



# TENDER DOCUMENTS

## VOLUME-I

**REHABILITATION/ RENOVATION OF ALL FLOORS OF STATE  
LIFE INSURANCE CORPORATION BUILDING -09  
DR ZIAUDDIN AHMED ROAD KARACHI.**



**MUKHTAR ENTERPRISE STUDIO FOR ARCHITECTURE  
CONSULTANT ARCHITECTS, INTERIOR DESIGNERS, URBAN PLANNERS &  
DIGITAL FABRICATOR**

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# **INVITATION TO BIDDERS**

No. \_\_\_\_\_

Dated: \_\_\_\_\_

## **INVITATION TO BIDDERS**

**SUBJECT:** REHABILITATION/ RENOVATION OF ALL FLOORS OF STATE LIFE INSURANCE CORPORATION BUILDING -09 DR ZIAUDDIN AHMED ROAD KARACHI.

1. The Employer invites sealed bids, under Single Stage-Two Envelope bidding procedure, from eligible firms licensed by the Pakistan Engineering Council valid for the year 2025 in Category PEC Category C-1 or above with PEC registration in relevant categories of ID, Civil, Works, Electrical & General works. (**Mandatory**).
2. Bidders may download further information and the Bidding Documents from <https://eprocure.gov.pk> (EPADS) free of cost and must be submitted electronically through EPADS as well as in the hard format on the mentioned address otherwise the submission shall not be considered. For registration and training on EPADS or any technical difficulty in using EPADS, prospective bidders may contact Mr. Rizwan Mehmood Director MIS PPRA Room No 109 1st Floor FBS Building Sector G-5/2 Islamabad Phone No 051-111-137-137 **EPAD SUBMISSION IS MANDATORY**
3. The physical Bids must be submitted also in sealed envelopes, one marked "Technical Bid" and the other marked "Financial Bid".
4. All bids (Technical & Financial Bids in separate sealed envelopes) must be accompanied by a Bid Security for an amount equivalent to Rs. 17,000,000/- of the Bidding Cost of the Project in the format of a Bank guarantee from a Schedule Bank of Pakistan or from a foreign bank duly counter guaranteed by a Scheduled Bank in Pakistan or in the form of a Pay order or Call Deposit in favor of Employer and hard Copy must be delivered to the Office of the Chief Engineer, Real Estate Division on or before 11.00 hrs., and upload the same on EPADS on or before **31 October, 2024. 1100 hrs.** Technical Bids will be opened **at 1130 hrs.** virtual (online) on the same day, in the presence of bidders/their representatives who choose to attend at the same address.
5. Any bid received by the Employer after the deadline for submission of bids will be returned unopened to such bidder, as per Clause IB 20.1(a) "Instruction to Bidders".
6. Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive, as per Clause IB 15.3 "Instruction to Bidders".
7. Date of opening of Financial Bids of Technically qualified bidders shall be notified at a later date after the Evaluation of the Technical Bids.
8. All the prospective bidders need to be intimated that the document downloaded from E-PADS shall be used as an "Original Bid". The drawings of the project may be downloaded from the link provided by the Consultant M/s MESA. The Consultant can be contacted on its telephone numbers;
  - i. MESA OFFICE,  
021-327297002
  - ii. Mr. Sohaib Jamshed  
Administrator,  
Tel No. 021-37297002
9. The blue ink shall be used to fill all the forms/ BOQ.

# **INSTRUCTIONS TO BIDDERS**

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## INSTRUCTIONS TO BIDDERS

### A. GENERAL

#### IB.1 Scope of Bid

- 1.1 The Employer as defined in the Bidding Data Sheet hereinafter called “the Employer” wishes to receive bids for the construction and completion of works as described in these Bidding Documents, and summarized in the Bidding Data Sheet hereinafter referred to as the “Works”.
- 1.2 The successful bidder will be expected to complete the Works within the time specified in Appendix-A to Bid.

#### IB.2 Source of Funds

- 2.1 The Employer has from own resources as indicated in the Bidding Data Sheet in Pakistani currency towards the cost of the project specified in the Bidding Data Sheet and it is intended that part of the proceeds of this t will be applied to eligible payments under the Contract for which these Bidding Documents are issued.

#### IB.3 Eligible Bidders

- 3.1 This Invitation for Bids is open to all bidders meeting the following requirements:
  - a). Duly licensed by the **Pakistan Engineering Council (PEC) in the category C-1** or above relevant to the value of the Works.

#### IB.4 One Bid per Bidder

- 4.1 Each bidder shall submit only one bid either by himself, or as a partner in a joint venture. A bidder who participates in more than one bid (other than alternatives pursuant to Clause IB.16) will be disqualified.

#### IB.5 Cost of Bidding

- 5.1 The bidders shall bear all costs associated with the preparation and submission of their respective bids and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

#### IB.6 Site Visit

- 6.1 The bidders are **required** to visit and examine the Site of Works and its surroundings and obtain for themselves on their own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. All cost in this respect shall be at the bidder’s own expense.
- 6.2 The bidders and any of their personnel or agents will be granted permission by the Employer to enter upon his premises and lands for the purpose of such inspection, but only upon the express condition that the bidders, their personnel and agents, will release and indemnify the Employer, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.

**B. BIDDING DOCUMENTS****IB.7 Contents of Bidding Documents**

7.1 The Bidding Documents, in addition to invitation for bids, are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB.9.

1. Instructions to Bidders
2. Bidding Data Sheet
3. General Conditions of Contract, Part-I (GCC)
4. Particular Conditions of Contract, Part-II (PCC)
5. Specifications - Special Provisions
6. Specifications - Technical Provisions
7. Form of Bid & Appendices to Bid
8. Bill of Quantities (Appendix-D to Bid)
9. Form of Bid Security
10. Form of Contract Agreement
11. Forms of Performance Security and Mobilization Advance Guarantee/Bond, Forms of Integrity and Form of Indemnity Bond for Secured Advance
12. Drawings

7.2 The bidders are expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of bid submission will be at the Bidder's own risk. Pursuant to Clause IB.26, bids which are not substantially responsive to the requirements of the Bidding Documents will be rejected.

7.3 The General Conditions of Contract and Particular Conditions of Contract used in these Standard Bidding Documents were prepared by the International Federation of Consulting Engineers (Federation Internationale des Ingenieurs-Conseils, or FIDIC), and are commonly known as the FIDIC Conditions of Contract. (The used version is the fourth edition, 1987, reprinted in 1992 with further amendments). The FIDIC Conditions of Contract are copyrighted and may not be copied, faxed, or reproduced. The FIDIC Conditions of Contract can be referred to in the bidding documents, and the bidders are advised to obtain copies directly from FIDIC.

Copies of the FIDIC Conditions of Contract can be obtained from:  
FIDIC Secretariat,  
P.O. Box 86,  
1000 Lausanne 12,  
Switzerland.  
e-mail: [fidic.pub@fidic.org](mailto:fidic.pub@fidic.org) – [FIDIC.org/bookshop](http://FIDIC.org/bookshop)

**IB.8 Clarification of Bidding Documents**

8.1 Any prospective bidder requiring any clarification (s) in respect of the Bidding Documents may notify the Consultant with a copy to the Employer in writing at the Consultant & Employer's address indicated in the Invitation for Bids. The Consultant will respond to any request for clarification that he receives earlier than 07 (Seven) days prior to the deadline for submission of bids.

Copies of the Consultant's response will be forwarded to all downloaders of the Bidding Documents from EPADS, including a description of the enquiry but without identifying its source.

**IB.9 Amendment of Bidding Documents**

- 9.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by issuing addendum.
- 9.2 Any addendum thus issued shall be part of the Bidding Documents pursuant to IB 7.1 hereof and shall be communicated in writing to all purchasers of the Bidding Documents. Prospective bidders shall acknowledge receipt of each addendum in writing to the Employer.
- 9.3 To afford prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may extend the deadline for submission of bids in accordance with Clause IB.20.

**C. PREPARATION OF BIDS****IB.10 Language of Bid**

- 10.1 The bid and all correspondence and documents related to the bid exchanged by a bidder and the Employer shall be in the bid language stipulated in the Bidding Data Sheet and Particular Conditions of Contract. Supporting documents and printed literature furnished by the bidders may be in any other language provided the same are accompanied by an accurate translation of the relevant parts in the bid language, in which case, for purposes of evaluation of the bid, the translation in bid language shall prevail.

**IB.11 Documents Comprising the Bid**

- 11.1 **The Original (Soft copy) bid shall be uploaded to the EPADS and the physical Bid submitted at Chief Engineer State Life Insurance Corporation of Pakistan shall comprise two envelopes submitted simultaneously, one called the Technical Bid (CONTAINING AN ENVELOPE MARKED BID SECURITY WITH COMPANY'S NAME MENTIONED ON THE ENVELOPE) and the other the Price Bid, containing the documents listed in Bidding Data Sheet under the heading of IB 11.1 A & B respectively.** Both envelopes to be enclosed together in an outer single envelope called the Bid. Each bidder shall furnish all the documents as specified in Bidding Data Sheet 11.1 A & B.
- 11.2 Bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all partners. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed agreement. The role to be played by each partner to be specified therein. Bids submitted by a joint venture of two (2) or more firms shall comply with the following requirements:
- a). In case of a successful bid, the Form of JV Agreement shall be signed so as to be legally binding on all partners within 7 days of the receipt of letter of acceptance failing which the contract and the letter of acceptance shall stand void and redundant.
  - b). One of the joint venture partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the joint venture partners;
  - c). The partner-in-charge shall always be duly authorized to deal with the Employer regarding all matters related with and/or incidental to the execution of Works as per the terms and Conditions of JV Agreement and in this regard to incur any and all liabilities,

receive instructions, give binding undertakings and receive payments on behalf of the joint venture;

- d). All partners of the joint venture shall at all times and under all circumstances be liable jointly and severally for the execution of the Contract in accordance with the Contract terms and a statement to this effect shall be included in the authorization mentioned under Sub-Para (b) above as well as in the Form of Bid and in the Form of JV Agreement (in case of a successful bid); and
  - e). A copy of JV agreement shall be submitted before signing of the Contract, stating the conditions under which JV will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the Contract and can give valid receipts on behalf of the joint venture, the proportionate participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning. The JV Agreement shall be made part of the contract. No amendments / modifications whatsoever in the joint venture agreement shall be agreed to between the joint venture partners without prior written consent of the Employer.
- 11.3 The Bidder shall furnish, as part of the Technical Bid, a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated Bidding Forms, in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time referred to in Sub-Clause 1.2 hereof.

#### **IB.12 Bid Prices**

- 12.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole of the Works as described in IB 1.1 hereof, based on the unit rates and / or prices submitted by the bidder.
- 12.2 The bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by a bidder will not be paid for by the Employer when executed and shall be deemed covered by rates and prices for other items in the Bill of Quantities.
- 12.3 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as on the date 28 days prior to the deadline for submission of bids shall be included in the rates and prices and the total Bid Price submitted by a bidder.

Additional / reduced duties, taxes and levies due to subsequent additions or changes in legislation shall be reimbursed / deducted as per Sub-Clause 70.2 of the General Conditions of Contract Part-I.

- 12.4 The rates and prices quoted by the bidders are subject to adjustment during the performance of the Contract in accordance with the provisions of Clause 70 of the Conditions of Contract. The bidders shall furnish the prescribed information for the price adjustment formulae in Appendix C to Bid and shall submit with the bids such other supporting information as required under the said clause.

#### **IB.13 Currencies of Bid and Payment**

- 13.1 The unit rates and the prices shall be quoted by the bidder entirely in Pak rupees. A bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's country (referred to as the "Foreign Currency Requirements") shall



indicate the same in Appendix-B to Bid. The proportion of the Bid Price (excluding Provisional Sums) needed by him for the payment of such Foreign Currency Requirements either (i) entirely in the currency of the Bidder's home country or, (ii) at the bidder's option, entirely in Pak rupees provided always that a bidder expecting to incur expenditures in a currency or currencies other than those stated in (i) and (ii) above for a portion of the foreign currency requirements, and wishing to be paid accordingly, shall indicate the respective portions in his bid.

- 13.2 The rates of exchange to be used by the bidder for currency conversion shall be the TT & OD Selling Rates published or authorized by the State Bank of Pakistan prevailing on the date 28 days prior to the deadline for submission of bids. For the purpose of payments, the exchange rates used in bid preparation shall apply for the duration of the Contract.

#### **IB.14 Bid Validity**

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data Sheet after the Date of Bid Opening specified in Clause IB.23.
- 14.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period which shall in no case be more than the original bid validity period. The request and the responses thereto shall be made in writing. A bidder may refuse the request without forfeiting his Bid Security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his Bid Security for the period of the extension, and in compliance with Clause IB.15 in all respects.

#### **IB.15 Bid Security**

- 15.1 Each bidder shall furnish, as part of his bid, a Bid Security in the amount stipulated in the Bidding Data Sheet in Pak Rupees or an equivalent amount in a freely convertible currency.
- 15.2 The Bid Security shall be, at the option of the bidder, in the form of Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan or from a foreign bank duly counter guaranteed by a Scheduled Bank in Pakistan in favor of the **Employer valid for a period 180 days beyond the Bid Validity date.**
- 15.3 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.
- 15.4 The bid securities of unsuccessful bidders will be returned after the signing of the contract agreement with the successful bidder.
- 15.5 The Bid Security of the successful bidder will be returned when the bidder has furnished the required Performance Security and signed the Contract Agreement.
- 15.6 The Bid Security may be forfeited:
- a). If the bidder withdraws his bid except as provided in IB 22.1;
  - b). If the bidder does not accept the correction of his Bid Price pursuant to IB 27.2 hereof;  
or
  - c). In the case of successful bidder, if he fails within the specified time limit to:
    - i). Furnish the required Performance Security;
    - ii). Sign the Contract Agreement, or
    - iii). Furnish the required JV agreement within 7 days of the receipt of letter of acceptance.

**IB.16 ~~Alternate Proposals by Bidder~~****IB.17 Pre-Bid Meeting**

- 17.1 **22nd October 2024:** The Employer may, on his own motion or at the request of any prospective bidder(s), hold a pre-bid meeting to clarify issues and to answer any questions on matters related to the Bidding Documents. The date, time and venue of the pre-bid meeting, if convened, is as stipulated in the Bidding Data Sheet. All prospective bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.
- 17.2 The bidders are requested to submit questions to the Consultant through email, if any, in writing so as to reach the Employer **not later than three (3) days** before the proposed pre-bid meeting.
- 17.3 Minutes of the pre-bid meeting, including the text of the questions raised and the replies given, will be transmitted without delay to all purchasers of the Bidding Documents. Any modification of the Bidding Documents listed in IB 7.1 hereof, which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause IB.9 and not through the minutes of the pre-bid meeting.
- 17.4 Absence at the pre-bid meeting will not be a cause for disqualification of a bidder.

**IB.18 Format and Signing of Bid**

- 18.1 Bidders are particularly directed that the amount entered on the Letter of Price Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.
- 18.2 All appendices to Bid are to be properly completed and signed.
- 18.3 No alteration is to be made in the Letters of Price and Technical Bids nor in the Appendices thereto except in filling up the blanks as directed. If any such alterations be made or if these instructions be not fully complied with, the bid may be rejected.
- 18.4 **The Bidder shall prepare one Physical Record copy of the Technical Bid and one physical Record copy of the Price Bid comprising the Bid as described in the Bidding Data Sheet against IB 11 and clearly mark it “RECORD COPY - TECHNICAL BID” and “RECORD COPY - PRICE BID”.**
- 18.5 The Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the Bidding Data Sheet and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid, except for unamended printed literature, shall be signed or initialed by the person signing the bid
- 18.6 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid. Use of white-O, blanco or any other erasing stationary is not allowed. The amendments shall be carried out by a simple strike-line over the text.
- 18.7 Bidders shall indicate in the space provided in the Letter of Technical and Price Bids, their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.

18.8 Bidders should retain a copy of the Bidding Documents as their file copy.

#### **D. SUBMISSION OF BIDS FOR SINGLE STAGE TWO ENVELOPE BIDDING PROCEDURE**

##### **IB.19 Sealing and Marking of Bids**

19.1 Each bidder shall submit his bid as under:

- a). ORIGINAL and each copy of the Bid shall be separately sealed and put in separate envelopes and marked as such.
- b). The envelopes containing the ORIGINAL and copies will be put in one sealed envelope and addressed / identified as given in IB 19.2 hereof.
- c). The technical bid should comprise of documents listed in IB11.1 (A) & the price bid should comprise of documents listed in IB 11.1 (B) which shall be placed in separate envelopes in accordance with IB 11.1.

19.2 The inner and outer envelopes shall:

- a). Be addressed to the Employer at the address provided in the Bidding Data Sheet;
- b). Bear the name and identification number of the contract as defined in the Bidding Data Sheet; and
- c). Provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data Sheet.

19.3 In addition to the identification required in IB 19.2 hereof, the inner envelope shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared "late" pursuant to Clause IB.21.

19.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

19.5 **The digital bid (MANDATORY)** Shall be submitted on EPADS as per rules and criteria specified in 19.1 c) with submission uploaded to technical and financial tabs separately.

19.6 Special Instructions EPADS Submission: **TECHNICAL BID along with BID SECURITY TO BE UPLOADED AS SINGLE FILE TO EPAD PORTAL. FINANCIAL BID AS A SINGLE FILE DULY SIGNED AND STAMPED TO BE UPLOADED TO EPAD FINANCIAL PORTAL.** as per rules and criteria specified in 19.1 c) with submission uploaded to technical and financial tabs separately.

**IB.20 Deadline for Submission of Bids**

- 20.1 a). **Bids must be uploaded on E-pads on or before closing date & time and its original physical copy be received by the Employer at the address specified no later than the closing time and date stipulated in the Bidding Data Sheet.**
- b). Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of bids. No claims will be entertained for refund of such expenses.
- c). Where delivery of a bid is by mail and the bidder wishes to receive an acknowledgment of receipt of such bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed bid package.
- d). Upon request, acknowledgment of receipt of bids will be provided to those making delivery in person or by messenger.
- 20.2 The Employer may, at his discretion, extend the deadline for submission of Bids by issuing an amendment in accordance with Clause IB.9, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

**IB.21 Late Bids**

- 21.1 a). Any bid received by the Employer after the deadline for submission of bids prescribed in Clause IB.20 will be returned unopened to such bidder.
- b). Delays in the mail, delays of person in transit, or delivery of a bid to the wrong office shall not be accepted as an excuse for failure to deliver a bid at the proper place and time. It shall be the bidder's responsibility to determine the manner in which timely delivery of his bid will be accomplished either in person, by messenger or by mail.

**IB.22 Modification, Substitution and Withdrawal of Bids**

- 22.1 Any bidder may modify, substitute or withdraw his bid after bid submission provided that the modification, substitution or written notice of withdrawal is received by the Employer prior to the deadline for submission of bids.
- 22.2 The modification, substitution, or notice for withdrawal of any bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.19 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.
- 22.3 No bid may be modified by a bidder after the deadline for submission of bids except in accordance with IB 22.1 and 27.2.
- 22.4 Withdrawal of a bid during the interval between the deadline for submission of bids and the expiration of the period of bid validity specified in the Form of Bid may result in forfeiture of the Bid Security in pursuance to Clause IB.15.

**E. BID OPENING AND EVALUATION FOR SINGLE STAGE TWO ENVELOPE BIDDING PROCEDURE**

**IB. 23 Bid Opening**

- 23.1 The Employer will open the Technical Bids on E-PADS at the address, date and time specified in the Bidding Data Sheet (**as per clause 23.1 of Bidding Data Sheet**) in the presence of Bidders' representatives who choose to attend.
- 23.2 The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record.
- 23.3 After the opening of Technical Bids the names of participating bidders and submission of Bid Security will be announced. Late bids will not be opened by the E-PADS system. All the participating bidders must submit a signed & stamped hard copy of their bid for record of State Life.
- 23.4 Next, outer envelopes marked "MODIFICATION" shall be opened. No Technical Bid and/or Price Bid shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Price Bids, both Original and Modification, will remain unopened in accordance with IB 23.1. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.
- 23.5 Other envelopes holding the Technical Bids shall be opened one at a time, and the following read out and recorded:
- a). the name of the Bidder;
  - b). whether there is a modification or substitution;
  - c). the presence of a Bid Security, if required; and
  - d). Any other details as the Employer may consider appropriate.

No Bid shall be rejected at the opening of Technical Bids except for late bids, in accordance with IB 21.1. Only Technical Bids read out and recorded at bid opening, shall be considered for evaluation.

**Preliminary Examination of Technical Bids**

- 23.6 At the end of the evaluation of the Technical Bids, the Employer will invite only those bidders who have submitted substantially responsive Technical Bids and who have been determined as being qualified for award to attend the opening of the Price Bids.

The date, time, and location of the opening of Price Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice for the opening of Price Bids.

- 23.7 The Employer will notify Bidders in writing who have been rejected on the grounds of their Technical Bids being substantially non-responsive to the requirements of the Bidding Document and return their Price Bids unopened before inviting others, who are determined as being qualified, to attend the opening of Price Bids.
- 23.8 The Employer shall conduct the opening of Price Bids of all Bidders who submitted substantially responsive Technical Bids on E-PADS in the presence of Bidders' representatives who choose to attend at the address, date and time specified by the Employer.

- 23.9 All files on E-PADS containing Price Bids shall be opened one at a time and the following read out and recorded:
- The name of the Bidder;
  - Whether there is a modification or substitution;
  - The Bid Prices, including any discounts and alternative offers; and
  - Any other details as the Employer may consider appropriate.

Only Price Bids and discounts, read out and recorded during the opening of Price Bids shall be considered for evaluation. No Bid shall be rejected at the opening of Price Bids.

- 23.10 If this Bidding Document allows Bidders to quote separate prices for different contracts, and the award to a single Bidder of multiple contracts, the methodology to determine the lowest evaluated price of the contract combinations is that which is most economical to the Employer.

#### **IB.24 Process to be Confidential**

- 24.1 Information relating to the examination, clarification, evaluation and comparison of bid and recommendations for the award of a contract shall not be disclosed to bidders or any other person not officially concerned with such process before the announcement of bid evaluation report which shall be done at least ten 10 days prior to issue of Letter of Acceptance. The announcement to all Bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated. Any effort by a bidder to influence the Employer's processing of bids or award decisions may result in the rejection of such bidder's bid. Whereas any bidder feeling aggrieved may lodge a written complaint not later than fifteen (15) days after the announcement of the bid evaluation report. However mere fact of lodging a complaint shall not warrant suspension of the procurement process.

#### **IB.25 Clarification of Bids**

- 25.1 To assist in the examination, evaluation and comparison of bids, the Employer may, at his discretion, ask any bidder for clarification of his bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with Clause IB.28.
- 25.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification, its bid may be rejected.

#### **IB.26 Examination of Bids and Determination of Responsiveness**

- 26.1 Prior to the detailed evaluation of bids, the Employer will determine whether each bid is substantially responsive to the requirements of the Bidding Documents.
- 26.2 A substantially responsive bid is one which (i) meets the eligibility criteria; (ii) has been properly signed; (iii) is accompanied by the required Bid Security; (iv) Includes signed Integrity Pact where required as per clause IB.35 and (v) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (i) which affect in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the bidder's obligations under the Contract; (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids. Only substantially responsive bid shall be considered for further evaluation.

- 26.3 If a bid is not substantially responsive, it may not subsequently be made responsive by correction or withdrawal of the non-conforming material deviation or reservation. The Employer may, however, seek confirmation/ clarification in writing which shall be responded in writing.

#### **IB.27 Correction of Errors**

- 27.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
- a). Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and
  - b). Where there is a discrepancy between the unit rate and the line-item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line-item total as quoted will govern and the unit rate will be corrected.
- 27.2 The amount stated in the Letter of Price Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and with the concurrence of the bidder, shall be considered as binding upon the bidder. If the bidder does not accept the corrected Bid Price, his Bid will be rejected, and the Bid Security shall be forfeited in accordance with IB.15.6 (b) hereof.

#### **IB.28 Evaluation and Comparison of Bids**

- 28.1 The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause IB.26.
- 28.2 In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
- a). Making any correction for errors pursuant to Clause IB.27;
  - b). Excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including competitively priced Day work; and
  - c). Making an appropriate adjustment for any other acceptable variation or deviation.
- 28.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.
- 28.4 If the Bid of the successful bidder is seriously unbalanced in relation to the Employer's estimate of the cost of work to be performed under the Contract, the Employer may require the bidder to produce detailed price analyses for any or all items of the Bill of Quantities to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in Clause IB.32 be increased at the expense of the successful bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful bidder under the Contract.
- 28.5 Bids will be evaluated on the basis of Bidding Data Sheet Clause 28.5.

**F. AWARD OF CONTRACT****IB.29 Award**

- 29.1 Subject to Clauses IB.30 and IB.34, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid Price, provided that such bidder has been determined to be eligible in accordance with the provisions of Clause IB.3 and qualify pursuant to IB 29.2.
- 29.2 The Employer, at any stage of the bid evaluation, having credible reasons for or prima facie evidence of any defect in bidder's capacities, may require the bidders to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

Provided that such qualification shall only be laid down after recording reasons in writing. They shall form part of the records of that bid evaluation report.

**IB.30 Employer's Right to Accept any Bid and to Reject any or all Bids**

- 30.1 Notwithstanding Clause IB.29, the Employer reserves the right to accept or reject any Bid and to annul the bidding process and reject all bids, at any time prior to award of the Contract, without thereby incurring any liability to the affected bidders or any obligation except that the grounds for rejection of all bids shall upon request be communicated to any bidder who submitted a bid, without justification of grounds. Rejection of all bids shall be notified to all bidders promptly.

**IB.31 Notification of Award**

- 31.1 Prior to the expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder in writing ("Letter of Intent") that his Bid has been accepted. This letter shall name the sum which the Employer will pay the Contractor in consideration of the execution and completion of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called the "Contract Price").
- 31.2 No Negotiation with the bidder having evaluated as the lowest responsive or any other bidder shall be permitted.
- 31.3 Contract Agreement shall be signed after the acceptance of the letter of intent by the successful bidder.
- 31.4 Upon furnishing by the successful bidder of a Performance Security, the Employer will promptly notify the other bidders that their Bids have been unsuccessful and return their bid securities.

**IB.32 Performance Security**

- 32.1 The successful bidder shall furnish to the Employer a Performance Security in the form and the amount stipulated in the Bidding Data Sheet and the Conditions of Contract within a period of **14 days** after the receipt of Letter of Acceptance.
- 32.2 Failure of the successful bidder to comply with the requirements of IB.32.1 or IB.33 or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.



**IB.33 Signing of Contract Agreement**

- 33.1 Within 07 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will send the successful bidder the Contract Agreement in the form provided in the Bidding Documents, incorporating all agreements between the parties.
- 33.2 The formal Agreement between the Employer and the successful bidder shall be executed within 07 days of the receipt of the Contract Agreement by the successful bidder from the Employer.

**IB. 34 General Performance of the Bidders**

The Employer reserves the right to obtain information regarding performance of the bidders on their previously awarded contracts/works. The Employer may in case of consistent poor performance of any Bidder as reported by the employers of the previously awarded contracts, inter alia, reject his bid and/or refer the case to the Pakistan Engineering Council (PEC). Upon such reference, PEC in accordance with its rules, procedures and relevant laws of the land take such action as may be deemed appropriate under the circumstances of the case including black listing of such Bidder and debarring him from participation in future bidding for similar works.

**IB.35 Integrity Pact**

The Bidder shall sign and stamp the Integrity Pact provided at Appendix-L to Bid in the Bidding Documents for all Federal Government procurement contracts exceeding Rupees ten million. Failure to provide such Integrity Pact shall make the bidder non-responsive.

**IB.36 Instructions not Part of Contract**

Bids shall be prepared and submitted in accordance with these Instructions which are provided to assist bidders in preparing their bids, and do not constitute part of the Bid or the Contract Documents.

# **BIDDING DATA SHEET**

## BIDDING DATA SHEET

The following specific data for the Works to be bided shall complement, amend, or supplement the provisions in the Instructions to Bidders. Wherever there is a conflict, the provisions herein shall prevail over those in the Instructions to Bidders.

*Instructions to Bidders*  
*Clause Reference*

### **1.1. Name and address of the Employer**

a. Name and address of the Employer is:

*Chief Engineer*

*Real Estate Division*

*State Life Insurance Corporation of Pakistan.*

*5TH Floor, State Life Building No. 09,*

*Dr. Ziauddin Ahmed Road, Karachi.*

*Phone: 021-99206168,*

*021-99206861,*

*0345-2163057.*

*Email: [Imran.usmani@statelife.com.pk](mailto:Imran.usmani@statelife.com.pk)*

b. **Name of the Project & Summary of the Works:**

Name of the Project: -

**REHABILITATION/ RENOVATION OF ALL FLOORS OF STATE LIFE INSURANCE CORPORATION BUILDING -09 DR ZIAUDDIN AHMED ROAD KARACHI.**

Summary of The Project:-

**The interior layout of offices & Rooms, Portioning & finishing, Civil, HVAC Plumbing, Electrical, Emergency Staircase, External and Internal Paint works with minor repairing, Furniture & furnishing etc. complete.**

c. **Name & Address of Consultant**

**Name: Mr. Mukhtar Enterprise Studio for Architecture. (MESA)**

**Address: Office No. 302, 3rd Floor, Building No. 52-C, Lane No 01, Al-Murtaza Commercial, Phase VIII, D.H.A, Karachi.**

**Tel / Cell No.: 0213-7297002**

**Email: [info@mesa.com.pk](mailto:info@mesa.com.pk)**

**2.1 Name of the Borrower/Source of Financing/Funding Agency**

*The Employer has arranged funds from its own sources.*

**2.1 Amount and type of financing**

*Not used*

**3.1 Eligible Bidders**

- a) **Bidders should have a Valid licence for 2025 from the Pakistan Engineering Council, in Category C-1 or above with PEC registration in relevant categories of ID, Civil, Works, Electrical & General works. (Mandatory). b) Active Tax Payer Registration with FBR**
- c) **Active Registration with Sindh Board Of Revenue SBR**

#### 8.1 Time limit for clarification

**07 days prior to the deadline for submission of bids.**

#### 10.1 Bid language

*The same language in which the bid documents are written i.e. English language.*

#### 11.1 (A) The Bidder shall submit with its Technical Bid the following documents

- a). Letter of Technical Bid
- b). Written confirmation authorizing the signatory of the Bid to commit the Bidder (IB.18.5)
- c). Pending litigation information
- d). Special Stipulations (as filled by the Employer) (Appendix - A)
- e). Proposed Construction Schedule (Appendix - E)
- f). Method of Performing the Work (Appendix - F)
- g). Availability of Critical Equipment (Appendix - G)
- h). Construction Camp and Housing Facilities (Appendix - H)
- i). **List of Sub-contractors** (Appendix - I)
- j). Organization Chart for Supervisory Staff (Separately for Construction & O & M Period) (Appendix - K)
- k). Integrity Pact (Appendix - L)
- l). Financial Competence and Access to Financial Resources (Appendix - M)
- m). Past Performance, Current Commitment, Qualification and Experience (Documentary Evidences) (Appendix - N)
- n). In separate envelopes, the documents in support of the Technical Bid as stipulated in Clause IB28.5 of Bidding Data
- o). Declaration of Ultimate Beneficial Owners Information (Appendix - O)

#### 11.1 (B) The Bidder shall submit with its Price Bid the following documents

- a). Letter of Price Bid
- b). Bill of Quantities (Appendix - D)
- c). Proposed Payment Yard Stick (Appendix - J)

#### 13.1 Bidders to quote entirely in Pak. Rupees only

#### 14.1 Period of Bid Validity

**ONE EIGHTY (180) days**

#### 15.1 Amount of Bid Security

**15.1 Each Bidder shall furnish, as part of his bid, a Bid Security EQUIVALENT TO 17,000,000/- Seventeen million PKR**

*15.2 The Bid Security shall be, at the option of the bidder, in the form of a Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan or from a Foreign Bank duly counter-*

*guaranteed by a Scheduled Bank in Pakistan in favour of the Employer.*

**16. Alternate Proposals by Bidders**

*Not Allowed*

**17.1 Venue, time, and date of the pre-bid meeting**

Date: 22nd October, 2024.

Venue: *Chief Engineer Office  
Real Estate Division  
State Life Insurance Corporation of Pakistan.  
5TH Floor, State Life Building No. 09,  
Dr. Ziauddin Ahmed Road, Karachi.  
Phone: 021-99206168,  
021-99206861,  
0345-2163057.*

**18.4 Number of copies of the Bid to be completed and returned** *One original and one copy: EPAD MANDATORY*

**19.2 (a) Employer's address for the purpose of Bid submission**

**Name and address of the Employer:**  
*Chief Engineer  
Real Estate Division  
State Life Insurance Corporation of Pakistan.  
5TH Floor, State Life Building No. 09,  
Dr. Ziauddin Ahmed Road, Karachi.  
Phone: 021-99206168,  
021-99206861,  
0345-2163057.  
Email: [Imran.usmani@statelife.com.pk](mailto:Imran.usmani@statelife.com.pk)*

**19.2 (b) Name and Number of the Contract**

*TENDER NO.RE / PO / PROJECT / 09 / 2024*

**20.1 (a) Deadline for submission of bids**

***1100 Hours on 31st October 2024.***

22 Failure to provide the following submissions, the bid shall be declared non-responsive.

- a) Written Power of attorney authorizing the signatory of the Bid to act for and on behalf of the bidder
- b) Bidding documents are properly signed and stamped including forms of bid and Integrity Pact.
- c) Required Bid security

- d) Covering letter on Bidder letterhead confirming all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation,

### **23.1 Venue, time, and date of Bid opening**

#### **Opening of Technical Proposals:**

Venue: Online (E-PADS)/ Chief Engineer, Real Estate Division, SLIC, Building No. 09, Dr. Ziauddin Ahmed Road, Karachi.

***Time: 1130 Hours***

***Date: 31st October***

***2024.***

#### **Opening of Financial Proposals:**

Venue: Online (E-PADS)/ Chief Engineer, Real Estate Division, SLIC, Building No. 09, Dr. Ziauddin Ahmed Road, Karachi.

***Time: To be announced after Evaluation of Technical Bids***

***Date: To be announced after Evaluation of Technical Bids***

## 28.5 Evaluation and Comparison of Bids

### (A) Evaluation / Qualification Criteria

Evaluation criteria are being given for the benefit of the Employer and bidder. Evaluation based on **Single Stage - Two Envelope** procedure is adopted as per PPRA Rules 2004 and amended up to date. Evaluation criteria as set forth in this proposal are based on mandatory requirements and marks/scores and both are adopted as the selection method while evaluating the constructors/firms. Information will be given in forms and marks will be given as per the information given in the submitted technical bid by the bidder.

#### I. Mandatory provisions / Eligibility

For consideration of the Technical Proposals submitted by the bidders following are the mandatory requirements:

- a. Undertaking on Stamp Paper of Rs.500/- containing that: - **(Mandatory)**
  - Affidavit to the effect that the firm has not been blacklisted previously by any Govt. or Non-Govt. executing agency.
  - List of litigation (if any) their nature and status/outcomes.
  - Affidavits to the effect that all documents/particulars/information furnished are true and correct.
- b. Valid Registration with Income Tax & Sindh Revenue Board (SRB) **(Mandatory)**.
- c. Valid Registration with Pakistan Engineering Council PEC in PEC Category C-1 or above with PEC registration in relevant categories of ID, Civil, Works, Electrical & General works. **(Mandatory)**.
- d. Valid Electrical License issued from Inspectorate of Electrical License Sindh of a similar region with respect to works shown above. **(Mandatory)**.

Further evaluation of only those bidders will be done who have cleared all the Mandatory requirements. Bids of applicants who do not provide the above mandatory documents will be declared as disqualified, will not be processed further and their financial bids will be returned unopened.

**(B) Evaluation Criteria Based on Marks / Score**  
Aggregate Qualifying Score is **70** out of **100**.

**I. Company Profile 05 Marks**

(a)	<p>The period since the Firm/ Constructor is in the Construction Business</p> <p>Between 6-10 years Above 10 years</p> <p>Attach your first/old PEC license for reference, as well as your most recent valid PEC license.</p>	<p><b>2.5 Marks</b></p> <p>1.0 Marks 2.5 Marks</p>
(b)	<p>Office Facilities</p> <p>If the office in Karachi If outside Karachi (attached documents evidence)</p>	<p><b>2.5 Marks</b></p> <p>2.5 Marks 1.0 Marks</p>

**II. Experience of The Firm Company 55 Marks**

(a)	<p><b>WORK COMPLETED</b></p> <p>Project of Similar Nature <i>Composite Civil &amp; MEP Works (Renovation, Restoration, Rehabilitation of Commercial/ Residential Multistoried Buildings ) with Government or Corporate / Private Sector of Project Worth PKR 600 Million or above</i> all over Pakistan during last 10 years. 5-Marks will be given for each Project. (Documentary Evidence with complete address of the Project and Client be attached)</p>	<p><b>30 Marks</b></p>
(b)	<p><b>WORK IN HAND</b></p> <p>Similar nature of Composite Civil &amp; MEP Works (Renovation, Restoration, Rehabilitation of Commercial/ Residential Multistoried Buildings) with Government or Corporate / Private Sector of Project Worth PKR 600 Million or above during last 02-years. 12.5 Marks will be given for each Project (Documentary Evidence with complete address of the Project and Client be attached)</p>	<p><b>25 Marks</b></p>



**III. Personnel Capabilities Required for This Project 15 Marks**

Employed Engineers must have valid registration with the Pakistan Engineering Council (PEC) and active Tax Payer also reflected in the firm's PEC license.

The key technical personnel required at the site and factors for marking are as follows:

<b>Sl.</b>	<b>Description / Position with Minimum Qualification &amp; Experience</b>	<b>Marks Assigned</b>	<b>Remarks</b>
1	<b>Project Manager (01 No.)</b> BE (Civil) registered with Pakistan Engineer Council (PEC) having experience of 10 years or above.	04	<b>01 Marks</b> Min. Post BE qualification up to 10 Years <b>01 Additional Marks</b> Post-grad experience of more than 10 years. <b>01 Additional Marks</b> MS / PhD experience up to 10 years. <b>01 Additional Marks</b> MS /PHD Experience More than 10 Years.
2	<b>Construction Engineer (01 No.)</b> B.E. (Civil) registered with Pakistan Engineering Council (PEC) having experience of 5 years or above.	02	<b>01 Marks</b> Minimum experience between 05-07 years. <b>01 Additional Marks</b> Experience above 07 years.
3	<b>Contract Engineer / Cost Engineer (01 No.)</b> B.E. (Civil) registered with Pakistan Engineering Council (PEC) having experience of 5 years or above.	02	<b>01 Marks</b> Minimum experience between 05-07 years. <b>02 Additional Marks</b> Experience above 07 years.
4	<b>Site Engineer ( MEP ) Engineer (01 No.)</b> B.E.(Elect./Elect/Telecomm/ITI) registered with Pakistan Engineering Council (PEC) Min. experience 5 years	02	<b>01 Marks</b> Minimum experience 05. <b>01 Additional Marks</b> Experience above 05 years.
5	<b>Quantity Surveyor - DAE in Civil (01 No.)</b> DAE in Civil having relevant experience of Min. 10 years.	01	<b>0.5 Marks</b> Minimum experience 10 years. <b>0.5 Additional Marks</b> Experience More than 10 years.
6	<b>Site Supervisor in Civil (01 No.) DAE</b> in Civil having a minimum of 10 years of relevant experience.	01	<b>0.5 Marks</b> Minimum experience up to 10 years. <b>0.5 Additional Marks</b> Experience above 10 years.
7	<b>Site Supervisor Elect/ IT (01.)</b> DAE in Civil having relevant experience of 10 years or above.	01	<b>.01 Marks</b> Minimum experience up to 10 years <b>01 Additional Marks</b> Experience above 10 years.

Sr.	Description / Position with Minimum Qualification & Experience	Marks Assigned	Remarks
8	<b>Site Surveyor ( Civil ) 01 No</b> DAE in Civil having relevant experience of 10 years or above.	01	<b>.0.5 Marks</b> Minimum experience up to 10 years <b>0.5 Additional Marks</b> Experience above 10 years.
9	<b>CAD Operator ( Civil ) 01</b> DAE in Civil having relevant experience of 10 years or above.	01	<b>.0.5 Marks</b> Minimum experience of up to 10 years <b>0.5 Additional Marks</b> Experience with 1 similar project.

**Equipment Capability****05 Marks**

- Critical equipment and number required for the Project shall be specified by the Procuring Agency.
- High value equipment should be an option to own, lease or hire.
- Total equipment available with the applicant is to be listed along with its current mobilization and on- going projects.

Details are to be provided as per the below form with documentary proof of ownership / rental/Leased failure to do so can result in rejection of tender).

Sr.	Description	Qty	Unit	Marks
2	Dumper Truck	1	Nos.	0.25
3	Concrete Mixer	2	Nos.	0.25
4	Concrete Pump for Ready Mix/ Concrete Lifter	1	No.	0.25
5	Tractor with Trolley	1	No.	0.50
7	Vibrator (Large Shaft! Small Shaft)	2	Nos.	0.25
8	Air Compressor (15 HP Cap.)	1	Nos.	0.25
9	Generator 100 KVA	1	Nos.	0.25
10	Aluminum Cutting & Fabrication Work Shop	1	Nos.	0.5
11	Steel cutting & Bending Machine	1	Nos.	0.25
12	Formwork & Molds 10,000 Sft	1	Set	0.25
13	Scaffolding Pipe 10,000 Rft	1	Set	0.25
14	Total Station with Staff etc	1	Set	0.125
15	Dewatering Pumps	2	Sets	0.125
16	Carpentry Work Shop	1	Sets	1
17	Suzuki Van	2	Nos.	0.5
	<b>Total Marks</b>			<b>5</b>

**Note:** The following formula is applicable to evaluation criteria based on marks/score only.

- If the available quantity of equipment is less than specified limit, give weight age as under:  $T = M \times (A/\text{Required Quantity})$ .

- b) If the available quantity of equipment is more than the minimum equipment requirement full marks will be given.

A = Available quantity of each equipment of each Item.

T = Marks obtained M = Marks assigned.

**(C) Financial Soundness 20 marks**

For the Financial Status assessment, the Applicants have to submit Income tax returns for the last three years and SRB monthly returns. Further, the bidder will provide evidence from the bank to verify the financial soundness of the bidder.

**Average Credit Limit 10 Marks**

Bank Letter showing credit limit/worth of the firm

- |     |                   |          |
|-----|-------------------|----------|
| i.  | to 300 million    | 05 Marks |
| ii. | Above 300 Million | 10 Marks |

**Turnover for last 03 Years 10 Marks**

Turnover for last 03 Years (Income Tax return / Audited financial report)

- |     |                             |          |
|-----|-----------------------------|----------|
| i.  | Between 800 to 1500 Million | 05 Marks |
| ii. | Above 1500 Million          | 10 Marks |

**(b) Commercial Evaluation**

It will be examined in detail whether the Bids comply with the commercial/ contractual conditions of the Bid Documents. It is expected that no major deviation/ stipulation shall be taken by the Bidders.

**(c) Evaluated Bid Price**

In evaluating the Bids, the Employer will determine for each Bid in addition to the Bid Price, the following factors (adjustments) in the manner and to the extent indicated below to determine the Evaluated Bid Price:

- (i) Making any correction for errors pursuant to Sub-Clause 27.2 hereof.
- (ii) Excluding Provisional Sums, if any, but including priced Day work (if applicable)
- (iii) Making an appropriate adjustment for any other acceptable variation or deviation.

**32.1 Standard form and amount of Performance Security acceptable to the Employer**

*Amount of Performance Security shall be per Clause 10.1 of Part II-Conditions of Particulars Application.*

### **33.1 Signing of Contract Agreement**

*The agreement would be made on stamp paper of value to be determined at the rate of 0.35 per cent of the contract value or as determined by the Inspectorate of Stamp Duty. The cost of stamp duty would be borne by the Contractor before mobilization on-site.*

**LETTER OF TECHNICAL BID/**  
**PRICE BID AND**  
**APPENDICES TO BID**

**LETTER OF TECHNICAL BID**

Date: \_\_\_\_\_

Bid Reference No. -----

**SUBJECT: Submission of Technical Bid for “REHABILITATION/ RENOVATION OF ALL FLOORS OF STATE LIFE INSURANCE CORPORATION BUILDING -09 DR ZIAUDDIN AHMED ROAD KARACHI.”**

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (IB) 9;
- (b) We offer to execute and complete in conformity with the Bidding Documents the following Works:
- (c) Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of **ONE HUNDRED EIGHTY (180)** days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) As security for the due performance of the undertakings and obligations of our bid, we submit here with a Bid security, in the amount specified in the Bidding Data Sheet, which is valid (at least) 28 days beyond the validity of the Bid itself.
- (e) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process, other than alternative offers submitted in accordance with IB16 (as applicable).
- (f) We agree to permit the Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB.11.1 of the Bidding Data Sheet.

Name .....

In the capacity of .....

Signed .....

Duly authorized to sign the Bid for and on behalf of .....

Date.....

Address.....

LPB-1

LETTER OF PRICED BID

Date: \_\_\_\_\_

Bid Reference No. -----

SUBJECT: Submission of Priced Bid for “REHABILITATION/ RENOVATION OF ALL FLOORS OF STATE LIFE INSURANCE CORPORATION BUILDING -09 DR ZIAUDDIN AHMED ROAD KARACHI.”

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (IB)9;
(b) The total price of our Bid, excluding any discounts offered in item (c) below is: Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only)
(c) The discounts offered and the methodology for their application are:
(d) Our Bid shall be valid for a period of 180 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
(e) If our Bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;
(f) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed and we do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.
(g) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
(h) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB.11.1 of the Bidding Data Sheet.
(i) If awarded the contract, the person named below shall act as Contractor’s Representative.

Name .....

In the capacity of .....

Signed .....

Duly authorized to sign the Bid for and on behalf of .....

Date.....

Address.....

**BA-1**  
**APPENDIX - A TO BID**

**SPECIAL STIPULATIONS**

		<b>Claus e No.</b>	
1.	Engineer's Authority to issue Variation in emergency	2.1	2% of the Contract price stated in the Letter of Acceptance.
2.	Law applicable	5.1 (b)	The law to be applied is the Law of Islamic Republic of
3.	Amount of Performance Security	10.1	5% of the Contract tender Price stated in the Letter of Acceptance in the form of (a) bank guarantee from any Scheduled Bank in Pakistan or (b) bank guarantee from a bank located outside Pakistan duly counter-guaranteed by a Scheduled Bank in Pakistan or (c) Bank Draft/Pay Order in favour of Employer.
4.	Time for Furnishing Program	14.1	Within 10 days from the date of receipt of the Letter of-Intent.
5.	Minimum amount of Third-Party Insurance	23.2	Rupees one million (Rs. 1,000,000) per occurrence with a number of occurrences unlimited.
6.	Time for Commencement	41.1	Within SEVEN (07) days from the date of receipt of the Engineer Letter to commence which shall be issued within SEVEN (07) days after the signing of the Contract Agreement
7.	Time for Completion	43.1 48.2	<b>EIGHTEEN (18) Months</b> from the date of receipt of the Engineer's Notice to Commence
8.	Amount of Liquidated Damages	47.1	0.1 % of the contract price for each day of delay in completion of works subject to a maximum of 10% of the contract price stated in the Letter of Acceptance
9.	Defects Liability Period	49.1	The Defect Liability Period after issuance of a substantial completion certificate is one year for Civil, Electrical & Plumbing works. For HVAC, Generator & all electrical distribution it will be 02 years.
10.	Percentage of Retention Money	60.2	FIVE (05) % of the amount of the Interim Payment Certificate.
11.	Limit of Retention Money	60.2	5% of the Contract Price stated in the Letter of Acceptance.
12.	Minimum amount of Interim Payment Certificates (Running Bills)	60.2	The minimum certified amount of IPC shall not be less than 10% of the tender bid amount.



13.	Time of Payment from delivery of Engineer's Interim Payment Certificate to the Employer.	60.1 0	30 days
14.	Mobilization Advance (Interest-Free)	60.1 2	An interest-free Mobilization Advance up to <b>10%</b> of the Contract Price stated in the Letter of Acceptance shall be paid by the Employer to the Contractor in two equal parts upon submission by the Contractor of a Mobilization Advance Guarantee/Bond for the full amount of the Advance in the specified form from a Scheduled Bank in Pakistan as per PPRA rules and regulations.

Initials of Signatory of Bid

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**BB-1  
APPENDIX-B TO BID**

**FOREIGN CURRENCY REQUIREMENTS**

1. The Bidder may indicate here in below his requirements of foreign currency (if any), with reference to various inputs to the Works.
  
2. Foreign Currency Requirement as percentage of the Bid Price excluding Provisional Sums \_\_\_\_\_ %.
  
3. Table of Exchange Rates

Unit of Currency	Equivalent in Pak. Rupees
Australian Dollar	-----
Euro	-----
Japanese Yen	-----
U.K. Pound	-----
U.S. Dollars	-----
-----	-----
-----	-----

**BC-1**  
**APPENDIX-C TO BID**

**PRICE ADJUSTMENT UNDER CLAUSE 70  
OF CONDITIONS OF CONTRACT**

The source of indices and the weightages or coefficients for use in the adjustment formula under Clause 70 shall be as follows:

<b>Cost Element</b>	<b>Description</b>	<b>Weightages</b>	<b>Applicable index</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
(i)	Fixed Portion	0.25	
(ii)	Local Labor	0.25	Government of Pakistan (GP) Federal Bureau of Statistics (FBS) Monthly Statistical Bulletin.
(iii)	Cement	0.05	“ “ “
(iv)	Reinforcing Steel (G- 60 ) & MS Sections	0.05	“ “ “
(v)	Wood	0.10	Statistics of Pakistan
(vi)	Aluminum Sections	0.10	Statistics of Pakistan
(vii)	High-Speed Diesel (HSD)	0.10	As per the rates fixed by Oil & Gas Regulatory Authority (OGRA)
(viii)	Cables Electrical/IT	0.10	Statistics of Pakistan
	<b>Total</b>	<b>1.00</b>	

**Notes:**

- 1) Indices for (ii) to (iv) are taken from the Government of Pakistan Federal Bureau of Statistics, Monthly Statistical Bulletin and (v) is taken from Oil & Gas Regulatory Authority (OGRA) rates. The base cost indices or prices shall be those applied 28 days prior to the latest day for submission of bids. Current indices or prices shall be those applied 28 days prior to the last day of the billing period.
- 2) Any fluctuation in the indices or prices of materials other than those given above shall not be subject to adjustment of the Contract Price.
- 3) The weightages have been determined for a fixed portion considering cost elements having a cost impact of 3% or more in this specific project.

**BD-1**  
**Appendix-D to Bid****BILL OF QUANTITIES****A. Preamble**

1. The Bill of Quantities shall be read in conjunction with the Conditions of Contract, Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work executed and measured by the Contractor and verified by the Engineer and valued at the rates and prices entered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix in accordance with provisions of the Contract.
3. The rates and prices entered in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract include all costs of Contractor's plant, labour, supervision, materials, execution, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract. Furthermore, all duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as on the date 28 days prior to deadline for submission of Bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.
4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the Contractor will have failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
5. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the Works.
6. General directions and description of work and materials are not necessarily repeated nor summarised in the Bill of Quantities. References to the relevant sections of the Bidding Documents shall be made before entering prices against each item in the priced Bill of Quantities.
7. Provisional sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with Sub-Clause 58.2 of Part I, General Conditions of Contract.

**BD-8**  
**Appendix-D to Bid****BILL OF QUANTITIES****C. Daywork Schedule****General**

1. Reference is made to Sub-Clause 52.4 of the General Conditions of Contract Part-I. Work shall not be executed on a day work basis except by written order of the Engineer. Bidders shall enter basic rates for Daywork items in the Schedules, which rates shall apply to any quantity of Daywork ordered by the Engineer. Nominal quantities have been indicated against each item of Daywork, and the extended total for Daywork shall be carried forward to the Bid Price.

**Daywork Labour**

2. In calculating payments due to the Contractor for the execution of Daywork, the actual time of classes of labour directly doing the Daywork ordered by the Engineer and for which they are competent to perform will be measured excluding meal breaks and rest periods. The time of gangers (charge hands) actually doing work with the gang will also be measured but not the time of foreman or other supervisory personnel.
3. The Contractor shall be entitled to payment in respect of the total time that labour is employed on Daywork, calculated at the basic rates entered by him in the Schedule of Daywork Rates for labour together with an additional percentage, payment on basic rates representing the Contractor's profit, overheads, etc., as described below.
  - a) the basic rates for labour shall cover all direct costs to the Contractor, including (but not limited to) the amount of wages paid to such labour, transportation time, overtime, subsistence allowances and any sums paid to or on behalf of such labour for social benefits in accordance with Pakistan law. The basic rates will be payable in local currency only; and
  - b) the additional percentage payment to be quoted by the Bidder and applied to costs incurred under (a) above shall be deemed to cover the Contractor's profit, overheads, superintendence, liabilities and insurances and allowances to labour timekeeping and clerical and office work; the use of consumable stores, water, lighting and power; the use and repair of stagings, scaffolding, workshops and stores, portable power tools, manual plant and tools; supervision by the Contractor's staff, foremen and other supervisory personnel; and charges incidental to the foregoing.

**BD-08 to BD-15 of Standard Form of Bidding Documents for Procurement of Civil Works are deleted being Not Applicable.**

**BE-1**  
**Appendix-E to Bid**

**PROPOSED CONSTRUCTION SCHEDULE**

Pursuant to Sub-Clause 43.1 of the General Conditions of Contract, the Works shall be completed on or before the date stated in Appendix-A to Bid. The Bidder shall provide as Appendix-E to Bid, the Construction Schedule in the bar chart and Primavera (Level-III) showing the sequence of work items and the period of time during which he proposes to complete each work item in such a manner that his proposed programme for completion of the whole of the Works and parts of the Works may meet Employer's completion targets in days noted below and counted from the date of receipt of Engineer's Notice to Commence (Attach sheets as required for the specified form of Construction Schedule)

A separate Bar Chart Showing monthly percentage progress showing major activities related to Cost of Project be attached which will be considered as "Scheduled Progress" throughout the currency of Contract unless revised with the approval of Client.

<b>Description</b>	<b>Time for Completion</b>
a) Whole Works	_____ days
b) Part-A	_____ days (If applicable)
c) Part-B	_____ days (If applicable)
d) _____	_____ days
e) _____	_____ days

**BF-1**  
**Appendix-F to Bid****METHOD OF PERFORMING THE WORK**

The Bidder is required to submit a narrative outlining the method of performing the Work. The narrative should indicate in detail and include but not be limited to:

1. Organization Chart indicating head office and field office personnel involved in management and supervision, engineering, equipment maintenance and purchasing.
2. Mobilization in Pakistan, the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for storage, communications, security and other services to be used.
3. The method of executing the Works, the procedures for installation of equipment and machinery and transportation of equipment and materials to the site.
4. Quality control / Quality assurance measures to be adopted including procedures to be followed for carrying out all tests required under specifications.

BG-1

Appendix-G to Bid

**LIST OF MAJOR EQUIPMENT – RELATED ITEMS**

The Bidder will provide a list of all major equipment and related items, under separate heading for items owned, to be purchased or to be arranged on lease by him to carry out the Works. The information shall include make, type, capacity, and anticipated period of utilization for all equipment which shall be in sufficient detail to demonstrate fully that the equipment will meet all requirements of the Specifications.

**LIST OF MAJOR EQUIPMENT**

<b>Owned Purchased or Leased</b>	<b>Description of Unit (Make, Model, Year)</b>	<b>Capacity HP Rating</b>	<b>Condition</b>	<b>Present Location or Source</b>	<b>Date of Delivery at Site</b>	<b>Period of Work on Project</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
a. Owned						
b. To be Purchased						



c. To be arranged on Lease						
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**BG-2**  
**Appendix-G to Bid**

**Equipment:**

The Bidder must demonstrate that it has the key equipment listed hereafter:

No.	PLANT/ EQUIPMENT				
	Equipment type and characteristics	Total Nos. available	Under Utilization on other projects, if applicable	Nos. waiting to be shifted to new project(s)	Min. Number Required for this Project

**BH-1**  
**Appendix-H to Bid****CONSTRUCTION CAMP AND HOUSING FACILITIES**

The Contractor in accordance with Clause 34 of the Conditions of Contract shall provide description of his construction camp's facilities and staff housing requirements.

The Contractor shall be responsible for pumps, electrical power, water and electrical distribution systems, and sewerage system including all fittings, pipes and other items necessary for servicing the Contractor's construction camp.

The Bidder shall list or explain his plans for providing these facilities for the service of the Contract as follows:

1. Site Preparation (clearing, land preparation, etc.).
2. Provision of Services.
  - a) Power (expected power load, etc.).
  - b) Water (required amount and system proposed).
  - c) Sanitation (sewage disposal system, etc.).
3. Construction of Facilities
  - a) Contractor's Office. Workshop and Work Areas (areas required and proposed layout, type of construction of buildings, etc.).
  - b) Warehouses and Storage Areas (area required, type of construction and layout).
  - c) Housing and Staff Facilities (Plans for housing for proposed staff, layout, type of construction, etc.).
4. Construction Equipment Assembly and Preparation (detailed plans for carrying out this activity).
5. Other Items Proposed (Security services, etc.). The Contractor should mention here what are his proposed environmental measures for the project as per EPA rules like treatment of wastewater and water quality etc. The Contractor shall submit a detailed EMP (Environmental Management Plan) to describe how materials are removed from site and disposed off at a safe location, prevention for the contamination of ground and surface water in neighboring areas etc. including remedial measures for adoption.
6. Detail of testing Lab with testing equipment etc.

**BI-1**  
**Appendix-I to Bid****LIST OF SUBCONTRACTORS**

I/We intend to subcontract the following parts of the Work to subcontractors. In my/our opinion, the subcontractors named hereunder are reliable and competent to perform that part of the work for which each is listed.

Enclosed are documentation outlining experience of subcontractors, the curriculum vitae and experience of their key personnel who will be assigned to the Contract, equipment to be supplied by them, size, location and type of contracts carried out in the past.

<b>Part of Works (Give Details)</b>	<b>Subcontractor (With Complete Address)</b>
<b>1</b>	<b>2</b>

**BJ-1**  
**Appendix-J to Bid**

**ESTIMATED PROGRESS PAYMENTS**

Bidder's estimate of the value of work which would be executed by him during each of the periods stated below, based on his Programme of the Works and the Rates in the Bill of Quantities, expressed in thousands of Pakistani Rupees:

<b>Month</b>	<b>Amounts (1,000 Rs.)</b>
<b>1</b>	<b>2</b>
1 <sup>st</sup> Quarter	
2 <sup>nd</sup> Quarter	
3 <sup>rd</sup> Quarter	
4 <sup>th</sup> Quarter	
-----	
-----	
-----	
<b>Bid Price</b>	

**BK-1**  
**Appendix-K to Bid**

**ORGANIZATION CHART  
FOR THE  
SUPERVISORY STAFF AND LABOUR**

BL-1

Appendix-L to Bid

## (INTEGRITY PACT)

**DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC.  
PAYABLE BY THE SUPPLIERS OF GOODS, SERVICES & WORKS IN  
CONTRACTS WORTH RS. 10.00 MILLION OR MORE**

Contract No. \_\_\_\_\_ Dated \_\_\_\_\_  
 Contract Value: \_\_\_\_\_  
 Contract Title: \_\_\_\_\_

..... [name of Supplier] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan (GoP) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoP through any corrupt business practice.

Without limiting the generality of the foregoing, [name of Supplier] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

[name of Supplier] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[name of Supplier] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [name of Supplier] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

Name of Buyer: .....  
 Signature: ..... [Seal]

Name of Seller/Supplier: .....  
 Signature: ..... [Seal]

## BM-1

## Appendix-M to Bid

**FINANCIAL COMPETENCE AND ACCESS TO FINANCIAL RESOURCES**

The financial position of the bidder shall be checked as per following details:

**1. SOUNDNESS AND ACCESS TO FINANCIAL RESOURCES:**

“The Bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credits, and other financial means, other than any contractual advance payments, to meet the financial requirements of the contract in the amount of his bid. As a minimum the Bidder must show that his resources, in term of at least his latest years working capital and line of credits, will be adequate to cover an amount equivalent to his bid price and current work commitments i.e.

[5 x working capital + Project specific lines of credit\* – 40% of current contract commitments]  
> Bid price.

Working capital is the difference between current assets and current liabilities and measures the firm’s ability to generate cash in the short term.”

*\*Any line of credit indicated for this (tendered) project needs to have been certified by the Bank and the said certificate is enclosed with this Appendix.*

**2. AVERAGE ANNUAL CONSTRUCTION TURNOVER**

Criteria	Bidders’ to list their certified yearly turnover for last 3 years
Minimum average annual construction turnover of Pak Rs. _____ calculated as total certified payments received for contracts in progress or completed, within the last 03 years.	



BN-1

Appendix-N to Bid

**PAST PERFORMANCE, CURRENT COMMITMENT, QUALIFICATION AND  
EXPERIENCE**

**1) General Construction Experience**

Requirement	Bidder to provide details	Role
Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last 5 years prior to the bid submission deadline		

**2) Contracts of Similar Size and Nature**

Requirement	Bidder to provide specific details	Role
Participation as contractor, management contractor, or subcontractor, in at least 3 Contracts within the last 5 years, each with a value of at least Rs . . . . . that has been successfully or is substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods, technology or other characteristics as indicated in these Bidding Documents.		

**BN-2**  
**Appendix-N to Bid**

**3) Personnel**

No.	Position	Total No. in the firm	Minimum requirement for the project	Total work experience (years)	Nos. already posted on other projects	Nos. being allocated for this project	Professional credit point

The Bidder must demonstrate that it has the personnel for the key positions that meet the following requirements:

**4) Data regarding past performance and present commitment of the Bidders:**

Present Commitment							
Sr. No.	Name of ongoing projects	Name of Employer	Date of Start		Progress	Remark regarding delays if applicable	Satisfactory performance certificate from Employer (Minimum requirement)

Number of projects that a bidder can undertake to construct as per PEC works by laws is aggregate Professional Credit Points (PCPs) authorized for a category of licensee divided by the PCP of construction and capital cost of single project under consideration.

## BN-3

## Appendix-N to Bid

For example C-3 category contractor should have a minimum of 15 PCPs as per table „A“ below from the Bye Laws/S.R.O. 568(I)/87 at all times and the PCP of individual project (costing say 100 million rupees) is 5 calculated on the basis of 1 PCP for every 20 million project cost. It means the contractor can have ongoing projects up to 3 (15 ÷ 5) number of this size.

Table A:-

<b>Contractor' Category</b>	<b>Limit of Construction Cost of Project (Million rupees )</b>	<b>Average annual value of work for last 3 years (million rupees)</b>	<b>Largest project value during last 5 years (Million rupees)</b>	<b>Paid up capital or net/capital worth (million rupees)</b>	<b>Minimum requirement of professional credit points (PCP credit)</b>
C-3	Upto 100	10	20	5	15

The evaluation of the personnel shall be carried out as per PEC Engineering Bye Laws 1987 and review his qualification accordingly. PCP/ minimum requirement of staff required for the contractor's works in hand should be in accordance with the provisions of PEC's works byelaws. For example, subject to the other conditional points and limits, a single registered Engineer is given 1 PCP for each year of experience in the construction and operation of engineering works (subject to a minimum of 10 PCPs and maximum of 30 PCPs). The contractor setup has to meet the minimum PCP requirements all time during the currency of the contract for engineering staff to be deployed/ already deployed.

BO-1

## Appendix-O to Bid

**Declaration of Ultimate Beneficial Owners Information**

Bidders are required to submit the subject declaration as per following format.

1. Name
2. Father's Name/Spouse's Name
3. CNIC/NICOP/Passport No.
4. Nationality
5. Residential address
6. Email address
7. Date on which shareholding, control or interest acquired in the business.
8. In case of indirect shareholding, control or interest being exercised through intermediary companies, e or other legal persons or legal arrangements in the chain of ownership or control, following additional particulars to be provided.

	2.	3	4			8.	9.	10.	
Name	Legal form (company Limited liability Partnership/ Association of Persons/Single Member Company/partnership Firm/Trust/Any other individual, body corporate (to be specified))	Date of Incorporation/Registration	Name of Registering Authority	Business Address	Country	Email Address	Percentage of Shareholding, control or interest of legal person or legal arrangement in the Company	Percentage of Shareholding, control or interest of legal person or legal arrangement in the Company	Identity of natural person who ultimately owns or controls the legal person or arrangement

9. Information about the Board of Directors (details shall be provided regarding number of shares in the capital of the company as set opposite respective names).

1.	2.	3.	4.	5.	6.	7.	8.
Name and Surname (in Block Letters)	CNIC No.(in case of foreigner, Passport No.	Father's/Husband's Name in Full	Current Nationality	Any other Nationality(ies)	Occupation	Residential address in full or the registered/principal office address for a subscribers other than natural person	Name of shares taken by cash subscribe(in figures and words)
			Total numbers of shares taken (in figures and words)				

10. Any other information incidental to or relevant to Beneficial Owner(s)  
Name and Signature  
(Person authorized to issue notice on behalf of the firm/company)

## **FORMS**

- **BID SECURITY**
- **FORM OF PERFORMANCE SECURITY**
- **FORM OF CONTRACT AGREEMENT**
- **FORM MOBILIZATION ADVANCE  
GUARANTEE/BOND**
- **INDEMNITY BOND FOR SECURED  
ADVANCE AGAINST MATERIAL  
BROUGHT AT SITE**

**BID SECURITY**

Security Executed on \_\_\_\_\_

(Date)

Name of Surety (Bank) with Address: \_\_\_\_\_

(Scheduled Bank in Pakistan)

Name of Principal (Bidder) with Address \_\_\_\_\_

Penal Sum of Security Rupees \_\_\_\_\_  
(Rs. \_\_\_\_\_)

Bid Reference No. \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at the request of the said Principal (Bidder) we, the Surety above named, are held and firmly bound unto \_\_\_\_\_ (hereinafter called the 'Employer') in the sum stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Bidder has submitted the accompanying Bid dated \_\_\_\_\_ for Bid No. \_\_\_\_\_ for \_\_\_\_\_ (Particulars of Bid) to the said Employer; and

WHEREAS, the Employer has required as a condition for considering said Bid that the Bidder furnishes a Bid Security in the above said sum from a Scheduled Bank in Pakistan or from a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan, to the Employer, conditioned as under:

- (1) that the Bid Security shall remain in force up to and including the date 28 days after the deadline for validity of bids as stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Surety is hereby waived;
- (2) that the Bid Security of unsuccessful Bidders will be returned by the Employer after expiry of its validity or upon signing of the Contract Agreement; and
- (3) that in the event of failure of the successful Bidder to execute the proposed Contract Agreement for such work and furnish the required Performance Security, the entire said sum be paid immediately to the said Employer pursuant to Clause 15.6 of the Instruction to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefor, on the prescribed form presented to him for signature enter into a formal Contract with the said Employer

in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, a Performance Security with good and sufficient surety, as may be required, upon the form prescribed by the said Employer for the faithful performance and proper fulfilment of the said Contract or in the event of non-withdrawal of the said Bid within the time specified for its validity then this obligation shall be void and of no effect, but otherwise to remain in full force and effect.

PROVIDED THAT the Surety shall forthwith pay the Employer the said sum upon first written demand of the Employer (without cavil or argument) and without requiring the Employer to prove or to show grounds or reasons for such demand, notice of which shall be sent by the Employer by registered post duly addressed to the Surety at its address given above.

**BS-2**

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Bidder) has duly performed his obligations to sign the Contract Agreement and to furnish the requisite Performance Security within the time stated above, or has defaulted in fulfilling said requirements and the Surety shall pay without objection the said sum upon demand from the Employer forthwith and without any reference to the Principal (Bidder) or any other person.

IN WITNESS WHEREOF, the above bounden Surety has executed the instrument under its seal on the date indicated above, the name and seal of the Surety being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

## SURETY

WITNESS:

1. \_\_\_\_\_  
\_\_\_\_\_

Corporate Secretary (Seal)

2. \_\_\_\_\_  
\_\_\_\_\_

Name, Title &amp; Address

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Corporate Guarantor (Seal)

PS-1

**FORM OF PERFORMANCE SECURITY**

Guarantee No. \_\_\_\_\_  
 Executed on \_\_\_\_\_  
 Expiry date \_\_\_\_\_

[Letter by the Guarantor to the Employer]

Name of Guarantor (Bank) with address: \_\_\_\_\_  
 (Scheduled Bank in Pakistan)

Name of Principal (Contractor) with address: \_\_\_\_\_  
 Penal Sum of Security (express in words and figures) \_\_\_\_\_

Letter of Acceptance No. \_\_\_\_\_ Dated \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bidding Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the request of the said Principal we, the Guarantor above named, are held and firmly bound unto the \_\_\_\_\_ (hereinafter called the Employer) in the penal sum of the amount stated above for the payment of which sum well and truly to be made to the said Employer, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has accepted the Employer's above said Letter of Acceptance for \_\_\_\_\_ (Name of Contract) for the \_\_\_\_\_ (Name of Project).

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract and of any and all modifications of said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till all requirements of Clause 49, Defects Liability, of Conditions of Contract are fulfilled.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, \_\_\_\_\_ (the Guarantor), waiving all objections and defences under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delay upon the Employer's first written demand without cavil or arguments and without requiring the Employer to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's written declaration that the Principal has refused or failed to perform the obligations under the Contract which payment will be effected by the Guarantor to Employer's designated Bank & Account Number.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in



fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.

**PS-2**

IN WITNESS WHEREOF, the above-bounden Guarantor has executed this Instrument under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

\_\_\_\_\_  
Guarantor

Witness:

1. \_\_\_\_\_

\_\_\_\_\_  
Corporate Secretary (Seal)

2. \_\_\_\_\_

\_\_\_\_\_  
Name, Title & Address

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

\_\_\_\_\_  
Corporate Guarantor (Seal)

CA-1

**FORM OF CONTRACT AGREEMENT**

THIS CONTRACT AGREEMENT (hereinafter called the “Agreement”) made on the \_\_\_\_\_ day of \_\_\_\_\_ (month) 2024 between \_\_\_\_\_ (hereafter called the “Employer”) of the one part and \_\_\_\_\_ (hereafter called the “Contractor”) of the other part.

WHEREAS the Employer is desirous that certain Works, viz \_\_\_\_\_ should be executed by the Contractor and has accepted a Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW this Agreement witnesseth as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda / Clarification as agreed or otherwise, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Contract, viz::
  - a). The Contract Agreement;
  - b). The Letter of Acceptance;
  - c). The completed Form of Bid;
  - d). Specification - Special Provision
  - e). Special Stipulations (Appendix-A to Bid);
  - f). The Particular Conditions of Contract - Part II;
  - g). The General Conditions - Part I;
  - h). Tender Drawings;
  - i). Specifications - Technical Provisions
  - j). The completed Appendices to Bid (B, C, E to N);
  - k). The priced Bill of Quantities (Appendix-D to Bid);
  - l). \_\_\_\_\_ (any other)
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy defects therein in conformity and in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed on the day, month and year first before written in accordance with their respective laws.

Signature of the Contactor

Signature of Employer

\_\_\_\_\_  
(Seal)

\_\_\_\_\_  
(Seal)

**CA-2**

Signed, Sealed and Delivered in the presence of:

Witness:

Witness:

\_\_\_\_\_

\_\_\_\_\_

(Name, Title and Address)

(Name, Title and Address)

**MG-1****MOBILIZATION ADVANCE GUARANTEE/ BOND**

Guarantee No. \_\_\_\_\_ Date \_\_\_\_\_

WHEREAS \_\_\_\_\_ (hereinafter called the 'Employer') has entered into a Contract for \_\_\_\_\_ (Particulars of Contract) with \_\_\_\_\_ (hereinafter called the "Contractor").

AND WHEREAS, the Employer has agreed to advance to the Contractor, at the Contractor's request, an amount of Rupees \_\_\_\_\_ (Rs \_\_\_\_\_) which amount shall be advanced to the Contractor as per provisions of the Contract.

AND WHEREAS, the Employer has asked the Contractor to furnish Guarantee to secure the mobilization advance for the performance of his obligations under the said Contract.

AND WHEREAS, \_\_\_\_\_ (Scheduled Bank in Pakistan) (hereinafter called the "Guarantor") at the request of the Contractor and in consideration of the Employer agreeing to make the above advance to the Contractor, has agreed to furnish the said Guarantee.

NOW, THEREFORE, the Guarantor hereby guarantees that the Contractor shall use the advance for the purpose of above-mentioned Contract and if he fails and commits default in fulfillment of any of his obligations for which the advance payment is made, the Guarantor shall be liable to the Employer for payment not exceeding the aforementioned amount.

Notice in writing of any default, of which the Employer shall be the sole and final judge, on the part of the Contractor, shall be given by the Employer to the Guarantor, and on such first written demand, payment shall be made by the Guarantor of all sums then due under this Guarantee without any reference to the Contractor and without any objection.

This Guarantee shall remain in force until the advance is fully adjusted against payments from the Interim Payment Certificates of the Contractor or until \_\_\_\_\_ (Date) whichever is earlier.

The Guarantor's liability under this Guarantee shall not in any case exceed the sum of Rupees \_\_\_\_\_ (Rs \_\_\_\_\_).

This Guarantee shall remain valid up to the aforesaid date and shall be null and void after the aforesaid date or earlier if the advance made to the Contractor is fully adjusted against payments from Interim Payment Certificates of the Contractor provided that the Guarantor agrees that the aforesaid period of validity shall be deemed to be extended if on the above-mentioned date the advance payment is not fully adjusted.

**GUARANTOR**

1. Signature \_\_\_\_\_
2. Name \_\_\_\_\_
3. Title \_\_\_\_\_

**WITNESS**

1. \_\_\_\_\_  
 \_\_\_\_\_  
 Corporate Secretary (Seal)

2. \_\_\_\_\_  
 (Name Title & Address)

\_\_\_\_\_ Corporate Guarantor (Seal)

IB-1

**INDEMNITY BOND  
FOR SECURED ADVANCE  
AGAINST MATERIALS BROUGHT AT SITE  
(ON RS.40 NONJUDICIAL STAMP PAPER)**

This Deed of Indemnity is issued by M/s. \_\_\_\_\_ (*Name of the Contractor*) in favour of M/s. \_\_\_\_\_ (*Name of the Employer*)

Whereas \_\_\_\_\_ (hereinafter called the Employer) has paid the Secured Advance against the cost of material through any Bank or like agency by any other method by virtue of the terms of the contract existing between the parties. The details of the material and their price for which secured advance is being sought for the period \_\_\_\_\_ till consumption of the material is as under:

1. \_\_\_\_\_ at Rs. \_\_\_\_\_ per \_\_\_\_\_ = Rs.
2. \_\_\_\_\_ at Rs. \_\_\_\_\_ per \_\_\_\_\_ = Rs.
3. \_\_\_\_\_ at Rs. \_\_\_\_\_ per \_\_\_\_\_ = Rs.
4. \_\_\_\_\_ at Rs. \_\_\_\_\_ per \_\_\_\_\_ = Rs.

**THEREFORE THIS DEED OF INDEMNITY WITNESSETH AS FOLLOWS:**

I/We \_\_\_\_\_ of M/s. \_\_\_\_\_ do hereby indemnify M/s \_\_\_\_\_ for all losses due to thefts, arson, pilferage, loss due to flood and inundation, shortage, deterioration and depreciation etc. through any act of Man or God or slump in the Market of any or all the materials financed or paid by the Employer on our request for financing payment against material.

I/We \_\_\_\_\_ shall indemnify \_\_\_\_\_ against any or all claims, action damages arising out of or resulting to the said material.

I/We \_\_\_\_\_ further declare that we will faithfully abide by the above declaration and solemnly affirm that we will not remove, sell, pilferage any of the materials against which M/s \_\_\_\_\_ has paid us such a secured advance and will not pledge the same with any Bank, Finance Corporation, Firm, Company, Individual or the like agency or create any change whereon in any from what so ever.

I/We \_\_\_\_\_ do hereby also declare that in the event of my/our infringement of the declaration made above \_\_\_\_\_ will be entitled to forfeit all such material and also proceed against me/us according to the relevant clause pertaining to breach of contract and further invoke the power or seek any remedies secured of \_\_\_\_\_ under the contract Agreement signed with us or otherwise available under law.

Place \_\_\_\_\_ Dated \_\_\_\_\_

Contractor \_\_\_\_\_

# **PART I -** **GENERAL CONDITIONS OF** **CONTRACT**

The General Conditions of Contract and Particular Conditions of Contract used in these Standard Bidding Documents were prepared by the International Federation of Consulting Engineers (Federation Internationale des Ingenieurs-Conseils, or FIDIC), and are commonly known as the FIDIC Conditions of Contract. (The used version is the fourth edition, 1987, reprinted in 1992 with further amendments).

The FIDIC Conditions of Contract are copyrighted and may not be copied, faxed, or reproduced. The FIDIC Conditions of Contract can be referred to in the bidding documents, and the bidders are advised to obtain copies directly from FIDIC.

Copies of the FIDIC Conditions of Contract can be obtained from:  
FIDIC Secretariat,  
P.O. Box 86,  
1000 Lausanne 12,  
Switzerland.  
e-mail: [fidic.pub@fidic.org](mailto:fidic.pub@fidic.org) – [FIDIC.org/bookshop](http://FIDIC.org/bookshop)

**PART II**  
**CONDITIONS OF PARTICULAR**  
**APPLICATION**

## **PART II - PARTICULAR CONDITIONS OF CONTRACT**

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## **PART II - PARTICULAR CONDITIONS OF CONTRACT**

### **1.1 DEFINITIONS AND INTERPRETATIONS**

- (a)(i) The Employer is *Project Implementation Unit, Education City, Govt of Sindh*. Wherever the term Client or Owner appears in the Tender Document, it shall mean the “Employer”.
- (iv) (a)(iv) The Engineer is CGD Consulting Pvt Ltd, or any other competent person appointed by the Employer, and notified to the Contractor, to act in replacement of the Engineer. Provided always that except in cases of professional misconduct, the outgoing Engineer to formulate his certifications/recommendations in relation to all outstanding matter, disputes and claims relating to the execution of the Works during his tenure.

Wherever the term Consultant or Consultants appears in the Bidding Documents, it shall mean the “Engineer” and vice-versa.

#### **Employer’s Representative**

Any person appointed by the Employer from time to time shall be deemed the Employer’s Representative, who shall have the authority to enter in to work site, inspect the work for insuring the quality.

- (a)(vii) **Labourers/ Workmen** mean such labourers/ workmen and staff as may be employed by the Contractor for the purpose of carrying out the works specified in the Contract.
- (a)(viii) "Bidder or Tenderer" means any person or persons, company, corporation, firm or joint venture submitting a Bid or Tender.
- (b)(v) Add the following at the end of the paragraph:
- The word "Tender" is synonymous with "Bid" and the word "Tender Documents" with "Bidding Document".
- (b)(ix) "Programme" means the programme to be submitted by the Contractor in accordance with Sub-Clause 14.1 and any approved revisions thereto.
- (b)(x) FIDIC means FEDERATION INTERNATIONALE DES INGENIEURS CONSEILS (International Federation of Consulting Engineers)
- (e)(i) Delete the text and substitutes:  
"Contract Price" means the sum stated in the Letter of Acceptance as payable to the Contractor for the execution and completion of the Works subject to such additions thereto or deductions therefrom as may be made and remedying of any defects therein in accordance with the provisions of the Contract.
- (h) **Approved/ Approval** means approved/ approval in writing by Engineer / Employer or their representative specified in “Conditions of Contract”.
- (i) When the terms **acceptable, satisfactory, proper** or other such general qualifying terms are used in the Contract it shall be understood that reference is made to the sole ruling and the sole judgment of the Employer representative or his Engineer.
- (j) The Word **Equivalent or Equal** where used in these documents in the general sense shall not mean similar but shall mean “**Conforming to, of Like Kind Quality and**

**Function Proprietary Items**” and **“Trade Name**” are used for the purposes of establishing a standard of **“Kind Quality and Function**” and **“Equivalent**” items, articles, things or materials will be approved if held to be **“Equivalent**” by the Engineer.

- (k) **“Schedule Progress**” means the monthly Percentage progress as described in Appendix-E of Appendices to Bid.

## 2.1 Engineer's Duties and Authority

With reference to Sub-Clause 2.1(b), the following provisions shall also apply;

The Engineer shall obtain the specific approval of the Employer before carrying out his duties in accordance with the following Clauses:

- (i) Consenting to the sub-letting of any part of the Works under Sub-Clause 4.1 “Subcontracting”.
- (ii) Certifying additional cost determined under Sub-Clause 12.2 “Not Foreseeable Physical Obstructions or Conditions”.
- (iii) Any action under Clause 10 “Performance Security” and Clauses 21, 23, 24 & 25 “Insurance” of sorts.
- (iv) Any action under Clause 40 “Suspension”.
- (v) Any action under Clause 44 “Extension of Time for Completion”.
- (vi) Any action under Clause 47 “Liquidated Damages for Delay” or Payment of Bonus for Early Completion of Works (PCC Sub-Clause 47.3).
- (vii) Issuance of “Taking Over Certificate” under Clause 48.
- (viii) Issuing a Variation Order under Clause 51, except:
  - a) in an emergency\* situation, as stated here below, or
  - b) if such variation would increase the Contract Price by less than the amount stated in the Appendix-A to Bid.
- (ix) Fixing rates or prices under Clause 52.
- (x) Extra payment as a result of Contractor’s claims under Clause 53.
- (xi) Release of Retention Money to the Contractor under Sub-Clause 60.3 “Payment of Retention Money”.
- (xii) Issuance of “Final Payment Certificate” under Sub-Clause 60.8.
- (xiii) Issuance of “Defect Liability Certificate” under Sub-Clause 62.1.
- (xiv) Any change in the ratios of Contract currency proportions and payments thereof under Clause 72 “Currency and Rate of Exchange”.

\*If in the opinion of the Engineer an emergency occurs affecting the safety of life or of the Works or of adjoining property, the Engineer may, without relieving the Contractor of any of his duties and responsibilities under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk.

The Contractor shall forthwith comply with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer.)

The following Sub-Clauses 2.5(a) & (b), 2.7 and 2.8 are added:

### **2.5 (a) Employer's Instructions**

The Employer/ Engineer through its representative may in absolute discretion and from time-to-time issue written instructions, details, directions and explanations which are hereafter collectively referred to as "Employer's Instructions". The Employer/Engineer shall have the right to reject any materials, workmanship or equipment, which does not conform to the Contract and to suspend any work that is being improperly done. The Engineer's decision as to the construction and meaning of the drawings and specifications shall be final. Precedent or opinion as to what is useful or standard practice shall not be held to affect the status of the Engineer decision in any way or to relieve the Contractor from full responsibility and compliance with all requirements of the specification and plans.

- (b) The Employer/ Engineer shall have the right to inspect and supervise the work. The inspection and supervision of the work by the Engineer shall not relieve the Contractor of his full responsibility and liability of careful and faultless execution of the work.

### **2.7 Engineer not Liable**

Approval, reviews and inspection by the Engineer of any part of the Works does not relieve the Contractor from his sole responsibility and liability for the supply of materials, plant and equipment for construction of the Works and their parts in accordance with the Contract and neither the Engineer's authority to act nor any decision made by him in good faith as provided for under the Contract whether to exercise or not to exercise such authority shall give rise to any duty or responsibility of the Engineer to the Contractor, any Subcontractor, any of their representatives or employees or any other person performing any portion of the Works.

### **2.8 Replacement of the Engineer**

"If the Employer intends to replace the Engineer, the Employer shall, not less than 14 days before the intended date of replacement, give notice to the Contractor, of the name, address and relevant experience of the intended replacement Engineer. The Employer shall not replace the Engineer with a person against whom the Contractor raises reasonable objection by notice to the Employer, with supporting particulars."

### **5.1 Language(s) and Law**

- (a) The Contract Documents, shall be drawn up in the English language  
(b) The Contract shall be subject to the Laws of Islamic Republic of Pakistan.

### **5.2 Priority of Contract Documents**

The documents listed at (1) to (6) of the Sub-Clause are deleted and substituted with the following:

- (1) The Contract Agreement;
- (2) The Letter of Acceptance;
- (3) The completed Form of Bid;
- (4) Special Stipulations (Appendix-A to Bid);
- (5) Specification - Special Provision
- (6) The Particular Conditions of Contract - Part II;
- (7) The General Conditions - Part I;
- (8) The priced Bill of Quantities (Appendix-D to Bid);
- (9) The completed Appendices to Bid (B, C, E to O);
- (10) The Drawings;
- (11) Specifications - Technical Provisions
- (12) \_\_\_\_\_ (any other)

In case of discrepancies between drawings, those of larger scale shall govern unless they are superseded by a drawing of later date regardless of scale. All Drawings and Specifications shall be interpreted in conformity with the Contract and these Conditions. Addendum, if any, shall be deemed to have been incorporated at the appropriate places in the documents forming the Contract.

### **5.3 Contract Documents are Mutually Complementary**

The Contract Documents are complementary and what is called for by any one shall be as binding as if called for by all.

### **5.5 Marginal Headlines, Titles**

The table of contents/ index, titles, headings, running headlines and marginal notes contained therein and/ or in said documents are solely to facilitate reference to the various provisions of Contract document and in no way shall affect limit or cast light upon the interpretation of provisions to which they refer in case of doubt, conflict in respect of interpretation of General Condition of Contract, shall prevail.

### **6.1 Custody and Supply of Drawings and Documents**

In line seven of Clause 6.1 General Condition of Contract Part-I after word "Certificate" add "or earlier completion / cancellation of contract".

The Sub-Clauses 6.6 and 6.7 are added:

### **6.6 Shop Drawings**

The Contractor shall submit to the Engineer for review 3 copies of all shop and erection drawings applicable to this Contract as per provision of relevant Sub-Clause of the Contract.

Review and approval by the Engineer shall not be construed as a complete check but will indicate only that the general method of construction and detailing is satisfactory and that the Engineer's review or approval shall not relieve the Contractor of any of his responsibilities under the Contract.

### **6.7 As-Built Drawings**

At the completion of the Works under the Contract, the Contractor shall furnish to the Engineer 6 copies and one reproducible of all drawings amended to conform with the Works as built. The price of such Drawings shall be deemed to be included in the Contract Price.

### **8.1 Contractor’s General Responsibilities**

In line two of Clause 8.1 General Condition of Contract Part-I after word “Works” add “mentioned in the contract and all other work if offered by him complimentary after award of tender and formed part of contract agreement however design of such work before execution shall be vetted by the Engineer”.

### **9.1 Contract Agreement**

In line two of Clause 9.1 General Condition of Contract Part-I replace the words “at the cost of the Employer” with “at the cost of the Contractor” and add the following sub paragraphs at the end:

The Contract Agreement would be made on stamp paper of an appropriate value liveable under the law. Cost of stamp duty would be borne by the Contractor.

The Contractor shall at his own cost submit to the Employer photocopies of Four (4) sets and to the Engineer two (2) sets of the Contract Documents in bound form, duly initialled and stamped by the Employer, and the Contractor for the use of the Employer and the Engineer.

Such submission shall be made within seven (7) days of signing of the Contract Agreement by the Employer and Contractor.

### **10.1 Performance Security**

The text is deleted and substituted with the following:

The Contractor shall provide Performance Security to the Employer in the prescribed form. The said Security shall be furnished or caused to be furnished by the Contractor within 28 days after the receipt of the Letter of Acceptance. The Performance Security shall be of an amount equal to **5%** of the Contract Price stated in the Letter of Acceptance. Such Security shall, at the option of the bidder, be in the form of either (a) bank guarantee from any Scheduled Bank in Pakistan or (b) bank guarantee from a bank located outside Pakistan duly counter-guaranteed by a Scheduled Bank in Pakistan as per SPPRA Rules & Regulations.

The cost of complying with requirements of this Sub-Clause shall be borne by the Contractor.

The following Sub-Clause 10.4 is added:

### **10.4 Performance Security Binding on Variations and Changes**

The Performance Security shall be binding irrespective of changes in the quantities or variations in the Works or extensions in time for completion of the Works which are granted or agreed upon under the provisions of the Contract.

#### **10.5 Approved Insurance Companies for Performance Security**

All Insurance Companies operating in Pakistan having atleast AA rating from PACRA/ JCR approved for submission of Performance Bond.

#### **13.1 Works to be in accordance with contract**

Add the following para in the end of this clause:-

The Employer/ Engineer shall have the right to retain and / or deduct from contractor's bill an adequate amount of money, if the contractor fails to perform his obligations in terms and conditions of this clause.

#### **14.1 Programme to be submitted**

In line two of Clause 14.1 General Condition of Contract Part-I after the word "consent" add "oblique approval of Employer" and in the third line the text "as the Engineer shall reasonably prescribe" is substituted by "as acceptable to the Engineer".

Add the following sub paras:-

- (a) The contractor shall submit two copies of the program prepared on Project Management Software Primavera P3 or MS Project with in 14 days from the date of receipt of letter of Acceptance/ commencement shown in first written work schedule for labour employment and material procurement.
- (b) The time schedule may be adjusted from time to time but the contractual/ completion date shall remain unchanged unless extension of time is approved by the Employer in accordance with the contract conditions.
- (c) The Contractor shall prepare and submit the programme of work in a way that 40% of his entire progress of building work shall cover Gray Structure of the building.

The Contractor shall submit the programme of work before issuance of Letter of Acceptance on bar chart and Primavera (Level-III). The Contractor must also attach monthly progress schedule in terms of Percentage of project as described in Appendix-E of Appendices to Bid which will be considered as Scheduled Progress.

The approval by the Engineers of the programme shall not relieve the Contractor or the Employer from any obligation under the contract.

#### **14.3 Cash Flow Estimate to be submitted**

The detailed Cash Flow Estimate shall be submitted within 21 days from the date of receipt of Letter of Acceptance.

Add the following Sub-Clause:

#### **14.5 Detailed Programme and Monthly Progress Report**

- a) For purposes of Sub-Clause 14.1, the Contractor shall submit to the Engineer detailed programme for the following:

- (1) Execution of Works;
  - (2) Labour Employment;
  - (3) Local Material Procurement;
  - (4) Material Imports, if any; and
  - (5) Other details as required by the Engineer.
- (b) During the period of the Contract, the Contractor shall submit to the Engineer not later than the 8<sup>th</sup> day of the following month, 10 copies each of Monthly Progress Reports covering:
- (1) A Construction Schedule indicating the monthly progress in percentage;
  - (2) Description of all work carried out since the last report;
  - (3) Description of the work planned for the next 56 days sufficiently detailed to enable the Engineer to determine his programme of inspection and testing;
  - (4) Monthly summary of daily job record;
  - (5) Photographs to illustrate progress; and
  - (6) Information about problems and difficulties encountered, if any, and proposals to overcome the same.
- (c) During the period of the Contract, the Contractor shall keep a daily record of the work progress, which shall be made available to the Engineer as and when requested. The daily record shall include particulars of weather conditions, number of men working, deliveries of materials, quantity, location and assignment of Contractor's equipment.

### **15.1 Contractor's Superintendence**

Replace Clause 15.1 of General Conditions of Contract Part-I by following

The Contractor shall be responsible to give or provide all necessary superintendence and efficient supervision during the execution of the work using his best skill and attention and as long thereafter as the Engineer may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. A competent Agent / Project Manager, registered with Pakistan Engineering Council as Professional Engineer and duly authorized through a power of attorney (whose qualification and appointment shall be approved in writing by the Engineer / Employer which approval may at any time be withdrawn) is to be constantly posted on the works and shall give his whole time to superintendence of the same.

If such approval shall be withdrawn by the Engineer/Employer the Contractor shall as soon as is practicable (having regard to the requirement of replacing him as hereinafter mentioned) after receiving written notice of such withdrawal, remove the Agent from the site and shall not thereafter employ him again on the site in any capacity and shall promptly replace him by another agent approved by the Engineer with consent of Employer.

The Agent shall receive on behalf of the Contractor, directions or instructions from the Engineer or (subject to the limitations of Clause 2 hereof) the representative of the Engineer. The approval by the Engineer of the qualifications and appointment of Contractor, his agent



or representatives for superintendence of the Work shall not relive the Contractor of any of his duties or responsibilities under the Contract. The Engineer shall have the right to remove from the site any of the Contractor's or his sub-contractor's personnel because of misconduct and/ or incompetence of which the Engineer shall be the sole judge.

In addition to the Contractor's Agent, the contractor shall employ reasonable number of Engineers. The number of Engineers employed should be in accordance with quantum of work and should be approved by the Engineer. The manpower schedule shall be submitted by the contractor alongwith work schedule for the approval of the Engineer. The Employer / Engineer shall have the right to retain and / or deduct from contractor's bills an adequate amount of money, if the contractor fails to perform his obligations in terms and conditions of this clause.

### **15.2 Language Ability of Contractor's Representative**

The Contractor's authorised representative shall be fluent in the English language. Alternately an interpreter with ability of English language shall be provided by the Contractor on full time basis.

### **15.3 Contractor's Representative**

The Contractor's authorised representative and his other professional engineers working at site shall register themselves with the Pakistan Engineering Council.

The Contractor's authorized representative at site shall be authorised to exercise adequate administrative and financial powers on behalf of the Contractor so as to achieve completion of the Works as per the Contract.

The following Sub-Clauses 16.3 and 16.4 are added:

### **16.3 Language Ability of Superintending Staff of Contractor**

A reasonable proportion of the Contractor's superintending staff shall have a working knowledge of the English language. If the Contractor's superintending staff is not fluent in English language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.

### **16.4 Employment of Local Personnel**

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour from sources within Pakistan.

#### **Safety, Security and Protection of Environment**

Add in Sub Clause (c) of clause 19.1 General Conditions of Contract Part-I, after word "Operation" The contractor shall stand liable for any loss to property, or life and shall indemnify the Employer against such claim, charges and proceedings if any.

Add Sub Clause (d):-

In order to minimize the negative impacts during construction stage proper planning to mitigate adverse impacts is, therefore, imperative. The Contractor shall carry out the mitigation measures according to the guidelines and satisfaction of the client. Mitigation measures to be taken to minimize negative impacts due to vehicular emissions, noise, vibrations, dust and exhaust gases. Mitigation measures against damage to utilities and traffic arrangement during construction are the contractor's responsibility. Contractor should

combat the problem of inadequate backfilling of trenches/ excavations. Environmental monitoring is to be performed as per environmental Monitoring Plan.

The works carried out as above shall not be measured for payment under this section directly and the cost of such works will be considered to be included in other items of work given in the Bill of Quantities.

#### **19.1.1 Safety of Employees and Works**

The Contractor shall throughout the execution and completion be responsible to take all necessary precautions for the safety of Employees on the work, and shall comply with all applicable safety laws and building codes to prevent accident or injury to persons on, about or adjacent to the places where the work is being performed. The Contractor shall provide at works site before commencement of work, sufficient and in good working condition life saving equipments, first aid kit etc.

#### **19.1.2 Watching and Lighting**

The Contractor shall in connection with the works provide and maintain at his own cost all lights, guards fencing and watching when and where necessary as required by the Engineer or the Representative of the Engineer or by any duly constituted authority for the protection of the works or for the safety and convenience of the public or others.

#### **19.3 Safety Precautions**

In order to provide for the safety, health and welfare of persons, and for prevention of damage of any kind, all operations for the purposes of or in connection with the Contract shall be carried out in compliance with the Safety Requirements of the Government of Pakistan with such modifications thereto as the Engineer may authorise or direct and the Contractor shall take or cause to be taken such further measures and comply with such further requirements as the Engineer may determine to be reasonably necessary for such purpose.

The Contractor shall make, maintain and submit reports to the Engineer concerning safety, health and welfare of persons and damage to property, as the Engineer may from time to time prescribe.

#### **19.4 Lighting Works at Night**

In the event of work being carried out at night, the Contractor shall at his own cost, provide and maintain such good and sufficient light as will enable the work to proceed satisfactorily and without danger. The approaches to the Site and the Works where the night-work is being carried out shall be sufficiently lighted. All arrangement adopted for such lighting shall be to the satisfaction of the Engineer's Representative.

#### **20.1 Care of Works**

Add Sub Para (c) & (d) at the end

(c) The Contractor shall in addition to the requirement indicated herein protect any utility and work of any kind against damage or interruption of services except as specifically directed or authorized by the Engineer. In case of any damages the same shall be repaired and or restored promptly by or at the expense of the Contractor without cost to the Employer.

- (d) The Employer/Engineer shall have the right to retain and / or deduct from contractor's bill an adequate amount of money due to the contractor if the contractor fails to perform his obligations in terms and conditions of this clause.

#### **20.4 Employer's Risks**

The Employer's Risks are:

Delete the text and substitute with the following:

- (a) insofar as they directly affect the execution of the Works in Pakistan:
- i. War and hostilities (whether war be declared or not), invasion, act of foreign enemies
  - ii. Rebellion, revolution, insurrection, or military or usurped power, or civil war;
  - iii. Ionizing radiations, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof
  - iv. Pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speeds,
  - v. Riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of his Subcontractors and arising from the conduct of the Works;
- (b) loss or damage due to the use or occupation by the Employer of any Section or part of the permanent works, except as may be provided for in the Contract.
- (c) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible; and
- (d) any operation of the forces of nature (insofar as it occurs on the Site) which an experienced contractor:-
- i. Could not have reasonably foreseen, or
  - ii. Could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures:-
    - (a) prevent loss or damage to physical property from occurring by taking appropriate measures, or
    - (b) Insure against.

#### **21.4 Exclusions**

The text is deleted and substituted with the following:

There shall be no obligation for the insurances in Sub-Clause 21.1 to include loss or damage caused by the risks listed under Sub-Clause 20.4 paras (a) (i) to (iv).

Add the following after 22.1(b)

#### **22.1 The Contractor to Protect Utilities**

- (c) The Contractor shall conduct his operations, make necessary arrangements, take suitable precautions and perform all required work incident to the protection of and avoidance of interference with power transmission, telegraph, telephone and natural gas lines, oil lines water and sewerage mains and other utilities within the areas of his operations in connection with this Contract and the cost thereof shall be borne by the

Contractor and the Contractor shall save harmless and indemnify the Employer in respect of all claims, demands, proceedings, costs, charges and expenses whatsoever arising out of or in relation to any such interference.

- (d) The Contractor shall make good, at his own cost, all damages to telephone, telegraph and electric cables or wires, sewer, water or other pipes except where the Authority, Employer or Private Party owing or responsible for the same elects to make good the damage.

All injury to the surface of the land, to the beds of water courses, Protecting Banks, riverbeds, etc. Where disturbed by the works (other than where specifically ordered by the Employer), shall be repaired by the Contractor or the Authorities concerned, at the Contractor's expense. All such making good shall be to the satisfaction of the Employer.

#### **22.4 Indemnity by Contractor**

The contractor shall pay and indemnify the employer against liability in respect of all claims proceedings, damages, cost, charges, fee and expenses incurred for no fault of employer and resulting from any act, omission or neglect of contractor, subcontractor, his agents or servants. These indemnifications, obligations shall be limited to claims, damages, loses and expenses which are attributable to bodily injury, sickness, disease or death or injury to or destruction of physical property (other than work), including consequential loss of use. Such obligation shall also be limited to the extent that such claims, damages, loses or expenses are caused in whole or in part by a breach of duty of care imposed by law on the contractor or any one directly or indirectly employed by the contractor.

#### **25.1 Evidence and Terms of Insurance**

In line three of Clause 25.1 General Conditions of Contract Part-I substitute "84 days" by "28 days".

The following Sub-Clause 25.5 is added:

#### **25.5 Insurance Company**

The Contractor shall be obliged to place all insurance relating to the Contract (including, but not limited to, the insurances referred to in Clauses 21, 23 and 24) with either National Insurance Company of Pakistan or any other insurance company operating in Pakistan having atleast AA rating from PACRA/ JCR.

The cost of complying with requirements of this Clause shall be borne by the Contractor. The Contractor shall be liable for deductible losses not covered by insurance. The Insurance Policy shall state:-

- (1) The Employer shall receive at least 30 calendar days written notice of Intended Cancellation or change effect in coverage.
- (2) The Contractor is fully responsible to provide full indemnity to Employer in respect of liability against loss or damage.

#### **26.1 Compliance with Statutes Regulations, etc.**

Add Sub Paras (c) and (d) at the end of 26.1 of General Conditions of Contract Part-I"

- (c) The Employer presupposes that the Contractor has cognizance of all laws of Pakistan pertaining to the execution of the work. The Contractor shall confirm in all respects with the provisions of any such statute, ordinance or law as aforesaid and the regulations or

by-laws of any local or other duly constituted authority which may be applicable to the works or public bodies and companies as aforesaid and shall keep the Employer indemnified against all penalties and liability of every kind for breach of any such statute, ordinance, law regulation or by-law. If the Contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the Employer/ Engineer in writing and any necessary changes shall be adjusted as provided in the Contract for changes in the work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations and without such notice to the Employer, he shall bear all costs arising there from.

- (d) The Contractor and his sub-contractors shall convey, store and make use of all explosives, dangerous petroleum acetylene, carbide of calcium and other similar material provided by them for use in or on the works in strict accordance with the provision of all laws, orders and regulations that are in force at the Site or may be issued from time to time by the Government.

### **29.2 Notices to Adjoining Property Owners**

The Contractor shall send or cause to be sent written notices to Owners of property adjacent to the Site or which may be affected in any way by the performance of the work contemplate notifying them as to the extent of the work included in so far as it affects surrounding property and complying with local ordinance and laws.

### **29.3 Giving of Notices and Payment of Fees**

The Contractor shall give all notices and pay all fees and charges required to be given or paid be any national or state statute, ordinance or other law or any regulation or by-law of any local or other duly constituted authority in relation to the execution of the work or of any temporary works and by the rule and regulations of all public bodies and companies whose property of rights are affected or may be affected in any way by the works or any temporary works.

### **30.2 Transport of Contractor's Equipment or Temporary Work,**

In line six of Clause 30.2 General Conditions of Contract Part-I, after word "bridge" add "or gas line or any kind of utility lines".

### **30.3 Transport of Material or Plant**

In line one of Clause 30.3 General Conditions of Contract Part-I after word "bridge" add "gas line, or any kind of utility lines".

### **31.3 Co-operation with other Contractors**

During the execution of the Works, the Contractor shall co-operate fully with other Contractors working for the Employer at and in the vicinity of the Site and also shall provide adequate precautionary facilities not to make himself a nuisance to local residents and other Contractors.

### **33.1 Clearance of Site on Completion**

At the end of Clause 33.1 General Conditions of Contract Part-I add following: -

The Employer/ Engineer shall have the right to retain an adequate amount of money due to the Contractor until the site is cleaned up and all damages made good.

**34.2 Rates of Wages and Conditions of Labour**

The contractor shall pay rates of wages and observe conditions of labour not less favorable than those established for the trade or industry where the work is carried out. In the absence of any rates of wages or conditions of labour so established, the Contractor shall pay rates of wages and observe conditions of labour which are not less favorable than the general level of wages and conditions observed by other employers whose general circumstances in the trade or in industry in which the Contractor is engaged are similar.

**34.3 Employment of Persons in the Service of Others**

The Contractor shall not recruit his staff and labour from amongst the persons in the services of the Employer or the Engineer, except with the prior written consent of the Employer or the Engineer, as the case may be.

**34.4 Housing for Labour**

Save insofar as the Contract otherwise provides, the Contractor shall provide and maintain such housing accommodation and amenities as he may consider necessary for all his supervisory staff and labor, employed for the purposes of or in connection with the Contract including all fencing, electricity supply, sanitation, cookhouses, fire prevention, water supply and other requirements in connection with such housing accommodation or amenities. On completion of the Contract, unless otherwise agreed with the Employer, the temporary camps or housing provided by the Contractor shall be removed and the Site reinstated, to its original condition, all to the approval of the Engineer.

**34.5 Health and Safety**

Due precautions shall be taken by the Contractor, and at his own cost, to ensure the safety of his staff and labour at all times throughout the period of the Contract. The Contractor shall further ensure that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements.

**34.6 Epidemics**

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government, or the local medical or sanitary authorities, for purpose of dealing with and overcoming the same.

**34.7 Supply of Water**

The Contractor shall, so far as is reasonably practicable, having regard to local conditions, provide on the Site, to the satisfaction of the Engineer or his representative, adequate supply of drinking and other water for the use of his staff and labour.

**34.8 Alcoholic Liquor or Drugs**

The Contractor shall not, otherwise than in accordance with the Statutes, Ordinances and Government Regulations or Orders for the time being in force, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or suffer any such importation, sale, gift, barter or disposal by his Subcontractors, agents, staff or labour.

**34.9 Arms and Ammunition**

The Contractor shall not give, or otherwise dispose of to any person or persons, any arms or ammunition of any kind or permit or suffer the same as aforesaid.

#### **34.10 Festivals and Religious Customs**

The Contractor shall in all dealings with his staff and labour have due regard to all recognized festivals, days of rest, religious, and other customs.

#### **34.11 Disorderly Conduct**

The Contractor shall at all times take all reasonable precautions to prevent any unlawful riotous or disorderly conduct by or amongst staff and labour and for the preservation of peace and protection of persons and property in the neighborhood of the Works against the same.

#### **34.12 Compliance by Subcontractors**

The Contractor shall be responsible for compliance by his Subcontractors of the provisions of this Clause.

Add the following Sub-Clauses:

#### **34.13 Day and Night Work and Work on Sundays or Holidays**

Unless otherwise stated in the Contract, the construction operations can be maintained for 24 HOURS, subject to security clearance. Approvals and all official timings shall remain as per contract. No work shall be carried out on Site on Sundays (locally recognised as day of rest) and on gazetted holidays, without the consent in writing of the Engineer except if the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the works in which case the Contractor shall immediately advise the Engineer. The Engineer shall not unreasonably withhold any such consent save in exceptional circumstances, nor do so if work on rest days or on gazetted holidays is considered by the Contractor to be necessary to meet the Time for Completion.

In case the contractor needs to work after normal working hours or on Sunday or holidays, he shall get specific approval before hand from the Engineer giving at least 2 days advance written notice. In such case, the contractor undertakes his liability to pay the Engineer for such extra working hours (beyond normal working hours) calculated on the basis of actual extra hours at the rate of 1.5 times of approved man-month rate of the Engineer's staff on duty on overtime payable to the Engineer by the 15<sup>th</sup> day of next month.

If the contractor works in night then he will have sufficient lighting arrangement at site of work and at way leaves also. He will also take necessary measures to avoid any accident.

#### **35.2 Records of Safety and Health**

The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.

#### **35.3 Reporting of Accidents**

The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition notify the Engineer immediately by the quickest available means.

The following Sub-Clause 36.6 is added:

#### **36.6 Use of Pakistani Materials and Services**

The Contractor shall, so far as may be consistent with the Contract make the maximum use of materials, supplies, plant and equipment indigenous to or produced or fabricated in Pakistan and services, available in Pakistan provided such materials, supplies, plant, equipment and services shall be of required standard.

#### **41.1 Commencement of Works**

The text is deleted and substituted with the following:

The Contractor shall commence the Works on Site within the period named in Appendix-A to Bid from the date of receipt by him from the Engineer of a written Notice to Commence. Thereafter, the Contractor shall proceed with the Works with due expedition and without delay.

Add the following sub-clause: -

#### **46.1 Rate of Progress**

At the end of the sub-clause add following: -

The Contractor shall ensure that rate of progress does not fall below 20% of Scheduled Progress as reflected in the programme of work (submitted before issuance of letter of acceptance).

If for any reason, which does not entitle the Contractor to an extension of time, the rate of progress of the Works or any Section is at any time, in the opinion of the Engineer, is below 20% of Schedule Progress as reflected in the programme of work, then the Client will have prerogative to either terminate the contract or reduce/ delete portion of work if the Contractor fails to improve the progress within 45 days of receipt of notice under this Clause.

#### **47.3 Bonus for Early Completion of Works**

The Clause is deleted in its entirety.

#### **48.2 Taking over of Sections or Parts.**

At the end add;

“Taking over of sections or parts may be considered at the sole discretion of Employer / Engineer”.

#### **51.2 Instructions for Variations**

In second line of Clause 51.2 General Conditions of Contract, after the word "Engineer", add the words "in writing".

#### **52.1 Valuation of Variations**

In the thirteenth line of Clause 52.1 General Conditions of Contract, after the words “Engineer shall” the following is added:

“Within a period not exceeding one-eighth of the completion time subject to a minimum of 56 days from the date of disagreement whichever is later”.

Add following;



“If the rates and prices in the contract shall not be applicable in the opinion of the Engineer new rates shall be fixed by the Engineer on twenty percent (20%) as contractor’s overhead and profit on the basic cost-plus applicable taxes.

#### **52.4 Day work**

In line one of Clause 52.4 General Conditions of Contract Part-I after word “Engineer” add with “consent of Employer”

#### **53.4 Failure to Comply**

Delete this Sub-Clause in its entirety and substituted with the following

“If the Contractor fails to comply with any of the provisions of this Clause i.e. 53, the Contractor shall not be entitled to any additional payment, and the Employer shall be discharged from any liability in connection with the claim”.

#### **54.5 Condition of Hire of Contractor's Equipment**

The following paragraph is added:

The Contractor shall, upon request by the Engineer at any time in relation to any item of hired Contractor's Equipment, forthwith notify the Engineer in writing the name and address of the Owner of the equipment and shall certify that the agreement for the hire thereof contains a provision in accordance with the requirements set forth above.

#### **56.1 Works to be Measured**

In line two of Clause 56.1 General Conditions of Contract Part-I after word “Works” add “deviations / amendments”.

#### **59.4 Payments to Nominated Sub-Contractors**

The Contractor shall pay to the nominated Subcontractor the amounts which the Engineer certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with Clause 58 [Provisional Sums], except as stated in Sub-Clause 59.5 [Certification of Payments].

#### **59.5 Certification of Payments & Nominated Subcontractors**

Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Engineer may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

- a) submits reasonable evidence to the Engineer, or
- b)
  - i) satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and
  - ii) submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the Contractor’s entitlement,

then the Employer may (at his sole discretion) pay direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence

described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Employer, the amount which the nominated Subcontractor was directly paid by the Employer.

### **60.1 Monthly Statement**

Sub-Clause 60.1 of the General Conditions of Contract is deleted and is substituted with the following Sub-Clause.

The Contractor shall submit on the basis of the joint measurement of work done under clause 56.1, to the Engineer after the end of each month, Six (6) copies, each signed by the Contractor's representative approved by the Engineer in accordance with Sub-Clause 15.1, of a statement, in a tabulated form approved by the Engineer, showing the amounts to which the Contractor considers himself to be entitled. The statement shall include the following items, as applicable, which shall be taken into account in the sequence listed:

- (a) The value of the works executed up to the end of the month in question.
- (b) The actual value certified for payment for the works executed up to the end of the previous month.
- (c) The value of the executed works for the month in question, obtained by deducting (b) from (a);
- (d) The value of any variation executed up to the end of the month in question, less the amount certified in the previous Interim Payment Certificate;
- (e) Any amount reflecting changes in cost and legislation, pursuant to Clause 70;
- (f) any amount to be withheld for retention, determined by applying the percentage of retention stated in the Appendix A to Bid, to the amount due to the contractor, until the amount so retained by the Employer reaches the limit of Retention Money (if any) stated in the Appendix to Bid;
- (g) Any other additions or deductions which may have become due in accordance with the Contract or otherwise.

After verification of monthly statement by the Engineer, the contractor shall make six (6) copies of the same on his own cost and submit the same to the Engineer.

### **60.2 Monthly Payments**

Following paragraph is added at the end of the Clause.

The Engineer shall not be bound to issue an Interim Payment Certificate if the Contractor has not submitted the progress reports in accordance with paragraph (b) of Clause 14.5 and such information as shall be mutually agreed in writing between the Employer and the Contractor.

### **60.10 Time for Payment**

The text is deleted and substituted with the following:

The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other terms of the Contract, shall, subject to Clause 47, be paid by the Employer to the Contractor within 30 days after such Interim Payment Certificate has been jointly verified by Employer and Contractor, or, in the case of

the Final Certificate referred to in Sub Clause 60.8, within 60 days after such Final Payment Certificate has been jointly verified by Employer and Contractor; Provided that the Interim Payment shall be caused in 42 days and Final Payment in 60 days in case of foreign funded project.

#### **60.11 Financial Assistance to Contractor**

Financial assistance shall be made available to the Contractor by the Employer as following:

- (a) An interest-free Mobilization Advance of 10% of the Contract Price stated in the Letter of Acceptance shall be paid by the Employer to the Contractor in two equal parts upon submission by the Contractor of a Mobilization Advance Guarantee for the full amount of the Advance in the specified form from a Scheduled Bank in Pakistan as per PPRA rules.
  - (1) First part within 14 days after signing of the Contract Agreement; and
  - (2) Second part within 42 days from the date of payment of the first part, subject to:
    - i). Satisfaction of Engineer regarding mobilization of contractor on site.
    - ii). Provision of Engineer facilities as per clause 11 of Specifications – Special provision.
- (b) This Advance shall be recovered @ 10% of each bill of the contractor till the time the whole of the Mobilization Advance is recovered before the date of completion of works as per Clause 43 hereof.

On full recovery of the Mobilization Advance, the Employer will return the said guarantee to the Contractor duly discharge. However, the Employer will be at liberty to encash the Bank Guarantee of the Contractor, if the Contractor fails to extend the said guarantee 15 days before the expiry date of the guarantee.

#### **63.1 Default of Contractor**

The following para is added at the end of the Sub-Clause:

Provided further that in addition to the action taken by the Employer against the Contractor under this Clause, the Employer may also refer the case of default of the Contractor to Pakistan Engineering Council for punitive action under the Construction and Operation of Engineering Works Bye-Laws 1987, as amended from time to time.

#### **65.2 Special Risks**

The text is deleted and substituted with the following:

The Special Risks are the risks defined under Sub-Clause 20.4 sub paragraphs (a) (i) to (a) (v).

#### **65.3 Damage to Work by Special Risks**

In first line of Clause 65.3 General Conditions of Contract Part-I after word “on” delete the words “ or near or in transit” and in line five after word “plant” add word “on site” and delete all words after “damaged”.

**65.8. Payment if Contract Terminated**

Sub Para (b) of clause 65.8 is replaced with following:-

The cost of materials, plant or goods of the Contractor which has been delivered at site for execution of work, such material, plant or goods becoming property of the Employer upon such payment being made by him.

**67.3 Arbitration**

In the sixth to eighth lines of Clause 67.3 General Conditions of Contract Part-I, the words “shall be finally settled .....appointed under such Rules” are deleted and substituted with the following:

“shall be finally settled under the provisions of the Arbitration Act, 1940 as amended or any statutory modification or re-enactment thereof for the time being in force”.

Add the following paragraph:

The place of arbitration shall be Karachi, Pakistan.

**68.1 Notices to Contractor**

Add the following paragraph:

For the purposes of this Sub-Clause, the Contractor shall, immediately after receipt of Letter of Acceptance, intimate in writing to the Employer and the Engineer by registered post, the address of his principal place of business or any change in such address during the period of the Contract.

**68.2 Notices to Employer and Engineer**

For the purpose of this Sub-Clause, the respective addresses are:

The Employer is:

*Chief Engineer*

*Real Estate Division*

*State Life Insurance Corporation of Pakistan.*

*5TH Floor, State Life Building No. 09,*

*Dr. Ziauddin Ahmed Road, Karachi.*

*Phone: 021-99206168,*

*021-99206861,*

*0345-2163057.*

*Email: [Imran.usmani@statelife.com.pk](mailto:Imran.usmani@statelife.com.pk)*

The Engineer/ Consultant is:

*Name: Mr. Mukhtar Enterprise Studio for Architecture. (MESA)*

*Address: Office No. 302, 3rd Floor, Building No. 52-C, Lane No 01, Al-Murtaza Commercial, Phase VIII, D.H.A, Karachi.*

*Tel / Cell No.: 021-37297002*

*Email: [info@mesa.com.pk](mailto:info@mesa.com.pk)*

**69.3 Payment on Termination**

In line one of Clause 69.3 General Conditions of Contract Part-I after word “termination” add “except for clause 65 or no fault of contractor” and in line five word “any loss” is replaced with “work completed”.

**70.1 Increase or Decrease of Cost**

Sub-Clause 70.1 is deleted in its entirety, and substituted with the following:  
The amounts payable to the Contractor, pursuant to Sub-Clause 60.1, shall be adjusted in respect of the rise or fall in the cost of labor, materials, and other inputs to the Works, by applying to such amount the formula prescribed in this Sub-Clause.

**(a) Other Changes in Cost**

To the extent that full compensation for any rise or fall in costs to the Contractor is not covered by the provisions of this or other Clauses in the Contract, the unit rates and prices included in the Contract shall be deemed to include amounts to cover the contingency of such other rise or fall of costs.

**(b) Adjustment Formula**

The adjustment to the monthly statements in respect of changes in cost shall be determined from the following formula:-

$$P_n = A + b \frac{L_n}{L_o} + c \frac{M_n}{M_o} + d \frac{E_n}{E_o} + \dots$$

Where:

$P_n$  is a price adjustment factor to be applied to the amount for the payment of the work carried out in the subject month, determined in accordance with Paragraph 60.1 (a), and with Paragraphs 60.1 (b) and (e), where any variations and daywork are not otherwise subject to adjustment;

$A$  is a constant, specified in Appendix-C to Bid, representing the nonadjustable portion in contractual payments;

$b, c, d, \text{ etc.}$ , are weightages or coefficients representing the estimated proportion of each cost element (labour, cement and reinforcing steel etc.) in the Works or Sections thereof, net of Provisional Sums and Prime Cost; the sum of  $A, b, c, d, \text{ etc.}$ , shall be one;

$L_n, M_n, E_n, \text{ etc.}$ , are the current cost indices or reference prices of the cost elements for month “ $n$ ”, determined pursuant to Sub-Clause 70.1(d), applicable to each cost element; and

$L_o, M_o, E_o, \text{ etc.}$ , are the base cost indices or reference prices corresponding to the above cost elements at the date specified in Sub-Clause 70.1(d).

**(c) Sources of Indices and Weightages**

The sources of indices shall be those listed in Appendix-C to Bid, as approved by the Engineer. As the proposed basis for price adjustment, the Contractor shall have submitted with his bid the tabulation of Weightages and Source of Indices if different than those given in Appendix-C to Bid, which shall be subject to approval by the Engineer.

**(d) Base, Current, and Provisional Indices**

The base cost indices or prices shall be those prevailing on the day 28 days prior to the latest date for submission of bids. Current indices or prices shall be those prevailing on the day 28 days prior to the last day of the period to which a particular monthly statement is related. If at any time the current indices are not available, provisional indices as determined by the Engineer will be used, subject to subsequent correction of the amounts paid to the Contractor when the current indices become available.

**(e) Adjustment after Completion**

If the Contractor fails to complete the Works within the Time for Completion prescribed under Clause 43, adjustment of prices thereafter until the date of completion of the Works shall be made using either the indices or prices relating to the prescribed time for completion, or the current indices or prices, whichever is more favorable to the Employer, provided that if an extension of time is granted pursuant to Clause 44, the above provision shall apply only to adjustments made after the expiry of such extension of time.

**(f) Weightages**

The weightages for each of the factors of cost given in Appendix-C to Bid shall be adjusted if, in the opinion of the Engineer, they have been rendered unreasonable, unbalanced, or inapplicable as a result of varied or additional work executed or instructed under Clause 51. Such adjustment(s) shall have to be agreed in the variation order.

**71.1 Currency Restrictions**

Delete this Sub-Clause in its entirety:

Add the following Sub-Clause:

**72.1 Rates of Exchange**

Sub-Clause 72.1 is deleted in its entirety.

**73.1 Payment of Income Tax**

The Contractor, Subcontractors and their employees shall be responsible for payment of all their income tax, super tax and other taxes on income arising out of the Contract and the rates and prices stated in the Contract shall be deemed to cover all such taxes.

Add the following Sub-Clause:

**73.4 Adherence to Labour Laws**

The contractor shall be responsible to adhere to all labour laws whether central or provincial and get themselves registered with the relevant department including but not limited to department of Sindh Employees Social Security Institution Karachi (S.E.S.S.I.) and EOBI department and shall be responsible to pay all dues in this regard to the concerned department. The employer reserves the right to ask the contractor to provide evidence of registration and payments if and when required. Furthermore the contractor shall indemnify the employer and the engineer for any claim/payments etc. in this regard.

**74.1 Integrity Pact**

If the Contractor or any of his Subcontractors, agents or servants is found to have violated or involved in violation of the Integrity Pact signed by the Contractor as Appendix-L to his Bid, then the Employer shall be entitled to:

- (a) recover from the Contractor an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by the Contractor or any of his Subcontractors, agents or servants;
- (b) terminate the Contract; and
- (c) recover from the Contractor any loss or damage to the Employer as a result of such termination or of any other corrupt business practices of the Contractor or any of his Subcontractors, agents or servants.

The termination under Sub-Para (b) of this Sub-Clause shall proceed in the manner prescribed under Sub-Clauses 63.1 to 63.4 and the payment under Sub-Clause 63.3 shall be made after having deducted the amounts due to the Employer under Sub-Para (a) and (c) of this Sub-Clause.

**75.1 Termination of Contract for Employer's Convenience**

The Employer shall be entitled to terminate the Contract at any time for the Employer's convenience after giving 56 days prior notice to the Contractor, with a copy to the Engineer. In the event of such termination, the Contractor;

- (a) Shall proceed as provided in Sub-Clause 65.7 hereof; and
- (b) Shall be paid by the Employer as provided in Sub-Clause 65.8 hereof

Add the following Sub-Clause:

**76.1 Liability of Contractor**

The Contractor or his Subcontractors or assigns shall follow strictly, all relevant labour laws including the Workmen's Compensation Act and the Employer shall be fully indemnified for all claims, damages etc. arising out of any dispute between the Contractor, his Subcontractors or assigns and the labour employed by them.

Add the following Sub-Clause:

**77.1 Joint and Several Liabilities**

If the Contractor is a joint venture of two or more persons, all such persons shall be jointly and severally bound to the Employer for the fulfillment of the terms of the Contract and shall designate one of such persons to act as leader with authority to bind the joint venture. The composition or the constitution of the joint venture shall not be altered without the prior consent of the Employer.

Add the following Sub-Clause:

**78.1 Details to be Confidential**

The Contractor shall treat the details of the Contract as private and confidential, save in so far as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the prior consent in writing of the Employer or the Engineer. If any dispute arises as to the

necessity of any publication or disclosure for the purpose of the Contract, the same shall be referred to the decision of the Engineer whose award shall be final.



**SPECIFICATION -**  
**SPECIAL PROVISION**

# SPECIFICATIONS - SPECIAL PROVISIONS

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## SPECIFICATIONS - SPECIAL PROVISIONS

### 1. DESCRIPTION OF PROJECT

#### 1.1. General

The Employer intends to do the Construction work of “REHABILITATION/ RENOVATION OF ALL FLOORS OF STATE LIFE INSURANCE CORPORATION BUILDING -09 DR ZIAUDDIN AHMED ROAD KARACHI.”

### 2. THE SITE

#### 2.1. Site of Works

The Site of the Works is the area for construction lying within the right-of-way lines, boundaries and limits shown on the Drawings and any such additional areas adjacent thereto as may be designated by the Engineer subject to approval of Employer from time to time for the construction to be performed under the Contract, and all such areas and additional areas shall be comprised in the Site as defined in Clause 1 of the Conditions of Contract.

The Employer will give to the Contractor possession of the area designated and defined as the Site and shown on the drawing as may be required to implement as much of the Works, when the Engineer’s Notice to Commence the Works is given.

### 3. THE WORKS UNDER THE CONTRACT

#### 3.1. General Description

The Contract comprises to construct the work in all respect with the provision of plant/equipment, labor and material required for execution, completion, the execution and completion of the Works, remedying of any defects therein, maintenance of utility services and everything whether of a temporary or permanent nature required in and for such execution, completion, remedying and maintenance so far as the necessity for providing the same is specified or can reasonably be inferred from the Contract.

The following description of the Works to be performed under this Contract is general in nature and is not intended to describe all of the facilities to be provided under this Contract.

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### 4. GENERAL RULES OF SPECIFICATIONS

#### a) Specification or as Specified

Specification” or “as specified” refers to the specifications outlined in these Documents and where no specifications are available for any work or where the same are found not applicable then the relevant applicable ASTM or BSS specifications or equivalent standards shall apply in the same order.

Any item for which no specifications are outlined but which are identified on drawings, shall be completed according to the standards as per ASTM / BSS, these include items that may be added in the future. The Employer / Employer’s Representative may supplement such specifications during the progress of work. All materials and processes used for these items

shall be subjected to standard testing and, if found below the pertinent ASTM / BSS standards, shall be removed from the site immediately at Contractor's expense.

**b) Standards and Codes**

Wherever reference is made in the specifications to the respective standards and codes in accordance to which goods and materials are to be furnished, and work is to be performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly set forth in the Contract.

**c) Materials and Processes**

All goods and materials to be incorporated in the Works shall be new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.

**d) Equivalent Materials, Processes, etc.**

Where specific materials, processes, etc. are specified and the same are not available other alternative materials and processes which ensure an equal or higher quality than those specified will be accepted subject to the Employer / Employer's Representative's prior review and written approval. Differences between those specified and the proposed alternatives must be fully described in writing by the Contractor and submitted to the Employer / Employer's Representative at least 30 days prior to the date when the Contractor desires the Employer / Employer's Representative's approval who may give such approval after determining that the alternative proposed ensures equal or higher quality.

**e) Approved, Directed, Instructed**

Approved, directed, instructed means the approval, etc. of the Employer / Employer's Representative unless otherwise stated.

**f) Alternatives**

Where alternative materials, processes etc., are specified the selection will depend on local conditions and discretion rests with the Employer / Employer's Representative whose decision shall be final and binding.

**g) Catalogues / Standards / Manufacturer's Instructions, etc.**

Wherever the manufacturer's/supplier's instructions, manuals, guarantees and ASTM/BSS Standards are referred to in the specifications and details of Bills of Quantities; all such literature shall be submitted by the Contractor to the Employer / Employer's Representative for due checking, approval and record.

**h) Applicability**

Unless stated or specified else-where to the contrary these General Rules shall apply to all sections of work irrespective of their sequence, location and description.

**5. DRAWINGS**

**5.1. Bid Drawings**

Bid Drawings issued with the Bid Documents, called the Tender Drawings, show scope of the work to be performed by the Contractor. The Drawings are generally in sufficient detail so as to be used as a basis for construction, fabrication and for placing orders for materials

subject to corrections based on the future issue of supplementary Drawings as provided under Sub-Clause 5.2 hereof.

## **5.2. Construction Drawings, Supplementary Drawings**

After award of Contract, the Contractor shall carry out “Joint Survey” at Site of Works in pursuance to Sub-Clause 6.4, Specifications - Special Provisions. The Contractor shall submit to the Engineer “Joint Survey”, duly signed, dated and stamped by the representatives of the Employer, Consultant and Contractor.

Simultaneously, the Contractor shall submit to the Engineer detailed “Work Programme” in terms of Sub-Clause 14.1 Conditions of Contract.

After receipt of “Joint Survey” and “Work Programme” from the Contractor, the Engineer will start issuing Construction Drawings to the Contractor. The Engineer shall have authority to issue to the Contractor, from time to time, such Supplementary Drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and completion of the Works and the remedying of any defects therein. The Contractor shall follow these Drawings.

The Contractor shall give notice to the Engineer regarding the part of the Drawings which in his opinion contain discrepancies or are not clear. The Engineer shall issue necessary clarifications or Supplementary Drawings in greater details as required to execute the Works. These Supplementary Drawings showing changes from the Bid Drawings, in the opinion of the Contractor, shall be reviewed by the Engineer for his determination of adjustment of the Contract Price under Clause 51 and 52 of the Conditions of Contract.

## **5.3. Definition of Term Drawings**

The term Drawings as used in the Specifications means the Drawings referred in Clauses 5.1 and 5.2 hereof.

## **5.4. Checking of Drawings**

The Contractor shall check all Drawings carefully as soon as practicable after receipt thereof, and shall promptly notify the Engineer of any errors discovered.

## **5.5. Copies of Drawings**

Drawings will be issued to the Contractor and the Employer as described below.

### **5.5.1. Bid Drawings**

One (1) set each of the Bid Drawings will be issued to the Contractor and Employer along with Bid Documents. Additional sets will be provided at cost of reproduction upon written request of the Contractor.

### **5.5.2. Construction Drawings / Supplementary Drawings**

One (1) print of each Construction Drawings / Supplementary Drawing will be issued to the Contractor and Employer free of charge. Additional sets will be provided at cost of reproduction upon written request of the Contractor.

## **5.6. Drawings to be furnished by the Contractor / As-Built Drawings**

The Contractor shall submit to the Engineer for review of such drawings as required under the Contract, sufficiently in advance of the work intended to be executed.

The Contractor shall, at all times, keep on Site a separate set of prints on which all significant changes between the work shown on the Drawings and that which is actually constructed, shall be noted neatly, accurately and promptly as the work progresses. The Subcontractor(s) for plumbing, mechanical and electrical shall, at all times, keep on Site, a separate set of prints of the drawings (showing their parts of the Works) on which all significant changes between the work shown on the Drawings and that which is actually constructed, shall be noted neatly, accurately and promptly as the work progresses. Such drawings shall show the exact physical location and configuration of the works as actually installed.

The Contractor shall, within fourteen (14) days of issuance Taking-Over Certificate for whole of the Works, furnish to the Engineer for his approval two (2) copies of such marked up drawings. One (1) copy of each of the marked-up drawings approved by the Engineer shall be returned to the Contractor by the Engineer and these shall be used for the preparation of the As - Built Drawings.

The Contractor shall furnish to the Engineer six (6) complete sets of all As -Built Drawings as well as AutoCAD soft copy within thirty (30) days of receipt of drawings stated above, from the Engineer.

## **5.7 Shop Drawings & Design**

The Contractor to prepare and provide detailed shop drawings & design, for all the required items as per the instructions and approval of the Employer/ Engineer and as mentioned in Bidding documents and drawings including but not limited to Architectural, Structural, Road works, Hard & Soft Landscaping, Electrical, Water Supply, Drainage, ICT or any related electro-mechanical works apart from Bar-bending schedule, etc. All drawings should be prepared based on the rules, regulation and requirements of the concerned departments and should be prepared electronically on latest version of AutoCAD, hard copies along with soft copies on CD's shall be submitted for the approval of Engineer as per the Nos. required in Scope of Work.

Any item which is neither shown on the drawing not mentioned in the Bill of Quantities or Specification but is a pre-requisite to carryout, the contractor is required to prepare shop drawing of the missing/ required items, distributed among the rates and prices entered for the related items of works and shall be considered to be included in the contract price. The decision of the Engineer shall be final and binding on the Contractor unless before the deadline for submission of Bids, such discrepancies are to be clarified. The clarifications in either case would be sent to all bidders as an Addendum.

## **6. SETTING OUT OF WORK AND SURVEY**

### **6.1. Reference Points, Lines**

The Contractor shall establish bench marks and / or reference line at the Site in accordance with the instructions of the Engineer. The Contractor shall set out its work from these bench marks and / or lines.

### **6.2. Verification**

The Engineer and the Employer may make checks as the work progress to verify lines and grades established by the Contractor and to determine the conformance of the work as it progresses with the requirements of the Drawings and Specifications. Such checking by the Engineer shall not relieve the Contractor of his responsibility to perform all work in accordance with the Drawings and Specifications and the lines and grades given therein.

### **6.3. Survey Instruments**

The Contractor shall maintain at the Site the requisite surveying instruments in perfect working conditions for the use of the Engineer's Representative to check levels and lines of the work at all times. These instruments shall include (but not limited to) One Total Station, Adequate nos. of Levels, theodolites, Tapes, etc.

### **6.4. No work without Joint Survey**

The Contractor shall not start the excavation and / or embankment works until the Joint Survey has been done to establish the existing/ original ground levels (i.e. National Surface Level or NSL).

## **7. APPROVAL OF MATERIALS AND PLANT**

### **7.1. Quality of Materials**

All materials, fixtures, fittings, supplies and plant furnished under the Contract shall be new and unused, standard first grade quality and of the best workmanship and design. No inferior or low-grade materials, supplies or articles will be either approved or accepted, and all work of assembly and construction shall be done in a first-class and workmanlike manner. In asking for prices for materials intended for delivery to the Site and incorporation in the Works under any portion of these Specifications, the Contractor shall provide the manufacturer or supplier with complete information as may be necessary to secure compliance to this Clause and, in every case, he shall quote this Clause in full to each such manufacturer or supplier.

The Employer will select the manufacturer of his choice and approval will be conveyed to the Engineer and Contractor.

### **7.2. Submission of Samples and Data**

As soon as practicable after award of Contract, the Contractor shall submit for the approval of the Engineer drawings, catalogues, diagrams and other descriptive data for all mechanical, electrical, architectural and such other materials and plant designated by the Engineer subject to approval of Employer, which the Contractor proposes for use under this Contract. For certain materials and plant, data may be required to be submitted in accordance with a detail form furnished by the Engineer. Samples of materials (1 set) each shall be submitted by the Contractor to the Engineer and the Employer at Contractor's cost for approval sufficiently in advance of the materials intended to be incorporated in the Works.

### **7.3. Testing**

Testing, except as otherwise specified herein, shall be performed by a testing agency as proposed by the Contractor and approved by the Engineer, at no extra cost to the Employer. The Engineer/ Employer may require all testing to be carried out under their supervision only.

The quality control testing shall be performed by the Contractor's competent personnel in accordance with a site testing as approved by the Engineer/ Employer.

The Contractor shall keep a complete record of all quality tests programme performed on Site.



#### **7.4. Testing Laboratory Certificates**

The Engineer may accept a certificate from a commercial testing laboratory, satisfactory to him, certifying that the product has been tested within a period acceptable to the Engineer and that it conforms to the requirements of these Specifications. The Employer may carryout testing from independent laboratory at the cost of the Contractor.

#### **7.5. Inspection**

All material and Plant furnished and all work performed under this Contract will be subject to inspection by the Engineer/ Employer or Employer's Representative at all times and in all states of completion both off-Site and on-Site. The Contractor shall furnish promptly without additional charge, all facilities, labour and materials reasonably needed for performing such inspection and testing as may be required by the Engineer/ the Employer or Employer's Representative.

#### **7.6. Approved Sample at Site**

The Contractor shall, at all times, keep on the Site approved samples. All such samples shall be made available to the Engineer/ Employer as and when required.

#### **7.7. Site Laboratory**

The Contractor shall establish a site laboratory for the purpose of necessary testing. The cost of equipment and salaries of the manpower required will be borne by the Contractor.

### **8. CONSTRUCTION SCHEDULE**

#### **8.1. Submittal Date**

The programme of Works submitted by the Contractor in accordance with Clause 14" Programme to be Submitted", of the Conditions of Contract shall be submitted in the form of a CPM schedule based on Primavera Project Planner or Microsoft Project covering all construction activities indicating critical activities with critical path, total and free float, interdependencies between the construction activities and resource scheduling for Contractor's Equipment, material and labour, within the period stated in the Appendix A to Tender. All milestones shall be clearly identified.

If the Contractor fails to submit the construction schedule indicating all the details as listed above within 30 days of Notice of Commencement a penalty of Rs 30,000/- per week will be charged on the Contractor.

#### **8.2. Requirements**

The detailed submittal shall consist of schedules, network analysis tabulations and narrative descriptions of the proposed construction programme.

Each summary or detailed schedule shall consist of a bar chart and a time -scaled network. The scheduled start and finish times for all activities on the bar chart shall agree with those on the network. All inter-relationships and inter-dependencies between structures shall be clearly indicated on the schedules.

The network shall show the order and interdependence of activities planned by the Contractor, and shall be time-scaled according to calendar dates.

### 8.3. Monthly Reports

Each month, the Contractor shall submit a report consisting of:

- Copies of the bar charts for the current phase with both actual progress and scheduled progress shown.
- Network analysis tabulations as in Sub-Clause 8.3 above, reflecting actual start and finish dates where applicable.

A narrative report discussing any significant deviations from the schedule and, if necessary, explaining the steps proposed to be taken to maintain the approved schedule.

### 9. Not used

## 10. SITE OFFICE AND TEMPORARY FACILITIES PROVIDED BY THE CONTRACTOR

### 10.1. Contractor's Office, Facilities etc.

The Contractor shall establish and maintain a Site office. The Contractor shall provide all facilities in connection with the execution, and completion, of the Works, remedying defects therein and maintenance of the utilities services. The facilities shall, not be limited to, the Contractor's Site Office, labour camps, work yard and storage areas, temporary water supply, wastewater disposal, temporary electricity, medical unit, temporary roads, fire protection and fire fighting equipment etc. The Contractor shall be solely responsible for arranging the facilities.

The Contractor shall arrange his labour camp, work yard, storage area, site office within the area available at the Site.

### 10.2. Notice Board

The Contractor shall erect and maintain at the Site in a location to be approved by the Engineer, 3 Sign Boards 4.45 M height and 2 M wide for writing the name of Work, name of Employer, name of consultants, name of Contractor and Project Cost. The notice board shall comprise of the following;

- Frame of 3" dia GI Pipe properly painted as per the direction of the Consultants/ Engineer and as per drawing.
- 2 Nos. Posts of 3" dia GI Pipe 4.45M above ground and 1M below ground embedded in 1:2:4 CC 2'x2'x4' with proper arrangements of anchorage and brasses. Pipes painted with anti-rust as directed by the Engineer.
- 4 Nos. Steel Sheets 0.6M high and 2M wide fixed on both sides with 50mm gap between each. The background of plates is of white color whereas the writing would be black or red color (as approved by the Engineer)
- White imported 3M sheet used as background. The color of monogram would be, green, red or black etc. (as approved by the Engineer)
- Alphabets of appropriate size as approved by the Engineer in 3M reflective sheet in blue/ black color.

The Contractor shall maintain the display of the notice boards at his own cost throughout the length of the project.

## 11. FACILITIES FOR ENGINEER'S PERSONNEL PROVIDED BY THE CONTRACTOR

### 11.1 Engineer Facilities (For Each Office)

The Contractor shall provide, operate and maintain the following facilities within 14 days of the Engineer's Order to Commence the Works for the Engineer all equipments except for containers and furniture will be returned to the contractor :

- a). Contractor shall establish a container office accommodation complex. Comprising Two (02) office containers 20 feet long with fully Air-Conditioned and maintain the same facility for the Engineer, till the completion of the project (including) DLP, including all costs of electricity, telephone, water supply, sewerage, janitorial services, provision of stationery / consumable / supplies (as per the requirement of the Engineer).
- b). Contractor shall provide 02 Nos office boy, 02 Nos. Security Guards etc. The contractor shall be responsible for all salaries, benefits etc. of the appointed people. Cost of all the above works are deemed to be included in the contract price and no additional payment shall be made by the Employer to the Contractor under any circumstances.
- c). Contractor shall provide all tea items for use in Engineer office.
- d). 02 Nos. Laptop- Core i7 10th Gen or Higher, 32/64 GB Ram, Latest Intel Motherboard as required by the processor & GPU, Nvidia GPU RTX 3000 Series or Higher, 1TB HDD + 256 SSD, Keyboard, Mouse, DVD Writer, 21" LED, Licensed Windows 10/11, MS Office latest version, USB 3.0 64 GB, Latest UPS for backup. 55 inch LED smart (android) tv for both offices.
- e). Contractor shall provide and maintain with cartridge etc., **HP Color Printer** with Scanner (All in one) latest model throughout the contract period including DLP period.
- f). 01 Nos. **Camera** - Canon Mark II 6D or equivalent, 64 GB Memory Card, Tripod, Flash, Extra **Batteries** - 2 Nos., Battery Charger, Normal & Wide-Angle Lenses.
- g). The contractor should also provide all protective gear like Helmets, goggles, and safety boots to the Engineer staff at site.
- h). Providing all stationery and consumable items like pen, pencils, papers, binder cards, plastics, staples, etc. as per requirement.
- i). The Contractor shall provide an average cost of Rupees Twenty five thousand only (Rs. 25,000/-) per month pertaining to mobile & telephone use for each member of staff.
- j). First aid kit with antiseptics, topical, bandage, cotton gauze, dressing bandage, scissors, Panadol, pyodine and other ancillary medicines and tools.
- k). Fire Extinguishers Dry Type and Foam Type.

The above equipment shall be in use of the Engineer and shall become the property of the Employer and as such will be handed-over to the Employer in good working condition on completion of the project.

Cost of all above facilities are deemed to be included in the contract price and no additional payment shall be made by the Engineer to the Contractor under any circumstances.

## **11.2 Furnishing and Maintaining Transportation Facilities for the Engineer / Engineer's Supervision Team**

The Contractor shall provide, operate and maintain the following transportation facilities within 14 days of the Engineer's Order to Commence the Works for the Employer/Engineer:

- a). The Contractor shall furnish, operate and maintain the following transportation facilities:  
01 No. Toyota GLI (full options current model and AC with Driver)  
02 Nos. Honda 70 CC Motorcycle

The vehicle should be brand new and the latest model. The vehicles are for the exclusive use of the Engineer / Engineer's supervision team to meet their transportation needs. The use of such transportation facilities shall be exclusively under the control of the Engineer and the contractor shall be wholly responsible for furnishing at all times above said facilities. The said facility shall be provided within 14 days of the Engineer's issue of the commencement letter and shall continue un-interrupted till the completion of works. The said vehicles shall be handed-over back to the Contractor on completion of work.

- b). The Contractor shall furnish, supply and provide, without specific direction of the Engineer all lubricants, tyres, other supplies, regular service and maintenance at all times for the above vehicles till the issue of the Completion Certificate of the contract.
- c). The Contractor shall provide an amount equivalent to 1x 400 liters for Toyota GLI , 2 x 200 litres for 70 CC Motorcycle of Hi-Super Petrol/diesel per month to the Engineer by 5<sup>th</sup> of each month in advance for complete duration of work including any extended period.

Cost of all above facilities are deemed to be included in the contract price and no additional payment shall be made by the Engineer to the Contractor under any circumstances.

## **12. SAFETY**

### **12.1. Accident Prevention, Protective Equipment**

The Contractor shall comply and enforce compliance by all his Subcontractors with the highest standards of safety and accident prevention in compliance with all applicable laws, ordinance and statutory provisions.

Where overhead work is being carried out, warning signs shall be installed at ground level clearly warning of the overhead work.

All warning signs shall be in two languages, English and Urdu, and shall at all times be maintained in a clean and legible condition, to the satisfaction of the Engineer.

Trash shall be removed at frequent intervals to the satisfaction of the Engineer.

If, safety precautions/ warning signs are not installed by the Contractor, employer will charge an amount of Rs. 10,000/- per site per day for the period.

## **13. PAYMENT FOR WORK REQUIRED BY SPECIAL PROVISIONS**

Unless otherwise specifically stated in the Contract, the price of all work required by the Special Provisions shall be considered to be included in the Contract Price.

14. The Bided Rates shall be inclusive of all lead and lift
15. No alterations or additions shall be made by the Contractor in the Bill of Quantities and rates must be filled in ink or typed out both in figures and words clearly and legibly in the columns provided in the schedule of quantities. All corrections must be initiated by the contractors. Any Tender which does not comply with this condition will be liable to be summarily rejected and not taken into account when preparing comparative statement.
16. Materials obtained from excavations will be the property of the Employer. Serviceable materials are to be stacked in places pointed out by Engineer-in-charge. The Contractor undertakes to have the site clean and free from rubbish to the satisfaction of the Engineer. All surplus materials, rubbish, etc., will be removed to places to be fixed by the Engineer and nothing extra will be paid for this.
17. On completion of the work or earlier as directed by the Engineer, the Contractor shall remove all temporary structure (Godowns, site offices, etc.), erected by him at the site of work. He shall fill tanks dug out by him at site, remove all debris and other materials like surplus sand, stone ballast, rubbish, etc.; and in short, shall leave the site in a neat and tidy condition.
18. The contractors in the course of their works should understand that all material (e.g., stone and other materials) obtained in the work or dismantling, excavation, etc., will be considered as Employer's property and issued to the contractors (if they require the same for their own use) at rates approved by the Engineer. If the materials are not required by them, they will be disposed off in the interest of Employer.
19. The contractor shall inspect the site of works and acquaint himself with the nature and requirements of the work, facilities of access for materials, removal of rubbish, cost of carriage, nature of strata, etc., before submitting his Bid.
20. The contractor shall have to make temporary approach roads, etc., at his own cost to facilitate movement of materials, such approach roads shall be aligned in a manner approved by the Engineer.
21. The contractor shall have to make proper arrangements for road crossing barriers during working hours in the day time as well as in the night when danger lights will have to be provided on either ends at his own cost and no extra cost will be paid. Sufficient barricades and red lights will be provided by the Contractor where required to avoid the chances of accidents. In case an accident occurs for failure on the part of the contractor, he shall be entirely responsible for the consequences.
22. The Contractor shall have to make arrangements for diversions for traffic wherever necessary and shall have to provide diversion and caution boards as per directions of the Engineer at his own cost for which no extra cost will be paid. The diversion shall be watered and consolidated as per directions of the Engineer.
23. No material shall be removed from the site without the written permission of the Engineer.
24. Dewatering including shoring wherever so required for any foundation area, pumping, bailing out water, drainage of water within plot areas if any shall be deemed to have been included in the rates quoted by the bidders and no extra payment will be made. The rates shall be deemed inclusive of such incidental charges.
25. The Contractors shall execute all works at their own cost for diversion of water away from the plot as per site requirements to have full satisfaction of Engineer and no additional payment will be made on this account.

- 26.** The Engineer, subject to approval of the Employer, reserves the right to select all materials and the type, grade, heating capacity and quantity of proportion of any or all materials as required for a particular work. The decision of Employer in this respect shall be final and binding on the Contractor. The rejects on materials must be carted at his own cost. If the rejected materials are not re moved within one month of its rejection the materials will become the property of the Employer or will be removed at Contractors cost.

**27. ATTENDANCE OF MEETINGS**

The Contractor shall attend and shall cause his Sub-Contractors to attend any or all meetings when called by the Employer or the Engineer or his Representative to discuss progress of the work and other matters related to the work and the Contract, without any compensation from the Employer.

- 27.1.** The Contractor shall bear all expenses of the Employer and his agents and representatives and the Engineer, his agents and representatives if requested by the Contractor for any meetings, instructions and approvals away from the Site.
- 27.2.** The proceedings of the meetings shall be recorded by the Engineer which shall be circulated to all the participants including those of the Contractor. All decisions taken in the meetings shall be binding on the Contractor and shall form part of the Contract.

**28. DOCUMENTS NOT TO BE ALTERED OR MUTILATED**

No alteration or mutilation (other than filling in all the blanks intended to be filled in) shall be made in the form of Bid or in any of the documents attached to it. Any comments which it is desired to make shall not be placed on any of the documents attached hereto, but shall take the form of a separate statement which shall be as brief as possible and referenced to items, clauses and pages of the annexed documents.

Such statements shall not qualify the acceptance of the Bid based upon a proposed change or changes in the annexed documents, nor shall be binding upon the Employer in any way in making the award. Alterations of already written prices must be signed in the place of alteration by the Bidder or his legally authorized representative.

**29. PERSONAL LIABILITY OF PUBLIC OFFICIALS OR ENGINEER**

In carrying out any of the provisions of these specifications, or in exercising any power of authority granted to them by or within the scope of the Contract, there shall be no liability upon the Employer or his authorized representatives or the Engineer or his authorized representatives their personally or in their official capacity, it being understood that in all matters they act solely as agents and representatives of the Employer.

**30. ACCESS AND EXISTING ROADS**

If the Contractor finds it necessary or elects to use existing roads, the Contractor shall make all necessary arrangements and obtain all permits from the relevant departments for travel over and use of such roads. The Contractor shall observe all rules regulations of the concerned department regarding the use of said roads. The cost of maintaining all necessary safety measures and temporary structures and making any necessary repairs, replacements or similar operations and all or any other costs required by reason of his use of such roads shall be borne by the Contractor and the Contractor shall save harmless and indemnify the Employer in respect of all claims, demands proceedings, damages, costs,

charges and expenses whatsoever arising out of or in relation to any such operation or interference.

**31. FIRST AID FACILITIES**

The Contractor shall provide and maintain adequate First Aid Facilities at all times, convenient to the Site to the approval of the Employer.

**32. FINAL HAND-OVER**

At the end of the Defect Liability Period stipulated in the contract, the Employer and the Engineer on application of the Contractor, shall decide the members of the final hand over committee and announce the same to the Contractor. The committee, after inspection of Work, if satisfied that there are no deficiencies or defects due to work of the Contractor shall certify the final hand-over, and the Employer will then issue a final Certificate of Completion of Work within thirty (30) calendar days thereafter.

Once completion has been formalized and endorsed both by the contractor as well as controlling officer, the work will be regarded as completed for all purpose as per contract agreement although the accounts may not have been settled, no further new works will be authorized against the sanctioned project and not further supplementary estimates or claims may be accepted.

**33. EMPLOYER AND ENGINEER NOT PERSONALLY LIABLE**

No member or officer of the Government or the Employer or the Employer's Representative or the Engineer or his representatives or any one of their respective staffs or their employees shall be in anyway personally bound or liable for the acts or obligations of the contractor under the contract or answerable for any default or omission in the observance or performance of any of the acts, matters or things which are herein, contained.

**34. PROGRESS PHOTOGRAPHS**

The contractor shall furnish to the Employer and to the Engineer every two weeks at least six photographs to clearly show the progress of construction. The photographs shall be submitted in glossy prints 20 cm x 20 cm. Each print shall be marked on the back with the date and serial number. There shall be no writing, lettering or marking on the face of the photographs. The set of photographs of the Engineer should accompany respective negatives.

**35. SITE ORDER BOOK**

The Contractor shall maintain site order book {of triplicate leaves} at the Site, for taking down instructions of the Engineer and/ or the Employers, without any obligation and charges to the Employer / Engineer.

**36. REPORT ON PROGRESS OF WORK AND PHOTOGRAPHS**

The Contractor shall, during the execution of the work, submit to the Employer (3 copies) and Engineer (2 copies) so as to reach them in the first week of every calendar month, a report on the actual progress of the works attained by him during the preceding month fully supported with color photographs of (5" x 7") size, at least 15, depicting the complete stages of the works. Each photograph should be properly pasted on A-4 size paper, indicating the location and other relevant information of the area photographed. The report will be submitted on the standard format to be supplied later on. In case the Supervision Engineer are different from the Design Engineer, one copy each of photographs should be sent to both the Engineer.

The set of photographs for the Design Engineer should be submitted with respective negatives.





## TECHNICAL SPECIFICATION

### VOLUME-II

**REHABILITATION/ RENOVATION OF ALL FLOORS OF STATE  
LIFE INSURANCE CORPORATION BUILDING -09**

**DR ZIAUDDIN AHMED ROAD KARACHI.**



**MUKHTAR ENTERPRISE STUDIO FOR ARCHITECTURE**  
CONSULTANT ARCHITECTS, INTERIOR DESIGNERS, URBAN PLANNERS & DIGITAL  
FABRICATOR

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OFFICE NO # 302, 3<sup>RD</sup> FLOOR, BUILDING NO.52-C, LANE 01, AL MURTAZA COMMERCIAL,  
PHASE VIII, DHA, KARACHI.  
TEL: 0321-7851777  
EMAIL: [info@mesa.com.pk](mailto:info@mesa.com.pk)

**VOLUME -II**

**TECHNICAL SPECIFICATION**

**FOR**

**REHABILITATION/RENOVATION OF ALL FLOORS  
OF STATE LIFE INSURANCE CORPORATION OF PAKISTAN  
BUILDING NO 09 DR ZIAUDDIN AHMED ROAD KARACHI**

Issued To : \_\_\_\_\_

Issued On : \_\_\_\_\_

Sign of Issuing Officer : \_\_\_\_\_

**STATE LIFE INSURANCE CORPORATION OF PAKISTAN (SLIC)**

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## CHAPTER – 00-00-00 GENERAL DESCRIPTION

### GD -00-00-01 NAME, LOCATION, SCOPE & SITE TEMPORARY FACILITIES

#### i) Name of The Project :

The proposed project is REHABILITATION/ RENOVATION OF ALL FLOORS OF STATE LIFE INSURANCE CORPORATION BUILDING -09 DR ZIAUDDIN AHMED ROAD KARACHI.

#### Location of Site

The proposed Site is located at Dr. Ziauddin Ahmed Road Karachi.

#### ii) **Scope of Work**

##### **The Scope of Work includes:**

The work includes but is not limited to

**The interior layout of offices & Rooms, Portioning & finishing, Civil, HVAC Plumbing, Electrical, Emergency Staircase, External and Internal Paint works with minor repairing, Furniture & furnishing etc. complete.**

as per drawing & Design, BOQ & Spec., as per direction of The Engineer in-charge which includes but is not limited to:

- a) Selective demolition and disposal of the existing all floors interior Partition walls, Existing Floorings and false ceiling, MEP fittings & fixtures, Existing HVAC ducting & appliances etc and stacking of the serviceable material at designated place as directed by the Engineer.
- b) Supply, erect / construct as per design, drawing & Specifications & direction of Engineer In charge, Masonry units, Plastering, floorings, wall paneling, interior finishing, doors, windows MEP fittings & fixtures, HVAC systems, Bath room fittings & fixtures, fire alarm fittings & fixtures, security surveillance system, IT networking, firefighting system etc. as per drawing & design, specification of the contract and directions of the Engineer In charge.
- c) The Contractor shall obtain all the necessary permission required for Rehabilitation/ Renovation required from, local / Provincial Agencies, Cantonment Board etc. Necessary documentation or coordination shall be provided by the State Life Insurance Corporation and all necessary Challan / Voucher issued by these agencies shall be paid by State life Insurance Corporation of Pakistan. However for services provided by the contractor as liaison shall not be paid separately and it is assumed that contractor has in built in the rate quoted.

#### lii) APPLICABLE STANDARDS

The General Specifications describe the requirements and procedures for execution of the various work items to achieve the required workmanship and quality. The materials to be used shall conform to specifications and testing procedures mentioned in the relevant sections as per American Society for Testing and Material (ASTM), British Standards (BS) European Norm (EN) or Deutsches Institut für Normung (DIN), as indicated in their latest editions. Sampling of materials for laboratory tests and their subsequent approval shall be executed according to these references unless otherwise directed by the Engineer

**iv) PRIORITY ORDER OF CONTRACT DOCUMENTS**

All Work shall be executed in accordance with requirements and in a manner set forth in the

1. Conditions of Contract, ( General & Particular )
2. Specifications;
3. Drawings
4. Bill of Quantities .

The priority is in descending order , In the event that situations exist which are not satisfactorily covered by the General Specifications or where particular conditions pertaining to a specific contract occur, the relevant clauses of the General Conditions will be modified by the terms of the Special Provisions of the Contract.

**v) SILENCE OF SPECIFICATIONS**

The apparent silence of the Specifications, Drawings or other Contract Documents, as to any detail or the apparent omission from them of a detailed description concerning any point, shall be regarded as meaning that only the best general practice is to be used. All interpretations of the specification will be made by the Engineer on this basis.

**vi) TEST LABORATORY AND TESTING**

1. Testing, except as otherwise specified herein, shall be performed by an approved testing agency as proposed by the Contractor and at no extra cost to the Employer. The Engineer may require all testing to be carried out under his supervision only.
2. The quality control testing shall be arranged and performed by the Contractor's competent personnel in accordance with a Site Testing and Quality Control Program / Facility to be established by the Contractor, and approved by the Engineer. The Contractor shall keep a complete record of all quality tests performed and submit the same to the Engineer. All quality control and related tests shall be carried out in accordance with applicable standards and codes under the supervision of the Engineer.

**Vii ) TEMPORARY FACILITIES**

The Contractor shall provide, erect/install, maintain, alter as necessary and remove on completion except as otherwise directed by the Engineer all temporary facilities and services as described hereinafter and/or in the Contract documents and / or instructed and approved by the Engineer.

**a) CONTRACTOR'S SITE OFFICE**

The Contractor's temporary site office and stores etc. including all buildings, utilities and facilities shall be available for use not later than 15 days after the date of the Site handing over. Installation of temporary services at the Site shall be given priority over all other construction at the Site.

**b) OFFICE FACILITIES FOR THE CLIENT (SLIC) & THE ENGINEER**

The Contractor shall Provide two furnished Container Cabins of 20'-0" Properly wall and roof insulated and fitted with AC and with attached bath facilities, two office tables and four chairs in each cabin and two New lap top HP / Dell i-7 with all necessary features and software installed and one printer for each cabin. No separate payment shall be made for these facilities and it is assumed that the contractor has absorbed the cost incurred in the quoted rate of the project. These facilities shall be property of the Client SLIC after completion and hand over of the Project.

**c) TEMPORARY FENCING & LIGHTNING**

The Contractor shall provide and maintain at his own cost all temporary lights, guards, fencing and watching to the approval of the Engineer for the safety and protection of the Works.

**d) TEMPORARY SERVICES****i) Temporary Waters Electricity Services**

The Contractor shall make his own arrangement for water for construction, drinking & other purposes. The Contractor shall also provide temporary power for the operation of construction equipment and lighting. The Contractor shall be responsible for the supply, maintenance, repair & operation of these services at his own costs throughout the construction period. The Contractor shall also provide adequate sanitary facilities for the use of the Contractor's staff and Work people at his own cost. However subject to availability, the Client may provide Power and water supply to the Contractor on Payment basis. For this purpose the contractor shall make his own arrangement for water and power distribution system and shall install necessary meter etc. The power and water shall be charged as per rate charges K- Electric and KWSB charging to SLIC. The contractor shall make necessary arrangement of stand by Generator arrangement during power shutdown. SLIC will not provide stand by generator facility to the contractor. The Contractor shall remove all these services at his own cost upon completion of Works.

**ii) First Aid Facilities**

The Contractor shall provide and maintain First Aid Facilities on the Site at his own cost First Aid kits of the type, model, number and equipped properly according to the requirements of the local health authorities and as approved by the Engineer must be furnished by the Contractor at Site.

**iii) Fire Fighting Facilities**

The Contractor shall provide and maintain adequate-firefighting facilities on the Site at his own cost to the approval of the local Fire Authority and the Engineers Fire Fighting equipment like fire buckets, fire extinguishers or other effective means ready for instant use shall be installed at suitable places at the project.

**iv) Vehicle Parking**

The Contractor shall park all his vehicles only in the designated place/places as agreed by the Engineer and no vehicle shall be parked on main road or in the passage where it may cause inconvenience to the others. For loading/ unloading of cargo programs shall be submitted at least 12 hrs. prior to the Engineer.

**E) STORAGE AND HANDLING OF CONSTRUCTION MATERIAL FACILITY AT SITE**

The Employer will provide the Contractor possible space within the area of Site of Works for the storage of plant, equipment and materials for Contract Works. On no account shall such temporary installation conflict/interfere with any of the permanent installations, services and any operational function of the Employer. The handling and storage of all plants, equipment and materials at Site shall be the responsibility of the Contractor and at no risk and cost to the Employer.

The Contractor shall protect his all materials installed at site or un stalled laying/ stacked at site against Theft, corrosion, mechanical damage or deterioration during storage and erection on Site. The contractor shall arrange necessary arrangement of Watch & Ward for installed / uninstalled materials, tools & plants, equipment etc and no payment shall be made / claimed in this regard. The Contractor is deemed to have covered the costs of all related supplies and performances in the unit prices of other contract items.

The protection methods shall be to the approval of the Engineer.

**F) PROPERTY OF SALVAGED / SERVICEABLE MATERIAL**

All the materials designated as reusable shall be the property of the Contractor and stacked/stored in an approved manner at a place within the site area as approved by the Engineer upon making payment made by the Contractor at the price offered by the Contractor in BOQ.. In this regard it is important to mention that Contractor shall visit the site before submission of the bid and shall assess the quality and quantity of the usable material and shall estimate its recovery rate by his own resource and then shall offer his recovery price in BOQ.

**End of Section**



**GD-00-00-01 WORK RESTRICTIONS, PROJECT MANGEMENT & COORDINATIONS****a WORK RESTRICTION**

A On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 7:00 a.m. to 5:00 p.m., Monday through Saturday, except otherwise indicated. To achieve required Project Substantial and Completion Deadlines, work hours can include evening, night weekend/gazette holidays, however in this regard the Contractor shall inform the Engineer and the Client in advance at least 24 hours.

Official Affairs to be settled between 9:00 am to 5 :00 pm PST whereby consultant will make himself and his staff available for approvals and correspondences from Monday till Friday. After office work shall be compensated by the contractor as a payment of overtime to the consultants.

Weekend Hours: As arranged a minimum twelve (12) hours beforehand with State Life Insurance Project Manager. / The Engineer

1. Hours for Utility Shutdowns: As arranged a minimum twelve (12) hours beforehand with Employer's Project Manager./The Engineer
2. Hours for noisy activity (including but not limited to core drilling. As arranged a minimum twelve (12) hours beforehand with Project Manager / The Engineer.

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

C. All inspections during construction shall be the responsibility of the General Contractor for their Engineered work efforts.

**b PROJECT MANGEMENT & COORDINATIONS****i) ABBREVIATIONS AND DEFINITIONS**

Wherever in these specifications or in other contract documents the following abbreviations and terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

AAMA	American Architectural Manufactures Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Material
AWG	American Wire Gauge
AWPA	American Wood Preservers Association
AWS	American Welding Society
BS	British Standard Code of Practice
PCA	Portland Cement Association
SWG	Standard Wire Gauge

**iii) WORKFORCE****a) GENERAL REQUIREMENTS**

The Contractor shall provide suitably skilled labour in adequate numbers, who can adequately carry out the works to the quality and with the standard of workmanship in accordance with the requirements of each individual work item.

The Contractor shall make all necessary arrangement for employing and maintaining the workforce required for the execution of the Works in accordance with the Conditions of Contract.

Any person employed by the Contractor who is not capable of performing the required works in a proper and skillful manner or who behaves in an improper manner may be removed from the site in accordance with the requirements of the Conditions of Contract.

**GD-00-00-02 SUPPLY, SAMPLES, QUALITY & SUBMITTAL****i) SUPPLY OF CONSTRUCTION MATERIAL**

All materials to be incorporated in the Works shall meet all quality requirements of the relevant provisions of the Contract. In all cases the materials, manufactured articles and machinery must be approved by the Engineer prior to their inclusion into the Work.

In order to expedite the Work, the Contractor shall, before placing any purchase order for materials, manufactured articles and machinery to be incorporated in the Works, submit for the approval of the Engineer, a complete description of such items, the names of the firms from which it is proposed to obtain such items, together with a list of the items it is proposed for each firm to supply. No such materials, manufactured articles or machinery shall be ordered from any firm without the written approval of the Engineer.

When directed by the Engineer or otherwise specified in the Contract the Contractor shall submit samples for approval.

If it is found after trials that sources of supply for previously approved materials, manufactured articles or machinery do not produce items in accordance with the Specifications, the Contractor shall furnish such items from other sources approved by the Engineer.

**ii) LOCAL MATERIAL SOURCES**

Material deposits have not been designated on the Drawings or described in the Special Provisions therefore the Contractor shall locate and provide materials acceptable to the Engineer.

The Contractor shall determine for itself the quality and the number/capacity of equipment and labour required to produce a material meeting the requirements of the Specifications.

No material, regardless of its source, shall be incorporated in the Work until representative samples taken by the Contractor in the presence of the Engineer and tested by the Contractor in the presence of the Engineer have been approved and written authority is issued by the Engineer for the use of the materials. Check request system shall be used for this purpose.

**ii) STORAGE OF MATERIALS**

Articles or materials to be incorporated in the work shall be stored in such a manner, as to ensure the preservation of their quality and fitness for the work and to facilitate their prompt inspection. Stored materials, even though approved before storage, may again be inspected prior to their incorporation in the Works, if so required.

The Contractor shall store materials and articles at his own risk and cost and shall be responsible for all Watch & Ward etc and Client or Engineer shall not be held responsible for any loss, damage etc. Materials and articles shall not be stored in the traffic movement areas unless permitted by the Engineer. Stockpiling of aggregate material within the site shall be confined to such authorised areas as may be approved by the Engineer. The site shall be abandoned immediately upon completion of the utilisation of the stockpile material and the natural surface shall be restored as nearly as possible to the original condition by the Contractor at its expense and to the satisfaction of the Engineer.

Any costs for the use of privately owned land for storage and/or for the placing of the Contractor's plant and equipment shall be borne by the Contractor. Private property shall not be used for storage purposes without written permission and release of the owner or lessee, and a copy of the written permission and release shall be submitted to the Engineer prior to any use of the land by the Contractor.

**iv) DEFECTIVE MATERIALS**

All materials that the Engineer has determined do not conform to the requirements of the drawings and specifications will be rejected whether in place or not. They shall be removed immediately from the site of the work, unless otherwise permitted by the Engineer. No rejected material, the defects of which have been subsequently corrected, shall be used in the work, unless approval in writing has been given by the Engineer.

Upon failure of the Contractor to comply promptly with any order of the Engineer made under the provisions in this clause, the Engineer shall have authority to cause the removal of rejected material and to deduct the cost thereof from any monies due or to become due to the Contractor in accordance with the provisions of Conditions of Contract.

**v) TRADE NAMES AND ALTERNATIVES**

Mention of a specific name in BOQ, shall be avoided, However, a list of approved material manufactures / supplier/distributor shall be supplied by the Engineer, if such designation is unavailable, then alternate equivalent from other manufactures will be allowed. The use of an alternative article or material that is of equal quality and of the required characteristics for the purpose intended will be permitted, subject to the following requirements:

The burden of proof as to quality and suitability of alternatives shall be upon the Contractor and he shall furnish all information necessary as required by the Engineer.

The Engineer shall be the sole judge as to the quality and suitability of alternative articles or materials and his decision shall be final. Whenever the specifications permit the substitution of a similar or equivalent material or article, no tests or action relating to the approval of such substitute material will be made until the request for the substitution is made in writing by the Contractor accompanied by complete data as to the equality of the material or article proposed. Such request shall be made in reasonable time to permit approval without delaying the work.

## **SUBMITTAL**

### **Method Statement and Details**

For all works the Contractor shall submit for the prior approval of the Engineer, the methodology and list of materials, plant and equipment to be employed on the Works. No work shall be commenced until the methodology, material, plant and equipment to be used in the Works is approved by the Engineer

### **i) PROCEDURES FOR SUBMITTAL**

General: Upon request electronic copies of PDF Drawings of the Contract Drawings will be provided by Engineer for Contractor's use in preparing submittals.

Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

B Submittals Schedule: Comply with requirements in relevant Section for list of submittals and time requirements for scheduled performance of related construction activities.

C ) Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.

Initial Review: Allow two (2) days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination:

Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.

Re-submittal Review: Allow one (1) days for review of each re-submittal.

Concurrent Consultant Review: When transmitted simultaneously to Engineer and to Engineer's consultants, allow 3 (three) days for review of each submittal. Submittal will be returned to Engineer before being returned to the General Contractor.

Identification: Place a permanent label or title block on each submittal for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Include the following information on label for processing and recording action taken:
  - a. Project name
  - b. Date
  - c. Name and address of Contractor
  - d. Name and address of Supplier
  - e. Name of manufacturer
  - f. Submittal number or other unique identifier, including revision identifier.
  - g. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.

Additional Copies: Unless additional copies are required for final submittal, and unless Engineer observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.

1. Submit one (1) paper and electronic copy of submittal to concurrent reviewer in addition to specified copy to Engineer.
2. Additional copies submitted for maintenance manuals will be marked with action taken and will be returned. On an attached separate sheet, prepared on the General Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Engineer on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
2. Re-submittals: Make re-submittals in same form and number of copies as initial submittal.
  1. Note date and content of previous submittal.
  2. Note date and content of revision in label or title block and clearly indicate extent of revision.
  3. Resubmit submittals until they are marked "NO EXCEPTION" or "REVIEWED AND NOTED"
4. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, and authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

Use for Construction: Use only final submittals with mark indicating "NO EXCEPTION" or "REVIEWED AND NOTED" taken by Engineer.

**(II) GENERAL CONTRACTOR'S REVIEW**

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of the General Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

**(III) ENGINEER'S ACTION**

A. General: Engineer will not review submittals that do not bear the General Contractor's approval stamp and will return them without action

B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

1. NO EXCEPTION
2. REVIEWED AND NOTED
3. REVISE AND RESUBMIT
4. REJECTED

C. Informational Submittals: Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.

D. Partial submittals are not acceptable, will be considered non-responsive, and will be returned without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

**END OF SECTION**

**GD- 00- 00-.03 PROTECTION OF THE ENVIRONMENT****a) GENERAL REQUIREMENTS**

This Section of the Specification sets out limitations on the Contractor's activities specifically intended to protect the environment. The Contractor's attention is however drawn to the fact that other provisions, equally important to the protection of the environment, are included throughout these Specifications.

The Contractor shall take all necessary measures and precautions and otherwise ensure that the execution of the works and all associated operations on site or offsite are carried out in conformity with statutory and regulatory environmental requirements including those prescribed elsewhere in this document.

The Contractor shall take all measures and precautions to avoid any nuisance or disturbance arising from the execution of the Works. This shall wherever possible be achieved by suppression of the nuisance at source rather than abatement of the nuisance once generated.

The provisions of these clauses are subject to amendment, if so required, for emergency work necessary for the saving of life or property or the safety of the Works.

**(i) WATER QUALITY**

The Contractor shall prevent any interference with the supply to or abstraction from or the pollution of water resources (including underground percolating water) as a result of the execution of the Works.

Areas where water is regularly or repetitively used for dust suppression purposes (including, without limitation, stockpiles for concrete-batching and asphalt plants) shall be laid to fall to specially-constructed settlement tanks to permit sedimentation of particulate matter. After settlement, the water may be re-used for dust suppression and rinsing.

All water and other liquid waste products arising on the Site shall be collected and disposed of at a location on or off the Site and in a manner that shall not cause either nuisance or pollution.

The Contractor shall not discharge or deposit any matter arising from the execution of the Works into any waters except with the permission of the Engineer and the regulatory authorities concerned.

The Contractor shall at all times ensure that all existing stream courses and drains within and adjacent to the Site are kept safe and free from any debris and any materials arising from the Works.

The Contractor shall protect all watercourses, waterways, ditches, canals, drains, lakes and the like from pollution, silting, flooding or erosion as a result of the execution of the Works.

The Contractor shall submit details of his temporary drainage work system (including all surface channels, sediment traps, washing basins and discharge pits) to the Engineer for approval prior to commencing work on its construction.



**(b) AIR QUALITY**

The Contractor shall devise and implement methods of working to minimize dust, gaseous or other air-borne emissions and carry out the Works in such a manner as to minimize adverse impacts on air quality.

The Contractor shall use effective water sprays during delivery and handing of materials when dust is likely to be created, and to dampen stored materials during dry and windy weather. Stockpiles of friable materials shall be covered with clean tarpaulins, with application of sprayed water during dry and windy weather. Stockpiles of material or debris shall be dampened prior their movement, except where this is contrary to the Specification.

Any vehicle with an open load-carrying area used for transporting potentially dust producing material shall have properly fitting side and tailboards. Materials having the potential to produce dust shall not be loaded to a level higher than the side and tail boards, and shall be covered with a clean tarpaulin in good condition. The tarpaulin shall be properly secured and extend at least 300 mm over the edges of the side and tailboards.

In the event that the Contractor is permitted to provide temporary non-bituminous surfaced roads for the use of the public or uses gravel or earth roads for haulage, he shall provide suitable measures for dust palliation, if these are, in the opinion of the Engineer, necessary. Such measures may include spraying the road surface with water at regular intervals.

**(c) NOISE**

The Contractor shall consider noise as an environmental constraint in his planning and execution of the Works.

The Contractor shall take all necessary measures to ensure that the operation of all mechanical equipment and construction processes on and off the Site shall not cause any unnecessary or excessive noise, taking into account applicable environment requirements. The Contractor shall use all necessary measures and shall maintain all plant and silencing equipment in good condition so as to minimize the noise emission during construction works.

**(d) CONTROL OF WASTES**

The Contractor shall control the disposal of all forms of waste generated by the construction operations and in all associated activities. No uncontrolled deposition or dumping shall be permitted. Wastes to be so controlled shall include, but shall not be limited to, sewerage, all forms of fuel and engine oils, bitumen, cement, surplus concrete, surplus aggregates, gravels etc. The Contractor shall make specifies provision for the proper disposal of these and any other waste products, conforming to local regulations and acceptable to the Engineer.

In the event of any spoil or debris or silt from the Site being deposited on any adjacent land, the Contractor shall immediately remove all such spoil debris or silt and restore the affected area to its original state to the satisfaction of the Engineer.

(e) **EMERGENCY RESPONSE**

The Contractor shall plan and provide for remedial measures to be implemented in the event of an occurrence of emergencies such as spillages of oil or bitumen or chemicals.

The Contractor shall provide the Engineer with a statement of the measures he intends to implement in the event of such an emergency that shall include a statement of how he intends to provide personnel adequately trained to implement such measures. This statement shall accompany the program to be submitted by the Contractor in accordance with the provisions of relevant Clause of the General Conditions.

**END OF SECTION**

**CHAPTER GD -00-00-04 QUALITY ASSURANCE****a) DEFINITIONS****I) Quality Assurance Services:**

Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

**II) Quality Control Services:**

Inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by The Engineer.

**III) Source Quality-Control Testing:**

Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

**IV) Testing Agency:**

An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

**V) Installer/Applicator/Erector:**

General Contractor or another entity engaged by the General Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

**b) QUALITY CONTROL OF WORKS****i) FREQUENCY OF TESTS AND TEST DESIGNATIONS**

Frequency of tests for major items of construction will be defined in these specifications or in the Special Provisions, however for certain items frequency of tests has been left to the discretion of the Engineer.

While deciding the frequency of tests for major items, each aspect of new construction, may be dealt with differently, keeping in view the quantum of work.

**ii) TESTING STANDARDS**

Unless otherwise specified, all tests shall be performed in accordance with the methods used by AASHTO, ASTM, BS Standards, ISO and shall be made by the Engineer or his designated representative.

Whenever the specifications provide an option between two or more tests, the Engineer will determine the test to be used.

**(iii) INSPECTION**

The Engineer shall, at all times, have safe access to the work during its construction, and shall be furnished with every reasonable facility for ascertaining that the materials and the workmanship are in accordance with the requirements and intentions of these specifications, the Special Provisions, and the plans. All work done and all materials furnished shall be subject to his inspection.

The inspection of the work or materials shall not relieve the Contractor of any of his obligations to fulfill his contract as prescribed. Work and materials not meeting such requirements shall be made good and unsuitable work or materials may be rejected, notwithstanding that such work or materials have been previously inspected by the Engineer or that payment thereof has been included in a progress estimate.

**(iv) CONFORMITY WITH CONTRACT DOCUMENTS**

Work and materials shall conform to the lines, grades, cross sections, dimensions and material requirements, including tolerances, shown on the plans or indicated in the specifications. Although measurement, sampling and testing may be considered evidence as to such conformity, the Engineer shall be the sole judge as to whether the work or materials deviate from the plans and specifications, and his decision relating to any allowable deviations there from shall be final.

**(v) REMOVAL OF REJECTED UN-AUTHORIZED WORK**

All work that has been rejected shall be remedied, or removed and replaced by the Contractor in an acceptable manner and no compensation will be allowed to him for such removal, replacement, or remedial work. Upon order of the Engineer un authorized work shall be remedied, removed or replaced at the Contractor's expenses.

Upon failure of the Contractor to comply promptly with any order of the Engineer made under this Item the Employer may cause rejected or un authorized work to be remedied, removed, or replaced, and to deduct the costs from any monies due or to become due to the Contractor in accordance with the Conditions of Contract.

**(vi) PRIORITY OF ITEM**

If there is any disparity between nomenclature of bill of items and text specification than following will be the priority.

- a) Specification of the text will get the priority over bill of items (Text).
- b) If there is any difference in dimensions than the figures in bill of items shall priority.

**(vii) MEASUREMENT AND PAYMENTS**

No measurement and payments shall be made for any work carried out under this section , unless specifically provided in a particular item or BOQ of works.

**END OF SECTION**

**CHAPTER GD 00- 00-05 CONSTRUCTION PROGRESS DOCUMENTATION****( a ) GENERAL****(I) RELATED DOCUMENTS**

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this Section.

**(ii) SUMMARY**

This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Preliminary Construction Schedule
2. Contractor's Construction Schedule
3. Field condition reports

**iii) SUBMITTALS**

- A. Submittals shall be submitted to the Engineer with copies to be retained to be later submitted as part of project closeout submittal manual.
- B. Preliminary Construction Schedule: Submit one (1) electronic copy to both employer's 's Project Manager and the Engineer.
- C. Contractor's Construction Schedule: Submit one (1) electronic copy to both Employer's Project Manager and the Engineer.
- D. Field Condition Reports: Submit one (1) electronic copy to both Employer's Project Manager and the Engineer

**iv) QUALITY ASSURANCE**

A. Construction Schedule: Conduct schedule review at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to the Contractor's Construction Schedule, Including, but not limited to, the following:

1. constraints, including work stages, area separations, interim milestones, and work by others within building.
2. Review time required for review of submittals and re-submittals.
3. Review requirements for inspections.
4. Review time required for completion and startup procedures.
5. Review and finalize list of construction activities to be included in schedule.
6. Review submittal requirements and procedures.
7. Review procedures for updating schedule.

**v) COORDINATION**

A. The General Contractor shall coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of all Subcontractors.

B. The General Contractor shall coordinate the Construction Schedule with the Schedule of Values, Submittals Schedule, progress reports, payment requests, and other required schedules and reports:

1. Secure time commitments for performing critical elements of the Work from parties involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

**(b) CONTRACTOR'S CONSTRUCTION SCHEDULE****(i) GENERAL**

A. Time Frame: Extend schedule from date established for the Notice-to-Proceed to date of construction Final Completion and to date of close out documents Final Completion.

**B. Activities**

1. Activity Duration: Define activities duration which has to be allowed by the Engineer.

2. Procurement Activities: Include procurement process activities or Procurement Plan for the following major items as separate activities in schedule. Procurement cycle activities

should include, but are not limited to submittals, approvals, purchasing, fabrication, and delivery and erection/ testing & commissioning.

2. Submittal Review Time: Include review and re-submittal times indicated in Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.

3. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Associate's administrative procedures necessary for certification of Substantial Completion.

4 Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

5. Products Ordered in Advance: Include a separate activity for each product. Include delivery

6. Work Restrictions: Show the effect of the following items on the schedule:

a. Coordination with existing construction.

b. Limitations of continued occupancies.

c. Uninterruptible services.

d. Use of premises restrictions.

7. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:

a. Submittals

b. Installation

c. Inspections

d. Adjusting

e. Startup and placement into final use and operation

8. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, Employer's Occupancy Requirements and Final Completion.

**C) REPORTS****I) Daily Construction Reports:**

Prepare a daily construction report recording the following information concerning events at Project site:

1. List of employees at Project site
2. Material deliveries & Consumed
3. Accidents
4. Meetings and significant decisions
5. Stoppages, delays, shortages, and losses
6. Orders and requests of authorities having jurisdiction
7. Change Orders received and implemented
8. Construction Change Directives received and implemented
9. Partial Completions and occupancies
10. Substantial Completions authorized

**II ) Field Condition Reports:**

Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

**d) Contractor's Construction Schedule Updating**

: At bi weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule three (3) days before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
2. Include a report with updated schedule that indicates every change, including, but not limited to changes in logic, durations, actual starts and finishes, and activity durations.
3. As the Work progresses indicate Actual Completion percentage for each activity.

**4 Distribution:**

Distribute copies of approved schedule to Engineer, Employer's Project Manager, Subcontractors, and other parties with a need-to-know schedule responsibility.

1. Post copies in temporary field office.
2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their, assigned portion of the Work and are no longer involved in performance of construction activities.

**END OF SECTION**

**CHAPTER GD 00-00-06 CLOSEOUT PROCEDURES****GENERAL (a)****(i) RELATED DOCUMENTS**

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this Section.

**(ii) SUMMARY**

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to the following:

1. Inspection procedures
2. Warranties
3. Final cleaning
4. Project Closeout

**(iii) SUBSTANTIAL COMPLETION**

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request:

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
3. Prepare and submit Project Record Documents, operation and maintenance manuals.
4. Deliver tools, spare parts, extra materials, and similar items to location designated by Employer. Label with manufacturer's name and model number where applicable.
5. Terminate and remove temporary facilities from Project site, construction tools, and similar elements.
6. Submit changeover information related to Employer's use, operation, and maintenance.
7. Complete final cleaning requirements, including touchup painting.
8. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

Submit a request for inspection for Substantial Completion. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection and will notify Contractor of items, either on Contractor's list or additional items identified by Engineer, that must be completed or corrected before final certificate will be issued.

**(iv) FINAL COMPLETION**

MESSA Office No 302 3<sup>rd</sup> Floor Bldg. No 52-C Lane No 01 Al Murtaza Commercial Phase-VIII DHA Karachi



A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Employer payment procedure.
2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (Punch List), endorsed and dated by the engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Instruct Employer's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

**A. Inspection:**

Submit a written request for final inspection for acceptance. On receipt of request, THE ENGINEER will either proceed with inspection or notify Contractor of unfulfilled requirements. THE ENGINEER will prepare a final Certificate for Payment after inspection or will notify the General Contractor of construction that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

C. Finalized Certificate of Warranty Commencement Certificate of Contract Completion and the Payment Release Affidavit.

**(v) WARRANTIES**

Submit written warranties on request of The Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf bind

**END OF SECTION**

**SECTION GD 00-00 -07 PROJECT RECORD DOCUMENTS**

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**(a) GENERAL RELATED DOCUMENTS**

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**(b) SUMMARY**

A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.

**(c) SUBMITTALS**

A. Record Drawings: Comply with the following:

1. Record Drawings: Provide one (1) printed copy of drawings on bond paper and provide on CD, or other data storage device, one (1) set of electronic as-built drawings in PDF format.

B. Record Specifications: Comply with the following:

1. Record specifications: Provide one (1) printed copy of specifications on bond paper and provide on CD, or other data storage device with modifications noted in red throughout the specification documents.

C. Record Product Data: Submit one (1) copy of each Product Data submittal.

1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

D. Record Management Data: Submit one (1) copy of the following:

1. Safety Meeting Minutes
2. Site Field Conditions Record
3. RFIs
4. Construction Change Directives (CCD)
5. Change Orders (CO)
6. Addenda

**(i) MAINTENANCE DOCUMENTATION DIRECTORY**

A. Organization: Include a section in the directory for each of the following:

1. List of documents
2. List of systems
3. List of equipment
4. Table of contents

B. Tables of Contents: Include a table of contents for each emergency and maintenance manual.

**(j) PROJECT MANUAL - GENERAL**

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A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page
2. Table of contents
3. Manual contents

B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:

1. Subject matter included in manual
2. Name and address of Project
3. Name and address of Owner
4. Date of submittal
5. Name, address, and telephone number of the General Contractor
6. Names, addresses, and telephone numbers of the Subcontractors
7. Name and address of Associate
8. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

#### **(K ) PROJECT MANUAL - OPERATIONS**

A. Descriptions: Include the following:

1. Product name and model number
2. Manufacturer's name
3. Equipment identification with serial number of each component
4. Limiting conditions
5. Complete nomenclature and number of replacement parts

#### **(L ) PRODUCT MANUAL - MAINTENANCE**

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name .and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross reference Specification Section number and title in Project Manual.

C. Product Information: Include the following, as applicable:

1. Product name and model number;
2. Manufacturer's name;
3. Color, pattern, and texture;
4. Material and chemical composition;

5. Reordering information for specially manufactured products;

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Types of cleaning agents to be used and methods of cleaning
2. List of cleaning agents and methods of cleaning detrimental to product
3. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

#### **(M ) PROJECT MANUAL PREPARATION**

A. Maintenance: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work and indicating maintenance of each system, subsystem, and piece of equipment not part of a system.

B. Manufacturers' Data: Include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

C. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

D. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.

1. Do not use original Project Record Documents as part of operation and maintenance manuals.

E. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.

**END OF SECTION**

## **CHAPTER CW-00-01-00 CIVIL WORKS**

## Table of Contents

Section No.	Description	CODE -NO
CW-00-01-01	Selective Demolition.	
CW-00-01-02	Anti Termite Treatment	
CW-00-01-03	Masonry Unit	
CW-00-01-04	Damp Proofing & Water Proofing	
CW-00-01-05	Plain Cement Concrete	
CW-00-01-06	Plaster	
CW-00-01-07	Paint & Polish	
CW -00-01-8	Glass & Glazing	
CW-00-01-9	Wood Work & Joinery	
CW-00-01-10	Aluminum Doors & Windows	
CW-00-01-11	False Ceiling	
CW-00-01-12	Flooring & Dado Skirting	
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CW-00-01-14	Metal Works	
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CW-00-01-16		
CW-00-01-17		

### **CH CW-00-01-01            SELECTIVE DEMOLITION WORKS**

MESSA Office No 302 3<sup>rd</sup> Floor Bldg. No 52-C Lane No 01 Al Murtaza Commercial Phase-VIII DHA Karachi

## 1 SCOPE

The work covered by this section of the specifications consists of removal of CC Block Work, Plain & Reinforced Concrete works, Wood Work, Plumbing Items, Electrical Items, and debris of bathrooms, and performing all operations as required to dismantle existing Interior Works of all floor, Building No 09 State Life Insurance Corporation of Pakistan SLIC, Dr. Ziauddin Ahmad Road Karachi, as per the method statement submitted during or before prequalification with all necessary required precautions or as directed by the Engineer.

## 2 SUBMITTALS

### 2.1 Method Statement and Details

For all Demolition works the Contractor shall submit for the prior approval of the Engineer, the methodology and list of plant and equipment to be employed on the Works. No work shall be commenced until the methodology, plant and equipment to be used in the Works is approved by the Engineer.

## 3 DISMANTLING PROCEDURES

- 3.1 Demolitions shall be performed in an orderly manner and the Contractor shall take all necessary precautions and expedients to prevent damages to the adjacent structures.
- 3.2 Explosives shall not be used to remove or demolish the Plain and Reinforced Cement Concrete Structures unless otherwise directed by the Engineer.

## 4 EXECUTION

### 4.1 Description of Site

The Contractor shall take sufficient steps/ actions/ measures for the safety of the adjoining building and shall be sole responsible for any damage to the existing superstructures and substructures caused due to demolition. Client and Consultant shall not be responsible for any misshape due to poor execution.

Where approval has been given to the Contractor for carrying out demolition operations at night or in places where day light is excluded, the Contractor shall provide adequate lighting at all points where demolition and transportation is in progress.

### 4.2 Notice to Commence Work

The Contractor shall give reasonable notice that he intends to commence any demolition works and he shall submit to the Engineer full details of his proposals. The Engineer may require modifications to be made if he considers the Contractor's proposals to be unsatisfactory and the Contractor shall give effect to such modifications but shall not be relieved of his responsibility with respect to such work.

### 4.3 Demolitions near Existing Buildings

The Contractor's attention is drawn particularly to his obligations under the General Conditions of Contract in respect of those works, which are in close proximity of existing buildings.

#### 4.4 Shoring, Planking and Strutting

Shoring, where required during demolition, shall be installed to protect workmen and adjacent paving, structures and utilities. The term shoring shall also be deemed to cover whatever methods the Contractor elects to adopt, with prior approval of the Engineer. Any damage to the property on account of Contractor's fault shall be solely on his account.

#### 4.4 Utility Lines

Existing utility lines that are visible or the locations of which are made known to the Contractor prior to demolition and that are to be retained, as well as utility lines constructed during dismantling if damaged, shall be repaired by the Contractor at his own expense. Any existing utility lines which are not known to the Contractor in sufficient time to avoid damage, if inadvertently damaged during demolition, shall be repaired by the Contractor and adjustment in payment will be made as approved by the Engineer. The utility lines, which are to be removed, are encountered within the area of operations the Contractor shall notify the Engineer in ample time for the necessary measures to be taken to prevent interruption of the service.

#### 4.5 Stockpiling of Demolished Materials

Demolished material suitable for reusable may be stockpiled as directed by the Engineer.

### 5 DISPOSAL

5.1 All materials resulting from Demolition shall be disposed off out of Municipal limits along the most direct route from the boundary of the project and/or as directed by the Engineer

5.2 All carts, trucks or other vehicles used by the Contractor for transportation of the Dismantled/Demolished material shall be suitably constructed or lined so as not to permit any leakage of materials while the vehicles are on the move. These would be so loaded and arranged as not to spill on the Site and public roads. Whenever any vehicle so used is found leaking and unsuitable it shall be immediately withdrawn from the Work.

5.3 The disposal of Dismantled/Demolished debris material shall include loading, unloading, transporting, spreading and leveling as directed by the Engineer

### 6 PROPERTY OF MATERIAL

***The Contractor shall visit the site and shall assess the quantity & quality of the material which is salvage/ reusable and shall offer their price for payment to the Client for the salvage in the BOQ separately. All the materials designated as reusable at the opening date of tender shall be the property of the Contractor and stacked/stored as per BOQ and direction by the Engineer in an approved manner at a place within the site area as approved by the Engineer.***

### 7 MEASUREMENT AND PAYMENT

## 7.1 General

Except otherwise specified herein or elsewhere in the Contract Documents, no measurement and payment will be made for the under-mentioned works related to the relevant BOQ item.

- 7.1.1 Timber shoring, planking, strutting and providing slope for upholding the sides of demolished work.
- 7.1.2 Stacking of reusable materials.
- 7.1.3 Operations and the steps taken for the safety of the existing adjoining structures including danger direction/ diversion sign boards of appropriate size and temporary segregating the area with corrugated sheet steel plates or with brick masonry in mud.
- 7.1.4 Temporary diversion of existing utility lines.
- 7.1.5 Disposal of demolished debris materials out of Municipal limits including loading unloading and spreading.
- 7.1.6 Arrangement of water and power supply for the works, if required.
- 7.1.7 Tools, Plants and equipment used for the demolition.
- 7.1.8 Any damage caused to the structures and installation due to negligence of the Contractors during dismantling operations and their repair/replacement. to the satisfaction of the Engineer.
- 7.1.9 Cleaning and restoring the site to the satisfaction of the Engineer.

## 7.2 Measurement and payment

***Payment for selective dismantling and disposal of debris outside the KMC limit and unusable material will be made to the contractor as per BOQ item. For taking out stacking of the reusable it is deemed that price of reusable materials such as Wooden Panels, Doors, Windows, stair railing, false ceiling metallic frame, electrical fittings & fixtures, Electrical switches, wires & cables etc; are in excess to the price of demolition and other liabilities of the contractor as mentioned above therefore the contractor will credit a lump sum amount to the Employer as quoted in Bill of Quantities.***



## **CW-00-01-02 TERMITE CONTROL TREATMENT**

### **1 SCOPE**

The scope of work for anti-termite treatment includes injection of insecticide in sides and bottom of foundation trenches, spraying on stockpiled backfill material and injections of the insecticide in floor sub-grade of the building. The scope also covers treatment of all wood works with insecticides before installation in position.

### **2 CODES AND STANDARDS**

All methods of termite protection used herein shall be in accordance with the standard practice of National Pest Control Association, U.S.A. and the British Wood Preserving Association.

### **3 SUBMITTALS**

- 3.1 Samples of all the materials to be used for termite control for approval of the Engineer and testing in accordance with the specified standards.
- 3.2 Method statement for application of anti-termite chemical.

### **4 QUALITY ASSURANCE**

#### **4.1 Manufacturer's Instructions**

In addition to the requirements of these specifications, the manufacturer's instructions and recommendations for the work, including preparation of substrata and application shall be complied with.

#### **4.2 Application**

A professional operator shall be engaged who shall have license in accordance with regulations of governing authorities for application of soil treatment solution.

#### **4.3 Guarantee**

The Contractor is to guarantee that the building shall be free from termites (white ants), wood bores and other pests which cause damage to wood or other organic material for one year from the date of acceptance of the building.

In the event of any damage caused within the guaranteed period, the Contractor shall replace at his own cost such damaged material, finishes affected and suitably preserve and treat the entire premises with the best method known to the trade to prevent the spreading of termites.

### **5 MATERIAL**

- 5.1 An emulsible concentrated insecticide shall be used for dilution with water, specially formulated to prevent infestation by termites. Fuel oil will not be permitted as a diluent. Provide a working solution of one of the following chemical with clean portable water in ratio 1:40 unless otherwise specified by the manufacturer/supplier.

5.1.1.1 Termidor

5.1.1.2 Biflex

5.1.1.3 Dursban

- 5.2 Insecticide shall be obtained from the Sole distributor, in sealed drums in quantity necessary for the requirement of works.  
All mixing shall be done at site and mixing proportion of insecticide with water shall be verified by the Engineer.
- 5.3 Pure turpentine shall be used for dilution of insecticide, in approved proportion for application to woodwork where such application is required.

## 6 METHOD AND EXTENT OF APPLICATION

- 6.1 Insecticide solution shall be applied with approved pressure spraying equipment maintaining a pressure of 150psi to all applications to, on or in earth.
- 6.2 Soil treatment shall begin after all work of preparation of earth prior to installation of concrete has been done. After application, no additional earth moving or work upon sub grade should be done. No covering of earth or concrete should be applied over soil treatment until at least 24 hours after treatment has been made. Solution should not be applied during wet weather, or when the earth surface is excessively wet. Application should be made to all areas beneath concrete slabs-on-grade, including sidewalks and paving abutting buildings for distance of at least 2 meter beyond building line. Solution shall be applied in amounts of not less than 6.00 litter /sq.m of area. If applied over gravel or sand fill, application shall not be less than 7.50litre /sq.metre of area. Insecticide shall penetrate to a depth of 25-mm minimum in porous earth at bottom and 50 mm to 75 mm at sides of excavations.
- 6.3 Sides of foundation excavations, grade beam, and similar areas shall be treated with solution at a rate of 0.37 gallon per square feet upon inner sides of such excavations, and at all locations where concrete slabs for platforms and similar work about the building. Similar treatment shall be made at all locations where expansion joints, control joints, column bases and similar work occur at or below grade slabs.
- 6.4 In the areas of application signs shall be fixed to show that soil treatment has been applied. Such signs shall be removed when areas are covered by other construction.
- 6.5 Care shall be exercised to insure that no marks or damage occurs to the finished structure as a result of the work under this section.
- 6.6 All woodwork for the entire project is to be insecticide treated (before application of solignum). Insecticide shall be sprayed on all surfaces of all the wooden work viz., door frames, blocking, furring, planks, boards etc. before installation. Spraying is to be done at the site, after delivery and before installation. No spraying shall be necessary after field sawing, jointing or installation of such material.

## 7 MEASUREMENT & PAYMENT

**7.1 General****7.2 Termite Control Treatment****7.2.1 Measurement**

Measurement of acceptably completed works of termite control treatment will be made on the basis of number of square feet of area treated by measuring the two dimensions (length & breadth) of treated surface.

**7.2.2 Payment**

Payment will be made for acceptable measured quantity of termite control treatment on the basis of unit rate per square Feet quoted in the Bills of Quantities & shall constitute full compensation for all the works related to the item.

## CW-00-01-03 UNIT MASONRY

### A ) Block Masonry

#### a) SCOPE

The work under this section of the specifications consists of furnishing all plant, labour, equipment, appliances and materials and performing all operations in any floor and at any height in connection with the supply and installation of ordinary cement concrete solid, hollow and thermal block masonry work including wall ties, anchors, damp-proof courses, complete in strict accordance with this section of the Specifications and applicable drawings, and subject to the terms and conditions of the Contract.

#### b) MATERIALS

##### i) FOR BLOCK

Cement, aggregates and water for concrete blocks shall conform to the requirements as specified in Section for Plain and Reinforced Concrete.

##### ii) FOR MORTAR

The cement and sand mortar for concrete block masonry shall be as specified.

##### iii) SAND

Sand for mortar shall comply with the requirements for BS-1200. It shall be graded in accordance with the following table and the various sizes of particles shall be uniformly distributed. Sand that has been in contact with seawater shall not be used unless it has been thoroughly washed to the satisfaction of the Engineer-in-Charge.

**Table 03 (b) Grading of Sand**

Sieve Size Number	Percent Passing by Weight	
	Min.	Max.
#4	100	Not Applicable
#8	95	100
#16	70	100
#30	40	75
#50	10	35
#100	2	15
#200	0	0

The sand shall conform to the provisions of Plain & Reinforced Concrete for limits of deleterious material.

#### iv) CEMENT

Cement shall be Ordinary Portland Cement conforming to ASTM C 150 or BS-12.

#### v) WATER

Water shall be clean and free from any harmful impurity. Where the quality of the water is doubtful, it shall be tested in accordance with BS- 3148. The water shall comply with the provisions of Clause Plain & Reinforced concrete.

**vi) ADDITIVES**

Additives where used, shall be proprietary products used in the proportions and manner recommended by the manufacturer. The additives shall in no way adversely affect the mortar strength or contain chemicals, which may be harmful to other building materials. To add gypsum to cement is strictly forbidden.

**vii) MORTARS AND GROUT**

Materials for mortar, sand, binding agent and water, shall be mixed by volume or by weight as specified for at least 3 minutes with the minimum amount of water to produce a correctly mixed mortar or grout of workable consistency in a mechanical batch mixer. For small jobs, hand mixing may be permitted, the ingredients being mixed with sufficient water to produce a correctly mixed workable mortar. Mortar shall be as strong, but no stronger than the materials it bonds together. Mortars shall be mixed in batches, which can be used within a period before the setting process commences. Once a mix begins drying off, it shall be rejected. No ingredients shall be added to it once the setting process has begun.

**viii) CONCRETE BLOCK MAKING**

Concrete Blocks shall be of the sizes required as per drawings (for solid and hollow block same as 4"x8"x12, 6"x8"x12" and 8"x8"x12") and shall conform to the requirements of ASTM C-90 "Standard Specification for Load bearing Concrete Masonry Units" or ASTM C-129 "Standard Specification for non-Load bearing Concrete Masonry Units" unless specified otherwise. The Solid and Hollow blocks shall be factory manufactured/fabricated and be machine moulded. The block making machines shall be of the standard approved by the Engineer-in-Charge. They shall be operated according to the instructions laid down by the manufacturers. The contractor shall submit samples/literature of various manufacturers for Engineer-in-Charge's approval. The contractor should note that only blocks supplied by the approved manufacturer(s) shall be allowed to be used in the work.

**ix) PROPERTIES OF BLOCKS**

All blocks shall be of the size and shape required to complete the work shown in the Drawings or as instructed by the Engineer-in-Charge.

The cement, sand and coarse aggregate shall be volume batched and their proportion may be adjusted so as to provide the concrete of the required strength when tested and shall be mixed in a concrete mixer in accordance with the provisions of 'Plain and Reinforced Concrete.

The compressive strength of various solid and hollow blocks shall be as follows when tested in accordance with ASTM C 140:

**Table -03-01 BLOCK PROPERTIES**

Sr. No.	Type of Concrete Masonry	Min. Compressive Strength (psi)		Location
		Average of 6 Units	Individual Unit (min.)	
1.	Solid load bearing Masonry units	2175	1740	Exposed to frost action
2.	Hollow load bearing Masonry units	1800	1450	Exposed to moisture & weather
3.	Solid/Hollow non-load bearing Masonry units	1000	870	Not exposed to moisture & weather
4.	Non Load bearing Thermal Blocks*	1000	870	Exposed to moisture & weather

Normally 1:3:6 or 1:2:4 concrete mixes should meet the above strength requirement as per Clause Plain & Reinforced Concrete. The specific gravity should be between 2.3 to 2.4. The proportion shall however be confirmed by contractor by trial mix and approved by Engineer-in-Charge for actual site conditions.

Average Water absorption for all the six samples shall not exceed 10 percent. The average moisture content of all the concrete masonry units shall not exceed 30 percent of the total water absorption of units. The Contractor shall provide test certificates providing the average minimum crushing strength of the blocks prior to the commencement of the construction. Further test certificates shall be provided as required by the Engineer-in-Charge to ensure that all batches of blocks have the minimum specified crushing strength. A laboratory approved by the Engineer-in-Charge shall carry out the test. Evidence shall be produced that the block manufacturer has an efficient method of quality control. The Engineer-in-Charge may require testing of samples of blocks periodically and the Contractor shall make necessary arrangements accordingly. The method of sampling for all tests shall be in accordance with ASTM C 140.

#### **xi) REINFORCING AND ANCHORS OF BLOCK MASONRY**

Unless otherwise stated reinforcing and anchors shall conform to under-mentioned sizes: Joint reinforcing shall be 1.32mm (0.05-inch) diameter mild steel wire mesh design, galvanized after fabrication. Steel wire woven into 12mm mesh 75mm wide. Reinforcing bar anchors shall be 25 mm dia. deformed bar minimum 10 inch long. Two 6mm dia bar shall be provided at every fourth course for anchoring of block masonry to columns. Two 10 mm bars at every fourth horizontal course shall be provided for anchoring masonry walls to plinth beam/floor beam, as shown on the drawings.

Dovetail anchors and slots (if used as an alternate anchorage) shall be not less than 18 gauge galvanized steel.

#### **Xii ) ERECTION**

Blocks shall be laid true to line, level and laid in accurately spaced courses in stretcher bond with vertical joints of each course located at centre of units in alternate courses below. Vertical joints shall be buttered in the entire height of blocks. Each course shall be bonded at corners and at intersections of walls and

shall be properly bonded. Courses of block shall be kept plumb throughout and corner reveals shall be true and in plumb. Standard width of mortar joints for both horizontal and vertical joints shall be 10mm (max). Mortar joints in walls shall have full mortar coverage on vertical and horizontal faces between the blocks. Mortar joints on wall including struck joints, shall be thoroughly compacted and pressed tight against the edges of the blocks with proper tools. Blocks terminating against soffits of beam or slab construction shall be wedged tight with wedges and the joints shall be packed solidly with mortar between the top of the block and the bottom of slab or beam. Control expansion joints shall be kept free from mortar or other debris. Unless otherwise shown on the drawings or specified by the Engineer-in-Charge, the spaces around doorframes and other material or built in items shall be solidly filled with mortar. Spaces around the door and window holdfasts shall be filled in with 1:3:6 concrete. Work required to be built in with masonry including doorframe anchors, wall plugs, and dovetail anchors and accessories shall be built in as the erection progresses. The block work shall be carried up in a uniform manner and no portion shall be carried more than one metre above the adjoining one at any time. All masonry shall be kept strictly true and square and the whole properly bonded together and levelled round each floor.

Sleeves, Chases, holes, sinking and mortices for other trades shall be correctly located and formed to the sizes as required by the relevant trades. Chiseling of completed walls or the formation of holes shall only be carried out as per design drawings with the approval of the Engineer-in-Charge. Walls of blocks indicated, as being non-load bearing shall be constructed on the in situ concrete floor slab unit after the floor formwork is struck and the concrete has obtained sufficient strength to support their-weight. Tothing into load-bearing walls shall not be permitted.

All bolts, anchors, ties, pipe sleeves, flushing metal attachments, lintels and the like required to be built into the work shall be correctly inserted and executed as the work proceeds.

Walls or partitions abutting concrete columns or walls shall be securely anchored and tied with metal anchors or ties at not more than 450mm vertical centres. Wall ties cast in with concrete shall be bent down after the removal of formwork and shall be securely jointed into the mortar beds of walling.

Care shall be taken during construction of cavity walls so as to avoid the filling up of cavity with mortar. G.I. flashing and weep holes shall be provided wherever specified on the drawings or as per the instructions of the Engineer-in-Charge. Weep holes will be formed by oiled rods, removed after the mortar is set, at specified locations.

### **xiii) SCAFFOLDING**

Contractor shall provide safe scaffolding of adequate strength for use of workmen at all levels and heights at his own expense. Scaffolding which is unsafe in the opinion of the Engineer-in-Charge shall not be used until it has been strengthened and made safe for use of workmen. Cost of scaffolding etc. shall be included by the Contractor in the unit rate for masonry items. Damage to masonry from scaffolding or from any other object shall be repaired by the Contractor at his own cost.

### **xiv) JOINTING**

Jointing is the forming of joints as work proceeds. Joints shall be as follows:

- o Exterior exposed joints shall be tightly formed to a weather joint with the point of the trowel.
- o Interior exposed joints shall be tightly formed to a concave joint.
- o Joints which are subsequently covered with plaster or other finish materials shall be struck flush.

**xv) TOLERANCES**

All block work shall be erected plumb and true to line and level with the maximum variation in any storey height or any length of wall being one mm in one metre. The maximum tolerance in the length, height or width of any single masonry unit shall be + 3mm.

**xviii) REINFORCED HOLLOW BLOCK MASONRY**

Where specified on the Drawings, reinforced hollow block masonry shall be provided. Horizontal and vertical reinforcement shall be cold worked deformed bar. Two bars of (8mm) diameter shall be provided at every third horizontal course at 600mm centres, while the vertical reinforcement shall be two bars of (12mm) diameter at 800mm centres. Bars shall be anchored and held firmly vertical in respective beams and columns in the manner shown in shop Drawings. The reinforced hollow part of the block wall shall be solidly filled with Concrete (1:2:4) at intervals of one meter maximum height as the laying of block masonry work proceeds. The filled concrete shall be consolidated thoroughly by rodding to avoid formation of voids. Contractor shall submit shop drawings of anchoring and placing of reinforcement in hollow block masonry for approval of the Engineer-in-Charge.

**xix) CURING AND REPAIRS**

All block masonry shall be water cured and shall be kept wet for at least seven days, by an approved method, which will keep all surfaces to be cured continuously wet. Water used for curing shall meet the requirements of the specifications for water used in the manufacture of blocks. If, after the completion of any block masonry, the work is not in alignment or level, or does not, conform to the lines and grades shown on the Drawings or shows a defective surface, it shall be removed and replaced by the Contractor at his expense unless the Engineer-in-Charge grants permission, in writing, to patch or replace the defective area.

**xx) MASONRY SHORT OF HEIGHT**

In case of different thickness of slab in different areas or rooms or for any other reasons, whatsoever if chiseling of masonry is required, the Contractor shall do so at his own cost. Where for any reason whatsoever, the height of the wall is short of ceiling height, the actual height shall be made good with 1:3:6 nominal mix concrete. This concrete shall neither be measured nor be paid under item of concrete but will be paid for under the item of wall masonry. Similarly, where the lintel heights are such that the Contractor has to chisel the masonry or provide cast in- place concrete to make up the height of the course, no payment will be made for chiseling, but where such cast-in-place concrete is provided, payment for the same will be made at the unit rate of masonry.

**xxi) MEASUREMENT AND PAYMENT****COMPOSITE RATE**

The measurement and payment for the items of the work of Cement Concrete Block Masonry here of shall be made corresponding to the applicable items as provided in Contract Agreement and shall constitute full compensation, for procurement, transportation, performance in all respects and completion of work, as specified herein, including the site clearance as approved by the Engineer-in-Charge.

Measurement and payment of in-fill concrete or steel reinforcement, if used, shall be paid under relevant item of these Specifications.



**CW- 00-00-04 DAMP PROOF COURSE AND WATER PROOFING****1. DAMP PROOF COURSE****a) SCOPE**

The work shall include furnishing all labour, material and equipment and performing all services to provide the damp-proofing in foundations and over plinths of Structures as shown on the drawings and/or as directed by the Engineer-in-Charge.

**b) RELATED WORKS**

- Section - Plain and Reinforced Concrete
- Section - Cement Concrete Block Masonry
- Section – Roofing

**c) INSTRUCTIONS**

Damp proofing shall not be applied when the ambient temperature is below 4 degree Centigrade. The work shall be done by workmen experienced in the application of damp proofing, and the Contractor shall co-ordinate damp proofing operations with other phases of the work to prevent staining or damaging finished work. The Contractor shall repair or replace damaged finished work to the satisfaction of the Engineer-in-Charge. Damp proofing shall be applied as shown on the Drawings.

**d) DAMP PROOFING MATERIALS**

All materials i.e. cement, sand, aggregate, water, polythene sheet and bitumen shall conform to the specifications given in respective section.

- (i) Concrete work shall comply with the requirements of “Non-Structural Concrete” specified in Section 5 of this specification.
- (ii) Polyethylene sheet shall not weigh less than 1.64 lbs per 100 sft(80 grams per SM) i.e. 500 Gauge.
- (iii) Water proofing material shall be Specified Industrial Bitumen (SIB) Grade 10/20
- (iv) Primer complying with ASTM D-41

**i) Damp Proof Course**

Damp Proof Course unless otherwise specified shall be minimum one inch thick 1:2:4 Plain Cement Concrete placed at the specified plinth level in accordance with the provisions of Section Plain& Reinforced Concrete.

**ii) Damp Proof Plaster**

Damp Proof Plaster is generally for vertical faces and unless otherwise specified is applied with 1:3 Cement Sand Plaster complying with the provisions of Clause 15.1 – Plaster, Finishes.

**(a) Polythene Sheet**

Polythene Sheet shall be used over bitumen painted surface where specified and shall consist of 0.13mm thick polythene sheet (500 gauge) complying with ASTM D 2103, as approved by the Engineer-in-Charge.

**(b) Water Proofing Agent**

The specified water proofing agent or asphaltic materials shall be delivered in sealed containers bearing the Manufacturer's original labels. Bituminized Kraft paper shall be delivered in rolls as per Manufacturer's original packing. All materials shall conform to the Specifications designated and shall be approved by the Engineer-in-Charge. Damp proofing materials shall conform to the requirements shown on the Drawings and given hereafter.

**(c) Bitumen**

Bitumen for damp proofing shall meet the requirements of Roofing and as approved by the Engineer-in-Charge

**2 EXECUTION****a) PREPARATION OF SURFACES**

Surfaces to receive damp proofing shall be smooth, clean and dry. Holes, joints and cracks shall be painted flush with mortar. Before damp proofing, surface shall be swept clean of all foreign matter and shall be inspected and approved by the Engineer-in-Charge. The surface shall be prepared complying with the provision of relevant Clause

**b) PLACEMENT****i) General**

The selection and combination of various water proofing and damp- proofing materials for different locations shall be as shown on the Drawings or as directed by the Engineer-in-Charge. Unless otherwise directed or approved by the Engineer-in-Charge, the procedures given in this subsection shall be adopted.

### **3 WATER PROOFING ROOFS**

#### **a) SCOPE**

The work of insulation, water proofing and roofing of the flat or sloped roofs shall consist of provision of all labour, material and equipment for installing the insulation, water proofing and roofing whichever required in accordance with the Drawings, specified or as directed by the Engineer-in-Charge.

#### **b) CODES AND STANDARDS**

The work shall conform to the requirements of the following Codes and Standards, unless otherwise specified:

ASTM D41-11                      Primer for use with asphalt in damp proofing and water proofing

ASTM D2103-15                  Polyethylene film and sheeting BS 747-77

#### **c) WATER PROOFING MATERIALS**

##### **i) ASPHALT/BITUMEN**

Special industrial asphalt shall be of 10/20 penetration, or any other type approved by the Engineer-in-Charge conforming to the following minimum and maximum limits:

Specific gravity 1.02/1.04 at 25°C

Penetration, 100 gm 10/20 at 25°C

Ductility (cms) 417 at 25°C Softening Point 77°C / 93°C

Working temperature 157°C /167°C

Asphalt/bitumen primer shall be from a manufacturer approved by the Engineer-in-Charge conforming to ASTM D 41, and applied at the rate of 1.45kg/sm.

##### **iii) FELT**

The felt shall be an asphalt impregnated type 1C fibre base. The number of plys thickness shall be as specified in the Drawings. The felt shall be smooth and stout building paper having safe water proofing qualities. Weight of 3 ply standard roll of 20 x 1 metre should not be less than 54 Kilograms. The brand/make of felt shall be as specified and approved by the Engineer-in-Charge.

##### **iii) ISOLATION MEMBRANE/POLYETHYLENE SHEET**

Isolation membrane shall be polyethylene sheet 0.13mm thick (500 gauge). The contractor shall provide sample of the sheet for approval by the Engineer-in-Charge.

**iv) JUTOID WATER PROOF MATTING**

The jutoid matting shall be asphalt impregnated jute base matting as approved by the Engineer-in-Charge. The matting shall be stout jute matting having safe water proofing qualities. The thickness of the matting shall be as specified.

**v) RUBEROID WATER PROOFING MEMBRANE**

Ruberoïd water proofing membrane shall be applied along with asphalt felt where specified. The thickness of the membrane shall be 4mm weighing 4 kgs per square meter. The physical properties of membrane when tested according to ASTM D5147 shall be as follows:

Property	Test Method	Values
Tensile Strength @ (nom.), lbf/in	ASTM D5147	90
Elongation @ (nom.), %	ASTM D5147	45
Low Temperature Flexibility (max.), F	ASTM D5147	7
Tear Strength (nom.), lbf	ASTM D5147	98
Dimensional Stability, %	ASTM D5147	<1

**d) EXECUTION****A) ROOFING****(i) Grading Roof with Cement Concrete 1:2:4 / Roof Screeding****(a) Materials**

Cement, coarse sand and graded stone aggregate 20 mm nominal size, shall be used as specified in the item. The specifications for the materials and method of preparation of concrete shall conform in general to the specification described in Section Plain & Reinforced Concrete. The grading of aggregates shall be limited between 3/4 inches maximum and 3/16 inches minimum.

**(b) Laying**

Before laying cement concrete for grading, the level marking to the required slope/gradient shall be made only with cement concrete on the surface of the slab at suitable spacing) so that the mason can lay the concrete to the required thickness, slope / gradient easily in between the two level markings.

On getting the level marking approved, the surface should be sprinkled with thick cement slurry and the concrete should be laid carefully, without throwing from height, in predetermined strips. The concrete should be consolidated by specially made wooden tamping. After the tamping is done the surface should be finished to required slope/gradient with wooden trowels without leaving any spots of loose aggregates etc.

The mixed cement concrete must be laid in position, within half an hour of its mixing. In case any quantity of concrete remains unused for more than half an hour the same should be rejected and removed from the site.

**(c) Finishing**

The slope of finished terrace shall not be more than 1 in 120 unless a steeper slope is ordered by the Engineer-in-Charge. The minimum thickness of the concrete at its junction with Khurra or parapets shall be 5 cm. The concrete shall be rounded at the junction of roof slab and parapet. It is desirable to provide a haunch/gola/filler at the junction of the parapet wall and the roof slab.

The finished concrete surface shall present a smooth surface with correct slopes and uniform rounding. The concrete should be free from cracks. Excess trowelling shall be avoided.

**(d) Thickness**

Average thickness shall be 1-1/2 inches to 3 inches and as specified.

**(e) Curing**

Curing shall be done either by spreading straw/Hessian cloth over the graded surface, keeping the same wet for full 10 days or flooding the graded area with water by making ponds with weak cement mortar or sand, for 10 days. Occasional curing by simply spraying water now and then shall not be permitted.

**(ii) Grading Roof with Cement Mortar****(a) Materials**

Cement and coarse sand shall be as specified in Section 5 – Plain & Reinforced Concrete.

**(b) Cement mortar**

Cement mortar 1:3 (1 cement: 3 coarse sand) /1:4(1 cement: 4 coarse sand) specified in the item of work shall conform to the specification described in Section 11 - Brickwork.

**(c) Preparation of the surface**

The surface shall be cleaned properly with brooms brush and cloth to remove all dirt, dust, mortar droppings etc.

**Laying**

Same as described under Clause 8.2.4.1(i) (b) above for concrete, except that cement mortar shall be stamped with wooden and steel trowels and surface finished with steel trowel.

**(d) Finishing**

1. The slope of finished surface shall not be more than 1 in 120 unless a steeper slope is specified.
2. The finished surface of the grading shall present a smooth surface with correct slopes and uniform rounding's wherever they are provided. The mortar surface shall be free of cracks. Excess trowelling shall be avoided.

**(e) Thickness**

The minimum thickness of cement mortar grading at the junction with khurra or parapet wall shall be 20 mm. The cement mortar shall be rounded at the junction of roof slab and parapet. It is desirable to provide a haunch/gola/filler at the junction of parapet wall and the roof slab. The maximum thickness that shall be adopted for grading with cement mortar shall be 50 mm. It is not at all desirable to lay the cement mortar grading for greater thickness and in that case it is advised to go in for grading with Cement Concrete.

**(f) Curing**

Curing for the grading with cement mortar shall be done exactly as described under Clause 8.2.4.1(i) above for concrete.

**(iii) Preparation of Surface****(a) Flat Roofs**

All surfaces to receive roofing and water proofing treatment shall be sound, clean, smooth, dry and free of debris, loose material or defects which would have an adverse effect on the water proofing application or performance. The work shall not start until the preparatory work has been inspected and approved by the Engineer-in-Charge.

**(b) Sloped Roofs**

Treated wood nailing strips 254 x 50 mm size shall be embedded in the roof with top of strip flush with the deck at 900 mm on centres or as shown and the drawings and/or directed by the Engineer-in-Charge. Metal gravel strips, scuppers and roof drains shall be placed and metal flashing, flanges etc., shall be provided and installed in time. Cant strips shall be installed at the angle formed by the roof deck and the vertical surfaces.

**(iv) Installation of Roof Felt / Matting**

- 1 The terms Felt/Matting used are synonymous. Felt shall be stacked in properly protected piles. Felt surfacing material shall always be dry and the several layers of felt shall be laid free from wrinkles.
- 2 Roofing shall not be applied during rain or while surfaces are damp; it shall be applied only to surfaces that are clean and dry.
- 3 Method of laying the different layers of built-up roofing shall be strictly in accordance with the recommendations of the manufacturer and the method proposed by the Contractor and approved by the Engineer-in-Charge.

**(v) Ruberoid Water Proofing**

The following shall be sequence of operation for lying Ruberoid water proofing:

- Asphalt Saturated Felt
- Ruberoid Compound

- Ruberoid Reelia Roofing (of the specified ply) ○ Ruberoid Compound ○ Washed Gravel

The roof surface shall be prepared as per (iii) above. The work shall be performed according to the instructions of the manufacturer.

Two or three underlay sheets will be unrolled and placed in position on the roof. Each sheet overlapping the adjoining one by 2 inches. Where the sheets meet the parapet or other roof obstructions they should be turned up 6 inches and bonded with Ruberoid Compound to the concrete for a width of about 15 inches.

The first spread of the underlay should be 18 inches wide so that the laps of the Ruberoid Reelia Roofing break joints with those of the underlay. Each length of the Ruberoid Reelia Roofing is in turn fitted in position and rolled back half way so that when unrolled it will resume its former position. The Ruberoid compound heated to the fusing point will then be poured from a suitable container such as watering can without a rose or a bucket and dipper at the rate of 30 lbs per hundred sft. On the underlay. As Ruberoid Reelia Roofing is rolled out pressure is applied so as to ensure adhesion while the compound is still hot. The other half of the length is then rolled up and the process repeated. The joints of the Ruberoid roofing should overlap 2 inches and care should be taken to see that ample compound is applied so that it flows out along-with edges. The length of the Ruberoid roofing should not exceed 15 feet. It is advisable that the laying operation for underlay and Ruberoid roofing should follow each other in such a way that a minimum of incomplete work is exposed to weather.

The Ruberoid roofing should be inserted for a depth of about 2 inches in the parapet wall by cutting chases in the first convenient course of parapet and covering these with cement plaster. It should be clearly understood that the underlay is not bonded with compound to the concrete substructure except at vertical abutments etc.

Over this surface of the Ruberoid roofing a bitumen compound will be spread at the rate of 30 lbs per hundred sft. In the same manner as described above washed gravel graded from 3/8 inch downward will be spread at the rate of 3 Cu.ft. Per hundred Sq.ft. over the bitumen compound and pressed to the surface by means of wooden thappies so that it adheres well to the bitumen compound.

#### **vii) Providing Blanco Roofing Felt**

The following will be the sequence of operation for laying Blanco roofing felt:

1. Sticking layer of bitumen
2. Layer of 2 ply Blanco felt
3. Flood coat of bitumen
4. Washed gravel

The roof surface shall be prepared as per (iii) above shall be filled in with 1:3 cement mortar. The work shall be carried out according to the instructions of the manufacturer. Over the surface thus prepared a layer of bitumen heated to the fusing point will be spread from a suitable container such as watering cans without a rose or a bucket and dipper at the rate of 30 lbs per hundred Sq. ft. Over this the Blanco felt roofing will be laid and the same will be pressed hard on the surface so that it may adequately adhere to it. Where the felt meets the parapet or other roofing obstruction they should be turned up 6 inches and bonded with bitumen to the concrete for a width of about 15 inches. The length of the roofing felt should not exceed 15 feet. The joints of the felt should overlap 2 inches.

Over this surface of roofing felt bitumen will be spread at the rate of 30 lbs. per hundred sft. In the same manner as described above. Washed gravel graded from 3/8 inch downward will be spread at the rate of 3 Cu.ft. Per hundred Sq.ft. over bitumen compound and pressed to the surface by means of wooden thappies so that it stick well to the bitumen.

#### **Viii) Jutoid Water Proof Matting**

Jutoid can be nailed into position over a wooden surface or can be fixed on a concrete base. If the area to be covered is more than 40 inches in width or 28 yards in length then another roll of similar dimension can be joined together by allowing an overlapping of about 4 inches in such a manner that the overlapping piece is on the higher level in case of a slope and the piece inserted below as the joint comes from the lower level of the slope. This allows the water to smoothly flow over the joint without striking it or penetrating inside to effect the water proofing. The overlap would have to be fixed with a special adhesive. This adhesive is heated, mixed with kerosene oil in specified quantities and applied hot at the joints and at the outer edges of the structure.

#### **ix) Flashings**

Roofing joints and parapets shall be provided base flashings as shown on the Drawings or directed by the Engineer-in-Charge. The base flashings can be either of the following types:

Where built-up base flashings are required, they shall be made by continuing the built-up roofing upon the cant and over the tip and securing the edge with galvanized roofing nail used with metal discs. The nails shall be spaced not over 100 mm apart.

Where metal base flashings are required, 3 layers of felt shall be applied extending up 150 mm on the vertical surface and out on the roof surfaces 100 to 150 mm respectively cementing the same in place with asphalt plastic, troweled on. These flashing strips shall be applied over the top ply of roofing and under the metal base flashing. The portion of metal flashing extending out over roof surfaces shall be covered with two additional plies of felt, 400 mm and 450 mm wide respectively and both cemented in place with bitumen.

### **MEASUREMENT AND PAYMENT**

#### **COMPOSITE RATE**

The measurement and payment for the items of the work of D.P.C. & Water Proofing hereof shall be made corresponding to the applicable items as provided in Contract Agreement and shall constitute full compensation, for procurement, transportation, performance in all respects and completion of work as specified including the site clearance as approved by the Engineer-in-Charge.

**End of section**



## **CW -00-01-05 PLAIN CONCRETE**

### **1 SCOPE**

The work under this section of the specification consists of furnishing all plant, labor, equipment, appliances and materials and performing all operations in connection with the supply and installation of plain and reinforced concrete work complete, in accordance with this section of the specifications and the applicable drawings, and subject to the terms and conditions of the Contract. The scope of this section of specification is covered with detailed specifications as laid down herein.

### **2 GENERAL**

- 2.1 Full co-operation shall be given to trades like electrical, mechanical and other services.
- 2.2 Suitable templates or instructions or both shall be provided for setting out items not placed in the forms. Embedded items and other materials for mechanical and electrical operations shall have been completed, inspected, tested and approved before concrete is placed.
- 2.3 Shop drawings shall be prepared by the Contractor at his own cost. Approval of shop drawings as well as that of actual samples of concrete finish shall be obtained before work is commenced.

### **3 CODES AND STANDARDS**

The work shall conform to the requirements of the following latest Codes and Standards, unless otherwise specified.

ACI Specifications for structural concrete for buildings.

301-  
latest

ACI Guide measuring, mixing, transporting and placing concrete.

304-  
latest

ACI Standard practice for curing concrete.

308-  
latest

ASTM Standard specifications for concrete aggregates.

C 33-  
latest

ASTM Standard test methods for compressive strength of cylindrical concrete specimens.

C 39-  
latest

ASTM Standard test method for sieve analysis of fine and coarse aggregates.

C 136-  
latest

ASTM Standard test method for slump of Portland cement concrete.

C 143-  
latest

ASTM Standard specifications for Portland cement.

C 150-  
latest

ASTM Standard specifications for air-entraining admixtures for concrete.

C 260-

latest

ASTM Standard specifications for aggregate for masonry grout.

C 404-

latest

ASTM Standard specifications for chemical admixtures for concrete.

C 494-

latest

#### **4.0 MATERIALS**

##### **a CEMENT**

###### **i General**

Cement shall be fresh, furnished in sacks as approved by the Engineer. Unless otherwise permitted, cement from not more than two plants shall be used and in general, the product of only one plant shall be used in any particular section of the work. Cement recovered through cleaning of sacks shall not be used.

###### **ii Portland Cement**

Portland cement shall be of Pakistan origin and manufacture unless otherwise approved by the Engineer. Portland cement shall conform to Pakistan Standard PS-232 or to British Standard BS-12 or to ASTM C 150 type-I. Portland cement conforming to ASTM C-150, Rapid hardening type-III or sulphate resistant type-V may also be used in certain parts of the Works as directed by the Engineer.

##### **b AGGREGATES**

###### **i Requirements**

The nominal maximum size of the aggregates shall not be larger than one fifth of the narrowest dimension of the finished wall or slab, or larger than three fourth of the minimum clear spacing between the reinforcing steel and embedment. These limitations may be waived if, in the judgment of the Engineer, workability and method of consolidation be such that the concrete can be placed without honeycombs or voids.

###### **ii Composition**

The use of natural sand or a combination of natural and manufactured sand may be permitted, provided that the fine aggregate meets the applicable requirements of the Specifications for the particular use intended. Coarse aggregate shall consist of gravel, crushed stone or a combination thereof.

###### **iii Source**

The Contractor shall obtain concrete aggregate from deposits of natural sand and gravel or shall procure crushed aggregate from approved quarries which produce aggregates meeting with the Specifications contained herein.

iv **Processed Aggregates**

The Contractor in procuring the processed aggregates or in planning his aggregate processing operations shall ensure that the aggregates, as delivered to the mixer, consist of clean, hard and uncoated particles; light weight elements (chalk, clay, coal) are separated by segregation under water by vibration where required and the fines are removed from the coarse aggregate by adequate washing. The coarse aggregate shall be rescreened just prior to delivery to the concrete mixer bins. The moisture content shall conform to the provisions of sub-section 6.5 "Moisture Control". Compliance with the aggregate grading and uniformity requirements shall be determined before the material is delivered at the mixer. All aggregates shall be sieved and washed with clean water. The aggregates shall conform to the specific requirements given hereinafter.

v **Fine Aggregate**

The grading of fine aggregate as delivered to the mixers shall conform to the requirements given in Table-G

**Table-G**

<i>sieve size Standard square mesh</i>	<i>Percentage passing (by weight)</i>
3/8 inch	100
No. 4	95 to 100
No. 8	80 to 100
No. 16	50 to 85
No. 30	25 to 60
No. 50	10 to 30
No.100	2 to 10

The Fineness Modulus shall range between 2.31 and 2.51

vi **Coarse Aggregate**

The grading of the coarse aggregate as delivered to the mixer shall conform to the requirements given in Table-H

vii **Particle Shape**

The shape of the particles in fine and coarse aggregate shall generally be spherical or cubical. The quantity of flat and elongated particles in the separated size groups of coarse aggregate, as defined and determined by standard tests approved by the Engineer, shall not exceed 15 per cent by

weight in any size group. A flat particle is one having a ratio of width to thickness greater than three. An elongated particle is one having a ratio of length to width greater than three.

viii **Soft Particles**

The Contractor in procuring processed aggregates or in planning his aggregate processing operations shall make whatever provisions are necessary, as regards methods and equipment, to ensure effective elimination of soft particles from all aggregates to the degree that the percentage of soft particles present in the processed coarse aggregate does not exceed 3 per cent by weight when determined in accordance with the applicable requirements of ASTM C-851, or other standard test methods selected by the Engineer. Test samples shall be representative of each size group of processed aggregate specified in Table-H, obtained according to ASTM C-851. Weight of samples for each size group shall be as given in Table-I

**Table-I**

Size No.	Nominal Size	Weight of Sample in Kilograms
8.	3/8" to No.8	0.6
7.	1/2" to No.4	1.0
6.	3/4" to 3/8"	1.5
5.	1" to 1/2"	3.0
4.	1-1/2" to 1"	4.5
3.	2" to 1"	7.0
2.	2-1/2" to 1-1/2"	16.0

**WATER**

Water for washing aggregates and for mixing and curing concrete shall be fresh, clean and free from injurious amounts of oil, acid, alkali, salt, organic matter, or other deleterious substances as determined by ASTM D-596.

The water for curing concrete should have a pH value between 6 to 8 and shall not contain impurities which cause discoloration of concrete.

a **ADMIXTURES**

i **Approval Required**

Admixtures, including air-entraining admixtures, foaming chemicals and water-reducing admixtures, shall not be used, except with the prior approval of the Engineer. All tests for the evaluation and approval of an admixture shall be made by the Contractor as specified in sub-section 6.6 of these Specifications.

ii **Air-Entraining Admixtures**

The source and brand of air-entraining admixture, if required, shall be proposed by the Contractor and approved by the Engineer. The air-entraining admixture will be an approved substance or compound conforming to the requirements of ASTM C-260, which will produce entrained air in the concrete as hereinafter specified. The air-entraining admixture shall be added to the batch in solution in a portion of the mixing water. This solution shall be batched by means of a mechanical batcher capable of accurate measurement and in such a manner as to ensure uniform distribution of the admixture throughout the batch during the specified mixing period.

iii **Water-Reducing Admixtures**

The source, brand, types of suitable water reducing cement dispersing admixtures, if required, shall be proposed by the Contractor and approved by the Engineer. The water-entraining admixture will be compatible with the air-entraining admixture specified above and shall be batched and added to the concrete in the manner specified for the adding of air-entraining admixture but separate from the portion of the mixing water containing the air-entraining admixture. The quantities of water-reducing, cement-dispersing admixture to be used shall be in accordance with the instructions of the manufacturers as approved by the Engineer. Water reducing admixture shall conform to the requirements of ASTM C-494.



**TABLE-H Grading Requirements for Coarse Aggregate**

Nominal Size with Square Openings)	Amounts Finer than Each Laboratory Sieve (Square openings) Weight Percentage													
	4"	3½"	3"	2½"	2"	1½"	1"	¾"	½"	⅜"	No.4	No.8	No.100	
3½" to 1½"	100	90 to 100	-----	25 to 60	-----	0 to 15	-----	0 to 5	-----	-----	-----	-----	-----	
2½" to 1½"	-----	-----	100	90 to 100	35 to 70	0 to 15	-----	0 to 5	-----	-----	-----	-----	-----	
2" to 1"	-----	-----	-----	100	90 to 100	35 to 70	0 to 15	-----	0 to 5	-----	-----	-----	-----	
2" to No.4.	-----	-----	-----	100	95 to 100	-----	35 to 70	-----	10 to 30	-----	0 to 5	-----	-----	
1½" to ¾"	-----	-----	-----	-----	100	90 to 100	20 to 55	0 to 15	-----	0 to 5	-----	-----	-----	
1½" to ¾"	-----	-----	-----	-----	100	95 to 100	-----	35 to 70	-----	10 to 30	0 to 5	-----	-----	
1" to ½"	-----	-----	-----	-----	-----	100	90 to 100	20 to 55	0 to 10	0 to 5	-----	-----	-----	
1" to ¾"	-----	-----	-----	-----	-----	100	90 to 100	40 to 85	10 to 40	0 to 15	0 to 5	-----	-----	
1" to No.4.	-----	-----	-----	-----	-----	100	95 to 100	-----	25 to 60	-----	0 to 10	0 to 5	-----	
¾" to ⅜"	-----	-----	-----	-----	-----	-----	100	90 to 100	20 to 55	0 to 15	0 to 5	-----	-----	
¾" to No.4.	-----	-----	-----	-----	-----	-----	100	90 to 100	-----	20 to 55	0 to 10	0 to 5	-----	

	1/2" to No.4.	-----	-----	-----	-----	-----	-----	-----	100	90 to 100	40 to 70	0 to 15	0 to 5	-----
	3/8" to No.8.	-----	-----	-----	-----	-----	-----	-----	-----	100	85 to 100	0 to 30	0 to 10	0 to 5



## 5. EXECUTION

### 5a PROPORTIONING OF CONCRETE

#### 5ai General

Trial mixes and tests shall be made by the Contractor for the purpose of designing the mixes and for quality control with regard to the required strength, density and durability. The proportions shall be changed whenever such change is necessary to maintain the standard of quality required for the structures and to meet the varying conditions encountered during construction.

All materials composing the concrete shall invariably be measured by weight or if approved by the Engineer as an exception by volume.

#### 5a ii Cement Content

The cement content of concrete for various grades shall be established by trial mixes and shall depend on the size, type and gradation of aggregate used, water cement ratio required for the structure and on the requirements of concrete strength, durability and workability.

#### 5a iii Aggregate Content

The maximum size of aggregate (MSA) to be used in the various parts of the structure shall be as shown on the Drawings and where not shown, shall be as directed by the Engineer. Concrete mixes shall be designed to use the largest size and maximum amount of coarse aggregate practicable keeping in view the requirements of sub-section.

#### 5a iv Water Content

The amount of water to be used shall be governed by the following considerations:

**5b WATER CEMENT RATIO:** In general, the mix design shall provide for water cement ratios by weight with aggregate at saturated surface dry condition, which will be determined on the basis of producing concrete having suitable workability, density, impermeability, durability and the required strength without the use of excessive amount of cement.

It is expected that water cement ratio by weight will vary from 0.45 for concrete in thin sections to 0.65 for mass concrete in severe weather conditions. Maximum permissible water cement ratio will also vary from 0.67 for low strength concrete to 0.38 for concrete for higher strength concrete.

- 5 **CONSISTENCY:** The amount of water used in the concrete shall be regulated as required to produce concrete of proper consistency taking into account the effect of any variation in either or both the moisture contents or grading of the aggregates as they enter the mixer. Addition of water to compensate for stiffening of concrete before placing shall not be permitted. Uniformity in concrete consistency from batch to batch shall be ensured.

## 6 Concrete Strength

Various classes of concrete shall have 28 day compressive strength of 6 inch x 12 inch test cylinders at least equal to the values given in Table-M except as otherwise indicated on the Drawings or directed by the Engineer.

Class	Cylinder Strength	Psi
A	4000	
B	3000	
C	1000	

**Table -M**

## **7 Slump**

In general, the slump of the concrete, after concrete has been deposited but before it has been consolidated, shall not exceed the values specified below for the structures and/or parts thereof unless otherwise directed by the Engineer. Check slumps shall be taken at the mixer and at locations of placement and or as directed by the Engineer. The Engineer may order the placement of concrete having lesser slump, wherever concrete of such lesser slumps can be consolidated readily into place by means of the specified vibrations. The use of buckets, chutes, hoppers, or other equipment of types that will not readily handle and place concrete of such lesser slumps will not be permitted. The slump will be determined in accordance with ASTM C-143.

The minimum slump shall be  $\frac{3}{4}$  inch in all cases, except when plasticizers are used with the Engineer's approval. The maximum slump shall not exceed the undermentioned limits:

Mass concrete	2 inch
Slabs, floors and foundations	2 inch
Columns, beams, walls, parapets etc.	4 inch
Other parts	3 inch

## **8 BATCHING AND MIXING**

### **8a Type and Capacity**

All concrete shall be produced in a batching and mixing plant or by means of a mechanical mixer as approved by the Engineer.

The capacity of the plant shall be such that the proposed arrangement will produce adequate quantity of concrete to meet with all the other requirements of these Specifications and the construction schedule. The batched materials shall be thoroughly combined into a uniform mixture before the addition of water and admixtures. The water shall be added gradually and the mixer operated for specified duration of time so as to obtain a thoroughly mixed concrete of uniform color and quality.

### **6b Mixers**

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Hand mixed concrete shall not be used; however, the Engineer may allow concrete to be mixed in small mixers. The mixers provided by the Contractor shall be capable of combining the materials into a uniform mixture and of discharging without segregation. Mixers shall not be charged in excess of the capacity recommended by the manufacturer and shall not be recharged before completely discharging the previous batches. Over mixing requiring additions of water will not be permitted. The mixers shall be operated at a drum speed designated by the manufacturer. The mixers shall be cleaned frequently and maintained in satisfactory operating condition, and mixer drums shall be replaced when worn down more than 10 per cent of their length and or thickness.

### 8 c Mixing Time

The mixing periods specified in Table-O are based on proper control of the speed of rotation of the mixer and of the proper introduction of the materials into the mixer. The mixing time will be increased when such increase is necessary to secure the required uniformity and consistency of the concrete. The mixing time for each batch after solid materials are in the mixer drum, provided that all the mixing water is introduced before one fourth of the mixing time has elapsed, shall be as follows:

<u>Capacity of</u>	<u>Mixer Mixing Time</u>
upto 2.0 cubic yards	2.0 minutes
from 2.0 to 3.25 cubic yards	2.5 minutes

## 9 CONVEYING

Concrete shall be conveyed from mixer to the place of final deposit as rapidly as practicable, by methods which will prevent segregation or loss of ingredients and in accordance with ACI-304. Any wet batch hopper through which the concrete passes shall be conical in shape. There shall be no vertical drop greater than three feet except where the use of such equipment is approved in writing by the Engineer, in advance of any use. Each type or class of concrete shall be visually identified by placing a Colored tag or marker on the bucket as it leaves the mixing plant so that the concrete may be positively identified and placed in the structure forms in the desired position.

## 10 PLACING

### 10 a General

No concrete is to be placed until all the preparatory works have been satisfactorily completed and the reinforcement and embedded items have been checked and approved by the Engineer. Concrete placing shall follow the practice given in ACI-304.

### 10.b Time Interval Between Mixing and Placing

Concrete mixed in stationary mixers and transported by non- agitating equipment shall be placed within thirty minutes after it has been mixed, unless otherwise authorized. In any case, concrete shall be placed and compacted well within the initial setting time.

### 10 d Blinding Concrete

Where concrete is to be placed on a flat excavated surface or on an excavated surface inclined at not more than 1V: 1.75 H, a 3 inch layer of blinding concrete, if not otherwise shown on the Drawings, shall be placed immediately after completion of excavation and cleaning. The upper surface of the blinding concrete shall not be higher than the required cover below the lowest layer of the reinforcing steel. The final excavated level shall be calculated to allow for the 3 inch thickness of the blinding layer.

#### **10 h Vibration of Concrete**

Recommended Practice given in ACI-309 shall be followed for concrete consolidation. Concrete shall be compacted with mechanical vibrating equipment supplemented by hand spading and tamping. In no case shall vibrators be used to transport concrete inside the forms. The vibrating equipment shall be of internal type and shall at all times be adequate in number of units and power of each unit to properly consolidate all the concrete. Form or surface vibrators shall not be used unless specifically approved. The intensity (amplitude) of vibration shall be sufficient (frequency not less than 6,000 impulses per minute) to produce satisfactory consolidation. The duration of vibrations shall be limited to that necessary to produce satisfactory consolidation. Excessive surface working will not be permitted.

#### **10 I Precast Cement Concrete**

The work to be done under this item consists of manufacturing, storing, handling, transporting and laying precast concrete members as may be required. Materials and methods for precast concrete work shall conform to the applicable requirements of these Specifications - Plain and Reinforced Concrete. Except as otherwise shown or specified, maximum size of coarse aggregate shall be  $\frac{3}{4}$  inch. Concrete shall be mechanically vibrated in placing. Slump shall be limited to 1-1/2 inch. Precast concrete shall be water cured for 14 days. Precast units shall not be removed until they have attained at least 75% of their required 28 days strength and shall be picked up only by their lifting hooks. The precast members which are subjected to overstress or otherwise injured during curing or handling shall be removed from the Site by the Contractor.

### **11 EXPANSION, CONTRACTION AND CONSTRUCTION JOINTS**

#### **11.1 Construction Joints**

**GENERAL:** As soon as a lift is completed, the top surface of concrete and reinforcing dowels shall be immediately and carefully protected from any condition that may damage the concrete surface and the dowels. The construction joints shall be prepared as per satisfaction of the Engineer.

**CLEANING:** Horizontal construction joints on lifts with relatively open and accessible surfaces shall be prepared for receiving the next lift by cleaning with either wet sandblasting or by air- water cutting. Approved wet sandblasting equipment shall be provided. If the surface of a lift is congested with reinforcing steel and is relatively inaccessible or if for any other reason it is considered undesirable to disturb the surface of a lift before it has hardened, surface cutting by means of air-water jets will not be permitted and the use of wet sandblasting will be required.

**WET SANDBLASTING:** When employed in the preparation of construction joints, wet sandblasting shall be performed immediately before placing the following lift. The operation shall be continued until all laitance, coating, stains, debris and other foreign materials are removed. The surface of the concrete shall then be washed thoroughly to remove all loose material.

**JOINTS:** Vertical construction joints shall be prepared similar to the horizontal construction joints. Where allowed by the Engineer, the inner surface of the formwork may be coated with an approved setretarder to facilitate the preparation of the vertical construction joint.

**WATER DISPOSAL:** The method used in disposing of water employed in cutting, washing and rinsing of concrete surfaces shall be such that the waste water does not stain, discolor, or effect exposed surfaces of the structure. Methods of disposal shall be subject to approval by the Engineer.

## **12. CURING**

### **12.1 General**

All concrete including concrete repair work shall be cured by an approved method or combination of methods in accordance with ACI-308. The Contractor shall have all equipment and materials needed for adequate curing and protection of the concrete on hand and ready to use before actual concrete placement begins. Means shall be provided for the protection of concrete from the sun, drying winds and traffic until the specified curing has been completed.

The curing medium shall be applied so as to prevent loss of moisture from the concrete. Concrete shall be protected from heavy rains for 24 hours. All concrete shall be adequately protected from damage. No fire or excessive heat, including the heat resulting from welding, shall be permitted near or in direct contact with the concrete at any time. All galleries, conduits and other formed openings through the concrete shall be closed during the curing period.

If during the specified minimum period of curing, the surface temperature of the concrete falls below 10°C, the period of curing shall be extended to allow the concrete to reach sufficient maturity. The period of extension shall be as approved by the Engineer.

### **12.3 Moist Curing**

Concrete shall be moist-cured maintaining all surfaces continuously (not periodically) wet for 14 days immediately following the placing or until covered with fresh concrete. Precast elements shall also be water-cured for 14 days. Curing water shall be removed without allowing stagnant pools of water to form on the exposed lift surface. Water for curing shall comply with the applicable requirements of subsection 10.3 "Water". Where forms of tongue-and groove or shiplap sheathing are used and are left in place during curing, the sheathing shall be kept wet at all times. When in contact with concrete, steel forms shall be kept wet. Horizontal construction joints and finished horizontal surfaces cured with sand shall be covered with a minimum uniform thickness of 2 inch of sand and kept continuously saturated with water.

### **12.4 Liquid Curing Membrane**

An approved curing compound conforming to ASTM C 309 shall be applied in accordance with the manufacturer's recommendations immediately after any water sheen which may develop after finishing has disappeared from the concrete surface. It shall not be used on any surface against which additional concrete or other material is to be bonded unless it is proven that the curing compound will not prevent bond or unless positive measures are taken to remove it completely from such areas.

## **13.0 REPAIR OF CONCRETE**

### **13.1 General**

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Concrete that is damaged from any cause; concrete that is honeycombed, fractured, or otherwise defective; and concrete which, because of excessive surface depressions, must be excavated and built up to bring the surface to the prescribed lines; shall be removed and replaced with drypack mortar, or concrete, as hereinafter specified. Repair of concrete shall be performed only by skilled workmen and within 24 hours of removal of forms. The Contractor shall keep the Engineer advised as to when repair of concrete will be performed. Unless an inspection is waived in each specific case, repair of concrete shall be performed only in the presence of the Engineer. Repairs shall be made in accordance with the procedures approved by the Engineer.

### **13.2 Materials**

All materials used in the repair of concrete shall conform to the applicable requirements of the Specifications.

### **13.3 Protrusions**

Where bulges and abrupt irregularities protrude outside the specified limits on formed surfaces not to be concealed permanently, the protrusions shall be reduced by bush-hammering and grinding so that the surface irregularities are within the specified limits.

### **13.4 Depressions**

GENERAL: All fillings for depressions shall be bonded tightly to the surfaces of holes and shall be sound and free from shrinkage cracks and dummy areas after the fillings have been cured and have dried. All fillings in surfaces of structures prominently exposed to public view shall contain sufficient white Portland cement to produce the same Color as that of the adjoining concrete. Repairs shall be made with non-shrink grout, guniting or drypack filling except where repairs with epoxy concrete and/or epoxy mortar are directed to be made by the Engineer. Concrete, mortar, grouting, guniting or drypack mortar filling as the case may be shall each be mixed in proportions approved by the Engineer to produce a repair at least equivalent in strength density and durability to the concrete in which the repair is required and shall match with the adjacent surfaces in texture, Color and shade.

CONCRETE FILLING: Concrete filling shall be used for holes extending entirely through concrete sections; for holes in which no reinforcement is encountered and which are greater in area than 1.0 square feet and deeper than 4 inch; and for holes in reinforced concrete which are greater than 0.5 square feet in area and which extend beyond the reinforcement.

MORTAR FILLING: Mortar filling, placed under impact by use of a mortar gun, may be used for repairing defects on surfaces, not exposed to public view where the defects are too wide for drypack filling and too shallow for concrete filling and no deeper than the far side of the reinforcement that is nearest to the surface.

DRYPACK MORTAR FILLING: Drypack mortar fillings shall be used for filling holes having a depth nearly equal to, or greater than, the least surface dimension; for narrow slots cut for repair of cracks; for grout pipes recesses; and for tie rod fastener recesses as specified. Drypack mortar shall not be used for filling behind reinforcement or for filling holes that extend completely through a concrete section. If removal of the ends of form ties results in recesses, the recesses shall be filled with drypack mortar provided that filling of recesses in surfaces upon or against which fill material or concrete is to be placed will be required only where the recesses are deeper than 1 inch in walls less than 12 inch thick.

SURFACE FINISHES OF REPAIRED AREAS: The Contractor shall correct all imperfections on the concrete surface as necessary to produce surfaces that conform to the requirements specified for the adjacent area. Fins and encrustations shall be neatly removed from the surfaces.

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## 14.0 EPOXY CONCRETE AND MORTAR

### 14.1 Mixing and Batching

**EPOXY BINDER:** Prior to mixing, the two components of the epoxy resin binder shall be conditioned to 15oC to 21oC. The two components shall be combined with constant stirring, and the stirring shall be continued until a uniform mixture is obtained. The rate of mixing should be such that entrained air is held to a minimum. A power-driven (air or sparkproof) mixer with propeller-type blade operating at a maximum of 500 rpm shall be used for mixing the two components of the epoxy resin binder and a hemispherical bottomed polyethylene or metal container shall be used for the mixing.

**EPOXY CONCRETE:** Epoxy binder shall be prepared as specified above, and after the two components have been thoroughly mixed, shall be transferred to large metal pans and the aggregates added in recommended and approved proportion as specified in relevant section

The fine aggregate shall be added to the epoxy resin binder and the material shall be mixed until a rich mortar consistency is attained. The coarse aggregate shall then be added and the epoxy concrete thoroughly mixed.

**MORTAR:** Epoxy binder shall be prepared as specified above in para - Epoxy Binder. After the two components have been thoroughly mixed, the binder shall be transferred to large metal pans and the fine aggregate added in recommended and approved proportions as specified in relevant sub-section. The fine aggregate shall be added to the binder gradually and mixing continued until all particles are coated.

## **15.0 FINISHES AND FINISHING**

**15.0 General** Allowable deviations from plumb or level and from the alignment, profile grades and dimensions shown on the Drawings or specified in sub-section 5 "Tolerances" are defined as tolerances and are to be distinguished from irregularities in finish as described herein. The classes of finish and the requirements for finishing of concrete surfaces shall generally be as specified herein or as indicated on the Drawings. Finishing of concrete surfaces shall be performed only by workmen who are skilled concrete finishers.

The Contractor shall keep the Engineer informed as to when finishing of concrete will be performed. Unless inspection is waived in each specific case, finishing of concrete shall be performed only in the presence of the Engineer. Concrete surfaces will be tested by the Engineer where necessary to determine whether surface irregularities are within the limits hereinafter specified. Surface irregularities are classified as abrupt or gradual. Offsets caused by displaced or misplaced form sheathing or lining or form sections or otherwise defective form lumber will be considered as abrupt irregularities, and will be tested by direct measurements. All other irregularities will be considered as gradual irregularities and will be tested by the use of a template, consisting of a straight edge or the equivalent thereof for curved surfaces. The length of the template will be 4 feet 6 inch.

The classes of finish for concrete surfaces shall be as shown on the Drawings or as directed by the Engineer. No grinding will be required on formed surfaces other than that necessary for repair of surface imperfections as specified herein.

### **15.1 Ordinary Finish (OF)**

Ordinary finish (OF) applies to surfaces upon or against which fill material or concrete is to be placed. If unformed, the finishing operation shall consist of sufficient levelling and screeding to produce even uniform surfaces. When formed, the surfaces require no treatment after form removal except for repair of defective concrete and filling of holes left by the removal of fasteners from the end of the tie rods as required under sub-section –"Repair of Concrete". Correction of surface irregularities shall be required for depressions only and only for those which exceed 1 inch when measured as described in sub-section .

### **15.2 Rough Concrete Finish (RC)**

Rough concrete finish (RC) applies to surfaces which are intended to receive tiles, metallic lining or other applications as indicated on the Drawings. After consolidation and levelling of the concrete to the specified tolerances, the surface shall be roughened with stiff brushes or rakes before final set. Where rough concrete finish is specified for wall surfaces, the same shall be obtained by use of formwork suitable to produce the required finish. Surface irregularities measured as described in sub-section 11.11.1 General, shall not exceed ¼ inch for floors and 1/8 inch for walls.

### **15.3 Ordinary Slab Finish (OS)**

Ordinary slab finish (OS) applies to floor surfaces which are not intended to receive any floor coverings. After the concrete has been placed, consolidated, struck-off and levelled, and its surface has stiffened sufficiently, floating shall be performed by use of hand or power driven equipment, and shall be the minimum necessary to produce a surface that is free from screed marks and is uniform in texture. Floating shall be continued until a small amount of mortar without excess water is brought to the surface so as to permit effective trowelling. Steel trowelling shall be



started when the surface has hardened sufficiently to prevent excess of fine material from being drawn to the surface. Steel trowelling shall be performed with firm pressure such as will flatten the sandy texture of the floated surface and produce a dense uniform surface, free from blemishes and trowel marks. Surface irregularities measured as described in sub-section 11.11.1 General, shall not exceed ¼ inch for abrupt irregularities and ½ inch for gradual irregularities and ½ inch for gradual irregularities.

#### **15.4 Fair Faced Finish (FF)**

Fair Finish (FF) shall be applied to all exposed surfaces of walls and ceilings which are not to be covered by any other finish. Surface irregularities shall not exceed 1/8 inch for abrupt irregularities and ¼ inch for gradual irregularities, when measured as described in subsection 11.11.1 All abrupt irregularities and all gradual irregularities in excess of 6 mm shall be reduced by grinding to conform to the specified limit for gradual irregularities.

### **16.0 MEASUREMENT AND PAYMENT**

#### **16.0 General**

16.1 Except as otherwise specified hereunder, measurement of concrete shall be made on the basis of the actual volume of concrete in place within the neat lines of the structure, as indicated on the Drawings. Measurement for payment shall not be made of concrete, nor any ingredients including cement in concrete, which is placed outside of the paylines shown on the Drawings. Measurement of concrete placed against the sides of any excavation without the use of intervening forms shall be made only within the pay lines of the structure. Unless otherwise specified, payment for concrete shall be made at the respective contract unit price per cubic feet for the various items of the Bill of Quantities, which price shall include the cost of all labor, materials and the use of all equipment and tools required to complete the batching, mixing, transporting, placing, protecting, curing and other concrete work; except the reinforcement, waterproofing and embedded parts which are specified to be paid for separately. The Contract unit prices per cubic metre for concrete will include the cost of formworks, form oils, aggregates, water, preparation of all type of joints, bond breaking and curing compounds, handling and incorporating the cement admixture into the work, mixing, cooling, specified cleaning and other preparation of surface to receive concrete, placing, finishing, curing and all other work required to complete the concrete structures. No measurement or payment shall be made for removal and replacement of rejected concrete with Portland cement mortar, epoxy concrete, epoxy mortar or by any other method.

## **CW -00-01-06 CEMENT PLASTER**

### **1. SCOPE OF WORK.**

The work covered by this section of the Specifications consists of furnishing all plant, labor, equipment, materials and performing all operations in connection with cement Plaster work, complete in strict accordance with this section of the specifications and the applicable drawings and subject to the terms and conditions of the Contract. The scope of this section of specifications is covered with detailed specifications as laid down herein.

### **2. APPLICABLE STANDARDS.**

The work shall be completed with the requirements of Pakistan, British and ASTM standards.

### **3. GENERAL.**

**3.1** Except as may be otherwise shown on surfaces specified, all plaster work, both internal and external, shall be Ordinary Portland cement plaster of the required thickness mentioned in B.O.Q. Internal plaster for the buildings for oil the internal surfaces; columns, walls ceilings, partitions, etc. shall be cement Plaster finished smooth unless otherwise specified. Whereas the areas like lavatory blocks, bathrooms, stores, or such other places where there is possibility of any dampness occurring, the plaster shall be cement Plaster finished smooth with cement niru or as specified in the BOQ. Except as otherwise specified, all plaster work shall be carried out in Conformity with acceptable code of practice for internal and external rendering and finishes.

**3.2** Plastering shall not commence until all electric conduits, drainage and sanitary pipes, inlets to tanks, brackets, clamps, sills, doors' and windows' frames and all sorts of inserts and embedded items are fixed in position. It shall be the responsibility of the Contractor to make sure that all such works are carried out by other Contractors before starting of plaster work. Chiseling and repairing of cement plaster shall not be permitted without the approval of the Engineer.

### **4. MATERIALS:**

**4.1** Cement: Cement for plaster shall be Portland Cement either ordinary, rapid hardening or sulphate resisting cement and shall conform to requirement as described in the specifications of concrete.

**4.2** Sand: Sand for plaster shall comply with the requirements of BS-812, BS-119 and ASTM C-144. It shall comprise natural sand, crushed stone sand or crushed gravel sand. It shall be hard durable, clean and free from adherent coatings such as clay and from any appreciable amount of clay pellet form. It shall not contain harmful materials to adversely affect the hardening, the strength, the durability or the appearance of the plaster or any materials in contact with it. The quantity of clay, silt and dust shall not exceed 5% by weight for sand or crushed gravel or 10% by weight for crushed stone sand.

The grading of sand for internal Plaster work and external rendering shall be within the permissible limits.

The grading specified above shall be suitable for smooth finishing coats, scraped finishes and for pebble dash or dry dash for textured surfaces, produced by the treatment of the freshly applied final coat with a tool, the coarser particles shall be removed by screening through a 2mm sieve.

**4.3** Water: Water for plaster shall conform to requirements as described in the specifications of concrete.

**4.4 Additives:** Additives for controlling the setting and working characteristics of plaster, or for imparting anti-corrosion, fungicidal or water proofing properties, shall be added to the plaster strictly in accordance with the particular manufacturer's specifications and instructions. Good quality hair or manila fiber in reasonably well distributed proportion may be added to the Plaster to assist application and reduce droppings. No additives shall be used except as specified in the Contract Documents.

## **5. PROPORTIONING AND MIXING.**

**5.1** Measurement of materials by volume shall be by containers of known capacity to maintain consistent proportions. No lumpy or caked material shall be used. Mixing equipment boxes and tools shall be clean. Materials shall be proportioned as specified on the drawings, in the Bill of Quantities or as directed by the Engineer. Mixing shall be continuous until complete and all ingredients are evenly distributed.

**5.2** Only limited water shall be added for proper workability and such quantity of the mortar shall be prepared as that which will be consumed in thirty minutes after preparation. Preparation of mortar in bulk quantity for use during the entire day or for any other time more than that stipulated above is expressly prohibited, Re-tampering shall not be permitted and all mortar which has begun to stiffen shall be discarded.

**5.3** Plaster ingredients shall be thoroughly mixed, either by hand on a clean cement concrete platform or by a mechanical mixer, as directed by the Engineer.

## **6. PREPARATION OF SURFACE TO BE PLASTERED.**

**6.1** Concrete surface to be plastered shall be cleaned to remove all grease, oil and other surface impurities, which will otherwise adversely affect the adhesion of plaster to the surface concerned. The surface of all concrete ceilings, beams and columns shall be lightly hacked by approved means to give the required key for plastering.

**6.2** All masonry surfaces to be plastered shall be cleaned to remove all matter which will otherwise adversely affect the adhesion of plaster to the surface concerned.

The surface shall be washed with clean water and kept damp for 24 hours before further treatment. The surface thus prepared shall be treated uniformly with cement and sand slurry. The slurry to be used shall be one part cement to one part sand by volume with water added to make a stiff creamy mix. This slurry shall be applied with a stiff brush on surface, which has previously been well wetted. The surface so treated shall be left to cure for three days.

## 7. APPLICATION OF PLASTER.

**7.1** The plaster shall be minimum 12-20mm thick, as mentioned in BOQ and shall not be less than 12mm thick at any internal surface or 20mm at any external surface. The Plaster of o thickness less than the specified thickness shall be rejected. If the plaster is to be more than 25mm thick, it shall be done in two coats. The surface of first coat shall be made rough before the second coat is applied. The plaster shall not have wavy surface and shall be perfectly in plumb. The edges and corners shall represent a straight line. The plaster shall be kept wet continuously for at least ten (10) days. The curing/wetting of the plastered surface shall start immediately after the surface is set i.e. 4-5 hours from the time of finishing. No extra payment shall be allowed for jambs, junctions, comers, edges, round surfaces or for more than one layer of plaster required due to any unevenness in the work done by the Contractor. The plaster work is to cover all conduits, pipes etc. fixed in the walls and ceiling. Wherever specified, metal lath shall be nailed firmly before plastering is commenced. The plaster surface shall be tested frequently with 3 meter straight edge and plumb bob.

**7.2** Plaster containing cracks, blisters, pits, discoloration or any defects shall not be acceptable. Any such Plaster or loose Plaster shall be removed and replaced with plaster in conformity with these specifications and as additionally directed by the Engineer. Contractor shall cut and patch all defective work at his own cost. All damaged plaster shall be patched as directed by the Engineer. Patching plaster shall match appearance of and shall be finished level with adjoining plaster. If the Engineer does not accept patch work, he may ask to replace the entire wall, ceiling, area. etc.

**7.6 Water-Tight Cement Plaster for Damp-Proof Course:** This type of plaster, where specified, shall be carried out very carefully. The cement sand proportions shall not be less than 1:3 or as specified. The wafer tight reagent such as "Pudlo" or approved additive shall be mixed dry with the cement sand mixture in the quantity specified in the schedule of description of works. The sand for this item shall be specially selected. The cement, sand and powder are thoroughly mixed and water is added to the extent, it is required to make the paste to apply as Plaster. Water should be added to that much mixture of cement, sand and powder, as would be used within the initial set, as per instructions of the manufacturers. The surface plastered shall be thoroughly protected from dry winds and the sun and kept wet for at least 10 days.

**7.7 Drip Courses and Moldings:** Drip course is to be provided in all projections, whatever the nature of cantilevers projections in sills or architraves, etc., may be. Where drip

course is to be provided in cast-in-situ concrete it may be cast by placing an inch dia. bar at the position where the drip course is required. Every care shall be taken to see that the drip course is exactly horizontal and parallel to the face of the wall. Drip courses made out in Plaster shall be made of richer mix than the plaster and shall be uniform in width and depth and preferably horizontal. Moldings at ceiling or around openings shall be made as shown in the drawings.

**8. METAL LATH AT JUNCTION OF CONCRETE & MASONRY, CONDUIT CHASES, ETC.**

Metal lathing, at the junction of concrete & masonry, conduit chases, etc., shall be fabricated from sheet steel, and shall be of uniform quality and free from flaws, broken strands, cracks and corrosive pitting, shall be rectangular and true to shape. Before plastering, wherever masonry meets with reinforced concrete members a 200mm wide continuous strip of expanded metal lath shall be nailed to the masonry and the reinforced concrete member covering the joint completely to prevent cracking of the joint.

**9. BEADS AND PROFILES.**

Angle beads, corner beads, stop beads, architraves beads, depth gauge beads, edging profiles, plaster dividing profiles, interior angle profiles, plaster borders and the like shall all be manufactured from sheet steel and galvanized after fabrication, all beads and profiles shall be perforated at edges to ensure good adhesion of the plaster work. Thickness and dimensions shall suit particular locations and plaster work thickness.

Nails for fixing metal lathing shall be galvanized and have either clout heads or small flat heads to suit particular locations. All angle beads, stop beads, architrave beads, depth gauge beads, and the like are to be fixed in accordance with the manufacturer's instructions.

**10. CLEANING AND PROTECTION.**

10.1 Rubbish and debris shall be removed as necessary to make way for work of other trades and as directed by the Engineer. As each room or space is completed, all rubbish, debris, scaffolding and tools should be removed to leave the room clean.

10.2 Prior to plastering all aluminum windows and finished metals should be covered by sheet of plastic or tarpaulin to protect them from damage.

10.3 Protect finished plaster from injury by any source. Contractor shall also protect walls, floors and work of other trades from plaster materials.

**11. TOLERANCES.**

Surfaces of plaster work shall be finished with a true plane to correct line and level with all angle and corners to a right angle unless otherwise specified and with walls and reveals plumb and square.

Maximum permitted tolerances shall not exceed 3mm in 2m variation from plumb or level in any exposed line or surface and 1.5mm variation between planes of abutting edges or ends.

## 12. MEASUREMENT AND PAYMENT.

### 12.1 General

**12.1.1** Except otherwise specified herein or elsewhere in the Contract Document, no measurement and payment will be made for the under mentioned specified works related to the relevant items of the Bill of Quantities. The cost thereof shall be deemed to have been included in the quoted unit rate of the respective items of the Bill of Quantities.

**12.1.2** Joints, junctions, jambs, corners, drip course, edges and Rounding.

**12.1.3** More than one layer due to any unevenness in the work done by the Contractor.

**12.1.4** Cuffing and patching of all defective works.

**12.1.5** Surface preparation, cleaning, providing expanded metal lath and protections as specified.

**12.1.6** Water proofing agent for water-proof plaster.

**12.1.7** Angles beads, corners, beads, stop beads, architraves beads, depth gauge, edging profiles, plaster dividing profiles, interior angle profiles and Plaster borders used in plaster works as shown on drawings if these are required in the respective items of Bill of Quantities.

### 12.2 Plain Plaster.

**12.2.1 Measurement** : Deductions shall not be made for ends of joints, beam posts, etc., and openings not exceeding 0.5 square meter each and no addition shall be made for reveals, iambs, soffits, sills, etc. of these openings nor for finishing the plaster around ends of joints, beams posts etc. In case of opening of area exceeding 0.5 square meter each, deduction shall be made for the openings and addition shall be made for reveals iambs, soffits, sills, etc. of these openings. Measurement for acceptably completed works of plaster will be made on the basis of number of square meter of the surface area plastered as shown on the Drawings or as directed by the Engineer.

**12.2.2 Payment:** Payment will be made for acceptable measured quantity of plaster on the basis of unit rate per square meter quoted in the Bill of quantities and shall constitute full compensation for all the works related to the item.

**12.3 Water Proof Plaster.**

**12.3.1** Measurement: Measurement for acceptably completed works of water proof plaster will be made on the basis of number of square meter of the surface area plastered as shown on the drawings or as directed by the Engineer.

**12.3.2** Payment: Payment will be made for acceptable measured quantify of water-proof plaster on the basis of unit rate per square meter quoted in the Bill of Quantities and shall constitute full compensation for all the works related to the item.

## **CW-00-01-07 PAINTING AND POLISHING**

### **1. SCOPE OF WORK.**

The work covered by this section of the Specification, consists of furnishing all materials, plant, labor, equipment, appliances and performing all operations in connection with surface preparation, mixing, painting concrete works, gates, frames, structural steel works, steel pipes, valves, steel and wooden doors, windows, louvers, wall ceilings and all such surfaces as shown on the drawings/or as directed by the Engineer, the scope of this section of specification is covered with detailed specifications as laid down herein.

### **2. GENERAL**

2.1 Where the work or term 'point' and 'polish' is used or referred to throughout the specifications, it shall be interpreted to mean and include the surface finish treatment consisting of any, all or some of the following items :-

Sealers, primers, fillers, body and final coat, emulsion varnish, shellac, wall paper paste, stain or enamels as more specifically defined hereinafter as to kind and quality and function for various surfaces and finishes.

2.2 All paint, polish and necessary materials incorporated in or forming a part thereof shall be subject to the approval and selection for color, tint or finish by the Architect / Engineer.

2.3 in connection with the Architect's / Engineer's determination of color or tint of any particular surface, the depth of any color or tint selected or required shall in no instance be a subject for an additional payment to the Contractor.

2.4 Where a 'two color' or tint combination may be selected or approved for the treatment of any particular surface in any space or room, no additional payment shall be made thereof to the Contractor in any instance.

2.5 Painting of wood work and for plaster surfaces shall be minimum 3 coats work except otherwise specified. Painting of metal surfaces required to be painted, shall be minimum 3 coats work, in addition to the shop protection coats.

2.6 All paints shall be as manufactured locally and approved by the Engineer and shall be brought on to the site in sealed containers and used without any admixture or adulteration except where recommended in the Manufacturer's printed instructions,

2.7 Surfaces of stainless steel aluminum, bronze, and machines surfaces adjacent to masonry work being cleaned or painted shall be protected by effective masking or other suitable means, during the cleaning and painting operations.

### **3. PREPARATION AND WORKMANSHIP**

3.1 Prior to start of any work the Contractor shall, as a part of his contract, carefully inspect oil surfaces to be painted or finished and notify the Engineer in writing of any defective workmanship, materials, or any other conditions, which in his opinion, will affect the satisfactory execution and /or performance of his work. No



work in this section shall be initiated until all such surfaces or conditions have been corrected. The absence of any such notification will be construed as an acceptance by the Contractor of all such surfaces and later claims of defects in these surfaces that may result in finished surfaces being unsatisfactory to the Engineer will not in any way relieve the Contractor from the responsibility and/or accountability under his guarantee. No work should be done under the conditions that are unsuitable for the production of good results, nor at any time when the plastering is in progress or is drying, or not dry. Neither paint nor any other finish treatment is to be applied over wet or damp surfaces unless specifically required, nor shall succeeding coats be applied until the proceeding coat is thoroughly dry.

- 3.2 Before proceeding with any painting or finishing thorough cleaning and removing of all dust from surfaces, which would affect either the satisfactory execution or permanency of the work is necessary.
- 3.3 All painting materials are to be applied evenly spread and thoroughly brushed -out only by skilled workers. All workmanship shall be executed in accordance with the best acceptable practices applying to the class of work and grade, type and kinds of materials specified.
- 3.4 Plastered surfaces shall be primed before speckling. After application of primer coat, Contractor shall check all surfaces and do all necessary speckling of cracks, indentations and other imperfections in any approved manner.
- 3.5 Wood work that is to have a finish treatment, whether executed as field work or shop finished, shall be smooth and free from raised grain or other surface imperfections that affect its appearance and shall be lightly sanded or steel wool during finishing operations. After filler has been applied, if required all nail holes or other similar blemishes shall be carefully stopped with linseed oil puffy.
- 3.6 Shop coats provided by others, where required or necessary, shall have all bare spots touched up by the Contractor, using same materials as used for shop coat, or other equivalent material, if approved by the Engineer.

#### **4. MATERIALS.**

- 4.1 All materials shall be stored and mixed only in spaces assigned for this purpose by the Engineer and all necessary precautions shall be taken to prevent fires by complying with all applicable local fire prevention and safety ordinances. The contractor shall provide galvanized iron pans of suitable size in which all mixing paints shall be placed and no mixing shall be permitted outside of these pans.
- 4.2 The basic materials entering into the compounding and/or manufacture of all paints, polishes and other treatments referenced herein shall be of the best grade and quality of their respective kinds for the intended purposes. These shall be the products or formula of recognized and reputable manufacturers of known reliability and integrity subject to the approval of the Engineer and shall conform to the applicable requirements of the British Standard Specifications or

approved local standards regarding kind, quality and finish, Reference herein to specific paint materials is for the sole purposes of establishing a basis of "Minimum Standards" of quality and shall not be construed to be a limit of perfection or quality for any of the materials, ingredients to be furnished or utilized in this work. The Engineer reserves the right to select and / or accept only the best grades of standard products, which in his opinion, will provide a finish of recognized performance and characteristics suitable for their respective surfaces, irrespective of minimum standards reference herein.

- 4.3 All materials shall be delivered to premises in their original sealed containers or package bearing the manufacturer's name, label and brand, and be mixed and applied in accordance with manufacturer's directions and /or instructions. The mixing of all paint or other covering finish treatments shall be done in premises as and when, if required, under the supervision and direction of the Engineer.

## **5. PAINTING TO METAL WORK.**

- 5.1 All metal work shall have, in addition to shop primer coats, minimum three (3) coats of enamel paint or as incorporated in the Bill of Quantities, in the manner as specified herein.
- 5.2 All exposed ornamental and miscellaneous iron and steel shall receive over the shop primer coat, minimum three (3) coats of enamel paints as specified herein or as incorporated in the Bill of Quantities.
- 5.3 Galvanized iron not previously shop coated shall receive minimum 4 coats, the first coat to be of an approved galvanized iron primer and minimum three finish coats of enamel paint or as incorporated in the Bill of Quantities.
- 5.4 Where shop coats and/or priming coats are found to be scratched or abraded they shall be touched up with appropriate paint.

## **6. OIL BOUND DISTEMPERING.**

- 6.1 Distempers shall be of approved quality and make as directed by the Engineer.
- 6.2 Before work of distempering is commenced, the surface should be cleaned. The surface then must be sized with a priming coat of petrifying liquid of approved manufacture. Distemper shall be applied quickly and boldly with broad stiff brushes of approved make. The brush is to be dipped and stroked cross-wise into the walls and then immediately stroked up and down. This shall be considered to be one coat of distempering. The distemper shall be mixed in the manner specified by the manufacturer and each coat shall be inspected and passed by the Engineer before the next coat is applied.
- 6.3 The Contractor shall carry out as many coats as specified in the Schedule of Quantities in accordance with the above specifications. The number of coats specified is enough for producing the uniform smooth finish and if the finish

produced by the Contractor is not up to the satisfaction of the Engineer, the Contractor will be required to apply more coats, as may be required to produce the specified finish without any additional charges.

## **7. SURFACE PREPARATION AND FILLING.**

Ali Plaster and masonry surfaces that are to be finished with vinyl emulsion, plastic emulsion or enamel paint shall be prepared as under prior to application of paint finish.

7.1 **NEW SURFACES:** Rub down the surfaces with a sand paper or carborandum stone to remove any material. Check that the surface is thoroughly dry before painting.

7.2 **OLD SURFACES:** For previously painted surfaces especially white - washed surfaces, scrape down to the bare surface and ensure that the surface is free from any contaminant like grease, oil, etc. and any loose material or dust is completely removed before painting.

7.3 **SEALING:** Apply 1 coat of Alkali Resisting Masonry Sealer and allow to dry overnight. Alkali Resisting Masonry Sealer may be thinned with 10-15% good quality mineral turpentine or white spirit if required due to surface absorption.

7.4 **FILLING:** Putty for filling the walls should be made by mixing 4 parts of good quality chalk and one part of Zinc Oxide Powder with Alkali resisting masonry sealer till a smooth knifing paste is formed. Putty should be applied after sealing the walls with Alkali Resisting Masonry Sealer, and after the tiling work is completed and prior to application of the finish paint, the filled surfaces should be dry and properly finished, No filling should be carried out on external surfaces. Each coat of paint shall be allowed to become dry before any subsequent coat is applied. The finished surface shall be free from runs and sags, defective coverage and clogging of lines or angles. Edges of paint adjoining other materials or other colors shall be full and clean - cut without overlapping.

The Contractor shall carry out as many coats as are specified in accordance with the above specifications. The number of coats specified should be enough for producing uniform smooth finish and if the finish produced by the Contractor is not up to the requirement, he will be required to apply as many more coats as may be required to produce the required uniform finish, and no payment for the extra coats applied to produce the desired uniformity will be made.

## **8. CEMENT BASED PAINTS.**

8.1 Cement based paint shall be obtained from approved manufacturers. It shall be obtained in sealed tins, which shall be opened in the presence of the Engineer. Only that much quantity of paint should be mixed which can be used in one hour.

Where required, different colors of cement based paints may have to be mixed together to provide the desired shade. The quantities of the various colors required to give the desired shade will be intimated by the Engineer. These shall be mixed

in the manner specified by the manufacturer or as approved by the Engineer after which it must be sieved through 200 mesh sieve.

- 8.2 The surface should be free from dust, dirt, etc., loose material and dirt must be removed by brushing or if necessary by washing and grease, oil paint, varnishes, oil bound distempers, lime wash, etc., shall be completely removed before application of the paint finish.
- 8.3 Paint Material must be mixed in two stages. First by adding a little quantity of water to form a paste and then further quantity of water to get a mix of liquid consistency, in the first stage one measure of water to two similar measures of paint must be thoroughly stirred and allowed to stand for 10 minutes. A further measure of water should then be added and thoroughly mixed. This mix must be applied within one hour of the mixing. The lid of the container must be tightly shut immediately after the material has been taken out from it. The surface over which the paint is to be applied shall be thoroughly saturated with water immediately before applying the first coat. The paint shall be applied with brushes of approved make and manufacture. The first coat of paint shall be well scrubbed into the surface by means of brushes and allowed to set for a period of 24 hours. After this, the second coat shall be brushed-in. After two coats have been applied, the surface should present a uniform smooth surface.

## 9. **LACQUER POLISHING.**

- 9.1 Clear polyurethane lacquer used on the work shall be of ICI / Berger or an approved make.
- 9.2 The surface to be lacquer polished should be sand papered and a staining compound should be applied if required.

When the stain coat dries up the surface should be rubbed down with sand paper. Approved polyurethane lacquer of a proprietary brand shall then be applied.

The surface shall then be wiped with a dry cloth and the process repeated several times in succession until the surface assumes the desired degree of gloss as approved by the Engineer.

## 10. **SAMPLES.**

Prior to the start of the application of any paint and /or finish treatment otherwise, the contractor shall apply samples of the required finish treatments to specific representative wall and ceiling surfaces or other areas or surfaces where indicated by the Engineer. The sizes of the sample paint and finishes shall be as determined by the Engineer.

## 11. **PROTECTION.**

The Contractor shall protect all the work against damage or injury by his employees or by the materials, tools used in connection with the work of this contract. Any and all work damages as a result of the execution of this shall be repaired at Contractor's expense or if

in the opinion of the Engineer it cannot be properly repaired, it shall be replaced with new work by the Contractor without additional compensation. At all times, the general and liberal use of drop cloths shall be a primary requirement for protection purposes.

**12. TOUCHING UP.**

At the completion of all work specified herein, all painted work shall be touched up and restored where damaged or defected and the entire work left free from blemishes, to the complete satisfaction of the Engineer.

**13. CLEANING.**

The Contractor shall clean all paint, spots, dubs, oil and stain from all floors, wood work, glass hardware, metal work, electrical fittings and all similar items, and leave the work in perfect condition, upon completion in every respect to the satisfaction of the Engineer.

**14. SCHEDULE OF MEASUREMENT OF PAINT AREA.**

14.1 Irrespective of prime coats and number of paint coats applied to exposed painting surfaces, area of column, walls, projections, ceilings and other surfaces (except gates, doors, windows and ventilators) shall be measured as per actual paint surface area for single time only and paid in accordance with quoted rate of Bill of Quantities.

## CW -00-01-08 GLASS AND GLAZING

### 1. SCOPE OF WORK.

The work covered under this section of the Specifications consists of furnishing all labor, equipment, scaffoldings and providing glass, gaskets, sealants, compounds and accessories required for performing all operations in connections with the installation and setting of glass, glazing and glass blocks and butt jointed glazed partitions complete in every respect in accordance with the Drawings or as directed by the Engineer. The scope of this section of specifications is covered with detailed specifications as fold down herein.

### 2. GENERAL.

2.1 The glazier must examine the framing and glazing channel surfaces, backing, removable stop design, and the conditions under which the glazing is to be performed. Do not proceed with the glazing until unsatisfactory conditions have been corrected in a manner acceptable to the Glazier.

2.2 **Weather Conditions:** Do not proceed with installation of liquid sealants under adverse weather conditions, or when temperatures are below or above manufacturer's recommended limitations for installation.

2.3 The Contractor shall submit two samples of each type of glass required. These samples shall be of 300mm x 300mm size or as directed. He will also submit lengths of installed (mock-up) glazing materials together with samples of glazing sealants and glazing gaskets.

2.4 Contractor shall also submit printed materials manufacturer's installation instructions for specified glazing gaskets, compounds, sealants and accessories including description of required equipment, procedures and precautions to be observed.

### 3. DELIVERY, STORAGE AND HANDLING

3.1 Contractor shall deliver materials in manufacturer's original unopened containers clearly labeled with manufacturer's name and address, material brand, type class and rating as applicable.

3.2 Contractor shall store the materials in original unopened containers, with labels intact, protected from ground contact and from other elements.

3.3 Contractor shall handle the materials in a manner to prevent breakage of glass and damage to surfaces, and shall exercise exceptional care to prevent edge damage to glass.

### 4. MATERIALS,

4.1 **Plain and Tinted Glass:** Glass shall be free from all blemishes, bubbles, distortions and other flaws of any kind and shall be properly cut to fit the rebates so as to have a uniform clearance round the panels between the edges of glass and the rebates. AH glass shall be of best quality manufacture as approved by the

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Architect/Engineer. Glass shall be of plate or float type, in thickness and size as shown on the drawings or Bill of Quantities. All glass shall be of such quality that surface deterioration will not develop under normal conditions of use. Glass shall have parallel surfaces and without physical impurities.

#### 4.2 **Glazing Sealants and Materials.**

1. **General:** Provide color of exposed sealant/compound indicated or if not otherwise indicated, as selected by Architect from manufacturer's standard colors, Comply with manufacturer's recommendations for selection or hardness, depending upon the locations of each application, conditions at the time of installation, and performance requirements as indicated. Select materials, and variations or modifications, carefully for compatibility with surfaces contacted in the installation.
2. **One or two part polysulfide glazing sealant:** Elastomeric polysulfide sealant specially compounded and tested to shown minimum of 20 years resistance to deterioration in normal glazing applications,
3. **One port Silicone Rubber Glazing Sealant:** Elastomeric silicone sealant, non-sag. Provide acid type recommended by manufacturer where only non-porous are contacted; provide non-acid type recommended by manufacturer where one or more porous bond surfaces are contacted.
4. **Molded Neoprene Glazing Gaskets:** Molded or extruded neoprene gaskets or the profile and hardness required.
5. **Polyvinyl Chloride Glazing Gaskets:** Extruded, flexible PVC gaskets of the profile and hardness required.
6. **Foam Glazing Tape:** Closed-cell, flexible, self-adhesive, non-extruding, polyvinyl chloride foam tape, recommended by manufacturer; comply with ASTM D 1667.
7. **Setting Blocks:** Neoprene, 70-90 durometer hardness, with proven compatibility with sealants used.
8. **Spacer:** Neoprene 40-50 durometer hardness, with proven compatibility with sealants used.
9. **Compressible Filler Rod:** Closed cell or water-proof jacketed rod stock of synthetic rubber or Plaster foam, proven to be compatible with sealants used, flexible and resilient, with compression strength for 25% deflection.
10. **Cleaners, Primers and Sealers:** Type recommended by sealant or gasket manufacturer.

**5. INSTALLATION OF GLAZING.**

- 5.1 Glazing work shall comply with the recommendations of the glass and glazing materials manufacturers.
- 5.2 Examine each piece of glass and discard and replace glass with edge damage or face imperfection.
- 5.3 Clean glazing channels and other framing members indicated to receive glass. Remove coatings, which are not firmly bonded to the substrate, remove lacquer from metal surfaces wherever elastomeric sealants are to be used. Apply primer and sealer to joint surfaces wherever recommended by the sealer manufacturers.
- 5.4 Trim and clean excess glazing materials from surrounding surfaces immediately after installation and eliminate stains and discolorations.
- 5.5 Cure glazing sealants and compounds in compliance with manufacturer's instructions, to obtain high early bond strength internal cohesive strength and surface durability.
- 5.6 No glazing shall be considered complete until and unless paint and other stains have been removed from the surface of the glass.
- 5.7 While glass operation is in progress, great care shall be taken to avoid breakage or damage to the glass and adjoining glazing. The Contractor shall make good, at his own cost, all glass broken by his workmen while cleaning or carrying out other operations. On the completion of the glazing work, all glass that has been set by the Contractor shall, if it becomes loose, within the maintenance period, be re-fixed at Contractor's expenses.
- 5.8 The glass panes shall be properly cut to fit the rebates so as to have a uniform clearance of 2mm round the panes between the edges of glass and the frame. In the event that any pane is cut short so that the clearance exceeds the required dimension and renders the gaskets loose, the panes shall be replaced by the Contractor.
- 5.9 Glass in butt-jointed installation shall be plain or tinted and of sizes and thickness as indicated in the drawings or the Bill of Quantities. The specifications of glass shall be as mentioned above for plain or tinted glass. The glass shall be installed with a uniform spacing between the leaves equal to the thickness of glass but not greater than 10mm. After the glass is placed on location and approved by the Engineer, the space in between shall be completely filled by a clear or opaque sealant manufactured by Dow Corning or as approved. All edges shall be marked adequately prior to sealant application.
- 5.10 Glazing vinyl beads and gaskets shall be of suitable size and shape to fit tightly between the glass and the window/door section. The installation shall



be carried out in a manner that the joints are confined to comers of glass panes, and no joint in beads and gaskets are visible on any side of the glass pane after completion of installation.

**6. PROTECTION AND CLEANING OF GLAZING.**

Remove all smears, labels and excess glazing sealant, leave clean inside and outside and free from scratches. The Contractor shall be responsible for the protection of installed glass. Before final acceptance, damaged or broken glass shall be removed and replaced with new glass of no additional expense to the Owner. All glazed surfaces shall be washed clean both inside and outside prior to final acceptance.

**7. MEASUREMENT AND PAYMENT.**

7.1 General: No payment shall be made for the works involved within the scope of this section of specifications unless otherwise specifically stated in the Bill of Quantities.

The cost thereof shall be deemed to be included in the quoted unit rate of the relevant items of the Bill of Quantities.

7.2 **Measurement:** Measurement of acceptably completed works will be made on the basis of net actual area in square meter / square feet of glozing material provided and installed in position as shown on the drawing or as directed by the Engineer.

7.3 **Payment:** Payment will be made for acceptable measured quantity of glazing material on the basis unit rate quoted in the Bill of Quantifies. The unit rate shall include the cost of glazing, wastage, sealants and compound for fixing the glass, all hardware fittings as per manufacturer's recommendations or as shown on the drawings. Payment shall constitute full compensation for all the works related to the item.

## **CW-00-01-09 CARPENTRY AND JOINERY**

### **1. SCOPE OF WORK.**

The work covered by this section of specifications consists of providing all labor equipment and materials including performance of all operations in connection with fixing and installation of all wood work and mill work, construction, assembly and surface finish treatment and building in of all cabinet type items, complete in every respect and all related items support, etc., of wood or metal and incidentals, associated wood work appurtenances, the application of all Finish Hardware in connection with finished wood work, strictly in accordance with the requirements and drawings, as specified herein or as required by the Engineer and subject to the terms and conditions of the contract.

### **2. GENERAL REQUIREMENTS.**

- 2.1 All materials specified herein shall be the products of one mill as far as possible. Only first class cabinet type workmanship will be admissible in execution of this work, performed by artisans skilled in this trade, so as to provide cabinet work of the highest grade, quality, finishing, fixing and installation as per drawings.
- 2.2 Care shall be exercised to avoid strong contrasts in color and graining of finished wood for all wood surfaces.
- 2.3 All cuttings, framing and fitting shall be done as required for accommodation of work of other trades. Use of wood chips, or other shrinkage material for leveling or plumbing will not be permitted in any form. Mortise and tenon joints, shall be set in an approved type of glue with wedges and/or pinned. No wood work in the building shall be allowed until such time plastering is entirely dry. As far as practicable, all wood work shall be assembled in shop, painted and finished throughout before fixing/installation in the building.
- 2.4 In addition to machine sanding, all interior, trim, paneling and wood work shall be smoothed by hand, using ZERO No. sandpaper to give all wood work the required smooth surface for exposed finished treatment and free from machine and tool marks, abrasions, raised grains and other undesirable defects. All wood work shall be fitted to plaster or other finished work in a careful manner so as not to injure these surfaces in any way. Where plaster or other work is damaged or disturbed, it shall be made good and/or restored to its original conditions at the expense of the Contractor.
- 2.5 The whole of the timber shall be of good quality, properly seasoned, "free from large, loose or dead, knots, or tight knots, the diameter of which exceeds one quarter of the width of the exposed face, or one inch whichever is less, or injurious open shakes" and shall not contain sap wood and having a moisture content of not more than 15 percent, nor less than 12 percent of the dry weight at the time of fixing.
- 2.6 All work shall be accurately set out and properly framed together with close

fitting mortise and tenon joints accurately cut and carefully fitted and wedged solid in the best and most substantial manner. The joinery work shall be started after the commencement of the construction of the building but not wedged up until required, for fixing in position within the building. No lathery shall be wedged or built into position until it has been accepted and approved by the Engineer.

- 2.7 Door frames built into the structure before the surrounding carcass is built shall be set plumb & true and shall be adequately braced and protected against damage during subsequent building operations.
- 2.8 All timber shall be of first class soft wood /deodar) except those specified in the Bill of Quantities and as shown on the drawings.
- 2.9 Plywood used for doors, paneling and other similar works shall be shown on the drawings or directed by the Engineer. The grade shall be first quality and the face and back shall be free from end joints, dead knots, overlaps, patches and other similar defects. The surfaces shall be free, smooth for painting or polishing. The veneer shall be of the required thickness and quality including base veneer and shall be impregnated with on approved adhesive and machine compressed. Such machine pressed veneered wood shall be fixed on all sides of the inner core wood (soft wood of approved quality) after it has been treated with water resistant hot setting glue.

### **3. DOOR AND WINDOW FRAMES,**

- 3.1 The door and windows frames shall be of the first class soft wood or hard wood as specified in the Bill of Quantities and description of works. These shall be fabricated to the exact sizes and dimensions as provided in the drawings, where the door frames are not to have any sills, the vertical length shall be embedded in the floor. The Contractor shall also fully protect door and window frames from damage or injury during construction and shall replace the damaged or injured frames at his own cost, the frames must have primary coat painted on or before fixing. All framing members shall be properly mortised, tenoned and all joints properly wedged and glued and pinned. The door and window frames shall be secured in place by means of galvanized steel anchors bent up against the back of the iambs and screwed in place and built into the masonry as if is being constructed. There shall be one such anchor near the top and bottom of each jamb not over 90 cms intervals between the top and bottom anchors, Frames shall be secured to the anchors by means of two counter-sunk screws per anchor.
- 3.2 Wherever the drawings and Bill of Quantities require door and/or frame of metal, these shall be constructed of prime quality galvanized steel of 16 swg unless otherwise specified. The width and shape shall be as indicated on drawings. The frames shall be recessed at the point of location of hinges and shall have integral reinforcement to allow the butt hinges, pivot hinges, door closers and other finish hardware to be screwed on, The door frames shall also have a provision to allow recessed installation of door lock strike plate with a back up boxing to keep concrete away from the lock strike plate. The number and type of anchors shall be as per

wooden frames. These anchors must not be welded onto the inner side of the exposed surface of the frames as indicated in the drawings. Under no circumstances must the Contractor manufacture the metal frames prior to approval of a sample by the Architect/Engineer. The protection of the metal frames from the plastered surface if shown on the drawings must be uniform throughout the project.

#### **4. FLUSH WOOD DOOR SHUTTERS.**

4.1 The door leaf has to be flushed type on both sides manufactured as approved. It shall be of well-seasoned solid core black board. Flush door shall be screwed to the frames by means of butt hinges. Hinges where provided shall be countersunk in the order for veneered leaves shall intimate the Engineer and also a sample of the leaf of the proposed manufacturer, Completed doors shall be sound, rigid and free from defects and warp. All edges shall be aligned and smooth, Joints shall be close fittings, hardwood doweled or mortised frames and of strength to maintain the structural properties of the members connected. All adjoining faces and edges shall be flush and smooth. Edges shall be rectangular and solid. If a lipping is required on the edges of the flush door shutter, this shall be of the required size and shall be recessed and glued and nailed into the edge frame of the shutter.

#### **5. GLAZED DOORS AND WINDOWS.**

5.1 All doors and windows Leaves shall be cut out and framed together as soon as possible after the commencement of the works and stacked in the shade for seasoning. These are not to be wedged and glued for four months where possible and where the contract time permits. If it is not possible, these should be wedged and glued just prior to being hung. Any or all portions, in which defects appear, shall be replaced by the contractor before final gluing up the same. All tenons at the final assembly of the doors (top and bottom) shall be glued and wedged. Immediately after gluing, the frames shall be tightly clamped and so left till the glue has set. Unless otherwise specified, leaves are to be hung on hinges of the size and numbers required. The hinges shall be countersunk into the frames as well as in the leaf, the recesses being cut of the exact size and depth of the hinges. No subsequent packing shall be allowed.

#### **6. WOODEN HAND RAIL.**

The wooden hand-rail shall be in accordance with the dimensions and shape shown in the drawings. It shall be fixed to the balustrades with counter screws at maximum 250mm centers or with bolts in an approved manner and the top neatly covered in with an appropriate wood stopper.

The wood shall be carefully selected and shall be free from all knots in addition to conforming to the specifications for wood work section.

#### **7. WOODEN CABINETS.**

All cabinets including fittings and fixtures shall be as approved and shall be of best quality.

- 7.1 The Contractor shall submit a finished sample of each type of cabinet including all lettings and fixtures and the same shall be got approved from the Engineer before fabrication. Samples of materials to be used in cabinets together with specifications and literature shall be supplied to the Engineer for his approval. The color shade shall be as approved.
- 7.2 All cabinets shall be installed in position by the skilled workmen. The Contractor shall inspect delivered cabinets and related parts for indication of location, size required by field measurements, finishing hardware and similar preliminary works. Verify locations for installation, required floor and wall finishes, painting and all other related work. Unsatisfactory conditions shall be repaired. Concealed fasteners, all joints surfaces shall be smooth and even. Doors and other moving parts shall exactly fit in the frame. Refit, as necessary to ensure proper and easy operations. Refit, if necessary, all cabinet hardware, test for proper operation, remove for painting and other finishing and properly replace in position with all fittings and accessories. All work shall be thoroughly protected from damage at all times by suitable methods approved by the Engineer, Adjacent work shall similarly be protected from damage. Any damage or disfigurement shall be immediately made good at Contractor's expense.

## **8. WOOD SKIRTING/DADO AND PANELLING.**

Wood skirting/dado and paneling shall be provided where shown on the drawings and the schedule of finishes. These shall be installed in position conforming to detailed drawings and as per direction of the Engineer. Shop drawings and sample shall be submitted to the Engineer for approval. In the event of non-conformance to specifications and drawings, the work shall be rejected by the Engineer and the Contractor shall remove and replace the rejected work by new work as per specification,

Surfaces shall be prepared in the manner as directed by the Engineer for clear polish finish or as specified.

## **9. HARDWARE.**

Hardware shall be of best quality and make, strong and fine finished according to the weight/dimension, material as per specified hardware schedule. The Contractor shall obtain prior approval from the Engineer for quality, shape, pattern and brand of all hardware materials by providing samples and catalogue etc. and shall provide and fix only the approved hardware materials.

Hardware shall be carefully and securely fitted. Upon handing over the work, hardware shall be demonstrated to operate freely. Keys shall be placed into respective locks and upon acceptance of the work keys shall be tagged and delivered to the Engineer.

## **10. MEASUREMENT AND PAYMENT.**

- 10.1 Except otherwise specified herein or elsewhere in the Contract Documents, no measurement and payment will be made for the under mentioned specified works related to the relevant items of the Bill of Quantities. The cost thereof shall be deemed to have been included in the quoted unit rate of the respective items of the Bill of Quantities, All finished hardware/fittings in carpentry and joinery works.

- a. Glass and glazing including other materials and accessories, required for installation and finishing.
  - b. Prime coat, painting and polish in carpentry and joinery, works.
  - c. Adhesives.
  - d. Fittings and fixtures for moveable panels.
- 10.2 Measurement of acceptably completed works of all units will be made on the basis of net actual area in square meter / square feet or length in meter / feet fabricated and installed in position as shown on the drawings or as directed by the Engineer.
- 10.3 Payment will be made for acceptable measured quantity of all units on the basis of unit rate quoted in the bill of quantities and shall constitute full compensation for all the works related to the item.

## **CW-00-01-10 ALUMINUM WORKS**

### **1 SCOPE**

The work under this section of specification includes furnishing all labor, equipment, appliances and materials and performing all operations in carrying out the work of natural, anodized and powder coated aluminum windows, doors, ventilators and louver with fly proof shutters and aluminum false ceiling of polycarbonate sheet on swimming pool. All related items such as sealants, rubber gasket for glazing, netting, rollers, latches, fastenings, glazing, anchor bolts and all items supplied by other trades and customarily built in and/or installed in strict accordance with this section of the specifications and the applicable drawings and subject to the terms and conditions of the Contract.

### **2 APPLICABLE STANDARDS**

Latest editions of following ISO and British Standards are relevant to these Specifications wherever applicable.

#### **ISO (International Organization for Standardization 6612**

Windows & Doors - wind resistance tests.

6613 Windows & Door - Air permeability test.

#### **BSI (British Standard Institution)**

1227 Hinges

4873 Aluminum alloy windows.

### **3 SUBMITTALS**

#### **3.1 Shop Drawings**

The contractor shall submit shop drawings which shall show full construction details, quantities and locations, fastenings and attachment to adjacent construction and materials. Shop drawings shall be submitted at the proper time to allow for checking, revisions and to permit manufacturer's product delivery and start of site work to suit the building programme.

#### **3.2 Samples.**

Prior to execution of work and sufficiently in advance, the Contractor shall submit representative samples of finished Doors, windows and ventilators, anchoring mechanism, embedded parts, fastenings, glass panes, accessories and other materials for the Engineer's approval.

#### **3.3 Manufacturer's Certificate**

The Contractor shall on request get certificate signed by the manufacturer stating that each lot has been sampled tested and inspected and has met the requirements in accordance with these specification and the same shall be furnished to the Engineer.

#### **3.4 Guarantee**

The manufacturer shall furnish his standard written guarantee against leakage of rain water, excessive infiltration of dust, air and all defects in materials, workmanship covering all the work under this section.

Such guarantee shall be in addition to and not in lieu of all other liabilities which manufacturers and the Contractor may have law or by other provision of the Contract Documents.

#### **4 INSPECTION & TESTING**

- 4.1 Contractor shall arrange tests and analysis if directed by the Engineer of scaled models of each Door, window ventilator type at the maker's works or any laboratory specified by the Engineer for the material supplied by him to be tested in the presence of the Engineer's Inspector, to whom test certificates, proof sheets, etc. shall be furnished. The models shall be submitted to the Engineer for approval prior to testing. Nevertheless, neither the fact that the materials have been tested in the presence of the inspector nor that the Engineer may have been furnished with test certificates in lieu of sending an inspector to the works shall affect the liberty of the Engineer to reject, after delivery of materials found not in accordance with these specifications.
- 4.2 After approval of shop drawings and tests etc., the Contractor shall submit at his own cost one mock-up sample of each type of aluminum works complete with glazing, all components assembly method and required fittings and accessories prior to the actual fabrication of the bulk. The samples shall be returned to the Contractor for incorporation in the works after installation of at least 80% of the works.

#### **5 PRODUCT DELIVERY AND STORAGE**

- 5.1 Deliver doors, windows, ventilator and louvers in a manner preventing damage to units. Store materials off the ground under cover in a manner preventing deterioration or damage.
- 5.2 All embedded parts and anchor bolts shall be delivered to the site carefully and keeping the fabricated shape and configuration. All these parts shall be suitably marked for identification.

#### **6 MATERIAL**

- 6.1 All the sections used for Doors, windows, ventilators & fly screens shall be of best quality aluminum products such as equal and unequal angles, channels, tubes, corrugated strips, moldings etc.; in accordance with international standards conforming to ASTM B 308 & B221.
- 6.2 **Frames**

The frames of aluminum doors, windows, ventilator, louvers and fly proof shutters shall be formed from rolled, strip or extruded aluminum and be at least 2mm thick deluxe section. Fastenings bolts and screws shall be made from hardened aluminum.
- 6.3 Fasteners shall be stainless steel of a type selected to prevent galvanic action with the components fastened.



- 6.4 Gaskets shall be vinyl glazing channel gasket to commercial standard CS230-60.
- 6.5 Hardware as required shall be manufacturer's standard hardware of aluminum, stainless steel or other corrosion resistant materials and shall blend in design with the frame finishes.
- 6.6 Joint sealant shall be approved elastomer.
- 6.7 Fittings and fixtures shall be as per approved samples.
- 6.8 Joint sealant shall be approved elastomer.
- 6.9 **Finished Coating**

#### **6.9.1 General**

The finished coating shall be as stated on the Drawings and applied strictly in accordance with the manufacturer's instructions.

The color of the coating shall be selected from available ranges if not stated if not stated in the drawing and or bill of quantities. The Contractor shall offer samples for approval prior to the final selection and the manufacture of these elements.

#### **6.9.2 Anodized coating**

The aluminum anodizing shall comply with BS 3987 and be integral color hard coat anodizing 550kp/mm<sup>2</sup> hardness, minimum 25 microns thick.

The color of anodizing shall be as described on the drawings.

Samples of color including limits of color variation shall be submitted to the Engineer for his approval before work commences. The Engineer reserves the right to reject the products of any supplier who cannot guarantee a reasonable limit of color variation, the acceptable limit of variation being at the Engineer's discretion.

#### **6.9.3 Polyester Powder coating**

All aluminum sections that are to receive a polyester powder coating shall be given a caustic etch followed by an anodic oxide treatment to obtain an architectural class 1 anodic coating. Anodization should be not less than 25 micron thickness.

All aluminum works shall be finished in colored electrostatic polyester powder coating as per DIN standard 53151, 53153, 53156 or equal and approved to RAL Color subject to the Consultant's approval.

#### **6.9.4 Coating Thickness**

As and when instructed by the Consultant, the Contractor shall provide certificates from independent laboratories that the minimum thickness as stated in these Documents has been applied to the aluminum sections. Failure to provide such information shall result in the complete installation being rejected and replaced at the Contractor's expense.

#### **6.9.5 Dissimilar Materials**

All aluminum surfaces that are to be in contact with cured concrete, mortar, steel and other metals shall have the contact surfaces protected wherever

they may entrap moisture or corrosive elements. Metals that are to be in contact with mortar or concrete shall be protected with a two coat bituminous coating.

Prime paint steel parts of anchors, anchor inserts, reinforcement, supports, and all parts after field welding or blotting with zinc chromate. Minimum dry film thickness of 1 mil for zinc chromate.

## **7 FABRICATION**

### **7.1 General**

All nuts, bolts, washers and screws used for assembly and fixing shall be of adequate strength for their purpose within the design and shall be stainless steel grade 18/8.

All sealants used in the assembly of, and in the fixing of cladding and window framing, shall be non-setting to allow thermal movement without detriment to those joint sealants used for peripheral caulking and shall be one part silicone sealant and shall conform to BS 4245. All spliced joints between mullions will be sealed with an approved silicone product, compatible with other sealants and packing used.

All ironmongery which is to have the same finish as the frames and shall be approved by the Engineer.

At all opening of windows and doors and where there are louvered screens and doors, a fly screen shall be provided to the approval of the Engineer, constructed following the principles and specifications as described elsewhere in this specification.

Glazing sections shall be set in special heat resisting PVC and of channel type. Separate glazing sections on each side of the glass will not be permitted.

The following table indicates the basic requirements for window construction. The weights of framing make no allowance for beads, glazing bars, opening light framing, coupling mullions or transoms.

<b>Classifi- 1. Catio n</b>	<b>Min. weight Of basic Frame Kg/m run</b>	<b>Max. superficial Area of window In m2</b>	<b>Max. Dimension Either way Mm</b>	<b>Remarks</b>
Light	0.60	1	1500	
Light	1.00	3	2000	
Medium	1.50	5	2500	
Medium	2.00	9	3000	
Heavy	2.50	12	3500	
Heavy	3.00	12	3500	With door

## 7.2 Sliding Windows and doors

Weather stripping - high density acrilan wool weather pile shall be used. There should be double brushes at every contact between shutter and frame sections for complete insulation. These should be present consistently throughout the unit between the inside and the outside and no portions without it are permitted.

The rollers for sliding shutters for both windows as well as doors shall be of the adjustable type. The adjusting screws must be accessible in the assembled state of the shutters and a vertical adjustment of 7 mm should be possible.

All sections for sliding windows and doors should be hollow section and the cross section dimensions of the sections should not be less than 60 x 40 mm.

The outer frame must be suitable for accommodating sliding fly screens as required.

The handle-latch set should have all visible surfaces finished as the aluminum sections. The handle must have a proper grip. A small projecting flange or recess in the shutter sections cannot be accepted to serve as handles. The latching mechanism should not be surface mounted but should be concealed within the sections.

Sash rails of vertical sliding windows are to be of tubular box sections with corner joints of outer frames and sashes interlocked, and the balance mechanism is to be an approved proprietary product.

## 7.3 Side hung windows, doors and ventilators

All windows and doors should be weather-stripped with heat resistant PVC sections. The weather protection should be achieved by a positive compressive action against the PVC section and should not depend on external contact with the

PVC section. At every contact between two profiles two weather-stripping section should be provided to complete weather protection.

The bottom sections for hinged doors must be capable of being adjusted vertically if necessary. The gap between the bottom section and the floor should be covered with a pair of special splay-type PVC sections.

The shutter sections for both windows as well as doors shall be hollow section type and shall be overall size 57 x 45 mm and door sections shall be overall size 81 x 45 mm (including flanges).

The shutters of the windows and doors should be assembled with concealed corners of high rigidity. Hinges should be concealed within the sections.

Hinges shall be anodized aluminum with stainless steel pins and nylon washers. Handles shall be anodized aluminum finished to match the aluminum sections and mounted with self-lubricating nylon washers.

A mortise cylinder rim automatic deadlock of high quality with double pin tumbler is to be used.

Windows shall have anodized aluminum handles, color as framing and a latching mechanism securing the shutter to the frame both at the top and bottom.

Fitting where required:

- a. Single action door closer concealed in the head bar of the outer frame and mounted on an adjacent pivot at the threshold and deadlock fitted.
- b. The left hand leaf of double doors with flush bolts at head and sill with deadlock fitted to the right hand leaf.
- c. Escape doors to have panic bolt assembly with vertical elements concealed in the stile and door closer as in (a).

#### **7.4 Fly screens**

Fly screens shall be fitted to all opening leaves of windows or sliding doors, consisting of a separate metal sub-frame in with aluminum mesh fly wire. The Fly screens shall be adequately secured with suitable clips, set screws or turn buckles and shall be removable for maintenance purposes. Fly screen doors shall consist of similar section to metal casement doors and shall be fitted with removable panels of fly wire.

The aluminum frame to the Fly screen shall be finished to match the framing of the window or sliding door. Color and type of mesh to Engineer's approval.

## 7.5 Glazing

The glass shall conform to specification laid down under chapter 'Glazing' and shall be free from all blemishes, bubbles, distortions and other flaws of any kind and shall be properly cut to size as shown on drawings, so as to fit the grooves in window members. All the glass shall be best quality of approved manufacture or equivalent standard as approved by the Engineer.

## 7 ERECTION AND WORKMANSHIP

### 7.1 Erection

7.2 Rawl plugs and anchoring bolts shall be embedded into the concrete or masonry for holding the doors, windows, ventilators and louvers in their correct position.

7.3 Care shall be taken to install the doors and windows, ventilators and louvers in line and plumb, solidly anchored in a good workman-like manner in accordance with the Drawings. Should any scale or scratch appear on the surface of doors, windows, ventilators and louvers the Contractor shall at his own expense and at the Engineer's direction have all exposed surface cleaned to bare bright metal and made good as required.

All joints between structure and the metal shall be fully caulked and painted.

All works shall be installed in strict accordance with the manufacturer's instructions.

### 7.4 Workmanship

The Contractor shall be responsible for the protection and installation of all items furnished. All items shall be installed plumb and square and shall be solidly anchored in a good workmanship like manner in accordance with the manufacturer's instructions and as specified herein. All items shall be left in operating, neat and clean condition, free from dirt, finger marks, cement mortar stains etc. The Contractor shall be responsible for final cleaning before the final acceptance.

The glass panes shall firmly be secured in the rebates with the rubber gasket. Beads and grooves shall be ensured to be clean, dry and unobstructive at the time of glazing. The complete unit shall be airtight and watertight on completion. No door and window shall be considered complete until the finger prints and other stains and marks have been removed from the surface of glass and aluminum.

Temporary protection shall be achieved by applying water soluble protective coating capable of withstanding the action of lime mortar.

Protective coating shall be applied in the manufacturer's plant to the exposed surfaces of all components after removing all fabrication compounds, mixture and dirt accumulations.

### 7.5 FINISHING

All exposed surfaces shall be carefully polished and all alloy defects, die marks, scratches, strokes or other surface blemishes shall be buffed to a clear surface and given an anodic oxides treatment. The structural shape of aluminum members shall be of uniform quality, Color and temper; clean, round, commercially straight and free from injurious defects.

## 8 PROTECTION AND CLEANING

- Temporary protection shall be achieved by applying water soluble protective coating capable of withstanding the action of lime mortar.
- Apply coating in the manufacturer's plant to the exposed surfaces of all components.
- Before application of coating, remove all fabrication compounds, moisture and dirt accumulations.

## 9 DEFECTIVE WORK

In the event of non-conformance to specifications and drawings the aluminum work shall be rejected by the Engineer and the Contractor shall remove and replace the rejected works by new work of same specifications.

## 10 MEASUREMENT AND PAYMENT

### 10.1 General

Except otherwise specified herein or else where in the Contract Documents, no measurement and payment will be made for the under mentioned specified works related to the relevant items of the Bill of Quantities. The cost thereof shall be deemed to have been included in the quoted unit rate of the respective items of the Bill of Quantities.

- Providing and fixing glazings.
- Rawlplugs, brackets, rubber gasket, sealants, rollers, vetting latches and any other embedded fixture required for fixing the doors, windows, ventilator and louvers.
- Providing and fixing locks, handles and door closers as approved by the Engineer.
- Providing and applying approved joint sealant according to the manufacturer's instructions
- Providing and fixing fly proof shutters along with aluminum wire gauze to sliding/ open able windows and ventilators.
- Plant, tool and equipment required to fix aluminum at any height.
- Providing and applying approved joint sealant/ aluminum covering where window mullion touches with the wall poly carbonate sheet (lexan) for Swimming pool false ceiling.

## 10.2 Aluminum Doors, Windows and Ventilators

### 10.2.1 Measurement

Measurement of acceptably completed works of aluminum doors, windows and ventilators will be made on the basis of net actual area in square feet provided and installed in position as shown on drawings or as directed by the Engineer.

### 10.2.2 Payment

Payment will be made for acceptable measured quantity of all finished aluminum doors ,windows and ventilators on the basis of unit rate per square feet quoted in the Bill of Quantities and shall constitute full compensation for all the works related to the item.

## **CW-00-01-11 FALSE CEILING**

### **1 SCOPE**

The work under this section of the specifications, consists of furnishing all plant, labor, equipment, appliances and materials and in performing all operations in connection with providing and installing different types of false ceiling including suspension system complete as shown on the drawing, specified herein and/or as directed by the Engineer.

### **2 CODES AND STANDARDS**

The following Codes and Standards shall be followed wherever relevant and applicable and/or as directed by the Engineer.

BS 443-82	Specifications for testing zinc coatings on steel wire and for quality requirements.
BS 729-71	Hot dip galvanized coatings on iron and steel articles.
BS 1369-47	Metal lathing (steel) for plastering
ASTM C841-81	Installation of interior lathing and furring
ASTM C847-77	Specifications for Metal lath
BSi 1191	Gypsum plaster for building Part I & II
ASTM C-28	Gypsum Plaster
ISO 3048	Gypsum plaster general best conditions



### 3 SUBMITTALS

- 3.1 Shop drawings shall be submitted showing reflected ceiling plan, locations of built-in products and access facilities, dimensions, layout arrangements, hanger locations, structural connection, details of level changes, direction of pattern and panel joint details. The shop drawings shall be got approved by the Contractor from the Engineer in advance of under taking this item of works.
- 3.2 Catalogue, data of standard products and printed installation instructions of the ceiling manufacturer shall be submitted for approval of the Engineer well before commencing of works.
- 3.3 No materials shall be procured prior to approval of shop drawings and details.
- 3.4 The Contractor shall incorporate the required access panels of all types of false ceiling in shop drawings.

### 4 PRODUCT DELIVERY, STORAGE AND HANDLING

- 4.1 Material shall be delivered in original, unopened, protective packaging, with manufacturer's labels indicating brand name, pattern, size, thickness and fire rating.
- 4.2 Material shall be stored in original protective packaging to prevent soiling, physical damage or wetting.
- 4.3 Cartons shall be stored in the installation area, opened at each end to stabilize moisture content and temperature, for 48 hours prior to installation.

### 5 QUALITY ASSURANCE

#### 5.1 Installer Qualifications

Workmen shall be skilled, well trained and experienced in their respective crafts and familiar with specified requirements and methods.

#### 5.2 Manufacturer to be Approved

For hangers, aluminum metal suspension system, panels, air distribution boxes and other accessories the manufacturer shall be the one approved by the Engineer.

#### 5.3 Tolerances

Suspension system components, hangers, fastening devices, supporting light fixtures, metal pan tiles and others shall be so installed that maximum deflection is not more than 1/360th of the span. Allowable tolerance of furnished ceiling system shall be level to within 3 mm in 4m.

#### 5.4 Warranty

Ceiling system materials shall be guaranteed by the manufacturer for 5 years.

### 6 JOBSITE CONDITIONS

- 6.1 Work which will be concealed by false ceilings shall be completed, tested, inspected and accepted before ceiling work is started.

- 6.2 False ceiling installation shall not begin until the area has been closed in, and temperature and humidity approximate occupancy conditions. Wet work shall be cured and dry before ceiling work is started.
- 6.3 Surface which will support the ceilings, and those to which the ceiling abut, shall be inspected and accepted for completeness and adequacy to receive the ceilings before the work begins.

## 7 MATERIALS

### 7.1 SUSPENSION SYSTEM

#### a) Suspension System for Acoustic Tiles

It shall be the Reveal T-Bar system comprising of main T- Bars and Cross TBars including the hold down clips for the tiles.

#### b) Hangers

This shall be 8 SWG steel wire or 10 SWG steel bars galvanized to B.S. 443. Attachments and metal accessories shall be provided in accordance with manufacturer's recommendations.

#### c) Suspension System for Solid Wood Boards And Sheets False Ceiling

The Partial wood frame of 2"x1½ @ 1/2x2 both ways shall be screwed to the side walls and suspended with appropriate hanging suspension system to the ceiling as directed by the Engineer.

#### d) Metal Lath

It shall be MS. expanded diamond mesh type conforming to BS 1369 weighing 1.3 Kg/sq. meter. It shall be galvanized to BS 729.

### 7.2 ACOUSTIC CEILING (Dampa Type)

#### a) Acoustic Tiles

These shall be non-combustible mineral fiber (Select-Tone) reveal tiles. The surface pattern shall be Travertine- Delica or as approved by the Engineer with a dimension of 600 x 600 mm 16 mm thick, all four edges shall be revealed to be installed by an approved recessed suspension system. The tile shall have a factory applied washable white paint finish having a light reflectance of 75 degrees or more.

#### b) Acoustic Ceiling

These shall be 200 mm wide profiled units, manufactured from 0.55 mm aluminum strips. The units shall be perforated and shall have an inlay of pattern glued foil and a pad of mineral wool 12 mm thick. The units shall be chromated and stone enamelled in white and manufactured by Dampa UK or Laxalon Sadi or approved equivalent.

### 7.3 WOODEN CEILING

#### a) Wood

It shall be best quality available wood as specified on the drawing.

b) **Chip Board and MDF Board**

It shall be of best quality available having uniform texture and thickness. The density of the chip board and MDF Board shall be in the range of 800 Kg per cu.metre.

c) **Fiber Insulation Board**

It shall be 2 inch (50 mm) thick high density rigid panel and shall have high sound absorption efficiency as manufactured by Owens Corning. Fiber glass Corporation U.S.A. or any other approved manufacturer.

## 8 EXECUTION

### 8.1 GENERAL REQUIREMENTS

- a) False ceiling shall be installed wherever indicated on the Drawings.
- b) Application of ceiling units shall be done in strict accordance with the manufacturer's specifications unless otherwise modified.
- c) Ceiling units shall be Installed in a true and even plane, in straight line, courses laid out symmetrically about centre lines of ceiling or panels.
- d) Reinforcement shall be provided around openings of electrical lighting, air diffusers and access panels as indicated and shown on the Drawings.
- e) Reinforced bracing for hanger bolts shall be provided where the height of space in ceiling is more than 1.5 metres.
- f) Anti-corrosive paint shall be provided at welding points.
- g) Access panels shall be furnished and installed as shown on the Drawings in strict accordance with the manufacturer's specifications.

### 8.2 INSTALLATION OF ACOUSTIC TILES AND CEILING

False ceiling suspension system and panels shall be installed in accordance with the requirements of BS-CP.290 and with the manufacturer's recommendations as approved by the Engineer. Engineer shall be notified of any discrepancies which preclude installation in patterns shown prior to execution of Work.

- a) The hangers as specified shall be evenly disposed as per Shop Drawings and placed in position as indicated at the time of concrete pour of R.C.C. roofing structure. Their lengths clear of roofing slab shall be as per Shop Drawing.
- b) The framing shall be of the specified section and run at spacings as per Shop Drawings. The jointing of battens to hangers and the extra framing if required shall be provided for light receptacles/air- conditioning as per approved Shop Drawings.
- c) Tiles shall be installed in the grid system after completion of installation of the suspension, lighting fixtures and ventilating unit.

- d) Forming ceiling panels shall be laid out in pattern including border of uniform width around all sides of each ceiling area. The pattern shall be as per approved Shop Drawings.

### 8.3 INSTALLATION OF WOODEN & FIBER BOARDS FALSE CEILING

#### a) **Wooden**

The Partial wood frame of 2"x1 ½ @ 2' x 2' both ways shall be screwed to the side walls and suspended with appropriate hanging suspension system to the ceiling. The MDF Board of specified thickness as shown on the Drawings shall be screwed to the wooden frame. The deodar wood strips 2" x ½ " thick of specified length shall be then glued to MDF board by approved adhesive and nailed with headless nails and polished/painted as directed by the Engineer.

#### b) **Fiber Boards**

Chip Board panels of size shown on the Drawings shall be first screwed to the wooden structure provided for the ceiling. Fiber glass insulation board shall then be glued to the chip board by an approved adhesive. Adhesive shall be applied around the panel perimeter using a minimum of 10 mm dia bead of adhesive and a maximum of 300 mm length wise.

## 9 INSTRUCTIONS

- a) Light fixtures and ventilating units shall be installed in grid pattern shown and supported in accordance with the manufacturer's recommendations.
- b) After installation, dirty, soiled or discolored surfaces shall be cleaned and left free from defects and ready to receive any painted finish if required.
- c) The panels which are damaged or improperly installed shall be removed and replaced by the Contractor at his own cost.

## 10 MEASUREMENT AND PAYMENT

### 10.1 **General**

Except otherwise specified herein or elsewhere in the Contract Documents, no measurement and payment will be made for the under mentioned specified works related to the relevant items of the Bill of Quantities. The cost thereof shall be deemed to have been included in the quoted unit rate of the respective items of the Bill of Quantities.

## **CW-00-01-12 FLOORING AND WALL DADO SKIRTING**

### **1 SCOPE**

The work done under this section of the Specification consists of furnishing all plant, labor, equipment, appliances and materials and performing all operations in connection with the installation of cement concrete floors and floor finishes including bases, skirting wainscots and exterior wall finishes complete in strict accordance with this section of the specifications and the applicable drawings and subject to the terms and conditions of the Contract. The scope of this section of specifications is covered with detailed specifications as laid down herein.

### **2 APPLICABLE STANDARDS**

Latest editions of following Pakistan, ISO, British & ASTM standards are relevant to these specifications wherever applicable.

#### **ASTM (American Society for Testing and Materials) C**

482 Bond strength of ceramic tile to Cement.

C 648 Breaking strength of ceramic tile.

C 650 Resistance of ceramic tile to chemical substances.

C 798 Color permanency of glazed ceramic tile.

D 2859 Flammability of finished materials vinyl-asbestos tile or flooring.

D 3564 Application of floor polishes to maintain vinyl- asbestos tile or flooring.

#### **BSI (British Standards Institutions)**

1201Pt.2 Aggregates for granolithic concrete floor finishes.

1281 Glazed ceramic tiles and tile fittings for internal walls.

1286 Clay tiles for flooring

3260 PVC (vinyl) asbestos floor tiles.

3261 Unpacked flexible PVC flooring.

5385 Internal Ceramic wall tiling and mosaics in normal conditions.

5442 Classification of adhesives for use in Construction pt-1 Adhesives for use.

203 Sheet and Tile flooring 204 In-situ

Floor Finishes.

209 Pt.1 Care and Maintenance of floor surface, wooden flooring.

### **3 SUBMITTALS**

MESSA Office No 302 3<sup>rd</sup> Floor Bldg. No 52-C Lane No 01 Al Murtaza Commercial Phase-VIII DHA Karachi

Prior to the execution of work and sufficiently in advance, the Contractor shall submit to the Engineer:

### 3.1 Methodology

Method statements detailing his proposed plans and program in respect of all the important and critical items of work or parts thereof for technical scrutiny. He should obtain approval from the Engineer in time so that the Work schedule is not affected adversely.

### 3.2 Specimen Samples

Specimen samples of all the materials, elements, components and embedded parts (if any) for prior approval by the Engineer. The Contractor shall retain and store the approved samples throughout the entire period of Works. Three samples shall be submitted of each type of all available Color and pattern for approval.

### 3.3 Technical Literature

Technical literature, brochures and documents relevant to the items of Works and the materials or components that he intends to use in the Works. The literature shall include manufacturers/supplier's specifications/ recommendations.

### 3.4 Test Certificates

Test Certificates in respect of the materials/products from the manufacturers/suppliers. In case of supplies, the Contractor shall ensure that the materials supplied are from genuine source and from the original manufacturers.

## 4 TOLERANCES

The tolerance in surface level of terrazzo and ceramic tiles shall be 1/8" (3mm) over a length of 10 feet (2 meters).

## 5 TESTING

### 5.1 Tiles

The Contractor shall provide samples of tiles for selection, testing and approval of the Engineer. The samples shall be in finished sizes and shapes and adequate in number for testing in the laboratory as and when ordered by the Engineer.

The Contractor may also be required to lay samples of finished items of tile work fixed in position before he is allowed to proceed with the work on a particular item.

### 5.2 Adhesion to Base

The adhesion between the screed or topping and base of tile shall be tested by tapping the surface with a rod or a hammer. A hollow sound shall be considered to indicate poor adhesion. When poor adhesion is accompanied by visible or measurable lifting of tiles at the edges of bays or the tile cracks then the adhesion shall be considered to be unsatisfactory and it shall be necessary to renew the whole of the affected bay or bays.

## 6 DELIVERY AND STORAGE

6.1 Materials shall be delivered in manufacturer's original sealed containers with labels intact and legible, identifying brand name and contents.

- 6.2 Manufactured materials shall be protected from moisture and extreme of heat and cold.
- 6.3 The aggregate shall be stored on properly constructed paving as directed by the Engineer.
- 6.4 There shall be a physical partition between the stockpiles of coarse and fine aggregate.

## 7 MATERIAL

### 7.1 Gray/ White Cement

Cement shall be ordinary Portland cement conforming to B.S. 12 or PS 232.

### 7.2 Sand

All fine sand shall be obtained from sources approved by the Engineer. The grading shall conform to B.S 882 Grading Zone 1 and 2 of which the gradation limits are as follows:

#### Percentage (by weight) passing

Sieve	Grading Zone 1	Grading Zone 2
3/8" (9.53mm)	100	100
3/16" (4.76mm)	90-100	90-100
No. 7	60- 95	75-100
No. 14	30- 70	55- 90
No. 25	15- 34	35- 59
No. 52	5- 20	8- 30
No. 100	0- 10	0- 10

### 7.3 Coarse Aggregate :

Coarse aggregate shall be crushed or uncrushed gravel or crushed stone, angular or rounded in shape and shall have granular, crystalline or smooth surface free from friable, flaky and laminated pieces, mica and shale. It shall not contain matters

injurious to concrete. All coarse aggregate shall conform to BSS NO.882 and shall be graded as follows:

	<b>% Passing by weight</b>	<b>Sieve</b>
25.40mm (1")	100	
19mm (3/4")	90-100	
9mm ( 3/8")	20- 55	
4.67mm (3/16")	0- 10	

The aggregate shall be stored on properly constructed paving or as directed by the Engineer.

There shall be a physical partition between the stockpiles of coarse and fine aggregate. If required aggregates shall be washed and screened to the satisfaction of the Engineer. Sieve analysis of all the aggregates to be used in the works and shall be carried out as and when required by the Engineer. All aggregate shall be subject to the approval of the Engineer.

Any aggregates not found to be of the specified/approved standard shall be rejected by the Engineer and all such rejected material shall be removed from site with-out delay.

Floors, sub-base or base constructed with rejected aggregates shall be dismantled and rebuilt at the expense of the Contractor.

#### 7.5 **Water**

Water used for mixing concrete, curing or any other operation of the works specified herein shall be fresh, clean and free from organic or inorganic matters in solutions or in suspension. Only water of the approved quality shall be used for all constructional purposes.

#### 7.7 **Ceramic Tiles ( Glazed , Matt tiles)**

Ceramic tiles shall be export quality white or Colored. The size, Color pattern and shade of Ceramic tiles shall be selected and approved by the Engineer, and shall conform to BS 1281 as per samples.

#### 7.8 **Cleaning Compound**

The compound used for cleaning of terrazzo shall be an approved neutral chemical cleaner free from acid and alkali or any other material that will affect the Color or otherwise damage the terrazzo and shall not affect the conductivity of terrazzo floors.



## 8 EXECUTION

### 8.1 CEMENT CONCRETE FLOORING

#### 8.1.1 Lean Concrete

Lean concrete shall have a strength of 1000psi. and shall conform to Section Plain and Reinforced Concrete of these Specifications. It will be screed in position to required depth and or surface elevations.

The surface of the sub base concrete shall be brushed with a stiff broom just before it hardened to remove all litanies and loose aggregate and at the same time to roughen the surface to improve the bond. The hardened base shall be thoroughly cleaned, wetted preferably overnight, the surplus water removed and a grout of cement and water brushed into the surface just ahead of the application of the topping.

#### 8.1.2 Panels

Before laying the cement concrete flooring, the surface of the sub-base shall be divided into panels of required size as shown on the Drawings. Panels shall be made of plate glass, division strips or as specified. The top of the division strips shall conform to the specified level of the finished floor surface.

#### 8.1.3 Floor

Mixing and placing of first bottom layer of 3000psi. concrete shall be in accordance with **Section "Plain concrete"**. Concrete may be conveyed in any suitable manner from the place of mixing provided there is no segregation or loss of any ingredients and provided it is placed in its final position before initial setting takes place, that is within 30 minutes of addition of water to the mix. The concrete will be laid in a manner so as not to cause the aggregate to separate from the mortar and laid in alternate panels, each panel shall not exceed the area as directed by the Engineer. Dividing strips shall be provided unless otherwise specified on the Drawings and BOQ. The floor concrete panels shall have the thickness as shown on the Drawings. The concrete shall be rammed and thoroughly consolidated and finished rough.

#### 8.1.4 Finishing

Immediately after consolidation, the surface, shall be levelled with a wooden trowel. Excessive trowelling in the early stage shall be avoided. The surface shall be tested with a straight edge to detect undulations, which, if found, shall be eliminated. The finer components in the concrete which come to the surface with the stroking shall be quickly but carefully smoothed with the steel trowel. When the concrete has hardened sufficiently, trowelling shall be done with steel trowels. No dry cement or a mixture of dry cement with sand shall be sprinkled on the surface for hardening the surface.

#### 8.1.5 Dado/Skirting

The plaster on the portion of the wall to be provided with skirting or dado shall be left in a rough state by brooming or by using wire brushes of approved type so as to provide a bond between this base plaster and the dado or skirting. The surface of the wall shall be cleaned of all foreign matter and shall be thoroughly wetted to control the suction. Only so much mix shall be mixed with water that could be utilized within 30 minutes. This mix of cement and coarse sand in the ratio of 1:2 shall be applied to the wall in a thickness as specified and trowelled hard to a smooth surface, proper in line both vertical and horizontal.

#### 8.1.6 **Curing**

Curing shall be carried out in accordance with the Specifications given under Section - Plain and Reinforced Concrete.

### **INSTALLATION OF TILE FLOORING**

The base in cement concrete and if required the sub-base in lean concrete shall be prepared as provided in Sub-Section 8.1 "Cement Concrete flooring". The thickness of sub-base if any and base shall be as shown in the Drawings, BOQ or directed by the Engineer. The surface of concrete base shall be rough finished. The curing period of base shall be at least 72 hours before laying the tile work.

#### 8.1.7 **General**

The sub-base and base shall be prepared by laying cement concrete of specified grade and thickness as shown on the drawings, or as specified in the Bill of Quantities.

The Tiles shall be laid to the required levels and grades over a setting bed of  $\frac{3}{4}$ " thick cement sand screed comprising of one part cement to three part of sand of volume unless otherwise shown in the Drawings or specified in the BOQ. As large an area of setting bed shall be spread at one time as can be covered with tiles before the mortar has set. Surplus mortar shall be removed. The thickness of setting bed in any space shall not be less than  $\frac{1}{2}$ " or as shown on the drawings.

Floor and wall surfaces to receive the tiles shall be thoroughly cleaned of all dirt, dust, oil and other objectionable matters. Tiles shall be laid out from the center line of each space in an outward direction and the pattern should be made symmetrical with a minimum number of cut tiles and shall be laid to straight edges. Tiles shall be cut with a suitable cutting tool and rough edges shall be rubbed smooth.

After each piece is laid, it shall be firmly pressed into place so as to embed it and to even the surface before the mortar takes its initial setting.

Joints between the tiles shall be of uniform width and shall be grouted full with a plastic mix of grey or white cement (as directed by the Engineer) immediately after a suitable area of tiles has been set.

#### 8.1.10 **Ceramic Tiles**

The glazed and matt finished ceramic tiles shall be laid to the required lines, levels and grades over a setting bed of cement sand mortar comprising of one part of

cement and 3 parts of sand by volume and the joints filled with neat white cement mixing with matching Color pigment including vertical and horizontal covers. The tile floor/wall shall be kept wet for at least 72 hours and no traffic should be allowed on the tiles during curing period.

## 8.2 Measurement

Measurement of acceptably completed works of respective type of tile on floor will be made on the basis of net actual area in square feet of floor laid in position to the line, level & grade as shown on the Drawing or as directed by the Engineer.

### 9.1.1 Payment

Payment will be made for acceptable measured quantity of respective type of tile on floor the basis of unit rate per square feet quoted in the Bills of Quantities and shall constitute full compensation for all the works related to the item.

## 9.2 Ceramic Tile Decorative Border

### 9.2.1 Measurement

Measurement of acceptably completed works of Ceramic Tile Decorative Border on walls will be made on the basis of net actual Length in running feet, laid in position to the line & level as shown on the Drawing or as directed by the Engineer.

### 9.2.2 Payment

Payment will be made for acceptably measured quantities of Ceramic Tile Decorative Border will be made on the basis of unit rate per running feet quoted in the Bills of Quantities and shall constitute full compensation for all the works related to the item.

**CW-00-01-13 MARBLE & GRANITE FLOOR & WALL DADO****1 SCOPE**

The work done under this section of specifications, consists of providing all material, labor, plant, equipment, appliances and performing all operations required for providing and installing marble natural stone slab and tile finishes in floor, skirting, stair case portion of exterior walls, kitchen and toilet counters, flower beds, and verandahs etc. as shown on the drawings, complete in accordance with this section of the specification and the applicable Drawings.

**2 SUBMITTALS****2.2 Manufacturer's/Supplier's Product Data**

The Contractor shall submit manufacturer's specifications and other product data for each type of marble stone and fixtures required, including instructions for handling, storage, installation and protection.

**2.3 Shop Drawings**

Shop Drawings shall be submitted showing sizes, dimensions, sections and profiles of slab and tile units, arrangement and provisions for jointing, anchoring, fastening and supports and other necessary fixing details. Indicate locations, layouts and pattern arrangements for each stone type and Color.

**2.4 Samples**

Submit three sets of range samples not less than 300mmx300mm in size of each type for different Color, grade and finish required include in each set the full range of exposed Color and texture, including material blemishes which may be characteristic of marble selected and to be expected in the complete work.

**3 DELIVERY, STORAGE AND HANDLING**

Materials shall be protected from damage during loading, shipment, delivery and storage. Non-staining materials for blocking and packing shall be used. Stack marble units at site in accordance with manufacturer's recommendations and as required to prevent staining, scratching, etching or breakage. Marble slabs/tiles shall be delivered finished unless otherwise approved. Damaged slabs/tiles with chipped edges or cracking will not be accepted if such defects are noticeable at a distance of one metre under normal light conditions. Decision of rejection shall be f



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5.1.5 Provide irregular shaped units, staircase units and skirting base units and counter tops to the profiles of required shape, with arises sharp, true and matched at joints, polished exposed edges.

**5.2 Beds and Backings**

Where applicable, standard cementitious screed and mortar beds and backings, mixed and proportioned by volume shall be as follows:

ordinary

Portland Cement                      1 part

Sand:                                      3 parts

Water:                                    Clean, fresh and free from deleterious substances

**5.3 Adhesives, Grouts and Sealants**

Proprietary adhesives, joint grouts and sealants of approved type as required and recommended by the manufacturer for specific application shall be used. The Color of the joint grout and the sealants shall match with the Color of stone.

**5.4 Setting Shims or Buttons**

Lead buttons of the thickness required for the joint size shown or specified, and of the size required to maintain uniform joint width.

**5.5 Connection Materials**

Provide necessary anchorages loose steel plates, clip angles, seat angles, anchors, dowels, clamps, hangers, and other miscellaneous steel shapes for securing marble units to other supporting and adjacent members. Provide at least two anchors for each piece.

**6 FABRICATION**

**6.1 Fabrication Qualification**

Fabrication of Marble shall be by a firm which has successfully fabricated marble similar to the quality specified for a period of not less than five years.

**6.2 General**

Fabricate as shown and as detailed as finial shop drawings. Provide holes and sinkages cut or drilled for anchors, fasteners and supports as shown and as necessary to secure marble in place. Cut and back check as required for proper fit and clearance. Shape beds to fit supports. Provide reinforcing backing as required for adequate strength firmly adhered in place.

**6.3 Contiguous Work**

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Provide chases, reveals, openings and similar spaces and features as required for conuquow works.

Co-Ordinate with drawings and final shop drawings showing contiguous work.

6.3.1 Cut openings for lavatories, plumbing fittings and similar items indicated on the drawings, as specified in other drawings and as required.

## 7 EXECUTION

### 7.1 General

The Contractor shall employ skilled and trained marble workers for doing this job. He may be allowed to employ a specialist Sub-Contractor for this item of work with the approval of the Engineer. The surface over which marble slab/title are required to be fixed shall be clean of all dirt and dust and shall be properly hocked so that the mortar sticks well to the surface.

Do not use marble Slab/Tile with chips, cracks, stains or other defects which might be visible in the finished work. Clean stone before setting by thoroughly scrubbing with fiber brush followed by a through drenching with clear water.

### 7.2 Paving, Flooring, Skirting and Stair

Apply cement slurry coat over surfaces of concrete substrate immediately prior to placing setting bed. Limit area of application to avoid premature drying out. Install setting bed of required thickness and set stone units before initial set occurs. Apply a thin layer of cement paste to bottom of each unit. Set, tamp and level units immediately. Set units in required pattern with uniform joint widths.

Point joints as soon as possible after initial set. Force grout into joints, strike flush and tool slightly concave.

Remove mortar and grout from surfaces while still moist and as the work progresses.

Do not permit traffic on finished surface during setting and for a minimum of 24 hours after final pointing of joints.

#### 7.2.1 BASE

The base in cement concrete if required, the sub base in brick ballast plus sand or lean concrete shall be prepared as provided in "Section Floor and Wall Finishes" cement concrete flooring. The thickness of sub-base if any and base shall be as shown on the drawings or directed by the Engineer. The surface of the concrete base shall be rough finished. The curing period of the base shall be at least 72 hours before laying the marble work.

### 7.3 Repair and Cleaning

Remove and replace marble units which are broken, chipped, stained or otherwise damaged. Where directed, remove and replace units which do not match adjoining stonework or are not in line and level as shown on Drawings. Provide new matching

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units, install and point joints to eliminate evidence of replacement. Repoint defective and unsatisfactory joints to provide neat, uniform appearance.

Clean stonework not less than 6 days after completion of work, using clean water and bristle brushes. Do not use wire brushes, acid or caustic type cleaning agents or other cleaning compounds which may be detrimental to the stone finish or joint grout.

**7.4 FINISHING AND POLISHING**

The Contractor shall make suitable arrangements for giving final finish to the marble tile work such as cleaning, washing and chemical polishing as specified or as directed by the Engineer.

The marble shall be polish finished to a glossy surface that will reflect light to emphasize the Color and marking, produced by a chemical polish applied to a honed surface. All finished surfaces shall be of uniform texture, Color and appearance and shall be in conformity with the sample approved by the Engineer.

**7.5 Protection**

Provide covers, boards, supports and all other necessary materials to protect finished work from collapse, deterioration, discoloration or damage during installation and until contract completion.

**8 MEASUREMENT AND PAYMENT**

**8.1 General**

Except otherwise specified herein or elsewhere in the Contract Documents, no measurement and payment will be made for the under mentioned specified works related to the relevant items of the Bill of Quantities. The cost thereof shall be deemed to have been included "Instructions to Tenderers" are attached.

- Finishing, washing, polishing, repair cleaning and protection of marble slab, tiles, in position.
- Appropriate adhesives, joint grouts and sealants for fixing marble tiles, where specified on the Drawings or directed by the Engineer.
- 3:4 thick 1:3 cement sand setting mortar for marble stone/tiles.
- Preparation of concrete substrate for laying marble tiles on floor.
- M.S. angle framing and fixing accessories for marble slab on vanity counter if required
- Cost of factory chemical polish for pre polished marble tile/ slab.



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**8.2 Marble/granite Slab on Vanity, Kitchen, and Reception Counter**

**8.2.1 Measurement**

Measurement of acceptably completed works of marble slab on Vanity, Kitchen and Reception Counter, will be made on the basis of net actual area in square feet of marble slab provided and laid in position as shown on the Drawings or as directed by the Engineer.

**8.2.2 Payment**

Payment will be made for acceptably measured quantity of marble slab on Vanity, Kitchen and Reception Counter, will be made on the basis of unit rate per square feet quoted in the Bill of Quantities and shall constitute full compensation for all the works related to the item.

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**GENERAL INSTRUCTION**

1. All wood work to be properly seasoned and of 'A' quality.
2. M.D.F. board to be of Lasani (Gold grade) or approved equivalent,
3. Steel reinforcement and cement (Grey & White) to be used as approved.
4. Formica to be of Baluchistan Laminates or approved equivalent.
5. All polish on wood work to be imported stain as approved in Matt / Satin Finish with required of coats of ICI or approved equivalent polyurethane as per manufacturer's specification and instruction.
6. All wooden frame work to be solignum treated (English make) prices to be included in respective items of BOQ.
7. All materials specified like wood, MDF board, M.S. & Stainless Steel, PVC & S.S Skirting, Glazing, etc. mentioned in nomenclature / drawings to be used in maximum possible sizes to avoid too many joints, etc.
8. All hardware like, hinges, Jacks, catchers, handles, etc. to be used of best quality as per hardware schedule and instruction of the Architect.
9. All aluminum section to be of Pakistan Cable or approved equivalent.
10. All Glass to be imported of China origin or approved equivalent.
11. All paint Matt Enamel Primer, Anti Corrosive, etc. to be of ICI or Bergen
12. All M.S. work to be treated with minimum 2 coats of Anti Corrosive paint.
13. All material specified must be approved by Architect before installation.

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**GENERAL SPECIFICATION OF FURNITURE**

1. **Wood:**

Wood of any kind, seasoned having 7 - 8% moisture

2. **Lamination Board**

12mm – 20mm thick high density chipboard pressed with Formica (Baluchistan Laminates or equivalent) on both sides, edge covered with PVC edging of matching color.

3. **Screws**

Adamjee or Equivalent

Wooden        -        1 ½" – 2 ½" x 10 counter sunk

Steel           -        ¼" – 2" x 8

4. **Steel Pipe**

Mild steel sq. pipe wall thickness 1-2 mm / 18 gage pipe (mild steel / cold rolled IIL Karachi or equivalent)

5. **Rubber Shoes**

All furniture shall be fixed with rubber shoes.

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## LIST OF APPROVED MANUFACTURERS /SUPPLIERS/SOURCES

### CIVIL WORKS

<b>LIST OF APPROVED MANUFACTURERS CIVIL ITEMS</b>		
S. No.	Equipment	MAKE / BRAND
1	Cement (OPC, SR)	Lucky, Pioneer, Maple Leaf, State Cement, Fouji, Askari, Facto, Charat, DG Khan
2	Cement (White)	Anwarzeb, Kohat, Maple Leaf, Zealpak
3	Construction Chemicals & Sealants	Sika, Fosroc, BASF, Ultra, Fastchem, Vertex, MAPEI, KALON, Mitchell
4	Anchoring / Fixing Systems	Strong hold, Strong force, Hilti, Fischer
5	Sand (for RCC)	From approved source as per Mix Design and for high risk structure/construction
6	Sand (other works)	From approved source as per nature of work.
7	Aggregate	From approved sources looking at the nature of work as per recommendations of M/s NESPAK under study Construction material sources
8	Steel Reinforcement	AFCO, Ittefaq, Fazal, Razzak, Pak Steel, Model Steel, FF Steel, Nizami Brothers, Moiz Steel, Pioneer, Tayyaba Steel
9	Bitumen (Cold	National Refinery, Attock Petroleum, PARCO
10	Bricks/Blocks	Local (Brand / source to be approved by the Engineer
11	Porcelain Tiles	S-Abdullah, Imperial Tiles (Imported Tiles) S- Tiles (Pakistan/Turkish/Chinese)
12	Vinyl Tiles	Decora, Marflex, A.T.S. Synthetic
13	Textured Decorative Wall Coating	Rockwall, Wall Tec, Rock Shield, Sand Tec, Graffito, Jotun
14	Aluminium Doors / Windows	Pakistan Cables, Chawla, Prime, Lucky, Khas Aluminium
15	Aluminium Composite Panel	Chawla, Pakistan Safety Glass (Alcobond), AKB (EuroBond - Exterior. & DuBond - Interior)
16	Paint	ICI, Burger, Master, Kansai (Japan), Nippon, Jotun, Diamond, Buxly, Pakistan Phthalates Limited (Kalon Chemicals Company)
17	Powder Coating	Jotun or approved equivalent
18	Concrete Pavers	Tuff Tiles, Izhar, Envicrete, National Pavers, Banu Mukhtar
19	Concrete Pavers	Diamond (Jumbolon), Pakistan Insulations, Safe line, Insugreen

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20	Concrete Pavers	Polytec (Henkel Polybit), Hygrip, Roof Grip, A.T.S. Synthetic, Petro Seal, Bitumat (Saudi Arabia), Pakistan Phthalates Limited (Kalon Chemicals Company)
21	uPVC Doors / Windows	Framez, Uniwin, Nasar Steel, U-Tech, Green Door, V-Make, Chawla
22	Steel Doors and windows	SECCO or any other approved equivalent
23	Termite Proofing	Agenda (Termidor), Biflex, Fiprokil, Mirage, Termicure, Ability
24	Pre-Engineered Steel Buildings	Zamil, Mammut, Mabani, Kirby, Banu Mukhtar, Izhar, SACHAL
25	Gypsum False Ceiling	United Gypsum, Arish
26	Glass	Ghani, Al-Fattah, Pakistan Safety Glass
27	Door hardware	Jb.Saeed, IM Hardware (Yale) or approved equivalent
28	Hanging rod/accessories Anchoring rod/Accessories Suspension rod/Accessories	HLITI, FISCHER



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**PH-00-02-00 GENERAL DESCRIPTION OF PLUMBING WORKS**

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## **GENERAL REQUIREMENTS OF PLUMBING WORKS**

### **02-00-01 SCOPE OF WORK**

The work covered by this section consists of providing all material and equipment and performing all the work necessary for the complete execution and completion, including testing and commissioning of all the system of plumbing works as shown on the drawing and/or as included in plumbing works are as follow:-

- i. Water supply (hot and cold) system
- ii. Sanitary drainage and sewerage system
- i. Storm water drainage system
- iv. Fire protection system
- ii. Gas supply system

Each of the hereinbefore listed system shall be completed in every respects including connection of these systems with external systems (Municipal domestic water supply, sewerage and gas) are included in the scope and shall be as shown on the drawings and as hereinafter specified.

### **02-00-02 GENERAL**

The Tender Specifications and Drawings make reference to certain Standard Specifications and also to certain Model Numbers. The object of these references is to ensure that the equipment and materials offered by the Tenderers and supplied by the Contractor are in accordance with the required standard of quality, workmanship and capacities, etc. The object is not to limit the selection of equipment to a particular manufacturer unless specifically mentioned in the tender documents that a particular equipment and/or material is to be supplied.

It is clarified that the equipment and the material shall comply with various U.S. standards, BSS, DIN and VDE and of manufacturers other than mentioned in the tender documents shall be acceptable only after prior approval of the Engineer provided that they strictly conforms the required capacities as specified and meet the intent of the specifications regarding quality and workmanship.

In case there is any deviation between any item or material offered by the Tenderer from the Tender specifications and Drawings, the Tenderer shall furnish the specifications and samples to the Engineer and shall proceed only after obtaining written approval. It should be cleared that such deviations shall not stand as new item/items/work and the contractor shall not be liable to make any claim against this, and bound to complete the job on the tender rates.

These specifications and accompanying Drawings are to be considered as supplementing each other and as such are intended to serve jointly as the basis upon which the Contractor shall establish a Contract Price, and upon which he shall base the performance of the required work.

It is intent of these Specifications and Drawings to call for finished work, tested, complete, and ready for operation.

The work throughout shall be executed in the best and most thorough manner, under the direction of, and to the satisfaction of the Engineer, who will interpret the meaning of the drawings and specifications and shall have the power to reject any work and material which in his judgment, is not in full accordance therewith.



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Except for such changes as may be specifically approved by the Engineer, in accordance with alternates or options stated hereinafter, all work must be in full accordance with the intent of the plans and specifications, complete in every way and ready for satisfactory and efficient operation when delivered to the Employer.

If any item/specialty best available in the make is not in accordance with the specifications and/or as shown in the drawings, it is the responsibility of the contractor to import or manufacture it locally as per the requirement and standards.

The Contractor shall thoroughly acquaint himself with the work involved, and must verify at the building all measurements necessary for the proper installation of his work.

It is specially intended, and must be agreed to by each Contractor submitting a Tender under this specification that anything (whether material or labor) which is usually furnished as a part of such equipment as is hereinafter called for (and which is necessary for its proper completion and best operation), shall be furnished as a part of this Contract without additional cost, whether or not shown in the specifications. This provision is in consideration of the fact that in many cases, the use of apparatus of different makes may be considered, which differs in detail from that described (although intended to fulfill the same function).

Certain equipment such as pumps, starters, motors, valves etc., shall preferably be of the same make. Where the same type of equipment is used in the building this equipment must be of one manufacturer.

All special tools for proper operation and maintenance of the equipment provided under this Contract shall be delivered at no additional cost.

The Contractor shall allow in his Tender for cost of all cutting, making holes and subsequent making it good of the desired finish as per approval of the Engineer. No separate payment shall be made for this item.

The Contractor shall allow in his Tender for cost of providing protective painting or coating as specified in the relevant section and no claim shall be entertained for this item.

All pipes shall be properly installed as shown on the drawing and/or as directed by the Engineer, and shall be as straight as possible forming right angles and parallel lines with the walls and other pipelines. The position, gradients, true alignment and inverts shall be as shown on the drawings and/or as directed in writing by the Engineer.

The arrangements, positions, and connections of pipe fitting and appurtenances shall be as shown on the drawings but Engineer reserves the right to change the location etc. Special precautions shall be taken for the installation of the concealed pipes as shown on the drawings and/or as required. Should it be necessary to correct piping so installed, the Contractor shall be held liable for any injury caused to other works in the correction of piping.

**02-00-03 CODES, PERMITS AND INSPECTION**

All work shall meet or exceed the latest requirements of all authorities exercising jurisdiction over construction work at the Works Site.

All required permits and inspections certificates shall be obtained, paid for, and made available at the time of completion of the works.

All plumbing work shall be carried out in accordance with the National Plumbing Code and the Installation of the Fire Protection system shall be in accordance with BS codes and standard.

**02-00-04 INTERPRETATION OF THE DRAWINGS AND SPECIFICATIONS**

Except where modified by a specific notation to the country, it shall be understood that the indication and/or description of any item, in the drawings or specifications or both, carries with it the instructions to furnish

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and install the item, regardless of whether or not this instruction is explicitly stated as part of the indication or description.

It shall be understood that the specification and drawings are complimentary and are to be taken together for a complete interpretation of the work. Exceptions are that notes on the drawings, which refer to an individual element of work that takes precedence over the specifications where they conflict with the same.

No exclusion from limitations, in the language used in the Drawings or Specifications shall be interpreted as meaning that the appurtenances or accessories necessary to complete any required system or item of equipment are omitted.

The necessary Drawings utilize symbols and schematic diagrams to indicate various items of work. Neither of these have any dimensional significance nor do they delineate every item required for the intended installation. The work shall be installed in accordance with the diagrammatic intent expressed on the electrical and mechanical drawings, and in conformity with the dimensions indicated on final Architectural drawings and Structural working drawings and on equipment shop drawings.

No interpretation shall be made from the limitations of symbols and diagrams that any elements necessary for complete work are excluded.

Certain details appear on the drawings which are specific with regard to the dimensions and positioning of the work. These details are intended only for the purpose of establishing general feasibility. They do not obviate field coordination for the indicated work.

Information as to the general construction not evident in this specifications and drawings shall be derived from structural and architectural drawings and specifications.

**02-00- 05 SHOP DRAWINGS BY CONTRACTOR**

Prior to commencement of works on site and at least 3 weeks in advance of all the drawings being required for actual execution the Contractor shall submit shop drawings in triplicate for approval to the Engineer. The Engineer shall review the drawings and (i) approve the drawings or, (ii) approve the drawings with comments or, (iii) disapprove the drawings with comments for rectifications/revisions of the drawings and resubmit 3 copies to the Engineer for approval. On a drawing being approved, the Contractor shall submit 6 CPIs for formal approval and distribution to the relevant offices.

All drawings shall have plan and sections with sufficient details to clearly reflect the installation of the plant. All material specification shall be provided on the drawings. All information required for preparing suitable foundation, for providing suitable access to the plant, for making openings in building structure, for working coordination with electrical, air-conditioning and other designs etc., shall be clearly provided.

Installation shall not be allowed to commence unless approved shop drawings are in possession of the contractor, for which purpose shop drawings shall be submitted by the Contractor to the Engineer three weeks in advance of actual requirements to allow for ample time in checking and approval and no claim for extension to the contract time will be considered by reason of the Contractor's failure to submit the drawings on time.

Each shop drawing submitted by the Contractor shall include a certificate by the Contractor that all related conditions on site relevant to that particular installation have been checked and that no conflict exists.

Any expenses resulting from an error mistake or omission in or delay in delivery of the drawings and information mentioned above shall be borne by the Contractor.

Drawings approved shall not be departed from except on the instructions of the Engineer.

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The approval by the Engineer for any submitted data, working drawings, performance curves, test certificates for any items, arrangements and/or layout shall not relieve the Contractor from any responsibility regarding the performance of the Contract. Such approvals shall not also relieve the Contractor from responsibility of any error in the submitted data and workings, brought to light at any time subsequent to any approvals.

**02-00- 06 APPROVAL FOR MATERIAL AND EQUIPMENT**

**a. General**

All the material and equipment shall be of the specification mentioned herein and the Contractor shall submit the sample, necessary catalogues, sketches, the name of manufacturer and guarantee if necessary, before installation and shall be installed after the Engineer approves it. All material and equipment shall be new and unused.

Approval of material and equipment by the Engineer shall not absolve the Contractor of the responsibility of furnishing the same of proper size, quantity, quality and performance characteristics to efficiently perform the requirements and intent of the Contract.

**b. Approval of Imported/ Local Equipment**

For approval of all equipment, the Contractor shall be required to submit, within two weeks of the signing of the Contract, detailed submittals stating the equipment proposed to be supplied and providing supporting Literature/Brochures etc. . All equipment be submittals shall be accompanied with the certificate stating that the equipment proposed to be supplied fit into the space allocated for it with sufficient clearance around it to allow for installation of related ducting, piping etc., and provides for maintenance clearance as required by the manufacturer of the equipment, and that all special requirements of the equipment have been accounted for. Any additional information, test reports etc., required by the Engineer shall be furnished by the Contractor. All work related to the equipment shall only be commenced after receipt of written approval from the Engineer. .

**02-00-07 CLEANING AND PROTECTION**

The Contractor shall be responsible for his work until its completion and final acceptance and shall replace any of the same, which may be damaged, lost or stolen; without any additional cost to the Employer.

All openings left in floor for passage of lines of soil, drain, waste, vent, and supply pipes shall be covered and protected. All open ends of pipes shall be closed by a plug fitting to prevent obstruction and damage. The use of new permanent water closets and other new plumbing fixtures during the progress of the work is prohibited.

As soon as installed, all metal fixtures and trimmings shall be thoroughly covered by the Contractor with noncorrosive grease which shall be maintained until all construction work is completed.

Upon the completion of the work, all fixtures and trimmings shall be thoroughly cleaned and polished and left in first class condition.

Prior to delivering the works to the Employer the Contractor shall thoroughly clean all equipment fixtures, fittings etc.

Before final connections are made and before operation of equipment and piping, all piping interior and exterior shall be thoroughly blown out, rod out, or washed out at least twice in a manner as directed and/or approved by the Engineer, to remove all accumulation of dirt, chips or other deleterious material. The Contractor shall make all temporary connections and furnish all appliances required for the purpose of cleaning at no extra expense to the Employer.

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**02-00-08 CUTTING AND PATCHING**

Cutting will be done under Specification of other trades. This Contractor is called upon to set openings and sleeves for pipes accurately before the concrete floors are poured or may set boxes on the forms so as to leave openings in the floors in which the required sleeves can be subsequently located in which case he is called upon to fill in the concrete voids around the sleeves, water tight.

All patching will be done under Specifications of other trades. Should the Contractor neglect to perform his preliminary work and should cuttings be required in order to install the piping equipment, then the expense of the cutting and restoring of surface to their original condition shall be borne by the Contractor.

**02-00-09 OPERATING AND MAINTENANCE INSTRUCTIONS**

Three sets of operating and maintenance instructions covering completely, the operation and maintenance of all plumbing equipment, pumps and the like shall be furnished to the Employer. Three sets of lubricating charts and manuals for each item of equipment shall be furnished to the Employer.

**02-00-10 STANDARDS ABBREVIATIONS**

ANSI	American National Standards Institute
API	American Petroleum Institute
ASA	American Standards Association
ASTM	American Society for Testing & Material
BSS	British Standards Specifications
DIN	Deutsches Institute für Normung (German Standard)
DVS	German Plastic Welding Standards
IEC	International Electro technical Commission
ISO	International Standards Organization
NFPA	National Fire Protection Association
OHSAS	Occupational Health & Safety Assessment Specifications

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02-00-11 **PRIORITY OF ITEM**

If there is any disparity between nomenclature of bill of items and text specification than following will be the priority.

- a) Specification of the text will get the priority over bill of items (Text).
- b) If there is any difference in dimensions than the figures in bill of items shall priority.

**END OF SECTION**

02-03-00

## **WATER SUPPLY, GAS, FIRE PROTECTION & FOUNTAIN PIPING AND SPECIALS**

### **PH-02-03-01 SCOPE OF WORK**

The work to be done under this section of the specification consists of:

Providing all material and labour for proper installation of pipes, pipe fittings including jointing, clamping, cleaning, painting etc. both above ground and underground as shown on the drawing or as specified herein.

Providing all material and labour, equipment, appliances etc. for proper installation of valves, strainers and piping specialities etc. as shown on the drawings or as specified herein.

### **PH-02-03-02 SYSTEM PRESSURE AND TEMPERATURE**

All pipes, fittings, valves and pipe specialities referred in this section or other, used for water supply system shall be capable to withstand the max. Test pressure of 90 psi or 1.5 times the working pressures whichever is greater for a period of One (1) Hour and the temperature of 65.6°C.

### **PH-02-03 -03 PIPES AND FITTINGS**

#### **A) PE Pressure Pipes**

Polyethylene Pressure Pipes (PE 100) for potable water application shall conform to ISO 4427:1996, DIN 8074/8075 and PS-3580:1997. PE pipes are suitable for outside water supply and distribution network and for other applications i.e. chemicals, compressed air, hazardous wastes, slurries, marine, mining and agriculture etc. Polyethylene used for Pipes shall contain Carbon Black (2% min.) as UV stabilizer when they are to be used in exposed conditions. Pipes up to 75 mm Outer Diameter (OD) shall be joined by using compression fittings of the same operating pressure as the pipe. Pipes of 90mm or larger OD shall be joined using Butt Fusion or Electro Fusion methods as specified by the manufacturer. Manufacturer's recommendations shall be strictly followed to ensure proper joints in pipes. Cold Bending Radius for PE pipes at 20oC shall not be less than 22 x Pipe OD. For lesser radii, Bend fittings shall be used. PE pipes (PE 100) shall conform to the following pressure ratings, dimensions and physical properties.

**Table PH-03-01 :PE 100 Pressure Pipe Dimensions (ISO 4427)**

OD (mm)	PN (bar)	SDR (OD/Th)	Th. (mm)	OD (mm)	PN (bar)	SDR (OD/Th)	Th. (mm)
20	16.0	11.0	1.9	110	6.0	21.0	5.3
					8.0	17.0	6.6
					10.0	13.6	8.1
					12.5	11.0	10.0
					16.0	9.0	12.3
25	12.5	14.0	1.9	125	6.0	21.0	6.0
	16.0	11.0	2.3		8.0	17.0	7.4
					10.0	13.6	9.2
					12.5	11.0	11.4
					16.0	9.0	14.0
32	12.5	13.0	2.4	140	6.0	21.0	6.7
	16.0	11.0	2.9		8.0	17.0	8.3
					10.0	13.6	10.3
					12.5	11.0	12.7
					16.0	9.0	15.7
40	12.5	13.0	3.0	160	6.0	21.0	7.7
	16.0	11.0	3.7		8.0	17.0	9.5
					10.0	13.6	11.8
					12.5	11.0	14.6
					16.0	9.0	17.9
50	12.5	13.0	3.7	180	6.0	21.0	8.6
	16.0	11.0	4.6		8.0	17.0	10.7
					10.0	13.6	13.3
					12.5	11.0	16.4
					16.0	9.0	20.1
63	10.0	16.0	3.8	200	6.0	21.0	9.6
	12.5	13.0	4.7		8.0	17.0	11.9
	16.0	11.0	5.8		10.0	13.6	14.7
					12.5	11.0	18.2
					16.0	9.0	22.4

75	8.0	17	4.5	225	6.0	21.0	10.8
	10.0	13.6	5.6		8.0	17.0	13.4
	12.5	11.0	6.8		10.0	13.6	16.6
	16.0	9.0	8.4		12.5	11.0	20.5
					16.0	9.0	25.2
90	6.0	21.0	4.3	250	6.0	21.0	11.9
	8.0	17.0	5.4		8.0	17.0	14.8
	10.0	13.6	6.7		10.0	13.6	18.4
	12.5	11.0	8.2		12.5	11.0	22.7
	16.0	9.0	10.1		16.0	9.0	27.9

**Table PH-03-2: TYPICAL PHYSICAL PROPERTIES OF POLYETHYLENE (BLACK) PE 100**

Properties		Typical Value	Unit	Test Method
Density	(Compound)	950-959	Kg/m <sup>3</sup>	ISO 1183
Melt Flow Rate	(190°C/5.0 kg)	0.3	g/10 min	ISO 1133
Tensile Stress at Yield	50 mm/min	19-21	MPa	ISO 1133
Elongation at Yield		9	%	ISO 527-2
Elongation At Break		>350	%	ISO 527-2
Charpy Impact Strength, notched	0°C	14	Kj/m <sup>2</sup>	ISO 179/1eA
Carbon Black Content		≥2	%	ASTM D 1603
Brittleness Temperature		<-70	°C	ASTM D 746
BSCR	10% Igepal, F <sub>60</sub>	>10000	h	ASTM D 1693-A
Thermal Satiability	210°C	>15	Min	EN 728



B) **PPR Water Supply Pipes**

Water supply pipes (internal cold and hot lines) shall be Polypropylene Random 80 PN 20 and fittings of the same material as of pipe shall be PN 25. Pipes shall conform to following specifications:

DIN 1988	DVGW Code of Practice (Drinking water supply system; materials' components' appliances, design and installation).
DIN 8076	Standard for testing metal threaded joints,
DIN 8077	Polypropylene (PP) pipe dimensions.
DIN 8078	Polypropylene (PP) pipes; general quality requirements testing & chemical resistance of pipes and fittings
DIN 2999	Standard for fittings with threaded metallic inserts.
DIN 16962/ Pt 1	Pipe joints assemblies and fittings for type 1 & 2 Polypropylene (PP) pressure pipes; bends produced by segment inserts for butt welding dimensions.
DIN 16928	Installation, pipe and fitting connections.
DIN 4109	Noise control in buildings.
DIN 4140	Insulation of service installations.
DVS 2207	Welding of thermoplastic pipe and fittings.
DVS 2208	Welding machines & devices for thermoplastic pipes and fittings
OHSAS 18001	British standard for Health and safety management system.
BS 6920	Suitability of non – metallic product for use in contact with water intended for human consumption with regard to their effect on the quality of the water

**Table PH-03-03: Standard Pipe (PPR) Sizes**

<b>Outer Diameter</b>	<b>Wall thickness</b>	<b>Internal diameter</b>
<b>mm</b>	<b>mm</b>	<b>mm</b>
20	3.4	13.2
25	4.2	16.6
32	5.4	21.2
40	6.7	26.6
50	8.4	33.2
63	10.5	42.0
75	12.5	50.0
90	15.0	60.0
110	18.4	73.2

All PPR pipes shall be welded carried out by simultaneously heating the male and female parts to be jointed together. Once the welding temperature reached, coupling is carried out to obtain tight joint.

The surfaces of the pipe and fittings must be clean and without blemish. Ends must be clean cut at right angles. Before carrying out welding, check that the poly-melting welding device operates correctly and that the welding temperature has been reached.

Pipes and fittings are inserted to the edges of welding bush and held steady without rotating. Once the heating has been completed the parts are extracted from heating element and rapidly joined axially so as not to create an excessive seam. It is important to follow the correct coupling depth without going beyond the ledge on the fitting.

Heating, working and cooling time for joining the pipes shall be as specified by the manufacturer.

**C ) Galvanized Iron (G. I.) pipe, fittings and specials shall conform to the following specifications**

Water supply (cold and hot) and vent pipes shall be of galvanised steel conforming to BSS 1387/1985, Medium Grade, given below. Pipefitting shall be of malleable cast iron, screwed or flanged.

**Table PH-03-4: Pipe (G. I.) Sizes as per BS 1387**

Nominal size of thread (DN)	Designation of thread	Outside diameter		Thickness	Mass of black tube	
		Max.	Min.		Plain end	Screwed and socketed
		mm	mm	mm	Kg/m	Kg/m
8	¼	13.9	13.3	2.3	0.641	0.645
10	3/8	17.4	16.8	2.3	0.839	0.845
15	½	21.7	21.1	2.6	1.21	1.22
20	¾	27.2	26.6	2.6	1.56	1.57
25	1	34.2	33.4	3.2	2.41	2.43
32	1 ¼	42.9	42.1	3.2	3.10	3.13
40	1 ½	48.8	48.0	3.2	3.57	3.61
50	2	60.8	59.8	3.6	5.03	5.10
65	2 ½	76.6	75.4	3.6	6.43	6.55
80	3	89.5	88.1	4.0	8.37	8.54
100	4	114.9	113.3	4.5	12.2	12.5
125	5	140.6	138.7	5.0	16.6	17.1
150	6	166.1	164.1	5.0	19.7	20.3

NOTE: Maximum and Minimum outside diameters meet the requirements of ISO 65.

Fire protection pipe shall also be galvanised steel conforming to BSS 1387/1985 medium quality.

Pipe fittings shall be of malleable iron or cast iron screwed or flanged conforming to following specifications:

a. Malleable Iron (Galvanized Fittings (i.e. coupling, elbows, Tees etc.) for G. I. Pipes 2-1/2" and below shall be of at least same thickness and quality as G. I. Pipe.

b. Cast Iron threaded flanges for joining G. I. Pipe of dia 3" and above.

- BS-10: 1962, Table D.

c. Cast Iron flanged fittings, for G. I. pipe 3" and above. • BS EN 545: 2002

- Working Pressure = 400 ft. of water.

All screwed tubes, sockets and fittings shall have pipe threads in accordance with BS EN 10226-1:2004.

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**D) u-PVC Water Supply Pressure Pipes and Fittings**

UN plasticized Polyvinylchloride (u-PVC) Pressure Pipes shall conform to BS 3505 and rubber rings shall conform to PS 3051:1991. U-PVC Fittings shall conform to DIN 8063. U-PVC pipes are manufactured in four classes B, C, D & E specifications for these are tabulated below.

**MAXIMUM SUSTAINED WORKING & FIELD TEST PRESSURES:**

**Table PH-03-06: WORKING PRESSURE**

Class	Bar	Kgf/cm <sup>2</sup>	lbf/in <sup>2</sup>
B	6	6.12	87
C	9	9.18	130
D	12	12.25	173
E	15	15.30	217

**Table PH-03-6.1: TEST PRESSURE (1 Hour)**

Bar	Kgf/Cm <sup>2</sup>	lbf/in <sup>2</sup>
9	9.18	130
14	13.77	195
18	18.38	259
23	23	325

**Table PH-03-07: Short-term hydrostatic pressure resistance at 20C**

**Maximum 1 h failure pressure**

Class of pipe	Maximum 1 h failure pressure
6 bar Class – B	21.6 bar
9 bar Class – C	32.4 bar
12 bar Class – D	43.2 bar
15 bar Class - E	54.0 bar

**a. Longitudinal Reversion:**

When tested in accordance with BS 2782: Method 1102A using a temperature of 150 °C and the appropriate immersion period specified in following Table, at no position around the pipe shall the length change by more than 5.0 %.

**Table PH-03-08: Test Piece Immersion Periods**

Pipe wall thickness	Minimum immersion period
mm	min
< 8.6	15
> 8.6 but < 14.1	30
> 14.1	60

**b. Impact resistance at 20 °C:**

When tested in accordance with appendix B of BS3505, the pipe shall have a True Impact Rate (TIR) below 10 % at a confidence level of 90 %.

**c. Fracture toughness:**

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This requirement shall only apply to pipes of nominal size 3in or greater, which, when tested in accordance with appendix C of BS3505, shall withstand for not less than 15 min without breaking or cracking at the notch the test force corresponding to a true fracture toughness,  $K_{Ic}$  (see appendix D of BS 3505), of not less than  $3.25 \text{ MN}\cdot\text{m}^{-3/2}$  for pipes of wall thickness  $e_n$  less than 6mm or not less than  $3.75 \text{ MN}\cdot\text{m}^{-3/2}$  for pipes of wall thickness  $e_n$  greater than or equal to 6mm.

**Table PH-03-09: APPROXIMATE WEIGHTS OF u-PVC PRESSURE PIPES**

<b>Normal Size (Inch)</b>	<b>CLASS-B Kg/m</b>	<b>CLASS-C Kg /m</b>	<b>CLASS-D Kg/m</b>	<b>CLASS-E Kg/m</b>
3/8	-	-	-	0.11
1/2	-	-	-	0.15
3/4	-	-	-	0.22
1	-	-	-	0.32
1-1/4	-	-	0.41	0.50
1-1/2	-	-	0.54	0.65
2	-	0.68	0.82	1.03
2-1/2	-	1.01	1.20	1.58
3	1.17	1.41	1.82	2.22
4	1.78	2.32	0.03	3.65
5	2.44	3.49	4.55	5.51
6	3.46	5.01	6.57	7.95
8	5.30	7.72	10.05	12.17
10	8.26	11.72	15.59	18.89
12	11.55	11.97	21.91	26.68
14	13.87	16.85	26.49	32.16

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**Table PH-03 -10 : U-PVC PRESSURE PIPE DIMENSIONS FOR CLASSES B, C, D AND E (as per BS 3505)**

Nominal Size	Mean Outside diameter		Wall thickness												
			Class B 6 bar			Class C 9 bar			Class D 12 bar			Class E 15 bar			
	Inch	Min.	Max.	Averaged value	Individual value		Averaged value	Individual value		Averaged value	Individual value		Averaged value	Individual value	
				Max.	Min.	Max.	Max.	Min.	Max.	Max.	Min.	Max.	Max.	Min.	Max.
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
3/8	17.0	17.3	-	-	-	-	-	-	-	-	-	1.9	1.5	1.9	
1/2	21.2	21.5	-	-	-	-	-	-	-	-	-	2.1	1.7	2.1	
3/4	26.6	26.9	-	-	-	-	-	-	-	-	-	2.5	1.9	2.5	
1	33.4	33.7	-	-	-	-	-	-	-	-	-	2.7	2.2	2.7	
1-1/4	42.1	42.4	-	-	-	-	-	-	2.7	2.2	2.7	3.2	2.7	3.2	
1-1/2	48.1	48.4	-	-	-	-	-	-	3.0	2.5	3.0	3.7	3.1	3.7	
2	60.2	60.5	-	-	-	3.0	2.5	3.0	3.7	3.1	3.7	4.5	3.9	4.5	
2-1/2	75.0	75.3	-	-	-	3.5	3.0	3.5	4.5	3.9	4.5	5.5	4.8	5.5	
3	88.7	89.1	3.4	2.9	3.4	4.1	3.5	4.1	5.3	4.6	5.3	6.5	5.7	6.6	
4	114.1	114.5	4.0	3.4	4.0	5.2	4.5	5.2	6.8	6.0	6.9	8.3	7.3	8.4	

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5	140.0	140.4	4.4	3.8	4.4	6.3	5.5	6.4	8.3	7.3	8.4	10.1	9.0	10.4
6	168.0	168.5	5.2	4.5	5.2	7.5	6.6	7.6	9.9	8.8	10.2	12.1	10.8	12.5
7	193.5	194.0	6.0	5.2	6.0	8.7	7.7	8.9	11.4	10.1	11.7	13.9	12.4	14.3
8	218.8	219.4	6.1	5.3	6.1	8.8	7.8	9.0	11.6	10.3	11.9	14.1	12.6	14.5
9	244.1	244.8	6.7	5.9	6.8	9.8	8.7	10.0	12.9	11.5	13.3	15.8	14.1	16.3
10	272.6	273.4	7.5	6.6	7.6	10.9	9.7	11.2	14.3	12.8	14.8	17.5	15.7	18.1
12	323.4	324.3	8.8	7.8	9.0	12.9	11.5	13.3	17.0	15.2	17.5	20.8	18.7	21.6
14	355.0	356.0	9.6	8.5	9.8	14.1	12.6	14.5	18.6	16.7	19.2	22.8	20.5	23.6
16	405.9	406.9	10.9	9.7	11.2	16.2	14.5	16.7	21.1	19.0	21.9	26.0	23.4	27.0
18	456.7	457.7	12.3	11.0	12.7	18.2	16.3	18.8	23.8	21.4	24.6	-	-	-
20	507.5	508.5	13.7	12.2	14.1	20.2	18.1	20.9	-	-	-	-	-	-
22	558.3	559.3	15.0	13.4	15.5	22.1	19.9	22.9	-	-	-	-	-	-
24	609.1	610.1	16.3	14.6	16.8	24.1	21.7	25.0	-	-	-	-	-	-



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**Table PH-03-11: GUIDE TO THE CONSUMPTION OF LUBRICANT, CLEANER AND**

**SOLVENT CEMENT PER 100 JOINTS**

**RANGE OF PIPES AND FITTINGS DIAMETER (mm)**

<b>APROX</b>	32-40	50-63	75-90	110-125	140-160
<b>Lubricant (Kg)</b>	-	2.00	3.50-	4.00-	5.0-
<b>Cleaner (Liter)</b>	0.35-	0.65-	1.00-	3.00-	6.5-
	0.50	0.90	2.00	5.00	9.0
<b>Solvent cement (Liter)</b>	0.78 – 1.00	1.30-1.80	2.00-4.00	6.00-10.00	13.0-18.0

**Table PH-03-12 SETTING TIME**

<b>Ambient temperature</b>	<b>Pipe diameter</b>	<b>Time during which the joint should not be moved</b>	<b>Waiting time before installation</b>
°C	de (mm)	Minute	Minute
> 25	< 63	1/2	10
	>75	1	15
10 – 25	< 63	3	20
	75	5	30
< 10	< 63	8	60
	> 75	15	90

PH-02-03 -04 **Natural Gas Pipes**

**A) Gi PIPE**

All high-pressure Gas pipes shall be MS black tubes of API 5L grade B standards given below. All high-pressure gas piping shall be of welded construction and should be tested at pressure specified by the Gas Company. A double layer of bitumen with fibre glass is to be provided for pipes of 100 mm diameter and above.

**Table PH-03-13: API 5L Grade B Standard**

<b>Nominal Bore mm</b>	<b>Wall Thickness mm</b>	<b>Weight Kg/M</b>	<b>Test Pressure Kg/Sq. cm.</b>
20	2.90	1.70	49.00
25	3.40	2.52	49.00
50	3.90	5.42	77.00

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100	6.00	9.63	91.00
150	7.10	28.22	91.00
200	8.20	49.10	110.00

Low-pressure Gas pipes used in internal installation (house piping) shall conform to BS 1387 of 1985 "Medium Grade" or equivalent

All low-pressure internal gas piping may be of screwed connection. Reduction in sizes should be with reduction tees, elbows or reducers. All changes in direction should be made with the use of fittings.

B )

**Medium Density Polyethylene (MDPE) High Pressure Gas Pipes**

Pipe shall conform to the standards ISO 4437 (DIN 8074) or ASTM D-2513 (DIN 8075) as specified, given in Tables below:

**Table PH-02 -13: ISO 4437 Dimensions in Millimeters (mm)**

Nominal outside diameter	Minimum wall thickness	
	SDR 17.6	SDR 11
20	2.3	3.0
25	2.3	3.0
32	2.3	3.0
40	2.3	3.7
50	2.9	4.6
63	3.6	5.8

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**Table PH-02 -15: ASTM D 2513 – Dimensions**

Nominal Pipe Size	Outside diameter Inch (mm)	Tolerance for Max. / Min. out of roundness SDR 17 / SDR 13.5 / SDR 11	Wall Thickness and Tolerance					
			SDR	min. inch (mm)	Tolerance Inch (mm)	SDR	Min. inch (mm)	Tolerance inch (mm)
3/4"	1.050 (26.7)	±0.010 (±0.254)	11	0.095 (2.41)	+0.011 (+0.279)	-	-	-
1"	1.315 (33.4)	±0.010 (±0.254)	11	0.119 (3.02)	+0.014 (+0.356)	-	-	-
1 1/4"	1.660 (42.1)	±0.012 (±0.305)	11	0.151 (3.84)	+0.018 (+0.457)	17	0.98 (2.49)	+0.012 (+0.305)
1 1/2"	1.900 (48.3)	±0.012 (±0.305)	11	0.173 (4.39)	+0.021 (+0.533)	17	0.112 (2.85)	+0.013 (+0.330)
2"	2.375 (60.3)	±0.012 (±0.305)	11	0.216 (5.49)	+0.026 (+0.660)	17	0.140 (3.56)	+0.017 (+0.432)
2 1/2"	2.875 (73.0)	±0.015 (±0.381)	11	0.261 (6.63)	+0.031 (+0.787)	17	0.169 (4.29)	+0.020 (+0.508)

SDR (Standard Dimension Ratio) = Outer Dia. / Thickness

PH-02-03-05 **VALVES AND STRAINERS**

**A). Gate / Sluice Valves**

Gate valves up to 50 mm dia. shall be threaded ends and 65 mm dia. and above shall be flanged ends. All Valves of 75mm dia. and below shall be of Copper alloy conforming to BS EN 12288:2003 and valve of 100mm diameter and above shall be ductile or cast iron conforming to the following standards:

Valves shall be non-rising stem and double wedge or disc type and ends may be screwed or flanged.

**B) Sluice Valves (Ductile and Cast Iron)**

Sluice Valves of Ductile or Cast Iron shall be epoxy coated internally and externally and shall conform to following standards.

- i. Flanged Sluice Valves (Ductile Iron) with Stainless Steel Wedge, stamp and seat as per BS 5163 with rating PN16
- ii. Flanged Sluice Valves (Ductile Iron) with Bronze Wedge, stamp and seat as per BS 5153 with rating PN16
- iii. Flanged Sluice Valves (Grey Cast Iron) with Stainless Steel Wedge, stamp and seat as per BS 5163 with rating PN10 or PN16
- iv. Flanged Sluice Valves (Grey Cast Iron) with Bronze Wedge, stamp and seat as per BS 3464 with rating PN10 or PN16

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v. Flanged Sluice Valves (Grey Cast Iron) Large Diameter serial with Bronze Wedge, stamp and seat as per BS 3464 and BS 5163 with rating PN10 or PN16

**C)Globe Valves**

All valves of 75mm dia and below shall be of copper alloy conforming to BS EN 12288:2003 and valve of 100mm dia and above shall be Cast Iron conforming to BS EN 13789:2002. The ends may be screened or flanged.

**D) Ball Valves**

All valves of 75mm dia and below shall be of copper alloy conforming to BS EN 12288:2003 and valve of 100mm dia and above shall be Cast Iron conforming to BS EN 13789:2002. The ends may be screened or flanged.

**E )Swing Check Valves**

All valves of 75mm dia and below shall be of copper alloy conforming to BS EN 12288:2003, and valve of 100mm diameter and above shall be Cast Iron conforming to BS EN 13789:2002.

**F ) Float Valves**

Shall be of best quality heavy duty type provided with 150mm dia. copper ball and heavy duty bronze float arm. Valve shall provide tight shut off at full closed position.

**G ) Y-Strainers**

Strainers shall be 'Y' types with bronze body and threaded ends up to m diameter screen shall be of 20-mesh model.

Strainers above 50mm shall have Cast Iron body with flanged ends. Screen Cover shall be provided with blow off tapping. Screen shall be of perforated stainless steel, 36 holes per Sq. cm. with 1.14mm diameter and 0.5mm thick. All strainers for water supply application shall be suitable for 1055 Kg/cm<sup>2</sup> 120°C. All strainers for fire protection service shall be suitable for 21 Kg/cm<sup>2</sup> and 120°C.

**H ) Foot Valve**

Shall be installed, on the suction line of the pumps where required or indicated on the drawings. Foot valve shall be of brass, and shall be provided with integral strainer. Foot valve shall be provided with a spring loaded vertical check disc with gasket for tight shut-off.

**I ) Air Release Valves**

Air release valves shall be of Grey Cast Iron Body conforming to BS 1074 with epoxy coating internally and externally.

**J ) Pressure Reducing Valves**

Air release valves shall comply with the following specifications:

Temperature Range Water: up to 70°C

Disc: EPDM

Strainer: Inline Mesh

Materials Body and Cover: Low Lead Bronze

Pressure Ratings:

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- Maximum Inlet Pressure: 400 psi (25 Bar)
- Maximum Differential Pressure: 150 psi (10 Bar)
- Minimum Differential Pressure: 14.5 psi

**K ) Wash Out valve**

Sluice Valves of Ductile or Cast Iron shall be epoxy coated internally and externally and shall conform to BS 5163

**L ) Gas Cocks**

Shall be of bronze and have approved make.

PH-02-03-06 **VALVE INSTALLATION**

All valves having stems over 2.13m height shall be provided with chain operate.

Valves in horizontal lines shall be installed with stems horizontal or above. Isolation gate valves shall be installed on each side of each piece of equipment's as pumps, and other similar items at the mid-point of all looped mains; and at any other points indicated or required for draining, isolation sectionalising purposes. Strainers shall be installed wherever necessary to protect equipment and control valves, where proper functioning would be effected by dirt on the seat or scoring of the seat. Strainers shall be arranged not to clog piping and allow easy disconnection for change. All strainers 50mm and above shall be provided with 20mm ball valves for blow-off. Strainers shall allow removal of accumulated dirt and screen replacement without disconnecting main piping.

PH-02-03-07 **WATER & FIRE PIPING SPECIALITIES**

a) **Flexible Connectors**

Flexible connectors shall be constructed of rubber, tetrafluoroethylene resin, or corrosion resisting steel, bronze, model or galvanised steel. The material used and the configuration shall be suitable for pressure, vacuum, temperature and circulation medium. The flexible section may have threaded, welding, soldering, flanged or socket ends and shall be suitable for service intended. The flexible section may be reinforced with metal retaining rings, with built-in reinforcement and restriction bolts

or with wire braided cover suitable for the service intended. Flanged assemblies shall be equipped with limited bolts to restrict maximum travel to within limits standard with the manufacturer. Unless otherwise shown on the drawings, the length of the flexible connectors shall be as recommended by the manufacturer for the services intended. Internal sleeves or liners shall be provided when recommended by the manufacturer suitable for the circulating medium. Covers to protect the below will be provided where necessary or directed. Flexible connectors shall be designed for 10.5 Kg./Cm<sup>2</sup> SWP, and 150°C for water supply system and 21 Kg./Cm<sup>2</sup> for water supply system and 21 Kg./Cm<sup>2</sup> SWP & 150°C for fire protection system. Flexible pipe connection or couplings shall be installed on piping connected to equipment where indicated on the drawings. Installation shall be as per manufacturer's recommendations.

b) **AUTOMATIC AIR VENTS FOR LIQUID SYSTEMS**

Automatic Air Vents shall be suitable for liquid systems. Body and cover shall be of malleable iron. Float and valve seat shall be of stainless steel. Valve head shall be of vision (Synthetic Rubber). Connections shall be 15mm or 20mm as specified, screwed. Vents shall be suitable for service up to 10.5 Kg./Cm<sup>2</sup> & 120°C service. Vents shall be similar to model AE 550 Manufactured by SPIRAX-SARCO.

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Air Vents shall be provided at all high points, where shown on the drawings to ensure adequate venting of the piping system. A 20mm ball valve shall be provided to isolate the vent.

c) **EXPANSION JOINTS**

Shall be installed where shown on drawings as required. The expansion joints shall consist of bellows constructed of super-strong Plies of Nylon, with both ends attached to flanges. External tie bars for limiting movement shall be provided. Flanges shall be of galvanised steel to ASA B16.5.

Pipes alignment guides shall be installed as recommended by the joint manufacturer but in any case not more than 1.5mm on each side of expansion joint, except in lines 100mm or smaller they may be not over 600mm each side of joint.

d) **ANCHORS**

Shall be provided wherever necessary or indicated to localise expansion or to prevent undue strain on piping. Anchors shall consist of heavy steel collars with lugs and bolts for clamping and attaching anchor branches, unless otherwise indicated. Anchor braces shall be installed in the most effective manner to secure the desired results, using turnbuckles wherever required. The weight or expansion of the pipeline shall attach anchors, supports or stays in places where such supports will not injure the construction during installation or damage the structure. Detailed drawings of pipe anchors shall be submitted for approval before Installation.

PH-02-03-08 **WATER METER**

Line size water meter of turbine type, equipped with instantaneous flow dial, and totalized read-out window. Water meter shall be imported but make and quality shall be approved by the Engineer. The water meter shall be installed in an underground concrete chamber suitably plastered and water proofed. The top slab of the chamber shall be provided with a water tight heavy-duty cast iron cover. Both the chamber and the C.I. Cover shall be suitable sized to provide easy removal of the water meter for maintenance.

PH-02-03-09 **VALVE CHAMBER**

Shall be constructed in accordance with the clearance for valves and the operations, as instructed by the Engineer In charge. It shall include 450mm dia (18") C.I. manhole frame and cover medium duty single seal. Chamber shall be constructed of 1:2:4 R.C.C. convenient for operation and maintenance of the valves, installed in the valve chamber. 3/4" (20mm) thick cement plaster shall be provided at the internal and external surface of the valve chamber. Bituminous paint shall be provided in two coats outside the valve chamber. PVC pipe sleeves shall be provided for pipe connections.

PH-02-03-10 **THERMAL INSULATION (for Metal Pipes)**

All hot water supply and return piping in false ceiling shafts and exposed shall be insulated as specified herein. Prior to insulation the pipes shall be thoroughly

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cleaned of all rust, scales and other contaminants by wire-brushing, sand blasting etc. and by using aromatic solvents to remove oil grease etc. Subsequent to the cleaning operation the pipe shall be coated two coats of approved, temperature resistant, anti-corrosion paint. Insulation shall be applied to the painted surface only after the hydraulic testing as specified under TESTING.

**Table PH -03 -16: Insulation Thickness**

<b>Nominal Pipe Dia. (mm)</b>	<b>Insulation Thickness (mm)</b>
15	40
20	40
25	40
32	40
40	40
50	50
62	50
100	50

Installation shall consist of performed sections of long fine fibre glass, bonded with a temperature resistant binder, damage resistant, light in weight easy to handle, cut and fit with the product complying with the requirements of BS 3958: Part-4, 1968. The density of the fibreglass shall be between 5 to 7 lbs./ft.<sup>3</sup> and a thermal conductivity of 0.24 Btu inch/hr. ft. °F at 100°F.

The insulation shall be rot-proof, odourless, non-hygroscopic, and shall not sustain vermin. The fibreglass, insulation shall be covered with a layer of bituminised Kraft paper and finally jacketed with a layer of 15oz canvas. Two coats of moisture proof paint shall be applied to the canvas. The insulation, covering and jacket shall be suitably fixed and an approved temperature resistant adhesive shall be used. The circumferential and longitudinal joints for the Kraft paper covering and canvas jacket shall be lapped at least 40mm. Further reinforcement shall be provided by the use of 20mm wide soft aluminium bands, generally spaced at 450mm, and on either side of elbows, tees, valves and other piping specialities. All but joints shall be sealed with self-adhesive type of approved quality.

All supply and return hot water pipe line embedded in floors and walls shall be provided with 10mm thick foam rubber insulation in preformed sections as manufactured by AEROFLEX.

All valves, fittings and other specialities shall be insulated with plain glass blanket of thickness equal to the adjoining pipe insulation thickness, and shall be covered by Kraft paper and canvas jacketing specified earlier. Two coats of moisture proof paint shall also be applied. The adjoining insulation near these fittings shall be metered and trimmed into suitable sections to tailor fit closely around the valves, flanges and fittings. All trimmed sections shall be secured by wrapping of approved type of self-adhesive tape to form a complete waterproof seal. All work shall be done in a neat workman like manner, and should reflect recommended practice.

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**PH-02-03-11 FOUNTAIN EQUIPMENT, PIPING AND ACCESSORIES**

The Contractor shall provide complete Fountain Unit with Pump. The pump shall be as mentioned in the approved manufacturer / supplier list. The Fountain unit shall be of Imperial Bronzelite complete with nozzle and piping. the unit shall be made of materials which under water, assure a safe and trouble free service over years. This will include installation of fountain nozzle in the fountain pool and pumps as shown on drawings and shall include wiring, which will be taken from nearby electric point provided by others.

**PH-02-03-11 INSTALLATION OF PIPING, VALVES AND FITTINGS**

a) **General**

Pipes shall be cut accurately to measurements established at the job site and worked into place without springing or forcing, properly clearing all Windows, doors and other openings. Excessive cutting or other weakening of the building structure to facilitate piping insulation will not be permitted without written approval. Shop drawings by Contractor shall show locations of all supports, the load imposed on each fastening or anchor, typical details for special anchorage's, and details for special anchorage's for supports attached to metal roof decking, for suspended piping, valves, tank, pumps, converters and other mechanical equipment. Supports shall be attached to metal decking. Where supports are required between structural framing members, suitable intermediate metal framing shall be provided and detailed. Pipe shall have burrs removed by reaming and shall be installed to permit free expansion and contraction without damage to joints and hangers. Changes in direction shall be made with fittings, except that bending of pipe 4 inches (100mm) and smaller will be permitted provided a pipe bender is used and wide-sweep bends are formed. The centre line radius of bends shall not be less than 6 diameters of the pipe. Bent pipe showing kinks, wrinkles, flattening or other malformations will not be accepted. All piping shall be installed with sufficient pitch to ensure adequate drainage and venting. Piping connections to equipment shall be provided with Bends or flanges. Open ends of pipelines or equipment shall be properly capped or plugged during installation to keep dirt and other foreign matter out of the system.

All horizontal runs of piping, except where concealed in partitions, shall be kept as high up as possible and close to walls. Consult with other trades so that grouped lines will not interfere with each other. Where plans call for offsets, it shall be kept close to underside of beams and slabs, and run alongside of beams, girders of patron.

The arrangement, positions and connections of pipes, fixtures, drains, valves, etc., as shown on the drawings shall be taken as a close approximation and while they shall be followed as closely as possible the right is reserved by the Engineer to change the location etc., to accommodate any conditions which may arise during the progress of work prior to installation without additional compensation to this Contractor for such change. The responsibility for accurately laying out the work and co-ordinating his installation with other contractors rests with this Contractor.

Should it be found that any of his work is laid out so that interference will occur, he shall so report that to the Engineer.

All of the pipes shall be concealed in walls, slabs unless otherwise shown on drawings or director by the Engineer.

Special precaution shall be taken in the installation of piping concealed underground or in the building construction, to see that the piping is properly installed. Should it be necessary



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to correct piping so installed, this Contractor shall be held liable for any injury caused to other work in the correction of his piping.

All screwed pipes throughout the job shall be reamed smooth before being installed.

Pipe shall not be split, bent, flattened nor otherwise injured either before or during the installation.

Fixture connections, shown to be installed concealed in building construction, shall in general, be carried concealed to points above floor (near fixtures) where they shall break-out and rise exposed to fixture, all as required or approved.

Reducing fittings, unless otherwise approved in special cases, shall be used in making reduction in size of pipe. Bushings will not be allowed unless specifically approved.

Exterior piping shall not be laid in water or when trench or weather conditions are unsuitable for the work, except by permission of the Engineer.

Fittings at bends or tees in buried water pipe lines shall be wedged against concrete thrust block poured between the vertical face of the trench and the fittings, to prevent the fittings from being blow off the lines when under pressure. The size of the blocks shall be based on the working pressure plus 3 bars, the pipe size and the bearing capacity of the soil, all as recommended in the Journal of the American Water Works Association.

Where chrome plated piping is installed, this Contractor shall cut and thread his pipe so that no un-plated pipe threads are visible when the work is complete.

Friction type wrenches and vices shall be used on all copper tubing and brass piping. Any pipes showing tools marks will be ordered to be removed and replaced with new materials, without additional cost.

Bends and flanges shall be provided at suitable intervals to enable easy assembly and disassembly of the pipes. All piping installation shall allow means of easy disassembly for cleaning and maintenance.

**b) PIPE SUPPORTS**

**General**

Pipe hangers, brackets, saddles, inserts, clamps and pipe rolls including rods, bolts, turn buckles, bases and protection shields shall conform to standard recommended engineering practice. Design generally accepted as exemplifying good engineering practice, using stock or production parts shall be utilised wherever possible. Chain, wire, strap or other make shift devices will not be permitted as hangers or supports. Pipe hangers shall be capable of supporting the pipe in all conditions of operations. Hangers shall be supported from beams, clamps, concrete inserts Phillips concrete fasteners, and powder actuated drive pins. Concrete inserts when used shall be installed in the exact location prior to the pouring of the concrete.

**c) Suspended Horizontal Piping**

Shall be supported by adjustable hangers or supports, which shall provide a means of vertical adjustment after erection. Unless otherwise indicated on drawings maximum spacing between pipe supports for straight runs of pipe shall be in accordance with recommended spacing shown in the table given below:

**Table PH-02-17:Maximum spacing between pipe supports**

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<b>Nominal Pipe Size</b>	in		0.5	0.75	1	1.5	2	2.5	3	4	5	6	8	10
	mm.		13	20	25	40	50	65	75	100	125	150	200	250
<b>Max. Span</b>	ft		5	6	7	9	10	11	12	14	16	17	19	22
	M		1.5	1.8	2.1	2.7	3	3.3	3.6	4.2	4.8	5.1	5.2	6.7
<b>M.S. Rod size</b>	Dia. mm		10	10	10	10	10	13	13	16	16	19	22	22

**Table PH-03 -18: CLAMP SPACES FOR PPR PIPES (PN20)**

Diameter	Clamp spacing distances according to temperature, cm						
	20° C	30° C	40° C	50° C	60° C	70° C	80° C
mm							
20	120	115	109	105	104	100	95
25	140	130	125	121	118	112	108
32	160	158	154	150	145	140	135
40	185	175	168	164	160	155	150
50	200	178	185	175	170	165	155
63	210	205	195	187	180	175	165
75	230	225	215	195	182	180	170

Pipe hangers and supports shall be spaced not over 5 feet (1.5m) apart at heavy fittings and valves. A hanger shall be installed not over 1 foot (0.3m) from each change in direction of piping.

**PH-02-03-12 Vertical Piping**

shall be guided or supported in the centre of each riser but not over 15 ft. (4.5m) on centres and shall be supported at the base of the riser on a base elbow or tee with a pipe stand only where required.

**PH-02-03-13 Piping in Trenches**

Pipes shall rest on suitable wall or floor supports with rollers.

**PH-02-03-14 Pipe sleeves**

Pipes passing through concrete or masonry walls or concrete floors or roofs shall be provided with pipe sleeves fitted into place at the time of construction or afterwards if necessary. Each sleeve shall extend through its respective wall, floor or roof and shall be out flush with each surface. Sleeves shall be of such size as to provide a minimum of ¼ inch (6mm) all around clearance between bare pipe and sleeve, or between jacket over insulation and sleeve. Sleeves in non-bearing wall walls shall be steel or cast iron pipe. Sleeves in non-bearing walls, floors, or ceilings may be steel pipe, cast iron pipe or GI sheet metal 14 gauge 0.08 inch (3.04mm) with lock type longitudinal seam. Sleeves in bearing walls shall be steel or cast iron pipe. Sleeves in exterior walls and pits shall be of steel and shall have anchor flanges with the space between the pipe and the sleeve caulked watertight.

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**PH-02-03-15 EXPANSION JOINT & EXPANSION LOOP**

The Contractor shall provide and install where required the expansion joints of the type specified herein.

Expansion joint shall be of the Packless Bellows type, with stainless steel bellows and carbon steel end connections shall be 150 SWP flanged.

Expansion joint shall be suitable for Hot Water Service, with in internal design pressure of 3 atm. gauge and an internal test pressure of 5 atm. gauge. Maximum operating temperature shall be 82°C, minimum temperature 7°C and installation temperature 32°C. No expansion joint shall be worked out for an axial compression of 25mm/30 meters without lateral deflection or angular rotation. Expansion joints shall be supplied with internal sleeve or liner to reduce pressure drop through the assembly.

The expansion joint shall be single GENFLEX BELLOWS expansion JOINT as manufactured by VOKES Limited U.K. or approved equivalent.

The Contractor shall supply all mating flanges required for connection of this expansion joint to the piping. Engineer shall approve the shop drawing showing the position of expansion joints before start of work.

**PH-02-03-14 BENDING AND FORMING**

Pipe may be bent by any hot or cold method permissible by radii and material characteristics of the pipe being bent. It may be bent to any radius, which will result in a bent surface, which is free of cracks and buckles. Generally bends should be made to a radius, measured to the centre line of the pipe, at least equal to five times the nominal diameter.

**PH-02-03-13 UNDERGROUND PIPING**

Piping specified to be laid, directly underground or below floors, shall be laid in an excavated trench with a minimum of 450mm of soil cover. The trench bottom shall be smooth and of uniform grade with either undisturbed ground, or a layer of selected and compacted backfill so that no settlement shall be expected. Pipe must bear on this material through its entire length. Where rock is encountered in trench, it shall be removed to a point at least 75mm below the grade line of the trench and the trench shall be backfilled to grade with sand tamped in place. If soft material of poor bearing qualities is found at the bottom of the trench, stabilization shall be achieved by over excavating at least two pipe diameters and bringing up to grade with fine grade or crushed stone or a concrete foundation. Such concrete foundation shall be bedded with sand tampered in place so as to provide a uniform bearing for the pipe between joints.

Care shall be exercised in backfilling trenches. Loose earth free of rocks, broken concrete, broken chips and other rubble shall be placed in the trench in 150mm layers and tamped in place. Care shall be taken during compaction and back filling under and beside the pipe, that the pipe is properly supported. Proper alignment shall be maintained.

**PH-02-03-15 EXCAVATION & BACKFILLING FOR UNDERGROUND PIPE LAYING**

As specified in related section.

**PH- 02-03-16 PROTECTIVE PAINTING**

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Underground piping shall be painted two coats of black asphalt paint or two coats of bitumen wrapped with approved polythene anticorrosion tape, if shown in the drawings / BOQ.

**PH-02-03-17 FLUSHING, TESTING AND STERILIZATION**

**PH-02-03-18 Cold Water System**

When the installations are complete they should be slowly and carefully charged with water, allowing all air to escape thus avoiding shock or water hammer. The systems should be inspected under working conditions of pressure and flow and when all draw-off taps are closed, should be absolutely watertight. Each draw-off tap should be opened and tested for rate of flow. Pressure testing of internal work should be tested as described below:-

The mains should be tested in sections as the work proceeds and joints should be left exposed for inspection during testing. After completion of each section, the main should be carefully and slowly changed with water so that all air is expelled from the main, allowed to stand full of water for 1-2 days if possible and then tested under pressure. The test pressure should be maximum working pressure plus 50% or 90 psi whichever is greater. The pressure should be applied by means of a manually operated test pump or, in case of long mains or mains of large diameter, by a power driven test pump provided that the pump is not left unattended. Precaution must always be taken to see that the test pressure is not exceeded. Pressure gauges must be accurate and if necessary should be recalibrated before the test. After the pump has been stopped, the test pressure should be maintained as long as is necessary to inspect the whole of the pipe network under test and in any event not less than half hour. Open ends of main should be temporarily closed for testing under moderate pressure by fitting watertight expanding plugs. The end of the main and any test plug must be well secured to resist the end thrust of the water pressure in the main, i.e. maximum test pressure x cross sectional area of pipe. If the section of main terminates with a sluice valve, the wedge of the valve should never be used to retain the water because this might lead to permanent distortion of the working parts of the valve. Instead, the valve should be fitted with an open position whilst testing. End support should be provided as explained previously.

In such cases it may be necessary to isolate items of equipment from the pressure test if they are not capable of withstanding the test pressure. Where these items are removed, blanking flanges or plugs must be used or a make-up piece of pipe work installed temporarily.

All piping, fittings and appliances should be inspected and checked for satisfactory support and protection from physical damage, corrosion and frost. Because of the possibility of damage in transit, it is always advisable to retest cisterns, tanks and cylinders for water tightness on arrival at site and before fixing.

**PH-02-03-19 Hot Water System**

Hot water system should be thoroughly flushed out and then tested in the same manner as described for cold water systems. Where thermal insulation is used, the hydraulic test should be made before the insulation work is completed and whilst all joints are exposed. Where a pressure test is employed boiler and calorific relief valves should be removed and these valves should be tested later. The test pressure should be one and half times the normal working pressure and this should be maintained for thirty minutes after making good any leaks.

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It may be necessary to carry out the hydraulic pressure test on sections of pipe network prior to completion of the whole installation where these are fixed in ducts, chases, trenches, etc., and are concealed from view. If rectification of faculty materials or workmanship on such sections is likely to involve disturbance to finished structural features, the test pressure should be twice the normal working pressure.

**PH-02-03-20 Sterilisation of water systems**

The whole of the system should be sterilised to eliminate possible traces of bacteria.

The plumbing contractor should carry out the sterilising process in accordance with the following:

After cleaning the cistern of all debris, the cistern and pipe network should be filled with water and the whole thoroughly flushed out. The system should then be filled with water a second time, but as the cistern is filling a sterilising chemical containing chlorine should be added to ensure thorough mixing of the chemical and water. The dose should be such as to give 50 part of chlorine to one million parts of water (50 ppm). If ordinary bleaching powder is employed the proportion used should be 150g of powder to 1000 litres of water, the powder first being mixed with water to a creamy consistency before being added. Proprietary brands of sterilising chemicals should be added in the proportions as instructed by the manufacturers.

After filling the system, the incoming water supply should be shut off and each tap on the distributing pipes opened successively, starting with that nearest the cistern. As the water, which issues from each tap begin to smell of chlorine, the tap should be closed. The cistern should then be filled again with water to which has been added the correct dose of chemical.

The whole system should then be allowed to stand charged with treated water for a period of at-least 3 hours, after which a test should be made by smell for residual chlorine. If none is found, the sterilisation should be repeated.

Before any water is used for domestic purposes, the whole system must be emptied and thoroughly flushed out with clean water.

**PH-02-03-21 WATER CONNECTIONS**

The Contractor shall be responsible for obtaining necessary permits, licenses etc., from the concerned authorities for the Water connections. He shall give notice to local authority of intention to connect to the main water line and forming connection should be carried out by permission from and under the supervision of the authorised representative of the relevant authorities.

**PH-02-03-22 MEASUREMENT AND PAYMENT**

**a. Pipes**

Measurement for pipes shall be in running feet and the work to be done shall include providing and fixing of pipe, pipe fittings, jointing hangers, clamps and brackets, sleeves, cutting and making it good, applying protection painting, coating, cleaving, testing and disinfecting etc., and the measurement will be for the full work specified herein.

Payment will be made for the actual quantity installed at the unit rate per running meter of pipe given in the Bill of Quantities. The amount bid shall be the full payment for completion of the work in all respects as specified herein, including Testing and Commissioning.

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The cost of fitting specials for pipes less than 6" dia shall not be paid separately but are deemed to be included in the measurement of pipe. However the specials for sizes of 6" dia or more will be counted and paid separately under the relevant item of bill of items.

**b. Valves, Strainers and Piping Specialities**

Measurement for Valves, Strainers Pressure Reducing Valves, Flexible Connector, Globe Valves, Automatic Air Vents, Expansion Joints, Anchors, Water Meter, etc., shall be made as per actual number provided and installed and shall be for the complete work specified herein or as shown on drawings, including Testing and Commissioning. Payment for Valves, Strainers, Pressure Reducing Valves, Flexible Connector, Globe Valves, Automatic Air Vents, Expansion Joint, Water Meter etc., shall be made for the actual quantity installed at the unit rate given in the Bill of Quantities, which shall be deemed to be full compensation for all works under the Contract.

**c. Chambers**

Chambers of all sizes mentioned in the bill if items shall be constructed as per drawings to be prepared by the designer. The measurement of excavation, backfill, concrete of all types, steel, plaster, masonry work and cover with frame shall be measured and paid as per relevant item under civil work of these specifications.

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PH-02-04-00     **SANITARY , STORM DRAINAGE & SEWERAGE PIPING WORKS**

a) **SCOPE OF WORK**

The work to be done under this section of the specifications consists of:

- 1 Providing all material and labour for proper installation of pipes, pipes fittings including jointing, clamping, cleaning, painting etc., both above ground and under-ground as shown on the drawings or as specified herein.
- 2 Providing all material and labour, equipment, appliances etc. for proper installation of drainage and sewerage specialities as shown on drawings or as specified herein.

b) **PIPE AND FITTINGS**

**1. SOIL, WASTE AND VENT SYSTEM (u-PVC)**

U-PVC soil, waste and vent pipe and fittings shall conform to ISO 3633:1991. Unplasticized polyvinyl chloride PVC-U pipes and fittings, with nominal outside diameters of 16mm to 400mm, intended for domestic installations inside buildings for:

- a. Soil and Waste discharge pipe lines (including ventilation of these pipes) and
- b. Internal Rainwater pipes

There are two types of pipes and fittings (Type-A and Type-B) for such discharge systems:

- a. Type-A, which shall be used only for primary and secondary ventilation pipe work and internal rainwater applications;
- b. Type-B, which shall be used for soil and waste discharge systems and may also is used for any type-A application.

**2. MATERIALS**

The material shall consist substantially of polyvinyl chloride PVC-U to which may be added only those additives that are needed to facilitate the manufacture of pipes and fittings having good mechanical strength and opacity.

Pipes and fittings shall be sufficiently stabilized against thermal ageing and ultraviolet light.

**3. GEOMETRICAL CHARACTERISTICS**

Nominal outside diameters and wall thicknesses are classified into two size ranges: a primary size range (see table 1 and table 2) and a secondary size range (see table 3 and 4). If dimensions other than those given for the primary size range are necessary, they shall be selected from the secondary size range.

- i) Primary size range

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a) Nominal outside diameter. Dimensions are in millimeters

**Table-PH-04- a :Nominal outside diameter (mm)**

40	50	75	90	110	125	160
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b) Wall thickness. Dimensions are in millimeters

**Table- PH-04 b :Wall thickness**

Nominal outside diameters (mm)	Minimum wall thickness	
	Type-A	Type-B
40	1.8	3.2
50	1.8	3.2
75	1.8	3.2
90	1.9	3.2
110	2.2	3.2
125	2.5	3.2
160	3.2	4

ii) Secondary size range

a) Nominal outside diameter. Dimensions are in millimeters

**Table - PH-04 c : Nominal outside diameter (mm)**

16	20	25	32	63	200	250	315	400
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b) Wall thickness. Dimensions are in millimeters

**Table- PH-04 d : Wall thickness**

Nominal outside diameters (mm)	Minimum wall thickness	
	Type-A	Type-B
16	-	1.8
20	-	2.3
25	-	3.2
32	1.8	3.2
63	1.8	3.2
200	3.9	4.9



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250	4.9	6.2
315	6.2	7.7
400	7.8	9.8

**C) LAYING AND JOINTING PROCEDURE**

**a) For rubber ring system**

Clean the outside of the pipe's spigot end and the inside of the sealing groove of the fitting. Apply the lubricant uniformly to the spigot end, sealing ring and pass the spigot end into the socket containing sealing ring until fully home. Mark the position of the socket edge with the pencil or felt-tip pen on the pipe, then withdraws the pipe from the socket by approx. 10 mm (towards thermal expansion gap).

**b) For Solvent system**

Clean the outside of the pipe end and the inside of the fitting. Apply the lubricant uniformly to the outside of the pipe, inside of the fitting and pass the pipe into the fitting until fully home.

**d) SPACING OF PIPE CLAMPS**

With horizontal runs, the pipe clamps should be spaced at intervals of no more than ten times the outside diameter of the pipes, vertical lines are spaced at intervals of one meter to a maximum of two meters according to pipe diameter.

**e) EXTERNAL SOIL AND WASTE LINES**

External soil & waste lines unless otherwise shown on plans, shall be Reinforced Cement Concrete pipes, of manufacturer approved by Engineer as per BSS 5911 class 'C' for pipes up to 9" dia and ASTM C-76-88 class-II or class IV (as specified) wall "B" for pipes 12" dia and above.

**02-04 ( B ) REINFORCED CONCRETE PIPES**

**a. Classes of Pipe**

The reinforced cement concrete pipes to be furnished and installed shall be of the strength Class II or as specified otherwise in the Drawings.

Following technical criteria shall be adhered to:

Class of Pipe : Class-II Class-IV

Concrete Cylinder Strength : 4000 psi 5000 psi

The design requirements for these classes of reinforced cement concrete pipes shall be as described in ASTM Designation C-76, Table 1 to 5 for the respective strength classes. Unless otherwise called for in other parts of these Technical Specifications or as ordered, all reinforced cement concrete pipes shall comply with the Wall-B design requirements as set forth in said Table 1 to 5 of ASTM Designation C-76-15 or latest revision.

For pipes smaller than 12 inches dia BSS 5911 shall be strictly followed:

**b. Basis of Acceptance**

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Acceptance of reinforced cement concrete pipes will be on the basis of three edge bearing and material tests as per ASTM Designation C-76-15 or latest revision and inspection of manufactured pipes for defects and imperfections. The Contractor shall bear the cost of such tests and pay fees etc., including the carriage of such samples and all other expenses contingent to tests.

**c. Pipe Dimensions**

The internal diameters and wall thicknesses of reinforced concrete pipes under this contract shall be as set forth in ASTM Designation C-76-15 or latest revision in Tables 1 to 5 for "Wall-B" pipes as required and shown on the Drawings.

For Class II Pipes, the Wall Thickness for various dia. pipes is as under:

**Table PH-02-4 (a): Wall Thickness for various dia. pipes**

1	12 inch dia. pipe	2.00 inch
2	15 inch dia. pipe	2.25 inch
3	18 inch dia. pipe	2.50 inch
4	21 inch dia. pipe	2.75 inch
5	24 inch dia. pipe	3.00 inch
6	27 inch dia. pipe	3.25 inch
7	30 inch dia. pipe	3.50 inch

The lengths of reinforced concrete pipes shall be as required to provide the designated laying length plus any overlap needed for the pipe joint. Pipe shall be of standard length of 8 ft. unless otherwise approved in writing by the Engineer-in-Charge. Only one laying length shall be permitted for each size of reinforced concrete pipe and pipes not of the approved uniform laying length shall not be used in the work.

For 9 inch dia. RCC pipes following data in addition to ASTM-76 shall be applicable:

**Table PH-02-4 (b) :RCC pipes following data in addition to ASTM-76 shall be applicable:**

1.	Wall thickness	1 inch
2.	Reinforcement square inches per linear foot of pipe wall	0.05
3.	Concrete strength	4000 Psi (Cylinder Test)
4.	Inside diameter at the mouth of socket	12½ inch
5.	Depth of socket	2¼inch
6.	Longitudinal Steel	As stated below

"Each layer of circumferential reinforcement shall be assembled into a rigid case supported by 4 Nos. longitudinal bar of quarter inch diameter".

The strength test requirements in pounds per linear foot of pipe under the three-edge-bearing method shall be either the D-Load (test load expressed in pounds per linear foot per foot of diameter) to produce 0.01 in crack, or D-loads to produce the 0.01 in crack and the ultimate load as specified below, multiplied by the internal diameter of the pipe in ft.

D-Load to produce a 0.01 in crack = 1000 pounds

D-Load to produce the ultimate load = 1500 pounds

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Lift holes in the walls of reinforced cement concrete pipes will not be permitted for the purpose of handling and laying. Other approved lifting methods shall be employed.

**d. Certified Drawings and Data Sheets**

The Contractor shall submit in triplicate, for approval by the Engineer-in-Charge certified drawings and data sheets as required to provide complete information on all concrete sewer pipes, dimensions, type and dimensions of pipe ends, joint details proposed concrete design mix for each different strength class of reinforced pipe and any other information needed to demonstrate full compliance with these specifications.

No concrete sewer pipe shall be delivered to the work site until the Engineer-in-Charge has formally approved the certified drawings and data sheets and until all test requirements called for in the respective ASTM Standard Specifications C-76 or latest revision have been met.

**e. Joints for Concrete Pipe Sewers**

The joints for concrete pipes shall be as specified and could be as follows:-

**i. Rubber Gaskets Joints**

Rubber gasket joints shall be used for either tongue and groove or bell and spigot pipes.

Rubber gasket joints shall be made using specially designed rubber gaskets, made to fit the applicable tongue and groove or bell and spigot pipes and adequately tested under operating conditions. Special care must be taken in the selection and handling of the concrete pipes for use with rubber gasket joints, to ensure that pipe ends shall be smooth and concentric with tolerances which closely conform to the requirements of the manufacturer of the rubber gaskets. The tongue or spigot end of each pipe shall be specially designed to perform groove or offsets to fit the manufacturer's rubber gaskets design.

The rubber gasket joints shall conform to all applicable requirements of the latest revision of ASTM Designation C443, entitled "Joints for Circular Concrete Sewer and Culvert pipe, using Flexible Watertight Rubber Type Gaskets" except that the test pressure need not exceed 10 feet of head at which the complete sewers shall meet the infiltration or ex-filtration limits set forth hereinafter.

The groove end of tongue and groove pipes shall have at least one line of wire reinforcement of 8 gauge size placed in the centre of the groove.

The rubber gasket shall be installed on the pipe in accordance with the instructions of the gasket manufacturer. In general the gaskets shall be pre-assembled at the pipe manufacturing plant. The pipes shall be handled with special care at all times to prevent damage to the pipe ends. A lubricant shall be used for jointing the pipes as recommended by the rubber gasket manufacturer. Care shall be taken to avoid contamination of the gasket and lubricated surfaces with earth or other undesirable material during installation.

For either tongue and groove or bell and spigot pipes, mechanical means shall be used to pull the pipe home for all sizes of 12 inches or larger diameter in accordance with the recommendations of the rubber gasket manufacturer. Pipes of 9 inches diameter may be coupled manually using a cross member and bar. Under no circumstances will bars alone be used nor shall any motor driven equipment be used to force the pipe home. **ii. Cement Mortar Joints**

Cement mortar may be used where called for. This type of joint will normally be permitted only for sewers laid above the water table. Bell and spigot joints with cement mortar shall be made as follows:

The first pipe shall be in place to the established line and grade. The interior surface of the bell (socket) shall be thoroughly cleaned with a wet brush, and a sufficient layer of stiff mortar shall be applied to the lower portion of the bell. The spigot of the second pipe shall be thoroughly cleaned with a wet brush, and uniformly

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fitted into the bell so that the interiors of the two pipes are closely fitted and accurately aligned. The remaining annular space in the bell shall then be solidly filled with mortar in sufficient amount to form a head around the outside of the spigot. The interior surface of the pipe at the joint shall be cleaned of all surplus mortar and brushed to a smooth finish. The Contractor may at his own option, use jute firmly caulked into place for holding the bell and spigot joint in proper position.

Tongue & groove joints with cement mortar shall be made as follows:

The first pipe (downstream) shall be in place to the established line and grade with groove upstream. The groove of the first pipe shall be thoroughly cleaned with a wet brush and a layer of soft mortar shall be applied to the groove in the entire lower half of the pipe. The tongue end of the second pipe shall be thoroughly cleaned with a wet brush and, while it is in the horizontal position, a layer of soft mortar shall be applied to the entire upper half of the pipe. The tongue end of the second pipe shall then be inserted into the groove of first pipe until mortar is squeezed out on the exterior surface. The Contractor will use hamper jute gasket soaked in cement slurry, for holding the two pipes in proper position. The joints shall then be completely and solidly filled with stiff mortar on the outside of the pipe. The Interior surface of the pipe at the Joint shall be cleaned of all surplus mortar and brushed to a smooth finish. The outside mortar joint shall be rubbed smooth with a moist rag and not trowelled.

The Portland cement mortar used for making joints shall consist of one part cement and one part clean sand thoroughly mixed dry with sufficient water slowly added to give proper consistency. The mortar shall be promptly used after it is made. The completed joints shall be immediately protected on the outside with an initial covering of moist earth canvas or burlap.

**f. House Connections**

House Connections shall be made through manholes as indicated in the drawing or as directed by the Engineer-in-Charge.

House connection shall be provided individually for each plot by means of a 6 inch dia. RCC sewer pipe and a dead end, laid at an average depth of 2.0 feet below NSL level and in such a manner that other services such as water supply, telephone and gas lines are not disturbed or interfered. The work of laying the sewer pipe shall conform to the specifications laid down in the relevant section of this specifications or as directed by the Engineer-in-Charge.

Tile inlet of each house connection shall be plugged with brick masonry 4½ inches thick in 1:6 cement sand mortar both in the manhole and the pipe in the plot.

**g. Gully Grating**

Gully grating shall be made through manholes as indicated in the drawings or as directed by the Engineer-in-Charge.

Gully grating shall be provided on the road junctions on as mentioned in the drawings by means of a 9 inch dia. RCC sewer pipe connecting the nearest manhole with the chamber of size 1 ft. – 6 inches x 1 ft. – 6 inches. The pipe is laid in such a manner that other services such as water supply and sewerage system are not disturbed or interfered. The work of laying RCC pipe shall conform to the specifications laid down in Sub-section 25.3.3.8. Mild steel grating shall be fixed at the top.

**h. Installation**

**i. Handling of Pipes**

Concrete sewer pipes shall be handled with special care at all times during the manufacture, while transporting to the site of work, and while installing. Each pipe shall be carefully inspected before being laid

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and no cracked, broken or defective pipe shall be used in the work. Chipping of the tongue and groove or bell and spigot pipe ends, which in the Engineer-in-Charge's opinion may cause defective joints, shall be sufficient cause for the rejection of any concrete pipe.

**ii. Excavation and Backfill**

The excavation and backfill for sewer installations shall be as specified in applicable provisions of Section 3 - Earthwork and will be paid for under separate contract items as classified.

**iii. Placing of Bedding**

**a) Brick Ballast Bedding**

The brick ballast shall be clean material of 1 to 1½ inch gauge broken from first class bricks or bats, or from dense over burnt bricks. No under-burnt bricks or bats nor those which have become spongy or porous in the process of burning shall be broken up for brick ballast.

The material shall be evenly spread over the full width of the formation in 4 inches loose layers and compacted with hand or mechanical rammers until the full thickness as shown on the drawings for the particular pipe size has been built up and finished no more than ¼ inch below required level. The Contractor shall note that it is essential that the material at the sides of the pipes is adequately compacted. Before the subsequent placing of pipe surrounding material, pipe joints shall be protected. Protection may take the form of a twist of yarn lightly pressed into the annular joints space or other equal protection approved by the Engineer-in-Charge.

**b) Crushed Stone Bedding**

Crushed stone bedding shall be from an approved source. It shall be obtained from a dark colored igneous rock such as basalt etc. It shall be strong durable, hard and impervious, having crystalline structure. The broken stone shall have sharp edges and clear fractured faces, shall be free from thin elongated or laminated pieces.

The crushed stone shall have a maximum gauge of 1½ inch and shall be graded down to¾ inch when passing through a screen made of ¼ inch diameter bars spaced ¾ inch center to center, it shall yield not more than ten percent (10%) by volume of fine materials.

**a. Laying of Sewers**

Neither any sewer pipe nor the bedding shall be laid or placed till the alignment of the sewer and its levels nor have gradients been carefully checked and tested with the trench excavation and found corrected.

Each length of sewer pipe shall be checked for cracks and defects before placing in the line. Defects which in the opinion of the Engineer-in-Charge indicate imperfect placing shall make the pipe liable to rejection. Each pipe shall be placed carefully to line and grade and in close contact with adjoining pipe. These specifications require rejection of the work, if the sewer invert varies as much ½ inch from the proper elevation. As shown on Drawings, the bottom of the trench must be shaped to fit the pipe barrel, with holes left for the bells. If excavation has been carried below the correct grade, refilling must be done with satisfactory materials as approved by the Engineer-in-Charge at no extra cost. The concrete pipe joints shall be of the type specified above and shall be made in accordance with the aforesaid specifications.

When laying is not in progress, the already laid open pipe shall be closed with a tapered wooden plug to keep out foreign matter.

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**I. TESTING OF SEWER LINES**

**a) General**

All sewer built shall be tested for infiltration or ex-filtration as specified below. The tests shall be made at times selected or approved by the Engineer-in-Charge. Sections of the completed sewer shall be isolated and measurements of the infiltration or ex-filtration shall be made by approved method. The contractor shall furnish all labor, material and equipment required for making the tests with no extra compensation over and above the agreed contract prices for the laying of sewer lines.

**b) Infiltration Test**

The sewers which are constructed with the ground water level above the invert level of the pipe shall be tested for infiltration after the sewers have been installed and backfilling has been substantially completed. The tests and measurement shall be performed by the Contractor in the presence of the Engineer-in-Charge as follows in accordance with ASTM C 969-02.

Conduct testing from manhole to manhole or between more than two manholes. The length of main tested shall not exceed 700 ft in length.

Following steps shall be taken to check infiltration:

- i. Stop all dewatering operation and allow the groundwater to return to its normal level. Infiltration testing shall not be used unless the groundwater level is at least 2 ft above the crown of the pipe for the entire length of the test section.
- ii. Plug all pipe outlets discharging into the upstream manhole.
- iii. Measure the groundwater elevation and determine the average head over the test section.
- iv. Measure infiltration leakage at the outlet of the test section. Because leakage allowances are small, measurements are best made by either filling of a small container of known volume, or by directing flow into a container for a specified time and measuring the content, or by using small weirs.
- v. If the measured rate of leakage is less than or equal to the allowable leakage in accordance with (d) hereafter the section of sewer tested is acceptable.
- vi. If the test section fails, the Contractor can repair the joints as per methods and using materials as approved by the Engineer-in-Charge and in accordance with this practice.
- vii. The allowable leakage limit including manholes is 500 gallon/ inch of internal diameter (mile of sewer) (24 h) when the average head on the test section is 6 ft or less.
- viii. The average head on the test section is the head above the crown of the pipe at the upstream manhole plus the head above the crown of the pipe at the downstream manhole divided by two.
- ix. When the average groundwater head on the test section is greater than 6 ft. the allowable leakage shall be increased in proportion to the ratio of the square root of the average groundwater head to the square root of the base head of 6 ft.

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x. Manholes shall be tested separately and independently or with the pipeline with the allowance of 0.1 gallon (ft of diameter) (ft of head) (h). If building or house leads are connected to the main line being tested, allowance shall be made for permissible leakage in such leads.

**c) Ex-filtration Test**

i. Conduct testing from manhole to manhole or between or between more than two manholes. The length of main lines tested shall not exceed 700 ft.

ii. Determine the groundwater elevation at both ends of the test section. If the ground water level is less than 2 ft above the crown of the pipe measured from the highest elevation of the sewer, the ex-filtration test shall be used.

iii. Plug all pipe outlets discharging into the upstream manhole and the test section outlet. Fill the sewer line with water.

iv. At the upstream manhole the test head shall be established as minimum of 2 ft above the crown of the pipe, or at least 2 ft above existing groundwater, whichever is higher.

v. Allow the pipe to remain saturated for a period long enough to allow water absorption in the pipe, a minimum of 4 h and up-to a maximum of 72 h. After the absorption period, refill the pipe to the required test head.

vi. Measure the leakage loss over a timed test period. The minimum test period shall be 15 min and the maximum shall not exceed 24 h.

vii. If the measured rate of leakage is less than or equal to the allowable leakage in accordance with (d) the section of sewer tested is acceptable.

viii. If the test section fails, the Contractor can repair the joints as per methods and using materials as approved by the Engineer-in-Charge and retested in accordance with this practice. The groundwater elevation shall be re-determined prior to a second test and the test head adjusted, if necessary in accordance with (iv).

ix. For ex-filtration testing the allowable leakage limit including manholes is 500 gal. (In. of internal diameter) mile of sewer (24 h) when the average head on the test section is 3 ft or less.

x. When the average head on the test section is greater than 3 ft. the allowable leakage shall be multiplied by the ratio of the square root of the average test head and the square root of the base head of 3 ft.

xi. Manholes shall be tested separately and independently or with the pipeline with an allowance of 0.1 gal. (ft of diameter) (ft of head) (h).

**d) Allowable Infiltration or Ex-filtration**

The calculated amount of infiltration or ex-filtration over a 24 hour period shall not exceed 500 gallons per inch of pipe diameter per mile of sewer which rate shall be

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applied to the actual sewer size and length tested to determine the allowable infiltration or ex-filtration over the 24 hour period.

If the measured infiltration or ex-filtration exceeds the specified allowable limit, then the Contractor shall locate the points of leakage and make necessary repairs so as to reduce the leakage to less than the permissible maximum stated above.

**e) Cleaning of Sewer Lines**

The Contractor shall clean all the sewer lines at no extra cost with the method approved by the Engineer-in-Charge prior to handing it over to the Employer.

**( C ) DRAINAGE & SEWERAGE SPECIALITIES**

**Manholes**

Shall be constructed as shown on drawings they shall be of brick masonry and shall be complete, including excavation backfill and plastered both surfaces.

Benching shall be constructed in concrete, finished to a smooth even surface true to radius, line and level and shall be kept well watered often day after laying.

M.I. Rungs of 20mm dia of specified size with Bituminous Paint shall be provided in manholes and shall be fixed at 300mm spacing in all manhole having a greater internal depth than 1000mm. Manholes shall be constructed to a height up to finished ground level.

Manhole covers and frames shall be Grey Cast Iron conforming to BS 497: 1967, ALPINE make, Rubber sealed material conforming to BS 1452 Grade 150.

All manhole covers shall be of size 24" dia. heavy duty type ALPINE or approved equivalent make of sizes as specified on drawings and shall be supplied complete with base frame.

**Sewer Connections**

The Contractor shall be responsible for obtaining necessary permits, licenses, etc., from the concerned authorities for the sewerage connections. He shall give notice to local authorities of intention to connect to the public sewer. The work of breaking into the existing public sewer and forming a connection should be carried out by permission from and under the supervision of the authorised representative of the relevant authorities.

The cautious enlargement of a small hole should affect breaking into the sewer, and every precaution should be taken to prevent foreign material from entering the sewer. The express consent of the local authority must be obtained before any temporary obstruction is made to the flow of the public sewer. **Gully Trap Chamber**

shall be constructed of 1:2:4 R.C.C., and shall be provided with au-PVC deep-seal 'P' trap with cast iron frame and cover of 12" dia, weighing 26 lbs. (12 Kgs.) where shown on drawing. Gully Trap chamber shall be made as instructed and approved by the Engineer In charge, prior to its construction.

**Cleanouts**

Cleanouts shall be U-PVC. A sample cleanout shall be submitted for approval to the Engineer.



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**Cleanout for Finished Floor Areas**

Shall be of u-PVC designed to provide an air tight seal

**Valve Chambers**

Shall be constructed in accordance with the clearance for valves and the operations, as instructed by the Engineer In charge it shall include C.I. manhole frame and cover. Chambers shall be constructed of 1:2:4 R.C.C. convenient for operation and maintenance of the valves, installed in the valve chamber. 3/4" (20 mm) thick cement plaster shall be provided at the internal and external surfaces of the valve chamber. Bituminous paint shall be provided in two coats outside the valve chamber. G.I. pipe sleeves shall be provided for pipe connections.

**Floor Drains**

Floor Drains shall be of u-PVC with 5" (125 mm) dia opening. The drain shall be provided with a u-UPVC P-Trap having a minimum water seal of 50mm. The drain grating shall be of stainless steel, Master, Faisal or approved equivalent make.

**Roof Drains**

Roof Drains shall be as shown on drawing of best available locally manufactured. Body shall be of cast iron with threaded outlet that shall screw into a cast iron ferrule. Ferrule shall be caulked into CI Pipe "Bell". Dome shall be of bronze with a large open area to permit un-obstructed flow. The basic drain body shall be installed during the concrete pour, for full structural integration.

**Master Trap**

Master trap shall conform to specifications given above, except that it shall be provided with an RCC master trap of the same diameter on the main pipe line.

**Vent Cowls**

All vent-lines terminating above the building shall be provided with best quality uPVC.

**D) INSTALLATION**

a) Each pipe shall be examined on arrival defective pipes shall not be used. Drains shall be laid in straight lines and gradients between the levels shown, with pipes and fittings. Great care shall be exercised in setting out and determining the levels of the pipes and the Contractor shall provide suitable instruments and set up and maintain all sight rails, and bench marks etc., necessary for the purpose. Cut pipe shall have smooth regular ends at right angles to arise of pipes. Pipe to be cut with an approved cutter.

All drain shall be kept free from earth debris, superfluous cement and other obstructions during laying and until the completion of the contract when they shall be handed over in clean conditions. Pipes shall be laid with the sockets leading uphill and shall rest on solid and even concrete foundation for the full length of the barrel as shown on drawings.

No pipes shall be laid on their collar or on block tiles or other temporary supports.

b) Drainage lines shall be accurately laid and shall be perfectly true to line and gradient from point to point in both vertical and horizontal planes. Every main shall be straight from manhole to manhole and any change in director shall take place inside the manhole by the use of the curved main channels, similar changes in internal diameter in drain shall be made in manhole by the use of tapers or bends.

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- c) Easily accessible clean outs, flush with the floor finish should be provided at each bend and bottom of stacks and at all points shown on drawings. The cleanouts should be made off "WYE" of full size the minimum size should be 75mm dia.
- d) Special fittings required in the installation not generally Contractor matching with the shell thickness specified should be specially cast by manufacturers.

**E) EXCAVATION AND BACKFILL FOR UNDERGROUND PIPE LAYING (RCC)**

Pipes and accessories shall be carefully examined before being laid and defective damaged pipes shall not be used. The pipes shall be brushed clean inside and outside to remove any soil or foreign matter that may have accumulated, including inside of the sockets and outside of spigots, before being lowered into the trench, and shall be kept clean during laying operation by plugging or other approved method.

The bottom of the trench shall be shaped to give substantially uniform circumferential support to the lower fourth of each pipe. Pipe laying shall processed upgrade with the spigot ends of bell and spigot pipe pointing in the direction of flow. Each pipe shall be laid true to line and grade and in such manner as to form close concentric joint with the adjoining pipe. If the width of the trench at the pipe is exceeded than necessary, due to any reason other than under direction from Engineer, the Contractor shall install at no additional cost to the Owner, such concrete cradling pipe encasement or other bedding as may be required to satisfactorily support the added load of the backfill.

Trenches shall be kept free from water until the pipe jointing material has set, and pipe shall not be laid when the condition of the trench or the weather condition is unsuitable for such work. At times when work is not in progress, open ends of pipe and fittings shall be securely and satisfactorily closed so that no trench water, earth, or other substance will enter the pipe and fittings.

As the work progresses, the interior of the sewer shall be cleaned of all dirt and superfluous materials of every description. Where cleaning after laying is difficult because of small pipe size, a suitable swab or drag shall be kept in the pipe and pulled forward past each joint immediately after the jointing has been completed. Where sewers cross above water line the sewer pipe for a distance of 3 meter (10 feet) each side of the crossing shall be of cast iron steel or other acceptable pressure pipe and with no joint closer than 3 feet (900 mm) to the crossing, or shall be fully encased in concrete of min. 15 cm. (6 ") thickness.

Any section of the pipe found to be defective before and after laying, shall be replaced with sound pipe without additional expense to the Owner.

The jointing or pipes with collars shall be done first with spun yarn rope (dipped in hot asphalt composition) fitted in between the ends of pipes and pressed together. The dia of rope shall not exceed 19mm (3/1") or as directed by Engineer.

The collar shall then be brought in the middle of the joint. Wooden wedges shall be placed at two or three places around the pipe so that the collar may have uniform gap all round the pipe for pressing pipes together. At a time five or six pipes shall be jointed together. After putting bitumen soaked hemp rope, suitable jacks and wedges or any other approved method shall be used. The inside of the collar and outside portion of the pipe shall be cleaned with brush and cement mortar of 1:1 proportion shall then be inserted from both ends of the collar. The mortar containing as little quantity of water as possible shall be carefully inserted by hand into the joints and tightly pressed with caulking tool. The mortar shall be finished off on the outside at an angle of 45 degree. The wooden wedges shall be carefully removed and mortar filled in the cavity before finishing. The joints shall be protected from weather and maintained wet for at least ten days and shall not be covered with backfill until the joints have been tested and approval given by the Engineers.

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For jointing of pipes with spigot and socket joints, the first pipe shall be bedded with the socket end upstream. The interior surface of the socket shall be carefully cleaned with a wet brush and its lower portion filled with mortar to such a depth as to bring together the inner surfaces of the abutting pipes flush and even. All further joints shall be made in this manner. The remainder of the socket joint shall be filled in with mortar and well pressed with the help of caulking tool. The mortar shall be finished smooth on the outside at an angle of 85 degree. The joints shall be protected and cured as for collar joints.

**F ) TESTING AND INSPECTION**

- a) The entire drainage and vent system and building sewer shall be subjected to testing after installation under operation conditions.

All the openings in the piping system shall be tightly closed by inserting testing plug so that heavy rubber gasket fits snugly all around the opening. The highest point will be left snugly all around the opening. The highest point will be left open to supply water and may be raised if necessary by temporary jointing develop a minimum head of five (5) meters of water at each section of the system. Water is filled to the point of overflow and any drop in the level of water will be found by inspection. The water level will be checked for no drop for at least 15 to 30 minutes. Higher stacks will be tested in sections, starting from the top section and then connecting top section to next lower section.

- b) A final test of completed drainage and vent system will be conducted by smoke to ensure that connection for water closets are absolutely gas and water tight and that fixture traps are sound.

All the traps will be filled with water and a thick smoke produced by burning oil, waste, tarpaper or similar material in the combustion chamber of a smoke test machine, will be introduced into the entire system. When smoke appears at highest point it will be closed and pressure equivalent to 25mm of water column will be built and maintained.

The drainage pipe and building sewer will also be inspected for slopes, which must conform to the slopes specified. The slopes will be checked with precision angle measuring equivalent like universal protector, plumb and level. Any portion found not laid according to the given slope will be rectified at the Contractor's expenses. The Contractor shall be required to inform the Engineers before any laid pipes are backfilled and approval obtained.

After the pipe is laid, the joints completed between manholes, and the trench practically backfilled leaving the joints exposed for examination, the newly laid piping shall be checked for alignment by flashing a light between manholes. If illuminated interior of the pipe line shows poor alignment, the displaced pipe, or any other defects, shall also be checked for the given slopes, and if found unsatisfactory, shall be repaired at the Contractor's expense.

- c) This Contractor shall furnish & pay for all devices, materials, supplies, labour and power required in connection with all tests. All tests shall be made in the presence of and to the satisfaction of the Engineer, Plumbing Inspector of the City and Public Utility Inspectors having jurisdiction.

- d) This Contractor shall also be responsible for the work of other trades that may be damaged or disturbed by the tests, or the repair or replacement of his work and he shall, without extra charge to the Employer, restore to its original condition, work of the trades so damaged and disturbed, engaging the original contractors to do the work of restoration.

- e) Defects disclosed by the tests shall be repaired, or if required by the Engineer. Defective work shall be replaced with new work without extra charge to the Employer. Test shall be repeated as directed, until all work is proven satisfactory.

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f) This Contractor shall notify the Engineer, Plumbing Inspector and other having jurisdiction at least ten days in advance of making the required tests, so that arrangements may be made for their presence to witness the tests.

G) **MEASUREMENT AND PAYMENT**

a) **Pipes**

i. Measurement for pipe shall be in running feet length and the work to be done shall include providing and fixing of pipe, pipe fittings, sleeves, anchors and supports, jointing, cutting and breaking concrete and then making it good applying protective painting, cleaning, testing and the measurement will be made for full work, specified herein, including Testing and Commissioning.

ii. Payment will be made for the actual quantity installed at the unit rate given in the Bill of Quantities which shall be deemed to be full compensation under the Contract.

b) **Drainage and Sewerage Specialities**

i. Measurement for manholes gully traps, floor drain, Roof drains, Vent Courts, etc., shall be made as per actual number provided and installed and shall be for conform work specified herein or as shown drawings, including Testing and Commissioning.

ii. Payment for Cleanouts, Floor Drains, Roof Drains, Master Trap, Valve Chambers, Vent Courts, etc., shall be for the actual quantity installed at the unit rate given in the Bill of Quantities which shall be deemed to be full compensation under the Contract.

iii. Gully trap of all sizes mentioned in the bill of quantities shall be constructed as per drawings to be prepared by the designer. The measurement of excavation, backfill, concrete of all types, steel, plaster, brick masonry and cover and frame shall be measured and paid under civil work of these specifications.

**PH- 02-05-00 PLUMBING FIXTURES AND ACCESSORIES****a) SCOPE OF WORK**

The work to be done under this section of the specifications consists of providing all material and labour for proper installation of plumbing fixtures of wash basins, water closets, urinals etc. along with all their accessories, water inlet connection, waste outlet connection etc. complete in all respect as specified herein or as shown on the drawings and/or as directed by the Engineer.

**b) MATERIALS AND INSTALLATION****General Requirements**

Materials shall conform to the latest reference standard specifications and other provisions stipulated herein and shall be new and unused prior to procurement of the materials, the Contractor shall be required to prepare and submit to the Engineer for his approval, a complete schedule of materials to be used in the works together with a list of the names and addresses of the materials. The schedule shall include diagrams, drawings and such other technical data as may be required by the Engineer to satisfy him as to the suitability, durability, quality and usefulness of the material to be purchased.

Approval of the schedule shall not be construed as authorising any deviations from the specifications unless the attention of the Engineer has been invited to the specific changes in writing. If the material or equipment offered under this provision is, in the opinion of the Engineer, equal to or better than specified, it will be given consideration.

Plumbing fixtures shall have smooth impervious surfaces, be free from defects and concealed faulting surface. They shall be true to line, angles, curves and colour etc. Normally they shall be of local make and of the quality available, provided they conform to the requirements specified herein.

All taps, cocks, flush tank, hot & cold water mixture fittings shall be of best class as per the specifications of approved manufacturer and as approved by the Engineer, to work without damage or leakage on specified pressure and temperature of potable water system.

When any fixture is provided with an overflow, the waste shall be so arranged that the standing water in the fixture cannot rise in the overflow when the stopper is closed or remain in the overflow when the fixture is empty.

Plumbing fixtures shall be installed in a manner to afford easy access for cleaning. The space between the fixture and the wall shall be closely fitted and pointed so that there is no chance for dirt or vermin to collect.

Floor Traps and P-traps shall conform to ASTM D2665 (PVC) or as per the specifications of approved manufacturer and as approved by the Engineer.

Bath Room accessories (Bath Mixer Shower, Shower Tray, glass shelf etc.) shall be as per approved manufacturer and as approved by the Engineer.

Where practical, all pipes from fixtures shall run to nearest wall.

Where fixture comes in contact with wall and floors, the joint shall be watertight.

Wall hung fixtures shall be rigidly supported by metal supporting members so that no strain is transmitted to the connections. Flush tanks and approved non-corrosive screws or bolts shall secure similar appurtenances.

Fixtures shall be set level and in proper alignment with reference to adjacent walls. No water closet shall be set closer than 400mm from its centre to any sidewall. No urinal shall be set neither closer than 300mm from its centre to any sidewall or partition nor closer than 600mm centre to centre.

The supply lines or fittings for every plumbing fixture shall be so installed as to prevent backflow.

All cutting, making holes etc., and making it good shall be included in the work.

#### b-1) **WASH BASIN**

Wash basin shall be of vitreous China of approved size and colour, best quality. It shall be installed as a complete unit including hot and cold water mixer fitting, 15mm CP Tee stop-cock, as manufactured by Master, Faisal or equivalent as approved, CP brass chain with 32mm rubber plug, CP brass bottle trap, Master or Faisal make for individual wash basin, CP brass strainer, heavy cast iron brackets with bolts, screws etc., PVC flexible water inlet connection pipe, CP brass steel waste outlet and/or waste pipe, joints, jointing and sealing material etc., with all other minor accessories required to complete the job in all respect ICL, or acceptable superior brand.

#### b-2) **COUNTER TOP WASH BASIN**

Shall be of Vitreous China of approved size and colour, best quality. It shall be installed as a complete unit including hot and cold water mixer fitting, 15mm CP Tee stop-cock, as manufactured Master, Faisal or approved equivalent make, CP brass chain with 32mm rubber plug, CP brass bottle trap Master, Faisal or approved equivalent make, for individual wash basin, CP brass strainer, heavy cast iron brackets with bolts, screws etc., PVC flexible water inlet connection pipe, CP brass steel waste outlet and/or waste pipe, joints, jointing and sealing material etc., with all other minor accessories required to complete the job in all respect ICL, or acceptable superior brand.

#### b-3) **WATER CLOSET**

Squatting (Asian) type water closet of vitreous China, of approved colour, best quality as manufactured by approved make. It shall be installed as a complete unit including 15mm CP stop cock plastic water inlet connection pipe, flush tank installed at low level including

interconnecting flush piping, foot-rests, porcelain P trap, joints, jointing and sealing material etc., with all other minor accessories.

Flush tank shall be made of vitreous China as manufactured by approved make for Asian Water Closet.

European type water closet of vitreous China with coupled flushing cistern as manufactured by approved make, shall meet all the requirements specified for Asian type water closet except the following. Flush tank shall be coupled, trap shall be porcelain integral with pan, shall be additionally provided with seat & toilet paper holder. The seat shall be smooth non-combustible non-absorbent materials like Bakelite and of the open front type fixed to the pan with hinges.

European water closet shall be provided with close-coupled vitreous China flush tank similar to approved make.

**b-4) URINAL**

Urinal shall be vitreous China best quality, light colour as manufactured by approved make complete with flushing valve Master, Faisal or approved equivalent make. All flush pipe, spreaders and clips shall be chrome plated. Urinal shall be of wall hung type either with integral water seal trap or with separate CP brass P trap. The complete unit shall be installed including 15mm CP stopcock. CP steel waste pipe, joints, jointing and sealing material etc. with all other minor accessories.

**b-5 ) KITCHEN SINK**

Sink shall be of best quality, stainless steel, Atlas, Master or approved equivalent make, double bowl double drain board; double bowl single drain board; single bowl double drain board, and single bowl single drain board type as indicated on the drawings/BOQ. Also include 40 mm (1½") diameter CP waste outlet with chain and plug, 15mm (1/2") diameter wall mounted mixer fittings with swivel spout and 40mm (1½") CP bottle trap Master, Faisal or approved equivalent make and 40mm (1½") CP brass waste pipe to floor or wall as indicated on the drawings. Cast iron support arms shall be provided.

**b-6 ) ELECTRIC WATER COOLER**

Water cooler local makes best quality as manufactured by approved make or equivalent as per approval of Engineer/Consultant. Water cooler shall be Instantaneous Pressure Type Water Coolers having water storage tank of specified capacity, made of finned copper total immersed evaporator coils for maximum thermal efficiency. Hermetically sealed slow speed compressor of required HP with overload protection for Refrigerant 12 controlled by capillary tube. The water cooler shall have 2 Nos. taps.

**b-7 ) MUSLIM SHOWER**

Muslim Shower shall be local make best quality (with or without double bib as specified in BOQ) from manufacturer approved by the Engineer. It shall consist of C.P. brass / PVC "T" Stop Cock at height of 18" from finished floor level, complete with 1/2" dia flexible stainless steel hose 3 ft long and hand spray, C.P. brass hose hook including the cost of all cutting, binding and making good, complete in all respects.

**b-8 ) SOAP HOLDERS**

Soap holder shall be of Vitreous China / PVC, best quality from manufacturer approved by the Engineer.

**b-9) TOWEL RAILS**

Shall be chromium finish brass / PVC rails of 20mm square, 600mm long with brackets, of best quality from manufacturer approved by the Engineer.

**b-10) TOILET PAPER HOLDER**

Shall be of Chromium finish brass / PVC type, best quality, from manufacturer approved by the Engineer.

**b-11) TAPS AND COCKS**

All the taps and cocks shall be from manufacturer approved by the Engineer, of best quality & shall be of brass, gun metal or other equally suitable corrosion resisting alloy conforming to BS 1010 and shall in addition be chrome plated. The nominal size specified shall be the nominal bore of the seating. The area of the waterway throughout the body shall not be less than the area of a circle of diameter equal to the nominal size of tap/cock. Washers for cold water cocks shall be of specially selected leather, rubber asbestos composition or other equally suitable material.

Washers for hot water-cocks shall be of good quality fibre, rubber-asbestos composition or other equally suitable material. Every tap/cock shall be tested, complete with its component parts, to a hydraulic pressure of at least 20 Kg/Cm<sup>2</sup>. During test it shall neither leak nor sweat.

**b-12) WATER HEATER**

Electric and gas water heater shall be of specified capacity and of storage type with adjustable thermostatic range of 40°C to 80°C. It shall be of approved manufacturer. All controls are to be automatic.

It shall automatically shut off (electric) or come to pilot (gas) when temperature of hot water reaches 80°C and restart when temperature drops below 40°C.

The vessel of water heater shall be constructed of steel with welded joints. The vessel shall be lined with copper on the inside and painted with baked stove enamel on the outside. The annular space between the copper and steel cylinders shall be filled with insulation material of thermal conductivity not more than 0.045 Watts/Sq.m°C. The heater vessel shall be rated for a working pressure of 0.6MPa and test pressure of 1 MPa.

In electric water heater the electric heating elements shall be withdraw-able, mineral insulated, metal clad copper rods. In gas water heater the gas supply shall be controlled by a regulator allowing at least 4 volumes of gas supply including arrangements for a pilot.



The capacity of the heating equipment shall be sufficient to raise the temperature of water from +10°C to + 70 °C in not more than one hour.

Water Heater shall be provided with the following accessories and control:

- a) Thermostat
- b) Pressure Relief Valve
- c) Thermometer
- d) Pressure Gauge
- e) Drain Valve
- f) In electric water heaters Automatic High Temperature Cut-off
- g) In Gas Water Heaters, a Regulator & a Pilot

Water Heaters of capacity as shown on drawings/BOQ shall be supplied and installed where shown on the drawings or as directed by the Engineer.

Gas water heater shall be storage type or instant type as mentioned in the BOQ.

All heaters, after installation, shall be subjected to an operation test to determine the efficient working of the recovery side, thermostat, etc. to the satisfaction of the Engineer. The Engineer, prior to supply and installation shall approve all heaters.

#### **b-13 MIRROR (LOOKINGGLASS)**

One bevelled edge glass mirror of first class quality and make as specified securely fixed on bard board packing required to be fixed on the wall for wash basin shall be at least 6 mm thick and shall be of requisite dimensions.

#### **b-14 BATH TUBS**

These shall be of porcelain enamelled cast iron or fibre glass, ceramic or porcelain as specified. The bath tub shall be provided with 27 mm (1-1/2") trap, overflow and anti-syphonic arrangements and connected to the waste and anti-syphonic stacks on the outside wall. Waste water may be allowed to discharge through over flow trap, if directed by the Engineer-in-Charge. The bath shall be fitted with two CP pillar cocks and CP chain with a plug. The approximate dimensions of the bath tubs shall be as per table.

#### **Table PH-02-05-a: DIMENSIONS OF BATH TUBS**

Description	Pattern					
	Magna		Rectangular		Parallel	
	cm	inch	cm	inch	cm	inch
Length overall	168	66	183	72	168	66
Width overall	71	28	1	28	71	29
Depth inside at waste	44	17-1/2	4	17-1/2	43	17
Height overall – exclusive feet & waste	46	18	6	18	44	17-1/2
Height overall - with feet for 38mm (1 1/2") seal trap	58	23	8	23	57	22-1/2
High overall for 76mm (3") seal trap top holes 35mm (1-3/8") square centered	62	24-1/2	2	24-1/2	61	24
On-roll-Hole distance part	18	7-1/8	8	7-1/8	18	7-1/8
Waste hole 57mm (2-1/4) clear diameter distance from edge of roll at tap & to centre of waste hole	29	11-1/4	9	11-1/4	25	10
Overflow centre-distance below top edge	10	4	0	4	9	3-1/2
Capacity	118 L	26Gal	127 L	28Gal	122 L	27Gal

The fall along the bottom from head end to outlet should be adequate for complete emptying. The feet shall be suitable for bath tubs with traps having 27 mm (1-1/2") seal or for bath tubs with taps having 75 mm (3") seal.

Bath tub outlets may be rebated or tapered to receive the outlet piece. The later comprises a chamfered flange 7.3 mm (2-7/8) diameter with tail 35 mm (1-3/8") long provided at the end having an integral grating. A riding flange 7.3 cm (2-7/8") diameter for tightening to the bottom of the bath tub is also provided.

The overflow holes on magna/rectangular bath tubs shall be 10 cm (4") from top of bath tub to centre and on parallel bath tubs 9 cm (3-1/2") from top to centre.

Overflow holes on parallel bath tubs shall be 4.4 cm (1-3/4") in diameter intended for 3.1 cm (1-1/4") overflows.

A grating shall be fixed in the overflow hole. A brass bend 5.7 cm (2-1/4") long shall be attached to the grating. The tail of which shall have threads 3.18 cm (1-1/4") for connection to outflow pipe.

**PH- 02-05-6 MEASUREMENT AND PAYMENT**

i. Measurement for Wash Basins, Water Closets, Urinals, Electric Water Cooler, Towel Rail, Soap Dish, Soap Holder, Toilet Paper Holder, Muslim Shower, Water heater, Manhole, Traps, Gauges, Cleanout, C.I. Manhole Cover, Roof Drain and Cock, mixer fittings and etc., will be made as per actual number acceptably provided and installed. The Contractor bid against these items shall include supply and installation of complete unit as specified herein, inclusive of all work from inlet connection of water supply to outlet connection with the sanitary system, complete as per Contractor Documents and or as directed by the Engineer.

ii. Payment for Wash Basins, Water Closets, Urinals, Electric Water Cooler, Towel Rail, Soap Dish, Soap Holder, Toilet Paper Holder, Muslim Shower, Water Meter, Manhole, Traps, Gauges, Cleanout, C.I. Manhole Cover, Roof Drain and Cock, mixer fittings and etc., shall be made at the applicable unit price per number bid for the respective item in the Bill of Quantities. The amount bid shall be full payment for the work specified herein.

**END OF SECTION**

**LIST OF APPROVED MANUFACTURERS / SUPPLIERS/SOURCES -  
PLUMBING WORKS**

<b>LIST OF APPROVED MANUFACTURERS /SUPPLIERS/SOURCES PLUMBING</b>		
S. No.	Equipment	MAKER/RAND
1	Sanitary Ware	Grohe, Porta, Roca
2	Bath/ Kit. Fittings	Master, Grohe, Porta
3	PPR-C Pipes & Fitting	Dadex, Beta, Master, Plasco, Turk Plast, Popular Pipe, Accufit, Minhas, Dura Built, IIL, Bultec, Euro Gulf, YAH Plastic Industry, Pelikan Pipe Industry (Civic
4	uPVC Pipes & Fittings	Fast Flow, Dadex,, Turk Plast, Jamal, Plasco, Popular Pipe, Master, Accufit, Dura Built, Bultec, Euro Gulf, YAH Plastic Industry, Newtech, Pelikan Pipe Industry (Civic), Prime Star Industries
5	RCC Pipe	Pakistan Pipes, National Pipe Industry
6	G. I. Pipes	International Industries Ltd. (IIL), Bashir Pipe, Master Pipe, Jamal, Victory
7	C. I. Pipes	Teepu, Alpine, NPC
8	Sluice Valves	KITZ (Star Corporation), Teepu, Rehman Group, Sirajia Trading co.
9	G.I. Fittings	KITZ (Star Corporation), Health Engineering (HE)
10	C. I. Fittings & Valves	Teepu, Alpine, Sirajia Trading co.
11	C. I. Manhole Cover	CME, Teepu, Alpine, Turk Plast
12	MS Seamless Pipe	Jamal, KITZ, Sirajia Trading co., Master Pipes, Victory
13	Gas Geysers	Cannon, General, Nesgas
14	Water Pump (Imported)	KSB, DAB (Italy), Lowara, Grundfos, HMA (Vansan, Rovatti), SAER (Italy), XYLEM (USA), WILO (Germany
15	Water Pump (Local)	PECO, Flowpak, Nobel, Golden Dynamics (Nowa)
16	Fire Pump	DAB (Italy), A-C Fire Pump, Firechief
17	PVC Water Stop	Fosroc, Sika, Decora, Marflex
18	HDPE pipe and Fittings	Dadex, Jamal, Plasco, Turk Plast, Beta, PopularPipe, Accufit, IIL, DURA BUILT, Bultec, Fast Flow, Sampak InternationalYAH Plastic Industry, Newtech, Pelikan Pipe Industry (Pelikan), Prime Star Industries
19	Electric water heater	Cannon, General, Nasgas
20	Kitchen Sink	Atlas or approved equivalent



# MEP Works

Technical Specifications

**STATE LIFE INSURANCE CORPORATION OF PAKISTAN BUILDING NO 09  
DR ZIAUDDIN AHMAD ROAD KARACHI**

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## LIST OF APPROVED MANUFACTURERS /SUPPLIERS/SOURCES

### ELECTRICAL WORKS

<b>LIST OF APPROVED MANUFACTURERS ELECTRICAL ITEMS</b>		
<b>S. No.</b>	<b>Equipment</b>	<b>MAKE/BRAND</b>
1	Cable/HDBC	Newage cables, Lahore Pioneer Cables Ltd, Karachi, Pakistan Cables Ltd, Karachi, Fast Cables, Lahore
2	Wiring Terminals, Crimp terminal, Wiring Connectors, Cable Lugs, Ferrules, Gland, Cable Labels, Cable markers, cable tie, Flexible/pliable (conduit, adapter/gland), industrial sockets, Heat shrinks	Univolt (Clipsal), Sofamel, Cembre, Gewiss, AMP, 3M, Weitkowitz, Partex, Wiska, IPE, Hilti, Sikla, Fisher, Emit, Weidmuller, Himel, Simpa, legrand, Phoenix contact
3	Cable Tray/Ladder	Electroline Karachi, Ezzi Engineering
4	Back-boxes, Pull boxes	Hussain & Co, Karachi
5	PVC Conduit & Accessories	Jeddah Pipes, Karachi, Galaxy (GALCO), Karachi
6	Steel Conduit & Accessories/G.I. Pipes	International Industries, Karachi
7	Switch socket/outlet, etc accessories	Clipsal Legrand
8	Distribution boards	Sunbeam Engineers, Khi, Hussain & Co., Khi, HRA Switchgear, Khi
9	Circuit Breakers	Schneider, ABB, Siemens
10	Circuit breaker Contactors/Relays	Schneider, ABB, Siemens
11	CTs/Ameter/ voltmeter	Revalco, Complee, Schneider, ABB, Lovato, GE
12	Voice/Data Structured Cabling System	Corning (3M)
13	Light Fixtures/ Lamps	Britlite, OHMS, Pierlite, Thermec
14	Hand dryer	Siemens
15	Insect Killer	MOEL CRI 307A
16	FANS (energy star 3)	PAK FAN, GFC, ROYAL
17	Fire Stopping	3M, Hilti, Charcot, Fischer, Svt, Roxtec

## Section 1: General Guidelines

### 1.1 Description:

The Work shall consist of furnishing and installation of all electrical and allied systems as shown on the drawings as specified herein and as directed by the Engineer.

### 1.2 Reference Codes & Standards:

Electrical materials and equipment furnished and installed shall comply with internationally recognized standards and codes and those of the Department and Local Project Specific Regulation Authorities Guidelines.

Sr#	Description	Reference Standard	Particular Section
A	Low Voltage Installations		
	General:		
1	Electrical Installations for Buildings	IEC	IEC 60364
2	Requirements for Electrical Installations. IET Wiring Regulations	BS	BS 7671
3	Electricity in Buildings	CIBSE	CIBSE-Guide K
B	Specific:		
B1	Low Voltage Distribution System		
5	Transformers	IEC	IEC-60076
6	Genset	ISO, NEMA, IEC, UL, NFPA	ISO 8528, IEC 341, NEMA MG-1-1, CSA 22, 282, UL 2200
7	Low-voltage switchgear and Control gear assemblies (Circuit-breakers, Switches, disconnectors, switch disconnectors and fuse-combination units, Contactors and motor-starters - Electromechanical contactors and motor-starter, Multiple function equipment - Transfer switching equipment, distribution boards)	IEC	IEC 60947-1 IEC- 61439
8	Busbar Trunking System	IEC	IEC- 61439



9	Residual current operated protective devices	IEC	IEC 60755
10	Degrees of protection provided by enclosures (IP code)	IEC	IEC 60529
11	Switch Sockets	IEC	IEC60309, BS 546,1363
B2	Earthing, Lightning Protection & Surge Protective Devices		
12	Lightning Protection	NFPA, IEC	NFPA-780 IEC-62305
13	Earthing	IEEE	IEEE-80
14	Surge Protective Devices	IEC	IEC-62305,61643
B3	Extra Low Voltage System		
15	Fire Alarm System	NFPA, BS	NFPA-72 BS-5839
16	Public Evacuation System	BS	BS-5839
B4	Lighting		
17	Lighting	SLL (Society of Light & Lighting), OSHA,	SLL Code for Lighting (2012), OSHA, IESNA
B5	Telecommunications		
18	Telecommunications	ANSI/TIA, EN	ANSI/TIA-568-C, EN-50173
C	Medium Voltage Installations		
19	Short-circuit currents in three-phase AC systems	IEC	IEC-60909
20	Instrument transformers	IEC	IEC 61869-1
21	High-voltage switchgear and control gear	IEC, WAPDA	IEC 62271-1 DDS-P44:96
22	Medium Voltage Cables (XLPE)	IEC	IEC-60502-2
23	Lifts/Elevator Standards	EN, EU Lifts Directive	EN 81-20,81-50
D	Local Prevailing Standards		
D1	Pakistan Building Code		
D2	LDA/CDA/MDA/Concern Development Authority Standards, Rules Regulations		
D3	WAPDA/NTDC/Concern DISCO Standards		
D4	Pakistan Building Code (PEC)		
D5	Pakistan Energy Efficiency & Conservation Code		
D6	Joint Commission International (JCI) Accreditation Standards for Hospitals		

Any contradictions between the requirements of two or more such standards or codes pertaining to a particular installation shall be brought to the Engineer's attention by the Contractor prior to placing orders for any cable, equipment or material.

The Contractor shall submit information to the Engineer concerning contradictions and qualifying information. The Engineer will direct the Contractor as to the governing standard or code.

### 1.3 Submittals:

A. Complete list of materials and equipment proposed for incorporation in the work:

- a. *List shall include manufacturer's name and material or equipment identification such as styles, types or catalog numbers to permit ready and complete identification.*
- b. *Include complete set of catalogs covering these submittals.*
- c. *If catalog does not indicate compliance with appropriate standard as specified, provide additional certification as to compliance subject to approval of consultant.*

B. Shop drawings shall be submitted for equipment as specified by Engineer-Incharge.

C. Samples shall be submitted for all items specified herein for Engineer's approval prior to placing order for procurement.

D. Test Reports, per specified procedures advised by consultant, of equipment shall be submitted before execution of the systems.

### 1.4 Quality Assurance:

The contractor as per Contract Documents shall be fully responsible for the products under defect liability period, warranty period.

All equipment shall be suitable for altitude/weather/seismic conditions of the Project site.

## **Section-2: Conduits, Raceways, Cable Trays, Ladders**

### 2.1 Conduits:

- a. PVC conduits and fittings used in building installation shall be from high impact rigid PVC complying with BS 4607, BS EN 60423 & BS EN 61386, suitable for use at ambient temperature up to 40 deg Cent. The material shall not soften or suffer structural degradation at a temperature of 70 deg Cent and shall be non-hygroscopic, fire retardant.
- b. Steel conduits and fittings shall comply with relevant specifications in BS EN 60423, BS EN 61386 and shall be hot dip galvanized to class 4 protection, both inside and outside. Flexible steel conduits and fittings shall comply with BS EN 61386.
- c. Corrugated flexible pipe should be installed where directed by the consultant.
- d. Conduit systems must be designed and installed so as to exclude moisture, dust and dirt. Small drainage holes must be provided at the lowest part of the system to avoid the accumulation of condensed moisture.
- e. All conduit expansion couplings used shall be fabricated from material equal to that of the conduit with which the coupling is to be used, having factory installed packing ring and pressure ring to prevent entrance of moisture. All expansion couplings shall be equipped with earthing ring or earthing conductor. PVC conduits shall be provided with copper/brass terminals.
- f. Unless indicated otherwise on the drawings, minimum size of conduits for installations shall be 25 mm diameter.
- g. All conduit expansion couplings used shall be fabricated from material equal to that of the conduit with which the coupling is to be used, having factory installed packing ring and pressure ring to prevent entrance of moisture. All expansion couplings shall be equipped with earthing ring or earthing conductor.

### 2.2 Conduit Accessories:

- a. Factory made round PVC junction boxes shall be installed with non-pressure type PVC conduits. Junction boxes shall be of 2-1/4" dia and 3" long (adequate) to receive PVC conduit and shall be concealed in RCC of slab. The wall type junction box shall also be factory made round PVC boxes. Each junction box shall be provided with one-piece cover which shall be fitted on the box with chromium plated screws. The physical size of pull boxes shall be in accordance with the wiring regulations to suit the number and size of conduits and conductors.
- b. Conduit accessories such as switch boxes, socket outlet boxes, pull boxes and inspection boxes shall be made of 16 SWG sheet steel having dust tight covers. Pull boxes and junction boxes shall be constructed of galvanized steel. Each shall be suitable in all respects for the applications, and complete with

screw-on hinged covers with gaskets. All boxes shall have required number of conduit entry holes and earth terminals for connecting E.C.P. All these boxes shall be painted inside and outside with black enamel, over a base coat of red oxide antirust paint. Shapes and sizes of these boxes shall be determined on each application.

- c. All boxes installed in exterior locations, plantrooms, janitor's room, ducts etc., shall be fitted with approved type gaskets to provide a waterproof seal approved type gasket to provide a waterproof seal between box and cover or other item fitted to the box.
- d. All boxes other than those on which accessories or any item of equipment is to be mounted, or at which flexible connections are to terminate, shall be provided with internal fixed brass earth terminals
- e. Manufactured smooth bends shall be used where conduit changes direction. Bending of conduit by heating or otherwise shall be allowed only at special situations with the permission of the Engineer. Use of shape 90-degree bends and Tees is prohibited. Bends shall have enlarged ends to receive the conduit without any deduction in the internal diameter of the PVC pipe.
- f. All boxes provided as junction boxes where cable joints are specified or permitted, shall be provided with fixed terminal blocks. Such boxes shall be of adequate size to contain the terminal block and sufficient cable to allow neat connections to be made. The terminal blocks shall be fixed to the box by brass screws and shall comprise brass conductor connectors, with brass clamping screws enclosed in porcelain or other heat resisting insulation material which will not distort or otherwise have its properties damaged by temperatures below the highest temperature at which the insulation of any cable connected to it is destroyed.
- g. All accessories e.g. boxes, couplings, bends, solid plugs, bushes, reducers, check nuts etc. shall be equal in quality to the specified conduit.
- h. Where inspection boxes occur in floor slabs a special cover on the box shall be installed to the satisfaction of the Engineer.
- i. The use of looping in box shall be allowed in places where floor slab thickness permits 90degree bends in conduit.
- j. Each outlet box must be suitable in all respects for the application, and complete with securing lugs, knockouts, and where necessary, suitable plaster rings, concrete rings, covers and any other required accessory.
- k. Provide blank cover plates for all boxes without wiring devices. Material and cover to the approval of the Engineer.

### 2.3 Conduit Installation Instructions:

The contractor shall furnish all labor and material for the installation of conduit as required.

- a. Conduit shall be installed concealed in RCC ceiling slabs, columns, walls and floors etc., Recessed conduit shall be laid over the first tier of reinforcement and under the second tier of reinforcement before pouring of concrete. All conduit outlet boxes to be concealed shall be laid firmly flush with the soffit of the slab or beam. The conduit should be tied to the reinforcement firmly so that the alignment is not disturbed by vibrators. All the outlet boxes installed shall be stuffed and their cover plates fixed so as to prevent concrete entering the outlet boxes.
- b. Under no circumstances shall chassis be made for recessing conduit in the RCC structure after it has been cast without the permission of the Engineer. Where conduits have to be concealed in cement concrete or brick masonry, chassis shall be made with appropriate tools not deeper than required. The conduit shall then be fixed in the chassis with iron hooks before covering it up with at least 20mm thick plaster. Conduit ends pointing upward shall be properly sealed to avoid entry of foreign material.
- c. The drawings provided with this specification indicate the approximate position only of outlet points and it shall be the Contractor's responsibility to mark out and center on site, the final positions and he shall also be responsible for their accuracy.
- d. The entire conduit system shall be essentially completed before the wire pulling is taken in hand. Each conduit run shall be tested for continuity and obstructions. All obstructions shall be cleared in an approved manner. Water and moisture that has entered any section of the conduit installation must be dried with suitable swabs to the satisfaction of the Engineer.
- e. Adequate expansion joints shall be provided in all conduit runs passing across the expansion joints in the concrete slabs of the buildings. A typical arrangement is shown on drawing.
- f. Pull boxes shall be installed in conduit runs at intervals mentioned below to facilities the pulling length of wires: -
  - i) Straight runs. -  
20 meter.
  - ii) Runs with one 90  
degrees bends. - 15  
meter.

- iii) Runs with two 90 degrees bends. - 10 meter.

The minimum length of inspection / pull boxes, distribution boards and switchboards in an approved manner to the satisfaction of the Engineer without any additional cost to the owner.

- g. Conduit runs between two outlets shall not contain more than two quarter bends or one 90-degree bend.
- h. All the free ends of conduit shall be solidly plugged till such time as final and proper terminations are made.
- i. All conduits of a system shall be run at least 6" away from the other systems and services where conduit of one system crosses the other it shall be done so at right angle i.e. 90 degree.
- j. Multiple runs of conduit shall be arranged symmetrically.
- k. Exposed runs of conduit where required shall be firmly held by means of saddles, clamps and brackets etc., to the surfaces of walls, columns and ceiling. Rawal plugs or phil plugs may be used for fixing saddles, clamps and brackets etc. The spacing between two saddles may not be more than 30". The straight runs on walls may be 18" to 24" below the ceiling and in the event of any obstruction due to beams the runs may be routed them. The conduit shall have a minimum clearance of 6 mm from the surface supporting it. Purpose made special clips and brackets may be required at some situations to support the conduit.
- l. No conduit less than 20mm dia. shall be used for point wiring and 25mm dia. for conduit wiring. The size of conduit shall however be determined from the number of wires required in the conduit run according to number of wires allowed as per IEE Regulations
- m. The Contractor shall be responsible for obtaining from site and checking from drawings the location of structural steelwork and the positions of holes, steelwork and finishes.  
No steelwork will be drilled without first obtaining written approval from the Engineer.
- n. The Contractor's attention is specially drawn to the necessity for keeping all conduit entirely separate from other piping services as direct connections will not be permitted between the conduits and such pipes, except where earthing is required. Conduit runs shall be determined by the Contractor and

agreed by the Engineer that cables installed in any particular run are easily with-drawable.

- o. Conduit systems shall be mechanically continuous and water-tight after installation. Conduit shall be installed in such a manner as to ensure against the collection of trapped condensation.
- p. Where conduit runs terminate in the boxes, the termination shall be made with flanged couplings as specified for adaptable boxes.
- q. Where conduits are specified in floor screeds, the Contractor must carefully check the proposed screed depths at all positions before installing conduits and shall, wherever possible, arrange to cross conduits where there is ample thickness of screed. If at isolated positions, the crossing of conduits in shallow screeds cannot be avoided, arrangements may be made to set the lower conduit into a shallow chase performed in the slab, subject to the agreement of the Engineer.
- r. No wiring shall be carried out before the particular section of the conduit installation to be wired is complete to the satisfaction of the Engineer
- s. The conduit outlets when installed and before wiring shall be temporarily closed by means of well-fitting wooden plugs, and immediately before cables are drawn in, conduit systems shall be thoroughly swabbed out until they are dry and clean.
- t. The metallic conduit shall be properly and tightly screwed between the various lengths and to the boxes to which it runs and terminates, so that the wiring is continuously and effectively protected throughout its entire length. The entire system shall be electrically and mechanically continuous throughout forming a completely bonded system, the whole being efficiently earthed in the supply point.
- u. All steel conduits shall be jointed with solid screwed couplings and flanged couplers at DB's.
- v. Surface mounted conduits shall be secured (at a maximum interval of 1.2m) by means of space-bar saddles where multiple runs occur. 'Distance' saddles shall be used on individual runs such as down drops to switches and plug points
- w. A 2mm galvanized iron draw wire or approved equal shall be left in every conduit which is left by the Contractor for installation of wires and cables. The draw wire shall have a tensile strength not less than 90 kg.
- x. No less than 300mm of slack shall be left at each end of the draw wire.

## **Section-3: Medium Voltage Cables**

### **PART 1 GENERAL**

#### **1.01 DESCRIPTION**

A. Work Included:

1. Cables and related splices, terminations and accessories for medium voltage electrical distribution systems.

B. Related Work:

1. Drawings and general provisions of the Contract, including General and Supplementary conditions apply to this Section.

#### **1.02 QUALITY ASSURANCE**

A. Comply with requirements of Specifications.

B. Installer: Engage a cable splicer, trained and certified by splice material manufacturer, to install, splice, and terminate medium-voltage cable.

C. Testing Agency Qualifications: An Independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the International Electrical Testing Association or is a nationality recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.

1. Testing Agency's Field Supervisor: Person currently certified by the Inter National Electrical Testing Association or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Part3.

D. Source Limitations: Obtain cables and accessories through one source from a single manufacturer.

E. Product data: For each type of cable indicated. Include splices and terminations for cables and cables accessories.

F. Qualification data: For Installer.

G. Material certificates: For each cable and accessory type, signed by manufacturers.

H. Source quality-control test reports.

I. Field quality-control test reports.

#### **1.03 PROJECT CONDITIONS**



- A. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or other unless permitted under the following conditions and only after arranging to provide temporary electric service according to requirements indicated:
  - 1. Notify Architect no fewer than two days in advance of proposed interruption of electric service.
  - 2. Do not proceed with interruption of electric service without Architect's written permission.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Available Manufacturers subject to compliance with requirements, manufacturers offering products that may be incorporated into the work include, but are limited to, the list of manufacturers provided with BOQ

### **2.02 CABLES**

- A. Cable type: Medium Voltage (15 KV)
- B. Comply with BS Standards.
- C. Conductor: Copper
- D. Conductor Stranding: Compact round, concentric lay Class B.
- E. Strand Filling: Conductor interstices are filled with impermeable compound.
- F. Conductor Insulation: Cross linked polyethylene.
- G. Conductor Insulation: Ethylene-Propylene rubber.
  - 1. Voltage Rating: 15KV
  - 2. Insulation Thickness: 133 percent Insulation level.
- H. Shielding: Copper tape, helically applied over semi conduction insulation shield.
- I. Shielding and jacket: Corrugated copper drain wires embedded in extruded, chlorinated, polyethylene jacket.
- J. Three conductor cable assembly: Three Insulated, shielded conductors cabled together with ground conductors.
  - 1. Circuit Identification: Color-coded tape (black, red, blue) under the metallic shielding.
- K. Cable Armor: Interlocked aluminum applied over cable.
- L. Cable Jacket: Chlorosulfonated Ppolythylene, CPE.

**2.03 SPLICE KITS**

- A. Connectors and Splice Kits: Comply with IEEE 404; type as recommended by cable or splicing kit manufacturer for the application.
- B. Splicing Products: As recommended, in writing, by splicing kit manufacturer for specific sizes, ratings and configurations of cable conductors. Include all components required for complete splice with detailed instructions.
  - 1. Combination tape and cold shrink rubber sleeve kit with re-jacketing by cast-epoxyresin encasement or other waterproof, abrasion-resistant material.
  - 2. Heat-shrink splicing kit of uniform, cross-section, polymeric construction with outer heat-shrink jacket.
  - 3. Premolded, cold shrink-rubber, in-line splicing kit.
  - 4. Premolded EPDM splicing body kit with cable joint sealed by interference fit of mating parts and cable.

**PART 3 EXECUTION****3.01 INSTALLATION**

- A. Install cable according to IEEE 576.
- B. Pull Conductors: Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
  - 1. Where necessary, use manufacturer-approved pulling compound or lubricant that will not deteriorate conductor or insulation.
  - 2. Use pulling means, including fish tape, cable rope, and basket-weave cable grips that will not damage cables and raceways. Do not use rope hitches for pulling attachment to cable.
- C. Install exposed cables parallel and perpendicular to surfaces of exposed structural members and follow surface contours where possible.
- D. Install "buried-cable" warning tape 12 inches(305 mm) above cables.
- E. In manholes, hand holes, pull boxes, junction boxes, and cable vaults, train cables around walls by the longest route from entry to exit and support cables at intervals adequate to prevent sag.
- F. Install cable splices at pull points and elsewhere as indicated; use standard kits.
- G. Install terminations at ends of conductors and seal multi conductor cable ends with standard kits.
- H. Install separable insulated connector components as follows:

1. Protective caps: At each terminal junction, with one on each terminal to which no feeder is indicated to be connected.
  2. Portable Feed – Through Accessory: Three
  3. Standoff Insulator: Three
- I. Arc Proofing: Unless otherwise indicated, arc proof medium voltage cable at locations not protected by conduit, cable tray, direct burial or termination materials. In addition to arcproofing tape manufacturer's written instructions, apply arc proofing as follows:
1. Clean cable sheath.
  2. Wrap metallic cable components with 10-mil (250-micrometer) pipe-wrapping tape.
  3. Smooth surface contours with electrical insulation putty.
  4. Apply arc proofing tape in one half-lapped layer with coated side toward cable.
  5. Band arc-proofing tape with 1 inch (25 mm) wide bands of half-lapped adhesive, glass cloth tape 2 inches (50 mm) o.c.
- J. Install fault indicators on each phase where indicated.
- K. Ground shields of shielded cable at terminations, splices and separable insulated connectors, Ground metal bodies of terminators, splices, cables and separable insulated connector fittings and hardware.

### **3.02 FIELD QUALITY CONTROL**

- A. Testing: Engage a qualified testing and inspecting agency to perform the following field tests and inspections and prepare test reports.
- B. Perform the following field test and inspections and prepare test reports:
1. Perform each visual and mechanical inspection and electrical test stated in BS. Certify compliance with test parameters.
  2. After installing medium voltage cables and before electrical circuitry has been energized, test for compliance with requirements.
- C. Remove and replace malfunctioning units and retest as specified above.

**END OF SECTION**

## **Section-4: Low Voltage Power Cables**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.

#### **1.2 DESCRIPTION OF WORK:**

A. Work Included: Provide low voltage electrical conductor, cable, wire, and connector work as shown, scheduled, indicated, and as specified.

B. Types: The types of low voltage electrical conductor, cables, wire, and connectors required for the project include, but are not limited to, the following:

1. 600/1000 volt building wire and cable.
2. 600/1000 volt building wire and cable connectors.
3. 300/500 volt control/signal wire and cable.
4. 300/500 volt control/signal wire and cable connectors.

C. Application: The applications for cable, wire, and connectors required on the project are as follows:

1. Power distribution circuitry.
2. Lighting branch circuitry.
3. Appliance, receptacle and equipment branch circuitry.
4. Motor branch circuitry.
5. Control wiring.
6. Outdoor lighting and power.

#### **1.3 STANDARDS:**

A. Products shall be designed, manufactured, tested, and installed in compliance with the following standards:

BS 6346 PVC insulated, armoured cables for voltages of 600/1000V and 1900/3300 V

BS6004 Polyvinyl Chloride (PVC) insulated and PVC over sheathed cables - up to 300/500V - for electric power and lighting.

BS6724 Thermosetting insulated armoured cables - 600/1000V to 1900/3300V - with low emission of smoke and corrosive gases when affected by fire.

- B. Where application of applicable codes, Trade Association standards, or publications appears to be in conflict with the requirements of this Section, an interpretation shall be obtained from the Architect/Engineer.

#### **1.4 QUALITY ASSURANCE:**

- A. Manufacturers: Provide products complying with these specifications and produced by the manufactures provide in the list with BOQ.

#### **1.5 SUBMITTALS:**

- A. Shop Drawing submittals shall include, but not be limited to, the following:

1. The Contractor shall submit to the Engineer for review, a list of the proposed manufacturers of wire and cable, cable lugs, cable connectors and termination fittings listed herein. The Contractor may install wire and cable, cable lugs, cable connectors and termination fittings furnished by any manufacturer listed on the approved submittal.
2. Cut sheets on all 300/500 and 600/1000 volt conductors with manufacturers name, ratings and capacities, insulation characteristics, and available colors, clearly listed.
3. Cut sheets indicating all cable lugs, termination fittings and cable connectors.
4. Cut sheets indicating types of conductor identification bands.

#### **1.6 DELIVERY, STORAGE AND HANDLING:**

- A. Provide factory-wrapped waterproof flexible barrier material for covering wire and cable wood reels, where applicable; and weather resistant fiberboard containers for factory packaging of cable, wire and connectors, to protect against physical damage in transit. Damaged cable, wire, or connectors shall be removed from project site.
- B. Store cable, wire, and connectors in their factory-furnished coverings, and in a clean, dry indoor space which provides protection against the weather.

### **PART 2 - EXECUTION**

#### **2.1 INSTALLATION**

- A. General: Install electrical cable, wire and connectors as shown, in accordance with the manufacturer's written instructions, the applicable requirements of "Standard of Installation", and recognized industry practices to ensure that products serve the intended functions.
- B. Coordination:
1. Coordinate cable and wire installation work with electrical raceway and equipment installation work, as necessary for proper interface.
  2. Installer shall examine the areas and conditions under which cable, wire and connectors are to be installed and notify the Contractor in writing of conditions detrimental to the proper

and timely completion of the work. Inspect wire and cable for physical damage. Do not proceed with the work until unsatisfactory conditions have been corrected.

C. 600 Volt Building Wire and Cable:

1. Mains and feeders are to be run their entire length in continuous pieces without joints or splices[, unless otherwise indicated or noted].
2. Conductors may be run in multiple on sizes inclusive, provided all multiple conductors are the same size, length, and type of insulation, and are so arranged and terminated as to ensure equal division of the total current between all conductors involved.
3. Before any wire is pulled into any conduit, the conduit shall be thoroughly swabbed in such a manner as to remove all foreign material and to permit the wire itself to be pulled into a clean, dry conduit. All conductors shall be pulled into the conduit at the same time.

D. 300 Volt Control/Signal Cable and Wire:

1. Install all low voltage wiring in a suitable raceway except in areas with accessible (lay-in) ceilings unless otherwise noted on Drawings Where cable is routed without a raceway, bundle all cables and suspend to one foot above ceiling using loop rings on 5' centers. Do not run cable loose on top of suspended ceilings. Do not attach cables to suspended ceiling supports or any mechanical, plumbing, or sprinkler piping. Conceal conduit except in mechanical rooms and areas where other conduit and piping are exposed. Fasten flexible conductors, which bridge cabinets and doors, neatly along hinge side and protect against abrasion. Tie and support the conductors neatly.
2. Number code or color code conductors appropriately for future identification and servicing of the system. Refer to consultants advice for additional requirements.

**2.2 TESTING:**

- A. Feeder Insulation Resistance Test: Each new [and reused existing] 600 volt feeder conductor shall have its insulation resistance tested after the installation is complete except for connection at its source and point of termination.
1. Tests shall be made using a Biddle Megger or equivalent test instrument at a voltage of not less than 1000 volt dc. Resistance shall be measured between phase, neutral, and ground conductors and from conductors to raceway (ground). Readings shall be taken after 30 seconds and 60 seconds of Megger operation at slip speed and insulation resistance shall not be less than the 1000 MΩ
  2. New conductors which do not meet or exceed the insulation resistance values listed above shall be removed, replaced, and retested.
  3. Where reused existing feeders fail to meet the above insulation requirements, notify the Engineer in writing for direction prior to placing the existing feeders back in service.]

- B. Neutral Testing: After all feeder and branch circuit conductors are terminated, neutral to ground testing shall comply with the following:
1. The resistance of the system's neutral to ground shall be greater than 10 k $\Omega$  with the system bonding jumper disconnected.
  2. Repeat neutral to ground test for neutrals of separately derived systems.
- C. Pre-energization Check: Prior to energization, check all new [and reused existing] branch circuit cable and wire for continuity of circuitry and for short circuits. Correct malfunction when detected. No submittal is required for this test.
- D. Voltage and Current Values: The voltage and current in each main feeder conductor shall be measured and recorded after all connections have been made and the feeder is under load.
- E. Submittals: Contractor shall furnish all instruments and personnel required for tests. Submit four copies of certified test results to Architect for review. Test reports shall include conductor tested, date and time of test, test results, relative humidity, temperature, and weather conditions.

### **2.3 AS BUILT DRAWINGS**

- A. As-Built Drawings: Refer to Section 26 00 01, "Electrical General Provisions", for applicable requirements.

### **2.4 IDENTIFICATION**

- A. Identification: Refer to Section 26 05 53, "Identification for Electrical Systems", for color coding and markings for all conductors and cables.

**END OF SECTION**

## **Section-5: Grounding & Bonding**

### **1.0 GENERAL**

An Integrated Grounding System is one that establishes a single point ground (or earthing) system that achieves an acceptably low resistance ground and provides for a low surge impedance path from any point in the system. This concept is often referred to as a Common Point Grounding (CPG) System.

### **2.0 EARTHING SYSTEM COMPONENTS**

Grounding system shall be composed of the following components:

- Chemically activated grounding electrodes, commercially known as AGE-T.
- Thin wall, soft copper tubing of at least one half-inch diameter, of at least ninety- nine (99%) percent pure copper.

### **3.0 EARTH INSTALLATION**

1. Active Green Earth ( AGE- ) is an electro-chemical grounding electrode that automatically conditions the soil/rod interface. This is accomplished by absorbing local moisture to facilitate the electrolytic process. The installation must be accomplished in such a manner as to encourage this process.
2. To install the AGE-T, first bore a hole in the selected location to a diameter of not less than six (6) inches to accommodate the Earth Conductivity Enhancement Compound ( ECEC ) and a depth equal to the length of the selected rod plus one foot.
3. Remove all of the tapes covering the absorption and electrolyte holes.
4. Insert the electrode in the bored hole to its full length. It is preferable to leave the top exposed and protected by the special wall assembly, as illustrated. Pour 2 to 4 liters of water in the hole as it is being back filled.
5. Tamp the earth in place, leaving space to reach the connections and to install the well access assembly.
6. Make the connection to the AGE-T copper electrode.
7. Do not install in a place where watershed or downspout carry-off will flood the unit. Provide for carry-off when you install. The unit may be cemented or paved around, providing above instructions are followed and may be installed indoors.
8. Upon completion of installation of the earthing system, resistance-to-ground (earthing connection) shall be tested with a resistance tester. Where tests indicate resistance-to-ground is over 5 ohms, appropriate action shall be taken to reduce resistance to 5 ohms or less, by installing additional, properly spaced, ground electrode and treating soils in proximity to ground electrode. A retest shall be performed to demonstrate compliance.



#### 4.0 TEST POINTS

These points are for testing of earthing systems. At these points hot work can be separated and can be tested for continuity and resistance. Test points should be made of brass and solidly fixed to wall at a height of 1.5 meter.

#### 5.0 EARTH PITS

These should be made of pre cast concrete with a cover lid and should be placed over the electrode in level with the finished ground level. The cover lid should have marking showing its number and written "Earth Electrode" .

#### 6.0 MAIN EARTHING SYSTEM

- 6.1** The contractor shall adequately allow in his tender for the provision and the installation of a complete earthing system required to meet the following requirements and shall ensure that the entire electrical installation is effectively bonded to earth as per BS 7430 Standards.
- 6.2** The contractor shall ensure that the whole of the electrical installation is both mechanically and electrically continuous throughout and is bonded to a suitable main earth in compliance with the IEE regulations and BS Code of Practice.
- 6.3** A test connection link shall be provided for testing purposes.
- 6.4** The nominal cross-sectional area of all earth continuity conductors shall be in accordance with the IEE regulations
- 6.5** All switchboards shall be provided with copper earth bar continuously run along the switchboard frames.
- 6.6** All switchgear, metal conduit and trunking systems, metal frames, enclosures, lighting fittings and cables sheaths shall be bonded together and connected to the earth tapes of the appropriate switchboard. Similarly all earth pins and metallic plates of socket outlets, switches, accessories and enclosures shall be bonded to earth with earth continuity conductors. Each individual earth path shall be electrically continuous throughout its length from the farthest point of the associated part of the system back to the main earth.
- 6.7** All earthing cables shall be installed in accordance with the relevant requirements called for in the cables section of this specification.
- 6.8** All bonding leads in the form of cable having a standard conductor shall be terminated in sheathed sockets and shall be rigidly bolted to earthing terminals.
- 6.9** All earthing cables shall be insulated with a PVC sheath. Where connection of the earth lead to the main earth is made with a stranded cable, the earth lead shall be double insulated with PVC.
- 6.10** Earth cable shall have same construction details as of phase cables.
- 6.11** Equipotential bonding conductors (6 mm<sup>2</sup> minimum) must be provided for metal pipes, water pipes, metal doors and other extraneous conductive parts and brought to the

main earthing terminal in ground floor electrical room for final connection to the main earth pits. The cables shall be concealed in slab / wall upto final connection point.

- 6.12** The metal doors, curtain wall, building structure, door frames in electrical room, substations shall be provided with equipotential bonding and connected to the main Earthing System. Contractor should prepare and submit separate shop drawings with details for the earthing system.
- 6.13** Main equipotential bonding conductors in relation to the neutral of the supply shall be as per table 54H of BS7671 : 2001.
- 6.14** The earth rods shall be copper, corrosion resistant.
- 6.15** Provide separate earth pits as required and shown in schematic
- 6.16** Contractor shall be responsible for Substation earthing as per LESCO requirements.
- 6.17** The extraneous conductors parts in the building shall be bonded together.
- 6.18** The metal underside of raised floor and support elements shall be bonded to the common bonding network in addition to the following:
  - Trunking, Tray , Chilled water / Sprinkler / Fire Fighting Pipe Work / Ductwork / HVAC Equipment, etc.

## **8.0 THERMO WELD**

### **1. GENERAL**

This specification covers the exothermic welding system for use in making electrical connections. The system supplied under this specification shall include weld metal, molds, tools and accessories as required.

### **2. STANDARDS**

The exothermic welding system furnished under this specification shall meet the applicable requirements of Standard for Qualifying Permanent Connections Used in Substation Grounding. Independent test data showing conformance to IEEE Std. 80 and IEEE Std. 837 shall be readily available.

The exothermic welding system supplied under this specification must be approved by consultant.

### **3. SYSTEM**

The system provides the ultimate in permanent molecular bonding. The process of exothermic welding in which no outside source of heat or power is required. Exothermic welding system comprise a complete range of joints and molds to suit all electrical connection application including bar to bar, bar to earth rod, bar to steel surface, cable to bar, cable to cable, cable to earth rod, cable to rebar and cable to steel surface and electronic ignitor (control unit)

### **4. APPLICATION**

The exothermic welding system is used for in making electrical connections of copper to copper, copper to steel or copper to cast iron for grounding and cathodic applications.

Connections shall be suitable for exposure to the elements of direct burial in earth or concrete without degradation over the lifetime of the grounding system.

## **5. MATERIAL**

Molds shall be made from:

- a. Graphite material capable of withstanding high temperatures that are capable of providing an average life of not less than fifty separate exothermic welds.
- b. Cordierite, refractory ceramic or other material suitable for a single connection.

Starting material (where used) shall consist of aluminum and copper and iron oxides. It shall not contain phosphorous, magnesium or any caustic, toxic or explosive substances.

Low voltage battery starting (where used), shall use an electric ignition system that does not use starting material.

Weld metal used for grounding connections shall contain copper oxide, aluminum and not less than 3% tin as the wetting agent. Weld metal used for cathodic connections shall not contain tin, but shall contain vanadium.

## **6. QUALITY CONTROL**

Weld metal shall be controlled at the factory and subjected to routing and rigid quality control inspection procedures. The batch control lot number shall be packaged with the product for shipment from the factory.

- a. Manufacturers shall be ISO9001:2000 certified.
- b. Manufacturers shall have been engaged in the design and manufacturing of exothermic connection systems for at least twenty (20) years.

**END OF SECTION**

## **Section-6: Raceway & Boxes**

### **1.0 GENERAL.**

The work under this section consists of supplying, installing and commissioning of all material and services of the complete conduit & pipe system as specified herein and/or shown on Tender Drawings and stated in the Bill of Quantities.

The Contractor shall discuss the electrical layout with the Engineer and co-ordinate at site with other services for exact route, location and position of the electrical lines.

### **2.0 PVC CONDUITS.**

All wiring for light, power, control and other circuits shall be carried out in Electrical Grade PVC pipe, minimum 1" dia, unless otherwise stated. The conduits and pipes shall be supplied complete with all accessories including bends, joints junction boxes and all cutting, repair, excavation backfilling, etc., required for complete installation. The conduits for internal wiring to lights, sockets and power circuit shall be of approved brand.

Manufactured smooth bends shall be used wherever conduit changes direction. The sharp 90 degree bends or tees shall not be allowed. All conduit accessories shall conform to same material specification as given above for conduit.

The bends shall have enlarged ends to receive conduit without any reduction in the internal diameter at joints.

The round junction box for ceiling light points shall be of PVC having minimum dimensions of 63 mm diameter and 63mm deep. The outlet box at wall light points shall be general purpose type having minimum dimensions of 63 mm diameter and 38 mm deep. Pull boxes and inspection boxes shall be installed in conduit runs where required to limit the pulling of the cables or for inspection purposes. The pull boxes shall be square having minimum dimension of 100mm and 50 mm deep. In all cases, the minimum length of inspection boxes shall be not less than four times the cable manufacturers recommended bending radius of the cable. These dimensions are minimum only and the Contractor shall determine the exact size keeping in view the ease of maintenance and installation. In general the use of pull boxes and inspection boxes shall be avoided. The pull boxes and inspection boxes shall be of 14SWG sheet steel provided with anti-rust paint and finished in enamel paint or powder coated (as approved by the Engineer during sampling stage).

### **3.0 INSTALLATION.**

The conduit shall be installed concealed in wall, column ceiling or under floor, on surface, above the false ceiling or as stated on the drawings. The drawings are diagrammatic and do not indicate the location of junction boxes, pull boxes or inspection boxes which shall be provided to suit site conditions.

The concealed conduits shall have a minimum of 25 mm concrete cover, when concealed in R.C.C works. The conduits in R.C.C works shall be laid before pouring of concrete. Chisel shall not be made in R.C.C structure for conduits and accessories after pouring of concrete. In slab, conduits shall be laid over the bottom reinforcement steel and tied firmly to it. The conduit outlet boxes shall be held firmly to finish with the surface of the slab or beam. At expansions joints, flexible conduits or alternate arrangement shall be provided.

Where conduits have to be concealed in cement concrete work after concreting or in block masonry, chases shall be made with appropriate tools and of required depth. The conduit shall

then be fixed firmly in the recess and covered after plastering. All chases for concealing conduits shall be carried out by the Contractor. The Contractor will be responsible for bringing back the general finish to the condition that it was before the cutting and chiseling by the Contractor.

The work of conduit installation and cutting in cement concrete work or brick work shall be coordinated with civil construction so as not to cause any undue hindrances and delays in progress. The Contractor shall obtain approval of the Consultant for route, etc. to suit the site conditions before starting chiseling and cutting. All junction boxes, outlet boxes, pull boxes etc., shall be installed concealed so as to finish with the surface.

Bending of conduits by heating or otherwise can be adopted provided that the recommendation of conduit manufacturers are strictly followed. After completion of conduit installation, the system shall be checked for any charred or twisted portion prior to the pulling of wire. At all joints, PVC jointing solution must be used. Conduits while embedding under concrete, plaster and screed (in vertical position or horizontal) should have minimum of 25 mm gap.

The termination of conduits is shown diagrammatically on the drawings. The exact final location of the termination shall be coordinated with the equipment to be installed. Conduit ends pointing upwards or downwards shall be properly plugged, in order to prevent the entry of foreign materials. All openings through which concrete may leak shall be carefully plugged and boxes shall be suitably protected against filling with concrete. At all termination of conduit, soft bushes shall be fixed to prevent sharp edges of conduit ends from cutting or damaging the wires or cables to be pulled through them.

The entire conduit system shall be installed and tested before wiring is carried out. Any obstruction found shall be cleared by use of a cutting or other approved devices and the conduit be cleaned out before the installation of cable.

#### **4.0 OTHER ACCESSORIES**

Outlet boxes, pull boxes, inspection boxes, switch and socket outlet boxes, fan regulator boxes, etc. shall be of 14 SWG sheet steel, de-rusted, degreased, rust-proof with two coats of zinc chromate primer and painted with enamel or powder coated, complete with earthing terminal. All boxes shall have ample wiring space, and boxes used for outdoor areas shall be weather-proof type.

**END OF SECTION**

## **Section-7: Cable Trays**

### **PART 1 GENERAL**

- 1.1 General Requirements
- 1.2 Scope of Work
- 1.3 Quality Assurance
- 1.4 Submittals
- 1.5 Related Work

### **PART 2 PRODUCTS**

- 2.1 General
- 2.2 Cable Tray

### **PART 3 EXECUTION**

- 3.1 Installation
- 3.2 Earthing
- 3.3 Fire Barriers

**PART 1 GENERAL****1.1 GENERAL REQUIREMENTS**

1. The work of this Division shall be governed by the following documents:
  1. Conditions of Contract.
  2. Instructions to Tenderers.
  3. Form of Agreement.
  4. General and Special Conditions of Contract.
  5. Form of Tender.
  6. Appendices.
  7. Applicable Divisions.
2. Comply with requirements of all sections of this Division
3. It is the Contractors responsibility to be fully aware of and comply with all of the requirements of the above listed documents.

**1.2 SCOPE OF WORKS**

1. Under this section of the Contract cable tray (cable tray) shall be installed to support distribution cables, communication cables and all wiring cables not generally installed in conduit and or trunking.
2. The cable tray shall be installed in such a manner to enable easy access for cable installation.
3. The cable tray shall vary in type and sizes, ie: where large cables are installed, ladder rack type cable tray shall be permitted, where smaller type communication cables are installed, ventilated type cable tray shall be permitted, unless otherwise stated.
4. Cable tray shall be galvanized finished or as specified in BOQ.
5. Cable ladders shall be installed in risers for the full length of the risers unless otherwise instructed by the Engineer.

**1.3 QUALITY ASSURANCE**

1. Acceptable Manufacturers
  1. Subject to compliance with the requirements of the Contract Documents, acceptable manufacturers are to be firms regularly engaged in manufacturer of all materials specified in this section of types and sizes required, whose products have been in satisfactory use under similar service conditions for not less than ten years.

**1.4 SUBMITTALS**

1. Submit the standards to which the cable tray is manufactured to.
2. Submit shop drawings and data in accordance with the general requirements of the contract.
3. Indicate the various types of cable tray with terminology used.
4. Show actual cable tray installation details, size and suspension system.

**1.5 RELATED WORK**

1. Section 26 05 19 Wire and Cables.

**PART 2 PRODUCTS****2.1 GENERAL**

1. The cable tray system shall be of one manufacturer and shall include factory made trays, tray fittings, connections, complete with accessories and supports to form a complete tray support system.
2. The cable tray system shall include the following factory-made tray elements. Straight trays and ladders, fittings and horizontal and vertical bends of various angles crosses, tees, wyes, reducers, vertical riser elements, connectors, joint plates and all necessary fixing accessories including supports. No local or site fabrication of any cable tray system including ceiling and wall supports are acceptable. Threaded rods for ceiling supports are not acceptable.

**2.2 CABLE TRAY**

1. The whole of the tray work, fittings, supports shall be of mild steel hot dipped galvanized after manufacture or as specified in BOQ. The thickness of the protective sheath on any element shall not be less than 60 microns.
3. Insert elements, bolts, screws, pins etc., shall be mild steel cadmium plated/hot dip galvanized.
4. Tray work shall have oval perforations. Ladder type trays shall be used as required and/or approved by the Engineer.
5. All trays (straight and fittings) to be heavy duty returned flanged type unless specified otherwise.
6. Tray component are to be accurately rolled or formed to close tolerance and all edges rounded. Flanges are to have full round smooth edges.
7. Unless indicated otherwise on drawings, cable trays shall be used in the range and 150mm to 750mm wide, in five preferred standard sizes: 150, 300, 450, 600 and 750mm.
8. Other sizes shall be used where specified or as approved by the Engineer.



9. Return flanges shall be a minimum of 10mm deep, unless otherwise specified.
10. Minimum radii at side rails, horizontal, and vertical tees and crosses shall be in accordance with the Manufacturer's standard.

### **PART 3 EXECUTION**

#### **3.1 INSTALLATION**

1. Install all cable trays and ladder racks strictly in accordance with IEE and local authorities requirements.
2. Drilling, machining or cutting shall not be carried out after application of protective coat, unless previously agreed by the Engineer. If cutting or drilling is necessary, edges shall be cleaned up and painted with zinc-based paint before erection.
3. Provision shall be made when installing all cables and cable trays for the expansion and settlement of the building.
4. Cables shall be fixed to the trays/ladders by means of PVC cleats and flame-retardant cleats for flame/fireproof cables with galvanized bolts, nuts and washers. Use galvanized metal trefoil cleats with rubber pad for single core cables
5. The Contractor shall submit calculations relating to tray / ladder work and tray / ladder supports demonstrating acceptable mechanical stresses and sag.
6. Where cable tray must pass below a beam a short length of tray shall be installed on the underside of the beam with 25mm spacers between the tray and the beam underside surface. Cables shall be strapped rigidly to the tray to prevent any possible sag in the cables.
7. Where cable tray is intended to cross a series of beams the tray shall be supported from each beam it crosses by metal supports suspended from below the underside of the beam - the space between the tray and the beam underside surface shall not exceed three times the diameter of the largest cable to be carried on the tray.
8. Cable tray covers are required as specified in BOQ.

#### **3.2 EARTHING**

1. The entire cable tray and ladder system shall be bonded and 12mm x 1.5mm braided tinned copper shall be bolted across each joint in the system by means of galvanized nuts and bolts, complete with flat and spring washers.
2. Tray systems shall be bonded to the main building earthing system as required or directed by the Engineer.

#### **3.3 FIRE BARRIERS**

1. Arrange for opening in fire rated walls, and floor for width and depth of cable tray to run through in addition to the specified clearance of the above cable trays.

2. Arrange and make good fire rating of floors or walls after cables have been installed. For all floor openings of all risers (telephone, power) except vertical telecom cable risers where grating shall be provided.
3. All openings / sleeves within floor slabs and fire rated walls shall be sealed with proper fire rated material.

**END OF SECTION**

## **Section-10: MV Switchgear**

### **PART 1 GENERAL**

#### **1.02 DESCRIPTION**

- B. Medium Voltage Switchgears:

#### **1.03 SCOPE**

- B. The work under this section consists of supplying, installing, testing and commissioning of all material and services of the complete MV switchboards as specified herein or stated on the Drawings and in the Bill of Quantities.
- C. The Contractor shall discuss the electrical layout with the Engineer and co-ordinate at site with other services for exact location and position of the MV Switchboards.

#### **1.04 QUALITY ASSURANCE**

- A. Electrical components, Devices and Accessories; Listed and labeled as defined in IEC 62270200, by a testing agency acceptable to authorities having jurisdiction and marked for intended use.

#### **1.04 SUBMITTALS**

- G. Product data: For each type and size of MV switchgear indicated.
- H. Manufacturer seismic qualification certification: Submit certification that the switchboard, accessories, and components will withstand seismic forces.
- I. Submit shop drawings and product information for approval and final documentation in the quantities listed.
- J. Documents for Approval:
  - 1. General arrangement drawing showing dimensioned elevation and floor plan, side views, foundation details and one-line diagram.
  - 2. Panel arrangement drawing showing layout of devices on the panel doors.
  - 3. Three line diagrams.
  - 4. DC Schematics.
  - 5. Nameplate engraving drawings.
  - 6. Bill of material.
- K. Final Documents: Record documentation to include:
  - 1. Documents listed above.
  - 2. Wiring diagrams.
  - 3. Recommended spare parts list for start-up support.
  - 4. Instruction manual.

#### **1.05 PROJECT CONDITIONS**

- A. Service Conditions: As specified in general conditions of contract.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Available Manufacturers:

Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to the list of manufacturers.

### 2.02 Medium Voltage Switchgear

- A. Enclosure Specification:

The enclosure must be Metal Clad as per IEC 62270-200 and shall place in an ambient condition not more than 50°C with IP 42 rating. The MV switchgear shall be 12 SWG sheet steel fabricated floor mounting, cubicle type indoor, totally enclosed, dust tight and vermin proof.

Basic Data:

Enclosure Material:	Metal Clad as per IEC 62270-200
Ambient Temperature:	50°C
Installation Type:	Indoor
Degree of Protection:	IP 42
Color:	RAL – 7035 (or as approved by the Engineer)
Name Plate:	Stainless steel
Pocket Drawing:	Suitable Location

- B. Ratings:

Peak impulse withstand voltage of 95kV and 1 minute power frequency withstand test voltage of 36 kV rms. The switch gear must be capable of carrying the short-time current ( $I^{th}$ ) for  $t=3$  sec. and must withstand the mechanical short circuit stresses by peak short-circuit current ( $I_s$ ).

- C. Components:

1. Vacuum Circuit Breaker

VCB must be with-draw able type with rated voltage 12 kV at 50 Hz. The rated current of VCB must be 630A/800A with short circuit making capacity of 50 kA and short circuit breaking capacity of 25 kA. The insulation level of VCB must be 95 kV (BIL).

Capacity and Basic Data:

Breaker Type:	Withdraw-able Vacuum Circuit Breaker
Rated Current:	(As shown on drawings)
Rated Nominal voltage:	11kV
Rated Maximum voltage:	12 kV
Operational Frequency:	50Hz
Rated Short Circuit Making Current:	50kA
Rated Short Circuit Breaking Current:	25kA

Rated Basic Insulation Level (BIL):	95kV
Auxiliary Contacts:	Provision for remote indication and/or as required
Heater and audible alarm:	220V AC from substation L.V switchboard
Motor Spring:	220V AC from substation L.T switchboard

#### Interlocking

Any interlocking if required inside the M.V switchboard and between M.V switchboard and other equipment shall be provided as stated on the drawing.

#### 2. Bus-bars

The bus-bar shall be made of high conductivity electrolytic 99.9% pure copper insulated and mechanically braced to safety to with-stand the stresses due to short circuit currents.

#### Bus-bar Specification:

Material of Conductor / Bus-bar: Tin Plated Copper & Sleeved

#### 3. Protective Relays

The circuit breaker shall be provided with inverse definite minimum time, non-directional relays with over current, earth fault and instantaneous tripping. Relay must be provided with setting ranges as follows:

#### Basic Data:

Relay Type:	Self Powered (Numerical)
Setting Ranges:	O/C = 0.2 – 40 I <sub>n</sub>
(Refer the Detailed Specs)	E/F = 0.05 – 10 I <sub>n</sub>
Over-current setting range	50-20% of CT secondary rating
Earth-fault setting range	20-80% of CT secondary rating
Short-Circuit setting range	200-800% of CT secondary rating.
Time setting range	0-1 second
Connection	Current Coil 5Amp secondary of CT, Tripping Series tripping through CT.

#### 4. Meters

Digital ammeters and voltmeters having front dimensions of 96 x 96 mm, voltmeter shall have measuring range of 0-15 kV and ammeters measuring range shall be as shown on the drawing. Ammeter and voltmeters shall conform to B.S.S. accuracy class 1.5 and suitable for connection to the secondary of PTs and CTs respectively as described in these specifications.

Kilowatt-Hour (kWh) and Kilovolt-amp hour (kVAh) meter shall be suitable for 3 phase, 3 wire 50 Hz balanced and unbalanced loads. The kWhr meter shall also be provided with maximum demand indicator and a built in switch for operation at an interval of 15 minutes.

#### 5. Earthing Switch

The three-pole isolating switches shall be suitable for earthing of equipment and shall be rated to safely carry the fault current due to inadvertent closing of supply circuit breaker and also for making duty on a fault.

#### 6. Current Transformer

MV switchgear must be provided with current transformer with following ratings and characteristics:

Cast Resin type transformer with three single units for each phase. Current transformer shall have transformation ratio of 400/5 A (or as specified by Consultant). CT must be designed for rated voltage of 12 kV and insulation level of 95 kV (BIL). The burden and accuracy class for protection purpose must be 5P20, 15 VA and for metering purpose to be 0.5M5, 10VA.

##### Basic Data:

Type:	Cast resin.
Transformation Ratio:	As shown on the tender drawing.
Rated Voltage:	12kV
Rated Insulation Level:	95kV BIL
Withstand Short Circuit Level:	25kA
Protection Class & Burden:	5P20, 15VA
Metering Class & Burden:	0.5M5, 10VA
Number:	Three single phase unit.
Duty:	For operating relays/meters and instruments.
Accuracy:	5P 20 for protection and 1.0 for measuring with security factor 5.

#### 7. Voltage Transformer

MV switchgear must be provided with voltage transformer with following ratings and characteristics:

Cast Resin type transformer with three single units for each phase. Voltage transformer shall have transformation ratio of 11 kV/110 V. VT must be designed for rated voltage of 12 kV and insulation level of 95 kV (BIL).

##### Basic Data:

Type:	Cast resin.
Transformation Ratio:	11kV/110V
Rated Voltage:	12kV
Rated Basic Insulation Level (BIL):	95kV
Burden:	100VA

#### 8. Surge Protection

Surge Arresters shall be provided in HT switchboard, wherever required as shown on drawing. The 11 kV surge arresters shall have following characteristics. Equipment will be tested in accordance with the relevant IEC standard.

##### Basic Data:

Peak Current Surge:	100 kA
Service (rated voltage):	11 / 1.732 kV rms
Voltage Class (highest system voltage):	12 kV rms

## 9. Operation Counter

The operation counter must be provided to count 10,000 operations.

## 10. Mechanical Interlocking Scheme.

- ✓ Prevent withdrawing or inserting trolley when the breaker is "ON".
- ✓ Prevent closing the circuit breaker when the trolley is between service & isolated position.
- ✓ Prevent decoupling the low voltage plug when the breaker is in service position.
- ✓ Prevent closing of the earthing switch (if opted), before the trolley is in the isolated position.
- ✓ Prevent inserting the trolley, when the earthing switch (if opted) is in the closed position.

## Codes and Compliance

Switchgear:	IEC 62271-200
VCB:	IEC 62271-100
Disconnecter / Earthing switches:	IEC 62271-102
Current Transformers:	IEC 60044-1
Potential Transformers:	IEC 60044-2
Degree of Protection:	IEC 60529
Installation Method:	IEC 61936-1
Insulation:	IEC 60071

## 11. MIMIC BUS

3mm x 12mm (color selected by purchaser) acrylic mimic BUS shall be supplied on each unit outlining the one-line diagram power circuits on front surface of the switchboard.

**PART 3 EXECUTION****3.1 INSTALLATION**

The MV switchboard shall be installed at location shown on the drawing. The cable trenches shall be constructed as part of civil works. The Contractor shall co-ordinate with the civil works for providing any openings, holes, etc., in time to avoid any breakage/damage to completed works. In case such provisions in civil works for installation of electrical equipment are not made or made incorrect, the same shall be rectified by the electrical Contractor at his own cost and to the satisfaction and approval of Engineer.

General: A Bidder shall provide 5 year warranties, parts included on all switchgears.

**3.2 DEMONSTRATION**

Switchgear Manufacturer shall provide a factory-authorized service representative to train Owner's maintenance personnel in the following:

1. In procedures and schedules related to startup and shutdown, troubleshooting, servicing, and preventive maintenance.
2. Review data in the maintenance manuals.
3. Schedule training with Owner with at least three week's advance notice.

### **3.3 FIELD SERVICE**

Switchgear manufacturers own (same name as the manufacturer) field service office shall be located not more than a three-hour drive from the installation site. And have at least 10 years experience in the installation, startup and testing of the said switchgear.

**END OF SECTION**



## **Section-12: Switchboards & Panelboards**

### **PART 1 GENERAL**

- 1.1 General Requirements
- 1.2 Scope of Work
- 1.3 Quality Assurance
- 1.4 Submittals
- 1.5 Factory Testing

### **PART 2 PRODUCTS**

- 2.1 References
- 2.2 Sleeves for Primary Service Cables
- 2.3 380/220 Volt Secondary Switchboards
- 2.4 Distribution Panel boards
- 2.5 Final Distribution Boards
- 2.6 Plant and Field Tests
- 2.7 Switchgear Components for MDBs, MCCs, SMDBs, OEBs and All Other Control Panels
- 2.8 Automatic Power Factor Correction Equipment
- 2.9 Riser Diagram

### **PART 3 EXECUTION**

- 3.1 Electric Service
- 3.2 Installation of Switchboards
- 3.3 Installation of Distribution Boards
- 3.4 Automatic Power Factor Correction Equipment
- 3.5 Testing & Coordination Study of Distribution
- 3.6 Co-ordination Study
- 3.7 Owner's Equipment Boards
- 3.8 Training

### **PART 1 GENERAL**

## 1.1 GENERAL REQUIREMENTS

- .1. The work of this Division shall be governed by the following documents:
  - .1. Conditions of Contract.
  - .2. Instructions to Tenderers.
  - .3. Form of Agreement.
  - .4. General and Special Conditions of Contract.
  - .5. Form of Tender.
  - .6. Appendices.
  - .7. Applicable Divisions.
- .2. Comply with requirements of all sections of this Division particularly Section 26 24 16 Electrical General Provisions.
- .3. It is the Contractors responsibility to be fully aware of and comply with all of the requirements of the above listed documents.

## 1.2 SCOPE OF WORK

- .1. Supply, install and connect all main distribution equipment and make the utility service connections all as described hereinafter and in accordance with the requirements of the Contract Documents.
- .2. The service cables provided by LESCO from the MV Switch room, Sub-station. Transformer secondary at 380/220V 50 Hz, shall be connected to free standing cubicle switchboards, sized in accordance with the capacity of the sub-station transformers, as shown on drawings.
- .3. The switchboards shall comprise of main breakers, indicating instruments and outgoing breakers to provide a complete service and distribution system for the whole complex.
- .4. Generally, the sub-distribution shall be carried out by means of:
  - .1. XLPE/SWA multi-core armoured cables to the various locations terminating at distribution panelboards, M.C.C. panels and items of electrical equipment.
  - .2. Where electrical loads are high, and volt drop a consideration due to lengthy runs, copper bus duct shall be installed to provide adequate distribution.
  - .3. Distributions from panel boards shall be generally in conduit and single copper conductors drawn into the conduit all as specified in other sections of the specification.

## 1.3 QUALITY ASSURANCE

- .1. Acceptable Manufacturers
  - .1. Subject to compliance with the requirements of the Contract Documents, acceptable manufacturers are to be firms regularly engaged in manufacture of switchboards, whose products have been in satisfactory use under similar service conditions for not less than ten years, and independently certified to ISO 9000/BS.
- .2. Regulatory Requirements
  - .1. All components shall meet all local standards listed and labeled, and comply with BS 5750 Part 1.
  - .2. All components and complete assemblies shall be rated for and capable to withstand ambient conditions of 50°C and 100% R.H.

#### 1.4 SUBMITTALS

- .1. Reference Applicable Divisions - Submittals.
- .2. Reference Applicable Divisions - Shop Drawings, Product Data & Samples.
- .3. Shop Drawings.
  - .1. Switchboards
    - Distribution panel boards
    - Power & Lighting panel boards
    - Air Circuit Breakers
    - Moulded Case Circuit Breakers
    - Earth Leakage Circuit Breakers
    - Miniature Circuit Breakers
    - Automatic Power Factor Correction Equipment
    - Busway termination
  - .2. Indicate on shop drawings:
    - .1. Floor anchoring method and foundation template.
    - .2. Dimensioned cable and bus duct entry and exit locations.
    - .3. Dimensioned position and size of bus.
    - .4. Overall length, height and depth of complete switchgear.
    - .5. Dimensioned layout of internal and front panel mounted components.
  - .3. Indicate on product data:
    - Time current characteristic curves for all circuit breakers.

## 1.5 FACTORY TESTING

- .1. Refer to Section 16010.
- .2. Notify the inspection team 4 weeks in advance of final factory tests of the switchboards. The inspection team shall be entitled to witness all or any of the factory tests.
- .3. Submit copies of certified test results.

## PART 2 PRODUCTS

### 2.1 REFERENCES

- .1. Refer to Section 16100 Basic Materials and Methods.
- .2. Refer to Section 16115 Busways.
- .3. Refer to Section 16450 Grounding.

### 2.2 SLEEVES FOR PRIMARY SERVICE CABLES

- .1. Heavy duty treated flanged metallic sleeves complete with all required fittings and bell end terminations, as shown on drawings and satisfying the requirements of authorities having jurisdiction.

### 2.3 380/220 VOLT SWITCHBOARDS

- .1. Provide switchboards as specified hereinafter and as detailed on the drawings.
- .2. General Switchboard Criteria.
- .3. Switchboards shall be 400/220 volt, 3 phase, 4 wire 50 cycle AC, IP 42, metal enclosed for use on solidly grounded systems. The switchboard shall be in accordance with BS 5486: or equal to IEC 439-1 and having a minimum class 3 protection IP-42. The switchboards shall incorporate all of the following:
  - .1. Air circuit breakers up to 3500 amps complying with IEC 947 and as specified hereinafter.
  - .2. Current limiting and standard type non-fused moulded case circuit breakers and as specified hereinafter.
  - .3. Tested to ASTA certification IEC 439-1 or BS 5486 for a fault rating of 50 KA for 3 secs at 380 volts or 100 KA for 1 sec. The ASTA certification or equal shall be valid for switchboard sections as well as field assembled complete switchboards.
  - .4. Tin plated copper bus bars.
- .4. Casings & Enclosures
  - .1. All switchboards shall be of indoor construction, dead front, metal enclosed multicubicle type, free standing, dust and vermin protected, front operated and of clean and

modern appearance. All equipment shall be completely enclosed and the construction of each cell shall be in such a manner as to permit front and rear access to the interior of any cell by isolating the particular switch.

- .2 All switchboard sections shall be assembled and co-ordinated by one manufacturer. Main switch boards; motor control centers; owner equipment boards and motor control panels used for four pumps and above are to be Form 4, Type 6. Provide mimic diagram on the fascia of the switchboards. Indicating lamps shall be LED type and provide lamp test button. Provide audiovisual alarm for trip indication with mute button. Space heaters shall be provided with humidistat and thermostat control, on/off switch and indicating lamp.
- .3. The main switchboard sections shall be completely made of folded steel construction, minimum 2 mm thickness, fully rustproofed and epoxy powder painted inside and outside. Any sheets not painted or any other materials such as Alu.Zinc etc. shall not be acceptable. Overall maximum height shall not exceed that shown on the drawings.
- .4. All external bolts or screw heads shall be brass or cadmium plated, complete with required washers.
- .5. All doors and removable covers or plates shall be provided with high quality neoprene gaskets to prevent the ingress of dust, vermin and insects. Doors shall have key type locks for faster open/close but not screws/bolts.
- .6. All switchboard sections shall be of IP 42 construction in accordance with IEC 439.
- .7. Each unit of the switchboards shall be housed in its own cell fittings with a hinged door mechanically interlocked in such a manner that the cell door can only be opened when the switch is in the 'OFF' position.
- .8. Switching units shall be arranged in separate compartments or sections to protect against accidental contact with adjacent equipment when handling the elements in the section and to prevent the spreading of faults from one section to the other. Bushings shall be provided for all outgoing cables including control and BMS cables.
- .9. Adequate cable ways shall be provided in switchboards accessible by hinged lids or removable covers. Arrangement shall be such that maximum accessibility is provided to all parts, incoming and outgoing wires and cables. They shall be factory assembled.
- .10. The equipment in switchboards shall be accessible with indicating instruments mounted not higher than 1.8m and the centre lines of operating devices not higher than 1.8m above switchboard base. Drawout breakers (400amps and above) mounting height shall not exceed 1.4m from FFL. Switchboards shall be properly fixed to the floor with foundation bolts grouted in the floor / fixed to channel on trench wherever trench is available.
- .11. All switchboards shall have top or bottom cable/busduct entry as required. Basically main incoming cables shall be bottom entry and outgoing cables or busducts top entry, through suitable termination boxes and gland plates, all accessible from front or rear of panel. The Contractor shall ensure that adequate access and termination provision is incorporated in complete switchboards for all incoming and outgoing cables and busducts specified.
- .12. All panels and equipment shall be certified typed-tested, suitably rated for operation in the ambient conditions and supply characteristics stated.

- .13. Switchboards sections shall contain withdrawable type air circuit breakers, busbars, MCCBs, instruments, earth bus, etc., as specified with ratings and arrangements as shown on the Drawings and shall be complete with all internal wiring and connections.
- .14. All switchboards shall be tested at the manufacturer's premises as well as after installation.
- .15. The Contractor shall submit all technical details, wiring diagrams and interlocking arrangements to the Engineer for review prior to ordering. Detailed constructions and general arrangements shall be agreed with the Engineer during construction stage.
- .16. All doors and removable covers shall be provided with a flexible earth conductor connected to the switchboard frame.
- .17. BMS marshalling compartment of adequate size shall be provided in every switchboard and motor control centre wired to units.
- .18. Battery and battery chargers for the control of PLC's and breakers shall be provided with 100% redundancy in separate enclosures with all failures, overcharge, under voltage, overvoltage alarms being monitored by BMS.

.5 Busbars

Main bus bars shall be constructed of high strength, high conductivity, flat tin plated hard drawn copper throughout, fully braced by means of colour code injection moulded glass filled polyester insulation with joints bolted using high strength 12mm cadmium plated steel bolts and extra wide, extra thick washers to ensure maximum pressure and current distribution at each joint or fully insulated with colour coded fire retardant insulation. Bolts shall be tightened to torque wrench prescriptions.

The busbars shall be designed so that maximum temperature rise in any part of the switchboard will not exceed 35 degree C over 50 degree C ambient at full load. Reduced size neutral busbars shall not be permitted. Bus bars current density shall not be less than 1000 A/Sq. inch. 'T' type connection units shall be used for connection between main busbars and branching busbars. Busbars end shall be finned. Compartment temperature rise shall be within the limits to comply with latest BS / IEC Standards.

.6 Ground Bus

A continuous ground bus, not less than 50% of the main bus cross section area shall be provided for the length of each switchboard and solidly bolted to the steel framework. The ground bus shall be constructed of the same materials as the main bus and shall be complete with suitable lugs for grounding connections outlined on the drawings. The ground bus shall have momentary current rating equal to or greater than that of the apparatus in the switchboard. Removable link is required between the neutral bus and ground bus .

.7 Control and Instrumentation Wiring

- .1 Control wiring will be with PVC insulated stranded copper conductors rated for 750V and 90 Deg. C.

.2 Connectors to be vinyl insulated compression terminals manufactured in one piece from pure electro tin plated copper. Insulation to be colour coded with separate colours for the following applications:

.1 380 volts.

.2 220 volts.

.3 Run wiring from current transformer to instruments or relays via terminal blocks with shorting links for maintenance. CTs for transducers shall be separate. CTs or PTs used for metering protections, signaling, interlocking shall be separate and shall not be used for multi-purpose.

.4 Identify all wires at each end with wire tags. Wires in all switchboards to have a unique identification.

.8 Digital Metering System

A digital metering system complete with all CTs and PTs for customer's use shall be installed and factory wired in locations in each switchboard as specified hereinafter. All PT secondaries shall be for 24V, and all CT secondaries shall be 5A. The system shall be an integrated micro-processor based metering package, capable of displaying phase voltage, line volts for all phase, current for each phase, power factor, frequency, kilovolt amperes, kilovolt amperes reactive, kilowatts, Kilowatts hours, megawatt hours, , maximum kilowatts demand, and display overflow. A standard banan jack test block shall allow testing of the meter by injecting 220V and 5A while the phase display indicates T. Three set point dry contacts for load shedding or alarm shall be provided, each being field programmable to suit Employer requirements. The meter shall be designed to include provisions for communication with external monitoring devices via an RS232C port or better. All parameters shall be available on LCD display only by selection button provided on meter.

The metering system and associated software shall be manufactured by the switchboard manufacturer.

The Contractor shall include for all hardware and software as required and recommended by the meter manufacturer for remote monitoring at the BMS terminals for kilowatt-hour meter readings and failure alarm.

.9 Switchboard Arrangements

.1 Generally switchboards shall be as specified hereinafter. Specific items of equipment of each switchboard shall be as detailed on the drawings and as listed hereinafter.

.1 A PLC alarms shall be monitored by BMS including battery alarms.

.2 Logic sequence of operation shall be as shown on drg. no. LITE/LSCH/L-47 achieved through the PLCs with 100% redundancy and auto changeover interconnected with the generator switchboard PLCs.

.2A Sealed batteries and charger with four hours back up power and 10 years guaranteed batteries shall be installed in separate enclosure. Provide digital ammeter, voltmeter and boost switch for battery charger. Batteries shall be monitored at BMS for common fault, charger trouble, low battery voltage and earth fault.

3 All MDBs

.1 Incoming breakers controlling incoming service motor operated, withdrawable air circuit breaker, communicating type.

- .2 Incoming breaker controlling generator service shall be motor operated, withdrawable air circuit breaker, communicating type.
- .3 Feeder circuit breaker serving bus risers shall be motor operated withdrawable air circuit breaker communicating type.
- .4 Other outgoing feeder breakers shall be of withdrawable moulded case circuit breakers sized as detailed on the drawings with a minimum short circuit interrupting capacity of 50 KA RMS system at 380 volt 3 phase, communicating type.
- .5 Digital metering units located as shown on drawings.
- .6 Ground fault relays and CT's.
- .7 All MCCBs shall be solid state communicating type.
- .8 Kilowatt Hr meters as shown on drawings.
- .9 Lamp test buttons
- .10 Buzzer with mute for mains presence. One button for each group to mute all buzzers.
- .11 Transformer failure simulation switches in addition to one simulation switch for total mains failure.

#### .4 Low Voltage Motor Control Centre

##### 1. Scope

This specification covers design, engineering, assembly works testing of low voltage Motor Control Centres for Modern high rise building complexes. The Motor Control Centre shall provide power and centralized control for Air Conditioning equipment drives in the building/complex. As such high reliability and continuity of supply / service are prime requisites. Refer also section 16800.

##### 2. Ambient Conditions

Max. ambient temperature	50°C
Max. RH	100

3. System Voltage	380V/220V, 50Hz 3 phase 4 wire
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##### 4. Standards

Equipment offered shall conform to the latest issue of following standards:

BS 4752	ACBs & MCBs
BS 3871	MCBs
BS 589	Direct Acting Meters
BS 1650	Capacitors for PF connection
BS 4941; 1-4	Motor Starters
BS 5424	Contactors
BS 5420	Degrees of protection of enclosures

In addition to the above the switchgear equipment shall conform to local regulations.

The Switchboard shall be of simple, yet robust modular construction providing a factory built assembly for use as a combined Power and Motor Control Center (PMCC).



It shall be floor mounting free standing sheet steel clad modular pattern Cubicle type

ASTA certified for 50 KA at 380V for 3 secs.

Manufactured to BS5486: Part 1: 1986, Form 4 Type 6 or IEC 439-1

Dead front design

Top and / or bottom cable entry

Front and / or rear access for cabling Degree of Protection IP54

#### 5. Indication & Controls

All indication and controls shall be grouped together on the front of the ACBs and shall be accessible on the front door of the Cubicle through a suitable cut out on the cubicle door. The arrangement shall be flush, neat aesthetic and modern.

The item shall generally comprise;

- Manual Spring charging lever
- Indication of spring charged - yellow
- Indication of Circuit breaker - Tripped
- Closing Push Button
- Opening Push Button
- Open / Closed Indication of ACB
- Racking in/ out device with door closed
- Release lever for moving part of ACB - Service/Test/Isolator Position indicator - Lamp test button.
- Microprocessor based control with LCD display and all adjustable settings displayed.

#### 6. Safety Shutters

Withdrawable ACBs shall be provided with shutters that drop automatically on withdrawal. Shutters shall be RED with markings to show live contact are behind the shutters. Shutters shall have padlocking facility.

#### 7. Safety Interlocks

A lever shall be provided on the front of the ACB which shall be released to withdraw or insert the moving part. It shall not be possible to rack In or Out a closed ACB.

#### 8. MCCBs

MCCBs shall be three pole manually operated fixed type with thermo magnetic releases for overload and short circuit. Breaking capacity shall not be less than 25KA at 380V, 50Hz where 50 kA is not specified.

#### 9. Starter Feeders

Each starter feeder shall be equipped with but not limited to:

- Main TP MCCB with door interlocked rotary handle

- Triple pole thermal overload relay with built in single phasing prevention feature, 2 auxiliary contacts for remote monitoring.
- Hand-Off-Auto Control Switch
- Common Duty Selector Switch where applicable
- Run/Trip Lamps
- Digital Ammeter with selector switch
- Auto changeover key operated arrangement where applicable
- Wiring for interlocking with Chiller Control Circuit
- Chillers sequence and selector controls if required/as shown on the drawings.

Earth bar shall be of minimum 300sq mm<sup>2</sup> and run the entire length of the switchboard.

#### 10. Interconnections

Interconnections shall be very short and neat using air insulated, tinned copper bars.

#### 11. Termination

Unless otherwise indicated, cable entry shall be from bottom only, cabling access is from the front or rear as applicable. A platform shall be built within mechanical room to elevate MCC's and allow bottom entry and easy access to compartments.

For large power feeders suitably staggered links shall be brought out into the cabling area for easy termination of cables of sizes as shown on the drawings.

For Starter feeders power and control cables shall be brought out neatly to terminal blocks. Power and Control terminals shall be adequately segregated. Power wires shall be RYB colour coded at the termination's. Control wires shall be multi stranded copper with black insulation and ferruled. Terminal Blocks should be suitably marked for identification and easy termination of field wires.

12. Meters shall be multi function digital type. Indicating lamps, push buttons control and selector switches shall be neatly and logically flush mounted on the front of the respective equipment compartment doors to IP54. Lamp test button shall be provided.

#### 13. ACBs

ACBs shall be of modern, advanced design and construction, modular pattern with features for high breaking capacities, precise control, indication and protection. They shall be motor operated 3 or 4 pole as specified on the drawings / schedules, and shall be of communicating type similar to MDB's Breakers with IP-54 covers.

14. Protection - Direct acting built in, solid state microprocessor (micro logic) based releases shall be provided for protection against Overload, short circuit and earth fault. Under voltage trip and shunt trip shall be provided. LCD display for reading all parameters is required. The activated protection also shall be displayed or indicated.

- Overload stage shall comprise an inverse Long Delay unit with settings from 0.4 to 1 x In, on 5 different characteristics curves.
- Short Circuit Stage - Inverse short delay unit adjustable from 1 to 8 x In definite steps on 7 different characteristic curves with adjustable time lag settings. The protection specified is applicable for all ACBs of Section 16400 & 16622 and 16800.

- The trip unit of ACB shall provide measurement of current, voltage, active power and harmonics (3, 5, 7, 9, 11 & 13). These shall be displayed on LCD screen. The trip unit shall also display histories of last 10 trips and maintenance indicator.

#### 15. Operating Mechanism

The ACB shall be closed and opened by a Stored energy spring charged operating mechanism. Closing springs shall be charged by motor operated with also provision for manual charging .

#### 16. Construction

The switchboards shall be constructed with 2mm-thickness sheet steel and of epoxy powder painted colour RAL7032. These frames shall be fitted with gland plates or cover plates depending on the cable entry. The top frame with provision of fitting lifting eye-bolts and the bottom frame with mounting holes for fixing to foundation bolts.

Functional units shall be mounted in multi tier modular assemblies / compartments that are prefabricated to accept the complete range of manufacturers products. Minor adaptations to the mounting assemblies shall enable a host of other products to be mounted.

Mounting assemblies, together with their functional units shall be bolted to the basic structure, which is also modular. The basic structure shall be 16 modules high and capable of accepting mounting assemblies that are in multiples of a basic module.

The Compartment front doors shall be folded at the edges and welded at the corners with concealed hinges and with rotary front operating handles accessible externally. Side and rear covers shall completely enclose all live parts and complete switchboard shall present a neat flush and aesthetic appearance.

#### 17. Paint Finish

All steel work shall pass through a four stage finishing process, chemical spray, degreasing, iron phosphating and finally an electrostatically applied top coat of epoxy powder coating which is cured in a high temperature oven to give a strong molecular bonding with the steel. The top coat shall be RAL7032 colour.

#### 18. Busbars

The Main Horizontal busbars shall be HDHC tinned insulated copper with phase colour sleeved running in the full switchboard. Current rating as shown on the drawings rated for the ambient specified. Supports shall be fibre glass reinforced, moulded type material with large creepage paths or as recommended by the manufacturer. They shall be totally enclosed in a separate sheet compartment and braced for the fault level specified. Temperature rise as specified earlier in this section.

The vertical busbars shall also be HDHC tinned insulated copper, suitably connected to the Main Horizontal busbar and run in a separate totally sheet steel enclosed Vertical busbar chamber. The busbars shall be supported regularly at short intervals by fibre glass reinforced moulded type material or as recommended by the manufacturer. Current ratings shall suit the loads connected on each Vertical busbar.

The Horizontal and Vertical busbars shall be ASTA Certified or equal for Specified fault level .

Neutral shall be of same size as the phases for Horizontal and Vertical busbar assemblies and sleeved completely black.

.5 Air Circuit Breakers

- .1 Air circuit breakers as listed in the switchboard arrangements shall conform to IEC 947-2 and shall be as specified hereinafter.

Air circuit breakers shall be supplied from an approved manufacturer with a solid state microprocessor based release adjustable type, instantaneous short circuit protection, adjustable earth fault protection, excess temperature and built-in release malfunction alarm. The microprocessor shall enable building management system to monitor and control the air circuit breaker. Provide LCD display for reading all parameters.

- .2 Low voltage power air circuit breakers shall be 3 or 4 pole (as indicated in the drawing) 600/1000-volt class with continuous current ratings and trip ratings as detailed on the plans. Breakers shall be rated for 65 KA interrupting capacity at 380 volt 3 phase for 3 seconds unless otherwise indicated. Breakers shall have double break main contacts, a 3 phase solid state overload relay, earth fault relay and shall be trip free in operation. Under-voltage and shunt trip release shall be provided. A compression spring stored energy in closing mechanism (electrically charged) shall be used for all ratings, with breakers being closed by means of a push button and shall have the ability to close and latch at interrupting rating at 600 volts. An emergency manual spring charging handle shall be supplied for electrically operated breakers. Handle shall be flush with the front panel of the air circuit breaker in the stored position.
- .3 Breaker faceplate shall have "closed-open" indicator, spring "charged-discharged" indicator, provision to padlock manual charging handle, provision to lock breaker in "open" position, and provision to lock drawout mechanism. Drawout circuit breakers shall be suitable for 3 position (connected, test, disconnected) racking with enclosure door closed, and shall be equipped with an interlock to ensure breaker contacts are open and closing spring is discharged when racking tool is inserted. Faceplate mounted control buttons indicators interlocks etc. shall be accessible without opening enclosure door.
- .4 Electrically operated breakers must have provision for emergency manual closing by inserting a special tool through the faceplate. A control isolating switch shall be provided on the faceplate to isolate the supply to the spring charging motor.

- .5 Relay pick-up and time delay settings shall be selected in discrete factory calibrated values by means of detent action thumbwheel actuated switches with gold-plated contacts. The relay shall be equipped with Zone Selective Instantaneous Protection feature on short time and ground fault elements. A direct acting dedicated solenoid shall be used for initiating breaker tripping. All ACB's shall be provided with auxiliary contacts for local and remote trip alarm annunciation.
  - .6 All bus couplers shall be drawout type manually operated ACB with overload, short circuit and earth fault protections and shall be mechanically and electrically interlocked as shown on drawings. Removable links shall be provided in the main bus bar of each phase immediately after the incoming ACBs to enable easy maintenance and replacement of current transformers of the measuring instruments.
- .6 Moulded Case Circuit Breakers
- .1 All breakers shall be of the same switchboard manufacturer and standard ratings and frame sizes shall be used where appropriate and possible.
  - .2 Moulded case circuit breakers shall be of the air break design type, quick make and quick break, having free toggle mechanism ensuring full contact pressure until time of opening, whether actuated automatically or manually. The mechanism shall be completely enclosed in a compact moulded Bakelite case, sealed to prevent tampering. Breakers shall be drawout type for MDBs and MCCs and plugin / screw on type for OEBs and SMDBs.
  - .3 Circuit breakers shall have inverse time tripping characteristics with automatic release secured through action of a combination thermal magnetic trip element which shall trip free of the handle and operate in response to an overload or short circuit. Provide MCCB with adjustable overload and short circuit protections
  - .4 Breaker contacts shall be non-welding and non-corrodible silver tungsten composition. Circuit breaker handle shall have three positions, 'OFF', 'ON' and 'TRIP' thus indicating clearly abnormal conditions of the circuit. Single pole circuit breakers with handle tie or bar equivalent construction are not acceptable for a multi-pole breaker. Breakers shall have ratings and breaking capacity as indicated on the Drawings.
  - .5 All circuit breakers shall be as indicated under the section of the documents and as drawings. All circuit breakers feeding motors shall be of motor protector type suitable to withstand the motor starting current at the full load current trip setting.
  - .6 Current limiting circuit breakers shall be no fuse type and shall be used, as specified elsewhere on the distribution system to ensure that fault levels are restricted to acceptable levels for downstream devices and equipment. The characteristics of all current limiting breakers shall be submitted to the Engineer for review.
  - .7 MCCBs shall be provided with padlocking in the 'OFF' position and shall be fitted with shunt trips/undervoltage trips as required for proper operation and two sets of N/O and N/C auxiliary contacts.
  - .8 Where indicated moulded case circuit breakers shall incorporate earth leakage sensors as detailed to trip the breaker and provide an alarm (except for fire pumps). The sensitivity setting of the sensors shall be as detailed on the drawings.
  - .9 All MCCBs shall have the capability of communicating with the BMS. Where indicated on the drawings or BMS schedule (Sections 15900 & 15950), MCCB's shall be monitored/controlled as shown therein.

- .10 MCCB's 100A and above shall be solid state communicating type for MDBs, MCCs, OEBs & SMDBs.
  
- .7 Outgoing Circuits and Connections
  - .1 All outgoing circuits shall have separate compartment and/or be screened so that equipment for any one circuit can be maintained without risk of contact with live connections on any other circuit, conforming to IEC 60439 form 4 type 6(c).
  - .2 Feeders for circuits rated up to 63A shall be connected to terminal blocks located in separate compartments at top or bottom, conveniently arranged to facilitate termination of cables and suitably identified.
  - .3 For feeders rated more than 63A copper links shall be suitably extended rigidly supported and covered with coloured PVC sleeves.
  - .4 All feeders shall be provided with cable lugs and brass cable glands.
  - .5 Vermin barrier and removable gland plates suitable for the glands required for the specified cables shall be provided. Where cables are single core, the gland plates shall be of a non-ferrous metal.
  - .6 Bushes shall be provided at every compartment for outgoing cables.
  
- .8 Cable and Busbar/Busduct Interconnections
  - .1 The Contractor shall supply and install all cable and busbar interconnections indicated on the Contract Documents and/or required for correct operation of the equipment.
  - .2 All cables must be in accordance with specification section 16120.
  
- .9 Cable Glands
  - .1 Each panel sections shall be provided with cable glands to suit the type, size and number of low voltage cables as indicated on the Drawings.
  - .2 Provision shall be made for future additional cabling.
  - .3 Cable glands or brackets where required shall be mounted inside the panel. Sufficient space for cable connections and adjustments on site shall be provided.
  - .4 The Contractor shall supply approved bolted type compression terminals or equivalent for external cable connections.
  - .5 All openings for external cable connections shall be suitably protected to prevent ingress of dust, vermin etc.
  - .6 The panel sections shall be provided with proper cable fixing clamps and sweating terminal lugs as well as bonding connections.

## **2.4 DISTRIBUTION PANELBOARDS (SUB MAIN DISTRIBUTION BOARDS)**

- .1
  - a) Distribution panel boards shall be manufactured in accordance with IEC 60439 form 2B type 2 and shall be ASTA certified to 35 KA RMS symmetrical for one second. Provide dead front for outgoing breakers. Incomer shall be provided with operating handle. Ambient temperature 50 degree C.
  - b) Owner equipment board shall be manufactured in accordance with IEC 60439 Form 4 Type 6 and shall be ASTA certified to 35KA RMS symmetrical for one second. Thickness of sheet 1.6mm epoxy powder painted colour RAL 7032 inside and outside.
- .2 Panel boards shall be factory assembled floor mounted type. Moulded case circuit breakers shall be provided to withstand a fault level of 35 KA at 380 V, 3 phase, 50 Hz. Moulded case circuit breakers shall have adjustable overload and short circuit protections. All MCCBs shall be solid state type. Panel boards shall have at least 10% spare circuits.
- .3 Panel board Constructions.
  - .1 Panel boards shall have 1.6 mm zinc coated sheet steel and all items shall be flush mounted in the panel. Unless otherwise specified all panels shall be so designed and constructed that all cable installation and connections, and maintenance including the replacement of any item, can be carried out from the front. Panel shall be manufactured in accordance with IP 42. Provide dead front for outgoing.
  - .2 All connections between bus bars and any incoming or outgoing protective devices shall be made using copper bar or cable. All items comprising the panel shall be so segregated that maintenance, other than to bus bar connections, can be carried out on any one item without disrupting the supplies fed by other items. The whole panel shall be finished in epoxy powder coating RAL 7032.
  - .3 The front face of such panels shall comprise a lockable gasketed hinged door. All internal connection cables shall be fitted with identity sleeves and all terminals with identifying tabs. The markings for identifying sleeves and tabs shall be shown on all shop and record drawings.
  - .4 A main earth terminal shall be provided on all panels, the metal framework and casing of any type of panel shall be bonded together and to the main earth terminal of the panel by means of copper earth conductor of adequate size.
  - .5 All panel boards shall incorporate an earthing terminal busbar sized to accommodate earth continuity conductors for each single pole, or multipole MCCB way, plus a minimum of five additional terminals for supplementary earth bonding conductors of minimum 16mm sq. size.
  - .6 Removable gland plates shall be provided at the top and bottom of all panel board enclosures for raceway termination and or cable gland termination. Where cables are single core, the gland plates shall be of a non-ferrous metal.
  - .7 Where contactors are incorporated in panel boards, these shall be located in a separate compartment from protective devices, and have hinged lockable door access and means of ventilation.
  - .8 Low voltage LED pilot lights shall be provided to indicate phase live conditions.
- .4 Panelboard Busbars

- .1 Busbars shall be electrolytic hard drawn copper to BS 159 and tin plated with rating as indicated on the drawings, air insulated and rigidly supported by suitable nonhygroscopic, anti-tracking insulators so as to withstand forces due to thermal expansion under normal operating conditions and the fault currents at the point of installation, neatly arranged for 380V, 50 Hz, 3 phase, 4 wire operation, and fault rating not less than 35 KA sym. for 1 seconds. Busbars shall be designed for 35°C temperature rise above an ambient temperature of 50°C.
  - .2 Busbars shall have the same cross section throughout.
  - .3 Busbars bracing shall maintain the same mechanical strength and current carrying capacity under normal operation conditions and fault conditions.
  - .4 Busbars shall be colour coded.
  - .5 Busbars shall not be exposed unless the complete panelboard doors and dead front is removed.
- .5 Moulded Case Circuit Breakers
- .1 All breakers shall be of the same manufacturer and standard ratings and frame sizes shall be used where appropriate and possible.
  - .2 Moulded case circuit breakers shall be air break deion type, quick make and quick break, having free toggle mechanism ensuring full contact pressure until time of opening, whether actuated automatically or manually. The mechanism shall be completely enclosed in a compact moulded bakelite case, sealed to prevent tampering. Breakers shall be plug in / screw on type.
  - .3 Circuit breakers shall have inverse time tripping characteristics with automatic release secured through action of a combination thermal magnetic or hydraulic magnetic trip element which shall trip free of the handle and operate in response to an overload or short circuit.
  - .4 Breaker contacts shall be non-welding and non-corrodible silver tungsten composition. Circuit breaker handle shall have three positions, 'OFF', 'ON' and 'TRIP' thus indicating clearly abnormal conditions of the circuit. Single pole circuit breakers with handle tie or bar equivalent construction are not acceptable for a multi-pole breaker. Moulded case circuit breakers shall be Plug-in type. Breakers shall have ratings and breaking capacity in accordance with the Contract Documents.
  - .5 Moulded case circuit breakers shall withstand a fault level of 35 KA at 380 V, 3 phase, 50 Hz.
  - .6 Current limiting circuit breakers shall be no fuse type and shall be used on the distribution system as specified elsewhere, to ensure that fault levels are restricted to acceptable levels of downstream devices, equipment and branch circuit panelboards. The characteristics of all current limiting breakers shall be submitted to the Engineer for review. The contacts shall be opened before the crest current value of the unrestricted short circuit current is reached.
  - .7 MCCB's shall have padlocking in the 'OFF' position and auxiliary contacts, shunt and under voltage trips for proper operation. Provide a minimum of two sets of N/O and N/C / auxiliary contacts.
  - .8 Where indicated moulded case circuit breakers shall incorporate earth leakage sensors as detailed to trip the breaker and provide an alarm (except for fire pumps). The sensitivity setting of the sensors shall be as detailed on the drawings.



- .9 All MCCB's shall be adjustable overload and short circuit setting type.
- .6 Digital voltmeter and digital ammeter with selector switches: 0-500V voltmeter with selector switch. Ammeter complete with selector switch and CT's with links for maintenance.

## 2.5 FINAL DISTRIBUTION BOARDS

- .1 Factory assembled Final distribution Boards as scheduled on the drawings and as specified hereinafter to BS5486 Parts 12 1986 with IP42 degree of protection. Enclosure including all other internal sheets shall be sheet steel 1.4mm thick minimum with epoxy powder paint inside and outside and colour shall be RAL 7032. Type of mounting flush or surface shall be agreed with the Engineer during construction stage.
- .2 Panel board Enclosure Provisions
  - .1 Panel boards shall have sheet metal cladding and all items shall be flush mounted in the panel. Unless otherwise specified all panels shall be so designed and constructed that all cable installation and connections, and maintenance including the replacement of any item, can be carried out from the front. Panel shall have dead front.
  - .2 All connections between bus bars and any incoming or outgoing protective devices shall be made using copper bar or cable. All items comprising the panel shall be so segregated that maintenance, other than to bus bar connections, can be carried out on any one item without disrupting the supplies fed by other items. The whole panel shall be finished epoxy powder paint colour RAL7032.
  - .3 The front face of such panels shall comprise a lockable hinged door. All internal connection cables shall be fitted with identity sleeves and all terminals with identifying tabs. The markings for identifying sleeves and tabs shall be shown on all shop and record drawings.
  - .4 A main earth terminal shall be provided on all panels. The metal framework and casing of any type of panel shall be bonded together and to the main earth terminal of the panel by means of a copper earth conductor of adequate size.
  - .5 All panel boards shall incorporate an earthing terminal busbar sized to accommodate earth continuity conductors for each single pole, or multipole MCB way, plus a minimum of five additional terminals for supplementary earth bonding conductors of minimum 16mm sq. size.
  - .6 Removable gland plates shall be provided at the top and bottom of all panel board enclosures for raceway termination and or cable gland termination. Where cables are single core, the gland plates shall be of a non ferrous metal.
  - .7 Final distribution power boards should be supplied with clear space between edge of outgoing breakers and side of panel minimum 200mm. for wiring. This clear space for wiring shall be available on both sides of the boards. Standard panels are not acceptable.

.3 Panelboards Busbars

- .1 Busbars shall be electrolytic hard drawn copper to BS 159 with rating as indicated on the drawings, air insulated and rigidly supported by suitable non-hygroscopic, anti-tracking insulators so as to withstand forces due to thermal expansion under normal operating conditions and the fault currents at the point of installation, neatly arranged for 380V, 50Hz, 3 phase, 4 wire operation, and fault rating minimum 10 KA symmetrical.
- .2 Busbars shall have the same cross section throughout.
- .3 Busbars bracing shall maintain the same mechanical strength and current carrying capacity under normal operation conditions and fault conditions.
- .4 The bus bar system shall be capable of accepting 3 phase or 1 phase plug-on MCB's.
- .5 Earthing terminal bus bar to be provided.

.4 Miniature Circuit Breakers (MCBs)

- .1 Miniature circuit breakers shall comply with IEC-60898 have a rated trip type B or C (type 2 or 3) as required by the drawings and shall have a minimum breaking capacity of 9KA. The frame size of all MCBs shall be the same so that they can be easily interchanged. Breakers can be either plug on type or screw-on type . Circuit breaker devices shall be of the trip free pattern to prevent closing the breaker on a fault and shall be engraved to indicate 'ON' and 'OFF' positions.
- .2 MCBs shall be so arranged in the board that it shall be possible to replace a triple pole MCB with three adjacent single pole MCBs or vice versa. The boards shall be surface type unless indicated otherwise on the Contract Documents. Cable glands shall be provided where required.
- .3 All MCBs shall ensure protection against sub-circuit overloads by means of ambient temperature compensated thermal overload trips for ambient temperature 50 Deg. C and against short circuits by instantaneous magnetic overload trips.
- .4 Multi-phase MCBs shall so designed that if more than one trip mechanism operates, all poles shall open simultaneously. Three pole devices shall be installed for three phase supplies.
- .5 Particular attention shall be paid to the utilization of MCBs in respect of system characteristics, such as fault capacity and discrimination protection, and where appropriate sizes or rating are not specified, it shall be the responsibility of the Contractor to ensure the correct type of equipment is installed and to submit his proposals to the Engineer for review before any equipment or materials are placed on order.
- .6 All MCBs shall be clearly engraved to indicate the particular current rating.

.5 RESIDUAL CURRENT DEVICE (ELCB) for FDBs

- .1 For all circuits serving socket outlets in the floor screed, either in the under floor duct system, the in floor outlet boxes or under the raised floor and where indicated on drawings provide residual current device (ELCB) type circuit breakers unless otherwise indicated.
- .2 Breakers shall comply with BS4293 (1993).
- .3 These breakers shall be all insulated type and consist of a current transformer, tripping coil and contact, 'ON'/'OFF' trip free front operated handle and a test push button. The tripping mechanism shall cause interruption of the supply on an earth fault current of 30 milliamps or 100 m amps or adjustable as shown on the drawings. The tripping arrangement shall not be

affected by ambient temperature changes. The current carrying contacts shall be of robust construction, made of suitable copper alloy and they shall be non-welding and self-wiping.

## **2.6 PLANT AND FIELD TESTS:**

Factory test all switchgears in accordance with ASTA Standards. Submit completed sheets for each switchboard to the Engineer for approval. Include approved field test sheets in the Operation and Maintenance Manual.

## **2.7 SWITCHGEAR COMPONENTS FOR MDBS, MCCS, SMDBS, OEBS AND ALL OTHER CONTROL PANELS.**

### **.1 A.C. Contactors**

- .1 Magnetic full voltage contactors, heavy duty, non-reversing type for heating, motor loads and lighting loads. Each contactor shall be suitable in all respects for the application and shall be recommended type for its breaker shall be AC-23 duty type to IEC 60947-4.
- .2 Mount each contactor in an enclosure, complete with the necessary accessories including pilot light in cover.
- .3 The amperes rating number of poles, auxiliary contacts etc., for contactors shall be as noted on the drawings and as required by equipment manufacturer.
- .4 Contactors shall have CE, CSA and UL approvals .

### **.2 Earth Leakage Circuit Breaker (Relays)**

- .1 Relays shall have power green ON led, red trip LED, test button , reset button, LED s for pre warning of leakage current at early stage. 2 change over contacts.
- .2 Setting range (sensitivity) shall be 0.03, 0.1, 0.3, 1, 3, 5 amps.
- .3 Time delay setting range 0.025, 0.5, 1, 1.5, 2, 2.5 seconds
- .4 Pre warning LEDs for 15%, 30%, 45%, 60%, (yellow) and 100 %(red) of set sensitivity value
- .5 Auxiliary supply voltage, DIN rail mounting /separate base will be as required to suit the board requirements. Provide clear glass window to see the relay. Relay shall be CE approved. Number of poles as indicated on drawings.

### **.3 Plug in type Power / Auxiliary Relays**

- .1 Relays shall have silver-nickel plated contacts. No of poles 2/3, 8/11 pins as required.
- .2 Coil rating 24V/220V/110V as required. Contact rating 10 amps at 250 volts.
- .3 Mechanical flag indication and latching feature.
- .4 Operating temperature – 40 to +60 degree C . Electrical life shall be minimum 200,000. IP40 degree of protection.
- .5 DIN rail mounting /separate base mounting will be as required to suit the board requirements. Contacts shall be clearly visible. Relay shall be CE, CSA and UL

approvals. Number of poles as indicated on drawings. Relay shall have manual operating button.

#### **.4 Under voltage, Phase Failure, Phase sequence, Timer, Thermistor Relays**

- .1 Relays shall have power ON /trip LED.
- .2 Setting range (sensitivity) as required.
- .3 Time delay settings range as required.
- .4 Supply voltage, DIN rail mounting /separate base will be as required to suit the board requirements. Ambient temperature  $-290$  to  $+60$  degree C. Relays shall be CE approval.

#### **AUTOMATIC POWER FACTOR CORRECTION EQUIPMENT**

Provide automatic power factor correction equipment to improve the power factor at the main switchboards to a min. of 0.95. The system shall automatically switch predetermined steps of capacitor banks as programmed in the controller and be integrated in the main switchboards.

Provide a detailed calculation to show the required capacity based on selected and approved equipment electrical loads.

The design, construction and installation of the automatic power factor correction equipment shall meet the requirements of the latest editions of CSA C22.1, C22.2, No. 29 and No. 190.

##### **.1 Capacitors**

The three phase capacitor cell shall be constructed of metallized polypropylene vacuum impregnated with NON-PCB oil, in a one piece extruded aluminium housing complete with integrated grounding/mounting stud. Capacitors to be self-healing type . Temperature range from  $-25^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$  as per IEC 831-1 & 2. Losses to be less than 0.2 W/kVAr.

##### **.2 Capacitor Steps**

All rack mounted capacitor modules to be equipped with standard HRC Form 1 fuses, contactors approved for capacitor switching, current limiting reactors, distribution blocks, discharge resistors and capacitor elements. Capacitor bank to consist of CSA approved 15kVAr capacitor elements or higher up to 50 kVAr to form the required rating for each step unless otherwise requested by DEWA.

##### **.3 Power Factor Controller**

Controller, microprocessor based, to be self contained and mounted in door of enclosure. The controller shall continually measure the actual phase angles, current amplitude and retain installed kVAr step size to automatically switch capacitors on or off as required. Other features shall include:

- A. automatic initialization of power factor controller (phase angle location),
  - B. automatic circular switching sequence (first step on is first step off),
  - C. digital adjustable setting and display of target power factor for 0.85 lagging to 0.96 leading,
  - D. digital display of power factor,
  - E. digital multiplier for switching time delay,
  - F. visual indication of capacitor steps energized,
  - G. visual indication of capacitive/inductive load,
  - H. manual operation (controller displays actual power factor),
  - I. zero voltage release.
- .4 Packaged Capacitors
- Three phase capacitors elements to be mounted in IP42 enclosure with 2mm thick sheet steel with epoxy powder coating inside and outside RAL7032 with provision for dust proofing, Elements shall be replaceable without removal of enclosure from job site. Main terminal or contactor shall be provided as specified. Panel shall be floor standing type. PFC enclosure for MCC shall be IP54.
- .5 Current Transformer
- Current transformer of proper rating to be supplied and installed by the manufacturer in their equipment.
- .6 Ventilation fan with thermostat operation is required. Overheating alarm shall be wired to B.M.S.

## 2.9 RISER DIAGRAM

- .1 Provide to the Employer 2 No. framed single line as built diagram of the electrical distribution system. Install in L.V. room and Generator house or as directed by the Engineer. Provide mimic diagrams on all MDBs , MCCs and OEBs.

## PART 3 EXECUTION

### 3.1 ELECTRIC SERVICE

- .1 Work to be undertaken by LESCO:
- .1 Primary service cables (11KV) into the MV Switchgear Room by LESCO.
  - .2 MV Switchgear (RMU's) by LESCO in MV Switch room.
  - .3 MV Interconnecting cabling from LESCO Switch to consumer switch by LESCO.
  - .4 Secondary service cables (as per drawings) from the power transformer to the main switchboards.

.2 Requirements

- .1 All work performed as part of this section for the electric service shall conform to all requirements of Electric Inspectorates.
- .2 Make all required arrangements with the authorities, in order that the electric service is installed and put into operation at the proper time.
- .3 Connection charges including material and labour costs of work classified under LESCO to be paid by client.

**3.2 INSTALLATION OF SWITCHBOARDS**

- .1 Install switchboards as noted on the drawings and secure to a concrete housekeeping pad, unless the switch board includes its own metal base.
- .2 Run grounding conductor 95mm<sup>2</sup> PVC copper in 50mm conduit from main ground bus to earth pits as per local authority requirements.

**3.3 INSTALLATION OF DISTRIBUTION BOARDS**

- .1 Provide factory assembled MDBs, SMDBs, OEBs, FDBs and PFC banks as indicated on the drawings, each complete with panel board directories.
- .2 Support cabinets and enclosures independent of connecting conduit and accurately install with reference to wall finishes.
- .3 The Contractor shall include for all necessary brackets, angle iron frameworks, supports, etc., for fixing of panel boards. The Contractor's attention is specifically drawn in this respect to the need for frameworks where panel boards are mounted on dry lining stud partitions, where support frames shall fix to, and span between, vertical steel supports to partition lining.
- .4 Equip panel boards with suitable lugs or provisions to accommodate the main and branch conductors scheduled.
- .5 Turn over to the Employer upon acceptance of the project, 2 keys for every panel board complete with key rings, tags and key cabinets to the Engineer's approval.
- .6 Where two (2) or more panel boards are installed in one (1) cabinet, equip the panel board with double lugs and increase gutter capacity to accommodate additional cabling. Busbars shall be rated for the combined current carrying capacity of the panel boards.
- .7 On all flush mounted panel boards stub 2 - 50 mm empty conduits into ceiling space above panel board.
- .8 Complete all panel board circuit directories to the Engineer's approval and mount it in a transparent enclosure at the back of the panel door.
- .9 Fill in panel board directories using a typewriter, to identify circuits.

**3.4 AUTOMATIC POWER FACTOR CORRECTION EQUIPMENT**

- .1 Set capacitor bank in place as shown on the drawings.
- .2 Connect the feeder breaker CT's and PT's.
- .3 Test the system before energizing the capacitor bank.
- .4 Commissioning of the system to be as per the manufacturers recommendations.
- .5 Demonstrate that the system is in perfect operating condition.

### 3.5 TESTING AND COORDINATION STUDY OF DISTRIBUTION

- .1 Inspection Testing
  - .1 Include in the tender price the cost of on-site engineering inspection and testing of the following main distribution equipment.  
Main Switchboards, M.C.C's OEB's, SMDB's MCP's, DB's Emergency Generators.  
Generator Switchboard and Synchronization Panel.  
  
Extent of Testing & Inspection
- .2 This engineering inspection and testing shall be done prior to the system being energized and shall include the following items where applicable.
- .3 Testing, cleaning where necessary, and calibrating all relays and circuit breaker trip devices. (Calibration of all protective devices shall conform to requirements of approved coordination curves).
- .4 Function test of associated control devices.
  - .1 Meggar test interconnecting cables.
  - .2 Carry out fault loop impedance test.
  - .3 Continuity of protective conductors.
  - .4 Earth resistance test.
- .5 Carry out Thermography scan once at the end of construction period using a load bank up to 80% of rated capacity of bus ways and once during the maintenance period with anticipated available peak load of the building utilizing building load only..
- .6 Preparation of testing, inspection and commission report on the function and operation of the automatic transfer switches associated with the emergency generator.
- .7 An acceptance test in the presence of and satisfaction of the Employer and the Engineer.
- .8 The presence, for the length of the required, or qualified and competent equipment service representatives during start-up.
- .9 Forward for approval prior to energization of the distribution system and equipment, form neat typewritten copies of the engineering and testing report.

### 3.6 CO-ORDINATION STUDY

- .1 The coordination study shall be carried out by switchgear specialist to ensure that full electrical power distribution system has proper protection devices to achieve proper protection and to isolate minimum possible faulty section from the system in case of any fault in any part of the power system. The study shall also ensure breakers can safely handle short circuit current derived at that point. KA rating and protections shown in the drawings or specifications are minimum requirements which shall be retained. But these values has to be varied and to be changed as per coordination study by contractor to the approval of Engineer before manufacturing the switchgear without any additional cost /time to contract.
- .2 Carry out the following:
  - .1 Immediately upon award of the contract and prior to the manufacture of the switchboards, prepare a set of co-ordination curves on K.E. NO.336E time current characteristic graph paper and forward eight copies to the Engineer for his approval. Make any changes as directed by the Engineer at no additional charge to the Employer. Submit software copy for Engineer's review.
  - .2 This shall be accompanied by supporting symmetrical as well as asymmetrical fault current calculation data with tabulations to verify protection of the various elements of the system under maximum and minimum fault conditions at the various points in the system.
  - .3 The time-current characteristic curves for the following shall be plotted:
    - .1 The relays and breakers protecting the incoming service.
    - .2 Main and feeder protective devices at all voltage levels used in the distribution system.
    - .3 Protective devices associated with the largest motor in each MCC, the refrigeration compressor, and largest device in each distribution panel.
    - .4 Motor generator protective devices, damage areas and current decrement areas.
  - .4 It shall be the responsibility of the contractor to examine the plans and specifications to ensure that all the relays and protective devices being installed in the distribution system will provide satisfactory co-ordination.
  - .5 Breaker frame sizes, sensors, and delay types, shall be provided in accordance with the approved co-ordination study.
  - .6 Testing procedures shall be in accordance with the following Regulatory Authorities, British Standards Institution, Lloyds Registry, Veritos.

### **3.7 OWNER'S EQUIPMENT BOARDS**

- .1 Provide all Boards as shown on drawings or as provided as part of the work of other Divisions of the Specifications. The Owners equipment boards shall be Form 4 Type 6 unless otherwise indicated.
- .2 Generally, unless otherwise noted, starting equipment, controls and accessories will be supplied by the supplier/installer of the apparatus. Obtain accurate "roughing-in" information to make all necessary "line" and "load" connections required.
- .3 Be familiar with the apparatus being supplied by other divisions and carefully co-ordinate and co-operate with the supplier/installer to ensure a proper and complete installation.



### 3.8 TRAINING

Switchgear manufacturer shall provide training to Client's staff on various activities for a minimum period as shown against each item:

#### Generator Switchboard

Protection Scheme	4 hours
Synchronization / Paralleling	4 hours
Sequence of operation in relation load shedding	8 hours with
PLC Scheme / redundancy	8 hours
Battery / Battery Charger	4 hours
Preventive / corrective maintenance (Training should include tutorial + site visit)	4 hours

#### LV Switchgear / Busways

Power flow / Sequence	4 hours
Panel Construction Scheme (LV Panels, SMDBs, DBs)	4 hours
Major Component's construction / detail	3 hours
Components Inspection	2 hours
Preventive / corrective maintenance	3 hours
Busway – routine inspection	2 hours
Preventive maintenance	2 hours
Drawing formats	2 hours
(Training should include tutorial + Site visits)	

#### Motor Control Center's / VFD's

Construction Scheme	2 hours
VFD – Basic theory / mode of operation	4 hours
Protection Scheme	1 hours
Components Inspection	2 hours
Preventive / corrective maintenance (Training should include tutorial + site visit)	3 hours

## **Section-13: Busways**

### **PART 1 GENERAL**

- 1.1 General Requirements
- 1.2 Scope of Work
- 1.3 Quality Assurance
- 1.4 Submittals

### **PART 2 EXECUTION**

- 2.1 Installation
- 2.2 Tests

**PART 1 GENERAL****1.1 GENERAL REQUIREMENTS**

1. The work of this Division shall be governed by the following documents:
  1. Conditions of Contract.
  2. Instructions to Tenderers.
  3. Form of Agreement.
  4. General and Special Conditions of Contract.
  5. Form of Tender.
  6. Appendices.
  7. Applicable Divisions.
2. Comply with requirements of all sections of this Division
3. It is the Contractors responsibility to be fully aware of and comply with all of the requirements of the above listed documents.

**1.2 SCOPE OF WORK**

1. This section provides for the complete installation of bus feeders and bus risers to IEC 61439 -1 & 2, as detailed on the drawings and as specified hereinafter.

Current ratings identified on drawings are for onsite requirements. Equipment provided shall be de-rated accordingly to take into account voltage drop, and ambient temperature of 50 Deg. C. The Contractor shall submit a manufacturer's confirmation to this effect or suitable de-rating calculations/curves for the Engineer's review.

2. Bus Risers
  1. From the designated main low voltage switchboards, supply and install Aluminum / copper bus risers through the building as detailed.
  2. The bus risers in the basement, Mechanical rooms and roof shall be weather proof totally enclosed feeder type to IP65 and shall be installed at high level through the basement service tunnel up to final destination (chillers, generators).
  3. At the tower riser locations change the bus from weatherproof totally enclosed feeder type to plug in type IP43.
  4. The bus riser shall be installed vertically up through the building to allow for tap off disconnect switches to be mounted directly to the tap off bus.

5. Provide internal and external fire barriers as required at floor penetrations in vertical runs and at penetrations through fire-rated walls on horizontal as required to maintain the fire rating of the surrounding area.
6. Bases on manufacture's recommendations provide expansion joints to allow for expansion and contraction of the Aluminum / copper bars. This applies to both horizontal and vertical runs.
7. Provide flanges at all wall and floor penetrations in finished areas.
8. Provide fire barriers as required to maintain the fire rating of the adjacent areas where the bus riser passes through fire rated walls, floors and openings in both horizontal and vertical runs.

### 1.3 QUALITY ASSURANCE

#### 1. Acceptable Manufacturers

1. Subject to compliance with the requirements of the Contract Documents, acceptable manufacturers are to be firms regularly engaged in manufacture of all materials specified in this section of types and sizes required, whose products have been in satisfactory use under similar service conditions for not less than fifteen years or as approved by consultant.

### 1.4 SUBMITTALS

1. Reference Applicable Divisions - Submittals.
2. Reference Applicable Divisions - Shop Drawings, Product Data and Samples.
3. Shop Drawings

Submit shop drawings of:

1. Detailed, dimensioned routing drawings of all bus ducts throughout the building, indicating the relationship to all structural slabs & Walls. Detail all points and methods of support. Detail all tap offs. Detail dimensioned data of each section of duct run. Provide voltage drop tests of each type of bus duct.
2. Weather proof totally enclosed feeder type bus duct including details of all bends, angles, supports, etc.
3. Plug in type bus duct including details of all bends, angles, supports, tap offs etc.

## PART 2 EXECUTION

### 2.1 INSTALLATION

1. Ensure that final installation of busway assembly is fully co-ordinated with aspects of building construction and with the work of other trades. Final field measurements shall be made by the contractor prior to the release of the bus duct for fabrication.

2. Install busways and associated fittings, supports, spring hangers for vertical runs and accessories as indicated in accordance with manufacturer's recommendations. Manufacturer's authorized engineer professional shall supervise and certify the busduct installations.
3. Space hangers in accordance with manufacturers recommendations. But maximum spacing of 2m for both horizontal and vertical runs of busways. Vertical runs shall be supported by spring hangers.
4. Tighten busway joint bolts to loading recommended by busway manufacturer.
5. Cover busways with plastic envelope until building is clean and bus ready for Insulation resistance testing and energized.
6. Perform the Insulation Resistance Test of bus ways in presence of Engineer and get the approval on the observed readings.
7. Re-torque single bolt sandwich type busway as recommended by manufacturer.

## 2.2 TESTING INSPECTION AND COMMISSIONING

The tests to be carried out in accordance to International Standards and in presence Engineer and owner at factory. Test report shall be provided and shall include but not necessarily be limited to:

1. Submit factory type test certificates.
2. Inspect physical and mechanical condition.
3. Inspect anchorage, alignment and grounding.
4. Prior to system commissioning, perform all Electrical tests including:
  - Insulation Resistance Test
  - Dielectric Voltage Withstand Test
  - Contact Resistance Test

Comprehensive report should be submitted in soft copy format as well as paper form.

These tests shall be witnessed and certified by the Engineer in the presence of installer / manufacturer.

5. Load banks along with cabling and necessary accessories for connection with bus bars to reach 80% of the rating of bus bars shall be provided by the Contractor.

**END OF SECTION**

## **Section-14: Switches & Outlets**

### **1.0 LOCAL SWITCHES**

- 1.1 The local switches shall be 10/20 amp. Gang type , one-way, two-way, intermediate or double pole as indicated on the drawings. Where more than one switch is indicated at any position multiple gang units shall be used.
- 1.2 Switches shall be of the quick start make, slow break type specially designed for AC circuits to BS Standards. The operation of the switch shall not depend wholly on the action of the spring. The switches shall generally be of the rocker operated type.
- 1.3 All switch boxes shall be supplied with adjustable steel grids and earthing terminals.
- 1.4 Generally, switch units shall be of the adjustable grid pattern and to be secured to the adjustable grid by means of screws. For flush mounting switches the switch-plate shall overlap all edges of the box by not less than 7mm. For surface mounting switches the switch plate shall finish flush with the edges of the switch boxes. Switches for water heaters and fan coil units shall be complete with neon indicator lights.
- 1.5 In Plant rooms the switch units shall be surface or flush as required.
- 1.6 Local switches shall be arranged in convenient positions for switching the various circuits and generally as indicated on the drawings.
- 1.7 The switches shall be of the same manufacture for a particular type of switch throughout the installation. All accessories in wet and damp areas shall be of the splash-proof type to IP54 protection standard.
- 1.8 All switch boxes should be galvanized steel.
- 1.9 To ensure easy and correct connection of the conductors during installation, the necessary terminal shall be easily identified, grouped in line, upward facing, captive and backed out prior to the installation.
- 1.10 All dimmer switches shall be suitably rated to the lighting load being Controlled with 25% spare capacity and shall be adequate for tungsten and / or fluorescent lighting as specified.

### **2.0 POWER OUTLETS**

- 2.1 The switch socket outlets, shall be in accordance with BS1363 Standard as appropriate and shall be of the three pin grounding type.
- 2.2 Switch socket outlet in the different areas shall comply with section 607 of BS7671 :2001
- 2.3 Live contact of the socket shall be completely shuttered such that it is not possible to engage any pin of the plug into a live contact whilst any other pin of the plug is exposed.
- 2.4 All floor mounted socket outlets shall be fixed as part of the under floor trunking service boxes.
- 2.5 These outlets shall be of the same manufacturer throughout the installation.
- 2.6 The sockets should provide a double earth terminal as per latest BS7671, 2001, Section 607.

### 3.0 FUSE CONNECTION UNITS / DP SWITCHES

- 3.1 These shall be of flush or surface mounting type as manufactured in compliance with BS Standard as appropriate. The fuse connection units shall incorporate integral switch, neon indicator and 20 amp fuse links. The DP switches supplied for water heaters shall be incorporated with neon indicator lights, and these also shall be engraved 'Water Heater'.
- 3.2 These shall be of the same manufacturer for a particular type of switch throughout the installation and shall be complete with the other accessories installed.
- 3.3 Fuse selection shall be based on actual requirement of equipments.

### 4.0 GI BOXES

GI boxes to be provided with brass earth terminal to facilitate earth wire connection. The boxes to have sufficient number of 20mm and 25mm knockout. The boxes thickness shall be 1.1mm minimum and shall comply with BS 4662. Boxes to have adjustable lug for proper installations of wiring accessories. Extension ring to be used along with GI boxes, in places where the box is deep inside the wall, marble or concrete.

### 5.0 ISOLATORS

All external isolators must have IP-65 protection with aluminum alloy or die-cast aluminium housing with bolt on drip proof canopy. Isolators must be de-rated for 50 deg. Ambient temperature. Internal isolators shall be IP 54 / IP 65 depending on the location with polycarbonate housing for non-armoured cables.

### 6.0 FLOOR SERVICE BOXES

Floor Service Boxes shall be two-compartment type of the size 300 x 300 x 75-90mm and shall be constructed from high-pressure Zinc Alloy die casting base frame pillars. This shall be fixed on to heavy gauge galvanized steel base plate for support by support frame. Other materials adequate in strength and performance shall be used and these shall be protected against corrosion. The boxes shall be constructed with provisions for ducting or conduit access on all four sides. Unwanted entries shall be blanked off with detachable side blanks.

Cover for floor service boxes shall be made of high pressure zinc alloy die casting provided with suitable hinges designed to enable the trap cover to open through 180 degrees and giving access at all times to the power and telephone outlets.

Covers for junction boxes shall be made of high pressure Zinc Alloy die casting with 12mm recess to receive ceramic tiles or carpet tiles. Counter sunk screws shall secure the covers of boxes. All exposed portions of the boxes shall be epoxy coated in grey color.

All boxes shall have extra wide gaskets in order to minimize water seepage. Gaskets shall be made of material that is durable in order to withstand loads.

All boxes shall be adjustable in height independently of the ducting system to take account of difference in floor thickness.

Adequate segregation shall be provided between service runs within boxes by using cross-over bridges and rigid compartments.

Circuit protective conductors shall be provided between the covers and the boxes.

Cable emerging for service boxes shall be protected against damage by means of nylon cables exit grommets or equivalent and shall be reversible to close position when not in use.

## 7.0 ACCESSORIES PLATE FINISH

7.1 All the wiring accessories shall be vandal proof. The accessories plate shall have the following finishes depending on the location where it is installed and on the feeding arrangement.

Switches to comply with BS 3676:2000, and sockets to BS 1363, ceiling rose to BS67 : 1999.

- a) All external outlets and outlets in pump room and parking shall be weatherproof to IP66.
- b) Weatherproof range should be suitable for semi recessed mounting and supplied with back boxes.
- c) All outlets above false ceiling, store, etc. shall be white plastic.
- d) Switches and outlets in apartments shall be white plastic slim type.
- e) Main entrance, common area and lift lobbies shall be matt chrome steel face plate slim type.
- f) Outlets in Electrical rooms, Mechanical floors, Tel. Rooms, etc shall be metal clad.
- g) All switch plates including SSOs are to be coordinated with tiling layouts by prior agreement with the Architect on site.

## 8.0 MOUNTING HEIGHTS

The mounting heights for the electrical equipment and accessories shall be coordinated with the furniture layout and shall be as per site requirements to Engineer's / ID's instruction and approval. In general the mounting heights from FFL to center of fixtures shall be as shown in legend.

**END OF SECTION**



## Section-16: Uninterruptable Power Supply

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This specification describes the three-phase or single-phase or as specified, on-line, double conversion pure sine wave, continuous operation, solid-state uninterruptible power supply (UPS). The UPS shall operate as an active power control system, working in conjunction with the building electrical system to provide power conditioning and on-line power protection for the critical loads.

#### 1.2 STANDARDS

- A. **Safety:** EN/ IEC 62040-1  
B. EMC/IEC 62040-2 (Class C2 and C3)  
C. **Performance:** EN/IEC 62040

#### 1.3 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** Manufacturer shall be a firm engaged in the manufacture of solid state UPS of types and sizes required, and whose products have been in satisfactory use in similar service for a minimum of 20 years.
- a. The manufacturer shall be ISO 9001 & 14001 certified and shall be designed to internationally accepted standards.

#### 1.4 WARRANTY

- A. The manufacturer's standard warranty shall in no event be for a period of less than 24 months starting from beneficial use of the equipment. Submittals received without written warranties as specified will be rejected in their entirety. Maintenance during reliability period shall also be covered in the warranty section.

#### 1.5 CLASSIFICATION

- A. Classification according to EN/IEC 62040-3

#### 1.6 SUBMITTALS

- A. **Product data:** Submit product data showing material proposed. Submit sufficient information to determine compliance with the Drawings and Specifications.
1. Bill of materials for the proposed system
  2. Product catalogue sheets or equipment brochures
  3. Product guide specifications
  4. System single-line operation diagram
  5. Floor layout / Footprints
  6. Installation guide
  7. Drawings for requested optional accessories

- B. **Operation and Maintenance Data:**

Submit operation and maintenance data to include in operation and maintenance manuals but not limited to, safe and correct operation of UPS functions.

1. Submit an installation manual, which shall include, but shall not be limited to, instructions for storage, handling, examination, preparation, installation, and start-up of all systems.
2. Submit an operation and maintenance manual, which shall include, but shall not be limited to, operating instructions.
3. Submit equipment drawings, dimensions and schematics.

## 1.7 PROJECT CONDITIONS

- A. **Environmental Requirements:** Do not install solid state UPS until space is enclosed and weather proof, wet work in space is completed and nominally dry, work above ceilings is complete, and ambient temperature and humidity conditions are and will be continuously maintained at values near those indicated for final occupancy.
1. The UPS shall be capable of withstanding any combination of the following environmental conditions in which it must operate without mechanical or electrical damage, or degradation of operating characteristics.
    - a. **Storage Ambient Temperature:** -15°C to 40°C with batteries; -30°C to 70°C without batteries
    - b. **Operating Ambient Temperature:** -10°C to 40°C.
    - c. **Relative humidity:** 0 to 95%, non-condensing.
    - d. **Storage elevation:** 0 to 20000 m.
    - e. **Altitude:** Maximum installation with no de-rating of the UPS above sea level shall be:
      - 1) 2800 m: 100% load
      - 2) 3300 m: 95% load
      - 3) 3800 m: 91% load
      - 4) 4300 m: 86% load
      - 5) 4800 m: 82% load

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. **Basis of Design:** Items specified are to establish a standard of quality for design, function, materials, and appearance. Only the products from the approved manufacturers are acceptable.  
The Architect/Engineer will be the sole judge of the basis of what is equivalent. Examples of modifications include, but are not limited to the following:
1. Structural reinforcement to accommodate heavier equipment.
  2. Increased sizes of circuit breakers, raceways and wiring.

3. Larger back-up generators (including upgraded accessories and wiring) to avoid instability caused by most double conversion UPS systems.
4. Larger HVAC equipment (including duct work and wiring) to accommodate increased heat dissipation of less efficient UPS systems.
5. Filters to prevent input distortion, avoid upstream equipment malfunction and failure of power factor equipment.

## 2.2 DESCRIPTION

- A. The UPS shall consist of the following easy to repair modular rectifier/inverter sections and easy to install internal and external modular battery units.
- B. The UPS shall be provided with separate feeds for rectifier/inverter section and the static bypass switch.
- C. Modes of operation: The UPS shall operate as an on-line system in the following modes:
  1. **Normal:** The inverter and the rectifier shall operate in an on-line manner to continuously regulate the power to the critical load. The rectifier shall derive power from the AC input source and supply DC power to float charge the battery.
  2. **Battery:** Upon failure of the AC input source, the critical load shall continue being supplied by the inverter without any switching. The inverter shall obtain its power from the battery. There shall be no interruption in power to the critical load upon failure or restoration of the AC input source.
  3. **Recharge:** Upon restoration of the AC input source, the UPS shall simultaneously recharge the battery and regulate the power to the critical load.
  4. **Static Bypass:** The static bypass switch shall be used for transferring the critical load to input supply without interruption. Automatic re-transfer to normal operation shall also be accomplished with no interruption in power to the critical load. The static bypass switch shall be fully rated and shall be capable of manual operation. The UPS shall be able to recharge the batteries while supplying full power to the load via the static bypass switch.
  5. **Internal maintenance bypass:** The UPS shall be provided with an internal manual bypass to simplify the installation and shall be used for supplying the load directly from the mains supply, while the UPS is taken out for maintenance.

## 2.3 STATIC UPS

- A. **General:** The UPS shall be housed in a freestanding enclosure. The enclosure shall be designed to blend into an IT environment. The cabinet shall be equipped for fork truck lifting. The UPS cabinet shall be painted with the manufacturer's standard color. All service access shall be from the front. Installation access shall be from the lower backside of the system.
  1. The UPS shall be in a self contained cabinet and comprise **30 kVA** and **6 kVA** power section; Bypass Static Switch; Battery for standard run time and interface LCD display all mounted in a separate cabinet. The UPS shall permit user installable and removable battery units.

The power section shall be of the Double Conversion On-Line topology with power factor corrected inputs.

- a. The UPS battery shall be sized for desired kVA Ratings at a power factor of 0.9 for 10 minutes (minimum).
2. The UPS shall have a short circuit withstand capability of 30 kA.

## 2.4 COMPONENT DESCRIPTION

### A. Rectifier

1. Each UPS power module shall include an active power factor corrected, Insulated Gated Bipolar Transistor (IGBT) rectifier.
2. The input current limiter must be design to support 100% load, charge batteries at 10% of the UPS output rating, and provide regulation with mains deviation of up/down to +/-15% of the nominal input voltage. During an overload condition the input current must be limited to maximum 125% of the nominal output current.
3. The battery charging shall keep the DC bus float voltage of +/- 219 V, +/-1%
4. DC ripple voltage shall be less than  $\pm 1\%$  of nominal with no battery connected.
5. Input power factor shall be 0.9(min.) lagging at 100% load without the use of passive filters.
6. Rectifier shall employ electronic waveform control technology to maintain the current sinusoidal.
7. Pulse Width Modulation (PWM) current control shall be used. Digital Signal Processors (DSP) shall be used for all monitoring and control tasks. Analog control is not acceptable.
8. Reflected input current Total Harmonic Distortion (THD) shall not exceed 5% at 100% load.
9. Typical battery re-charge time as per IEEE 485.

### B. Batteries

1. Standard battery technology shall be Dry Sealed Maintenance Free
2. Batteries shall be housed in the same rack as the power section or in a separate enclosure. Batteries shall be modular on pull out shelves for quick replacement and servicing.
3. Battery voltage shall be Battery Temperature Compensated as outlined in the rectifier section above.
4. **End of discharge:** 150VDC.
5. For longer runtimes, external battery frames in the same design may be offered.
6. **Battery Charge Current Limit:** The UPS shall be capable of limiting the energy sourced from the mains for purposes of battery charging. As a default setting, the battery charge energy will be set to 100% of its nominal value. When signaled by a dry contact, (such as from an emergency generator) the UPS shall be capable of limiting the battery charge energy taken from the mains. This shall take place in user selectable increments of 75%, 50%, 25%, 10% and 0% of the nominal charge power. The selection shall be made from the UPS front panel display/control unit.

7. The battery charging circuit shall remain active when in Static Bypass and in Normal Operation.
8. The batteries charger shall allow cyclic charging when system is running in normal operation and batteries are full charged to extend the battery life. This operation shall be selectable in the display. Cyclic charge should be 10 hours on and 48 hours off. The Cyclic charge shall end if UPS is overloaded, switch to battery operation, battery voltage drops below 200 V or are deactivated by user.
9. The UPS battery shall be of modular construction made up of user replaceable, hot swappable, fused, battery modules. Each battery module shall be monitored to determine the highest battery unit temperature for use by the UPS battery diagnostic, and temperature compensated charger circuitry.
10. The battery blocks housed within each removable battery module shall be of the Dry Sealed Maintenance Free type.

C. **Inverter**

1. The inverter shall consist of fast switching IGBT power module.
2. Inverter shall be PWM controlled using DSP logic. Analog control shall not be acceptable.
3. The inverter modules shall be rated for an output power factor at 0.8.
4. Nominal output voltage shall be 1×230 V and adjustable for 1×220 V or 1×240 V, 50 Hz, L1,N,PE.
5. **Efficiency of each module at full load:** Not less than 92% (minimum)
6. **Output Voltage Total Harmonic Distortion at full load:**
  - a. Less than 1.5% for 100% resistive load.
  - b. Less than 3.5% for computer load as defined by EN50091-3/IEC 62040-3.
7. **Output voltage regulation:**
  - a. **Static:** Less than 1% at full linear load.
  - b. **Dynamic:** 5% at 100% step load.
8. **Output frequency:** 50 Hz free running.
9. **Crest factor:** Unlimited but regulates it down to 2.7.
  - a. Remote Emergency Power Off (EPO) shall be standard (wall switch and wiring shall be provided by the electrical contractor).

D. **Static Bypass Switch**

1. The static switch shall consist of fully rated Silicon Controlled Rectifiers (SCRs). Part rated SCR with a wrap around contactor are not acceptable.

2. **The static bypass switch shall automatically transfer the critical load to bypass input supply without interruption after the logic senses one of the following conditions:**
  - a. Inverter overload beyond rating.
  - b. Battery runtime expired and bypass available.
  - c. Inverter failure.
  - d. Fatal error in control system.
3. The static bypass switch shall automatically retransfer from bypass to the inverter, when one of the following conditions occurs:
  - a. After an instantaneous overload-induced transfer has occurred and the load current has returned to less than 100% of the system rating.
  - b. The inverter is active (on).
4. The static bypass switch shall be equipped with a manual means of transferring the load to bypass and back to inverter.
5. If more than 10 transfers from and to inverter occur in a 1 minutes period, the load shall be locked on static bypass. An alarm communicating this condition shall be annunciated.

**E. Mechanical**

1. The ups power section, static bypass switch, internal manual bypass switch and the dry sealed maintenance free batteries (for standard runtimes) shall be housed in a freestanding enclosure. The enclosure shall be designed to blend into an IT environment. The UPS cabinet shall be painted with the manufacturer's standard color. All service access shall be from the front. The enclosure shall have the following specifications:
  - a. Heavy-duty design with an all-metal construction.
  - b. Caster fitted for mobility. Leveling feet shall be supplied as standard.
  - c. Electrostatic applied paint.
  - d. The cable entry shall be from the bottom on the back of the UPS.
  - e. The UPS enclosure shall meet an ingress level of min. IP52
  - f. The UPS should be fitted with dust filter in the air inlet to filter dust, molds and spores with particles larger than 3 m.

## **2.5 SYSTEM CONTROLS AND INDICATORS**

- A. **General:** A microprocessor controlled display unit shall be located on the front of the system. The display shall consist of an alphanumeric display with backlight, an alarm LED, and a keypad consisting of pushbutton switches.

1. **The following metered data, shall be available on the alphanumeric display but shall not limited to:**
  - a. Time record of occurring events.
  - b. Input AC Voltage
  - c. Output AC voltage
  - d. Output AC current
  - e. Input Frequency
  - f. Battery voltage
  - g. Highest Internal Battery temperature

2. The display unit shall allow the user to display an event log of all active alarms and of the 50 most recent status and alarm events (minimum).
3. **For purposes of remote communications with the UPS the following shall be available and contained within the UPS on a removable, "hot swappable" "smart slot" interface card:**
  - a) RJ-45 Interface port for remote communications with a network via web browser or SNMP.
  - b) Environmental monitoring feature, capable of locally monitoring temperature and humidity as well as two additional generic set of user determined dry contacts capable of taking an input signal from any third party on/off signal, such as water detection, smoke detection, motion, or fire detection.

## 2.6 ACCESSORIES

### A. Extended runtime (XR) option

1. For purposes of extending the UPS battery runtime, external extended runtime options shall be available. The extended runtime option shall be housed in "line up and match" type enclosures and shall contain necessary hardware and cables to connect to the UPS, or between enclosures. Each XR enclosure shall be equipped with removable, hot swappable, battery units housed in draw-out cartridges.
2. The extended runtime system shall have a 250 V DC rated, thermal magnetic trip molded case circuit breaker. Each circuit breaker shall be equipped with shunt trip mechanisms and 1A/1B auxiliary contacts. The circuit breakers are to be equipped as part of a line-up-and match type battery enclosure.

### B. Software and connectivity

1. The Ethernet Web/SNMP Adaptor shall allow one or more network management systems (NMS) to monitor and manage the UPS in TCP/IP network environments. The management information base (MIB) shall be provided in DOS and UNIX formats. The SNMP interface adaptor shall be connected to the UPS via the RS232 serial port on the standard communication interface board.
2. The UPS, in conjunction with a network interface card, shall be capable of gracefully shutting down one or more operating systems during when the UPS is on reserve mode.
3. The UPS shall also be capable of using an RS232 port to communicate by means of serial communications to gracefully shutdown one or more operating systems during an on battery situation.

### C. Remote UPS monitoring: The following three methods of remote UPS monitoring shall be available:

1. **Web Monitoring:** Remote monitoring shall be available via a web browser such as Internet Explorer.
2. **RS232 Monitoring:** Remote UPS monitoring shall be possible via either RS232 or contact closure signals from the UPS.
3. **Simple Network Management Protocol (SNMP):** Remote UPS Monitoring shall be possible through a standard MIB II compliant platform.

- D. **Software compatibility:** The UPS manufacturer shall have available software to support graceful shutdown and or remote monitoring for the maximum prevailing operating systems.

#### END OF SECTION

## **Section-17: Lighting**

### **1.0 GENERAL**

All lighting fixtures complete details, including: wattage, luminous flux, energy label class, average lamp life, switching cycles, colour temperature, length and diameter, location of production, compliance with relevant standards and complete with lamps, accessories, installation materials, etc. shall be furnished and installed as per drawings. The fixtures shall be designed and built to give reliable service continuously at the normal voltage and current rating.

The light fitting schedule is given on the drawing and each type is specified in detail in the Bill of Quantities. The manufacturer's type and catalog number specified shall serve as illustration of the type of fixture required and any other approved equivalent fitting shall be acceptable. The equivalency shall be based on certified photometric data, as well as on construction material, shape, finish, etc. The Contractor shall submit complete technical details and/or samples of each and every lighting fixture specified and obtain approval of the Consultant before commencing with placement of order.

### **2.0 FLUORESCENT LIGHT FIXTURES.**

2.1 All the light fixtures shall have lamps and efficient ballasts of the wattage specified. The fluorescent lamp color shall generally be day light, cool day light and/or warm white in the order of preference or as mentioned specifically. The fluorescent lamps shall be in accordance to List of Approved Manufacturer but having a minimum useful life of 5000 hours.

2.2 The ballast shall be totally enclosed efficient type suitable for operation on 220 V, 50 Hz, single phase supply, a wiring diagram, wattage, voltage and current ratings shall be printed on the body of the ballast. The power loss shall not be more than 10 watts for 40 watts ballast. The ballast shall be noiseless in operation without any whistling sound. The measurement shall be called upon to guarantee a trouble-free life of 3 years, effective from the date of completion Certificate.

2.3 All light fixtures shall be provided with power factor improvement capacitors. The following capacitor combinations shall be used / wired on 'du' circuits. For 2x40 watts fixture 3.7 mfd capacitor 380 volts. For 2x40 watts fixture 3.7 mfd capacitor 400 volts.

2.4 The lamp holder shall be lock-in rotary type.

2.5 The starters shall have radio-interference suppressers.

2.6 The internal wiring of the light fixture shall be carried out at manufacturers factory with heat resistance wires of size not less than 1.5mm square.

2.7 The louvers of light fixtures shall be made of anodized aluminum and/or non yellowing white painted steel louvers.



2.8 The body of the light fixture shall be white or grey stove enamel as required. The industrial reflector shall have white stove enamel finish inside and gray/green stove enamel finish outside. Appropriate sized bushed entry holes, and fixing holes shall be provided. The thickness of the sheet steel used in the fabrication of the body and reflector shall not be less than 22 gauge.

2.9 Pendant type of fixture shall have 2 Nos. 1/2" dia. chromium plated pendant tubes for suspension or as per detail shown on drawings.

### **3 LED LIGHT FIXTURES.**

- 3.1 All the LED light fixtures shall have efficient driver circuitry suitable for 230V, + 10% for AC supply, conversation efficiency more than 92% along with No speckle, no flickering, no humming, no buzzing, no RF interference. The luminaire suitable for input voltage range from 85 VAC- 265 VAC and power factor => 0.9, suitable for at 50 Hz frequency as per utility power characteristics.
- 3.2 All aspects of the lighting system shall be appropriate, consistent and suitable for the specific environment or work task required, and where appropriate, a mixture of light fittings, including down lighters, wall washers and uplighters shall be provided.
- 3.3 Luminaires shall have an efficacy of NOT less than 80lm/W with THD less than 20%.
- 3.4 The housing for of light must have feasible material for maximum heat dissipation to insure the maximum life of the luminaire along with frosted non-brittle, non-decoloring cover with minimum 5 years of life span as per recommendation of engineer-in-charge.
- 2.5 The luminaire should have CRI Index greater than 75 along with the color temperature range as specified by engineer in-charge available from 3000 K to 6500 K having IP Rating 20-40 (for indoor use) and IP-65 or greater for outdoor use.
- 2.6 The manufacturer should provide third party test reports from reputable laboratory (Local PCSIR/ CERAD UET /Equivalent) or international firm along with all the photometric data specification as per CIBSE/IEC, CE, RoHS relevant standards.
- 2.7 The manufacturer should provide lifetime warranty 30,000 Hours or more (per LED Chip LM80 report), three-year service warranty to engineer in-charge.

### **4 ROAD LIGHTING.**

Pole mounted (8-10 meters high) or duly approved by the engineer LED luminaires shall be used for open area lighting. The fixture shall have a die cast/ Extruded aluminum housing providing adequate rigidity, strength and heat dissipation. The housing shall have integrated driver and Led compartments for better heat dissipation and both LED module & driver compartment must separate for convenience in maintenance at the site and to avoid Driver and LED Compartments thermal effect to each other. The optical LED component shall have thermally hardened glass cover and high-quality silicon gaskets. The glass shall be extra white for maximum light transmission. The glass cover shall be lightly secured with the housing. The housing shall feature highly reflective components and films to increase light output. The light output ratio (LOR) shall not be less than 85% The luminaries shall offer a composite system efficacy of minimum 100 lumen/watt Ensure maximum spread of light by using any efficient technique, shall carry defined inner and outer profile for high efficiency LED to ensure maximum spacing between the road lighting poles and coverage of wider roads (according to center/ pole distance in meter and pole height). The multilayer optics design will be preferred for adequate luminance and luminance uniformity in the unlikely event of an individual LED failure. The optical (lens/ glass) system shall feature long life with no discoloration, highest possible light transmission and white

painted circuit board for high reflectivity for maximum light output. Plastic/Acrylic should not pale within warranty time. The LED compartment of luminaire shall have ingress protection class IP66 for long reliable performance and minimal maintenance requirements and impact resistance of IK08 or above. No chemical glue shall be used as that may cause breakdown of water proof, dust proof and corrosion proof. The test reports shall be submitted by the manufacturer per relevant IEC/CIBSE/CERAD UET Recommendation & Standards. Luminaire and accessories warranty 3 years. Complete replacement of luminaire in case of manufacturing fault.

## **5 DIMMABLE LIGHT FIXTURES.**

For areas where dimmer shall be provided the provision of fluorescent light fixtures in general and its allied control gear in particular shall be strictly in accordance with the manufacturer's recommendations and to the entire satisfaction of the Engineer.

The requirement of control circuiting depending upon the type of fluorescent tubes (rods) used 38mm dia. or 26mm dia. with or without metallic firing strip (or metal net) shall be strictly conforming to manufacturers recommendations. Wiring diagrams of each light fixture showing the relative position of ordinary and/or electronic ballasts, filament transformers, base load resistors and compensating p.f. capacitor shall be submitted to the Engineer for approval along with detailed specification of each component and with technical brochures.

## **6 DIMMERS.**

The dimmers used shall be universal type i.e. suitable for use with incandescent and fluorescent lamps. The planning of making three phase assemblies and integration with relevant distribution boards specified hereinafter shall be contractor's responsibility. The dimmer rack assemblies shall be sheet steel clad, flush wall mounting type, modular in construction and solid-state design comprising of automatic and slave dimmers suitable for operation on 3 phase, 400 volts, 50Hz supply. Each dimmer rack assembly shall be provided with direct or remote, as most suitable to requirement, push button control plates with the following five standard options: -

Light dark-preset-stop-ON/OFF.

The capacity of the dimmer rack assembly shall be commensurate with the installed lighting load.

The schematic wiring diagram of the dimmers showing the relative position of its components e.g. Isolators, thyristors, contractors, RYB indicator, instruments, fuses, relays and MCB's for final sub-circuit protection and push button controls shall be submitted to the Engineer for approval.

he dimers shall be manufactured by M/s. Polaron Controls U.K., M/s. Strand Lighting U.K. and/or M/s. Altenburg Germany.

## **7 MEASUREMENT.**

Actual number of units installed shall be taken as the basis for measurement or as specified in BOQ.

## **8.0 LIGHTING EQUIPMENT, GENERAL INSTALLATION REQUIREMENTS**

- 8.1 Complete manufacturers data shall be supplied along with the proposal of luminaries.
- 8.2 Lighting equipment and lighting fixtures shall be as called for on plans by designated symbols and type. Said equipment shall embody the highest standards of electrical and mechanical design with maximum efficiency obtainable and all shall be subject to the approval of the Engineer.
- 8.3 All hangers, cables, supports, channels, frames and brackets of all kinds for safely erecting this equipment in place, shall be furnished from the standard manufacturer's product range and shall be erected in place under this Section.
- 8.4 Each lighting fixture shall have a manufacturer's label affixed to it and shall comply with the requirements of all authorities having jurisdiction.
- 8.5 The right to select other fixtures of the same quality, without additional cost to the Employer is reserved by the Engineer regarding the shape of the lighting luminaire.
- 8.6 The supply to lighting fittings mounted on or recessed into a false ceiling shall be effected by means of a ceiling rose on a conduit box within the false ceiling space with a three core heat resisting flexible cable connection. When fixtures are surface mounted to the ceiling. Ceiling rose to be provided adjacent to the fitting. In plasterboard ceiling areas, ceiling rose to be installed and supported next to the luminaire with a backbox to terminate the flexible conduit from the conduit box within slab at high level.
- 8.7 All prismatic controllers for fluorescent fittings shall be of the injection moulded acrylic type to obviate discoloration. Plastic diffusers will not be accepted.

## **9.0 EXTERNAL LIGHTING, GENERAL INSTALLATION REQUIREMENTS**

- 9.1 Furnish and install external lighting fittings of the types specified and, in the positions, indicated on the drawings. Check all requirements regarding conduit runs and positions and the casting in of conduit.
- 9.2 The Contractor shall also be responsible for the installation and wiring of the external lighting installation as shown on the drawing and in accordance with the schedule of light fittings.
- 9.3 Each mounting bracket pole shall be fitted with a fuse unit of approved manufacturer connecting to the lighting units mounted on the bracket.

**END OF SECTION**

## Section-18: Public Address System

### 1.0 GENERAL

The Contractor shall allow for the supply, installation, testing and commissioning of a Back-ground Music / Public Address system comprising of Amplifiers, loudspeakers and all necessary cabling and termination. The system shall be generally as indicated on the drawings and as herein specified, to the approval of the Engineer.

The complete system shall be supplied by a specialist Subcontractor having at least five years experience in the field. All equipment supplied shall be from one reputed manufacturer and shall be installed by the authorized representative of the manufacturer. All the equipment included in this system shall be covered by manufacturer's warranty for minimum five years.

For the purpose of Public Address System the speakers are grouped into different zones as follows:

- a) Corridors and Passage
- b) Toilets
- c) Prayer Area
- d) Parking

Different level of priorities as per following shall be allotted to different signals for transmission through same speaker.

- |                            |                  |
|----------------------------|------------------|
| a) Emergency announcements | Highest priority |
| b) Fire tone               | Next             |
| c) Music                   | Least            |

All control consoles shall be placed in the Control / Management Room. Announcement shall be played from the Control / Management Room.

The announcement shall be made in individual mode (i.e one zone at a time) or to multiple zones at a time.

The SOP can vary subject to the requirement of Chief Operating Officer. This shall be specified at the time of Completion of Commissioning and is included in part of vender software and hardware programming.

### 2.0 AMPLIFIER RACK

The amplifiers and associated equipment shall be housed in a standard 19" rack with plexi-glass door, located as shown on drawings. Ventilation panels shall be provided between every amplifier mainframe for proper air circulation and cooling. Proper exhaust fans shall be provided to achieve proper ventilation.

#### 2.1 Amplifier Mainframe

The amplifiers shall be of modular construction with preamplifiers pluggable onto a mainframe. Upto ten preamplifiers could be added as required providing microphone, line, alarm tones, etc. Control over the total mainframe shall be achieved through audio monitoring combiners. The motherboard shall also be capable of accepting switch selectable pre-announcement chimes.

The power rating of the amplifiers shall be 160 watts, 320 watts or depending on the loudspeaker load requirements. No amplifier shall be loaded more than 80% of its rated capacity. Slave amplifiers shall be used to meet additional power requirements.

The amplifiers shall have the following technical characteristics or as per BOQ:

Output power	240W/120W/Per BOQ
Nominal RMS	100 W or 200W/Per BOQ
Long Term Power	(100V) 160W / Per BOQ
Output Voltage	100V
Frequency Response	60 Hz - 20,000 Hz
Speaker Outputs	6/8 Ohms
Inputs	2: Paging / BGM
THD @1 KHz.	<1%
SNR	=74dB
Sensitivity	-10dBm, 245m Volts
AC Input	220V, 50 Hz
Operational temperature	-20 to 45 deg C
Separate Tone Control	Bass and Treble

### 3.0 MICROPHONE INPUT MODULE

The module shall be a basic general purpose low impedance balanced microphone input, with a selectable phantom power facility. Output shall be available on bus and individually, separate bass and treble control and also relay controlled priority shall be available

It shall have the following specifications or as per BOQ:

Input impedance	:	-60dB (775uV)/200 Ohms maximum.	
Frequency response	:	30Hz and 20 kHz 0.5dB.	
Output	:	0dB/47k	
Signal/noise ratio	:	55dB max. sensitivity, 150 Ohms source	Bass
Control	:	15dB at 50 Hz.	
Treble Control	:	15dB at 15 KHz.	
Distortion	:	< 0.1% at nominal output 1 kHz, max. sensitivity	

### 4.0 BALANCED LINE INPUT MODULE

The balanced line input module shall be a general purpose balanced 600 Ohm input with relay controlled priority.

It shall have the following specifications or as per BOQ:

Input Aux	:	-10dB (245mV) /10 K Ohm	
Output	:	0dB / 47 K.	
Input impedance	:	15k Ohms (300mV), 100k Ohms (100V).	
Frequency response	:	30 Hz to 20 kHz	Bass Control :
		15dB at 50 Hz.	
Treble Control	:	15dB at 15 kHz.	
Distortion	:	<0.1% at nominal output 1 kHz, max. sensitivity	

### 8.0 MIXER AMPLIFIER

The local amplifiers for the meeting rooms shall be rated 50W to drive the loudspeakers in the area. It shall be a full feature integrated amplifier with two mixable inputs, front panel activity indicators, integral fault monitoring, bass and treble control and shall be rack mountable. It shall be possible to add slave amplifiers for additional power requirements.

The amplifier shall have the following characteristics or as per BOQ:

Input	:	220 / 240V, 50 Hz
Output regulation	:	<2dB
Distortion	:	<1%
Frequency response	:	60 Hz-20 kHz
SNR	:	74dB
Sensitivity Input	:	-10dB (245mV) 47K Ohms.
Power rating (Nominal)	:	50W or 100W

## 9.0 LOUDSPEAKERS

Loudspeakers shall be installed in the areas to achieve a uniform sound pressure level. The loudspeakers shall be mounted on walls, ceiling or in ground to meet the site requirements. All Parking/External area loudspeakers shall be weatherproof type. Speakers shall only be from the same equipment manufacture.

All loudspeakers shall have 100V line transformer to match 100V amplifier outputs.

The loudspeakers, including horns if used, shall provide music quality reproduction with a frequency response up to at least 18,000 Hz.

The specified power ratings of the speakers are the maximum values and no speaker is expected to be tapped at the maximum rating.

### 9.1 Sound Projectors

The sound projectors shall be used for landscape areas. It shall have a frequency response of 150 Hz-16 kHz and a maximum power rating of 30 watts.

The transformer shall have tapings of 15, 8, 4.0 and 2 watts at 100 volts. The SPL shall be 92dB, 1watt, 1m and the dispersion angle shall be at least 150 deg.

The speaker shall be dual cones wide band silicon treated.

The speakers shall be of weatherproof construction in aluminium alloy extruded body and front grill shall be perforated aluminium, with fixing brackets for angled positioning.

### 9.2 Ceiling mounted Loudspeaker

The ceiling loudspeaker shall include a 180 mm high compliance loudspeaker, 100 volt transformer and baffle.

The loudspeaker shall have a dispersion angle of 140 deg, a frequency response of 100 Hz – 18 kHz and a maximum power rating of 6 watts. The SPL shall be 90dB @ 1W, 1M.

The transformer shall have power tapping of 6, 3, and 1.5 watts at 100 volts.

The speaker shall be dual cones wide band silicon treated. The same speaker shall also be suitable either for public areas or humid and steamed rooms.

The baffle shall have a diameter of 180mm and be finished in baked white enamel with a sculptured modern contoured shape. Construction shall be of welded steel to prevent vibration and rattle.

The speaker shall be white RAL 9010 epoxy coated with all aluminium grill and chassis to withstand to avoid corrosion.

The baffle shall utilize a torsion spring fixing for installation with mounting ring.

### 9.3 Compact cabinets (W/P)

The weatherproof compact cabinet shall have a frequency response of 100 Hz-18 kHz and a maximum power rating of 16, 8, 4 or 2 watts as required for the area to be covered. The SPL shall be 92dB, 1 Watt, 1m.

The speaker shall be dual cones wide band silicon treated.

The construction shall be of moulded ABS plastic with aluminium grill and shall be black in colour. The unit shall include fixing brackets for angled positioning.

### 9.4 Spherical Speaker

The spherical speaker shall be an omni-directional speaker, which shall be white in colour and manufactured of ABS plastic. Mounting shall be via a Pendant and the speaker shall be supplied with a metal braided cable.

Rated Power	:	6-20Watts
SPL@1m, 1 Watt	:	94dB
SPL@ Full Power,1m	:	107dB
Dispersion	:	140 (Vertical), 360 (Horizontal) Degrees
Dimensions	:	368 x 98 x 90mm
Frequency Range	:	80 – 18 kHz

## 10.0 INTEGRATION

Emergency Voice Evacuation system shall be integrated with Fire Alarm system and Building Management system for sequential operations and status monitoring.

### 10.1 Functions:

- a. During normal conditions, these systems play music in common area and can be used to page people and to make public announcements.
- b. In case of fire, a signal from fire alarm panel shall initiate announcement of pre-recorded message in all the groups/zones. This has the highest priority.
- c. To avoid panic in the entire building, manual announcements shall be made to be restricted to the affected areas through the PA system.
- d. If any additional hardware is needed, it should be specified and given with the software.

**END OF SECTION**

## **Section-20: CCTV System**

### **1.0 IP BASED CCTV SYSTEM**

#### **1.1 SCOPE OF WORK**

The scope of the work includes the installation, testing and commissioning the complete CCTV system as described herein and as shown on the plans. The system shall include NVRs, PTZ cameras, Dome Cameras, Box type cameras, PTZ controller, LCD screens, wiring, termination, electrical boxes, and all other necessary material for a complete operating system.

##### **1.1.1 FIXED DOME / BOX TYPE IP COLOUR DAY/NIGHT CAMERA**

The fixed camera should have the following features:

- Directly IP based without requirement of encoder.
- Day / Night camera. Should switch automatically to monochrome mode (black and white) at night.
- Imaging Device 1/3 inch complementary metal oxide semiconductor (CMOS) or charge Coupled Device (CCD) with wide dynamic range (WDR)
- Image Control with Automatic white balance (AWB), automatic back light compensation (BLC), automatic gain control (AGC)
- Iris setting should be auto/manual with definitions for sharpness, image quality and also time stamp and camera ID.
- Minimum Illumination should be:
  - Color mode: F1.4 @ 0.1 lux (.01 fc)
  - Black and white mode: F1.4 @ 0.04 lux (0.004 fc)
- Vari-focal CS mount lens 3.5mm to 50mm required
- Supported Video Compression should be H.264 and Motion JPEG (MJPEG)
- 704 x 576 @ 25 fps PAL (minimum required )  
1920 x1080 @ 25 fps PAL (maximum required)
- Should support dual Video Streaming with both streams originating independently from the camera
- Should support multicasting
- Should support Power over Ethernet (PoE) 802.3af
- Should provide at least two digital inputs and two digital outputs for hardwire integration.
- Camera should provide 802.1X authentication



- Camera should support at least 128 bit encryption using hardware-based Advanced Encryption Standard (AES)
- Multiple user access levels with password protection.

### 1.1.2 PAN/TILT/ZOOM DAY/NIGHT INDOOR/OUTDOOR COLOUR DOME CAMERA

The PTZ Camera should have the following features:

- The camera should be IP based.
- The camera should be true outdoor model suitable for use in Pakistan.
- It shall be a discreet camera dome system consisting of a dome drive with a variable speed/high speed pan/tilt drive unit with continuous 360° rotation.
- Imaging device should be 1/3 inch CCD and support both color and monochrome black and white. With 540 TVL horizontal resolution.
- Should provide 27x optical zoom and 12x digital zoom (minimum) with auto focus feature
- The camera should provide high-quality MPEG-4, MJPEG or H.264 compressed images.
- The camera should provide images @ 4CIF i.e. with a resolution of 704x576 pixels in PAL mode.
- The supported frame rate should be 30ips or 25ips in PAL mode.
- The camera should support two simultaneous streams
- Should support Day/Night mode and should switch automatically to monochrome mode at night with below 1 lux sensing at variable shutter speeds.
- Should provide super quick, 400° per-second pan and 200° per-second tilt speeds with 256 pre-set positions. Each pre-set position should support the programmable camera settings such including selectable auto focus modes, iris level, Low Light limit, and backlight compensation for each preset.
- Should support wide dynamic range (128x) appropriate for high contrasting environments
- Should support Automatic focus, automatic Iris control, gain control horizontal and vertical aperture control.
- Should be installed in a High-impact, weather-resistant dome enclosure
- Camera must provide at least 7 Inputs and 2 outputs that can be programmed individually. Inputs should be able to trigger an alarm condition. Outputs should be able to drive an external device.
- Should support intelligent privacy masking by providing 8, four-sided user-defined shapes, each side with different lengths; window blanking setting to turn off at user-defined zoom ratio; window

blanking set to opaque gray or translucent smear; blank all video above user-defined tilt angle; blank all video below user-defined tilt angle .

- Should support at least 8 user-defined programmable patterns including pan/tilt/zoom and preset functions, and pattern programming through control keyboard or through dome system on-screen menu
- Should support a web interface utility for 5 simultaneous users when using MJPEG/MPEG-4 in unicast mode. When configured in multicast mode (MPEG-4), the camera should support an unlimited number of users.
- Should support On-screen display for time, date and location. The position of the display and text should be user definable.
- Should support On-screen display of compass heading and user-definable compass setup so as to indicate direction that the camera is looking in.
- Should support multi level password protection.
- Should support Secure Sockets Layer (SSL) 128 bit encryption

### 1.1.3 VIDEO MANAGEMENT AND RECORDING SYSTEM

The Video Surveillance Management platform should be optimized for applications to view, store, and manage real-time and recorded video in a networked environment. The system should use an open suite of URL-based programmatic interfaces to communicate with applications. The system shall provide a highly scalable and reliable platform to enable customized, network-based surveillance applications. The Video Surveillance Management platform shall include but not limited to the minimum of the following features/functions/specifications:

- The system shall display any combination of live and recorded camera feeds on multiple workstations simultaneously using an IP network.
- The system shall provide low latency video with high quality images and support H.264, MPEG-4, and Motion-JPEG compression schemes simultaneously.
- The system shall provide replication of individual video feeds at different frame rates for multiple users and other system processes.
- The system shall support simultaneous video feeds across multiple locations for centralized and decentralized storage, display, and distribution of video without limitation, but shall minimize load on video servers by streaming only the active video channels.
- The system shall be capable of streaming and recording video at different bit rates and variable frame rates up to full motion 25 fps (PAL) video on all camera feeds and shall support QCIF, CIF, VGA (640x480 pixels), D1 (720x576pixels) and 4CIF (704x576 pixels) camera resolution.
- The system shall provide the ability to remotely configure the cameras and shall allow configuration data to be imported from a spreadsheet.
- The system shall allow instant replay of video and will permit pausing of live video, forward and backward review of recorded video, and return to live viewing.
- The system shall manage storage of real-time video at any specified frame rate, duration, and physical location on the network.

- The system shall provide flexible archiving capability in terms of frame rate, duration, and location and shall utilize dynamic file allocation to ensure that the full duration of the selected video stream will be recorded, regardless of lighting condition, motion, or scene detail.
- System shall support access to the archived video, to seek to any point in the archive, to set the pre and post time, and to loop that segment of the archive.
- The system shall cater for redundant multi-site video storage. Meaning that the video feeds coming from the sites must be stored on primary and backup storage.
- The system shall provide a Management Console that shows the status of CPU, Memory, Disk Usage, and traffic analysis.
- The System shall support H.264 Compression Protocol and 128 bit encryption. The system shall provide diagnostic tools that support Simple Network Management Protocol (SNMP).
- The system shall provide for integration with other software applications through an open and published Application Programming Interface (API). Such applications shall include, but not be limited to, access control, video analytics, and other alarms and sensor inputs.
- The system shall be capable of running on a single physical server or distributed across the network, scaling to handle thousands of cameras and users.
- The system shall provide for or have the capability of interoperating with the functional modules providing the capability for multiple web-based display consoles to configure, manage, display, and control video throughout the IP network; multiple options to store video and audio; virtual matrix switching; client PC viewing; and, remote encoding and storage.
- The system shall be capable of simultaneously supporting 3rd party IP based cameras from a variety of different vendors.

**The system shall provide the following administrator functionalities:**

- Secure login
- Server, encoder, and camera administration
- Scheduled and event-based video recording
- User and role management
- Fine-grained activity reports and system audit
- Ability to push pre-defined views to any number of digital monitors with Virtual Matrix  
Ability to schedule to operator shifts, event filters, temporary views.

**The operator workstations running as part of the Video Management System shall provide the following operator functionalities:**

- Secure login
- Flexible video displays
- PTZ controls including presets and advanced camera options (e.g. focus, white balance, iris)
- Digital zoom and instant replay
- Create instant recordings, "Record Now"
- Client-side video enhancements (adjusting brightness, color, transparency, etc.)
- Instantly swap between live and archive video of the same camera feed
- Archive review and clipping

- Event notifications
- Ability to search archived video based on motion within a predefined window within the video frame
- Synchronize playback of multiple archives

**Supported file format types shall include** or as per BOQ:

- WMV - A standard file format for downloading and playing audio/video data or to stream data on a PC.
- AVI - A standard file format for storing audio/video data on a PC.MP2
- Clip (BWM) - A segment of video extracted from an existing stream-able archive.
- Digitally Signed Clip (BWX) - A segment of video extracted from an existing stream-able archive and signed with a digital signature to verify content has not been tampered with.

**Operator Workstation:**

- The minimum configuration of the Operator workstation PCs and the Video Wall PCs shall be or as per BOQ:
  - workstation based on the new Intel® X38 Express performance chipset and the latest workstation-class dual core Intel processors:
  - Intel's Core™ 2 Duo (2.83 GHz, 4 MB L2 Cache) or better
  - DDR-2 800 MHz ECC
- Should include the following Components or as per BOQ:
  - 160 GB SATA 3 GB/s NCQ 7200, 1st HDD
  - Intel Core 2 Duo E6850 3.0 4 MB/1333 CPU
  - 2 GB (2x1 GB) DDR2-800 ECC Memory
  - 768 MB PCIe Graphics
  - Microsoft Windows XP Pro 32-bit OS
  - Graphic card: NVIDIA®, GeForce® FX 5700 Ultra, FX 5900 Ultra or FX 5950 Ultra, Matrox Parhelia™, ATI RADEON® 8500,9500,9800
- The Operator workstation PC and the Video Wall PC will be separate and the two applications will not be combined on the same PC.

**The minimum configuration of the Management and Recording servers shall be:**

- Rack mounted, high end server - Multi processor based on a latest Intel processor.
- Minimum 2 GB of RAM
- Network adapter 1000 Mbps Ethernet
- Standard sound card is optional and recommended.
- Minimum 750GB storage capacity for installation.
- Redundant Power Supply.

#### 1.1.4 STORAGE REQUIREMENTS

The video storage system shall have following features:

- Recording of all the camera streams must be stored for the period of 30days on DAS, NAS or SAN.
- The storage media must be SATA drives or Fiber Channel drivers or Flash Drives.

- Minimum storage requirement is 64TB raw (The supplier to confirm the storage requirement as per number of cameras, pixel resolutions, video compression and number of recording days)
- The storage servers must have redundant power supply and meet high availability standards
- The storage should be RAID 5 configured for disaster recovery.
- Each recording unit/server should allow for internal storage up to 32 TB per recording unit so as to allow expansion if later required

#### **CCTV Color LCD Monitor**

- The Video Color LCD Monitor shall be high performance with high resolution.
- Its image signal input / output port terminal allow bridge connection.
- The Video monitor shall have operating controls & shall be mounted below or on side-front of its screen.
- It should have 450v lines Resolution and variable control Knobs to control contrast, V hold HHold & brightness.
- Push buttons switch to control power On / Off and separate LED pilot light.
- The video monitor screen size shall be 21 inches flat & square tube shall produce clear distortion less viewing all the way out to the edge and corners of the screen.
- It shall consist of S- video input / output connectors separated output. Input signal shall be 1.0V p-p and impedance 75 ohms.
- The power source shall be AC 198-264 auto and power consumption shall be not more than 36 W.
- It shall consist of Automatic Voltage selector (AVS) to level voltage fluctuation instantly and automatically.

#### **1.1.5 INTEGRATION (OPTIONAL)**

CCTV system shall be integrated with Fire alarm system, Emergency Voice Evacuation system, Access control system and Building Management system for sequential operations and status monitoring.

## **Section-21: Fire Alarm System**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Manuals, brochures, technical submittals and general provisions of the Contract, including general and supplementary conditions, apply to this Section.

#### **1.2 SUMMARY**

- A. This section includes the intelligent addressable fire alarm and detection system for ensuring safety and asset protection.

#### **1.3 DEFINITIONS**

- A. NOT USED.

#### **1.4 SUBMITTALS**

- A. Submit the product information for approval and final documentation in the quantities listed.
- B. Documents for Approval:
  - 1. Bill of material
  - 2. Technical specifications of all the material
  - 3. Connectivity diagrams
  - 4. Any variance (in case of deviation from the given specifications)
- C. Final Documents: Record documentation to include:
  - 1. Documents listed above.
  - 2. Recommended spare parts list for start-up support
  - 3. Instruction manual
  - 4. Testing Certificates

#### **1.5 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Engage a firm with at least 15 years experience in manufacturing fire alarm detection system.
- B. Supplier is to have a local service team with available spare parts in Lahore, Pakistan.
- C. Service personnel are to have at least 10 years in the installation, start-up and servicing of the said system.

## 1.6 WARRANTY

A. The manufacturer's standard warranty shall in no event be for a period of less than 36 months starting from beneficial use of the equipment. Submittals received without written warranties as specified will be rejected in their entirety. Maintenance during reliability period shall also be covered in the warranty section. **PART 2- SCOPE OF WORK**

## 2.1 GENERAL

The contractor shall supply and test the complete fire alarm system as described herein and as shown on the plans. The system shall include Intelligent Addressable main control panel, Addressable smoke sensors, Multi/heat sensors, wiring, termination, electrical boxes, and all other necessary material for a complete operating system.

The supplier has to verify that complete installation shall confirm to the applicable sections of NFPA72, NFPA-71, EN-54 and BS-5839.

The fire alarm system shall allow for loading and editing instructions and operating sequences as necessary. The system shall be capable of storing, and downloading while the system is in operation, a second set of operating software resident in the control panels as backup in case primary operating software is corrupted. In addition, the system shall be capable of on-site programming to accommodate system expansion and facilitate changes in operation. All software operation shall be stored in a non-volatile programmable memory within the fire alarm control unit. Loss of primary and secondary power shall not erase the instructions stored in memory.

Resident software shall allow for full configuration of initiating circuits so that additional hardware shall not be necessary to accommodate changes in, for instance, sensing of normally open contact devices to sensing of normally closed contact devices or from sensing of normally open contact devices to sensing a combination of current limited and non-current limited devices on the same circuit.

The system shall have the capability of recalling alarms and trouble conditions in chronological order for the purpose of creating an event history of 600 events.

The activation of any system smoke detector shall initiate an alarm verification operation whereby the panel will reset the activated detector and wait for a second alarm activation. If within one minute after resetting, a second alarm is reported from the same or any other smoke detector, the system shall process the alarm as described in the sequence of operation. If no second alarm occurs within one minute the system shall resume normal operation. The Alarm verification shall operate only on smoke detector alarms. Other activated initiating devices shall be processed immediately. The Alarm verification operation shall be selectable by zone.

A manual evacuation switch shall be provided to operate the alarm indicating appliances without causing other control circuits to be activated. However, should a true alarm occur, all alarm functions service conditions including the time of each occurrence.

The system shall have a single key that will allow the operator to display all alarm, troubles, and supervisory service conditions including the time of each occurrence.

The system shall have provisions for disabling and enabling all circuits individually for maintenance or testing purposes.

The system batteries shall be supervised for disabling and enabling all circuits individually for maintenance or testing purposes.

The panels shall be capable of networking upto 99 more nodes as nodes as and when required without modification of hardware except adding network cards.

## 2.2 SEQUENCE OF OPERATION

Upon actuation of any manual station, or automatic detector or sprinkler flow switch, or air conditioning and ventilation duct return and exhaust air smoke detector. The system is to operate as follows:

On the Main Panel the green normal LED is to extinguish and the red alarm LED is to light. The first line is to display the user specified message indicating the floor and zone that initiated. The first line is to display the user specification message indicating the floor and zone that initiated the alarm. The second line of the LCD is to indicating real time, number of messages waiting, type of alarm, zone of alarm and time the alarm occurred. Red LED corresponding to the zone in alarm in the main panel shall also be lit.

The alarm indicators on the FACP and repeater panel to continue to flash until the alarm is acknowledged . If a subsequent alarm is received after acknowledgment, the alarm is to sound again. The operator is to acknowledge the alarm by pressing a dedicated button and the buzzer is to silence provided that isn't an additional alarms the operator is to acknowledge all pending alarms before the buzzer is to silence. To reset the system the device is to be cleared first then the reset button is to be pressed.

The alarm shall consists a "slow whoop" alarm tone, for ten second. The tone shall repeat continuously (unless manually silenced) until the alarm initiating device is restored to normal and system reset. The silencing of an alarm condition is not to prevent the resounding of alarm devices if a subsequent condition occurs. A time delay feature is to be provided to sound a general evacuation alarm automatically throughout the building if the initiating alarm condition is not responded to within a predetermined time. Visual indication at the panels, corresponding to activated voice alarm circuits is to illuminate.

## 2.3 VOICE COMMUNICATION (OPTIONAL)

A central single channel digital audio control module shall be provided for the necessary alarm message / tone generation main and remote microphone connections, music inputs, and mixer / pre-amplifier circuits. Continuous supervision shall be provided along with specific information as to the type of failure should a problem occur (e.g. Main microphone trouble, tone trouble, etc.) Audio outputs shall have individual gain control.

A hand-held push-to-talk microphone shall be provided in the Voice Command Center, recessed within a protective panel-mounted enclosure. The microphone shall be a noise-canceling communication type with a frequency range of 200 Hz and shall be equipped with self-winding five foot coiled cable. An LED indicator shall be provided for the circuits ready for transmission. The microphone shall be supervised for disconnection.

Digital tones for alarm (show whoop) and auxiliary requirements (wail, horn, chime, etc.) shall be provided.

A pre-recorded digitized voice message capability is to be provided for automatic transmission to building occupants during alarm conditions. The automatic message player shall not rely on a tape or other mechanical means of transmitting the evacuation message. A standard evacuation message shall be provided under this contract, however, the message player must be capable of transmitting a custom message of up to five (5) minutes long. A self-contained speaker will provide testing of the message (s) without disturbing the occupants of the facility.



The system shall be configured to allow selective voice paging. Upon activation of any speaker manual control switch, two attention getting beeps shall sound over the speakers indicating an impending voice message will occur.

If any speaker manual control switchers are activated, the control panel operator shall be able to make announcements via the push-to-talk paging microphone over the pre-selected speakers.

Facility for total building evacuation and paging shall be provided to allow for activation of all speakers. This shall be accomplished by the means of an "All Circuit" switch.

## **2.4 POWER REQUIREMENTS**

The system shall be provided with sufficient battery capacity to operate the entire system upon loss of normal 230VAC power in a normal supervisory mode for a period of 24 hours with 30 minutes of alarm operation at the end of this period. The system shall automatically transfer to the stand-by batteries upon power failure. All battery charging and recharging operations shall be automatic. Contractor shall submit standby and alarm power calculations in support of the selected battery size. The batteries used for the system shall be maintenance free type.

## **2.5 FIRE ALARM CONTROL PANEL**

The control panel shall be Intelligent Addressable type of adequate point capacity with 20% spare and the construction shall be modular with solid state, microprocessor based electronics. It shall display only those primary controls and display essential to operation during a fire alarm condition.

A local audible device shall sound during alarm, trouble or supervisory conditions. The audible device shall sound differently during each condition.

The following primary controls shall be visible through a front access panel:

- Eighty character liquid crystal display.
- Individual red system alarm LED.
- Individual yellow supervisory service LED.
- Silent Walktest with History Logging

The system shall be capable of being tested by one person. While in testing mode the alarm activation of an initiating device circuit shall be silently logged as an alarm condition in the historical data file. The panel shall automatically reset itself after logging of the alarm. The panel shall also be capable of giving an alert alarm in case if any addressable device is not in operation or requires maintenance.

### **2.5.1 LED Supervision**

All slave module LEDs shall be supervised for burnout or disarrangement. Should a problem occur the LCD shall display the module and LED location number to facilitate location of that LED.

### **2.5.2 System Trouble Reminder**

Should a trouble condition be present within the system and audible trouble signal silenced, the trouble signal shall resound at preprogrammed time intervals to act as reminder that the fire alarm system is not 100% operational. Both the time interval and the trouble reminder signal shall be programmable to suit the owner's application.

## **2.6 MULTIPLE ADDRESSABLE PERIPHERAL NETWORK**

The system must provide communication with initiating and control devices individually. All of these devices will be individually annunciated at the control panel. Annunciation shall include the following conditions for each point:

- Alarm
- Trouble
- Open
- Short
- Device missing/failed
- Automatic environmental compensation.
- Variable Sensitivity setting
- Day & Night mode of operation
- Automatic dirty sensor indication

All addressable devices shall have the capability of being disabled or enabled individually.

Each loop to have a minimum capacity of 200 devices with detector & control modules in any combination. System that require factory reprogramming to add or delete devices are unacceptable. Each loop to have 25% spares available. Vendor to increase the no. of loops, if required.

Each addressable device must be uniquely identified by an address code interred for each device. The use of jumpers to set address will not be acceptable due to the potential of vibration and poor contact. The system must verify that proper type device is in place and matches the desired software configuration.

## **PART 3-ADDRESSABLE DEVICE TYPES**

### **3.1 GENERAL**

The system control panel must be capable of communicating with the types of addressable devices specified below. Addressable Devices will be located as shown on the drawings. The system shall identify when a smoke sensor becomes too dirty to operate properly. It shall also identify sensors which are almost dirty which need cleaning before they drift beyond their selected sensitivity. In short, a review of the front panel display or the printed status report quickly identify sensor that need cleaning.

Sensitivity of the sensor shall a programmable, photoelectric shall be variable from 0.2 to 37 percent and ionization sensitivity from 0.5 to 1.7 percent. It shall also be possible to program for timed, automatic sensitivity selection such as less sensitive during working hours and more sensitive when quite.

The panel shall provide the following features:

- Individual sensitivity selection for each sensor
- Peak value logging allowing accurate analysis for sensitivity selection
- Automatic, once per minute individual; sensor calibration check to verify sensor integrity
- Display of sensitivity directly in per cent per foot
- Multi-stage alarm operation
- Ability to display and print detailed sensor information

### **3.2 ADDRESSABLE SENSOR BASES**

The addressable sensor bases shall contain integral addressable electronics that constantly monitor the status of the detachable photoelectric, ionization or heat sensors. Each sensors output shall be digitized and transmitted to the control panel every four seconds.

It shall be possible to use different sensor types with the same base. The base shall have integral LED for power-on (pulsing), or alarm or trouble (steady on). The bases shall be available with connections for remote LED alarm indicator or connections for supervised remote replay. The sensor bases shall be size not more than 125mm diameter.

Address of the device shall be set in the base using dip switches so that removal or replacement of the sensor head will not affect the operation of the system. Device addressed through software or address set in the sensor head are not acceptable. Soft addressable sensors are also will be acceptable subject to compliance with other requirements of the specifications.

### 3.3 ADDRESSABLE OPTICAL SMOKE SENSORS

Optical sensor shall use a stable, pulsed infra red LED light source and a silicon photodiode receiver to provide consistent and accurate low power smoke sensing. Seven levels of sensitivity shall be available for each individual sensor, ranging from 0.2% to 3.7% per foot of smoke obscuration. It shall be possible to select and monitor the sensitivity at the control panel.

The head be designed to allow 360 deg. Smoke entry for optimum response to smoke from any direction. A built-in screen shall keep insects from entering the smoke chamber.

### 3.4 ADDRESSABLE OPTICAL HEAT SENSOR

The addressable type heat sensor shall be self restoring and provide a combination of rate and fixed temperature rate compensated sensing. It shall have low thermal mass to accurately and quickly measure the local temperature at the fire alarm panel.

It shall be possible to select the rate of rise temperature detection for either 15 °F or 20 °F per minute. Fixed temperature sensing and shall be programmable to operate at 135 °F or 155 °F. It shall be possible to program these sensors as a utility device to monitor for temperature extremes in the range from 32 °F to 120 °F (optional).

### 3.5 INTELLIGENT OPTICAL MULTI SENSOR

The Addressable Multi Sensor gathers analog information from one photoelectric fire sensing element and one heat sensing element and converts it into digital signals. The sensitivity of the Device shall be variable. The Addressable code for the Device shall be electronically programmed and stored in the Sensor and be non-volatile. The programming of this code shall be facilitated by a digital electronic hand held Device.

• Sensitivity	variable
• Operating voltage	24VDC
• Standby Condition	≤100μA
• Alarm Condition	≤7mA
• Transmission Method	Digital Communications
• Maximum Humidity	93% RH- Non Condensing (at 40°C)
• Temperature range	-10°C - + 50°C
• Smoke Sensing Element: Photoelectric - Light Scattering Principle	
• Heat Sensing Element:	Fixed temperature alarms at 135°F (57°C) ambient

### ADDRESSABLE PULL STATION

They shall be manufactured from high impact red lexan. Station shall mechanically latch upon operation and remain so until manually reset by opening with a key common to all system locks. Pull stations shall be double action type requiring smashing glass and pulling a lever to initiate an alarm.

The device shall integral electronics for constantly monitoring the status of the device and communicating the same to the control panel. Address of the device shall be set by dip switches in the associated electronics.

### **3.7 ADDRESSABLE DEVICE SUPERVISION**

All devices shall be supervised or trouble conditions. The system control panel will be capable of displaying the type of trouble condition (open, short, device missing, failed). Should a device fail it will not hinder the operation of other system devices.

### **3.8 NOTIFICATION APPLIANCES**

Notification appliances shall include visible, audible or Audible / visible as shown in the drawing. Audible appliance shall be loudspeaker or dc vibrating bells and the visible appliance shall be strobes. The sounders must be capable of projecting the pre-recorded voice messages. The prerecorded messages shall be in various languages i.e English , Urdu or any other as specified by the end user.

### **3.9 STROBES WITH SOUNDER (SINGLE UNIT)**

Strobes shall be suitable for wall or ceiling mounting as shown in the drawings. Xenon flash tubes shall be 24VDC powered from the panel. Visible output shall be 30 candela. The reflective design shall provide light output in key axis directions allowing vertical or horizontal mounting. The unit shall be of red finish with white "FIRE" lettering . Flash rate shall be 1 Hz.

### **3.10 INTEGRATION**

Fire Alarm system shall be integrated with Emergency Voice Evacuation system, Access control system and Building Management system for sequential operations and status monitoring.

## Section-22: GPON

### PART 1 - GENERAL

#### **1.1 DESCRIPTION:**

A. The Work shall consist of furnishing and installation of voice and data communication cabling as shown on the drawings and specified herein.

#### **1.2 REFERENCES:**

##### **A. ISO – International Standards Organization**

ISO/IEC 11801 Information Technology – Generic Cabling for Customer Premises

ISO/IEC TR 14763-1 Information technology – Implementation and operation of customer premises cabling – Part 1: Administration

ISO/IEC TR 24750 Information Technology – Assessment of installed balanced cabling channels in order to support 10 GBASE - T

##### **B. IEC - International Electrotechnical Commission**

IEC 60603-7 Connectors for Electronic Equipment – Part 7-1 & 7-7

IEC 60793 All parts relevant to these Specifications

IEC 60794 All parts relevant to these Specifications

IEC 61156-1 to 6 Multicore and symmetrical pair/quad cables for digital communications – Part 1 to 6

IEC 61935-1 & 2 Generic cabling systems – Specification for the testing of balanced communication cabling in accordance with ISO/IEC 11801 – Part 1 & 2

IEC 60332 Test on electric cables under fire conditions

IEC 60754 Tests on Gases Evolved During Combustion of Material from Cables

##### **C. EIA - Electronic Industries Association**

RS-453 Dimensional, Mechanical and Electrical Characteristics

Deferring Phone Plugs and Jacks

EIA 310 Racks, Panels and Associated Equipment

EIA/TIA 492AAAA Detail Specification for 62.5-UM Core Diameter/125-UM Cladding Diameter Class 1A Graded-Index Multimode Optical Fibers

EIA/TIA 526-14-A Optical Power Loss Measurements of Installed Multimode

## Fiber Cable plant - OFSTP-14a

EIA/TIA 568 A Commercial Building Telecommunications Wiring Standard

EIA/TIA 568-B.1 Commercial Building Telecommunications Cabling Standard, Part 1: General Requirements (ANSI)

EIA/TIA 568-B.2 Commercial Building Telecommunications Cabling Standard, Part 2: Balanced Twisted-Pair Cabling Components (ANSI)

EIA/TIA 568-B.3 Optical Fiber Cabling Components (ANSI)

EIA/TIA 569 Commercial Building Standard for Telecommunications Pathways and Spaces

EIA/TIA 606-A Administration Standard for the Telecommunications Infrastructure of Commercial Buildings

EIA/TIA 607 Commercial Building Grounding/Bonding/Requirement Standard

EIA/TIA TSB 67 Transmission Performance Specifications for Field Testing of UTP Cabling Systems

EIA/TIA TSB 155 Additional Guidance for 4 – Pair 100 ohms Category 6 Cabling for 10 GBASE-T Application

**D. IEEE - Institute of Electrical and Electronic Engineers**

IEEE 802.3 AN 10 GBASE – T Standards 2006

**E. ICEA - Insulated Cable Engineers Association**

ICEA S-80-576 Category 1 & 2 Individually Unshielded Twisted Pair Indoor Cables for Use in Communications Wiring Systems

ICEA S-83-596 Standard for Fiber Optic Premises Distribution Cable

**1.3 SUBMITTALS:**

- A. General: Submit the necessary complete sets of documentation indicating type, size, rating, style, catalog number, Manufacturers names, photographs and / or catalog data sheets for all items to ensure compliance with Specifications. This documentation shall be subject to the approval of the Owner Representative and no equipment shall be ordered without his approval for all equipment and devices, which are shown on documents (drawings, BOQ, etc). During technical submittal stage, contractor shall submit all required technical document for study and approval.
- B. Product Data: Submit manufacturer's technical product data, including:
  1. Compliance sheet to the specification with cross reference to related items in data sheet, point by point, indicating deviations, if any, with reasons for such deviations, also indicate any extra features / specifications.
  2. Complete one-line riser diagram(s) showing all system components

3. Pin to pin riser diagram showing all system components and interconnection between the system and all other related systems.
  4. Complete description data including UL listing or any equivalent standards for all system components
  5. Provide all system related calculations supported by manufacturer specific software and perform all necessary calculations validating the shop drawing system distribution and related installations.
  6. Complete description of system operations and functions of each system component.
  7. Manufacturer's technical product data sheets, including quantities and specifications of every item, specification of every device, system component, quantities, software and installations for each unit of equipment.
  8. Contractor shall submit a list of the Manufacturer's authorized, local representative responsible for installation coordination and service, pre-qualification for the system provider and installer.
  9. Complete description and data including related standards for all system components.
  10. Documents indicating system expandability options included in the submitted products and system included redundancy features.
  11. Documents indicating that the supplied system components are the latest and most updated products from the system manufacturer and software versions are the latest produced by the system manufacturer.
  12. All technical material submittals must be provided in both hard copy and soft copy. The softcopy must allow for searching capabilities. The technical material submittal will be rejected if the softcopy was not included.
  13. Testing & commissioning procedures according to system manufacturer requirements and calibration certificate for testing equipment
  14. Configuration plan including all management plans to be implemented according to project operational team
  15. Provide Bandwidth calculation sheets for all switches in the network
  16. Verify and submit power consumption and heat dissipation calculation sheets utilizing system manufacturer software and make all necessary changes and adaptation on site without extra cost.
  17. Submit Wi Fi Coverage patterns and accordingly modify, add, relocate wi fi outlets to provide full coverage of the building enabling VOIP over Wi Fi network in all building areas.
- C. Shop Drawings: Provide shop drawings & Composite drawings showing equipment, device locations, labeling, part number and connecting wiring of the systems, including riser diagrams, rack elevations. Shop drawings shall include, but not be limited to the following:
1. Complete pin to pin one-line riser diagram(s) showing all approved equipment, size, type and number of all conductors, interconnection between the system and all other related systems.
  2. Installation details for all system components. Installation details drawings shall show all accessories used in installation such as back boxes, glands, washers, etc.
  3. Complete Grounding details as per system manufacturer requirements.

Indicating connections with dedicated grounding system including connections with telecommunication grounding bus bars as part of overall grounding and bonding system including telecom main grounding bus bar

4. Exact location of every single component of the system in coordination with all other works (Electromechanical, Arch., and Civil).
5. Colored Composite drawings for all MEP systems showing all coordinated
7. Complete sequence of operations and functions of the system.
8. All drawings should be submitted in both softcopy and hardcopy formats.

No of copies shall be according to contract documents requirements (at least three copies shall be submitted)

- D. System supplier & Installer qualifications documents: System supplier & Installer should submit the required certifications indicating that the system supplier and installer company is certified from system manufacturer to perform all system supplying, installations, testing and commissioning supported by system installers CVs and related manufacturer certifications. The system supplier should be involved in a strong relationship with system manufacturer with proven reference of similar projects. The system supplier & installer should submit reference of similar projects and abide by all requirements in project documents (specifications, drawings ,BOQ, and method of measurements)
- E. Manuals: Submit complete manufacturer Installations, maintenance and operation manuals including spare parts list for each system component, including furnished specialties and accessories. Include this data, product data, and shop drawings in the manuals in accordance with other relevant documentation.
- F. Composite Coordinated drawings illustrating all MEP devices and equipment.
- G. Documents indicating the working environment according to system manufacturer regarding temperature and humidity are achieved and coordinated with HVAC team.
- H. Finalized Reflected ceiling drawings illustrating all works in the ceilings after finalizing the coordination process.
- I. Testing & commissioning plan according to manufacturer testing procedures. Third party testing agency shall be nominated for the whole project
- J. Wiring Diagrams: Show typical wiring schematics including workstation outlets, jack and jack assemblies, patch cords, patch panels, fiber-optic boxes and other equipment.
- K. Samples: For workstation outlets (TO), jacks, jack assemblies, and faceplates for color selection and evaluation of technical features.
- L. Close-out Submittal: Operation and Maintenance Data, spare parts, System record Drawings and wiring details, in compliance - PROJECT CLOSE-OUT REQUIREMENTS

#### 1.4 TRANSPORTATION, HANDLING AND STORAGE:

- A. Deliver equipment and components in factory-fabricated containers or wrappings, which properly protect equipment from damage.
- B. Store equipment and components in original packaging. Store inside in a well- ventilated space protected from weather, moisture, soiling, humidity, and extreme temperatures.



C. Handle equipment and components carefully to prevent damage, breaking, and scoring of finishes. Do not install damaged units or components; replace with new.

#### 1.5 WARRANTY:

A. The manufacturer must guarantee to the End User that the products referenced within the specific Warranty Modules (Class E System) when correctly installed in accordance with installation guidelines:

1. Will be free from product defects in materials and workmanship

2. Supports the following application (not limited):

- 10BASE T Ethernet
- 100BASET Fast Ethernet
- 1000BASE TX Gigabit Ethernet
- 10GBASE-T
- 155Mbit ATM
- 1000Mbit ATM (CB1G)
- 10 GBASE-T

3. For a duration of 20 years

B. All components including the patch cords have to be produced by the same cabling system manufacturer to ensure warranted performances and applications against the standards.

#### 1.6 QUALITY ASSURANCE:

A. Manufacturer's Qualifications: The items provided under this contract will be from manufacturers that have a minimum of 5 years experience in producing the types of systems and equipment specified.

B. Installer Qualifications: Specialist subcontractor with at least 5 years of successful installation experience with projects utilizing data system similar to that required for this project. Subcontractor shall be subject to approval of Engineer.

C. Materials and installation shall comply with the specified Codes and Standards.

D. Single Source Responsibility: All components and accessories shall be product of single manufacturer except for cables unless approved by consultant.

#### 1.7 ENVIRONMENTAL REQUIREMENTS:

A. Connecting hardware shall be rated for operation under ambient conditions of 0 to 50 degrees C and in the range of 0 to 95 percent relative humidity, non-condensing.

## PART 2 – PRODUCTS

### 2.1 SYSTEM DESCRIPTION:

A. The voice and data communication cabling shall consist of horizontal and backbone cables and connecting hardware to transport data (including LAN/WAN) and voice (telephone) system signals between related as shown on drawings. Numbers of outlets shall be as shown on drawings and documents. The Data Local Area Network (LAN) Sub-Contractor shall coordinate his work with telephone equipment Sub-Contractor(if any). B. The system shall support GPON Scheme.

- C. The Data Network will perform all switching and routing functions for voice, video and data services and applications. The network shall serve all IP based services such as VOIP, IP CCTV, IPTV, etc, as applicable.
- D. The Core Switches will be located at the heart of the network and shall provide very fast switching, intelligent high performance platform for deploying numerous concurrent intelligent services without degrading the overall performance of the network. The core switches shall perform various functions using various service modules for wan interfaces, security firewalls...etc. Core Switches should support MPLS and act as P-Routers.
- E. Connectivity between DC Switches and Core Switches should be based on 40G/ per BOQ/Risers.
- F. Connectivity between Core Switches and Distribution Switches should be based on 40G/ per BOQ/Risers.
- G. The distribution switches will be used to provide aggregation for various services and filter traffic that will reach the network core. Each distribution switch shall be connected to each core switch via 40GbE link and the edge/Access switch will be connected to the distribution switch via 2x10GbE /per BOQ/Risers. The connections between each edge switch and the distribution switch must be on a different card on the distribution switch
- H. Access Switch: Access Switches will be located per per BOQ/Risers/Dwgs.
- K. Network Equipment Management Software: The management software's main function is to enable remote and centralized configuration of the different parameters and functions of switches and routers of the Data Network.

N. Horizontal cable and its connecting hardware provide the means of transporting signals between the telecommunications outlet/connector and the horizontal cross-connect located in the communications equipment room. This cabling and its connecting hardware are called "permanent link," a term that is used in the testing protocols.

1. Horizontal cabling shall contain no more than one transition point or consolidation point between the horizontal cross-connect and the telecommunications outlet/connector.
2. Bridged taps and splices shall not be installed in the horizontal cabling.

P. The maximum allowable horizontal cable length is 90 m. This maximum allowable length does not include an allowance for the length of 4.9 m to the workstation equipment. The maximum allowable length does not include an allowance for the length of 4.9 m in the horizontal crossconnect.

Q. Backbone cabling system shall provide interconnections between communications equipment rooms, main terminal space, and entrance facilities in the telecommunications cabling system structure. Cabling system consists of backbone cables, intermediate and main cross-connects mechanical terminations, and patch cords or jumpers used for backbone-to-backbone cross-connection.

R. Backbone cabling cross-connects may be located in communications equipment rooms or at entrance facilities. Bridged taps and splitters shall not be used as part of backbone cabling.

## 2.2 GENERAL:

A. Materials and equipment shall be the standard products of a manufacturer regularly engaged in the manufacture of the products and shall be of latest technology/version available at the time of installation, and has been in satisfactory use for at least 1 year prior to installation. Materials and equipment shall conform to the respective publications and standards specified.

## 2.3 HORIZONTAL CABLING:

A. Horizontal Distribution Cable:

1. Horizontal distribution cable shall be Category 6.
2. The cable shall be a four, thermoplastic-insulated, individually twisted pairs of copper conductors; No.23 AWG, color-coded; enclosed in PVC jacket or a material.
3. Cable shall be designed to support the IEEE 802.3 1000Base.
4. All pairs must have impedance of 100 Ohms, with a tolerance of +/- 15

Ohms. In the construction of the cable cross-talk performance shall be maintained using a C3 (Central dielectric Cross-talk Cancellation) member set between the 4 pairs.

5. Insulators in standard Blue/White, Orange/White, Green/White, Brown/White colors must cover the conductors.
6. Cable shall be of latest technology/speed manufactured and available at the installation time.
7. Cable shall be used for horizontal run between data, voice (telephone), clock and security system outlets and floor communicable cabinet.
10. Meet the following electrical characteristics per consultant's recommendations (if any):

Max DC Resistance (@ 20°C) <math>< 8.5\Omega / 100m</math>

Characteristic Impedance

(no impedance averaging allowed) 1-100 MHz: 100 ohms  $\pm$  15%

100 - 750MHz: 100 ohms  $\pm$  22%

Nominal Velocity of Propagation (NVP)

LSOH – 67%

11. Provide the following 100m, 4-connector topology performance (std ref. values in grey cells):

B. Telecom Outlets (TO): Category 6 RJ45 information outlets designed for termination of 4-pair balanced twisted-pair category 6 copper cable must possess the following characteristics at the minimum:

1. Exceed category 6A component compliance.
2. Telecom outlets shall be CAT 6 (UTP) RJ45.
3. Each connector shall provide both T568A and T568B color code identification for the pins at the rear of the connector.
4. The punch down is to be in accordance with the T568B color code.
5. Reassignment of pairs is forbidden.
  
6. All conductors from the CAT6 4 pair cable shall be terminated on the respective contacts.
7. Universal design allows the same outlet to be mounted in flat or angled orientation.
8. Have available termination tools.
9. Be backwards compatible to allow lower performing categories of cables or connecting hardware to operate to their full capacity.
10. Allow installation from the front or rear of the faceplate, and allow for the jack to pass through the faceplate without re-termination.
11. Provide color-coded, snap-in icons available for circuit identification.
12. To avoid installation errors, the wire organizer of the snap-in connector must be identified by the same standard color coding as the wires.
13. All CAT 6 (UTP) RJ45 connectors shall be fully compliant with the ISO/IEC 11801:2002 standard. The presentation of the outlet shall provide for labeling and identification.
14. A transparent window shall protect the labeling tag.
15. All outlets shall be equipped with shutters.
16. Snap-in Format (Where required): The dimensions of the Snap-in format connectors shall be H x W x D: 19.5 mm x 16.8 mm x 35.7 mm. The same format connectors (unscreened) shall be used on each link. The connector fits in specific structural hardware for Snap-in format of third parties. If not available, the Snap-in connector can be used in combination with a keystone clip and specific structural hardware for keystone connectors.

C. Faceplates: All faceplates installed, as part of this specification shall have these minimum features listed below:

1. Be applicable to both fiber and copper applications.
2. Be available in 2 and 4 port single-gang configurations.
3. Allow modules to be removed from the front of the faceplate.
4. Allow UTP modules to pass through faceplates even after termination.

5. Have write on designation labels for circuit identification together with a clear plastic cover.
  6. Feature easily removable designation label covers which can be removed without use of tools.
  7. Have as a minimum the standard colors of white, bright white, and alpine white.
  8. Have optional modular furniture adapters available.
  9. Have surface mount boxes single gang faceplates
  10. Be manufactured using UV resistant, high impact thermoplastic to prevent color fading and provide additional durability.
- D. Copper Patch Panels (RJ45):
1. Patch panels must have 19" equipment practice dimensions to permit mounting in standard cabinets, racks or bays.
  2. Provide 24 ports Snap-in format (Modular) patch panels equipped with a cable management mechanism that provides strain relief, earthing and grounding features.
  3. The presentation of the Patch Panel shall provide for labeling using a printed numbering system.
  4. The connector shall provide both T568A and T568B colour code identification for the pins at the rear of the connector.
  5. Patch panel outlets must have each Category 6 (UTP) RJ45 connector, connected separately.
  6. The punch down is to be in accordance with the T568B color code. Reassignment of pairs is forbidden.
  7. The screened connectors from modular patch panel shall provide termination facilities for the drain wire of each category 6A F/UTP cable.
  8. All conductors from the 4 pair cable are to be terminated on the respective contacts. To avoid installation errors, IDC blocks must be identified by the same standard color coding as the wires.
  9. Each patch panel shall provide a means to locate and clamp the incoming cables without causing damage to the cables or affecting the performance of link.
  10. The installer must avoid any risk of cable pinching or compression during the installation of cable.
  11. In the rack, the Patch Panels shall be separated by metallic patch-guides that have a closed front to protect the patch cords. The height of these guides will be 1U or 2U depending on the layout of the rack.
  12. The metal frame of patch panel must not be earthed to the cabinet with a separate earth strap if the patch panels automatically make contact with the metal frame of the cabinets. If the cabinet is not designed to provide the panels with automatic earth, then the patch panels must be connected with separate earth strap to the earth key. E. Intelligent Patch Panels:
1. Intelligent physical infrastructure management by providing a modular and scalable approach to meet the demands of enterprise and data center installations.

2. Standard copper and fiber cabling is used for all terminations onto the back of these panels while Patch Cords are used for cross-connect or interconnect installations.
  4. Accommodates intelligent modules that mount in the rear and utilize no additional rack space zero RU.
  5. Accepts all UTP, STP, and LC Fiber Optic Modules.
  6. Accepts an Interface Unit to provide patch cord tracing and provisioning of switch ports with Interconnect Patch Cords or patch field mapping with Cross-Connect Patch Cords.
- F. Patch Cords: To achieve a performance all Patch Cords will be Category 6 rated. All patch cord cable will be made from PVC or Low Smoke Zero Halogen (LSZH) material (when used in plenum areas).

1. Augmented category 6 component compliant out to 250MHz with operational bandwidth to 500MHz.
2. Factory assembled and 100% transmission tested with laboratory grade network analyzers for proper performance up to 500MHz.
3. Backwards compatible with lower performing categories.
4. Equipped with identical modular 8-position plugs on both ends, wired straight through with standards compliant wiring.
5. Have full 360° shield coverage and metal plug housing to provide durability and resistance to damage.
6. Have a PCB based plug to enable high levels of performance.
7. Have fixed position front contacts to ensure plug quality and consistent mating with outlets.
8. Have internal rear contacts to maintain cable pair symmetry to the point of termination.
9. Have a boot that features an ultra slim design for high density applications and snag free operation.
10. Use modular plugs.
11. Have a dual jack construction for excellent alien crosstalk performance.
12. Available in standard lengths of 3, 5, 7, 10, 15 and 20 ft. with custom lengths available upon request.
13. Have optional colored clips to allow field color coding even when cords are already installed. Available in Black, White, Red, Gray, Yellow, Blue, Green and Orange

G. Consolidation point/Zone Unit Enclosure: A zone unit is a termination connection point between open office cabling and horizontal cabling to allow for reconfiguration of the open office cabling. A zone unit is not a splice, it is considered to be a piece of connecting hardware. Installation guidelines are as follows:

1. No more than one zone unit may be used in a single horizontal cable run.
2. Each horizontal distribution cable exiting the zone unit shall have all pairs terminated in all eight positions of the modular outlets in the work area.
3. Cross-connections or active equipment shall not be permitted at a zone unit.

The zone unit shall have the following characteristics as minimum:

1. Enclosure designed to accommodate 24- or 48- work area modules.

2. Constructed of 16-gauge steel.
  3. Feature 1.8" x 4.1" cable access entry points.
  4. Incorporate ¼-turn hook and loop managers for routing of cables entering/exiting the enclosure.
  5. Have two-piece, base and cover design.
  6. Feature a low-profile design, which is 1.8", or lower in height.
- H. Class E link or channel: Manufacturer should demonstrate guaranteed minimum worst-case performance to compliant with class E channel performance according to the ISO/IEC 11801: 2002 standard. Components used must be compliant with the category 6 standard mentioned above and the manufacturer should be able to demonstrate independent verification.

#### **2.4 BACKBONE CABLING:**

- A. Data Backbone: This backbone will link the Switches located in the Floor Distributors (FD) to the Data network server through the Building Distributor (BD).
1. Optical Fiber Cable: The cable shall be suitable for connector manufacturer termination processes (LC, SC or ST connectors). Fiber splicing method should be used for termination of Fiber Cables using fiber pigtailed manufactured by the same vendor.

Construction: Tight buffered with water blocking Aramid/Glass yarn reinforcements or tape and shall be suitable for indoor or outdoor use making it ideal for short campus links without the use of transition joints. The cable strength member shall be glass yarn laid longitudinally between the fibers and the inside wall of the outer jacket. The cable shall be dielectric construction, i.e. with no metallic content. The cable shall be a dry construction i.e. with no gel content. The jacket material shall be waterproof LSZH with a minimum fire performance of IEC 332 part 3C.

2. Single Mode Fiber Optic Cable
  - a. The Cabling system must be designed and installed according to ISO 11801 OS1 for indoor use, and ISO 11801 OS2 for outdoor use, compliant and should also meet EN50173 2nd editions and TIA/EIA 568B3. The Cable shall have 6 or 12 or 24 cores, 9.2/125 µm universal distribution cable with improved performance.
  - b. Low Smoke Zero Halogen - LSZH Jacket that does not give off toxic fumes in case of fire and offer flame propagation retardant properties.
  - c. Shall contain a Rip Cord applied longitudinally under the cable jacket for easy cable jacket removal.
  - d. Shall contain a lightweight Central Strength member located in the middle of the fibre bundles.
  - e. Shall contain both colour-coded buffered fibres as well as colour-coded buffer tubes.
  - f. Cables shall have length markings in 2 ft. increments.
  - g. Fibre will be available in strand counts of 4, 6, 12, 24, 36, 48, 72, 96, 144 and 288.
  - h. Shall meet these minimum performance parameters per standards specified above.

### 3. Optical Fiber Patch Panel:

- a. Optical fiber Patch Panels shall be mounted in 19" frames of the cabinets. The patch panels shall be equipped with a mechanism that ensures the retention and support of incoming cables. An Earth Key shall be provided within the patch panel to earth any metallic part of the cable. The patch panel shall be designed with a sliding mechanism enabling front side installation and maintenance work to be carried out without having to remove the entire panel.
- b. The patch panel shall provide facilities to recess the front connector plate deeper than the front of the 19" rails of the cabinet. This will provide sufficient bend radius for the patch cords once connected to the panel. This shall also prevent damage to the patch cords when the cabinet doors are closed.
- c. Direct Termination of the connectors on to the fibers as well as splicing of pigtails shall be possible. The Patch Panel shall provide management for 1m of fiber per link after breaking the fibers out from the cable. The Patch Panel shall support the connector type specified for this installation. For multimode fiber links, these can be LC, SC and ST. The panel-mounted couplers shall be protected on the front presentation side of the patch Panel for safety purposes.

### 4. Optical Fiber Patch Cords

- a. The Fiber adapters will be connected to the active equipment by means of duplex patch cords 2LC-2LC, 2 SC-2 SC or 2 ST-2ST as per client site standard.
- b. The patch cords consist of 50/125 microns fibers and a LSHF-FR jacket. The SC or ST connectors shall comply with the International standard IEC 74-13. The patch cords should be available in lengths of 2 and 5 meters.
- c. To avoid mix of patch cords built around different types of fiber, cords produced with LASER optimized fiber will be used for both OM1 and OM2 optical fiber cables. When using OM3 optical fiber cables, patch cords produced with the same OM3 fiber have to be installed.
- d. Fiber cables shall interface and connect to fiber interface unit at both ends as part of the fiber contractor work.

## 2.5 CABINETS:

- A. The metal cabinets shall have a footprint of 800x1000 mm. In the frames 19" components can be mounted by means of the standard cage nuts. The front door consists of a metal framework with hinges and a central perforated panel. The side panels and the panel in the back have to be equipped with a hinge on the left or the right in order to facilitate the access to the equipment. A 42 U cabinet is preferred providing enough space for active equipment.
- B. For an orderly cord storage and easy to manage installation, the following accessories shall be used:
  - Closed 1 or 2 U patch guides between the patch panels;
  - Lateral cable rings installed at both sides of the frames. The patch rings can be removed very easily by rotation and have to be located on the front rails of the 19" frames in the cabinets.

The cabinets should be supplied with:



- Provide power strip with 8 \* 240VAC BS 1363 electrical sockets, No ON/OFF switch, 3-meter power cord and commando socket (male) at the end. Female commando outlet to be provided by the electrical contractor.
  - Provide seismic kit, casters, leveling feet, and bolt down stabilization bracket for each cabinet.
  - Provide Horizontal/Vertical Cable Management. 1 RU of cable management per 24 port patch panel and 1 RU above and below per 48 port patch panel.
- C. Earthing has to be achieved .The cabinet and frame assembly when installed will also serve as equipotential plane so that damaging external EMI currents can be drained off. To this end, the intercabinet connections shall also be made off by extending the earth connection from cabinet to cabinet in a suite of cabinets. The suite of cabinets shall be connected to the grounding network of the building.
- D. The Earth key of the cabinet must be connected to the protective earth. The dimension of the earth conductor is 6mm<sup>2</sup>. If no or only a poor protective earth system is present in the building, a separate earthing to the main earth terminal of the building is required. The dimensions of the conductor should then be 16mm<sup>2</sup>.

**PART 3 - EXECUTION****3.1 INSTALLATION:**

- A. The entire system shall be installed by specialist subcontractor approved by the Engineer.
- B. Installation shall be in accordance with the approved drawings and manufacturer's written instructions.
- C. System components and appurtenances shall be installed in accordance with ISO/IEC 11801, manufacturer's written instructions and as shown. Necessary interconnections, services, and adjustments required for a complete and operable signal distribution system shall be provided. Components shall be labeled in accordance with EIA/TIA 606. Penetrations in fire-rated construction shall be fire stopped. Conduits, outlets and raceways shall be installed in accordance with Section 16050 - BASIC ELECTRICAL MATERIALS AND METHODS. Wiring shall be installed in accordance with ISO/IEC 11801, EIA/TIA 568A and EIA/TIA 568B. Cables shall not be installed in the same cable tray, utility pole compartment, or floor trench compartment with ac power cables.
- D. Horizontal Distribution Cable: The rated cable pulling tension shall not be exceeded. Cable shall not be stressed such that twisting, stretching or kinking occurs. Cable shall not be spliced. Cable shall not be run through structural members or in contact with pipes, ducts, or other potentially damaging items. Placement of cable parallel to power conductors shall be avoided, if possible; a minimum separation of 300 mm shall be maintained when such placement cannot be avoided. Cables shall be terminated; no cable shall contain unterminated elements. Minimum bending radius shall not be exceeded during installation or once installed. Cable ties shall not be excessively tightened such that the transmission characteristics of the cable are altered.
- E. Riser and Backbone Cable: Vertical cable support intervals shall be per manufacturer's recommendations. Cable bend radius shall not be less than ten times the outside diameter of the cable during installation and once installed. Maximum tensile strength rating of the cable shall not be exceeded. Cable shall not be spliced.
- F. Data Outlets: As a minimum each jack shall be labeled as to its function and a unique number to identify cable link. Minimum of 6 inches of slack cable loosely coiled into the data outlet boxes. Minimum manufacturers bend radius for each type of cable shall not be exceeded.
- G. Unshielded Twisted Pair Patch Panels: Patch panels shall be mounted in equipment racks with sufficient modular jacks to accommodate the installed cable plant plus 10 percent spares. Cable guides shall be provided above, below and between each panel.
- H. Fiber Optic Patch Panels: Patch Panels shall be mounted in equipment racks with sufficient ports to accommodate the installed cable plant plus 10 percent spares. A slack loop of fiber shall be provided within each panel. Loop shall be

900 mm in length. The outer jacket of each cable entering a patch panel shall be

secured to the panel to prevent movement of the fibers within the panel, using clamps or brackets specifically manufactured for that purpose.

- I. For excavation and backfilling refer to Section 02200 - EARTHWORK.

### **3.2 ELECTRICAL SAFETY:**

A. Separation of telecommunication circuits from the building electrical system and electrical equipment shall conform to the latest publications of Articles 800-3 (a) and 820-13 of National Electric Code (NEC) / per consultant's recommendations.

B. An earth or ground shall be provided and extended to the termination box and connected to each station protector. The earth or ground shall be installed and bonded in accordance with Article 250, 800 and 820 of National Electric Code (NEC)/ per consultant's recommendations.

### 3 TESTING (per consultant's recommendation):

A. General: After installation of entire system and prior to acceptance of work, manufacturer's standard tests shall be conducted in the presence of the Engineer to show proper operation of each equipment and the system entirely. The manufacturer of the cabling system shall provide copper (Data) and optical fiber testing procedures that clearly describes the tools and settings to be used to ensure correct measurements of the system. The result of testing shall meet or exceed the requirements of ISO/IEC 11801, latest edition and ISO/IEC TR 24750.

B. Testing of Class E: 100 % of the installed horizontal links shall be tested. The testing procedure has to comply with the standard ISO/IEC 11801: 2002 for Class E, according to the procedure for "Channel or Permanent Link". The measurements shall be done using Level III testing equipment. Channel testing shall be preferred. Channels shall be tested to support 10 G 500 MHz

The testers have to be calibrated according to the recommendations made by the supplier of the testing equipment. The following parameters have to be tested... Pair continuity (wiremap)

- Pair length
- DC Loop resistance per pair
- Insertion loss (Attenuation) per pair
- NEXT and Powersum NEXT for every pair combination
- FEXT and Powersum FEXT for every pair combination
- The ACR (ratio NEXT/ insertion loss) for every pair combination
- Return Loss (impedance match, retransmitted signal)

The complete test results of all the installed links or channels shall be collected in a certification file. It is preferred to have the test result in electronic format to facilitate the certification procedure. Apart from all the test results mentioned above, a few more documents shall be added to the file: a list of material used for the project, a design of the network, a Cable schedule per distributor and finally all the necessary co-ordinates of the persons responsible of the project.

C. Vertical Fiber Testing: The procedure shall comply with the ISO/IEC 14763-3 standard. The ISO/IEC 14763 standard specifies the implementation and operation of customer premises cabling. The part 3 of this ISO document (14763-

3) Details test procedures for optical fiber cabling designed in accordance with ISO/IEC 11801:2002 and installed according to the recommendations of ISO/IEC 14763-2 (Planning and installation of customer premises cabling).

For Multimode fibers, the test procedure is based on the use of the "one-jumper method" specified by Method 2 of IEC 61280-4-1. This procedure is used for testing links for which the connector loss is a significant portion of the total link attenuation. This is the case for LAN premises links.

For Single mode fibers, the test procedure to be applied is the same and is based on the use of the "onejumper method" specified by Method 1a of IEC 61280-4-2.

Fiber-optic Tests applied to links and exclude equipment and work area cord.

OF Attenuation testing is used to verify the initial performance of the installed link. All 100 % of the installed OF links have to be tested and must pass the acceptance criteria.

The attenuation of the link is measured using the insertion loss method. This method uses an optical source and an optical power meter to compare the difference between two optical power levels.

When testing multimode optical fiber links with a Light Source and a Power Meter, this measurement kit has to be capable of operating at ...

- 850nm and 1300nm for multimode fibers (OM1, OM2 & OM3)
- 1310nm and 1550nm for single mode fibers (OS1)

The test scenario with a Light Source and a Power Meter shall be one of the following for each link:

- Single direction @ 850nm and @ 1300nm for multimode fibers
- Single direction @ 1310nm and @ 1550nm for single mode fibers

The use of certification tool is recommended. Those tools are capable of producing a report logging the time of the test the link identification under test, the link length, the attenuation at the window tested and the acceptable link attenuation. The report shall also identify in which direction the testing was implemented.

When testing with basic optical source and power meter, the operator will fill up a report logging:

- The time of the test,
- The link identification under test,
- The link length and attenuation at the window tested.
- The report shall also identify in which direction the testing was implemented.
- Acceptable link attenuation (To be calculated)

The measured attenuation of the links shall have a lower value than the acceptable link attenuation calculated.

# TECHNICAL SPECIFICATIONS

HVAC WORKS



**LIST OF APPROVED MANUFACTURERS /SUPPLIERS/SOURCES**  
**HVAC WORKS**

<b>LIST OF APPROVED MANUFACTURERS HVAC ITEMS</b>		
<b>S. No.</b>	<b>Equipment</b>	<b>MAKE/BRAND</b>
1	COPPER PIPE	MULLER, GOLDEN DEAGON
2	INSULATION	SUPER LOAN, AEROFOAM
3	DRAINAGE PIPE	DAIDEX, A G M
4	CABLES	PAKISTAN CABLES, PIONEER, UNIVERSAL
5	PLANT	DAIKIN, MIDEA, HISENSE, GREE



## **GENERAL DESCRIPTION**

### **1. BASIC MECHANICAL REQUIREMENTS**

#### **PART 1 – GENERAL**

##### **1.1 RELATED DOCUMENTS:**

- A. All Drawings and General Provisions, Special Provision of the Contract, including General and Special Conditions Technical Specification, Equipment Selection Sections, apply to this Section. The approved drawings or building layout plan shall be available for participating bidders for clarification and understanding.

##### **1.2 SUMMARY**

- A. This Section includes general administrative and procedural requirements for mechanical installations. The following administrative and procedural requirements are included.
1. Submittals.
  2. Samples.
  3. Record documents.
  4. Maintenance manuals
  5. Shop Drawings
  6. Mechanical installations.
  7. Cutting and patching.

##### **1.3 SUBMITTALS**

- A. General: The Contractor shall submit the submittals/broachers/manuals for all the equipment and material to be installed at site in triplicate. After review one copy shall be returned to the Contractor and 02 copies shall be retained by the Consultants. The Contractor shall provide all the information's in these submittals as required by the Consultants and found necessary to review the product. No additional payment shall be made for these submittals.

##### **1.4 SAMPLES**

- A. General: The Contractor shall submit the samples for all the material to be installed at site. After review rejected samples shall be returned to the Contractor and approved samples shall be retained by the Consultant. The Contractor shall submit the samples in a proper manner and shall be fixed on a sample board and all technical features shall be provided in triplicate with these samples, 02 copies technical features shall be retained by the Consultants and one copy shall be returned to the Contractor. The Contractor shall provide all the information's related

to these samples as required by the Consultants and found necessary to review the product. No additional payment shall be made for these samples.

### **1.5 RECORD DOCUMENTS:**

A. The Contractor shall prepare and furnish record documents of all the equipment and material. These documents shall include installation manual, operational instructions, technical literature, engineering data and other information's related to the product being installed at site.

1. Ductwork mains and branches, size and location, for both exterior and interior; locations of dampers and other control devices; filters, boxes, and terminal units requiring periodic maintenance or repair.
2. Equipment locations (exposed and concealed), dimensioned from prominent building lines.
3. Approved substitutions, Contract Modifications, and actual equipment and materials installed.
4. Contract Modifications, actual equipment and materials installed.

### **1.6 OPERATIONS AND MAINTENANCE MANUALS**

A. Prepare/provide manufacturer recommended operations and maintenance manuals in triplicate, these manuals shall be in properly binding form including all the information's required for the operations and maintenance of the equipment. These manuals shall be translated into Urdu and English and include the followings:

1. Description of function, normal operating characteristics and limitations, performance curves, engineering data and tests, and complete nomenclature and commercial numbers of replacement parts.
2. Manufacturer's printed operating procedures to include start-up, break-in, and routine and normal operating instructions; regulation, control, stopping, shutdown, and emergency instructions; and summer and winter operating instructions.
3. Maintenance procedures for routine preventative, curative maintenance and troubleshooting; disassembly, repair, and reassembly; aligning and adjusting instructions.
4. Servicing instructions and lubrication charts and schedules.
5. Quality control and assurances measures

### **1.7 SHOP DRAWINGS**

General: Contractor shall prepare the shop drawings before execution of any job and these shop drawings shall be submitted to the Consultant for the approval, after approval of these shop drawings the Contractor shall carry out the work. These shop drawings shall be submitted by the Contractor in triplicate, 02 copies shall be retained by the Consultant and one copy shall be returned to the Contractor. These shop drawings shall be drawn on scale and shall be submitted on minimum A2 size paper. Contractor shall provide section and other details as necessary and directed by the Consultant.

## 1.8 MECHANICAL INSTALLATIONS

A. General: Sequence, coordinate, and integrate the various elements of mechanical systems, materials, and equipment. Comply with the following requirements:

1. Coordinate mechanical systems, equipment, and materials installation with other building components.
2. Verify all dimensions by field measurements.
3. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for mechanical installations.
4. Coordinate the installation of required supporting devices and sleeves to be set in poured-in-place concrete and other structural components, as they are constructed.
5. Sequence, coordinate, and integrate installations of mechanical materials and equipment for efficient flow of the Work.
6. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.

7. Install systems, materials, and equipment to conform with approved

Submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Consultant

8. Install systems, materials, and equipment to conform with approved Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Consultant

9. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
10. Install mechanical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.
11. Install access panel or doors where units are concealed behind finished surfaces.
12. Install systems, materials, and equipment giving right-of-way priority to systems required to be installed at a specified slope.

### **1.9 CUTTING AND PATCHING:**

- A. General: Perform cutting and patching in accordance with requirements and coordinations with other services, the following requirements apply:
  1. Protection of Installed Work: During cutting and patching operations, protect adjacent installations.
- B. Perform cutting, fitting, and patching of mechanical equipment and materials required to:
  1. Install equipment and materials in existing structure.
  2. Uncover Work to provide for installation of ill-timed Work.
  3. Remove and replace defective Work.
  4. Remove and replace Work not conforming to requirements of the Contract Documents.
- C. Provide suitable caps for exposed ends of pipes.
- D. Protect the structure, furnishings, finishes, and adjacent materials not indicated or scheduled to be removed.

END OF SECTION

## **2. GENERAL PROVISIONS**

### **PART 1 – GENERAL**

#### **RELATED DOCUMENTS:**

- A. All Drawings and General Provisions, Special Provision of the Contract, including General and Special Conditions Technical Specification, Equipment Schedule and Bill of Quantities apply to this Section.

## **COOLING SYSTEM WORKS**

### **2.1 COOLING SYSTEM CONCEPT:**

The building shall be air-conditioned by Variable Refrigerant Flow system (with R410A refrigerant), Multi Split air conditioning system with electronic expansion valves with indoor units.

The system shall comprise of one or more outdoor units connected via inter-connecting refrigeration pipe work to multiple indoor units using branch pipe connectors (ref-net joints). The system shall be complete with all the necessary electronic controls and associated control wiring to maintain the space design conditions.

### **2.2 VENTILATION:**

All toilets shall be provided with mechanical ventilation by means of propeller type or inline exhaust fans as required and mentioned in schedule of equipment and shown in the drawings.

### **2.3 DESIGN CONDITIONS:**

Cooling System has been designed for the conditions listed hereunder. These conditions are being given for the information of the Contractor to enable him to perform specified tests under these conditions, but these temperature conditions must be authenticated from Metrological Authority

External Conditions for Design:

- i) Summer Dry Bulb Temperature Range: 113° F-130° F
- ii) Winter Dry Bulb Temperature Range: 30° F-35° F

Internal Conditions for Design:

- a) Temperature Range: 70° F- 72° F
- b) Humidity Range: 40-45 %

### **2.4 MATERIALS:**

All materials shall be of the highest grade, free from defects and imperfections, of recent manufacture and unused, and the classification and grades designated, conforming to the requirements of the latest issue of the appropriate specifications cited herein. All materials, supplies, and articles forming part of major equipment and not fabricated by the manufacturer of the equipment shall be the products of the recognized reputable manufacturers.

**2.5 WORKMANSHIP:**

Workmanship and general finish shall be of the highest grade, in accordance with the requirements specified herein, and the latest standard practice.

**2.6 EQUIPMENT:**

- a) All equipment shall be manufactured by companies which have had at least ten years of previous experience in the design and manufacture of equipment of comparable type, capacity, and operating conditions, unless otherwise approved by the Consultant.
- b) All equipment and materials supplied shall be from approved, and renowned manufacturers who are adequately represented in Pakistan preferably by itself, if not then by an authorized Agent/Partner capable of providing installation, commissioning, spare parts and after sales services. All major equipment shall be imported directly from the manufacturers through their local agents. Import of this equipment through warehouses/Export Houses will not be accepted.
- c) All equipment shall be of latest production, not older than one year in which this contract is awarded and shall bear year of manufacture stamped on the manufacturer's name plate duly certified by the manufacturer.
- d) When a manufacturer's product is specified by name, or equivalent, it shall be in the sole judgment of the Consultant as to acceptability of any product which is offered as equal to that specified.
- e) Where two or more units of the same class of equipment are offered, product of the same manufacturer shall be selected, component parts of entire system need not be product of same manufacturer.

**2.7 CHASES AND OPENINGS:**

The contractor shall provide templates or details for chases and openings to be left in walls and partitions to accommodate work under Cooling system scope of works.

**2.8 PROTECTION:**

The contractor shall keep pipe, duct and other openings closed to prevent entry of foreign matter. All fixtures, equipment and apparatus shall be covered and protected against dirt, water, chemical or mechanical damage, before and during the construction period. All fixtures, apparatus, or equipment damaged including damaged shop coats of paint shall be restored to original conditions prior to Commissioning and again prior to Final Acceptance. All bright finished shafts, bearing housings and similar items shall be protected until in service. No rust will be permitted.

**2.9 CUTTING, PATCHING AND REPAIRING:**

Required for proper installation and completion of Cooling system works, including masonry work, concrete work, and carpentry work, painting and re-painting shall be performed by skilled craftsmen in

respective trades, at expense of the Contractor. Construction shall be cut only after obtaining written permission from the Consultant.

#### **2.10 LINES, LEVELS AND SPACES:**

The Contractor shall check dimensions at the building site and establish lines and levels for work specified in specifications. The Contractor shall check with work of other trades to ensure proper clearance of piping, ductwork, conduit and other items. Any deviations observed between drawings and actual construction shall be brought to the notice of the Consultant. The erection supervisor shall regularly inspect, during progress of civil works, the areas allocated for installation of Cooling system equipment and any conflict observed shall immediately be reported to the Consultant.

#### **2.11 ACOUSTIC TREATMENT:**

The noise criterion (NC) < 35 is to be obtained.

Sound measurements will be made at 5 feet above floor level in the area served and not more than 5 feet from the grilles, diffusers, air curtains or other air devices being tested. Instruments for sound measurement shall be provided by the Contractor.

Provision is to be made to minimize noise and vibration. However, different manufacturers' equipment Cooling system varying sound and vibration characteristics and it is, therefore, the responsibility of the Contractor to ensure that the requirements in these specifications are fully met by the equipment he is offering. If the Contractor has any requirements for additional vibration or sound isolation, these must be incorporated into the price quoted.

All equipment installed should not be audible inside the occupied areas and the Contractor must ensure that the equipment he is offering is quiet and supplied with all necessary silencers to ensure satisfactory sound levels. Where silencers are required, these must be incorporated into the price quoted for such equipment, if these are not specified separately.

#### **2.12 SAMPLES:**

Contractor shall provide at own cost, samples of materials, instruments, gauges and electrical items, for approval by the Consultant before order is placed for the same. Consultant may waive this requirement, if detailed published catalogues submitted by the contractor provide sufficient information for approval. These samples shall include, but not limited to

- a) GI Sheet Metal
- b) Fiber Glass Duct Insulation
- c) Refrigerant Piping
- d) Condensate drain piping
- e) Pipe insulations

- f) Adhesives and tapes
- g) Air devices
- h) Pipe hanger trays and supports
- i) Cables and accessories

### **2.13 APPROVAL OF MATERIAL AND EQUIPMENT:**

As soon as practicable after the award of contract, the contractor shall submit for approval of the Consultant specifications, drawing, catalogue diagrams and other descriptive data for all materials components and equipment which the contractor proposes for use under this contract. For certain materials and equipment, data may be required to be submitted in accordance with a detailed form furnished by the Consultant. Items submitted shall be properly labeled to indicate item number, and other data required by the Specifications. All items shall be submitted time to permit proper consideration and action thereon without delaying the construction schedule.

### **2.14 TIME FOR DELIVERY:**

All equipment plant and machinery shall be delivered at site on such dates to ensure adherence to time scheduled given for the completion of project and dates stated in programs of works submitted by the contractor and approved by the Consultant. Contractor shall inform the progress of the shipment and notify them in advance, in writing, as to when the equipment will be ready for inspection at factory by the Consultant and client prior to shipment. All expenses for the pre-shipment inspection shall be borne by the contractor without any additional cost to the Employer. The contractor shall share a complete Gantt chart for project deliverables with specified timelines

### **2.15 STANDARDS AND CODE REQUIREMENTS:**

All equipment and materials under Cooling System Scope of works shall be furnished in conformity with the latest edition of applicable standards of ASME, ASHRAE, ARI, SMACNA, AMCA and applicable Government and local Codes governing the same. In case of conflict, the stricter requirements shown specified shall govern.

Abbreviations for Codes and Standards referred in the Contract are as under: a) ASME – American Society of Mechanical Engineers.

- b) ASTM – American Society for Testing & Materials.
- c) ASHRAE – American Society of heating, Refrigeration and Air Conditioning Engineers.
- d) NFPA—National Fire Protection Association, USA
- e) ARI - Air-conditioning and Refrigeration Institute, USA.
- f) SMACNA — Sheet Metal and Air-conditioning Contractors National Association.



- g) GOVERNMENT - Government of Pakistan
- h) LOCAL-Local authorities of the city where the Project is located
- i) AMCA — Air Moving and Control Association inc. USA
- j) P.S. - Pakistan Standards.
- k) B.S. - British Standards.

#### **2.16 AS BUILT DRAWINGS:**

The Contractor shall supply to the Consultant a set of "As-Built" drawings showing the contract works as installed, together with any other information necessary for operation and maintenance. Three copies for each drawing and other information shall be supplied, along with a reproducible copy.

#### **2.17 MANUFACTURER'S DATA:**

Manufacturer's performance data, certified factory drawings and/or curves of apparatus giving full information as to capacity, performance at different operating and ambient conditions, dimensions, materials electrical data and all information pertinent to the adequacy of the submitted equipment shall be submitted for approval. One original and 3 copies of catalogues and other information shall be submitted.

Manufacturer's names, sizes, catalogue numbers and/or samples or all materials shall also be submitted for approval.

END OF SECTION

### **3. HANGERS AND SUPPORTS:**

#### **1. PART 1 - GENERAL**

##### **3.1 RELATED DOCUMENTS:**

- A. All Drawings and General Provisions, Special Provision of the Contract, including General and Special Conditions Technical Specification, Equipment Selection Sections, apply to this Section.

##### **3.2 SUMMARY:**

- A. This Section includes Hangers and Supports for mechanical system piping and equipment.

##### **3.3 PERFORMANCE REQUIREMENTS:**

- A. Design channel support systems for piping to support multiple pipes capable of supporting combined weight of supported systems.
- B. Design seismic restraint hangers and supports for piping and equipment.

## PART 2 – EXECUTION:

### 3.4 HANGER AND SUPPORT APPLICATIONS:

- A. Specific hanger requirements are specified in Sections specifying equipment and systems.
- B. Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Specification Sections, install the following types:
  - 1. Adjustable Steel Clevis Hangers. For suspension of non-Insulated or insulated stationary pipes,
- C. Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Specification Sections, install the following types;
  - 1. Extension Pipe or Riser Clamps. For support of pipe risers, DN20 to DN500
- C. Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Specification Sections, and detailed drawings

### 3.5 HANGER AND SUPPORT INSTALLATION:

- A. Pipe Hanger and Support Installation: Install hangers, supports, clamps, and attachments as required to properly support piping from building structure.
- B. Channel Support System Installation: Arrange for grouping of parallel runs of piping and support together on field-assembled channel systems.
  - 1. Field assemble and install according to manufacturer's written instructions.

- C. Install building attachments within concrete slabs. Install additional attachments at concentrated loads, including valves, flanges, guides, strainers, and expansion joints, and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.
- D. Install mechanical-anchor fasteners in concrete after concrete is placed and completely cured. Install fasteners according to manufacturer's written instructions.
- E. Install hangers and supports complete with necessary inserts, bolts, rods, nuts, washers, and other accessories.
- F. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
- G. Load Distribution: Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment

### 3.6 **EQUIPMENT SUPPORTS:**

- A. Fabricate structural-steel stands to suspend equipment from structure above or to support equipment above floor.
- B. Grouting: Place grout under supports for equipment and make smooth bearing surface.

### 3.7 **METAL FABRICATION:**

- A. Cut, drill, and fit miscellaneous metal fabrications for heavy-duty steel trapezes and equipment supports.
- B. Fit exposed connections together to form hairline joints. Field-weld connections that cannot be shop-welded because of shipping size limitations.
- C. Field Welding: Appearance and quality of welds, and methods used in correcting welding work, and with the following:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.

4. Finish welds at exposed connections so no roughness shows after finishing and contours of welded surfaces match adjacent contours.

### **3.8 ADJUSTING:**

- A. Hanger Adjustment: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.

END OF SECTION

#### 4. MECHANICAL IDENTIFICATION: PART 1 - GENERAL

##### 4.0 RELATED DOCUMENTS:

A. All Drawings and General Provisions, Special Provision of the Contract, including General and Special Conditions Technical Specification, Equipment Selection Sections, apply to this Section.

##### 4.1 SUMMARY:

A. This Section describes the following Mechanical Identification materials and their installation:

1. Equipment Identification.
2. Piping Identification.
3. Duct Identification.
4. Warning Indications.

##### 4.2 COORDINATION:

- A. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
- B. Coordinate installation of identifying devices with location of access panels and doors.
- C. Install identifying devices before installing false ceilings and similar concealment.

#### PART 2 – PRODUCTS:

##### 4.3 EQUIPMENT IDENTIFICATION:

A. Paint names on all equipment in service color-letters 2” high. The painting and color coding shall be applied throughout the building except where concealed and not accessible through lay-in-ceiling, pipes and ducts shall be identified.

B. Mechanical equipment shall be stenciled with its appropriate designation in a place where the view is not obstructed to operating personnel.

#### **4.4 PIPING IDENTIFICATION DEVICES:**

A. Manufactured Pipe Markers, General: Preprinted, color-coded, with lettering indicating service, and showing direction of flow.

1. Colors: Comply with ASME A 13.1, unless otherwise indicated.
2. Lettering: Use piping system terms indicated and abbreviate only as necessary for each application length.
3. Pipes with OD, Including Insulation, Less Than 150 mm: Full-band pipe markers extending 360 degrees around pipe at each location.
4. Pipes with OD, Including Insulation, 150 mm and Larger. Either full band or strip-type pipe markers at least three times letter height and of length required for label.
5. Arrows: Integral with piping system service lettering to accommodate both directions; and as separate unit on each pipe marker to indicate direction of flow.

B. Pre-tensioned Pipe Markers: Pre-coiled semi-rigid plastic formed to cover mil circumference of pipe and to attach to pipe without adhesive.

#### **4.5 DUCT IDENTIFICATION DEVICES:**

A. Duct Markers: Engraved, colors-coded laminated plastic. Include direction and duct service (such as supply, return, and exhaust). Include contact-type, permanent adhesive.

### **PART 3 – EXECUTION:**

#### **4.6 APPLICATIONS, GENERAL:**

A. Products specified are for applications referenced in other Division 15 Sections. If more than single-type material, device, or label is specified for listed applications, selection is Installer's option.

#### **4.7 EQUIPMENT IDENTIFICATION:**

A. Install equipment signs with screws and permanent adhesive on or near each major item of mechanical equipment. Locate signs where accessible and visible.

1. Identify mechanical equipment with equipment markers in the following color codes:

- a. Green: For cooling equipment and components.
- b. Yellow: For cooling equipment and components.
- c. Orange: For combination cooling and cooling equipment and components.

2. Letter Size: Minimum 6.4 mm for name of units if viewing distance is less than 600 mm, 13mm for viewing distances up to 1830 mm, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.

3. Data: Distinguish among multiple units, indicate operational requirements, indicate safety and emergency precautions, warn of hazards and improper operations, and identify units.

4. Include signs for the following general categories of equipment:

- a. Main control and operating valves, including safety devices and hazardous units.
- b. Fuel-burning units, including boilers.
- c. Pumps, compressors, chillers, condensers, and similar motordriven units.
- d. Heat exchangers, coils, cooling towers and similar equipment
- e. Fans, blowers, primary balancing dampers, and mixing boxes.
- f. Packaged Cooling system central-station and zone-type units.
- g. Tanks and pressure vessels.
- h. Strainers, AHU filters section, humidifiers, water-treatment systems, and similar equipment.

#### **4.8 PIPING IDENTIFICATION:**

A. Install manufactured pipe markers indicating service on each piping system. Install with flow indication arrows showing direction of flow.

1. Use: Pre-tensioned pipe markers. Use size to ensure a tight fit.
- B. Locate pipe markers and color bands where piping is exposed in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior non-concealed locations as follows:
1. Near each valve and control device.
  2. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
  3. Near penetrations through walls, floors, ceilings, and non accessible enclosures.
  4. At access doors, manholes, and similar access points that permit view of concealed piping.
  5. Near major equipment items and other points of origination and termination.
  6. Spaced at maximum intervals of 15 m along each run. Reduce intervals to 7.6 m in areas of congested piping and equipment.
  7. On piping above removable acoustical ceilings. Omit intermediately spaced markers.

#### **4.9 DUCT IDENTIFICATION:**

- A. Install duct markers with permanent adhesive on air ducts in the following color codes:
1. Cyan: For cold-air supply ducts.
  2. Blue: For hot-air supply ducts.
  3. Orange: For exhaust-, outside-, relief-, return-, and mixed-air ducts.
  4. ASME A13.1 Colors and Designs: For hazardous material exhaust.
  5. Letter Size: Minimum 6.4 mm for name of units if viewing distance is less than 600 mm, 13 mm for viewing distances up to 1830 mm, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.



B. Locate markers near points where ducts enter into concealed spaces and at maximum intervals of 15 m in each space where ducts are exposed or concealed by removable ceiling system.

**4.10 WARNING-TAG INSTALLATION:**

A. Write required message on, and attach warning tags to, equipment and other items where required.

**4.11 ADJUSTING:**

A. Relocate mechanical identification materials and devices that have become visually blocked by other work.

**4.12 CLEANING:**

A. Clean faces of mechanical identification devices and glass frames of valve schedules.

**4.13 PAINTING:**

All MS piping shall be painted with 02 coats of Red Oxide Primer. One coat shall be applied prior to installation and other coat shall be applied after installation. Final finish coats (02) of all piping shall be as per color codes specified by ASHRAE

END OF SECTION

## **5 VRF AIR HANDLING UNITS**

### **PART 1 - GENERAL**

#### **5.1 RELATED DOCUMENTS:**

- A. All Drawings and General Provisions, Special Provision of the Contract, including General and Special Conditions Technical Specification, Equipment Selection Sections, apply to this Section.

#### **5.2 SUMMARY:**

The Contractor shall furnish all labor, materials, plant equipment and perform all necessary operations required to execute the work of this section. It is the responsibility of the Contractor to ensure that equipment, ductwork, piping etc shall fit into the spaces allocated and shall allow acceptable clearances, recommended by the manufacturer for entry, servicing and maintenance.

#### **5.3 QUALITY ASSURANCE:**

- A. Source Limitations: Obtain all air-handling units for a single project through one source from a single manufacturer.
- B. NFPA Compliance: Air-handling units and components shall be designed, fabricated, and installed in compliance with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems."
- C. ARI Certification: Air-handling units and their components shall be factory tested according to ARI 430, "Central-Station Air-Handling Units," and shall be listed and labeled by ARI. Or as approved by the Consultant

#### **5.4 COORDINATION:**

- A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements as specified
- B. Coordinate installation of roof curbs, equipment supports, and roof penetrations.

#### **5.5 SUBMITTALS:**

After the award of contract, the Contractor shall submit the technical submittal for Air Handling Units. In selection of air handling units Contractor shall ensure the proper installation of these air handling units in the space allocated for air handling units.

## **PART 2 - PRODUCTS**

### **5.6 VRF AIR HANDLING UNITS:**

A. Furnish and install all central air handling units, complete of size, type and capacities as shown in the Drawings, Equipment Selection Data. The Air Handling Units (AHUs) shall be tested rated and certified as complete unit in accordance with ARI Standard 430-66 and shall bear the ARI seal, or equivalent certification as approved by the Consultant. And as approved by the consultant

B. All the Air Handling Units shall be manufactured at factory having ISO 9002 certified manufacturing facility; the manufacturer shall have at least 10 years of experience of manufacturing Air Handling Units. All the AHUs shall be complete with all the fittings, fixtures and accessories mentioned hereinafter.

C. The Air-handling units shall be factory assembled and basic units shall consist of main frame, casing, fan section, condensate drain-pan, cooling coils, filters section, fan, drive motor, vibration isolators, service lock, internal service light, controls and all the necessary accessories as required

D. Air Handling unit shall have refrigerant VRF coils, with refrigerant kit to make it suitable for operation of design conditions

E. Air Handling unit shall be supplied with matching all dc inverter VRF condensing unit

### **5.7 MAIN FRAME:**

The main frame of all the air handling units shall be made of extruded aluminum profiles, these profiles shall be forming a structural frame to house all internal components, and these shall be joined at corners in such a manner that there shall be no heat leakage or sweating.

Thermal break and non-aging rubber seals shall be provided to eliminate the heat and air leakages.

### **5.8 CASING PANELS:**

The outer casing panels shall be constructed with minimum of 0.8 mm thick galvanized steel sheets, with baked polyester powder coated on exterior walls and shall be filled with polyurethane with not less than 50 kg/cu m density, and the inner casing panels shall be stainless steel sheets for hygienic applications with round edges, the thickness of panels is 50 mm or as given in equipment selection data, and shall be provided with self-locking mechanism represented by a wedge and frame exerting pressure evenly onto the panel and seal attached to the frame for better air tight construction. The unit casing shall be airtight at low and high pressure, units to be installed open to weather shall be weatherproof type. The casing shall be designed to meet Eurovent Casing Air Leakage class B. The casing strength shall meet the European Standard EN 1886:1998, Casing Strength Class 2A.

### **5.9 FANS:**

A. Each Air Handling Unit shall be provided with direct driven plug fan, all fans shall be forward/back ward curved, as specified in equipment selection data, fans shall be dynamically and statically balanced according to air flow and speed and shall be tested in the factory. All fans shall be certified to AMCA 210 and AMCA 300 Standards.

B. All fans shall be provided with vibration isolators for 80 to 90% isolation efficiency at operating speed. Fan air suction and discharge arrangements shall be suitable for proper fixing or as indicated.

C. Direct Drive Plug Fans and drive shall be mounted on a framework isolated through vibration isolators and a flexible connection at fan discharge.

#### **5.10 FILTERS:**

The air handling units shall be provided with Pre-Filters and Bag Filters, as specified in schedule. The AHU shall have a separate filter section

#### **5.11 COOLING COIL:**

A. The Contractor shall ensure proper selection of coils for required heat transfer and capacities given in Equipment Selection Data. The Dx coils shall be removable without dismantling the unit. The Dx coils shall be constructed of seamless copper tubing with suitable non-ferrous fins securely bonded to the tubes. The coils shall be tested pneumatically and proved tight under gauge pressure of 30 bars and shall be designed for 15 bar working pressure. The wall thickness of copper tubes shall not be less than 0.80 mm. These coils shall be dehydrated and sealed at the factory after inspection. Tubes shall be round seamless of suitable outer diameter. Tabulators inside the coils shall not be acceptable. Coils shall be suitable for 32 to 220°F operating temperatures.

B. Unless otherwise specified the cooling coils shall have not more than 10 fins per inch and face velocity not to exceed 450 fpm. Fins should be flat and with full drawn collars so that no bare copper tube shall be visible between fins. Tube headers shall be made of extra heavy seamless copper tube. There shall be air vent on the top of the header and drain point at the bottom

#### **5.12 DRAIN PAN:**

The Units shall be equipped with condensate drain pan, the drain pan shall be made of stainless-steel sheet and shall be insulated with foam insulation. The drain pan shall be pitched for even flow of condensate and with side drain connection on both sides.

#### **5.13 BASE FRAME:**

A. The air handling unit sections shall be mounted on a 2 mm thick galvanized iron base frame to assure entire stability and for easy lifting, handling and positioning at site

B. Unit sections shall be provided with non-ageing gaskets and connection clamps to permit quickly and airtight assembly at site

C. Air Handling Units shall be installed by the Contractor complete in all respects as recommended by the manufacturer and to the entire satisfaction of the Consultant. All piping, ducting, electrical etc., connections shall be made as per specifications and drawings and standard engineering practices.

#### **5.14 SERVICE LIGHT:**

Each floor mounted air handling unit shall be provided with factory fitted weather resistant, inside the AHU and shall be provided with an ON-OFF switch box outside the unit. The light shall be single phase with PL lamp with ballast and reflector.

#### **5.15 ACCESS & INSPECTION DOOR:**

Access and inspection door shall be provided with same construction as of AHU panels. Door shall have durable rubber seal and rigid frame and shall not permit air leakage. The door shall be hinged and able to be lifted off or removed totally for easy access. This shall also incorporate the thermal break feature.

#### **5.16 OUTDOOR UNIT:**

The Variable Refrigerant Flow (VRF) System shall be Inverter type R410A refrigerant based Multi Split Unit System with high C.O.P. The systems shall comprise of one or several of outdoor units connected via interconnecting refrigeration pipe work to multiple indoor units using simple Y type branch pipe connectors. Y Connectors (as per drawings/manufacturer's recommendations) shall be supplied with A/C units. The systems shall be complete with all the necessary electronic controls board and control wiring to maintain the design room conditions without external controller.

The units shall be air-cooled type incorporating heat exchanger coils manufactured from copper tubes and aluminum fins, factory treated to reduce the effect of atmospheric corrosion. The unit casing shall be manufactured with 50µm polyester powder coated baked enamel finish sheet steel and condenser fins should be coated with hydrophilic coating with 95µm in order to have a high corrosion resistance and to protect against salt laden environment close to where the units may be installed. VRF outdoor unit coil must be 168 Hours salt spray tested. The color shall be manufacturer's standard. The air outlets of outdoor units should have grills/guards for safety.

The outdoor units are to be Variable Refrigerant Flow (VRF) inverter based, combination of Multiple Outdoor Units of capacities given in schedules.

All VRF Outdoor units must be heat pump type and must have an ambient operating range of minimum 54 degree C without tripping.

The outdoor units shall have DC Inverter driven scroll compressors electronically controlled and capable of changing speed linearly to follow the variation in cooling requirements. Each compressor should have a standard crankcase heater.

All compressors used in the offered VRF system must be DC Inverter T3 type Scroll compressors must be made in Japan/Europe/Thailand or Korea only and must be high pressure chamber design type. Moreover, compressors must be performance tested, rain tested with minimum 6-Hours and salt spray tested with minimum 500-Hours.

Power modules of PCB cards must be made in Japan/Europe/Thailand or Korea only.

The capacity control of the outdoor units will be inverter controlled and shall be determined electronically by sensing operational temperatures and ambient temperature and monitoring requirements for the indoor units.

The units shall be complete with electronic expansion valve(s), oil separator(s), high pressure switches, fan motor safety devices, over current relay, inverter overload protection, fuses, necessary solenoid valves and all necessary sensors for a safe and trouble-free operation.

The access to the internal components for maintenance purposes shall be by removable panels.

It shall be possible to connect up to 64 indoor units, capacity permitting, to one modular outdoor unit.

The outdoor unit shall have capacity control to meet the load fluctuation up to 130% and indoor unit individual control.

The outdoor fan must be axial type and must be capable of overcoming a minimum of 82 Pascal of external static pressure. The outdoor fan motor should be DC operated and capable of minimum 64-Stage speed adjustments. The outdoor fan motor must be 6-pole type and with minimum E class of insulation, I class of safety and protection class of IP44.

Outdoor Heat exchanger must be designed with corrosion and oxidation resistant grooved inner tubes of 8mm dia and hydrophilic coated coil fins. Each outdoor unit must have two pieces' heat-exchangers of 2-way each.

Outdoor unit casing cabinet must be made of hot zinc plate with 0.8mm thickness and should be salt spray test minimum 72 Hours. Casing should also have a powder coating of minimum 50um thickness.

The outdoor unit PCB card must be air-cooled type and each outdoor unit module should have two or more refrigerant circuits.

Outdoor unit should have two separate chambers design as upper and lower chambers and there must be a drain pan between both the chambers. Upper chamber contains the heat-exchanger and fan, and

lower chamber contains the compressor and other electronic components. This is subjected to better service experience.

2-Stage oil separation technology must be used and minimum 4-solenoid valve technology must be used for oil balancing of VRF outdoor units.

All the outdoor unit modules should be of same footprint dimensions for ease of installation works. The dimension of all outdoor unit modules should be (WxD): 1350×720mm as footprints, rest the height of the outdoor units can be varied according to the manufacturers design.

END OF SECTION

## **6 METAL DUCT WORK: PART 1 - GENERAL**

### **6.1 RELATED DOCUMENTS:**

A. All Drawings and General Provisions, Special Provision of the Contract, including General and Special Conditions Technical Specification, Equipment Schedule and Bill of Quantities apply to this Section.

### **6.2 SUMMARY:**

A. This Section includes rectangular and round metal ducts for Cooling Systems in pressure classes, from minus 2 inches to plus 4 inches' water gage.

B. Related Sections: The following sections contain requirements that relate to this Section:

1. Section 15050, "Basic Materials and Methods" for fire-resistant sealants for use around duct penetrations and fire damper installations in fire rated floors, partitions, and walls.
2. Section 15010, "Basic Mechanical Requirements"
3. Section 15147 "Duct Insulation" for exterior duct and plenum insulation.
4. Section 15892 "Duct Accessories" for flexible duct materials, dampers, duct-mounted access panels and doors, and turning vanes.
5. Division 15 Section "Diffusers, Registers, and Grilles."
6. Division 15 Section "Testing, Adjusting, and Balancing,"

### **6.3 DEFINITIONS:**

A. Sealing Requirements Definitions: For the purposes of duct systems sealing requirements specified in this Section, the following definitions apply:'

1. Seams: A seam is defined as joining of two longitudinally (in the direction of airflow) oriented edges of duct surface material occurring between two joints. All other duct surface connections made on the perimeter are deemed to be joints.
2. Joints: Joints include girth joints; branch and subbranch intersections; so-called duct collar tap-ins; fitting subsections; louver and air terminal connections to ducts; access door and access panel frames and jambs; duct, plenum, and casing abutments to building structures.



**6.4 SYSTEM PERFORMANCE REQUIREMENTS:**

- A. The duct system design, as indicated, has been used to select and size air moving and distribution equipment and other components of the air system. Changes or alterations to the layout or configuration of the duct system must be specifically approved in writing. Accompany requests for layout modifications with calculations showing that the proposed layout will provide the original design results without increasing the system total pressure.

**6.5 SUBMITTALS:**

- A. General: Submit the following in accordance with Conditions of Contract and Division 15 Specification Sections.
- B. Product data including details of construction relative to materials, dimensions of individual components, profiles, and finishes for the following items:
1. Duct Liner.
  2. Sealing Materials.
- C. Shop drawings from duct fabrication shop, drawn to a scale not smaller than 1:50 scale, on drawing sheets same size as the Contract Drawings, detailing:
1. Fabrication, assembly, and installation details, including plans, elevations, sections, details of components, and attachments to other work.
  2. Duct layout, indicating pressure classifications and sizes in plan view. For exhaust ducts systems, indicate the classification of the materials handled as defined in this Section.
  3. Fittings.
  4. Reinforcing details and spacing.
  5. Seam and joint construction details.
  6. Penetrations through fire-rated and other partitions.
  7. Terminal unit installation.
  8. Hangers and supports, including methods for building attachment, vibration isolation, and duct attachment.
  9. Dimensions shall be in IP units.
- D. Coordination drawings for ductwork installation in accordance with Division 15 Section "Basic Mechanical Requirements." In addition to the requirements specified in "Basic Mechanical Requirements" show the following:

1. Coordination with ceiling suspension members.
2. Spatial coordination with other systems installed in the same space with the duct systems.
3. Coordination of ceiling- and wall-mounted access doors and panels required to provide access to dampers and other operating devices.
4. Coordination with ceiling-mounted lighting fixtures and air outlets and inlets.

#### **6.6 DELIVERY, STORAGE, AND HANDLING:**

A. Deliver sealant materials to site in original unopened containers or bundles with labels informing about manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.

B. Store and handle sealant in compliance with manufacturers' recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

### **PART 2 – PRODUCTS:**

#### **6.7 SHEET METAL MATERIALS:**

A. Sheet Metal, General: Provide sheet metal in thicknesses indicated, packaged and marked as specified in ASTM A 700.

B. Galvanized Sheet Steel: Lock-forming quality, ASTM A653, Coating Designation G90. Provide mill phosphatized finish for exposed surfaces of ducts exposed to view.

C. Reinforcement Shapes and Plates: Unless otherwise indicated, provide galvanized steel reinforcing where installed on galvanized sheet metal ducts.

#### **6.8 DUCT LINER:**

A. General: Comply with NFPA Standard 90A and TTMA Standard AHC-101.

B. Materials: ASTM C 1071, Type II, with coated surface exposed to airstreams to prevent erosion of glass fibers,

1. Thickness: 25 mm.
2. Density: 7,32 kg/m<sup>2</sup>.

3. Thermal Performance: "K-Factor" equal to 0.107 [kcal.m/h.m<sup>2</sup>°C} or better, at a mean temperature of 24°C.
4. Fire Hazard Classification: Flame spread rating of not more than 25 without evidence of continued progressive combustion and a smoke developed rating of no higher than 50, when tested in accordance with ASTM C 411.
5. Liner Adhesive: Comply with NFPA Standard 90A and ASTM C 916.
6. Mechanical Fasteners: Galvanized steel, suitable for adhesive attachment, mechanical attachment, or welding attachment to duct. Provide fasteners that do not damage the liner when applied as recommended by the manufacturer, that do not cause leakage in the duct, and will indefinitely sustain a 23-kilogram tensile dead load test perpendicular to the duct wall.
  - a. Fastener Pin Length: As required for thickness of insulation, and without projecting more than 6 mm into the airstreams.
  - b. Adhesive for Attachment of Mechanical Fasteners: Comply with the "Fire Hazard Classification" of duct liner system.

#### **6.9 JOINT SEALANT:**

- A. Apply joint sealant to all transverse joints as recommended by the manufacturer.
- B. Joint sealant is specified in the list of approved manufacturers.

#### **6.10 HANGERS AND SUPPORTS:**

- A. Building Attachments: Concrete inserts or structural steel fasteners appropriate for building materials.
- B. Hangers: Galvanized steel round rods on minimum 10 mm diameter
- C. Duct Attachments: Sheet metal screws, blind rivets, or self-tapping metal screws; compatible with duct materials.

#### **6.11 RECTANGULAR DUCT FABRICATION:**

- A. General: Except as otherwise indicated, fabricate rectangular ducts with galvanized sheet steel, in accordance with SMACNA "Cooling system Duct Construction Standards," Tables 1-3 through 1-19, including their associated details. Conform to the requirements in the referenced standard for metal thickness, reinforcing types and intervals, tie rod applications, and joint types and intervals.

1. Fabricate rectangular ducts in lengths appropriate to reinforcement and rigidity class required for pressure classification.
2. Provide materials that are free from visual imperfections such as pitting, seam marks, roller marks, stains, and discolorations.

B. Static Pressure Classifications: Except where otherwise indicated, Construct duct systems to the following pressure classifications:

1. Supply Ducts: 75 mm water gage.
2. Return Ducts: 50 mm water gage, negative pressure.
3. Exhaust Ducts: 50 mm inches' water gage, negative pressure.

C. Cross breaking or Cross Beading: Cross break or bead duct sides that are 48 cm and larger and are 20 gage or less, with more than 1 square meter of unbraced panel area, as indicated in SMACNA "HVAC / cooling system Duct Construction Standard," Figure 1-4, unless they are lined or are externally insulated.

#### 6.12 **RECTANGULAR DUCT FITTINGS:**

A. Fabricate elbows, transitions, offsets, branch connections, and other duct construction in accordance with SMACNA "HVAC / cooling system Metal Duct Construction Standard," 1985 Edition, Figures 2-1 through 2-10.

#### 6.13 **SHOP APPLICATION OF LINER IN RECTANGULAR DUCTS:**

- A. Adhere a single layer of indicated thickness of duct liner with 90 percent coverage of adhesive at liner contact surface area. Multiple layers of insulation to achieve indicated thickness is prohibited.
- B. Apply a coat of adhesive to liner facing in direction of airflow not receiving metal hosing.
- C. Butt transverse joints without gaps and coat joint with adhesive.
- D. Fold and compress liner in corners of rectangular ducts or cut and fit to assure butted edge overlapping.
- E. Longitudinal joints in rectangular ducts shall not occur except at corners of ducts, unless the size of the duct and standard liner product dimensions make longitudinal joints necessary.

1. Apply an adhesive coating on longitudinal seams in ducts exceeding 12.7 m/s air velocity.

F. Secure liner with mechanical fasteners 10 cm from corners and at intervals not exceeding 30 cm transversely around perimeter; at 7.5 cm from transverse joints and at intervals not exceeding 45 cm longitudinally.

G. Secure transversely oriented liner edges facing the airstreams with metal nosing that are either channel or "Z" profile or are integrally formed from the duct wall at the following locations:

1. Fan discharge.
2. Intervals of lined duct preceding unlined duct.
3. Upstream edges of transverse joints in ducts.

#### **6.14 ROUND DUCT FABRICATION:**

A. General: "Basic Round Diameter" as used in this article is the diameter of the size of round duct that has a circumference equal to the perimeter of a given sized of flat oval duct. Except where interrupted by fittings, provide round ducts in lengths not less than 3.5 meters.

B. Round Ducts: Fabricate round supply ducts with spiral lock seam construction. Comply with SMACNA "HVAC/cooling system Duct Construction Standards/ Table 3-2 for galvanized steel gages.

#### **6.15 ROUND SUPPLY AND EXHAUST FITTINGS FABRICATION:**

A. Elbows: Fabricate in die-formed, gored, or pleated construction. Fabricate the bend radius of die-formed, gored, and pleated elbows 1.5 times the elbow diameter. Unless elbow construction type is indicated, provide elbows meeting the following requirements:

1. Round Elbows - 20 cm and Smaller: Die-formed elbows for 45- and 90-degree elbows and pleated elbows for 30, 45, 60, and 90 degrees only.
2. Round Elbows - 22 cm Through 36 cm: Gored or pleated elbows for 30, 45, 60, and 90 degrees, except where space restrictions require a mitered elbow.

### **PART 3 – EXECUTION:**

#### **6.16 DUCT INSTALLATION, GENERAL:**

A. Duct System Pressure Class: Construct and install each duct system for the specific duct pressure classification indicated.

- B. Install ducts with the fewest possible joints.
- C. Use fabricated fittings for all changes in directions, changes in size and shape, and connections.
- D. Install couplings tight to duct wall surface with projections into duct at connections kept to a minimum.
- E. Locate ducts, except as otherwise indicated, vertically and horizontally, parallel and perpendicular to building lines; avoid diagonal runs. Install duct systems in shortest route that does not obstruct useable space or block access for servicing building and its equipment.
- F. Install ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building.
- G. Provide clearance of 25 mm where furring is shown for enclosure or concealment of ducts, plus allowance for insulation thickness, if any.
- H. Install insulated ducts with 25 mm clearance outside of insulation.
- I. Conceal ducts from view in finished and occupied spaces by locating in mechanical shafts, hollow wall construction, or above suspended ceilings. Do not encase horizontal runs in solid partitions, except as specifically shown.
- J. Coordinate layout with suspended ceiling and lighting layouts and similar finished work.
- K. Non-Fire-Rated Partition Penetrations: Where ducts pass interior partitions and exterior walls, and are exposed to view, conceal space between construction opening and duct or duct insulation with sheet metal flanges of same gage as duct. Overlap opening on 4 sides by at least 4 cm.

#### **6.17 SEAM AND JOINT SEALING:**

- A. General: Seal duct seams and joints as follows:
- B. Pressure Classification 50 and 75 mm Water Gage: All transverse joints and longitudinal seams.
- C. Seal externally insulated ducts prior to insulation installation.

#### **6.18 DUCT LINING:**

Provide duct lining on ductwork within 4 meters of the Air Handling Units, both supply and return ducts. Duct sizes shown on drawing shall be the net free dimensions inside the duct.

#### **6.19 HANGING AND SUPPORTING:**

- A. Install rigid round, rectangular, and flat oval metal duct with support systems indicated in SMACNA "HVAC/cooling system Duct Construction Standards," Tables 4-1 through 4-3 and Figures 4-1 through 4-8.
- B. Support horizontal ducts within 60 cm of each elbow and within 120 cm of each branch intersection.
- C. Support vertical ducts at a, maximum interval of 4 M and at each floor.
- D. Upper attachments to structures shall have an allowable load not exceeding 1/4 of the failure (proof test) load but are not limited to the specific methods indicated.
- E. Install concrete insert prior to placing concrete.

#### 6.20 **CONNECTIONS:**

- A. Equipment -Connections: Connect equipment with flexible connectors in accordance with Division 15 Section "Duct Accessories."
- B. Branch Connections: Comply with SMACNA "HVAC/cooling system Duct Construction Standards," Figures 2-7 and 2-8.
- C. Outlet and Inlet Connections: Comply with SMACNA "HVAC/cooling system Duct Construction Standards," Figures 2-16 through 2-18.
- D. Terminal Units Connections: Comply with SMACNA "HVAC/cooling Duct Construction Standards," Figure 2-19.

#### 6.21 **FIELD QUALITY CONTROL:**

- A. Disassemble, reassemble, and seal segments of the systems as required to accommodate leakage testing, and as required for compliance with test requirements.
- B. Conduct tests, in the presence of the Consultant, at static pressures equal to the maximum design pressure of the system or the section being tested. If pressure classifications are not indicated, test entire system at the maximum system design pressure. Do not pressurize systems above the maximum design operating pressure. Give 7 days' advanced notice for testing.
- C. Determine leakage from entire system or section of the system by relating leakage to the surface area of the test section.
- D. Maximum Allowable Leakage: As described in ASHRAE 1989 Handbook, "Fundamentals" Volume, Chapter 32, Table 6 and Figure 10. Comply with requirements for leakage classification 3 for round and flat oval ducts, leakage classification 12 for rectangular ducts in pressure classifications less than and equal to 50 mm water gage (both positive and negative pressures), and leakage

classification 6 for pressure classifications greater than 50 mm water gage and less than and equal to 250 mm water gage.

E. Remake leaking joints as required and apply sealants to achieve specified maximum allowable leakage.

F. Leakage Test: Perform volumetric measurements and adjust air systems as described in ASHRAE 1987 "HVAC/Cooling Systems and Applications" Volume, Chapter 57 and ASHRAE 1989 "Fundamentals" Volume, Chapter 13, and Division 15 Section "TESTING, ADJUSTING, AND BALANCING."

## **6.22 ADJUSTING AND CLEANING:**

A. Adjust volume control devices as required by the testing and balancing procedures to achieve required air flow. Refer to Division 15 Section "TESTING, ADJUSTING, AND BALANCING" for requirements and procedures for adjusting and balancing air systems.

END OF SECTION



## **7 DUCT WORK & ACCESSORIES:**

### **PART 1 – GENERAL**

#### **7.1 RELATED DOCUMENTS:**

A. All Drawings and General Provisions, Special Provision of the Contract, including General and Special Conditions, Technical Specification, Equipment Schedule and Bill of Quantities apply to this Section.

#### **7.2 DESCRIPTION OF WORK:**

A. Extent of ductwork and accessories work is indicated on drawings and in schedules, and by requirements of this section.

B. Types of ductwork accessories required for project include the following:

1. Dampers.

a. Manual Dampers.

b. Motor-Operated Dampers.

2. Turning Vanes.

3. Duct Hardware.

4. Duct Access Doors.

5. Flexible Ducts.

6. Screens.

#### **7.3 QUALITY ASSURANCE:**

A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of ductwork accessories, of types and sizes required, whose products have been in satisfactory use in similar service for not less than 10 years.

B. Codes and Standards:

1. SMACNA. Compliance: Comply with applicable portions of SMACNA "HVAC/Cooling system Duct Construction Standards, Metal and Flexible."

2. Industry Standards: Comply with ASHRAE recommendations pertaining to construction of ductwork accessories, except as otherwise indicated.

#### 7.4 SUBMITTALS:

- A. Product Data: Submit manufacturer's technical product data for each type of ductwork accessory, including dimensions, capacities, and materials of construction; and installation instructions.
- B. Shop Drawings: Submit manufacturer's assembly-type shop drawings for each type of ductwork accessory showing interfacing requirements with ductwork, method of fastening or support, and methods of assembly of components.
- C. Maintenance Data: Submit manufacturer's maintenance data including parts lists for each type of duct accessory. Include this data, product data, and shop drawings in maintenance manual; in accordance with requirements of Division 15.

### PART 2 – PRODUCTS:

#### 7.5 DUCT WORK:

- a. Except as otherwise specified, all sheet metal ductwork, flexible ducts, flexible connections, dampers of all types and related items shall be in accordance with this section.
- b. Make every duct bent with center line radius not less than its width. Make every change in size or shape of duct with taper not exceeding 1 in 5. Unless otherwise indicated, provide throats at all branches with throat velocity same as main duct velocity, construct square throat elbows, indicated or required, with internal turning vans in accordance with detail indicated.
- c. Joints in all ductworks shall form smooth interior surface.
- d. Support horizontal ductwork on galvanized iron hangers not less than 1" X 1/8". Spaced not more than 8 ft. on center for ducts up to 8 sq. ft. in area and not more than 4 ft on center for larger ductwork.
- e. Support vertical duct work at each floor with angles not less than 1 1/4" X 1 1/4" X 1/8", for ducts up to 30" wide 1-1/2" X 1-1/2" X 1/8", ducts from 31" to 60 "wide; provide minimum of two angles for each duct.
- f. Furnish dampers indicated or required to balance distribution of air through various parts of duct systems to obtain air deliveries indicated at all air inlets and outlets.
- g. For all ducts, dampers, access door, joints, stiffeners and hangers, "wide" is meant greatest dimension.

- h. All ductwork, UNLESS OTHERWISE SPECIFIED, in accordance with recommendation of SMACNA & ASHRAE.
- i. All the air plenums for linear grills shall be factory fabricated.
- j. During construction, where it is necessary for ductwork to be left open for extended period before completion, temporarily close any such openings with sheet metal covers where necessary or required to prevent debris from entering ducts and /or to maintain opening straight and square.
- k. All ducting measurements will be done after the installation.

## 7.6 DUCTWORK – MATERIAL

### GALVANISED STEEL DUCTWORK:

- a. All ductwork, prime quality galvanized sheet steel:
  - 1. To 12 inches' maximum dimension, #24 USSG
  - 2. 13 to 27 inches' maximum dimension, #24 USSG
  - 3. 28 to 50 inches' maximum dimension #22 USSG
  - 4. 51 to 80 inches' maximum dimension #20 USSG
  - 5. Over 80 inches' maximum dimension #18 USSG
- b. Transverse joint connections and duct-work stiffening, except as otherwise, specified:
  - 1. To 24 inches wide: "S" slip, drive slip, pocket slip or bar slip on 94-inch centers.
  - 2. 25 to 30 inches wide: "S" slip, drive slip, pocket slip or bar slip on 94-inch centers with 1-inch angles on 48-inch centers.
  - 3. 31 to 40 inches wide: Drive slip, 1-inch pocket slip or 1-inch bar slip on 94- inch centers with 1-inch angles on 48 inch centers.
  - 4. 41 to 60 inches wide: 1-1/2" angle connections, 1-1/2-inch pocket slip or 1 1/2-inch bar slip on 94 centers with 1-1/2 inch angles on 48 inch centers.
  - 5. 61 to 90 inches wide: 1-1/2-inch angle connections, 1-1/2-inch pocket slip or 1-1/2-inch bar slip on 45-inch centers, with 1-1/2- inch angles on 24-inch centers.

6. 91 inches and larger: 2-inch angle connections, 1-1/2-inch pocket slip or 1 1/2-inch bar slip on 45-inch centers, with 1-1/2 -inch angles on 24-inch centers.
- c. On ductwork up to 60" wide, 45 inches long duct sections may be used.
- d. Ductwork for distance of 20 ft. from fan inlet and outlet: Stiffened as specified above, except angles spaced on centers not greater than 24 inches, both transverse and longitudinal.
- e. Stiffing angles: Riveted or spot welded to ductwork, may be of black structural steel. Angles, total girth, on all four sides of ductwork. Angles may be omitted at joints if joints are equivalently reinforced.
- f. Make longitudinal seams on all ductwork with Pittsburgh or double seams, locked and hammered tight, with smooth interior duct surface.
- g. Cross-break all un-insulated ducts 18 inches wide and larger to prevent vibration or buckling.

#### **DAMPERS:**

- A. Manual Dampers: Provide dampers of single blade type or multi-blade type, constructed in accordance with SMACNA "HVAC / cooling system Duct Construction Standards."
- B. Motor-Operated Dampers: Provide automatic dampers, as indicated, with damper frames not less than formed 13-gauge galvanized steel. Provide mounting holes for enclosed duct mounting. Provide damper blades not less than formed 16-gauge galvanized steel, with maximum blade width of 8". Equip dampers with motors, with proper rating for each application. Dampers shall be spring return to closed.
  1. Secure blades to 1/2" diameter zinc-plated axles using zinc-plated hardware. Seal off against spring stainless steel blade bearings. Provide blade bearings of nylon and provide thrust bearings at each end of every blade. Construct blade linkage hardware of zinc-plated steel and brass. Submit leakage and flow characteristics, plus size schedule for controlled dampers.
  2. Operating Temperature Range: From -30°C to 95°C.

#### **7.7 TURNING VANES:**

- A. Fabricated Turning Vanes: Provide fabricated turning vanes and vane runners, constructed in accordance with SMACNA "HVAC /cooling system Duct Construction Standards."

#### **7.8 DUCT HARDWARE:**

A. Test Holes: Provide in ductwork at fan outlet, and elsewhere as indicated, duct test holes, consisting of slot and cover, for instrument tests.

B. Quadrant Locks: Provide for each damper, quadrant lock device on one end of shaft; and end bearing plate on other end for damper lengths over 300 mm. Provide extended quadrant locks and end extended bearing plates for externally insulated ductwork.

#### **7.9 DUCT ACCESS DOORS:**

A. General: Provide where indicated, duct access doors of size indicated.

B. Construction: Construct of same or greater gage as ductwork served, provide insulated doors for insulated ductwork. Provide extended frames for externally insulated duct. Provide one size hinged other side with one handle-type latch for doors 12" high and smaller, 2 handle type latches for larger doors.

#### **7.10 FLEXIBLE CONNECTORS:**

A. General: Provide flexible duct connections wherever ductwork connects to the air conditioning unit and to other vibration isolated equipment. Construct flexible connections of neoprene-coated flameproof fabric crimped into duct flanges for attachment to duct and equipment. Make airtight joint. Provide adequate joint flexibility to allow for thermal, axial, transverse, and tensional movement, and capable of absorbing vibration of connected equipment.

#### **7.11 FLEXIBLE DUCTS**

A. General: Provide flexible duct connects to plenums with main ducts. Flexible ducts shall be as short as possible and shall be a single continuous piece.

B. Construction: Flexible ducts shall be UL 181 Class 1 labelled composed of a flexible, resin bonded fiberglass helix wrapped with several layers of glass fiber insulation. Ducts shall be covered with a tough, seamless, vapor barrier jacket.

#### **7.12 SCREENS:**

A. General: Provide 2" clear, 1/8" diameter galvanized wire screens in a 1/16" (minimum) galvanized steel frame where shown on the drawings.

### **PART 3 – EXECUTION:**

#### **7.13 INSPECTION:**

A. Examine areas and conditions under which ductwork accessories will be installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Consultant.

**7.14                   INSTALLATION OF DUCTWORK ACCESSORIES:**

- A.       Install ductwork accessories in accordance with manufacturer's installation instructions, with applicable portions of details of construction as shown in SMACNA standards, and in accordance with recognized industry practices to ensure that products serve intended function.
- B.       Install turning vanes in square or rectangular 90-degree elbows in supply and exhaust air systems, and elsewhere as indicated.
- C.       Install access doors to open against system air pressure, with latches operable from either side, except outside only where duct is too small for person to enter.
- D.       Coordinate with other work, including ductwork, as necessary to interface installation of ductwork accessories properly with other work.

**7.15                   FIELD QUALITY CONTROL:**

- A. Operate installed ductwork accessories to demonstrate compliance with requirements. Test for air leakage while system is operating. Repair or replace faulty accessories, as required to obtain proper operation and leak proof performance.

**7.16                   ADJUSTING AND CLEANING:**

- i). Adjusting: Adjust ductwork accessories for proper settings, install fusible links in fire dampers and adjust for proper action.
- ii) Final positioning of manual dampers is specified in Division- 15 section "Testing, Adjusting, and Balancing."
- iii). Cleaning: Clean factory-finished surfaces. Repair any marred or scratched surfaces with manufacturer's touch-up paint.

**7.17                   LEAKAGE AND PREVENTION:**

- a.       Duct leakage tests shall be carried out as recommended and test reports shall be submitted to the consultant for approval.
- b.       To this end, the contractor shall, in the construction of his work, use appropriate joint, seam, and connection caulking and sealers, to insure air tightness of the ductwork. In addition, he shall apply a 3-inch-wide frame resistant duct tape to all joints and seams that are not welded, soldered or otherwise airtight. Tape shall be applied in a continuous and even strip on and around the joints.

- c. For exposed ductwork, contractor shall confer with the Consultant as to the appropriate method of sealing to affect the most aesthetic appearance while maintaining an efficient seal.

7.18            **ADJUSTMENT OF SYSTEMS AND TESTS:**

- a. Upon completion of installation, balance air distribution by adjustment of dampers and apparatus so that actual air delivery of each diffuser, grille and register does not vary more than 5% from air quantities indicated. Adjust all registers and diffusers so that there are no drafts.
- b. After balancing air distribution, test ventilating and air conditioning systems to certify compliance with Code requirements for ventilation and proper functioning of all operating devices.
- c. Submit certification and test report as specified.

END OF SECTION

## 8. DIFFUSERS, REGISTERS, AND GRILLES

### PART 1 – GENERAL

#### 8.1 RELATED DOCUMENTS:

- A. All Drawings and General Provisions, Special Provision of the Contract, including General and Special Conditions Technical Specification, Equipment Selection Sections, apply to this Section.

#### 8.2 SUMMARY:

A. This Section includes ceiling- and wall-mounted diffusers, registers, and grilles, Louvers and linear grills etc. B. Related Sections include the following:

1. This Section includes rectangular and round metal ducts for cooling systems in pressure classes, from minus 2 inches to plus 4 inches' water gage.
2. Related Sections: The following sections contain requirements that relate to this Section:
3. Section 15055, "Basic Materials and Methods" for fire-resistant sealants for use around duct penetrations and fire damper installations in fire rated floors, partitions, and walls.
4. Section 15010, "Basic Mechanical Requirements"
5. Division 15 Section "Duct Insulation" for exterior duct and plenum insulation.
6. Division 15 Section "Duct Accessories" for flexible duct materials, dampers, duct-mounted access panels and doors, and turning vanes.
7. Division 15 Section "Testing, Adjusting, and Balancing,"

#### 8.3 QUALITY ASSURANCE:

- A. Product Options: Drawings and schedules indicate specific requirements of diffusers, registers, Louvers, linear grills and grilles and are based on the specific requirements of the systems indicated. Other manufacturer's products with equal performance characteristics may be considered.
- B. NFPA Compliance: Install diffusers, registers, and grilles according to NFPA 90A, "Standard for the Installation of Air Conditioning and Ventilating Systems."



**PART 2 – PRODUCTS:****8.4 GRILLES AND REGISTERS:**

- A. Adjustable Bar Grille or Register: 1 Material: Aluminum.  
2 Finish: Baked enamel, white.  
3 Damper Type: Adjustable opposed-blade assembly.

**8.5 CEILING DIFFUSER OUTLETS:**

- A. Rectangular and Square Ceiling Diffusers:  
1. Material: Aluminum.  
2. Finish: Baked enamel, white.  
3. Face Size: See schedule on drawings.  
4. Dampers: Radial opposed blade.

**8.6 JET DIFFUSERS:**

- 1 Round Ceiling Diffusers:  
2 Material: Aluminum.  
3 Finish: Baked enamel, white.  
4 Face Size: See schedule on drawings.

**8.7 CEILING DIFFUSER DISC TYPE:**

- A. Round Ceiling Diffusers:  
1. Material: Aluminum.  
2. Finish: Baked enamel, white.  
3. Face Size: See schedule on drawings.  
4. Face Style: Disc type.

**8.8 LINEAR GRILL:**

- A. Linear Grill Series 6000 T &B: or Imperial Line Series  
1. Material: Aluminum.  
2. Finish: Baked enamel, white.  
3. Face Size: See schedule on drawings.

**8.9 LOUVERS:**

- A. Rectangular and Square Louvers:  
1. Material: Aluminum.  
2. Finish: Baked enamel, white.  
3. Face Size: See schedule on drawings.

**8.10 SOURCE QUALITY CONTROL:**

Verification of Performance: Rate diffusers, registers, linear grills, Louvers and grilles according to ASHRAE 70, "Method of Testing for Rating the Performance of Air Outlets and Inlets."

**PART 3 - EXECUTION 8.11 EXAMINATION:**

- A. Examine areas where diffusers, registers, and grilles are to be installed for compliance with requirements for installation tolerances and other conditions affecting quality and performance of equipment.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

**8.12 INSTALLATION:**

- A. Install diffusers, registers, linear grill, louvers and grilles level and plumb.
- B. Ceiling-Mounted Outlets and Inlets: Drawings indicate general arrangement of ducts, fittings, and accessories. Air outlet and inlet locations have been indicated to achieve design requirements for air volume, noise criteria, airflow pattern, throw, and pressure drop. Make final locations where indicated, as much as practicable. For units installed in lay-in ceiling panels, locate units in the centre of panel. Where architectural features or other items conflict with installation, notify Architect for a determination of final location.
- C. Install diffusers, registers, and grilles with airtight connections to ducts and to allow service and maintenance of dampers, air extractors, and fire dampers.

**8.13 ADJUSTING:**

- A. After installation, adjust diffusers, registers, and grilles to air patterns indicated, or as directed, before starting air balancing.

END OF SECTION

## 9. OPERATION AND MAINTENANCE OF COOLING SYSTEM

### 9.1 RELATED DOCUMENTS:

- A. All Drawings and General Provisions, Special Provision of the Contract, including General and Special Conditions Technical Specification, Equipment Selection Sections, apply to this Section.

### 9.2 SUMMARY:

This Section includes the following:

- A. After satisfactory completion, testing commissioning adjustment of all Cooling system (VRF & Split type) equipment and systems to the entire satisfaction of Consultant "Completion Certificate" shall be issued to the Contractor. After obtaining the completion certificate the Contractor shall operate and maintain the entire Cooling system through his own manpower for a period of two year starting after the issuance of completion certificate. Contractor shall provide training to the Owner's staff in operation and maintenance of Cooling Systems during this period of operation and maintenance.
- B. The Contractor shall submit operation and maintenance program to the Consultant for approval, after approval of Consultant the Contractor shall operate, maintain the entire Cooling Systems equipment and systems through his manpower in accordance with the operation & maintenance program approved by the Consultant.

### 9.3 OPERATION:

- A. The entire Cooling System (VRF & Split type) would be operated wholly by the Contractor without any assistance of Owner's staff. The operation timings shall be designated by the Owner, however 10 hrs. a day without any break (No leave throughout the year except gazette holidays) operation is to be carried out by the Contractor.
- B. During this period of operation and maintenance the Contractor shall train the operating staff for the operation and maintenance of Cooling System's equipment
- C. The Contractor shall provide qualified, experienced and competent staff for the operation of the complete Cooling System's equipment and systems and comply with the applicable Codes and Regulations.
- D. The Contractor shall submit the biodata of operational staff to the Consultant, Consultant shall evaluate their qualification and experience, after satisfactory evaluation the Contractor shall appoint them.
- E. Following minimum operating staff shall be employed by the Contractor

## ii. Electrician

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F. Contractor shall maintain proper log sheet as directed by the Consultant, all necessary records of temperature, humidity and electricity consumption etc., shall be kept during the operation period. These shall conform to the figures and efficiency rating as per contract requirement.

G. The Contractor shall be responsible to maintain inside design conditions during the operating period.

H. The Contractor prepare daily log sheets of equipment as directed by the Consultant and shall submit to the Consultant on weekly basis or as directed by the Consultant.

**9.4 MAINTENANCE:**

A. The Cooling System shall be maintained by the Contractor during period of operation & maintenance stated above. This shall include routine maintenance including preventive maintenance of the plant, regular servicing and cleaning and periodical overhauling according to the maintenance program prepared on basis of manufacturer's recommendations and approved by the Engineer.

B. Maintenance shall also include inspection, monitoring and troubleshooting of the plant. Complete maintenance record of all the equipments shall be kept in the form of a daily diary and log sheets. Maintenance record shall also be kept up to date on a log card shall be attached to each equipment. The operation & maintenance (O&M) record shall be reviewed and jointly signed by the Contractor's Chief O&M and Owner's representative daily.

C. All the consumable, non-consumable material, parts etc. involved during the two years' operation and maintenance shall be provided by the Contractor, and no extra cost will be paid for these items to the Contractor, and if any part or spares are used from the maintenance stock, then Contractor is responsible to provide that part/material without any additional cost to the Owner

D. During the Operation & Maintenance period if anything, part, machinery, equipment damages, Contractor shall replace/repair it, to the entire satisfaction of consultant without any additional cost to the Owner.

**9.5 TRAINING:**

During the period of operation and maintenance, the Contractor shall submit the "Training Schedule" to the Consultant for approval, after approval the Contractor shall impart regular training to the Owner's staff in operation and maintenance so that the Owner's staff should become competent to take independent charge of operation and maintenance of cooling system after two years.

**9.6 OPERATION AND MAINTENANCE MANUALS AND CHARTS:**

Before requesting acceptance of work, Contractor shall submit to the Engineer five (5) printed and bonded sets of complete operation and maintenance manuals in both English and Urdu together with technical data catalogs, and spare parts list for each piece of all the equipment's. The operation and maintenance manual shall include wiring diagrams and control diagrams of each equipment and of the whole system.

#### **9.7 AS-BUILT DRAWINGS:**

Contractor shall submit five (5) sets of as-built drawings in hard copy and its soft copy (DWG Format) including drawings of complete electrical and control circuits, duly approved by the Consultant. The drawings shall be prepared in a neat and accurate manner (on computer CAD) showing the completed work in detail as installed. Identification marks and colors on the drawings shall be shown corresponding to those marked on the installation.

#### **9.8 SPECIAL TOOLS AND INSTRUMENTS:**

Provide special tools and instruments as listed in the Equipment Schedule Data and Bill of Quantities for testing, operation and maintenance of cooling systems as part of the contract, before commencement of testing and commissioning phase.

#### **9.9 SUPPLEMENTARY SPARE PARTS:**

In addition to the maintenance stock recommended for two years' maintenance by the manufacturers of the equipment and approved by the Consultant, the Contractor shall provide supplementary spare parts as mentioned in Equipment schedule data and Bill of Quantities as part of contract before the commencement of testing and commissioning phase.

#### **9.10 COMPLETION OF OPERATION:**

After two-year successful completion of operation and maintenance of entire Cooling system, the Contractor shall handover the entire system to the Owner with each thing intact to the entire satisfaction of the Consultant and Owner, and if anything found damaged during this period the Contractor shall repair or replace it without any extra charges to the Owner before handing it over to the Owner.

END OF SECTION

### **10. TESTING, ADJUSTING, AND BALANCING**

#### **PART 1 – GENERAL**

#### **10.1 RELATED DOCUMENTS:**

- A. All Drawings and General provisions, Special Provisions of the Contract, including General and Special Conditions and Technical Specification Sections, Equipment Selection Data apply to this Section.

**10.2 SUMMARY:**

A. This Section includes Testing, and Commissioning, (Adjusting, and Balancing) of all Cooling Systems to produce design objectives, mainly as following:

1. Balancing air flow within distribution systems, including mains, all branches, and Terminal, to indicated quantities.
2. Measuring electrical performance of Cooling System's equipment
3. Verifying that automatic control devices are functioning properly
4. Measuring sound and vibration

**10.3 DEFINITIONS:**

- A. Adjust: To regulate fluid flow rate and air patterns at the air outlet/inlet, such as to reduce fan speed or adjust a damper.
- B. Balance: To set the proportional flows within the distribution system, including sub-mains, branches, and terminal, according to the design quantities.
- C. Procedure: An approach to and execution of and sequence of work to obtain the results.
- D. Test Reports: Test data sheets for recording test data in logical order.
- E. Terminal: A point where the controlled medium, such as fluid or energy, enters or leaves the distribution system.
- F. Test: A procedure to determine quantitative performance of a system or equipment.

**10.4 QUALITY ASSURANCE:**

- A. Testing, Adjusting, and Balancing Reports: Use standard forms from for Testing, Adjusting, and Balancing" or as directed by the Consultant.
- B. Instrumentation Type, Quantity, and Accuracy: All the instruments used for testing adjusting and balancing shall be calibrated by a approved agency.

**10.5 COORDINATION:**

A. Obtain all shop drawings of systems to be tested, adjusted and balanced in order to become familiar with installation prior to the day when testing, adjusting and balancing is performed.

B. Perform testing, adjusting, and balancing after leakage and pressure tests on air distribution systems have been satisfactorily completed.

**PART 2 – EXECUTION:**

A. Examine approved submittal data of Cooling Systems and equipment.

B. Examine project record documents.

C. Examine Consultant's design data, including Cooling System descriptions, statements of design assumptions for environmental conditions and systems' output.

D. Examine system and equipment installations to verify that they are complete and that testing, cleaning, adjusting, and commissioning specified in individual Specification Sections have been performed.

E. Examine system and equipment test reports.

F. Examine cooling system and equipment installations to verify that indicated balancing devices, such as test ports, gage cocks, thermometer wells, flowcontrol devices, balancing valves and fittings, and manual volume dampers, are properly installed, and their locations are accessible and appropriate for effective balancing and for efficient system and equipment operation.

G. Examine systems for functional deficiencies that cannot be corrected by adjusting and balancing.

H. Examine air-handling equipment to ensure clean filters have been installed, bearings are greased, belts are aligned and tight, and equipment with functioning controls is ready for operation.

I. Examine plenum ceilings, utilized for supply air, to verify that they are airtight. Verify that pipe penetrations and other holes are sealed.

J. Examine equipment for installation and for properly operating safety interlocks and controls.

K. Examine automatic temperature system components to verify the following:

1. Dampers, valves, and other controlled devices operate by the intended controller.

2. Dampers and valves are in the position indicated by the controller.

3. Thermostats are located to avoid adverse effects of sunlight, drafts, and cold walls.
  4. Sensors are located to sense only the intended conditions.
  5. Sequence of operation for control modes is according to the Contract Documents.
  6. Controller set points are set at design values. Observe and record system reactions to changes in conditions. Record default set points if different from design values.
  7. Interlocked systems are operating.
  8. Changeover from normal to cooling mode occurs according to design values.
- L. Report deficiencies discovered before and during performance of testing, adjusting, and balancing procedures.

#### **10.6 PREPARATION:**

- A. Prepare a testing, adjusting, and balancing plan that includes strategies and step-by-step procedures.
- B. Complete system readiness checks and prepare system readiness reports. Verify the following:
  - Permanent electrical power wiring is complete.
  - Automatic temperature-control systems are operational.
  - Equipment and duct access doors are securely closed.
  - Windows and doors can be closed so design conditions for system operations can be met.

#### **10.7 FUNDAMENTAL PROCEDURES FOR HYDRONIC SYSTEMS:**

- A. Prepare test reports with pertinent design data and number in sequence starting at pump to end of system. Check the sum of branch circuit flows against approved flow rate. Correct variations that exceed plus or minus 5 percent.

#### **10.8 FINAL REPORT:**

- A. Final test reports shall be provided to the Consultant.
- B. General: Typewritten, or computer printout in letter-quality font, on standard bond paper, in 3-ring binder, tabulated and divided into sections by tested and balanced systems.



**SPECIAL NOTE**

Apart from other Documentation, Contractor is liable to provide the following information along with their evidences

1. List of Plant Machinery and Tools for the above project, the contractor must attach list of the main plant and machinery to be used at site
2. The description and location of the main fabrication shop of the contractor with address and facilities and design office location
3. List of engineers, technicians with qualification and membership like PEC for the engineers
4. Project plan and completion time with bar chart
5. Sub-contracting is not allowed for Cooling system
6. Performance and testing period and its cost either to be borne by the contractor or client

**END OF SECTION**

**LIST OF APPROVED MANUFACTURERS /SUPPLIERS/SOURCES****CIVIL WORKS**

<b>LIST OF APPROVED MANUFACTURERS CIVIL ITEMS</b>		
<b>S. No.</b>	<b>Equipment</b>	<b>MAKE / BRAND</b>
1	Cement (OPC, SR)	Lucky, Pioneer, Maple Leaf, State Cement, Fouji, Askari, Facto, Charat, DG Khan
2	Cement (White)	Anwarzeb, Kohat, Maple Leaf, Zealpak
3	Construction Chemicals & Sealants	Sika, Fosroc, BASF, Ultra, Fastchem, Vertex, MAPEI, KALON, Mitchell
4	Anchoring / Fixing Systems	Strong hold, Strong force, Hilti, Fischer
5	Sand (for RCC)	From approved source as per Mix Design and for high risk structure/construction
6	Sand (other works)	From approved source as per nature of work.
7	Aggregate	From approved sources looking at the nature of work as per recommendations of M/s NESPAK under study Construction material sources
8	Steel Reinforcement	AFCO, Ittefaq, Fazal, Razzak, Pak Steel, Model Steel, FF Steel, Nizami Brothers, Moiz Steel, Pioneer, Tayyaba Steel
9	Bitumen (Cold)	National Refinery, Attock Petroleum, PARCO
10	Bricks/Blocks	Local (Brand / source to be approved by the Engineer)
11	Porcelian Tiles	S-Abdullah, Imperial Tiles (Imported Tiles) S- Tiles (Pakistan/Turkish/Chinese)
12	Vinyl Tiles	Decora, Marflex, A.T.S. Synthetic
13	Textured Decorative Wall Coating	Rockwall, Wall Tec, Rock Shield, Sand Tec, Graffito, Jotun
14	Aluminium Doors / Windows	Pakistan Cables, Chawla, Prime, Lucky, Khas Aluminium
15	Aluminium Composite Panel	Chawla, Pakistan Safety Glass (Alcobond), AKB (EuroBond - Exterior. & DuBond - Interior)
16	Paint	ICI, Burger, Master, Kansai (Japan), Nippon, Jotun, Diamond, Buxly, Pakistan Phthalates Limited (Kalon Chemicals Company)
17	Powder Coating	Jotun or approved equivalent
18	Concrete Pavers	Tuff Tiles, Izhar, Envicrete, National Pavers, Banu Mukhtar
19	Concrete Pavers	Diamond (Jumbolon), Pakistan Insulations, Safe line, Insugreen
20	Concrete Pavers	Polytec (Henkel Polybit), Hygrip, Roof Grip, A.T.S. Synthetic, Petro Seal, Bitumat (Saudi Arabia), Pakistan Phthalates Limited (Kalon Chemicals Company)
21	uPVC Doors / Windows	Framez, Uniwin, Nasar Steel, U-Tech, Green Door, V-Make, Chawla

22	Steel Doors and windows	SECCO or any other approved equivalent
23	Termite Proofing	Agenda (Termidor), Biflex, Fiprokil, Mirage, Termicure, Ability
24	Pre-Engineered Steel Buildings	Zamil, Mammut, Mabani, Kirby, Banu Mukhtar, Izhar, SACHAL
25	Gypsum False Ceiling	United Gypsum, Arish
26	Glass	Ghani, Al-Fattah, Pakistan Safety Glass
27	Door hardware	Jb.Saeed, IM Hardware (Yale) or approved equivalent
28	Hanging rod/accessories Anchoring rod/Accessories Suspension rod/Accessories	HLITI, FISCHER

**LIST OF APPROVED MANUFACTURERS /SUPPLIERS/SOURCES****ELECTRICAL WORKS**

<b>LIST OF APPROVED MANUFACTURERS ELECTRICAL ITEMS</b>		
<b>S. No.</b>	<b>Equipment</b>	<b>MAKE/BRAND</b>
1	Cable/HDBC	Newage cables, Lahore Pioneer Cables Ltd, Karachi, Pakistan Cables Ltd, Karachi, Fast Cables, Lahore
2	Wiring Terminals, Crimp terminal, Wiring Connectors, Cable Lugs, Ferrules, Gland, Cable Labels, Cable markers, cable tie, Flexible/pliable (conduit, adapter/gland), industrial sockets, Heat shrinks	Univolt (Clipsal), Sofamel,Cembre,Gewiss, AMP, 3M, Weitkowitz, Partex, Wiska,IPE, Hilti, Sikla, Fisher, Emit, Weidmuller, Himel, Simpa, legrand, Phoenix contact
3	Cable Tray/Ladder	Electroline Karachi, Ezzi Engineering
4	Back-boxes, Pull boxes	Hussain & Co, Karachi
5	PVC Conduit & Accessories	Jeddah Pipes, Karachi, Galaxy (GALCO), Karachi
6	Steel Conduit & Accessories/G.I. Pipes	International Industries, Karachi
7	Switch socket/outlet, etc accessories	Clipsal Legrand
8	Distribution boards	Sunbeam Engineers, Khi,Hussain & Co., Khi,HRA Switchgear,Khi
9	Circuit Breakers	Schneider, ABB, Siemens
10	Circuit breaker Contactors/Relays	Schneider, ABB, Siemens
11	CTs/Ameter/ voltmeter	Revalco, Complee, Schneider, ABB, Lovato, GE
12	Voice/Data Structured Cabling System	Corning (3M)
13	Light Fixtures/ Lamps	Britlite, OHMS, Pierlite, Thermec
14	Hand dryer	Siemens
15	Insect Killer	MOEL CRI 307A
16	FANS (energy star 3)	PAK FAN,GFC,ROYAL
17	Fire Stopping	3M, Hilti, Charcot, Fischer, Svt, Roxtec

**LIST OF APPROVED MANUFACTURERS / SUPPLIERS/SOURCES -  
PLUMBING WORKS**

<b>LIST OF APPROVED MANUFACTURERS /SUPPLIERS/SOURCES PLUMBING</b>		
S. No.	Equipment	MAKER/RAND
1	Sanitary Ware	Grohe, Porta, Roca
2	Bath/ Kit. Fittings	Master, Grohe, Porta
3	PPR-C Pipes & Fitting	Dadex, Beta, Master, Plasco, Turk Plast, Popular Pipe, Accufit, Minhas, Dura Built, IIL, Builtec, Euro Gulf, YAH Plastic Industry, Pelikan Pipe Industry (Civic
4	uPVC Pipes & Fittings	Fast Flow, Dadex,, Turk Plast, Jamal, Plasco, Popular Pipe, Master, Accufit, Dura Built, Builtec, Euro Gulf, YAH Plastic Industry, Newtech, Pelikan Pipe Industry (Civic), Prime Star Industries
5	RCC Pipe	Pakistan Pipes, National Pipe Industry
6	G. I. Pipes	International Industries Ltd. (IIL), Bashir Pipe, Master Pipe, Jamal, Victory
7	C. I. Pipes	Teepu, Alpine, NPC
8	Sluice Valves	KITZ (Star Corporation), Teepu, Rehman Group, Sirajia Trading co.
9	G.I. Fittings	KITZ (Star Corporation), Health Engineering (HE)
10	C. I. Fittings & Valves	Teepu, Alpine, Sirajia Trading co.
11	C. I. Manhole Cover	CME, Teepu, Alpine, Turk Plast
12	MS Seamless Pipe	Jamal, KITZ, Sirajia Trading co., Master Pipes, Victory
13	Gas Geyser	Cannon, General, Nesgas
14	Water Pump (Imported)	KSB, DAB (Italy), Lowara, Grundfos, HMA (Vansan, Rovatti), SAER (Italy), XYLEM (USA), WILO (Germany
15	Water Pump (Local)	PECO, Flowpak, Nobel, Golden Dynamics (Nowa)
16	Fire Pump	DAB (Italy), A-C Fire Pump, Firechief
17	PVC Water Stop	Fosroc, Sika, Decora, Marflex
18	HDPE pipe and Fittings	Dadex, Jamal, Plasco, Turk Plast, Beta, PopularPipe, Accufit, IIL, DURA BUILT, Builtec, Fast Flow, Sampak InternationalYAH Plastic Industry, Newtech, Pelikan Pipe Industry (Pelikan), Prime Star Industries
19	Electric water heater	Cannon, General, Nasgas
20	Kitchen Sink	Atlas or approved equivalent

**LIST OF APPROVED MANUFACTURERS /SUPPLIERS/SOURCES****HVAC WORKS**

<b>LIST OF APPROVED MANUFACTURERS HVAC ITEMS</b>		
<b>S. No.</b>	<b>Equipment</b>	<b>MAKE/BRAND</b>
1	COPPER PIPE	MULLER, GOLDEN DEAGON
2	INSULATION	SUPER LOAN, AEROFOAM
3	DRAINAGE PIPE	DAIDEX, A G M
4	CABLES	PAKISTAN CABLES, PIONEER, UNIVERSAL
5	PLANT	DAIKIN, MIDEA, HISENSE, GREE

# LIST OF APPROVED MAKES / VENDORS FOR HVAC WORKS

LIST OF APPROVED MAKES FOR HVAC WORKS				
S. No.	Item	Make / Manufacturer	Authorized Dealer	Contact No.
1	VRF SYSTEM	GREE, CHINA HISENSE, CHINA HITACHI, JAPAN SAMSUNG, KOREA HAIER, CHINA MIDEA, CHINA	M/S. DWP M/S. SMARTCLIMATE SOLUTIONS M/S. NATIONAL TECHNOLOGIES INC. M/S. DYNAMIC EQUIPMENT & CONTROLS (Pvt.) Ltd. M/S. HAIER PAKISTAN M/S. MEP GLOBAL TECHNOLOGIES	021-34322341 - 2, Ext: 110 021-34329995-6 021-34327578-79 021 34542302, 34546421 021- 35656607 021 32466731-735
2	Split System	GREE, CHINA HITACHI, JAPAN SAMSUNG, KOREA HAIER, CHINA MIDEA, CHINA	M/S. DWP M/S. NATIONAL TECHNOLOGIES INC. M/S. DYNAMIC EQUIPMENT & CONTROLS (Pvt.) Ltd. M/S. HAIER PAKISTAN M/S. MEP GLOBAL TECHNOLOGIES	021-34322341 - 2, Ext: 110 021-34327578-79 021 34542302, 34546421 021- 35656607 021 32466731-735
3	Fan Coil Units	SKM, UAE TICA, CHINA TRANE, CHINA YORK, CHINA RHOSS, ITALY DUNHAM BUSH, MALAYSIA CARRIER, CHINA	M/S. THUMB INTERNATIONAL M/S. DYNAMIC EQUIPMENT & CONTROLS (Pvt.) Ltd. M/S. MECATECH (Pvt.) Ltd. M/S. GREAVES AIRCONDITIONING (Pvt.) Ltd. M/S. CAPTIVE AIRE ENGINEERING SERVICES M/S. ORIENT ENERGY SYSTEMS (Pvt.) Ltd. M/S. SMARTCLIMATE SOLUTIONS	021 35857780 021 34542302, 34546421 021-34327686, 34327581-82 021-111-345-111 Ext: 1408 042-35234176-8 Ext:117 021 - 111507507 Ext: 425 021-34329995-6
4	COPPER PIPES	MULLER, USA	M/S. FAKHRI BROTHERS M/S. CRESCENT CORPORATION	021- 3588 6201 ~ 5 042- 3764 3162
5	VENTILATION FANS (Imported)	BVN, TURKEY SYSTEM-AIR, MALAYSIA SODECA, ITALY MUNTERS, ITALY	M/S. IDEAS ASSOCIATES M/S. DYNAMIC EQUIP. & CONTROLS M/S. KHURSHID ENGINEERING M/S. PEPKO PAKISTAN	021- 3454 2302 042-35323166 042- 35446335 055-3204402-4, 042-35956273
6	VENTILATION FANS (Local)	UNI AIR, PAKISTAN SASA, PAKISTAN AEROTECH, PAKISTAN	M/S. SHAN INDUSTRIES M/S. SASA METAL INDUSTRIES M/S. AIRENG COMPANY	021- 38899083 021- 35065840 Ext -42 051- 4493344-6
7	FLEXIBLE CONNECTOR	TOZAN, JAPAN	M/S. SHERAZ CORPORATION	021- 3241 6259
8	FLEXIBLE DUCT	AERODUCT, UAE AFS, TURKEY DUCTMATE, USA	M/S. M.M STEEL CORPORATION M/S. FAKHRI BROTHERS M/S. IQBAL SONS	051-5750594 021- 3588 6201 ~ 5 021- 3453 3122 ~ 3
9	ALUMINUM TAPE (3" WIDTH)	ABRO, USA	M/s. FAKHRI BROTHERS	021- 3588 6201 ~ 5
10	FLEXIBLE RUBBERIZED DUCT CONNECTOR	AFS, UAE AERODUCT, UAE	M/S. FAKHRI BROTHERS M/S. M.M STEEL CORPORATION	021- 3588 6201 ~ 5 051- 5750 594
11	AIR CURTAINS	IMPORTED MAKE	IMPORTED MAKE AS PER APPROVED SAMPLE	-----
12	PRE-INSULATED SHEETS	GREENFOAM, CHINA PAL, UAE (KINGSPAN) EUROPAN, ITALY	M/S. TRADE MANUFACTURER M/S. FAKHRI BROTHERS M/S. NEOTECH ENGINEERING	042-37603203 021- 3588 6201 ~ 5 042- 3594 8136
13	G.I. & M.S SHEETS	ISL, PAK (as per approved sample)	M/S. ISL (IIL PIPES) M/S. LOKHANDWALA	021- 111 019 019 021- 3273 0738
14	M.S. SCHEDULE. 40 SEAMLESS PIPES	LONTRIN, CHINA  PROTEK, CHINA BAOLAI, CHINA	M/S. CRESCENT CORPORATION M/S. FAKHRI BROTHERS M/S. SAEED SONS M/S. BUILD CON	042- 3764 3162 021- 3588 6201 ~ 5 021- 3221 6151 ~ 6 021- 32603638
15	WELDING ROD	BOC, PAKISTAN ZODIAN, PAKISTAN	LOCAL MARKET	-----
16	POLYURETHANE INSULATION	ISLAMUDDIN & SONS PUR INSULATION	M/S. ISLAM UDDIN & SONS M/S. UNITED INSULATION PAKISTAN	021- 3273 3650 0345-6187766
17	POLYSTYRENE (THERMOPORE) INSULATION	ISLAMUDDIN & SONS	M/S. ISLAM UDDIN & SONS	021- 3273 3650
18	NBR/EPDM/XLPE INSULATION	ARMACELL, UK AEROFLEX, THAILAND AEROFLEX, THAILAND AEROFOAM, UAE SUPERLON, MALAYSIA	M/S. FAKHRI BROTHERS M/S. IQBAL SONS M/S. KATYS M/s. M.M STEEL CORPORATION M/S. IQBAL SONS	021- 3588 6201 ~ 5 021- 3453 3122 ~ 3 021- 34520916 051-5750594 021- 3453 3122 ~ 3
19	FIBER GLASS INSULATION	KNAUF, UAE AFICO, KSA	M/s. UNIQUE TOOLS & MILL STORE M/S. IQBAL SONS	021- 3455 1400 021- 3453 3122 ~ 3
20	ROCK WOOL INSULATION	PAKISTAN INSULATION	M/s. PAKISTAN INSULATION	021- 3452 9723
21	SOUND LINER FIBER GLASS	AFICO, KSA	M/S. IQBAL SONS	021- 3453 3122 ~ 3
22	SOUND LINER ADHESIVE	AEROFLEX, THAILAND THERMOBREAK, THAILAND	M/S. KATYS M/S. S. FAZAL ELAHI & SONS	021- 3452 0916 042- 3766 6895
23	UPVC PIPE & FITTING (SCH. 40)	AGM, KSA BINA PLASTIC, MALAYSIA	M/S. MALIK CORPORATION M/S. CHAMAN TRADERS	021- 3524 1666 021- 3493 7866

**LIST OF APPROVED MAKES / VENDORS**  
FOR HVAC WORKS

LIST OF APPROVED MAKES FOR HVAC WORKS				
S. No.	Item	Make / Manufacturer	Authorized Dealer	Contact No.
24	G.I PIPE	IIL, PAKISTAN	M/S. IIL PIPES	021- 111 019 019
25	G.I FITTING	HE / TG CHINA		
26	VALVES AND ACCESSORIES	KITZ, THAILAND HATTERSLEY, CHINA GALA, CHINA RUB, ITALY WATTS, USA TOZEN, MALAYSIA	M/S. SHERAZ CORPORATION M/S. KHAN BROTHERS M/S. SAEED SONS / M/S. FAKHRI BROTHERS M/S. SAEED SONS M/S. KHAN BROTHERS M/S. LA-MECH PVT. LTD.	021- 3241 6259 021- 021- 3452 60025 021- 3221 6151 ~ 6 / 3588 6201 ~ 5 021- 3221 6151 ~ 6 021- 3452 60025 021-34321116
27	MCC & DBs	A TO Z ELECTRONICS HUSSAIN & COMPANY BILAL SWITCH GEARS SOUTH ASIAN ELECTRIC CONCERN	M/S. A TO ZEE ENGINEERING M/S. HUSSAIN & COMPANY M/S. BILAL SWITCH GEARS M/S. SOUTH ASIAN ELECTRIC CONCERN	021- 3512 1798 021- 3634 1930 042- 3630 5462 042- 3653 0000 ~ 2
28	CABLES & WIRES	PAKISTAN CABLES PIONEER CABLES	M/S. PAKISTAN CABLES M/S. PIONEER CABLES	021- 111 222 537 021- 3241 6511 ~ 4
29	ELECTRICAL COMPONENTS	SCHNEIDER, USA M&G, USA	LOCAL MARKET AS PER APPROVED SAMPLES	-----
30	AIR DEVICES (Or Equivalent, as per approved samples)	AIR GUIDE STEEL CRAFT SHAN INDUSTRIES ENGATECH E.A.P AIR DEVICES	M/S. AIR GUIDE M/S. STEEL CRAFT M/s. SHAN INDUSTRIES M/S. ENGATECH INTERNATIONAL M/S. ENGINEERING AIR PRODUCTS	021- 3452 3256 051- 3547 4761 021- 3501 9865 ~ 9 021- 3498 2605 042- 35299448
31	SUPPORTS, HANGERS	NORM, TURKEY INDEX, SPAIN FISCHER, GERMANY HILTI, GERMANY	M/S. UNIQUE TOOLS & MILL STORE M/s. M.M STEEL CORPORATION M/S. H.S Ahmed Ally M/S. HILTI PAKISTAN / VPL LTD.	021- 3455 1400 051-5750594 051- 5511 748 021- 111 875 875
32	CONCRETE FASTENERS	INDEX, SPAIN FISCHER, GERMANY HILTI, GERMANY RAWALPLUG, GERMANY	M/S. M.M STEEL CORPORATION M/S. H.S Ahmed Ally M/S. HILTI PAKISTAN / VPL LTD. M/S. INGENIOUS ENG. PRODUCTS	051- 575 0594 051- 5511 748 021- 111 875 875 021- 3432 6894
33	GASKITS	IMPORTED MAKE (as per approved sample)	LOCAL MARKET AS PER APPROVED SAMPLES	-----
34	ELECTRIC MOTORS	SIEMENS	M/S. SEIMENS PAKISTAN	021- 3587 6391
35	VAPOUR BARRIER COATING	FOSTER, USA ZAHABIYA, PAKISTAN	M/S. FAKHRI BROTHERS M/S. ZAHABIYA CHEMICAL INDUSTRIES	021- 3588 6201 ~ 5 021- 3508 2323
36	WHITE GLUE	HOECHST, PAKISTAN MOVILITH, GERMANY	LOCAL MARKET AS PER APPROVED SAMPLES	-----
37	DUCT SEALANT	GREENMAN, ENGLAND LAG IT, USA ZAHABIYA, PAKISTAN	M/S. M.M STEEL CORPORATION M/S. IQBAL SONS M/S. ZAHABIYA CHEMICAL INDUSTRIES	051-5750594 021- 3453 3122 ~ 3 021- 3508 2323
38	PVC CONDUIT	GALCO BETA	M/s. MAHMOOD INDUSTRIES M/s. BETA PIPES	021- 32412252 042- 35172410 ~ 1
39	VIBRATION ISOLATORS	TARIQ CORPORATION (as per approved sample)	M/S. TARIQ CORPORATION	021- 3453 8128
40	STEEL MEMBERS	AMRELI STEELS (Or approved equivalent)	M/s. AMRELI STEELS	021-111 267 354
41	PAINTS	ICI PAINT JOTUN PAINT	M/S. ICI PAKISTAN M/S. JOTUN PAKISTAN	021- 3231 3717 ~ 9 021- 3512 1491 ~ 3





## BOQ

### VOLUME-III

# REHABILITATION/ RENOVATION OF ALL FLOORS OF STATE LIFE INSURANCE CORPORATION BUILDING -09

DR ZIAUDDIN AHMED ROAD KARACHI.



**MUKHTAR ENTERPRISE STUDIO FOR ARCHITECTURE**  
CONSULTANT ARCHITECTS, INTERIOR DESIGNERS, URBAN PLANNERS & DIGITAL  
FABRICATOR

OFFICE NO # 302, 3<sup>RD</sup> FLOOR, BUILDING NO.52-C, LANE 01, AL MURTAZA COMMERCIAL,  
PHASE VIII, DHA, KARACHI.  
TEL: 0321-7851777  
EMAIL: [info@mesa.com.pk](mailto:info@mesa.com.pk)

PREAMBLE TO PRICING  
AND  
METHOD OF MEASUREMENTS

## **PREAMBLE TO PRICING AND METHOD OF MEASUREMENTS**

### **Generally**

The Bill of Quantities herein, including all notes and instructions, forms an integral part of the Bid/Contract Documents. However, the descriptions contained in the Bill of Quantities for each item are not necessarily complete. The Contractor is referred to the Conditions of the Contract and other Documents, Specifications and Drawings as well as relevant Standards and Codes of Practice for further information as no claim or variation will be considered on account of the Contractor's failure to do so.

The Contractor is cautioned to familiarize himself with the full content of other Contract Documents including the Instructions to Bidders, Bid Form, General Conditions, Particular Conditions, Bid / Contract Drawings and Specifications or any other information that can be easily inferred from any of them and all obligations contained in the documents shall be included in the item rates and / or contract price.

Drawings, Specifications and Bill of Quantities and all other documents are complementary and if description of any item is included in any of them, it shall be deemed included in all.

The Contractor's bid for the entire work shall provide for supervision of any or all trades that are intended to be performed with his own forces, his domestic sub-contractors and nominated sub-contractors. No extra compensation for services as a General Contractor will be paid.

The Contractor shall not use these Bills of Quantities as the basis for a construction program or for the purposes of ordering materials or arranging sub-contracts. The references for these activities shall be the drawings, specifications and instructions issued by the Engineer.

This is a Measurable type of Contract. The quantities contained within these Bills of Quantities may not accurately reflect the quantities of works as indicated in the drawings, Specification and Package Scope. The contractor is to satisfy himself for the accuracy of all quantities. No claim will be entertained for differences in quantities between the Tender Drawings, Specification and Bills of Quantities.

Items in the Preamble Section of these Bills of Quantities are deemed to qualify and to form part of description of measured work to which they refer including composite description.

All measurements are net and the rates shall include for all laps, waste, working space, etc. and trade or traditional allowances.

Amendments shall not be made to these Bills of Quantities without the authority, in writing of the Engineer.

A price or rate is to be entered against each item in the Bills of Quantities. The cost of any item left un-priced will be deemed to be included for elsewhere in the Bills of Quantities, and the rate for the un-priced item will be taken as nil. Any item of the Day Works if not entered by the Bidder shall have to be carried out at the Rate as decided by the Engineer.

For the general guidance of the bidders the relevant Sindh Composite Schedule of Rates Section numbers have been mentioned at the end of the description. This does not absolve the Bidder's responsibility to confirm and price according to the appropriate BSI/ASTM/CSI code applicable to any item mentioned in the Bill of Quantities and drawings etc.

## **Method of Measurement**

The quantities in the Bill of Quantities have been prepared generally in accordance with the **Principles of Measurement (International) for works of construction, U.K. amended to suit the local practice and conditions**. The description of each item (which description shall imply references to any heading, sub-heading, preamble or other clause of item which shall apply) shall be held to include all claims, materials, workmanship, including all taxes, duties, charges, all Government levies, landing charges, transport, profit and overheads and all other incidental costs to complete the Works.

These preambles are to be read in conjunction with the item description in the Bill of Quantities.

“As described” means as directed in the Specifications and / or Drawings.

Unless otherwise described or measured separately, prices for all items shall include for all necessary straight, raking or circular cutting.

The Conditions of Contract applicable to this Contract is as specified in Volume 1 – Tender & Contract Conditions of the Tender and Contract Document.

## **Pricing**

The prices shall be comprehensive and must include for complying in all respects with the instructions to Bidder, Conditions of Contract, Specifications, and Drawings and for all matters and things necessary for the proper construction and completion of the whole of the Works. No claim for additional payment will be allowed for any error or misunderstanding by the Contractor of the work involved.

The rates and sums inserted in the Bills of Quantities are deemed to include for the following: (i)

- Labor and all costs of Tools and Plants in connection therewith.
- (ii) Materials, goods and all costs in connection therewith (e.g. carriage, freight, delivery, unloading, storing, returning packing handling, Letters of Credit, Bank Guarantees, Bank charges and the like, Customs duties, port dues, import duties, taxes including sales tax, charges, Insurances and other dues levied by any authority or imposed by the Government, hoisting or lowering, replacing work, goods or materials damaged, broken, lost or stolen until the issue of a Certificate of Completion.
- (iii) Fittings and fixing materials or goods in position.
- (iv) Waste, bulking, shrinkage and overlaps
- (v) Allowance for phasing requirements of works, effect on programming of the works of all traffic diversions and construction activity associated with diversion or installation of services.
- (vi) For taking measures for the support and full protection of pipes, cables and other apparatus required during the progress of the Works as required by Service Authority or the Engineer.
- (vii) For working alongside and liaising with other Contractors working on the same site. (viii) Preparation and submission of shop drawings.
- (ix) Overhead charges and profit.
- (x) Guarantees and warranties where necessary. (xi) Temporary works, if any.

Lump sums shall not be given where unit rates are applicable.

Where the word "allow" is used, the cost of the item shall be the responsibility of the Contractor.

The amounts set against any items of overhead shall include for all costs in connection with letters of credit, bank charges, interest charges and insurance after the materials come under the control of the Contractor.

The rates inserted will be used to determine the amount of the Contractor's Interim Payments.

The Bidder shall submit the full and detailed rate breakdown of all the BOQ items including spare parts items in the format as per enclosed Annexure-1, together with their Bid submission. The breakdown is to show the actual calculations of the General Items, Labor, Plant and Materials costs for the Works, the build-up of measured rates with on-costs and site and Head Office overheads and any other allowances used to arrive at the Bid Price. In addition, the Bidder will be required to provide the Engineer within 48 hours with a full and detailed breakdown/any other information if requested. The purpose of this Breakdown/Rate Analysis is to make sure that (i) the rates used in the analysis of the items of permanent works and those quoted in the Day Works are reciprocal to each other, (ii) the bid is not front loaded, and (iii) the markup of Overheads & profit is uniform throughout the bid.

Where "fix only" items are specified, the rate shall be deemed to include for taking delivery, storing and installation of goods or materials in works where appropriate.

The rates inserted in the Schedule of Day work shall be deemed to be the rates used by the Contractor in making up rates for works items in all Parts of the Bills of Quantities.

### **Adjustment Item**

The adjustment item, if any, addition or deduction, shall apply to all Bill items, excluding provisional sum unless clearly indicated otherwise. The adjustment item shall not be a lump sum, but a percentage of the total Bid amount excluding provisional sum or a percentage of the total for the items indicated. The adjustment items shall be applied to all applicable item rates and sums entered in the Bills of Quantities (including any addenda). The adjusted rates and sums shall be applied for the valuation of Variations.

## **General Requirements**

### **Standards**

Where no reference is made to a code, standard or Specifications in volume-II Specifications of the SUB-CONTRACT Documents, the Standard Specifications of the American Society of Testing Materials, (ASTM), British Standard Codes of Practice (BSCP) or any other relevant standard as approved by the THE ENGINEER shall govern.

### **Drawings**

The WORK shall agree in all particulars with the Drawings or any approved modifications of them or such other drawings as may be issued during the CONTRACT. The THE ENGINEER will supply two copies of each of the drawings to the CONTRACTOR.

The CONTRACTOR will make any further copies required by him at his own expense.

The CONTRACTOR will keep one set of all drawings duly mounted with muslin cloth and hanged on the wooden drawings stand when not in use.

## **CONTRACTOR'S (Drawings & Documents)**

The CONTRACTOR shall submit three copies of all drawings, documents and schedules to be prepared by him. These will be of a standard size and format acceptable to the THE ENGINEER. All such submission by the CONTRACTOR shall be accompanied by a letter of submittal.

### **Record Drawings**

The CONTRACTOR shall prepare during the progress of the CONTRACT, drawings showing the WORK "as built" including the positions of all services, plant and equipment. The drawings shall be prepared to a form & detail to the satisfaction of the THE ENGINEER and prints shall be submitted to the THE ENGINEER'S REPRESENTATIVE for his approval as the WORK proceeds. At the completion of the CONTRACT the CONTRACTOR shall supply to the THE ENGINEER reproducible of each drawing.

### **Supply of Water and Electricity**

The CONTRACTOR shall make his own arrangements for the provision of water & electricity whether for use in the execution and construction of the WORK or otherwise. In the event of the source of water being from any existing piped supply the CONTRACTOR shall comply with any regulations laid down by the Water Authority and shall pay for such supply, stand-pipe connections, meter rents and all other charges as required all at his own expense. Similarly he will be responsible for all costs in providing electricity. Where electricity is not available for 24 hours, diesel/petrol driven electricity generators in good and reliable condition and of sufficient capacity to meet the requirements of construction equipment and lighting and other facilities at Site will be used by the CONTRACTOR.

### **Disposal of Wastes**

The CONTRACTOR shall make adequate arrangements to the satisfaction of the THE ENGINEER'S REPRESENTATIVE for disposal of all sewage, rubbish and all other waste material arising from or connected with the execution of the WORK.

### **Other Services**

The CONTRACTOR shall make his own arrangements for and shall provide any service (including telephone) which may require in addition to the foregoing.

### **Bench Marks and Control Points**

All levels, lines, grades and measurements shown on the Drawings shall be measured from a Bench Mark and points to be established by the THE ENGINEER within the Points Site of the WORK. The CONTRACTOR shall be responsible for ensuring the levels of all parts of the work are accurately related to this Bench Mark which shall be notified to the CONTRACTOR by the THE ENGINEER immediately after commencement of the WORK.

### **Survey**

The CONTRACTOR shall furnish and maintain at his own expense survey instruments stakes and other such materials and give such assistance, including qualified staff as may be required by the THE ENGINEER who will establish Bench Marks base lines, grades and other principal control points. The CONTRACTOR shall, however, call the THE ENGINEER'S attention to any inaccuracies and discrepancies of such controlling points etc., before proceeding with the work. The CONTRACTOR shall at his own expense, establish working or construction lines and grades as required, which shall be frequently checked by the THE ENGINEER'S REPRESENTATIVE but the CONTRACTOR shall be solely responsible for the accuracy thereof.

### **Safeguarding Bench Marks & Control Points**

The CONTRACTOR shall safeguard all points, stakes, grade marks and bench marks made or established on the work. If disturbed he shall bear the cost of re-establishing them and also the entire Points expense of rectifying the work rendered defective due to such disturbance.

### **Progress Photograph**

The CONTRACTOR shall, throughout the construction of the WORK use digital camera for photography and provide the progress photographs in color to the THE ENGINEER. He will also submit three prints each of size 5"x7" along with the recorded data at two-week intervals. All such photographs will be taken under the direction of the THE ENGINEER.

### **Materials and Workmanship**

As soon as possible after the CONTRACT has been awarded, the CONTRACTOR shall submit to THE ENGINEER list of suppliers from whom he proposes to purchase the materials necessary for the execution of the WORK. The information regarding the names of suppliers may be submitted at different times, as may be convenient, but no approved source of supply shall be changed without the prior permission of the THE ENGINEER'S REPRESENTATIVE.

Preference shall be given to the use of materials and fittings manufactured in Pakistan which comply with the SUB-CONTRACT and are competitive in price. Foreign materials shall only be used with the consent of the THE ENGINEER.

All materials incorporated in the WORK shall be new and of the best quality and description of their respective kinds and shall comply with all relevant specifications. Similarly, the workmanship in every case shall be of the best character, and the whole shall be subject to the approval of the THE ENGINEER.

Materials whose quality and construction are not covered by the Technical Specifications shall be of equal or better quality than the relevant sample accepted by the THE ENGINEER'S REPRESENTATIVE.

### **Samples**

In addition to any special provisions herein for the sampling and testing of materials, the CONTRACTOR shall submit to the THE ENGINEER as he may require samples of all materials and goods which he proposes to use or employ in or for the WORK. Such samples, if approved, will be retained by the THE ENGINEER'S REPRESENTATIVE, and no materials or goods of which samples have been submitted shall be used on the WORK unless and until such samples have been approved in writing by the THE ENGINEER.

The THE ENGINEER'S REPRESENTATIVE may reject any materials and goods which in his opinion are inferior to the samples thereof previously approved and the CONTRACTOR shall promptly remove such materials and goods from the Site.

The cost of supplying all such samples and of conveying same to such place of inspection or testing as the THE ENGINEER may designate within the country of origin shall be deemed to be included in the tendered rates and prices.

Samples will be retained by the THE ENGINEER and when directed by the THE ENGINEER'S REPRESENTATIVE the CONTRACTOR shall dispose of the samples. Except for those which may be incorporated into the WORK after approval, such as plumbing and electric fixtures.

### **Tests Generally. Access to Premises**

The THE ENGINEER may examine and may require to be tested any materials or goods required in or for the WORK such as he may decide from time to time and shall have unrestricted access to the CONTRACTOR'S, CONTRACTOR'S and supplier's premises for such purpose at all times and the CONTRACTOR shall specify this requirement when placing all orders.

THE ENGINEER will notify the CONTRACTOR whether materials and goods will be inspected at the manufacturer's or supplier's premises or at the Site. No materials or goods shall be dispatched from such premises until such notification is given and, if appropriate, inspection is complete and a release certificate is given to this effect. In both cases the CONTRACTOR is to notify the THE ENGINEER when materials and good will be ready for inspection and shall do so adequately in advance for him to make the necessary arrangement for inspection.

The CONTRACTOR shall afford the THE ENGINEER all facilities, assistance, labor and appliances necessary for the convenient examination, testing weighing or analysis of all such materials or goods. The CONTRACTOR shall provide and prepare such test pieces of any such materials or goods as the THE ENGINEER may require.

Notwithstanding any tests which may have been carried out off the Site the THE ENGINEER shall be empowered to order further tests of any materials or goods to be made on the Site and to reject such materials or goods should they fail to pass such test on the Site.

The full cost of providing all facilities, labor, consumable stores and appliances required in connection with all testing on the Site shall be deemed to be included in the tendered rates and prices.

### **Test Certificates**

Should THE ENGINEER not inspect any materials or goods at the place of manufacture, the CONTRACTOR shall, if required, obtain certificates of test from the suppliers of such materials or goods and shall send such certificates to the THE ENGINEER. Such certificates shall certify that the materials or goods concerned have been tested in accordance with the requirements of the Technical Specifications and shall show the results of all the tests carried out. The CONTRACTOR shall provide adequate means of identifying the materials & goods delivered to the Site with the corresponding certificates.

### **Testing at an independent Laboratory**

Where tests are specified or directed by THE ENGINEER to be carried out in an independent testing laboratory, the CONTRACTOR shall supply and deliver the samples and shall arrange for the relevant tests to be carried out. The independent testing laboratory shall be nominated by the CONTRACTOR and acceptable to the THE ENGINEER. Unless otherwise specified the CONTRACTOR shall arrange for one copy each of the independent testing laboratory's test certificates to be delivered to THE ENGINEER and to THE ENGINEER not less than 3 working days before the materials covered by the relevant test certificates are to be incorporated in the WORK. Each test certificate shall be relatable to the materials from which the sample was taken.



## **Site Testing**

The CONTRACTOR shall carry out such laboratory and field test (including tests to check the accuracy of testing equipment and methods but excluding tests specified to be carried out in an independent testing laboratory) as specified or as can reasonably be inferred from herein, as may be necessary to ensure and satisfy THE ENGINEER that the requirements of the Technical Specifications are met. The type and frequency of testing shall be in accordance with the relevant standards except as otherwise specified herein or directed by THE ENGINEER.

The CONTRACTOR'S attention is drawn to the fact that the frequencies of testing specified in the relevant clauses are intended to represent only a general guide. THE ENGINEER shall be empowered to vary the frequencies at which tests are conducted should he deem this necessary for the proper control of the quality of the WORK. Should THE ENGINEER'S REPRESENTATIVE vary the frequencies stated in the relevant clauses of the Technical Specifications, the CONTRACTOR shall not be entitled to extra payments thereof.

## **Shop Drawings, Working Drawings, Operations and Maintenance manuals & Instructions.**

The Contractor is to allow in his rates for the production of all shop drawings, working drawings, operations and maintenance instructions called for in the Specifications.

These shall include but not to be limited to the following: (i) The surveyed location of all existing services.

(ii) A Combined Services Drawing including all surveyed existing and proposed services showing manholes, draw pits, joint boxes, inspection chambers, lighting column bases traffic signal bars, concrete surrounds, pipe diameters, etc. to scale, plus any other possible obstructions.

(iii) Combined Services Working drawings original and new.

(iv) Separate sets of working drawings for each individual service showing proposed locations for submission to the service authorities.

(v) Existing ground levels.

(vi) Earthworks cross sections.

(vii) Temporary traffic sign design and fixing details. (viii) Proposed traffic sign design and fixing details.

(ix) Mechanical, electrical and other services drawings, diagrams and instructions as required in the contract and directed by the Engineer.

(x) Temporary work drawing where requested by the Engineer.

The rates in the appropriate section shall include for design of the civil works as specified in the Contract and for providing working drawings, shop drawings, schedules, specifications, calculations, etc. and for obtaining the Engineer's approval.

Rates for various items throughout the Bills of Quantities shall include, unless otherwise stated or measured, for cutting of every description and the consequent waste, for work in girths, widths or heights of less than 300mm and for all short lengths.

Rates for all work shall include for protection, provision of samples and testing.

The pricing of materials shall take account of the following:

(i) Pricing Preambles and Specifications shall apply reciprocally between sections of the works unless otherwise described.

(ii) Materials shall be of the quantity specified unless otherwise directed by the Engineer.

(iii) All materials shall be transported, handled, stored and fixed in accordance with the printed instructions or recommendations of their manufacturers or suppliers.

(iv) Protection of completed work, all casings and temporary coverings and making good, cleaning and polishing and clearing away upon completion.

## **Rates for Plumbing and HVAC Work**

Rates for all pipe work shall include for assembling and joining, pipe supports, pipe sleeves and cover plates and the like.

Rates for pipework shall include for all fittings to small pipes (i.e. pipes into an internal dia. of 60mm or less) fittings (except joint in running lengths) to large pipes (i.e. pipes with internal dia exceeding 60mm) and to gutters shall be enumerated, grouped together for each size of pipe and gutter and described as fittings.

Rates for duct work are to be included all fittings, brackets, hangers and other support.

Rates for insulation are to be included for cutting, waste, joining lap and working around and our ancillaries, fittings, flanges and other obstructions.

## **Electrical Installations**

The rates and prices for plant, equipment and installations are to be all inclusive of supply, installation, testing, commissioning and all associated builders work required for the full operation of such plant, equipment and installations, to comply in all respects with the Specification, Bills of Quantities, Drawings and to the complete satisfaction of the Local Regulatory Body and the Engineer.

The rates in general shall include for the following:

- (i) All cutting, short lengths and small quantities.
- (ii) All joints in the running length and all connections.
- (iii) All considerations arising from the specification.
- (iv) Fixing conduits / cable trays, etc., by approved methods.
- (v) Pipe sleeves through walls.
- (vi) Assembling component parts.
- (vii) Cleaning off all protective wrappers and leaving ready for use.
- (viii) Leaving all equipment etc., clean and in full working order.
- (ix) Draw wires in empty conduits.
- (x) Rates for cable and duct trench excavation shall include for all excavation, bedding, backfill and disposal as required by the Statutory Authority standard specification.
- (xi) Backfilling to trenches with approved excavated material. If the excavated material is not suitable imported fill shall be used.

The Contractor shall include for the supply of manufacturers recommended spares as required by the Specification for all electrical engineering installations and shall submit details of spares to be provided by him on the Schedule of Recommended Spares, including other relevant details.

The cable lengths / routes are measured from point to point on the drawing (horizontal plan distance on the drawing, any cable required for connections, loops, etc., at equipments, appliances, control gear or the like will be deemed to be included.

### **Multiple Ducts and Cables**

The quantity stated in the Bills of Quantities for multiple ducts and cables is the length of a single duct or cable in the particular group of ducts or cables. The contractor will allow the cost of number of ducts or cables in the rate as appropriate. eg., a qty of 50m against a 3 way 200mm dia duct means that a total quantity of  $50 \times 3 = 150\text{m}$  of 200mm duct is to be priced for, ditto for cables.

**END OF THE SECTION**

Walkthrough Declaration:

		
<b>6<sup>th</sup> Floor Walk Through</b>	<b>7<sup>th</sup> Floor Walk Through</b>	<b>8<sup>th</sup> Floor Walk Through</b>

We hereby declare we have studied the drawings and the 3d walkthrough and acquaintance ourselves with the project ,its theme and its design.

**Contractor's Signature (MANDATORY)**

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**GRAND SUMMARY**

**REV-2.0 (03-10-2024)**

## STATE LIFE INSURANCE CORPORATION BUILDING No. 9

GRAND SUMMARY		
S. No.	Description	Amount (Rs.)
1	Total cost of Ground floor	
	Less Salvage cost of Ground floor	
	Total cost of 5th floor	
	Salvage cost of 5th floor	
2	Total cost of 1st to 5th floor:	5th floor cost x 5=
	Less Salvage cost of 1st to 5th floor	5th floor cost x 5=
3	Total cost of 6th floor	
	Salvage cost of 6th floor	
4	Total cost of 7th floor	
	Less Salvage cost of 7th floor	
5	Total cost of 8th floor	
	Less Salvage cost of 8th floor	
6	Total cost of General Works	
	Less Salvage cost of General Works	
<b>Total Cost of Project</b>		
<b>(Sum of costs - Sum of Salvage costs)</b>		

All taxes are inclusive

Total Amount Rs. \_\_\_\_\_

Contractor's Signature with Stamp

Dated: \_\_\_\_\_

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**GENERAL**  
**SALVAGABLE MATERIAL**

The contractor is required to store the items temporarily in the storage space provided by the client (if required). Each lot of the salvaged material shall be documented before leaving the site, including acquiring the gate pass. All salvaged items shall be considered as the contractor's property after leaving the site.

<b>GENERAL - SALVAGABLE MATERIAL (TO BE CREDITED TO THE CLIENT)</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>A.</b>	REMOVAL OF <b>EXISTING COOLING TOWERS</b> OF 150 TR. EACH FROM ROOF (S) ALONG WITH PIPE LINE NETWORK, PUMPS ETC AS PER SCHEDULE APPROVED BY CONSULTANT & STACKING THOSE ON DESIGNATED PLACE PRIOR TO REMOVAL FROM BUILDING. > 3 UNITS, 150 TR. EACH	3	No.		
<b>B.</b>	REMOVAL OF <b>EXISTING AIR HANDLING UNITS (PACKAGE TYPE UNIT) FROM EACH FLOOR</b> ALONG WITH CHILLED WATER LINES, POWER CABLES, DBS ETC. AS PER SCHEDULE APPROVED BY CONSULTANT AND STACKING THOSE ON DESIGNATED PLACE PRIOR TO REMOVAL FROM BUILDING. > 20 UNITS, 15 TR. EACH > 03 UNITS, 20 TR. EACH	23	No.		
<b>C.</b>	REMOVAL OF <b>EXISTING AIR HANDLING UNITS (PACKAGE TYPE UNITS) FROM THE MEDICAL SECTION GROUND FLOOR</b> , ALONG, POWER CABLES, DBS ETC. AS PER SCHEDULE APPROVED BY CONSULTANT AND STACKING THOSE ON DESIGNATED PLACE PRIOR TO REMOVAL FROM BUILDING. > 02 UNITS > 10 TR. EACH	2	No.		
<b>D.</b>	REMOVAL OF <b>EXISTING AIR HANDLING UNITS (PACKAGE TYPE UNITS) FROM THE BANK SIDE GROUND FLOOR</b> , FLOOR ALONG, POWER CABLES, DBS ETC. AS PER SCHEDULE APPROVED BY THE CONSULTANT AND STACKING THOSE ON DESIGNATED PLACE PRIOR TO REMOVAL FROM BUILDING. > 05 UNITS, 7 TR. EACH > 02 UNITS, 4 TR. EACH	7	No.		
<b>TOTAL AMOUNT TO BE CREDITED TO THE CLIENT</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**GENERAL WORKS**



The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**GENERAL WORKS**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>EMERGENCY STAIR CASE</b>					
<b>1.</b>	<b>EMERGENCY MS STAIRCASE</b>				
	<p>PROVIDING MAKING, AND FIXING THE M.S. STAIRS EMERGENCY STAIRS WITH 10 SWG CHECKERED PLATE FLOOR, T-SECTION FOR GIRDERS AND ANGLE OF 1.5" BY 2" ON THE INSIDE (1/4"Th) 2" by 3" ON THE PERIPHERY 3/8" TH. HAVING MS RAILING AT EVERY STEP CONNECTED TO THE PLATFORM HAVING 3 EQUIDISTANT SECTION MADE OF MS PIPE 1/2" TH 10 SWG, HAVING BALUSTERS AT TOP; EPOXY PAINTED ON ALL SIDES WHICH CONNECT ALL FLOORS TO THE GROUND FLOOR. ALL MEMBERS SHOULD BE M.S. 16 SWG. INSTALLED WITH EMERGENCY LIGHTS AND REVOLVING EMERGENCY LIGHTS WITH PANIC BUTTON. COMPLETE IN ALL RESPECTS AS SPECIFIED BY ENGINEER. PROVIDING ALL MATERIALS, LABOUR, CONSTRUCTION EQUIPMENT, SUPERVISION, SCAFFOLDINGS, TOOLS &amp; PLANTS, TRANSPORTATION &amp; STORAGE, AND ALL INCIDENTAL ITEMS NOT SHOWN OR SPECIFIED BUT REASONABLY IMPLIED OR NECESSARY FOR COMPLETION OF THE JOB.</p> <p>NOTE: THE CONTRACTOR IS REQUIRED TO PREPARE AND SUBMIT SHOP DRAWINGS BEFORE EXECUTION OF WORKS.</p>	7,500	KG		
<b>SOIL, WASTE VENT AND RAIN WATER DRAINAGE SYSTEM</b>					
	SUPPLY, FIXING, TESTING AND COMMISSIONING OF EQUIPMENT, PIPE WORK REQUIRED TO COMPLETE THE SOIL, WASTE, VENT AND RAIN WATER SYSTEMS IN ALL RESPECTS WITH ACCESSORIES READY TO OPERATE AS PER SPECIFICATIONS, DRAWINGS AND INSTRUCTIONS OF CONSULTANT.				
<b>2.</b>	<b>RISER DRAIN FOR WASTE WATER</b>				
	uPVC DADEX, AGM, STEELEX OR EQUIVALENT PIPES UPTO 6 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT.				
<b>A.</b>	DIA 4" (GREY WATER) (KITCHEN AND BATHS)	150	RFT		
<b>B.</b>	DIA 4" (GREY WATER) (HVAC)	150	RFT		
<b>C.</b>	DIA 8" (BLACK WATER)	150	RFT		
<b>3.</b>	<b>uPVC COWL FOR VENT PIPE OF THE FOLLOWING DIA. INCLUDING ALL ACCESSORIES COMPLETE.</b>				
<b>A.</b>	DIA 4" (HVAC)	4	No.		
<b>B.</b>	DIA 4"	4	No.		
<b>C.</b>	DIA 8"	4	No.		

GENERAL WORKS				
S. No.	DESCRIPTION	QTY	UNIT	AMOUNT (RS)
	<b>EXTERNAL SEWER, TRENCH &amp; MANHOLES</b>			
	SUPPLY, FIXING, TESTING AND COMMISSIONING OF EQUIPMENT, AND PIPE WORK REQUIRED TO COMPLETE THE SEWERAGE DISPOSAL SERVICES IN ALL RESPECTS WITH ACCESSORIES READY TO OPERATE AS PER SPECIFICATIONS, DRAWINGS AND INSTRUCTIONS OF THE ENGINEER.			
4.	<b>UPVC PIPES FOR SEWER DRAINAGE</b> WITH PUSH-FIT RUBBER JOINTS INCLUDING EXCAVATION IN ANY TYPE OF SOIL, DEWATERING IF REQUIRED BEDDING, BACK FILLING WITH SELECTED MATERIAL, AND REMOVING OF EXTRA MATERIALS. INCLUDING ALL ACCESSORIES COMPLETE.			
A.	DIA 6" (GREY WATER) (HVAC)	400	RFT	
B.	DIA 10" (BLACK WATER)	400	No.	
5.	CONSTRUCTION OF <b>GULLY TRAP</b> WITH MATERIAL INCLUDING, EXCAVATION, 4" SIZE UPVC P-TRAP CC BASE CI COVER WITH FRAME, CC BENCHING WATERPROOF INTERNAL PLASTER INLET/OUT CONNECTIONS ETC.			
A.	TYPE GT, SIZE 10"X10"	4	No.	
6.	CONSTRUCTION OF RCC MANHOLE 1:2:4 WITH CRYSTALLINE CEMENT ADMIXTURE TO APPROPRIATE DOSAGE MANHOLES WITH COMPACTED BASE: INCLUSIVE OF BITUMINOUS WATER PROOFING WITH MATERIAL INCLUDING, EXCAVATION, BASE TOP RCC SLAB CI COVER WITH FRAME, GI STEPS, CC BENCHING WATERPROOF INTERNAL PLASTER INLET/OUT CONNECTIONS ETC.			
A.	SIZE. 24" x 24" 5'-6" DEPTH	24	No.	
7.	CONTRACTOR WILL PRICE THE <b>SUNDRIES</b> ITEMS FOR ALL PLUMBING & SANITARY (P&S) SERVICES AS PER SPECIFICATIONS, DRAWINGS AND INSTRUCTION OF THE CONSULTANT.	1	JOB	
8.	<b>DISMANTLING AND EXCAVATION (GENERAL NATURE)</b>			
	DISMANTLING AND EXCAVATION OF GENERAL NATURE IN CC OR EARTH SOIL. INCLUDING DISPOSING OF THE MATERIAL UP TO 10 KM AWAY FROM THE SITE OR TO THE SITE DESIGNATED BY THE CLIENT.	800	CFT	
9.	<b>TRENCH FOR ELECTRICAL CABLE</b>			
	<ul style="list-style-type: none"> <li>&gt; EARTHWORK IN EXCAVATION OF CABLE TRENCHES NOT EXCEEDING 4' IN DEPTH FOR LAYING OF LT CABLE AND CUTTING EXISTING CONCRETE/SOIL / GETTING OUT IN SOFT / LOOSE SOIL COMPLETE ALL AS SPECIFIED AND DIRECTED.</li> <li>&gt; EARTHWORK IN FILLING IN FOUNDATION TRENCHES OR PLINTHS WITH GOOD EARTH, IN LAYERS NOT EXCEEDING 150 MM. INCLUDING WATERING AND RAMMING ETC. LAYER BY LAYER COMPLETE.</li> <li>&gt; INCLUDING 4 PULL BOXES AND 2 MANHOLES</li> <li>&gt; FILLING IN TRENCH BY SILVER SAND IN LAYERS AS DIRECTED AND CONSOLIDATING THE SAME BY THOROUGH SATURATION WITH WATER, RAMMING COMPLETE INCLUDING THE COST OF SUPPLY OF SAND.</li> <li>&gt; CEMENT CONCRETE WITH GRADED STONE BALLAST (40 MM SIZE EXCLUDING SHUTTERING) IN GROUND FLOOR PCC (A) 1:2:4 PROPORTION</li> <li>&gt; RCC CABLE TRENCH. RCC TRENCH COVER ALONG THE BOUNDARY WALL FROM TRANSFORMER TO ELECTRICAL ROOM. THE CABLE TRENCH SHALL BE FILLED WITH RIVER SAND AFTER LAYING OF CABLE AND RCC TRENCH COVERS SHALL BE PLACED IN POSITION WITH AN ADEQUATE NO OF PITS AND PROPERLY FINISHED AS PER INSTRUCTION OF THE ARCHITECT/SITE ENGINEER.</li> </ul>	150	RFT	

GENERAL WORKS				
S. No.	DESCRIPTION	QTY	UNIT	AMOUNT (RS)
<b>ELECTRICAL WORKS</b>				
<b>SECTION-A MAIN / SUB-MAIN LV PANELS &amp; DISTRIBUTION BOARDS</b>				
	<p><b>Supply, testing &amp; commissioning</b> of following <b>Distribution Boards</b> as shown on drawing made with <b>14 SWG sheet steel housing</b> including all installation accessories such as Rawal bolt etc. Complete in all respects.</p> <p><b>Note: (Refer Single Line Diagram)</b></p> <ol style="list-style-type: none"> <li>1) All the Panels / DBs should be front accessible and maintainable.</li> <li>2) Cost of Lighting Control Relays &amp; Power Supplies should be Included in Distribution Boards .</li> <li>3) The transportation and placement of DBs upto site and respective locations is also included in the work scope, complete in all respects including leveling, grouting etc.</li> <li>4) Laser engraved tags required as mention in SLDs</li> <li>5) Space for circuit tagging required with permanent installation on protective sheet via rivets</li> <li>6) 20% space required in Panels / DBs for future provision</li> <li>7) Tin plated Imported 99.99% pure Tinned Cu bus bar with heat shrink color coded sleeves to be used.</li> <li>8) Hinged protective metallic door required with knob/handle.</li> <li>9) Braided Door earth required.</li> <li>10) Lockable handle required for main door.</li> <li>11) As-built drawing pocket.</li> <li>12) Cable hanging arrangement.</li> <li>13) MIMIC Diagram is required on doors of all the Panels.</li> <li>14) Panel Lights and Exhaust Fans with Door Limit Switch &amp; Temperature Sensors are required in all the floor standing Panels.</li> <li>15) All the Floor Standing Panels shall be Type-Tested Type.</li> <li>16) MOA to be provided in the ATS of LV Panels.</li> <li>17) Anti-Condensation Heater to be provided in all the Floor Standing Panels.</li> <li>18) Bypass Option in-case of synch panel Failure.</li> </ol>			
<b>10</b>	LV PANEL + PFI (with Bus Coupler)	1	No.	
<b>12</b>	DB-Pump	1	No.	
<b>13</b>	MUDB-1	1	No.	
<b>14</b>	MUDB-2	1	No.	
<b>15</b>	DB-Server (for 4th floor)	1	No.	
	<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1) <b>Supply &amp; Installation</b> of MCCs required for Fire Fighting, HVAC &amp; Plumbing Services shall be in the scope of Mechanical Works.</li> </ol>			

GENERAL WORKS				
S. No.	DESCRIPTION	QTY	UNIT	AMOUNT (RS)
	<b>SECTION-B MEDIUM VOLTAGE SWITCHGEAR</b>			
16	<p>Supply Installation Testing Commissioning Transportation &amp; Placement of following 11KV Incoming MV Switchgears with Phase Reversal Correction (Cassette Type) comprising with motor mechanism, metering and all protection devices CTs, PTs, Over current Protection, IBMS Complied Energy Analyzer, earth Fault Relay including complete interlocking facility by adding blocking coils, UVT, coils etc. Panel shall have provision for Cable Entry &amp; Outgoing from Bottom. Complete with all respects having following specifications: The Cu Bus Bars shall be Tin Plated using Electroplating Method and covered with Heat Shrink Color Coded Sleeves. Complete in all respect. Breaker type: VCB Rate Voltage: 17.5kV Rated Current : 630A TP (2 No. VCB Breakers) BIL: 95kV Supply Frequency: 50 Hz Rated Power Frequency Withstand Voltage: 38 kV Rated Short Circuit Breaking Current Rating : 25KA for 3 sec. MV Panel must be Type Tested with operator safety IAC qualification FLR Cable entry from the Bottom AC supply should be provided by client. DC power supply should be supplied by supplier if required Refer Drawings and Specifications.</p>	1	Job	
17	<p>Supply Installation Testing Commissioning Transportation &amp; Placement of following 11KV Outgoing MV Switchgears (Cassette Type) comprising with motor mechanism and all protection devices CTs, PTs, Over current Protection, IBMS Complied Energy Analyzer, earthing switch &amp; Earth Fault Relay including complete interlocking facility by adding blocking coils, UVT, coils etc. Panel shall have provision for Cable Entry &amp; Outgoing from Bottom. Complete with all respects having following specifications: The Cu Bus Bars shall be Tin Plated using Electroplating Method and covered with Heat Shrink Color Coded Sleeves. Complete in all respect. Breaker type: VCB Rate Voltage: 17.5kV Rated Current : 630A TP BIL: 95kV Supply Frequency: 50 Hz Rated Power Frequency Withstand Voltage: 38 kV Rated Short Circuit Breaking Current Rating : 25KA for 3 sec. MV Panel must be Type Tested with operator safety IAC qualification FLR Cable entry from the Bottom AC supply should be provided by client DC power supply should be supplied by supplier if required Refer Drawings and Specifications.</p>	2	No.	
	<p><b>Note:</b> 1) The Bidder shall provide the complete Technical Literature for the system offered. 2) The Transportation &amp; Placement (Basement-1) of Equipment is also included in the work scope. 3) Minimum 3 years warranty is required.</p>			

<b>GENERAL WORKS</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>SECTION-C            DRY TYPE TRANSFORMER</b>					
18	<p><b>Supply, Installation, Testing, Commissioning, Transportation &amp; Placement of 750 kVA ANAF Dry Type 11kV/0.415kV Step Down Power Transformer</b> including all protection devices CTs, PTs, relay, enclosure etc. Complete in all respects, and having following specifications:</p> <p>Supply Frequency (HZ)      50 HZ            HV winding connection      Delta            LV winding connection      Star            Vector group reference      Dyn 11            Impedance at 75 °C      6% With Force cooling            Ambient Temperature      45 deg C            HV Tapping (% of no-loads volts)    ±2.5% , ±5%,-7.5%            Method of Cooling      ANAF (natural + forced ventilation for at least 40% extra rating)            Enclosure      IP-31            Secondary voltage at:            . @ Full load      400 V            . @ No load      415 V            . HV Insulation Level      12 KV            . Impulse KV Peak      95 BIL -            . Winding Material (HV/LV)    <b>AL/AL</b>            . Insulation Class      F            Paint finish color      Manufacturer Standard            HV conductor and type      Cu / Top entry Cables            LV conductor type      Bi-Metallic / Top entry Cables  <b>(Refer Specifications)</b></p>	2	No.		
19	<p><b>Factory Acceptance Test</b> at the manufacturer's premises for 2 Persons (1 No. Client's Representative &amp; 1 No. Consultant's Representative)</p>	1	Job		
	<p><b>Note:</b>            1) The Bidder shall provide the complete Technical Literature for the system offered.            2) The Transportation and Placement of Transformer upto foundation pad is also included in the work scope.            3) Minimum 3 years warranty is required.</p>				
<b>SECTION-D            DIESEL GENERATOR &amp; ALLIED WORKS</b>					
20	<p><b>Supply, Installation, testing commissioning and transportation upto the respective location (Basement-1)</b> for following Diesel Generators <b>415V</b>, 3-phase, water cooled with control panel, AMF (without ATS), exhaust silencer, elbow etc.            The work also includes but not limited to            - Transportation upto respective location            - 1/2" thick neuprene Sheet or vibration isolator and            - placement on foundation pads            All generators shall be supplied with electronic governor.            The gensets shall be with remote radiator including pumps radiator supply &amp; return piping, batteries in with all accessories complete in all respect.            Transportation of gensets on site including all accessories complete in all respect.            4000 Operational Hours warranty from the date of commissioning is required.  <b>Note:</b> Please find attached drawing of take-off panel for your perusal, specify size &amp; spaces you require to install synchronizing modules and for control cabling into panel. <b>(Refer Specifications)</b></p>				
22	<p><b>Supply, Installation, testing and commissioning of Auto Synchronization module (Wood Word, Data com, Deep Sea, ComAp) of 4 No. DG Set (550 kVA + 550 kVA + 250 kVA), electronic governer, Control wiring between DG Set + Synch Module and motorized ACB inside enclosure and all other accessories</b> for above DG Sets system for Auto Synchronizing, Load Sharing and Load Management facilities. The Synch. Modules shall be enclosed in already provided MS Panel with ventilation fan. The work also includes control cabling, cable containment etc. Complete in all respect.  <b>Note:</b> Please find attached drawing of take-off panel for your perusal, specify size &amp; spaces you require to install synchronizing modules and for control cabling into panel.</p>	1	Job		

GENERAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>SECTION-E ENCLOSED BUS ASSEMBLIES</b>				
	<p><b>Supply, installation, testing and commissioning</b> including transportation, shifting and storing material at site must be included in quoted price. of following imported TP+N+E Compact Busway including imported accessories like elbows, flange ends, U Shape supporting hangers ,mounting accessories, complete in all respects and having attached specifications.</p> <p><b>Material : Copper</b> <b>Type : Compact</b></p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>- Separate earth bar on 50% basis is required for all busways.</li> <li>- Expansion joints for straight length feeders shall be added in cost as per manufacturer standard without any additional cost.</li> <li>- All Power Busway shall be <b>sandwich type</b>.</li> <li>- All type test certificates are required; site tests shall be carried out in accordance with the provided specifications.</li> <li>- Supplier is advised to confirm the busway running lengths as per site conditions before final ordering to the principal.</li> <li>- Bidder shall submit the shop drawings with isometric views in hard copy and soft copy as well.</li> <li>- Installation will include hangers and other accessories like hanging rods, rawal bolts etc.</li> <li>- Client will not arrange the site security particularly for the material &amp; equipment till its final erection. It will be vendor responsibility.</li> <li>- All Busway lengths will be measured from End to End excluding the Elbows, Flandges, Flexibles etc.</li> <li>- Copper connection between Breaker and Flange shall be included as mentioned below</li> <li>'- Flexible Joints in all the horizontal runs as per manufacturer recommendation shall be included in the quoted amount of straight length.</li> <li>- Megger testing report shall be submitted by the supplier after site installation and before final testing and commissioning</li> <li>- Minimum 3 Years warranty is required.</li> </ul>				
<b>40</b>	<b>Busway (1250A TP+N+E) (IP-65 Rated)</b> <b>Location: Ground Floor Electrical Room to The Last Floor</b>				
a	Straight Lengths 1250 AMP TP+N+E	195	Rft		
b	Imported Galvanized Fixing Bracket with threaded rods, bolts and all other required accessories.	1	Job		
<b>41</b>	<b>Supply, installation, testing and commissioning</b> of following <b>TAP OFF Units including circuit breakers (MCB / MCCB)</b> as per mentioned ratings, to be installed on Bus Way Turnking including all installation accessories as shown on drawing.				
a	100A TP MCCB Tap Off Unit (Icu = 25kA).	4	No.		
b	300A TP MCCB Tap Off Unit (Icu = 25kA).	8	No.		

<b>GENERAL WORKS</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>SECTION-F MAIN / SUBMAIN CABLES</b>				
	<b>Supply, installation, testing, commissioning and termination of following 8.7/15kV, CU/XLPE/PVC (MV Cables) in already installed Cable trench / Cable ladder / Cable tray / Duct Bank including all accessories. Complete in all respects.</b>				
42	<b>From K-Electric MV Switch to Consumer Switch Room</b> Termination of Existing Cable at New MV Switch	1	Job		
43	<b>From MV Switch to MV Switch and MV Switch Transformer</b> 3C, 300 Sq.mm 8.7/15kV, CU/XLPE/PVC	60	Rm.		
44	<b>Supply, Installation, testing and commissioning of following sizes of Main / Sub main Cables (LV Cables) in already installed cable tray, conduit etc. Including all accessories, lugs, glands etc. complete in all respect as shown on drawing.</b>				
47	<b>From 250kVA Generator to Synchronization Panel</b> 4 NO 1C-240 Sqmm Cu/XLPE/PVC + ECC 1 NO 1C-70 Sqmm Cu/PVC	30	Rm.		
48	<b>From Synchronization Panel to LV Panel</b> 24 NO 1C-240 Sqmm Cu/XLPE/PVC + ECC 4 NO 1C-70 Sqmm Cu/PVC	40	Rm.		
49	<b>From 750kVA Trafo 1 to LV Panel</b> 12 NO 1C-240 Sqmm Cu/XLPE/PVC + ECC 2 NO 1C-70 Sqmm Cu/PVC	30	Rm.		
50	<b>From 750kVA Trafo 2 to LV Panel</b> 12 NO 1C-240 Sqmm Cu/XLPE/PVC + ECC 2 NO 1C-70 Sqmm Cu/PVC	35	Rm.		
51	<b>From LV Panel to Fire fighting Pump</b> 4C-95 Sqmm Cu/XLPE/PVC + ECC 1C-50 Sqmm Cu/PVC	50	Rm.		
52	<b>From LV Panel to Busway 1</b> 12 NO 1C-240 Sqmm Cu/XLPE/PVC + ECC 2 NO 1C-70 Sqmm Cu/PVC	100	Rm.		
53	<b>From LV Panel to Busway 2</b> 12 NO 1C-240 Sqmm Cu/XLPE/PVC + ECC 2 NO 1C-70 Sqmm Cu/PVC	100	Rm.		
54	<b>From Tap Off Box to MDB-G</b> 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	20	Rm.		
55	<b>From Tap Off Box to MUDB-1</b> 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	6	Rm.		
56	<b>From Tap Off Box to MUDB-2</b> 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	7	Rm.		
57	<b>From MDB-G to DB-Pump</b> 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	20	Rm.		
58	<b>From MDB-G to DB-G</b> 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	50	Rm.		
59	<b>From MUDB-1 to DB-Server (4th Floor)</b> 4C-6Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	25	Rm.		
60	<b>From MUDB-1 to UDB-1F</b> 4C-10Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	20	Rm.		
61	<b>From MUDB-1 to UDB-2F</b> 4C-10Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	15	Rm.		
62	<b>From MUDB-1 to UDB-3F</b> 4C-10Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	10	Rm.		
63	<b>From MUDB-1 to UDB-4F</b> 4C-10Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	5	Rm.		
64	<b>From MUDB-2 to UDB-5F</b> 4C-10Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	10	Rm.		
65	<b>From MUDB-2 to UDB-6F</b> 4C-10Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	15	Rm.		
66	<b>From MUDB-2 to UDB-7F</b> 4C-10Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	20	Rm.		
67	<b>From MUDB-2 to UDB-8F</b> 4C-10Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	25	Rm.		

GENERAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>SECTION-G CABLE CONTAINMENT</b>					
68	<p><b>Supply &amp; installation</b> of following sizes of <b>16 SWG MS Powder Coated perforated Cable tray with 18 SWG cover (4 feet covers)</b> duly Painted after degreasing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>- Color Printed Tags to be provided at every 3 Meter Length.</li> <li>- Imported C-Channel Hanger to be used for ladder hanging from ceiling.</li> <li>- Wall Hanger Supports to be provided with ladder moving with walls.</li> <li>- U-shaped fisher plates to be used for cable ladder joints</li> <li>- Earth bonding to be done with every cable ladder joint</li> <li>- Only imported cable ladder mounting accessories to be used make mungo, fischer or equivalent.</li> <li>- Color of cable ladder to be decided with consent of architect.</li> </ul>				
a	450mm x 100mm Cable Tray	200	Rm.		
69	<p><b>Supply &amp; installation</b> following sizes of <b>GI 14 SWG Cable Ladder with 16 SWG cover duly painted with 100 micron primer after degreasing, derusting, phosphating and antirust primer</b> including all installation accessories such as rawal bolts elbows,tees e.t.c. Complete in all respect.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>- Color Printed Tags to be provided at every 3 Meter Length.</li> <li>- Imported C-Channel Hanger to be used for ladder hanging from ceiling.</li> <li>- Wall Hanger Supports to be provided with ladder moving with walls.</li> <li>- U-shaped fisher plates to be used for cable ladder joints</li> <li>- Earth bonding to be done with every cable ladder joint</li> <li>- Only imported cable ladder mounting accessories to be used make mungo, fischer or equivalent.</li> <li>- Color of cable ladder to be decided with consent of architect.</li> </ul>				
a	750mm x 150mm (Horizontal clipped on wall) (HT Cable) External Area <b>With Wall supports</b>	30	Rm.		
b	750mm x 150mm (Horizontal on Roof Ceiling)	50	Rm.		
c	750mm x 150mm (Vertical for HT Cable) <b>With Wall supports</b>	25	Rm.		
d	<b>Vertical Pedestal for Generator Cable Ladder Supports</b> (Approx: 10ft Height)	2	No.		
70	<b>Sealing all sorts of openings</b> made due to cutting and drilling done in walls, ceiling or other areas of premises for cable containment and allied accessories with <b>Fire resistant Material</b> (Fire Mortar) Make: 3M or equivalent.	30	Cb.m		
71	<b>Supply and installation of Insulation rubber mat laying in MV/LV rooms (where ever required)</b> , including all materials, equipments, labor, tools, transportation, accessories etc. Complete in all respects. Contractor will submit shop drawings for approval from consultant / architect before commencement of work.	200	Sqm.		
72	<b>Supply, installation, testing and commissioning 3C, 300 Sq.mm 15KV XLPE-CU Cable MV Termination Kits with Boots</b> including all termination accessories like HT tape etc.	12	No.		
	<b>Note:</b> Contractor is advised to confirm the sizes, running lengths and termination as per site conditions before commencement of work. All the conduits / cable tray crossings through partition walls shall be properly sealed by fire retardant material after installation.				



<b>GENERAL WORKS</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>SECTION-H EARTHING / GROUNDING SYSTEM</b>					
	<b>Supply, installation, testing and commissioning</b> of following items for Earthing / Grounding System for lightning protection and grounding of other systems including all material, boring, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.				
73	<b>Imported Chemical Enhanced Earth</b> using 20 mm dia Tin Plated copper Rod including 6" dia, 11' deep boring and back filled chemical to enhance conductivity. Complete with termination clamps, 12" dia heavy duty round cover.	9	No.		
74	<b>Earth Connecting Point (ECP)</b> or Equipotential bar made with 250mm wide, 50mm high and 8mm thick tin plated Copper, as shown in drawings. Bar shall be provided with holes suitable for installation of 6 No. 70 sqmm bare copper conductor. ECP shall be enclosed in appropriate size of powder coated metal enclosure with front accessible cover.	6	No.		
75	<b>Supply, installation, testing and commissioning</b> of following size of Single core PVC Cables from ECP to several equipments in following sizes of PVC Conduit, including all material, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.				
a	1C, 70 Sq.mm PVC (Green) in 32mm dia PVC Conduit	120	Rm.		
76	<b>Stranded bare copper conductors</b> of following sizes laid in floor/raft from Earth Station to ECP. Complete in all respects including termination at ECP.				
a	95 Sq.mm Bare Copper Conductor	150	Rm.		
	<b>Note:</b> Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.				
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
77	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.				
78	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.				
	<b>COST OF GENERAL WORKS</b>				

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**GROUND FLOOR**  
**SUMMARY**

GROUND FLOOR - SUMMARY		
S/N	DESCRIPTION	AMOUNT RS
1	Cost of Civil Work	
2	Cost of Furniture	NTQ
3	Cost of Electrical Works	
4	Cost of Plumbing Works	
5	Cost of HVAC	
<b>Total Cost of Ground Floor</b>		
<b>LESS SALVAGE COST</b>		
<b>NET TOTAL COST OF GROUND FLOOR</b>		
All taxes are inclusive		
<p><b>Total Amount in Words Rs.</b> _____</p>		
<p>Contractor's Signature with Stamp</p>		
<p>Dated: _____</p>		

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**GROUND FLOOR**  
**SALVAGABLE MATERIAL**

The contractor is required to store the items temporarily in the storage space provided by the client (if required). Each lot of the salvaged material shall be documented before leaving the site, including acquiring the gate pass. All salvaged items shall be considered as the contractor's property after leaving the site.

<b>GROUND FLOOR - SALVAGABLE MATERIAL (TO BE CREDITED TO THE CLIENT)</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>SERVICEABLE MATERIAL DEMOLITION</b>				
A.	TAKING OUT WOODEN / VIN BOARD PARTITION WALLS, WINDOWS, DOOR SHUTTERS TAKING OUT CAREFULLY AND STACKING SERVICE ABLE AT THE DESIGNATED PLACE AND CREDIT FOR THE COST OF SALVAGE TO THE CLIENT AND THEN IT WILL BE THE PROPERTY OF THE CONTRACTOR.	2,800	Sft		
B.	TAKING OUT GLAZED ALUMINUM DOORS & WINDOWS CAREFULLY AND STACKING SERVICEABLE AT DESIGNATED PLACES AND DISPOSAL OF UNSERVICEABLE AS PER DIRECTION	300	Each		
C.	TAKING OUT GI PIPES, FITTINGS AND FIXTURES AND STACKING THE SERVICEABLE AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
D.	TAKING OUT ELECTRICAL WIRES, FITTINGS & FIXTURES, SWITCHBOARDS ETC. AND STACKING THE SERVICE AT SOME DESIGNATED PLACE AS PER DIRECTION.	1	LS		
E.	TAKING OUT CAREFULLY ELECTRICAL DISTRIBUTION BOARDS AND SUB MAIN DISTRIBUTION BOARDS AND STAKING THE SERVICEABLE IT OUT AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
F.	TAKING OUT CAREFULLY HVAC DUCTS AND STACKING THE SERVICEABLE IT AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
G.	TAKING OUT WOODEN /METALLIC RAILINGS AND STACKING THE SERVICEABLE AT SOME DESIGNATED PLACE AS PER DIRECTION.	1	LS		
H.	TAKING OUT CAREFULLY DOOR, WINDOWS HARDWARE ETC COMPLETE	1	LS		
I.	TAKING OUT CAREFULLY WINDOW BLINDS AND STACKING THE SERVICEABLE	1	LS		
J.	TAKING OUT CAREFULLY <b>BUS BAR</b> AND ACCESSORIES AND STACKING THE SERVICEABLE	1	LS		
<b>TOTAL AMOUNT TO BE CREDITED TO THE CLIENT GROUND FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**GROUND FLOOR**  
**CIVIL WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge. Single Surface shall be used to measure QTY in SFT

<b>GROUND FLOOR - CIVIL WORK</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>1</b>	<b>DEMOLITION</b>				
	DEMOLITION AND DISMANTLING OF EXISTING INFRASTRUCTURE, EXISTING BUILDING INTERIORS INCLUDING: 1. FLOOR TILES, 2. MASONRY WALLS, 3. DOORS, 4. FALSE CEILING 5. ALL KIND OF WIRING 6. FIRE SENSORS 7. SPEAKERS 8. ROLLER BLINDS. 9. CEILING ACCESSORIES ETC. 10. REINSTALLING ANY EQUIPMENT ON THE ROOF WITH APPROPRIATE ANCHORING WHEREVER NEEDED. COVERED AREA: <b>4,883</b> SFT APPROX. INCLUSIVE OF COLLECTING, TEMPORARY STORAGE BEFORE DISPOSAL, CARTAGE, ALL KINDS OF LABOUR, DISPOSAL OF DEBRIS FROM ANY LEVEL UP TO ANY LEAD AND LIFT AS DIRECTED BY THE CLIENT /SITE ENGINEER. AFTER THE COMPLETION OF THE JOB THE CONTRACTOR WILL PHOTOGRAPH, RECORD & AND SUBMIT AS BUILT DRAWING TO THE CONSULTANT BEFORE STARTING CONSTRUCTION WORKS. NOTE: 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUMPING THE DEBRIS AT THE APPROPRIATE DUMPING SITE OUT OF SITE PREMISES. 2. COLLECTIBLE ITEMS SHALL BE SAFELY TRANSFERRED TO THE CLIENT-DESIGNATED STORAGE AREA. 3. IDENTIFICATION OF INVENTORY BEFORE DISMANTLING NEEDS TO BE MADE. 4. AFTER IDENTIFICATION ITEMS TO BE HANDED OVER TO THE CLIENT, CATEGORIZED SALVAGED. 5. LOSS OF PROPERTY TO BE CHARGED AT PKR 60/KG.	1	Job		
<b>2</b>	<b>TERMITE PROOFING</b>				
	VERMIN AND TERMITE FULL SPECTRUM FUMIGATION DONE ON FOLLOWING THREE (3) STAGES. I. AFTER COMPLETE DEMOLITION, BEFORE COMMENCEMENT OF ANY CONSTRUCTION. II. AFTER CONSTRUCTION OF ALL WALLS AND PARTITIONS. III. ON COMPLETION OF ALL CONSTRUCTION AND FINISHING.	5,402	SFT		
<b>WALLS, PARTITIONS &amp; CLADDING</b>					
<b>3</b>	<b>BLOCK MASONRY</b>				
	PROVIDING & LAYING STANDARD CEMENT CONCRETE SOLID BLOCK MASONRY WALL, USING MACHINE-MADE BLOCKS AND APPROVED QUALITY OF FINE AND COURSE AGGREGATE LAID IN 1:5 CEMENT SAND MORTAR, IN ANY SHAPE, LENGTH, OR HEIGHT INCLUDING, RAKING JOINTS, SCAFFOLDING, ANCHOR BARS, CURING, CUTTING OF FLOOR FOR MASONRY ETC. COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. WETTED FOR THREE DAYS AFTER COMPLETE LAYING OF WALL.				
<b>A.</b>	9" THICK BLOCK MASONRY	651	sqft		
<b>B.</b>	6" THICK BLOCK MASONRY	1,627	sqft		
<b>C.</b>	4" THICK BLOCK MASONRY (TOILET WALL)	976	sqft		

GROUND FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>4</b>	<b>CEMENT BOARD PARTITION WALL</b>				
	CEMENT BOARD PARTITION WALL SUSPENDED FROM THE TOP SLAB ABOVE GLASS PARTITION WITH 100mm THICK STUD PARTITION @ 3 FEET c/c, CONSISTING OF G.I. SHEET (22 SWG): ALL CEMENT BOARD PANELS TO HAVE GI FRAMING ON PERIPHERY INTERNAL FRAMING OF APPROVED SECTION, 12mm THICK CEMENT BOARD FIXED ON BOTH SIDES OF FRAME, INCLUDING ALL HARDWARE, FIBER TAPE ON SHEET JOINTS, METAL TAPE ON EDGES, ETC., PAINT JOB TO BE INCLUDED IN THE ITEM. INCLUDING MAKING OPENINGS FOR HVAC DUCTS AND CABLE TRAYS ETC. ABOVE 9' IN HEIGHT. COMPLETE IN ALL RESPECT AS PER DRAWING AND INSTRUCTION OF THE ARCHITECT.				
<b>A.</b>	4" THICK HEIGHT: 3'-6" (ABOVE GLASS PARTION)	221	RFT		
<b>5</b>	<b>GYPSUM VERTICAL BAND</b>				
	P/F OF GYPSUM BAND ABOVE GLASS PARTITION WITH COVE HAVING DC LED STRIP LIGHT @ 120 LEDs PER METRE (36 LEDs PER FOOT) IN/AROUND COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT AND NECESSARY G.I. FRAMING. INCLUDING APPROVED WALLPAPER PASTED IN SEAMLESS MANNER AND MAKING OPENINGS FOR HVAC DUCTS AND CABLE TRAYS ETC. ABOVE 9' HEIGHT. COMPLETE IN ALL RESPECT AS PER DRAWING AND INSTRUCTION OF THE ARCHITECT. <b>NOTE:</b> COST OF WALLPAPER TO BE INCLUDED IN THE ITEM.	70	SFT		
<b>6</b>	<b>PLASTER WORK</b>				
	PROVIDING AND LAYING CEMENT SAND PLASTER 1:4 USING O.P. CEMENT & FINE SAND ON WALLS, COLUMNS AND WHEREVER REQUIRED OF ANY SHAPE, CURVE AND DESIGN USING EXPANDED METAL MESH ON JOINTS COLUMNS WITH WALL AND ON CONDUITS FILLING SCAFFOLDING WITH MAKING EDGES CORNERS, HOISTING, WATERING, CURING AT ANY HEIGHT SMOOTHLY FINISHED INCLUDING MAKING DRIP COURSE AT ALL PROJECTIONS, SLABS OFFSETS OR WHERE AS REQUIRED COMPLETE AS PER SPECIFICATIONS AND INSTRUCTION OF THE ENGINEER/ ARCHITECT.	6535.7355	SFT		
<b>7</b>	<b>REPAIRING / FILLING OF CRACKS</b>	0			
	REPAIRING CRACKS ON INTERNAL AND EXTERNAL WALLS, CEILING, BEAMS, AND WHEREVER REQUIRED BY SCRAPPING, CHISELLING, FILLING, AND FINISHING OF SURFACE. FILLING SHALL BE DONE WITH PLASTER / PUTTY OR ANY OTHER APPROPRIATE MATERIAL. NOTE: EACH POINT SHALL NOT EXCEED 1 SFT SURFACE AREA. IN CASE OF REPAIRING OF LARGER THAN 1 SFT THE CONTRACTOR SHALL MEASURE, PHOTOGRAPH, AND DOCUMENT THE POINT FOR THE RECORD.	52.5	No.		
<b>8</b>	<b>MARINE PLY DECO PAINTED FLUTED PANELS</b>				
	PROVIDING AND FIXING OF FLUTED PANELS CNC OR ROUTER PROFILED AS PER ARCHITECT CHOICE AND SPECIFICATION TO MAKE A SEAMLESS SURFACE. MADE OF MARINE PLY 16mm THICK, PASTED ON TOP OF 12mm TH MARINE PLY SHEET WITH ROUGH WOOD FRAMING OF 25mm by 50mm @ 3 FEET c/c AT BACK SIDE AND FIXED FRAMING ON EDGES OF EACH SHEET. MARINE PLY BATTONS ARE TO BE PASTED AFTER MAKING IT SECURE IN PLACE WITH APPROVED DECO PAINT ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. ALL NECESSARY SUPPORT/FRAMING STRUCTURE IS INCLUDED IN THE JOB.	818.125	SFT		



<b>GROUND FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>9</b>	<b>MACHINE POLISHED MARBLE FEATURE WALL</b>				
	PROVIDING AND FIXING OF MACHINE POLISHED WALL OF APPROVED MARBLE INCLUDING BULL NOSING / CHAMFERING ON EDGES, ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. FIBER MESH TO BE PASTED AT THE BACK SIDE OF THE MARBLE USING EPOXY RESIN BEFORE FIXING TO ITS POSITION. ALL CONCRETE/ DRY BOND WORKS ARE INCLUDED IN THE JOB.				
<b>A.</b>	LIFT MARBLE FEATURE WALL <b>PASHA WHITE, SANDALWOOD, DIAG-NOSE WHITE OR EQUIVALENT</b> (BOOK MATCHED- SEAMLESS TEXTURED IF APPLICABLE)	374	SFT		
<b>10</b>	<b>FLAT GLASS PARTITION WALL</b>				
	PROVIDING, FABRICATION & FIXING <b>9FT HIGH</b> 12mm THICK TEMPERED ULTRA CLEAR MACHINE EDGED, GLASS PARTITIONS WITH ALL SIDES POWDER COATED ALUMINUM SECTION 12mm THICK BORDER AS APPROVED BY ARCHITECT. SECTION DESIGN TO BE CONFIRMED BY THE ARCHITECT. WITH GASKET FLUSHED AND CLEANED TO MATCH FRONT AND BACK SURFACE AND SHAPE INCLUDING FROSTING FILM PASTED ENSURING NO BUBBLES OR ANOMALIES ARE FOUND AS SHOWN IN DRAWINGS/ INSTRUCTED BY ARCHITECT, INCLUDING BOLTS, NUTS, SCREWS ALUMINIUM CHANNEL IF REQUIRED FOR SAFELY MOUNTING AND ANCHORING THE GLASS PARTITION. BOLTED/ CONNECTED TO GROUND AND CEILING AT EVERY 4 FEET SPACE OR WHEREVER GLASS CUTTING IS ENCOUNTERED, CONTRACTOR TO ENSURE SEAMLESS EDGING SOLUTION WITH A TOLERANCE OF UPTO 0.5MM. COMPLETE IN ALL RESPECTS. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM INCLUDING FROSTING FILM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE A DETAILED SHOP DRAWING OF FRAMING, GLASS PARTITION, CUTTING, AND DOORS DETAILS AND PATCH FITTINGS IF ANY PRIOR TO THE START OF WORK.	1,240	SFT		
<b>12</b>	<b>GLASS DOORS (SWING)</b>				
	P/F TEMPERED SWING GLASS DOOR USING 12mm ULTRA CLEAR GLASS, MACHINE EDGED, WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. WITH ALL SIDES POWDER COATED ALUMINUM SECTION 1.6mm THICK BORDER AS APPROVED BY ARCHITECT. ALUMINUM SECTION SIZE APPROX. 1.5" x 2" WITH GASKET FLUSHED. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. GLASS DOOR TO BE ANCHORED ON FLOOR AND MOUNTED TO CEILING USING A CHANNEL AND M10 RODS TO BE MADE STURDY.				
<b>A.</b>	DOUBLE LEAF DOORS (6'-0" x 9'-0")	3	Nos		
<b>B.</b>	SINGLE LEAF DOORS (3'-0" x 9'-0")	7	Nos		
<b>C.</b>	SINGLE LEAF DOORS (2'-6" x 9'-0")	1	Nos		

GROUND FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>13</b>	<b>GLASS DOORS (FOLDING / ACORDIAN)</b>				
	P/F TEMPERED FOLDING GLASS DOOR (ACORDIAN STYLE) USING 12mm ULTRA CLEAR GLASS WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. GLASS TO BE ENCASED IN ALUMINUM SECTION OF 2mm TH POWDER COATED; 1.5" (FRONT PROFILE) by 2" SECTION. INCLUSIVE OF IMPORTED HARDWARE TOP MOUNTED TO MOUNT SECURE AND PROVIDE CLEAN CHANNEL TO GLASS. ONCE HARDWARE SHALL INCLUDE RUBBER GASKITS TO SECURE CLEAN UNINTERRUPTED GLASS SURFACE WITHOUT OPENINGS ONCE COMPLETELY OPEN				
<b>A.</b>	4 PANELS FOLDING DOOR (11-6" x 9'-0")	1	No.		
<b>14</b>	<b>SS TRIM FOR LIFT OPENINGS</b>				
	P/F OF 14 SWG SS ARCHITRAVE FOR LIFT DOORS, WITH GOLDEN AND SS FINISH COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE.COST TO INCLUDE COST OF MOUNTING. BACKING USING MARINE PLY PROFILE OVER WHICH THE TRIM SHALL BE PASTED GLUED AND SECURED IN PLACE.	4	No.		
<b>15</b>	<b>ALUMINUM WINDOWS</b>				
	PROVIDING AND FIXING FULLY DOUBLE-GLAZED UV-RATED,SOUND PROOF, APPROVED TEXTURE, POWDER COATED/ ANODIZED ALUMINUM FIXED WINDOWS/ VENTILATORS/ PARTITIONS WITH FROSTING FILM AS PER BRITISH STANDARDS INCLUDING SHATTER PROOF SECURITY FILM OF 3m OR EQUIVALENT, MANUFACTURED BY ALPHAPEN/ ALUCON/ UBM TOSTEM/ SCHUCO OR EQUIVALENT. PROFILE THICKNESS OF MINIMUM 1.5 INCH IN WIDTH. FIXING THROUGH THEIR APPROVED FABRICATORS, INCLUDING DRAIN CHANNEL. FITTINGS WITH ALL ACCESSORIES CUTTING HOLES ETC. AND MAKING GOOD DAMAGES TO WALLS ETC. THE ADJACENT FINISHED WALL SHALL BE FILLED WITH WEATHERPROOF SILICON SEALANT OVER THE BACKER ROD OF THE REQUIRED SIZE AND OF APPROVED QUALITY, ALL COMPLETE AS PER THE APPROVED DRAWING & DIRECTION OF THE ENGINEER-IN-CHARGE. NOTE: FRAMING OF THE PRODUCT TO THE ADJACENT WALL FACE IS ALSO INCLUDED IN THE COST	1,200	SFT		
<b>16</b>	<b>ALUMINUM DOOR (TOILET CUBICLE)</b>				
	PROVIDING AND INSTALLING IN-POSITION ALUMINUM DOOR, WITH POWDER COATED/ ANODIZED ALUMINUM SHUTTER FRAME & MAIN FRAME SECTION OF (ALPHAPEN/ ALUCON/ UBM/ TOSTEM/ SCHUCO OR EQUIVALENT), INCLUDING ALL HARDWARE, S.S. HINGES, LOCKSET, GLUE, SILICONE SEALANT, BACKING ROD, NEOPRENE/RUBBER GASKET, WASTAGE, LIFTING, CUTTING, FIXING, MAKING OF GROOVE IF REQUIRED ETC., COMPLETE AS PER DRAWING, HARDWARE SCHEDULE & INSTRUCTION OF THE ARCHITECT. CONTRACTOR MUST SUBMIT DOOR OPTIONS SPECIFYING COLORS, PATTERNS AVAILABLE. NOTE: FRAMING OF THE PRODUCT TO THE ADJACENT WALL FACE IS ALSO INCLUDED IN THE COST				
<b>A.</b>	2.25'x 7' (WIDTH x HEIGHT)	4	No.		
<b>B.</b>	2.5'x 7' (WIDTH x HEIGHT)	2	No.		

<b>GROUND FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>17</b>	<b>WOODEN DOOR</b>				
	PROVIDING AND FIXING OF PARTIAL FRAMED 1.5" THICK SOLID OAK PANEL DOOR. HAVING IRON MONGRIES INCLUDING COAT HANGERS, DECORATIVE MORTGAGE-STYLE LOCK OF MAKE YALE OR EQUIVALENT, HANDLES S.S. HINGES, AND ALL OTHER ACCESSORIES OF ARCHITECT'S CHOICE. COMPLETE IN ALL RESPECT. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	3'x 9' (WIDTH x HEIGHT)	2	No.		
<b>B.</b>	3.5'x 9' (WIDTH x HEIGHT)	1	No.		
<b>18</b>	<b>FIRE DOOR (FIRE CORRIDOR)</b>				
	PROVIDING, FABRICATING, AND FIXING IN POSITION 2" THICK INTERNAL METAL FRAME DOOR WITH OUTER BODY MADE OF FIRE-RATED WOOD ALONG WITH PUSH BAR HAVING HONEY COMB STRUCTURE INSIDE AND GLASS WOOL FILLING WITH 16 SWG MOULDED SHEET METAL FRAME (CHOWKATS) WITH 2 COATS OF RED OXIDE PAINT. METAL FRAME SHALL BE FILLED WITH CONCRETE AND FIXED WITH 4 NOS. 6" LONG HEAVY DUTY M.S CHROMIUM PLATED HINGES AND 6 NO HINGES FOR LEAD LINE DOOR TO EACH SHUTTER, AND 6 NOS 6" LONG HOLD FASTS WELDED MADE OF ANGLE IRON (1-1/2"X1-1/2" X3/16") WITH FORKED ENDS TARRED AND WITH METAL FRAME EMBEDDED IN MASONRY AND WITH APPROVED HARDWARE 2 NOS. 9" LONG TOWER BOLTS, DOOR CLOSER RAYOBI OF JAPAN OR EQUIVALENT, DOOR STAY, AND C.P. HANDLES, DEODAR WOOD ARCHITRAVE 2-1/2"X 5/8" ALL AROUND DOOR FRAME AND APPROVED POLISHING OR SINLGE COAT OF APPROVED ENAMEL PAINT OVER A PRIMER COAT AND 2 COATS OF ICI INTUMESCENT PAINT TO RESIST FIRE UP TO MINIMUM 120 MINUTE ON STANDARD (BS 476-22). TERMITE CONTROL AND WOOD PRESERVATIONS APPLICATIONS (SOLIGNUM), SMOKE SEALS ON THREE SIDES AND FIRE-RATED ACCESSORIES, AND PEEP WINDOWS OF APPROPRIATE SIZE ALL COMPLETE AS PER DRAWINGS, SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. <b>NOTE:</b> THE PRODUCT MUST ASSURE FIREPROOFING STANDARDS AS REQUIRED. THE CONTRACTOR MUST SUBMIT THE SHOP DRAWING AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	3'x 9' (WIDTH x HEIGHT)	2	No.		
<b>B.</b>	DOUBLE LEAF 5'x 9' (WIDTH x HEIGHT)	1	No.		
<b>19</b>	<b>WOODEN DOOR (BATHROOM DOOR)</b>				
	PROVIDING AND FIXING OF PARTIAL FRAMED 1.5" THICK SOLID OAK PANEL DOOR. HAVING IRON MONGRIES INCLUDING COAT HANGERS, DECORATIVE MORTGAGE-STYLE LOCK OF MAKE YALE OR EQUIVALENT, HANDLES S.S. HINGES, AND ALL OTHER ACCESSORIES OF ARCHITECT'S CHOICE. 1.5 FEET HIGH SPLASH ALUMINIUM SHEET SHALL BE PASTED ON EITHER SIDE OF THE DOOR AS PER DRAWINGS. COMPLETE IN ALL RESPECT. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	2.5'x 9' HEIGHT	1	No.		
<b>B.</b>	3'x 9' HEIGHT	2	No.		
<b>20</b>	<b>LINTELS</b>				
	PROVIDING & FIXING OF PRECAST RCC LINTELS OVER DOORS, WINDOWS OR WHEREVER REQUIRED. UPTO 12" HEIGHT, THE COST MUST INCLUDE ALL MATERIAL (STEEL BARS) 1:2:4 (fc 3000 psi).				
<b>A.</b>	WINDOW LINTEL	121	RFT		
<b>B.</b>	DOOR LINTEL	23	RFT		

GROUND FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>21</b>	<b>ROLLER BLINDS</b>				
	PROVIDE AND INSTALL IN POSITION ROLL-UP WINDOW BLINDS OF APPROVED COLOR AND SPECIFICATIONS, CHAIN OPERATED ROLLER BLIND (PROTECTOR OR APPROVED EQUIVALENT) WITH APPROVED FABRIC SCREW ON WALLS, INCLUDING ALL HARDWARE, WASTAGE, LIFTING, CUTTING, FIXING, SCAFFOLDING ETC., COMPLETE AS PER DRAWING & INSTRUCTION OF THE ARCHITECT. <b>HEIGHT 9'</b> FOR PAYMENT NET INSTALLED BLIND (INCLUDING TOP & BOTTOM CHANNEL) AREA WILL BE MEASURED.	1,409	SFT		
	<b>FLOORING</b>				
	NOTE: 1. THE DEMOLITION / DISMANTLING OF EXISTING FLOORING IS INCLUDED IN THE JOB. 2. SAMPLES & TILE-CUTTING DRAWINGS ARE TO BE APPROVED BY ENGINEER/ ARCHITECT.				
<b>22</b>	<b>PORCELAIN TILES FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED <b>FULL-BODY PORCELAIN</b> TILES OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT. <b>NOTE:</b> THE TILES SHALL BE MACHINE CUT i.e. CUTTING SHOULD BE CARRIED OUT OFF SITE EXCEPT THE TILES OF THE LAST EDGE OF FLOORING SPACE.				
<b>A.</b>	24" x 48"	2,590	SFT		
<b>B.</b>	15" x 36" (FOR BATHROOMS)	420	SFT		
<b>C.</b>	BATH WALL (APPROX. 15" x 36")	805	SFT		
<b>D.</b>	36" x 72"	130	SFT		
<b>23</b>	<b>FLOOR SCREEDING</b>				
	SCREEDING ON BATHROOM FLOORING OR WHEREVER REQUIRED TO MAKE APPROPRIATE SLOPE FOR WATER DRAINAGE. 2" THICK 1:3:6 MIX WITH PUDLO TOPPING AND WATERPROOFING. CURRING OF AT LEAST 14 DAYS.	1,400	SFT		
<b>24</b>	<b>MARBLE STAIR STEPS</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED <b>MARBLE STAIR STEPS, 3/4" TO 1" THICK</b> , (ZIARAT WHITE, OR EQUIVALENT) OF GLAZED/ MATT FINISH, ANTI-SLIP WITH GROVES AT NOSING END TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.				
<b>A.</b>	25 TREADS 5'-0" x 1' 25 RISERS 5'-0" x 8" 2 LANDINGS, 5'-0" x 5'-0"	330	SFT		

GROUND FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>25</b>	<b>STONE STAIR STEPS (SMALL WING)</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE STAIR STEPS, <b>3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP WITH GROVES AT NOSING END TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.				
<b>A.</b>	25 TREADS 4'-6" x 1' 25 RISERS 4'-6" x 8" 2 LANDINGS, 4'-6" x 4'-6"	270	SFT		
<b>26</b>	<b>PRE-POLISHED / FLAMED MARBLE FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED <b>FULL-BODY PORCELAIN</b> TILES OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT. <b>NOTE:</b> THE TILES SHALL BE MACHINE CUT i.e. CUTTING SHOULD BE CARRIED OUT OFF SITE EXCEPT THE TILES OF THE LAST EDGE OF FLOORING SPACE.				
<b>A.</b>	LIFT LOBBY (SIZE 36" x 72')	830	SFT		
<b>27</b>	<b>WOOD LAMINATE FLOOR</b>				
	P/F OF BEST QUALITY WOOD LAMINATE FLOOR OF MAKE FIRST FLOOR, PAK CARPETS, INTERWOOD OR EQUIVALENT INCLUDING ALL BENDS, CORNERS ETC. INCLUDING COST OF T-PROFILES AND SKIRTING. COMPLETE IN ALL RESPECT, INCLUDING FINISHING, CLEANING & POLISHING ETC. COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER/ ARCHITECT. MALAYSIA, CHINA, TURKISH FLOORING	1,225	SFT		
<b>28</b>	<b>WOOD LAMINATE SKIRTING (FOR AREAS WITHOUT LAMINATE FLOORING)</b>				
	P/F OF APPROVED BRAND WOODEN SKIRTING 6" HIGH & 1/2" THICK INCLUDING ALL BENDS, CORNERS ETC. COMPLETE IN ALL RESPECT, INCLUDING FINISHING, CLEANING ETC. COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER/ ARCHITECT.	217	RFT		
<b>29</b>	<b>SKIRTING UPVC</b>				
	PROVIDING & FIXING 4" HIGH INDUSTRIAL UPVC SKIRTING OF ARCHITECT'S CHOICE OF FINISH, WITH VERTICAL SUPPORT MAXIMUM 2' APART OR ON TURNING POINTS ON WALLS, GLASS PARTITIONS, PELMET WALLS AND ANY OTHER WALL SURFACE. COMPLETE IN ALL RESPECTS AND AS PER DRAWING, PATTERNS AND DIRECTIONS OF THE ARCHITECT / ENGINEER. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS & SAMPLES FOR APPROVAL BY ENGINEER/ ARCHITECT.				
<b>A.</b>	FLOOR 1 SKIRTING (MATCHING WITH PORCELAIN)	824	RFT		
<b>B.</b>	FLOOR 2 SKIRTING (MATCHING WITH MARBLE)	317	RFT		
<b>30</b>	<b>FIRE CORRIDOR FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE, <b>SIZE 24" x 48". 3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	481	SFT		

GROUND FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>31</b>	<b>FIRE CORRIDOR SKIRTING</b>				
	PROVIDING AND FIXING BEST QUALITY APPROVED 4" HIGH SKIRTING WITH PRE-POLISHED STONE, 3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT) OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE FIXED USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	225	RFT		
<b>32</b>	<b>WATER PROOFING</b>				
	POLYURETHANE SINGLE COMPONENT WATERPROOF COATING OF MAKE CONCUR OF AQUAKNIGHT OF BMT OR EQUIVALENT. APPLYING PRIMER AFTER SURFACE CLEANING, SHEET REPAIR AND PREPARATION WORKS. APPLY POLYESTER CLOTH OVER JOINTS/PATCHES AND ENSURE TO COVER JOINTS WITH PU COATING ALONG WITH CANVAS/POLYESTER CLOTH. ON COMPLETION OF THE ENTIRE AREA, APPLY 2 COATING OF PU - COATING AND COMPLETE IN ALL RESPECT. TOTAL THICKNESS 4mm.	312	SFT		
	<b>PAINT</b>				
<b>33</b>	<b>PAINT WORKS</b>				
	PROVIDING AND APPLYING PAINT ON WALLS/ ETC. INCLUDING RUBBING WITH SANDSTONE, FILLING THE UNEVEN SURFACES WITH PUTTY, CRACKER, AND EPOXY TREATMENT (IF REQUIRED) , RUBBING WITH SANDPAPER AND PREPARING THE SURFACE. APPLYING COATS OF PRIMER ON INTERNAL WALLS TO PREPARED SURFACE OF PLASTERED AND FINISH PAINT COATS AS INDICATED IN SUB ITEMS, COMPLETE IN ALL RESPECTS AS PER DRAWINGS.				
<b>A.</b>	PLASTIC EMULSION PAINT(ON INTERIOR WALLS) 3 COATS	17,325	SFT		
<b>B.</b>	TEXTURED PAINT (ON INTERIOR WALLS) 3 COATS	5,198	SFT		
<b>C.</b>	PLASTIC EMULSION PAINT(BLACK OR DARK GRAY ON CEILING DUCTS, AND BEAMS) 3 COATS	6,160	SFT		
<b>D.</b>	WEATHER SHEILD ON EXTERIOR AND FORE CORRIDOR WALLS 3 COATS	8,984	SFT		
<b>E.</b>	ENAMEL PAINT OF DUCTS, PIPES, CONDUITS, ETC.	1	SFT		
	<b>TOILETS</b>				
<b>34</b>	<b>CORIAN COUNTER TOP</b>				
	PROVIDING AND FIXING OF CORIAN COUNTERTOP OF APPROVED SHADE AND DESIGN. HAVING SS TRIM 0.5 INCH THICK ON JOINING SURFACES AND 0.5 INCH BELOW JOINT LINE. MONTELLI/ CHINESE CORIAN. INCLUSIVE OF COST OF DOUBLE FRAME 1/2 " by 3/4" MS FRAME RED OXIDE AND PAINTED ON TOP. NOTE: THE TOP SURFACE AREA SHALL BE CONSIDERED FOR BILLING PURPOSE.				
<b>A.</b>	FEMALE TOILET SMALL WING	10	SFT		
<b>B.</b>	MALE TOILET SMALL WING	10	SFT		
<b>C.</b>	FEMALE CHIEF TOILET SMALL WING	8	SFT		
<b>D.</b>	MALE CHIEF TOILET SMALL WING	8	SFT		

GROUND FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>CEILING</b>					
<b>35</b>	<b>MS CEILING TRELLIS</b>				
	P/F APPROVED DECO PAINTED. 16 SWG MS T-SECTION (SIZE:0.75" x 0.5", WxH) BOX SECTION OPEN CEILING TRELIS @ 2 FEET c/c SUSPENDED USING GI THREADED RODS M10. ALL NECESSARY SUPPORT STRUCTURE IS INCLUDED IN THE JOB.	1,750	SFT		
<b>36</b>	<b>MARINE PLY DECO PAINTED FLUTED PANELS CEILING</b>				
	PROVIDING AND FIXING OF FLUTED PANELS MADE OF MARINE PLY HAVING CNC ROUTING OR PROFILED TO ARCHITECTS SPEC 16mm THICK, PASTED ON TOP OF 12mm TH MARINE PLY SHEET WITH ROUGH WOOD FARMING OF 1" by 2" @ 1 FEET c/c AT BACK SIDE TO SECURE IN PLACE TO DESIRED CEILING LEVEL AS PER DRAWING. MARINE PLY BATTONS TO BE PASTED AFTER MAKING IT SECURE IN PLACE WITH APPROVED DECO PAINT ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. ALL NECESSARY SUPPORT/ FRAMING STRUCTURE IS INCLUDED IN THE JOB. SECTION PLY: 28mm, FRAMING: 25mm Th MATERIAL. <b>NOTE:</b> CONTRACTOR TO INCLUDE PRICE OF CUTTING FOR LIGHT ACCESSORIES AND CREATION OF ACCESS PANELS WHERE NEEDED.	210	SFT		
<b>37</b>	<b>PELMET LIGHT ON CEILING</b>				
	P/F IN POSITION DC LED STRIP LIGHT @ 120 LEDS PER METRE (36 LEDS PER FOOT) IN/AROUND FLUTTED PANEL CEILING, INCLUDING MAKING OF COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT WITH APPROVED PAINT FINISH MAKING OF LIGHT PELMET WITH FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT. NOTE: RUNNING LENGTH OF THE LIGHT WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.	193	RFT		
<b>38</b>	<b>GYPSUM CEILING</b>				
	P/F IN POSITION GYPSUM BOARD CEILING, CONSISTING OF G.I. FRAME WORK OF APPROVED SECTIONS WITH G.I. HANGERS AND 16-18 SWG. 12MM THICK GYPSUM BOARD SHEET FIXED ON FRAME WITH APPROVED PAINT FINISH ON GYPSUM, CUTTING OF OPENING FOR LIGHT FIXTURES / AC CASSETTES WITH MAKING OF LIGHT PELMET, FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT. NOTE: FLAT AREA OF CEILING WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.	2,465	SFT		
<b>39</b>	<b>PELMET LIGHT ON GYPSUM CEILING</b>				
	P/F IN POSITION DC LED STRIP LIGHT @ 120 LEDS PER METRE (36 LEDS PER FOOT) IN/AROUND GYPSUM BOARD CEILING, INCLUDING MAKING OF COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT WITH APPROVED PAINT FINISH MAKING OF LIGHT PELMET WITH FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT. NOTE: RUNNING LENGTH OF THE LIGHT WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.	770	RFT		



<b>GROUND FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>LIFT LOBBY</b>					
<b>40</b>	<b>WOOD HANDRAIL (FIXED UPON EXISTING IRON BALUSTER)</b>				
	PROVIDING AND FIXING IN-POSITION WOOD HANDRAIL OF APPROVED PROFILE AND POLISH / FINISH UPON EXISTING IRON BALUSTERS, AS SHOWN ON DRAWINGS. WORKS INCLUDE REMOVING OF EXISTING IRON BALUSTERS, POWDER COATING OF EXISTING IRON BALUSTERS AFTER SCAPING AND REPAIRING. FIXING THE BALUSTERS TO FLOOR. ALL WORKS ARE TO BE COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	90	RFT		
<b>41</b>	<b>REPAIRING &amp; PAINTING OF EXISITNG IRON BALUSTERS</b>				
	REMOVING OF EXISTING IRON BALUSTERS, POWDER COATING OF EXISTING IRON BALUSTERS AFTER SCAPING AND REPAIRING. FIXING THE BALUSTERS TO FLOOR. ALL WORKS ARE TO BE COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	90	RFT		
<b>42</b>	<b>EXPANSION JOINTS CLIPS</b>				
	PROVIDING AND FIXING OF EXPANSION JOINT CLIPS. W TYPE PROFILE 4" WIDTH 1" TO BE EMBEDDED IN THE FLOOR, EXPANSION TO BE TREATED BY PUTTING IN AND SECURING IN PLACE BECKER ROD OF APPROPRIATE WIDTH, AND SEALING IT WITH APPROVED SEALANT TILL W PROFILE SECTION. MAKING SURE THE JOINT AND SEALANT ARE TIGHTLY BOUND AND DO NOT LET WATER PENETRATE THROUGH. CUTTING & GROUTING WHERE NECESSARY SHALL BE USED. COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	1	RFT		
<b>43</b>	<b>MS ELECTRICAL CABINET/ FRAME CABINETS FOR DB</b>				
	PROVIDING AND FIXING OF MS FRAME PANELS WITH PAINTED GLASS PANELS IN FRONT HINGED TO MAKE 4 SECTIONS WITH 12 mm TH TAMPERED PAINTED GLASS PANELS HOUSED IN ALUMINUM SECTION OF 1.5" BY 2" * HAVING FIRE RETARDANT PAINT ON THE INSIDE AND ALUMINIUM PROILE DOORS FOR ELECTRICAL DBs CUPBOARD. COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. FRONT FACE SHALL BE USED FOR BILLING	140	SFT		
<b>FIRE EXTINGUISHER</b>					
<b>44</b>	<b>FIRE EXTINGUISHER DRY TYPE</b>				
	<ul style="list-style-type: none"> <li>&gt; DCP FIRE EXTINGUISHER 6 KG</li> <li>&gt; CAPACITY: 6 KG FIRE</li> <li>&gt; RATING: 34B</li> <li>&gt; HIGHLY EFFECTIVE ON A, B &amp; C CLASS OF FIRE</li> <li>&gt; AVERAGE DISCHARGE TIME: 21.0 SEC</li> <li>&gt; DIAMETER: 150 MM</li> <li>&gt; FILLED WEIGHT: 10.3 KG</li> <li>&gt; OPERATING TEMPERATURE: -30°C TO 55°C</li> <li>&gt; WORKING PRESSURE: 15 BAR</li> <li>&gt; SERVICE PRESSURE: 18 BAR</li> <li>&gt; TEST PRESSURE: 35 BAR</li> <li>&gt; FLOOR STAND OR WALL MOUNT BRACKET INCLUDING ACCESSORIES</li> <li>&gt; NEFFCO, SFFECO OR EQUIVALENT</li> </ul>	5	No.		
<b>45</b>	<b>FIRE EXTINGUISHER FOAM TYPE (FOR KITCHEN)</b>				
	<ul style="list-style-type: none"> <li>&gt; AFFF FOAM TYPE FIRE EXTINGUISHER</li> <li>&gt; CAPACITY: 9 LTR</li> <li>&gt; FIRE RATING: 34A 183B</li> <li>&gt; WORKING PRESSURE: 13.5 BAR</li> <li>&gt; TOTAL WEIGHT: 16.5 KG</li> <li>&gt; MAXIMUM OPERATING PRESSURE: 18.5 BAR @ 60°C</li> <li>&gt; TESTED AT PRESSURE: 30 BAR</li> <li>&gt; FLOOR STAND OR WALL MOUNT BRACKET INCLUDING ACCESSORIES</li> <li>&gt; NEFFCO, SFFECO OR EQUIVALENT</li> </ul>	2	No.		



<b>GROUND FLOOR - CIVIL WORK</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
	<b>SIGNAGE</b>				
<b>46</b>	<b>WALL SIGNAGE</b>				
	WALL SIGNAGE MADE OF 3mm CLEAR ACRYLIC WITH REVERSE PLOTTER CUT WHITE VINYL OVER VINYL OF APPROVED BASE COLOR. SIZE: 4" x 12"	11	No.		
<b>47</b>	<b>WALL BOARD SIGNAGE</b>				
	WALL BOARD SIGNAGE OF 6mm CLEAR ACRYLIC WITH REVERSE PLOTTER CUT WHITE VINYL OVER VINYL OF APPROVED BASE COLOR. SIZE: 48" x 36"	2	No.		
<b>48</b>	<b>CEILING HUNG + SIGNAGE DOUBLE SIDED</b>				
	<b>CEILING HUNG + SIGNAGE DOUBLE SIDED</b> MADE OF 25mm ACRYLIC SIGNAGE IN APPROVED COLOR WITH S.S FITTING PIPE. TEXT TO BE LASER CUT IN 8mm ACRYLIC OF APPROVED COLOR. SIZE: 24" x 9" 3" LETTER HEIGHT	2	No.		
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
<b>49</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>50</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>COST OF CIVIL WORK GROUND FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**GROUND FLOOR**  
**FURNITURE WORKS (NOT TO BE QUOTED)**

The BOQ document shall be read in conjunction with the Compliance sheet. NOT TO BE QUOTED: ONLY MARKINGS TO BE DONE AS PER LAYOUT BY THE CONTRACTOR WITH PROOF OF MARKING AS PER DRAWING AND SIZES GIVEN IN DESCRIPTION. COMPLETE DOCUMENTATION TO BE MAINTAINED THE MARKING IS TO BE MADE VISIBLE BY PASTING AN APPROPRIATE CUT OUT ON ALL TIMES.

**GROUND FLOOR - FURNITURE**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<p>NOTES:</p> <ul style="list-style-type: none"> <li>&gt; ALL THE FURNITURE ITEMS LISTED BELOW MUST BE PROCURED BY APPROVED VENDOR BRAND I.E. GLOBAL, MASTER, INTERWOOD, DIMENSIONS OR EQUIVALENT.</li> <li>&gt; COMPLETE PROFILE BROCHURE OF ITEM ORIGIN OF ITEM TO BE SUBMITTED BY TENDERER.</li> <li>&gt; CONTRACTOR TO SUBMIT EACH SAMPLE TO CONSULTANTS HEAD OFFICE FOR REVIEW AFTER INSPECTION AT SITE OFFICE. SAMPLE TO BE CONSUMED FOR TESTING AND REVIEW. PHYSICAL SAMPLE IS TO BE A PART OF SUBMITAL ELSE CONDITIONAL APPROVAL CAN ONLY BE GRANTED.</li> <li>&gt; THE FINISHED PRODUCT SHALL BE DELIVERED TO THE SITE DULY COVERED WITH BUBBLE SHEET TO AVOID ANY BREAKAGE ETC. HOWEVER IN CASE OF ANY MINOR REPAIR ARISING OUT OF TRANSPORTATION ETC. THE SAME SHALL BE REPAIRED/ REPLACED IMMEDIATELY BY THE SUPPLIER WITHOUT ANY EXTRA COST.</li> <li>&gt; 1 YEAR COMPREHENSIVE MAINTAINANCE TO BE A PART OF TENDER WITH ALL STRUCTURAL, MECHANICAL, FINISHING WORKS TO BE INCLUDED.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>				
<b>WORKSTATIONS AND DESKS</b>					
<b>1</b>	<b>WORKSTATIONS</b>				
	<ul style="list-style-type: none"> <li>&gt; HAVING A PARTITION WITH FABRIC SOFTBOARD OF NO MORE THAN 1'-4" IN HEIGHT HAVING TWO STUDDED ANCHORS WITH LOCK ON BOTTOM BETWEEN TWO WORKSTATION.</li> <li>&gt; DESK TOP THICKNESS IS 25MM, HAVING LIPPING OF MATCHING COLOR.</li> <li>&gt; FINISH: LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) DESKTOP OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; SQUARE LEGS (TAPPERED) AT 15 DEGREE WITH CABLE MANAGEMENT TRAY 1.2MM POWDER COATED AND OUTLET AT THE CENTRE.WITH EARTH POINT TO BE ATTACHED TO EARTH CABLE</li> <li>&gt; LEG WALL THICKNESS IS 2.0MM POWDER COATED TO COLOUR.</li> <li>&gt; WORKSTATION TO HAVE A LINEAR POWER TRAY UNDERNEATH FOR CABLE DISTRIBUTION ALONG WITH A CUT-OUT ON TOP HAVING A TECHNOLOGY BOX AS SPECIFIED IN THE ELECTRICAL COMPONENT OF THE TENDER.</li> <li>&gt; ONE MOBILE DRAWER UNIT INCLUDED 14 INCHES IN WIDTH AS PER INDUSTRY STANDARD..</li> <li>&gt; BEST QUALITY LOCK FOR DRAWERS WITH 3 KEYS INCLUDED.</li> <li>&gt; INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT.</li> <li>&gt; ALL FABRICS AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY THE ARCHITECT.</li> </ul>				
<b>A.</b>	<b>SIZE 5'-0"x4'-0" (LxW), 2'-6" DEEP</b>	5	No.	NTQ	NTQ
<b>B.</b>	<b>SIZE 4'-0"x4'-0" (LxW), 2'-6" DEEP</b>	4	No.	NTQ	NTQ

GROUND FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>2</b>	<b>FLOOR CABINETS</b>				
	PROVIDING AND FIXING IN POSITION FLOOR STANDING CABINETS; MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) DESKTOP OF ARCHITECT'S CHOICE OF COLOUR & FINISH. ARCHITECT'S CHOICE OF COLOUR & FINISH, ON TOP, FRONT AND SIDE WITH GROOVES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ARCHITECT. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
<b>A.</b>	<b>OVERALL SIZE 5'-0"x1'-0" (LxW), 2'-6" DEEP</b>	3	No.	NTQ	NTQ
<b>B.</b>	<b>OVERALL SIZE 4'-0"x1'-6" (LxW), 2'-6" DEEP</b>	2	No.	NTQ	NTQ
<b>C.</b>	<b>OVERALL SIZE 5'-6"x1'-6" (LxW), 2'-6" DEEP FOR CAFETERIA</b>	1	No.	NTQ	NTQ
<b>3</b>	<b>CHIEF DESK</b>				
	> DESK TOP THICKNESS IS 25MM. > MELAMINE TOP OF APPROVED COLOR. HAVING A SIDE RETURN. OF 1'4". by 5' 6" Length. > AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING CABLE MANAGEMENT, CABLE TRAY AND TECHNOLOGY BOXES. WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> <b>DESK TO SIZE: (LxWxH) 9'-3"x 5'-0"x 2'-6"</b>	2	No.	NTQ	NTQ
<b>4</b>	<b>D.G.M DESK</b>				
	> DESK TOP THICKNESS IS 25MM. > MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) > MATERIAL MDF WITH WOOD VENEER FINISH. > 100 MM X 40 MM TEAK WOOD FOOT REST WITH POLISHING AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> <b>DESK TO SIZE: (LxWxH) 6'-0"x 6'-0"x 2'-6"</b>	2	No.	NTQ	NTQ
<b>5</b>	<b>OCCASSIONAL TABLE (FOR VISITOR SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED COLOUR AND FINISH.				
	> <b>SIZE: 1'-6" x 1'-6" x 2'-0" (LxWxH)</b>	2	No.	NTQ	NTQ
<b>6</b>	<b>OCCASSIONAL TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED DESIGN, COLOUR AND FINISH.				
	> <b>SIZE: 1'-8" x 1'-8" x 2'-0" (LxWxH)</b>	3	No.	NTQ	NTQ
<b>7</b>	<b>CONSOLE TABLE</b>				
	SUPPLYING OF CONSOLE TABLE WITH LAMINATE BOARDS / MDF OF APPROVED COLOUR AND FINISH.				
	> <b>SIZE: 4'-0" x 1'-9" x 2'-0" (LxWxH)</b>	2	No.	NTQ	NTQ
	> <b>SIZE: 6'-4" x 1'-6" x 2'-0" (LxWxH)</b>	1	No.	NTQ	NTQ

GROUND FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>8</b>	<b>MEETING ROOM TABLE</b>				
	> MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) FOR TABLE EDGES AND SUPPORTED ON 3mm THICK S.S. PIPES BRUSH 3.75mm DIA WITH 6mm THICK BASE AND TOP PLATE. > THE TOP MUST HAVE PROVISION FOR CABLE MANAGEMENT AND POP-UP MULTI SOCKET BOARD. > ALL INTERNAL SURFACE COVERED WITH 0.8MM THICK LAMINATE > ALL EXTERNAL SURFACES COVERED WITH 1.0 MM THICK LAMINATE OF APPROVED COLOUR. > RATES TO INCLUDE ALL NECESAARY ACCESSORIES. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>SIZE 5'-3" DIA, 3'-0" DEEP FOR 6 PERSONS</b>	1	No.	NTQ	NTQ
<b>B.</b>	<b>SIZE 5'-3" DIA, 3'-0" DEEP FOR 6 PERSONS</b>	1	No.	NTQ	NTQ
<b>9</b>	<b>DINING TABLE FOR CAFETERIA</b>				
	> GRANITE / ARTIFICIAL GRANITE TOP. > M.S. FRAME, POWDER COATED, DISTRIBUTED SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>&gt; SIZE: 2'-6" x 1'-6" x 3'-0" (LxWxH)</b>	3	No.	NTQ	NTQ
<b>B.</b>	<b>&gt; SIZE: 2'-6" x 2'-6" x 3'-0" (LxWxH)</b>	2	No.	NTQ	NTQ
<b>10</b>	<b>RECEPTION TABLE</b>				
	PROVIDING AND FIXING IN POSITION RECEPTION TABLE; MADE OF 20mm OAK PLY HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING T3 TUBELIGHT TO BE HUNG BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
<b>A.</b>	<b>&gt; SIZE: (LxWxH) 4'-6" x 2'-8" x 4'-6".</b>	1	No.	NTQ	NTQ
<b>11</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH MS FRAME AND MARBLE TOP OF APPROVED COLOUR AND FINISH.				
	<b>&gt; SIZE: 2'-9" DIA, 1'-6" H (ENTRANCE WAITING)</b>	2	No.	NTQ	NTQ
	<b>&gt; SIZE: 5'-0"x3'-0", 1'-6" H (VISITORS LOUNGE)</b>	1	No.	NTQ	NTQ

GROUND FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>CHAIRS AND SEATING</b>					
<b>12</b>	<b>CHIEF CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; HIGH BACK WITH HEAD AND ARM REST BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	2	No.	NTQ	NTQ
<b>13</b>	<b>D.G.M CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; LOW BACK WITH HEAD &amp; ARM REST BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	2	No.	NTQ	NTQ
<b>14</b>	<b>DINING CHAIR</b>				
	<ul style="list-style-type: none"> <li>&gt; FRAME MATERIAL: WOOD</li> <li>&gt; SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; FOAM DENSITY : 18 KG/ CUBIC CM.</li> <li>&gt; BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS.</li> <li>&gt; BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING.</li> <li>&gt; THE ARMCHAIR IS BASED ON STEEL LEG.</li> <li>&gt; THE LEG BASE MUST HAVE RUBBER PADDING.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>	7	No.	NTQ	NTQ

GROUND FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>15</b>	<b>GUEST CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; FIXED VISITOR CHAIR,</li> <li>&gt; MOULDED FOAM</li> <li>&gt; ITALIAN LEATHER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; BACK SHELL MADE OF PLASTIC WITH WOOD COLOUR PRINTED.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; CUSTOMIZED ALUMINIUM LEG</li> <li>&gt; LIFT APPROVED WITH SGS.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>	6	No.	NTQ	NTQ
<b>16</b>	<b>RECEPTION CHAIR</b>				
	<ul style="list-style-type: none"> <li>&gt; SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT.</li> <li>&gt; SHOULDER HEIGHT BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	2	No.	NTQ	NTQ
<b>17</b>	<b>OFFICE CHAIRS (STAFF)</b>				
	<ul style="list-style-type: none"> <li>&gt; SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT.</li> <li>&gt; SHOULDER HEIGHT BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	18	No.	NTQ	NTQ

GROUND FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
18	<b>MEETING CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT.</li> <li>&gt; SHOULDER HEIGHT BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	6	No.	NTQ	NTQ
19	<b>WAITING CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; FRAME MATERIAL: WOOD</li> <li>&gt; SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; FOAM DENSITY : 18 KG/ CUBIC CM.</li> <li>&gt; BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS.</li> <li>&gt; BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING.</li> <li>&gt; THE ARMCHAIR IS BASED ON STEEL LEG.</li> <li>&gt; THE LEG BASE MUST HAVE RUBBER PADDING.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>	4	No.	NTQ	NTQ
20	<b>SOFA FOR 2</b>				
	<ul style="list-style-type: none"> <li>&gt; SUPPORTED ON METAL LEGS.</li> <li>&gt; COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC.</li> <li>&gt; SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK.</li> <li>&gt; SPRING: IMPORTED SPRING FOR STRONG SUPPORT.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>				
A.	(LxWxH) 5'-0" x 2'-10" x 2'-10" (CHIEF ROOMS)	2	No.	NTQ	NTQ
B.	(LxWxH) 7'-3" x 2'-10" x 2'-10" (VISITOR LOUNGE)	1	No.	NTQ	NTQ
C.	(LxWxH) 6'-6" x 2'-10" x 2'-10" (ENTRANCE)	1	No.	NTQ	NTQ
21	<b>SOFA FOR 1</b>				
	<ul style="list-style-type: none"> <li>&gt; SUPPORTED ON METAL LEGS.</li> <li>&gt; COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC.</li> <li>&gt; SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK.</li> <li>&gt; SPRING: IMPORTED SPRING FOR STRONG SUPPORT.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>				
A.	(LxWxH) 3'-0" x 2'-10" x 2'-10" (CHIEF ROOMS)	2	No.	NTQ	NTQ
B.	(LxWxH) 3'-0" x 2'-10" x 2'-10" (VISITORS LOUNGE)	1	No.	NTQ	NTQ



GROUND FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>22</b>	<b>LOUNGE CHAIR (ENTRANCE)</b>				
	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STELL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>CHAIR 1</b>	2	No.	NTQ	NTQ
<b>B.</b>	<b>CHAIR 2</b>	2	No.	NTQ	NTQ
<b>23</b>	<b>FULL HEIGHT STORAGE CABINET</b>				
	P/F OF WOODEN FILLING CABINETS FULL HEIGHT MADE OF OAK PLY POLISHED WITH GLASS PANE WITH APPROVED OAK VENEER PRESSED ON BOTH SIDES UNDER 100-150 KG/CM2 OF AIR PRESSURE AND 60 DEGREE OF TEMPERATURE. INTERNAL CARCASS IN 16MM THICK LAMINATION CHIPBOARD WITH 3MM OAK WOOD EDGING ALL-ROUND, FINISH WITH CLEAR NC LAQUER POLISH, INCLUDING APPROVED HANDLES, HINGES AND SHELF, SHUTTER FINISH WITH APPROVED DRAWING AND DESIGN. COMPLETE IN ALL RESPECT. THE CABINET'S FRONT FACE SHALL BE PASTED WITH GRAPHICS OF THE ARCHITECT'S APPROVAL. <b>NOTE:</b> FRONT FACE OF CABINETS SHALL BE MEASURED FOR PAYMENT. 1'-3" DEEP				
<b>a.</b>	<b>STORAGE CABINET</b>	120	SFT	NTQ	NTQ
	<b>MISCELLANEOUS</b>				
<b>24</b>	<b>PICTURE FRAME</b>				
	PICTURE FRAME WITH OIL / ACRYLIC ON CANVAS WITH APPROVED FRAME MADE OF WOOD / FIBRE, ALONG WITH ALL NECESSARY ACCESSORIES FOR HANGING AND SUSPENSION.				
<b>A.</b>	<b>&gt; AVERAGE SIZE 17 SFT</b>	2	No.	NTQ	NTQ
<b>25</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT)				
<b>A.</b>	<b>&gt; AVERAGE SIZE 27 SFT</b>	2	No.	NTQ	NTQ
<b>26</b>	<b>PLANTER</b>				
<b>a.</b>	P/F OF CUSTOMIZED PLANTER MADE OF CONCRETE WITH SMOOTH FINISH AND DECO PAINT OF APPROVED COLOR AND DESIGN. <b>NOTE:</b> THE CONTRACTOR SHALL MAKE AND APPROVE THE SAMPLE BEFORE EXECUTION. AVERAGE SIZE: 1'-3"x1'X3"x 1'-3" (LxWxH)	10	No.	NTQ	NTQ

GROUND FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
27	<b>PANTRY CABINET</b>				
	PROVIDING AND FIXING IN POSITION FLOOR CABINETS & HANGING TYPE CABINETS; MADE OF 20mm OAK PLY HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. INCLUDING MAKING PROVISION OF GLASS HOOD. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING STRIP LIGHT BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. <b>NOTE:</b> CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE. FRONT FACE OF THE CABINET SHALL BE USED FOR BILLING.				
A.	> SIZE: (LxWxH) 20'-9" x 2'-0" x 9'-6".	1	SFT	NTQ	NTQ
B.	> SIZE: (LxWxH) 15'-3" x 2'-0" x 9'-6".	1	SFT	NTQ	NTQ
C.	> SIZE: (LxWxH) 6'-3" x 2'-0" x 9'-6".	1	SFT	NTQ	NTQ
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
28.	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB	NTQ	NTQ
29	<b>SHOP DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS OF EVERY FURNITURE ITEM WHICH WILL BE FABRICATED / INSTALLED ON SITE.	1	JOB	NTQ	NTQ
<b>COST OF FURNITURE GROUND FLOOR</b>					<b>NTQ</b>

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**GROUND FLOOR**  
**ELECTRICAL WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**GROUND FLOOR - ELECTRICAL WORKS**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>NOTE: SAMPLES &amp; TECHNICAL SPECIFICATIONS TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.</b>				
	<b>SECTION-A MAIN / SUB-MAIN LV PANELS &amp; DISTRIBUTION BOARDS</b>				
	<p><b>Supply, testing &amp; commissioning</b> of following <b>Distribution Boards</b> as shown on drawing made with <b>14 SWG sheet steel housing</b> including all installation accessories such as Rawal bolt etc. Complete in all respects.</p> <p><b>Note: (Refer Single Line Diagram)</b></p> <ol style="list-style-type: none"> <li>1) All the Panels / DBs should be front accessible and maintainable.</li> <li>2) Cost of Lighting Control Relays &amp; Power Supplies should be Included in Distribution Boards .</li> <li>3) The transportation and placement of DBs upto site and respective locations is also included in the work scope, complete in all respects including leveling, grouting etc.</li> <li>4) Laser engraved tags required as mention in SLDs</li> <li>5) Space for circuit tagging required with permanent installation on protective sheet via rivets</li> <li>6) 20% space required in Panels / DBs for future provision</li> <li>7) Tin platted Imported 99.99% pure Tinned Cu bus bar with heat shrink color coded sleeves to be used.</li> <li>8) Hindged protective metallic door required with knob/handle.</li> <li>9) Braided Door earth required.</li> <li>10) Lockable handle required for main door .</li> <li>11) As-built drawing pocket.</li> <li>12) Cable hanging arrangement.</li> <li>13) MIMIC Diagram is required on doors of all the Panels.</li> <li>14) Panel Lights and Exhaust Fans with Door Limit Switch &amp; Temperature Sensors are required in all the floor standing Panels.</li> <li>15) All the Floor Standing Panels shall be Type-Tested Type.</li> <li>16) MOA to be provided in the ATS of LV Panels.</li> <li>17) Anti-Condensation Heater to be provided in all the Floor Standing Panels.</li> <li>18) Bypass Option in-case of synch panel Failiure.</li> </ol>				
<b>1</b>	MDB-G	1	No.		
<b>2</b>	DB-G	1	No.		
<b>3</b>	Breaker Box with 50A TP MCCB For HVAC Ground Floor	1	No.		
	<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1) <b>Supply &amp; Installation</b> of MCCs required for Fire Fighting, HVAC &amp; Plumbing Services shall be in the scope of Mechanical Works.</li> </ol>				

GROUND FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>WIRING</b>					
<b>CIRCUIT / POINT WIRING &amp; SWITCH ACCESSORIES</b>					
4	PROVIDING, FIXING & LAYING OF WIRING FOR LIGHTS AND EXHAUST/ FALSE CEILING/ CEILING FANS, WITH COMPLETE INSTALLATION ON WHATEVER SURFACE; THE PRICE IS TO INCLUDE ANY FABRICATION/ BOXING MADE OF ANODIZED GI FRAME OR WOODEN FRAME AS ADVISED BY THE ARCHITECT ON-SITE IF NEEDED TO BE MOUNTED ON THE CEILING DIRECTLY. ALL MOUNTINGS AND VERTICAL SUSPENSIONS WILL BE DONE USING FISCHER OR EQUIVALENT ANCHORS WITH M10 THREADED GI RODS. IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. COMPLETE WITH BENDS, SOCKETS, AND OTHER ACCESSORIES WITH 3X2.5 mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST/NEWAGE WITH 16 SWG SHEET STEEL SWITCH BOXES DULY APPLIED WITH RED OXIDE BASE PAINT SPRAY PAINTED AS REQUIRED AND THE BOX TO BE CONCEALED: INCLUDING P/F OF 10A/16A CLIPSAL/ CLOPAL/ SIEMENS MAKE SWITCH WITH CLIPSAL/ CLOPAL/ SIEMENS COVER GANG PLATE ETC. AND CONCEALED WITH CEILING ROSE COMPLETE IN ALL RESPECT AS REQUIRED.	56	No.		
5	SAME AS (A) BUT POINT TO POINT WIRING	175	No.		
6	PROVIDING, FIXING & LAYING OF WIRING FOR <b>EMERGENCY LIGHTS</b> , WITH COMPLETE INSTALLATION ON WHATEVER SURFACE; THE PRICE IS TO INCLUDE ANY FABRICATION/ BOXING MADE OF ANODIZED GI FRAME OR WOODEN FRAME AS ADVISED BY THE ARCHITECT ON-SITE IF NEEDED TO BE MOUNTED ON THE CEILING DIRECTLY. ALL MOUNTINGS AND VERTICAL SUSPENSIONS WILL BE DONE USING FISCHER OR EQUIVALENT ANCHORS WITH M10 THREADED GI RODS. IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. INCLUDING PULL BOXES, SIZE: 8"x8". COMPLETE WITH BENDS, SOCKETS, AND OTHER ACCESSORIES WITH 3X2.5 mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST/NEWAGE WITH 16 SWG SHEET STEEL SWITCH BOXES DULY APPLIED WITH RED OXIDE BASE PAINT SPRAY PAINTED AS REQUIRED AND THE BOX TO BE CONCEALED: INCLUDING P/F OF 10A/16A CLIPSAL/ CLOPAL/ SIEMENS MAKE SWITCH WITH CLIPSAL/ CLOPAL/ SIEMENS COVER GANG PLATE ETC. AND CONCEALED WITH CEILING ROSE COMPLETE IN ALL RESPECT AS REQUIRED.	2	No.		
7	PROVIDING, FIXING & LAYING OF WIRING POWER CIRCUITS <b>FROM DB TO TECHNOLOGY BOX / BOARD</b> WITH 2 x 4 SQ. mm + ECC 1X2.5 SQ. mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED. INCLUSIVE OF FLOOR CUTTING AND CREATION OF FLOOR CHANNEL WITH EMBEDDED CONDUIT PIPES <b>NOTE: ALL DATA CABLES SHALL HAVE SEPARATE CONDUITS FROM POWER LINES TO AVOID ELECTROMAGNETIC FIELD (EMF) INTERFERENCE AND ATTENUATION.</b>	42	No.		
8	PROVIDING, FIXING & LAYING OF WIRING POWER CIRCUITS <b>FROM DB TO SWITCHBOARD (S) (INDUSTRIAL SOCKETS)</b> WITH 2 X 4 SQ. mm + ECC 1X2.5 SQ. mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 MM DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED). <b>INCLUDING I/O FACE PLATE.</b> COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED.	28	No.		
9	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF <b>TELEPHONE RJ45 CLIPSAL / 3M CABLE</b> IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED I/O FACE PLATE HAVING 01 No. RJ-45/RJ11 CONNECTORS, CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS.	4	No.		

<b>GROUND FLOOR - ELECTRICAL WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>10</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN WALLS OR SLABS OF CONCRETE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK.				
<b>A.</b>	4" DIA	6	No.		
<b>B.</b>	6" DIA	2	No.		
<b>C.</b>	8" DIA	1	No.		
<b>SWITCH SOCKET OUTLET (SSO)</b>					
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
<b>11.</b>	SUPPLY & INSTALLATION OF THE FOLLOWING SWITCH SOCKET OUTLETS (SSO) OF MAKE CLOPAL, SIEMENS, CLIPSAL, AND ORANGE, WITH 16 SWG MS BACK BOXES MADE OF 1.2 MM POWER COATED SHEET STEEL WITH EARTH TERMINALS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 MM DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED				
<b>A.</b>	13AMP UNIVERSAL/INTERNATIONAL 3 PIN SSO PVC INSULATED WIRE	19	No.		
<b>B.</b>	15AMP UNIVERSAL/INTERNATIONAL 3PIN SSO (INDUSTRIAL SOCKETS)	10	No.		
<b>GANG SWITCHES</b>					
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
<b>12.</b>	SUPPLY AND INSTALLATION OF FOLLOWING 10 AMPS, ONE-WAY <b>GANG TYPE SWITCHES</b> OF MAKE CLOPAL, SIEMENS, CLIPSAL OR EQUIVALENT, INCLUDING BACK BOXES, RECESSED ON WALL OR COLUMN AS PER DESIGN DRAWINGS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, COMPLETE WITH ALL ACCESSORIES & CONNECTIONS IN ALL RESPECTS.				
<b>A.</b>	3 GANG SWITCHES	1	No.		
<b>B.</b>	4 GANG SWITCHES	28	No.		

<b>GROUND FLOOR - ELECTRICAL WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>TECHNOLOGY BOX / BOARD</b>					
	<b>NOTE: SAMPLES &amp; TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.</b>				
<b>13.</b>	SUPPLY AND INSTALLATION OF TECHNOLOGY BOX / BOARD OF MAKE CLOPAL, SIEMENS, CLIPAL OR EQUIVALENT, INCLUDING WATERPROOF BACK BOXES, WATERPROOF HOUSING WITH LID AND POWER SWITCH, FIXED ON A WORKSTATION, GYPSUM OR ANY OTHER SURFACE WALL AS PER DESIGN DRAWINGS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, INCLUDING CABLE MANAGEMENT VIA SQUARE MATCHING PIPE OF 18 SWG EARTHED OR CABLE MANAGEMENT SLEEVES OF BEST QUALITY AS PER APPROVAL OF TECHNICAL SPECIFICATIONS AND SAMPLES BY THE ARCHITECT ON SITE. ALL CABLES ARE TO BE TAGGED VISIBLY END TO END. APPROPRIATE DATA/ POWER CABLES/ WIRES WILL RUN THROUGH APPROPRIATE CONDUITS INSIDE THE ALUMINIUM CHANNEL. COMPLETE WITH ALL ACCESSORIES & CONNECTIONS IN ALL RESPECTS HAVING THE FOLLOWING SWITCH AND SOCKETS.				
<b>A.</b>	<b>TECHNOLOGY BOX A (FOR GENERAL WORKSTATIONS)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)	20	No.		
<b>B.</b>	<b>TECHNOLOGY BOX B (FOR EXECUTIVE DESK)</b> A. 3 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 3 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)	2	No.		
<b>C.</b>	<b>TECHNOLOGY BOX C (EXECUTIVE TV / MEETING TV)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)	4	No.		
<b>D.</b>	<b>TECHNOLOGY BOX D (ATTENDANCE MACHINE)</b> A. 0 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 1 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)	1	No.		
<b>LIGHT FITTINGS AND FIXTURES</b>					
	<b>NOTE: SAMPLES &amp; TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.</b>				
<b>14.</b>	<b>LED CEILING RECESSED DOWN LIGHT</b>				
	P/F, CONNECTING, TESTING & COMMISSIONING OF OPPL/ SOGO/ PHILIPS/ BRITLITE/ ORANGE <b>RECESSED MOUNTED DOWNLIGHT</b> HAVING APPROVED COLOUR TEMPERATURE with PF >0.90 AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, COMPLETE WITH MAKING A HOLE AS MAY BE REQUIRED AND TO FINISH THE SURFACE SUITABLY AFTER INSTALLATION AND WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS. <b>NOTE: ALL SAMPLES/TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO THE EXECUTION OF WORKS.</b>				
<b>A.</b>	6W TO 9W (TOILETS AND KITCHEN)	22	No.		
<b>B.</b>	10W TO 12W (OFFICES)	114	No.		
<b>C.</b>	13W TO 15W (COMMON SPACES, CORRIDORS)	23	No.		

<b>GROUND FLOOR - ELECTRICAL WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>15.</b>	<b>CEILING RECESSED LINEAR LIGHT MAGNETIC TRACK</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 1 METER LONG CEILING RECESSED LINEAR MAGNETIC TRACK LIGHT CONNECTED TO MAKE TRACKS OF SUITABLE DIMENSIONS WITH COMPLETE ACCESSORIES AND JOINERIES SUCH AS POWER ADAPTER 200 WATTS, CONTINUITY TRACK TO TRACK CONNECTOR. RECESSED IN FALSE CEILING USING THREADED RODS AS ANCHORS. EACH TRACK TO HAVE ATLEAST 4 LIGHTS HAVING 12 LED POINTS RATED AT 12 WATTS EACH MAGNETIC LIGHT WITH REFLECTORS. OF ARCHITECTS CHOICE AND APPROVAL. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	5	No.		
<b>16.</b>	<b>LINEAR TRACK LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 3'-0" LINEAR TRACK LIGHT. HAVING 2 LIGHTS PER FEET 6 WATTS LED. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	<b>WAITING LOBBY</b>	10	No.		
<b>17.</b>	<b>WALL SCONCE DOWNLIGHT (STAIRS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF WALL SCONE DOWNLIGHT APPROX 15 WATT. OF APPROVED DESIGN. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	<b>LIFT LOBBY</b>	10	No.		
<b>18.</b>	<b>HANGING LIGHT LINEAR L1 PENDANT (WORKSTATIONS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 5'-3" LONG 30WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT WITH • DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	4	No.		
<b>19.</b>	<b>HANGING LIGHT LINEAR L2 PENDANT (WORKSTATIONS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 3'-0" LONG 20 WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT.. WITH LED LIGHT DRIVER DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	22	No.		



GROUND FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
20.	<b>HANGING LIGHT LINEAR L3 PENDANT (CHIEF DESK &amp; MEETING ROOM)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 5'-6" LONG 30 WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT. DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVAILBLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	3	No.		
21.	<b>CHANDELIER LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING CHANDELIER LIGHT. HAVING CLUSTER OF 4 GLASS ENCASED HANDCRAFTED DECORATIVE LIGHT FIXTURES. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	1	No.		
22.	<b>HANGING PENDANT LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING CHANDELIER LIGHT. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	1	No.		
23.	<b>FLOOR STANDING LAMP</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING FLOOR STANDING LAMP MS LEGS WITH MARBLE BASE ARCHED TYPE . HEIGHT BETWEEN 6 FEET TO 4-10 INCHES HEIGHT; WITH LED BULB. EACH LAMP TO HAVE A SWITCH FOR EASY SWITCH ON AND OFF NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	5	No.		
24.	<b>WALL / MIRROR LIGHTS</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING WALL / MIRROR LIGHTS. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	3	No.		
25.	<b>EMERGENCY LIGHT</b>				
	P/F OF <b>EMERGENCY LIGHT</b> OF MAKE "OPPLE/ SOGO/ ORIENT/ OR PHILIPS" BRITLITE/ 2 X 8W FLUORESCENT LAMPS HAVING COLOUR TEMPERATURE 3500 K WITH BATTERY CHARGER. CONTRACTOR TO ENSURE THE PERFECT SOLUTION FOR HANGING, AND FIXING ON THE WALL ALONG WITH A POWER CABLE AND PLUG FOR CONNECTION. CONTRACTOR TO ENSURE LIVE WIRING IS TO BE PROVIDED ALONG WITH MALE/ FEMALE CONNECTION SECURED & TIED AWAY.				
<b>A.</b>	<b>CEILING / WALL MOUNTED</b>	9	No.		
<b>26</b>	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE LIGHTING SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. CONTRACTOR TO PERFORM 3 WORKSHOPS WITH EMPLOYEERS FACILITY MANAGER TO TRAIN ON OPERATION, MAINTAINANCE AND LIFE CYCLE OF ALL LIGHTS INSTALLED. EACH LIGHT TO BE CATEGORIZED AS TYPE AND LIFE CYCLE HOURS.	1	JOB		

GROUND FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>APPLIANCES</b>					
<b>27.</b>	<b>FALSE CEILING FAN</b>				
	PROVIDING, INSTALLING, TESTING AND COMMISSIONING OF FALSE CEILING FAN 14" IN 2'X2' SQUARE SIZE OF MAKE "VOLDAM OR EQUIVALENT" WITH REMOTE CONTROL IMPORTED COMPLETE WITH CONNECTIONS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT. NOTE: ALL ELECTRICAL WIRING, SWITCHES AND HOISTING OF REMOTE CONTROLLER ON WALLS TO BE INCLUDED IN THE ITEM.	25	No.		
<b>28.</b>	<b>LED MONITOR</b>				
	SUPPLYING, FIXING, INSTALLATION & COMMISSIONING OF LED MONITOR/ TV OF MAKE SAMSUNG, L.G., SONY OR EQUIVALENT WITH , HDMI PORTS COAXIAL PORT, AUDIO VIDEO PORT, VGA PORT VIDEO INPUT PORT. WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT/ ENGINEER. NOTE: > EASYLINK (HDMI-CEC) > SMARTVIEW > WIFI DIRECT > CONNECTIVITY PORTS: HDMI PORTS 4(SIDE) USB SUPPORTS AUDIO, VIDEO, IMAGE RF INPUT ANALOG COAXIAL PORTS 1(REAR) COMPOSITE INPUT AUDIO VIDEO CABLE PORTS 1(REAR) USB PORTS 3 DIGITALOPTICAL AUDIO OUTPUT PORTS 1 > VENDORS OFFERING LOCAL AFTER SALE SERVICES SHALL BE PREFERRED.				
<b>A.</b>	55"	5	No.		
<b>B.</b>	HDMI CABLE 5 METER (SONY, UGREEN OR EQUIVALENT) FROM TV TO DESK	5	No.		
<b>29.</b>	<b>WATER DISPENSER</b>				
	SUPPLY AND INSTALLATION OF WATER DISPENSER OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT) WITH 19-22 Litre Standard WATER BOTTLES FIXED ATOP HAVING COLD CABINET UNDERNEATH INVERTER TYPE.	3	No.		
<b>30.</b>	<b>GLASS HOOD (KITCHEN)</b>				
	SUPPLY AND INSTALLATION OF GLASS HOOD OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).	1	No.		
<b>31.</b>	<b>MICROWAVE OWEN</b>				
	SUPPLY AND INSTALLATION OF MICROWAVE OWEN OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).				
<b>A.</b>	IN-BUILT INTO CABINET	1	No.		
<b>B.</b>	NORMAL	1	No.		
<b>32.</b>	<b>REFRIGERATOR</b>				
	SUPPLY AND INSTALLATION OF REFRIGERATOR OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).	1	No.		

GROUND FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
33.	<b>EXHAUST FAN (WITH FALSE CEILING PIPE )</b>				
	PROVIDING, INSTALLING, TESTING AND COMMISSIONING OF 6" DIA INLINE FAN OF MAKE "VOLDAM OR EQUIVALENT" WITH CENTRIFUGAL BLOWER AND MOTOR ENCASED IN SHEET METAL CASING, AS PER SPECIFICATIONS. THE MOTOR SHALL BE SUITABLE FOR 220±6% V, 50 HZ AC SUPPLY. THE PRICE SHALL INCLUDE FAN SPEED REGULATOR AND COWL WITH BIRD SCREEN. FALSE CEILING FAN TO BE CONNECTED TO ITS EXHAUST OUTLET USING FLEXIBLE PIPE NON INTERRUPTED ANCHORED IN PLACE USING M8/M10 ANCHORS AND FIXING ACCESSORIES FROM THE CEILING. CAPACITY 3600 CMH AT 15 MM STATIC PRESSURES (FOR PNEUMATIC TEST SCREEN OF WORKSHOP OFFICES BUILDING).	7	No.		
34.	<b>HAND DRYER</b>				
	P/F OF AUTOMATIC HAND DRYER OF BRAND SIEMENS OR EQUIVALENT COMPLETE IN ALL RESPECTS. <b>NOTE:</b> TECHNICAL SPECIFICATION TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCUREMENT.	2	No.		
35.	<b>TOWER FAN</b>				
	> POWER: 45W > AIR FLOW : >21.54M3/MIN > HEIGHT: NOT LESS THAN 38" > 3 SPEEDS CONTROL WITH OSCILLATION > WITH 12 HOURS TIMER CONTROL WITH REMOTE CONTROL > WITH ROOM TEMPERATURE DISPLAY > FULL LED DISPLAY > INTEGRATED CARRY HANDLE > COMPLETE IN ALL RESPECTS. > HITACHI, TOSHIBA ELITE OR EQUIVALENT. <b>NOTE:</b> TECHNICAL SPECIFICATION TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCUREMENT.	9	No.		
<b>TELEPHONES</b>					
	<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
36.	<b>TELEPHONE 10 PAIR CABLE</b>				
	SOLID ANNEALED COPPER WIRE, PLAIN OR TINNED ACCORDING TO IEC 60228 CLASS 1, INSULATED WITH PVC (POLYVINYL CHLORIDE) RATED 70°C, TWO CORES ARE TWISTED TO FORM A PAIR, PAIRS ASSEMBLED TOGETHER DEPENDING ON THE CABLE CONSTRUCTION, FOR CABLES UP TO <b>10 PAIRS</b> , PAIRS ARE ASSEMBLED TOGETHER DIRECTLY IN CONCENTRIC LAYERS, ALL PAIRS ARE IDENTIFIED WITH IDENTIFICATION TAPES, OUTER SHEATH IS A FLAME RETARDANT POLYVINYL CHLORIDE 70°C, GRAY COLOR.	13	METER		
37.	<b>JUNCTION BOX</b>				
	PROVIDING AND FIXING OF TELEPHONE JUNCTION HAVING CONNECTION OF NOT LESS THAN 10 WIRES, WALL MOUNTED.	1	No.		
38	P/L OF <b>TELEPHONE WIRING</b> IN PVC CONDUIT GALCO 32MM DIA 10 PAIR TELEPHONE CABLE CLIPSAL MAKE FROM MDF PANEL TO PTCL CABINET AND PABX. COMPLETE WITH 12SWG COPPER ECC AND CONNECTIONS AT TERMINAL BOXES COMPLETE IN ALL RESPECTS AS REQUIRED AT SITE.	175	METER		
40	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF NETWORKING CABLE <b>CAT 6 CLIPSAL</b> / 3M CABLE IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED CAT6 CONNECTORS, INCLUSIVE OF IO SWITCH PLATE HAVING CAT 6 INTERFACE CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS. <b>NOTE: ALL DATA CABLES SHALL HAVE SEPARATE CONDUITS FROM POWER LINES TO AVOID ELECTROMAGNETIC FIELD (EMF) INTERFERENCE AND ATTENUATION.</b>	39	No.		
46.	FIBRE OPTIC CABLE (FROM DISTRIBUTOR TO FLOOR SWITCH)	53	METER		

GROUND FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>SECURITY SYSTEM</b>					
	ALL NETWORK ACCESSORIES ARE TO BE A PART OF THIS ITEM, INCLUDING RACKS, MOUNTING SCREWS, RAWL BOLTS, ANCHORS, MOUNTING BRACKETS AND ETC.				
49	<b>BIOMETRIC ATTENDANCE MACHINE / CCTV CAMERA</b> SUPPLY, INSTALLATION, CONFIGURATION, TESTING AND COMMISSIONING OF BIOMETRIC (FINGERPRINT CUM CARD, FACIAL ID) BASED TIME ATTENDANCE & ACCESS CONTROL MACHINES INCLUDING RELATED SOFTWARE. > BIOMETRIC/ CARD ENROLLMENT/ FACIAL ID- RFID TAGS OF 200 PERSONS (INCLUDING COLLECTION, ENTRY AND VALIDATION OF DATA) OF ALL RELEVANT INFORMATION OF THE EMPLOYEES LIKE FINGERPRINTS, PHOTOGRAPHS, CONTACT INFORMATION ETC. TO ENSURE A COMPREHENSIVE DATABASE OF INFORMATION FOR THE FUNCTIONING OF THE TIME AND ATTENDANCE BIOMETRIC SYSTEM.	2	No.		
50	SUPPLY & INSTALLATION OF FIXED TYPE <b>CEILING / WALL MOUNTED DOME CAMERA</b> TRUE DAY / NIGHT WITH IR ILLUMINATOR, 4-MP, FIXED LENS OF 4 MM, WDR, FACE RECOGNITION TILL MINIMUM 10 METER. ALL WEATHER SUITABLE. COMPLETE WITH HOUSING, MOUNTING BRACKETS, ENCLOSURE FOR POWER SUPPLY ETC AS PER DRAWING & SPECIFICATION & SCHEDULE OF CAMERA COMPLETE IN ALL RESPECTS.	6	No.		
51	SUPPLY & INSTALLATION OF <b>PoE CAT-6 (POWER OVER ETHERNET) CABLE</b> FROM NVR TO CAMERA LOCATION. COMPLETE WITH HOUSING, MOUNTING BRACKETS, ENCLOSURE FOR POWER SUPPLY ETC AS PER DRAWING & SPECIFICATION & SCHEDULE OF CAMERA COMPLETE IN ALL RESPECTS. <b>AVERAGE LENGTH 170 RFT</b>	66	No.		
52	SUPPLY & INSTALLATION OF <b>2U SERVER RACK</b> AS PER DRAWING & SPECIFICATION COMPLETE IN ALL RESPECT	1	No.		
53	SUPPLY & INSTALLATION OF <b>CABLE MANAGEMENT KIT</b> FOR 2U RACK CABLE MANAGER TYPE: HORIZONTAL D-RING NUMBER OF D-RINGS: 5 D-RING MATERIAL: PLASTIC BACK PLATE MATERIAL: 18 GAUGE COLD ROLLED STEEL BACK PLATE FINISH: POWDER COATED COMPLETE IN ALL RESPECT	1	No.		
54	SUPPLY & INSTALLATION OF <b>32 CHANNEL NVR</b> HAVING NOT LESS THAN 24 PoE POINTS STACKABLE VIRTUALLY TO ACCOMMODATE ALL THE CAMERAS AND STORAGE CAPACITY OF 30 DAYS (16TB HARDISK) AT HIGH QUALITY, 25 FPS, AND ADJUSTABLE NOISE RATIO AS PER DRAWING & SPECIFICATION COMPLETE IN ALL RESPECT	1	No.		
55	<b>COMPLETE DOCUMENTATION</b> TESTING COMMISSIONING OF THE SECURITY SURVEILLANCE SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
56	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF SECURITY SYSTEM	1	JOB		
<b>FIRE ALARM SYSTEM</b>					
	ALL NETWORK ACCESSORIES ARE TO BE A PART OF THIS ITEM, INCLUDING RACKS, MOUNTING SCREWS, RAWL BOLTS, ANCHORS, MOUNTING BRACKETS AND ETC.				
57	SUPPLY & INSTALLATION OF ADDRESSABLE <b>MANUAL CALL POINTS REUSABLE</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETED IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	7	No.		
58	SUPPLY & INSTALLATION OF ADDRESSABLE DIRECTIONAL <b>ELECTRONIC SOUNDER WITH FLASHER</b> WITH MOUNTING ACCESSORIES, AND BACK BOX. COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	7	No.		
59	SUPPLY AND INSTALLATION OF INTELLIGENT CELING RECESSED/SURFACE MOUNTED <b>SMOKE DETECTORS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	7	No.		

<b>GROUND FLOOR - ELECTRICAL WORKS</b>						
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>	
60	SUPPLY AND INSTALLATION OF CEILING RECESSED/SURFACE MOUNTED <b>HEAT DETECTOR</b> S WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	3	No.			
61	SUPPLY AND INSTALLATION OF <b>4 ZONES INTELLIGENT ADDRESSABLE NETWORKED FIRE ALARM CONTROL PANEL (FACP)</b> WITH POWER SUPPLY AND BATTERY BACKUP FOR 3 HOURS WITH INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS. TO BE INTEGRATED TO BUILDING FACP SYSTEM.	1	No.			
62	SUPPLY & INSTALLATION OF <b>LOOP WIRING FROM FACP TO FIELD DEVICES</b> WITH 2X2.5 SQ.MM FP- 200 CLASS A CABLE WITH 3HRS FIRE RATING IN 1" DIA 16-GAUGE MS PIPE SURFACE AS PER DRAWINGS WITH ALL CONDUIT ACCESSORIES, JUNCTION BOXES, PULL BOXES ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS. ACTUAL MEASUREMENT SHALL BE TAKEN FROM THE SITE.	2275	RFT			
63	SPARE PARTS FOR FIRE ALARM SYSTEM FOR 2 YEAR OPERATION	1	JOB			
64	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF FIRE ALARM SYSTEM	1	JOB			
65	2 YEARS WARRANTY ALONG WITH COMPLETE PREVENTIVE MAINTENANCE OF ALL COMPONENTS OF FIRE ALARM SYSTEM.	1	JOB			
66	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE FIRE ALARM SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB			
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
67	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>					
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB			
68	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>					
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB			
	<b>TOTAL COST OF ELECTRICAL WORKS GROUND FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**GROUND FLOOR**  
**PLUMBING WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**GROUND FLOOR - PLUMBING WORKS**

S No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>ED BATHROOMS</b>					
<b>1.</b>	<b>FREE STANDING WASH BASIN STALL</b>				
	PROVIDING AND FIXING GLAZED EARTHENWARE FREE STANDING WASH BASIN STALL COMPLETE WITH INCLUDING THE COST OF INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER OF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT). THE CONTRACTOR IS TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED ON-SITE AS PER SITE CONDITIONS. NOTE: FAUCET, BIB COCKS, AND ALL OTHER FITTINGS ARE TO BE INCLUDED IN THE COST OF ITEM CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES BEFORE EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	2	No.		
<b>2.</b>	<b>WESTERN W.C. (COMMUNE)</b>				
	PROVIDING AND FIXING SQUATTING TYPE WHITE GLAZED EARTHEN WARE W.C. PAN WITH FRONT FLUSH INLET AND COMPLETE WITH INCLUDING THE COST OF FLUSHING CISTERN WITH INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER ONLYF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT) WITH 4" DIA C.I. TRAP. CONTRACTOR TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED END TO END UTILISING PERFECT SLOPE ON SITE AS PER SITE CONDITIONS. NOTE: CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES PRIOR TO EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	5	No.		
<b>3.</b>	<b>EASTERN (SQUATTING) WATER CLOSET</b>				
	PROVIDING AND FIXING SQUATTING TYPE WHITE GLAZED EARTHEN WARE W.C. PAN WITH FRONT FLUSH INLET AND COMPLETE WITH INCLUDING THE COST OF FLUSHING CISTERN WITH INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER ONLYF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT) WITH 4" DIA C.I. TRAP. CONTRACTOR TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED END TO END UTILISING PERFECT SLOPE ON SITE AS PER SITE CONDITIONS. NOTE: CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES PRIOR TO EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	2	No.		
<b>4.</b>	<b>HAND SHOWERS (MUSLIM SHOWER)</b>				
	MASTER, SONEX OR EQUIVALENT TOILET HAND SPRAY WITH FLEXIBLE CHAIN & TELEPHONE TYPE SHOWER INCLUDING TEE STOP COCK ETC. COMPLETE IN ALL RESPECT.	6	No.		
<b>5.</b>	<b>BASIN MIXER TAP</b>				
	MASTER, SONEX OR EQUIVALENT WASH BASIN HOT AND COLD WATER MIXER, ETC.				
a.	MIXER TAP	6	No.		
b.	DOUBLE BIB COCK FOR TOILETS	16	No.		
<b>6.</b>	<b>TOILET ACCESSORIES COMPLETE SET</b>				
a.	SOAP DISPENSER	5	No.		
b.	SOAP DISH				
	PROVIDING AND FIXING SOAP-DISH OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	5	No.		

GROUND FLOOR - PLUMBING WORKS					
S No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
c.	<b>TOWEL ROD</b>				
	PROVIDING AND FIXING CHROMIUM PLATED TOWEL RAIL 24" LONG AND 3/4" DIA, OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	5	No.		
d.	<b>PAPER HOLDER</b>				
	PROVIDING AND FIXING TOILET PAPER-HOLDER OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	6	No.		
e.	<b>COAT HOOKS</b>	6	No.		
7.	<b>LOOKING MIRROR</b>				
	LOOKING MIRROR 5mm BEST QUALITY BELGIUM OR EQUIVALENT MADE FIXED WITH CLIPS. HAVING MIRROR LED LIGHT EMBEDDED IN THE LOOKING MIRROR ATOP VANITY WITH 2" THICK LIGHT BORDER WITH 1" OFFSET MIRROR FINISH FROM THE MIRROR EDGES. EACH MIRROR TO BE MOUNTED ON FRAMES MARINE PLY BACK WITH 2 TH FRAMING TO ALLOW 2 INCH GAP BETWEEN WALL AND MIRROR; HAVING LED LIGHT POINT AT ITS BACK; TO MAKE IT BACK LIT. COMPLETE IN ALL RESPECT AND SIZE AS PER SITE REQUIREMENT.	53	Sft		
8.	<b>KITCHEN SINK</b>				
	PROVIDING AND FIXING STAINLESS STEEL KITCHEN SINK BOWL 24"x18" WITH DRY TRAY/ WASHING SURFACE OF 18 GAUGE MAKE MASTER OR EQUIVALENT FIXED IN COUNTER OVER PRE CAST SLAB, PASTING WITH JELLY/ SILICON WITH 15mm DIA C.P. BRASS T. STOP COCK OF MASTER, SONEX, 40mm DIA HEAVY DUTY WASTE COUPLING AND PVC FLEXIBLE WASTE PIPE OF APPROVED MAKE AND QUALITY COMPLETE IN ALL RESPECTS. AS PER THE MANUFACTURER'S REQUIREMENT.	1	No.		
9.	<b>SECTION-02 WATER SUPPLY SYSTEM</b>				
	<b>SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF COMPLETE PIPE WORK FOR COLD AND HOT WATER SYSTEM INCLUDING ALL ACCESSORIES REQUIRED TO COMPLETE SYSTEMS READY TO OPERATE AS PER SPECIFICATION, DRAWINGS &amp; INSTRUCTION OF CONSULTANT.</b>				
a.	POLYPROPYLENE RANDOM DADDEX, AGM, STEELEX OR EQUIVALENT PP-R PIPES PN 20 AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT.				
i.	DIA. 1-1/2"	21	Rft		
ii.	DIA. 2"	25	Rft		
b.	POLYPROPYLENE RANDOM DADDEX, AGM, STEELEX OR EQUIVALENT PP-R PIPES PN 20 AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT.				
i.	DIA. 1-1/4"	27	Rft		
ii.	DIA. 1-1/2"	14	Rft		
iii.	DIA. 2"	11	Rft		
iv.	DIA.3"	7	Rft		
d.	<b>BRASS BODY GATE-VALVES / BALL-VALVES WITH UNIONS.</b>				
i.	SIZE 1-1/4"	3	No.		
ii.	SIZE 1-1/2"	3	No.		
iii.	SIZE 2"	5	No.		
iv.	SIZE 3" (CI BODY)	2	No.		



<b>GROUND FLOOR - PLUMBING WORKS</b>					
<b>S No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>10.</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN R.C.C. WALLS OR SLABS WITH HILTE CORE CUTTING MACHINE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK, COST OF DISPOSAL OF CONCRETE CORES, COMPLETE IN ALL RESPECTS AS DIRECTED BY THE ENGINEER.				
<b>A.</b>	4" DIA	2	No.		
<b>B.</b>	6" DIA	2	No.		
<b>C.</b>	8" DIA	7	No.		
<b>11</b>	<b>DRAIN PLUMBING</b>				
	PVC DADEX, AGM, STEELEX OR EQUIVALENT PVC PIPES UPTO 4 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT. NOTE: THE JOB INCLUDES PLUGGING OF DRAIN INTO RISER DRAIN LINE.				
<b>A.</b>	DIA 2"	35	RFT		
<b>B.</b>	DIA 4"	35	RFT		
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
<b>12.</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>13</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>TOTAL COST OF PLUMBING WORKS GROUND FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**GROUND FLOOR**  
**HVAC WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**GROUND FLOOR - HVAC WORKS**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>VRF CASSETTES</b>				
	P/F COMMISSIONING INSTALLATION, TESTING OF VRF AC/DC INDOOR UNITS CASSETTE TYPE INCLUSIVE OF ALL ACCESSORIES, COPPER PIPING, Y SECTIONS, ALL COPPER ACCESSORIES AND HANGING ACCESSORIES TO BE A PART OF THIS ITEM, INSULATION BOUND IN A PVC CONDUIT FOR EACH CASSETTE. DRAIN RISER AND DRAIN PIPES SHALL BE INCLUSIVE OF THIS COST CONNECTED TO BUILDING SERVICE CORE AT THE END. COMPLETE ELECTRICAL SCOPE I.E. CONTROL WIRE, SENSING WIRE, PANEL WIRE, COMMUNICATION WIRE, POWER WIRE TO INTERNAL UNIT. INCLUSIVE OF TWO REMOTE CONTROL. FOR EACH CASSETTE INCLUSIVE OF ROOM PANEL AND IR REMOTE COST. ISOLATION VALVE FOR REFRIGERANT ON THE BEFORE THE CASSETTE TO BE INCLUSIVE OF THE COST. COMPLETE INSTALLATION IN ALL ASPECTS. VRF DRAIN PIPE FROM VRF CASSETTE TO THE PERIPHERY OF THE BUILDING TO BE INCLUSIVE OF THE COST WHICH WILL BE CONNECTED TO DRAIN RISER VIA 3" UPVC PIPE (3 INCHES PIPE IS A SEPARATE ITEM). WHEREVER THE VRF CASSETTE IS EXPOSED A DECO PAINTED MS BOX of 12SWG ON THE SIDE AS SLEEVE OF THE CASSETTE WITH OPENABLE SECTIONS FOR MAINTAINANCE AS PER ARCHITECTS RECOMMENDATION AND COLOUR.				
<b>A.</b>	2 TON	17	No.		
<b>B.</b>	2.5 TON	3	No.		
<b>C.</b>	4 TON	1	No.		
<b>2</b>	<b>STRUCTURAL STEEL WORK</b>				
	PROVIDING, FABRICATING & FIXING OF MS TEE BARS, CHECKERED SHEETS (10 SWG) ANGLES 3" X 2" X 1/4" TH ETC FOR STRUCTURAL WORKS REQUIRED FOR FIXING OF HVAC OUTDOOR UNIT ON PLATFORM INCLUSIVE OF PLATFORM CONSTRUCTION AND ITS MOUNTING TO THE BUILDING STRUCTURAL COMPONENT. THE JOB SHALL INCLUDE ANY OR ALL REPAIRS AND NECESSARY ADJUSTMENTS AND OTHER NECESSARY WORKS. COMPLETE WITH WASHERS AND MOUNTING RUBBERIZED ABSORBERS TO PREVENT VIBRATIONS AND ITS EFFECT ON BUILDING. ALL STRUCTURAL WORKS TO BE EPOXY PAINTED TO DARK BLUE COLOR	500	KG		
<b>3</b>	<b>OUTDOOR UNIT</b>				
	REMOVAL CLEANING, WRAPPING OF INSULATION FABRIC, WATERPROOFING AND PAINTING OF APPROVED COLOUR ALL PREVIOUS INSTALLATIONS TO BE TAKEN OUT CAREFULLY AND SEALED OFF. <b>2x 10+ 1x6 TON UNIT (FOR LARGE WING)</b> <b>2x 10 TON UNIT (FOR SMALL WING)</b>				
<b>A.</b>	VRF OUTDOOR UNIT PER TON COST WITH COPPER PIPING FROM OUTER TO INNER WITH ALTERNATE PIPES FOR EACH INDOOR CONNECTION; INTEGRATION AND COPPER PIPING MAIN AS PER EACH VRF OUTDOOR UNIT ALL VRF OUTDOOR UNITS TO HAVE ISOLATION VALVES FOR REFRIGERANT CAPTURE AND MAINTAINANCE. ALL OUTDOOR UNITS TO BE SYNCHROZIED WITH EACH OTHER FOR FAIL SAFE OPERATION USING COPPER PIPES AND RELEVANT ACCESSORIES: ENSURING SYNCHRONIZATION AMONGST EACH OTHER. ALL COPPER PIPING INCLUSIVE OF NETWORK COPPER PIPING VIA Y AND STRAIGHT SECTIONS OF APPROPRIATE SIZES AS PER VRF REQUIREMENTS TO BE INCLUSIVE OF THIS JOB HAVING PROPER INSULATION TO INDUSTRY STANDARD AS PER MANUFACTURER. INCLUSIVE OF REFRIGRANT COST AND ITS TOP UP COST WHEN SYSTEM IS RUN AS PER OEM. VRF OUTDOOR UNITS AND ITS CARDS TO BE VALIDATED AND MADE PROPER USING ALL WEATHER SILICON PROTECTION IN ADDITION TO THE OEM PROTECTION. THE CONTRACTOR SHALL PRODUCE SAMPLES OF ADDITIONAL PROTECTION OF CARDS ALONG WITH INSTALLATION OF PROTECTION DEVICES SUCH AS SURGE PROTECTIONS AND OTHERS AS REQUIRED FOR SMOOTH OPERATION	46	TON		

<b>GROUND FLOOR - HVAC WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>4</b>	<b>DISTRIBUTION BOARDS</b>				
	SUPPLY AND INSTALLATION OF THE FOLLOWING DISTRIBUTION BOARDS OF MAKE HUSSAIN & CO., A TO Z, UNIVERSAL MADE WITH 14 SWG SHEET STEEL HOUSING WITH APPROVED COLOR AND HAVING SPECIFIED CIRCUIT BREAKERS USING TP MCCB, VOLTMETER, AMMETER, INDICATION LIGHTS, WITH <b>K- ELECTRIC APPROVED ENERGY METERS</b> AND ENERGY LOGGERS. AS SHOWN IN THE DRAWING. ( <b>REFER SINGLE LINE DIAGRAM</b> ). NOTE: SPECIFIED MULTIMETER SHOULD BE INCLUDED IN THE DBs				
<b>A.</b>	FOR SMALL WING	1	No.		
<b>B.</b>	FOR LARGE WING	1	No.		
<b>5</b>	<b>DRAIN PIPING (HVAC)</b>				
	PVC DADEX, AGM, STEELEX OR EQUIVALENT PVC PIPES UPTO 4 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT. NOTE: THE JOB INCLUDES PLUGGING OF DRAIN INTO RISER DRAIN LINE.				
<b>A.</b>	DIA 3"	245	RFT		
<b>B.</b>	DIA 1"	140	RFT		
<b>6</b>	<b>COMMISSIONING OF HVAC SYSTEM</b>				
	<b>COMPLETE DOCUMENTATION</b> TESTING COMMISSIONING OF THE HVAC SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
<b>7</b>	<b>2 YEARS WARRANTY</b> ALONG WITH COMPLETE PREVENTIVE MAINTENANCE OF ALL COMPONENTS OF HVAC SYSTEM.	1	JOB		
<b>8</b>	<b>COMPLETE TRAINING</b> OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF HVAC SYSTEM	1	JOB		
<b>9</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN R.C.C. WALLS OR SLABS WITH HILTE CORE CUTTING MACHINE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK, COST OF DISPOSAL OF CONCRETE CORES, COMPLETE IN ALL RESPECTS AS DIRECTED BY THE ENGINEER.				
<b>A.</b>	1.5" DIA	7	No.		
<b>B.</b>	4" DIA	2	No.		
<b>C.</b>	6" DIA	1	No.		
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
<b>10</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>11</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>COST OF HVAC GROUND FLOOR</b>					



SLIC RENOVATION  
DESIGN CONSULTANCY  
OF 6th FLOOR  
BUILDING No. 9, KARACHI.



**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**5th FLOOR**  
**SUMMARY**

5th FLOOR - SUMMARY		
S # N	DESCRIPTION	AMOUNT RS.
1	Cost of Civil Work	
2	Cost of Furniture	NTQ
3	Cost of Electrical Works	0
4	Cost of Plumbing Works	0
5	Cost of HVAC	0
<b>Total Cost of 5th Floor</b>		<b>0</b>
<b>LESS SALVAGE COST</b>		<b>0</b>
<b>NET TOTAL COST OF 5TH FLOOR</b>		<b>0</b>

All taxes are inclusive

**Total Amount in Words Rs.** \_\_\_\_\_

Contractor's Signature with Stamp

Dated: \_\_\_\_\_

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**5th FLOOR**  
**SALVAGABLE MATERIAL**

The contractor is required to store the items temporarily in the storage space provided by the client (if required). Each lot of the salvaged material shall be documented before leaving the site, including acquiring the gate pass. All salvaged items shall be considered as the contractor's property after leaving the site.

<b>5th FLOOR - SALVAGABLE MATERIAL (TO BE CREDITED TO THE CLIENT)</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>1</b>	<b>SERVICEABLE MATERIAL DEMOLITION</b>				
A.	TAKING OUT WOODEN / VIN BOARD PARTITION WALLS, WINDOWS, DOOR SHUTTERS TAKING OUT CAREFULLY AND STACKING SERVICE ABLE AT THE DESIGNATED PLACE AND CREDIT FOR THE COST OF SALVAGE TO THE CLIENT AND THEN IT WILL BE THE PROPERTY OF THE CONTRACTOR.	8,000	Sft		
B.	TAKING OUT GLAZED ALUMINUM DOORS & WINDOWS CAREFULLY AND STACKING SERVICEABLE AT DESIGNATED PLACES AND DISPOSAL OF UNSERVICEABLE AS PER DIRECTION	850	Each		
C.	TAKING OUT GI PIPES, FITTINGS AND FIXTURES AND STACKING THE SERVICEABLE AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
D.	TAKING OUT ELECTRICAL WIRES, FITTINGS & FIXTURES, SWITCHBOARDS ETC. AND STACKING THE SERVICE AT SOME DESIGNATED PLACE AS PER DIRECTION.	1	LS		
E.	TAKING OUT CAREFULLY ELECTRICAL DISTRIBUTION BOARDS AND SUB MAIN DISTRIBUTION BOARDS AND STAKING THE SERVICEABLE IT OUT AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
F.	TAKING OUT CAREFULLY HVAC DUCTS AND STACKING THE SERVICEABLE IT AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
G.	TAKING OUT WOODEN /METALLIC RAILINGS AND STACKING THE SERVICEABLE AT SOME DESIGNATED PLACE AS PER DIRECTION.	1	LS		
H.	TAKING OUT CAREFULLY DOOR, WINDOWS HARDWARE ETC COMPLETE	1	LS		
I.	TAKING OUT CAREFULLY WINDOW BLINDS AND STACKING THE SERVICEABLE	1	LS		
J.	TAKING OUT CAREFULLY <b>BUS BAR</b> AND ACCESSORIES AND STACKING THE SERVICEABLE	1	LS		
<b>TOTAL AMOUNT TO BE CREDITED TO THE CLIENT FIFTH FLOOR</b>					



**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**5th FLOOR**  
**CIVIL WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge. Single Surface shall be used to measure QTY in SFT

<b>5th FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>DEMOLITION</b>				
	<p>DEMOLITION AND DISMANTLING OF EXISTING INFRASTRUCTURE, EXISTING BUILDING INTERIORS INCLUDING:</p> <ol style="list-style-type: none"> <li>1. FLOOR TILES,</li> <li>2. MASONRY WALLS,</li> <li>3. DOORS,</li> <li>4. FALSE CEILING</li> <li>5. ALL KIND OF WIRING</li> <li>6. FIRE SENSORS</li> <li>7. SPEAKERS</li> <li>8. ROLLER BLINDS.</li> <li>9. CEILING ACCESSORIES ETC.</li> <li>10. REINSTALLING ANY EQUIPMENT ON THE ROOF WITH APPROPRIATE ANCHORING WHEREVER NEEDED.</li> </ol> <p>COVERED AREA: 14,031 SFT APPROX.</p> <p>INCLUSIVE OF COLLECTING, TEMPORARY STORAGE BEFORE DISPOSAL, CARTAGE, ALL KINDS OF LABOUR, DISPOSAL OF DEBRIS FROM ANY LEVEL UP TO ANY LEAD AND LIFT AS DIRECTED BY THE CLIENT /SITE ENGINEER. AFTER THE COMPLETION OF THE JOB THE CONTRACTOR WILL PHOTOGRAPH, RECORD &amp; AND SUBMIT AS BUILT DRAWING TO THE CONSULTANT BEFORE STARTING CONSTRUCTION WORKS.</p> <p>NOTE:</p> <ol style="list-style-type: none"> <li>1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUMPING THE DEBRIS AT THE APPROPRIATE DUMPING SITE OUT OF SITE PREMISES.</li> <li>2. COLLECTIBLE ITEMS SHALL BE SAFELY TRANSFERRED TO THE CLIENT- DESIGNATED STORAGE AREA.</li> <li>3. IDENTIFICATION OF INVENTORY BEFORE DISMANTLING NEEDS TO BE MADE.</li> <li>4. AFTER IDENTIFICATION ITEMS TO BE HANDED OVER TO THE CLIENT, CATEGORIZED SALVAGED.</li> <li>5. LOSS OF PROPERTY TO BE CHARGED AT PKR 60/KG.</li> </ol>	1	Job		
<b>2</b>	<b>TERMITE PROOFING</b>				
	<p>VERMIN AND TERMITE FULL SPECTRUM FUMIGATION DONE ON FOLLOWING THREE (3) STAGES.</p> <ol style="list-style-type: none"> <li>I. AFTER COMPLETE DEMOLITION, BEFORE COMMENCEMENT OF ANY CONSTRUCTION.</li> <li>II. AFTER CONSTRUCTION OF ALL WALLS AND PARTITIONS.</li> <li>III. ON COMPLETION OF ALL CONSTRUCTION AND FINISHING.</li> </ol>	15,435	SFT		
<b>WALLS, PARTITIONS &amp; CLADDING</b>					
<b>3</b>	<b>BLOCK MASONRY</b>				
	<p>PROVIDING &amp; LAYING STANDARD CEMENT CONCRETE SOLID BLOCK MASONRY WALL, USING MACHINE-MADE BLOCKS AND APPROVED QUALITY OF FINE AND COURSE AGGREGATE LAID IN 1:5 CEMENT SAND MORTAR, IN ANY SHAPE, LENGTH, OR HEIGHT INCLUDING, RAKING JOINTS, SCAFFOLDING, ANCHOR BARS, CURING, CUTTING OF FLOOR FOR MASONRY ETC. COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. WETTED FOR THREE DAYS AFTER COMPLETE LAYING OF WALL.</p>				
<b>A.</b>	9" THICK BLOCK MASONRY	1,944	sqft		
<b>B.</b>	6" THICK BLOCK MASONRY	4,861	sqft		
<b>C.</b>	4" THICK BLOCK MASONRY (TOILET WALL)	2,916	sqft		

5th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>4</b>	<b>CEMENT BOARD PARTITION WALL</b>				
	CEMENT BOARD PARTITION WALL SUSPENDED FROM THE TOP SLAB ABOVE GLASS PARTITION WITH 100mm THICK STUD PARTITION @ 3 FEET c/c, CONSISTING OF G.I. SHEET (22 SWG): ALL CEMENT BOARD PANELS TO HAVE GI FRAMING ON PERIPHERY INTERNAL FRAMING OF APPROVED SECTION, 12mm THICK CEMENT BOARD FIXED ON BOTH SIDES OF FRAME, INCLUDING ALL HARDWARE, FIBER TAPE ON SHEET JOINTS, METAL TAPE ON EDGES, ETC., PAINT JOB TO BE INCLUDED IN THE ITEM. INCLUDING MAKING OPENINGS FOR HVAC DUCTS AND CABLE TRAYS ETC. ABOVE 9' IN HEIGHT. COMPLETE IN ALL RESPECT AS PER DRAWING AND INSTRUCTION OF THE ARCHITECT.				
<b>A.</b>	4" THICK HEIGHT: 3'-6" (ABOVE GLASS PARTION)	633	RFT		
<b>5</b>	<b>GYPSUM VERTICAL BAND</b>				
	P/F OF GYPSUM BAND ABOVE GLASS PARTITION WITH COVE HAVING DC LED STRIP LIGHT @ 120 LEDs PER METRE (36 LEDs PER FOOT) IN/AROUND COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT AND NECESSARY G.I. FRAMING. INCLUDING APPROVED WALLPAPER PASTED IN SEAMLESS MANNER AND MAKING OPENINGS FOR HVAC DUCTS AND CABLE TRAYS ETC. ABOVE 9' HEIGHT. COMPLETE IN ALL RESPECT AS PER DRAWING AND INSTRUCTION OF THE ARCHITECT. <b>NOTE:</b> COST OF WALLPAPER TO BE INCLUDED IN THE ITEM.	200	SFT		
<b>6</b>	<b>PLASTER WORK</b>				
	PROVIDING AND LAYING CEMENT SAND PLASTER 1:4 USING O.P. CEMENT & FINE SAND ON WALLS, COLUMNS AND WHEREVER REQUIRED OF ANY SHAPE, CURVE AND DESIGN USING EXPANDED METAL MESH ON JOINTS COLUMNS WITH WALL AND ON CONDUITS FILLING SCAFFOLDING WITH MAKING EDGES CORNERS, HOISTNG, WATERING, CURING AT ANY HEIGHT SMOOTHLY FINISHED INCLUDING MAKING DRIP COURSE AT ALL PROJECTIONS, SLABS OFFSETS OR WHERE AS REQUIRED COMPLETE AS PER SPECIFICATIONS AND INSTRUCTION OF THE ENGINEER/ ARCHITECT.	19,346	SFT		
<b>7</b>	<b>REPAIRING / FILLING OF CRACKS</b>				
	REPAIRING CRACKS ON INTERNAL AND EXTERNAL WALLS, CEILING, BEAMS, AND WHEREVER REQUIRED BY SCRAPPING, CHISELLING, FILLING, AND FINISHING OF SURFACE. FILLING SHALL BE DONE WITH PLASTER / PUTTY OR ANY OTHER APPROPRIATE MATERIAL. NOTE: EACH POINT SHALL NOT EXCEED 1 SFT SURFACE AREA. IN CASE OF REPAIRING OF LARGER THAN 1 SFT THE CONTRACTOR SHALL MEASURE, PHOTOGRAPH, AND DOCUMENT THE POINT FOR THE RECORD.	150	No.		
<b>8</b>	<b>MARINE PLY DECO PAINTED FLUTED PANELS</b>				
	PROVIDING AND FIXING OF FLUTED PANELS CNC OR ROUTER PROFILED AS PER ARCHITECT CHOICE AND SPECIFICATION TO MAKE A SEAMLESS SURFACE. MADE OF MARINE PLY 16mm THICK, PASTED ON TOP OF 12mm TH MARINE PLY SHEET WITH ROUGH WOOD FRAMING OF 25mm by 50mm @ 3 FEET c/c AT BACK SIDE AND FIXED FRAMING ON EDGES OF EACH SHEET. MARINE PLY BATTONS ARE TO BE PASTED AFTER MAKING IT SECURE IN PLACE WITH APPROVED DECO PAINT ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. ALL NECESSARY SUPPORT/ FRAMING STRUCTURE IS INCLUDED IN THE JOB.	2,444	SFT		

5th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>9</b>	<b>MACHINE POLISHED MARBLE FEATURE WALL</b>				
	PROVIDING AND FIXING OF MACHINE POLISHED WALL OF APPROVED MARBLE INCLUDING BULL NOSING / CHAMFERING ON EDGES, ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. FIBER MESH TO BE PASTED AT THE BACK SIDE OF THE MARBLE USING EPOXY RESIN BEFORE FIXING TO ITS POSITION. ALL CONCRETE/ DRY BOND WORKS ARE INCLUDED IN THE JOB.				
<b>A.</b>	LIFT MARBLE FEATURE WALL <b>PASHA WHITE, SANDALWOOD, DIAG-NOSE WHITE OR EQUIVALENT (BOOK MATCHED- SEAMLESS TEXTURED IF APPLICABLE)</b>	374	SFT		
<b>10</b>	<b>FLAT GLASS PARTITION WALL</b>				
	PROVIDING, FABRICATION & FIXING <b>9FT HIGH</b> 12mm THICK TEMPERED ULTRA CLEAR MACHINE EDGED, GLASS PARTITIONS WITH ALL SIDES POWDER COATED ALUMINUM SECTION 12mm THICK BORDER AS APPROVED BY ARCHITECT. SECTION DESIGN TO BE CONFIRMED BY THE ARCHITECT. WITH GASKET FLUSHED AND CLEANED TO MATCH FRONT AND BACK SURFACE AND SHAPE INCLUDING FROSTING FILM PASTED ENSURING NO BUBBLES OR ANOMALIES ARE FOUND AS SHOWN IN DRAWINGS/ INSTRUCTED BY ARCHITECT, INCLUDING BOLTS, NUTS, SCREWS ALUMINIUM CHANNEL IF REQUIRED FOR SAFELY MOUNTING AND ANCHORING THE GLASS PARTITION. BOLTED/ CONNECTED TO GROUND AND CEILING AT EVERY 4 FEET SPACE OR WHEREVER GLASS CUTTING IS ENCOUNTERED, CONTRACTOR TO ENSURE SEAMLESS EDGING SOLUTION WITH A TOLERANCE OF UPTO 0.5MM. COMPLETE IN ALL RESPECTS. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM INCLUDING FROSTING FILM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE A DETAILED SHOP DRAWING OF FRAMING, GLASS PARTITION, CUTTING, AND DOORS DETAILS AND PATCH FITTINGS IF ANY PRIOR TO THE START OF WORK.	3,542	SFT		
<b>12</b>	<b>GLASS DOORS (SWING)</b>				
	P/F TEMPERED SWING GLASS DOOR USING 12mm ULTRA CLEAR GLASS, MACHINE EDGED, WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. WITH ALL SIDES POWDER COATED ALUMINUM SECTION 1.6mm THICK BORDER AS APPROVED BY ARCHITECT. ALUMINUM SECTION SIZE APPROX. 1.5" x 2" WITH GASKET FLUSHED. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. GLASS DOOR TO BE ANCHORED ON FLOOR AND MOUNTED TO CEILING USING A CHANNEL AND M10 RODS TO BE MADE STURDY.				
<b>A.</b>	DOUBLE LEAF DOORS (6'-0" x 9'-0")	3	Nos		
<b>B.</b>	SINGLE LEAF DOORS (3'-0" x 9'-0")	15	Nos		
<b>C.</b>	SINGLE LEAF DOORS (2'-6" x 9'-0")	1	Nos		

5th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>13</b>	<b>GLASS DOORS (FOLDING / ACORDIAN)</b>				
	P/F TEMPERED FOLDING GLASS DOOR (ACORDIAN STYLE) USING 12mm ULTRA CLEAR GLASS WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. GLASS TO BE ENCASED IN ALUMINUM SECTION OF 2mm TH POWDER COATED; 1.5" (FRONT PROFILE) by 2" SECTION. INCLUSIVE OF IMPORTED HARDWARE TOP MOUNTED TO MOUNT SECURE AND PROVIDE CLEAN CHANNEL TO GLASS. ONCE HARDWARE SHALL INCLUDE RUBBER GASKITS TO SECURE CLEAN UNINTERRUPTED GLASS SURFACE WITHOUT OPENINGS ONCE COMPLETELY OPEN				
<b>A.</b>	4 PANELS FOLDING DOOR (11-6" x 9'-0")	2	No.		
<b>14</b>	<b>SS TRIM FOR LIFT OPENINGS</b>				
	P/F OF 14 SWG SS ARCHITRAVE FOR LIFT DOORS, WITH GOLDEN AND SS FINISH COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE.COST TO INCLUDE COST OF MOUNTING. BACKING USING MARINE PLY PROFILE OVER WHICH THE TRIM SHALL BE PASTED GLUED AND SECURED IN PLACE.	4	No.		
<b>15</b>	<b>ALUMINUM WINDOWS</b>				
	PROVIDING AND FIXING FULLY DOUBLE-GLAZED UV-RATED,SOUND PROOF, APPROVED TEXTURE, POWDER COATED/ ANODIZED ALUMINUM FIXED WINDOWS/ VENTILATORS/ PARTITIONS WITH FROSTING FILM AS PER BRITISH STANDARDS INCLUDING SHATTER PROOF SECURITY FILM OF 3m OR EQUIVALENT, MANUFACTURED BY ALPHAPEN/ ALUCON/ UBM TOSTEM/ SCHUCO OR EQUIVALENT. PROFILE THICKNESS OF MINIMUM 1.5 INCH IN WIDTH. FIXING THROUGH THEIR APPROVED FABRICATORS, INCLUDING DRAIN CHANNEL. FITTINGS WITH ALL ACCESSORIES CUTTING HOLES ETC. AND MAKING GOOD DAMAGES TO WALLS ETC. THE ADJACENT FINISHED WALL SHALL BE FILLED WITH WEATHERPROOF SILICON SEALANT OVER THE BACKER ROD OF THE REQUIRED SIZE AND OF APPROVED QUALITY, ALL COMPLETE AS PER THE APPROVED DRAWING & DIRECTION OF THE ENGINEER-IN-CHARGE. NOTE: FRAMING OF THE PRODUCT TO THE ADJACENT WALL FACE IS ALSO INCLUDED IN THE COST	2,581	SFT		
<b>16</b>	<b>ALUMINUM DOOR (TOILET CUBICLE)</b>				
	PROVIDING AND INSTALLING IN-POSITION ALUMINUM DOOR, WITH POWDER COATED/ ANODIZED ALUMINUM SHUTTER FRAME & MAIN FRAME SECTION OF (ALPHAPEN/ ALUCON/ UBM/ TOSTEM/ SCHUCO OR EQUIVALENT), INCLUDING ALL HARDWARE, S.S. HINGES, LOCKSET, GLUE, SILICONE SEALANT, BACKING ROD, NEOPRENE/RUBBER GASKET, WASTAGE, LIFTING, CUTTING, FIXING, MAKING OF GROOVE IF REQUIRED ETC., COMPLETE AS PER DRAWING, HARDWARE SCHEDULE & INSTRUCTION OF THE ARCHITECT. CONTRACTOR MUST SUBMIT DOOR OPTIONS SPECIFYING COLORS, PATTERNS AVAILABLE. NOTE: FRAMING OF THE PRODUCT TO THE ADJACENT WALL FACE IS ALSO INCLUDED IN THE COST				
<b>A.</b>	2.25'x 7' (WIDTH x HEIGHT)	12	No.		
<b>B.</b>	2.5'x 7' (WIDTH x HEIGHT)	2	No.		

5th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>17</b>	<b>WOODEN DOOR</b>				
	PROVIDING AND FIXING OF PARTIAL FRAMED 1.5" THICK SOLID OAK PANEL DOOR. HAVING IRON MONGRIES INCLUDING COAT HANGERS, DECORATIVE MORTGAGE-STYLE LOCK OF MAKE YALE OR EQUIVALENT, HANDLES S.S. HINGES, AND ALL OTHER ACCESSORIES OF ARCHITECT'S CHOICE. COMPLETE IN ALL RESPECT. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
A.	3'x 9' (WIDTH x HEIGHT)	7	No.		
B.	3.5'x 9' (WIDTH x HEIGHT)	1	No.		
<b>18</b>	<b>FIRE DOOR (FIRE CORRIDOR)</b>				
	PROVIDING, FABRICATING, AND FIXING IN POSITION 2" THICK INTERNAL METAL FRAME DOOR WITH OUTER BODY MADE OF FIRE-RATED WOOD ALONG WITH PUSH BAR HAVING HONEY COMB STRUCTURE INSIDE AND GLASS WOOL FILLING WITH 16 SWG MOULDED SHEET METAL FRAME (CHOWKATS) WITH 2 COATS OF RED OXIDE PAINT. METAL FRAME SHALL BE FILLED WITH CONCRETE AND FIXED WITH 4 NOS. 6" LONG HEAVY DUTY M.S CHROMIUM PLATED HINGES AND 6 NO HINGES FOR LEAD LINE DOOR TO EACH SHUTTER, AND 6 NOS 6" LONG HOLD FASTS WELDED MADE OF ANGLE IRON (1-1/2"x1-1/2" X3/16") WITH FORKED ENDS TARRED AND WITH METAL FRAME EMBEDDED IN MASONRY AND WITH APPROVED HARDWARE 2 NOS. 9" LONG TOWER BOLTS, DOOR CLOSER RAYOBI OF JAPAN OR EQUIVALENT, DOOR STAY, AND C.P. HANDLES, DEODAR WOOD ARCHITRAVE 2-1/2"x 5/8" ALL AROUND DOOR FRAME AND APPROVED POLISHING OR SINLGE COAT OF APPROVED ENAMEL PAINT OVER A PRIMER COAT AND 2 COATS OF ICI INTUMESCENT PAINT TO RESIST FIRE UP TO MINIMUM 120 MINUTE ON STANDARD (BS 476-22). TERMITES CONTROL AND WOOD PRESERVATIONS APPLICATIONS (SOLIGNUM), SMOKE SEALS ON THREE SIDES AND FIRE-RATED ACCESSORIES, AND PEEP WINDOWS OF APPROPRIATE SIZE ALL COMPLETE AS PER DRAWINGS, SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. <b>NOTE:</b> THE PRODUCT MUST ASSURE FIREPROOFING STANDARDS AS REQUIRED. THE CONTRACTOR MUST SUBMIT THE SHOP DRAWING AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
A.	3'x 9' (WIDTH x HEIGHT)	7	No.		
B.	DOUBLE LEAF 5'x 9' (WIDTH x HEIGHT)	1	No.		
<b>19</b>	<b>WOODEN DOOR (BATHROOM DOOR)</b>				
	PROVIDING AND FIXING OF PARTIAL FRAMED 1.5" THICK SOLID OAK PANEL DOOR. HAVING IRON MONGRIES INCLUDING COAT HANGERS, DECORATIVE MORTGAGE-STYLE LOCK OF MAKE YALE OR EQUIVALENT, HANDLES S.S. HINGES, AND ALL OTHER ACCESSORIES OF ARCHITECT'S CHOICE. 1.5 FEET HIGH SPLASH ALUMINIUM SHEET SHALL BE PASTED ON EITHER SIDE OF THE DOOR AS PER DRAWINGS. COMPLETE IN ALL RESPECT. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
A.	2.5'x 9' HEIGHT	3	No.		
B.	3'x 9' HEIGHT	6	No.		
<b>20</b>	<b>LINTELS</b>				
	PROVIDING & FIXING OF PRECAST RCC LINTELS OVER DOORS, WINDOWS OR WHEREVER REQUIRED. UPTO 12" HEIGHT, THE COST MUST INCLUDE ALL MATERIAL (STEEL BARS) 1:2:4 (fc 3000 psi).				
A.	WINDOW LINTEL	345	RFT		
B.	DOOR LINTEL	64	RFT		

5th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>21</b>	<b>ROLLER BLINDS</b>				
	<p>PROVIDE AND INSTALL IN POSITION ROLL-UP WINDOW BLINDS OF APPROVED COLOR AND SPECIFICATIONS, CHAIN OPERATED ROLLER BLIND (PROTECTOR OR APPROVED EQUIVALENT) WITH APPROVED FABRIC SCREW ON WALLS, INCLUDING ALL HARDWARE, WASTAGE, LIFTING, CUTTING, FIXING, SCAFFOLDING ETC., COMPLETE AS PER DRAWING &amp; INSTRUCTION OF THE ARCHITECT.</p> <p><b>HEIGHT 9'</b></p> <p>FOR PAYMENT NET INSTALLED BLIND (INCLUDING TOP &amp; BOTTOM CHANNEL) AREA WILL BE MEASURED.</p>	4,025	SFT		
	<b>FLOORING</b>				
	<p>NOTE:</p> <p>1. THE DEMOLITION / DISMANTLING OF EXISTING FLOORING IS INCLUDED IN THE JOB.</p> <p>2. SAMPLES &amp; TILE-CUTTING DRAWINGS ARE TO BE APPROVED BY ENGINEER/ ARCHITECT.</p>				
<b>22</b>	<b>PORCELAIN TILES FLOORING</b>				
	<p>PROVIDING AND LAYING BEST QUALITY APPROVED <b>FULL-BODY PORCELAIN</b> TILES OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.</p> <p><b>NOTE:</b> THE TILES SHALL BE MACHINE CUT i.e. CUTTING SHOULD BE CARRIED OUT OFF SITE EXCEPT THE TILES OF THE LAST EDGE OF FLOORING SPACE.</p>				
<b>A.</b>	24" x 48"	7,400	SFT		
<b>B.</b>	15" x 36" (FOR BATHROOMS)	1,200	SFT		
<b>C.</b>	BATH WALL (APPROX. 15" x 36")	2,300	SFT		
<b>D.</b>	36" x 72"	370	SFT		
<b>23</b>	<b>FLOOR SCREEDING</b>				
	<p>SCREEDING ON BATHROOM FLOORING OR WHEREVER REQUIRED TO MAKE APPROPRIATE SLOPE FOR WATER DRAINAGE. 2" THICK 1:3:6 MIX WITH PUDLO TOPPING AND WATERPROOFING. CURRING OF AT LEAST 14 DAYS.</p>	4,000	SFT		
<b>24</b>	<b>MARBLE STAIR STEPS</b>				
	<p>PROVIDING AND LAYING BEST QUALITY APPROVED <b>MARBLE STAIR STEPS, 3/4" TO 1" THICK</b>, (ZIARAT WHITE, OR EQUIVALENT) OF GLAZED/ MATT FINISH, ANTI-SLIP WITH GROVES AT NOSING END TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.</p>				
<b>A.</b>	<p>25 TREADS 5'-0" x 1'</p> <p>25 RISERS 5'-0" x 8"</p> <p>2 LANDINGS, 5'-0" x 5'-0"</p>	330	SFT		

5th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>25</b>	<b>STONE STAIR STEPS (SMALL WING)</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE STAIR STEPS, <b>3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP WITH GROVES AT NOSING END TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.				
A.	25 TREADS 4'-6" x 1' 25 RISERS 4'-6" x 8" 2 LANDINGS, 4'-6" x 4'-6"	270	SFT		
<b>26</b>	<b>PRE-POLISHED / FLAMED MARBLE FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED <b>FULL-BODY PORCELAIN</b> TILES OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT. <b>NOTE:</b> THE TILES SHALL BE MACHINE CUT i.e. CUTTING SHOULD BE CARRIED OUT OFF SITE EXCEPT THE TILES OF THE LAST EDGE OF FLOORING SPACE.				
A.	LIFT LOBBY (SIZE 36" x 72")	830	SFT		
<b>27</b>	<b>WOOD LAMINATE FLOOR</b>				
	P/F OF BEST QUALITY WOOD LAMINATE FLOOR OF MAKE FIRST FLOOR, PAK CARPETS, INTERWOOD OR EQUIVALENT INCLUDING ALL BENDS, CORNERS ETC. INCLUDING COST OF T-PROFILES AND SKIRTING. COMPLETE IN ALL RESPECT, INCLUDING FINISHING, CLEANING & POLISHING ETC, COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER/ ARCHITECT. MALAYSIA, CHINA, TURKISH FLOORING	3,500	SFT		
<b>28</b>	<b>WOOD LAMINATE SKIRTING (FOR AREAS WITHOUT LAMINATE FLOORING)</b>				
	P/F OF APPROVED BRAND WOODEN SKIRTING 6" HIGH & 1/2" THICK INCLUDING ALL BENDS, CORNERS ETC. COMPLETE IN ALL RESPECT, INCLUDING FINISHING, CLEANING ETC, COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER/ ARCHITECT.	1,500	RFT		
<b>29</b>	<b>SKIRTING UPVC</b>				
	PROVIDING & FIXING 4" HIGH INDUSTRIAL UPVC SKIRTING OF ARCHITECT'S CHOICE OF FINISH, WITH VERTICAL SUPPORT MAXIMUM 2' APART OR ON TURNING POINTS ON WALLS, GLASS PARTITIONS, PELMET WALLS AND ANY OTHER WALL SURFACE. COMPLETE IN ALL RESPECTS AND AS PER DRAWING, PATTERNS AND DIRECTIONS OF THE ARCHITECT / ENGINEER. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS & SAMPLES FOR APPROVAL BY ENGINEER/ ARCHITECT.				
A.	FLOOR 1 SKIRTING (MATCHING WITH PORCELAIN)	2,345	RFT		
B.	FLOOR 2 SKIRTING (MATCHING WITH MARBLE)	905	RFT		
<b>30</b>	<b>FIRE CORRIDOR FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE, <b>SIZE 24" x 48". 3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	1,375	SFT		



<b>5th FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>31</b>	<b>FIRE CORRIDOR SKIRTING</b>				
	PROVIDING AND FIXING BEST QUALITY APPROVED 4" HIGH SKIRTING WITH PRE-POLISHED STONE, 3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT) OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE FIXED USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	644	RFT		
<b>32</b>	<b>WATER PROOFING</b>				
	POLYURETHANE SINGLE COMPONENT WATERPROOF COATING OF MAKE CONCUR OF AQUAKNIGHT OF BMT OR EQUIVALENT. APPLYING PRIMER AFTER SURFACE CLEANING, SHEET REPAIR AND PREPARATION WORKS. APPLY POLYESTER CLOTH OVER JOINTS/PATCHES AND ENSURE TO COVER JOINTS WITH PU COATING ALONG WITH CANVAS/POLYESTER CLOTH. ON COMPLETION OF THE ENTIRE AREA, APPLY 2 COATING OF PU – COATING AND COMPLETE IN ALL RESPECT. TOTAL THICKNESS 4mm.	890	SFT		
<b>PAINT</b>					
<b>33</b>	<b>PAINT WORKS</b>				
	PROVIDING AND APPLYING PAINT ON WALLS/ ETC. INCLUDING RUBBING WITH SANDSTONE, FILLING THE UNEVEN SURFACES WITH PUTTY, CRACKER, AND EPOXY TREATMENT (IF REQUIRED) , RUBBING WITH SANDPAPER AND PREPARING THE SURFACE. APPLYING COATS OF PRIMER ON INTERNAL WALLS TO PREPARED SURFACE OF PLASTERED AND FINISH PAINT COATS AS INDICATED IN SUB ITEMS, COMPLETE IN ALL RESPECTS AS PER DRAWINGS. FOR EXTERNAL APPLICATION A BASE OF HD PUTTY IS TO BE APPLIED BEFORE PAINTING TO MAKE SURFACE FREE FROM BLEMISHES				
A.	PLASTIC EMULSION PAINT(ON INTERIOR WALLS) 3 COATS	51,750	SFT		
B.	TEXTURED PAINT (ON INTERIOR WALLS) 3 COATS	14,850	SFT		
C.	PLASTIC EMULSION PAINT(BLACK OR DARK GRAY ON CEILING DUCTS, AND BEAMS) 3 COATS	17,600	SFT		
D.	WEATHER SHEILD ON EXTERIOR AND FORE CORRIDOR WALLS 3 COATS	25,668	SFT		
E.	ENAMEL PAINT OF DUCTS, PIPES, CONDUITS, ETC.	1	SFT		
<b>TOILETS</b>					
<b>34</b>	<b>CORIAN COUNTER TOP</b>				
	PROVIDING AND FIXING OF CORIAN COUNTERTOP OF APPROVED SHADE AND DESIGN. HAVING SS TRIM 0.5 INCH THICK ON JOINING SURFACES AND 0.5 INCH BELOW JOINT LINE. MONTELLI/ CHINESE CORIAN. INCLUSIVE OF COST OF DOUBLE FRAME 1/2 " by 3/4" MS FRAME RED OXIDE AND PAINTED ON TOP. NOTE: THE TOP SURFACE AREA SHALL BE CONSIDERED FOR BILLING PURPOSE.				
A.	FEMALE TOILET LARGE WING	10	SFT		
B.	MALE TOILET LARGE WING	15	SFT		
C.	FEMALE CHIEF TOILET LARGE WING	8	SFT		
D.	MALE CHIEF TOILET LARGE WING	11	SFT		
E.	FEMALE TOILET SMALL WING	10	SFT		
F.	MALE TOILET SMALL WING	10	SFT		
G.	FEMALE CHIEF TOILET SMALL WING	8	SFT		
H.	MALE CHIEF TOILET SMALL WING	8	SFT		
<b>CEILING</b>					
<b>35</b>	<b>MS CEILING TRELLIS</b>				
	P/F APPROVED DECO PAINTED. 16 SWG MS T-SECTION (SIZE:0.75" x 0.5", WxH) BOX SECTION OPEN CEILING TRELIS @ 2 FEET c/c SUSPENDED USING GI THREADED RODS M10. ALL NECESSARY SUPPORT STRUCTURE IS INCLUDED IN THE JOB.	5,000	SFT		

5th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
36	<b>MARINE PLY DECO PAINTED FLUTED PANELS CEILING</b>				
	<p>PROVIDING AND FIXING OF FLUTED PANELS MADE OF MARINE PLY HAVING CNC ROUTING OR PROFILED TO ARCHITECTS SPEC 16mm THICK, PASTED ON TOP OF 12mm TH MARINE PLY SHEET WITH ROUGH WOOD FARMING OF 1" by 2" @ 1 FEET c/c AT BACK SIDE TO SECURE IN PLACE TO DESIRED CEILING LEVEL AS PER DRAWING. MARINE PLY BATTONS TO BE PASTED AFTER MAKING IT SECURE IN PLACE WITH APPROVED DECO PAINT ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. ALL NECESSARY SUPPORT/ FRAMING STRUCTURE IS INCLUDED IN THE JOB.</p> <p>SECTION PLY: 28mm, FRAMING: 25mm Th MATERIAL.</p> <p><b>NOTE:</b> CONTRACTOR TO INCLUDE PRICE OF CUTTING FOR LIGHT ACCESSORIES AND CREATION OF ACCESS PANELS WHERE NEEDED.</p>	600	SFT		
37	<b>PELMET LIGHT ON CEILING</b>				
	<p>P/F IN POSITION DC LED STRIP LIGHT @ 120 LEDS PER METRE (36 LEDS PER FOOT) IN/AROUND FLUTTED PANEL CEILING, INCLUDING MAKING OF COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT WITH APPROVED PAINT FINISH MAKING OF LIGHT PELMET WITH FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT.</p> <p>NOTE: RUNNING LENGTH OF THE LIGHT WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.</p>	550	RFT		
38	<b>GYPSUM CEILING</b>				
	<p>P/F IN POSITION GYPSUM BOARD CEILING, CONSISTING OF G.I. FRAME WORK OF APPROVED SECTIONS WITH G.I. HANGERS AND 16-18 SWG. 12MM THICK GYPSUM BOARD SHEET FIXED ON FRAME WITH APPROVED PAINT FINISH ON GYPSUM, CUTTING OF OPENING FOR LIGHT FIXTURES / AC CASSETTES WITH MAKING OF LIGHT PELMET, FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT.</p> <p>NOTE: FLAT AREA OF CEILING WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.</p>	7,044	SFT		
39	<b>PELMET LIGHT ON GYPSUM CEILING</b>				
	<p>P/F IN POSITION DC LED STRIP LIGHT @ 120 LEDS PER METRE (36 LEDS PER FOOT) IN/AROUND GYPSUM BOARD CEILING, INCLUDING MAKING OF COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT WITH APPROVED PAINT FINISH MAKING OF LIGHT PELMET WITH FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT.</p> <p>NOTE: RUNNING LENGTH OF THE LIGHT WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.</p>	2,500	RFT		

5th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>LIFT LOBBY</b>					
<b>40</b>	<b>WOOD HANDRAIL (FIXED UPON EXISTING IRON BALUSTER)</b>				
	PROVIDING AND FIXING IN-POSITION WOOD HANDRAIL OF APPROVED PROFILE AND POLISH / FINISH UPON EXISTING IRON BALUSTERS, AS SHOWN ON DRAWINGS. WORKS INCLUDE REMOVING OF EXISTING IRON BALUSTERS, POWDER COATING OF EXISTING IRON BALUSTERS AFTER SCAPING AND REPAIRING. FIXING THE BALUSTERS TO FLOOR. ALL WORKS ARE TO BE COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	90	RFT		
<b>41</b>	<b>REPAIRING &amp; PAINTING OF EXISITNG IRON BALUSTERS</b>				
	REMOVING OF EXISTING IRON BALUSTERS, POWDER COATING OF EXISTING IRON BALUSTERS AFTER SCAPING AND REPAIRING. FIXING THE BALUSTERS TO FLOOR. ALL WORKS ARE TO BE COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. 1 RFT = 4 SFT SECTION	90	RFT		
<b>42</b>	<b>EXPANSION JOINTS CLIPS</b>				
	PROVIDING AND FIXING OF EXPANSION JOINT CLIPS. W TYPE PROFILE 4" WIDTH 1" TO BE EMBEDDED IN THE FLOOR, EXPANSION TO BE TREATED BY PUTTING IN AND SECURING IN PLACE BECKER ROD OF APPROPRIATE WIDTH, AND SEALING IT WITH APPROVED SEALANT TILL W PROFILE SECTION. MAKING SURE THE JOINT AND SEALANT ARE TIGHTLY BOUND AND DO NOT LET WATER PENETRATE THROUGH. CUTTING & GROUTING WHERE NECESSARY SHALL BE USED. COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	1	RFT		
<b>43</b>	<b>MS ELECTRICAL CABINET/ FRAME CABINETS FOR DB</b>				
	PROVIDING AND FIXING OF MS FRAME PANELS WITH PAINTED GLASS PANELS IN FRONT HINGED TO MAKE 4 SECTIONS WITH 12 mm TH TAMPERED PAINTED GLASS PANELS HOUSED IN ALUMINIUM SECTION OF 1.5" BY 2" * HAVING FIRE RETARDANT PAINT ON THE INSIDE AND ALUMINIUM PROILE DOORS FOR ELECTRICAL DBs CUPBOARD. COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. FRONT FACE SHALL BE USED FOR BILLING	140	SFT		
<b>FIRE EXTINGUISHER</b>					
<b>44</b>	<b>FIRE EXTINGUISHER DRY TYPE</b>				
	<ul style="list-style-type: none"> <li>&gt; <b>DCP FIRE EXTINGUISHER 6 KG</b></li> <li>&gt; CAPACITY: 6 KG FIRE</li> <li>&gt; RATING: 34B</li> <li>&gt; HIGHLY EFFECTIVE ON A, B &amp; C CLASS OF FIRE</li> <li>&gt; AVERAGE DISCHARGE TIME: 21.0 SEC</li> <li>&gt; DIAMETER: 150 MM</li> <li>&gt; FILLED WEIGHT: 10.3 KG</li> <li>&gt; OPERATING TEMPERATURE: -30°C TO 55°C</li> <li>&gt; WORKING PRESSURE: 15 BAR</li> <li>&gt; SERVICE PRESSURE: 18 BAR</li> <li>&gt; TEST PRESSURE: 35 BAR</li> <li>&gt; FLOOR STAND OR WALL MOUNT BRACKET INCLUDING ACCESSORIES</li> <li>&gt; <b>NEFFCO, SFFECO OR EQUIVALENT</b></li> </ul>	15	No.		
<b>45</b>	<b>FIRE EXTINGUISHER FOAM TYPE (FOR KITCHEN)</b>				
	<ul style="list-style-type: none"> <li>&gt; <b>AFFF FOAM TYPE FIRE EXTINGUISHER</b></li> <li>&gt; CAPACITY: 9 LTR</li> <li>&gt; FIRE RATING: 34A 183B</li> <li>&gt; WORKING PRESSURE: 13.5 BAR</li> <li>&gt; TOTAL WEIGHT: 16.5 KG</li> <li>&gt; MAXIMUM OPERATING PRESSURE: 18.5 BAR @ 60°C</li> <li>&gt; TESTED AT PRESSURE: 30 BAR</li> <li>&gt; FLOOR STAND OR WALL MOUNT BRACKET INCLUDING ACCESSORIES</li> <li>&gt; <b>NEFFCO, SFFECO OR EQUIVALENT</b></li> </ul>	2	No.		
<b>SIGNAGE</b>					

<b>5th FLOOR - CIVIL WORK</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>46</b>	<b>WALL SIGNAGE</b>				
	WALL SIGNAGE MADE OF 3mm CLEAR ACRYLIC WITH REVERSE PLOTTER CUT WHITE VINYL OVER VINYL OF APPROVED BASE COLOR. SIZE: 4" x 12"	30	No.		
<b>47</b>	<b>WALL BOARD SIGNAGE</b>				
	WALL BOARD SIGNAGE OF 6mm CLEAR ACRYLIC WITH REVERSE PLOTTER CUT WHITE VINYL OVER VINYL OF APPROVED BASE COLOR. SIZE: 48" x 36"	4	No.		
<b>48</b>	<b>CEILING HUNG + SIGNAGE DOUBLE SIDED</b>				
	CEILING HUNG + SIGNAGE DOUBLE SIDED MADE OF 25mm ACRYLIC SIGNAGE IN APPROVED COLOR WITH S.S FITTING PIPE. TEXT TO BE LASER CUT IN 8mm ACRYLIC OF APPROVED COLOR. SIZE: 24" x 9" 3" LETTER HEIGHT	4	No.		
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
<b>49</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>50</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>COST OF CIVIL WORK FIFTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**5th FLOOR**  
**FURNITURE WORKS (NOT TO BE QUOTED)**

The BOQ document shall be read in conjunction with the Compliance sheet. NOT TO BE QUOTED: ONLY MARKINGS TO BE DONE AS PER LAYOUT BY THE CONTRACTOR WITH PROOF OF MARKING AS PER DRAWING AND SIZES GIVEN IN DESCRIPTION. COMPLETE DOCUMENTATION TO BE MAINTAINED THE MARKING IS TO BE MADE VISIBLE BY PASTING AN APPROPRIATE CUT OUT ON ALL TIMES.

5th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<p>NOTES:</p> <ul style="list-style-type: none"> <li>&gt; ALL THE FURNITURE ITEMS LISTED BELOW MUST BE PROCURED BY APPROVED VENDOR BRAND I.E. GLOBAL, MASTER, INTERWOOD, DIMENSIONS OR EQUIVALENT.</li> <li>&gt; COMPLETE PROFILE BROCHURE OF ITEM ORIGIN OF ITEM TO BE SUBMITTED BY TENDERER.</li> <li>&gt; CONTRACTOR TO SUBMIT EACH SAMPLE TO CONSULTANTS HEAD OFFICE FOR REVIEW AFTER INSPECTION AT SITE OFFICE. SAMPLE TO BE CONSUMED FOR TESTING AND REVIEW. PHYSICAL SAMPLE IS TO BE A PART OF SUBMITAL ELSE CONDITIONAL APPROVAL CAN ONLY BE GRANTED.</li> <li>&gt; THE FINISHED PRODUCT SHALL BE DELIVERED TO THE SITE DULY COVERED WITH BUBBLE SHEET TO AVOID ANY BREAKAGE ETC. HOWEVER IN CASE OF ANY MINOR REPAIR ARISING OUT OF TRANSPORTATION ETC. THE SAME SHALL BE REPAIRED/ REPLACED IMMEDIATELY BY THE SUPPLIER WITHOUT ANY EXTRA COST.</li> <li>&gt; 1 YEAR COMPREHENSIVE MAINTAINANCE TO BE A PART OF TENDER WITH ALL STRUCTURAL, MECHANICAL, FINISHING WORKS TO BE INCLUDED.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>				
<b>WORKSTATIONS AND DESKS</b>					
<b>1</b>	<b>WORKSTATIONS</b>				
	<ul style="list-style-type: none"> <li>&gt; HAVING A PARTITION WITH FABRIC SOFTBOARD OF NO MORE THAN 1'-4" IN HEIGHT HAVING TWO STUDDED ANCHORS WITH LOCK ON BOTTOM BETWEEN TWO WORKSTATION.</li> <li>&gt; DESK TOP THICKNESS IS 25MM, HAVING LIPPING OF MATCHING COLOR.</li> <li>&gt; FINISH: LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) DESKTOP OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; SQUARE LEGS (TAPPERED) AT 15 DEGREE WITH CABLE MANAGEMENT TRAY 1.2MM POWDER COATED AND OUTLET AT THE CENTRE.WITH EARTH POINT TO BE ATTACHED TO EARTH CABLE</li> <li>&gt; LEG WALL THICKNESS IS 2.0MM POWDER COATED TO COLOUR.</li> <li>&gt; WORKSTATION TO HAVE A LINEAR POWER TRAY UNDERNEATH FOR CABLE DISTRIBUTION ALONG WITH A CUT-OUT ON TOP HAVING A TECHNOLOGY BOX AS SPECIFIED IN THE ELECTRICAL COMPONENT OF THE TENDER.</li> <li>&gt; ONE MOBILE DRAWER UNIT INCLUDED 14 INCHES IN WIDTH AS PER INDUSTRY STANDARD..</li> <li>&gt; BEST QUALITY LOCK FOR DRAWERS WITH 3 KEYS INCLUDED.</li> <li>&gt; INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT.</li> <li>&gt; ALL FABRICS AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY THE ARCHITECT.</li> </ul>				
<b>A.</b>	<b>SIZE 5'-0"x4'-0" (LxW), 2'-6" DEEP</b>	24	No.	NTQ	NTQ
<b>B.</b>	<b>SIZE 4'-0"x4'-0" (LxW), 2'-6" DEEP</b>	21	No.	NTQ	NTQ

5th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>2</b>	<b>FLOOR CABINETS</b>				
	PROVIDING AND FIXING IN POSITION FLOOR STANDING CABINETS; MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) DESKTOP OF ARCHITECT'S CHOICE OF COLOUR & FINISH. ARCHITECT'S CHOICE OF COLOUR & FINISH, ON TOP, FRONT AND SIDE WITH GROOVES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ARCHITECT. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
<b>A.</b>	<b>OVERALL SIZE 5'-0"x1'-0" (LxW), 2'-6" DEEP</b>	12	No.	NTQ	NTQ
<b>B.</b>	<b>OVERALL SIZE 4'-0"x1'-6" (LxW), 2'-6" DEEP</b>	9	No.	NTQ	NTQ
<b>C.</b>	<b>OVERALL SIZE 5'-6"x1'-6" (LxW), 2'-6" DEEP FOR CAFETERIA</b>	1	No.	NTQ	NTQ
<b>3</b>	<b>CHIEF DESK</b>				
	> DESK TOP THICKNESS IS 25MM. > MELAMINE TOP OF APPROVED COLOR. HAVING A SIDE RETURN. OF 1'4". by 5' 6" Length. > AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING CABLE MANAGEMENT, CABLE TRAY AND TECHNOLOGY BOXES. WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> <b>DESK TO SIZE: (LxWxH) 9'-3"x 5'-0"x 2'-6"</b>	7	No.	NTQ	NTQ
<b>4</b>	<b>D.G.M DESK</b>				
	> DESK TOP THICKNESS IS 25MM. > MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) > MATERIAL MDF WITH WOOD VENEER FINISH. > 100 MM X 40 MM TEAK WOOD FOOT REST WITH POLISHING AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> <b>DESK TO SIZE: (LxWxH) 6'-0"x 6'-0"x 2'-6"</b>	8	No.	NTQ	NTQ
<b>5</b>	<b>OCCASSIONAL TABLE (FOR VISITOR SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED COLOUR AND FINISH. > <b>SIZE: 1'-6" x 1'-6" x 2'-0" (LxWxH)</b>	7	No.	NTQ	NTQ
<b>6</b>	<b>OCCASSIONAL TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED DESIGN, COLOUR AND FINISH. > <b>SIZE: 1'-8" x 1'-8" x 2'-0" (LxWxH)</b>	13	No.	NTQ	NTQ
<b>7</b>	<b>CONSOLE TABLE</b>				
	SUPPLYING OF CONSOLE TABLE WITH LAMINATE BOARDS / MDF OF APPROVED COLOUR AND FINISH. > <b>SIZE: 4'-0" x 1'-9" x 2'-0" (LxWxH)</b>	7	No.	NTQ	NTQ
	> <b>SIZE: 6'-4" x 1'-6" x 2'-0" (LxWxH)</b>	1	No.	NTQ	NTQ

5th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>8</b>	<b>MEETING ROOM TABLE</b>				
	> MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) FOR TABLE EDGES AND SUPPORTED ON 3mm THICK S.S. PIPES BRUSH 3.75mm DIA WITH 6mm THICK BASE AND TOP PLATE. > THE TOP MUST HAVE PROVISION FOR CABLE MANAGEMENT AND POP-UP MULTI SOCKET BOARD. > ALL INTERNAL SURFACE COVERED WITH 0.8MM THICK LAMINATE > ALL EXTERNAL SURFACES COVERED WITH 1.0 MM THICK LAMINATE OF APPROVED COLOUR. > RATES TO INCLUDE ALL NECESAARY ACCESSORIES. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>SIZE 7'-6"x3'-9" (LxW), 3'-0" DEEP FOR 21 PERSONS</b>	3	No.	NTQ	NTQ
<b>B.</b>	<b>SIZE 5'-3" DIA, 3'-0" DEEP FOR 6 PERSONS</b>	1	No.	NTQ	NTQ
<b>C.</b>	<b>SIZE 5'-3" DIA, 3'-0" DEEP FOR 6 PERSONS</b>	1	No.	NTQ	NTQ
<b>9</b>	<b>DINING TABLE FOR CAFETERIA</b>				
	> GRANITE / ARTIFICIAL GRANITE TOP. > M.S. FRAME, POWDER COATED, DISTRIBUTED SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> <b>SIZE: 2'-6" x 1'-6" x 3'-0" (LxWxH)</b>	15	No.	NTQ	NTQ
	> <b>SIZE: 2'-6" x 2'-6" x 3'-0" (LxWxH)</b>	9	No.	NTQ	NTQ
<b>10</b>	<b>RECEPTION TABLE</b>				
	PROVIDING AND FIXING IN POSITION RECEPTION TABLE; MADE OF 20mm OAK PLY HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING T3 TUBELIGHT TO BE HUNG BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
<b>A.</b>	> <b>SIZE: (LxWxH) 4'-6" x 2'-8" x 4'-6"</b> .	1	No.	NTQ	NTQ
<b>11</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH MS FRAME AND MARBLE TOP OF APPROVED COLOUR AND FINISH.				
	> <b>SIZE: 2'-9" DIA, 1'-6" H (ENTRANCE WAITING)</b>	2	No.	NTQ	NTQ
	> <b>SIZE: 5'-0"x3'-0", 1'-6" H (VISITORS LOUNGE)</b>	1	No.	NTQ	NTQ



5th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>CHAIRS AND SEATING</b>					
<b>12</b>	<b>CHIEF CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; HIGH BACK WITH HEAD AND ARM REST BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	7	No.	NTQ	NTQ
<b>13</b>	<b>D.G.M CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; LOW BACK WITH HEAD &amp; ARM REST BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	8	No.	NTQ	NTQ
<b>14</b>	<b>DINING CHAIR</b>				
	<ul style="list-style-type: none"> <li>&gt; FRAME MATERIAL: WOOD</li> <li>&gt; SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; FOAM DENSITY : 18 KG/ CUBIC CM.</li> <li>&gt; BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS.</li> <li>&gt; BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING.</li> <li>&gt; THE ARMCHAIR IS BASED ON STEEL LEG.</li> <li>&gt; THE LEG BASE MUST HAVE RUBBER PADDING.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>	32	No.	NTQ	NTQ

5th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
15	<b>GUEST CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; FIXED VISITOR CHAIR,</li> <li>&gt; MOULDED FOAM</li> <li>&gt; ITALIAN LEATHER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; BACK SHELL MADE OF PLASTIC WITH WOOD COLOUR PRINTED.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; CUSTOMIZED ALUMINIUM LEG</li> <li>&gt; LIFT APPROVED WITH SGS.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>	30	No.	NTQ	NTQ
16	<b>RECEPTION CHAIR</b>				
	<ul style="list-style-type: none"> <li>&gt; SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT.</li> <li>&gt; SHOULDER HEIGHT BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	1	No.	NTQ	NTQ
17	<b>OFFICE CHAIRS (STAFF)</b>				
	<ul style="list-style-type: none"> <li>&gt; SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT.</li> <li>&gt; SHOULDER HEIGHT BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	90	No.	NTQ	NTQ

<b>5th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>18</b>	<b>MEETING CHAIRS</b>				
	> SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT. > SHOULDER HEIGHT BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > MESH FABRIC. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT	27	No.	NTQ	NTQ
<b>19</b>	<b>WAITING CHAIRS</b>				
	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STEEL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.	17	No.	NTQ	NTQ
<b>20</b>	<b>SOFA FOR 2</b>				
	> SUPPORTED ON METAL LEGS. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>(LxWxH) 5'-0" x 2'-10" x 2'-10" (CHIEF ROOMS)</b>	7	No.	NTQ	NTQ
<b>B.</b>	<b>(LxWxH) 7'-3" x 2'-10" x 2'-10" (VISITOR LOUNGE)</b>	2	No.	NTQ	NTQ
<b>C.</b>	<b>(LxWxH) 6'-6" x 2'-10" x 2'-10" (ENTRANCE)</b>	2	No.	NTQ	NTQ
<b>21</b>	<b>SOFA FOR 1</b>				
	> SUPPORTED ON METAL LEGS. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>(LxWxH) 3'-0" x 2'-10" x 2'-10" (CHIEF ROOMS)</b>	7	No.	NTQ	NTQ
<b>B.</b>	<b>(LxWxH) 3'-0" x 2'-10" x 2'-10" (VISITORS LOUNGE)</b>	2	No.	NTQ	NTQ

5th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>22</b>	<b>LOUNGE CHAIR (ENTRANCE)</b>				
	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STELL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>CHAIR 1</b>	3	No.	NTQ	NTQ
<b>B.</b>	<b>CHAIR 2</b>	2	No.	NTQ	NTQ
<b>23</b>	<b>FULL HEIGHT STORAGE CABINET</b>				
	P/F OF WOODEN FILLING CABINETS FULL HEIGHT MADE OF OAK PLY POLISHED WITH GLASS PANE WITH APPROVED OAK VENEER PRESSED ON BOTH SIDES UNDER 100-150 KG/CM2 OF AIR PRESSURE AND 60 DEGREE OF TEMPERATURE. INTERNAL CARCASS IN 16MM THICK LAMINATION CHIPBOARD WITH 3MM OAK WOOD EDGING ALL-ROUND, FINISH WITH CLEAR NC LAQUER POLISH, INCLUDING APPROVED HANDLES, HINGES AND SHELF, SHUTTER FINISH WITH APPROVED DRAWING AND DESIGN. COMPLETE IN ALL RESPECT. THE CABINET'S FRONT FACE SHALL BE PASTED WITH GRAPHICS OF THE ARCHITECT'S APPROVAL. <b>NOTE:</b> FRONT FACE OF CABINETS SHALL BE MEASURED FOR PAYMENT. 1'-3" DEEP				
<b>a.</b>	<b>STORAGE CABINET</b>	587	SFT	NTQ	NTQ
	<b>MISCELLANEOUS</b>				
<b>24</b>	<b>PICTURE FRAME</b>				
	PICTURE FRAME WITH OIL / ACRYLIC ON CANVAS WITH APPROVED FRAME MADE OF WOOD / FIBRE, ALONG WITH ALL NECESSARY ACCESSORIES FOR HANGING AND SUSPENSION.				
<b>A.</b>	<b>&gt; AVERAGE SIZE 17 SFT</b>	10	No.	NTQ	NTQ
<b>25</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT)				
<b>A.</b>	<b>&gt; AVERAGE SIZE 27 SFT</b>	10	No.	NTQ	NTQ
<b>26</b>	<b>PLANTER</b>				
<b>a.</b>	P/F OF CUSTOMIZED PLANTER MADE OF CONCRETE WITH SMOOTH FINISH AND DECO PAINT OF APPROVED COLOR AND DESIGN. <b>NOTE:</b> THE CONTRACTOR SHALL MAKE AND APPROVE THE SAMPLE BEFORE EXECUTION. AVERAGE SIZE: 1'-3"x1'X3"x 1'-3" (LxWxH)	28	No.	NTQ	NTQ

5th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
27	<b>PANTRY CABINET</b>				
	PROVIDING AND FIXING IN POSITION FLOOR CABINETS & HANGING TYPE CABINETS; MADE OF 20mm OAK PLY HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. INCLUDING MAKING PROVISION OF GLASS HOOD. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING STRIP LIGHT BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. <b>NOTE:</b> CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE. FRONT FACE OF THE CABINET SHALL BE USED FOR BILLING.				
A.	> SIZE: (LxWxH) 20'-9" x 2'-0" x 9'-6".	1	SFT	NTQ	NTQ
B.	> SIZE: (LxWxH) 15'-3" x 2'-0" x 9'-6".	1	SFT	NTQ	NTQ
C.	> SIZE: (LxWxH) 6'-3" x 2'-0" x 9'-6".	1	SFT	NTQ	NTQ
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
28.	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB	NTQ	NTQ
29	<b>SHOP DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS OF EVERY FURNITURE ITEM WHICH WILL BE FABRICATED / INSTALLED ON SITE.	1	JOB	NTQ	NTQ
<b>COST OF FURNITURE FIFTH FLOOR</b>					<b>NTQ</b>

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**5th FLOOR**  
**ELECTRICAL WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**5th FLOOR - ELECTRICAL WORKS**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
	<b>SECTION-A MAIN / SUB-MAIN LV PANELS &amp; DISTRIBUTION BOARDS</b>				
	<p><b>Supply, testing &amp; commissioning</b> of following <b>Distribution Boards</b> as shown on drawing made with <b>14 SWG sheet steel housing</b> including all installation accessories such as Rawal bolt etc. Complete in all respects.</p> <p><b>Note: (Refer Single Line Diagram)</b></p> <ol style="list-style-type: none"> <li>All the Panels / DBs should be front accessible and maintainable.</li> <li>Cost of Lighting Control Relays &amp; Power Supplies should be Included in Distribution Boards .</li> <li>The transportation and placement of DBs upto site and respective locations is also included in the work scope, complete in all respects including leveling, grouting etc.</li> <li>Laser engraved tags required as mention in SLDs</li> <li>Space for circuit tagging required with permanent installation on protective sheet via rivets</li> <li>20% space required in Panels / DBs for future provision</li> <li>Tin plated Imported 99.99% pure Tinned Cu bus bar with heat shrink color coded sleeves to be used.</li> <li>Hindged protective metallic door required with knob/handle.</li> <li>Braided Door earth required.</li> <li>Lockable handle required for main door.</li> <li>As-built drawing pocket.</li> <li>Cable hanging arrangement.</li> <li>MIMIC Diagram is required on doors of all the Panels.</li> <li>Panel Lights and Exhaust Fans with Door Limit Switch &amp; Temperature Sensors are required in all the floor standing Panels.</li> <li>All the Floor Standing Panels shall be Type-Tested Type.</li> <li>MOA to be provided in the ATS of LV Panels.</li> <li>Anti-Condensation Heater to be provided in all the Floor Standing Panels.</li> <li>Bypass Option in-case of synch panel Failure.</li> </ol>				
1	DB-6F	1	No.		
2	LPDB-6F	1	No.		
3	UDB-6F	1	No.		
4	Breaker Box with 125A TP MCCB For HVAC Large Wing Area	1	No.		
5	Breaker Box with 100A TP MCCB For HVAC Small Wing Area	1	No.		
	<p><b>Note:</b></p> <ol style="list-style-type: none"> <li><b>Supply &amp; Installation</b> of MCCs required for Fire Fighting, HVAC &amp; Plumbing Services shall be in the scope of Mechanical Works.</li> </ol>				
	<b>SECTION-F MAIN / SUBMAIN CABLES</b>				
	<b>Supply, installation, testing, commissioning and termination</b> of following <b>8.7/15kV, CU/XLPE/PVC (MV Cables)</b> in already installed Cable trench / Cable ladder / Cable tray / Duct Bank including all accessories. Complete in all respects.				
6	<b>From Tap Off Box to DB-6F</b> 4C-120 Sqmm Cu/XLPE/PVC + ECC 1C-70 Sqmm Cu/PVC	5	Rm.		
7	<b>From DB-6F to LPDB-6F (Large Wing)</b> 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	5	Rm.		
8	<b>From DB-6F to LPDB-6F (Small Wing)</b> 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	5	Rm.		
9	<b>From DB-6F to Breaker Box For HVAC 6F1 (Large Wing)</b> 4C-50 Sqmm Cu/PVC/PVC + ECC 1C-25 Sqmm Cu/PVC	75	Rm.		
10	<b>From DB-6F to Breaker Box For HVAC 6F2 (Small Wing)</b> 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	45	Rm.		
	<b>WIRING</b>				
	<b>CIRCUIT / POINT WIRING &amp; SWITCH ACCESSORIES</b>				

5th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
11	PROVIDING, FIXING & LAYING OF WIRING FOR LIGHTS AND EXHAUST/ FALSE CEILING/ CEILING FANS, WITH COMPLETE INSTALLATION ON WHATEVER SURFACE; THE PRICE IS TO INCLUDE ANY FABRICATION/ BOXING MADE OF ANODIZED GI FRAME OR WOODEN FRAME AS ADVISED BY THE ARCHITECT ON-SITE IF NEEDED TO BE MOUNTED ON THE CEILING DIRECTLY. ALL MOUNTINGS AND VERTICAL SUSPENSIONS WILL BE DONE USING FISCHER OR EQUIVALENT ANCHORS WITH M10 THREADED GI RODS. IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. COMPLETE WITH BENDS, SOCKETS, AND OTHER ACCESSORIES WITH 3X2.5 mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST/NEWAGE WITH 16 SWG SHEET STEEL SWITCH BOXES DULY APPLIED WITH RED OXIDE BASE PAINT SPRAY PAINTED AS REQUIRED AND THE BOX TO BE CONCEALED: INCLUDING P/F OF 10A/16A CLIPSAL/ CLOPAL/ SIEMENS MAKE SWITCH WITH CLIPSAL/ CLOPAL/ SIEMENS COVER GANG PLATE ETC. AND CONCEALED WITH CEILING ROSE COMPLETE IN ALL RESPECT AS REQUIRED.	160	No.		
12	SAME AS (A) BUT POINT TO POINT WIRING	500	No.		
13	PROVIDING, FIXING & LAYING OF WIRING FOR <b>EMERGENCY LIGHTS</b> , WITH COMPLETE INSTALLATION ON WHATEVER SURFACE; THE PRICE IS TO INCLUDE ANY FABRICATION/ BOXING MADE OF ANODIZED GI FRAME OR WOODEN FRAME AS ADVISED BY THE ARCHITECT ON-SITE IF NEEDED TO BE MOUNTED ON THE CEILING DIRECTLY. ALL MOUNTINGS AND VERTICAL SUSPENSIONS WILL BE DONE USING FISCHER OR EQUIVALENT ANCHORS WITH M10 THREADED GI RODS. IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. INCLUDING PULL BOXES , SIZE: 8"x8". COMPLETE WITH BENDS, SOCKETS, AND OTHER ACCESSORIES WITH 3X2.5 mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST/NEWAGE WITH 16 SWG SHEET STEEL SWITCH BOXES DULY APPLIED WITH RED OXIDE BASE PAINT SPRAY PAINTED AS REQUIRED AND THE BOX TO BE CONCEALED: INCLUDING P/F OF 10A/16A CLIPSAL/ CLOPAL/ SIEMENS MAKE SWITCH WITH CLIPSAL/ CLOPAL/ SIEMENS COVER GANG PLATE ETC. AND CONCEALED WITH CEILING ROSE COMPLETE IN ALL RESPECT AS REQUIRED.	6	No.		
14	PROVIDING, FIXING & LAYING OF WIRING POWER CIRCUITS <b>FROM DB TO TECHNOLOGY BOX / BOARD</b> WITH 2 x 4 SQ. mm + ECC 1X2.5 SQ. mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED. INCLUSIVE OF FLOOR CUTTING AND CREATION OF FLOOR CHANNEL WITH EMBEDDED CONDUIT PIPES <b>NOTE: ALL DATA CABLES SHALL HAVE SEPARATE CONDUITS FROM POWER LINES TO AVOID ELECTROMAGNETIC FIELD (EMF) INTERFERENCE AND ATTENUATION.</b>	120	No.		
15	PROVIDING, FIXING & LAYING OF WIRING POWER CIRCUITS <b>FROM DB TO SWITCHBOARD (S) (INDUSTRIAL SOCKETS)</b> WITH 2 X 4 SQ. mm + ECC 1X2.5 SQ. mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 MM DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED). <b>INCLUDING I/O FACE PLATE.</b> COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED.	80	No.		
16	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF <b>TELEPHONE RJ45 CLIPSAL / 3M CABLE</b> IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED I/O FACE PLATE HAVING 01 No. RJ-45/RJ11 CONNECTORS, CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS.	10	No.		
17	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN WALLS OR SLABS OF CONCRETE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK.				
A.	4" DIA	15	No.		
B.	6" DIA	5	No.		
C.	8" DIA	1	No.		
	<b>SWITCH SOCKET OUTLET (SSO)</b>				



5th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
18.	SUPPLY & INSTALLATION OF THE FOLLOWING SWITCH SOCKET OUTLETS (SSO) OF MAKE CLOPAL, SIEMENS, CLIPSAL, AND ORANGE, WITH 16 SWG MS BACK BOXES MADE OF 1.2 MM POWER COATED SHEET STEEL WITH EARTH TERMINALS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 MM DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED				
A.	13AMP UNIVERSAL/INTERNATIONAL 3 PIN SSO PVC INSULATED WIRE	52	No.		
B.	15AMP UNIVERSAL/INTERNATIONAL 3PIN SSO (INDUSTRIAL SOCKETS)	28	No.		
<b>GANG SWITCHES</b>					
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
19.	SUPPLY AND INSTALLATION OF FOLLOWING 10 AMPS, ONE-WAY <b>GANG TYPE SWITCHES</b> OF MAKE CLOPAL, SIEMENS, CLIPSAL OR EQUIVALENT, INCLUDING BACK BOXES, RECESSED ON WALL OR COLUMN AS PER DESIGN DRAWINGS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, COMPLETE WITH ALL ACCESSORIES & CONNECTIONS IN ALL RESPECTS.				
A.	3 GANG SWITCHES	1	No.		
B.	4 GANG SWITCHES	80	No.		

5th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>TECHNOLOGY BOX / BOARD</b>					
<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.					
20.	SUPPLY AND INSTALLATION OF TECHNOLOGY BOX / BOARD OF MAKE CLOPAL, SIEMENS, CLIPSAL OR EQUIVALENT, INCLUDING WATERPROOF BACK BOXES, WATERPROOF HOUSING WITH LID AND POWER SWITCH, FIXED ON A WORKSTATION, GYPSUM OR ANY OTHER SURFACE WALL AS PER DESIGN DRAWINGS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, INCLUDING CABLE MANAGEMENT VIA SQUARE MATCHING PIPE OF 18 SWG EARTHED OR CABLE MANAGEMENT SLEEVES OF BEST QUALITY AS PER APPROVAL OF TECHNICAL SPECIFICATIONS AND SAMPLES BY THE ARCHITECT ON SITE. ALL CABLES ARE TO BE TAGGED VISIBLY END TO END. APPROPRIATE DATA/ POWER CABLES/ WIRES WILL RUN THROUGH APPROPRIATE CONDUITS INSIDE THE ALUMINIUM CHANNEL. COMPLETE WITH ALL ACCESSORIES & CONNECTIONS IN ALL RESPECTS HAVING THE FOLLOWING SWITCH AND SOCKETS.				
A.	<b>TECHNOLOGY BOX A (FOR GENERAL WORKSTATIONS)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)	100	No.		
B.	<b>TECHNOLOGY BOX B (FOR EXECUTIVE DESK)</b> A. 3 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 3 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)	8	No.		
C.	<b>TECHNOLOGY BOX C (EXECUTIVE TV / MEETING TV)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)	19	No.		
D.	<b>TECHNOLOGY BOX D (ATTENDANCE MACHINE)</b> A. 0 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 1 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)	4	No.		
<b>LIGHT FITTINGS AND FIXTURES</b>					
<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.					
21.	<b>LED CEILING RECESSED DOWN LIGHT</b>				
	P/F, CONNECTING, TESTING & COMMISSIONING OF OPPL/ SOGO/ PHILIPS/ BRITLITE/ ORANGE <b>RECESSED MOUNTED DOWNLIGHT</b> HAVING APPROVED COLOUR TEMPERATURE with PF >0.90 AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, COMPLETE WITH MAKING A HOLE AS MAY BE REQUIRED AND TO FINISH THE SURFACE SUITABLY AFTER INSTALLATION AND WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS. <b>NOTE:</b> ALL SAMPLES/TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO THE EXECUTION OF WORKS.				
A.	6W TO 9W (TOILETS AND KITCHEN)	62	No.		
B.	10W TO 12W (OFFICES)	324	No.		
C.	13W TO 15W (COMMON SPACES, CORRIDORS)	64	No.		

5th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>22.</b>	<b>CEILING RECESSED LINEAR LIGHT MAGNETIC TRACK</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 1 METER LONG CEILING RECESSED LINEAR MAGNETIC TRACK LIGHT CONNECTED TO MAKE TRACKS OF SUITABLE DIMENSIONS WITH COMPLETE ACCESSORIES AND JOINERIES SUCH AS POWER ADAPTER 200 WATTS, CONTINUITY TRACK TO TRACK CONNECTOR. RECESSED IN FALSE CEILING USING THREADED RODS AS ANCHORS. EACH TRACK TO HAVE ATLEAST 4 LIGHTS HAVING 12 LED POINTS RATED AT 12 WATTS EACH MAGNETIC LIGHT WITH REFLECTORS. OF ARCHITECTS CHOICE AND APPROVAL. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	12	No.		
<b>23.</b>	<b>LINEAR TRACK LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 3'-0" LINEAR TRACK LIGHT. HAVING 2 LIGHTS PER FEET 6 WATTS LED. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	WAITING LOBBY	10	No.		
<b>24.</b>	<b>WALL SCONCE DOWNLIGHT (STAIRS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF WALL SCONE DOWNLIGHT APPROX 15 WATT. OF APPROVED DESIGN. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	LIFT LOBBY	10	No.		
<b>25.</b>	<b>HANGING LIGHT LINEAR L1 PENDANT (WORKSTATIONS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. <b>5'-3" LONG 30WATTS</b> LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT WITH • DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	18	No.		
<b>26.</b>	<b>HANGING LIGHT LINEAR L2 PENDANT (WORKSTATIONS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. <b>3'-0" LONG 20 WATTS</b> LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT.. WITH LED LIGHT DRIVER DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	62	No.		

5th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>27.</b>	<b>HANGING LIGHT LINEAR L3 PENDANT (CHIEF DESK &amp; MEETING ROOM)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. <b>5'-6" LONG 30 WATTS</b> LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT. DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	8	No.		
<b>28.</b>	<b>CHANDELIER LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING CHANDELIER LIGHT. HAVING CLUSTER OF 4 GLASS ENCASED HANDCRAFTED DECORATIVE LIGHT FIXTURES. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	2	No.		
<b>29.</b>	<b>HANGING PENDANT LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING CHANDELIER LIGHT. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	1	No.		
<b>30.</b>	<b>FLOOR STANDING LAMP</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING FLOOR STANDING LAMP MS LEGS WITH MARBLE BASE ARCHED TYPE. HEIGHT BETWEEN 6 FEET TO 4-10 INCHES HEIGHT; WITH LED BULB. EACH LAMP TO HAVE A SWITCH FOR EASY SWITCH ON AND OFF NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	12	No.		
<b>31.</b>	<b>WALL / MIRROR LIGHTS</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING WALL / MIRROR LIGHTS. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	8	No.		
<b>32.</b>	<b>EMERGENCY LIGHT</b>				
	P/F OF <b>EMERGENCY LIGHT</b> OF MAKE "OPPLE/ SOGO/ ORIENT/ OR PHILIPS" BRITLITE/ 2 X 8W FLUORESCENT LAMPS HAVING COLOUR TEMPERATURE 3500 K WITH BATTERY CHARGER. CONTRACTOR TO ENSURE THE PERFECT SOLUTION FOR HANGING, AND FIXING ON THE WALL ALONG WITH A POWER CABLE AND PLUG FOR CONNECTION. CONTRACTOR TO ENSURE LIVE WIRING IS TO BE PROVIDED ALONG WITH MALE/ FEMALE CONNECTION SECURED & TIED AWAY.				
<b>A.</b>	<b>CEILING / WALL MOUNTED</b>	25	No.		
<b>33</b>	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE LIGHTING SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. CONTRACTOR TO PERFORM 3 WORKSHOPS WITH EMPLOYEERS FACILITY MANAGER TO TRAIN ON OPERATION, MAINTAINANCE AND LIFE CYCLE OF ALL LIGHTS INSTALLED. EACH LIGHT TO BE CATEGORIZED AS TYPE AND LIFE CYCLE HOURS.	1	JOB		
<b>APPLIANCES</b>					
<b>34.</b>	<b>FALSE CEILING FAN</b>				

5th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	PROVIDING, INSTALLING, TESTING AND COMMISSIONING OF FALSE CEILING FAN 14" IN 2'X2' SQUARE SIZE OF MAKE "VOLDAM OR EQUIVALENT" WITH REMOTE CONTROL IMPORTED COMPLETE WITH CONNECTIONS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT. NOTE: ALL ELECTRICAL WIRING, SWITCHES AND HOISTING OF REMOTE CONTROLLER ON WALLS TO BE INCLUDED IN THE ITEM.	70	No.		
<b>35.</b>	<b>LED MONITOR</b>				
	SUPPLYING, FIXING, INSTALLATION & COMMISSIONING OF LED MONITOR/ TV OF MAKE SAMSUNG, L.G., SONY OR EQUIVALENT WITH , HDMI PORTS COAXIAL PORT, AUDIO VIDEO PORT, VGA PORT VIDEO INPUT PORT. WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT/ENGINEER. NOTE: > EASYLINK (HDMI-CEC) > SMARTVIEW > WIFI DIRECT > CONNECTIVITY PORTS: HDMI PORTS 4(SIDE) USB SUPPORTS AUDIO, VIDEO, IMAGE RF INPUT ANALOG COAXIAL PORTS 1(REAR) COMPOSITE INPUT AUDIO VIDEO CABLE PORTS 1(REAR) USB PORTS 3 DIGITALOPTICAL AUDIO OUTPUT PORTS 1 > VENDORS OFFERING LOCAL AFTER SALE SERVICES SHALL BE PREFERRED.				
<b>A.</b>	55"	14	No.		
<b>B.</b>	HDMI CABLE 5 METER (SONY, UGREEN OR EQUIVALENT) FROM TV TO DESK	14	No.		
<b>36.</b>	<b>WATER DISPENSER</b>				
	SUPPLY AND INSTALLATION OF WATER DISPENSER OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT) WITH 19-22 Litre Standard WATER BOTTLES FIXED ATOP HAVING COLD CABINET UNDERNEATH INVERTER TYPE.	6	No.		
<b>37.</b>	<b>GLASS HOOD (KITCHEN)</b>				
	SUPPLY AND INSTALLATION OF GLASS HOOD OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).	2	No.		
<b>38.</b>	<b>MICROWAVE OWEN</b>				
	SUPPLY AND INSTALLATION OF MICROWAVE OWEN OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).				
<b>A.</b>	IN-BUILT INTO CABINET	1	No.		
<b>39</b>	NORMAL	2	No.		
<b>40.</b>	<b>REFRIGERATOR</b>				
	SUPPLY AND INSTALLATION OF REFRIGERATOR OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).	2	No.		

5th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
41.	<b>EXHAUST FAN (WITH FALSE CEILING PIPE )</b>				
	PROVIDING, INSTALLING, TESTING AND COMMISSIONING OF 6" DIA INLINE FAN OF MAKE "VOLDAM OR EQUIVALENT" WITH CENTRIFUGAL BLOWER AND MOTOR ENCASED IN SHEET METAL CASING, AS PER SPECIFICATIONS. THE MOTOR SHALL BE SUITABLE FOR 220 ± 6% V, 50 HZ AC SUPPLY. THE PRICE SHALL INCLUDE FAN SPEED REGULATOR AND COWL WITH BIRD SCREEN. FALSE CEILING FAN TO BE CONNECTED TO ITS EXHAUST OUTLET USING FLEXIBLE PIPE NON INTERRUPTED ANCHORED IN PLACE USING M8/M10 ANCHORS AND FIXING ACCESSORIES FROM THE CEILING. CAPACITY 3600 CMH AT 15 MM STATIC PRESSURES (FOR PNEUMATIC TEST SCREEN OF WORKSHOP OFFICES BUILDING).	18	No.		
42.	<b>HAND DRYER</b>				
	P/F OF AUTOMATIC HAND DRYER OF BRAND SIEMENS OR EQUIVALENT COMPLETE IN ALL RESPECTS. <b>NOTE:</b> TECHNICAL SPECIFICATION TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCUREMENT.	10	No.		
43.	<b>TOWER FAN</b>				
	> POWER: 45W > AIR FLOW : >21.54M3/MIN > HEIGHT: NOT LESS THAN 38" > 3 SPEEDS CONTROL WITH OSCILLATION > WITH 12 HOURS TIMER CONTROL WITH REMOTE CONTROL > WITH ROOM TEMPERATURE DISPLAY > FULL LED DISPLAY > INTEGRATED CARRY HANDLE > COMPLETE IN ALL RESPECTS. > HITACHI, TOSHIBA ELITE OR EQUIVALENT. <b>NOTE:</b> TECHNICAL SPECIFICATION TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCUREMENT.	25	No.		
<b>TELEPHONES</b>					
	<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
44.	<b>TELEPHONE 10 PAIR CABLE</b>				
	SOLID ANNEALED COPPER WIRE, PLAIN OR TINNED ACCORDING TO IEC 60228 CLASS 1, INSULATED WITH PVC (POLYVINYL CHLORIDE) RATED 70°C, TWO CORES ARE TWISTED TO FORM A PAIR, PAIRS ASSEMBLED TOGETHER DEPENDING ON THE CABLE CONSTRUCTION, FOR CABLES UP TO <b>10 PAIRS</b> , PAIRS ARE ASSEMBLED TOGETHER DIRECTLY IN CONCENTRIC LAYERS, ALL PAIRS ARE IDENTIFIED WITH IDENTIFICATION TAPES, OUTER SHEATH IS A FLAME RETARDANT POLYVINYL CHLORIDE 70°C, GRAY COLOR.	35	METER		
45.	<b>JUNCTION BOX</b>				
	PROVIDING AND FIXING OF TELEPHONE JUNCTION HAVING CONNECTION OF NOT LESS THAN 10 WIRES, WALL MOUNTED.	1	No.		
46	P/L OF <b>TELEPHONE WIRING</b> IN PVC CONDUIT GALCO 32MM DIA 10 PAIR TELEPHONE CABLE CLIPSAL MAKE FROM MDF PANEL TO PTCL CABINET AND PABX. COMPLETE WITH 12SWG COPPER ECC AND CONNECTIONS AT TERMINAL BOXES COMPLETE IN ALL RESPECTS AS REQUIRED AT SITE.	500	METER		
48	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF NETWORKING CABLE <b>CAT 6 CLIPSAL</b> / 3M CABLE IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED CAT6 CONNECTORS, INCLUSIVE OF IO SWITCH PLATE HAVING CAT 6 INTERFACE CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS. <b>NOTE: ALL DATA CABLES SHALL HAVE SEPARATE CONDUITS FROM POWER LINES TO AVOID ELECTROMAGNETIC FIELD (EMF) INTERFERENCE AND ATTENUATION.</b>	110	No.		
<b>NETWORKING</b>					
54.	FIBRE OPTIC CABLE (FROM DISTRIBUTOR TO FLOOR SWITCH)	150	METER		

5th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>SECURITY SYSTEM</b>					
	ALL NETWORK ACCESSORIES ARE TO BE A PART OF THIS ITEM, INCLUDING RACKS, MOUNTING SCREWS, RAWL BOLTS, ANCHORS, MOUNTING BRACKETS AND ETC.				
57	<b>BIOMETRIC ATTENDANCE MACHINE / CCTV CAMERA</b> SUPPLY, INSTALLATION, CONFIGURATION, TESTING AND COMMISSIONING OF BIOMETRIC (FINGERPRINT CUM CARD, FACIAL ID) BASED TIME ATTENDANCE & ACCESS CONTROL MACHINES INCLUDING RELATED SOFTWARE. > BIOMETRIC/ CARD ENROLLMENT/ FACIAL ID- RFID TAGS OF 200 PERSONS (INCLUDING COLLECTION, ENTRY AND VALIDATION OF DATA) OF ALL RELEVANT INFORMATION OF THE EMPLOYEES LIKE FINGERPRINTS, PHOTOGRAPHS, CONTACT INFORMATION ETC. TO ENSURE A COMPREHENSIVE DATABASE OF INFORMATION FOR THE FUNCTIONING OF THE TIME AND ATTENDANCE BIOMETRIC SYSTEM.	2	No.		
58	SUPPLY & INSTALLATION OF FIXED TYPE <b>CEILING / WALL MOUNTED DOME CAMERA</b> TRUE DAY / NIGHT WITH IR ILLUMINATOR,4-MP, FIXED LENS OF 4 MM, WDR, FACE RECOGNITION TILL MINIMUM 10 METER. ALL WEATHER SUITABLE. COMPLETE WITH HOUSING, MOUNTING BRACKETS, ENCLOSURE FOR POWER SUPPLY ETC AS PER DRAWING & SPECIFICATION & SCHEDULE OF CAMERA COMPLETE IN ALL RESPECTS.	16	No.		
59	SUPPLY & INSTALLATION OF <b>PoE CAT-6 (POWER OVER ETHERNET) CABLE</b> FROM NVR TO CAMERA LOCATION. COMPLETE WITH HOUSING, MOUNTING BRACKETS, ENCLOSURE FOR POWER SUPPLY ETC AS PER DRAWING & SPECIFICATION & SCHEDULE OF CAMERA COMPLETE IN ALL RESPECTS. <b>AVERAGE LENGTH 170 RFT</b>	16	No.		
60	SUPPLY & INSTALLATION OF <b>2U SERVER RACK</b> AS PER DRAWING & SPECIFICATION COMPLETE IN ALL RESPECT	1	No.		
61	SUPPLY & INSTALLATION OF <b>CABLE MANAGEMENT KIT</b> FOR 2U RACK CABLE MANAGER TYPE: HORIZONTAL D-RING NUMBER OF D-RINGS: 5 D-RING MATERIAL: PLASTIC BACK PLATE MATERIAL: 18 GAUGE COLD ROLLED STEEL BACK PLATE FINISH: POWDER COATED COMPLETE IN ALL RESPECT	1	No.		
62	SUPPLY & INSTALLATION OF <b>32 CHANNEL NVR</b> HAVING NOT LESS THAN 24 PoE POINTS STACKBALE VIRTUALLY TO ACCOMMODATE ALL THE CAMERAS AND STORAGE CAPACITY OF 30 DAYS (16TB HARDISK) AT HIGH QUALITY, 25 FPS, AND ADJUSTABLE NOISE RATIO AS PER DRAWING & SPECIFICATION COMPLETE IN ALL RESPECT	1	No.		
63	<b>COMPLETE DOCUMENTATION</b> TESTING COMMISSIONING OF THE SECURITY SURVEILLANCE SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS.INCLUSIVE OF ALL THE LICENSE	1	JOB		
64	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF SECURITY SYSTEM	1	JOB		
<b>FIRE ALARM SYSTEM</b>					
	ALL NETWORK ACCESSORIES ARE TO BE A PART OF THIS ITEM, INCLUDING RACKS, MOUNTING SCREWS, RAWL BOLTS, ANCHORS, MOUNTING BRACKETS AND ETC.				
65	SUPPLY & INSTALLATION OF ADDRESSABLE <b>MANUAL CALL POINTS REUSABLE</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETED IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	20	No.		
66	SUPPLY & INSTALLATION OF ADDRESSABLE DIRECTIONAL <b>ELECTRONIC SOUNDER WITH FLASHER</b> WITH MOUNTING ACCESSORIES, AND BACK BOX. COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	20	No.		
67	SUPPLY AND INSTALLATION OF INTELLIGENT CELING RECESSED/SURFACE MOUNTED <b>SMOKE DETECTORS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	20	No.		

<b>5th FLOOR - ELECTRICAL WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
68	SUPPLY AND INSTALLATION OF CEILING RECESSED/SURFACE MOUNTED <b>HEAT DETECTORS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	6	No.		
69	SUPPLY AND INSTALLATION OF <b>4 ZONES INTELLIGENT ADDRESSABLE NETWORKED FIRE ALARM CONTROL PANEL (FACP)</b> WITH POWER SUPPLY AND BATTERY BACKUP FOR 3 HOURS WITH INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS. TO BE INTEGRATED TO BUILDING FACP SYSTEM.	1	No.		
70	SUPPLY & INSTALLATION OF <b>LOOP WIRING FROM FACP TO FIELD DEVICES</b> WITH 2X2.5 SQ.MM FP- 200 CLASS A CABLE WITH 3HRS FIRE RATING IN 1" DIA 16-GAUGE MS PIPE SURFACE PAINTED AS PER DRAWINGS WITH ALL CONDUIT ACCESSORIES, JUNCTION BOXES, PULL BOXES ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS. ACTUAL MEASUREMENT SHALL BE TAKEN FROM THE SITE.	6500	RFT		
71	SPARE PARTS FOR FIRE ALARM SYSTEM FOR 2 YEAR OPERATION	1	JOB		
72	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF FIRE ALARM SYSTEM	1	JOB		
73	2 YEARS WARRANTY ALONG WITH COMPLETE PREVENTIVE MAINTENANCE OF ALL COMPONENTS OF FIRE ALARM SYSTEM.	1	JOB		
74	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE FIRE ALARM SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
75	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
76	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>TOTAL COST OF ELECTRICAL WORKS FIFTH FLOOR</b>					



**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**5th FLOOR**  
**PLUMBING WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

<b>5th FLOOR - PLUMBING WORKS</b>					
<b>S No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
	<b>ED BATHROOMS</b>				
<b>1.</b>	<b>FREE STANDING WASH BASIN STALL</b>				
	PROVIDING AND FIXING GLAZED EARTHENWARE FREE STANDING WASH BASIN STALL COMPLETE WITH INCLUDING THE COST OF INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER OF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT). THE CONTRACTOR IS TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED ON-SITE AS PER SITE CONDITIONS. NOTE: FAUCET, BIB COCKS, AND ALL OTHER FITTINGS ARE TO BE INCLUDED IN THE COST OF ITEM CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES BEFORE EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	5	No.		
<b>2.</b>	<b>WESTERN W.C. (COMMODE)</b>				
	PROVIDING AND FIXING SQUATTING TYPE WHITE GLAZED EARTHEN WARE W.C. PAN WITH FRONT FLUSH INLET AND COMPLETE WITH INCLUDING THE COST OF FLUSHING CISTERN WITH INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER ONLYF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT) WITH 4" DIA C.I. TRAP. CONTRACTOR TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED END TO END UTILISING PERFECT SLOPE ON SITE AS PER SITE CONDITIONS. NOTE: CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES PRIOR TO EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	12	No.		
<b>3.</b>	<b>EASTERN (SQUATTING) WATER CLOSET</b>				
	PROVIDING AND FIXING SQUATTING TYPE WHITE GLAZED EARTHEN WARE W.C. PAN WITH FRONT FLUSH INLET AND COMPLETE WITH INCLUDING THE COST OF FLUSHING CISTERN WITH INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER ONLYF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT) WITH 4" DIA C.I. TRAP. CONTRACTOR TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED END TO END UTILISING PERFECT SLOPE ON SITE AS PER SITE CONDITIONS. NOTE: CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES PRIOR TO EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	4	No.		
<b>4.</b>	<b>HAND SHOWERS (MUSLIM SHOWER)</b>				
	MASTER, SONEX OR EQUIVALENT TOILET HAND SPRAY WITH FLEXIBLE CHAIN & TELEPHONE TYPE SHOWER INCLUDING TEE STOP COCK ETC. COMPLETE IN ALL RESPECT.	16	No.		
<b>5.</b>	<b>BASIN MIXER TAP</b>				
	MASTER, SONEX OR EQUIVALENT WASH BASIN HOT AND COLD WATER MIXER, ETC.				
<b>a.</b>	MIXER TAP	16	No.		
<b>b.</b>	DOUBLE BIB COCK FOR TOILETS	16	No.		
<b>6.</b>	<b>TOILET ACCESSORIES COMPLETE SET</b>				
<b>a.</b>	SOAP DISPENSER	13	No.		
<b>b.</b>	SOAP DISH				
	PROVIDING AND FIXING SOAP-DISH OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	13	No.		
<b>c.</b>	<b>TOWEL ROD</b>				

5th FLOOR - PLUMBING WORKS					
S No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	PROVIDING AND FIXING CHROMIUM PLATED TOWEL RAIL 24" LONG AND 3/4" DIA. OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	13	No.		
d.	<b>PAPER HOLDER</b>				
	PROVIDING AND FIXING TOILET PAPER-HOLDER OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	16	No.		
e.	<b>COAT HOOKS</b>	16	No.		
7.	<b>LOOKING MIRROR</b>				
	LOOKING MIRROR 5mm BEST QUALITY BELGIUM OR EQUIVALENT MADE FIXED WITH CLIPS. HAVING MIRROR LED LIGHT EMBEDDED IN THE LOOKING MIRROR ATOP VANITY WITH 2" THICK LIGHT BORDER WITH 1" OFFSET MIRROR FINISH FROM THE MIRROR EDGES. EACH MIRROR TO BE MOUNTED ON FRAMES MARINE PLY BACK WITH 2 TH FRAMING TO ALLOW 2 INCH GAP BETWEEN WALL AND MIRROR; HAVING LED LIGHT POINT AT ITS BACK; TO MAKE IT BACK LIT. COMPLETE IN ALL RESPECT AND SIZE AS PER SITE REQUIREMENT.	150	Sft		
8.	<b>KITCHEN SINK</b>				
	PROVIDING AND FIXING STAINLESS STEEL KITCHEN SINK BOWL 24"x18" WITH DRY TRAY/ WASHING SURFACE OF 18 GAUGE MAKE MASTER OR EQUIVALENT FIXED IN COUNTER OVER PRE CAST SLAB, PASTING WITH JELLY/ SILICON WITH 15mm DIA C.P. BRASS T. STOP COCK OF MASTER, SONEX, 40mm DIA HEAVY DUTY WASTE COUPLING AND PVC FLEXIBLE WASTE PIPE OF APPROVED MAKE AND QUALITY COMPLETE IN ALL RESPECTS. AS PER THE MANUFACTURER'S REQUIREMENT.	2	No.		
9.	<b>SECTION-02 WATER SUPPLY SYSTEM</b>				
	<b>SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF COMPLETE PIPE WORK FOR COLD AND HOT WATER SYSTEM INCLUDING ALL ACCESSORIES REQUIRED TO COMPLETE SYSTEMS READY TO OPERATE AS PER SPECIFICATION, DRAWINGS &amp; INSTRUCTION OF CONSULTANT.</b>				
a.	POLYPROPYLENE RANDOM DADDEX, AGM, STEELEX OR EQUIVALENT PP-R PIPES PN 20 AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT.				
i.	DIA. 1-1/2"	60	Rft		
ii.	DIA. 2"	70	Rft		
b.	POLYPROPYLENE RANDOM DADDEX, AGM, STEELEX OR EQUIVALENT PP-R PIPES PN 20 AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT.				
i.	DIA. 1-1/4"	75	Rft		
ii.	DIA. 1-1/2"	40	Rft		
iii.	DIA. 2"	30	Rft		
iv.	DIA.3"	20	Rft		
d.	<b>BRASS BODY GATE-VALVES / BALL-VALVES WITH UNIONS.</b>				
i.	SIZE 1-1/4"	8	No.		
ii.	SIZE 1-1/2"	8	No.		
iii.	SIZE 2"	13	No.		
iv.	SIZE 3" (CI BODY)	3	No.		

<b>5th FLOOR - PLUMBING WORKS</b>					
<b>S No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>10.</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN R.C.C. WALLS OR SLABS WITH HILTE CORE CUTTING MACHINE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK, COST OF DISPOSAL OF CONCRETE CORES, COMPLETE IN ALL RESPECTS AS DIRECTED BY THE ENGINEER.				
<b>A.</b>	4" DIA	4	No.		
<b>B.</b>	6" DIA	5	No.		
<b>C.</b>	8" DIA	20	No.		
<b>11</b>	<b>DRAIN PLUMBING</b>				
	PVC DADEX, AGM, STEELEX OR EQUIVALENT PVC PIPES UPTO 4 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT. NOTE: THE JOB INCLUDES PLUGGING OF DRAIN INTO RISER DRAIN LINE.				
<b>A.</b>	DIA 2"	100	RFT		
<b>B.</b>	DIA 4"	100	RFT		
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
<b>12.</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>13</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>TOTAL COST OF PLUMBING WORKS FIFTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**5th FLOOR**  
**HVAC WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

5th FLOOR - HVAC WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>VRF CASSETTES</b>				
	P/F COMMISSIONING INSTALLATION, TESTING OF VRF AC/DC INDOOR UNITS CASSETTE TYPE INCLUSIVE OF ALL ACCESSORIES, COPPER PIPING, Y SECTIONS, ALL COPPER ACCESSORIES AND HANGING ACCESSORIES TO BE A PART OF THIS ITEM, INSULATION BOUND IN A PVC CONDUIT FOR EACH CASSETTE. DRAIN RISER AND DRAIN PIPES SHALL BE INCLUSIVE OF THIS COST CONNECTED TO BUILDING SERVICE CORE AT THE END. COMPLETE ELECTRICAL SCOPE I.E. CONTROL WIRE, SENSING WIRE, PANEL WIRE, COMMUNICATION WIRE, POWER WIRE TO INTERNAL UNIT. INCLUSIVE OF TWO REMOTE CONTROL. FOR EACH CASSETTE INCLUSIVE OF ROOM PANEL AND IR REMOTE COST. ISOLATION VALVE FOR REFRIGERANT ON THE BEFORE THE CASSETE TO BE INCLUSIVE OF THE COST. COMPLETE INSTALLATION IN ALL ASPECTS. VRF DRAIN PIPE FROM VRF CASSETTE TO THE PERIPHERY OF THE BUILDING TO BE INCLUSIVE OF THE COST WHICH WILL BE CONNECTED TO DRAIN RISER VIA 3" UPVC PIPE (3 INCHES PIPE IS A SEPARATE ITEM). WHEREVER THE VRF CASSETTE IS EXPOSED A DECO PAINTED MS BOX of 12SWG ON THE SIDE AS SLEEVE OF THE CASSETE WITH OPENABLE SECTIONS FOR MAINTAINANCE AS PER ARCHITECTS RECOMMENDATION AND COLOUR.				
<b>A.</b>	1 TON	6	No.		
<b>B.</b>	2 TON	40	No.		
<b>2</b>	<b>STRUCTURAL STEEL WORK</b>				
	PROVIDING, FABRICATING & FIXING OF MS TEE BARS, CHECKERED SHEETS (10 SWG) ANGLES 3" X 2" X 1/4" TH ETC FOR STRUCTURAL WORKS REQUIRED FOR FIXING OF HVAC OUTDOOR UNIT ON PLATFORM INCLUSIVE OF PLATFORM CONSTRUCTION AND ITS MOUNTING TO THE BUILDING STRUCTURAL COMPONENT. THE JOB SHALL INCLUDE ANY OR ALL REPAIRS AND NECESSARY ADJUSTMENTS AND OTHER NECESSARY WORKS. COMPLETE WITH WASHERS AND MOUNTING RUBBERIZED ABSORBERS TO PREVENT VIBRATIONS AND ITS EFFECT ON BUILDING. ALL STRUCTURAL WORKS TO BE EPOXY PAINTED TO DARK BLUE COLOR	1200	KG		
<b>3</b>	<b>OUTDOOR UNIT</b>				
	REMOVAL CLEANING, WRAPPING OF INSULATION FABRIC, WATERPROOFING AND PAINTING OF APPROVED COLOUR ALL PREVIOUS INSTALLATIONS TO BE TAKEN OFF CAREFULLY AND SEALED OFF. 1x 20 + 1x 10 TON UNIT (FOR SMALL WING) 2x 20 + 1x 16 TON UNIT (LARGE WING)				
<b>A.</b>	VRF OUTDOOR UNIT PER TON COST WITH COPPER PIPING FROM OUTER TO INNER WITH ALTERNATE PIPES FOR EACH INDOOR CONNECTION; INTEGRATION AND COPPER PIPING MAIN AS PER EACH VRF OUTDOOR UNIT ALL VRF OUTDOOR UNITS TO HAVE ISOLATION VALVES FOR REFRIGERANT CAPTURE AND MAINTAINANCE. ALL OUTDOOR UNITS TO BE SYNCHROZIED WITH EACH OTHER FOR FAIL SAFE OPERATION USING COPPER PIPES AND RELEVANT ACCESSORIES: ENSURING SYNCHRONIZATION AMONGST EACH OTHER. ALL COPPER PIPING INCLUSIVE OF NETWORK COPPER PIPING VIA Y AND STRAIGHT SECTIONS OF APPROPRIATE SIZES AS PER VRF REQUIREMENTS TO BE INCLUSIVE OF THIS JOB HAVING PROPER INSULATION TO INDUSTRY STANDARD AS PER MANUFACTURER. INCLUSIVE OF REFRIGRANT COST AND ITS TOP UP COST WHEN SYSTEM IS RUN AS PER OEM. VRF OUTDOOR UNITS AND ITS CARDS TO BE VALIDATED AND MADE PROPER USING ALL WEATHER SILICON PROTECTION IN ADDITION TO THE OEM PROTECTION. THE CONTRACTOR SHALL PRODUCE SAMPLES OF ADDITIONAL PROTECTION OF CARDS ALONG WITH INSTALLATION OF PROTECTION DEVICES SUCH AS SURGE PROTECTIONS AND OTHERS AS REQUIRED FOR SMOOTH OPERATION	86	TON		

<b>5th FLOOR - HVAC WORKS</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>4</b>	<b>DISTRIBUTION BOARDS</b>				
	SUPPLY AND INSTALLATION OF THE FOLLOWING DISTRIBUTION BOARDS OF MAKE HUSSAIN & CO., A TO Z, UNIVERSAL MADE WITH 14 SWG SHEET STEEL HOUSING WITH APPROVED COLOR AND HAVING SPECIFIED CIRCUIT BREAKERS USING TP MCCB, VOLTMETER, AMMETER, INDICATION LIGHTS, WITH K- ELECTRIC APPROVED ENERGY METERS AND ENERGY LOGGERS. AS SHOWN IN THE DRAWING. (REFER SINGLE LINE DIAGRAM). NOTE: SPECIFIED MULTIMETER SHOULD BE INCLUDED IN THE DBs				
<b>A.</b>	FOR SMALL WING	1	No.		
<b>B.</b>	FOR LARGE WING	1	No.		
<b>5</b>	<b>DRAIN PIPING (HVAC)</b>				
	PVC DADEX, AGM, STEELEX OR EQUIVALENT PVC PIPES UPTO 4 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT. NOTE: THE JOB INCLUDES PLUGGING OF DRAIN INTO RISER DRAIN LINE.				
<b>A.</b>	DIA 3"	700	RFT		
<b>B.</b>	DIA 1"	400	RFT		
<b>6</b>	<b>COMMISSIONING OF HVAC SYSTEM</b>				
	<b>COMPLETE DOCUMENTATION</b> TESTING COMMISSIONING OF THE HVAC SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
<b>7</b>	2 YEARS WARRANTY ALONG WITH COMPLETE PREVENTIVE MAINTENANCE OF ALL COMPONENTS OF HVAC SYSTEM.	1	JOB		
<b>8</b>	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF HVAC SYSTEM	1	JOB		
<b>9</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN R.C.C. WALLS OR SLABS WITH HILTE CORE CUTTING MACHINE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK, COST OF DISPOSAL OF CONCRETE CORES, COMPLETE IN ALL RESPECTS AS DIRECTED BY THE ENGINEER.				
<b>A.</b>	1.5" DIA	20	No.		
<b>B.</b>	4" DIA	5	No.		
<b>C.</b>	6" DIA	1	No.		
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
<b>10</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>11</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>COST OF HVAC FIFTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**6th FLOOR**  
**SUMMARY**



6th FLOOR - SUMMARY		
S # N	DESCRIPTION	AMOUNT RS
1	Cost of Civil Work	0
2	Cost of Furniture	NTQ
3	Cost of Electrical Works	0
4	Cost of Plumbing Works	0
5	Cost of HVAC	0
<b>Total Cost of 6th Floor</b>		<b>0</b>
<b>LESS SALVAGE COST</b>		<b>0</b>
<b>NET TOTAL COST OF 6TH FLOOR</b>		<b>0</b>
All taxes are inclusive		
<p><b>Total Amount Rs.</b> _____</p>		
<p>Contractor's Signature with Stamp</p>		
<p>Dated: _____</p>		

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**6th FLOOR**  
**SALVAGABLE MATERIAL**

**SLIC RENOVATION  
DESIGN CONSULTANCY  
OF 6th FLOOR  
BUILDING No. 9, KARACHI.**

The contractor is required to store the items temporarily in the storage space provided by the client (if required). Each lot of the salvaged material shall be documented before leaving the site, including acquiring the gate pass. All salvaged items shall be considered as the contractor's property after leaving the site.

**6th FLOOR - SALVAGABLE MATERIAL (TO BE CREDITED TO THE CLIENT)**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>SERVICEABLE MATERIAL DEMOLITION</b>				
A.	TAKING OUT WOODEN / VIN BOARD PARTITION WALLS, WINDOWS, DOOR SHUTTERS TAKING OUT CAREFULLY AND STACKING SERVICE ABLE AT THE DESIGNATED PLACE AND CREDIT FOR THE COST OF SALVAGE TO THE CLIENT AND THEN IT WILL BE THE PROPERTY OF THE CONTRACTOR.	8,000	Sft		
B.	TAKING OUT GLAZED ALUMINUM DOORS & WINDOWS CAREFULLY AND STACKING SERVICEABLE AT DESIGNATED PLACES AND DISPOSAL OF UNSERVICEABLE AS PER DIRECTION	850	Each		
C.	TAKING OUT GI PIPES, FITTINGS AND FIXTURES AND STACKING THE SERVICEABLE AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
D.	TAKING OUT ELECTRICAL WIRES, FITTINGS & FIXTURES, SWITCHBOARDS ETC. AND STACKING THE SERVICE AT SOME DESIGNATED PLACE AS PER DIRECTION.	1	LS		
E.	TAKING OUT CAREFULLY ELECTRICAL DISTRIBUTION BOARDS AND SUB MAIN DISTRIBUTION BOARDS AND STAKING THE SERVICEABLE IT OUT AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
F.	TAKING OUT CAREFULLY HVAC DUCTS AND STACKING THE SERVICEABLE IT AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
G.	TAKING OUT WOODEN /METALLIC RAILINGS AND STACKING THE SERVICEABLE AT SOME DESIGNATED PLACE AS PER DIRECTION.	1	LS		
H.	TAKING OUT CAREFULLY DOOR, WINDOWS HARDWARE ETC COMPLETE	1	LS		
I.	TAKING OUT CAREFULLY WINDOW BLINDS AND STACKING THE SERVICEABLE	1	LS		
J.	TAKING OUT CAREFULLY <b>BUS BAR</b> AND ACCESSORIES AND STACKING THE SERVICEABLE	1	LS		
<b>TOTAL AMOUNT TO BE CREDITED TO THE CLIENT SIXTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**6th FLOOR**  
**CIVIL WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge. Single Surface shall be used to measure QTY in SFT

**6th FLOOR - CIVIL WORK**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>DEMOLITION</b>				
	<p>DEMOLITION AND DISMANTLING OF EXISTING INFRASTRUCTURE, EXISTING BUILDING INTERIORS INCLUDING:</p> <ol style="list-style-type: none"> <li>1. FLOOR TILES,</li> <li>2. MASONRY WALLS,</li> <li>3. DOORS,</li> <li>4. FALSE CEILING</li> <li>5. ALL KIND OF WIRING</li> <li>6. FIRE SENSORS</li> <li>7. SPEAKERS</li> <li>8. ROLLER BLINDS.</li> <li>9. CEILING ACCESSORIES ETC.</li> <li>10. REINSTALLING ANY EQUIPMENT ON THE ROOF WITH APPROPRIATE ANCHORING WHEREVER NEEDED.</li> </ol> <p>COVERED AREA: 14,031 SFT APPROX.</p> <p>INCLUSIVE OF COLLECTING, TEMPORARY STORAGE BEFORE DISPOSAL, CARTAGE, ALL KINDS OF LABOUR, DISPOSAL OF DEBRIS FROM ANY LEVEL UP TO ANY LEAD AND LIFT AS DIRECTED BY THE CLIENT /SITE ENGINEER. AFTER THE COMPLETION OF THE JOB THE CONTRACTOR WILL PHOTOGRAPH, RECORD &amp; AND SUBMIT AS BUILT DRAWING TO THE CONSULTANT BEFORE STARTING CONSTRUCTION WORKS.</p> <p>NOTE:</p> <ol style="list-style-type: none"> <li>1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUMPING THE DEBRIS AT THE APPROPRIATE DUMPING SITE OUT OF SITE PREMISES.</li> <li>2. COLLECTIBLE ITEMS SHALL BE SAFELY TRANSFERRED TO THE CLIENT- DESIGNATED STORAGE AREA.</li> <li>3. IDENTIFICATION OF INVENTORY BEFORE DISMANTLING NEEDS TO BE MADE.</li> <li>4. AFTER IDENTIFICATION ITEMS TO BE HANDED OVER TO THE CLIENT, CATEGORIZED SALVAGED.</li> <li>5. LOSS OF PROPERTY TO BE CHARGED AT PKR 60/KG.</li> </ol>	1	Job		
<b>2</b>	<b>TERMITE PROOFING</b>				
	<p>VERMIN AND TERMITE FULL SPECTRUM FUMIGATION DONE ON FOLLOWING THREE (3) STAGES.</p> <ol style="list-style-type: none"> <li>I. AFTER COMPLETE DEMOLITION, BEFORE COMMENCEMENT OF ANY CONSTRUCTION.</li> <li>II. AFTER CONSTRUCTION OF ALL WALLS AND PARTITIONS.</li> <li>III. ON COMPLETION OF ALL CONSTRUCTION AND FINISHING.</li> </ol>	15,435	SFT		
	<b>WALLS, PARTITIONS &amp; CLADDING</b>				
<b>3</b>	<b>BLOCK MASONRY</b>				
	<p>PROVIDING &amp; LAYING STANDARD CEMENT CONCRETE SOLID BLOCK MASONRY WALL, USING MACHINE-MADE BLOCKS AND APPROVED QUALITY OF FINE AND COURSE AGGREGATE LAID IN 1:5 CEMENT SAND MORTAR, IN ANY SHAPE, LENGTH, OR HEIGHT INCLUDING, RAKING JOINTS, SCAFFOLDING, ANCHOR BARS, CURING, CUTTING OF FLOOR FOR MASONRY ETC. COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. WETTED FOR THREE DAYS AFTER COMPLETE LAYING OF WALL.</p>				
<b>A.</b>	9" THICK BLOCK MASONRY	1,944	sqft		
<b>B.</b>	6" THICK BLOCK MASONRY	4,861	sqft		
<b>C.</b>	4" THICK BLOCK MASONRY (TOILET WALL)	2,916	sqft		

6th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>4</b>	<b>CEMENT BOARD PARTITION WALL</b>				
	CEMENT BOARD PARTITION WALL SUSPENDED FROM THE TOP SLAB ABOVE GLASS PARTITION WITH 100mm THICK STUD PARTITION @ 3 FEET c/c, CONSISTING OF G.I. SHEET (22 SWG); ALL CEMENT BOARD PANELS TO HAVE GI FRAMING ON PERIPHERY INTERNAL FRAMING OF APPROVED SECTION, 12mm THICK CEMENT BOARD FIXED ON BOTH SIDES OF FRAME, INCLUDING ALL HARDWARE, FIBER TAPE ON SHEET JOINTS, METAL TAPE ON EDGES, ETC., PAINT JOB TO BE INCLUDED IN THE ITEM. INCLUDING MAKING OPENINGS FOR HVAC DUCTS AND CABLE TRAYS ETC. ABOVE 9' IN HEIGHT. COMPLETE IN ALL RESPECT AS PER DRAWING AND INSTRUCTION OF THE ARCHITECT.				
<b>A.</b>	4" THICK HEIGHT: 3'-6" (ABOVE GLASS PARTION)	633	RFT		
<b>5</b>	<b>GYPSUM VERTICAL BAND</b>				
	P/F OF GYPSUM BAND ABOVE GLASS PARTITION WITH COVE HAVING DC LED STRIP LIGHT @ 120 LEDs PER METRE (36 LEDs PER FOOT) IN/AROUND COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT AND NECESSARY G.I. FRAMING. INCLUDING APPROVED WALLPAPER PASTED IN SEAMLESS MANNER AND MAKING OPENINGS FOR HVAC DUCTS AND CABLE TRAYS ETC. ABOVE 9' HEIGHT. COMPLETE IN ALL RESPECT AS PER DRAWING AND INSTRUCTION OF THE ARCHITECT. <b>NOTE:</b> COST OF WALLPAPER TO BE INCLUDED IN THE ITEM.	400	SFT		
<b>6</b>	<b>PLASTER WORK</b>				
	PROVIDING AND LAYING CEMENT SAND PLASTER 1:4 USING O.P. CEMENT & FINE SAND ON WALLS, COLUMNS AND WHEREVER REQUIRED OF ANY SHAPE, CURVE AND DESIGN USING EXPANDED METAL MESH ON JOINTS COLUMNS WITH WALL AND ON CONDUITS FILLING SCAFFOLDING WITH MAKING EDGES CORNERS, HOISTNG, WATERING, CURING AT ANY HEIGHT SMOOTHLY FINISHED INCLUDING MAKING DRIP COURSE AT ALL PROJECTIONS, SLABS OFFSETS OR WHERE AS REQUIRED COMPLETE AS PER SPECIFICATIONS AND INSTRUCTION OF THE ENGINEER/ ARCHITECT.	19,346	SFT		
<b>7</b>	<b>REPAIRING / FILLING OF CRACKS</b>				
	REPAIRING CRACKS ON INTERNAL AND EXTERNAL WALLS, CEILING, BEAMS, AND WHEREVER REQUIRED BY SCRAPPING, CHISELLING, FILLING, AND FINISHING OF SURFACE. FILLING SHALL BE DONE WITH PLASTER / PUTTY OR ANY OTHER APPROPRIATE MATERIAL. NOTE: EACH POINT SHALL NOT EXCEED 1 SFT SURFACE AREA. IN CASE OF REPAIRING OF LARGER THAN 1 SFT THE CONTRACTOR SHALL MEASURE, PHOTOGRAPH, AND DOCUMENT THE POINT FOR THE RECORD.	150	No.		
<b>8</b>	<b>MARINE PLY DECO PAINTED FLUTED PANELS</b>				
	PROVIDING AND FIXING OF FLUTED PANELS CNC OR ROUTER PROFILED AS PER ARCHITECT CHOICE AND SPECIFICATION TO MAKE A SEAMLESS SURFACE. MADE OF MARINE PLY 16mm THICK, PASTED ON TOP OF 12mm TH MARINE PLY SHEET WITH ROUGH WOOD FRAMING OF 25mm by 50mm @ 3 FEET c/c AT BACK SIDE AND FIXED FRAMING ON EDGES OF EACH SHEET. MARINE PLY BATTONS ARE TO BE PASTED AFTER MAKING IT SECURE IN PLACE WITH APPROVED DECO PAINT ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. ALL NECESSARY SUPPORT/ FRAMING STRUCTURE IS INCLUDED IN THE JOB.	2,444	SFT		

6th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>9</b>	<b>MACHINE POLISHED MARBLE FEATURE WALL</b>				
	PROVIDING AND FIXING OF MACHINE POLISHED WALL OF APPROVED MARBLE INCLUDING BULL NOSING / CHAMFERING ON EDGES, ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. FIBER MESH TO BE PASTED AT THE BACK SIDE OF THE MARBLE USING EPOXY RESIN BEFORE FIXING TO ITS POSITION. ALL CONCRETE/ DRY BOND WORKS ARE INCLUDED IN THE JOB.				
<b>A.</b>	LIFT MARBLE FEATURE WALL <b>PASHA WHITE, SANDALWOOD, DIAG-NOSE WHITE OR EQUIVALENT (BOOK MATCHED- SEAMLESS TEXTURED IF APPLICABLE)</b>	374	SFT		
<b>10</b>	<b>FLAT GLASS PARTITION WALL</b>				
	PROVIDING, FABRICATION & FIXING <b>9FT HIGH</b> 12mm THICK TEMPERED ULTRA CLEAR MACHINE EDGED, GLASS PARTITIONS WITH ALL SIDES POWDER COATED ALUMINUM SECTION 12mm THICK BORDER AS APPROVED BY ARCHITECT. SECTION DESIGN TO BE CONFIRMED BY THE ARCHITECT. WITH GASKET FLUSHED AND CLEANED TO MATCH FRONT AND BACK SURFACE AND SHAPE INCLUDING FROSTING FILM PASTED ENSURING NO BUBBLES OR ANOMALIES ARE FOUND AS SHOWN IN DRAWINGS/ INSTRUCTED BY ARCHITECT, INCLUDING BOLTS, NUTS, SCREWS ALUMINIUM CHANNEL IF REQUIRED FOR SAFELY MOUNTING AND ANCHORING THE GLASS PARTITION. BOLTED/ CONNECTED TO GROUND AND CEILING AT EVERY 4 FEET SPACE OR WHEREVER GLASS CUTTING IS ENCOUNTERED, CONTRACTOR TO ENSURE SEAMLESS EDGING SOLUTION WITH A TOLERANCE OF UPTO 0.5MM. COMPLETE IN ALL RESPECTS. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM INCLUDING FROSTING FILM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE A DETAILED SHOP DRAWING OF FRAMING, GLASS PARTITION, CUTTING, AND DOORS DETAILS AND PATCH FITTINGS IF ANY PRIOR TO THE START OF WORK.	3,542	SFT		
<b>12</b>	<b>GLASS DOORS (SWING)</b>				
	P/F TEMPERED SWING GLASS DOOR USING 12mm ULTRA CLEAR GLASS, MACHINE EDGED, WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. WITH ALL SIDES POWDER COATED ALUMINUM SECTION 1.6mm THICK BORDER AS APPROVED BY ARCHITECT. ALUMINUM SECTION SIZE APPROX. 1.5" x 2" WITH GASKET FLUSHED. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. GLASS DOOR TO BE ANCHORED ON FLOOR AND MOUNTED TO CEILING USING A CHANNEL AND M10 RODS TO BE MADE STURDY.				
<b>A.</b>	DOUBLE LEAF DOORS (6'-0" x 9'-0")	3	Nos		
<b>B.</b>	SINGLE LEAF DOORS (3'-0" x 9'-0")	15	Nos		
<b>C.</b>	SINGLE LEAF DOORS (2'-6" x 9'-0")	1	Nos		

6th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>13</b>	<b>GLASS DOORS (FOLDING / ACORDIAN)</b>				
	P/F TEMPERED FOLDING GLASS DOOR (ACORDIAN STYLE) USING 12mm ULTRA CLEAR GLASS WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. GLASS TO BE ENCASED IN ALUMINUM SECTION OF 2mm TH POWDER COATED; 1.5" (FRONT PROFILE) by 2" SECTION. INCLUSIVE OF IMPORTED HARDWARE TOP MOUNTED TO MOUNT SECURE AND PROVIDE CLEAN CHANNEL TO GLASS. ONCE HARDWARE SHALL INCLUDE RUBBER GASKITS TO SECURE CLEAN UNINTERRUPTED GLASS SURFACE WITHOUT OPENINGS ONCE COMPLETELY OPEN				
<b>A.</b>	4 PANELS FOLDING DOOR (11-6" x 9'-0")	2	No.		
<b>14</b>	<b>SS TRIM FOR LIFT OPENINGS</b>				
	P/F OF 14 SWG SS ARCHITRAVE FOR LIFT DOORS, WITH GOLDEN AND SS FINISH COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE.COST TO INCLUDE COST OF MOUNTING. BACKING USING MARINE PLY PROFILE OVER WHICH THE TRIM SHALL BE PASTED GLUED AND SECURED IN PLACE.	4	No.		
<b>15</b>	<b>ALUMINUM WINDOWS</b>				
	PROVIDING AND FIXING FULLY DOUBLE-GLAZED UV-RATED,SOUND PROOF, APPROVED TEXTURE, POWDER COATED/ ANODIZED ALUMINUM FIXED WINDOWS/ VENTILATORS/ PARTITIONS WITH FROSTING FILM AS PER BRITISH STANDARDS INCLUDING SHATTER PROOF SECURITY FILM OF 3m OR EQUIVALENT, MANUFACTURED BY ALPHAPEN/ ALUCON/ UBM TOSTEM/ SCHUCO OR EQUIVALENT. PROFILE THICKNESS OF MINIMUM 1.5 INCH IN WIDTH. FIXING THROUGH THEIR APPROVED FABRICATORS, INCLUDING DRAIN CHANNEL. FITTINGS WITH ALL ACCESSORIES CUTTING HOLES ETC. AND MAKING GOOD DAMAGES TO WALLS ETC. THE ADJACENT FINISHED WALL SHALL BE FILLED WITH WEATHERPROOF SILICON SEALANT OVER THE BACKER ROD OF THE REQUIRED SIZE AND OF APPROVED QUALITY, ALL COMPLETE AS PER THE APPROVED DRAWING & DIRECTION OF THE ENGINEER-IN-CHARGE. NOTE: FRAMING OF THE PRODUCT TO THE ADJACENT WALL FACE IS ALSO INCLUDED IN THE COST	2,581	SFT		
<b>16</b>	<b>ALUMINUM DOOR (TOILET CUBICLE)</b>				
	PROVIDING AND INSTALLING IN-POSITION ALUMINUM DOOR, WITH POWDER COATED/ ANODIZED ALUMINUM SHUTTER FRAME & MAIN FRAME SECTION OF (ALPHAPEN/ ALUCON/ UBM/ TOSTEM/ SCHUCO OR EQUIVALENT), INCLUDING ALL HARDWARE, S.S. HINGES, LOCKSET, GLUE, SILICONE SEALANT, BACKING ROD, NEOPRENE/RUBBER GASKET, WASTAGE, LIFTING, CUTTING, FIXING, MAKING OF GROOVE IF REQUIRED ETC., COMPLETE AS PER DRAWING, HARDWARE SCHEDULE & INSTRUCTION OF THE ARCHITECT. CONTRACTOR MUST SUBMIT DOOR OPTIONS SPECIFYING COLORS, PATTERNS AVAILABLE. NOTE: FRAMING OF THE PRODUCT TO THE ADJACENT WALL FACE IS ALSO INCLUDED IN THE COST				
<b>A.</b>	2.25'x 7' (WIDTH x HEIGHT)	12	No.		
<b>B.</b>	2.5'x 7' (WIDTH x HEIGHT)	2	No.		



6th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>17</b>	<b>WOODEN DOOR</b>				
	PROVIDING AND FIXING OF PARTIAL FRAMED 1.5" THICK SOLID OAK PANEL DOOR. HAVING IRON MONGRIES INCLUDING COAT HANGERS, DECORATIVE MORTGAGE-STYLE LOCK OF MAKE YALE OR EQUIVALENT, HANDLES S.S. HINGES, AND ALL OTHER ACCESSORIES OF ARCHITECT'S CHOICE. COMPLETE IN ALL RESPECT. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	3'x 9' (WIDTH x HEIGHT)	7	No.		
<b>B.</b>	3.5'x 9' (WIDTH x HEIGHT)	1	No.		
<b>18</b>	<b>FIRE DOOR (FIRE CORRIDOR)</b>				
	PROVIDING, FABRICATING, AND FIXING IN POSITION 2" THICK INTERNAL METAL FRAME DOOR WITH OUTER BODY MADE OF FIRE-RATED WOOD ALONG WITH PUSH BAR HAVING HONEY COMB STRUCTURE INSIDE AND GLASS WOOL FILLING WITH 16 SWG MOULDED SHEET METAL FRAME (CHOWKATS) WITH 2 COATS OF RED OXIDE PAINT. METAL FRAME SHALL BE FILLED WITH CONCRETE AND FIXED WITH 4 NOS. 6" LONG HEAVY DUTY M.S CHROMIUM PLATED HINGES AND 6 NO HINGES FOR LEAD LINE DOOR TO EACH SHUTTER, AND 6 NOS 6" LONG HOLD FASTS WELDED MADE OF ANGLE IRON (1-1/2"X1-1/2" X3/16") WITH FORKED ENDS TARRED AND WITH METAL FRAME EMBEDDED IN MASONRY AND WITH APPROVED HARDWARE 2 NOS. 9" LONG TOWER BOLTS, DOOR CLOSER RAYOBI OF JAPAN OR EQUIVALENT, DOOR STAY, AND C.P. HANDLES, DEODAR WOOD ARCHITRAVE 2-1/2"X 5/8" ALL AROUND DOOR FRAME AND APPROVED POLISHING OR SINLGE COAT OF APPROVED ENAMEL PAINT OVER A PRIMER COAT AND 2 COATS OF ICI INTUMESCENT PAINT TO RESIST FIRE UP TO MINIMUM 120 MINUTE ON STANDARD (BS 476-22). TERMITES CONTROL AND WOOD PRESERVATIONS APPLICATIONS (SOLIGNUM), SMOKE SEALS ON THREE SIDES AND FIRE-RATED ACCESSORIES, AND PEEP WINDOWS OF APPROPRIATE SIZE ALL COMPLETE AS PER DRAWINGS, SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. <b>NOTE:</b> THE PRODUCT MUST ASSURE FIREPROOFING STANDARDS AS REQUIRED. THE CONTRACTOR MUST SUBMIT THE SHOP DRAWING AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	3'x 9' (WIDTH x HEIGHT)	7	No.		
<b>B.</b>	DOUBLE LEAF 5'x 9' (WIDTH x HEIGHT)	1	No.		
<b>19</b>	<b>WOODEN DOOR (BATHROOM DOOR)</b>				
	PROVIDING AND FIXING OF PARTIAL FRAMED 1.5" THICK SOLID OAK PANEL DOOR. HAVING IRON MONGRIES INCLUDING COAT HANGERS, DECORATIVE MORTGAGE-STYLE LOCK OF MAKE YALE OR EQUIVALENT, HANDLES S.S. HINGES, AND ALL OTHER ACCESSORIES OF ARCHITECT'S CHOICE. 1.5 FEET HIGH SPLASH ALUMINIUM SHEET SHALL BE PASTED ON EITHER SIDE OF THE DOOR AS PER DRAWINGS. COMPLETE IN ALL RESPECT. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	2.5'x 9' HEIGHT	3	No.		
<b>B.</b>	3'x 9' HEIGHT	6	No.		
<b>20</b>	<b>LINTELS</b>				
	PROVIDING & FIXING OF PRECAST RCC LINTELS OVER DOORS, WINDOWS OR WHEREVER REQUIRED. UPTO 12" HEIGHT, THE COST MUST INCLUDE ALL MATERIAL (STEEL BARS) 1:2:4 (fc 3000 psi).				
<b>A.</b>	WINDOW LINTEL	345	RFT		
<b>B.</b>	DOOR LINTEL	64	RFT		

6th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>21</b>	<b>ROLLER BLINDS</b>				
	<p>PROVIDE AND INSTALL IN POSITION ROLL-UP WINDOW BLINDS OF APPROVED COLOR AND SPECIFICATIONS, CHAIN OPERATED ROLLER BLIND (PROTECTOR OR APPROVED EQUIVALENT) WITH APPROVED FABRIC SCREW ON WALLS, INCLUDING ALL HARDWARE, WASTAGE, LIFTING, CUTTING, FIXING, SCAFFOLDING ETC., COMPLETE AS PER DRAWING &amp; INSTRUCTION OF THE ARCHITECT.</p> <p><b>HEIGHT 9'</b></p> <p>FOR PAYMENT NET INSTALLED BLIND (INCLUDING TOP &amp; BOTTOM CHANNEL) AREA WILL BE MEASURED.</p>	4,025	SFT		
	<b>FLOORING</b>				
	<p>NOTE:</p> <p>1. THE DEMOLITION / DISMANTLING OF EXISTING FLOORING IS INCLUDED IN THE JOB.</p> <p>2. SAMPLES &amp; TILE-CUTTING DRAWINGS ARE TO BE APPROVED BY ENGINEER/ ARCHITECT.</p>				
<b>22</b>	<b>PORCELAIN TILES FLOORING</b>				
	<p>PROVIDING AND LAYING BEST QUALITY APPROVED <b>FULL-BODY PORCELAIN</b> TILES OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.</p> <p><b>NOTE:</b> THE TILES SHALL BE MACHINE CUT i.e. CUTTING SHOULD BE CARRIED OUT OFF SITE EXCEPT THE TILES OF THE LAST EDGE OF FLOORING SPACE.</p>				
<b>A.</b>	24" x 48"	7,400	SFT		
<b>B.</b>	15" x 36" (FOR BATHROOMS)	1,200	SFT		
<b>C.</b>	BATH WALL (APPROX. 15" x 36")	2,300	SFT		
<b>D.</b>	36" x 72"	370	SFT		
<b>23</b>	<b>FLOOR SCREEDING</b>				
	<p>SCREEDING ON BATHROOM FLOORING OR WHEREVER REQUIRED TO MAKE APPROPRIATE SLOPE FOR WATER DRAINAGE. 2" THICK 1:3:6 MIX WITH PUDLO TOPPING AND WATERPROOFING. CURRING OF AT LEAST 14 DAYS.</p>	4,000	SFT		
<b>24</b>	<b>MARBLE STAIR STEPS</b>				
	<p>PROVIDING AND LAYING BEST QUALITY APPROVED <b>MARBLE STAIR STEPS, 3/4" TO 1" THICK</b>, (ZIARAT WHITE, OR EQUIVALENT) OF GLAZED/ MATT FINISH, ANTI-SLIP WITH GROVES AT NOSING END TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.</p>				
<b>A.</b>	<p>25 TREADS 5'-0" x 1'</p> <p>25 RISERS 5'-0" x 8"</p> <p>2 LANDINGS, 5'-0" x 5'-0"</p>	330	SFT		

6th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>25</b>	<b>STONE STAIR STEPS (SMALL WING)</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE STAIR STEPS, <b>3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP WITH GROVES AT NOSING END TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.				
A.	25 TREADS 4'-6" x 1' 25 RISERS 4'-6" x 8" 2 LANDINGS, 4'-6" x 4'-6"	270	SFT		
<b>26</b>	<b>PRE-POLISHED / FLAMED MARBLE FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED <b>FULL-BODY PORCELAIN</b> TILES OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT. <b>NOTE:</b> THE TILES SHALL BE MACHINE CUT i.e. CUTTING SHOULD BE CARRIED OUT OFF SITE EXCEPT THE TILES OF THE LAST EDGE OF FLOORING SPACE.				
A.	LIFT LOBBY (SIZE 36" x 72")	830	SFT		
<b>27</b>	<b>WOOD LAMINATE FLOOR</b>				
	P/F OF BEST QUALITY WOOD LAMINATE FLOOR OF MAKE FIRST FLOOR, PAK CARPETS, INTERWOOD OR EQUIVALENT INCLUDING ALL BENDS, CORNERS ETC. INCLUDING COST OF T-PROFILES AND SKIRTING. COMPLETE IN ALL RESPECT, INCLUDING FINISHING, CLEANING & POLISHING ETC. COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER/ ARCHITECT. MALAYSIA, CHINA, TURKISH FLOORING	3,500	SFT		
<b>28</b>	<b>WOOD LAMINATE SKIRTING (FOR AREAS WITHOUT LAMINATE FLOORING)</b>				
	P/F OF APPROVED BRAND WOODEN SKIRTING 6" HIGH & 1/2" THICK INCLUDING ALL BENDS, CORNERS ETC. COMPLETE IN ALL RESPECT, INCLUDING FINISHING, CLEANING ETC. COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER/ ARCHITECT.	1,500	RFT		
<b>29</b>	<b>SKIRTING UPVC</b>				
	PROVIDING & FIXING 4" HIGH INDUSTRIAL UPVC SKIRTING OF ARCHITECT'S CHOICE OF FINISH, WITH VERTICAL SUPPORT MAXIMUM 2' APART OR ON TURNING POINTS ON WALLS, GLASS PARTITIONS, PELMET WALLS AND ANY OTHER WALL SURFACE. COMPLETE IN ALL RESPECTS AND AS PER DRAWING, PATTERNS AND DIRECTIONS OF THE ARCHITECT / ENGINEER. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS & SAMPLES FOR APPROVAL BY ENGINEER/ ARCHITECT.				
A.	FLOOR 1 SKIRTING (MATCHING WITH PORCELAIN)	2,345	RFT		
B.	FLOOR 2 SKIRTING (MATCHING WITH MARBLE)	905	RFT		
<b>30</b>	<b>FIRE CORRIDOR FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE, <b>SIZE 24" x 48". 3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	1,375	SFT		

<b>6th FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>31</b>	<b>FIRE CORRIDOR SKIRTING</b>				
	PROVIDING AND FIXING BEST QUALITY APPROVED 4" HIGH SKIRTING WITH PRE-POLISHED STONE, 3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT) OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE FIXED USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	644	RFT		
<b>32</b>	<b>WATER PROOFING</b>				
	POLYURETHANE SINGLE COMPONENT WATERPROOF COATING OF MAKE CONCUR OF AQUAKNIGHT OF BMT OR EQUIVALENT. APPLYING PRIMER AFTER SURFACE CLEANING, SHEET REPAIR AND PREPARATION WORKS. APPLY POLYESTER CLOTH OVER JOINTS/PATCHES AND ENSURE TO COVER JOINTS WITH PU COATING ALONG WITH CANVAS/POLYESTER CLOTH. ON COMPLETION OF THE ENTIRE AREA, APPLY 2 COATING OF PU – COATING AND COMPLETE IN ALL RESPECT. TOTAL THICKNESS 4mm.	890	RFT		
<b>PAINT</b>					
<b>33</b>	<b>PAINT WORKS</b>				
	PROVIDING AND APPLYING PAINT ON WALLS/ ETC. INCLUDING RUBBING WITH SANDSTONE, FILLING THE UNEVEN SURFACES WITH PUTTY, CRACKER, AND EPOXY TREATMENT (IF REQUIRED) , RUBBING WITH SANDPAPER AND PREPARING THE SURFACE. APPLYING COATS OF PRIMER ON INTERNAL WALLS TO PREPARED SURFACE OF PLASTERED AND FINISH PAINT COATS AS INDICATED IN SUB ITEMS, COMPLETE IN ALL RESPECTS AS PER DRAWINGS.				
A.	PLASTIC EMULSION PAINT(ON INTERIOR WALLS) 3 COATS	51,750	SFT		
B.	TEXTURED PAINT (ON INTERIOR WALLS) 3 COATS	14,850	SFT		
C.	PLASTIC EMULSION PAINT(BLACK OR DARK GRAY ON CEILING DUCTS, AND BEAMS) 3 COATS	17,600	SFT		
D.	WEATHER SHEILD ON EXTERIOR AND FORE CORRIDOR WALLS 3 COATS	25,668	SFT		
E.	ENAMEL PAINT OF DUCTS, PIPES, CONDUITS, ETC.	1	SFT		
<b>TOILETS</b>					
<b>34</b>	<b>CORIAN COUNTER TOP</b>				
	PROVIDING AND FIXING OF CORIAN COUNTERTOP OF APPROVED SHADE AND DESIGN. HAVING SS TRIM 0.5 INCH THICK ON JOINING SURFACES AND 0.5 INCH BELOW JOINT LINE. MONTELLI/ CHINESE CORIAN. INCLUSIVE OF COST OF DOUBLE FRAME 1/2 " by 3/4" MS FRAME RED OXIDE AND PAINTED ON TOP. NOTE: THE TOP SURFACE AREA SHALL BE CONSIDERED FOR BILLING PURPOSE.				
A.	FEMALE TOILET LARGE WING	10	SFT		
B.	MALE TOILET LARGE WING	15	SFT		
C.	FEMALE CHIEF TOILET LARGE WING	8	SFT		
D.	MALE CHIEF TOILET LARGE WING	11	SFT		
E.	FEMALE TOILET SMALL WING	10	SFT		
F.	MALE TOILET SMALL WING	10	SFT		
G.	FEMALE CHIEF TOILET SMALL WING	8	SFT		
H.	MALE CHIEF TOILET SMALL WING	8	SFT		
<b>CEILING</b>					
<b>35</b>	<b>MS CEILING TRELLIS</b>				
	P/F APPROVED DECO PAINTED. 16 SWG MS T-SECTION (SIZE:0.75" x 0.5", WxH) BOX SECTION OPEN CEILING TRELLIS @ 2 FEET c/c SUSPENDED USING GI THREADED RODS M10. ALL NECESSARY SUPPORT STRUCTURE IS INCLUDED IN THE JOB.	5,000	SFT		

6th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
36	<b>MARINE PLY DECO PAINTED FLUTED PANELS CEILING</b>				
	<p>PROVIDING AND FIXING OF FLUTED PANELS MADE OF MARINE PLY HAVING CNC ROUTING OR PROFILED TO ARCHITECTS SPEC 16mm THICK, PASTED ON TOP OF 12mm TH MARINE PLY SHEET WITH ROUGH WOOD FARMING OF 1" by 2" @ 1 FEET c/c AT BACK SIDE TO SECURE IN PLACE TO DESIRED CEILING LEVEL AS PER DRAWING. MARINE PLY BATTONS TO BE PASTED AFTER MAKING IT SECURE IN PLACE WITH APPROVED DECO PAINT ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. ALL NECESSARY SUPPORT/ FRAMING STRUCTURE IS INCLUDED IN THE JOB.</p> <p>SECTION PLY: 28mm, FRAMING: 25mm Th MATERIAL.</p> <p><b>NOTE:</b> CONTRACTOR TO INCLUDE PRICE OF CUTTING FOR LIGHT ACCESSORIES AND CREATION OF ACCESS PANELS WHERE NEEDED.</p>	800	SFT		
37	<b>PELMET LIGHT ON CEILING</b>				
	<p>P/F IN POSITION DC LED STRIP LIGHT @ 120 LEDS PER METRE (36 LEDS PER FOOT) IN/AROUND FLUTTED PANEL CEILING, INCLUDING MAKING OF COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT WITH APPROVED PAINT FINISH MAKING OF LIGHT PELMET WITH FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT.</p> <p>NOTE: RUNNING LENGTH OF THE LIGHT WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.</p>	800	RFT		
38	<b>GYPSUM CEILING</b>				
	<p>P/F IN POSITION GYPSUM BOARD CEILING, CONSISTING OF G.I. FRAME WORK OF APPROVED SECTIONS WITH G.I. HANGERS AND 16-18 SWG. 12MM THICK GYPSUM BOARD SHEET FIXED ON FRAME WITH APPROVED PAINT FINISH ON GYPSUM, CUTTING OF OPENING FOR LIGHT FIXTURES / AC CASSETTES WITH MAKING OF LIGHT PELMET, FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT.</p> <p>NOTE: FLAT AREA OF CELING WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.</p>	7,200	SFT		
39	<b>PELMET LIGHT ON GYPSUM CEILING</b>				
	<p>P/F IN POSITION DC LED STRIP LIGHT @ 120 LEDS PER METRE (36 LEDS PER FOOT) IN/AROUND GYPSUM BOARD CEILING, INCLUDING MAKING OF COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT WITH APPROVED PAINT FINISH MAKING OF LIGHT PELMET WITH FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT.</p> <p>NOTE: RUNNING LENGTH OF THE LIGHT WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.</p>	2,800	RFT		

<b>6th FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>LIFT LOBBY</b>					
<b>40</b>	<b>WOOD HANDRAIL (FIXED UPON EXISTING IRON BALUSTER)</b>				
	PROVIDING AND FIXING IN-POSITION WOOD HANDRAIL OF APPROVED PROFILE AND POLISH / FINISH UPON EXISTING IRON BALUSTERS, AS SHOWN ON DRAWINGS. WORKS INCLUDE REMOVING OF EXISTING IRON BALUSTERS, POWDER COATING OF EXISTING IRON BALUSTERS AFTER SCAPING AND REPAIRING. FIXING THE BALUSTERS TO FLOOR. ALL WORKS ARE TO BE COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	90	RFT		
<b>41</b>	<b>REPAIRING &amp; PAINTING OF EXISITNG IRON BALUSTERS</b>				
	REMOVING OF EXISTING IRON BALUSTERS, POWDER COATING OF EXISTING IRON BALUSTERS AFTER SCAPING AND REPAIRING. FIXING THE BALUSTERS TO FLOOR. ALL WORKS ARE TO BE COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. 1 RFT = 4 SFT SECTION	90	RFT		
<b>42</b>	<b>EXPANSION JOINTS CLIPS</b>				
	PROVIDING AND FIXING OF EXPANSION JOINT CLIPS. W TYPE PROFILE 4" WIDTH 1" TO BE EMBEDDED IN THE FLOOR, EXPANSION TO BE TREATED BY PUTTING IN AND SECURING IN PLACE BECKER ROD OF APPROPRIATE WIDTH, AND SEALING IT WITH APPROVED SEALANT TILL W PROFILE SECTION. MAKING SURE THE JOINT AND SEALANT ARE TIGHTLY BOUND AND DO NOT LET WATER PENETRATE THROUGH. CUTTING & GROUTING WHERE NECESSARY SHALL BE USED. COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	1	RFT		
<b>43</b>	<b>MS ELECTRICAL CABINET/ FRAME CABINETS FOR DB</b>				
	PROVIDING AND FIXING OF MS FRAME PANELS WITH PAINTED GLASS PANELS IN FRONT HINGED TO MAKE 4 SECTIONS WITH 12 mm TH TAMPERED PAINTED GLASS PANELS HOUSED IN ALUMINIUM SECTION OF 1.5" BY 2" * HAVING FIRE RETARDANT PAINT ON THE INSIDE AND ALUMINIUM PROILE DOORS FOR ELECTRICAL DBs CUPBOARD. COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. FRONT FACE SHALL BE USED FOR BILLING	140	SFT		
<b>FIRE EXTINGUISHER</b>					
<b>44</b>	<b>FIRE EXTINGUISHER DRY TYPE</b>				
	> <b>DCP FIRE EXTINGUISHER 6 KG</b> > CAPACITY: 6 KG FIRE > RATING: 34B > HIGHLY EFFECTIVE ON A, B & C CLASS OF FIRE > AVERAGE DISCHARGE TIME: 21.0 SEC > DIAMETER: 150 MM > FILLED WEIGHT: 10.3 KG > OPERATING TEMPERATURE: -30°C TO 55°C > WORKING PRESSURE: 15 BAR > SERVICE PRESSURE: 18 BAR > TEST PRESSURE: 35 BAR > FLOOR STAND OR WALL MOUNT BRACKET INCLUDING ACCESSORIES > <b>NEFFCO, SFFECO OR EQUIVALENT</b>	15	No.		
<b>45</b>	<b>FIRE EXTINGUISHER FOAM TYPE (FOR KITCHEN)</b>				
	> <b>AFFF FOAM TYPE FIRE EXTINGUISHER</b> > CAPACITY: 9 LTR > FIRE RATING: 34A 183B > WORKING PRESSURE: 13.5 BAR > TOTAL WEIGHT: 16.5 KG > MAXIMUM OPERATING PRESSURE: 18.5 BAR @ 60°C > TESTED AT PRESSURE: 30 BAR > FLOOR STAND OR WALL MOUNT BRACKET INCLUDING ACCESSORIES > <b>NEFFCO, SFFECO OR EQUIVALENT</b>	2	No.		

6th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>SIGNAGE</b>					
<b>46</b>	<b>WALL SIGNAGE</b>				
	WALL SIGNAGE MADE OF 3mm CLEAR ACRYLIC WITH REVERSE PLOTTER CUT WHITE VINYL OVER VINYL OF APPROVED BASE COLOR. SIZE: 4" x 12"	30	No.		
<b>47</b>	<b>WALL BOARD SIGNAGE</b>				
	WALL BOARD SIGNAGE OF 6mm CLEAR ACRYLIC WITH REVERSE PLOTTER CUT WHITE VINYL OVER VINYL OF APPROVED BASE COLOR. SIZE: 48" x 36"	4	No.		
<b>48</b>	<b>CEILING HUNG + SIGNAGE DOUBLE SIDED</b>				
	CEILING HUNG + SIGNAGE DOUBLE SIDED MADE OF 25mm ACRYLIC SIGNAGE IN APPROVED COLOR WITH S.S FITTING PIPE. TEXT TO BE LASER CUT IN 8mm ACRYLIC OF APPROVED COLOR. SIZE: 24" x 9" 3" LETTER HEIGHT	4	No.		
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
<b>49</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>50</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>COST OF CIVIL WORK SIXTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**6th FLOOR**  
**FURNITURE WORKS NOT TO BE QUOTED**



The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**6th FLOOR - FURNITURE**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	NOTES: > ALL THE FURNITURE ITEMS LISTED BELOW MUST BE PROCURED BY APPROVED VENDOR BRAND I.E. GLOBAL, MASTER, INTERWOOD, DIMENSIONS OR EQUIVALENT. > COMPLETE PROFILE BROCHURE OF ITEM ORIGIN OF ITEM TO BE SUBMITTED BY TENDERER. > CONTRACTOR TO SUBMIT EACH SAMPLE TO CONSULTANTS HEAD OFFICE FOR REVIEW AFTER INSPECTION AT SITE OFFICE. SAMPLE TO BE CONSUMED FOR TESTING AND REVIEW. PHYSICAL SAMPLE IS TO BE A PART OF SUBMITAL ELSE CONDITIONAL APPROVAL CAN ONLY BE GRANTED. > THE FINISHED PRODUCT SHALL BE DELIVERED TO THE SITE DULY COVERED WITH BUBBLE SHEET TO AVOID ANY BREAKAGE ETC. HOWEVER IN CASE OF ANY MINOR REPAIR ARISING OUT OF TRANSPORTATION ETC. THE SAME SHALL BE REPAIRED/ REPLACED IMMEDIATELY BY THE SUPPLIER WITHOUT ANY EXTRA COST. > 1 YEAR COMPREHENSIVE MAINTAINANCE TO BE A PART OF TENDER WITH ALL STRUCTURAL, MECHANICAL, FINISHING WORKS TO BE INCLUDED. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>WORKSTATIONS AND DESKS</b>					
<b>1</b>	<b>WORKSTATIONS</b>				
	> HAVING A PARTITION WITH FABRIC SOFTBOARD OF NO MORE THAN 1'-4" IN HEIGHT HAVING TWO STUDDED ANCHORS WITH LOCK ON BOTTOM BETWEEN TWO WORKSTATION. > DESK TOP THICKNESS IS 25MM, HAVING LIPPING OF MATCHING COLOR. > FINISH: LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) DESKTOP OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SQUARE LEGS (TAPPERED) AT 15 DEGREE WITH CABLE MANAGEMENT TRAY 1.2MM POWDER COATED AND OUTLET AT THE CENTRE.WITH EARTH POINT TO BE ATTACHED TO EARTH CABLE > LEG WALL THICKNESS IS 2.0MM POWDER COATED TO COLOUR. > WORKSTATION TO HAVE A LINEAR POWER TRAY UNDERNEATH FOR CABLE DISTRIBUTION ALONG WITH A CUT-OUT ON TOP HAVING A TECHNOLOGY BOX AS SPECIFIED IN THE ELECTRICAL COMPONENT OF THE TENDER. > ONE MOBILE DRAWER UNIT INCLUDED 14 INCHES IN WIDTH AS PER INDUSTRY STANDARD.. > BEST QUALITY LOCK FOR DRAWERS WITH 3 KEYS INCLUDED. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY THE ARCHITECT.				
<b>A.</b>	<b>SIZE 5'-0"x4'-0" (LxW), 2'-6" DEEP</b>	24	No.	NTQ	NTQ
<b>B.</b>	<b>SIZE 4'-0"x4'-0" (LxW), 2'-6" DEEP</b>	21	No.	NTQ	NTQ

<b>6th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>2</b>	<b>FLOOR CABINETS</b>				
	PROVIDING AND FIXING IN POSITION FLOOR STANDING CABINETS; MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) DESKTOP OF ARCHITECT'S CHOICE OF COLOUR & FINISH. ARCHITECT'S CHOICE OF COLOUR & FINISH, ON TOP, FRONT AND SIDE WITH GROOVES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ARCHITECT. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
	<b>A. OVERALL SIZE 5'-0"x1'-0" (LxW), 2'-6" DEEP</b>	12	No.	NTQ	NTQ
	<b>B. OVERALL SIZE 4'-0"x1'-6" (LxW), 2'-6" DEEP</b>	9	No.	NTQ	NTQ
	<b>C. OVERALL SIZE 5'-6"x1'-6" (LxW), 2'-6" DEEP FOR CAFETERIA</b>	1	No.	NTQ	NTQ
<b>3</b>	<b>CHIEF DESK</b>				
	> DESK TOP THICKNESS IS 25MM. > MELAMINE TOP OF APPROVED COLOR. HAVING A SIDE RETURN. OF 1'4". by 5' 6" Length. > AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING CABLE MANAGEMENT, CABLE TRAY AND TECHNOLOGY BOXES. WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	<b>&gt; DESK TO SIZE: (LxWxH) 9'-3"x 5'-0"x 2'-6"</b>	7	No.	NTQ	NTQ
<b>4</b>	<b>D.G.M DESK</b>				
	> DESK TOP THICKNESS IS 25MM. > MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) > MATERIAL MDF WITH WOOD VENEER FINISH. > 100 MM X 40 MM TEAK WOOD FOOT REST WITH POLISHING AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	<b>&gt; DESK TO SIZE: (LxWxH) 6'-0"x 6'-0"x 2'-6"</b>	8	No.	NTQ	NTQ
<b>5</b>	<b>OCCASSIONAL TABLE (FOR VISITOR SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED COLOUR AND FINISH.				
	<b>&gt; SIZE: 1'-6" x 1'-6" x 2'-0" (LxWxH)</b>	7	No.	NTQ	NTQ
<b>6</b>	<b>OCCASSIONAL TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED DESIGN, COLOUR AND FINISH.				
	<b>&gt; SIZE: 1'-8" x 1'-8" x 2'-0" (LxWxH)</b>	13	No.	NTQ	NTQ
<b>7</b>	<b>CONSOLE TABLE</b>				
	SUPPLYING OF CONSOLE TABLE WITH LAMINATE BOARDS / MDF OF APPROVED COLOUR AND FINISH.				
	<b>&gt; SIZE: 4'-0" x 1'-9" x 2'-0" (LxWxH)</b>	7	No.	NTQ	NTQ
	<b>&gt; SIZE: 6'-4" x 1'-6" x 2'-0" (LxWxH)</b>	1	No.	NTQ	NTQ

<b>6th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>8</b>	<b>MEETING ROOM TABLE</b>				
	> MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) FOR TABLE EDGES AND SUPPORTED ON 3mm THICK S.S. PIPES BRUSH 3.75mm DIA WITH 6mm THICK BASE AND TOP PLATE. > THE TOP MUST HAVE PROVISION FOR CABLE MANAGEMENT AND POP-UP MULTI SOCKET BOARD. > ALL INTERNAL SURFACE COVERED WITH 0.8MM THICK LAMINATE > ALL EXTERNAL SURFACES COVERED WITH 1.0 MM THICK LAMINATE OF APPROVED COLOUR. > RATES TO INCLUDE ALL NECESSARY ACCESSORIES. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	<b>A. SIZE 7'-6"x3'-9" (LxW), 3'-0" DEEP FOR 21 PERSONS</b>	3	No.	NTQ	NTQ
	<b>B. SIZE 5'-3" DIA, 3'-0" DEEP FOR 6 PERSONS</b>	1	No.	NTQ	NTQ
	<b>C. SIZE 5'-3" DIA, 3'-0" DEEP FOR 6 PERSONS</b>	1	No.	NTQ	NTQ
<b>9</b>	<b>DINING TABLE FOR CAFETERIA</b>				
	> GRANITE / ARTIFICIAL GRANITE TOP. > M.S. FRAME, POWDER COATED, DISTRIBUTED SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> <b>SIZE: 2'-6" x 1'-6" x 3'-0" (LxWxH)</b>	15	No.	NTQ	NTQ
	> <b>SIZE: 2'-6" x 2'-6" x 3'-0" (LxWxH)</b>	9	No.	NTQ	NTQ
<b>10</b>	<b>RECEPTION TABLE</b>				
	PROVIDING AND FIXING IN POSITION RECEPTION TABLE; MADE OF 20mm OAK PLY HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING T3 TUBELIGHT TO BE HUNG BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
	<b>A. &gt; SIZE: (LxWxH) 4'-6" x 2'-8" x 4'-6".</b>	1	No.	NTQ	NTQ
<b>11</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH MS FRAME AND MARBLE TOP OF APPROVED COLOUR AND FINISH.				
	> <b>SIZE: 2'-9" DIA, 1'-6" H (ENTRANCE WAITING)</b>	2	No.	NTQ	NTQ
	> <b>SIZE: 5'-0"x3'-0", 1'-6" H (VISITORS LOUNGE)</b>	1	No.	NTQ	NTQ

6th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>CHAIRS AND SEATING</b>					
<b>12</b>	<b>CHIEF CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; HIGH BACK WITH HEAD AND ARM REST BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	7	No.	NTQ	NTQ
<b>13</b>	<b>D.G.M CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; LOW BACK WITH HEAD &amp; ARM REST BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	8	No.	NTQ	NTQ
<b>14</b>	<b>DINING CHAIR</b>				
	<ul style="list-style-type: none"> <li>&gt; FRAME MATERIAL: WOOD</li> <li>&gt; SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; FOAM DENSITY : 18 KG/ CUBIC CM.</li> <li>&gt; BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS.</li> <li>&gt; BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING.</li> <li>&gt; THE ARMCHAIR IS BASED ON STEEL LEG.</li> <li>&gt; THE LEG BASE MUST HAVE RUBBER PADDING.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>	32	No.	NTQ	NTQ

6th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>15</b>	<b>GUEST CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; FIXED VISITOR CHAIR,</li> <li>&gt; MOULDED FOAM</li> <li>&gt; ITALIAN LEATHER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; BACK SHELL MADE OF PLASTIC WITH WOOD COLOUR PRINTED.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; CUSTOMIZED ALUMINIUM LEG</li> <li>&gt; LIFT APPROVED WITH SGS.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>	30	No.	NTQ	NTQ
<b>16</b>	<b>RECEPTION CHAIR</b>				
	<ul style="list-style-type: none"> <li>&gt; SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT.</li> <li>&gt; SHOULDER HEIGHT BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	1	No.	NTQ	NTQ
<b>17</b>	<b>OFFICE CHAIRS (STAFF)</b>				
	<ul style="list-style-type: none"> <li>&gt; SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT.</li> <li>&gt; SHOULDER HEIGHT BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	90	No.	NTQ	NTQ

<b>6th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>18</b>	<b>MEETING CHAIRS</b>				
	> SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT. > SHOULDER HEIGHT BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > MESH FABRIC. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT	27	No.	NTQ	NTQ
<b>19</b>	<b>WAITING CHAIRS</b>				
	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STEEL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.	17	No.	NTQ	NTQ
<b>20</b>	<b>SOFA FOR 2</b>				
	> SUPPORTED ON METAL LEGS. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>(LxWxH) 5'-0" x 2'-10" x 2'-10" (CHIEF ROOMS)</b>	7	No.	NTQ	NTQ
<b>B.</b>	<b>(LxWxH) 7'-3" x 2'-10" x 2'-10" (VISITOR LOUNGE)</b>	2	No.	NTQ	NTQ
<b>C.</b>	<b>(LxWxH) 6'-6" x 2'-10" x 2'-10" (ENTRANCE)</b>	2	No.	NTQ	NTQ
<b>21</b>	<b>SOFA FOR 1</b>				
	> SUPPORTED ON METAL LEGS. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>(LxWxH) 3'-0" x 2'-10" x 2'-10" (CHIEF ROOMS)</b>	7	No.	NTQ	NTQ
<b>B.</b>	<b>(LxWxH) 3'-0" x 2'-10" x 2'-10" (VISITORS LOUNGE)</b>	2	No.	NTQ	NTQ

6th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>22</b>	<b>LOUNGE CHAIR (ENTRANCE)</b>				
	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STEEL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>CHAIR 1</b>	3	No.	NTQ	NTQ
<b>B.</b>	<b>CHAIR 2</b>	2	No.	NTQ	NTQ
<b>23</b>	<b>FULL HEIGHT STORAGE CABINET</b>				
	P/F OF WOODEN FILLING CABINETS FULL HEIGHT MADE OF OAK PLY POLISHED WITH GLASS PANE WITH APPROVED OAK VENEER PRESSED ON BOTH SIDES UNDER 100-150 KG/CM2 OF AIR PRESSURE AND 60 DEGREE OF TEMPERATURE. INTERNAL CARCASS IN 16MM THICK LAMINATION CHIPBOARD WITH 3MM OAK WOOD EDGING ALL-ROUND, FINISH WITH CLEAR NC LAQUER POLISH, INCLUDING APPROVED HANDLES, HINGES AND SHELF, SHUTTER FINISH WITH APPROVED DRAWING AND DESIGN. COMPLETE IN ALL RESPECT. THE CABINET'S FRONT FACE SHALL BE PASTED WITH GRAPHICS OF THE ARCHITECT'S APPROVAL. <b>NOTE:</b> FRONT FACE OF CABINETS SHALL BE MEASURED FOR PAYMENT. 1'-3" DEEP				
<b>a.</b>	<b>STORAGE CABINET</b>	587	SFT	NTQ	NTQ
	<b>MISCELLANEOUS</b>				
<b>24</b>	<b>PICTURE FRAME</b>				
	PICTURE FRAME WITH OIL / ACRYLIC ON CANVAS WITH APPROVED FRAME MADE OF WOOD / FIBRE, ALONG WITH ALL NECESSARY ACCESSORIES FOR HANGING AND SUSPENSION.				
<b>A.</b>	<b>&gt; AVERAGE SIZE 17 SFT</b>	10	No.	NTQ	NTQ
<b>25</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT)				
<b>A.</b>	<b>&gt; AVERAGE SIZE 27 SFT</b>	10	No.	NTQ	NTQ
<b>26</b>	<b>PLANTER</b>				
<b>a.</b>	P/F OF CUSTOMIZED PLANTER MADE OF CONCRETE WITH SMOOTH FINISH AND DECO PAINT OF APPROVED COLOR AND DESIGN. <b>NOTE:</b> THE CONTRACTOR SHALL MAKE AND APPROVE THE SAMPLE BEFORE EXECUTION. AVERAGE SIZE: 1'-3"x1'X3"x 1'-3" (LxWxH)	28	No.	NTQ	NTQ

6th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
27	<b>PANTRY CABINET</b>				
	PROVIDING AND FIXING IN POSITION FLOOR CABINETS & HANGING TYPE CABINETS; MADE OF 20mm OAK PLY HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. INCLUDING MAKING PROVISION OF GLASS HOOD. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING STRIP LIGHT BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. <b>NOTE:</b> CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE. FRONT FACE OF THE CABINET SHALL BE USED FOR BILLING.				
A.	> SIZE: (LxWxH) 20'-9" x 2'-0" x 9'-6".	1	SFT	NTQ	NTQ
B.	> SIZE: (LxWxH) 15'-3" x 2'-0" x 9'-6".	1	SFT	NTQ	NTQ
C.	> SIZE: (LxWxH) 6'-3" x 2'-0" x 9'-6".	1	SFT	NTQ	NTQ
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
28.	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB	NTQ	NTQ
29	<b>SHOP DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS OF EVERY FURNITURE ITEM WHICH WILL BE FABRICATED / INSTALLED ON SITE.	1	JOB	NTQ	NTQ
<b>COST OF FURNITURE SIXTH FLOOR</b>					<b>NTQ</b>



**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**6th FLOOR**  
**ELECTRICAL WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

<b>6th FLOOR - ELECTRICAL WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
	<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
	<b>SECTION-A MAIN / SUB-MAIN LV PANELS &amp; DISTRIBUTION BOARDS</b>				
	<p><b>Supply, testing &amp; commissioning</b> of following <b>Distribution Boards</b> as shown on drawing made with <b>14 SWG sheet steel housing</b> including all installation accessories such as Rawal bolt etc. Complete in all respects.</p> <p><b>Note: (Refer Single Line Diagram)</b></p> <p>1) All the Panels / DBs should be front accessible and maintainable.            2) Cost of Lighting Control Relays &amp; Power Supplies should be Included in Distribution Boards .            3) The transportation and placement of DBs upto site and respective locations is also included in the work scope, complete in all respects including leveling, grouting etc.            4) Laser engraved tags required as mention in SLDs            5) Space for circuit tagging required with permanent installation on protective sheet via rivets            6) 20% space required in Panels / DBs for future provision            7) Tin plated Imported 99.99% pure Tinned Cu bus bar with heat shrink color coded sleeves to be used.            8) Hindged protective metallic door required with knob/handle.            9) Braided Door earth required.            10) Lockable handle required for main door.            11) As-built drawing pocket.            12) Cable hanging arrangement.            13) MIMIC Diagram is required on doors of all the Panels.            14) Panel Lights and Exhaust Fans with Door Limit Switch &amp; Temperature Sensors are required in all the floor standing Panels.            15) All the Floor Standing Panels shall be Type-Tested Type.            16) MOA to be provided in the ATS of LV Panels.            17) Anti-Condensation Heater to be provided in all the Floor Standing Panels.            18) Bypass Option in-case of synch panel Failiure.</p>				
<b>1</b>	DB-6F	1	No.		
<b>2</b>	LPDB-6F	1	No.		
<b>3</b>	UDB-6F	1	No.		
<b>4</b>	Breaker Box with 125A TP MCCB For HVAC Large Wing Area	1	No.		
<b>5</b>	Breaker Box with 100A TP MCCB For HVAC Small Wing Area	1	No.		
	<p><b>Note:</b></p> <p>1) <b>Supply &amp; Installation</b> of MCCs required for Fire Fighting, HVAC &amp; Plumbing Services shall be in the scope of Mechanical Works.</p>				
	<b>SECTION-F MAIN / SUBMAIN CABLES</b>				
	<p><b>Supply, installation, testing, commissioning and termination</b> of following <b>8.7/15kV, CU/XLPE/PVC (MV Cables)</b> in already installed Cable trench / Cable ladder / Cable tray / Duct Bank including all accessories. Complete in all respects.</p>				
<b>6</b>	<p><b>From Tap Off Box to DB-6F</b>            4C-120 Sqmm Cu/XLPE/PVC + ECC 1C-70 Sqmm Cu/PVC</p>	5	Rm.		
<b>7</b>	<p><b>From DB-6F to LPDB-6F (Large Wing)</b>            4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC</p>	5	Rm.		
<b>8</b>	<p><b>From DB-6F to LPDB-6F (Small Wing)</b>            4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC</p>	5	Rm.		
<b>9</b>	<p><b>From DB-6F to Breaker Box For HVAC 6F1 (Large Wing)</b>            4C-50 Sqmm Cu/PVC/PVC + ECC 1C-25 Sqmm Cu/PVC</p>	75	Rm.		
<b>10</b>	<p><b>From DB-6F to Breaker Box For HVAC 6F2 (Small Wing)</b>            4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC</p>	45	Rm.		

6th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>WIRING</b>					
<b>CIRCUIT / POINT WIRING &amp; SWITCH ACCESSORIES</b>					
11	PROVIDING, FIXING & LAYING OF WIRING FOR LIGHTS AND EXHAUST/ FALSE CEILING/ CEILING FANS, WITH COMPLETE INSTALLATION ON WHATEVER SURFACE; THE PRICE IS TO INCLUDE ANY FABRICATION/ BOXING MADE OF ANODIZED GI FRAME OR WOODEN FRAME AS ADVISED BY THE ARCHITECT ON-SITE IF NEEDED TO BE MOUNTED ON THE CEILING DIRECTLY. ALL MOUNTINGS AND VERTICAL SUSPENSIONS WILL BE DONE USING FISCHER OR EQUIVALENT ANCHORS WITH M10 THREADED GI RODS. IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. COMPLETE WITH BENDS, SOCKETS, AND OTHER ACCESSORIES WITH 3X2.5 mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST/NEWAGE WITH 16 SWG SHEET STEEL SWITCH BOXES DULY APPLIED WITH RED OXIDE BASE PAINT SPRAY PAINTED AS REQUIRED AND THE BOX TO BE CONCEALED: INCLUDING P/F OF 10A/16A CLIPSAL/ CLOPAL/ SIEMENS MAKE SWITCH WITH CLIPSAL/ CLOPAL/ SIEMENS COVER GANG PLATE ETC. AND CONCEALED WITH CEILING ROSE COMPLETE IN ALL RESPECT AS REQUIRED.	160	No.		
12	SAME AS (A) BUT POINT TO POINT WIRING	500	No.		
13	PROVIDING, FIXING & LAYING OF WIRING FOR <b>EMERGENCY LIGHTS</b> , WITH COMPLETE INSTALLATION ON WHATEVER SURFACE; THE PRICE IS TO INCLUDE ANY FABRICATION/ BOXING MADE OF ANODIZED GI FRAME OR WOODEN FRAME AS ADVISED BY THE ARCHITECT ON-SITE IF NEEDED TO BE MOUNTED ON THE CEILING DIRECTLY. ALL MOUNTINGS AND VERTICAL SUSPENSIONS WILL BE DONE USING FISCHER OR EQUIVALENT ANCHORS WITH M10 THREADED GI RODS. IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. INCLUDING PULL BOXES, SIZE: 8"x8". COMPLETE WITH BENDS, SOCKETS, AND OTHER ACCESSORIES WITH 3X2.5 mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST/NEWAGE WITH 16 SWG SHEET STEEL SWITCH BOXES DULY APPLIED WITH RED OXIDE BASE PAINT SPRAY PAINTED AS REQUIRED AND THE BOX TO BE CONCEALED: INCLUDING P/F OF 10A/16A CLIPSAL/ CLOPAL/ SIEMENS MAKE SWITCH WITH CLIPSAL/ CLOPAL/ SIEMENS COVER GANG PLATE ETC. AND CONCEALED WITH CEILING ROSE COMPLETE IN ALL RESPECT AS REQUIRED.	6	No.		
14	PROVIDING, FIXING & LAYING OF WIRING POWER CIRCUITS <b>FROM DB TO TECHNOLOGY BOX / BOARD</b> WITH 2 x 4 SQ. mm + ECC 1X2.5 SQ. mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED. INCLUSIVE OF FLOOR CUTTING AND CREATION OF FLOOR CHANNEL WITH EMBEDDED CONDUIT PIPES <b>NOTE: ALL DATA CABLES SHALL HAVE SEPARATE CONDUITS FROM POWER LINES TO AVOID ELECTROMAGNETIC FIELD (EMF) INTERFERENCE AND ATTENUATION.</b>	120	No.		
15	PROVIDING, FIXING & LAYING OF WIRING POWER CIRCUITS <b>FROM DB TO SWITCHBOARD (S) (INDUSTRIAL SOCKETS)</b> WITH 2 X 4 SQ. mm + ECC 1X2.5 SQ. mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 MM DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED). <b>INCLUDING I/O FACE PLATE.</b> COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED.	80	No.		
16	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF <b>TELEPHONE RJ45 CLIPSAL / 3M CABLE</b> IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED I/O FACE PLATE HAVING 01 No. RJ-45/RJ11 CONNECTORS, CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS.	10	No.		

6th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>17</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN WALLS OR SLABS OF CONCRETE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK.				
<b>A.</b>	4" DIA	15	No.		
<b>B.</b>	6" DIA	5	No.		
<b>C.</b>	8" DIA	1	No.		
	<b>SWITCH SOCKET OUTLET (SSO)</b>				
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
<b>18.</b>	SUPPLY & INSTALLATION OF THE FOLLOWING SWITCH SOCKET OUTLETS (SSO) OF MAKE CLOPAL, SIEMENS, CLIPSAL, AND ORANGE, WITH 16 SWG MS BACK BOXES MADE OF 1.2 MM POWER COATED SHEET STEEL WITH EARTH TERMINALS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 MM DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED				
<b>A.</b>	13AMP UNIVERSAL/INTERNATIONAL 3 PIN SSO PVC INSULATED WIRE	52	No.		
<b>B.</b>	15AMP UNIVERSAL/INTERNATIONAL 3PIN SSO (INDUSTRIAL SOCKETS)	28	No.		
	<b>GANG SWITCHES</b>				
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
<b>19.</b>	SUPPLY AND INSTALLATION OF FOLLOWING 10 AMPS, ONE-WAY <b>GANG TYPE SWITCHES</b> OF MAKE CLOPAL, SIEMENS, CLIPSAL OR EQUIVALENT, INCLUDING BACK BOXES, RECESSED ON WALL OR COLUMN AS PER DESIGN DRAWINGS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, COMPLETE WITH ALL ACCESSORIES & CONNECTIONS IN ALL RESPECTS.				
<b>A.</b>	3 GANG SWITCHES	1	No.		
<b>B.</b>	4 GANG SWITCHES	80	No.		

6th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>TECHNOLOGY BOX / BOARD</b>					
<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.					
20.	SUPPLY AND INSTALLATION OF TECHNOLOGY BOX / BOARD OF MAKE CLOPAL, SIEMENS, CLIPSALE OR EQUIVALENT, INCLUDING WATERPROOF BACK BOXES, WATERPROOF HOUSING WITH LID AND POWER SWITCH, FIXED ON A WORKSTATION, GYPSUM OR ANY OTHER SURFACE WALL AS PER DESIGN DRAWINGS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, INCLUDING CABLE MANAGEMENT VIA SQUARE MATCHING PIPE OF 18 SWG EARTHED OR CABLE MANAGEMENT SLEEVES OF BEST QUALITY AS PER APPROVAL OF TECHNICAL SPECIFICATIONS AND SAMPLES BY THE ARCHITECT ON SITE. ALL CABLES ARE TO BE TAGGED VISIBLY END TO END. APPROPRIATE DATA/ POWER CABLES/ WIRES WILL RUN THROUGH APPROPRIATE CONDUITS INSIDE THE ALUMINIUM CHANNEL. COMPLETE WITH ALL ACCESSORIES & CONNECTIONS IN ALL RESPECTS HAVING THE FOLLOWING SWITCH AND SOCKETS.				
<b>A.</b>	<b>TECHNOLOGY BOX A (FOR GENERAL WORKSTATIONS)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)	100	No.		
<b>B.</b>	<b>TECHNOLOGY BOX B (FOR EXECUTIVE DESK)</b> A. 3 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 3 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)	8	No.		
<b>C.</b>	<b>TECHNOLOGY BOX C (EXECUTIVE TV / MEETING TV)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)	19	No.		
<b>D.</b>	<b>TECHNOLOGY BOX D (ATTENDANCE MACHINE)</b> A. 0 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 1 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)	4	No.		
<b>LIGHT FITTINGS AND FIXTURES</b>					
<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.					
21.	<b>LED CEILING RECESSED DOWN LIGHT</b>				
	P/F, CONNECTING, TESTING & COMMISSIONING OF OPPLER/ SOGO/ PHILIPS/ BRITLITE/ ORANGE <b>RECESSED MOUNTED DOWNLIGHT</b> HAVING APPROVED COLOUR TEMPERATURE with PF >0.90 AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, COMPLETE WITH MAKING A HOLE AS MAY BE REQUIRED AND TO FINISH THE SURFACE SUITABLY AFTER INSTALLATION AND WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS. <b>NOTE:</b> ALL SAMPLES/TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO THE EXECUTION OF WORKS.				
<b>A.</b>	6W TO 9W (TOILETS AND KITCHEN)	62	No.		
<b>B.</b>	10W TO 12W (OFFICES)	324	No.		
<b>C.</b>	13W TO 15W (COMMON SPACES, CORRIDORS)	64	No.		

6th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>22.</b>	<b>CEILING RECESSED LINEAR LIGHT MAGNETIC TRACK</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 1 METER LONG CEILING RECESSED LINEAR MAGNETIC TRACK LIGHT CONNECTED TO MAKE TRACKS OF SUITABLE DIMENSIONS WITH COMPLETE ACCESSORIES AND JOINERIES SUCH AS POWER ADAPTER 200 WATTS, CONTINUITY TRACK TO TRACK CONNECTOR. RECESSED IN FALSE CEILING USING THREADED RODS AS ANCHORS. EACH TRACK TO HAVE ATLEAST 4 LIGHTS HAVING 12 LED POINTS RATED AT 12 WATTS EACH MAGNETIC LIGHT WITH REFLECTORS. OF ARCHITECTS CHOICE AND APPROVAL. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	12	No.		
<b>23.</b>	<b>LINEAR TRACK LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 3'-0" LINEAR TRACK LIGHT. HAVING 2 LIGHTS PER FEET 6 WATTS LED. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	WAITING LOBBY	10	No.		
<b>24.</b>	<b>WALL SCONCE DOWNLIGHT (STAIRS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF WALL SCONCE DOWNLIGHT APPROX 15 WATT. OF APPROVED DESIGN. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	LIFT LOBBY	10	No.		
<b>25.</b>	<b>HANGING LIGHT LINEAR L1 PENDANT (WORKSTATIONS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 5'-3" LONG 30WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT WITH • DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	18	No.		
<b>26.</b>	<b>HANGING LIGHT LINEAR L2 PENDANT (WORKSTATIONS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 3'-0" LONG 20 WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT.. WITH LED LIGHT DRIVER DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	62	No.		

6th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
27.	<b>HANGING LIGHT LINEAR L3 PENDANT (CHIEF DESK &amp; MEETING ROOM)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. <b>5'-6" LONG 30 WATTS</b> LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT. DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVAILBLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	8	No.		
28.	<b>CHANDELIER LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING CHANDELIER LIGHT. HAVING CLUSTER OF 4 GLASS ENCASED HANDCRAFTED DECORATIVE LIGHT FIXTURES. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	2	No.		
29.	<b>HANGING PENDANT LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING CHANDELIER LIGHT. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	1	No.		
30.	<b>FLOOR STANDING LAMP</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING FLOOR STANDING LAMP MS LEGS WITH MARBLE BASE ARCHED TYPE . HEIGHT BETWEEN 6 FEET TO 4-10 INCHES HEIGHT; WITH LED BULB. EACH LAMP TO HAVE A SWITCH FOR EASY SWITCH ON AND OFF NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	12	No.		
31.	<b>WALL / MIRROR LIGHTS</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING WALL / MIRROR LIGHTS. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	8	No.		
32.	<b>EMERGENCY LIGHT</b>				
	P/F OF <b>EMERGENCY LIGHT</b> OF MAKE "OPPLE/ SOGO/ ORIENT/ OR PHILIPS" BRITLITE/ 2 X 8W FLUORESCENT LAMPS HAVING COLOUR TEMPERATURE 3500 K WITH BATTERY CHARGER. CONTRACTOR TO ENSURE THE PERFECT SOLUTION FOR HANGING, AND FIXING ON THE WALL ALONG WITH A POWER CABLE AND PLUG FOR CONNECTION. CONTRACTOR TO ENSURE LIVE WIRING IS TO BE PROVIDED ALONG WITH MALE/ FEMALE CONNECTION SECURED & TIED AWAY.				
A.	CEILING / WALL MOUNTED	25	No.		
33	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE LIGHTING SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. CONTRACTOR TO PERFORM 3 WORKSHOPS WITH EMPLOYEERS FACILITY MANAGER TO TRAIN ON OPERATION, MAINTAINANCE AND LIFE CYCLE OF ALL LIGHTS INSTALLED. EACH LIGHT TO BE CATEGORIZED AS TYPE AND LIFE CYCLE HOURS.	1	JOB		

6th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>APPLIANCES</b>					
<b>34.</b>	<b>FALSE CEILING FAN</b>				
	PROVIDING, INSTALLING, TESTING AND COMMISSIONING OF FALSE CEILING FAN 14" IN 2'X2' SQUARE SIZE OF MAKE "VOLDAM OR EQUIVALENT" WITH REMOTE CONTROL IMPORTED COMPLETE WITH CONNECTIONS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT. NOTE: ALL ELECTRICAL WIRING, SWITCHES AND HOISTING OF REMOTE CONTROLLER ON WALLS TO BE INCLUDED IN THE ITEM.	70	No.		
<b>35.</b>	<b>LED MONITOR</b>				
	SUPPLYING, FIXING, INSTALLATION & COMMISSIONING OF LED MONITOR/ TV OF MAKE SAMSUNG, L.G., SONY OR EQUIVALENT WITH , HDMI PORTS COAXIAL PORT, AUDIO VIDEO PORT, VGA PORT VIDEO INPUT PORT. WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT/ ENGINEER. NOTE: > EASYLINK (HDMI-CEC) > SMARTVIEW > WIFI DIRECT > CONNECTIVITY PORTS: HDMI PORTS 4(SIDE) USB SUPPORTS AUDIO, VIDEO, IMAGE RF INPUT ANALOG COAXIAL PORTS 1(REAR) COMPOSITE INPUT AUDIO VIDEO CABLE PORTS 1(REAR) USB PORTS 3 DIGITAL OPTICAL AUDIO OUTPUT PORTS 1 > VENDORS OFFERING LOCAL AFTER SALE SERVICES SHALL BE PREFERRED.				
<b>A.</b>	55"	14	No.		
<b>B.</b>	HDMI CABLE 5 METER (SONY, UGREEN OR EQUIVALENT) FROM TV TO DESK	14	No.		
<b>36.</b>	<b>WATER DISPENSER</b>				
	SUPPLY AND INSTALLATION OF WATER DISPENSER OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT) WITH 19-22 Litre Standard WATER BOTTLES FIXED ATOP HAVING COLD CABINET UNDERNEATH INVERTER TYPE.	6	No.		
<b>37.</b>	<b>GLASS HOOD (KITCHEN)</b>				
	SUPPLY AND INSTALLATION OF GLASS HOOD OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).	2	No.		
<b>38.</b>	<b>MICROWAVE OWEN</b>				
	SUPPLY AND INSTALLATION OF MICROWAVE OWEN OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).				
<b>A.</b>	IN-BUILT INTO CABINET	1	No.		
<b>39</b>	NORMAL	2	No.		
<b>40.</b>	<b>REFRIGERATOR</b>				
	SUPPLY AND INSTALLATION OF REFRIGERATOR OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).	2	No.		



6th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
41.	<b>EXHAUST FAN (WITH FALSE CELING PIPE )</b>				
	PROVIDING, INSTALLING, TESTING AND COMMISSIONING OF 6" DIA INLINE FAN OF MAKE "VOLDAM OR EQUIVALENT" WITH CENTRIFUGAL BLOWER AND MOTOR ENCASED IN SHEET METAL CASING, AS PER SPECIFICATIONS. THE MOTOR SHALL BE SUITABLE FOR 220 ± 6% V, 50 HZ AC SUPPLY. THE PRICE SHALL INCLUDE FAN SPEED REGULATOR AND COWL WITH BIRD SCREEN. FALSE CEILING FAN TO BE CONNECTED TO ITS EXHAUST OUTLET USING FLEXIBLE PIPE NON INTERRUPTED ANCHORED IN PLACE USING M8/M10 ANCHORS AND FIXING ACCESSORIES FROM THE CEILING. CAPACITY 3600 CMH AT 15 MM STATIC PRESSURES (FOR PNEUMATIC TEST SCREEN OF WORKSHOP OFFICES BUILDING).	18	No.		
42.	<b>HAND DRYER</b>				
	P/F OF AUTOMATIC HAND DRYER OF BRAND SIEMENS OR EQUIVALENT COMPLETE IN ALL RESPECTS. <b>NOTE:</b> TECHNICAL SPECIFICATION TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCUREMENT.	10	No.		
43.	<b>TOWER FAN</b>				
	> POWER: 45W > AIR FLOW : >21.54M3/MIN > HEIGHT: NOT LESS THAN 38" > 3 SPEEDS CONTROL WITH OSCILLATION > WITH 12 HOURS TIMER CONTROL WITH REMOTE CONTROL > WITH ROOM TEMPERATURE DISPLAY > FULL LED DISPLAY > INTEGRATED CARRY HANDLE > COMPLETE IN ALL RESPECTS. > HITACHI, TOSHIBA ELITE OR EQUIVALENT. <b>NOTE:</b> TECHNICAL SPECIFICATION TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCUREMENT.	25	No.		
<b>TELEPHONES</b>					
	<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
44.	<b>TELEPHONE 10 PAIR CABLE</b>				
	SOLID ANNEALED COPPER WIRE, PLAIN OR TINNED ACCORDING TO IEC 60228 CLASS 1, INSULATED WITH PVC (POLYVINYL CHLORIDE) RATED 70°C, TWO CORES ARE TWISTED TO FORM A PAIR, PAIRS ASSEMBLED TOGETHER DEPENDING ON THE CABLE CONSTRUCTION, FOR CABLES UP TO <b>10 PAIRS</b> , PAIRS ARE ASSEMBLED TOGETHER DIRECTLY IN CONCENTRIC LAYERS, ALL PAIRS ARE IDENTIFIED WITH IDENTIFICATION TAPES, OUTER SHEATH IS A FLAME RETARDANT POLYVINYL CHLORIDE 70°C, GRAY COLOR.	35	METER		
45.	<b>JUNCTION BOX</b>				
	PROVIDING AND FIXING OF TELEPHONE JUNCTION HAVING CONNECTION OF NOT LESS THAN 10 WIRES, WALL MOUNTED.	1	No.		
46	P/L OF <b>TELEPHONE WIRING</b> IN PVC CONDUIT GALCO 32MM DIA 10 PAIR TELEPHONE CABLE CLIPSAL MAKE FROM MDF PANEL TO PTCL CABINET AND PABX. COMPLETE WITH 12SWG COPPER ECC AND CONNECTIONS AT TERMINAL BOXES COMPLETE IN ALL RESPECTS AS REQUIRED AT SITE.	500	METER		
48	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF NETWORKING CABLE <b>CAT 6 CLIPSAL</b> / 3M CABLE IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED CAT6 CONNECTORS, INCLUSIVE OF IO SWITCH PLATE HAVING CAT 6 INTERFACE CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS. <b>NOTE: ALL DATA CABLES SHALL HAVE SEPARATE CONDUITS FROM POWER LINES TO AVOID ELECTROMAGNETIC FIELD (EMF) INTERFERENCE AND ATTENUATION.</b>	110	No.		
49	COMPLETE DOCUMENTATION TESTING COMMISSIONING INCLUSIVE COST OF LICENSE , SOFTWARE AND PROGRAMMING OF THE TELEPHONE SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS.	1	JOB		

<b>6th FLOOR - ELECTRICAL WORKS</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>NETWORKING</b>					
54.	FIBRE OPTIC CABLE (FROM DISTRIBUTOR TO FLOOR SWITCH)	150	METER		
<b>SECURITY SYSTEM</b>					
	ALL NETWORK ACCESSORIES ARE TO BE A PART OF THIS ITEM, INCLUDING RACKS, MOUNTING SCREWS, RAWL BOLTS, ANCHORS, MOUNTING BRACKETS AND ETC.				
57	<b>BIOMETRIC ATTENDANCE MACHINE / CCTV CAMERA</b> SUPPLY, INSTALLATION, CONFIGURATION, TESTING AND COMMISSIONING OF BIOMETRIC (FINGERPRINT CUM CARD, FACIAL ID) BASED TIME ATTENDANCE & ACCESS CONTROL MACHINES INCLUDING RELATED SOFTWARE. > BIOMETRIC/ CARD ENROLLMENT/ FACIAL ID- RFID TAGS OF 200 PERSONS (INCLUDING COLLECTION, ENTRY AND VALIDATION OF DATA) OF ALL RELEVANT INFORMATION OF THE EMPLOYEES LIKE FINGERPRINTS, PHOTOGRAPHS, CONTACT INFORMATION ETC. TO ENSURE A COMPREHENSIVE DATABASE OF INFORMATION FOR THE FUNCTIONING OF THE TIME AND ATTENDANCE BIOMETRIC SYSTEM.	2	No.		
58	SUPPLY & INSTALLATION OF FIXED TYPE <b>CEILING / WALL MOUNTED DOME CAMERA</b> TRUE DAY / NIGHT WITH IR ILLUMINATOR, 4-MP, FIXED LENS OF 4 MM, WDR, FACE RECOGNITION TILL MINIMUM 10 METER. ALL WEATHER SUITABLE. COMPLETE WITH HOUSING, MOUNTING BRACKETS, ENCLOSURE FOR POWER SUPPLY ETC AS PER DRAWING & SPECIFICATION & SCHEDULE OF CAMERA COMPLETE IN ALL RESPECTS.	16	No.		
59	SUPPLY & INSTALLATION OF <b>PoE CAT-6 (POWER OVER ETHERNET) CABLE</b> FROM NVR TO CAMERA LOCATION. COMPLETE WITH HOUSING, MOUNTING BRACKETS, ENCLOSURE FOR POWER SUPPLY ETC AS PER DRAWING & SPECIFICATION & SCHEDULE OF CAMERA COMPLETE IN ALL RESPECTS. <b>AVERAGE LENGTH 170 RFT</b>	16	No.		
60	SUPPLY & INSTALLATION OF <b>2U SERVER RACK</b> AS PER DRAWING & SPECIFICATION COMPLETE IN ALL RESPECT	1	No.		
61	SUPPLY & INSTALLATION OF <b>CABLE MANAGEMENT KIT</b> FOR 2U RACK CABLE MANAGER TYPE: HORIZONTAL D-RING NUMBER OF D-RINGS: 5 D-RING MATERIAL: PLASTIC BACK PLATE MATERIAL: 18 GAUGE COLD ROLLED STEEL BACK PLATE FINISH: POWDER COATED COMPLETE IN ALL RESPECT	1	No.		
62	SUPPLY & INSTALLATION OF <b>32 CHANNEL NVR</b> HAVING NOT LESS THAN 24 PoE POINTS STACKABLE VIRTUALLY TO ACCOMMODATE ALL THE CAMERAS AND STORAGE CAPACITY OF 30 DAYS (16TB HARDISK) AT HIGH QUALITY, 25 FPS, AND ADJUSTABLE NOISE RATIO AS PER DRAWING & SPECIFICATION COMPLETE IN ALL RESPECT	1	No.		
63	<b>COMPLETE DOCUMENTATION</b> TESTING COMMISSIONING OF THE SECURITY SURVEILLANCE SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
64	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF SECURITY SYSTEM	1	JOB		

<b>6th FLOOR - ELECTRICAL WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>FIRE ALARM SYSTEM</b>					
	ALL NETWORK ACCESSORIES ARE TO BE A PART OF THIS ITEM, INCLUDING RACKS, MOUNTING SCREWS, RAWL BOLTS, ANCHORS, MOUNTING BRACKETS AND ETC.				
<b>65</b>	SUPPLY & INSTALLATION OF ADDRESSABLE <b>MANUAL CALL POINTS REUSABLE</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETED IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	20	No.		
<b>66</b>	SUPPLY & INSTALLATION OF ADDRESSABLE DIRECTIONAL <b>ELECTRONIC SOUNDER WITH FLASHER</b> WITH MOUNTING ACCESSORIES, AND BACK BOX. COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	20	No.		
<b>67</b>	SUPPLY AND INSTALLATION OF INTELLIGENT CEILING RECESSED/SURFACE MOUNTED <b>SMOKE DETECTORS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	20	No.		
<b>68</b>	SUPPLY AND INSTALLATION OF CEILING RECESSED/SURFACE MOUNTED <b>HEAT DETECTORS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	6	No.		
<b>69</b>	SUPPLY AND INSTALLATION OF <b>4 ZONES INTELLIGENT ADDRESSABLE NETWORKED FIRE ALARM CONTROL PANEL(FACP)</b> WITH POWER SUPPLY AND BATTERY BACKUP FOR 3 HOURS WITH INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS. TO BE INTEGRATED TO BUILDING FACP SYSTEM.	1	No.		
<b>70</b>	SUPPLY & INSTALLATION OF <b>LOOP WIRING FROM FACP TO FIELD DEVICES</b> WITH 2X2.5 SQ.MM FP- 200 CLASS A CABLE WITH 3HRS FIRE RATING IN 1" DIA 16-GAUGE MS PIPE SURFACE AS PER DRAWINGS WITH ALL CONDUIT ACCESSORIES, JUNCTION BOXES, PULL BOXES ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS. ACTUAL MEASUREMENT SHALL BE TAKEN FROM THE SITE.	6500	RFT		
<b>71</b>	SPARE PARTS FOR FIRE ALARM SYSTEM FOR 2 YEAR OPERATION	1	JOB		
<b>72</b>	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF FIRE ALARM SYSTEM	1	JOB		
<b>73</b>	2 YEARS WARRANTY ALONG WITH COMPLETE PREVENTIVE MAINTENANCE OF ALL COMPONENTS OF FIRE ALARM SYSTEM.	1	JOB		
<b>74</b>	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE FIRE ALARM SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
<b>75</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>76</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>TOTAL COST OF ELECTRICAL WORKS SIXTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**6th FLOOR**  
**PLUMBING WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**6th FLOOR - PLUMBING WORKS**

S No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>ED BATHROOMS</b>					
<b>1.</b>	<b>FREE STANDING WASH BASIN STALL</b>				
	PROVIDING AND FIXING GLAZED EARTHENWARE FREE STANDING WASH BASIN STALL COMPLETE WITH INCLUDING THE COST OF INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER OF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT). THE CONTRACTOR IS TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED ON-SITE AS PER SITE CONDITIONS. NOTE: FAUCET, BIB COCKS, AND ALL OTHER FITTINGS ARE TO BE INCLUDED IN THE COST OF ITEM CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES BEFORE EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	5	No.		
<b>2.</b>	<b>WESTERN W.C. (COMMUNE)</b>				
	PROVIDING AND FIXING SQUATTING TYPE WHITE GLAZED EARTHEN WARE W.C. PAN WITH FRONT FLUSH INLET AND COMPLETE WITH INCLUDING THE COST OF FLUSHING CISTERN WITH INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER OF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT) WITH 4" DIA C.I. TRAP. CONTRACTOR TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED END TO END UTILISING PERFECT SLOPE ON SITE AS PER SITE CONDITIONS. NOTE: CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES PRIOR TO EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	12	No.		
<b>3.</b>	<b>EASTERN (SQUATTING) WATER CLOSET</b>				
	PROVIDING AND FIXING SQUATTING TYPE WHITE GLAZED EARTHEN WARE W.C. PAN WITH FRONT FLUSH INLET AND COMPLETE WITH INCLUDING THE COST OF FLUSHING CISTERN WITH INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER OF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT) WITH 4" DIA C.I. TRAP. CONTRACTOR TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED END TO END UTILISING PERFECT SLOPE ON SITE AS PER SITE CONDITIONS. NOTE: CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES PRIOR TO EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	4	No.		
<b>4.</b>	<b>HAND SHOWERS (MUSLIM SHOWER)</b>				
	MASTER, SONEX OR EQUIVALENT TOILET HAND SPRAY WITH FLEXIBLE CHAIN & TELEPHONE TYPE SHOWER INCLUDING TEE STOP COCK ETC. COMPLETE IN ALL RESPECT.	16	No.		
<b>5.</b>	<b>BASIN MIXER TAP</b>				
	MASTER, SONEX OR EQUIVALENT WASH BASIN HOT AND COLD WATER MIXER, ETC.				
<b>a.</b>	MIXER TAP	16	No.		
<b>b.</b>	DOUBLE BIB COCK FOR TOILETS	16	No.		
<b>6.</b>	<b>TOILET ACCESSORIES COMPLETE SET</b>				
<b>a.</b>	SOAP DISPENSER	13	No.		
<b>b.</b>	SOAP DISH				
	PROVIDING AND FIXING SOAP-DISH OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	13	No.		
<b>c.</b>	<b>TOWEL ROD</b>				

6th FLOOR - PLUMBING WORKS					
S No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	PROVIDING AND FIXING CHROMIUM PLATED TOWEL RAIL 24" LONG AND 3/4" DIA, OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	13	No.		
d.	<b>PAPER HOLDER</b>				
	PROVIDING AND FIXING TOILET PAPER-HOLDER OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	16	No.		
e.	<b>COAT HOOKS</b>	16	No.		
<b>7.</b>	<b>LOOKING MIRROR</b>				
	LOOKING MIRROR 5mm BEST QUALITY BELGIUM OR EQUIVALENT MADE FIXED WITH CLIPS. <b>HAVING MIRROR LED LIGHT EMBEDDED IN THE LOOKING MIRROR ATOP VANITY WITH 2" THICK LIGHT BORDER WITH 1" OFFSET MIRROR FINISH FROM THE MIRROR EDGES. EACH MIRROR TO BE MOUNTED ON FRAMES MARINE PLY BACK WITH 2 TH FRAMING TO ALLOW 2 INCH GAP BETWEEN WALL AND MIRROR; HAVING LED LIGHT POINT AT ITS BACK; TO MAKE IT BACK LIT.</b> COMPLETE IN ALL RESPECT AND SIZE AS PER SITE REQUIREMENT.	150	Sft		
<b>8.</b>	<b>KITCHEN SINK</b>				
	PROVIDING AND FIXING STAINLESS STEEL KITCHEN SINK BOWL 24"x18" WITH DRY TRAY/ WASHING SURFACE OF 18 GAUGE MAKE MASTER OR EQUIVALENT FIXED IN COUNTER OVER PRE CAST SLAB, PASTING WITH JELLY/ SILICON WITH 15mm DIA C.P. BRASS T. STOP COCK OF MASTER, SONEX, 40mm DIA HEAVY DUTY WASTE COUPLING AND PVC FLEXIBLE WASTE PIPE OF APPROVED MAKE AND QUALITY COMPLETE IN ALL RESPECTS. AS PER THE MANUFACTURER'S REQUIREMENT.	2	No.		
<b>9.</b>	<b>SECTION-02 WATER SUPPLY SYSTEM</b>				
	<b>SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF COMPLETE PIPE WORK FOR COLD AND HOT WATER SYSTEM INCLUDING ALL ACCESSORIES REQUIRED TO COMPLETE SYSTEMS READY TO OPERATE AS PER SPECIFICATION, DRAWINGS &amp; INSTRUCTION OF CONSULTANT.</b>				
a.	POLYPROPYLENE RANDOM DADDEX, AGM, STEELEX OR EQUIVALENT PP-R PIPES PN 20 AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT.				
i.	DIA. 1-1/2"	60	Rft		
ii.	DIA. 2"	70	Rft		
b.	POLYPROPYLENE RANDOM DADDEX, AGM, STEELEX OR EQUIVALENT PP-R PIPES PN 20 AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT.				
i.	DIA. 1-1/4"	75	Rft		
ii.	DIA. 1-1/2"	40	Rft		
iii.	DIA. 2"	30	Rft		
iv.	DIA. 3"	20	Rft		
d.	<b>BRASS BODY GATE-VALVES / BALL-VALVES WITH UNIONS.</b>				
i.	SIZE 1-1/4"	8	No.		
ii.	SIZE 1-1/2"	8	No.		
iii.	SIZE 2"	13	No.		
iv.	SIZE 3" (CI BODY)	3	No.		

6th FLOOR - PLUMBING WORKS					
S No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>10.</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN R.C.C. WALLS OR SLABS WITH HILTE CORE CUTTING MACHINE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK, COST OF DISPOSAL OF CONCRETE CORES, COMPLETE IN ALL RESPECTS AS DIRECTED BY THE ENGINEER.				
<b>A.</b>	4" DIA	4	No.		
<b>B.</b>	6" DIA	5	No.		
<b>C.</b>	8" DIA	20	No.		
<b>11</b>	<b>DRAIN PLUMBING</b>				
	PVC DADEX, AGM, STEELEX OR EQUIVALENT PVC PIPES UPTO 4 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT. NOTE: THE JOB INCLUDES PLUGGING OF DRAIN INTO RISER DRAIN LINE.				
<b>A.</b>	DIA 2"	100	RFT		
<b>B.</b>	DIA 4"	100	RFT		
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
<b>12.</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>13</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
	<b>TOTAL COST OF PLUMBING WORKS SIXTH FLOOR</b>				

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**6th FLOOR**  
**HVAC WORKS**



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<b>6th FLOOR - HVAC WORKS</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>VRF CASSETTES</b>				
	P/F COMMISSIONING INSTALLATION, TESTING OF VRF AC/DC INDOOR UNITS CASSETTE TYPE INCLUSIVE OF ALL ACCESSORIES, COPPER PIPING, Y SECTIONS, ALL COPPER ACCESSORIES AND HANGING ACCESSORIES TO BE A PART OF THIS ITEM, INSULATION BOUND IN A PVC CONDUIT FOR EACH CASSETTE. DRAIN RISER AND DRAIN PIPES SHALL BE INCLUSIVE OF THIS COST CONNECTED TO BUILDING SERVICE CORE AT THE END. COMPLETE ELECTRICAL SCOPE I.E. CONTROL WIRE, SENSING WIRE, PANEL WIRE, COMMUNICATION WIRE, POWER WIRE TO INTERNAL UNIT. INCLUSIVE OF TWO REMOTE CONTROL FOR EACH CASSETTE INCLUSIVE OF ROOM PANEL AND IR REMOTE COST. ISOLATION VALVE FOR REFRIGERANT ON THE BEFORE THE CASSETTE TO BE INCLUSIVE OF THE COST. COMPLETE INSTALLATION IN ALL ASPECTS. VRF DRAIN PIPE FROM VRF CASSETTE TO THE PERIPHERY OF THE BUILDING TO BE INCLUSIVE OF THE COST WHICH WILL BE CONNECTED TO DRAIN RISER VIA 3" UPVC PIPE (3 INCHES PIPE IS A SEPARATE ITEM). WHEREVER THE VRF CASSETTE IS EXPOSED A DECO PAINTED MS BOX of 12SWG ON THE SIDE AS SLEEVE OF THE CASSETTE WITH OPENABLE SECTIONS FOR MAINTAINANCE AS PER ARCHITECTS RECOMMENDATION AND COLOUR.				
<b>A.</b>	2 TON	47	No.		
<b>B.</b>	2.5 TON	8	No.		
<b>C.</b>	4 TON	0	No.		
<b>2</b>	<b>STRUCTURAL STEEL WORK</b>				
	PROVIDING, FABRICATING & FIXING OF MS TEE BARS, CHECKERED SHEETS (10 SWG) ANGLES 3" X 2" X 1/4" TH ETC FOR STRUCTURAL WORKS REQUIRED FOR FIXING OF HVAC OUTDOOR UNIT ON PLATFORM INCLUSIVE OF PLATFORM CONSTRUCTION AND ITS MOUNTING TO THE BUILDING STRUCTURAL COMPONENT. THE JOB SHALL INCLUDE ANY OR ALL REPAIRS AND NECESSARY ADJUSTMENTS AND OTHER NECESSARY WORKS. COMPLETE WITH WASHERS AND MOUNTING RUBBERIZED ABSORBERS TO PREVENT VIBRATIONS AND ITS EFFECT ON BUILDING. ALL STRUCTURAL WORKS TO BE EPOXY PAINTED TO DARK BLUE COLOR	1200	KG		
<b>3</b>	<b>OUTDOOR UNIT</b>				
	REMOVAL CLEANING, WRAPPING OF INSULATION FABRIC, WATERPROOFING AND PAINTING OF APPROVED COLOUR ALL PREVIOUS INSTALLATIONS TO BE TAKEN OUT CAREFULLY AND SEALED OFF. <b>2x 30 TON UNIT (FOR LARGE WING)</b> <b>3x 20 TON UNIT (1 FOR LARGE WING AND 2 FOR SMALL WING)</b>				
<b>A.</b>	VRF OUTDOOR UNIT PER TON COST WITH COPPER PIPING FROM OUTER TO INNER WITH ALTERNATE PIPES FOR EACH INDOOR CONNECTION; INTEGRATION AND COPPER PIPING MAIN AS PER EACH VRF OUTDOOR UNIT ALL VRF OUTDOOR UNITS TO HAVE ISOLATION VALVES FOR REFRIGERANT CAPTURE AND MAINTAINANCE. ALL OUTDOOR UNITS TO BE SYNCHROZIED WITH EACH OTHER FOR FAIL SAFE OPERATION USING COPPER PIPES AND RELEVANT ACCESSORIES; ENSURING SYNCHRONIZATION AMONGST EACH OTHER. ALL COPPER PIPING INCLUSIVE OF NETWORK COPPER PIPING VIA Y AND STRAIGHT SECTIONS OF APPROPRIATE SIZES AS PER VRF REQUIREMENTS TO BE INCLUSIVE OF THIS JOB HAVING PROPER INSULATION TO INDUSTRY STANDARD AS PER MANUFACTURER. INCLUSIVE OF REFRIGRANT COST AND ITS TOP UP COST WHEN SYSTEM IS RUN AS PER OEM. VRF OUTDOOR UNITS AND ITS CARDS TO BE VALIDATED AND MADE PROPER USING ALL WEATHER SILICON PROTECTION IN ADDITION TO THE OEM PROTECTION. THE CONTRACTOR SHALL PRODUCE SAMPLES OF ADDITIONAL PROTECTION OF CARDS ALONG WITH INSTALLATION OF PROTECTION DEVICES SUCH AS SURGE PROTECTIONS AND OTHERS AS REQUIRED FOR SMOOTH OPERATION	114	TON		

6th FLOOR - HVAC WORKS				
S. No.	DESCRIPTION	QTY	UNIT	AMOUNT (RS)
<b>4</b>	<b>DISTRIBUTION BOARDS</b>			
	SUPPLY AND INSTALLATION OF THE FOLLOWING DISTRIBUTION BOARDS OF MAKE HUSSAIN & CO., A TO Z UNIVERSAL MADE WITH 14 SWG SHEET STEEL HOUSING WITH APPROVED COLOR AND HAVING SPECIFIED CIRCUIT BREAKERS USING TP MCCB, VOLTMETER, AMMETER, INDICATION LIGHTS, WITH K- ELECTRIC APPROVED ENERGY METERS AND ENERGY LOGGERS. AS SHOWN IN THE DRAWING. (REFER SINGLE LINE DIAGRAM). NOTE: SPECIFIED MULTIMETER SHOULD BE INCLUDED IN THE DBs			
A.	FOR SMALL WING	1	No.	
B.	FOR LARGE WING	1	No.	
<b>5</b>	<b>DRAIN PIPING (HVAC)</b>			
	PVC DADEX, AGM, STEELEX OR EQUIVALENT PVC PIPES UPTO 4 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT. NOTE: THE JOB INCLUDES PLUGGING OF DRAIN INTO RISER DRAIN LINE.			
A.	DIA 3"	700	RFT	
B.	DIA 1"	400	RFT	
<b>6</b>	<b>COMMISSIONING OF HVAC SYSTEM</b>			
	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE HVAC SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB	
<b>7</b>	2 YEARS WARRANTY ALONG WITH COMPLETE PREVENTIVE MAINTENANCE OF ALL COMPONENTS OF HVAC SYSTEM.	1	JOB	
<b>8</b>	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF HVAC SYSTEM	1	JOB	
<b>9</b>	<b>CORE CUTTING</b>			
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN R.C.C. WALLS OR SLABS WITH HILTE CORE CUTTING MACHINE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK, COST OF DISPOSAL OF CONCRETE CORES, COMPLETE IN ALL RESPECTS AS DIRECTED BY THE ENGINEER.			
A.	1.5" DIA	20	No.	
B.	4" DIA	5	No.	
C.	6" DIA	1	No.	
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>			
<b>10</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>			
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB	
<b>11</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>			
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB	
<b>COST OF HVAC SIXTH FLOOR</b>				

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**7th FLOOR**  
**SUMMARY**

7th FLOOR - SUMMARY		
S.N	DESCRIPTION	AMOUNT RS
1	Cost of Civil Work	0
2	Cost of Furniture	NTQ
3	Cost of Electrical Works	0
4	Cost of Plumbing Works	0
5	Cost of HVAC	0
<b>Total Cost of 7th floor</b>		<b>0</b>
<b>LESS SALVAGE COST</b>		<b>0</b>
<b>NET TOTAL COST OF 7TH FLOOR</b>		<b>0</b>
All taxes are inclusive		
Total Amount in Words Rs. _____		
Contractor's Signature with Stamp		
Dated: _____		

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**7th FLOOR**  
**SALVAGEABLE MATERIAL**

**SLIC RENOVATION  
DESIGN CONSULTANCY  
OF 7th FLOOR  
BUILDING No. 9, KARACHI.**

The contractor is required to store the items temporarily in the storage space provided by the client (if required). Each lot of the salvaged material shall be documented before leaving the site, including acquiring the gate pass. All salvaged items shall be considered as the contractor's property after leaving the site.

<b>7th FLOOR - SALVAGEABLE MATERIAL (TO BE CREDITED TO THE CLIENT)</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>1</b>	<b>SERVICEABLE MATERIAL DEMOLITION</b>				
A.	TAKING OUT WOODEN / VIN BOARD PARTITION WALLS, WINDOWS, DOOR SHUTTERS TAKING OUT CAREFULLY AND STACKING SERVICE ABLE AT THE DESIGNATED PLACE AND CREDIT FOR THE COST OF SALVAGE TO THE CLIENT AND THEN IT WILL BE THE PROPERTY OF THE CONTRACTOR.	8,000	Sft		
B.	TAKING OUT GLAZED ALUMINUM DOORS & WINDOWS CAREFULLY AND STACKING SERVICEABLE AT DESIGNATED PLACES AND DISPOSAL OF UNSERVICEABLE AS PER DIRECTION	850	Each		
C.	TAKING OUT GI PIPES, FITTINGS AND FIXTURES AND STACKING THE SERVICEABLE AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
D.	TAKING OUT ELECTRICAL WIRES, FITTINGS & FIXTURES, SWITCHBOARDS ETC. AND STACKING THE SERVICE AT SOME DESIGNATED PLACE AS PER DIRECTION.	1	LS		
E.	TAKING OUT CAREFULLY ELECTRICAL DISTRIBUTION BOARDS AND SUB MAIN DISTRIBUTION BOARDS AND STAKING THE SERVICEABLE IT OUT AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
F.	TAKING OUT CAREFULLY HVAC DUCTS AND STACKING THE SERVICEABLE IT AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
G.	TAKING OUT WOODEN /METALLIC RAILINGS AND STACKING THE SERVICEABLE AT SOME DESIGNATED PLACE AS PER DIRECTION.	1	LS		
H.	TAKING OUT CAREFULLY DOOR, WINDOWS HARDWARE ETC COMPLETE	1	LS		
I.	TAKING OUT CAREFULLY WINDOW BLINDS AND STACKING THE SERVICEABLE	1	LS		
J.	TAKING OUT CAREFULLY <b>BUS BAR</b> AND ACCESSORIES AND STACKING THE SERVICEABLE	1	LS		
<b>TOTAL AMOUNT TO BE CREDITED TO THE CLIENT SEVENTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**7th FLOOR**  
**CIVIL WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge. Single Surface shall be used to measure QTY in SFT

**7th FLOOR - CIVIL WORK**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>DEMOLITION</b>				
	DEMOLITION AND DISMANTLING OF EXISTING INFRASTRUCTURE, EXISTING BUILDING INTERIORS INCLUDING: 1. FLOOR TILES, 2. MASONRY WALLS, 3. DOORS, 4. FALSE CEILING 5. ALL KIND OF WIRING 6. FIRE SENSORS 7. SPEAKERS 8. ROLLER BLINDS. 9. CEILING ACCESSORIES ETC. 10. REINSTALLING ANY EQUIPMENT ON THE ROOF WITH APPROPRIATE ANCHORING WHEREVER NEEDED. COVERED AREA: 14,031 SFT APPROX. INCLUSIVE OF COLLECTING, TEMPORARY STORAGE BEFORE DISPOSAL, CARTAGE, ALL KINDS OF LABOUR, DISPOSAL OF DEBRIS FROM ANY LEVEL UP TO ANY LEAD AND LIFT AS DIRECTED BY THE CLIENT /SITE ENGINEER. AFTER THE COMPLETION OF THE JOB THE CONTRACTOR WILL PHOTOGRAPH, RECORD & AND SUBMIT AS BUILT DRAWING TO THE CONSULTANT BEFORE STARTING CONSTRUCTION WORKS. NOTE: 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUMPING THE DEBRIS AT THE APPROPRIATE DUMPING SITE OUT OF SITE PREMISES. 2. COLLECTIBLE ITEMS SHALL BE SAFELY TRANSFERRED TO THE CLIENT-DESIGNATED STORAGE AREA. 3. IDENTIFICATION OF INVENTORY BEFORE DISMANTLING NEEDS TO BE MADE. 4. AFTER IDENTIFICATION ITEMS TO BE HANDED OVER TO THE CLIENT, CATEGORIZED SALVAGED. 5. LOSS OF PROPERTY TO BE CHARGED AT PKR 60/KG.	1	Job		
<b>2</b>	<b>TERMITE PROOFING</b>				
	VERMIN AND TERMITE FULL SPECTRUM FUMIGATION DONE ON FOLLOWING THREE (3) STAGES. I. AFTER COMPLETE DEMOLITION, BEFORE COMMENCEMENT OF ANY CONSTRUCTION. II. AFTER CONSTRUCTION OF ALL WALLS AND PARTITIONS. III. ON COMPLETION OF ALL CONSTRUCTION AND FINISHING.	15,435	SFT		
<b>WALLS, PARTITIONS &amp; CLADDING</b>					
<b>3</b>	<b>BLOCK MASONRY</b>				
	PROVIDING & LAYING STANDARD CEMENT CONCRETE SOLID BLOCK MASONRY WALL, USING MACHINE-MADE BLOCKS AND APPROVED QUALITY OF FINE AND COURSE AGGREGATE LAID IN 1:5 CEMENT SAND MORTAR, IN ANY SHAPE, LENGTH, OR HEIGHT INCLUDING, RAKING JOINTS, SCAFFOLDING, ANCHOR BARS, CURING, CUTTING OF FLOOR FOR MASONRY ETC. COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. WETTED FOR THREE DAYS AFTER COMPLETE LAYING OF WALL.				
<b>A.</b>	9" THICK BLOCK MASONRY	6,969	sqft		
<b>B.</b>	6" THICK BLOCK MASONRY	8,875	sqft		
<b>C.</b>	4" THICK BLOCK MASONRY (TOILET WALL)	3,945	sqft		



7th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>4</b>	<b>CEMENT BOARD PARTITION WALL</b>				
	CEMENT BOARD PARTITION WALL SUSPENDED FROM THE TOP SLAB ABOVE GLASS PARTITION WITH 100mm THICK STUD PARTITION @ 2 FEET c/c, CONSISTING OF G.I. FRAMED SECTION (22 SWG) INTERNAL FRAMING OF APPROVED SECTION (3" x 1.5"), 12mm THICK CEMENT BOARD FIXED ON BOTH SIDES OF FRAME, INCLUDING ALL HARDWARE, FIBER TAPE ON SHEET JOINTS, METAL TAPE ON EDGES, ETC., PAINT JOB TO BE INCLUDED IN THE ITEM. INCLUDING MAKING OPENINGS FOR HVAC DUCTS AND CABLE TRAYS ETC. ABOVE 9' IN HEIGHT. COMPLETE IN ALL RESPECT AS PER DRAWING AND INSTRUCTION OF THE ARCHITECT.				
<b>A.</b>	4" THICK HEIGHT: 3'-6" (ABOVE GLASS PARTION)	400	RFT		
<b>5</b>	<b>GYPSON VERTICAL BAND</b>				
	P/F OF GYPSON BAND ABOVE GLASS PARTITION WITH COVE HAVING DC LED STRIP LIGHT @ 120 LEDs PER METRE (36 LEDs PER FOOT) IN/AROUND COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT AND NECESSARY G.I. FRAMING. INCLUDING APPROVED WALLPAPER PASTED IN SEAMLESS MANNER AND MAKING OPENINGS FOR HVAC DUCTS AND CABLE TRAYS ETC. ABOVE 9' HEIGHT. COMPLETE IN ALL RESPECT AS PER DRAWING AND INSTRUCTION OF THE ARCHITECT. <b>NOTE:</b> COST OF WALLPAPER TO BE INCLUDED IN THE ITEM.	200	SFT		
<b>6</b>	<b>PLASTER WORK</b>				
	PROVIDING AND LAYING CEMENT SAND PLASTER 1:4 USING O.P. CEMENT & FINE SAND ON WALLS, COLUMNS AND WHEREVER REQUIRED OF ANY SHAPE, CURVE AND DESIGN USING EXPANDED METAL MESH ON JOINTS COLUMNS WITH WALL AND ON CONDUITS FILLING SCAFFOLDING WITH MAKING EDGES CORNERS, HOISTNG, WATERING, CURING AT ANY HEIGHT SMOOTHLY FINISHED INCLDING MAKING DRIP COURSE AT ALL PROJECTIONS, SLABS OFFSETS OR WHERE AS REQUIRED COMPLETE AS PER SPECIFICATIONS AND INSTRUCTION OF THE ENGINEER/ ARCHITECT.	39,578	SFT		
<b>7</b>	<b>REPAIRING / FILLING OF CRACKS</b>				
	REPAIRING CRACKS ON INTERNAL AND EXTERNAL WALLS, CEILING, BEAMS, AND WHEREVER REQUIRED BY SCRAPPING, CHISELLING, FILLING, AND FINISHING OF SURFACE. FILLING SHALL BE DONE WITH PLASTER / PUTTY OR ANY OTHER APPROPRIATE MATERIAL. NOTE: EACH POINT SHALL NOT EXCEED 1 SFT SURFACE AREA. IN CASE OF REPAIRING OF LARGER THAN 1 SFT THE CONTRACTOR SHALL MEASURE, PHOTOGRAPH, AND DOCUMENT THE POINT FOR THE RECORD.	150	No.		
<b>8</b>	<b>MARINE PLY DECO PAINTED FLUTED PANELS</b>				
	PROVIDING AND FIXING OF FLUTED PANELS CNC OR ROUTER PROFILED AS PER ARCHITECT CHOICE AND SPECIFICATION TO MAKE A SEAMLESS SURFACE. MADE OF MARINE PLY 16mm THICK, PASTED ON TOP OF 12mm TH MARINE PLY SHEET WITH ROUGH WOOD FRAMING OF 25mm by 50mm @ 2 FEET c/c AT BACK SIDE. MARINE PLY BATTONS ARE TO BE PASTED AFTER MAKING IT SECURE IN PLACE WITH APPROVED DECO PAINT ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. ALL NECESSARY SUPPORT/ FRAMING STRUCTURE IS INCLUDED IN THE JOB.	3,900	SFT		

7th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>9</b>	<b>MACHINE POLISHED MARBLE FEATURE WALL</b>				
	PROVIDING AND FIXING OF MACHINE POLISHED WALL OF APPROVED MARBLE INCLUDING BULL NOSING / CHAMFERING ON EDGES, ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. FIBER MESH TO BE PASTED AT THE BACK SIDE OF THE MARBLE USING EPOXY RESIN BEFORE FIXING TO ITS POSITION. ALL CONCRETE/ DRY BOND WORKS ARE INCLUDED IN THE JOB.				
<b>A.</b>	OFFICE FEATURE WALLS (SILVER TRAVERTINE, BLUBERRY, RIO BLUE OR EQUIVALENT or SIMILAR OF ARCHITECTS CHOICE )	2,100	SFT		
<b>B.</b>	LIFT MARBLE FEATURE WALL PASHA WHITE, SANDALWOOD, DIAG-NOSE WHITE OR EQUIVALENT (BOOK MATCHED- SEAMLESS TEXTURED)	400	SFT		
<b>10</b>	<b>FLAT GLASS PARTITION WALL</b>				
	(ED ROOMS, MEETING ROOM & BOARD SECRETARIAT) PROVIDING, FABRICATION & FIXING 9FT HIGH 12mm THICK TEMPERED ULTRA CLEAR MACHINE EDGED, GLASS PARTITIONS WITH ALL SIDES POWDER COATED ALUMINUM SECTION 12mm THICK BORDER AS APPROVED BY ARCHITECT. SECTION DESIGN TO BE CONFIRMED BY THE ARCHITECT. WITH GASKET FLUSHED AND CLEANED TO MATCH FRONT AND BACK SURFACE AND SHAPE INCLUDING FROSTING FILM PASTED ENSURING NO BUBBLES OR ANOMALIES ARE FOUND AS SHOWN IN DRAWINGS/ INSTRUCTED BY ARCHITECT, INCLUDING BOLTS, NUTS, SCREWS ALUMINIUM CHANNEL IF REQUIRED FOR SAFELY MOUNTING AND ANCHORING THE GLASS PARTITION. BOLTED/ CONNECTED TO GROUND AND CEILING AT EVERY 4 FEET SPACE OR WHEREVER GLASS CUTTING IS ENCOUNTERED, CONTRACTOR TO ENSURE SEAMLESS EDGING SOLUTION WITH A TOLERANCE OF UPTO 0.5MM. COMPLETE IN ALL RESPECTS. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM INCLUDING FROSTING FILM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE A DETAILED SHOP DRAWING OF FRAMING, GLASS PARTITION, CUTTING, AND DOORS DETAILS AND PATCH FITTINGS IF ANY PRIOR TO THE START OF WORK.	4,100	SFT		
<b>11</b>	<b>BENT TEMPERED GLASS PARTITION WALL</b>				

7th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<p><b>(MEETING ROOM)</b> PROVIDING, FABRICATION &amp; FIXING 9FT HIGH 12mm THICK BENT (USING HEAT BENDING) TEMPERED ULTRA CLEAR GLASS MACHINE EDGED, GLASS PARTITIONS WITH ALL SIDES POWDER COATED ALUMINUM SECTION 12mm THICK BORDER AS APPROVED BY ARCHITECT. SECTION DESIGN TO BE CONFIRMED BY THE ARCHITECT. WITH GASKET FLUSHED AND CLEANED TO MATCH FRONT AND BACK SURFACE AND SHAPE INCLUDING FROSTING FILM PASTED ENSURING NO BUBBLES OR ANOMALIES ARE FOUND AS SHOWN IN DRAWINGS/ INSTRUCTED BY ARCHITECT, INCLUDING BOLTS, NUTS, SCREWS ALUMINIUM CHANNEL IF REQUIRED FOR SAFELY MOUNTING AND ANCHORING THE GLASS PARTITION. BOLTED/ CONNECTED TO GROUND AND CEILING AT EVERY 4 FEET SPACE OR WHEREVER GLASS CUTTING IS ENCOUNTERED, CONTRACTOR TO ENSURE SEAMLESS EDGING SOLUTION WITH A TOLERANCE OF UPTO 0.5MM. COMPLETE IN ALL RESPECTS. COST INCLUDES THE PRICE OF MOCKUP AND ALL ACCESSORIES AND FIXTURES INCLUDING TEMPORARY MATERIALS TO FACILITATE THE CREATION OF SECURE MOCKUP USED TO CREATE BENDING FOR TAMPERING.</p> <p><b>NOTE:</b> CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM INCLUDING FROSTING FILM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE A DETAILED SHOP DRAWING OF FRAMING, GLASS PARTITION, CUTTING, AND DOORS PRIOR TO THE START OF WORK.</p>	280	SFT		

7th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>12</b>	<b>GLASS DOORS (SWING)</b>				
	P/F TEMPERED SWING GLASS DOOR USING 12mm ULTRA CLEAR GLASS, MACHINE EDGED, WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. GLASS DOOR TO BE ANCHORED ON FLOOR AND MOUNTED TO CEILING USING A CHANNEL AND M10 RODS TO BE MADE STURDY.				
<b>A.</b>	DOUBLE LEAF DOORS (7'-4" x 9'-0") (SMALL WING CORRIDOR)	1	Nos		
<b>B.</b>	SINGLE LEAF DOORS (3'-0" x 9'-0")	13	Nos		
<b>13</b>	<b>GLASS DOORS (SLIDING)</b>				
	P/F TEMPERED SLIDING GLASS DOOR USING 12mm ULTRA CLEAR GLASS, MACHINE EDGED, WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS AND CHANNELS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE.				
<b>A.</b>	SINGLE LEAF DOORS (3'-0" x 9'-0")	1	Nos		
<b>B.</b>	DOUBLE LEAF DOORS (8'-0" x 9'-0")	1	Nos		
<b>C.</b>	SINGLE LEAF DOORS (11'-0" x 9'-0")	1	Nos		
<b>D.</b>	SINGLE LEAF DOORS (6' x 9'-0")	1	Nos		
<b>14</b>	<b>GLASS DOORS (FOLDING / ACORDIAN)</b>				
	P/F TEMPERED FOLDING GLASS DOOR (ACORDIAN STYLE) USING 12MM ULTRA CLEAR GLASS WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. GLASS TO BE ENCASED IN ALUMINUM SECTION OF 2mm TH POWDER COATED; 1.5" (FRONT PROFILE) by 2" SECTION. INCLUSIVE OF IMPORTED HARDWARE TOP MOUNTED TO MOUNT SECURE AND PROVIDE CLEAN CHANNEL TO GLASS. ONCE HARDWARE SHALL INCLUDE RUBBER GASKITS TO SECURE CLEAN UNINTERUPTED GLASS SURFACE WITHOUT OPENINGS ONCE COMPLETELY OPEN				
<b>A.</b>	4 PANELS FOLDING DOOR (12'-6" x 9'-0")	1	No.		
<b>15</b>	<b>SS TRIM FOR LIFT OPENINGS</b>				
	P/F OF 12 SWG SS ARCHITRAVE FOR LIFT DOORS, WITH GOLDEN AND SS FINISH COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. COST TO INCLUDE COST OF MOUNTING. BACKING USING MARINE PLY PROFILE OVER WHICH THE TRIM SHALL BE PASTED GLUED AND SECURED IN PLACE.	4	No.		

7th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>16</b>	<b>ALUMINUM WINDOWS</b>				
	PROVIDING AND FIXING FULLY DOUBLE-GLAZED UV-RATED, SOUND PROOF, APPROVED TEXTURE, POWDER COATED/ ANODIZED ALUMINUM FIXED WINDOWS/ VENTILATORS/ PARTITIONS WITH FROSTING FILM AS PER BRITISH STANDARDS INCLUDING SHATTER PROOF SECURITY FILM OF 3m OR EQUIVALENT, MANUFACTURED BY ALPHAPEN/ ALUCON/ UBM TOSTEM/ SCHUCO OR EQUIVALENT. PROFILE THICKNESS OF MINIMUM 1.5 INCH IN WIDTH. FIXING THROUGH THEIR APPROVED FABRICATORS, INCLUDING DRAIN CHANNEL. FITTINGS WITH ALL ACCESSORIES CUTTING HOLES ETC. AND MAKING GOOD DAMAGES TO WALLS ETC. THE ADJACENT FINISHED WALL SHALL BE FILLED WITH WEATHERPROOF SILICON SEALANT OVER THE BACKER ROD OF THE REQUIRED SIZE AND OF APPROVED QUALITY, ALL COMPLETE AS PER THE APPROVED DRAWING & DIRECTION OF THE ENGINEER-IN-CHARGE. NOTE: FRAMING OF THE PRODUCT TO THE ADJACENT WALL FACE IS ALSO INCLUDED IN THE COST	2,900	SFT		
<b>17</b>	<b>ALUMINUM DOOR (TOILET CUBICLE)</b>				
	PROVIDING AND INSTALLING IN-POSITION ALUMINUM DOOR, WITH POWDER COATED/ ANODIZED ALUMINUM SHUTTER FRAME & MAIN FRAME SECTION OF (ALPHAPEN/ ALUCON/ UBM/ TOSTEM/ SCHUCO OR EQUIVALENT), INCLUDING ALL HARDWARE, S.S. HINGES, LOCKSET, GLUE, SILICONE SEALANT, BACKING ROD, NEOPRENE/RUBBER GASKET, WASTAGE, LIFTING, CUTTING, FIXING, MAKING OF GROOVE IF REQUIRED ETC., COMPLETE AS PER DRAWING, HARDWARE SCHEDULE & INSTRUCTION OF THE ARCHITECT. CONTRACTOR MUST SUBMIT DOOR OPTIONS SPECIFYING COLORS, PATTERNS AVAILABLE. NOTE: FRAMING OF THE PRODUCT TO THE ADJACENT WALL FACE IS ALSO INCLUDED IN THE COST				
<b>A.</b>	2.5'x 7' (WIDTH x HEIGHT)	7	No.		
<b>18</b>	<b>WOODEN DOOR</b>				
	PROVIDING AND FIXING OF PARTIAL FRAMED 1.5" THICK SOLID OAK PANEL DOOR. HAVING IRON MONGRIES INCLUDING COAT HANGERS, DECORATIVE MORTGAGE-STYLE LOCK OF MAKE YALE OR EQUIVALENT, HANDLES S.S. HINGES, AND ALL OTHER ACCESSORIES OF ARCHITECT'S CHOICE. COMPLETE IN ALL RESPECT. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	2.5'x 9' (WIDTH x HEIGHT)	8	No.		
<b>B.</b>	3'x 9' (WIDTH x HEIGHT)	1	No.		
<b>C.</b>	3.5'x 9' (WIDTH x HEIGHT)	1	No.		

7th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>19</b>	<b>FIRE DOOR (FIRE CORRIDOR)</b>				
	PROVIDING, FABRICATING, AND FIXING IN POSITION 2" THICK INTERNAL METAL FRAME DOOR WITH OUTER BODY MADE OF FIRE-RATED WOOD ALONG WITH PUSH BAR HAVING HONEY COMB STRUCTURE INSIDE AND GLASS WOOL FILLING WITH 16 SWG MOULDED SHEET METAL FRAME (CHOWKATS) WITH 2 COATS OF RED OXIDE PAINT. METAL FRAME SHALL BE FILLED WITH CONCRETE AND FIXED WITH 4 NOS. 6" LONG HEAVY DUTY M.S CHROMIUM PLATED HINGES AND 6 NO HINGES FOR LEAD LINE DOOR TO EACH SHUTTER, AND 6 NOS 6" LONG HOLD FASTS WELDED MADE OF ANGLE IRON (1-1/2"x1-1/2" X3/16") WITH FORKED ENDS TARRED AND WITH METAL FRAME EMBEDDED IN MASONRY AND WITH APPROVED HARDWARE 2 NOS. 9" LONG TOWER BOLTS, DOOR CLOSER RAYOBI OF JAPAN OR EQUIVALENT, DOOR STAY, AND C.P. HANDLES, DEODAR WOOD ARCHITRAVE 2-1/2"x 5/8" ALL AROUND DOOR FRAME AND APPROVED POLISHING OR SINLGE COAT OF APPROVED ENAMEL PAINT OVER A PRIMER COAT AND 2 COATS OF ICI INTUMESCENT PAINT TO RESIST FIRE UP TO MINIMUM 120 MINUTE ON STANDARD (BS 476-22). TERMITE CONTROL AND WOOD PRESERVATIONS APPLICATIONS (SOLIGNUM), SMOKE SEALS ON THREE SIDES AND FIRE-RATED ACCESSORIES, AND PEEP WINDOWS OF APPROPRIATE SIZE ALL COMPLETE AS PER DRAWINGS, SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. <b>NOTE:</b> THE PRODUCT MUST ASSURE FIREPROOFING STANDARDS AS REQUIRED. THE CONTRACTOR MUST SUBMIT THE SHOP DRAWING AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	3'x 9' (WIDTH x HEIGHT)	6	No.		
<b>B.</b>	DOUBLE LEAF 5'x 9' (WIDTH x HEIGHT)	1	No.		
<b>20</b>	<b>WOODEN DOOR (BATHROOM DOOR)</b>				
	PROVIDING AND FIXING OF PARTIAL FRAMED 1.5" THICK SOLID OAK PANEL DOOR. HAVING IRON MONGRIES INCLUDING COAT HANGERS, DECORATIVE MORTGAGE-STYLE LOCK OF MAKE YALE OR EQUIVALENT, HANDLES S.S. HINGES, AND ALL OTHER ACCESSORIES OF ARCHITECT'S CHOICE. 1.5 FEET HIGH SPLASH ALUMINIUM SHEET SHALL BE PASTED ON EITHER SIDE OF THE DOOR AS PER DRAWINGS. COMPLETE IN ALL RESPECT. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	3'x 9' HEIGHT	13	No.		
<b>21</b>	<b>LINTELS</b>				
	PROVIDING & FIXING OF PRECAST RCC LINTELS OVER DOORS, WINDOWS OR WHEREVER REQUIRED. UPTO 12" HEIGHT, THE COST MUST INCLUDE ALL MATERIAL (STEEL BARS) 1:2:4 (fc 3000 psi).				
<b>A.</b>	DOOR LINTEL	100	RFT		
<b>B.</b>	WINDOW LINTEL	344	RFT		
<b>22</b>	<b>ROLLER BLINDS</b>				
	PROVIDE AND INSTALL IN POSITION ROLL-UP WINDOW BLINDS OF APPROVED COLOR AND SPECIFICATIONS, CHAIN OPERATED ROLLER BLIND (PROTECTOR OR APPROVED EQUIVALENT) WITH APPROVED FABRIC SCREW ON WALLS, INCLUDING ALL HARDWARE, WASTAGE, LIFTING, CUTTING, FIXING, SCAFFOLDING ETC., COMPLETE AS PER DRAWING & INSTRUCTION OF THE ARCHITECT. HEIGHT 9' FOR PAYMENT NET INSTALLED BLIND (INCLUDING TOP & BOTTOM CHANNEL) AREA WILL BE MEASURED.	4,200	SFT		

7th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>23</b>	<b>MS FEATURE WALL</b>				
	<p>PROVIDE AND INSTALL IN POSITION FREE STANDING DECO PAINTED/ GOLD LEAFING, MS FEATURE WALL OF APPROVED COLOR AND SPECIFICATIONS, INCLUDING FLUTED GLASS PANELS FIXED WITHIN THE MS FRAME, INCLUDING ALL HARDWARE, WASTAGE, LIFTING, CUTTING, FIXING, SCAFFOLDING ETC., COMPLETE AS PER DRAWING &amp; INSTRUCTION OF THE ARCHITECT.</p> <p>INCLUDED BACKLIT SS LOGO of DIMENSION 4 FEET BY 5 FEET OF AREA ; OF ARCHITECT'S CHOICE.</p> <p>HEIGHT 12'</p> <p>FOR PAYMENT SINGLE SIDE SURFACE ARE SHALL BE CONSIDERED.</p>	400	SFT		
	<b>FLOORING</b>				
	<p>NOTE:</p> <p>1. THE DEMOLITION / DISMANTLING OF EXISTING FLOORING IS INCLUDED IN THE JOB.</p> <p>2. SAMPLES &amp; TILE-CUTTING DRAWINGS ARE TO BE APPROVED BY ENGINEER/ ARCHITECT.</p>				
<b>24</b>	<b>PORCELAIN TILES FLOORING</b>				
	<p>PROVIDING AND LAYING BEST QUALITY <b>SPANISH OR EUROPEAN REGION</b> APPROVED <b>FULL-BODY PORCELAIN</b> TILES OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND 2-3" TH ATLEAST WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.</p> <p><b>NOTE:</b> THE TILES SHALL BE MACHINE CUT i.e. CUTTING SHOULD BE CARRIED OUT OFF SITE EXCEPT THE TILES OF THE LAST EDGE OF FLOORING SPACE.</p>				
<b>A.</b>	(APPROX. 36" x 72")	7,200	SFT		
<b>B.</b>	TOILET AND KICHEN FLOOR (APPROX. 24" x 48")	1,367	SFT		
<b>C.</b>	TOILET AND KICHEN WALLS (APPROX. 24" x 48")	0	SFT		
<b>25</b>	<b>FLOOR SCREEDING</b>				
	<p>SCREEDING ON BATHROOM FLOORING OR WHEREVER REQUIRED TO MAKE APPROPRIATE SLOPE FOR WATER DRAINAGE. 2" THICK 1:3:6 MIX WITH PUDLO TOPPING AND WATERPROOFING. CURRING OF AT LEAST 14 DAYS.</p>	4,000	SFT		
<b>26</b>	<b>MARBLE STAIR STEPS</b>				
	<p>PROVIDING AND LAYING BEST QUALITY APPROVED <b>MARBLE STAIR STEPS, 3/4" TO 1" THICK</b>, (ZIARAT WHITE, OR EQUIVALENT) OF GLAZED/ MATT FINISH, ANTI-SLIP WITH GROVES AT NOSING END TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.</p>				
<b>A.</b>	<p>25 TREADS 5'-0" x 1'</p> <p>25 RISERS 5'-0" x 8"</p> <p>2 LANDINGS, 5'-0" x 5'-0"</p>	340	SFT		

7th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>27</b>	<b>STONE STAIR STEPS (SMALL WING)</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE STAIR STEPS, <b>3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP WITH GROVES AT NOSING END TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.				
<b>A.</b>	25 TREADS 4'-6" x 1' 25 RISERS 4'-6" x 8" 2 LANDINGS, 4'-6" x 4'-6"	280	SFT		
<b>28</b>	<b>WOOD LAMINATE FLOOR</b>				
	P/F OF BEST QUALITY WOOD LAMINATE FLOOR OF MAKE FIRST FLOOR, PAK CARPETS, INTERWOOD OR EQUIVALENT INCLUDING ALL BENDS, CORNERS ETC. INCLUDING COST OF T-PROFILES AND SKIRTING. COMPLETE IN ALL RESPECT, INCLUDING FINISHING, CLEANING & POLISHING ETC, COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER/ ARCHITECT. GERMAN, ITALIAN OR WESTERN EUROPE ORIGIN.	4,800	SFT		
<b>29</b>	<b>WOOD LAMINATE SKIRTING</b>				
	P/F OF APPROVED BRAND WOODEN SKIRTING 6" HIGH & 1/2" THICK INCLUDING ALL BENDS, CORNERS ETC. COMPLETE IN ALL RESPECT, INCLUDING FINISHING, CLEANING ETC, COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER/ ARCHITECT.	1,400	RFT		
<b>30</b>	<b>UPVC SKIRTING</b>				
	PROVIDING & FIXING 4" HIGH INDUSTRIAL UPVC SKIRTING OF ARCHITECT'S CHOICE OF FINISH, WITH VERTICAL SUPPORT MAXIMUM 2' APART OR ON TURNING POINTS ON WALLS, GLASS PARTITIONS, PELMET WALLS AND ANY OTHER WALL SURFACE. COMPLETE IN ALL RESPECTS AND AS PER DRAWING, PATTERNS AND DIRECTIONS OF THE ARCHITECT / ENGINEER. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS & SAMPLES FOR APPROVAL BY ENGINEER/ ARCHITECT.				
<b>A.</b>	FLOOR 1 SKIRTING (FOR OFFICES) (MATCHING WITH LAMINATE)	1,300	RFT		
<b>B.</b>	FLOOR 2 SKIRTING (OPEN CORRIDOR SMALL WING)	300	RFT		
<b>C.</b>	FLOOR 3 SKIRTING (OPEN CORRIDOR LARGE WING)	500	RFT		
<b>D.</b>	FLOOR 5 SKIRTING (LIFT LOBBY)	200	RFT		
<b>31</b>	<b>FIRE CORRIDOR FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE, SIZE 24" x 48". <b>3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	1,375	SFT		
<b>32</b>	<b>FIRE CORRIDOR SKIRTING</b>				
	PROVIDING AND FIXING BEST QUALITY APPROVED 4" HIGH SKIRTING WITH PRE-POLISHED STONE, <b>3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE FIXED USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	644	RFT		



<b>7th FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>33</b>	<b>WATER PROOFING</b>				
	POLYURETHANE SINGLE COMPONENT WATERPROOF COATING OF MAKE CONCUR OF AQUAKNIGHT OF BMT OR EQUIVALENT. APPLYING PRIMER AFTER SURFACE CLEANING, SHEET REPAIR AND PREPARATION WORKS. APPLY POLYESTER CLOTH OVER JOINTS/PATCHES AND ENSURE TO COVER JOINTS WITH PU COATING ALONG WITH CANVAS/POLYESTER CLOTH. ON COMPLETION OF THE ENTIRE AREA, APPLY 2 COATING OF PU - COATING AND COMPLETE IN ALL RESPECT. TOTAL THICKNESS 4mm.	1,320	RFT		
	<b>PAINT</b>				
<b>34</b>	<b>PAINT WORKS</b>				
	PROVIDING AND APPLYING PAINT ON WALLS/ ETC. INCLUDING RUBBING WITH SANDSTONE, FILLING THE UNEVEN SURFACES WITH PUTTY, CRACKER, AND EPOXY TREATMENT (IF REQUIRED) , RUBBING WITH SANDPAPER AND PREPARING THE SURFACE. APPLYING COATS OF PRIMER ON INTERNAL WALLS TO PREPARED SURFACE OF PLASTERED AND FINISH PAINT COATS AS INDICATED IN SUB ITEMS, COMPLETE IN ALL RESPECTS AS PER DRAWINGS.				
<b>A.</b>	PLASTIC EMULSION PAINT (ON INTERIOR WALLS) 3 COATS	39,000	SFT		
<b>B.</b>	TEXTURED PAINT (ON INTERIOR WALLS) 3 COATS	11,500	SFT		
<b>C.</b>	PLASTIC EMULSION PAINT (BLACK OR DARK GRAY ON CEILING DUCTS, AND BEAMS) 3 COATS	15,378	SFT		
<b>D.</b>	WEATHER SHEILD ON EXTERIOR AND FORE CORRIDOR WALLS 3 COATS	25,668	SFT		
<b>E.</b>	ENAMEL PAINT OF DUCTS, PIPES, CONDUITS, ETC.	1	SFT		
	<b>TOILETS</b>				
<b>35</b>	<b>CORIAN COUNTER TOP</b>				
	PROVIDING AND FIXING OF CORIAN COUNTERTOP OF APPROVED SHADE AND DESIGN. HAVING SS TRIM 0.5 INCH THICK ON JOINING SURFACES AND 0.5 INCH BELOW JOINT LINE. EACH VANITY TO HAVE ITS OWN INDEPENDENT DOUBLE FRAMED STRUCTURE MADE OF 1/2" by 3/4" 10 MS PIPE. RED OXIDE AND PAINTED USING ENAMEL PAINT WITH LACQUERED COATING OVER THE PAINT. AS PER NEED AND REQUIREMENT FIXED TO THE WALL SECTION. USING APPROPRIATE ANCHORS. NOTE: THE TOP SURFACE AREA SHALL BE CONSIDERED FOR BILLING PURPOSE. DUPONT AMERICAN/ EUROPEAN ORIGIN ONLY.				
<b>A.</b>	CEO BATHROOM	10	SFT		
<b>B.</b>	FEMALE TOILET LARGE WING	12	SFT		
<b>C.</b>	MALE TOILET LARGE WING	10	SFT		
<b>D.</b>	VISITING DIR.(2)	30	SFT		
<b>E.</b>	MALE & FEMALE TOILET SMALL WING	14	SFT		
<b>36</b>	<b>CORIAN SHOWER BENCH</b>				
	PROVIDING AND FIXING OF CORIAN SHOWER BENCH OF APPROVED SHADE AND DESIGN. TO HAVE ITS OWN INDEPENDENT DOUBLE FRAMED STRUCTURE MADE OF 1/2" by 3/4" 10 MS PIPE. RED OXIDE AND PAINTED USING ENAMEL PAINT WITH LACQUERED COATING OVER THE PAINT. AS PER NEED AND REQUIREMENT FIXED TO THE WALL USING APPROPRIATE ANCHORS. NOTE: THE TOP SURFACE AREA SHALL BE CONSIDERED FOR BILLING PURPOSE. DUPONT AMERICAN/ EUROPEAN ORIGIN ONLY.				
<b>A.</b>	CEO BATHROOM	10	SFT		

7th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>CEILING</b>					
<b>37</b>	<b>MARINE PLY DECO PAINTED FLUTED PANELS CEILING</b>				
	<p>PROVIDING AND FIXING OF FLUTED PANELS MADE OF MARINE PLY HAVING CNC ROUTING OR PROFILED TO ARCHITECTS SPEC 16mm THICK, PASTED ON TOP OF 12mm TH MARINE PLY SHEET WITH ROUGH WOOD FARMING of 1" by 2" @ 1 FEET c/c AT BACK SIDE TO SECURE IN PLACE TO DESIRED CEILING LEVEL AS PER DRAWING. MARINE PLY BATTONS TO BE PASTED AFTER MAKING IT SECURE IN PLACE WITH APPROVED DECO PAINT ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. ALL NECESSARY SUPPORT/ FRAMING STRUCTURE IS INCLUDED IN THE JOB. SECTION PLY: 28mm, FRAMING: 25mm Th MATERIAL.</p> <p><b>NOTE:</b> CONTRACTOR TO INCLUDE PRICE OF CUTTING FOR LIGHT ACCESSORIES AND CREATION OF ACCESS PANELS WHERE NEEDED.</p>				
<b>A.</b>	MEETING ROOM	400	SFT		
<b>B.</b>	LIFT LOBBY	350	SFT		
<b>C.</b>	BOARD ROOM	850	SFT		
<b>38</b>	<b>PELMIT LIGHT ON FLUTED PANEL CEILING</b>				
	<p>P/F IN POSITION DC LED STRIP LIGHT @ 120 LEDS PER METRE (36 LEDS PER FOOT) IN/AROUND FLUTTED PANEL CEILING, INCLUDING MAKING OF COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT WITH APPROVED PAINT FINISH MAKING OF LIGHT PELMET WITH FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT.</p> <p>NOTE: RUNNING LENGTH OF THE LIGHT WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.</p>	450	RFT		
<b>39</b>	<b>GYPSUM CEILING</b>				
	<p>P/F IN POSITION GYPSUM BOARD CEILING, CONSISTING OF G.I. FRAME WORK OF APPROVED SECTIONS WITH G.I. HANGERS AND 16-18 SWG. 12MM THICK GYPSUM BOARD SHEET FIXED ON FRAME WITH APPROVED PAINT FINISH ON GYPSUM, CUTTING OF OPENING FOR LIGHT FIXTURES / AC CASSETTES WITH MAKING OF LIGHT PELMET, FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT.</p> <p>NOTE: FLAT AREA OF CEILING WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.</p>	11,112	SFT		
<b>40</b>	<b>PELMIT LIGHT ON GYPSUM CEILING</b>				
	<p>P/F IN POSITION DC LED STRIP LIGHT @ 120 LEDS PER METRE (36 LEDS PER FOOT) IN/AROUND GYPSUM BOARD CEILING, INCLUDING MAKING OF COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT WITH APPROVED PAINT FINISH MAKING OF LIGHT PELMET WITH FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT.</p> <p>NOTE: RUNNING LENGTH OF THE LIGHT WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.</p>	770	RFT		

<b>7th FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>LIFT LOBBY</b>					
<b>41</b>	<b>WOOD HANDRAIL (FIXED UPON EXISTING IRON BALUSTER)</b>				
	PROVIDING AND FIXING IN-POSITION WOOD HANDRAIL OF APPROVED PROFILE AND POLISH / FINISH UPON EXISTING IRON BALUSTERS, AS SHOWN ON DRAWINGS. WORKS INCLUDE REMOVING OF EXISTING IRON BALUSTERS, POWDER COATING OF EXISTING IRON BALUSTERS AFTER SCAPING AND REPAIRING. FIXING THE BALUSTERS TO FLOOR. ALL WORKS ARE TO BE COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	90	SFT		
<b>42</b>	<b>EXPANSION JOINTS CLIPS</b>				
	PROVIDING AND FIXING OF EXPANSION JOINT CLIPS. W TYPE PROFILE 4" WIDTH 1 " TO BE EMBEDDED IN THE FLOOR, EXPANSION TO BE TREATED BY PUTTING IN AND SECURING IN PLACE BECKER ROD OF APPROPRIATE WIDTH, AND SEALING IT WITH APPROVED SEALANT TILL W PROFILE SECTION. MAKING SURE THE JOINT AND SEALANT ARE TIGHTLY BOUND AND DO NOT LET WATER PENETRATE THROUGH. CUTTING & GROUTING WHERE NECESSARY SHALL BE USED. COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	1	JOB		
<b>FIRE EXTINGUISHER</b>					
<b>43</b>	<b>FIRE EXTINGUISHER DRY TYPE</b>				
	<ul style="list-style-type: none"> <li>&gt; <b>DCP FIRE EXTINGUISHER 6 KG</b></li> <li>&gt; CAPACITY: 4 KG FIRE</li> <li>&gt; RATING: 34B</li> <li>&gt; HIGHLY EFFECTIVE ON A, B &amp; C CLASS OF FIRE</li> <li>&gt; AVERAGE DISCHARGE TIME: 21.0 SEC</li> <li>&gt; DIAMETER: 150 MM</li> <li>&gt; FILLED WEIGHT: 10.3 KG</li> <li>&gt; OPERATING TEMPERATURE: -30°C TO 55°C</li> <li>&gt; WORKING PRESSURE: 15 BAR</li> <li>&gt; SERVICE PRESSURE: 18 BAR</li> <li>&gt; TEST PRESSURE: 35 BAR</li> <li>&gt; FLOOR STAND OR WALL MOUNT BRACKET INCLUDING ACCESSORIES</li> <li>&gt; <b>NEFFCO, SFFECO OR EQUIVALENT</b></li> </ul>	15	No.		
<b>44</b>	<b>FIRE EXTINGUISHER FOAM TYPE (FOR KITCHEN)</b>				
	<ul style="list-style-type: none"> <li>&gt; <b>AFFF FOAM TYPE FIRE EXTINGUISHER</b></li> <li>&gt; CAPACITY: 9 LTR</li> <li>&gt; FIRE RATING: 34A 183B</li> <li>&gt; WORKING PRESSURE: 13.5 BAR</li> <li>&gt; TOTAL WEIGHT: 16.5 KG</li> <li>&gt; MAXIMUM OPERATING PRESSURE: 18.5 BAR @ 60°C</li> <li>&gt; TESTED AT PRESSURE: 30 BAR</li> <li>&gt; FLOOR STAND OR WALL MOUNT BRACKET INCLUDING ACCESSORIES</li> <li>&gt; <b>NEFFCO, SFFECO OR EQUIVALENT</b></li> </ul>	2	No.		
<b>SIGNAGE</b>					
<b>45</b>	<b>WALL SIGNAGE</b>				
	WALL SIGNAGE MADE OF 3mm CLEAR ACRYLIC WITH REVERSE PLOTTER CUT WHITE VINYL OVER VINYL OF APPROVED BASE COLOR. SIZE: 4" x 12"	30	No.		
<b>46</b>	<b>WALL BOARD SIGNAGE</b>				
	WALL BOARD SIGNAGE OF 6mm CLEAR ACRYLIC WITH REVERSE PLOTTER CUT WHITE VINYL OVER VINYL OF APPROVED BASE COLOR. SIZE: 48" x 36"	4	No.		
<b>47</b>	<b>CEILING HUNG + SIGNAGE DOUBLE SIDED</b>				
	CEILING HUNG + SIGNAGE DOUBLE SIDED MADE OF 25mm ACRYLIC SIGNAGE IN APPROVED COLOR WITH S.S FITTING PIPE. TEXT TO BE LASER CUT IN 8mm ACRYLIC OF APPROVED COLOR. SIZE: 24" x 9" 3" LETTER HEIGHT	4	No.		

7th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
<b>48</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>49</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>COST OF CIVIL WORK SEVENTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**7th FLOOR**

**FURNITURE WORKS NOT TO BE QUOTED**

The BOQ document shall be read in conjunction with the Compliance sheet. The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**7th FLOOR - FURNITURE**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<p>NOTES:</p> <ul style="list-style-type: none"> <li>&gt; ALL THE FURNITURE ITEMS LISTED BELOW MUST BE PROCURED BY APPROVED VENDOR BRAND I.E. GLOBAL, MASTER, INTERWOOD, DIMENSIONS OR EQUIVALENT.</li> <li>&gt; COMPLETE PROFILE BROCHURE OF ITEM ORIGIN OF ITEM TO BE SUBMITTED BY TENDERER.</li> <li>&gt; CONTRACTOR TO SUBMIT EACH SAMPLE TO CONSULTANTS HEAD OFFICE FOR REVIEW AFTER INSPECTION AT SITE OFFICE. SAMPLE TO BE CONSUMED FOR TESTING AND REVIEW. PHYSICAL SAMPLE IS TO BE A PART OF SUBMITAL ELSE CONDITIONAL APPROVAL CAN ONLY BE GRANTED.</li> <li>&gt; THE FINISHED PRODUCT SHALL BE DELIVERED TO THE SITE DULY COVERED WITH BUBBLE SHEET TO AVOID ANY BREAKAGE ETC. HOWEVER IN CASE OF ANY MINOR REPAIR ARISING OUT OF TRANSPORTATION ETC. THE SAME SHALL BE REPAIRED/ REPLACED IMMEDIATELY BY THE SUPPLIER WITHOUT ANY EXTRA COST.</li> <li>&gt; 1 YEAR COMPREHENSIVE MAINTAINANCE TO BE A PART OF TENDER WITH ALL STRUCTURAL, MECHANICAL, FINISHING WORKS TO BE INCLUDED.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>				
<b>BOARD SECRETARIAT STAFF</b>					
<b>1</b>	<b>WORKSTATIONS</b>				
	<ul style="list-style-type: none"> <li>&gt; HAVING A PARTITION WITH FABRIC SOFTBOARD OF NO MORE THAN 1'-4" IN HEIGHT HAVING TWO STUDDED ANCHOR WITH LOCK ON BOTTOM BETWEEN TWO WORKSTATION.</li> <li>&gt; DESK TOP THICKNESS IS 25MM, HAVING LIPPING OF MATCHING COLOR.</li> <li>&gt; FINISH: MALAMINE DESKTOP OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; SQUARE LEGS (TAPPERED) AT 15 DEGREE WITH CABLE MANAGEMENT TRAY 1.2mm POWDER COATED AND OUTLET AT THE CENTRE. WITH EARTH POINT TO BE ATTACHED TO EARTH CABLE</li> <li>&gt; LEG WALL THICKNESS IS 2.0mm POWDER COATED TO COLOUR.</li> <li>&gt; WORKSTATION TO HAVE A LINEAR POWER TRAY UNDERNEATH FOR CABLE DISTRIBUTION ALONG WITH A CUT OUT ON TOP HAVING TECHNOLOGY BOX AS SPECIFIED IN ELECTRICAL COMPONENT OF THE TENDER.</li> <li>&gt; ONE MOBILE DRAWER UNIT INCLUDED 14 INCHES IN WIDTH AS PER INDUSTRY STANDARD..</li> <li>&gt; BEST QUALITY LOCK FOR DRAWERS WITH 3 KEYS INCLUDED.</li> <li>&gt; INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT.</li> <li>&gt; ALL FABRICS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>				
<b>A.</b>	<b>SIZE 4'-6"x2'-0" (LxW), 2'-6" HEIGHT</b>	<b>4</b>	<b>No.</b>	<b>NTQ</b>	<b>NTQ</b>

<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>2</b>	<b>FLOOR CABINETS</b>				
	PROVIDING AND FIXING IN POSITION FLOOR STANDING CABINETS; MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH MELAMINE DESKTOP OF ARCHITECT'S CHOICE OF COLOUR & FINISH, ON TOP, FRONT AND SIDE WITH GROOVES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ARCHITECT. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
	<b>A.</b> WALL CABINET; OVERALL SIZE 8'-6"x1'-8" (LxH), 1'-6" DEEP	1	No.	NTQ	NTQ
<b>3</b>	<b>OFFICE CHAIRS (STAFF)</b>				
	> SHOULDER HEIGHT BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > MESH FABRIC. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT	4	No.	NTQ	NTQ
	<b>CEO OFFICE</b>				
<b>4</b>	<b>TV CONSOLE UNIT</b>				
	SUPPLYING AND FABRICATION OF TV CONSOLE UNIT USING OAK PLY WITH WOOD VENEER POLISHED FINISH WITH LED PELMIT BACK WALL, DRAWERS AND SHELVES AS PER DRAWINGS. > SIZE: 24'-6" x 1'-6" x 1'-0" (LxWxH)	1	No.	NTQ	NTQ
<b>5</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT) <b>A.</b> > SIZE: 11' x 8' (88 SFT) <b>B.</b> > SIZE: 11' x 11' (121 SFT)	1	No.	NTQ	NTQ
<b>6</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH SHEESHAM OR EQUIVALENT WOOD BASE FRAME AND MARBLE TOP OF APPROVED COLOUR AND FINISH. (SILVER TRAVERTINE, BLUEBERRY, RIO BLUE OR EQUIVALENT) > SIZE: 5'-0" x 3'-6" x 1'-6" (LxWxH)	1	No.	NTQ	NTQ
<b>7</b>	<b>CEO DESK</b>				
	> DESK TOP THICKNESS IS 25MM. CONSULT DRAWINGS AND 3D . > MDF WITH WOOD VENEER POLISHED FINISH. HAVING MATCHING SOLID WOOD LIPPING. WITH CABLE MANAGEMENT AND BIOMETRIC LOCKING MECHANISM, INCLUSIVE OF SIDE RETURN AS PER DRAWING AND 3D > 100mm X 40mm TEAK WOOD FOOTREST WITH POLISHING AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. > DESK TO SIZE: (LxWxH) 10'-0"x 6'-6"x 2'-6"	1	No.	NTQ	NTQ

<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>8</b>	<b>CEO CHAIR</b>				
	> TOP QUALITY > HIGH BACK WITH HEAD REST BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > FAUX LEATHER CHAIR WITH ARM REST ADJUSTABLE. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT	1	No.	NTQ	NTQ
<b>9</b>	<b>GUEST CHAIRS (CEO)</b>				
	> FRAME MATERIAL: WOOD/ METAL > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM: POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY: 18 KG/ CUBIC CM. > BACK FOAM: POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > HAVING ROTATION MECHANISM WITH APPROPRIATE HARDWARE. > BACK FOAM DENSITY: 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON POWDER-COATED METAL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.	2	No.	NTQ	NTQ
<b>10</b>	<b>MODERN ARM CHAIR</b>				
	> FRAME MATERIAL: METAL FRAMING COMPLETELY UPHOLSTERED. > FABRIC UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STEEL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.	2	No.	NTQ	NTQ
<b>11</b>	<b>OCCASSIONAL TABLE (FOR VISITOR SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND SHEESHAM BASE AND TOP OF APPROVED POLISH AND FINISH.				
	> SIZE: 1'-6" x 1'-6" x 2'-0" (LxWxH)	1	No.	NTQ	NTQ
<b>12</b>	<b>OCCASSIONAL TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH SHEESHAM OR EQUIVALENT WOOD BASE, FRAME AND MARBLE TOP OF APPROVED DESIGN, COLOUR AND FINISH. (SILVER TRAVERTINE, BLUEBERRY, RIO BLUE OR EQUIVALENT)				
	> SIZE: 1'-8" x 1'-8" x 2'-0" (LxWxH)	2	No.	NTQ	NTQ
<b>13</b>	<b>OCCASSIONAL TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE MADE WITH SHEESHAM OR EQUIVALENT WOOD AND MARBLE TOP OF APPROVED POLISH AND FINISH. (SILVER TRAVERTINE, BLUEBERRY, RIO BLUE OR EQUIVALENT)	1	No.	NTQ	NTQ



7th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>14</b>	<b>CONSOLE TABLE</b>				
	> SUPPORTED ON LAMINATE BOARDS IN "L" SHAPE > MARBLE TOP > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> SIZE: 4'-6" x 1'-6" x 3'-0" (LxWxH)	1	No.	NTQ	NTQ
<b>15</b>	<b>SOFA FOR 3 (CEO ROOM)</b>				
	> SUPPORTED ON POWDER COATED METAL LEGS / WOOD. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	(LxWxH) 8'-9" x 2'-10" x 2'-10"	1	No.	NTQ	NTQ
<b>B.</b>	(LxWxH) 6'-6" x 2'-10" x 2'-10"	1	No.	NTQ	NTQ
<b>16</b>	<b>EXECUTIVE BOOK SHELF (CEO ROOM)</b>				
	> OAK PLY WITH SHEESHAM OR EQUIVALENT WOOD VENEER POLISHED FINISH. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING HINGED PANELS WITH GLASS PANES. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	> SIZE: (LxWxH) 11'-6" x 1'-3" x 9'-6".	1	No.	NTQ	NTQ
<b>B.</b>	> SIZE: (LxWxH) 7'-10" x 1'-3" x 9'-6".	1	No.	NTQ	NTQ
<b>17</b>	<b>PICTURE FRAME</b>				
	PICTURE FRAME WITH OIL / ACRYLIC ON CANVAS WITH APPROVED FRAME MADE OF WOOD / FIBRE, ALONG WITH ALL NECESSARY ACCESSORIES FOR HANGING AND SUSPENSION.				
<b>A.</b>	> SIZE: (LxH) 4'-9" x 6'-0"	1	No.	NTQ	NTQ
<b>B.</b>	> SIZE: (LxH) 8'-0" x 4'-0"	1	No.	NTQ	NTQ
<b>CEO SECRETARIAT</b>					
<b>18</b>	<b>WALL HANGING BOOK CASE (CEO SECRETARIAT)</b>				
	> MS AND SHEESHAM OR EQUIVALENT WOOD VENEER POLISHED FINISH. > OPEN SHELVING DESING. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	> SIZE: (LxWxH) 5'-0" x 1'-0" x 2'-6".	1	No.	NTQ	NTQ

<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>19</b>	<b>WORKSTATIONS</b>				
	> HAVING A PARTITION WITH FABRIC SOFTBOARD OF NO MORE THAN 1'-4" IN HEIGHT HAVING TWO STUDDED ANCHOR WITH LOCK ON BOTTOM BETWEEN TWO WORKSTATION. > DESK TOP THICKNESS IS 25MM, HAVING LIPPING OF MATCHING COLOR. > FINISH: MALAMINE DESKTOP OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SQUARE LEGS (TAPERED) AT 15 DEGREE WITH CABLE MANAGEMENT TRAY 1.2mm POWDER COATED AND OUTLET AT THE CENTRE. WITH EARTH POINT TO BE ATTACHED TO EARTH CABLE > LEG WALL THICKNESS IS 2.0mm POWDER COATED TO COLOUR. > WORKSTATION TO HAVE A LINEAR POWER TRAY UNDERNEATH FOR CABLE DISTRIBUTION ALONG WITH A CUT OUT ON TOP HAVING TECHNOLOGY BOX AS SPECIFIED IN ELECTRICAL COMPONENT OF THE TENDER. > ONE MOBILE DRAWER UNIT INCLUDED 14 INCHES IN WIDTH AS PER INDUSTRY STANDARD.. > BEST QUALITY LOCK FOR DRAWERS WITH 3 KEYS INCLUDED. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	<b>A. SIZE 4'-6"x2'-0" (LxW), 2'-6" HEIGHT</b>	4	No.	NTQ	NTQ
<b>20</b>	<b>OFFICE CHAIR (STAFF)</b>				
	> SHOULDER HEIGHT BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3mm). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > MESH FABRIC. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT	4	No.	NTQ	NTQ
	<b>EXECUTIVE DIRECTORS</b>				
<b>21</b>	<b>TV CONSOLE UNIT</b>				
	SUPPLYING AND FABRICATION OF TV CONSOLE UNIT USING OAK PLY WITH WOOD VENEER POLISHED FINISH WITH LED PELMIT BACK WALL, DRAWERS AND SHELVES AS PER DRAWINGS.				
	<b>A. EXECUTIVE DIRECTOR 4,5</b> > SIZE: 16'-0" x 1'-6" x 1'-0" (LxWxH)	2	No.	NTQ	NTQ
	<b>B. EXECUTIVE DIRECTOR 2</b> > SIZE: 16'-6" x 1'-6" x 1'-0" (LxWxH)	1	No.	NTQ	NTQ
	<b>C. EXECUTIVE DIRECTOR 1</b> > SIZE: 15'-6" x 1'-6" x 1'-0" (LxWxH)	1	No.	NTQ	NTQ
	<b>D. EXECUTIVE DIRECTOR 3</b> > SIZE: 12'-7" x 1'-6" x 1'-0" (LxWxH)	1	No.	NTQ	NTQ

7th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>22</b>	<b>BOOK SHELF (PLACED ON TV CONSOLE UNIT)</b>				
	> PLACED UPON TV CONSOLE UNIT. > OAK PLY WITH WOOD VENEER POLISHED FINISH. > HAVING BOTH OPEN SHELVING AND PANELLED CABINETS AS PER DESIGN. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> SIZE: 4' x 1' x 8' (LxWxH)	5	No.	NTQ	NTQ
<b>23</b>	<b>SOFA FOR 3 (ED OFFICE)</b>				
	> SUPPORTED ON POWDER COATED METAL LEGS / WOOD. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	EXECUTIVE DIRECTOR 1, 2, 3, 4, 5 (LxWxH) 5'-9" x 2'-10" x 2'-10"	5	No.	NTQ	NTQ
<b>24</b>	<b>MODERN LOUNGE CHAIR</b>				
	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STELL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	EXECUTIVE DIRECTOR 1, 4,3,2,5	12	No.	NTQ	NTQ
<b>25</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT)				
A.	EXECUTIVE DIRECTOR 4,2,3,5,1 > SIZE: 9' x 6' (54 SFT)	5	No.	NTQ	NTQ
<b>26</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH SHEESHAM OR EQUIVALENT WOODEN BASE AND WOOD / MARBLE TOP OF APPROVED COLOUR AND FINISH.				
A.	EXECUTIVE DIRECTOR 4, 3, 5 > SIZE: 3'-6" x 2'-0" x 1'-6" (LxWxH)	1	No.	NTQ	NTQ
B.	EXECUTIVE DIRECTOR 2, 1 > SIZE: 3'-6" x 3'-6" x 1'-6" (LxWxH)	1	No.	NTQ	NTQ
<b>27</b>	<b>EXECUTIVE DIRECTOR DESK</b>				
	> DESK TOP THICKNESS IS 25MM. > MDF WITH WOOD VENEER POLISHED FINISH. > 100mm X 40mm TEAK WOOD FOOTREST WITH POLISHING AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	EXECUTIVE DIRECTOR 1, 2, 3, 4, 5 > DESK TO SIZE: (LxWxH) 7'-10"x 5'-6"x 2'-6"	5	No.	NTQ	NTQ

7th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>28</b>	<b>EXECUTIVE DIRECTOR CHAIRS</b>				
	> TOP NOTCH QUALITY > HIGH BACK WITH HEAD REST BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > IMPORTED BEST QUALITY FAUX LEATHER COMPLETELY UPHOLSTERED . > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT				
A.	EXECUTIVE DIRECTOR 1, 2, 3, 4, 5	5	No.	NTQ	NTQ
<b>29</b>	<b>OCCASSIONAL (CORNER) TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED DESIGN, COLOUR AND FINISH.				
A.	EXECUTIVE DIRECTOR 1, 2, 3, 4, 5 > SIZE: 1'-6" x 1'-6" x 2'-0" (LxWxH)	5	No.	NTQ	NTQ
<b>30</b>	<b>OCCASSIONAL (CORNER) TABLE (FOR VISITOR SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED COLOUR AND FINISH.				
A.	EXECUTIVE DIRECTOR 1, 2, 3, 4, 5 > SIZE: 1'-8" x 1'-8" x 2'-0" (LxWxH)	5	No.	NTQ	NTQ
<b>31</b>	<b>EXECUTIVE BOOK SHELF (ED OFFICE)</b>				
	> OAK PLY WITH SHEESHAM OR EQUIVALENT WOOD VENEER POLISHED FINISH. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING HINGED PANELS WITH GLASS PANES. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	EXECUTIVE DIRECTOR 4, 5 > SIZE: (LxWxH) 12'-6" x 1'-3" x 9'-6".	2	No.	NTQ	NTQ
B.	EXECUTIVE DIRECTOR 2 > SIZE: (LxWxH) 10'-0" x 1'-3" x 9'-6".	1	No.	NTQ	NTQ
C.	EXECUTIVE DIRECTOR 3 > SIZE: (LxWxH) 16'-4" x 1'-3" x 9'-6".	1	No.	NTQ	NTQ
D.	EXECUTIVE DIRECTOR 1 > SIZE: (LxWxH) 10'-0" x 1'-3" x 9'-6".	1	No.	NTQ	NTQ
<b>32</b>	<b>GUEST CHAIRS (EXECUTIVE DIRECTOR)</b>				
	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM: POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY: 18 KG/ CUBIC CM. > BACK FOAM: POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > HAVING ROTATION MECHANISM WITH APPROPRIATE HARDWARE. > BACK FOAM DENSITY: 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON POWDER-COATED METAL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	EXECUTIVE DIRECTOR 1, 2, 3, 4, 5	10	No.	NTQ	NTQ

<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>BOARD SECRETARIAT</b>					
<b>33</b>	<b>CONSOLE TABLE</b>				
	SUPPLYING OF CONSOLE TABLE WITH MARBLE CLADDED UPON MS FRAME FOR BASE FRAME AND TOP. (SILVER TRAVERTINE, BLUEBERRY, RIO BLUE OR EQUIVALENT). APPROVED COLOUR AND FINISH.				
	> SIZE: 4'-0" x 1'-9" x 2'-0" (LxWxH)	1	No.	NTQ	NTQ
<b>34</b>	<b>SOFA FOR 2 (BOARD SECRETARIAT)</b>				
	> SUPPORTED ON POWDER COATED METAL LEGS / WOOD. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	(LxWxH) 5'-9" x 2'-10" x 2'-10"	1	No.	NTQ	NTQ
<b>35</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT)				
A.	> SIZE: 8' x 5' (40 SFT)	1	No.	NTQ	NTQ
<b>36</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH SHEESHAM OR EQUIVALENT WOOD FRAME AND MARBLE TOP OF APPROVED COLOUR AND FINISH. (SILVER TRAVERTINE, BLUEBERRY, RIO BLUE OR EQUIVALENT)				
A.	> SIZE: 4'-0" x 3'-0" x 1'-6" (LxWxH)	1	No.	NTQ	NTQ
<b>37</b>	<b>BOARD SECRETARY DESK</b>				
	> DESK TOP THICKNESS IS 25MM. > MDF WITH WOOD VENEER POLISHED FINISH. > 100mm X 40mm WITH FOOTREST WITH POLISHING AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	> DESK TO SIZE: (LxWxH) 7'-10"x 5'-6"x 2'-6"	1	No.	NTQ	NTQ
<b>38</b>	<b>OCCASSIONAL (CORNER) TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASIONAL TABLE WITH SHEESHAM OR EQUIVALENT FRAME AND TOP OF APPROVED DESIGN, COLOUR AND FINISH.				
A.	> SIZE: 1'-3" x 1'-3" x 2'-0" (LxWxH)	2	No.	NTQ	NTQ
<b>39</b>	<b>TV CONSOLE UNIT</b>				
	SUPPLYING AND FABRICATION OF TV CONSOLE UNIT USING MARBLE CLADDED UPON MDF, WITH LED PELMIT BACK WALL, DRAWERS AND SHELVES AS PER DRAWINGS (SILVER TRAVERTINE, BLUEBERRY, RIO BLUE OR EQUIVALENT)				
A.	> SIZE: 12'-0" x 1'-6" x 1'-0" (LxWxH)	1	No.	NTQ	NTQ
<b>40</b>	<b>GUEST CHAIRS (BOARD SECRETARIAT)</b>				
	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM: POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY: 18 KG/ CUBIC CM. > BACK FOAM: POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > HAVING ROTATION MECHANISM WITH APPROPRIATE HARDWARE. > BACK FOAM DENSITY: 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON POWDER-COATED METAL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> SIZE: 11'-6" x 1'-6" x 1'-0" (LxWxH)	2	No.	NTQ	NTQ

7th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>41</b>	<b>MODERN ARM CHAIR</b>				
A.	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER/ FABRIC UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STELL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.	2	No.	NTQ	NTQ
<b>42</b>	<b>EXECUTIVE BOOK SHELF (BOARD SECRETARIAT)</b>				
	> OAK PLY WITH SHEESHAM OR EQUIVALENT WOOD VENEER POLISHED FINISH. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING HINGED PANELS WITH GLASS PANES. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	> SIZE: (LxWxH) 17'-0" x 1'-3" x 9'-6".	1	No.	NTQ	NTQ
	<b>SMALL WING EXECUTIVE LOUNGE</b>				
<b>43</b>	<b>PANTRY CABINET</b>				
	PROVIDING AND FIXING IN POSITION FLOOR CABINETS & HANGING TYPE CABINETS; MADE OF 20mm SUPER GLOSS LAMINATE (PATEX AND EQUIVALENT) LAMINATE WOOD ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING STRIP LIGHT BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. WITH MARBLE TOP AND BACKSPLASH (RIO BLUE, PANDA WHITE, DIAGNOSE OR EQUIVALENT ) <b>NOTE:</b> CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE. FRONT FACE OF THE CABINET SHALL BE USED FOR BILLING.				
A.	> SIZE: (LxWxH) 14'-6" x 2'-0" x 9'-6".	1	SFT	NTQ	NTQ
<b>44</b>	<b>SOFA FOR 3</b>				
	> SUPPORTED ON POWDER COATED METAL LEGS / WOOD. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	(LxWxH) 7'-3" x 2'-10" x 2'-10"	1	No.	NTQ	NTQ
B.	(LxWxH) 8'-8" x 2'-10" x 2'-10"	1	No.	NTQ	NTQ
<b>45</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT)				
A.	> SIZE: 7' x 11' (54 SFT)	1	No.	NTQ	NTQ
B.	> SIZE: 9' x 9' (54 SFT)	1	No.	NTQ	NTQ

7th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>46</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
A.	SUPPLYING OF COFFEE TABLE WITH MS FRAME AND GLASS TOP OF APPROVED COLOUR AND FINISH. > SIZE: 4'-0" x 3'-6" x 1'-6" (LxWxH)	1	No.	NTQ	NTQ
B.	SUPPLYING OF COFFEE TABLE WITH MS FRAME AND MARBLE PASTED ON ALL SIDES OF APPROVED COLOUR AND FINISH. > SIZE: 4'-9" x 2'-9" x 1'-6" (LxWxH)	1	No.	NTQ	NTQ
<b>47</b>	<b>MODERN LOUNGE CHAIR</b>				
A.	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM: POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY: 18 KG/ CUBIC CM. > BACK FOAM: POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY: 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON POWDER COATED METAL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.	5	No.	NTQ	NTQ
<b>48</b>	<b>OCCASSIONAL TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASIONAL TABLE WITH MS FRAME AND WOOD TOP OF APPROVED STAIN AND POLISH OF APPROVED DESIGN, COLOUR AND FINISH.				
A.	> SIZE: 1'-9" x 1'-6" x 2'-0" (LxWxH)	1	No.	NTQ	NTQ
B.	> SIZE: 1'-7" x 1'-7" x 2'-0" (LxWxH)	1	No.	NTQ	NTQ
C.	> SIZE: 2'-0" x 2'-0" x 2'-0" (LxWxH)	3	No.	NTQ	NTQ
<b>49</b>	<b>PICTURE FRAME</b>				
	PICTURE FRAME WITH OIL / ACRYLIC ON CANVAS WITH APPROVED FRAME MADE OF WOOD / FIBRE, ALONG WITH ALL NECESSARY ACCESSORIES FOR HANGING AND SUSPENSION.				
A.	> SIZE: (LxH) 2'-0" x 3'-0"	3	No.	NTQ	NTQ
	<b>WAITING AREA</b>				
<b>50</b>	<b>PANTRY CABINET</b>				
	PROVIDING AND FIXING IN POSITION FLOOR CABINETS & HANGING TYPE CABINETS; MADE OF 20mm SUPER GLOSS LAMINATE (PATEX AND EQUIVALENT) LAMINATE WOOD ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING STRIP LIGHT BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. WITH MARBLE TOP AND BACKSPLASH (RIO BLUE, PANDA WHITE, DIAGNOSE OR EQUIVALENT ) <b>NOTE:</b> CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE. FRONT FACE OF THE CABINET SHALL BE USED FOR BILLING.				
A.	SIZE 7'-6"x9'-0" (LxH), 2'-0" DEEP	1	SFT	NTQ	NTQ

7th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>51</b>	<b>SOFA FOR 3</b>				
	> SUPPORTED ON METAL LEGS. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK."> SUPPORTED ON POWDER COATED METAL LEGS / WOOD. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT." > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	(LxWxH) 10'-3" x 2'-10" x 2'-10"	1	No.	NTQ	NTQ
<b>52</b>	<b>SOFA FOR 2</b>				
	> SUPPORTED ON POWDER COATED METAL LEGS / WOOD. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	(LxWxH) 5'-9" x 2'-10" x 2'-10"	1	No.	NTQ	NTQ
<b>53</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT)				
A.	> SIZE: 10' x 12' (120 SFT)	1	No.	NTQ	NTQ
<b>54</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH MS FRAME AND MARBLE TOP OF APPROVED COLOUR AND FINISH.				
	> SIZE: 6'-8" x 4'-9" x 1'-6" (LxWxH)	1	No.	NTQ	NTQ
<b>55</b>	<b>PICTURE FRAME</b>				
	PICTURE FRAME WITH OIL / ACRYLIC ON CANVAS WITH APPROVED FRAME MADE OF WOOD / FIBRE, ALONG WITH ALL NECESSARY ACCESSORIES FOR HANGING AND SUSPENSION.				
A.	> SIZE: (LxH) 7'-6" x 5'-0"	1	No.	NTQ	NTQ
<b>56</b>	<b>OCCASSIONAL (CORNER) TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED DESIGN, COLOUR AND FINISH.SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED DESIGN, COLOUR AND FINISH.				
A.	> SIZE: 1'-9" x 1'-9" x 2'-0" (LxWxH)	2	No.	NTQ	NTQ
<b>57</b>	<b>SOFA FOR 1</b>				
	> SUPPORTED ON POWDER COATED METAL LEGS / WOOD. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	(LxWxH) 3'-0" x 2'-10" x 2'-10"	1	No.	NTQ	NTQ



<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>58</b>	<b>CONSOLE TABLE</b>				
	> SUPPORTED ON METAL FRAME > MARBLE TOP PASTED ON MDF FIXED ON METAL FRAME. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> SIZE: 5'-3" x 1'-0" x 2'-6" (LxWxH)	1	No.	NTQ	NTQ
<b>STAFF LARGE WING</b>					
<b>59</b>	<b>FLOOR CABINETS</b>				
	PROVIDING AND FIXING IN POSITION FLOOR CABINETS; MADE OF 20mm THICK COMMERCIAL VEN BOARD PRESSED ON BOTH SIDES WITH TEXTURED APPROPRIATE FORMICA APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING T3 TUBELIGHT TO BE HUNG BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
	<b>A. SIZE 8'-8"x3'-0" (LxH), 2'-2" DEEP (FREE STANDING)</b>	4	No.	NTQ	NTQ
	<b>B. SIZE 4'-0"x2'-6" (LxH), 1'-2" DEEP (ADJACENT TO WORKSTATION)</b>	5	No.	NTQ	NTQ
<b>60</b>	<b>WORKSTATIONS</b>				
	> SET OF FOUR (4) WORKSTATIONS > HAVING A PARTITION WITH FABRIC SOFTBOARD OF NO MORE THAN 1'-4" IN HEIGHT HAVING TWO STUDDED ANCHORS WITH LOCK ON BOTTOM BETWEEN WORKSTATIONS. > DESK TOP THICKNESS IS 25mm, HAVING LIPPING OF MATCHING COLOR. > FINISH: MALAMINE DESKTOP OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SQUARE LEGS (TAPERED) AT 15 DEGREE WITH CABLE MANAGEMENT TRAY 1.2mm POWDER COATED AND OUTLET AT THE CENTRE. WITH EARTH POINT TO BE ATTACHED TO EARTH CABLE > LEG WALL THICKNESS IS 2.0mm POWDER COATED TO COLOUR. > WORKSTATION TO HAVE A LINEAR POWER TRAY UNDERNEATH FOR CABLE DISTRIBUTION ALONG WITH A CUT-OUT ON TOP HAVING TECHNOLOGY BOX AS SPECIFIED IN THE ELECTRICAL COMPONENT OF THE TENDER. > ONE MOBILE DRAWER UNIT INCLUDED 14 INCHES IN WIDTH AS PER INDUSTRY STANDARD. > BEST QUALITY LOCK FOR DRAWERS WITH 3 KEYS INCLUDED. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY THE ARCHITECT.				
	<b>A. SIZE 8'-0"x4'-0" (LxW), 2'-6" HEIGHT</b>	5	No.	NTQ	NTQ

<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>61</b>	<b>PICTURE FRAME</b>				
	PICTURE FRAME WITH OIL / ACRYLIC ON CANVAS WITH APPROVED FRAME MADE OF WOOD / FIBRE, ALONG WITH ALL NECESSARY ACCESSORIES FOR HANGING AND SUSPENSION.				
A.	> SIZE: (LxH) 1'-6" x 2'-0"	1	No.	NTQ	NTQ
B.	> SIZE: (LxH) 2'-3" x 2'-3"	1	No.	NTQ	NTQ
C.	> SIZE: (LxH) 2'-9" x 3'-9"	1	No.	NTQ	NTQ
D.	> SIZE: (LxH) 2'-9" x 3'-0"	3	No.	NTQ	NTQ
E.	> SIZE: (LxH) 2'-6" x 4'-6"	1	No.	NTQ	NTQ
F.	> SIZE: (LxH) 2'-6" x 3'-0"	1	No.	NTQ	NTQ
G.	> SIZE: (LxH) 2'-0" x 3'-0"	1	No.	NTQ	NTQ
H.	> SIZE: (LxH) 3'-0" x 3'-0"	1	No.	NTQ	NTQ
I.	> SIZE: (LxH) 1'-6" x 1'-6"	1	No.	NTQ	NTQ
J.	> SIZE: (LxH) 5'-0" x 1'-6"	1	No.	NTQ	NTQ
K.	> SIZE: (LxH) 4'-6" x 1'-6"	2	No.	NTQ	NTQ
<b>62</b>	<b>OFFICE CHAIR (STAFF)</b>				
	> SHOULDER HEIGHT BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3mm). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > MESH FABRIC. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT	20	No.	NTQ	NTQ
	<b>CHAIRMAN AND VISITING DIRECTOR OFFICE</b>				
<b>63</b>	<b>SOFA FOR 2 (ED OFFICE)</b>				
	> SUPPORTED ON POWDER COATED METAL LEGS / WOOD. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	(LxWxH) 6'-0" x 2'-10" x 2'-10"	2	No.	NTQ	NTQ
<b>64</b>	<b>CHAIRMAN/ VISITING DIRECTOR DESK</b>				
	> DESK TOP THICKNESS IS 25mm. > MDF WITH WOOD VENEER POLISHED FINISH. > 100mm X 40mm TEAK WOOD OR EQUIVALENT FOOTREST WITH POLISHING AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	> DESK TO SIZE: (LxWxH) 7'-10"x 5'-6"x 2'-6"	2	No.	NTQ	NTQ

<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>65</b>	<b>MODERN ARM CHAIR</b>				
A.	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STEEL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.	8	No.	NTQ	NTQ
<b>66</b>	<b>PICTURE FRAME</b>				
	PICTURE FRAME WITH OIL / ACRYLIC ON CANVAS WITH APPROVED FRAME MADE OF WOOD / FIBRE, ALONG WITH ALL NECESSARY ACCESSORIES FOR HANGING AND SUSPENSION.				
A.	> SIZE: (LxH) 6'-6" x 4'-0"	1	No.	NTQ	NTQ
<b>67</b>	<b>OCCASSIONAL (CORNER) TABLE (FOR VISITOR SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED COLOUR AND FINISH.				
A.	> SIZE: 1'-8" x 1'-8" x 2'-0" (LxWxH)	2	No.	NTQ	NTQ
<b>68</b>	<b>GUEST CHAIRS (BOARD SECRETARIAT)</b>				
A.	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM: POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY: 18 KG/ CUBIC CM. > BACK FOAM: POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > HAVING ROTATION MECHANISM WITH APPROPRIATE HARDWARE. > BACK FOAM DENSITY: 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON POWDER-COATED METAL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	> SIZE: 11'-6" x 1'-6" x 1'-0" (LxWxH)	4	No.	NTQ	NTQ
<b>69</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH MS FRAME AND MARBLE TOP OF APPROVED COLOUR AND FINISH. (SILVER TRAVERTINE, BLUEBERRY, RIO BLUE OR EQUIVALENT)				
A.	> SIZE: 3'-6" x 2'-6" x 1'-6" (LxWxH)	2	No.	NTQ	NTQ
<b>70</b>	<b>OCCASSIONAL TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND GLASS TOP OF APPROVED DESIGN, COLOUR AND FINISH.				
	> SIZE: 1'-7" x 1'-7" x 2'-0" (LxWxH)	4	No.	NTQ	NTQ
<b>71</b>	<b>EXECUTIVE BOOKSHELF (VD &amp; CHAIRMAN)</b>				
	> OAK PLY WITH SHEESHAM OR EQUIVALENT WOOD VENEER POLISHED FINISH. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING HINGED PANELS WITH GLASS PANES. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	> SIZE: (LxWxH) 16'-9" x 1'-3" x 9'-6".	1	No.	NTQ	NTQ
<b>72</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT)				
A.	> SIZE: 10' x 7' (170 SFT)	1	No.	NTQ	NTQ

7th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>BOARD ROOM</b>					
<b>73</b>	<b>CONFERENCE TABLE</b>				
	<ul style="list-style-type: none"> <li>&gt; FOR 26 PERSONS.</li> <li>&gt; OAK WOOD TOP WITH WOOD ROUND MOULDING FOR TABLE EDGES AND SUPPORTED ON DECO PAINTED MS PLATFORM MADE OF 10 SWG MS SHEET METAL.</li> <li>&gt; HAVING 10" WIDE 1/2" THICK MARBLE APRON IN THE MIDDLE (RIO BLUE OR EQUIVALENT). LENGTH OF THE MARBLE TO BE 80% OF THE TOTAL LENGTH. BUTT JOINTED TOGETHER AND 1/4" THICK GROOVE ON THE EDGES BETWEEN MARBLE AND WOODEN TOP.</li> <li>&gt; THE TOP APRON MUST HAVE PROVISION FOR CABLE MANAGEMENT AND POP-UP MULTI SOCKET BOARD.</li> <li>&gt; HAVING SPINE OR APPROPRIATE RISER FOR CABLES FROM THE FLOOR AT MULTIPLE POINTS.</li> <li>&gt; ALL INTERNAL SURFACE COVERED WITH 0.8mm THICK LAMINATE</li> <li>&gt; ALL EXTERNAL SURFACES COVERED WITH 1.0mm THICK LAMINATE OF APPROVED COLOUR.</li> <li>&gt; RATES TO INCLUDE ALL NECESSARY ACCESSORIES.</li> <li>&gt; INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>				
<b>A.</b>	> SIZE: (LxWxH) 33'-0" x 10'-0" x 2'-6"	1	No.	NTQ	NTQ
<b>74</b>	<b>PICTURE FRAME</b>				
	PICTURE FRAME WITH OIL / ACRYLIC ON CANVAS WITH APPROVED FRAME MADE OF WOOD / FIBRE, ALONG WITH ALL NECESSARY ACCESSORIES FOR HANGING AND SUSPENSION.				
<b>A.</b>	> SIZE: (LxH) 4'-0" x 4'-0"	1	No.	NTQ	NTQ
<b>75</b>	<b>MEETING CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; SHOULDER HEIGHT BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3mm).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	26	No.	NTQ	NTQ

<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>76</b>	<b>FLOOR CABINETS</b>				
	PROVIDING AND FIXING IN POSITION FLOOR STANDING CABINETS; MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH MELAMINE DESKTOP OF ARCHITECT'S CHOICE OF COLOUR & FINISH, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING T3 TUBELIGHT TO BE HUNG BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
	<b>A.</b> SIZE 5'-3"x1'-6" (LxH), 3'-0" DEEP	2	No.	NTQ	NTQ
	<b>PANTRY</b>				
<b>77</b>	<b>PANTRY CABINET</b>				
	PROVIDING AND FIXING IN POSITION FLOOR CABINETS & HANGING TYPE CABINETS; MADE OF 20mm OAK PLY HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING STRIP LIGHT BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE. FRONT FACE OF THE CABINET SHALL BE USED FOR BILLING.				
	<b>A.</b> SIZE 7'-6"x9'-0" (LxH), 2'-0" DEEP	1	SFT	NTQ	NTQ
	<b>B.</b> SIZE 16'-0"x9'-0" (LxH), 2'-0" DEEP	1	SFT	NTQ	NTQ
	<b>EXECUTIVE MEETING ROOM</b>				
<b>78</b>	<b>CONFERENCE TABLE</b>				
	> FOR 16 PERSONS. > OAK WOOD TOP WITH WOOD ROUND MOULDING FOR TABLE EDGES AND SUPPORTED ON DECO PAINTED MS PLATFORM MADE OF 10 SWG MS SHEET METAL. > HAVING 10" WIDE 1/2" THICK MARBLE APRON IN THE MIDDLE (RIO BLUE OR EQUIVALENT). LENGTH OF THE MARBLE TO BE 80% OF THE TOTAL LENGTH. BUTT JOINTED TOGETHER AND 1/4" THICK GROOVE ON THE EDGES BETWEEN MARBLE AND WOODEN TOP. > THE TOP APRON MUST HAVE PROVISION FOR CABLE MANAGEMENT AND POP-UP MULTI SOCKET BOARD. > HAVING SPINE OR APPROPRIATE RISER FOR CABLES FROM THE FLOOR AT MULTIPLE POINTS. > ALL INTERNAL SURFACE COVERED WITH 0.8mm THICK LAMINATE > ALL EXTERNAL SURFACES COVERED WITH 1.0mm THICK LAMINATE OF APPROVED COLOUR. > RATES TO INCLUDE ALL NECESSARY ACCESSORIES. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	<b>A.</b> > SIZE: (LxWxH) 19'-0" x 5'-0" x 2'-6".	1	No.	NTQ	NTQ

<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>79</b>	<b>TV CONSOLE UNIT</b>				
	SUPPLYING AND FABRICATION OF TV CONSOLE UNIT USING OAK PLY WITH WOOD VENEER POLISHED FINISH WITH LED PELMIT BACK WALL, DRAWERS AND SHELVES AS PER DRAWINGS.				
<b>A.</b>	> SIZE: 16'-0" x 1'-6" x 1'-0" (LxWxH)	2	No.	NTQ	NTQ
<b>80</b>	<b>MEETING CHAIRS</b>				
	> SHOULDER HEIGHT BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3mm). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > MESH FABRIC. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT	26	No.	NTQ	NTQ
<b>RETIRING ROOM</b>					
<b>81</b>	<b>SOFA FOR 1</b>				
	> SUPPORTED ON POWDER COATED METAL LEGS / WOOD. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	(LxWxH) 3'-0" x 2'-10" x 2'-10"	2	No.	NTQ	NTQ
<b>82</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH MS FRAME AND MARBLE TOP OF APPROVED COLOUR AND FINISH.				
	> SIZE: 6'-8" x 4'-9" x 1'-6" (LxWxH)	1	No.	NTQ	NTQ
<b>83</b>	<b>OCCASSIONAL TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASIONAL TABLE WITH WOOD FRAME AND TOP OF APPROVED DESIGN, COLOUR AND FINISH.				
	> SIZE: 1'-7" x 1'-7" x 2'-0" (LxWxH)	2	No.	NTQ	NTQ
<b>84</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH MS FRAME AND GLASS TOP OF APPROVED COLOUR AND FINISH.				
	> SIZE: 5'-0" x 3'-6" x 1'-6" (LxWxH)	1	No.	NTQ	NTQ
<b>85</b>	<b>CURVED SOFA</b>				
	> SUPPORTED ON POWDER COATED METAL LEGS / WOOD. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	(LxWxH) 14'-6" x 7'-6" x 2'-10"	1	No.	NTQ	NTQ
<b>86</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT)				
<b>A.</b>	> SIZE: 11' x 11' (121 SFT)	1	No.	NTQ	NTQ

<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>RECEPTION</b>					
<b>87</b>	<b>RECEPTION DESK</b>				
	PROVIDING AND FIXING IN POSITION RECEPTION TABLE; MADE OF 20mm OAK PLY HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING T3 TUBELIGHT TO BE HUNG BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE.				
<b>A.</b>	> SIZE: 11' x 3' (121 SFT)	1	No.	NTQ	NTQ
<b>CHAIRMAN SECRETARIAT</b>					
<b>88</b>	<b>WORKSTATIONS</b>				
	>HAVING A PARTITION WITH FABRIC SOFTBOARD OF NO MORE THAN 1'-4" IN HEIGHT HAVING TWO STUDDED ANCHORS WITH LOCK ON BOTTOM BETWEEN WORKSTATIONS. > DESK TOP THICKNESS IS 25mm, HAVING LIPPING OF MATCHING COLOR. > FINISH: MALAMINE DESKTOP OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SQUARE LEGS (TAPPERED) AT 15 DEGREE WITH CABLE MANAGEMENT TRAY 1.2mm POWDER COATED AND OUTLET AT THE CENTRE.WITH EARTH POINT TO BE ATTACHED TO EARTH CABLE > LEG WALL THICKNESS IS 2.0mm POWDER COATED TO COLOUR. > WORKSTATION TO HAVE A LINEAR POWER TRAY UNDERNEATH FOR CABLE DISTRIBUTION ALONG WITH A CUT-OUT ON TOP HAVING TECHNOLOGY BOX AS SPECIFIED IN THE ELECTRICAL COMPONENT OF THE TENDER. > ONE MOBILE DRAWER UNIT INCLUDED 14 INCHES IN WIDTH AS PER INDUSTRY STANDARD. > BEST QUALITY LOCK FOR DRAWERS WITH 3 KEYS INCLUDED. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY THE ARCHITECT.				
<b>A.</b>	SIZE 4'-6"x2'-0" (LxW), 2'-6" HEIGHT	4	No.	NTQ	NTQ
<b>89</b>	<b>WALL HANGING BOOK CASE (CHAIRMAN SECRETARIAT)</b>				
	> MDF WITH WOOD VENEER POLISHED FINISH. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	> SIZE: (LxWxH) 4'-0" x 1'-0" x 2'-6".	1	No.	NTQ	NTQ
<b>90</b>	<b>OFFICE CHAIR (STAFF)</b>				
	> SHOULDER HEIGHT BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3mm). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > MESH FABRIC. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT.	4	No.	NTQ	NTQ

<b>7th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>CEO PANTRY</b>					
<b>91</b>	<b>PANTRY CABINET</b>				
	PROVIDING AND FIXING IN POSITION FLOOR CABINETS & HANGING TYPE CABINETS; MADE OF 20mm THICK COMMERCIAL VEN BOARD HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING T3 TUBELIGHT TO BE HUNG BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE. FRONT FACE OF THE CABINET SHALL BE USED FOR BILLING.				
<b>A.</b>	SIZE 7'-6"x9'-0" (LxH), 2'-0" DEEP	1	SFT	NTQ	NTQ
<b>MISCELLANEOUS</b>					
<b>92</b>	<b>PLANTER</b>				
	P/F OF CUSTOMIZED PLANTER MADE OF CORIAN / PORCELAIN/ CLAY / WOOD OR ANY OTHER PRESCRIBED MATERIAL AND DESIGN. a. <b>NOTE:</b> THE CONTRACTOR SHALL MAKE AND APPROVE THE SAMPLE BEFORE EXECUTION. AVERAGE SIZE: 1'-3"x1'X3"x 1'-3" (LxWxH)	35	No.	NTQ	NTQ
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
<b>93</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB	NTQ	NTQ
<b>94</b>	<b>SHOP DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS OF EVERY FURNITURE ITEM WHICH WILL BE FABRICATED / INSTALLED ON SITE.	1	JOB	NTQ	NTQ
<b>COST OF FURNITURE SEVENTH FLOOR</b>					<b>NTQ</b>



**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**7th FLOOR**  
**ELECTRICAL WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**7th FLOOR - ELECTRICAL WORKS**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
	<b>SECTION-A MAIN / SUB-MAIN LV PANELS &amp; DISTRIBUTION BOARDS</b>				
	<p><b>Supply, testing &amp; commissioning</b> of following <b>Distribution Boards</b> as shown on drawing made with <b>14 SWG sheet steel housing</b> including all installation accessories such as Rawal bolt etc. Complete in all respects.</p> <p><b>Note: (Refer Single Line Diagram)</b></p> <ol style="list-style-type: none"> <li>All the Panels / DBs should be front accessible and maintainable.</li> <li>Cost of Lighting Control Relays &amp; Power Supplies should be Included in Distribution Boards .</li> <li>The transportation and placement of DBs upto site and respective locations is also included in the work scope, complete in all respects including leveling, grouting etc.</li> <li>Laser engraved tags required as mention in SLDs</li> <li>Space for circuit tagging required with permanent installation on protective sheet via rivets</li> <li>20% space required in Panels / DBs for future provision</li> <li>Tin platted Imported 99.99% pure Tinned Cu bus bar with heat shrink color coded sleeves to be used.</li> <li>Hinged protective metallic door required with knob/handle.</li> <li>Braided Door earth required.</li> <li>Lockable handle required for main door.</li> <li>As-built drawing pocket.</li> <li>Cable hanging arrangement.</li> <li>MIMIC Diagram is required on doors of all the Panels.</li> <li>Panel Lights and Exhaust Fans with Door Limit Switch &amp; Temperature Sensors are required in all the floor standing Panels.</li> <li>All the Floor Standing Panels shall be Type-Tested Type.</li> <li>MOA to be provided in the ATS of LV Panels.</li> <li>Anti-Condensation Heater to be provided in all the Floor Standing Panels.</li> <li>Bypass Option in-case of synch panel Failure.</li> </ol>				
1	DB-7F	1	No.		
2	LPDB-7F	1	No.		
3	UDB-7F	1	No.		
4	Breaker Box with 125A TP MCCB For HVAC Large Wing Area	1	No.		
5	Breaker Box with 100A TP MCCB For HVAC Small Wing Area	1	No.		
	<p><b>Note:</b></p> <ol style="list-style-type: none"> <li><b>Supply &amp; Installation</b> of MCCs required for Fire Fighting, HVAC &amp; Plumbing Services shall be in the scope of Mechanical Works.</li> </ol>				
	<b>SECTION-F MAIN / SUBMAIN CABLES</b>				
	<p><b>Supply, installation, testing, commissioning and termination</b> of following <b>8.7/15kV, CU/XLPE/PVC (MV Cables)</b> in already installed Cable trench / Cable ladder / Cable tray / Duct Bank including all accessories. Complete in all respects.</p>				
6	<p><b>From Tap Off Box to DB-7F</b> 4C-120 Sqmm Cu/XLPE/PVC + ECC 1C-70 Sqmm Cu/PVC</p>	5	Rm.		
7	<p><b>From DB-7F to LPDB-7F (Large Wing)</b> 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC</p>	5	Rm.		
8	<p><b>From DB-7F to LPDB-7F (Small Wing)</b> 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC</p>	5	Rm.		
9	<p><b>From DB-7F to Breaker Box For HVAC 7F1 (Large Wing)</b> 4C-50 Sqmm Cu/PVC/PVC + ECC 1C-25 Sqmm Cu/PVC</p>	75	Rm.		
10	<p><b>From DB-7F to Breaker Box For HVAC 7F2 (Small Wing)</b> 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC</p>	45	Rm.		
	<b>WIRING</b>				

7th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>CIRCUIT / POINT WIRING &amp; SWITCH ACCESSORIES</b>				
11	PROVIDING, FIXING & LAYING OF WIRING FOR LIGHTS AND EXHAUST/ FALSE CEILING/ CEILING FANS, WITH COMPLETE INSTALLATION ON WHATEVER SURFACE; THE PRICE IS TO INCLUDE ANY FABRICATION/ BOXING MADE OF ANODIZED GI FRAME OR WOODEN FRAME AS ADVISED BY THE ARCHITECT ON-SITE IF NEEDED TO BE MOUNTED ON THE CEILING DIRECTLY. ALL MOUNTINGS AND VERTICAL SUSPENSIONS WILL BE DONE USING FISCHER OR EQUIVALENT ANCHORS WITH M10 THREADED GI RODS. IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS, AND OTHER ACCESSORIES WITH 3X2.5 mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST/NEWAGE WITH 16 SWG SHEET STEEL SWITCH BOXES DULY APPLIED WITH RED OXIDE BASE PAINT SPRAY PAINTED AS REQUIRED AND THE BOX TO BE CONCEALED AND INCLUDING P/F OF 10A CLIPSAL/ CLOPAL/ SIEMENS MAKE SWITCH WITH CLIPSAL/ CLOPAL/ SIEMENS COVER GANG PLATE ETC. AND CONCEALED WITH CEILING ROSE COMPLETE IN ALL RESPECT AS REQUIRED.	120	No.		
12	SAME AS (A) BUT POINT TO POINT WIRING	450	No.		
13	PROVIDING, FIXING & LAYING OF WIRING FOR <b>EMERGENCY LIGHTS</b> , WITH COMPLETE INSTALLATION ON WHATEVER SURFACE; THE PRICE IS TO INCLUDE ANY FABRICATION/ BOXING MADE OF ANODIZED GI FRAME OR WOODEN FRAME AS ADVISED BY THE ARCHITECT ON-SITE IF NEEDED TO BE MOUNTED ON THE CEILING DIRECTLY. ALL MOUNTINGS AND VERTICAL SUSPENSIONS WILL BE DONE USING FISCHER OR EQUIVALENT ANCHORS WITH M10 THREADED GI RODS. IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. <b>INCLUDING PULL BOXES</b> , SIZE: 8"x8". COMPLETE WITH BENDS, SOCKETS, AND OTHER ACCESSORIES WITH 3X2.5 mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST/NEWAGE WITH 16 SWG SHEET STEEL SWITCH BOXES DULY APPLIED WITH RED OXIDE BASE PAINT SPRAY PAINTED AS REQUIRED AND THE BOX TO BE CONCEALED: INCLUDING P/F OF 10A/16A CLIPSAL/ CLOPAL/ SIEMENS MAKE SWITCH WITH CLIPSAL/ CLOPAL/ SIEMENS COVER GANG PLATE ETC. AND CONCEALED WITH CEILING ROSE COMPLETE IN ALL RESPECT AS REQUIRED.	6	No.		
14	PROVIDING, FIXING & LAYING OF WIRING POWER CIRCUITS <b>FROM DB TO TECHNOLOGY BOX / BOARD</b> WITH 2 x 4 SQ. mm + ECC 1X2.5 SQ. mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED. INCLUSIVE OF FLOOR CUTTING AND CREATION OF FLOOR CHANNEL WITH EMBEDDED CONDUIT PIPES <b>NOTE: ALL DATA CABLES SHALL HAVE SEPARATE CONDUITS FROM POWER LINES TO AVOID ELECTROMAGNETIC FIELD (EMF) INTERFERENCE AND ATTENUATION.</b>	80	No.		
15	PROVIDING, FIXING & LAYING OF WIRING POWER CIRCUITS <b>FROM DB TO SWITCHBOARD (S) (INDUSTRIAL SOCKETS)</b> WITH 2 X 4 SQ. mm + ECC 1X2.5 SQ. mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 MM DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED). <b>INCLUDING I/O FACE PLATE</b> . COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED.	66	No.		

7th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
16	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF TELEPHONE RJ45 CLIPSAL / 3M CABLE IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED I/O FACE PLATE HAVING 01 No. RJ-45/RJ11 CONNECTORS, CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS.	10	No.		
17	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN WALLS OR SLABS OF CONCRETE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK.				
A.	4" DIA	15	No.		
B.	6" DIA	5	No.		
C.	8" DIA	1	No.		
	<b>SWITCH SOCKET OUTLET (SSO)</b>				
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
18.	SUPPLY & INSTALLATION OF THE FOLLOWING SWITCH SOCKET OUTLETS (SSO) OF MAKE CLOPAL, SIEMENS, CLIPSAL, AND ORANGE, WITH 16 SWG MS BACK BOXES MADE OF 1.2 MM POWER COATED SHEET STEEL WITH EARTH TERMINALS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 MM DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED				
A.	13AMP UNIVERSAL/INTERNATIONAL 3 PIN SSO PVC INSULATED WIRE	44	No.		
B.	15AMP UNIVERSAL/INTERNATIONAL 3PIN SSO (INDUSTRIAL SOCKETS)	22	No.		
	<b>GANG SWITCHES</b>				
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
19.	SUPPLY AND INSTALLATION OF FOLLOWING 10 AMPS, ONE-WAY <b>GANG TYPE SWITCHES</b> OF MAKE CLOPAL, SIEMENS, CLIPSAL OR EQUIVALENT, INCLUDING BACK BOXES, RECESSED ON WALL OR COLUMN AS PER DESIGN DRAWINGS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, COMPLETE WITH ALL ACCESSORIES & CONNECTIONS IN ALL RESPECTS.				
A.	3 GANG SWITCHES	1	No.		
B.	4 GANG SWITCHES	120	No.		

7th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>TECHNOLOGY BOX / BOARD</b>					
<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.					
20.	SUPPLY AND INSTALLATION OF TECHNOLOGY BOX / BOARD OF MAKE CLOPAL, SIEMENS, CLIPSAL OR EQUIVALENT, INCLUDING WATERPROOF BACK BOXES, WATERPROOF HOUSING WITH LID AND POWER SWITCH, FIXED ON A WORKSTATION, GYPSUM OR ANY OTHER SURFACE WALL AS PER DESIGN DRAWINGS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, INCLUDING CABLE MANAGEMENT VIA SQUARE MATCHING PIPE OF 18 SWG EARTHED OR CABLE MANAGEMENT SLEEVES OF BEST QUALITY AS PER APPROVAL OF TECHNICAL SPECIFICATIONS AND SAMPLES BY THE ARCHITECT ON SITE. ALL CABLES ARE TO BE TAGGED VISIBLY END TO END. APPROPRIATE DATA/ POWER CABLES/ WIRES WILL RUN THROUGH APPROPRIATE CONDUITS INSIDE THE ALUMINIUM CHANNEL. COMPLETE WITH ALL ACCESSORIES & CONNECTIONS IN ALL RESPECTS HAVING THE FOLLOWING SWITCH AND SOCKETS.				
<b>A.</b>	<b>TECHNOLOGY BOX A (FOR GENERAL WORKSTATIONS)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)	40	No.		
<b>B.</b>	<b>TECHNOLOGY BOX B (FOR EXECUTIVE DESK)</b> A. 3 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 3 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)	10	No.		
<b>C.</b>	<b>TECHNOLOGY BOX C (EXECUTIVE TV / MEETING TV)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)	15	No.		
<b>D.</b>	<b>TECHNOLOGY BOX D (ATTENDANCE MACHINE)</b> A. 0 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 1 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)	4	No.		
<b>LIGHT FITTINGS AND FIXTURES</b>					
<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.					
21.	<b>LED CEILING RECESSED DOWN LIGHT</b>				
	P/F, CONNECTING, TESTING & COMMISSIONING OF OPPL/ SOGO/ PHILIPS/ BRITLITE/ ORANGE <b>RECESSED MOUNTED DOWNLIGHT</b> HAVING APPROVED COLOUR TEMPERATURE with PF >0.90 AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, COMPLETE WITH MAKING A HOLE AS MAY BE REQUIRED AND TO FINISH THE SURFACE SUITABLY AFTER INSTALLATION AND WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS. <b>NOTE:</b> ALL SAMPLES/TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO THE EXECUTION OF WORKS.				
<b>A.</b>	6W TO 9W	65	No.		
<b>B.</b>	10W TO 12W	170	No.		
<b>C.</b>	13W TO 15W	160	No.		

7th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>22.</b>	<b>CEILING RECESSED LINEAR LIGHT MAGNETIC TRACK</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 1 METER LONG CEILING RECESSED LINEAR MAGNETIC TRACK LIGHT CONNECTED TO MAKE TRACKS OF SUITABLE DIMENSIONS WITH COMPLETE ACCESSORIES AND JOINERIES SUCH AS POWER ADPATER 200 WATTS, CONTINUITY TRACK TO TRACK CONNECTOR. RECESSED IN FALSE CEILING USING THREADED RODS AS ANCHORS. EACH TRACK TO HAVE ATLEAST 4 LIGHTS HAVING 12 LED POINTS RATED AT 12 WATTS EACH MAGENTIC LIGHT WITH REFLECTORS. OF ARCHITECTS CHOICE AND APPROVAL. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	BOARD ROOM	12	No.		
<b>B.</b>	EXECUTIVE MEETING ROOM	12	No.		
<b>C.</b>	SMALL WING HALL WAY	14	No.		
<b>D.</b>	AUDITORIUM	15	No.		
<b>23.</b>	<b>LINEAR TRACK LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 3'-0" LINEAR TRACK LIGHT. HAVING 2 LIGHTS PER FEET 6 WATTS LED. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	LIFT LOBBY	20	No.		
<b>24.</b>	<b>WALL SCONCE DOWNLIGHT (STAIRS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF WALL SCONE DOWNLIGHT APPROX 15 WATT. OF APPROVED DESIGN. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	LIFT LOBBY	10	No.		
<b>25.</b>	<b>HANGING LIGHT LINEAR L1 (WORKSTATIONS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 5'-3" LONG 30WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT WITH • DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	14	No.		

7th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>26.</b>	<b>HANGING LIGHT LINEAR L2</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 3'-0" LONG 20 WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT.. WITH LED LIGHT DRIVER. DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT\ NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	2	No.		
<b>27.</b>	<b>HANGING LIGHT LINEAR L3 (CHIEF DESK &amp; MEETING ROOM)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 5'-6" LONG 30 WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT. DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	9	No.		
<b>28.</b>	<b>CHANDELIER LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING CHANDELIER LIGHT. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	FOR EXECUTIVE LOUNGE (CLUSTER OF 3)	1	No.		
<b>B.</b>	FOR EXECUTIVE LOUNGE (INVERTED BOWL)	2	No.		
<b>C.</b>	FOR WAITING ROOM (CLUSTER OF 4) (BAMBOO CANOPIES)	1	No.		
<b>D.</b>	RETIRING ROOM (CLUSTER OF 4) (INVERTED BOWL)	1	No.		
<b>E.</b>	ELEVATOR LOBBY (CLUSTER OF 350 PIECES OF GLASS SUSPENDE USING FISH WIRES TO MAKE A CHANDELIER IN CONTINUITY CUSTOMIZED TO CEILING HEIGHT AND HAVING SELECTED COLOR. 9'6" by 2'6" HAVING SS BASE PLATE ON WHICH THE GLASS SHALL BE SUSPENDE AS EQUIDISTANT ENTITIES. ALL ANCHORS SUPPORTS TO BE INCLUSIVE OF COST	1	No.		
<b>29.</b>	<b>FLOOR STANDING LAMP</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING FLOOR STANDING LAMP. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	FOR CEO ROOM	1	No.		
<b>B.</b>	FOR EXECUTIVE DIRECTOR'S ROOM	1	No.		
<b>C.</b>	FOR BOARD SECRETARY OFFICE	1	No.		
<b>D.</b>	FOR WAITING ROOM	1	No.		
<b>E.</b>	CHAIRMAN OFFICE	1	No.		

7th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>30.</b>	<b>WALL / MIRROR LIGHTS</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING WALL / MIRROR LIGHTS. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	EXECUTIVE TOILET VANITY (PAIR OF 2)	10	No.		
<b>B.</b>	CEO TOILET VANITY (PAIR OF 2)	2	No.		
<b>C.</b>	VISITING DIRECTOR TOILET VANITY (PAIR OF 2)	2	No.		
<b>D.</b>	CHAIRMAN TOILET VANITY (PAIR OF 2)	2	No.		
<b>31.</b>	<b>EMERGENCY LIGHT</b>				
	P/F OF <b>EMERGENCY LIGHT</b> OF MAKE "OPPLE/ SOGO/ ORIENT/ OR PHILIPS" BRITLITE/ 2 X 8W FLUORESCENT LAMPS HAVING COLOUR TEMPERATURE 3500 K WITH BATTERY CHARGER. CONTRACTOR TO ENSURE THE PERFECT SOLUTION FOR HANGING, AND FIXING ON THE WALL ALONG WITH A POWER CABLE AND PLUG FOR CONNECTION. CONTRACTOR TO ENSURE LIVE WIRING IS TO BE PROVIDED ALONG WITH MALE/ FEMALE CONNECTION SECURED & TIED AWAY.				
<b>A.</b>	CEILING / WALL MOUNTED	30	No.		
<b>32</b>	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE LIGHTING SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS.	1	JOB		
<b>APPLIANCES</b>					
<b>33.</b>	<b>FALSE CEILING FAN</b>				
	PROVIDING, INSTALLING, TESTING AND COMMISSIONING OF FALSE CEILING FAN 14" IN 2'X2' SQUARE SIZE OF MAKE "VOLDAM OR EQUIVALENT" WITH REMOTE CONTROL IMPORTED COMPLETE WITH CONNECTIONS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT. NOTE: ALL ELECTRICAL WIRING, SWITCHES AND HOISTING OF REMOTE CONTROLLER ON WALLS TO BE INCLUDED IN THE ITEM.	55	No.		
<b>34.</b>	<b>LED MONITOR</b>				
	SUPPLYING, FIXING, INSTALLATION & COMMISSIONING OF LED MONITOR OF MAKE SAMSUNG, L.G., SONY OR EQUIVALENT WITH , HDMI PORTS COAXIAL PORT, AUDIO VIDEO PORT, VGA PORT VIDEO INPUT PORT. WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT/ ENGINEER. NOTE: > EASYLINK (HDMI-CEC) > SMARTVIEW > WIFI DIRECT > CONNECTIVITY PORTS: HDMI PORTS 4(SIDE) USB SUPPORTS AUDIO, VIDEO, IMAGE RF INPUT ANALOG COAXIAL PORTS 1(REAR) COMPOSITE INPUT AUDIO VIDEO CABLE PORTS 1(REAR) USB PORTS 3 DIGITAL OPTICAL AUDIO OUTPUT PORTS 1 > VENDORS OFFERING LOCAL AFTER SALE SERVICES SHALL BE PREFERRED.				
<b>A.</b>	55"	8	No.		
<b>B.</b>	65"	3	No.		
<b>C.</b>	HDMI CABLE 5 METER (SONY, UGREEN OR EQUIVALENT)	12	No.		
<b>35.</b>	<b>WATER DISPENSER</b>				
	SUPPLY AND INSTALLATION OF WATER DISPENSER OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT)	4	No.		



7th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>36.</b>	<b>STAINLESS STEEL HOOD (KITCHEN)</b>				
	SUPPLY AND INSTALLATION OF S.S. HOOD OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).	2	No.		
<b>37.</b>	<b>MICROWAVE OWEN</b>				
	SUPPLY AND INSTALLATION OF MICROWAVE OWEN OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).				
<b>A.</b>	IN-BUILT INTO CABINET	1	No.		
<b>B.</b>	NORMAL	2	No.		
<b>38.</b>	<b>REFRIGERATOR</b>				
	SUPPLY AND INSTALLATION OF REFRIGERATOR OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).	2	No.		
<b>39.</b>	<b>EXHAUST FAN (WITH FALSE CELING PIPE )</b>				
	PROVIDING, INSTALLING, TESTING AND COMMISSIONING OF 6" DIA INLINE FAN OF MAKE "VOLDAM OR EQUIVALENT" WITH CENTRIFUGAL BLOWER AND MOTOR ENCASED IN SHEET METAL CASING, AS PER SPECIFICATIONS. THE MOTOR SHALL BE SUITABLE FOR 220 ± 6% V, 50 HZ AC SUPPLY. THE PRICE SHALL INCLUDE FAN SPEED REGULATOR AND COWL WITH BIRD SCREEN. CAPACITY 3600 CMH AT 15 MM STATIC PRESSURES (FOR PNEUMATIC TEST SCREEN OF WORKSHOP OFFICES BUILDING).	13	No.		
<b>40.</b>	<b>HAND DRYER</b>				
	P/F OF AUTOMATIC HAND DRYER OF BRAND SIEMENS OR EQUIVALENT COMPLETE IN ALL RESPECTS. <b>NOTE:</b> TECHNICAL SPECIFICATION TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCUREMENT.	8	No.		
	<b>TELEPHONES</b>				
	<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
<b>41.</b>	<b>TELEPHONE 15 PAIR CABLE</b>				
	SOLID ANNEALED COPPER WIRE, PLAIN OR TINNED ACCORDING TO IEC 60228 CLASS 1, INSULATED WITH PVC (POLYVINYL CHLORIDE) RATED 70°C, TWO CORES ARE TWISTED TO FORM A PAIR, PAIRS ASSEMBLED TOGETHER DEPENDING ON THE CABLE CONSTRUCTION, FOR CABLES UP TO <b>15 PAIRS</b> , PAIRS ARE ASSEMBLED TOGETHER DIRECTLY IN CONCENTRIC LAYERS, ALL PAIRS ARE IDENTIFIED WITH IDENTIFICATION TAPES, OUTER SHEATH IS A FLAME RETARDANT POLYVINYL CHLORIDE 70°C, GRAY COLOR.	40	METER		
<b>42.</b>	<b>JUNCTION BOX</b>				
	PROVIDING AND FIXING OF TELEPHONE JUNCTION HAVING CONNECTION OF NOT LESS THAN 15 WIRES, WALL MOUNTED.	1	No.		
<b>43</b>	P/L OF <b>TELEPHONE WIRING</b> IN PVC CONDUIT GALCO 32MM DIA 10 PAIR TELEPHONE CABLE CLIPSAL MAKE FROM MDF PANEL TO PTCL CABINET AND PABX. COMPLETE WITH 12SWG COPPER ECC AND CONNECTIONS AT TERMINAL BOXES COMPLETE IN ALL RESPECTS AS REQUIRED AT SITE.	470	METER		

7th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
44.	<b>TELEPHONE SETS</b>				
B.	P/F, CONNECTING, TESTING & COMMISSIONING OF TELEPHONE SETS OF SPECIFIED REQUIREMENTS. <b>AWAYA OR EQUIVALENT IP TELEPHONE WITH DIRECT LINE INPUT</b> ; WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS. <b>NOTE: ALL SAMPLES/ TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO THE EXECUTION OF WORKS.</b>				
45	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF NETWORKING CABLE <b>CAT 6 CLIPSAL / 3M CABLE IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED CAT6 CONNECTORS, INCLUSIVE OF IO SWITCH PLATE HAVING CAT 6 INTERFACE CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS.</b> <b>NOTE: ALL DATA CABLES SHALL HAVE SEPARATE CONDUITS FROM POWER LINES TO AVOID ELECTROMAGNETIC FIELD (EMF) INTERFERENCE AND ATTENUATION.</b>	50	No.		
50.	SPF FIBRE OPTIC CONVERTER	3	No.		
51.	FIBRE OPTIC CABLE (FROM DISTRIBUTOR TO FLOOR SWITCH)	150	METER		

7th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>SECURITY SYSTEM</b>				
	ALL NETWORK ACCESSORIES ARE TO BE A PART OF THIS ITEM, INCLUDING RACKS, MOUNTING SCREWS, RAWL BOLTS, ANCHORS, MOUNTING BRACKETS AND ETC.				
54	<b>BIOMETRIC ATTENDANCE MACHINE / CCTV CAMERA</b> SUPPLY, INSTALLATION, CONFIGURATION, TESTING AND COMMISSIONING OF BIOMETRIC (FINGERPRINT CUM CARD, FACIAL ID) BASED TIME ATTENDANCE & ACCESS CONTROL MACHINES INCLUDING RELATED SOFTWARE. > BIOMETRIC/ CARD ENROLLMENT/ FACIAL ID- RFID TAGS OF 100 PERSONS (INCLUDING COLLECTION, ENTRY AND VALIDATION OF DATA) OF ALL RELEVANT INFORMATION OF THE EMPLOYEES LIKE FINGERPRINTS, PHOTOGRAPHS, CONTACT INFORMATION ETC. TO ENSURE A COMPREHENSIVE DATABASE OF INFORMATION FOR THE FUNCTIONING OF THE TIME AND ATTENDANCE BIOMETRIC SYSTEM.	2	No.		
55	SUPPLY & INSTALLATION OF FIXED TYPE <b>CEILING MOUNTED DOME CAMERA</b> TRUE DAY / NIGHT WITH IR ILLUMINATOR, 2-MP, FIXED LENS OF 4 MM, WDR, FACE RECOGNITION TILL MINIMUM 10 METER COMPLETE WITH HOUSING, MOUNTING BRACKETS, ENCLOSURE FOR POWER SUPPLY ETC AS PER DRAWING & SPECIFICATION & SCHEDULE OF CAMERA COMPLETE IN ALL RESPECTS.	16	No.		
56	SUPPLY & INSTALLATION OF <b>PoE (POWER OVER ETHERNET) CABLE</b> FROM NVR TO CAMERA LOCATION. COMPLETE WITH HOUSING, MOUNTING BRACKETS, ENCLOSURE FOR POWER SUPPLY ETC AS PER DRAWING & SPECIFICATION & SCHEDULE OF CAMERA COMPLETE IN ALL RESPECTS. <b>AVERAGE LENGTH 170 RFT</b>	16	No.		
57	SUPPLY & INSTALLATION OF <b>2U SERVER RACK</b> AS PER DRAWING & SPECIFICATION COMPLETE IN ALL RESPECT	1	No.		
58	SUPPLY & INSTALLATION OF <b>CABLE MANAGEMENT KIT</b> FOR 2U RACK CABLE MANAGER TYPE: HORIZONTAL D-RING NUMBER OF D-RINGS: 5 D-RING MATERIAL: PLASTIC BACK PLATE MATERIAL: 18 GAUGE COLD ROLLED STEEL BACK PLATE FINISH: POWDER COATED COMPLETE IN ALL RESPECT	1	No.		
59	SUPPLY & INSTALLATION OF <b>32 CHANNEL NVR</b> HAVING NOT LESS THAN 24 PoE POINTS STACKABLE VIRTUALLY TO ACCOMMODATE ALL THE CAMERAS AND STORAGE CAPACITY OF 30 DAYS (16TB HARDISK) AT HIGH QUALITY, 25 FPS, AND ADJUSTABLE NOISE RATIO AS PER DRAWING & SPECIFICATION COMPLETE IN ALL RESPECT	16	No.		
60	<b>COMPLETE DOCUMENTATION</b> TESTING COMMISSIONING OF THE SECURITY SURVEILLANCE SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
61	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF SECURITY SYSTEM	1	JOB		

7th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>FIRE ALARM SYSTEM</b>				
	ALL NETWORK ACCESSORIES ARE TO BE A PART OF THIS ITEM, INCLUDING RACKS, MOUNTING SCREWS, RAWL BOLTS, ANCHORS, MOUNTING BRACKETS AND ETC.				
62	SUPPLY & INSTALLATION OF ADDRESSABLE <b>MANUAL CALL POINTS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETED IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	20	No.		
63	SUPPLY & INSTALLATION OF ADDRESSABLE DIRECTIONAL <b>ELECTRONIC SOUNDER WITH FLASHER</b> WITH MOUNTING ACCESSORIES, AND BACK BOX. COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	20	No.		
64	SUPPLY AND INSTALLATION OF INTELLIGENT CEILING RECESSED/SURFACE MOUNTED <b>SMOKE DETECTORS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	20	No.		
65	SUPPLY AND INSTALLATION OF CEILING RECESSED/SURFACE MOUNTED <b>HEAT DETECTORS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	6	No.		
66	SUPPLY AND INSTALLATION OF <b>4 ZONES INTELLIGENT ADDRESSABLE NETWORKED FIRE ALARM CONTROL PANEL (FACP)</b> WITH POWER SUPPLY AND BATTERY BACKUP FOR 3 HOURS WITH INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS. TO BE INTEGRATED TO BUILDING FACP SYSTEM.	1	No.		
67	SUPPLY & INSTALLATION OF <b>LOOP WIRING FROM FACP TO FIELD DEVICES</b> WITH 2X2.5 SQ.MM FP- 200 CLASS A CABLE WITH 3HRS FIRE RATING IN 1" DIA 16-GAUGE MS PIPE SURFACE AS PER DRAWINGS WITH ALL CONDUIT ACCESSORIES, JUNCTION BOXES, PULL BOXES ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS. ACTUAL MEASUREMENT SHALL BE TAKEN FROM THE SITE.	6500	RFT		
68	SPARE PARTS FOR FIRE ALARM SYSTEM FOR 2 YEAR OPERATION	1	JOB		
69	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF FIRE ALARM SYSTEM	1	JOB		
70	2 YEARS WARRANTY ALONG WITH COMPLETE PREVENTIVE MAINTENANCE OF ALL COMPONENTS OF FIRE ALARM SYSTEM.	1	JOB		
71	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE FIRE ALARM SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
72	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
73	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
	<b>TOTAL COST OF ELECTRICAL WORKS SEVENTH FLOOR</b>				

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**7th FLOOR**  
**PLUMBING WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

<b>PLUMBING WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>1.</b>	<b>FREE STANDING WASH BASIN STALL</b>				
	PROVIDING AND FIXING STONE CUT PEDESTAL TYPE FREE STANDING WASH BASIN STALL COMPLETE WITH INCLUDING THE COST OF INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER OF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT). THE CONTRACTOR IS TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED ON-SITE AS PER SITE CONDITIONS. NOTE: FAUCET, BIB COCKS, AND ALL OTHER FITTINGS ARE TO BE INCLUDED IN THE COST OF ITEM CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES BEFORE EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.FAUCET AND ACCESSORIES TO BE PORTA OR EQUIVALENT	8	No.		
<b>2.</b>	<b>WESTERN W.C. (COMMODE)</b>				
	PROVIDING AND FIXING SQUATTING TYPE WHITE GLAZED EARTHEN WARE W.C. PAN WITH FRONT FLUSH INLET AND COMPLETE WITH INCLUDING THE COST OF FLUSHING CISTERN WITH INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBERATE ONLYF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT) WITH 4" DIA C.I. TRAP. CONTRACTOR TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED END TO END UTILISING PERFECT SLOPE ON SITE AS PER SITE CONDITIONS. NOTE: CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES PRIOR TO EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.				
<b>A.</b>	<b>EXECUTIVE DIRECTOR 1, 2, 3, 4, 5, CHAIRMAN BOARD, VISITING DIRECTOR (WALL HUNG) PORTA HD5 OR EQUIVALENT WITH CONCEALED BODY</b>	12	No.		
<b>B.</b>	<b>TOILET CUBICLES FLOOR MOUNTED</b>	4	No.		
<b>C.</b>	<b>CEO ROOM (WALL HUNG CONCEALED BODY) SOFT TOP CLOSING</b>	1	No.		
<b>3.</b>	<b>EASTERN (SQUATTING) WATER CLOSET</b>				
	PROVIDING AND FIXING SQUATTING TYPE WHITE GLAZED EARTHEN WARE W.C. PAN WITH FRONT FLUSH INLET AND COMPLETE WITH INCLUDING THE COST OF FLUSHING CISTERN WITH INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBERATE ONLYF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT) WITH 4" DIA C.I. TRAP. CONTRACTOR TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED END TO END UTILISING PERFECT SLOPE ON SITE AS PER SITE CONDITIONS. NOTE: CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES PRIOR TO EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	2	No.		
<b>4</b>	<b>HAND SHOWERS (MUSLIM SHOWER)</b>				
	MASTER, SONEX OR EQUIVALENT TOILET HAND SPRAY WITH FLEXIBLE CHAIN & TELEPHONE TYPE SHOWER INCLUDING TEE STOP COCK ETC. COMPLETE IN ALL RESPECT.	18	No.		
<b>5</b>	<b>BASIN MIXER TAP</b>				
	PORTA, GROHE, ROCA OR EQUIVALENT SENSOR BASED MIXER TAPS WITH PROXIMITY SENSOR, SS BASED LONG NECK FAUCETS.				
<b>a.</b>	<b>VANITY</b>	8	No.		
<b>b.</b>	<b>DOUBLE BIB COCK FOR TOILETS SS BASED SAME SERIES AS VANITY MIXERS</b>	17	No.		

PLUMBING WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>6</b>	<b>RAIN SHOWER</b>				
	PORTA, GROHE, ROCA OR EQUIVALENT BEST QUALITY RAIN SHOWER. > MATERIAL: METAL > BALL JOINT WITH TURNING ANGLE 15 DEGREE. > CONNECTION THREAD 1/2" > ANTI LIME SCALE SYSTEM > SUITABLE FOR INSTANTANEOUS HEATER > DIRT STRAINER > COMPLETE IN ALL RESPECTS.	1	No.		
<b>7</b>	<b>CONCEALED BODY SHOWER UNIVERSAL ROUGH-IN BOX</b>				
	PORTA, GROHE, ROCA OR EQUIVALENT BEST QUALITY CONCEALED BODY SHOWER UNIVERSAL ROUGH-IN BOX > 3 OUTLETS 1/2 > 2 INLETS BELOW > INSTALLATION DEPTH 75-105 mm. > CONNECTION UNIT IN DR BRASS > PRE MOUNTED FLUSHING PLUG > STABLE BUILD-IN BOX AND PROTECTIVE COVER > FIXATION OPTIONS FOR SOLID WALLS AND DRY CLADDING > GASKET > SEAL KIT > COMPLETE IN ALL RESPECTS.	1	No.		
<b>8</b>	<b>CONCEALED BODY SHOWER SINGLE LEVER MIXER</b>				
	PORTA, GROHE, ROCA OR EQUIVALENT BEST QUALITY CONCEALED BODY SHOWER SINGLE LEVER MIXER > METAL LEVER > WALL ESCUTCHEON > MOUNTING PLATE > FLOW PERFORMANCE: 30 Lit./min. > SHAFT SEALING. > CARTRIDGE. > SEALS > TEMPERATURE LIMITER > EXTENSION SET > COMPLETE IN ALL RESPECTS.	1	No.		
<b>9</b>	<b>TOILET ACCESSORIES COMPLETE SET</b>				
a.	SOAP DISPENSER	17	No.		
b.	SOAP DISH				
	PROVIDING AND FIXING SOAP-DISH OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	17	No.		
c.	TOWEL ROD				
	PROVIDING AND FIXING CHROMIUM PLATED TOWEL RAIL 24" LONG AND 3/4" DIA, OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	17	No.		
d.	PAPER HOLDER				
	PROVIDING AND FIXING TOILET PAPER-HOLDER ONLY MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	17	No.		
e.	COAT HOOKS	17	No.		
<b>10</b>	<b>LOOKING MIRROR</b>				
	LOOKING MIRROR 5mm BEST QUALITY BELGIUM OR EQUIVALENT MADE FIXED WITH CLIPS. HAVING MIRROR LED LIGHT EMBEDDED IN THE LOOKING MIRROR ATOP VANITY WITH EACH MIRROR TO BE MOUNTED ON FRAMES MARINE PLY BACK WITH 2 TH FRAMING TO ALLOW 2 INCH GAP BETWEEN WALL AND MIRROR; HAVING LED LIGHT POINT AND STRIP AT ITS BACK; TO MAKE IT BACK LIT. COMPLETE IN ALL RESPECT AND SIZE AS PER SITE REQUIREMENT.	200	Sft		

<b>PLUMBING WORKS</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>11</b>	<b>KITCHEN SINK</b>				
	PROVIDING AND FIXING STAINLESS STEEL KITCHEN SINK BOWL 24"x18" WITH DRY TRAY/ WASHING SURFACE OF 18 GAUGE MAKE MASTER OR EQUIVALENT FIXED IN COUNTER OVER PRE CAST SLAB, PASTING WITH JELLY/ SILICON WITH 15mm DIA C.P. BRASS T. STOP COCK OF MASTER, SONEX, 40mm DIA HEAVY DUTY WASTE COUPLING AND PVC FLEXIBLE WASTE PIPE OF APPROVED MAKE AND QUALITY COMPLETE IN ALL RESPECTS. AS PER THE MANUFACTURER'S REQUIREMENT.	2	No.		
<b>12</b>	<b>SECTION-02 WATER SUPPLY SYSTEM</b>				
	<b>SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF COMPLETE PIPE WORK FOR COLD AND HOT WATER SYSTEM INCLUDING ALL ACCESSORIES REQUIRED TO COMPLETE SYSTEMS READY TO OPERATE AS PER SPECIFICATION, DRAWINGS &amp; INSTRUCTION OF CONSULTANT.</b>				
<b>a.</b>	POLYPROPYLENE RANDOM DADDEX, AGM, STEELEX OR EQUIVALENT PP-R PIPES PN 20 AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT.				
i.	DIA. 1-1/2"	320	Rft		
ii.	DIA. 2"	280	Rft		
<b>b.</b>	POLYPROPYLENE RANDOM DADDEX, AGM, STEELEX OR EQUIVALENT PP-R PIPES PN 20 AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT.				
i.	DIA. 1-1/4"	300	Rft		
ii.	DIA. 1-1/2"	160	Rft		
iii.	DIA. 2"	120	Rft		
iv.	DIA.3"	80	Rft		
<b>d.</b>	BRASS BODY GATE-VALVES / BALL-VALVES WITH UNIONS.				
i.	SIZE 1-1/4"	32	No.		
ii.	SIZE 1-1/2"	32	No.		
iii.	SIZE 2"	52	No.		
iv.	SIZE 3" (CI BODY)	12	No.		
<b>13</b>	<b>DRAIN PLUMBING</b>				
	PVC DADDEX, AGM, STEELEX OR EQUIVALENT PVC PIPES UPTO 4 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT. NOTE: THE JOB INCLUDES PLUGGING OF DRAIN INTO RISER DRAIN LINE.				
<b>A.</b>	DIA 2"	200	RFT		
<b>B.</b>	DIA 4"	200	RFT		
<b>14</b>	<b>INSTANT WATER HEATER</b>				
	PROVIDING AND FIXING OF INSTANT WATER HEATER OF BEST QUALITY 5 Lit/ min. ADJUSTABLE POWER 3-5-7 KW 220 V. WALL MOUNTING TYPE. COMPLETE IN ALL RESPECT.	11	No.		
<b>15</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN R.C.C. WALLS OR SLABS WITH HILTE CORE CUTTING MACHINE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK, COST OF DISPOSAL OF CONCRETE CORES, COMPLETE IN ALL RESPECTS AS DIRECTED BY THE ENGINEER.				
<b>A.</b>	4" DIA	4	No.		
<b>B.</b>	6" DIA	5	No.		
<b>C.</b>	8" DIA	20	No.		



<b>PLUMBING WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
<b>16</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>17</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>TOTAL COST OF PLUMBING WORKS SEVENTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**7th FLOOR**  
**HVAC WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**HVAC WORK**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>VRF CASSETTES</b>				
	P/F COMISSIONING INSTALLATION, TESTING OF VRF AC/DC INDOOR UNITS CASSETTE TYPE INCLUSIVE OF ALL ACCESSORIES, COPPER PIPING, Y SECTIONS, ALL COPPER ACCESSORIES AND HANGING ACCESSORIES TO BE A PART OF THIS ITEM, INSULATION BOUND IN A PVC CONDUIT FOR EACH CASSETTE. DRAIN RISER AND DRAIN PIPES SHALL BE INCLUSIVE OF THIS COST CONNECTED TO BUILDING SERVICE CORE AT THE END. COMPLETE ELECTRICAL SCOPE I.E. CONTROL WIRE, SENSING WIRE, PANEL WIRE, COMMUNICATION WIRE, POWER WIRE TO INTERNAL UNIT. INCLUSIVE OF TWO REMOTE CONTROL. FOR EACH CASSETTE INCLUSIVE OF ROOM PANEL AND IR REMOTE COST. ISOLATION VALVE FOR REFRIGERANT ON THE BEFORE THE CASSETE TO BE INCLUSIVE OF THE COST. COMPLETE INSTALLATION IN ALL ASPECTS. VRF DRAIN PIPE FROM VRF CASSETTE TO THE PERIPHERY OF THE BUILDING TO BE INCLUSIVE OF THE COST WHICH WILL BE CONNECTED TO DRAIN RISER VIA 3" UPVC PIPE (3 INCHES PIPE IS A SEPARATE ITEM). WHEREVER THE VRF CASSETTE IS EXPOSED A DECO PAINTED MS BOX of 12SWG ON THE SIDE AS SLEEVE OF THE CASSETE WITH OPENABLE SECTIONS FOR MAINTAINANCE AS PER ARCHITECTS RECOMMENDATION AND COLOUR.				
<b>A.</b>	2 TON	32	No.		
<b>B.</b>	2.5 TON	6	No.		
<b>C.</b>	4 TON	9	No.		
<b>2</b>	<b>STRUCTURAL STEEL WORK</b>				
	PROVIDING, FABRICATING & FIXING OF MS TEE BARS, CHECKERED SHEETS (10 SWG) ANGLES 3" X 2" X 1/4" TH ETC FOR STRUCTURAL WORKS REQUIRED FOR FIXING OF HVAC OUTDOOR UNIT ON PLATFORM INCLUSIVE OF PLATFORM CONSTRUCTION AND ITS MOUNTING TO THE BUILDING STRUCTURAL COMPONENT. THE JOB SHALL INCLUDE ANY OR ALL REPAIRS AND NECESSARY ADJUSTMENTS AND OTHER NECESSARY WORKS. COMPLETE WITH WASHERS AND MOUNTING RUBBERIZED ABSORBERS TO PREVENT VIBRATIONS AND ITS EFFECT ON BUILDING. ALL STRUCTURAL WORKS TO BE EPOXY PAINTED TO DARK BLUE COLOR	1200	KG		
<b>3</b>	<b>OUTDOOR UNIT</b>				
	REMOVAL CLEANING, WRAPPING, REINSULATION AND REFIXING OF PLANUM BOXES ON NEW LOCATIONS INCLUDING WRAPPING OF INSULATION FABRIC AND PAINTING OF APPROVED COLOUR <b>2x 30 TON UNIT (FOR LARGE WING)</b> <b>3x 20 TON UNIT (1 FOR LARGE WING AND 2 FOR SMALL WING)</b>				
<b>A.</b>	VRF OUTDOOR UNIT PER TON COST WITH COPPER PIPING FROM OUTER TO INNER WITH ALTERNATE PIPES FOR EACH INDOOR CONNECTION; INTEGRATION AND COPPER PIPING MAIN AS PER EACH VRF OUTDOOR UNIT ALL VRF OUTDOOR UNITS TO HAVE ISOLATION VALVES FOR REFRIGERANT CAPTURE AND MAINTAINANCE. ALL OUTDOOR UNITS TO BE SYNCHROZIED WITH EACH OTHER FOR FAIL SAFE OPERATION USING COPPER PIPES AND RELEVANT ACCESSORIES: ENSURING SYNCHRONIZATION AMONGST EACH OTHER. ALL COPPER PIPING INCLUSIVE OF NETWORK COPPER PIPING VIA Y AND STRAIGHT SECTIONS OF APPROPRIATE SIZES AS PER VRF REQUIREMENTS TO BE INCLUSIVE OF THIS JOB HAVING PROPER INSULATION TO INDUSTRY STANDARD AS PER MANUFACTURER. INCLUSIVE OF REFRIGRANT COST AND ITS TOP UP COST WHEN SYSTEM IS RUN AS PER OEM. VRF OUTDOOR UNITS AND ITS CARDS TO BE VALIDATED AND MADE PROPER USING ALL WEATHER SILICON PROTECTION IN ADDITION TO THE OEM PROTECTION. THE CONTRACTOR SHALL PRODUCE SAMPLES OF ADDITIONAL PROTECTION OF CARDS ALONG WITH INSTALLATION OF PROTECTION DEVICES SUCH AS SURGE PROTECTIONS AND OTHERS AS REQUIRED FOR SMOOTH OPERATION	116	TON		

<b>HVAC WORK</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>4</b>	<b>DISTRIBUTION BOARDS</b>				
	SUPPLY AND INSTALLATION OF THE FOLLOWING DISTRIBUTION BOARDS OF MAKE HUSSAIN & CO., A TO Z, UNIVERSAL MADE WITH 14 SWG SHEET STEEL HOUSING WITH APPROVED COLOR AND HAVING SPECIFIED CIRCUIT BREAKERS USING TP MCCB, VOLTMETER, AMMETER, INDICATION LIGHTS, WITH <b>K- ELECTRIC APPROVED ENERGY METERS</b> AND ENERGY LOGGERS. AS SHOWN IN THE DRAWING. ( <b>REFER SINGLE LINE DIAGRAM</b> ). NOTE: SPECIFIED MULTIMETER SHOULD BE INCLUDED IN THE DBs				
<b>A.</b>	FOR SMALL WING	1	No.		
<b>B.</b>	FOR LARGE WING	1	No.		
<b>5</b>	<b>DRAIN PIPING (HVAC)</b>				
	PVC DADEX, AGM, STEELEX OR EQUIVALENT PVC PIPES UPTO 4 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT. NOTE: THE JOB INCLUDES PLUGGING OF DRAIN INTO RISER DRAIN LINE.				
<b>A.</b>	DIA 3"	700	RFT		
<b>B.</b>	DIA 1"	400	RFT		
<b>6</b>	<b>COMMISSIONING OF HVAC SYSTEM</b>				
	<b>COMPLETE DOCUMENTATION</b> TESTING COMMISSIONING OF THE HVAC SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
<b>7</b>	2 YEARS WARRANTY ALONG WITH COMPLETE PREVENTIVE MAINTENANCE OF ALL COMPONENTS OF HVAC SYSTEM.	1	JOB		
<b>8</b>	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF HVAC SYSTEM	1	JOB		
<b>9</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN R.C.C. WALLS OR SLABS WITH HILTE CORE CUTTING MACHINE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK, COST OF DISPOSAL OF CONCRETE CORES, COMPLETE IN ALL RESPECTS AS DIRECTED BY THE ENGINEER.				
<b>A.</b>	1.5" DIA	20	No.		
<b>B.</b>	4" DIA	5	No.		
<b>C.</b>	6" DIA	1	No.		
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
<b>10</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>11</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>COST OF HVAC SEVENTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**8th FLOOR**  
**SUMMARY**

8th FLOOR - SUMMARY		
S. # N	DESCRIPTION	AMOUNT RS.
1	Cost of Civil Work	0
2	Cost of Furniture	NTQ
3	Cost of Electrical Works	0
4	Cost of Plumbing Works	0
5	Cost of HVAC	0
<b>Total Cost of Project</b>		<b>0</b>
<b>LESS SALVAGE COST</b>		<b>0</b>
<b>NET TOTAL COST OF 8TH FLOOR</b>		<b>0</b>

All taxes are inclusive

Total Amount Rs. \_\_\_\_\_

Contractor's Signature with Stamp

Dated: \_\_\_\_\_

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**8th FLOOR**  
**SALVAGEABLE MATERIAL**

The contractor is required to store the items temporarily in the storage space provided by the client (if required). Each lot of the salvaged material shall be documented before leaving the site, including acquiring the gate pass. All salvaged items shall be considered as the contractor's property after leaving the site.

**8th FLOOR - SALVAGABLE MATERIAL (TO BE CREDITED TO THE CLIENT)**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>SERVICEABLE MATERIAL DEMOLITION</b>				
A.	TAKING OUT WOODEN / VIN BOARD PARTITION WALLS, WINDOWS, DOOR SHUTTERS TAKING OUT CAREFULLY AND STACKING SERVICE ABLE AT THE DESIGNATED PLACE AND CREDIT FOR THE COST OF SALVAGE TO THE CLIENT AND THEN IT WILL BE THE PROPERTY OF THE CONTRACTOR.	4000	Sft		
B.	TAKING OUT GLAZED ALUMINUM DOORS & WINDOWS CAREFULLY AND STACKING SERVICEABLE AT DESIGNATED PLACES AND DISPOSAL OF UNSERVICEABLE AS PER DIRECTION	425	Each		
C.	TAKING OUT GI PIPES, FITTINGS AND FIXTURES AND STACKING THE SERVICEABLE AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
D.	TAKING OUT ELECTRICAL WIRES, FITTINGS & FIXTURES, SWITCHBOARDS ETC. AND STACKING THE SERVICE AT SOME DESIGNATED PLACE AS PER DIRECTION.	1	LS		
E.	TAKING OUT CAREFULLY ELECTRICAL DISTRIBUTION BOARDS AND SUB MAIN DISTRIBUTION BOARDS AND STAKING THE SERVICEABLE IT OUT AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
F.	TAKING OUT CAREFULLY HVAC DUCTS AND STACKING THE SERVICEABLE IT AT SOME DESIGNATED PLACE AS PER DIRECTION	1	LS		
G.	TAKING OUT WOODEN /METALLIC RAILINGS AND STACKING THE SERVICEABLE AT SOME DESIGNATED PLACE AS PER DIRECTION.	1	LS		
H.	TAKING OUT CAREFULLY DOOR, WINDOWS HARDWARE ETC COMPLETE	1	LS		
I.	TAKING OUT CAREFULLY WINDOW BLINDS AND STACKING THE SERVICEABLE	1	LS		
J.	TAKING OUT CAREFULLY <b>BUS BAR</b> AND ACCESSORIES AND STACKING THE SERVICEABLE	1	LS		
	<b>TOTAL AMOUNT TO BE CREDITED TO THE CLIENT EIGHTH</b>				



**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**8th FLOOR**  
**CIVIL WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge. Single Surface shall be used to measure QTY in SFT

**8th FLOOR - CIVIL WORK**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>DEMOLITION</b>				
	<p>DEMOLITION AND DISMANTLING OF EXISTING INFRASTRUCTURE, EXISTING BUILDING INTERIORS INCLUDING:</p> <p>1. FLOOR TILES, 2. MASONRY WALLS, 3. DOORS, 4. FALSE CEILING 5. ALL KIND OF WIRING 6. FIRE SENSORS 7. SPEAKERS 8. ROLLER BLINDS. 9. CEILING ACCESSORIES ETC. 10. REINSTALLING ANY EQUIPMENT ON THE ROOF WITH APPROPRIATE ANCHORING WHEREVER NEEDED. COVERED AREA: 14,031 SFT APPROX. INCLUSIVE OF COLLECTING, TEMPORARY STORAGE BEFORE DISPOSAL, CARTAGE, ALL KINDS OF LABOUR, DISPOSAL OF DEBRIS FROM ANY LEVEL UP TO ANY LEAD AND LIFT AS DIRECTED BY THE CLIENT /SITE ENGINEER. AFTER THE COMPLETION OF THE JOB THE CONTRACTOR WILL PHOTOGRAPH, RECORD &amp; AND SUBMIT AS BUILT DRAWING TO THE CONSULTANT BEFORE STARTING CONSTRUCTION WORKS. NOTE: 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUMPING THE DEBRIS AT THE APPROPRIATE DUMPING SITE OUT OF SITE PREMISES. 2. COLLECTIBLE ITEMS SHALL BE SAFELY TRANSFERRED TO THE CLIENT- DESIGNATED STORAGE AREA. 3. IDENTIFICATION OF INVENTORY BEFORE DISMANTLING NEEDS TO BE MADE. 4. AFTER IDENTIFICATION ITEMS TO BE HANDED OVER TO THE CLIENT, CATEGORIZED SALVAGED. 5. LOSS OF PROPERTY TO BE CHARGED AT PKR 60/KG.</p>	1	Job		
<b>2</b>	<b>TERMITE PROOFING</b>				
	<p>VERMIN AND TERMITE FULL SPECTRUM FUMIGATION DONE ON FOLLOWING THREE (3) STAGES.</p> <p>I. AFTER COMPLETE DEMOLITION, BEFORE COMMENCEMENT OF ANY CONSTRUCTION. II. AFTER CONSTRUCTION OF ALL WALLS AND PARTITIONS. III. ON COMPLETION OF ALL CONSTRUCTION AND FINISHING.</p>	15,435	SFT		
	<b>WALLS, PARTITIONS &amp; CLADDING</b>				
<b>3</b>	<b>BLOCK MASONRY</b>				
	<p>PROVIDING &amp; LAYING STANDARD CEMENT CONCRETE SOLID BLOCK MASONRY WALL, USING MACHINE-MADE BLOCKS AND APPROVED QUALITY OF FINE AND COURSE AGGREGATE LAID IN 1:5 CEMENT SAND MORTAR, IN ANY SHAPE, LENGTH, OR HEIGHT INCLUDING, RAKING JOINTS, SCAFFOLDING, ANCHOR BARS, CURING, CUTTING OF FLOOR FOR MASONRY ETC. COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. WETTED FOR THREE DAYS AFTER COMPLETE LAYING OF WALL.</p>				
<b>A.</b>	9" THICK BLOCK MASONRY	7,200	sqft		
<b>B.</b>	6" THICK BLOCK MASONRY	12,000	sqft		
<b>C.</b>	4" THICK BLOCK MASONRY (TOILET WALL)	2,200	sqft		

8th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>4</b>	<b>CEMENT BOARD PARTITION WALL</b>				
	CEMENT BOARD PARTITION WALL SUSPENDED FROM THE TOP SLAB ABOVE GLASS PARTITION WITH 100mm THICK STUD PARTITION @ 2 FEET c/c, CONSISTING OF G.I. FRAMED SECTION (22 SWG) INTERNAL FRAMING OF APPROVED SECTION (3" x 1.5"), 12mm THICK CEMENT BOARD FIXED ON BOTH SIDES OF FRAME, INCLUDING ALL HARDWARE, FIBER TAPE ON SHEET JOINTS, METAL TAPE ON EDGES, ETC., PAINT JOB TO BE INCLUDED IN THE ITEM. INCLUDING MAKING OPENINGS FOR HVAC DUCTS AND CABLE TRAYS ETC. ABOVE 9' IN HEIGHT. COMPLETE IN ALL RESPECT AS PER DRAWING AND INSTRUCTION OF THE ARCHITECT.				
<b>A.</b>	4" THICK HEIGHT: 3'-6" (ABOVE GLASS PARTITION)	180	RFT		
<b>5</b>	<b>GYPSUM VERTICAL BAND</b>				
	P/F OF GYPSUM BAND ABOVE GLASS PARTITION WITH COVE HAVING DC LED STRIP LIGHT @ 120 LEDs PER METRE (36 LEDs PER FOOT) IN/AROUND COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT AND NECESSARY G.I. FRAMING. INCLUDING APPROVED WALLPAPER PASTED IN SEAMLESS MANNER AND MAKING OPENINGS FOR HVAC DUCTS AND CABLE TRAYS ETC. ABOVE 9' HEIGHT. COMPLETE IN ALL RESPECT AS PER DRAWING AND INSTRUCTION OF THE ARCHITECT. <b>NOTE:</b> COST OF WALLPAPER TO BE INCLUDED IN THE ITEM.	280	SFT		
<b>6</b>	<b>PLASTER WORK</b>				
	PROVIDING AND LAYING CEMENT SAND PLASTER 1:4 USING O.P. CEMENT & FINE SAND ON WALLS, COLUMNS AND WHEREVER REQUIRED OF ANY SHAPE, CURVE AND DESIGN USING EXPANDED METAL MESH ON JOINTS COLUMNS WITH WALL AND ON CONDUITS FILLING SCAFFOLDING WITH MAKING EDGES CORNERS, HOISTING, WATERING, CURING AT ANY HEIGHT SMOOTHLY FINISHED INCLUDING MAKING DRIP COURSE AT ALL PROJECTIONS, SLABS OFFSETS OR WHERE AS REQUIRED COMPLETE AS PER SPECIFICATIONS AND INSTRUCTION OF THE ENGINEER/ ARCHITECT.	27,375	SFT		
<b>7</b>	<b>REPAIRING / FILLING OF CRACKS</b>				
	REPAIRING CRACKS ON INTERNAL AND EXTERNAL WALLS, CEILING, BEAMS, AND WHEREVER REQUIRED BY SCRAPPING, CHISELLING, FILLING, AND FINISHING OF SURFACE. FILLING SHALL BE DONE WITH PLASTER / PUTTY OR ANY OTHER APPROPRIATE MATERIAL. NOTE: EACH POINT SHALL NOT EXCEED 1 SFT SURFACE AREA. IN CASE OF REPAIRING OF LARGER THAN 1 SFT THE CONTRACTOR SHALL MEASURE, PHOTOGRAPH, AND DOCUMENT THE POINT FOR THE RECORD.	150	No.		
<b>8</b>	<b>MARINE PLY DECO PAINTED FLUTED PANELS</b>				
	PROVIDING AND FIXING OF FLUTED PANELS CNC OR ROUTER PROFILED AS PER ARCHITECT CHOICE AND SPECIFICATION TO MAKE A SEAMLESS SURFACE. MADE OF MARINE PLY 16mm THICK, PASTED ON TOP OF 12mm TH MARINE PLY SHEET WITH ROUGH WOOD FRAMING OF 25mm by 50mm @ 2 FEET c/c AT BACK SIDE. MARINE PLY BATTONS ARE TO BE PASTED AFTER MAKING IT SECURE IN PLACE WITH APPROVED DECO PAINT ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. ALL NECESSARY SUPPORT/ FRAMING STRUCTURE IS INCLUDED IN THE JOB.				
<b>A.</b>	FULL HEIGHT (12 FT) PANELING	4,200	SFT		
<b>B.</b>	PANELING ABOVE GLASS PARTITION (4 FT HEIGHT)	300	SFT		

<b>8th FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>9</b>	<b>MACHINE POLISHED MARBLE FEATURE WALL</b>				
	PROVIDING AND FIXING OF MACHINE POLISHED WALL OF APPROVED MARBLE INCLUDING BULL NOSING / CHAMFERING ON EDGES, ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. FIBER MESH TO BE PASTED AT THE BACK SIDE OF THE MARBLE USING EPOXY RESIN BEFORE FIXING TO ITS POSITION. ALL CONCRETE/ DRY BOND WORKS ARE INCLUDED IN THE JOB.				
<b>A.</b>	LIFT MARBLE FEATURE WALL <b>PASHA WHITE, SANDALWOOD, DIAG-NOSE WHITE OR EQUIVALENT</b> (BOOK MATCHED- SEAMLESS TEXTURED IF APPLICABLE)	400	SFT		
<b>10</b>	<b>FLAT GLASS PARTITION WALL</b>				
	(ED ROOMS, MEETING ROOM & BOARD SECRETARIAT) PROVIDING, FABRICATION & FIXING <b>9FT HIGH</b> 12mm THICK TEMPERED ULTRA CLEAR MACHINE EDGED, GLASS PARTITIONS WITH ALL SIDES POWDER COATED ALUMINIUM SECTION 12mm THICK BORDER AS APPROVED BY ARCHITECT. SECTION DESIGN TO BE CONFIRMED BY THE ARCHITECT. WITH GASKET FLUSHED AND CLEANED TO MATCH FRONT AND BACK SURFACE AND SHAPE INCLUDING FROSTING FILM PASTED ENSURING NO BUBBLES OR ANOMALIES ARE FOUND AS SHOWN IN DRAWINGS/ INSTRUCTED BY ARCHITECT, INCLUDING BOLTS, NUTS, SCREWS ALUMINIUM CHANNEL IF REQUIRED FOR SAFELY MOUNTING AND ANCHORING THE GLASS PARTITION. BOLTED/ CONNECTED TO GROUND AND CEILING AT EVERY 4 FEET SPACE OR WHEREVER GLASS CUTTING IS ENCOUNTERED, CONTRACTOR TO ENSURE SEAMLESS EDGING SOLUTION WITH A TOLERANCE OF UPTO 0.5MM. COMPLETE IN ALL RESPECTS. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM INCLUDING FROSTING FILM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE A DETAILED SHOP DRAWING OF FRAMING, GLASS PARTITION, CUTTING, AND DOORS DETAILS AND PATCH FITTINGS IF ANY PRIOR TO THE START OF WORK.	920	SFT		
<b>11</b>	<b>GLASS DOORS (SWING)</b>				
	P/F TEMPERED SWING GLASS DOOR USING 12mm ULTRA CLEAR GLASS, MACHINE EDGED, WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. GLASS DOOR TO BE ANCHORED ON FLOOR AND MOUNTED TO CEILING USING A CHANNEL AND M10 RODS TO BE MADE STURDY.				
<b>A.</b>	SINGLE LEAF DOORS (3'-0" x 9'-0")	14	Nos		
<b>B.</b>	DOUBLE LEAF DOORS (6'-0" x 9'-0")	1	Nos		
<b>12</b>	<b>GLASS DOORS (SLIDING)</b>				
	P/F TEMPERED SLIDING GLASS DOOR USING 12mm CLEAR GLASS WITH FROSTING FILM PASTED WITHOUT BUBBLES OR ANOMALIES, IMPORTED CONCEALED FLOOR DOOR CLOSERS LG/NEW STAR MADE JAPAN, DOOR LOCKS AND APPROVED HANDLES ON BOTH SIDES. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE.				
<b>A.</b>	SINGLE LEAF DOORS (6'-0" x 9'-0") (LARGE WING)	1	Nos		
<b>B.</b>	DOUBLE LEAF DOORS (8'-0" x 9'-0") (SMALL WING)	1	Nos		
<b>13</b>	<b>SS TRIM FOR LIFT OPENINGS</b>				
	P/F OF 16 SWG SS ARCHITRAVE FOR LIFT DOORS, WITH GOLDEN AND SS FINISH COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND TO THE SATISFACTION OF THE CONSULTANT AND ENGINEER IN CHARGE. COST TO INCLUDE COST OF MOUNTING. BACKING USING MARINE PLY PROFILE OVER WHICH THE TRIM SHALL BE PASTED GLUED AND SECURED IN PLACE.	4	No.		

8th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>14</b>	<b>ALUMINUM WINDOWS</b>				
	PROVIDING AND FIXING FULLY DOUBLE-GLAZED UV-RATED, SOUND PROOF, APPROVED TEXTURE, POWDER COATED/ ANODIZED ALUMINUM FIXED WINDOWS/ VENTILATORS/ PARTITIONS WITH FROSTING FILM AS PER BRITISH STANDARDS INCLUDING SHATTER PROOF SECURITY FILM OF 3m OR EQUIVALENT, MANUFACTURED BY ALPHAPEN/ ALUCON/ UBM TOSTEM/ SCHUCO OR EQUIVALENT. PROFILE THICKNESS OF MINIMUM 1.5 INCH IN WIDTH. FIXING THROUGH THEIR APPROVED FABRICATORS, INCLUDING DRAIN CHANNEL FITTINGS WITH ALL ACCESSORIES CUTTING HOLES ETC. AND MAKING GOOD DAMAGES TO WALLS ETC. THE ADJACENT FINISHED WALL SHALL BE FILLED WITH WEATHERPROOF SILICON SEALANT OVER THE BACKER ROD OF THE REQUIRED SIZE AND OF APPROVED QUALITY, ALL COMPLETE AS PER THE APPROVED DRAWING & DIRECTION OF THE ENGINEER-IN-CHARGE. NOTE: FRAMING OF THE PRODUCT TO THE ADJACENT WALL FACE IS ALSO INCLUDED IN THE COST	1,800	SFT		
<b>15</b>	<b>ALUMINUM DOOR (TOILET CUBICLE)</b>				
	PROVIDING AND INSTALLING IN-POSITION ALUMINUM DOOR, WITH POWDER COATED/ ANODIZED ALUMINUM SHUTTER FRAME & MAIN FRAME SECTION OF (ALPHAPEN/ ALUCON/ UBM/ TOSTEM/ SCHUCO OR EQUIVALENT), INCLUDING ALL HARDWARE, S.S. HINGES, LOCKSET, GLUE, SILICONE SEALANT, BACKING ROD, NEOPRENE/RUBBER GASKET, WASTAGE, LIFTING, CUTTING, FIXING, MAKING OF GROOVE IF REQUIRED ETC., COMPLETE AS PER DRAWING, HARDWARE SCHEDULE & INSTRUCTION OF THE ARCHITECT. CONTRACTOR MUST SUBMIT DOOR OPTIONS SPECIFYING COLORS, PATTERNS AVAILABLE. NOTE: FRAMING OF THE PRODUCT TO THE ADJACENT WALL FACE IS ALSO INCLUDED IN THE COST				
<b>A.</b>	2.25'x 8' (WIDTH x HEIGHT)	4	No.		
<b>B.</b>	2.5'x 8' (WIDTH x HEIGHT)	5	No.		
<b>16</b>	<b>WOODEN DOOR</b>				
	PROVIDING AND FIXING OF PARTIAL FRAMED 1.5" THICK SOLID OAK PANEL DOOR. HAVING IRON MONGRIES INCLUDING COAT HANGERS, DECORATIVE MORTGAGE-STYLE LOCK OF MAKE YALE OR EQUIVALENT, HANDLES S.S. HINGES, AND ALL OTHER ACCESSORIES OF ARCHITECT'S CHOICE. COMPLETE IN ALL RESPECT. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	3'x 9' (WIDTH x HEIGHT)	6	No.		
<b>B.</b>	3.5'x 9' (WIDTH x HEIGHT)	1	No.		
<b>C.</b>	DOUBLE LEAF ASYMMETRICAL, AUDITORIUM, SOUND PROOFING 5'x8' (WIDTHxHEIGHT)	2	No.		

8th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>17</b>	<b>FIRE DOOR (FIRE CORRIDOR)</b>				
	PROVIDING, FABRICATING, AND FIXING IN POSITION 2" THICK INTERNAL METAL FRAME DOOR WITH OUTER BODY MADE OF FIRE-RATED WOOD ALONG WITH PUSH BAR HAVING HONEY COMB STRUCTURE INSIDE AND GLASS WOOL FILLING WITH 16 SWG MOULDED SHEET METAL FRAME (CHOWKATS) WITH 2 COATS OF RED OXIDE PAINT. METAL FRAME SHALL BE FILLED WITH CONCRETE AND FIXED WITH 4 NOS. 6" LONG HEAVY DUTY M.S CHROMIUM PLATED HINGES AND 6 NO HINGES FOR LEAD LINE DOOR TO EACH SHUTTER, AND 6 NOS 6" LONG HOLD FASTS WELDED MADE OF ANGLE IRON (1-1/2"x1-1/2" X3/16") WITH FORKED ENDS TARRER AND WITH METAL FRAME EMBEDDED IN MASONRY AND WITH APPROVED HARDWARE 2 NOS. 9" LONG TOWER BOLTS, DOOR CLOSER RAYOBI OF JAPAN OR EQUIVALENT, DOOR STAY, AND C.P. HANDLES, DEODAR WOOD ARCHITRAVE 2-1/2"x 5/8" ALL AROUND DOOR FRAME AND APPROVED POLISHING OR SINLGE COAT OF APPROVED ENAMEL PAINT OVER A PRIMER COAT AND 2 COATS OF ICI INTUMESCENT PAINT TO RESIST FIRE UP TO MINIMUM 120 MINUTE ON STANDARD (BS 476-22). TERMITE CONTROL AND WOOD PRESERVATIONS APPLICATIONS (SOLIGNUM), SMOKE SEALS ON THREE SIDES AND FIRE-RATED ACCESSORIES, AND PEEP WINDOWS OF APPROPRIATE SIZE ALL COMPLETE AS PER DRAWINGS, SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. <b>NOTE:</b> THE PRODUCT MUST ASSURE FIREPROOFING STANDARDS AS REQUIRED. THE CONTRACTOR MUST SUBMIT THE SHOP DRAWING AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	3'x 9' (WIDTH x HEIGHT)	6	No.		
<b>B.</b>	DOUBLE LEAF 5'x 9' (WIDTH x HEIGHT)	1	No.		
<b>18</b>	<b>WOODEN DOOR (BATHROOM DOOR)</b>				
	PROVIDING AND FIXING OF PARTIAL FRAMED 1.5" THICK SOLID OAK PANEL DOOR. HAVING IRON MONGRIES INCLUDING COAT HANGERS, DECORATIVE MORTGAGE-STYLE LOCK OF MAKE YALE OR EQUIVALENT, HANDLES S.S. HINGES, AND ALL OTHER ACCESSORIES OF ARCHITECT'S CHOICE. 1.5 FEET HIGH SPLASH ALUMINIUM SHEET SHALL BE PASTED ON EITHER SIDE OF THE DOOR AS PER DRAWINGS. COMPLETE IN ALL RESPECT. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND APPROVE ALL ACCESSORIES BEFORE EXECUTION.				
<b>A.</b>	2.5'x 9' HEIGHT	4	No.		
<b>B.</b>	3.25'x 9' HEIGHT	1	No.		
<b>C.</b>	3'x 9' HEIGHT	4	No.		
<b>19</b>	<b>LINTELS</b>				
	PROVIDING & FIXING OF PRECAST RCC LINTELS OVER DOORS, WINDOWS OR WHEREVER REQUIRED. UPTO 12" HEIGHT, THE COST MUST INCLUDE ALL MATERIAL (STEEL BARS) 1:2:4 (fc 3000 psi).				
<b>A.</b>	DOOR LINTEL	120	RFT		
<b>B.</b>	WINDOW LINTEL	220	RFT		
<b>20</b>	<b>ROLLER BLINDS</b>				
	PROVIDE AND INSTALL IN POSITION ROLL-UP WINDOW BLINDS OF APPROVED COLOR AND SPECIFICATIONS, CHAIN OPERATED ROLLER BLIND (PROTECTOR OR APPROVED EQUIVALENT) WITH APPROVED FABRIC SCREW ON WALLS, INCLUDING ALL HARDWARE, WASTAGE, LIFTING, CUTTING, FIXING, SCAFFOLDING ETC., COMPLETE AS PER DRAWING & INSTRUCTION OF THE ARCHITECT. <b>HEIGHT 9'</b> FOR PAYMENT NET INSTALLED BLIND (INCLUDING TOP & BOTTOM CHANNEL) AREA WILL BE MEASURED.	2,000	SFT		

8th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>FLOORING</b>					
	NOTE: 1. THE DEMOLITION / DISMANTLING OF EXISTING FLOORING IS INCLUDED IN THE JOB. 2. SAMPLES & TILE-CUTTING DRAWINGS ARE TO BE APPROVED BY ENGINEER/ ARCHITECT.				
<b>21</b>	<b>PORCELAIN TILES FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY <b>SPANISH OR EUROPEAN REGION</b> APPROVED <b>FULL-BODY PORCELAIN</b> TILES OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT. <b>NOTE:</b> THE TILES SHALL BE MACHINE CUT i.e. CUTTING SHOULD BE CARRIED OUT OFF SITE EXCEPT THE TILES OF THE LAST EDGE OF FLOORING SPACE.				
<b>A.</b>	15" x 36"	990	SFT		
<b>B.</b>	24" x 48"	7,150	SFT		
<b>C.</b>	36" x 72"	370	SFT		
<b>22</b>	<b>FLOOR SCREEDING</b>				
	SCREEDING ON BATHROOM FLOORING OR WHEREVER REQUIRED TO MAKE APPROPRIATE SLOPE FOR WATER DRAINAGE. 2" THICK 1:3:6 MIX WITH PUDLO TOPPING AND WATERPROOFING. CURRING OF AT LEAST 14 DAYS.	4,000	SFT		
<b>23</b>	<b>MARBLE STAIR STEPS</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED <b>MARBLE STAIR STEPS, 3/4" TO 1" THICK</b> , (ZIARAT WHITE, OR EQUIVALENT) OF GLAZED/ MATT FINISH, ANTI-SLIP WITH GROVES AT NOSING END TO BE LAID USING DRY BOND WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.				
<b>A.</b>	25 TREADS 5'-0" x 1' 25 RISERS 5'-0" x 8" 2 LANDINGS, 5'-0" x 5'-0"	330	SFT		
<b>24</b>	<b>STONE STAIR STEPS (SMALL WING)</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE STAIR STEPS, <b>3/4" TO 1" THICK</b> , ( <b>OCEAN BROWN OR EQUIVALENT</b> ) OF GLAZED/ MATT FINISH, ANTI-SLIP WITH GROVES AT NOSING END TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.				
<b>A.</b>	25 TREADS 4'-6" x 1' 25 RISERS 4'-6" x 8" 2 LANDINGS, 4'-6" x 4'-6"	270	SFT		
<b>25</b>	<b>WOOD LAMINATE FLOOR</b>				
	P/F OF BEST QUALITY WOOD LAMINATE FLOOR OF MAKE FIRST FLOOR, PAK CARPETS, INTERWOOD OR EQUIVALENT INCLUDING ALL BENDS, CORNERS ETC. INCLUDING COST OF T-PROFILES AND SKIRTING. COMPLETE IN ALL RESPECT, INCLUDING FINISHING, CLEANING & POLISHING ETC, COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER/ ARCHITECT. GERMAN, ITALIAN OR WESTERN EUROPE ORIGIN.				
<b>A.</b>	LIBRARY, CHIEF OFFICES, D.G.M, AND MEETING ROOM	2,880	SFT		

8th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>26</b>	<b>WOOD LAMINATE SKIRTING</b>				
	P/F OF APPROVED BRAND WOODEN SKIRTING 6" HIGH & 1/2" THICK INCLUDING ALL BENDS, CORNERS ETC. COMPLETE IN ALL RESPECT, INCLUDING FINISHING, CLEANING ETC, COMPLETE AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER/ ARCHITECT.	480	RFT		
<b>27</b>	<b>SKIRTING</b>				
	PROVIDING & FIXING 4" HIGH INDUSTRIAL UPVC SKIRTING OF ARCHITECT'S CHOICE OF FINISH, WITH VERTICAL SUPPORT MAXIMUM 2' APART OR ON TURNING POINTS ON WALLS, GLASS PARTITIONS, PELMET WALLS AND ANY OTHER WALL SURFACE. COMPLETE IN ALL RESPECTS AND AS PER DRAWING, PATTERNS AND DIRECTIONS OF THE ARCHITECT / ENGINEER. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS & SAMPLES FOR APPROVAL BY ENGINEER/ ARCHITECT.				
<b>A.</b>	FLOOR 1 SKIRTING (ENTRANCE)	140	RFT		
<b>B.</b>	FLOOR 3 SKIRTING (GATHERING+HALLWAY)	240	RFT		
<b>C.</b>	FLOOR 4 SKIRTING (SERVICE AREA AND KITCHEN)	350	RFT		
<b>D.</b>	FLOOR 5 SKIRTING (RECEPTION AND WAITING)	280	RFT		
<b>E.</b>	FLOOR 6 SKIRTING (D.G.M)	200	RFT		
<b>28</b>	<b>ROOF GARDEN FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE, <b>SIZE 48" x 48". 3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	4,000	SFT		
<b>29</b>	<b>FIRE CORRIDOR FLOORING</b>				
	PROVIDING AND LAYING BEST QUALITY APPROVED PRE-POLISHED STONE, <b>SIZE 24" x 48". 3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	1,020	SFT		
<b>30</b>	<b>FIRE CORRIDOR SKIRTING</b>				
	PROVIDING AND FIXING BEST QUALITY APPROVED 4" HIGH SKIRTING WITH PRE-POLISHED STONE, <b>3/4" TO 1" THICK, (OCEAN BROWN OR EQUIVALENT)</b> OF GLAZED/ MATT FINISH, ANTI-SLIP TO BE FIXED USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT.	644	RFT		
<b>31</b>	<b>WATER PROOFING</b>				
	POLYURETHANE SINGLE COMPONENT WATERPROOF COATING OF MAKE CONCUR OF AQUAKNIGHT OF BMT OR EQUIVALENT. APPLYING PRIMER AFTER SURFACE CLEANING, SHEET REPAIR AND PREPARATION WORKS. APPLY POLYESTER CLOTH OVER JOINTS/PATCHES AND ENSURE TO COVER JOINTS WITH PU COATING ALONG WITH CANVAS/POLYESTER CLOTH. ON COMPLETION OF THE ENTIRE AREA, APPLY 2 COATING OF PU – COATING AND COMPLETE IN ALL RESPECT. TOTAL THICKNESS 4mm.				
<b>A.</b>	TOILETS FLOORING AREA	1,300	RFT		
<b>B.</b>	ROOF GARDEN FLOORING AREA	4,200	RFT		
	<b>ROOF</b>				
<b>32</b>	<b>WATER PROOFING FOR ROOF</b>				



8th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	POLYURETHANE SINGLE COMPONENT WATERPROOF COATING OF MAKE CONCUR OF AQUAKNIGHT OF BMT OR EQUIVALENT. APPLYING PRIMER AFTER SURFACE CLEANING, SHEET REPAIR AND PREPARATION WORKS. APPLY POLYESTER CLOTH OVER JOINTS/PATCHES AND ENSURE TO COVER JOINTS WITH PU COATING ALONG WITH CANVAS/POLYESTER CLOTH. ON COMPLETION OF THE ENTIRE AREA, APPLY 2 COATING OF PU – COATING AND COMPLETE IN ALL RESPECT. TOTAL THICKNESS 4mm.	1,200	SFT		
<b>33</b>	<b>ROOF FLOORING</b>				
	PROVIDING AND LAYING APPROVED PRE-POLISHED MARBLE 3/4" TO 1" THICK, (ZIARAT WHITE OR EQUIVALENT) OF GLAZED FINISH, TO BE LAID USING DRY BOND 2" TH. WITH SPACER AS SPECIFIED BY ARCHITECT/ ENGINEER ON-SITE INCLUDING DRESSING, CUTTING, JOINTING AND GROUTING, FINISHING AND CLEANING ETC LAID IN A PATTERN. COMPLETE IN ALL RESPECTS AS SHOWN IN DRAWINGS AND AS DIRECTED BY ENGINEER/ ARCHITECT. SIZE: 24" x 24"	1,200	SFT		

8th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>PAINT</b>					
<b>34</b>	<b>PAINT WORKS</b>				
	PROVIDING AND APPLYING PAINT ON WALLS/ ETC. INCLUDING RUBBING WITH SANDSTONE, FILLING THE UNEVEN SURFACES WITH PUTTY, CRACKER, AND EPOXY TREATMENT (IF REQUIRED) , RUBBING WITH SANDPAPER AND PREPARING THE SURFACE. APPLYING COATS OF PRIMER ON INTERNAL WALLS TO PREPARED SURFACE OF PLASTERED AND FINISH PAINT COATS AS INDICATED IN SUB ITEMS, COMPLETE IN ALL RESPECTS AS PER DRAWINGS.				
A.	PLASTIC EMULSION PAINT(ON INTERIOR WALLS) 3 COATS	48,000	SFT		
B.	TEXTURED PAINT (ON INTERIOR WALLS) 3 COATS	14,000	SFT		
C.	PLASTIC EMULSION PAINT(BLACK OR DARK GRAY ON CEILING DUCTS, AND BEAMS) 3 COATS	18,000	SFT		
D.	WEATHER SHEILD ON EXTERIOR AND FORE CORRIDOR WALLS 3 COATS	28,000	SFT		
E.	ENAMEL PAINT OF DUCTS, PIPES, CONDUITS, ETC.	1	SFT		
<b>TOILETS</b>					
<b>35</b>	<b>CORIAN COUNTER TOP</b>				
	PROVIDING AND FIXING OF CORIAN COUNTERTOP OF APPROVED SHADE AND DESIGN. HAVING SS TRIM 0.5 INCH THICK ON JOINING SURFACES AND 0.5 INCH BELOW JOINT LINE. EACH VANITY TO HAVE ITS OWN INDEPENDENT DOUBLE FRAMED STRUCTURE MADE OF 1/2" by 3/4" 10 MS PIPE. RED OXIDE AND PAINTED USING ENAMEL PAINT. WITH LACQUERED TOP. AS PER NEED AND REQUIREMENT FIXED TO THE WALL SECTION. USING APPROPRIATE ANCHORS. NOTE: THE TOP SURFACE AREA SHALL BE CONSIDERED FOR BILLING PURPOSE. DUPONT AMERICAN/ EUROPEAN ORIGIN ONLY.				
A.	FEMALE TOILET LARGE WING	12	SFT		
B.	MALE TOILET LARGE WING	12	SFT		
C.	FEMALE CHIEF TOILET LARGE WING	9	SFT		
D.	MALE CHIEF TOILET LARGE WING	9	SFT		
E.	FEMALE TOILET SMALL WING	12	SFT		
F.	MALE TOILET SMALL WING	12	SFT		
G.	FEMALE CHIEF TOILET SMALL WING	9	SFT		
H.	MALE CHIEF TOILET SMALL WING	9	SFT		
<b>CEILING</b>					
<b>36</b>	<b>MS CEILING TRELLIS</b>				
	P/F APPROVED DECO PAINTED. 16 SWG MS T-SECTION (SIZE:0.75" x 0.5", WxH) BOX SECTION OPEN CEILING TRELLIS @ 2 FEET c/c SUSPENDE USING GI THREADED RODS M10. ALL NECESSARY SUPPORT STRUCTURE IS INCLUDED IN THE JOB.	2,200	SFT		
<b>37</b>	<b>MARINE PLY DECO PAINTED FLUTED PANELS CEILING</b>				
	PROVIDING AND FIXING OF FLUTED PANELS MADE OF MARINE PLY HAVING CNC ROUTING OR PROFILED TO ARCHITECTS SPEC 16mm THICK, PASTED ON TOP OF 12mm TH MARINE PLY SHEET WITH ROUGH WOOD FARMING of 1" by 2" @ 1 FEET c/c AT BACK SIDE TO SECURE IN PLACE TO DESIRED CEILING LEVEL AS PER DRAWING. MARINE PLY BATTONS TO BE PASTED AFTER MAKING IT SECURE IN PLACE WITH APPROVED DECO PAINT ON SPECIFIED WALLS COMPLETE IN ALL RESPECTS. ALL NECESSARY SUPPORT/ FRAMING STRUCTURE IS INCLUDED IN THE JOB. SECTION PLY: 28mm, FRAMING: 25mm Th MATERIAL.  <b>NOTE:</b> CONTRACTOR TO INCLUDE PRICE OF CUTTING FOR LIGHT ACCESSORIES AND CREATION OF ACCESS PANELS WHERE NEEDED.				
A.	WAITING AREA	220	SFT		
B.	ENTRANCE LOBBY	380	SFT		
C.	AUDITORIUM HALLWAY	580	SFT		

8th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>38</b>	<b>PELMIT LIGHT ON FLUTED PANEL CEILING</b>				
	P/F IN POSITION DC LED STRIP LIGHT @ 120 LEDs PER METRE (36 LEDs PER FOOT) IN/AROUND FLUTTED PANEL CEILING, INCLUDING MAKING OF COVE OR CUT OUT OR ANY OTHER REQUIRED PROFILE AS INSTRUCTED BY ARCHITECT WITH APPROVED PAINT FINISH MAKING OF LIGHT PELMET WITH FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT. NOTE: RUNNING LENGTH OF THE LIGHT WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.	400	RFT		
<b>39</b>	<b>GYPSUM CEILING</b>				
	P/F IN POSITION GYPSUM BOARD CEILING, CONSISTING OF G.I. FRAME WORK OF APPROVED SECTIONS WITH G.I. HANGERS AND 16-18 SWG. 12MM THICK GYPSUM BOARD SHEET FIXED ON FRAME WITH APPROVED PAINT FINISH ON GYPSUM, CUTTING OF OPENING FOR LIGHT FIXTURES / AC CASSETTES WITH MAKING OF LIGHT PELMET, FIBER TAPE ON JOINTS, METAL TAPE ON EDGES, INCLUDING PRIMER COAT FILLING IF REQUIRED AND ALL OTHER HARDWARES, WASTAGE, SCAFFOLDING, MAKING ACCESS PANEL (WHERE REQUIRED), ETC., COMPLETE IN ALL RESPECT. NOTE: FLAT AREA OF CEILING WILL BE MEASURED AND PAID. THE CONTRACTOR WILL HAVE TO GET A SAMPLE APPROVED FROM THE CONSULTANT BEFORE EXECUTION. THE SAMPLE SHOULD HAVE A GROVE AND WHITE MATT PAINT FINISH.	4,600	SFT		
	<b>LIFT LOBBY</b>				
<b>40</b>	<b>WOOD HANDRAIL (FIXED UPON EXISTING IRON BALUSTER)</b>				
	PROVIDING AND FIXING IN-POSITION WOOD HANDRAIL OF APPROVED PROFILE AND POLISH / FINISH UPON EXISTING IRON BALUSTERS, AS SHOWN ON DRAWINGS. WORKS INCLUDE REMOVING OF EXISTING IRON BALUSTERS, POWDER COATING OF EXISTING IRON BALUSTERS AFTER SCAPING AND REPAIRING. FIXING THE BALUSTERS TO FLOOR. ALL WORKS ARE TO BE COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	90	RFT		
<b>41</b>	<b>EXPANSION JOINTS CLIPS</b>				
	PROVIDING AND FIXING OF EXPANSION JOINT CLIPS. W TYPE PROFILE 4" WIDTH 1" TO BE EMBEDDED IN THE FLOOR, EXPANSION TO BE TREATED BY PUTTING IN AND SECURING IN PLACE BECKER ROD OF APPROPRIATE WIDTH, AND SEALING IT WITH APPROVED SEALANT TILL W PROFILE SECTION. MAKING SURE THE JOINT AND SEALANT ARE TIGHTLY BOUND AND DO NOT LET WATER PENETRATE THROUGH. CUTTING & GROUTING WHERE NECESSARY SHALL BE USED. COMPLETED AS PER DRAWINGS, AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.	1	JOB		
	<b>ROOF GARDEN</b>				
<b>42</b>	<b>MS FRAME FOR DECKING</b>				
	P/F OF MS FRAME FOR DECKING OF WOOD FLOORS WHEREVER REQUIRED.	3	TON		
<b>43</b>	<b>BLOCK MASONRY FOR PLANTER</b>				
	P/F OF BLOCK MASONRY FOR MAKING OF PLANTERS. 6" Th	1,800	SFT		
<b>44</b>	<b>STONE CLADDING ON PLANTER</b>				
	P/F OF STONE CLADDING ON PLANTERS WHEREVER REQUIRED WITH OCEAN BROWN OR EQUIVALENT STONES	2,400	SFT		
<b>45</b>	<b>BENCHES</b>				
	P/F OF CC BENCHES WITH TERAZZO FINISH TOP FOR ROOF GARDEN WITH WOOD BATTONS SEAT	10	NO.		

<b>8th FLOOR - CIVIL WORK</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>46</b>	<b>COLOR CRETE</b>				
	P/F COLOR CRETE ON ROOF TERRACE WALLS WHEREVER REQUIRED	2,200	SFT		
<b>47</b>	<b>WOOD PLANKS FOR AESTHICAL PURPOSE</b>				
	P/F OF WOOD PLANKS OF 4" , 6" 8" 2" TH. AS PER DESIGN AND DRAWING FOR ARCHITECTURAL WORKS TO CREATE SEATING AND PARTITIONS. SEASONED OAK WOOD TO BE FINISHED IN NATURAL POLISH.	600	SFT		
<b>48</b>	<b>COAL FILLING</b>				
	P/F OF COAL FILLING FOR RAISED FLOOR UPTO 1FT HEIGHT	1,200	SFT		
<b>49</b>	<b>C.C. FLOOR</b>				
	POURING OF C.C FLOOR AS INSTRUCTED BY ARCHITECT 1:2:4 as DESIRED	400	CFT		
<b>50</b>	<b>OAK WOOD CLADDING ON FLOOR</b>				
	P/F OF OAK WOOD CLADDING ON FLOOR WITH 0.5" THICK, 4" WIDE AND 8FT LONG FLOORING RAFTERS PASTED UPON MARINE PLY POLISHED AS INSTRUCTED BY ARCHITECT.	1,200	SFT		
<b>51</b>	<b>PLANTER</b>				
	P/F OF CUSTOMIZED PLANTER MADE OF CONCRETE PLANTERS MATERIAL AND DESIGN. WITH LIVE PLANT AND BAILS <b>NOTE:</b> THE CONTRACTOR SHALL MAKE AND APPROVE THE SAMPLE BEFORE EXECUTION. AVERAGE SIZE: 2'-6"DIA 3'6" HEIGHT	60	No.		
<b>52</b>	<b>MS PERGOLA SHADE</b>				
	P/F OF PERGOLA SHADE MADE WITH MS FRAMING AND ARTIFICIAL WOOD PANELS AND BAMBOO REEDS FOR SHADING	1,400	SFT		
<b>AUDITORIUM</b>					
<b>53</b>	<b>AUDITORIUM PODIUM</b>				
	MAKING OF 30" HIGH RAISED PODIUM AS AUDITORIUM STAGE BY MAKING FRAME WITH 2"X2" OAK WOOD FRAMING WITH MARINE PLY ON THE TOP AND WOOD LAMINATE FLOOR ABOVE. THE COST SHALL INCLUDE MAKING OF STAIRS AND OTHER NECESSARY WORKS.	380	SFT		
<b>54</b>	<b>AUDITORIUM STEPS</b>				
	MAKING OF AUDITORIUM SPECTATORS STEPS BY MAKING FRAME WITH 2"X2" OAK WOOD FRAMING WITH MARINE PLY ON THE TOP AND WOOD LAMINATE FLOOR ABOVE. THE COST SHALL INCLUDE MAKING OF STAIRS AND OTHER NECESSARY WORKS.	1,800	SFT		
<b>55</b>	<b>ACOUSTIC PANELS</b>				
	P/F OF BEST QUALITY ACOUSTIC PANELS FOR WALLS AND CEILINGS OF AUDITORIUM AS INSTRUCTED BY ARCHITECT. ACOUSTIC PANELS TO BE PASTED. ON TOP OF MARINE PLY WITH WOODEN FRAMING OF 2" by 3"				
<b>A.</b>	<b>CEILING</b>	1,200	SFT		
<b>B.</b>	<b>WALLS</b>	2,500	SFT		
<b>FIRE EXTINGUISHER</b>					
<b>56</b>	<b>FIRE EXTINGUISHER DRY TYPE</b>				
	> <b>DCP FIRE EXTINGUISHER 6 KG</b> > CAPACITY: 6 KG FIRE > RATING: 34B > HIGHLY EFFECTIVE ON A, B & C CLASS OF FIRE > AVERAGE DISCHARGE TIME: 21.0 SEC > DIAMETER: 150 MM > FILLED WEIGHT: 10.3 KG > OPERATING TEMPERATURE: -30°C TO 55°C > WORKING PRESSURE: 15 BAR > SERVICE PRESSURE: 18 BAR > TEST PRESSURE: 35 BAR > FLOOR STAND OR WALL MOUNT BRACKET INCLUDING ACCESSORIES > <b>NEFFCO, SFFECO OR EQUIVALENT</b>	10	No.		
<b>57</b>	<b>FIRE EXTINGUISHER FOAM TYPE (FOR KITCHEN)</b>				

8th FLOOR - CIVIL WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<ul style="list-style-type: none"> <li>&gt; AFFF FOAM TYPE FIRE EXTINGUISHER</li> <li>&gt; CAPACITY: 9 LTR</li> <li>&gt; FIRE RATING: 34A 183B</li> <li>&gt; WORKING PRESSURE: 13.5 BAR</li> <li>&gt; TOTAL WEIGHT: 16.5 KG</li> <li>&gt; MAXIMUM OPERATING PRESSURE: 18.5 BAR @ 60°C</li> <li>&gt; TESTED AT PRESSURE: 30 BAR</li> <li>&gt; FLOOR STAND OR WALL MOUNT BRACKET INCLUDING ACCESSORIES</li> <li>&gt; NEFFCO, SFFECO OR EQUIVALENT</li> </ul>	2	No.		
<b>SIGNAGE</b>					
<b>58</b>	<b>WALL SIGNAGE</b>				
	WALL SIGNAGE MADE OF 3mm CLEAR ACRYLIC WITH REVERSE PLOTTER CUT WHITE VINYL OVER VINYL OF APPROVED BASE COLOR. SIZE: 4" x 12"	15	No.		
<b>59</b>	<b>WALL BOARD SIGNAGE</b>				
	WALL BOARD SIGNAGE OF 6mm CLEAR ACRYLIC WITH REVERSE PLOTTER CUT WHITE VINYL OVER VINYL OF APPROVED BASE COLOR. SIZE: 48" x 36"	2	No.		
<b>60</b>	<b>CEILING HUNG + SIGNAGE DOUBLE SIDED</b>				
	CEILING HUNG + SIGNAGE DOUBLE SIDED MADE OF 25mm ACRYLIC SIGNAGE IN APPROVED COLOR WITH S.S FITTING PIPE. TEXT TO BE LASER CUT IN 8mm ACRYLIC OF APPROVED COLOR. SIZE: 24" x 9" 3" LETTER HEIGHT	2	No.		
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
<b>61</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>62</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>COST OF CIVIL WORK EIGHTH FLOOR</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**8th FLOOR**  
**FURNITURE WORKS NOT TO BE QUOTED**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

**8th FLOOR - FURNITURE**

S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<p>NOTES:</p> <ul style="list-style-type: none"> <li>&gt; ALL THE FURNITURE ITEMS LISTED BELOW MUST BE PROCURED BY APPROVED VENDOR BRAND I.E. GLOBAL, MASTER, INTERWOOD, DIMENSIONS OR EQUIVALENT.</li> <li>&gt; COMPLETE PROFILE BROCHURE OF ITEM ORIGIN OF ITEM TO BE SUBMITTED BY TENDERER.</li> <li>&gt; CONTRACTOR TO SUBMIT EACH SAMPLE TO CONSULTANTS HEAD OFFICE FOR REVIEW AFTER INSPECTION AT SITE OFFICE. SAMPLE TO BE CONSUMED FOR TESTING AND REVIEW. PHYSICAL SAMPLE IS TO BE A PART OF SUBMITAL ELSE CONDITIONAL APPROVAL CAN ONLY BE GRANTED.</li> <li>&gt; THE FINISHED PRODUCT SHALL BE DELIVERED TO THE SITE DULY COVERED WITH BUBBLE SHEET TO AVOID ANY BREAKAGE ETC. HOWEVER IN CASE OF ANY MINOR REPAIR ARISING OUT OF TRANSPORTATION ETC. THE SAME SHALL BE REPAIRED/ REPLACED IMMEDIATELY BY THE SUPPLIER WITHOUT ANY EXTRA COST.</li> <li>&gt; 1 YEAR COMPREHENSIVE MAINTAINANCE TO BE A PART OF TENDER WITH ALL STRUCTURAL, MECHANICAL, FINISHING WORKS TO BE INCLUDED.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>				
	<b>WORKSTATIONS AND DESKS</b>				
<b>1</b>	<b>WORKSTATIONS</b>				
	<ul style="list-style-type: none"> <li>&gt; HAVING A PARTITION WITH FABRIC SOFTBOARD OF NO MORE THAN 1'-4" IN HEIGHT HAVING TWO STUDDED ANCHORS WITH LOCK ON BOTTOM BETWEEN TWO WORKSTATION.</li> <li>&gt; DESK TOP THICKNESS IS 25MM, HAVING LIPPING OF MATCHING COLOR.</li> <li>&gt; FINISH: LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) DESKTOP OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; SQUARE LEGS (TAPPERED) AT 15 DEGREE WITH CABLE MANAGEMENT TRAY 1.2MM POWDER COATED AND OUTLET AT THE CENTRE.WITH EARTH POINT TO BE ATTACHED TO EARTH CABLE</li> <li>&gt; LEG WALL THICKNESS IS 2.0MM POWDER COATED TO COLOUR.</li> <li>&gt; WORKSTATION TO HAVE A LINEAR POWER TRAY UNDERNEATH FOR CABLE DISTRIBUTION ALONG WITH A CUT-OUT ON TOP HAVING A TECHNOLOGY BOX AS SPECIFIED IN THE ELECTRICAL COMPONENT OF THE TENDER.</li> <li>&gt; ONE MOBILE DRAWER UNIT INCLUDED 14 INCHES IN WIDTH AS PER INDUSTRY STANDARD..</li> <li>&gt; BEST QUALITY LOCK FOR DRAWERS WITH 3 KEYS INCLUDED.</li> <li>&gt; INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT.</li> <li>&gt; ALL FABRICS AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY THE ARCHITECT.</li> </ul>				
<b>A.</b>	<b>SIZE 5'-0"x4'-0" (LxW), 2'-6" DEEP</b>	9	No.	NTQ	NTQ
<b>B.</b>	<b>SIZE 4'-0"x4'-0" (LxW), 2'-6" DEEP</b>	6	No.	NTQ	NTQ

<b>8th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>2</b>	<b>FLOOR CABINETS</b>				
	PROVIDING AND FIXING IN POSITION FLOOR STANDING CABINETS; MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) DESKTOP OF ARCHITECT'S CHOICE OF COLOUR & FINISH. ARCHITECT'S CHOICE OF COLOUR & FINISH, ON TOP, FRONT AND SIDE WITH GROOVES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ARCHITECT. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
	<b>A. OVERALL SIZE 5'-0"x1'-0" (LxW), 2'-6" DEEP</b>	1	No.	NTQ	NTQ
	<b>B. OVERALL SIZE 4'-0"x1'-6" (LxW), 2'-6" DEEP</b>	3	No.	NTQ	NTQ
<b>3</b>	<b>CHIEF DESK</b>				
	> DESK TOP THICKNESS IS 25MM. > MELAMINE TOP OF APPROVED COLOR. HAVING A SIDE RETURN. OF 1'4". by 5' 6" Length. > AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING CABLE MANAGEMENT, CABLE TRAY AND TECHNOLOGY BOXES. WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	<b>&gt; DESK TO SIZE: (LxWxH) 6'-6"x 6'-3"x 2'-6"</b>	2	No.	NTQ	NTQ
<b>4</b>	<b>D.G.M DESK</b>				
	> DESK TOP THICKNESS IS 25MM. > MADE OF 20mm OAK PLY PRESSED ON BOTH SIDES WITH LAMINATE WITH MATCHING LIPPING (PATEX LAMINATES SERIES OR EQUIVALENT) > MATERIAL MDF WITH WOOD VENEER FINISH. > 100 MM X 40 MM TEAK WOOD FOOT REST WITH POLISHING AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
	<b>&gt; DESK TO SIZE: (LxWxH) 6'-6"x 6'-3"x 2'-6"</b>	3	No.	NTQ	NTQ
	<b>&gt; DESK TO SIZE: (LxWxH) 6'-6"x 6'-3"x 2'-6" (LIBRARIAN)</b>	1	No.	NTQ	NTQ
<b>5</b>	<b>OCCASSIONAL TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND MARBLE TOP OF APPROVED COLOUR AND FINISH. (SILVER TRAVERTINE, BLUEBERRY, RIO BLUE OR EQUIVALENT)				
	<b>&gt; SIZE: 1'-8" x 1'-8" x 2'-0" (LxWxH)</b>	4	No.	NTQ	NTQ
<b>6</b>	<b>CONSOLE TABLE</b>				
	SUPPLYING OF OCCASSIONAL TABLE WITH MS FRAME AND MARBLE TOP OF APPROVED DESIGN, COLOUR AND FINISH.(SILVER TRAVERTINE, BLUEBERRY, RIO BLUE OR EQUIVALENT)				
	<b>&gt; SIZE: 4'-0" x 1'-6" x 2'-0" (LxWxH)</b>	2	No.	NTQ	NTQ



<b>8th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>7</b>	<b>MEETING ROOM TABLE</b>				
	> 19 MM THICK MARINE BOARD WITH WOOD ROUND MOULDING FOR TABLE EDGES AND SUPPORTED ON 3mm THICK S.S. PIPES BRUSH 3.75mm DIA WITH 6mm THICK BASE AND TOP PLATE. > THE TOP MUST HAVE PROVISION FOR CABLE MANAGEMENT AND POP-UP MULTI SOCKET BOARD. > ALL INTERNAL SURFACE COVERED WITH 0.8MM THICK LAMINATE > ALL EXTERNAL SURFACES COVERED WITH 1.0 MM THICK LAMINATE OF APPROVED COLOUR. > RATES TO INCLUDE ALL NECESSARY ACCESSORIES. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>SIZE 4'-7" DIA, 3'-0" DEEP FOR 6 PERSONS</b>	1	No.	NTQ	NTQ
<b>8</b>	<b>RECEPTION TABLE</b>				
	PROVIDING AND FIXING IN POSITION RECEPTION TABLE; MADE OF 20mm THICK COMMERCIAL VEN BOARD HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING T3 TUBELIGHT TO BE HUNG BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. NOTE: CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
<b>A.</b>	<b>&gt; SIZE: (LxWxH) 4'-6" x 2'-8" x 4'-6"</b>	1	No.	NTQ	NTQ
<b>9</b>	<b>COFFEE TABLE (FOR INFORMAL SOFA SITTING)</b>				
	SUPPLYING OF COFFEE TABLE WITH MS FRAME AND MARBLE TOP OF APPROVED COLOUR AND FINISH. (SILVER TRAVERTINE, BLUEBERRY, RIO BLUE OR EQUIVALENT)				
<b>A.</b>	<b>&gt; SIZE: 4'-0" DIA, 1'-6" H (VISITORS LOUNGE)</b>	1	No.	NTQ	NTQ
<b>B.</b>	<b>&gt; SIZE: 5'-3"x4'-3", 1'-6" H (VISITORS LOUNGE)</b>	1	No.	NTQ	NTQ
<b>C.</b>	<b>&gt; SIZE: 4'-3" DIA, 1'-6" H (GATHERING LOUNGE)</b>	2	No.	NTQ	NTQ
<b>10</b>	<b>LIBRARY DESKS</b>				
	> 19 MM THICK MARINE BOARD WITH WOOD ROUND MOULDING FOR TABLE EDGES AND SUPPORTED ON 3mm THICK S.S. PIPES BRUSH 3.75mm DIA WITH 6mm THICK BASE AND TOP PLATE. > THE TOP MUST HAVE PROVISION FOR CABLE MANAGEMENT AND POP-UP MULTI SOCKET BOARD. > ALL INTERNAL SURFACE COVERED WITH 0.8MM THICK LAMINATE > ALL EXTERNAL SURFACES COVERED WITH 1.0 MM THICK LAMINATE OF APPROVED COLOUR. > RATES TO INCLUDE ALL NECESSARY ACCESSORIES. > INCLUDING POLISHING WHEREVER REQUIRED AS PER DESIGN AND INSTRUCTIONS BY ARCHITECT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>&gt; SIZE: 9'-6"x3'-0" (FOR STUDY)</b>	1	No.	NTQ	NTQ
<b>B.</b>	<b>&gt; SIZE: 8'-9"x1'-6" (FOR STUDY)</b>	1	No.	NTQ	NTQ

8th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>CHAIRS AND SEATING</b>				
<b>11</b>	<b>CHIEF CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; HIGH BACK WITH HEAD AND ARM REST BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT</li> </ul>	2	No.	NTQ	NTQ
<b>12</b>	<b>GUEST CHAIRS</b>				
	<ul style="list-style-type: none"> <li>&gt; TOP NOTCH QUALITY</li> <li>&gt; FIXED VISITOR CHAIR,</li> <li>&gt; MOULDED FOAM</li> <li>&gt; ITALIAN LEATHER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; BACK SHELL MADE OF PLASTIC WITH WOOD COLOUR PRINTED.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM).</li> <li>&gt; CUSTOMIZED ALUMINIUM LEG</li> <li>&gt; LIFT APPROVED WITH SGS.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.</li> </ul>	12	No.	NTQ	NTQ
<b>13</b>	<b>OFFICE CHAIRS (STAFF)</b>				
	<ul style="list-style-type: none"> <li>&gt; SHOULDER HEIGHT BACK REVOLVING CHAIR.</li> <li>&gt; CHAIR FRAME MADE OF NYLON + BACK FIBER OF ARCHITECT'S CHOICE OF COLOUR &amp; FINISH.</li> <li>&gt; MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3mm).</li> <li>&gt; DIECASTED ALUMINIUM BASE 350 MM.</li> <li>&gt; FABRIC PADDED SEAT</li> <li>&gt; LUMBAR BACK SUPPORT.</li> <li>&gt; MESH FABRIC.</li> <li>&gt; TORSION BAR BASIC TILTING MECHANISM.</li> <li>&gt; THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM.</li> <li>&gt; ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT.</li> </ul>	30	No.	NTQ	NTQ

8th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>14</b>	<b>MEETING CHAIRS</b>				
	> SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT. > SHOULDER HEIGHT BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > MESH FABRIC. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT	6	No.	NTQ	NTQ
<b>15</b>	<b>WAITING CHAIRS</b>				
	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STEEL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.	4	No.	NTQ	NTQ
<b>16</b>	<b>SOFA FOR 3</b>				
	> SUPPORTED ON METAL LEGS. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	(LxWxH) ROUND STYLE 12'-0" x 2'-10" x 2'-10" (GATHERING)	2	No.	NTQ	NTQ
B.	(LxWxH) 8'-0" x 3'-0" x 2'-10" (VISITOR LOUNGE)	1	No.	NTQ	NTQ
<b>17</b>	<b>SOFA FOR 2</b>				
	> SUPPORTED ON METAL LEGS. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
A.	(LxWxH) 7'-0" x 3'-0" x 2'-10" (VISITOR LOUNGE)	1	No.	NTQ	NTQ
B.	(LxWxH) 5'-3" x 3'-0" x 2'-10" (CHIEF OFFICE)	2	No.	NTQ	NTQ

8th FLOOR - FURNITURE					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>18</b>	<b>SOFA FOR 1</b>				
	> SUPPORTED ON METAL LEGS. > COVERED WITH TOP-QUALITY IMPORTED FAUX LEATHERETTE / FABRIC. > SPONGE: HIGH QUALITY POLYMERIC URETHANE FOAM 1.4 MINIMUM DENSITY AS THE DIFFERENCE PART , SEAT AND BACK. > SPRING: IMPORTED SPRING FOR STRONG SUPPORT. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.				
<b>A.</b>	<b>(LxWxH) 3'-0" x 2'-10" x 2'-10" (CHIEF ROOMS)</b>	2	No.	NTQ	NTQ
<b>B.</b>	<b>(LxWxH) 3'-0" x 2'-10" x 2'-10" (VISITOR LOUNGE)</b>	2	No.	NTQ	NTQ
<b>C.</b>	<b>(LxWxH) 3'-0" x 2'-10" x 2'-10" (GATHERING)</b>	3	No.	NTQ	NTQ
<b>19</b>	<b>LIBRARY STUDY CHAIRS</b>				
	> FRAME MATERIAL: WOOD > SYNTHETIC LEATHER UPHOLSTERY OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > SEAT FOAM : POLYURETHANE FOAM WITH APPROPRIATE FABRIC OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > FOAM DENSITY : 18 KG/ CUBIC CM. > BACK FOAM : POLYURETHANE FOAM WITH SILICON FILL AT ARMS. > BACK FOAM DENSITY : 22 KG/CUBIC CM S-SPRING WEBBING. > THE ARMCHAIR IS BASED ON STEEL LEG. > THE LEG BASE MUST HAVE RUBBER PADDING. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT.	9	No.	NTQ	NTQ
<b>20</b>	<b>SEATING BENCH</b>				
	>SIZE: 8'-3"x2'-0"x1'-6" (LxWxH) FOR ENTRANCE LOBBY	4	No.	NTQ	NTQ
<b>21</b>	<b>D.G.M CHAIRS AND LIBRARIAN CHAIR</b>				
	> TOP NOTCH QUALITY > HIGH BACK WITH HEAD REST BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > MESH FABRIC. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT	4	No.	NTQ	NTQ

<b>8th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>22</b>	<b>RECEPTION CHAIR</b>				
	> SIZE: 24" WIDTH, 18" DEPTH, 39" HEIGHT. > SHOULDER HEIGHT BACK REVOLVING CHAIR. > CHAIR FRAME MADE OF NYLON + BLACK FIBER OF ARCHITECT'S CHOICE OF COLOUR & FINISH. > MULTI FUNCTIONAL AND AUTOMATICALLY SELF-WEIGHT ADJUSTABLE MECHANISM (THICKNESS 3 MM). > DIECASTED ALUMINIUM BASE 350 MM. > FABRIC PADDED SEAT > LUMBAR BACK SUPPORT. > MESH FABRIC. > TORSION BAR BASIC TILTING MECHANISM. > THE CHAIR MUST HAVE BEST QUALITY BASE WHEELS WITH LOCKING MECHANISM. > ALL FABRICS, LEATHERS, AND FINISHES WILL BE APPROVED UPON PHYSICAL INSPECTION OF SWATCHES BY ARCHITECT. HAVING ADJUSTABLE ARMS SUPPORT	1	No.	NTQ	NTQ
	<b>MISCELLANEOUS</b>				
<b>23</b>	<b>PICTURE FRAME</b>				
	PICTURE FRAME WITH OIL / ACRYLIC ON CANVAS WITH APPROVED FRAME MADE OF WOOD / FIBRE, ALONG WITH ALL NECESSARY ACCESSORIES FOR HANGING AND SUSPENSION.				
<b>A.</b>	> AVERAGE SIZE 15 SFT	10	No.	NTQ	NTQ
<b>24</b>	<b>RUG</b>				
	SUPPLYING OF BEST QUALITY WOOLEN RUG OF MAKE. (EWC, ABBAS CARPETS OR EQUIVALENT)				
<b>A.</b>	> AVERAGE SIZE 80 SFT	5	No.	NTQ	NTQ
<b>25</b>	<b>PLANTER</b>				
<b>a.</b>	P/F OF CUSTOMIZED PLANTER MADE OF CORIAN / PORCELAIN/ CLAY / WOOD OR ANY OTHER PRESCRIBED MATERIAL AND DESIGN. <b>NOTE:</b> THE CONTRACTOR SHALL MAKE AND APPROVE THE SAMPLE BEFORE EXECUTION. AVERAGE SIZE: 1'-3"x1'X3"x 1'-3" (LxWxH)	25	No.	NTQ	NTQ
<b>26</b>	<b>PANTRY CABINET</b>				
	PROVIDING AND FIXING IN POSITION FLOOR CABINETS & HANGING TYPE CABINETS; MADE OF 20mm THICK COMMERCIAL VEN BOARD HAVING OAK PLY PRESSED ON BOTH SIDES APPROVED, ON TOP, FRONT AND SIDE WITH GROOVES; 3/8" THICK LACQUERED DEODAR WOOD LIPPING/ UPVC ON ALL EDGES; INCLUDING DIVIDER, SHELVES; IMPORTED MAGNETIC HINGES, LOCK, STAINLESS STEEL HANDLES WITH POLISH FINISH AS PER APPROVED SAMPLE AND AS DIRECTED BY ENGINEER. INCLUDING MAKING PROVISION OF GLASS HOOD.COMPLETE WIRING SOLUTION FOR UNDER COUNTER LIGHT TO BE PROVIDED BY CONTRACTOR USING T3 TUBELIGHT TO BE HUNG BELOW CABINET FOR APPROPRIATE LIGHTING CONTRACTOR TO SUBMIT LIGHT SAMPLES ALONG WITH COLOR CHOICE. FRONT FACE TO BE MEASURED FOR PAYMENT. <b>NOTE:</b> CONTRACTOR MUST SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL BEFORE EXECUTION OF WORKS. THE ARCHITECT/ ENGINEER ON SITE HAS THE AUTHORITY TO CHANGE DETAILS AS PER SITE.				
<b>A.</b>	> SIZE: (LxWxH) 10'-0" x 2'-0" x 9'-6". (LARGE WING PANTRY)	1	SFT	NTQ	NTQ
<b>B.</b>	> SIZE: (LxWxH) 6'-3" x 2'-0" x 9'-6". (VISITOR LOUNGE)	1	SFT	NTQ	NTQ

<b>8th FLOOR - FURNITURE</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
	<b>AUDITORIUM</b>				
<b>27</b>	<b>AUDITORIUM CHAIRS</b>				
	P/F OF BEST QUALITY RETRACTABLE AUDITORIUM CHAIRS HAVING FABRIC AND FINISH OF ARCHITECT'S CHOICE	116	No.	NTQ	NTQ
<b>28</b>	<b>AUDITORIUM PODIUM</b>				
<b>A.</b>	>SIZE 2'x1'-6"x4'x3" (LxWxH)	1	No.	NTQ	NTQ
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
<b>29.</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB	NTQ	NTQ
<b>30</b>	<b>SHOP DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS OF EVERY FURNITURE ITEM WHICH WILL BE FABRICATED / INSTALLED ON SITE.	1	JOB	NTQ	NTQ
	<b>COST OF FURNITURE</b>				<b>NTQ</b>

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**8th FLOOR**  
**ELECTRICAL WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

<b>8th FLOOR - ELECTRICAL WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
	<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
	<b>SECTION-A MAIN / SUB-MAIN LV PANELS &amp; DISTRIBUTION BOARDS</b>				
	<p><b>Supply, testing &amp; commissioning</b> of following <b>Distribution Boards</b> as shown on drawing made with <b>14 SWG sheet steel housing</b> including all installation accessories such as Rawal bolt etc. Complete in all respects.</p> <p><b>Note: (Refer Single Line Diagram)</b></p> <p>1) All the Panels / DBs should be front accessible and maintainable.            2) Cost of Lighting Control Relays &amp; Power Supplies should be Included in Distribution Boards .            3) The transportation and placement of DBs upto site and respective locations is also included in the work scope, complete in all respects including leveling, grouting etc.            4) Laser engraved tags required as mention in SLDs            5) Space for circuit tagging required with permanent installation on protective sheet via rivets            6) 20% space required in Panels / DBs for future provision            7) Tin plated Imported 99.99% pure Tinned Cu bus bar with heat shrink color coded sleeves to be used.            8) Hindged protective metallic door required with knob/handle.            9) Braided Door earth required.            10) Lockable handle required for main door.            11) As-built drawing pocket.            12) Cable hanging arrangement.            13) MIMIC Diagram is required on doors of all the Panels.            14) Panel Lights and Exhaust Fans with Door Limit Switch &amp; Temperature Sensors are required in all the floor standing Panels.            15) All the Floor Standing Panels shall be Type-Tested Type.            16) MOA to be provided in the ATS of LV Panels.            17) Anti-Condensation Heater to be provided in all the Floor Standing Panels.            18) Bypass Option in-case of synch panel Failure.</p>				
1.	DB-Lift	1	No.		
2.	DB-8F	1	No.		
3.	LPDB-8F	1	No.		
4.	UDB-8F	1	No.		
5.	Breaker Box with 125A TP MCCB For HVAC Large Wing Area	1	No.		
6.	Breaker Box with 100A TP MCCB For HVAC Small Wing Area	1	No.		
	<p><b>Note:</b></p> <p>1) <b>Supply &amp; Installation</b> of MCCs required for Fire Fighting, HVAC &amp; Plumbing Services shall be in the scope of Mechanical Works.</p>				
	<b>SECTION-F MAIN / SUBMAIN CABLES</b>				
	<p><b>Supply, installation, testing, commissioning and termination</b> of following <b>8.7/15kV, CU/XLPE/PVC (MV Cables)</b> in already installed Cable trench / Cable ladder / Cable tray / Duct Bank including all accessories. Complete in all respects.</p>				
6.	<p><b>From Tap Off Box to DB-8F</b> 4C-120 Sqmm Cu/XLPE/PVC + ECC 1C-70 Sqmm Cu/PVC</p>	5	Rm.		
7.	<p><b>From Tap Off Box to DB-Lift</b> 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC</p>	5	Rm.		
8.	<p><b>From DB-Lift to Respective Lift Isolator</b> 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC</p>	30	Rm.		
9.	<p><b>From DB-8F to LPDB-8F (Large Wing)</b> 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC</p>	5	Rm.		
10.	<p><b>From DB-8F to LPDB-8F (Small Wing)</b> 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC</p>	5	Rm.		



8th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
11.	From DB-8F to Breaker Box For HVAC 8F1 (Large Wing) 4C-50 Sqmm Cu/PVC/PVC + ECC 1C-25 Sqmm Cu/PVC	75	Rm.		
12.	From DB-8F to Breaker Box For HVAC 8F2 (Small Wing) 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	45	Rm.		
<b>WIRING</b>					
13.	<b>CIRCUIT / POINT WIRING &amp; SWITCH ACCESSORIES</b>				
	PROVIDING, FIXING & LAYING OF WIRING FOR LIGHTS AND EXHAUST/ FALSE CEILING/ CEILING FANS, WITH COMPLETE INSTALLATION ON WHATEVER SURFACE; THE PRICE IS TO INCLUDE ANY FABRICATION/ BOXING MADE OF ANODIZED GI FRAME OR WOODEN FRAME AS ADVISED BY THE ARCHITECT ON-SITE IF NEEDED TO BE MOUNTED ON THE CEILING DIRECTLY. ALL MOUNTINGS AND VERTICAL SUSPENSIONS WILL BE DONE USING FISCHER OR EQUIVALENT ANCHORS WITH M10 THREADED GI RODS. IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS, AND OTHER ACCESSORIES WITH 3X2.5 mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST/NEWAGE WITH 16 SWG SHEET STEEL SWITCH BOXES DULY APPLIED WITH RED OXIDE BASE PAINT SPRAY PAINTED AS REQUIRED AND THE BOX TO BE CONCEALED AND INCLUDING P/F OF 10A CLIPSAL/ CLOPAL/ SIEMENS MAKE SWITCH WITH CLIPSAL/ CLOPAL/ SIEMENS COVER GANG PLATE ETC. AND CONCEALED WITH CEILING ROSE COMPLETE IN ALL RESPECT AS REQUIRED.	70	No.		
14	SAME AS (A) BUT POINT TO POINT WIRING	450	No.		
15	PROVIDING, FIXING & LAYING OF WIRING POWER CIRCUITS <b>FROM DB TO MULTI-SWITCHBOARD (S) (MB-1)</b> WITH 2 X 4 SQ. mm + ECC 1X2.5 SQ. mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 mm DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED.	55	No.		
16	PROVIDING, FIXING & LAYING OF WIRING POWER CIRCUITS <b>FROM DB TO SWITCHBOARD (S) (INDUSTRIAL SOCKETS)</b> WITH 2 X 4 SQ. mm + ECC 1X2.5 SQ. mm PVC INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 MM DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED). <b>INCLUDING I/O FACE PLATE.</b> COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED.	45	No.		
17	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF NETWORKING TWO (2) CABLE CAT 6 CLIPSAL / 3M CABLE IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED I/O FACE PLATE HAVING 02 No. CAT6 CONNECTORS, CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS. <b>NOTE: ALL DATA CABLES SHALL HAVE SEPARATE CONDUITS FROM POWER LINES TO AVOID ELECTROMAGNETIC FIELD (EMF) INTERFERENCE AND ATTENUATION.</b>	55	No.		
18	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF TELEPHONE RJ45 CLIPSAL / 3M CABLE IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED I/O FACE PLATE HAVING 01 No. RJ-45/RJ11 CONNECTORS, CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS.	6	No.		

8th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>19</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN WALLS OR SLABS OF CONCRETE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK.				
<b>A.</b>	4" DIA	15	No.		
<b>B.</b>	6" DIA	5	No.		
<b>C.</b>	8" DIA	1	No.		
<b>SWITCH SOCKET OUTLET (SSO)</b>					
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
<b>20.</b>	SUPPLY & INSTALLATION OF THE FOLLOWING SWITCH SOCKET OUTLETS (SSO) OF MAKE CLOPAL, SIEMENS, CLIPSAL, AND ORANGE, WITH 16 SWG MS BACK BOXES MADE OF 1.2 MM POWER COATED SHEET STEEL WITH EARTH TERMINALS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, INSULATED WIRE OF PAKISTAN CABLES /FAST /NEWAGE IN 20/25 MM DIA PVC GALCO CONDUIT RECESSED IN WALLS, COLUMNS AND CEILING ETC. (IF REQUIRED) COMPLETE WITH BENDS, SOCKETS AND OTHER ACCESSORIES COMPLETE IN ALL RESPECT AS REQUIRED				
<b>A.</b>	13AMP UNIVERSAL/INTERNATIONAL 3 PIN SSO PVC INSULATED WIRE	30	No.		
<b>B.</b>	15AMP UNIVERSAL/INTERNATIONAL 3PIN SSO (INDUSTRIAL SOCKETS)	15	No.		
<b>GANG SWITCHES</b>					
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
<b>21.</b>	SUPPLY AND INSTALLATION OF FOLLOWING 10 AMPS, ONE-WAY <b>GANG TYPE SWITCHES</b> OF MAKE CLOPAL, SIEMENS, CLIPSAL OR EQUIVALENT, INCLUDING BACK BOXES, RECESSED ON WALL OR COLUMN AS PER DESIGN DRAWINGS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, COMPLETE WITH ALL ACCESSORIES & CONNECTIONS IN ALL RESPECTS.				
<b>A.</b>	3 GANG SWITCHES	1	No.		
<b>B.</b>	4 GANG SWITCHES	60	No.		
<b>TECHNOLOGY BOX / BOARD</b>					
	NOTE: SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
<b>22.</b>	SUPPLY AND INSTALLATION OF TECHNOLOGY BOX / BOARD OF MAKE CLOPAL, SIEMENS, CLIPSAL OR EQUIVALENT, INCLUDING WATERPROOF BACK BOXES, WATERPROOF HOUSING WITH LID AND POWER SWITCH, FIXED ON A WORKSTATION, GYPSUM OR ANY OTHER SURFACE WALL AS PER DESIGN DRAWINGS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, INCLUDING CABLE MANAGEMENT VIA SQUARE MATCHING PIPE OF 18 SWG EARTHED OR CABLE MANAGEMENT SLEEVES OF BEST QUALITY AS PER APPROVAL OF TECHNICAL SPECIFICATIONS AND SAMPLES BY THE ARCHITECT ON SITE. ALL CABLES ARE TO BE TAGGED VISIBLY END TO END. APPROPRIATE DATA/ POWER CABLES/ WIRES WILL RUN THROUGH APPROPRIATE CONDUITS INSIDE THE ALUMINIUM CHANNEL. COMPLETE WITH ALL ACCESSORIES & CONNECTIONS IN ALL RESPECTS HAVING THE FOLLOWING SWITCH AND SOCKETS.				
<b>A.</b>	<b>TECHNOLOGY BOX A (FOR GENERAL WORKSTATIONS)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)	48	No.		
<b>B.</b>	<b>TECHNOLOGY BOX B (FOR EXECUTIVE DESK)</b> A. 3 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 3 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)	4	No.		

8th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>C.</b>	<b>TECHNOLOGY BOX C (EXECUTIVE TV / MEETING TV)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)	5	No.		
<b>D.</b>	<b>TECHNOLOGY BOX D (ATTENDANCE MACHINE)</b> A. 0 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 1 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)	4	No.		
<b>LIGHT FITTINGS AND FIXTURES</b>					
<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.					
<b>23.</b>	<b>LED CEILING RECESSED DOWN LIGHT</b>				
	P/F, CONNECTING, TESTING & COMMISSIONING OF OPPL/ SOGO/ PHILIPS/ BRITLITE/ ORANGE <b>RECESSED MOUNTED DOWNLIGHT</b> HAVING APPROVED COLOUR TEMPERATURE with PF >0.90 AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT AFTER APPROVAL OF PHYSICAL SAMPLE, COMPLETE WITH MAKING A HOLE AS MAY BE REQUIRED AND TO FINISH THE SURFACE SUITABLY AFTER INSTALLATION AND WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS. <b>NOTE:</b> ALL SAMPLES/TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO THE EXECUTION OF WORKS.				
<b>A.</b>	6W TO 9W	30	No.		
<b>B.</b>	10W TO 12W	185	No.		
<b>C.</b>	13W TO 15W	63	No.		
<b>24.</b>	<b>CEILING RECESSED LINEAR LIGHT MAGNETIC TRACK</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 1 METER LONG CEILING RECESSED LINEAR MAGNETIC TRACK LIGHT CONNECTED TO MAKE TRACKS OF SUITABLE DIMENSIONS WITH COMPLETE ACCESSORIES AND JOINERIES SUCH AS POWER ADAPTER 200 WATTS, CONTINUITY TRACK TO TRACK CONNECTOR. RECESSED IN FALSE CEILING USING THREADED RODS AS ANCHORS. EACH TRACK TO HAVE ATLEAST 4 LIGHTS HAVING 12 LED POINTS RATED AT 12 WATTS EACH MAGNETIC LIGHT WITH REFLECTORS. OF ARCHITECTS CHOICE AND APPROVAL. <b>NOTE:</b> CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	10	No.		
<b>25.</b>	<b>LINEAR TRACK LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 3'-0" LINEAR TRACK LIGHT. HAVING 2 LIGHTS PER FEET 6 WATTS LED. <b>NOTE:</b> CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
<b>A.</b>	LIFT LOBBY	20	No.		
<b>B.</b>	LIBRARY	16	No.		

8th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
26.	<b>WALL SCONCE DOWNLIGHT (STAIRS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF WALL SCONE DOWNLIGHT APPROX 15 WATT. OF APPROVED DESIGN. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.				
A.	LIFT LOBBY	10	No.		
27.	<b>HANGING LIGHT LINEAR L1 (WORKSTATIONS)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 5'-3" LONG 30WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT WITH DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	14	No.		
28.	<b>HANGING LIGHT LINEAR L2</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 3'-0" LONG 20 WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT.. WITH LED LIGHT DRIVER DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	4	No.		
29.	<b>HANGING LIGHT LINEAR L3 (CHIEF DESK &amp; MEETING ROOM)</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING OF APPROX. 5'-6" LONG 30 WATTS LINEAR DC LIGHT ALUMINUM BODY WITH LIGHT DIFFUSE KIT. DIFFUSED LIGHTING AND GRID LIGHTING TO BE AVILABLE IN ONE UNIT HAVING POLYCARBONATE SHEET AS PER LENGTH SPECIFIED AND AGREED BY ARCHITECT. WITH LED LIGHT DRIVER. COMPLETE WITH HANGING ACCESSORIES. PHILIPS GREENUP LINEAR FLEX OR EQUIVALENT NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	4	No.		
30.	<b>CHANDELIER LIGHT</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING CHANDELIER LIGHT. HAVING CLUSTER OF 4 NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	2	No.		
31.	<b>FLOOR STANDING LAMP</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING FLOOR STANDING LAMP. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	5	No.		

8th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>32.</b>	<b>WALL / MIRROR LIGHTS</b>				
	PROVIDING, INSTALLING, CONNECTING, TESTING, AND COMMISSIONING WALL / MIRROR LIGHTS. NOTE: CONTRACTOR TO SUBMIT SAMPLES OF EACH ITEM TO BE USED ALONG WITH SPECIFICATION TO CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST PROVIDE DETAILED SHOP DRAWINGS BEFORE THE COMMENCEMENT OF WORK.	8	No.		
<b>33.</b>	<b>EMERGENCY LIGHT</b>				
	P/F OF <b>EMERGENCY LIGHT</b> OF MAKE "OPPLE/ SOGO/ ORIENT/ OR PHILIPS" BRITLITE/ 2 X 8W FLUORESCENT LAMPS HAVING COLOUR TEMPERATURE 3500 K WITH BATTERY CHARGER. CONTRACTOR TO ENSURE THE PERFECT SOLUTION FOR HANGING, AND FIXING ON THE WALL ALONG WITH A POWER CABLE AND PLUG FOR CONNECTION. CONTRACTOR TO ENSURE LIVE WIRING IS TO BE PROVIDED ALONG WITH MALE/ FEMALE CONNECTION SECURED & TIED AWAY.				
<b>A.</b>	CEILING / WALL MOUNTED	30	No.		
<b>34</b>	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE LIGHTING SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS.	1	JOB		
<b>APPLIANCES</b>					
<b>35.</b>	<b>FALSE CEILING FAN</b>				
	PROVIDING, INSTALLING, TESTING AND COMMISSIONING OF FALSE CEILING FAN 14" IN 2'X2' SQUARE SIZE OF MAKE "VOLDAM OR EQUIVALENT" WITH REMOTE CONTROL IMPORTED COMPLETE WITH CONNECTIONS, AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT. NOTE: ALL ELECTRICAL WIRING, SWITCHES AND HOISTING OF REMOTE CONTROLLER ON WALLS TO BE INCLUDED IN THE ITEM.	30	No.		
<b>36.</b>	<b>LED MONITOR</b>				
	SUPPLYING, FIXING, INSTALLATION & COMMISSIONING OF LED MONITOR OF MAKE SAMSUNG, L.G., SONY OR EQUIVALENT WITH , HDMI PORTS COAXIAL PORT, AUDIO VIDEO PORT, VGA PORT VIDEO INPUT PORT. WITH ALL NECESSARY CONNECTIONS, COMPLETE IN ALL RESPECTS AS PER SPECIFICATION AND RECOMMENDATION OF ARCHITECT/ENGINEER. NOTE: > EASYLINK (HDMI-CEC) > SMARTVIEW > WIFI DIRECT > CONNECTIVITY PORTS: HDMI PORTS 4(SIDE) USB SUPPORTS AUDIO, VIDEO, IMAGE RF INPUT ANALOG COAXIAL PORTS 1(REAR) COMPOSITE INPUT AUDIO VIDEO CABLE PORTS 1(REAR) USB PORTS 3 DIGITAL OPTICAL AUDIO OUTPUT PORTS 1 > VENDORS OFFERING LOCAL AFTER SALE SERVICES SHALL BE PREFERRED.				
<b>A.</b>	55"	6	No.		
<b>B.</b>	65"	0	No.		
<b>C.</b>	HDMI CABLE 5 METER (SONY, UGREEN OR EQUIVALENT)	6	No.		
<b>37.</b>	<b>WATER DISPENSER</b>				
	SUPPLY AND INSTALLATION OF WATER DISPENSER OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT)	4	No.		
<b>38.</b>	<b>GLASS HOOD (KITCHEN)</b>				
	SUPPLY AND INSTALLATION OF GLASS HOOD OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).	2	No.		

8th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>39.</b>	<b>MICROWAVE OVEN</b>				
	SUPPLY AND INSTALLATION OF MICROWAVE OWEN OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).				
<b>A.</b>	IN-BUILT INTO CABINET	1	No.		
<b>B.</b>	NORMAL	2	No.		
<b>40.</b>	<b>REFRIGERATOR</b>				
	SUPPLY AND INSTALLATION OF REFRIGERATOR OF ANY RENOWNED BRAND (PEL, ORIENT, DAWLANCE OR EQUIVALENT).	2	No.		
<b>41.</b>	<b>EXHAUST FAN (WITH FALSE CELING PIPE )</b>				
	PROVIDING, INSTALLING, TESTING AND COMMISSIONING OF 6" DIA INLINE FAN OF MAKE "VOLDAM OR EQUIVALENT" WITH CENTRIFUGAL BLOWER AND MOTOR ENCASED IN SHEET METAL CASING, AS PER SPECIFICATIONS. THE MOTOR SHALL BE SUITABLE FOR 220 ± 6% V, 50 HZ AC SUPPLY. THE PRICE SHALL INCLUDE FAN SPEED REGULATOR AND COWL WITH BIRD SCREEN. CAPACITY 3600 CMH AT 15 MM STATIC PRESSURES (FOR PNEUMATIC TEST SCREEN OF WORKSHOP OFFICES BUILDING).	10	No.		
<b>42.</b>	<b>HAND DRYER</b>				
	P/F OF AUTOMATIC HAND DRYER OF BRAND SIEMENS OR EQUIVALENT COMPLETE IN ALL RESPECTS. <b>NOTE:</b> TECHNICAL SPECIFICATION TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCUREMENT.	6	No.		
	<b>TELEPHONES</b>				
	<b>NOTE:</b> SAMPLES & TECHNICAL SPECIFICATIONS ARE TO BE SUBMITTED FOR EACH ITEM FOR APPROVAL PRIOR TO EXECUTION.				
<b>43.</b>	<b>TELEPHONE 5 PAIR CABLE</b>				
	SOLID ANNEALED COPPER WIRE, PLAIN OR TINNED ACCORDING TO IEC 60228 CLASS 1, INSULATED WITH PVC (POLYVINYL CHLORIDE) RATED 70°C, TWO CORES ARE TWISTED TO FORM A PAIR, PAIRS ASSEMBLED TOGETHER DEPENDING ON THE CABLE CONSTRUCTION, FOR CABLES UP TO <b>5 PAIRS</b> , PAIRS ARE ASSEMBLED TOGETHER DIRECTLY IN CONCENTRIC LAYERS, ALL PAIRS ARE IDENTIFIED WITH IDENTIFICATION TAPES, OUTER SHEATH IS A FLAME RETARDANT POLYVINYL CHLORIDE 70°C, GRAY COLOR.	45	METER		
<b>44.</b>	<b>JUNCTION BOX</b>				
	PROVIDING AND FIXING OF TELEPHONE JUNCTION HAVING CONNECTION OF NOT LESS THAN 10 WIRES, WALL MOUNTED.	1	No.		
<b>45</b>	P/L OF <b>TELEPHONE WIRING</b> IN PVC CONDUIT GALCO 32MM DIA 10 PAIR TELEPHONE CABLE CLIPSAL MAKE FROM MDF PANEL TO PTCL CABINET AND PABX. COMPLETE WITH 12SWG COPPER ECC AND CONNECTIONS AT TERMINAL BOXES COMPLETE IN ALL RESPECTS AS REQUIRED AT SITE.	1500	METER		

8th FLOOR - ELECTRICAL WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
47	PROVIDING, FIXING, INSTALLING, TESTING AND COMMISSIONING OF NETWORKING CABLE <b>CAT 6 CLIPSAL</b> / 3M CABLE IN 20 MM DIA PVC GALCO CONDUIT /CHANNEL TERMINATED AT DESIGNATED CAT6 CONNECTORS, INCLUSIVE OF IO SWITCH PLATE HAVING CAT 6 INTERFACE CLIPSAL MAKE OR EQUIVALENT WITH 16 SWG MS BACK BOX COMPLETE IN ALL RESPECTS. <b>NOTE: ALL DATA CABLES SHALL HAVE SEPARATE CONDUITS FROM POWER LINES TO AVOID ELECTROMAGNETIC FIELD (EMF) INTERFERENCE AND ATTENUATION.</b>	45	No.		
<b>NETWORKING</b>					
53.	FIBRE OPTIC CABLE (FROM DISTRIBUTOR TO FLOOR SWITCH)	150	METER		
<b>SECURITY SYSTEM</b>					
	ALL NETWORK ACCESSORIES ARE TO BE A PART OF THIS ITEM, INCLUDING RACKS, MOUNTING SCREWS, RAWL BOLTS, ANCHORS, MOUNTING BRACKETS AND ETC.				
56	<b>BIOMETRIC ATTENDANCE MACHINE / CCTV CAMERA</b> SUPPLY, INSTALLATION, CONFIGURATION, TESTING AND COMMISSIONING OF BIOMETRIC (FINGERPRINT CUM CARD, FACIAL ID) BASED TIME ATTENDANCE & ACCESS CONTROL MACHINES INCLUDING RELATED SOFTWARE. > BIOMETRIC/ CARD ENROLLMENT/ FACIAL ID- RFID TAGS OF 100 PERSONS (INCLUDING COLLECTION, ENTRY AND VALIDATION OF DATA) OF ALL RELEVANT INFORMATION OF THE EMPLOYEES LIKE FINGERPRINTS, PHOTOGRAPHS, CONTACT INFORMATION ETC. TO ENSURE A COMPREHENSIVE DATABASE OF INFORMATION FOR THE FUNCTIONING OF THE TIME AND ATTENDANCE BIOMETRIC SYSTEM.	1	No.		
57	SUPPLY & INSTALLATION OF FIXED TYPE <b>CEILING MOUNTED DOME CAMERA</b> TRUE DAY / NIGHT WITH IR ILLUMINATOR, 2-MP, FIXED LENS OF 4 MM, WDR, FACE RECOGNITION TILL MINIMUM 10 METER COMPLETE WITH HOUSING, MOUNTING BRACKETS, ENCLOSURE FOR POWER SUPPLY ETC AS PER DRAWING & SPECIFICATION & SCHEDULE OF CAMERA COMPLETE IN ALL RESPECTS.	10	No.		
58	SUPPLY & INSTALLATION OF <b>PoE (POWER OVER ETHERNET) CABLE</b> FROM NVR TO CAMERA LOCATION. COMPLETE WITH HOUSING, MOUNTING BRACKETS, ENCLOSURE FOR POWER SUPPLY ETC AS PER DRAWING & SPECIFICATION & SCHEDULE OF CAMERA COMPLETE IN ALL RESPECTS. <b>AVERAGE LENGTH 170 RFT</b>	10	No.		
59	SUPPLY & INSTALLATION OF <b>2U SERVER RACK</b> AS PER DRAWING & SPECIFICATION COMPLETE IN ALL RESPECT	1	No.		
60	SUPPLY & INSTALLATION OF <b>CABLE MANAGEMENT KIT</b> FOR 2U RACK CABLE MANAGER TYPE: HORIZONTAL D-RING NUMBER OF D-RINGS: 5 D-RING MATERIAL: PLASTIC BACK PLATE MATERIAL: 18 GAUGE COLD ROLLED STEEL BACK PLATE FINISH: POWDER COATED COMPLETE IN ALL RESPECT	1	No.		
61	SUPPLY & INSTALLATION OF <b>32 CHANNEL NVR</b> HAVING NOT LESS THAN 24 PoE POINTS STACKBALE VIRTUALLY TO ACCOMMODATE ALL THE CAMERAS AND STORAGE CAPACITY OF 30 DAYS (16TB HARDISK) AT HIGH QUALITY, 25 FPS, AND ADJUSTABLE NOISE RATIO AS PER DRAWING & SPECIFICATION COMPLETE IN ALL RESPECT	1	No.		
62	<b>COMPLETE DOCUMENTATION</b> TESTING COMMISSIONING OF THE SECURITY SURVEILLANCE SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
63	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF SECURITY SYSTEM	1	JOB		



<b>8th FLOOR - ELECTRICAL WORKS</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>FIRE ALARM SYSTEM</b>					
	ALL NETWORK ACCESSORIES ARE TO BE A PART OF THIS ITEM, INCLUDING RACKS, MOUNTING SCREWS, RAWL BOLTS, ANCHORS, MOUNTING BRACKETS AND ETC.				
64	SUPPLY & INSTALLATION OF ADDRESSABLE <b>MANUAL CALL POINTS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETED IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	10	No.		
65	SUPPLY & INSTALLATION OF ADDRESSABLE DIRECTIONAL <b>ELECTRONIC SOUNDER WITH FLASHER</b> WITH MOUNTING ACCESSORIES, AND BACK BOX. COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	10	No.		
66	SUPPLY AND INSTALLATION OF INTELLIGENT CELING RECESSED/SURFACE MOUNTED <b>SMOKE DETECTORS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	10	No.		
67	SUPPLY AND INSTALLATION OF CEILING RECESSED/SURFACE MOUNTED <b>HEAT DETECTORS</b> WITH ISOLATOR MODULE, BASE & MOUNTING ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS.	2	No.		
68	SUPPLY AND INSTALLATION OF <b>4 ZONES INTELLIGENT ADDRESSABLE NETWORKED FIRE ALARM CONTROL PANEL(FACP)</b> WITH POWER SUPPLY AND BATTERY BACKUP FOR 3 HOURS WITH INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS. TO BE INTEGRATED TO BUILDING FACP SYSTEM.	1	No.		
69	SUPPLY & INSTALLATION OF <b>LOOP WIRING FROM FACP TO FIELD DEVICES</b> WITH 2X2.5 SQ.MM FP- 200 CLASS A CABLE WITH 3HRS FIRE RATING IN 1" DIA 16-GAUGE MS PIPE SURFACE AS PER DRAWINGS WITH ALL CONDUIT ACCESSORIES, JUNCTION BOXES, PULL BOXES ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS AND SPECIFICATIONS. ACTUAL MEASUREMENT SHALL BE TAKEN FROM THE SITE.	7000	RFT		
70	SPARE PARTS FOR FIRE ALARM SYSTEM FOR 2 YEAR OPERATION	1	JOB		
71	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF FIRE ALARM SYSTEM	1	JOB		
72	2 YEARS WARRANTY ALONG WITH COMPLETE PREVENTIVE MAINTENANCE OF ALL COMPONENTS OF FIRE ALARM SYSTEM.	1	JOB		
73	COMPLETE DOCUMENTATION TESTING COMMISSIONING OF THE FIRE ALARM SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
<b>AUDITORIUM</b>					
<b>74. SPEAKERS (REFERENCE SERIES)</b>					
	SUPPLYING, FIXING OF BEST QUALITY 14 CHANNELS, 4 ZONES SPEAKERS AND AMPLIFIERS				
<b>A.</b>	SPEAKERS (8 Watts CEILING MOUNTED SPEAKERS DC. WITH TOP GRILLS. COMPLETE IN ALL ASPECTS.) TOA, BOSE, OR EQUIVALENT.	14	No.		
<b>B.</b>	AMPLIFIERS 5 INPUT FOR MICS. AND AV FOR EACH AMPLIFIER SYNCHRONIZED TO EACH OTHER TO WORK AS ONE. ITEM TO INCLUDE ANY ADDITIONAL ACCESSORY AS PER MANUFACTURER TO FULFILL THE FUNCTION.	3	No.		
<b>C.</b>	AUDIO MIXER FOR ADDITIONAL INPUTS 8 INPUTS.	1	No.		
<b>75. MICROPHONES</b>					
	SUPPLYING, FIXING OF BEST QUALITY MICS AND ALL OTHER NECESSARY EQUIPMENTS TOA OR EQUIVALENT REFERENCE SERIES				
<b>A.</b>	GOOSE-NECK MIC	2	No.		
<b>B.</b>	WIRELESS MICS	4	No.		
<b>C.</b>	TABLE MICS	2	No.		
<b>D.</b>	COLLAR MICS	2	No.		



<b>8th FLOOR - ELECTRICAL WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
<b>76</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>77</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
	<b>TOTAL COST OF ELECTRICAL WORKS</b>				

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**8th FLOOR**  
**PLUMBING WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

<b>8th FLOOR - PLUMBING WORKS</b>					
<b>S. No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE (RS)</b>	<b>AMOUNT (RS)</b>
<b>1.</b>	<b>FREE STANDING WASH BASIN STALL</b>				
	PROVIDING AND FIXING GLAZED EARTHENWARE FREE STANDING WASH BASIN STALL COMPLETE WITH INCLUDING THE COST OF INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER OF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT). THE CONTRACTOR IS TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED ON-SITE AS PER SITE CONDITIONS. NOTE: FAUCET, BIB COCKS, AND ALL OTHER FITTINGS ARE TO BE INCLUDED IN THE COST OF ITEM CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES BEFORE EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	5	No.		
<b>2.</b>	<b>WESTERN W.C. (COMMUNE)</b>				
	PROVIDING AND FIXING SQUATTING TYPE WHITE GLAZED EARTHEN WARE W.C. PAN WITH FRONT FLUSH INLET AND COMPLETE WITH INCLUDING THE COST OF FLUSHING CISTERN WITH INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER OF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT) WITH 4" DIA C.I. TRAP. CONTRACTOR TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED END TO END UTILISING PERFECT SLOPE ON SITE AS PER SITE CONDITIONS. NOTE: CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES PRIOR TO EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	12	No.		
<b>3.</b>	<b>EASTERN (SQUATTING) WATER CLOSET</b>				
	PROVIDING AND FIXING SQUATTING TYPE WHITE GLAZED EARTHEN WARE W.C. PAN WITH FRONT FLUSH INLET AND COMPLETE WITH INCLUDING THE COST OF FLUSHING CISTERN WITH INTERNAL FITTING AND FLUSH PIPE WITH BEND AND MAKING REQUISITE NUMBER OF HOLES IN WALLS PLINTH AND FLOOR FOR PIPE CONNECTION AND MAKING GOOD IN CEMENT CONCRETE 1:2:4 (FOREIGN EQUIVALENT) WITH 4" DIA C.I. TRAP. CONTRACTOR TO ENSURE ALL FITTINGS AND PROPER FLUSHING IS PERFORMED END TO END UTILISING PERFECT SLOPE ON SITE AS PER SITE CONDITIONS. NOTE: CONTRACTOR MUST SUBMIT TECHNICAL SPECIFICATIONS AND SAMPLES PRIOR TO EXECUTION ALONG WITH SHOP DRAWINGS EXPRESSING ALL FIXTURES/ ROUTES TO BE USED AS PER SITE CONDITIONS.	4	No.		
<b>4</b>	<b>HAND SHOWERS (MUSLIM SHOWER)</b>				
	MASTER, SONEX OR EQUIVALENT TOILET HAND SPRAY WITH FLEXIBLE CHAIN & TELEPHONE TYPE SHOWER INCLUDING TEE STOP COCK ETC. COMPLETE IN ALL RESPECT.	16	No.		
<b>5</b>	<b>BASIN MIXER TAP</b>				
	MASTER, SONEX OR EQUIVALENT WASH BASIN HOT AND COLD WATER MIXER, ETC.				
<b>A.</b>	VANITY	16	No.		
<b>B.</b>	DOUBLE BIB COCK FOR TOILETS	16	No.		
<b>6</b>	<b>TOILET ACCESSORIES COMPLETE SET</b>				
<b>A.</b>	SOAP DISPENSER	16	No.		
<b>B.</b>	SOAP DISH				
	PROVIDING AND FIXING SOAP-DISH OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	16	No.		

<b>8th FLOOR - PLUMBING WORKS</b>					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
C	TOWEL ROD				
	PROVIDING AND FIXING CHROMIUM PLATED TOWEL RAIL 24" LONG AND 3/4" DIA, OF MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	16	No.		
D.	PAPER HOLDER				
	PROVIDING AND FIXING TOILET PAPER-HOLDER ONLY MAKE "MASTER, VICTORIAN OR AN APPROVED EQUIVALENT". COMPLETE IN ALL RESPECT.	16	No.		
E	COAT HOOKS	16	No.		
<b>7</b>	<b>LOOKING MIRROR</b>				
	LOOKING MIRROR 5mm BEST QUALITY BELGIUM OR EQUIVALENT MADE FIXED WITH CLIPS COMPLETE IN ALL RESPECT AND SIZE AS PER SITE REQUIREMENT	150	Sft		
<b>8.</b>	<b>KITCHEN SINK</b>				
	PROVIDING AND FIXING STAINLESS STEEL KITCHEN SINK BOWL 24"x18" WITH DRY TRAY/ WASHING SURFACE OF 18 GAUGE MAKE MASTER OR EQUIVALENT FIXED IN COUNTER OVER PRE CAST SLAB, PASTING WITH JELLY/ SILICON WITH 15mm DIA C.P. BRASS T. STOP COCK OF MASTER, SONEX, 40mm DIA HEAVY DUTY WASTE COUPLING AND PVC FLEXIBLE WASTE PIPE OF APPROVED MAKE AND QUALITY COMPLETE IN ALL RESPECTS. AS PER THE MANUFACTURER'S REQUIREMENT.	2	No.		
<b>9.</b>	<b>SECTION-02 WATER SUPPLY SYSTEM</b>				
	<b>SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF COMPLETE PIPE WORK FOR COLD AND HOT WATER SYSTEM INCLUDING ALL ACCESSORIES REQUIRED TO COMPLETE SYSTEMS READY TO OPERATE AS PER SPECIFICATION, DRAWINGS &amp; INSTRUCTION OF CONSULTANT.</b>				
<b>A.</b>	POLYPROPYLENE RANDOM DADEX, AGM, STEELEX OR EQUIVALENT PP-R PIPES PN 20 AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT.				
i.	DIA. 1-1/2"	60	Rft		
ii.	DIA. 2"	70	Rft		
<b>B.</b>	PROVIDING & FIXING JOINING TESTING G.I. PIPE ILL MADE LINES FOR WATER SUPPLY AS PER BS 1387 MEDIUM QUALITY ILL. INCLUDING SPECIALS SOCKETS TEE, ELBOW, BEDN, REDUCER PLUG AND UNION ETC) SUPPORTED ON WALLS SUSPENDED FROM ROOF SLAB, INCLUDING PROTECTIVE COATING AS PER DRAWING AND SPECIFICATION INCLUDING COLOR CODING COMPLETE IN ALL RESPECT.				
i.	DIA. 1-1/4"	75	Rft		
ii.	DIA. 1-1/2"	40	Rft		
iii.	DIA. 2"	30	Rft		
iv.	DIA.3"	20	Rft		
<b>C</b>	<b>BRASS BODY GATE-VALVES / BALL-VALVES WITH UNIONS.</b>				
i.	SIZE 1-1/4"	8	No.		
ii.	SIZE 1-1/2"	8	No.		
iii.	SIZE 2"	13	No.		
iv.	SIZE 3" (CI BODY)	3	No.		
<b>10</b>	<b>DRAIN PLUMBING</b>				
	PVC DADEX, AGM, STEELEX OR EQUIVALENT PVC PIPES UPTO 4 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT. NOTE: THE JOB INCLUDES PLUGGING OF DRAIN INTO RISER DRAIN LINE.				
<b>A.</b>	DIA 2"	100	RFT		
<b>B.</b>	DIA 4"	100	RFT		

8th FLOOR - PLUMBING WORKS					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>11.</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN R.C.C. WALLS OR SLABS WITH HILTE CORE CUTTING MACHINE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK, COST OF DISPOSAL OF CONCRETE CORES, COMPLETE IN ALL RESPECTS AS DIRECTED BY THE ENGINEER.				
<b>A.</b>	4" DIA	4	No.		
<b>B.</b>	6" DIA	5	No.		
<b>C.</b>	8" DIA	20	No.		
<b>12.</b>	<b>PLANTER DRAIN WITH DOME GRATING</b>				
	PLANTER DRAIN WITH DOME-TYPE GRATING, GRAVELS, AND OUTLET PIPE.				
<b>A.</b>	PD 4" DIA	24	No.		
<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>					
<b>13.</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>14</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>TOTAL COST OF PLUMBING WORKS</b>					

**STATE LIFE INSURANCE CORPORATION**  
**BUILDING No. 9**

**BOQ**  
**8th FLOOR**  
**HVAC WORKS**

The BOQ document shall be read in conjunction with the Compliance sheet. The rates of all the items quoted should be done considering specifications and special conditions and including the following nature of the project its shape, angle, curve, bends, size etc. to be made at any depth and height with the use of all steel formwork properly supported as required and as directed by the Engineer/ Architect to the entire satisfaction of the Architect / Engineer/ Architect-in-Charge.

8th FLOOR - HVAC WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>1</b>	<b>VRF CASSETTES</b>				
	P/F COMISSIONING INSTALLATION, TESTING OF VRF AC/DC INDOOR UNITS CASSETTE TYPE INCLUSIVE OF ALL ACCESSORIES, COPPER PIPING, Y SECTIONS, ALL COPPER ACCESSORIES AND HANGING ACCESSORIES TO BE A PART OF THIS ITEM, INSULATION BOUND IN A PVC CONDUIT FOR EACH CASSETTE. DRAIN RISER AND DRAIN PIPES SHALL BE INCLUSIVE OF THIS COST CONNECTED TO BUILDING SERVICE CORE AT THE END. COMPLETE ELECTRICAL SCOPE I.E. CONTROL WIRE, SENSING WIRE, PANEL WIRE, COMMUNICATION WIRE, POWER WIRE TO INTERNAL UNIT. INCLUSIVE OF TWO REMOTE CONTROL. FOR EACH CASSETTE INCLUSIVE OF ROOM PANEL AND IR REMOTE COST. ISOLATION VALVE FOR REFRIGERANT ON THE BEFORE THE CASSETE TO BE INCLUSIVE OF THE COST. COMPLETE INSTALLATION IN ALL ASPECTS. VRF DRAIN PIPE FROM VRF CASSETTE TO THE PERIPHERY OF THE BUILDING TO BE INCLUSIVE OF THE COST WHICH WILL BE CONNECTED TO DRAIN RISER VIA 3 " UPVC PIPE (3 INCHES PIPE IS A SEPARATE ITEM). WHEREVER THE VRF CASSETTE IS EXPOSED A DECO PAINTED MS BOX of 12SWG ON THE SIDE AS SLEEVE OF THE CASSETE WITH OPENABLE SECTIONS FOR MAINTAINANCE AS PER ARCHITECTS RECOMMENDATION AND COLOUR.				
<b>A.</b>	2 TON	36	No.		
<b>B.</b>	2.5 TON	0	No.		
<b>C.</b>	4 TON	2	No.		
<b>2</b>	<b>STRUCTURAL STEEL WORK</b>				
	PROVIDING, FABRICATING & FIXING OF MS TEE BARS, CHECKERED SHEETS (10 SWG) ANGLES 3" X 2" X 1/4" TH ETC FOR STRUCTURAL WORKS REQUIRED FOR FIXING OF HVAC OUTDOOR UNIT ON PLATFORM INCLUSIVE OF PLATFORM CONSTRUCTION AND ITS MOUNTING TO THE BUILDING STRUCTURAL COMPONENT. THE JOB SHALL INCLUDE ANY OR ALL REPAIRS AND NECESSARY ADJUSTMENTS AND OTHER NECESSARY WORKS. COMPLETE WITH WASHERS AND MOUNTING RUBBERIZED ABSORBERS TO PREVENT VIBRATIONS AND ITS EFFECT ON BUILDING. ALL STRUCTURAL WORKS TO BE EPOXY PAINTED TO DARK BLUE COLOR	1200	KG		

8th FLOOR - HVAC WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>3</b>	<b>OUTDOOR UNIT</b>				
	REMOVAL CLEANING, WRAPPING, REINSULATION AND REFIXING OF PLANUM BOXES ON NEW LOCATIONS INCLUDING WRAPPING OF INSULATION FABRIC AND PAINTING OF APPROVED COLOUR  <b>2x 30 TON UNIT (FOR LARGE WING)</b> <b>1x 20 TON UNIT (FOR LARGE WING)</b>				
<b>A.</b>	VRF OUTDOOR UNIT PER TON COST WITH COPPER PIPING FROM OUTER TO INNER WITH ALTERNATE PIPES FOR EACH INDOOR CONNECTION; INTEGRATION AND COPPER PIPING MAIN AS PER EACH VRF OUTDOOR UNIT ALL VRF OUTDOOR UNITS TO HAVE ISOLATION VALVES FOR REFRIGERANT CAPTURE AND MAINTAINANCE. ALL OUTDOOR UNITS TO BE SYNCHROZIED WITH EACH OTHER FOR FAIL SAFE OPERATION USING COPPER PIPES AND RELEVANT ACCESSORIES: ENSURING SYNCHRONIZATION AMONGST EACH OTHER. ALL COPPER PIPING INCLUSIVE OF NETWORK COPPER PIPING VIA Y AND STRAIGHT SECTIONS OF APPROPRIATE SIZES AS PER VRF REQUIREMENTS TO BE INCLUSIVE OF THIS JOB HAVING PROPER INSULATION TO INDUSTRY STANDARD AS PER MANUFACTURER. INCLUSIVE OF REFRIGRANT COST AND ITS TOP UP COST WHEN SYSTEM IS RUN AS PER OEM. VRF OUTDOOR UNITS AND ITS CARDS TO BE VALIDATED AND MADE PROPER USING ALL WEATHER SILICON PROTECTION IN ADDITION TO THE OEM PROTECTION. THE CONTRACTOR SHALL PRODUCE SAMPLES OF ADDITIONAL PROTECTION OF CARDS ALONG WITH INSTALLATION OF PROTECTION DEVICES SUCH AS SURGE PROTECTIONS AND OTHERS AS REQUIRED FOR SMOOTH OPERATION	80	TON		
<b>4</b>	<b>DISTRIBUTION BOARDS</b>				
	SUPPLY AND INSTALLATION OF THE FOLLOWING DISTRIBUTION BOARDS OF MAKE HUSSAIN & CO., A TO Z, UNIVERSAL MADE WITH 14 SWG SHEET STEEL HOUSING WITH APPROVED COLOR AND HAVING SPECIFIED CIRCUIT BREAKERS USING TP MCCB, VOLTMETER, AMMETER, INDICATION LIGHTS, WITH <b>K-ELECTRIC APPROVED ENERGY METERS</b> AND ENERGY LOGGERS. AS SHOWN IN THE DRAWING. <b>(REFER SINGLE LINE DIAGRAM)</b> . NOTE: SPECIFIED MULTIMETER SHOULD BE INCLUDED IN THE DBs				
<b>A.</b>	FOR LARGE WING	1	No.		



8th FLOOR - HVAC WORK					
S. No.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)
<b>5</b>	<b>DRAIN PIPING (HVAC)</b>				
	PVC DADEX, AGM, STEELEX OR EQUIVALENT PVC PIPES UPTO 4 BAR AND FITTINGS WITH FUSION JOINTING ALONG WITH ALL TYPES OF UNIONS, TEES, BENDS, SOCKETS, CLAMPS HANGERS, SUPPORTS, SLEEVES, MASKING PLATES, CHISELLING, MAKING HOLES MAKING GOOD, EXCAVATION, BEDDING BACKFILLING AS REQUIRED COMPLETE IN ALL RESPECT. NOTE: THE JOB INCLUDES PLUGGING OF DRAIN INTO RISER DRAIN LINE.				
<b>A.</b>	DIA 3"	700	RFT		
<b>B.</b>	DIA 1"	400	RFT		
<b>6</b>	<b>COMMISSIONING OF HVAC SYSTEM</b>				
	<b>COMPLETE DOCUMENTATION</b> TESTING COMMISSIONING OF THE HVAC SYSTEM ALONG WITH A LEDGER FORMAT DOCUMENT FOR ALL THE COMPONENTS USED AND ACCESSORIES INSTALLED MARKING THE ROUTES AND OTHER NECESSARY ITEMS. INCLUSIVE OF ALL THE LICENSE	1	JOB		
<b>7</b>	2 YEARS WARRANTY ALONG WITH COMPLETE PREVENTIVE MAINTENANCE OF ALL COMPONENTS OF HVAC SYSTEM.	1	JOB		
<b>8</b>	COMPLETE TRAINING OF LOCAL TECHNICIANS FOR OPERATION, MAINTENANCE OF HVAC SYSTEM	1	JOB		
<b>9</b>	<b>CORE CUTTING</b>				
	CORE CUTTING / DRILLING TO DRILL HOLES OF SPECIFIED SIZE IN R.C.C. WALLS OR SLABS WITH HILTE CORE CUTTING MACHINE TO FACILITATE INSTALLATION AND REPAIR OF UTILITY SYSTEMS AND EQUIPMENT. INCLUDING MARKING POSITION FOR DRILL BASE, USING RULER AND CHALK, COST OF DISPOSAL OF CONCRETE CORES, COMPLETE IN ALL RESPECTS AS DIRECTED BY THE ENGINEER.				
<b>A.</b>	1.5" DIA	20	No.		
<b>B.</b>	4" DIA	5	No.		
<b>C.</b>	6" DIA	1	No.		
	<b>SUBMITTALS, INSPECTIONS, OPERATION, DRAWINGS ETC.</b>				
<b>10</b>	<b>SUBMITTALS, SAMPLES, INSPECTIONS, ETC.</b>				
	SUBMITTALS, SAMPLES, INSPECTIONS, OPERATION AND MAINTENANCE MANUALS AND THE LIKE AS REQUIRED BY SPECIFICATION.	1	JOB		
<b>11</b>	<b>SHOP DRAWINGS &amp; AS-BUILT DRAWINGS</b>				
	PREPARATION AND SUBMISSION OF HARD AND SOFT (.dwg) COPIES OF SHOP DRAWINGS & AS-BUILT DRAWINGS OF EACH JOB AT THE END OF THE EXECUTION.	1	JOB		
<b>COST OF HVAC</b>					

**\*END OF BOQ\***




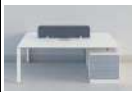







# COMPLIANCE SHEET



















PROJECT NAME:

SL Building No. 9 6th floor

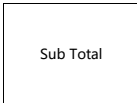

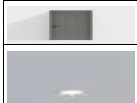






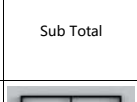



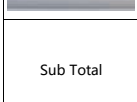
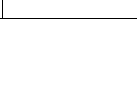

Room Name	Brand	Product Photo	Quantity
LW D.G.M		plant	4.0
		Two universal windows	2.0
		Poliform modern blue office chair	10.0
		potted plant	1.0
		Printer	4.0
		venetian blind	2.0
		Apple Mac Desktop White	26.0
		Apple Mac Desktop White	10.0
		Apple Mac Desktop	1.0
		Apple Mac Desktop	1.0
		Modern office chair	2.0
		Modern office chair	2.0
		Office Chair	37.0
		Office Chair	1.0

	vitra.-Storage1	8.0
	Cramer L-Shaped Writing Desk	1.0
	Cramer L-Shaped Writing Desk	1.0
	Panzhuhua Luo total plan 2 people combination seat (1400X600) sm	17.0
	Panzhuhua Luo total plan 2 people combination seat (1400X600) sm	1.0
	Downlight	111.0
	Downlight	8.0
	Chandelier light (middle floodlight, grille spotlights at both ends) - black	16.0
	Chandelier light (middle floodlight, grille spotlights at both ends) - black	4.0
	Chandelier light (middle floodlight, grille spotlights at both ends) - black	2.0
	Plant	1.0
Sub Total		

Reception		Two universal windows	1.0
		Two universal windows	1.0
		Glass door	1.0
	Sub Total		
		Two universal windows	1.0
		Modern corrugated glass partition	1.0
		Modern corrugated glass partition	1.0
		Modern corrugated glass partition	1.0
		Poliform modern blue office chair	9.0
		Printer	1.0
		Printer	1.0
		venetian blind	1.0
		venetian blind	1.0
		venetian blind	1.0
		Apple Mac Desktop White	15.0
		Apple Mac Desktop White	7.0
		Apple Mac Desktop White	8.0

SW D.G.M









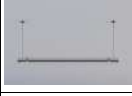




	Apple Mac Desktop	4.0
	Modern office chair	8.0
	Office Chair	34.0
	vitra.-Storage1	4.0
	vitra.-Storage1	3.0
	Cramer L-Shaped Writing Desk	2.0
	Cramer L-Shaped Writing Desk	2.0
	Panzhuhua Luo total plan 2 people combination seat (1400X600) sm	9.0
	Panzhuhua Luo total plan 2 people combination seat (1400X600) sm	6.0
	Downlight	24.0
	Downlight	15.0
	Chandelier light (middle floodlight, grille spotlights at both ends) - black	2.0
	Chandelier light (middle floodlight, grille spotlights at both ends) - black	16.0
	Chandelier light (middle floodlight, grille spotlights at both ends) - black	6.0
	Chandelier light (middle floodlight, grille spotlights at both ends) - black	2.0
	Chandelier light (middle floodlight, grille spotlights at both ends) - black	2.0
	Plant	3.0

		Sub Total		
SW Male toilet		Mirror Cabinet	1.0	
		door	1.0	
		Downlights	2.0	
		Column basin 504	2.0	
		Sub Total		
WC		Two universal windows	1.0	
		modern toilet	1.0	
		door	1.0	
		Downlight	1.0	
		Sub Total		
WC		Two universal windows	1.0	
		modern toilet	3.0	
		door	1.0	
		Downlight	1.0	
		Sub Total		

Bathroom 1		Two universal windows	1.0
		modern toilet	1.0
		Modern hand washing table	1.0
		door	1.0
		Downlights	3.0
	Sub Total		
Bathroom 2		Two universal windows	1.0
		modern toilet	1.0
		Modern hand washing table	1.0
		door	1.0
		Downlights	3.0
	Sub Total		
WC		Two universal windows	1.0
		modern toilet	2.0
		door	1.0
		Downlight	1.0
	Sub Total		









SW Chief Office 5		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Modern Painting	1.0
		Modern Side table	1.0
		Modern green plant potted plants	1.0
		Modern character ornaments glass bottle	1.0
		venetian blind	1.0
		New Chinese bar office chandeliers	1.0
		Modern office chair meeting chair	2.0
		Finance desk	1.0
		Office Chair	1.0
		rug	1.0
		floor lamp	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Downlights	8.0
		Ornaments	1.0
		Side KT-JC-02	1.0









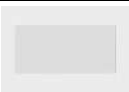











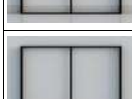




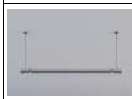





		console table	1.0
		SF05 sofa double seat	1.0
		Uera Art Bronte/Nordic Sofa Chair Single Chair	1.0
		Living Room Lounge with Accent Desk 240C	
	Sub Total		
SW Chief Office 6		Modern Painting	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Modern Side table	1.0
		Modern green plant potted plants	1.0
		Modern character ornaments glass bottle	1.0
		venetian blind	1.0
		New Chinese bar office chandeliers	1.0
		Modern office chair meeting chair	2.0
		Finance desk	1.0
		Downlight	8.0
		Office Chair	1.0

		rug	1.0
		floor lamp	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Ornaments	1.0
		Side KT-JC-02	1.0
		console table	1.0
		SF05 sofa double seat	1.0
		Opera Art Bronte/Nordic Sofa Chair Single Chair Living Room Lounge with Accent Book 2406	1.0
	Sub Total		
SW Record Room		door	1.0
		TT-179 set of color double door locker narrow edge tin cabinet steel filing cabinet	1.0
		TT-179 set of color double door locker narrow edge tin cabinet steel filing cabinet	1.0
		TT-179 set of color double door locker narrow edge tin cabinet steel filing cabinet	1.0
		Downlight	2.0
	Sub Total		
		Two universal windows	1.0
		Two universal windows	1.0
		venetian blind	1.0
		venetian blind	1.0

LW Record 1		door	1.0
		TT-179 set of color double door locker narrow edge tin cabinet steel filing cabinet	17.0
		Downlight	11.0
	Sub Total		
Chief Office 1		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Milotti Minotti hangs a painting	1.0
		Modern Side table	1.0
		Modern green plant potted plants	1.0
		Modern character ornaments glass bottle	1.0
		venetian blind	1.0
		New Chinese bar office chandeliers	1.0
		Modern office chair meeting chair	2.0
		Finance desk	1.0
		Downlight	8.0
		Office Chair	1.0

	rug	1.0
	floor lamp	1.0
	MORU GLASS Changhong Art deco glass sliding door	1.0
	Ornaments	1.0
	Side KT-JC-02	1.0
	console table	1.0
	SF05 sofa double seat	1.0
	Opera Art Bronte/Nordic Sofa Chair Single Chair Living Room Lounge with Adjustable Back 249C	1.0
Sub Total		

Chief Office 3		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Modern Painting	1.0
		Modern Side table	1.0
		Modern green plant potted plants	1.0
		Modern character ornaments glass bottle	1.0
		venetian blind	1.0
		New Chinese bar office chandeliers	1.0
		Modern office chair meeting chair	2.0
		Finance desk	1.0
		Downlight	8.0
		Office Chair	1.0
		rug	1.0
		floor lamp	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Ornaments	1.0


















		Side KT-JC-02	1.0
		console table	1.0
		SF05 sofa double seat	1.0
		Bronte/Nordic Sofa Chair Single Chair Living Room Lounge with Accent Book	1.0
	Sub Total		
Chief Office 4		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Modern Side table	1.0
		Modern green plant potted plants	1.0
		Modern character ornaments glass bottle	1.0
		venetian blind	1.0
		New Chinese bar office chandeliers	1.0
		Modern office chair meeting chair	2.0
		Finance desk	1.0
		Downlight	8.0
		Office Chair	1.0


















		rug	1.0
		floor lamp	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Ornaments	1.0
		Side KT-JC-02	1.0
		console table	1.0
		SF05 sofa double seat	1.0
		Opera Art Bronte/Nordic Sofa Chair Single Chair Living Room Lounge with Accent Book 2406	1.0
	Sub Total		
LW Record 2		Two universal windows	2.0
		door	1.0
		TT-179 set of color double door locker narrow edge tin cabinet steel filing cabinet	2.0
		TT-179 set of color double door locker narrow edge tin cabinet steel filing cabinet	1.0
		TT-179 set of color double door locker narrow edge tin cabinet steel filing cabinet	1.0
		TT-179 set of color double door locker narrow edge tin cabinet steel filing cabinet	3.0
		Downlight	4.0
	Sub Total		
		Mirror Cabinet	1.0
		door	1.0





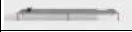

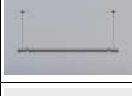

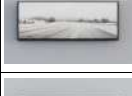




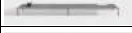

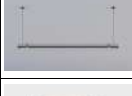
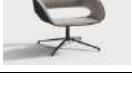
Male Toilet		Downlight	6.0
		Downlight	1.0
		Column basin 504	3.0
	Sub Total		
Female Chief Toilet		Modern bathroom Cabinet	1.0
		door	1.0
		Downlight	4.0
	Sub Total		
WC		modern toilet	1.0
		door	1.0
		Downlight	1.0
	Sub Total		
Male Chief Toilet		door	1.0
		Downlight	4.0
		Langmun-Cx2526 (double basin)	1.0
	Sub Total		
WC		modern toilet	1.0
		door	1.0
		Downlight	1.0
	Sub Total		




















WC		modern toilet	1.0
		door	1.0
		Downlight	1.0
	Sub Total		
WC		modern toilet	1.0
		door	1.0
		Downlight	1.0
	Sub Total		
WC		modern toilet	1.0
		door	1.0
		Downlight	1.0
		Window group	1.0
	Sub Total		
WC		modern toilet	1.0
		door	1.0
		Downlight	1.0
		Window group	1.0
	Sub Total		
		modern toilet	1.0
		door	1.0

WC		Downlight	1.0
		Window group	1.0
	Sub Total		
WC		modern toilet	1.0
		door	1.0
		Downlight	1.0
		Window group	1.0
	Sub Total		
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Modern Painting	1.0
		Modern Side table	1.0
		Modern green plant potted plants	1.0
		Modern character ornaments glass bottle	1.0
		venetian blind	1.0
		New Chinese bar office chandeliers	1.0
		Modern office chair meeting chair	2.0

Chief Office 2		Finance desk	1.0
		Downlight	8.0
		Office Chair	1.0
		rug	1.0
		floor lamp	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Ornaments	1.0
		Side KT-JC-02	1.0
		console table	1.0
		SF05 sofa double seat	1.0
		Uefa Art Bronte/Nordic Sofa Chair Single Chair Living Room Lounge with Armrest Back 249S-20	1.0
	Sub Total		
	Meeting Room		Two universal windows
		modern conference table	1.0
		Modern green plant potted plants	1.0
		New Chinese bar office chandeliers	1.0
		Modern office chair	7.0
		TV Television	1.0








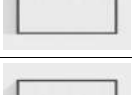










		3000x2400mm four folding doors	1.0
		Downlight	4.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
	Sub Total		
Meeting Room 1		Two universal windows	1.0
		modern conference table	1.0
		Modern green plant potted plants	1.0
		New Chinese bar office chandeliers	1.0
		Modern office chair	7.0
		TV Television	1.0
		3000x2400mm four folding doors	1.0
		Downlight	4.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
	Sub Total		
Meeting Room 3		Two universal windows	1.0
		modern conference table	1.0
		Modern green plant potted plants	1.0
		New Chinese bar office chandeliers	1.0
		Modern office chair	7.0

		TV Television	1.0
		Downlight	4.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
	Sub Total		
WC		modern toilet	1.0
		door	1.0
		Downlight	1.0
	Sub Total		
Female toilet		Mirror Cabinet	1.0
		door	1.0
		Downlight	3.0
		Column basin 504	2.0
	Sub Total		
Janitorial Closet		door	1.0
	Sub Total		
		table	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0

SW Meeting Room		venetian blind	1.0
		Cream style chandelier	1.0
		Modern office chair	6.0
		TV Television	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Downlights	4.0
	Sub Total		
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Modern corrugated glass partition	1.0
		Modern green plant potted plants	3.0
		venetian blind	1.0
		venetian blind	2.0
		Apple Mac Desktop- White	7.0
		Apple Mac Desktop- White	14.0
		Apple Mac Desktop- White	7.0
		Apple Mac Desktop	2.0

Office Space		Modern office chair	4.0
		Office Chair	26.0
		vitra.-Storage1	1.0
		vitra.-Storage1	5.0
		Cramer L-Shaped Writing Desk	1.0
		Cramer L-Shaped Writing Desk	1.0
		Panzhuhua Luo total plan 2 people combination seat (1400X600) sm	4.0
		Panzhuhua Luo total plan 2 people combination seat (1400X600) sm	8.0
		Downlight	20.0
		MORU GLASS Changhong Art deco glass sliding door	2.0
		Chandelier light (middle floodlight, grille spotlights at both ends) - black	12.0
		Chandelier light (middle floodlight, grille spotlights at both ends) - black	2.0
	Sub Total		
			Pillow
		Two universal windows	1.0
		Two universal windows	1.0
		Baxter Modern Wabi-sabi Single Sofa 576680-2	2.0
		Triangle throw pillow	1.0

Waiting Lounge

	Green plants	2.0
	Wabi-sabi wind small flower pot ornament	1.0
	Modern crafts	1.0
	Decorative item	1.0
	Cream style artificial flower ornaments	1.0
	Wabi-sabi crafts	1.0
	Wabi-sabi chandelier	1.0
	hospital visiting window	1.0
	hospital visiting window	1.0
	El Daisy family-Nordic abstract abstract decorative painting-103	1.0
	Modern scandi minimalist sofa for three	2.0
	X-W2132 Entry Cabinet	1.0
	Masasanty - Side Table	2.0
	floor lamp	1.0
	Pillows/cushions	1.0
	Pillows/cushions	1.0
	table lamp	1.0
	Roller Blinds	1.0



	Jewelry2022.4.26-2	1.0
	Downlights	12.0
	European Venus de Milo sculpture figure	1.0
	MORU GLASS Changhong Art deco glass sliding door	1.0
	NH2259 - Coffee table slab	1.0
	pillow	1.0
	pillow	1.0
	rug	1.0
	Modern Cabinet-001	1.0
	Wardrobe	1.0
	ceramic vase	1.0
Sub Total		
	20-Lotus Pond	1.0
	Two universal windows	2.0
	Two universal windows	2.0
	greenwall Plantscapers green wall	1.0
	Poliform modern blue office chair	2.0
	Simple side table	1.0

Entrance Lobby		Modern round a few marble corners a few	3.0
		Visionaire dining table	1.0
		Modern Coffee table	2.0
		BluDot Bank Bench	1.0
		Ochen-S3029 - Two-seater sofa	2.0
		Masasanty - Modern study chair	6.0
		Glass door	1.0
		Roller Blinds	1.0
		Roller Blinds	1.0
		Downlight	9.0
		Downlight	18.0
		Decorative painting	1.0
		rug	2.0
		TUNNI wing dining chair	3.0
		Plant	1.0
		plant	3.0
		Sub Total	
	Fire Exit		Two universal windows

Cafeteria		Island	1.0
		Two universal windows	1.0
		Cupboard	1.0
		Modern chairs/dining chairs	29.0
		Komu-Bellini-Sideboard-BG721	1.0
		Glass door	1.0
		table	9.0
		table	4.0
		table	1.0
		Downlight	21.0
		Integrated sink	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
SW Pantry		Two universal windows	1.0
		Two universal windows	1.0
		modern cabinets	1.0
		door	1.0
		Downlights	5.0

Hallway		door	1.0
		door	1.0
		Downlight	6.0
SW Female Toilet		Mirror Cabinet	1.0
		door	1.0
		Downlights	2.0
		Column basin 504	2.0
WC		Two universal windows	1.0
		modern toilet	1.0
		door	1.0
		Downlight	1.0
SW Record		door	1.0
		TT-179 set of color double door locker narrow edge tin cabinet steel filing cabinet	5.0
		Downlight	6.0












SW Chief Office 7		Modern Painting	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Two universal windows	1.0
		Modern Side table	1.0
		Modern character ornaments glass bottle	1.0
		venetian blind	1.0
		New Chinese bar office chandeliers	1.0
		Modern office chair meeting chair	2.0
		Finance desk	1.0
		Office Chair	1.0
		rug	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Downlights	8.0
		Ornaments	1.0
		Side KT-JC-02	1.0
		console table	1.0

		SF05 sofa double seat	1.0
		Uefa Art Bronte/Nordic Sofa Chair Single Chair Living Room Lounge with Armrest Back 249S-20	1.0
SW Pantry		Two universal windows	1.0
		Two universal windows	1.0
		Modern chairs/dining chairs	9.0
		table	1.0
		table	9.0
		Downlight	12.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
外景		venetian blind	1.0
Total			

# COMPLIANCE SHEET











PROJECT NAME: SL Building No. 9 7th floor

Room Name	Product Photo	Product Name	Quantity
SW Staff		Desk Table	4.0
		Hanging Cabinet	1.0
		plant	1.0
		Two universal windows	1.0
		KM-182110 Flowers ceramic vase	1.0
		File holder	2.0
		Office Chair	4.0
		Vertical blinds	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Mora "under the glowing chandelier 2.4 meters" high-gloss effe	2.0
		Downlight-LS	24.0


		rug	1.0
		Modern vase floral colored glass	1.0
		Modern ceramic crafts ornaments	1.0
		Modern ceramic crafts ornaments	1.0
		Wabi-sabi ornaments	1.0
		Wabi-sabi nook vase ornament set crockery	1.0
		Circus Modern Book Book Ornament	1.0
		Ornament	1.0
		Wabi-sabi chandelier	1.0







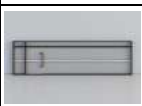

















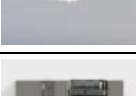

	TV Television	1.0
	Minotti Milotti Modern Bookshelf	1.0
	bookcase	1.0
	Wabi-sabi hanging painting	1.0
	Modern Office - Combined Desk-13	1.0
	Light luxury chair- 21	2.0
	Plant potting	1.0
	Curtain	1.0
	Curtain	1.0
	Wabi-Sabi Desk Lamp	1.0


CEO ROOM

	Wabi-Sabi Desk Lamp	1.0
	New Chinese Observation Deck	1.0
	Decorations	1.0
	wooden door	1.0
	Modern book vase sculpture ornaments-ornaments	1.0
	AJ016 side table	2.0
	Side table	1.0
	Sofa threesome	1.0
	2188 TV stand 4 pumping short feet	1.0
	Candle	1.0
	Downlights	5.0

	Downlights	8.0
	Glass vase	1.0
	rug	1.0
	Le bond home new Chinese living room light luxury modern Nordic minimalist bedroom	1.0
	T28# leather sofa with two arms and two seats	1.0
	Mora "under the glowing chandelier 1.8 meters" deep anti-glare	1.0
	plant	1.0
	Side KT-JC-02	1.0
	Master bedroom coffee table	1.0
	Yeelight Pro-P20 surface-mounted magnetic track - black 1m	2.0
	Rak Origin/ Arley Florence Corner Wc	1.0

ED 5 Bath		wooden door	1.0
		Downlight	2.0
		Handwashing table 09	1.0
CEO Secretariat		New Chinese bar office chandeliers	4.0
		modern bookcase	1.0
		Curtain	1.0
		modern glass wide partition wall	1.0
		office desk	2.0
		Office Chair	4.0
		Fiberglass black round pier flowerpot	1.0
		Downlight-LS	6.0
















ED Office 4		Chandelier 5	1.0
		Modern cream style TV cabinet	1.0
		Green tree ornament combination ornament	1.0
		Shanghai Maison Dada modern circular circular geometric dining table	1.0
		Modern office desk and chair combination	1.0
		floor lamp	1.0
		Wabi-sabi green plants potted plants	1.0
		Curtain	1.0
		fendi casa table	1.0
		Cement Pot Planter	1.0
		Living room downlight	8.0
		Bookcase background	1.0
		Ant Star Map-MC-Modern Light Luxury Series-Book Chair-PIB02	2.0

	Sofa 006	1.0
	TV Television	1.0














ED Office 2		Chandelier 5	1.0
		rug	1.0
		Modern cream style TV cabinet	1.0
		Modern Single Sofa Lounge Chair	1.0
		Green tree ornament combination ornament	1.0
		Shanghai Maison Dada modern circular circular geometric dining table	1.0
		Cattelan Italia Contemporary Coffee Table	1.0
		Modern office desk and chair combination	1.0
		floor lamp	1.0
		Wabi-sabi green plants potted plants	1.0
		Curtain	1.0













	fendi casa table	1.0
	Jewelry ornaments	1.0
	Living room downlight	8.0
	Bookcase background	1.0
	Ant Star Map-MC-Modern Light Luxury Series-Book Chair-PIB02	2.0
	Book	1.0
	Sofa 006	1.0
	Ornaments	1.0
	TV Television	1.0





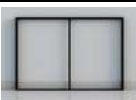



ED Bath 1		wooden door	1.0
		sink	1.0
		Downlights	2.0
		Xingyue Pro Smart Toilet (Original) 5.18	1.0















ED Office 3		Chandelier 5	1.0
		rug	1.0
		Modern cream style TV cabinet	1.0
		Green tree ornament combination ornament	1.0
		Shanghai Maison Dada modern circular circular geometric dining table	1.0
		Modern office desk and chair combination	1.0
		floor lamp	1.0
		Wabi-sabi green plants potted plants	1.0
		Curtain	1.0
		fendi casa table	1.0
		Living room downlight	8.0
		Bookcase background	1.0
		Ant Star Map-MC-Modern Light Luxury Series-Book Chair-PIB02	2.0
		Sofa 006	1.0
	TV Television	1.0	



ED Office 5		Chandelier 5	1.0
		Modern cream style TV cabinet	1.0
		Modern office desk and chair combination	1.0
		Chinese Side table	1.0
		Wabi-sabi green plants potted plants	1.0
		Curtain	1.0
		fendi casa table	1.0
		Cement Pot Planter	1.0
		Living room downlight	8.0
		Bookcase background	1.0
		Ant Star Map-MC-Modern Light Luxury Series-Book Chair-PIB02	4.0
		Sofa 006	1.0
		TV Television	1.0

ED4 Bath		Rak Origin/ Arley Florence Corner Wc	1.0
		wooden door	1.0
		Downlights	2.0
		Handwashing table 09	1.0
ED 3 Bath		wooden door	1.0
		sink	1.0
		Downlights	2.0
		Xingyue Pro Smart Toilet (Original) 5.18	1.0
ED Bath 2		wooden door	1.0
		sink	1.0
		Downlights	2.0
		Xingyue Pro Smart Toilet (Original) 5.18	1.0

PB-2		nordico retrete = retrete inodoro wc bater escusado retrete baño hinodoro bater	1.0
		Downlight	1.0
		-Jane Earthwood, single door.-04.	1.0
		Chandelier 5	1.0
		rug	1.0
		plant	1.0
		Two universal windows	1.0
		console table	1.0
		Double sofa	1.0
		Modern Coffee table	1.0
		Modern office desk and chair combination	1.0
		floor lamp	1.0
		Modern style small side table	2.0







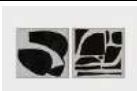






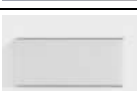

Board Secretariat		Modern green plant potted plants	2.0
		Matrix cross-section New Chinese sales office reception area 2-decorative lights	1.0
		fendi casa table	1.0
		Slate TV Cabinet-BSJD2020-Senkelo	1.0
		Vertical blinds	1.0
		Ant Star Map-MC-Modern Light Luxury Series-Book Chair-PIB02	2.0
		TV Television	1.0
		Modern table lamp-OB	1.0
		Modern table lamp-OB	1.0
		Negotiation chair - beige	2.0
		Modern decorative shelf bookshelf shelf	1.0
		Two universal windows	1.0
		Two universal windows	1.0
	Pantry side cabinet	1.0	

SW Executive  
Lounge

	Modern love sofa	1.0
	Modern Rug cute rug	1.0
	Felis Modern Chair	1.0
	Modern armchair	1.0
	Modern armchair	1.0
	Modern armchair	1.0
	Modern armchair	2.0
	Wabi-Sabi Wind Table	1.0
	Modern green plant potted plants	1.0
	Plant	1.0
	potted plant	1.0
	Plant potting	1.0
	plant	1.0
	Nordic four-person down leather sofa red oak foot leather in-line living room casual	1.0
	Vertical blinds	2.0

		Modern Simple Black and White Line Decoration - 906-4	1.0
		Side table/coffee table/tea seat	1.0
		Downlights	3.0
		Downlights	8.0
		Side a few yr	1.0
		Side Table	1.0
		rug	1.0
		plant	1.0
		Cabinet	1.0
		Cabinet	1.0
outdoors		Floor to ceiling window 02	1.0
		couch	1.0
		floor lamp	1.0
		Two universal windows	1.0

Waiting Area




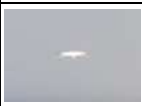





	Two universal windows	1.0
	Pantry side cabinet	1.0
	Wabi-Sabi Style Decorations Ornaments	1.0
	Wabi-sabi chandelier	1.0
	Modern Rug cute rug	1.0
	Modern marble coffee table	1.0
	Modern Painting	1.0
	Plant	1.0
	plant	1.0
	Side table	1.0
	DY81 single sofa	1.0
	F42 two-seater sofa	1.0
	Downlight	6.0
	Vertical blinds	1.0
	Vertical blinds	1.0

	MORU GLASS Changhong Art deco glass sliding door	1.0
	MORU GLASS Changhong Art deco glass sliding door	1.0
	console table	1.0
	Plant	1.0
	ceramic vase	1.0
















	Chandelier 5	1.0
	rug	1.0
	Modern cream style TV cabinet	1.0
	Modern Single Sofa Lounge Chair	1.0
	Green tree ornament combination ornament	1.0
	Shanghai Maison Dada modern circular circular geometric dining table	1.0
	Cattelan Italia Contemporary Coffee Table	1.0
	Modern office desk and chair combination	1.0
	floor lamp	1.0

















ED Office 1		Wabi-sabi green plants potted plants	1.0
		Curtain	1.0
		modern glass wide partition wall	1.0
		fendi casa table	1.0
		Jewelry ornaments	1.0
		Living room downlight	8.0
		Bookcase background	1.0
		Ant Star Map-MC-Modern Light Luxury Series-Book Chair-PIB02	2.0
		Book	1.0
		Sofa 006	1.0
		Ornaments	1.0
		TV Television	1.0
		TV Television	1.0
			lift door

outdoors		Floor to ceiling window 02	2.0
		Floor to ceiling window 02	1.0
		wooden door	2.0
PB-3		Nordico retrete - retrete inodoro wc bater escusado retrete baño hinodoro bater	1.0
		-Jane Earthwood, single door.-04.	1.0
		Downlights	1.0
Small wing Foyer		Glass sliding door	1.0
		Modern Sliding Door	1.0
		Modern green plant potted plants	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Chandelier 5	1.0
		Two universal windows	1.0
		Double sofa	1.0

Visiting Director







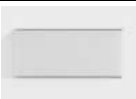







	y047(flower stand 2)	1.0
	Modern office desk and chair combination	1.0
	Modern armchair	2.0
	Paintings_529436.5714a0e60628	1.0
	fendi casa table	1.0
	Downlight	3.0
	Downlights	1.0
	Vertical blinds	1.0
	rug	1.0
	Ant Star Map-MC-Modern Light Luxury Series-Book Chair-PIB02	2.0
	Tea machine	1.0
	Side Table	1.0
	Side a few yr	1.0
	Negotiation chair - beige	1.0
	Negotiation chair - beige	1.0



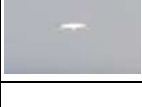
		Modern decorative shelf bookshelf shelf	1.0
		large plant	1.0
VD Bath		mirror	1.0
		Two universal windows	1.0
		modern toilet	1.0
		Wabi-Sabi Style wall lamp	2.0
		wooden door	1.0
		Custom hand-washing table	1.0
		Washbasin 3	1.0
		Downlight	2.0
		Chandelier 5	1.0
		Rug	1.0
		Cabinet 05	1.0
		Side a few 1	1.0

Chairman's room

	Two universal windows	1.0
	Modern office desk and chair combination	1.0
	modern floor lamp	1.0
	Poliform modern blue office chair	1.0
	Poliform modern blue office chair	1.0
	fendi casa table	1.0
	Original - Trend Chihiro - TV cabinet	1.0
	Downlight	8.0
	Huayi furniture HY-2919 sofa	1.0
	Vertical blinds	1.0
	Ant Star Map-MC-Modern Light Luxury Series-Book Chair-PIB02	2.0
	MORU GLASS Changhong Art deco glass sliding door	1.0
	Side table/coffee table/tea seat	1.0
	TV Television	1.0
	Plant	1.0

Chairman Bath		Đèn tường hiện đại	2.0
		mirror	1.0
		Two universal windows	1.0
		modern toilet	1.0
		wooden door	1.0
		Custom hand-washing table	1.0
		Washbasin 3	1.0
		Washbasin 3	1.0
		Downlights	2.0
		Two universal windows	2.0
		Modern conference room white conference table	1.0
		Đơn án thành của phòng cách tranh trang trí trừu tượng tranh treo im lặng quy mô lớn vẽ tay	1.0
		Đơn án thành của bức tranh trang trí trừu tượng phong cách Trung Quốc mới tranh treo im lặng quy mô lớn vẽ	1.0
		Wabi-sabi green plants potted plants	1.0











Board room		Modern office chair	16.0
		Modern office chair	10.0
		Komu - Jacob - Sideboard - BG725.16	1.0
		2cm 900mm line light	12.0
		Downlight 14-Star Mans Special effect 1	2.0
		Downlight spotlight	8.0
		Vertical blinds	2.0
		TV Television	2.0
BR Bathroom Lobby		Pocket door sliding door	1.0
		Two universal windows	1.0
		Downlight	5.0
BR Bathroom 3		Pocket door sliding door	1.0
		modern toilet	1.0
		Modern hand washing table	1.0

		Downlight	1.0
Back Foyer		Pocket door sliding door	1.0
		Pocket door sliding door	1.0
		Pocket door sliding door	1.0
		Downlight	2.0
SW Men's Bathroom		Pocket door sliding door	1.0
		Pocket door sliding door	1.0
		French bathroom Cabinet	1.0
		Downlights	1.0
SW Women's Bath		Pocket door sliding door	1.0
		Pocket door sliding door	1.0
		French bathroom Cabinet	1.0
		Downlights	1.0



Men's WC		modern toilet	1.0
		Downlights	1.0
Women's WC		modern toilet	1.0
		Downlights	1.0
Executive Entrance		lift door	1.0
		Glass sliding door	1.0
		Downlight	3.0
		Plantyr	1.0
Executive Meeting Room		Glass sliding door	1.0
		TV Television	1.0
		Modern conference room white conference table	1.0
		modern flowerpot green plants	1.0
		Modern School Basketball Hall - Swings	1.0

	T18-LS900-24In-10	5.0
	Downlight	10.0
	YN305 TV cabinet	1.0
	modern office chair	16.0


Retiring Room		wooden sidetable	1.0
		Floor to ceiling window 02	4.0
		Glass sliding door	1.0
		Floor to ceiling window 02	1.0
		Cream style single sofa	2.0
		wabi-sabi chandelier	1.0
		Minotti modern Nordic coffee table	1.0
		modern plant flowerpot green plants	1.0
		Plant potting	1.0
		Curved booth multi-person sofa	1.0









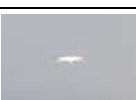





	fendi casa table	1.0
	green plants	1.0
	Downlights	8.0
	MORU GLASS Changhong Art deco glass sliding door	1.0
	green plants	1.0
	rug	1.0








PB-4		nordico retrete - retrete inodoro wc bater escusado retrete baño hinodoro bater water poeste	1.0
		Downlight	1.0
		-Jane Earthwood, single door.-04.	1.0














PB-1		nordico retrete - retrete inodoro wc bater escusado retrete baño hinodoro bater water poeste	1.0
		-Jane Earthwood, single door.-04.	1.0
		Downlights	1.0













		-Jane Earthwood, single door.-04.	1.0
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Men's Bathroom		Downlights	4.0
		596B column basin wastafel	1.0
		596B column basin wastafel	1.0
Service Hall		wooden door	1.0
		-Jane Earthwood, single door.-04.	1.0
		Downlights	3.0
Pantry		Downlight	3.0
		-Jane Earthwood, single door.-04.	1.0
		Downlights	1.0
		Modern cabinets - 002	1.0
PB-5		modern toilet	1.0
		-Jane Earthwood, single door.-04.	1.0
		Downlights	1.0

Women's Bath		Washbasin mirror combination	1.0
		Downlight	1.0
		-Jane Earthwood, single door.-04.	1.0
ceo bath		modern toilet	1.0
		Bathroom cabinet	1.0
		Modern bathroom mirror bathroom mirror dressing mirror	1.0
		Hammac - constant temperature large shower - 1445139A	1.0
		Downlights	1.0
		Downlights	2.0
		Bathroom-shower room-xs	1.0
		wardrobe	1.0
		lift door	3.0
		Modern green wall 3-2	3.0
		Modern green wall 3-2	1.0

Elevator Lobby		Hotel lobby - New Chinese chandelier-7	1.0
		Track Light-124	8.0
		Restaurant reception table	1.0
		Screen partition-154	3.0
		Modern green plant pile potted plant - small flower green plant	2.0
		Front magnetic world folding grille lamp-12W	3.0
		Front magnetic world folding grille lamp-12W	1.0
		Glass door	1.0
		Roller Blinds	1.0
		Walking Man 17-Dynamic	1.0
		Downlights	4.0
		Downlights	5.0
		Desk Table	4.0
		Hanging Cabinet wall Cabinet	1.0











Chairman Secretariat		Office Chair	4.0
		Mora "under the glowing chandelier 2.4 meters" high-gloss effe	2.0
Service Hall		Pocket door sliding door	1.0
		Downlight	2.0
Hall Way		Modern corrugated glass partition	1.0
		Glass partition 1500 2600	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		625U Spotlight Black	14.0
CEO Pantry		Floor to ceiling window 02	1.0
		Modern Coffee Shop Operator's Station 1-Hanging Cabinet	1.0
		Curtain	1.0
		Downlights	2.0

		Guide	1.0
outdoors		Floor to ceiling window 02	1.0
outdoors		Floor to ceiling window 02	1.0
outdoors		Floor to ceiling window 02	1.0
outdoors		Floor to ceiling window 02	1.0
outdoors		Floor to ceiling window 02	2.0
outdoors		Floor to ceiling window 02	1.0
		File cabinets	4.0
		Book	6.0
		Modern minimalist villa living room dining room - wall painting	1.0
		Modern style TV cabinet - wall painting	1.0
		Office cabinet-3	1.0



Open Office











	Office cabinet-3	4.0
	Modern decorative painting	1.0
	Lipang Furniture - Medical Furniture - YB34 four-person workstation	1.0
	Lipang Furniture - Medical Furniture - YB34 four-person workstation	4.0
	Bauhaus-End Painting 6	1.0
	green plants	4.0
	Courtesy fair house with painting - modern Xuanguan decorative painting - Hyunguan single - black case 1	1.0
	Living room downlight	52.0
	Living room downlight	10.0
	Office Chair	4.0
	Office Chair	16.0
	Lebond Painting Industry-Modern Simple Abstract Decoration Painting-Yuanxia-8	1.0
	Happy Workshop - Nordic Wind - Living Room Bedroom Hyun-Doodle Painting - Chess	1.0
	Painting Alliance - Nordic Plains - Single - Decorative Painting - XJ006	1.0
	Painting Alliance - Nordic Plains - Single - Decorative Painting - XJ004	1.0

		Modern chandelier 1.0-LY	10.0
BR Bathroom 2		Pocket door sliding door	1.0
		modern toilet	1.0
		Modern hand washing table	1.0
BR Bathroom 1		Pocket door sliding door	1.0
		modern toilet	1.0
		Modern hand washing table	1.0
Pantry		cupboard	1.0
media room		Pocket door sliding door	1.0
外景		Downlights	2.0
Total			
















# COMPLIANCE SHEET



























PROJECT NAME: SL Building No. 9 8th floor








Room Name	Product Photo	Product Name	Quantity
Storage		wooden door	1.0
		Downlight spotlight	3.0
	Sub Total		
Handicap Bathroom		Handicapped Toilet	1.0
		wooden door	1.0
		Towel Bar	1.0
		Towel Bar	1.0
		Daqin sanitary ware-Feitongstandard customization-bathroom Cabinet	1.0
		Downlight	2.0
		Towel bar	1.0
		Window group	1.0
Sub Total			

Men's Bathroom		Modern hand washing table	2.0
		wooden door	1.0
		Downlights	4.0
	Sub Total		
Executive Bath 2		modern toilet	1.0
		Bathroom Cabinet combined bathroom Cabinet	1.0
		wooden door	1.0
		Downlight	2.0
	Sub Total		
Executive Bath1		modern toilet	1.0
		Bathroom Cabinet combined bathroom Cabinet	1.0
		wooden door	1.0
		Downlights	2.0
		Window group	1.0
	Sub Total		
WBJanitor's Closet		wooden door	1.0
		Downlight spotlight	1.0
	Sub Total		

Women's Bathroom		Modern hand washing table	2.0
		wooden door	1.0
		Downlights	5.0
	Sub Total		
Pantry		Kitchen cabinet	1.0
		window	1.0
		Single door zero built-in refrigerator	1.0
		wooden door	1.0
	Sub Total		
Service Hall		wooden door	1.0
		wooden door	1.0
		Downlight	6.0
	Sub Total		
Huddle Room		Modern fabric lounge chair - white lounge chair	6.0
		wabi-sabi chandelier	1.0
		Glass door	1.0
		Heng Teng Honey Home First Star Rice Luxury Series Table 19300102 and CXCZ043	1.0
		Downlights	4.0
	Sub Total		







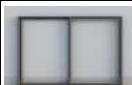


Library		Modern conference room training room conference table	1.0
		Track Light-135	14.0
		library bookshelf	6.0
		library bookshelf	1.0
		bookstore bookshelf	1.0
		bookstore bookshelf	2.0
		library bookshelf	1.0
		library bookshelf	3.0
		library bookshelf	1.0
		library bookshelf	1.0
		Computer	2.0
		Simple modern - XH10A-Office Furniture Manager Table Staff Table	1.0

		Office chair	1.0
		Tangjing TJ-office chair	11.0
		3D rights are air XLG - Nordic Modern Guest Restaurant Bedroom Single Head Chandeliers	4.0
		Chandelier light (middle floodlight, grille spotlights at both ends) - black	1.0
		Modern - Small Windows - xs	3.0
		Modern - Small Windows - xs	1.0
		60 single-person unilateral office desk table	1.0
		60 single-person unilateral office desk table	1.0
	Sub Total		
WC4		toilet bowl	1.0
		wooden door	1.0
		Downlight	1.0
		Window group	1.0
	Sub Total		


WC1		toilet bowl	1.0
		wooden door	1.0
		Downlight	1.0
		Window group	1.0
	Sub Total		
WC2		toilet bowl	1.0
		wooden door	1.0
		Downlights	1.0
		Window group	1.0
	Sub Total		
WC3		toilet bowl	1.0
		wooden door	1.0
		Downlight	1.0
		Window group	1.0
	Sub Total		







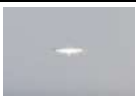










Storage Auditorium		window	1.0
		wooden door	1.0
		Roller Blinds	1.0
		Downlights	4.0
	Sub Total		
Office 3		plant	1.0
		window	1.0
		Window	1.0
		Window	1.0
		Modern fabric lounge chair - white lounge chair	2.0
		Modern Fabric Single Sofa	1.0
		Modern simple office desk and chair combination	1.0
		Side table	1.0
		Roller Blinds	1.0

	F42 two-seater sofa	1.0
	Downlights	5.0
	MORU GLASS Changhong Art deco glass sliding door	1.0
	Brilliant black box	1.0
	Chandelier light (middle floodlight, grille spotlights at both ends) - black	1.0
	Sideboard YR4.26	1.0
	rug	1.0
Sub Total		
	window	1.0
	window	1.0
	window	1.0
	Modern podium - LCD screen	1.0
	615mm 3.5 Embedded 12-Hole Stripe Light Ouzhong	3.0
	615mm 3.5 Embedded 12-Hole Stripe Light Ouzhong	3.0

auditorium

	615mm 3.5 Embedded 12-Hole Stripe Light Ouzhong	2.0
	615mm 3.5 Embedded 12-Hole Stripe Light Ouzhong	3.0
	615mm 3.5 Embedded 12-Hole Stripe Light Ouzhong	3.0
	Roller Blinds	1.0
	Roller Blinds	1.0
	Roller Blinds	1.0
	Office Chair	49.0
	Office Chair	6.0
	Office Chair	5.0
	Office Chair	5.0
	Office Chair	11.0
	Office Chair	6.0
	Office Chair	6.0












	Office Chair	5.0
	Office Chair	5.0
	Office Chair	5.0
	Office Chair	6.0
	Office Chair	12.0
Sub Total		
	plant	1.0
	window	1.0
	Window	1.0
	Window	1.0
	Modern Fabric Single Sofa	1.0
	Modern fabric lounge chair - white lounge chair	2.0
	Modern simple office desk and chair combination	1.0
	Side table	1.0

Office 5		Roller Blinds	1.0
		F42 two-seater sofa	1.0
		Downlights	5.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Decorative Amance - Modern Light Luxury Premium - Single - Decorative Painting - GUM1100027	1.0
		Chandelier light (middle floodlight, grille spotlights at both ends) - black	1.0
		Sideboard YR4.26	1.0
		rug	1.0
	Sub Total		
		Modern Painting	1.0
		rug	1.0
		Table lamp - XS	2.0
		small window	1.0
		Modern green plant potted plants	2.0

Corridor

	Green plant	1.0
	Nordic sofa stool	1.0
	French light luxury coffee table	1.0
	window	1.0
	Green sofa	1.0
	Masasanty - Side Table	2.0
	cupboard	1.0
	Wabi-Sabi Style Side table	1.0

	Roller Blinds	1.0
	Red Square Print - Oriental Minimalist Two-seat sofa - S2010	1.0
	PS515 Single Seat	2.0
	MORU GLASS Changhong Art deco glass sliding door	2.0
	Nordic Chandelier	1.0
	Wabi-sabi style side table/coffee table/tea seat	1.0
	Downlights	14.0
	Painting Alliance - Modern Light Luxury Premium Sense - Collage - Decorative Painting	1.0
	french window	1.0
	french window	1.0
Sub Total		





	black metal shelf	1.0
	Apple Mac Desktop	1.0
	Apple Mac Desktop	11.0
	window	1.0
	window	1.0
	window	1.0
	window	1.0
	File holder-32	3.0
	File holder-10	1.0
	Plant	1.0
	Đồ trang sức hiện đại - đồ trang trí hoa	1.0











Office 1










	Medieval style jewelry set	1.0
	modern folder	1.0
	Paper tray	2.0
	Office Supplies	1.0
	Paper rack	1.0
	modern folder	1.0
	Office stationery	1.0
	Earth Globe	1.0
	Modern filing cabinet filing cabinet-double door low cabinet	2.0
	Modern filing cabinet filing cabinet-double door low cabinet	1.0
	Modern simple office desk and chair combination	1.0
	Modern simple office desk and chair combination	1.0

	Simple post-modern-TK24-Office furniture filing cabinets bookcases storage	1.0
	Simple post-modern-TK21-Office furniture filing cabinets bookcases storage	1.0
	Office Chair	12.0
	glass partition	1.0
	Tangjing TJ-office chair	4.0
	Roller Blinds	1.0
	Roller Blinds	3.0
	Living room downlight	22.0
	The staff seats 2 people sit on top of another	6.0
	MORU GLASS Changhong Art deco glass sliding door	2.0
	Wall hanging plant small-	1.0
	Chandelier light (middle floodlight, grille spotlights at both ends) - black	7.0








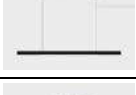


		Chandelier light (middle floodlight, grille spotlights at both ends) - black	2.0
		small flowers	1.0
	Sub Total		
Lobby		New Chinese metal chandelier 4	1.0
		Landscape sketch pool	1.0
		Bernhardt Design- Seating-Benches- cp-2	4.0
		window	1.0
		Green plant potted 28	1.0
		Plant potting	1.0
		Downlight	16.0
		MORU GLASS Changhong Art deco glass sliding door	1.0
		Plant potting	2.0
	Sub Total		

	plant	1.0
	window	1.0
	Wabi-Sabi Style Painting	1.0
	Modern Floor Lamp	1.0
	Modern style small side table	2.0
	Outdoor curved multi-person sofa	2.0
	vase book combination ornaments	1.0
	Small plantains	1.0
	A small glass vase for H.M	1.0
	modern books books books	1.0
	book	1.0

Auditorium  
Waiting

	Wabi-sabi style vase ornaments	1.0
	Wabi-sabi wind lamp	1.0
	Candle	1.0
	Modern Living Room - Single Sofa	3.0
	plant	1.0
	AJ073 coffee table	2.0
	Roller Blinds	1.0
	Downlights	12.0
	Candle	1.0

	Chandelier-028	1.0
	Chandelier-028	1.0
	243 Water Cup Pd_1	1.0
	rug	2.0
Sub Total		
	Apple Mac Desktop	10.0
	Apple Mac Desktop	8.0
	window	2.0
	Green plants	2.0
	Printer	1.0
	Modern filing cabinet filing cabinet-double door low cabinet	1.0
	Modern office chair meeting chair	4.0
	Modern simple office desk and chair combination	1.0

Staff Hall		Office Chair	18.0
		Tangjing TJ-office chair	2.0
		Roller Blinds	2.0
		Living room downlight	27.0
		Living room downlight	1.0
		The staff seats 2 people sit on top of another	9.0
		Chandelier light (middle floodlight, grille spotlights at both ends) - black	8.0
		Chandelier light (middle floodlight, grille spotlights at both ends) - black	3.0
		Plant potting	1.0
		Plant	1.0
		Sub Total	

Auditorium Hallway		window	2.0
		Downlight	2.0
		Downlight	11.0
		Double Door	2.0
		MORU GLASS Changhong Art deco glass sliding door	3.0
	Sub Total		
Entrance		reception+counter	1.0
		Nanchang Jiangling - Glass Door	1.0
		Finely furnished CH- 252C lounge chair	1.0
	Sub Total		
		Tree pool	3.0
		Modern tree pond street tree-Tree 2	12.0
		Modern tree pond street tree-Tree 2	1.0



Terrace		Plant potting	6.0
		square swing	1.0
		Kindergarten outdoor courtyard landscape	5.0
		Gazebo	1.0
		plant	1.0
		Plant	7.0
		Plant	1.0
		Sub Total	
Total			



**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**VOLUME-IV  
DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

## 6TH FLOOR LIST OF DRAWINGS

<u>TITLE</u>	<u>DWG. No.</u>	<u>S. No.</u>	<u>TITLE</u>	<u>DWG. No.</u>
<b>ARCHITECTURE DRAWINGS</b>				
72 SMALL WING D.G.M FURNITURE LAYOUT	SL.06.AR.WR-71		<b>ELECTRICAL DRAWINGS</b>	
73 SMALL WING STAFF FURNITURE LAYOUT	SL.06.AR.SS-72	100	CEILING LAYOUT PLAN	SL.06.CL-01
74 SMALL WING PANTRY FURNITURE LAYOUT	SL.06.AR.SP-73	101	LOOPING LAYOUT PLAN	SL.06.LP-02
75 SMALL WING KITCHEN FURNITURE LAYOUT	SL.06.AR.SK-74	102	TECNOLOGY BOX LAYOUT PLAN	SL.06.TB-03
76 SMALL WING CHIEFS TOILET LAYOUT	SL.06.AR.SCT-75		<b>HVAC DRAWINGS</b>	
77 SMALL WING TOILETS LAYOUT	SL.06.AR.SPB-76			
78 WAITING AREA CEILING LAYOUT	SL.06.AR.WC-77	103	HVAC LAYOUT PLAN	SL.06.HV-01
79 VISITOR LOUNGE CEILING LAYOUT	SL.06.AR.VC-78		<b>PLUMBING DRAWINGS</b>	
80 LARGE WING RECORD ROOMS CEILING LAYOUT	SL.06.AR.LR-79			
81 LARGE WING MEETING ROOMS CEILING LAYOUT	SL.06.AR.LM.-80	104	PLUMBING & FIXTURE LAYOUT PLAN	SL.06.PB-01
82 LARGE WING CHIEF OFFICE CEILING LAYOUT	SL.06.AR.LC-81	105	WATER SUPPLY LAYOUT PLAN	SL.06.PB-02
83 LARGE WING D.G.M CEILING LAYOUT	SL.06.AR.LD-82	106	DRAIN LAYOUT PLAN	SL.06.PB-03
84 LARGE WING D.G.M CEILING LAYOUT	SL.06.AR.LD-83		<b>FIRE ALARM DRAWINGS</b>	
85 LARGE WING PANTRY CEILING LAYOUT	SL.06.AR.LP-84			
86 LARGE WING FEMALE CHIEF TOILET CEILING LAYOUT	SL.06.AR.LF-85	107	FIRE ALARM LAYOUT PLAN	SL.06.HV-01
87 LARGE WING MALE CHIEF TOILET CEILING LAYOUT	SL.06.AR.LM-86		<b>SECURITY SURVEILLANCE DRAWINGS</b>	
88 LARGE WING TOILET CEILING LAYOUT	SL.06.AR.LPB-87			
89 SMALL WING MEETING ROOM CEILING LAYOUT	SL.06.AR.SM-88	108	SECURITY SURVEILLANCE LAYOUT PLAN	SL.06.SS-01
90 LARGE WING MALE CHIEF TOILET CEILING LAYOUT	SL.06.AR.SR-89			
91 SMALL WING CHIEF OFFICE CEILING LAYOUT	SL.06.AR.SC-90			
92 SMALL WING D.G.M CEILING LAYOUT	SL.06.AR.SD-91			
93 SMALL WING D.G.M AND STAFF CEILING LAYOUT	SL.06.AR.SD-92			
94 SMALL WING PANTRY CEILING LAYOUT	SL.06.AR.SP-93			
95 SMALL WING KITCHEN CEILING LAYOUT	SL.06.AR.SK-94			
96 SMALL WING CHIEFS TOILET CEILING LAYOUT	SL.06.ARSC-95			
97 SMALL WING TOILET CEILING LAYOUT	SL.06.AR.SPB-96			
98 SMALL WING SERVICE AREA CEILING LAYOUT	SL.06.AR.SS-97			
99 HVAC & CEILING LIGHTING PLAN	SL.06.HV.01			

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

#### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
LIST OF DRAWING

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	JUNE2024

DWG. No.  
**SL.06 LD -02**

## 6TH FLOOR LIST OF DRAWINGS

S. No	TITLE	DWG. No.	S. No	TITLE	DWG. No.
<b>ARCHITECTURE DRAWINGS</b>					
1.	MASTER PLAN	SL-06-AR.MP-01	36.	LARGE WING PANTRY ELEVATION C	SL.06.AR.RF-36
2.	MASTER PLAN WALL POSITIONING	SL.06.AR.MP-02	37.	DH/CHIEF ELEVATION A	SL.06.AR.DHC-37
3.	MASTER FLOOR FINISH	SL.06.AR.MP-03	38.	DH/CHIEF ELEVATION B	SL.06.AR.DHC-38
4.	MASTER PLAN CEILING LAYOUT	SL.06.AR.MP-04	39.	DH/CHIEF ELEVATION C	SL.06.AR.DHC-39
5.	LARGE WING MEETING ROOM ELEVATION A	SL.06.AR.LWM-05	40.	DH/CHIEF ELEVATION D	SL.06.AR.DHC-40
6.	LARGE WING MEETING ROOM ELEVATION B	SL.06.AR.LWM-06	41.	DH/CHIEF FLOOR	SL.06.AR.LWP-41
7.	LARGE WING MEETING ROOM ELEVATION C	SL.06.AR.LW-07	42.	SMALL WING DGM ELEVATION 1	SL.06.AR.SWD-42
8.	LARGE WING MEETING ROOM ELEVATION D	SL.06.AR.LWM-08	43.	SMALL WING DGM ELEVATION 2	SL.06.AR.SWD-43
9.	LARGE WING MEETING ROOM FLOOR	SL.06.AR.LWM-09	44.	SMALL WING DGM FLOOR	SL.06.AR.SWD-44
10.	DGM ELEVATION A	SL.06.AR.DGM-10	45.	SMALL WING DGM FLOOR-1	SL.06.AR.SWD-45
11.	DGM ELEVATION B	SL.06.AR.DGM-11	46.	MEETING ROOM ELEVATION A	SL.06.AR.MR-46
12.	DGM PLAN	SL.06.AR.DGM-12	47.	MEETING ROOM ELEVATION B	SL.06.AR.MR-47
13.	LARGE WING CHIEF OFFICE ELEVATION A	SL.06.AR.LWC-13	48.	MEETING ROOM ELEVATION C	SL.06.AR.MR-48
14.	LARGE WING CHIEF OFFICE ELEVATION B	SL.06.AR.LWC-14	49.	MEETING ROOM FLOOR	SL.06.AR.MR-49
15.	LARGE WING CHIEF OFFICE ELEVATION C	SL.06.AR.LWC-15	50.	FEMALE CHIEF BATH ELEVATION 1	SL.06.AR.FCB-50
16.	LARGE WING CHIEF OFFICE ELEVATION D	SL.06.AR.LWC-16	51.	FEMALE CHIEF BATH ELEVATION 2	SL.06.AR.FCB-51
17.	LARGE WING CHIEF OFFICE FLOOR	SL.06.AR.LWC-17	52.	LARGE WING PUBLIC BATH ELEVATION	SL.06.AR.LWPB-52
18.	LARGE WING PANTRY ELEVATION A	SL.06.AR.LWP-18	53.	LARGE WING PUBLIC BATH WALLS	SL.06.AR.LWPB-53
19.	LARGE WING PANTRY ELEVATION B	SL.06.AR.LWP-19	54.	SW PUBLIC BATH ELEVATION B	SL.06.AR.SWP-54
20.	LARGE WING PANTRY ELEVATION C	SL.06.AR.LWP-20	55.	SW PUBLIC BATH FLOOR	SL.06.AR.SWP-55
21.	LARGE WING PANTRY ELEVATION D	SL.06.AR.LWP-21	56.	SW KITCHEN ELEVATION	SL.06.AR.SWK-55A
22.	LARGE WING PANTRY FLOOR	SL.06.AR.LWP-22	57.	SW KITCHEN FLOOR	SL.06.AR.SWK-56
23.	VISITOR LOUNGE ELEVATION A	SL.06.AR.VL-23	58.	WAITING AREA FURNITURE LAYOUT	SL.06.AR.WT-57
24.	VISITOR LOUNGE ELEVATION B	SL.06.AR.VL-24	59.	VISITORS LOUNGE FURNITURE LAYOUT	SL.06.AR.VL-58
25.	VISITOR LOUNGE ELEVATION C	SL.06.AR.VL-25	60.	LARGE WING RECORD ROOMS LAYOUT	SL.06.AR.LR-59
26.	VISITOR LOUNGE FLOOR	SL.06.AR.VL-26	61.	LARGE WING MEETING ROOM FURNITURE LAYOUT	SL.06.AR.LM-60
27.	WAITING/PANTRY ELEVATION A	SL.06.AR.WP-27	62.	LARGE WING CHIEF OFFICE FURNITURE LAYOUT	SL.06.AR.LC-61
28.	WAITING/PANTRY ELEVATION B	SL.06.AR.WP-28	63.	LARGE WING D.G.M FURNITURE LAYOUT	SL.06.AR.LD-62
29.	WAITING/PANTRY ELEVATION C	SL.06.AR.WP-29	64.	LARGE WING STAFF FURNITURE LAYOUT	SL.06.AR.LS-63
30.	WAITING/PANTRY ELEVATION D	SL.06.AR.WP-30	65.	LARGE WING PANTRY FURNITURE LAYOUT	SL.06.AR.LP-64
31.	WAITING/PANTRY FLOOR	SL.06.AR.WP-31	66.	FEMALE CHIEF TOILET LAYOUT	SL.06.AR.LFC-65
32.	RECEPTION AREA ELEVATION A	SL.06.AR.WR-32	67.	MALE CHIEF TOILET LAYOUT	SL.06.AR.LM-66
33.	RECEPTION AREA ELEVATION B	SL.06.AR.RA-33	68.	LARGE WING TOILETS LAYOUT	SL.06.AR.LB-67
34.	RECEPTION AREA ELEVATION C	SL.06.AR.RA-34	69.	SMALL WING MEETING ROOM FURNITURE LAYOUT	SL.06.AR.SM-68
35.	RECEPTION AREA ELEVATION D	SL.06.AR.RA-35	70.	SMALL WING RECORD ROOMS FURNITURE LAYOUT	SL.06.AR.SR-69
			71.	SMALL WING CHIEF OFFICES FURNITURE LAYOUT	SL.06.AR.WT-70

### GENERAL NOTES

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#### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
LIST OF DRAWING

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	JUNE-2024

DWG. No.  
**SL.06 LD -01**



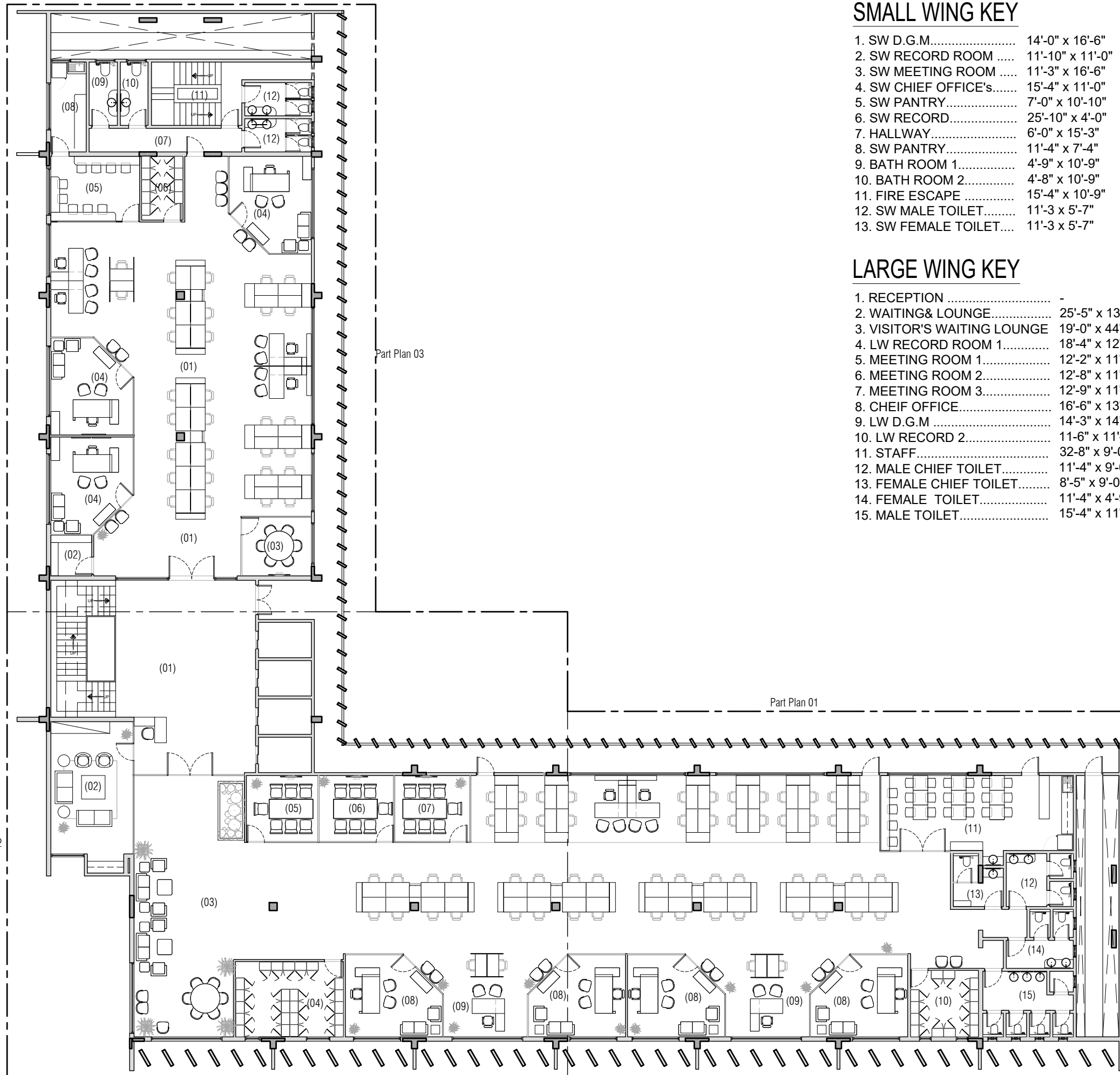
**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**5th & 6th FLOOR**  
**ARCHITECTURE DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.





### SMALL WING KEY

- 1. SW D.G.M..... 14'-0" x 16'-6"
- 2. SW RECORD ROOM ..... 11'-10" x 11'-0"
- 3. SW MEETING ROOM ..... 11'-3" x 16'-6"
- 4. SW CHIEF OFFICE's..... 15'-4" x 11'-0"
- 5. SW PANTRY..... 7'-0" x 10'-10"
- 6. SW RECORD..... 25'-10" x 4'-0"
- 7. HALLWAY..... 6'-0" x 15'-3"
- 8. SW PANTRY..... 11'-4" x 7'-4"
- 9. BATH ROOM 1..... 4'-9" x 10'-9"
- 10. BATH ROOM 2..... 4'-8" x 10'-9"
- 11. FIRE ESCAPE ..... 15'-4" x 10'-9"
- 12. SW MALE TOILET..... 11'-3 x 5'-7"
- 13. SW FEMALE TOILET.... 11'-3 x 5'-7"

### LARGE WING KEY

- 1. RECEPTION ..... -
- 2. WAITING & LOUNGE..... 25'-5" x 13'-11"
- 3. VISITOR'S WAITING LOUNGE 19'-0" x 44'-4"
- 4. LW RECORD ROOM 1..... 18'-4" x 12'-9"
- 5. MEETING ROOM 1..... 12'-2" x 11'-2"
- 6. MEETING ROOM 2..... 12'-8" x 11'-2"
- 7. MEETING ROOM 3..... 12'-9" x 11'-2"
- 8. CHEIF OFFICE..... 16'-6" x 13'-11"
- 9. LW D.G.M ..... 14'-3" x 14"-1"
- 10. LW RECORD 2..... 11'-6" x 11'-1"
- 11. STAFF..... 32'-8" x 9'-0"
- 12. MALE CHIEF TOILET..... 11'-4" x 9'-0"
- 13. FEMALE CHIEF TOILET..... 8'-5" x 9'-0"
- 14. FEMALE TOILET..... 11'-4" x 4'-9"
- 15. MALE TOILET..... 15'-4" x 11'-1"

### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

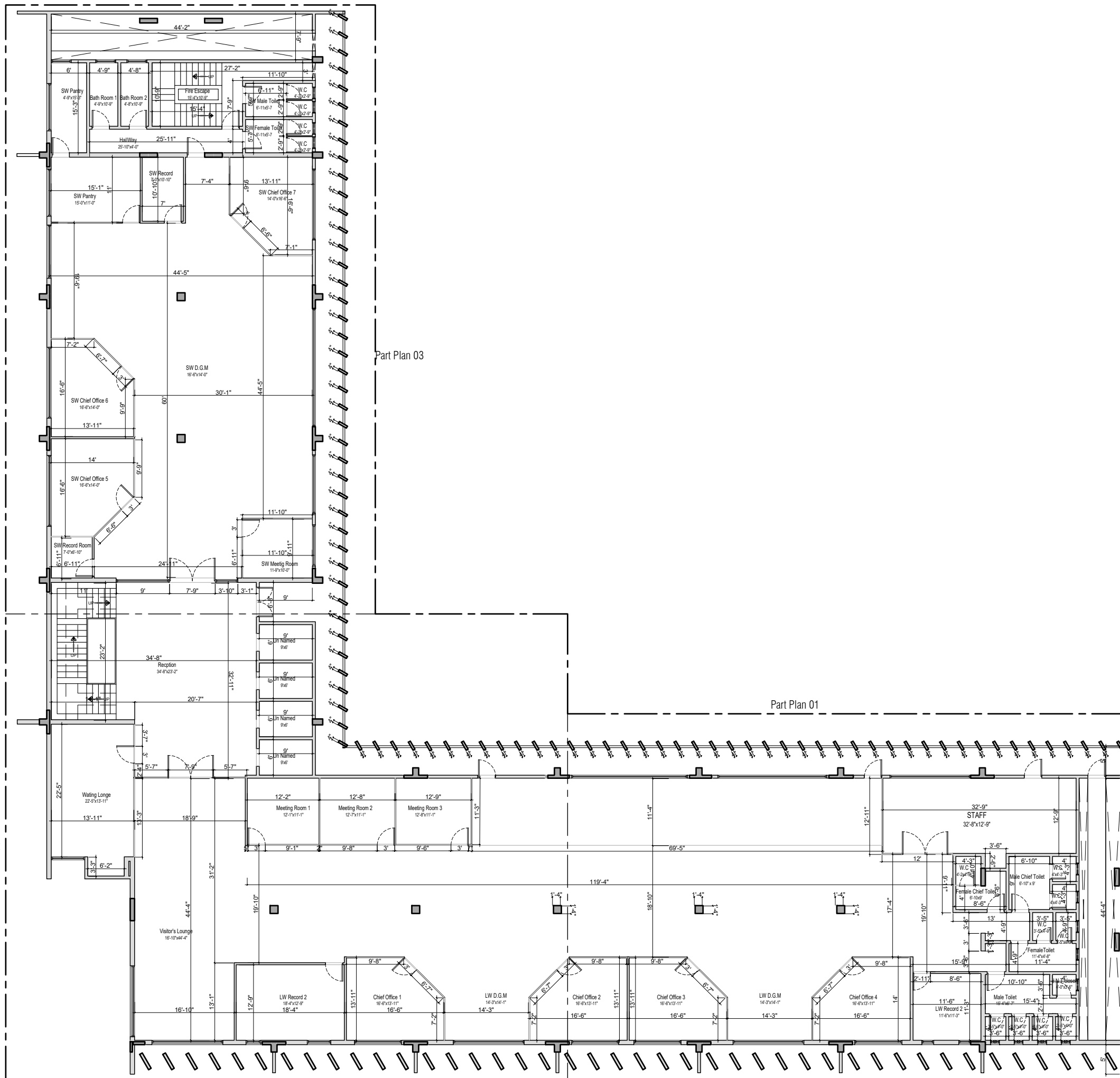
DRAWING TITLE:

**6th FLOOR**  
**FURNITURE LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	APR-2024

DWG. No.  
**SL.06.AR.MP-01**



### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

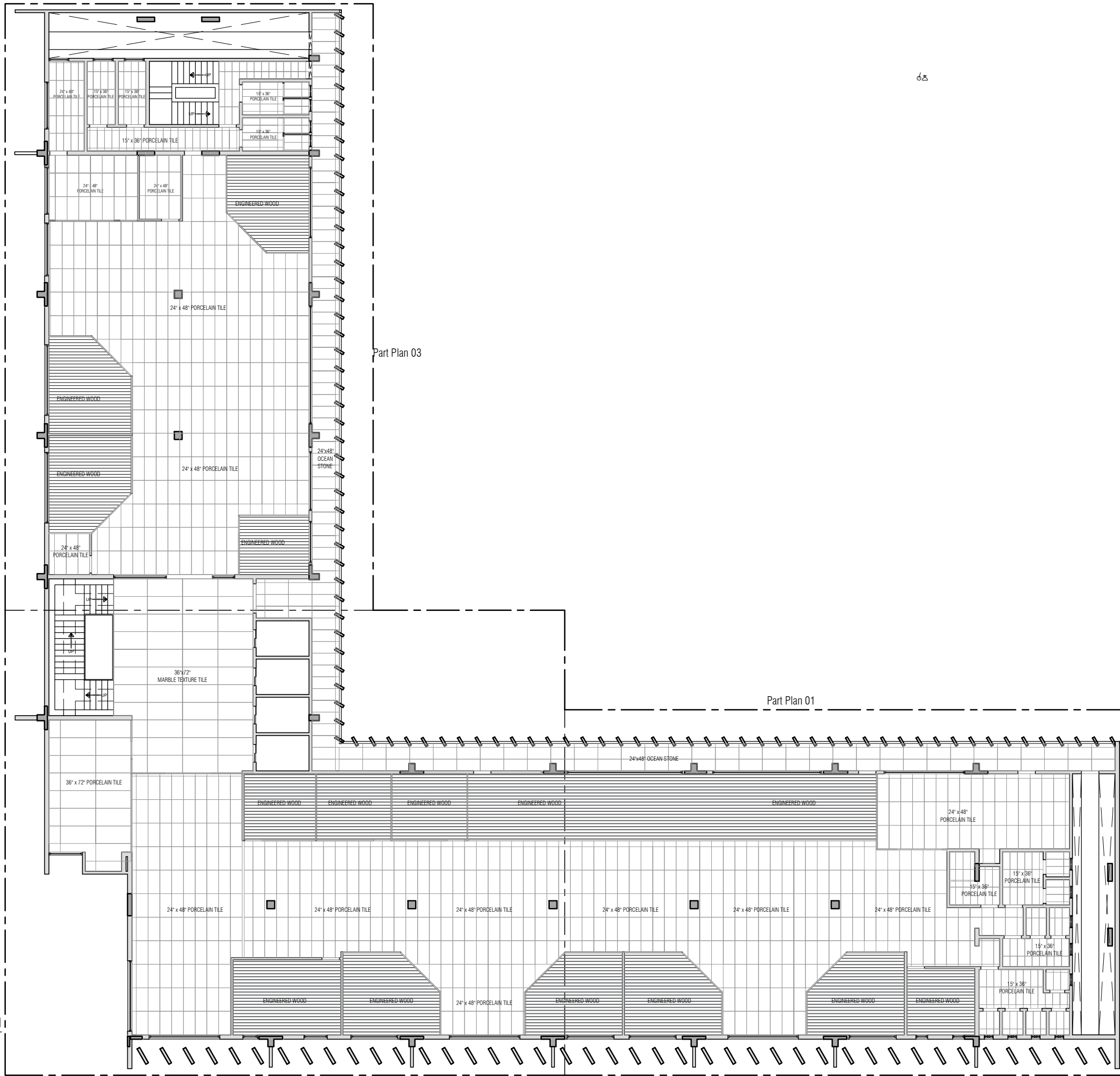
DRAWING TITLE:

**6th FLOOR**  
**WORKING LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
1/8" = 1'		@ A3 APR-2024

DWG. No.  
**SL.06.AR.MP-02**

**A** Working Layout Plan  
A-02 Scale: N.T.S



### GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

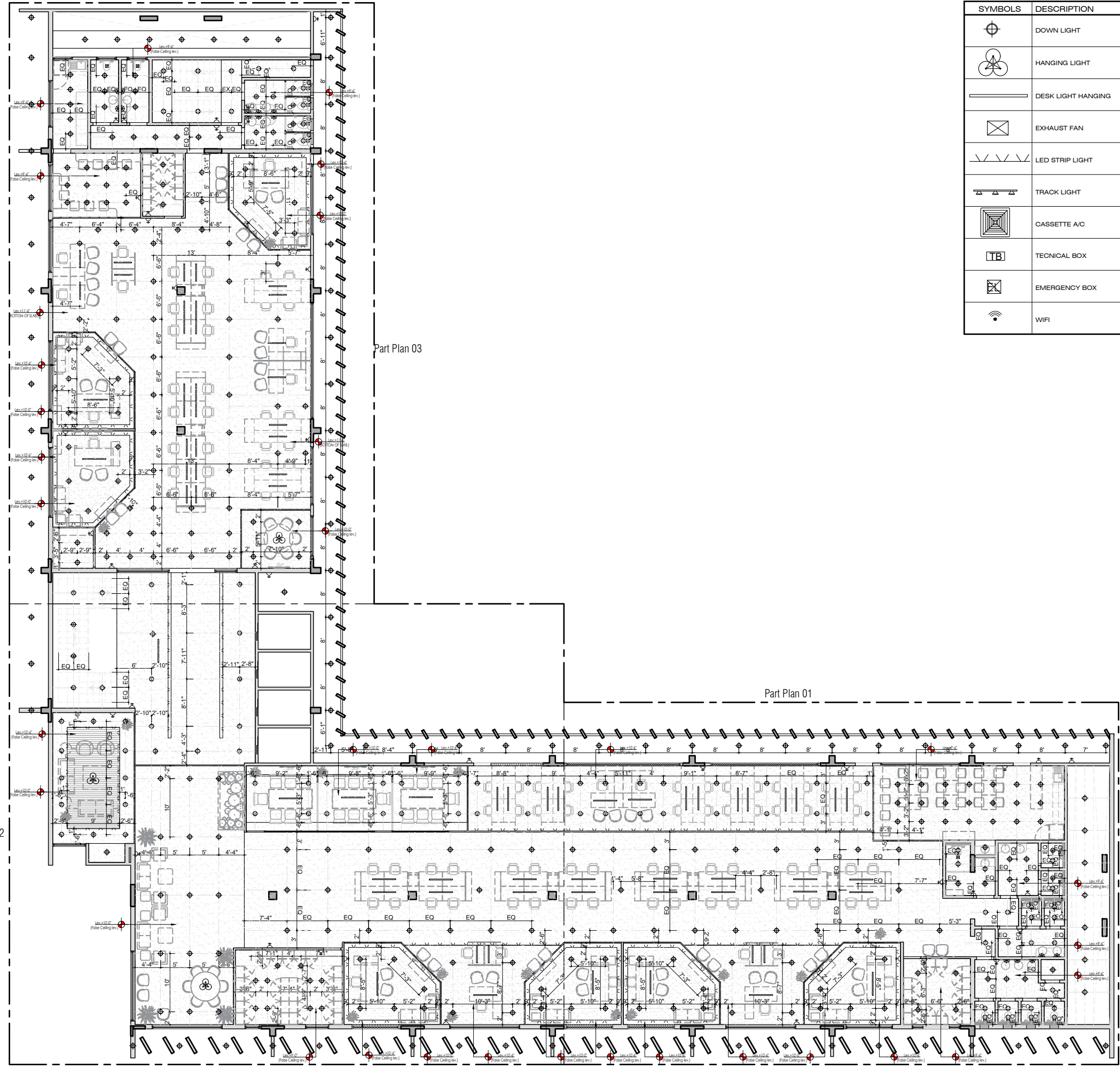
DRAWING TITLE:  
**6th FLOOR FLOORING LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
1/8" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.MP-03**

**A** Flooring Layout Plan  
A-03 Scale: N.T.S





SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT
	CASSETTE A/C
	TECNICAL BOX
	EMERGENCY BOX
	WIFI

### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
CEILING LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	APR-2024

DWG. No.  
**SL.06.AR.MP-04**

**A**  
A-04 Ceiling Layout Plan  
Scale: N.T.S

## GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



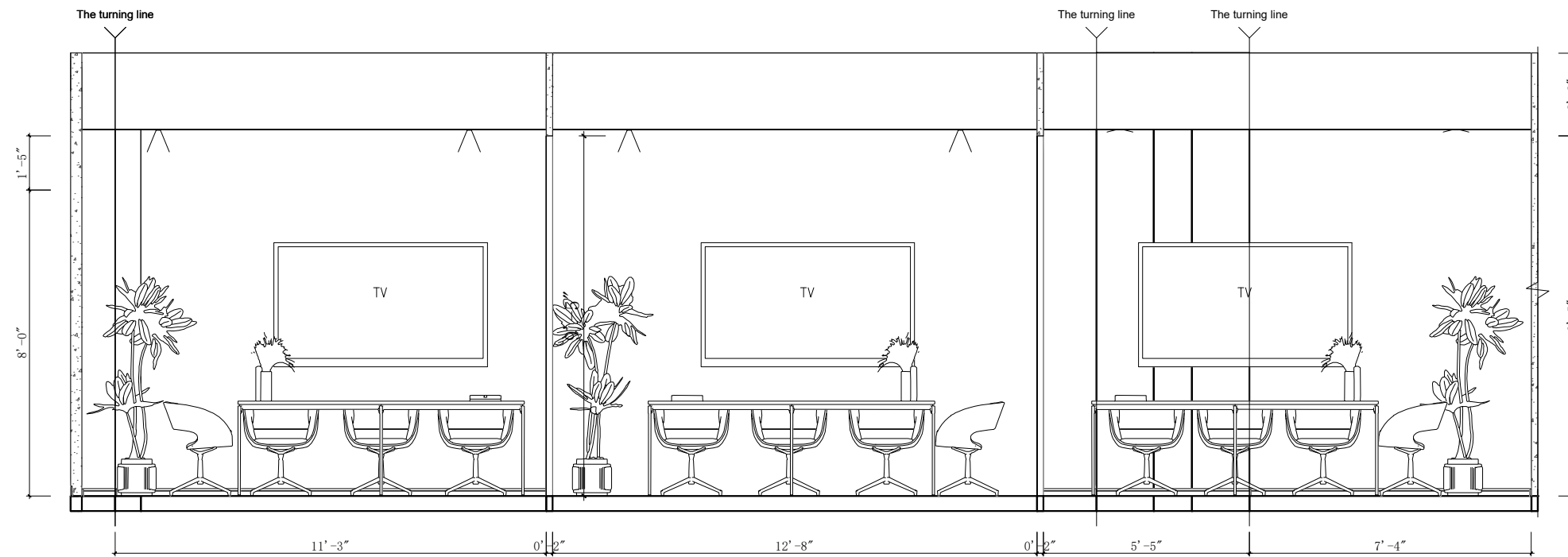
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PROJECT:

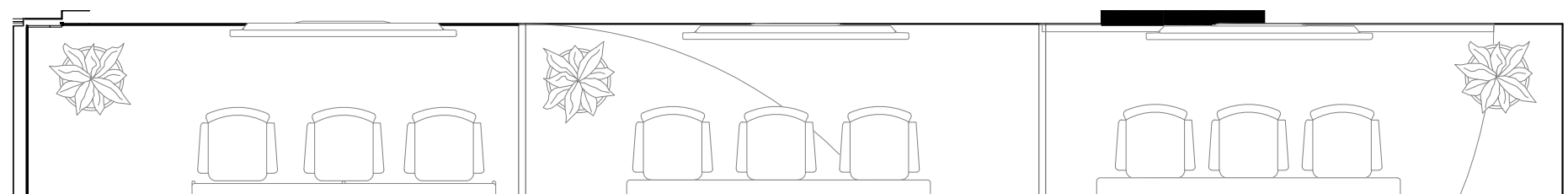
**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:



Meeting Room Elevation A(1/4"=1'-0")



MEETING ROOM ELEV A(1/4"=1'-0")

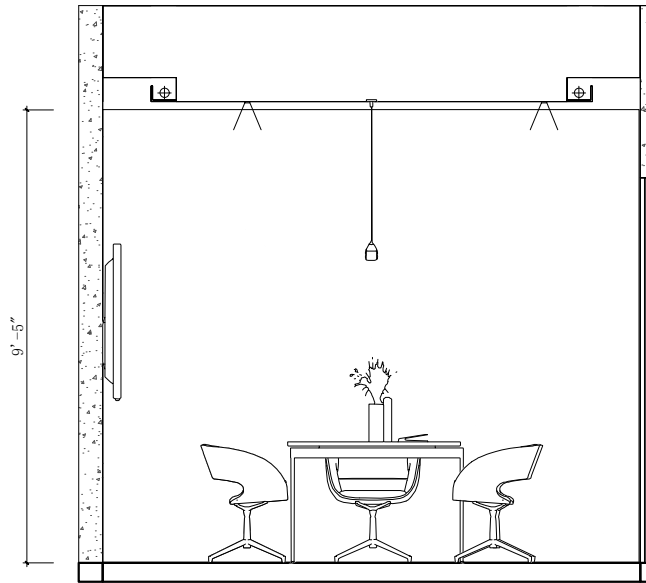


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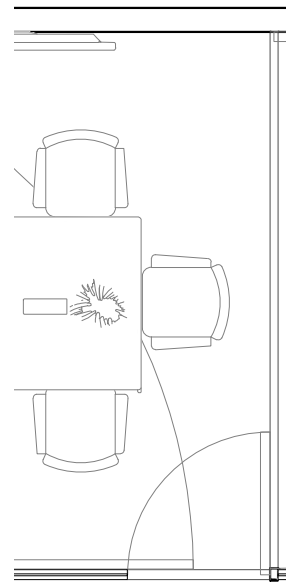
**6th FLOOR**  
LARGE WING MEETING ROOM  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.LWM-05



Meeting Room 1 Elevation B(1/4"=1'-0")



MEETING ROOM ELEV B(1/4"=1'-0")



**GENERAL NOTES**

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING MEETING ROOM  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.LWM-06



## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

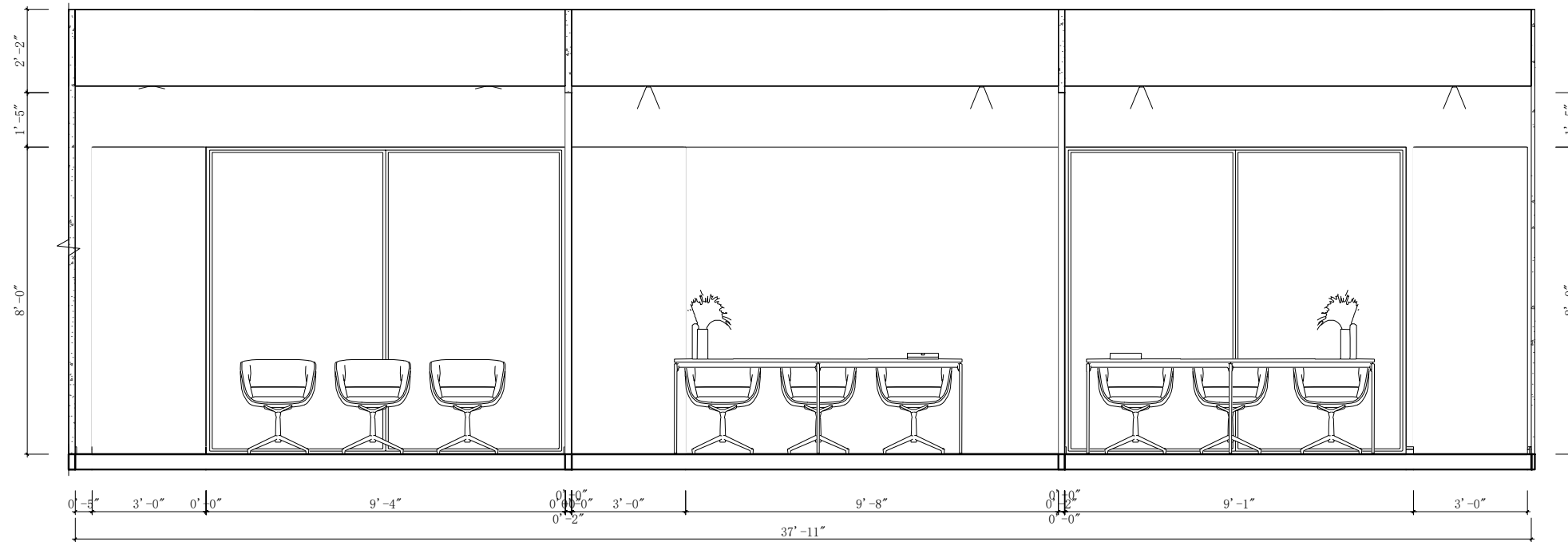


COMMENTS:

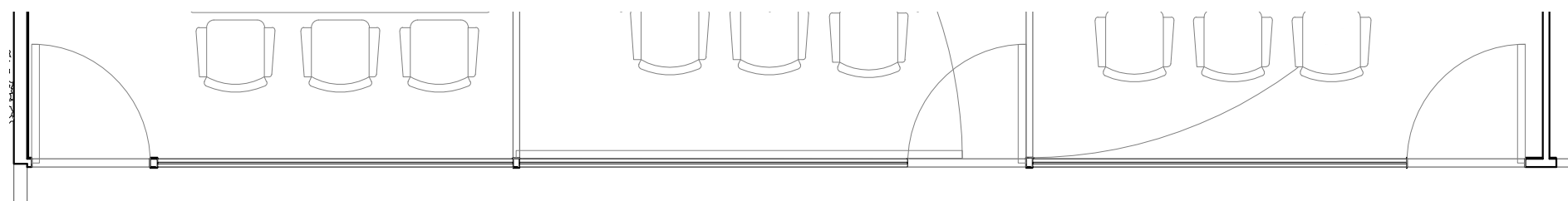
DRAWING TITLE:  
**6th FLOOR**  
LARGE WING MEETING ROOM  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.LW-07



Meeting Room 1 Elevation C(1/4"=1'-0")



MEETING ROOM ELEV C(1/4"=1'-0")



### GENERAL NOTES

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



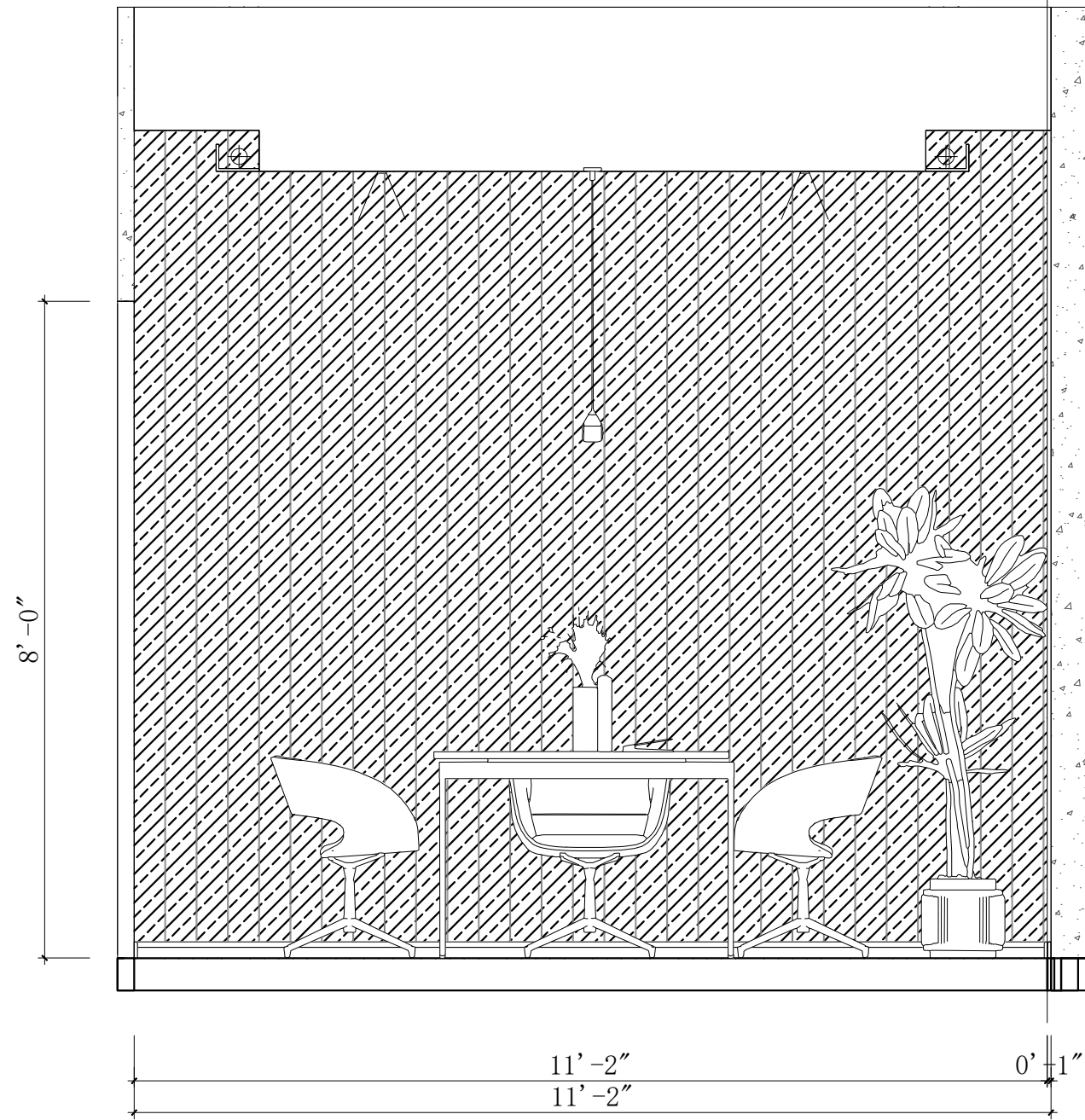
COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING MEETING ROOM  
ELEVATION D

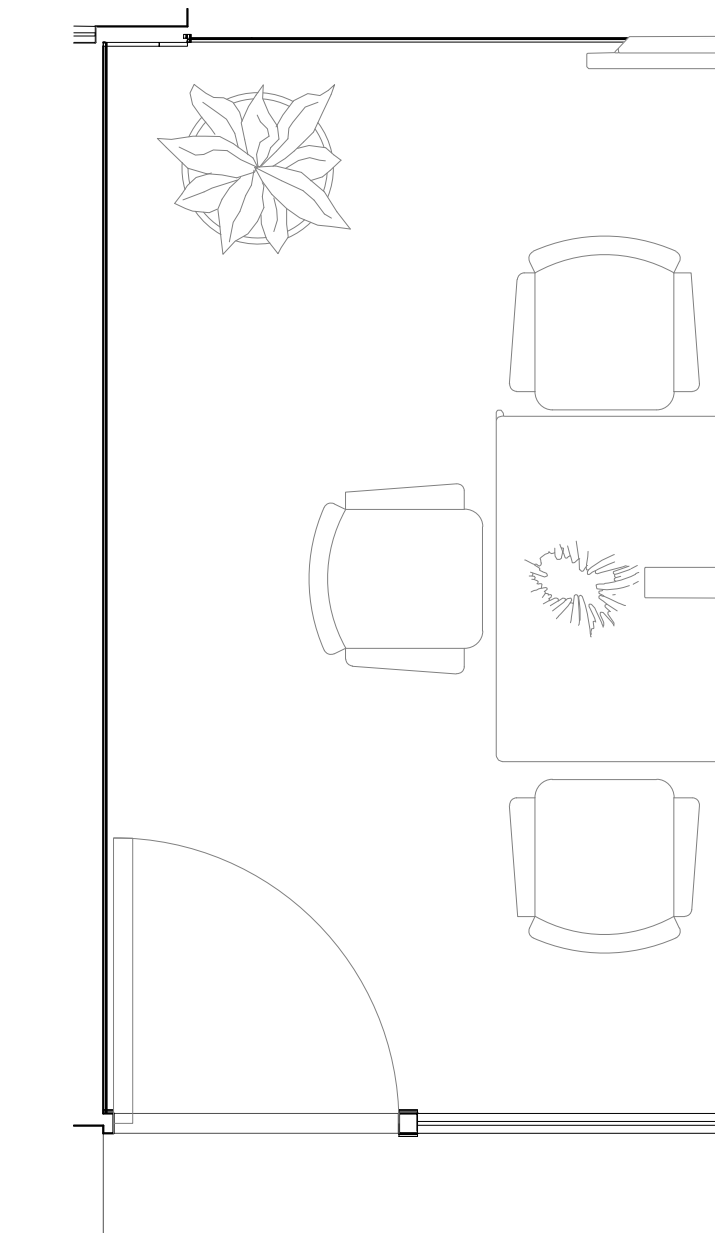
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.LWM-08

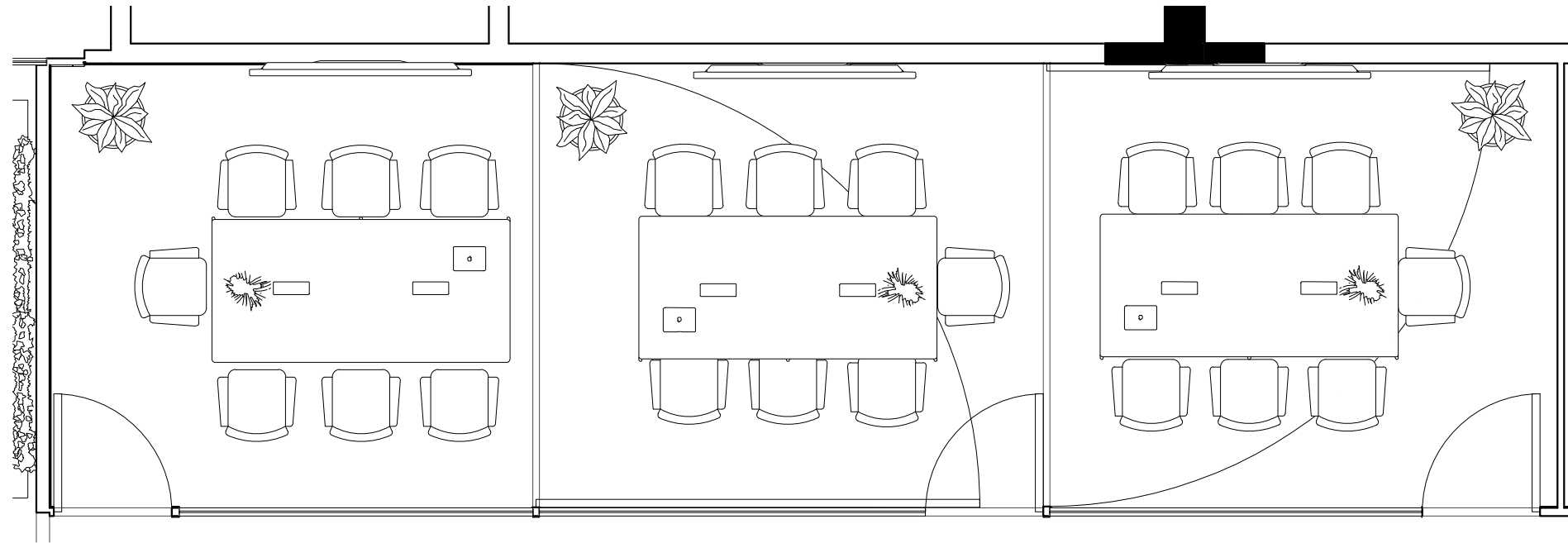
The turning line



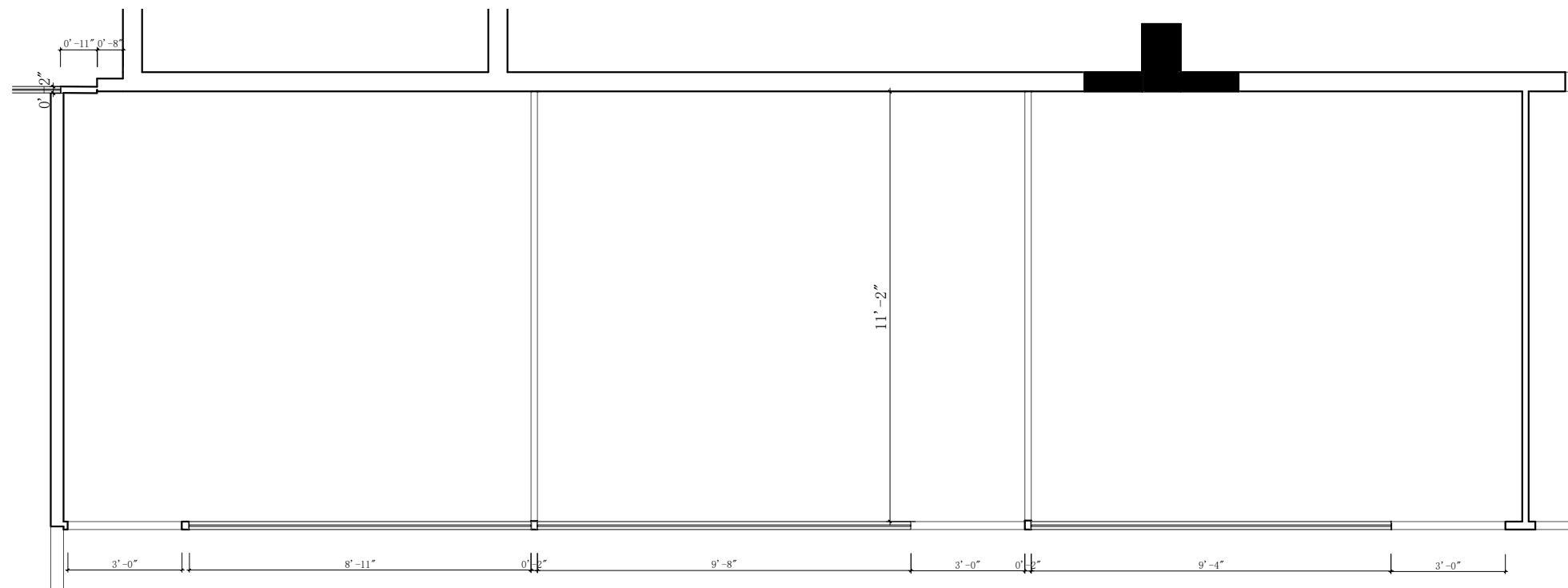
Meeting Room 1 Elevation D(1/2"=1'-0")



MEETING ROOM ELEV D(1/2"=1'-0")



MEETING ROOM PLAN(1/4"=1'-0")



MEETING ROOM WALLS(1/4"=1'-0")

**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING MEETING ROOM FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.LWM-09

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



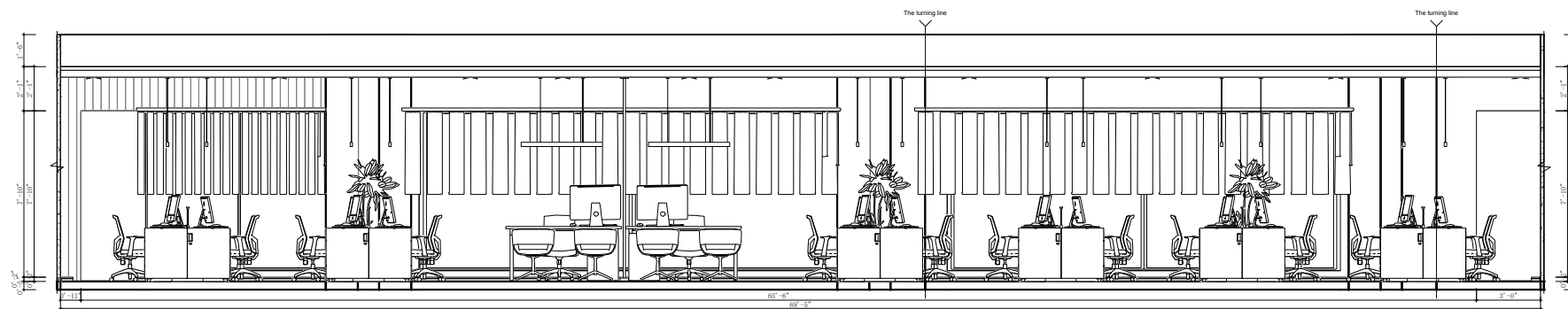
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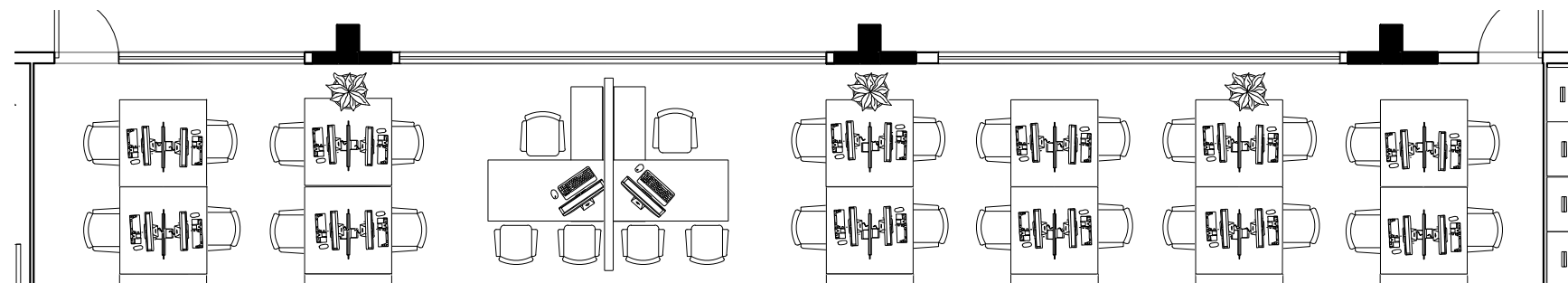
**6th FLOOR**  
**DGM ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.DGM-10

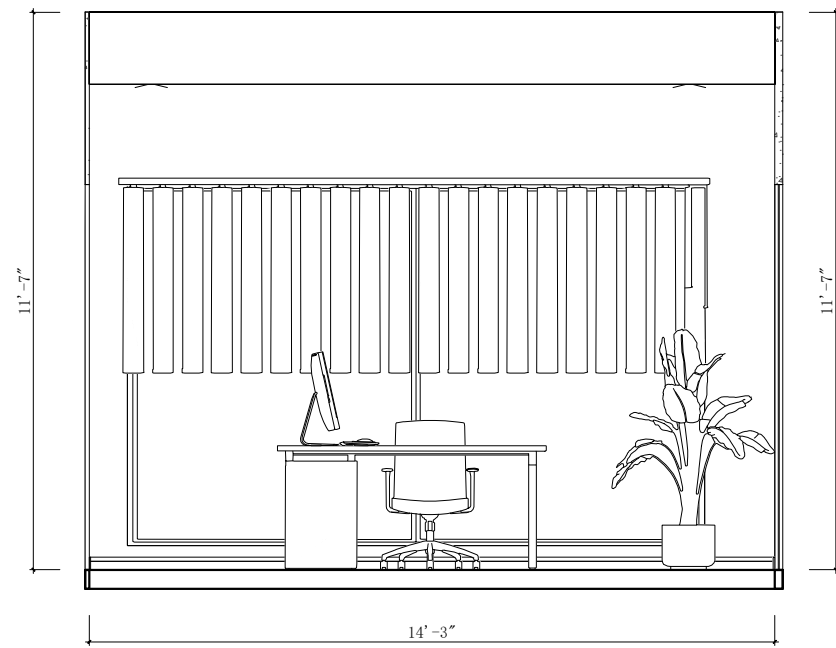


D.G.M and Staff Elevation A(1/8"=1'-0")

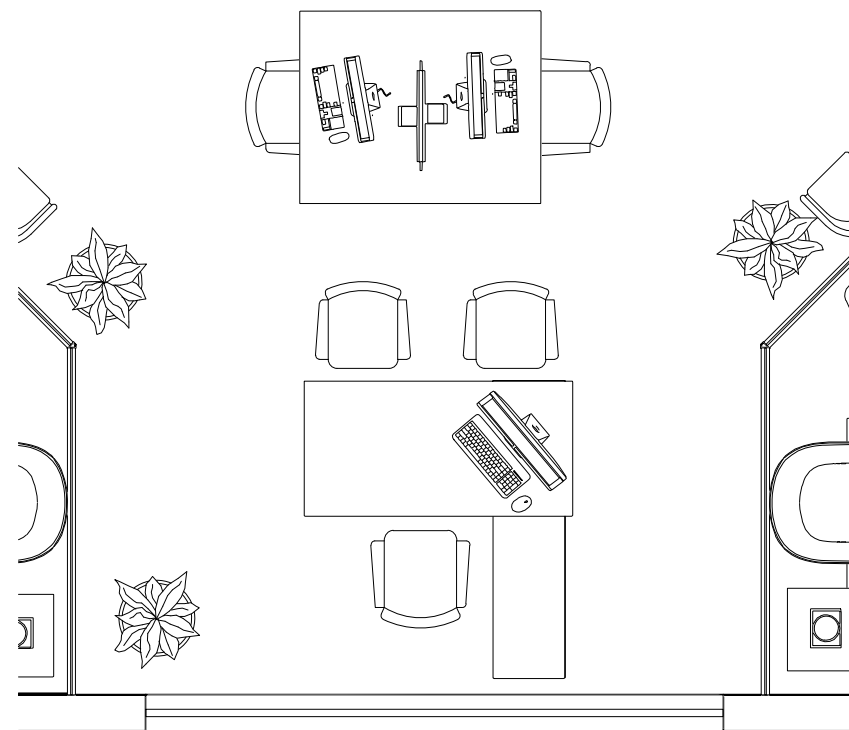


LW DGM ELEV A(1/8"=1'-0")





LW D.G.M Elevation C1(1/4"=1'-0")



LW DGM ELEV B(1/4"=1'-0")

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REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
**DGM ELEVATION B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.DGM-11



## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

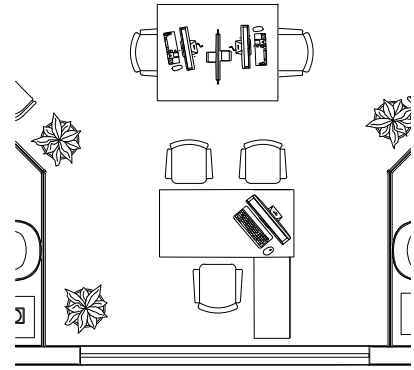
DRAWING TITLE:

**6th FLOOR**  
DGM PLAN

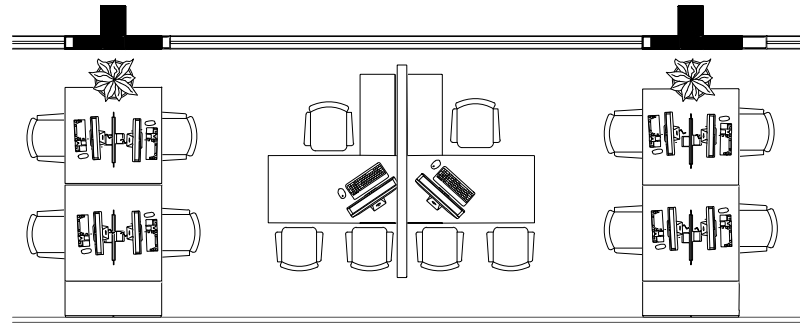
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

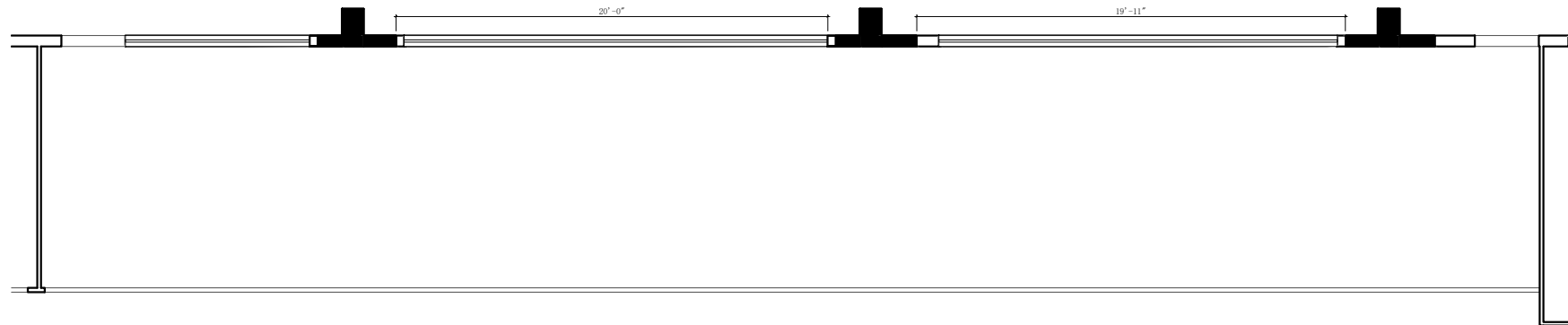
DWG. No.  
SL.06.AR.DGM-12



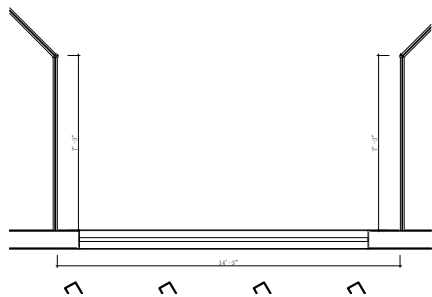
LW DGM PLAN 1(1/8"=1'-0")



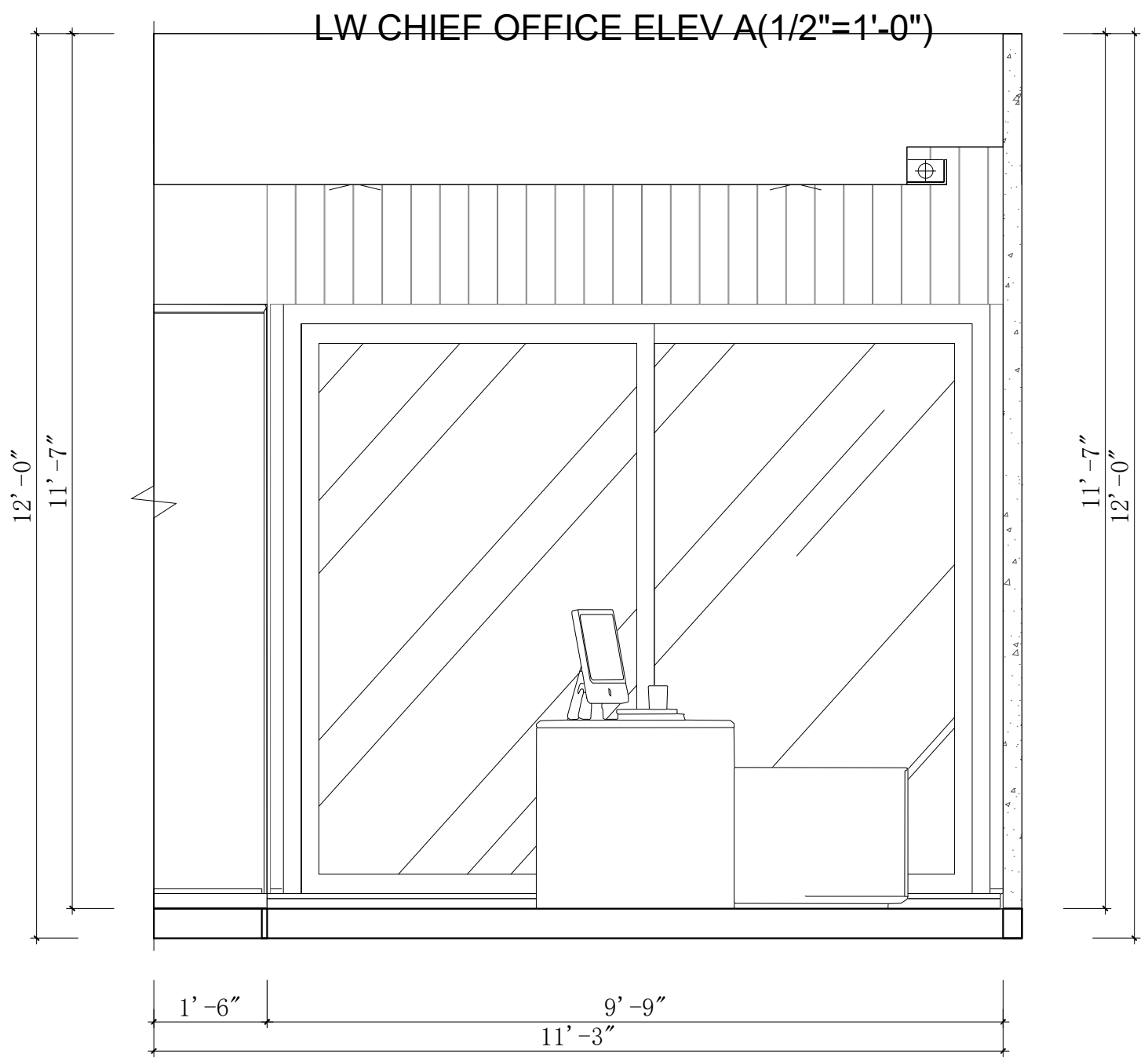
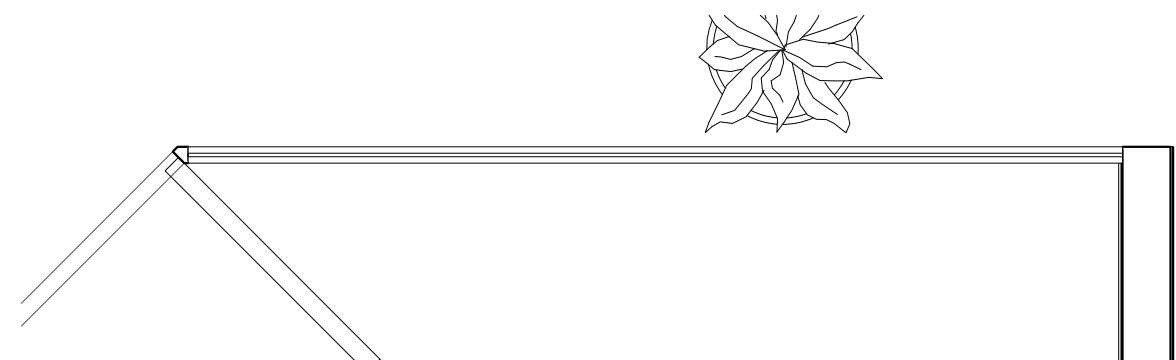
LW DGM PLAN 2(1/8"=1'-0")



LW DGM P1 WALLS(1/8"=1'-0")



LW DGM P2 WALLS(1/8"=1'-0")



Chief Office 4 Elevation A(1/2"=1'-0")

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING CHIEF OFFICE  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.LWC-13

## GENERAL NOTES

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OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

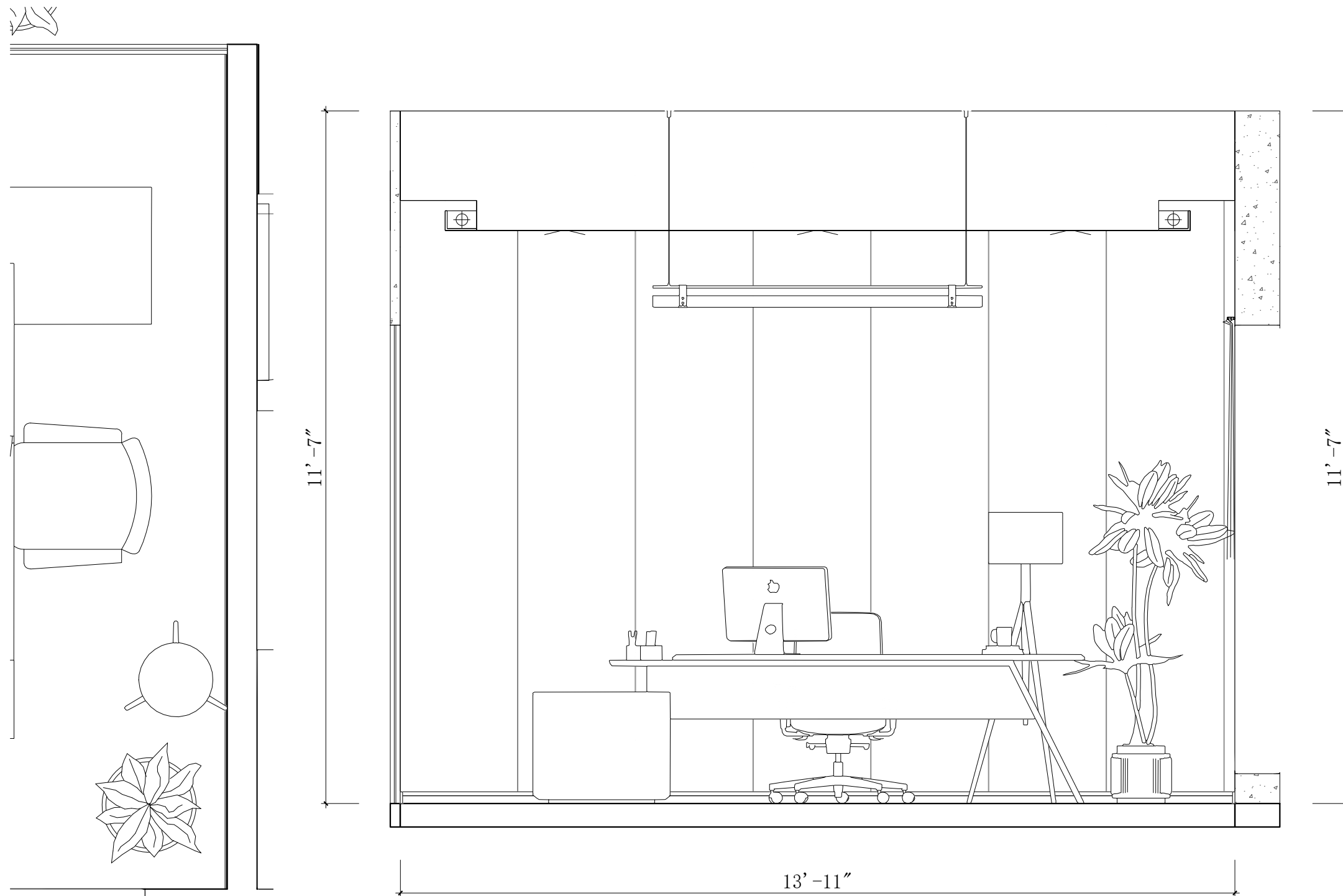
DRAWING TITLE:

**6th FLOOR**  
LARGE WING CHIEF OFFICE  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

DWG. No.  
SL.06.AR.LWC-14



Chief Office 4 Elevation B(1/2"=1'-0")

LW CHIEF OFFICE ELEV B(1/2"=1'-0")

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REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

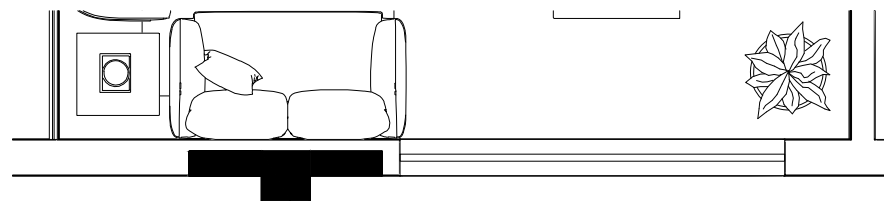


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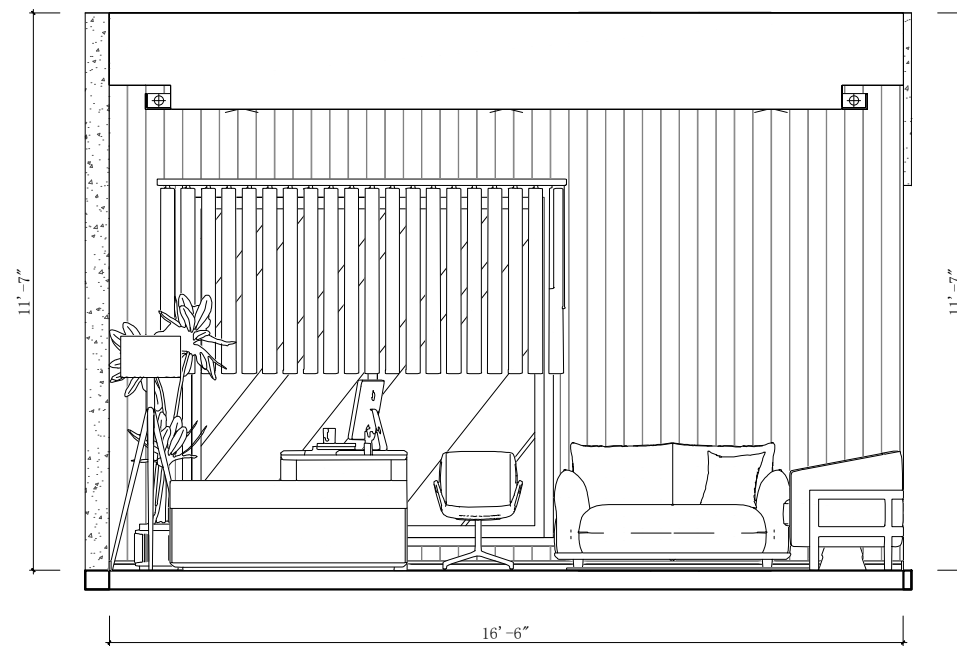
DRAWING TITLE:  
**6th FLOOR**  
LARGE WING CHIEF OFFICE  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.LWC-15

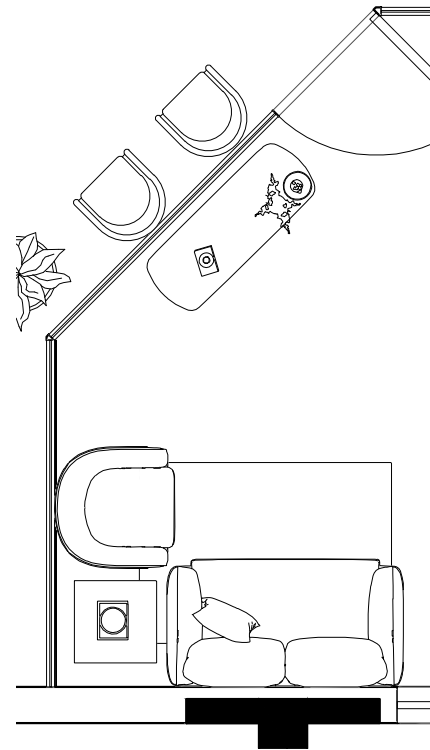


LW CHIEF OFFICE ELEV C(1/4"=1'-0")

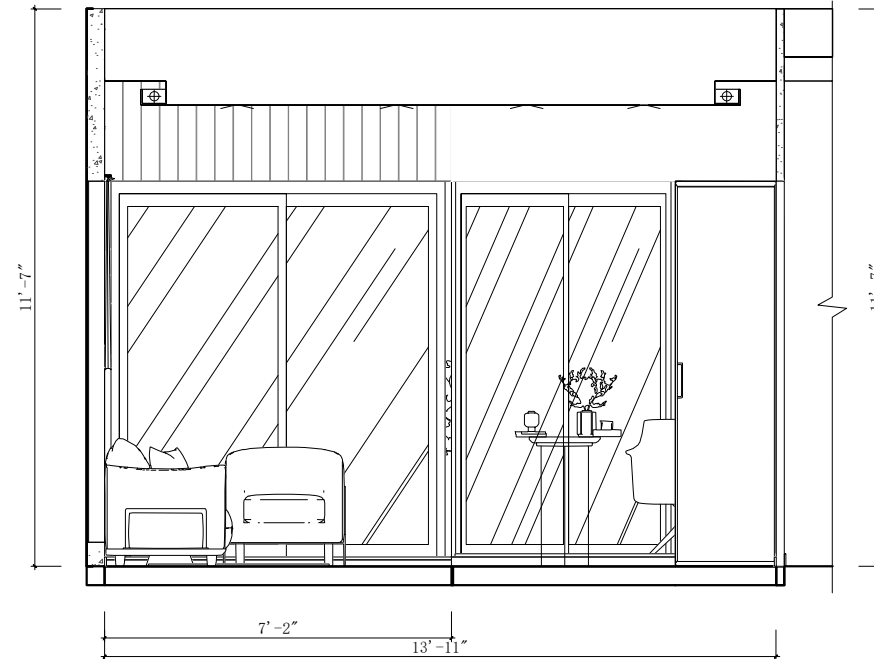


Chief Office 4 Elevation C(1/4"=1'-0")

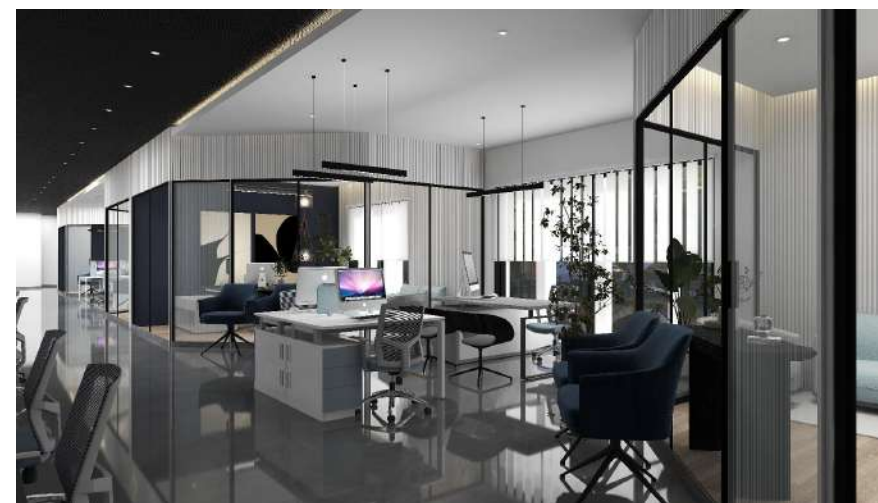




LW CHIEF OFFICE ELEV D(1/4"=1'-0")



Chief Office 4 Elevation D(1/4"=1'-0")



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REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
LARGE WING CHIEF OFFICE  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.LWC-16

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PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



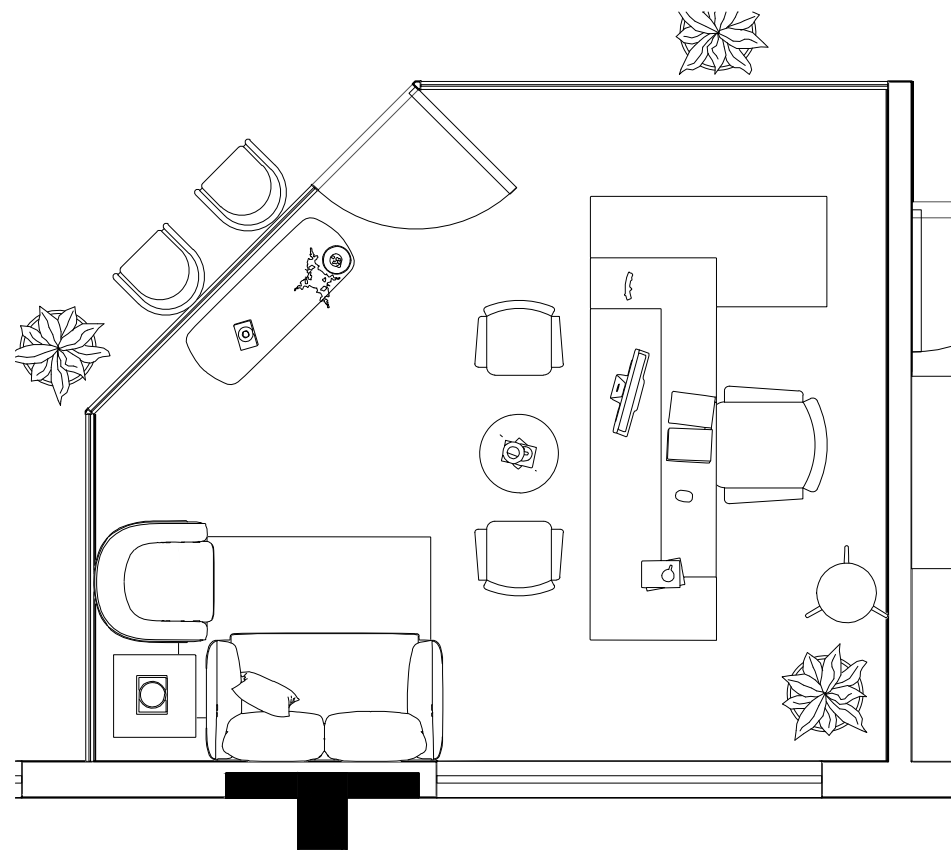
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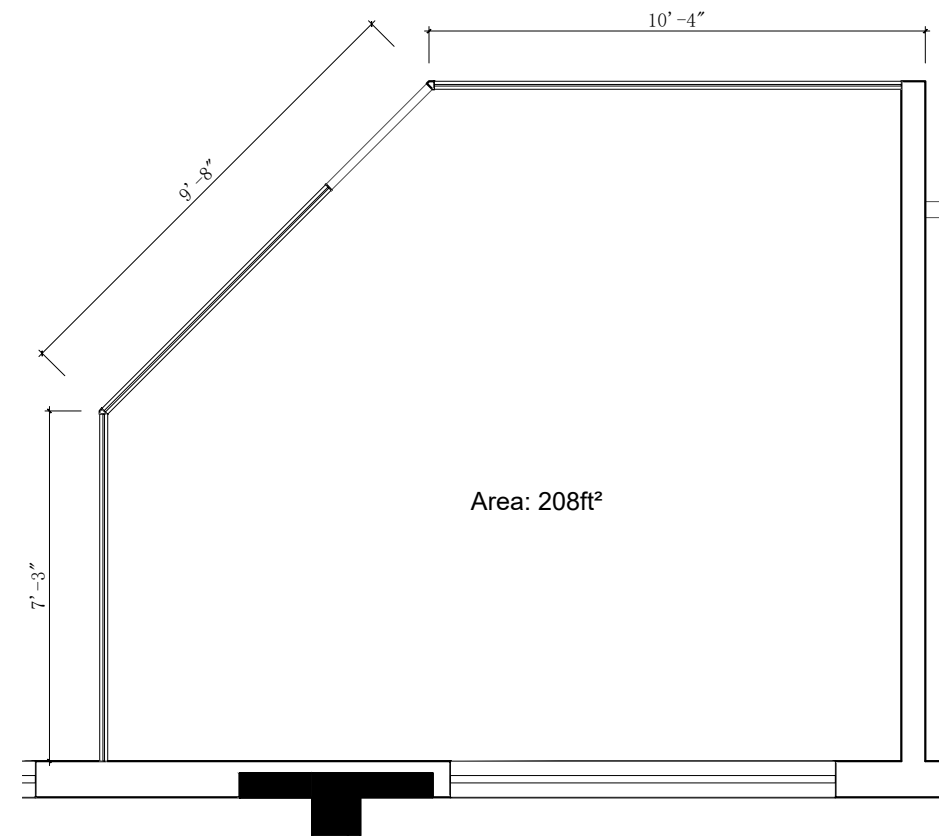
**6th FLOOR**  
LARGE WING CHIEF OFFICE FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.LWC-17



LW CHIEF OFFICE PLAN(1/4"=1'-0")



LW CHIEF OFFICE WALLS(1/4"=1'-0")

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

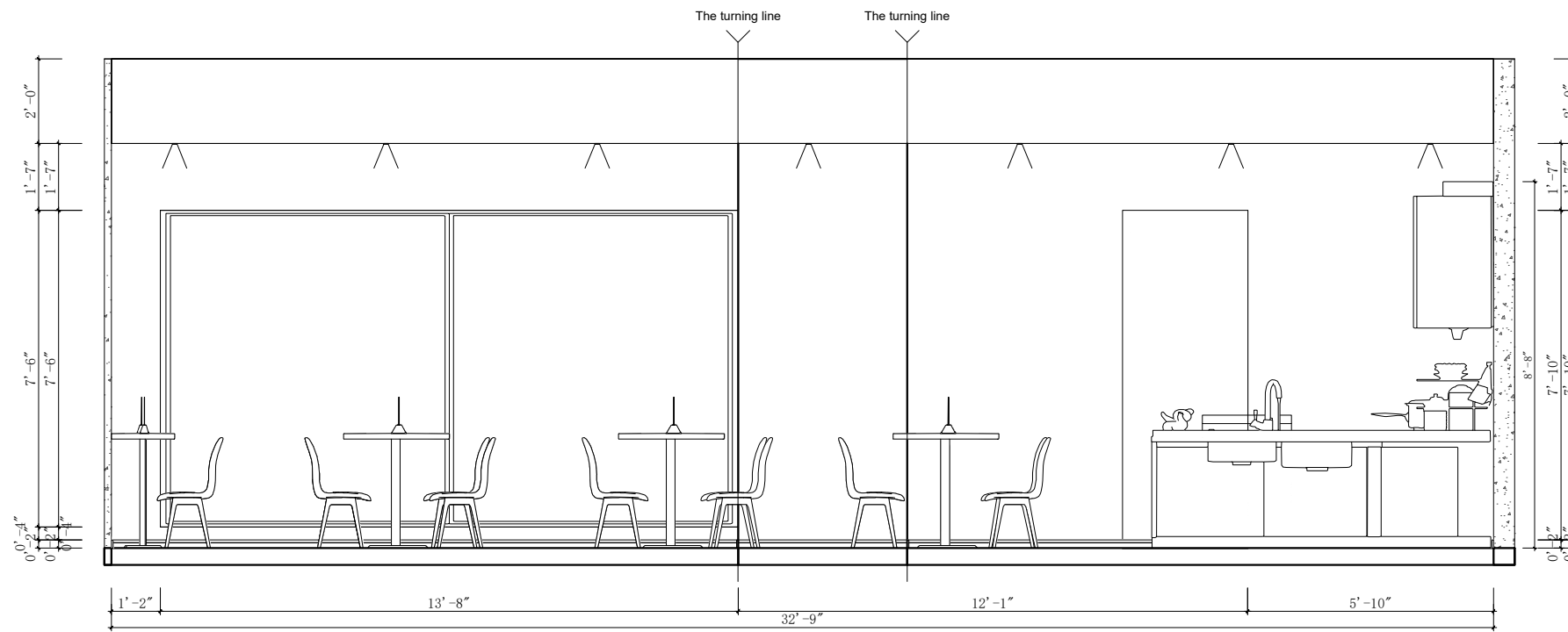
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**6th FLOOR**  
LARGE WING PANTRY  
ELEVATION A

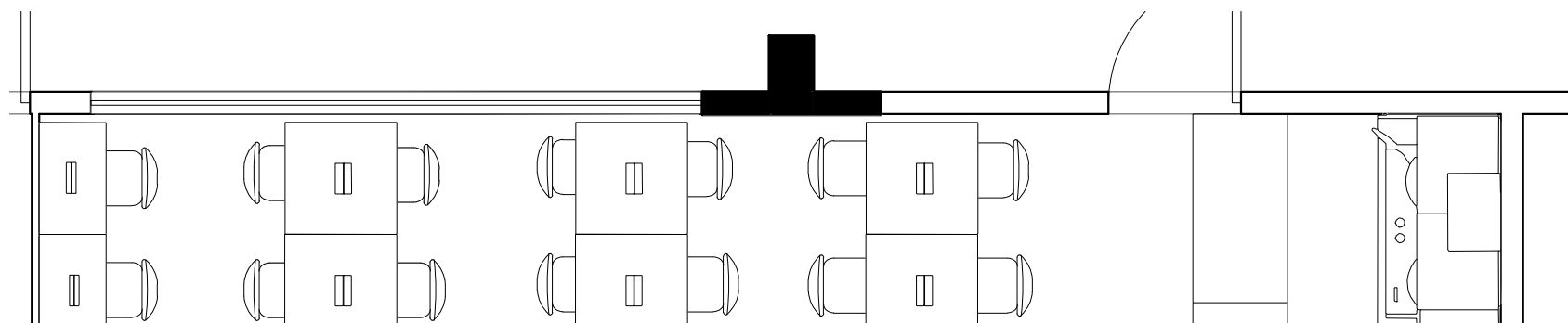
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

DWG. No.  
**SL.06.AR.LWP-18**

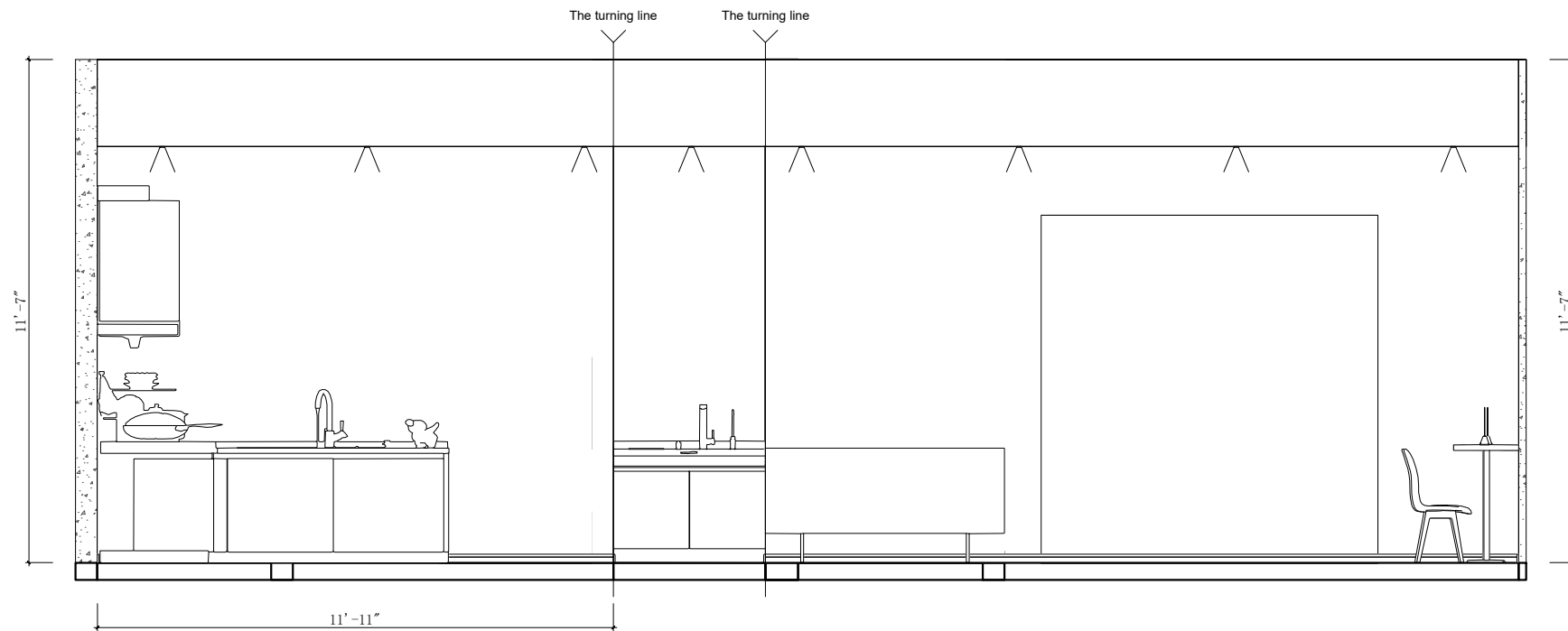


LW PANTRY Elevation A(1/4"=1'-0")

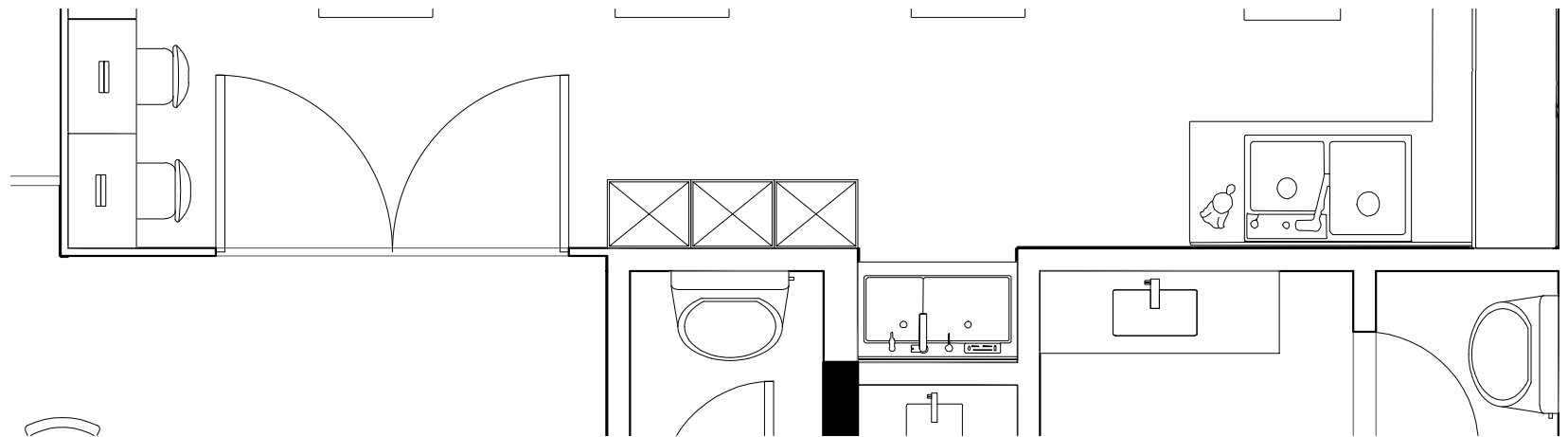


LW PANTRY ELEV A(1/4"=1'-0")





LW PANTRY ELEV B (1/4"=1'-0")



LW PANTRY ELEV B(1/4"=1'-0")

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REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING PANTRY  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.LWP-19**



## GENERAL NOTES

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REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

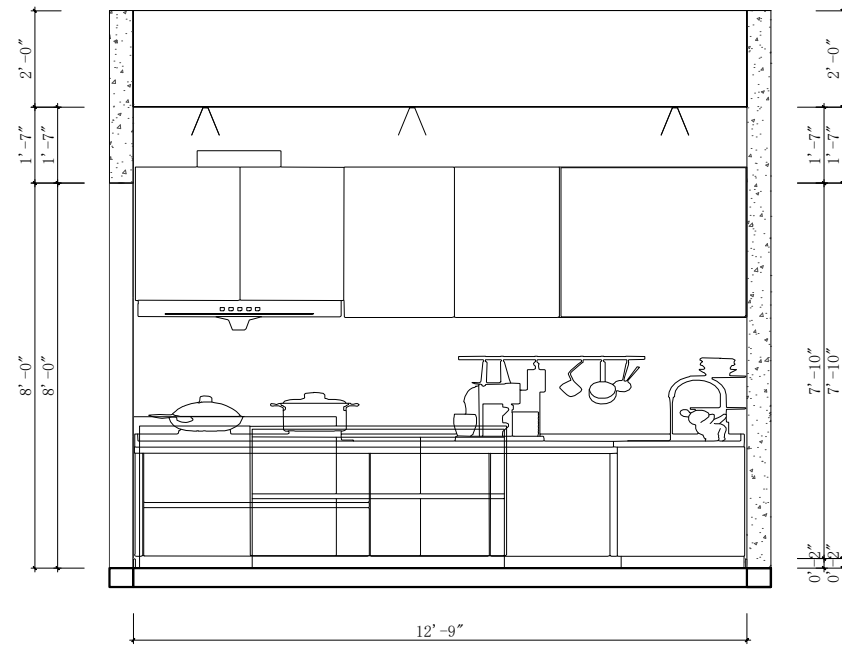
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**6th FLOOR**  
LARGE WING PANTRY  
ELEVATION C

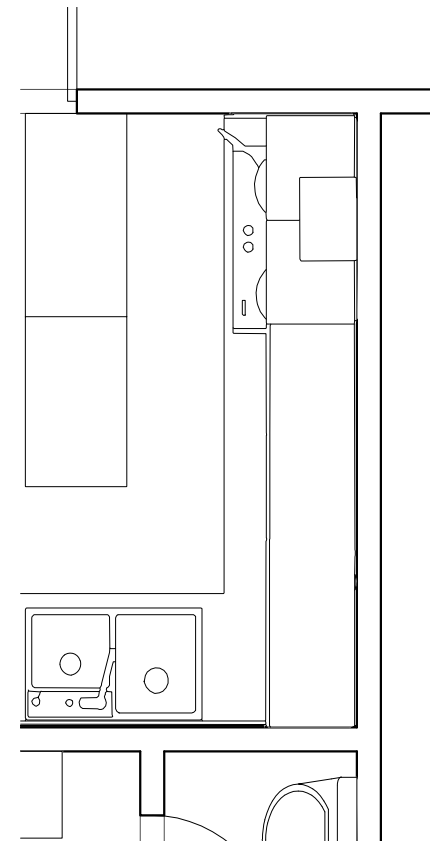
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

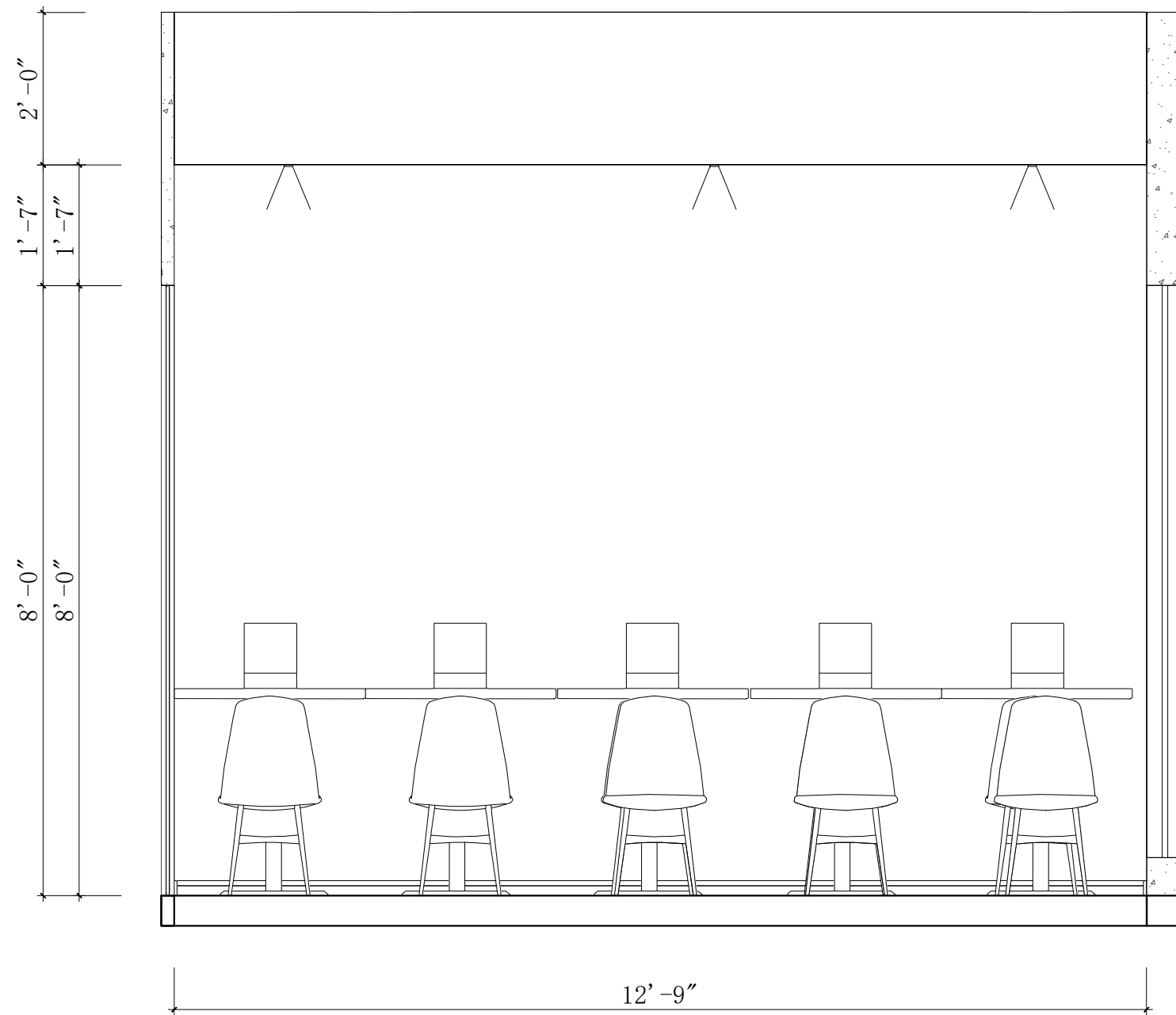
DWG. No.  
**SL.06.AR.LWP-20**



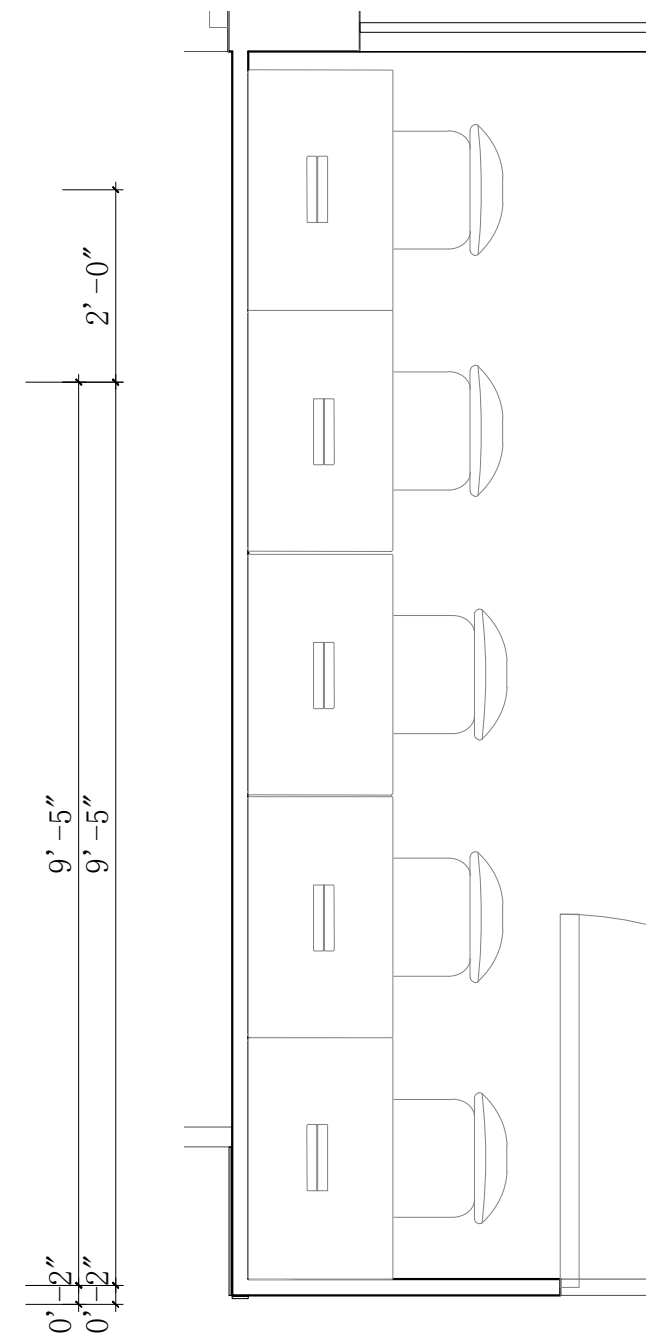
LW PANTRY Elevation C(1/4"=1'-0")



LW PANTRY ELEV C(1/4"=1'-0")



LW PANTRY Elevation D(1/2"=1'-0")



LW PANTRY ELEV D(1/2"=1'-0")

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

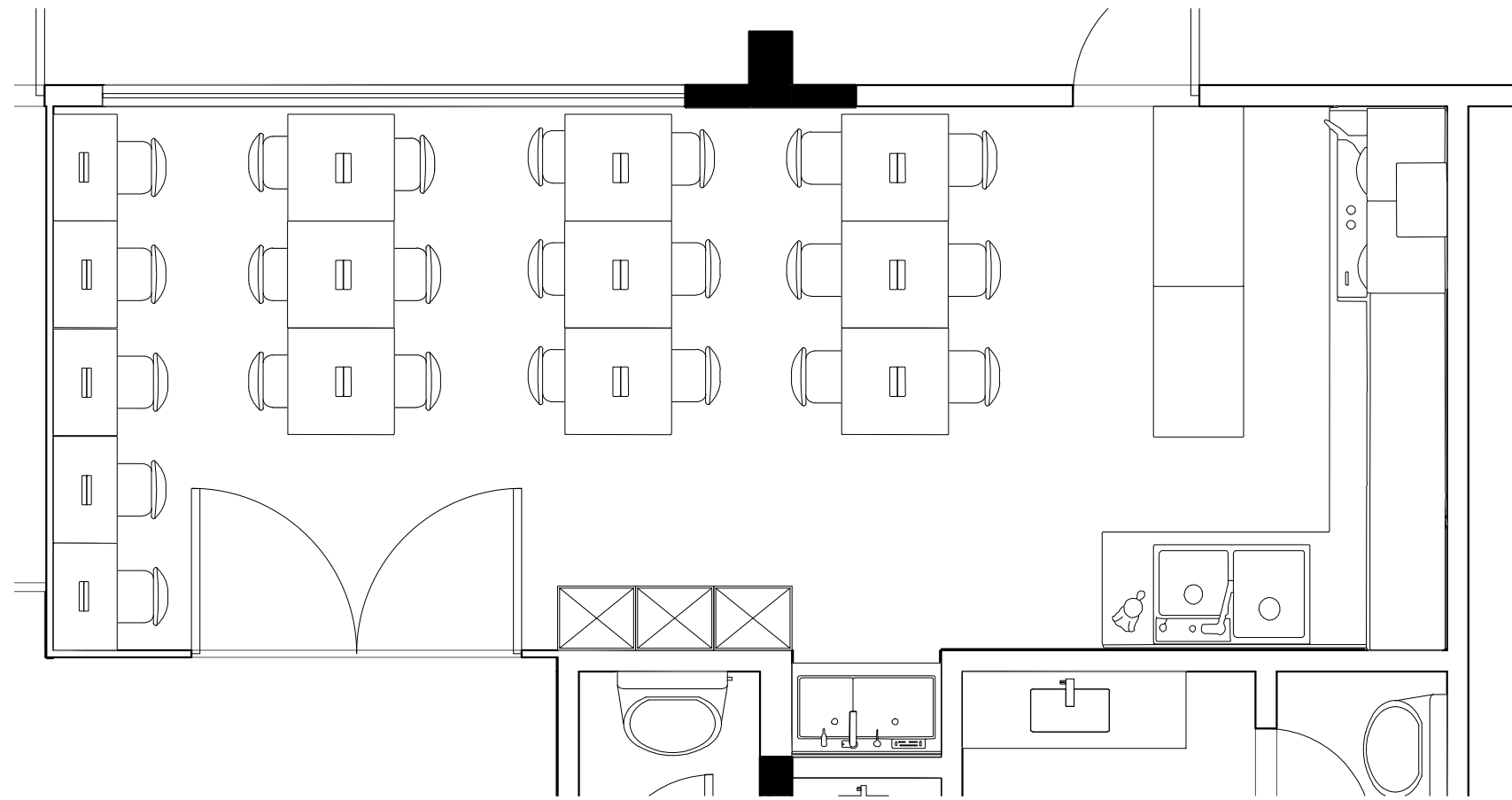


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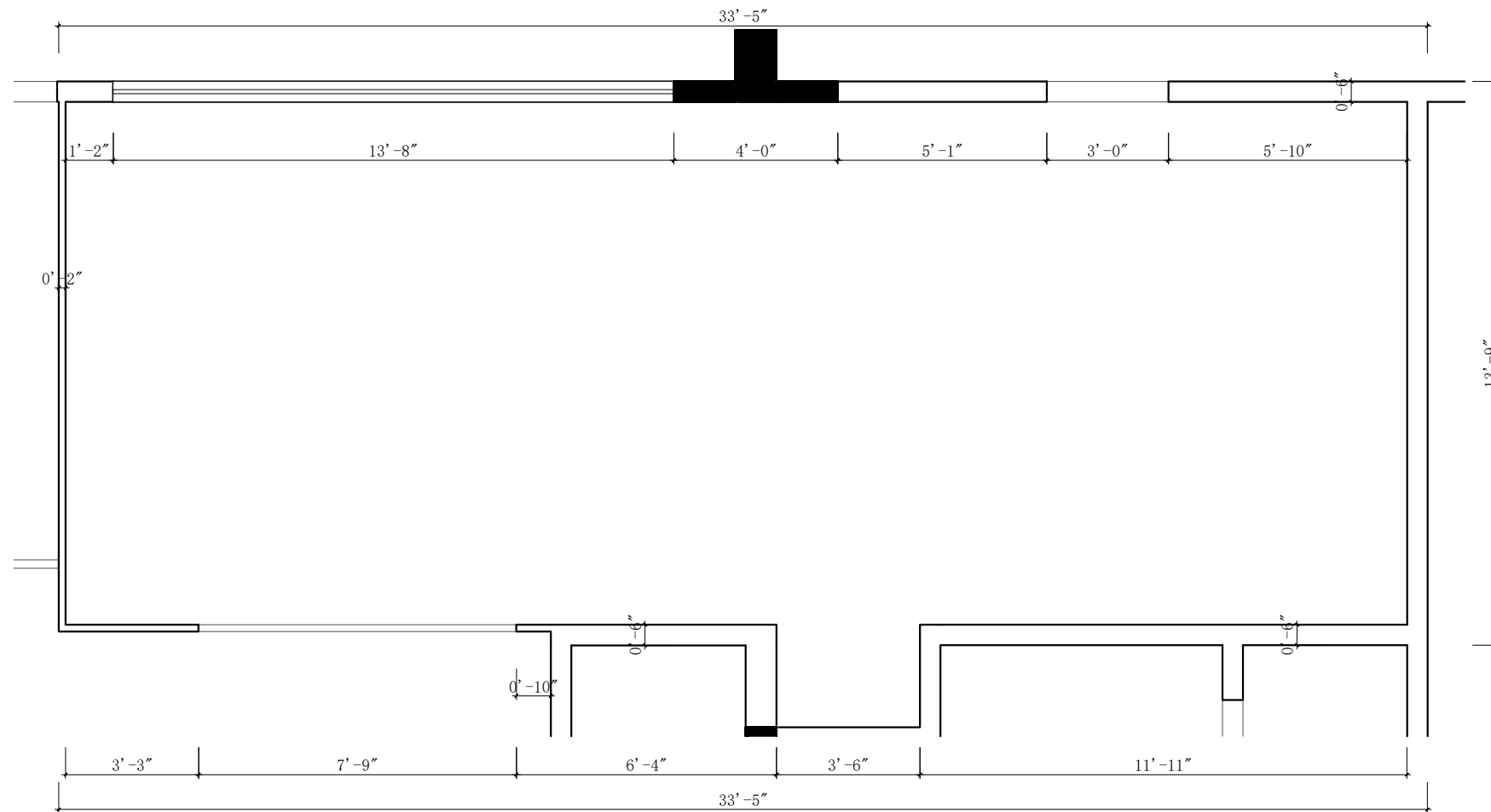
DRAWING TITLE:  
**6th FLOOR**  
LARGE WING PANTRY  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.LWP-21**



LW PANTRY PLAN(1/4"=1'-0")



LW PANTRY WALLS(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING  
NO. 52-C, LANE NO. 01, AL-MURTAZA  
COMMERCIAL, PHASE VIII, D.H.A.,  
KARACHI.

PROJECT:

**RENOVATION OF STATE  
LIFE BUILDING No. 9**  
KARACHI

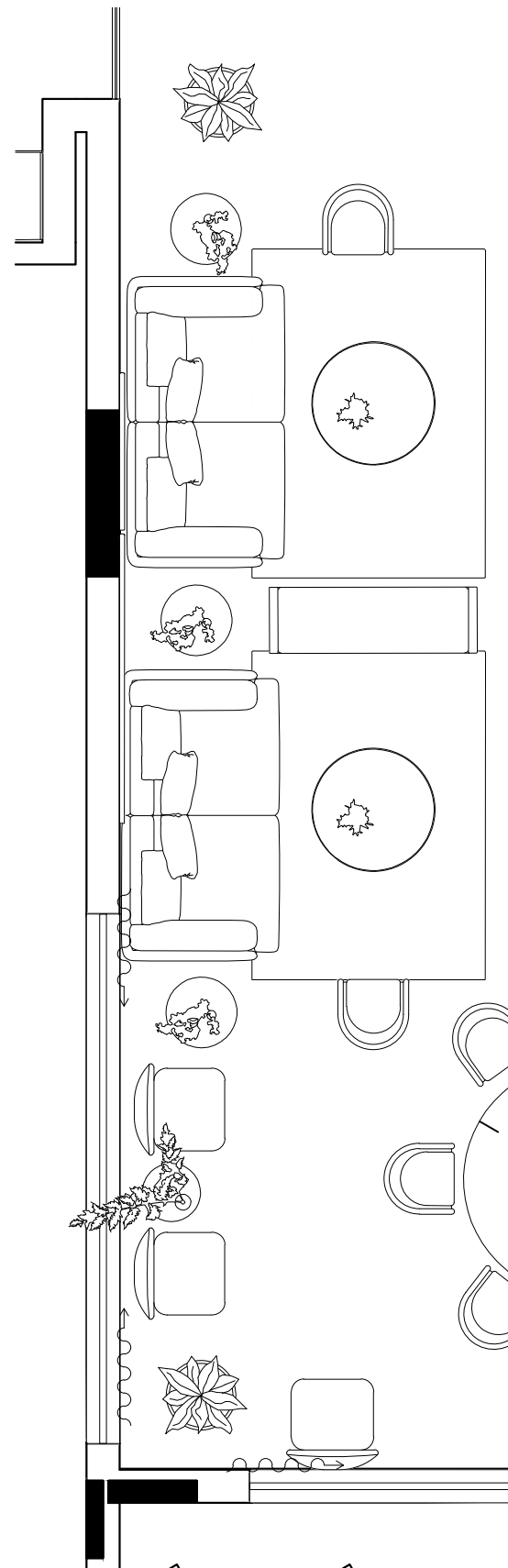


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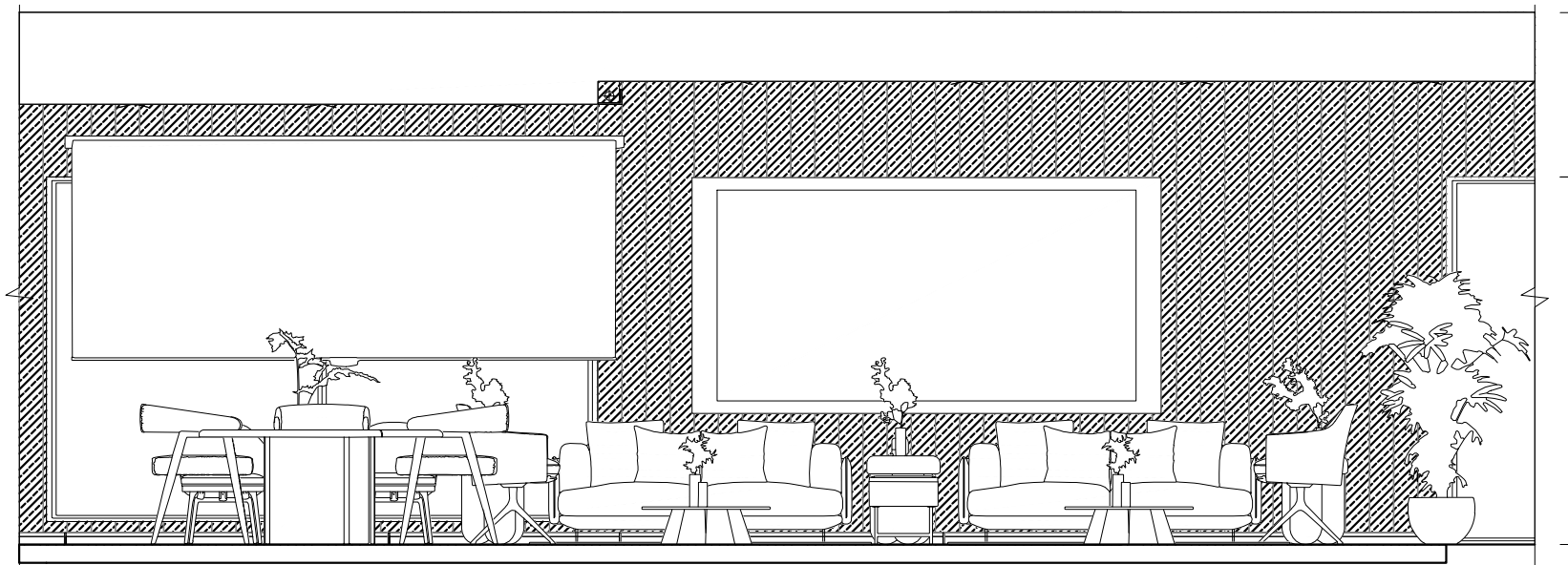
DRAWING TITLE:  
**6th FLOOR**  
LARGE WING PANTRY  
FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.LWP-22**



VISITORS LOUNGE ELEV A(1/4"=1'-0")



VISITORS LOUNGE Elevation A(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
VISITOR LOUNGE  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.VL-23**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

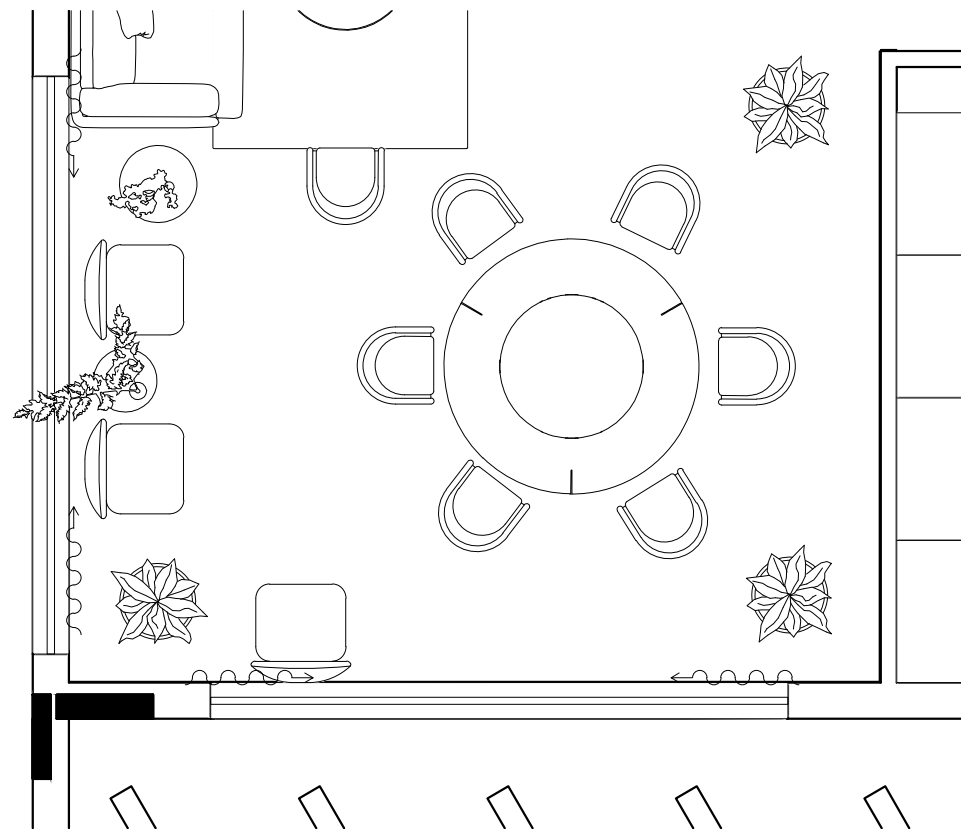
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**6th FLOOR**  
**VISITOR LOUNGE**  
**ELEVATION B**

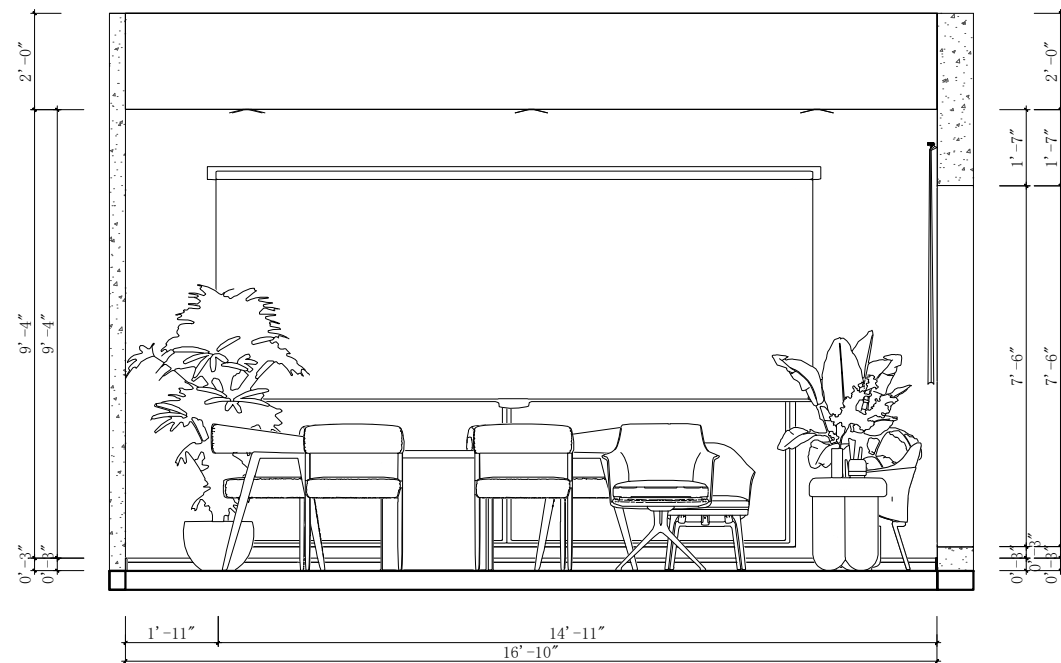
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1'	@ A3 APR-2024

DWG. No.  
**SL.06.AR.VL-24**



**VISITORS LOUNGE ELEV B(1/4"=1'-0")**



**VISITORS LOUNGE Elevation C4(1/4"=1'-0")**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

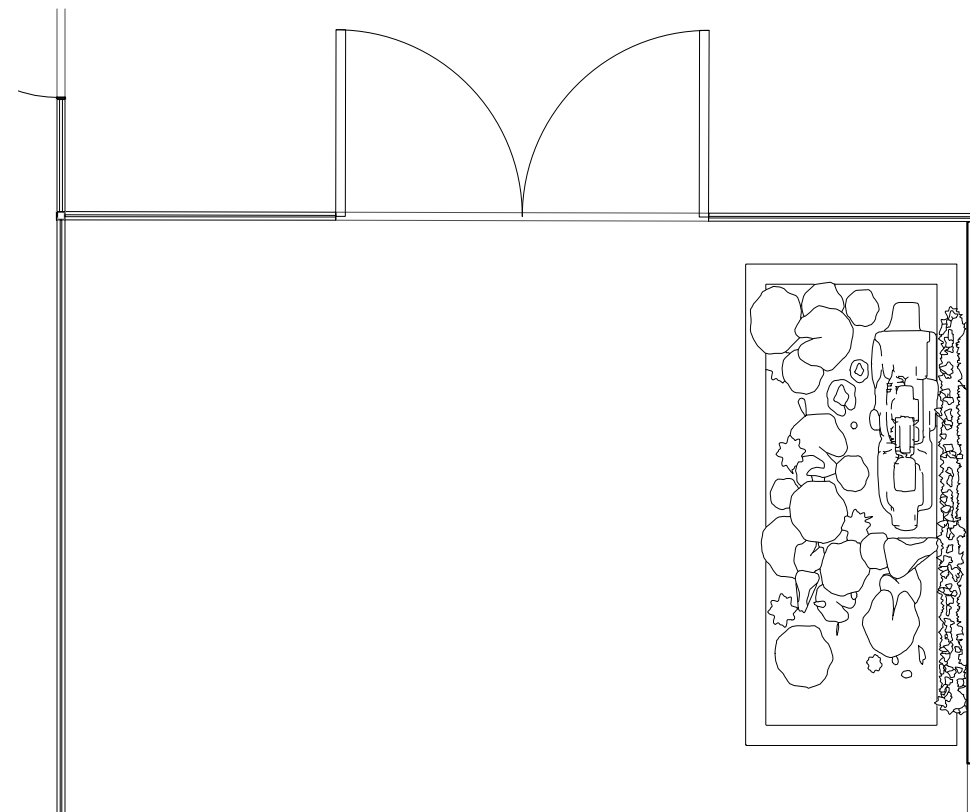
DRAWING TITLE:

**6th FLOOR**  
VISITOR LOUNGE  
ELEVATION C

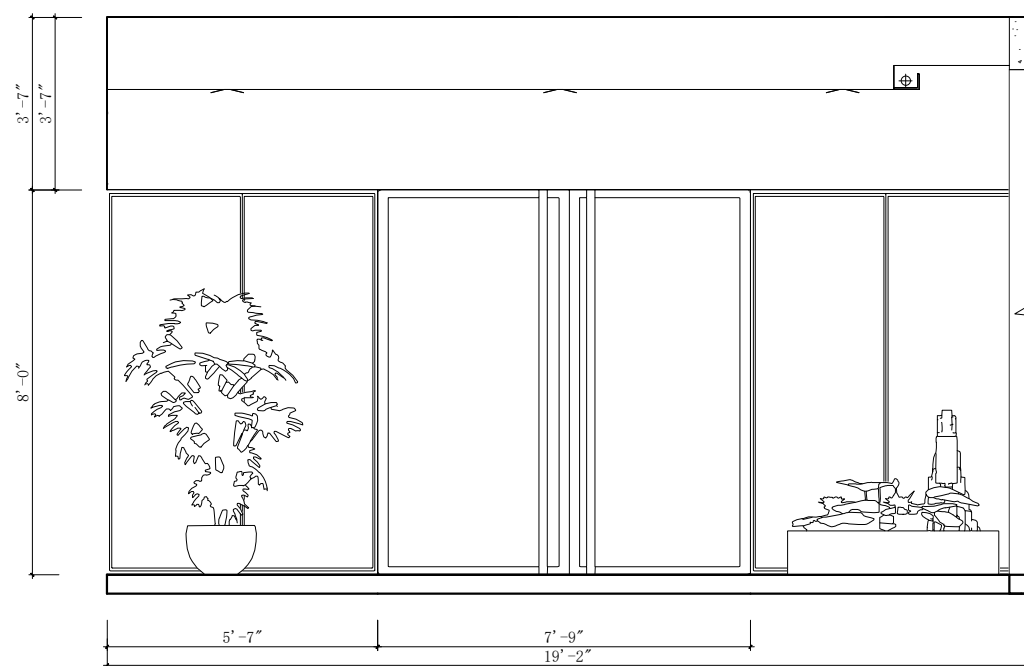
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

DWG. No.  
**SL.06.AR.VL-25**



VISITORS LOUNGE ELEV C(1/4"=1'-0")



VISITORS LOUNGE Elevation C(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



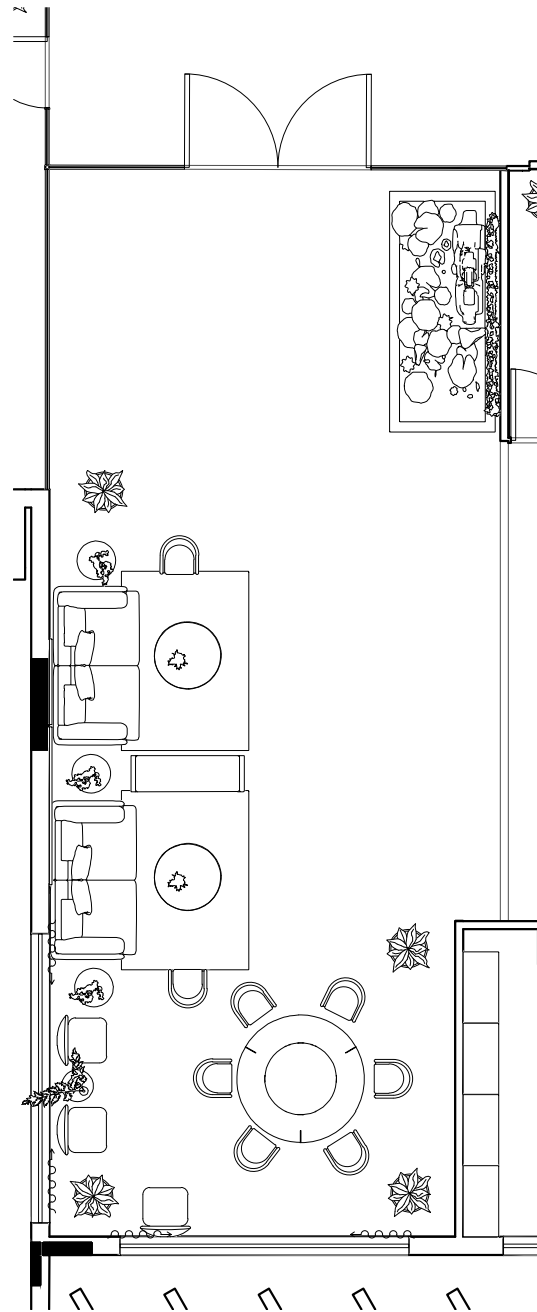
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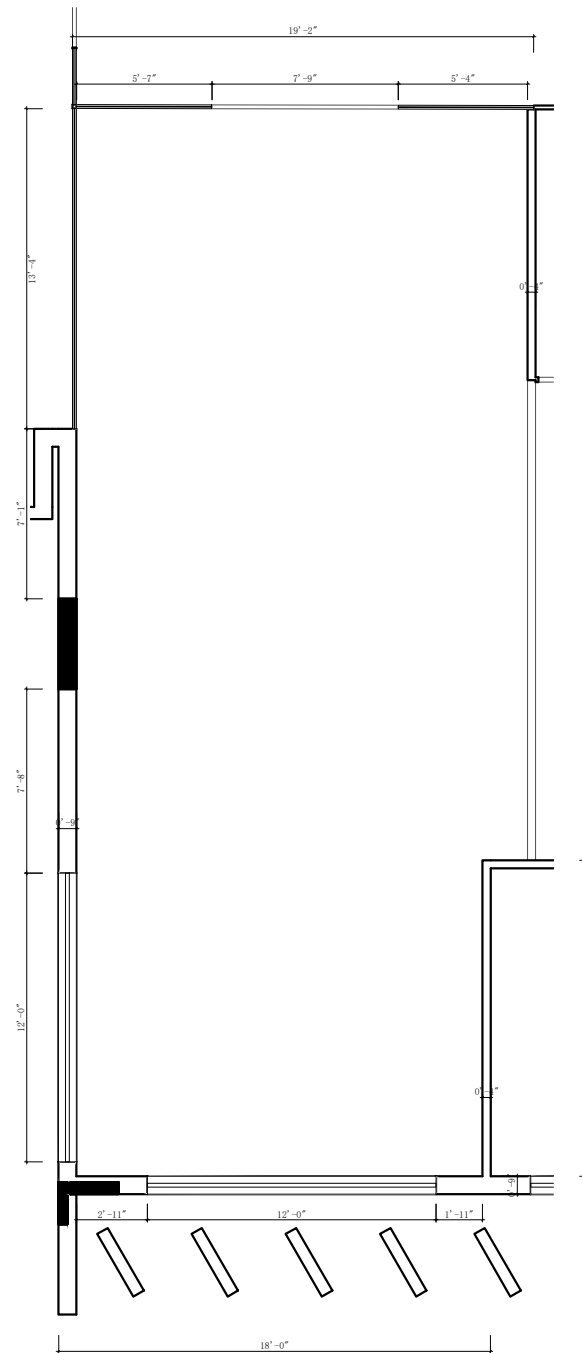
**6th FLOOR**  
**VISITOR LOUNGE FLOOR**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.VLF-26



VISITORS LOUNGE PLAN(1/8"=1'-0")



VISITORS LOUNGE WALLS(1/8"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

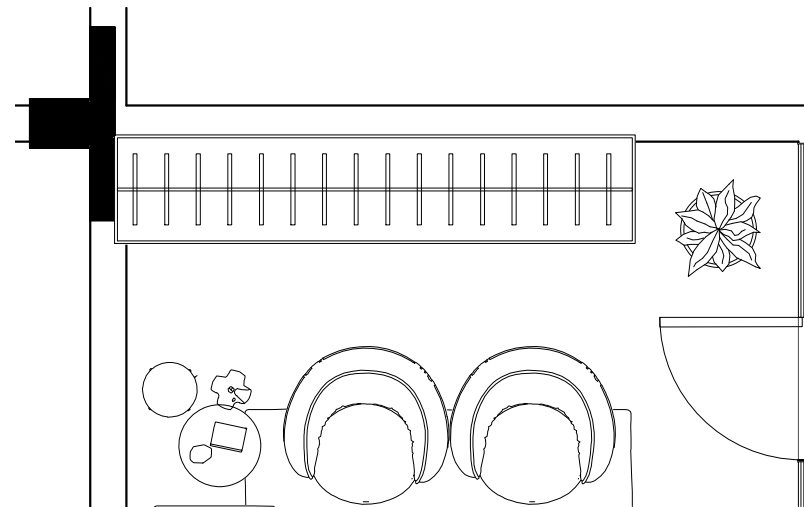
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**6th FLOOR**  
WAITING/PANTRY  
ELEVATION A

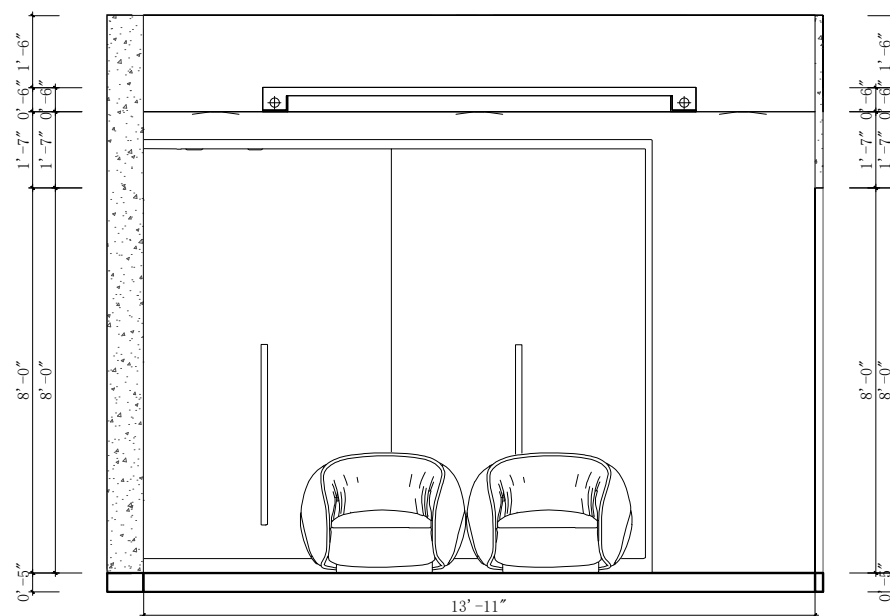
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

DWG. No.  
SL.06.AR.WP-27

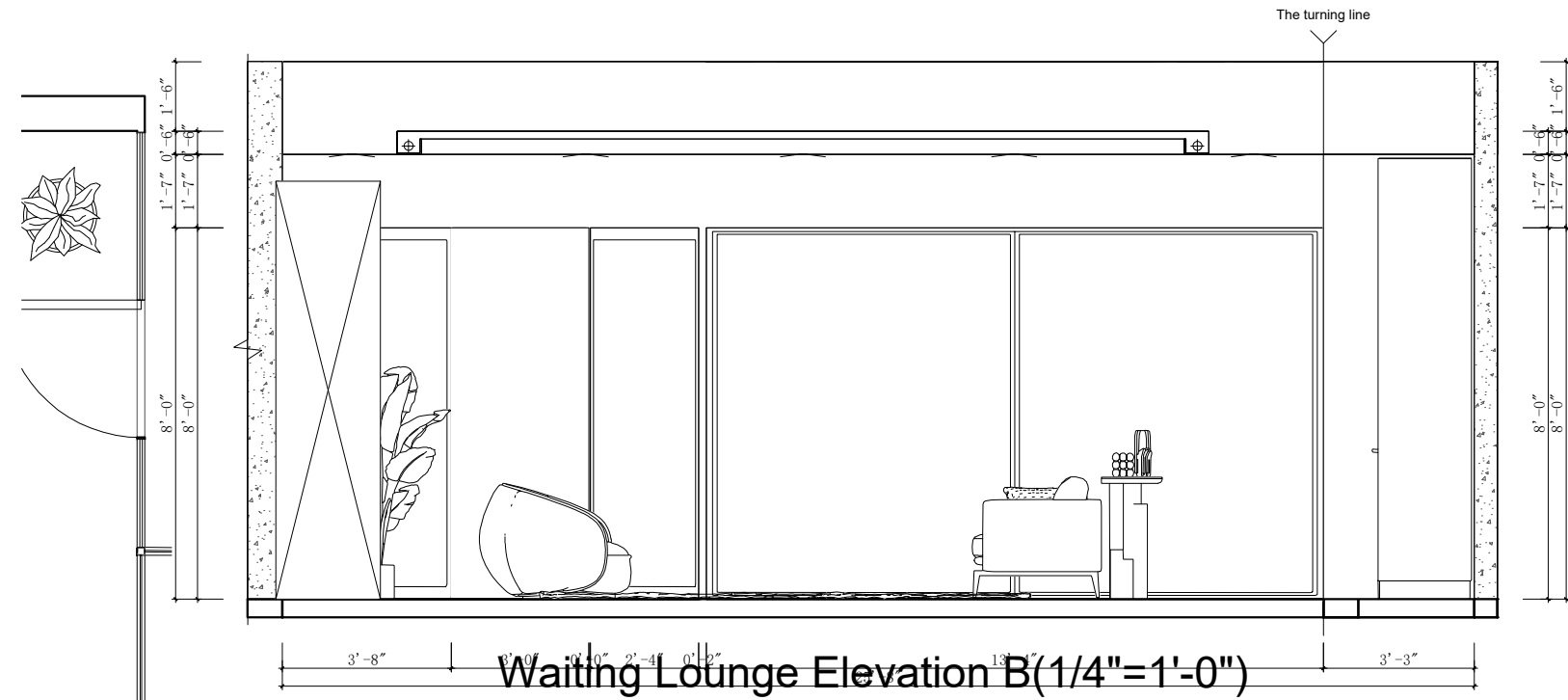


WAITING/PANTRY ELEV A(1/4"=1'-0")



Waiting Lounge Elevation A(1/4"=1'-0")





WAITING/PANTRY ELEV B(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
WAITING/PANTRY  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.WP-28

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

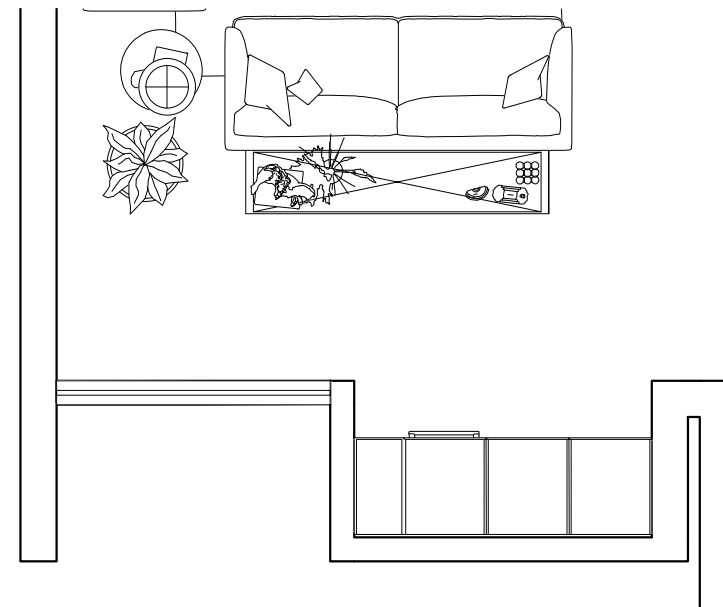


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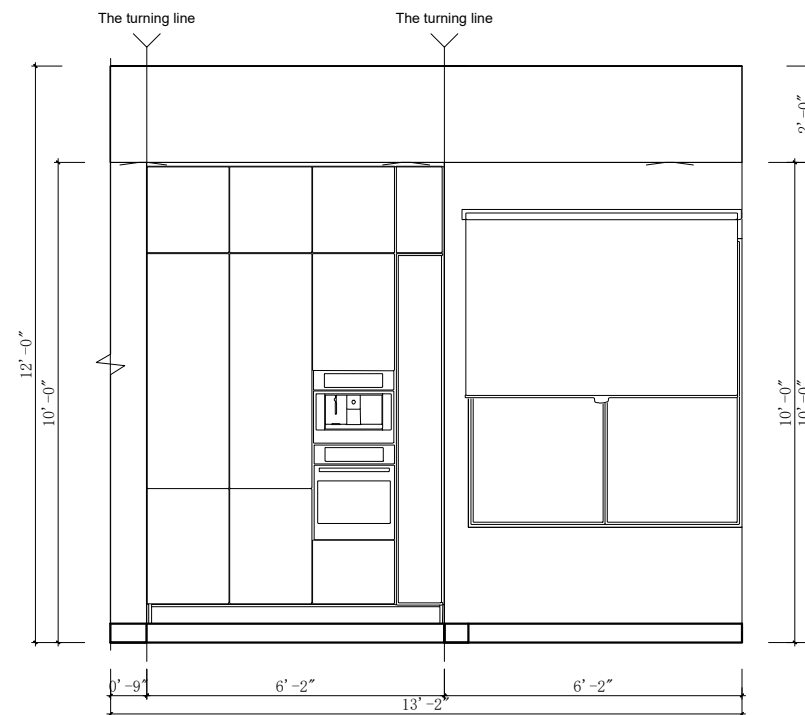
DRAWING TITLE:  
**6th FLOOR**  
WAITING/PANTRY  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.WP-29



WAITING/PANTRY ELEV C(1/4"=1'-0")



Waiting Lounge Elevation C(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

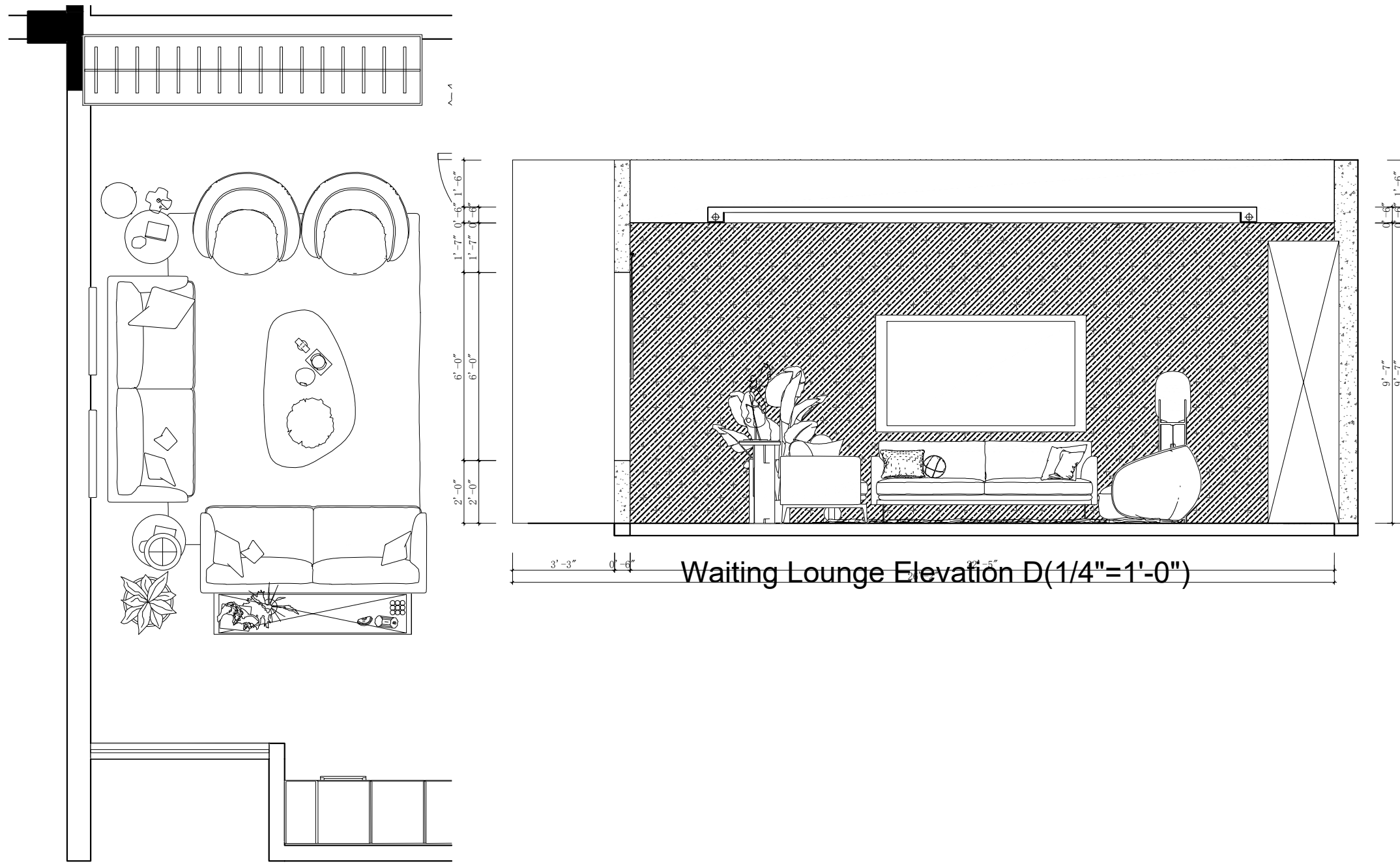


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
WAITING/PANTRY  
ELEVATION D

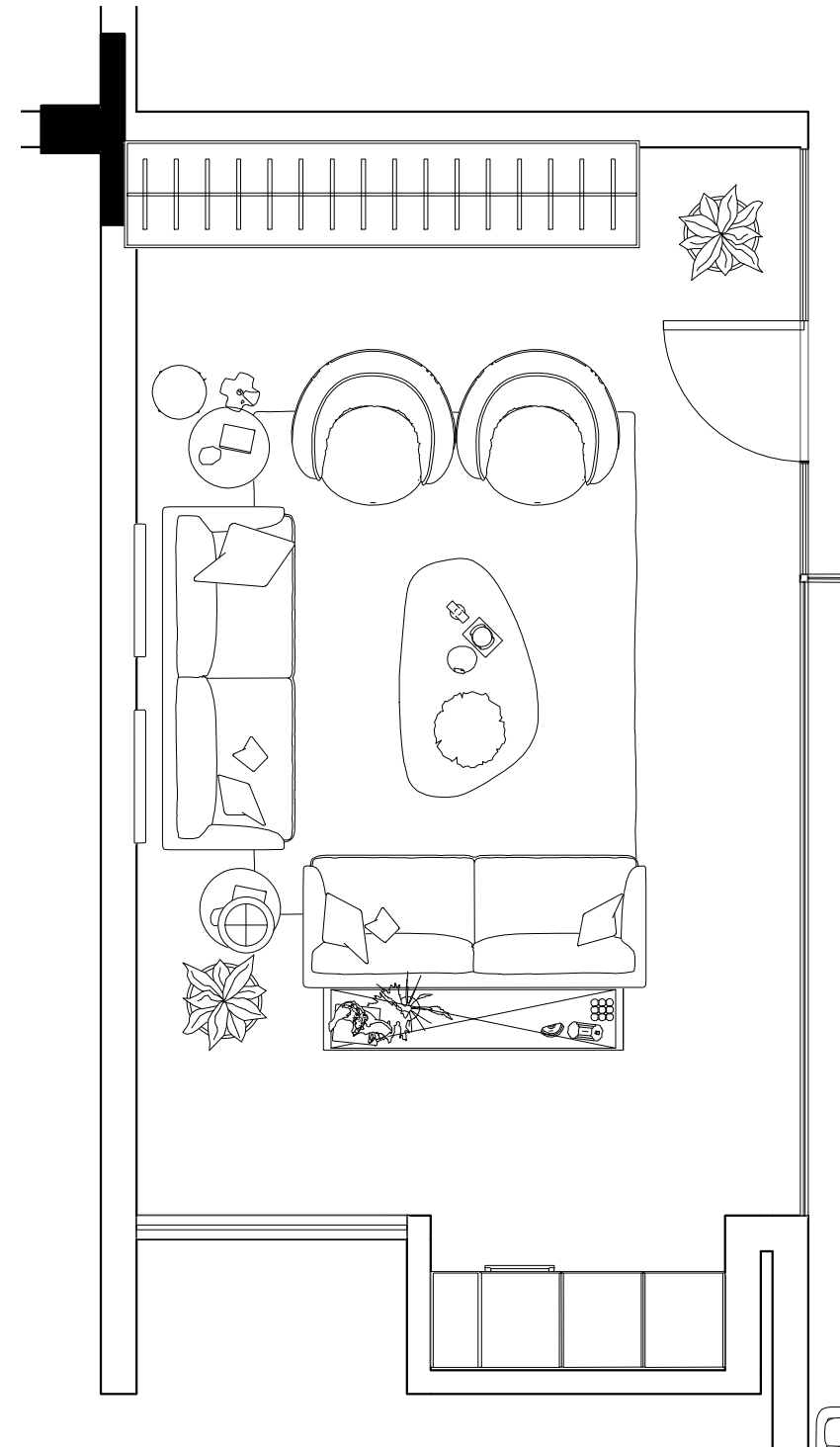
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.WP-30

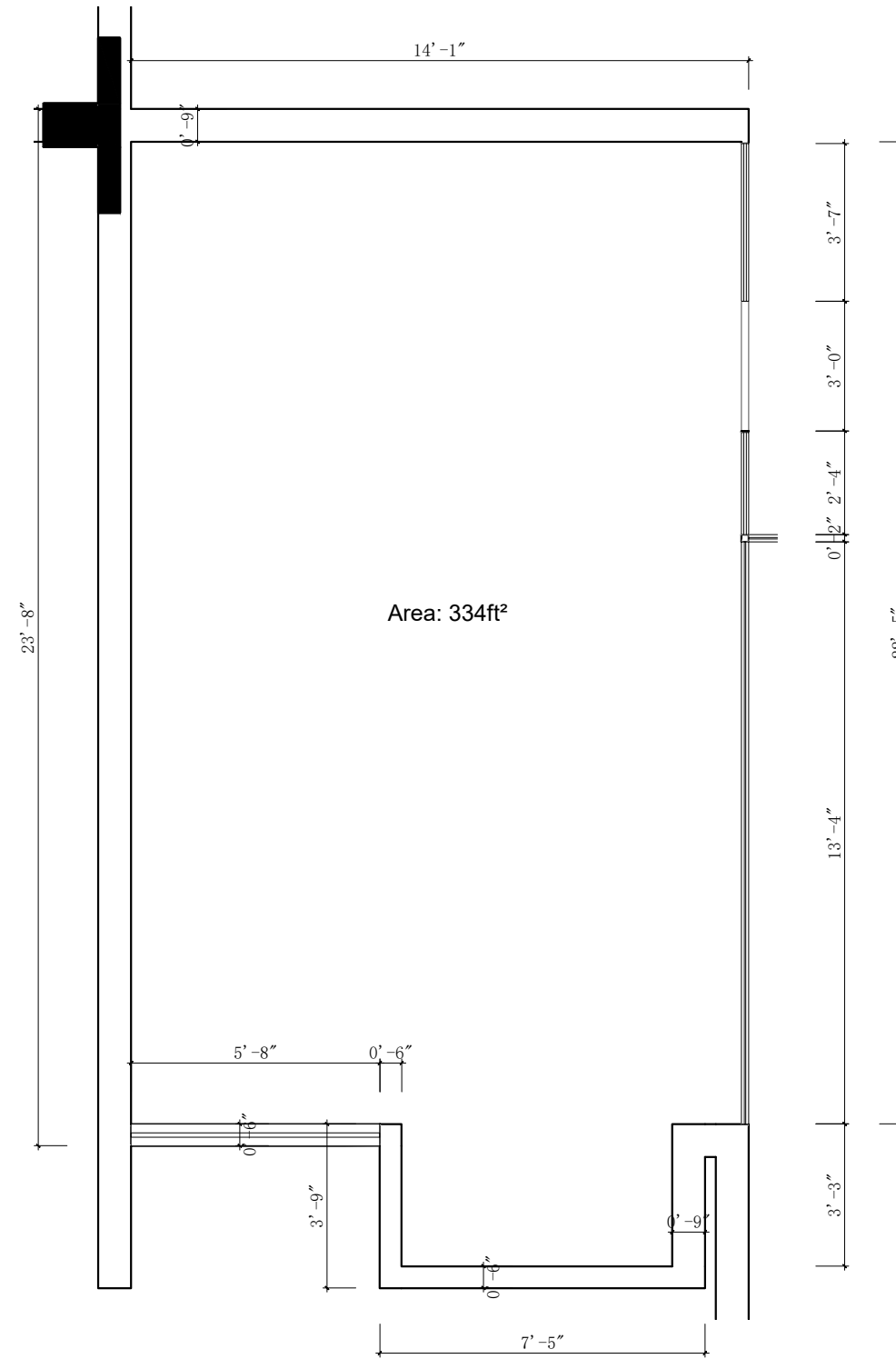


WAITING/PANTRY ELEV D(1/4"=1'-0")

Waiting Lounge Elevation D(1/4"=1'-0")



WAITING/PANTRY PLAN(1/4"=1'-0")



WAITING/PANTRY WALLS(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
WAITING/PANTRY FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.WP-31

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



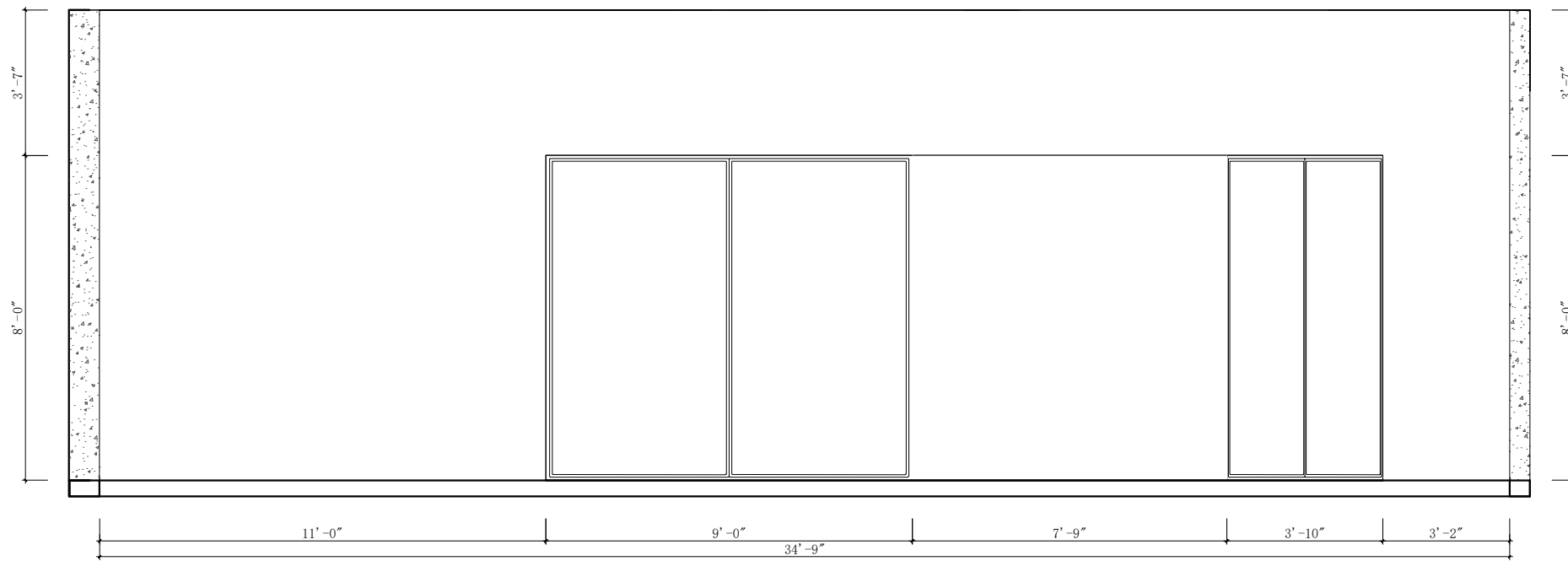
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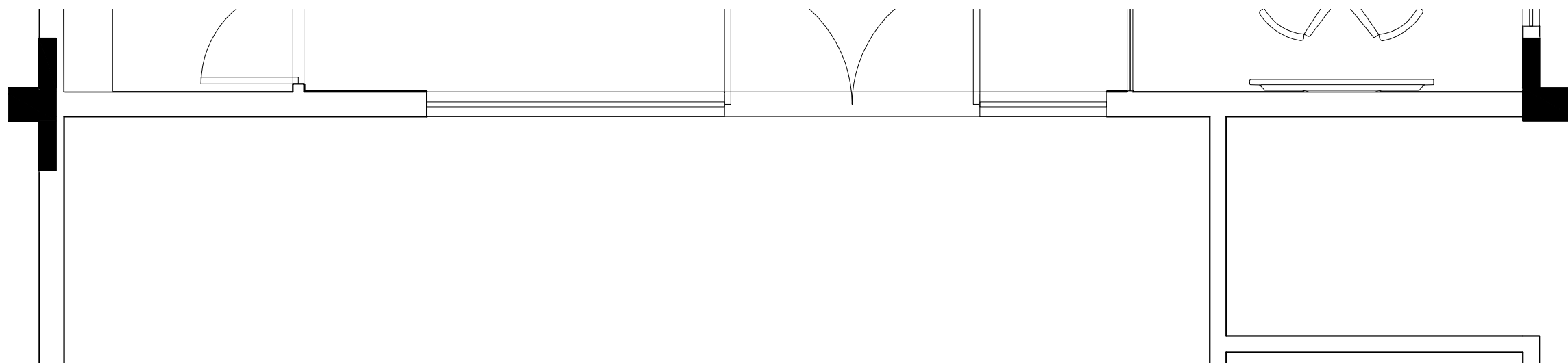
**6th FLOOR**  
RECEPTION AREA  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

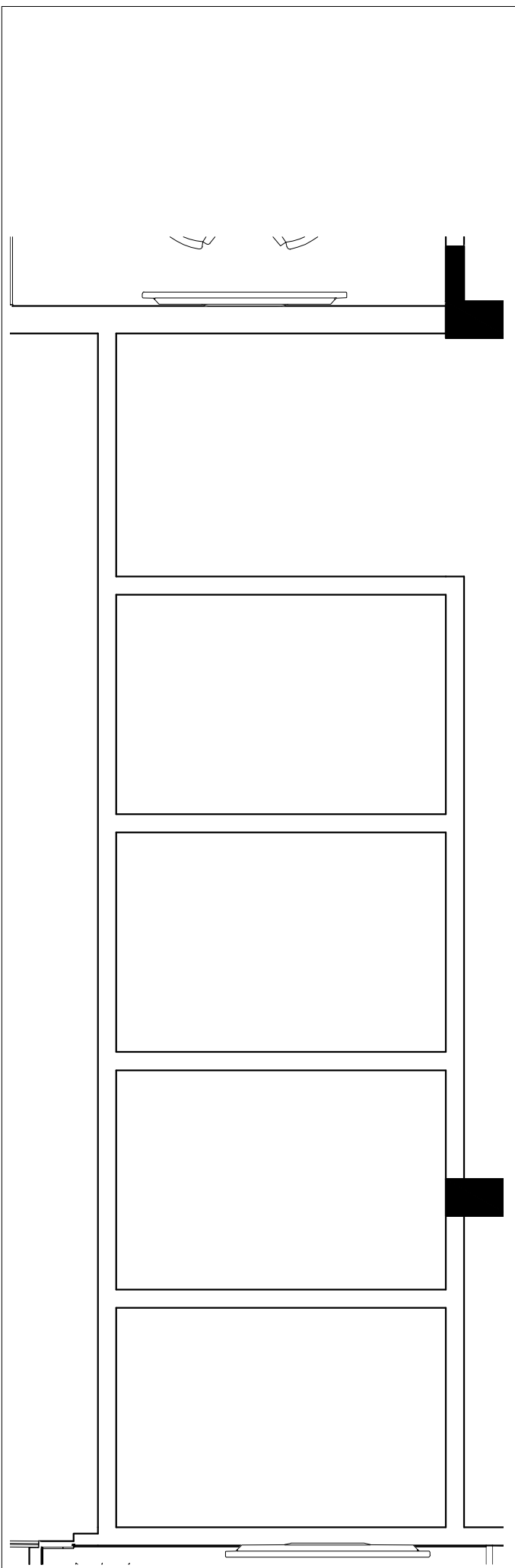
DWG. No.  
SL.06.AR.RA-32



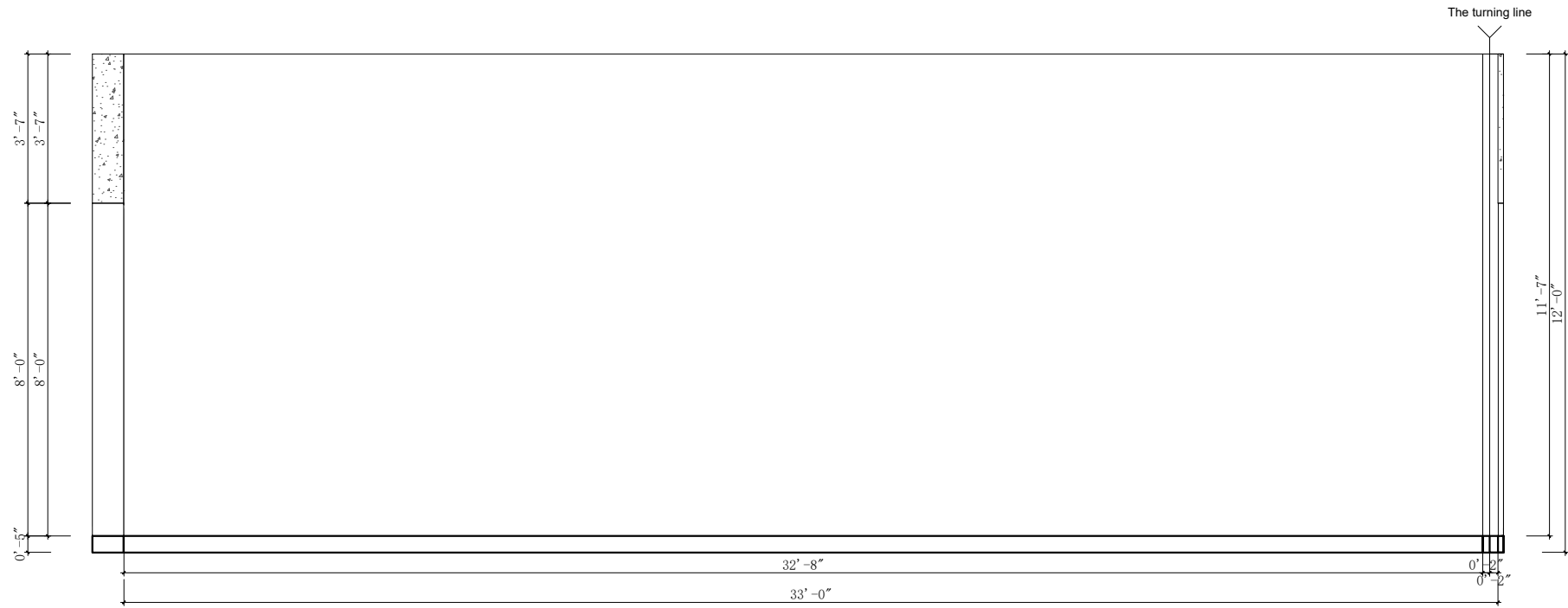
Reception Elevation A(1/4"=1'-0")



RECEPTION ELEV A(1/4"=1'-0")



RECEPTION ELEV B(1/4"=1'-0")



Reception Elevation B1(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

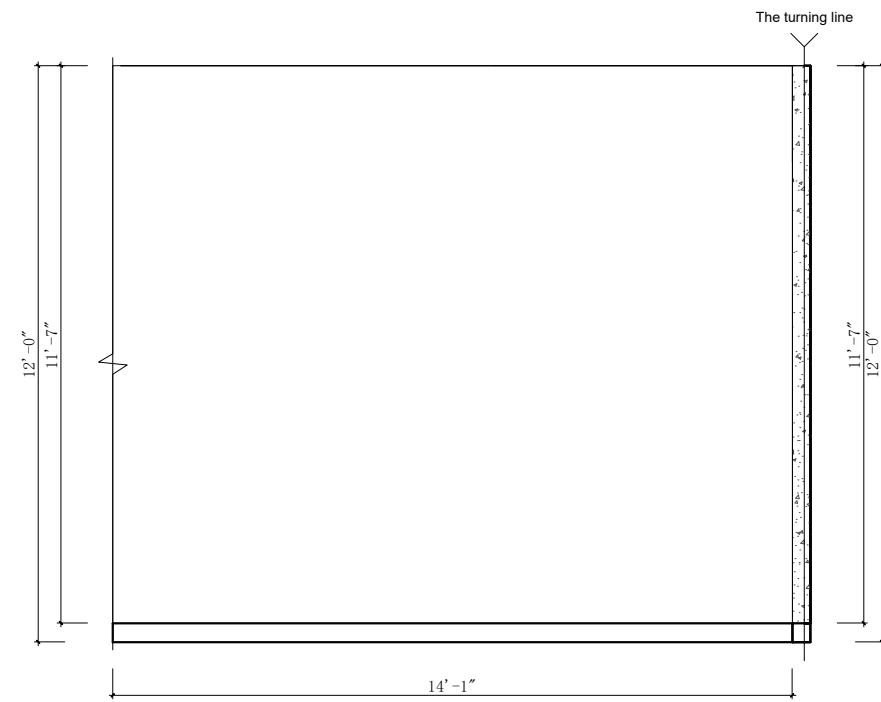


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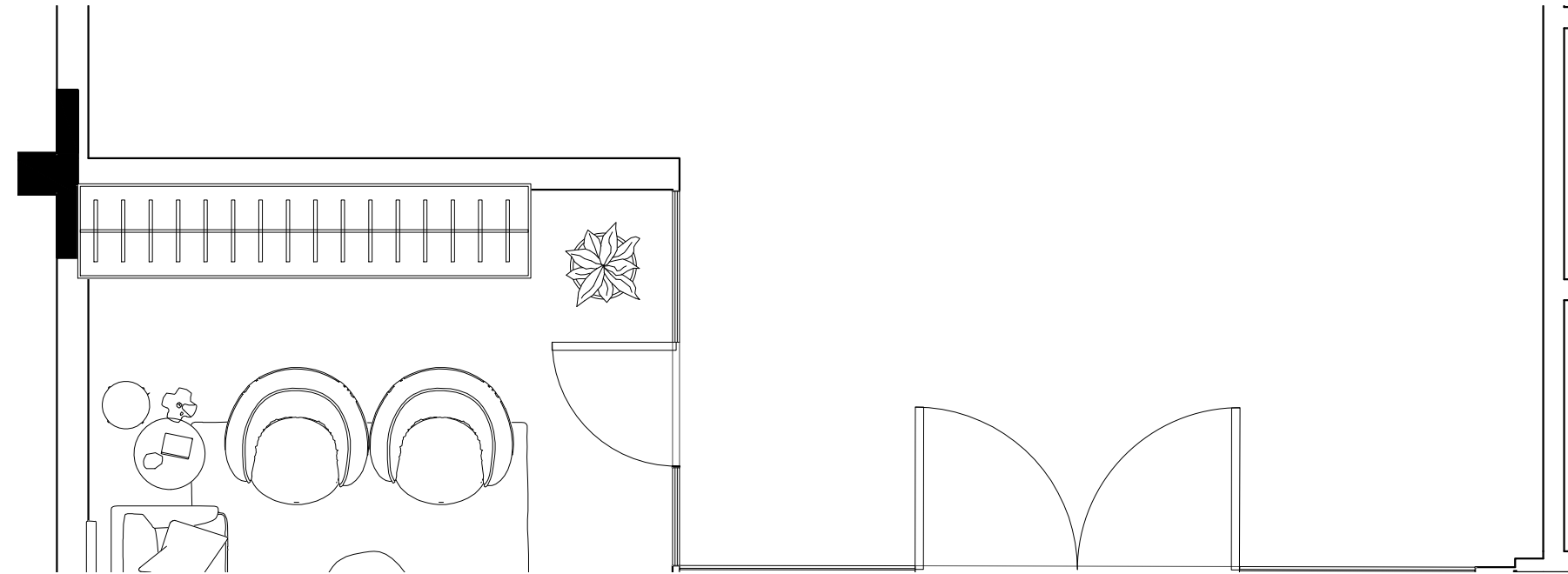
DRAWING TITLE:  
**6th FLOOR**  
RECEPTION AREA  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.RA-33



Reception Elevation C(1/4"=1'-0")



RECEPTION ELEV C(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

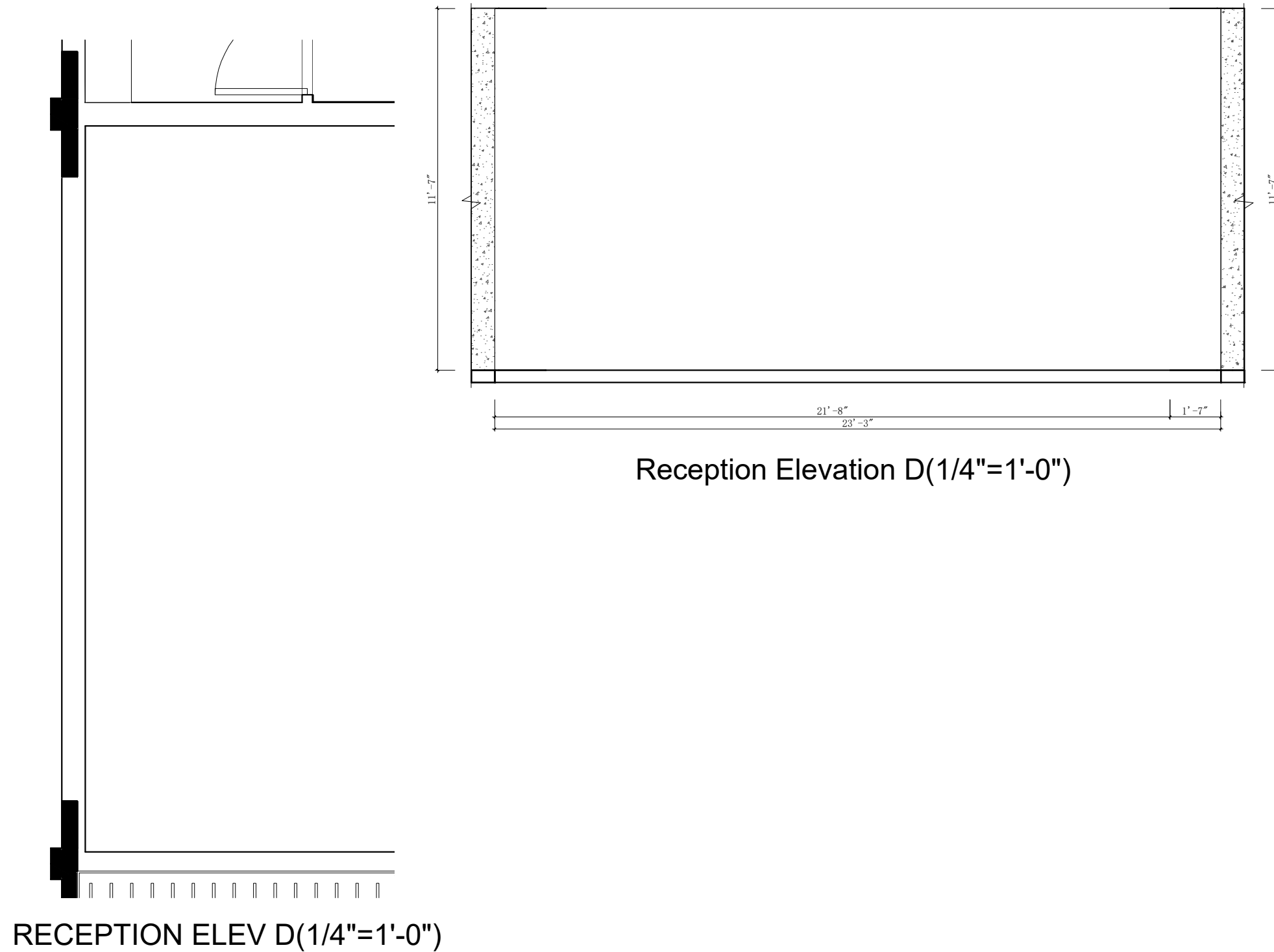


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
RECEPTION AREA  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.RA-34



### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

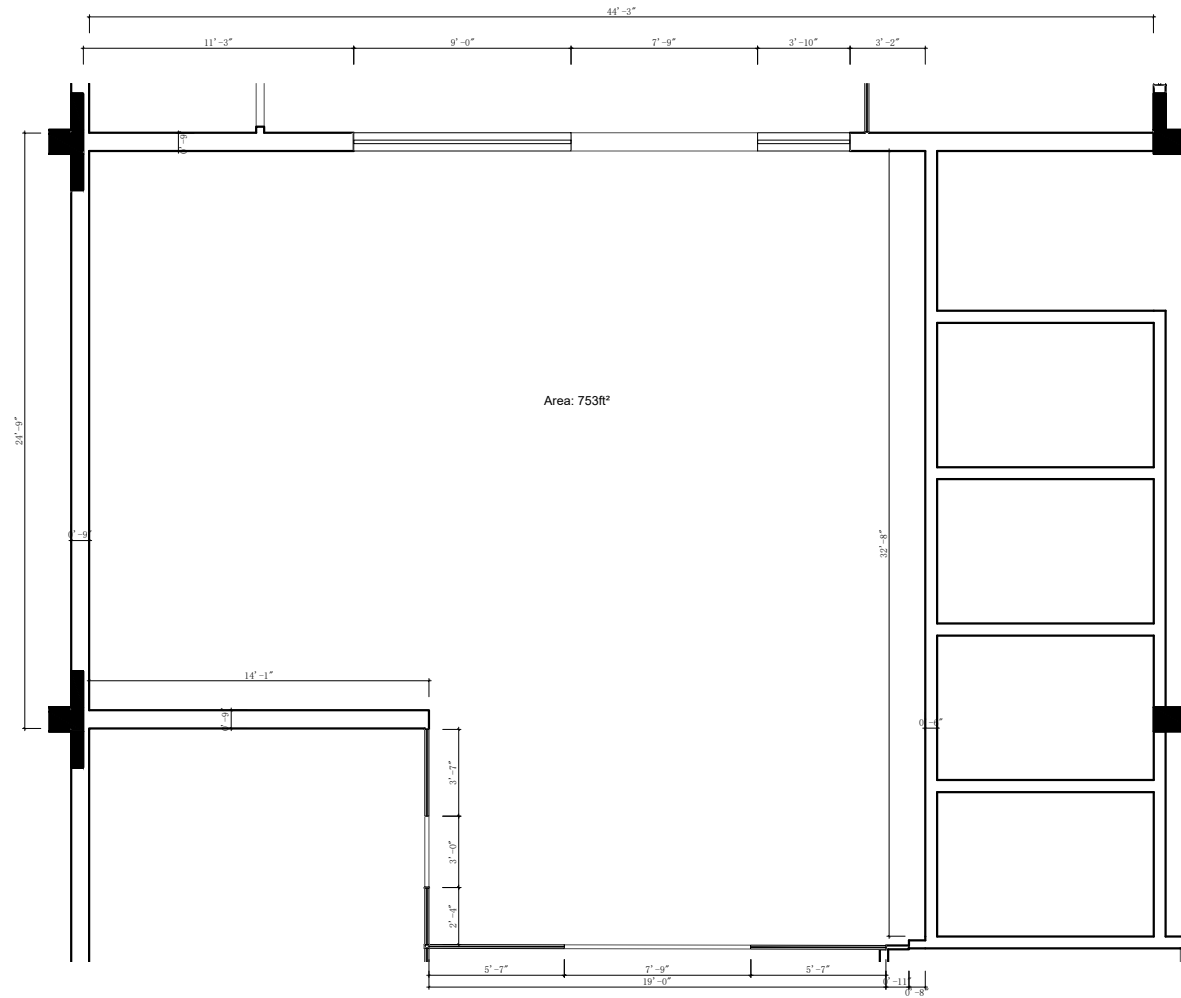
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**6th FLOOR**  
RECEPTION AREA  
ELEVATION D

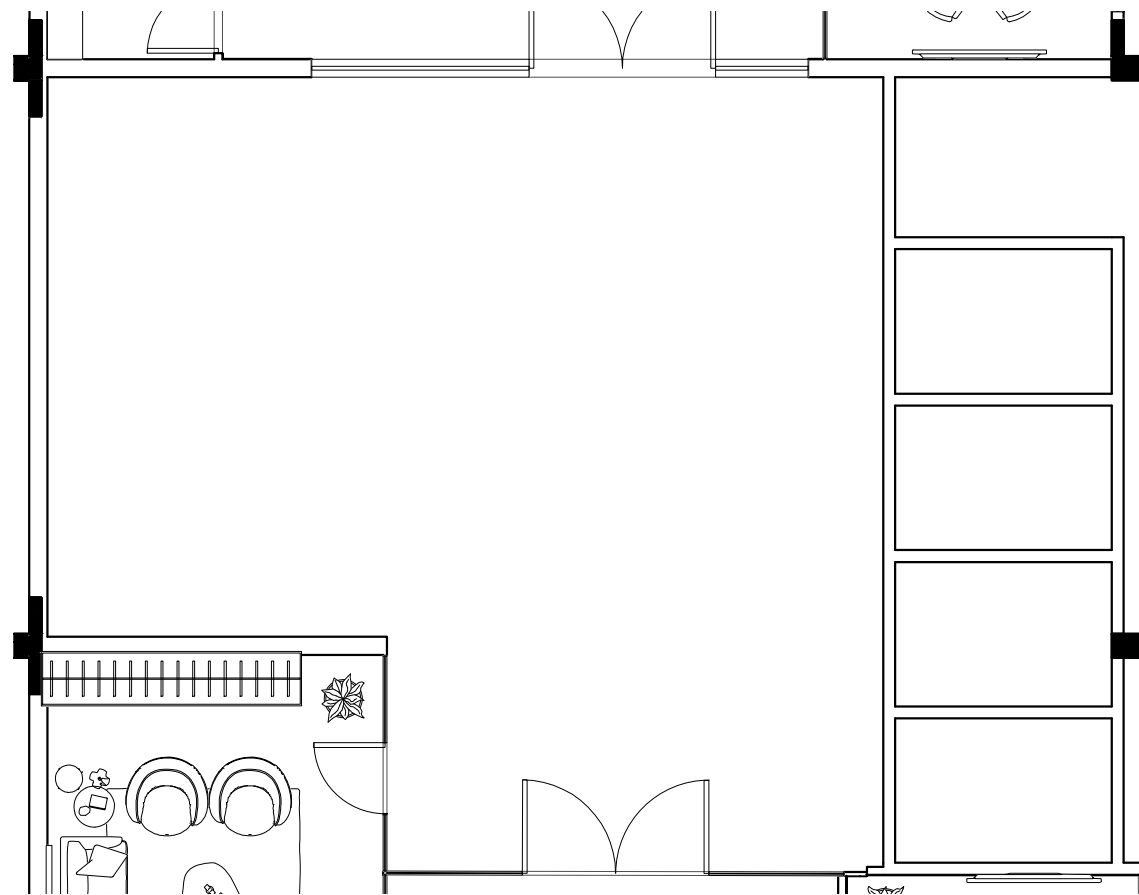
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.RA-35





RECEPTION WALLS(1/8"=1'-0")



RECEPTION PLAN(1/8"=1'-0")

## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

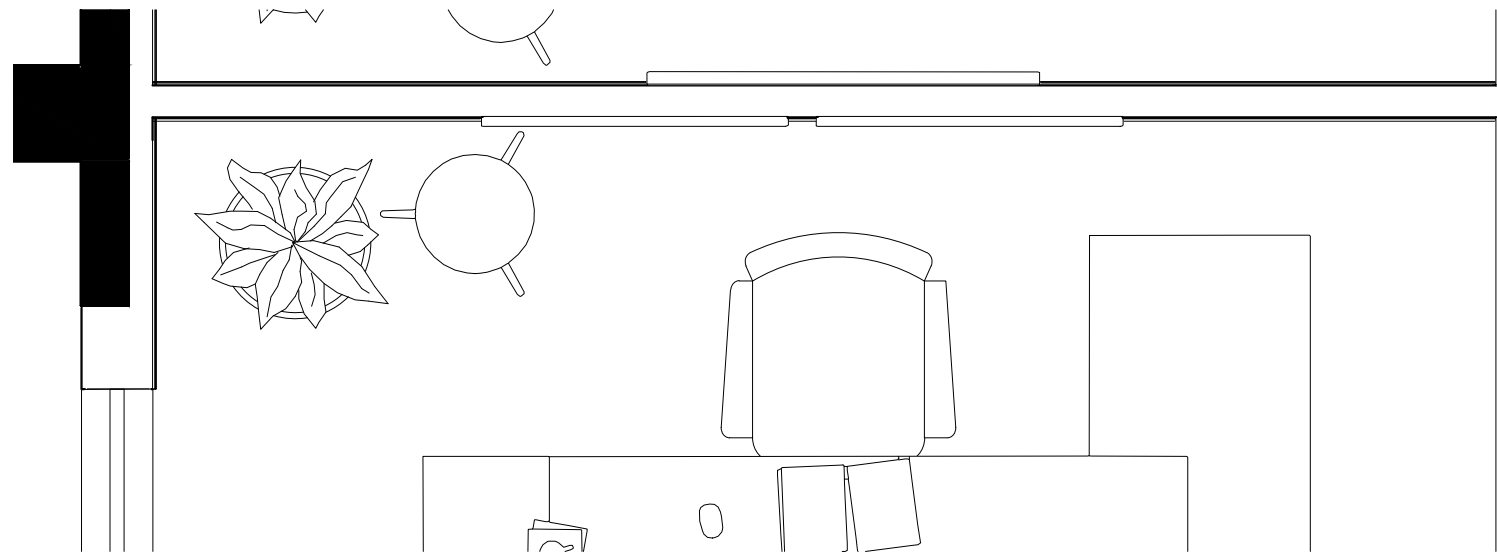


COMMENTS:

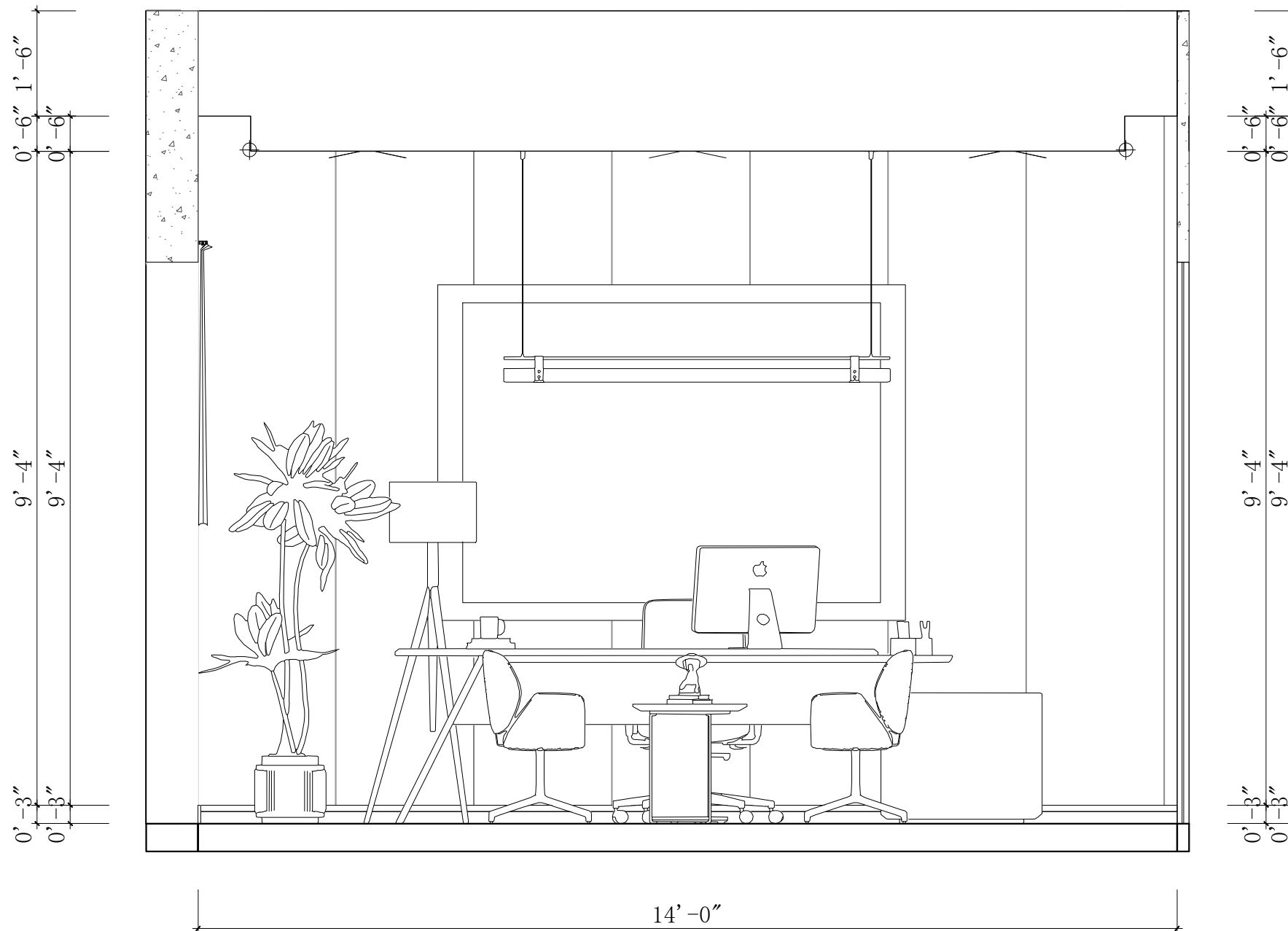
DRAWING TITLE:  
**6th FLOOR**  
LARGE WING PANTRY  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.RF-36



DH/CHIEF ELEV A(1/2"=1'-0")



Chief Office 5 Elevation A(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
DH/CHIEF  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.DHC-37

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

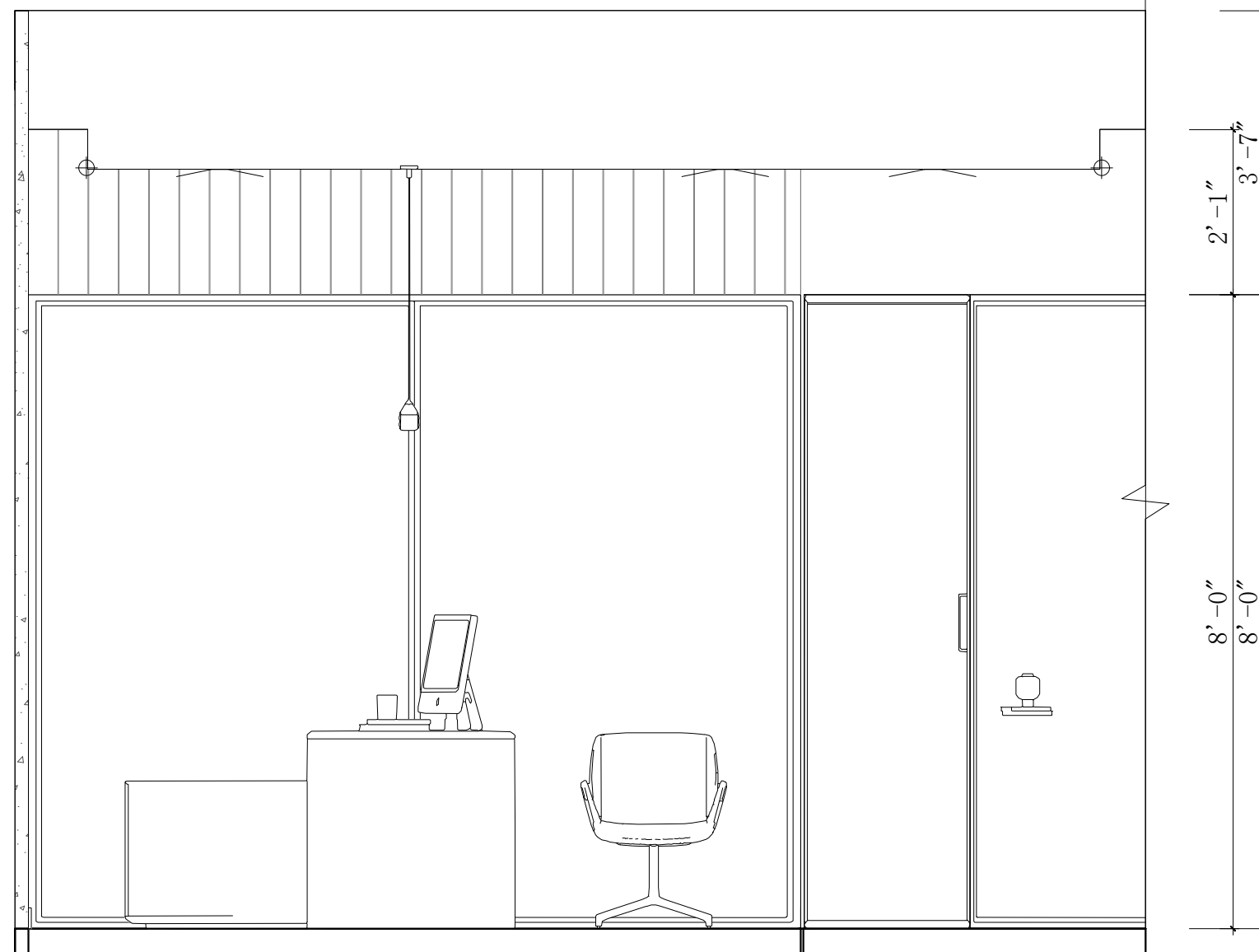
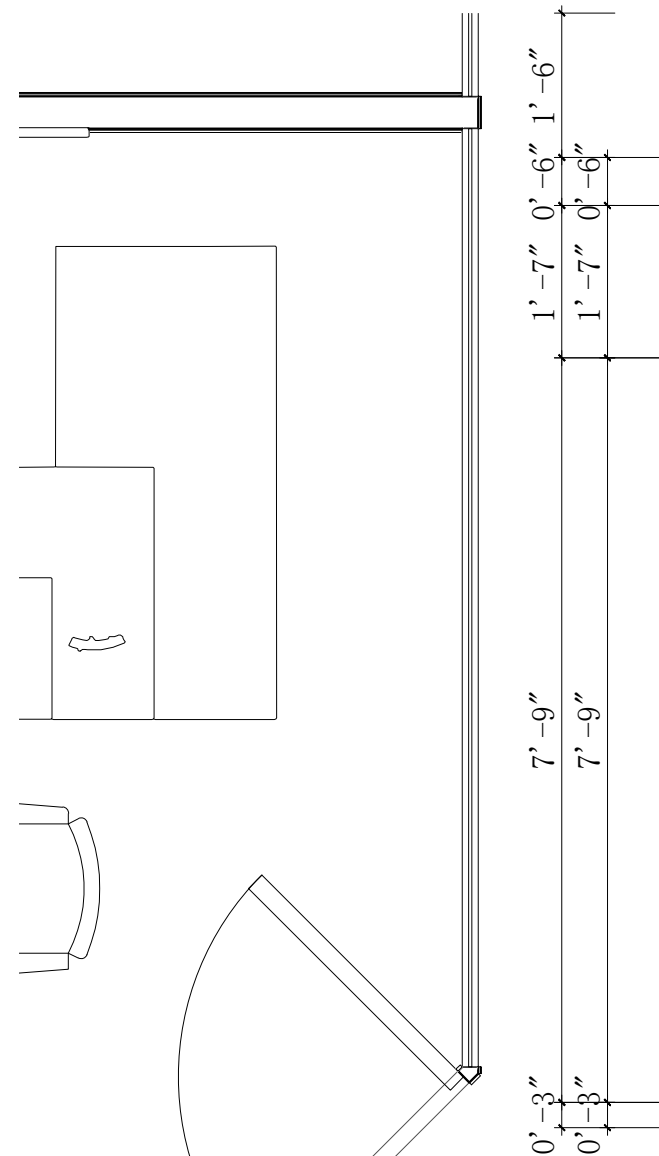


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
DH/CHIEF  
ELEVATION B

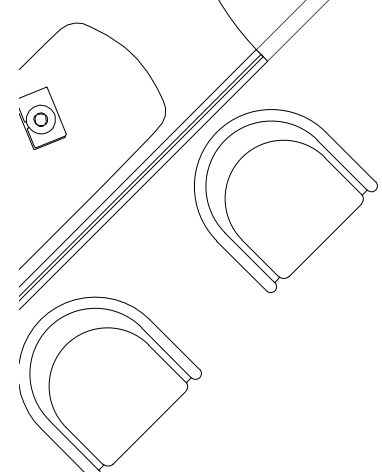
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.DHC-38

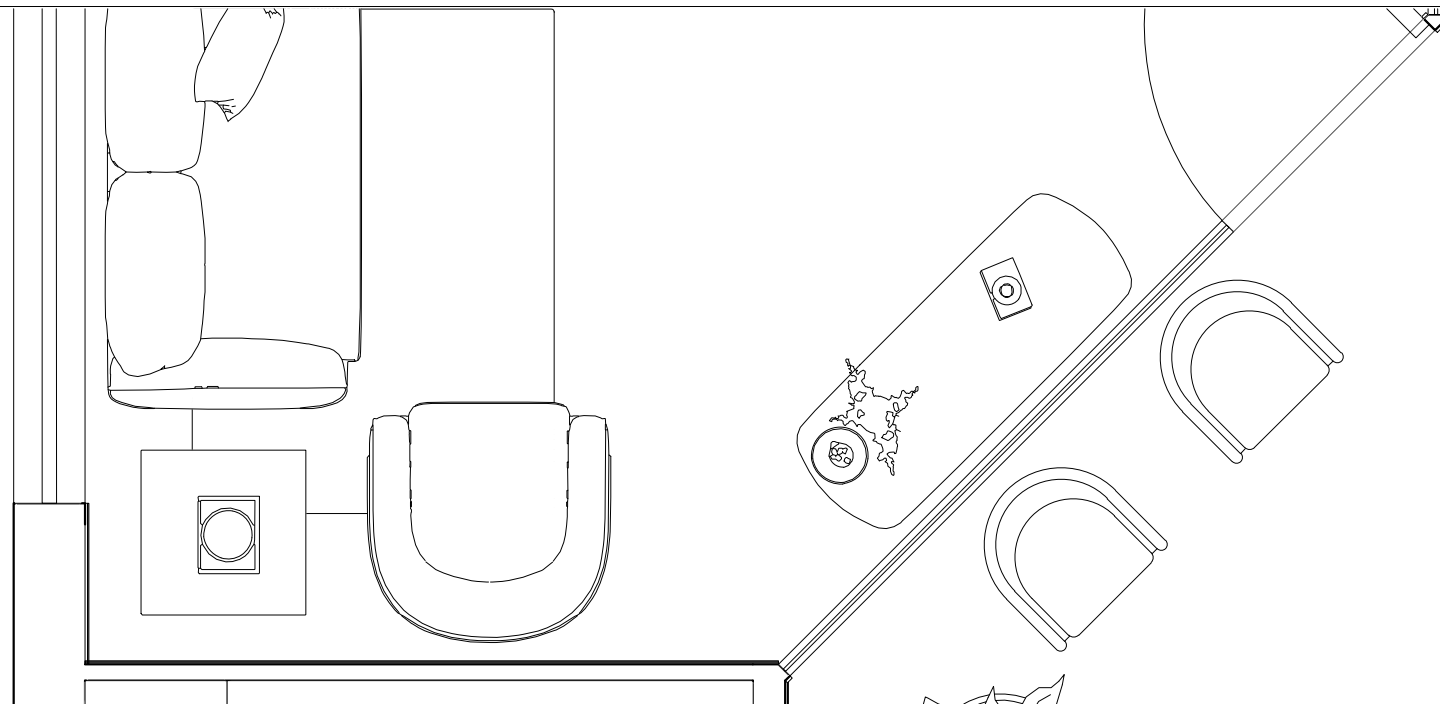


Chief Office 5 Elevation B(1/2"=1'-0")

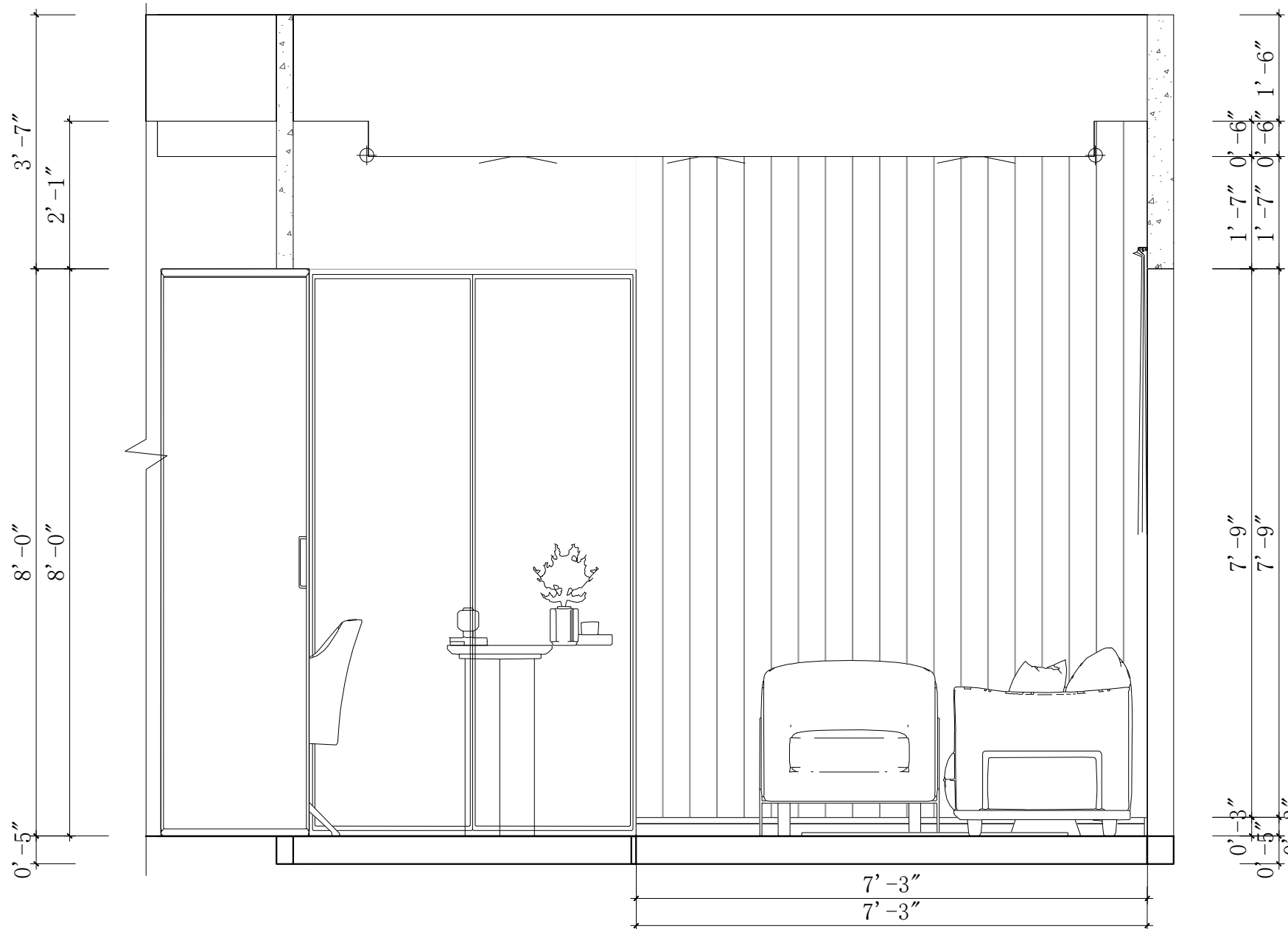
9'-9" 0'-3" 2'-1" 2'-3" 14'-1"



DH/CHIEF ELEV B(1/2"=1'-0")



DH/CHIEF ELEV C (1/2"=1'-0")



**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

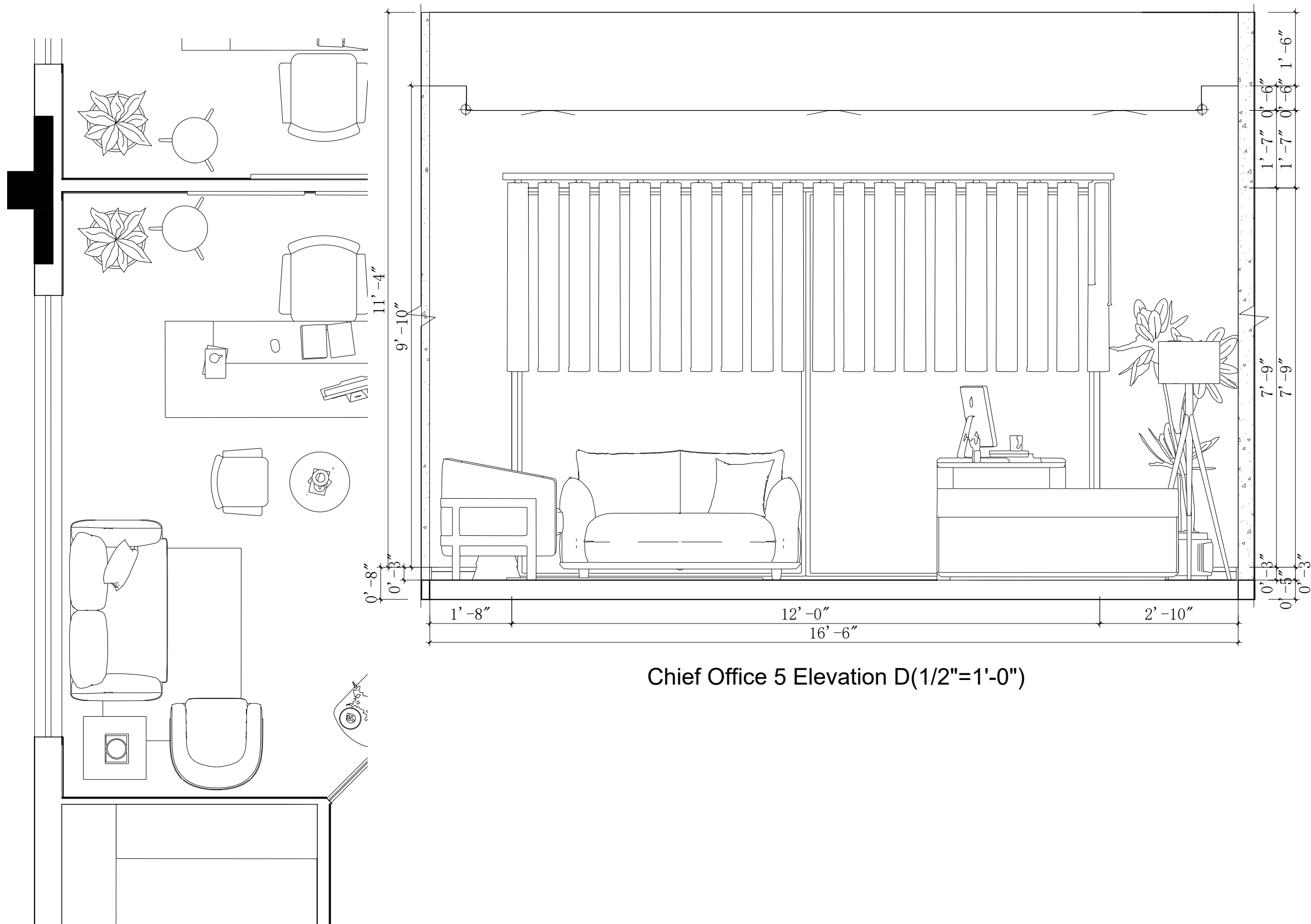


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
DH/CHIEF  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.DHC-39



DH/CHIEF ELEV D(1/2"=1'-0")

**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
DH/CHIEF  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.DHC-40

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

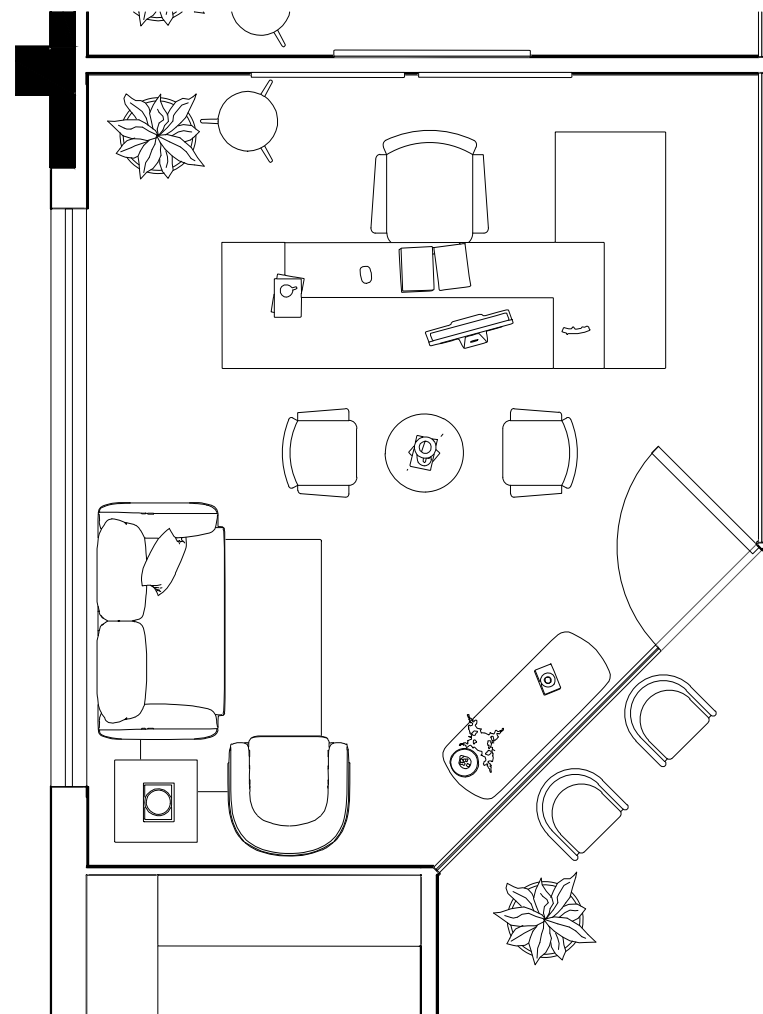
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**6th FLOOR**  
**DH/CHIEF FLOOR**

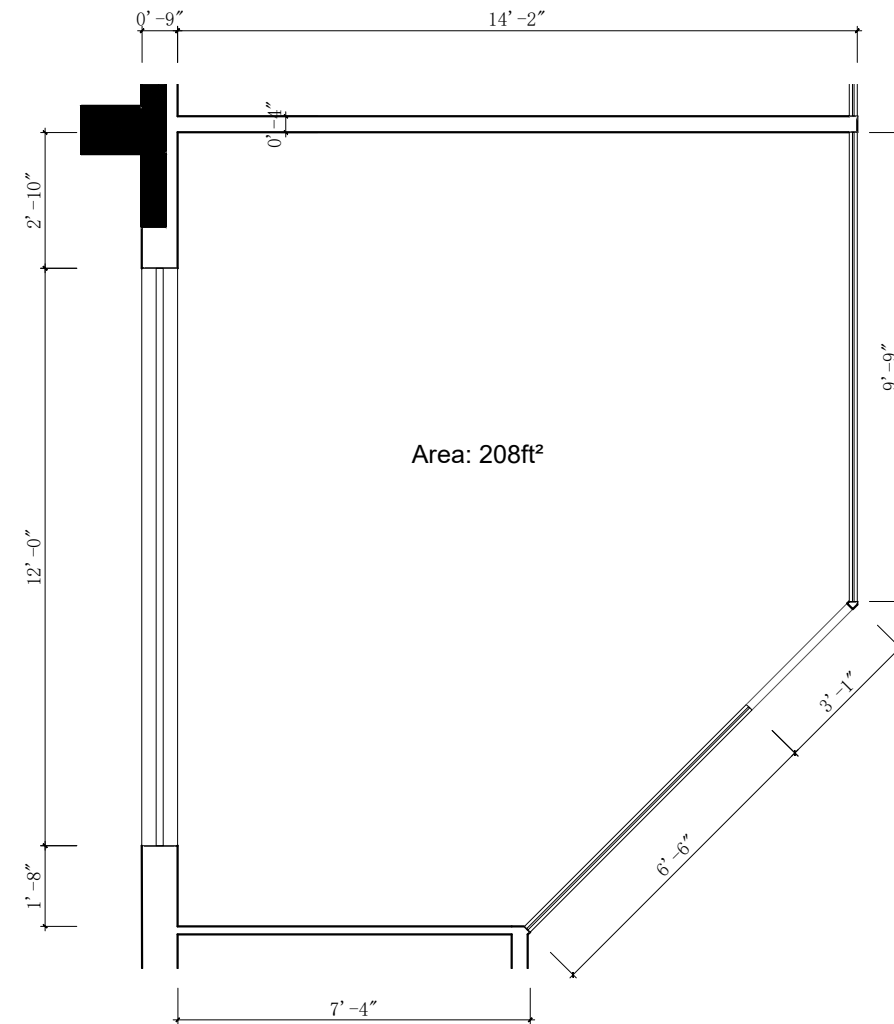
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

DWG. No.  
SL.06.AR.LWP-41



DH/CHIEF PLAN(1/4"=1'-0")



DH/CHIEF WALLS(1/4"=1'-0")

## GENERAL NOTES

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



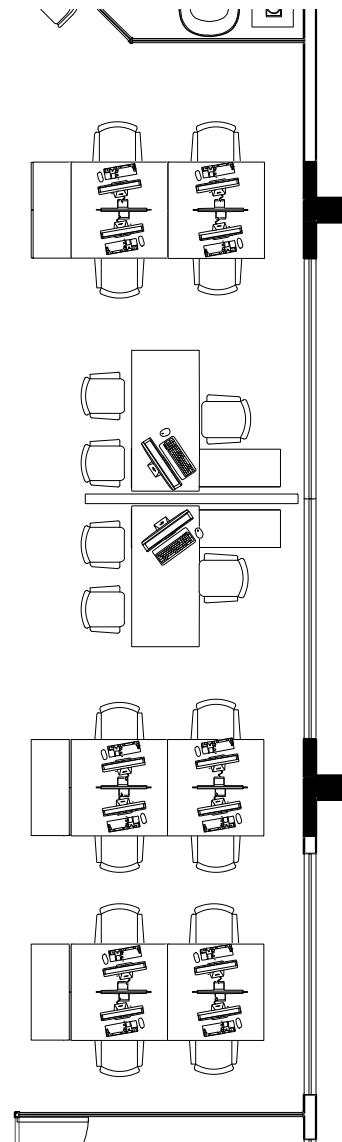
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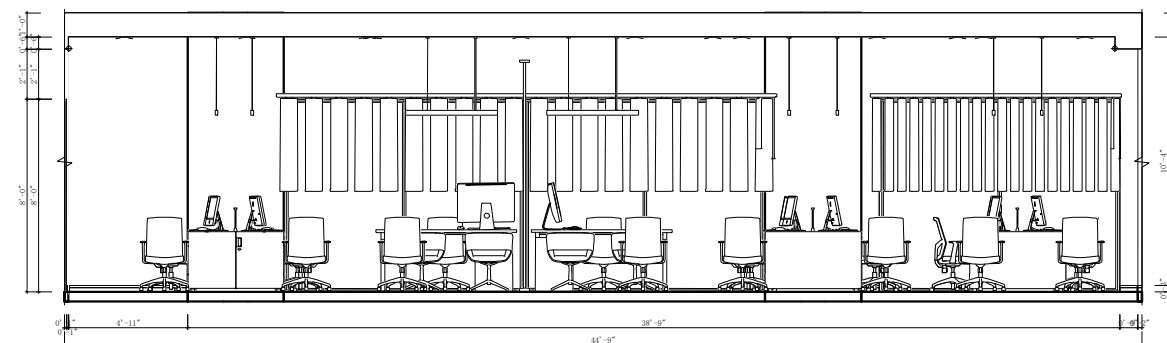
**6th FLOOR**  
SMALL WING DGM  
ELEVATION 1

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.SWD-42**



SW DGM ELEV 1(1/8"=1'-0")



SW DGM ELEV 1(1/8"=1'-0")

## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

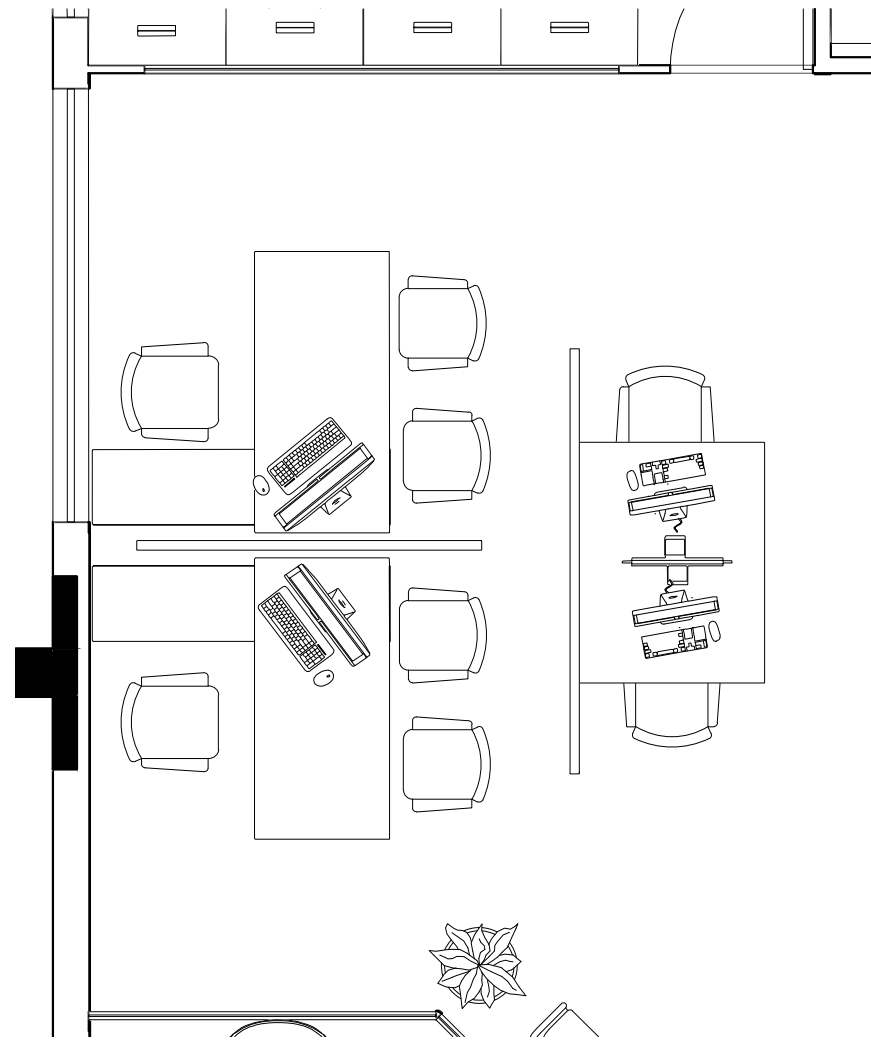
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SMALL WING DGM  
ELEVATION 2

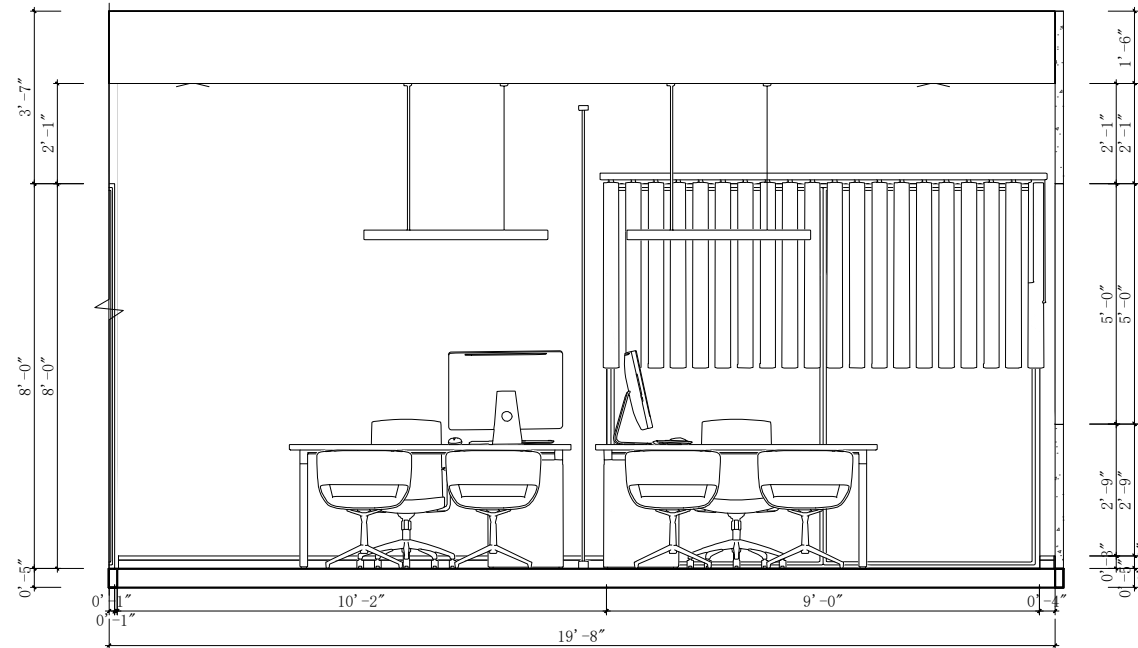
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

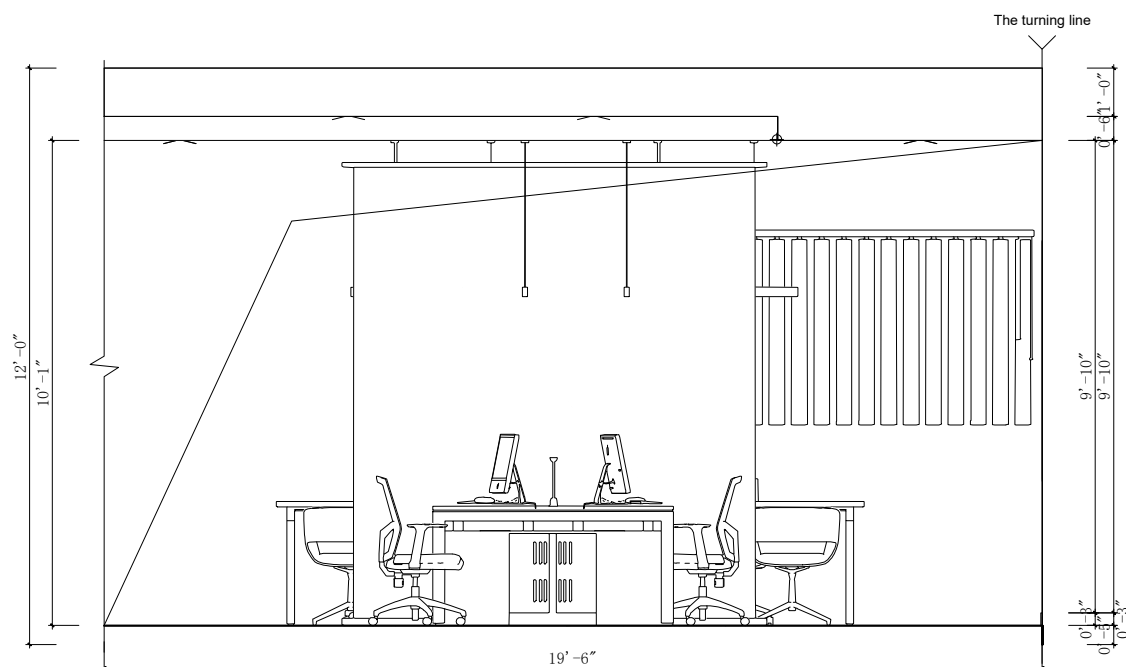
DWG. No.  
**SL.06.AR.SWD-43**



SW DGM ELEV 2(1/4"=1'-0")



SW DGM ELEV 2A(1/4"=1'-0")



D.G.M and Staff Elevation D(1/4"=1'-0")



## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



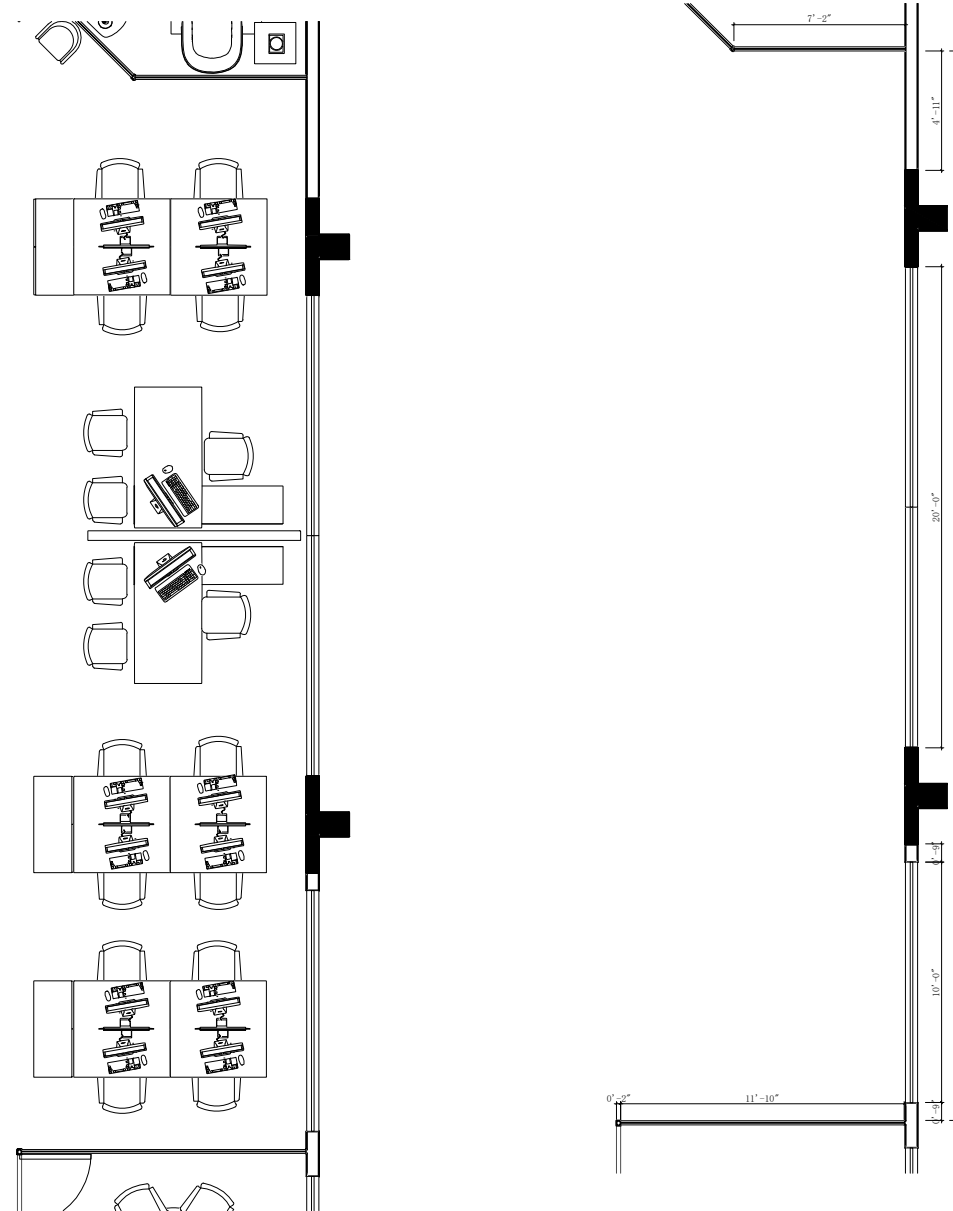
COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
SMALL WING DGM FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.SWD-44**



SW DGM WALLS 1(1/8"=1'-0")

SW DGM PLAN 1(1/8"=1'-0")

## GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

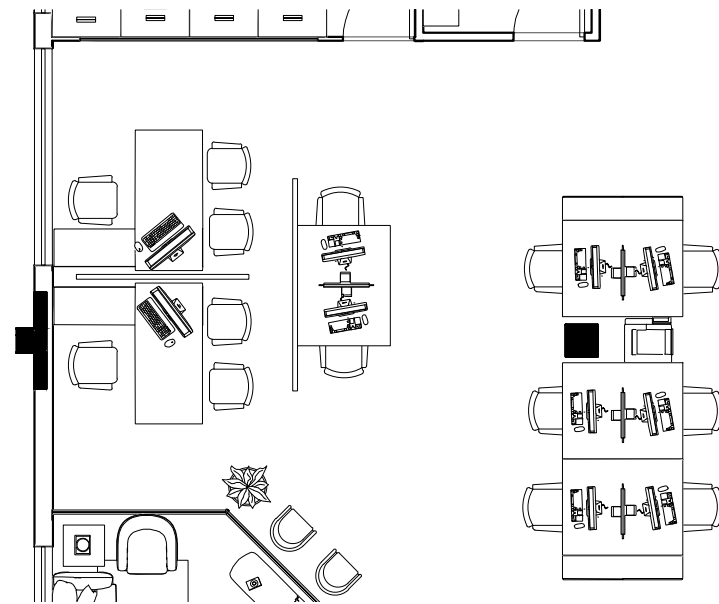
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SMALL WING DGM  
FLOOR-1

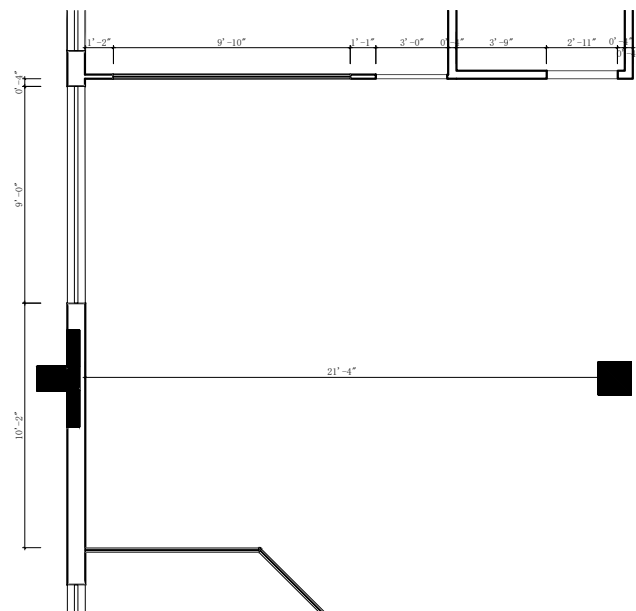
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

DWG. No.  
**SL.06.AR.SWD-45**



SW DGM PLAN 2(1/8"=1'-0")



SW DGM WALLS 2(1/8"=1'-0")

## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

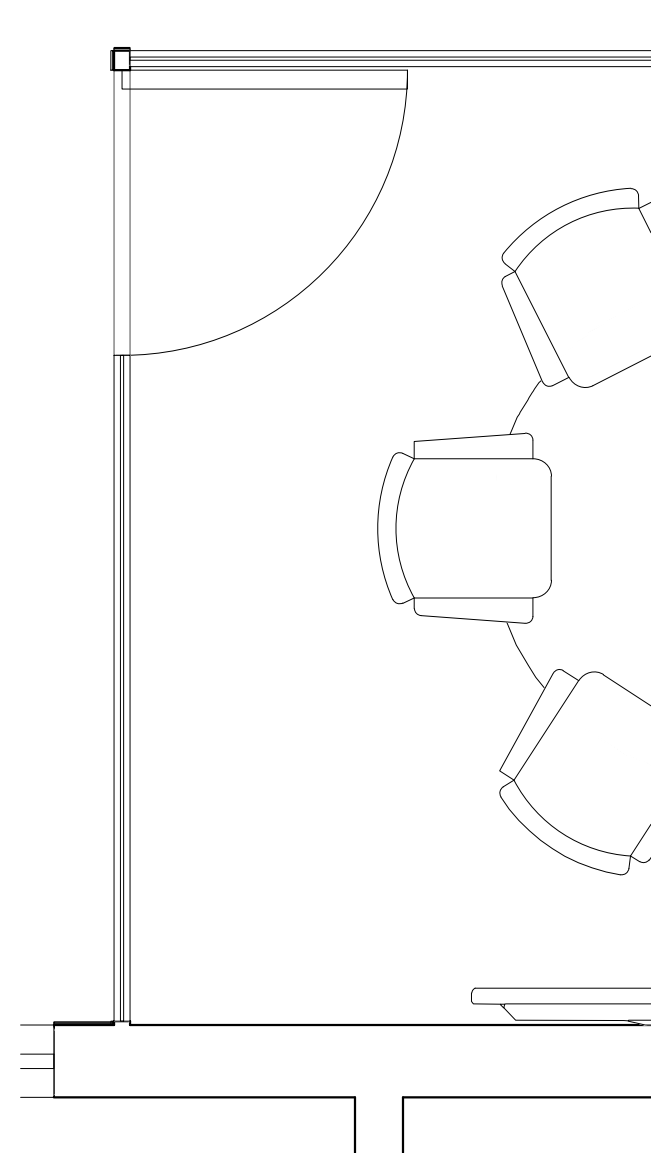
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**6th FLOOR**  
MEETING ROOM  
ELEVATION A

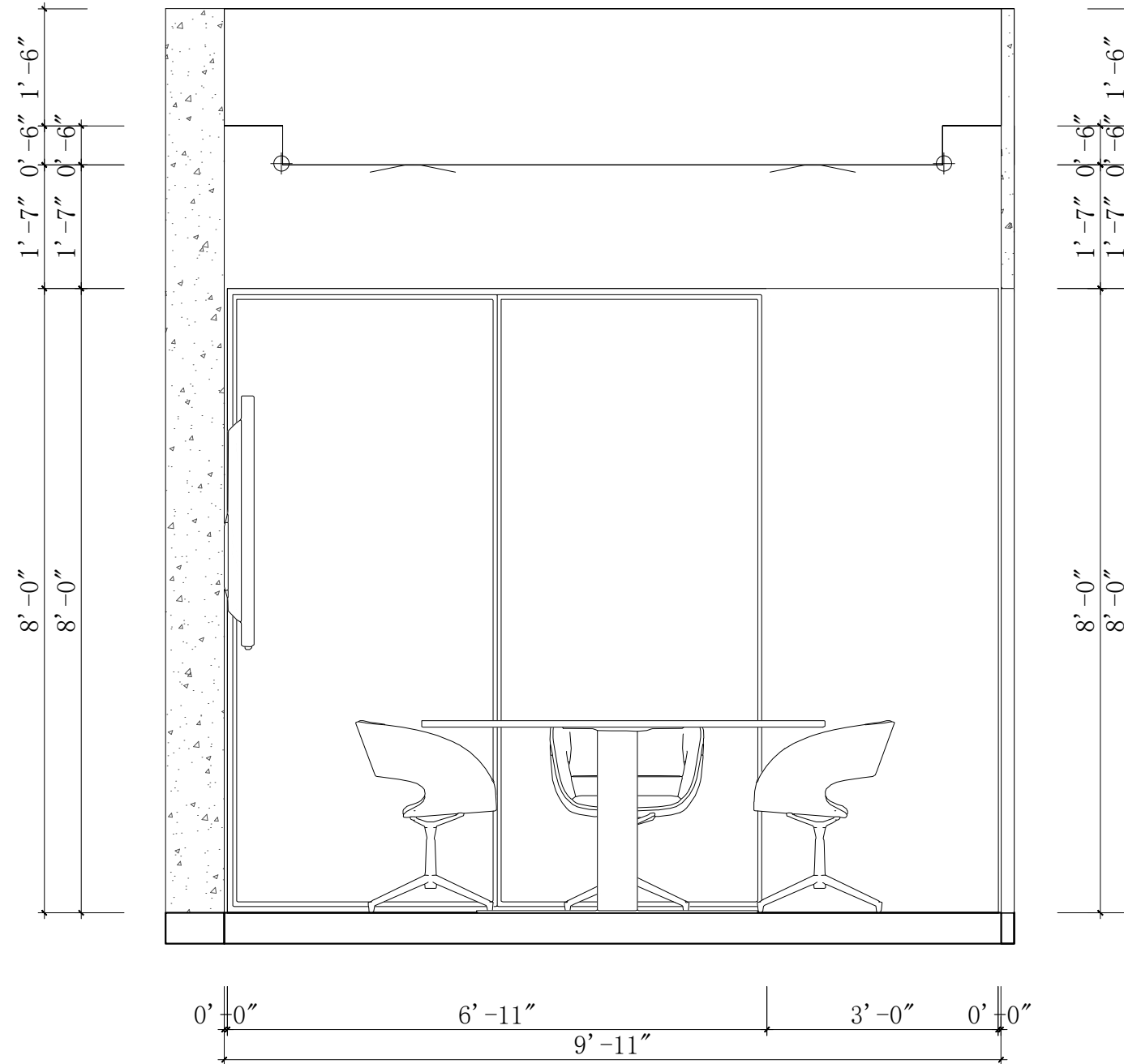
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

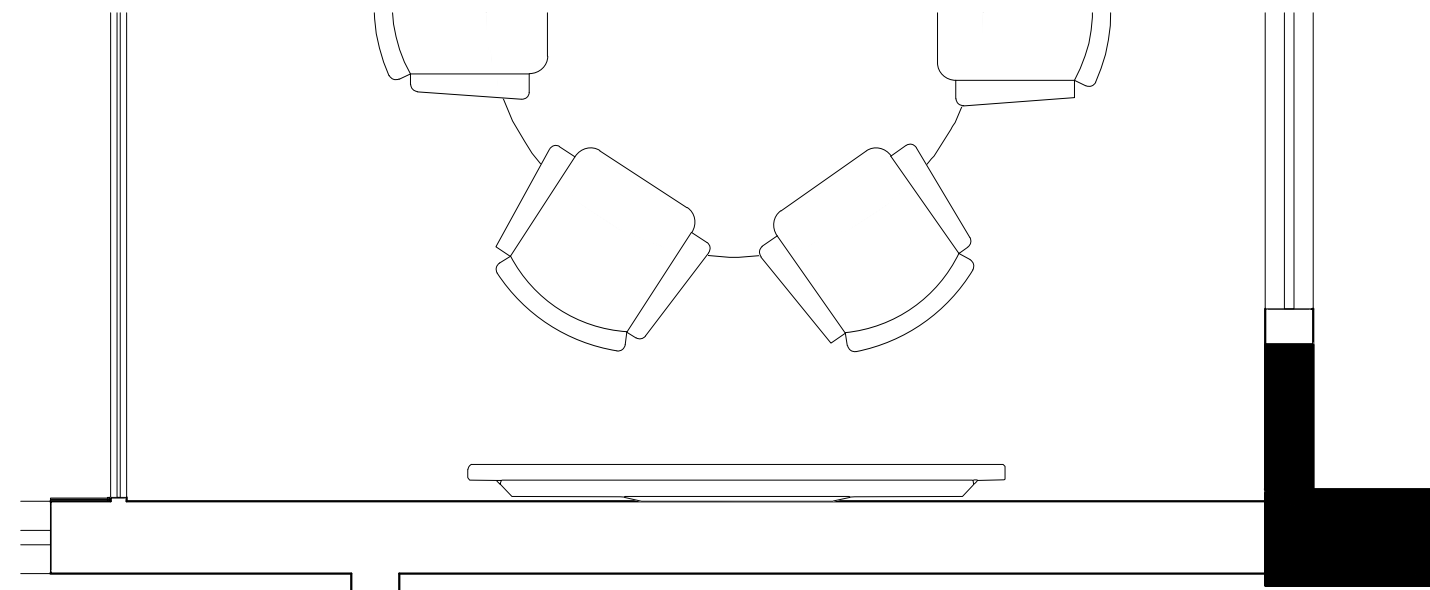
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**SL.06.AR.MR-46**



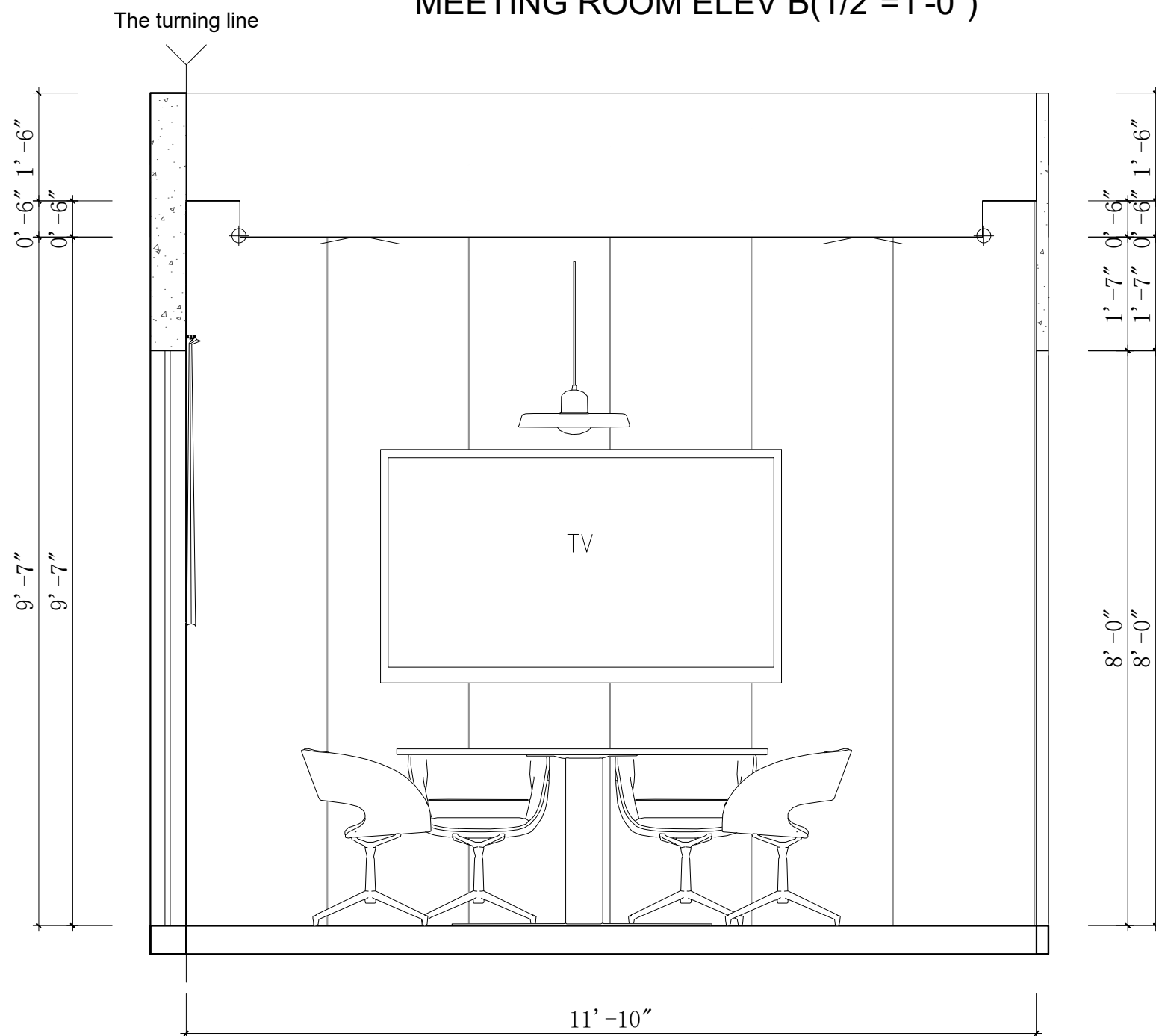
MEETING ROOM ELEV A(1/2"=1'-0")



MEETING ROOM ELEV A(1/2"=1'-0")



MEETING ROOM ELEV B(1/2"=1'-0")



MEETING ROOM ELEV B(1/2"=1'-0")

**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



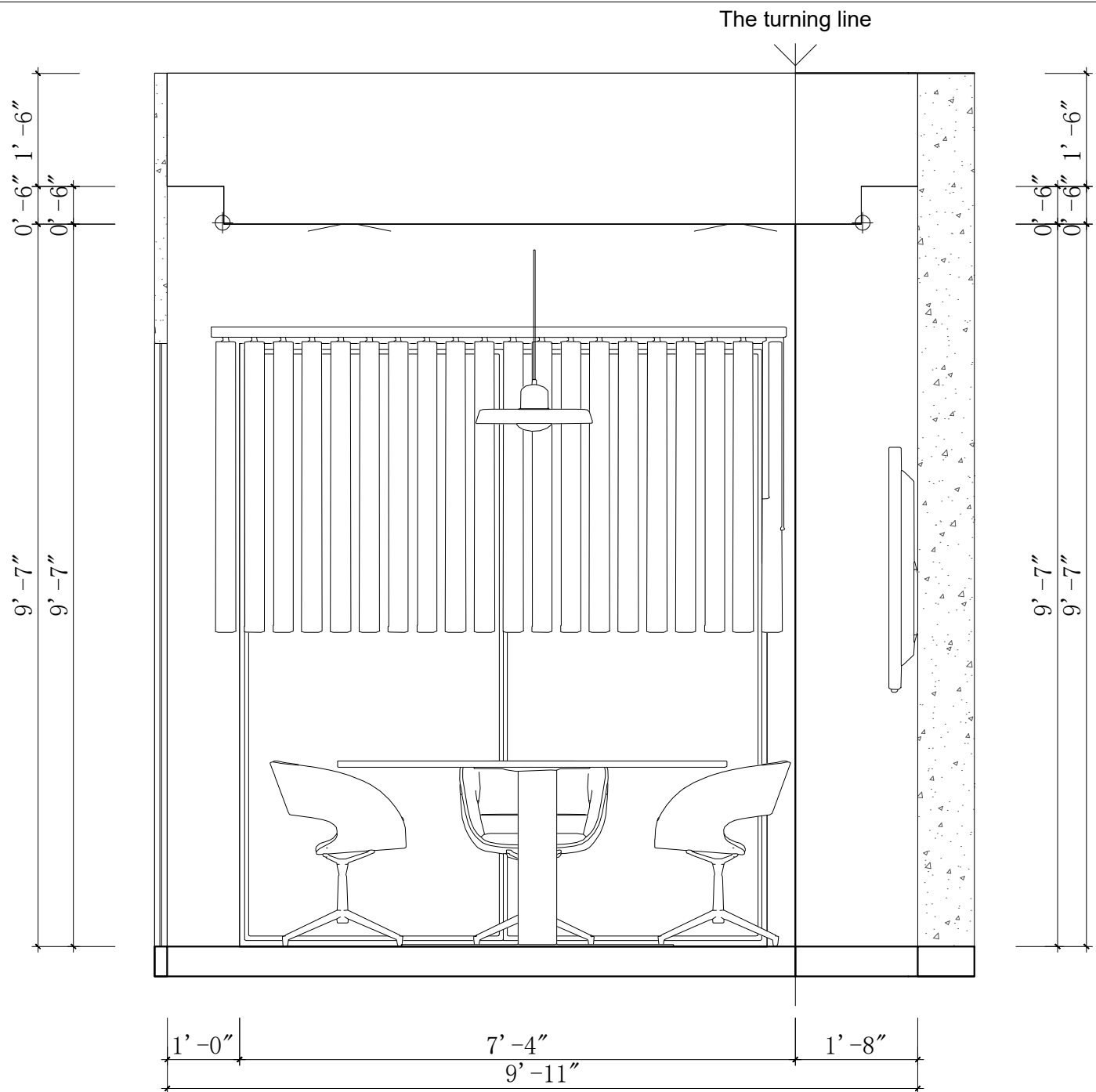
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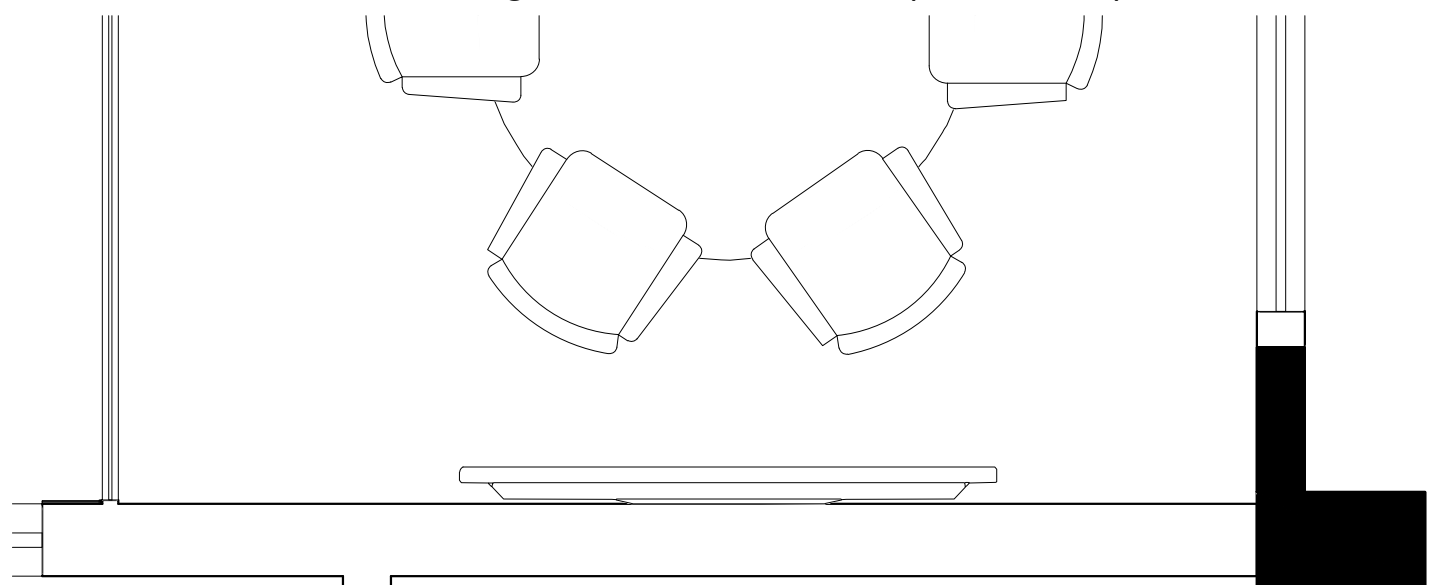
**6th FLOOR**  
**MEETING ROOM**  
**ELEVATION B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.MR-47**



SW Meeting Room Elevation B(1/2"=1'-0")



MEETING ROOM ELEV B(1/2"=1'-0")

**GENERAL NOTES**

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR  
ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING  
NO. 52-C, LANE NO. 01, AL-MURTAZA  
COMMERCIAL, PHASE VIII, D.H.A.,  
KARACHI.

PROJECT:  
**RENOVATION OF STATE  
LIFE BUILDING No. 9**  
KARACHI

**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:  
**6th FLOOR  
MEETING ROOM  
ELEVATION C**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.MR-48**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

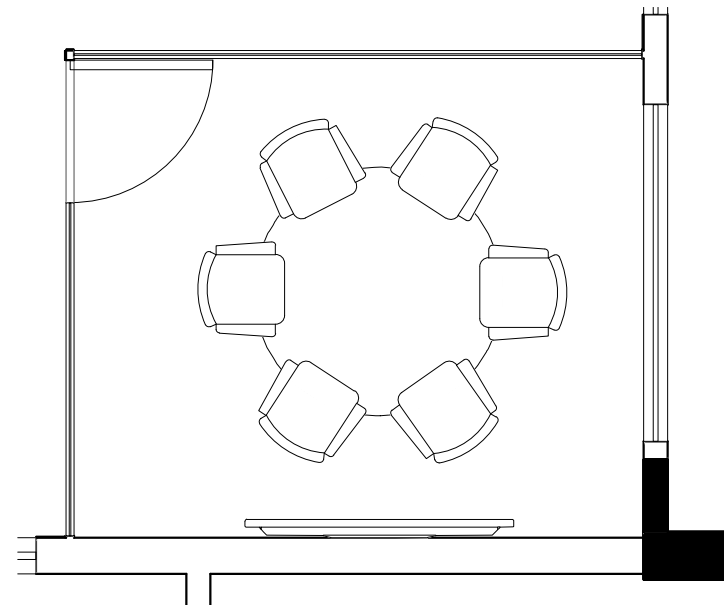
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**6th FLOOR**  
**MEETING ROOM FLOOR**

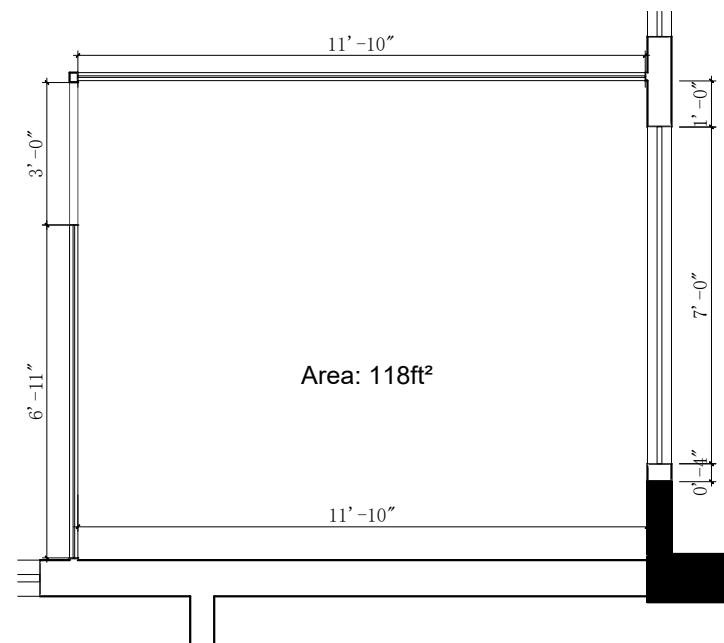
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

DWG. No.  
**SL.06.AR.MR-49**



MEETING ROOM PLAN(1/4"=1'-0")



MEETING ROOM WALLS(1/4"=1'-0")

### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



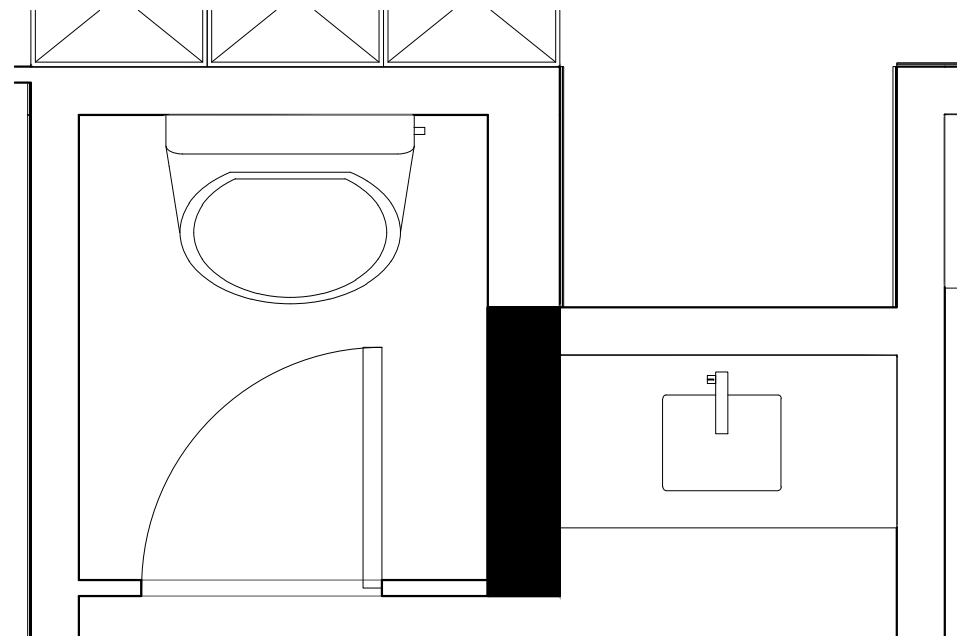
COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
FEMALE CHIEF BATH  
ELEVATION 1

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

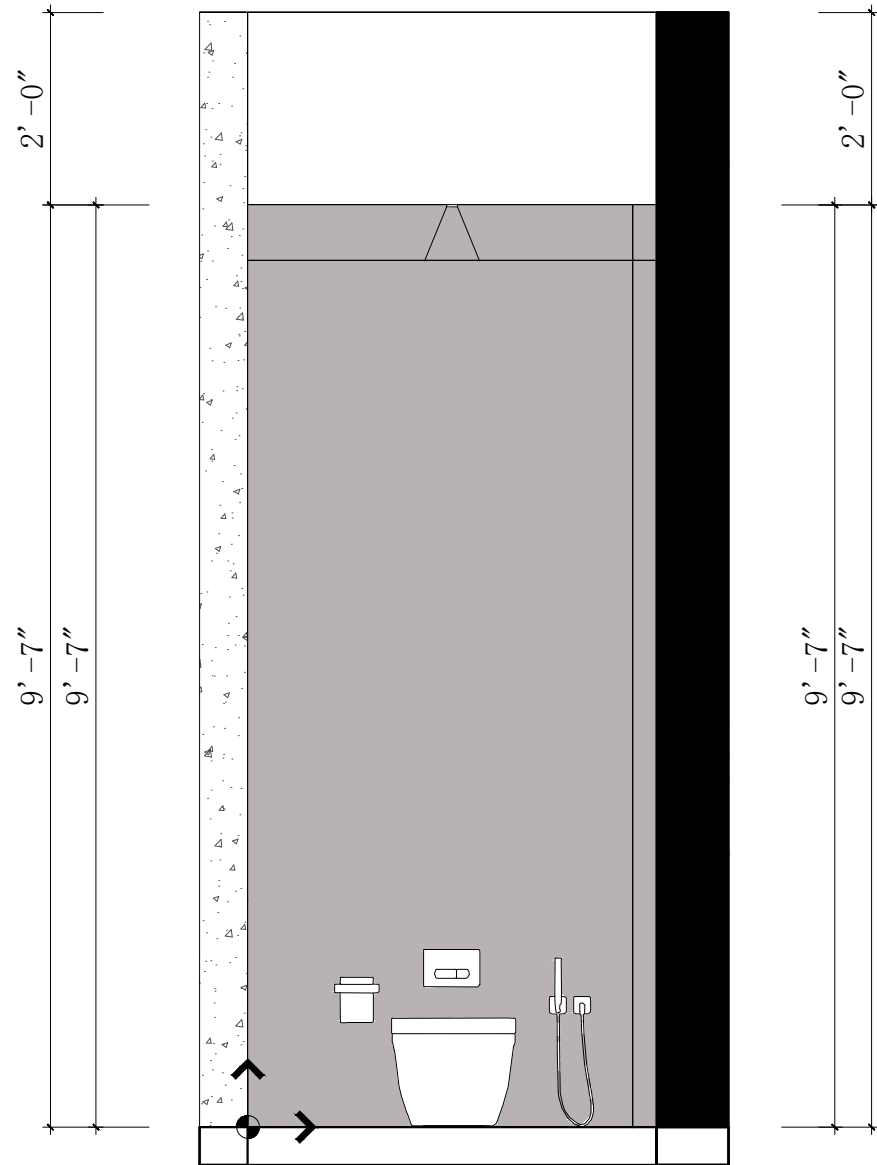
SCALE	DATE
1/16" = 1'	@ A3 APR-2024

DWG. No.  
SL.06.AR.FCB-50

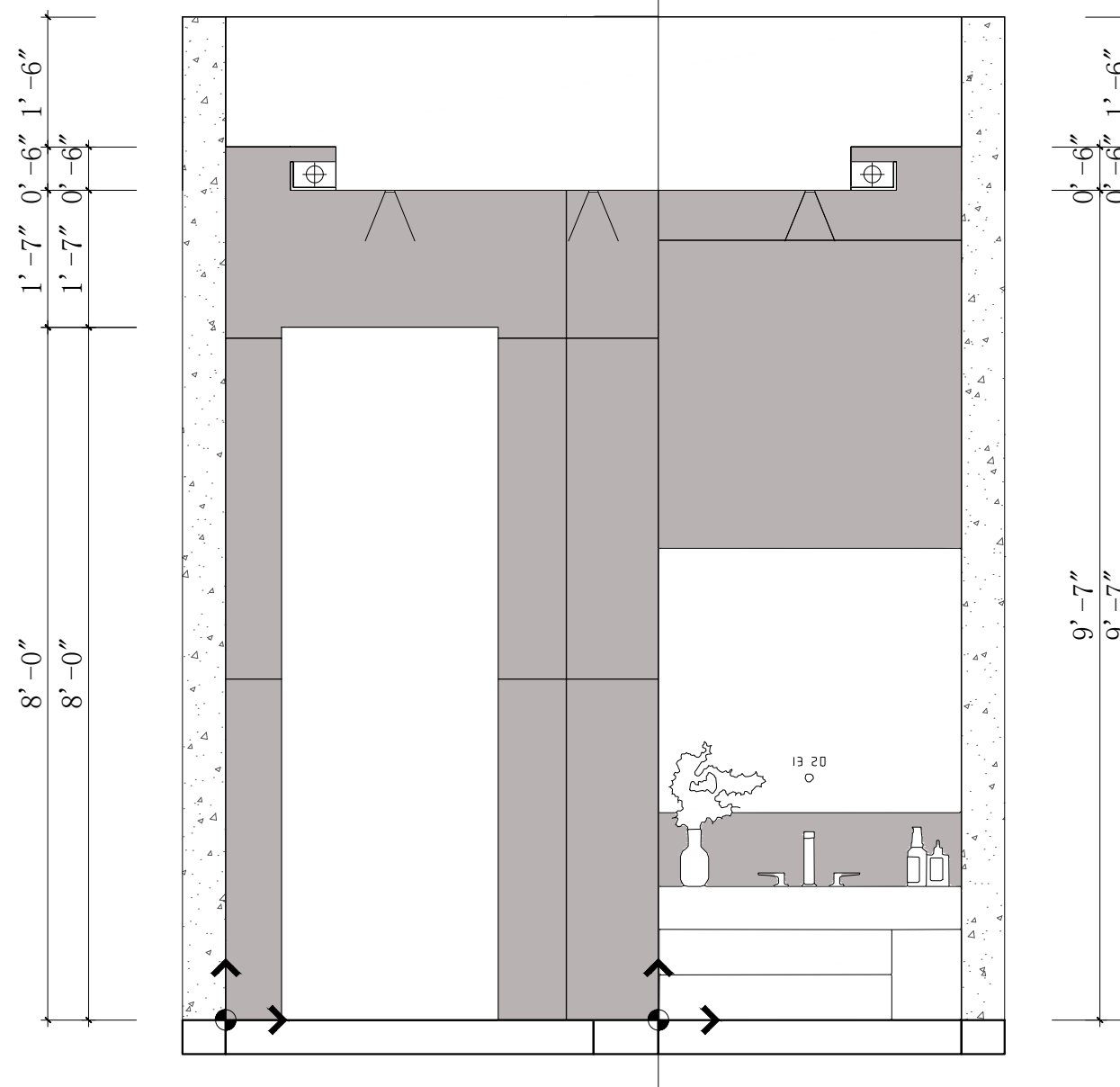


FEMALE CHIEF BATH ELEV 1(1/2"=1'-0")

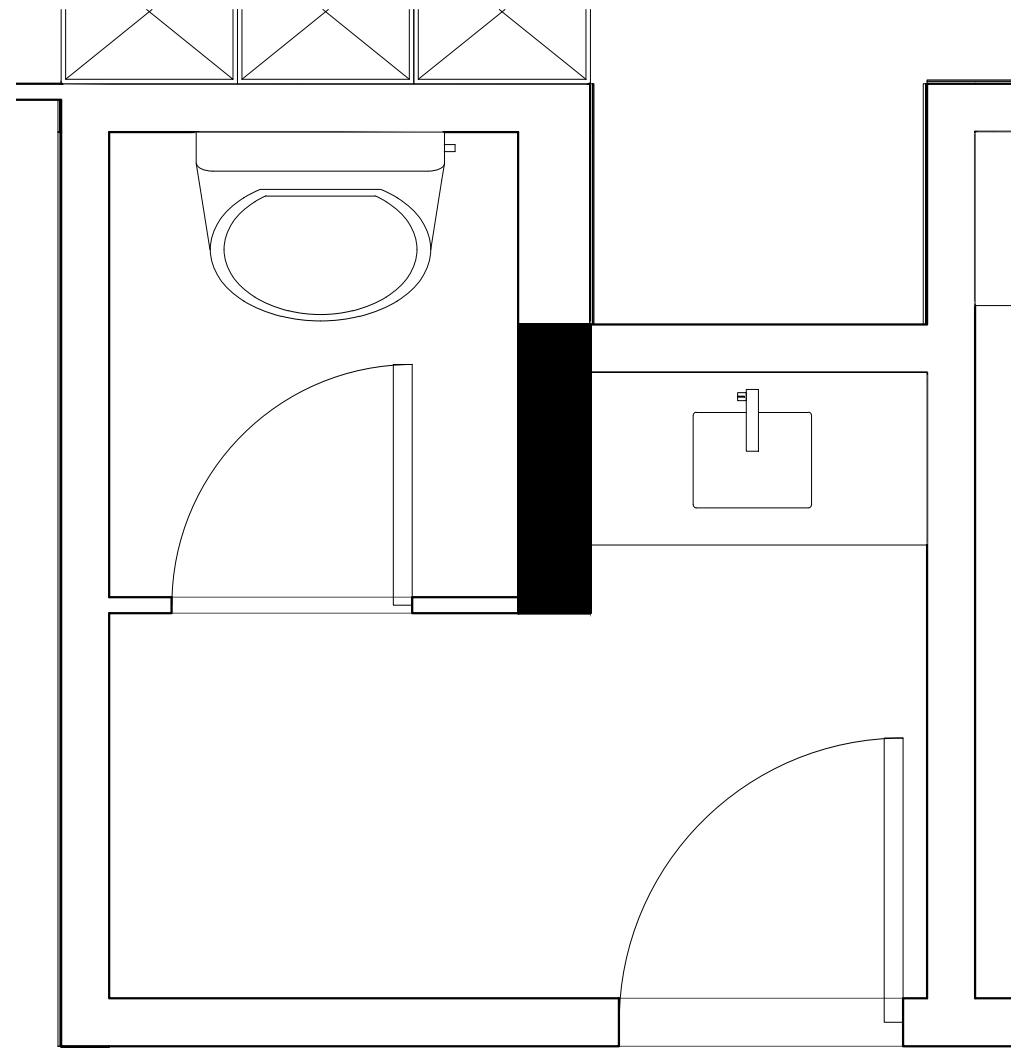
The turning line



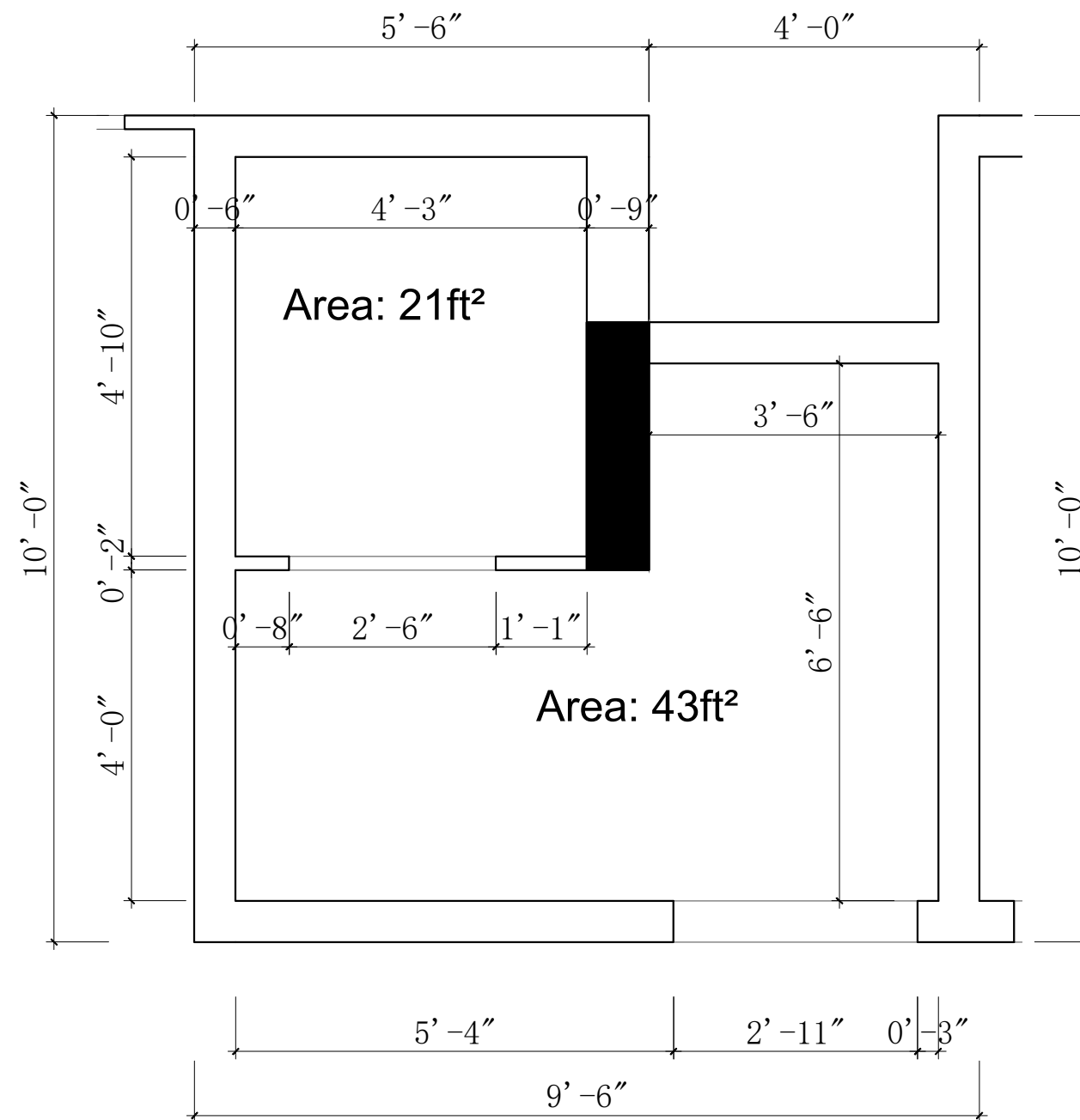
WC Elevation A(1/2"=1'-0")



Female Chief Toilet Elevation A(1/2"=1'-0")



FEMALE CHIEF BATH PLAN(1/2"=1'-0")



FEMALE CHIEF BATH WALLS(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

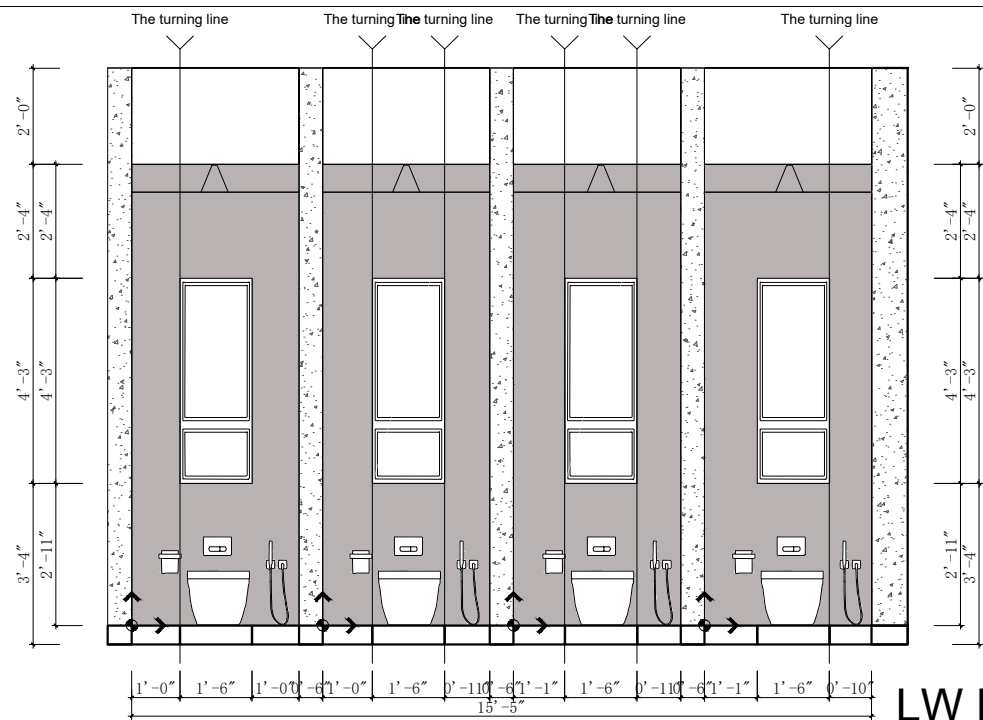
DRAWING TITLE:

**6th FLOOR**  
FEMALE CHIEF BATH  
ELEVATION 2

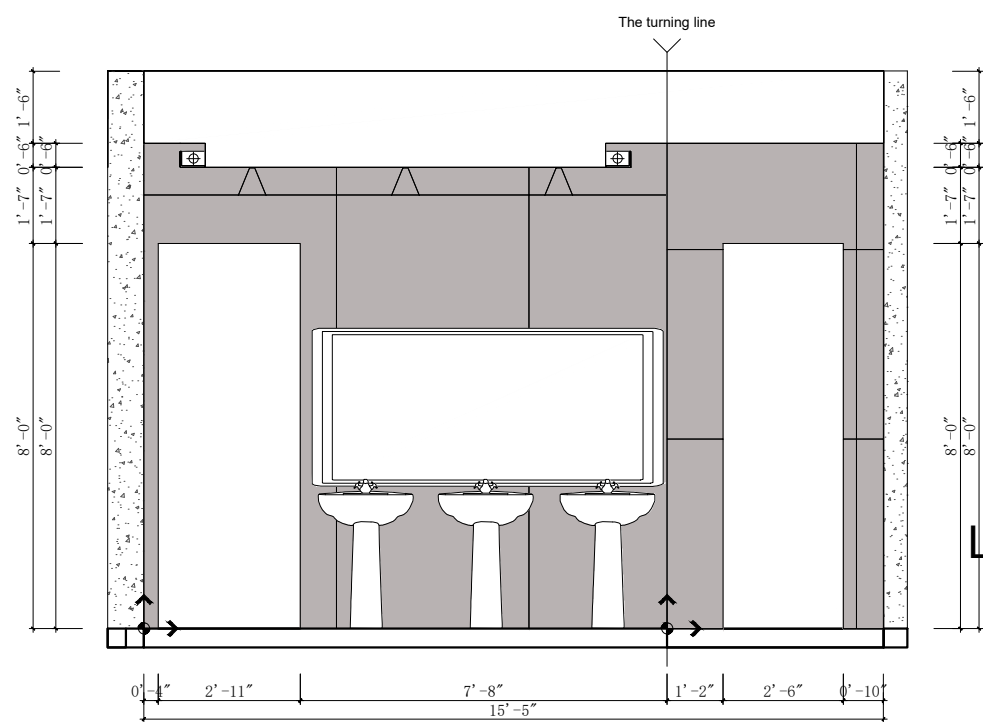
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
SL.06.AR.FCB-51

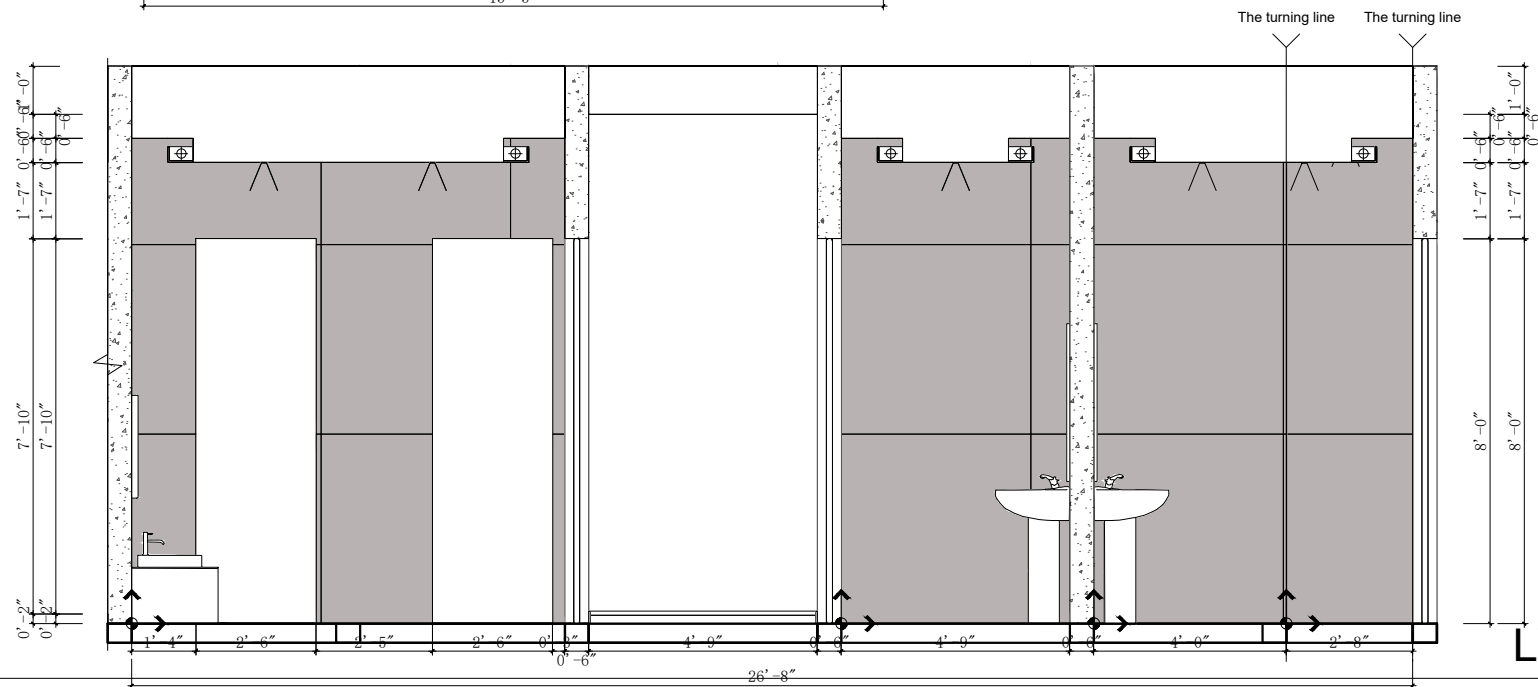




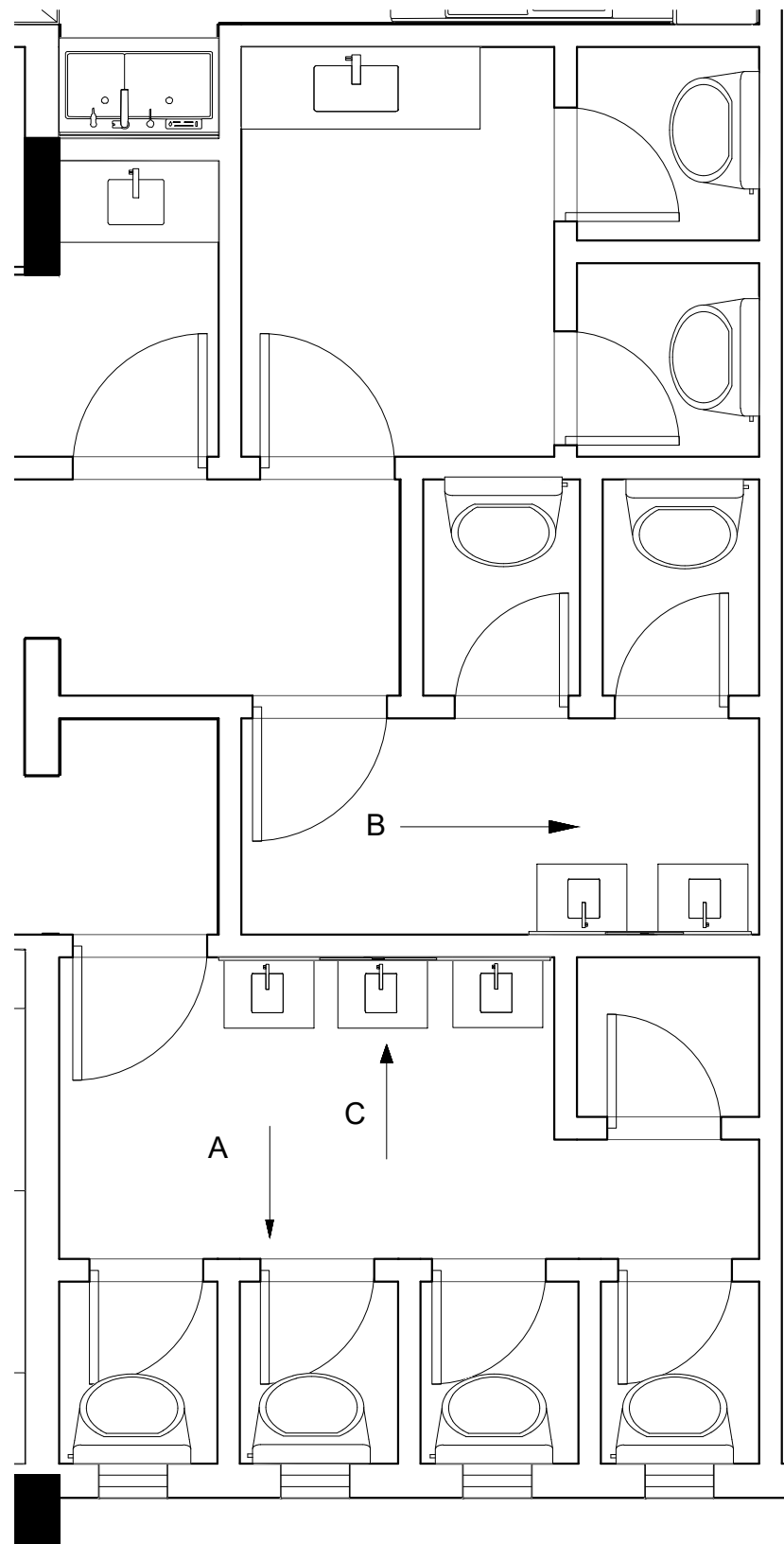
LW PB ELEV A (1/4"=1'-0")



LW PB ELEV C (1/4"=1'-0")



LW PB ELEV B (1/4"=1'-0")



LW PB (1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



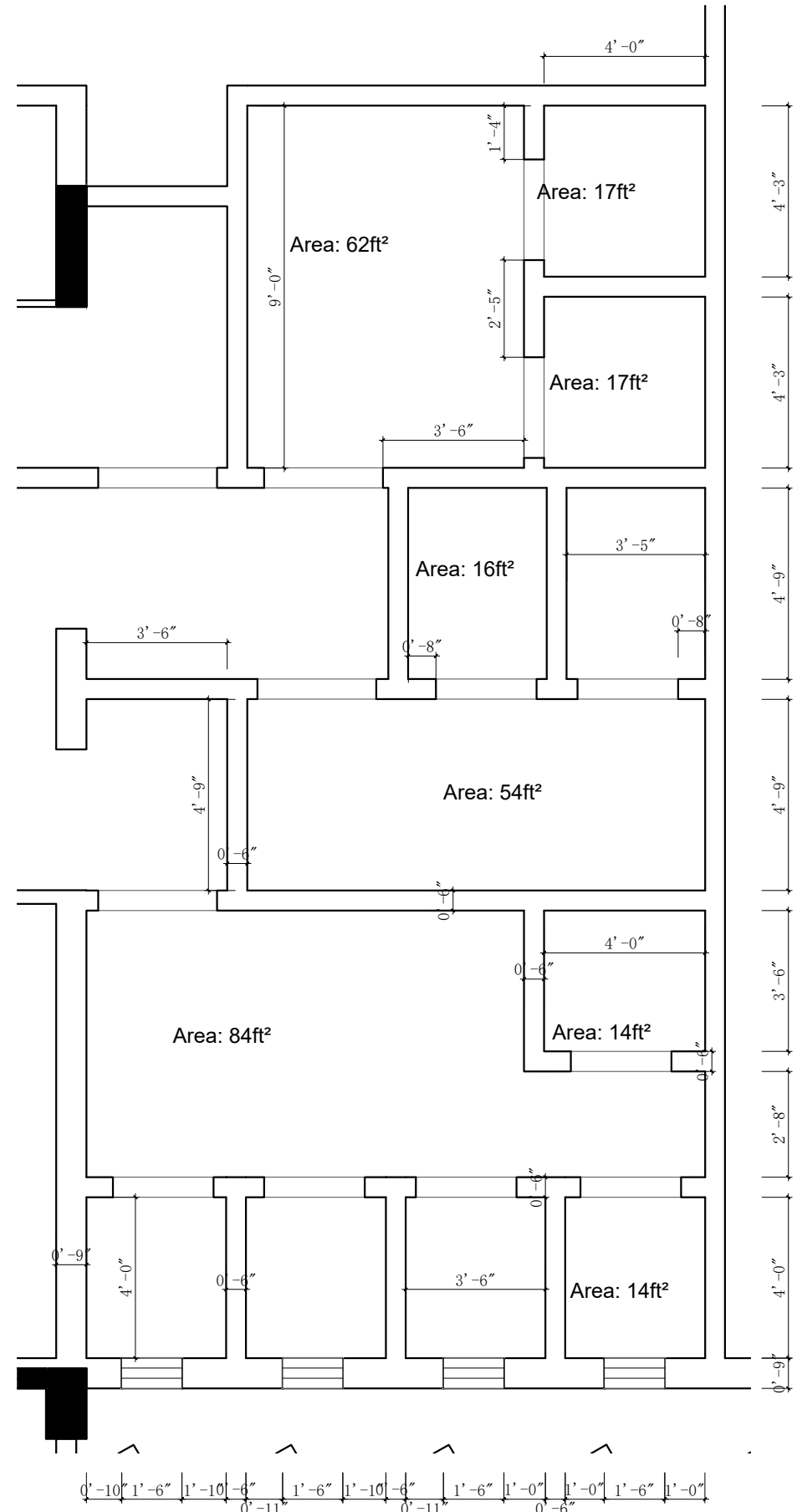
COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
LARGE WING PUBLIC  
BATH ELEVATION

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.LWPB-52**



LW PB WALLS(1/4"=1'-0")

**GENERAL NOTES**

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING PUBLIC BATH WALLS

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4 = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.LWPB-53**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

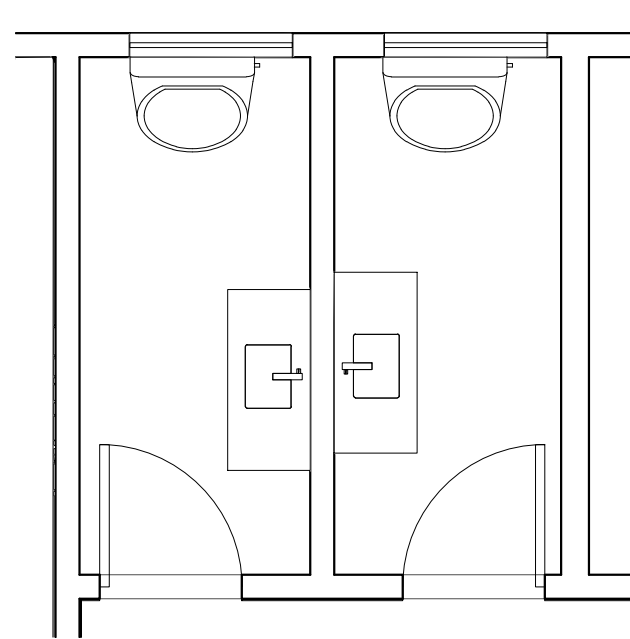
DRAWING TITLE:

**6th FLOOR**  
SW PUBLIC  
BATH ELEVATION B

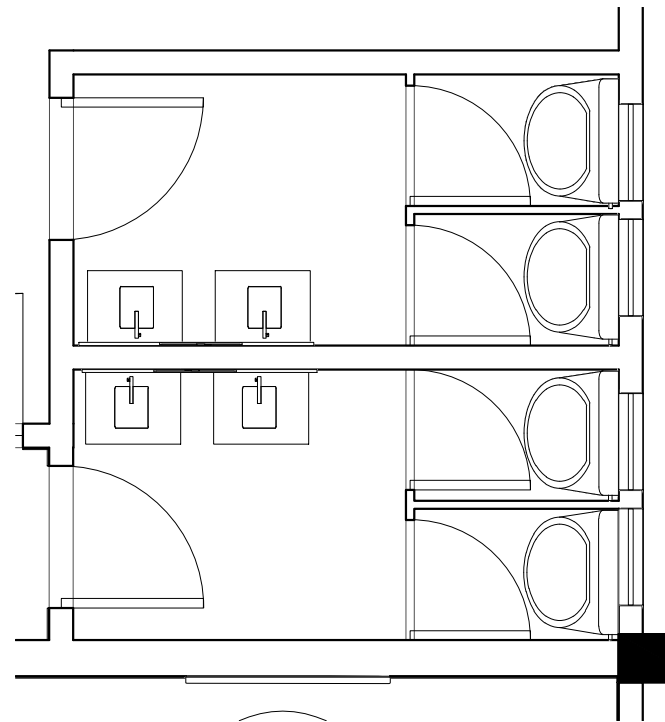
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16" = 1' @ A3	APR-2024

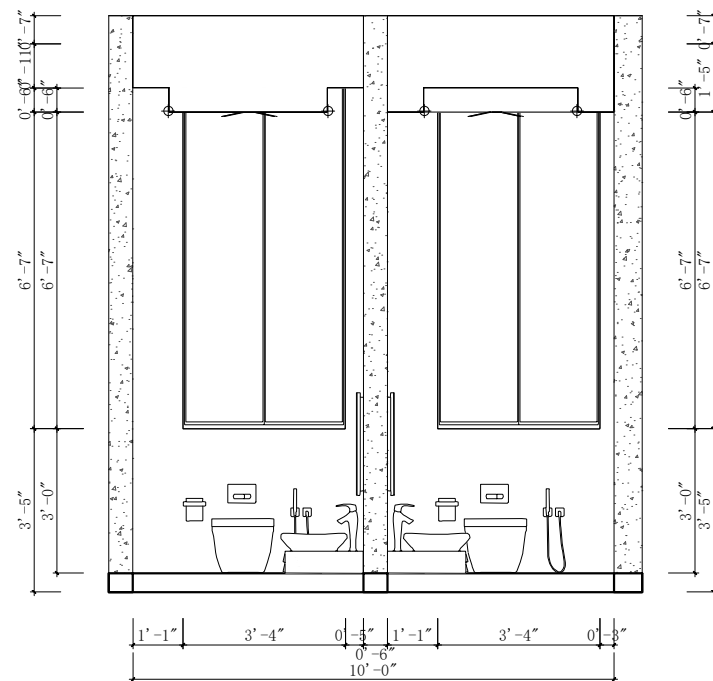
DWG. No.  
**SL.06.AR.SWP-54**



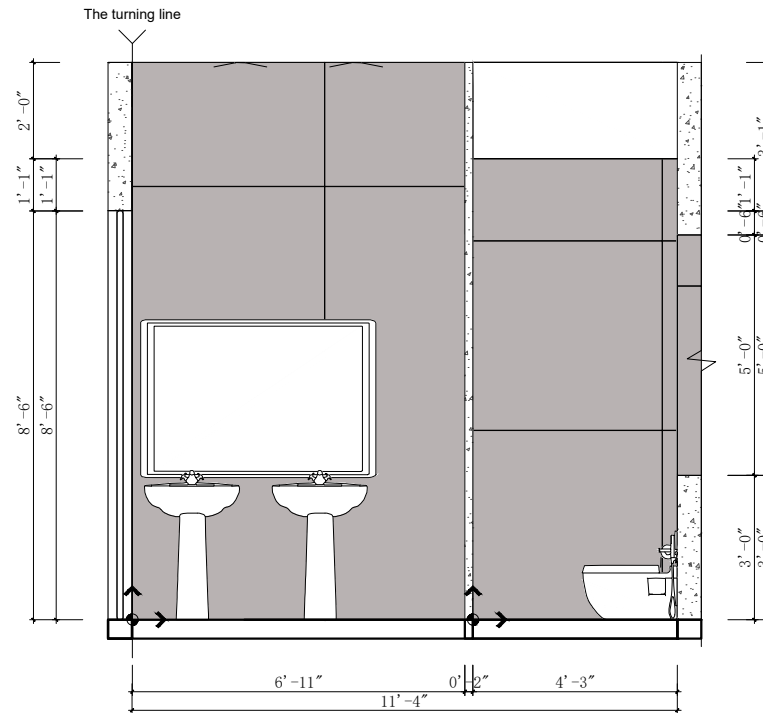
SW BATH 1(1/4"=1'-0")



SW BATH 2(1/4"=1'-0")



SW BATH 1(1/4"=1'-0")



SW BATH 2(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

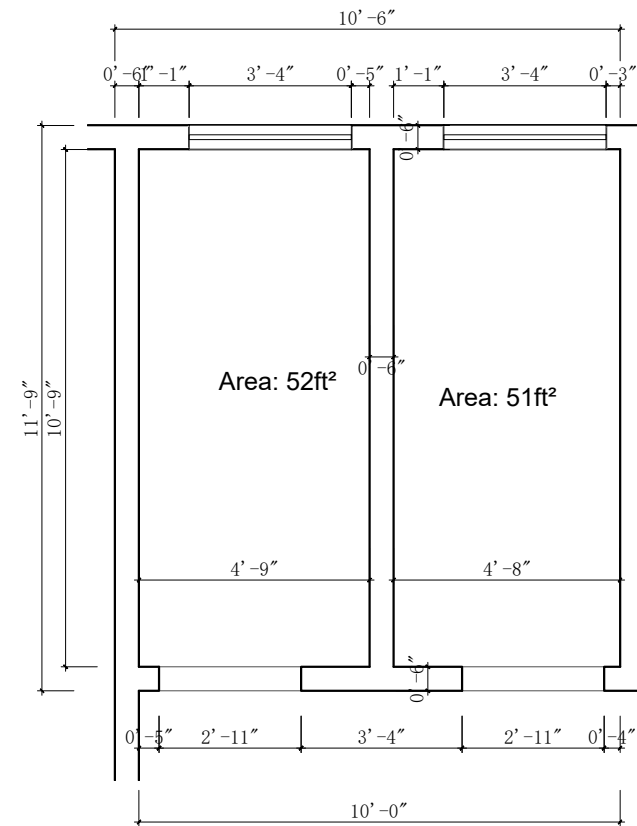


COMMENTS:

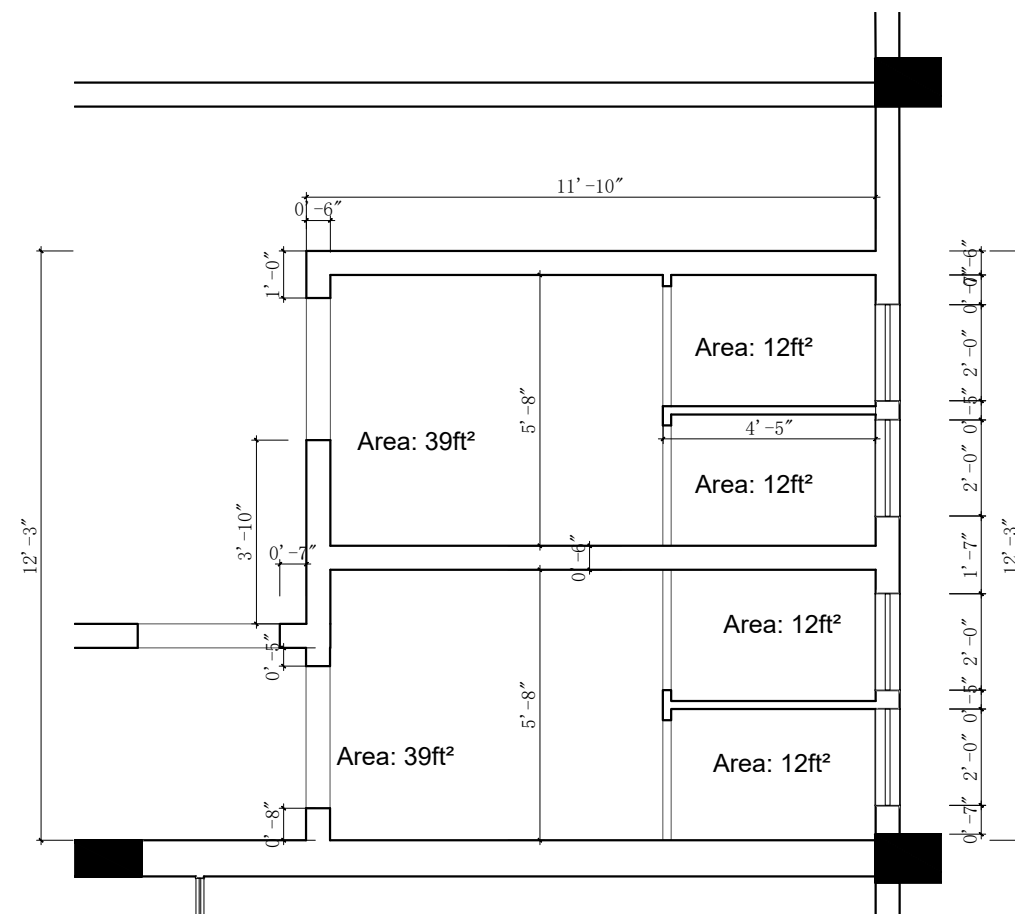
DRAWING TITLE:  
**6th FLOOR**  
SW PUBLIC  
BATH FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.SWP-55**



SW BATH 1 WALLS(1/4"=1'-0")



SW BATH 2 WALLS(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

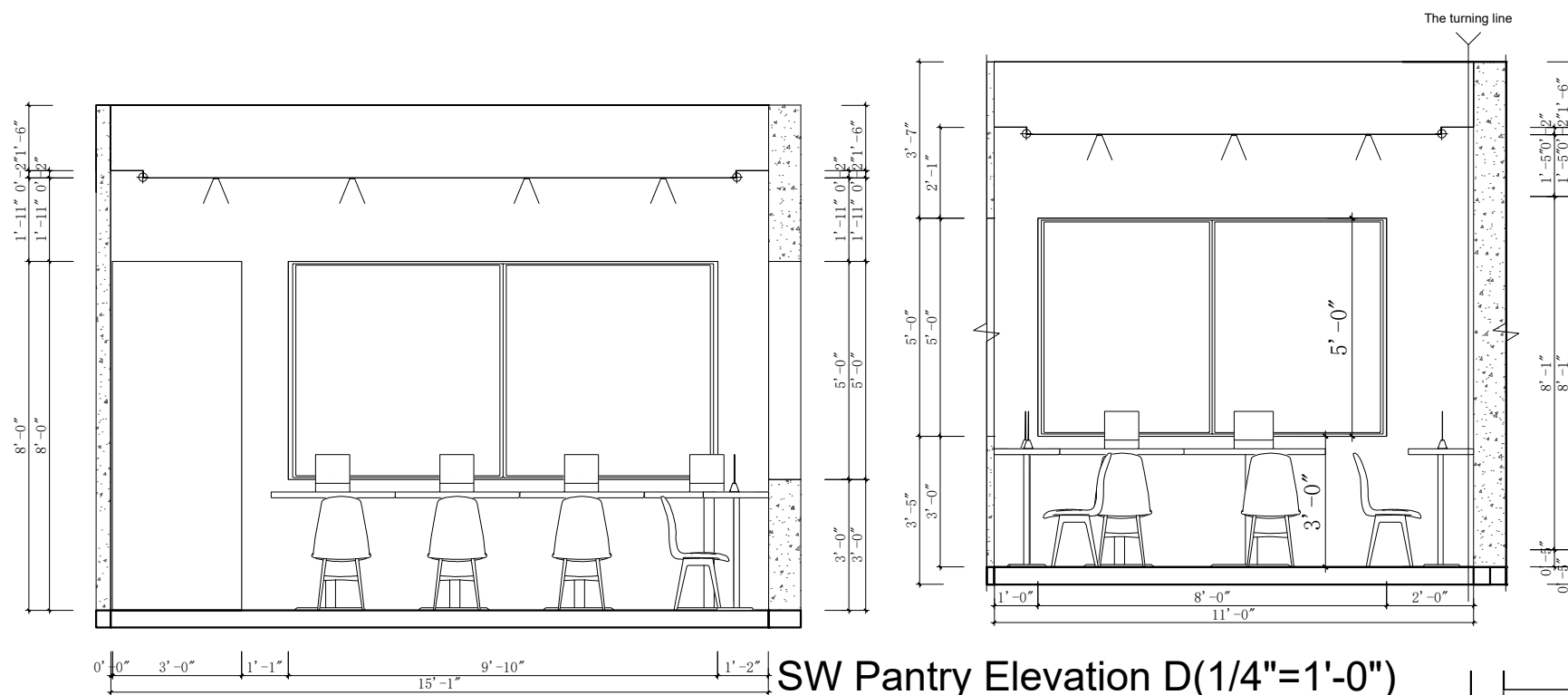
DRAWING TITLE:

**6th FLOOR**  
SW KITCHEN  
ELEVATION

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

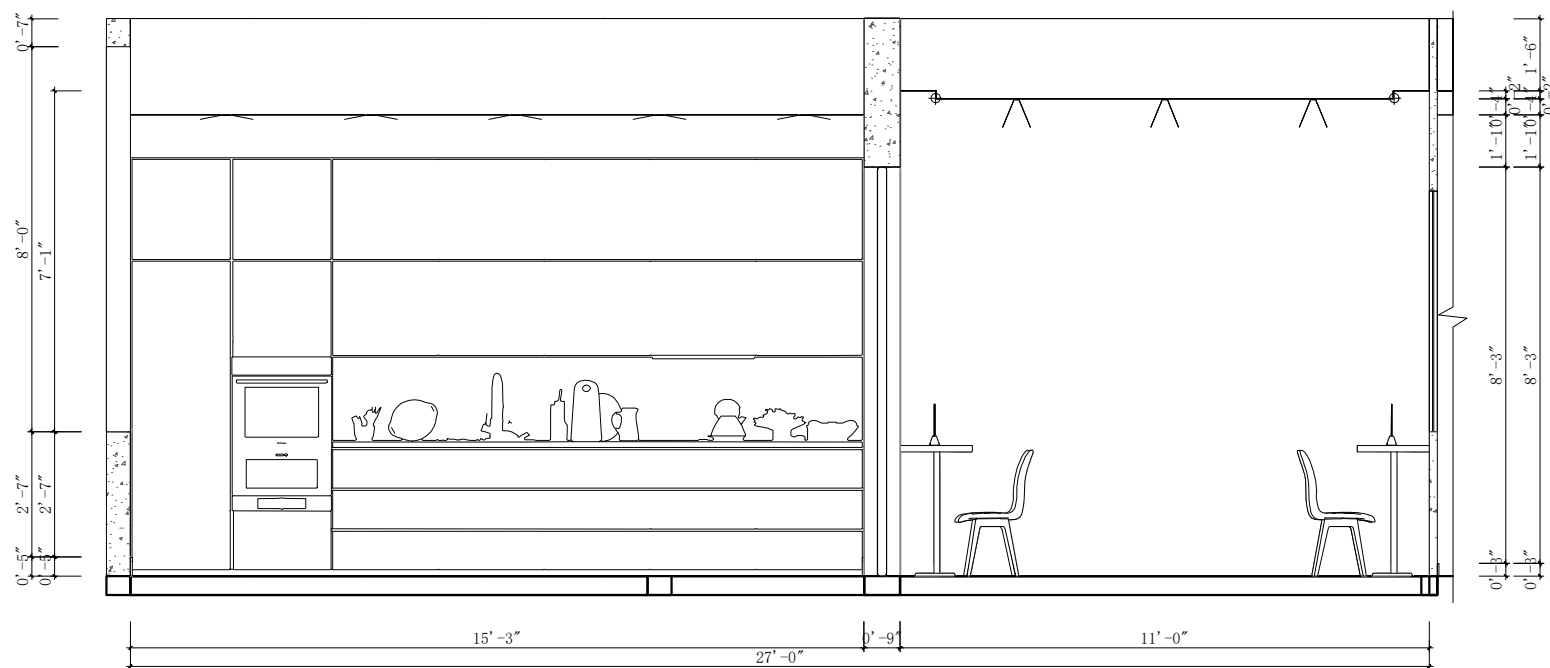
SCALE	DATE
1/16" = 1' @ A3	APR-2024

DWG. No.  
**SL.06.AR.SWK-55A**



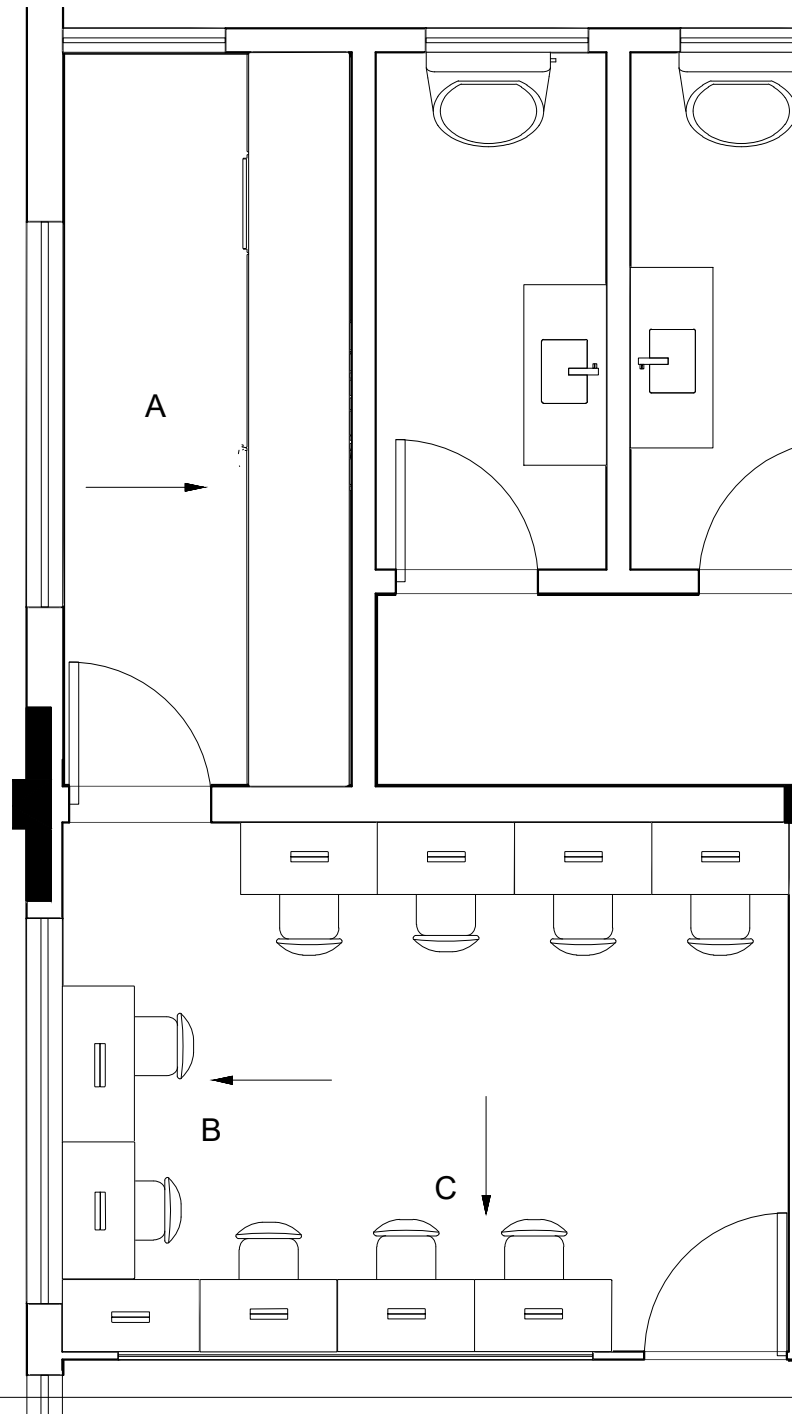
SW Pantry Elevation D (1/4"=1'-0")

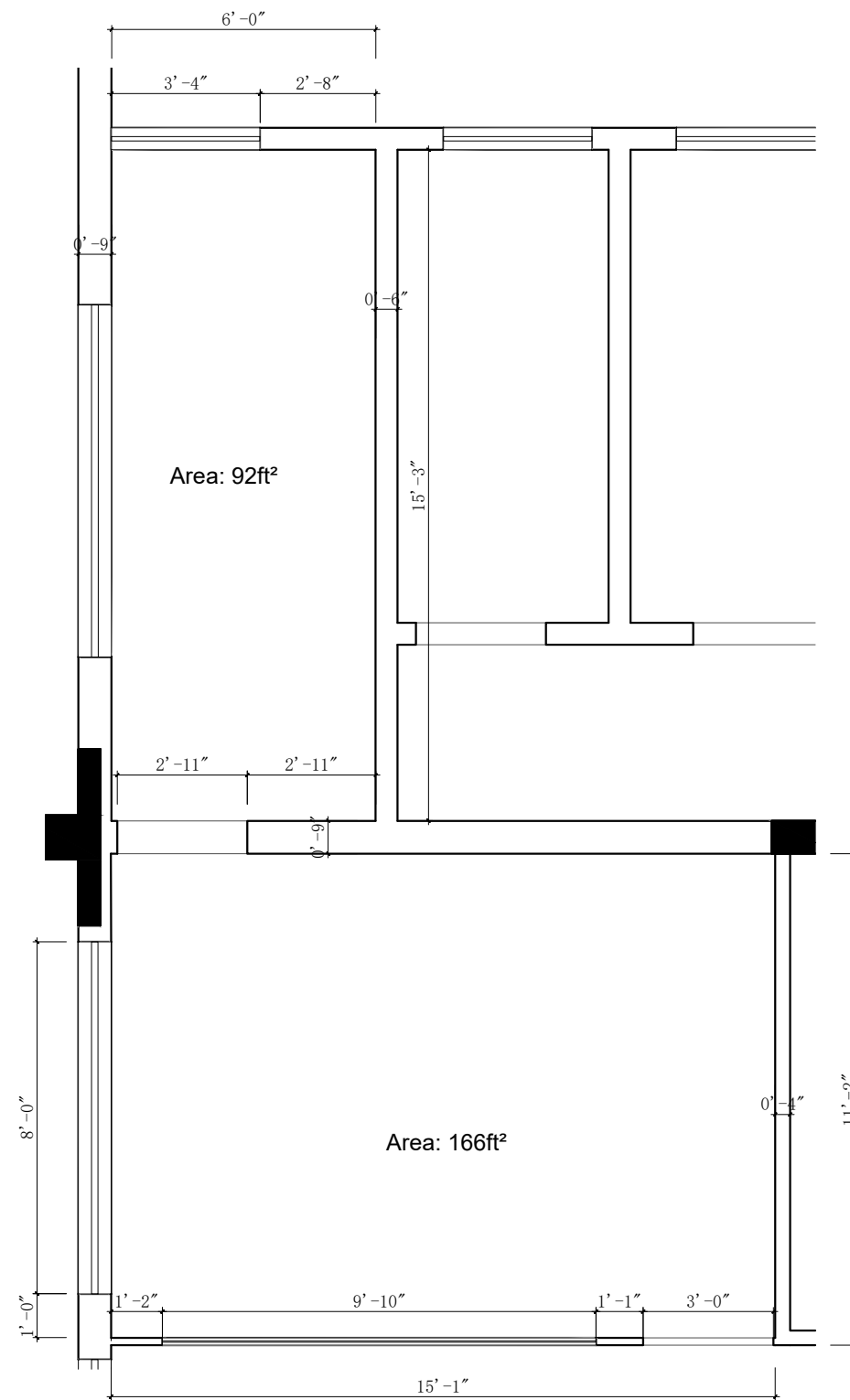
SW Pantry Elevation C (1/4"=1'-0")



SW Pantry Elev A (1/4"=1'-0")

SW KITCHEN (1/4"=1'-0")





SW KITCHEN WALLS(1/4"=1'-0")

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

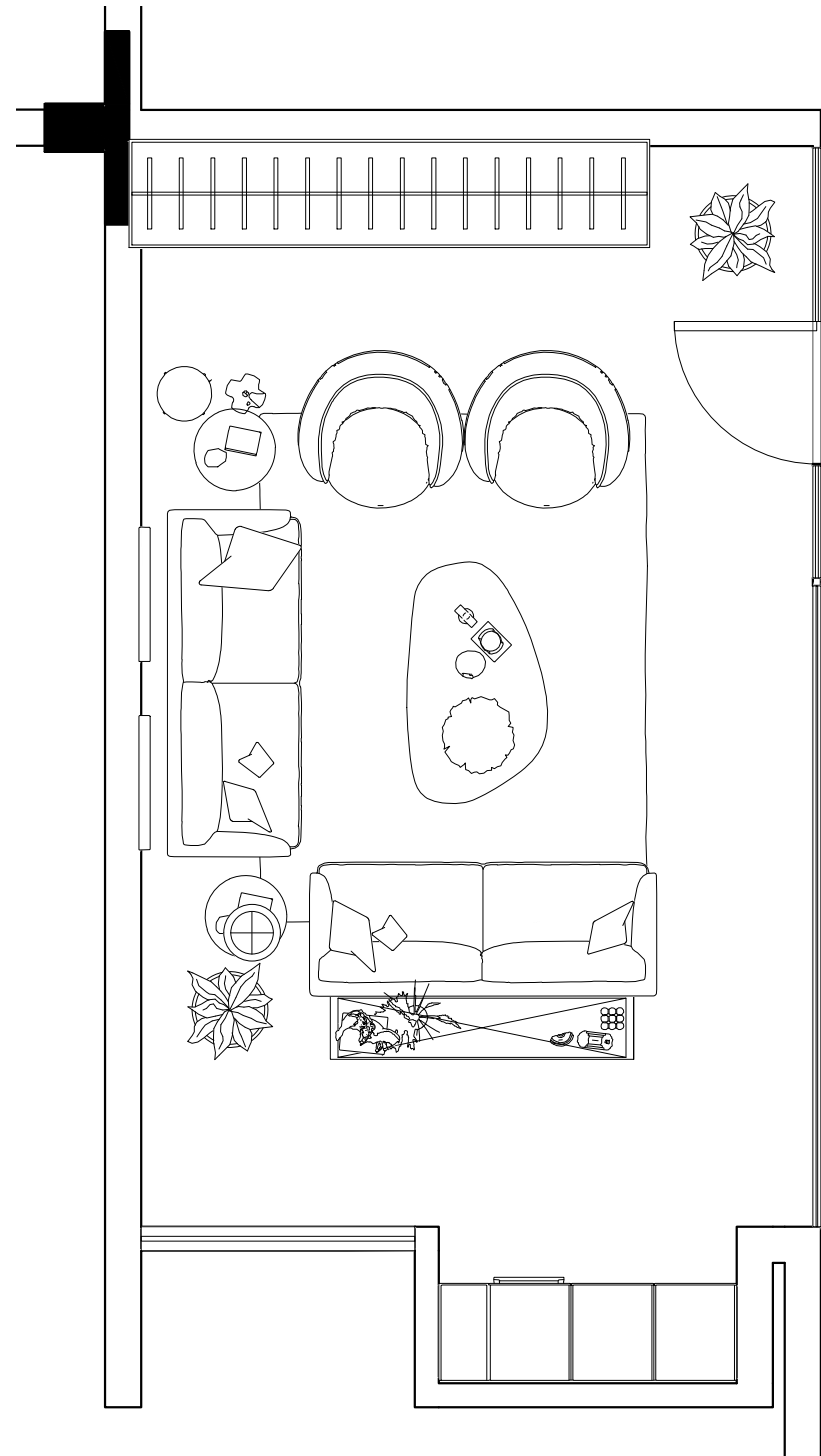


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
SW KITCHEN FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/16" = 1'	@ A3	APR-2024

DWG. No.  
**SL.06.AR.SWK-56**



WAITING FURNITURE(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

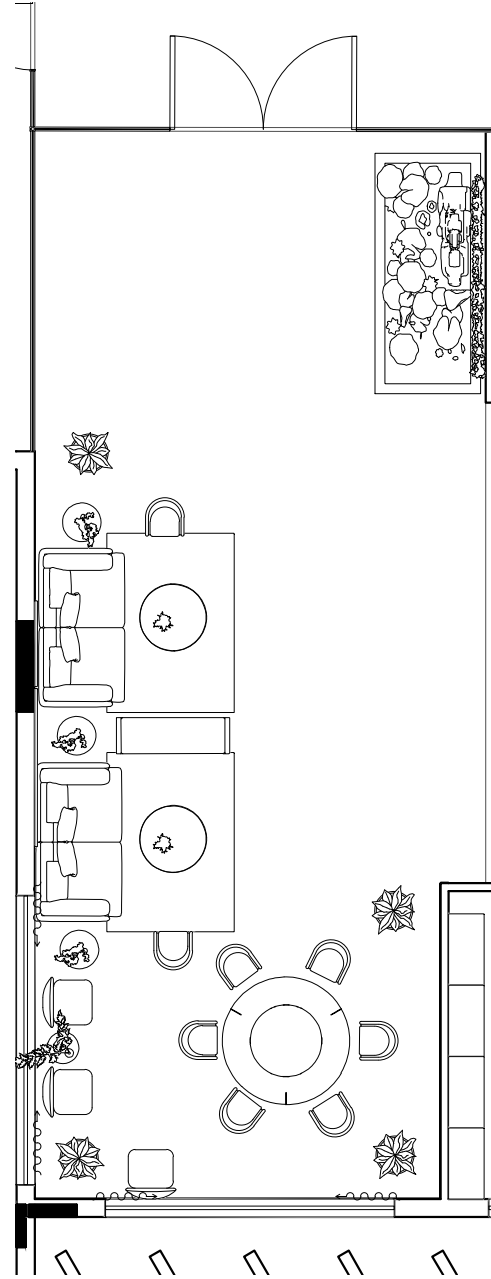


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
WAITING AREA FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-WT-57**



VISITOR LOUNGE FURNITURE(1/8"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

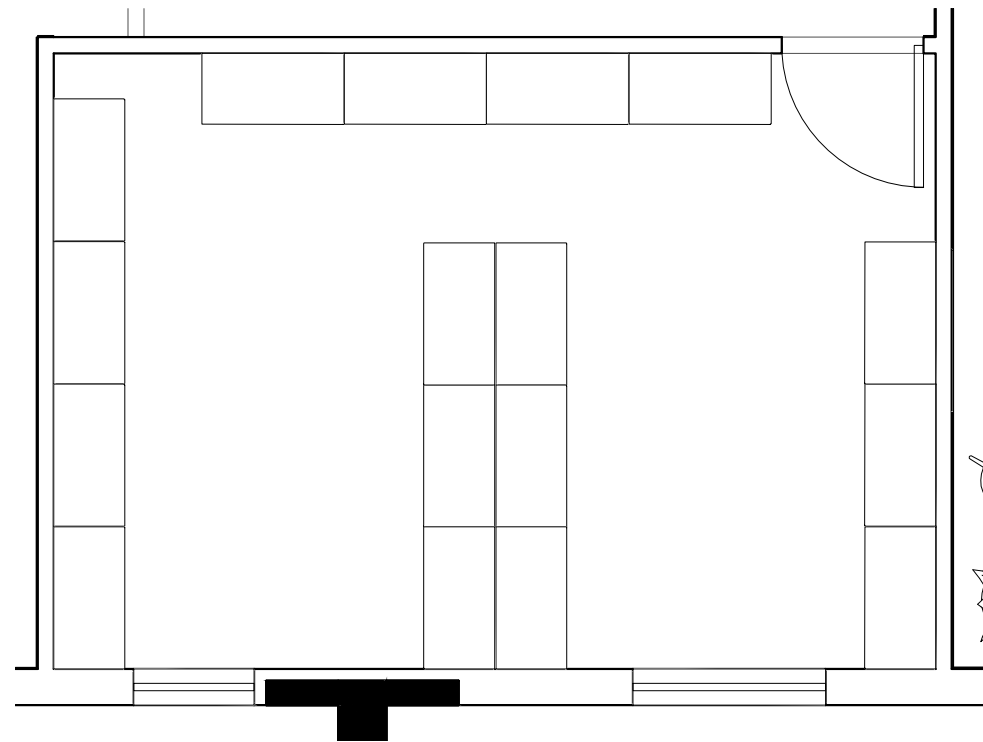
**6th FLOOR**

VISITORS LOUNGE FURNITURE LAYOUT

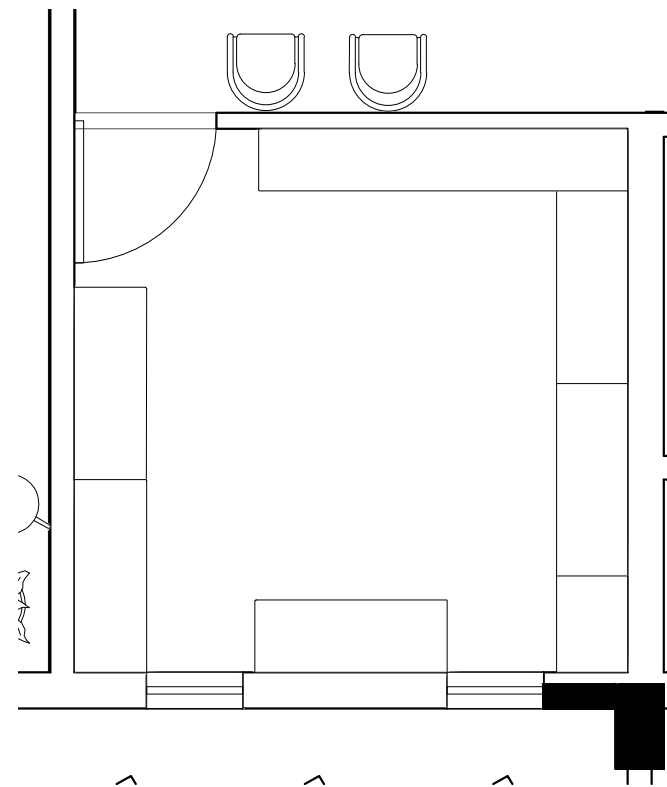
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-VL-58**





LW RECORD ROOM1 FURNITURE(1/4"=1'-0")



LW RECORD ROOM2 FURNITURE(1/4"=1'-0")

### GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

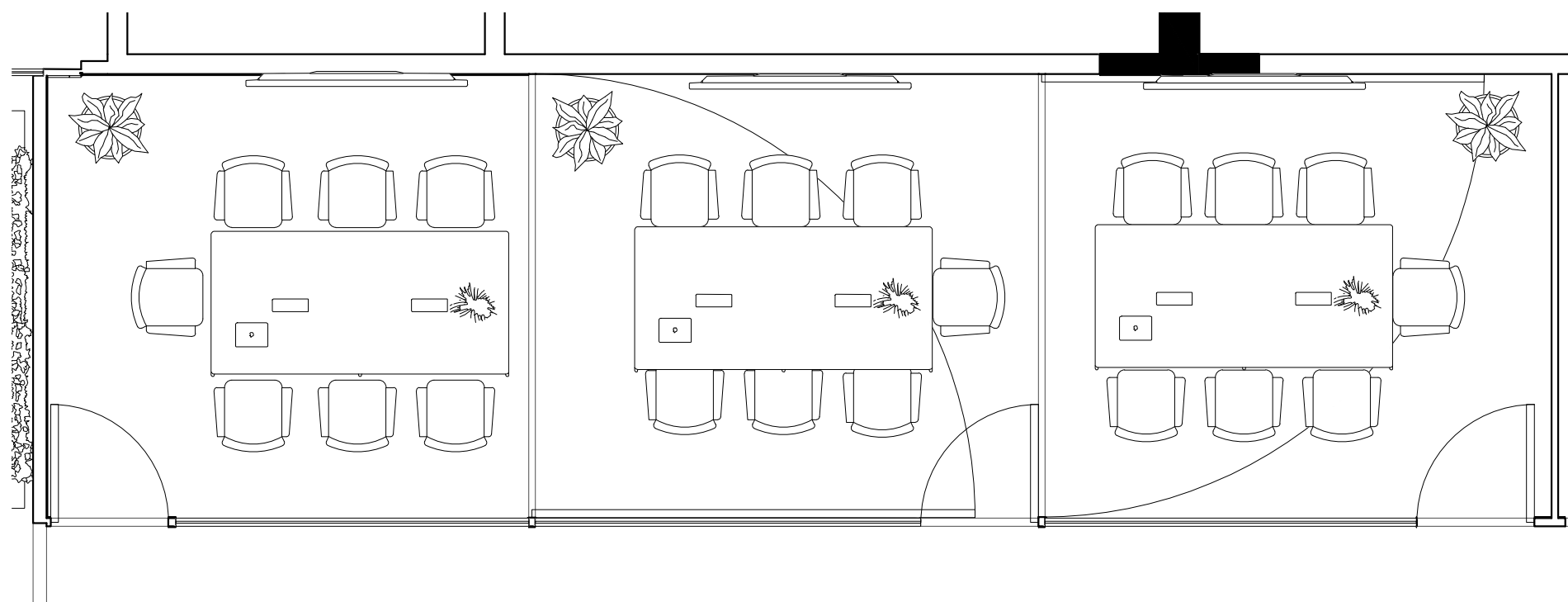


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING RECORD ROOMS LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LR-59**



LW MEETING ROOMS FURNITURE(1/4"=1'-0")

### GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

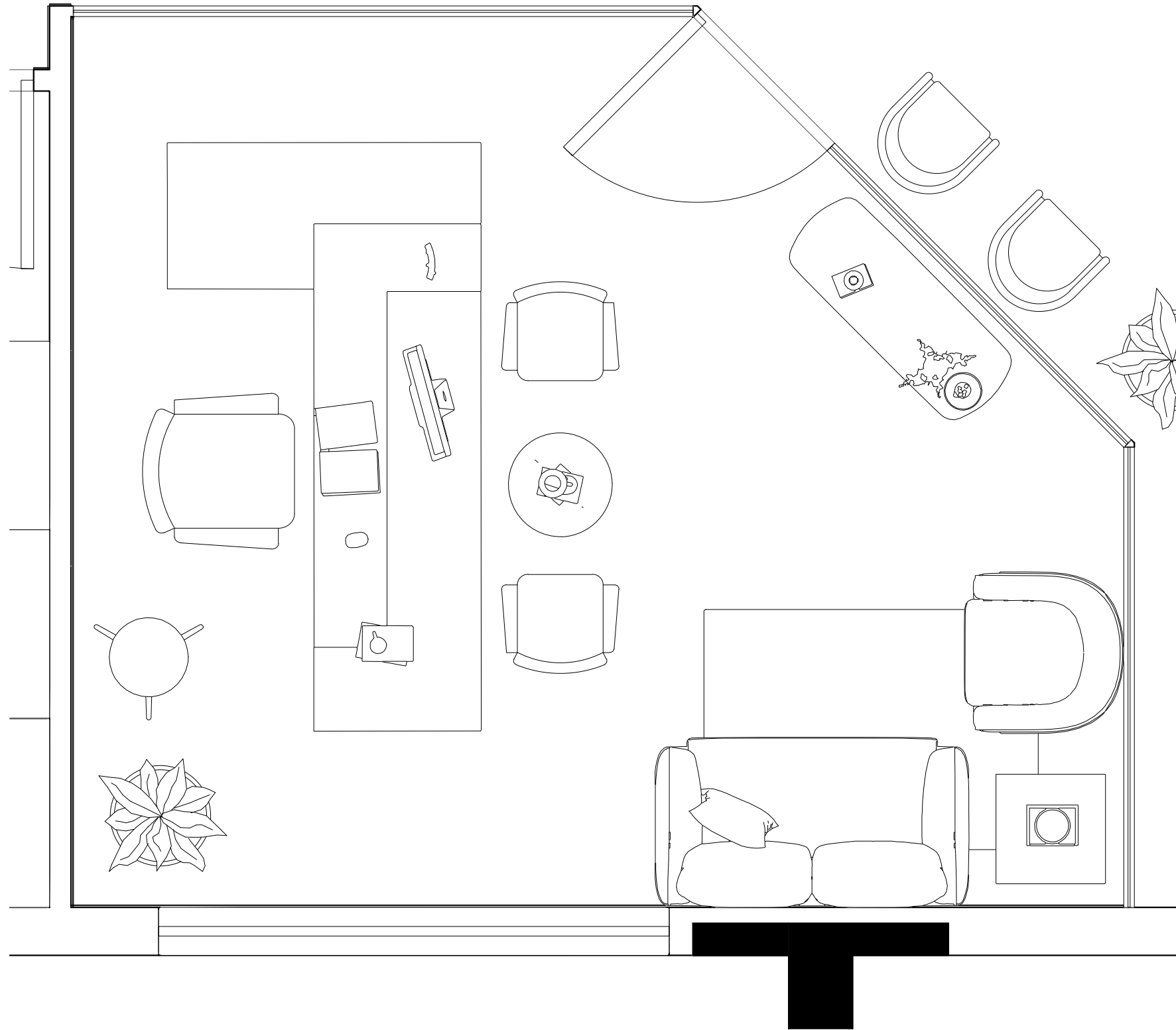


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING MEETING ROOM  
FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LM-60**



LW CHIEF OFFICE FURNITURE(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

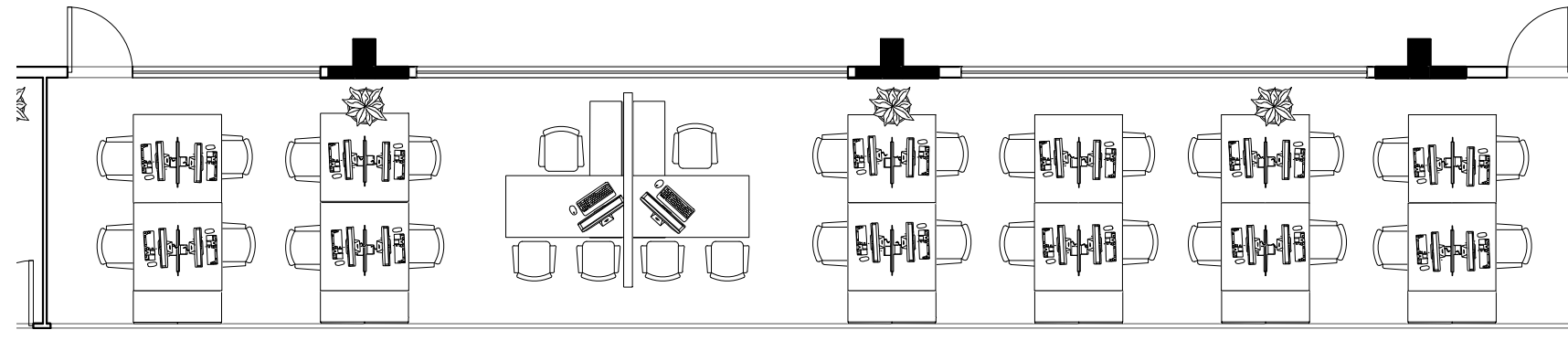


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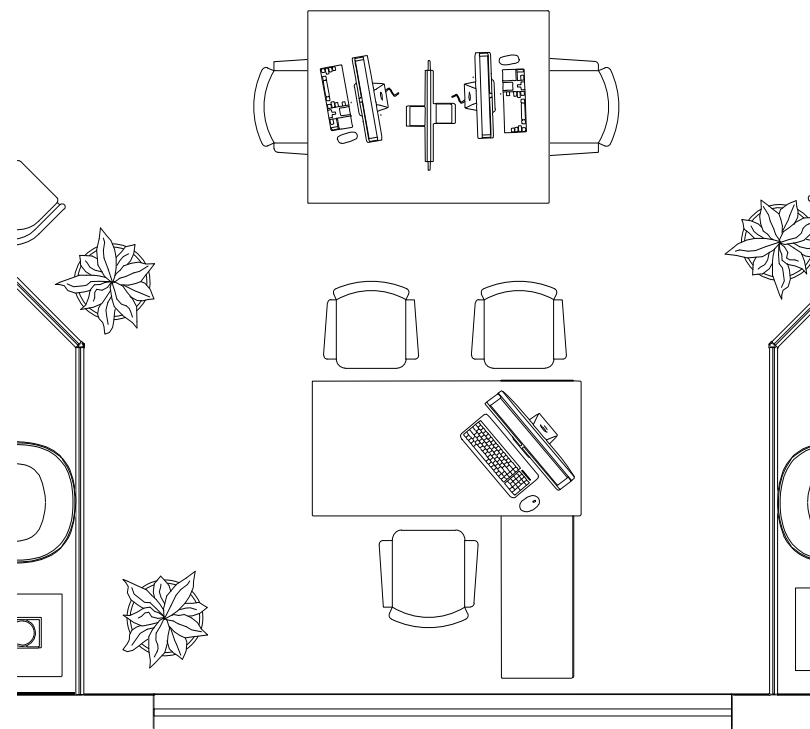
DRAWING TITLE:  
**6th FLOOR**  
LARGE WING CHIEF OFFICE  
FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LC-61**



LW DGM2 FURNITURE(1/8"=1'-0")



LW DGM1 FURNITURE(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING D.G.M FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LD-62**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



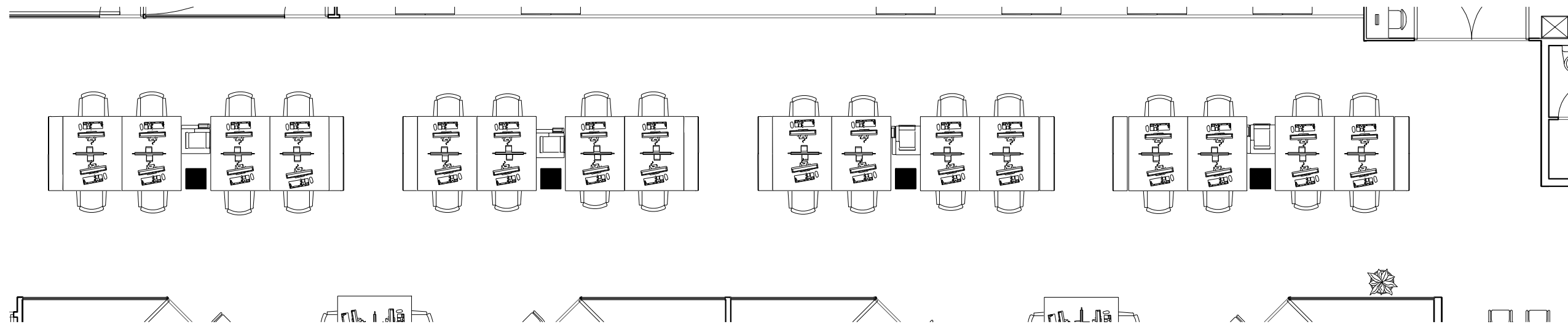
COMMENTS:

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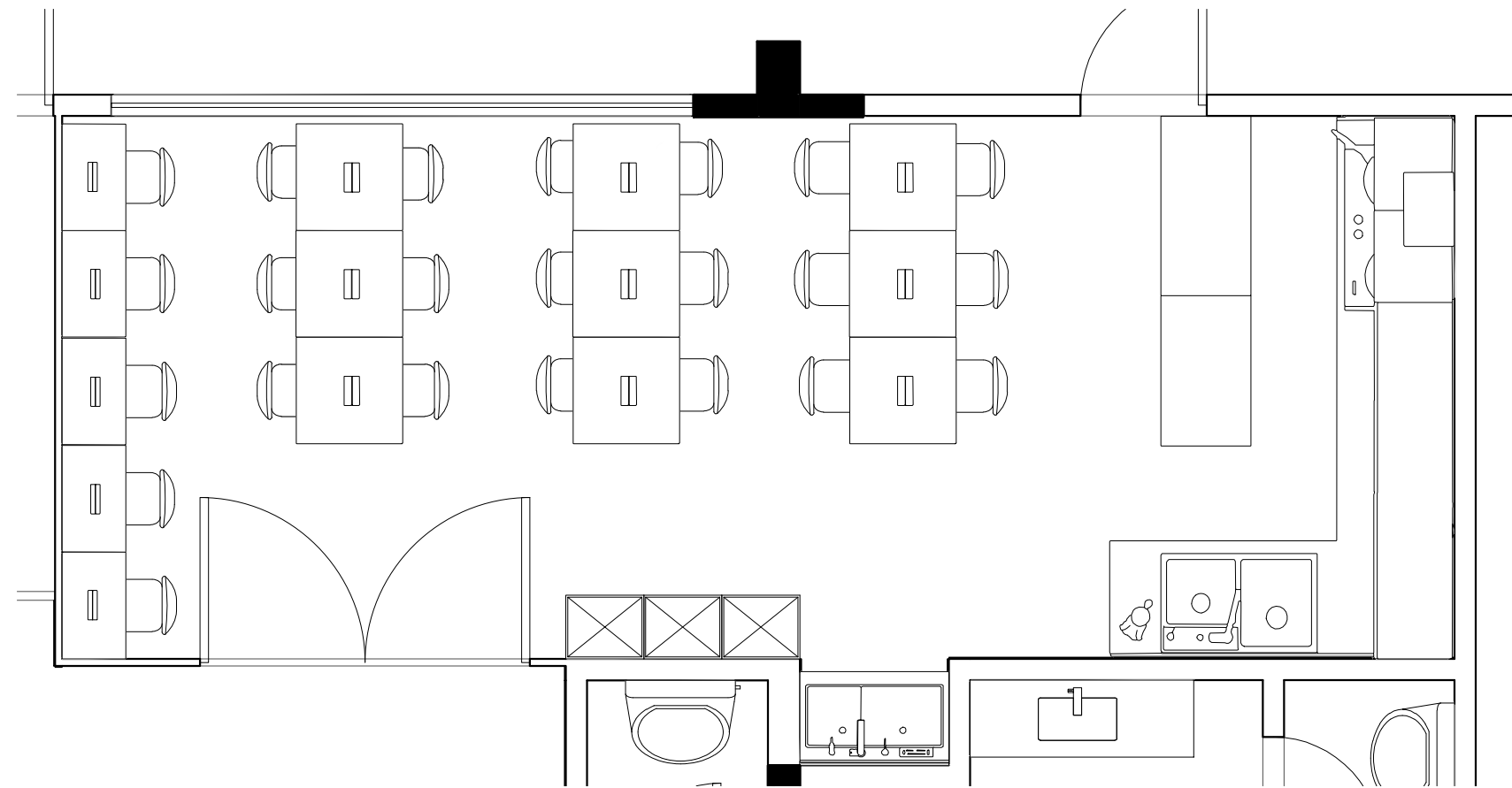
**6th FLOOR**  
LARGE WING STAFF FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-LS-63**



LW STAFF FURNITURE(1/8"=1'-0")



LW PANTRY FURNITURE(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

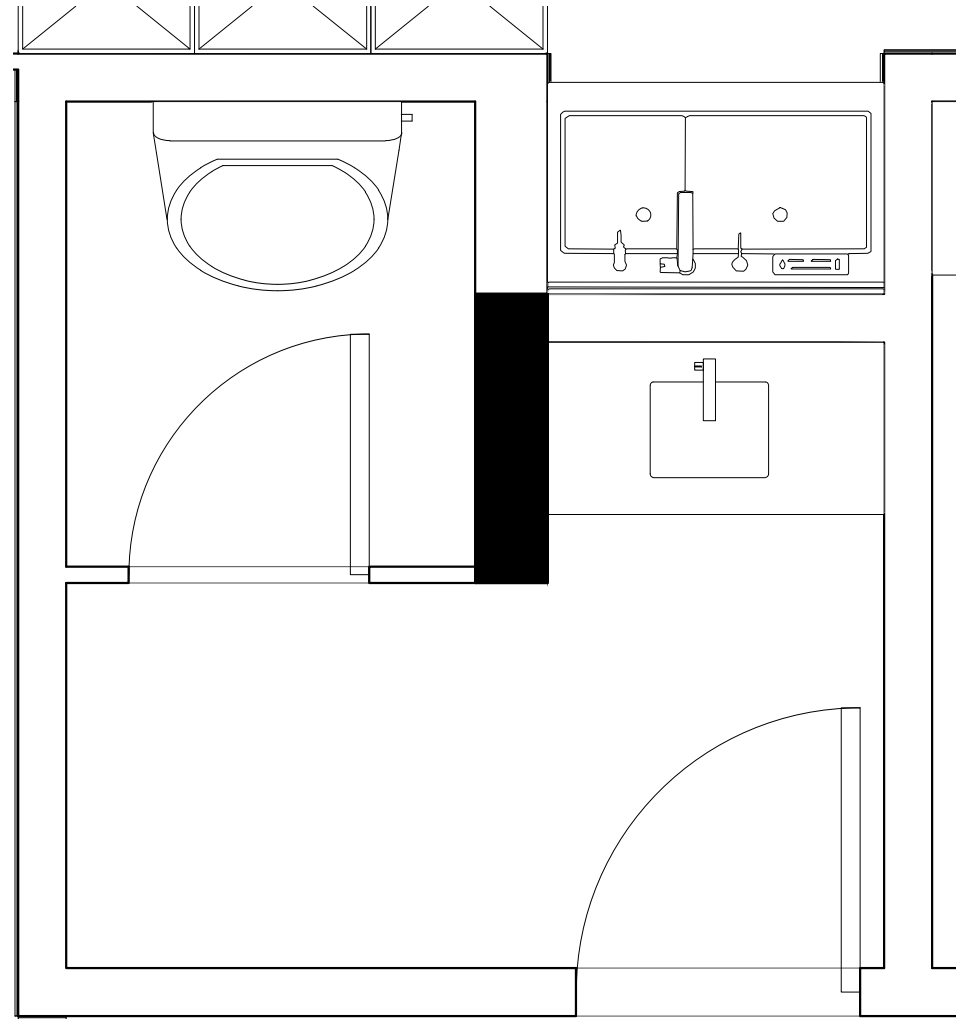


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING PANTRY  
FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LP-64**



LW FEMALE CHIEF BATH FURNITURE(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



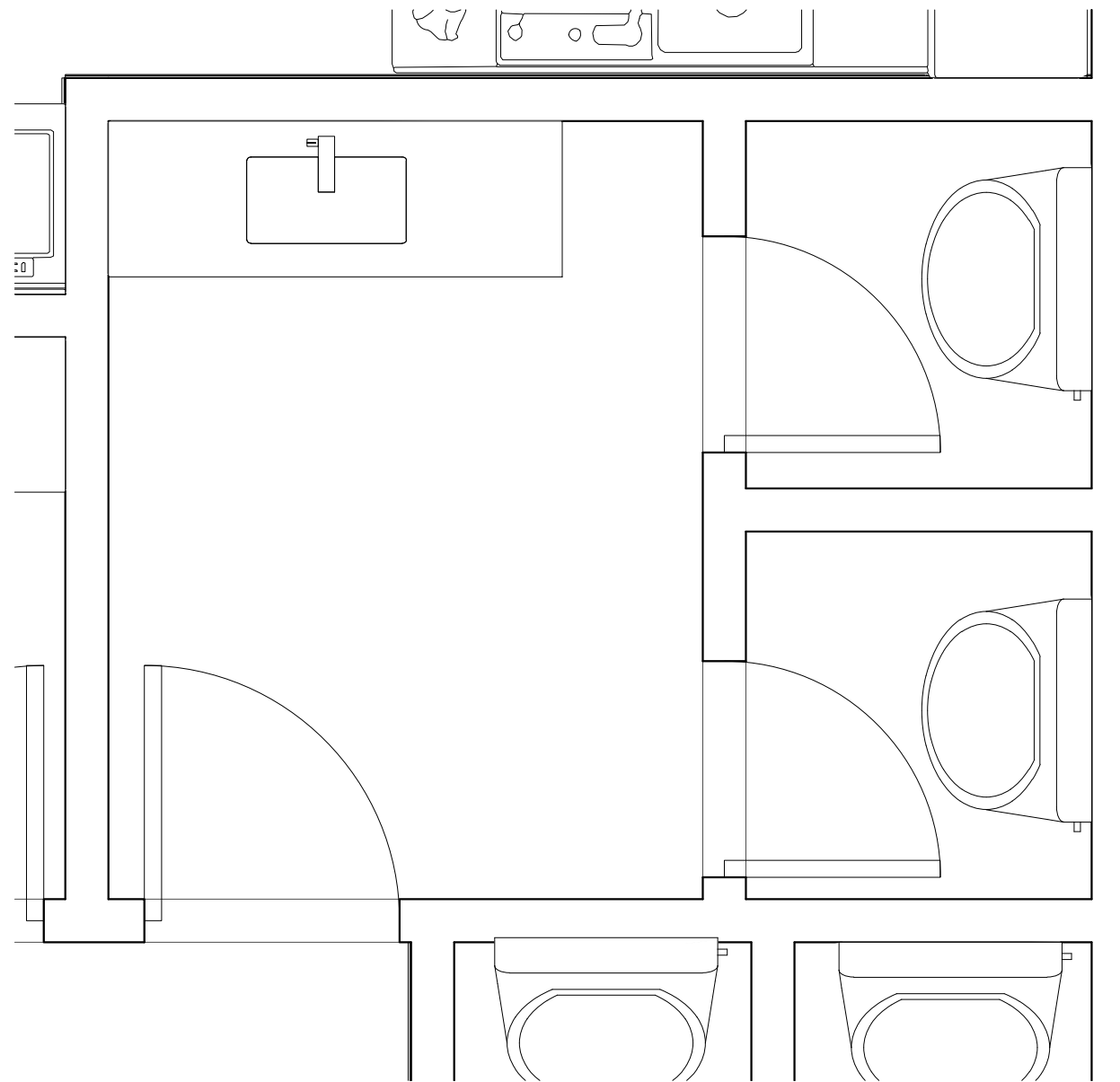
COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
**FEMALE CHIEF TOILET LAYOUT**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LFC-65**



LW MALE CHIEF BATH FURNITURE(1/2"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

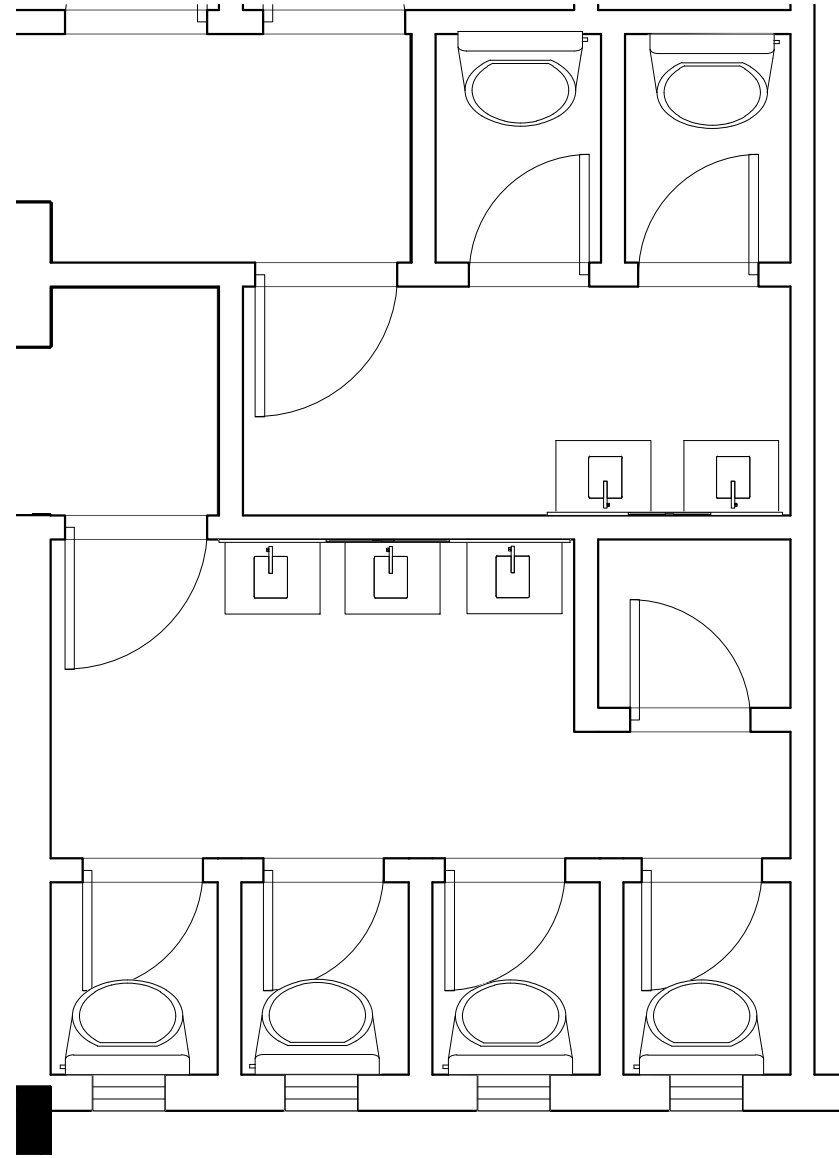
DRAWING TITLE:

**6th FLOOR**  
**MALE CHIEF TOILET LAYOUT**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LM-66**





LW BATHS FURNITURE(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



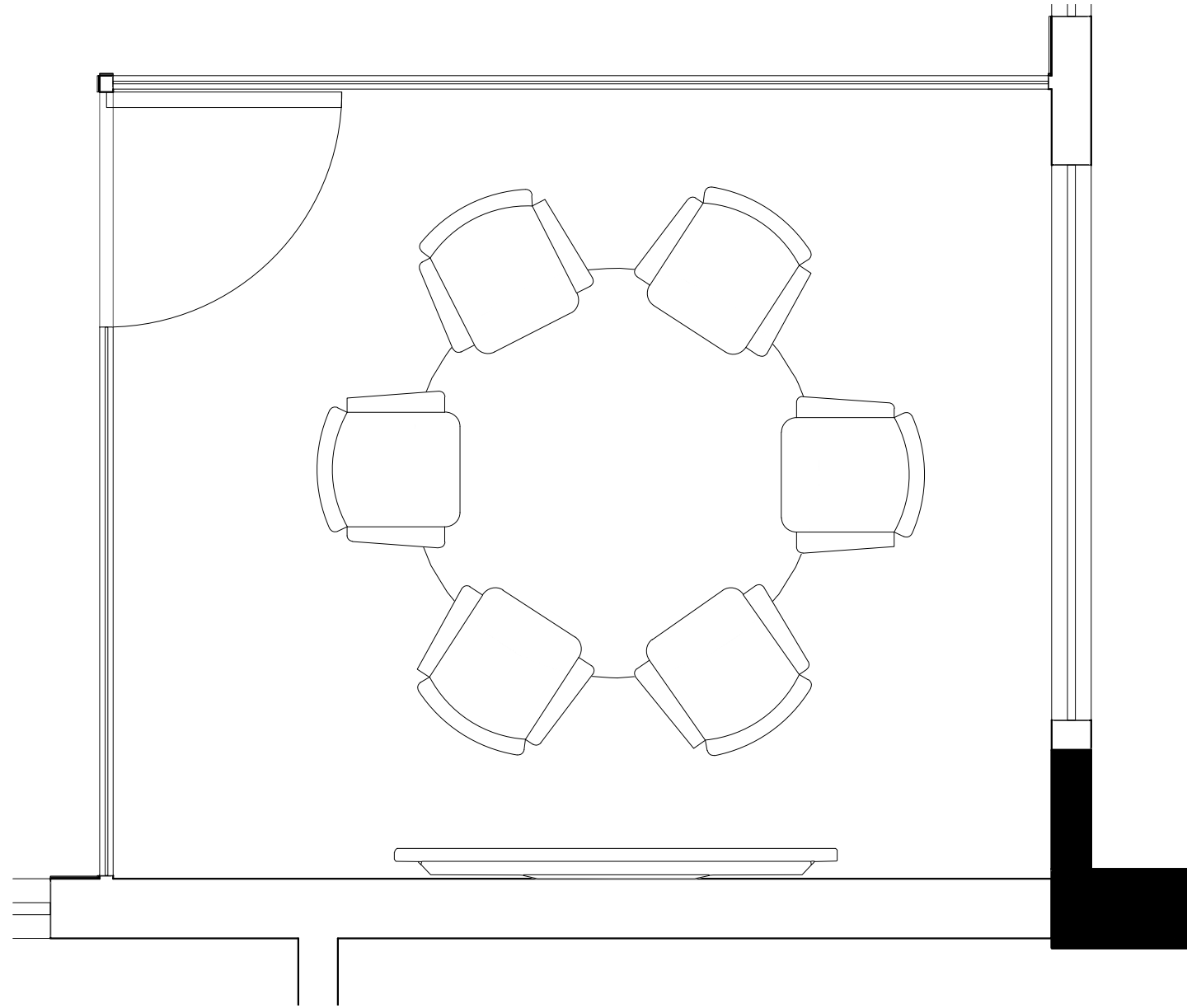
COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
**LARGE WING TOILETS LAYOUT**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LB-67**



SW MEETING ROOM FURNITURE(1/2"=1'-0")

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

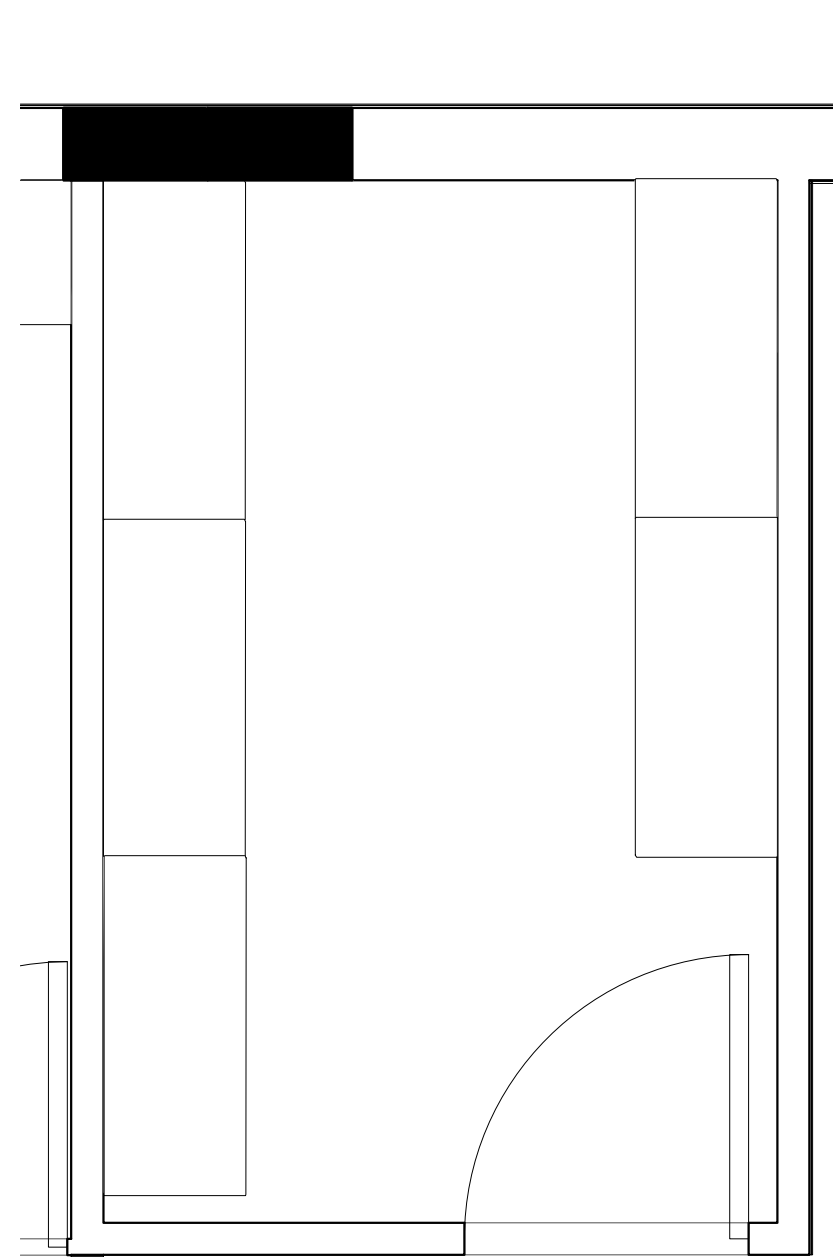
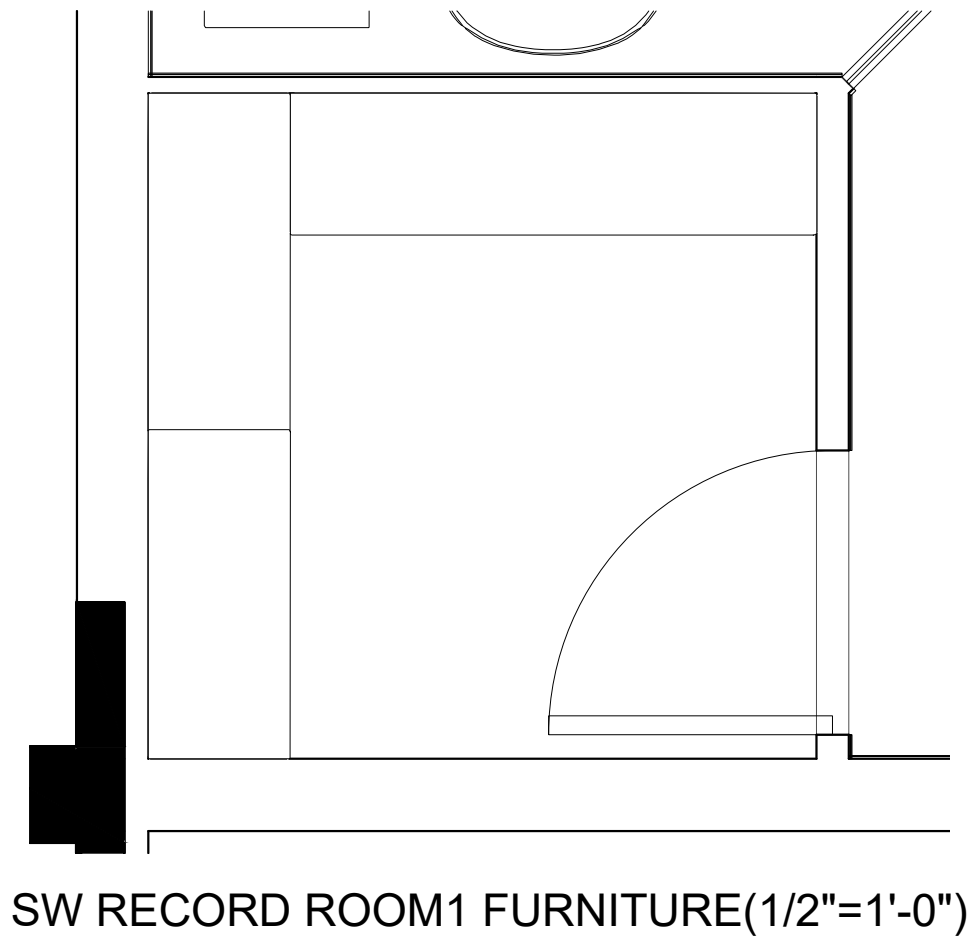


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
SMALL WING MEETING ROOM  
FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-SM-68**



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING  
NO. 52-C, LANE NO. 01, AL-MURTAZA  
COMMERCIAL, PHASE VIII, D.H.A.,  
KARACHI.

PROJECT:

RENOVATION OF STATE  
LIFE BUILDING No. 9  
KARACHI

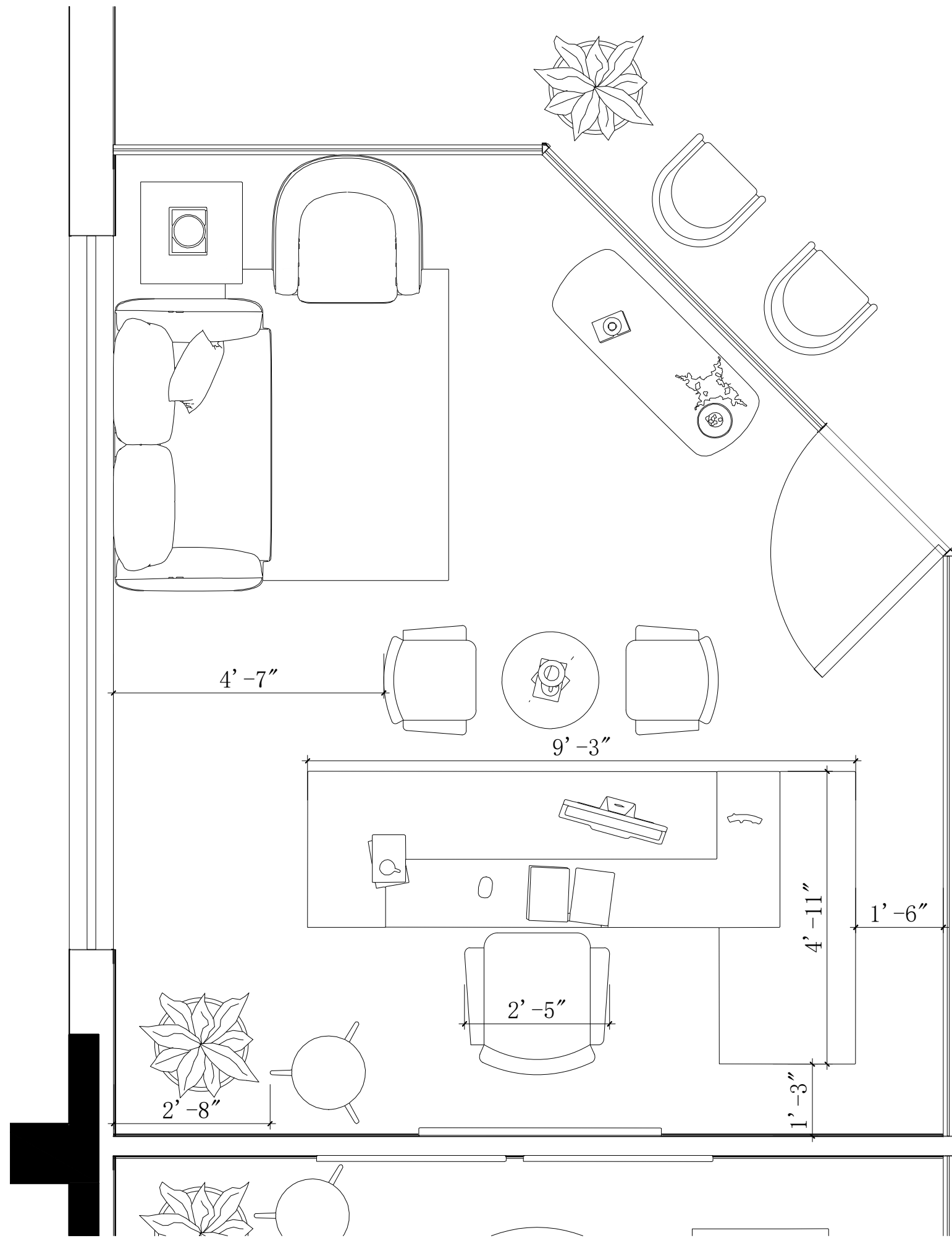


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
SMALL WING RECORD ROOMS  
FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
SL06AR-SR-69



SW CHIEF FURNITURE (1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

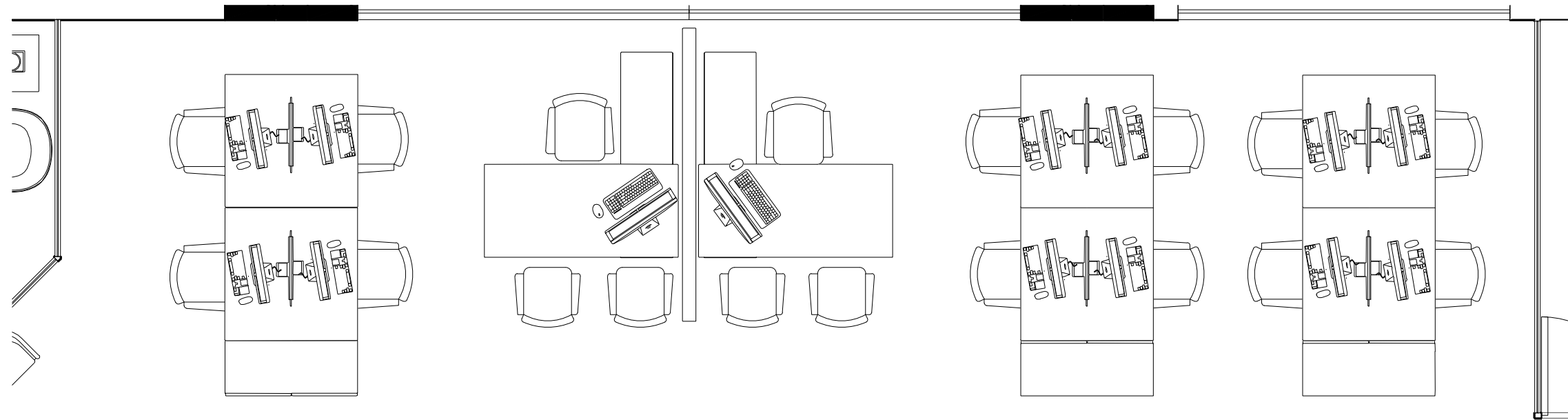


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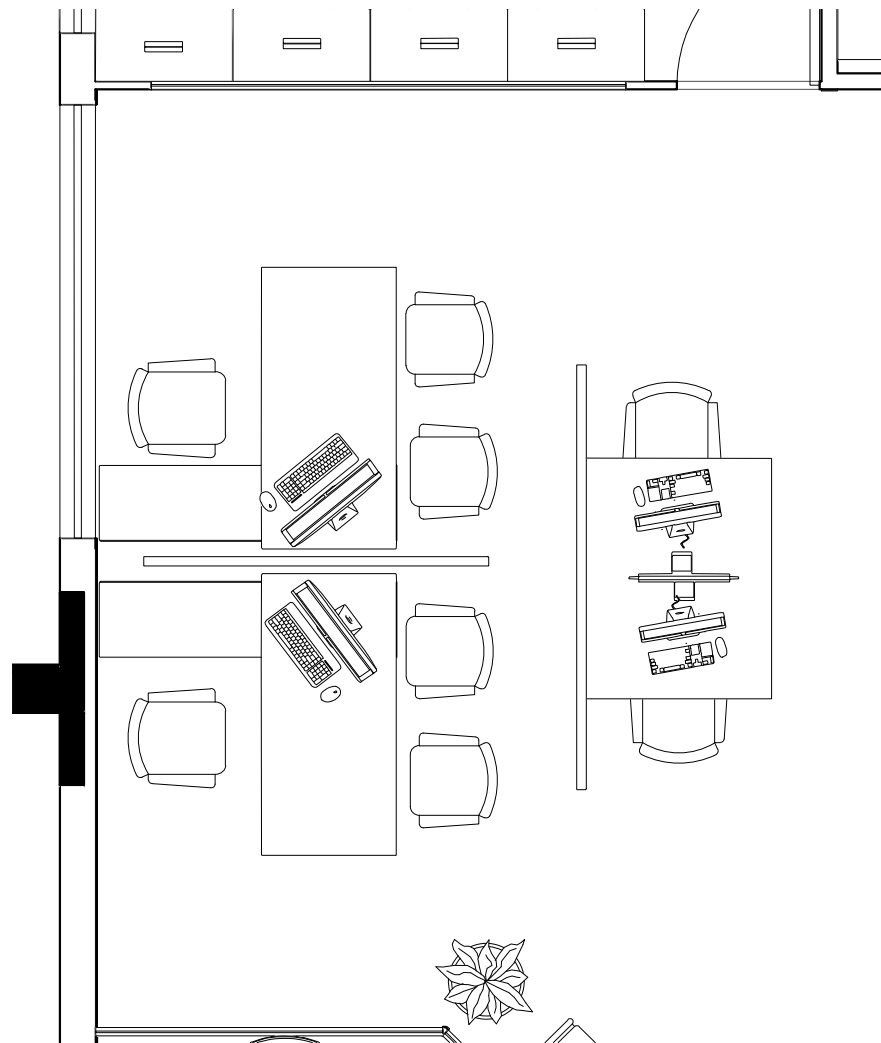
DRAWING TITLE:  
**6th FLOOR**  
SMALL WING CHIEF OFFICES  
FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-WT-70**



SW DGM2 FURNITURE(1/4"=1'-0")



SW DGM1 FURNITURE(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
SMALL WING D.G.M FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
SL06AR-SD-71

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

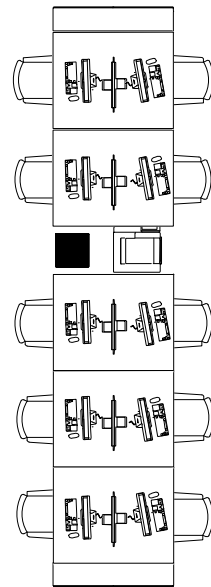
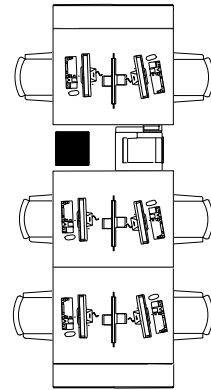
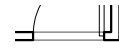


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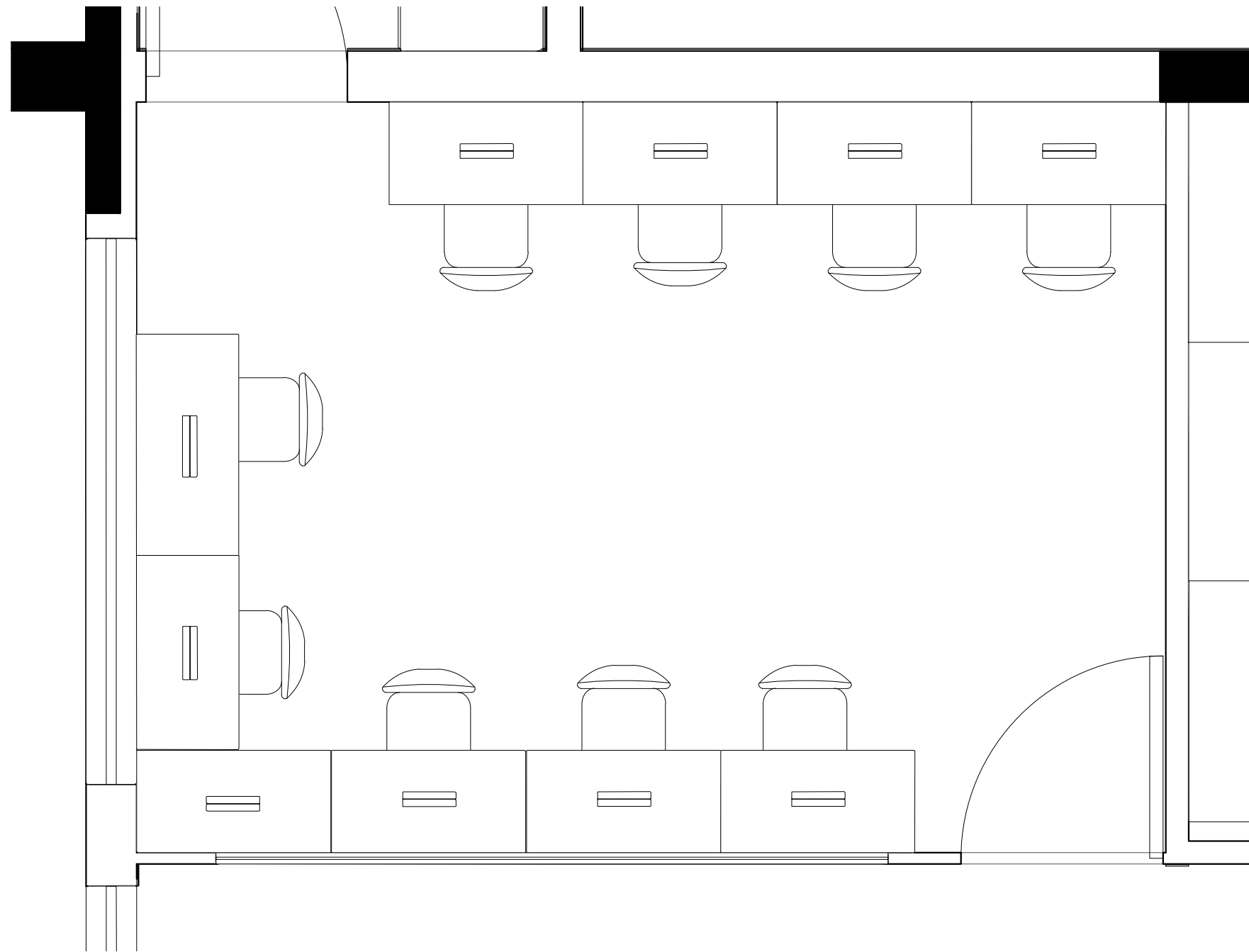
DRAWING TITLE:  
**6th FLOOR**  
SMALL WING STAFF FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-SS-72**



SW STAFF FURNITURE(1/8"=1'-0")



SW PANTRY FURNITURE (1/2"=1'-0")

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

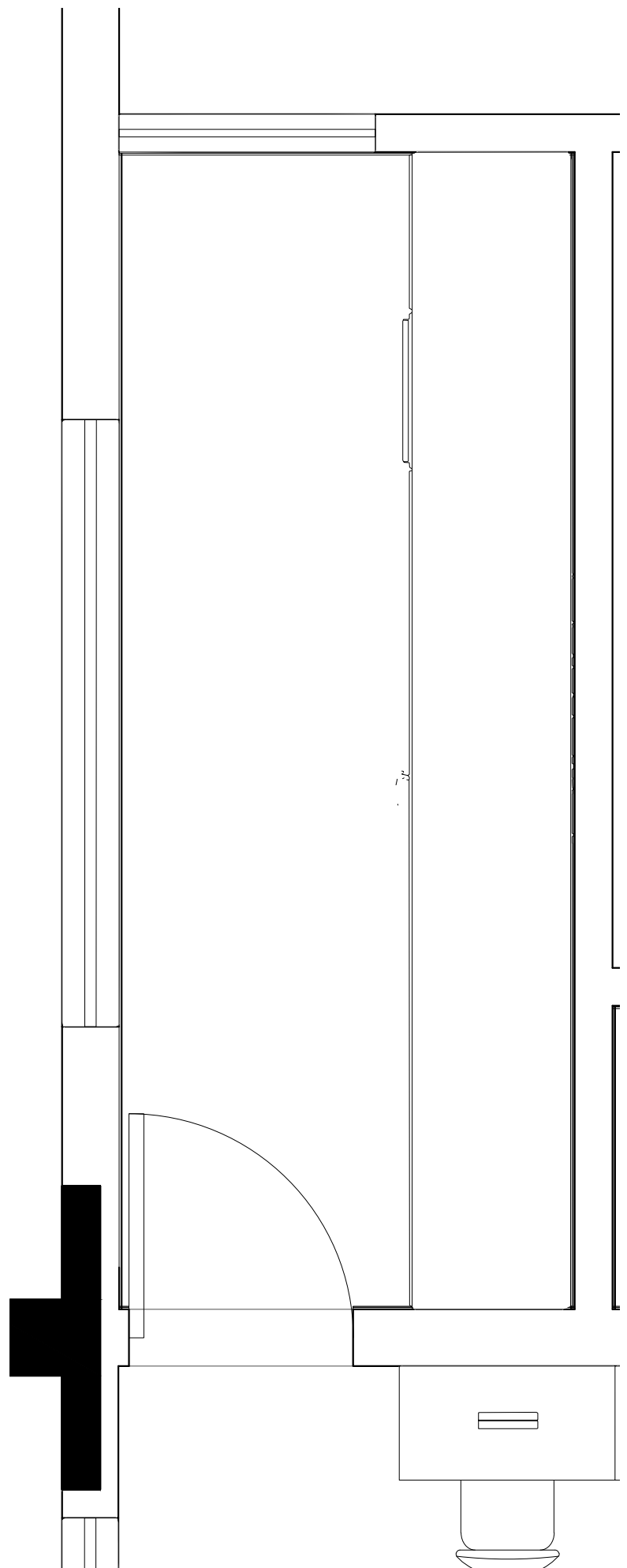


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
SMALL WING PANTRY FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-SP-73**



SW KITCHEN FURNITURE(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

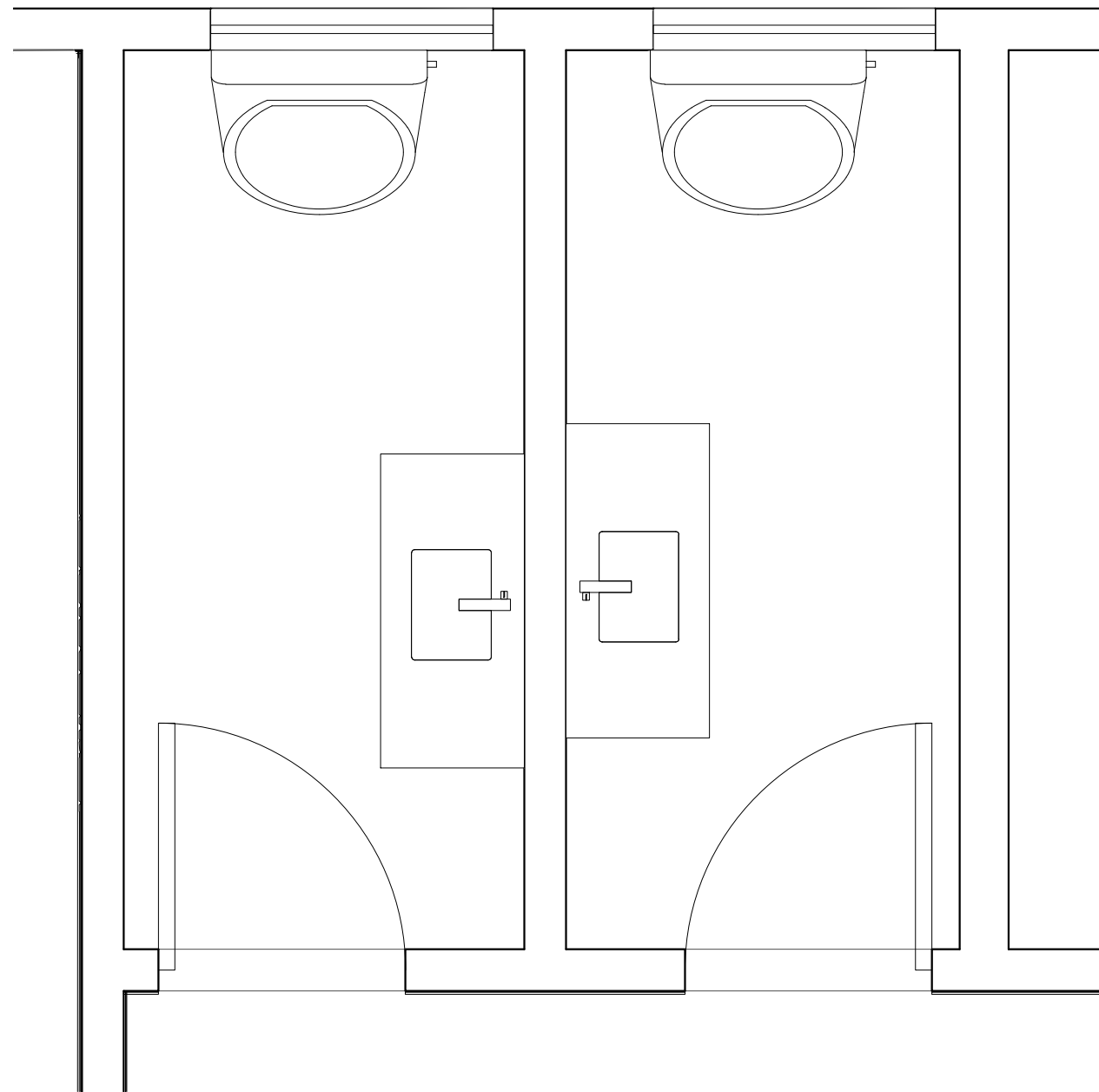
DRAWING TITLE:

**6th FLOOR**  
SMALL WING KITCHEN  
FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-SK-74**





SW CHIEF BATH FURNITURE(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

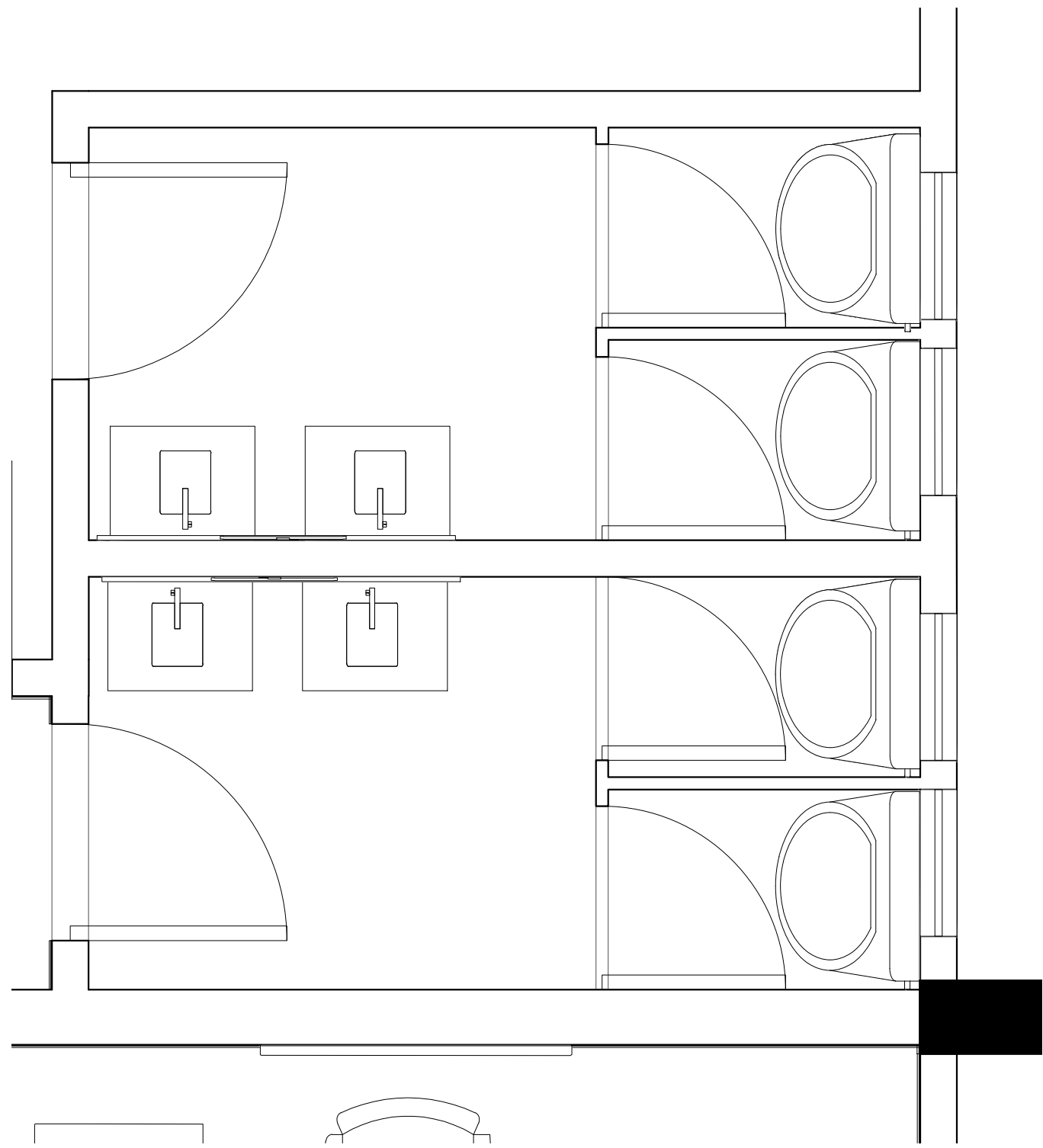


COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
SMALL WING CHIEFS TOILET LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-SCT-75**



SW BATH FURNITURE(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE  
 OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

**PROJECT:**

**RENOVATION OF STATE LIFE BUILDING No. 9**  
 KARACHI



**COMMENTS:**

**DRAWING TITLE:**

**6th FLOOR**  
 SMALL WING TOILETS LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-SPB-76**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



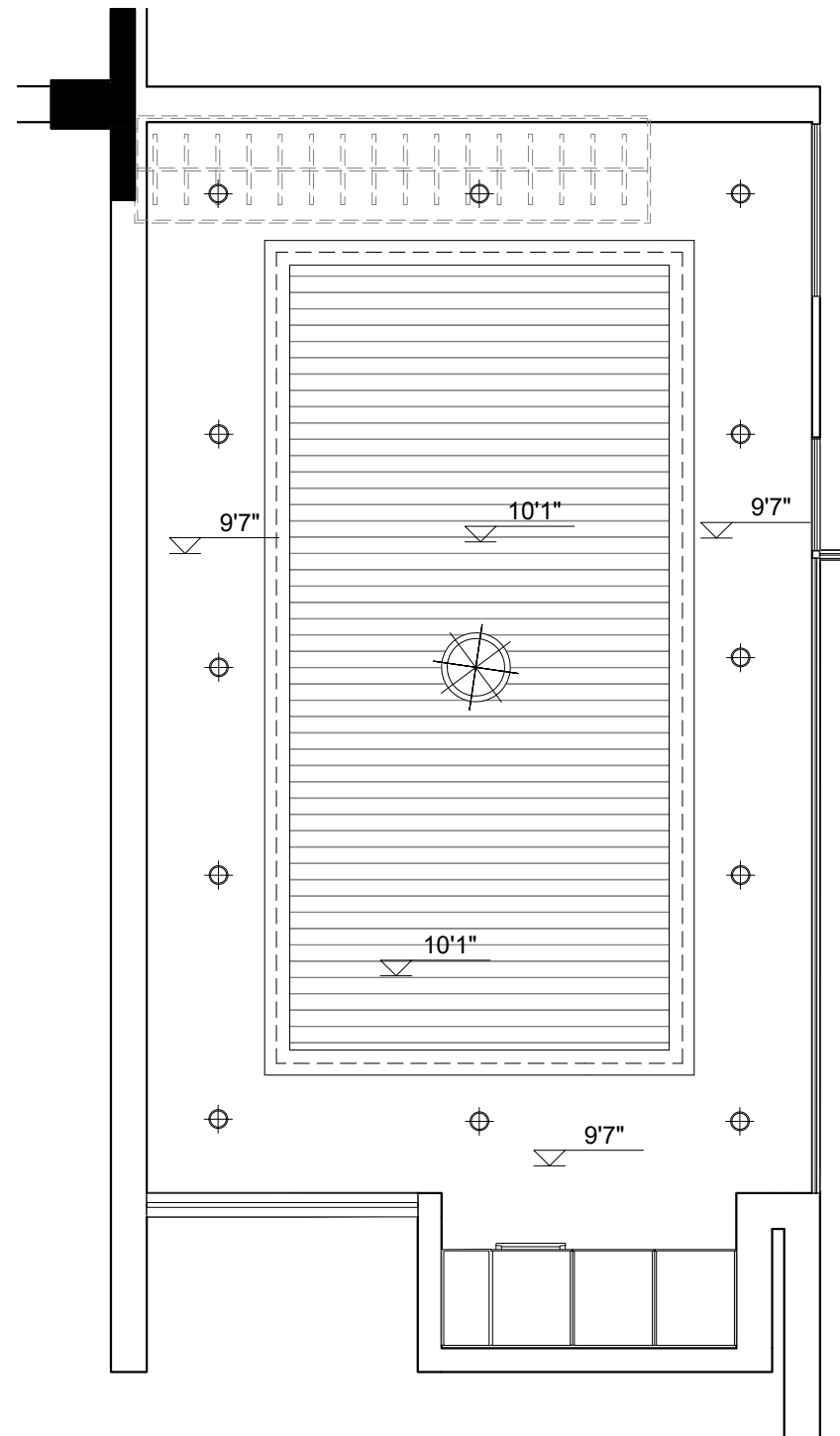
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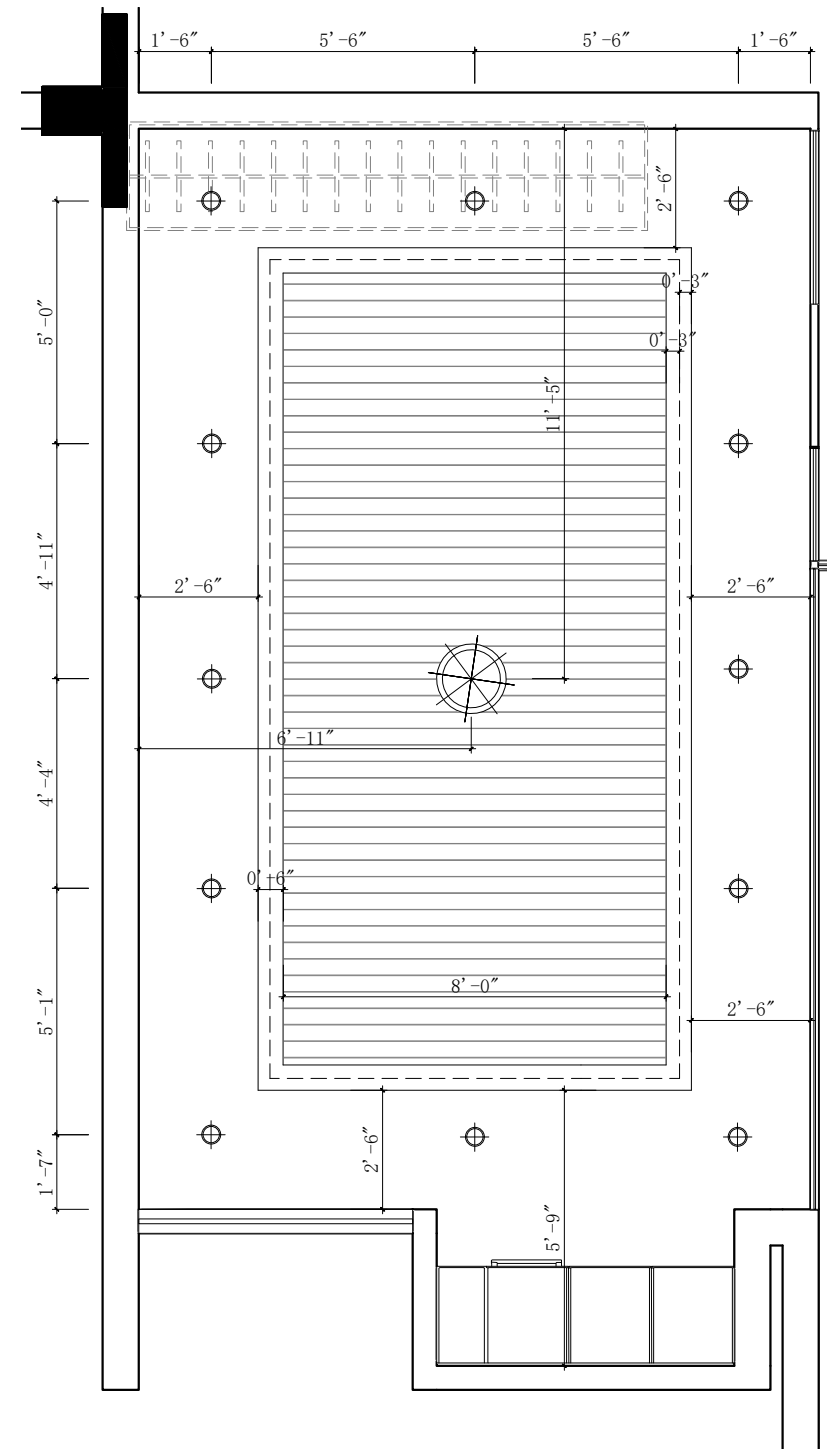
**6th FLOOR**  
WAITING AREA CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-WC-77**

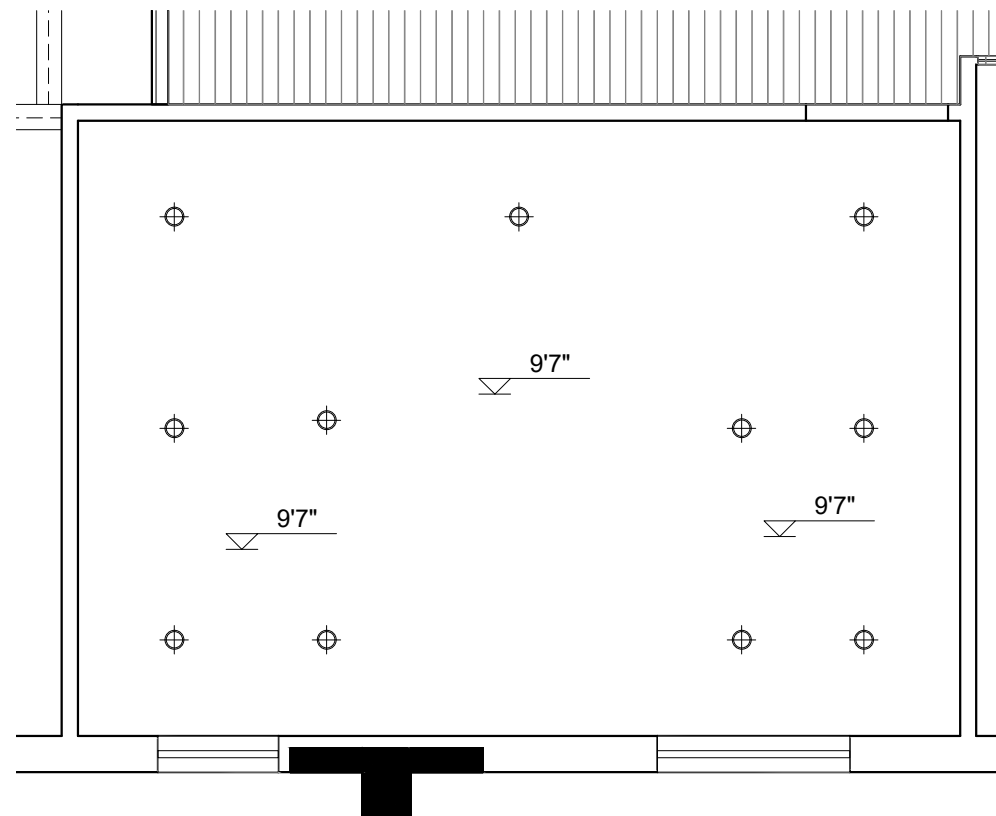


WAITING CEILING(1/4"=1'-0")

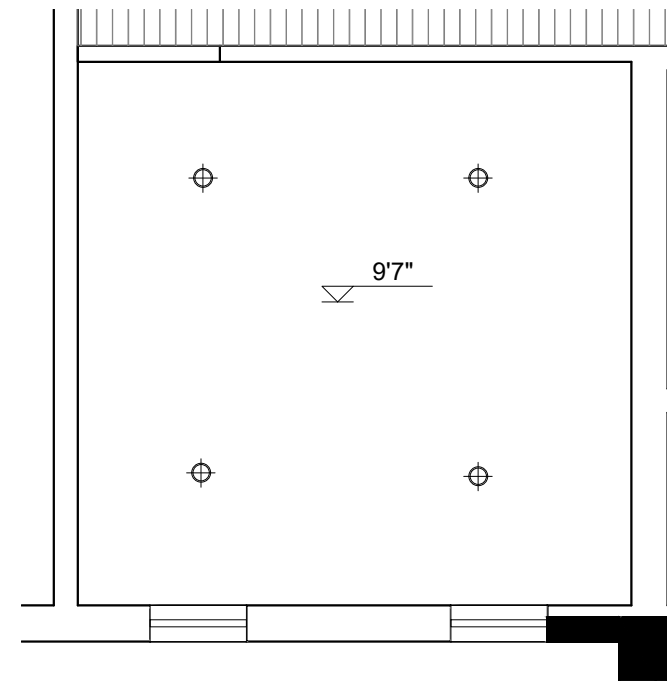


WAITING CEILING LIGHTS(1/4"=1'-0")

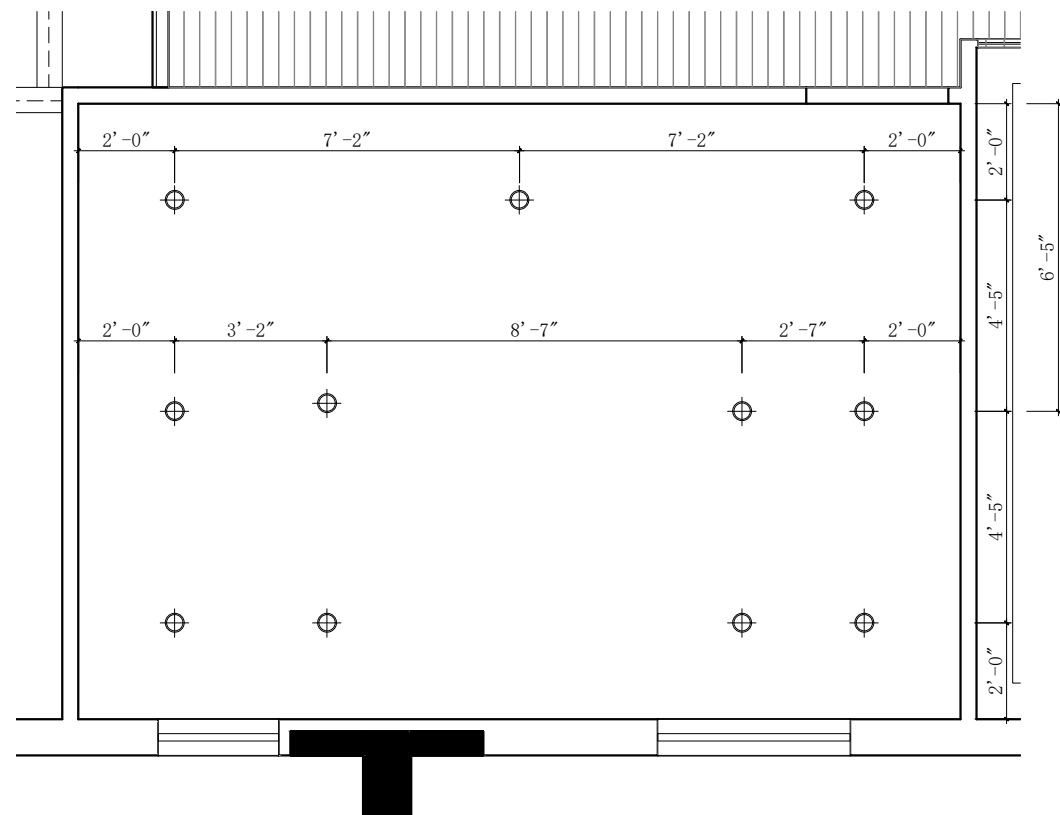




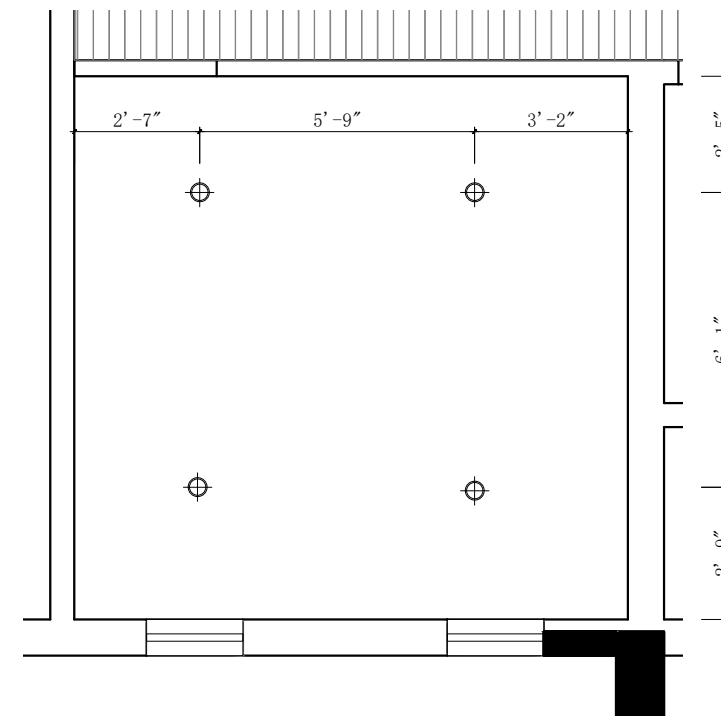
LW RECORD ROOM1 CEILING(1/4"=1'-0")



LW RECORD ROOM2 CEILING(1/4"=1'-0")



LW RECORD ROOM1 CEILING LIGHTS(1/4"=1'-0")



LW RECORD ROOM2 CEILING LIGHTS(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

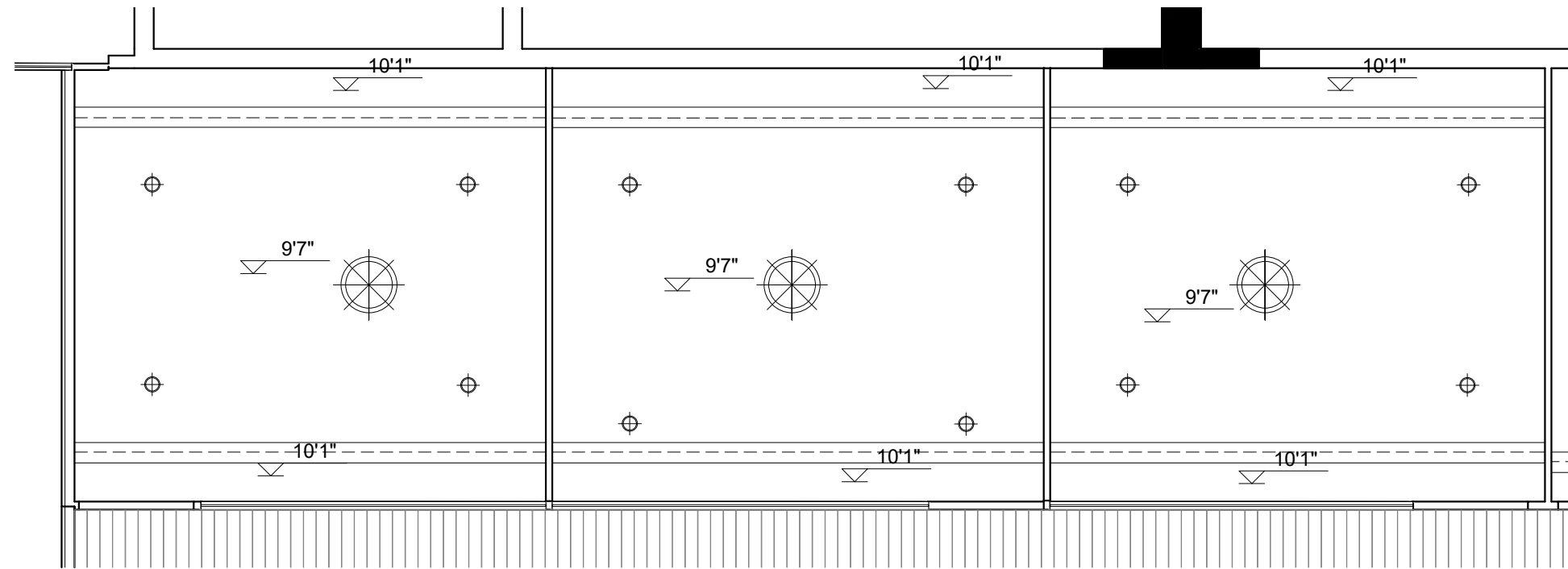


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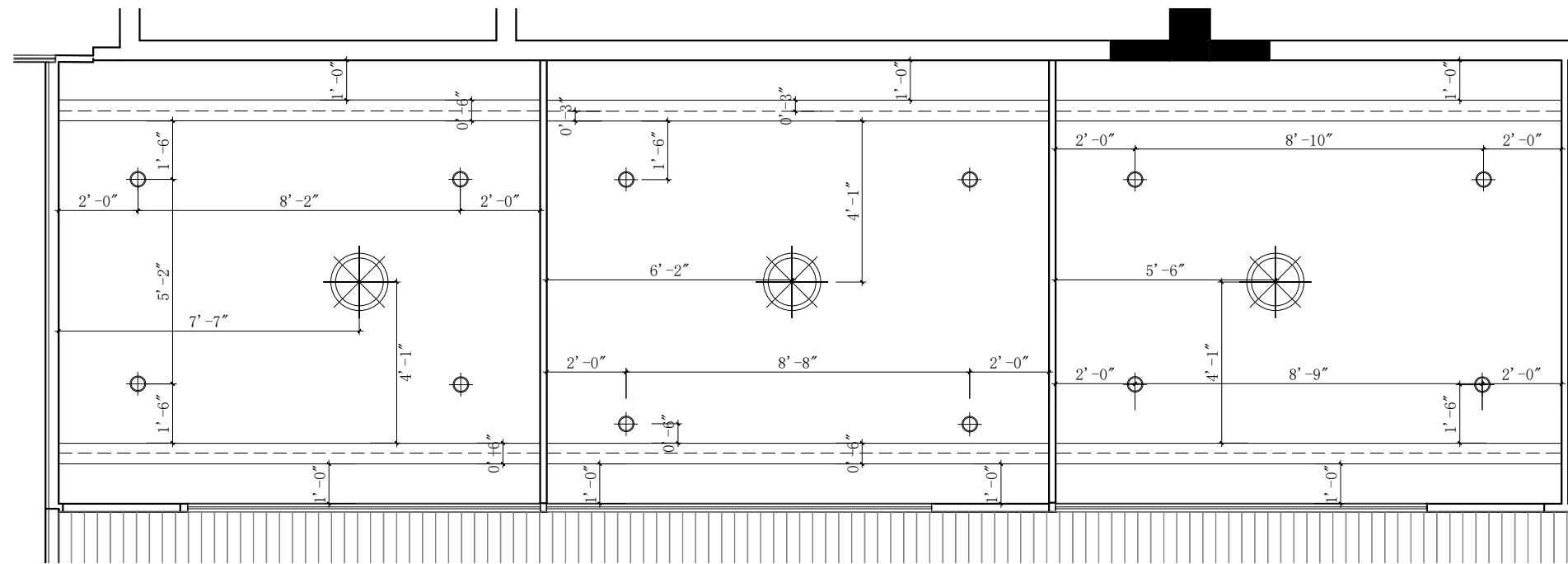
DRAWING TITLE:  
**6th FLOOR**  
LARGE WING RECORD ROOMS  
CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-LR-79**



LW MEETING ROOM CEILING(1/4"=1'-0")



LW MEETING ROOM CEILING LIGHTS(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

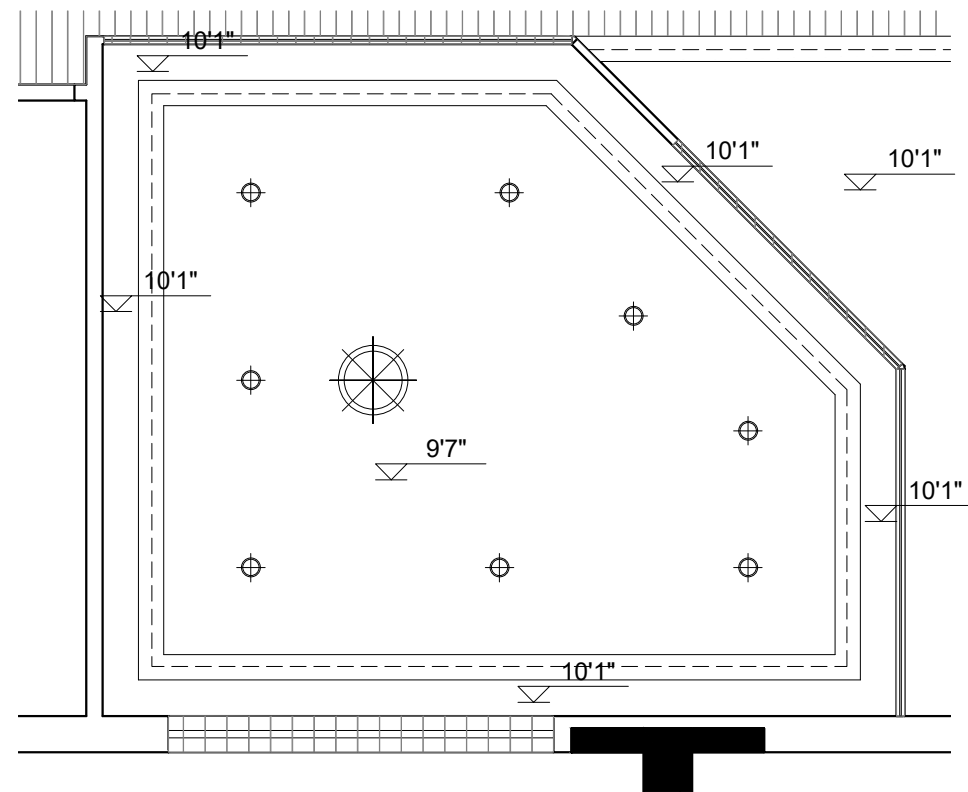


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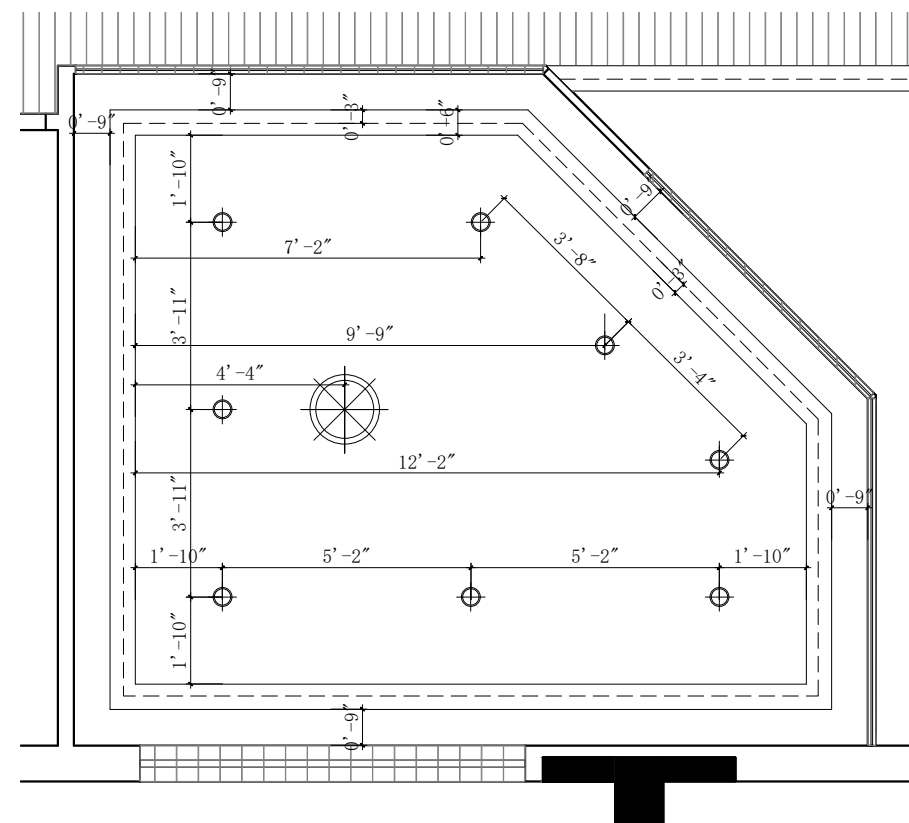
DRAWING TITLE:  
**6th FLOOR**  
LARGE WING MEETING ROOM  
CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LM-80**



LW CHIEF OFFICE CEILING(1/4"=1'-0")



LW CHIEF OFFICE CEILING LIGHTS(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
LARGE WING CHIEF OFFICE  
CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LC-81**

## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



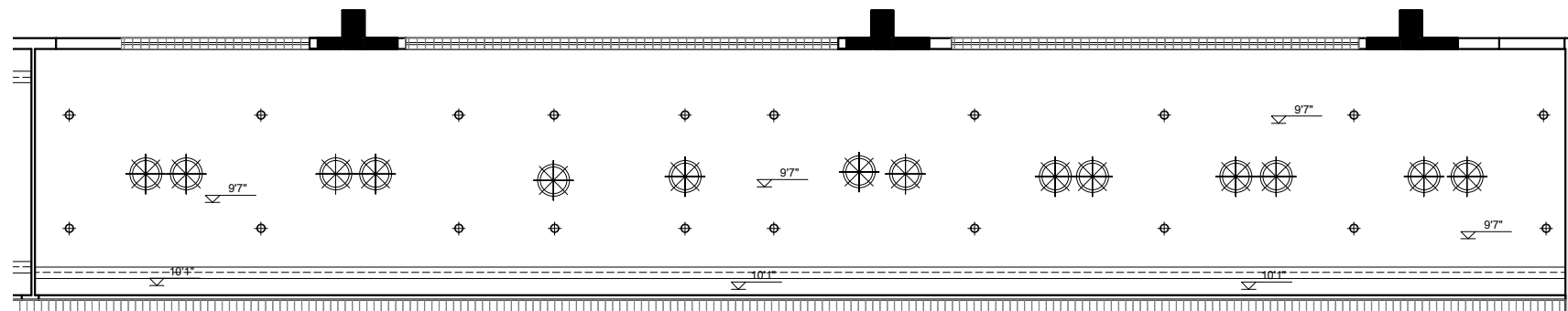
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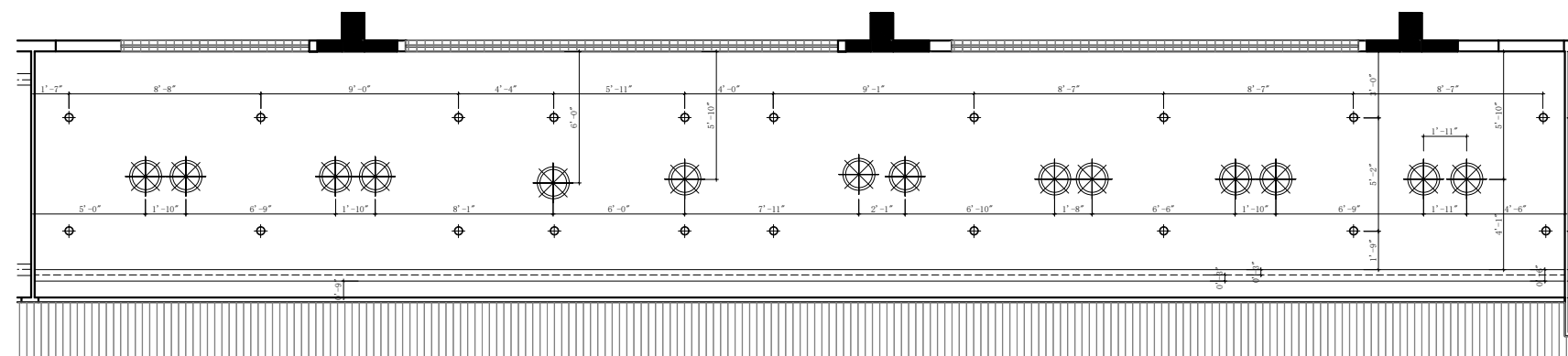
**6th FLOOR**  
LARGE WING D.G.M CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-LD-82**

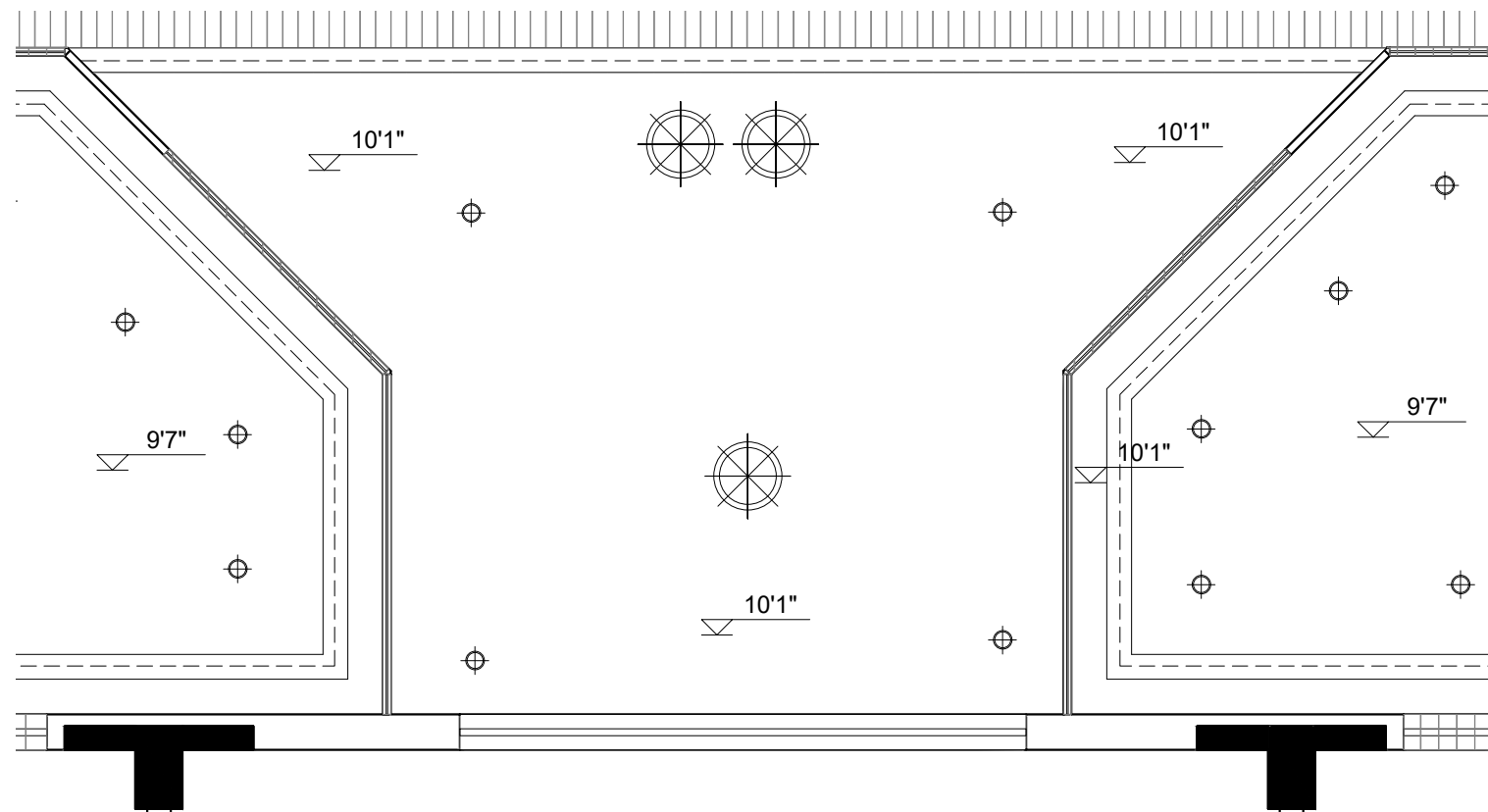


LW DGM2 CEILING(1/8"=1'-0")

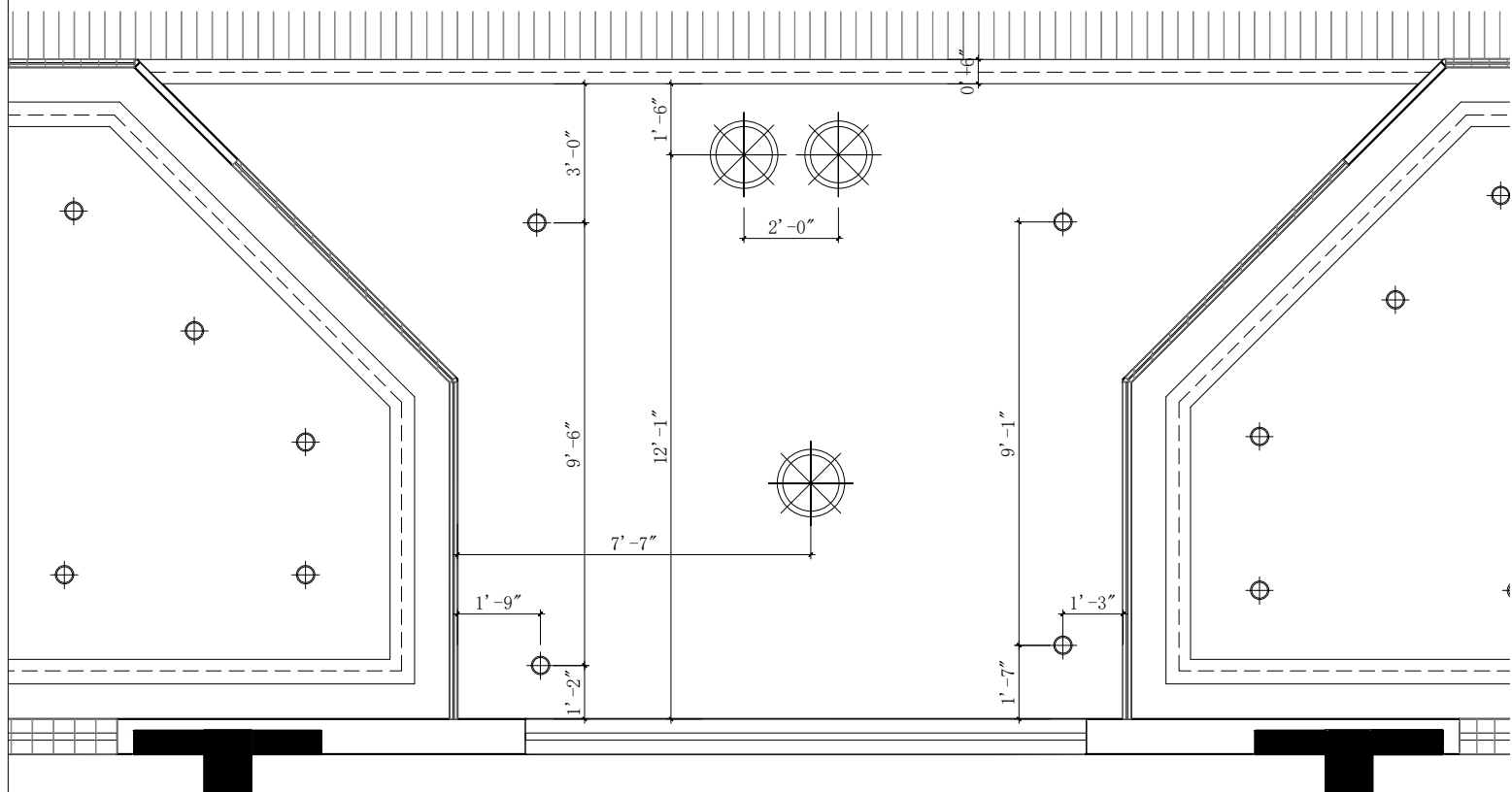


LW DGM2 CEILING LIGHTS(1/8"=1'-0")





LW DGM1 CEILING(1/4"=1'-0")



LW DGM1 CEILING LIGHTS(1/4"=1'-0")

### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
LARGE WING D.G.M CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-LD-83**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



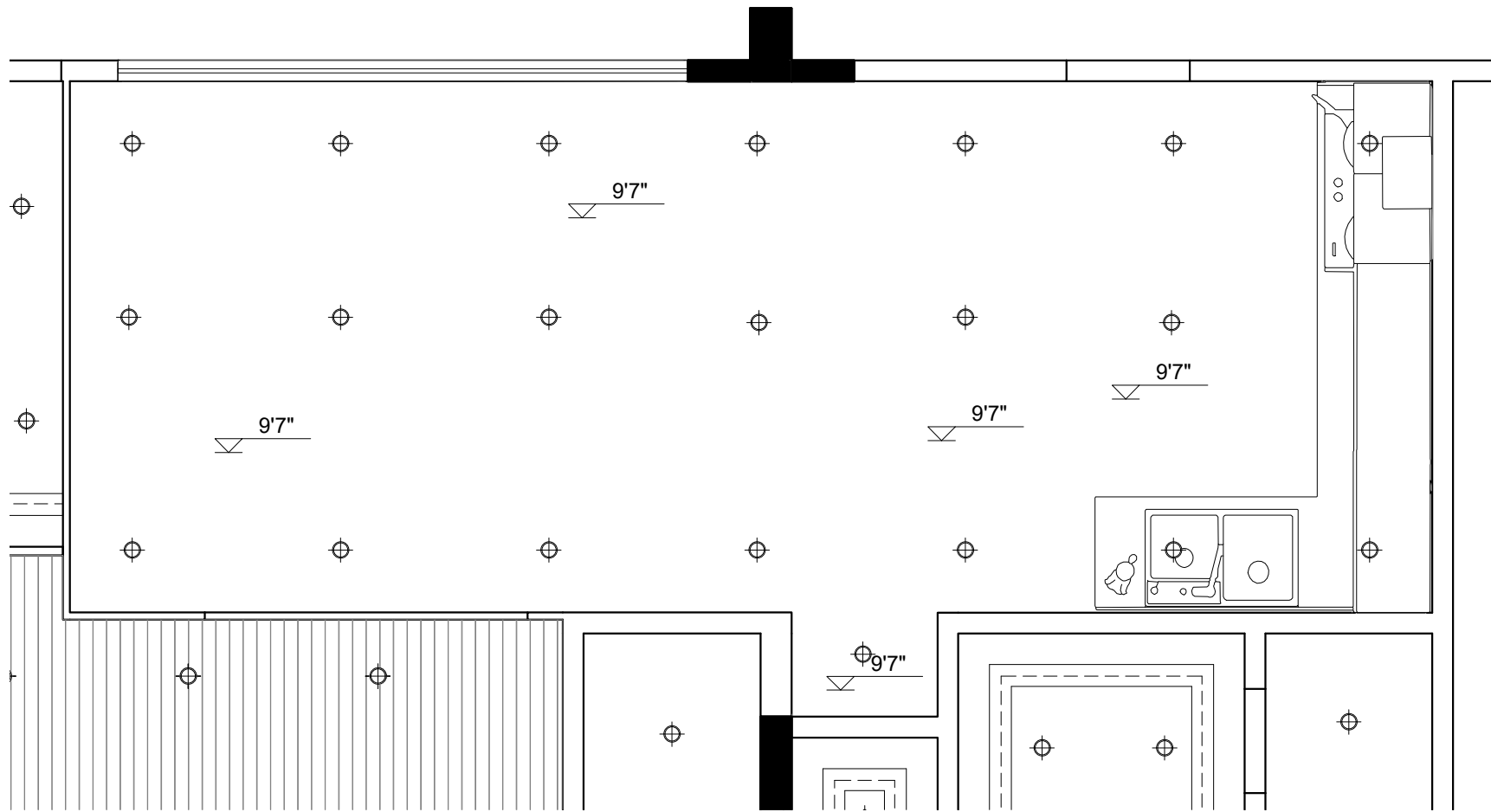
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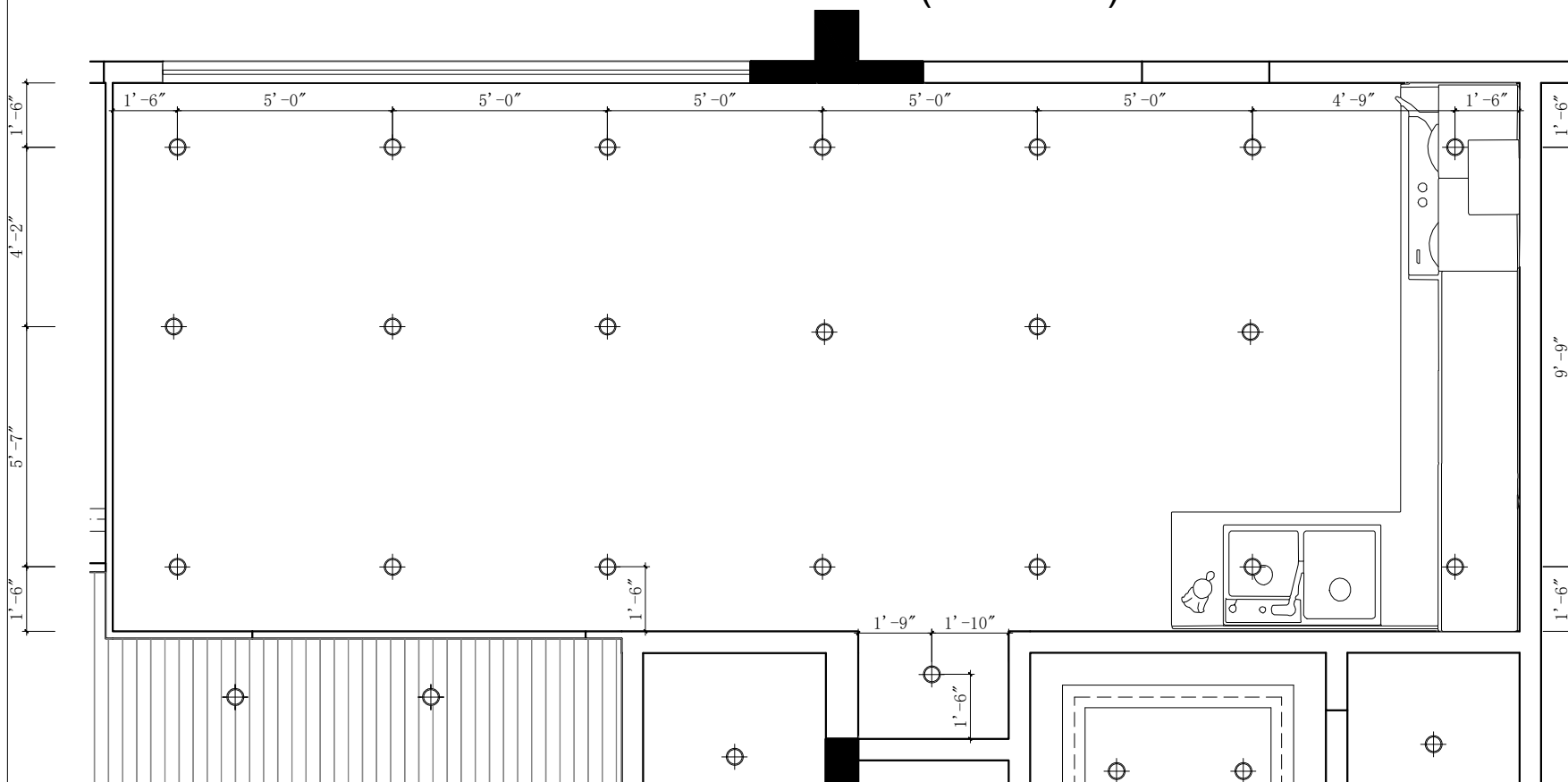
**6th FLOOR**  
LARGE WING PANTRY CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-LP-84**



LW PANTRY CEILING(1/4"=1'-0")



LW PANTRY CEILING LIGHTS(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



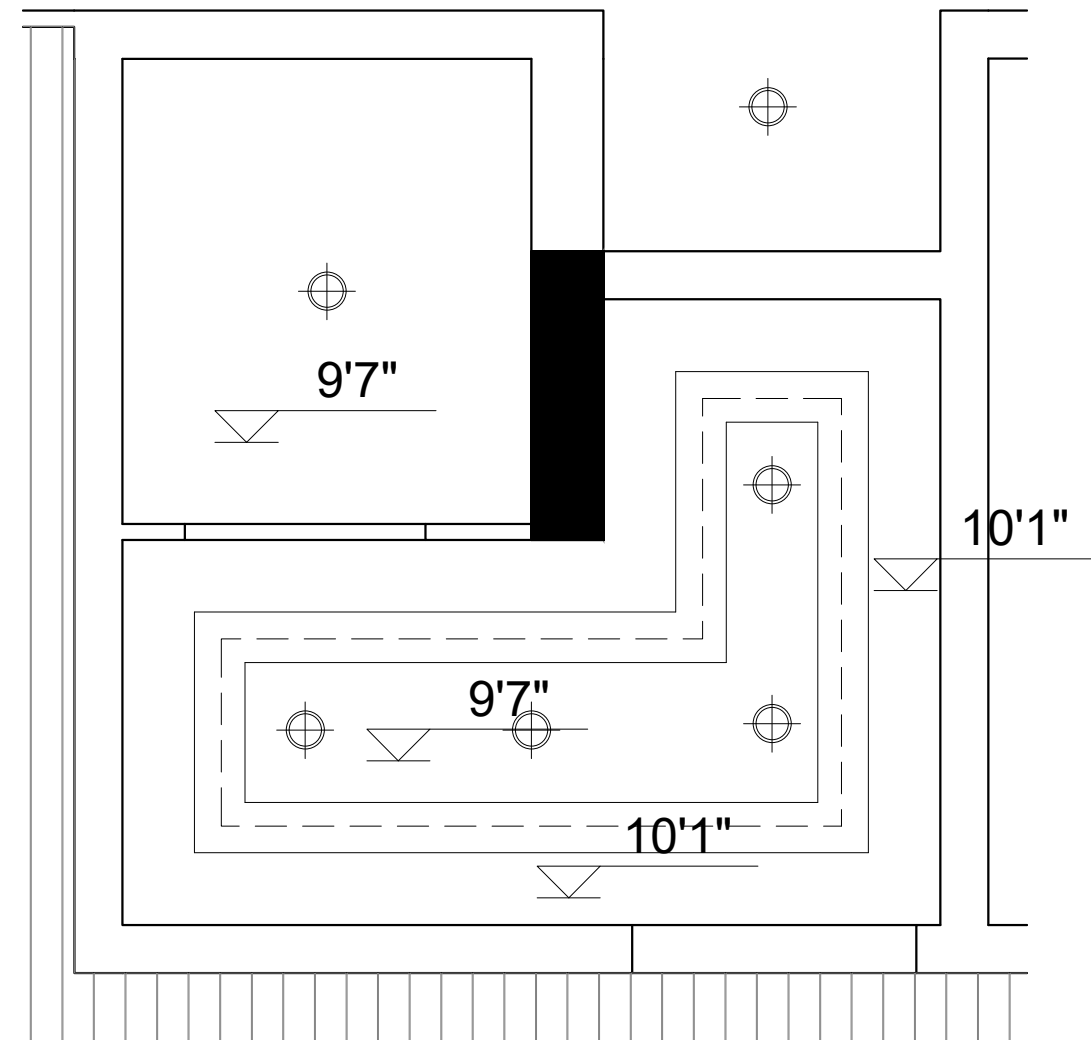
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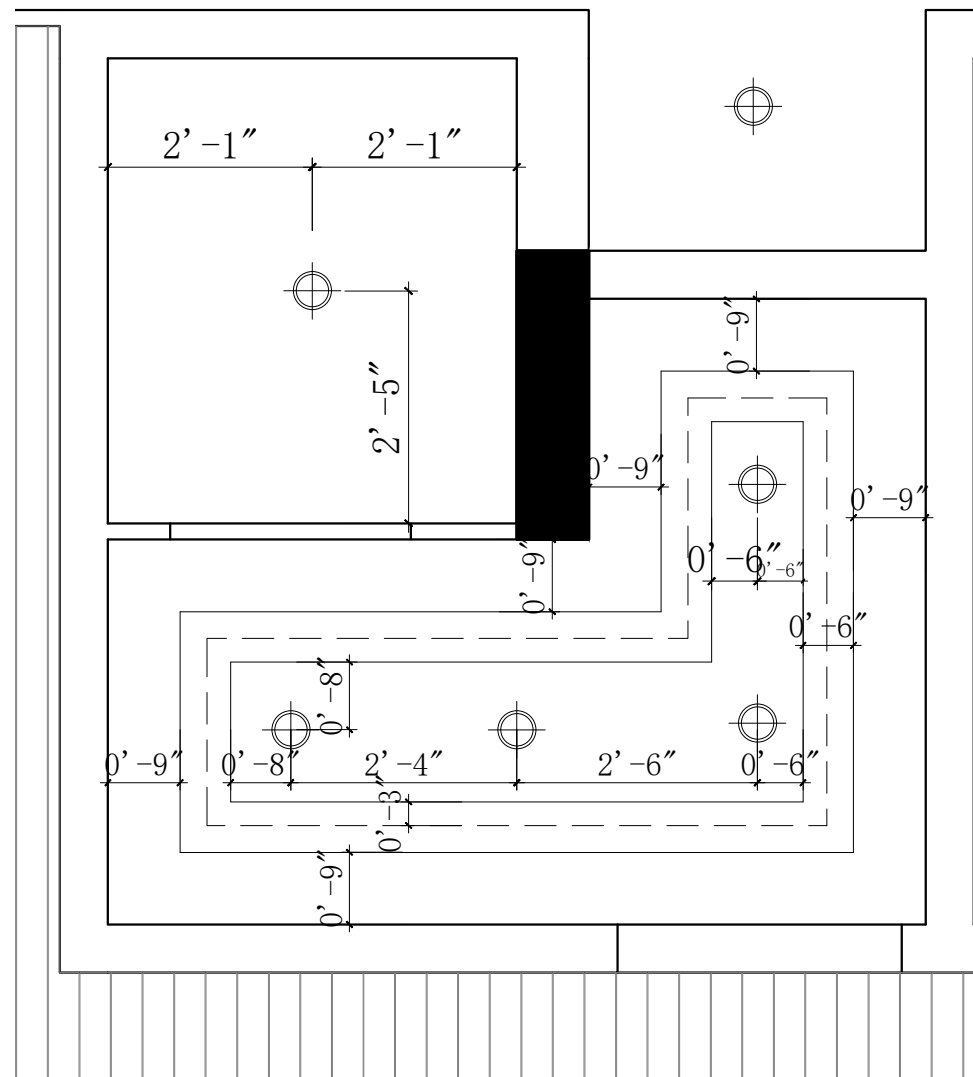
**6th FLOOR**  
LARGE WING FEMALE CHIEF TOILET CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-LF-85**



LW FEMALE CHIEF TOILET CEILING(1/2"=1'-0")



FEMALE CHIEF BATH CEILING LIGHTS(1/2"=1'-0")

## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



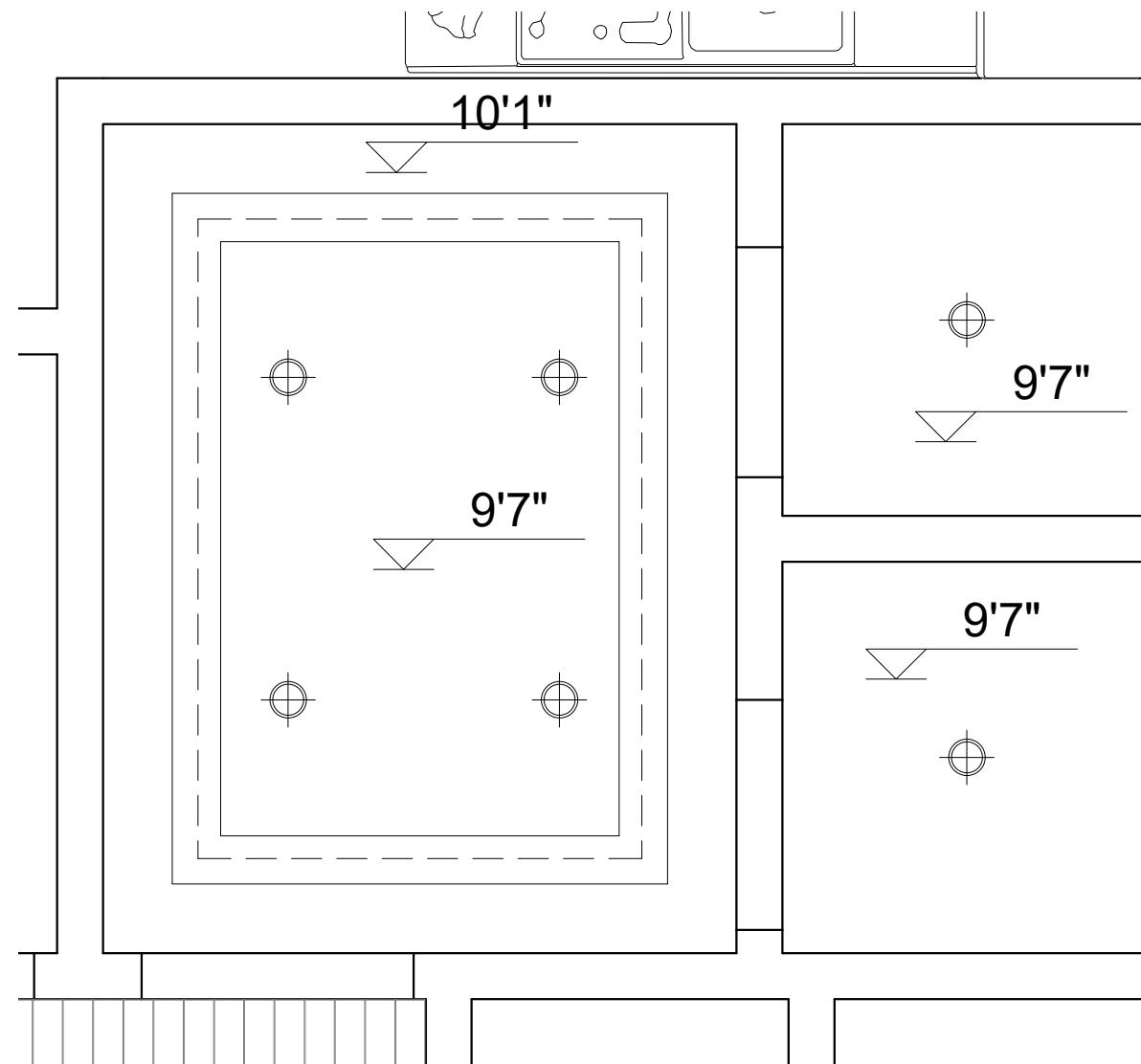
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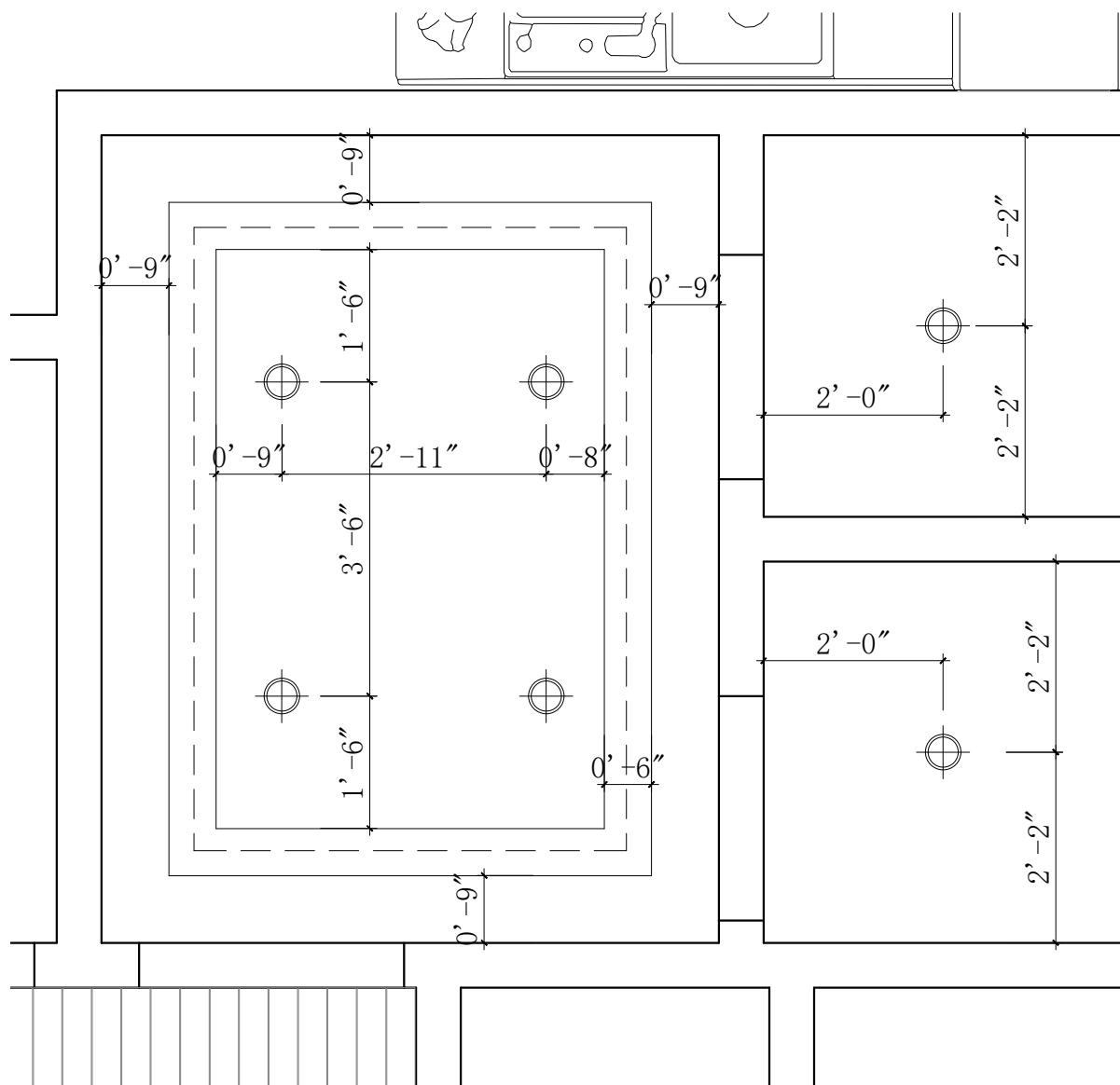
**6th FLOOR**  
LARGE WING MALE CHIEF TOILET  
CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-LM-86**



LW MALE CHIEF TOILET CEILING(1/2"=1'-0")



MALE CHIEF BATH CEILING LIGHTS(1/2"=1'-0")

## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

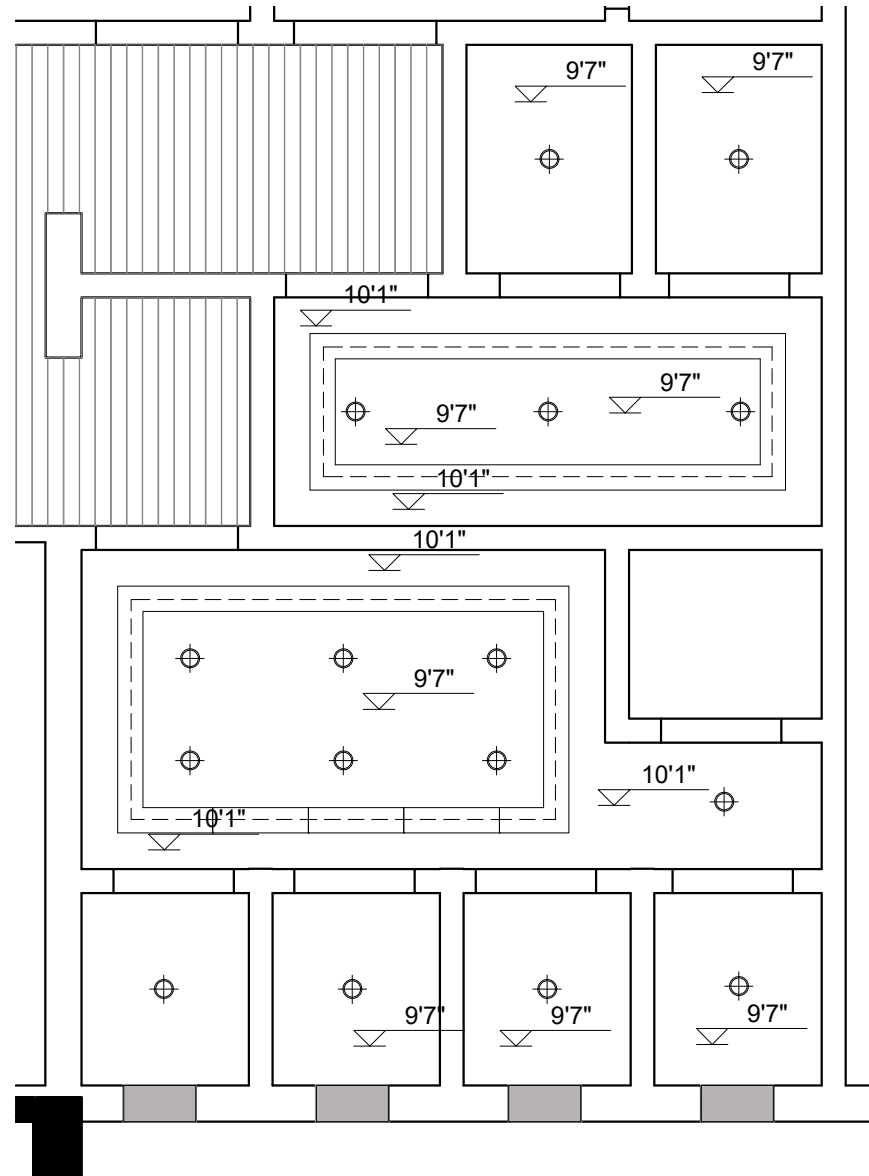


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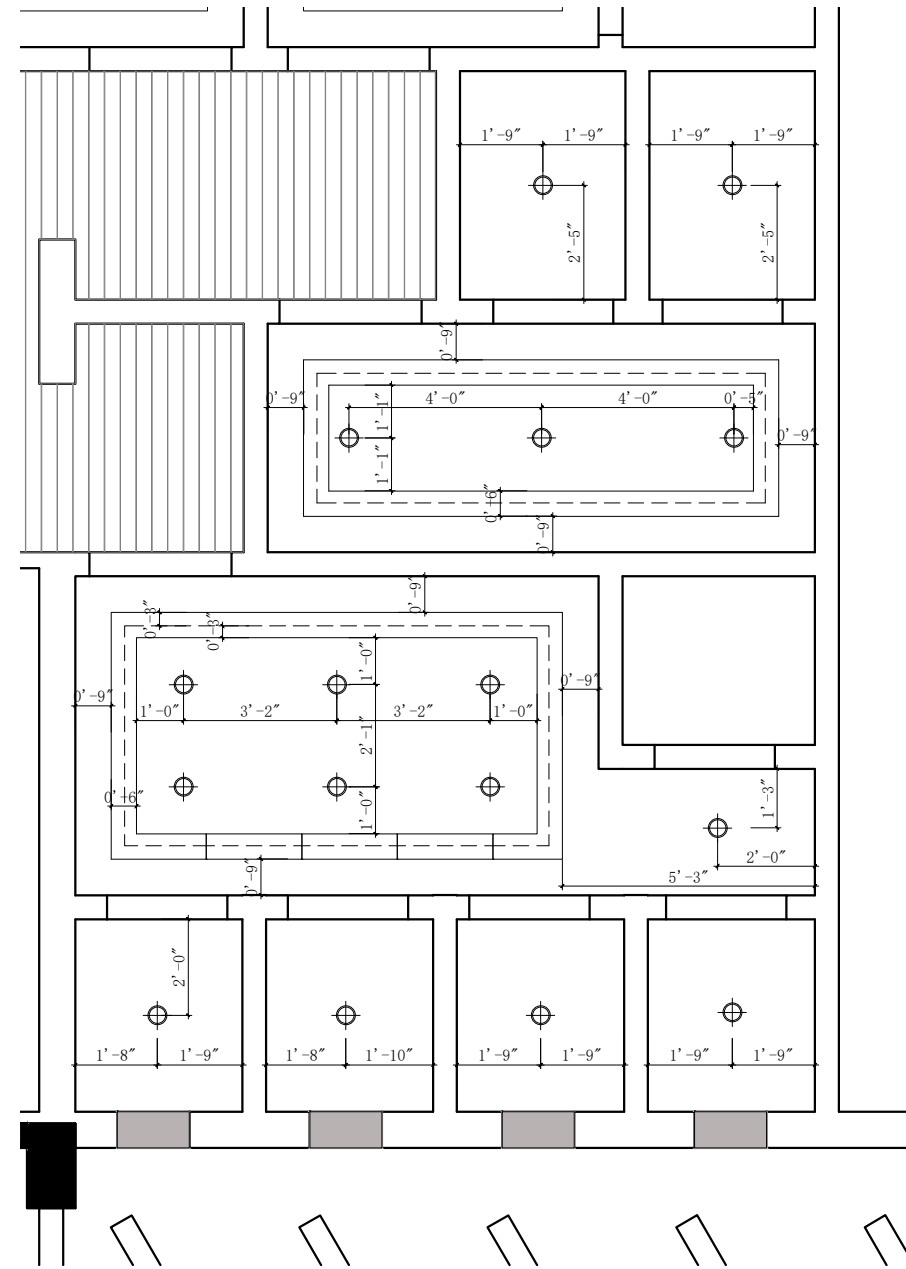
DRAWING TITLE:  
**6th FLOOR**  
LARGE WING TOILET CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

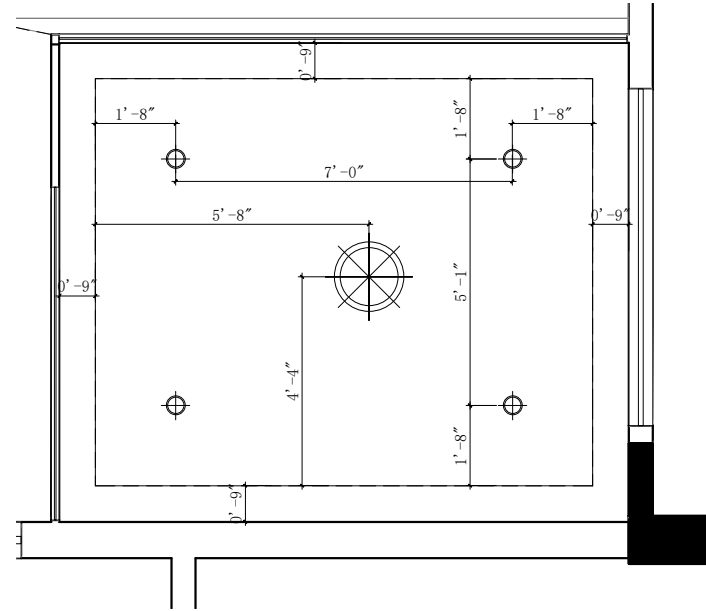
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**SL06AR-LPB-87**



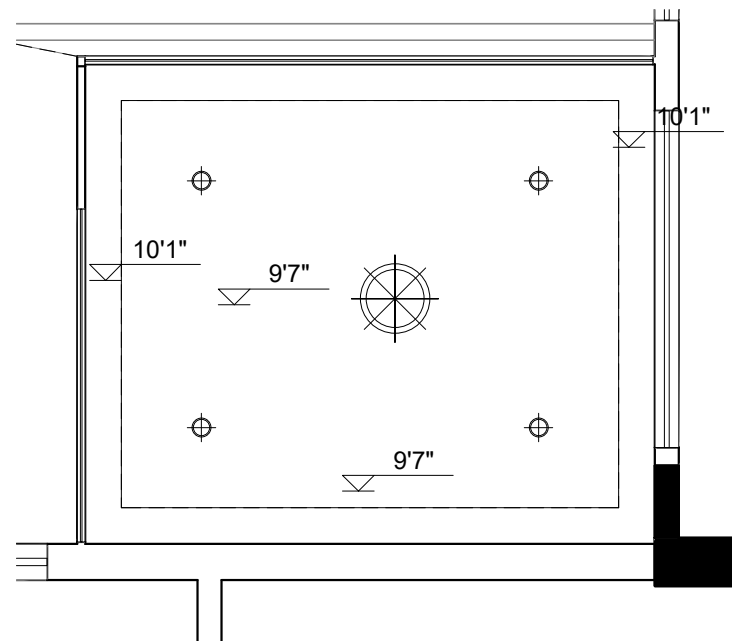
LW BATHS CEILING(1/4"=1'-0")



LW BATHS CEILING LIGHTS(1/4"=1'-0")



SW MEETING ROOM CEILING LIGHTS(1/4"=1'-0")



SW MEETING ROOM CEILING(1/4"=1'-0")

## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
SMALL WING MEETING ROOM  
CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-SM-88**

## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI

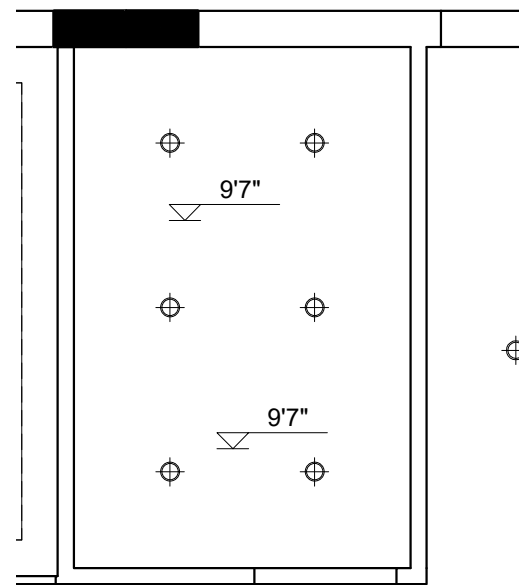


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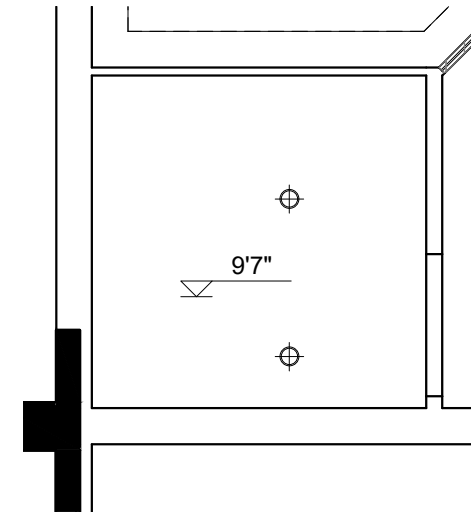
DRAWING TITLE:  
**6th FLOOR**  
LARGE WING MALE CHIEF TOILET  
CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

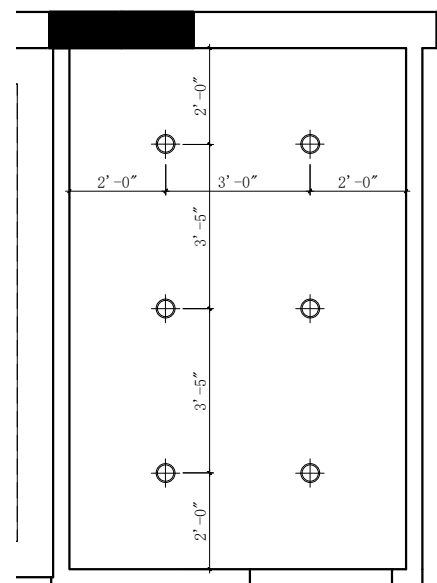
DWG. No.  
**SL06AR-SR-89**



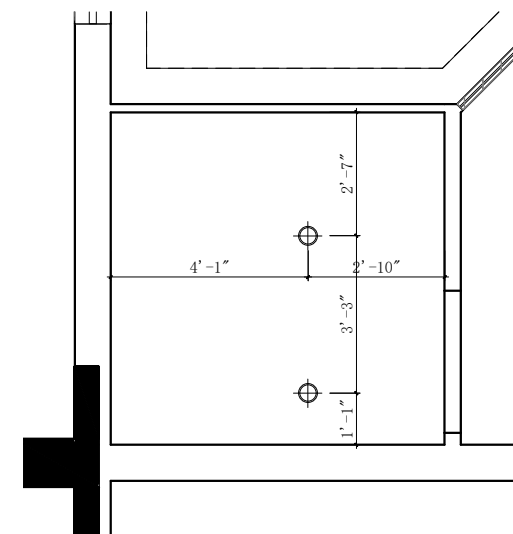
SW RECORD ROOM2 CEILING(1/4"=1'-0")



SW RECORD ROOM1 CEILING(1/4"=1'-0")



SW RECORD ROOM2 CEILING LIGHTS(1/4"=1'-0")



SW RECORD ROOM1 CEILING LIGHTS(1/4"=1'-0")

## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

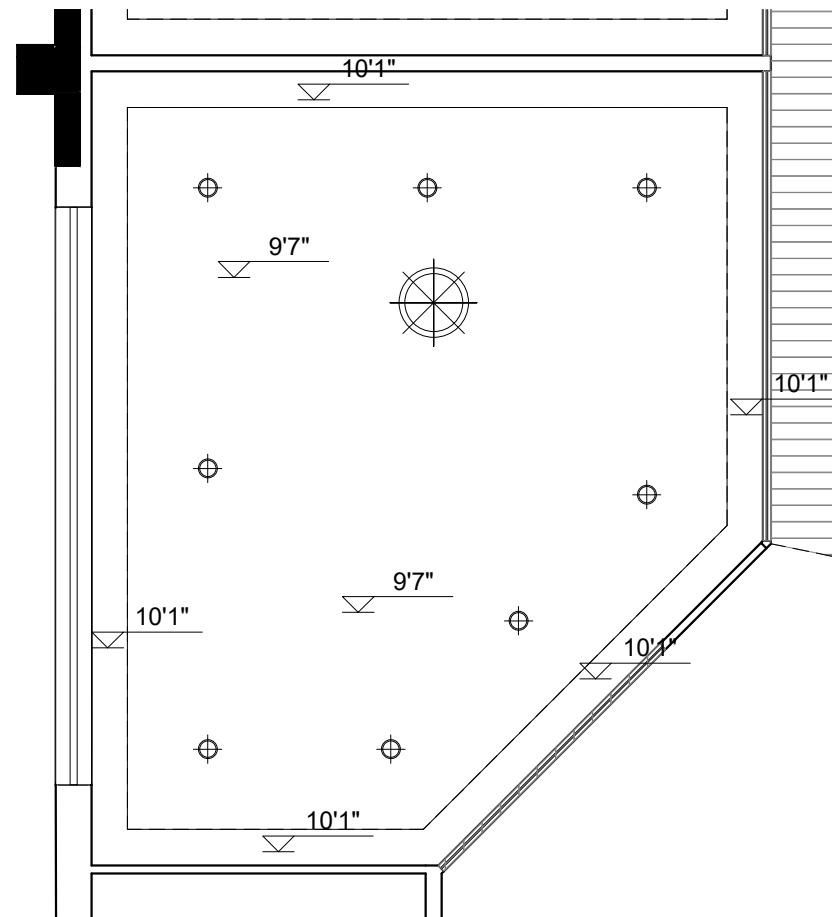


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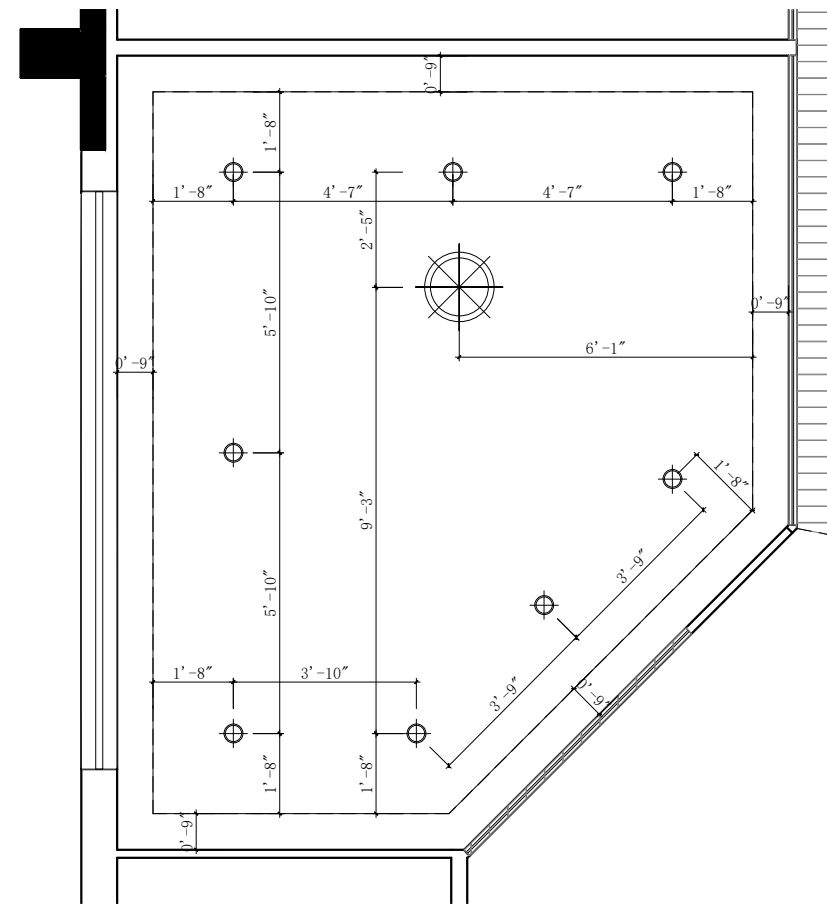
DRAWING TITLE:  
**6th FLOOR**  
SMALL WING CHIEF OFFICE  
CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-SC-90**



SW CHIEF OFFICE CEILING(1/4"=1'-0")



SW CHIEF OFFICE CEILING LIGHTS(1/4"=1'-0")



## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



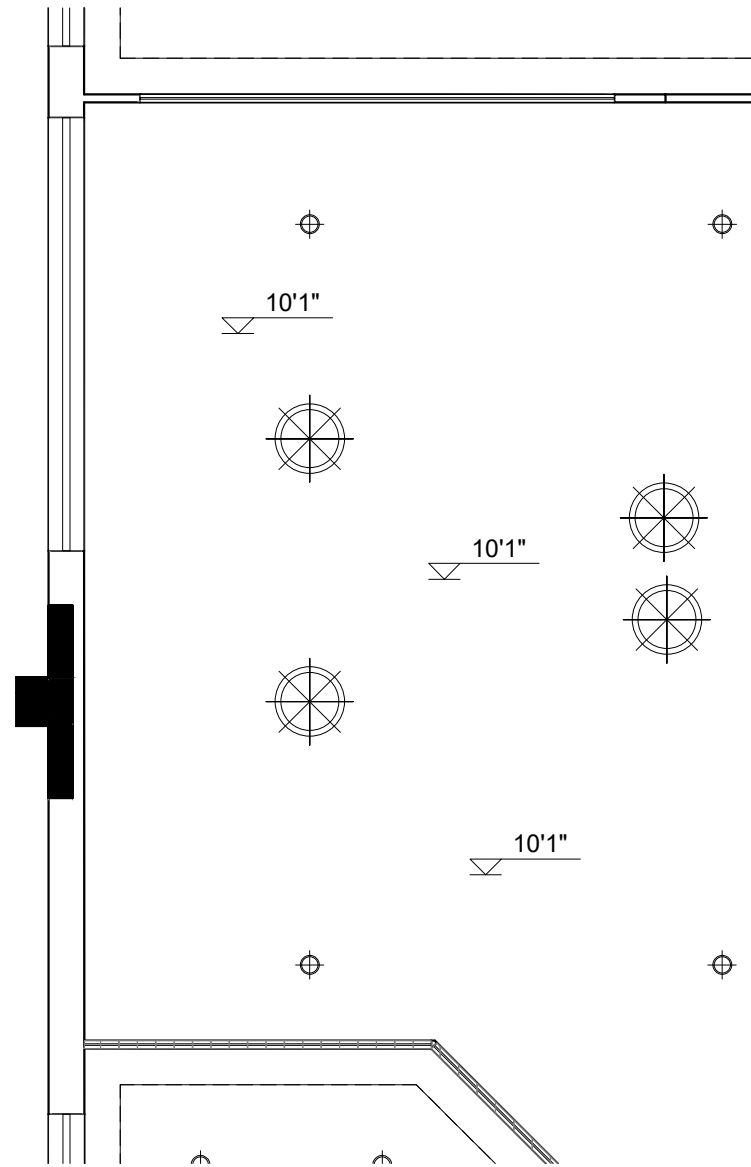
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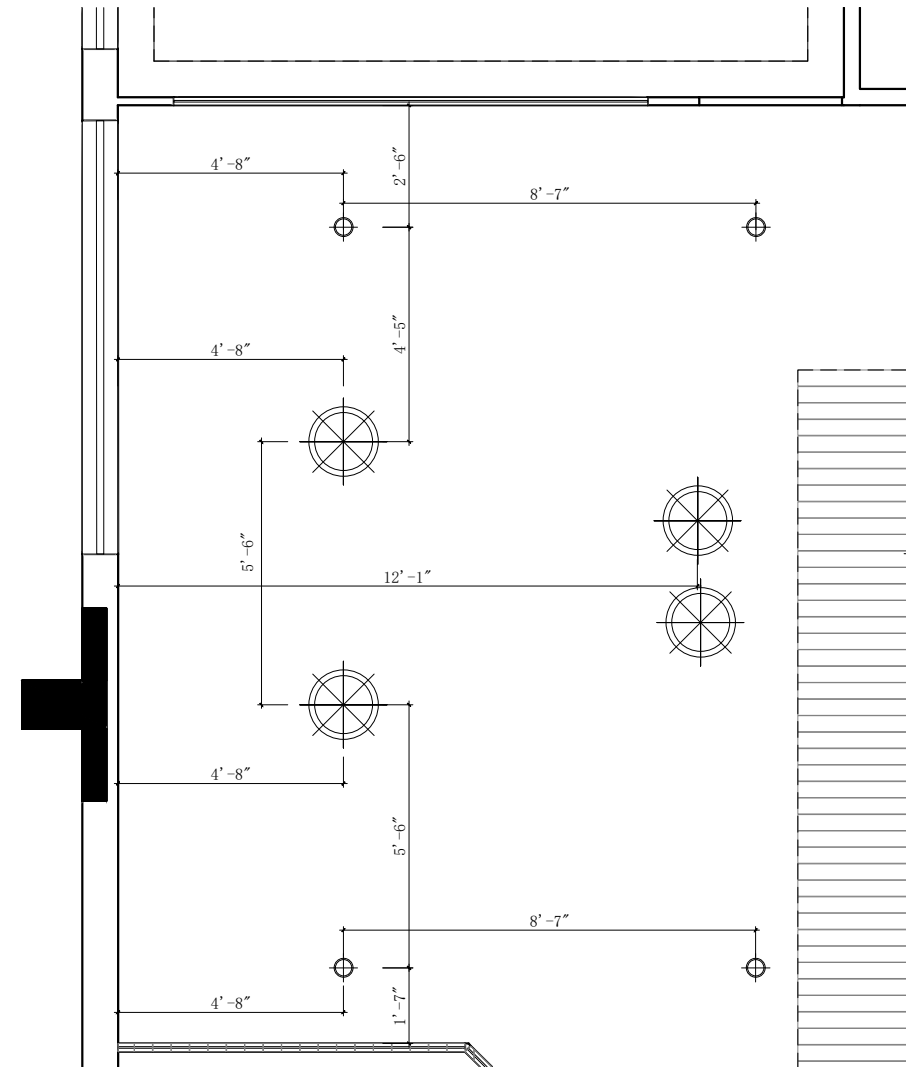
**6th FLOOR**  
SMALL WING D.G.M CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-SD-91**

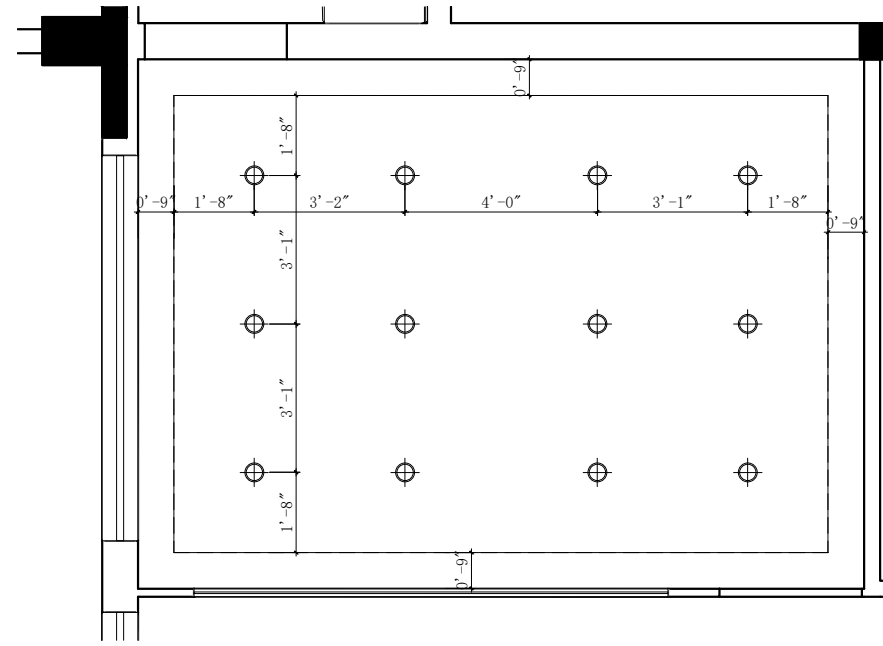


SW DGM1 CEILING(1/4"=1'-0")

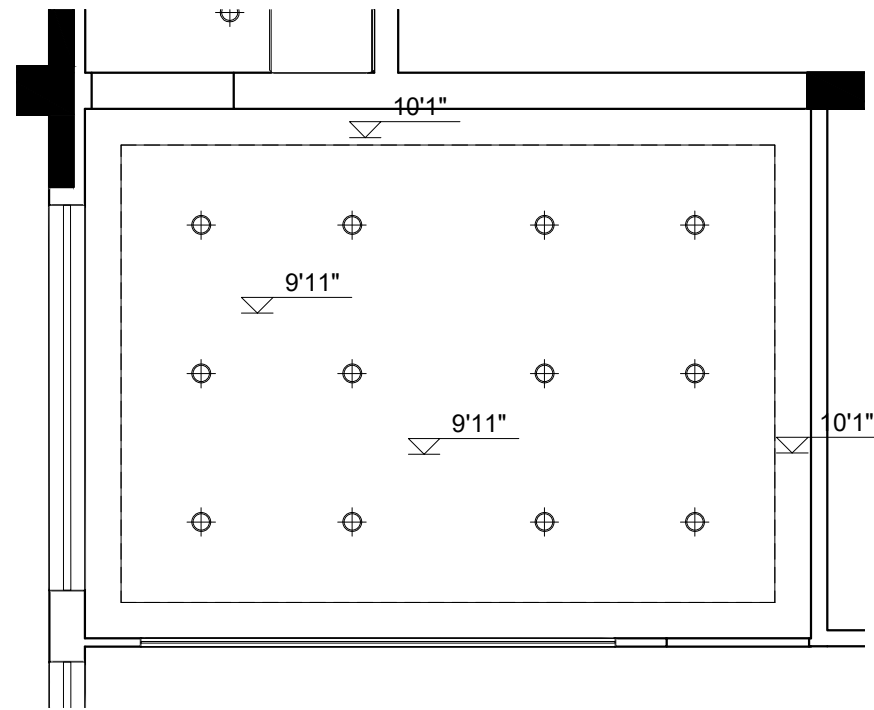


SW DGM1 CEILING LIGHTS(1/4"=1'-0")





SW PANTRY CEILING LIGHTS(1/4"=1'-0")



SW PANTRY CEILING(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

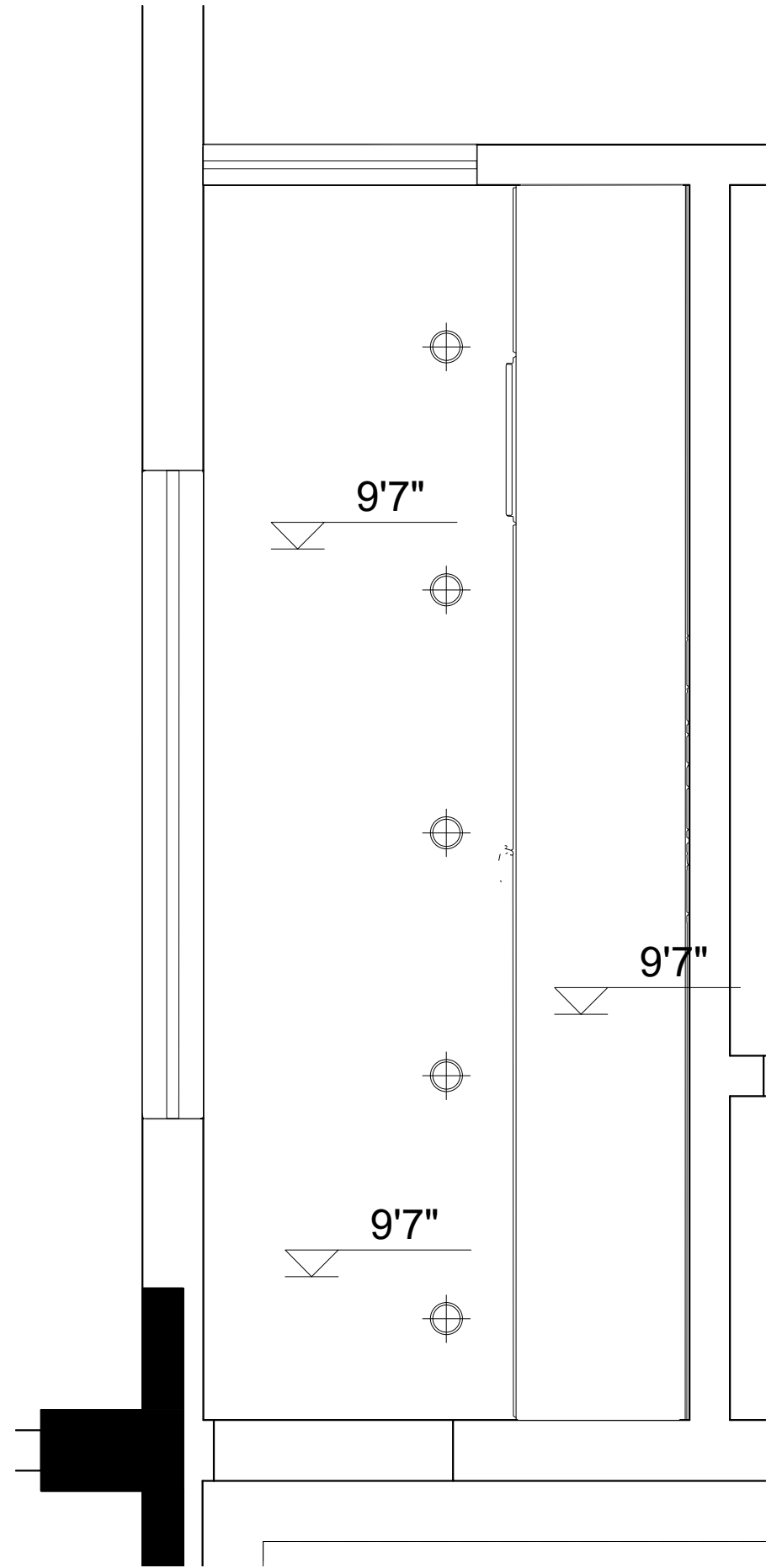


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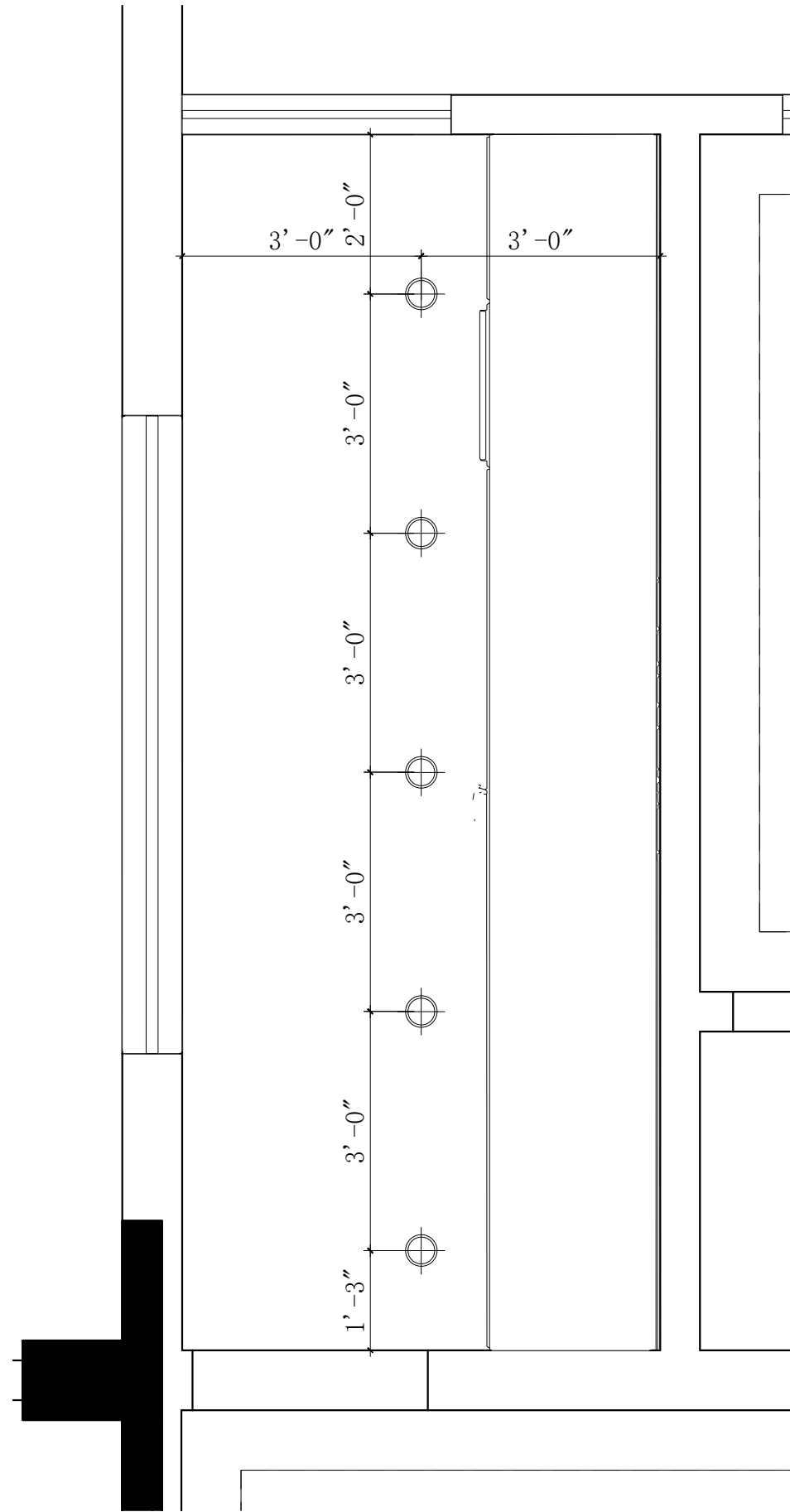
DRAWING TITLE:  
**6th FLOOR**  
SMALL WING PANTRY CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-SP-93**



SW KITCHEN CEILING(1/2"=1'-0")



SW KITCHEN CEILING LIGHTS(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
SMALL WING KITCHEN CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-SK-94**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



PROJECT:

**RENOVATION OF STATE  
LIFE BUILDING No. 9**  
KARACHI



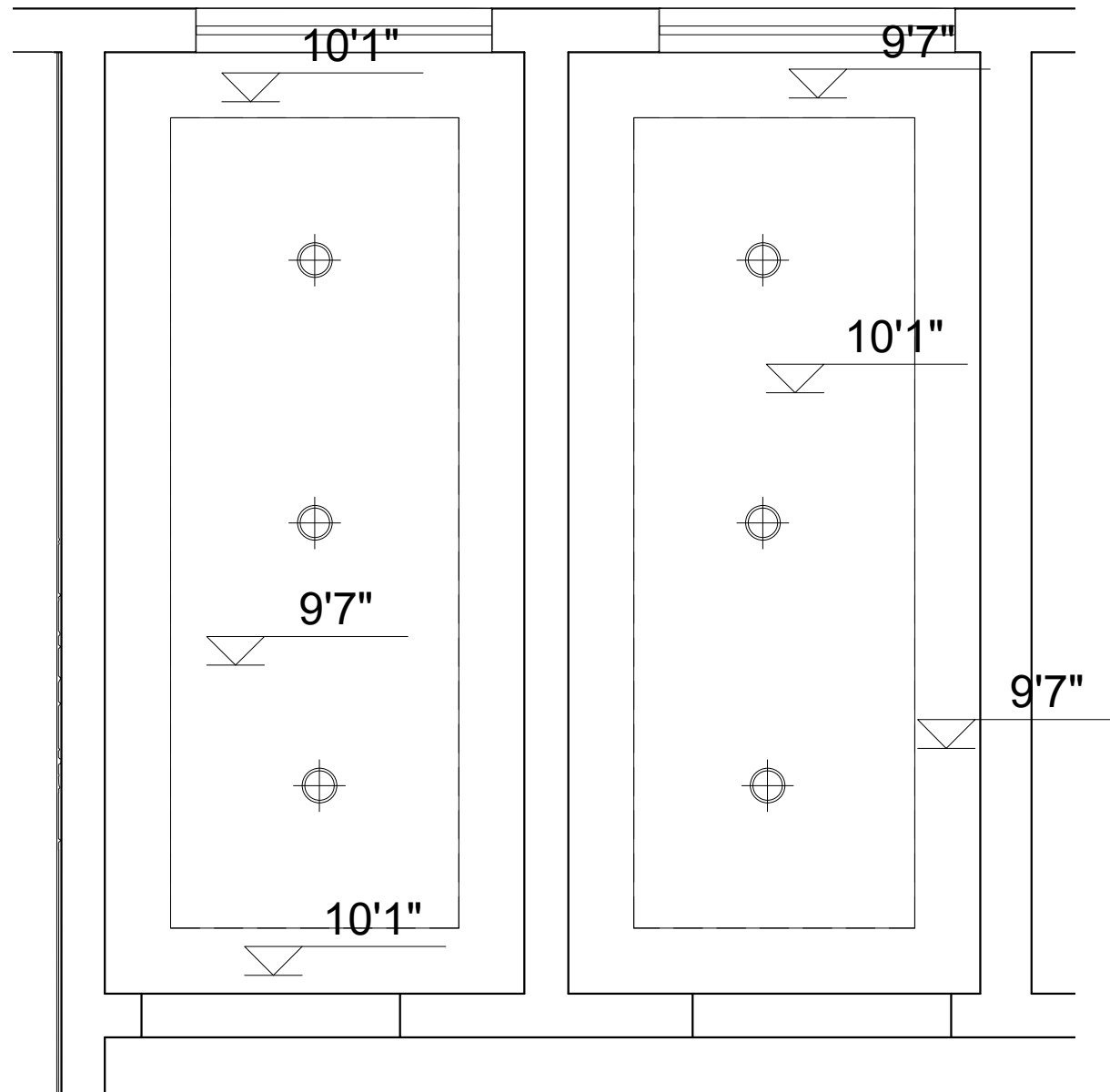
COMMENTS:

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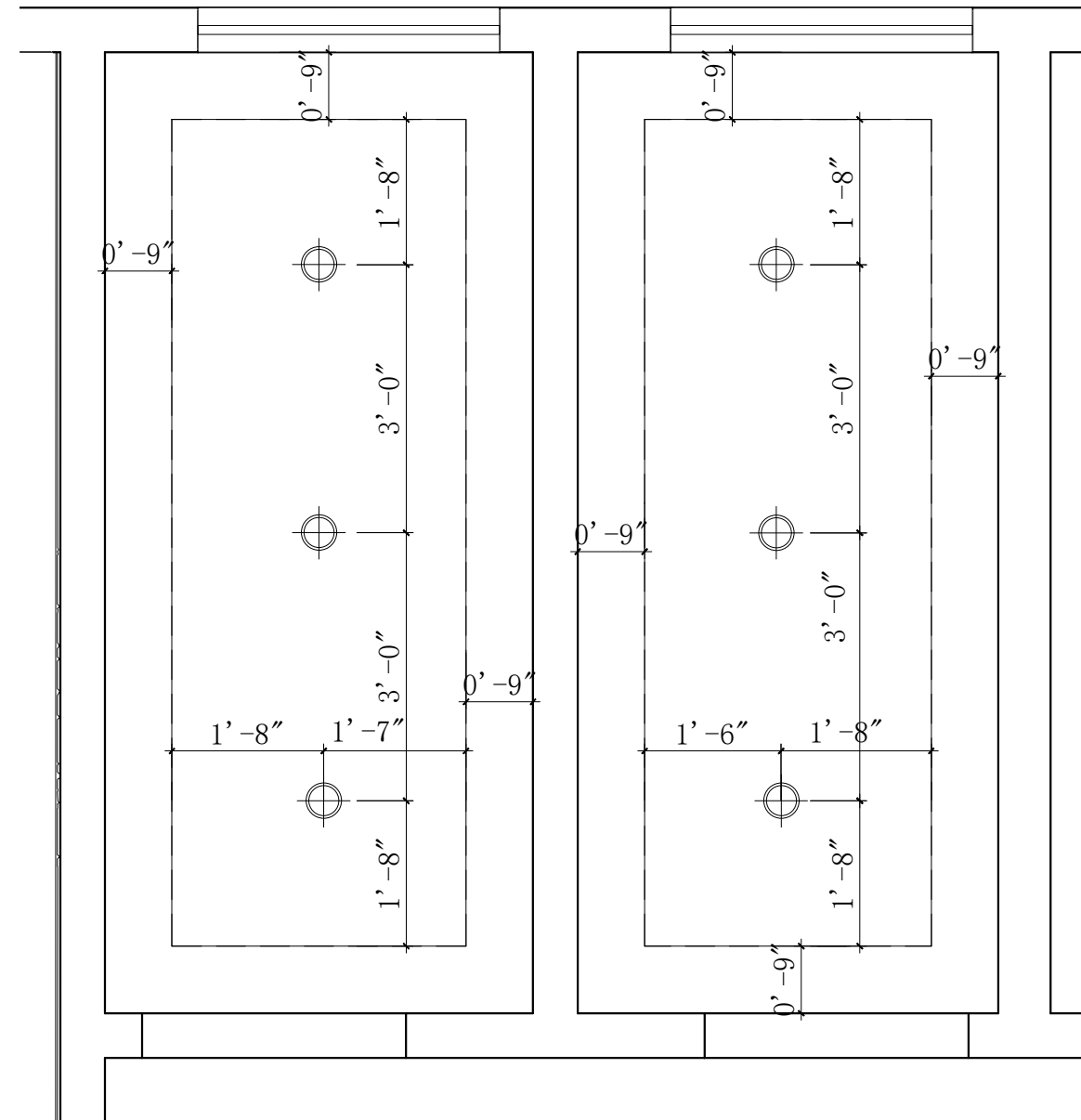
**6th FLOOR**  
SMALL WING CHIEFS TOILET  
CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-SC-95**



SW CHIEFS TOILET CEILING(1/2"=1'-0")



SW CHIEFS BATH CEILING LIGHTS(1/2"=1'-0")

## GENERAL NOTES

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

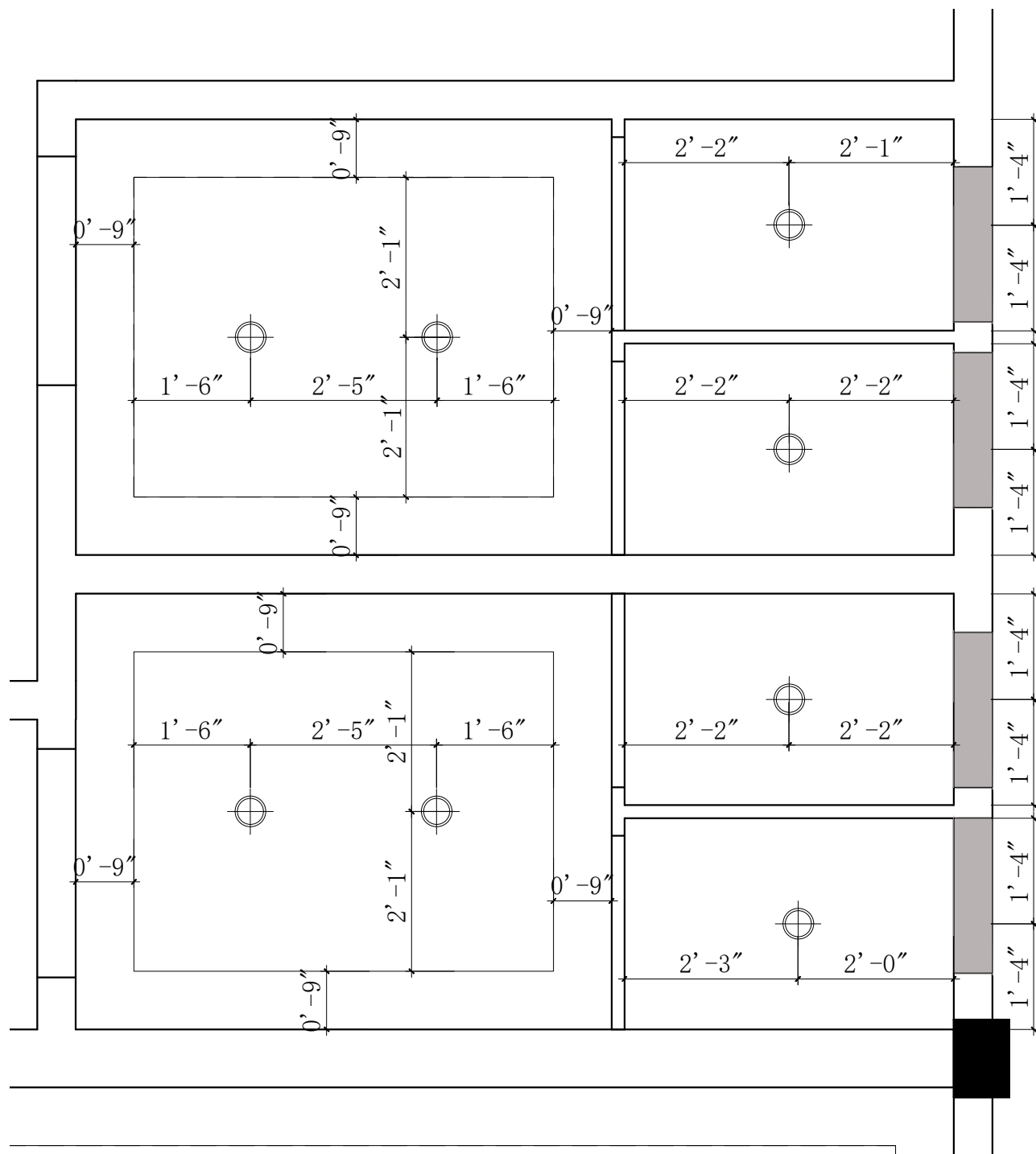


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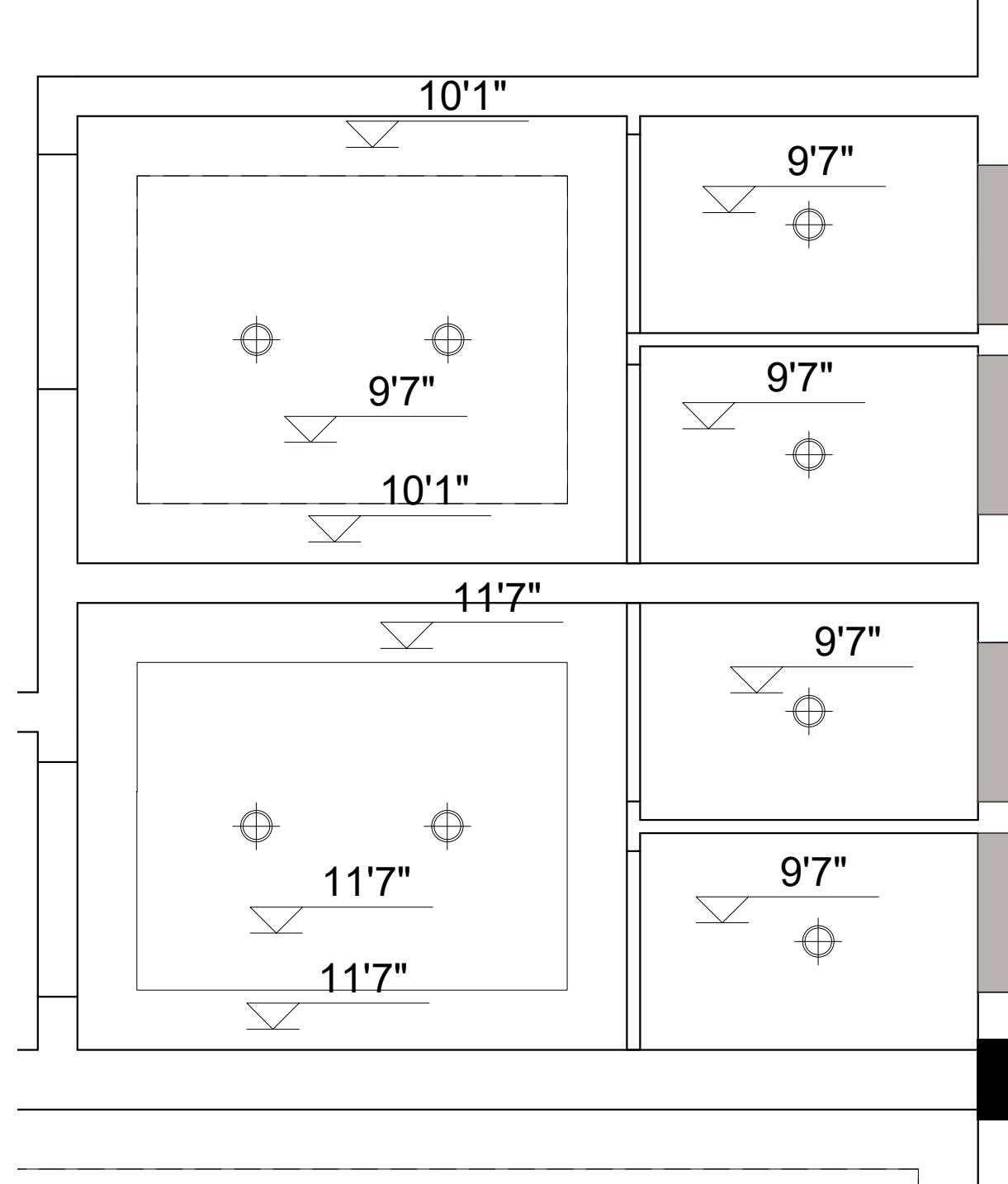
DRAWING TITLE:  
**6th FLOOR**  
SMALL WING TOILET CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL06AR-SPB-96**



SW BATHS CEILING LIGHTS(1/2"=1'-0")



SW BATHS CEILING(1/2"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



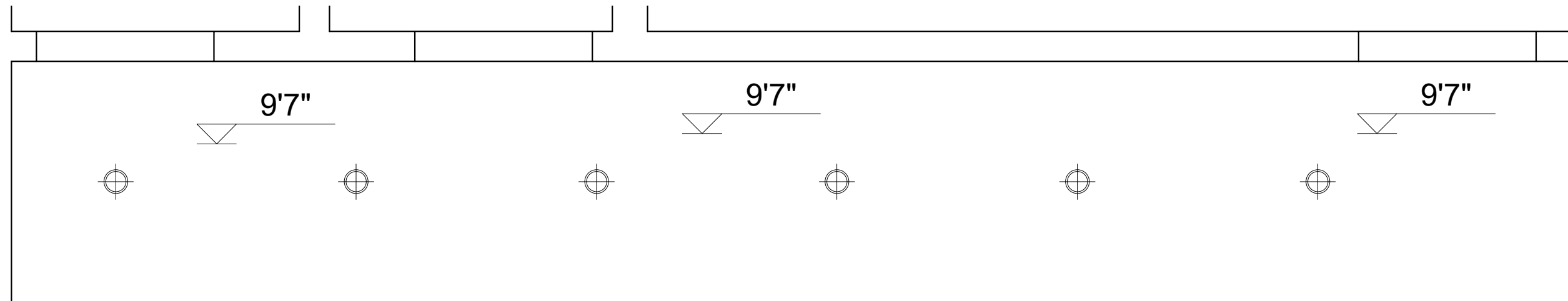
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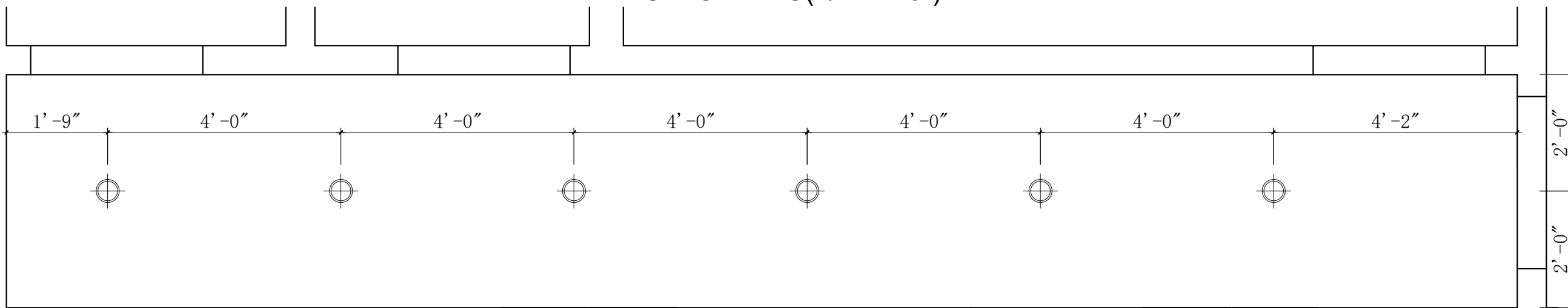
**6th FLOOR**  
SMALL WING SERVICE AREA  
CEILING LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL06AR-SS-97**



SW SERVICE CEILING(1/2"=1'-0")



SW SERVICE CEILING LIGHTS(1/2"=1'-0")



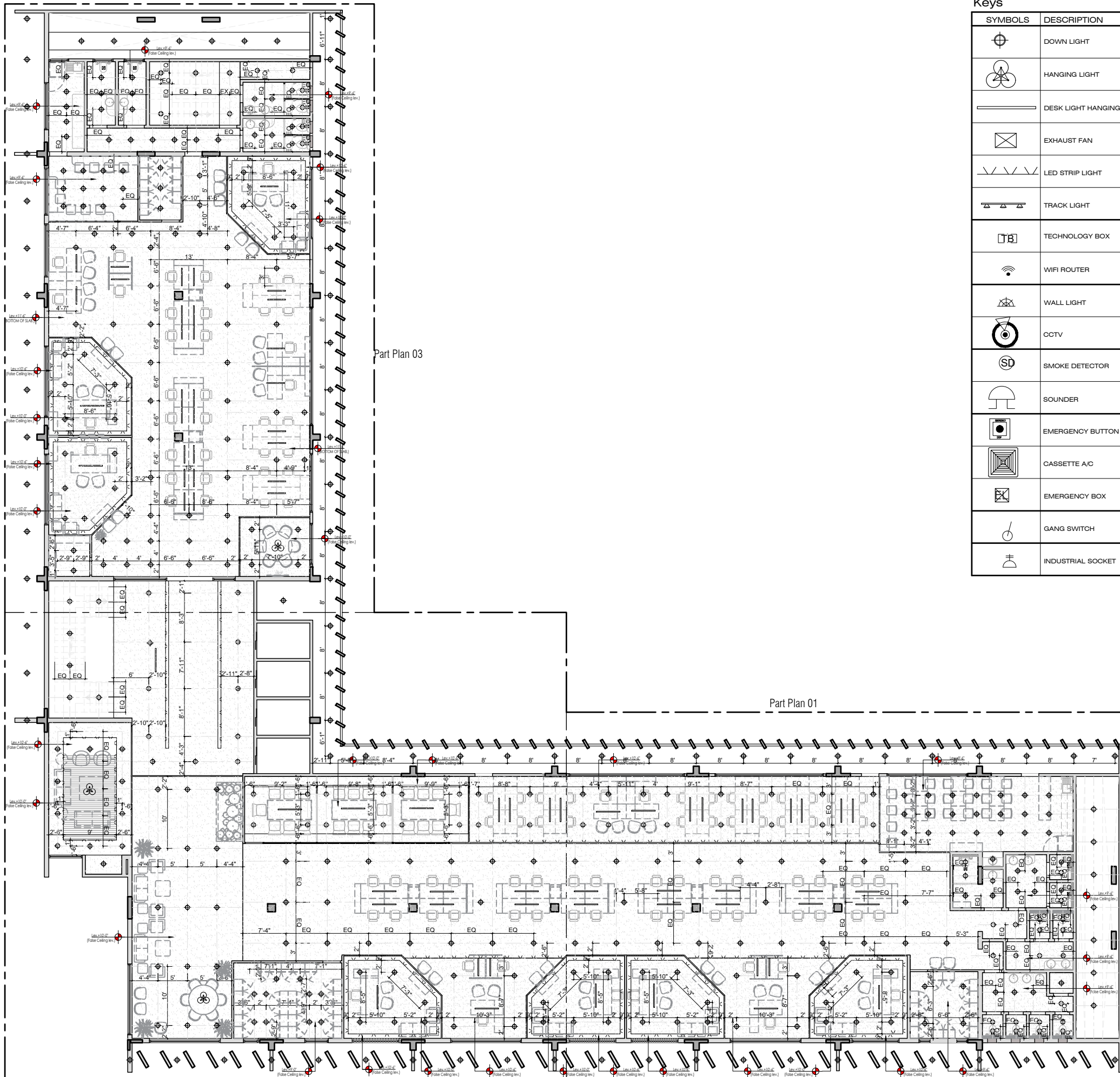
**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**6th FLOOR  
ELECTRICAL DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.





**Keys**

SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT
	TECHNOLOGY BOX
	WIFI ROUTER
	WALL LIGHT
	CCTV
	SMOKE DETECTOR
	SOUNDER
	EMERGENCY BUTTON
	CASSETTE A/C
	EMERGENCY BOX
	GANG SWITCH
	INDUSTRIAL SOCKET

### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

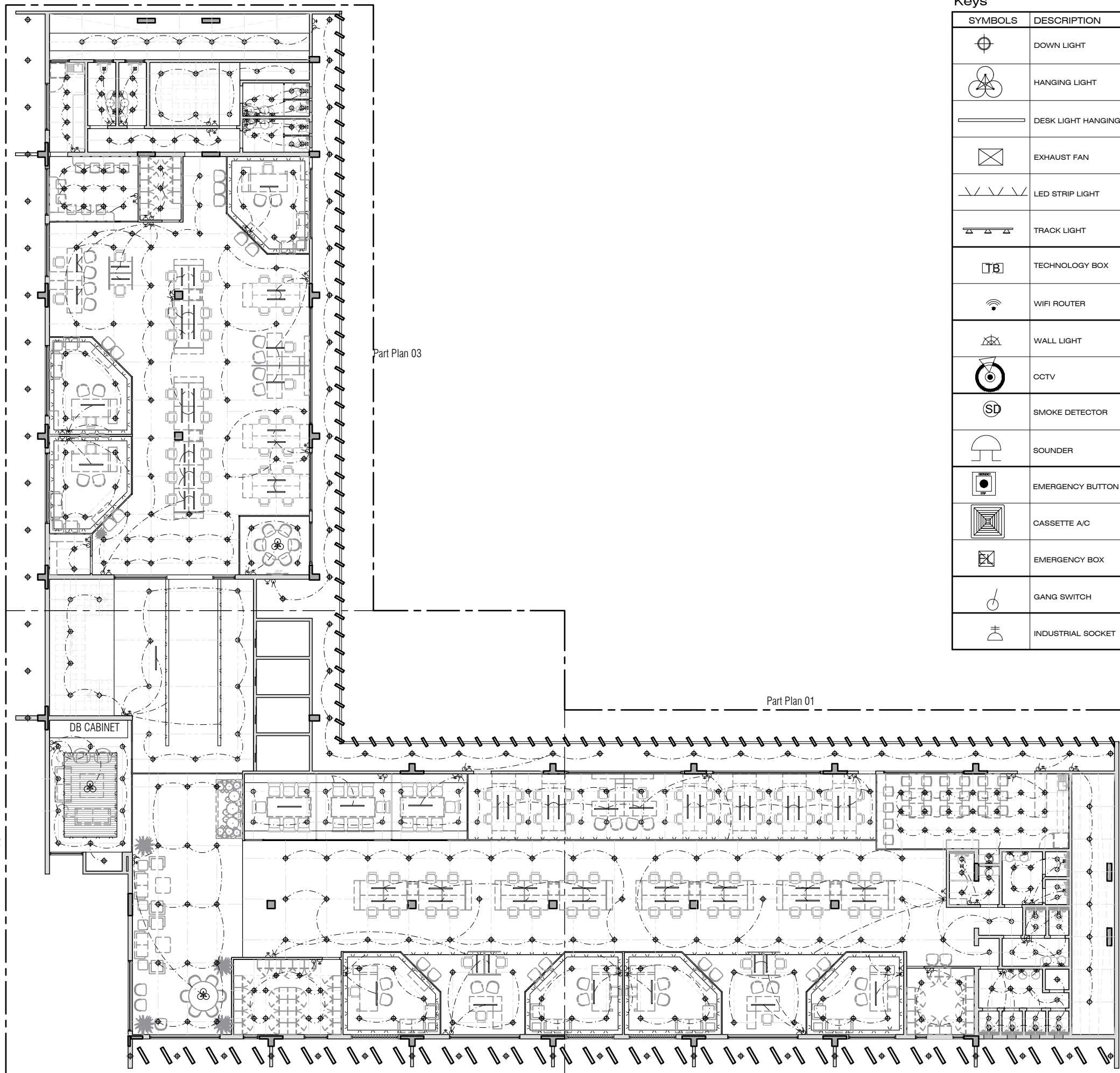
**6th FLOOR**  
ELECTRICAL LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
N.T.S.	JUNE-2024

DWG. No.  
**SL.06.CL-01**

**CL** Electrical Layout Plan  
Scale: N.T.S



**Keys**

SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT
	TECHNOLOGY BOX
	WIFI ROUTER
	WALL LIGHT
	CCTV
	SMOKE DETECTOR
	SOUNDER
	EMERGENCY BUTTON
	CASSETTE A/C
	EMERGENCY BOX
	GANG SWITCH
	INDUSTRIAL SOCKET

## GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

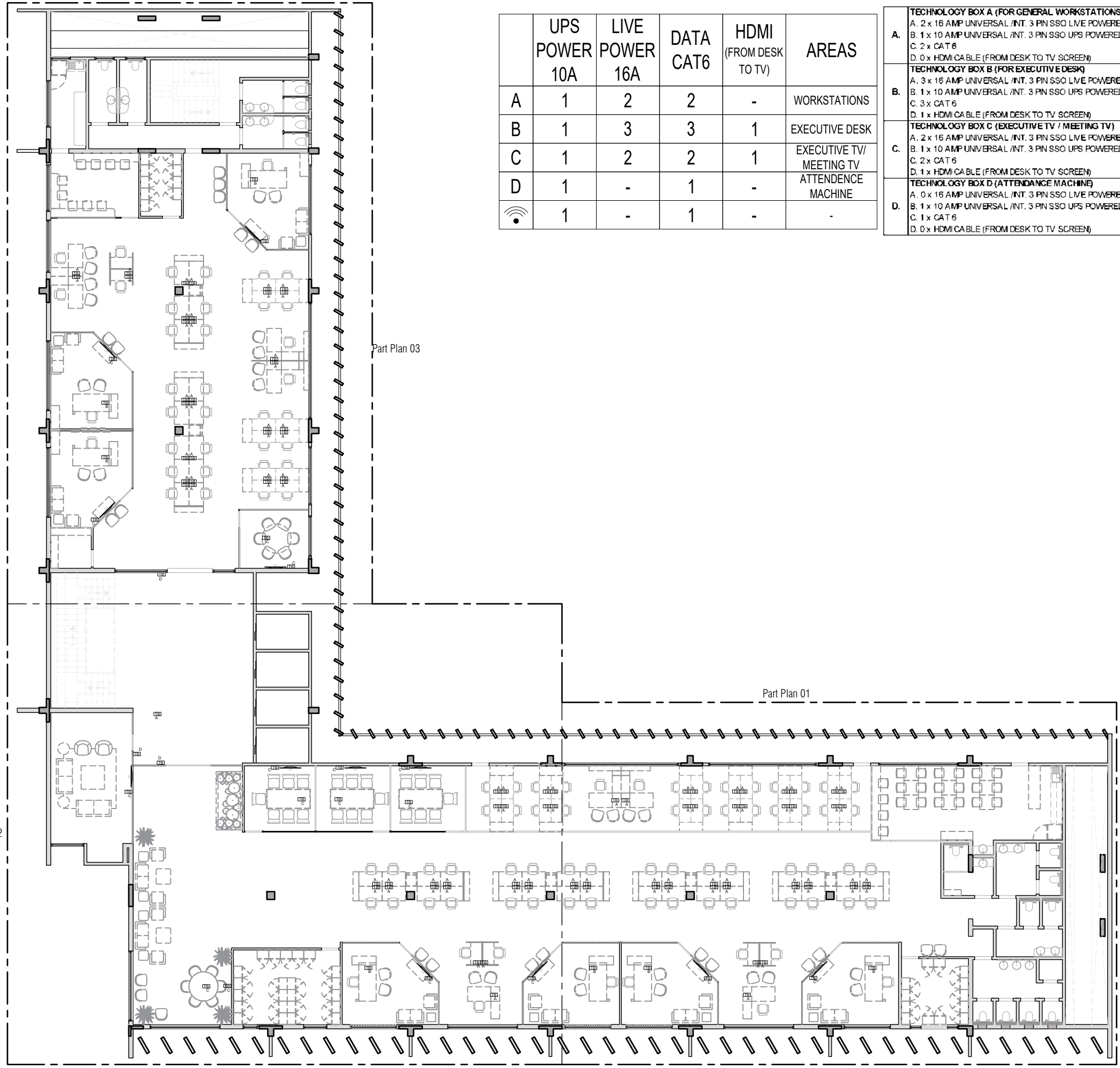
**6th FLOOR**  
LOOPING LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
N.T.S.	@ A3 JUNE-2024

DWG. No.  
**SL.06.LP-01**

**LP** Looping Layout Plan  
Scale: N.T.S



	UPS POWER 10A	LIVE POWER 16A	DATA CAT6	HDMI (FROM DESK TO TV)	AREAS
A	1	2	2	-	WORKSTATIONS
B	1	3	3	1	EXECUTIVE DESK
C	1	2	2	1	EXECUTIVE TV/ MEETING TV
D	1	-	1	-	ATTENDANCE MACHINE
📶	1	-	1	-	-

- TECHNOLOGY BOX A (FOR GENERAL WORKSTATIONS)**  
 A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED.  
 B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED.  
 C. 2 x CAT 6  
 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)
- TECHNOLOGY BOX B (FOR EXECUTIVE DESK)**  
 A. 3 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED  
 B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED  
 C. 3 x CAT 6  
 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)
- TECHNOLOGY BOX C (EXECUTIVE TV / MEETING TV)**  
 A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED  
 B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED  
 C. 2 x CAT 6  
 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)
- TECHNOLOGY BOX D (ATTENDANCE MACHINE)**  
 A. 0 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED  
 B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED  
 C. 1 x CAT 6  
 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)

### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE  
 OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
 KARACHI



COMMENTS:

DRAWING TITLE:  
**6th FLOOR**  
 TECHNOLOGY BOX  
 LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
N.T.S. @ A3	JUNE-2024

DWG. No.  
**SL.06.TB-01**

EL TECH BOX Layout Plan  
 Scale: N.T.S





**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**5th FLOOR  
HVAC DRAWING**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



SCHEDULE OF VRF

SYMBOLS	DESCRIPTION	NO.	TON
	CASSETTE A/C 1T	10	10 T
	CASSETTE A/C 2T	38	76 T

**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**5th FLOOR**  
HVAC LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	ALINA	HISSAN

SCALE	DATE
N.T.S. @ A3	OCT-2024

DWG. No.  
**SL.06.HV-01**

**HV** HVAC Layout Plan  
Scale: N.T.S

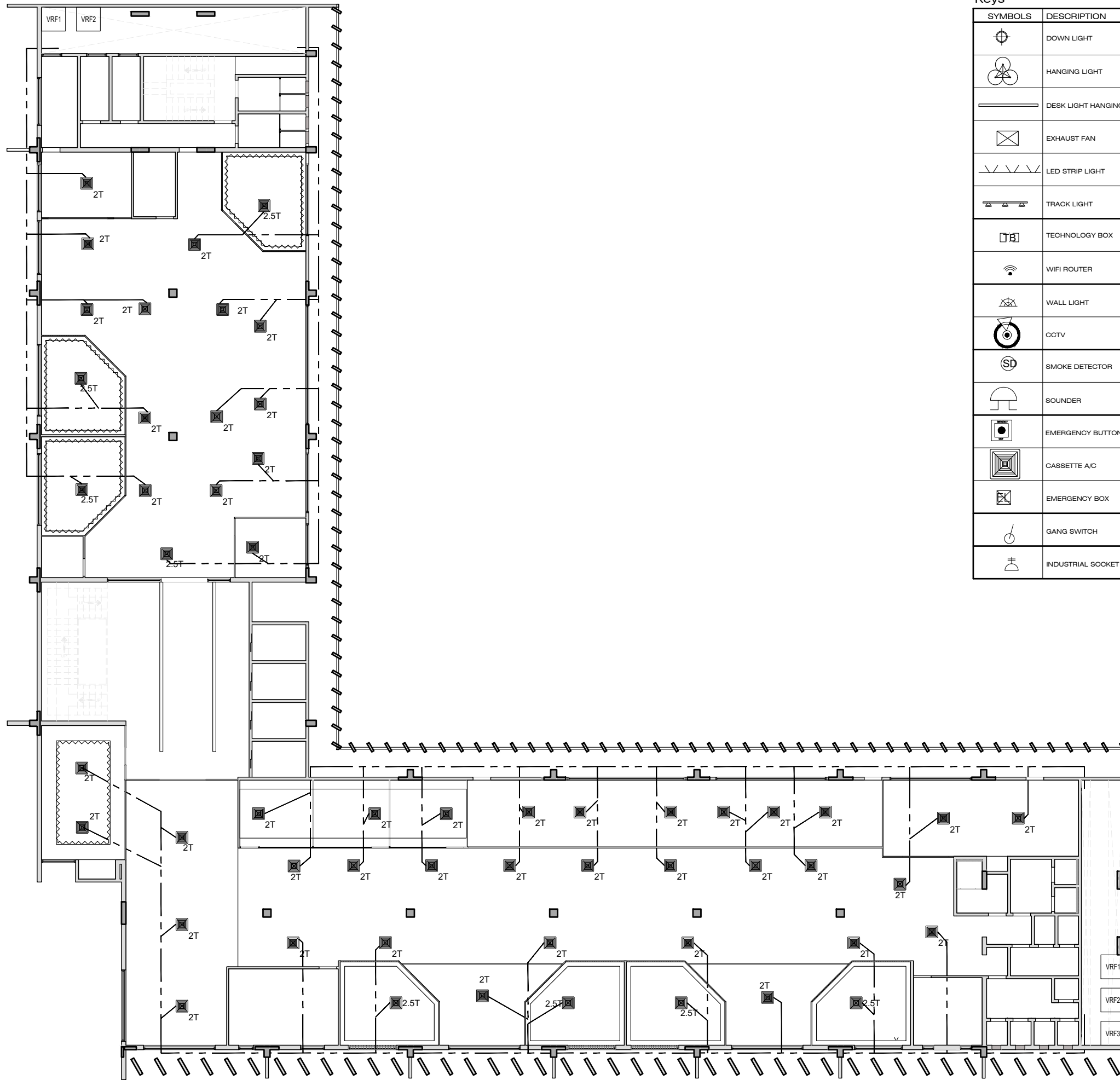


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**6th FLOOR  
HVAC DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



**Keys**

SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT
	TECHNOLOGY BOX
	WIFI ROUTER
	WALL LIGHT
	CCTV
	SMOKE DETECTOR
	SOUNDER
	EMERGENCY BUTTON
	CASSETTE A/C
	EMERGENCY BOX
	GANG SWITCH
	INDUSTRIAL SOCKET

**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
HVAC LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
N.T.S. @ A3	JUNE-2024

DWG. No.  
**SL.06.HV-01**

**HV** HVAC Layout Plan  
Scale: N.T.S



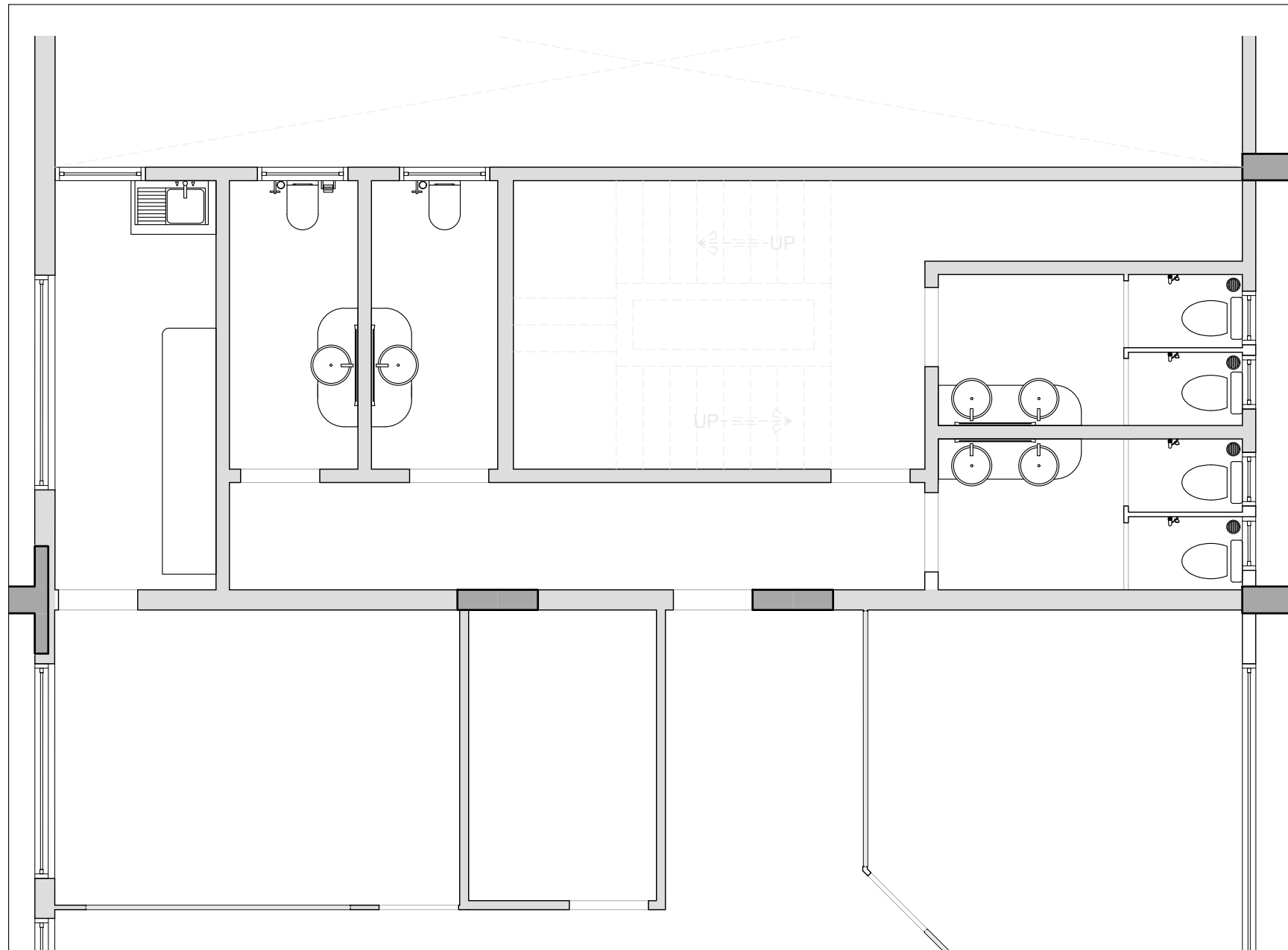
**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**6th FLOOR  
PLUMBING DRAWINGS**

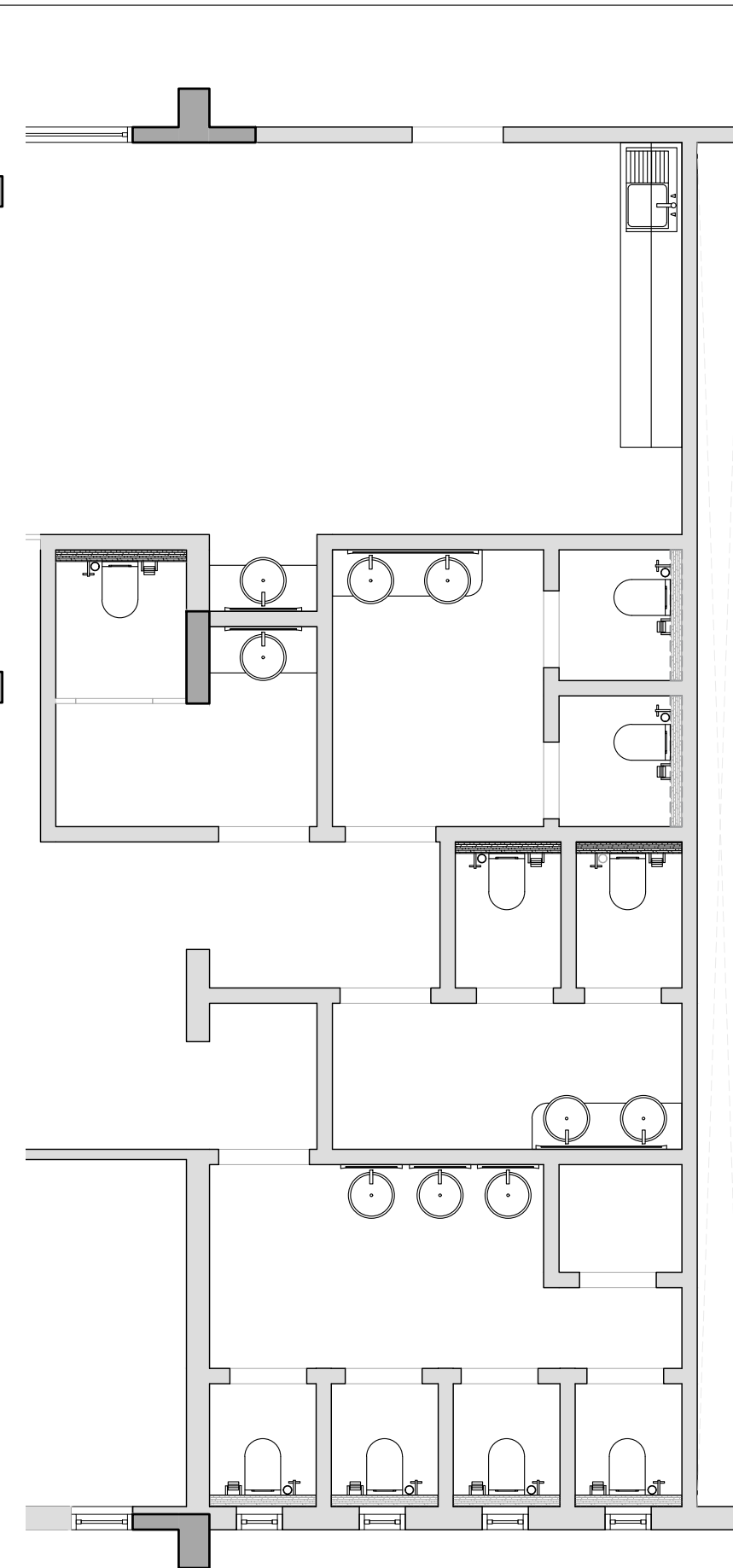


OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.





**PB** Plumbing & Fixtures Layout Plan  
 Scale: N.T.S Small Wing



**PB** Plumbing & Fixtures Layout Plan  
 Scale: N.T.S Large Wing

**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE

**MESA**  
 MUKHTAR ENTERPRISES STUDIO FOR  
 ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING  
 NO. 52-C, LANE NO. 01, AL-MURTAZA  
 COMMERCIAL, PHASE VIII, D.H.A.,  
 KARACHI.

PROJECT:  
**RENOVATION OF STATE  
 LIFE BUILDING No. 9**  
 KARACHI

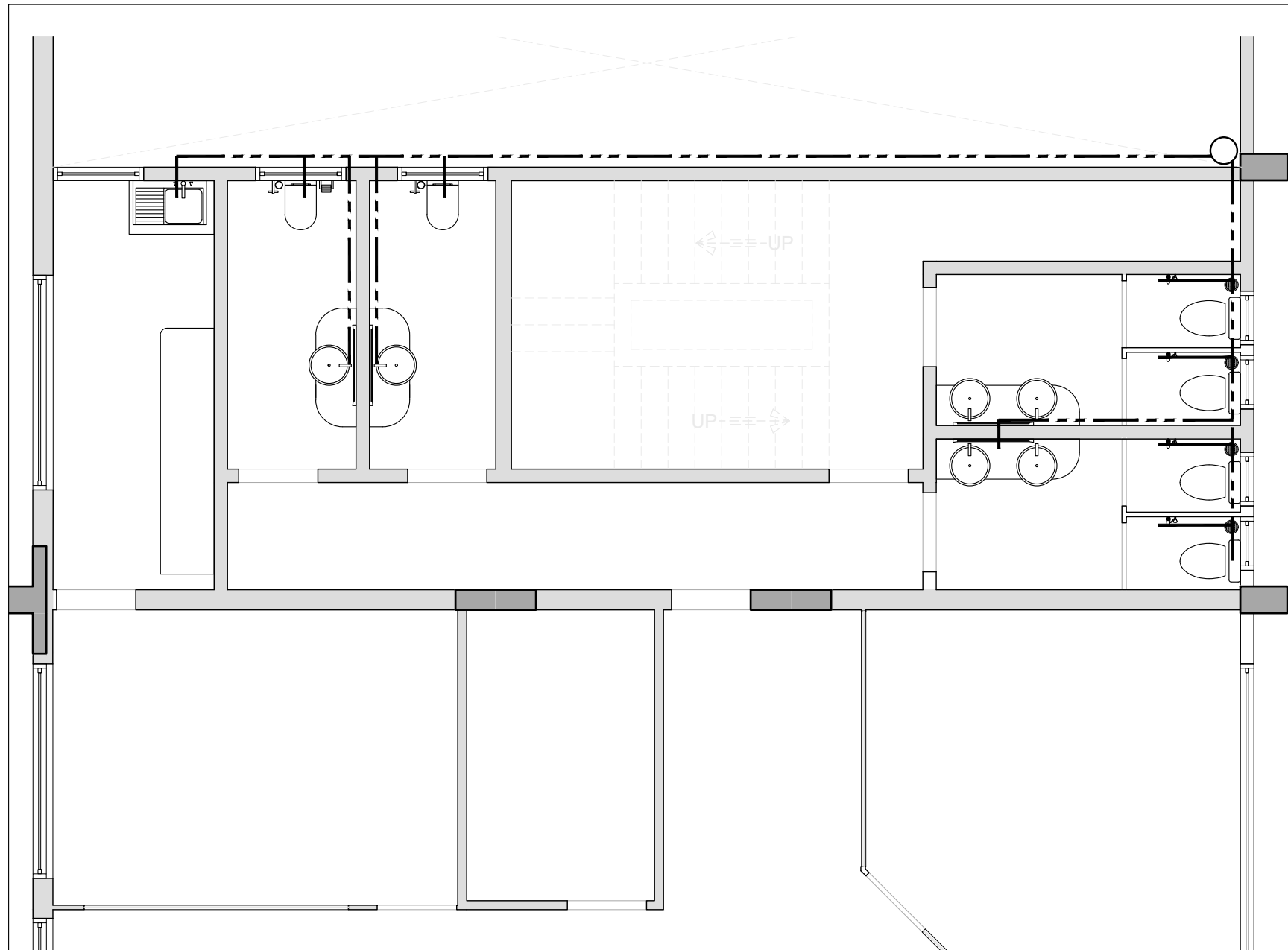
**STATE LIFE**  
 INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

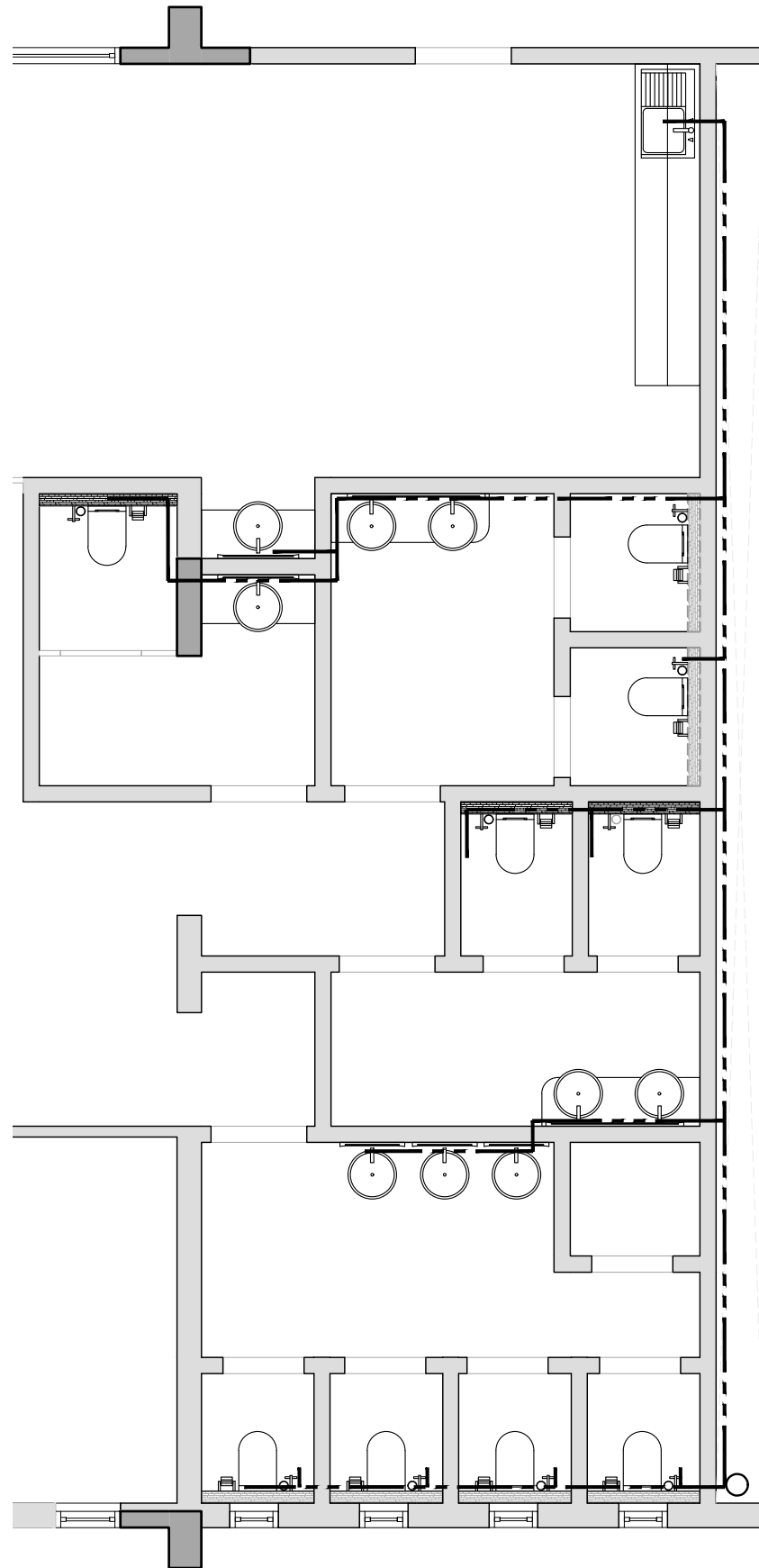
DRAWING TITLE:  
**6th FLOOR**  
 PLUMBING & FIXTURE LAYOUT  
 PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE	DATE	
1/8" = 1'	@ A3	JUNE-2024

DWG. No.  
**SL.06.PB-01**



**PB** Water supply Layout Plan  
Scale: N.T.S Small Wing



**PB** Water supply Layout Plan  
Scale: N.T.S Large Wing

**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:  
**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

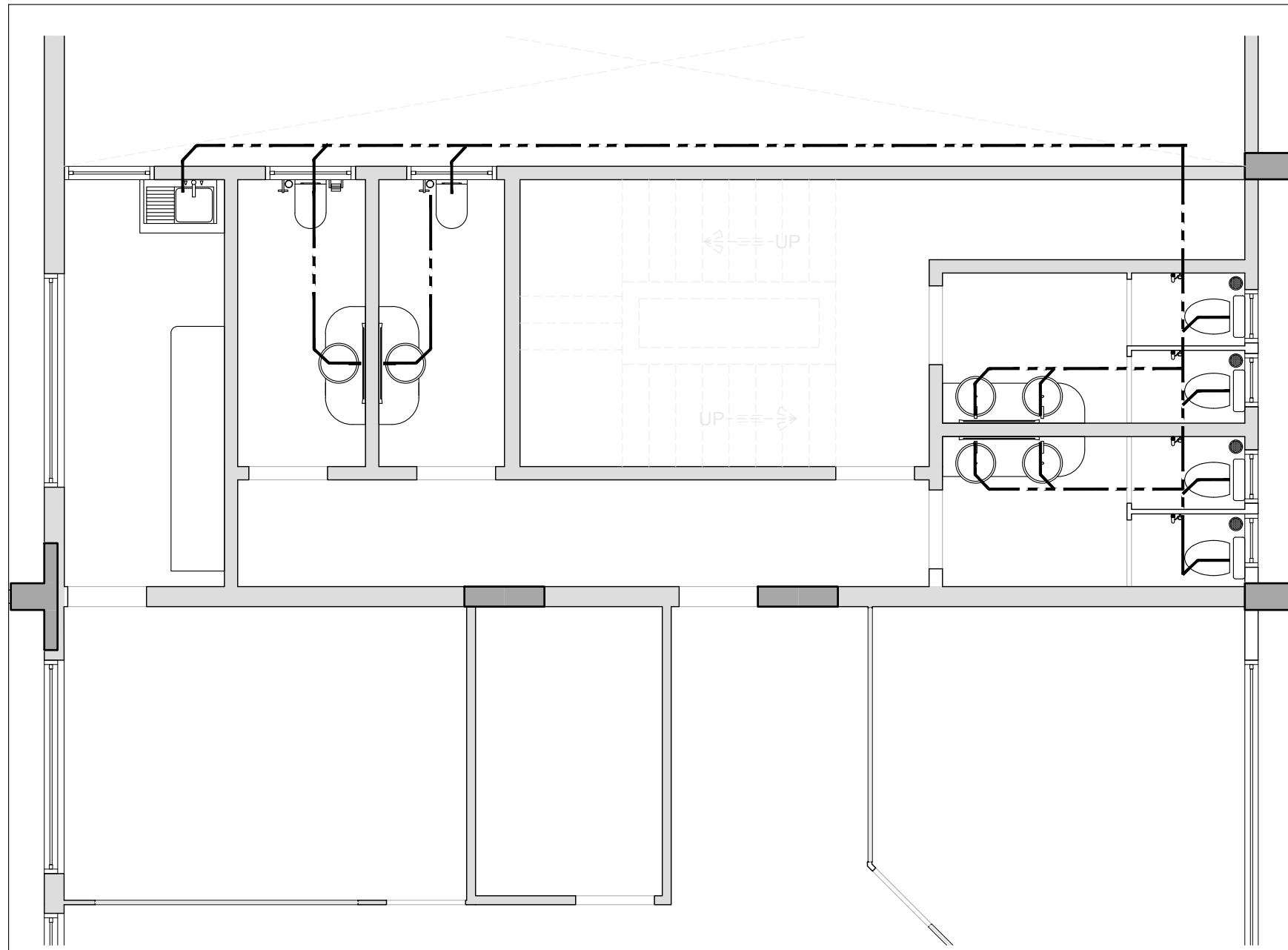
**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

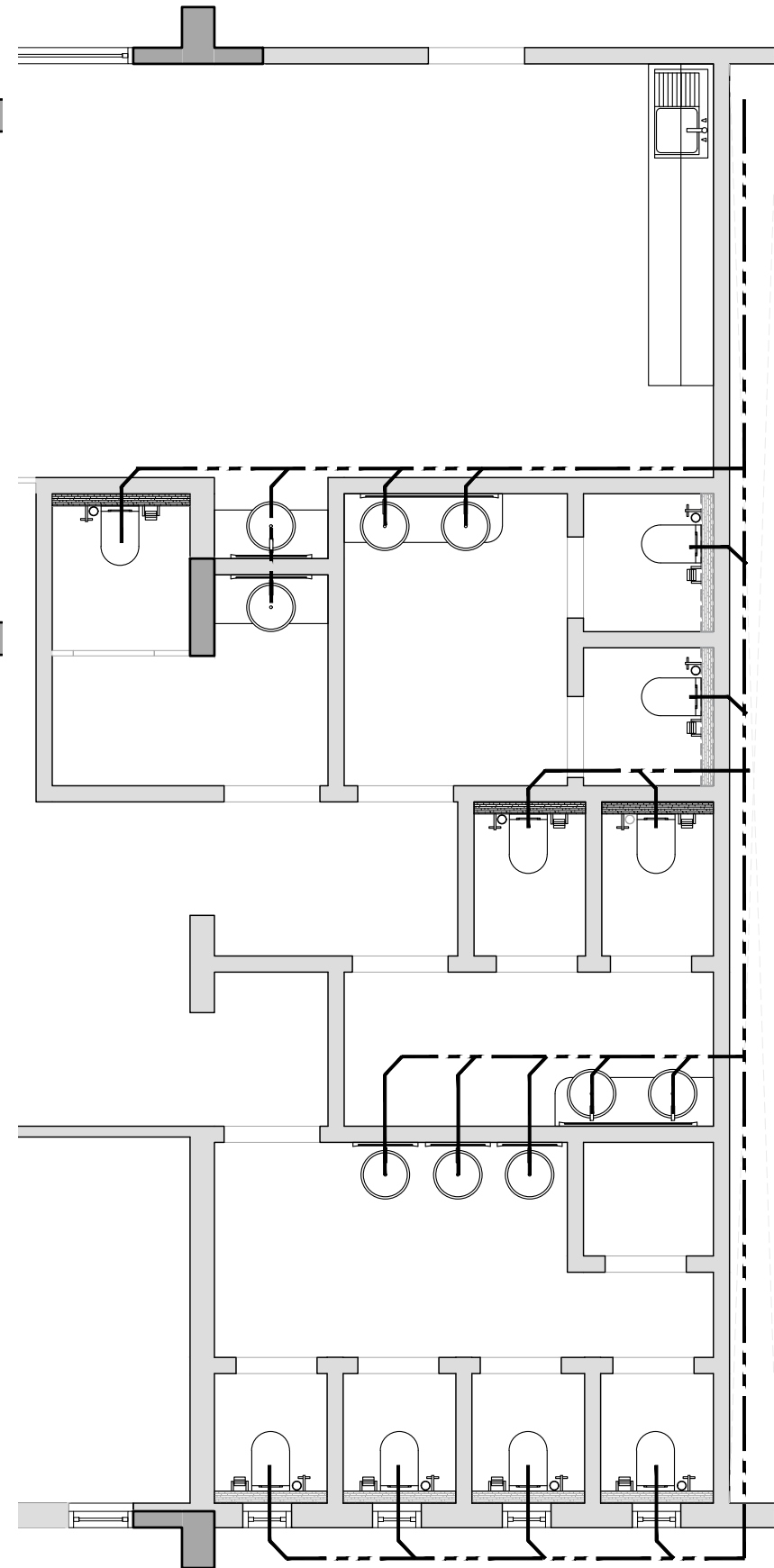
DRAWING TITLE:  
**6th FLOOR**  
WATER SUPPLY LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE	DATE	
1/8" = 1'	@ A3	JUNE-2024

DWG. No.  
**SL.06.PB-02**



**A** Drain Layout Plan  
Scale: N.T.S Small Wing



**PB** Drain Layout Plan  
Scale: N.T.S Large Wing

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:  
**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:  
**6th FLOOR DRAIN LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE	DATE	
1/8" = 1'	@ A3	JUNE-2024

DWG. No.  
**SL.06.PB-03**

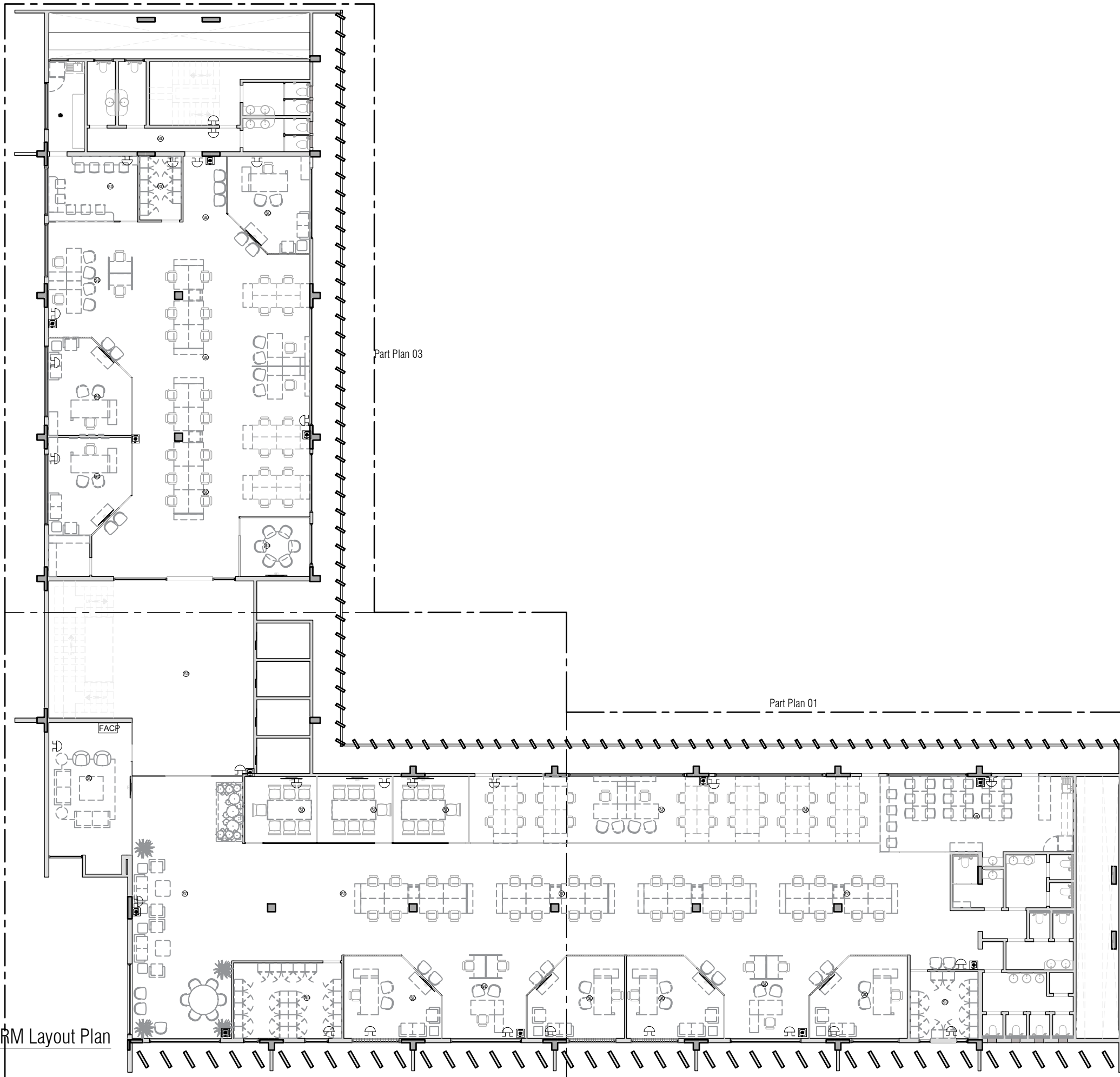


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**6th FLOOR**  
**FIRE ALARM DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**6th FLOOR**  
**FIRE ALARM LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
N.T.S. @ A3	JUNE-2024

DWG. No.  
**SL.06.FA-01**

FA

FIRE ALARM Layout Plan

Scale: N.T.S

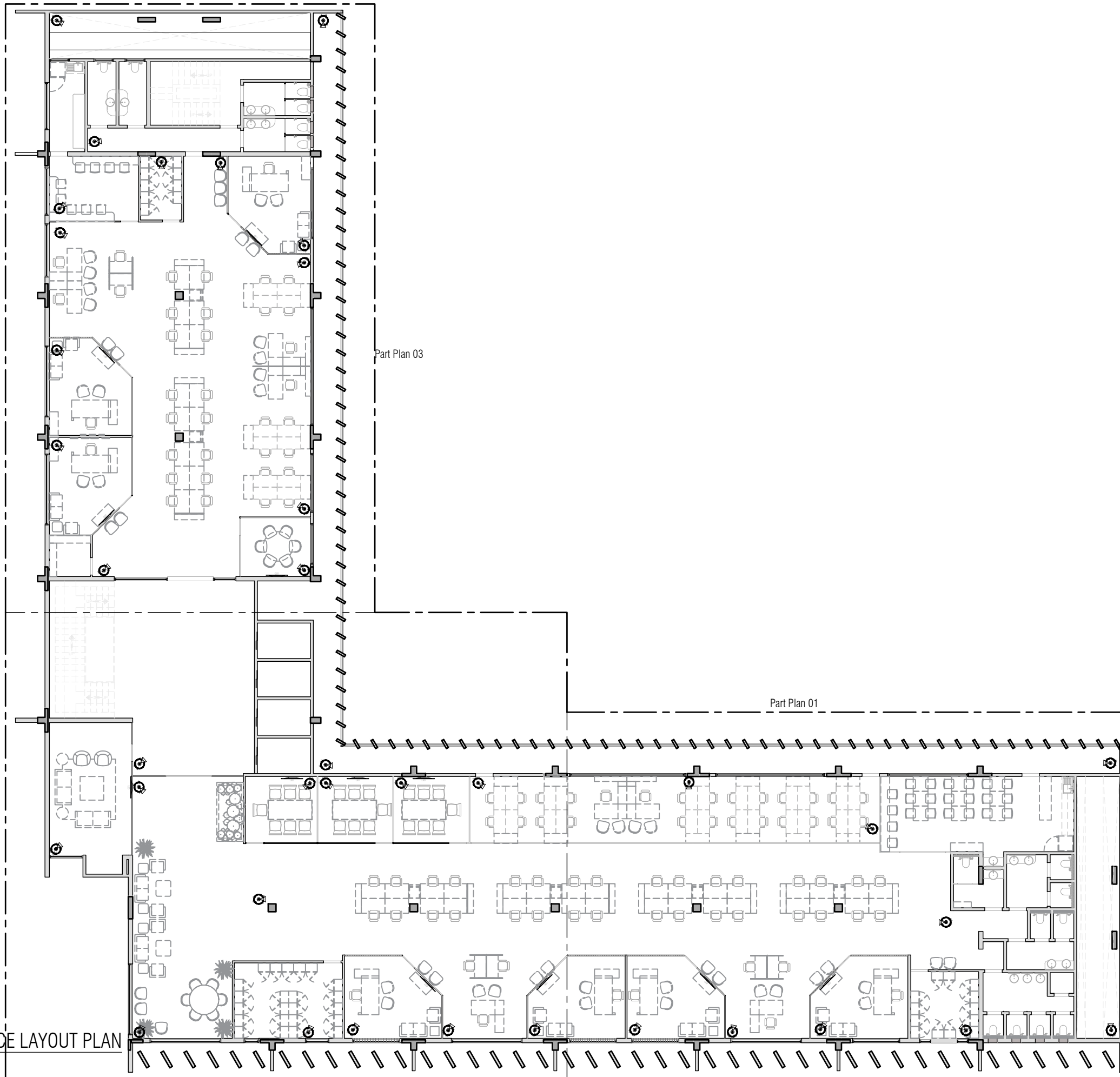


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**6th FLOOR**  
**SECURITY SURVEILLANCE DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



**SS** SECURITY SURVEILLANCE LAYOUT PLAN  
SCALE: N.T.S

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**6TH FLOOR**  
SECURITY SURVEILLANCE LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
N.T.S.	@ A3	JUNE-2024

DWG. No.  
**SL.06.SS-01**



## 7TH FLOOR LIST OF DRAWINGS

<u>TITLE</u>	<u>DWG. No.</u>	<u>S. No.</u>	<u>TITLE</u>	<u>DWG. No.</u>
<b>ARCHITECTURE DRAWINGS</b>				
1. FURNITURE LAYOUT PLAN	SL.07.AR.MP-01	36.	ED4 ELEVATION A	SL.07.AR.ED4-31
2. WORKING LAYOUT PLAN	SL.07.AR.MP-02	37.	ED4 ELEVATION B	SL.07.AR.ED4-32
3. FLOORING LAYOUT PLAN	SL.07.AR.MP-03	38.	ED4 ELEVATION C	SL.07.AR.ED4-33
4. CEILING LAYOUT PLAN	SL.07.AR.MP-04	39.	ED4 ELEVATION D	SL.07.AR.ED4-34
5. CEO SECT PLAN & FLOOR	SL.07.AR.CST-00	40.	ED4 FURNITURE	SL-06-AR.ED4-35
6. CEO SECT ELEVATION C	SL.07.AR.CST-01	41.	ED4 FLOOR PLAN	SL.07.AR.ED4-36
7. CEO SECT ELEVATION D	SL.07.AR.CST-02	42.	ED4 CEILING	SL.07.AR.ED4-37
8. CEO SECT ELEVATION A	SL.07.AR.CST-03	43.	ED4 BATH	SL.07.AR.ED4-38
9. CEO SECT ELEVATION B	SL.07.AR.CST-04	44.	ED5 ELEVATION A	SL.07.AR.ED5-39
10. CEO SECT FURNITURE PLAN	SL.07.AR.CST-05	45.	ED5 ELEVATION B	SL.07.AR.ED5-40
11. CEO SECT CEILING PLAN	SL.07.AR.CST-06	46.	ED5 ELEVATION C	SL.07.AR.ED5-41
12. ED 1 ELEVATION A	SL.07.AR.ED1-07	47.	ED5 ELEVATION D	SL.07.AR.ED5-42
13. ED 1 ELEVATION B	SL.07.AR.ED1-08	48.	ED5 FURNITURE	SL.07.AR.ED5-43
14. ED 1 ELEVATION C	SL.07.AR.ED1-09	49.	ED5 FLOOR	SL.07.AR.ED5-44
15. ED 1 ELEVATION D	SL.07.AR.ED1-10	50.	ED5 CEILING	SL.07.AR.ED5-45
16. ED1 FURNITURE PLAN & ELEVATION A	SL.07.AR.ED1-11	51.	ED5 BATH	SL.07.AR.ED5-46
17. ED1 FLOORING PLAN	SL.07.AR.ED1-12	52.	COFFEE CORNER ELEVATION A	SL.07.AR.CA-47
18. ED1 CEILING	SL.07.AR.ED1-13	53.	COFFEE AREA ELEVATION B	SL.07.AR.CA-48
19. ED1 BATH	SL.07.AR.ED1-14	54.	COFFEE AREA ELEVATION C	SL.07.AR.CA-49
20. ED2 ELEVATION A	SL.07.AR.ED2-15	55.	COFFEE AREA ELEVATION D	SL.07.AR.CA-50
21. ED2 ELEVATION B	SL.07.AR.ED2-16	56.	COFFEE AREA FLOOR	SL.07.AR.CA-51
22. ED2 ELEVATION C	SL.07.AR.ED2-17	57.	COFFEE AREA FURNITURE LAYOUT	SL.07.AR.CA-52
23. ED2 ELEVATION D	SL.07.AR.ED2-18	58.	COFFEE AREA CEILING	SL.07.AR.CA-53
24. ED2 FURNITURE	SL.07.AR.ED2-19	59.	LARGE WING STAFF ELEVATION A	SL.07.AR.LS-54
25. ED2 FLOOR PLAN	SL.07.AR.ED2-20	60.	LARGE WING STAFF ELEVATION B	SL.07.AR.LS-55
26. ED2 CEILING	SL.07.AR.ED2-21	61.	LARGE WING STAFF ELEVATION C	SL.07.AR.LS-56
27. ED2 BATH ELEVATION	SL.07.AR.ED2-22	62.	-	SL.07.AR.LS-57
28. ED3 ELEVATION A	SL.07.AR.ED3-23	63.	LARGE WING STAFF FLOOR	SL.07.AR.LS-58
29. ED3 ELEVATION B	SL.07.AR.ED3-24	64.	LARGE WING STAFF CEILING	SL.07.AR.LP-59
30. ED3 ELEVATION C	SL.07.AR.ED3-25	65.	RETIRING ROOM ELEVATION A	SL.07.AR.RR-60
31. ED3 ELEVATION D	SL.07.AR.ED3-26	66.	RETIRING ROOM ELEVATION B	SL.07.AR.RR-61
32. ED3 FURNITURE	SL.07.AR.ED3-27	67.	RETIRING ROOM ELEVATION C	SL.07.AR.RR-62
33. ED3 FLOOR PLAN	SL.07.AR.ED3-28	68.	RETIRING ROOM ELEVATION D	SL.07.AR.RR-63
34. ED3 CEILING	SL.07.AR.ED3-29	69.	RETIRING ROOM FLOOR	SL.07.AR.RR-64
35. ED3 BATH	SL.07.AR.ED3-30			

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE  
OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
LIST OF DRAWINGS

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
1/8" = 1'	@ A3	JUNE-2024

DWG. No.  
**SL.07.LD-01**



## 7TH FLOOR LIST OF DRAWINGS

	<u>TITLE</u>	<u>DWG. No.</u>	<u>S. No.</u>	<u>TITLE</u>	<u>DWG. No.</u>
	<b>ARCHITECTURE DRAWINGS</b>				
71	RETIRING ROOM FURNITURE	SL.07.AR.RR-65	107	CONFERENCE ROOM FLOOR	SL.07.AR.CR-101
72	RETIRING ROOM CEILING	SL.07.AR.RR-66	108	CONFERENCE ROOM FURNITURE	SL.07.AR.CE-102
73	CONFERENCE ROOM ELEVATION A	SL.07.AR.RR-67	109	CONFERENCE ROOM CEILING	SL.07.AR.CR-103
74	CONFERENCE ROOM ELEVATION B	SL.07.AR.CR-68	110	EXECUTIVE LOUNGE ELEVATION A	SL.07.AR.EL-104
75	CONFERENCE ROOM ELEVATION C	SL.07.AR.CR-69	111	EXECUTIVE LOUNGE ELEVATION B	SL.07.AR.EL-105
76	CONFERENCE ROOM ELEVATION D	SL.07.AR.CR-70	112	EXECUTIVE LOUNGE ELEVATION C	SL.07.AR.EL-106
77	CONFERENCE ROOM FLOOR	SL.07.AR.CR-71	113	EXECUTIVE LOUNGE ELEVATION D	SL.07.AR.EL-107
78	CONFERENCE ROOM FURNITURE	SL.07.AR.CR-72	114	EXECUTIVE LOUNGE FLOOR	SL.07.AR.ELF-108
79	CONFERENCE ROOM CEILING	SL.07.AR.CR-73	115	EXECUTIVE LOUNGE FURNITURE	SL.07.AR.ELF-109
80	CEO ROOM ELEVATION A	SL.07.AR.CEO-74	116	EXECUTIVE LOUNGE CEILING	SL.07.AR.ECL-110
81	CEO ROOM ELEVATION B	SL.07.AR.CEO-75	117	CEO ROOM ELEVATION B	SL.07.AR.CEO-111
82	CEO ROOM ELEVATION C	SL.07.AR.CEO-76	118	CEO ROOM ELEVATION C	SL.07.AR.CEO-112
83	CEO ROOM ELEVATION D	SL.07.AR.CEO-77	119	CEO ROOM ELEVATION D	SL.07.AR.CEO-113
84	CEO ROOM FLOOR	SL.07.AR.CEO-78	120	CEO ROOM FLOOR	SL.07.AR.CEO-114
85	CEO ROOM FURNITURE	SL.07.AR.CEO-79	121	CEO ROOM FURNITURE	SL.07.AR.CEO-115
86	CEO ROOM CEILING	SL.07.AR.CR-80	122	CHAIRMAN OFFICE FURNITURE	SL.07.AR.CO-116
87	CEO ROOM BATH	SL.07.AR.CEO-81	123	CHAIRMAN OFFICE CEILING	SL.07.AR.CO-117
88	CEO PANTRY	SL.07.AR.CEO-82	124	CHAIRMAN OFFICE BATH	SL.07.AR.CO-118
89	BOARD SECT ELEVATION A	SL.07.AR.BS-83	125	VISITING DIRECTOR ELEVATION A	SL.07.AR.VD-119
90	BOARD SECT ELEVATION B	SL.07.AR.BS-84	126	VISITING DIRECTOR ELEVATION B	SL.07.AR.VD-120
91	BOARD SECT ELEVATION C	SL.07.AR.BS-85	127	VISITING DIRECTOR ELEVATION C	SL.07.AR.VD-121
92	BOARD SECT ELEVATION D	SL.07.AR.BS-86	128	VISITING DIRECTOR ELEVATION D	SL.07.AR.VD-122
93	BOARD SECT FLOOR	SL.07.AR.BS-87	129	VISITING DIRECTOR FLOOR	SL.07.AR.VD-123
94	BOARD SECT FURNITURE	SL.07.AR.BS-88	130	VISITING DIRECTOR FURNITURE	SL.07.AR.VD-124
95	BOARD SECT CEILING	SL.07.AR.BS-89	131	VISITING DIRECTOR CEILING	SL.07.AR.VD-125
96	BOARD SECT STAFF ELEVATION A	SL.07.AR.SPB-90	132	VISITING DIRECTOR BATH	SL.07.AR.VD-126
97	BOARD SECT STAFF ELEVATION B	SL.07.AR.BS-91	133	BOARD SECT STAFF ELEVATION B	SL.07.AR.BS-127
98	BOARD SECT STAFF ELEVATION C	SL.07.AR.BS-92	134	BOARD SECT STAFF ELEVATION C	SL.07.AR.BS-128
99	BOARD SECT STAFF ELEVATION D	SL.07.AR.BS-93	135	BOARD SECT STAFF ELEVATION D	SL.07.AR.BS-129
100	BOARD SECT STAFF FLOOR	SL.07.AR.BS-94	136	BOARD SECT STAFF FLOOR	SL.07.AR.BS-130
101	BOARD SECT STAFF FURNITURE	SL.07.AR.BS-95	137	EXECUTIVE STAFF FLOOR	SL.07.AR.ES-131
102	BOARD SECT STAFF CEILING	SL.07.AR.BS-96	138	EXECUTIVE STAFF FURNITURE	SL.07.AR.ES-132
103	BOARD ROOM ELEVATION A	SL.07.AR.BS-97	139	EXECUTIVE STAFF CEILING	SL.07.AR.ES-133
104	BOARD ROOM ELEVATION B	SL.07.AR.BR-98	140	HALL WAY ELEVATION A	SL.07.AR.HW-134
105	BOARD ROOM ELEVATION C	SL.07.AR.BR-99	141	HALL WAY ELEVATION B	SL.07.AR.HW-135
106	BOARD ROOM ELEVATION D	SL.07.AR.BR-100	142	HALL WAY ELEVATION C	SL.07.AR.HW-136

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#### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE  
OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
LIST OF DRAWINGS

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	JUNE-2024

DWG. No.  
**SL.07.LD-02**

## 7TH FLOOR LIST OF DRAWINGS

TITLE	DWG. No.	S. No.	TITLE	DWG. No.
143 HALL WAY ELEVATION C	SL.07.AR.HW-136			
144 HALL WAY ELEVATION D	SL.07.AR.HW-137		<b><u>ELECTRICAL DRAWINGS</u></b>	
145 HALL WAY FLOOR	SL.07.AR.HW-138	170	CEILING LAYOUT PLAN	SL.06.CL-01
146 HALL WAY CEILING	SL.07.AR.HW-139	171	LOOPING LAYOUT PLAN	SL.06.LP-02
147 RECEPTION LOBBY ELEVATION A	SL.07.AR.RL-140	172	TECNOLOGY BOX LAYOUT PLAN	SL.06.TB-03
148 RECEPTION LOBBY ELEVATION B	SL.07.AR.RL-141		<b><u>HVAC DRAWINGS</u></b>	
149 RECEPTION LOBBY ELEVATION C	SL.07.AR.RL-142			
150 RECEPTION LOBBY ELEVATION D	SL.07.AR.RL-143	173	HVAC LAYOUT PLAN	SL.06.HV-01
151 RECEPTION LOBBY FLOOR	SL.07.AR.RL-144		<b><u>PLUMBING DRAWINGS</u></b>	
152 RECEPTION LOBBY FURNITURE	SL.07.AR.RL-145	174	PLUMBING & FIXTURE LAYOUT PLAN	SL.06.PB-01
153 RECEPTION LOBBY CEILING	SL.07.AR.RL-146	175	WATER SUPPLY LAYOUT PLAN	SL.06.PB-02
154 FOYER ELEVATION A	SL.07.AR.FO-147	176	DRAIN LAYOUT PLAN	SL.06.PB-03
155 FOYER ELEVATION B	SL.07.AR.FO-148		<b><u>FIRE ALARAM DRAWINGS</u></b>	
156 FOYER ELEVATION C	SL.07.AR.FO-149			
157 FOYER ELEVATION D	SL.07.AR.FO-150	177	FIRE ALARAM LAYOUT PLAN	SL.06.HV-01
158 FOYER FLOOR	SL.07.AR.FO-151		<b><u>SECURITY SURVEILLANCE DRAWINGS</u></b>	
159 FOYER CEILING	SL.07.AR.FO-152			
160 PB ELEVATION	SL.07.AR.PB-153	178	SECURITY SURVEILLANCE LAYOUT PLAN	SL.06.SS-01
161 PB+K FLOOR	SL.07.AR.PB-154			
162 PB+K CEILING	SL.07.AR.PB-155			
163 PB FURNITURE	SL.07.AR.PB-156			
164 PANTRY ELEVATION	SL.07.AR.PB-157			
165 PB ELEVATION	SL.07.AR.PB-158			
166 PB ELEVATION A	SL.07.AR.PB-159			
167 KITCHEN ELEVATION	SL.07.AR.K1-160			
168 PB+K FLOOR	SL.07.AR.PB-161			
169 PB+K CEILING	SL.07.AR.PBK-162			

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OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
LIST OF DRAWINGS

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE	DATE	
1/8" = 1'	@ A3	JUNE-2024

DWG. No.  
**SL.07.LD-03**

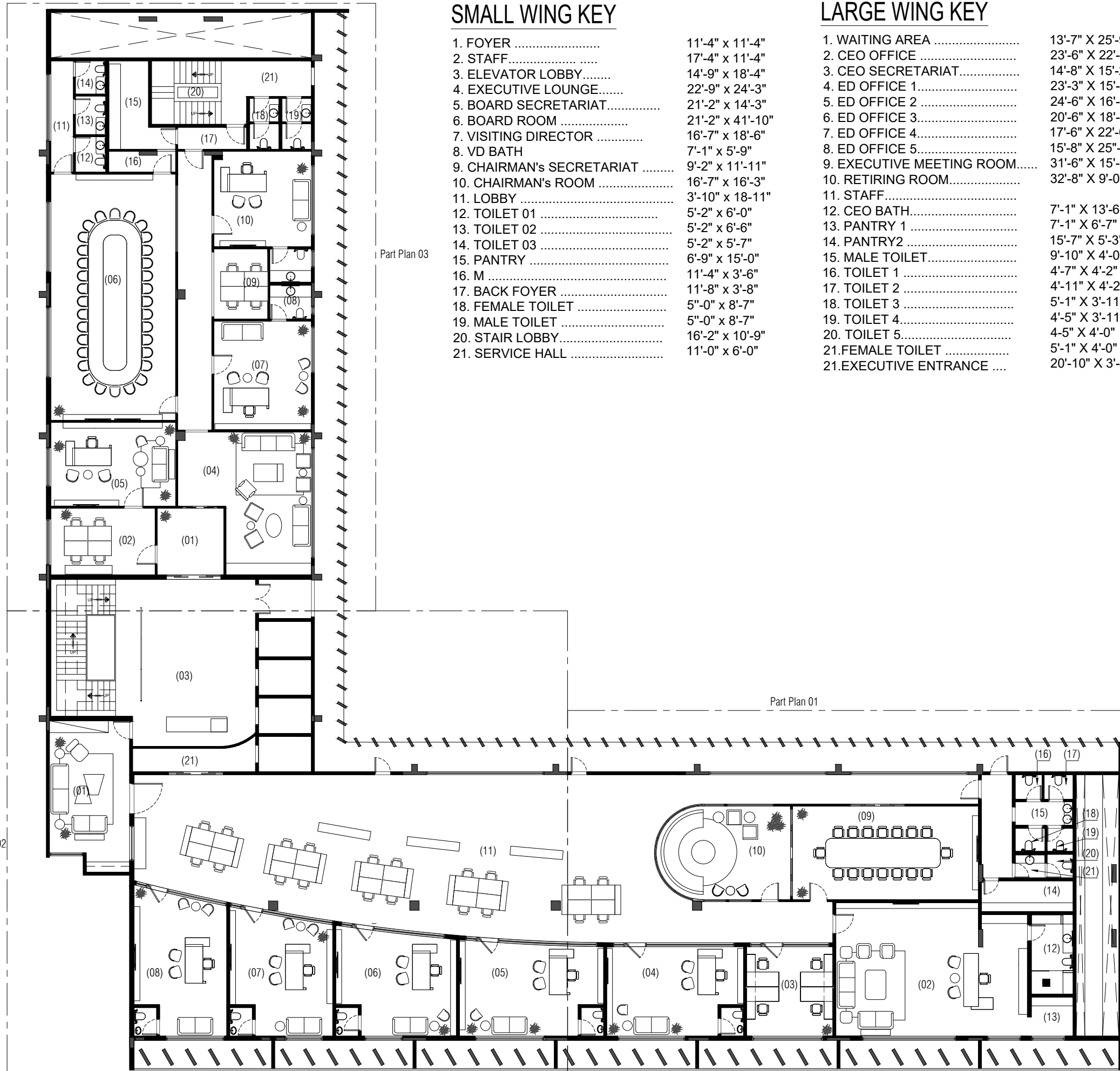


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**7th FLOOR  
ARCHITECTURE DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



### SMALL WING KEY

- |                                 |                  |
|---------------------------------|------------------|
| 1. FOYER .....                  | 11'-4" x 11'-4"  |
| 2. STAFF .....                  | 17'-4" x 11'-4"  |
| 3. ELEVATOR LOBBY.....          | 14'-9" x 18'-4"  |
| 4. EXECUTIVE LOUNGE.....        | 22'-9" x 24'-3"  |
| 5. BOARD SECRETARIAT.....       | 21'-2" x 14'-3"  |
| 6. BOARD ROOM .....             | 21'-2" x 41'-10" |
| 7. VISITING DIRECTOR .....      | 16'-7" x 18'-6"  |
| 8. VD BATH .....                | 7'-1" x 5'-9"    |
| 9. CHAIRMAN's SECRETARIAT ..... | 9'-2" x 11'-11"  |
| 10. CHAIRMAN's ROOM .....       | 16'-7" x 16'-3"  |
| 11. LOBBY .....                 | 3'-10" x 18'-11" |
| 12. TOILET 01 .....             | 5'-2" x 6'-0"    |
| 13. TOILET 02 .....             | 5'-2" x 6'-6"    |
| 14. TOILET 03 .....             | 5'-2" x 5'-7"    |
| 15. PANTRY .....                | 6'-9" x 15'-0"   |
| 16. M .....                     | 11'-4" x 3'-6"   |
| 17. BACK FOYER .....            | 11'-8" x 3'-8"   |
| 18. FEMALE TOILET .....         | 5'-0" x 8'-7"    |
| 19. MALE TOILET .....           | 5'-0" x 8'-7"    |
| 20. STAIR LOBBY.....            | 16'-2" x 10'-9"  |
| 21. SERVICE HALL .....          | 11'-0" x 6'-0"   |

### LARGE WING KEY

- |                                |                  |
|--------------------------------|------------------|
| 1. WAITING AREA .....          | 13'-7" X 25'-9"  |
| 2. CEO OFFICE .....            | 23'-6" X 22'-8"  |
| 3. CEO SECRETARIAT.....        | 14'-8" X 15'-2"  |
| 4. ED OFFICE 1.....            | 23'-3" X 15'-2"  |
| 5. ED OFFICE 2 .....           | 24'-6" X 16'-5"  |
| 6. ED OFFICE 3.....            | 20'-6" X 18'-10" |
| 7. ED OFFICE 4.....            | 17'-6" X 22'-0"  |
| 8. ED OFFICE 5.....            | 15'-8" X 25'-8"  |
| 9. EXECUTIVE MEETING ROOM..... | 31'-6" X 15'-10" |
| 10. RETIRING ROOM.....         | 32'-8" X 9'-0"   |
| 11. STAFF .....                | 7'-1" X 13'-6"   |
| 12. CEO BATH.....              | 7'-1" X 6'-7"    |
| 13. PANTRY 1 .....             | 15'-7" X 5'-3"   |
| 14. PANTRY2 .....              | 9'-10" X 4'-0"   |
| 15. MALE TOILET.....           | 4'-7" X 4'-2"    |
| 16. TOILET 1 .....             | 4'-11" X 4'-2"   |
| 17. TOILET 2 .....             | 5'-1" X 3'-11"   |
| 18. TOILET 3 .....             | 4'-5" X 3'-11"   |
| 19. TOILET 4.....              | 4'-5" X 4'-0"    |
| 20. TOILET 5.....              | 5'-1" X 4'-0"    |
| 21.FEMALE TOILET .....         | 20'-10" X 3'-11" |
| 21.EXECUTIVE ENTRANCE .....    |                  |

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OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**FURNITURE LAYOUT PLAN**

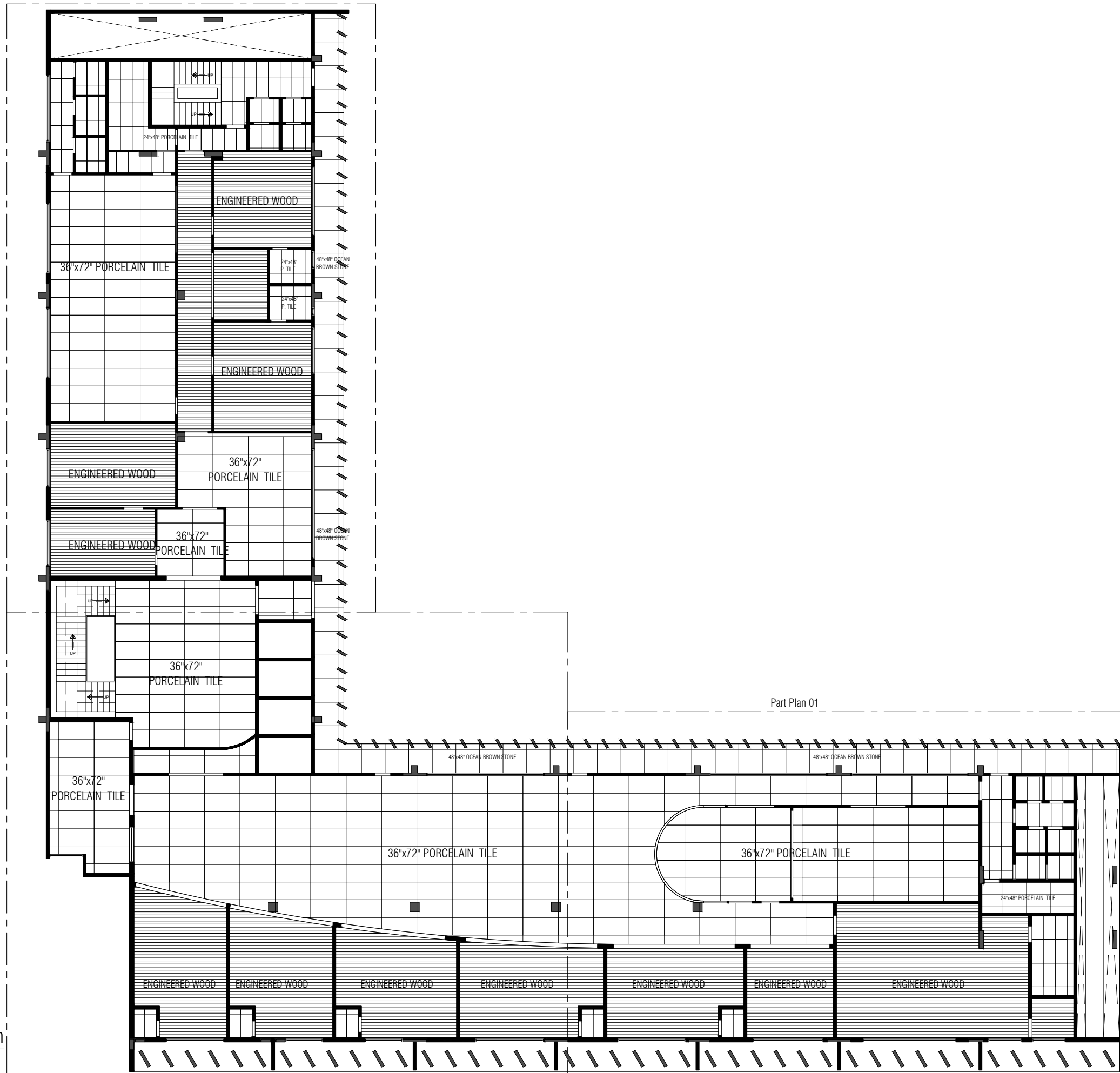
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1'	@ A3 APR-2024

DWG. No.  
**SL.07.AR.MP-01**







**A**  
A-03  
Flooring Layout Plan  
Scale: N.T.S

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REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

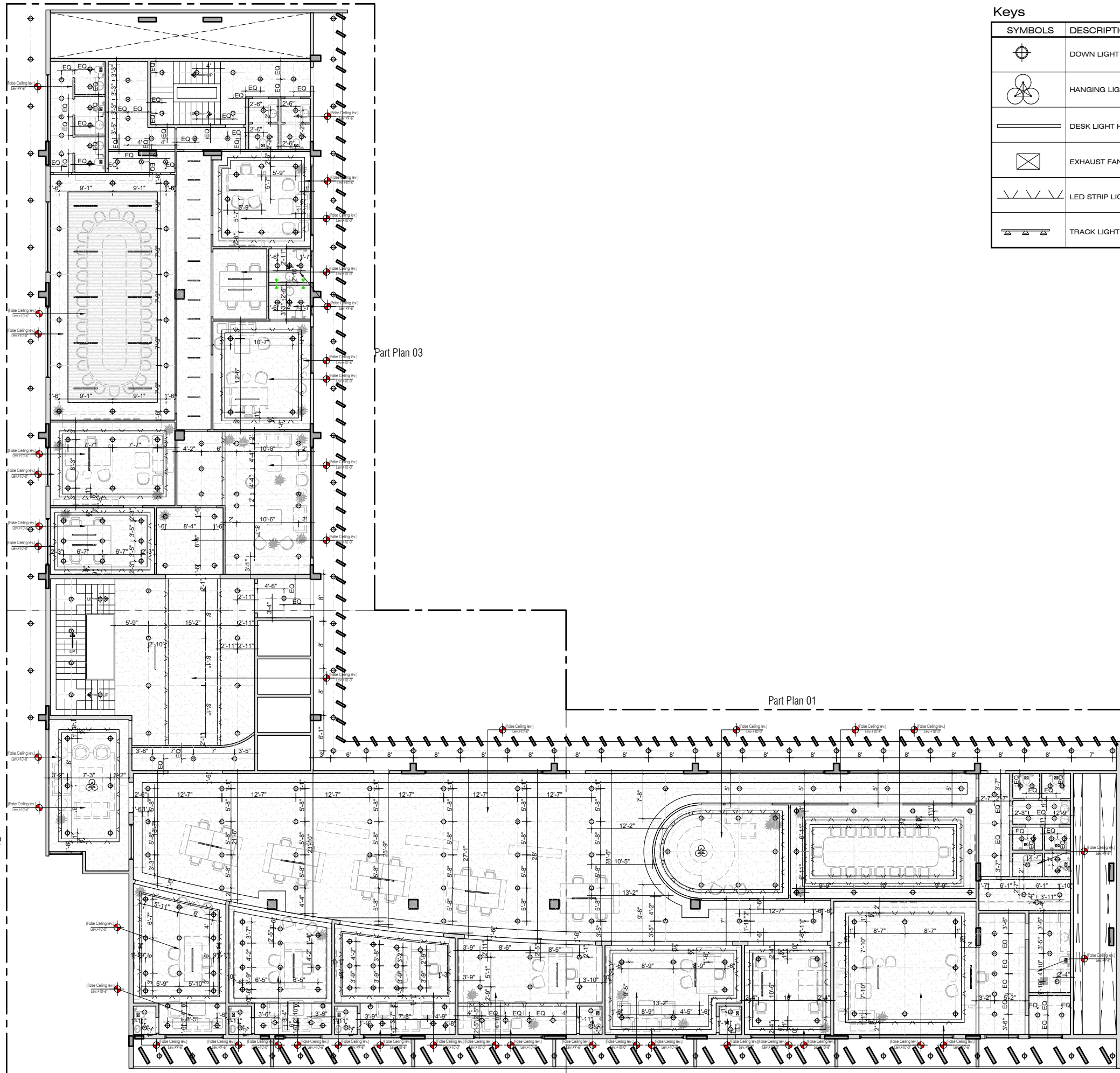
DRAWING TITLE:

**7th FLOOR**  
FLOORING LAYOUT PLAN

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	APR-2024

DWG. No.  
**SL.07.AR.MP-03**



**Keys**

SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:  
**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
CEILING LAYOUT PLAN

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/8" = 1'	@ A3	APR-2024

DWG. No.  
**SL.07.AR.MP-04**

**A**  
A-04  
Ceiling Layout Plan  
Scale: N.T.S

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



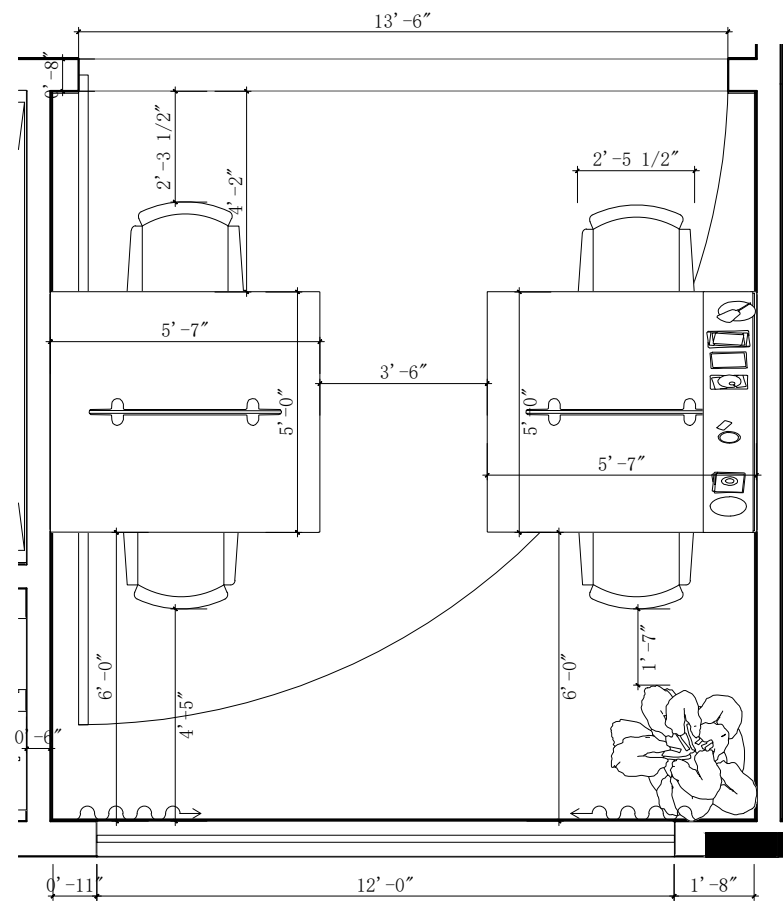
COMMENTS:

DRAWING TITLE:

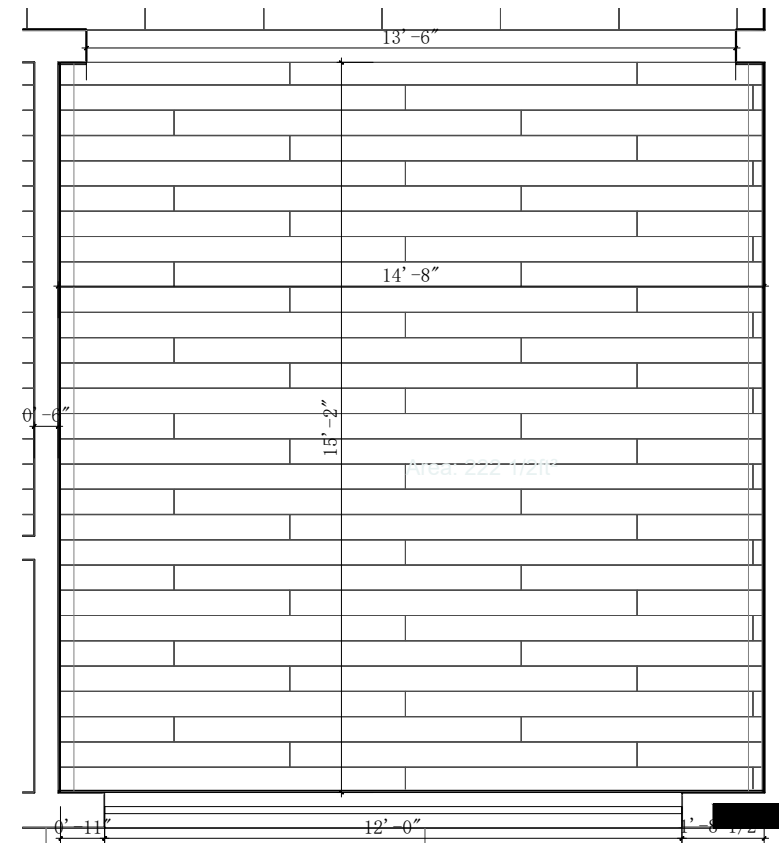
**7th FLOOR**  
CEO Sect. Plan & Floor

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

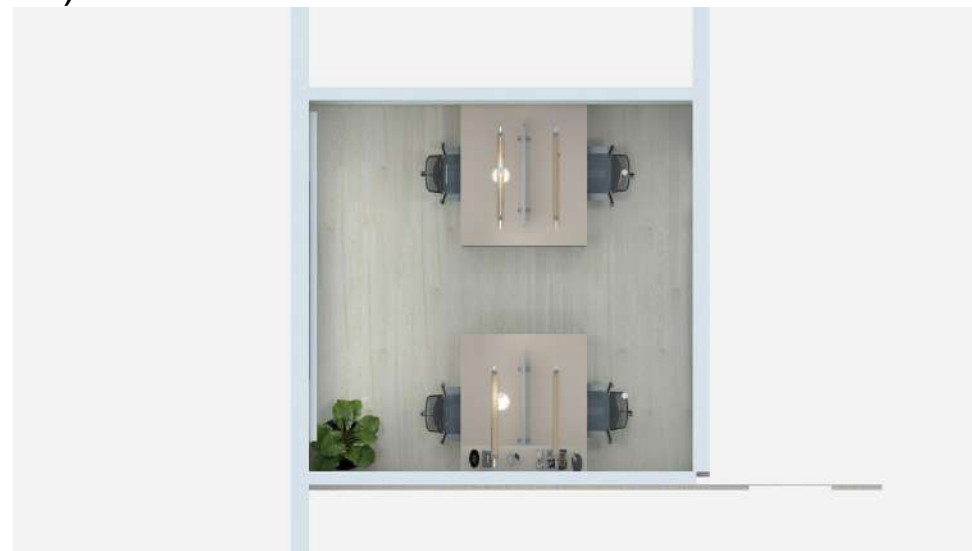
DWG. No.  
**SL07AR-CST-00**



005 FLOOR + FURNIT B1(1/4"=1'-0")



005 FLOOR(1/4"=1'-0")





## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

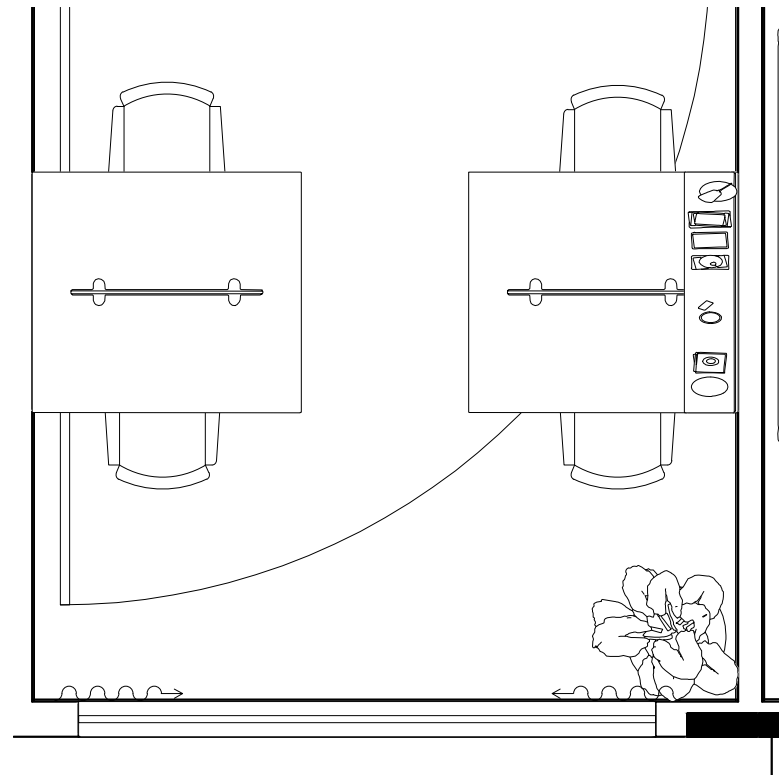
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**7th FLOOR**  
**CEO SECT ELEVATION C**

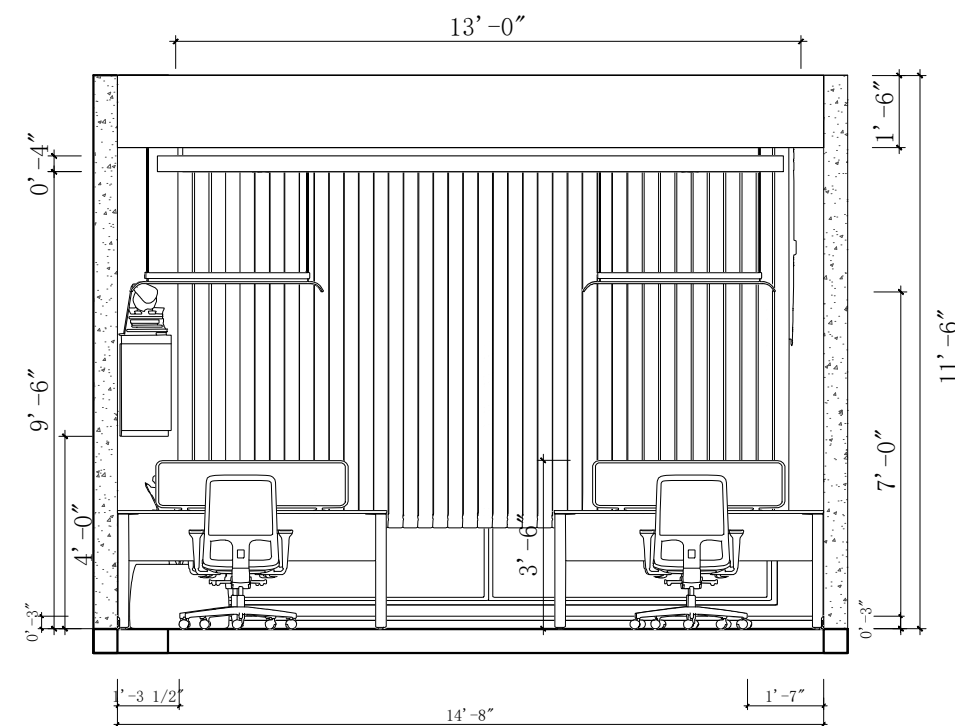
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR. 2024

DWG. No.  
**SL07AR-CST-01**



001 Ceo Sect. Elev C(1/4"=1'-0")



CEO Secretariat Elevation C(1/4"=1'-0")

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



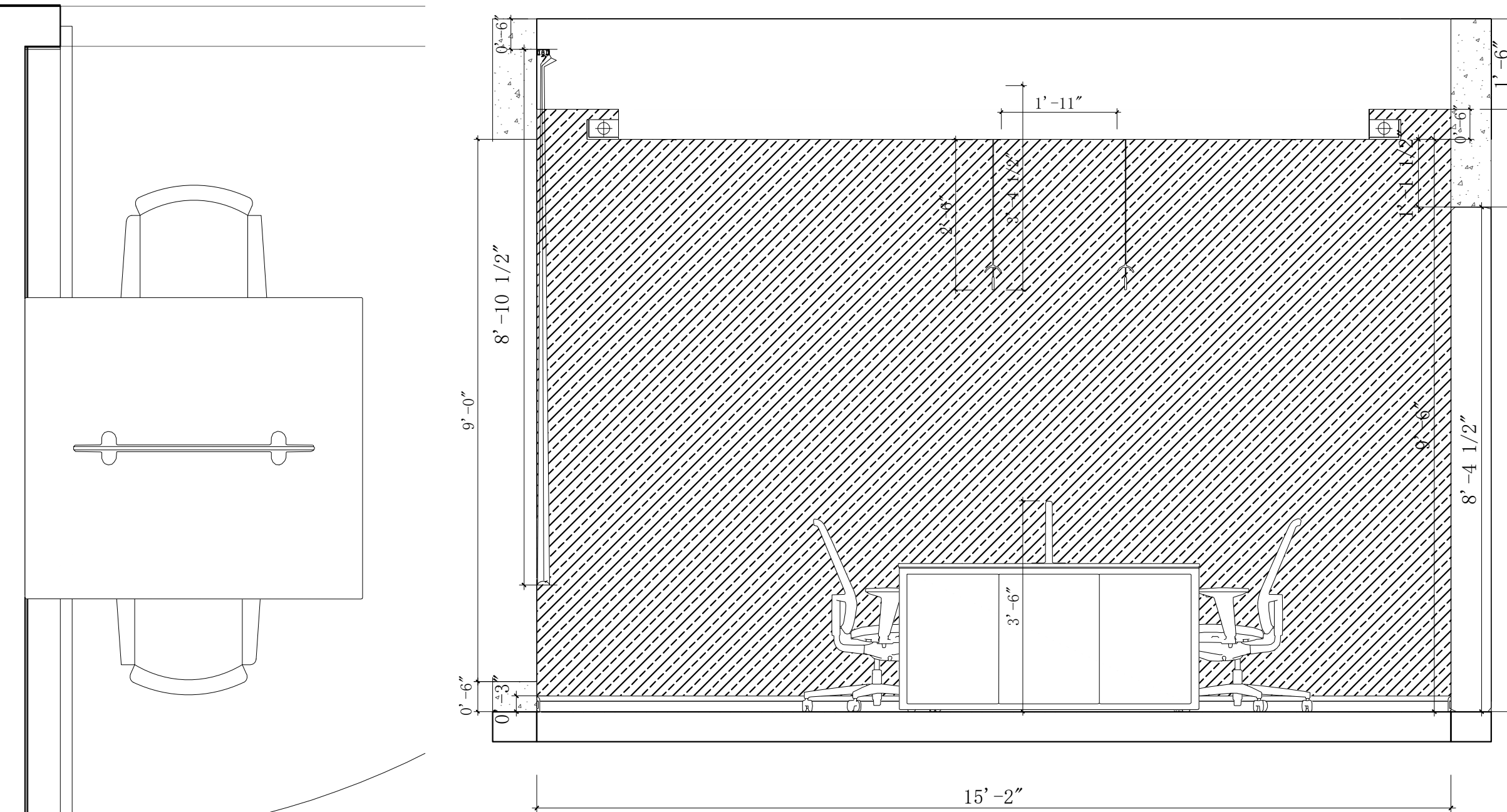
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**CEO SECT ELEVATION D**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CST-02**



CEO Secretariat Elevation D(1/2"=1'-0")

002 ceo Sect. Elev D(1/2"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



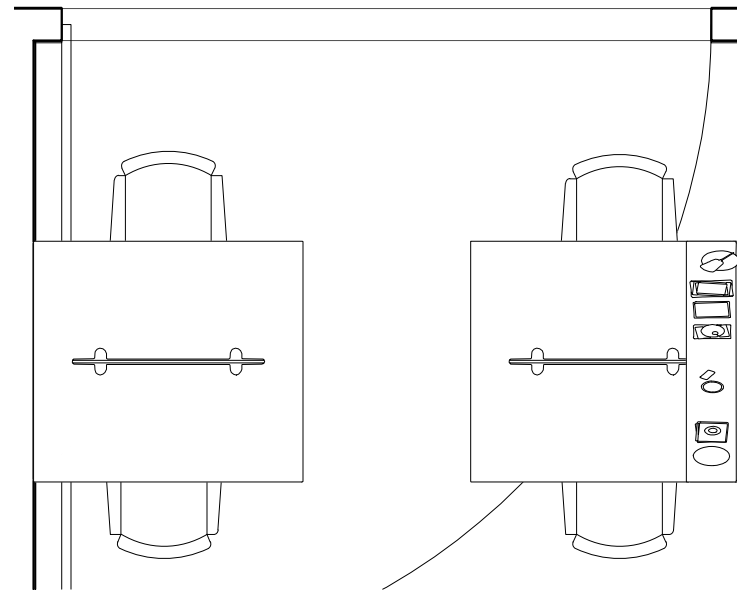
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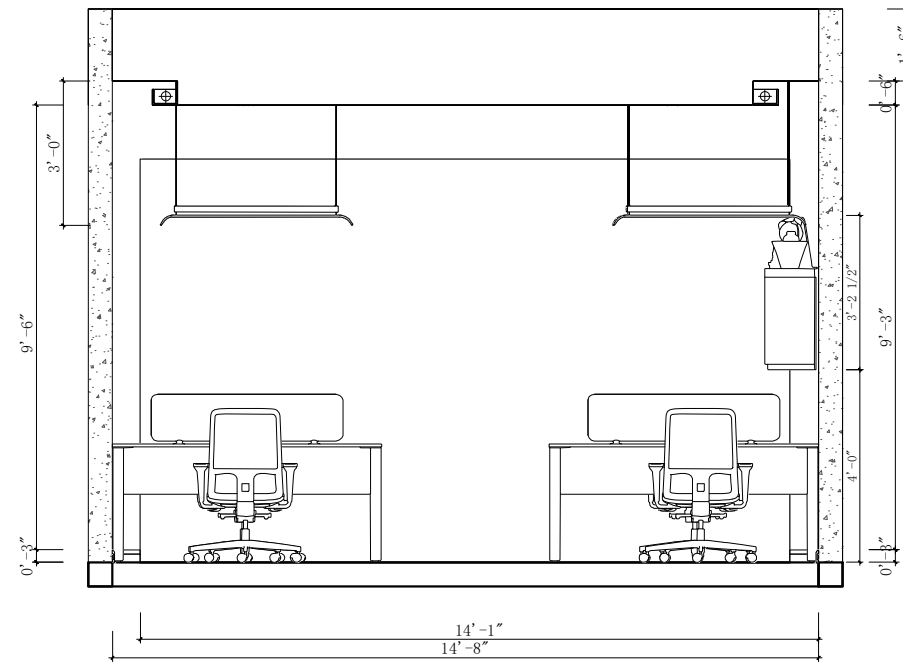
**7th FLOOR**  
**CEO SECT ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CST-03**



003 CEO SECT ELEV A(1/4"=1'-0")



CEO Secretariat Elevation A(1/4"=1'-0")



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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

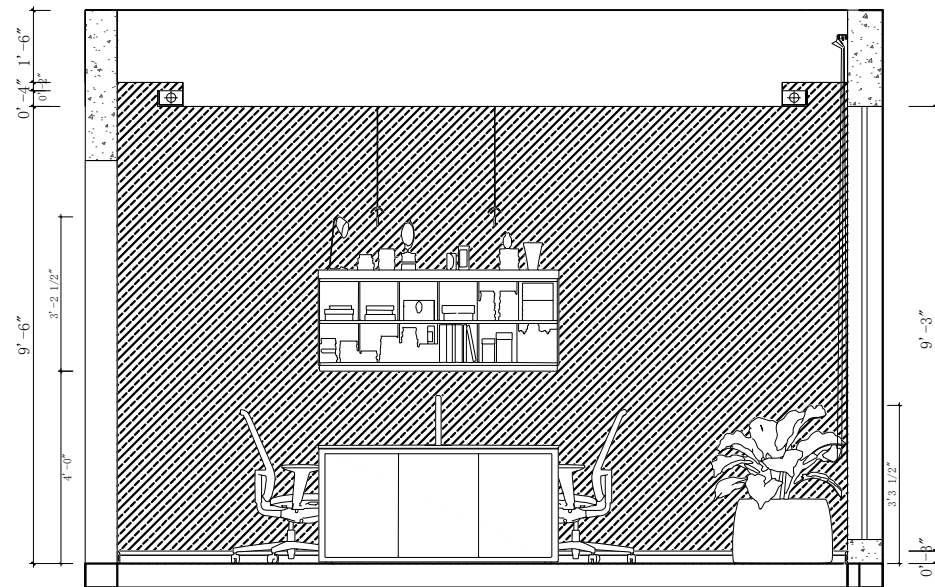
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**CEO SECT ELEVATION B**

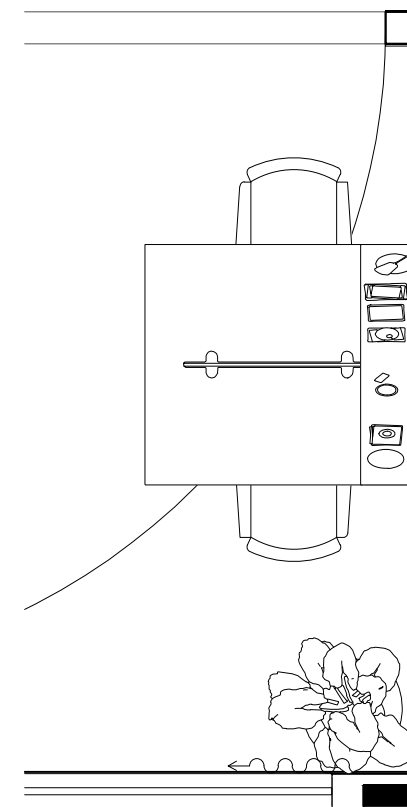
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CST-04**



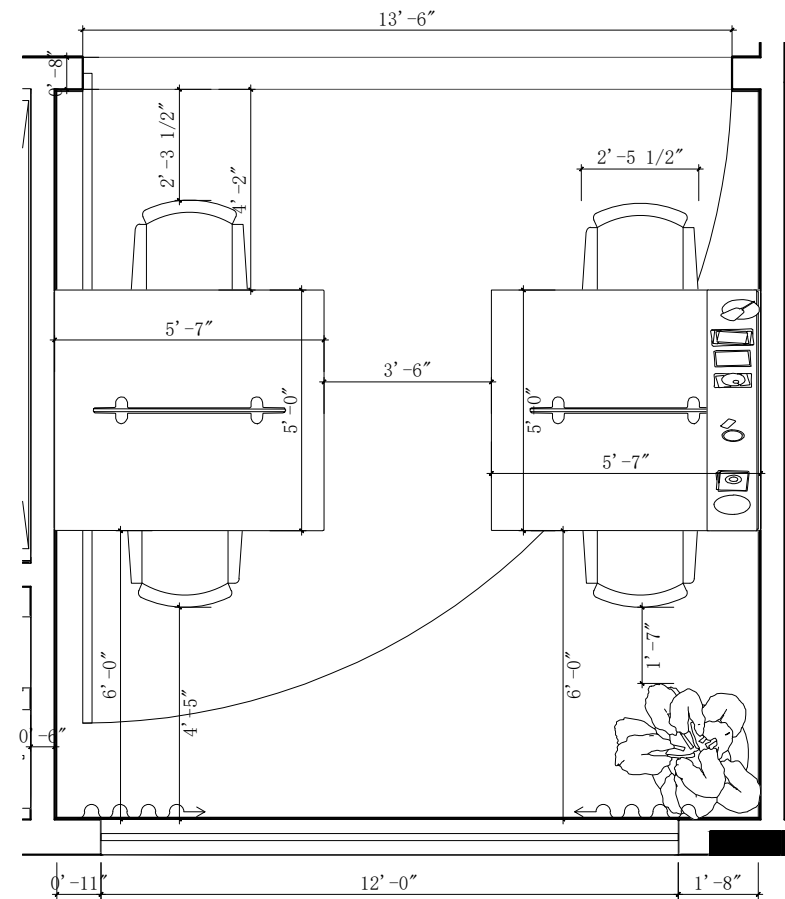
CEO Secretariat Elevation B(1/4"=1'-0")



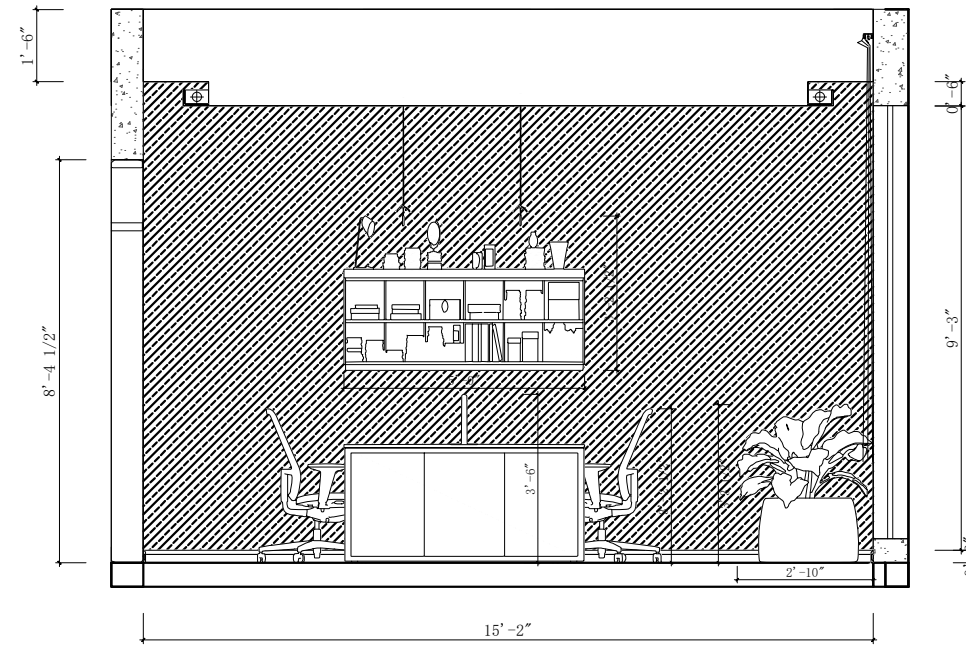
004 CEO SECT ELEV B(1/4"=1'-0")







005 FLOOR + FURNIT B1(1/4"=1'-0")



CEO Secretariat Elevation B1(1/4"=1'-0")

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



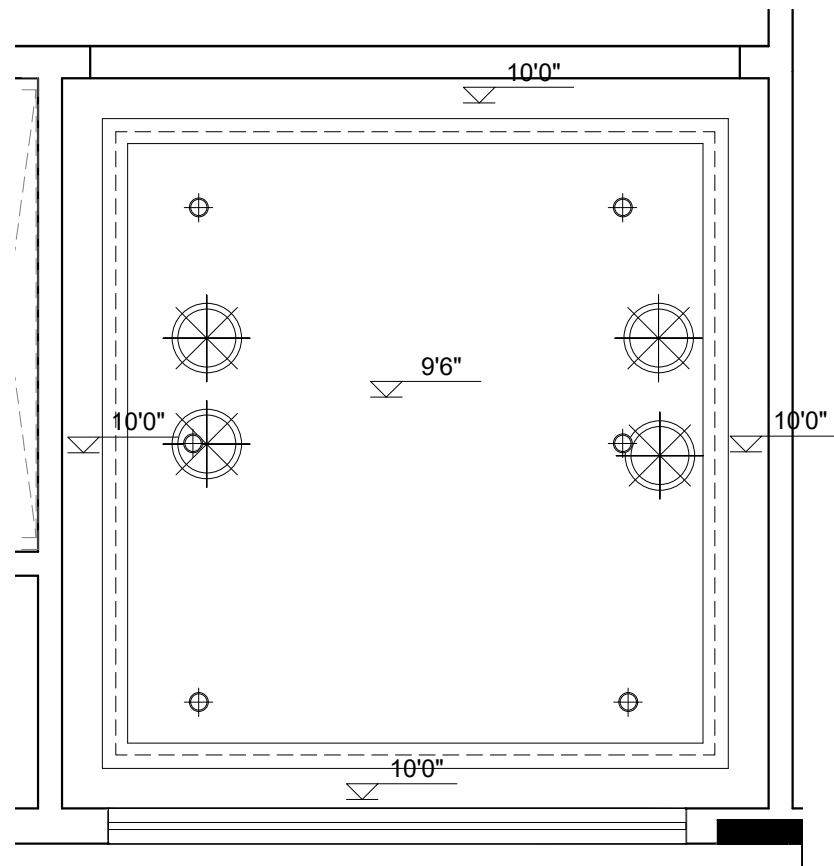
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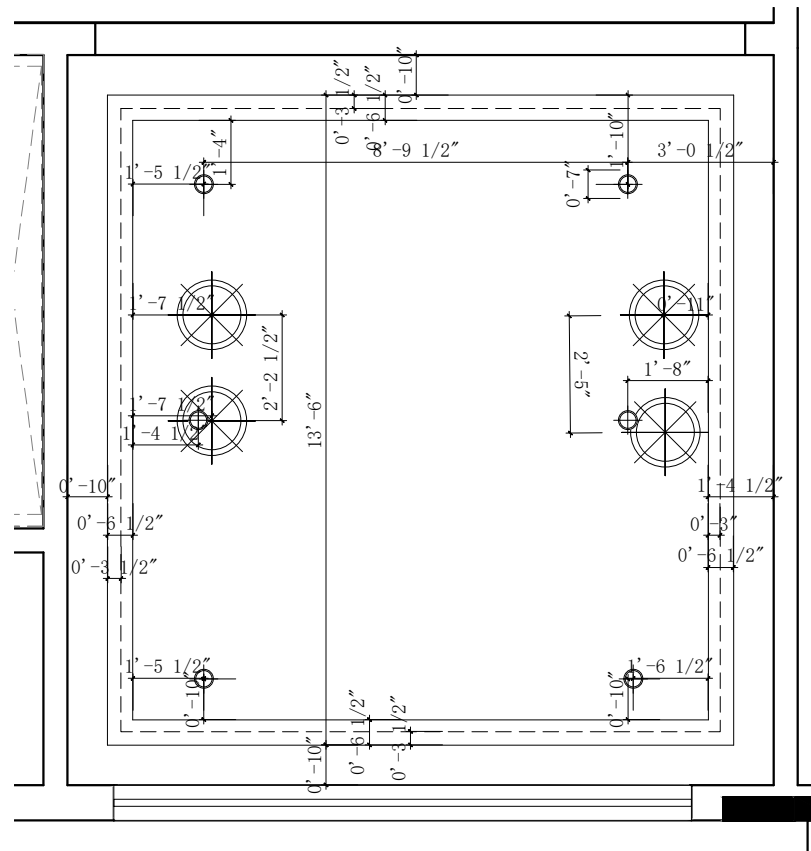
**7th FLOOR**  
CEO SECT FURNITURE PLAN

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CST-05**



006 CEILING(1/4"=1'-0")



006 CEILING LIGHT(1/4"=1'-0")

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



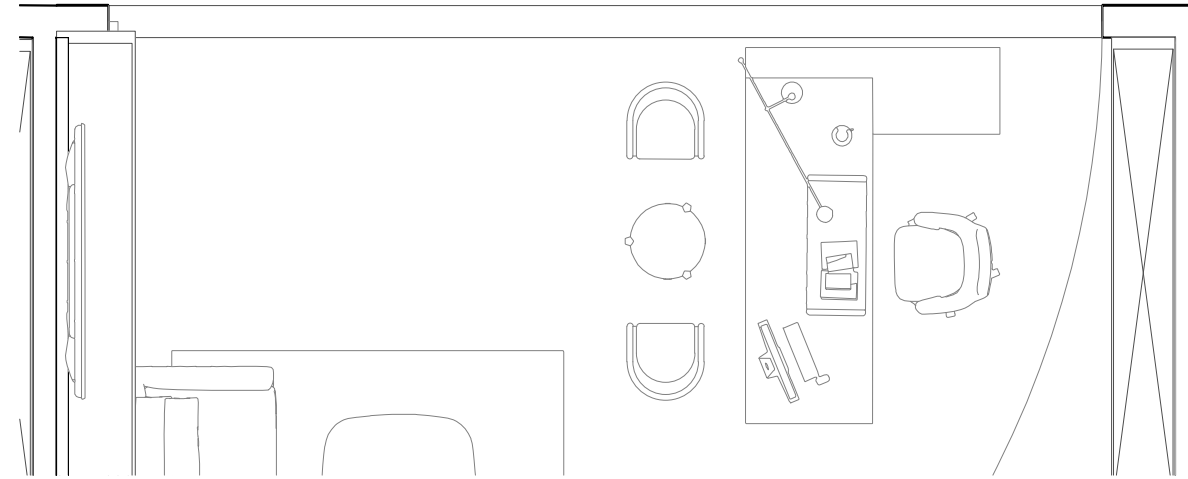
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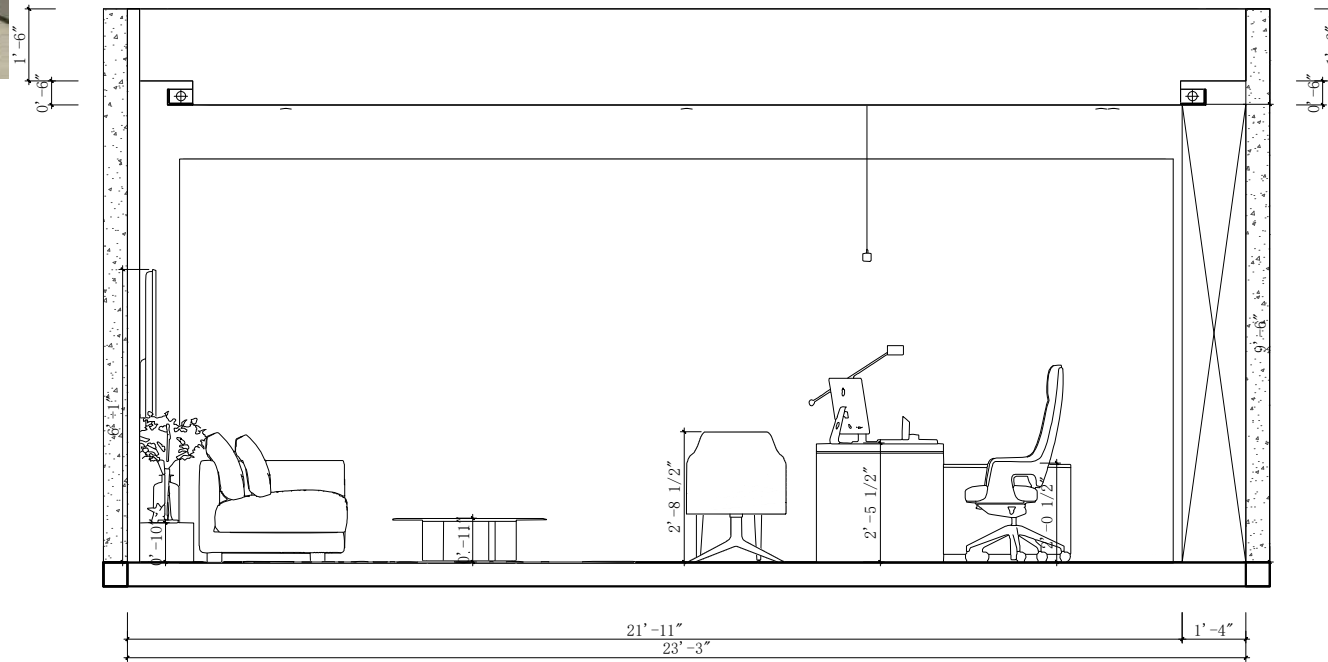
**7th FLOOR**  
**CEO SECT CEILING PLAN**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CST-06**



007 ED ELEV A(1/4"=1'-0")



ED Office 1 Elevation A(1/4"=1'-0")

**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**ED 1 ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED1-07**

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



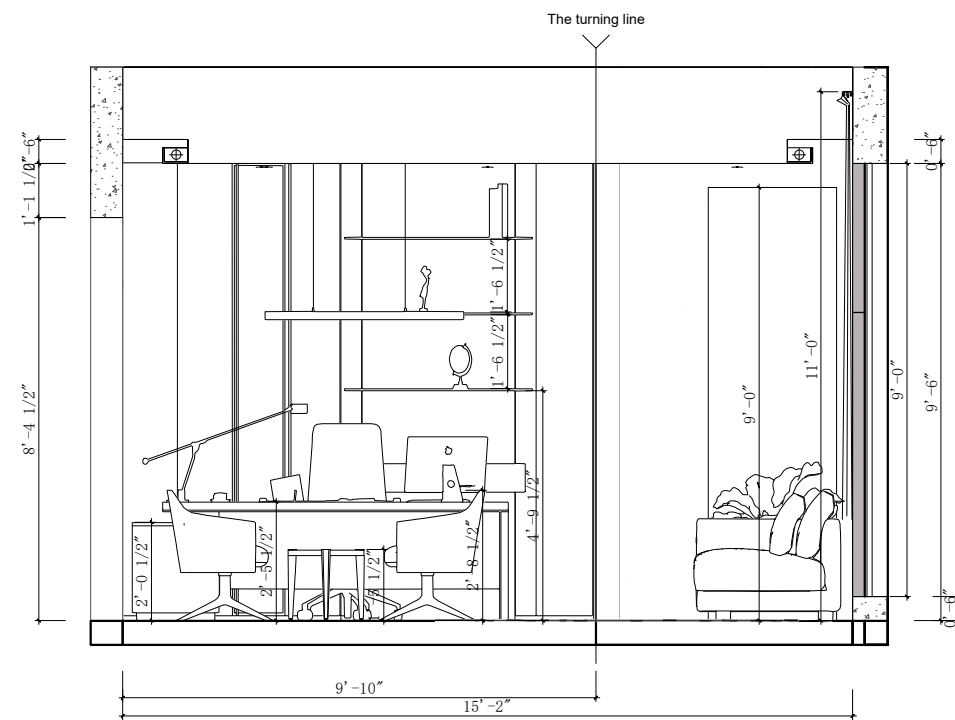
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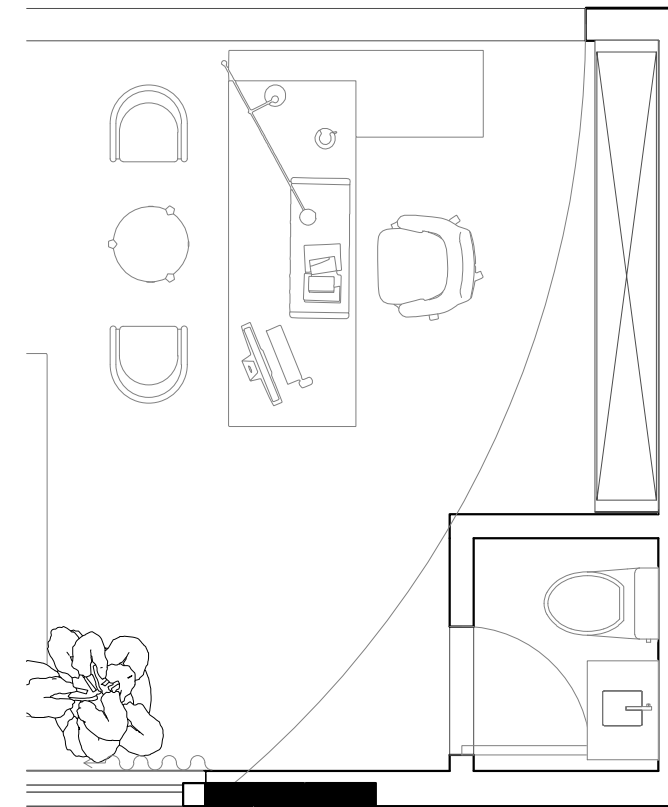
**7th FLOOR**  
**ED 1 ELEVATION B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED1-08**



ED Office 1 Elevation B(1/4"=1'-0")



008 ED ELEV B(1/4"=1'-0")





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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

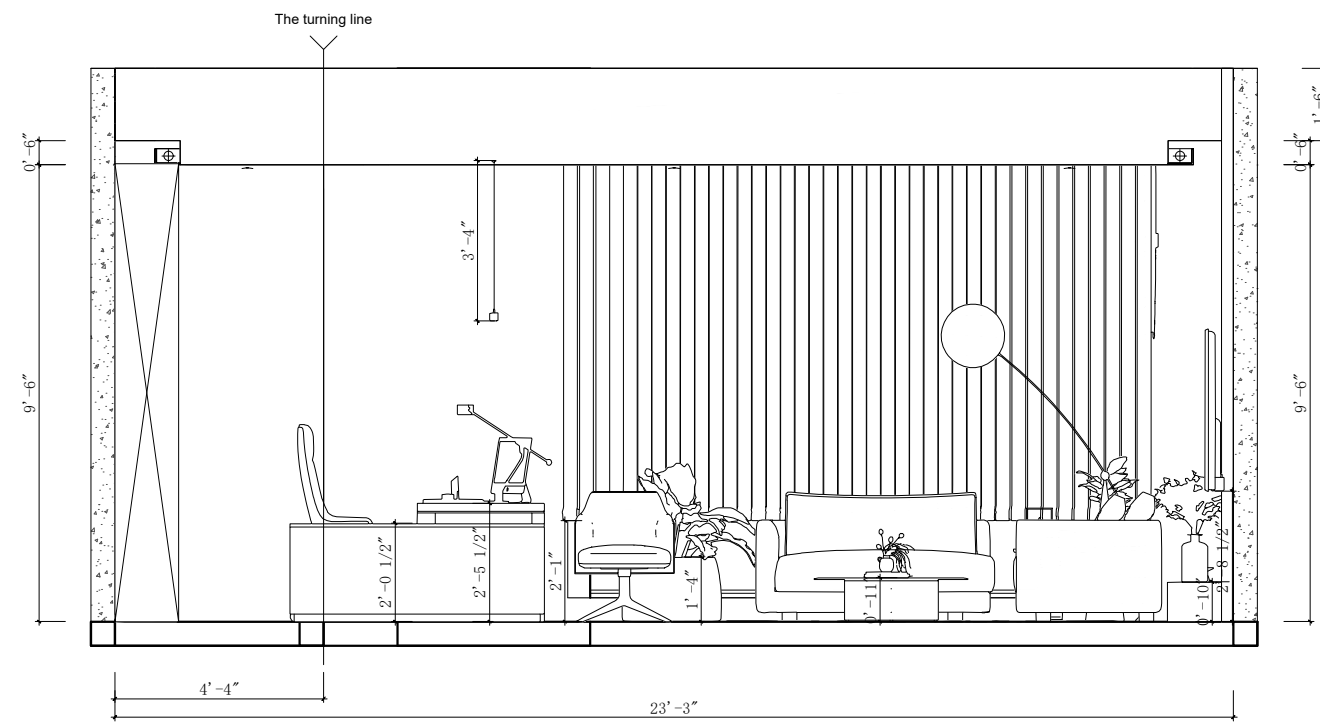
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**ED 1 ELEVATION C**

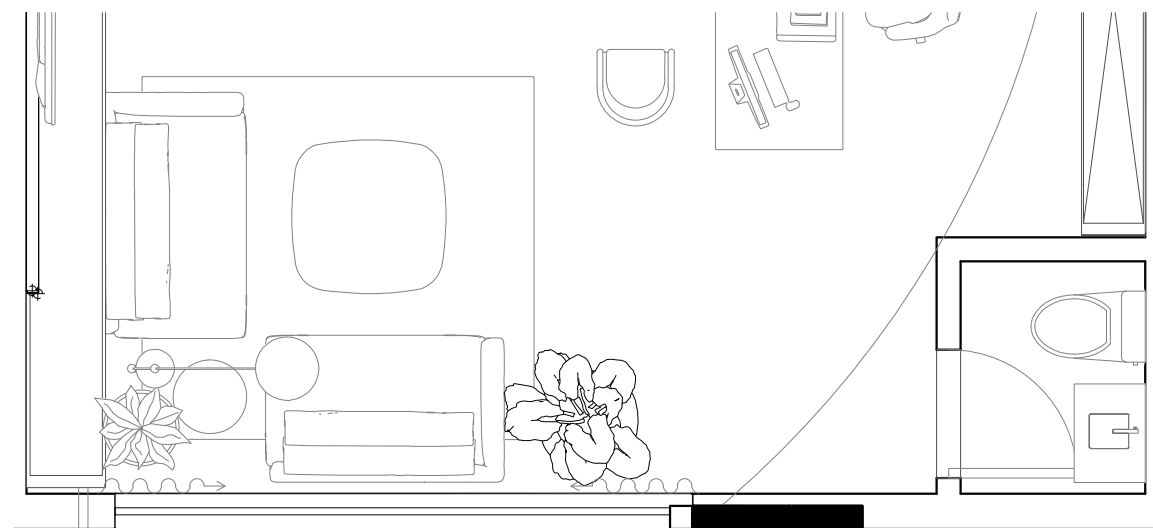
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR. 2024

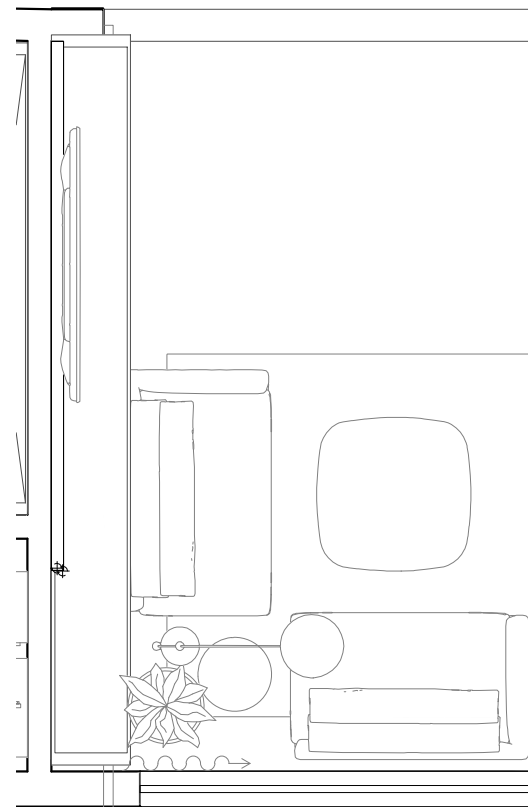
DWG. No.  
**SL07AR-ED1-09**



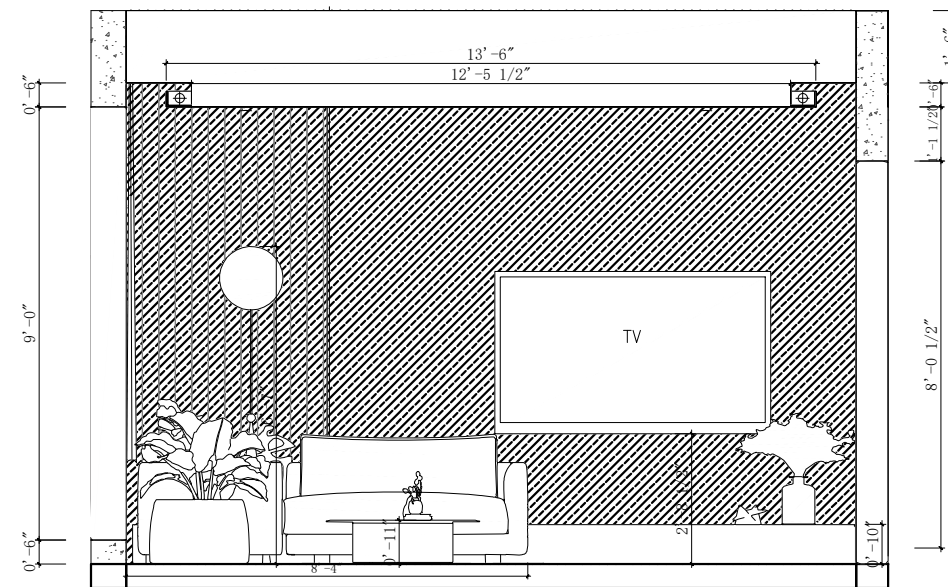
**ED Office 1 Elevation C(1/4"=1'-0")**



**009 ED ELEV C(1/4"=1'-0")**



010 ED ELEV D(1/4"=1'-0")



ED Office 1 Elevation D(1/4"=1'-0")



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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**ED 1 ELEVATION D**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED1-10**

## GENERAL NOTES

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### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

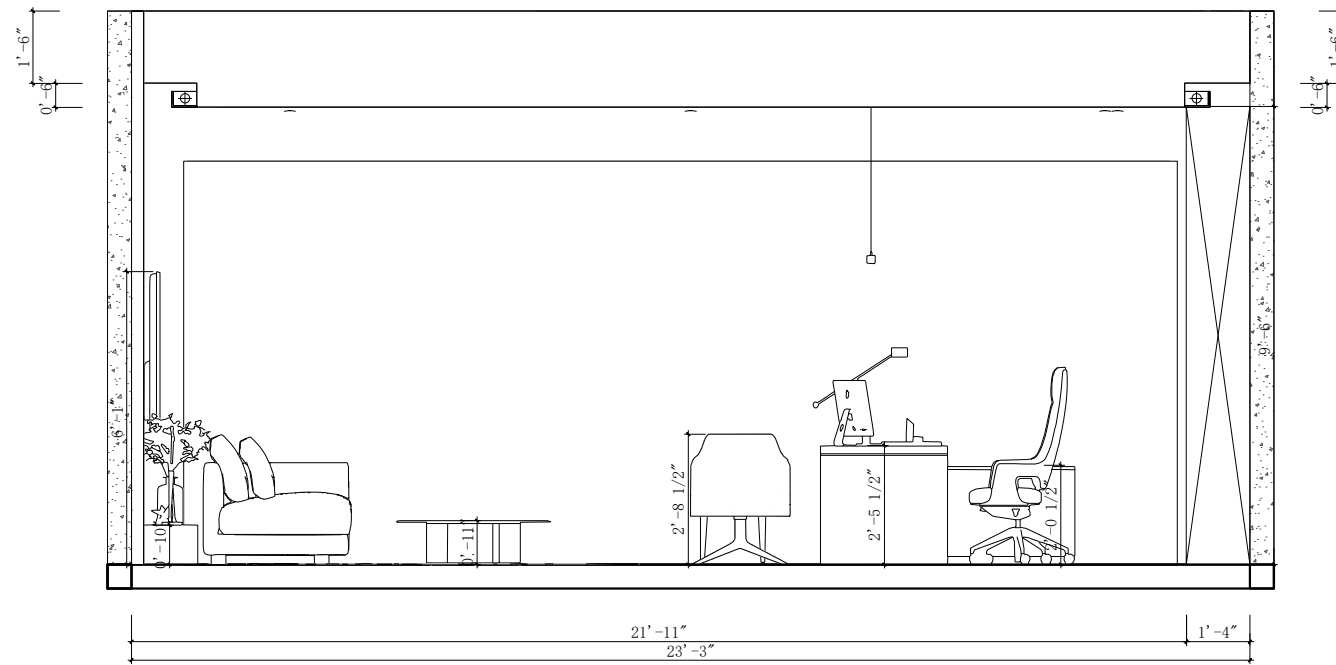
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**7th FLOOR**  
ED1 FURNITURE PLAN & ELEVATION A

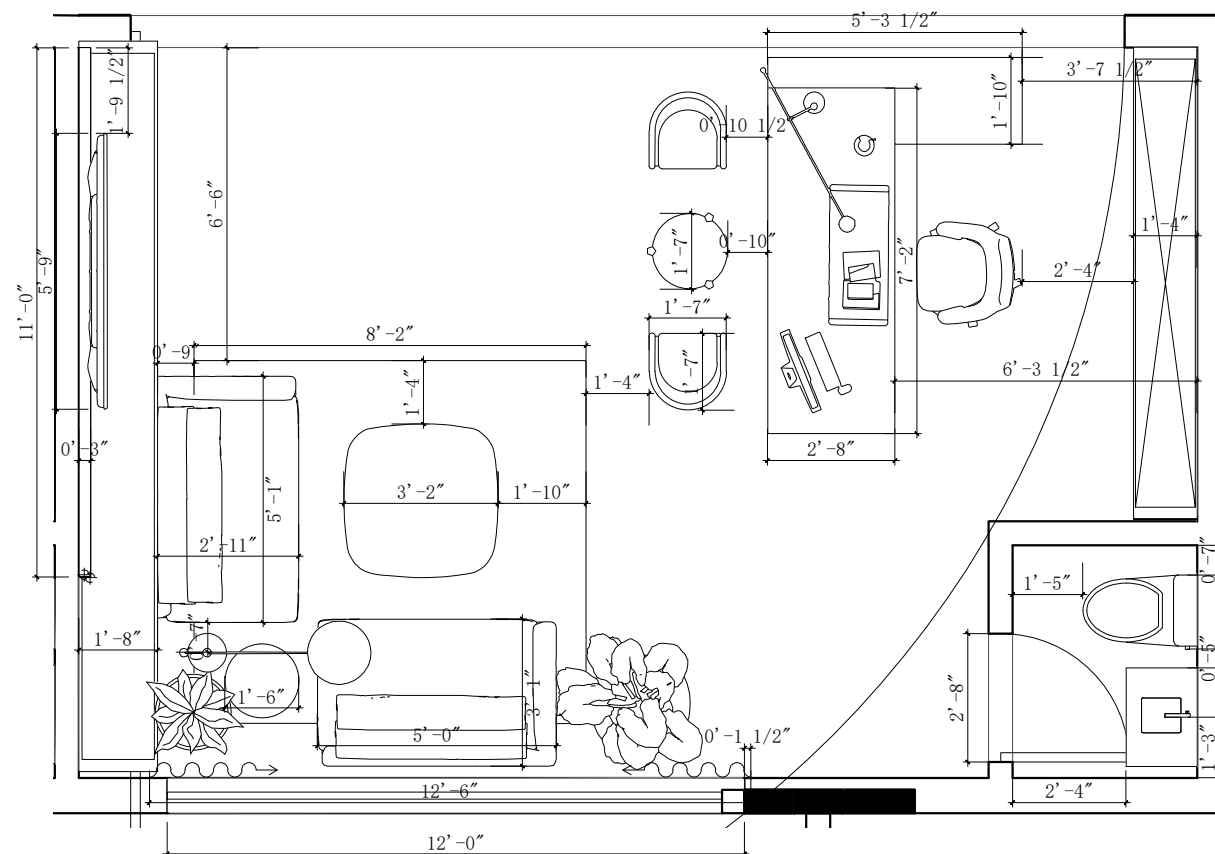
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-ED1-11**



**ED Office 1 Elevation A(1/4"=1'-0")**



**011 ED FURNITURE(1/4"=1'-0")**

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



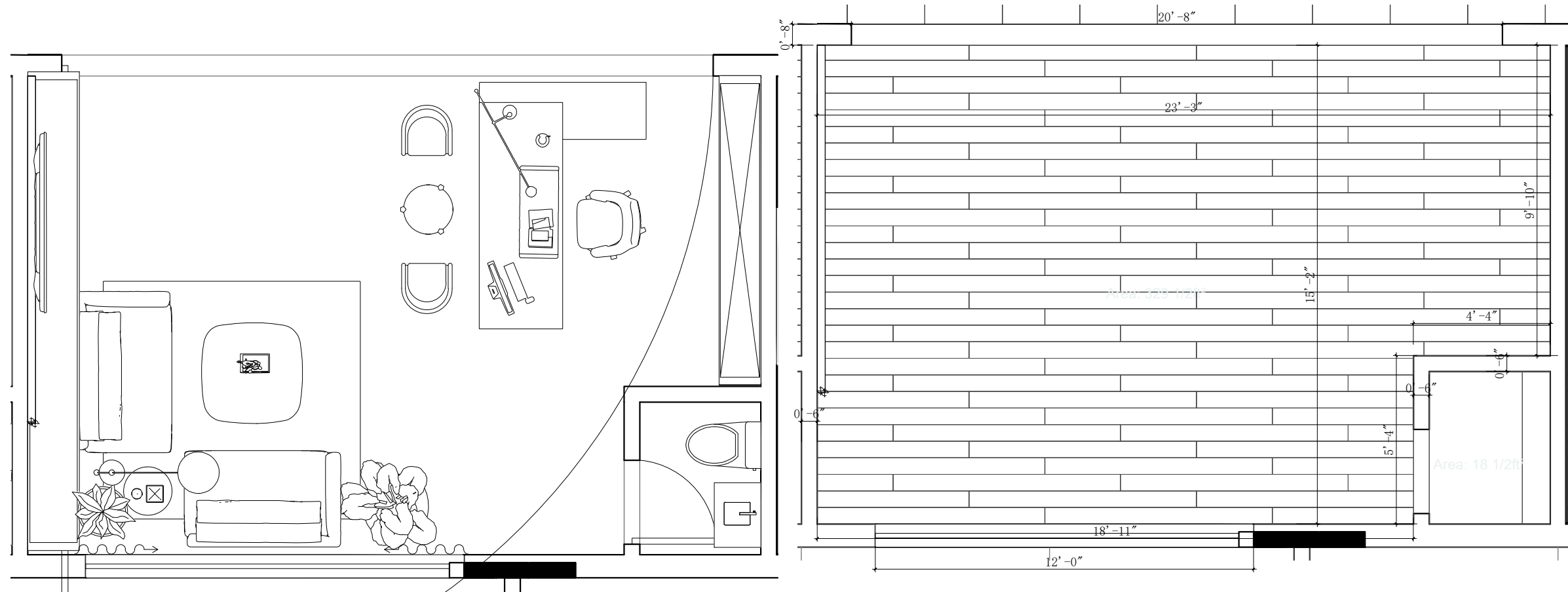
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**ED1 FLOORING PLAN**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED1-12**



012 ED1 FLOOR PLAN(1/4"=1'-0")

012 ED1 FLOOR(1/4"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



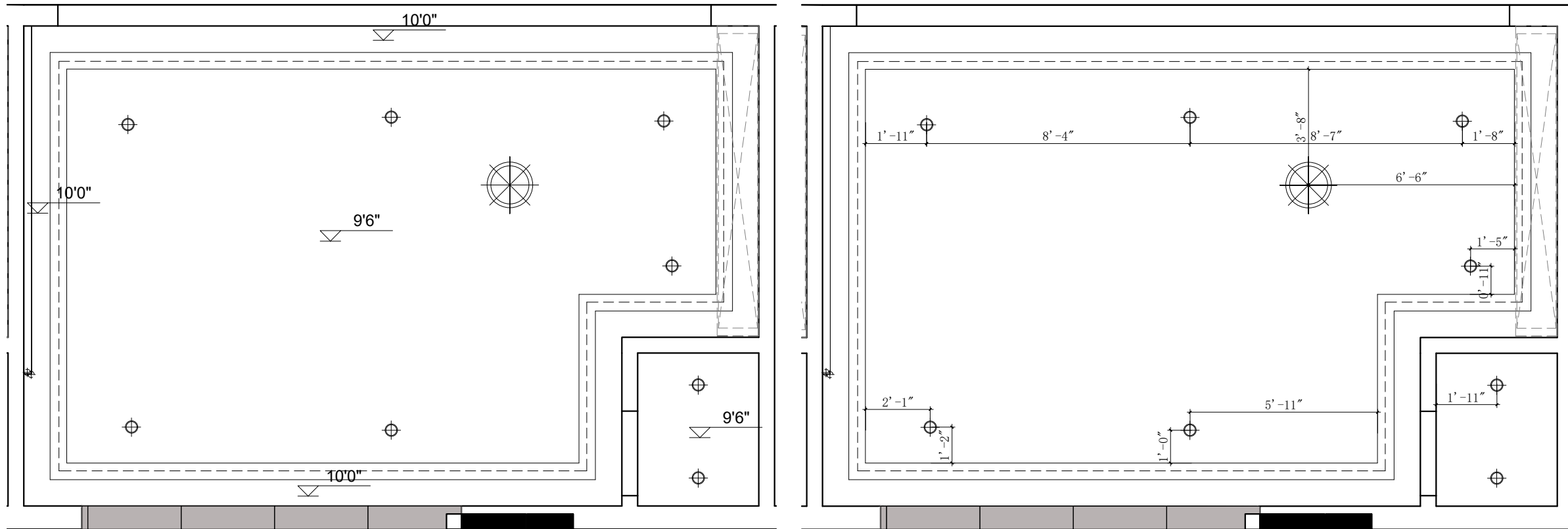
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**ED1 CEILING**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED1-13**



**013 ED1 CEILING(1/4"=1'-0")**



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

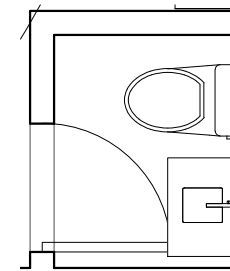
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**7th FLOOR**  
**ED1 BATH**

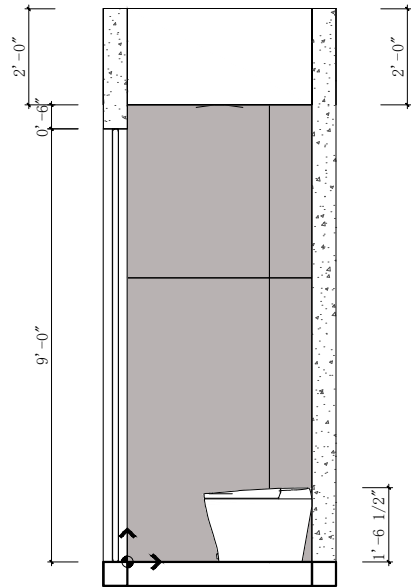
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR. 2024

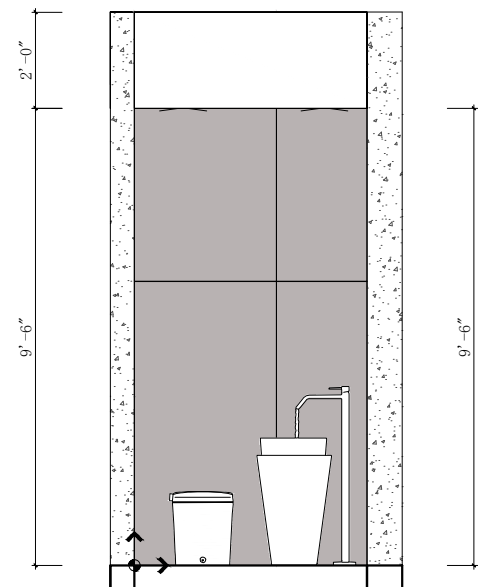
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**SL07AR-ED1-14**



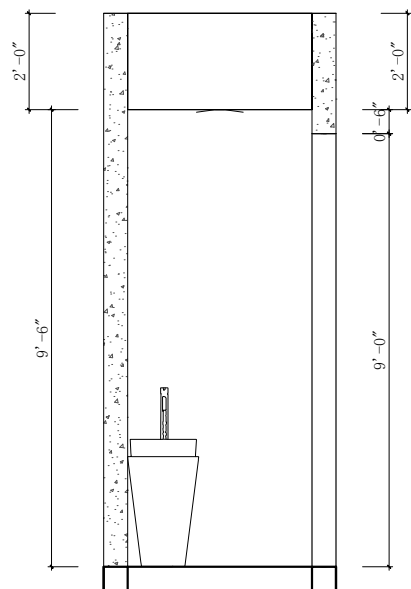
ED1 BATH(1/4"=1'-0")



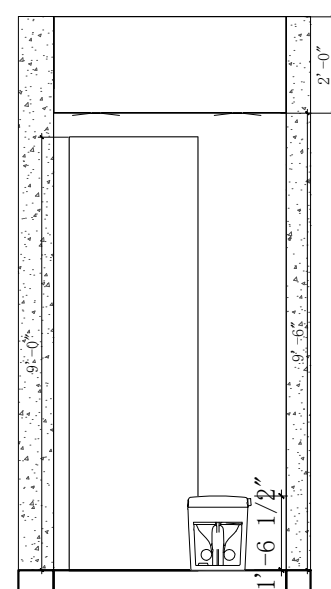
ED1 BATH ELEV A(1/4"=1'-0")



ED1 BATH ELEV B(1/4"=1'-0")



ED1 BATH ELEV C(1/4"=1'-0")



ED1 BATH ELEV D(1/4"=1'-0")

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



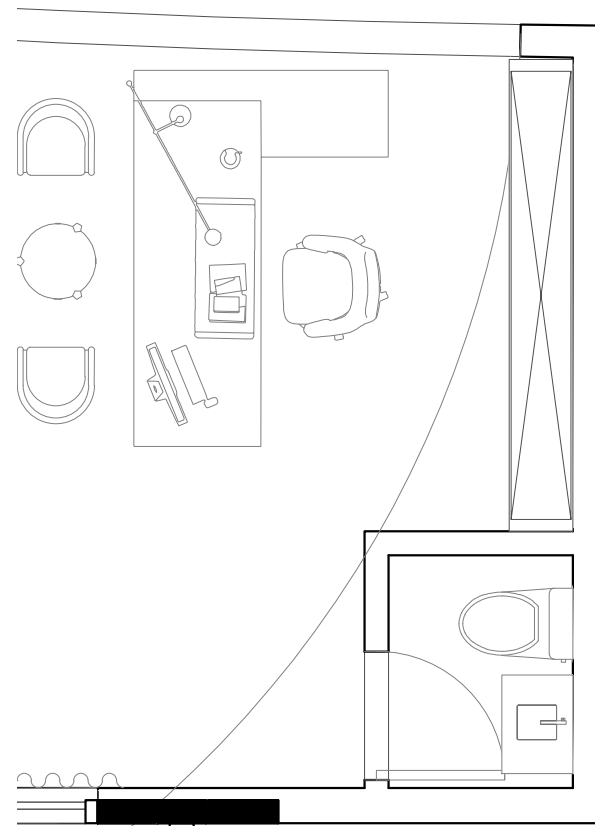
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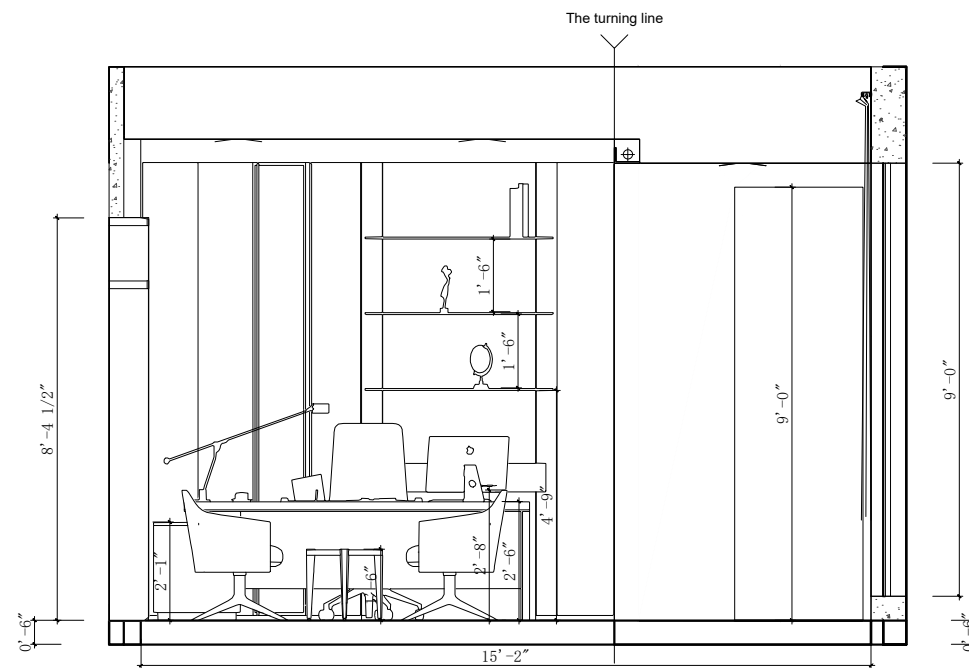
**7th FLOOR**  
**ED2 ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED2-15**



014 ED2 ELEV A(1/4"=1'-0")



ED Office 2 Elevation B2(1/4"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



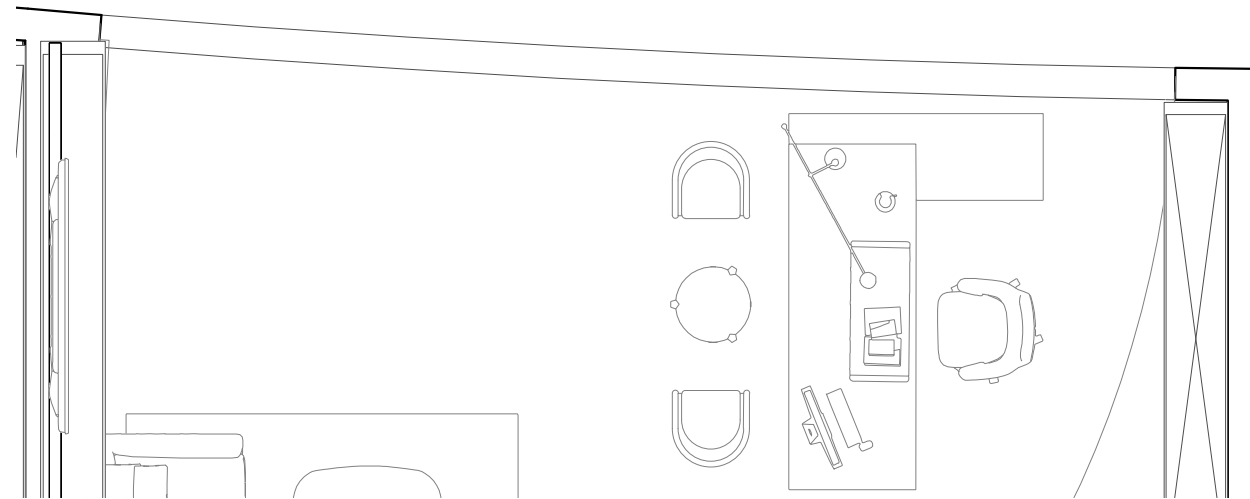
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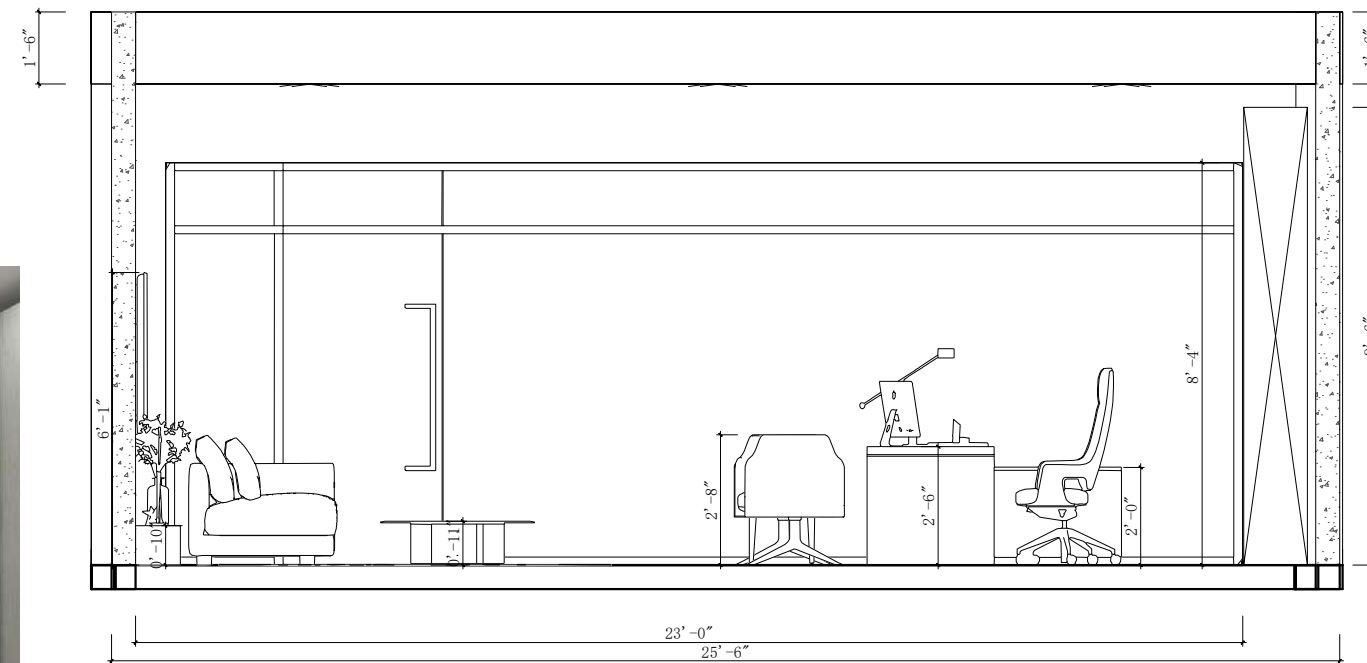
**7th FLOOR**  
**ED2 ELEVATION B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED2-16**



016 ED2 ELEV B(1/4"=1'-0")



ED Office 2 Elevation E(1/4"=1'-0")





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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



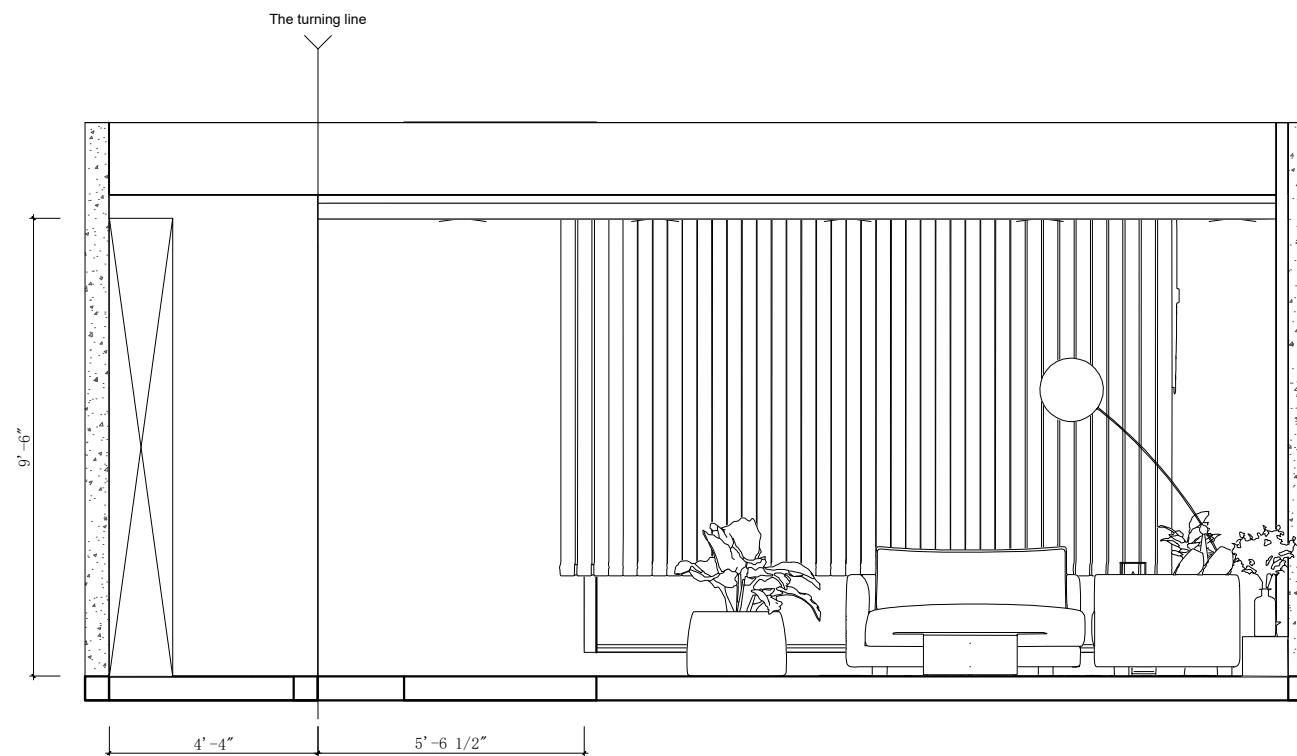
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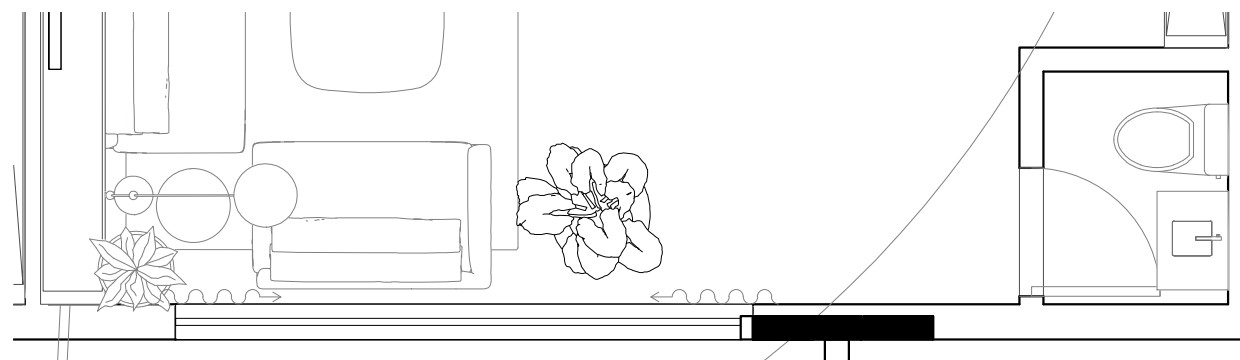
**7th FLOOR**  
ED2 ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED2-17**



ED Office 2 Elevation C(1/4"=1'-0")



017 ED2 ELEV C(1/4"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



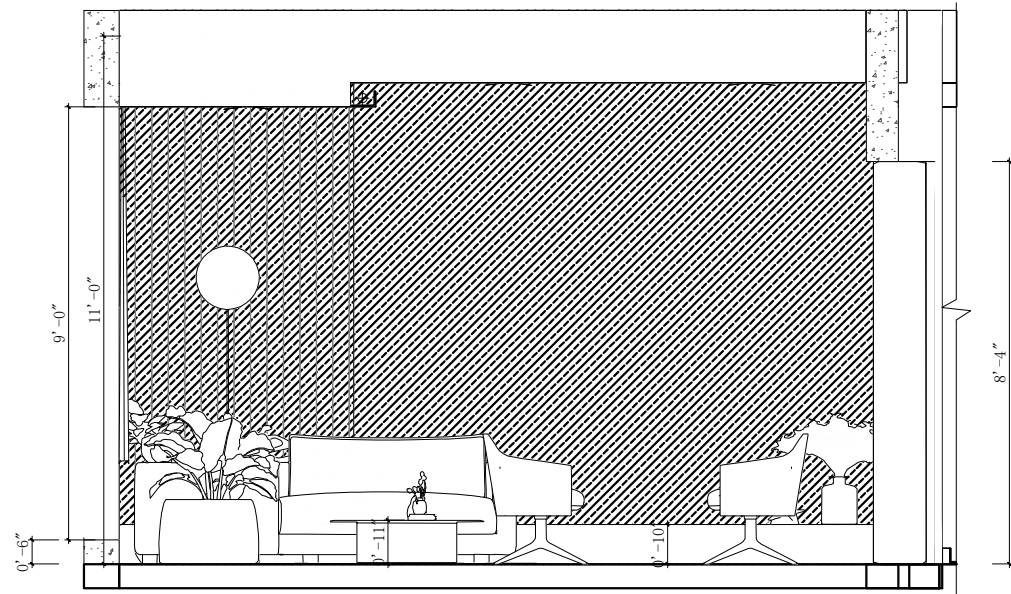
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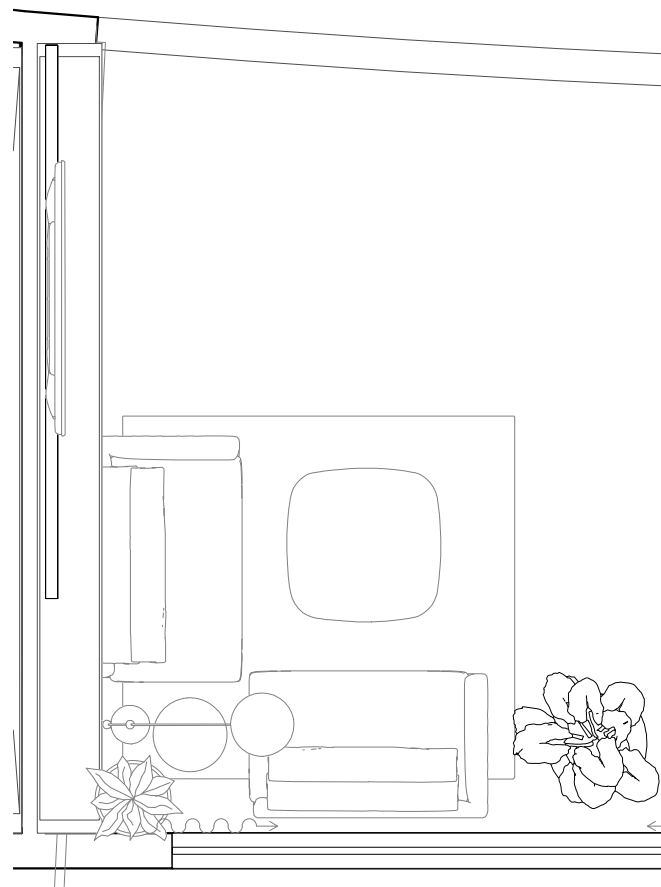
**7th FLOOR**  
**ED2 ELEVATION D**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED2-18**



**ED Office 2 Elevation D1(1/4"=1'-0")**



**018 ED2 ELEV D(1/4"=1'-0")**



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### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

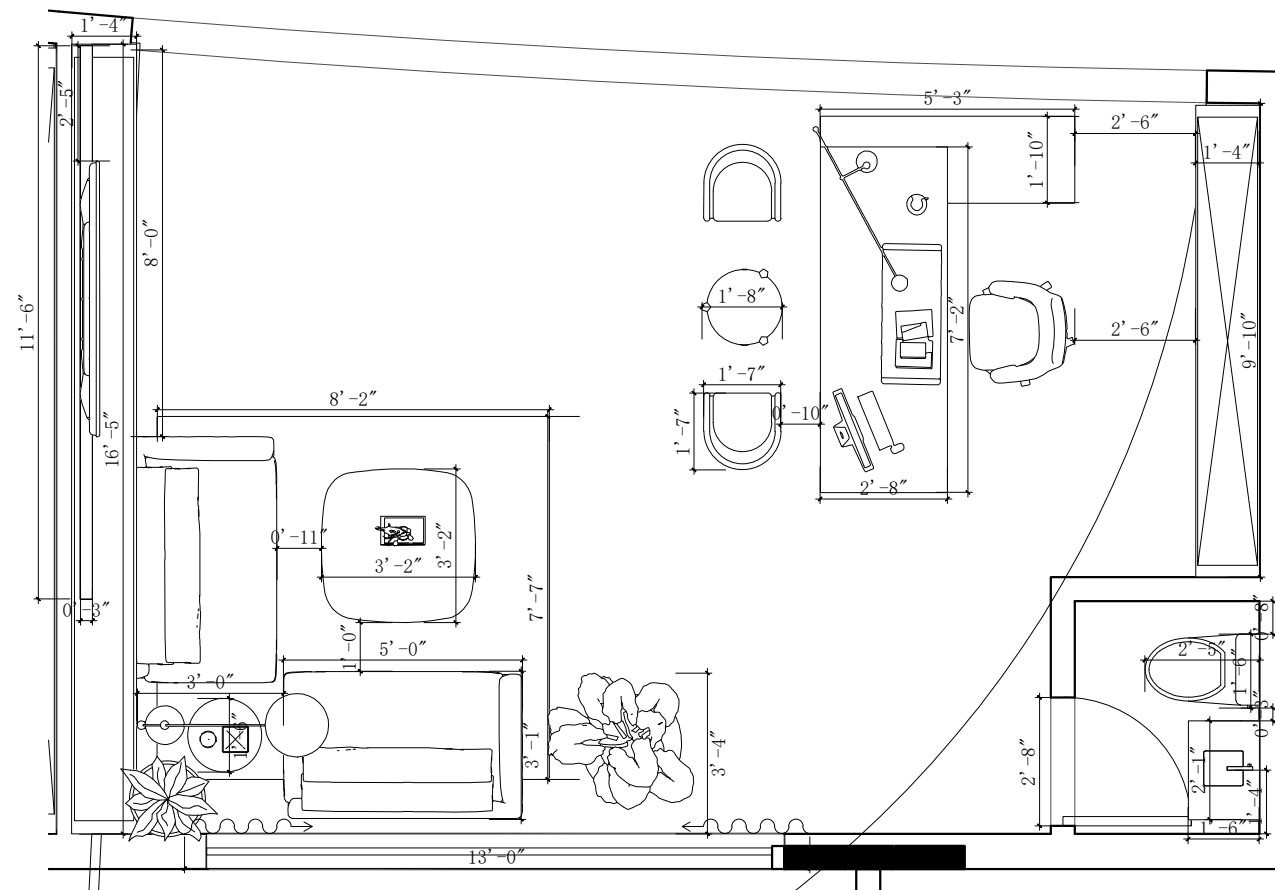
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**7th FLOOR**  
**ED2 FURNITURE**

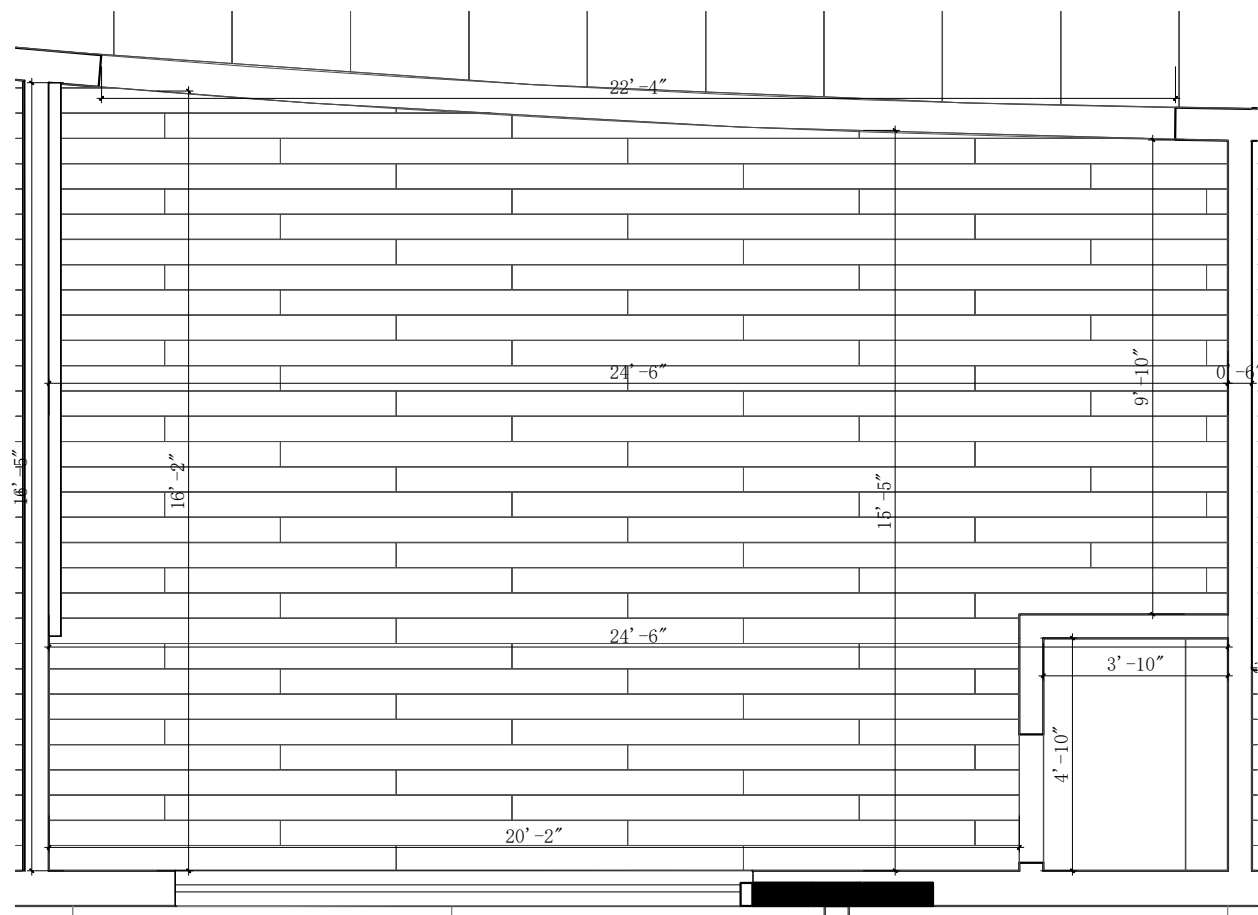
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

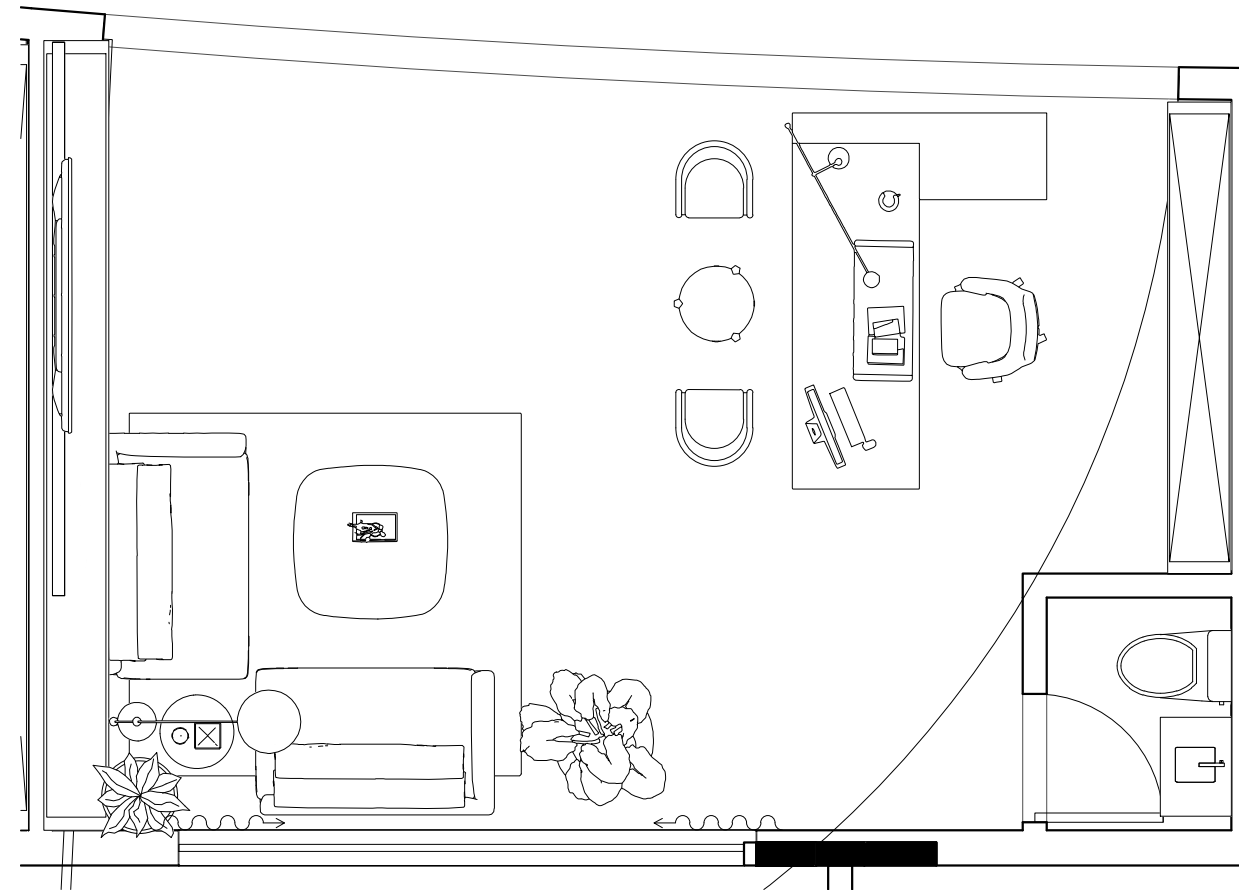
DWG. No.  
**SL07AR-ED2-19**



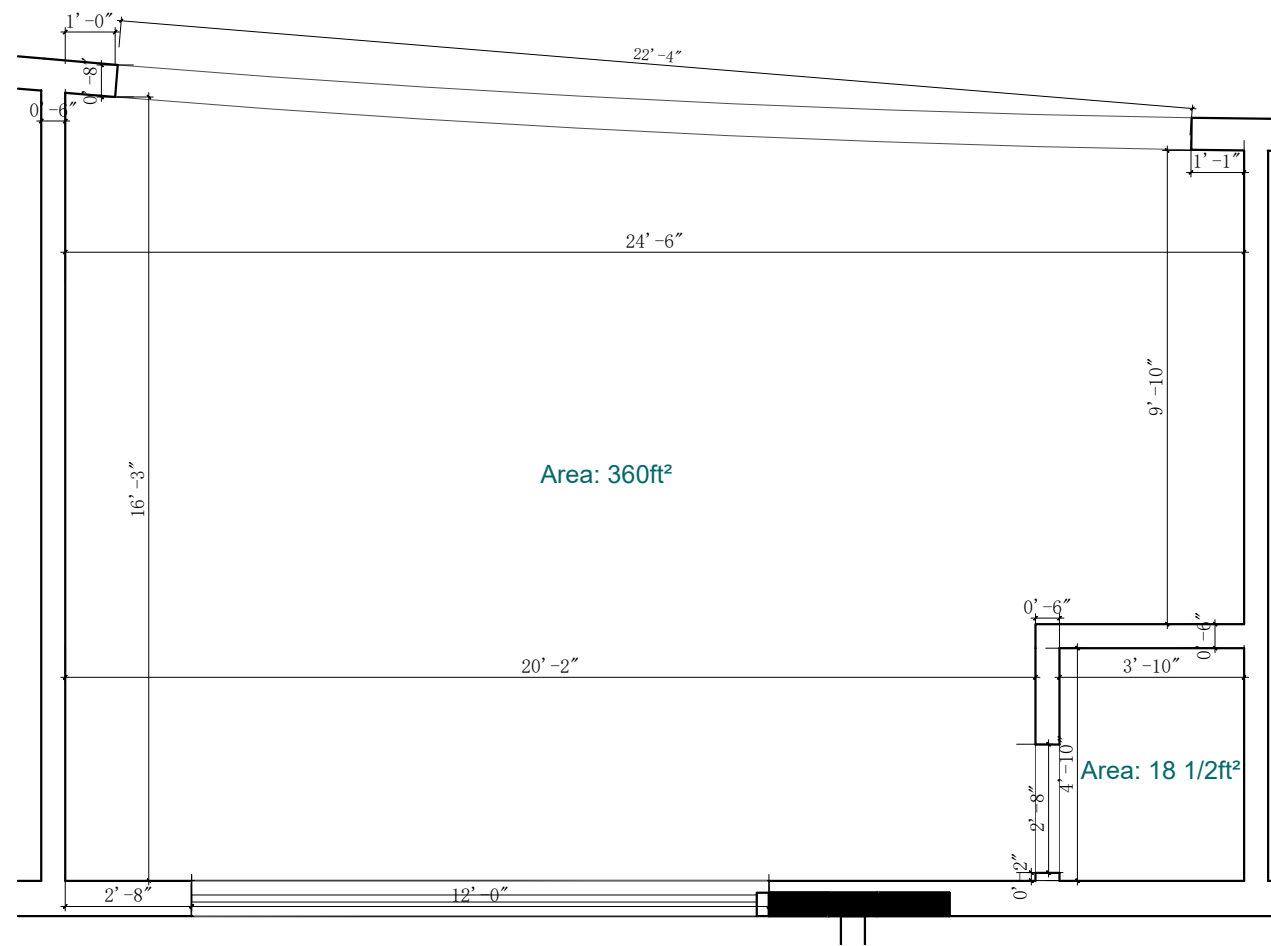
**019 ED2 FURNITURE (1/4"=1'-0")**



020 ED2 FLOOR FINISH(1/4"=1'-0")



020 ED2 FLOOR PLAN(1/4"=1'-0")



ED2 FLOOR(1/4"=1'-0")



**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



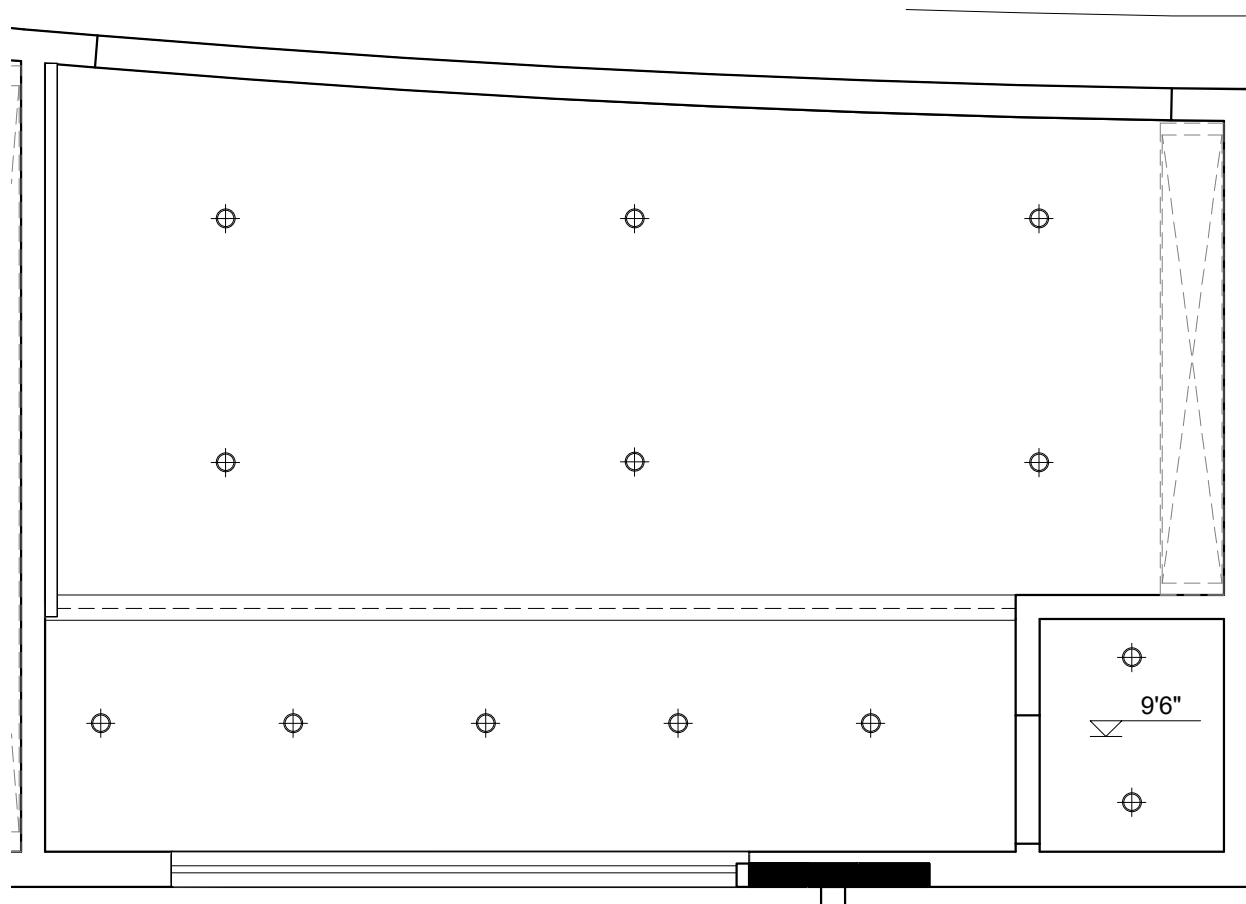
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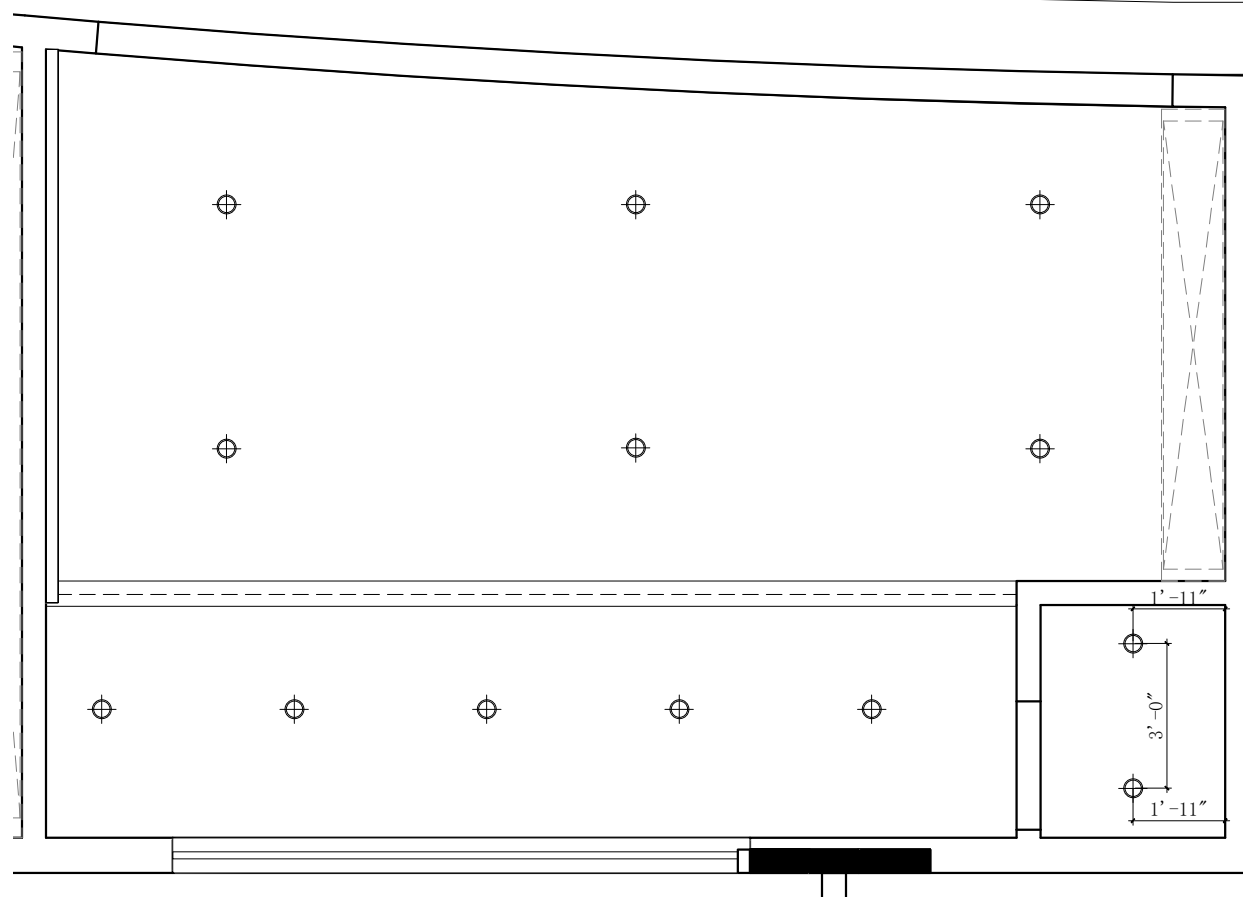
**7th FLOOR**  
**ED2 FLOOR PLAN**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED2-20**



021 ED2 CEILING (1/4"=1'-0")



021 ED2 CEILING(1/4"=1'-0")

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### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**ED2 CEILING**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED2-21**



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



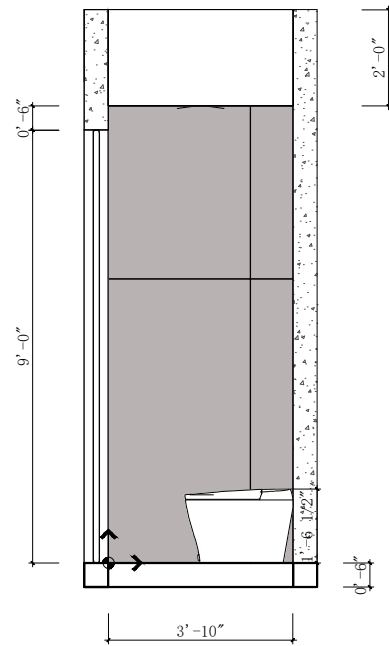
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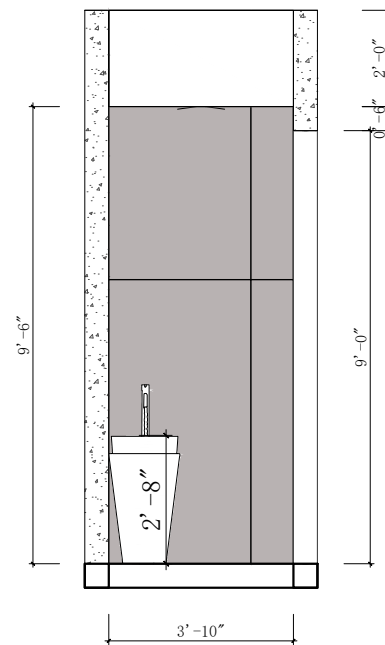
**7th FLOOR**  
**ED2 BATH ELEVATION**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

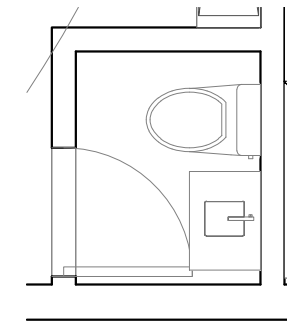
DWG. No.  
**SL07AR-ED2-22**



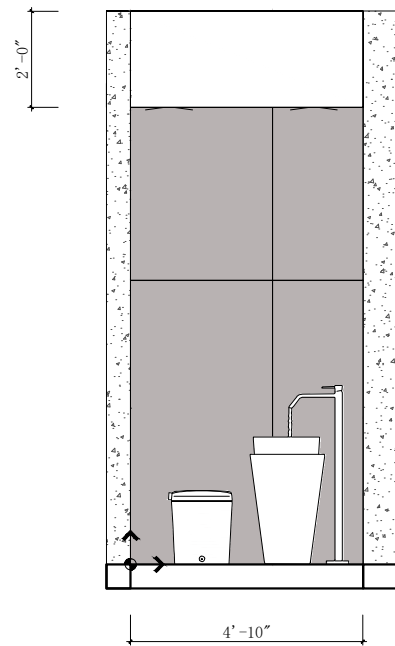
ED2 BATH ELEV A(1/4"=1'-0")



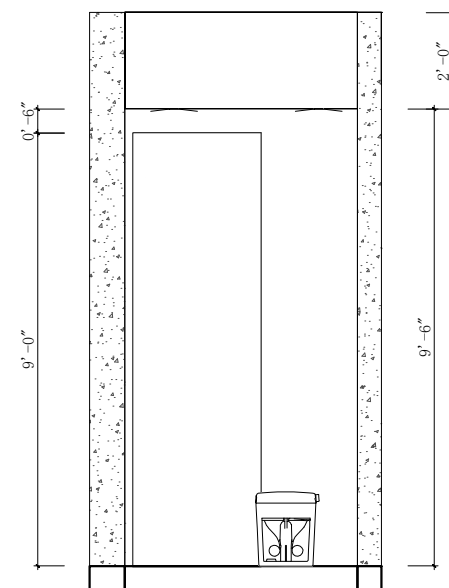
ED2 BATH ELEV C(1/4"=1'-0")



ED2 BATH(1/4"=1'-0")



ED2 BATH ELEV B(1/4"=1'-0")



ED2 BATH ELEV D(1/4"=1'-0")

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



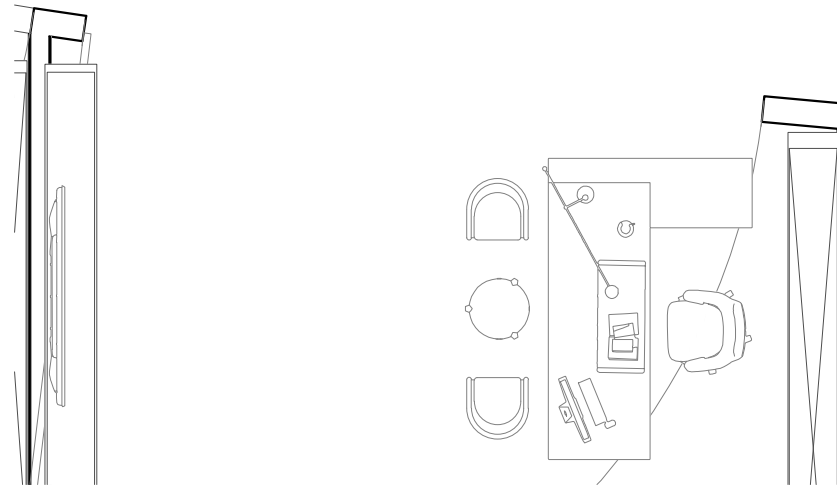
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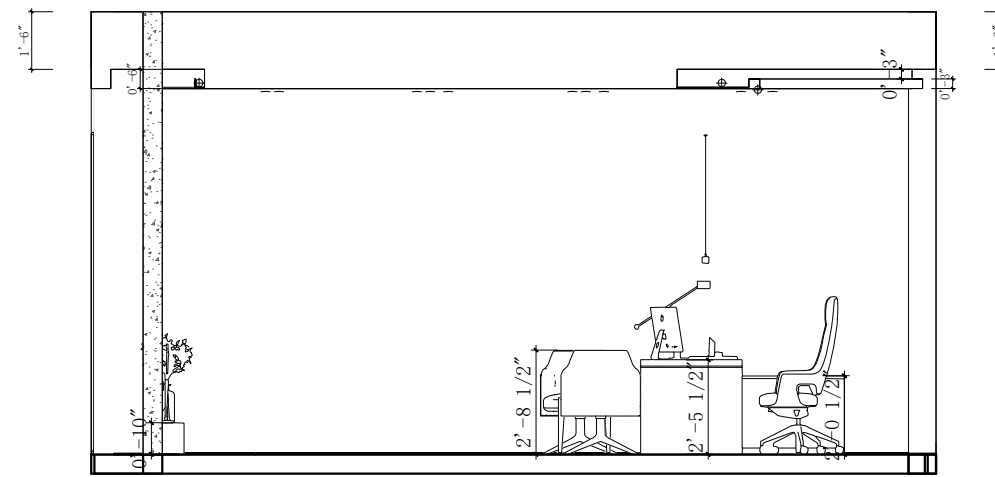
**7th FLOOR**  
**ED3 ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

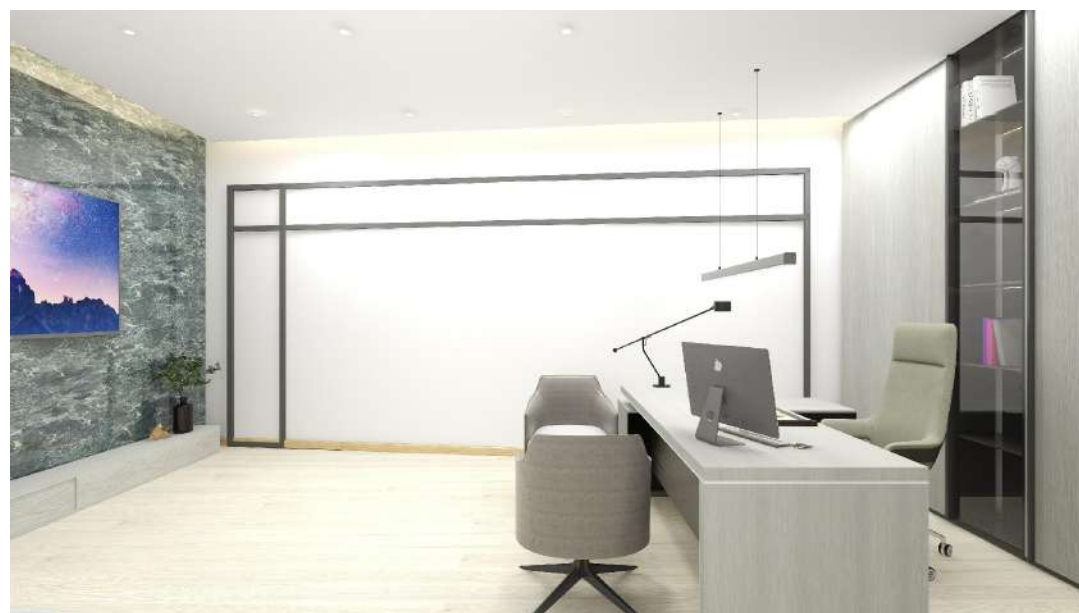
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**SL07AR-ED3-23**

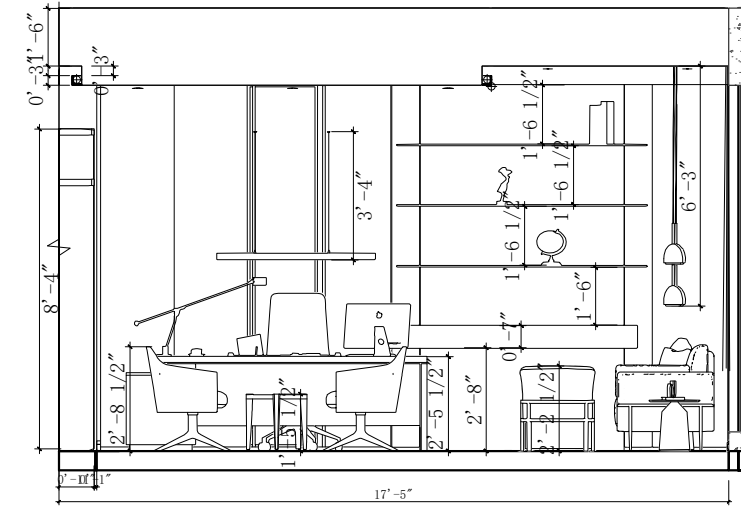


ED3 ELEV A(1/5"=1'-0")

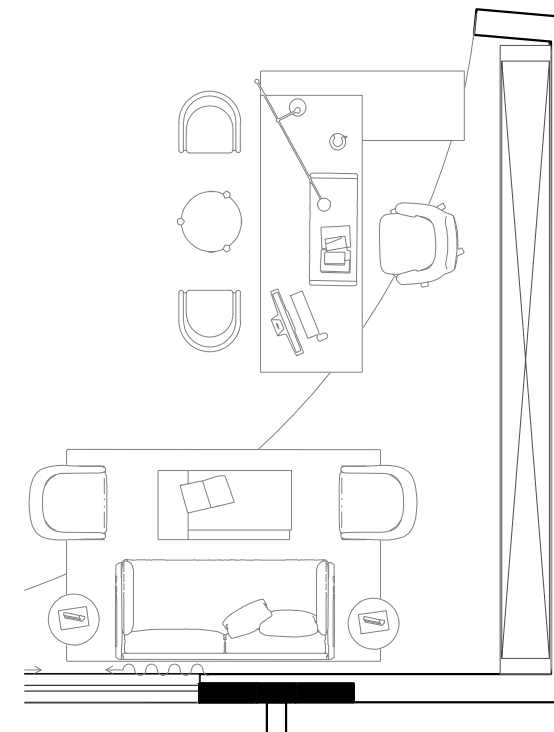


ED Office 3 Elevation E(1/5"=1'-0")





ED Office 3 Elevation B1 (1/5"=1'-0")



ED3 ELEV B (1/5"=1'-0")

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
ED3 ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED3-24**



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



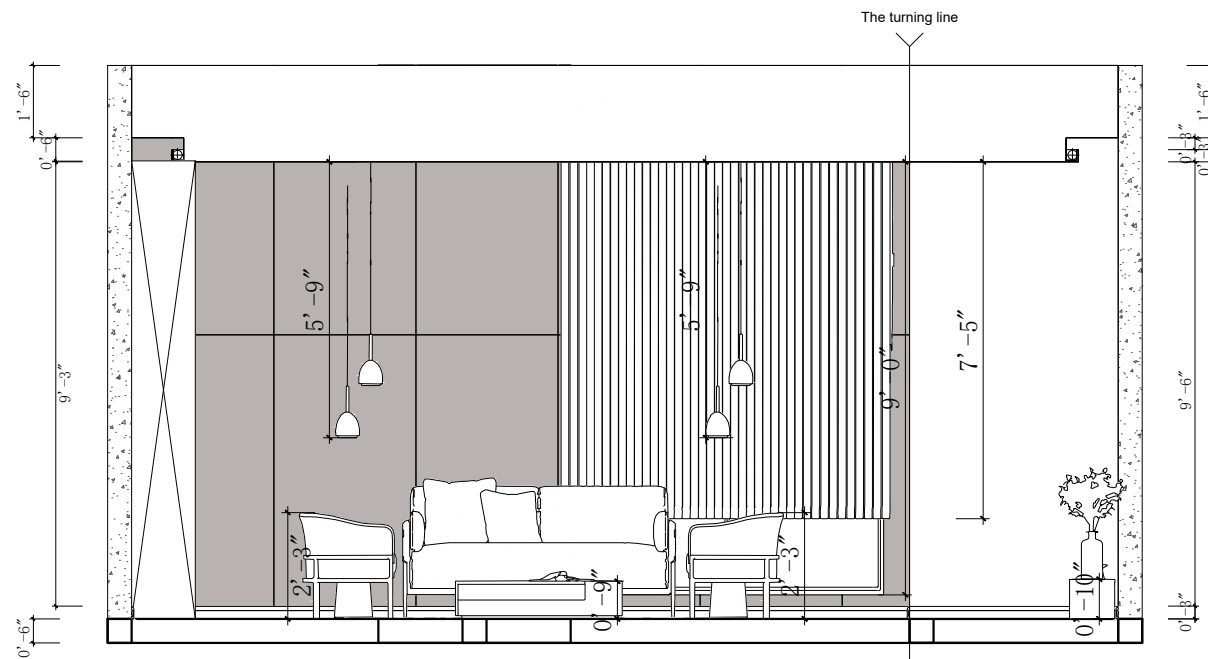
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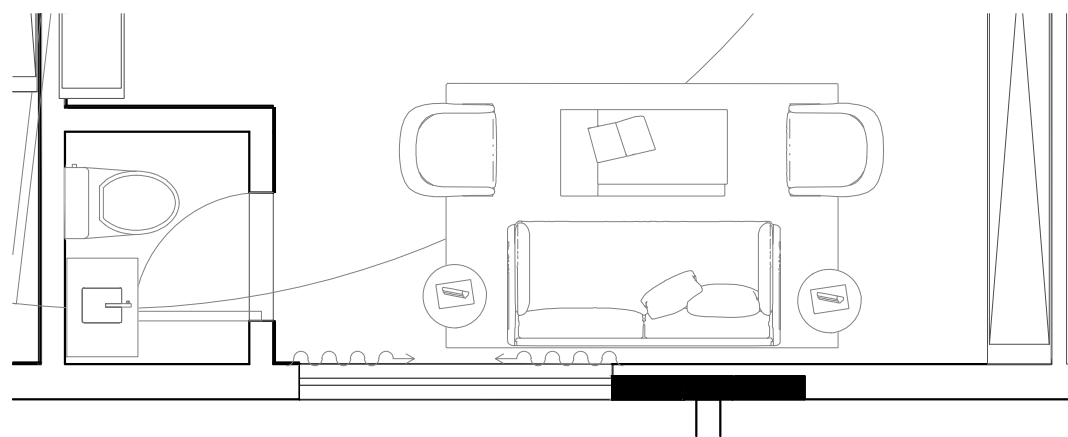
**7th FLOOR**  
**ED3 ELEVATION C**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED3-25**



ED Office 3 Elevation C(1/4"=1'-0")



ED3 ELEV C(1/4"=1'-0")



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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



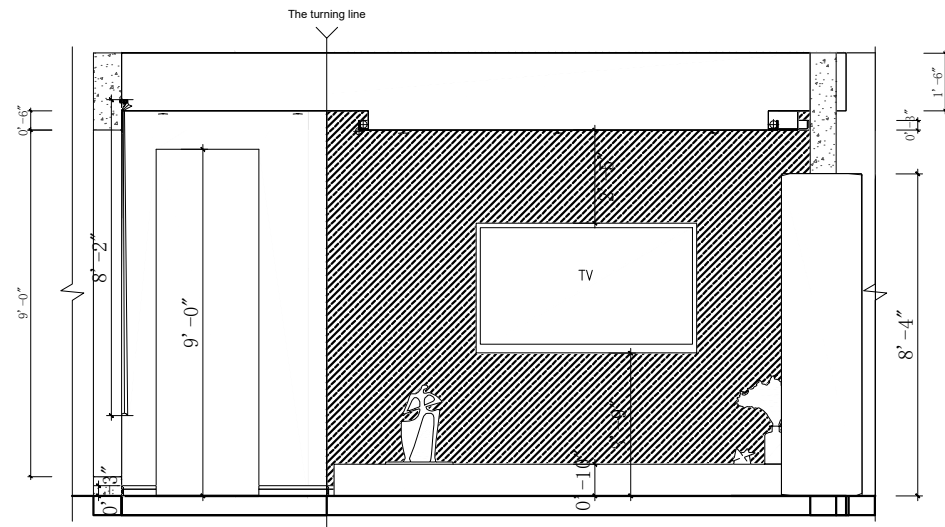
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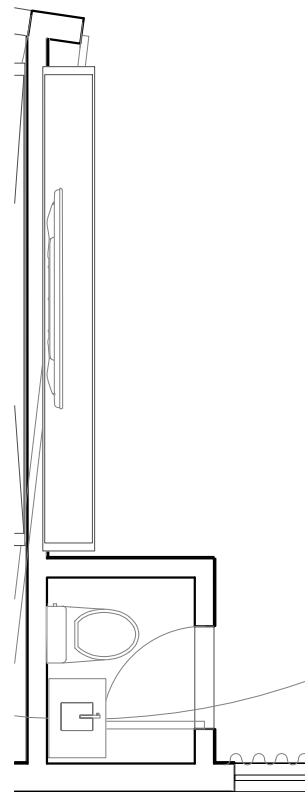
**7th FLOOR**  
**ED3 ELEVATION D**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

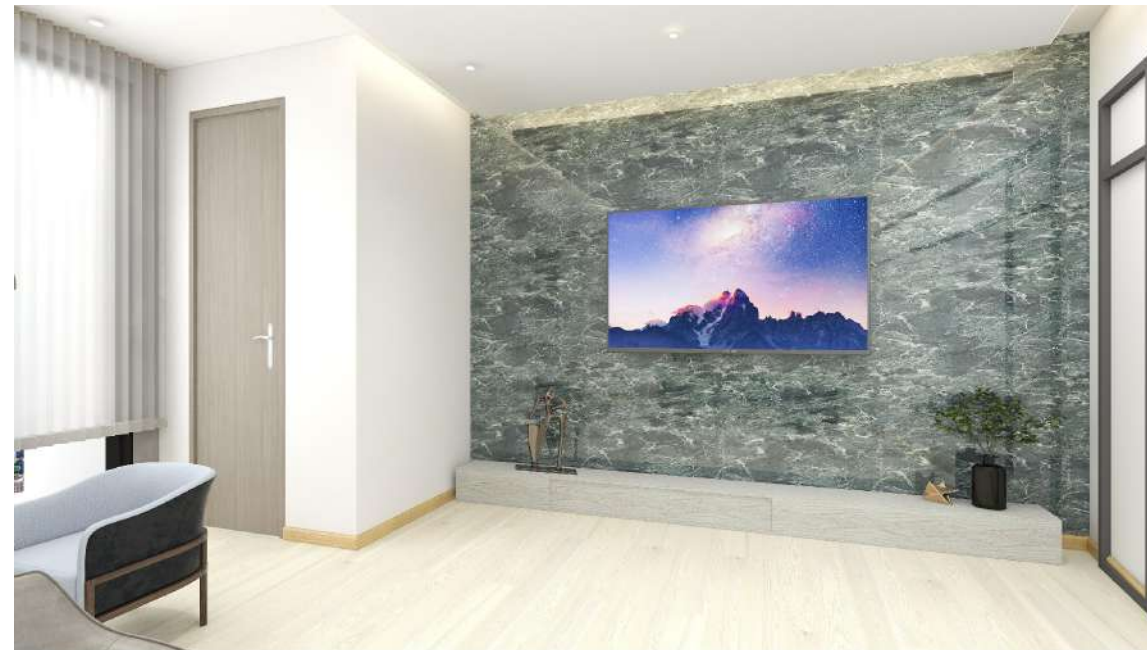
DWG. No.  
**SL07AR-ED3-26**



ED Office 3 Elevation D2(1/5"=1'-0")



ED ELEV D(1/5"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

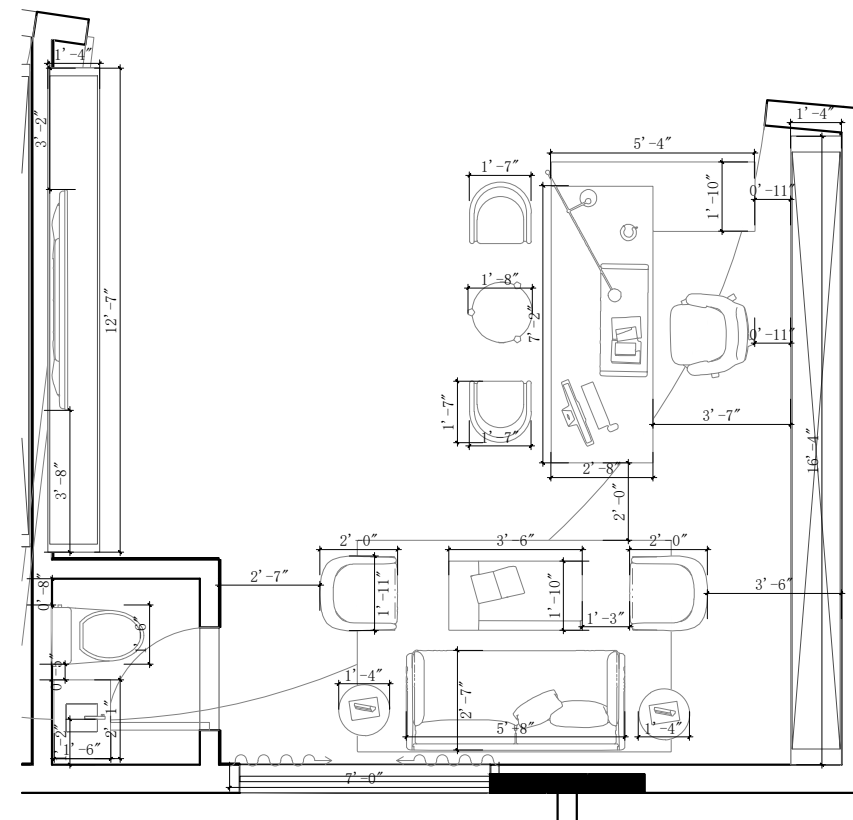
DRAWING TITLE:

**7th FLOOR**  
**ED3 FURNITURE**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR. 2024

DWG. No.  
**SL07AR-ED3-27**



**ED3 FURNITURE(1/5"=1'-0")**





## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

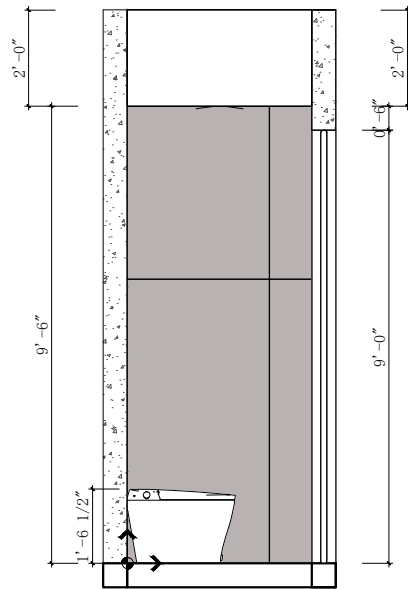
DRAWING TITLE:

**7th FLOOR**  
ED3 BATH

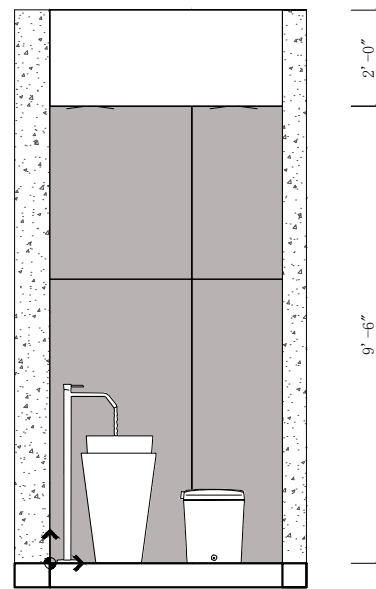
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

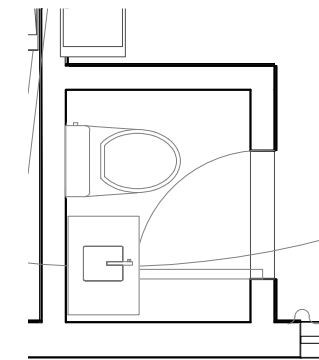
DWG. No.  
**SL07AR-ED3-30**



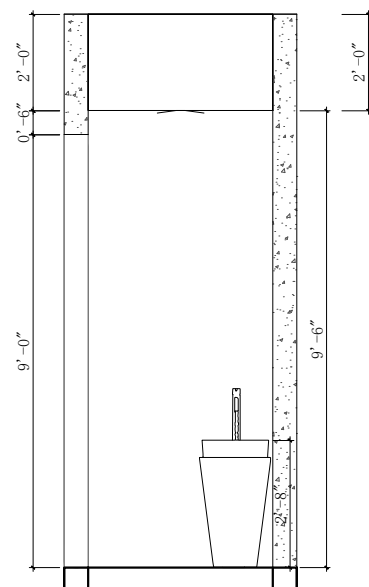
ED3 BATH ELEV A(1/4"=1'-0")



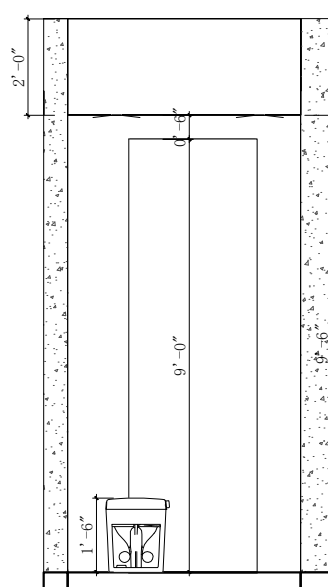
ED3 BATH ELEV D(1/4"=1'-0")



ED3 BATH(1/4"=1'-0")



ED3 BATH ELEV C(1/4"=1'-0")



ED3 BATH ELEV B(1/4"=1'-0")



**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



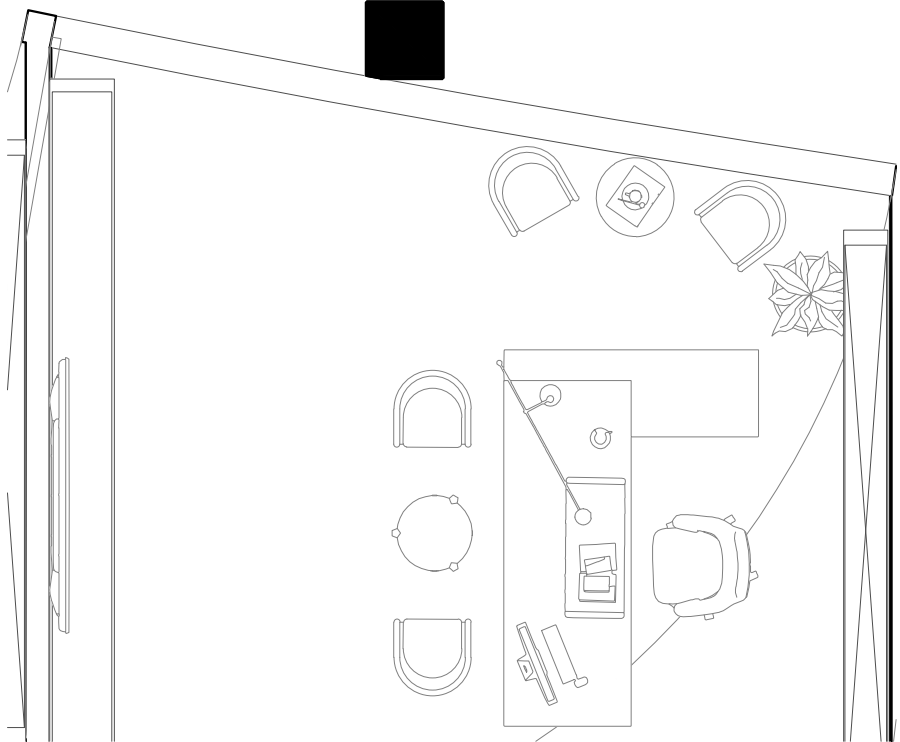
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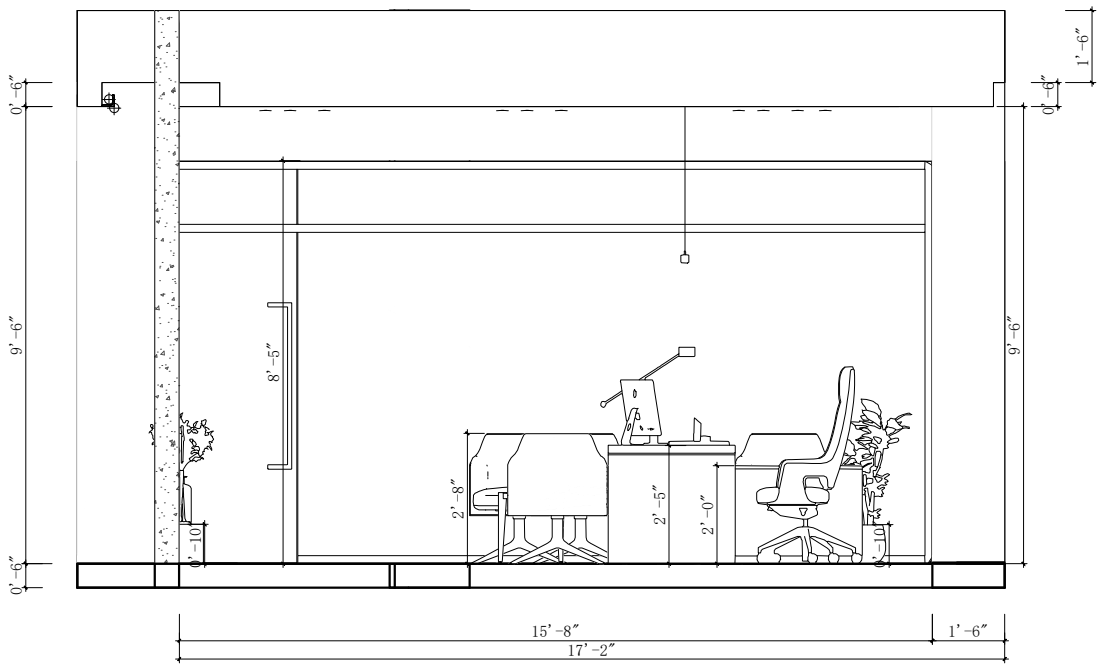
**7th FLOOR**  
**ED4 ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED4-31**



ED4 ELEV A(1/4"=1'-0")

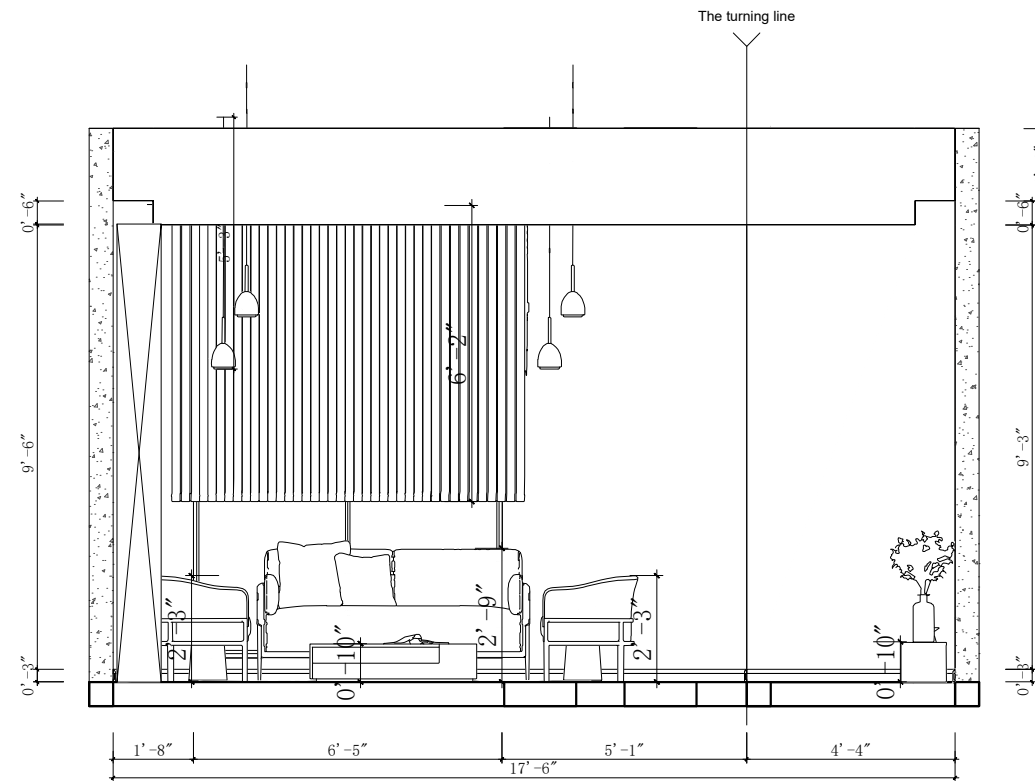


ED Office 4 Elevation E(1/4"=1'-0")

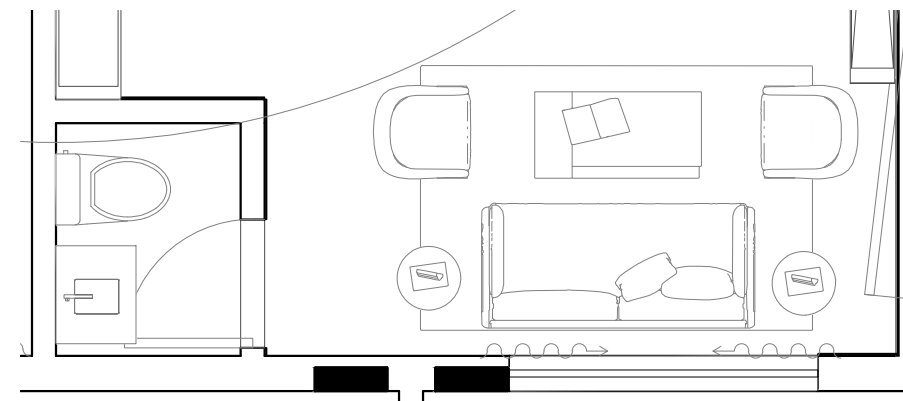








ED Office 4 Elevation C(1/4"=1'-0")



ED4 ELEV C(1/4"=1'-0")

## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



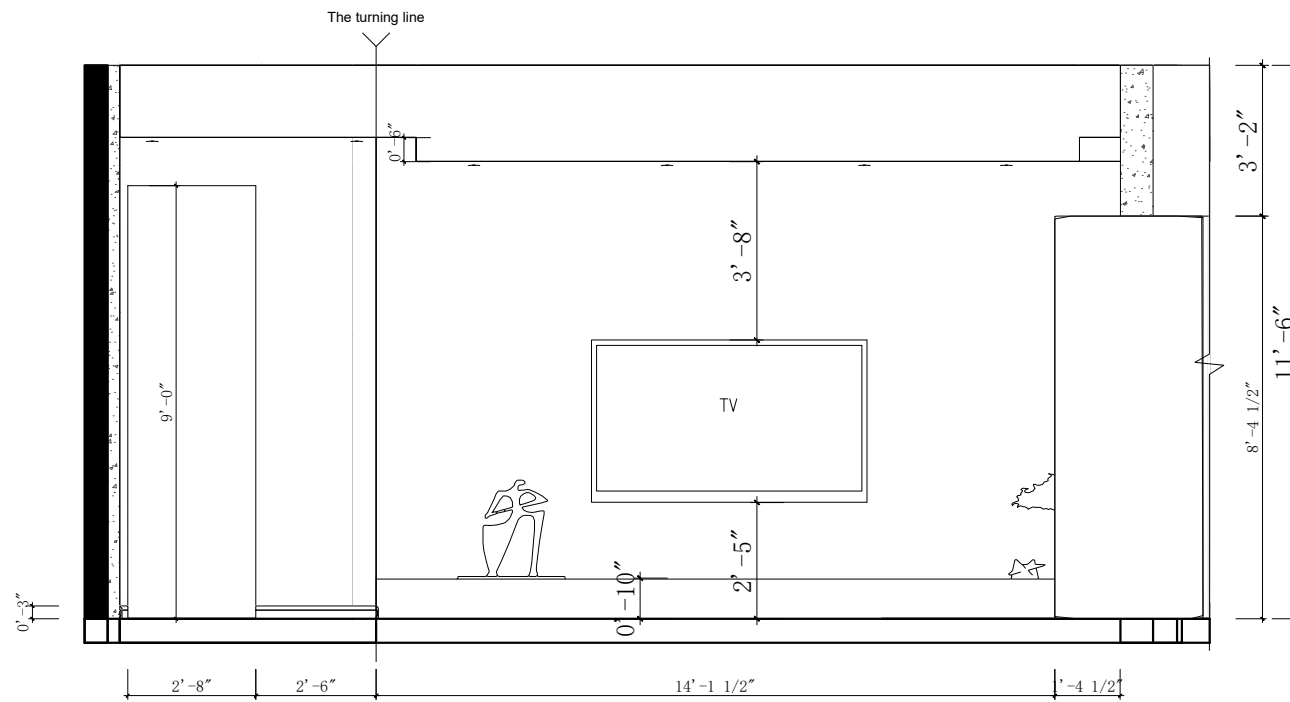
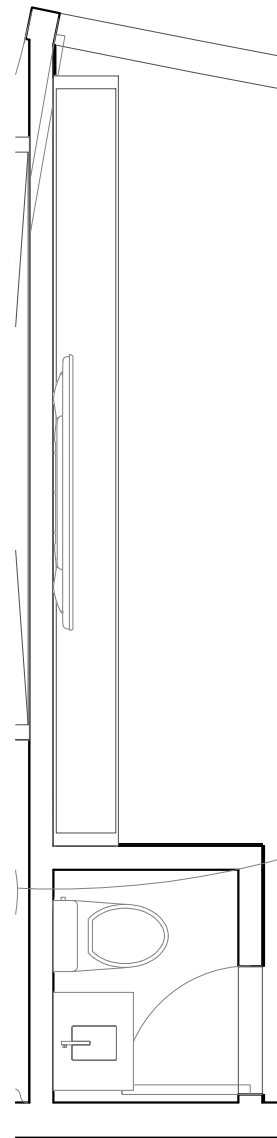
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
ED4 ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED4-33**



ED Office 4 Elevation D2(1/4"=1'-0")



## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
ED4 ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED4-34**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



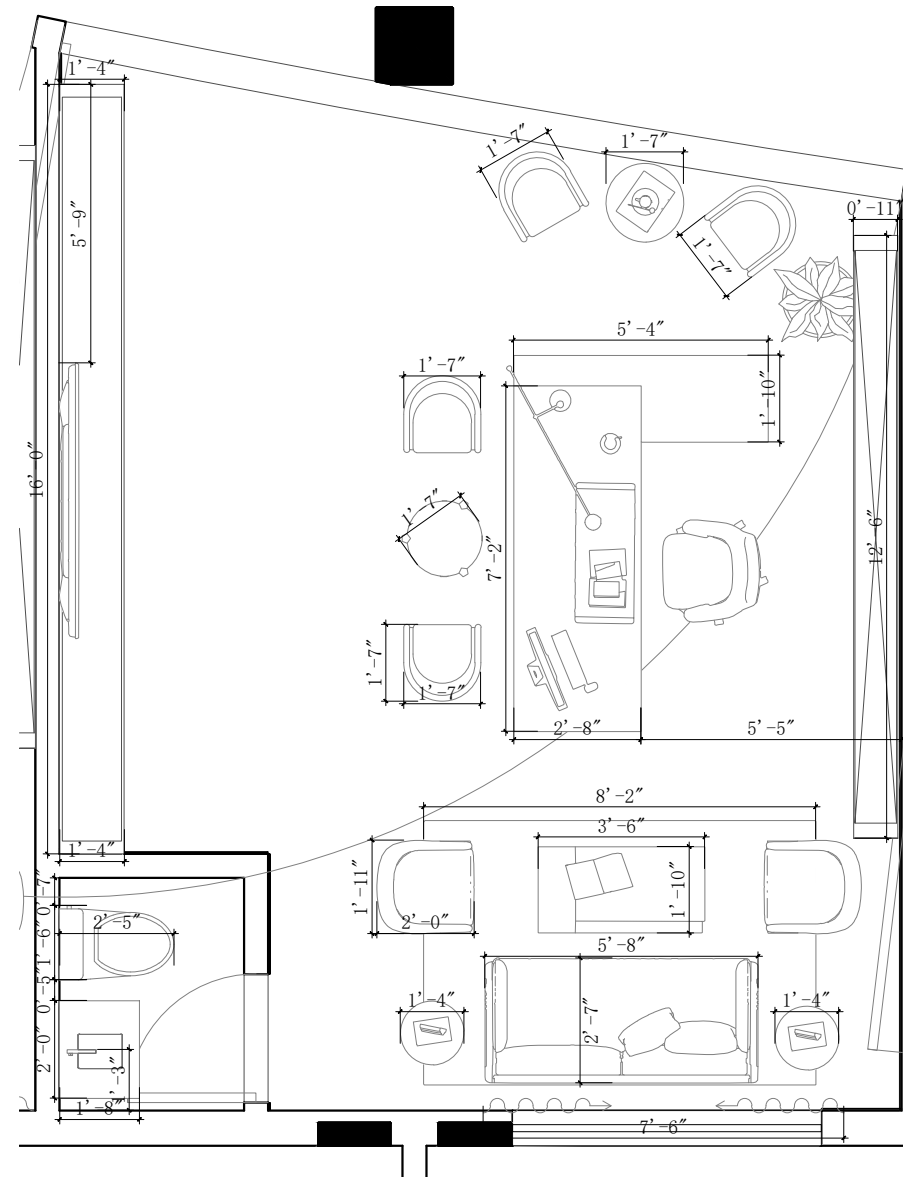
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**ED4 FURNITURE**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED4-35**



ED4 FURNITURE (1/4"=1'-0")

## GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



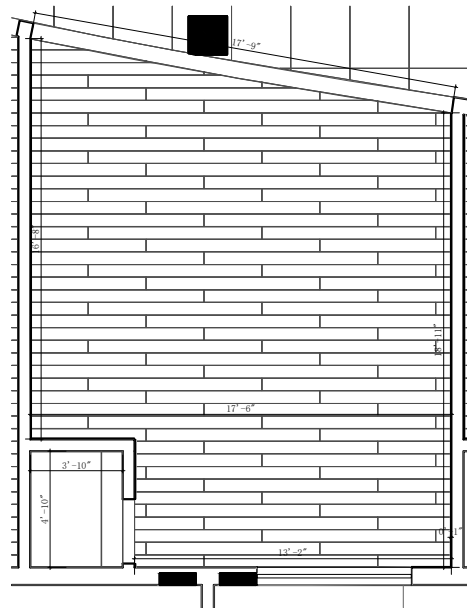
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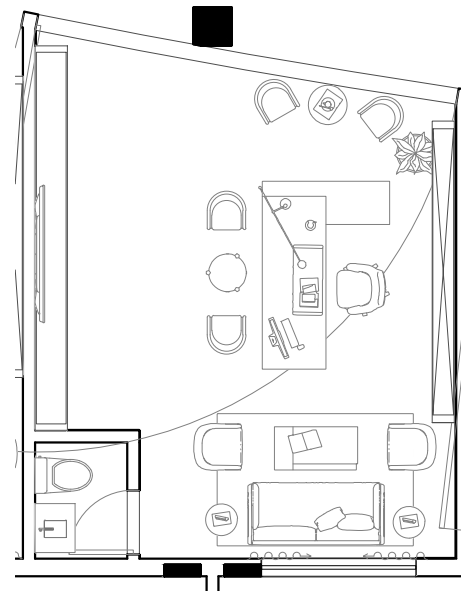
**7th FLOOR**  
ED4 FLOOR PLAN

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

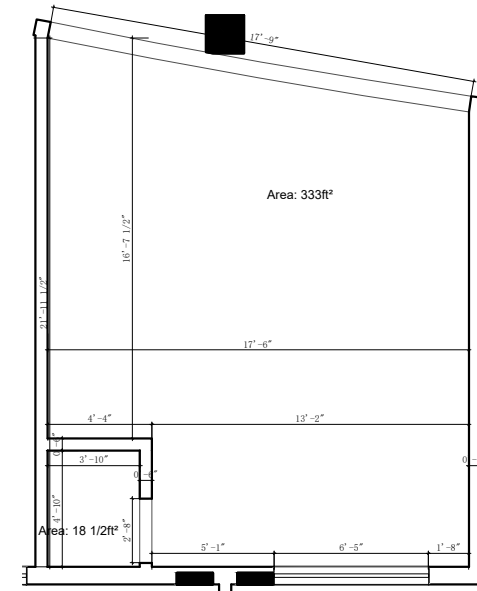
DWG. No.  
**SL07AR-ED4-36**



ED4 FLOOR FINISH(1/8"=1'-0")



ED4 PLAN(1/8"=1'-0")



ED4 FLOOR PLAN(1/8"=1'-0")





## GENERAL NOTES

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### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

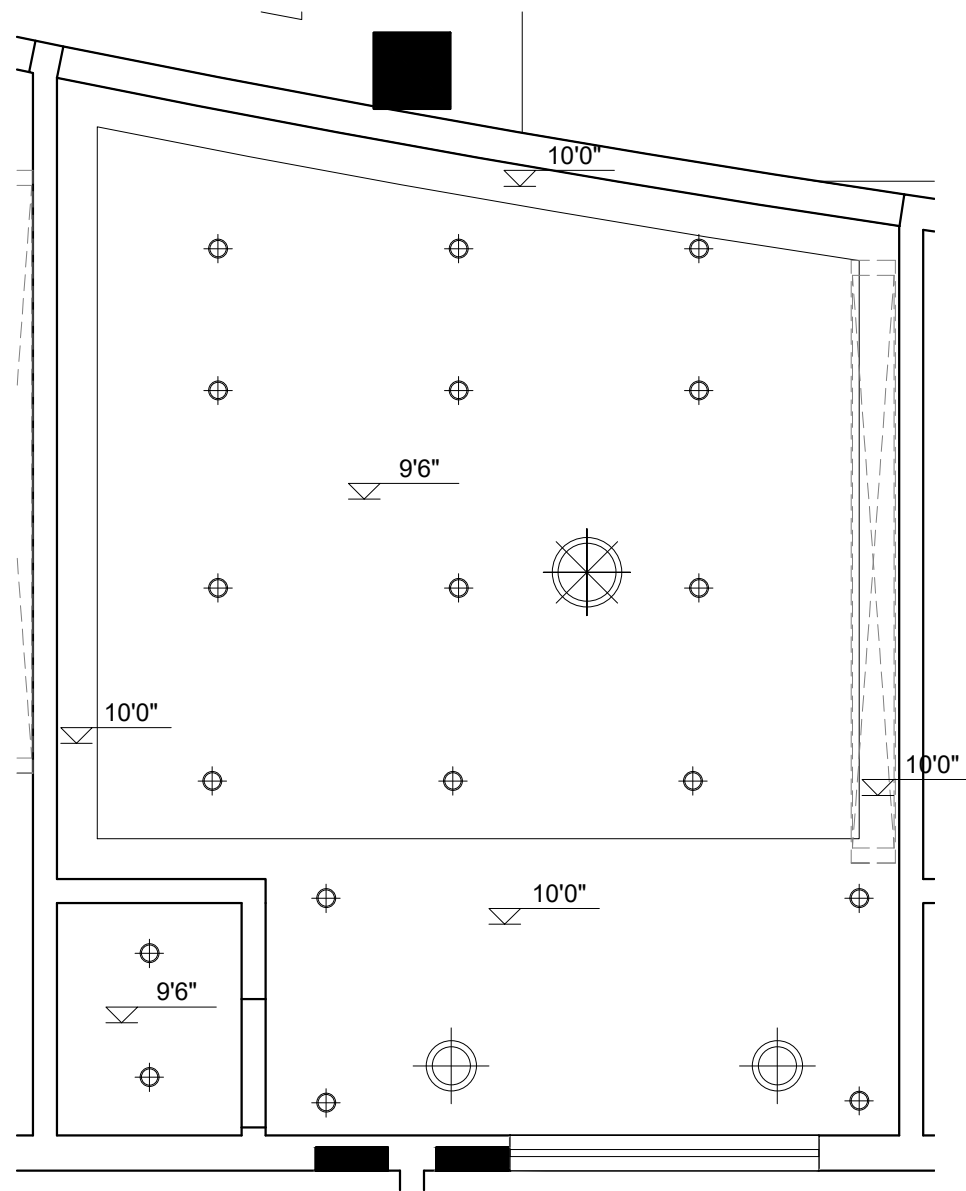
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**7th FLOOR**  
**ED4 CEILING**

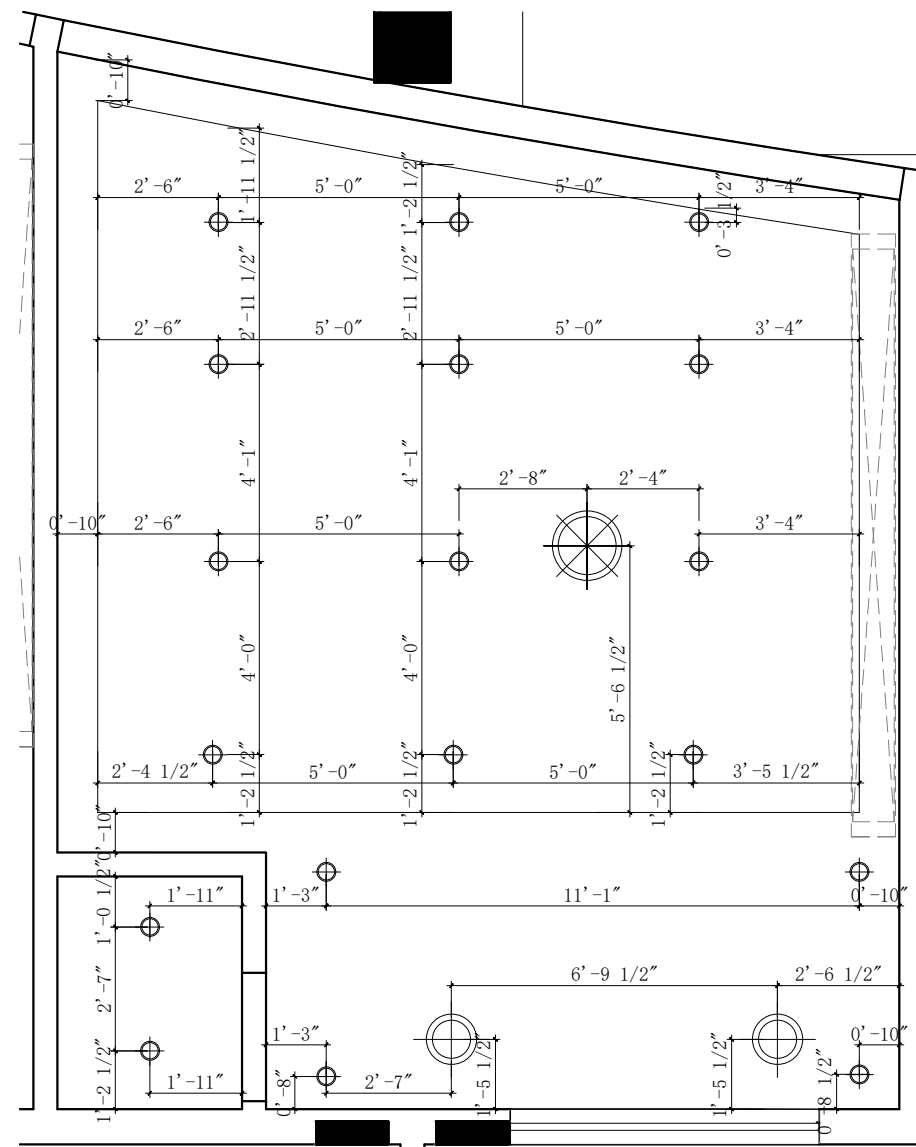
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

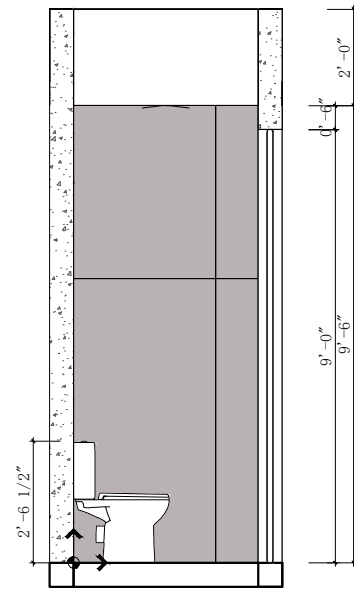
DWG. No.  
**SL07AR-ED4-37**



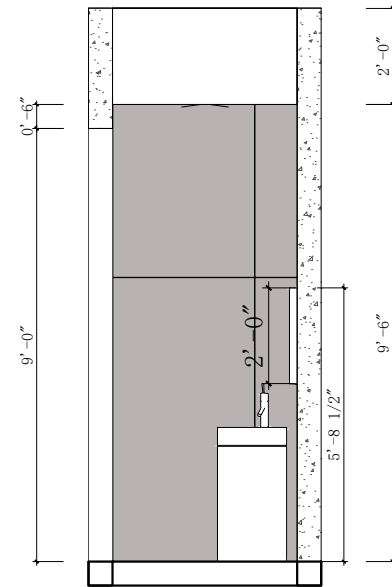
ED4 CEILING (1/4"=1'-0")



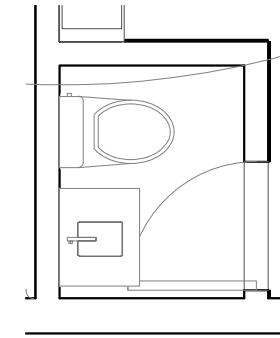
ED4 CEILING LIGHTS(1/4"=1'-0")



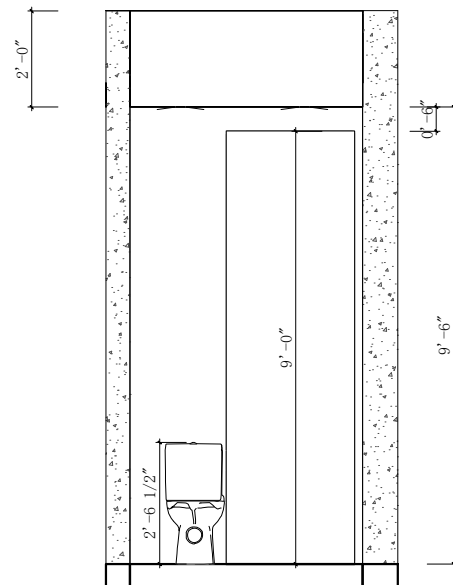
ED4 Bath Elevation A(1/4"=1'-0")



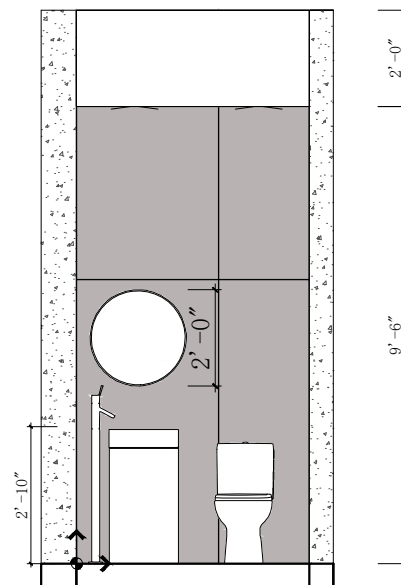
ED4 Bath Elevation C(1/4"=1'-0")



ED4 BATH(1/4"=1'-0")



ED4 Bath Elevation B(1/4"=1'-0")



ED4 Bath Elevation D(1/4"=1'-0")

**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**ED4 BATH**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED4-38**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

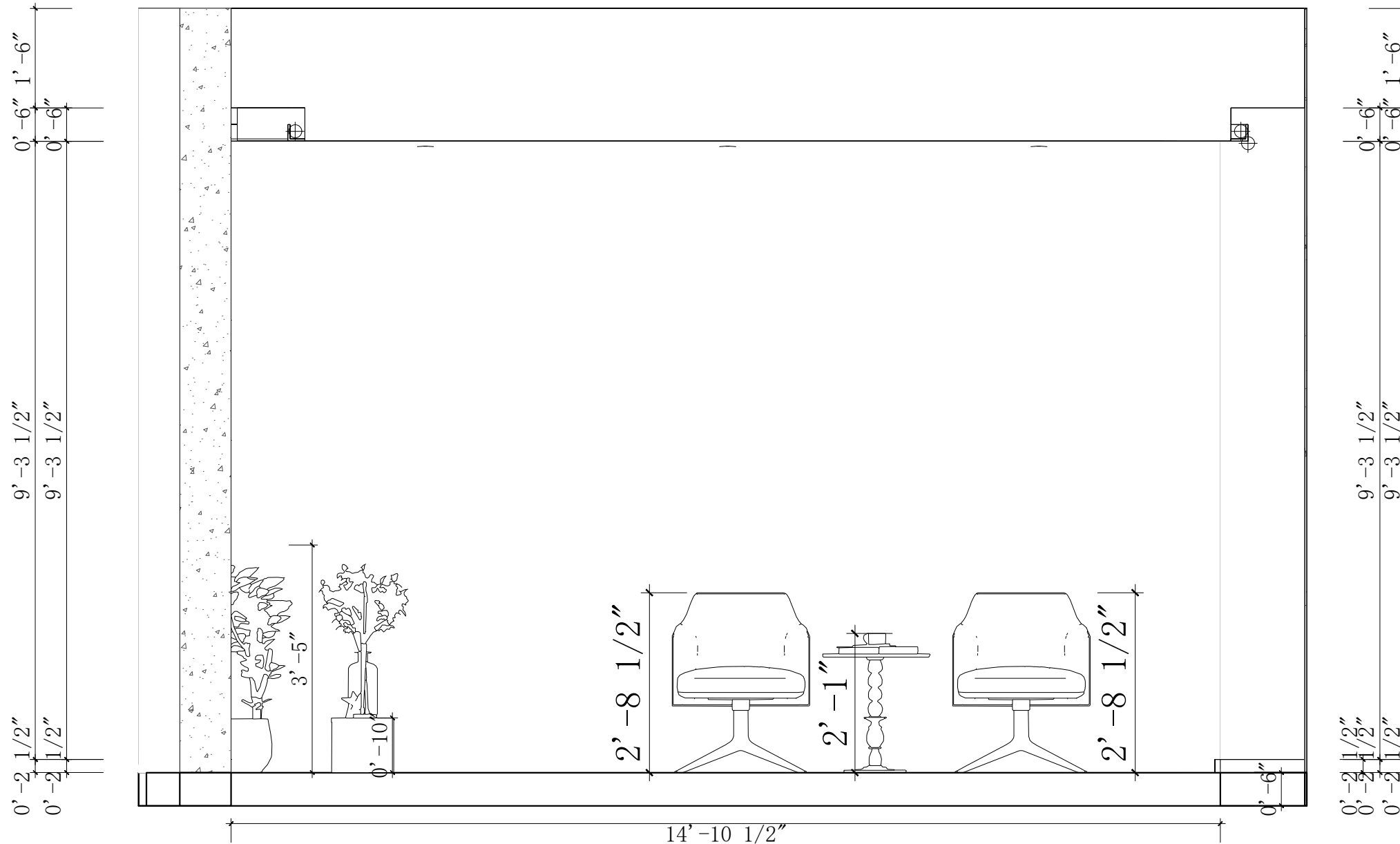
**7th FLOOR**  
**ED5 ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED5-39**



ED5 ELEV A(1/2"=1'-0")



ED Office 5 Elevation E(1/2"=1'-0")

## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

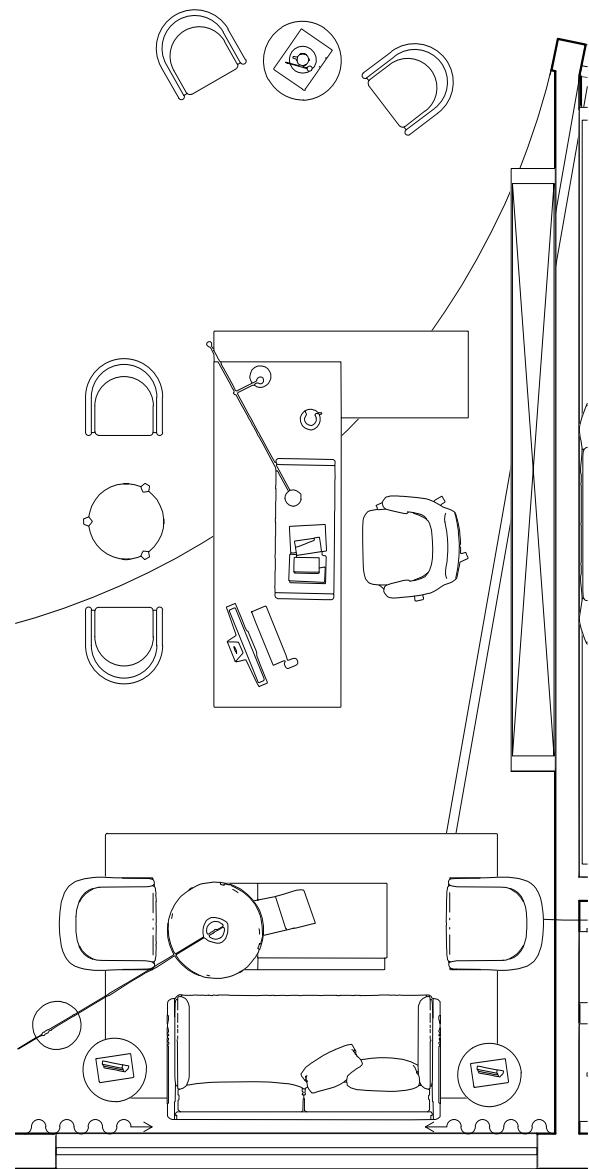
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**7th FLOOR**  
**ED5 ELEVATION B**

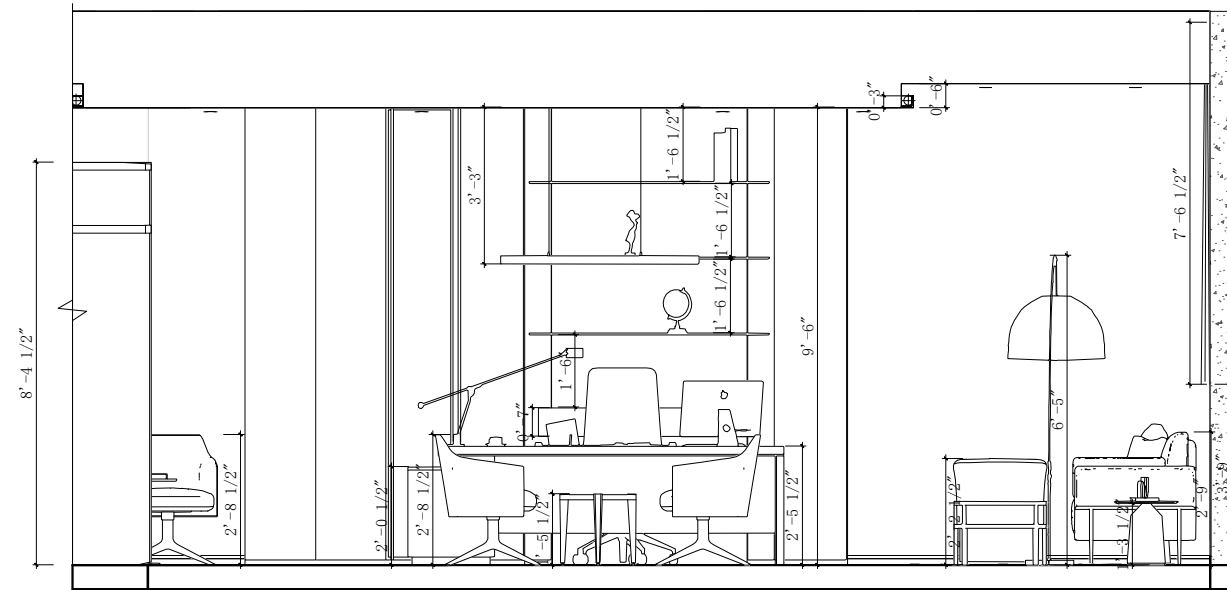
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-ED5-40**



ED5 ELEV B(1/4"=1'-0")



ED Office 5 Elevation B1(1/4"=1'-0")





## GENERAL NOTES

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### CONCEPT PLAN FOR APPROVAL

DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

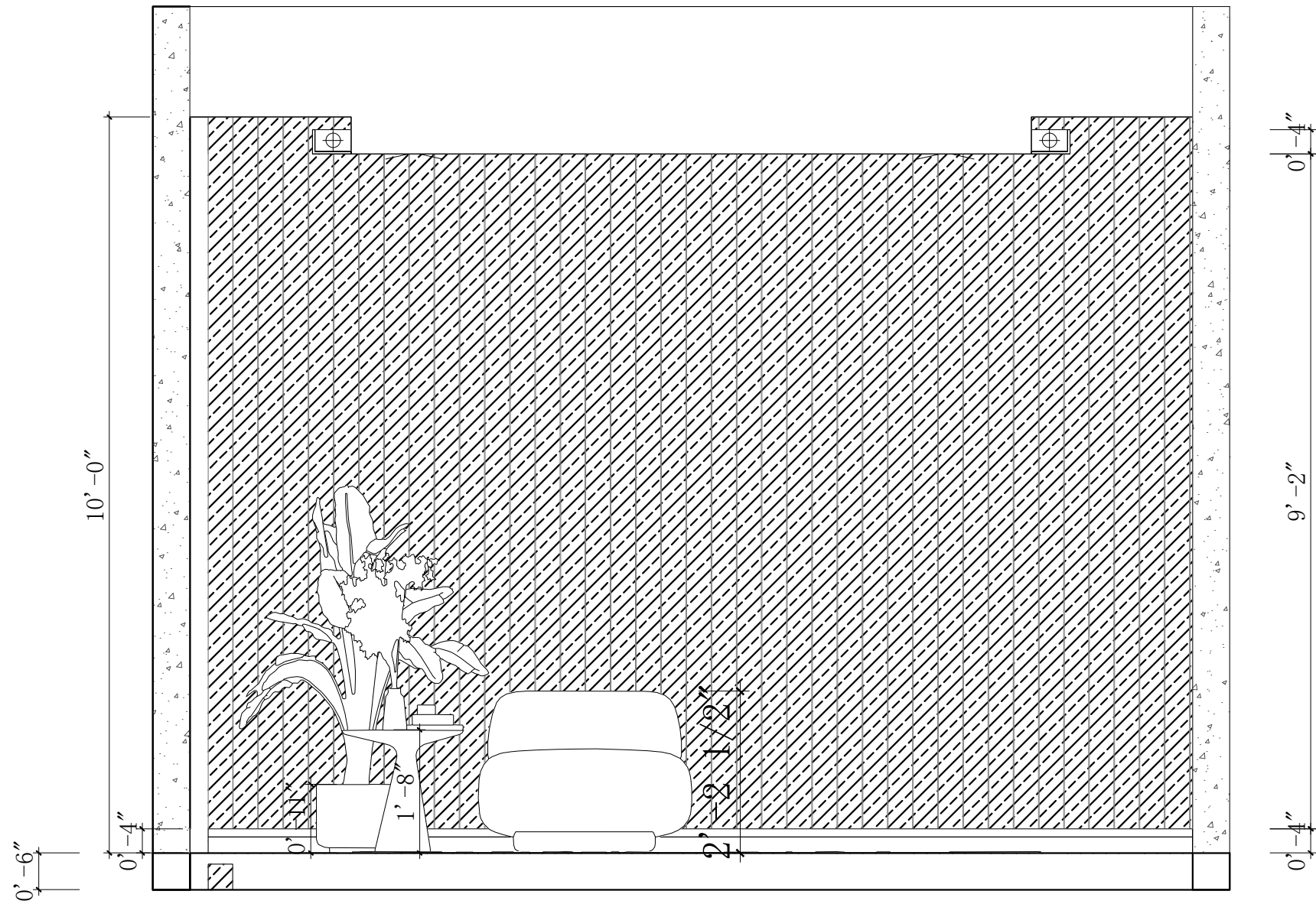
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**7th FLOOR**  
**COFFEE CORNER**  
**ELEVATION A**

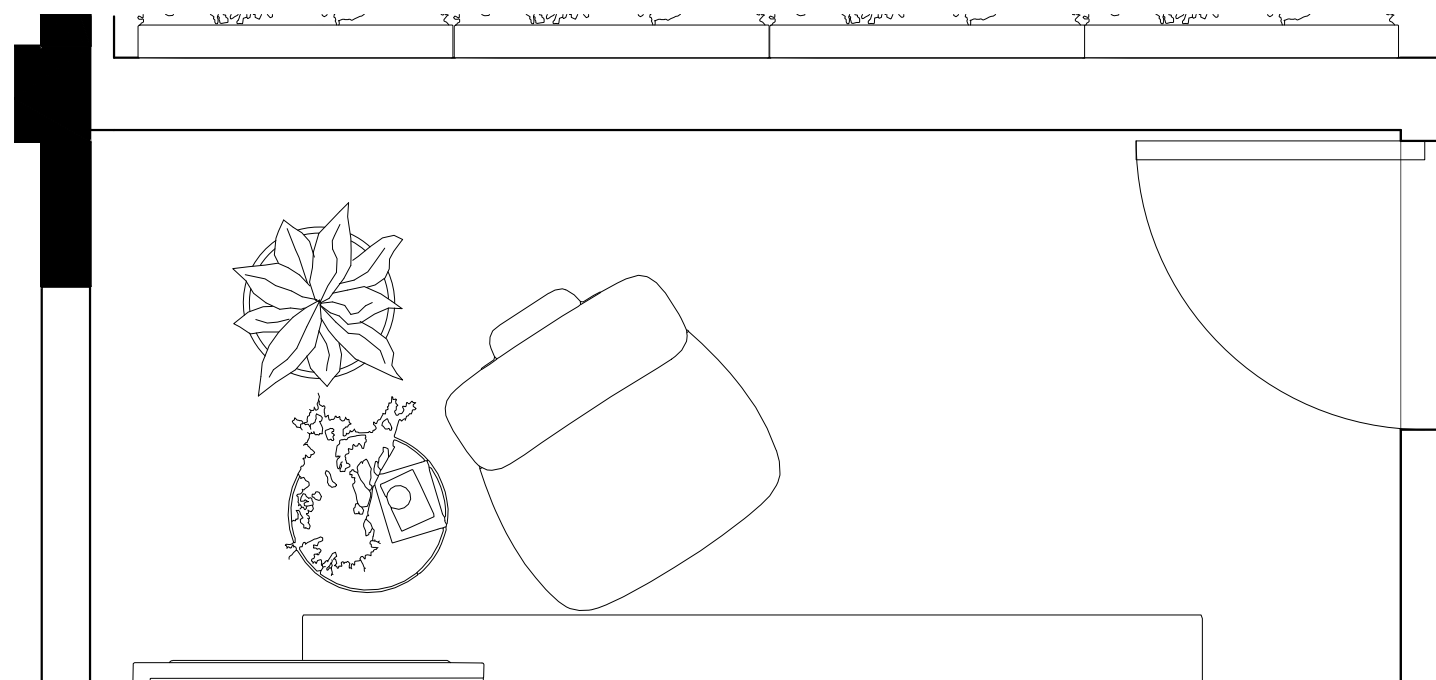
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
@ A3	APR. 2024

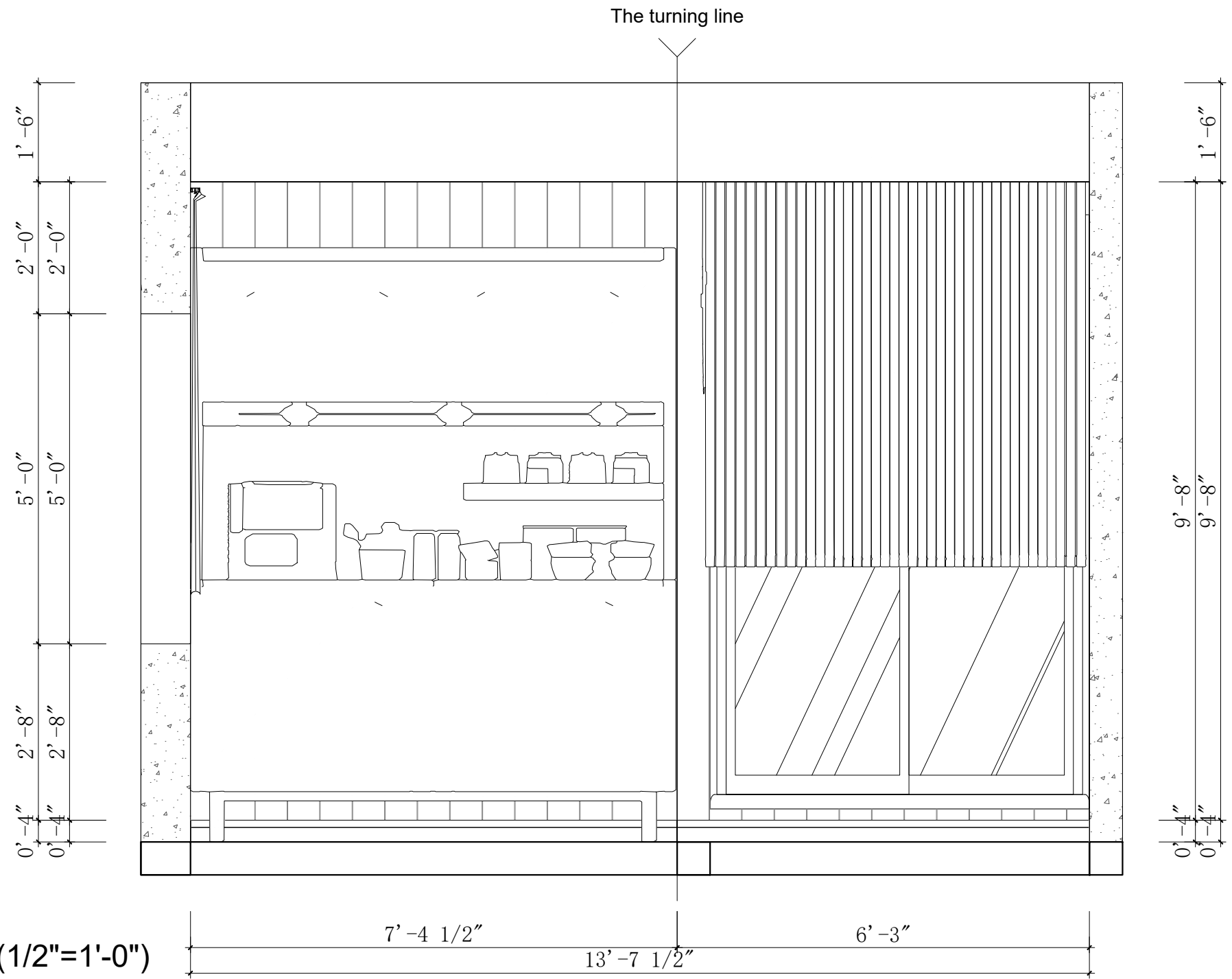
DWG. No.  
**SL07AR-CA-47**



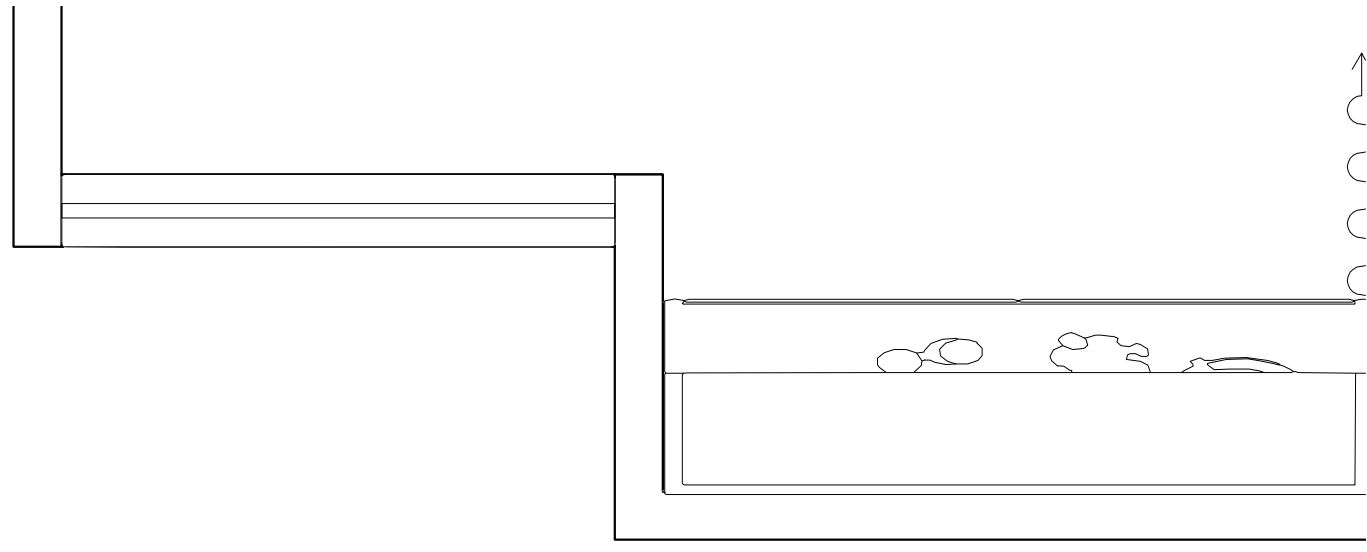
Waiting Area Elevation A(1/2"=1'-0")



COFFEE AREA ELEV A(1/2"=1'-0")



Waiting Area Elevation C(1/2"=1'-0")



COFFEE AREA ELEV C(1/2"=1'-0")

**GENERAL NOTES**

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
COFFEE AREA  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CA-49**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

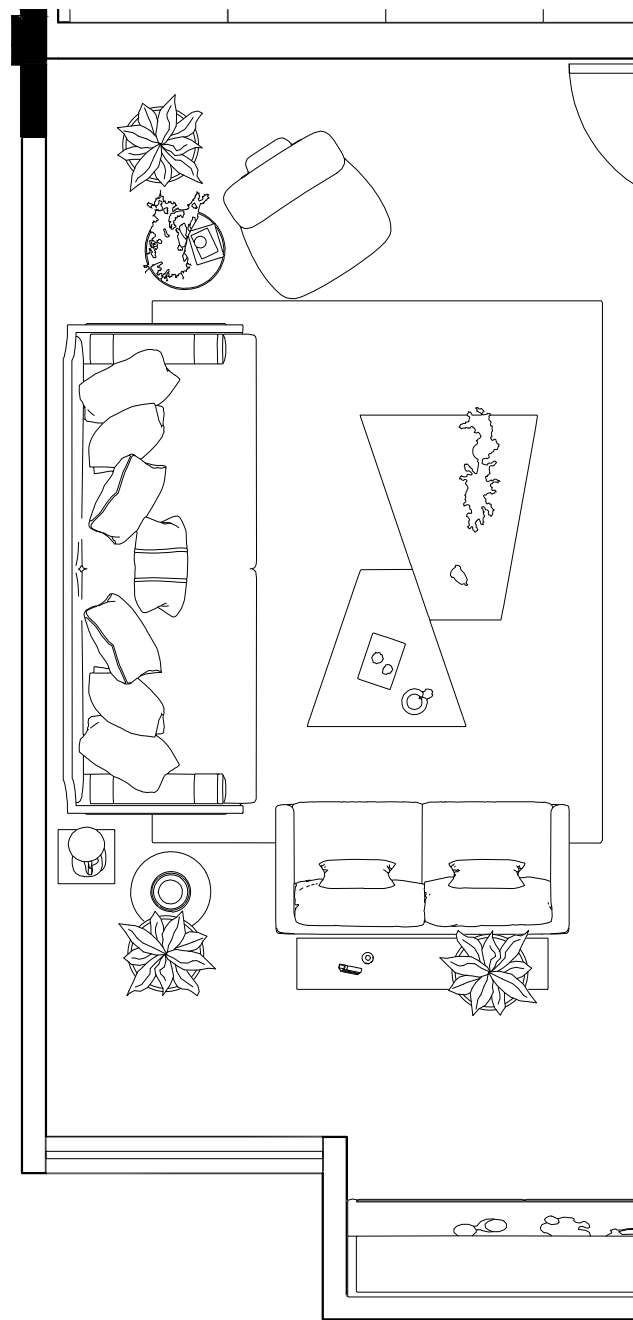


COMMENTS:

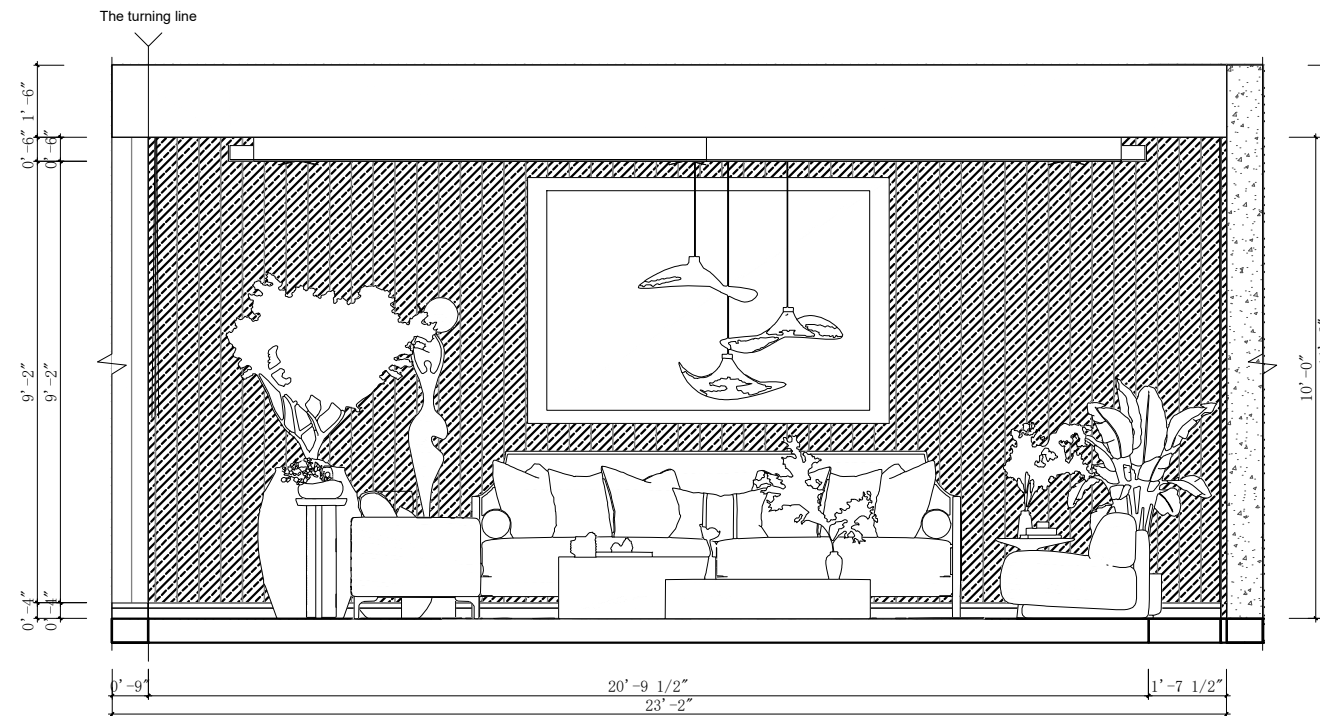
DRAWING TITLE:  
**7th FLOOR**  
COFFEE AREA  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CA-50**



COFFEE AREA ELEV D(1/4"=1'-0")



Waiting Area Elevation D(1/4"=1'-0")





## GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



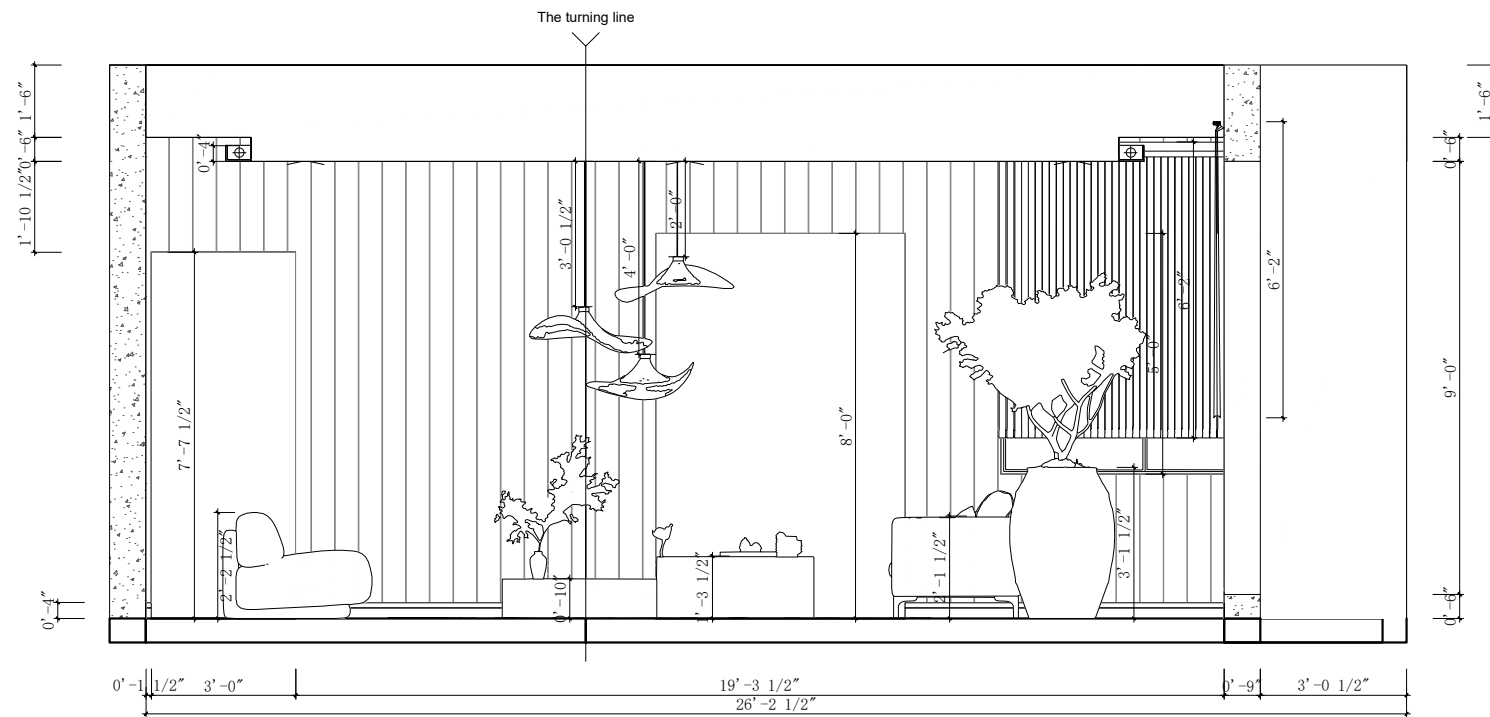
COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
COFFEE AREA  
ELEVATION B

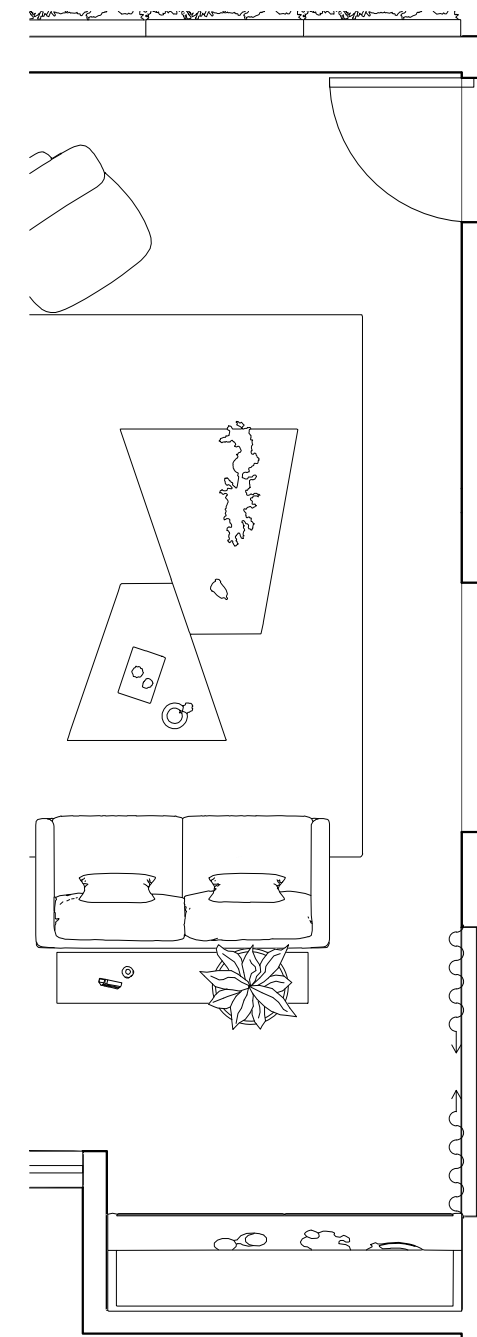
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CC-48**



Waiting Area Elevation B(1/4"=1'-0")



COFFEE AREA ELEV B(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



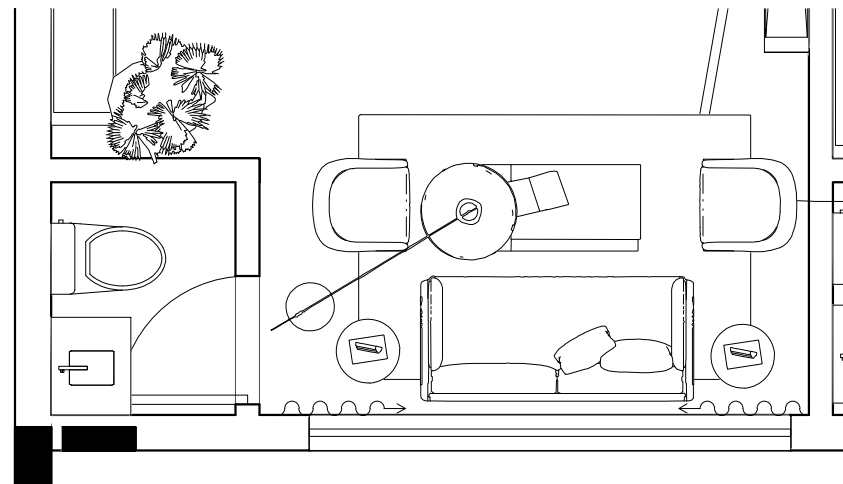
COMMENTS:

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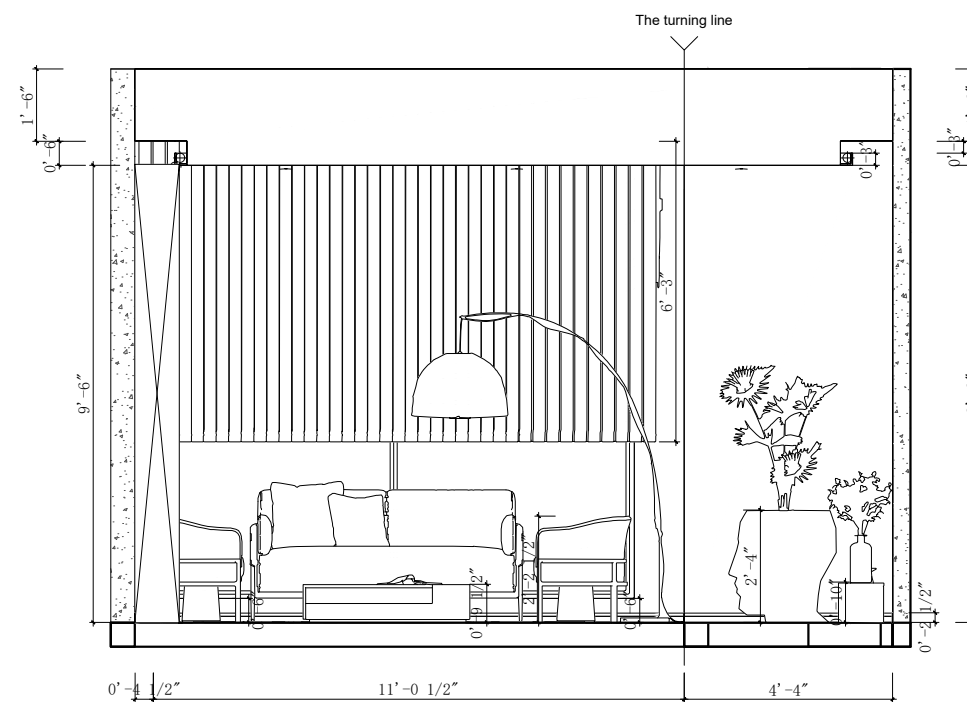
**7th FLOOR**  
**ED5 ELEVATION C**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED5-41**



ED5 ELEV C(1/4"=1'-0")



ED Office 5 Elevation C(1/4"=1'-0")



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

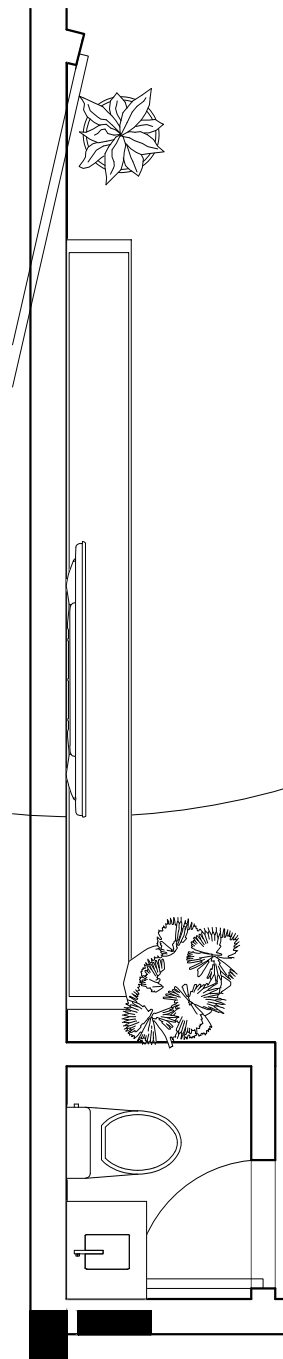
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**7th FLOOR**  
**ED5 ELEVATION D**

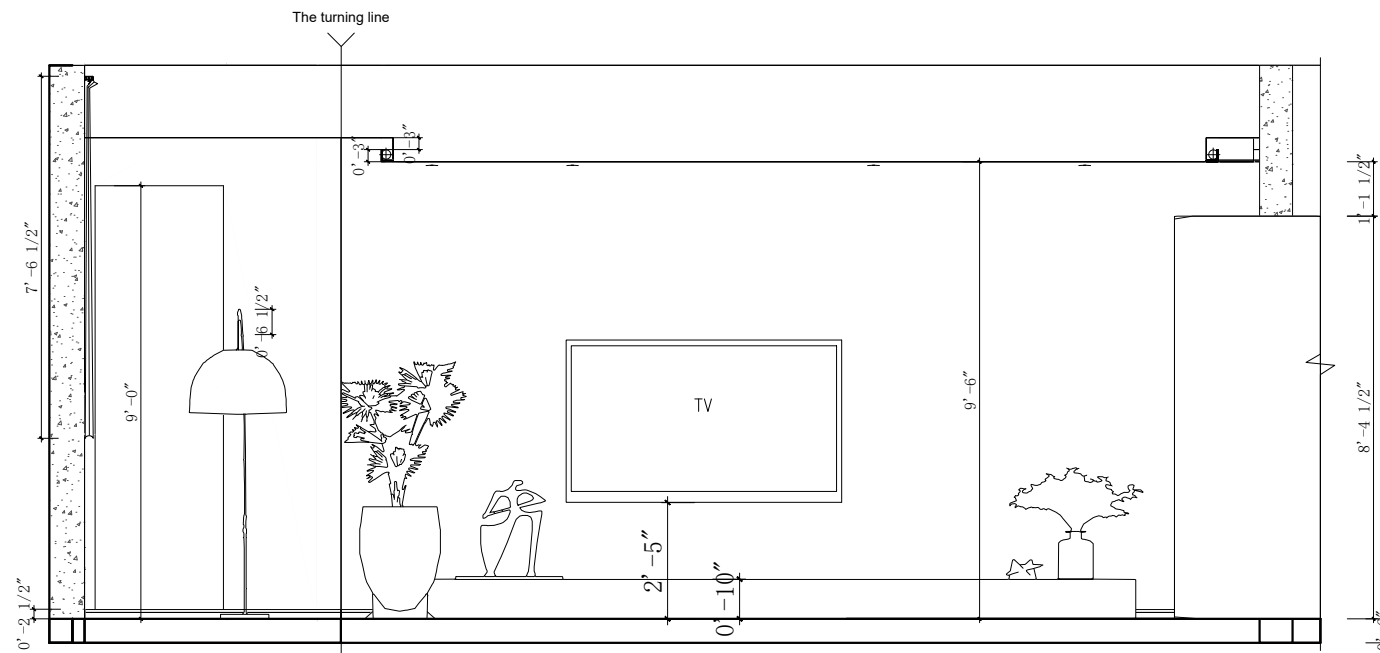
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-ED5-42**



ED5 ELEV D(1/4"=1'-0")



ED Office 5 Elevation D2(1/4"=1'-0")



## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
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### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

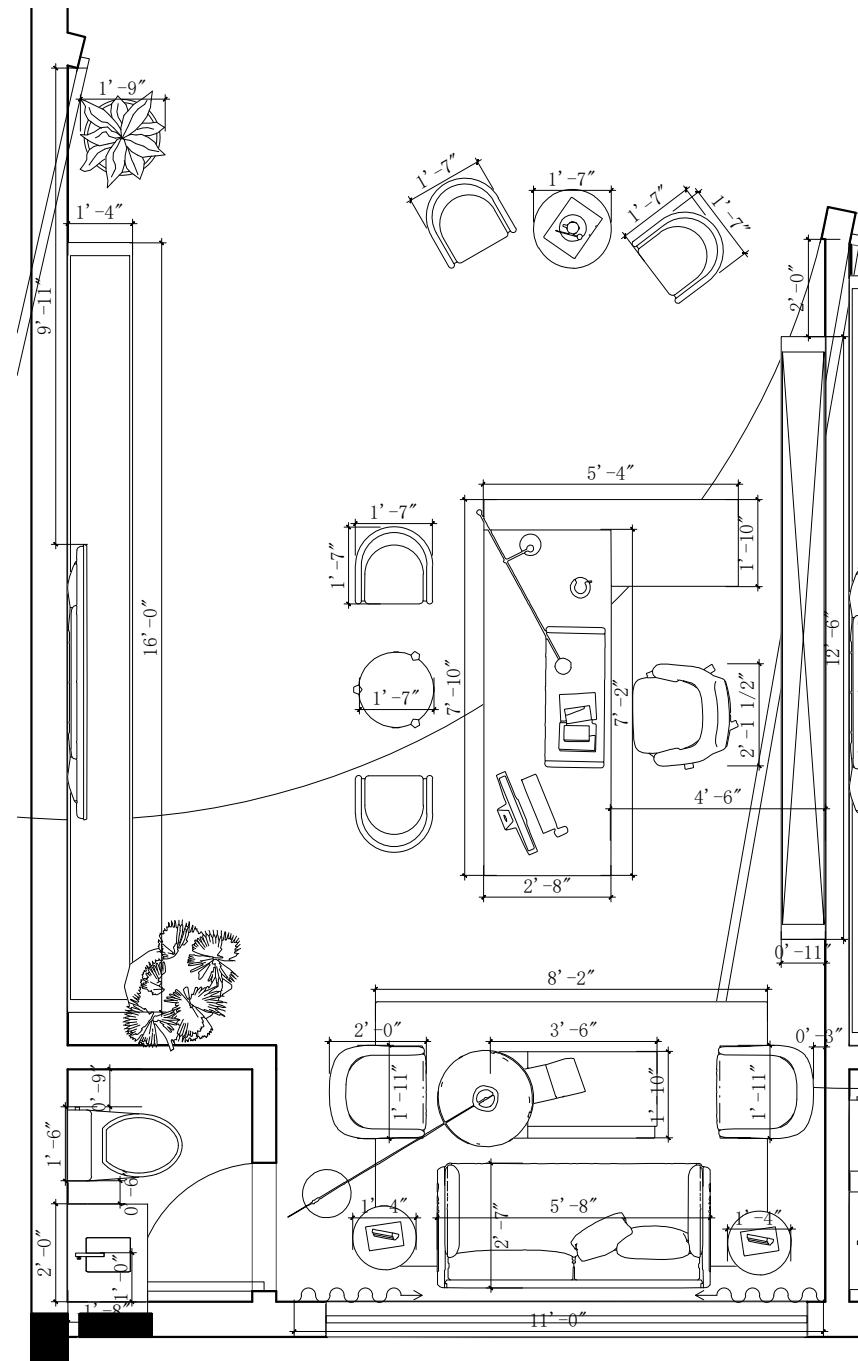
DRAWING TITLE:

**7th FLOOR**  
**ED5 FURNITURE**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

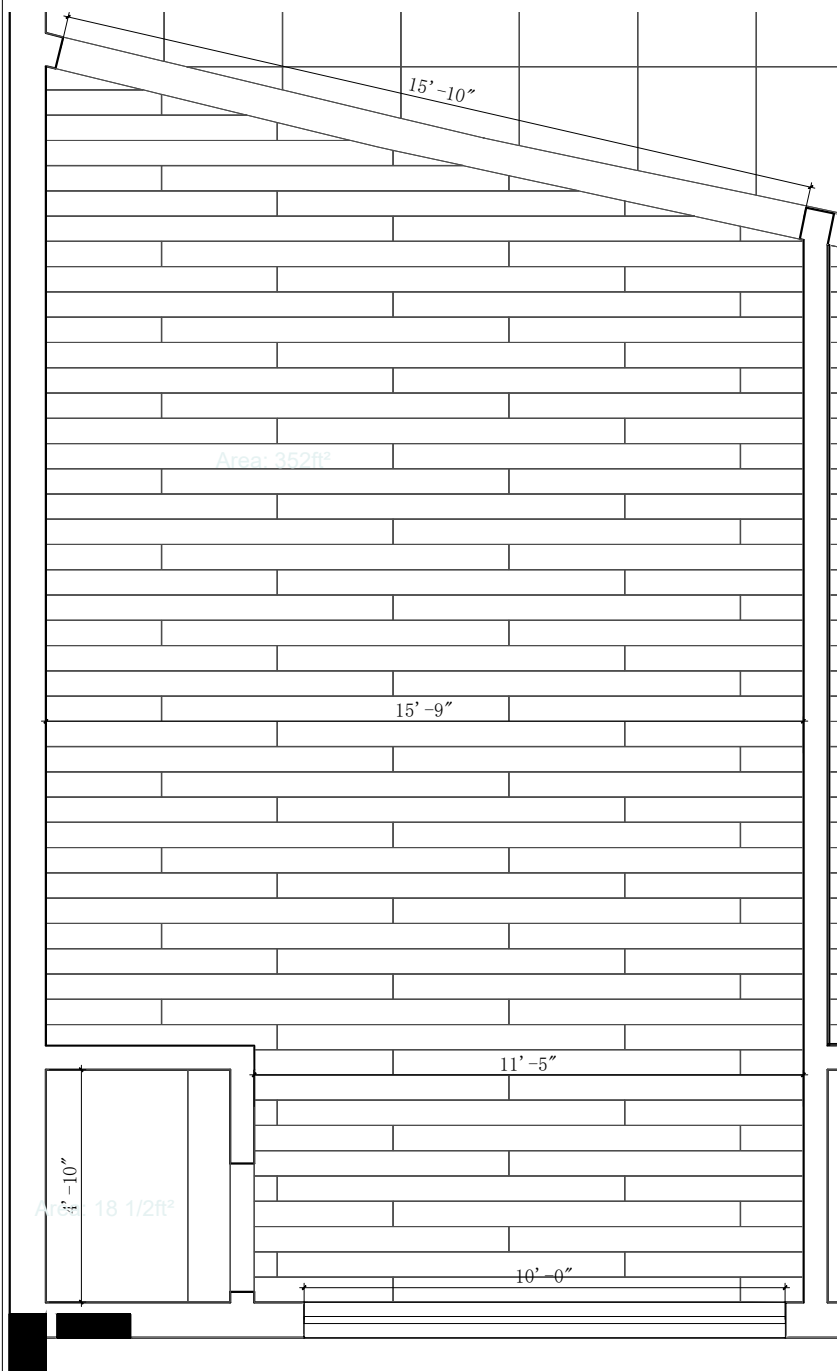
SCALE	DATE
1/4"=1'	APR. 2024

DWG. No.  
**SL07AR-ED5-43**

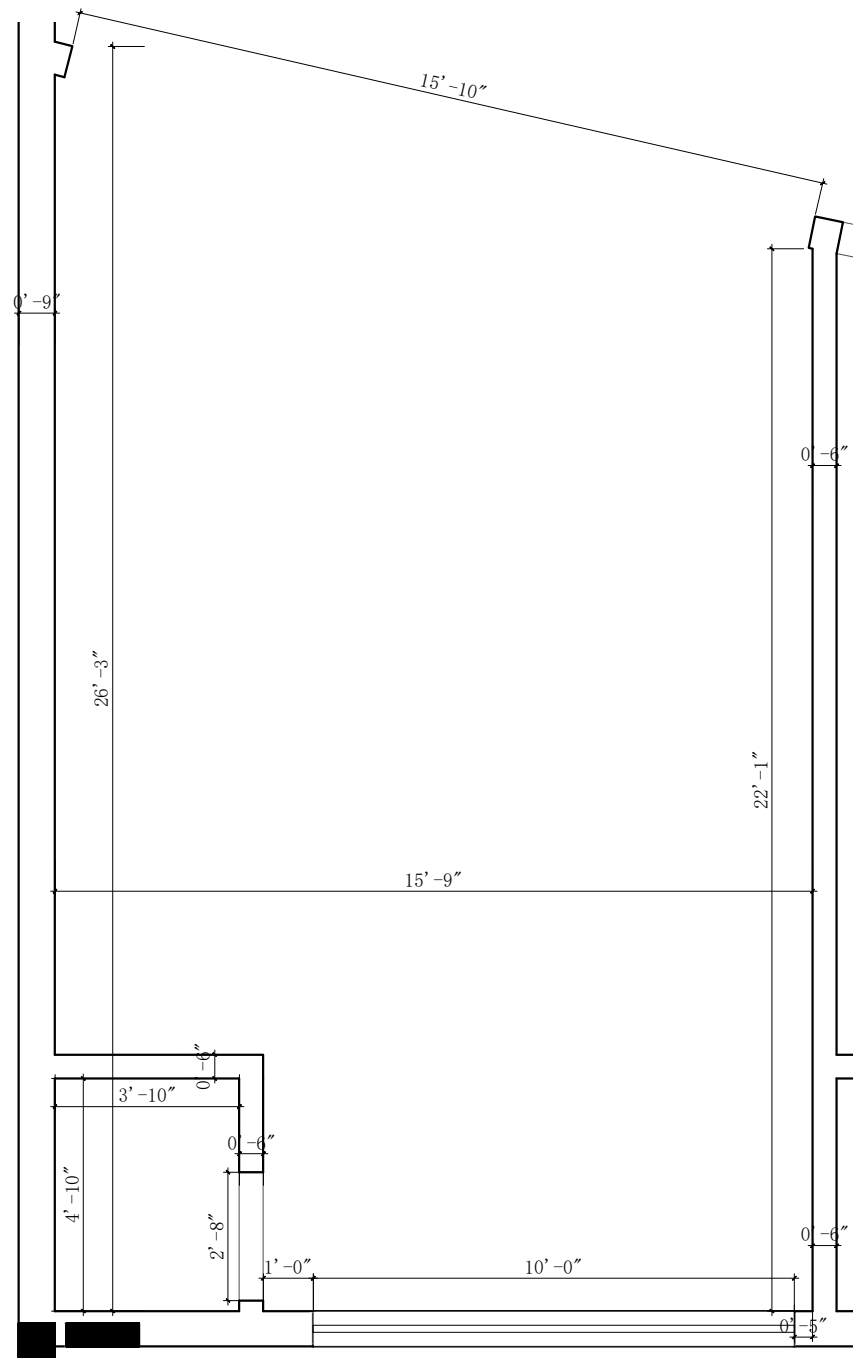


**ED5 FURNITURE (1/4"=1'-0")**

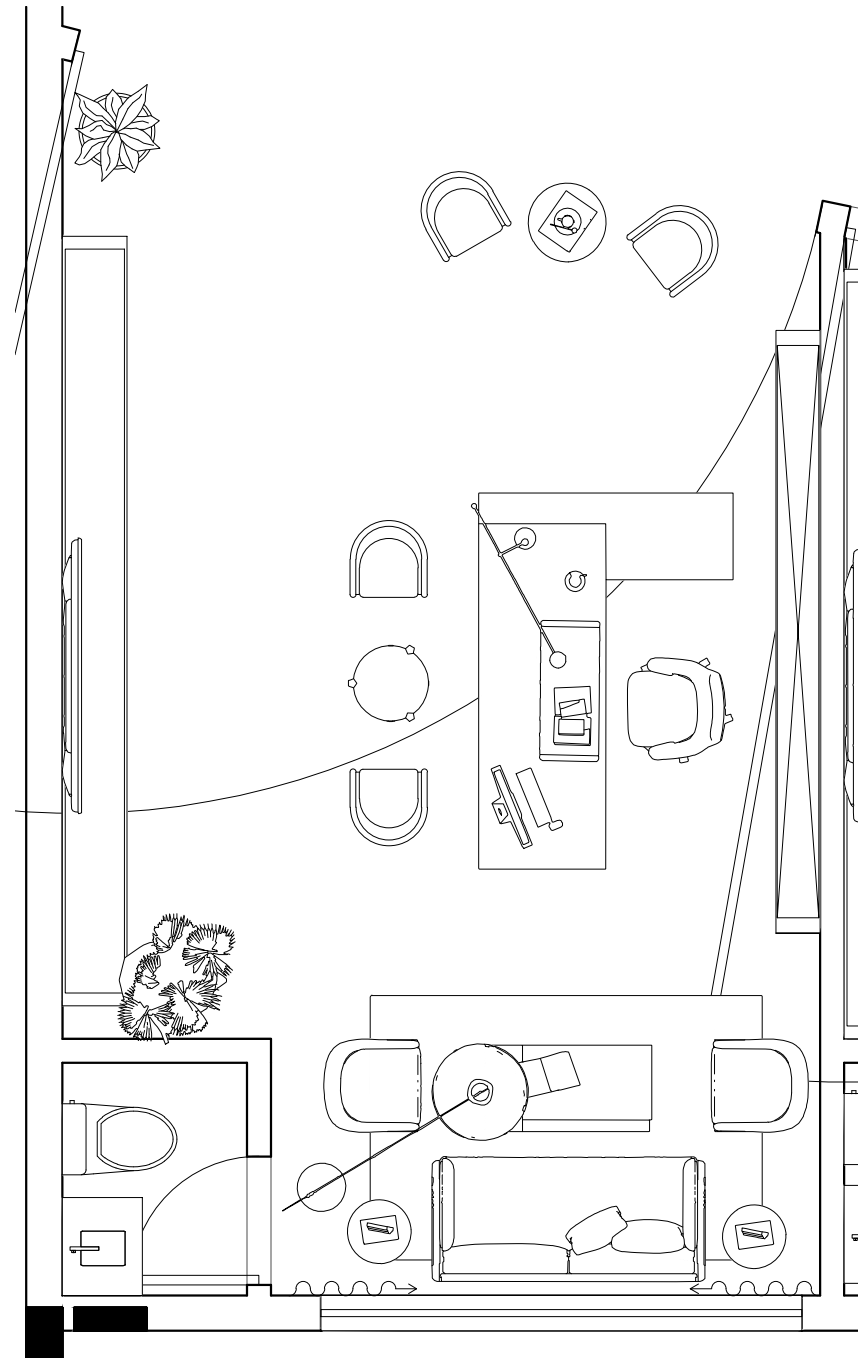




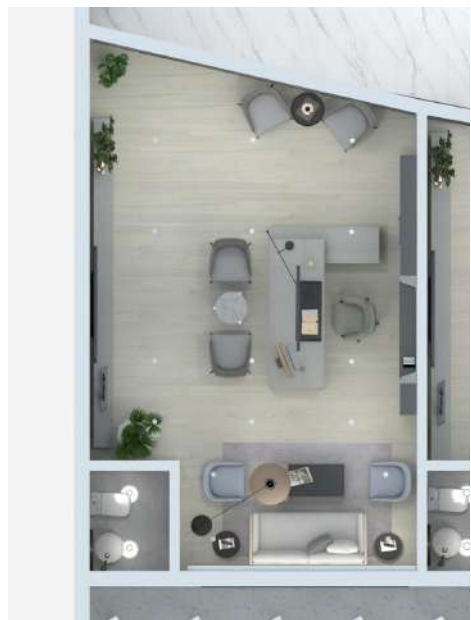
ED5 FLOOR (1/4"=1'-0")



ED5 FLOOR P(1/4"=1'-0")



ED5 FLOOR PLAN(1/4"=1'-0")



**GENERAL NOTES**

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
ED5 FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ED5-44**



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

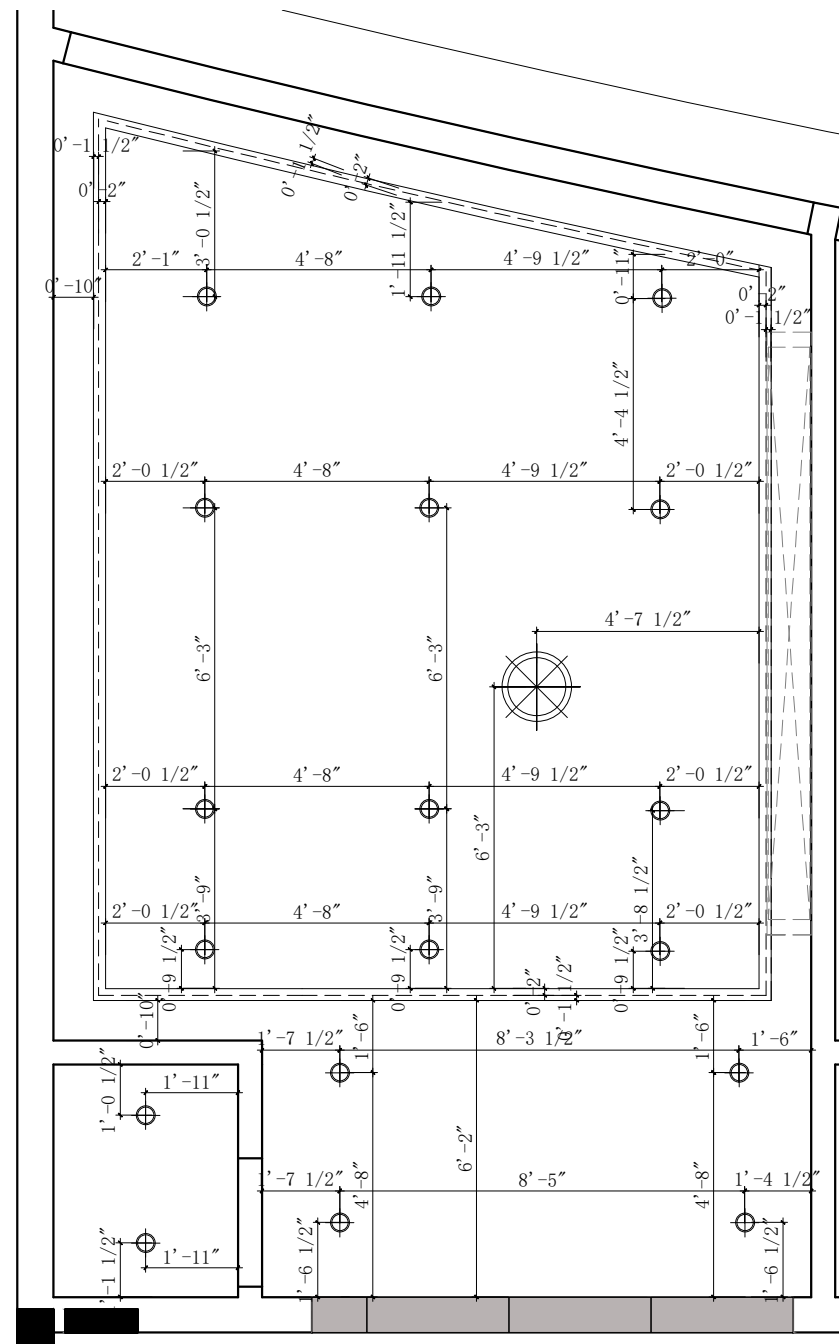
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**7th FLOOR**  
ED5 CEILING

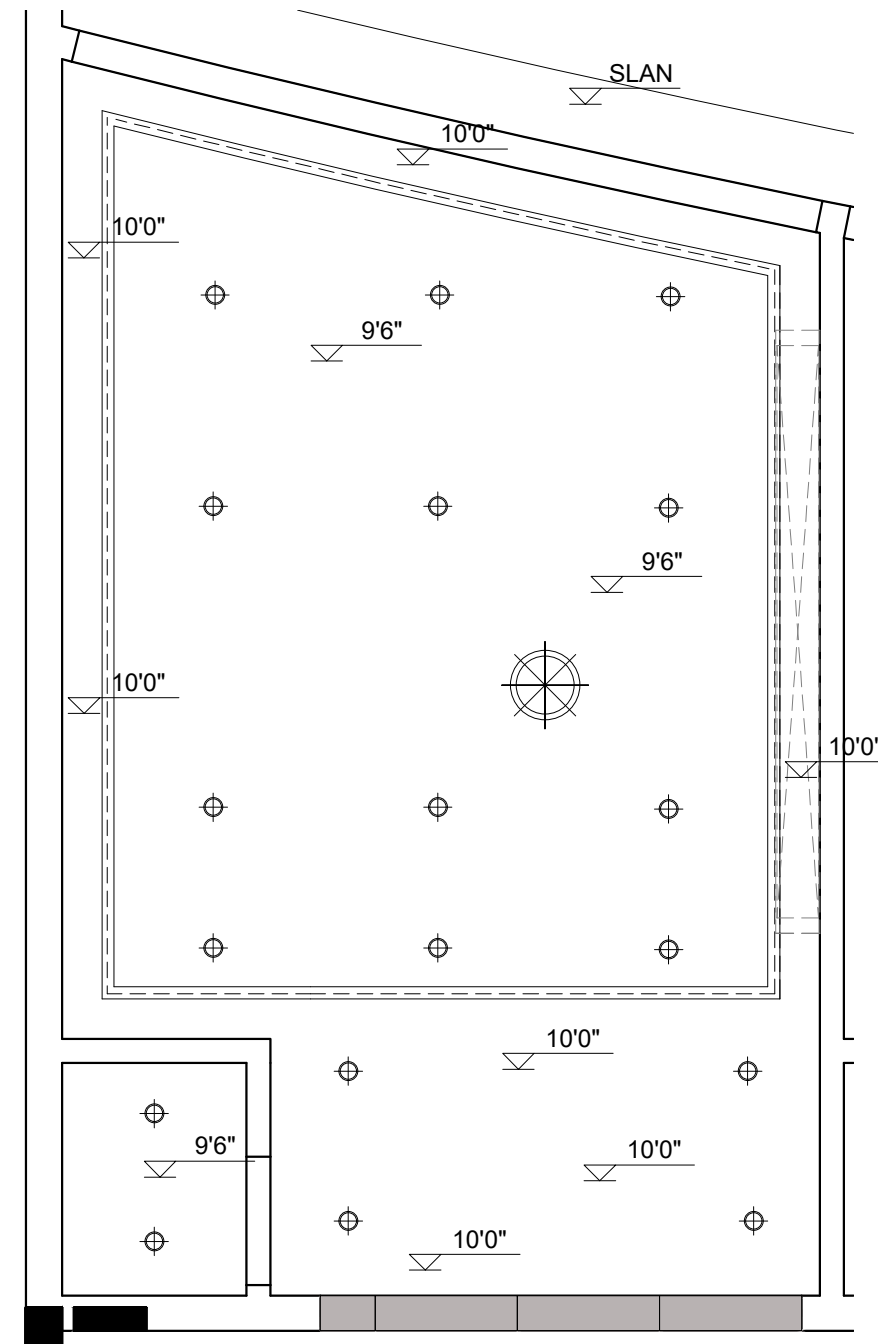
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-ED5-45**



ED5 CEILING LIGHT (1/4"=1'-0")



ED5 CEILING (1/4"=1'-0")

## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

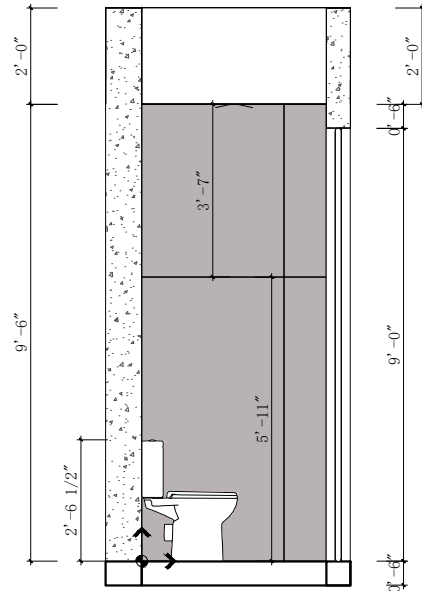
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**7th FLOOR**  
**ED5 BATH**

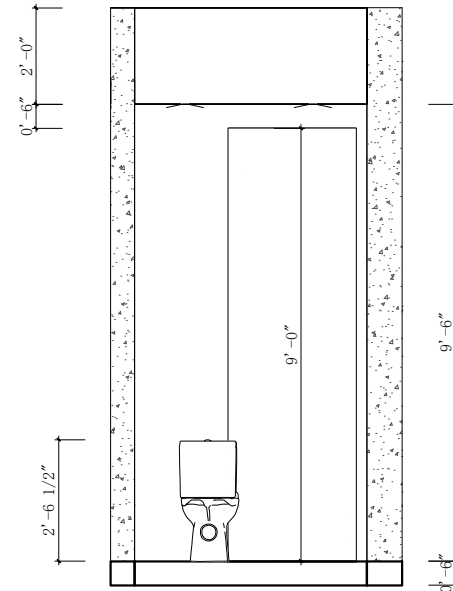
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR. 2024

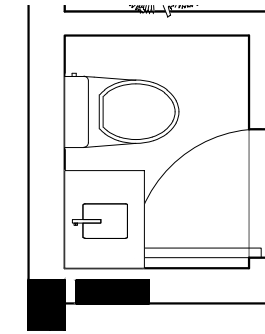
DWG. No.  
**SL07AR-ED5-46**



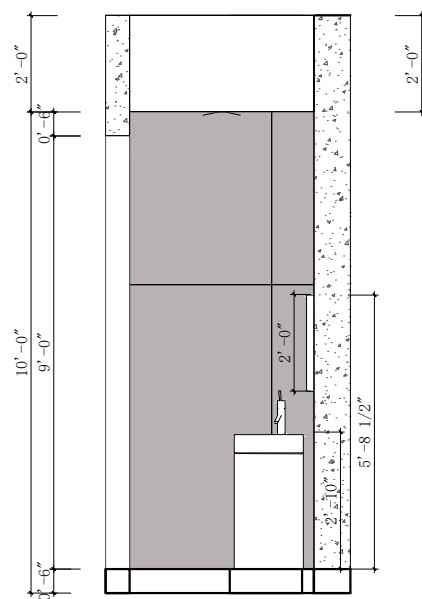
Bathroom Elevation A(1/4"=1'-0")



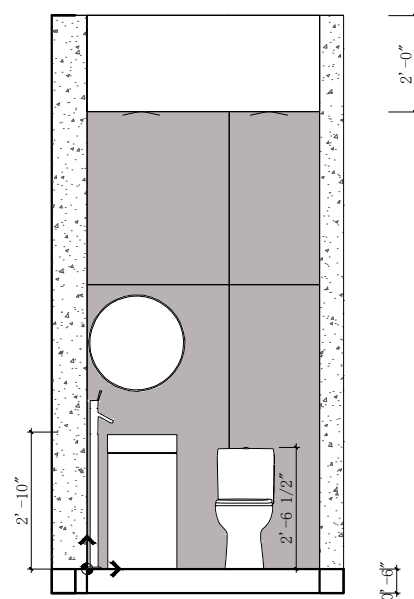
Bathroom Elevation B(1/4"=1'-0")



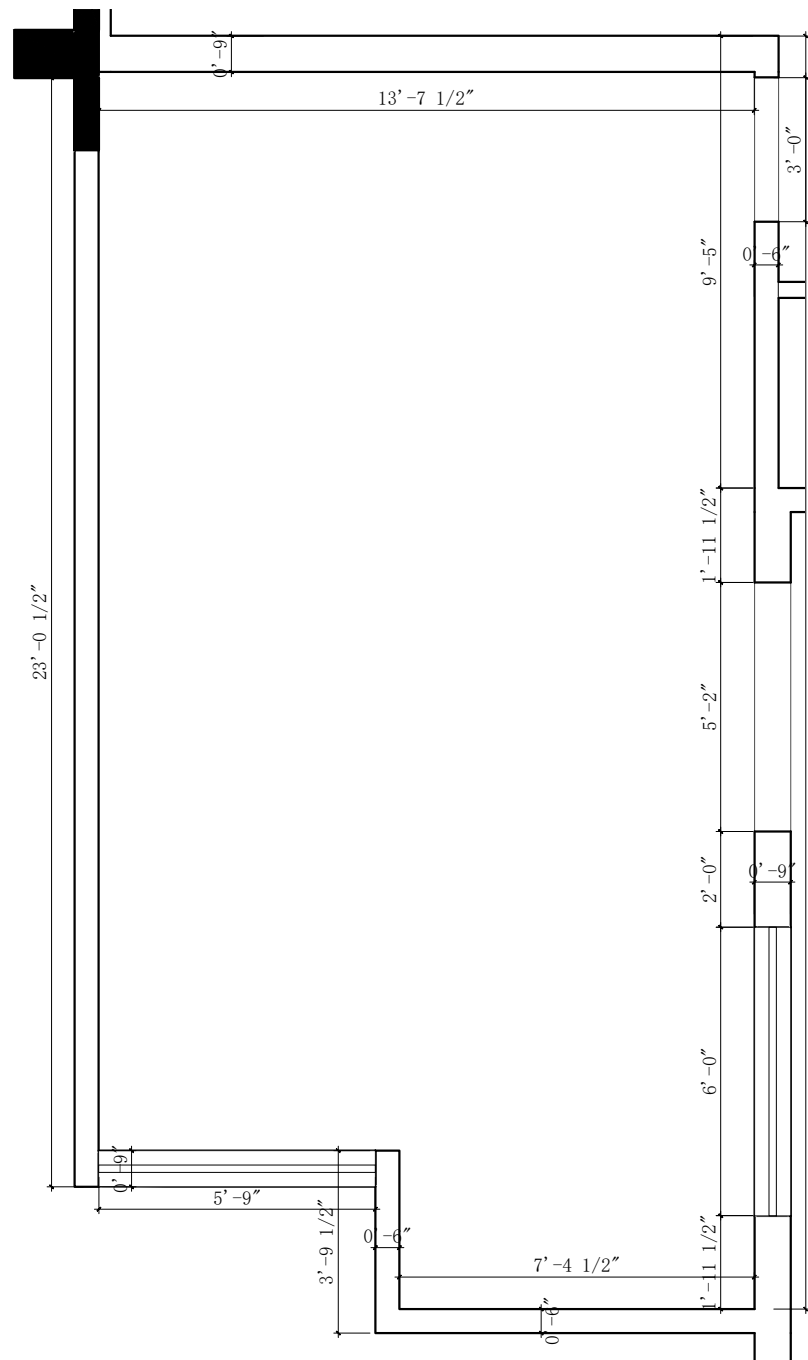
ED 5 BATH(1/4"=1'-0")



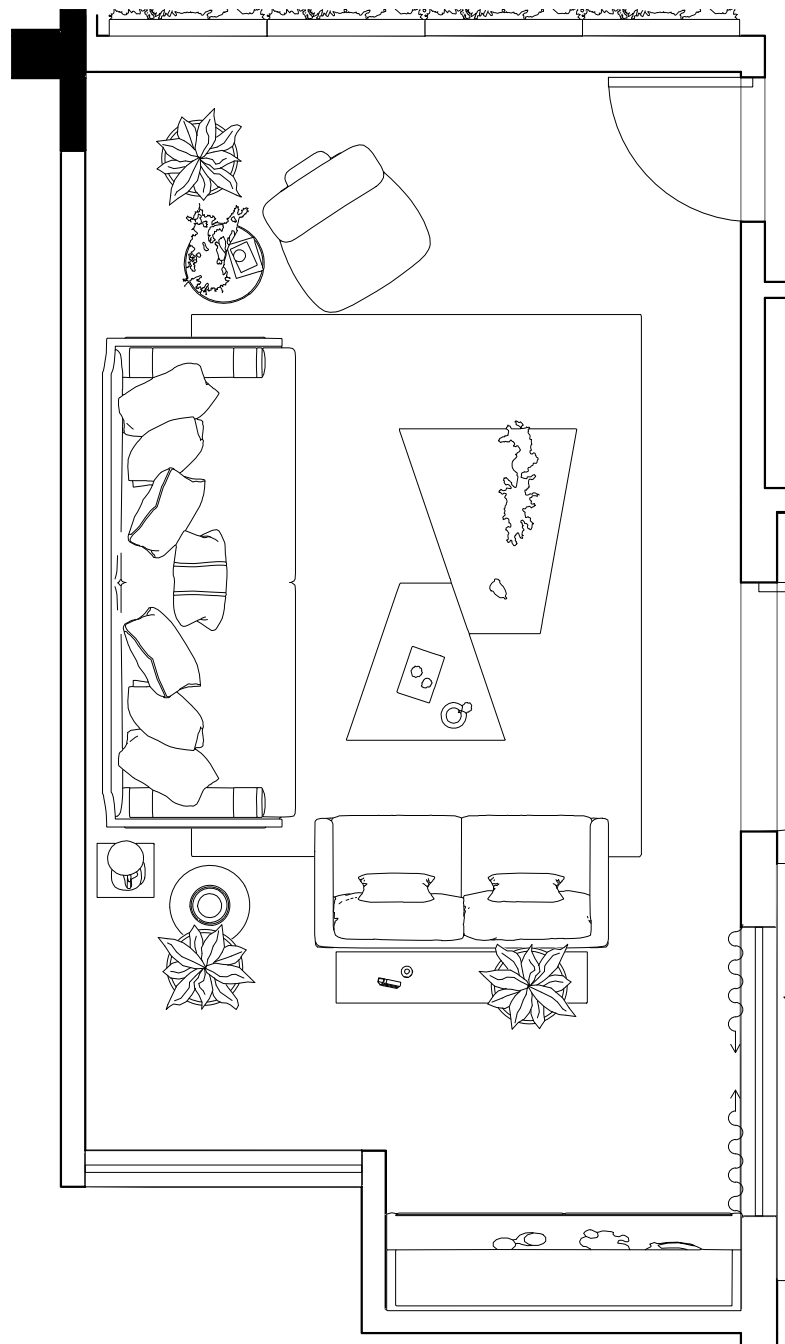
Bathroom Elevation C(1/4"=1'-0")



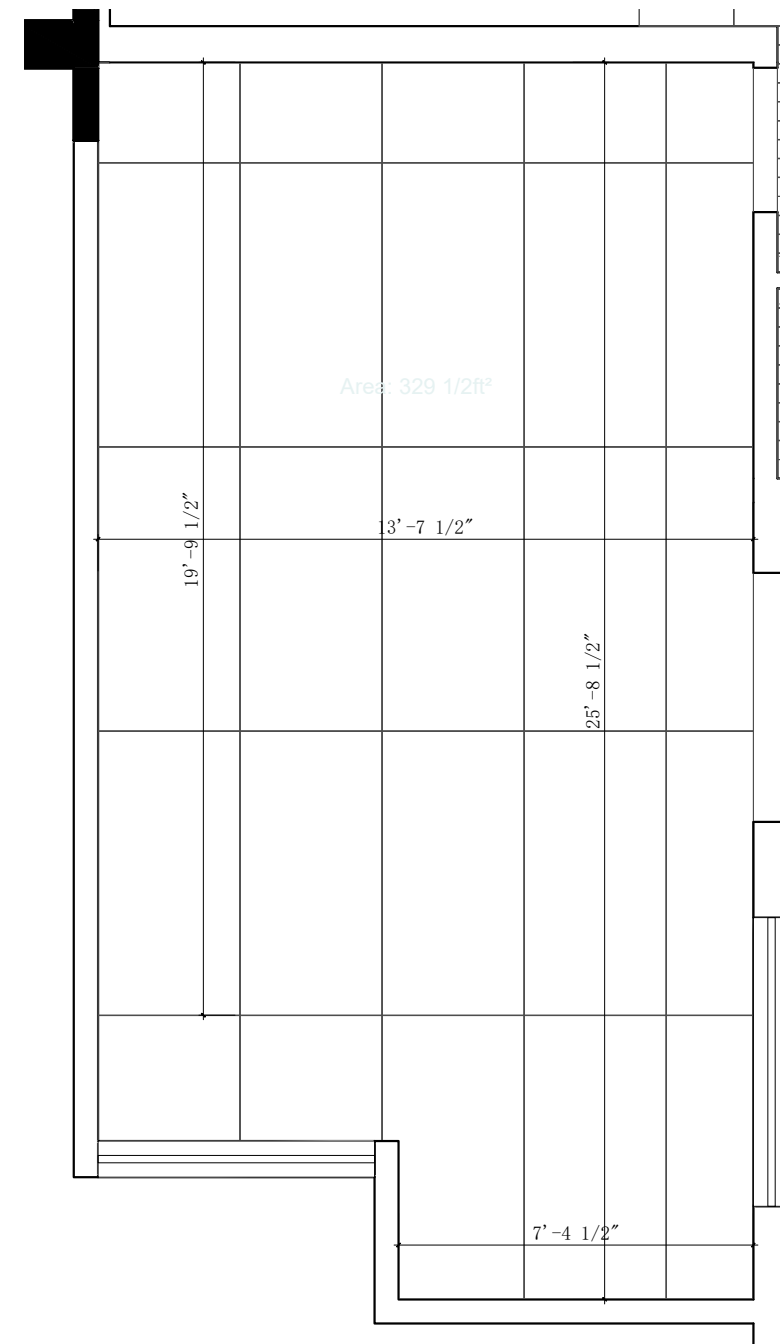
Bathroom Elevation D(1/4"=1'-0")



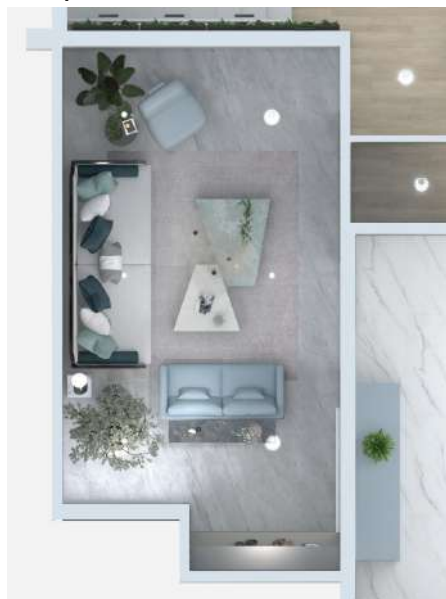
COFFEE AREA FLOOR P(1/4"=1'-0")



COFFEE AREA PLAN(1/4"=1'-0")



COFFEE AREA FLOOR(1/4"=1'-0")



**GENERAL NOTES**

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**COFFEE AREA FLOOR**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CA-51**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



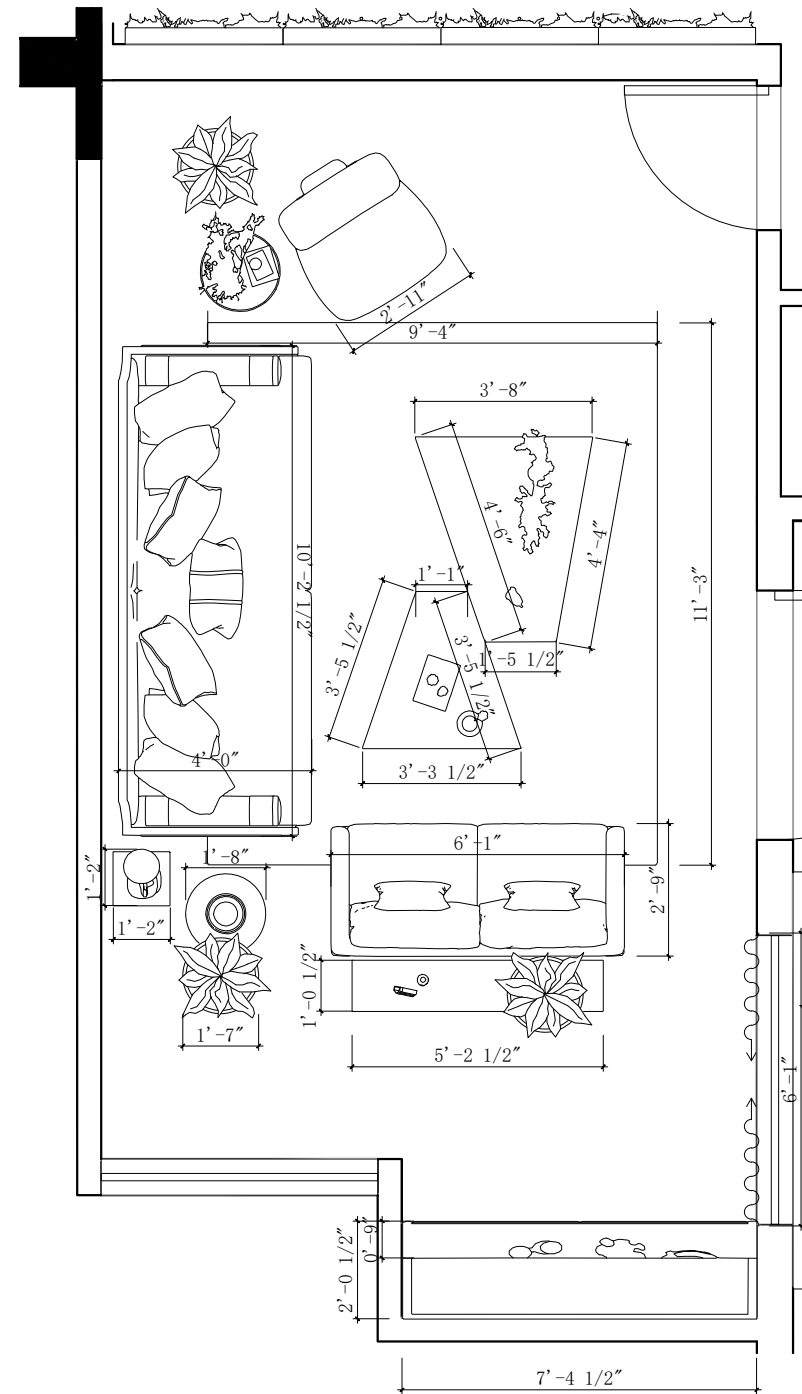
COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
COFFEE AREA  
FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CA-52**



**COFFEE AREA FURNITURE (1/4"=1'-0")**

## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

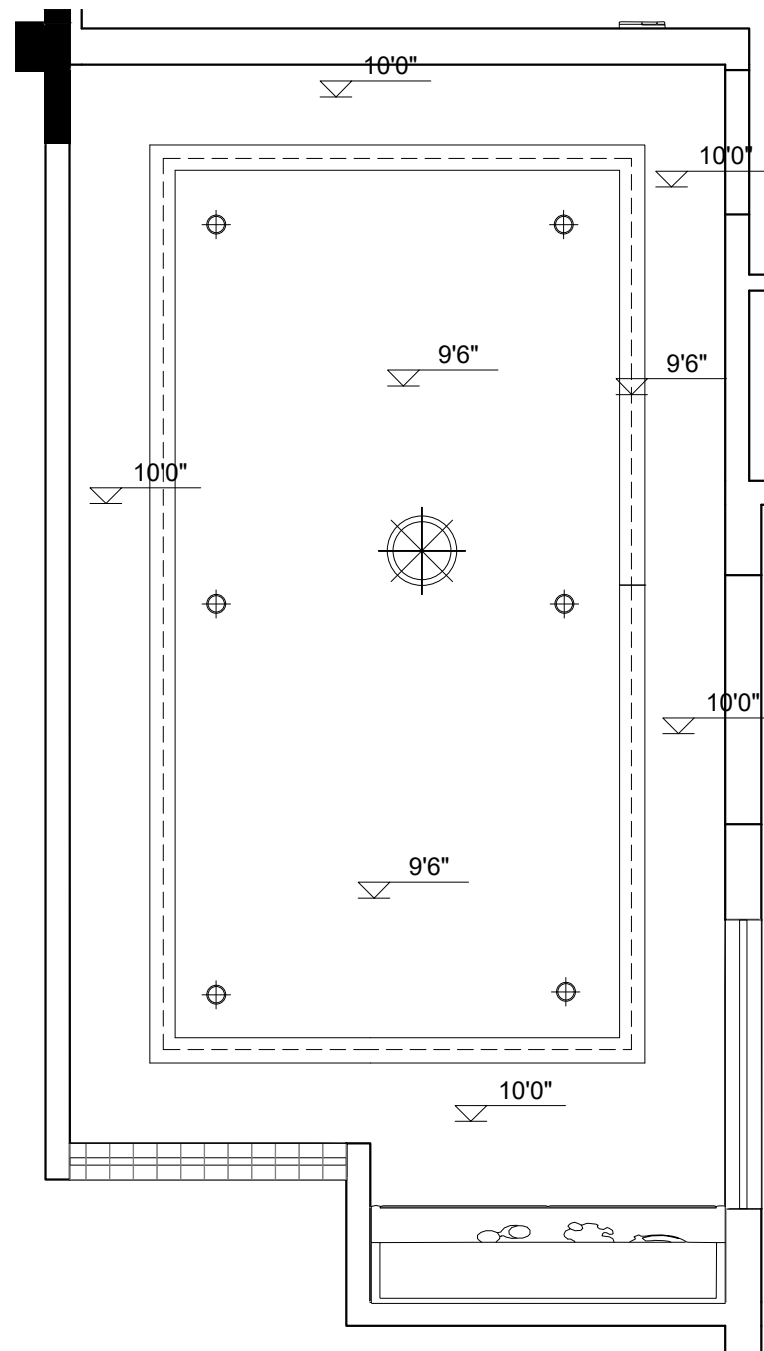
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**7th FLOOR**  
COFFEE AREA CEILING

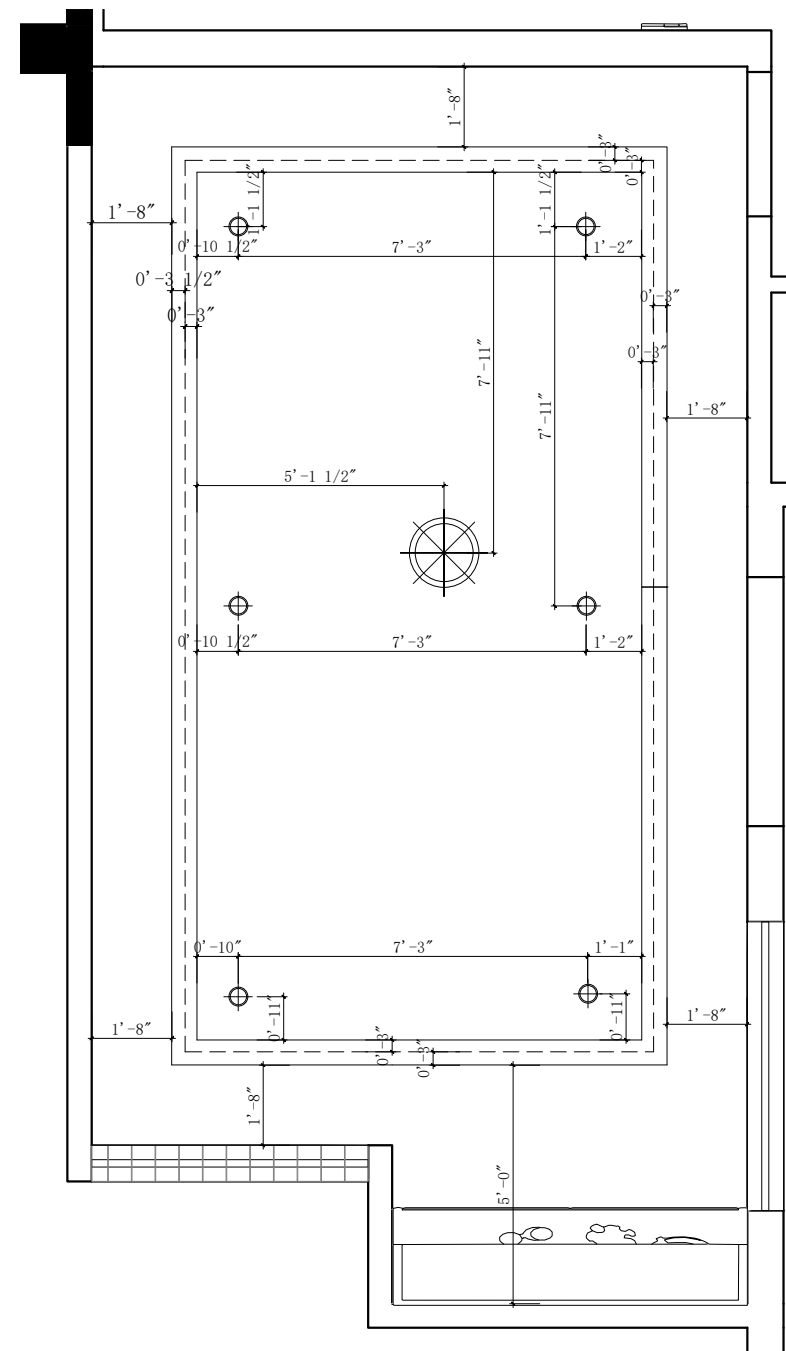
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CA-53**



COFFEE AREA CEILING(1/4"=1'-0")



COFFEE AREA CEILING LIGHT(1/4"=1'-0")

## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
LARGE WING STAFF  
ELEVATION A

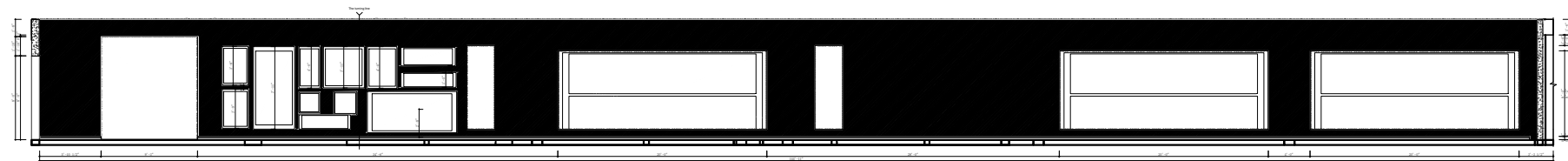
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

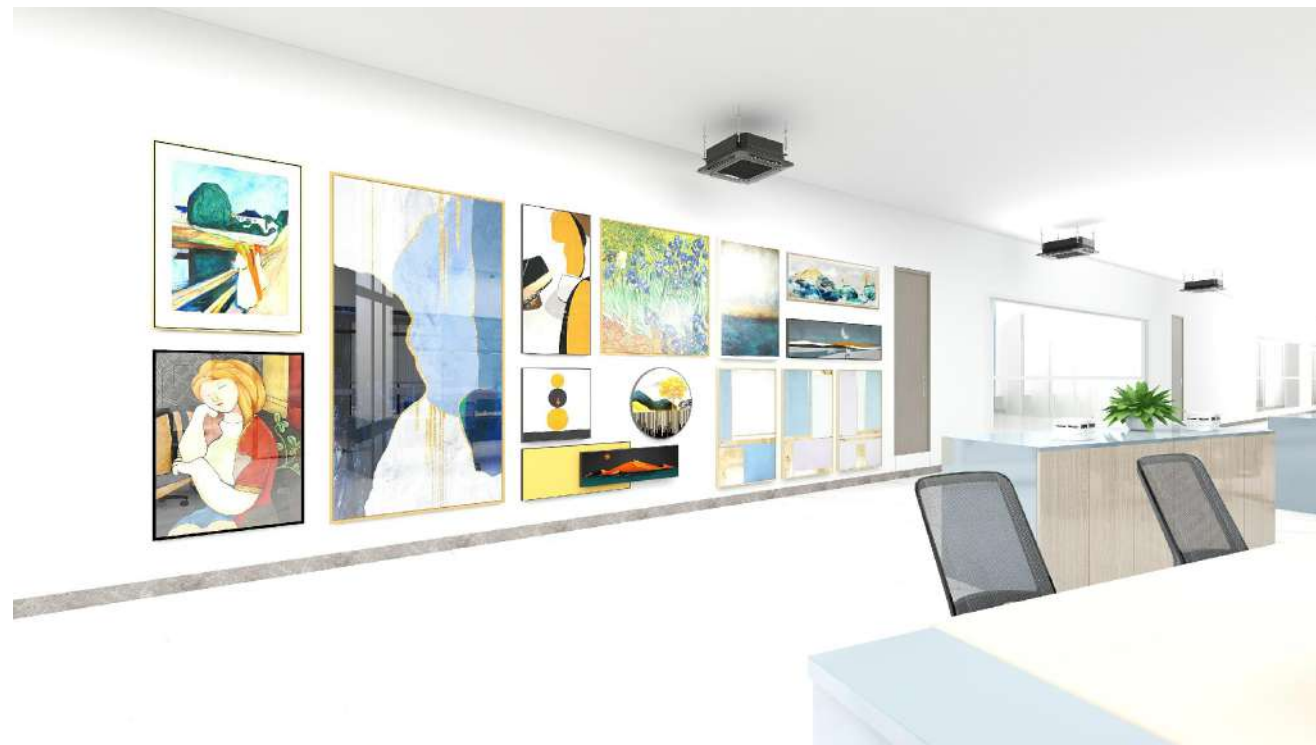
DWG. No.  
**SL07AR-LS-54**



LW STAFF ELEV A(1/16"=1'-0")



Staff Elevation A(1/16"=1'-0")





## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

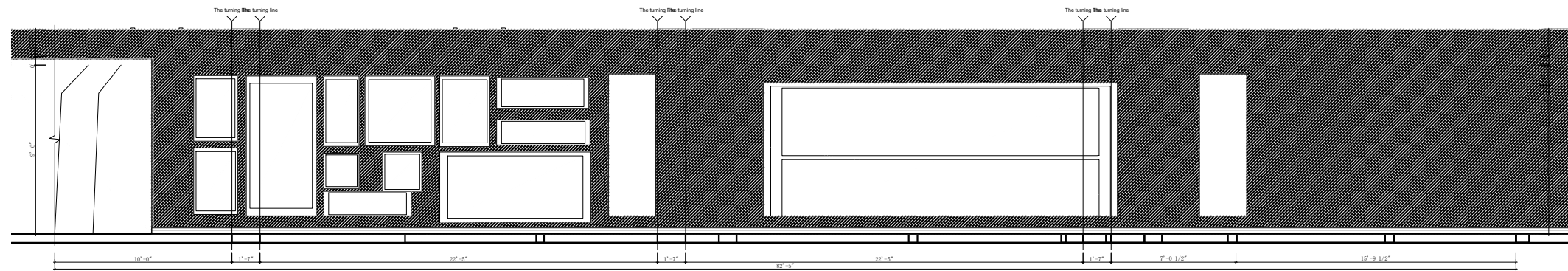


COMMENTS:

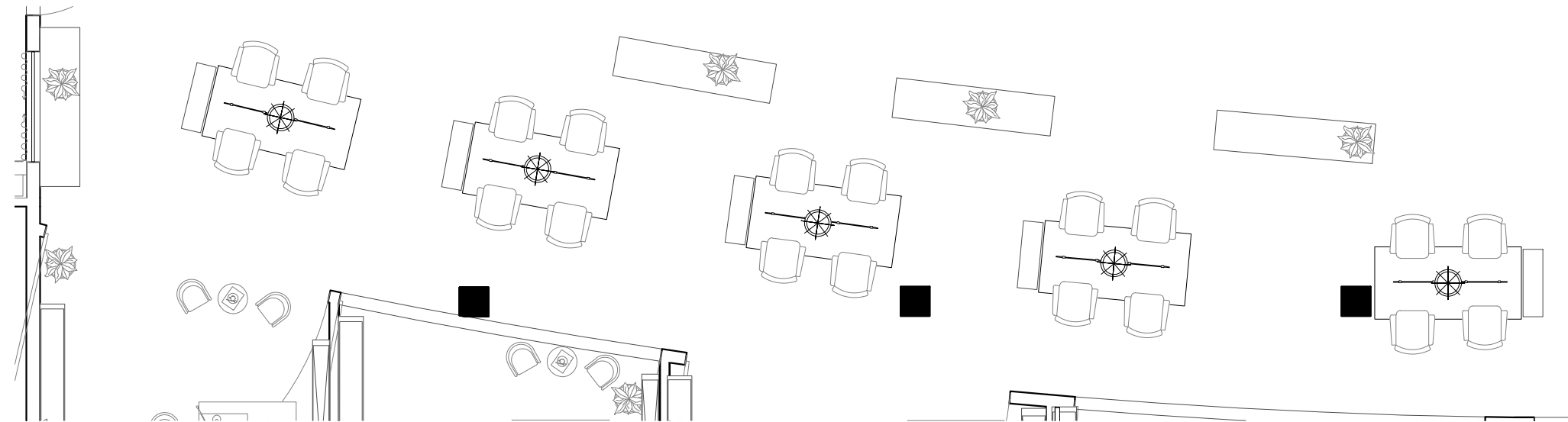
DRAWING TITLE:  
**7th FLOOR**  
LARGE WING STAFF  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-LS-55**



Staff Elevation C(1/8"=1'-0")



LW STAFF ELEV B(1/8"=1'-0")



## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

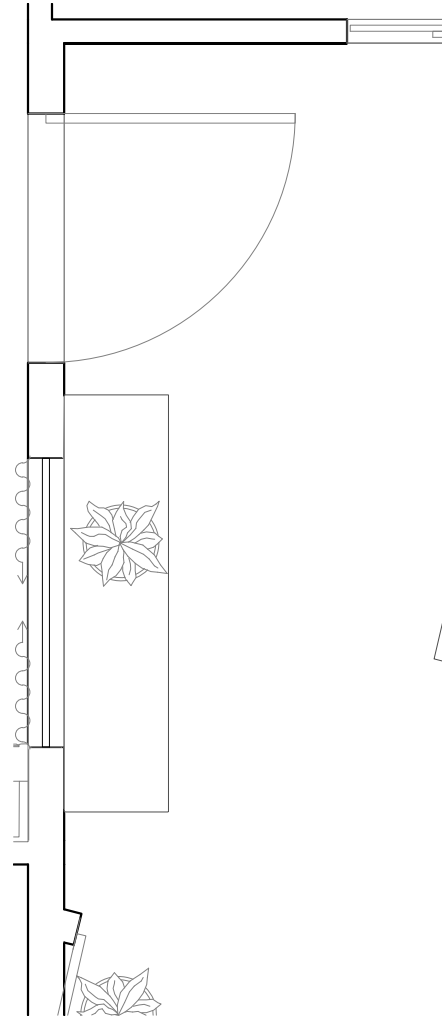
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**7th FLOOR**  
LARGE WING STAFF  
ELEVATION C

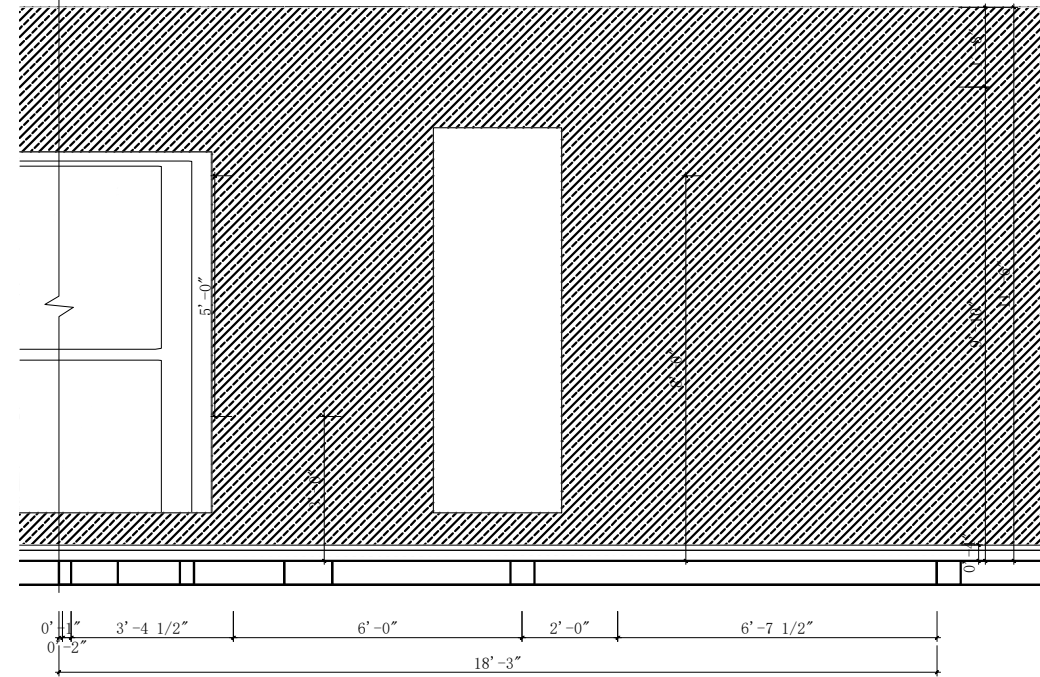
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	APR. 2024

DWG. No.  
**SL07AR-LS-56**



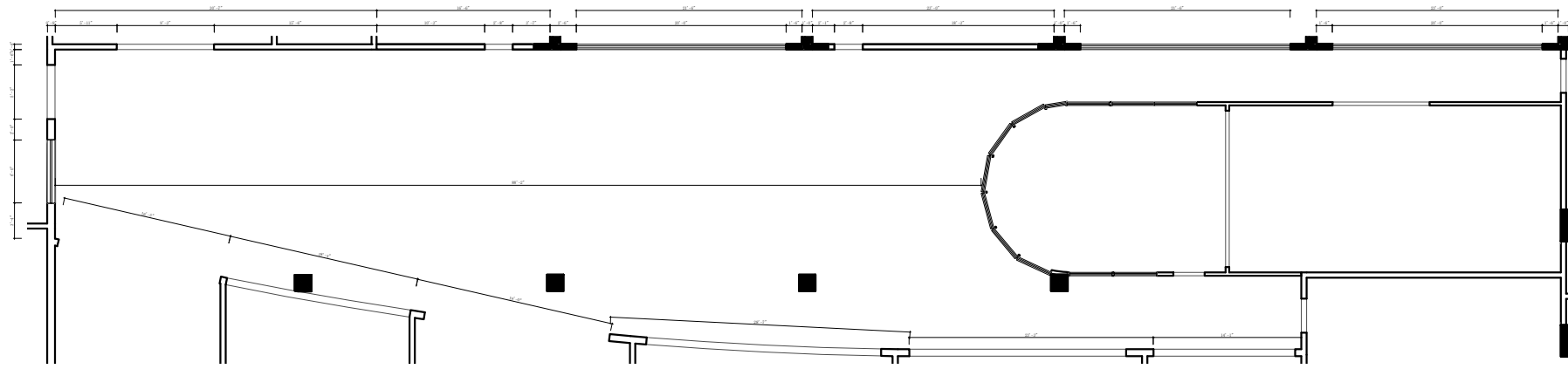
LW STAFF ELEV C(1/4"=1'-0")



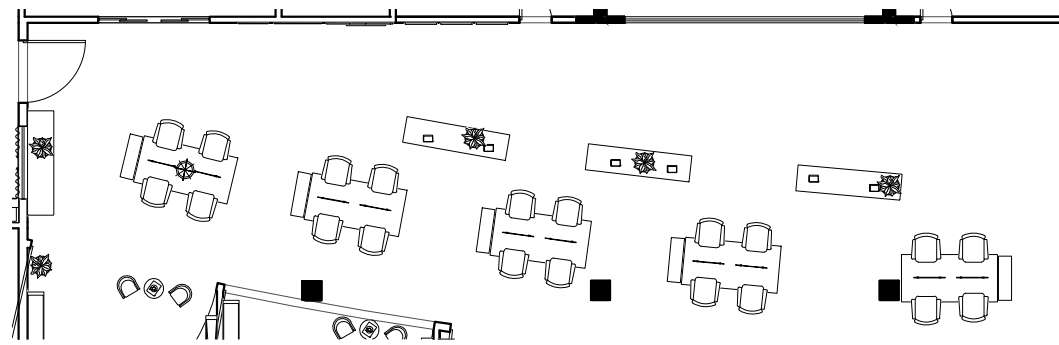
Staff Elevation D(1/4"=1'-0")



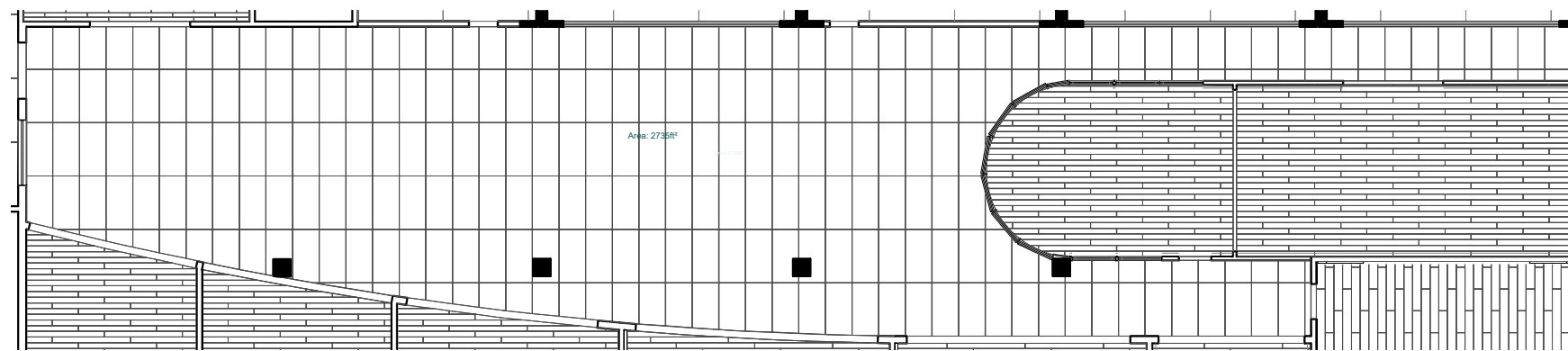
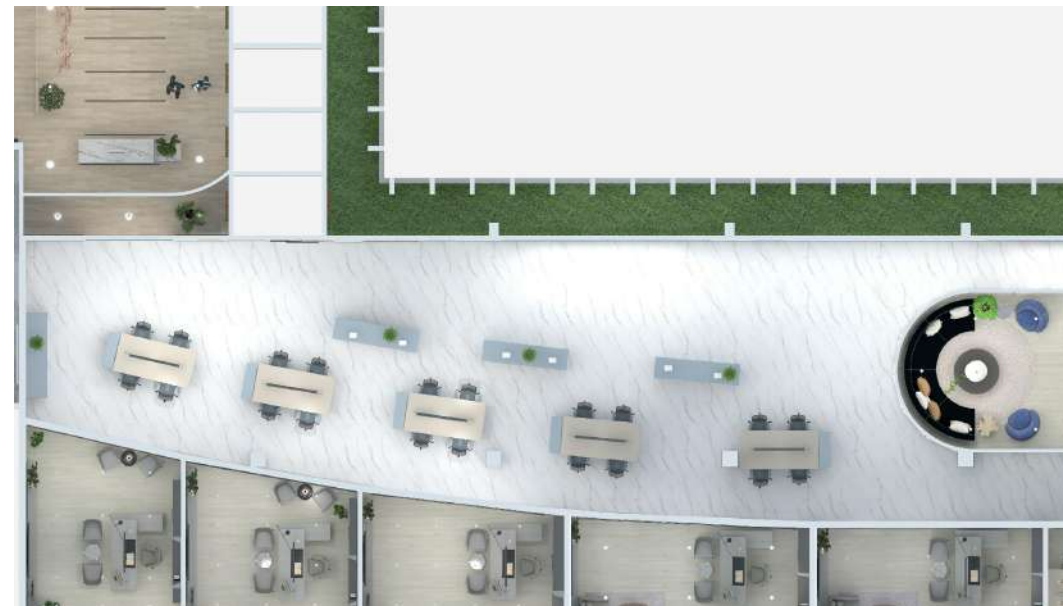




LW STAFF FLOOR(1/16"=1'-0")



LW STAFF PLAN(1/16"=1'-0")



LW STAFF FLOOR P(1/16"=1'-0")

**GENERAL NOTES**

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
LARGE WING STAFF FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-LS-58**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

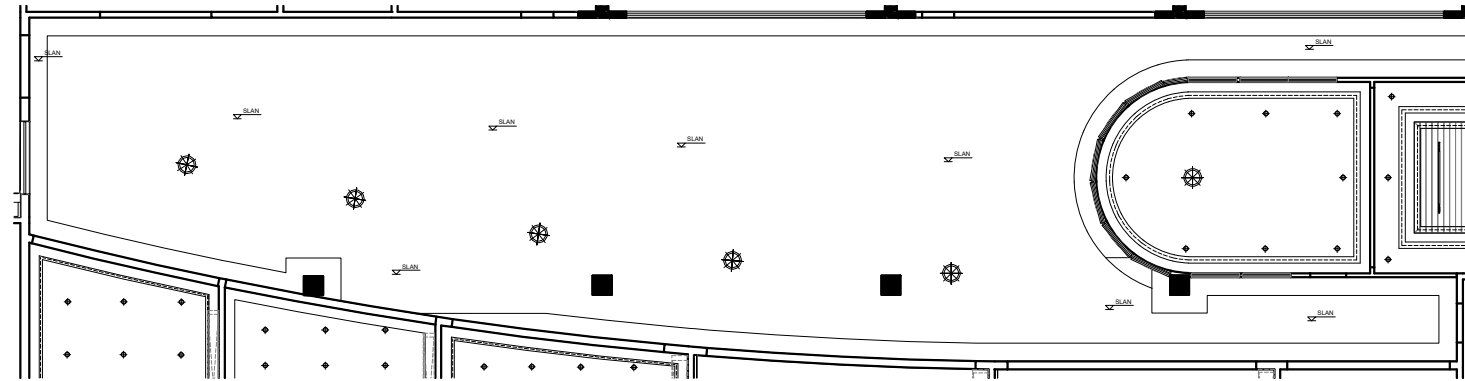


COMMENTS:

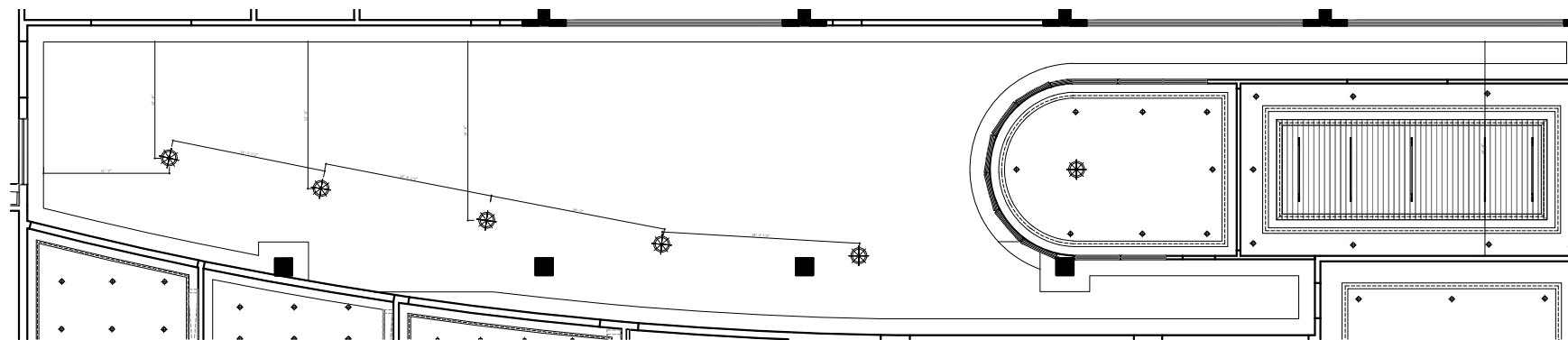
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**7th FLOOR**  
LARGE WING STAFF  
CEILING

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

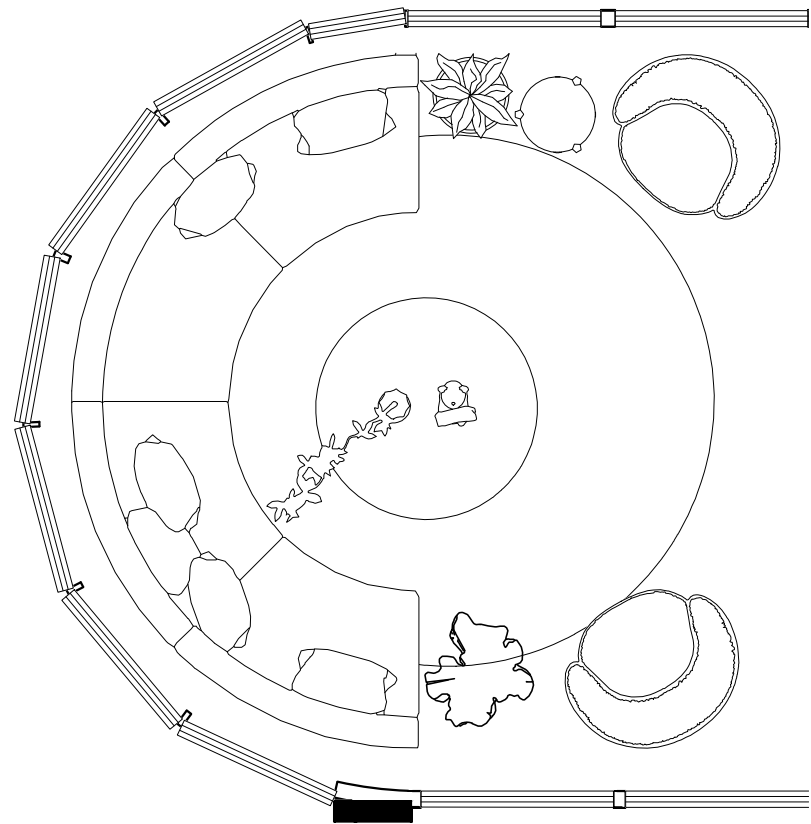
DWG. No.  
**SL07AR-LS-59**



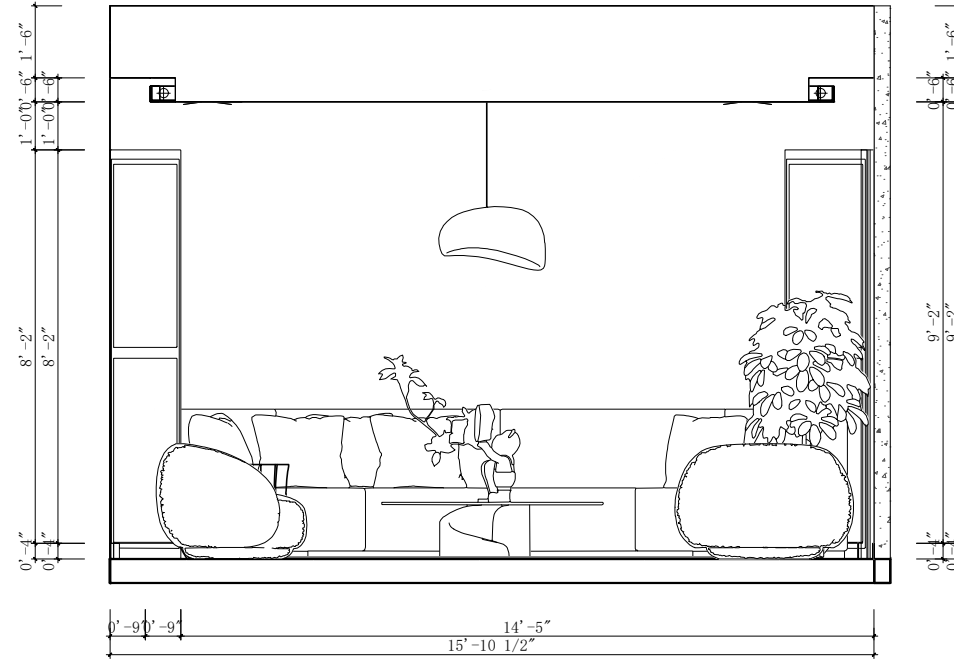
LW STAFF CEILING(1/16"=1'-0")



LW STAFF CEILING LIGHT(1/16"=1'-0")



RETIRING ROOL ELEV A(1/4"=1'-0")



Executive Meeting Room Elevation D1(1/4"=1'-0")



**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
RETIRING ROOM  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-RR-60**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

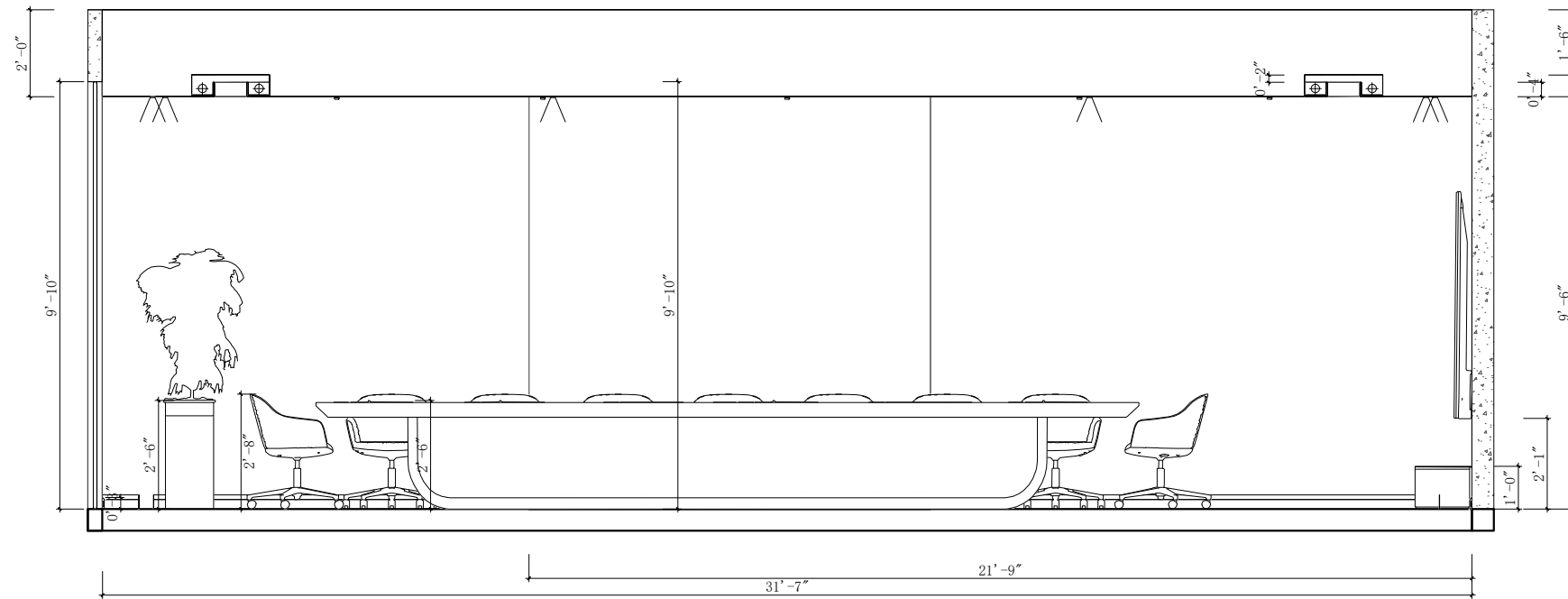


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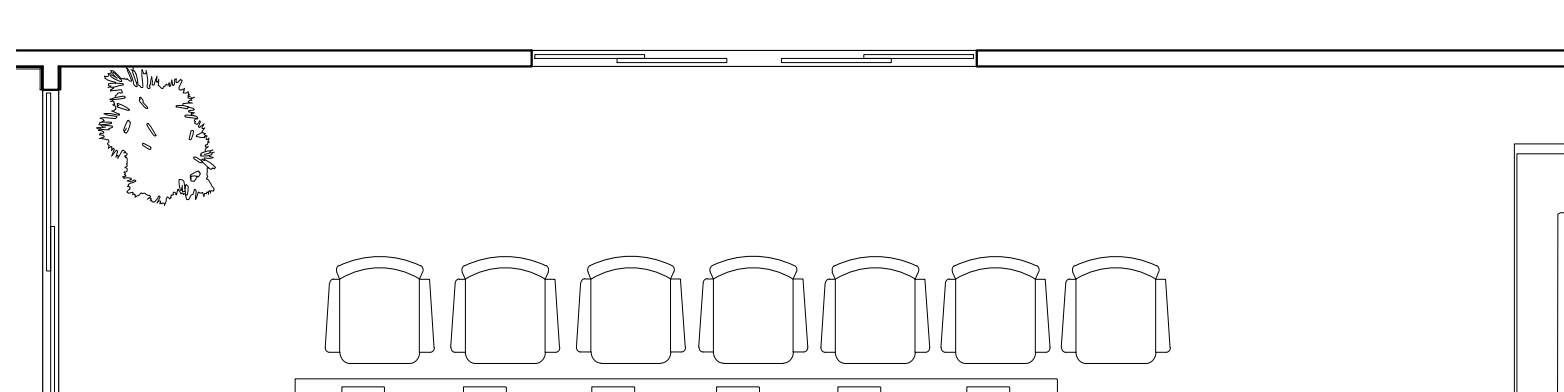
DRAWING TITLE:  
**7th FLOOR**  
CONFERENCE ROOM  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CR-67**

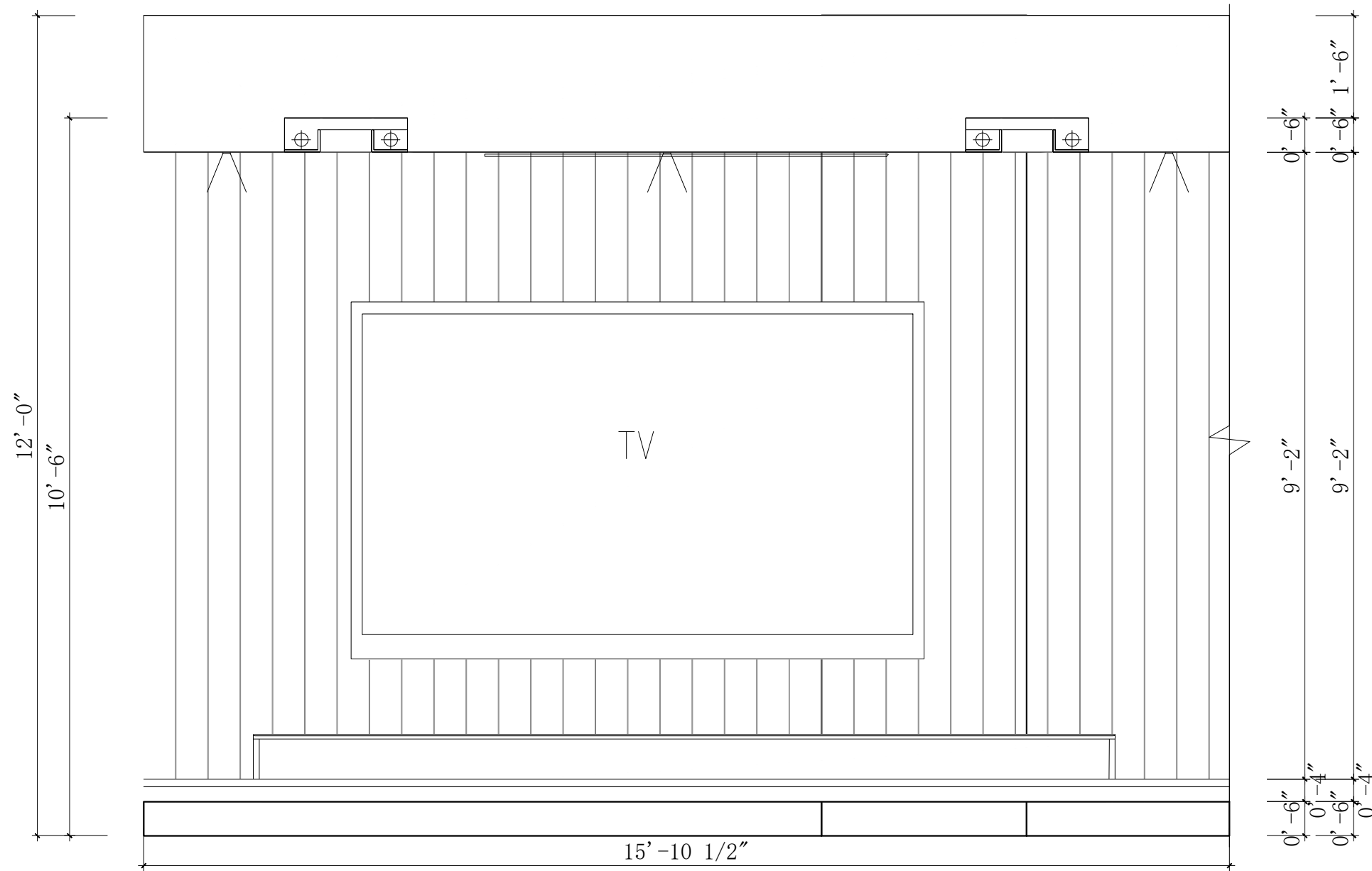


**Executive Meeting Room Elevation A(1/4"=1'-0")**

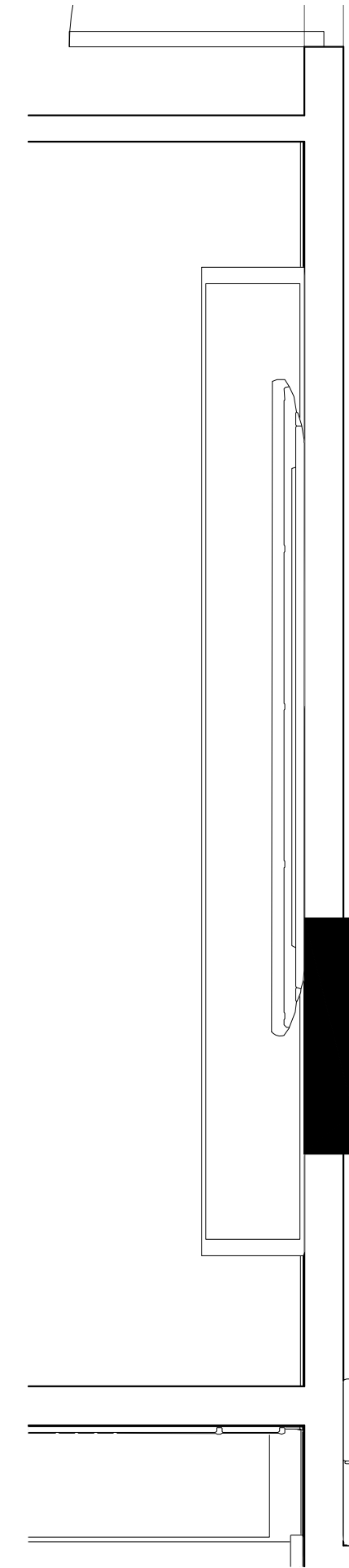


**CONF ROOM ELEV A(1/4"=1'-0")**





Executive Meeting Room Elevation B(1/2"=1'-0")



CONF ROOM ELEV B(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR  
ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING  
NO. 52-C, LANE NO. 01, AL-MURTAZA  
COMMERCIAL, PHASE VIII, D.H.A.,  
KARACHI.

PROJECT:

**RENOVATION OF STATE  
LIFE BUILDING No. 9**  
KARACHI

**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**CONFERENCE ROOM**  
**ELEVATION B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CR-68**



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

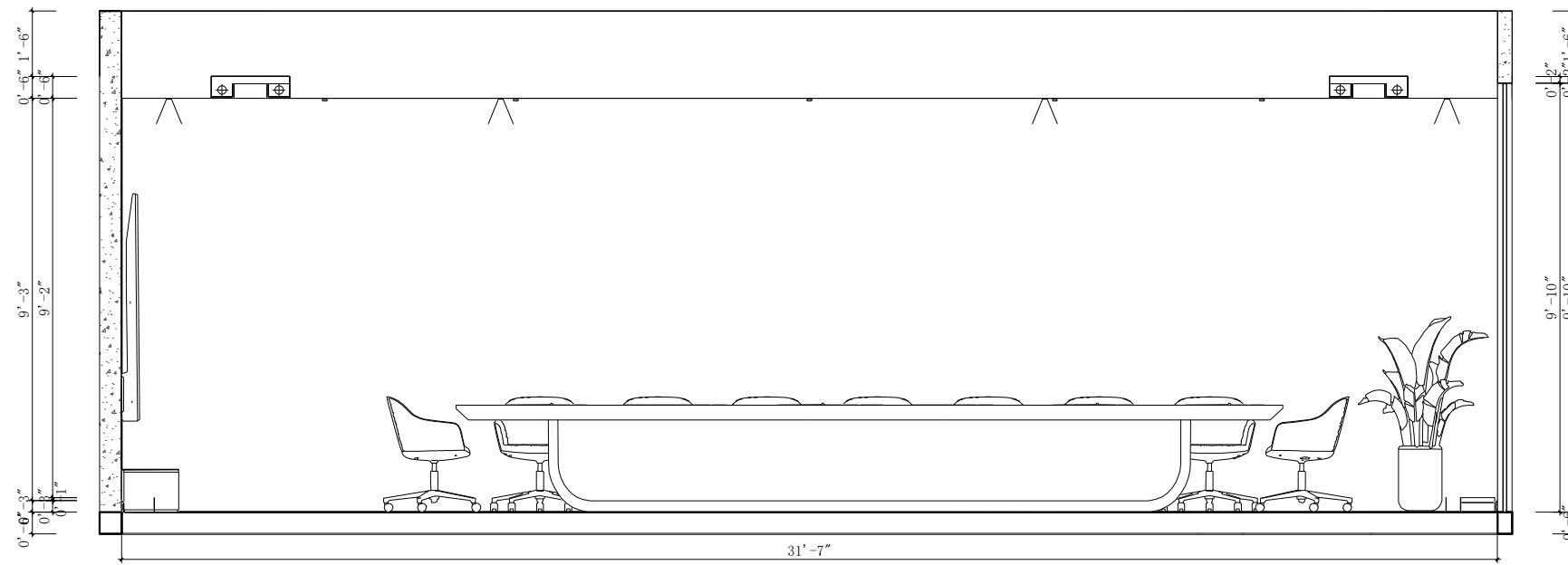


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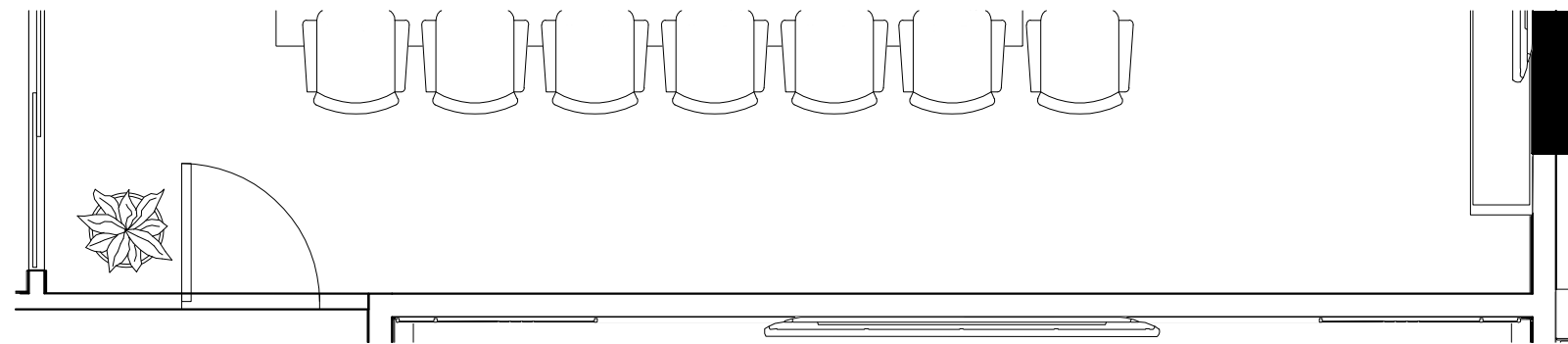
DRAWING TITLE:  
**7th FLOOR**  
CONFERENCE ROOM  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

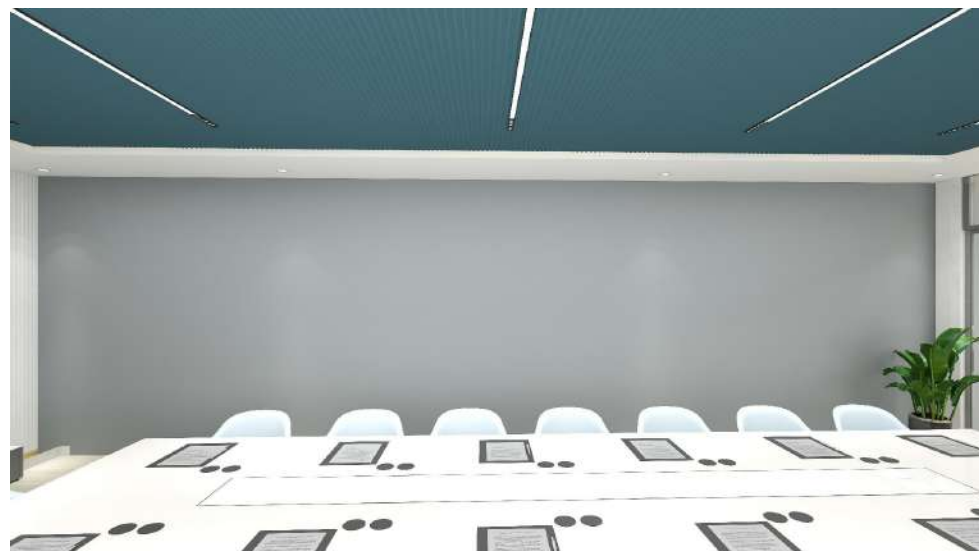
DWG. No.  
**SL07AR-CR-69**



Executive Meeting Room Elevation C2(1/4"=1'-0")



CONF ROOM ELEV C(1/4"=1'-0")



## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

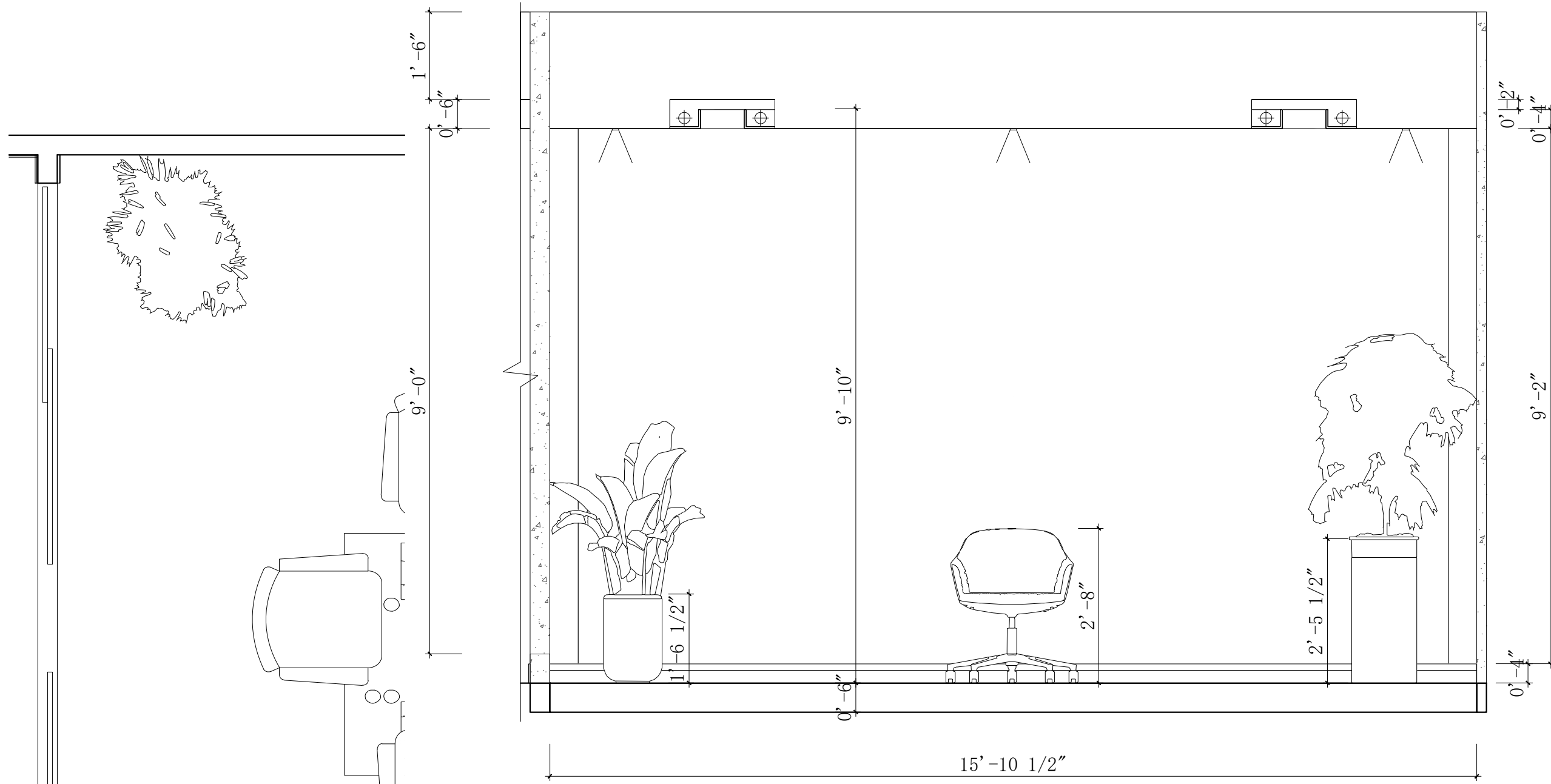


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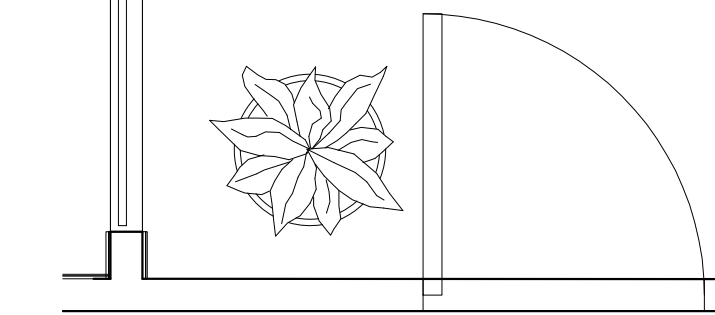
DRAWING TITLE:  
**7th FLOOR**  
CONFERENCE ROOM  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CR-70**



Executive Meeting Room Elevation D(1/2"=1'-0")



CONF ROOM ELEV D(1/2"=1'-0")



## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

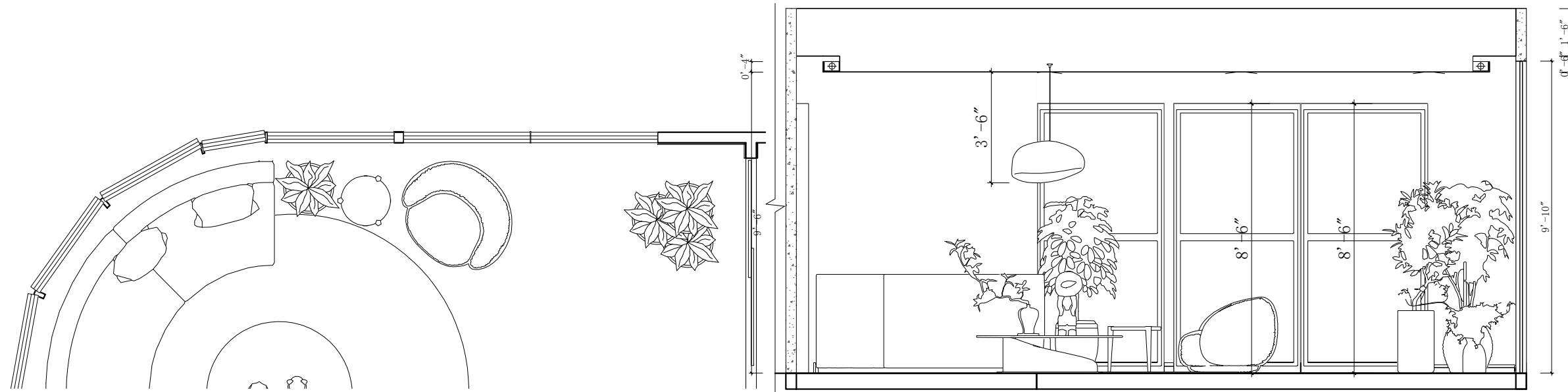


COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
RETIRING ROOM  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-RR-61**

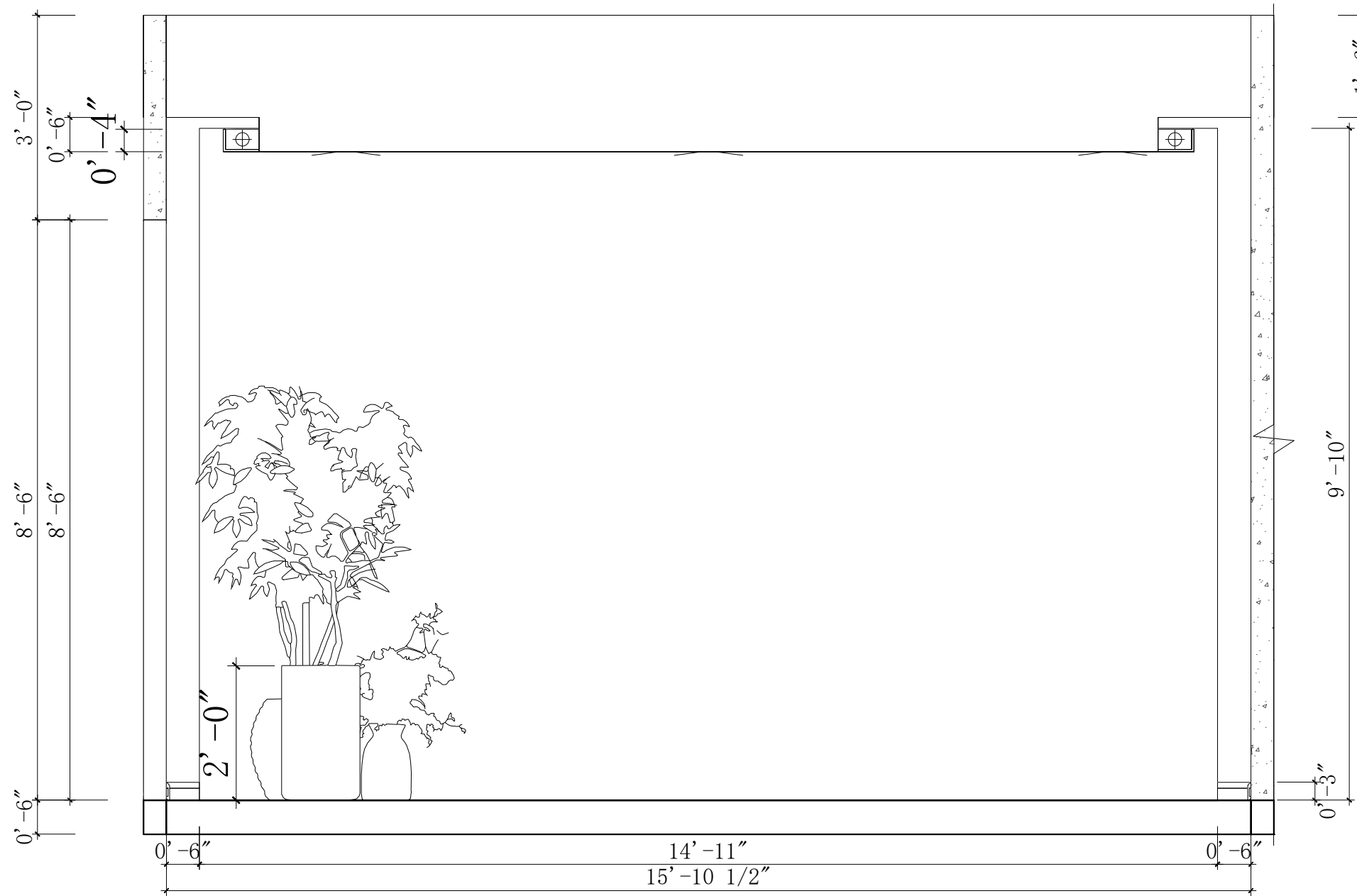


RETIRING ROOM ELEV B(1/4"=1'-0")

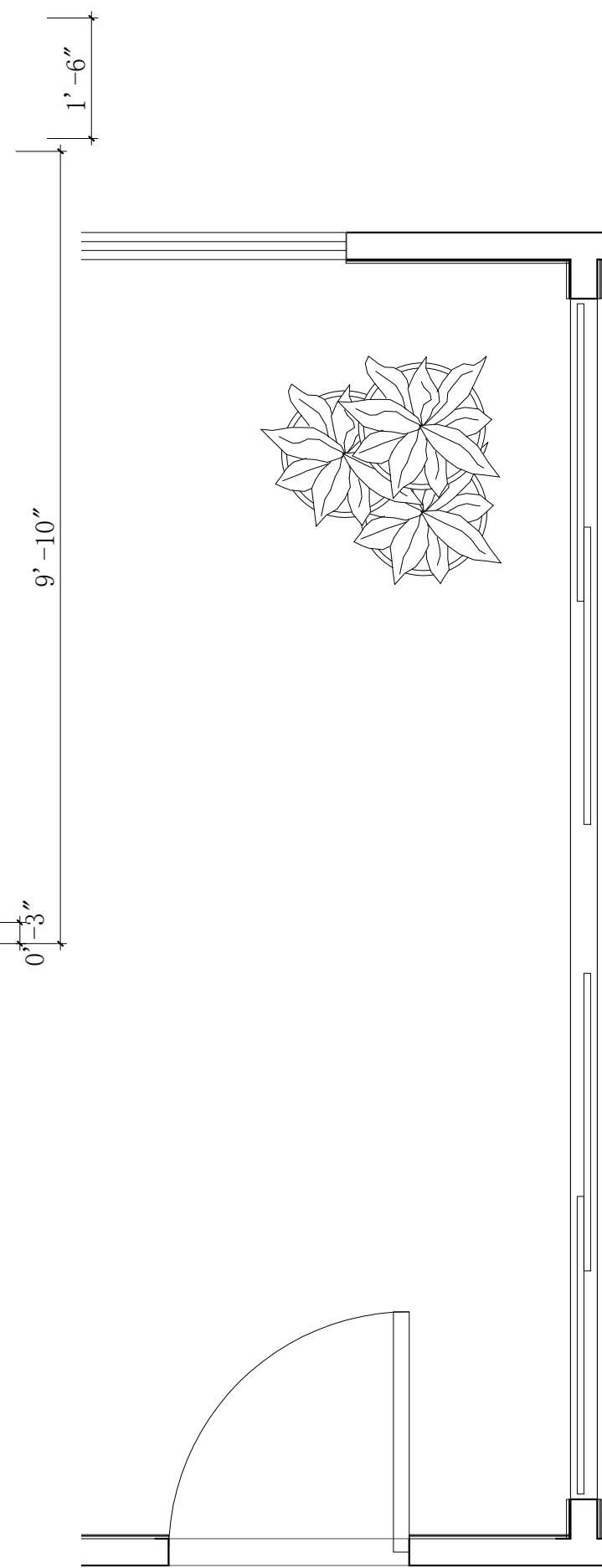
Retiring Room Elevation A1(1/4"=1'-0")







Retiring Room Elevation B(1/2"=1'-0")



RETIRING ROOM ELEV C(1/2"=1'-0")

**GENERAL NOTES**

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**RETIRING ROOM**  
**ELEVATION C**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-RR-62**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

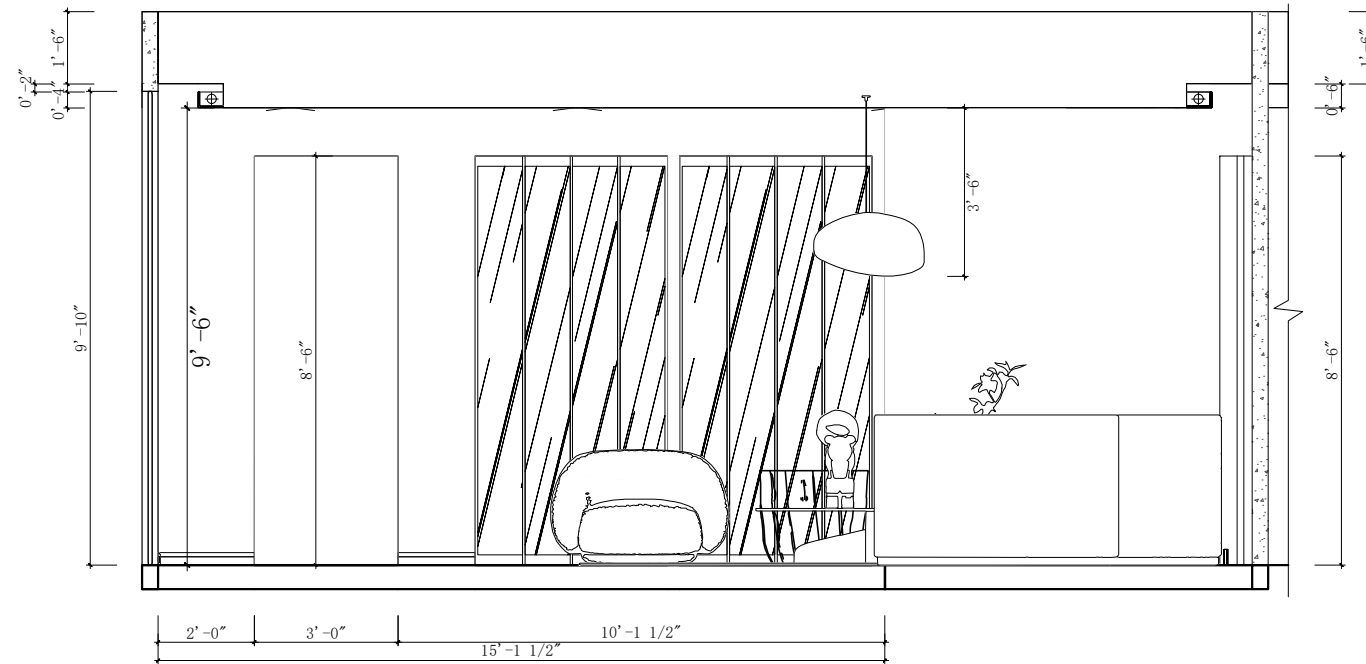


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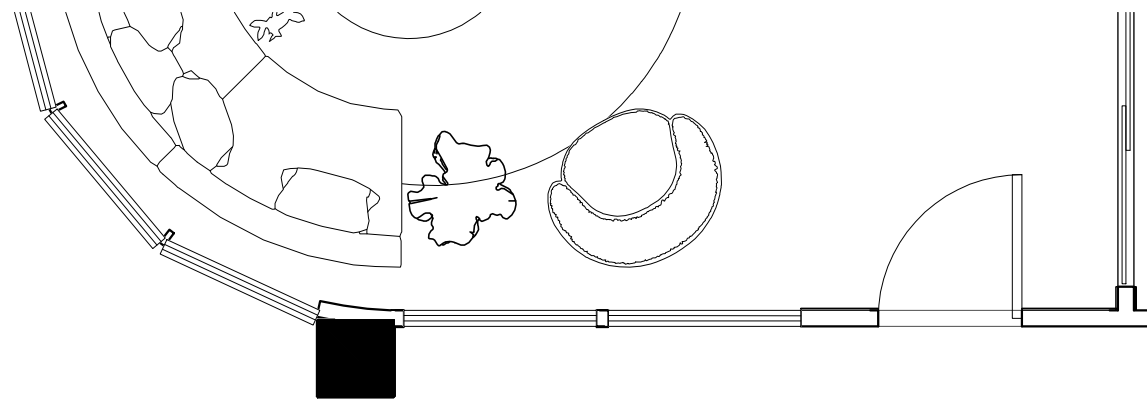
DRAWING TITLE:  
**7th FLOOR**  
RETIRING ROOM  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-RR-63**



Retiring Room Elevation C2(1/4"=1'-0")



RETIRING ROOM ELEV D(1/4"=1'-0")

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



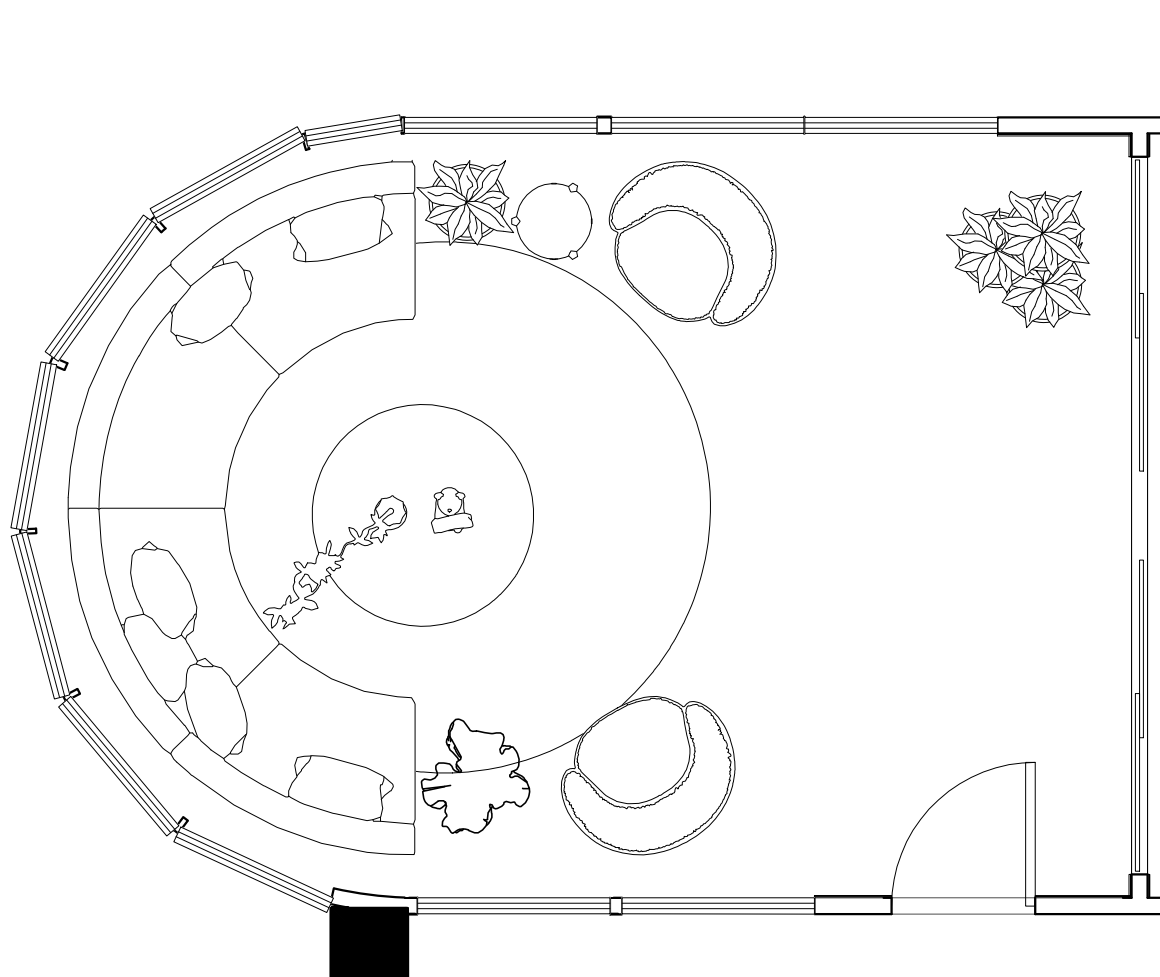
COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
RETIRING ROOM FLOOR

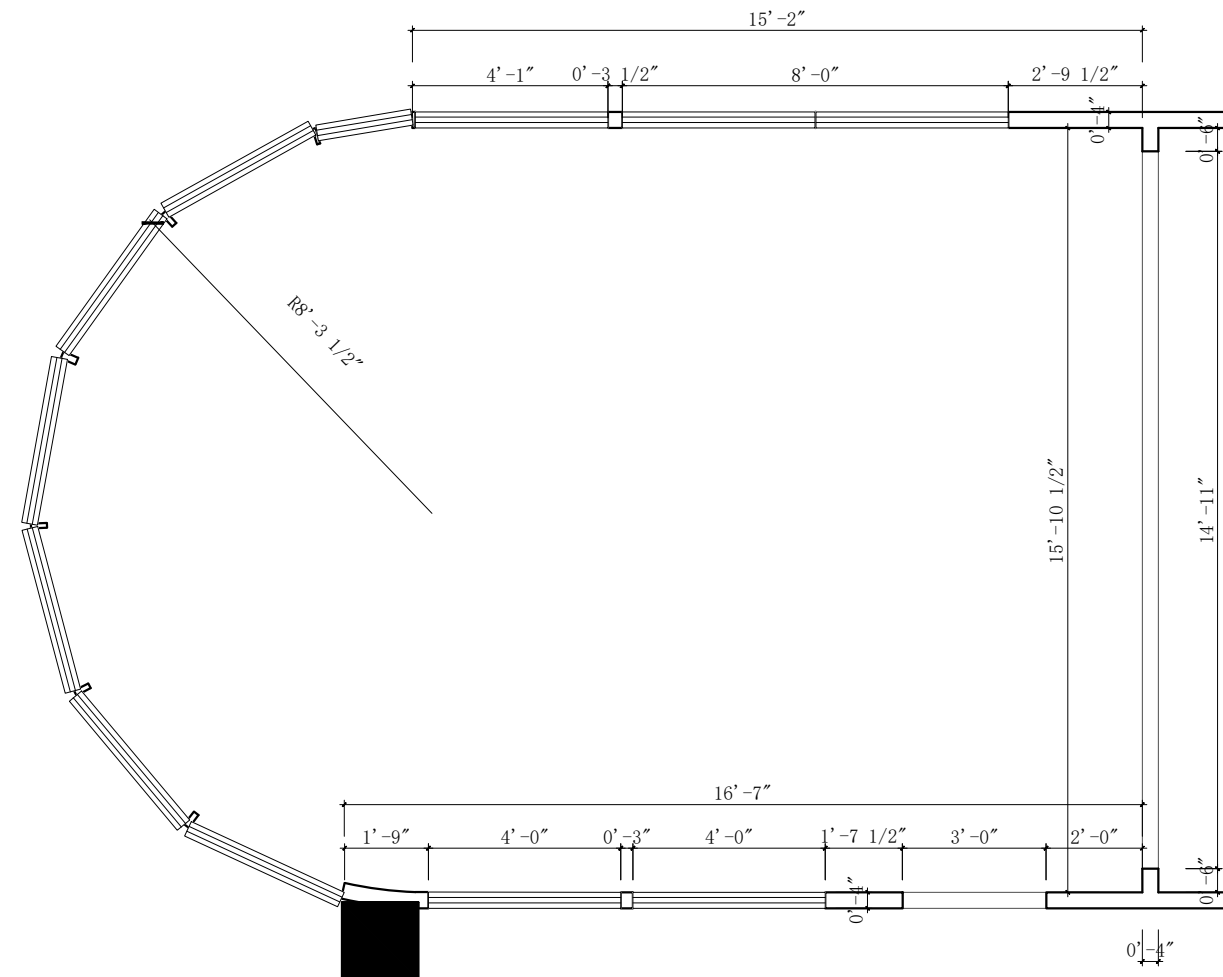
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

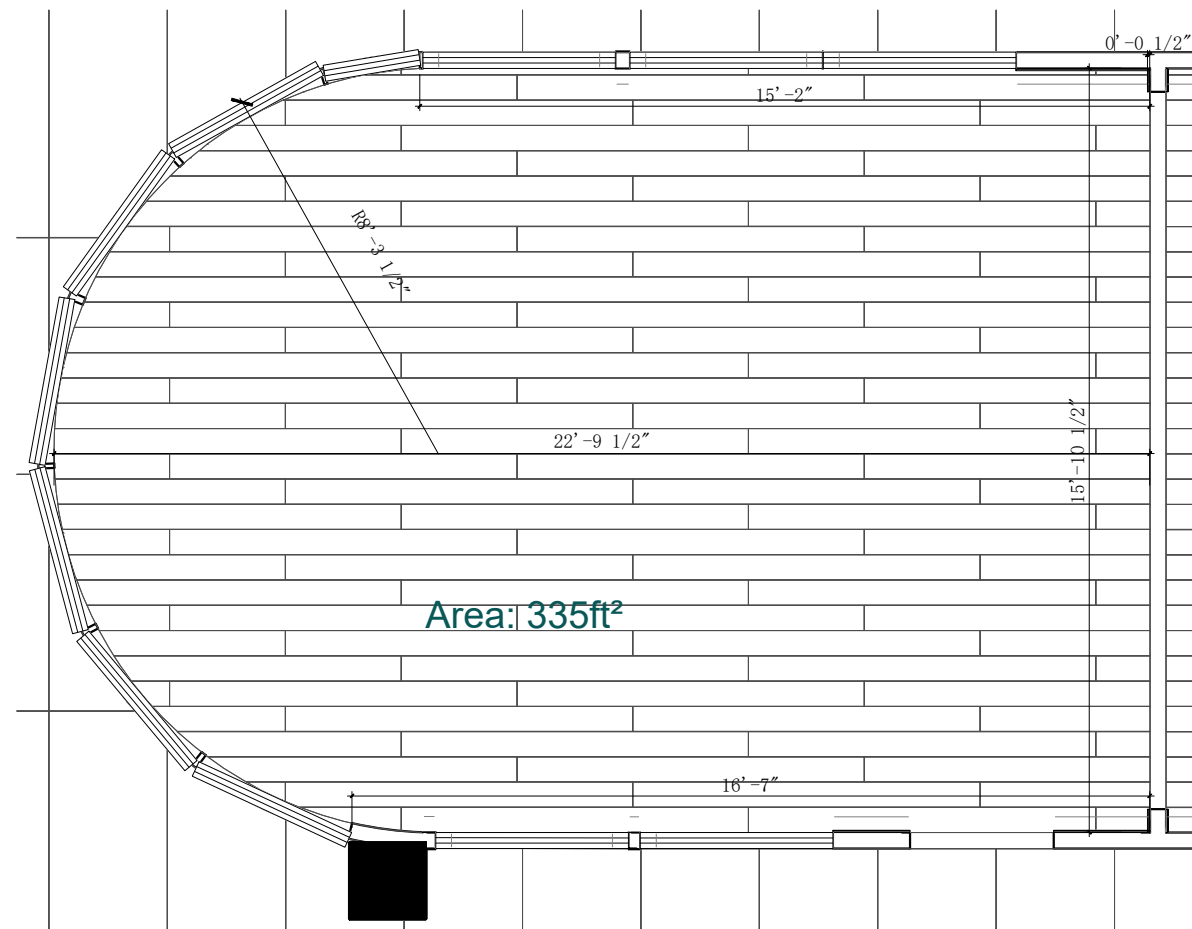
DWG. No.  
**SL07AR-RR-64**



RETIRING ROOM PLAN (1/4"=1'-0")

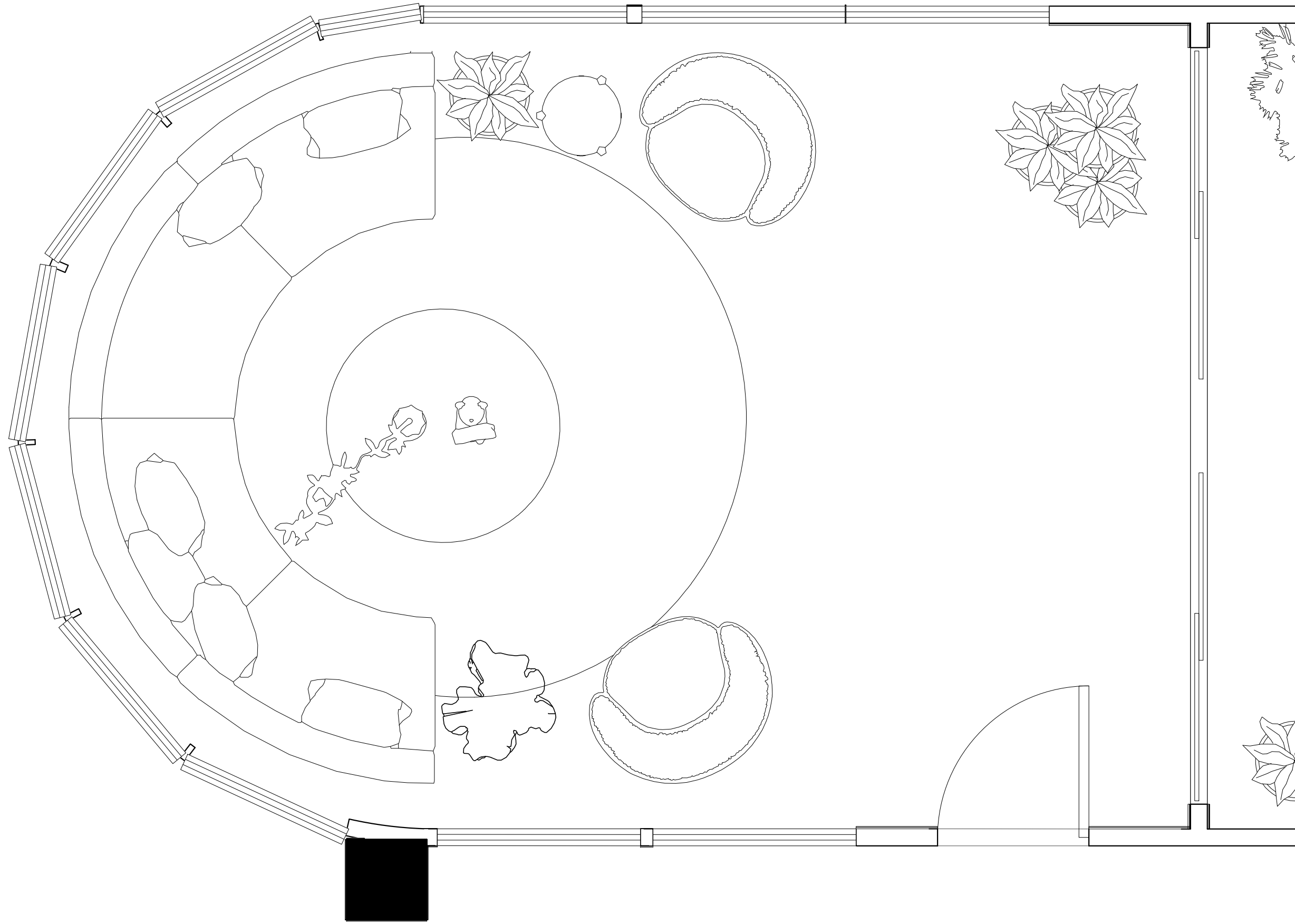


RETIRING ROOM FLOOR P (1/4"=1'-0")



RETIRING ROOM FLOOR F (1/4"=1'-0")





RETIRING ROOM FURNITURE(1/2"=1'-0")

**GENERAL NOTES**

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



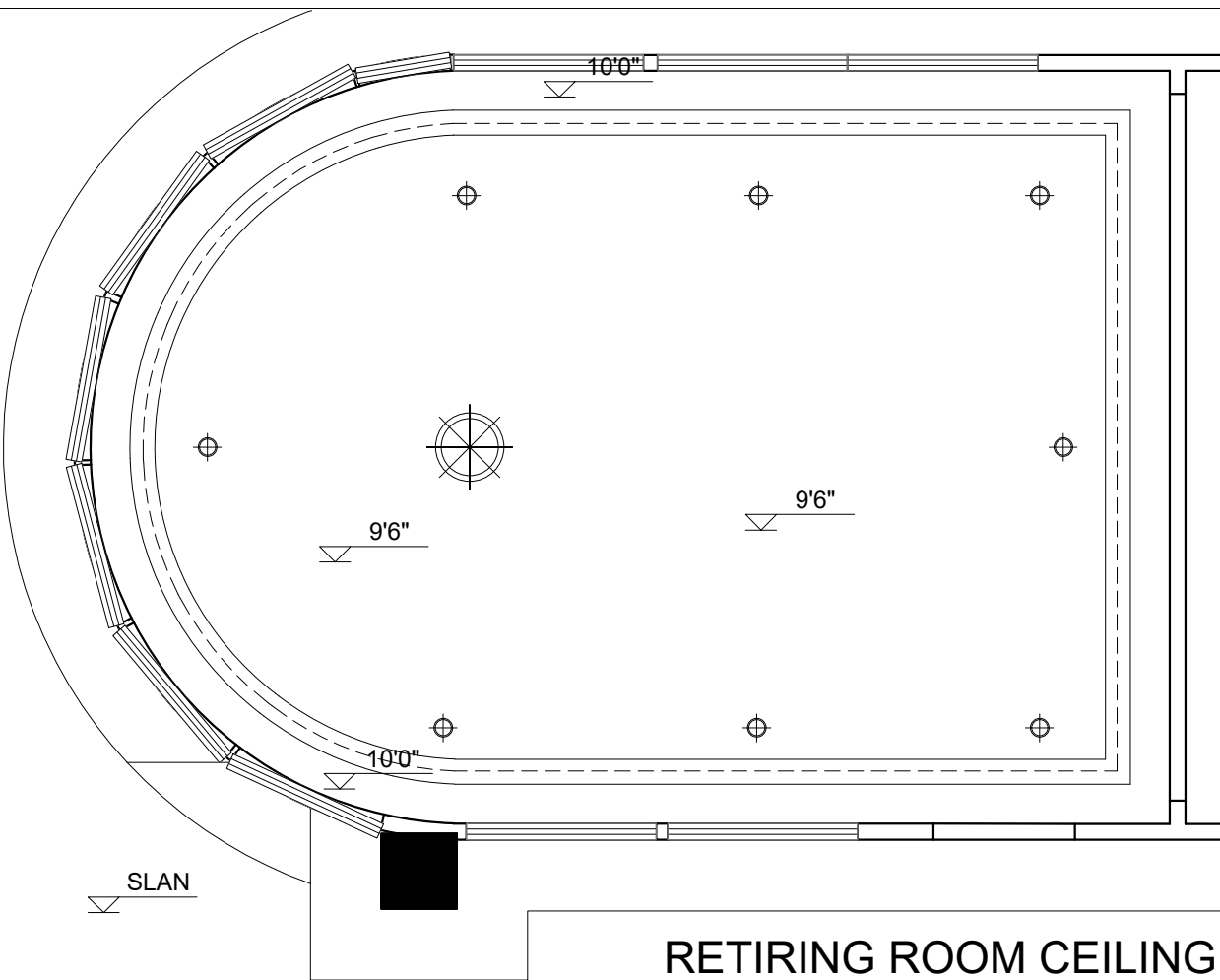
COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
RETIRING ROOM  
FURNITURE

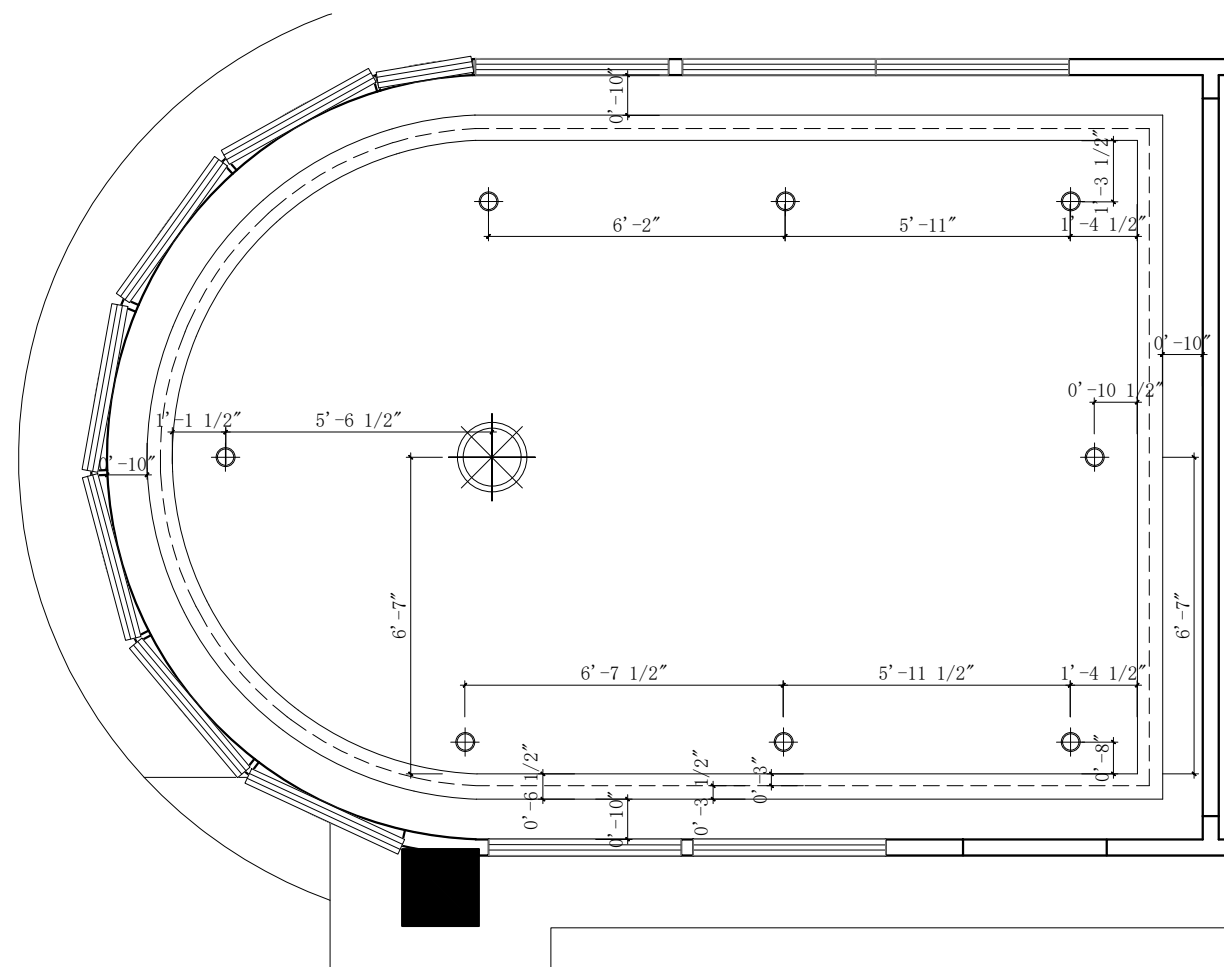
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-RR-65**





RETIRING ROOM CEILING (1/4"=1'-0")



RETIRING ROOM CEILING LIGHTS(1/4"=1'-0")

**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**RETIRING ROOM**  
**CEILING**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-RR-66**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI

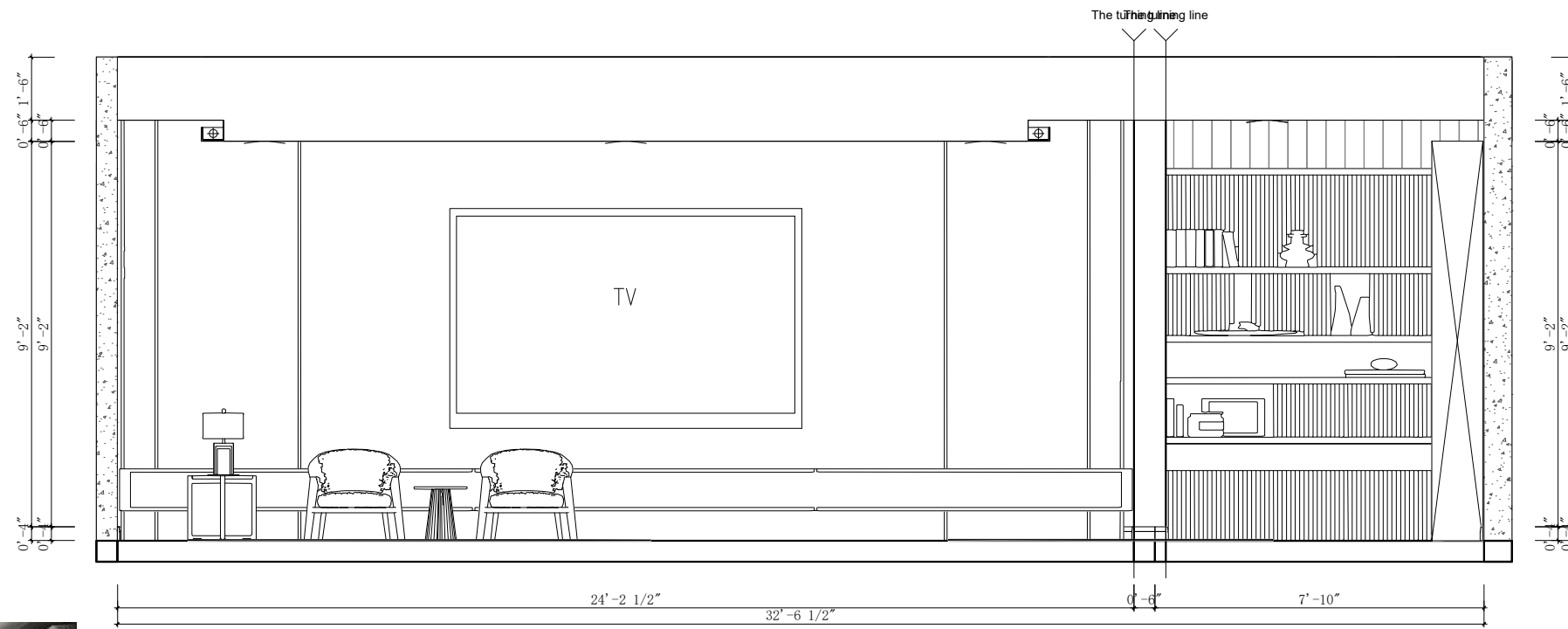


COMMENTS:

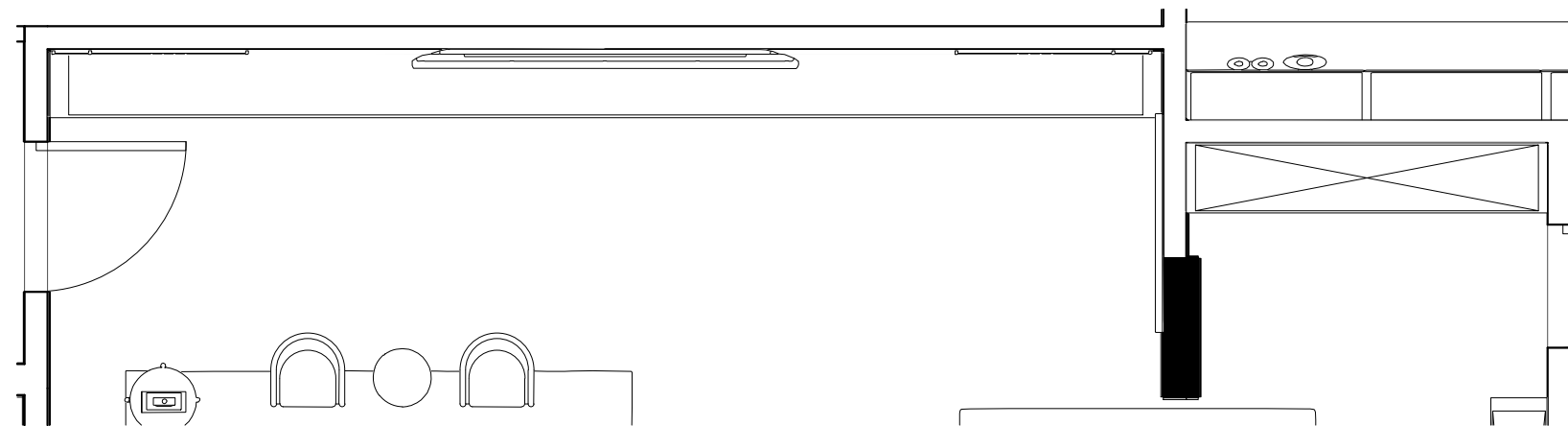
DRAWING TITLE:  
**7th FLOOR**  
CEO ROOM  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CEO-74**

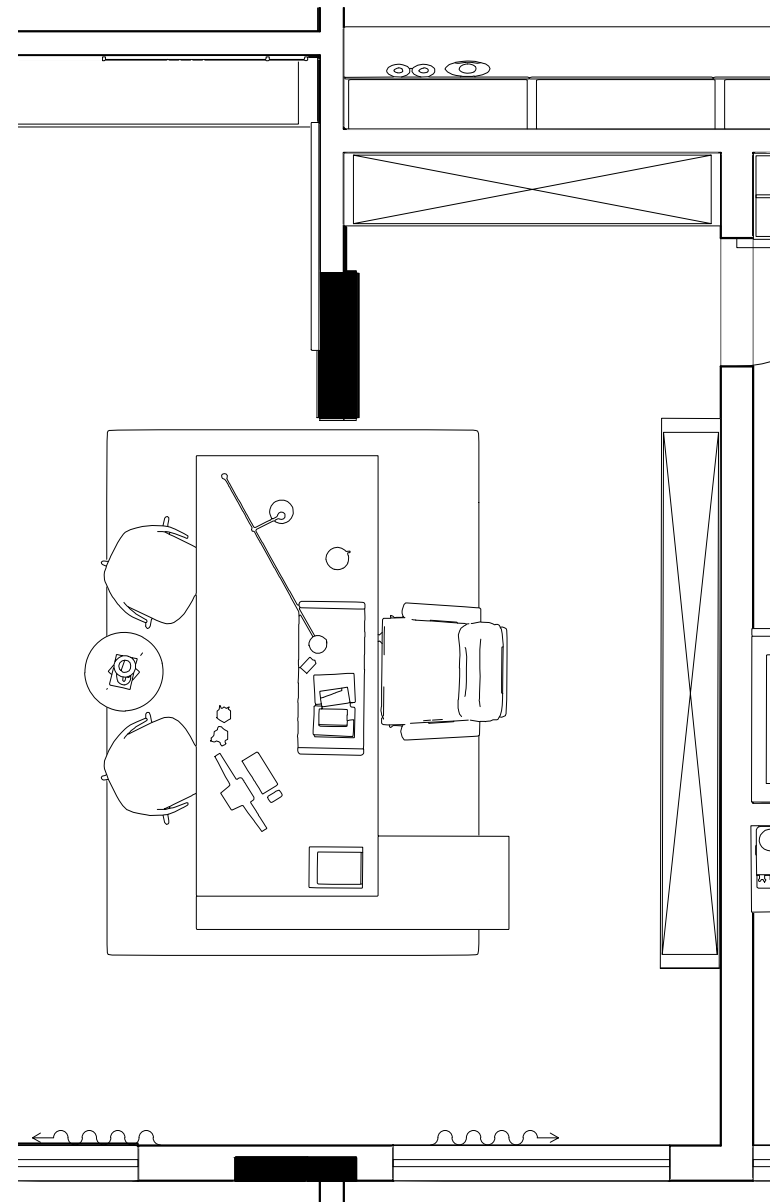


CEO ROOM Elevation A(1/4"=1'-0")

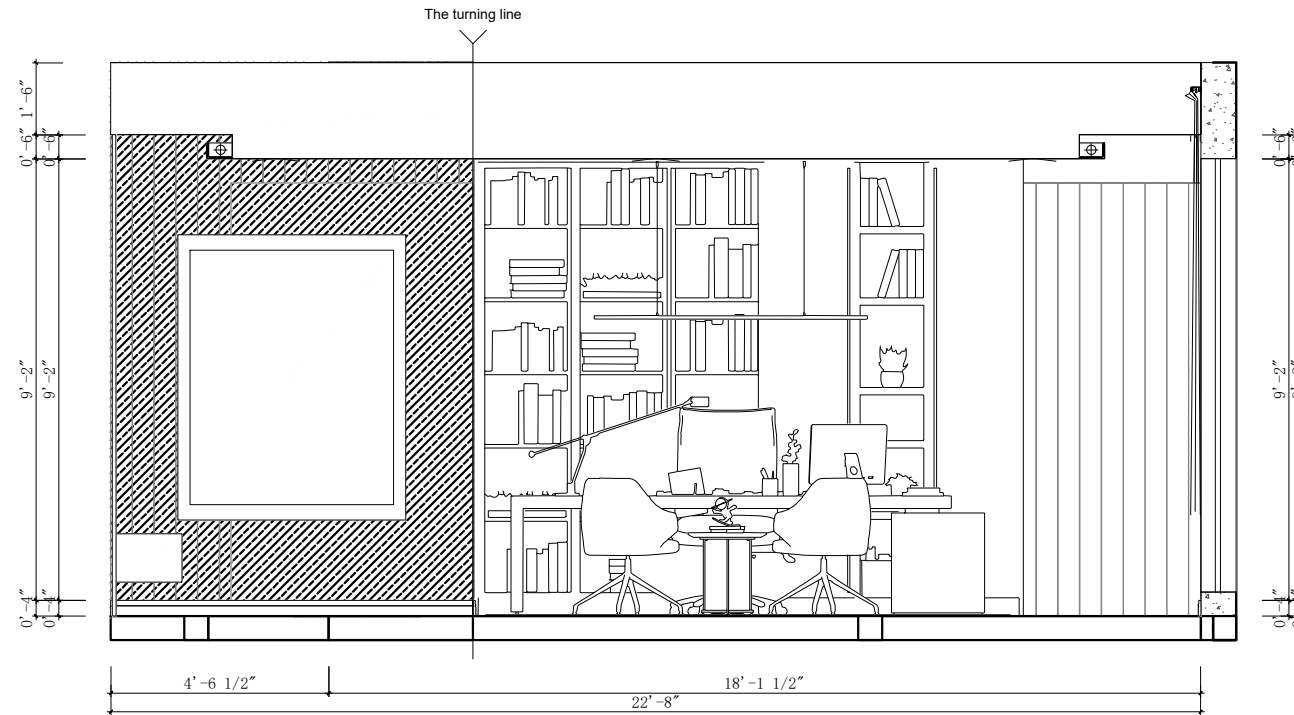


CEO ELEV A(1/4"=1'-0")





CEO ELEV B(1/4"=1'-0")



CEO ROOM Elevation B(1/4"=1'-0")



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
CEO ROOM  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CEO-75**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



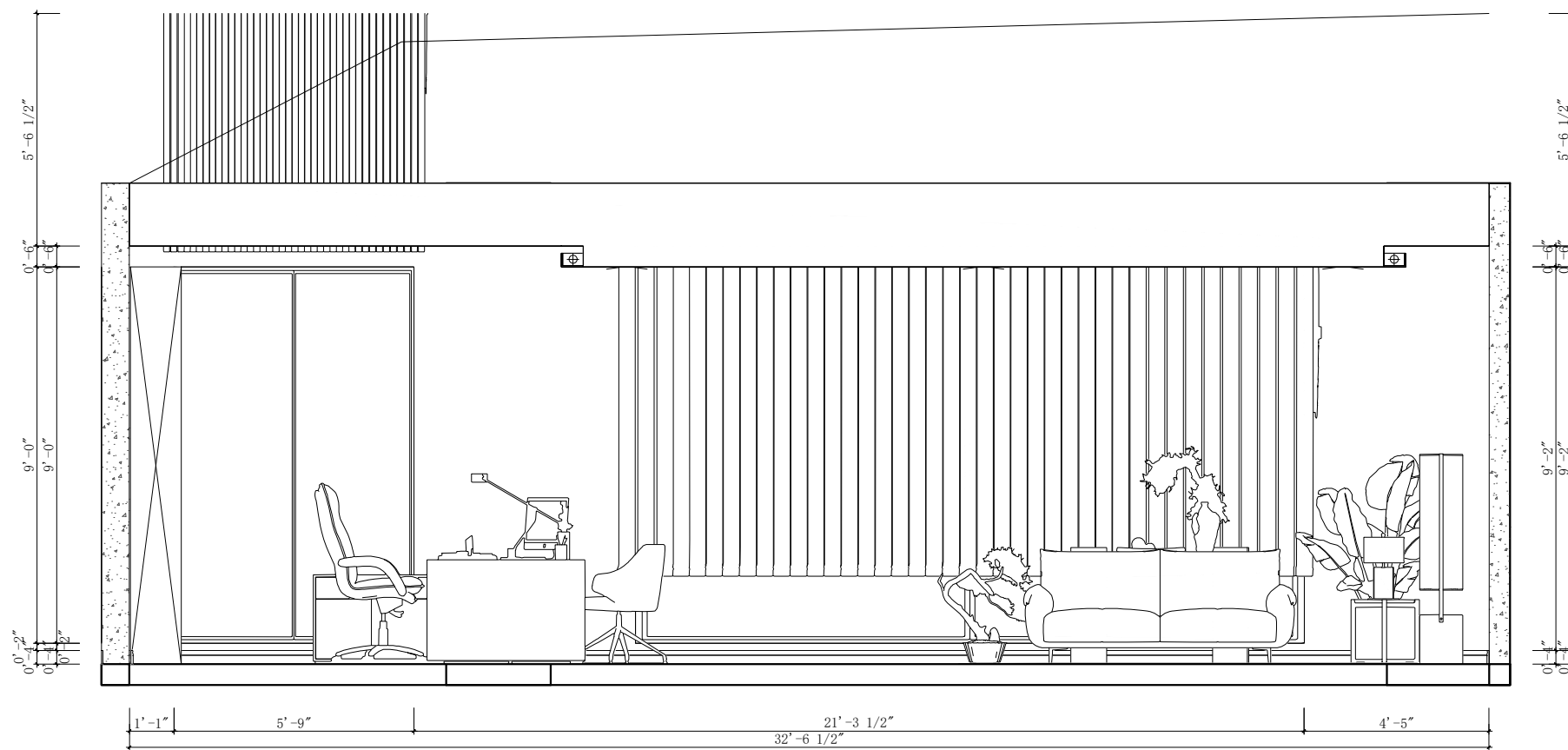
COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
CEO ROOM  
ELEVATION C

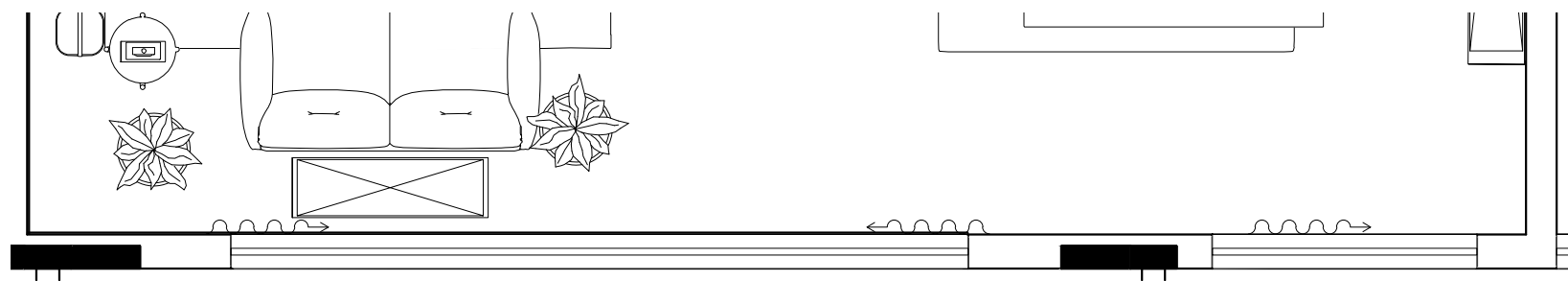
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CEO-76**



CEO ROOM Elevation C(1/4"=1'-0")



CEO ELEV C(1/4"=1'-0")





## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



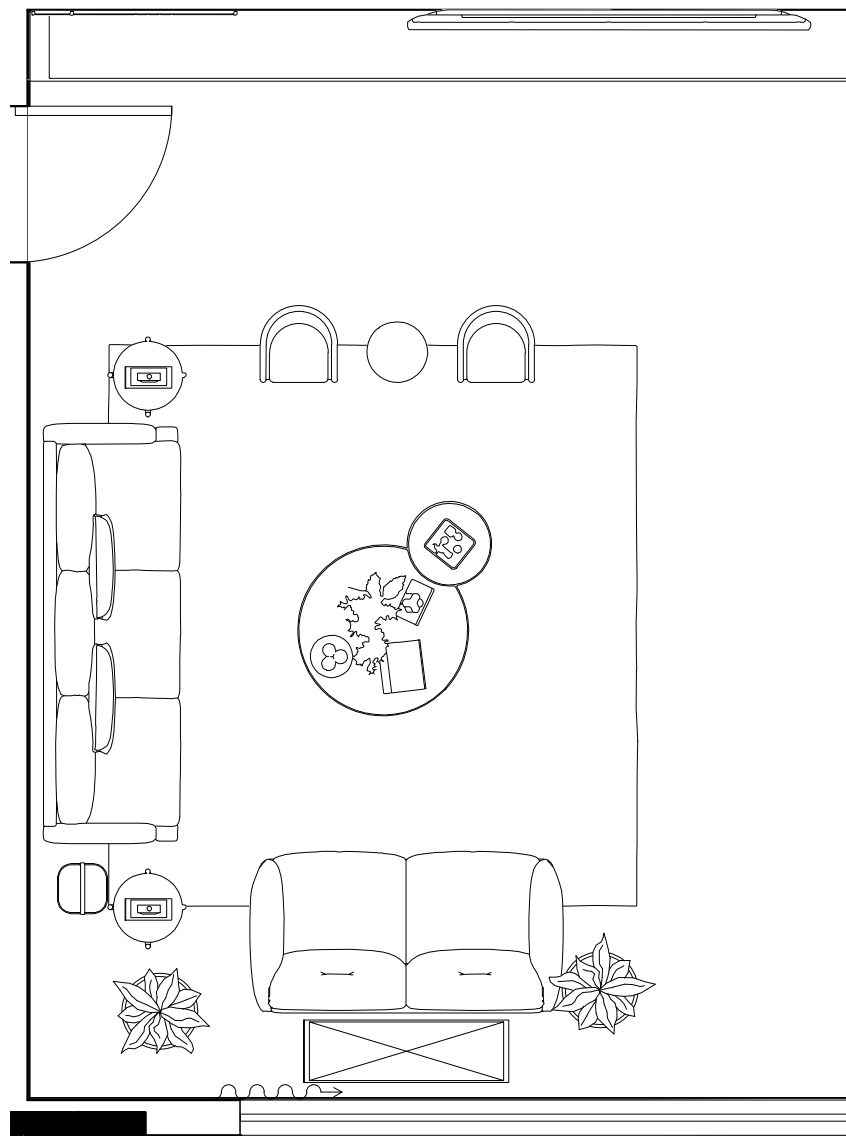
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DRAWING TITLE:  
**7th FLOOR**  
CEO ROOM  
ELEVATION D

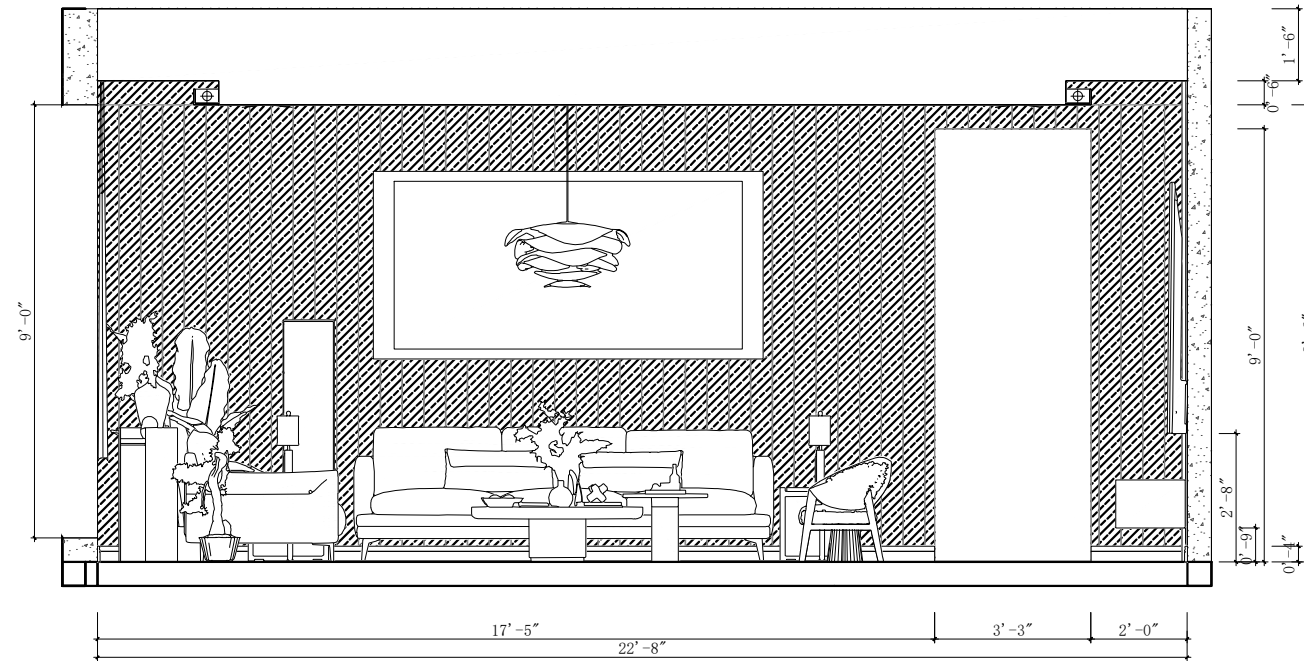
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CEO-77**

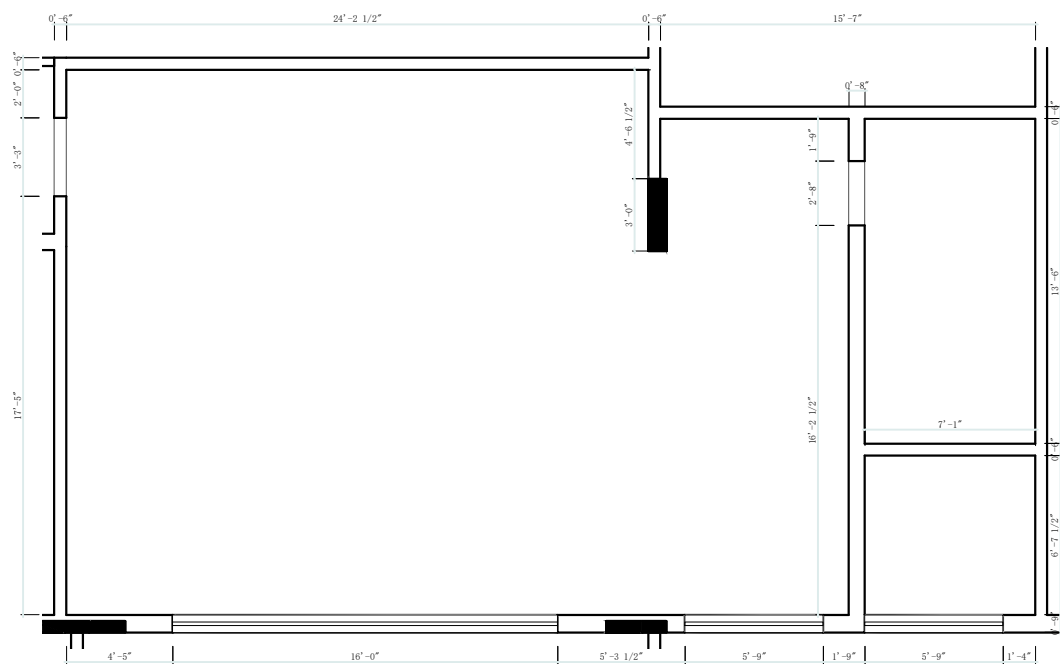


CEO ELEV D(1/4"=1'-0")

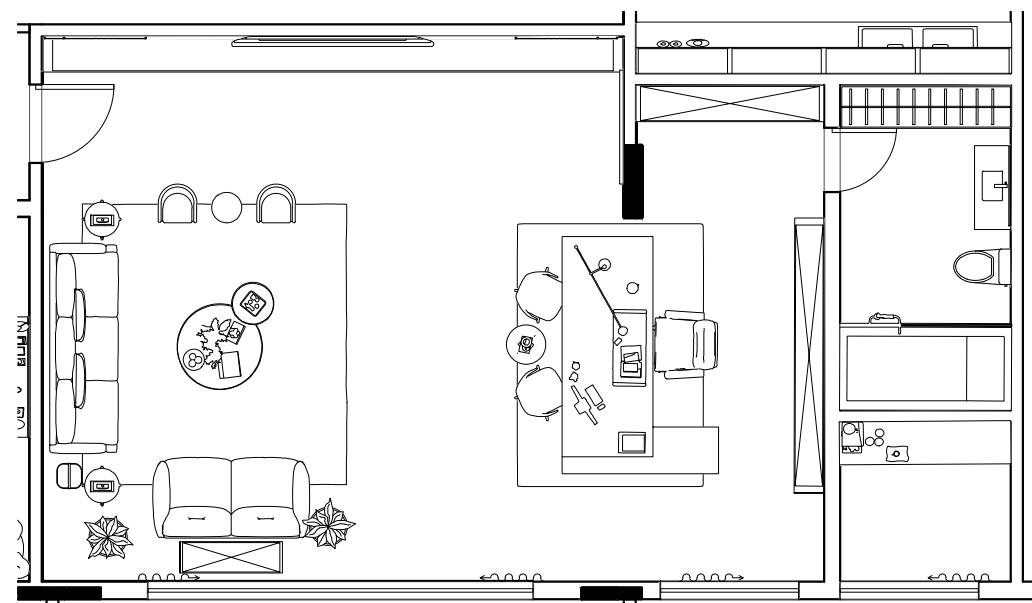


CEO ROOM Elevation D(1/4"=1'-0")

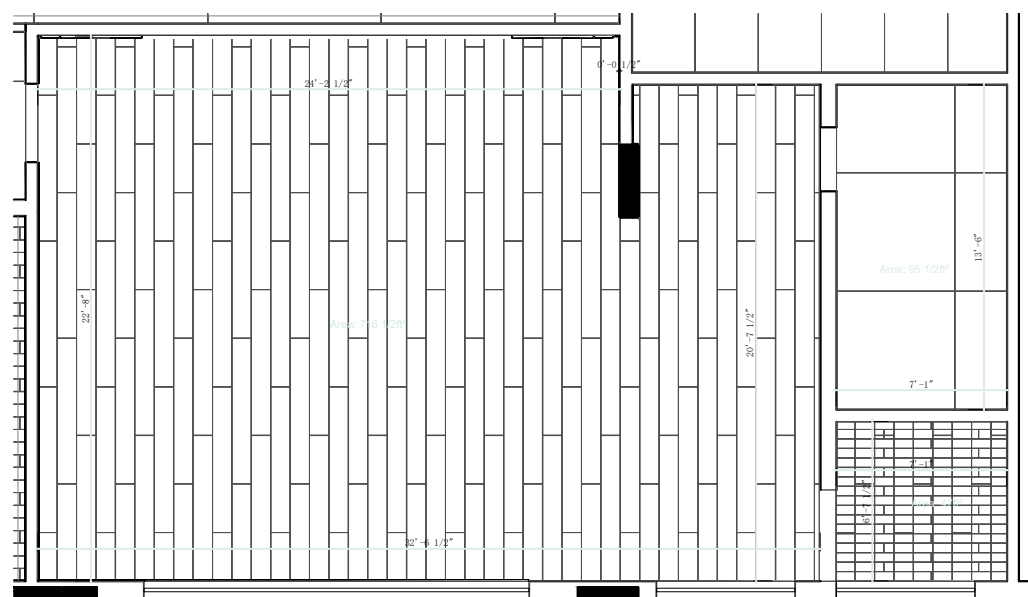




CEO FLOOR P (1/8"=1'-0")



CEO PLAN (1/8"=1'-0")



CEO FLOOR F (1/8"=1'-0")



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
CEO ROOM FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
SL07AR-CEO-78

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

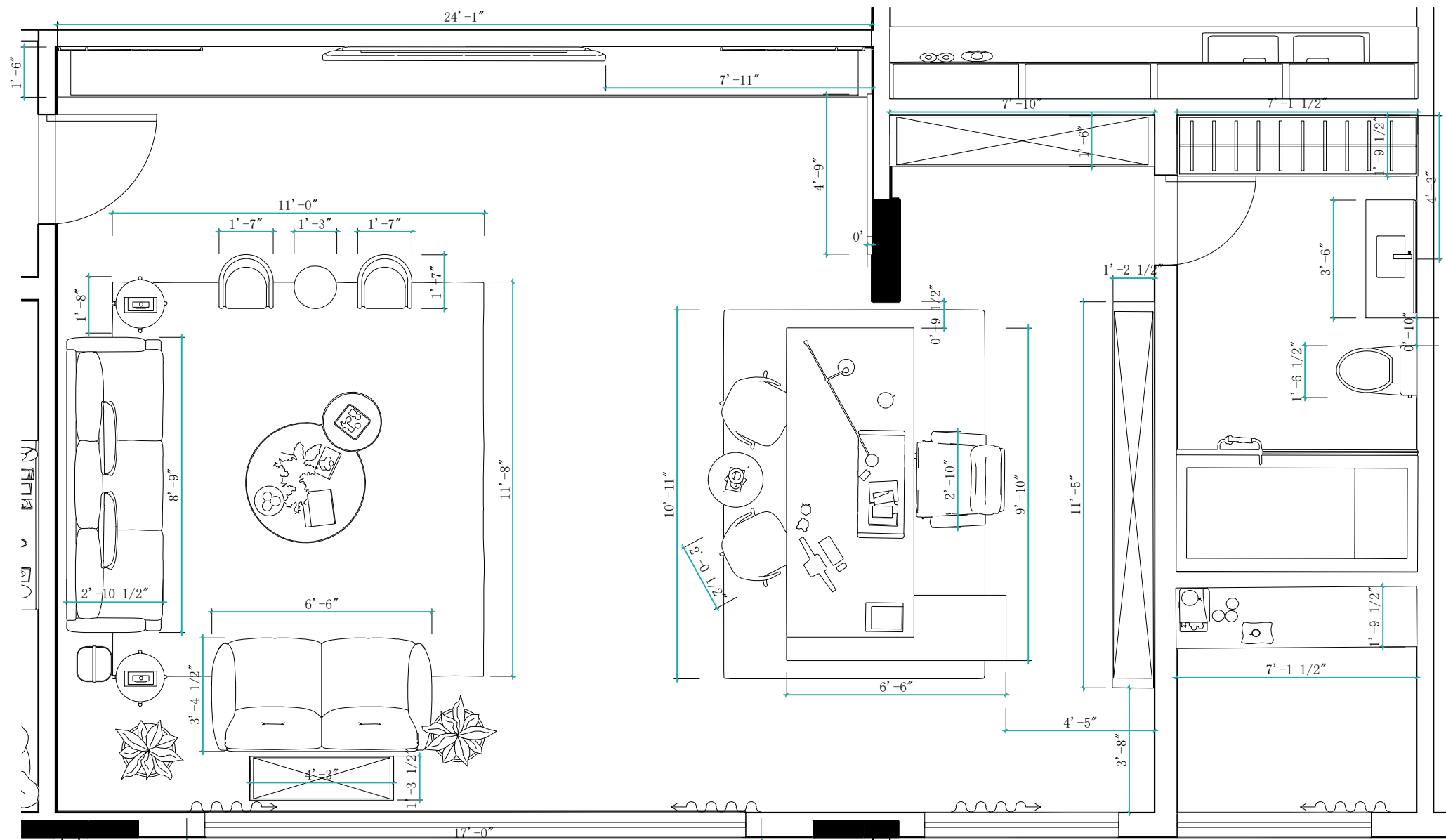
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**7th FLOOR**  
**CEO ROOM FURNITURE**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CEO-79**



**CEO FURNITURE(1/4"=1'-0")**

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

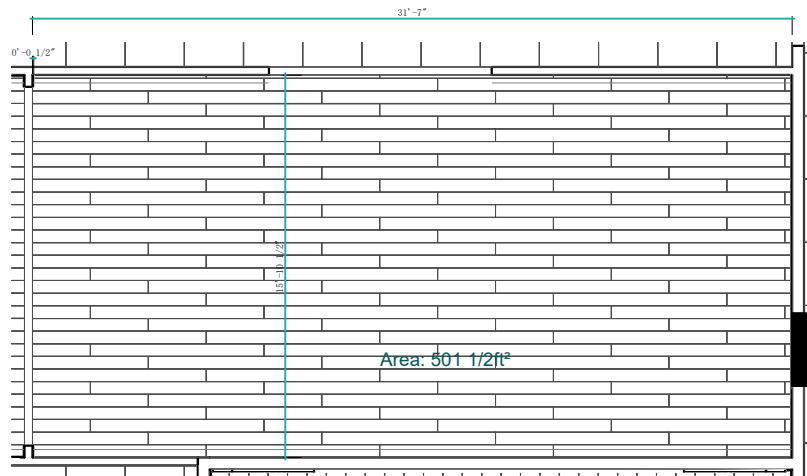


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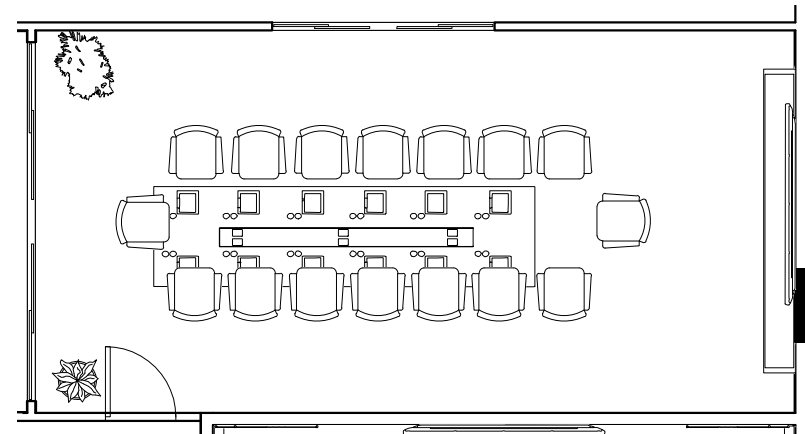
DRAWING TITLE:  
**7th FLOOR**  
CONFERENCE ROOM FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

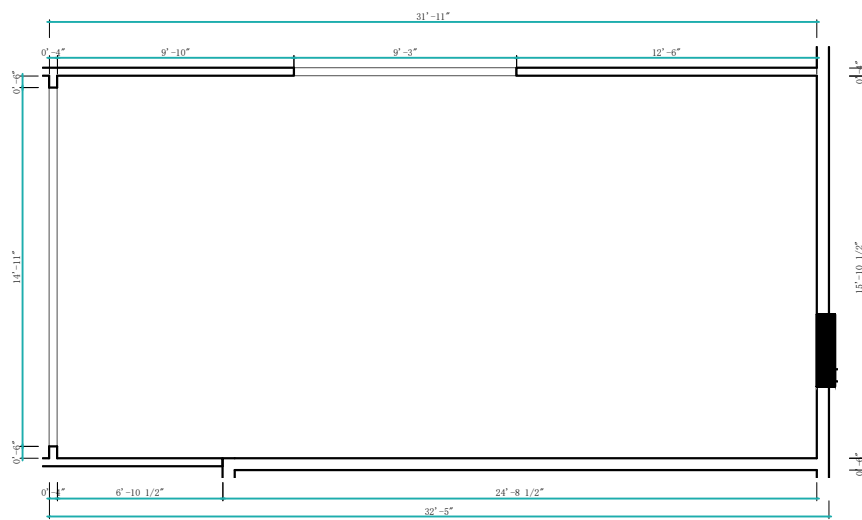
DWG. No.  
**SL07AR-CR-71**



**CONF ROOM FLOOR F(1/8"=1'-0")**



**CONF ROOM PLAN(1/8"=1'-0")**



**CONFROOM FLOOR P(1/8"=1'-0")**

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



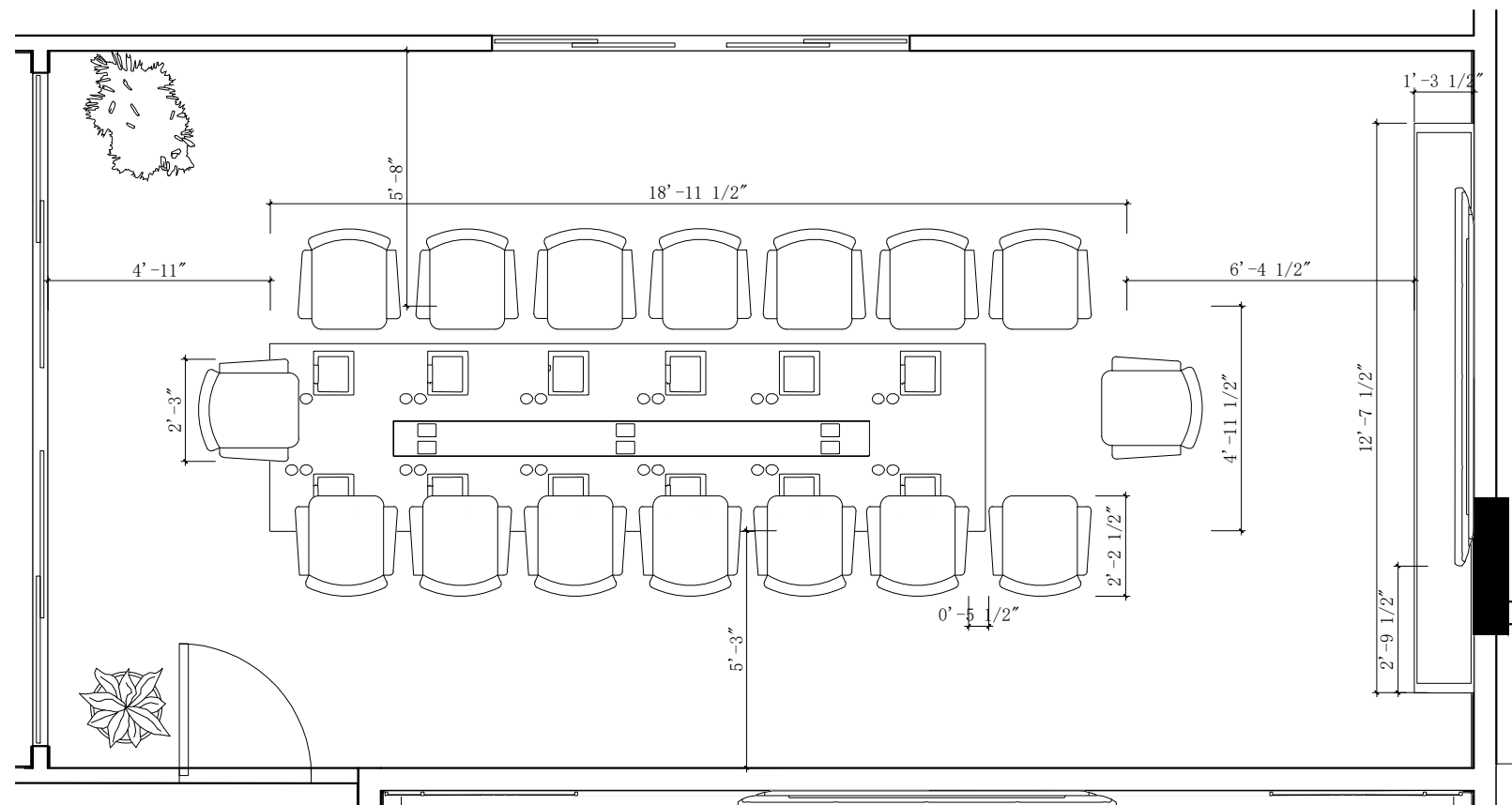
COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
CONFERENCE ROOM  
FURNITURE

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CR-72**



**CONF ROOM FURNITURE(1/4"=1'-0")**

## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

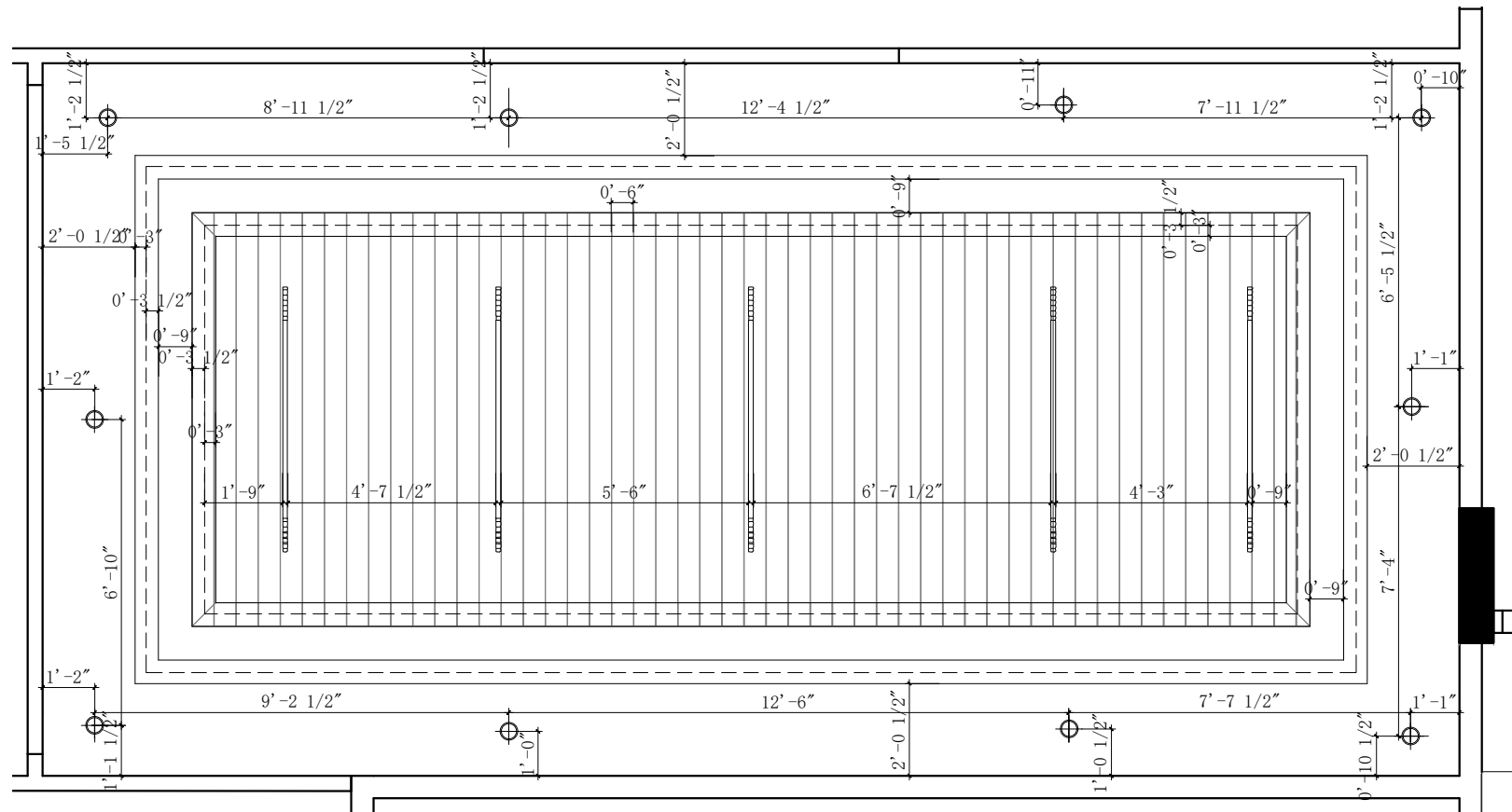
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**CONFERENCE ROOM**  
**CEILING**

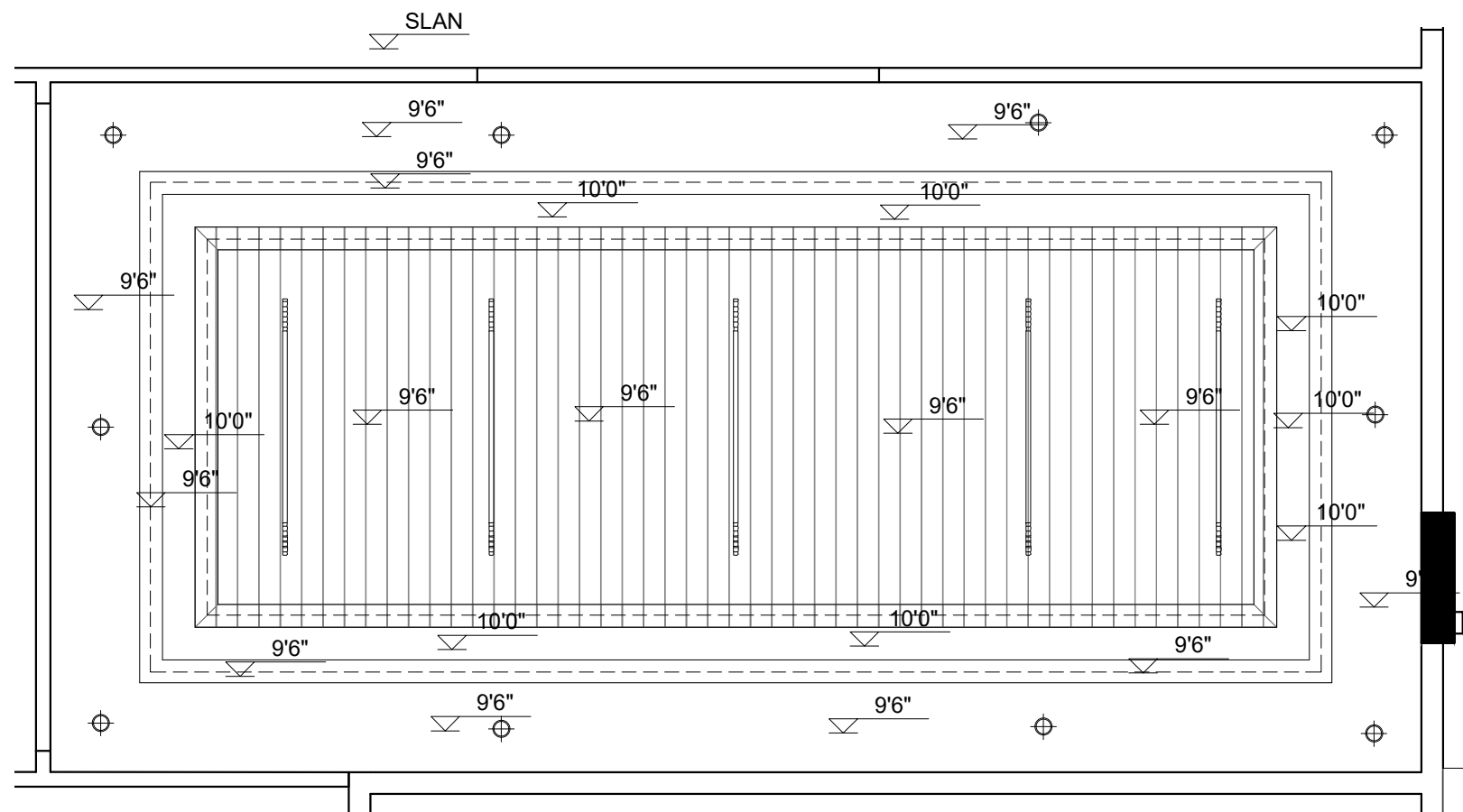
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CR-73**



**CONF ROOM CEILING LIGHTS(1/4"=1'-0")**



**CONF ROOM CEILING(1/4"=1'-0")**



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

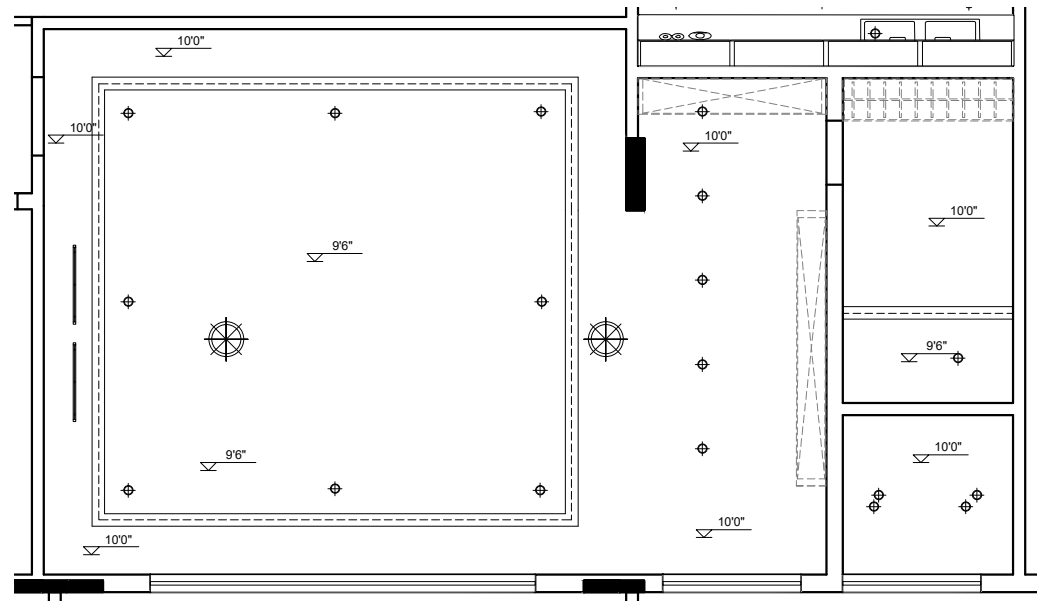
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**7th FLOOR**  
**CEO ROOM CEILING**

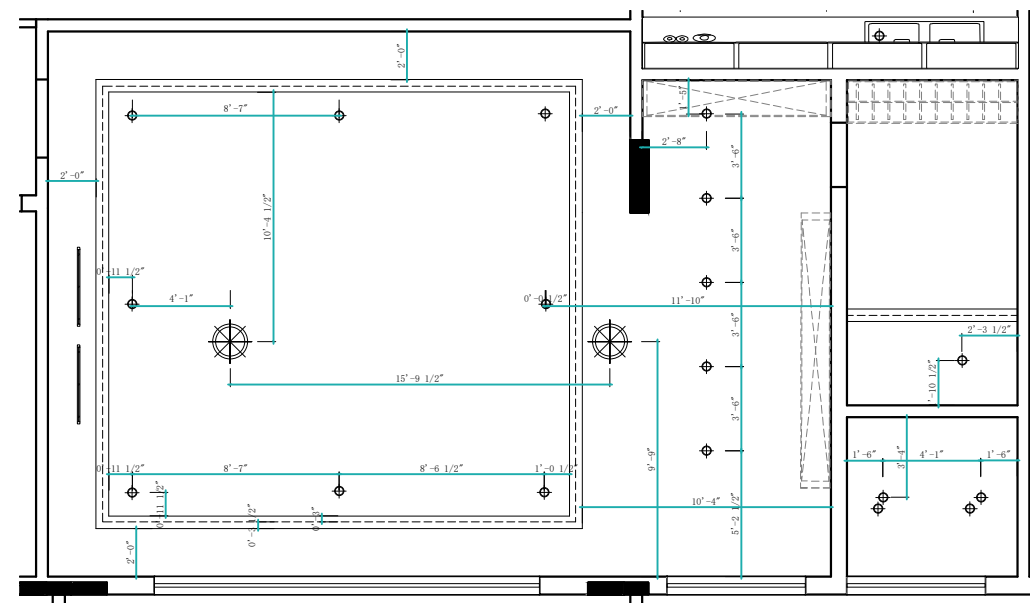
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR. 2024

DWG. No.  
**SL07AR-CR-80**



**CEO CEILING(1/8"=1'-0")**



**CEO CEILING LIGHTS(1/8"=1'-0")**





## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

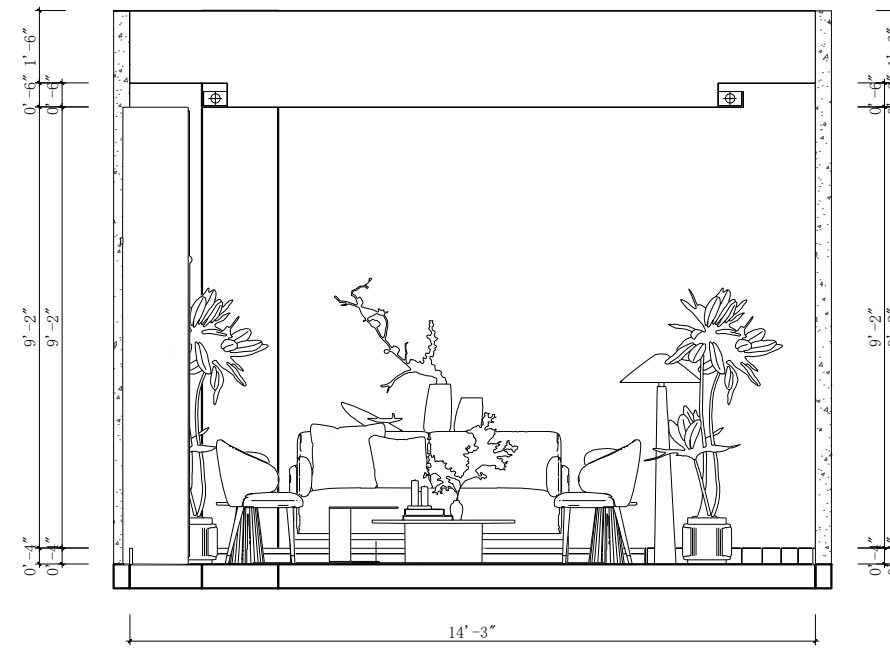


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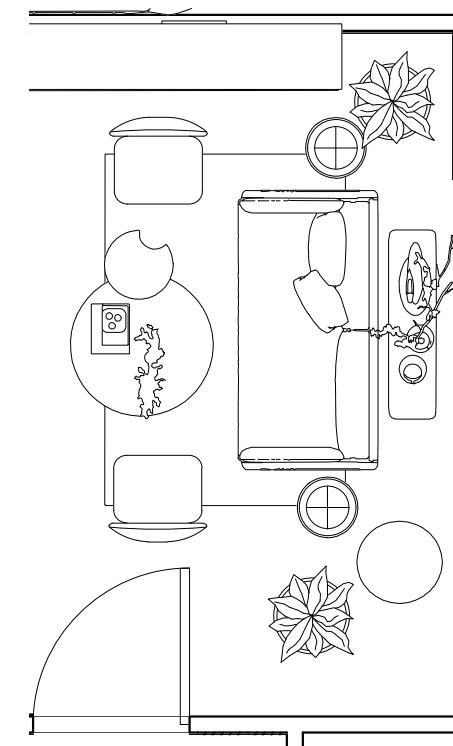
DRAWING TITLE:  
**7th FLOOR**  
BOARD SECT  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-BS-84**



**Board Secretariat Elevation B(1/4"=1'-0")**



**BOARD SECT ELEV B(1/4"=1'-0")**

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



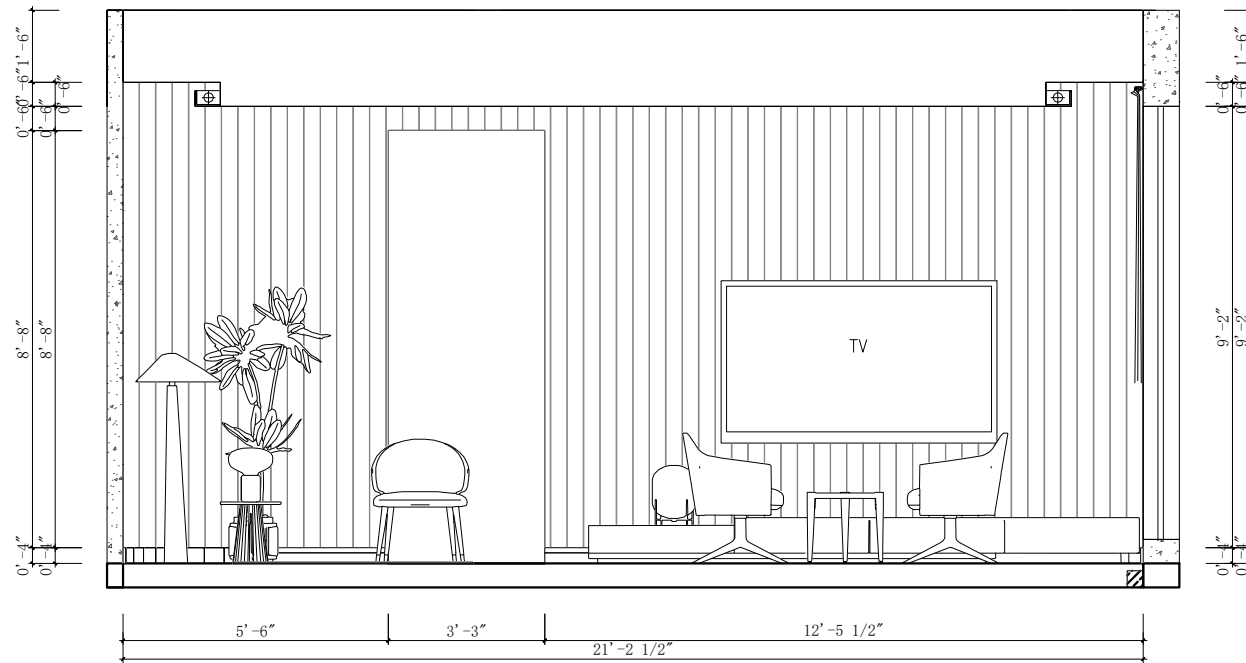
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DRAWING TITLE:  
**7th FLOOR**  
BOARD SECT  
ELEVATION C

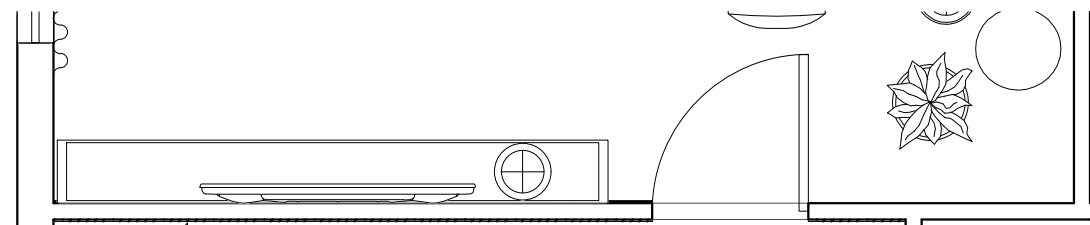
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-BS-85**



**Board Secretariat Elevation C(1/4"=1'-0")**



**BOARD SECT ELEV C(1/4"=1'-0")**



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

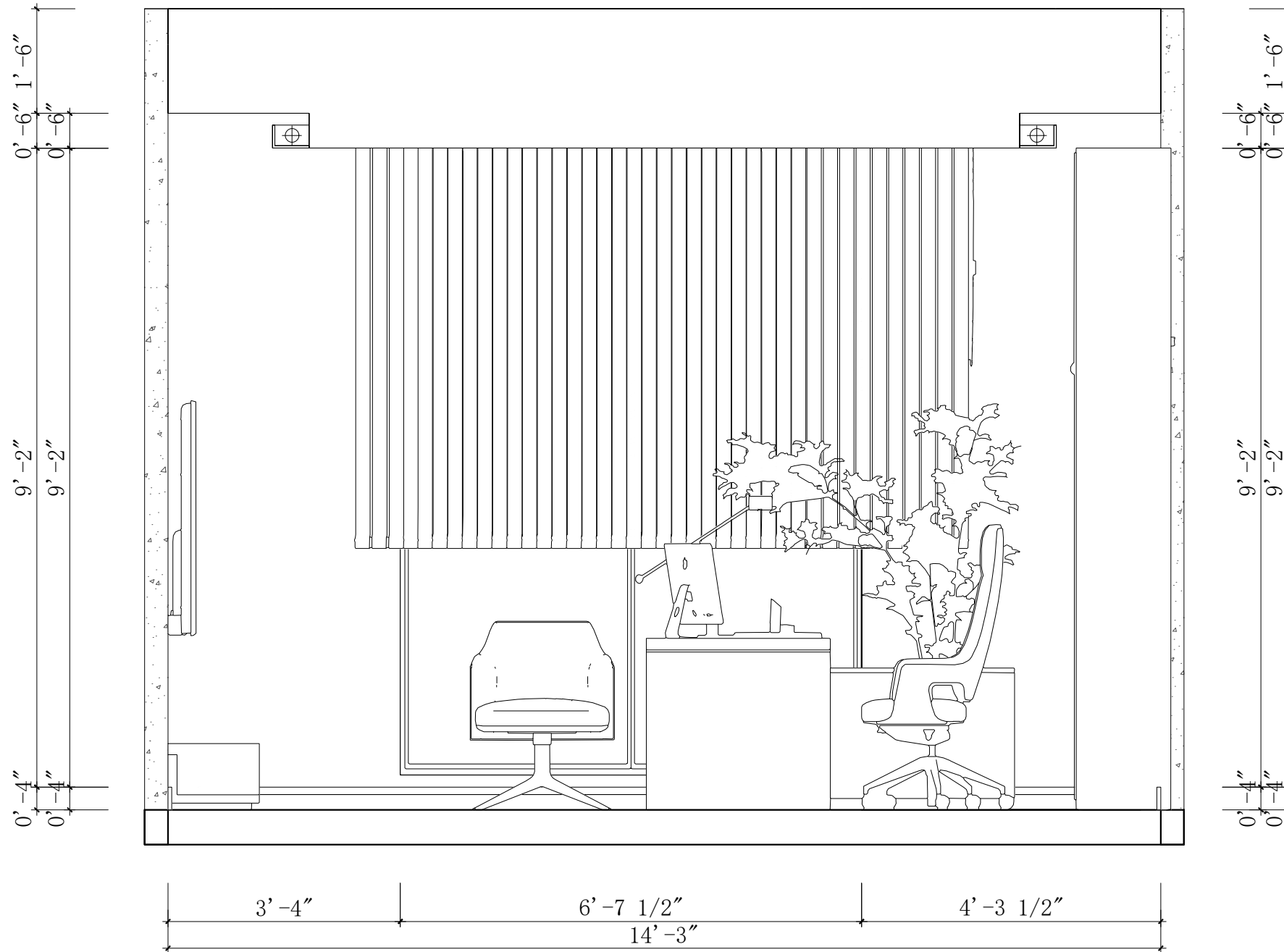


COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
BOARD SECT  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

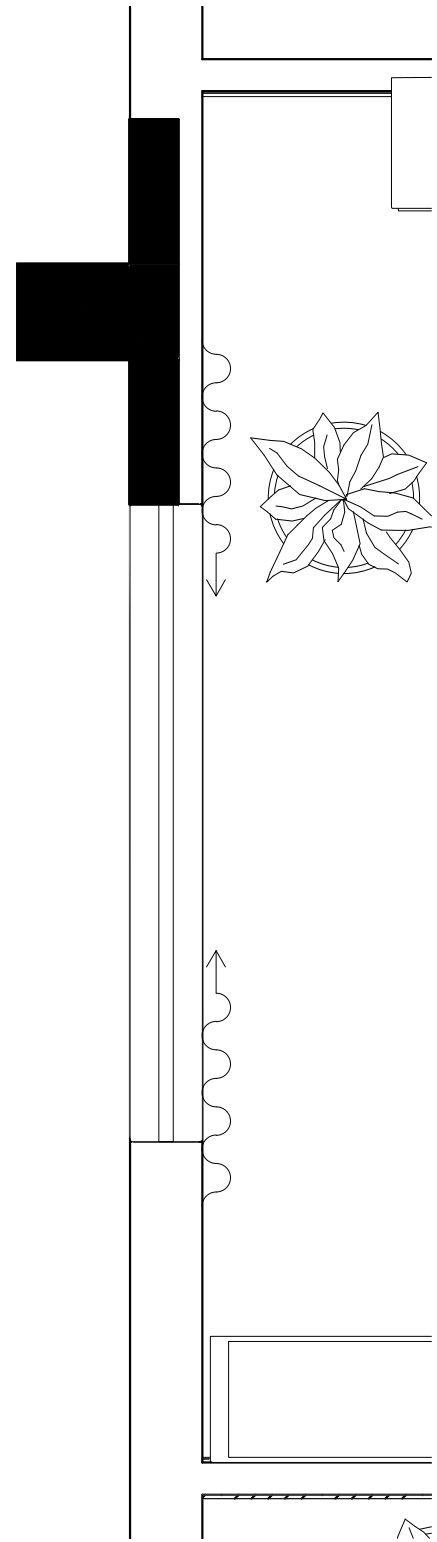
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**SL07AR-BS-86**

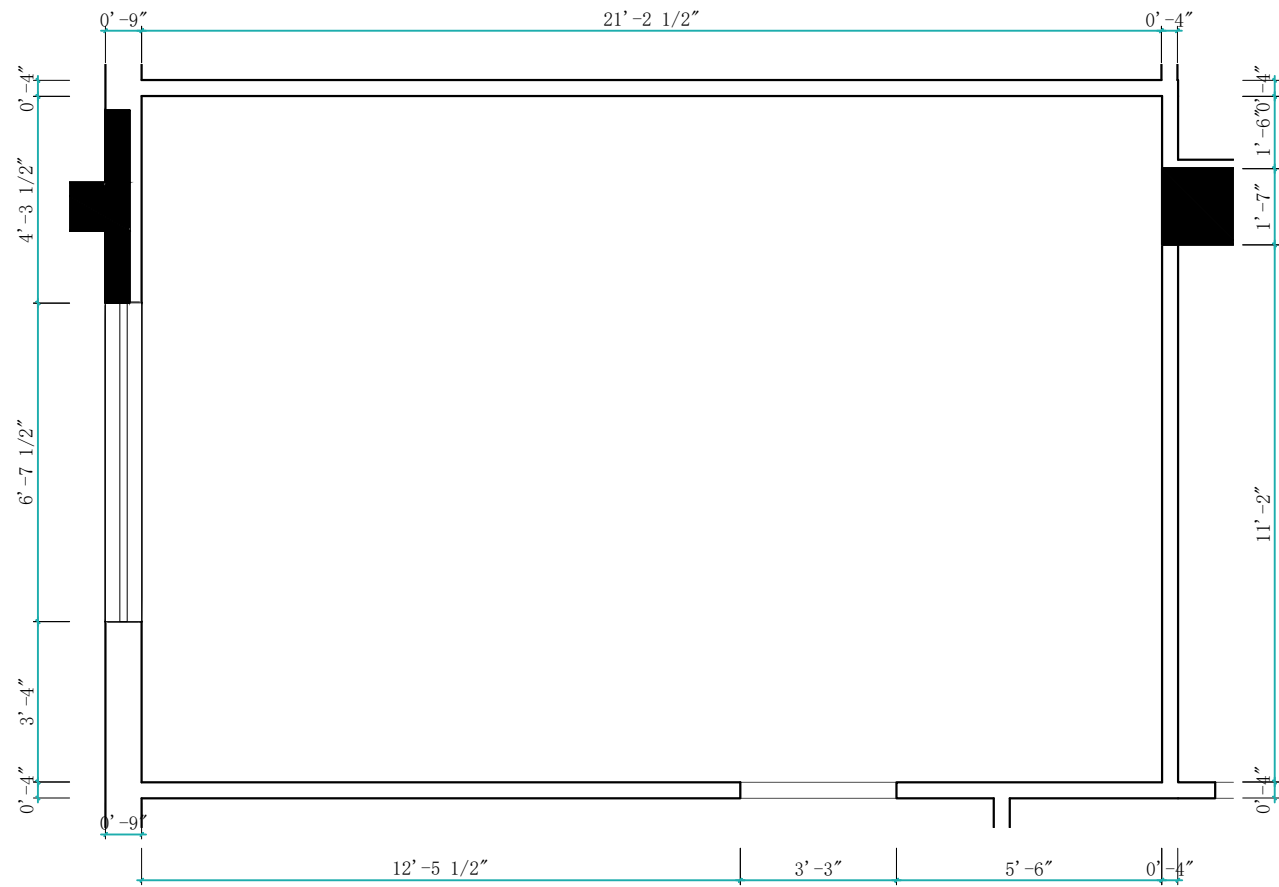


Board Secretariat Elevation D(1/2"=1'-0")

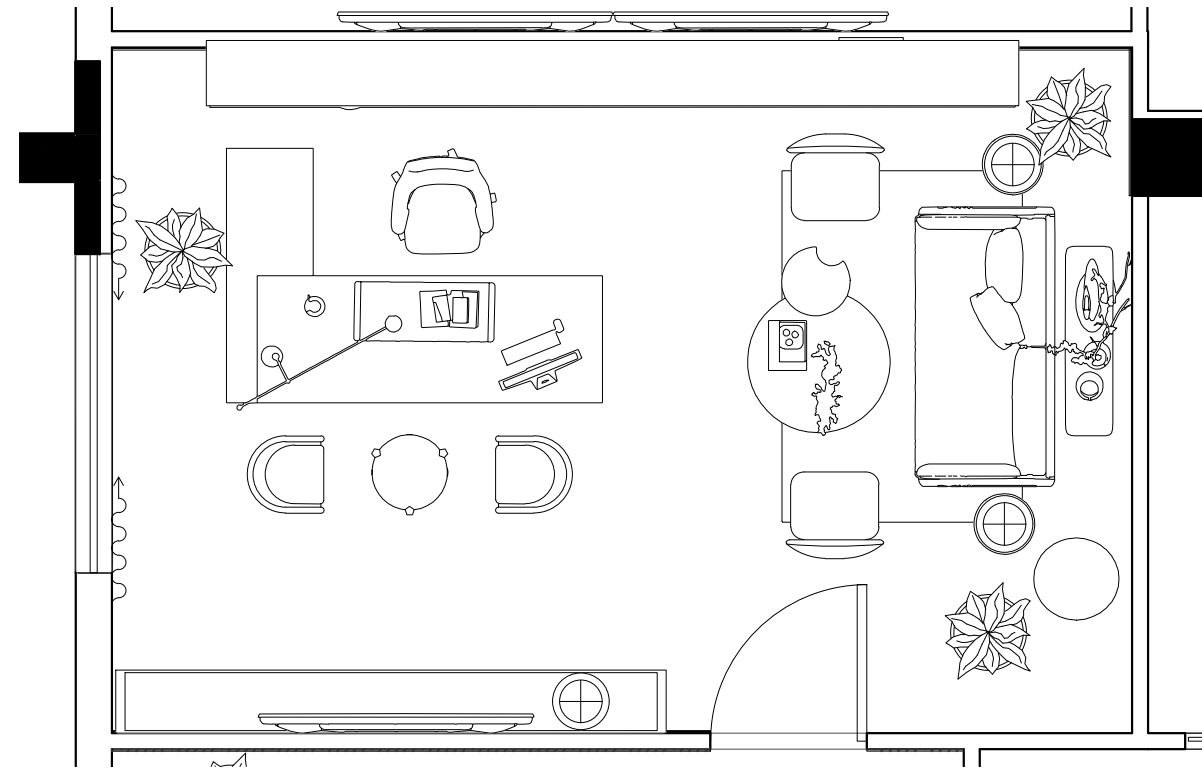


BOARD SECT ELEV D(1/2"=1'-0")

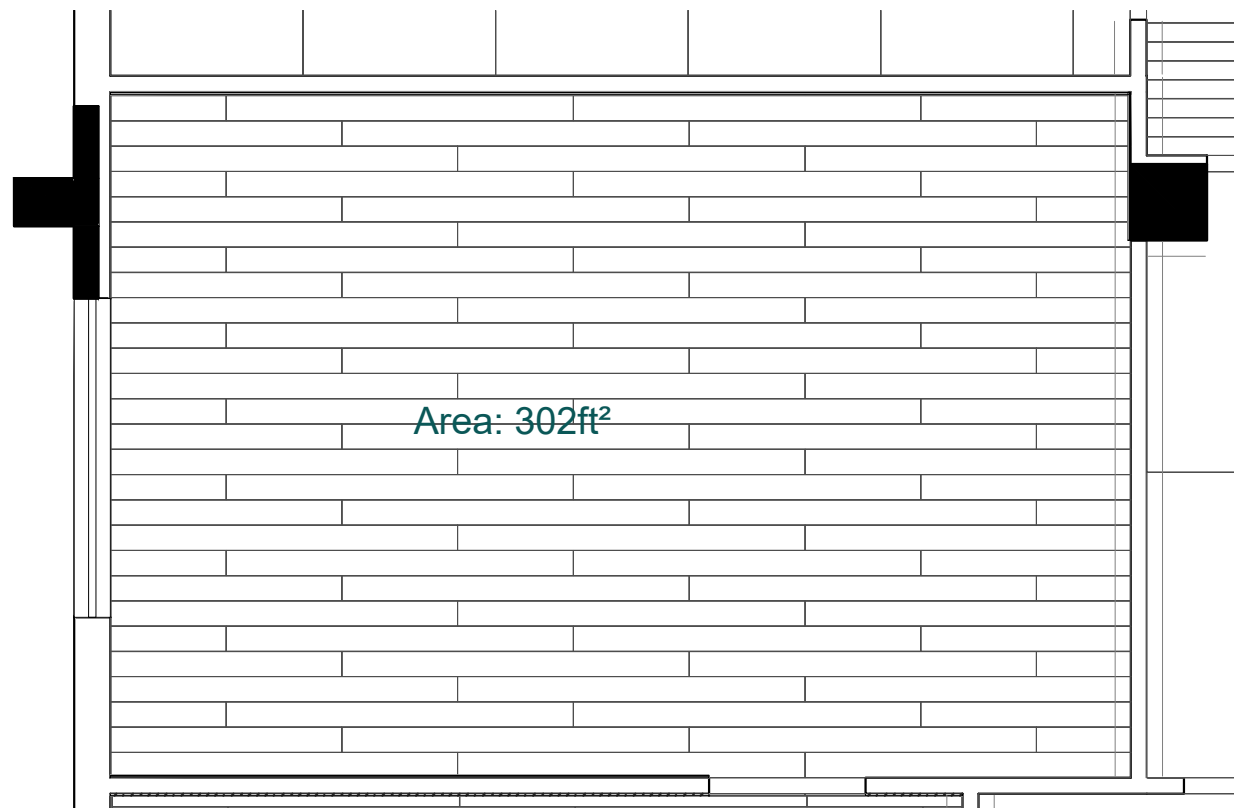




BOARD SECT FLOOR P(1/4"=1'-0")



BOARD SECT PLAN(1/4"=1'-0")



BOARD SECT FLOOR F(1/4"=1'-0")



**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
BOARD SECT FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-BS-87**



## GENERAL NOTES

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### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

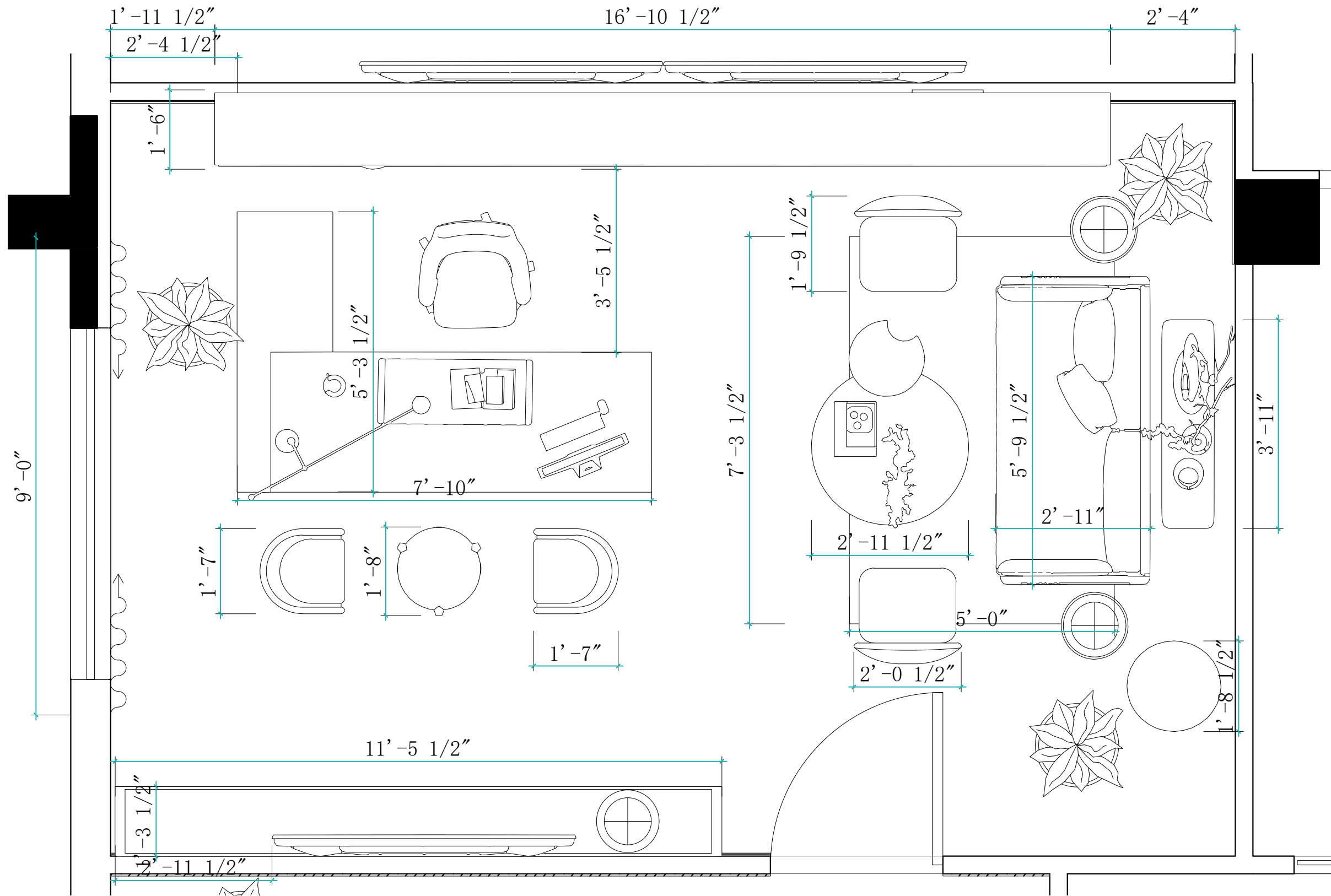
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**7th FLOOR**  
**BOARD SECT FURNITURE**

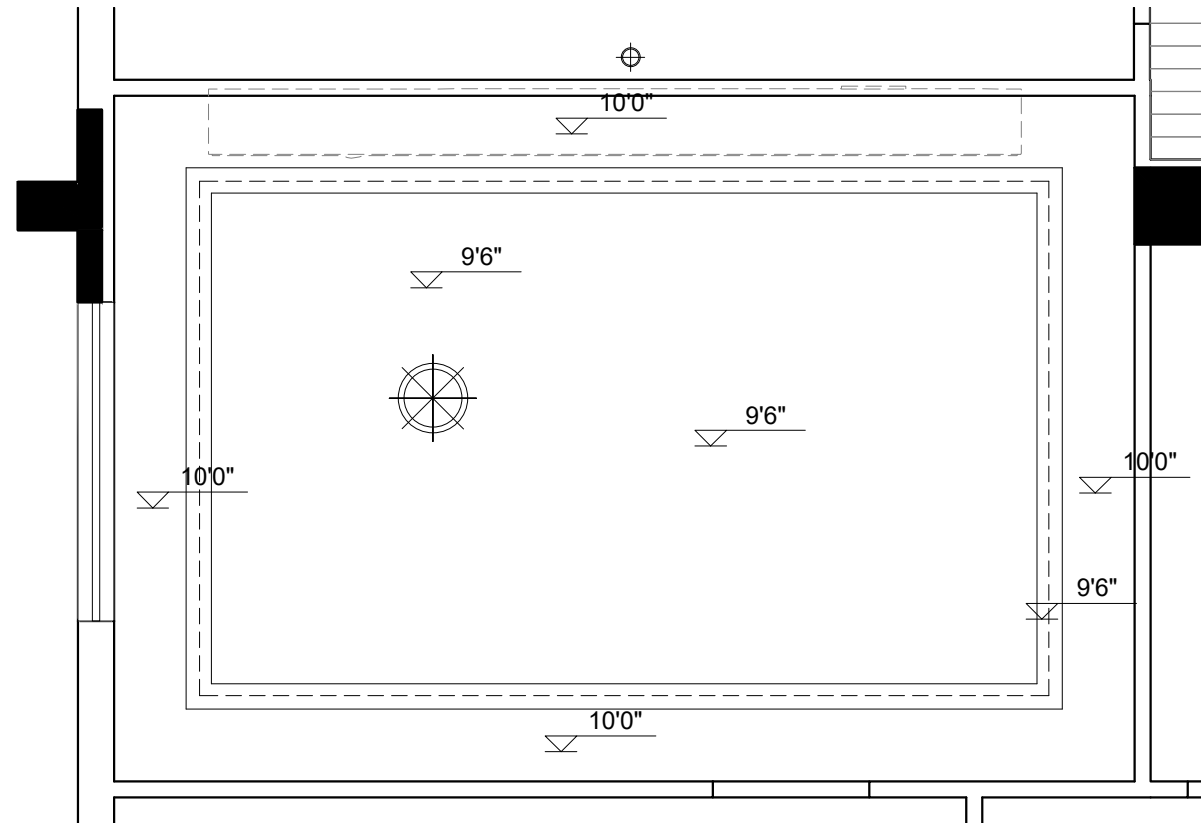
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

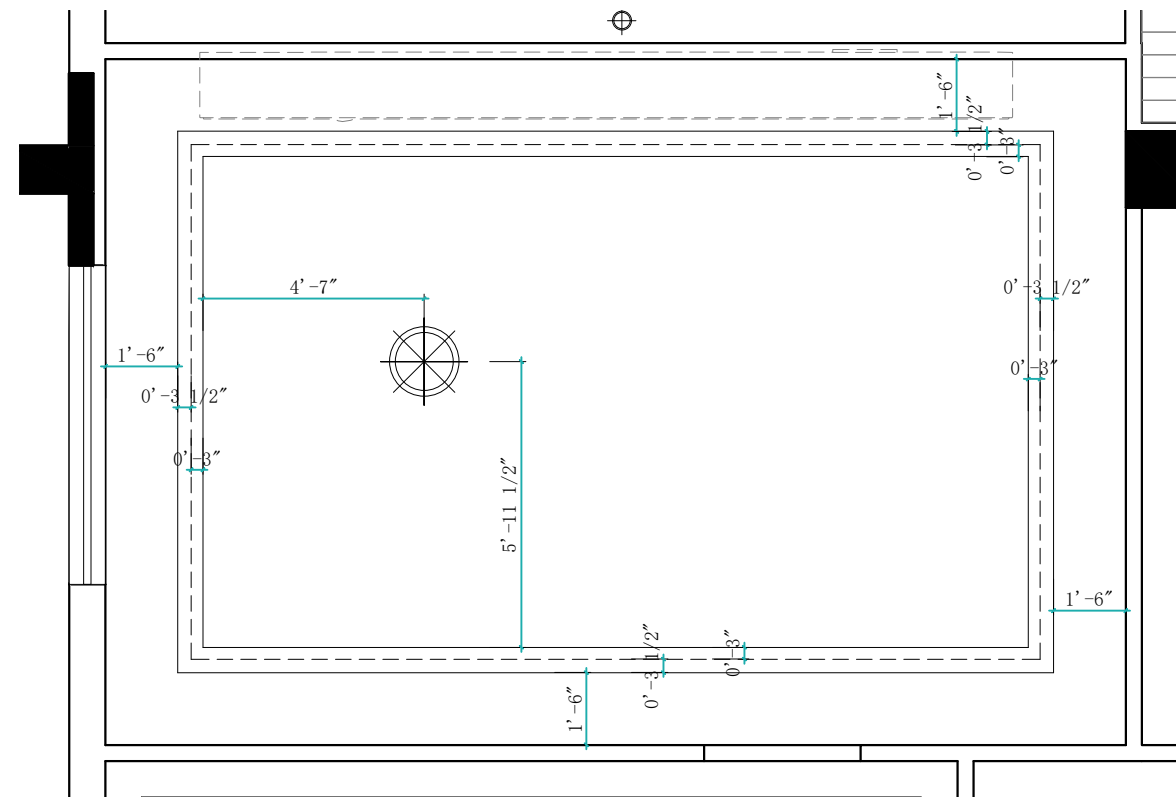
DWG. No.  
**SL07AR-BS-88**



**BOARD SECT FURNITURE(1/2"=1'-0")**



BOARD SECT CEILING(1/4"=1'-0")



BOARD SECT CEILING LIGHT(1/4"=1'-0")

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



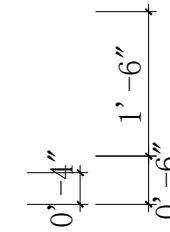
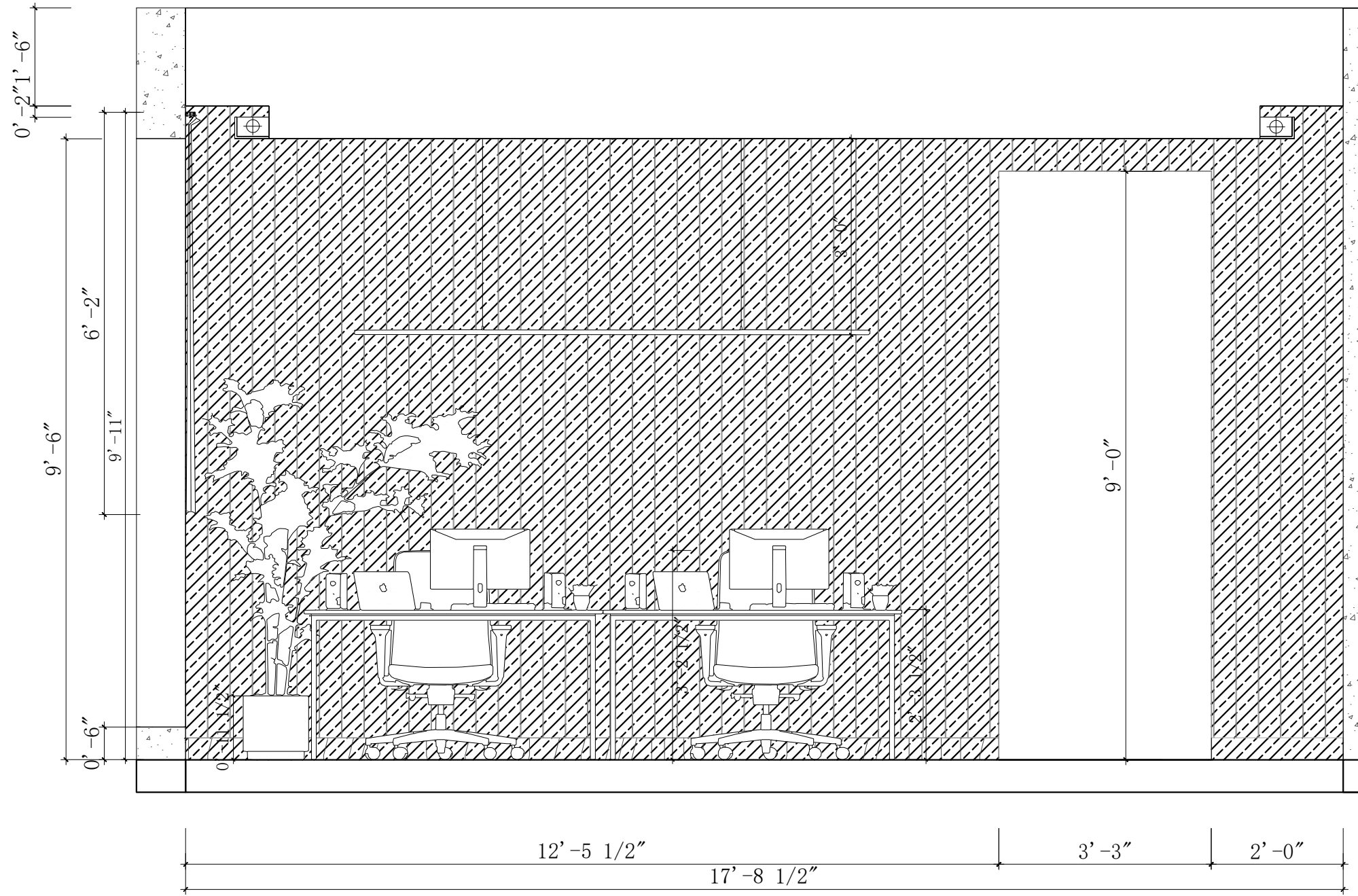
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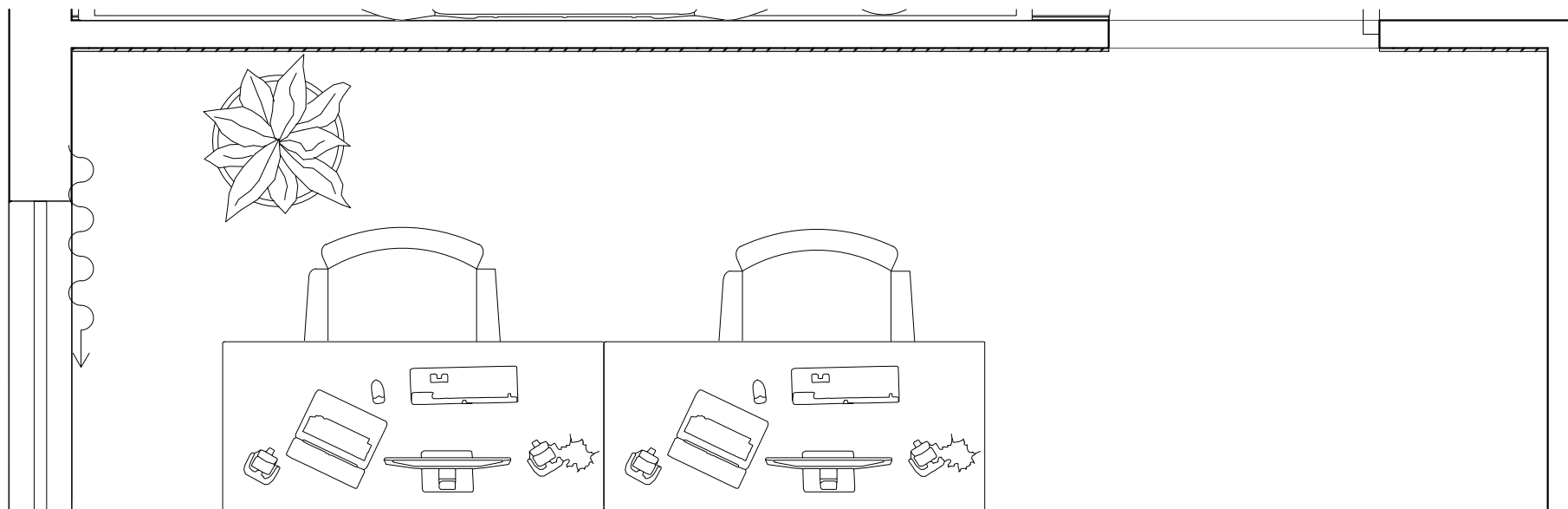
**7th FLOOR**  
**BOARD SECT CEILING**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-BS-89**



Staff Elevation A(1/2"=1'-0")



BOARD SECT STAFF ELEV A(1/2"=1'-0")

**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

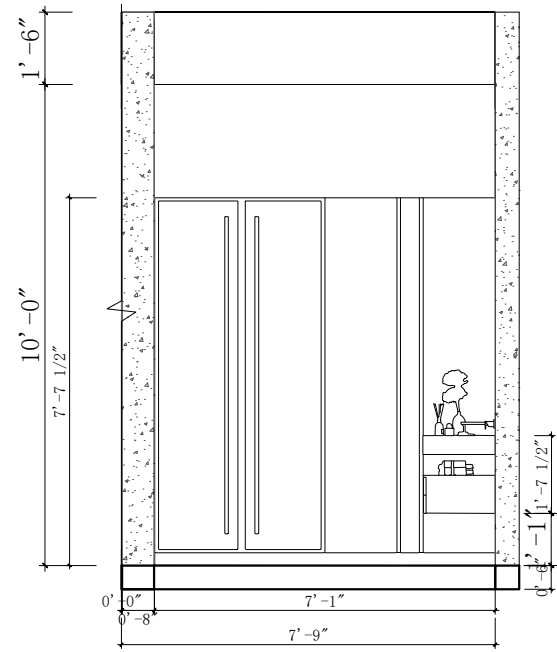


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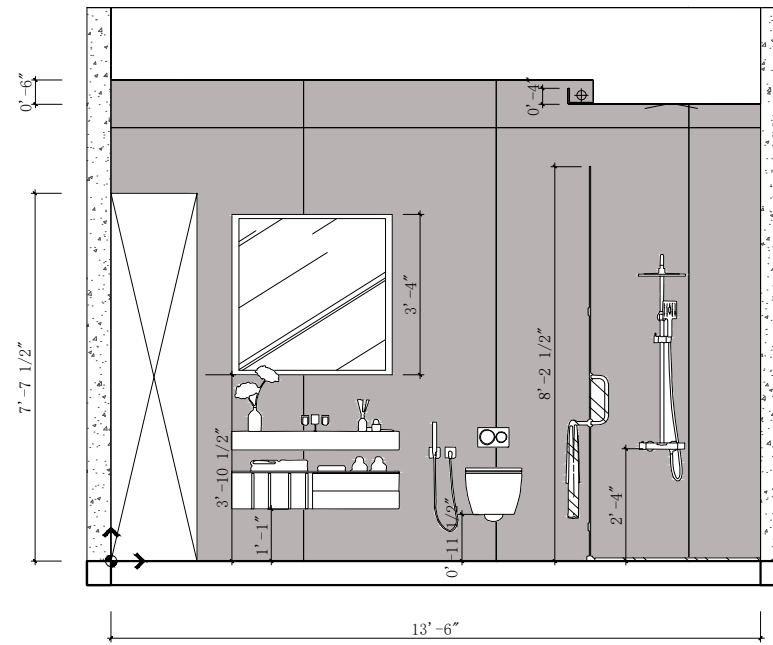
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**7th FLOOR**  
BOARD SECT STAFF  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

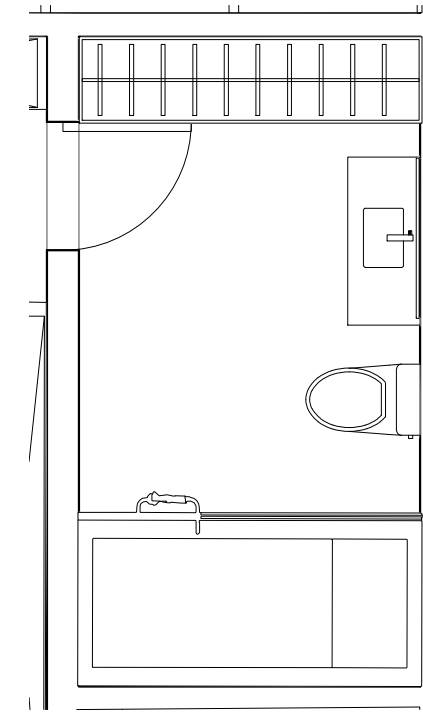
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**SL07AR-BS-90**



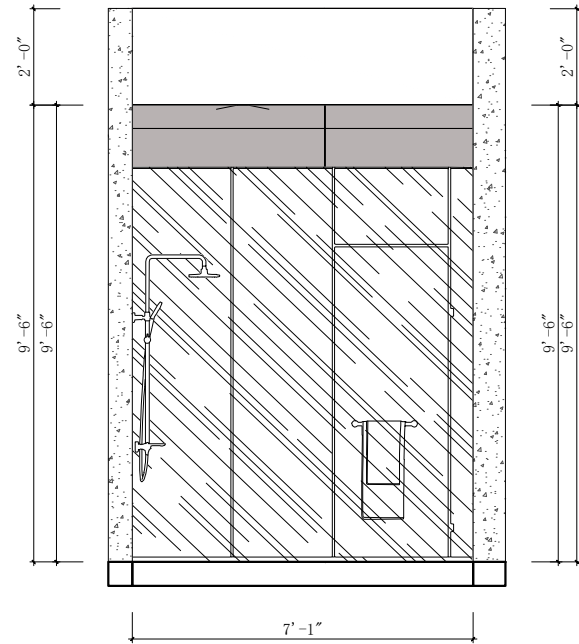
ceo bath Elevation A(1/4"=1'-0")



ceo bath Elevation B(1/4"=1'-0")



CEO BATH(1/4"=1'-0")



ceo bath Elevation C1(1/4"=1'-0")



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
CEO ROOM BATH

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CEO-81**



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

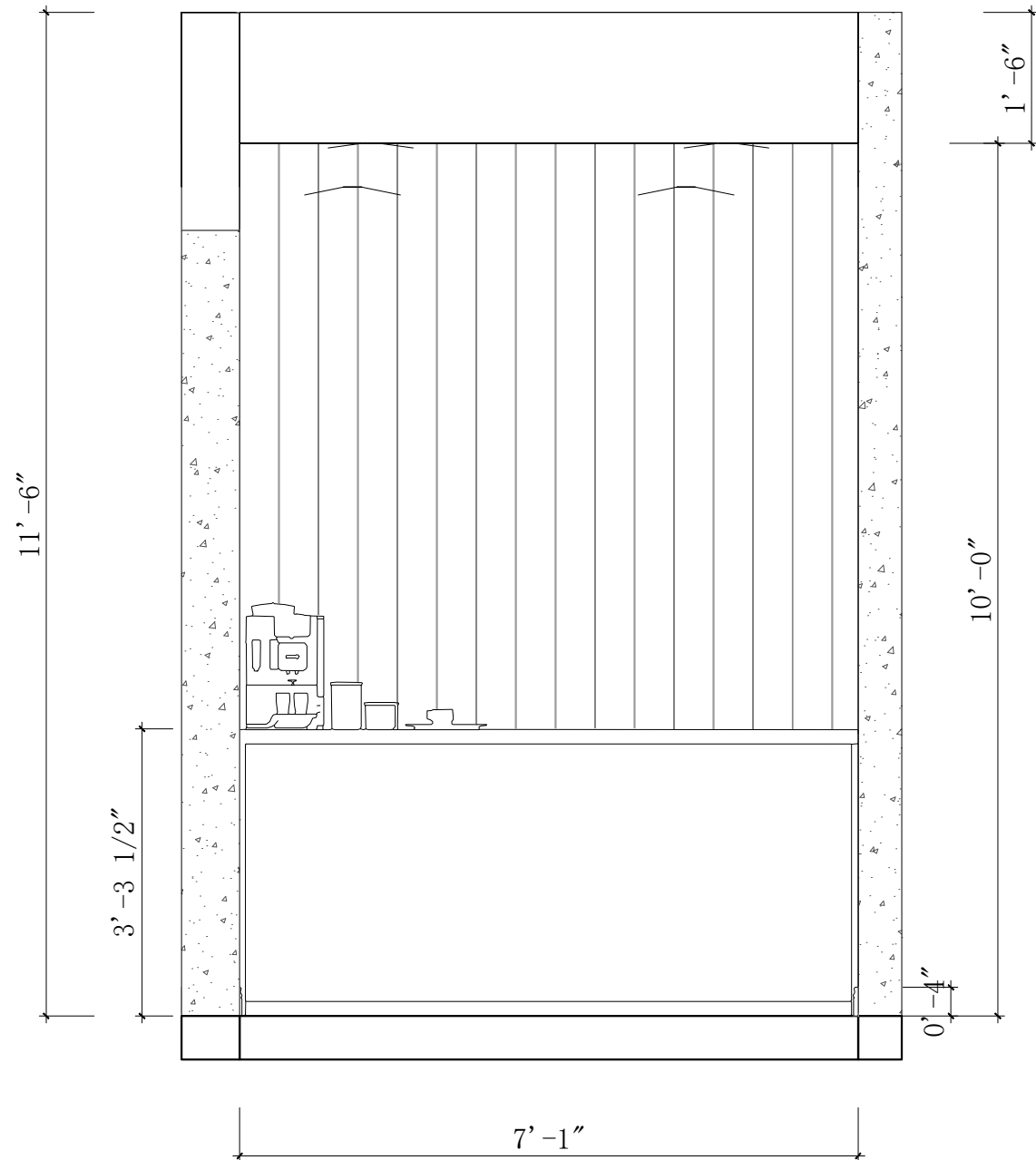
DRAWING TITLE:

**7th FLOOR**  
**CEO PANTRY**

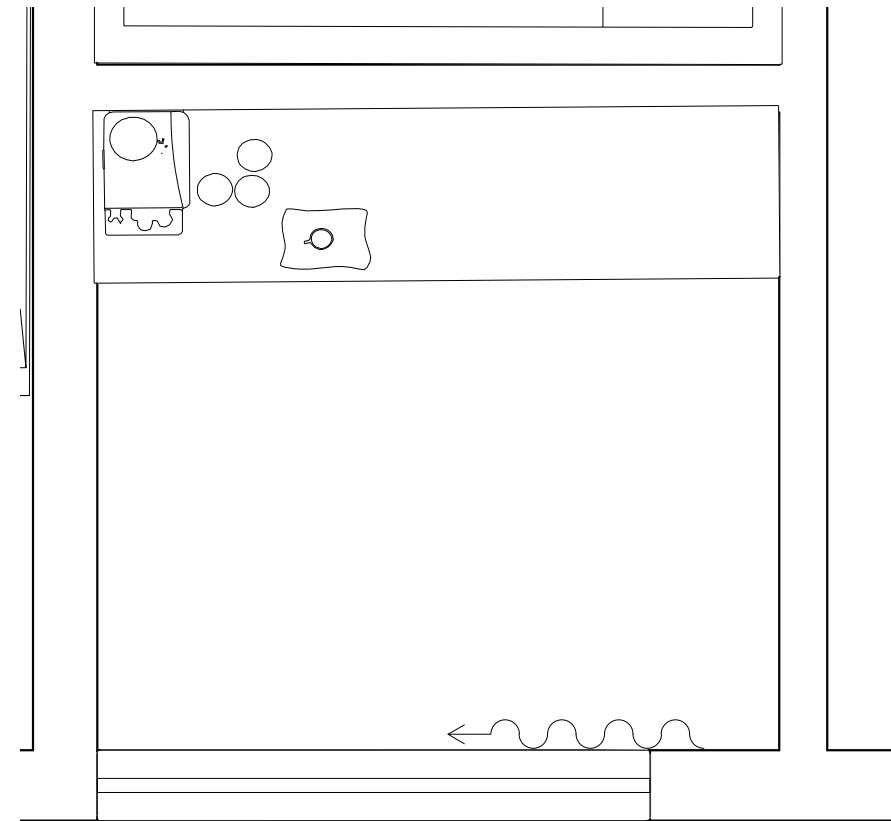
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CEO-82**



Pantry Elevation A(1/2"=1'-0")



CEO PANTRY(1/2"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

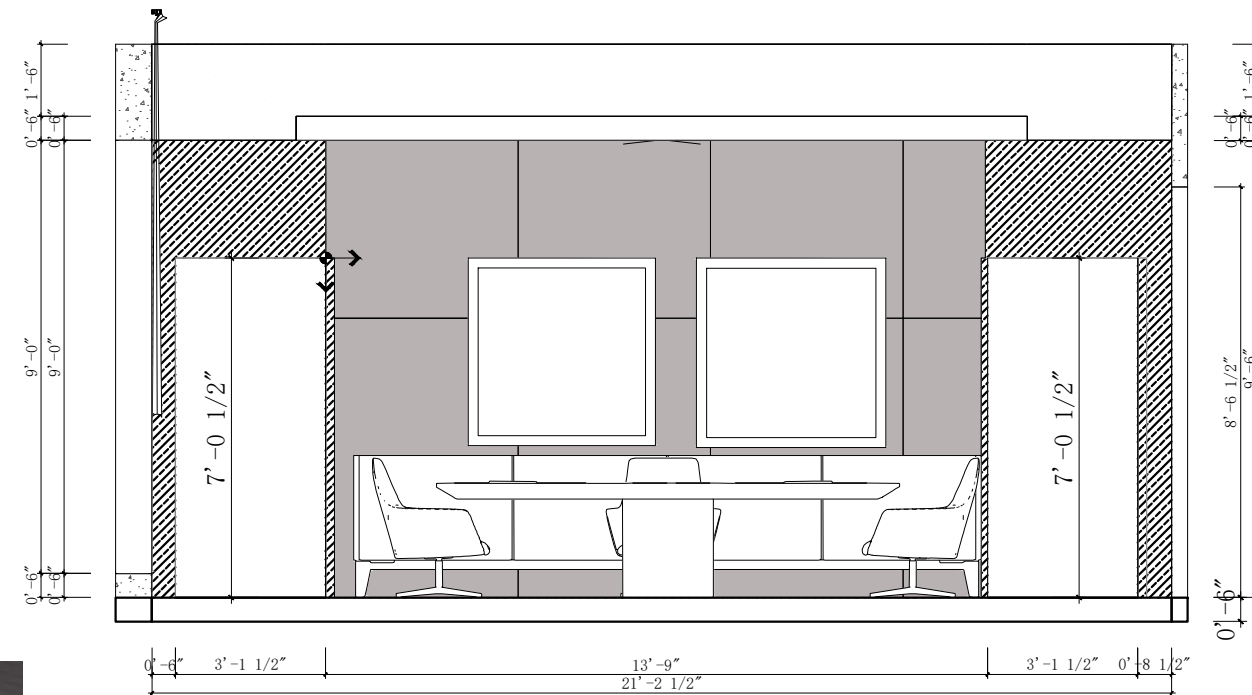
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**7th FLOOR**  
**BOARD ROOM ELEVATION A**

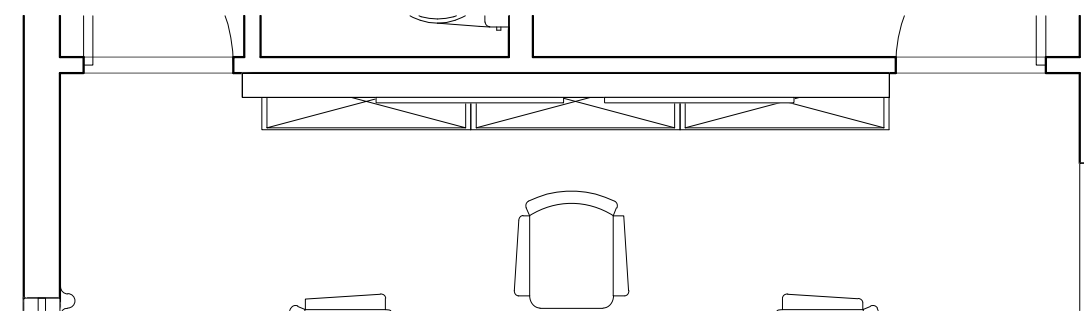
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-BR-97**

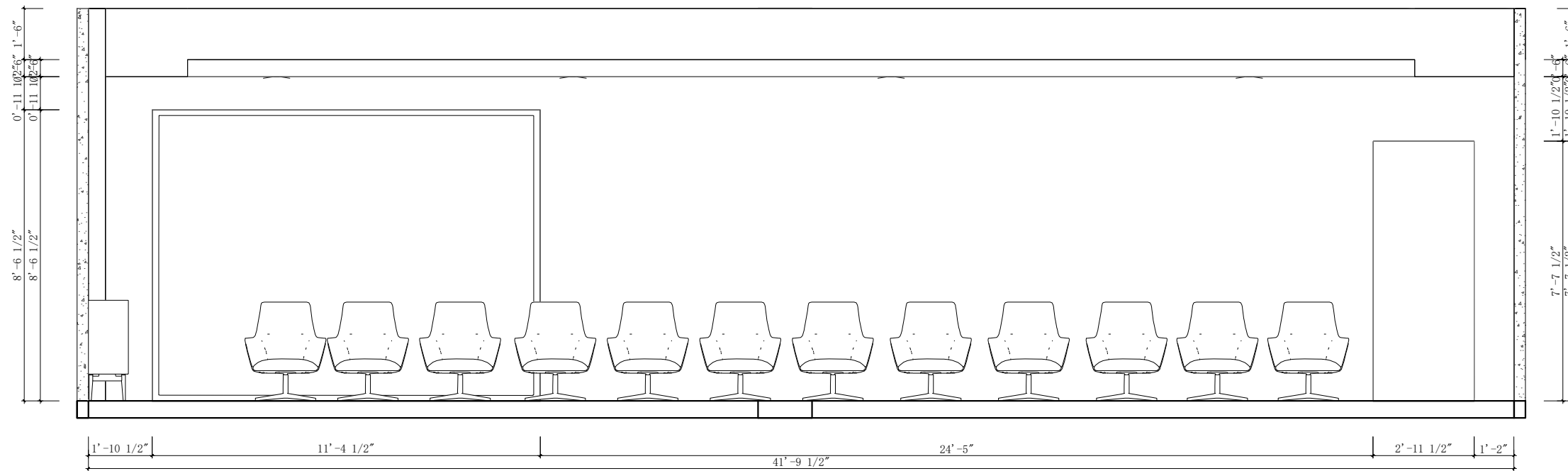


Board room Elevation A(1/4"=1'-0")



BOARD ROOM ELEV A(1/4"=1'-0")





Board room Elevation B(1/4"=1'-0")



BOARD ROOM ELEV B(1/4"=1'-0")

**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**BOARD ROOM ELEVATION B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-BR-98**

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

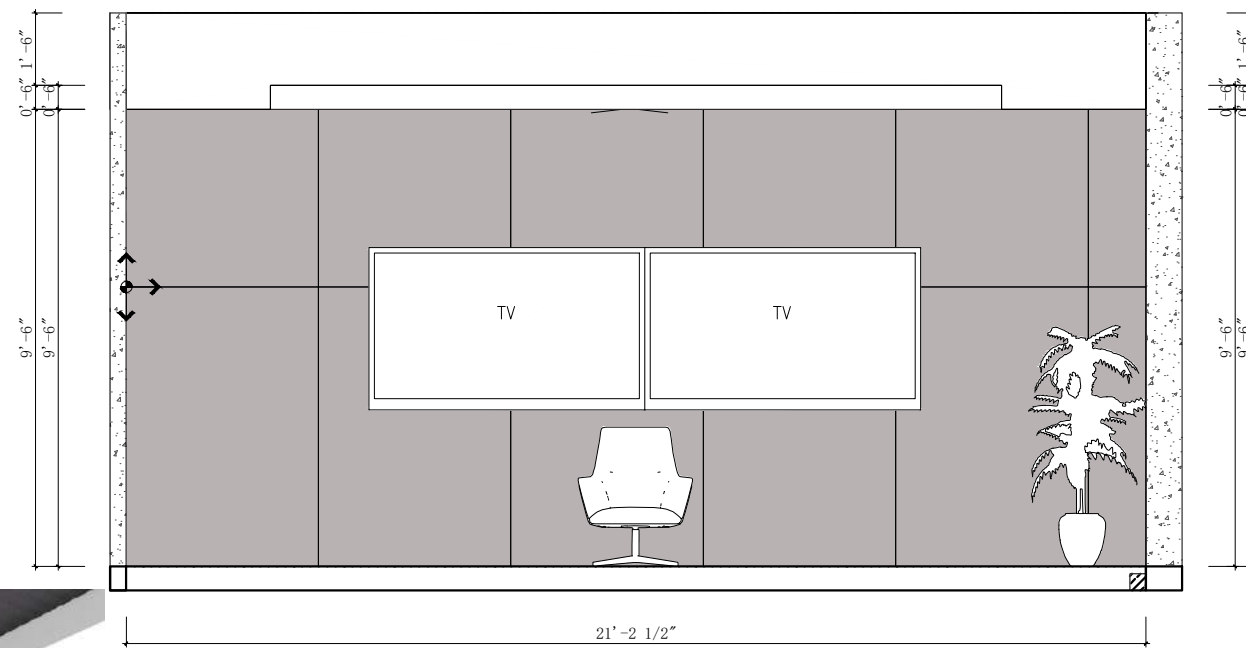
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**7th FLOOR**  
**BOARD ROOM ELEVATION C**

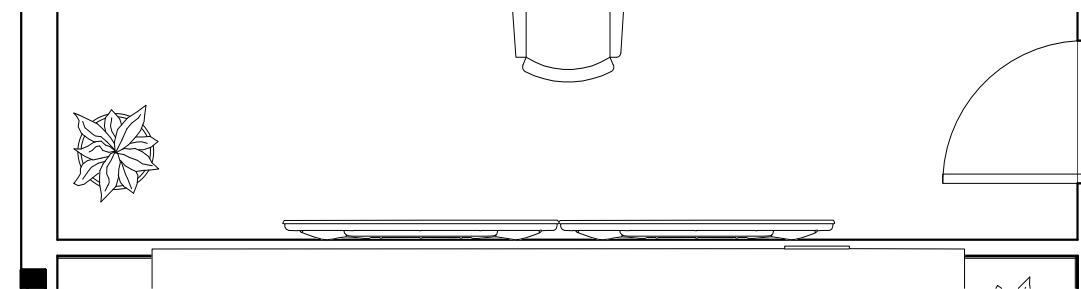
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-BR-99**

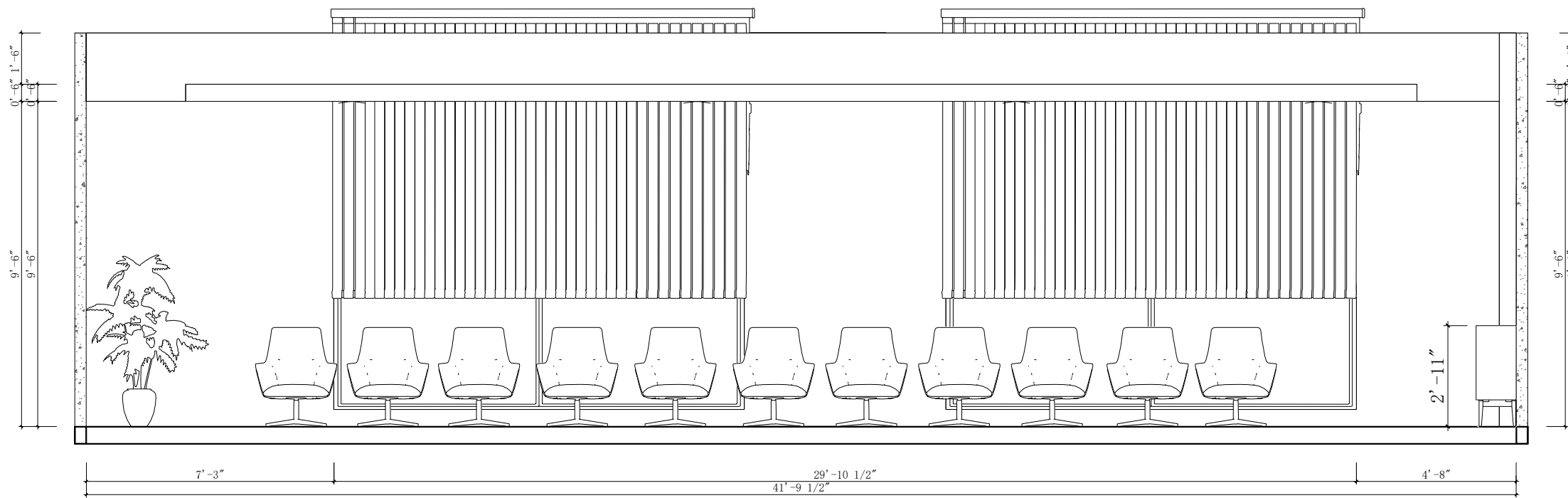


Board room Elevation C(1/4"=1'-0")



BOARD ROOM ELEV C(1/4"=1'-0")





Board room Elevation D(1/4"=1'-0")



BOARD ROOM ELEV D(1/4"=1'-0")

**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**BOARD ROOM ELEVATION D**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-BR-100**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



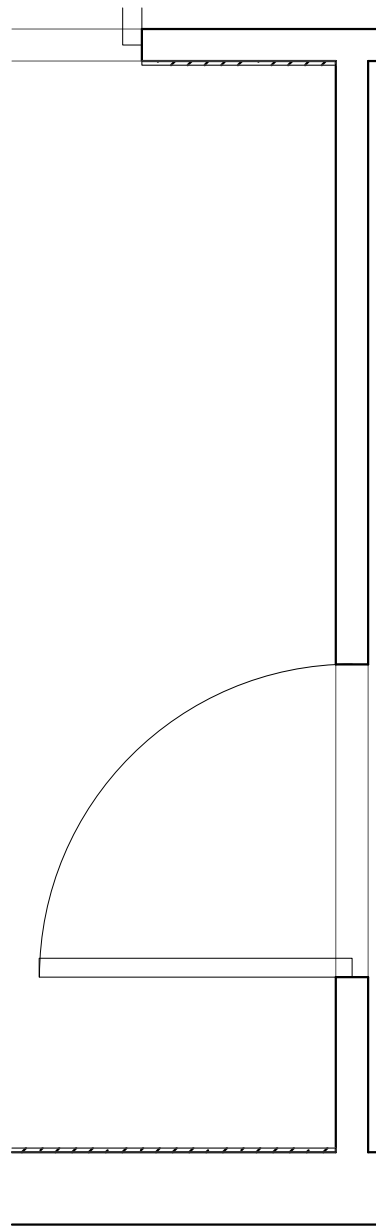
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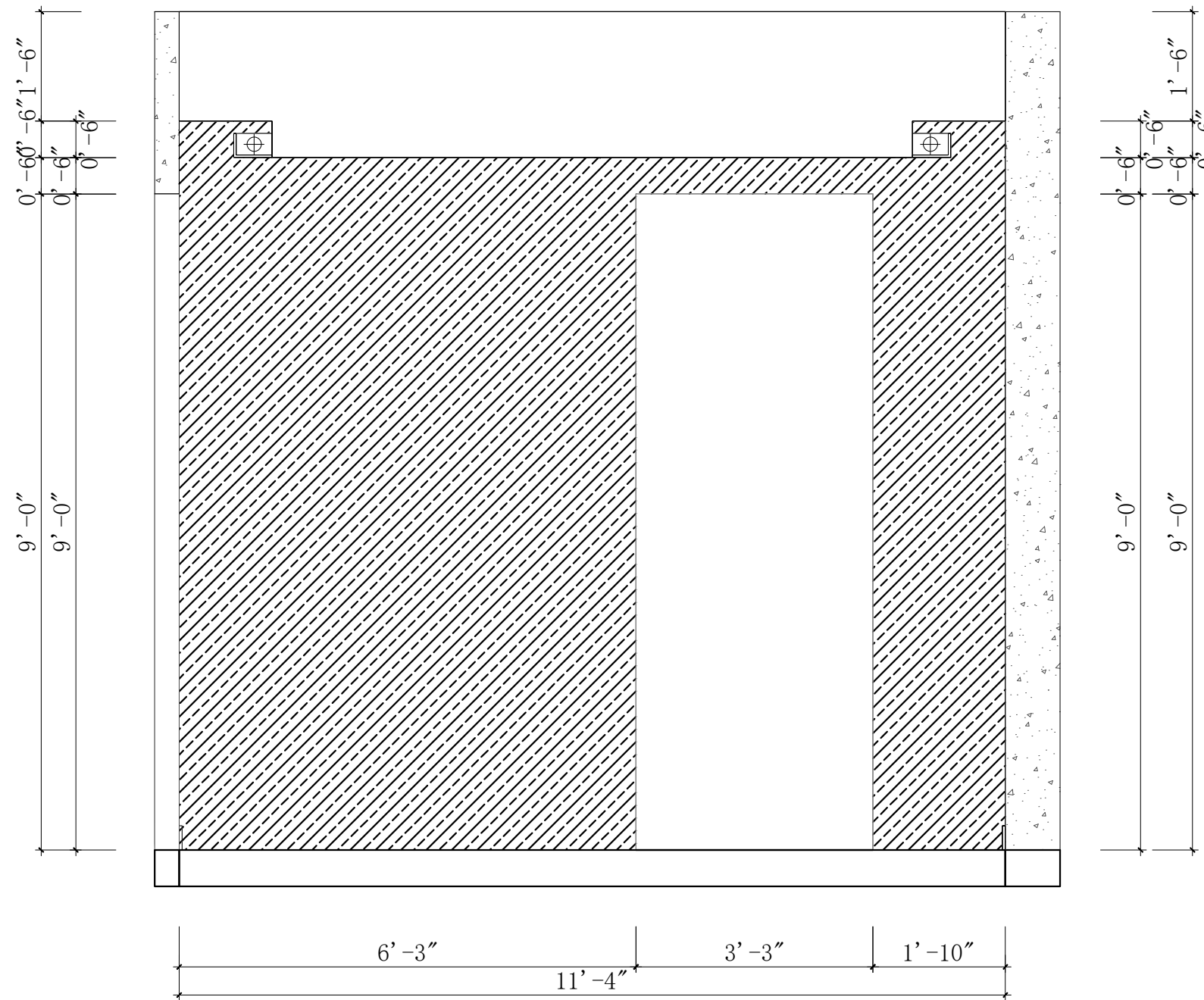
**7th FLOOR**  
**BOARD SECT STAFF**  
**ELEVATION B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-BS-91**



BOARD SECT STAFF ELEV B(1/2"=1'-0")



Staff Elevation B(1/2"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

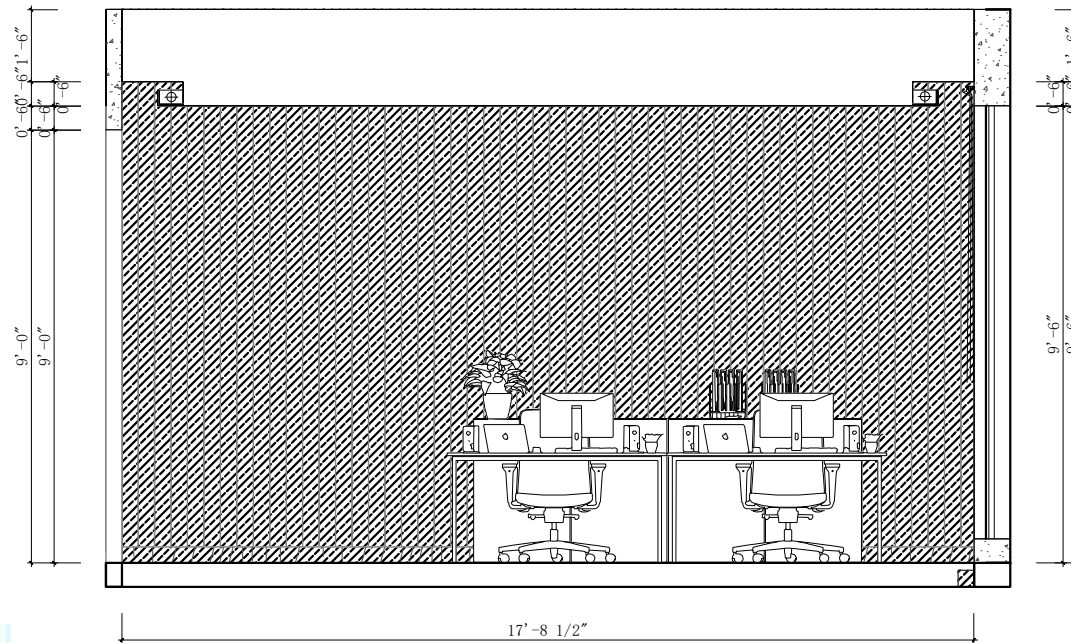


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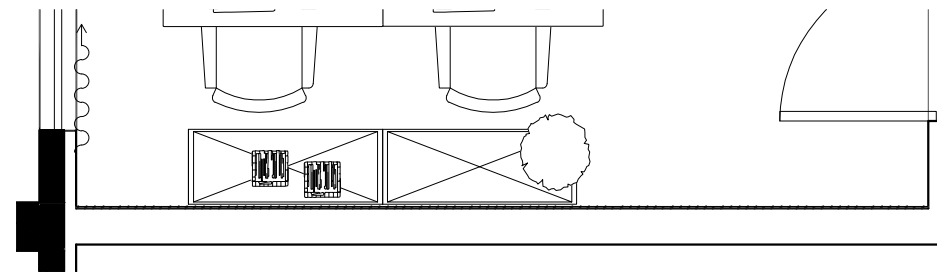
DRAWING TITLE:  
**7th FLOOR**  
BOARD SECT STAFF  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-BS-92**



Staff Elevation C(1/4"=1'-0")



BOARD SECT STAFF ELEV C(1/4"=1'-0")

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



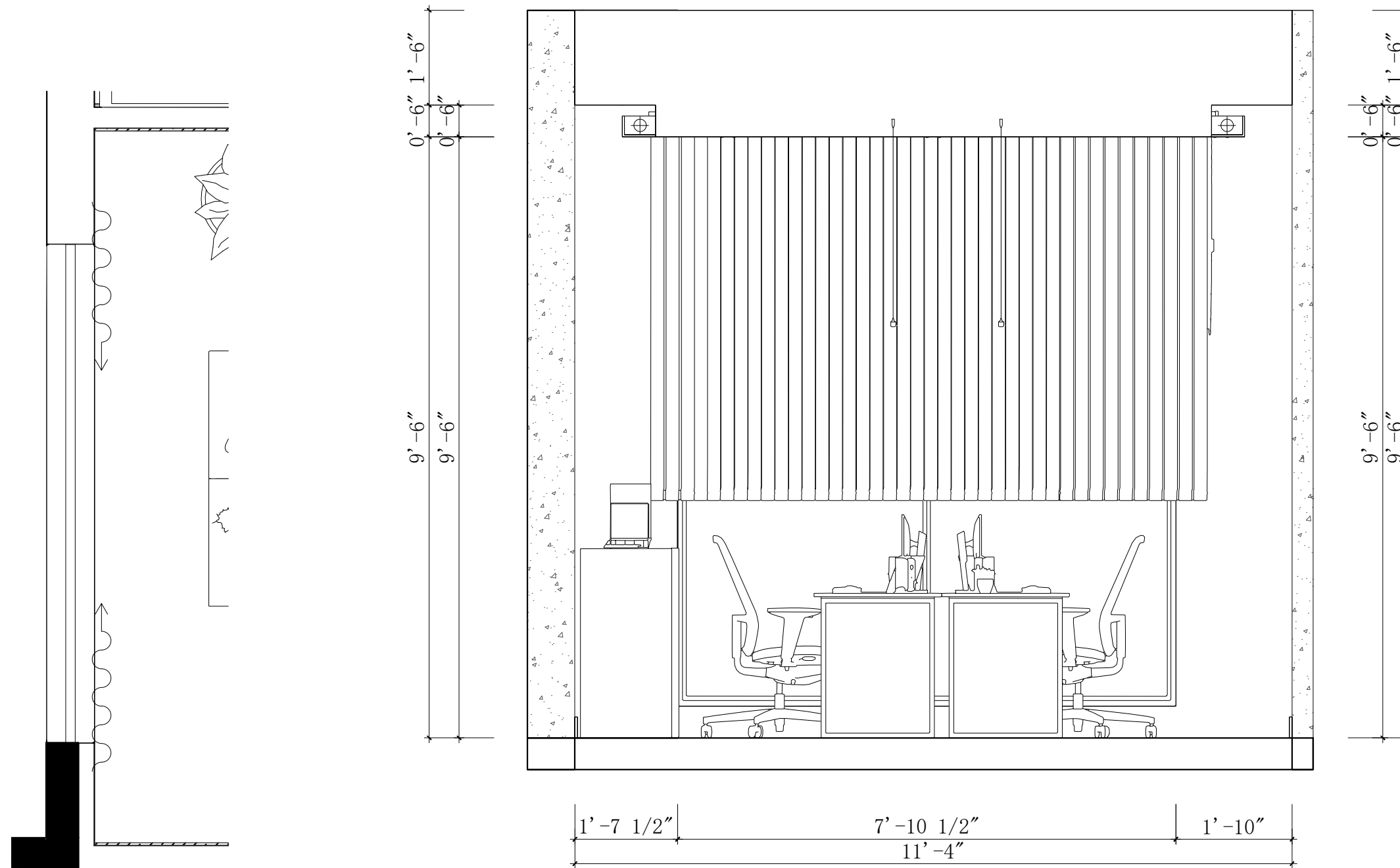
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**BOARD SECT STAFF**  
**ELEVATION D**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-BS-93**

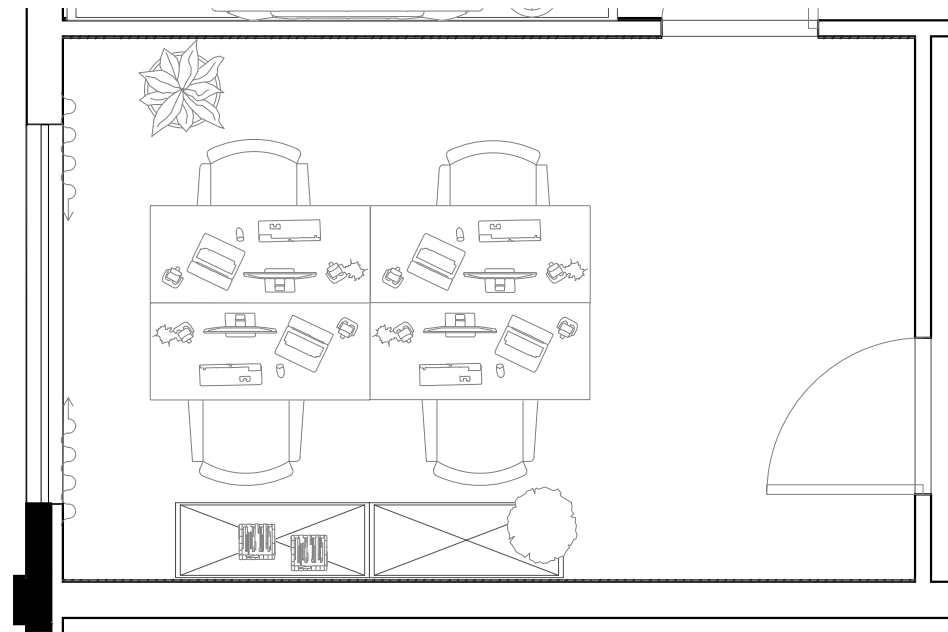


Staff Elevation D(1/2"=1'-0")

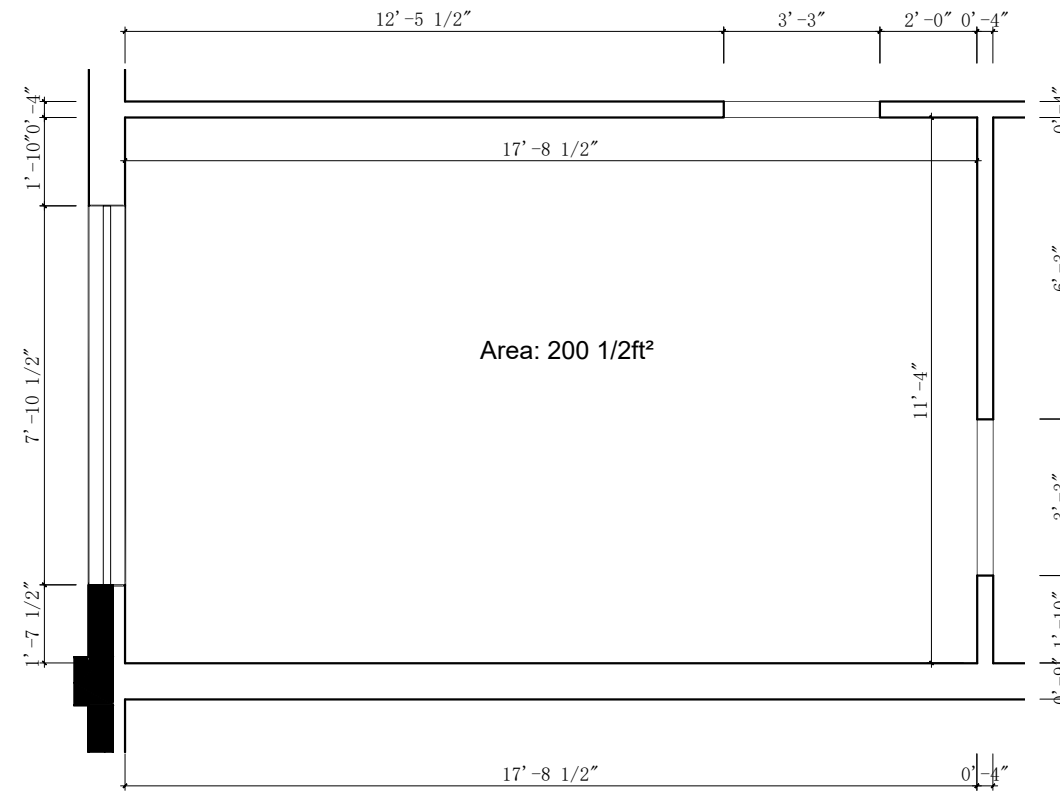
BOARD SECT STAFF ELEV D(1/2"=1'-0")



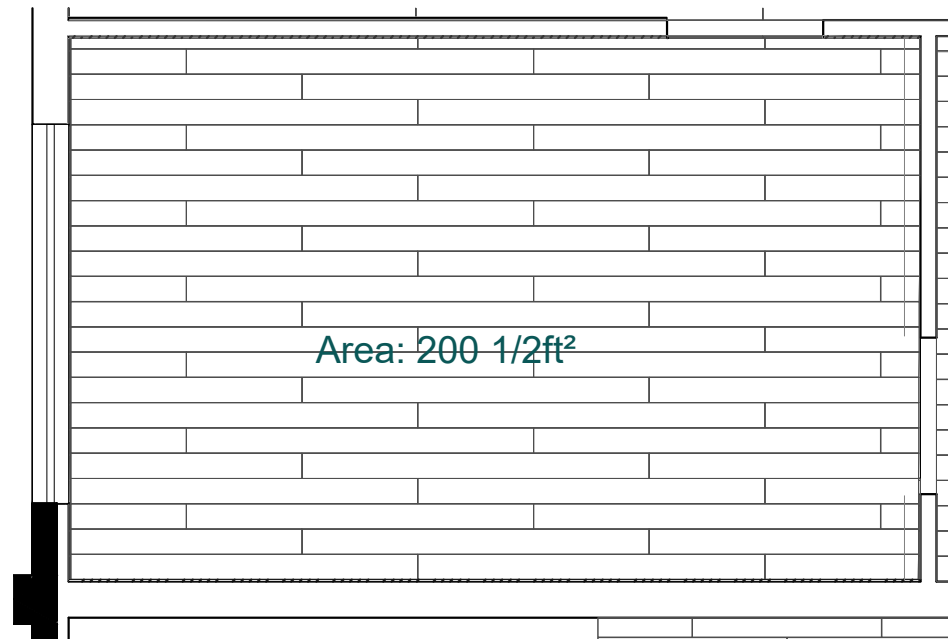




BOARD SECT STAFF PLAN(1/4"=1'-0")



BOARD SECT STAFF FLOOR P(1/4"=1'-0")



BOARD SECT STAFF FLOOR F(1/4"=1'-0")



**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



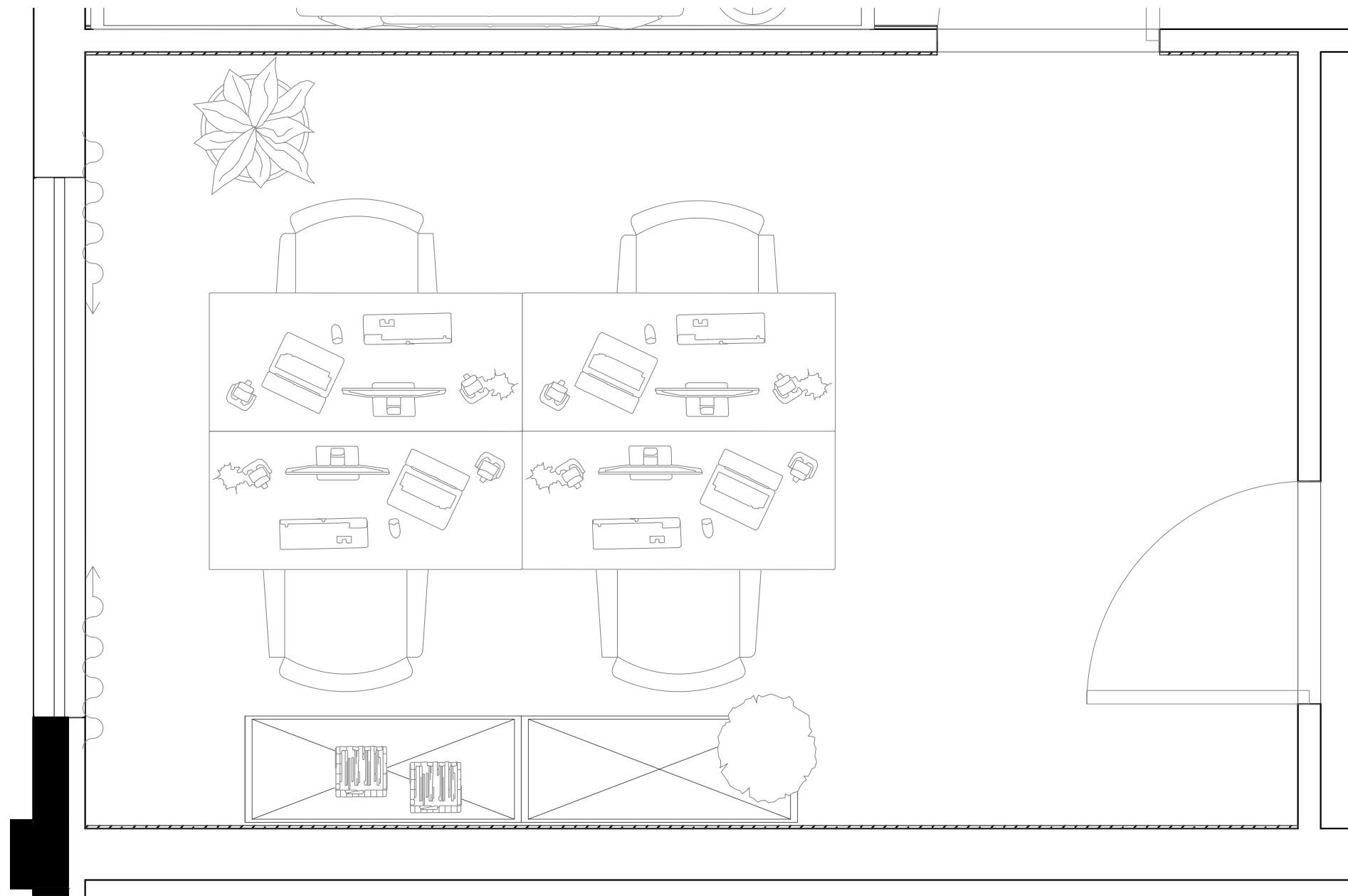
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**BOARD SECT STAFF FLOOR**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-BS-94**



BOARD SECT STAFF FURNITURE(1/2"=1'-0")

**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
BOARD SECT STAFF FURNITURE

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-BS-95**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

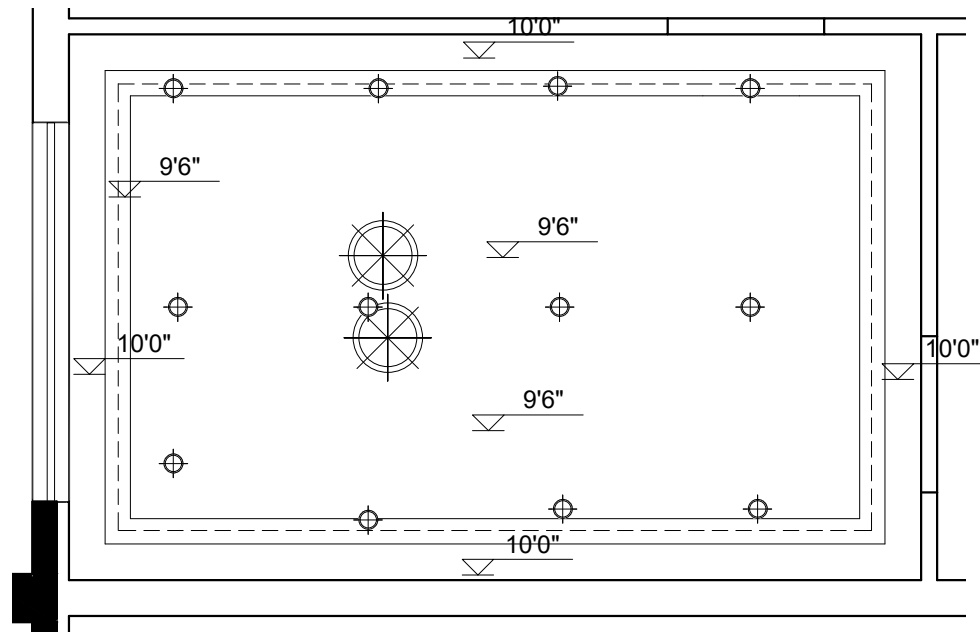
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**7th FLOOR**  
BOARD SECT STAFF  
CEILING

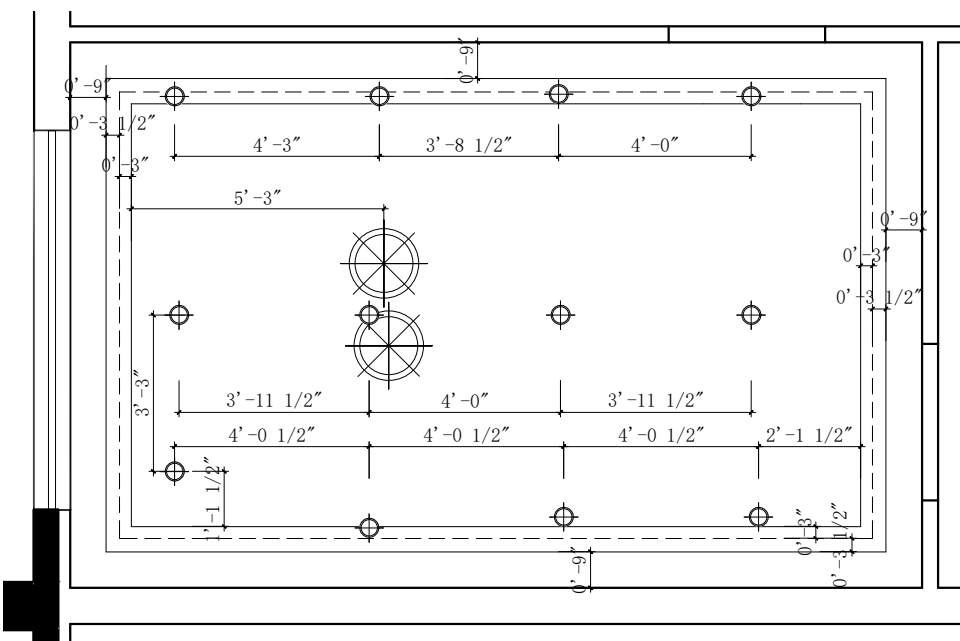
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-BS-96**

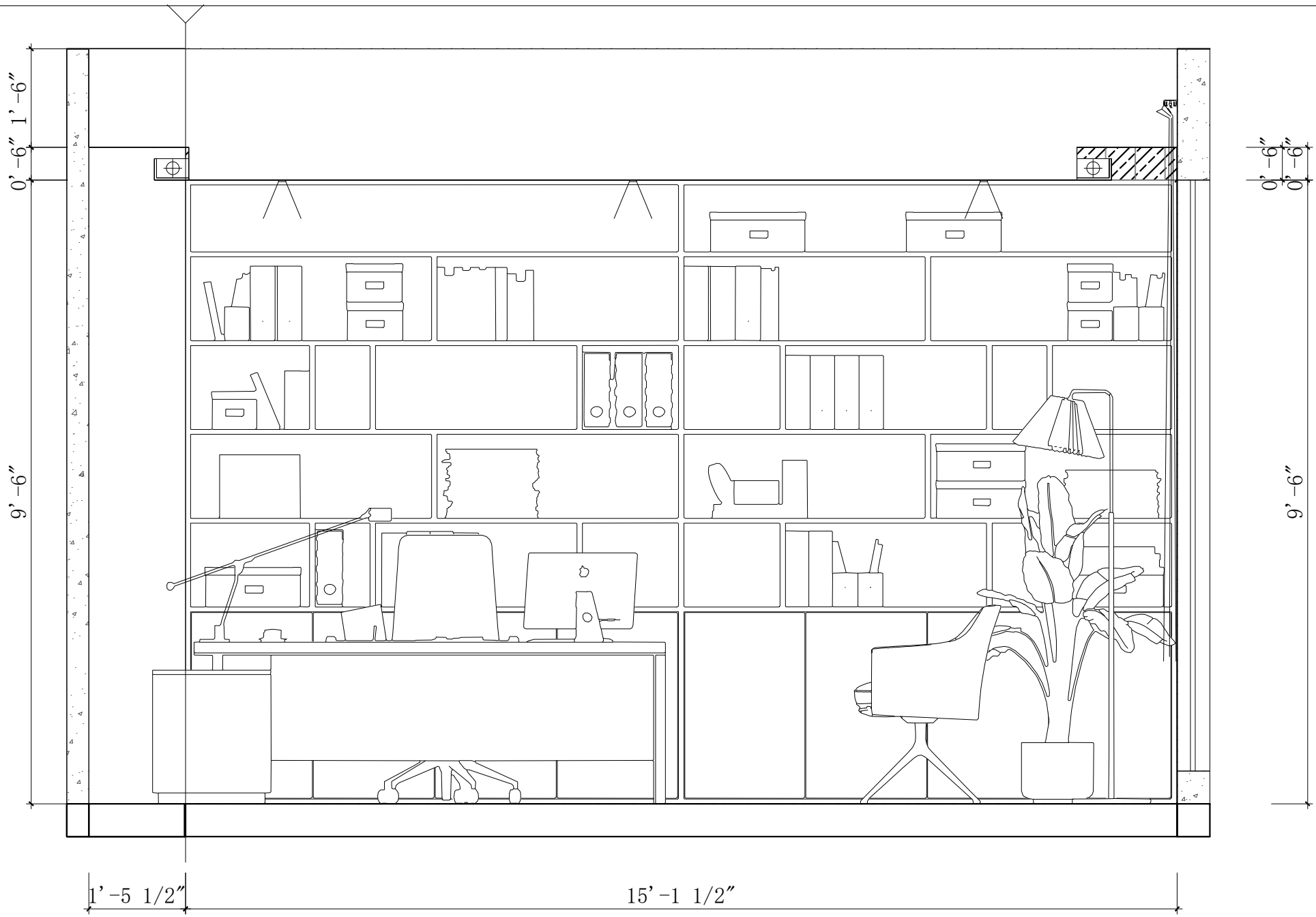


**BOARD SECT STAFF CEILING(1/4"=1'-0")**

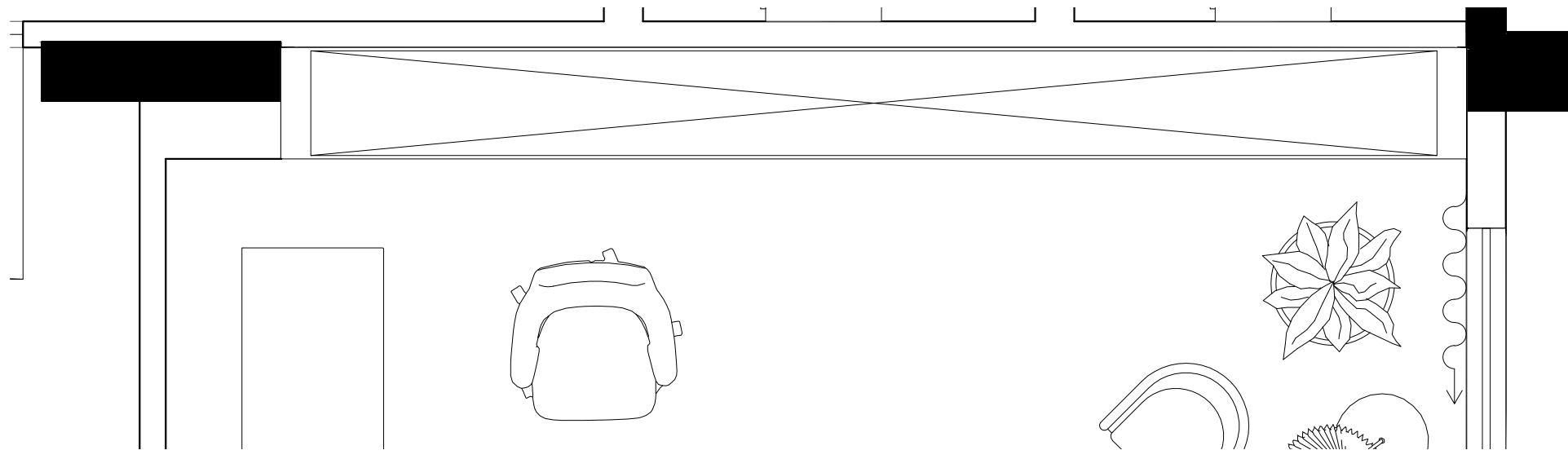


**BOARD SECT STAFF CEILING LIGHT(1/4"=1'-0")**

The turning line



Chairman's room Elevation A(1/2"=1'-0")



CHAIRMAN OFFICE ELEV A(1/2"=1'-0")

**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**CHAIRMAN OFFICE ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CO-111**

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

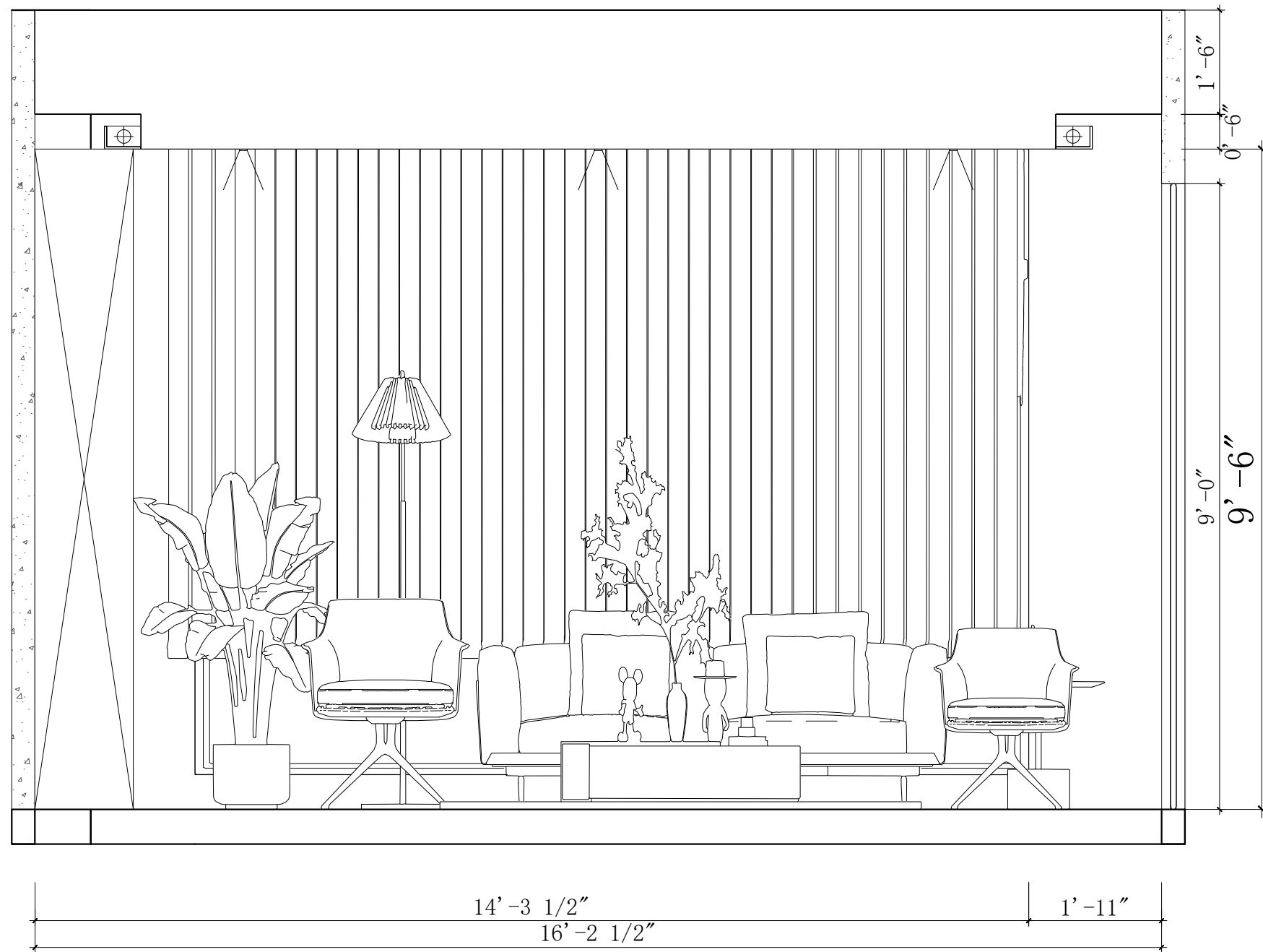
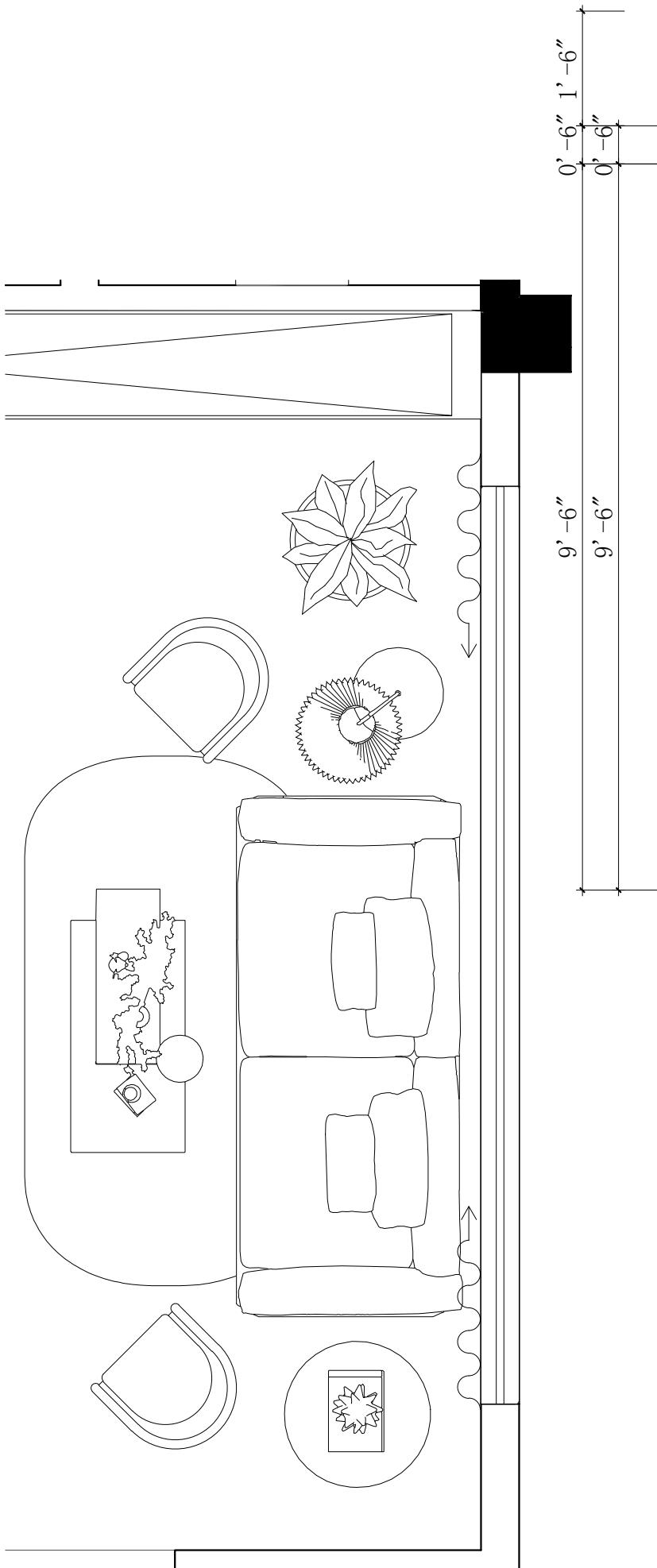
DRAWING TITLE:

**7th FLOOR**  
**CHAIRMAN OFFICE ELEV B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CO-112**



Chairman's room Elevation B(1/2"=1'-0")



CHAIRMAN OFFICE ELEV B(1/2"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

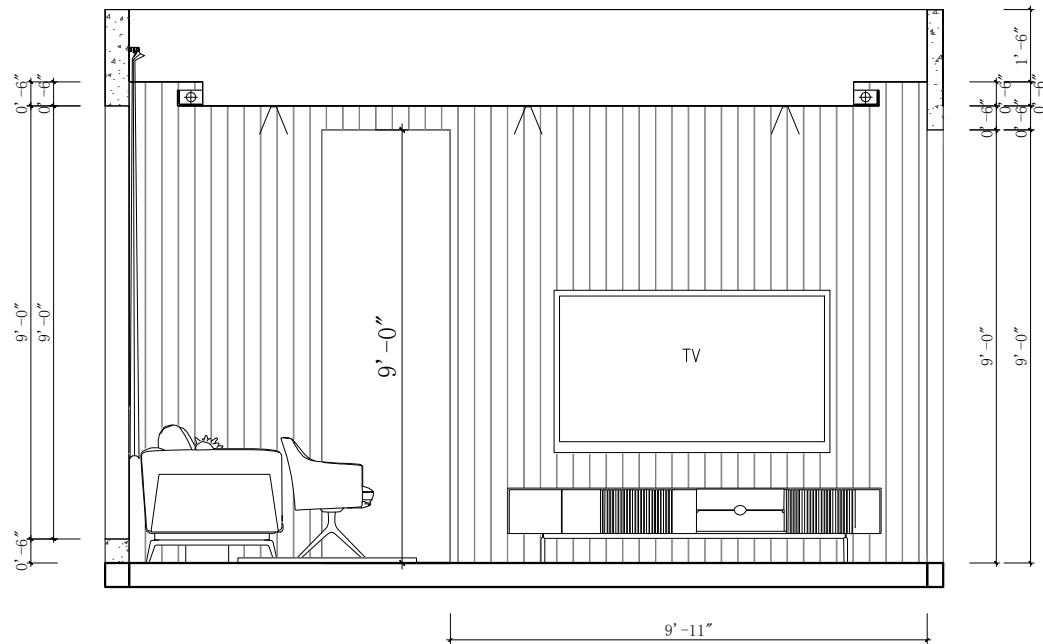
DRAWING TITLE:

**7th FLOOR**  
**CHAIRMAN OFFICE ELEV C**

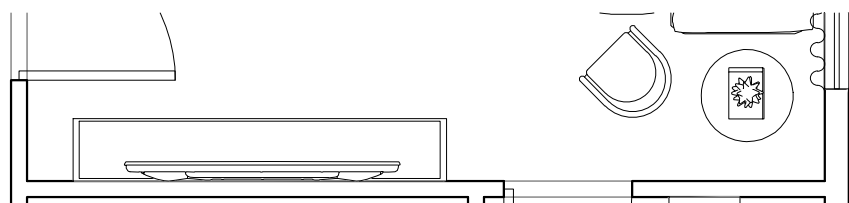
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-CO-113**



Chairman's room Elevation C(1/4"=1'-0")



CHAIRMAN OFFICE ELEV C(1/4"=1'-0")



## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



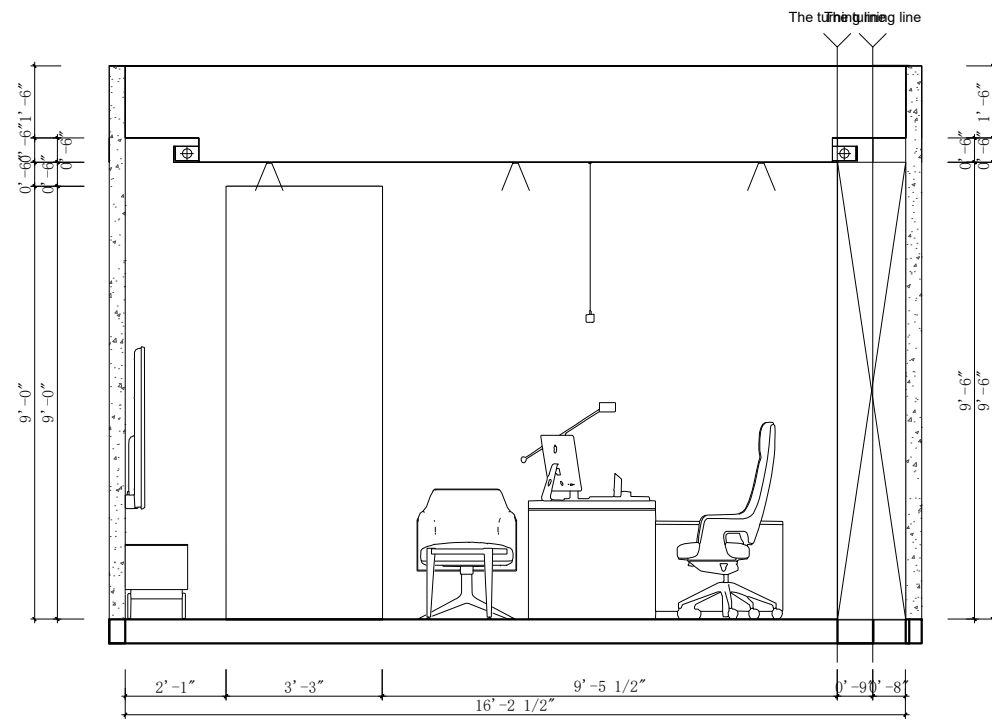
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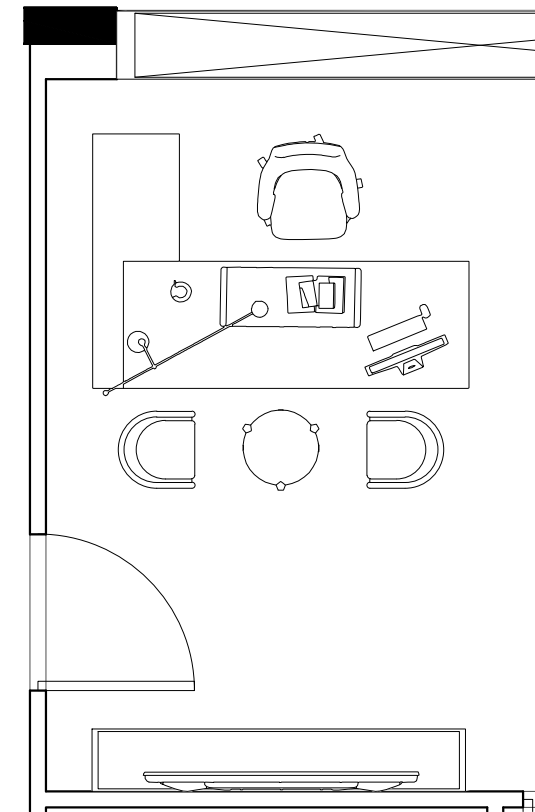
**7th FLOOR**  
**CHAIRMAN OFFICE ELEV D**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CO-114**



Chairman's room Elevation D(1/4"=1'-0")



CHAIRMAN OFFICE ELEV D(1/4"=1'-0")



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



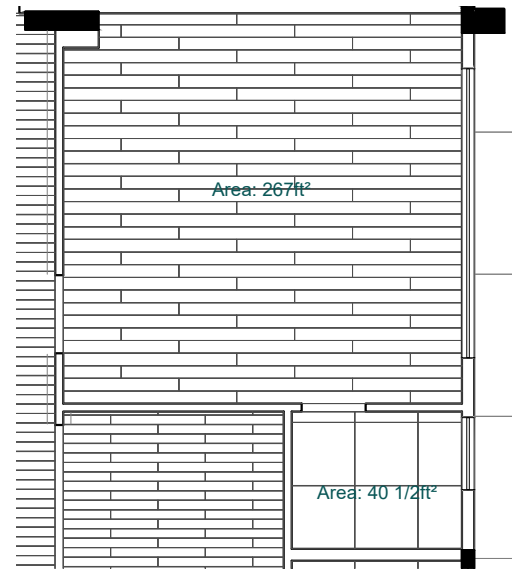
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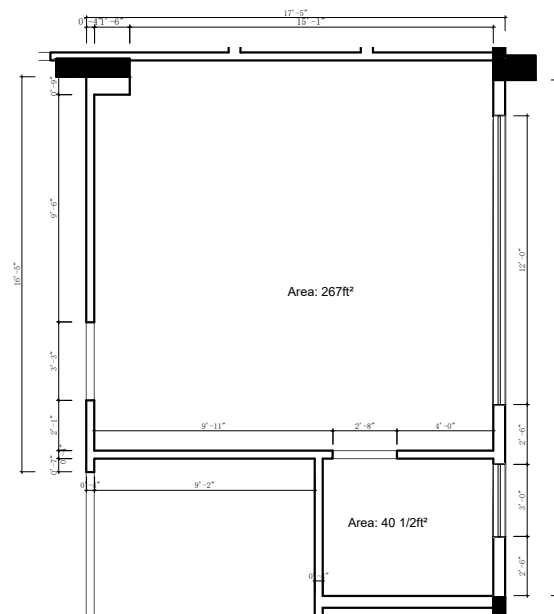
**7th FLOOR**  
**CHAIRMAN OFFICE FLOOR**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

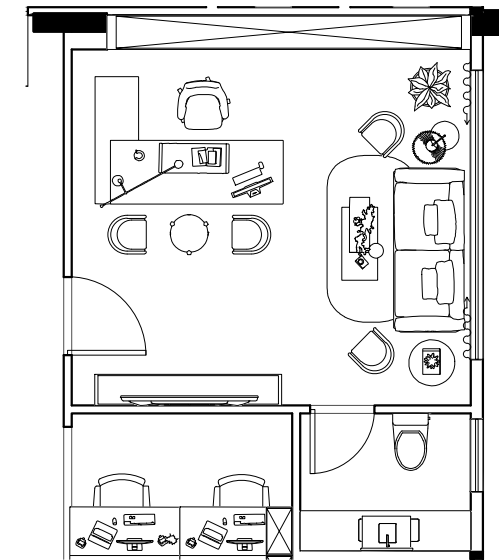
DWG. No.  
**SL07AR-CO-115**



CHAIRMAN OFFICE FLOOR F(1/8"=1'-0")



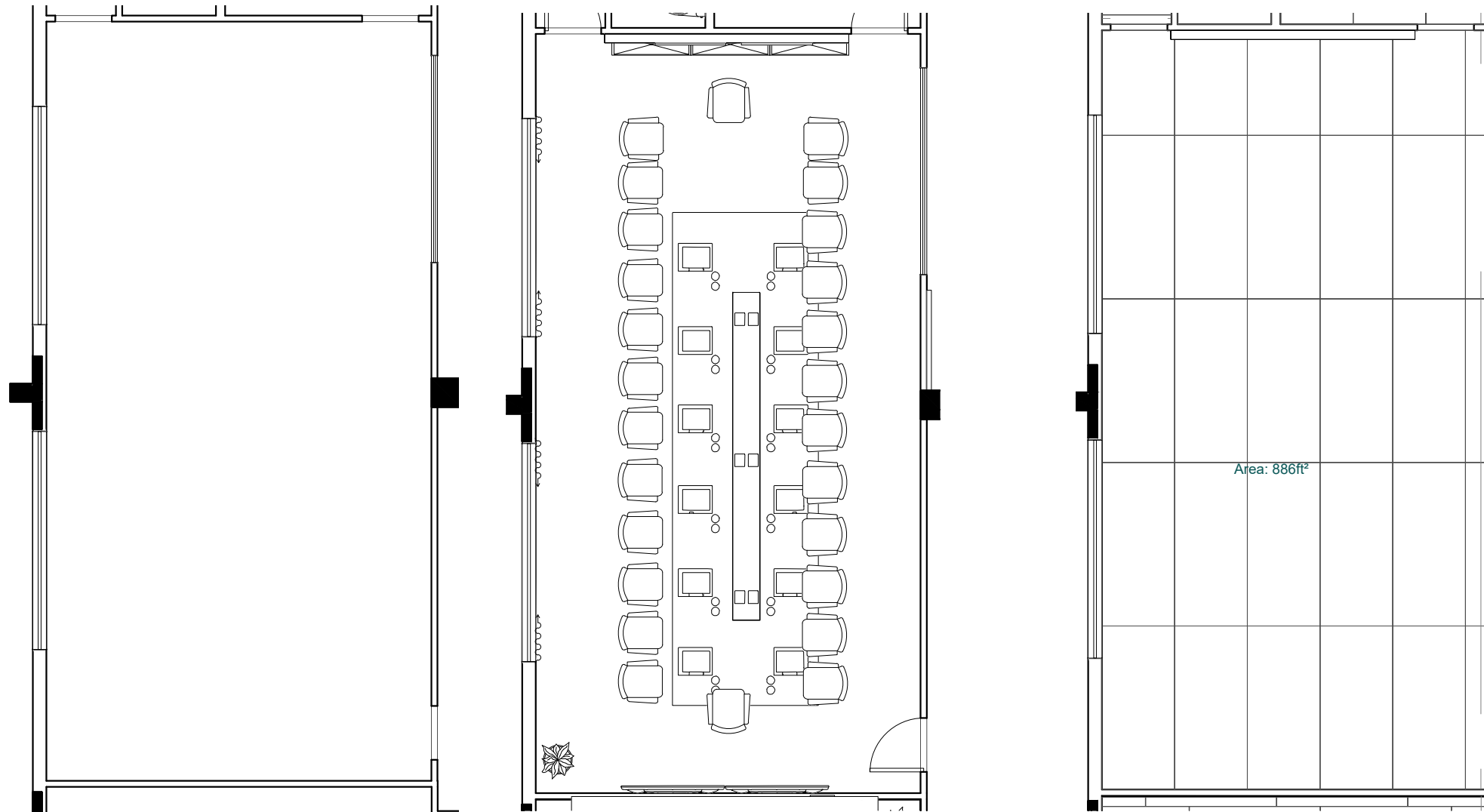
CHAIRMAN OFFICE FLOOR(1/8"=1'-0")



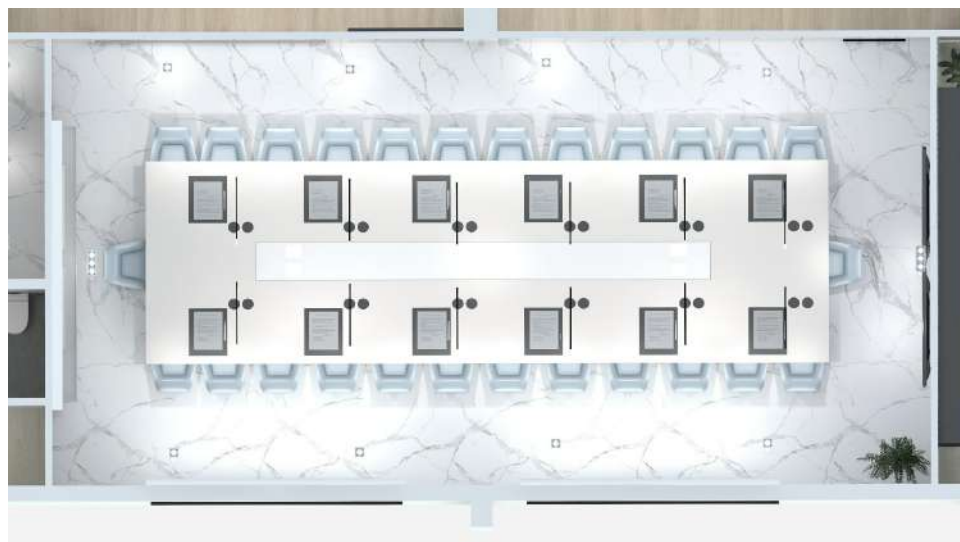
CHAIRMAN OFFICE PLAN(1/8"=1'-0")







BOARD ROOM FLOOR(1/8"=1'-0") BOARD ROOM PLAN(1/8"=1'-0") BOARD ROOM FLOOR F(1/8"=1'-0")



### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

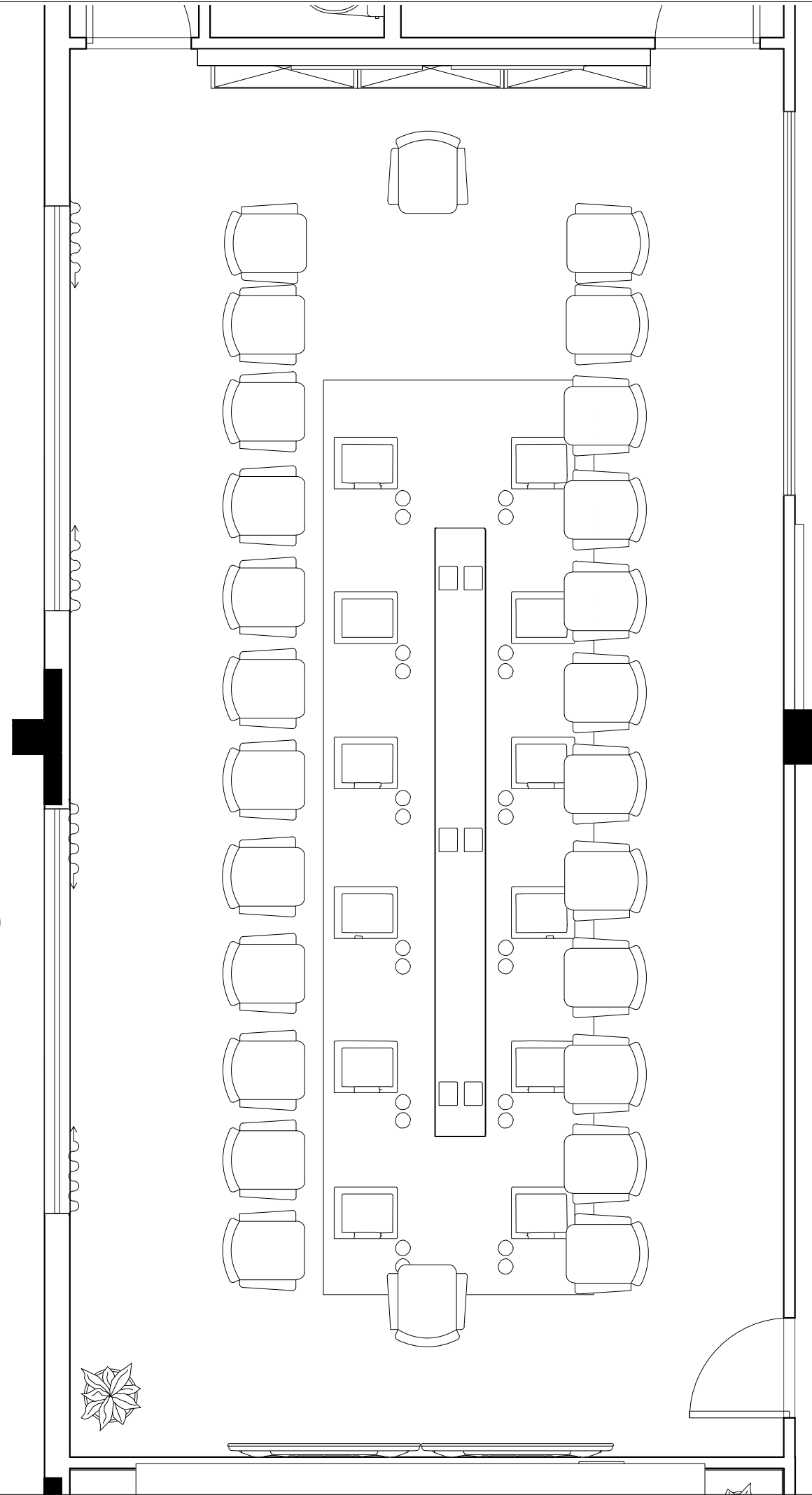
DRAWING TITLE:

**7th FLOOR**  
CONFERENCE ROOM FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CR-101**

BOARD ROOM FURNITURE(1/4"=1'-0")



**GENERAL NOTES**

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



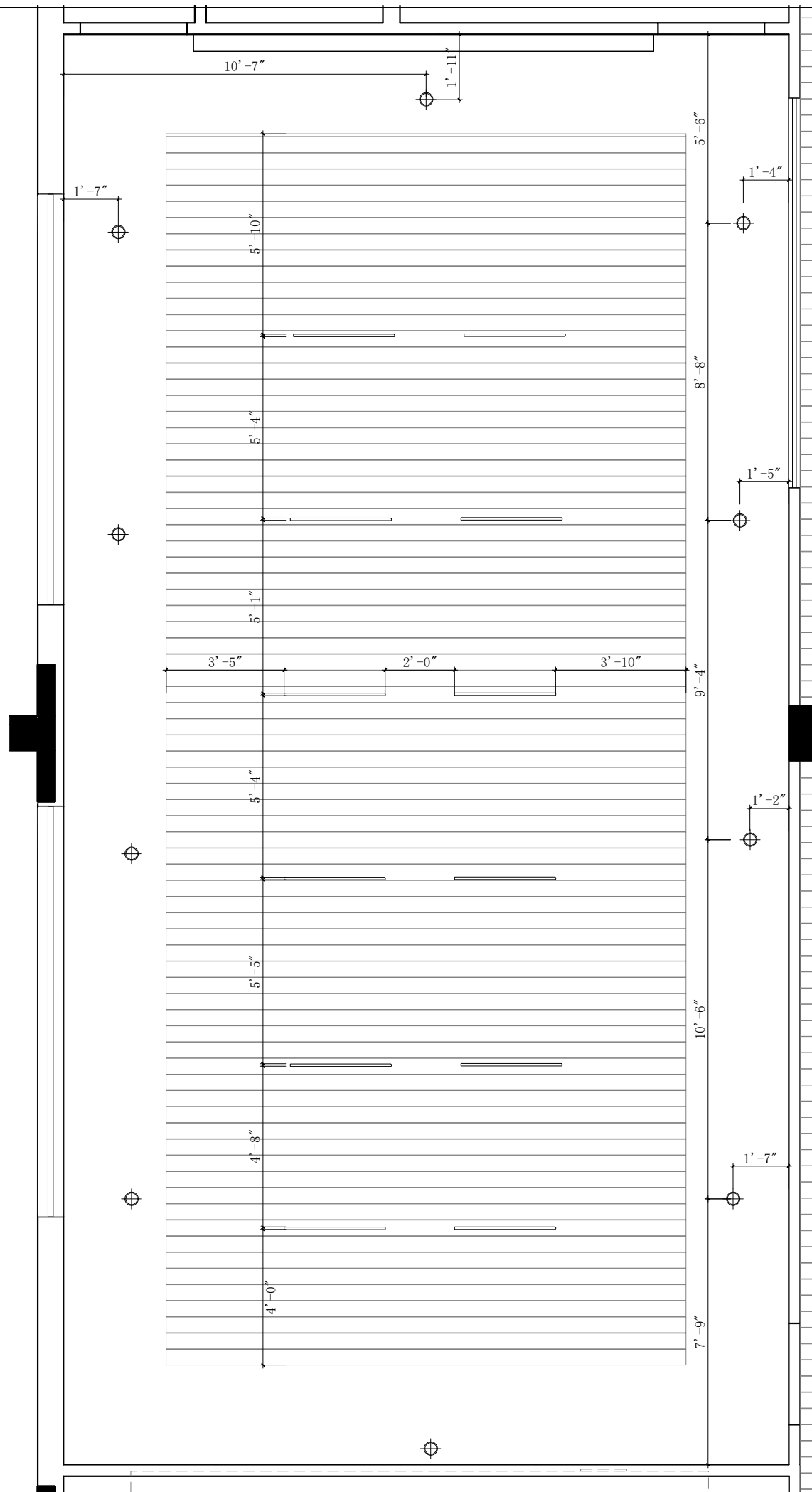
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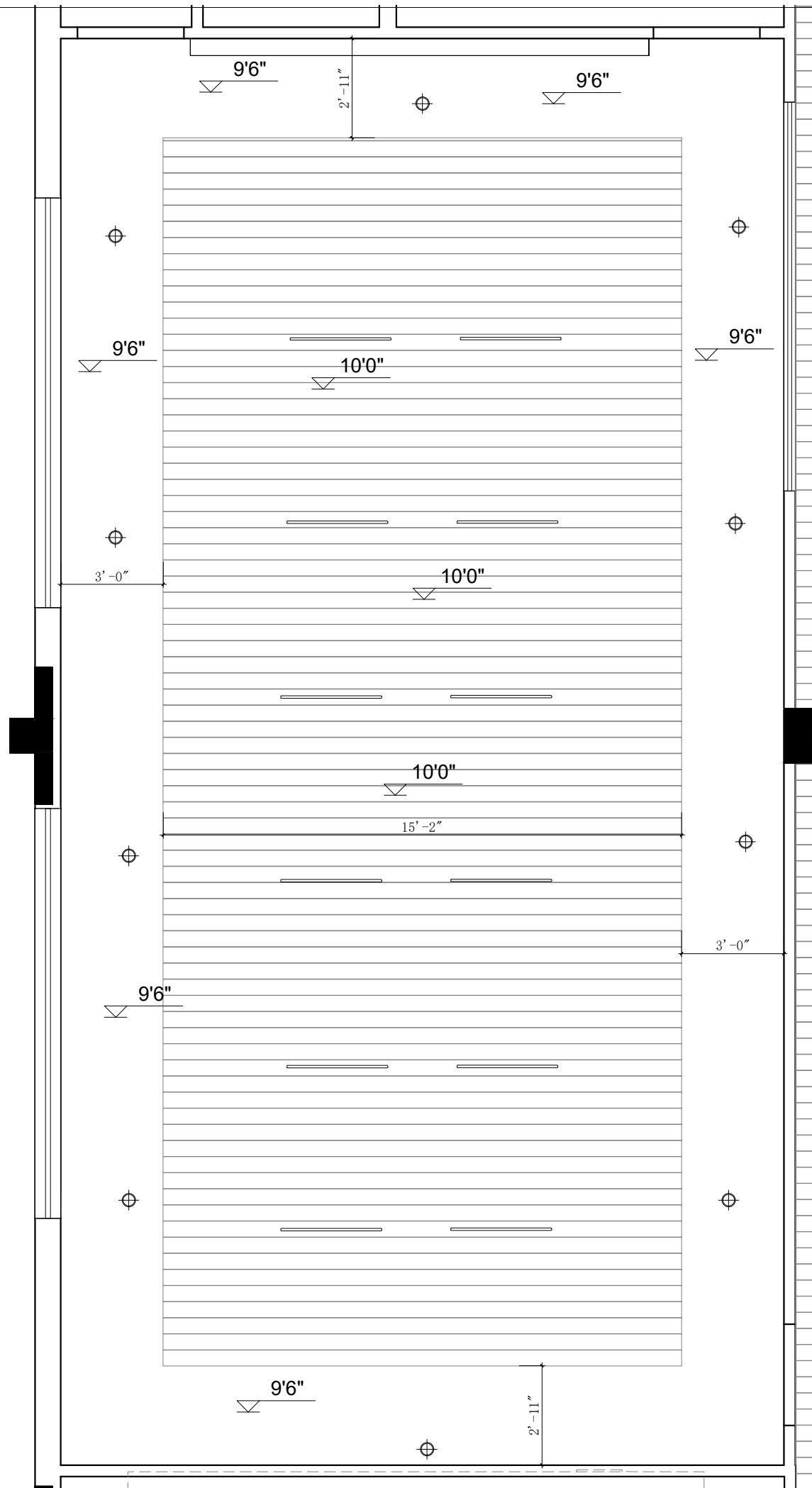
**7th FLOOR**  
**CONFERENCE ROOM FURNITURE**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CR-102**



BOARD ROOM CEILING(1/4"=1'-0")



BOARD ROOM CEILING LIGHTS(1/4"=1'-0")

**GENERAL NOTES**

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**CONFERENCE ROOM CEILING**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CR-103**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI

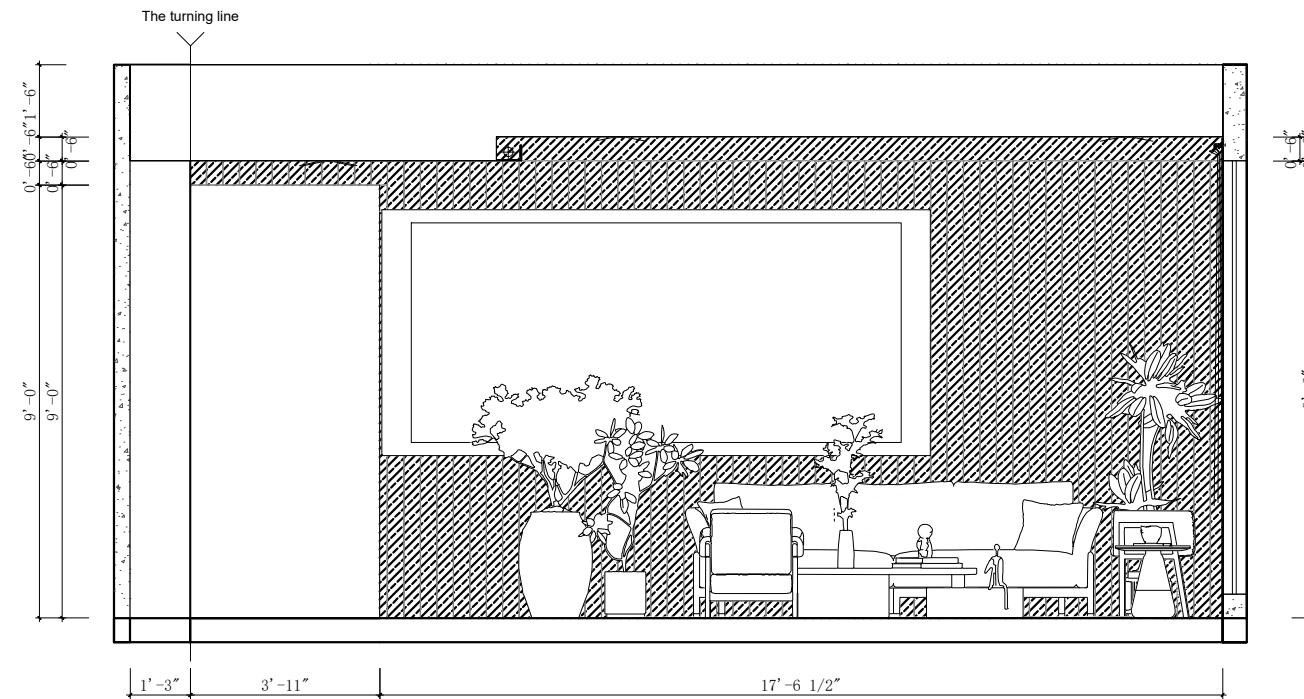


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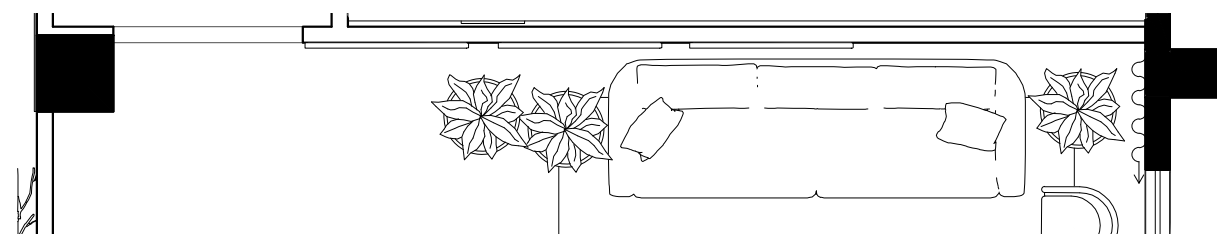
DRAWING TITLE:  
**7th FLOOR**  
EXECUTIVE LOUNGE  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-EL-104**



Executive Lounge Elevation A1(1/4"=1'-0")



EXEC LOUNGE ELEV A(1/4"=1'-0")

## GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



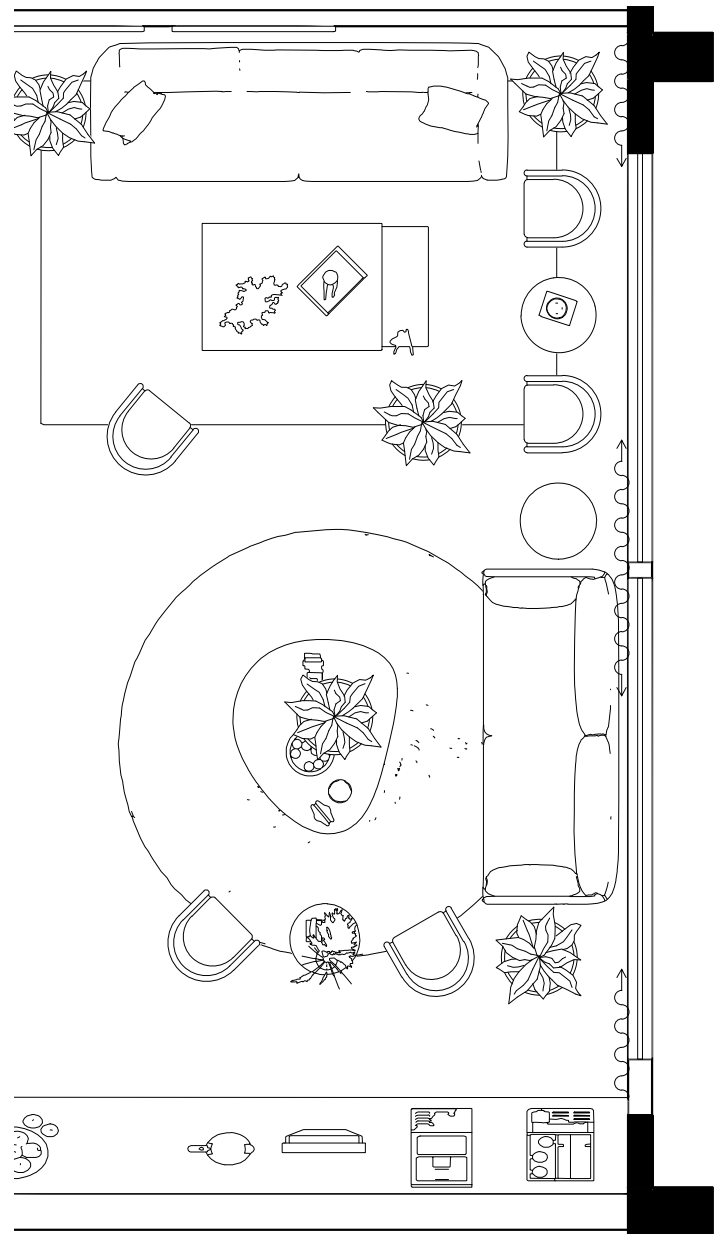
COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
EXECUTIVE LOUNGE  
ELEVATION B

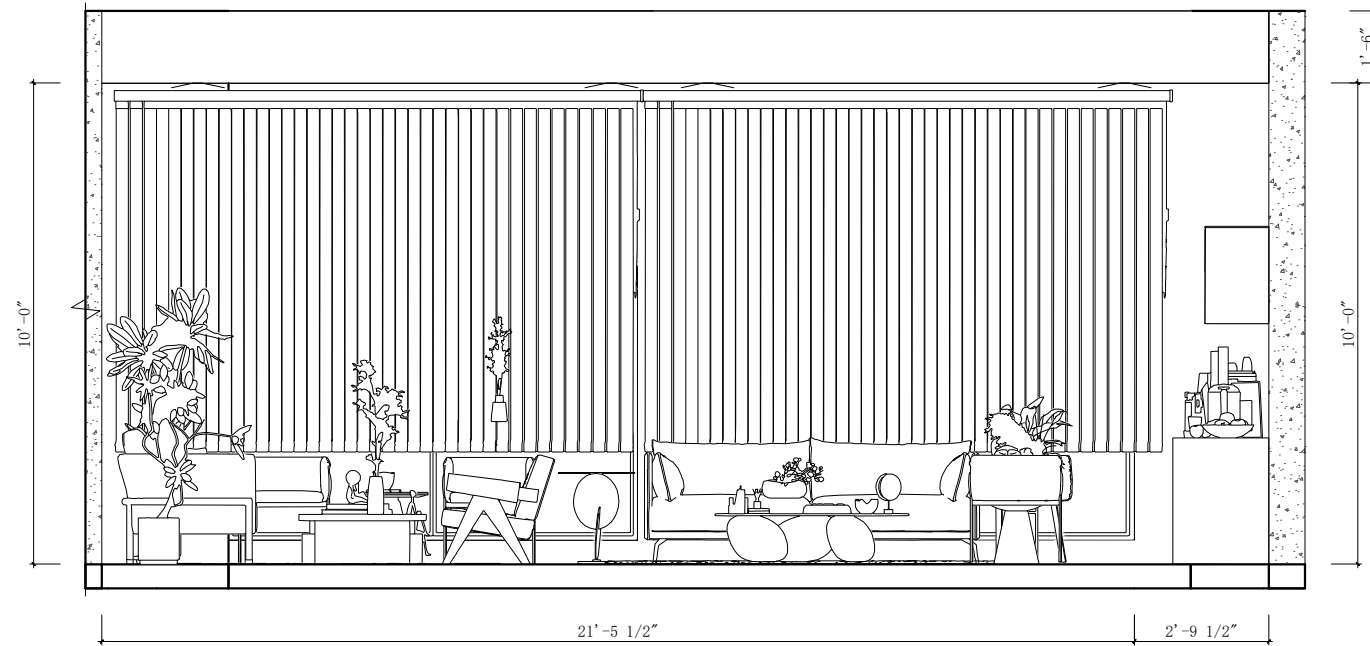
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-EL-105**



EXEC LOUNGE ELEV B(1/4"=1'-0")



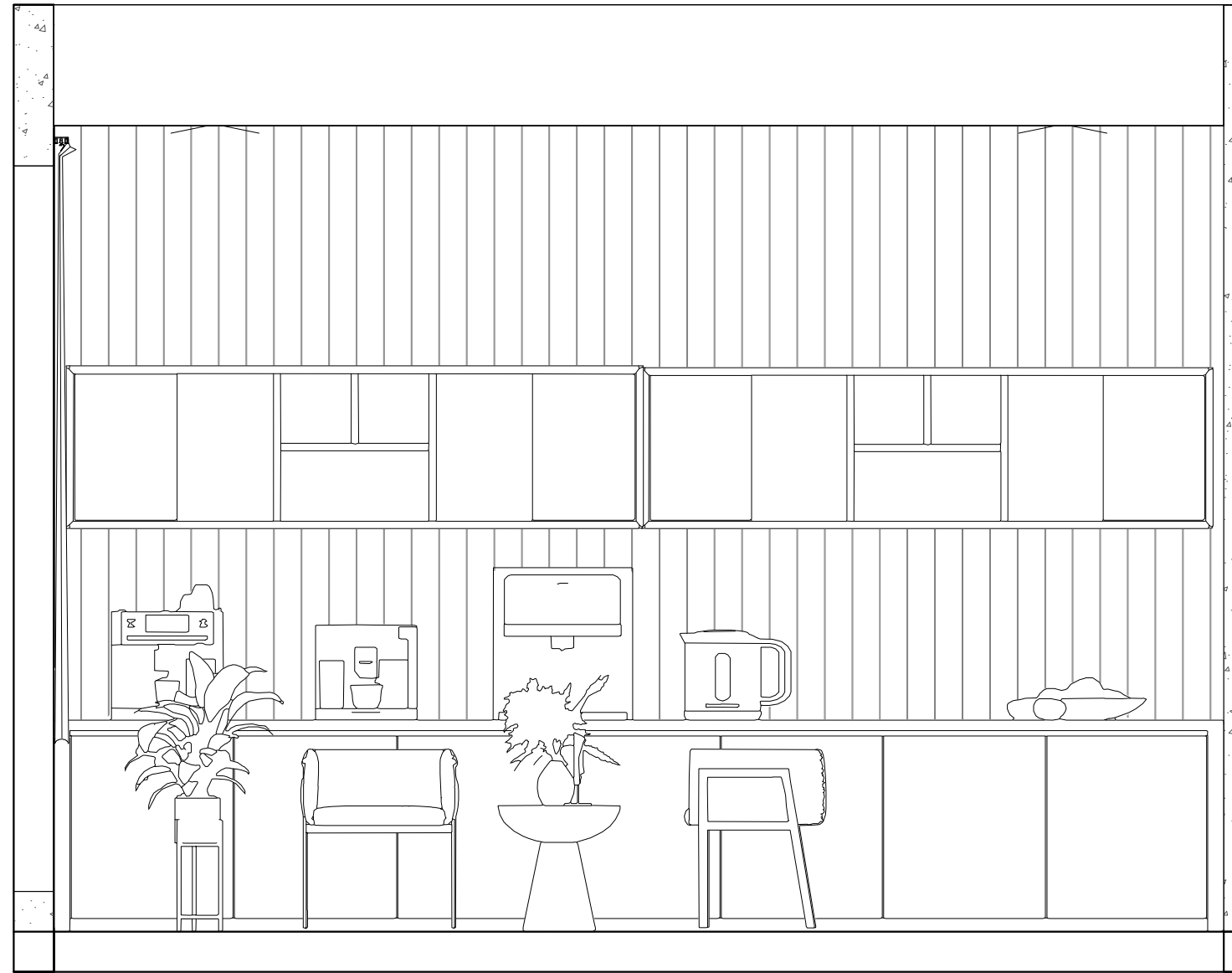
Executive Lounge Elevation B(1/4"=1'-0")







0'-6"  
0'-6"  
9'-0"  
9'-0"  
0'-6"



1'-6"  
10'-0"

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

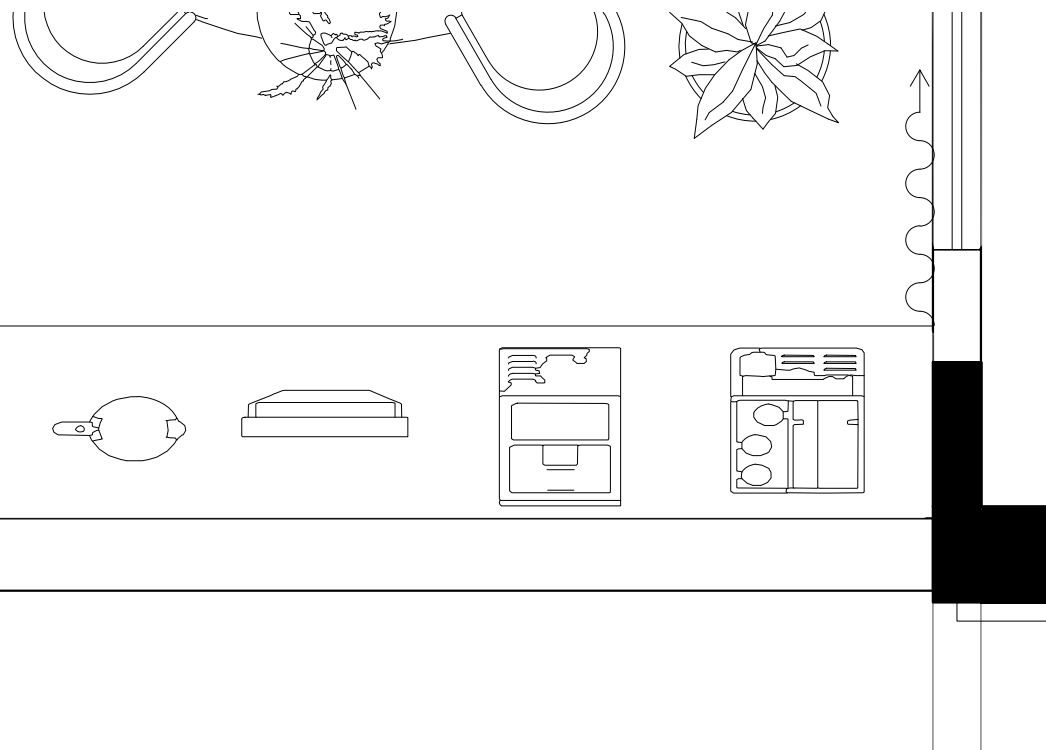
PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

**Executive Lounge Elevation C(1/2"=1'-0")**



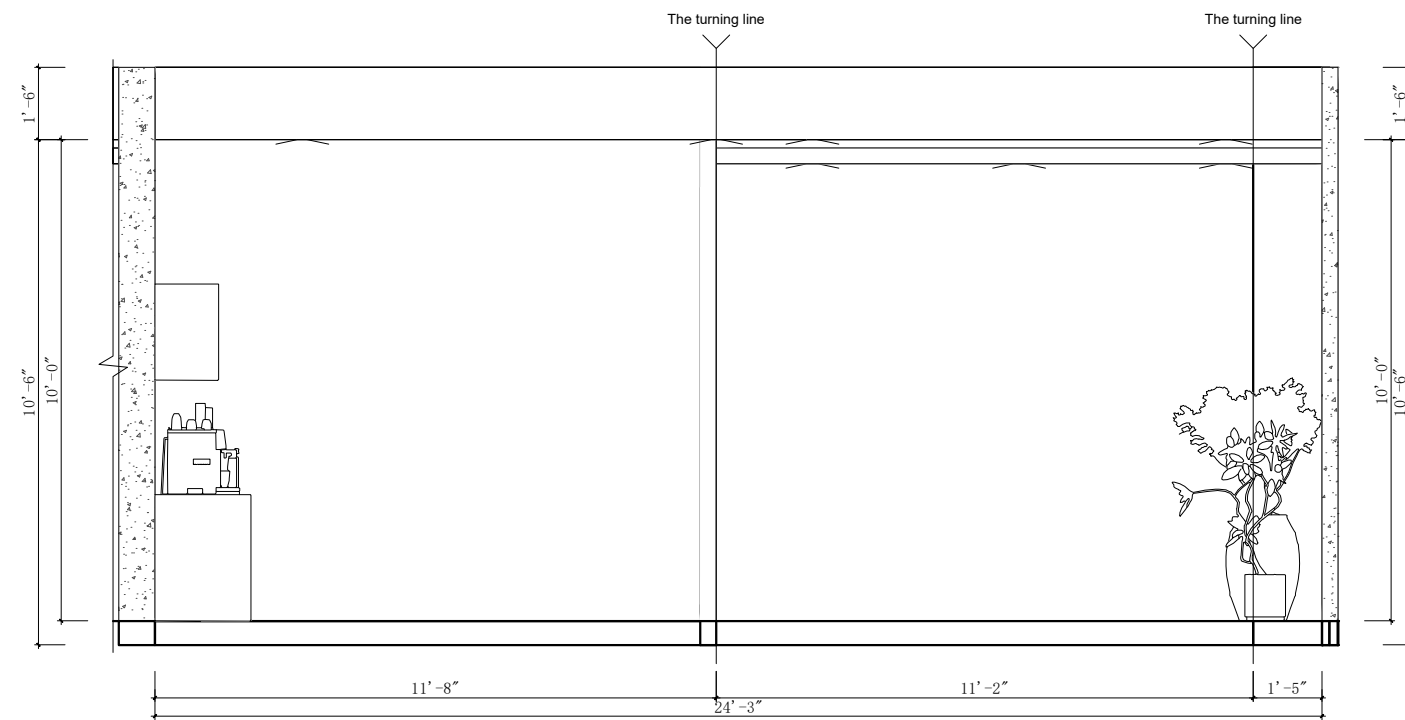
**EXEC LOUNGE ELEV C(1/2"=1'-0")**

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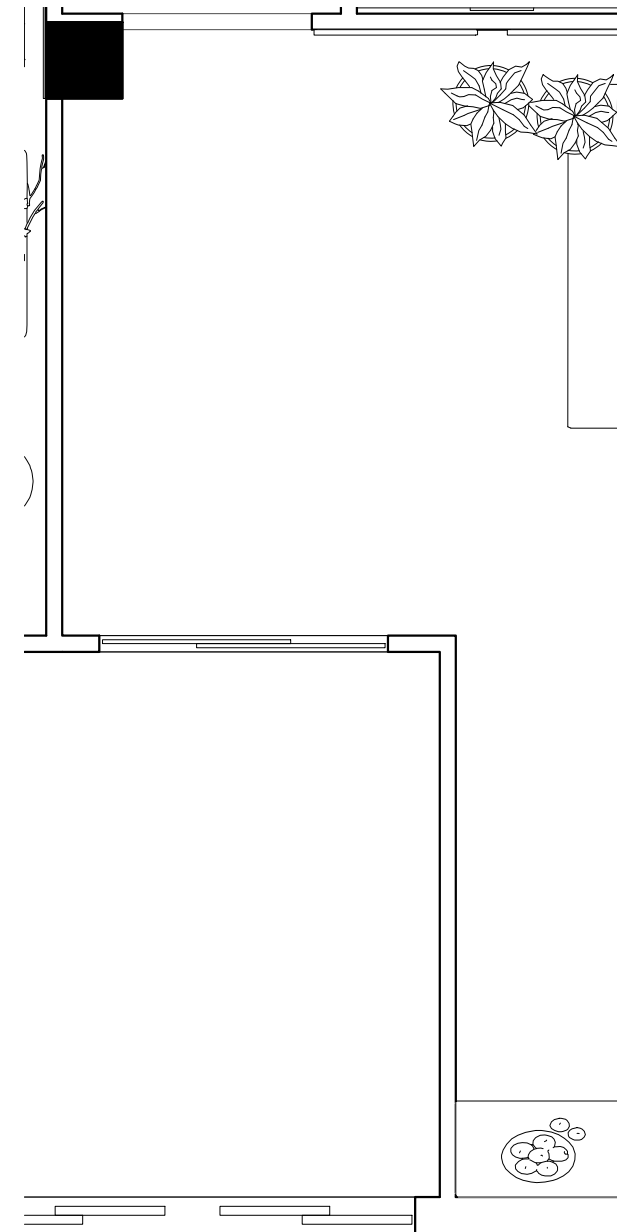
**7th FLOOR**  
**EXECUTIVE LOUNGE**  
**ELEVATION C**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-EL-106**



Executive Lounge Elevation D(1/4"=1'-0")



EXEC LOUNGE ELEV D(1/4"=1'-0")

**GENERAL NOTES**

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

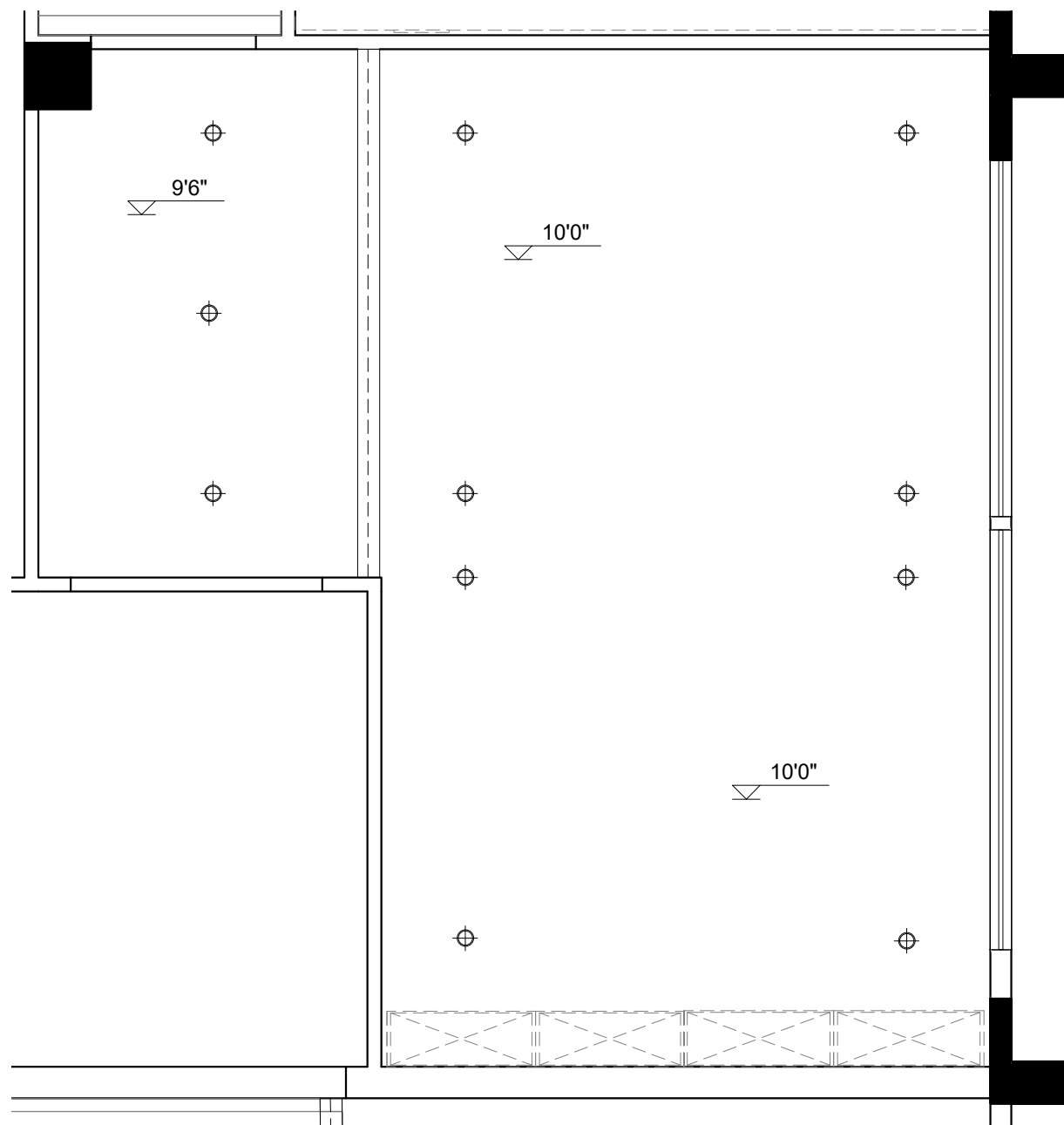


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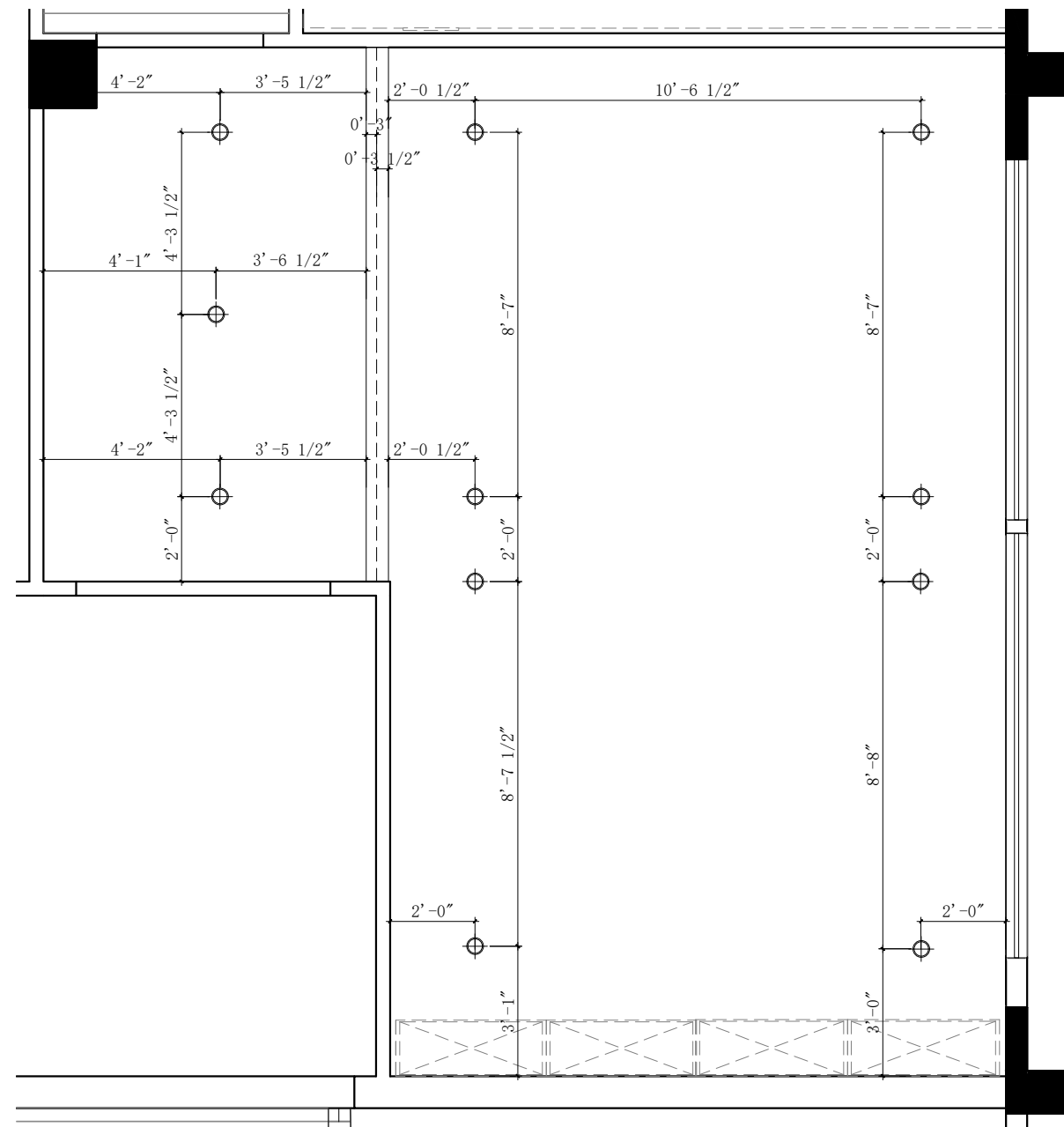
DRAWING TITLE:  
**7th FLOOR**  
EXECUTIVE LOUNGE  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-EL-107**



EXEC LOUNGE CEILING(1/4"=1'-0")



EXEC LOUNGE CEILING LIGHTS(1/4"=1'-0")

**GENERAL NOTES**

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

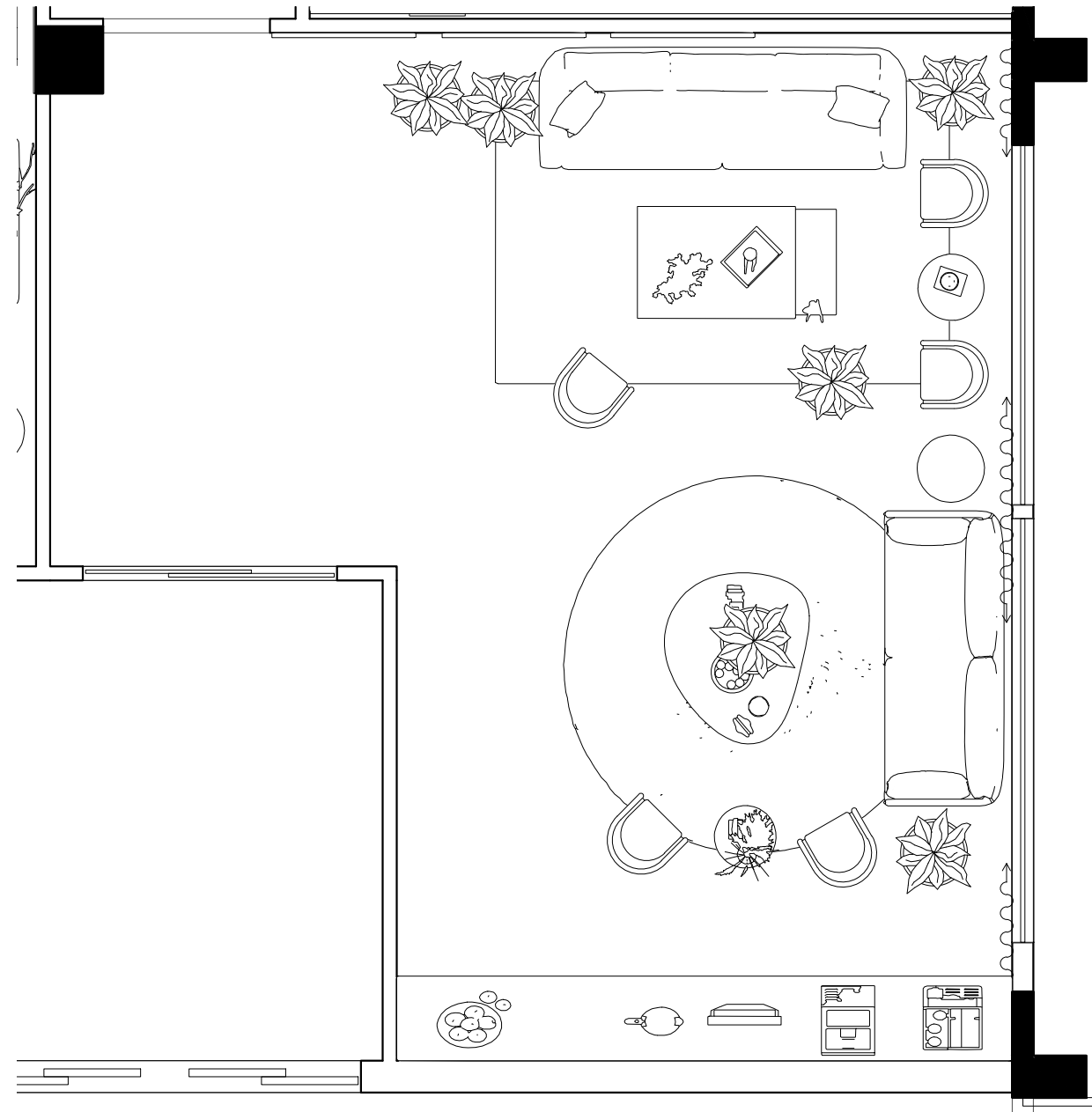
**7th FLOOR**  
**EXECUTIVE LOUNGE CEILING**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ELC-110**







EXEC LOUNGE FURNITURE(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

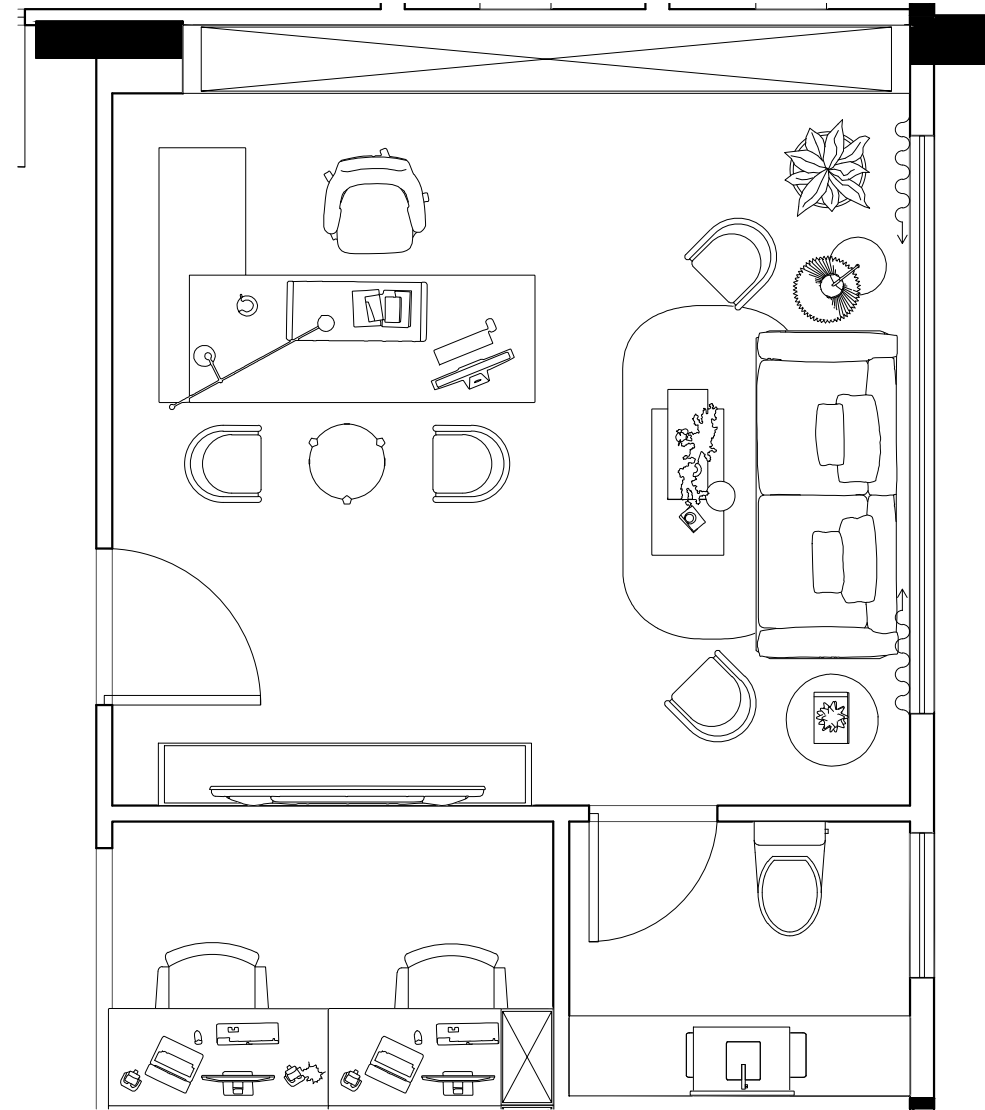


COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
EXECUTIVE LOUNGE FURNITURE

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ELF-109**



CHAIRMAN OFFICE FURNITURE(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



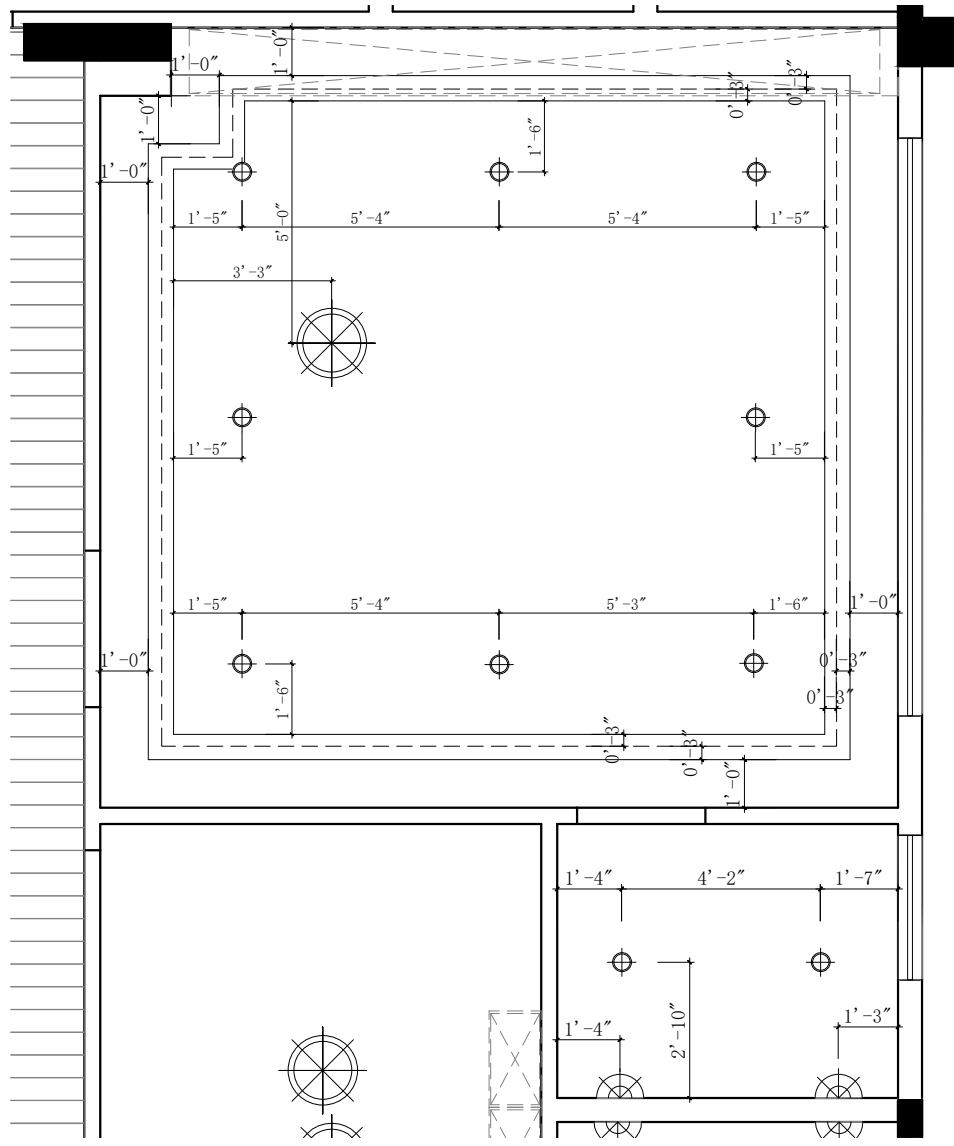
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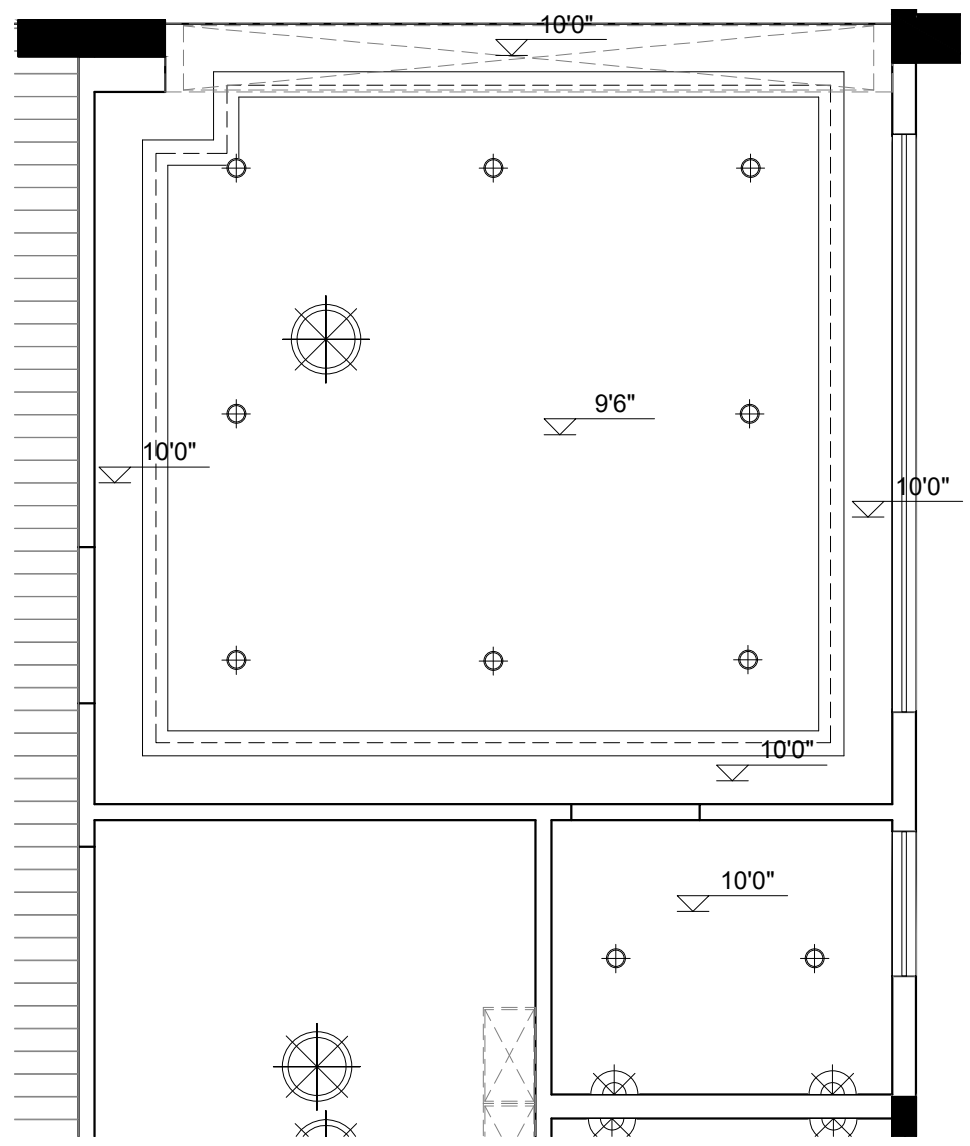
**7th FLOOR**  
**CHAIRMAN OFFICE FURNITURE**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CO-116**



CHAIRMAN OFFICE CEILING LIGHTS(1/4"=1'-0")



CHAIRMAN OFFICE CEILING(1/4"=1'-0")

**GENERAL NOTES**

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
CHAIRMAN OFFICE CEILING

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-CO-117**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



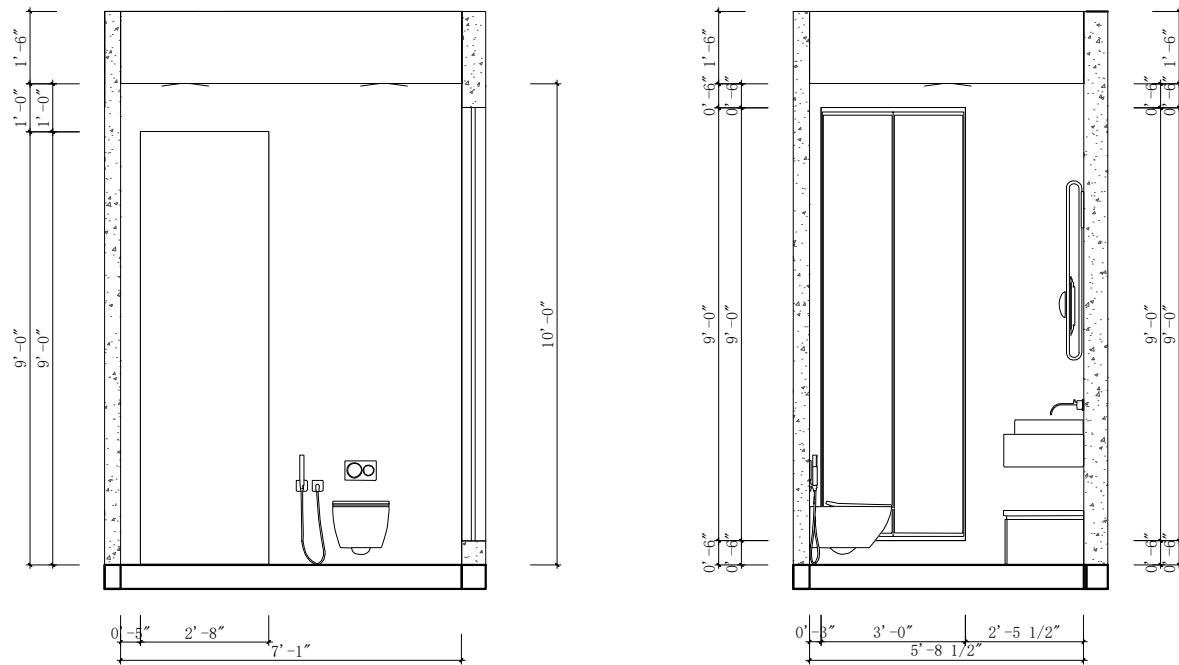
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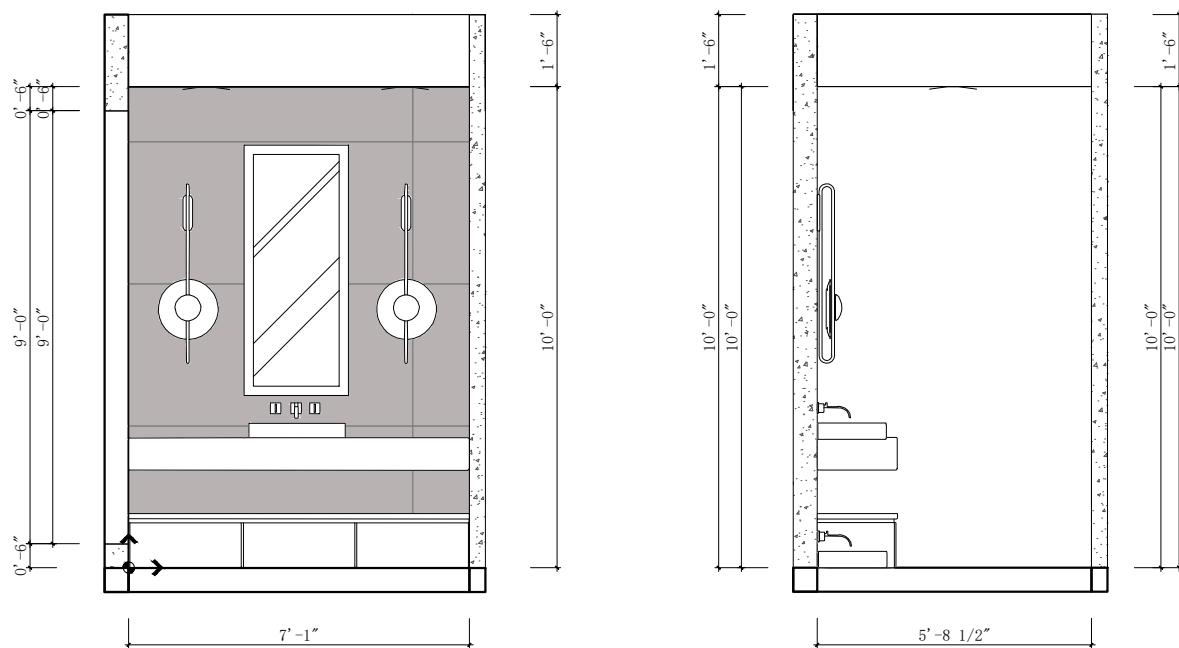
**7th FLOOR**  
CHAIRMAN OFFICE BATH

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

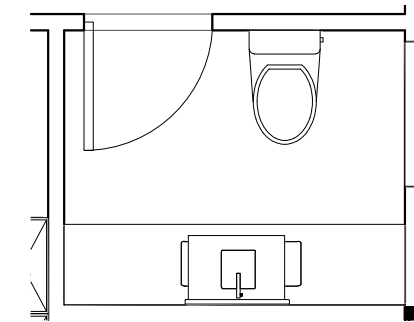
DWG. No.  
**SL07AR-CO-118**



Chairman Bath Elevation A(1/4"=1'-0") Chairman Bath Elevation B(1/4"=1'-0")



Chairman Bath Elevation C(1/4"=1'-0") Chairman Bath Elevation D(1/4"=1'-0")



CHAIRMAN OFFICE BATH(1/4"=1'-0")



## GENERAL NOTES

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### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



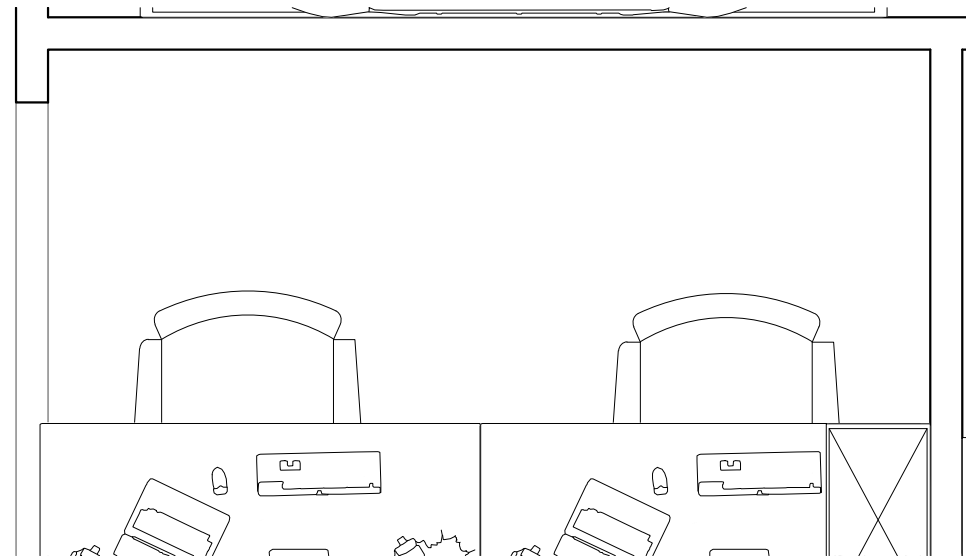
COMMENTS:

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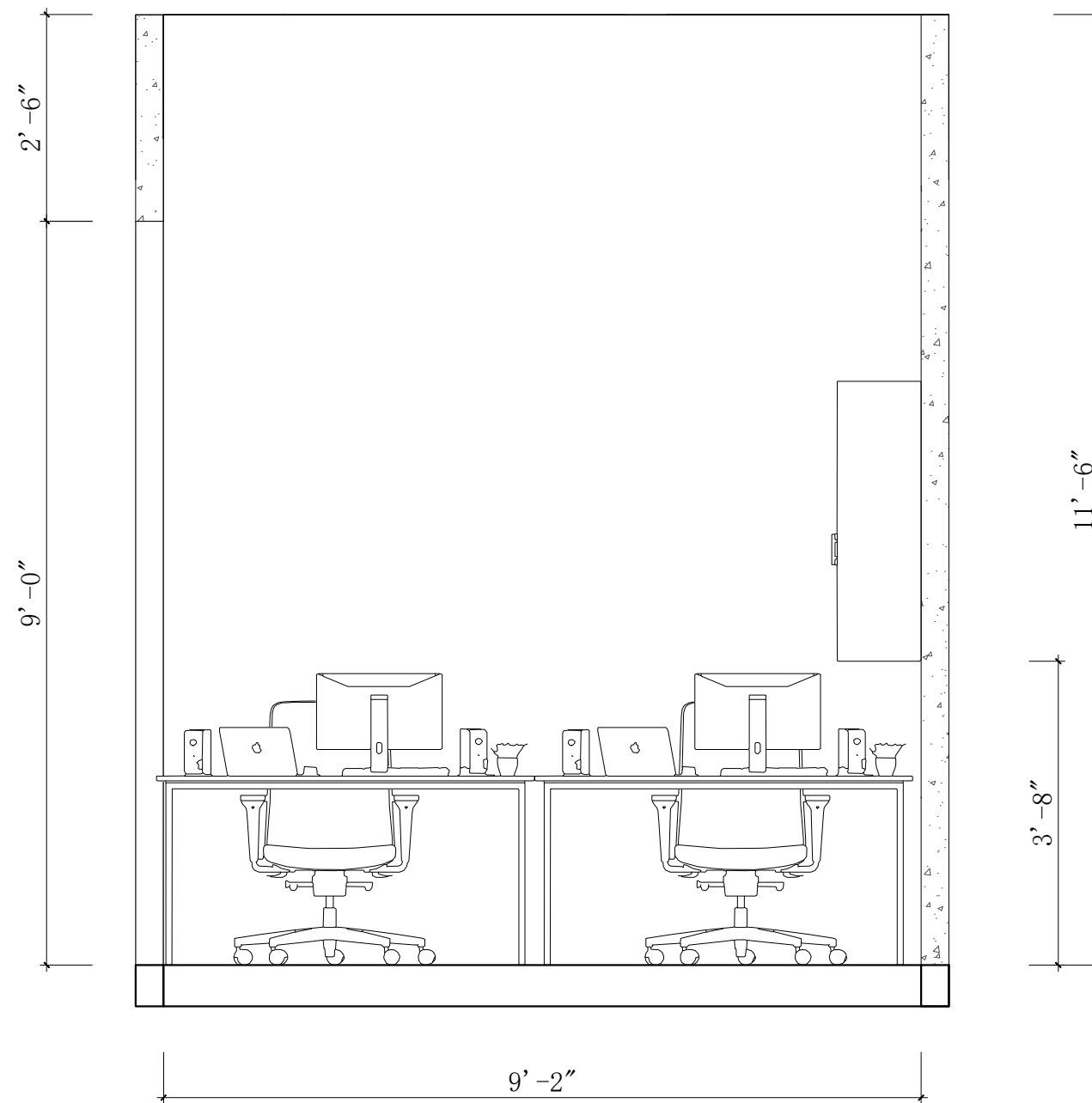
**7th FLOOR**  
**EXECUTIVE STAFF**  
**ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ES-127**



**EXECUTIVE SECRETARIAT ELEV A(1/2"=1'-0")**



**Chairman Secretariat Elevation A(1/2"=1'-0")**



### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

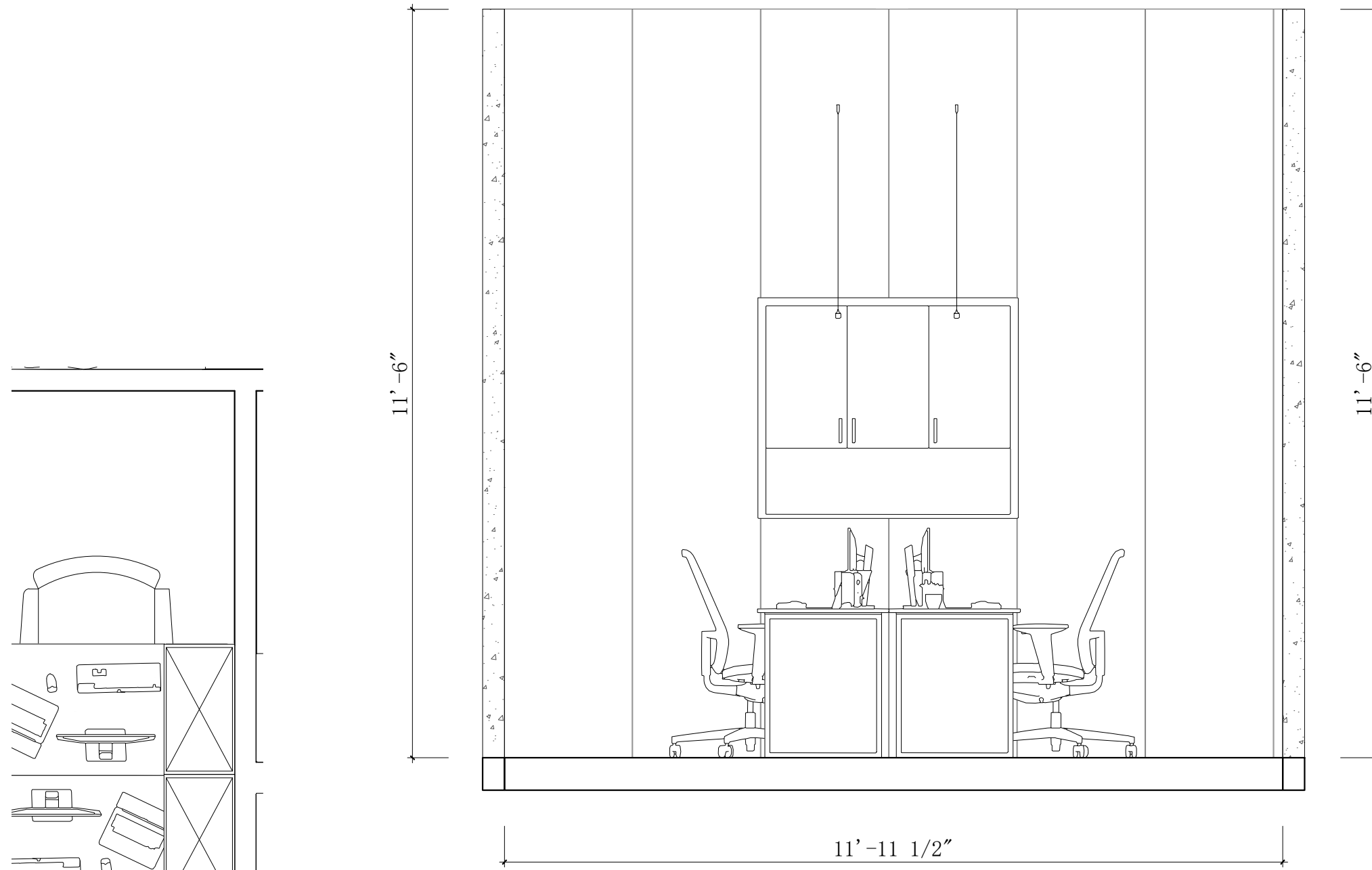


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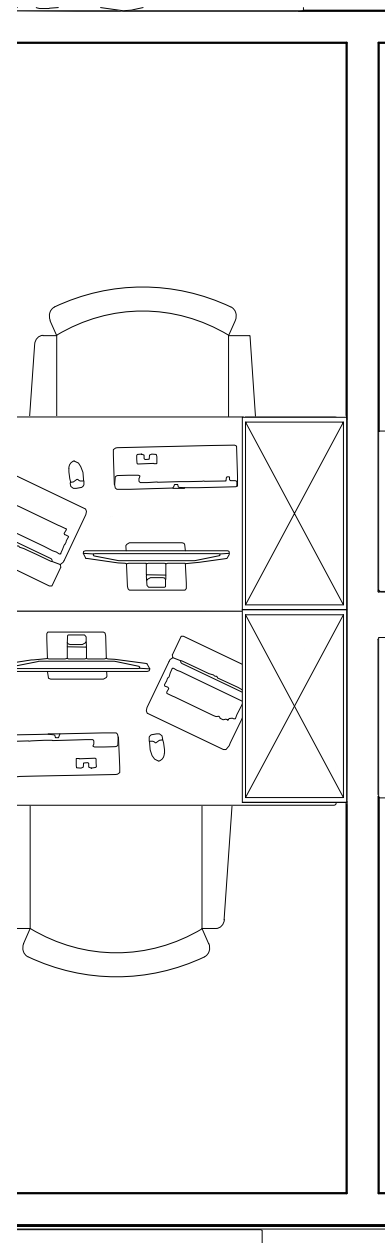
DRAWING TITLE:  
**7th FLOOR**  
EXECUTIVE STAFF  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ES-128**



**Chairman Secretariat Elevation B1(1/2"=1'-0")**



**EXECUTIVE SECRETARIAT ELEV B(1/2"=1'-0")**



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



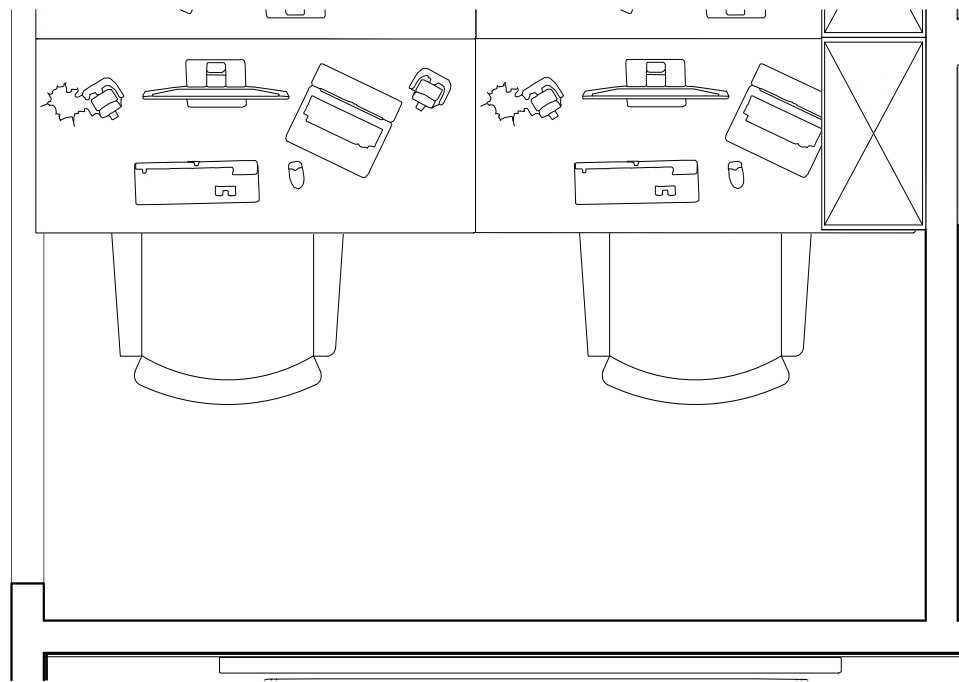
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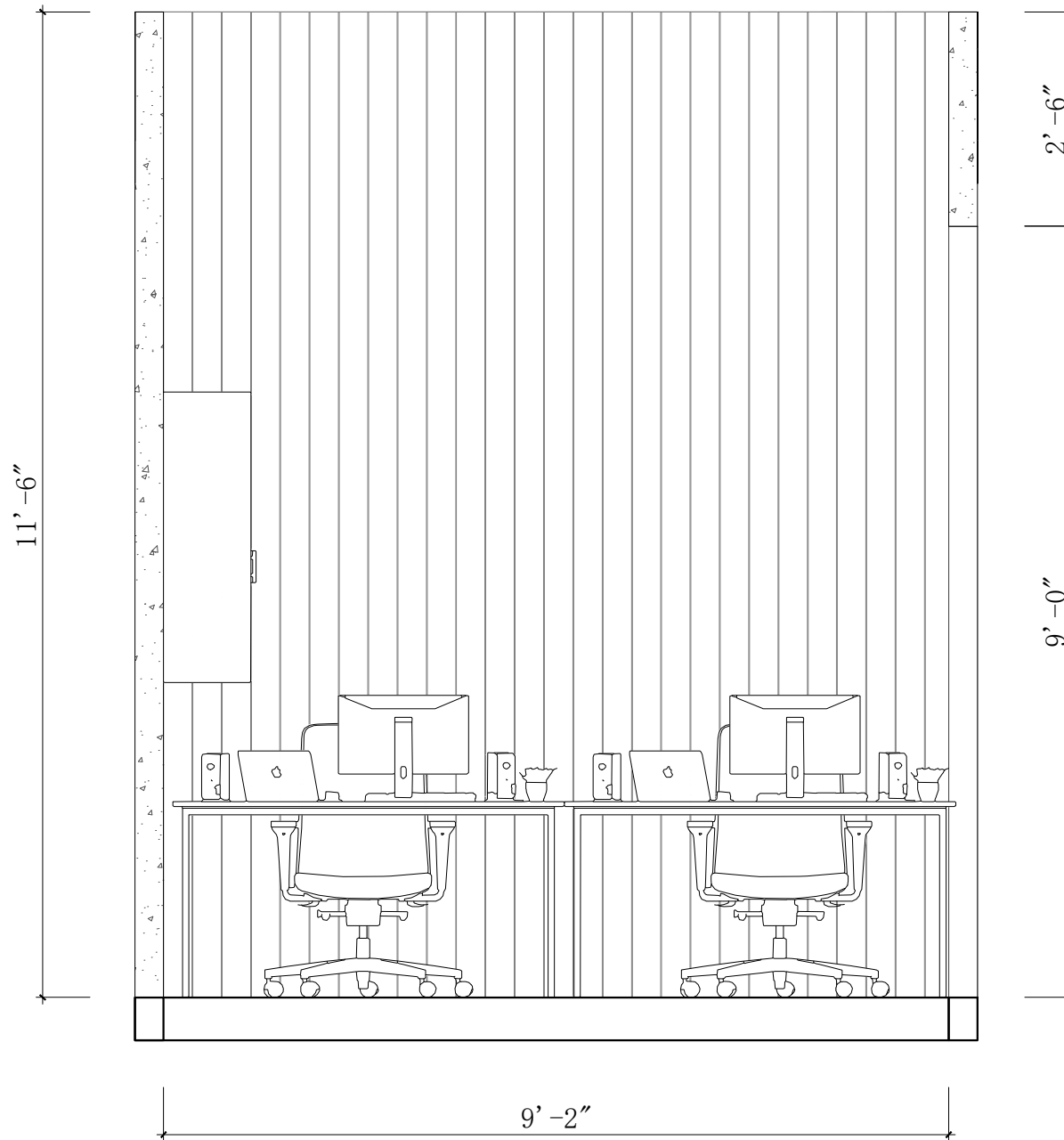
**7th FLOOR**  
**EXECUTIVE STAFF**  
**ELEVATION C**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ES-129**



**EXECUTIVE SECRETARIAT ELEV C (1/2"=1'-0")**



**Chairman Secretariat Elevation C3 (1/2"=1'-0")**



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

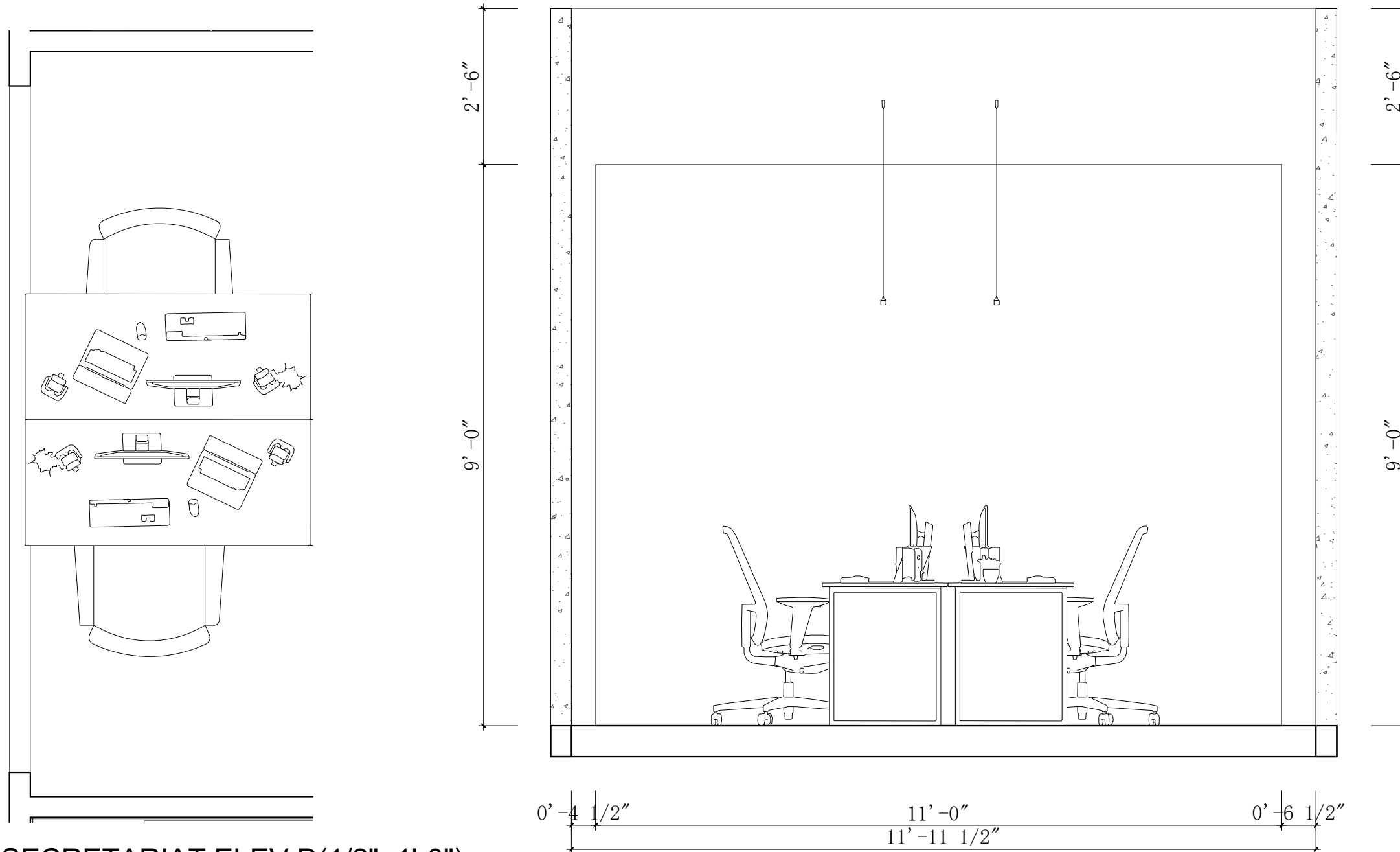
DRAWING TITLE:

**7th FLOOR**  
EXECUTIVE STAFF  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-ES-130**



EXECUTIVE SECRETARIAT ELEV D (1/2"=1'-0")

Chairman Secretariat Elevation D2 (1/2"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



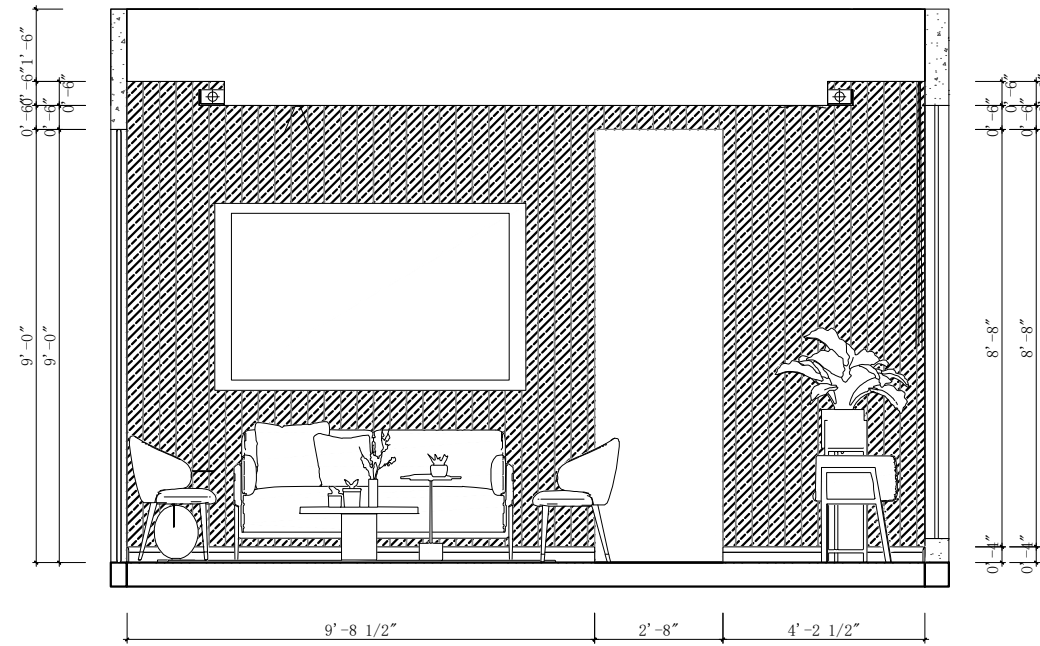
COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
VISITING DIRECTOR  
ELEVATION A

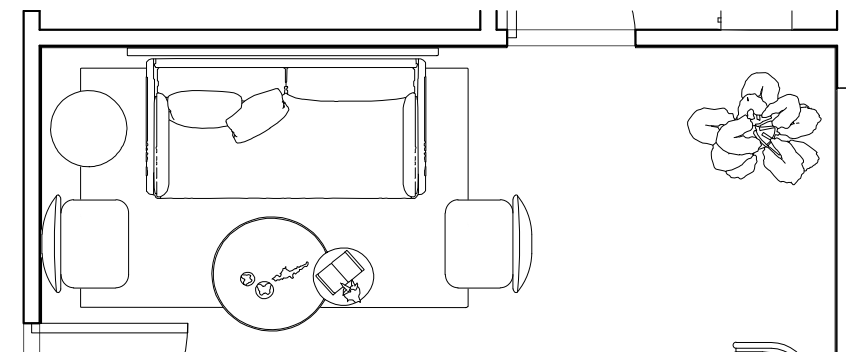
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	APR. 2024

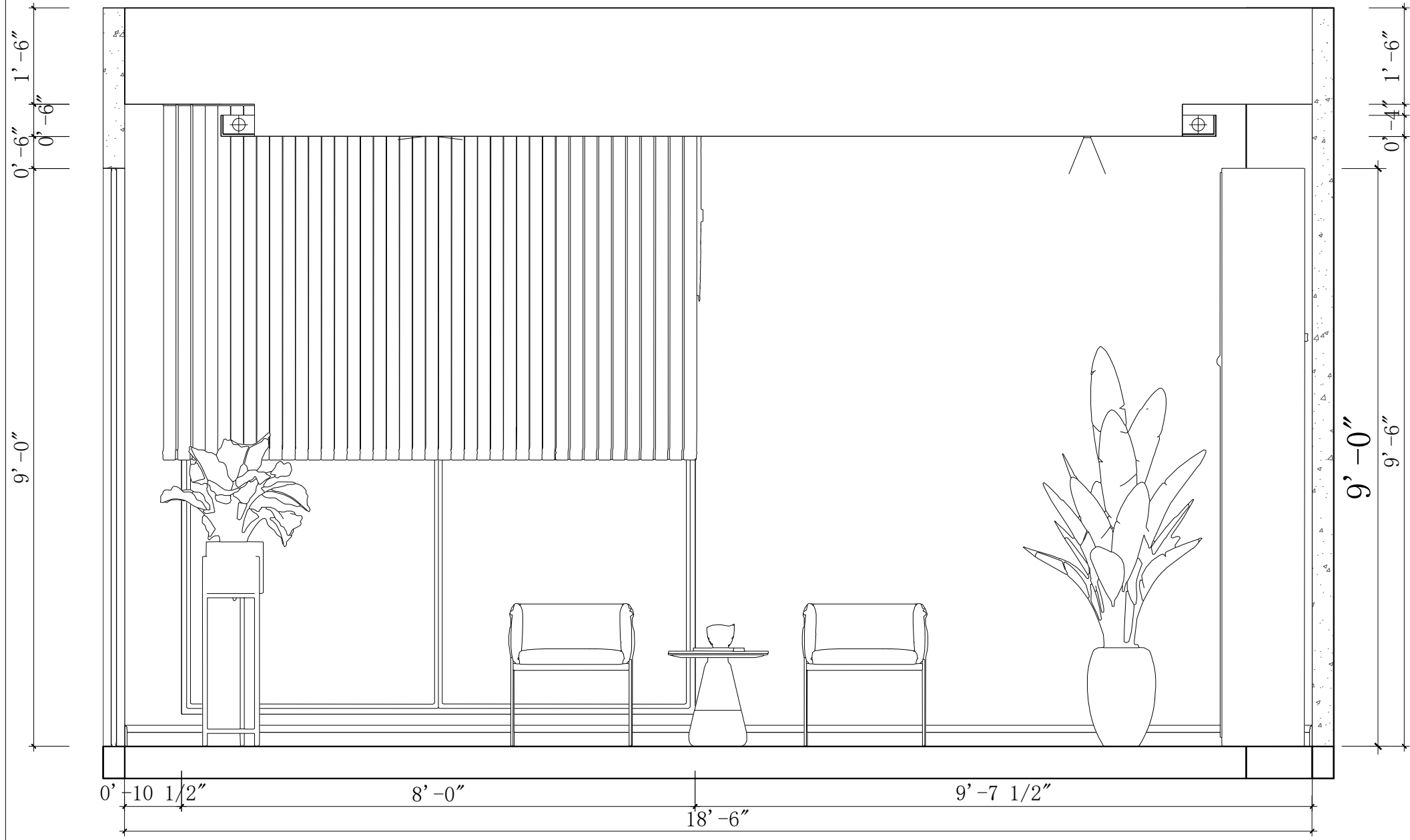
DWG. No.  
**SL07AR-VD-119**



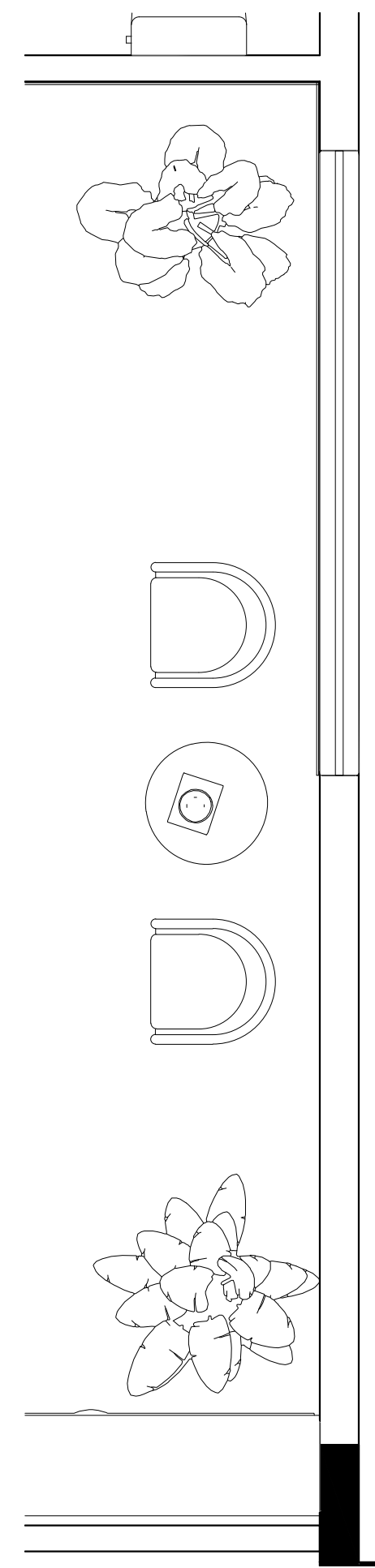
Visiting Director Elevation A(1/4"=1'-0")



VD ELEV A(1/4"=1'-0")



Visiting Director Elevation B(1/2"=1'-0")



VD ELEV B(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**VISITING DIRECTOR**  
**ELEVATION B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-VD-120**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



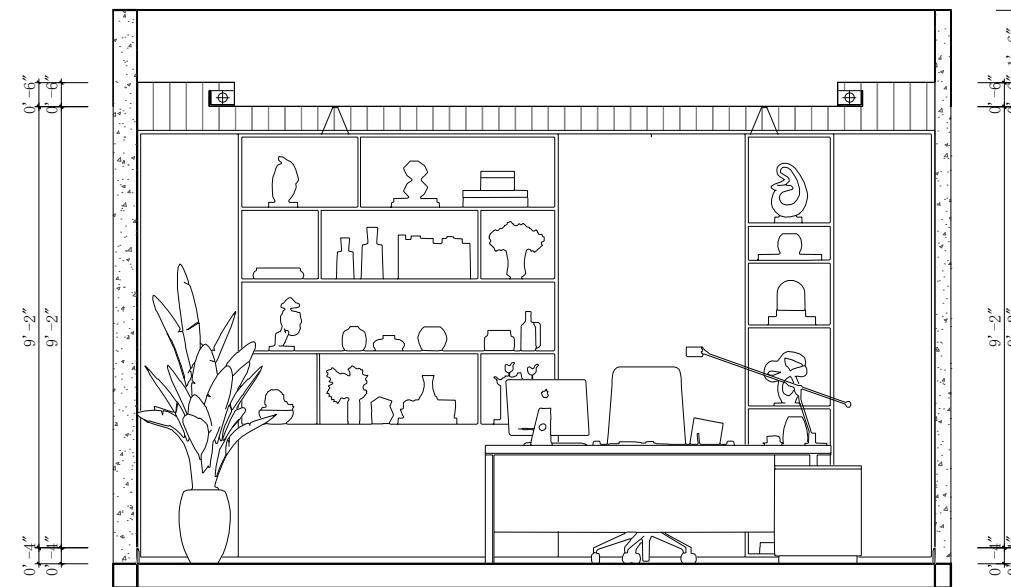
COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
VISITING DIRECTOR  
ELEVATION C

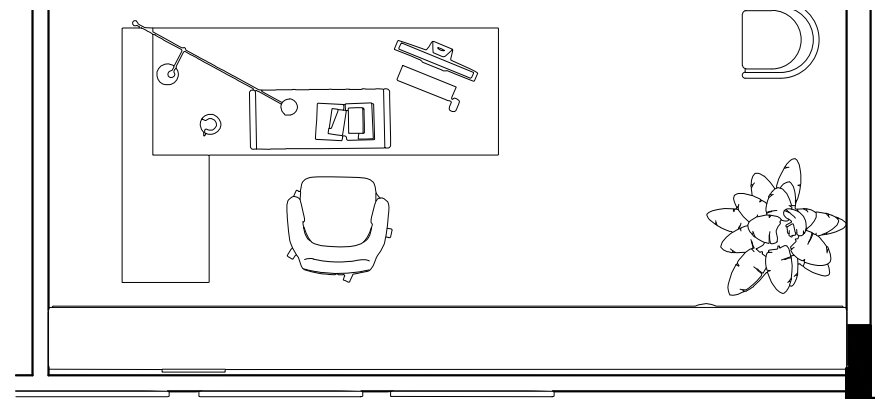
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	APR. 2024

DWG. No.  
**SL07AR-VD-121**

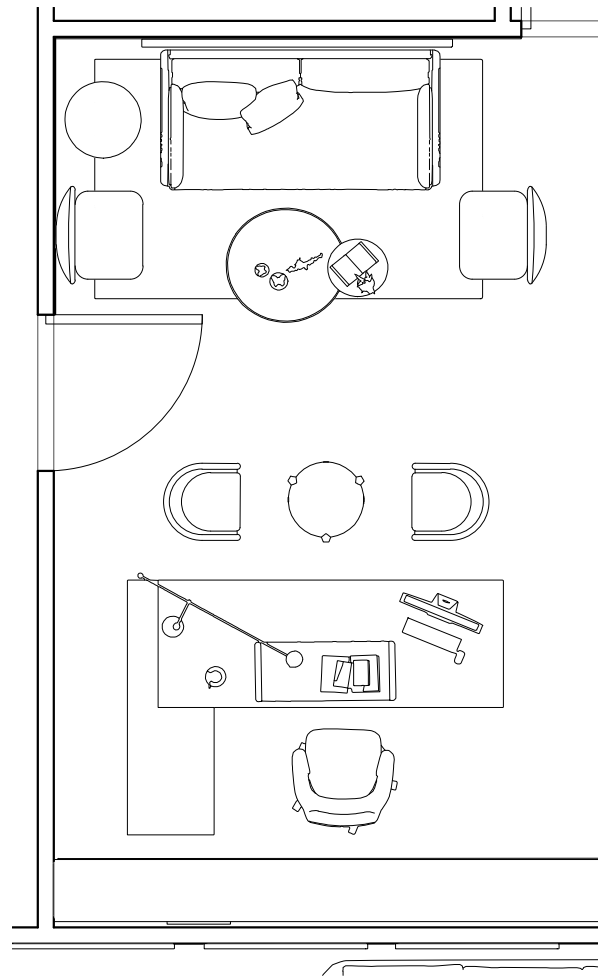


Visiting Director Elevation C(1/4"=1'-0")

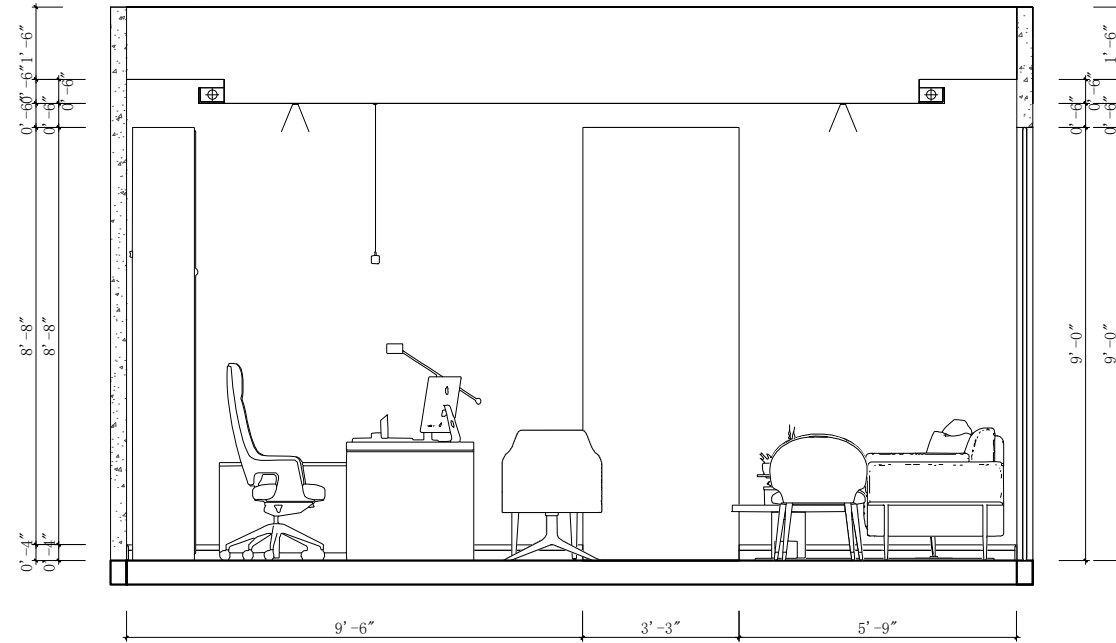


VD ELEV C(1/4"=1'-0")





VD ELEV D(1/4"=1'-0")



Visiting Director Elevation D(1/4"=1'-0")



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI

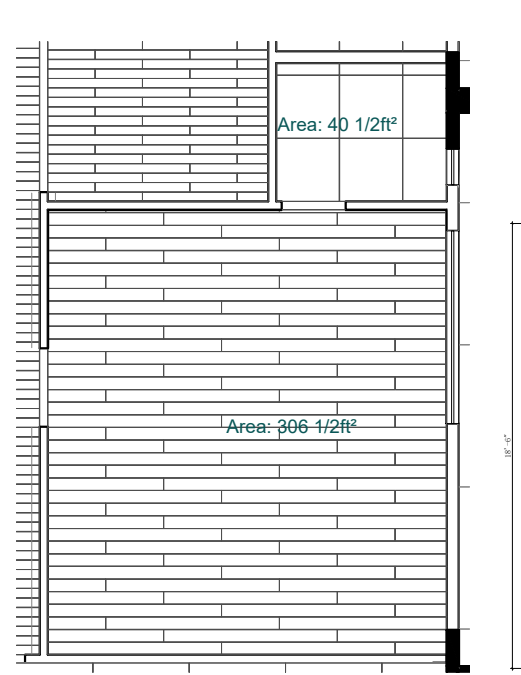


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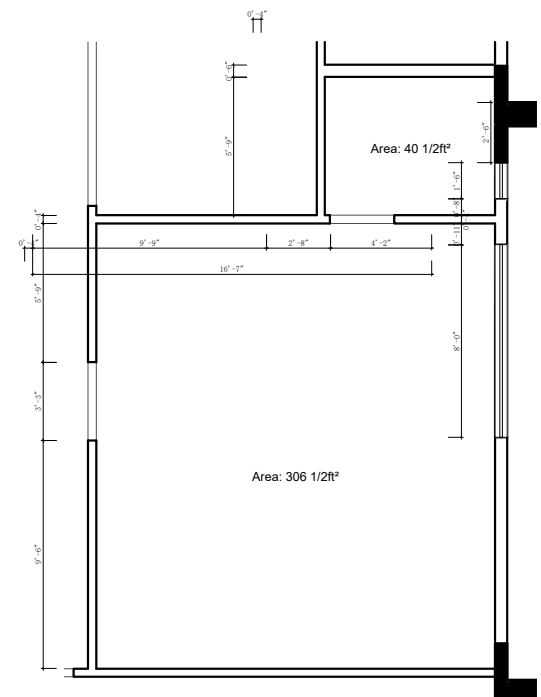
DRAWING TITLE:  
**7th FLOOR**  
VISITING DIRECTOR  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

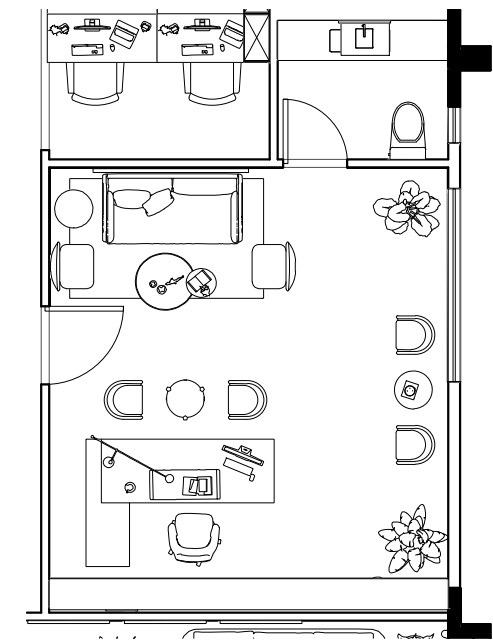
DWG. No.  
**SL07AR-VD-122**



VD FLOOR F(1/8"=1'-0")



VD FLOOR(1/8"=1'-0")



VD PLAN(1/8"=1'-0")



**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



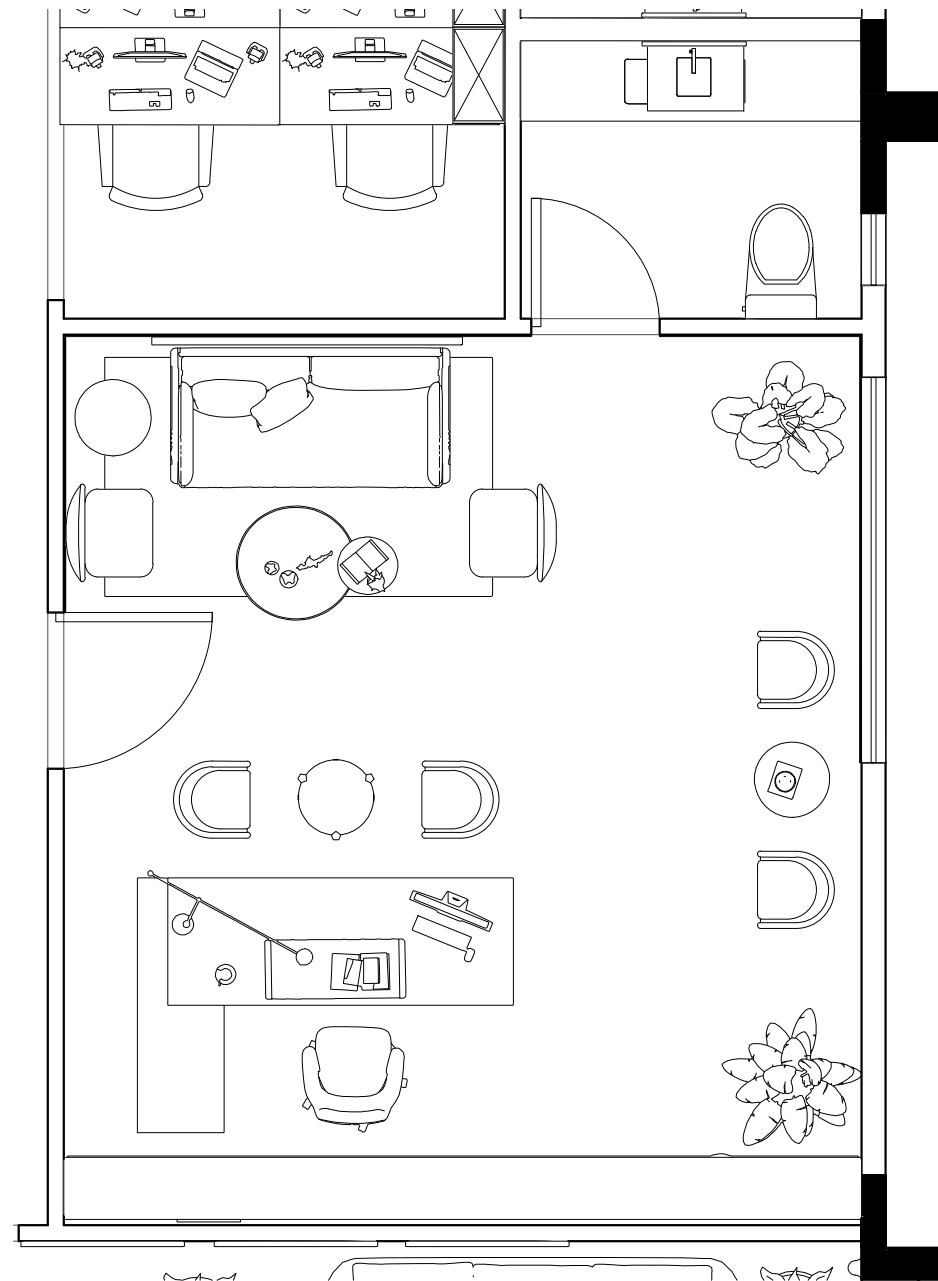
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
VISITING DIRECTOR FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-VD-123**



VD FURNITURE(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE  
 OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
 KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
 VISITING DIRECTOR  
 FURNITURE

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-VD-124**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

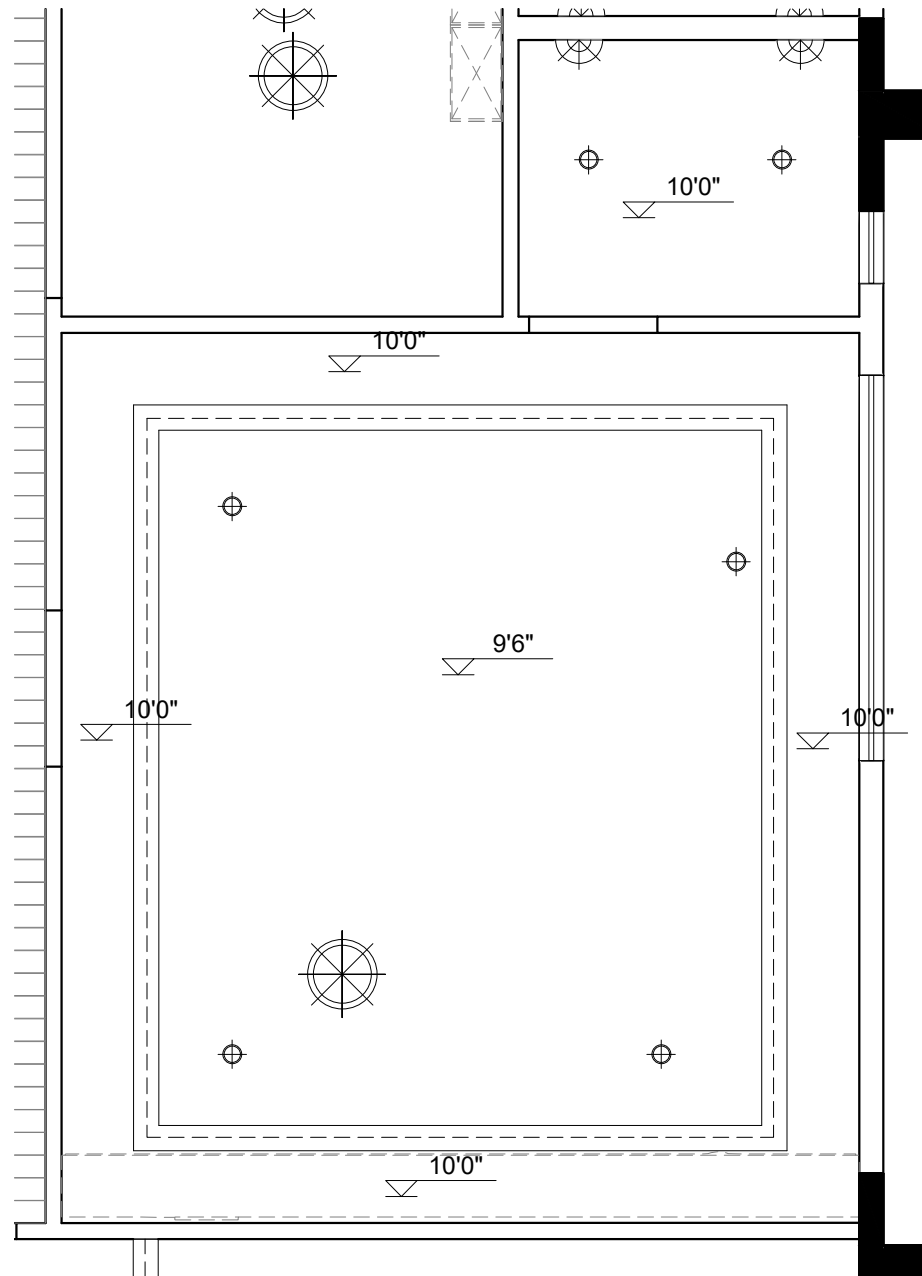
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**7th FLOOR**  
VISITING DIRECTOR  
CEILING

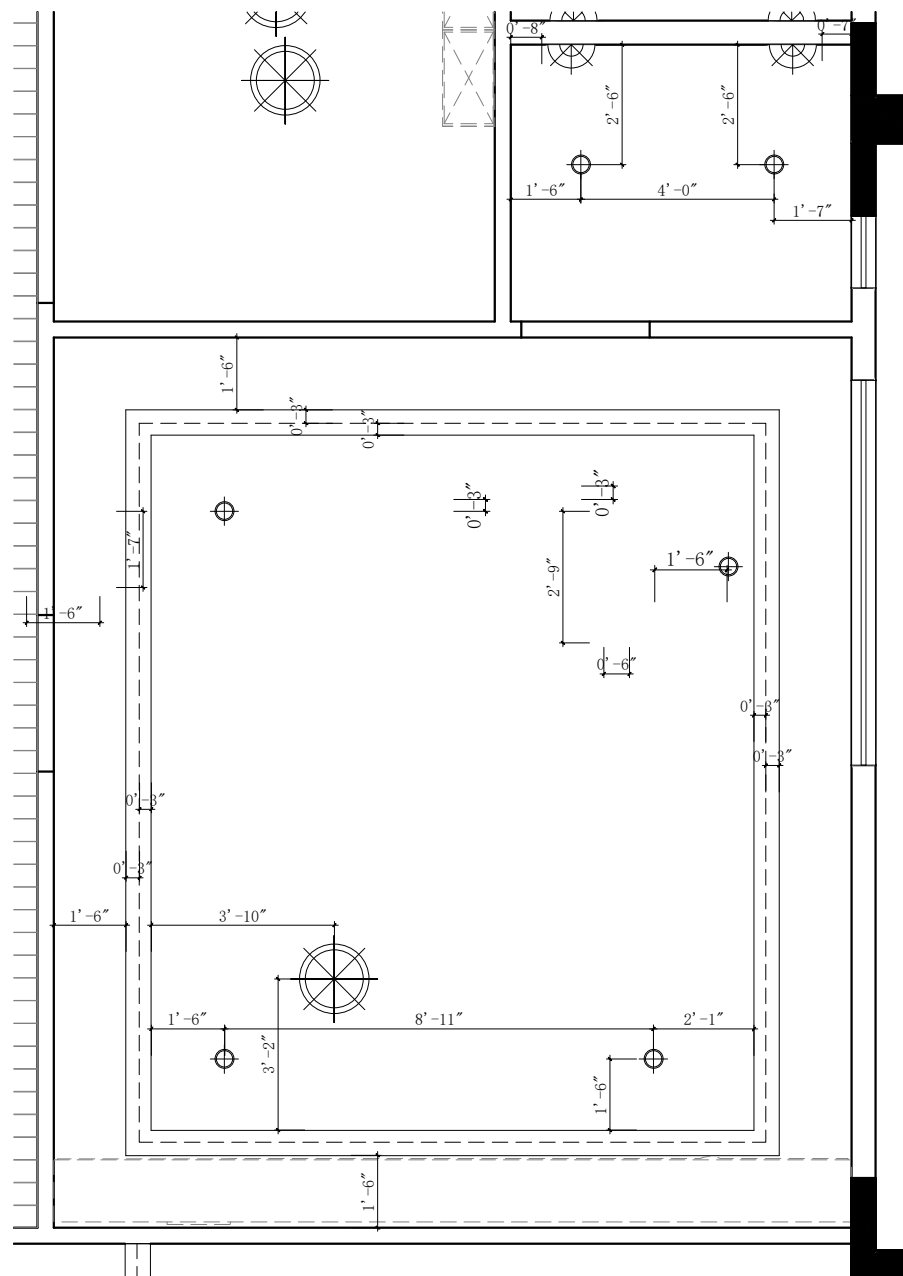
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-VD-125**



VD CEILING(1/4"=1'-0")



VD LIGHTS(1/4"=1'-0")



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



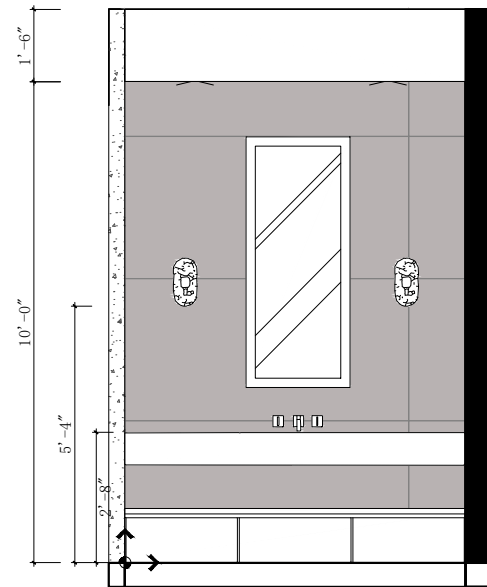
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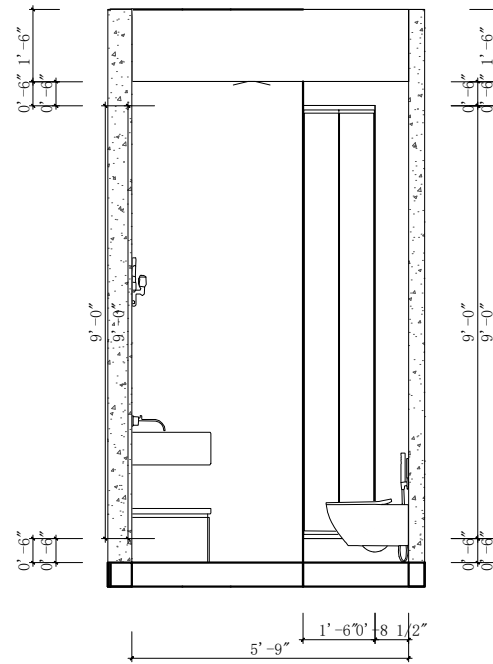
**7th FLOOR**  
VISITING DIRECTOR  
BATH

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

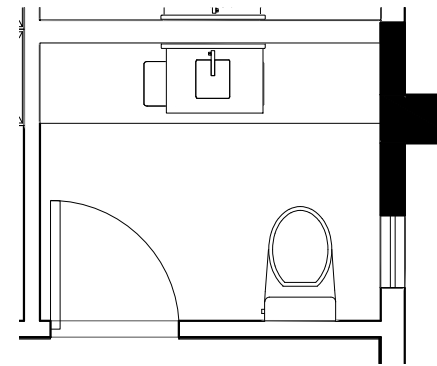
DWG. No.  
SL07AR-VD-126



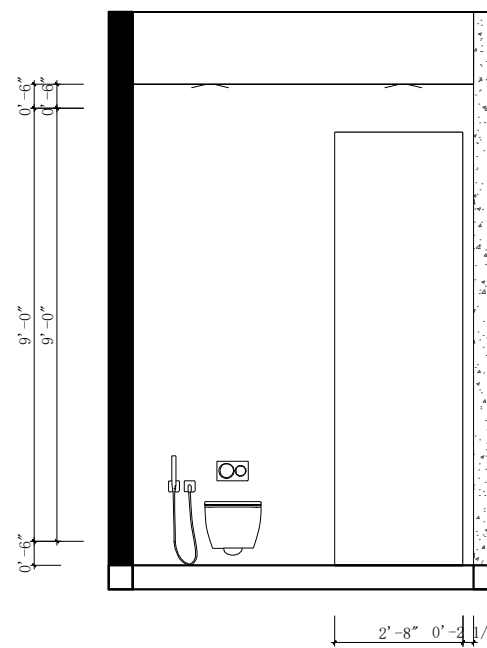
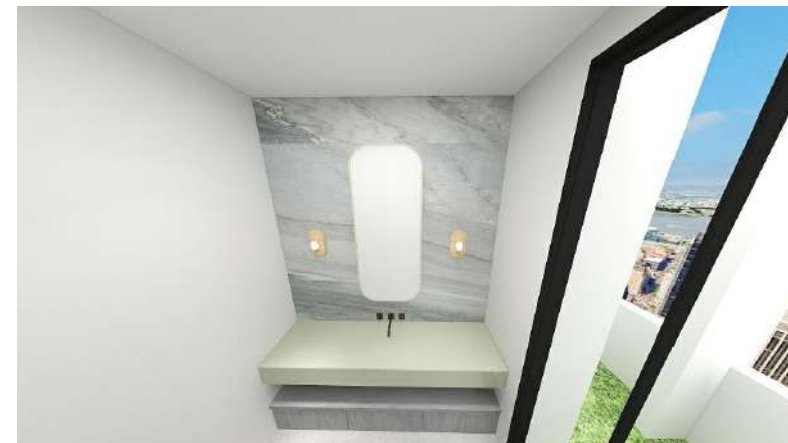
VD Bath Elevation A(1/4"=1'-0")



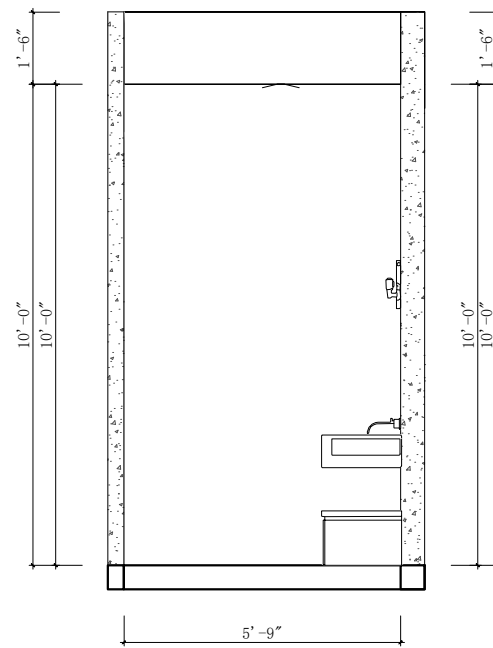
VD Bath Elevation B(1/4"=1'-0")



VD BATH(1/4"=1'-0")

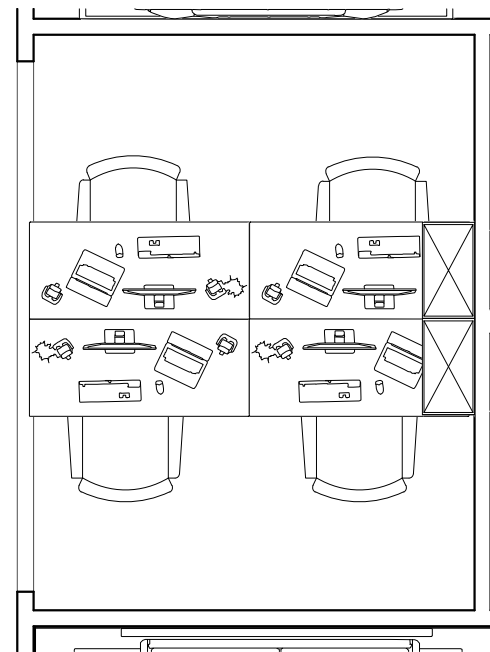
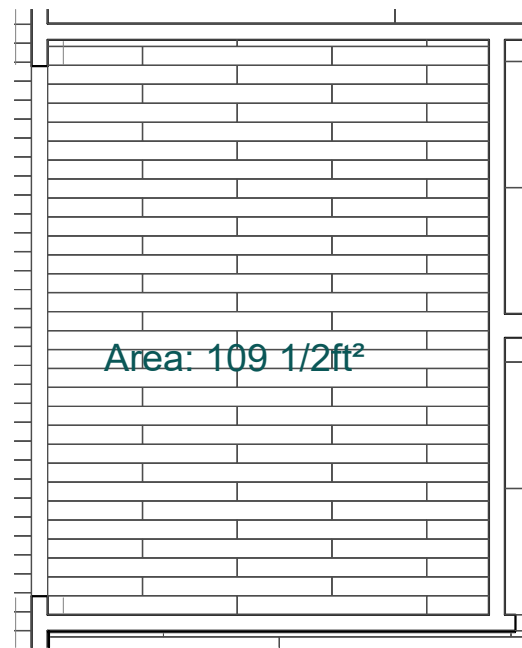


VD Bath Elevation C(1/4"=1'-0")

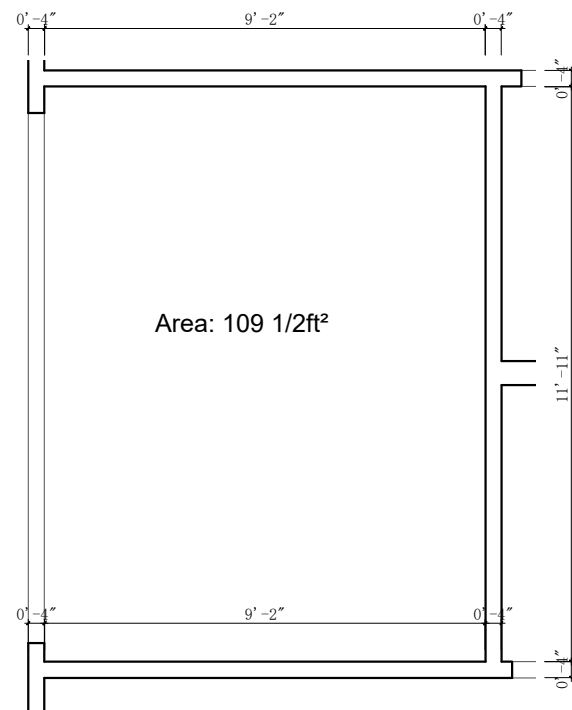


VD Bath Elevation D(1/4"=1'-0")





EXECUTIVE SECRETARIAT FLOOR F (1/4"=1'-0") EXEC SECT PLAN (1/4"=1'-0")



EXECUTIVE SECRETARIAT FLOOR P (1/4"=1'-0")



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
EXECUTIVE STAFF FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
SL07AR-ES-131

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



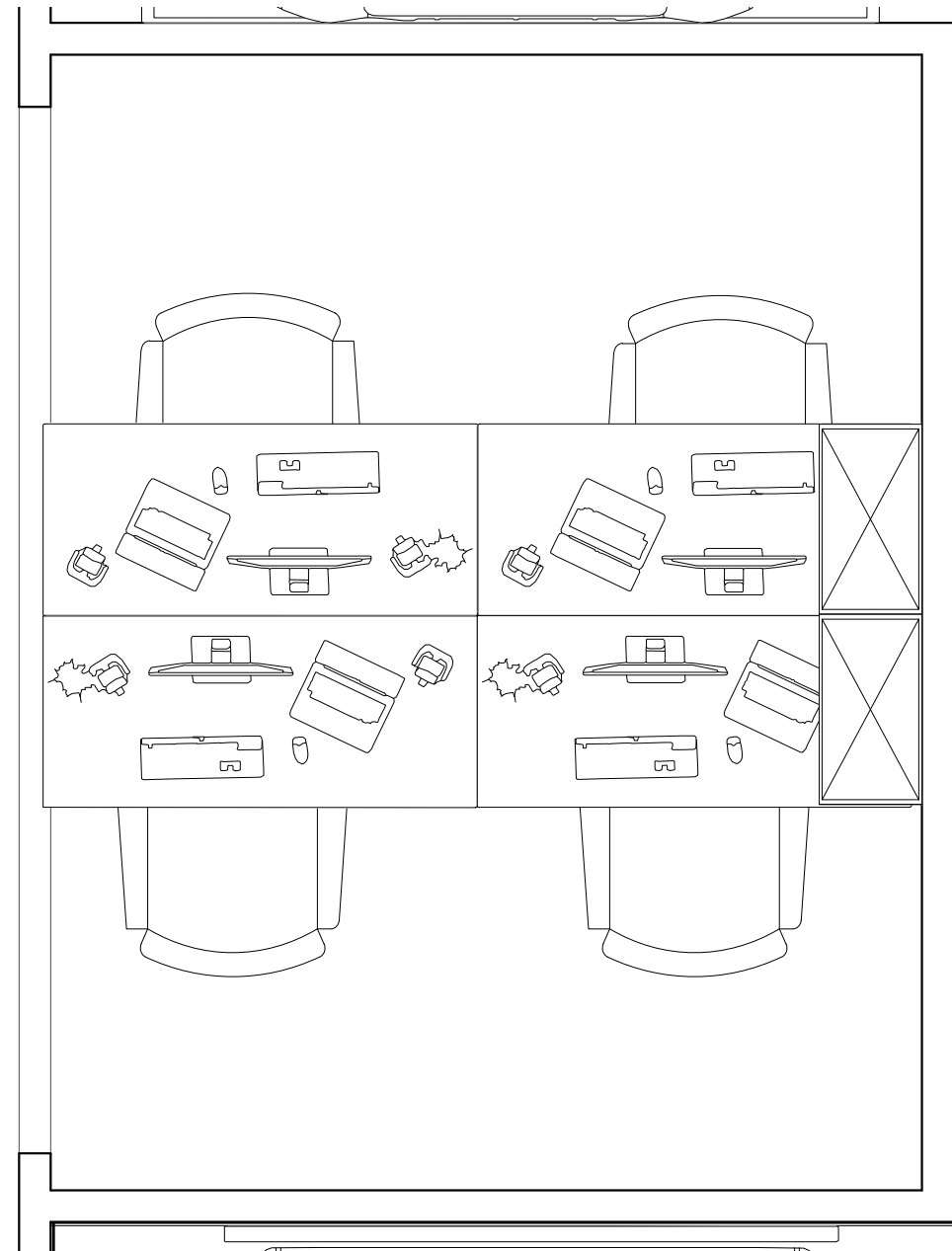
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**EXECUTIVE STAFF FURNITURE**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-ES-132**



**EXECUTIVE SECRETARIAT FURNITURE(1/2"=1'-0")**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

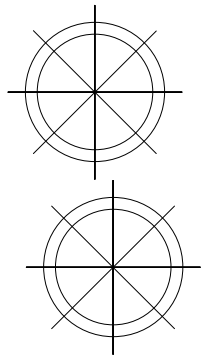
**7th FLOOR**  
**EXECUTIVE STAFF CEILING**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-ES-133**

SLAN

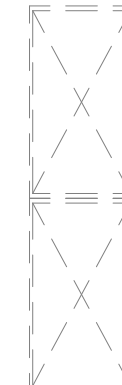
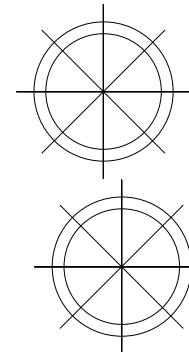


EXECUTIVE SECRETARIAT CEILING LIGHTS(1/2"=1'-0")

5'-1"

4'-7"

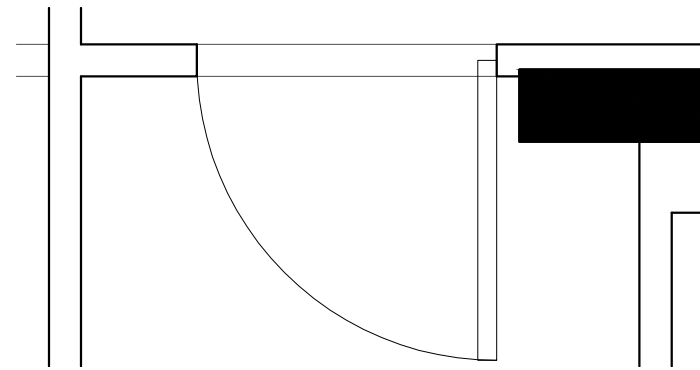
1'-10"



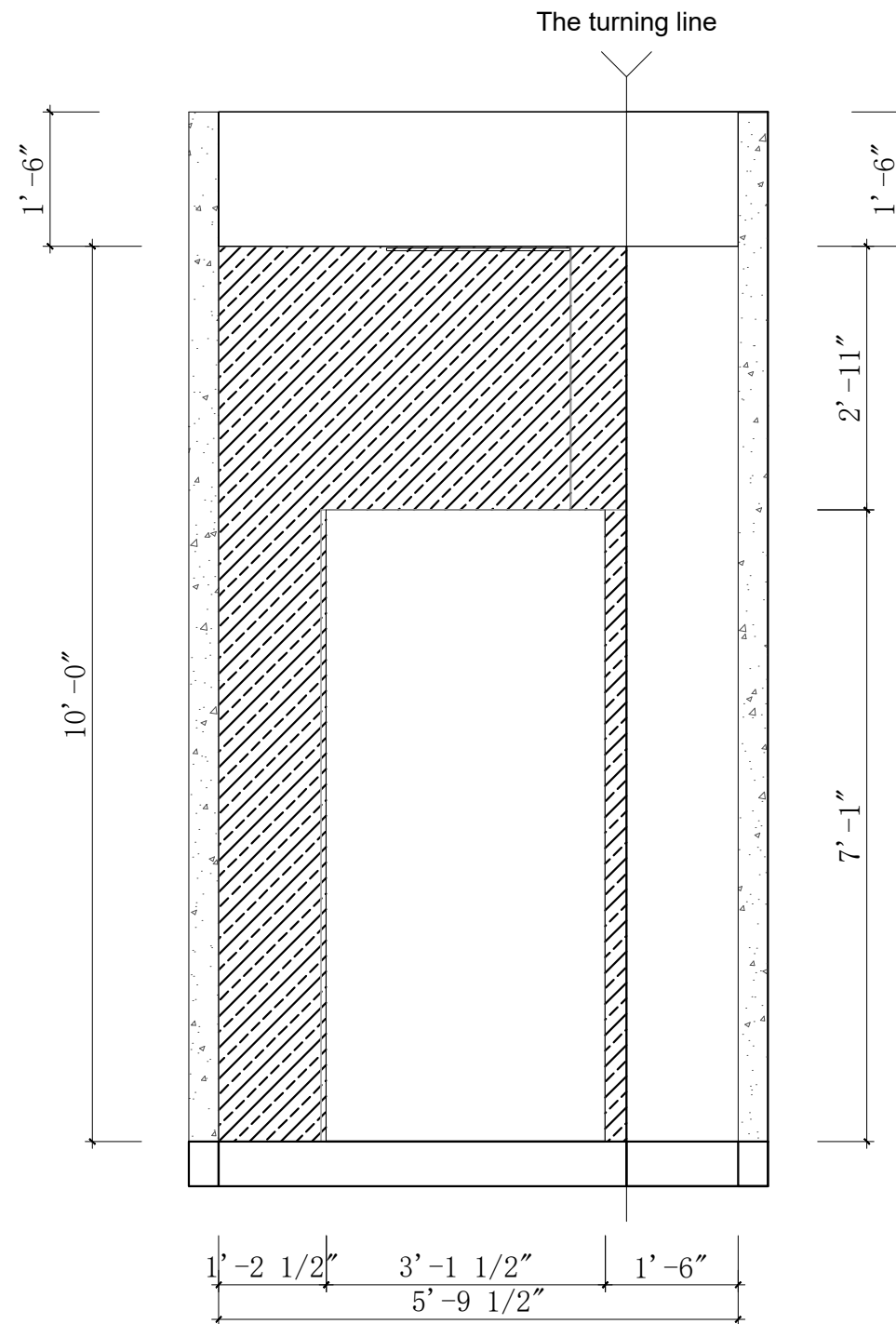
5'-0"

4'-4"

EXECUTIVE SECRETARIAT CEILING(1/2"=1'-0")



HALL WAY ELEV A(1/2"=1'-0")



Hall Way Elevation A3(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
HALL WAY ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-HW-134**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

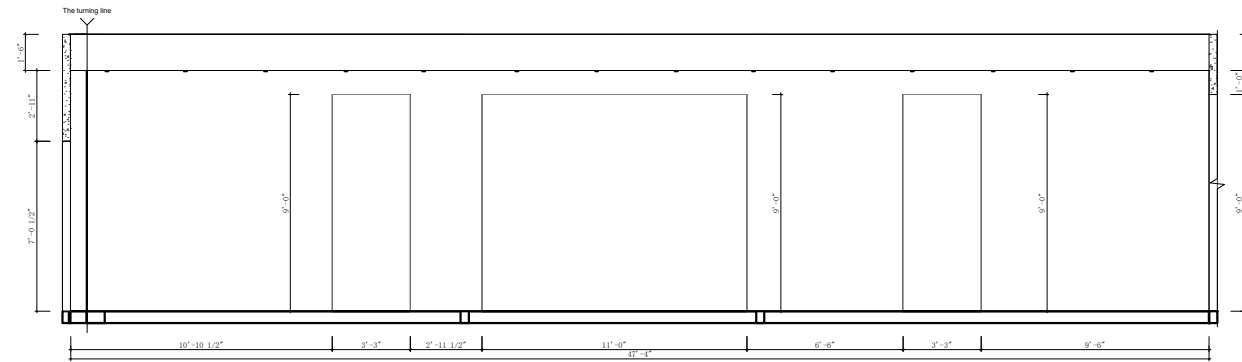
DRAWING TITLE:

**7th FLOOR**  
**HALL WAY ELEVATION B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR. 2024

DWG. No.  
**SL07AR-HW-135**



Hall Way Elevation B2(1/8"=1'-0")



HALL WAY ELEV B(1/8"=1'-0")

## GENERAL NOTES

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

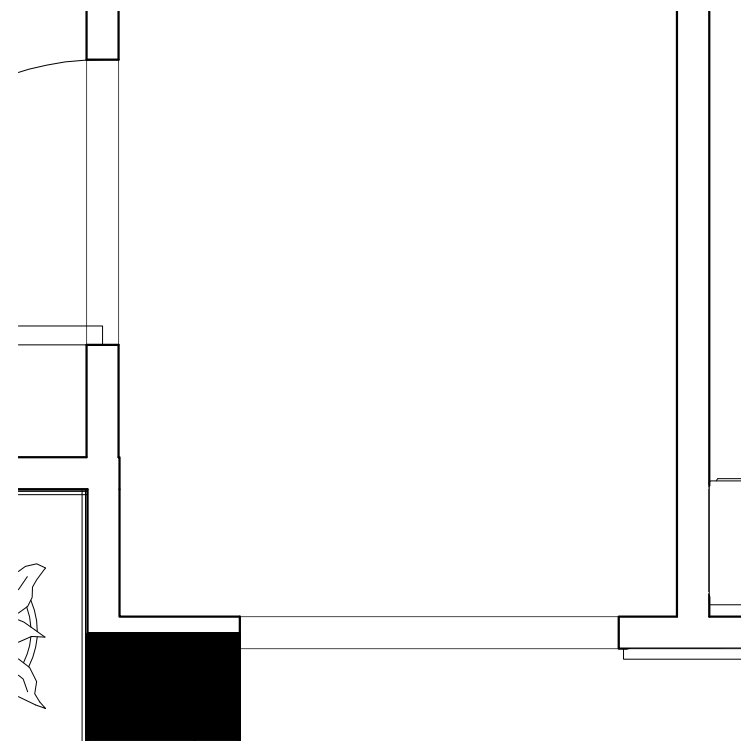
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**HALL WAY ELEVATION C**

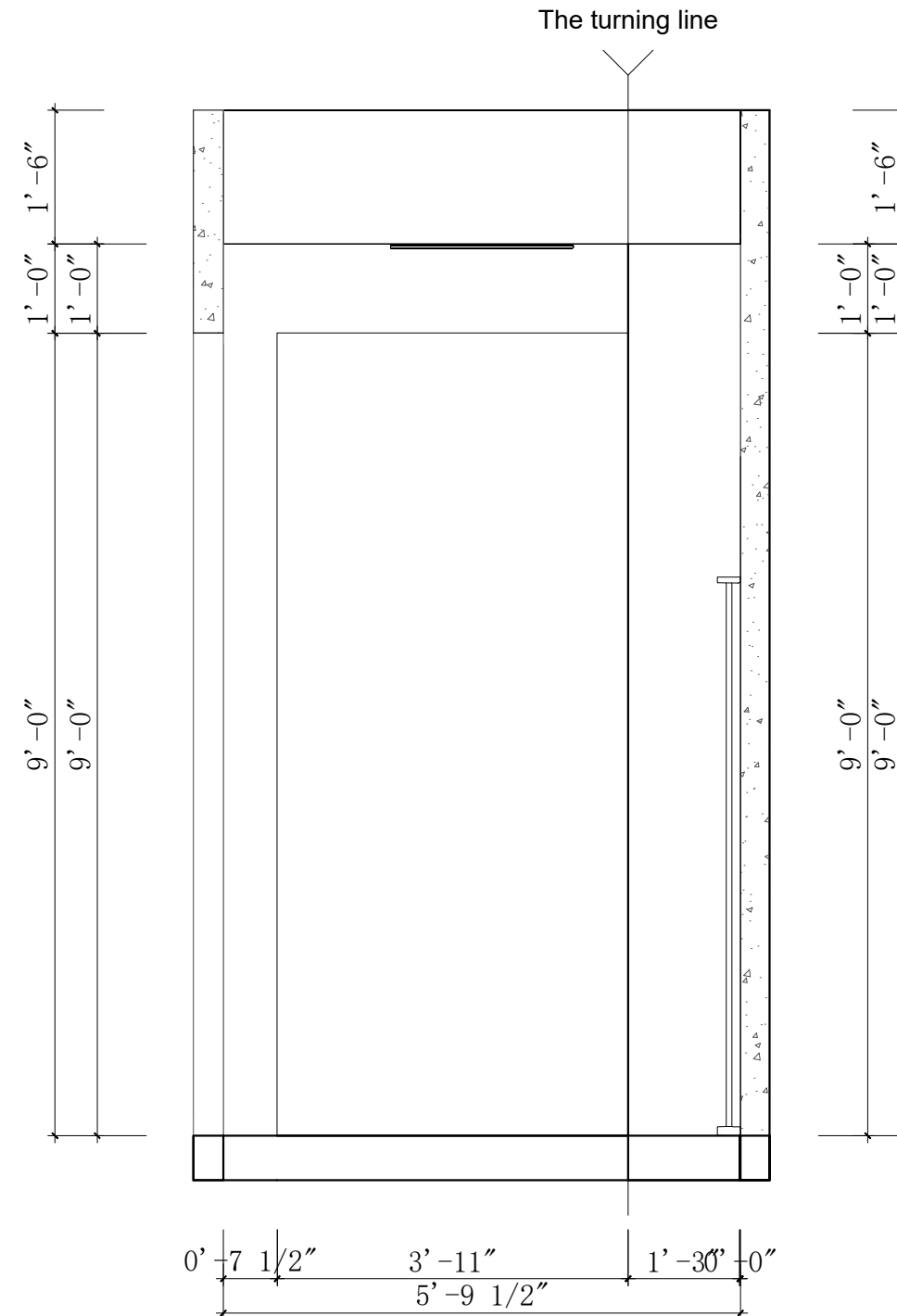
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-HW-136**



HALL WAY ELEV C(1/2"=1'-0")



Hall Way Elevation C1(1/2"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



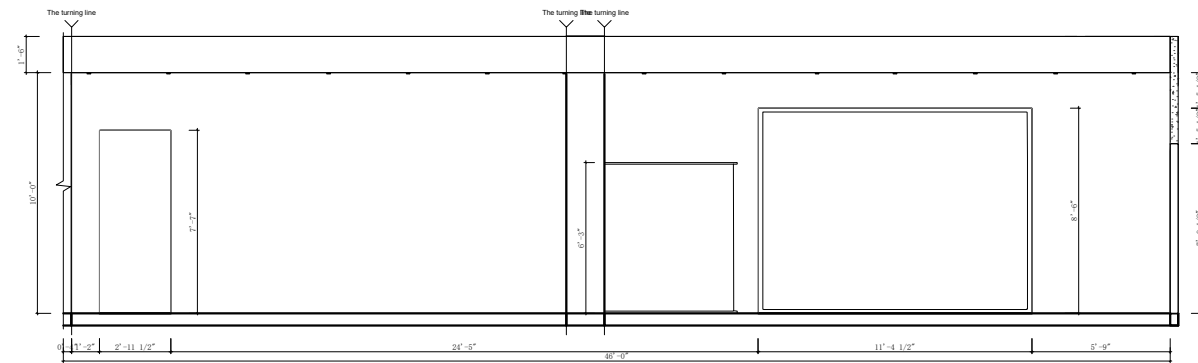
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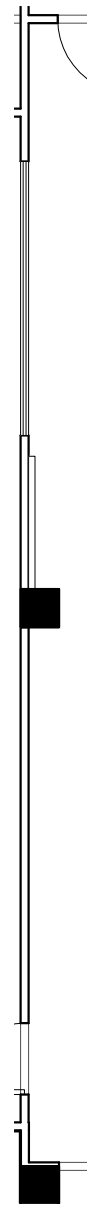
**7th FLOOR**  
**HALL WAY ELEVATION D**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-HW-137**



Hall Way Elevation D(1/8"=1'-0")



HALL WAY ELEV D(1/8"=1'-0")



## GENERAL NOTES

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

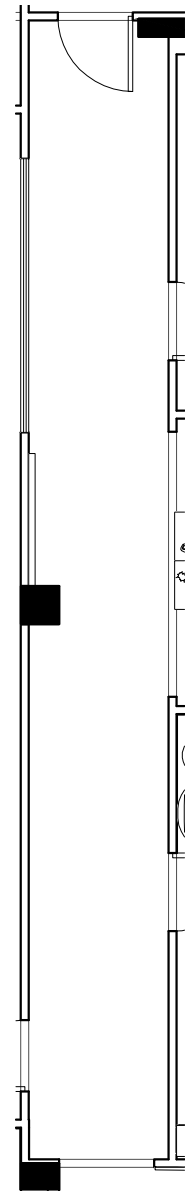
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**7th FLOOR**  
**HALL WAY FLOOR**

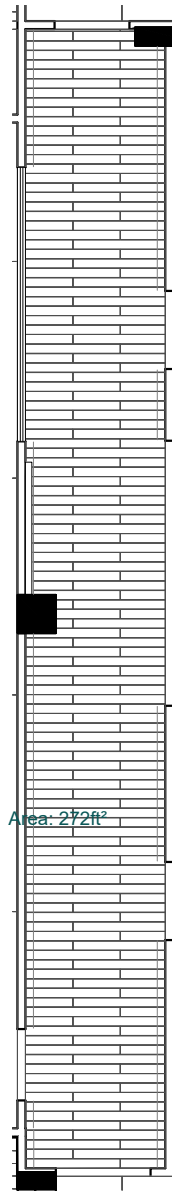
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

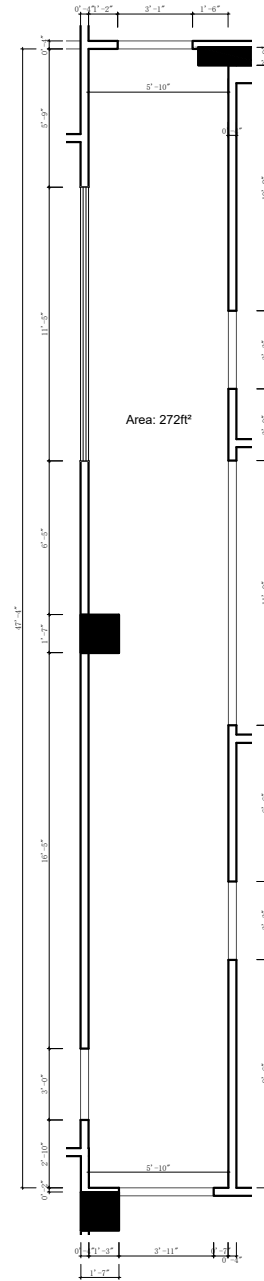
DWG. No.  
**SL07AR-HW-138**



HALL WAY FLOOR (1/8"=1'-0")



Area: 272ft<sup>2</sup>



Area: 272ft<sup>2</sup>

HALL WAY FLOOR P (1/8"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

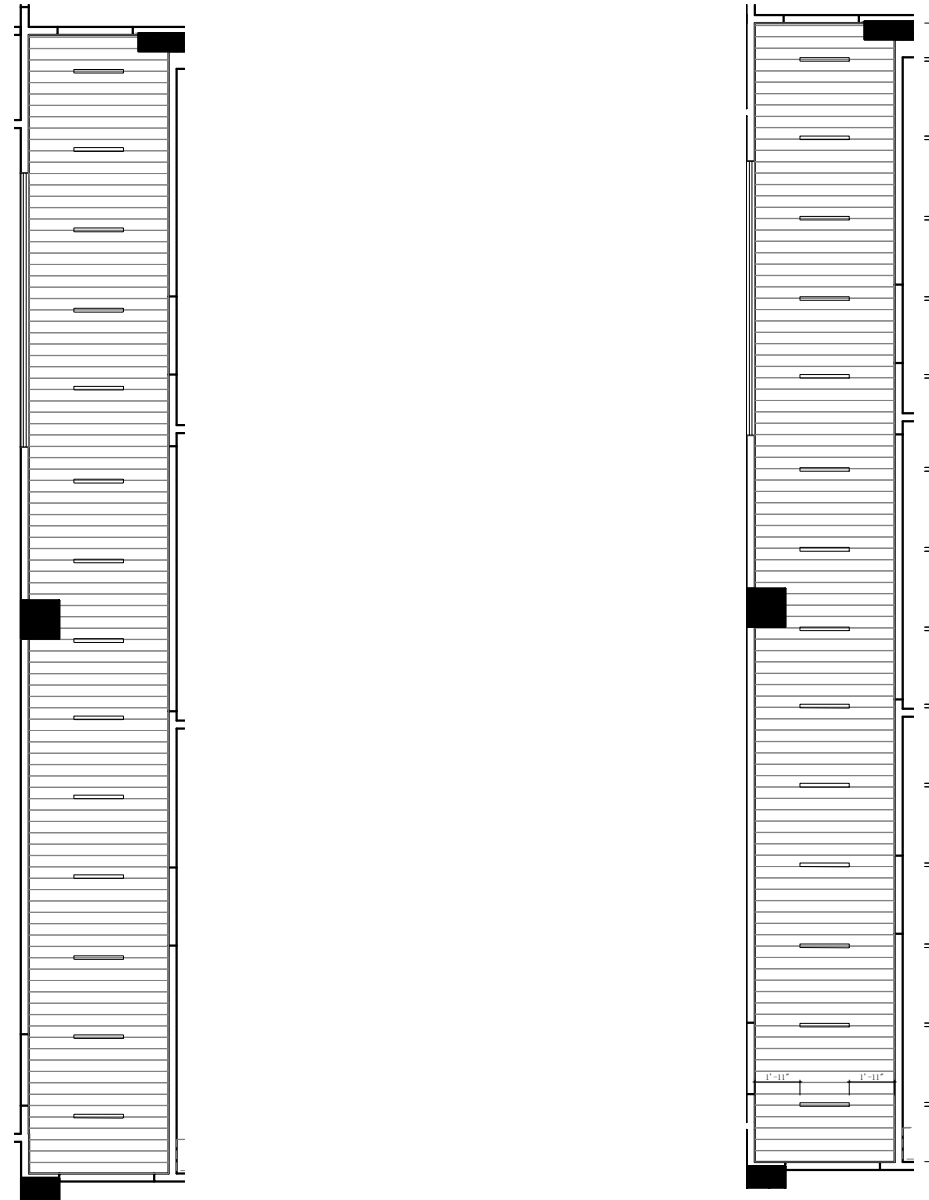
DRAWING TITLE:

**7th FLOOR**  
**HALL WAY CEILING**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-HW-139**



HALL WAY CEILING(1/8"=1'-0") HALL WAY CEILING LIGHTS(1/8"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

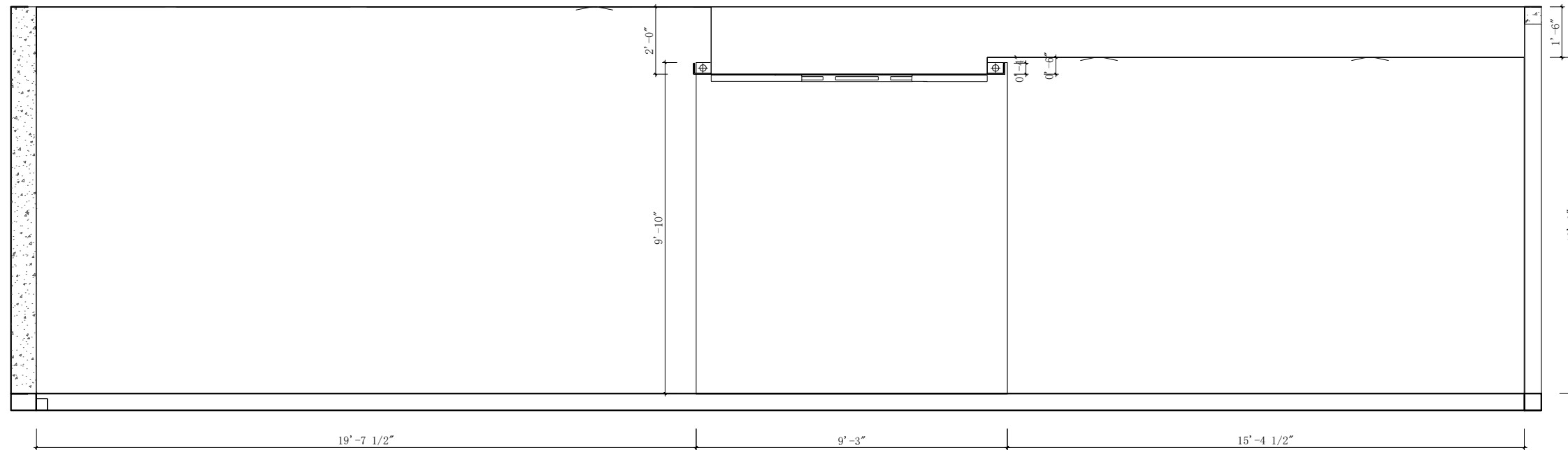
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**7th FLOOR**  
RECEPTION LOBBY  
ELEVATION A

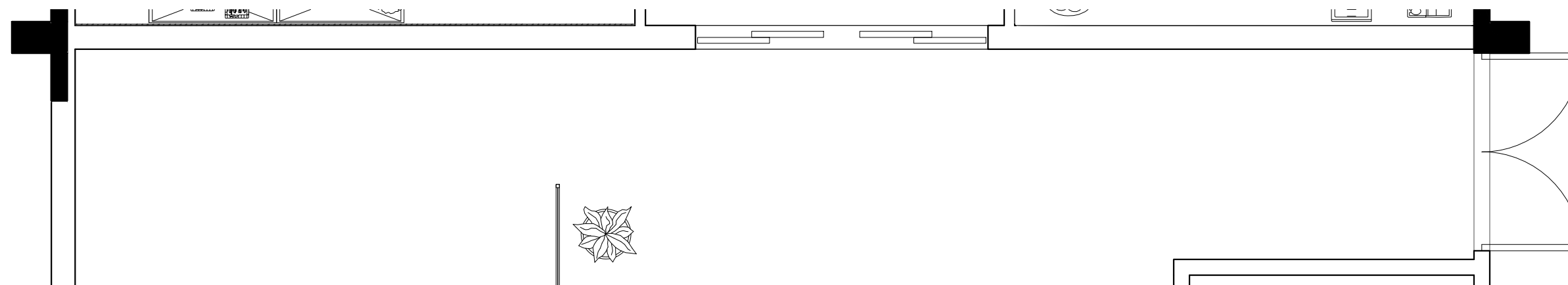
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR. 2024

DWG. No.  
**SL07AR-RL-140**



Lobby Area Elevation A(1/4"=1'-0")



RECEPTION ELEV A(1/4"=1'-0")



## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

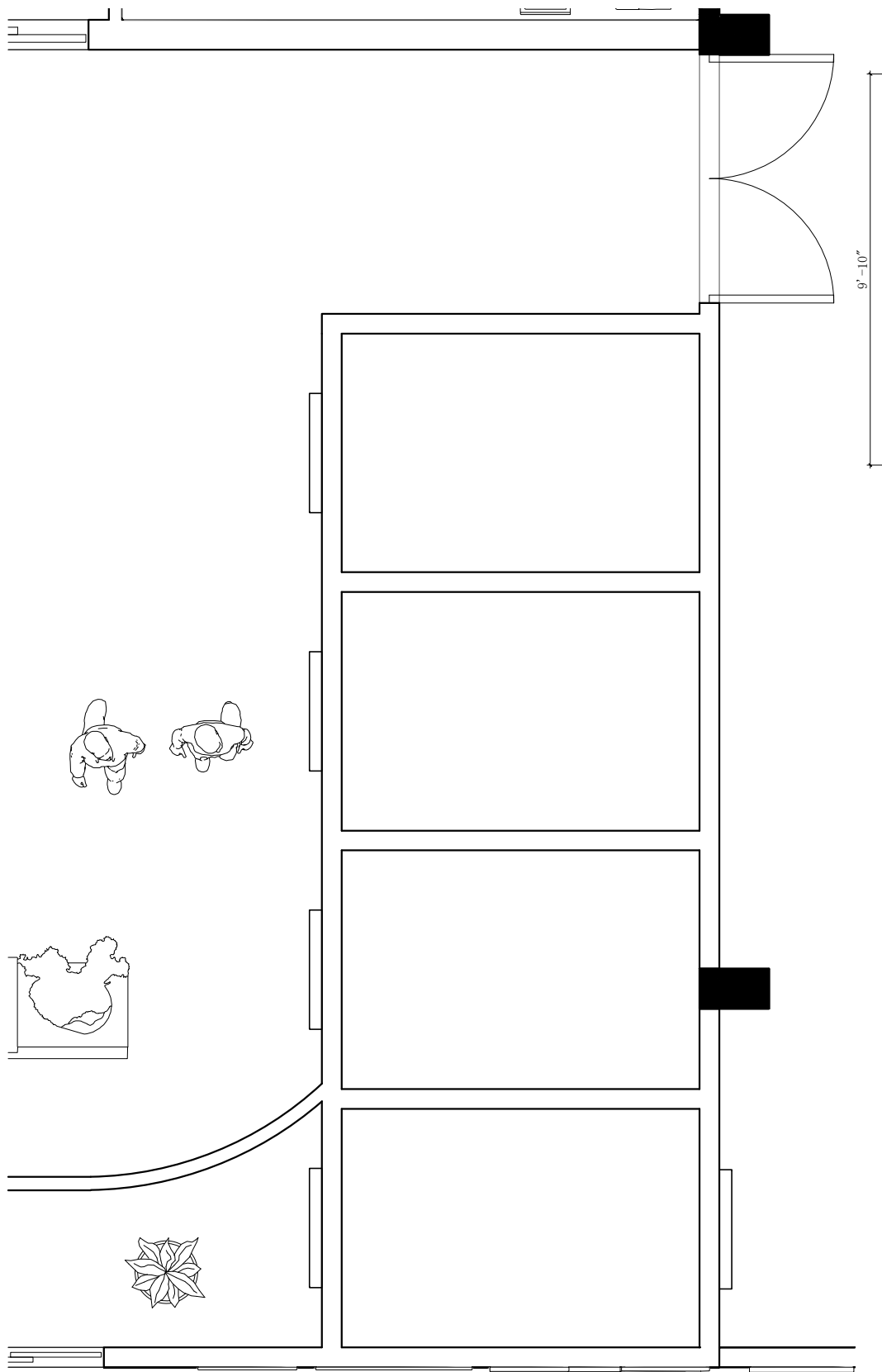
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**7th FLOOR**  
RECEPTION LOBBY  
ELEVATION B

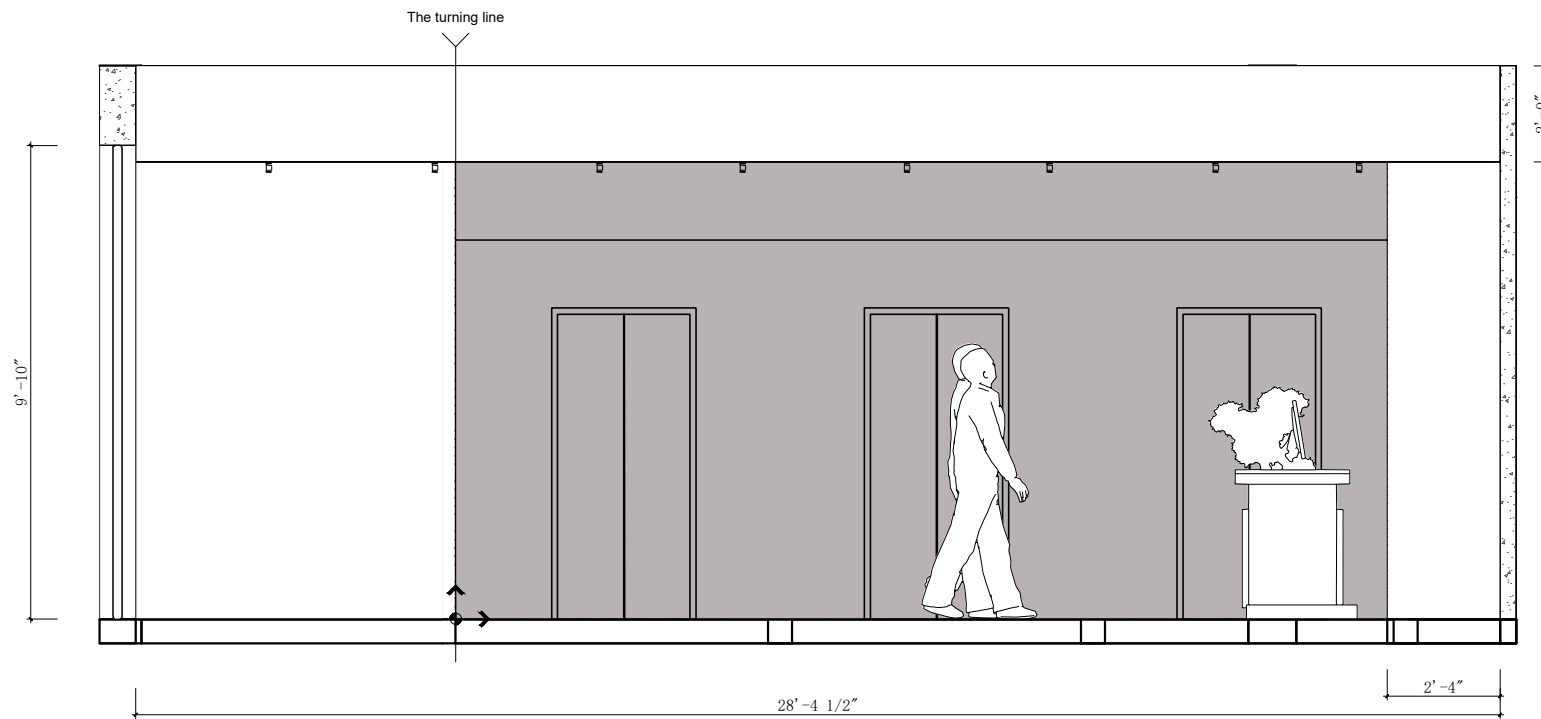
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-RL-141**



RECEPTION ELEV B(1/4"=1'-0")



Lobby Area Elevation B(1/4"=1'-0")



## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

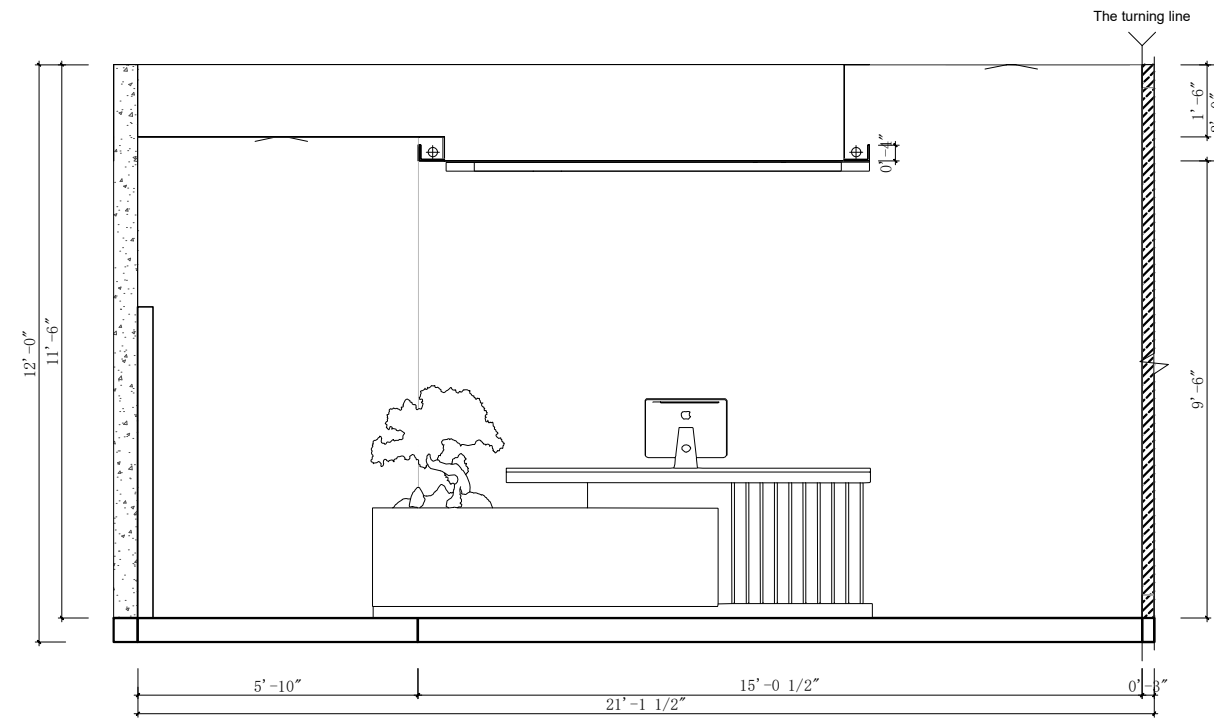
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RECEPTION LOBBY  
ELEVATION C

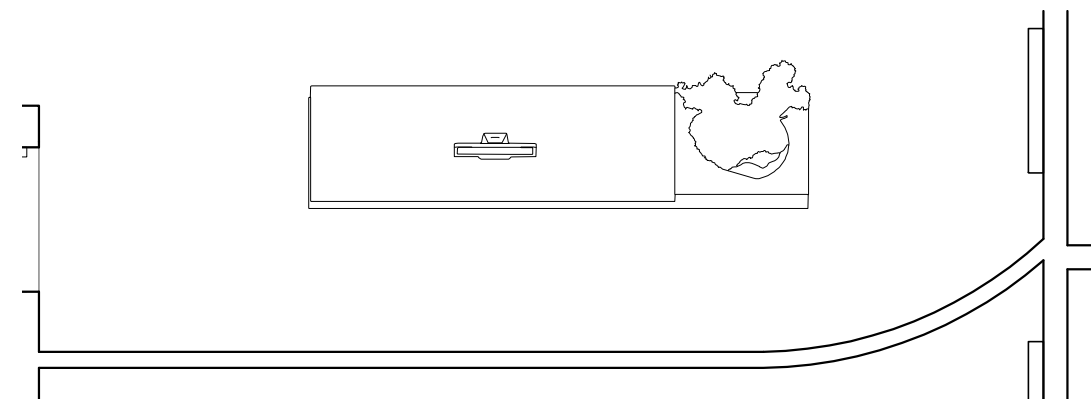
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-RL-142**



Lobby Area Elevation C(1/4"=1'-0")



RECEPTION ELEV C(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

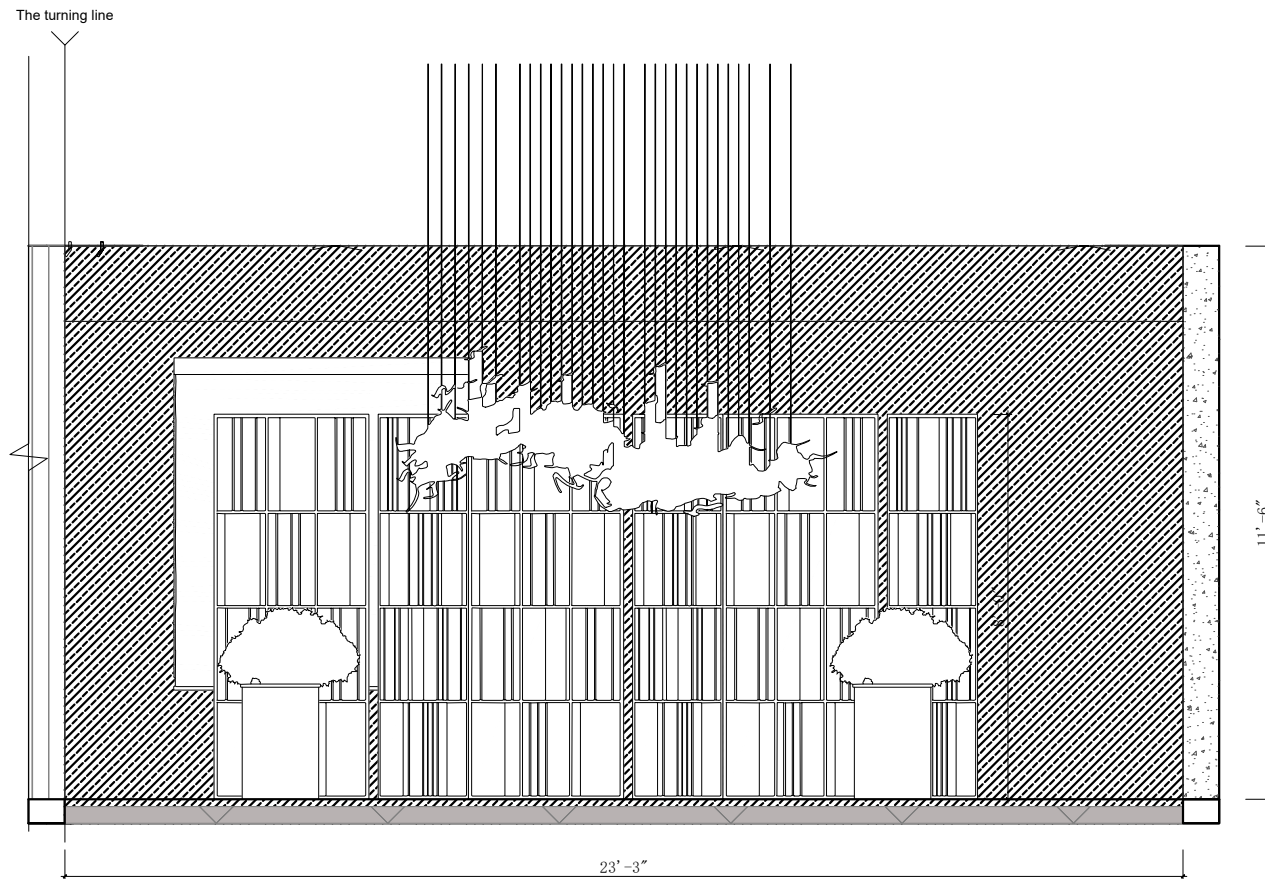
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**RECEPTION LOBBY**  
**ELEVATION D**

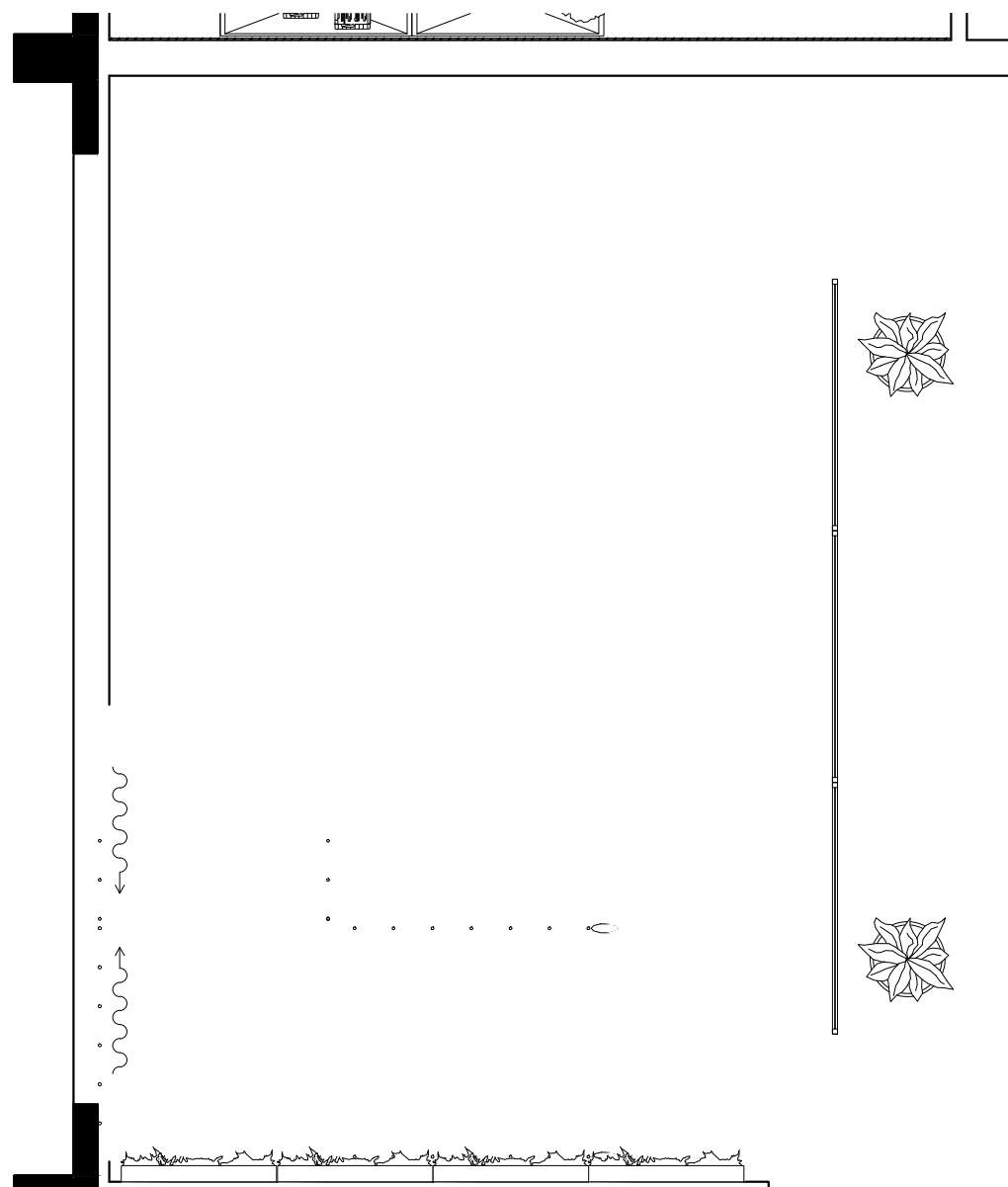
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL07AR-RL-143**



Lobby Area Elevation D(1/4"=1'-0")



RECEPTION ELEV D(1/4"=1'-0")



## GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

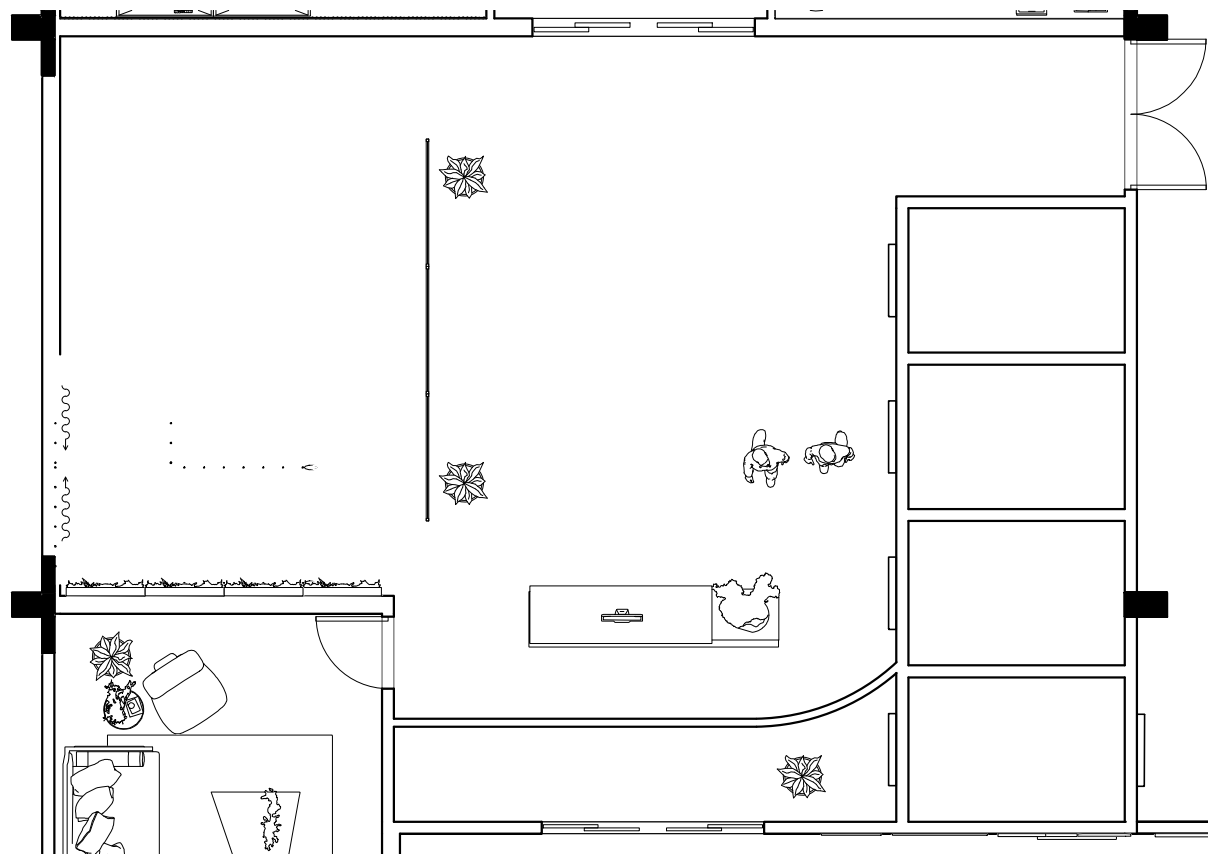
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**7th FLOOR**  
**RECEPTION LOBBY FLOOR**

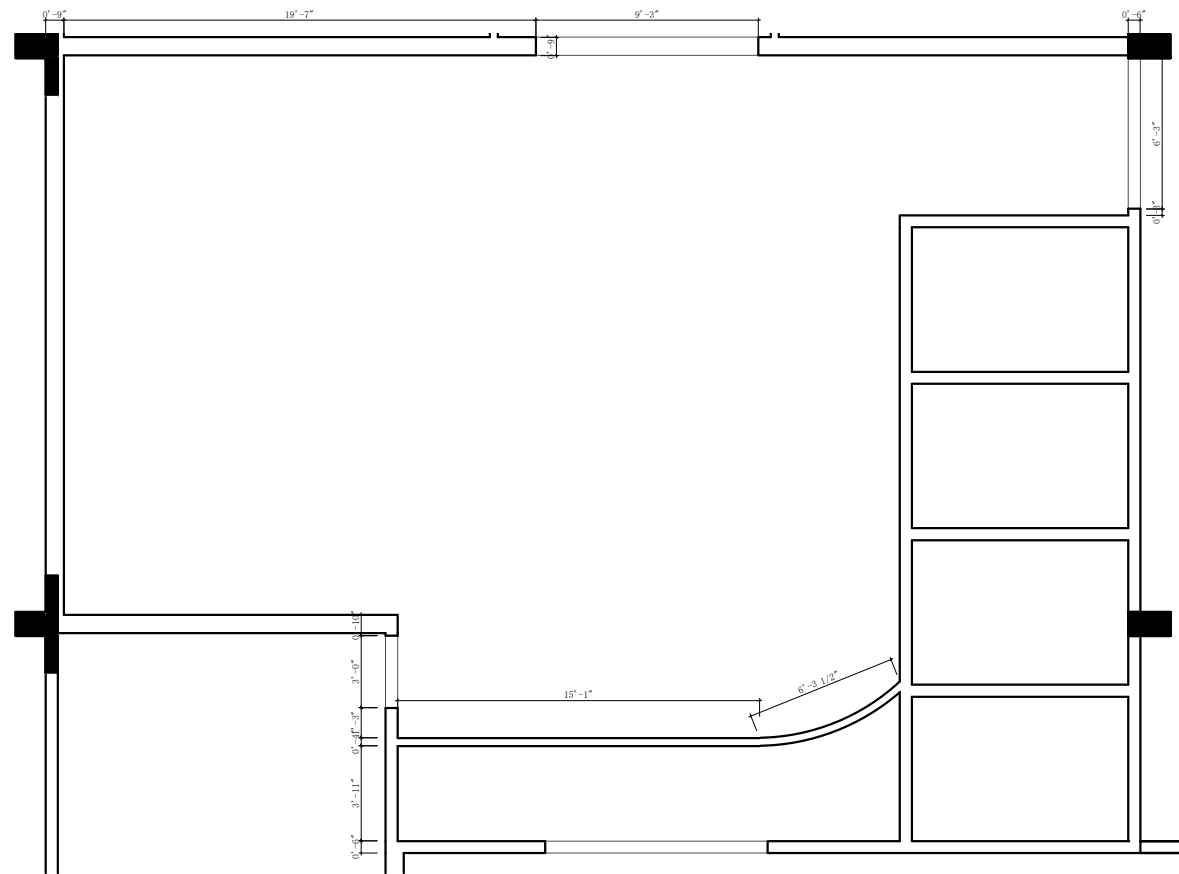
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

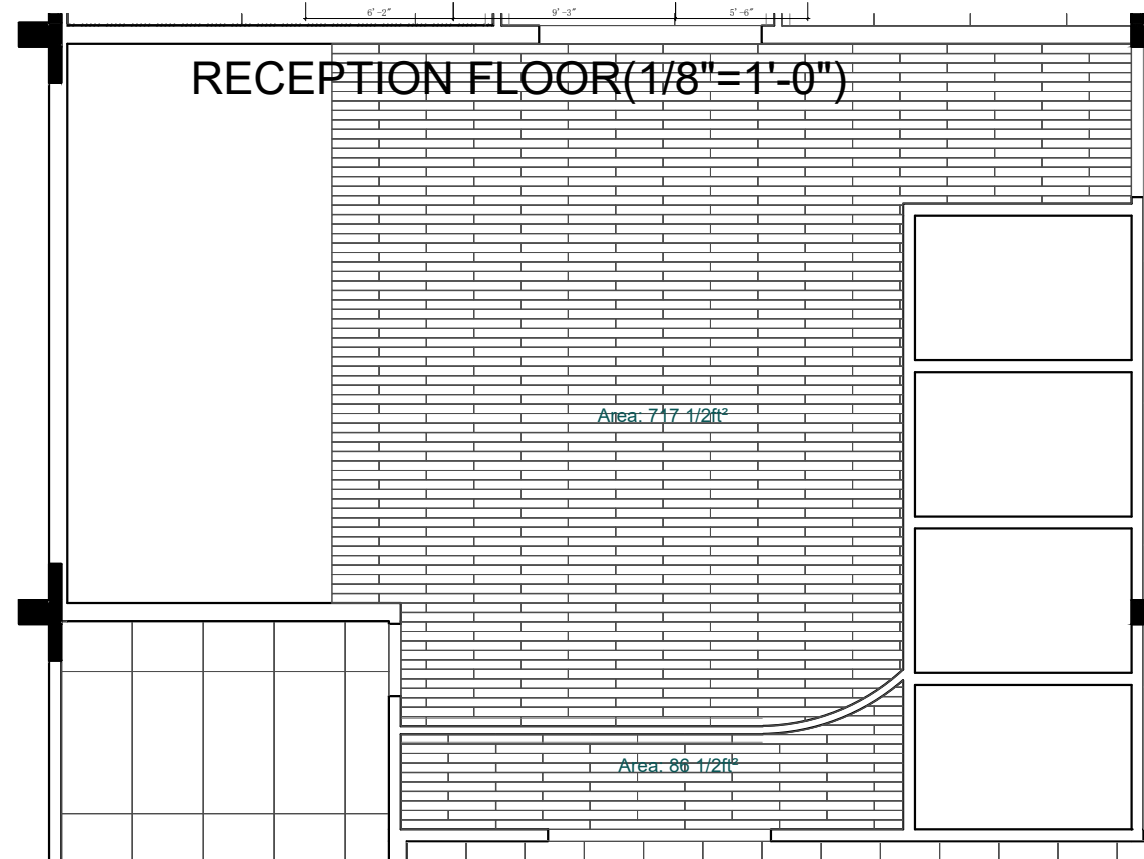
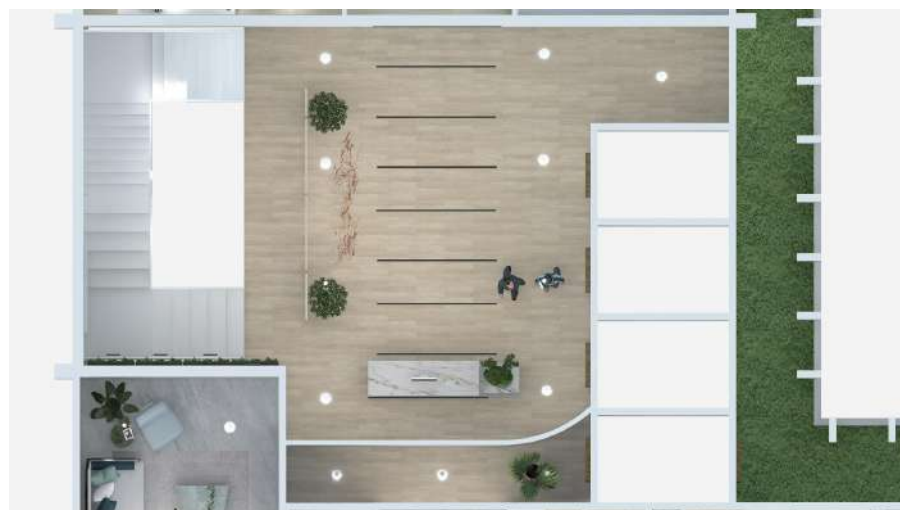
DWG. No.  
**SL07AR-RL-144**



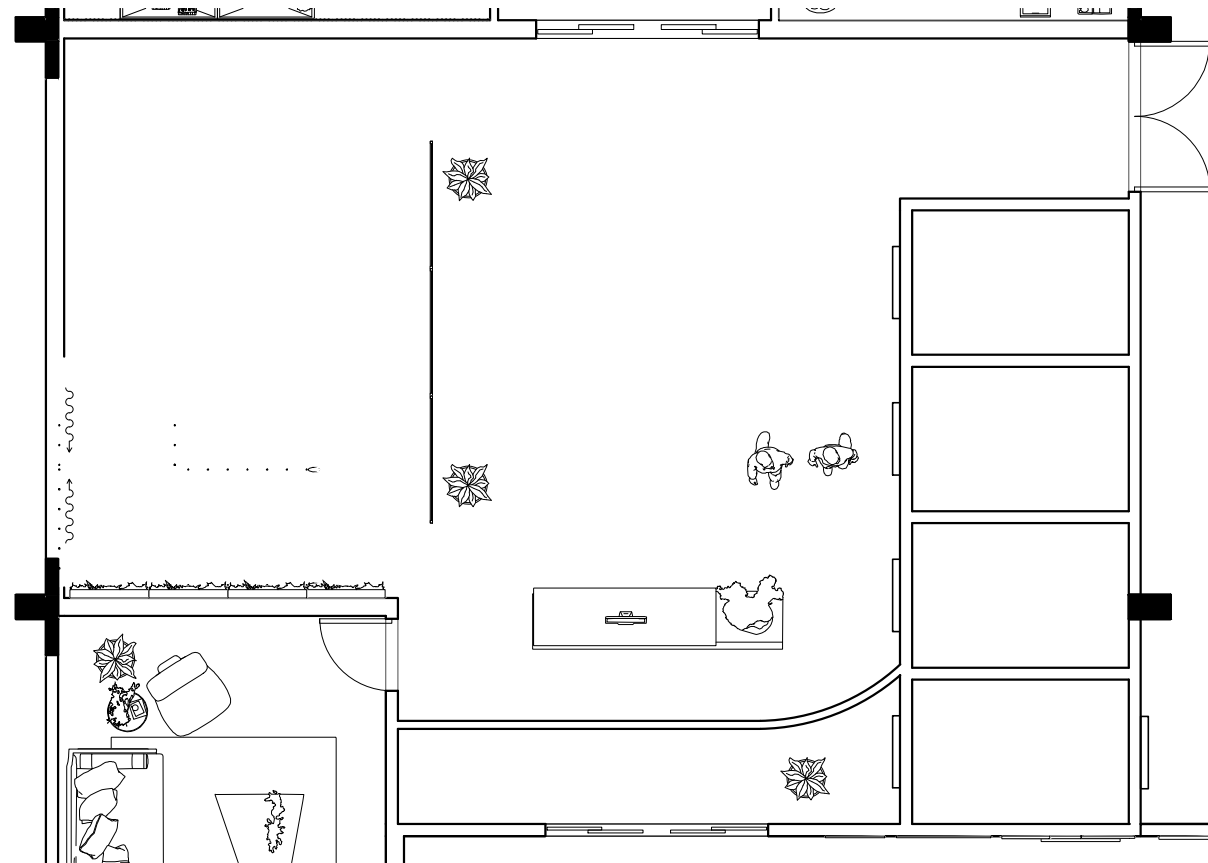
RECEPTION PLAN (1/8"=1'-0")



RECEPTION FLOOR (1/8"=1'-0")



RECEPTION FLOOR F (1/8"=1'-0")



RECEPTION FURNITURE(1/8"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

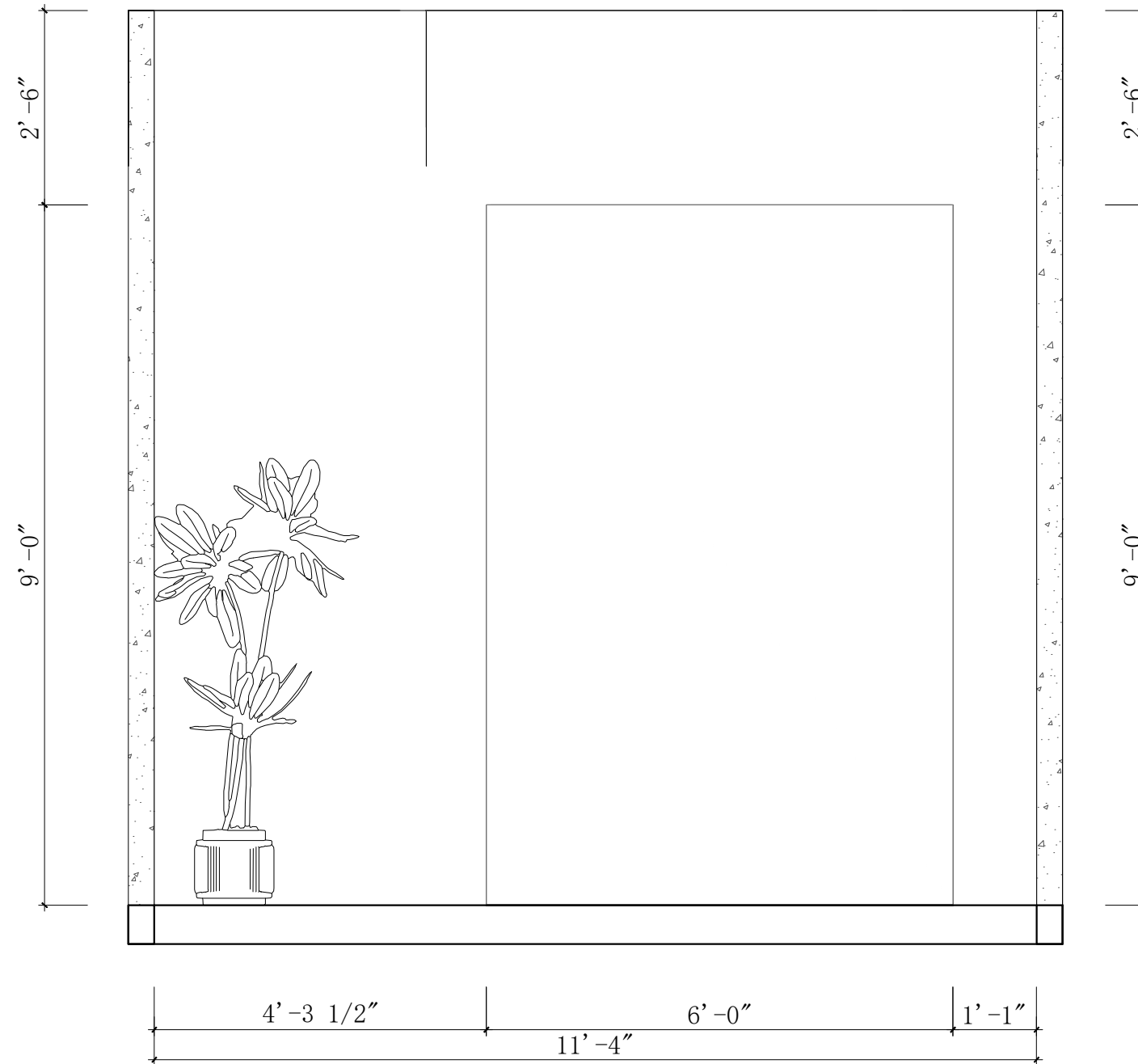
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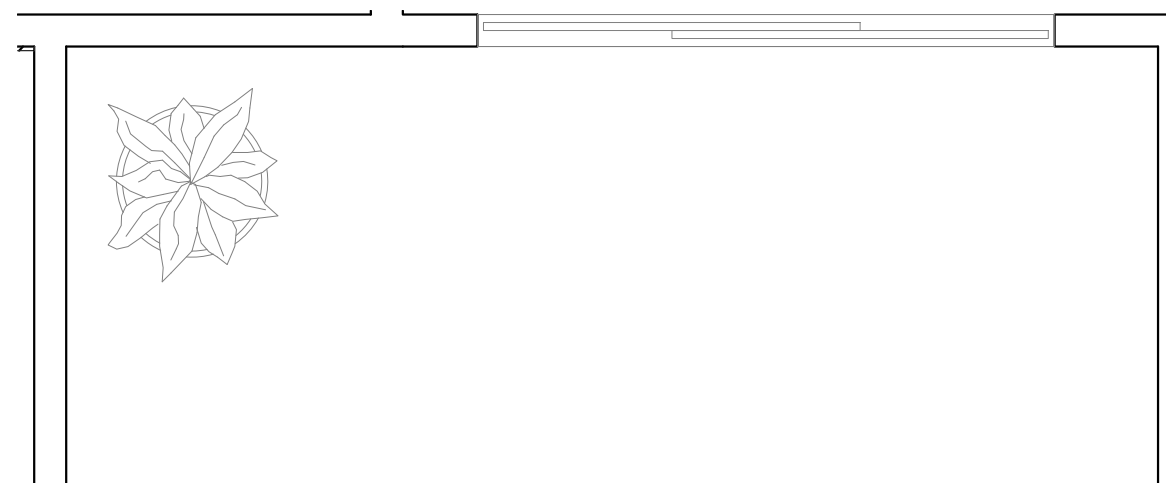
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL07AR-RL-145**





Small wing Foyer Elevation A(1/2"=1'-0")



SW FOYER ELEV A(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR  
ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING  
NO. 52-C, LANE NO. 01, AL-MURTAZA  
COMMERCIAL, PHASE VIII, D.H.A.,  
KARACHI.

PROJECT:

**RENOVATION OF STATE  
LIFE BUILDING No. 9**  
KARACHI



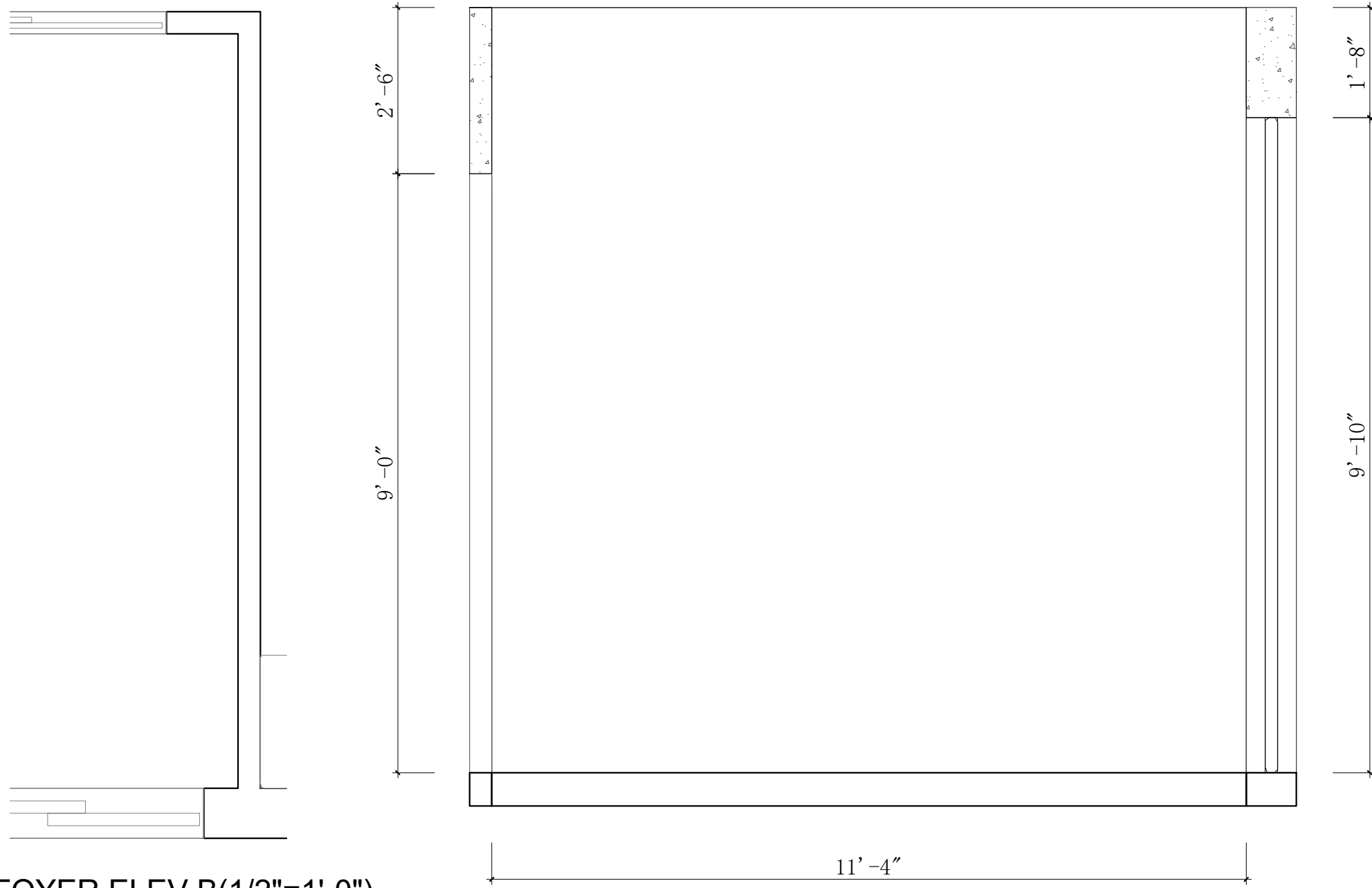
COMMENTS:

DRAWING TITLE:

**7th FLOOR  
FOYER ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR-2024

DWG. No.  
**SL07AR-FO-147**



SW FOYER ELEV B(1/2"=1'-0")

Small wing Foyer Elevation B(1/2"=1'-0")



**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



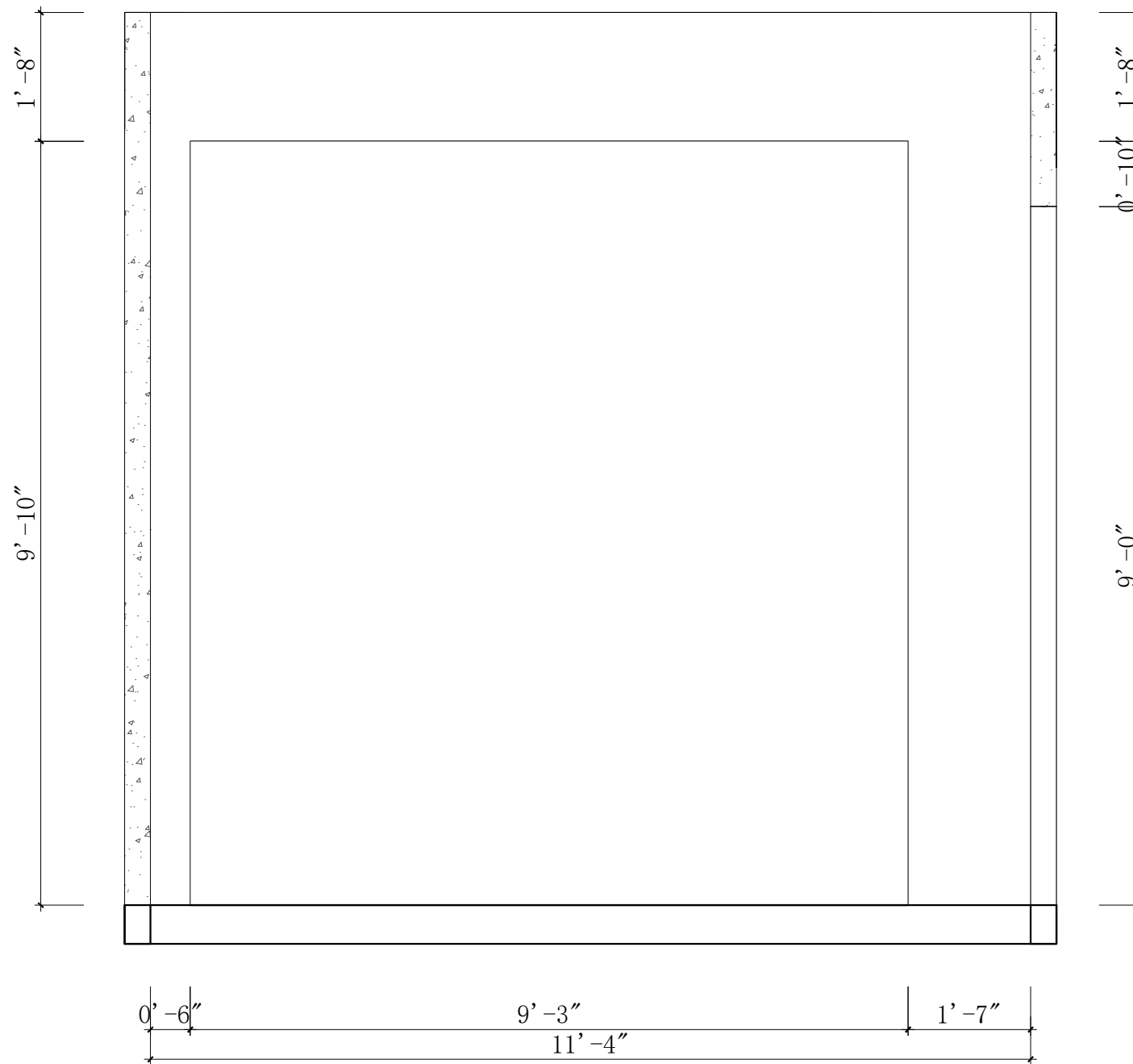
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**FOYER ELEVATION B**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR-2024

DWG. No.  
**SL07AR-FO-148**



Small wing Foyer Elevation C(1/2"=1'-0")



SW FOYER ELEV C(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



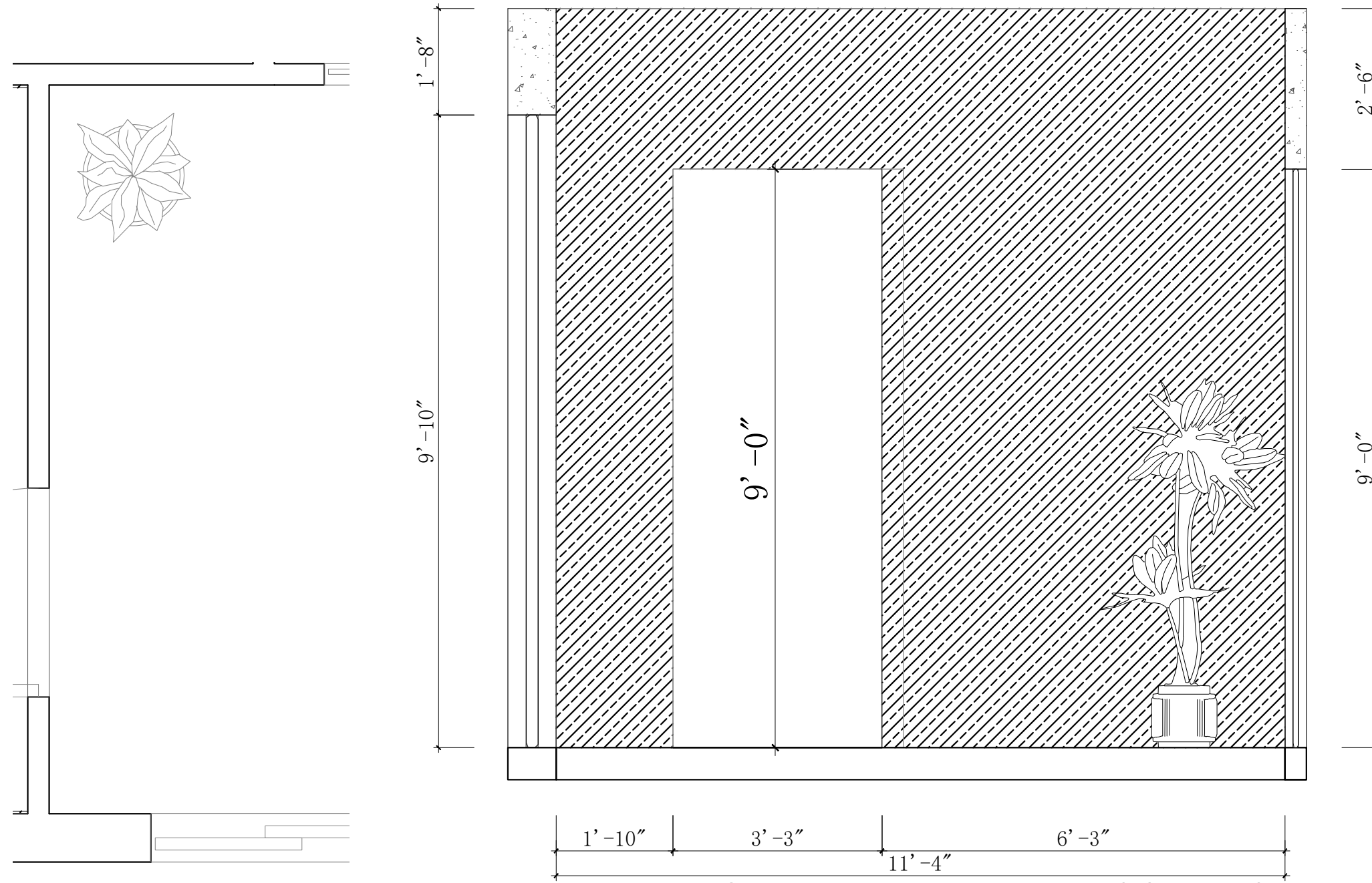
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**FOYER ELEVATION C**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR-2024

DWG. No.  
**SL07AR-FO-149**



SW FOYER ELEV D(1/2"=1'-0")

Small wing Foyer Elevation D(1/2"=1'-0")



**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR  
ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING  
NO. 52-C, LANE NO. 01, AL-MURTAZA  
COMMERCIAL, PHASE VIII, D.H.A.,  
KARACHI.

PROJECT:

**RENOVATION OF STATE  
LIFE BUILDING No. 9**  
KARACHI

**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:  
**7th FLOOR  
FOYER ELEVATION D**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR-2024

DWG. No.  
**SL07AR-FO-150**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

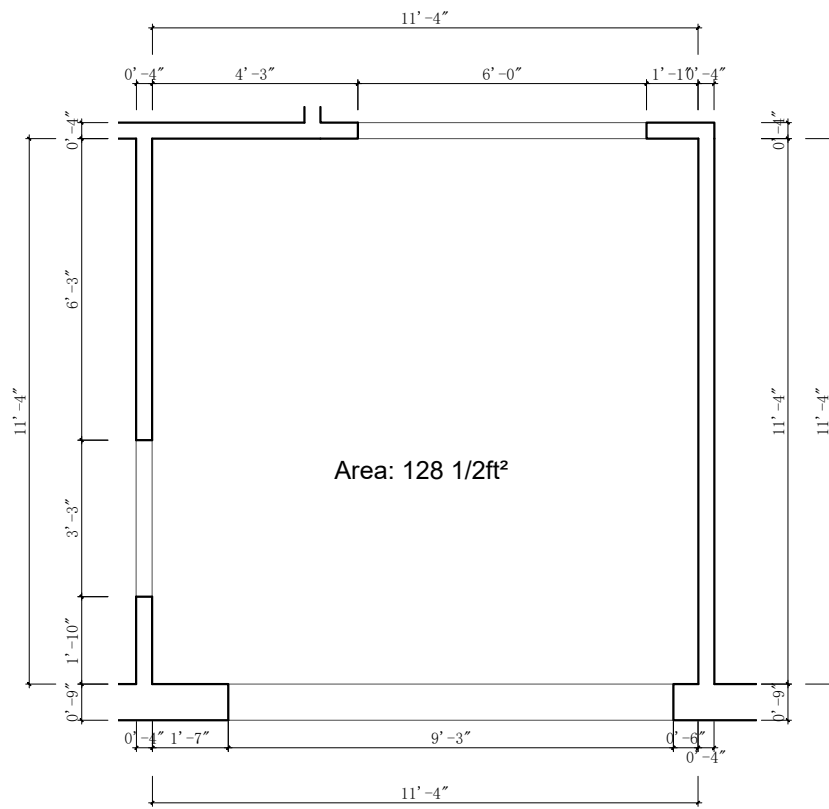
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**7th FLOOR**  
**FOYER FLOOR**

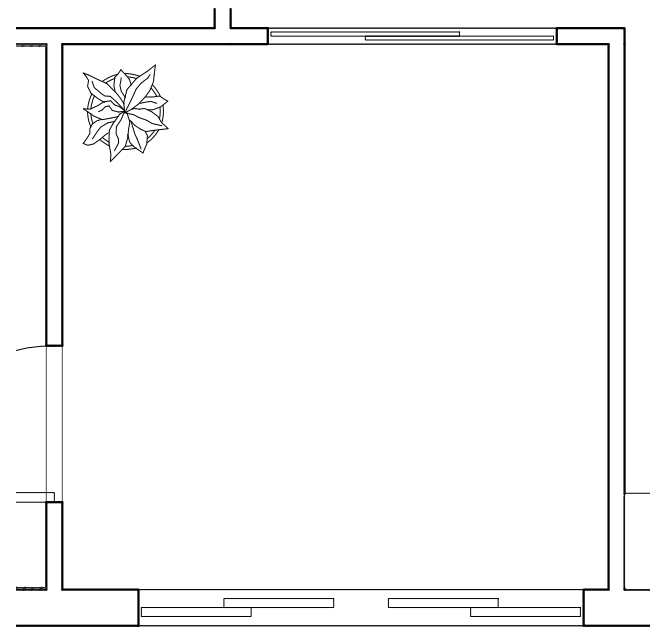
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR-2024

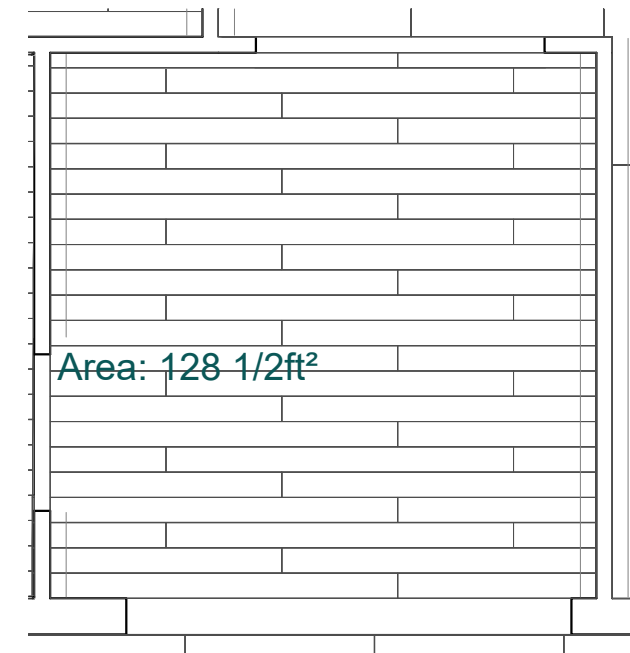
DWG. No.  
**SL07AR-FO-151**



SW FOYER FLOOR(1/4"=1'-0")

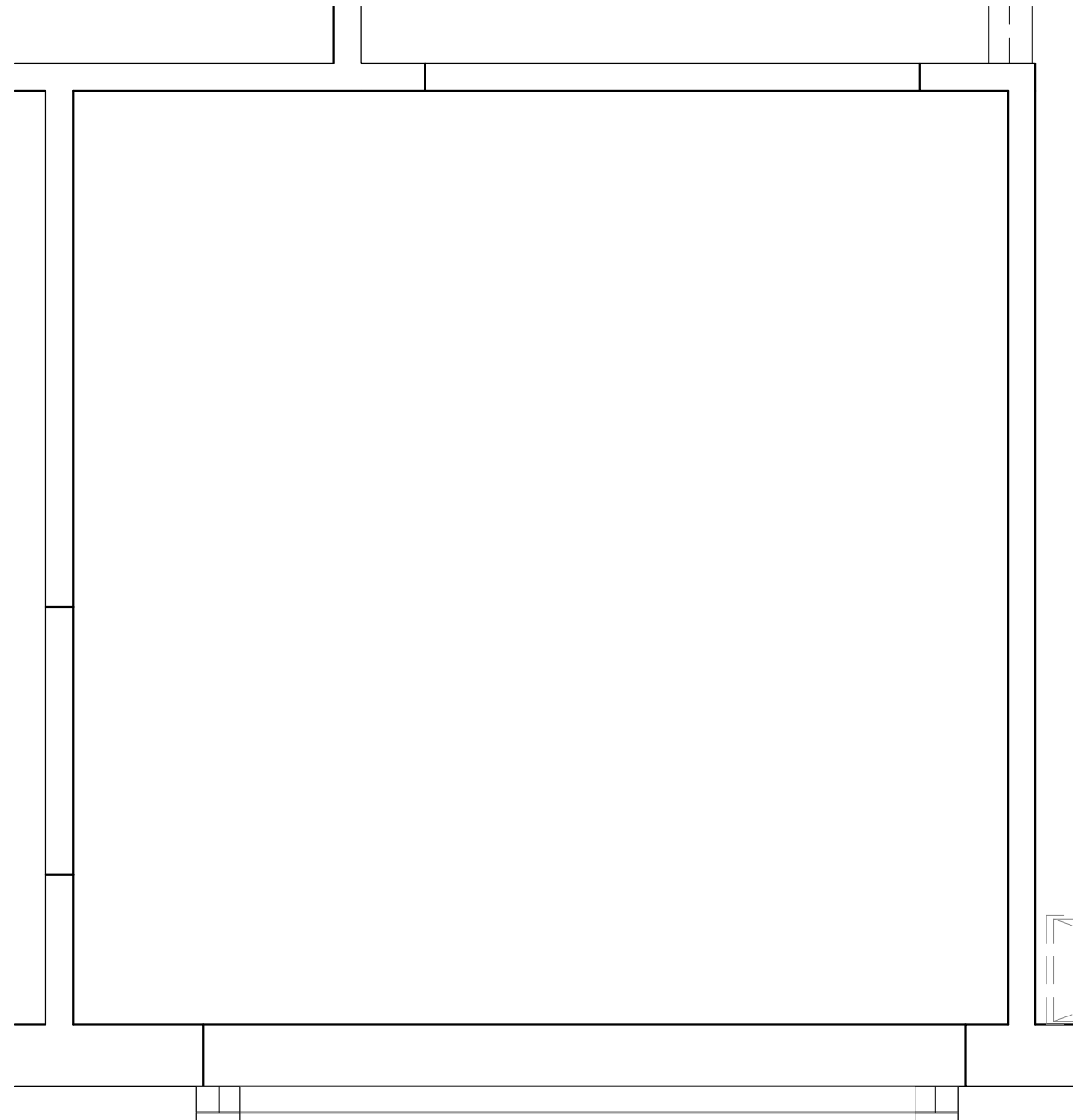


SW FOYER PLAN(1/4"=1'-0")



SW FOYER FLOOR F(1/4"=1'-0")





SW FOYER CEILING(1/2"=1'-0")

**GENERAL NOTES**

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

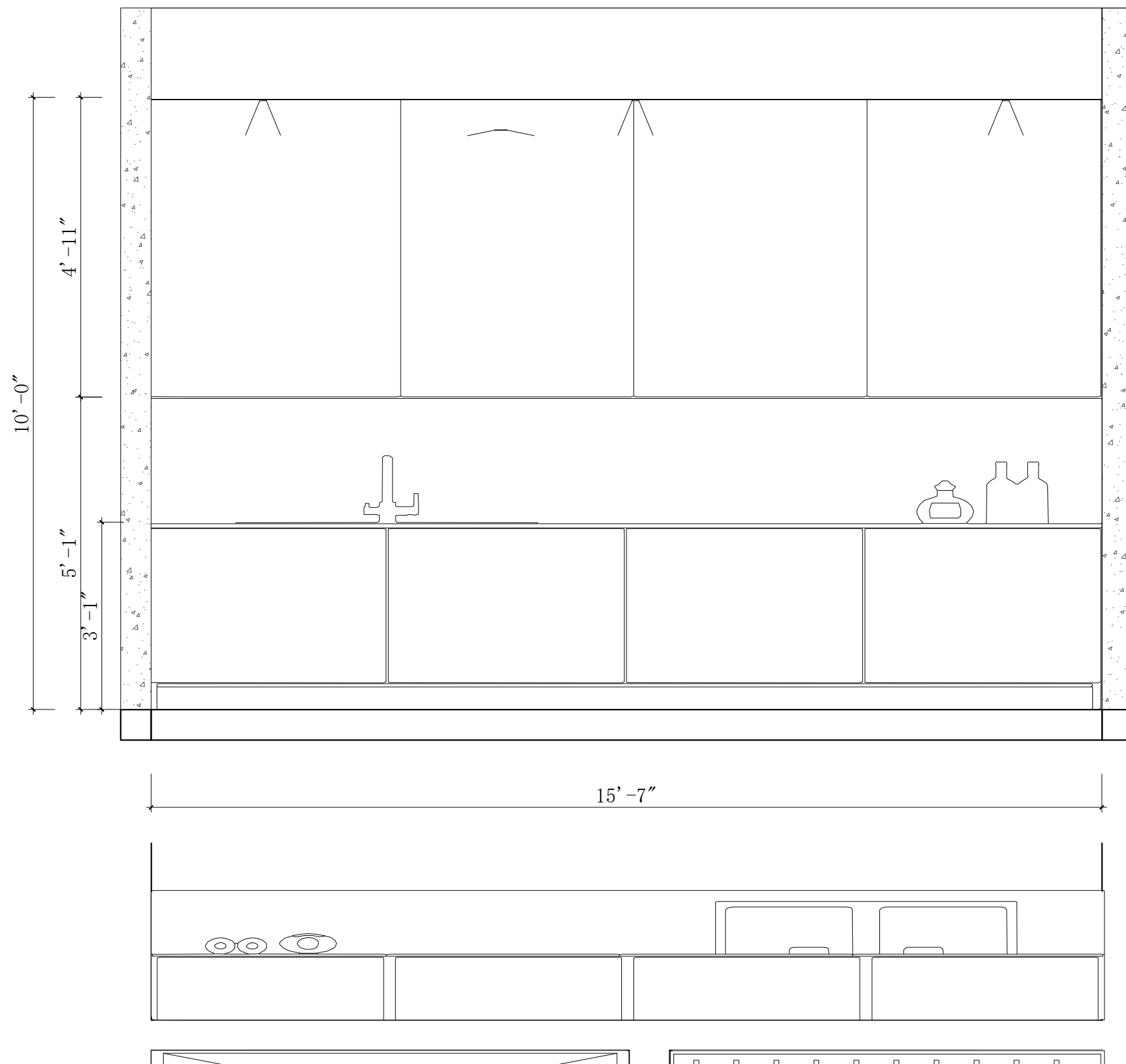
DRAWING TITLE:

**7th FLOOR**  
**FOYER CEILING**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR-2024

DWG. No.  
**SL07AR-FO-152**





Pantry Elevation C(1/2"=1'-0")

LW K ELEV (1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



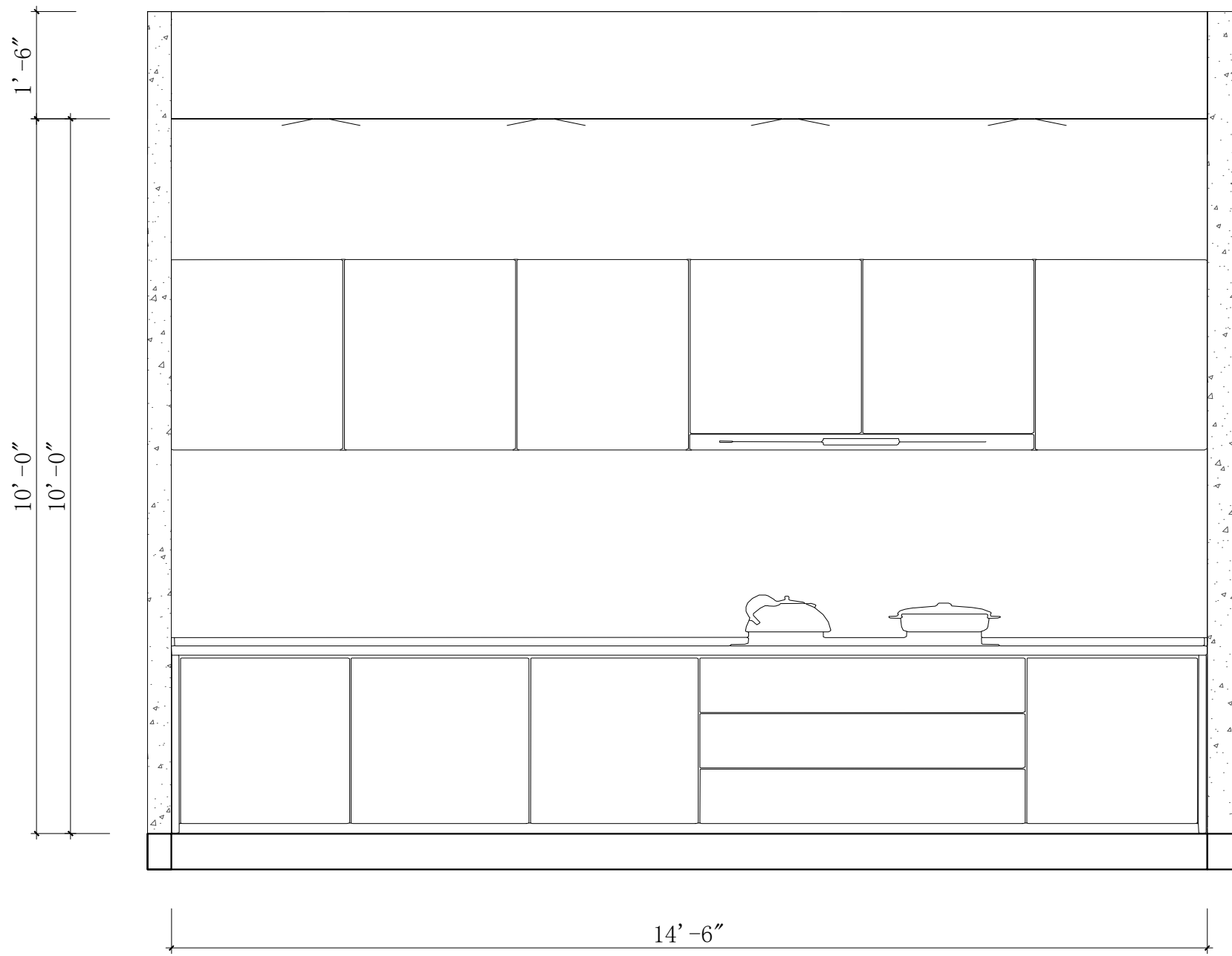
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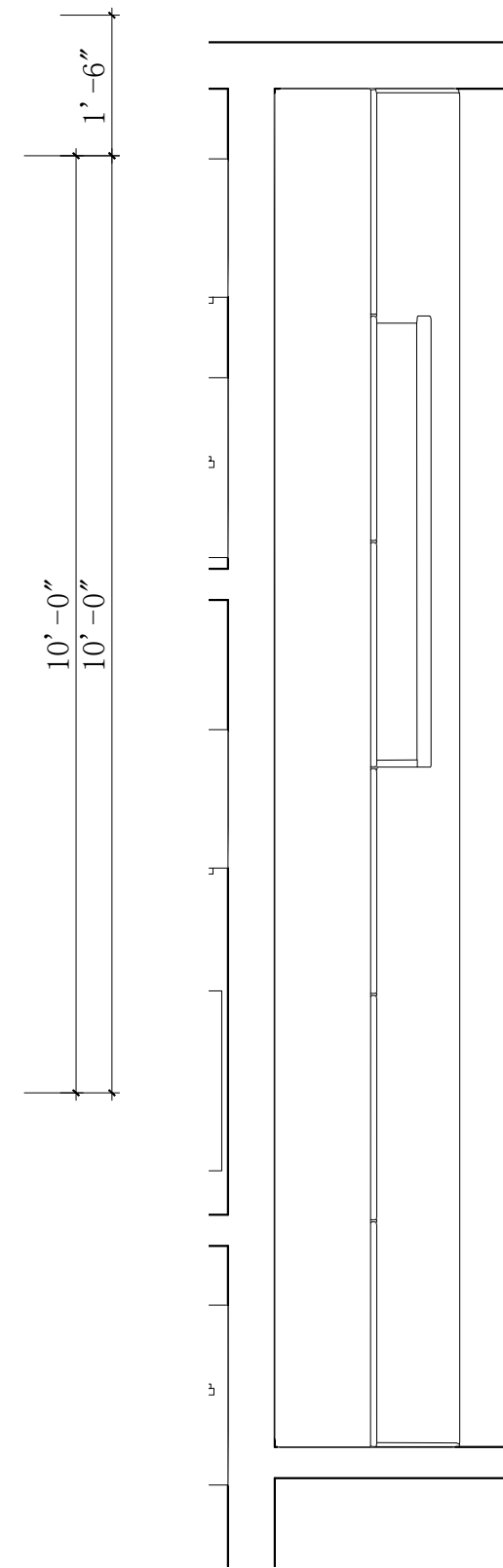
**7th FLOOR**  
**KITCHEN ELEVATION**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR-2024

DWG. No.  
**SL07AR-KI-160**



Pantry Elevation D(1/2"=1'-0")



SW K ELEV(1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**PANTRY ELEVATION**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR-2024

DWG. No.  
**SL07AR-PA-157**



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

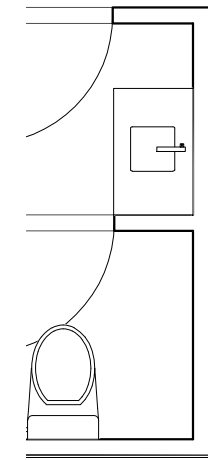
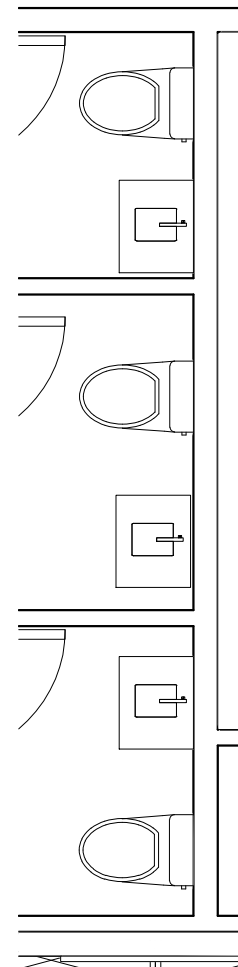
DRAWING TITLE:

**7th FLOOR  
PB ELEVATION**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

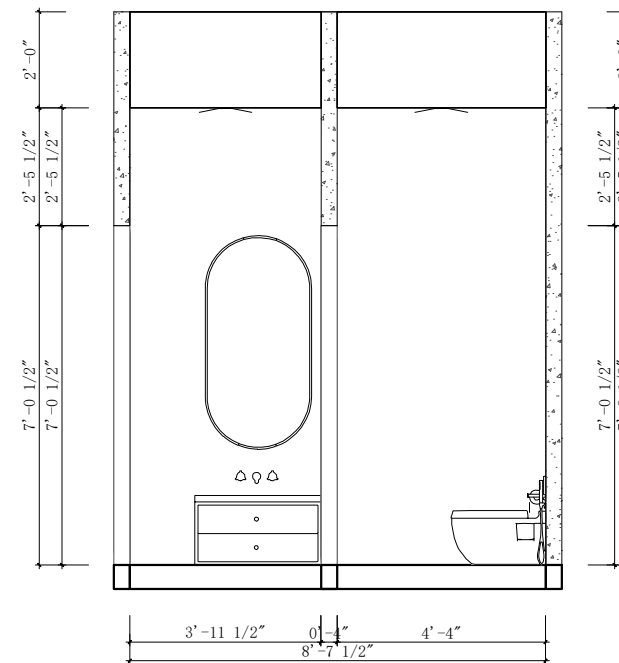
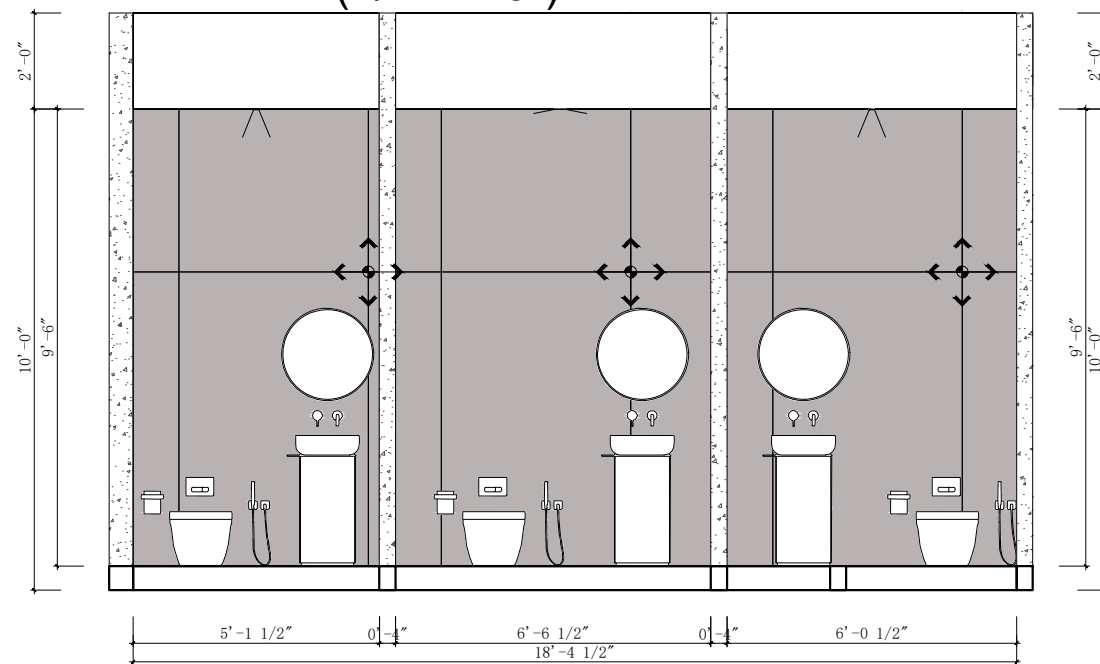
SCALE	DATE
1/4"=1'	@ A3 APR-2024

DWG. No.  
**SL07AR-PB-153**



SW PB ELEV A(1/4"=1'-0")

SW PB ELEV(1/4"=1'-0") Bathroom 3 Elevation B(1/4"=1'-0")



Women's Bath Elevation B(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



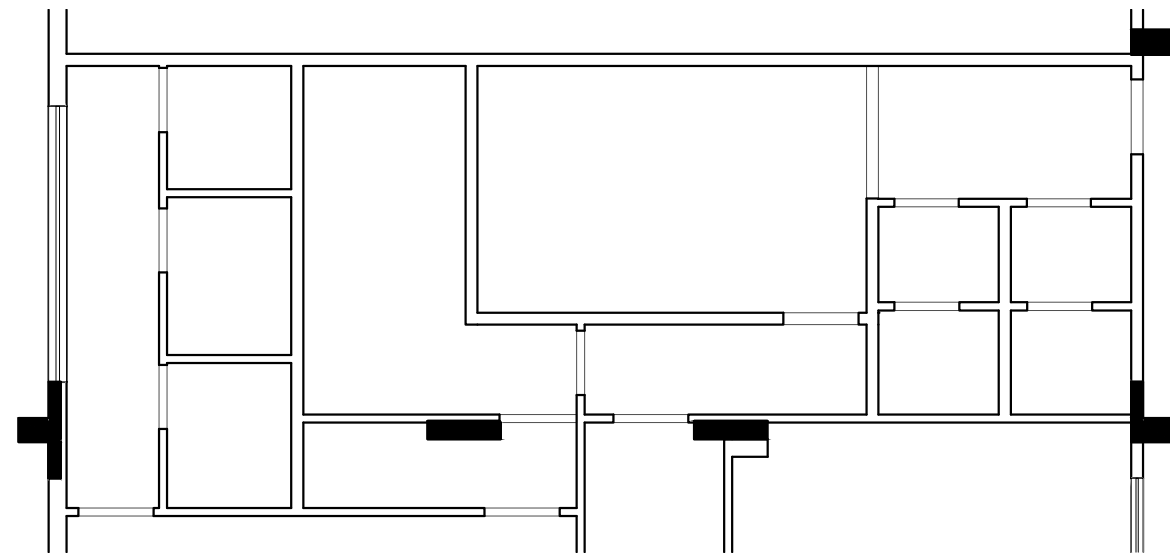
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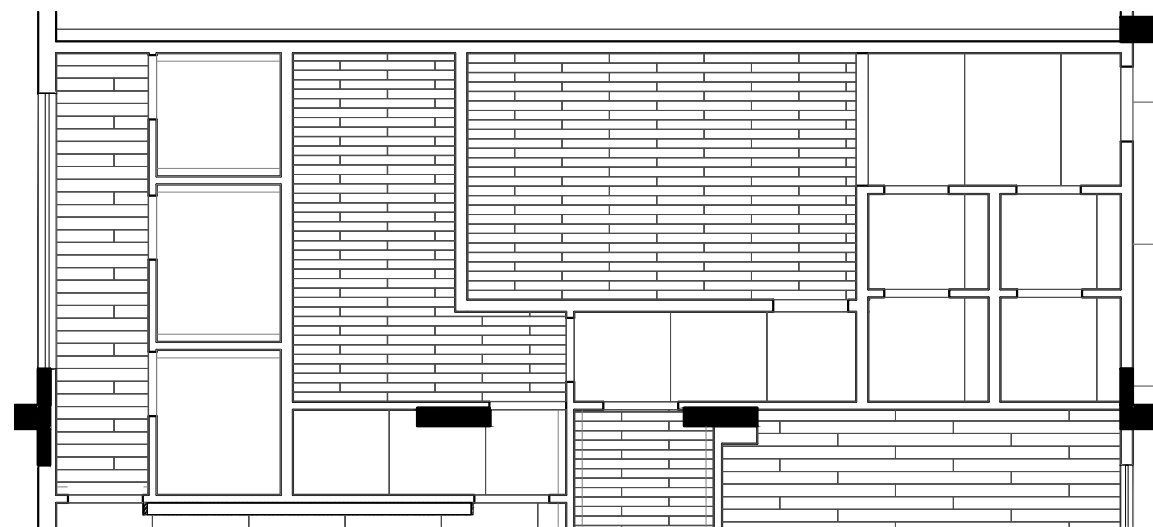
**7th FLOOR**  
**PB+K FLOOR**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR-2024

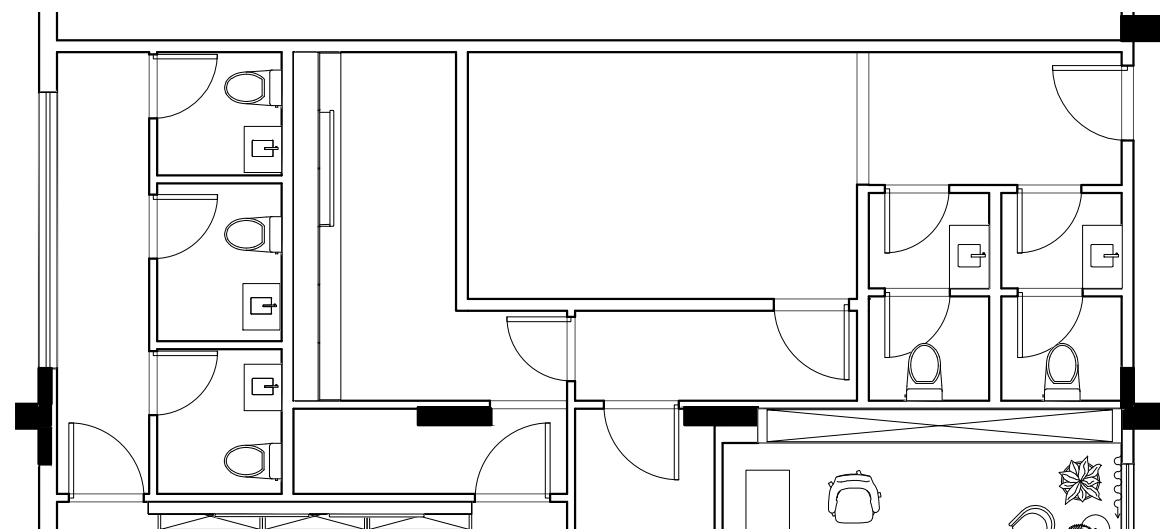
DWG. No.  
**SL07AR-PB-154**



SW PB+K FLOOR(1/8"=1'-0")



SW PB+K FLOOR F(1/8"=1'-0")



SW PB+K PLAN(1/8"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
PB+K CEILING

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR-2024

DWG. No.  
**SL07AR-PB-155**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



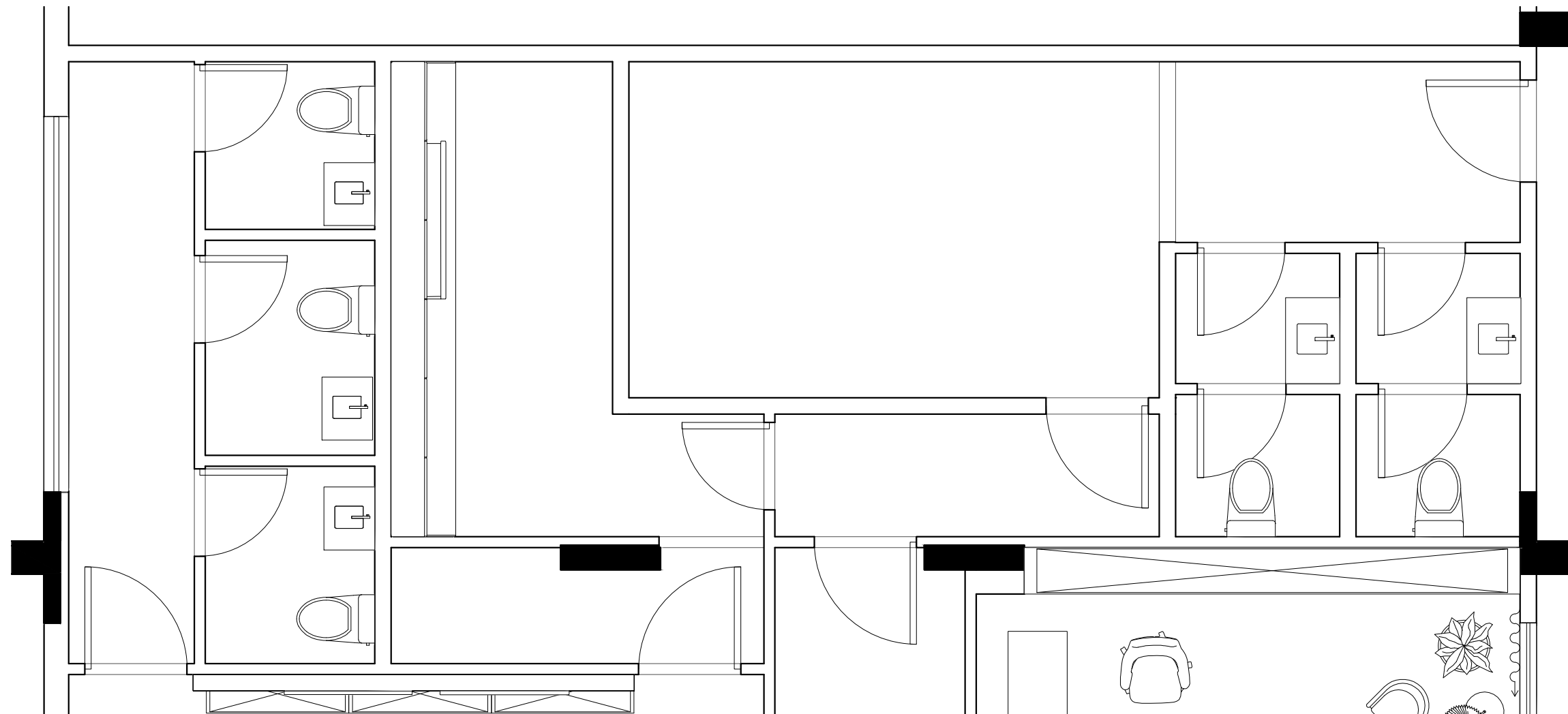
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**PB FURNITURE**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR-2024

DWG. No.  
**SL07AR-PB-156**



SW PB+K PLAN(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

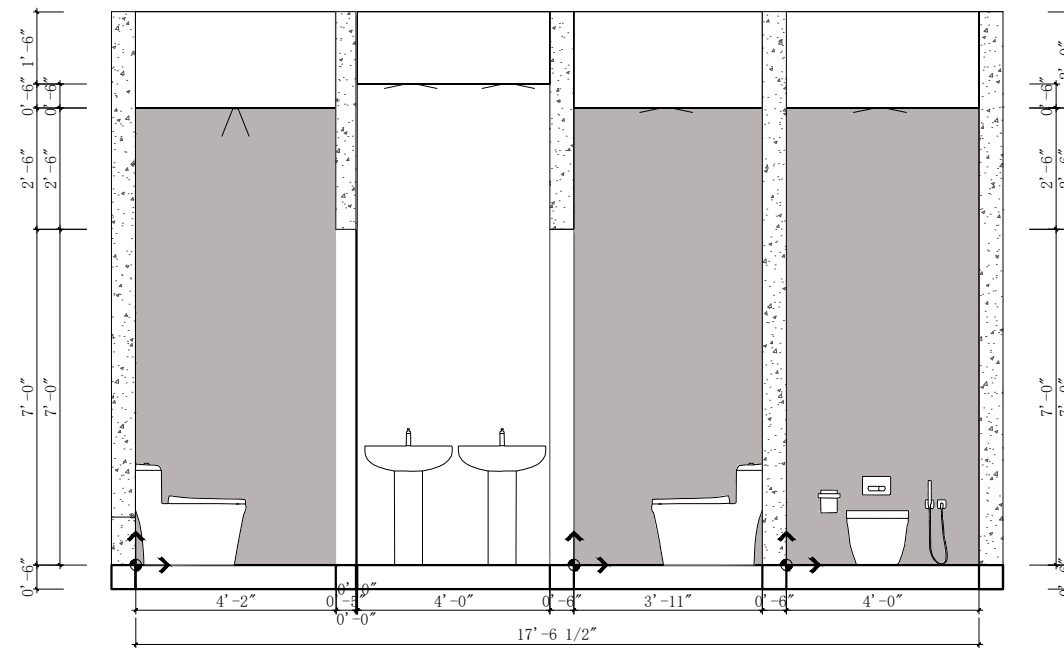
DRAWING TITLE:

**7th FLOOR**  
**PB ELEVATION**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR-2024

DWG. No.  
**SL07AR-PB-158**



**PB-5 Elevation B(1/4"=1'-0")**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



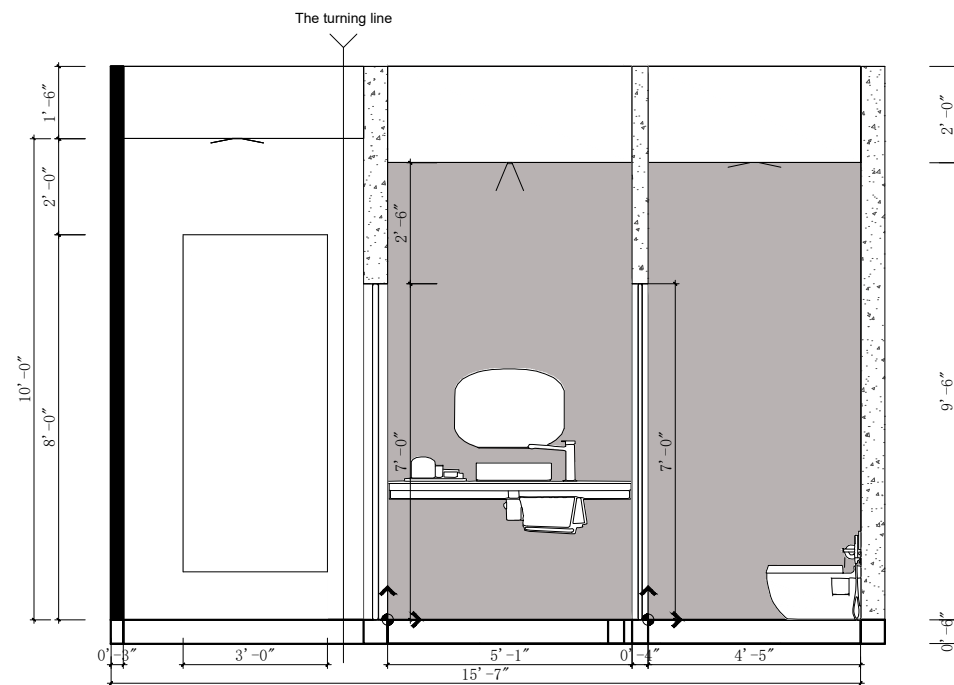
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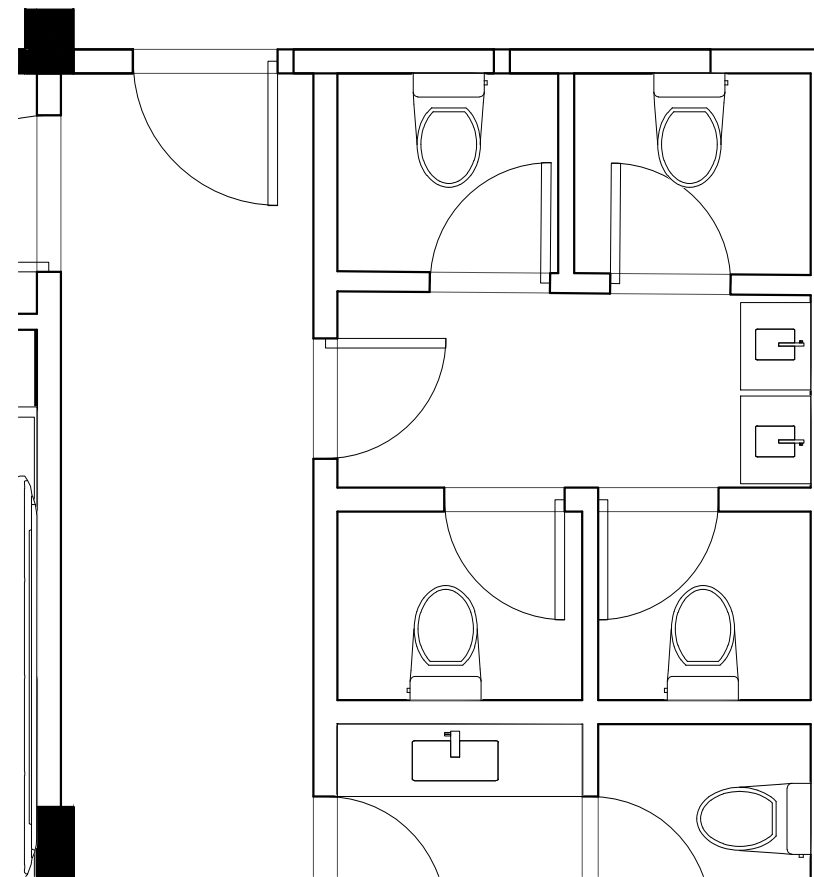
**7th FLOOR**  
**PB ELEVATION A**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR-2024

DWG. No.  
**SL07AR-PB-159**



Women's Bath Elevation A(1/4"=1'-0")



LW PB ELEV A(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



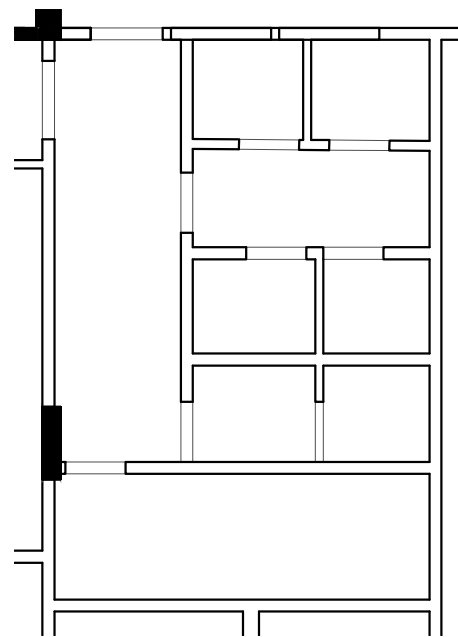
COMMENTS:

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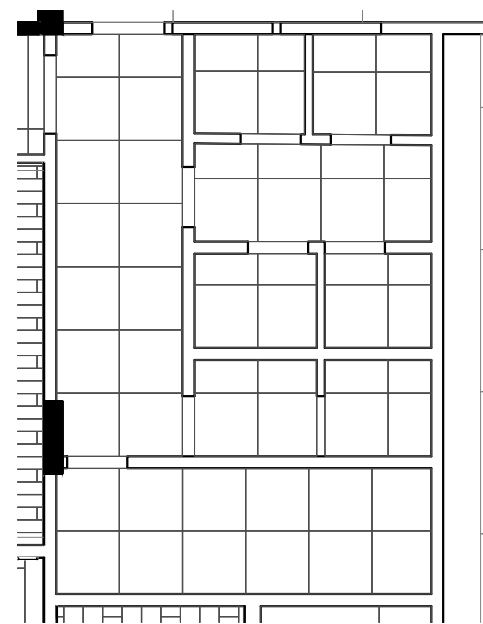
**7th FLOOR**  
PB+K FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR-2024

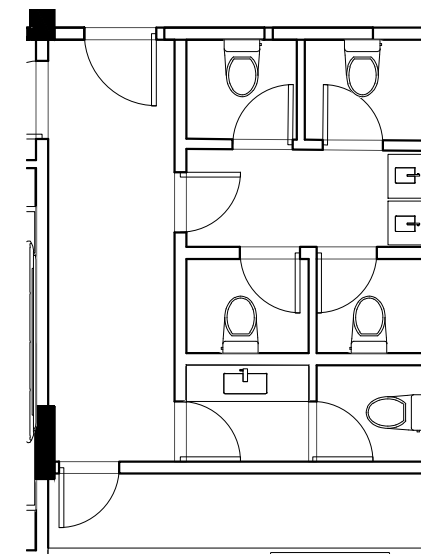
DWG. No.  
**SL07AR-PB-161**



LW PB+K FLOOR P(1/8"=1'-0")



LW PB+K FLOOR F(1/8"=1'-0")



LW PB+KPLAN(1/8"=1'-0")





## GENERAL NOTES

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

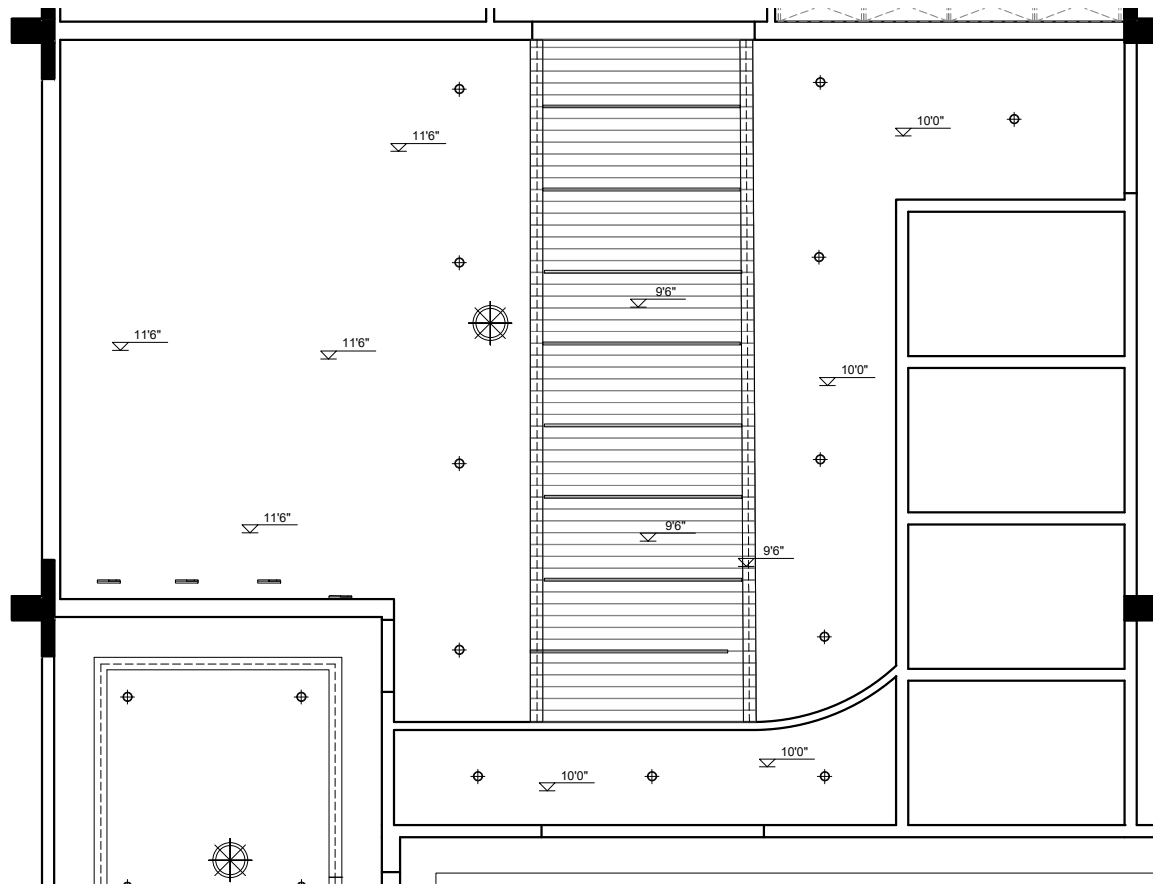
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**7th FLOOR**  
RECEPTION LOBBY CEILING

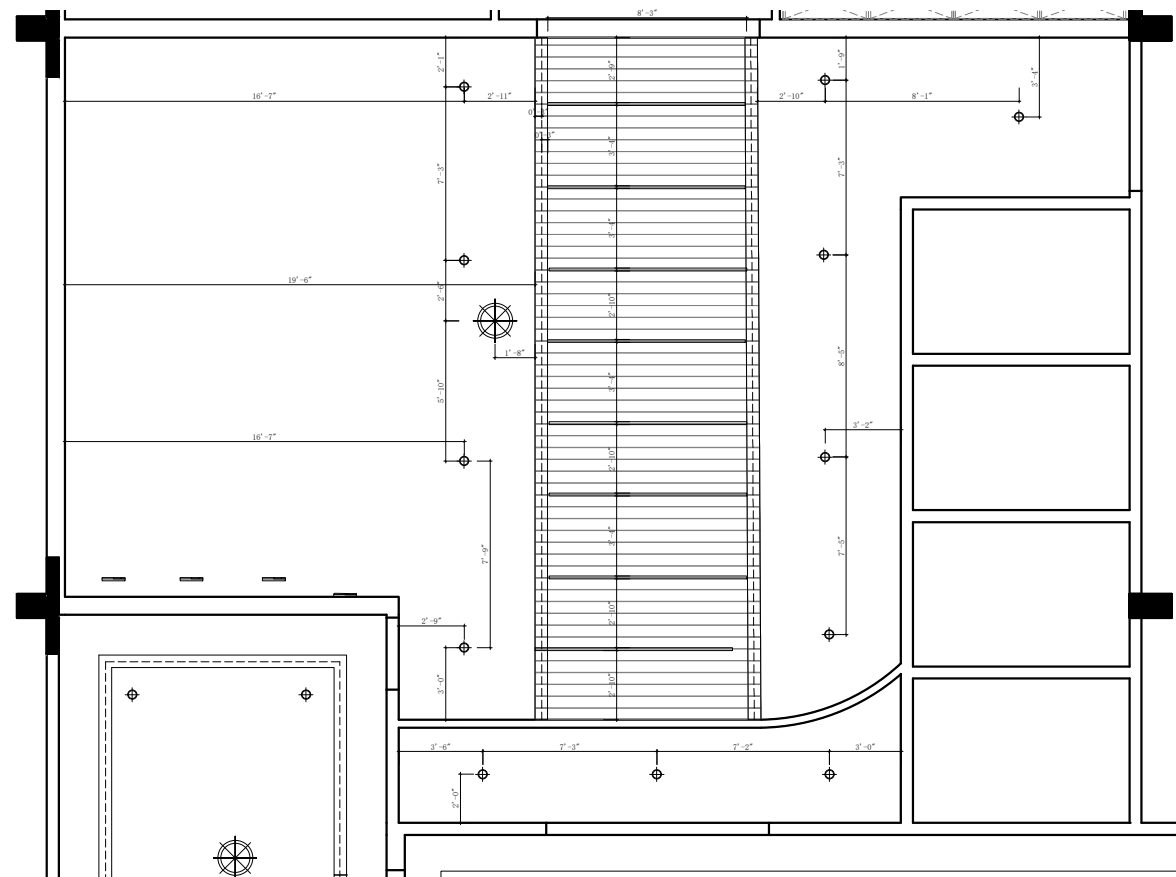
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR-2024

DWG. No.  
**SL07AR-RL-146**



RECEPTION CEILING(1/8"=1'-0")



RECEPTION CEILING LIGHTS(1/8"=1'-0")

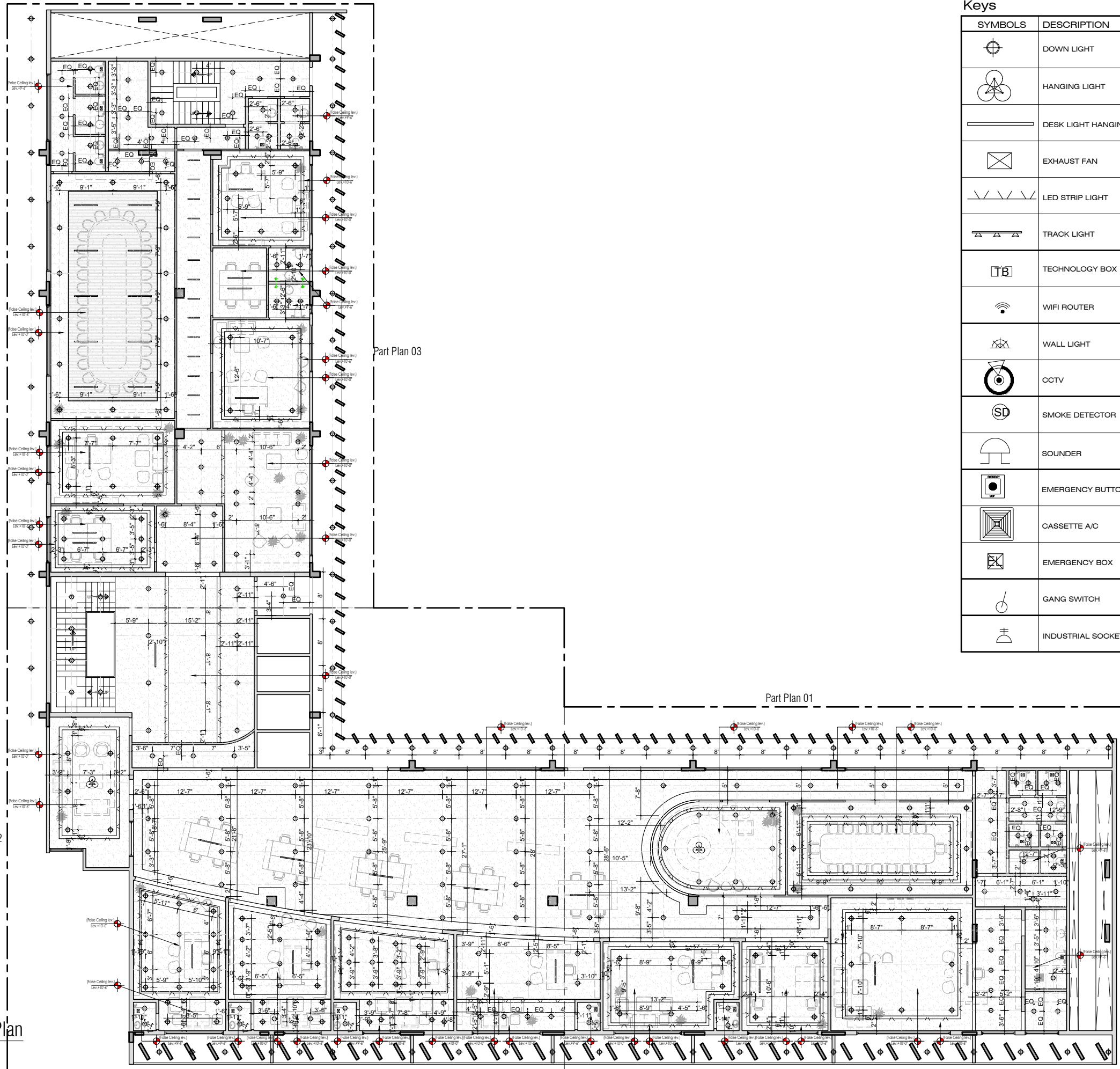


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**7th FLOOR  
ELECTRICAL DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



**Keys**

SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT
	TECHNOLOGY BOX
	WIFI ROUTER
	WALL LIGHT
	CCTV
	SMOKE DETECTOR
	SOUNDER
	EMERGENCY BUTTON
	CASSETTE A/C
	EMERGENCY BOX
	GANG SWITCH
	INDUSTRIAL SOCKET

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

COMMENTS:

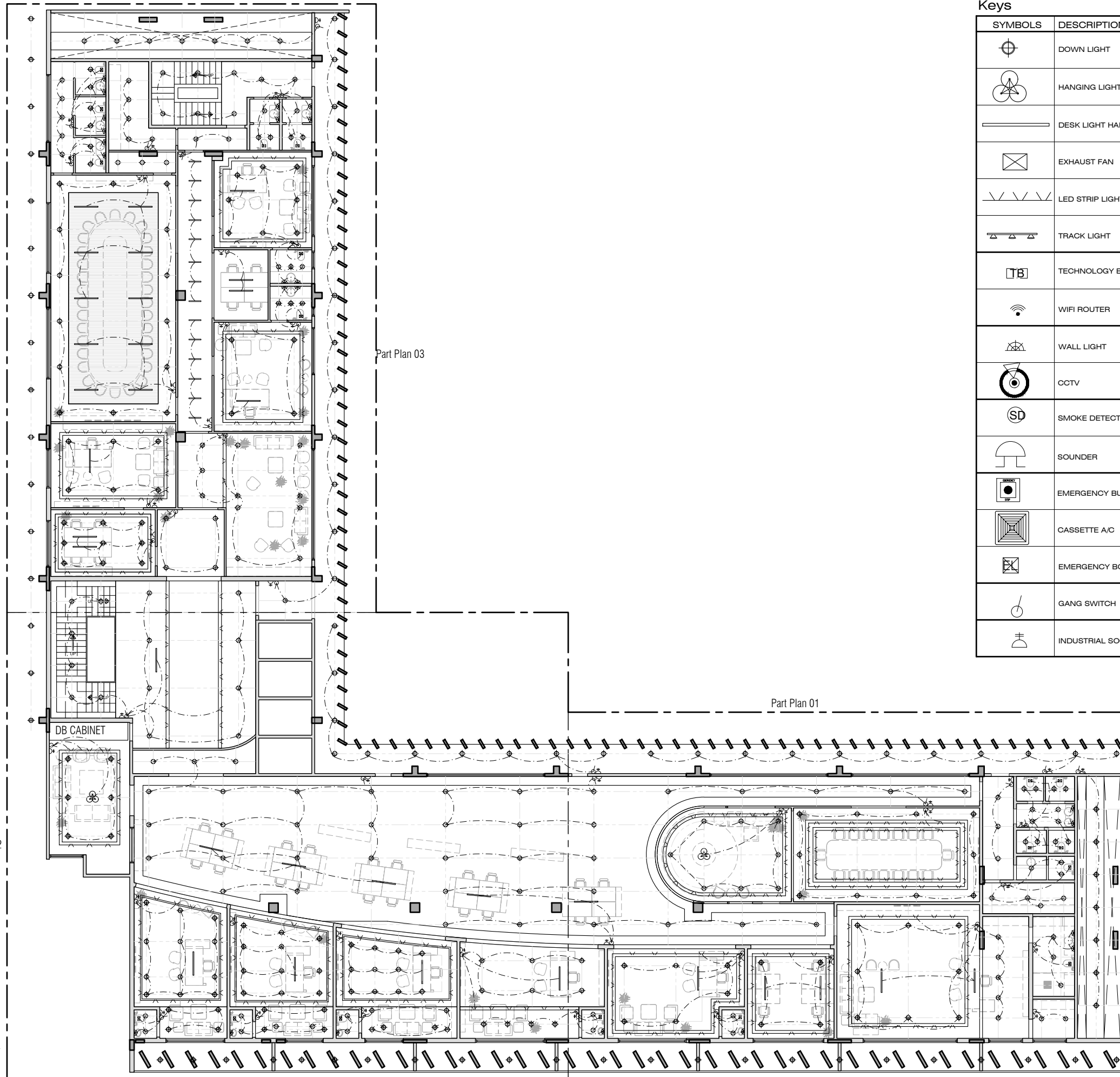
DRAWING TITLE:

**7th FLOOR**  
**ELECTRICAL LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
N.T.S. @ A3	JUNE-2024

DWG. No.  
**SL.07 .CL-01**



**Keys**

SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT
	TECHNOLOGY BOX
	WIFI ROUTER
	WALL LIGHT
	CCTV
	SMOKE DETECTOR
	SOUNDER
	EMERGENCY BUTTON
	CASSETTE A/C
	EMERGENCY BOX
	GANG SWITCH
	INDUSTRIAL SOCKET

**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

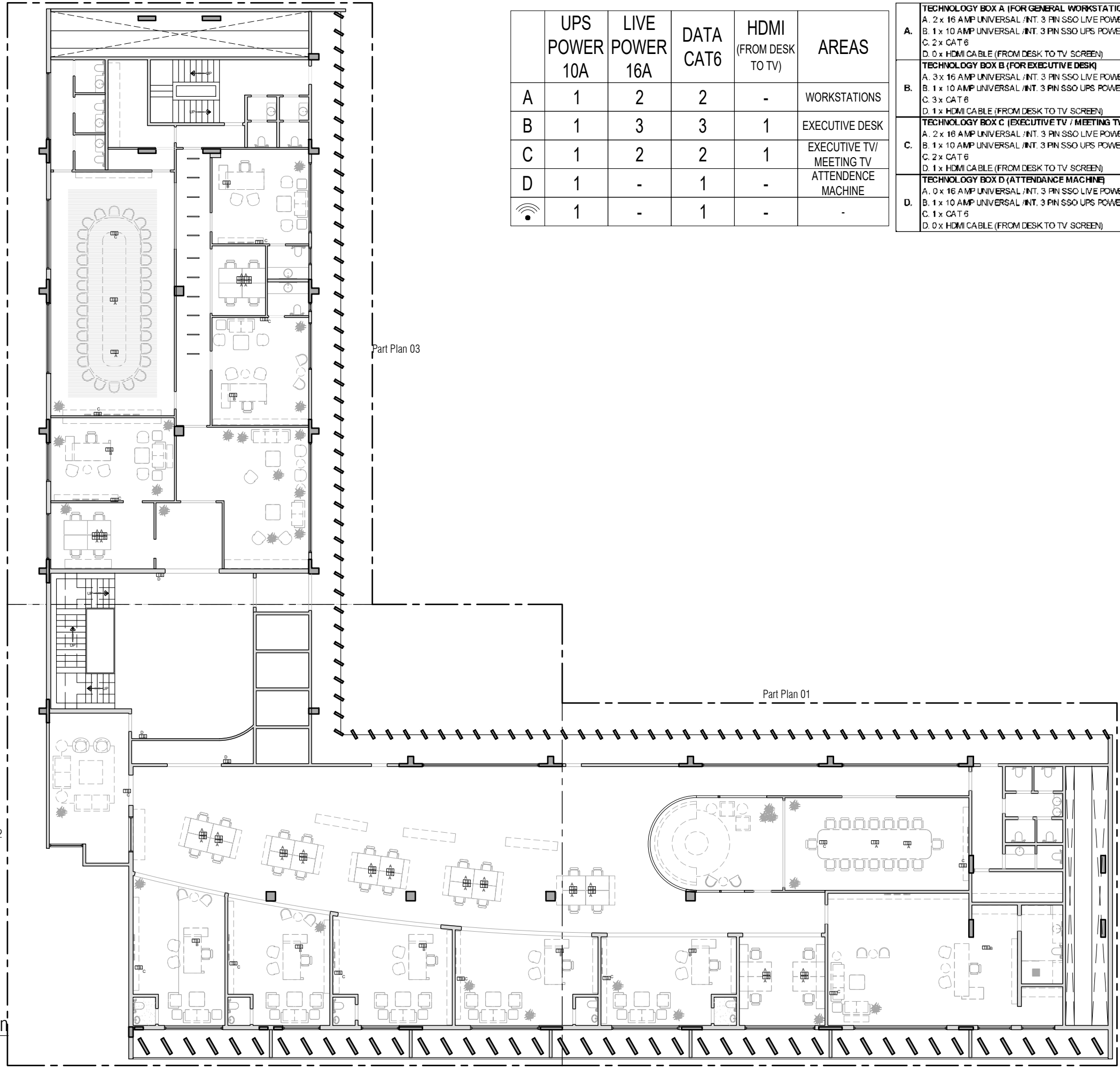
**7th FLOOR**  
LOOPING LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
N.T.S. @ A3	JUNE-2024

DWG. No.  
**SL.07 LP-01**





	UPS POWER 10A	LIVE POWER 16A	DATA CAT6	HDMI (FROM DESK TO TV)	AREAS
A	1	2	2	-	WORKSTATIONS
B	1	3	3	1	EXECUTIVE DESK
C	1	2	2	1	EXECUTIVE TV/ MEETING TV
D	1	-	1	-	ATTENDANCE MACHINE
	1	-	1	-	-

<b>A.</b>	<b>TECHNOLOGY BOX A (FOR GENERAL WORKSTATIONS)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)
<b>B.</b>	<b>TECHNOLOGY BOX B (FOR EXECUTIVE DESK)</b> A. 3 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 3 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)
<b>C.</b>	<b>TECHNOLOGY BOX C (EXECUTIVE TV / MEETING TV)</b> A. 2 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 2 x CAT 6 D. 1 x HDMI CABLE (FROM DESK TO TV SCREEN)
<b>D.</b>	<b>TECHNOLOGY BOX D (ATTENDANCE MACHINE)</b> A. 0 x 16 AMP UNIVERSAL /INT. 3 PIN SSO LIVE POWERED. B. 1 x 10 AMP UNIVERSAL /INT. 3 PIN SSO UPS POWERED. C. 1 x CAT 6 D. 0 x HDMI CABLE (FROM DESK TO TV SCREEN)

### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR  
ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING  
NO. 52-C, LANE NO. 01, AL-MURTAZA  
COMMERCIAL, PHASE VIII, D.H.A.,  
KARACHI.

PROJECT:

**RENOVATION OF STATE  
LIFE BUILDING No. 9**  
KARACHI

**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:  
**7th FLOOR  
TECHNOLOGY BOX  
LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE	DATE	
N.T.S.	@ A3	JUNE-2024

DWG. No.  
**SL.07.TB-01**

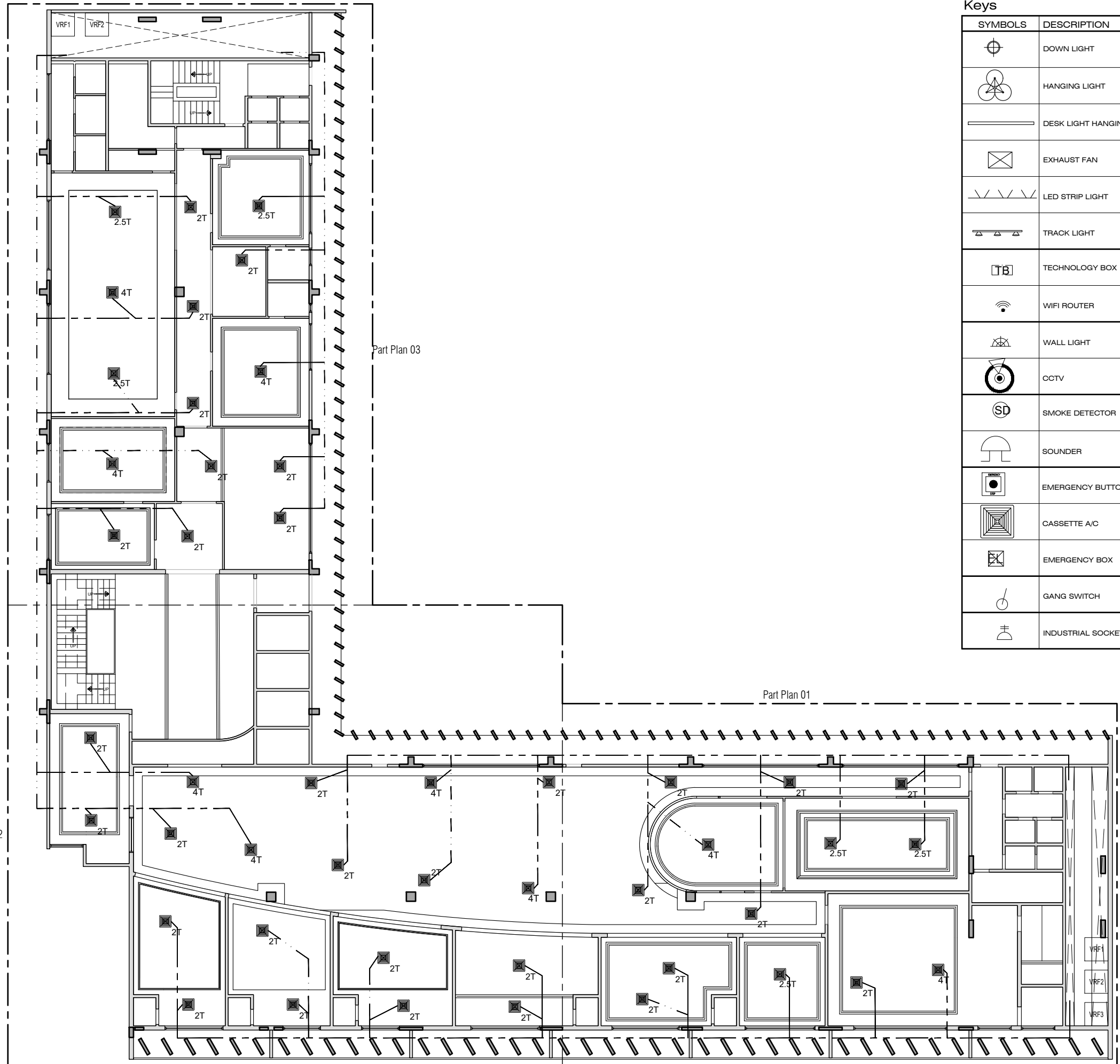


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**7th FLOOR  
HVAC DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



Keys	
SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT
	TECHNOLOGY BOX
	WIFI ROUTER
	WALL LIGHT
	CCTV
	SMOKE DETECTOR
	SOUNDER
	EMERGENCY BUTTON
	CASSETTE A/C
	EMERGENCY BOX
	GANG SWITCH
	INDUSTRIAL SOCKET

### GENERAL NOTES

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#### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:  
**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
HVAC LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE	DATE	
N.T.S.	@ A3	JUNE-2024

DWG. No.  
**SL.07.HV-01**



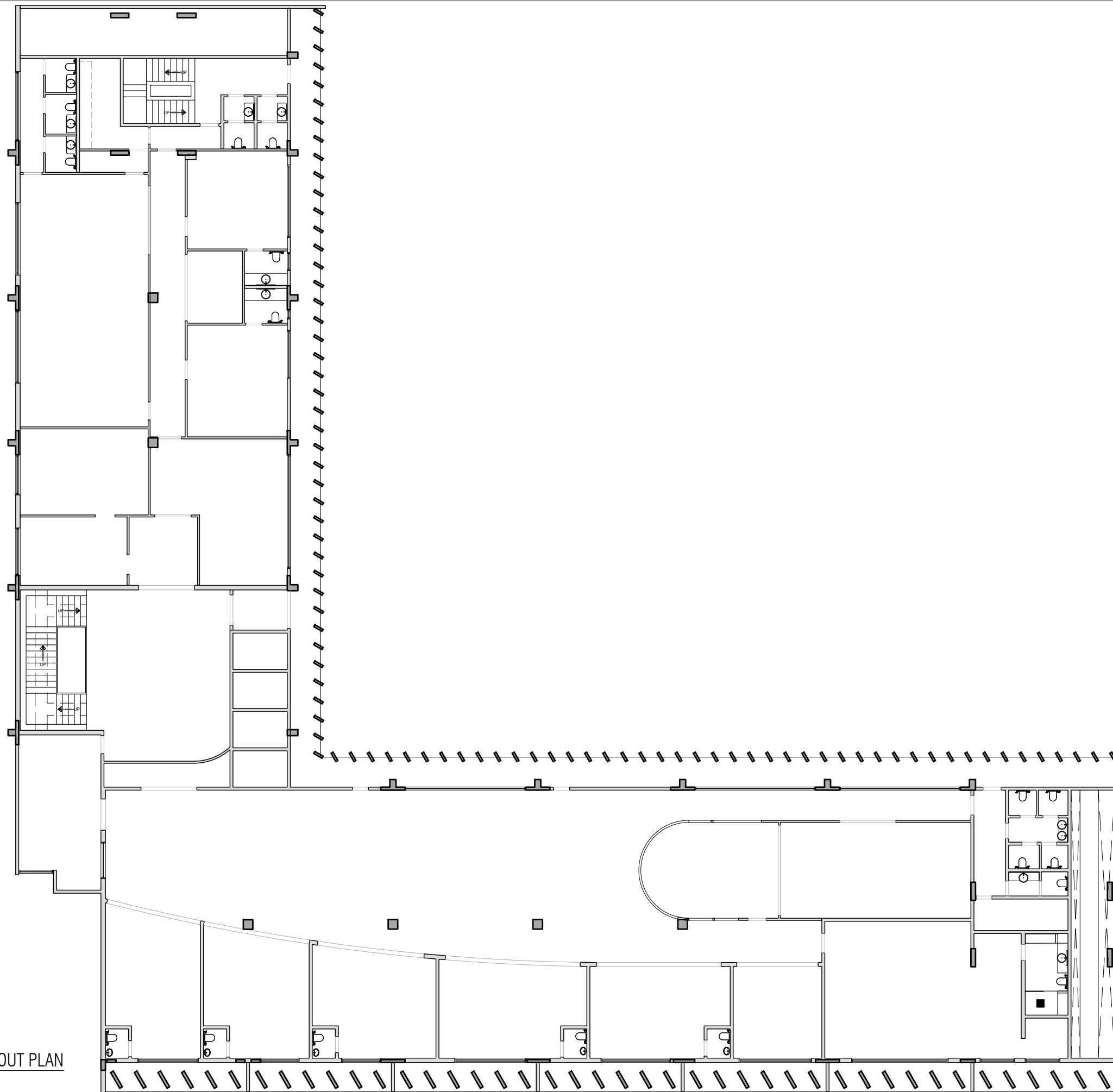
**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**7th FLOOR  
PLUMBING DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.





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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



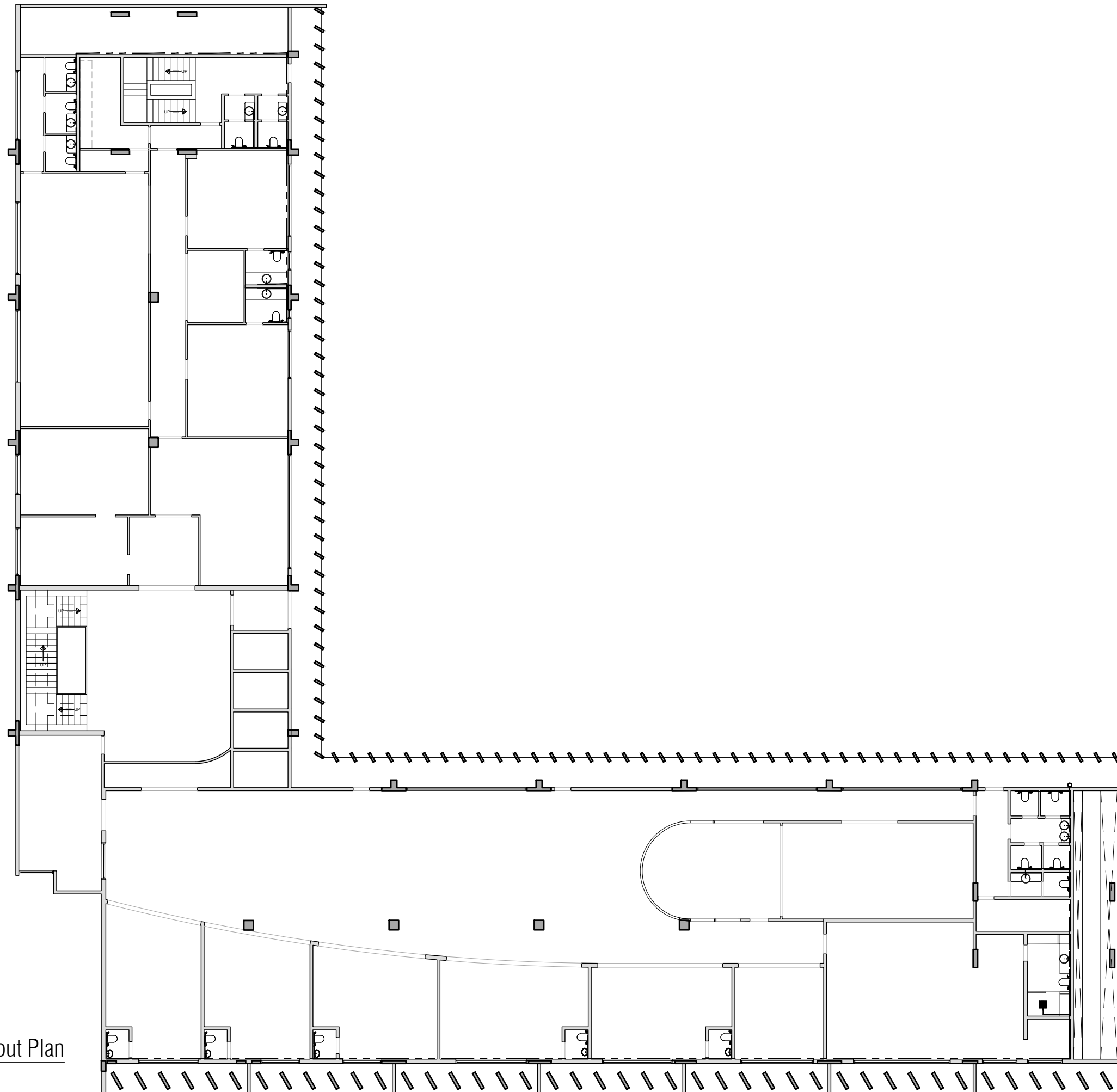
COMMENTS:

DRAWING TITLE:  
**7TH FLOOR**  
PLUMBING & FIXTURES LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
1/8" = 1'	@ A3	JUNE-2024

DWG. No.  
**SL.07.PB-01**

**A** PLUMBING & FIXTURES LAYOUT PLAN  
PB-01 Scale: N.T.S



**A** Water Supply Layout Plan  
 PB-2 Scale: N.T.S

**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
 KARACHI



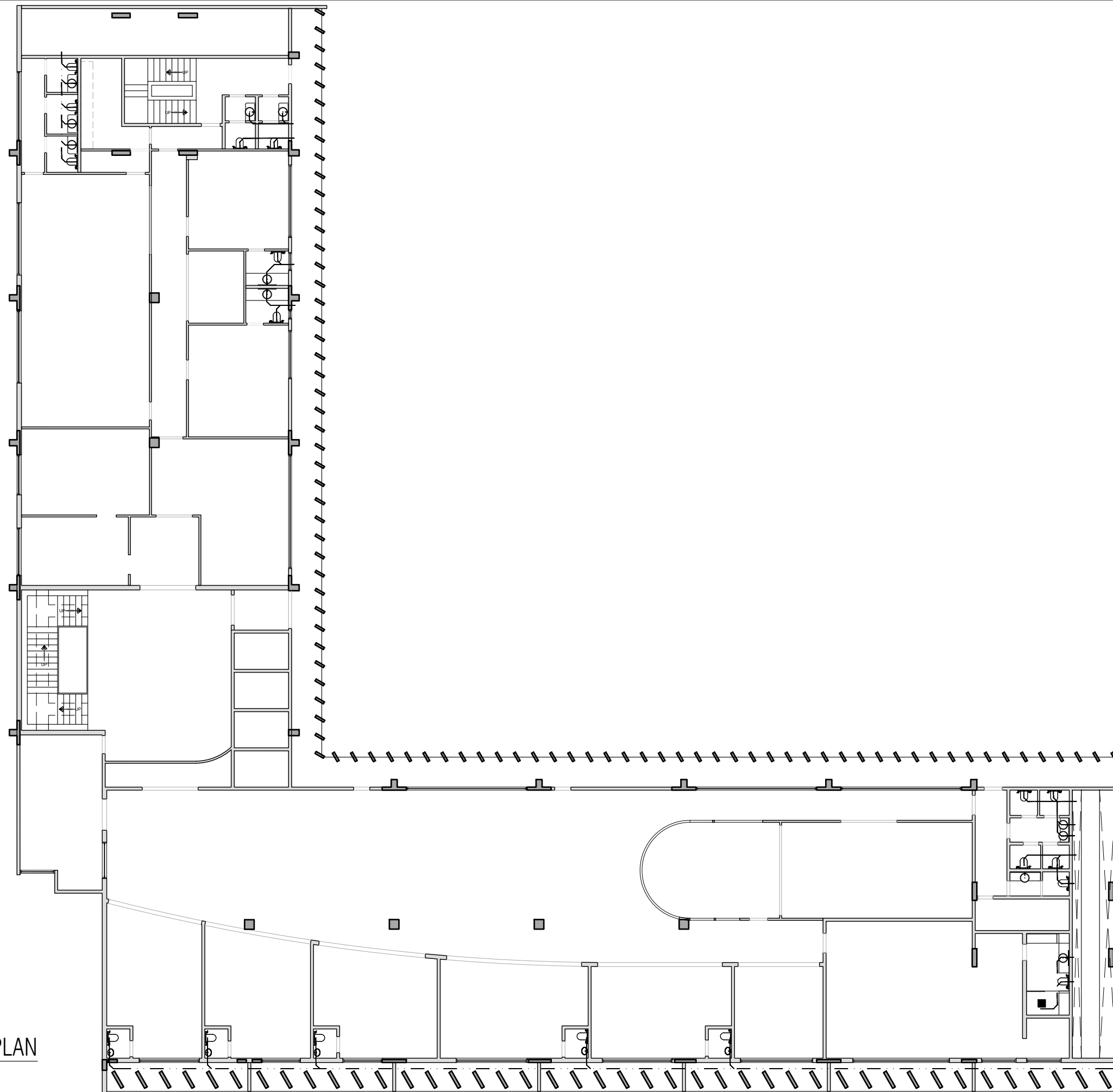
COMMENTS:

DRAWING TITLE:

**7th FLOOR**  
**WATER SUPPLY LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
1/8" = 1'	@ A3	JUNE-2024

DWG. No.  
**SL.07.PB-02**



**A**  
PB-03  
DRAIN LAYOUT PLAN  
Scale: N.T.S

**GENERAL NOTES**

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REV.	DESCRIPTION	DATE

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MUKHTAR ENTERPRISES STUDIO FOR  
ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING  
NO. 52-C, LANE NO. 01, AL-MURTAZA  
COMMERCIAL, PHASE VIII, D.H.A.,  
KARACHI.

PROJECT:

**RENOVATION OF STATE  
LIFE BUILDING No. 9**  
KARACHI

**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:  
**7th FLOOR  
DRAIN LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
1/8" = 1'	@ A3	JUNE-2024

DWG. No.  
**SL.07.PB-03**

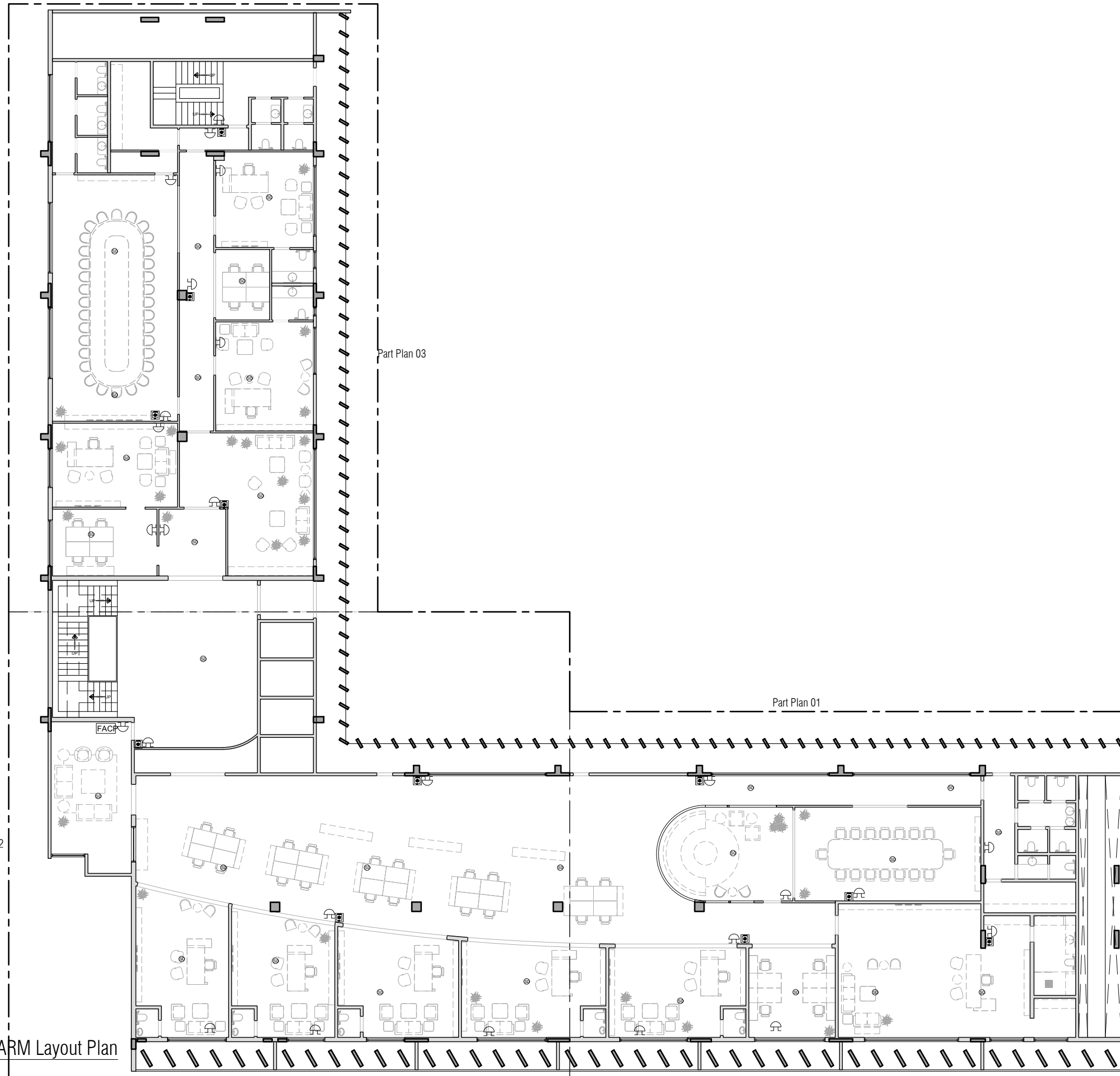


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**7th FLOOR  
FIRE ALARM DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



**FA** FIRE ALARM Layout Plan  
Scale: N.T.S

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REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
FIRE ALARM LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
N.T.S.	@ A3	JUNE-2024

DWG. No.  
**SL.07.FA-01**

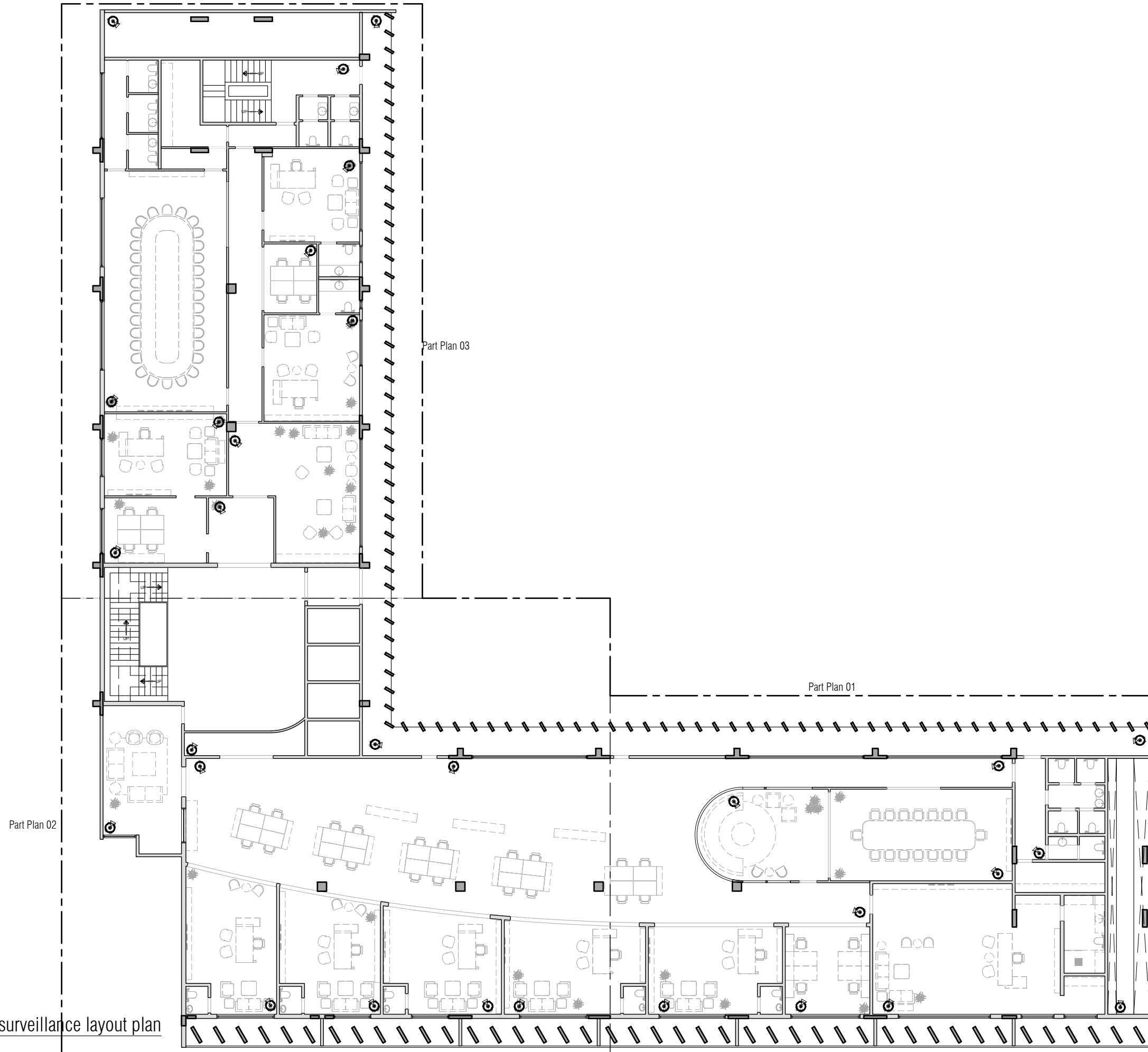


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**7th FLOOR  
SECURITY SURVEILLANCE DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**7th FLOOR**  
SECURITY SURVEILLANCE LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
N.T.S. @ A3	JUNE-2024

DWG. No.  
**SL.07.SS-01**

FA security surveillance layout plan  
Scale: N.T.S.



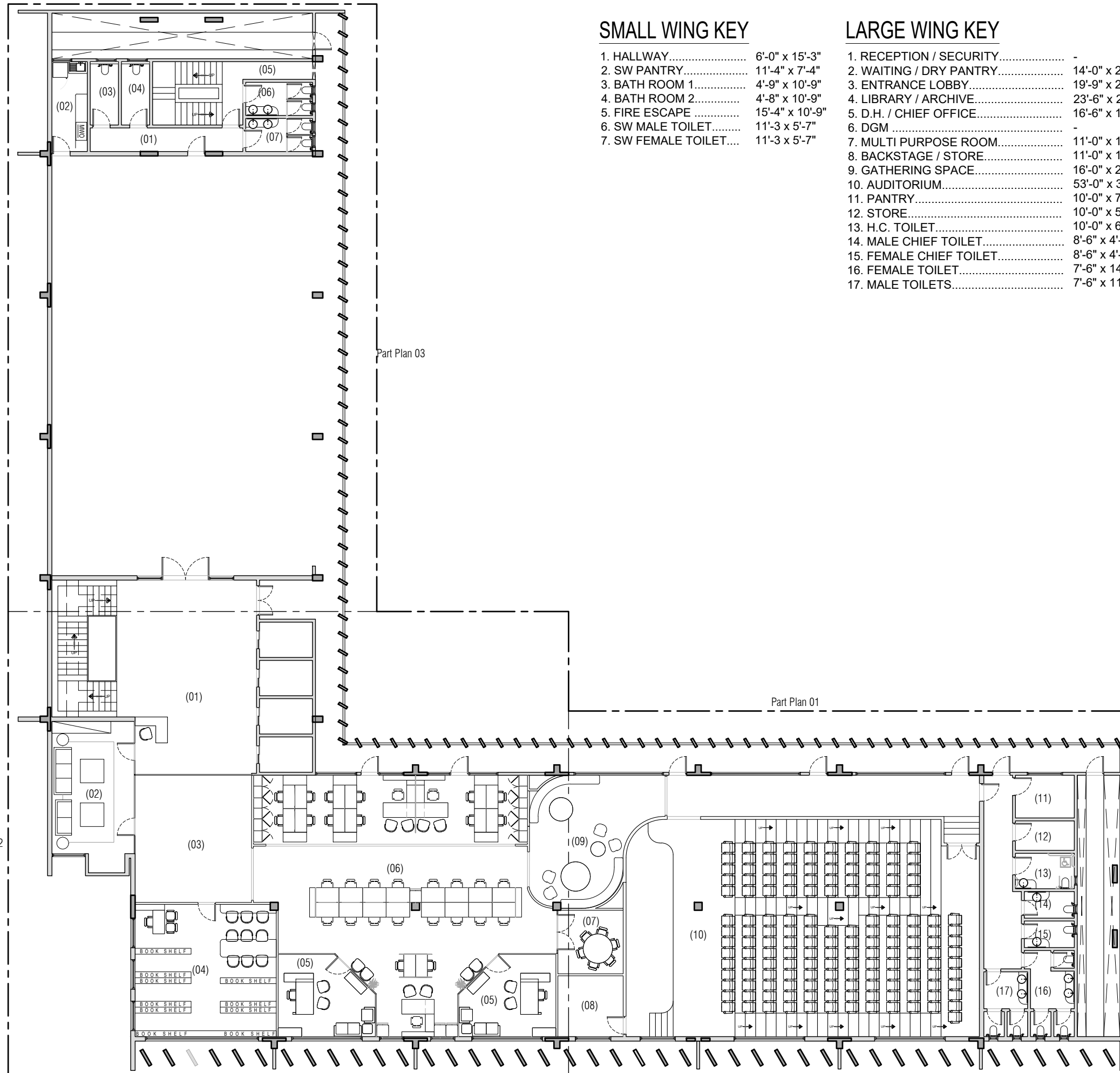
**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**8th FLOOR  
ARCHITECTURE DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.





### SMALL WING KEY

- 1. HALLWAY..... 6'-0" x 15'-3"
- 2. SW PANTRY..... 11'-4" x 7'-4"
- 3. BATH ROOM 1..... 4'-9" x 10'-9"
- 4. BATH ROOM 2..... 4'-8" x 10'-9"
- 5. FIRE ESCAPE..... 15'-4" x 10'-9"
- 6. SW MALE TOILET..... 11'-3 x 5'-7"
- 7. SW FEMALE TOILET.... 11'-3 x 5'-7"

### LARGE WING KEY

- 1. RECEPTION / SECURITY..... -
- 2. WAITING / DRY PANTRY..... 14'-0" x 22'-6"
- 3. ENTRANCE LOBBY..... 19'-9" x 21'-7"
- 4. LIBRARY / ARCHIVE..... 23'-6" x 21'-2"
- 5. D.H. / CHIEF OFFICE..... 16'-6" x 14'-0"
- 6. DGM..... -
- 7. MULTI PURPOSE ROOM..... 11'-0" x 10'-9"
- 8. BACKSTAGE / STORE..... 11'-0" x 10'-4"
- 9. GATHERING SPACE..... 16'-0" x 22'-7"
- 10. AUDITORIUM..... 53'-0" x 38'-0"
- 11. PANTRY..... 10'-0" x 7'-3"
- 12. STORE..... 10'-0" x 5'-0"
- 13. H.C. TOILET..... 10'-0" x 6'-0"
- 14. MALE CHIEF TOILET..... 8'-6" x 4'-6"
- 15. FEMALE CHIEF TOILET..... 8'-6" x 4'-6"
- 16. FEMALE TOILET..... 7'-6" x 14'-7"
- 17. MALE TOILETS..... 7'-6" x 11'-0"

### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
**FURNITURE LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	APR-2024

DWG. No.  
**SL.08.AR.MP-01**

**A**  
**A-01** Furniture Layout Plan  
Scale: N.T.S

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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

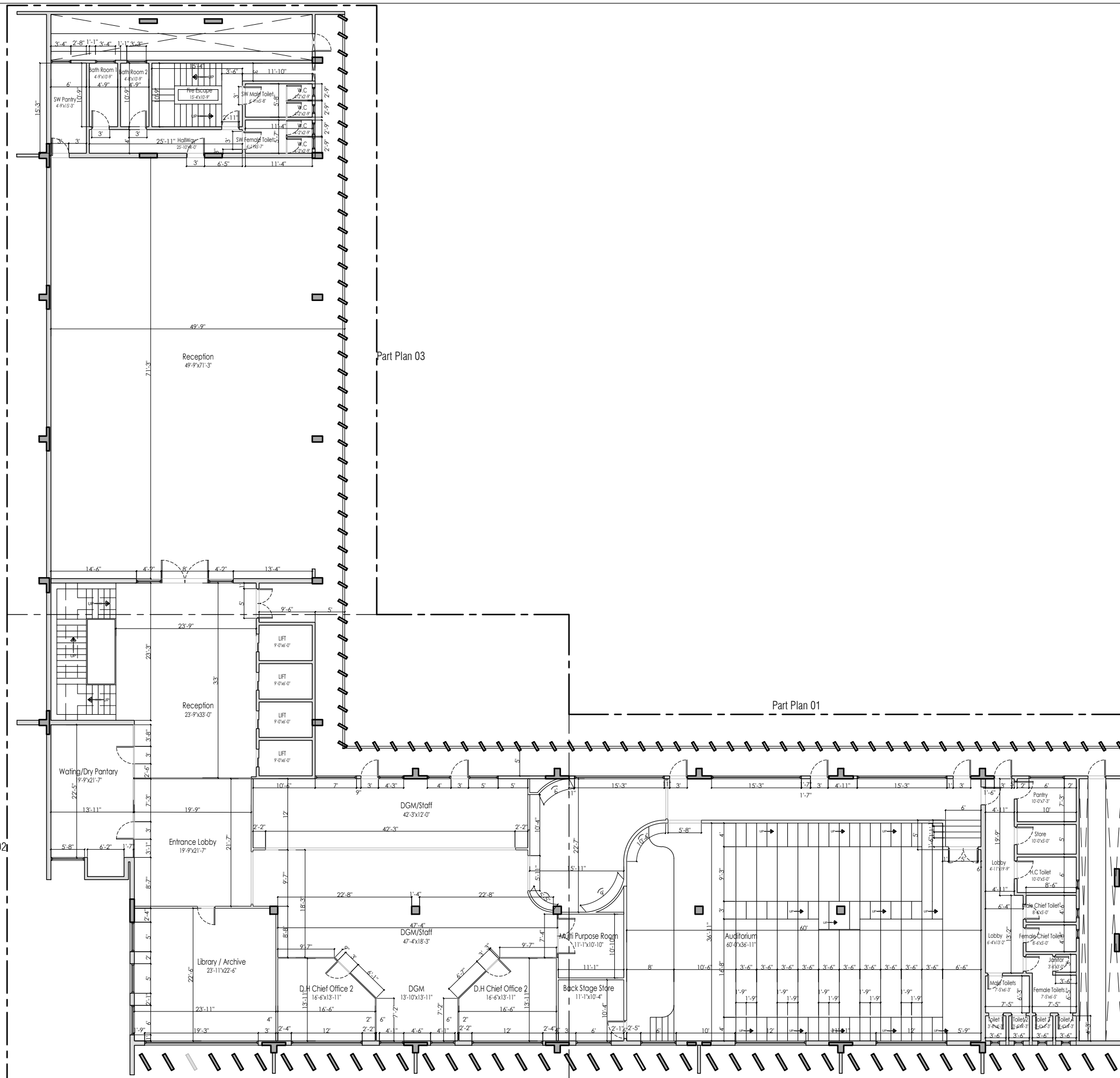
DRAWING TITLE:

**8th FLOOR**  
WORKING LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	APR-2024

DWG. No.  
**SL.08.AR.MP-02**

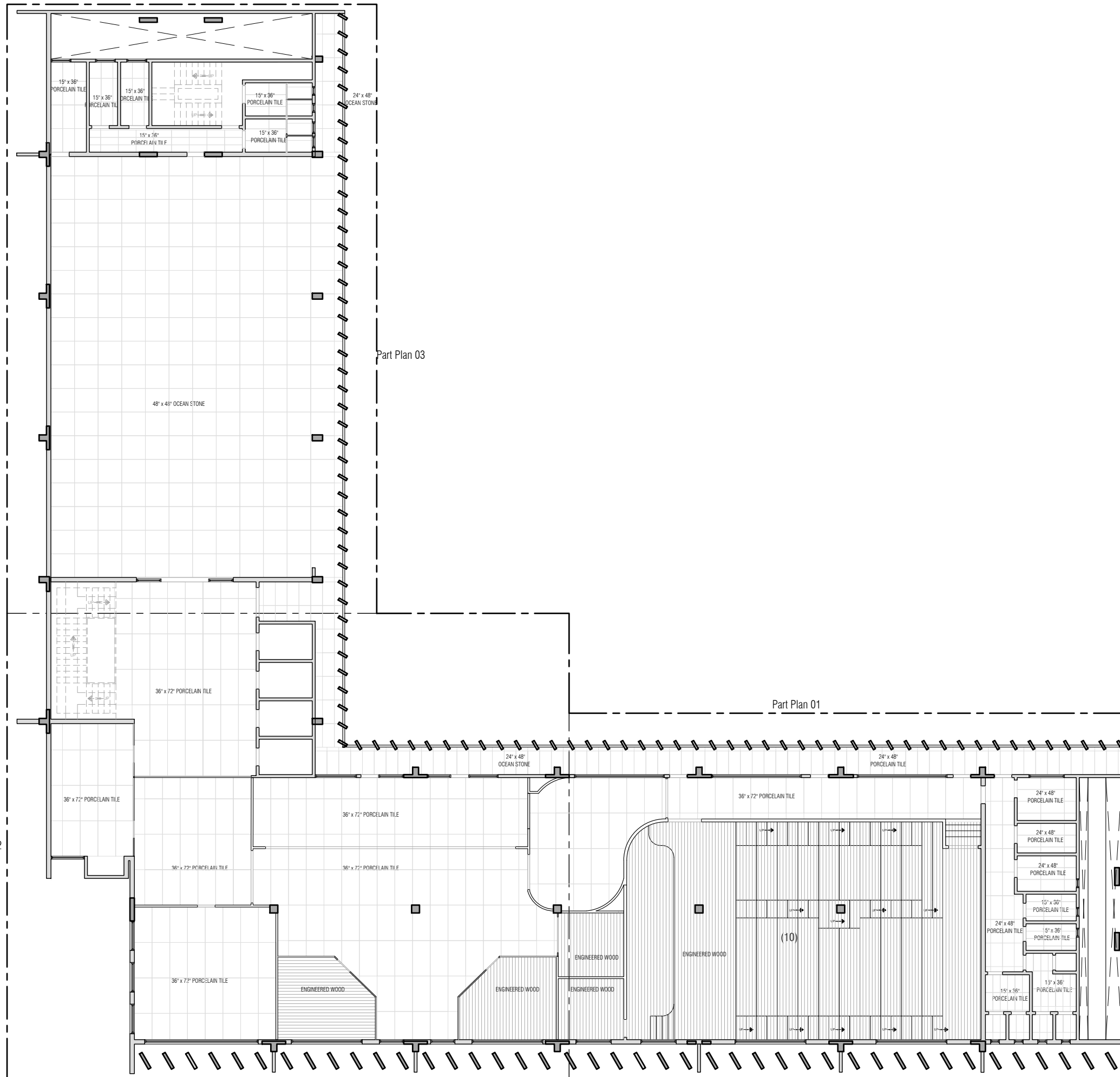


A

Flooring Layout Plan

A-02

Scale: N.T.S



**A**  
A-03  
Flooring layout Plan  
Scale: N.T.S

### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

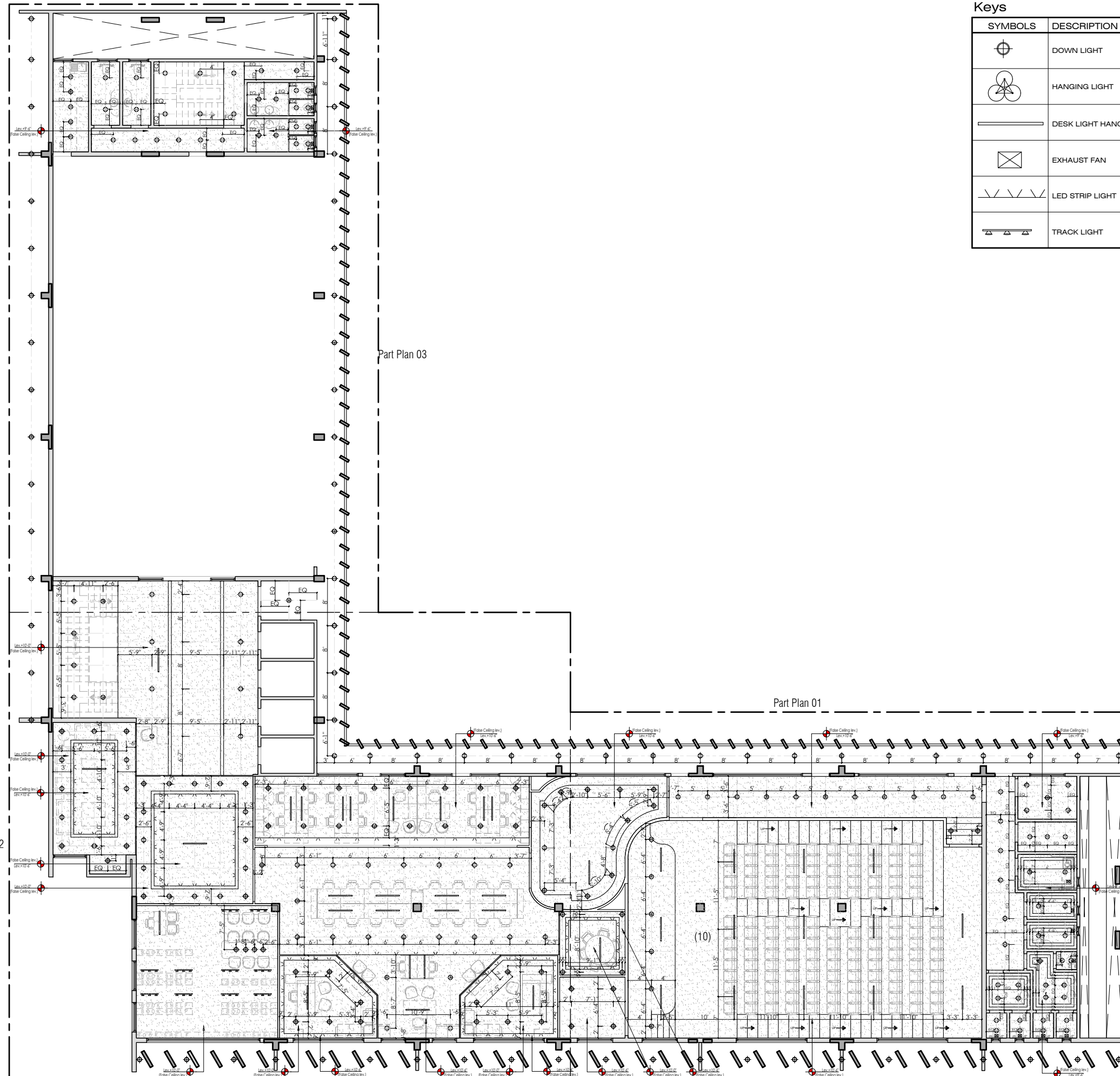
DRAWING TITLE:

**8th FLOOR**  
FLOORING LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	APR-2024

DWG. No.  
**SL.08.AR.MP-03**



Keys

SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT

GENERAL NOTES

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ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
CEILING LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	APR-2024

DWG. No.  
**SL.08.AR.MP-04**

**A**  
A-04 Ceiling Layout Plan  
Scale: N.T.S



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

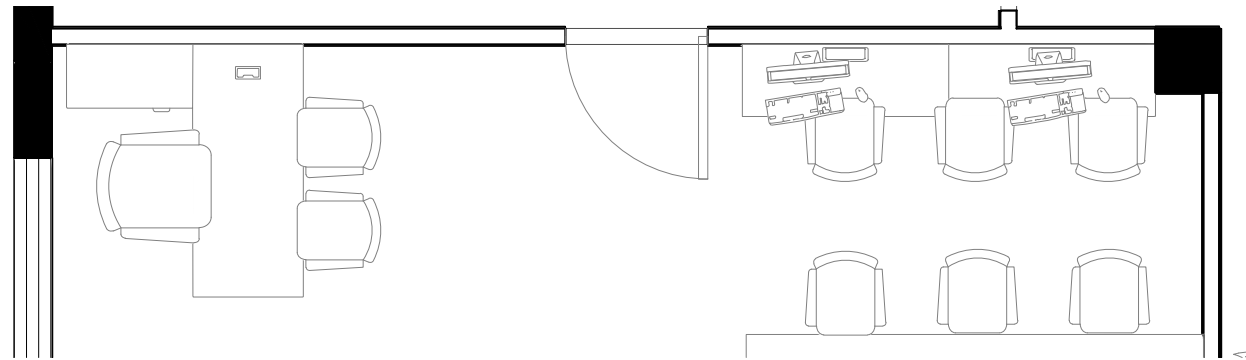
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**8th FLOOR**  
**LIBRARY ELEVATION D**

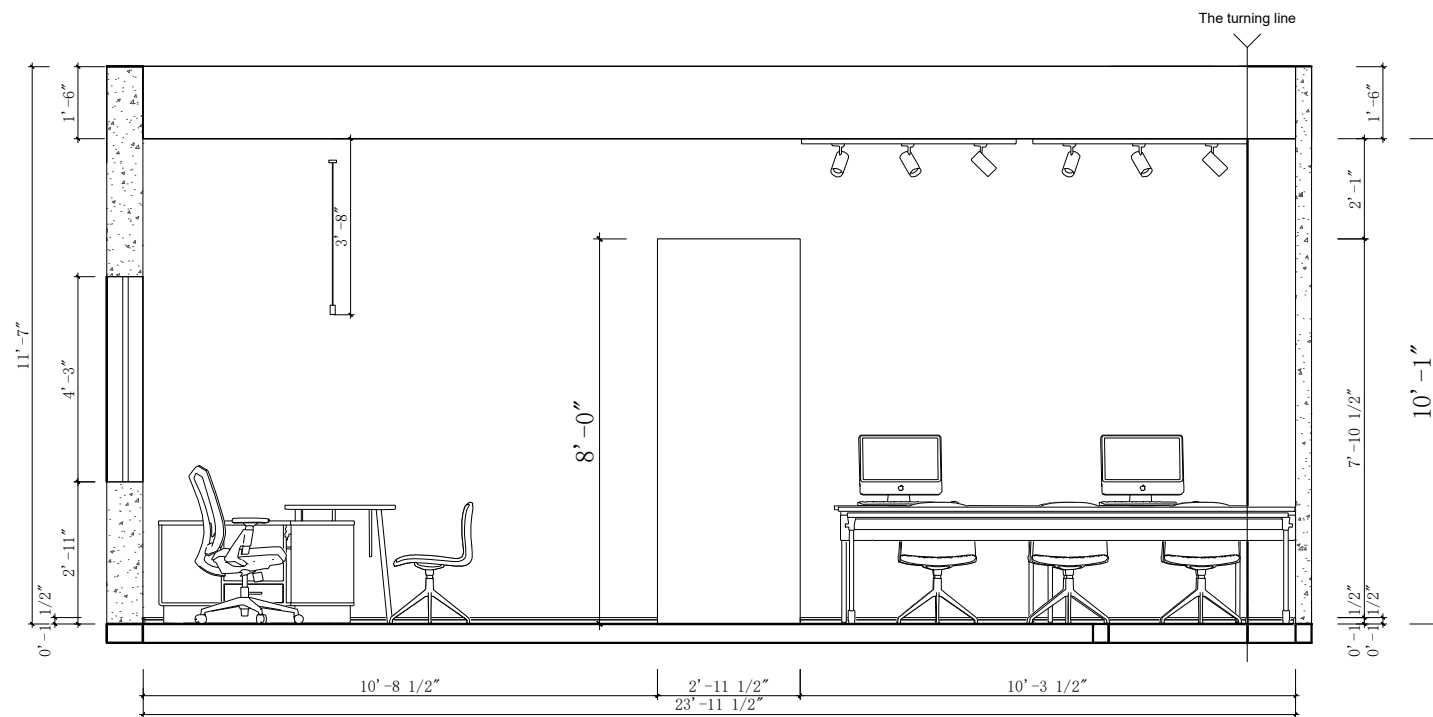
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL08AR-LB-05**



LIBRARY ELEV A(1/4"=1'-0")



Library Elevation A(1/4"=1'-0")

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

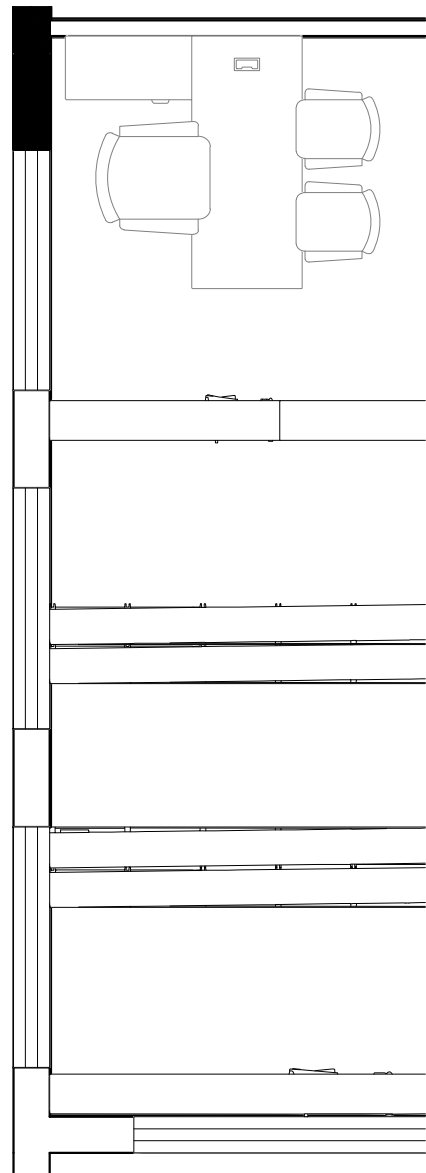
DRAWING TITLE:

**8th FLOOR**  
**LIBRARY ELEVATION B**

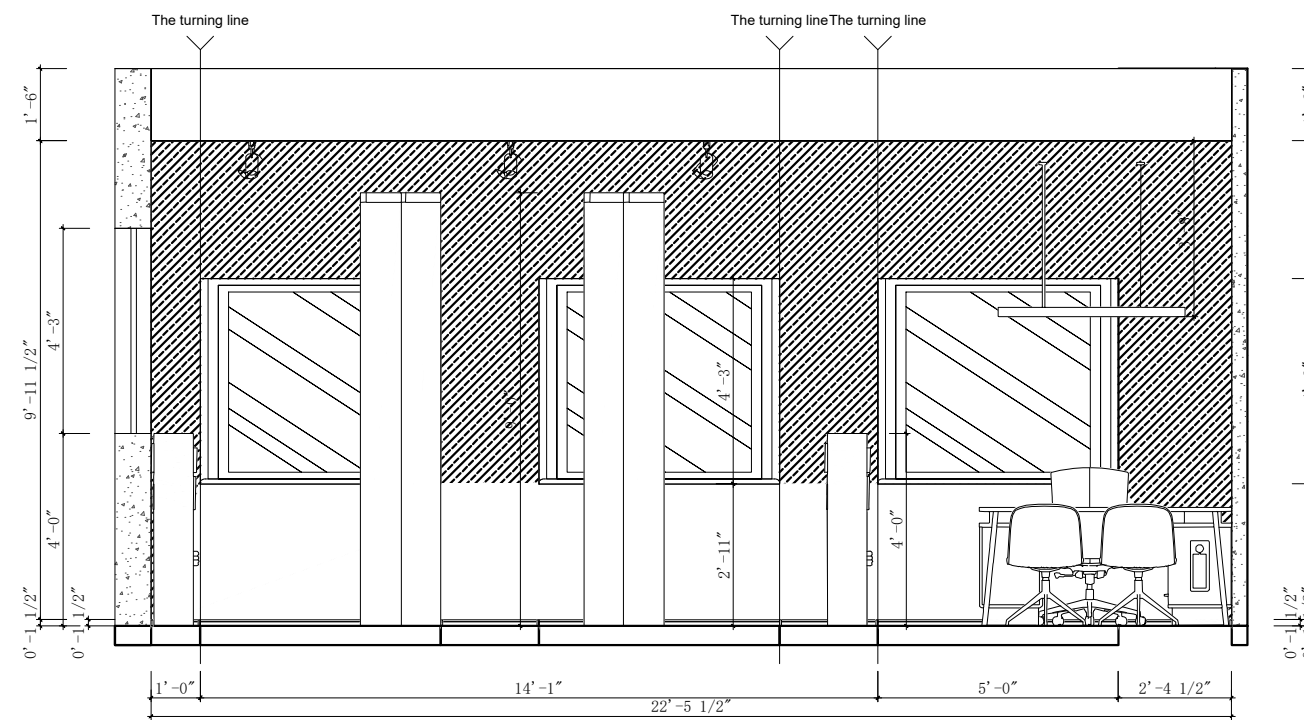
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	@ A3 APR. 2024

DWG. No.  
**SL08AR-LB-06**



LIBRARY ELEV B(1/4"=1'-0")



Library Elevation D(1/4"=1'-0")

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



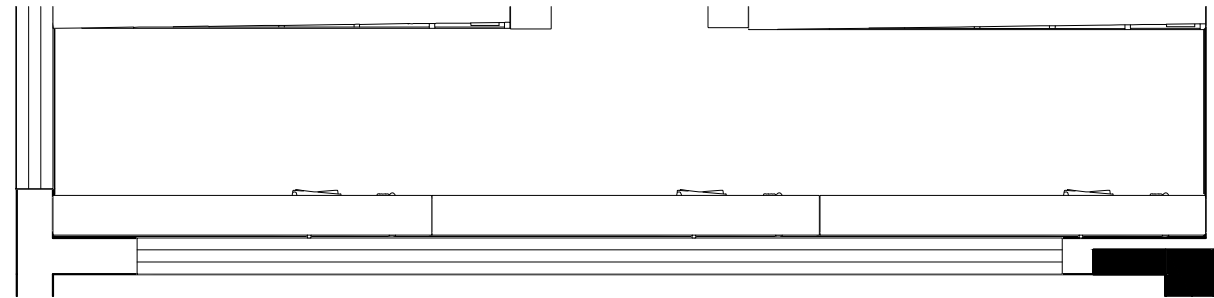
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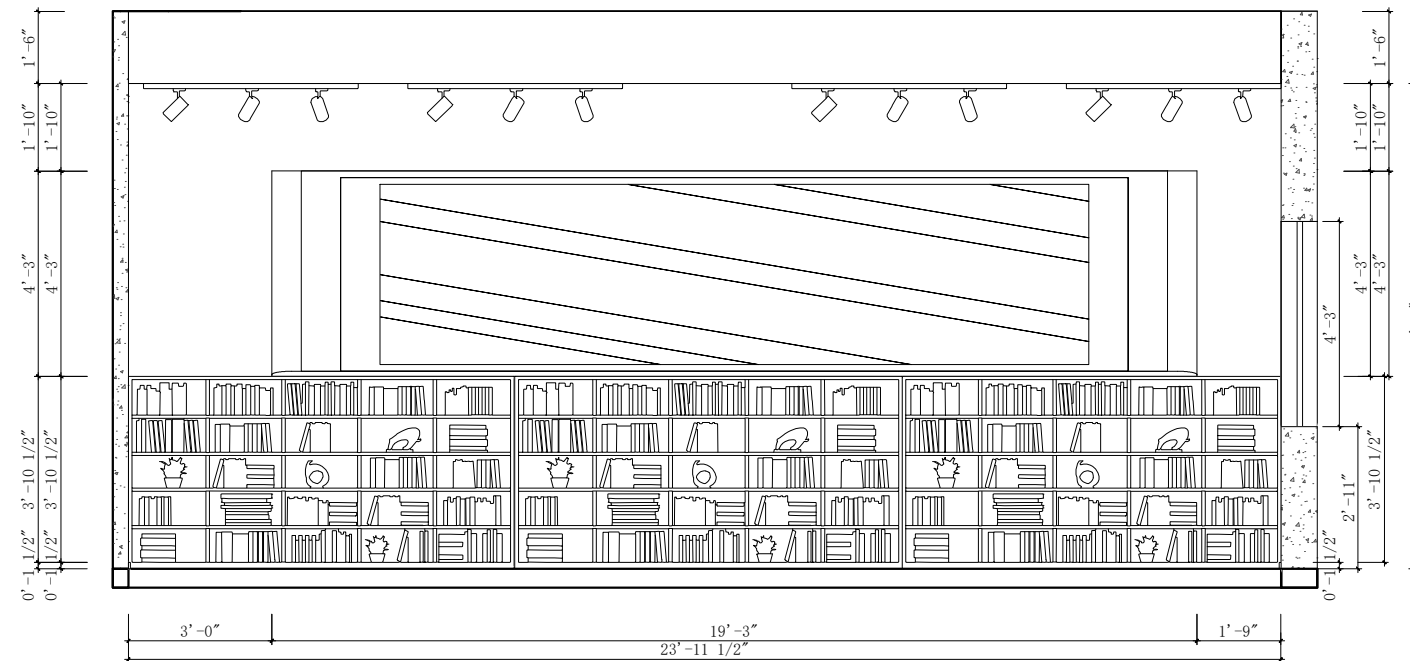
**8th FLOOR**  
**LIBRARY ELEVATION C**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-LB-07**



LIBRARY ELEV C(1/4"=1'-0")



Library Elevation C(1/4"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
**LIBRARY FLOOR**

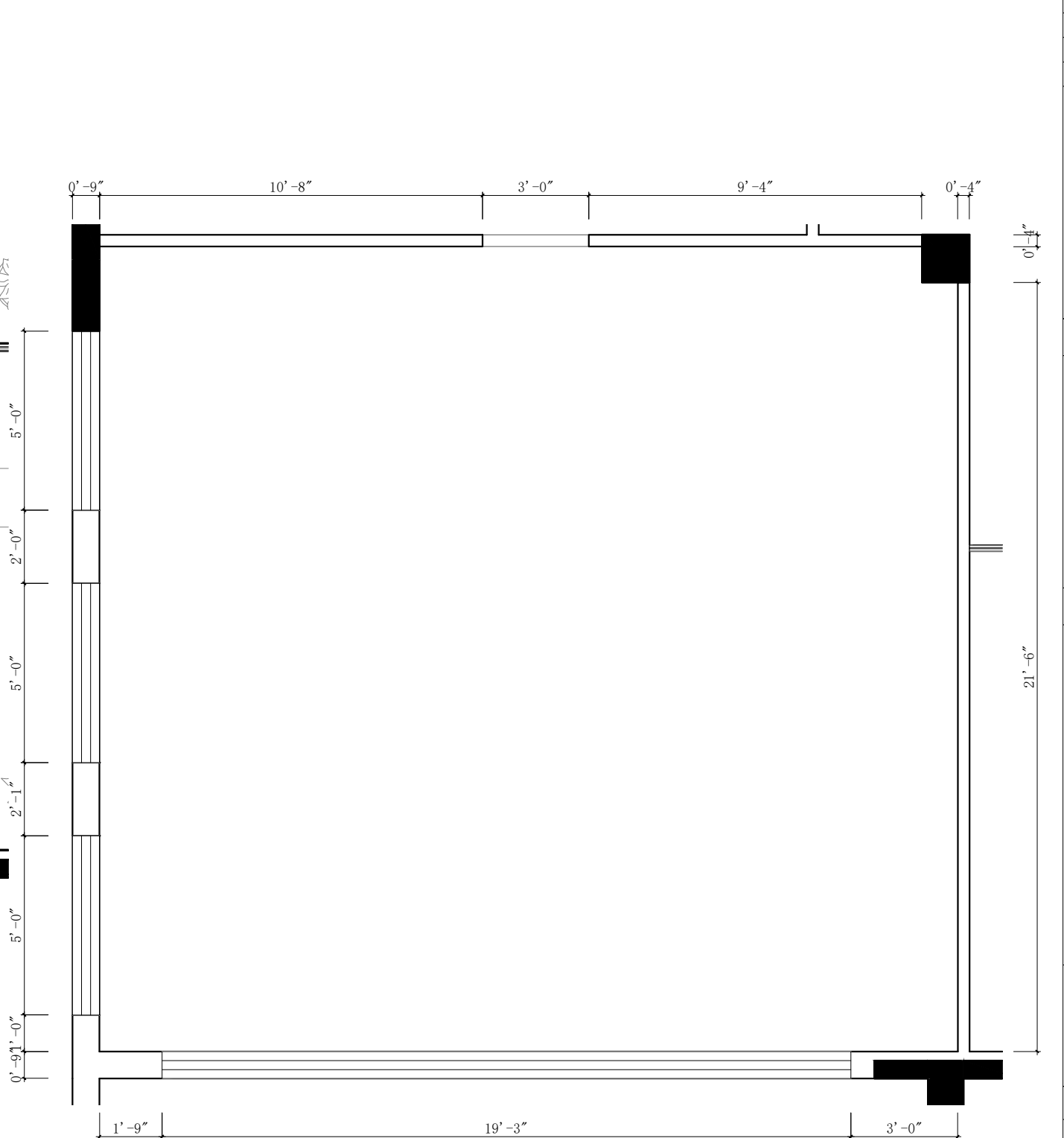
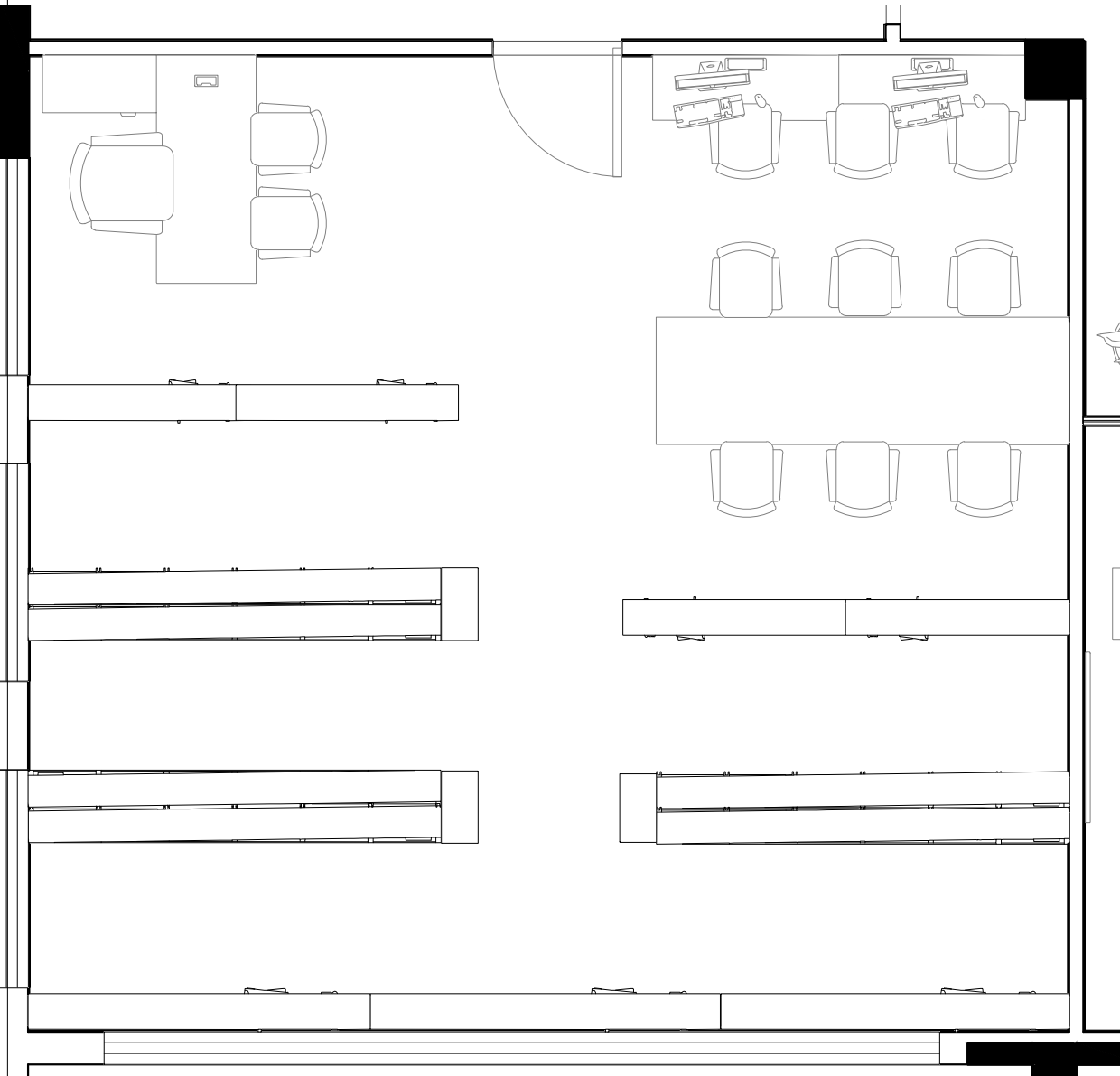
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	APR. 2024

DWG. No.  
**SL08AR-LB-08**

LIBRARY PLAN(1/4"=1'-0")

LIBRARY WALLS(1/4"=1'-0")







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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



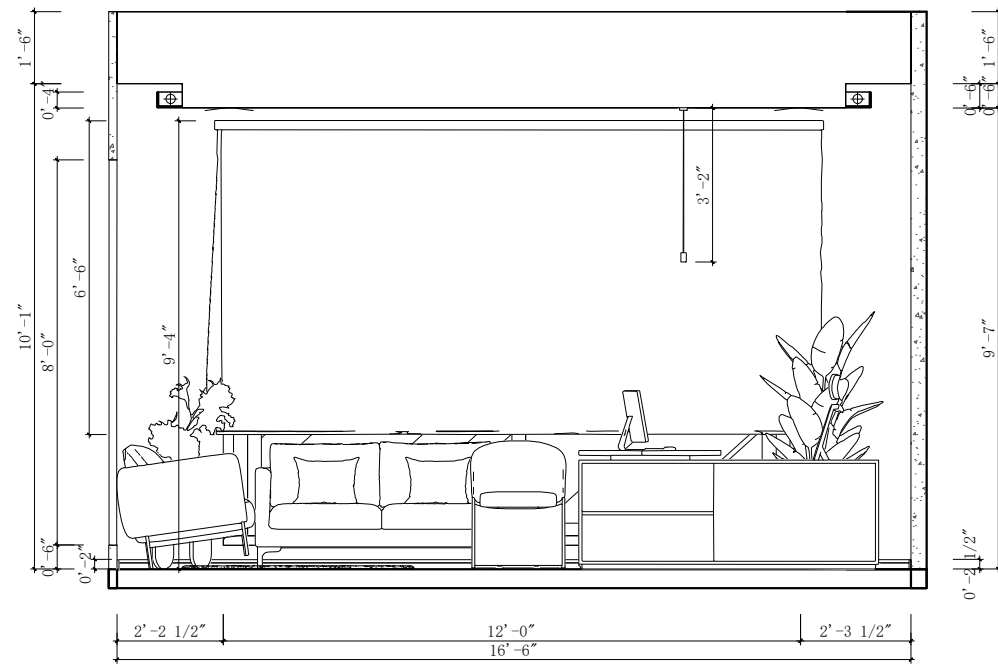
COMMENTS:

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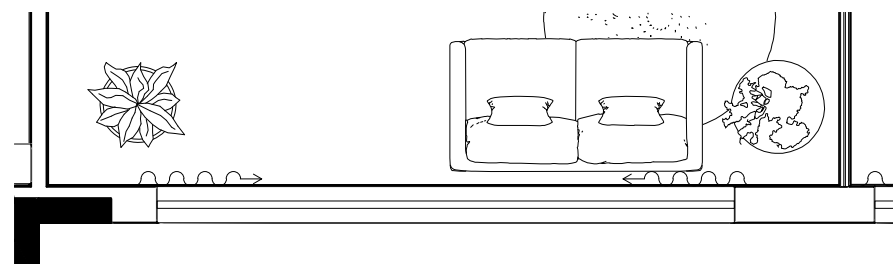
**8th FLOOR**  
DH TYPICAL OFFICE  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-DH-10**

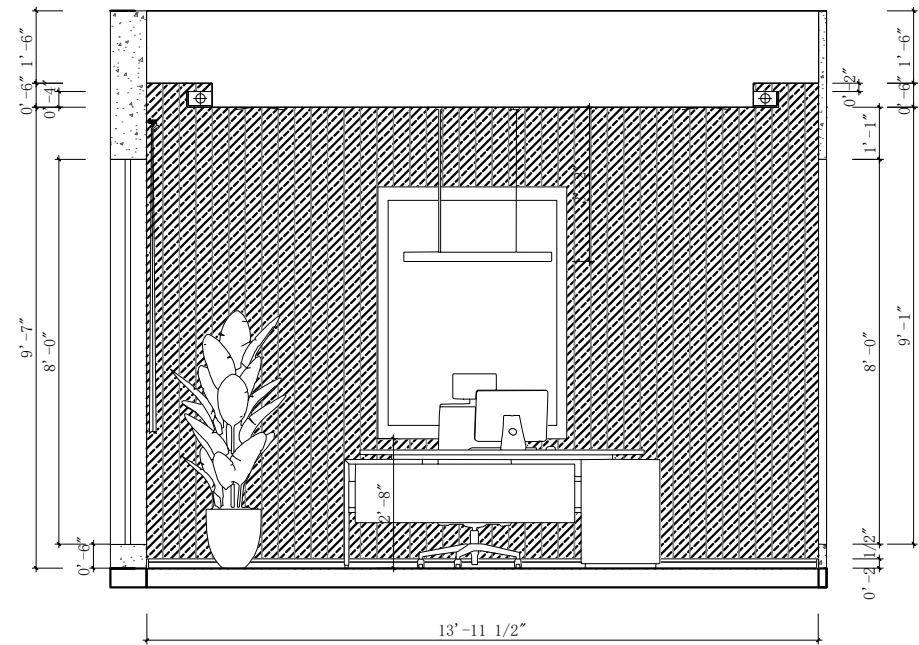


Office 5 Elevation C(1/4"=1'-0")

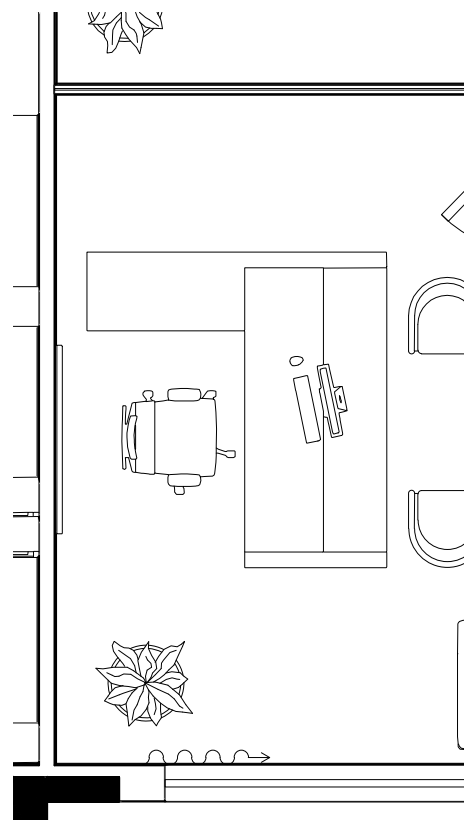


DH ELEV(1/4"=1'-0")





Office 5 Elevation D(1/4"=1'-0")



DH ELEV D(1/4"=1'-0")



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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



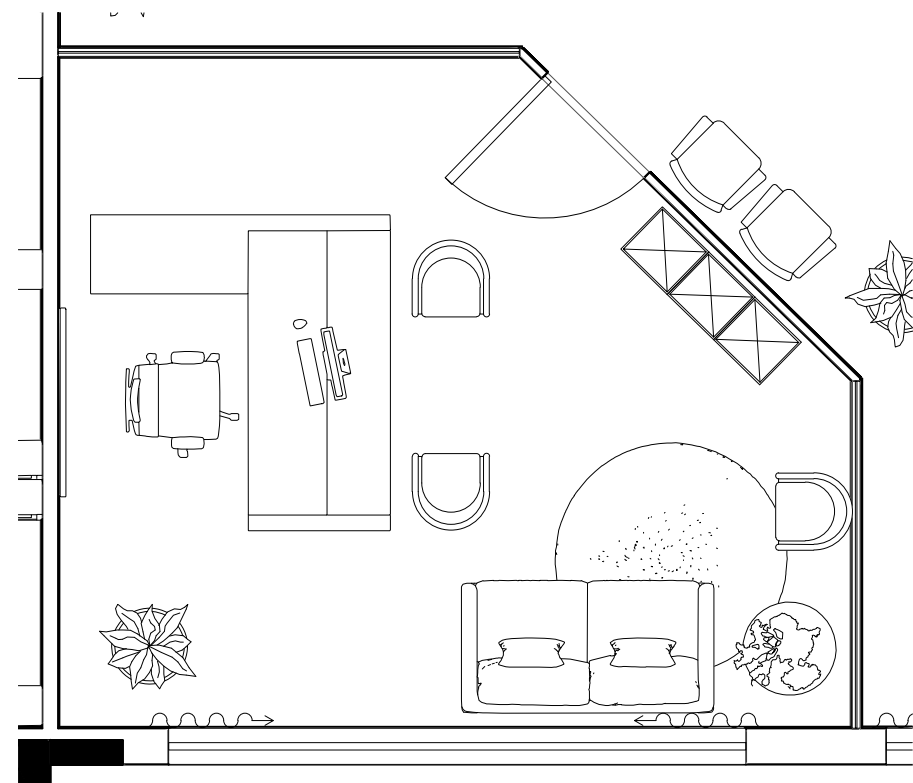
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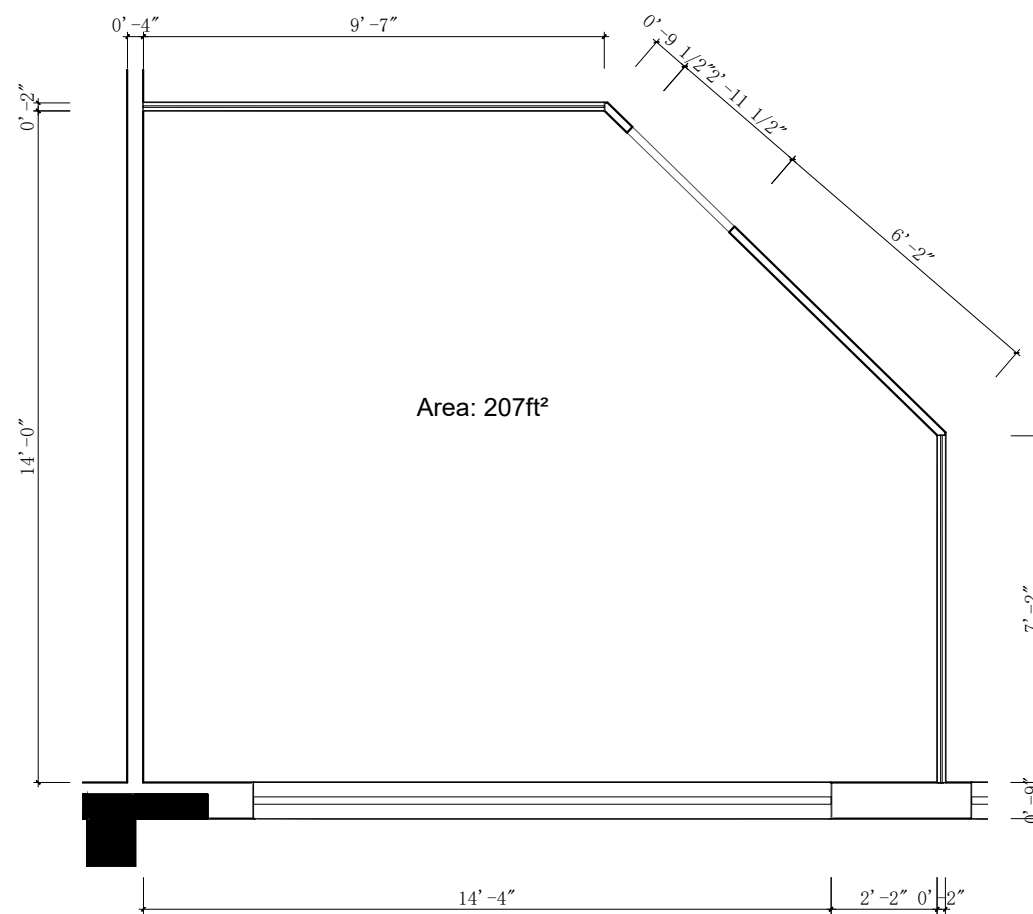
**8th FLOOR**  
DH TYPICAL OFFICE  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
SL08AR-DH-11



DH PLAN(1/4"=1'-0")



DH OFFICE 1 WALLS(1/4"=1'-0")

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

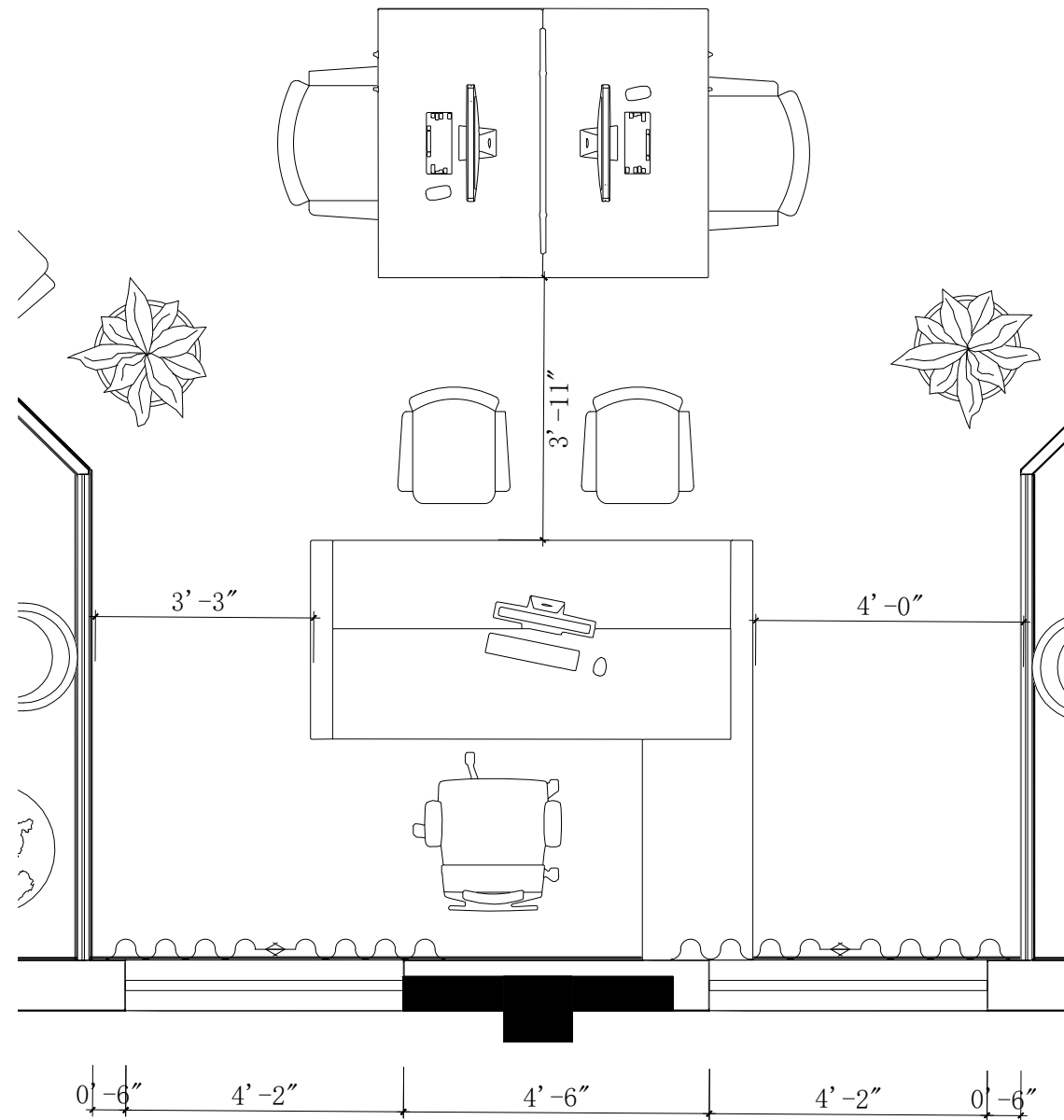
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**8th FLOOR**  
DH TYPICAL FLOOR

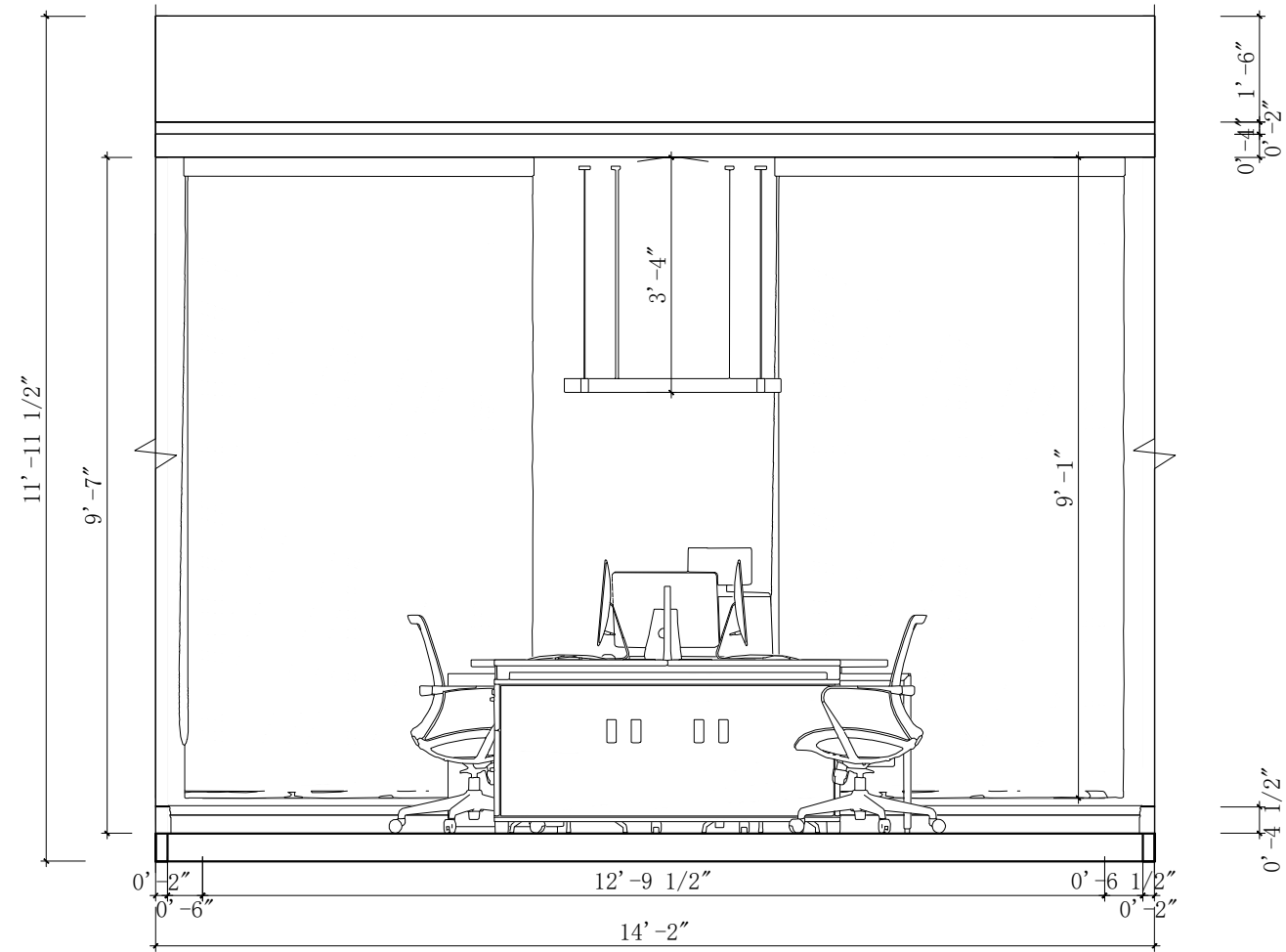
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
SL08AR-DH-12





DGM PLAN(3/8"=1'-0")



D.G.M Elevation (3/8"=1'-0")



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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



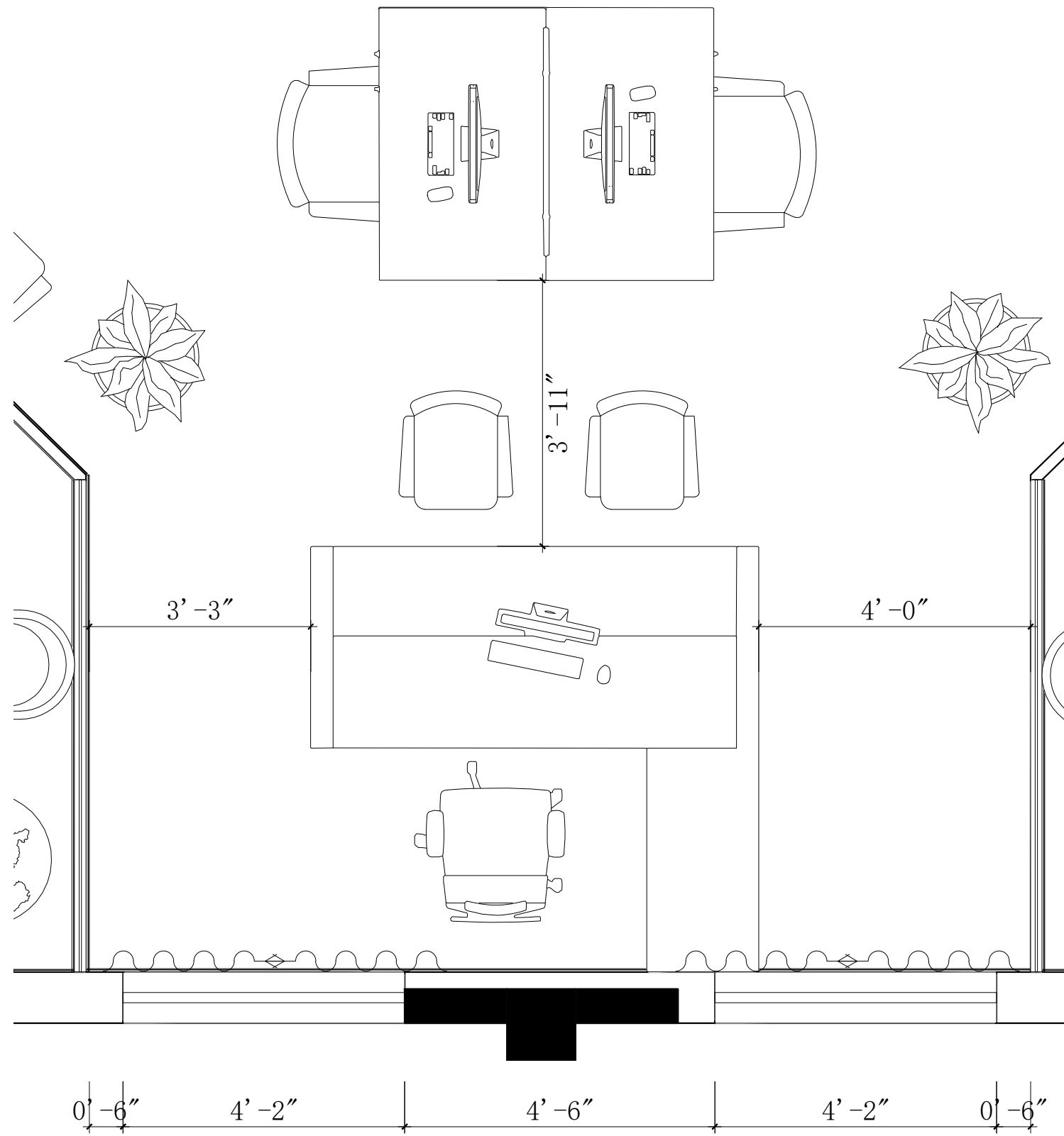
COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
**DGM ELEVATION**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
3/8"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-DGM-13**



DGM PLAN(1/2"=1'-0")

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### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



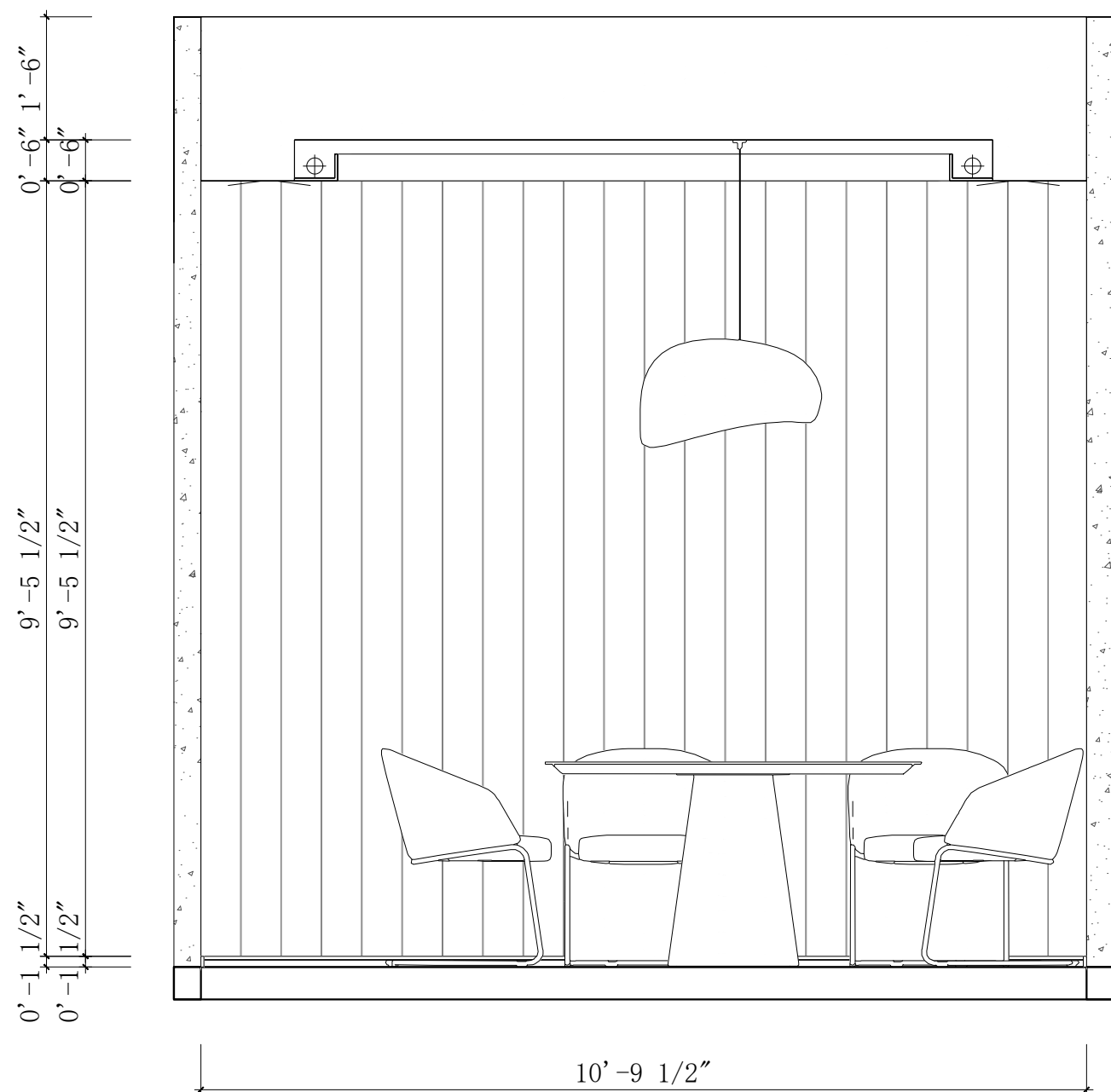
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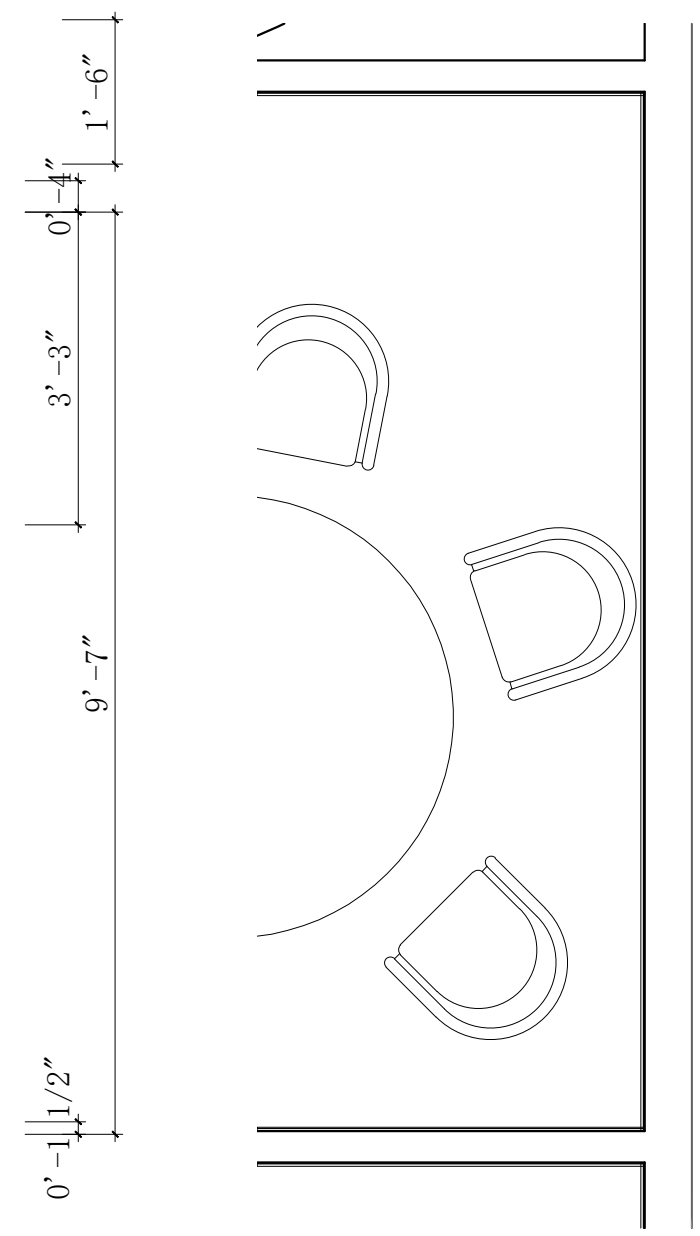
**8th FLOOR**  
DGM FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/2"=1'	@ A3	APR. 2024

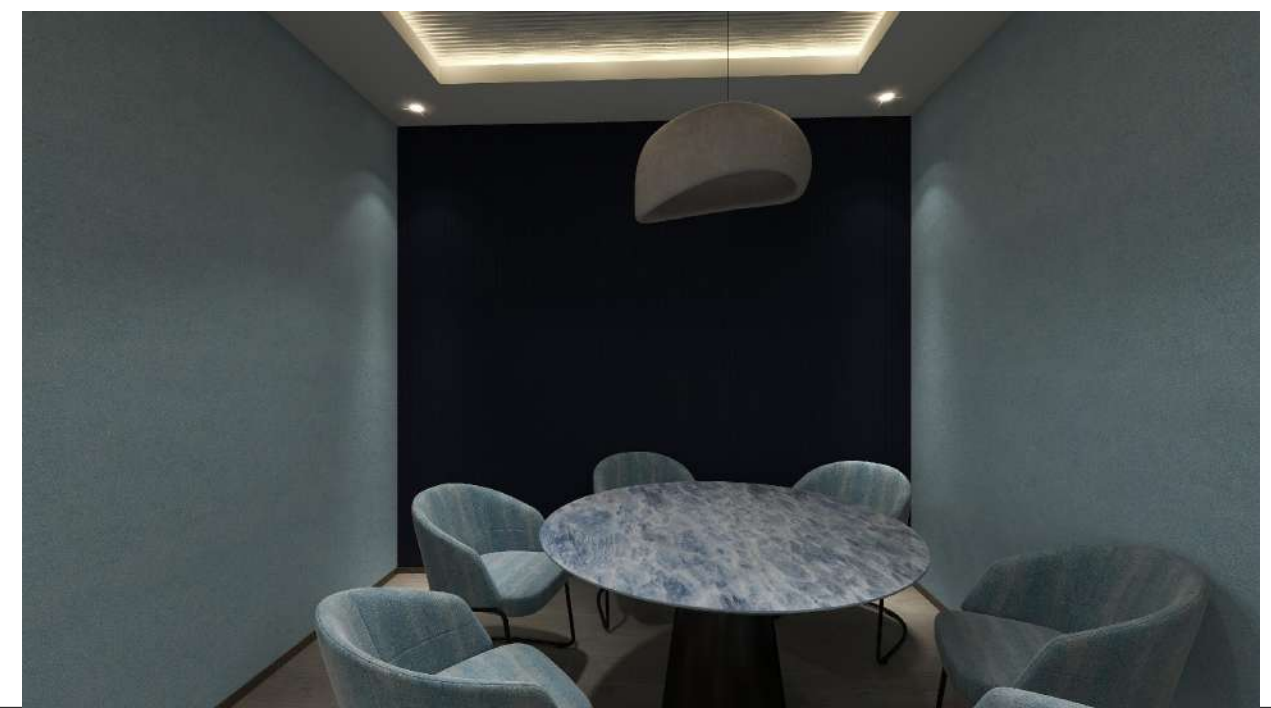
DWG. No.  
**SL08AR-DGM-14**



Huddle Room Elevation B(1/2"=1'-0")



MPR ELEV B(1/2"=1'-0")



**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

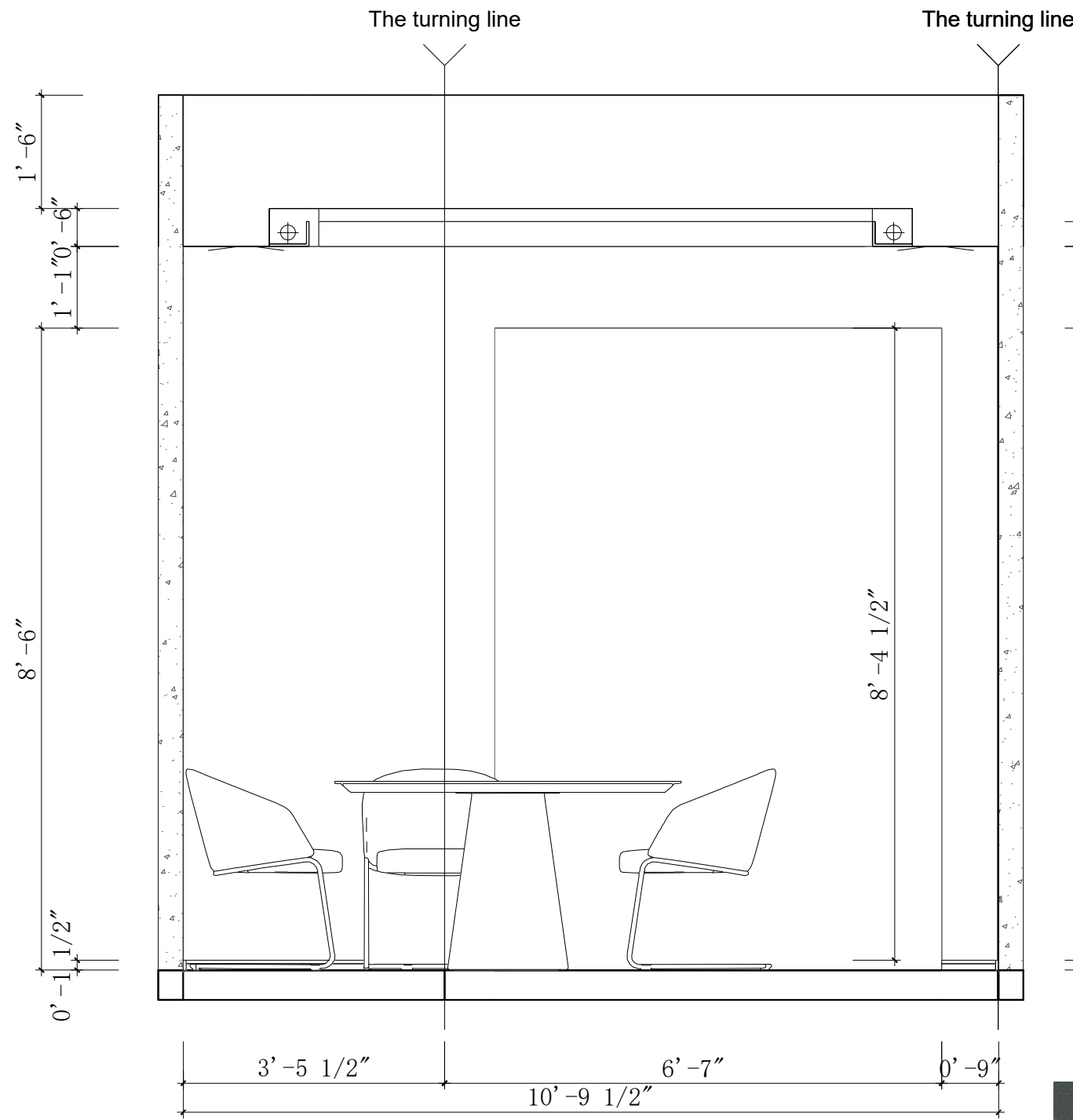


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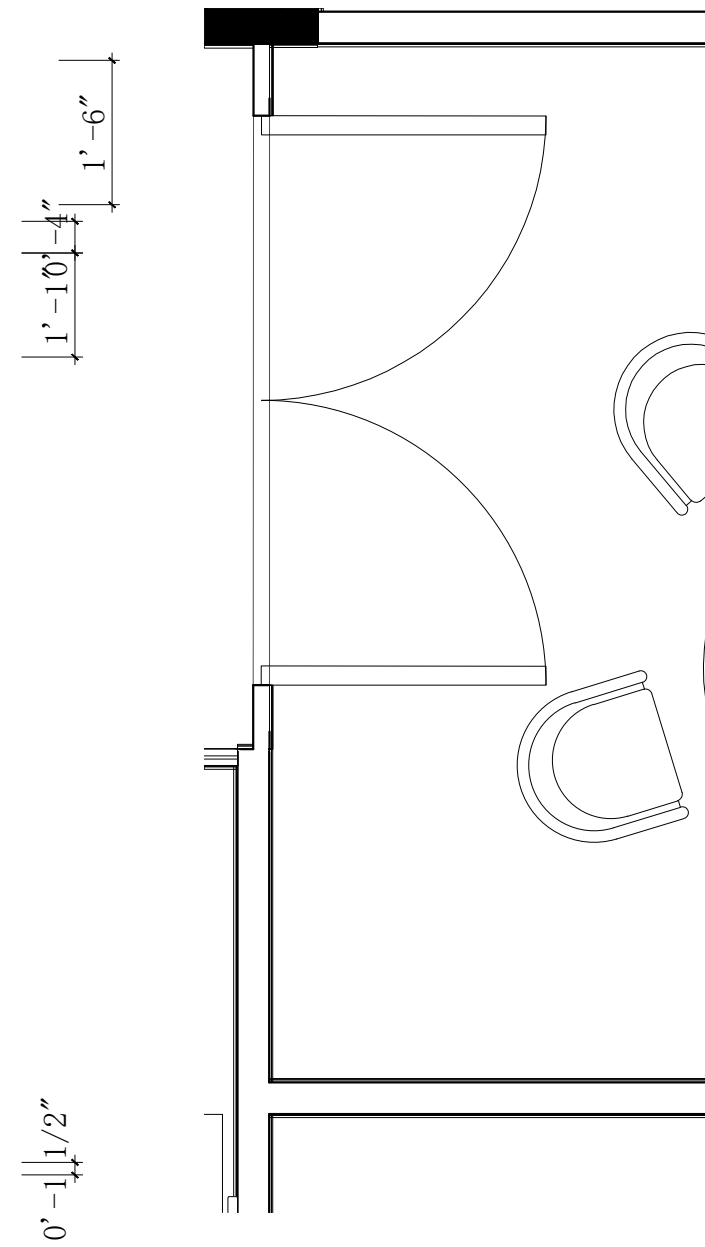
DRAWING TITLE:  
**8th FLOOR**  
MULTI PURPOSE ROOM  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/2"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-MPR-15**



Huddle Room Elevation D(1/2"=1'-0")



MPR ELEV D(1/2"=1'-0")



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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
MULTI PURPOSE ROOM  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/2"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-MPR-16**



## GENERAL NOTES

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### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



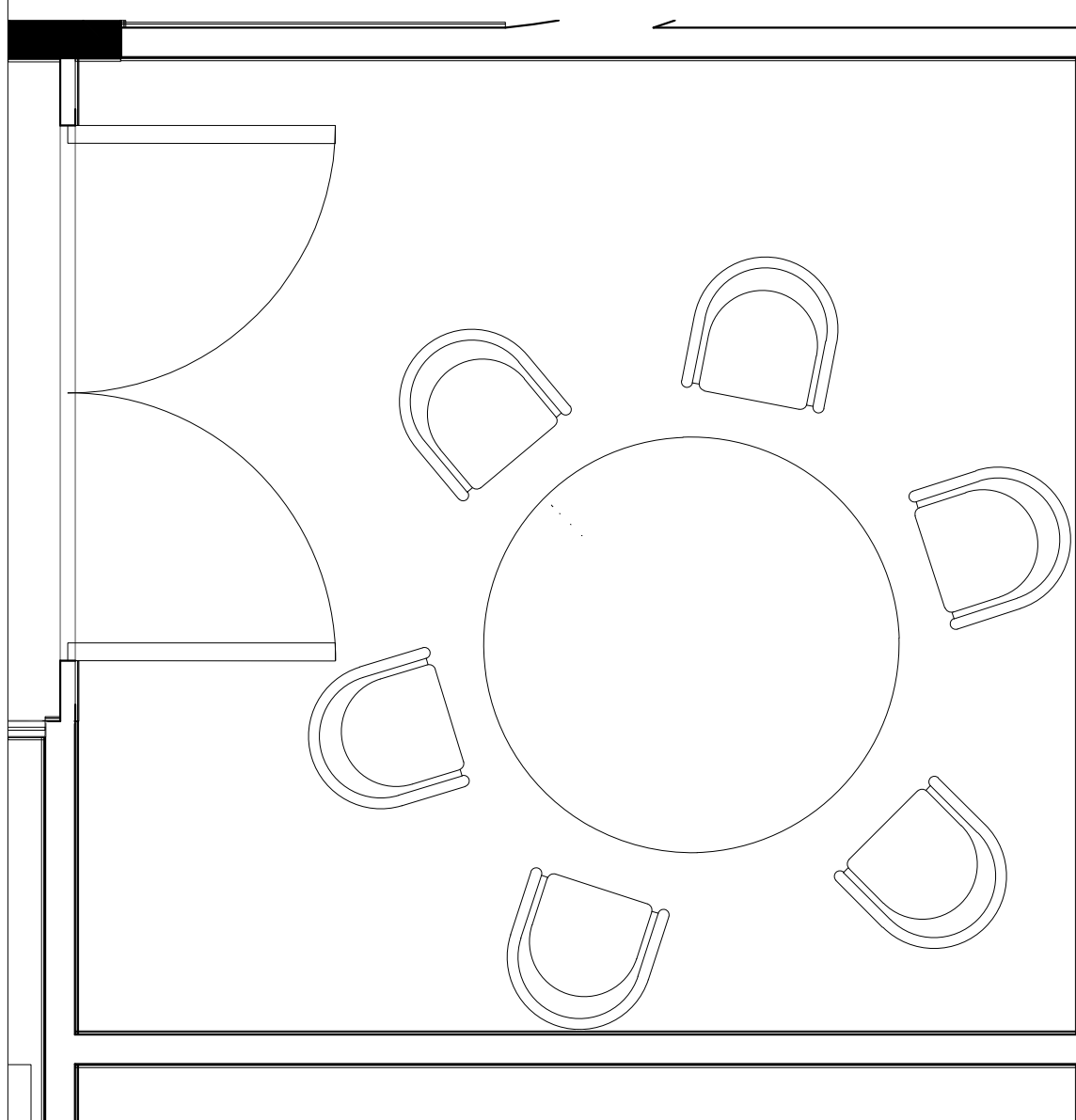
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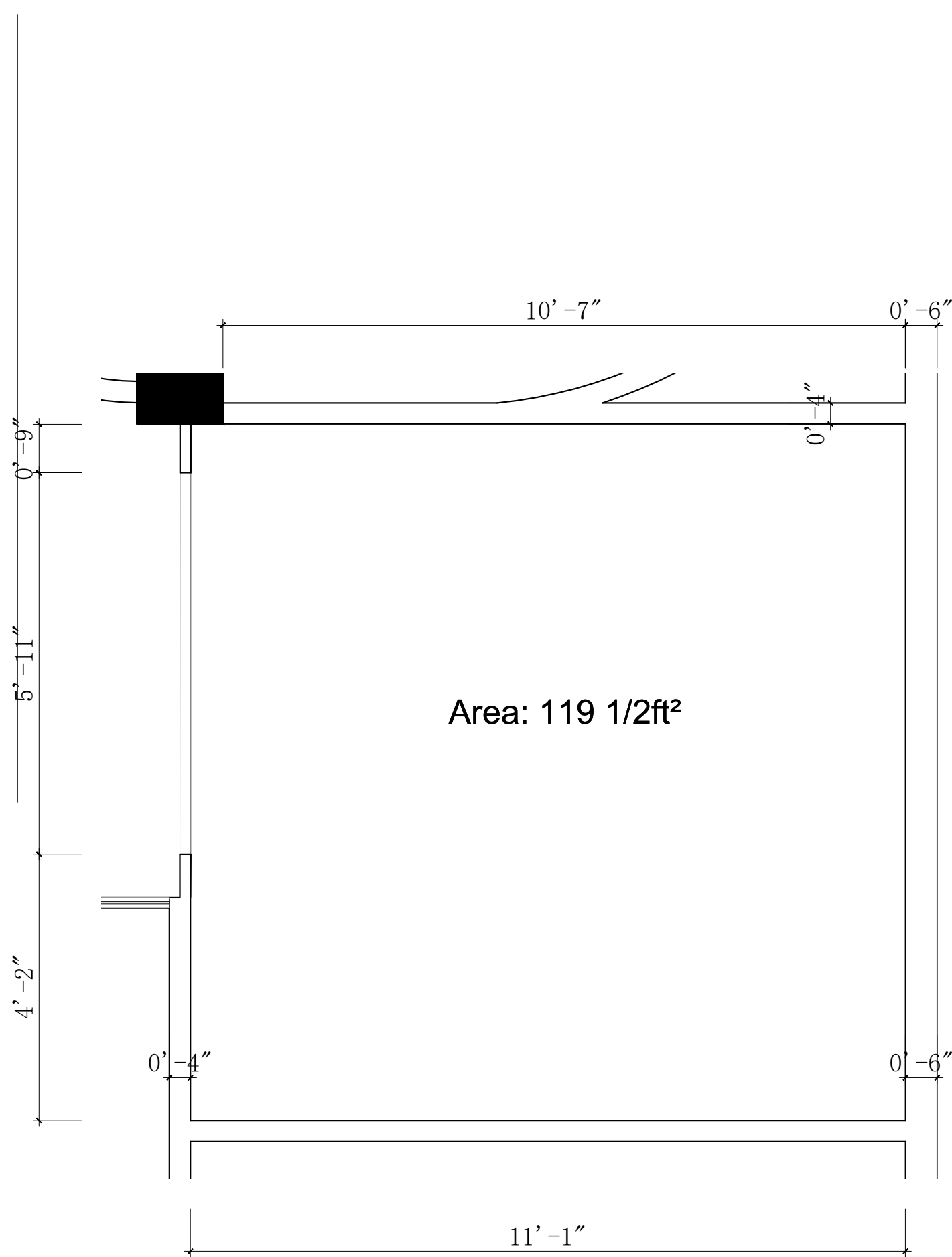
**8th FLOOR**  
MULTI PURPOSE ROOM FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/2"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-MPR-17**

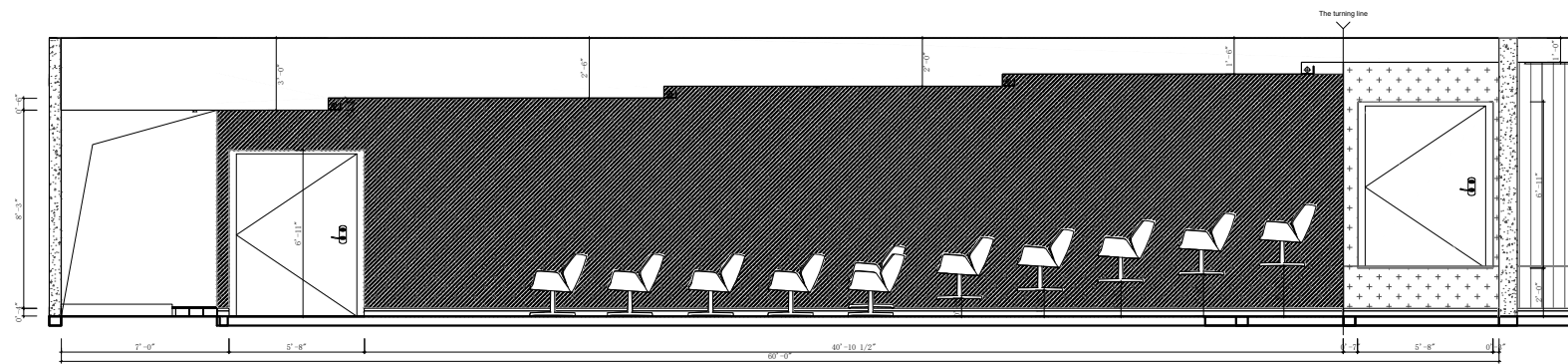


MULTI PURPOSE ROOM PLAN(1/2"=1'-0")

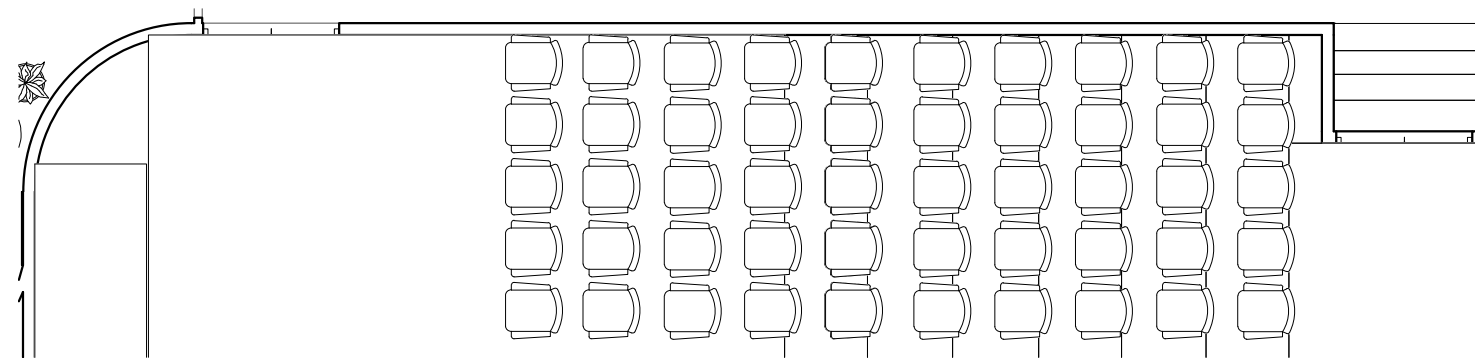


Area: 119 1/2ft<sup>2</sup>

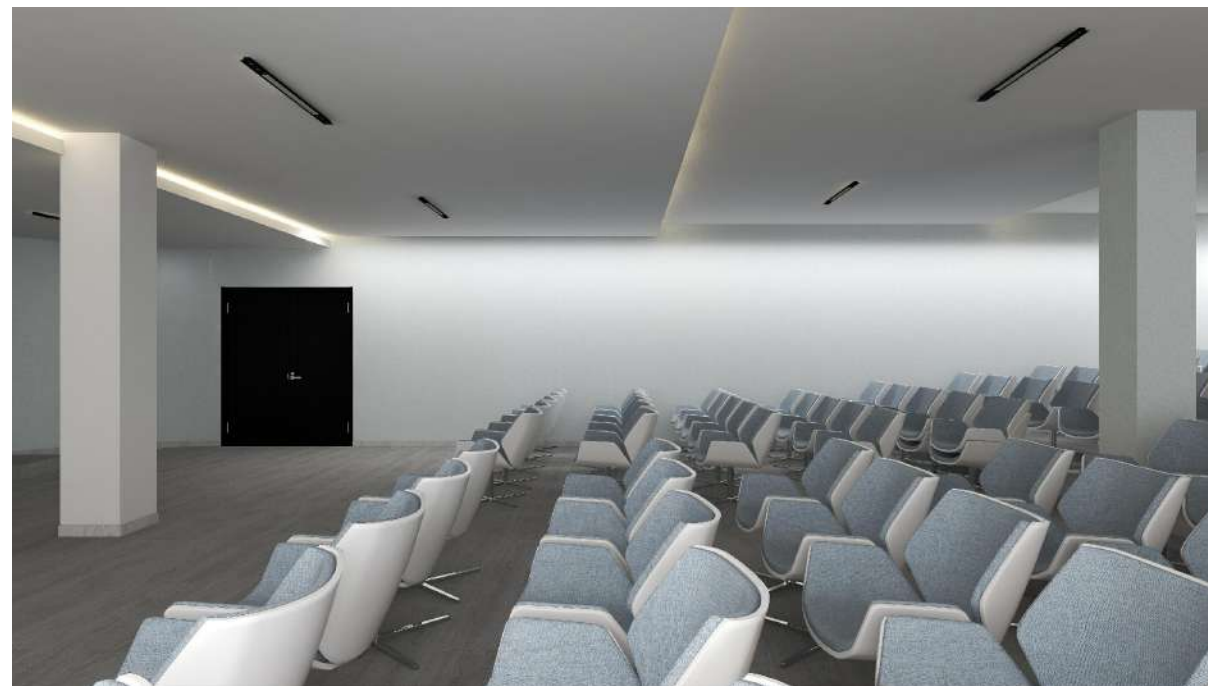
MPR WALLS(1/2"=1'-0")



auditorium Elevation A(1/8"=1'-0")



AUDITORIUM ELEV A(1/8"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
AUDITORIUM ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-AD-18**

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

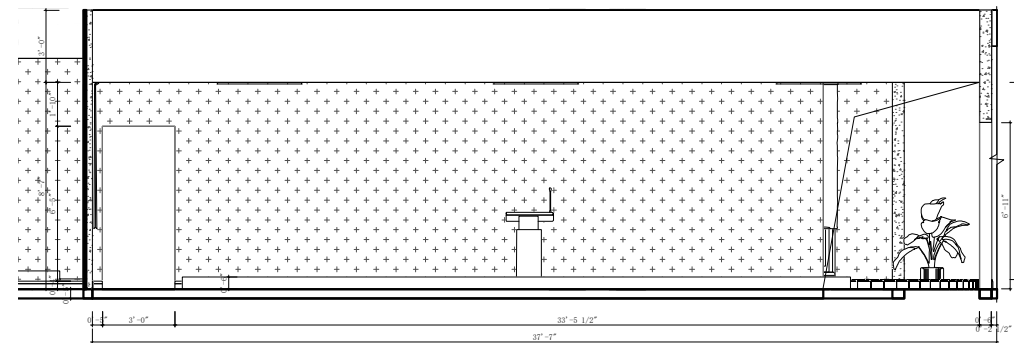
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**8th FLOOR**  
AUDITORIUM ELEVATION B

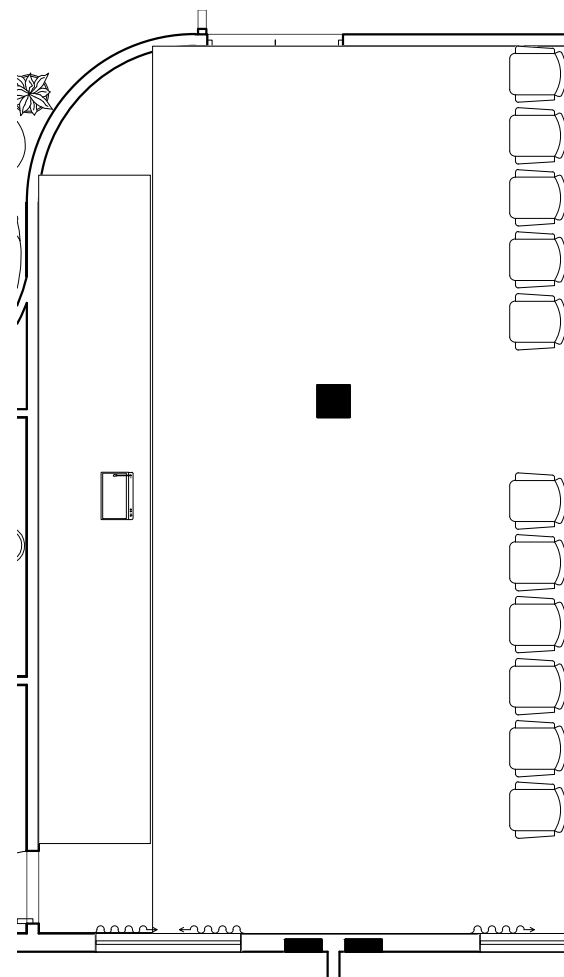
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/8"=1'	APR. 2024

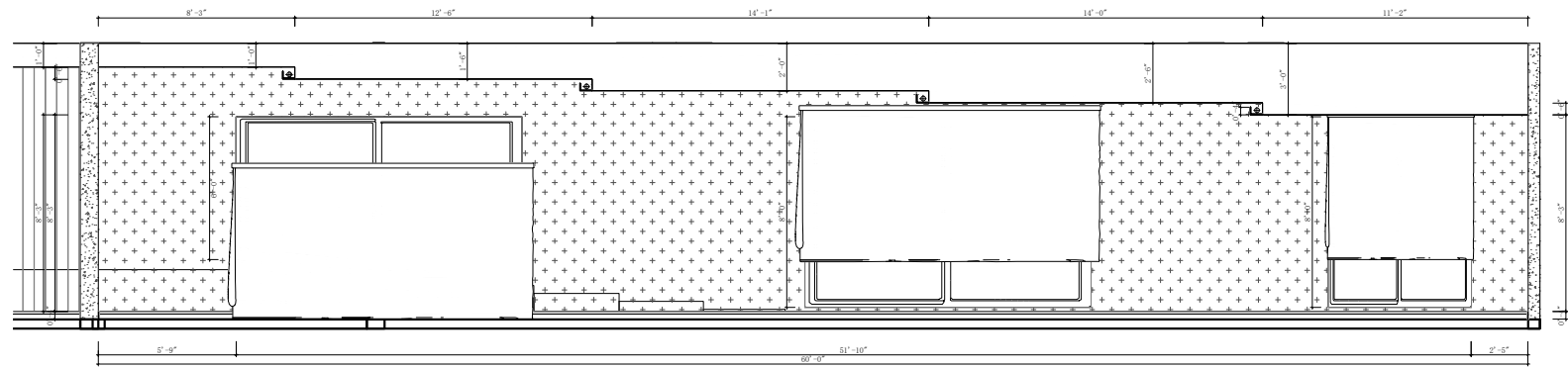
DWG. No.  
**SL08AR-AD-19**



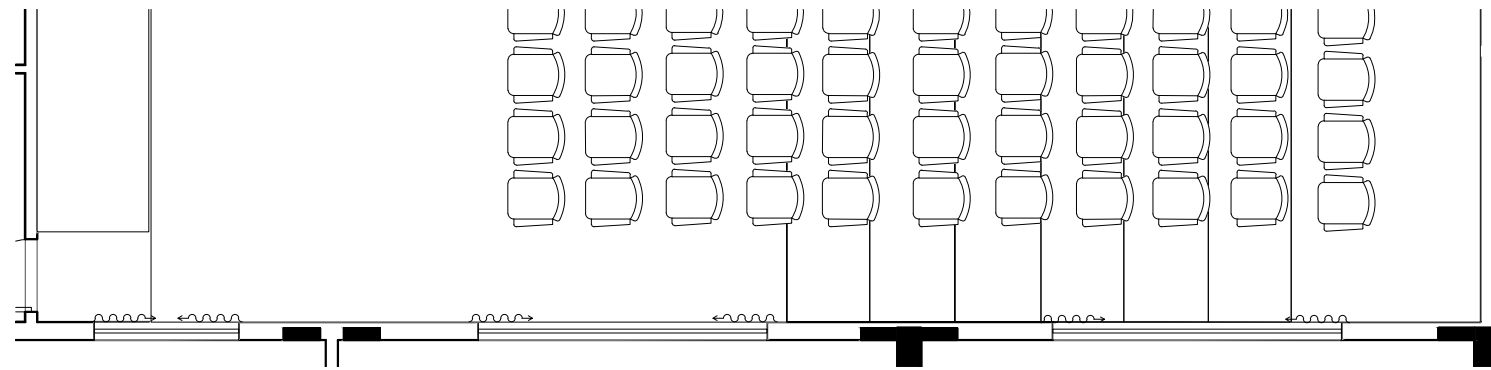
Auditorium Elevation (1/8"=1'-0")



AUDITORIUM ELEV B(1/8"=1'-0")



auditorium Elevation C(1/8"=1'-0")



AUDITORIUM ELEV C(1/8"=1'-0")



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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
AUDITORIUM ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/8"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-AD-20**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

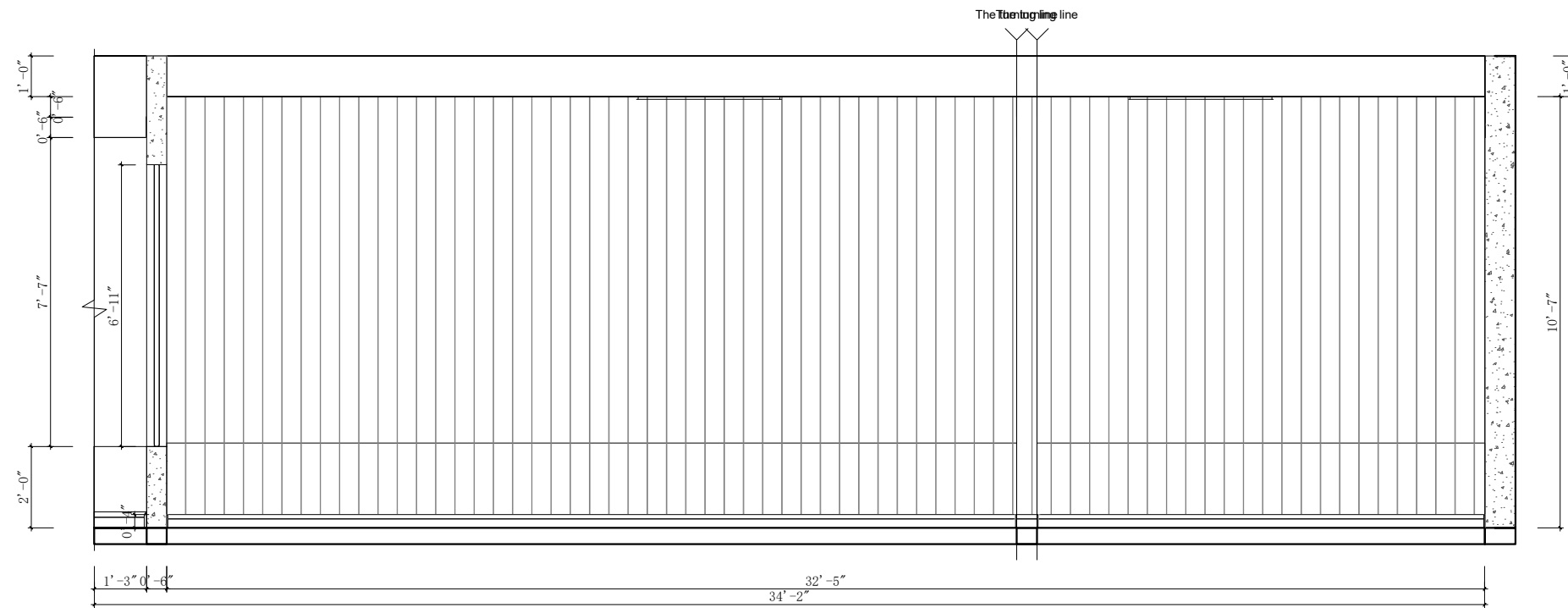
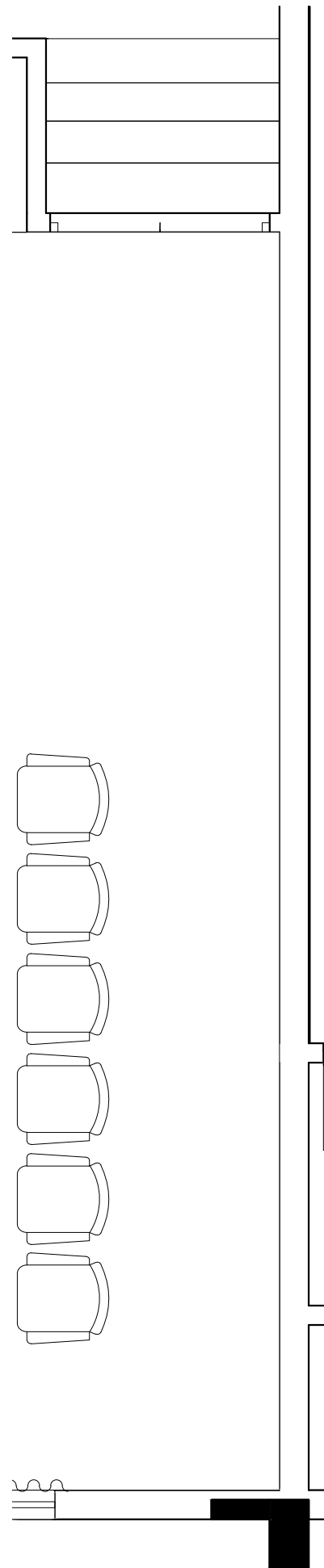
DRAWING TITLE:

**8th FLOOR**  
**AUDITORIUM ELEVATION D**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	APR. 2024

DWG. No.  
**SL08AR-AD-21**



Auditorium Elevation (1/4"=1'-0")



AUDITORIUM ELEV D(1/4"=1'-0")





## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

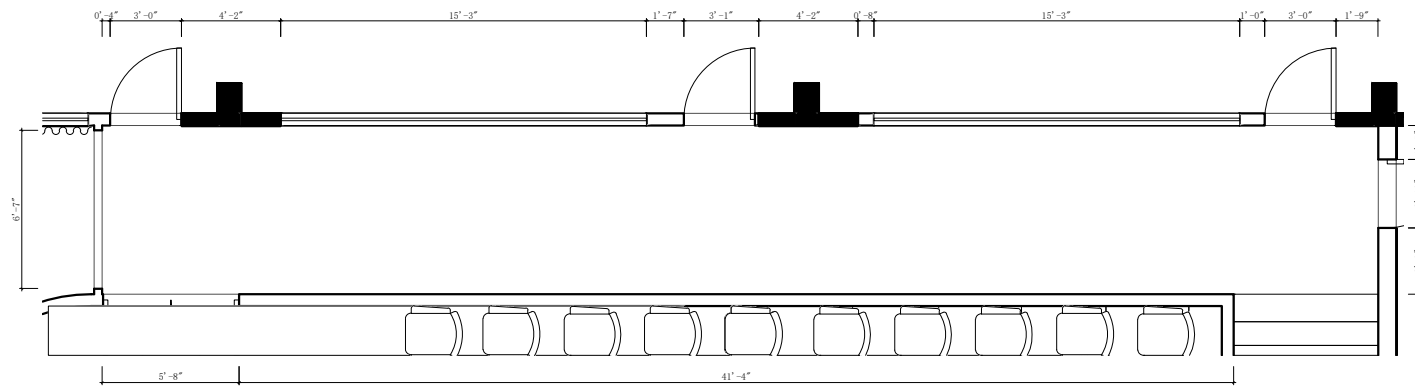


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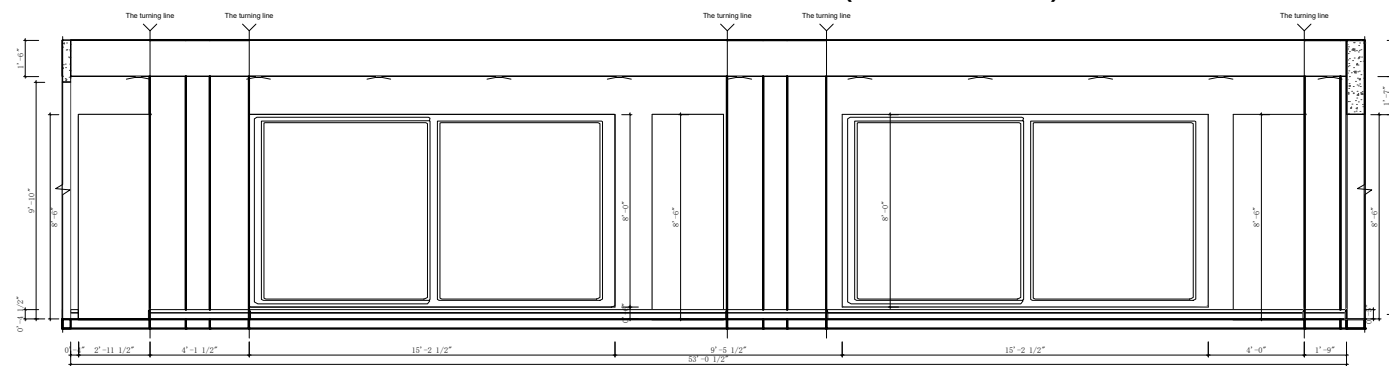
DRAWING TITLE:  
**8th FLOOR**  
AUDITORIUM HALLWAY  
ELEVATION

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/8"=1'	@ A3	APR. 2024

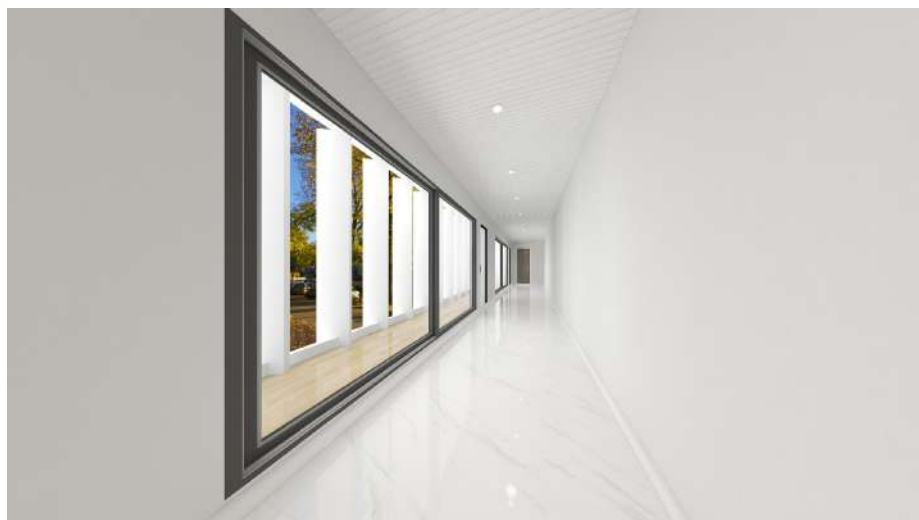
DWG. No.  
**SL08AR-AD-23**

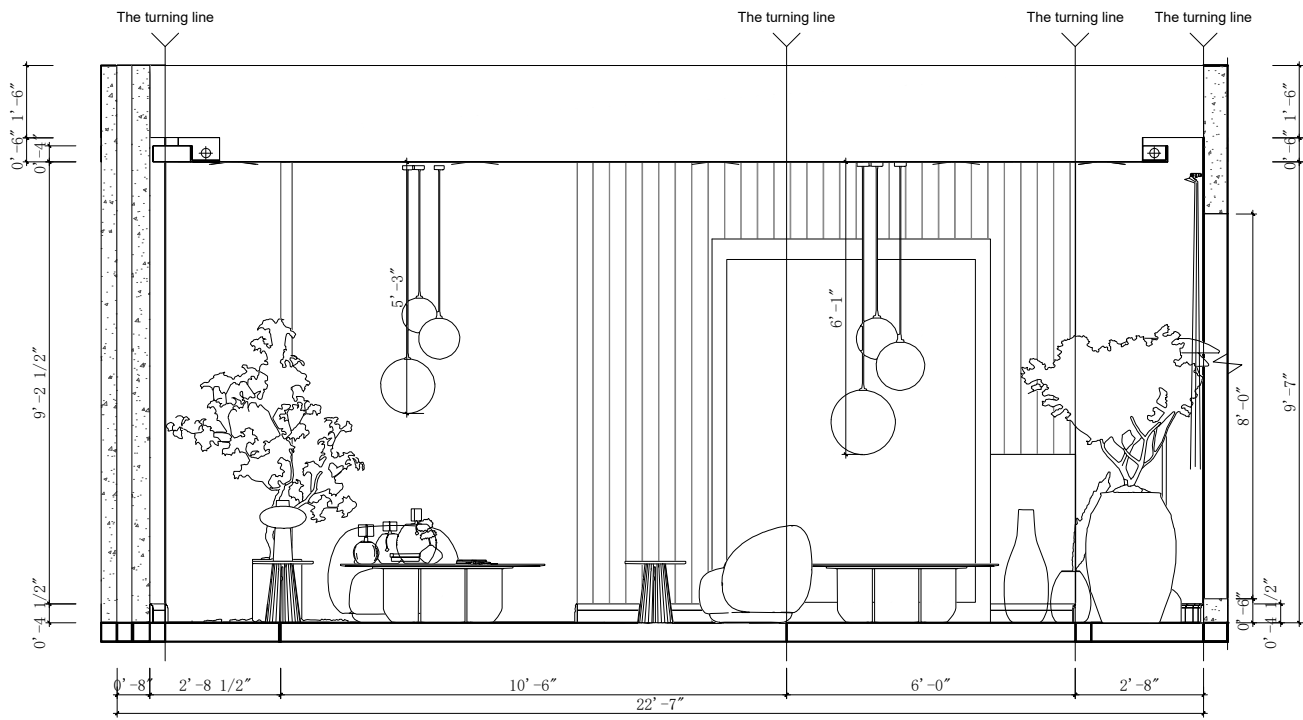


**AUDITORIUM HALLWAY(1/8"=1'-0")**

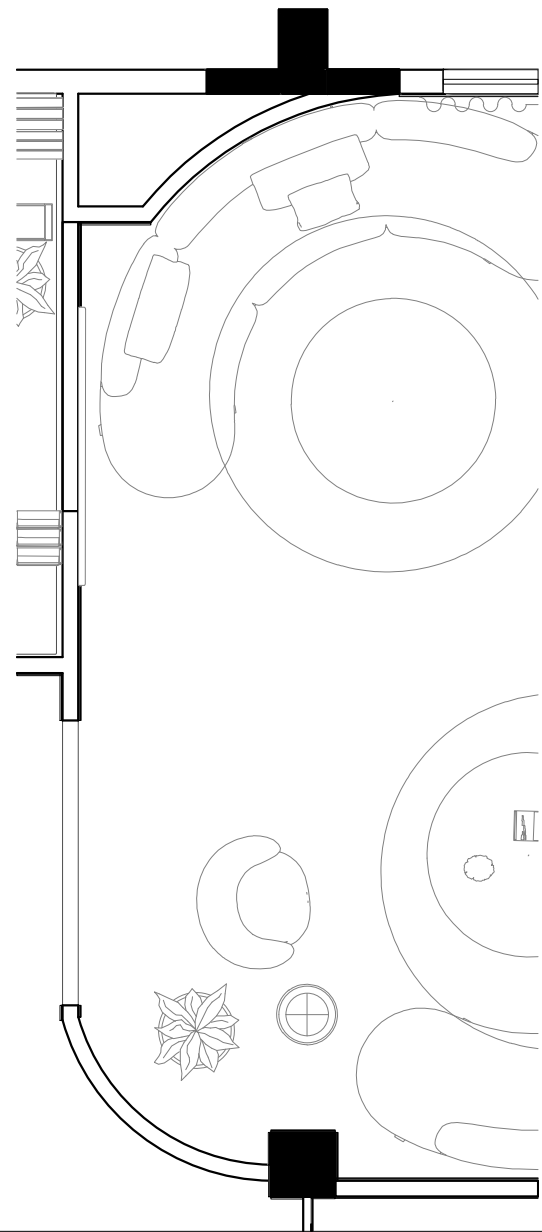


**Auditorium Hallway Elevation A(1/8"=1'-0")**





Auditorium Waiting Elevation D(1/4"=1'-0")



Gathering Elev A(1/4"=1'-0")



**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
GATHERING SPACE  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-GS-24**



**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

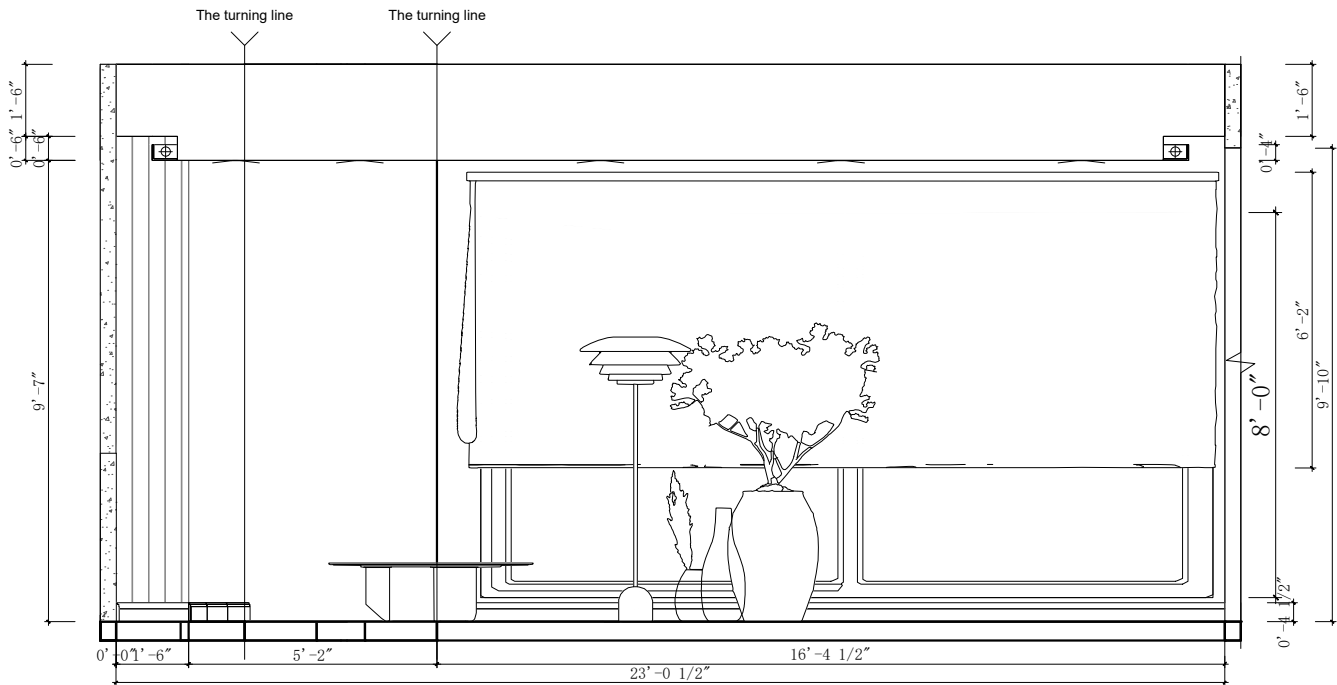


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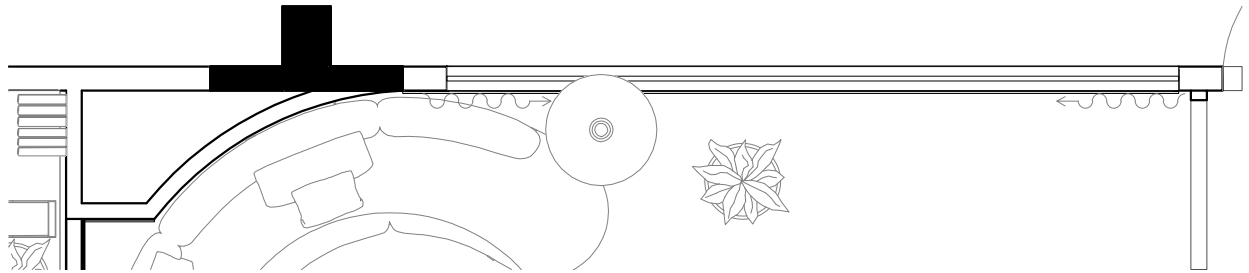
DRAWING TITLE:  
**8th FLOOR**  
GATHERING SPACE  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-GS-25**



**Auditorium Waiting Elevation A(1/4"=1'-0")**



**Gathering Elev B(1/4"=1'-0")**



## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

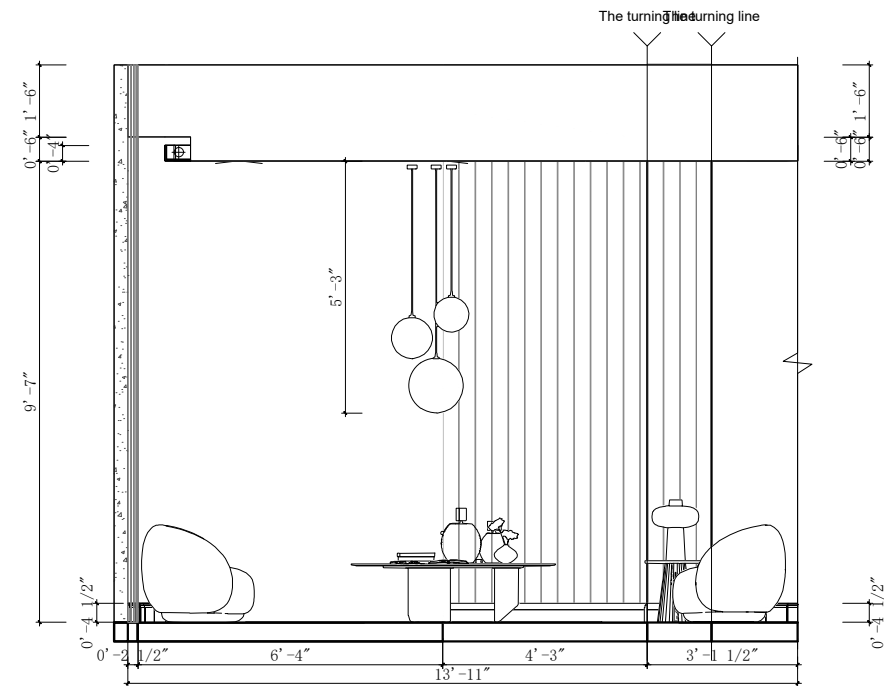
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**8th FLOOR**  
GATHERING SPACE  
ELEVATION C

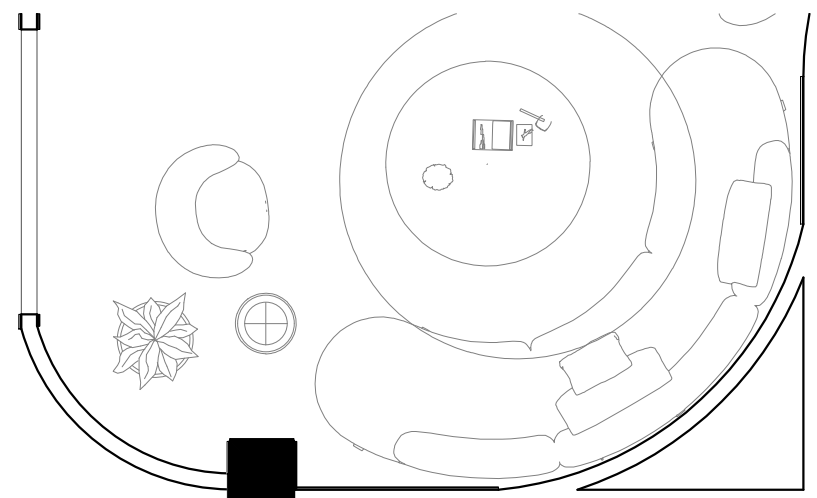
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL08AR-GS-26**



Auditorium Waiting Elevation C(1/4"=1'-0")



Gathering Elev C(1/4"=1'-0")

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

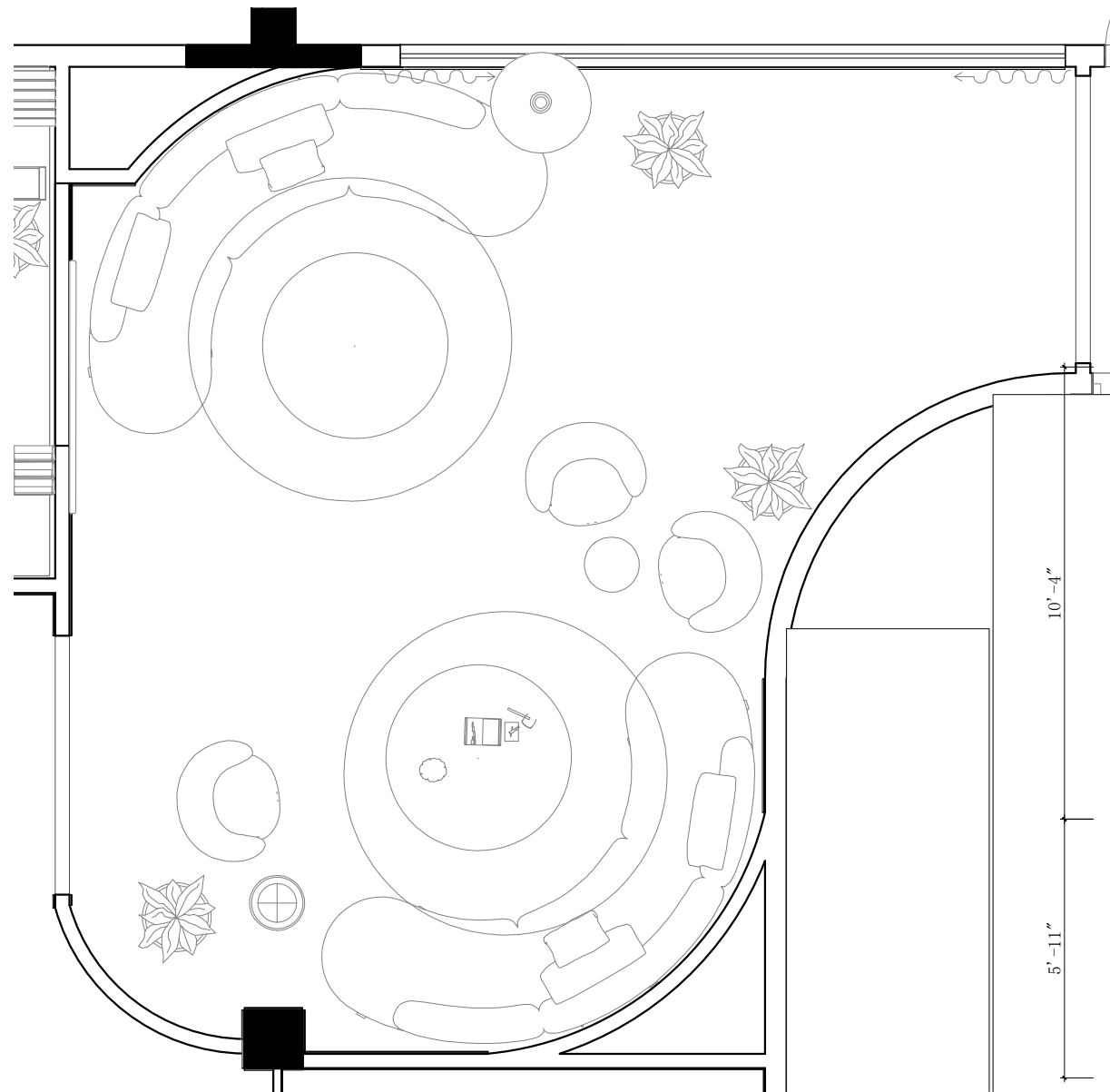


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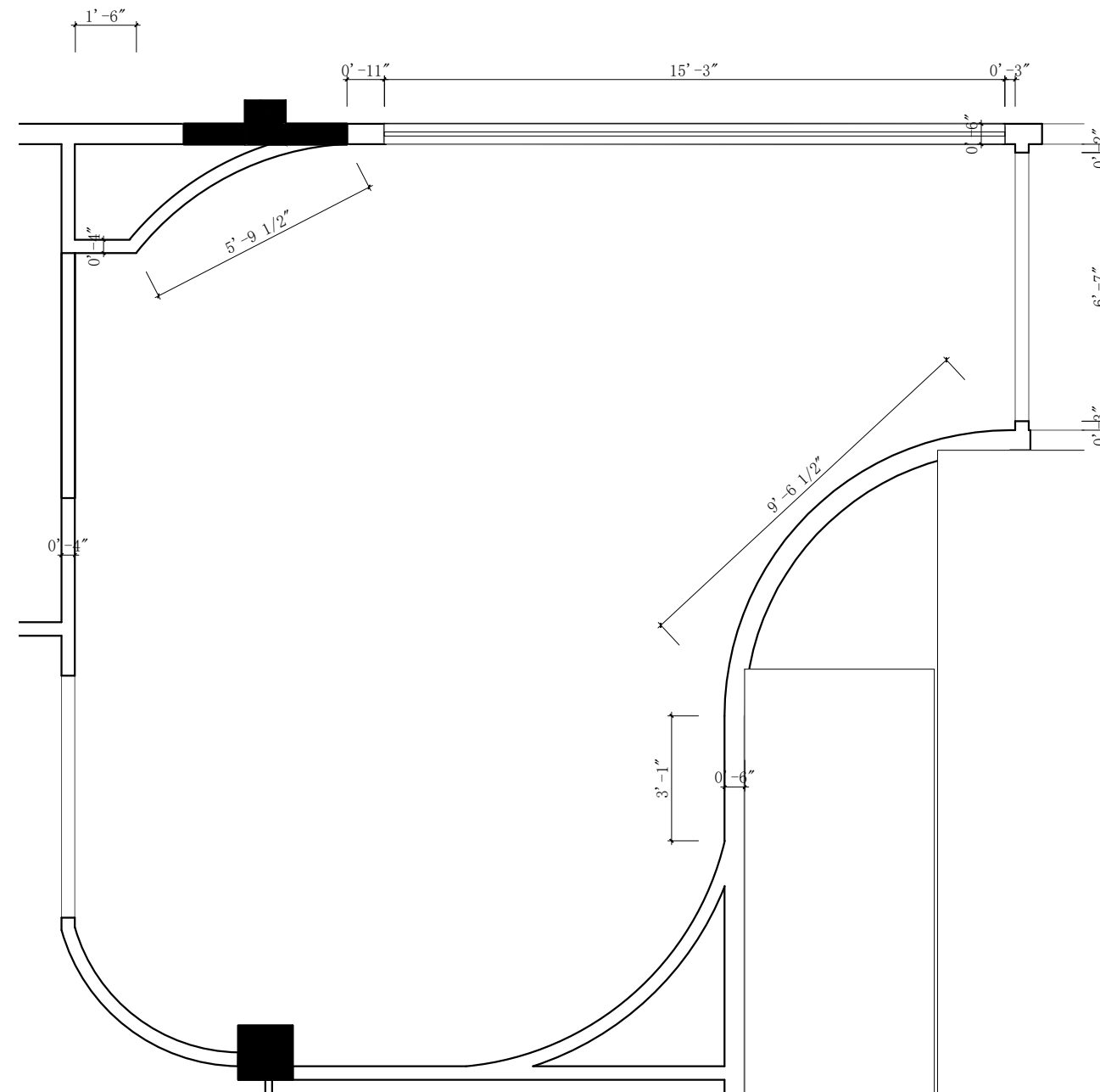
DRAWING TITLE:  
**8th FLOOR**  
GATHERING SPACE FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

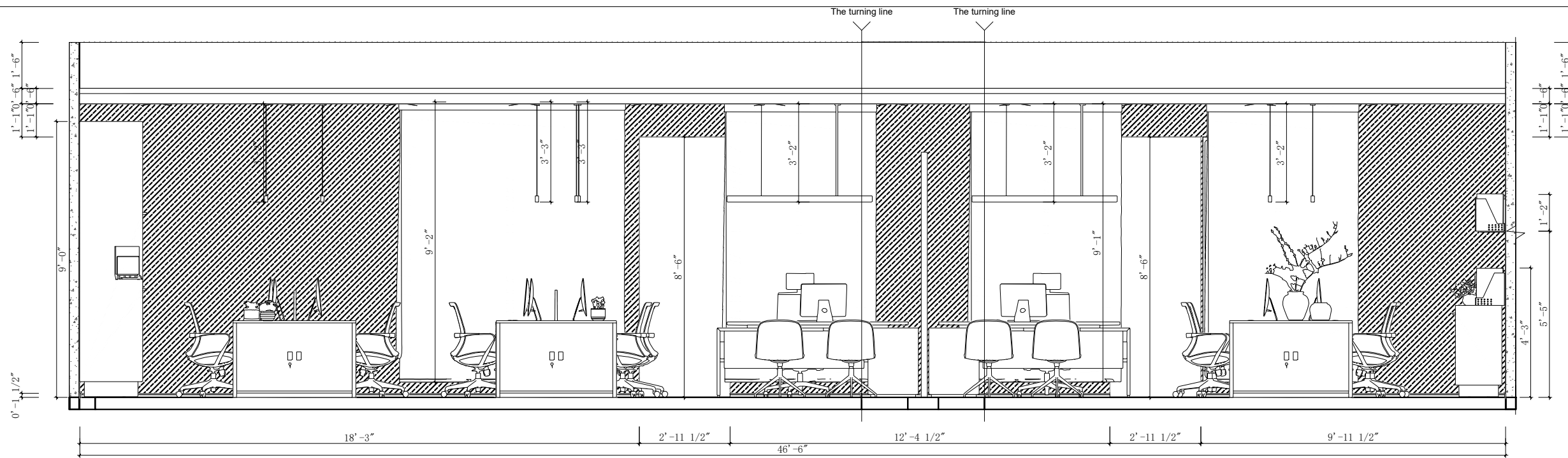
DWG. No.  
**SL08AR-GS-27**



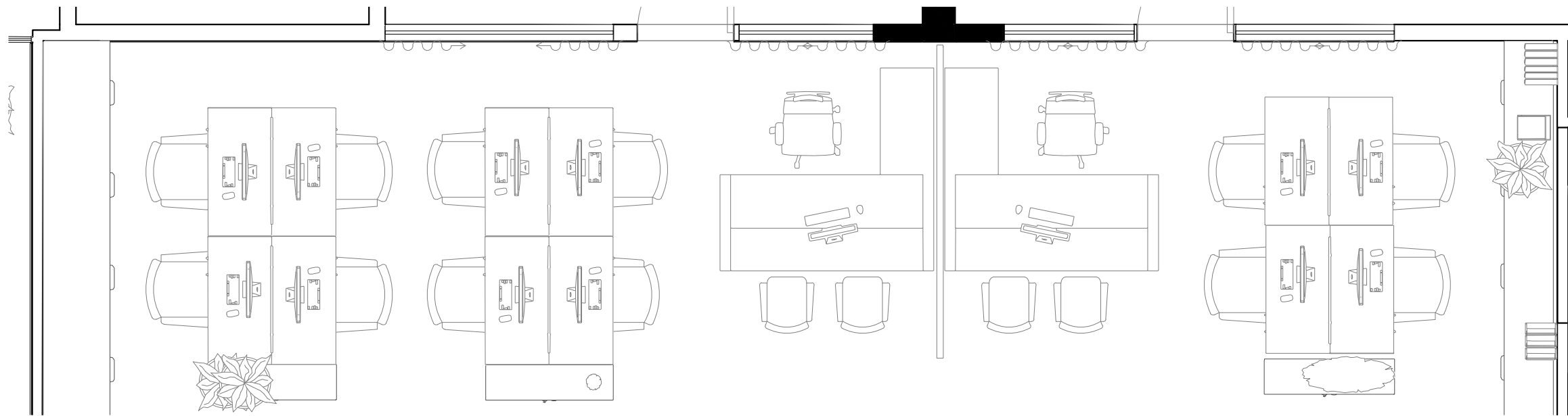
GATHERING PLAN(1/4"=1'-0")



GATHERING WALLS(1/4"=1'-0")



Office 1 Elevation A(1/4"=1'-0")



DGM LW ELEV(1/4"=1'-0")



**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
DGM LW ELEVATION

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-DGM-28**



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



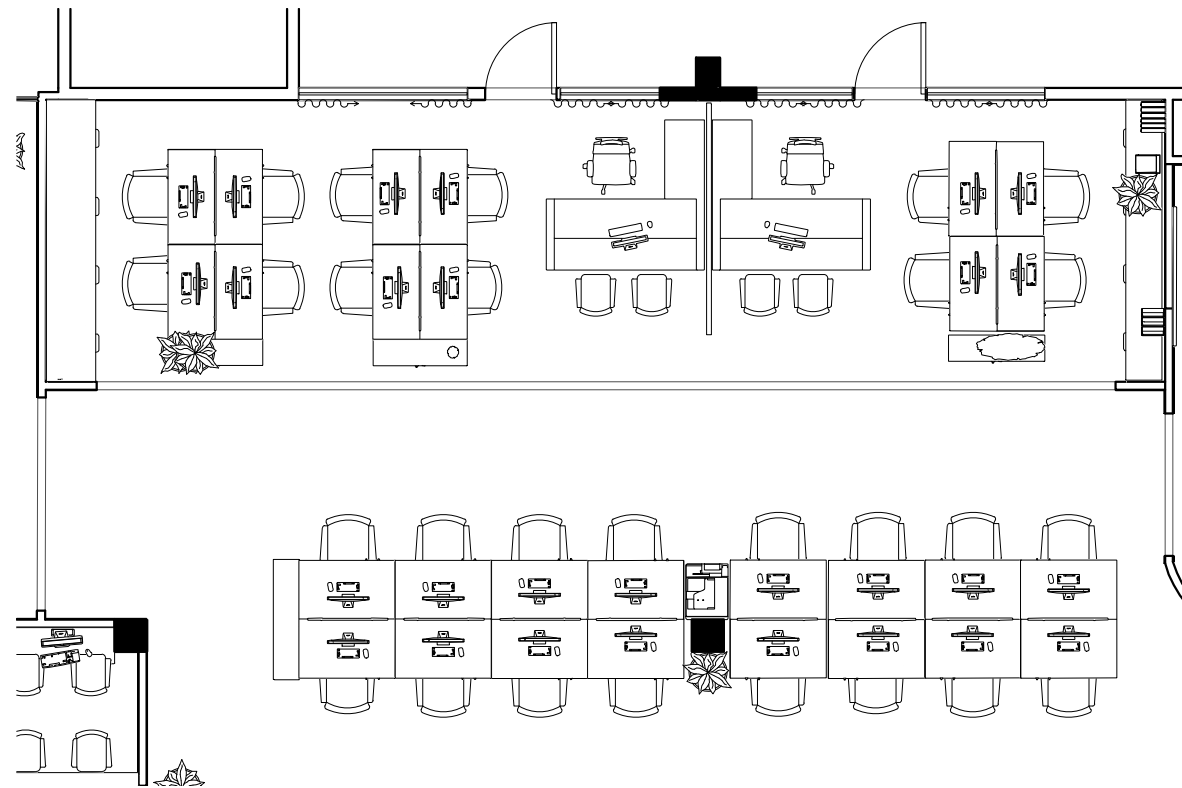
COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
DGM LW FLOOR

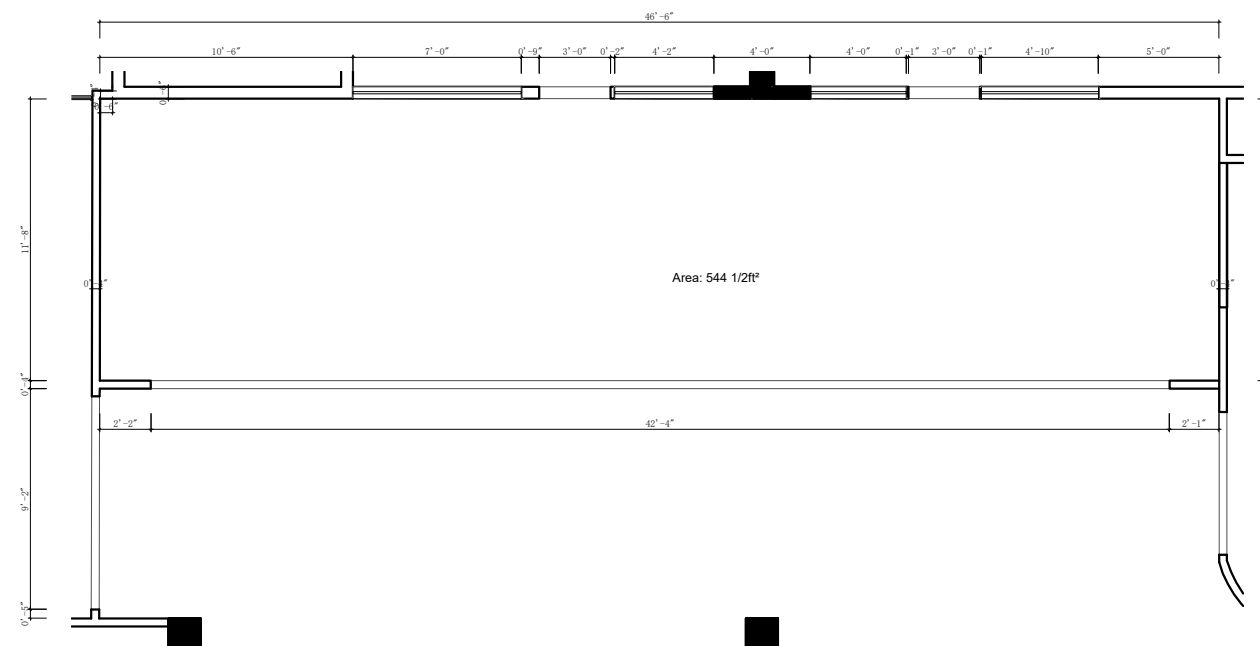
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/8"=1'	APR. 2024

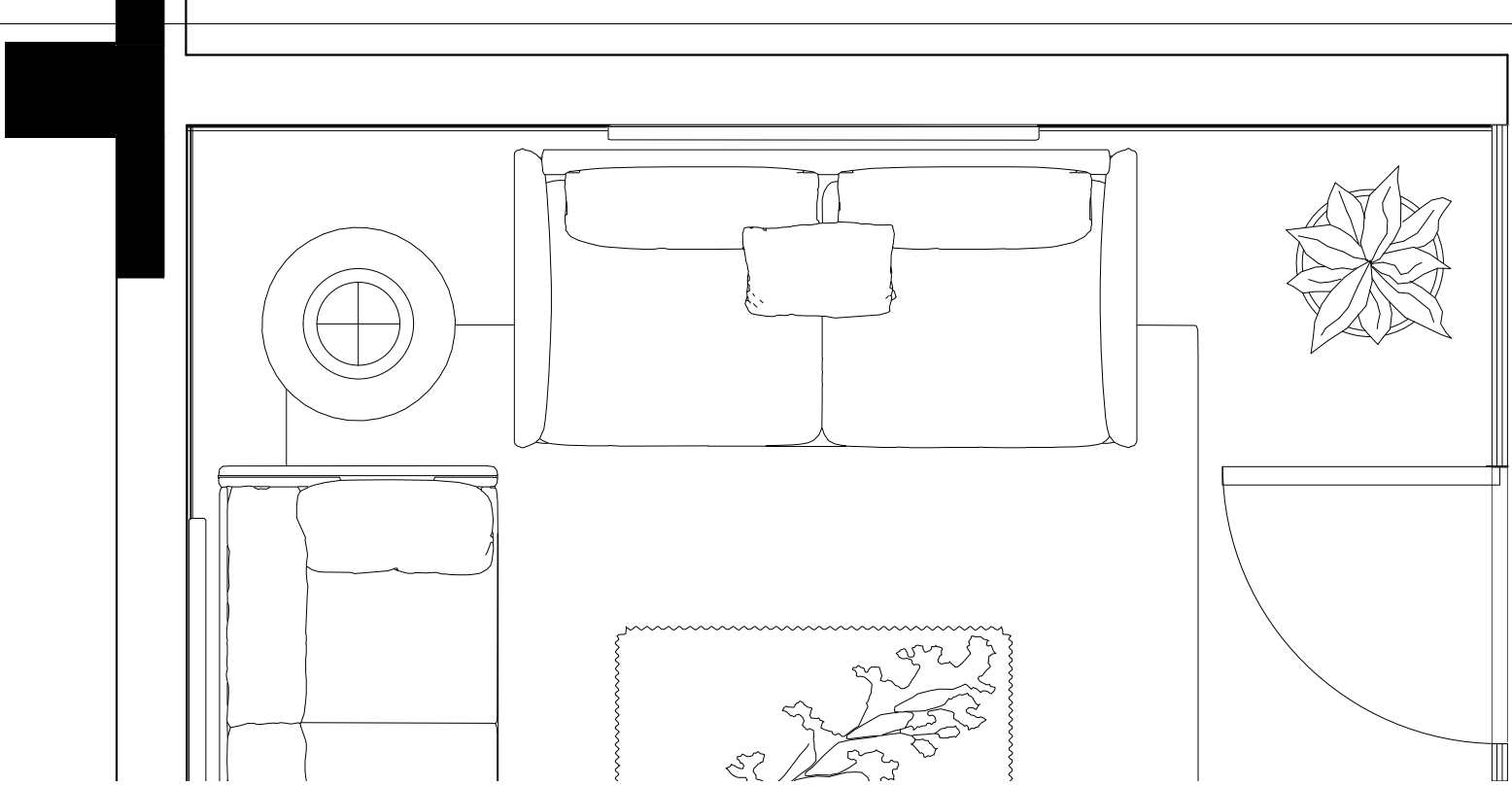
DWG. No.  
**SL08AR-DGM-29**



**DGM LW PLAN(1/8"=1'-0")**



**DGM LW WALLS(1/8"=1'-0")**



WAITING ELEV A(1/2"=1'-0")



**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

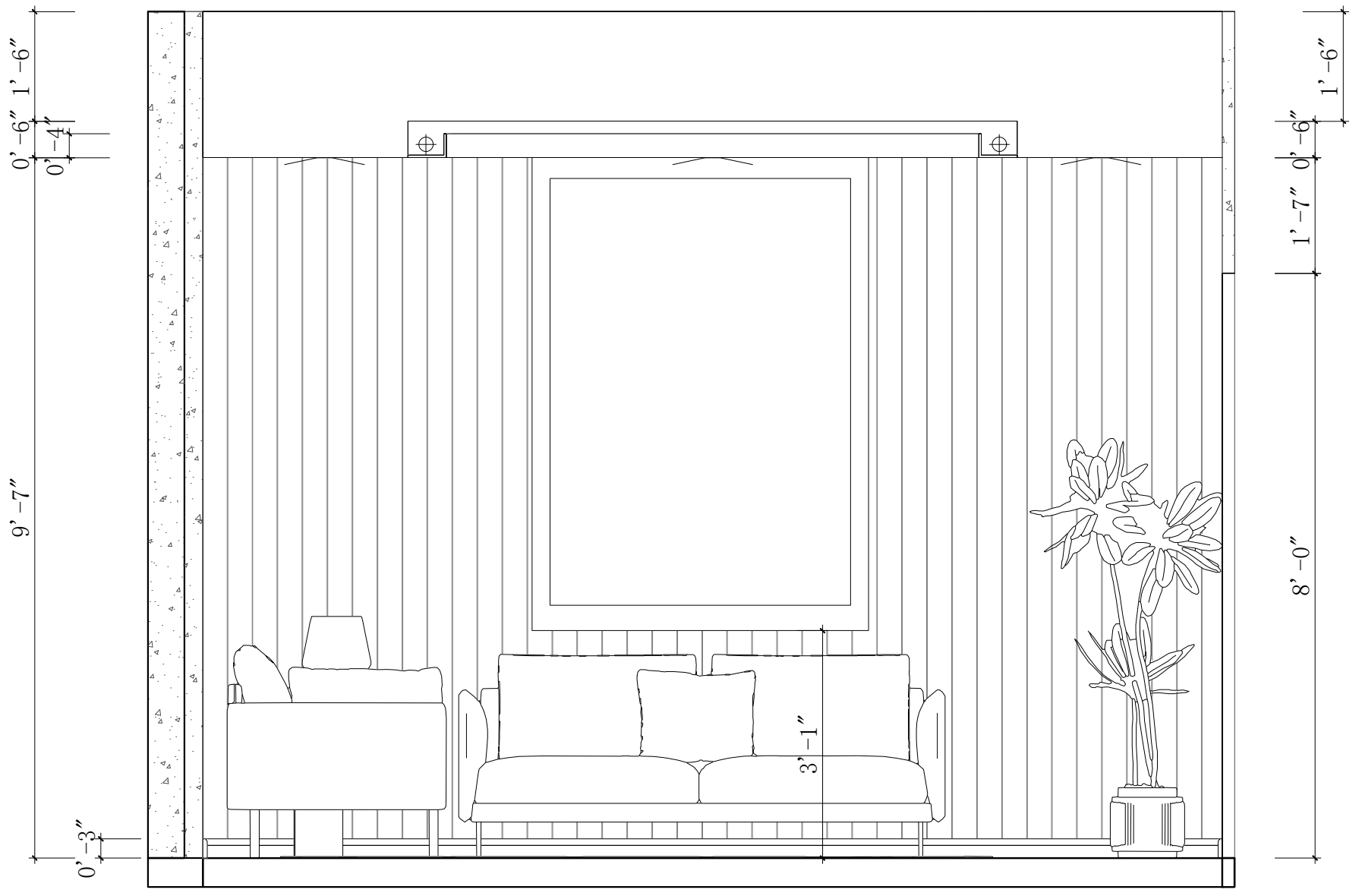


COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
WAITING ROOM ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/2"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-WR-30**



Corridor Elevation A(1/2"=1'-0")  
13' -11 1/2"

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

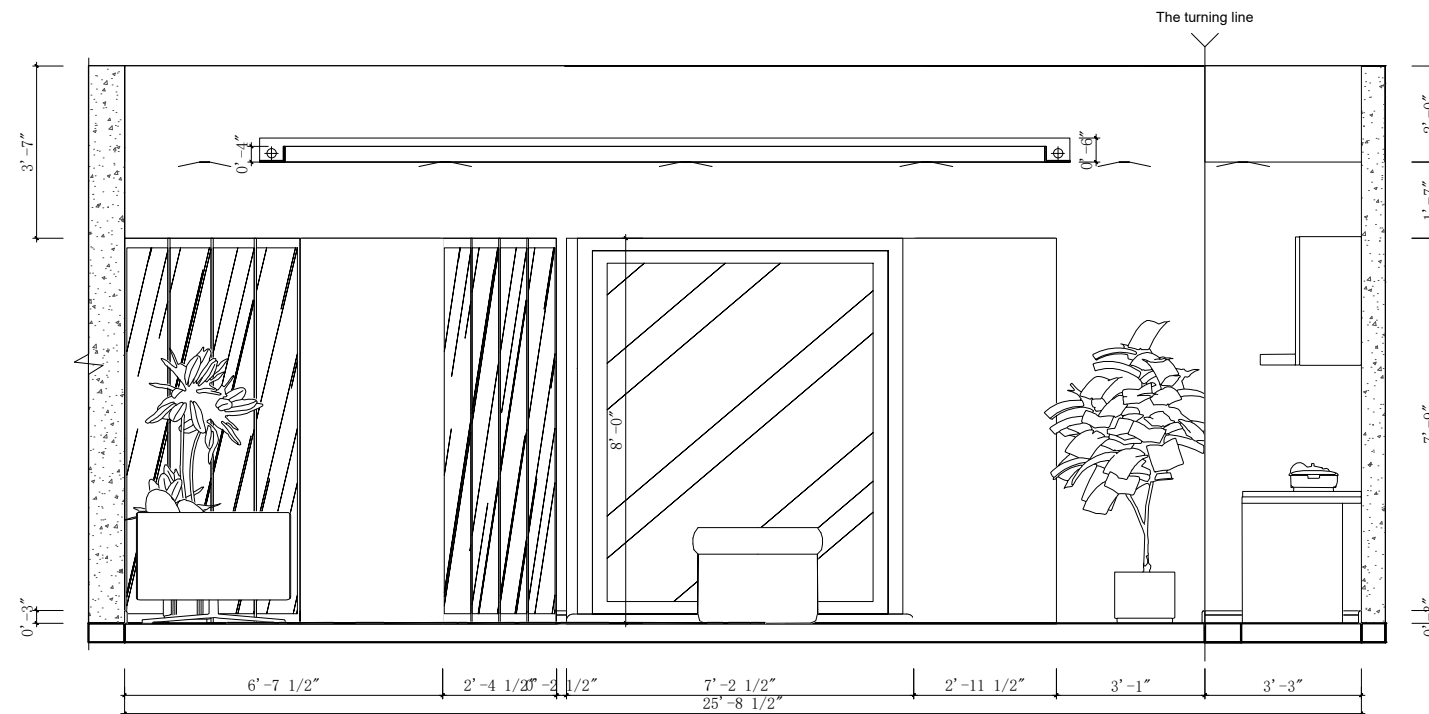
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**8th FLOOR**  
WAITING ROOM ELEVATION B

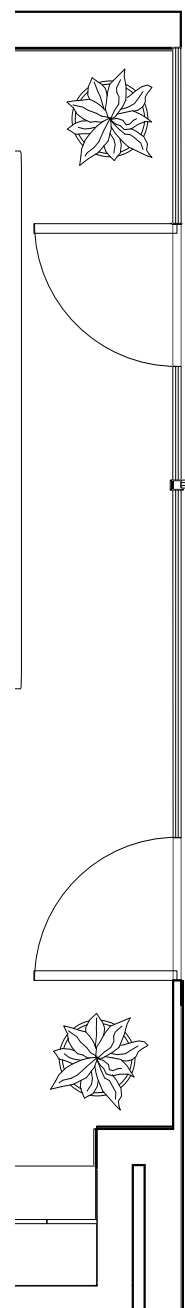
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

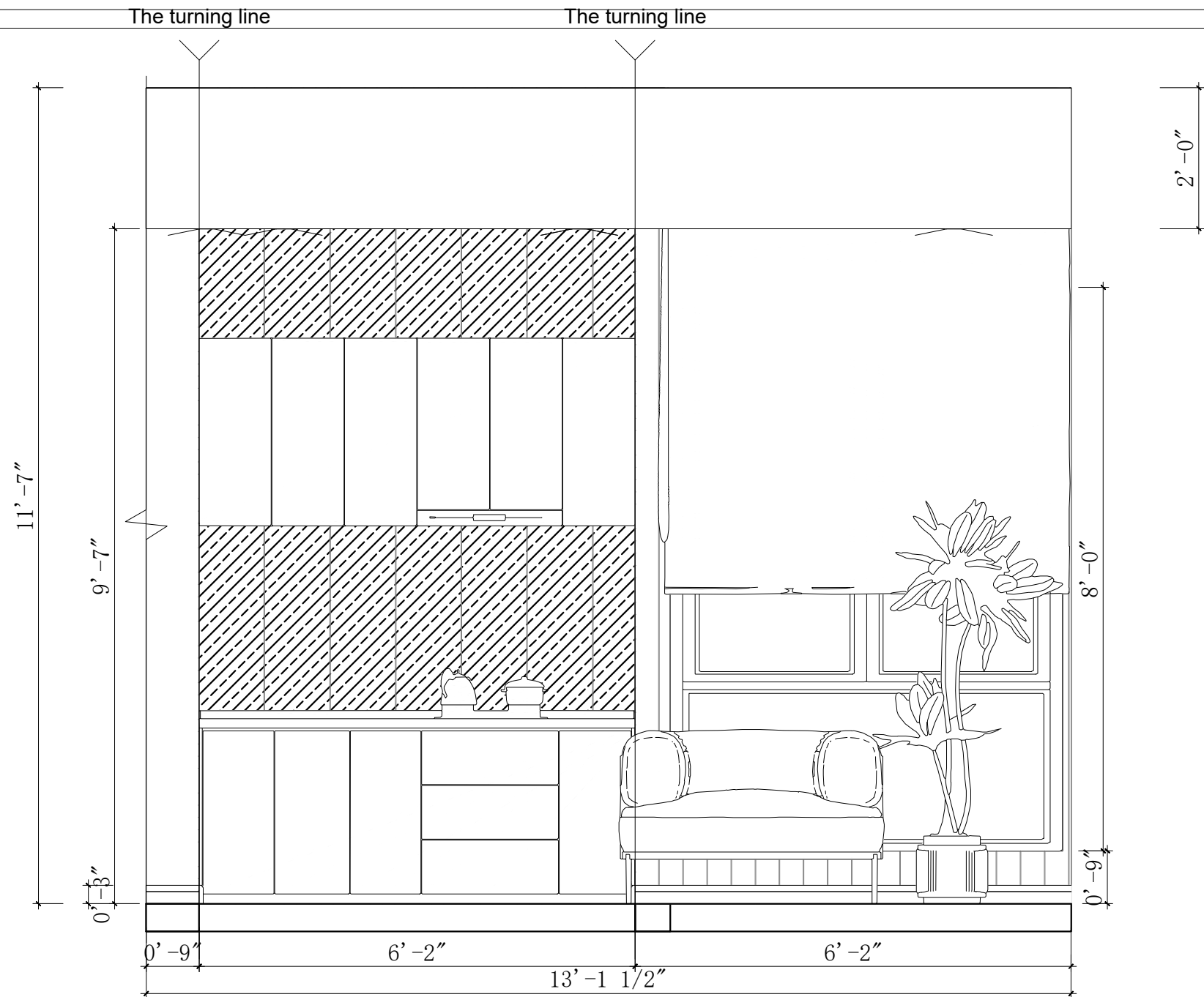
DWG. No.  
**SL08AR-WR-31**



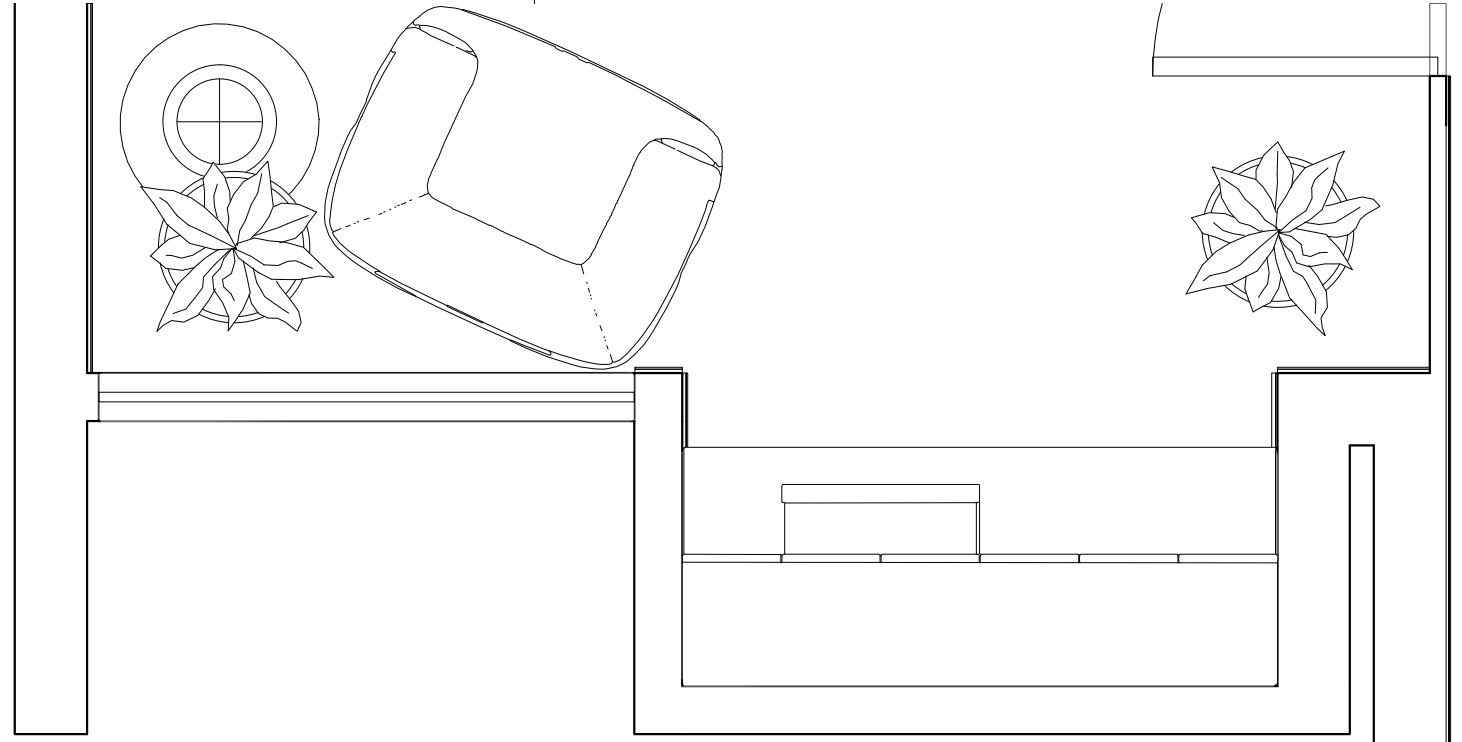
Corridor Elevation B(1/4"=1'-0")



WAITING ELEV B(1/4"=1'-0")



Corridor Elevation C(1/2"=1'-0")



WAITING ELEV C(1/2"=1'-0")



**GENERAL NOTES**

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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

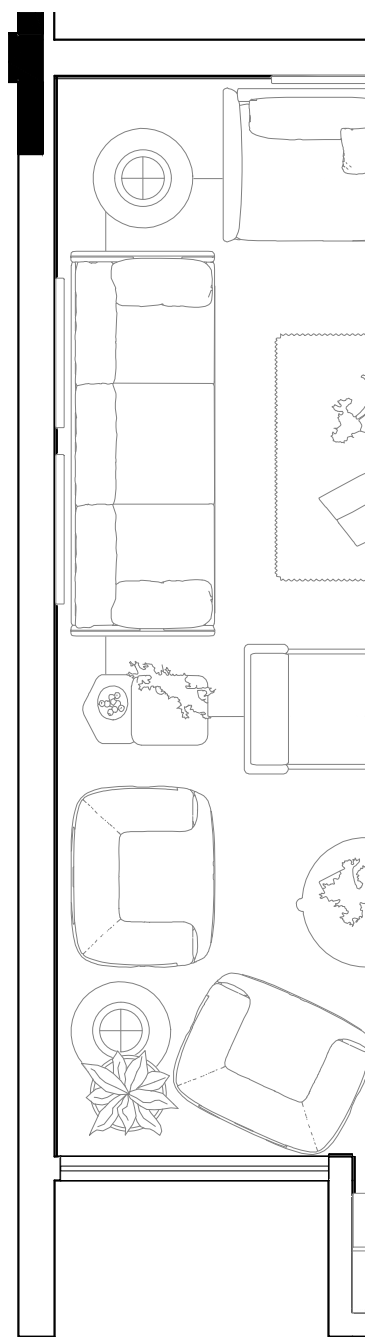
DRAWING TITLE:

**8th FLOOR**  
**WAITING ROOM ELEVATION C**

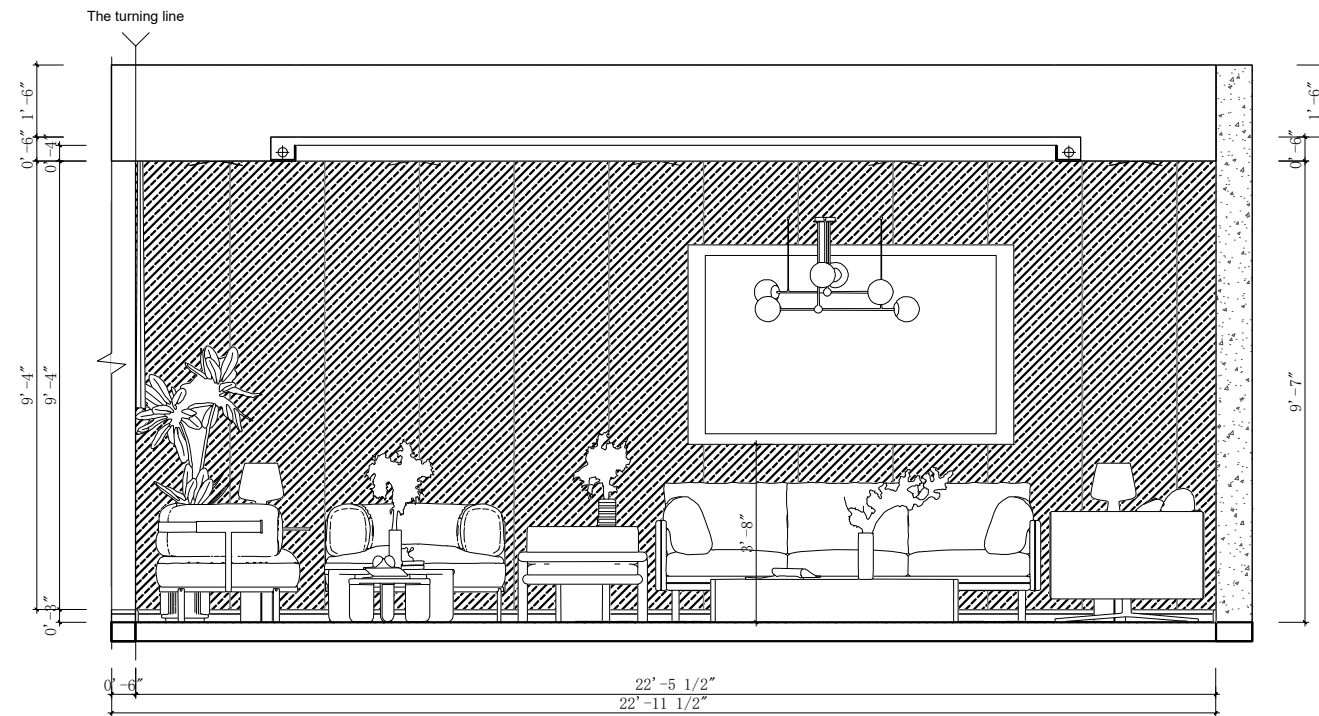
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/2"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-WR-32**





WAITING AREA ELEV D(1/4"=1'-0")



Corridor Elevation D1(1/4"=1'-0")



**GENERAL NOTES**

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



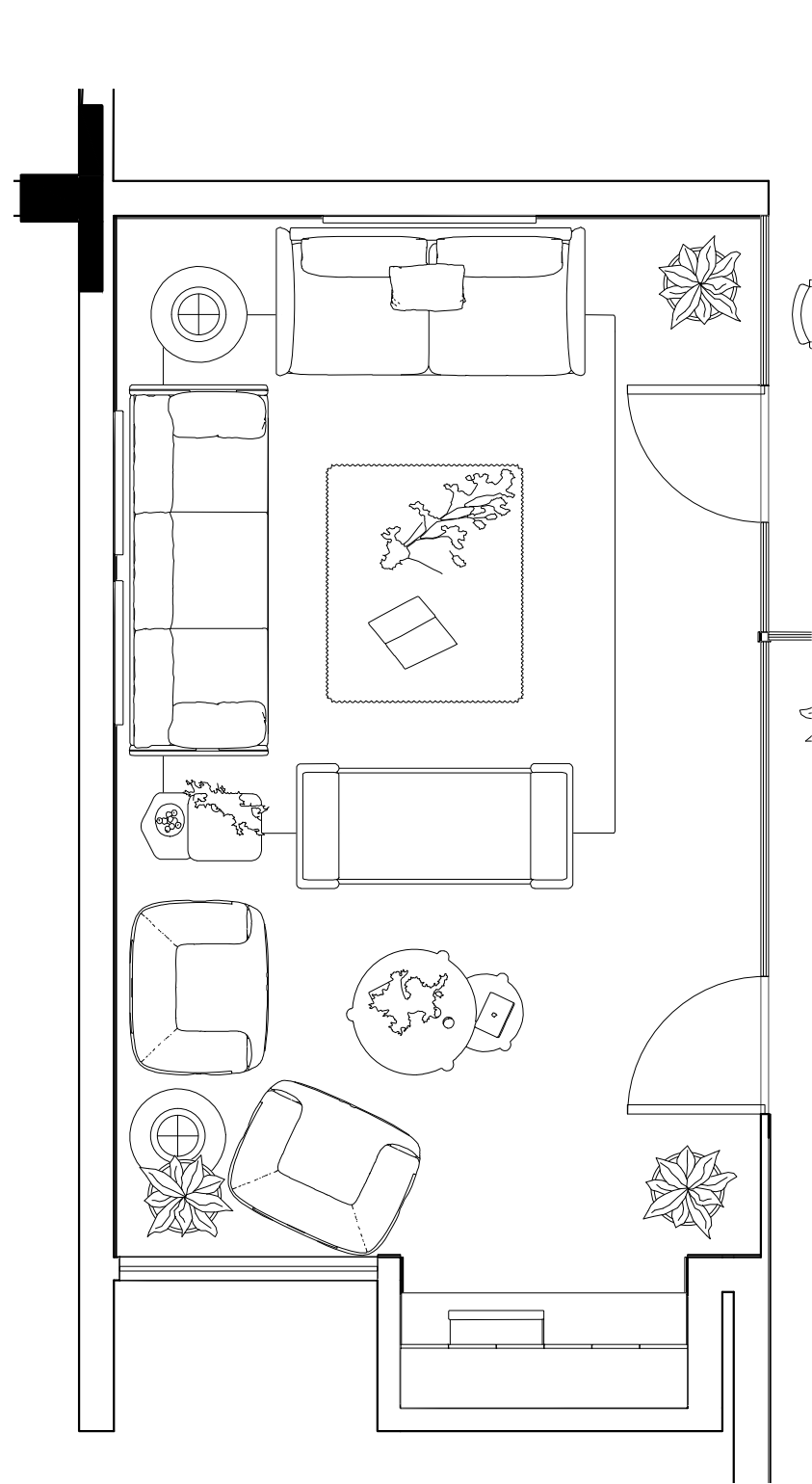
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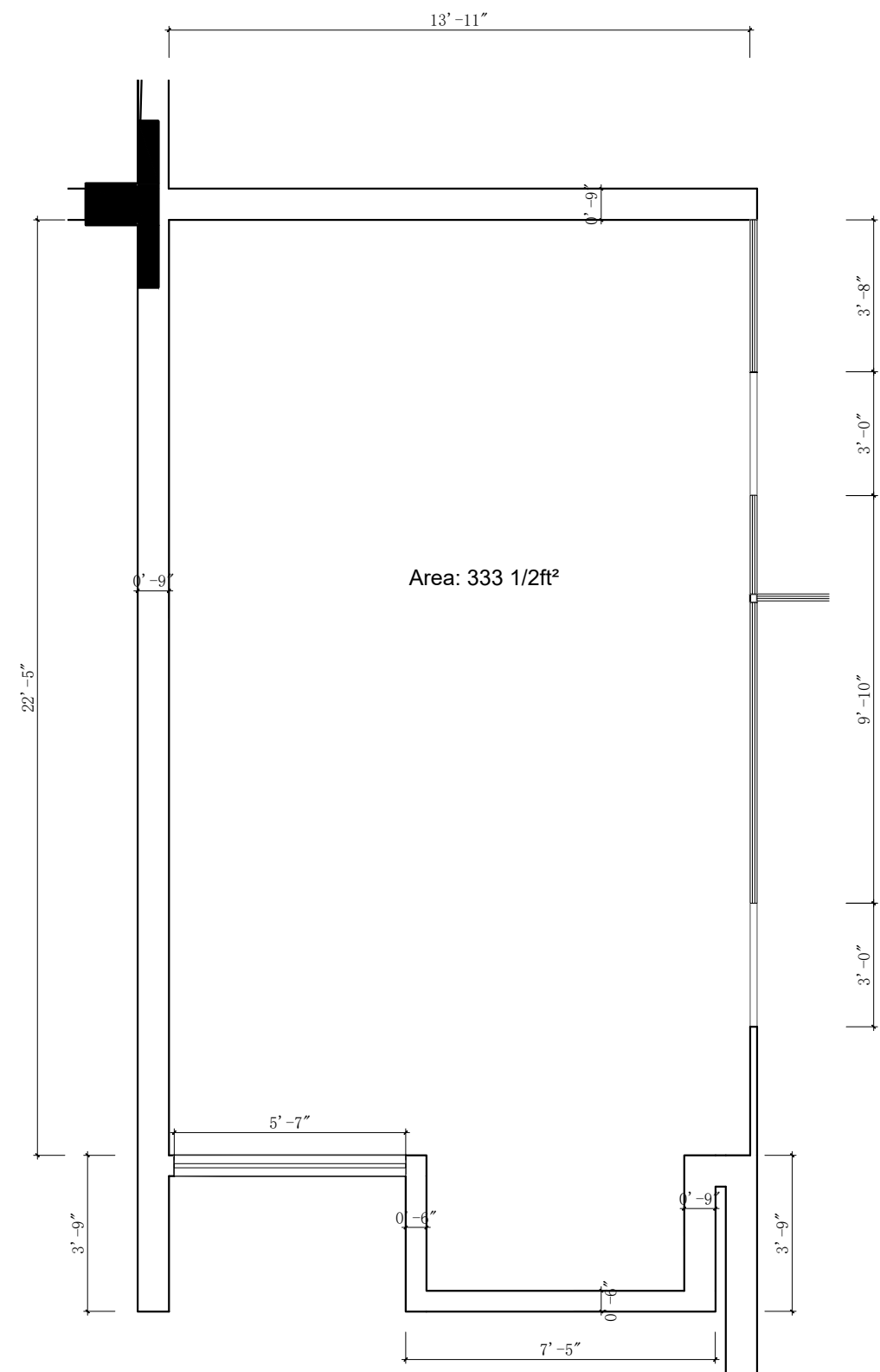
**8th FLOOR**  
WAITING ROOM ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-WR-33**



WAITING ROOM PLAN(1/4"=1'-0")



WAITING ROOM WALL(1/4"=1'-0")

**GENERAL NOTES**

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
WAITING ROOM FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-WR-34**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

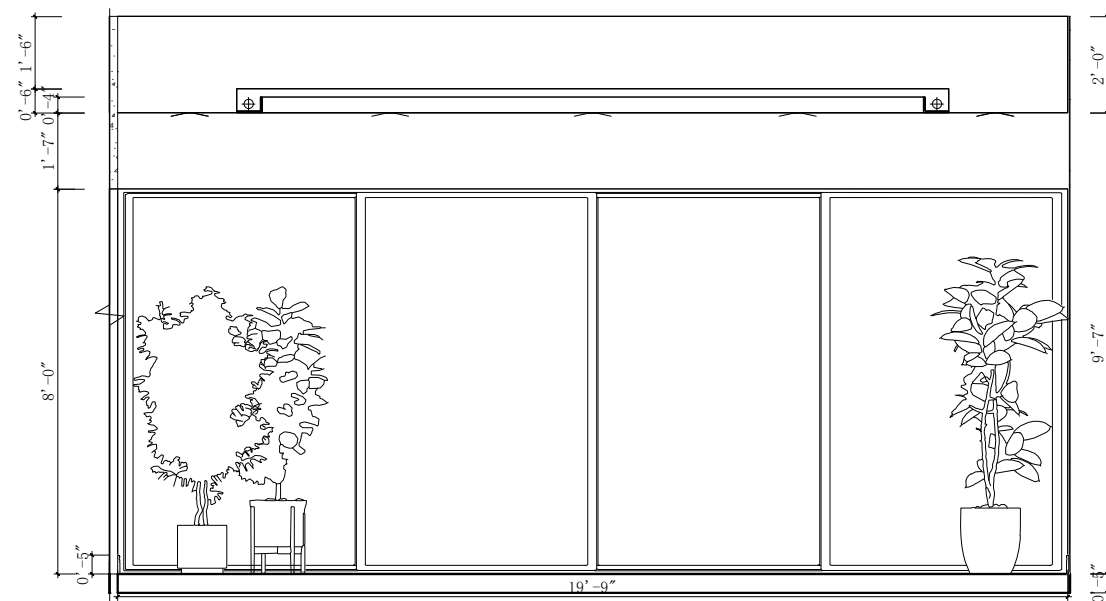
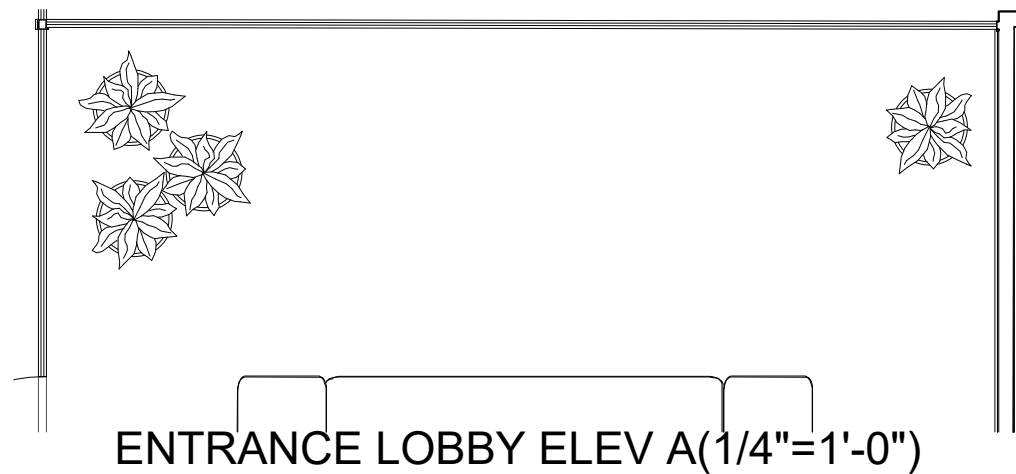
DRAWING TITLE:

**8th FLOOR**  
ENTRANCE LOBBY  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1'	APR. 2024

DWG. No.  
**SL08AR-EL-35**



Lobby Elevation A1(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
ENTRANCE LOBBY  
ELEVATION B

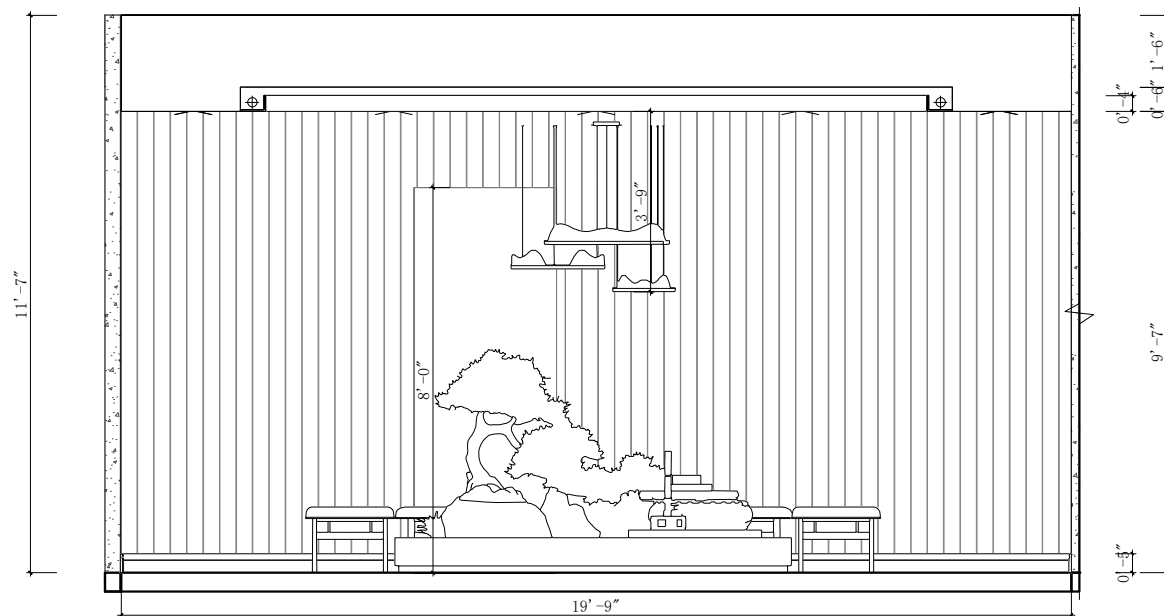
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL08AR-EL-36**



ENTRANCE LOBBY ELEV B(1/4"=1'-0")



Lobby Elevation (1/4"=1'-0")



## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



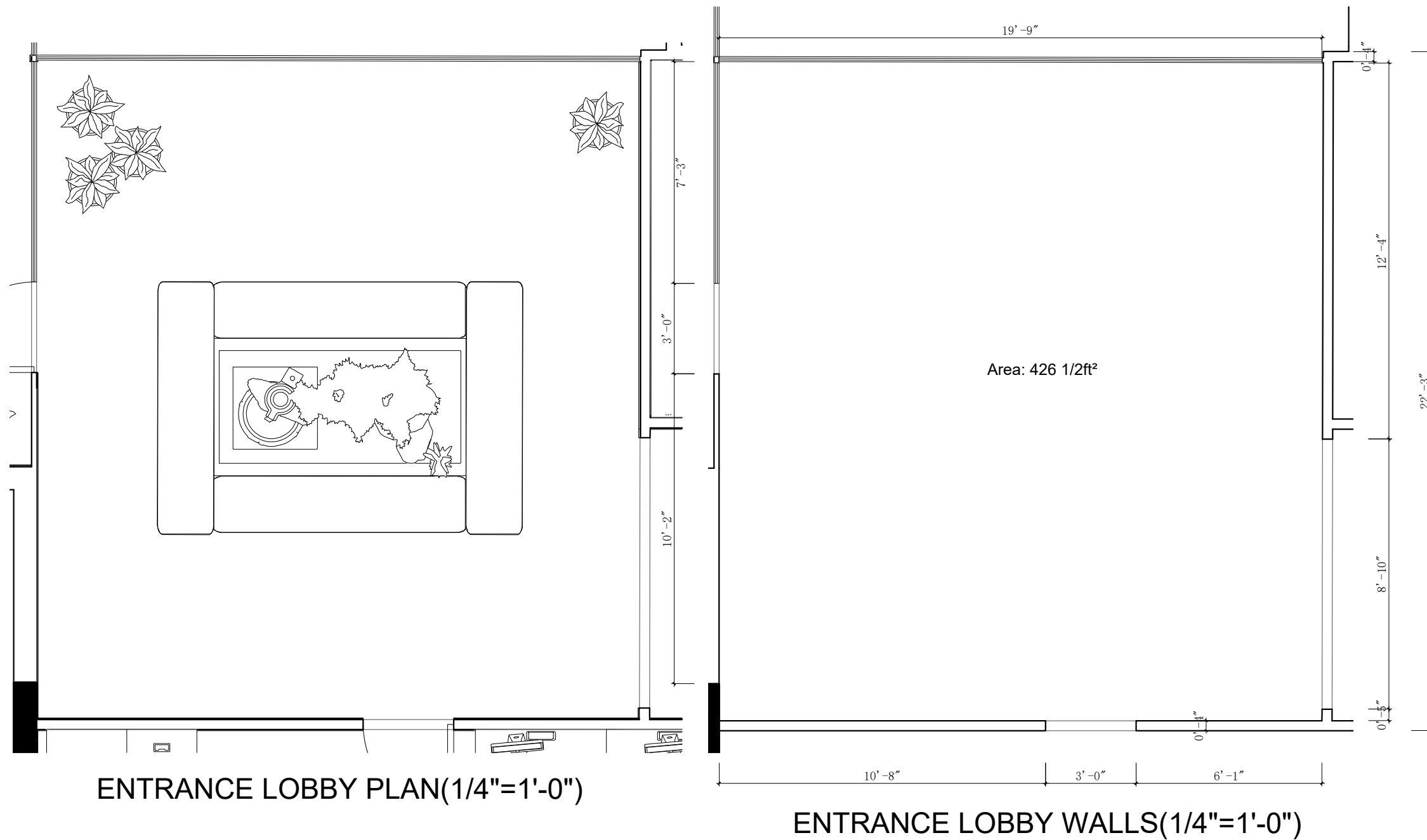
COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
ENTRANCE LOBBY FLOOR

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-EL-37**



ENTRANCE LOBBY PLAN(1/4"=1'-0")

ENTRANCE LOBBY WALLS(1/4"=1'-0")

## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



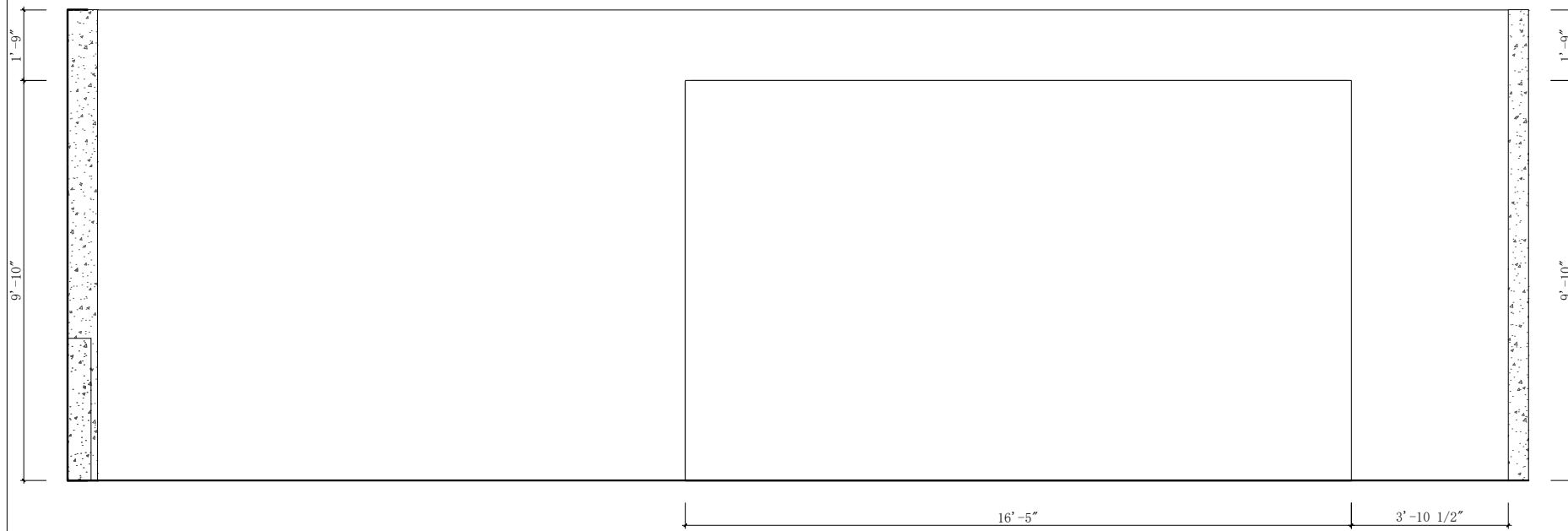
COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
RECEPTION AREA  
ELEVATION A

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

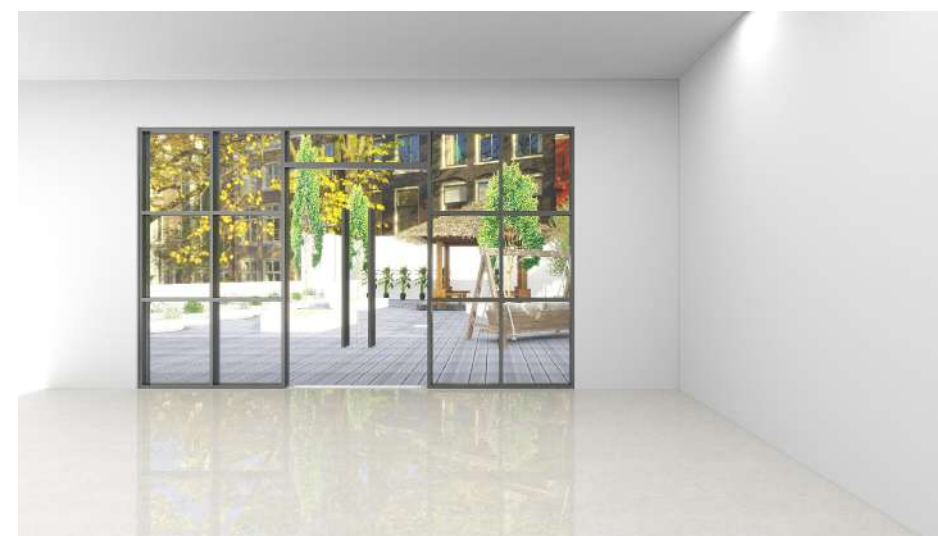
DWG. No.  
**SL08AR-RA-38**



RECEPTION Elevation A(1/4"=1'-0")



RECEPTION ELEV A(1/4"=1'-0")



## GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

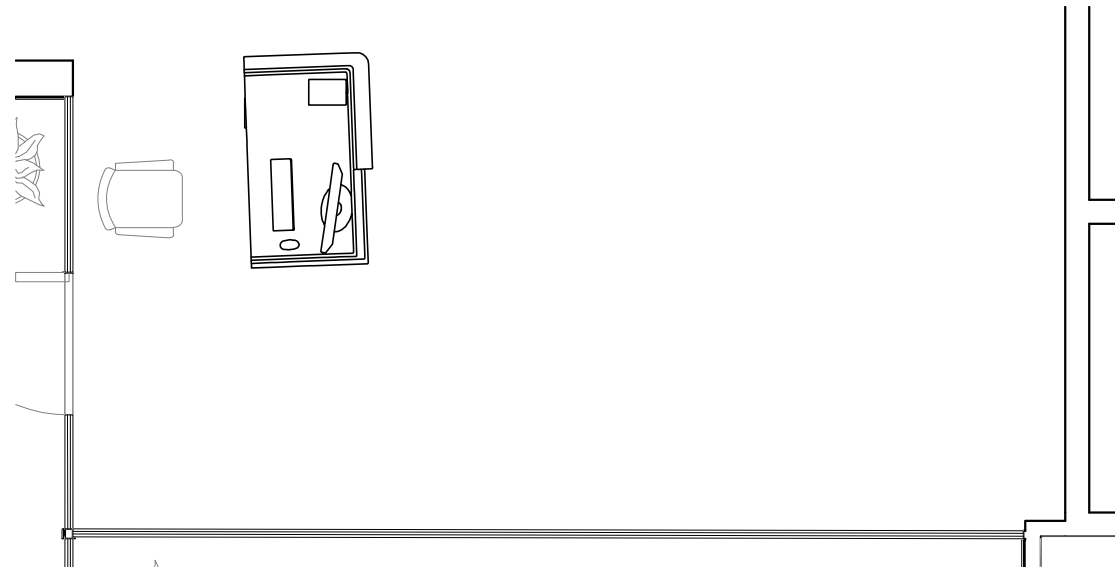
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RECEPTION AREA  
ELEVATION B

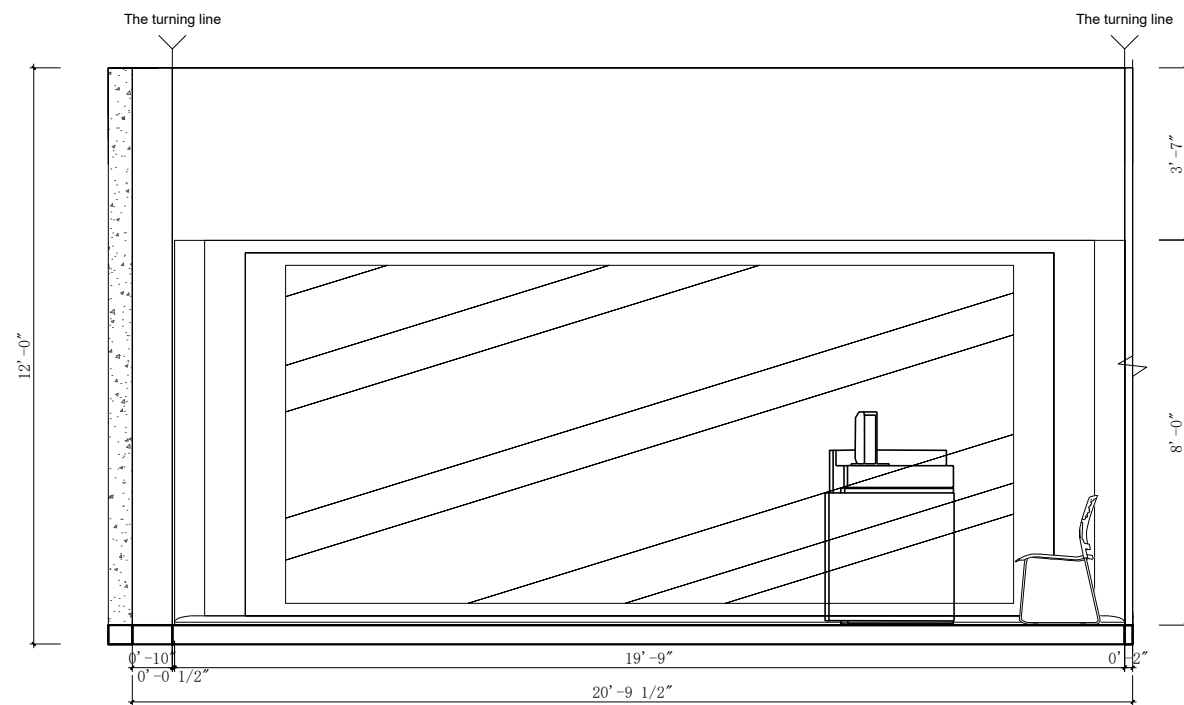
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL08AR-RA-39**



RECEPTION ELEV B(1/4"=1'-0")



Entrance Elevation (1/4"=1'-0")



## GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

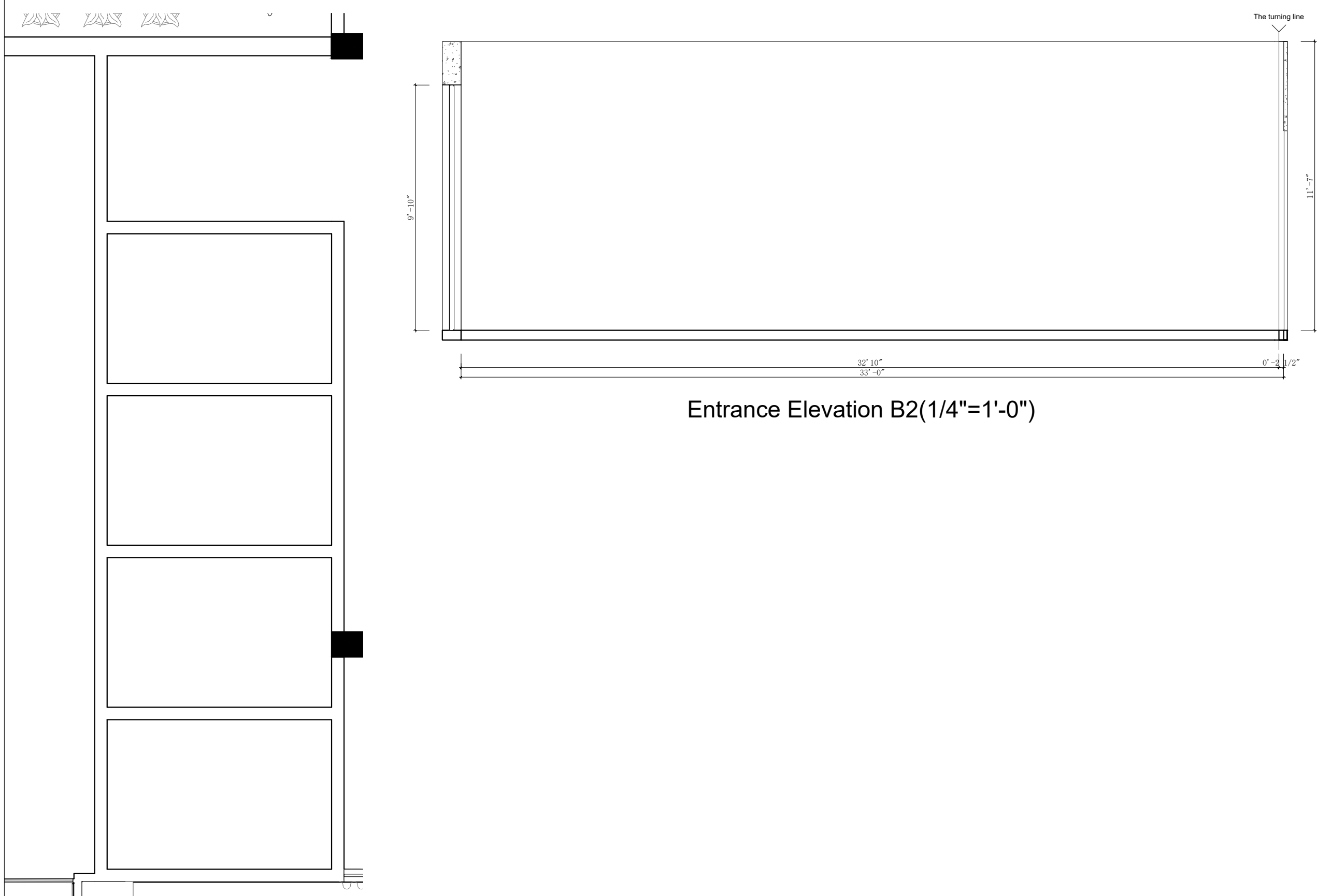
DRAWING TITLE:

**8th FLOOR**  
RECEPTION AREA  
ELEVATION C

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

DWG. No.  
**SL08AR-RA-40**



Entrance Elevation B2(1/4"=1'-0")

RECEPTION ELEV C(1/4"=1'-0")



## GENERAL NOTES

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### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



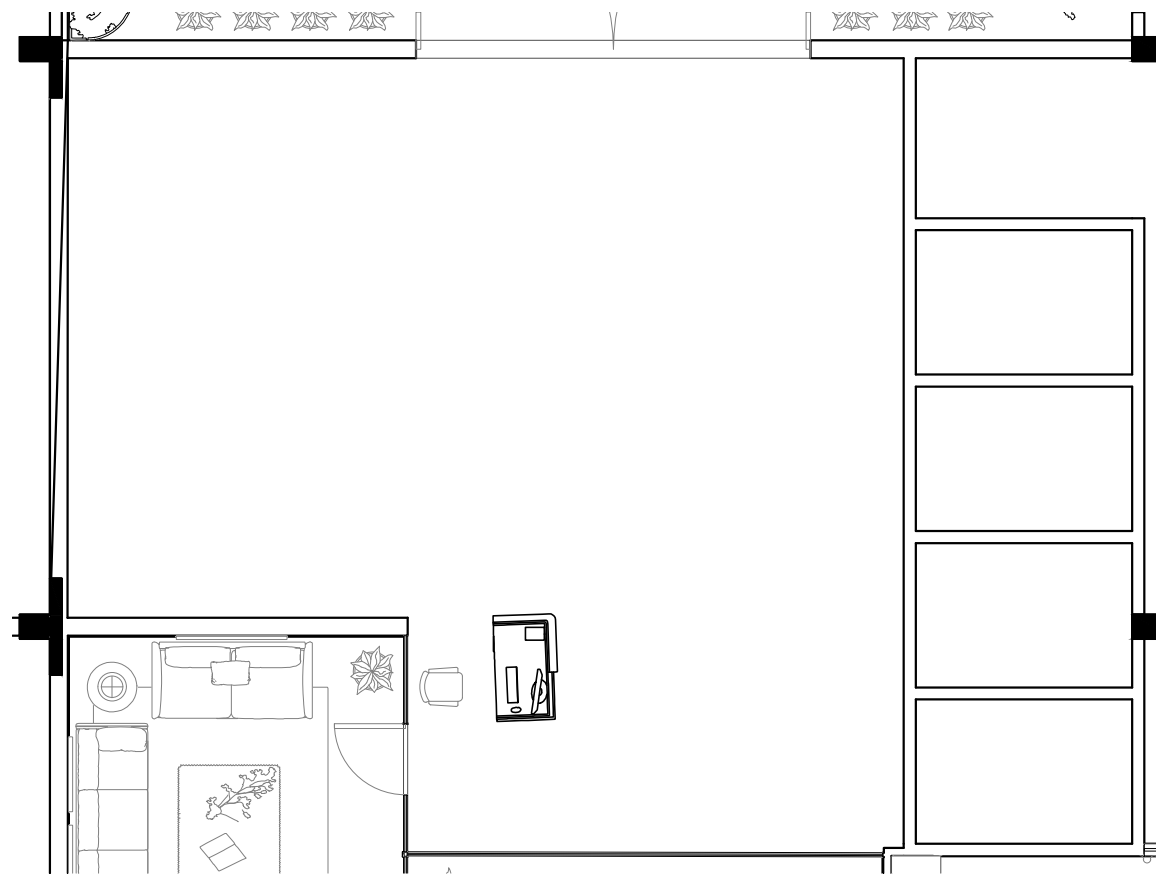
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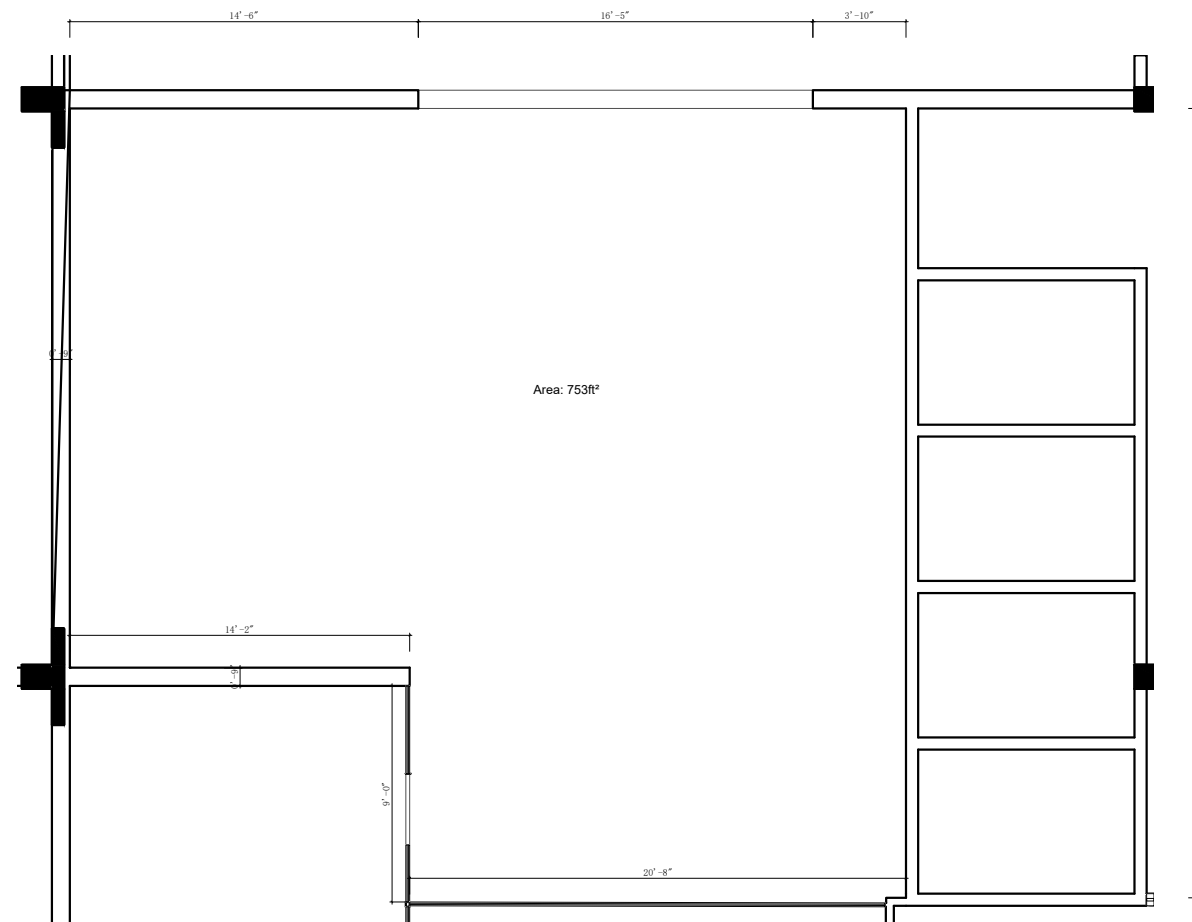
**8th FLOOR**  
**RECEPTION AREA FLOOR**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/8"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-RA-41**



RECEPTION PLAN(1/8"=1'-0")



RECEPTION WALLS(1/8"=1'-0")

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

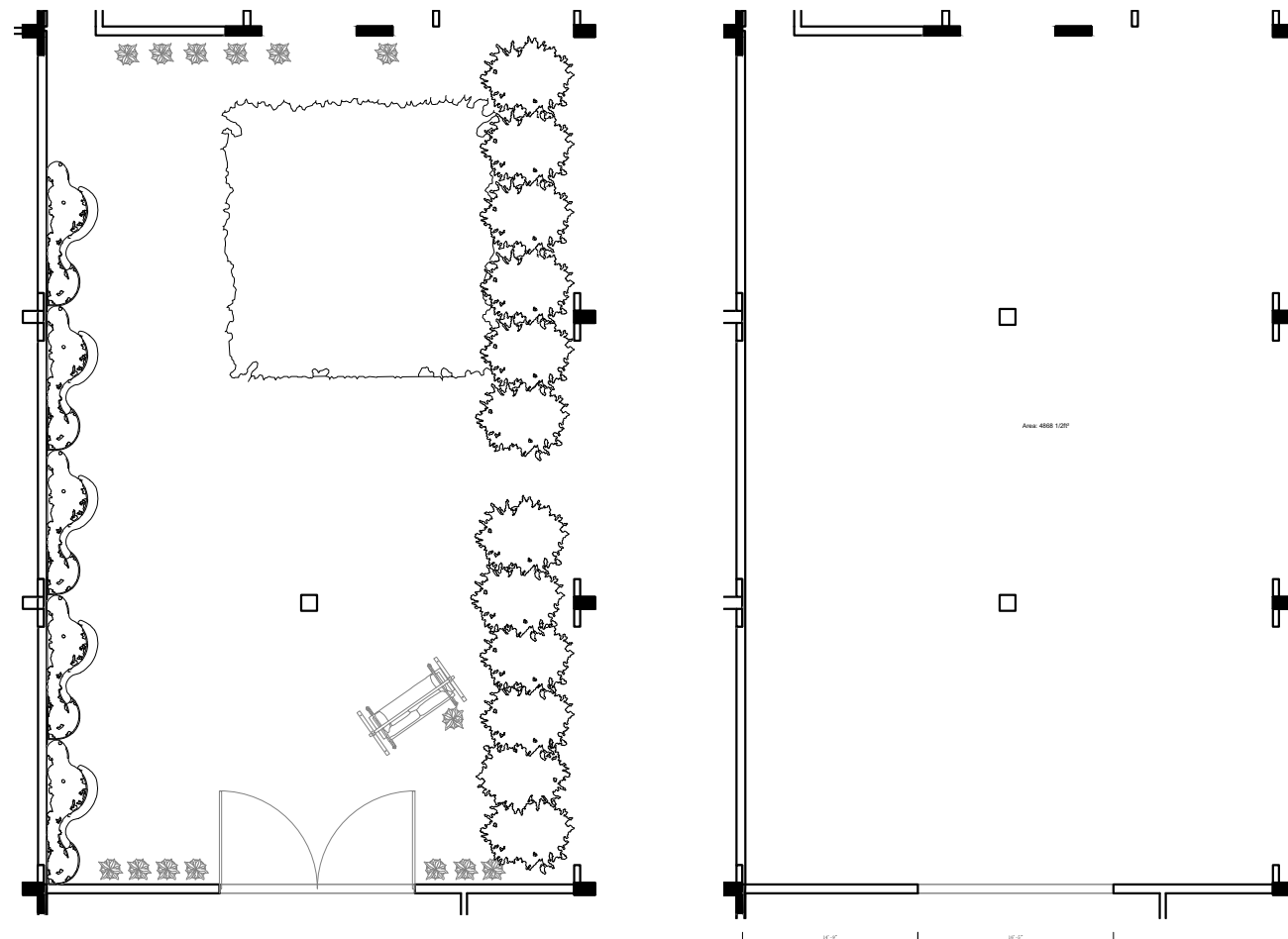
DRAWING TITLE:

**8th FLOOR**  
**ROOF GARDEN FLOOR**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/16"=1' @ A3	APR. 2024

DWG. No.  
**SL08AR-RG-42**



ROOF GARDEN PLAN(1/16"=1'-0")

ROOF GARDEN WALLS(1/16"=1'-0")

## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

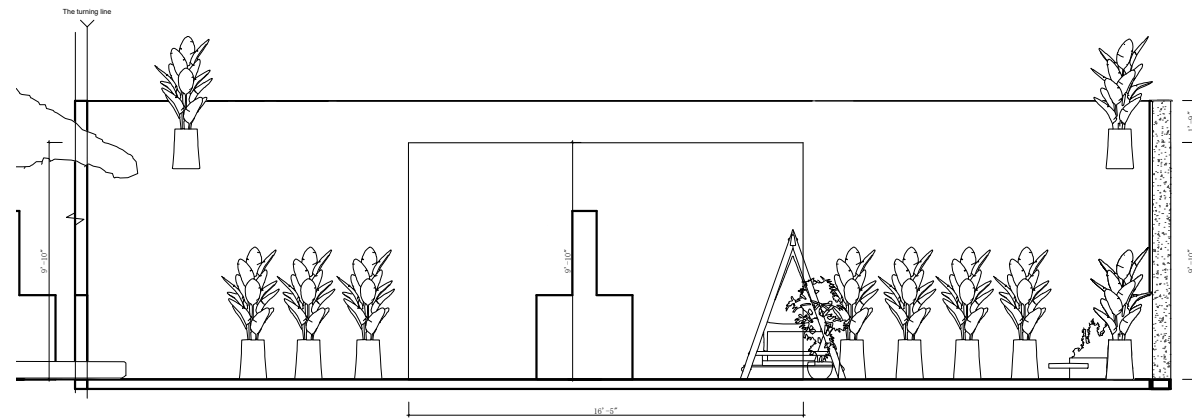
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**8th FLOOR**  
**ROOF GARDEN ELEVATION A**

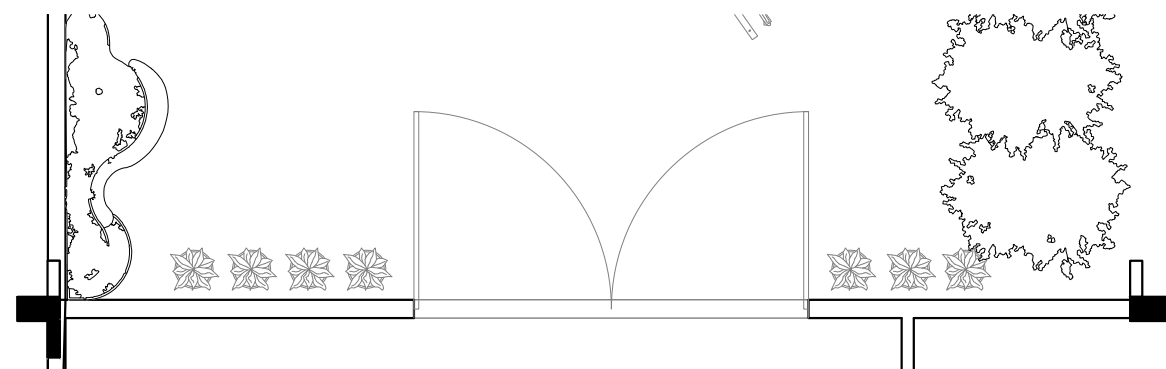
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/8"=1'	@ A3 APR. 2024

DWG. No.  
**SL08AR-RG-43**



Terrace Elevation (1/8"=1'-0")



ROOF GARDEN ELEV(1/8"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

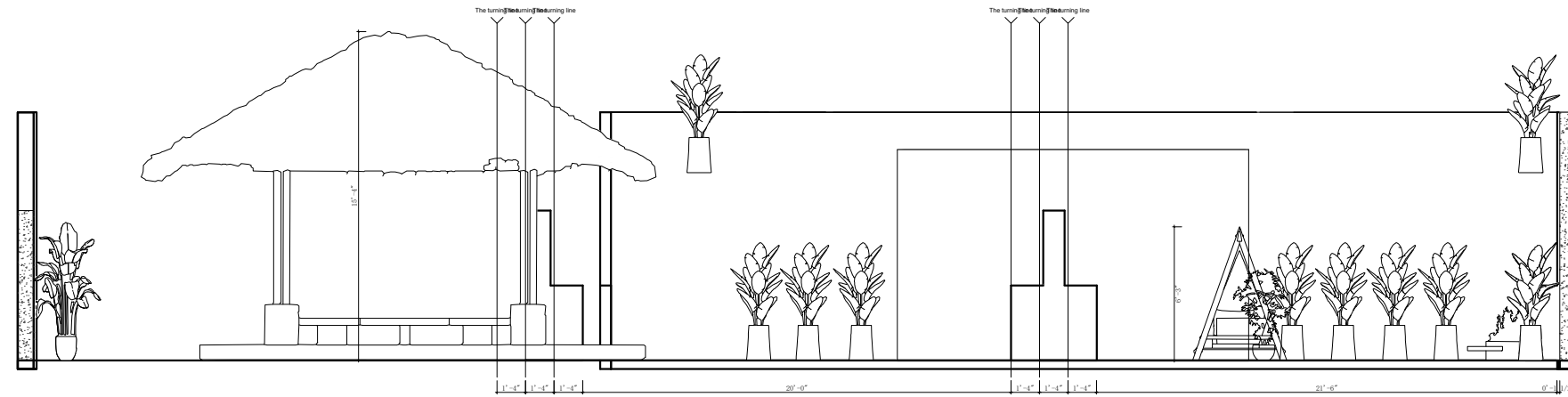
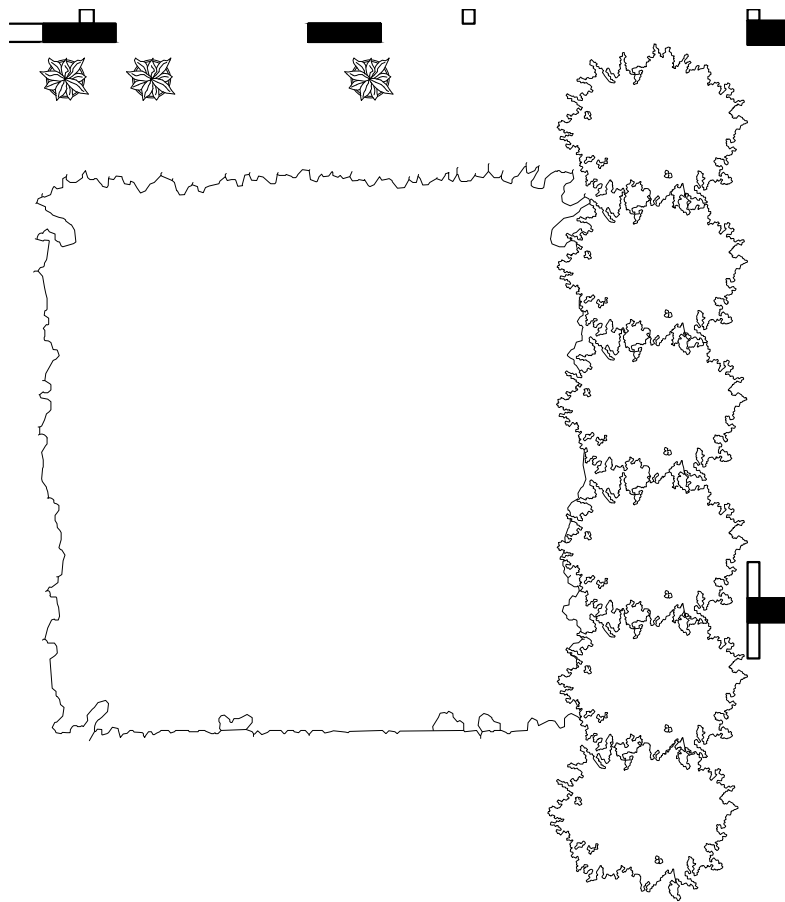
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**8th FLOOR**  
**ROOF GARDEN ELEVATION A**

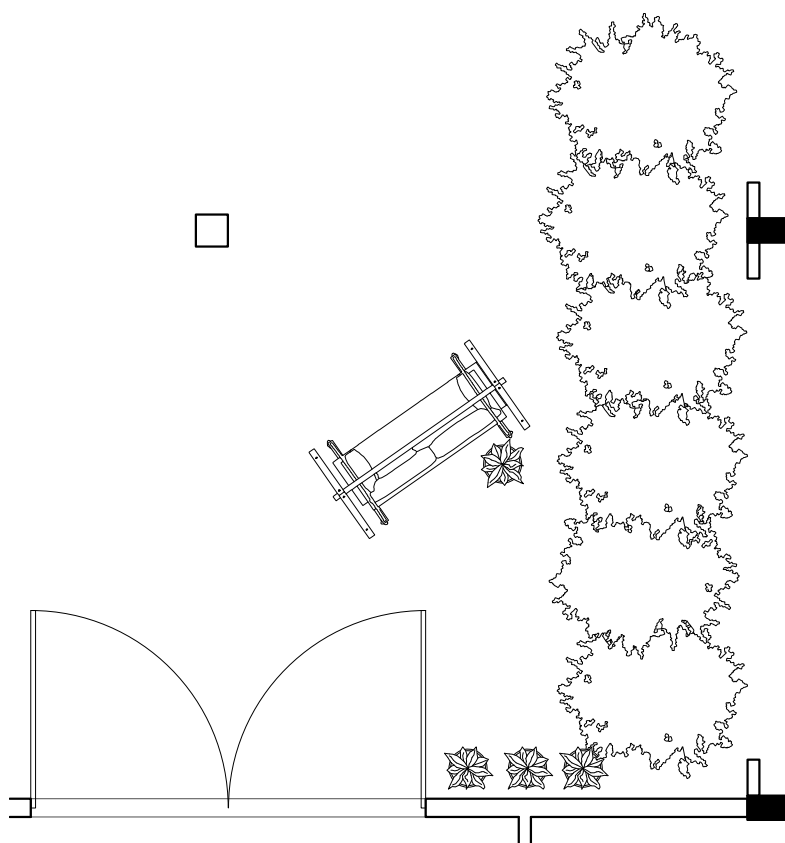
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/8"=1' @ A3	APR. 2024

DWG. No.  
**SL08AR-RG-44**



Terrace Elevation B(1/8"=1'-0")



ROOF GARDEN ELEV B(1/8"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

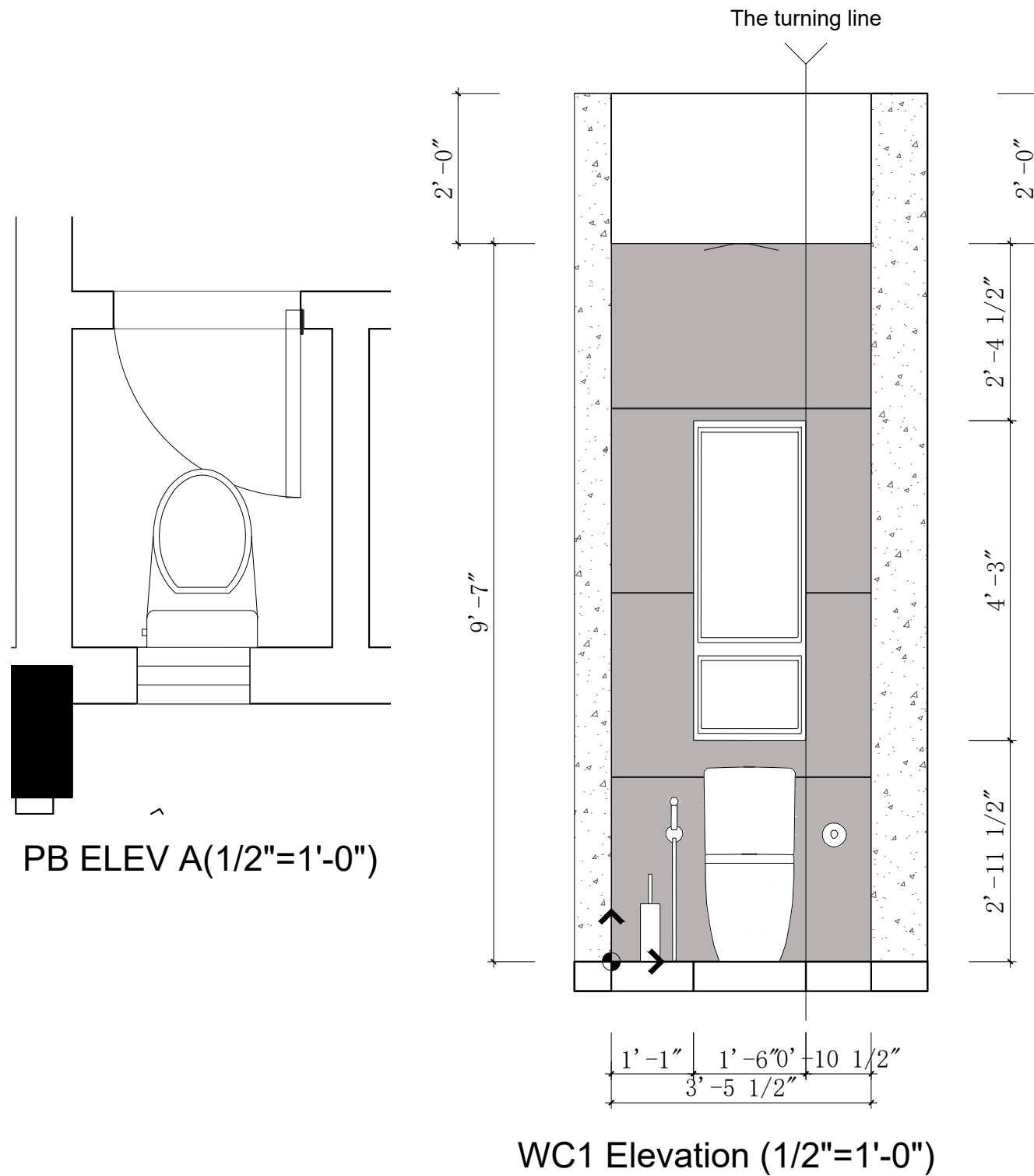
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**8th FLOOR**  
LARGE WING BATH  
ELEVATION A

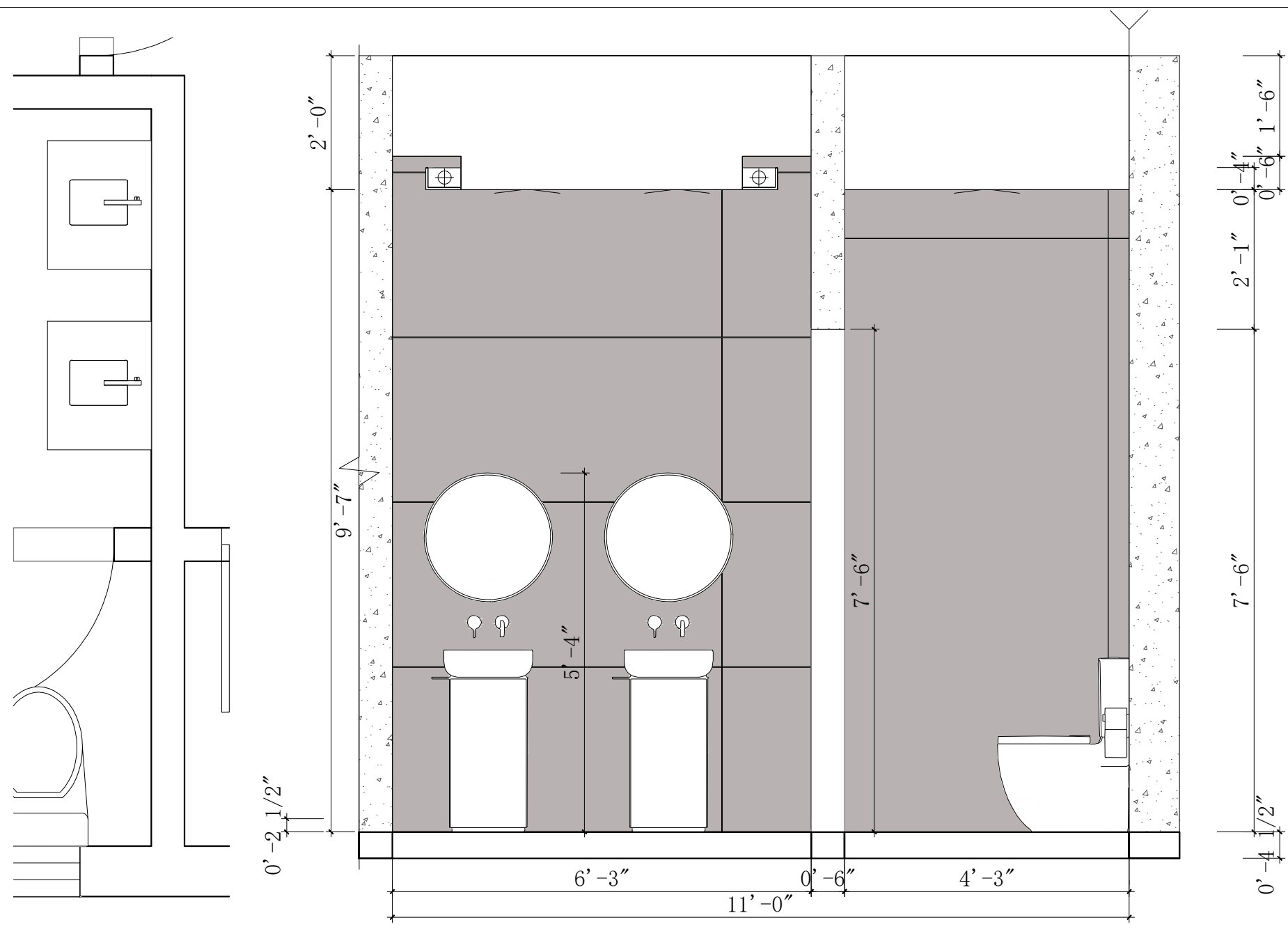
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/2"=1'	@ A3 APR. 2024

DWG. No.  
**SL08AR-LPB-45**



The turning line



PB ELEV B(1/2"=1'-0")

Men's Bathroom Elevation B(1/2"=1'-0")

**GENERAL NOTES**

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
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**CONCEPT PLAN FOR APPROVAL**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
LARGE WING BATH  
ELEVATION B

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/2"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-LPB-46**



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

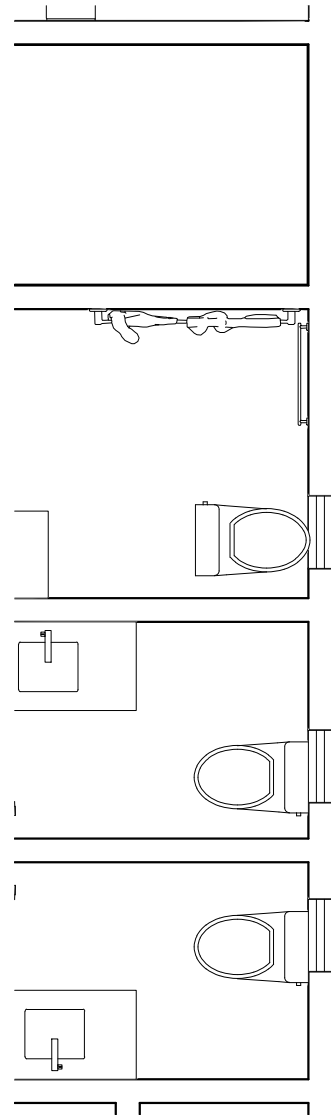
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**8th FLOOR**  
LARGE WING BATH  
ELEVATION C

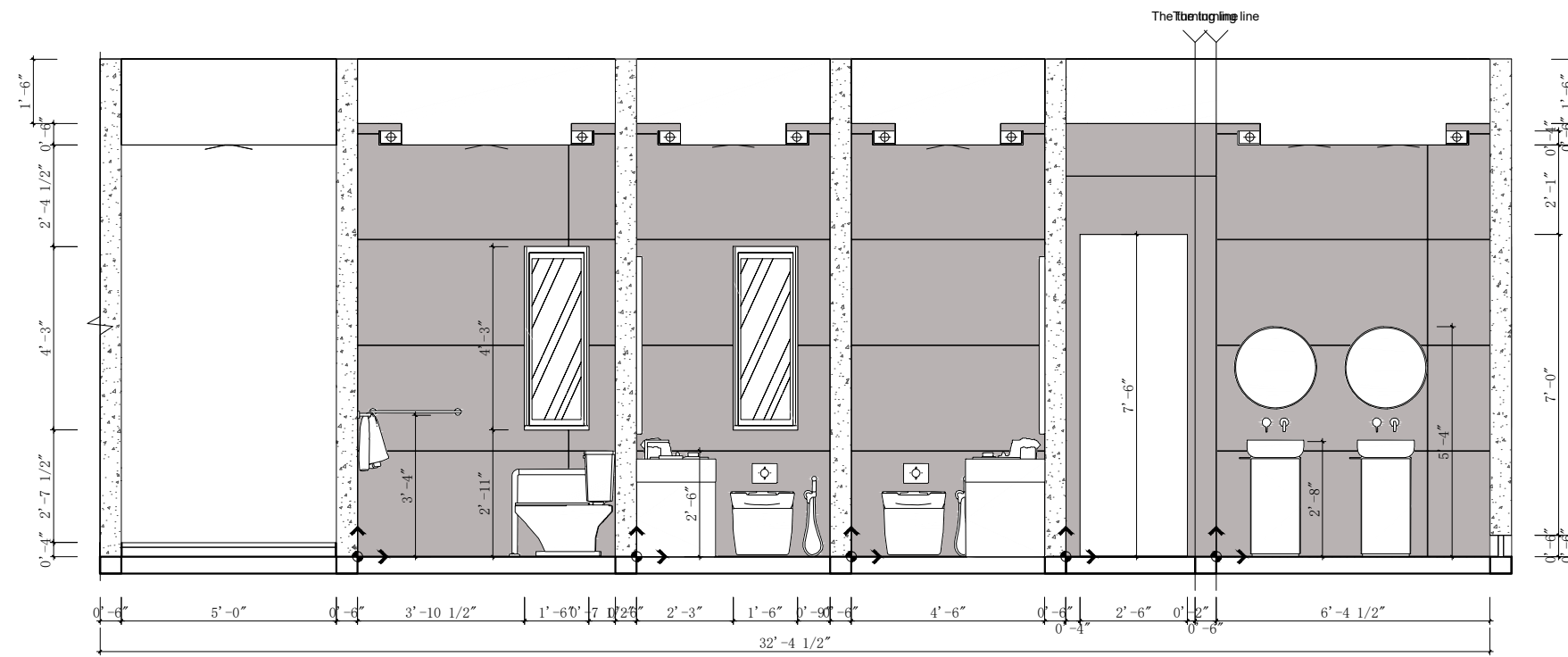
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/4"=1' @ A3	APR. 2024

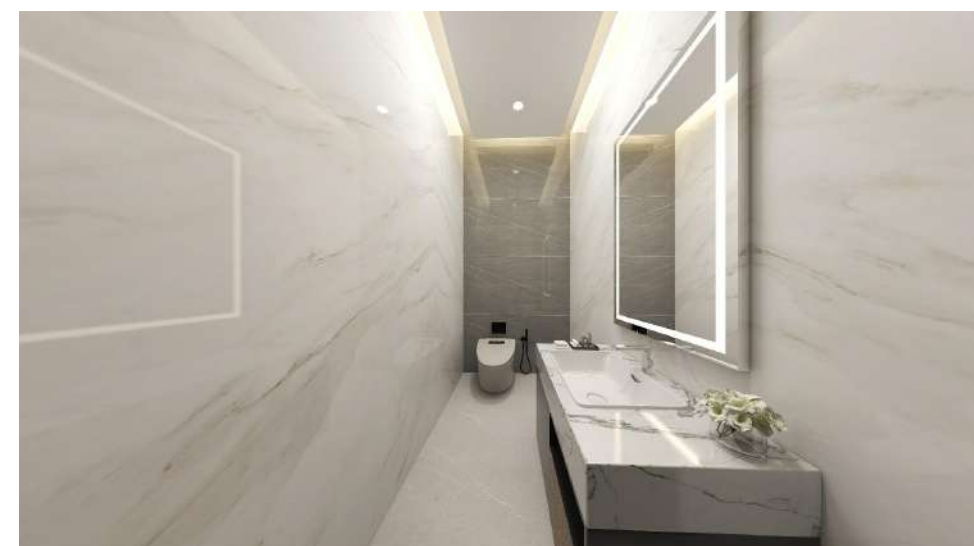
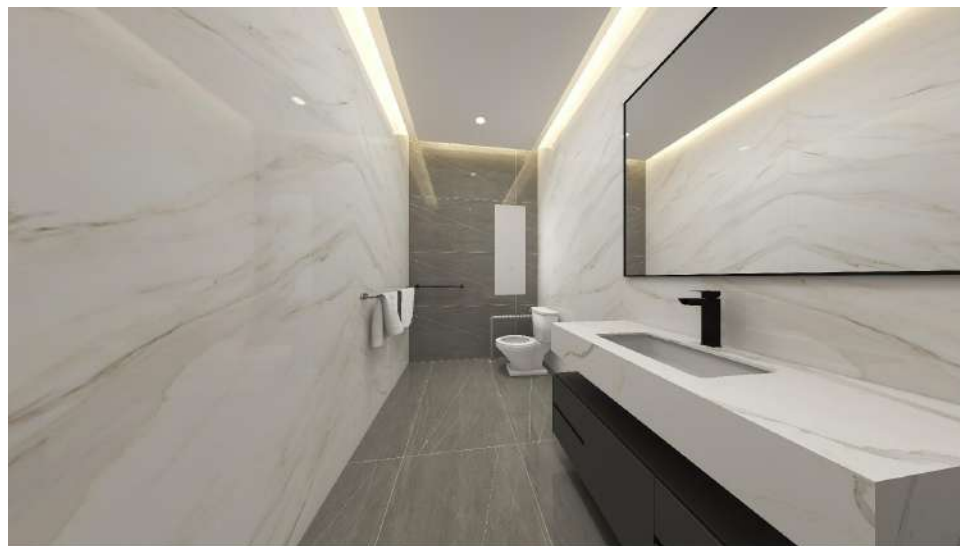
DWG. No.  
**SL08AR-LPB-47**



PB ELEV C(1/4"=1'-0")



Women's Bathroom Elevation B(1/4"=1'-0")



## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

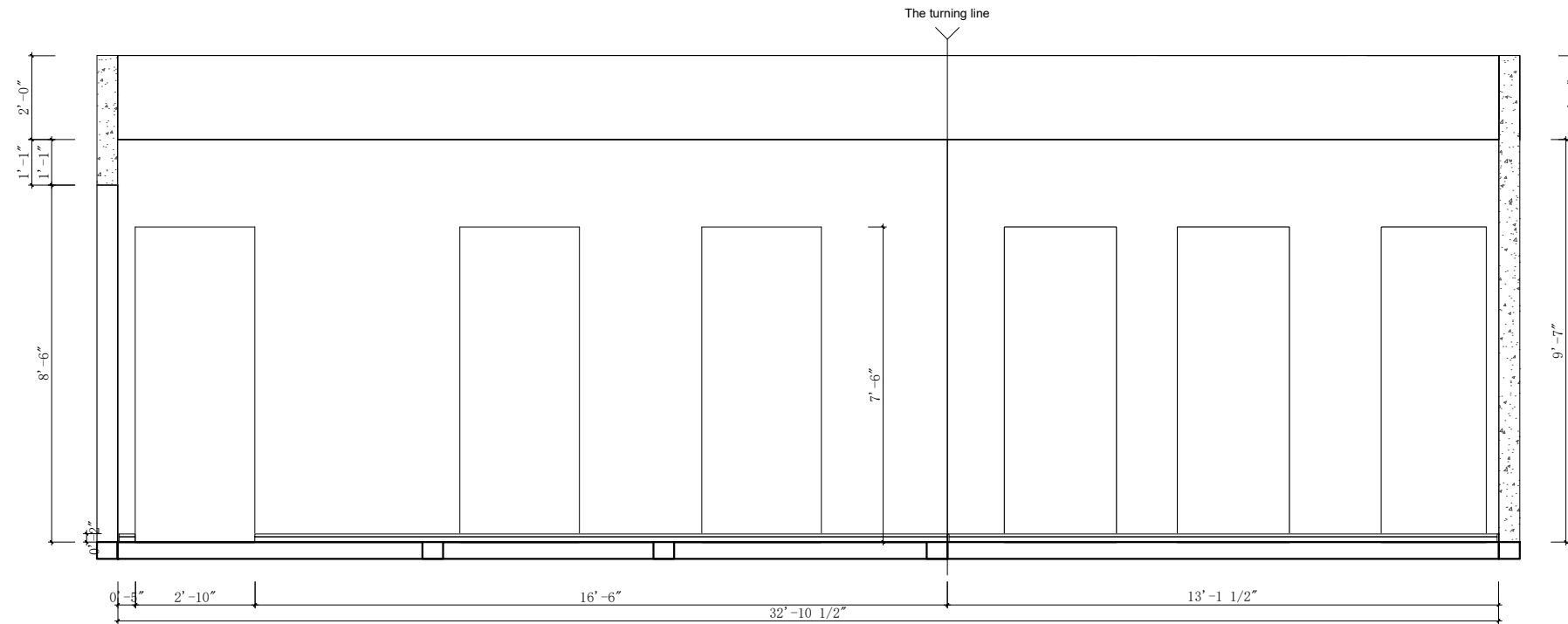
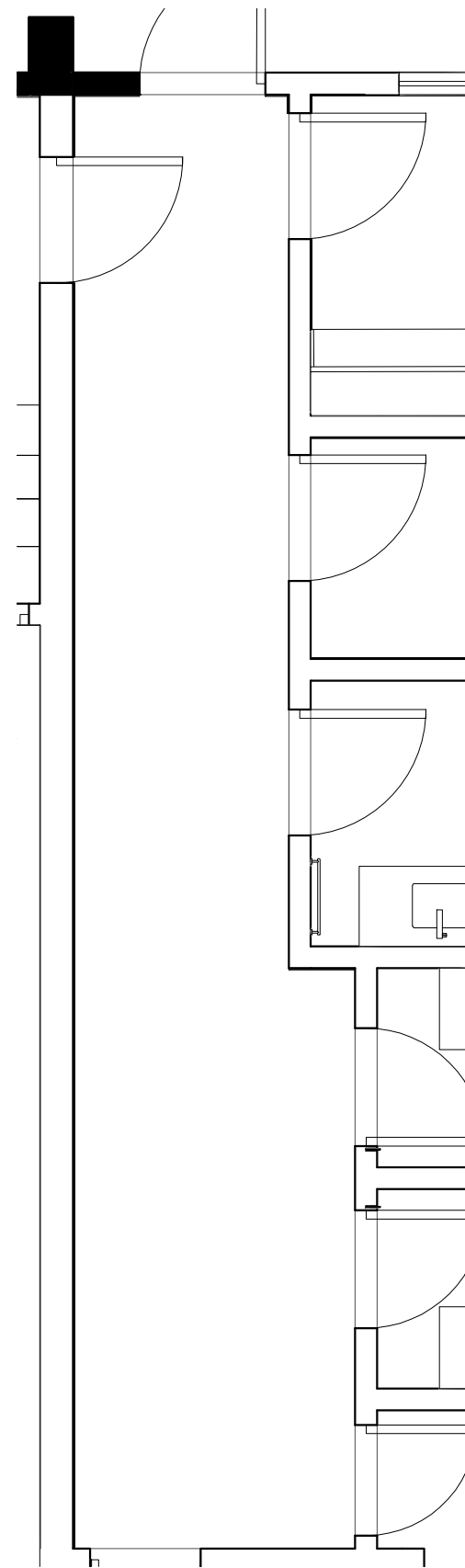


COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
LARGE WING SERVICE AREA  
ELEVATION D

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-LPB-48**



Service Hall Elevation B(1/4"=1'-0")



PB SERVICE HALL ELEV D(1/4"=1'-0")



## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



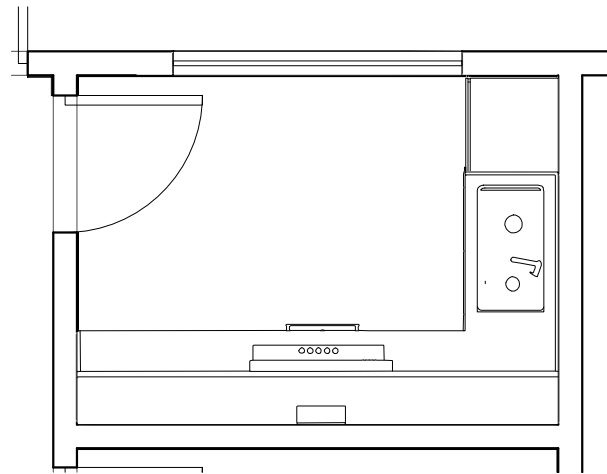
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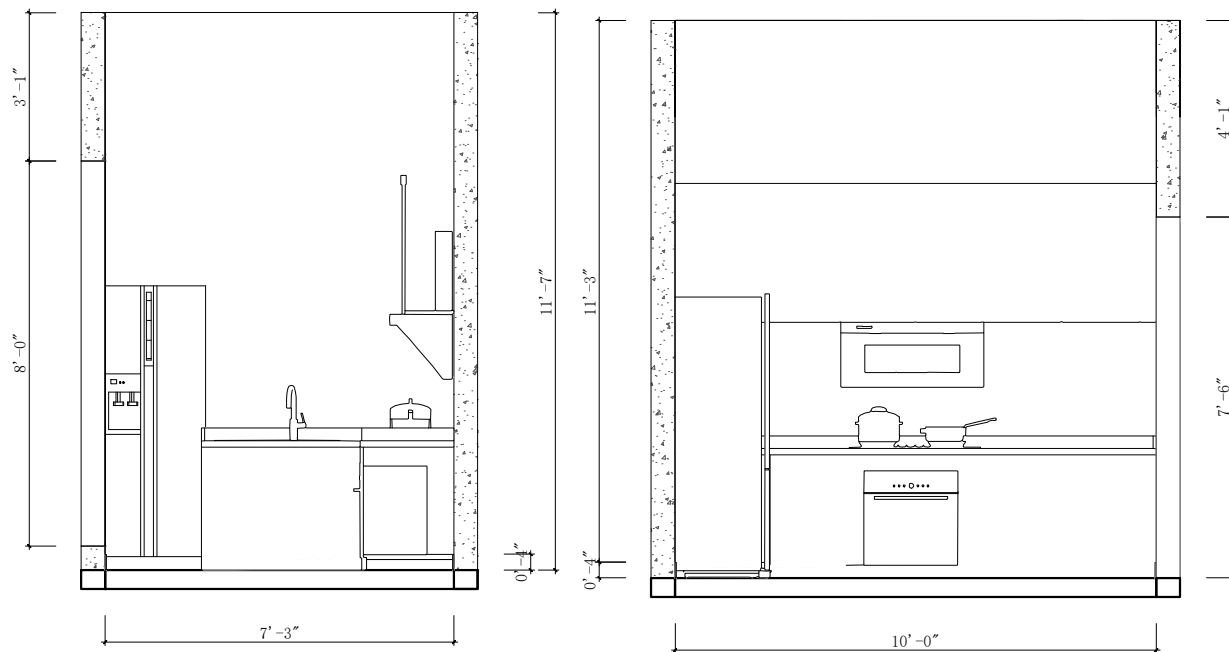
**8th FLOOR**  
LARGE WING KITCHEN  
ELEVATION

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
1/4"=1'	@ A3	APR. 2024

DWG. No.  
**SL08AR-LPB-49**



KITCHEN PLAN(1/4"=1'-0")



Pantry Elevation A(1/4"=1'-0") Pantry Elevation B(1/4"=1'-0")



## GENERAL NOTES

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## CONCEPT PLAN FOR APPROVAL

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

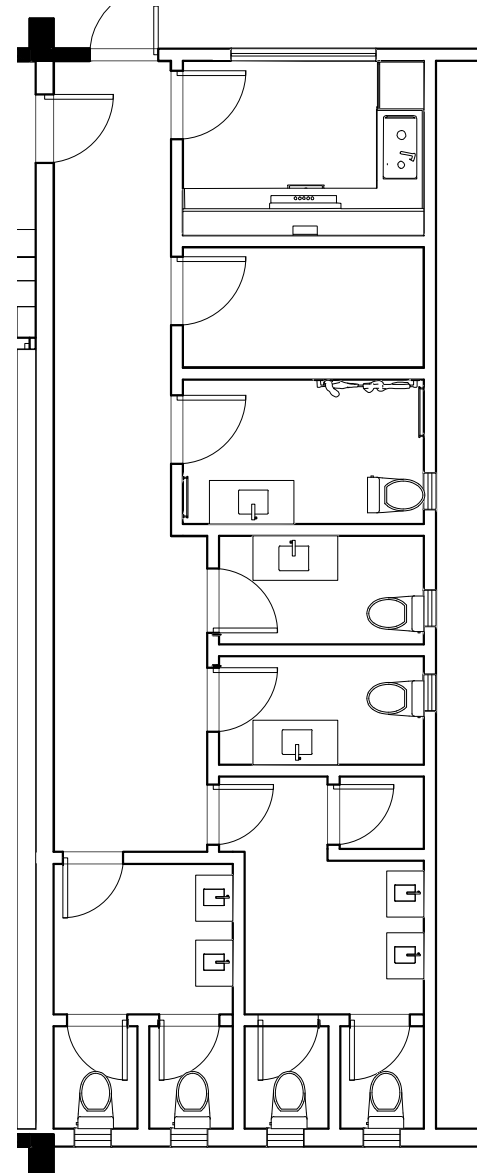
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**8th FLOOR**  
**LARGE WING TOILETS AND**  
**KITCHEN FLOOR**

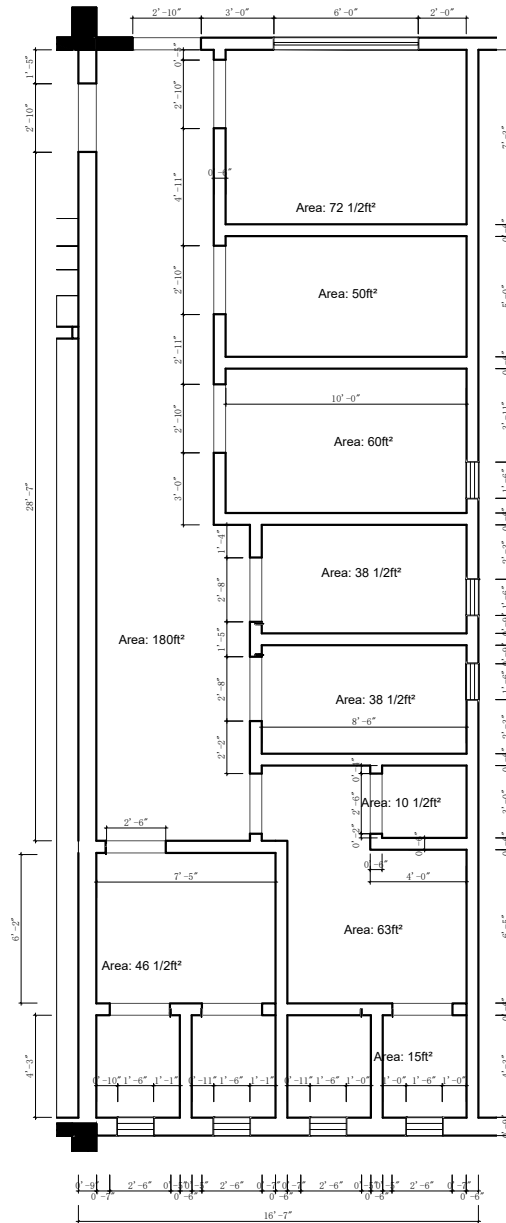
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN

SCALE	DATE
1/8"=1'	APR. 2024

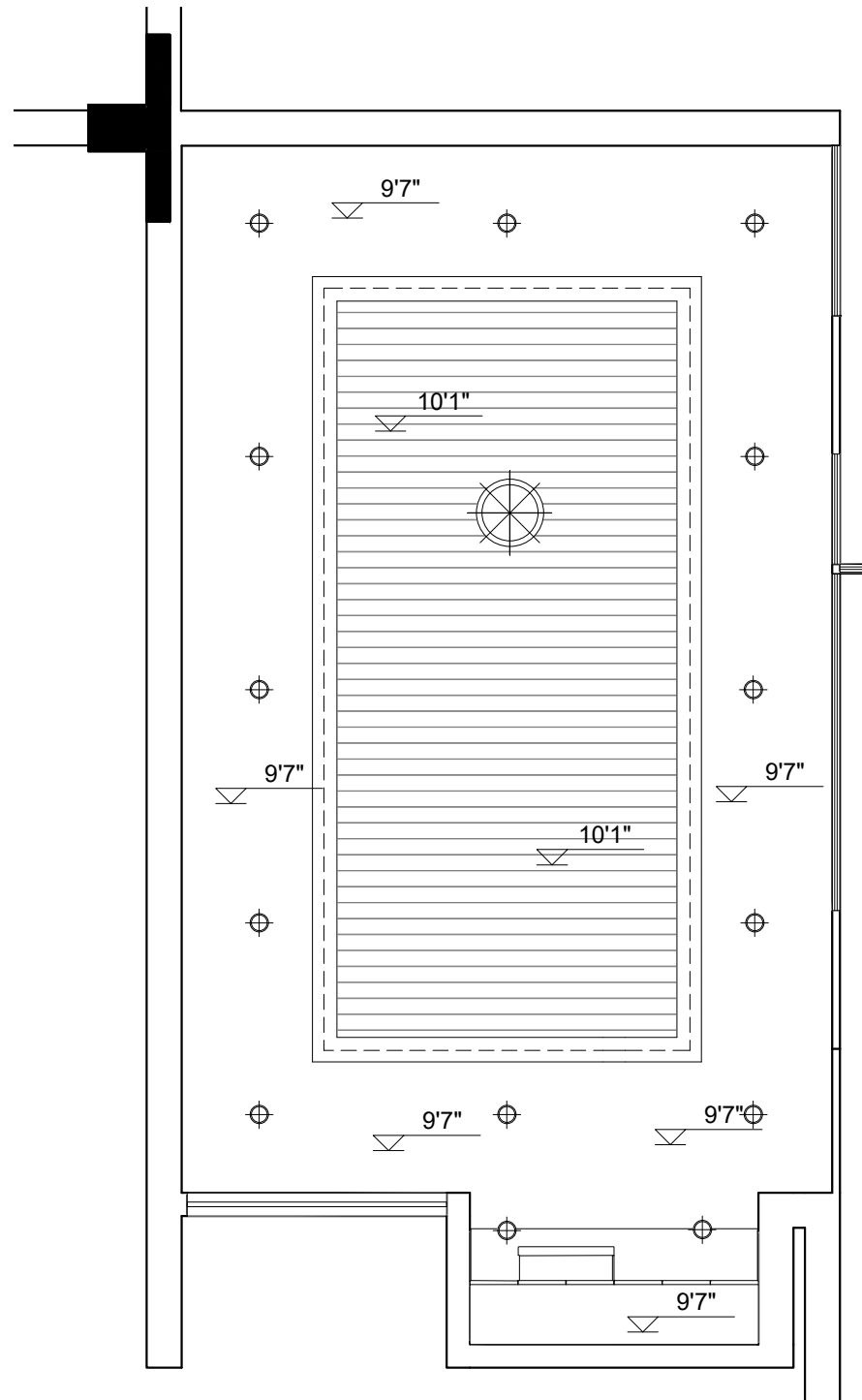
DWG. No.  
**SL08AR-LPB-50**



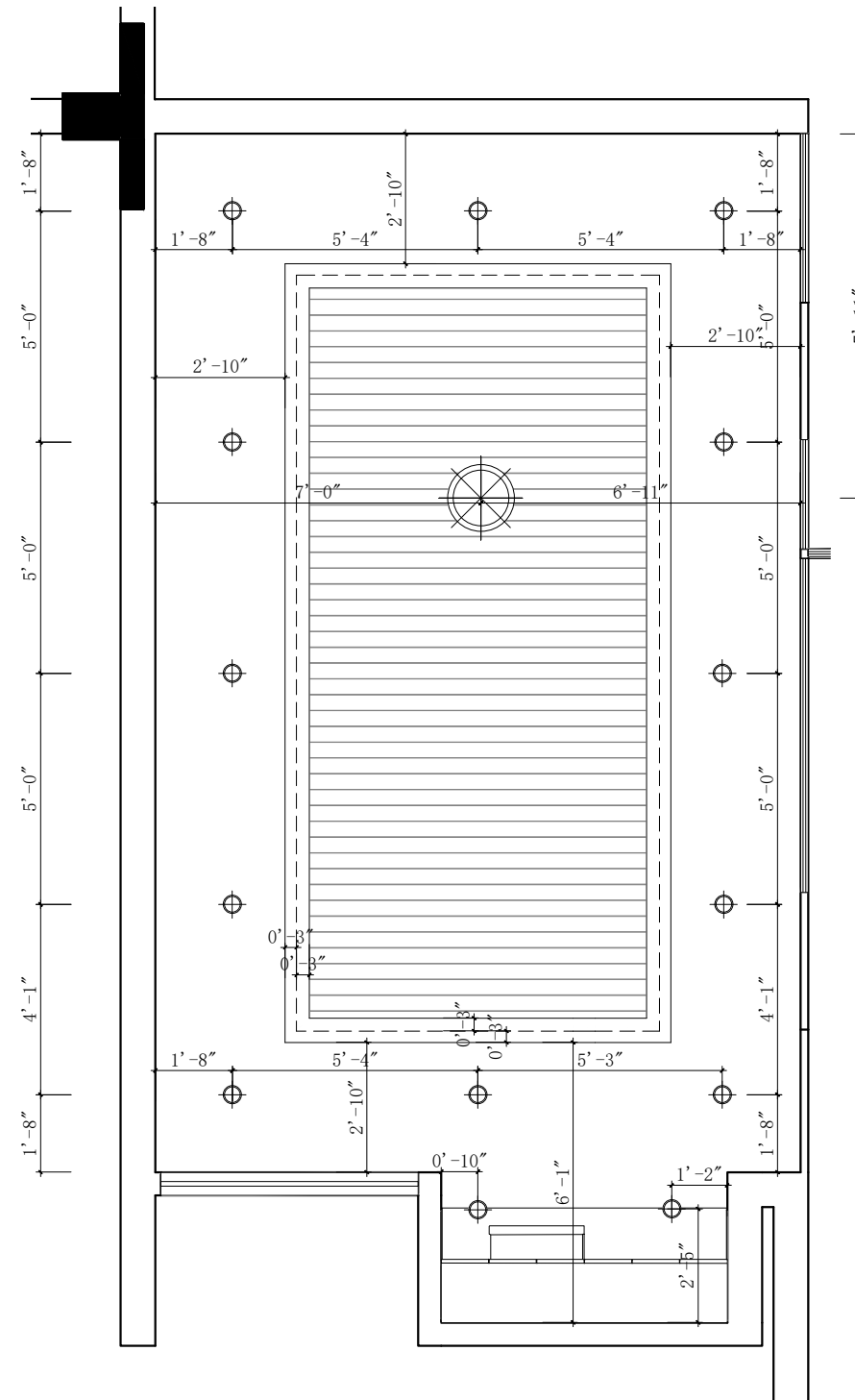
PB+K PLAN(1/8"=1'-0")



PB+K WALLS(1/8"=1'-0")



WAITING CEILING(1/4"=1'-0")



WAITING CEILING LIGHTS(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
WAITING LOUNGE CEILING PLAN

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL08AR-WT-51**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



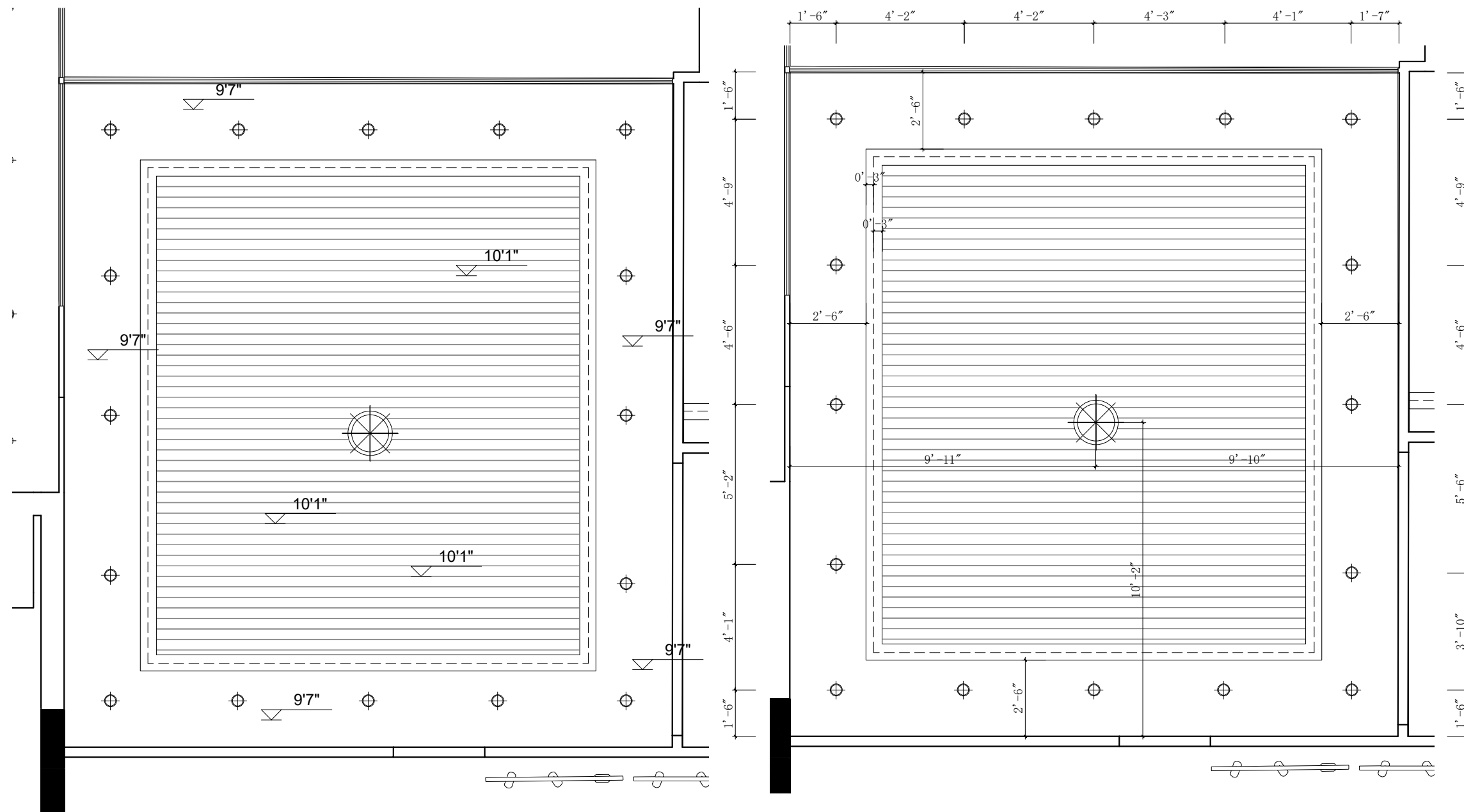
COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
**ENTRANCE CEILING PLAN**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL08AR-ENT-52**



ENTRANCE CEILING(1/4"=1'-0")

ENTRANCE CEILING LIGHTS(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



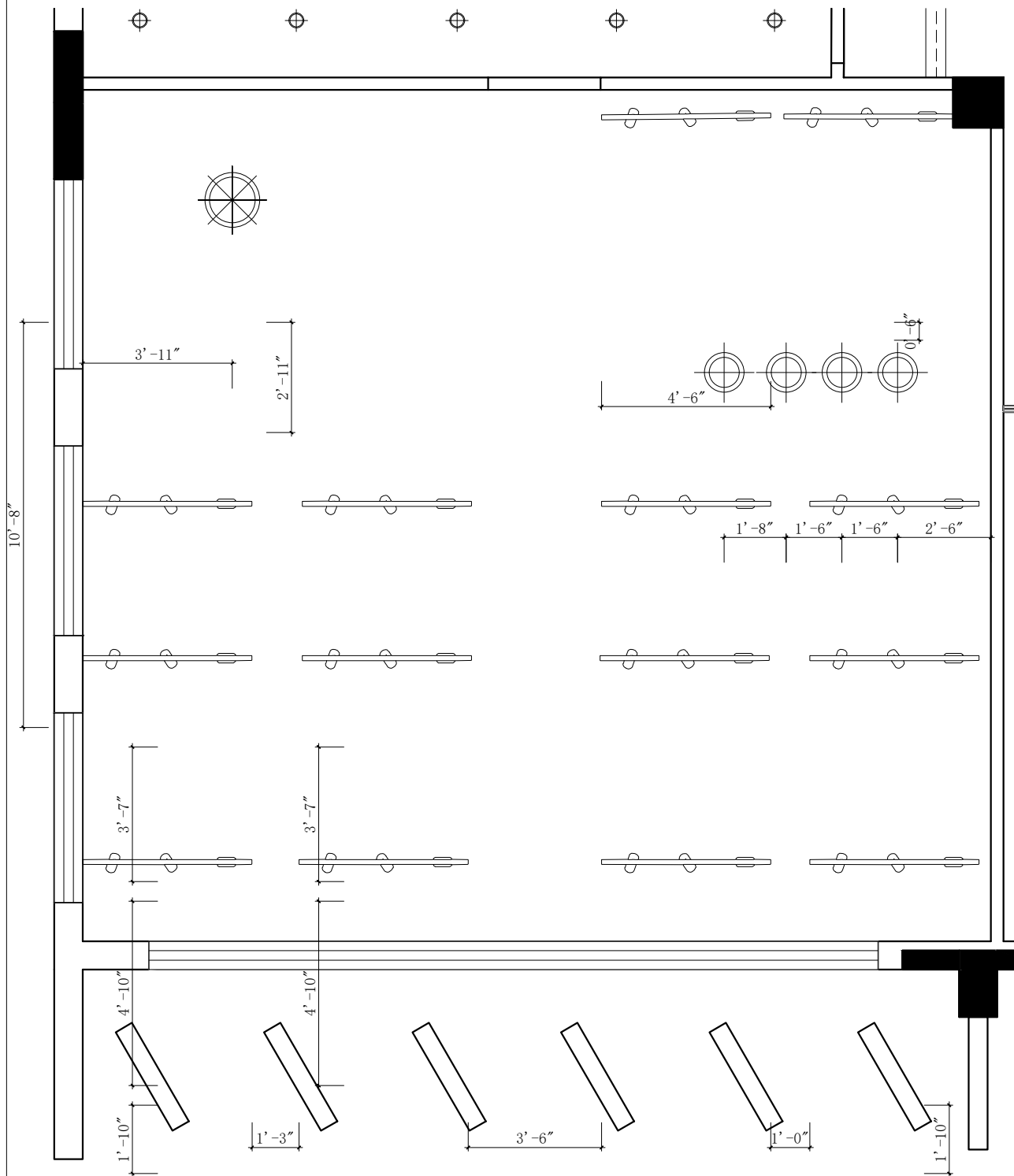
COMMENTS:

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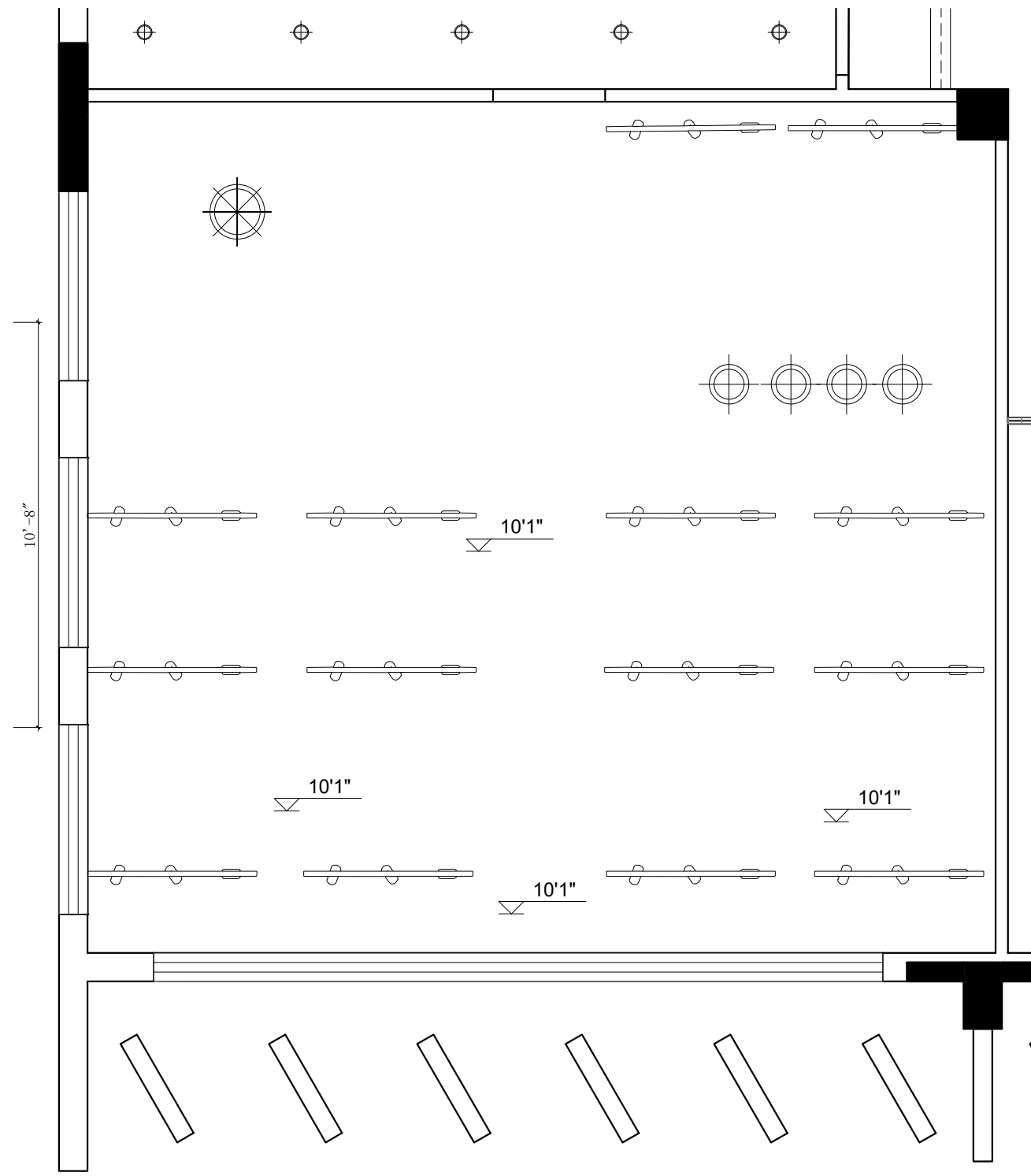
**8th FLOOR**  
**LIBRARY CEILING PLAN**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL08AR-LIB-53**



LIBRARY CEILING LIGHTS(1/4"=1'-0")



LIBRARY CEILING(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



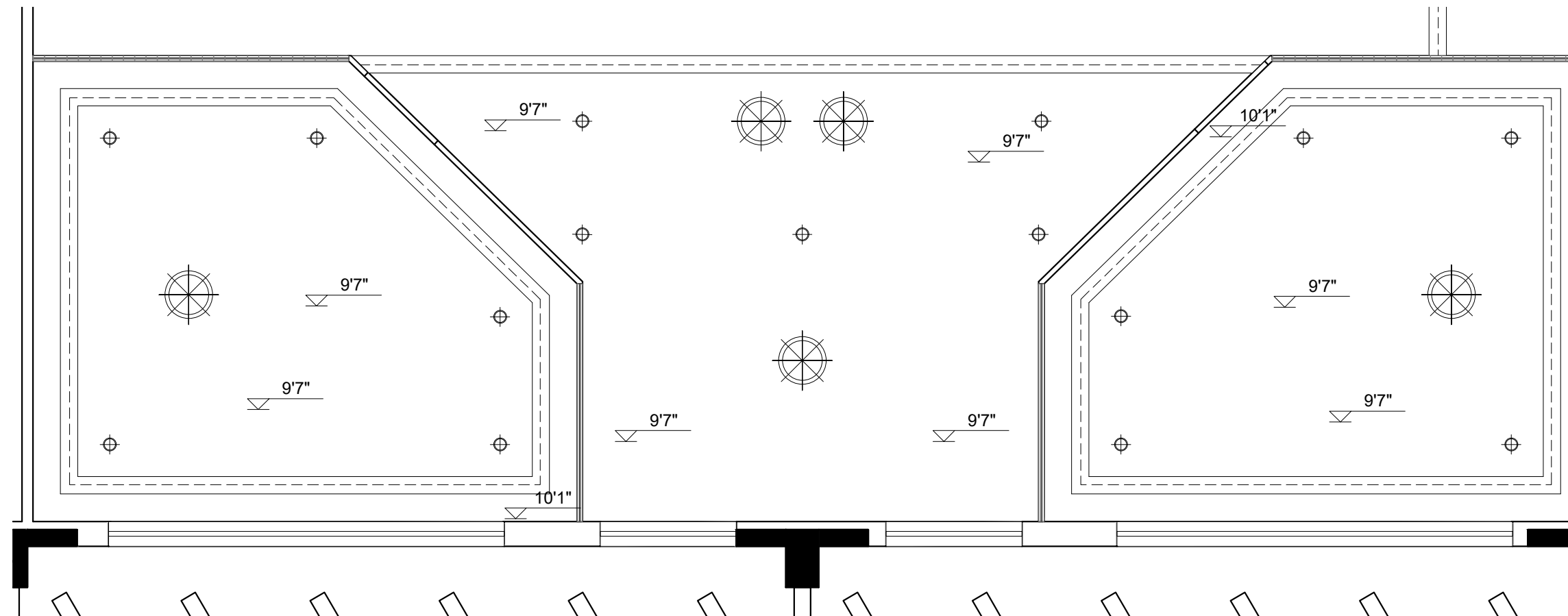
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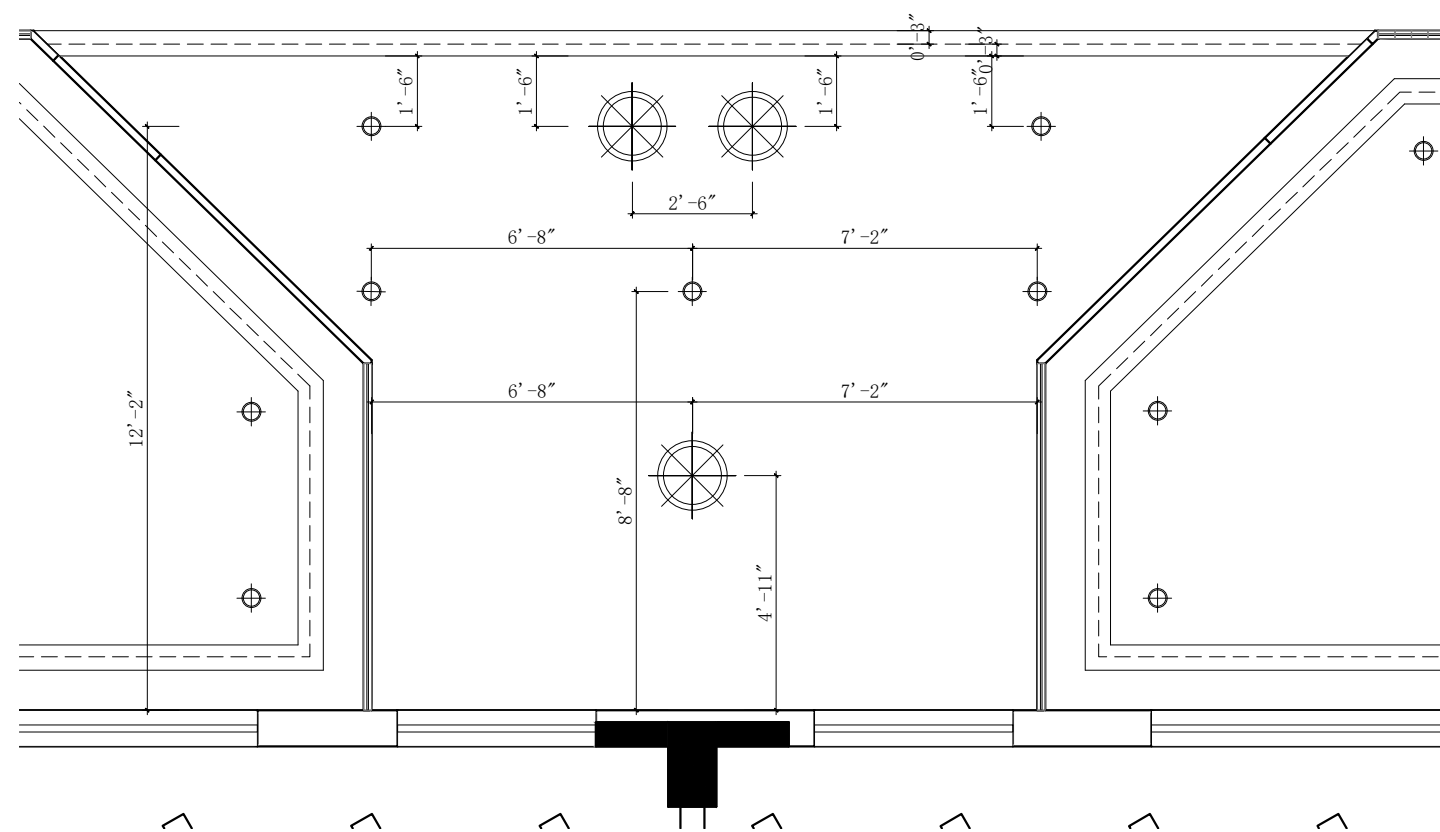
**8th FLOOR**  
**D.G.M CEILING PLAN**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

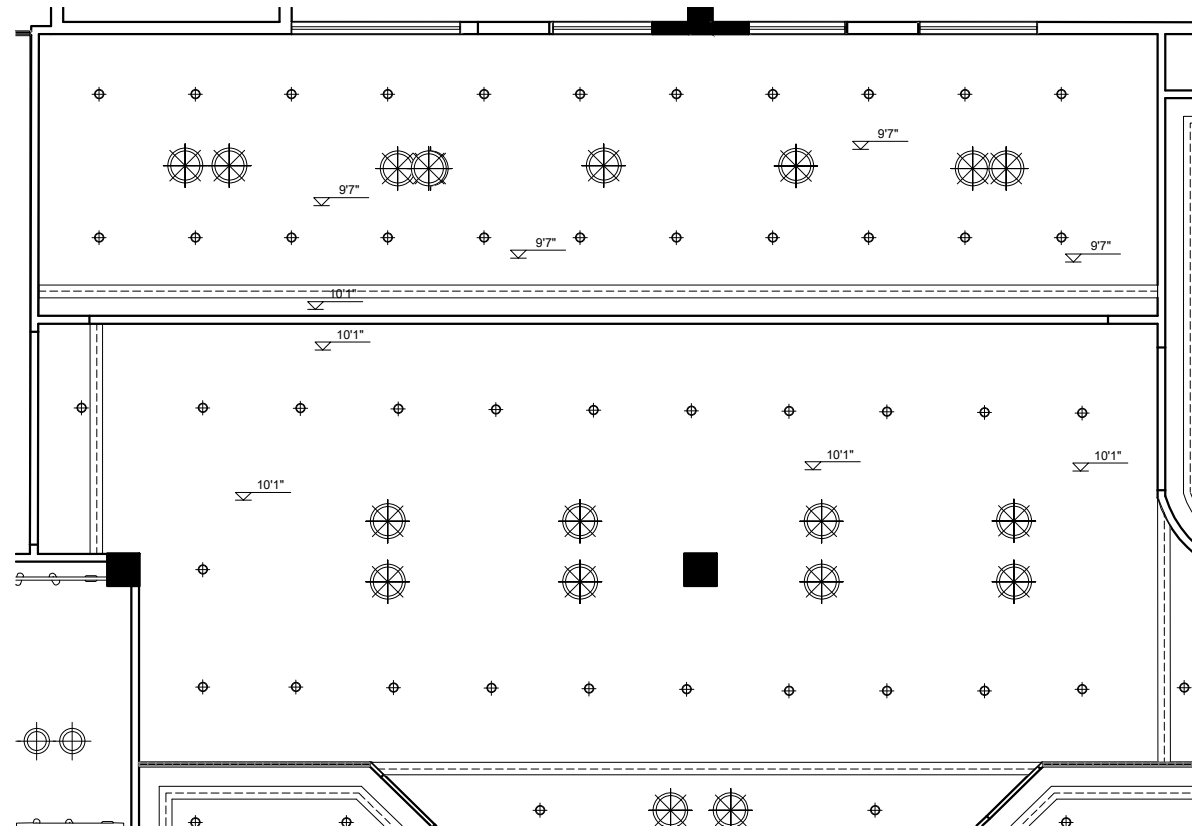
DWG. No.  
**SL08AR-DGM-54**



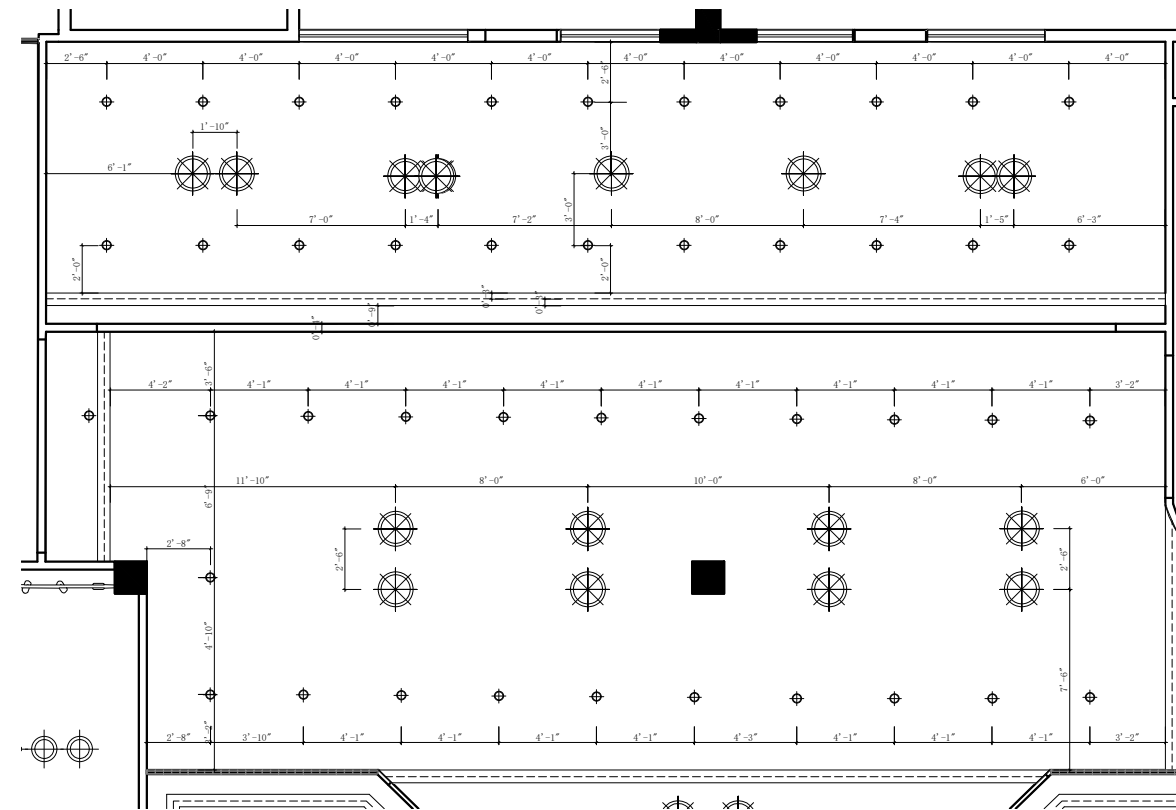
**DGM 1 CEILING(1/4"=1'-0")**



**D.G.M 1 CEILING LIGHTS(1/4"=1'-0")**



DGM 2 CEILING(1/8"=1'-0")



D.G.M 2 CEILING LIGHTS(1/8"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
**D.G.M CEILING PLAN**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL08AR-DGM-55**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



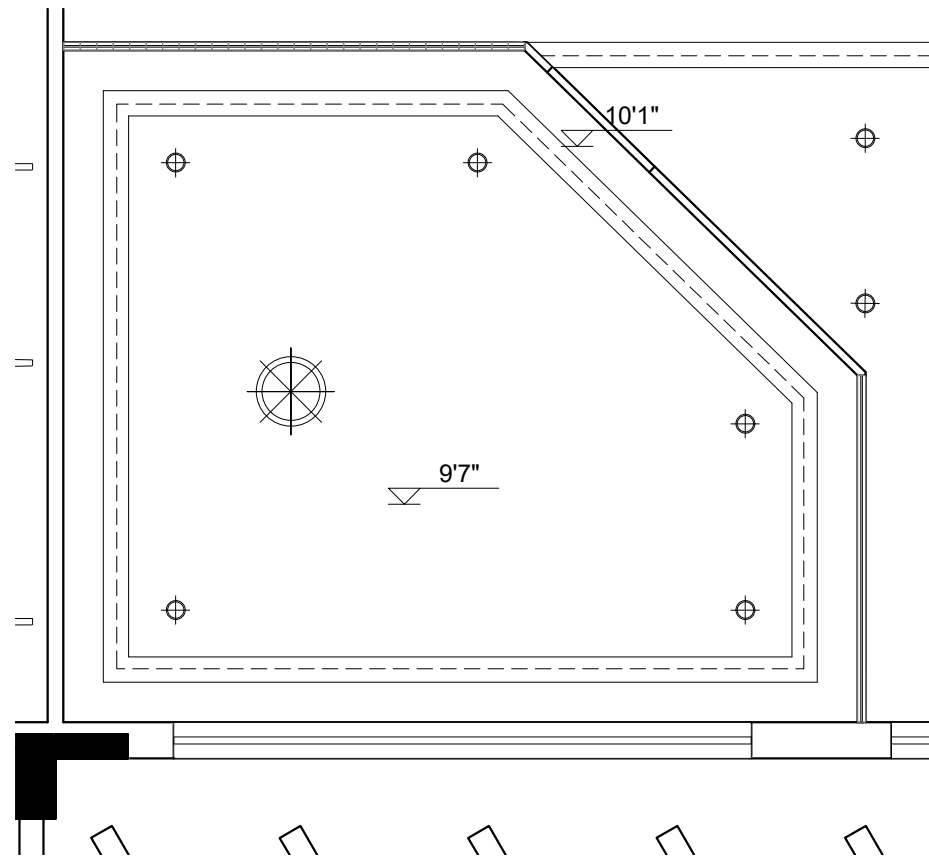
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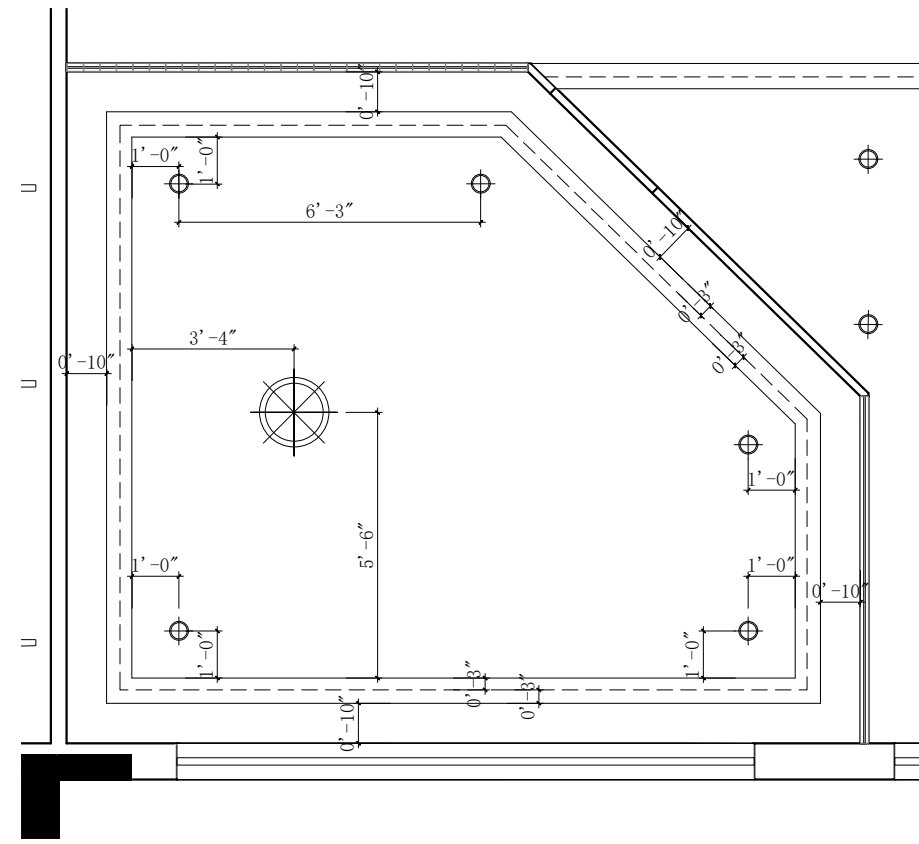
**8th FLOOR**  
**CHIEF OFFICE CEILING PLAN**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-CHF-56**



CHIEF OFFICE CEILING(1/4"=1'-0")



CHIEF OFFICE CEILING LIGHTS(1/4"=1'-0")



**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



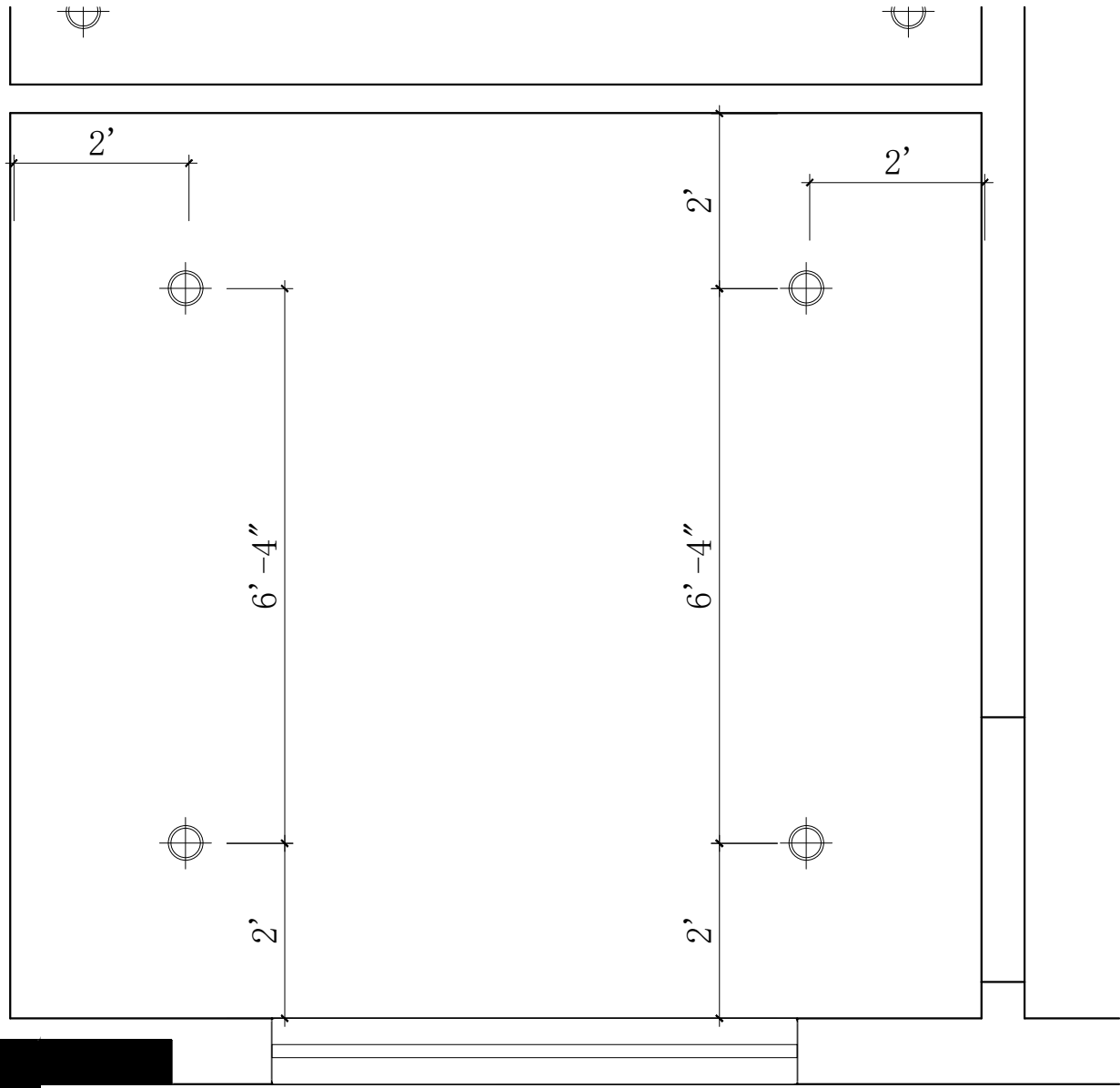
COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
AUDITORIUM STORE CEILING PLAN

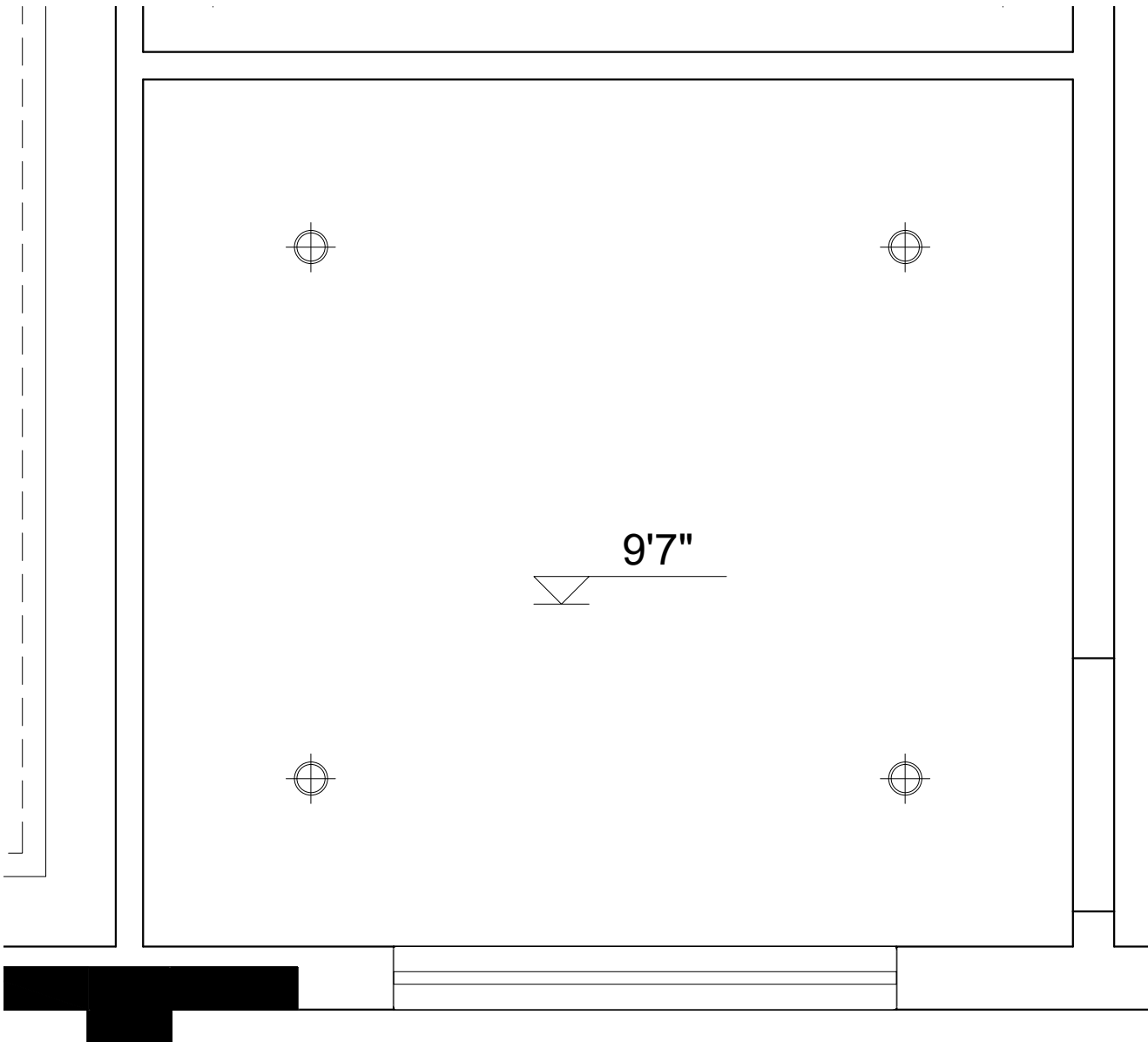
DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-ENT-57**

**AUD STORE CEILING LIGHTS(1/2"=1'-0")**



**AUD STORE CEILING(1/2"=1'-0")**



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



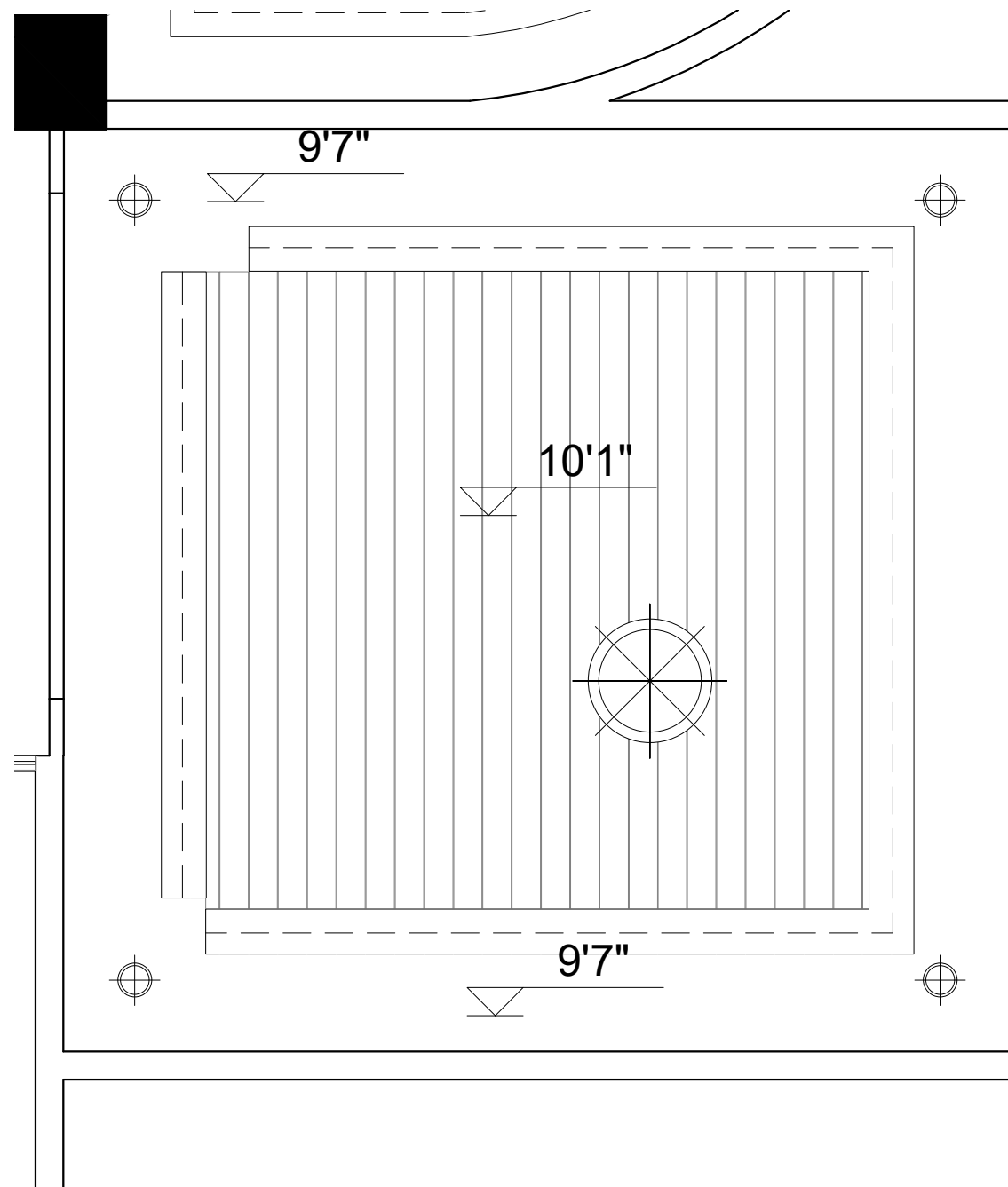
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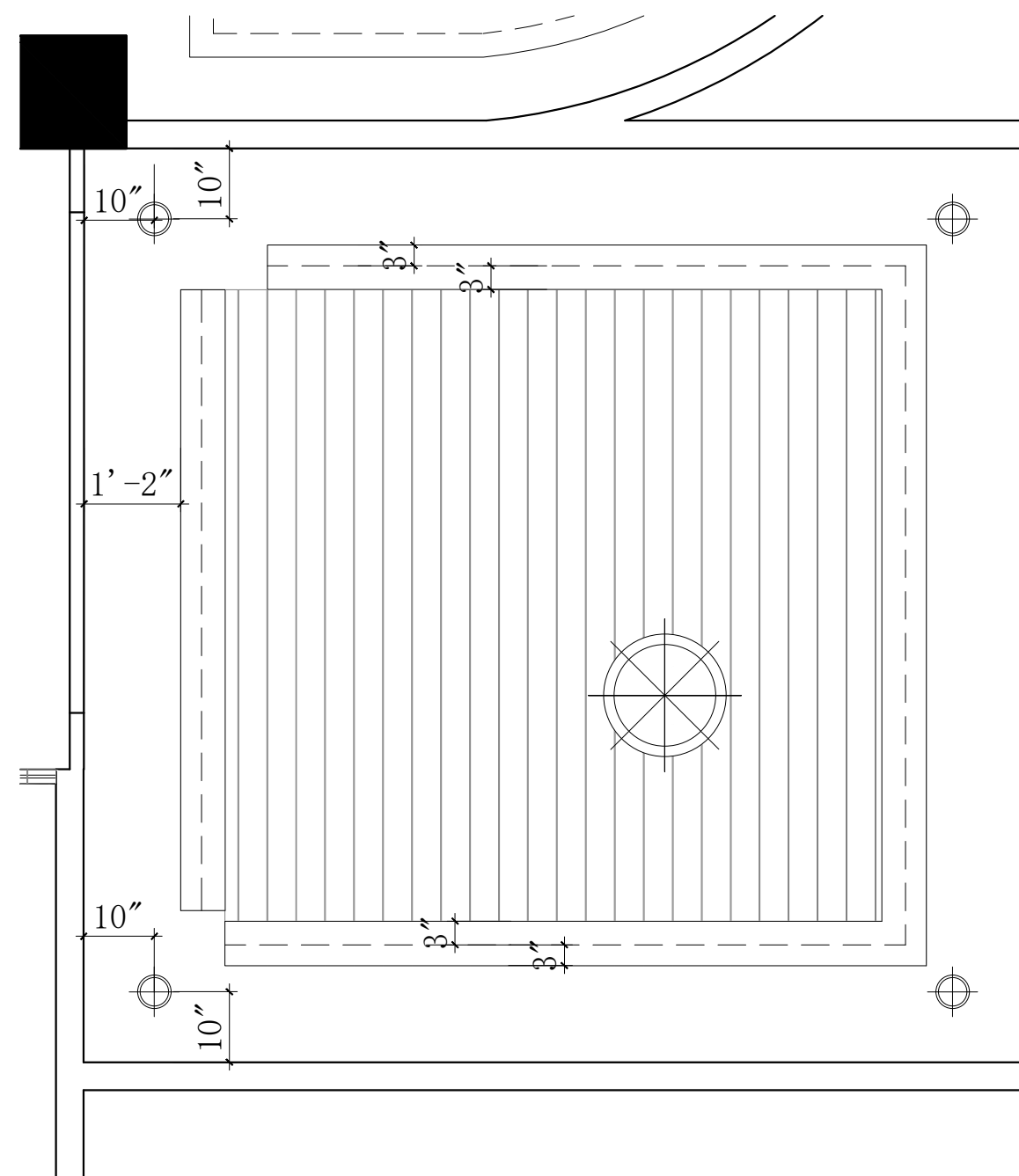
**8th FLOOR**  
**MEETING ROOM CEILING PLAN**

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

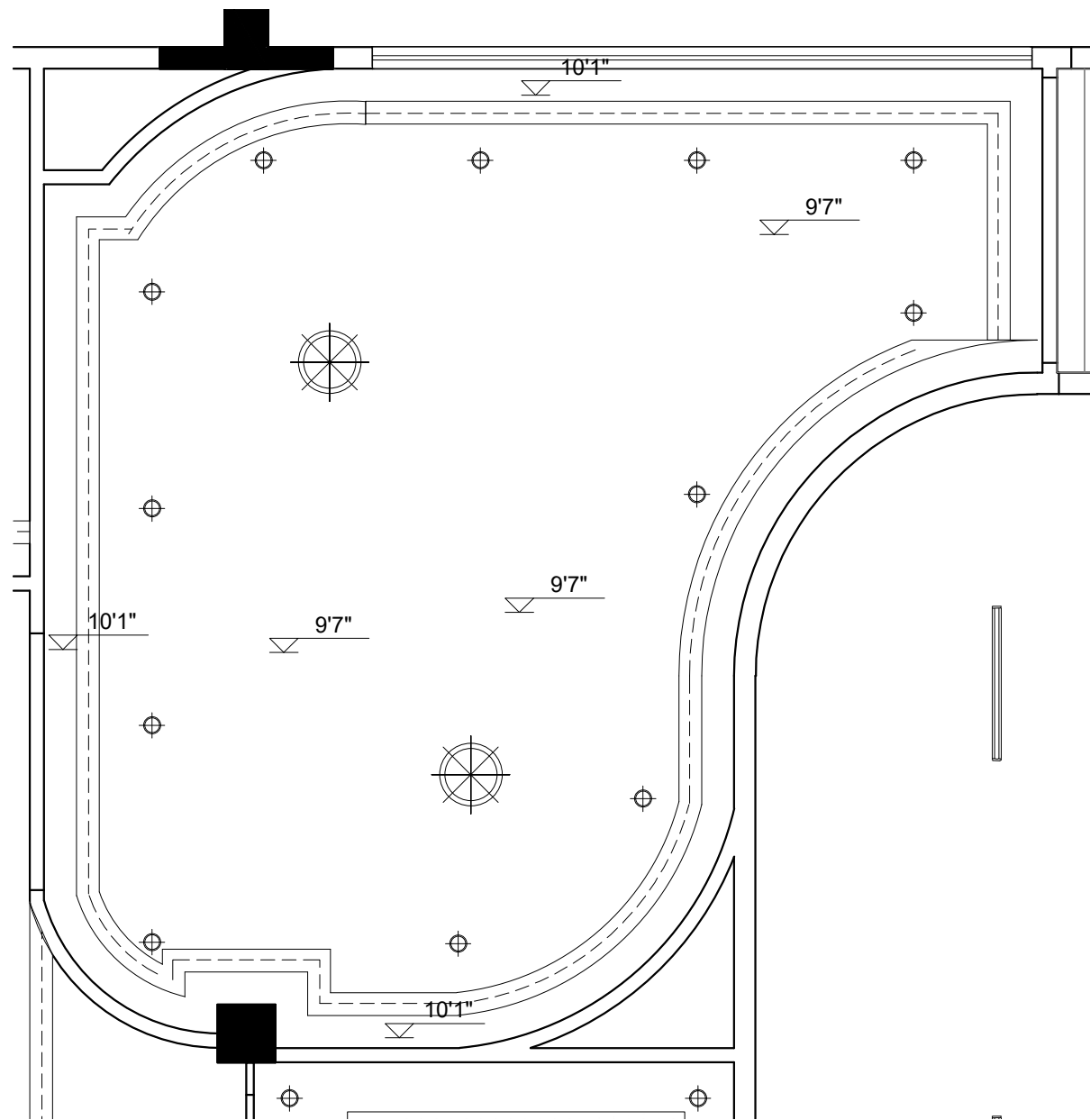
DWG. No.  
**SL08AR-MET-58**



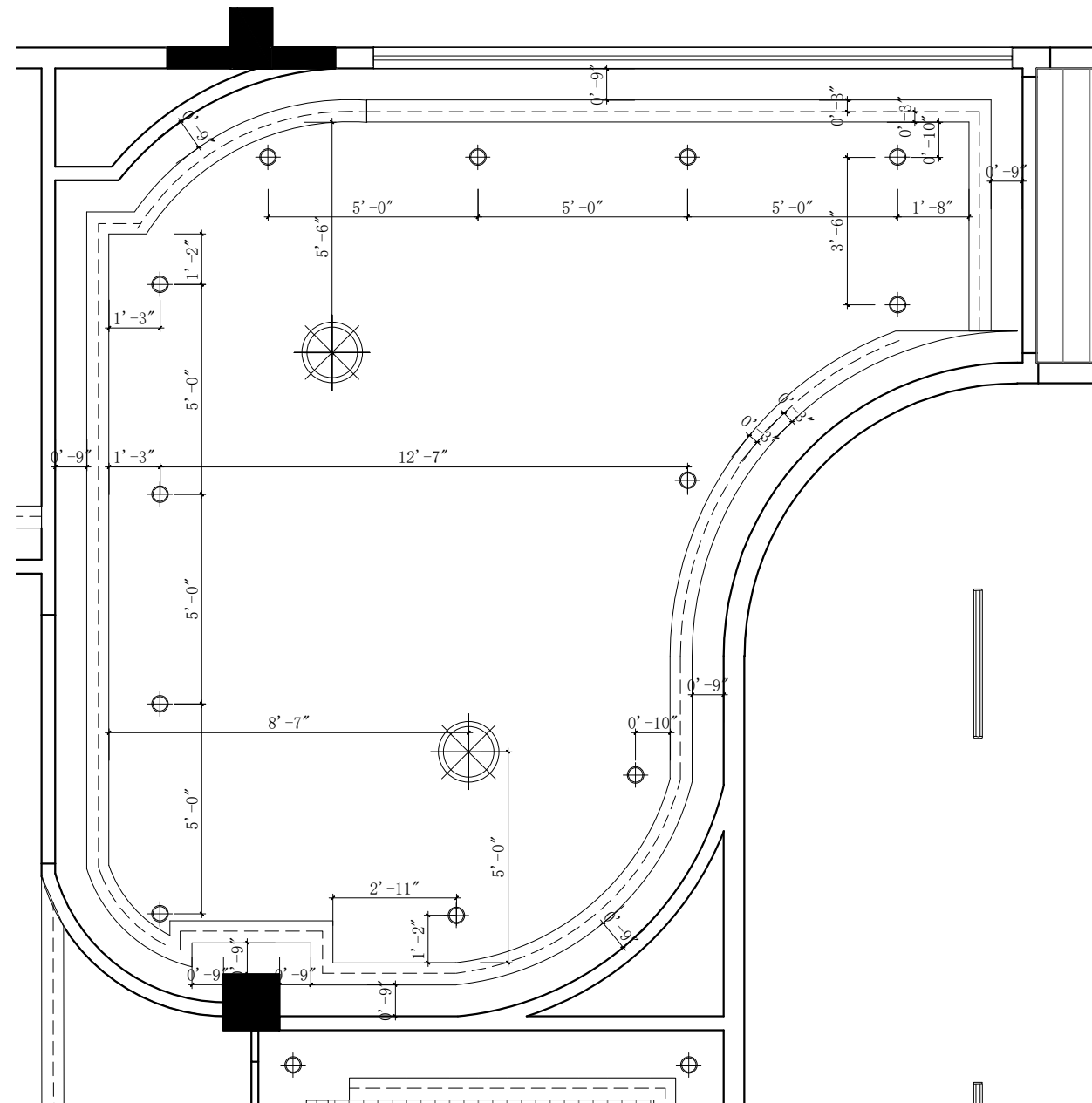
MEETING ROOM CEILING(1/2"=1'-0")



MEETING ROOM CEILING LIGHTS(1/2"=1'-0")



GATHERING CEILING(1/4"=1'-0")



GATHERING CEILING LIGHTS(1/4"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
GATHERING AREA CEILING PLAN

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL08AR-GTH-59**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



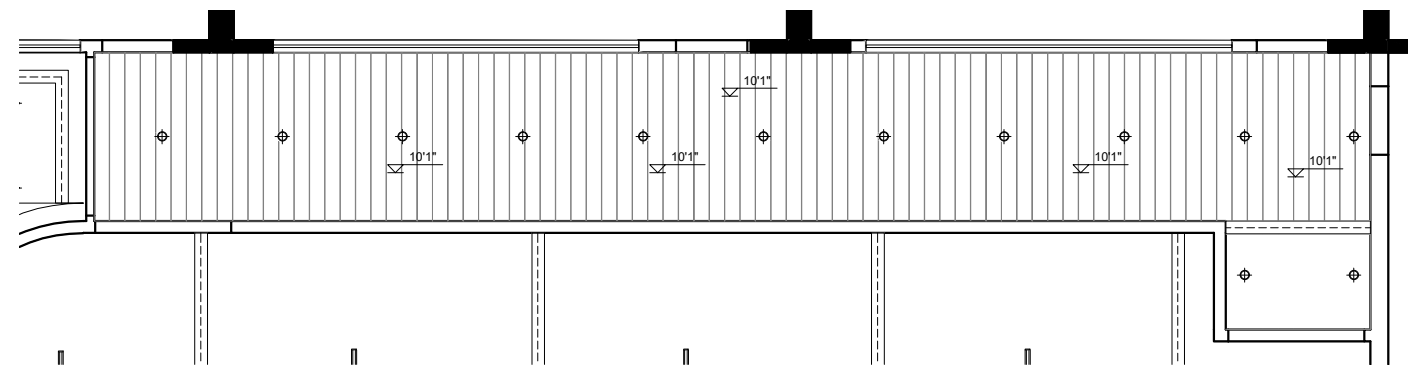
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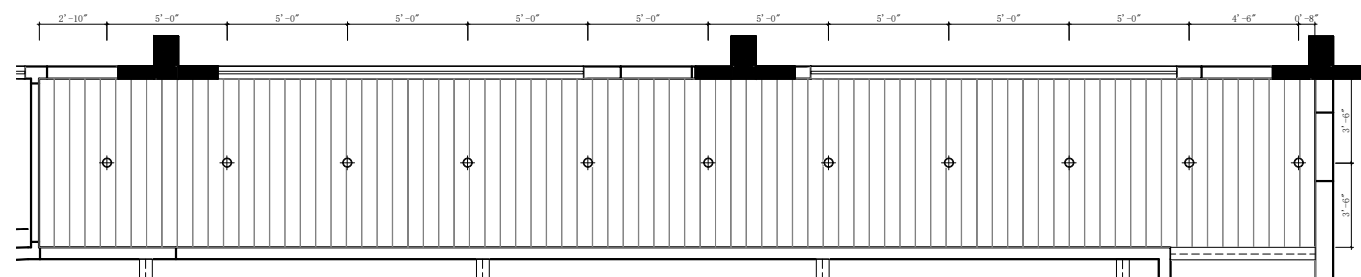
**8th FLOOR**  
AUDITORIUM HALLWAY CEILING PLAN

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL08AR-HLW-60**



HALLWAY CEILING(1/8"=1'-0")



HALLWAY CEILING LIGHTS(1/8"=1'-0")



## GENERAL NOTES

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3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



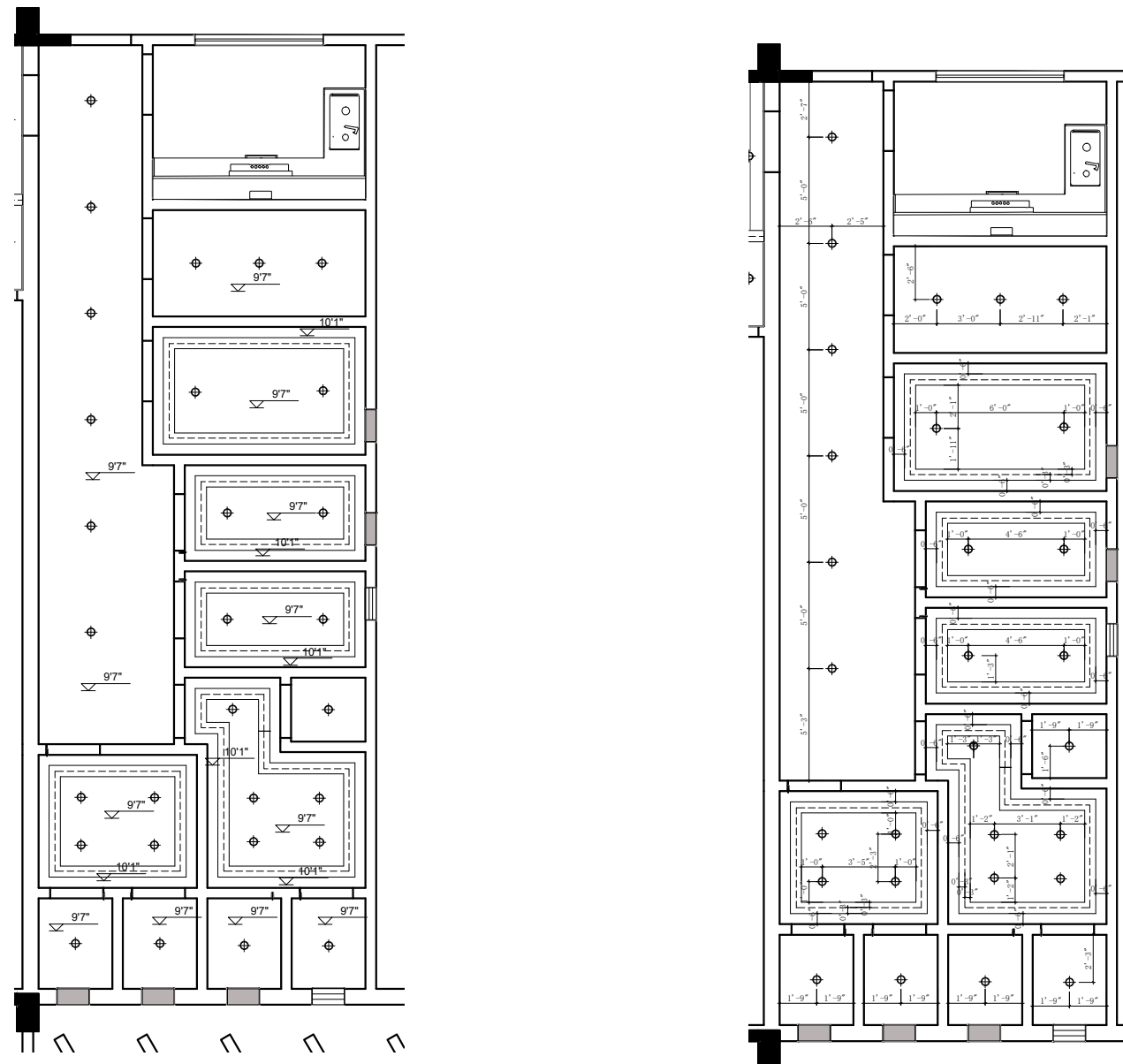
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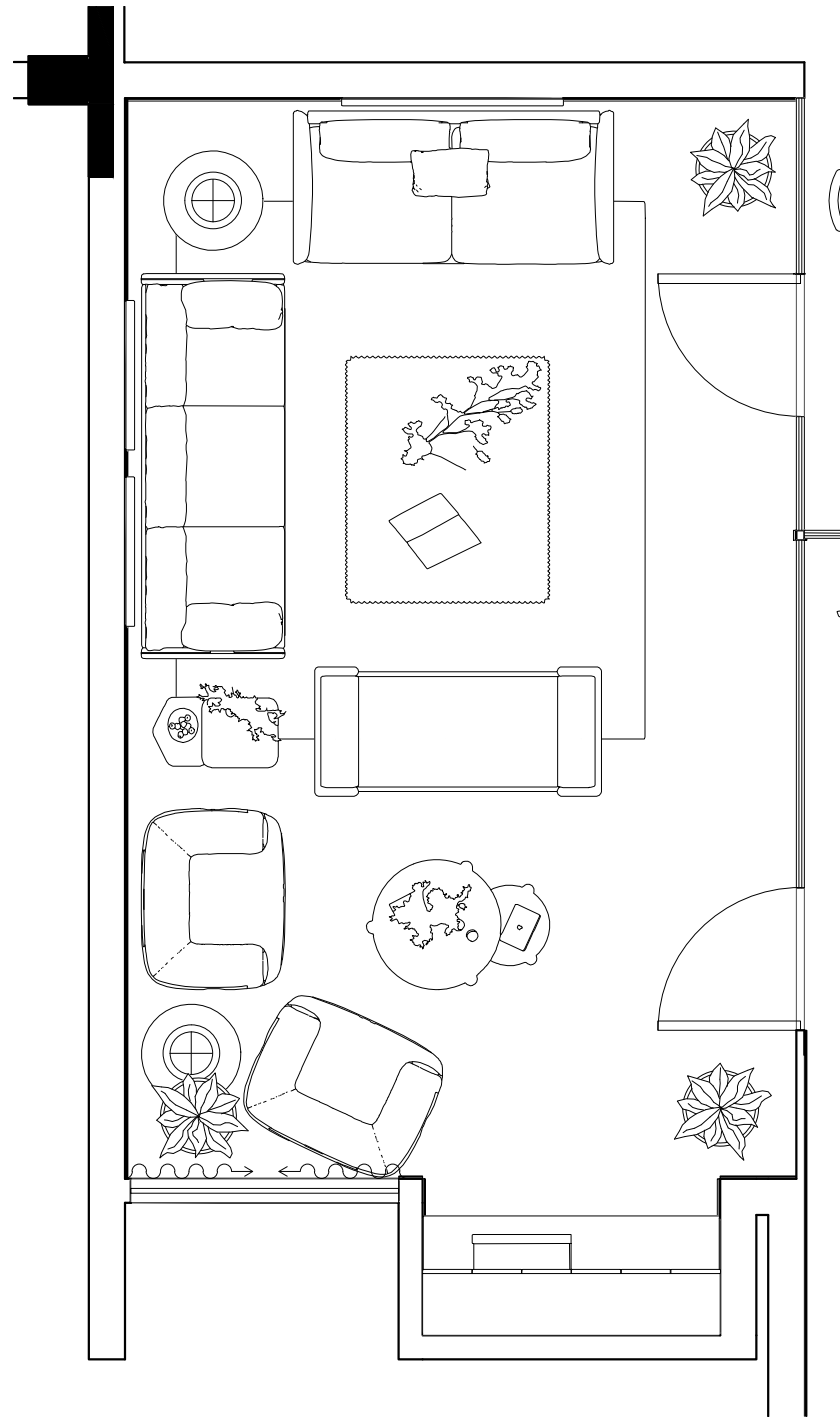
**8th FLOOR**  
LARGE WING TOILETS CEILING PLAN

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE		DATE
AS SHOWN	@ A3	APR. 2024

DWG. No.  
**SL08AR-LPB-62**



LARGE WING BATH CEILING(1/8"=1'-0") LW BATH CEILING LIGHTS(1/8"=1'-0")



WAITING FURNITURE(1/4"=1'-0")

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



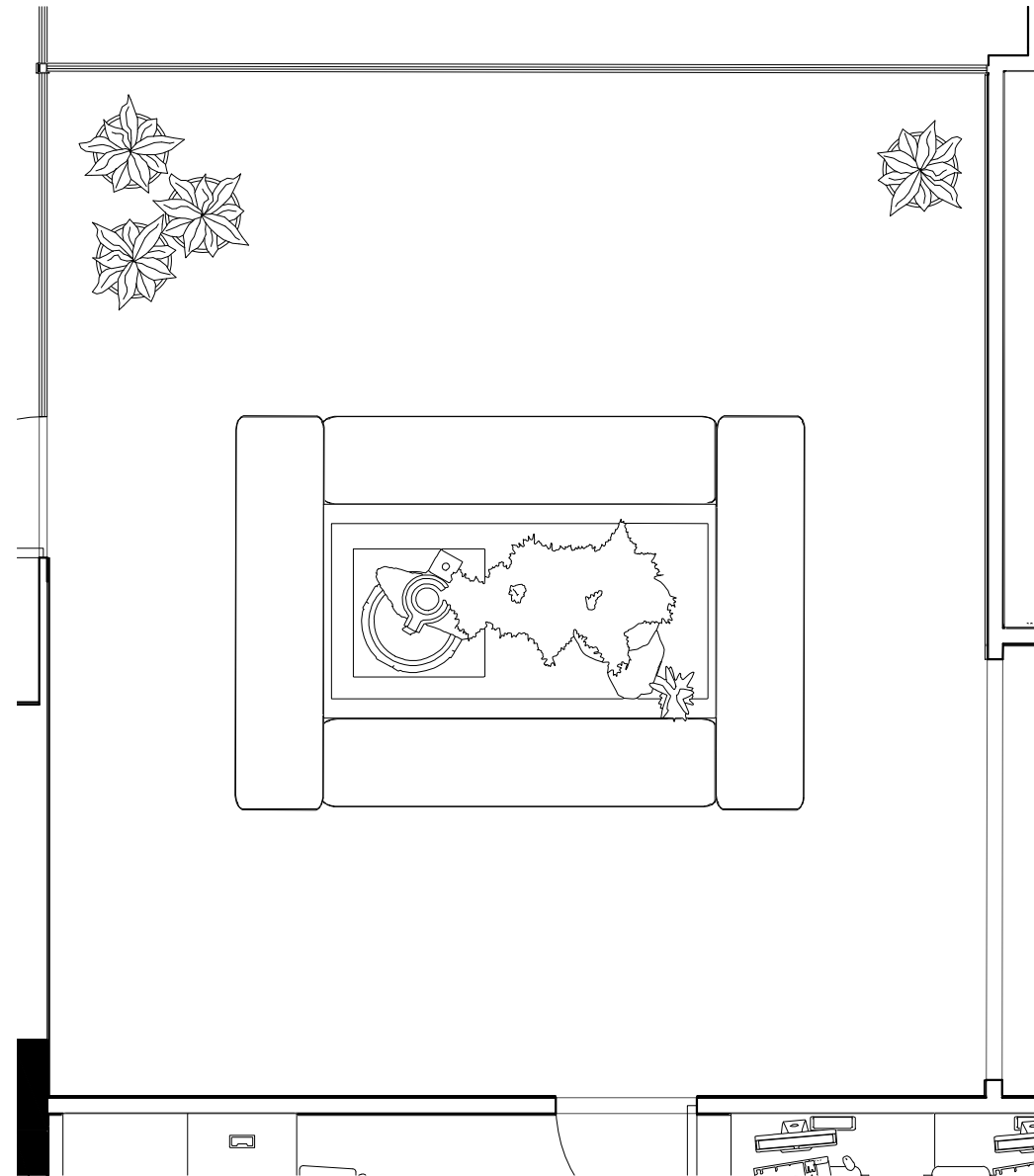
COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
ENTRANCE FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-WTN-63**



ENTRANCE FURNITURE(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

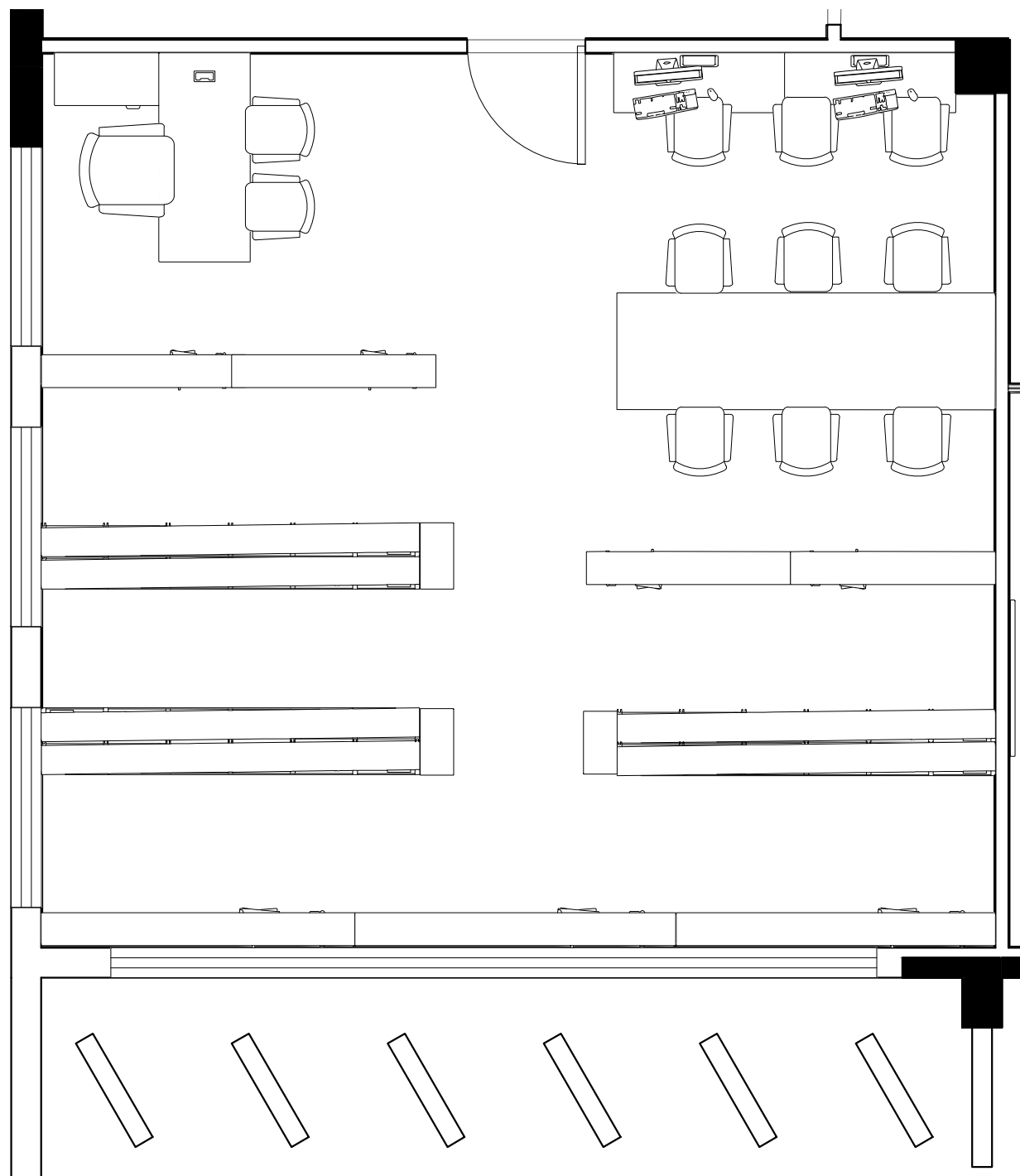
DRAWING TITLE:

**8th FLOOR**  
ENTRANCE FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-ENT-64**





LIBRARY FURNITURE(1/4"=1'-0")

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



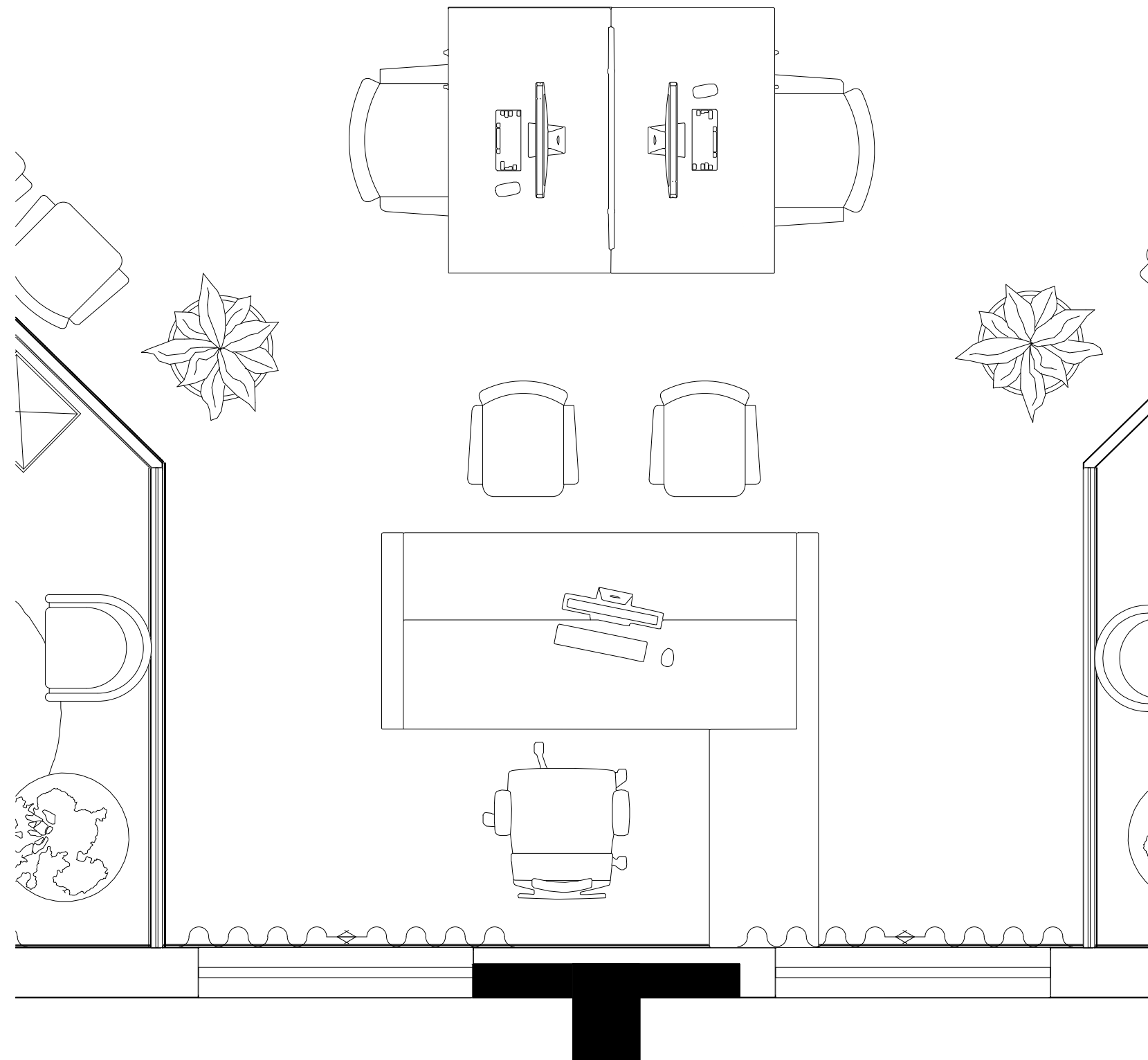
COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
LIBRARY FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-LIB-65**



DGM 1 FURNITURE(1/2"=1'-0")

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
D.G.M FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-DGM-66**

## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



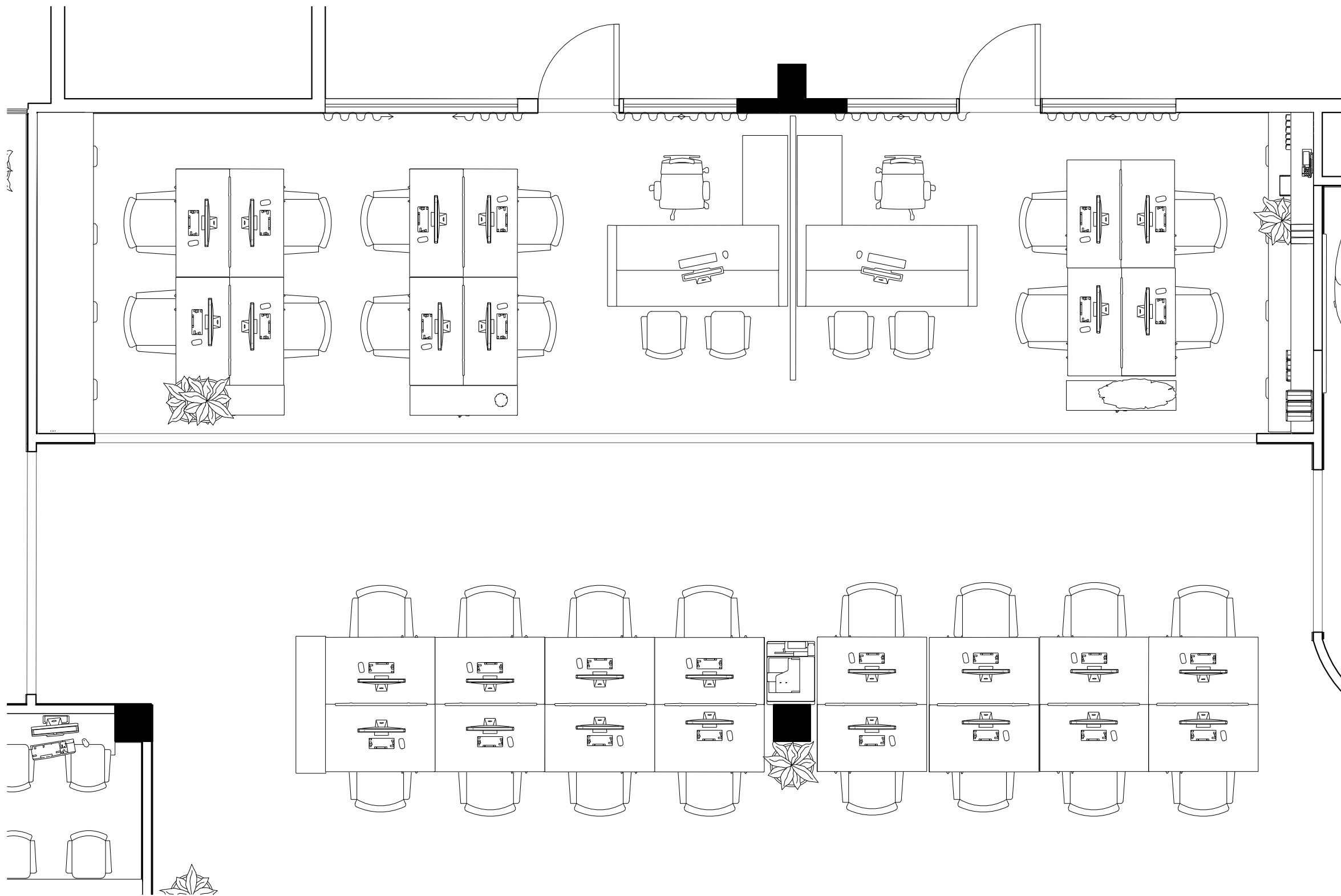
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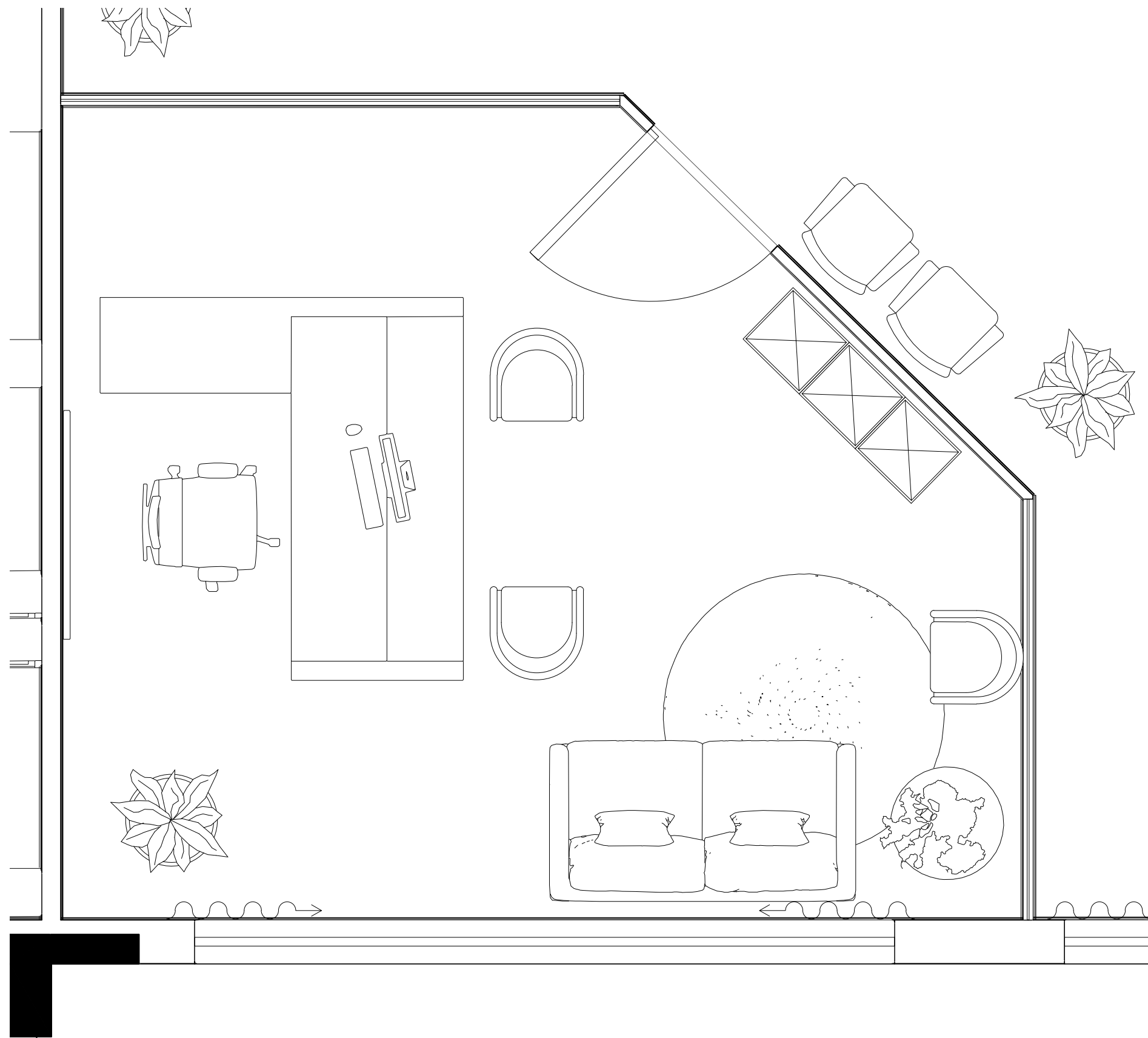
**8th FLOOR**  
D.G.M FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-DGM-67**



**DGM 2 FURNITURE(1/4"=1'-0")**



CHIEF OFFICE FURNITURE (1/2"=1'-0")

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

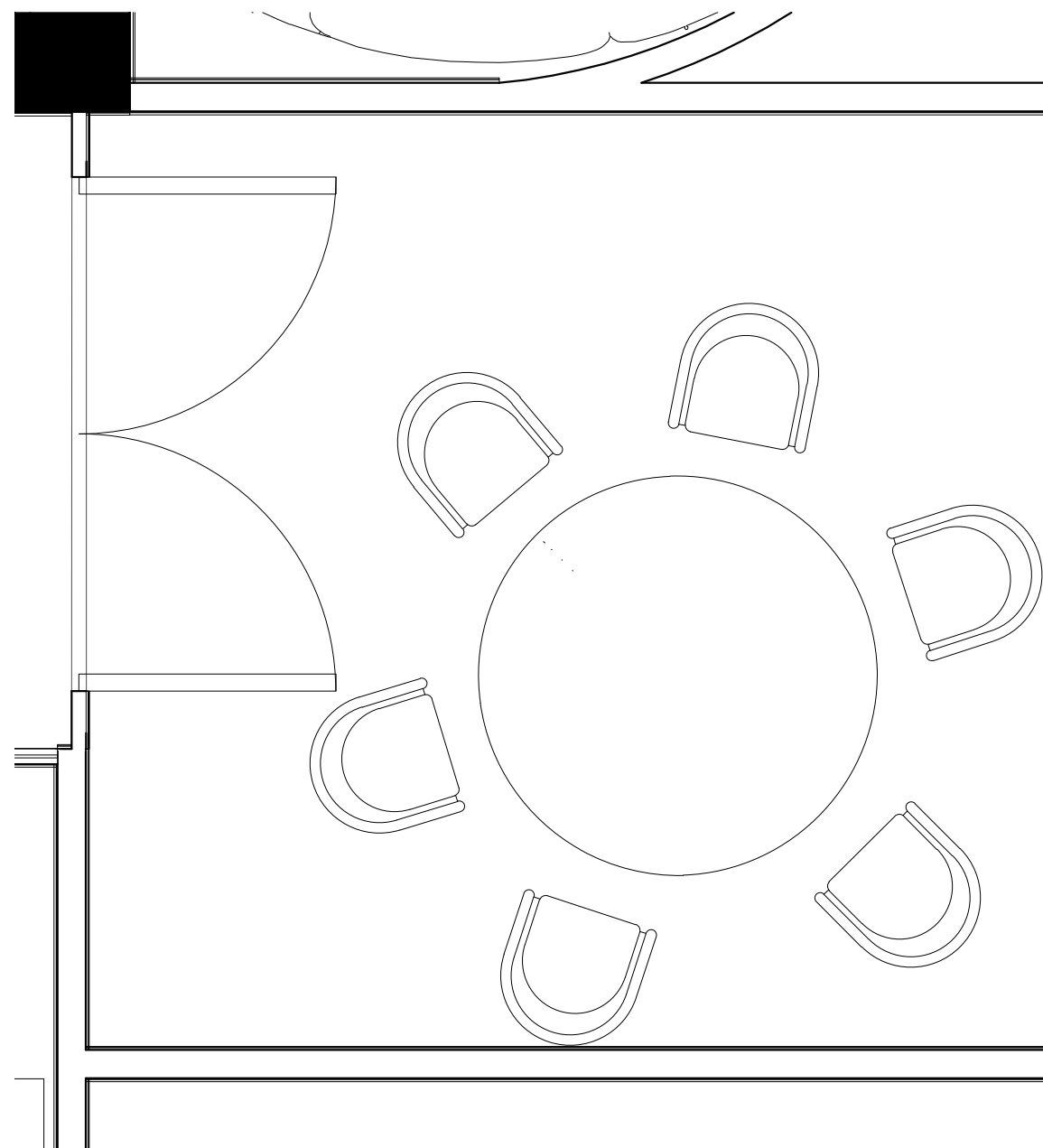


COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
CHIEF OFFICE FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-CHF-68**



MEETING ROOM FURNITURE(1/2"=1'-0")

### GENERAL NOTES

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4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

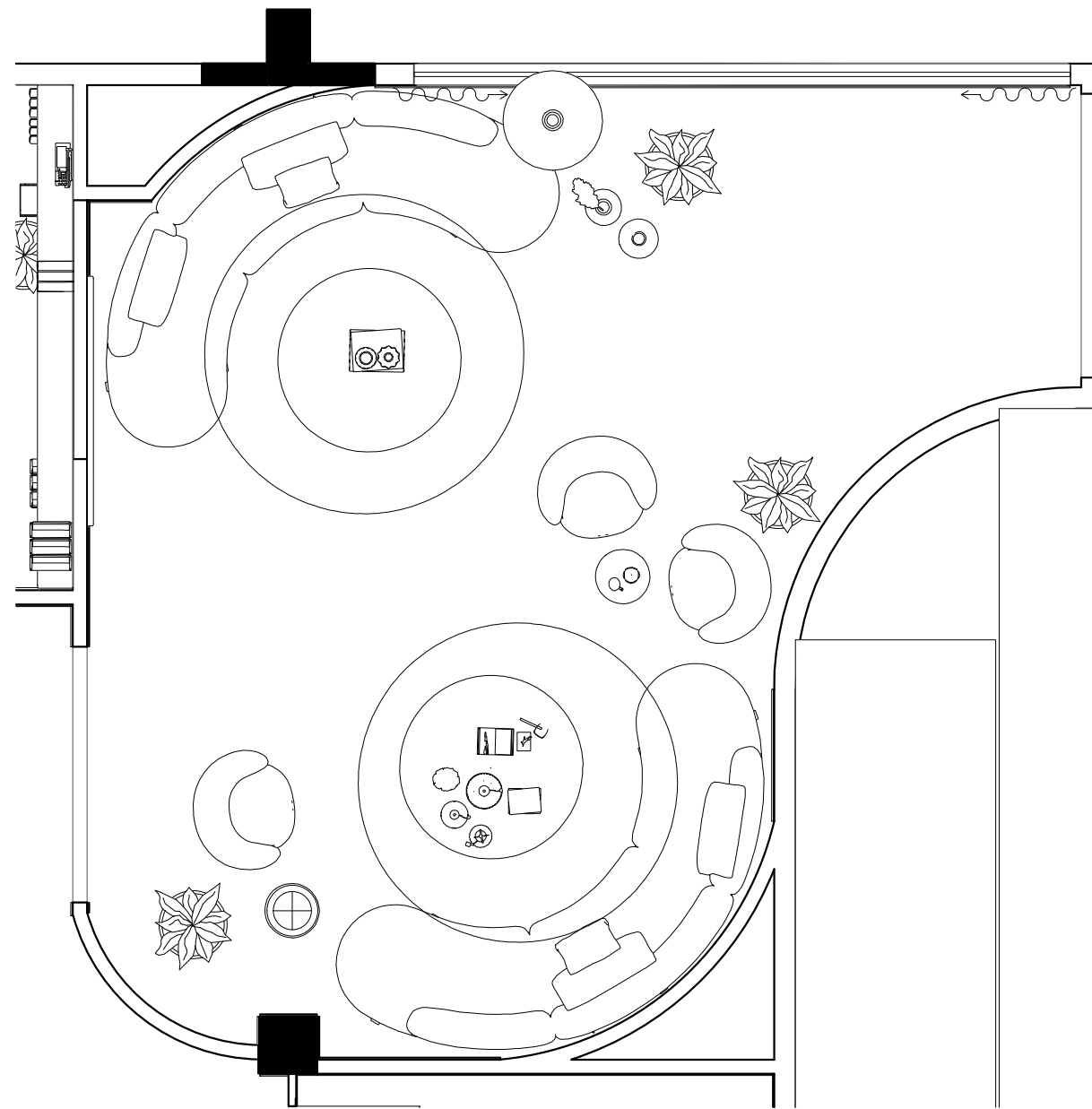


COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
MEETING ROOM FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-MET-69**



GATHERING FURNITURE(1/4"=1'-0")

### GENERAL NOTES

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2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

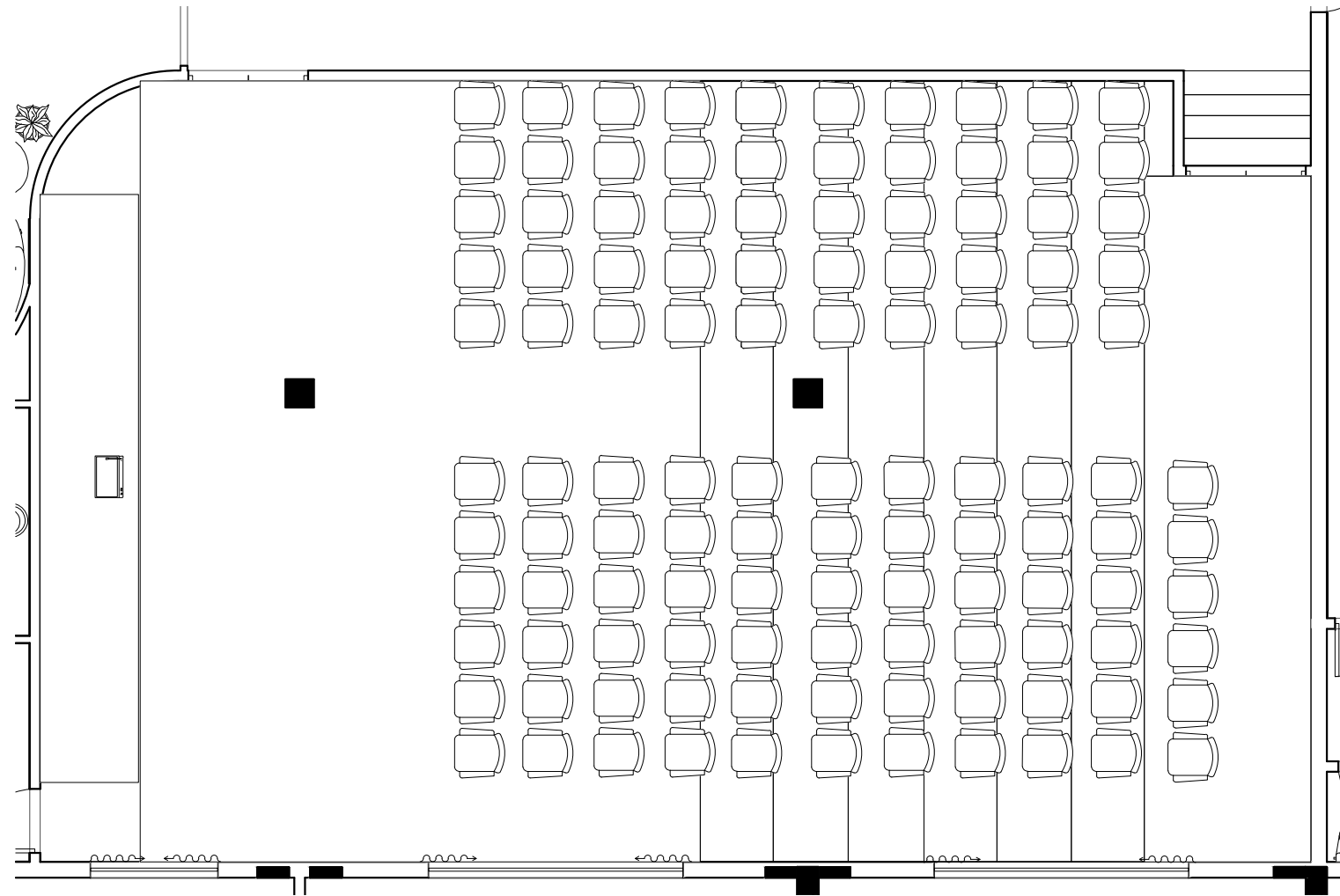


COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
GATHERING AREA FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-GTH-70**



AUDITORIUM FURNITURE(1/8"=1'-0")

## GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

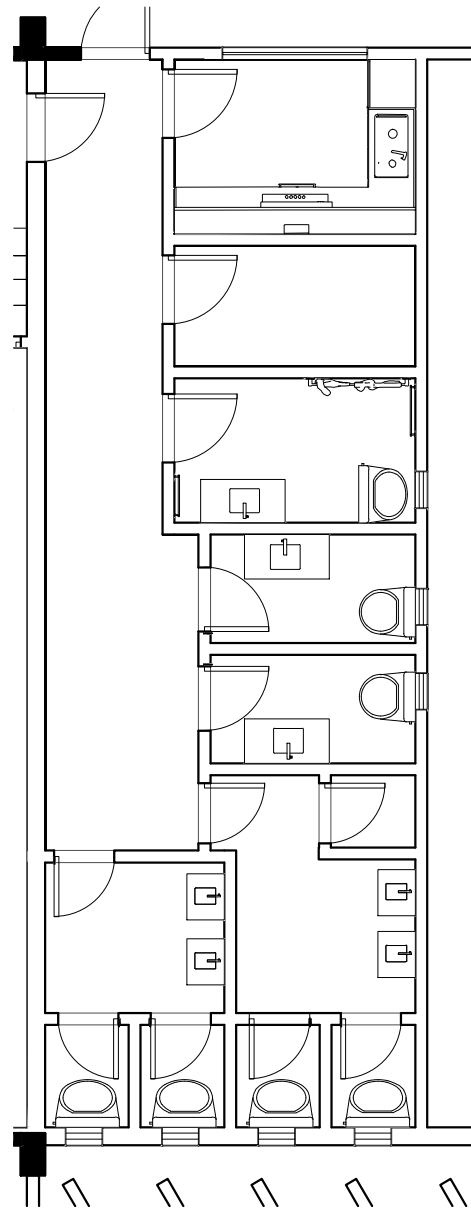


COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
AUDITORIUM FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-AUD-71**



LARGE WING BATH FURNITURE(1/8"=1'-0")

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
LARGE WING BATH FURNITURE LAYOUT

DRAWN	CHECKED	APPROVED
NAMEER	DANIYAL	HISSAN
SCALE	DATE	
AS SHOWN @ A3	APR. 2024	

DWG. No.  
**SL08AR-LPB-72**



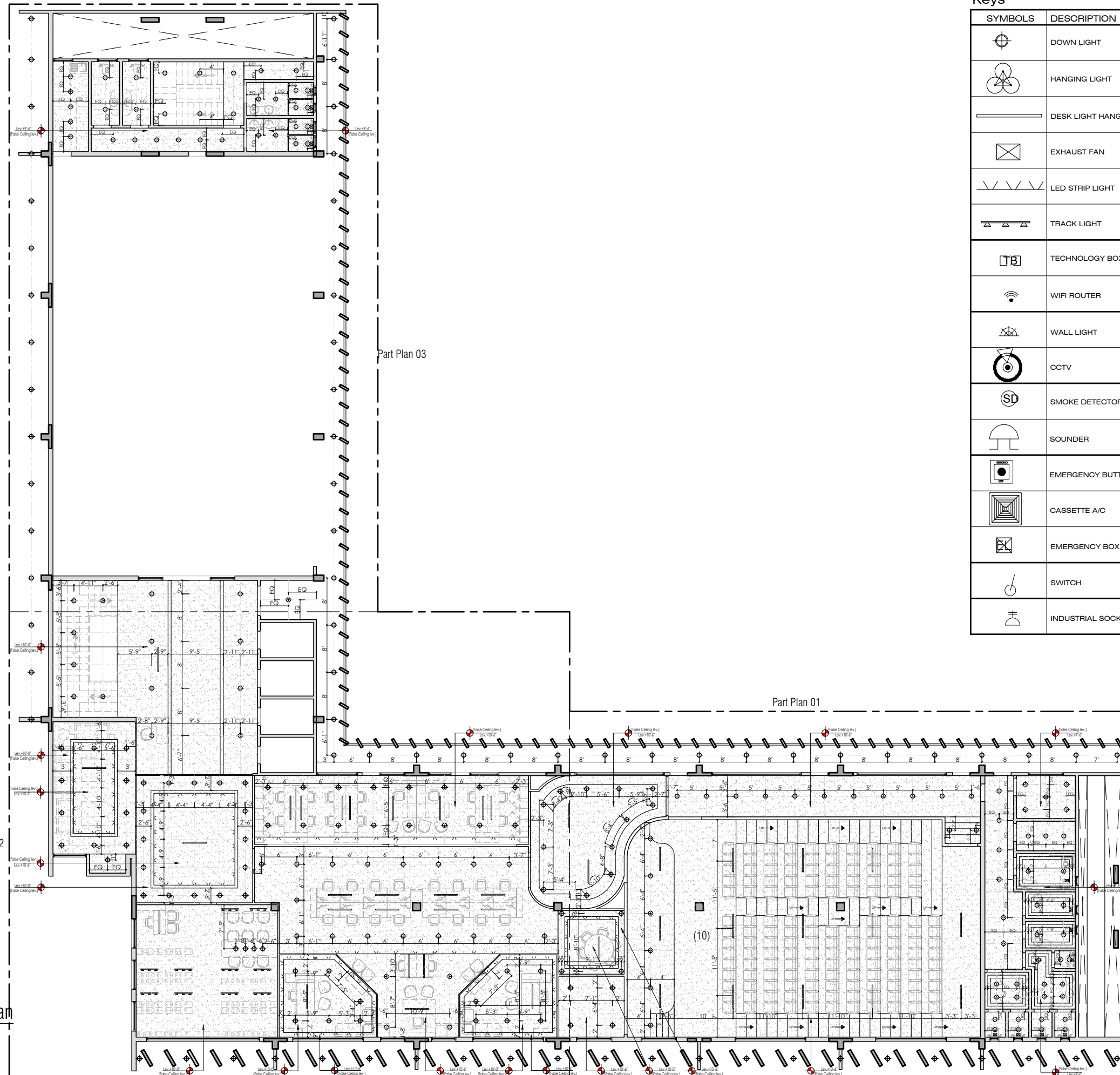


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**8th FLOOR  
ELECTRICAL DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



**Keys**

SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT
	TECHNOLOGY BOX
	WIFI ROUTER
	WALL LIGHT
	CCTV
	SMOKE DETECTOR
	SOUNDER
	EMERGENCY BUTTON
	CASSETTE A/C
	EMERGENCY BOX
	SWITCH
	INDUSTRIAL SOCKET

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

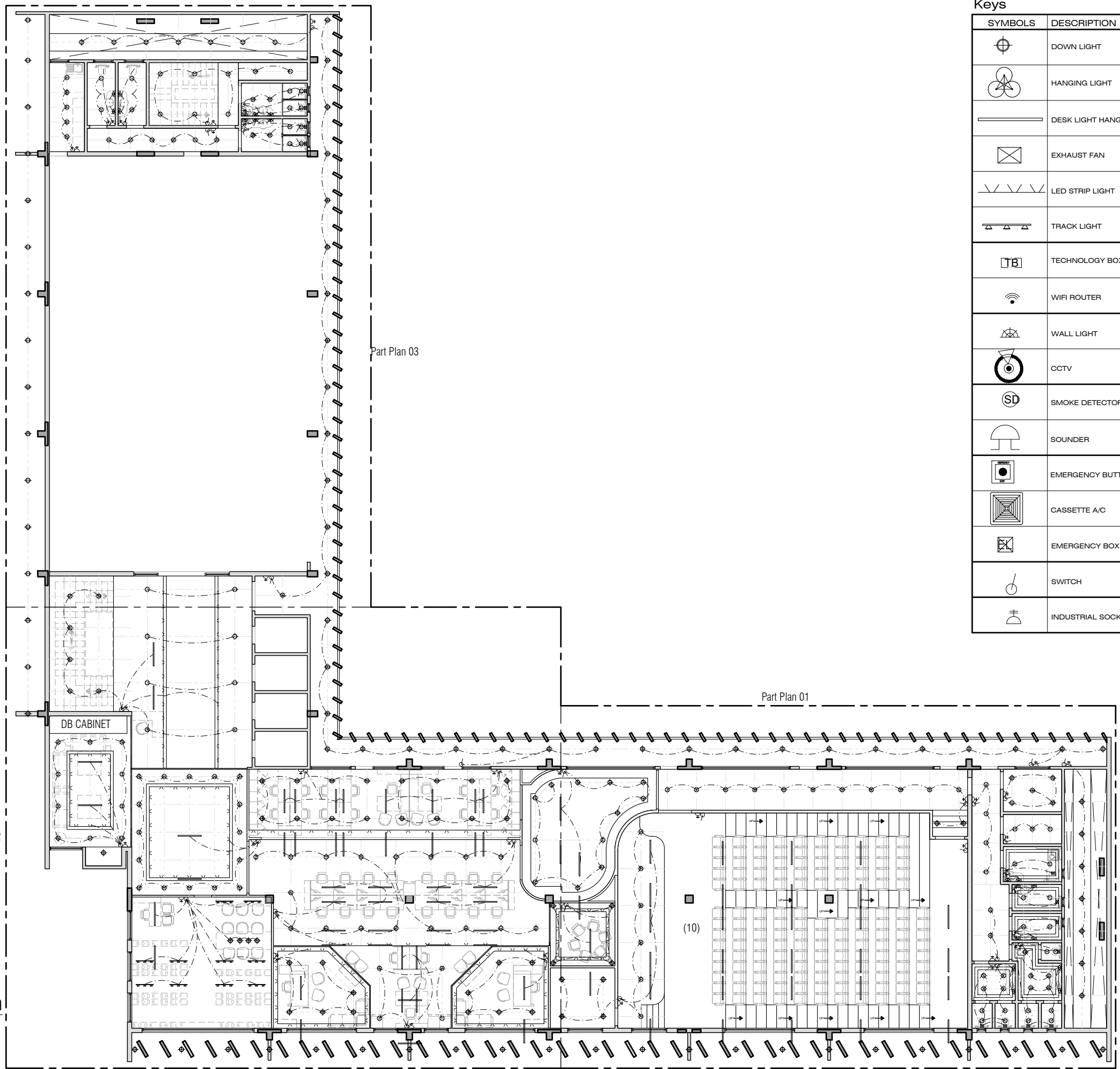
DRAWING TITLE:

**8th FLOOR**  
**ELECTRICAL LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
1/8" = 1'	@ A3	JUNE-2024

DWG. No.  
**SL.08.CL-01**

**EL** Electrical Layout Plan  
Scale: N.T.S



**Keys**

SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT
	TECHNOLOGY BOX
	WIFI ROUTER
	WALL LIGHT
	CCTV
	SMOKE DETECTOR
	SOUNDER
	EMERGENCY BUTTON
	CASSETTE A/C
	EMERGENCY BOX
	SWITCH
	INDUSTRIAL SOCKET

**GENERAL NOTES**

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**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE

**MESA**  
 MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE  
 OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:  
**RENOVATION OF STATE LIFE BUILDING No. 9**  
 KARACHI



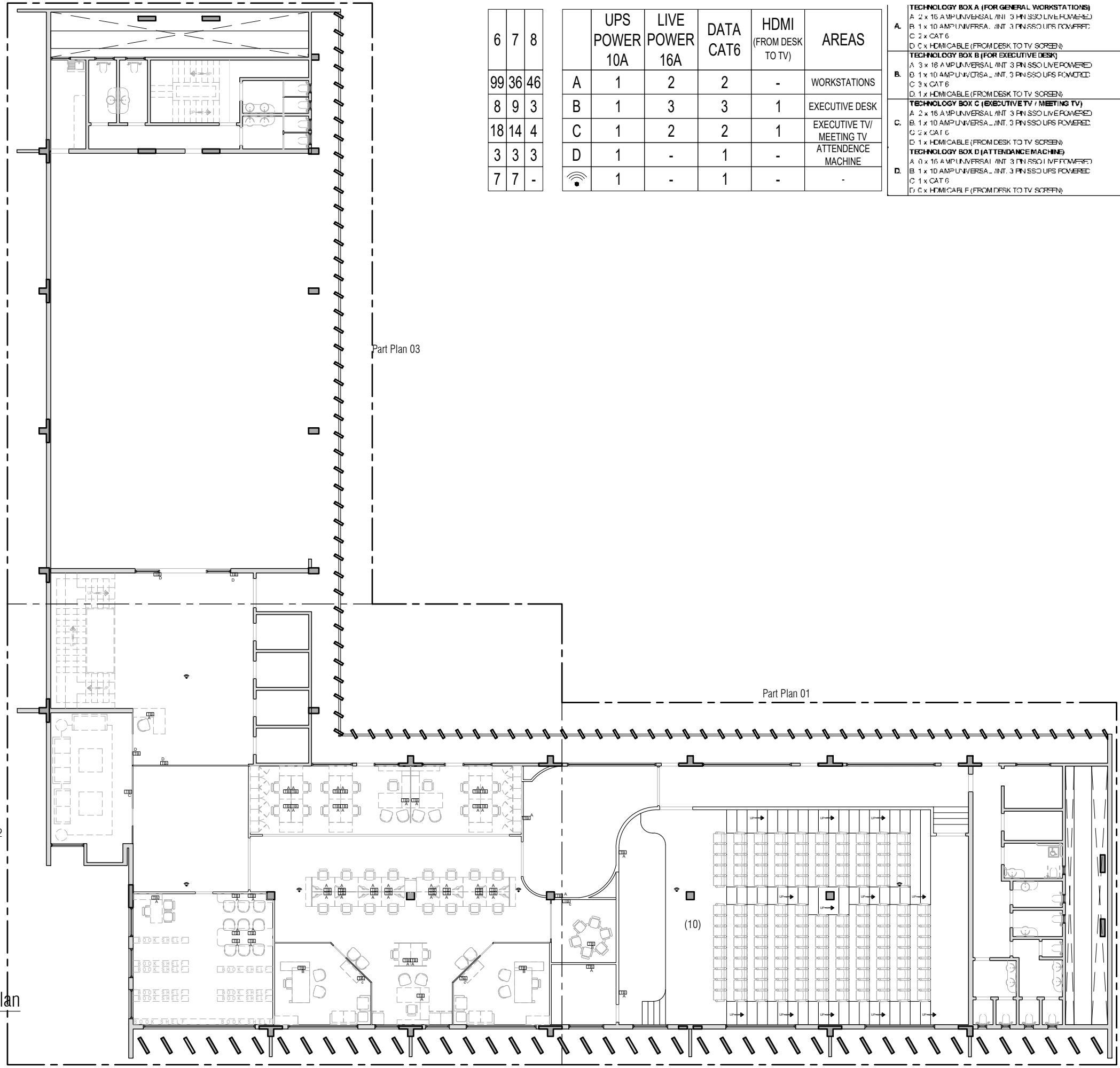
COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
 LOOPING LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
1/8" = 1'	@ A3	JUNE-2024

DWG. No.  
**SL.08.LP-01**

**LP** Looping Layout Plan  
 Scale: N.T.S



6	7	8
99	36	46
8	9	3
18	14	4
3	3	3
7	7	-

	UPS POWER 10A	LIVE POWER 16A	DATA CAT6	HDMI (FROM DESK TO TV)	AREAS
A	1	2	2	-	WORKSTATIONS
B	1	3	3	1	EXECUTIVE DESK
C	1	2	2	1	EXECUTIVE TV / MEETING TV
D	1	-	1	-	ATTENDANCE MACHINE
📶	1	-	1	-	-

- TECHNOLOGY BOX A (FOR GENERAL WORKSTATIONS)**  
 A 2 x 16 AMP UNIVERSAL INT. 3 PIN SSO LIVE POWERED  
 B 1 x 10 AMP UNIVERSAL INT. 3 PIN SSO UPS POWERED  
 C 2 x CAT 6  
 D 0 x HDMI CABLE (FROM DESK TO TV SCREEN)
- TECHNOLOGY BOX B (FOR EXECUTIVE DESK)**  
 A 3 x 16 AMP UNIVERSAL INT. 3 PIN SSO LIVE POWERED  
 B 1 x 10 AMP UNIVERSAL INT. 3 PIN SSO UPS POWERED  
 C 3 x CAT 6  
 D 1 x HDMI CABLE (FROM DESK TO TV SCREEN)
- TECHNOLOGY BOX C (EXECUTIVE TV / MEETING TV)**  
 A 2 x 16 AMP UNIVERSAL INT. 3 PIN SSO LIVE POWERED  
 B 1 x 10 AMP UNIVERSAL INT. 3 PIN SSO UPS POWERED  
 C 2 x CAT 6  
 D 1 x HDMI CABLE (FROM DESK TO TV SCREEN)
- TECHNOLOGY BOX D (ATTENDANCE MACHINE)**  
 A 0 x 16 AMP UNIVERSAL INT. 3 PIN SSO LIVE POWERED  
 B 1 x 10 AMP UNIVERSAL INT. 3 PIN SSO UPS POWERED  
 C 1 x CAT 6  
 D 0 x HDMI CABLE (FROM DESK TO TV SCREEN)

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE

**MESA**  
 MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
 KARACHI

**STATE LIFE**  
 INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:  
**8th FLOOR**  
 TECHNOLOGY BOX  
 LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE	DATE	
N.T.S.	@ A3	JUNE-2024

DWG. No.  
**SL.08.TB-01**

**TB** TECH BOX Layout Plan  
 Scale: N.T.S



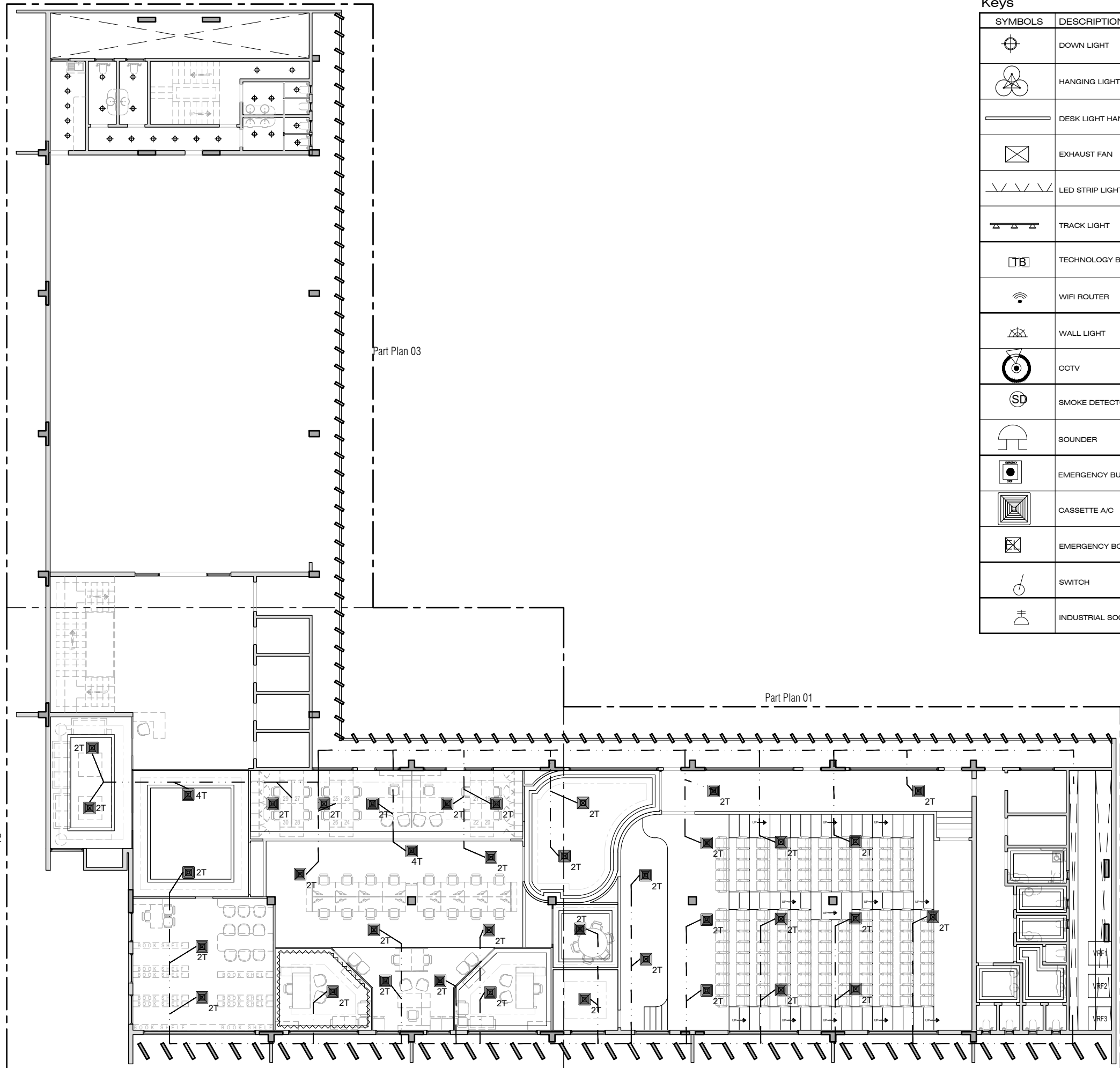
**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**8th FLOOR  
HVAC DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.





**Keys**

SYMBOLS	DESCRIPTION
	DOWN LIGHT
	HANGING LIGHT
	DESK LIGHT HANGING
	EXHAUST FAN
	LED STRIP LIGHT
	TRACK LIGHT
	TECHNOLOGY BOX
	WIFI ROUTER
	WALL LIGHT
	CCTV
	SMOKE DETECTOR
	SOUNDER
	EMERGENCY BUTTON
	CASSETTE A/C
	EMERGENCY BOX
	SWITCH
	INDUSTRIAL SOCKET

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
HVAC LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	JUNE-2024

DWG. No.  
**SL.08.HV-01**

**HV** H.V.AC Layout Plan  
Scale: N.T.S

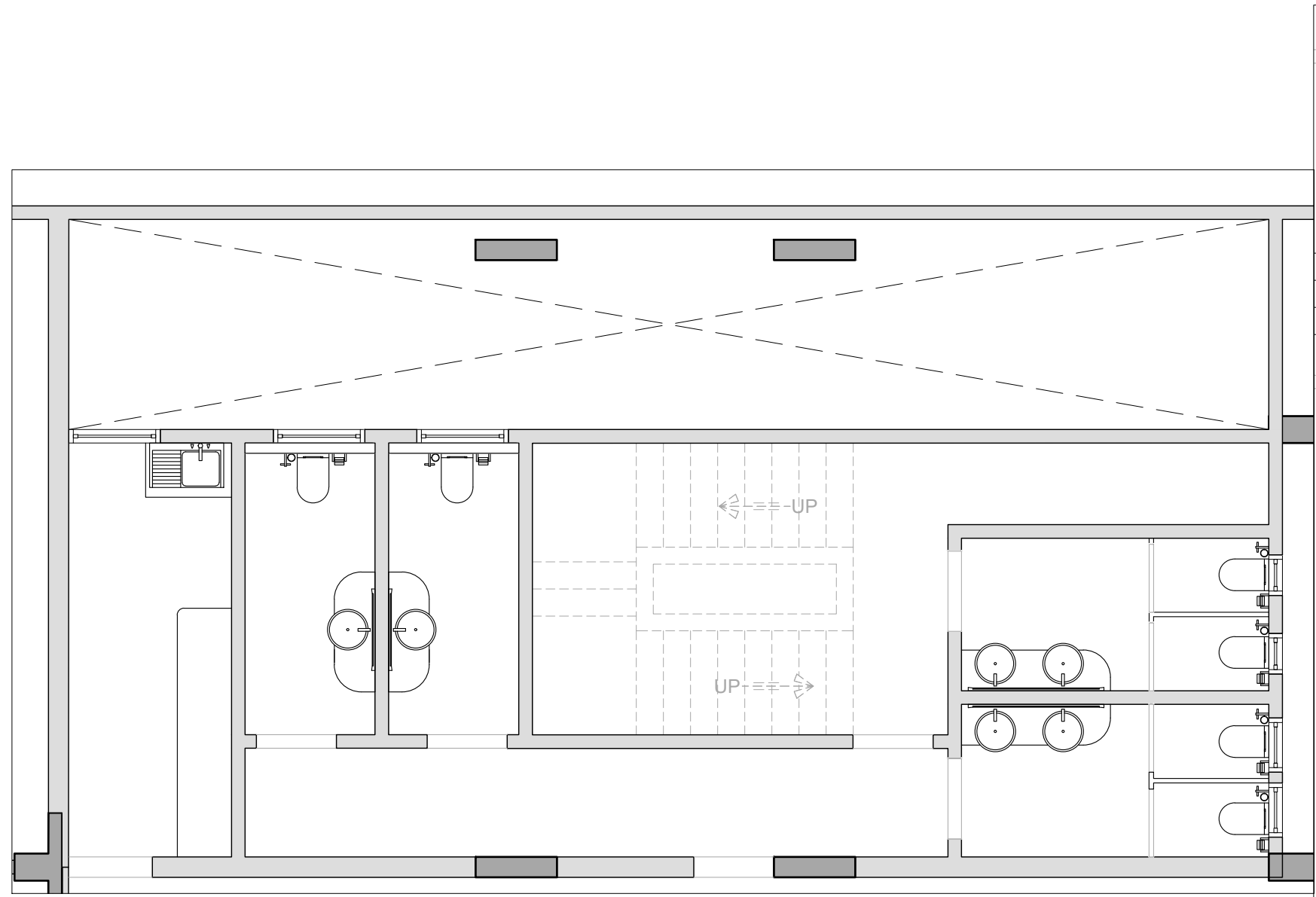


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

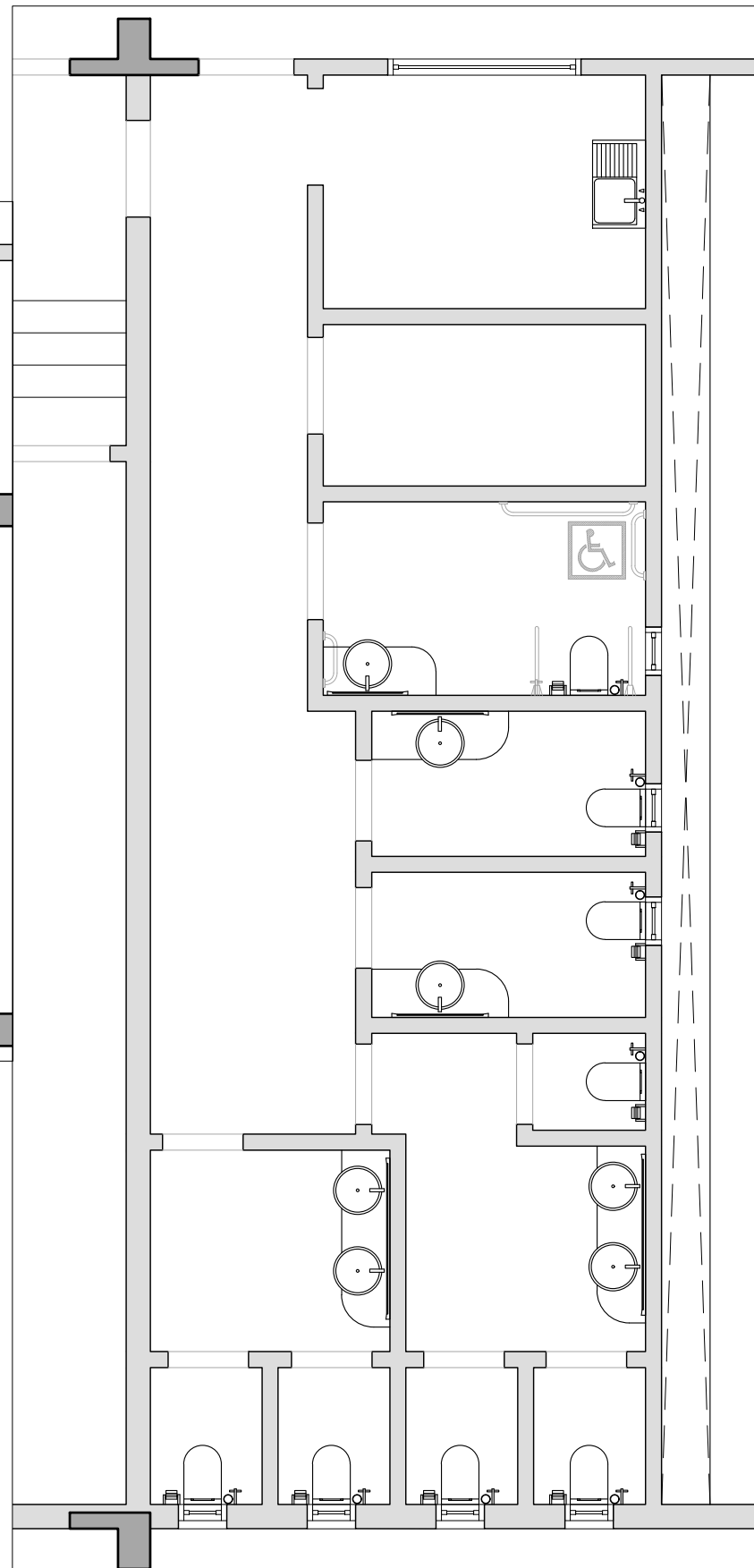
**8th FLOOR  
PLUMBING DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



**PB** Plumbing & Fixtures Layout Plan  
 Scale: 3/16" = 1'-0" Small Wing



**PB** Plumbing & Fixtures Layout Plan  
 Scale: 3/16" = 1'-0" Large Wing

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE

**MESA**  
 MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE  
 OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:  
**RENOVATION OF STATE LIFE BUILDING No. 9**  
 KARACHI

**STATE LIFE**  
 INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

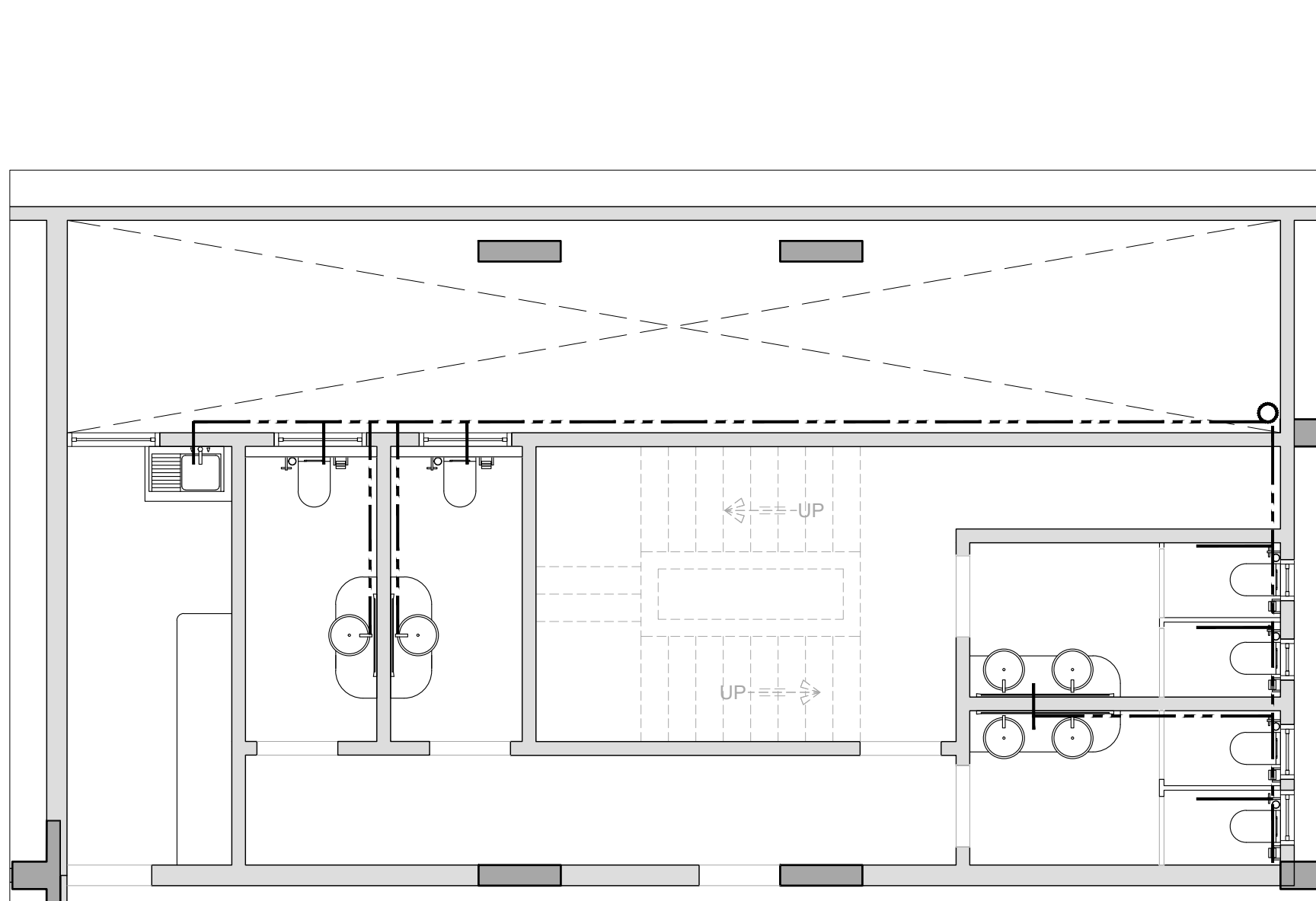
DRAWING TITLE:  
**8TH FLOOR**  
 PLUMBING & FIXTURES LAYOUT PLAN

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

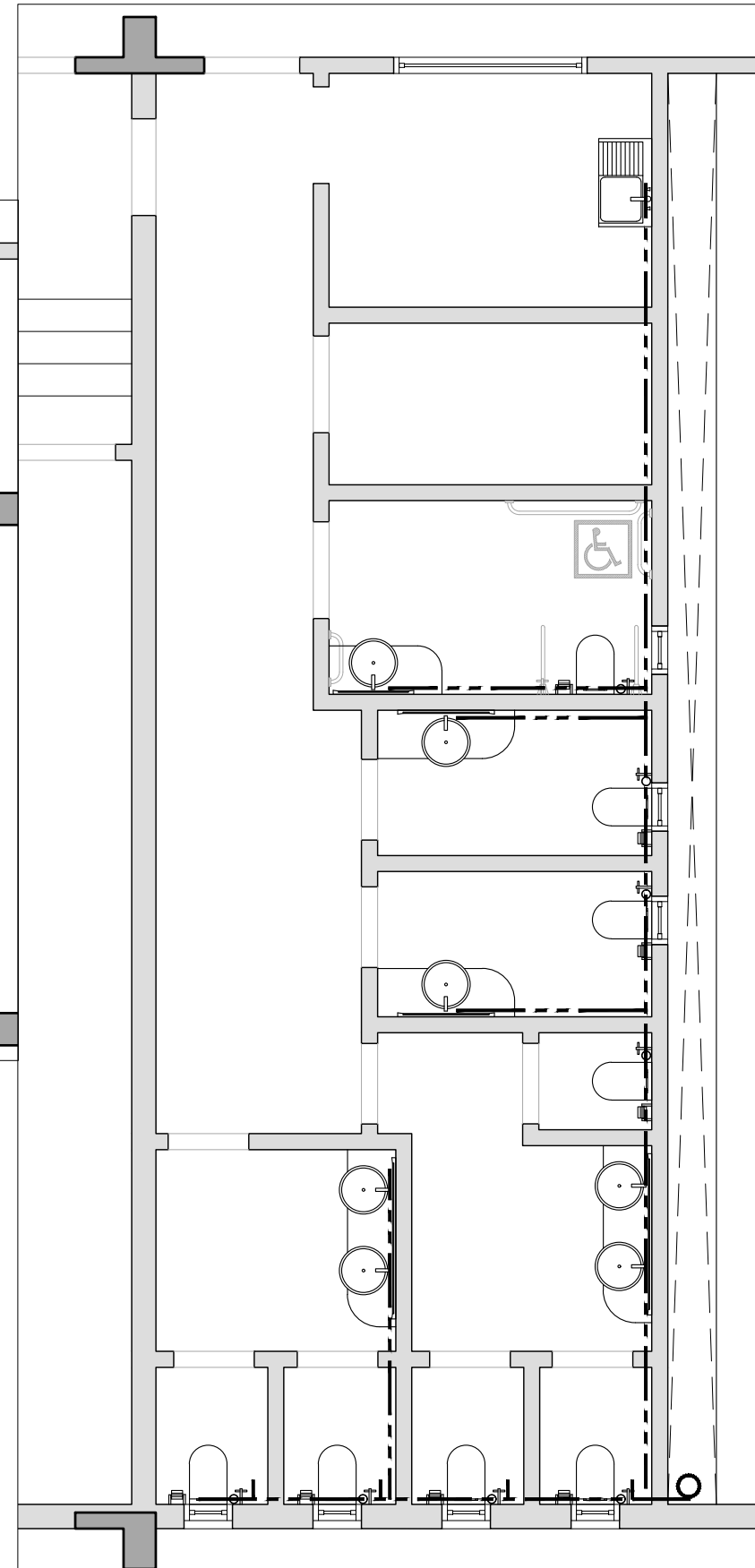
SCALE	DATE
1/8" = 1' @ A3	JUNE-2024

DWG. No.  
**SL.08.PB-01**





**PB** Water Supply Layout Plan  
 Scale: 3/16" = 1'-0" Small Wing



**PB** Water Supply Layout Plan  
 Scale: 3/16" = 1'-0" Large Wing

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

**ISSUED FOR TENDER**

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
 KARACHI



COMMENTS:

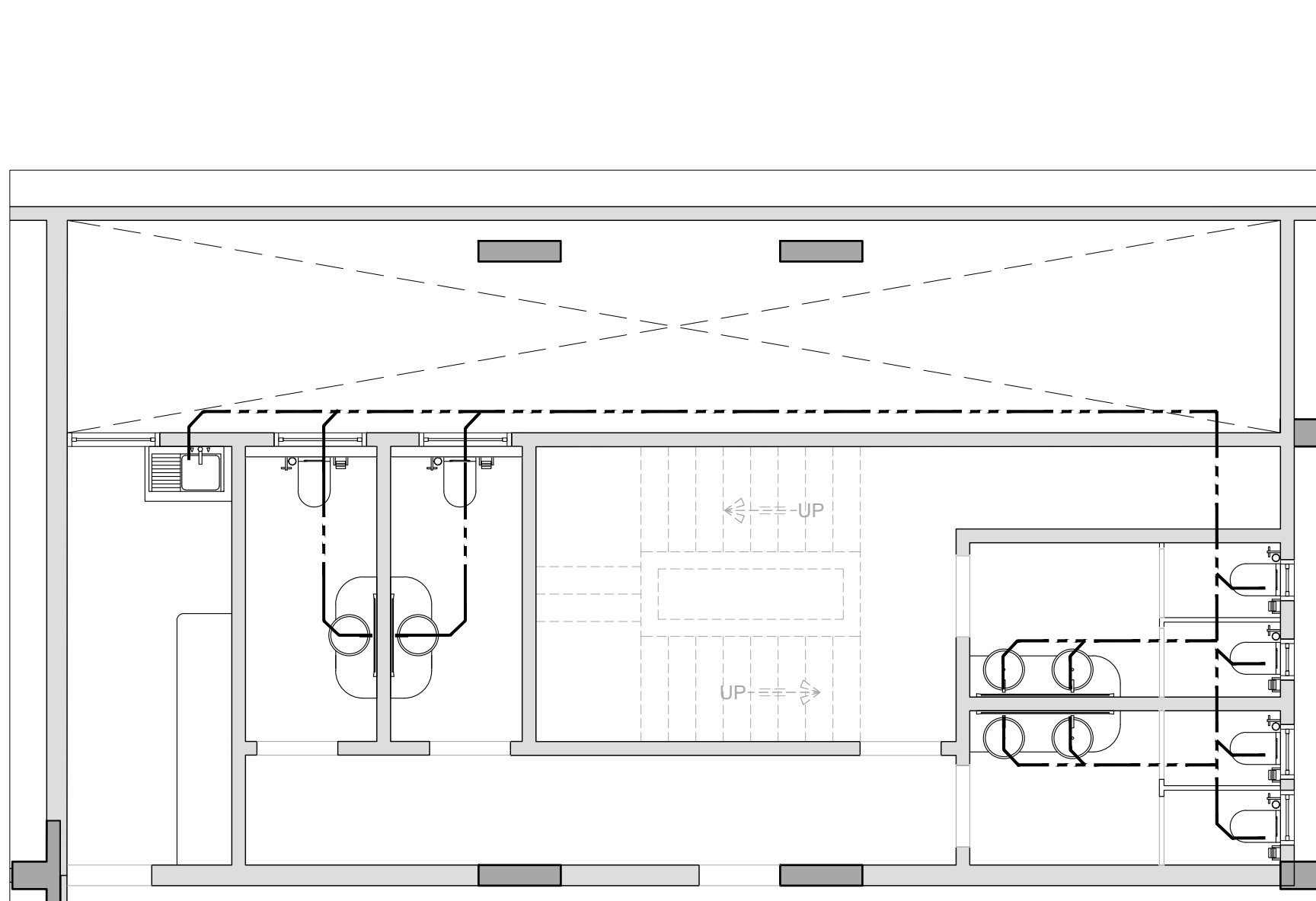
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**8TH FLOOR**  
**WATER SUPPLY LAYOUT PLAN**

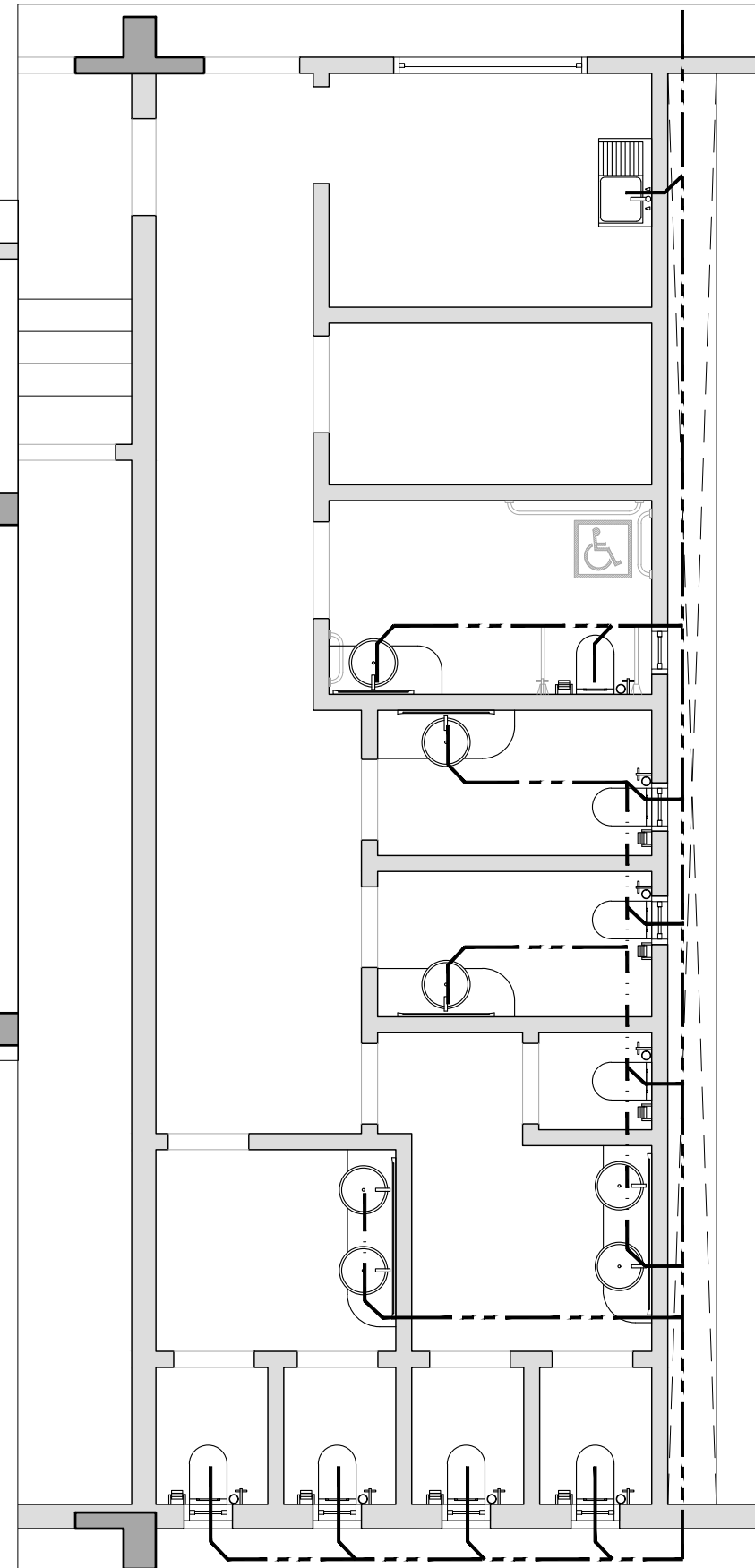
DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	JUNE-2024

DWG. No.  
**SL.08.PB-02**



**PB** Drain Layout Plan  
 Scale: 3/16" = 1'-0" Small Wing



**PB** Drain Layout Plan  
 Scale: 3/16" = 1'-0" Large Wing

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
 KARACHI



COMMENTS:

DRAWING TITLE:

**8TH FLOOR**  
**DRAIN LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
1/8" = 1' @ A3	JUNE-2024

DWG. No.  
**SL.08.PB-03**

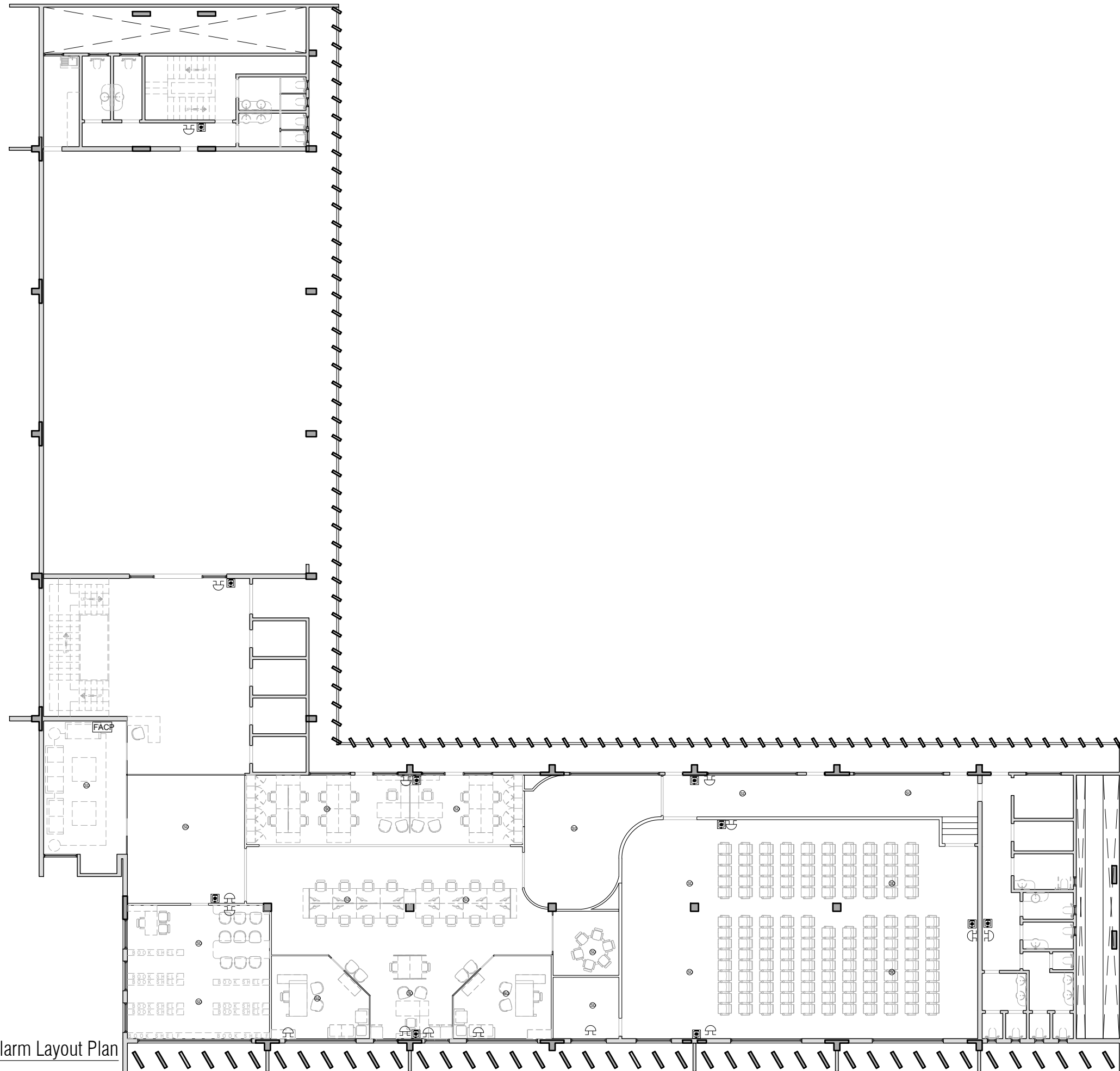


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**8th FLOOR  
FIRE ALARM DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



**PB** Fire Alarm Layout Plan  
Scale: N.T.S

### GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**8th FLOOR**  
**FIRE ALARM LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN

SCALE	DATE
N.T.S.	JUNE-2024

DWG. No.  
**SL.08.FA-01**

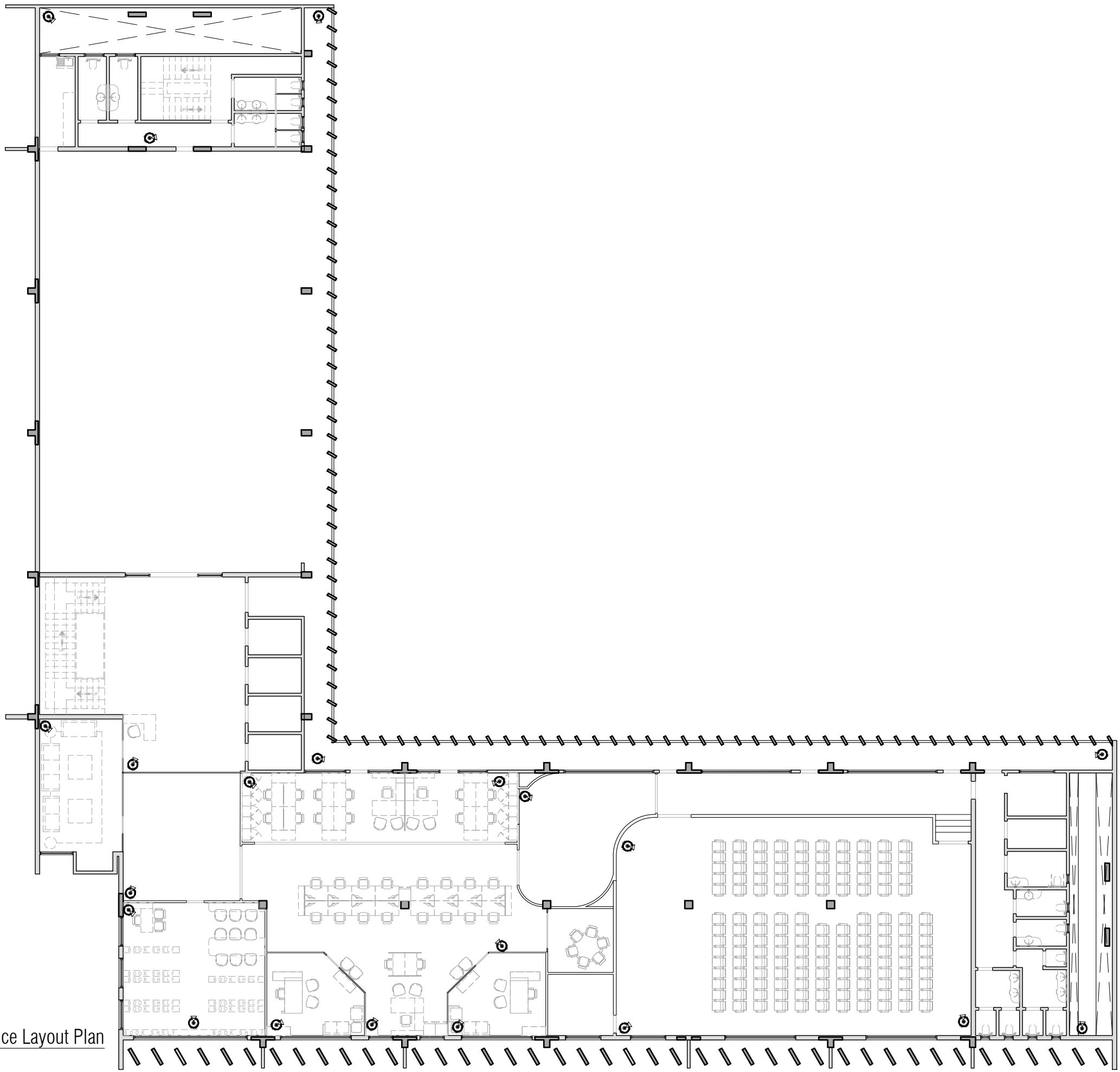


**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**8th FLOOR  
SECURITY SURVEILLANCE DRAWINGS**



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.



**SS** Security Surveillance Layout Plan  
Scale: N.T.S

### GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
2. ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR ON SITE.
3. DRAWINGS TO BE READ, NOT SCALED.
4. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO MANUFACTURE AND INSTALLATION ON SITE.
5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR  
ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING  
NO. 52-C, LANE NO. 01, AL-MURTAZA  
COMMERCIAL, PHASE VIII, D.H.A.,  
KARACHI.

PROJECT:

**RENOVATION OF STATE  
LIFE BUILDING No. 9**  
KARACHI

**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

COMMENTS:

DRAWING TITLE:  
**8TH FLOOR  
SECURITY SURVEILLANCE  
LAYOUT PLAN**

DRAWN	CHECKED	APPROVED
M.ZUBAIR	DANIYAL	HISSAN
SCALE		DATE
N.T.S.	@ A3	JUNE-2024

DWG. No.  
**SL.08.SS-01**



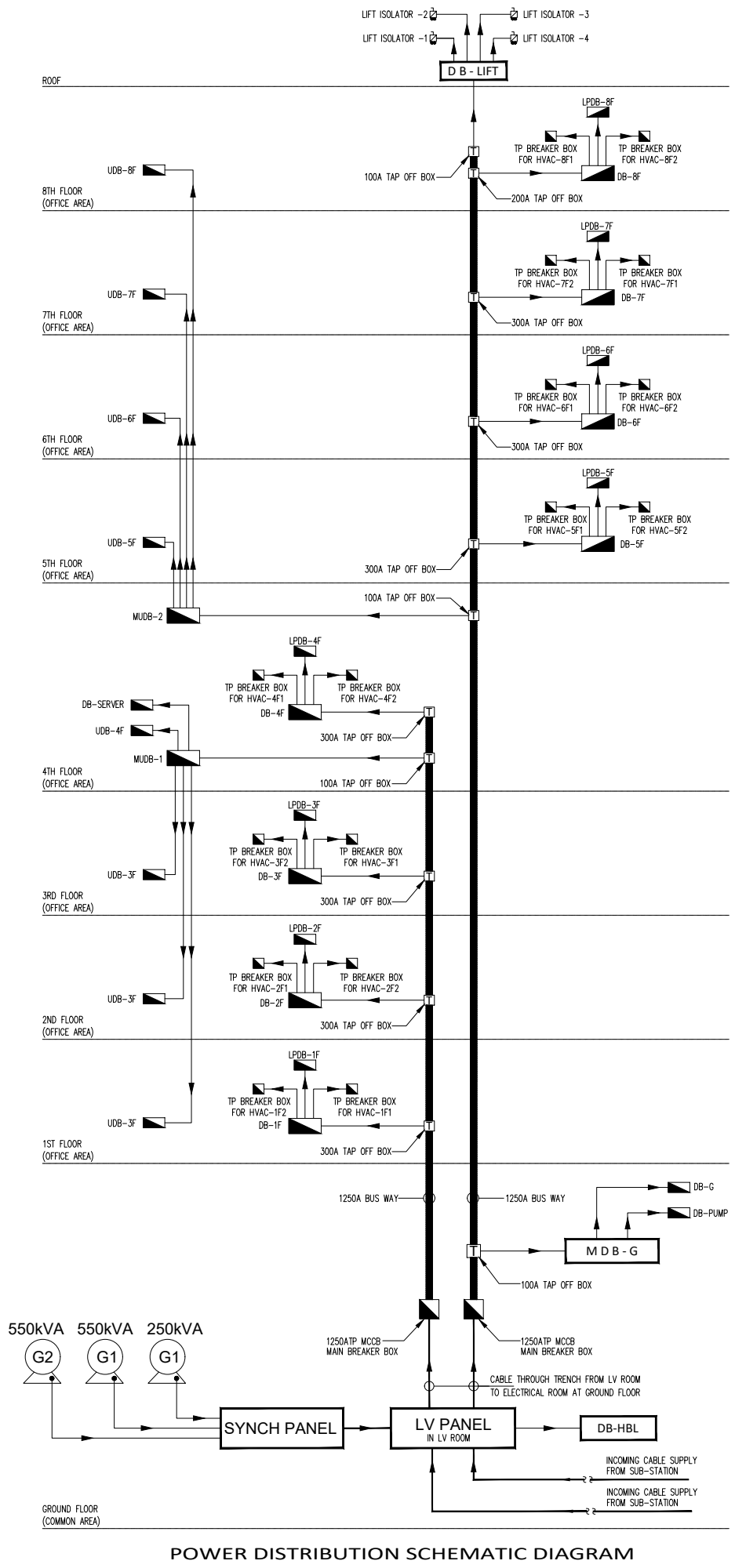
**REHABILITATION/RENOVATION OF ALL FLOORS OF  
STATE LIFE INSURANCE CORPORATION BUILDING -09  
DR.ZIAUDDIN AHMED ROAD . KARACHI**

**ELECTRICAL DISTRIBUTION DRAWINGS**

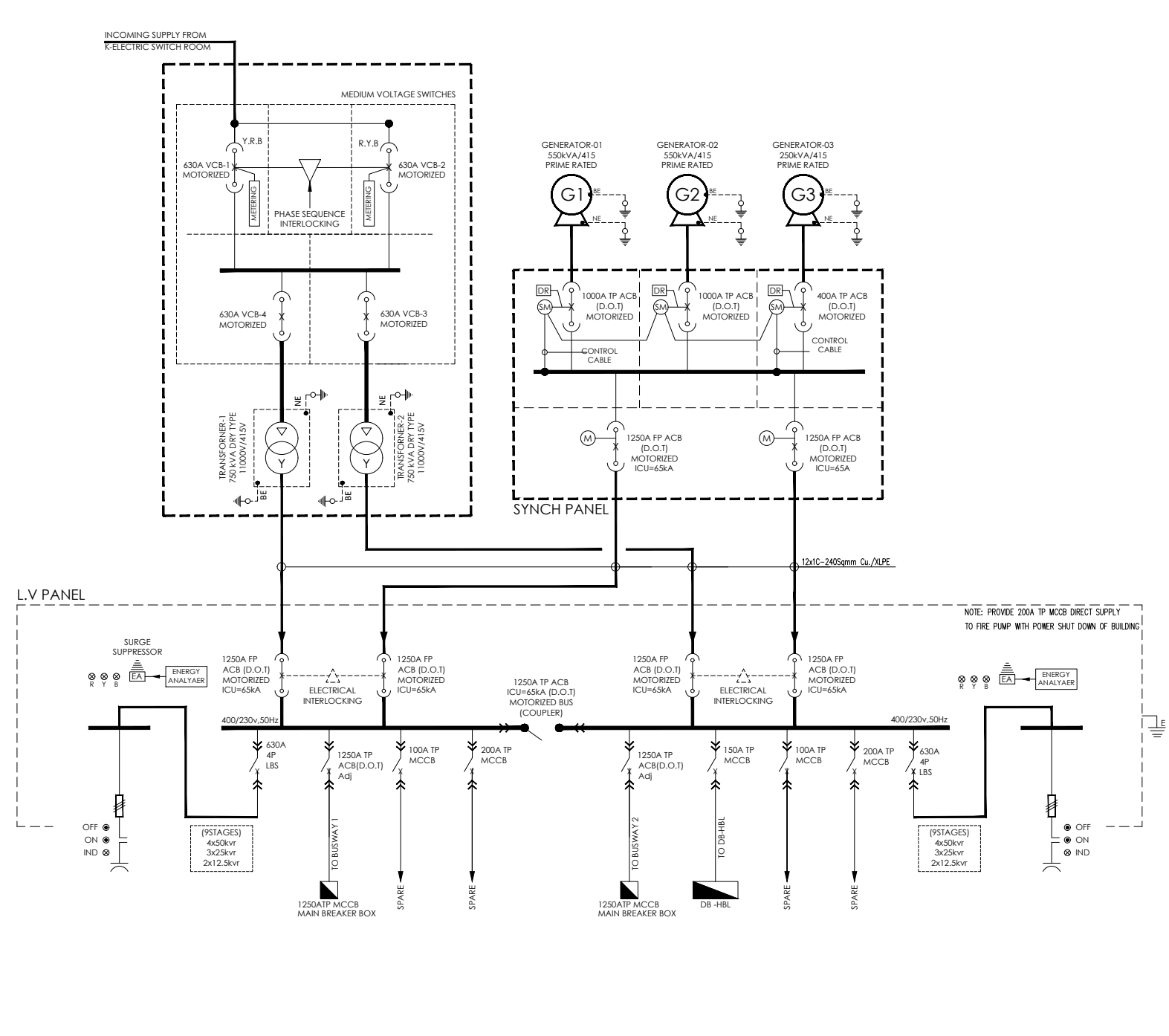


OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01,  
AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.





POWER DISTRIBUTION SCHEMATIC DIAGRAM



NOTES LV PANEL

- ALL THE BUSBAR USED IN PANEL SHOULD BE TINNED COATED.
- ALL INTERNAL SECTION OF PANEL SHOULD BE PROPERLY GROUNDED THROUGH BRAIDED WIRES
- PROVIDE PHASE BARRIER FOR MAIN TP MCCB.
- PROVIDE TAGGING AT ALL INCOMING AND OUTGOING BREAKERS OF THE PANEL.
- PROVIDE SEPARATE EARTH AND NEUTRAL BAR FOR UTILITY AND EMERGENCY SUPPLY.
- PANEL SHALL BE ELECTRO STATICALLY COATED WITH APPROVED COLOR AND THEN OVEN BAKED. THE THICKNESS OF POWDER COATING SHALL NOT BE LESS THAN 100 MICRONS.
- IP VALUE FOR INDOOR DB WILL BE IP-55.
- PANEL TO HAVE INSIDE POCKET WITH AS-BUILT DRAWING.
- DOORS SHALL HAVE LOCKABLE LOCK.
- THE PROTECTIVE SHEET SHALL BE HINGED FROM ONE END (LEFT SIDE) AND SCREWED AT THE OTHER END (RIGHT SIDE) OR AS PER DOOR SWING DIRECTION.
- THE BRANDS/MAKE OF ALL COMPONENTS SHALL BE AS FOLLOWS:
  - CIRCUIT BREAKERS: ABB, SCHNEIDER ELECTRIC, TERASAKI
  - MAGNETIC CONTACTORS: ABB, SCHNEIDER ELECTRIC, TERASAKI
  - CHANGEOVER: SOCOMEC
  - CAPACITORS: NOKIAN, SHIZUKI, GROUPO ENERGA
  - INDICATION LIGHTS: CASMCO, CHINT
  - VOLT METER: NECRON, TENSE
  - ENERGY ANALYZER: LOVATO
  - CONTROL RELAY & TIMERS: FINDER, AUTONICS, SCHNEIDER, FOTEK
  - CONTROL CABLE: PAKISTAN CABLE, PIONEER CABLE
  - COPPER BARS: IMPORTED

GENERAL NOTES

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- ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

RENOVATION OF STATE LIFE BUILDING No. 9  
KARACHI



COMMENTS:

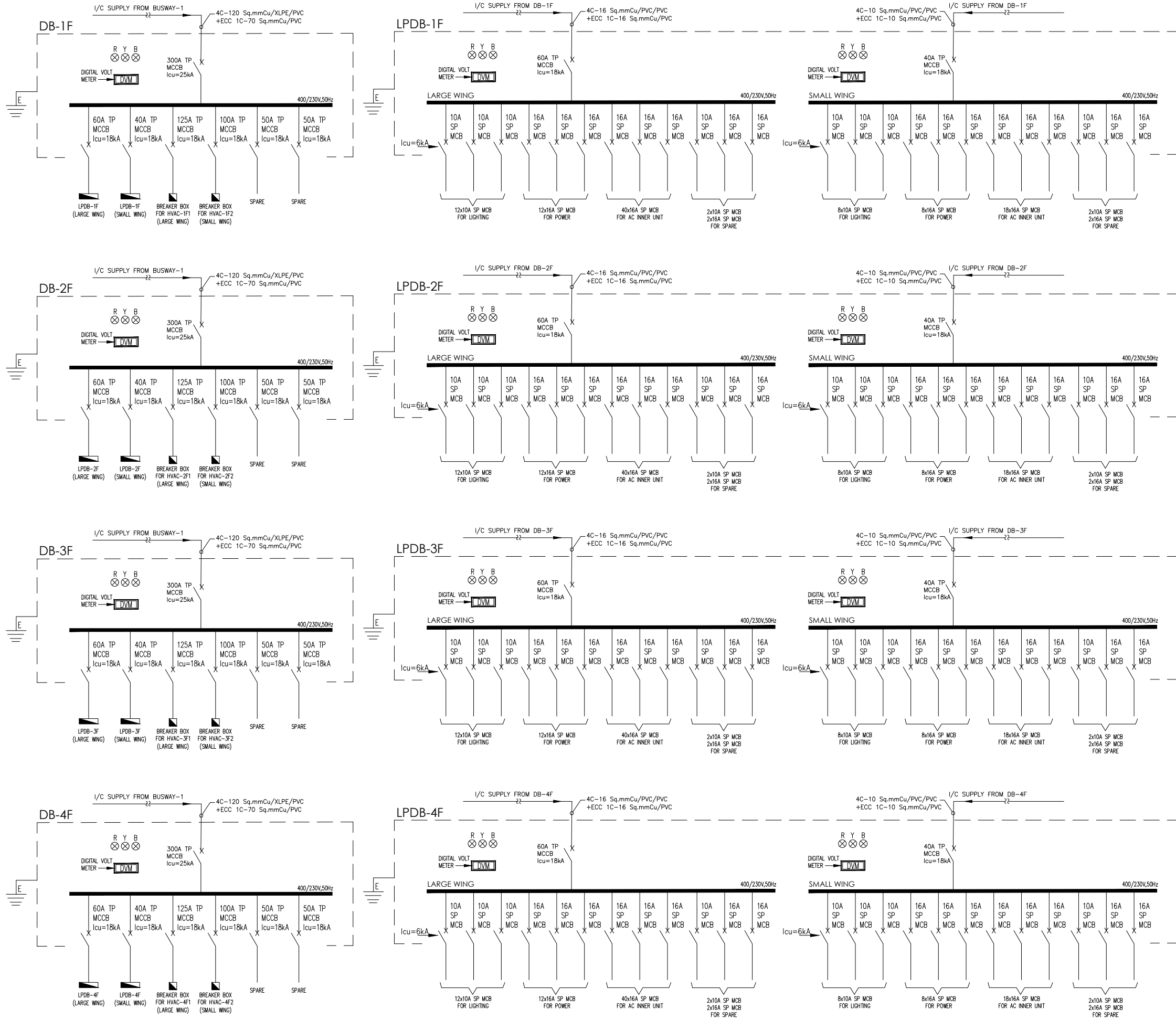
DRAWING TITLE:

**POWER DISTRIBUTION SCHEMATIC DIAGRAM & LV PANEL**

DRAWN	CHECKED	APPROVED
ANAS	MUDDASAR	HISSAN
SCALE		DATE
N.T.S.	@ A3	MAY-2024

DWG. No.  
EL-PDS-01





### GENERAL NOTES

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### ISSUED FOR TENDER

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:  
**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI

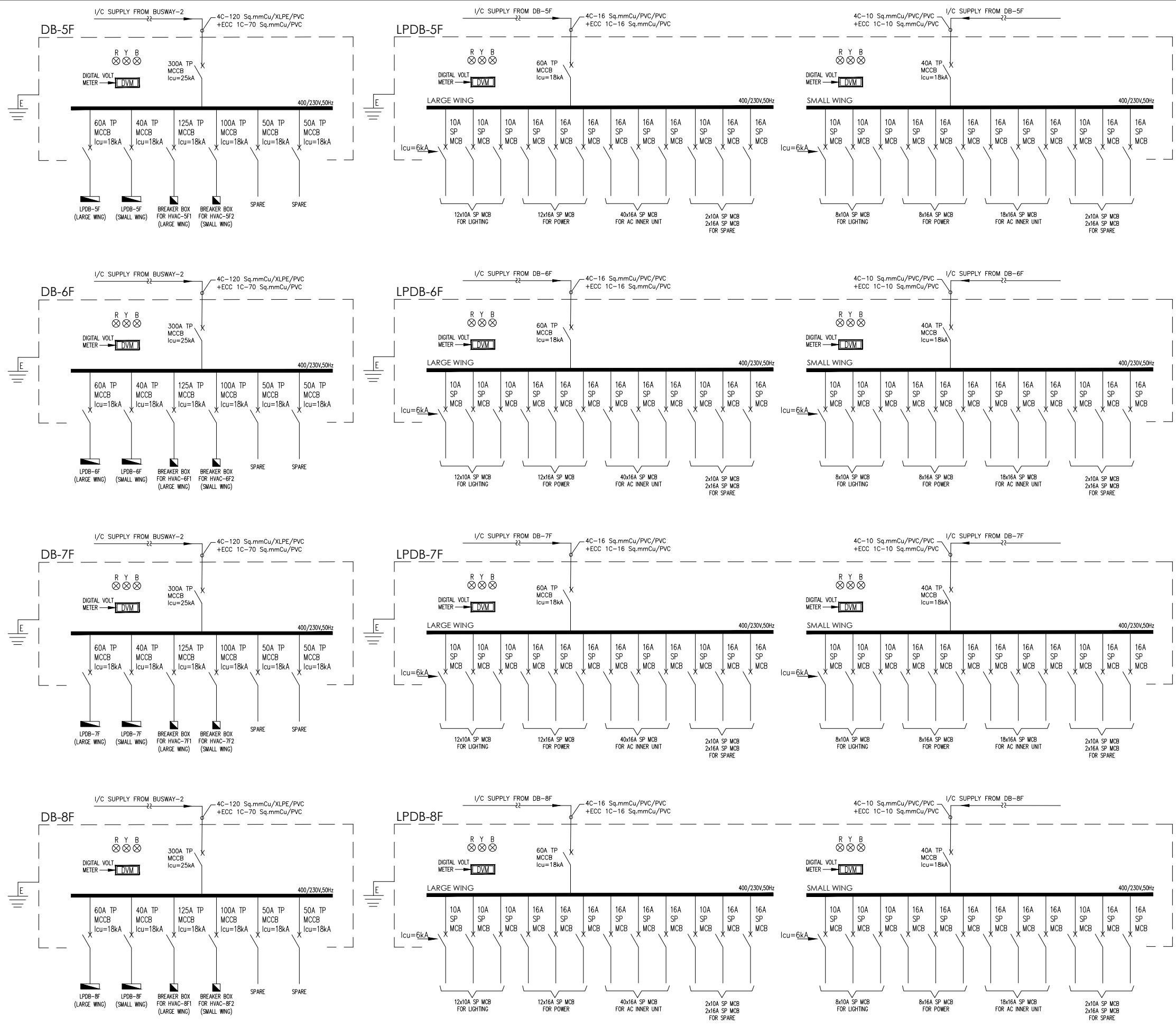


COMMENTS:

DRAWING TITLE:  
**SINGLE LINE DIAGRAM (SHEET-1)**

DRAWN	CHECKED	APPROVED
ANAS	MUDDASAR	HISSAN
SCALE	DATE	
N.T.S.	@ A3	MAY-2024

DWG. No.  
**EL-PDS-02**



## GENERAL NOTES

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE MENTIONED.
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## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE

**MESA**  
MUKHTAR ENTERPRISES STUDIO FOR ARCHITECTURE

OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:  
**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:  
**SINGLE LINE DIAGRAM (SHEET-2)**

DRAWN	CHECKED	APPROVED
ANAS	MUDDASAR	HISSAN
SCALE	DATE	
N.T.S.	@ A3	MAY-2024

DWG. No.  
**EL-PDS-03**

# GENERAL NOTES

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5. ALL SHOPS DRAWINGS TO BE MADE BY CONTRACTOR AS PER SITE DIMENSION AND VERIFIED BY THE ARCHITECT.

## ISSUED FOR TENDER

REV.	DESCRIPTION	DATE



OFFICE NO. 302, 3RD FLOOR, BUILDING NO. 52-C, LANE NO. 01, AL-MURTAZA COMMERCIAL, PHASE VIII, D.H.A., KARACHI.

PROJECT:

**RENOVATION OF STATE LIFE BUILDING No. 9**  
KARACHI



COMMENTS:

DRAWING TITLE:

**SINGLE LINE DIAGRAM (SHEET-3)**

DRAWN	CHECKED	APPROVED
ANAS	MUDDASAR	HISSAN

SCALE	DATE
N.T.S.	@ A3 MAY-2024

DWG. No.  
**EL-PDS-04**

