

AUDIO VISUAL ADDENDUM

AVA01

project name / location	METRO HALL 11TH FLOOR - MINOR OFFICE RENOVATION 55 JOHN STREET, 11TH FLOOR, TORONTO, ON
project no.	241168
to	X DESIGN
attention	LISA BLOIS
date issued	AUGUST 15, 2024

Amend the Contract Documents and Specifications for the above project as follows:

1. DRAWINGS

- 1.1 AV-001
- 1.2 AV-002
- 1.3 AV-311
- 1.4 AV-401
- 1.5 AV-501
- 1.6 AV-601
- 1.7 AV-701

2. SPECIFICATIONS

- 2.1 N/A.

3. DESCRIPTION

- 3.1 AV-001
 - 3.1.1 Revise title block as shown.
- 3.2 AV-002
 - 3.2.1 Revise title block as shown.
 - 3.2.2 Remove clauses related to AV tender form.
- 3.3 AV-311
 - 3.3.1 Revise title block as shown.
 - 3.3.2 Revise note on the drawing.
- 3.4 AV-401
 - 3.4.1 Revise title block as shown.
- 3.5 AV-501
 - 3.5.1 Revise title block as shown.
- 3.6 AV-601
 - 3.6.1 Revise title block as shown.

3.7 AV-701

3.7.1 Revise title block as shown.

4. ENCLOSURES

4.1 Drawings: AV-001, AV-002, AV-311, AV-401, AV-501, AV-601, AV-701

4.2 Specifications: None.

4.3 Sketches: None.

MULVEY & BANANI AUDIO VISUAL INC.



TOM YICK

Senior Audio Visual Designer

ModernTO and TPH

55 JOHN STREET
TORONTO, ONTARIO

AUDIO VISUAL DRAWINGS

GENERAL NOTES

- PLENUM RATED CABLES SHALL BE PROVIDED WHERE REQUIRED BY CODE.
- CONTRACTOR SHALL INSPECT ALL DRAWINGS AND NOTIFY THE CONSULTANT SHOULD ANY DISCREPANCIES ARISE.
- REFER TO ELECTRICAL DRAWINGS FOR POWER LOCATIONS AND DETAILS.
- REFER TO COMMUNICATIONS DRAWINGS FOR DATA AND CATV LOCATIONS AND DRAWINGS.
- REFER TO ARCHITECTURAL AND INTERIOR DESIGN DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS.
- ALL CONDUITS NOT TERMINATED TO A BOX SHALL BE COMPLETE WITH AN INSULATED THROAT BUSHING.
- ALL CABLE TELEVISION BOXES SHALL BE SUPPLIED BY THE OWNER FOR INSTALLATION AND COMMISSIONING BY THE CONTRACTOR.
- GENERAL CONTRACTOR SHALL COORDINATE WITH THE CLIENT'S AV VENDOR FOR ALL AUDIO VISUAL INSTALLATION.

DIVISION OF RESPONSIBILITY MATRIX

THE SCOPE OF WORK OF THE VARIOUS TRADES RELATED TO THE AUDIO VISUAL (AV) SYSTEMS IS DESCRIBED IN THE FOLLOWING TABLE. P = PROVIDE (SUPPLY AND INSTALL), S = SUPPLY, I = INSTALL, C = COORDINATE, N/A = NOT APPLICABLE								
Item	Scope	Owner	Base Building	Gen.Ctr. / Const.Mgr.	Comm. Contractor	Elec. Contractor	Furniture Vendor	NOTES
1.00	Decommissioning							
1.01	Uninstallation of Existing AV Equipment	P						
1.02	Packing and Storage of Existing AV Equipment	P						
1.03	Transportation of Existing AV Equipment	P						
1.04	Reinstallation of Existing AV Equipment	P						
1.05	Removal of Existing AV Conduit							
1.06	Removal of Existing AV Cabling							
1.07	Warranty of Reinstalled AV Equipment (Workmanship)	P						
2.00	Blocking and Support							
2.01	Support Blocking/Bracing for AV Devices			P				
2.02	Engineered Structural Supports			P				
3.00	Equipment							
3.01	AV Equipment & Components			P				
3.02	CATV/SATV Receivers (Set-Top Box)	P		C				
3.03	Owner Furnished Equipment	P		C				
3.04	Floor Boxes	C		C		P		
3.05	Table Boxes	C		C			P	
3.06	Flat Panel Display Mounts			P				
3.07	AV Related Routers, Switches, Firewalls & Border Controllers	P						
4.00	Millwork and Furniture							
4.01	Integration of AV Equipment within Millwork & Furniture	P		C				
4.02	Cut-outs for AV Devices with Millwork & Furniture	C					P	
4.03	Lecturns / Podiums						P	
7.00	Miscellaneous							
7.01	Fire Alarm Interconnect	C				P		
7.02	Control or Low Voltage Interface for Automated / Motorized Devices (i.e. Window Shades)	P				C		
7.03	Video Conference Licensing	P						
7.04	Support for AV Related IT after Commissioning	P						
8.00	Power					P		
8.01	Power for AV equipment	C						
9.00	Programming							
9.01	Control System Programming	P						
9.02	IP Address Provisioning and VLAN Configuration	P						
10.00	Wire, Cable & Infrastructure							
10.01	AV Wire and Cables			P				
10.02	AV Wire & Cable Termination			C				
10.03	Conduit, Pull Boxes, Standard Boxes, etc for AV	C		C		P		
10.04	Specialty Enclosures (Excl. loudspeaker)	S		C		I		
10.05	Wire/Cables for Control or LV Interface (i.e. Window Shades, etc)					P		
10.06	Voice/Data Cable & Connectivity				P			
10.07	CATV/Satellite Cable & Connectivity				P			
11.00	Content							
11.01	Content Creation	P						
11.02	Content Installation / Configuration	P						
12.00	Networking							
12.01	Configuration of AV device network related settings	P						
12.02	Configuration of Network settings (switches, ports, firewall, etc.)	P						

DRAWING LIST

AV-001	AUDIO VISUAL LEGEND, GENERAL NOTES AND DRAWING LIST
AV-002	AUDIO VISUAL SPECIFICATIONS
AV-003	AUDIO VISUAL SPECIFICATIONS
AV-311	AUDIO VISUAL FLOOR PLAN
AV-401	AUDIO VISUAL FUNCTIONAL DIAGRAMS
AV-501	AUDIO VISUAL RISER DIAGRAMS
AV-601	AUDIO VISUAL ELEVATION DETAILS
AV-701	AUDIO VISUAL DETAILS

EQUIPMENT SCHEDULE

EQUIPMENT TYPE	MANUFACTURER	MODEL
CAMERA		
VB1	LOGITECH	RALLY BAR
VB2	LOGITECH	RALLY BAR MINI
VB3	POLY	STUDIO P15
SIGHT	LOGIECH	LOGI SIGHT
DISPLAY		
P43	SAMSUNG	LH43QETELGCXGO
P65	SAMSUNG	LH65QETELGCXGO
P85	SAMSUNG	LH85QETELGCXGO
I55	SAMSUNG	LH55WMRWBGXCXA - FLIP
I65	SAMSUNG	LH65WMRWBGXCXA - FLIP (MOUNTED ON MOBILE CART)
USER INTERFACE		
RB	LOGITECH	TAP SCHEDULER
TAP	LOGITECH	TAP
MICROPHONE		
POD	LOGITECH	RALLY MIC POD

AUDIO VISUAL

SYMBOL	DESCRIPTION
	CEILING MOUNT ANTENNA "X" DENOTES ANTENNA TYPE "Y" DENOTES ANTENNA SYSTEM
	DESK/TABLE/ELECTERN MOUNT ANTENNA "X" DENOTES ANTENNA TYPE "Y" DENOTES ANTENNA SYSTEM
	WALL MOUNT ANTENNA "X" DENOTES ANTENNA TYPE "Y" DENOTES ANTENNA SYSTEM
	PTZ CAMERA "X" DENOTES CAMERA TYPE "Y" DENOTES MOUNT TYPE
	CEILING MOUNT INPUT/OUTPUT DEVICE LOCATION "X" DENOTES AV PLATE ID
	DESK/TABLE/ELECTERN MOUNT INPUT/OUTPUT DEVICE LOCATION "X" DENOTES AV PLATE ID
	WALL MOUNT INPUT/OUTPUT DEVICE LOCATION "X" DENOTES AV PLATE ID
	CEILING MOUNT DISPLAY MONITOR "X" DENOTES DISPLAY TYPE "Y" DENOTES DISPLAY MOUNT TYPE
	FLOOR MOUNT DISPLAY MONITOR "X" DENOTES DISPLAY TYPE "Y" DENOTES DISPLAY MOUNT TYPE
	WALL MOUNT DISPLAY MONITOR "X" DENOTES DISPLAY TYPE "Y" DENOTES DISPLAY MOUNT TYPE
	EQUIPMENT RACK "X" DENOTES RACK TYPE "Y" DENOTES RACK FINISH
	FLOOR BOX "X" DENOTES FLOOR BOX TYPE "Y" DENOTES FLOOR BOX CONFIGURATION
	CEILING MOUNT LOUDSPEAKER "X" DENOTES LOUDSPEAKER TYPE "Y" DENOTES LOUDSPEAKER WATTAGE TAP
	FLOOR MOUNT LOUDSPEAKER "X" DENOTES LOUDSPEAKER TYPE "Y" DENOTES LOUDSPEAKER WATTAGE TAP
	WALL MOUNT LOUDSPEAKER "X" DENOTES LOUDSPEAKER TYPE "Y" DENOTES LOUDSPEAKER WATTAGE TAP
	CEILING MOUNT MICROPHONE "X" DENOTES MICROPHONE TYPE "Y" DENOTES MICROPHONE MOUNT
	DESK/TABLE/ELECTERN MOUNT MICROPHONE "X" DENOTES MICROPHONE TYPE "Y" DENOTES MICROPHONE MOUNT
	WALL MOUNT MICROPHONE "X" DENOTES MICROPHONE TYPE "Y" DENOTES MICROPHONE MOUNT
	TABLE BOX "X" DENOTES TABLE BOX TYPE "Y" DENOTES TABLE BOX CONFIGURATION
	CEILING MOUNT USER INTERFACE "X" DENOTES AV CONTROL PANEL TYPE
	DESK/TABLE/ELECTERN MOUNT USER INTERFACE "X" DENOTES AV CONTROL PANEL TYPE
	WALL MOUNT USER INTERFACE "X" DENOTES AV CONTROL PANEL TYPE
	CEILING MOUNT SOUND MASKING "X" DENOTES LOUDSPEAKER TYPE "Y" DENOTES LOUDSPEAKER WATTAGE TAP
	CEILING DEVICE "X" DENOTES TYPE
	FLOOR DEVICE "X" DENOTES TYPE
	WALL DEVICE "X" DENOTES TYPE
AUDIO VISUAL STANDARD NOMENCLATURE	
M	MICROPHONE
LS	LOUDSPEAKER
DM	DISPLAY MONITOR
PS	PARTITION SENSOR
TB	TABLE BOX (SQUARE ONLY)
FB	FLOOR BOX (SQUARE ONLY)
ES	ELECTRIC SCREEN
MS	MANUAL SCREEN
OFCI	OWNER SUPPLIED FURNISHING, CONTRACTOR INSTALLED
OFOI	OWNER SUPPLIED FURNISHING, OWNER INSTALLED

MULVEY & BANANI
AUDIO VISUAL

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BUILDING DEPARTMENT SEAL

CONSTRUCTION NORTH

SEAL

4.	ISSUED FOR AV ADDENDUM 01	2024-08-16
3.	ISSUED FOR PERMIT TENDER	2024-07-12
2.	ISSUED FOR 90% PAGE TURN REVIEW	2024-07-08
1.	ISSUED FOR 75% PAGE TURN REVIEW	2024-06-28

No.	DESCRIPTION	DATE
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PROJECT

METRO HALL 11TH
FLOOR - MINOR
OFFICE RENOVATION

55 JOHN STREET, 11TH
FLOOR TORONTO, ON

DRAWING

AUDIO VISUAL LEGEND,
GENERAL NOTES AND
DRAWING LIST

SCALE	N.T.S.	DATE	2024/06/11
DRAWN	TY	CHECKED	GR
PROJECT NO.	241168	SHEET #	AV-001

AUDIO VISUAL GENERAL SPECIFICATIONS

1. REFERENCE
- 1.1. This Section supplements "The General Conditions" and Division 1, and forms part of every Section of Division 27.
2. ACCESS DOORS
- 2.1. Wherever any item of audio visual equipment requiring accessibility, maintenance or adjustment is concealed, ensure adequate access, or provide an Access Door and arrange for its installation by the Division in whose work it occurs.
- 2.2. Doors shall be sized for proper and easy access, and located to suit the concealed device. In removable acoustic panel ceilings, no Access Doors are required, but after completion of the ceilings. Use ULC labelled rated Access Doors in all fire rated walls and ceilings, which act as fire barriers and match the Door type with the ceiling type and application.
- 2.3. Submit for the Consultant's review, floor plans and shop drawings showing the size, type and exact location of all Access Doors.
- 2.4. All Access Doors and ties requiring removal shall be shown on the Record Drawings. Notations adjacent to each Access Door shown on the drawings shall indicate frequency of maintenance required for item or items above or behind the Door.
3. AS-BUILT DRAWINGS AND MANUALS
- 3.1. Upon substantial completion, the Contractor shall compile and submit A/V systems manuals to the consultant for review. Upon approval, manuals shall be presented to the Owner at time of training. Manuals shall be used as a resource material during the training process to make the Owner aware of its contents as well as familiarize them with it. Manuals shall include the following:
- 3.1.1.1. Cover page shall include the following:
- 3.1.1.1.1. Owner name including logo if applicable
- 3.1.1.1.2. Project name including logo if applicable
- 3.1.1.1.3. Consultants' contact information including logo
- 3.1.1.1.4. Contractors' contact information including logo if applicable
- 3.1.1.1.5. Date of issuance
- 3.2. Detailed index.
- 3.3. Complete system Block Diagrams and detailed Interfaces
- 3.4. Complete step by step operating instructions
- 3.5. Equipment manufacturers' Operating Instructions and Maintenance Manuals
- 3.6. As item 3, 4 and 5 for all custom items.
- 3.7. As-built wiring diagrams showing the connections between equipment, cable colour coding and numbering and terminal connection numbering of all equipment assemblies and terminal cabinets.
- 3.8. Loudspeaker tap connections on all transformers, impedance of all speaker circuits and details of impedance matching networks (on a separate sheet).
- 3.9. Designations and settings of all signal processing equipment, zone, gain and other controls (on a separate sheet).
- 3.10. Connections to all amplifiers and the output voltage of all amplifiers during normal operation (on a separate sheet).
- 3.11. Performance data on the completed system as specified under Performance Testing.
- 3.12. Any Shop Drawings not detailed in this list.
- 3.13. Warranty Certificate and Statement
- 3.14. List of manufacturer warranties.
- 3.15. Detailed step by step procedures for preventative maintenance of all user maintainable equipment.
- 3.16. Statement of Completion
- 3.17. List of key contacts for further sales and service relating specifically to the project as outlined herein. Contact information shall include 24/7 contact numbers for service.
- 3.18. Troubleshooting guide of most common system faults including step by step remedy procedures.
- 3.19. Each Operation and Maintenance Manuals shall include a complete soft copy on either CD or DVD as required. Digital medium shall be formatted as such to be accessible on both Windows™ and Macintosh™ operating systems. All documents shall be in PDF format for universal viewing.
4. CAD DRAWINGS
- 4.1. Electronic copies (AutoCad format Release 2007) of all drawings will be made available to the Audio Visual contractor by the Consultant at an additional cost. Refer to the "Drawing Request Form" for terms and conditions of use.
5. CLEANING
- 5.1. Audio Visual:
- 5.1.1. The AV contractor shall provide temporary protective covering on all electronic and sensitive components exposed to construction dust. Protect all components where required during the construction process.
- 5.1.2. Upon completion, clean all projectors and lenses, speakers, components and other surfaces, as per manufacturer's recommendations that have been exposed to construction dust and dirt.
- 5.1.3. Clean the insides and outsides of junction boxes, pull boxes, equipment racks and other audio visual equipment, and completely remove all debris and tools from the project.
- 5.1.4. The AV contractor shall keep all work areas tidy and collect all debris and recyclable materials. The AV contractor shall comply with the construction manager's waste policies and procedures.
6. CODES AND STANDARDS
- 6.1. Complete the installation of the work in accordance with latest editions of the Ontario Building Code, Ontario Electrical Safety Code, C.S.A., U.L.C., N.F.P.A., O.S.H.A. or other Codes, as required.
- 6.2. Comply with Electrical and Building Code(s) Bulletin in force at time of Bid submission. While not identified and specified by number in this Division, they are to be considered as forming part of related Standards.
- 6.3. Abbreviations for electrical terms are as per C.S.A. Z86.
7. COMPLETION OF CONTRACT
- 7.1. All the equipment must be cleaned and tested, before final acceptance by the Consultant.
- 7.2. From the date of issuance of a "Certificate of Substantial Performance", all equipment, materials and workmanship, other than lamps, must be unconditionally warranted for not less than 2 (two) year.
- 7.3. Replace, at no cost, all projector lamps burned out during a 30 (thirty) day period after date of issuance of certificate of "Substantial Performance" for the Contract for the building.
- 7.4. Defects and deficiencies which originate or become evident during the warranty period must be repaired or replaced, at no cost.
- 7.5. If, during the warranty period, any noise and vibration producing equipment are considered by the Consultant to exceed acceptable standards, then these must be replaced without delay or additional cost to the Owner. All work relating to the replacement of defective items must be carried out after normal working hours and at a time which is acceptable to the Owner.
- 7.6. On or about time of acceptance of the system, the AV contractor shall present to the Owner available extended warranties and/or preventative maintenance programs offered by manufacturers and/or by the AV contractor. The Owner shall reserve their right to evaluate the merits of the extended warranties and/or preventative maintenance programs. The Owner at their discretion reserves their rights to accept or reject the extended warranties and/or preventative maintenance programs.
8. CONTRACT DRAWINGS
- 8.1. The Drawings for the audio visual work are diagrammatic performance Drawings only, intended to convey the scope of work and indicate the general arrangement and approximate location of equipment, and the approximate sizes and locations of equipment. The Drawings do not intend to show Architectural, Mechanical or Structural details.
- 8.2. Do not scale or measure Drawings, but obtain information regarding accurate dimensions, from the dimensions shown on the Architectural Drawings, or by site measurements. Follow the Audio Visual Drawings for laying out the work.
- 8.3. Refer to the other Division's Coordination Drawings, to become familiar with all conditions affecting the work, and verify suitable spaces exist, in which the equipment will be installed.
- 8.4. Make, at no additional cost, any changes or additions to materials and equipment necessary to accommodate Structural conditions (offsets around beams, columns, etc.).
- 8.5. Alter, at no additional cost, the location of materials and/or equipment as directed, provided that the changes are made before installation, and do not necessitate additional materials.
- 8.6. Install ceiling mounted components (such as lighting fixtures, heat detectors, loudspeakers, antennas etc.) in accordance with dimensioned reflected ceiling drawings, prepared by the (Architectural) Consultant.
- 8.7. Leave space clear, and install equipment to accommodate future materials and/or equipment as indicated or specified, or to accommodate equipment and/or materials supplied by other Contractors.
- 8.8. Verify that the spaces in which the equipment is to be installed is sufficient and install all equipment to maintain head room and clearances, to conserve space, comply with codes, and to ensure adequate space for future servicing.
- 8.9. Confirm at the site, the exact location of equipment, outlets and fixtures, and the location of outlets for equipment supplied by other Contractors, before installation.
9. DEFINITIONS
- 9.1. Whenever the words "equal", "approved", or "approved equal" are used, it shall be understood to mean, "equal", "approved", or "approved equal" in the opinion of the Consultant only.
- 9.2. Whenever the words "install", "provide", or "supply and install", are used, it shall be understood to mean "provide and install, inclusive of all labour, materials, installation, testing, and connections" for the item to which referred.
- 9.3. "Concealed" is defined as "out of sight" in "normal" viewing conditions, and includes buried in concrete, above acoustic tile or gypsum board ceilings, within masonry or gypsum board constructed walls, within cable trays or below raised access floors.

10. EXISTING CONDITIONS
- 10.1. Visit the site and examine the existing conditions affecting the work of this Division.
- 10.2. No claim for extra payment shall be made for extra work made necessary by circumstances encountered due to conditions which were visible upon, or reasonably inferable from an examination of the site prior to submission of the Bid.
11. EXPEDIENT
- 11.1. Continuously check and expedite delivery of all materials and equipment required for the successful execution of the work.
- 11.2. If requested by Consultant, inspect at the source of manufacture, to confirm status, and submit an itemized flow chart of equipment order and delivery dates.
- 11.3. Continuously check and ensure that the necessary information is communicated to all parties involved.
- 11.4. Immediately inform the Consultant in writing of any anticipated delays.
12. FIELD SUPERVISION AND WORKMANSHIP
- 12.1. Throughout the construction of the Project, a properly qualified audio visual Superintendent must be available at all times. The Superintendent who starts the work must not be changed unless requested by the Consultant, or by the Contractor with written permission from the Consultant.
- 12.2. In addition, provide proper office supervision of the work. The person responsible for office supervision must visit the site as often as necessary, to ensure work is properly performed, and attend meetings when so requested.
- 12.3. Submit resume of proposed supervision staff when called upon to do so by Consultant.
- 12.4. Workmanship throughout to conform with the highest standards applicable.
13. FINISHES
- 13.1. All shop finished metal equipment and enclosure surfaces, must be prepared by removal of rust and scale from the raw metal, degreasing, cleaning, application of rust resistant primer inside and outside, and at least two coats of finish enamel paint. Use factory standard colours unless otherwise specified.
- 13.2. Clean and touch-up (to Consultant's acceptance) surfaces of shop-finished equipment that is scratched or marred during shipment or installation, so as to match original paint.
- 13.3. Leave with the Owner, 1l (0.22 gal.) of paint of each colour used, in the form of liquid or spray, to allow for future touch-up of damaged areas.
14. IDENTIFICATION
- 14.1. Identify all Audio Visual equipment and wiring.
- 14.2. Wordings on nameplates and labels to be approved by the Consultant shall be in English.
- 14.3. Use labels for AV cables and conductors. Labels shall be of the mylar/cloth self-adhesive type, black lettering on white background, for audio visual conduits and cables and located at each end of the run and at junction and pull boxes.
15. Audio Visual Labeling
- 15.1. Identify all Audio, Video, Control and associated wiring with appropriate computer generated labelling scheme as approved by the Consultant. Labelling devices that print on heat shrink such as Brady and Rhino label makers are preferred. Should a standard label maker be used, transparent heat shrink shall extend a minimum of 6mm (1/4") past the label at each end.
- 15.2. Labelling scheme shall be logical and consistent thought the project with identical identifiers at opposing connection point. Labels shall be equally identified on all as-built technical drawings.
- 15.3. All modifiable control points shall be logically identified and labelled using appropriate labelling methods. Labelling shall be executed in a neat and meaningful manner, squared and centred.
- 15.4. Where it is not possible to label user controls neatly while maintaining legibility, labels may be placed on a blank rack panel above designated equipment for proper placement of labels.
- 15.5. Appropriate identification tags and conventions shall be applied in all software configuration files. This shall include all inputs, output and control locations.
16. INTENT
- 16.1. It is the intent of these drawings and specifications that the Contractor provide complete and operational systems as required.
- 16.2. Where differences occur, the maximum condition shall govern.
- 16.3. Any miscellaneous items, hardware, devices, wiring, etc., not specifically described, but required for the operation of the system, must be provided and included as part of the Bid.
17. MATERIALS AND EQUIPMENT
- 17.1. All materials and equipment shall be new, C.S.A. certified, and manufactured to the Standards specified.
- 17.2. Where there is no alternative to supplying equipment which is not C.S.A. certified, obtain special approval from the local Inspection Department.
- 17.3. Indicate which manufacturer in the column titled "Base and Approved Equal" is carried in the Bid. If this is not indicated, the specified "Base" equipment (the first name in the list) shall be assumed to have been carried.
- 17.4. "Substitute" manufacturer's equipment must be equal in intent, construction and performance, in every respect, as defined by the Consultant, or will be rejected by the Consultant at the time of shop drawing submittal, the Contractor being instructed to provide the "Base" equipment as specified.
- 17.5. Be aware that all equipment, whether "Base", "Approved equal" or "substitute" must fit into the space allocated. Be responsible for any increase in space requirements, due to non-conformity to the above requirement.
- 17.6. If a single item is specified, the specified item shall form the basis of the Bid, with no substitutes allowed. The Contractor however, still has the option of offering a "deduction" from the Bid, by suggesting a "substitution".
- 17.7. If a manufacturer is noted by the Contractor in the substitute column only, that manufacturer will be considered as a substitute, and a savings from the Base Bid Price must be shown. The Base Bid Price must include the base and "approved equal" manufacturers only.
18. MOUNTING HEIGHTS
- 18.1. Mounting height of equipment is from finished floor to centre line of equipment unless specified or indicated otherwise.
- 18.2. Contractor shall review all local A.H.J. accessibility standards, coordinate with local A.H.J. and revise mounting heights listed below as required.
- 18.3. If mounting height of equipment is not indicated, verify with the Architect and Consultant before proceeding with installation.
19. NOISE AND VIBRATION
- 19.1. Audio Visual equipment is to operate without objectionable noise or vibration. If, in the opinion of the Consultant, the equipment operates with excessive noise or vibration, then the equipment must be replaced or noise or vibration eliminated.
- 19.2. Connections to noise-producing and vibrating equipment must be made with flexible conduit.
20. OPERATION AND MAINTENANCE MANUALS
- 20.1. Provide three (3) sets of operation and maintenance manuals.
- 20.2. Include the following information in the Operations and Maintenance manuals:
- 20.2.1. Names and address of local suppliers for the items included.
- 20.2.2. Details of design elements, construction features, component function and maintenance requirements, to permit effective start-up, operation, maintenance, repair, modification, extension and expansion of any portion or feature of the installation.
- 20.2.3. Technical data, product data, supplemented by bulletins, component illustrations, exploded views, technical descriptions of items, and parts lists. Advertising or sales literature is not acceptable.
- 20.2.4. The Consultants reviewed shop drawings.
- 20.2.5. Certificates from inspection authorities.
- 20.2.6. Security system testing and verification with approval from A.H.J.
- 20.2.7. E.M.L. testing and verification certificate.
- 20.2.8. Generator factory and site test reports.
- 20.2.9. UPS factory and site test reports.
- 20.2.10. Fire alarm verification reports.
- 20.2.11. Warranty letters from contractors and suppliers.
- 20.3. Include the following information in the Audio Visual Operations and Maintenance manuals:
- 20.3.1. Names and address of local suppliers for the items included.
- 20.3.2. Details of design elements, construction features, component function and maintenance requirements, to permit effective start-up, operation, maintenance, repair, modification, extension and expansion of any portion or feature of the installation.
- 20.3.3. Technical data, product data, supplemented by bulletins, component illustrations, exploded views, technical descriptions of items, and parts lists. Advertising or sales literature is not acceptable.
- 20.3.4. The final shop drawings as reviewed by Consultant.
- 20.3.5. Certificates from inspection authorities (if applicable).
- 20.3.6. Warranty letters from contractors and suppliers.
- 20.4. Review information provided in the maintenance instructions and manuals with the Owner's operating personnel to ensure a complete understanding of the Audio Visual equipment and systems and their operation.
- 20.5. Review information provided in the maintenance instructions and manuals with the Owner's operating personnel to ensure a complete understanding of the electrical equipment and systems and their operation.

21. OWNERS EQUIPMENT
- 21.1. Where specified install all equipment provided by the Owner.
- 21.2. Receive, store and install equipment, and accept full responsibility for it and its correct operation.
22. OWNERS INSTRUCTION AND TRIAL USAGE
- 22.1. Instruct the Owner's operating personnel in the start-up, operation, care and maintenance of all the equipment. All equipment to be tested and operational before instruction. Provide sheets for signatures of Owners representative and operating personnel present at each instruction period.
- 22.2. Since commissioning is included in the contract.
- 22.2.1. Prior to any instruction sessions, commissioning coordinator shall submit check lists of each system or equipment indicating their operation status for acceptance by the Owner.
- 22.2.2. Coordinate all instruction sessions to suit Owner's operation personnel schedule. Submit proposed instruction session schedule c/w training agenda 1 (one) week prior to session start date to Owner for review.
- 22.2.3. Upon completion of each training session, submit record of instruction including but not limited to the following:
- 22.2.3.1. Date/time of session.
- 22.2.3.2. Duration.
- 22.2.3.3. Training session title.
- 22.2.3.4. Name and attendance list of Owner's representatives, instructor(s) and all other personnel attending.
- 22.3. The Owner's operating personnel, must be permitted to operate the systems under the contractor's supervision for a reasonable period of time prior to Substantial Completion of Contract. This use shall not be misconstrued as acceptance of the equipment.
23. PERMITS AND FEES
- 23.1. The Audio Visual Contractor shall include in bid amount all costs associated with any permits, fees and charges as required.
- 23.2. The Consultant will provide upon request, at the Contractors cost, the required quantity of drawings and specifications.
24. PROGRESS PAYMENTS
- 24.1. Submit a complete breakdown of the Contract with each progress billing, indicating percentage of work complete, in a form acceptable to the Owner/Consultant.
25. RECORD DRAWINGS
- 25.1. Prepare, from the CADD data provided by the Consultant, a complete and separate set of white prints to keep on the site at all times.
- 25.2. These prints shall be marked up to record clearly, neatly, accurately and promptly, all locations of audio visual, deviations from and changes to the "Issued for Construction" Documents.
- 25.3. The accurate locations, depth, size and type of each underground utility and service line shall be recorded before concealment, to ensure accurate and future direct access to these buried services.
- 25.4. The Record Drawings will be reviewed at regular intervals by the Consultant, and will be taken into consideration when reviewing the monthly applications for progress payment.
- 25.5. After the date of Substantial Performance, incorporate all changes made to the building through Change Orders and Consultant's instructions. Utilize normal recognised drafting procedures that match the original drafting methodology, whether CAD or hand drawn. Transfer all recordings from the Record Drawings to the discs, and submit 3 (three) sets of prints together with the originals in disc format, to the Consultant for review and presentation to the Owner.
26. SEALING
- 26.1. Where cables, bus ducts, cable tray, or conduits pass through non fire-rated floors, walls or roof, provide internal and external sealing thereto.
- 26.2. Comply with manufacturer's installation instructions for all sealant applications.
- 26.3. Sealants shall be silicone, that meets requirements of CCSI 19-CP-23, for the size of the joint required, and the types of materials being bonded.
- 26.4. For fire rated locations, the fire stop shall meet the requirements of ULC with regards to the type of assembly and the fire separation.
- 26.5. Seal all empty conduits at both ends.
27. SHOP DRAWINGS
- 27.1. Submit Shop Drawings must indicate details of construction, dimensions, scale, capacities, weights and electrical performance characteristics of equipment or materials, as well as specification reference Section number, and project name.
- 27.2. Shop drawings shall be provided in the form of 1 (one) original and 3 (three) copies, with sufficient space on the front for all Consultant's and Contractor's "review" stamps.
- 27.3. Where applicable, include wiring, single line and schematic design drawings, and diagrams showing interconnections with the work of other Contractors.
- 27.4. Work affected by submittal shall not proceed until review is complete.
- 27.5. Review submittals prior to submission to Consultant. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of the work and Contract Documents and bears Stamp of Electrical and General Contractors. Changes made to the Shop Drawings by the Consultant will not affect the Contract Price.
28. SUGGESTED SAVINGS
- 28.1. Complete a list of possible deductions from the Bid Price. Fully appreciate that the acceptance of these savings shall be at the discretion of the Owner and Consultant.
29. VALUATION OF CHANGES
- 29.1. Refer to and conform with the requirements set out in Division 1.
- 29.2. Submissions will be scrutinized by the Consultant and therefore require complete detailed itemization of all material, labour, unit prices and overhead and profit mark-ups.
30. WARNING SIGNS
- 30.1. Provide warning signs, as specified to meet requirements of Ministry of Labour Safety Inspection, Inspection Department, Authorities having jurisdiction and Consultant.
- 30.2. Use decal signs, in English as required by Authorities.
31. WIRE PULLING LUBRICANT
- 31.1. Lubricant to be non-corrosive and CSA approved for the type of cable used.
- 31.2. Lubricants to be soap or wax based, depending upon application. Use soap based for short runs and for semi-conducting insulated wires, and wax based for long runs.
32. WORK IN RENOVATED AREAS
- 32.1. All existing equipment which is no longer required shall be removed and disposed of, off site pending approval from the Owner.
- 32.2. Be responsible and pay for any damage to the base building incurred by work of this Division, or repair to the satisfaction of the Consultant.
- 32.3. Carry out the work with a minimum of noise, dust and disturbance.
- 32.4. Provide tools and clean up equipment. Obtain the Owner's permission for the use of electrical, plumbing or drainage outlets. Provide daily clean-up and proper disposal of debris generated by daily operations. On completion of the work, all tools, surplus materials and waste materials shall be removed and the premises left in a clean, perfect condition.

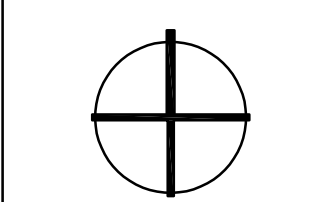
MULVEY & BANANI
AUDIO VISUAL

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BUILDING DEPARTMENT SEAL

CONSTRUCTION NORTH

SEAL



4.	ISSUED FOR AV ADDENDUM 01	2024-08-16
3.	ISSUED FOR PERMIT TENDER	2024-07-12
2.	ISSUED FOR 75% PAGE TURN REVIEW	2024-07-08
1.	ISSUED FOR 75% PAGE TURN REVIEW	2024-06-28

No. DESCRIPTION DATE

ISSUE RECORD

1135 DUNDAS ST. EAST, SUITE 200
TORONTO, ON, M4M 1R9
TEL: 416-462-3084
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PROJECT
METRO HALL 11TH
FLOOR - MINOR
OFFICE RENOVATION

55 JOHN STREET, 11TH
FLOOR TORONTO, ON

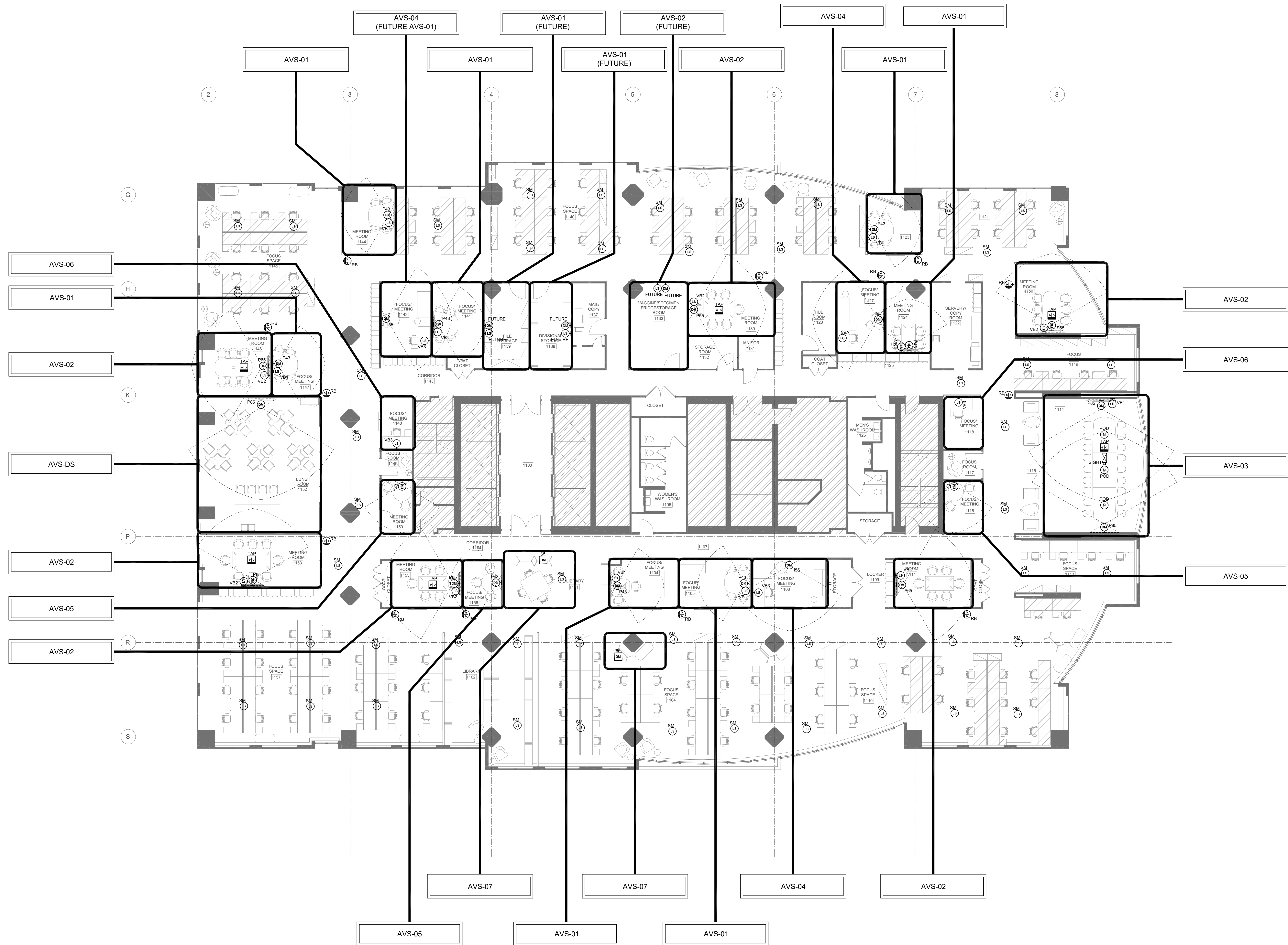
DRAWING
AUDIO VISUAL GENERAL
SPECIFICATIONS -
27 41 10

SCALE N.T.S. DATE 2024/06/11

DRAWN TY CHECKED GR

PROJECT NO. 241168 SHEET #

AV-002



NOTE:
1. SOUND MASKING EQUIPMENT ARE FOR INDICATION ONLY. FINAL LOCATION SHALL BE PROVIDED AND COORDINATED BY THE MANUFACTURER.

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BUILDING DEPARTMENT SEAL

CONSTRUCTION NORTH

SEAL

4.	ISSUED FOR AV ADDENDUM 01	2024-08-15
3.	ISSUED FOR PERMIT TENDER	2024-07-12
2.	ISSUED FOR 90% PAGE TURN REVIEW	2024-07-08
1.	ISSUED FOR 75% PAGE TURN REVIEW	2024-06-28
No.	DESCRIPTION	DATE

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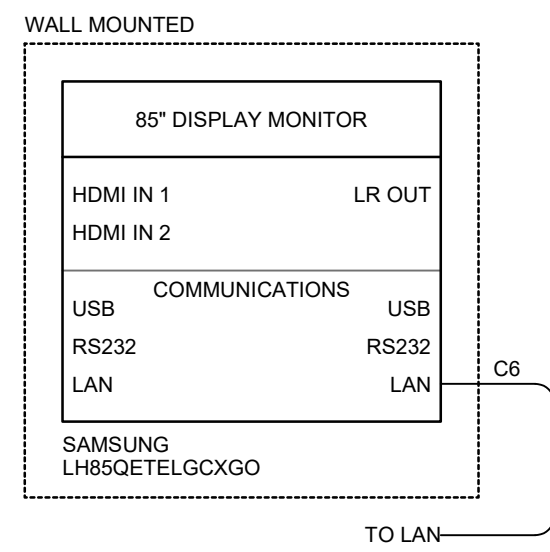
PROJECT
METRO HALL 11TH FLOOR - MINOR OFFICE RENOVATION
55 JOHN STREET, 11TH FLOOR TORONTO, ON

DRAWING
AUDIO VISUAL FLOOR PLAN

SCALE 1/8"=1'-0"	DATE 2024/06/11
DRAWN TY	CHECKED GR
PROJECT NO. 241168	SHEET # AV-311

DATE: 2024-06-11
FILE NAME: C:\Users\jbanani\OneDrive - JDesign Inc\Documents\241168_Metro Hall 11th Floor\OPTION 1_AudioVisualFloorPlan.dwg

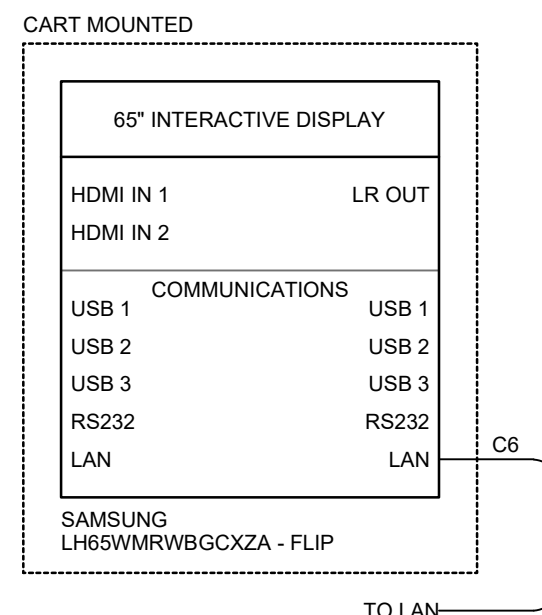
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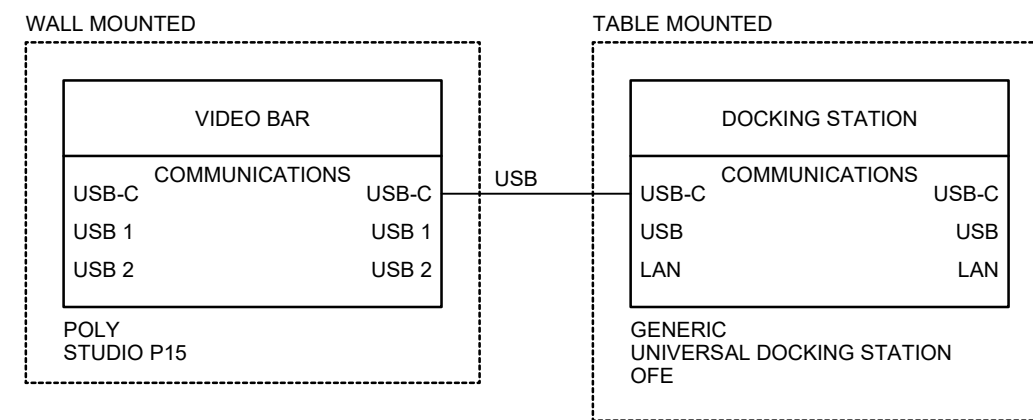
NOTE: MAKE AND MODEL AS INDICATED IN THIS DIAGRAM, OR APPROVED EQUIVALENT.

NOTES:
-15' DATA CABLE TYPICAL
-15' POWER EXTENSION CORD TYPICAL
-SAFECORD STRIP TO COVER CABLES



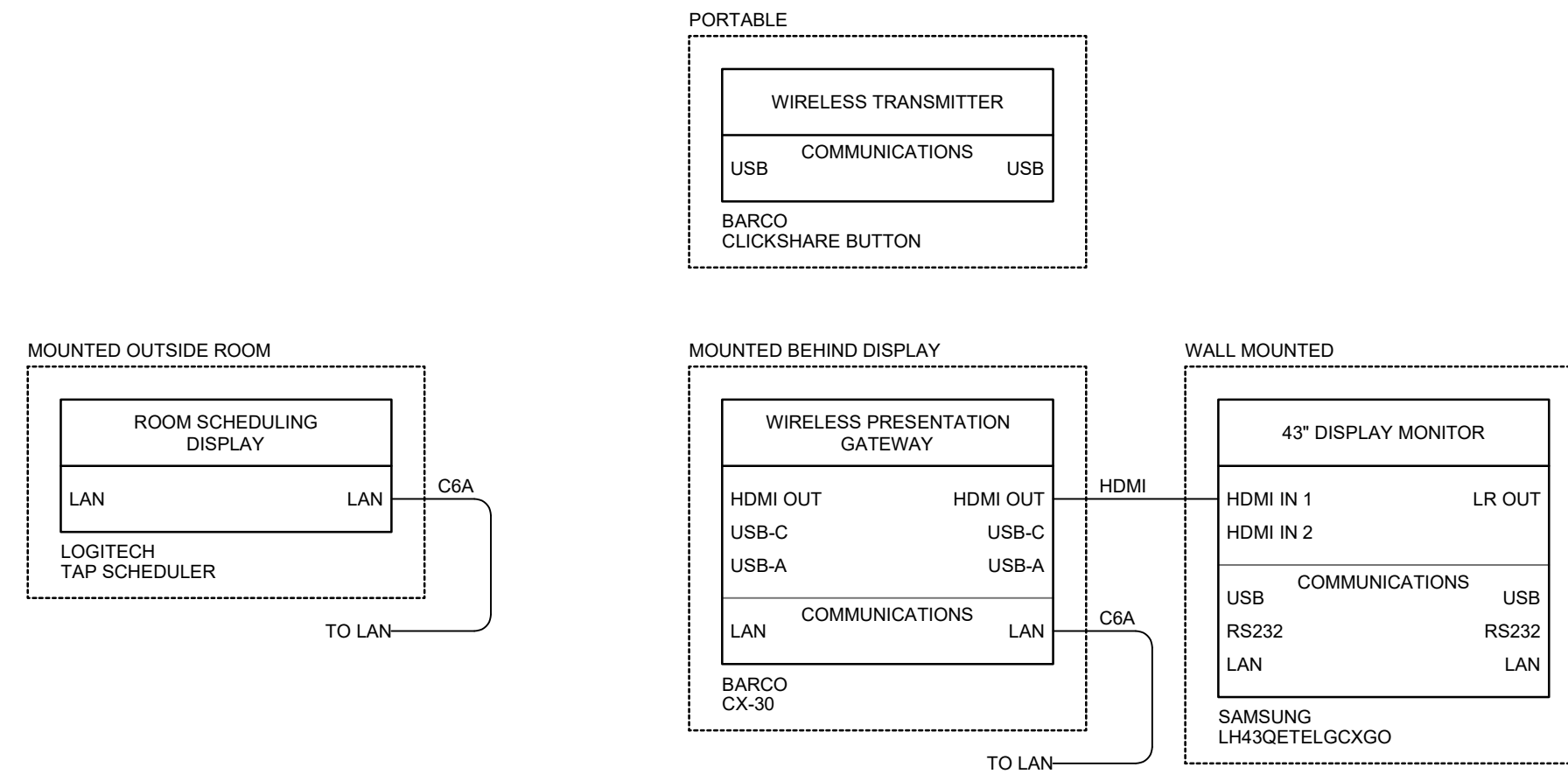
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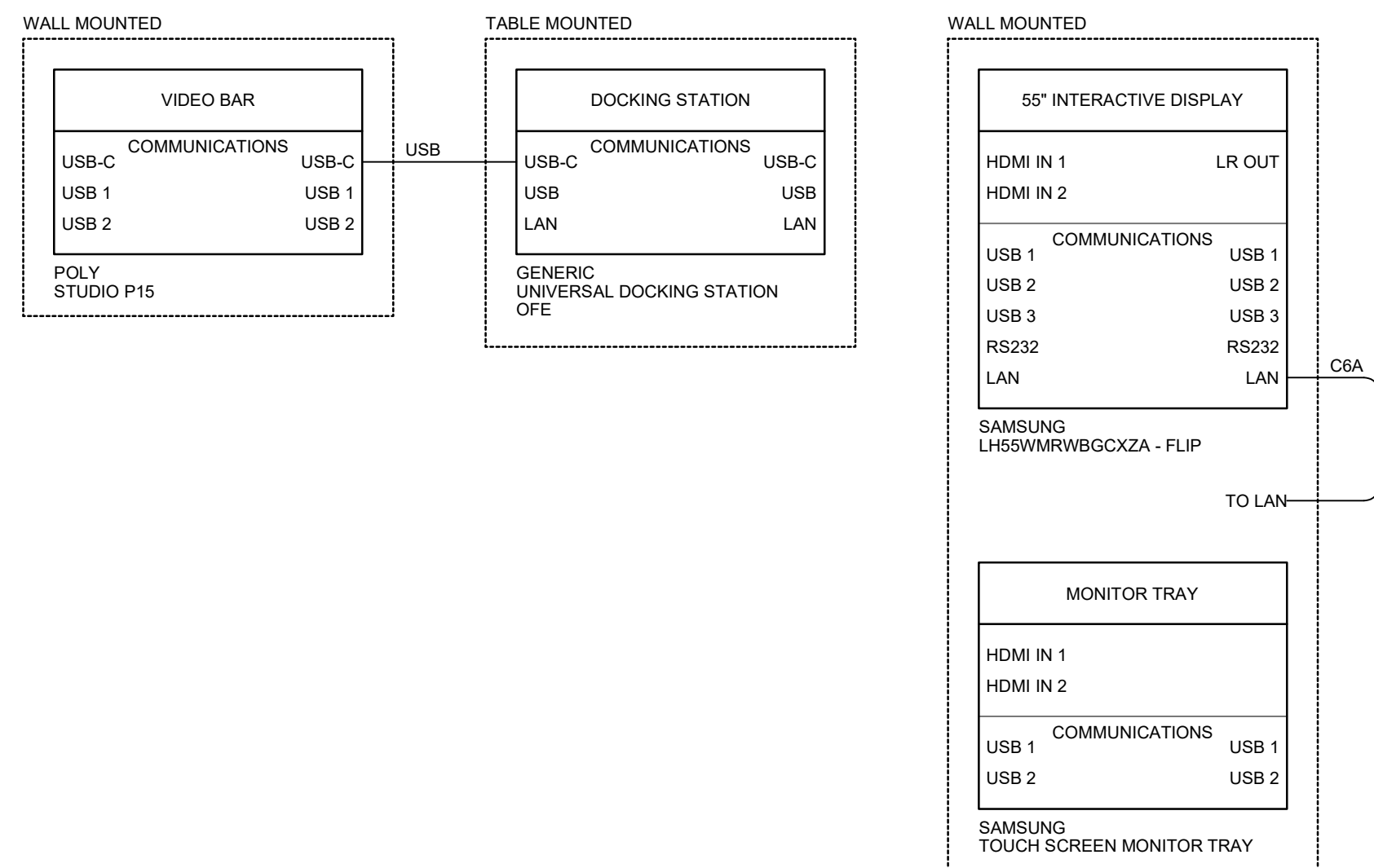
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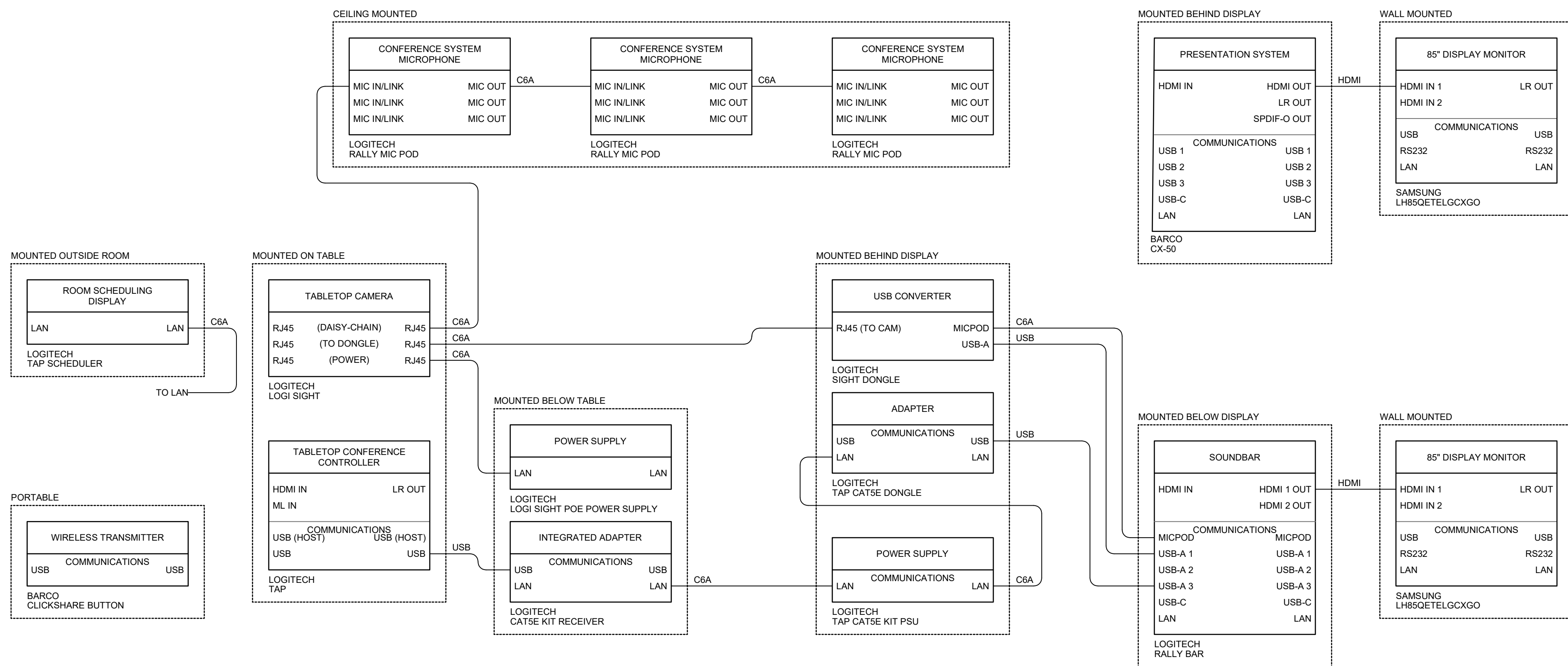
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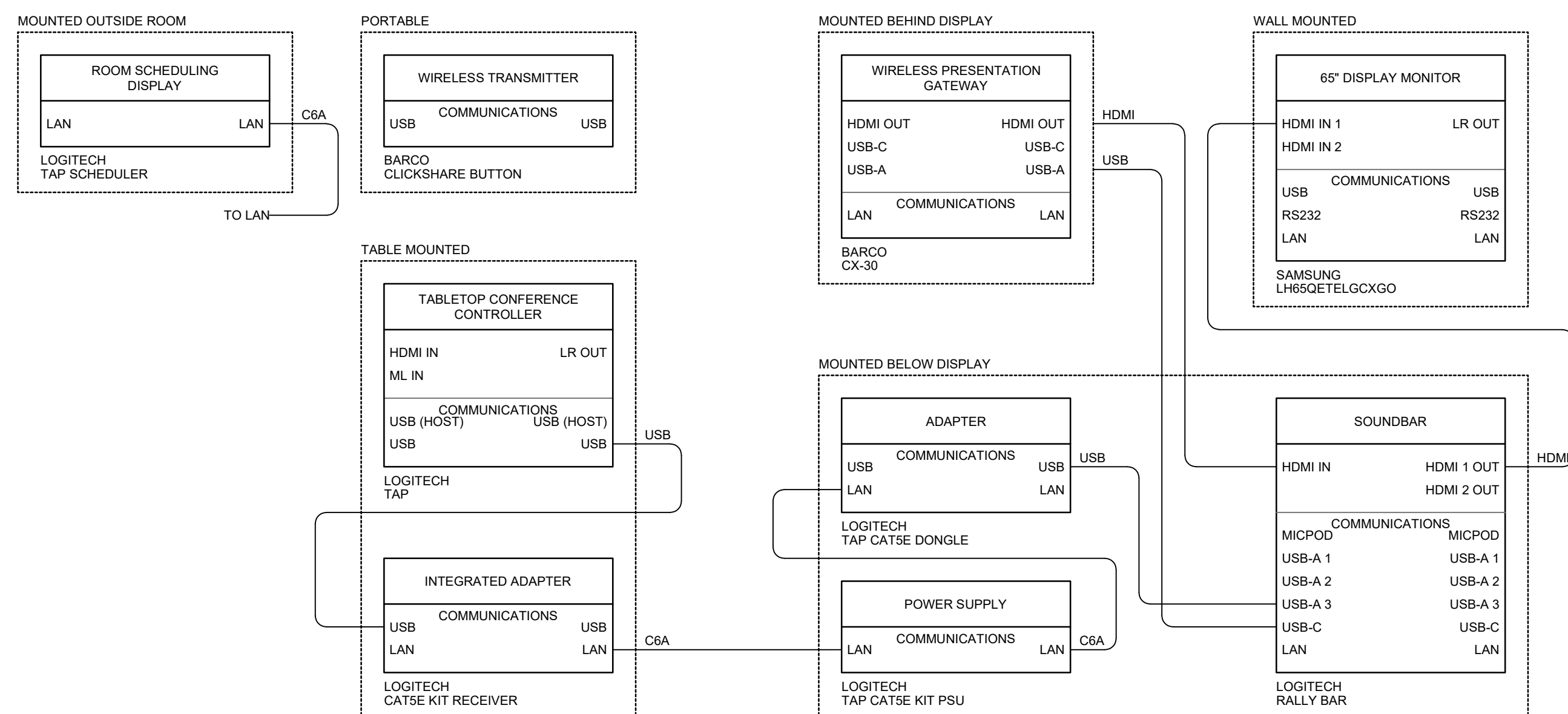
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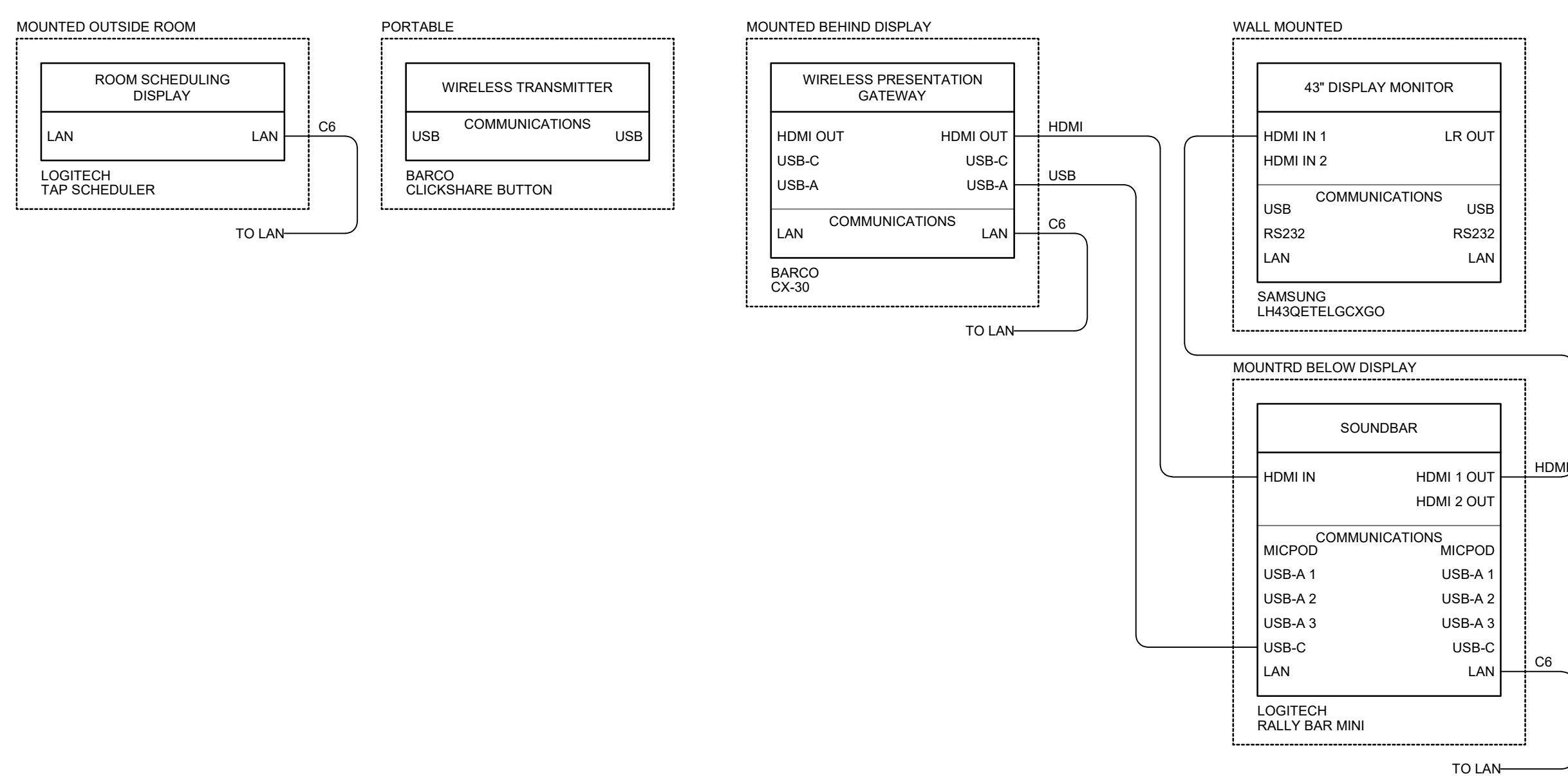
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SCALE: N.T.S.

NOTE: MAKE AND MODEL AS INDICATED IN THIS DIAGRAM, OR APPROVED EQUIVALENT.



AVS02 - FUNCTIONAL DIAGRAM
SCALE: N.T.S.

NOTE: MAKE AND MODEL AS INDICATED IN THIS DIAGRAM, OR APPROVED EQUIVALENT.

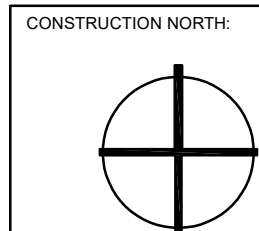


AVS01 - FUNCTIONAL DIAGRAM
SCALE: N.T.S.

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BUILDING DEPARTMENT SEAL



No.	DESCRIPTION	DATE
4.	ISSUED FOR AV ADDENDUM 01	2024-08-15
3.	ISSUED FOR PERMIT TENDER	2024-07-12
2.	ISSUED FOR 90% PAGE TURN REVIEW	2024-07-08
1.	ISSUED FOR 75% PAGE TURN REVIEW	2024-06-28

ISSUE RECORD

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TORONTO, ON, M4M 1R5
TEL: 416-462-3084
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PROJECT
METRO HALL 11TH
FLOOR - MINOR
OFFICE RENOVATION

55 JOHN STREET, 11TH
FLOOR TORONTO, ON

DRAWING
AUDIO VISUAL
FUNCTIONAL DIAGRAM

SCALE: N.T.S. DATE: 2024/06/11

DRAWN: TY CHECKED: GR

PROJECT NO: 241168 SHEET: AV-401

4.	ISSUED FOR AV ADDENDUM 01	2024-08-15
3.	ISSUED FOR PERMIT TENDER	2024-07-12
2.	ISSUED FOR 90% PAGE TURN REVIEW	2024-07-08
1.	ISSUED FOR 75% PAGE TURN REVIEW	2024-06-28
No.	DESCRIPTION	DATE
ISSUE RECORD		

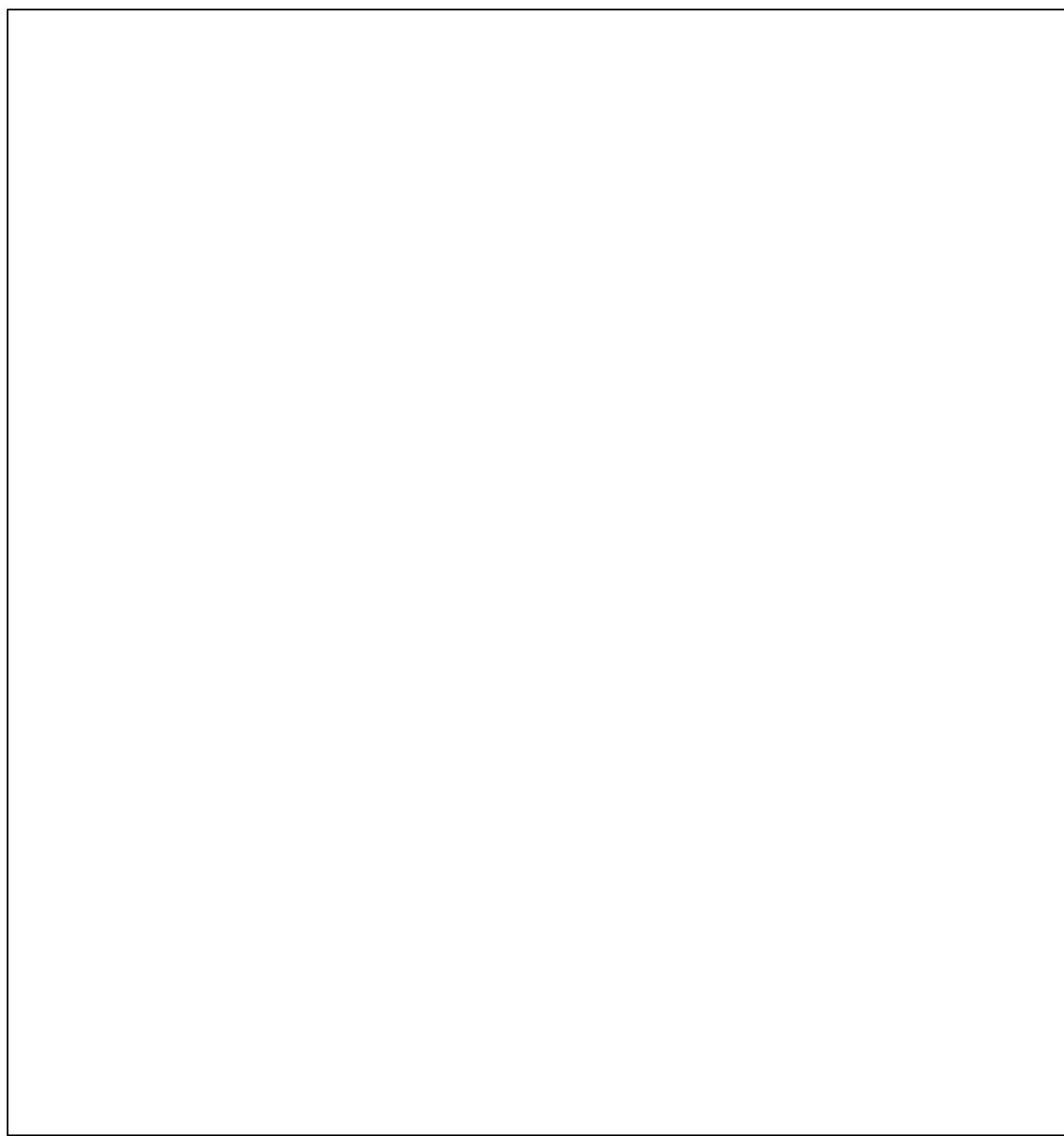
1135 DUNDAS ST. EAST, SUITE 200
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PROJECT
**METRO HALL 11TH
FLOOR - MINOR
OFFICE RENOVATION**

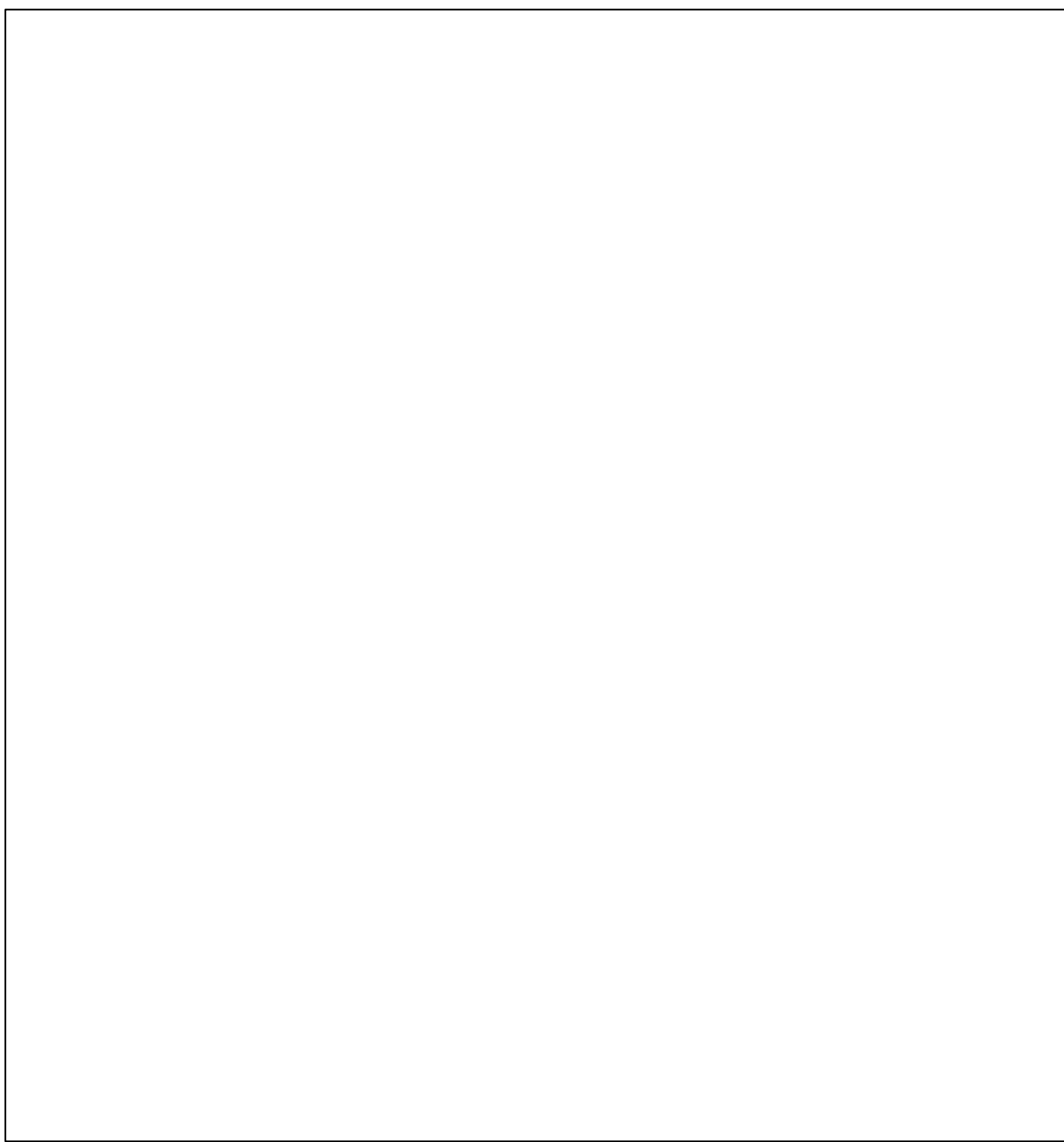
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FLOOR TORONTO, ON

DRAWING
**AUDIO VISUAL
RISER DIAGRAMS**

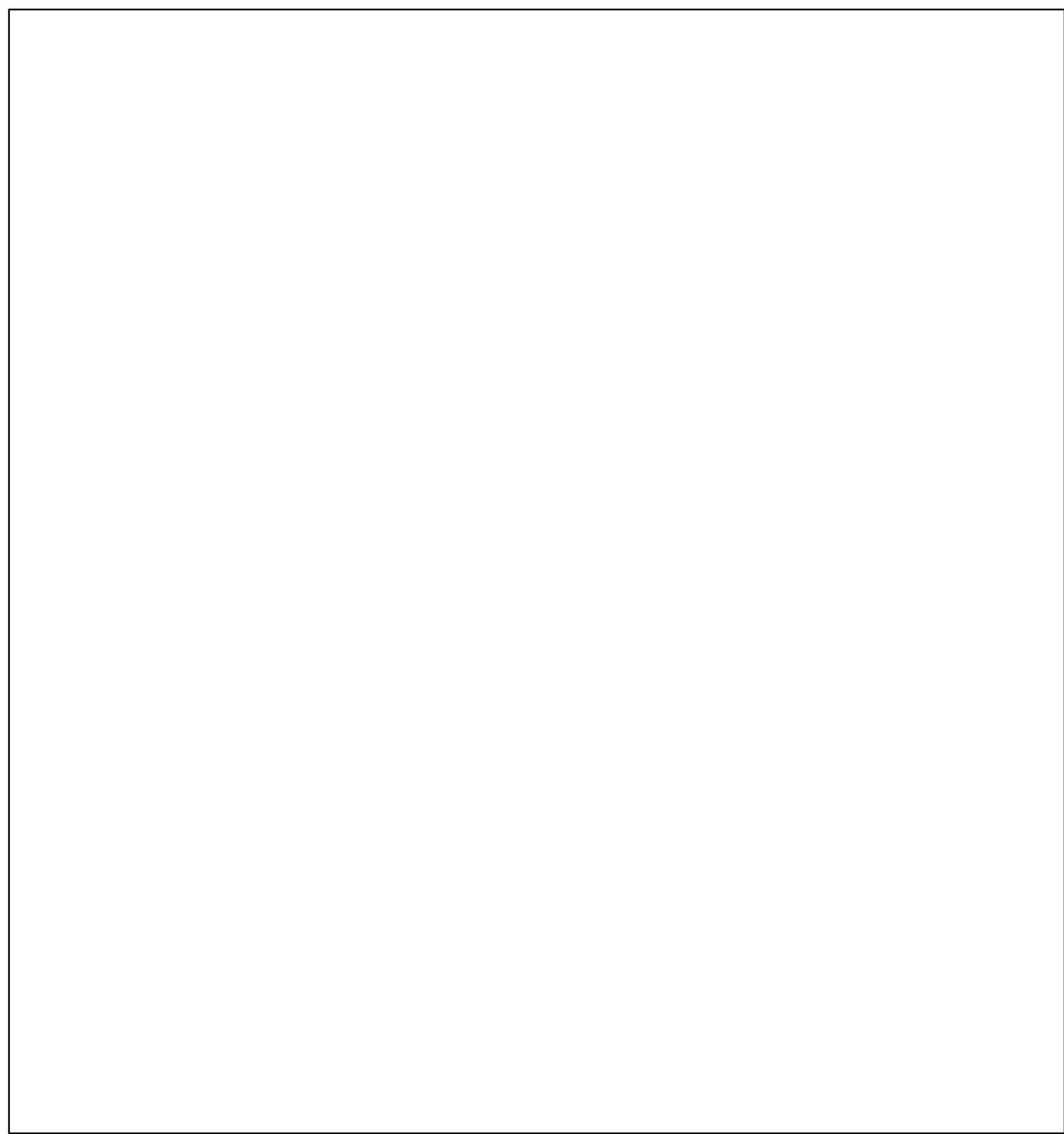
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PROJECT NO.	241168	SHEET #	AV-501



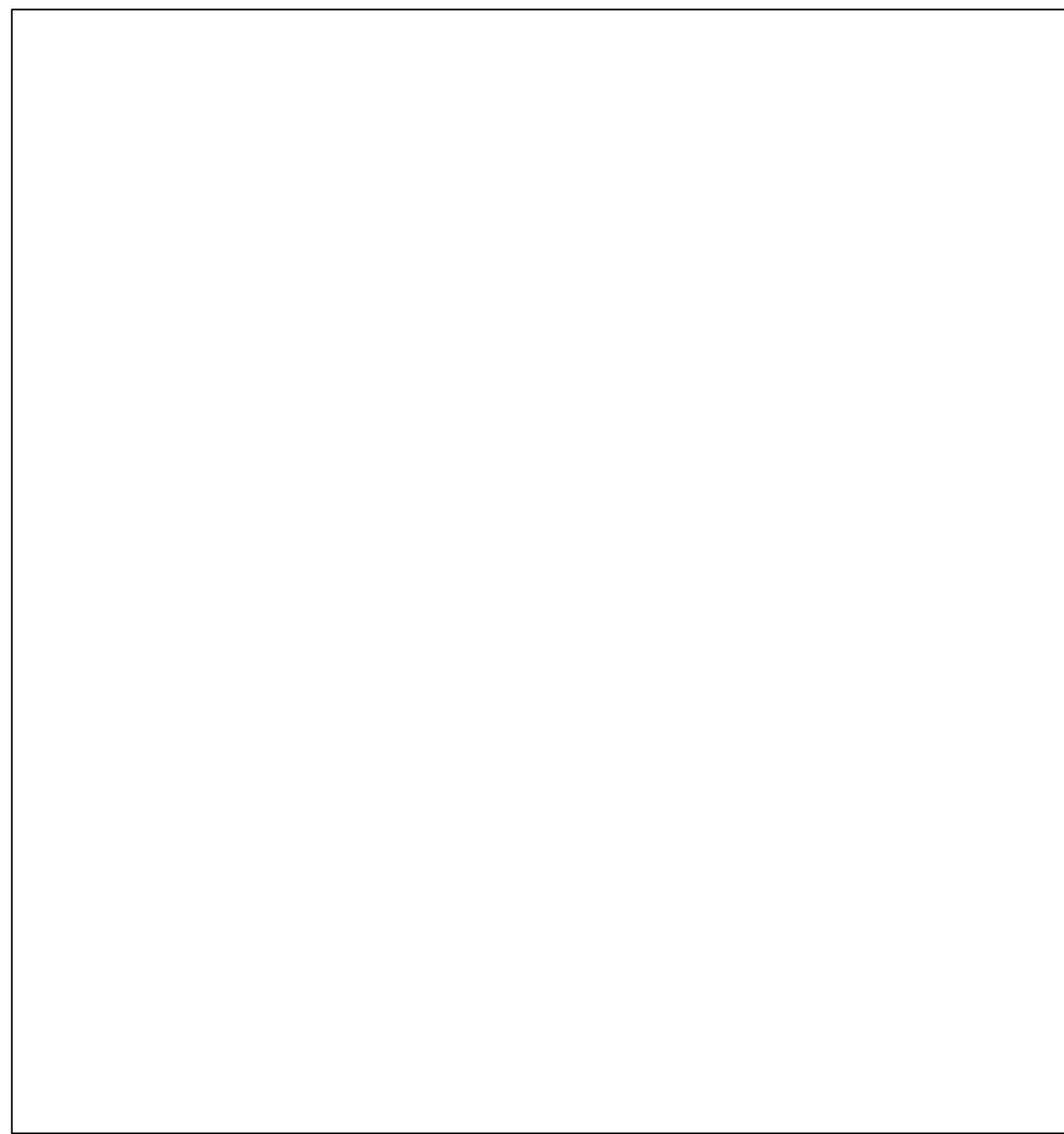
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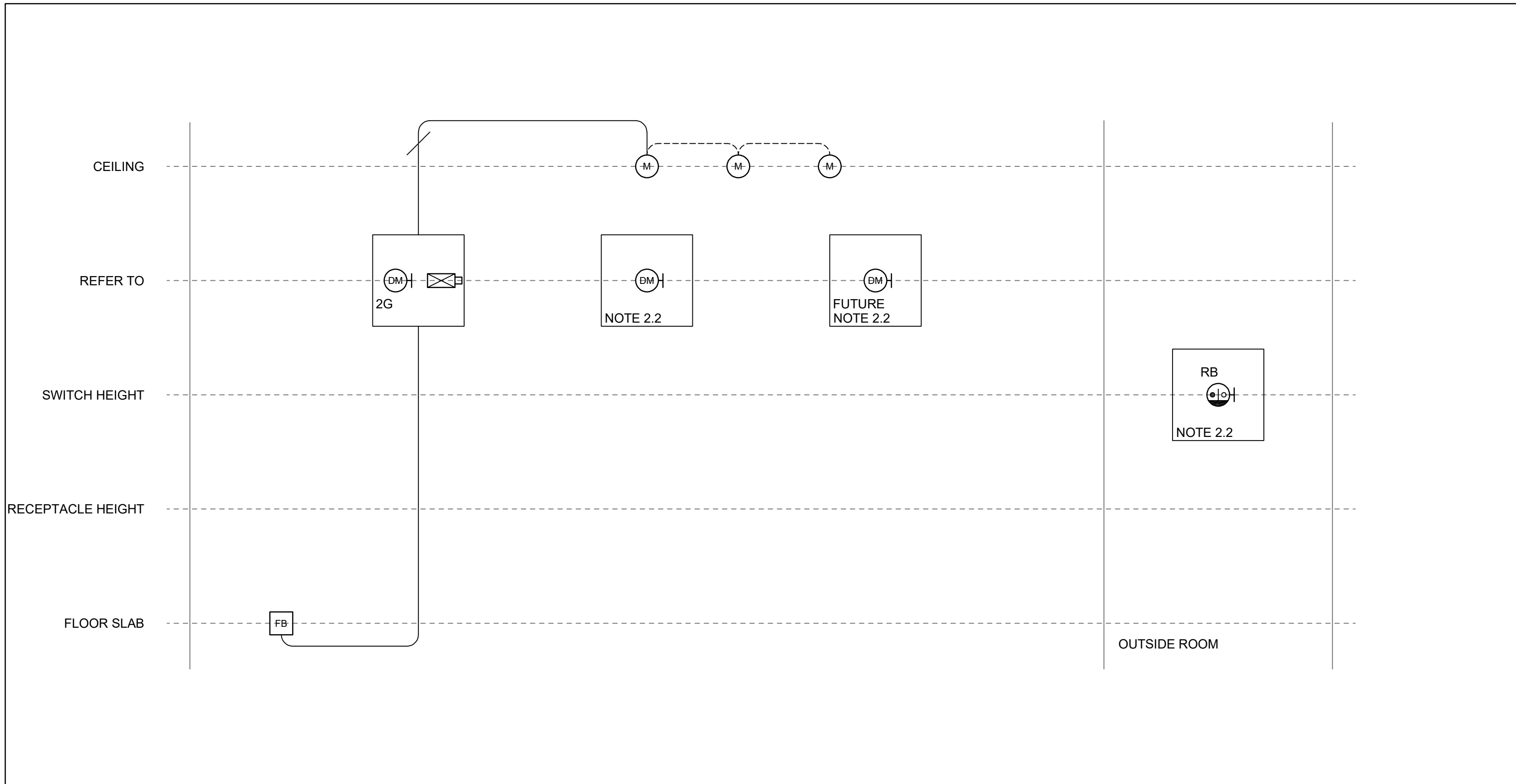
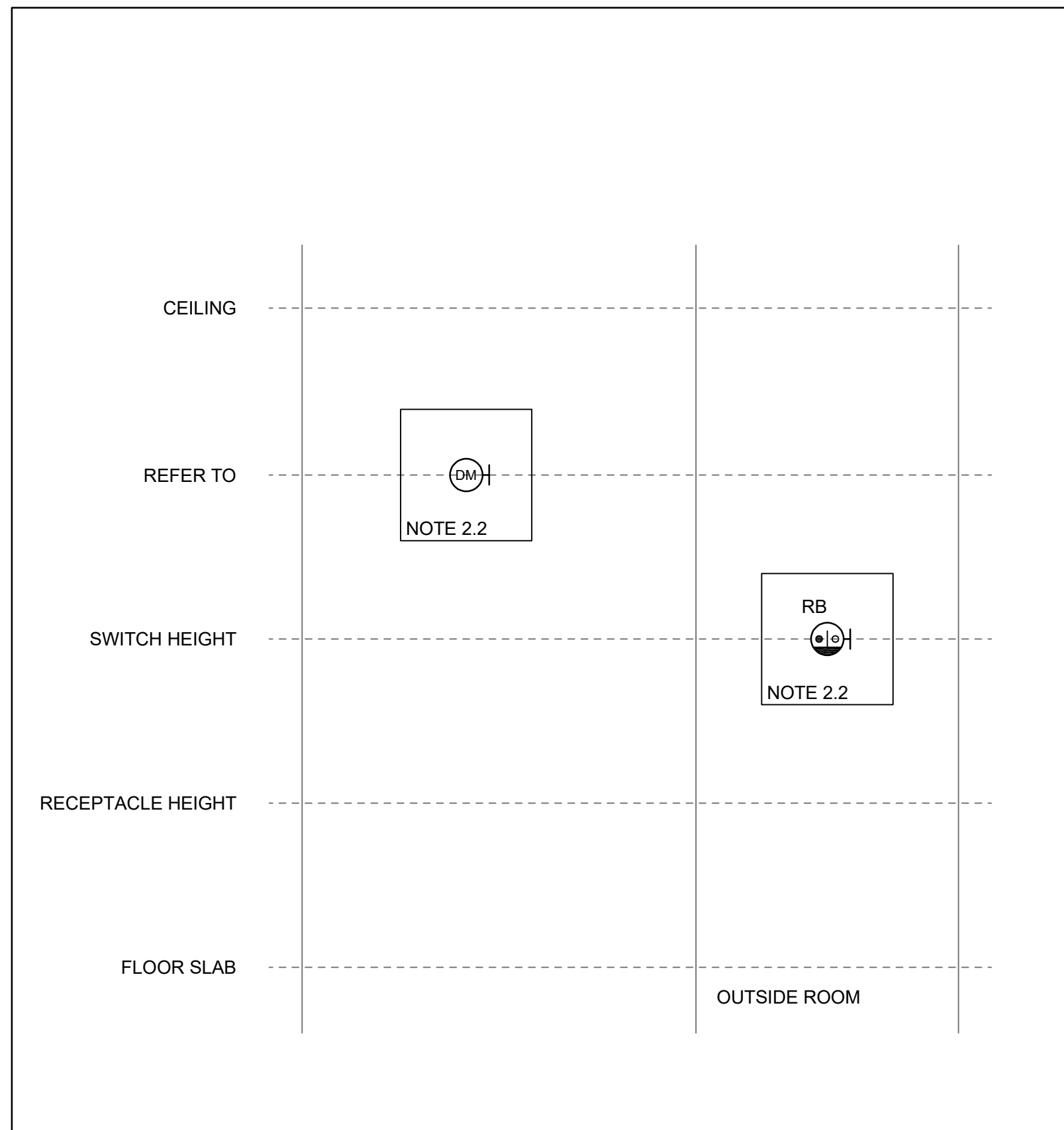
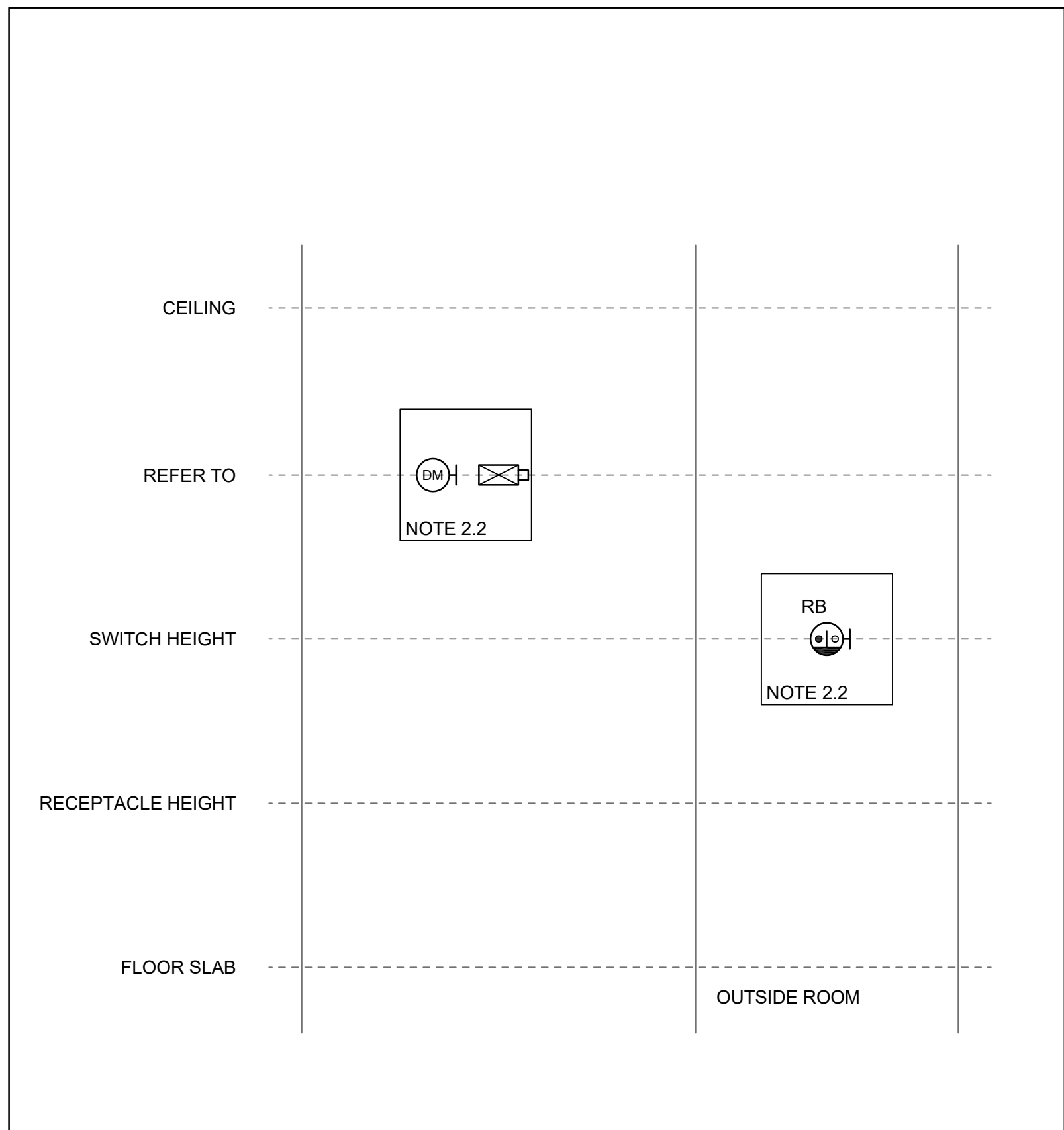
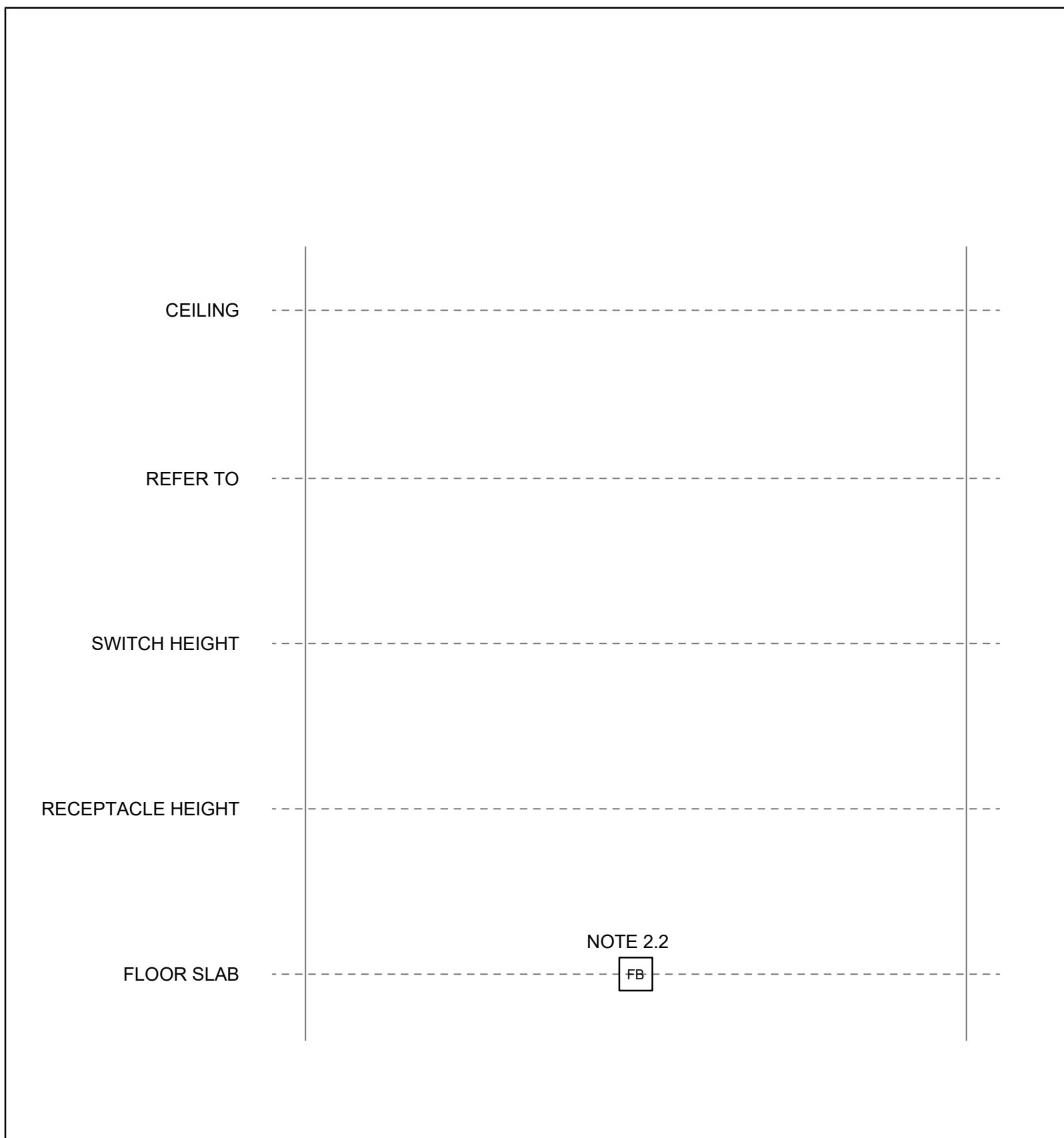
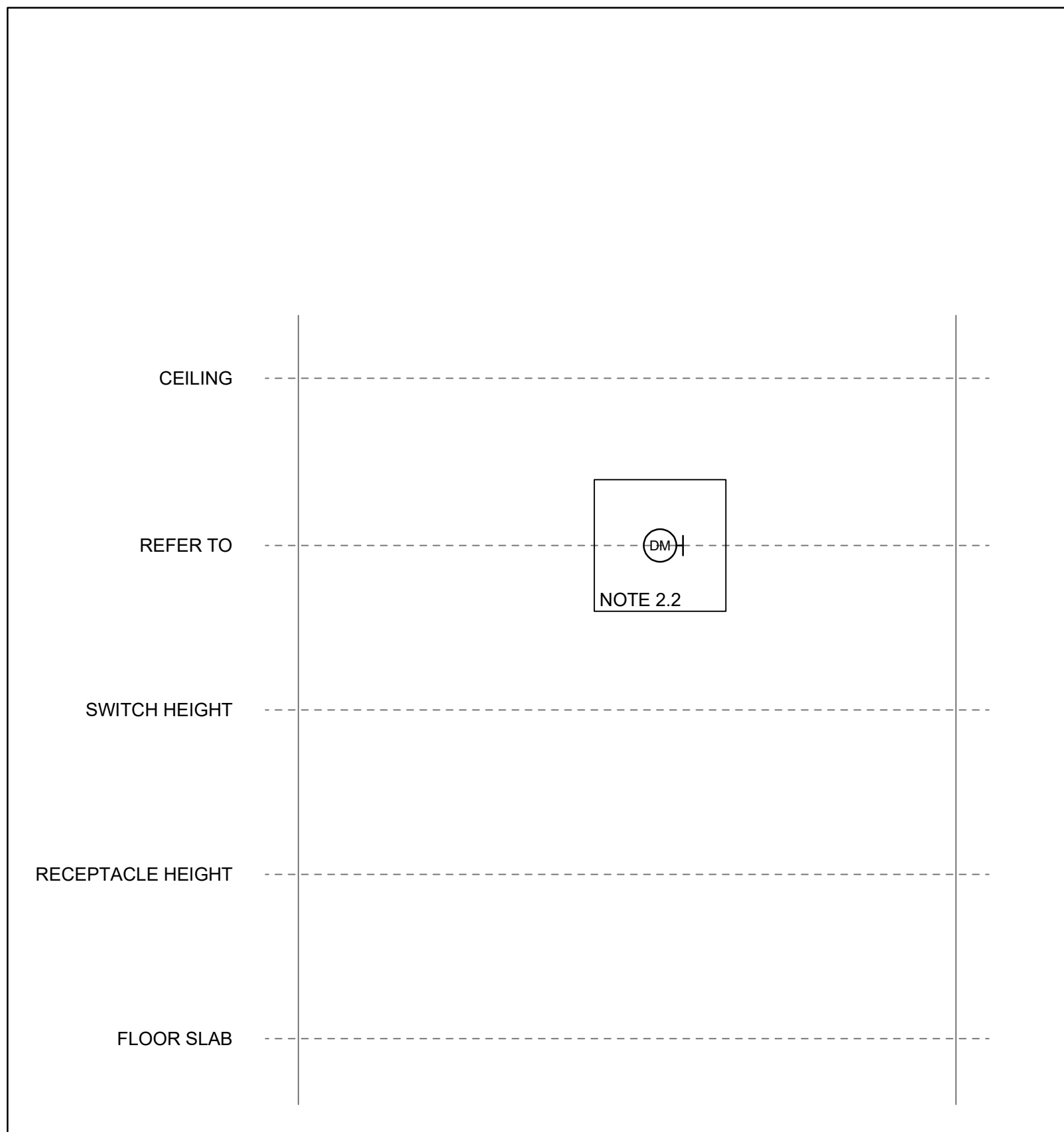
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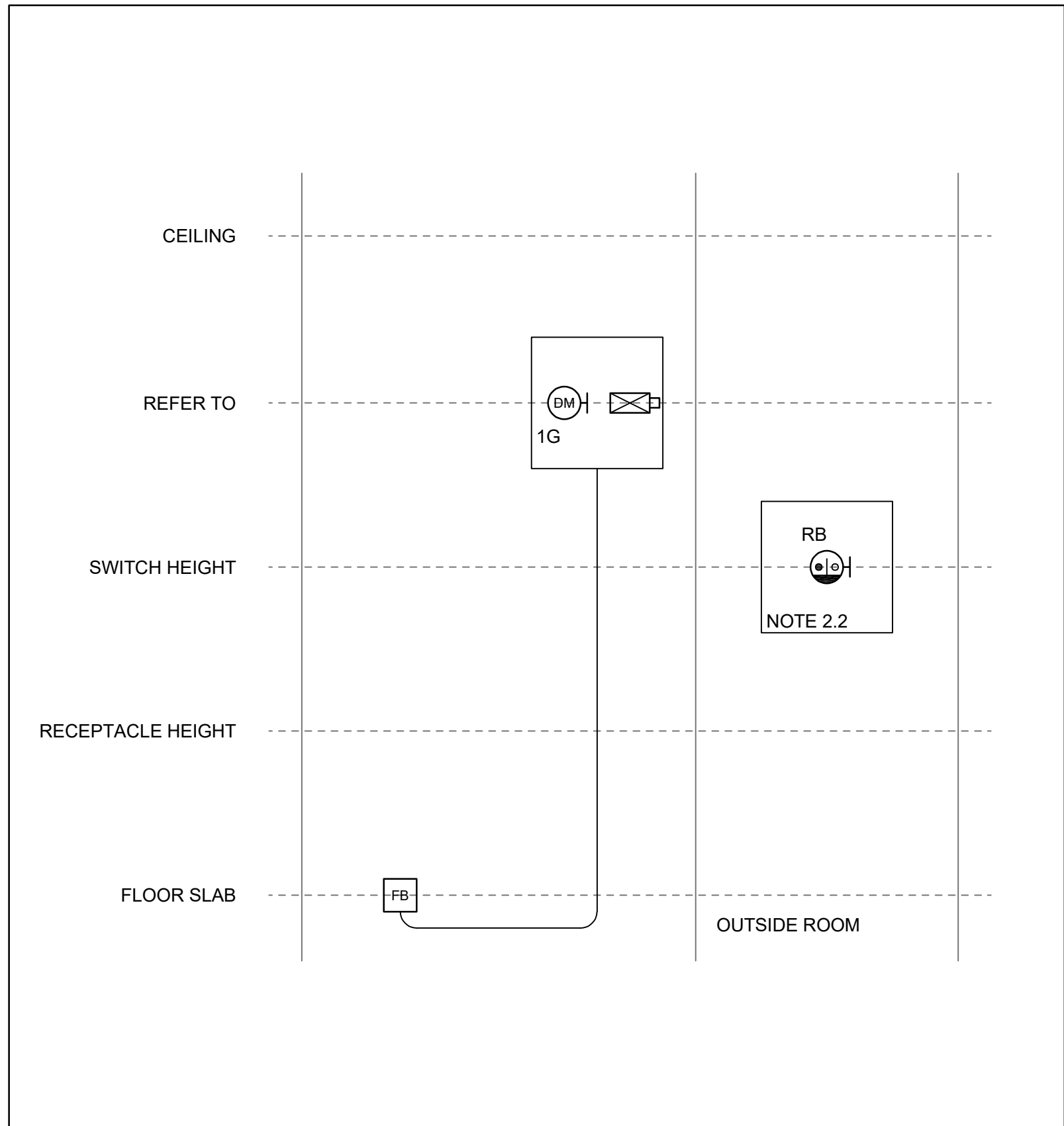
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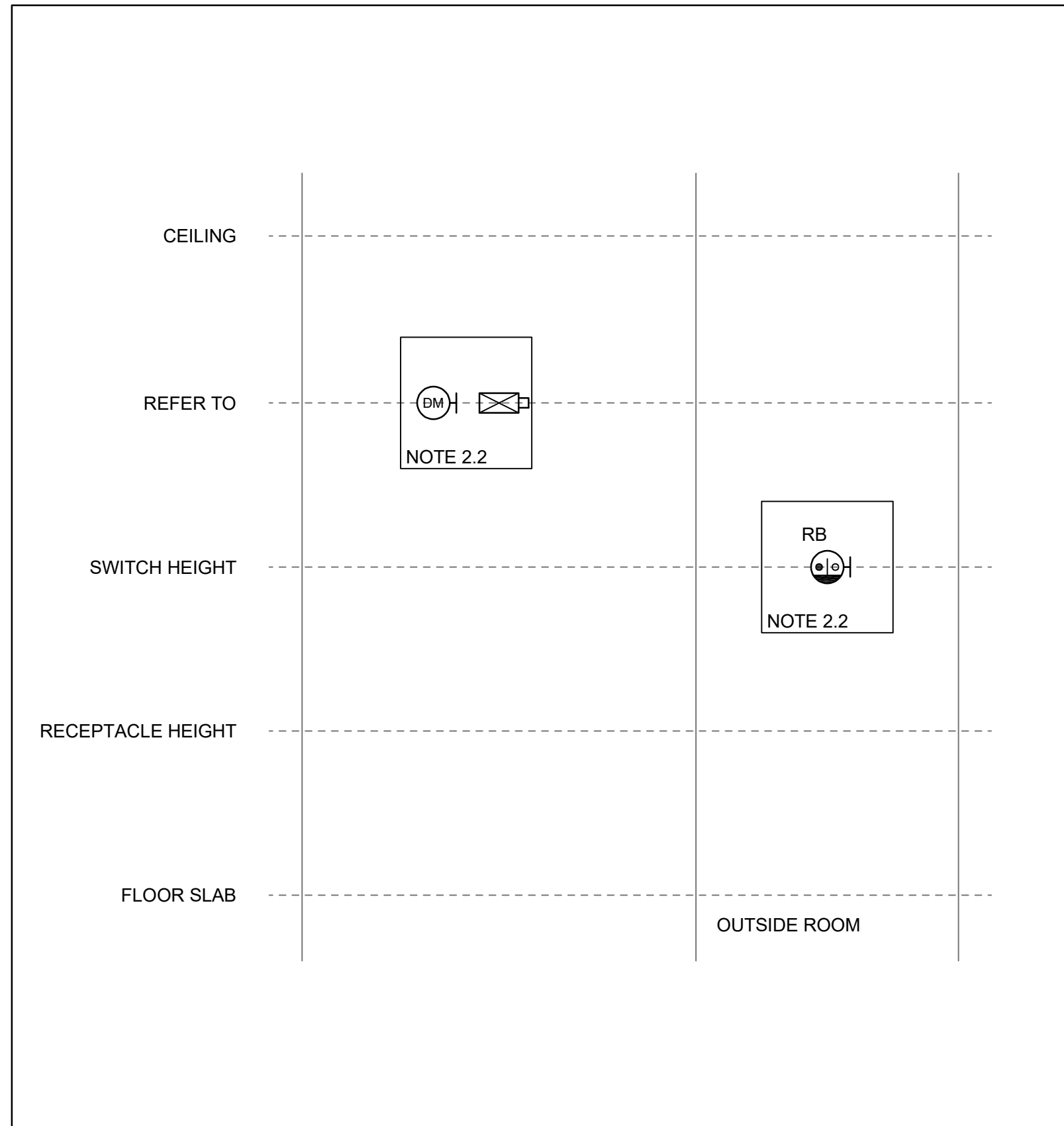
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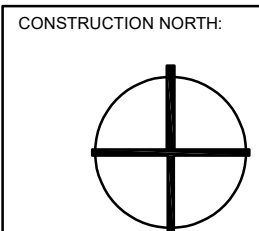
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SCALE: N.T.S.



AVS02 - RISER DIAGRAM
SCALE: N.T.S.



AVS01 - RISER DIAGRAM
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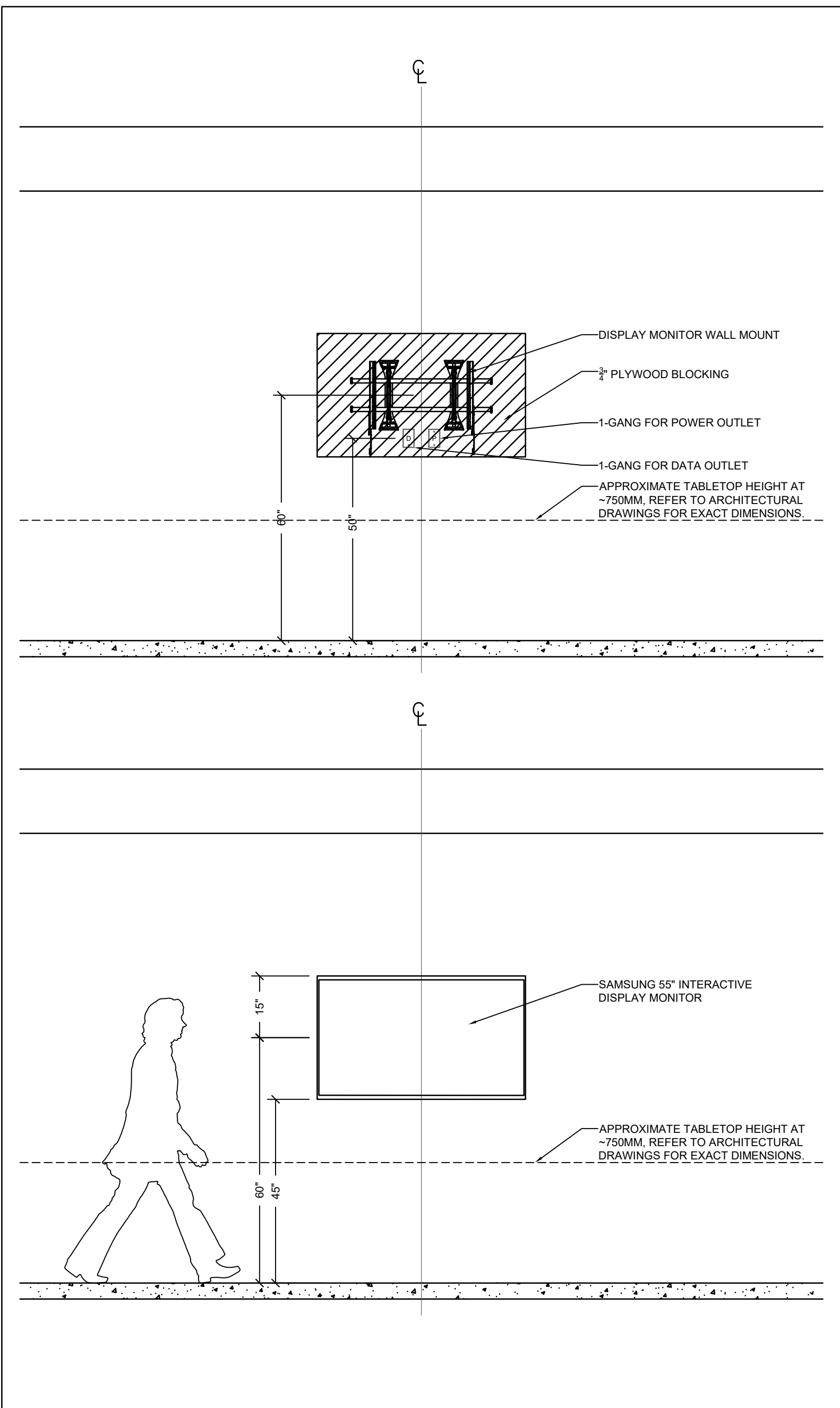
No.	DESCRIPTION	DATE
4.	ISSUED FOR AV ADDENDUM 01	2024-08-16
3.	ISSUED FOR PERMIT TENDER	2024-07-12
2.	ISSUED FOR 90% PAGE TURN REVIEW	2024-07-08
1.	ISSUED FOR 75% PAGE TURN REVIEW	2024-06-28

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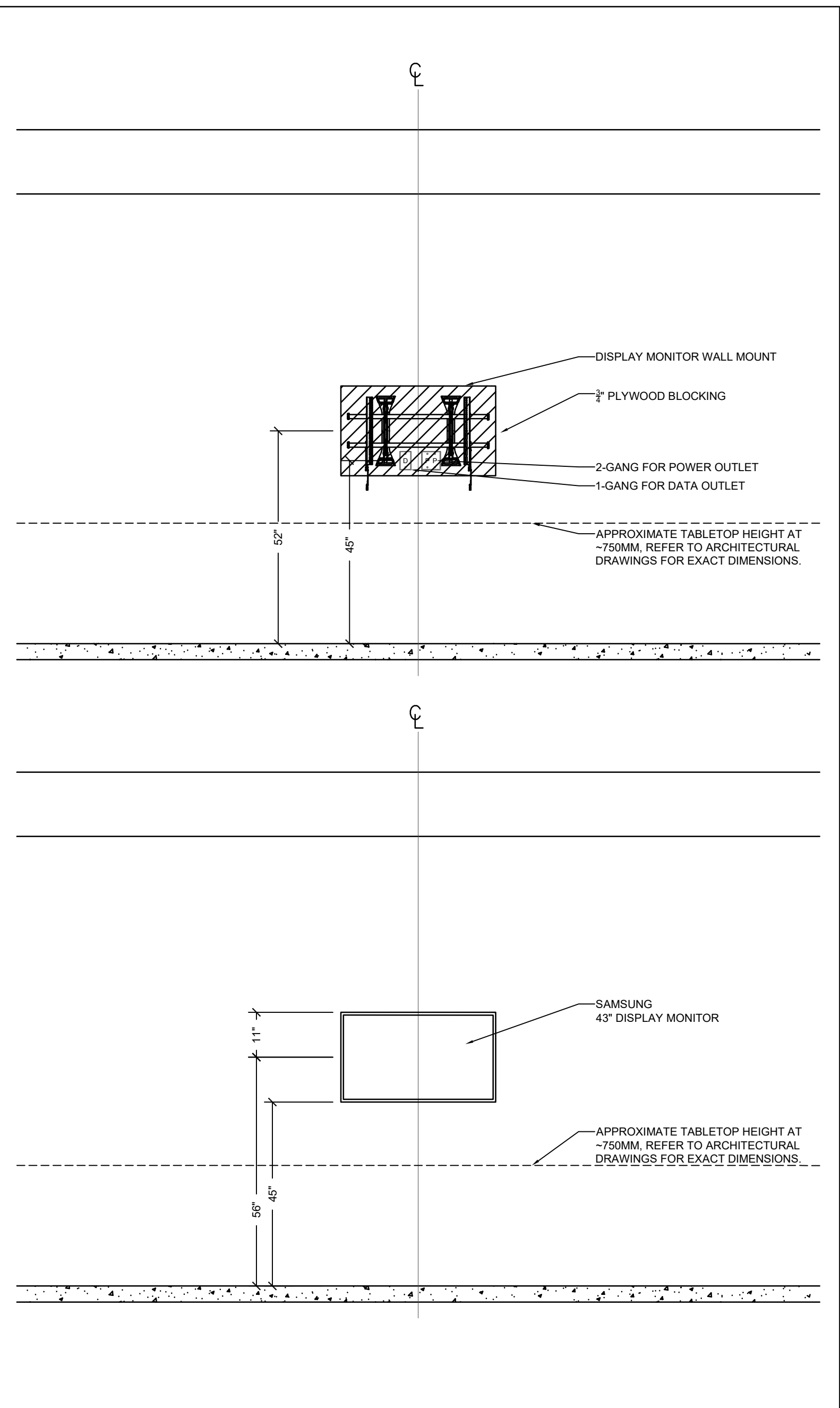
PROJECT
**METRO HALL 11TH
FLOOR - MINOR
OFFICE RENOVATION**
55 JOHN STREET, 11TH
FLOOR TORONTO, ON

DRAWING
**AUDIO VISUAL
ELEVATION DETAILS**

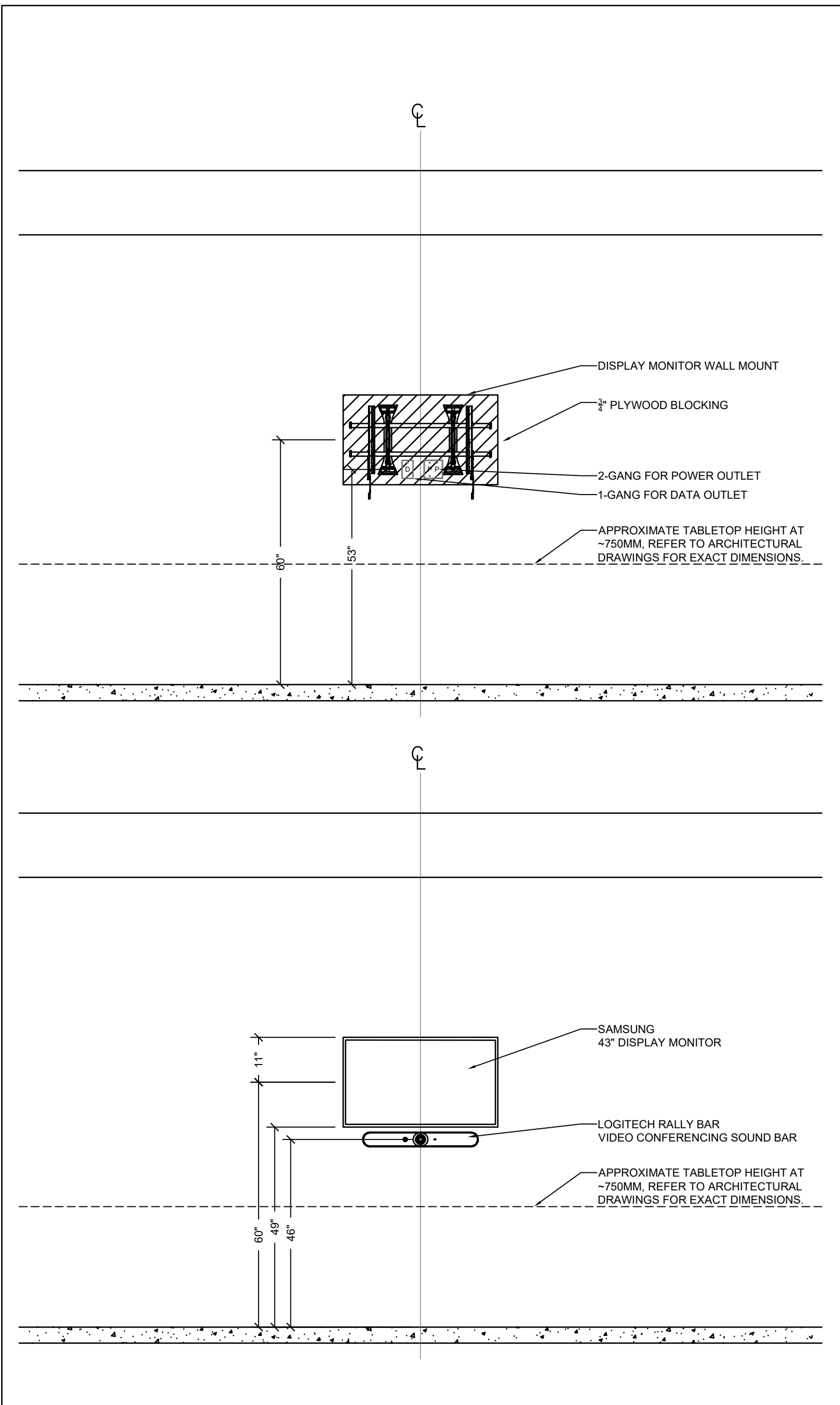
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DRAWN	TY	CHECKED	GR
PROJECT NO	241168	SHEET #	AV-601



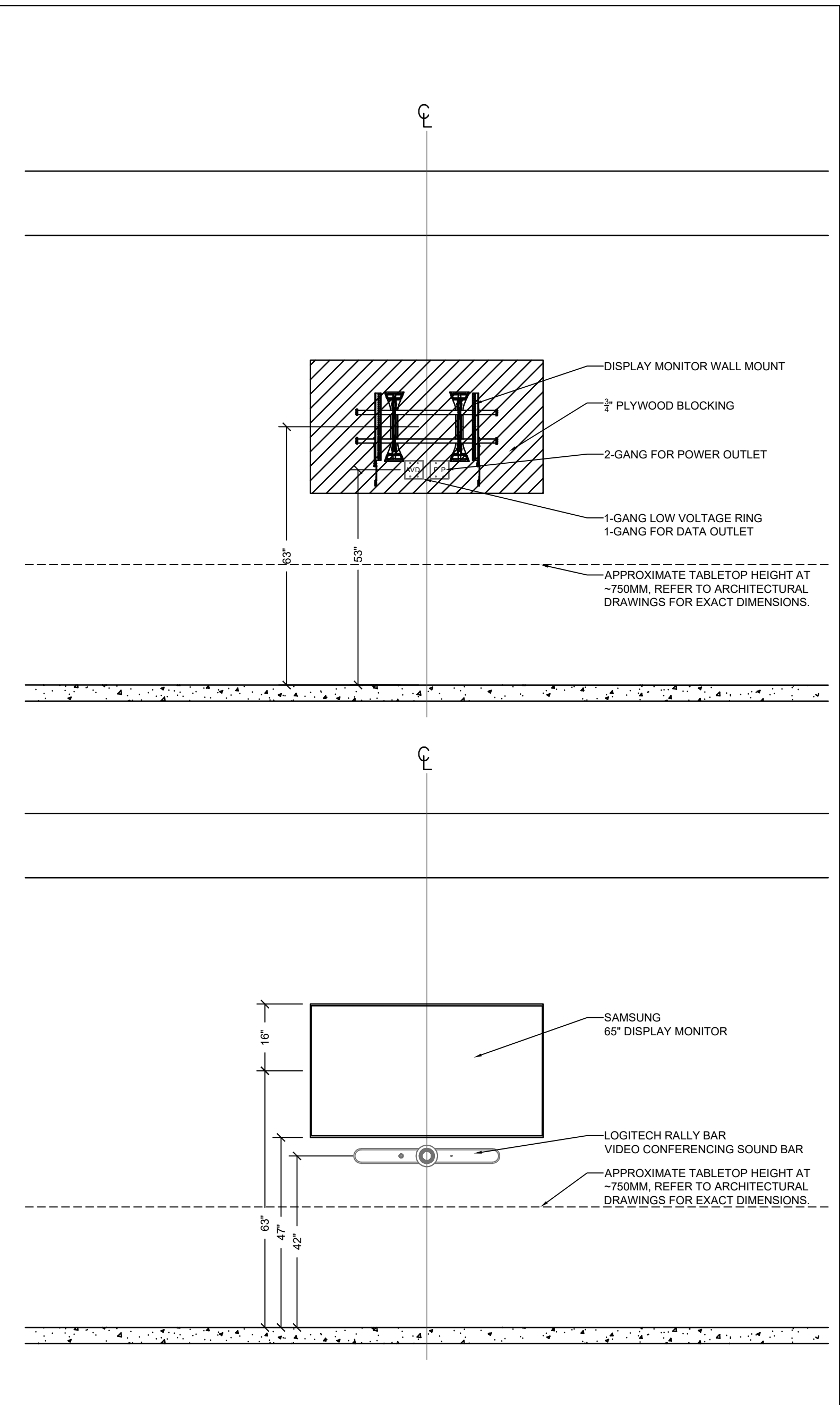
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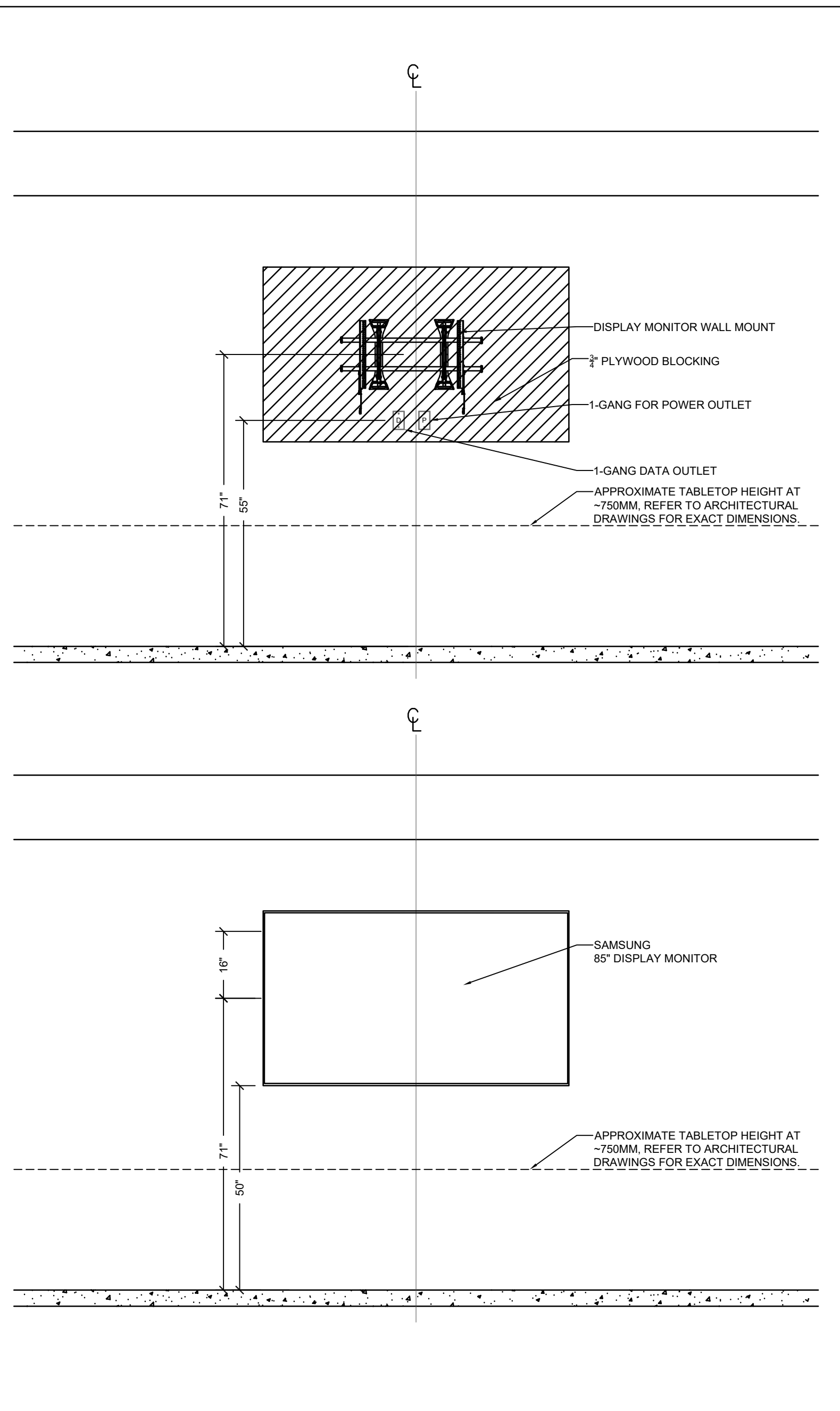
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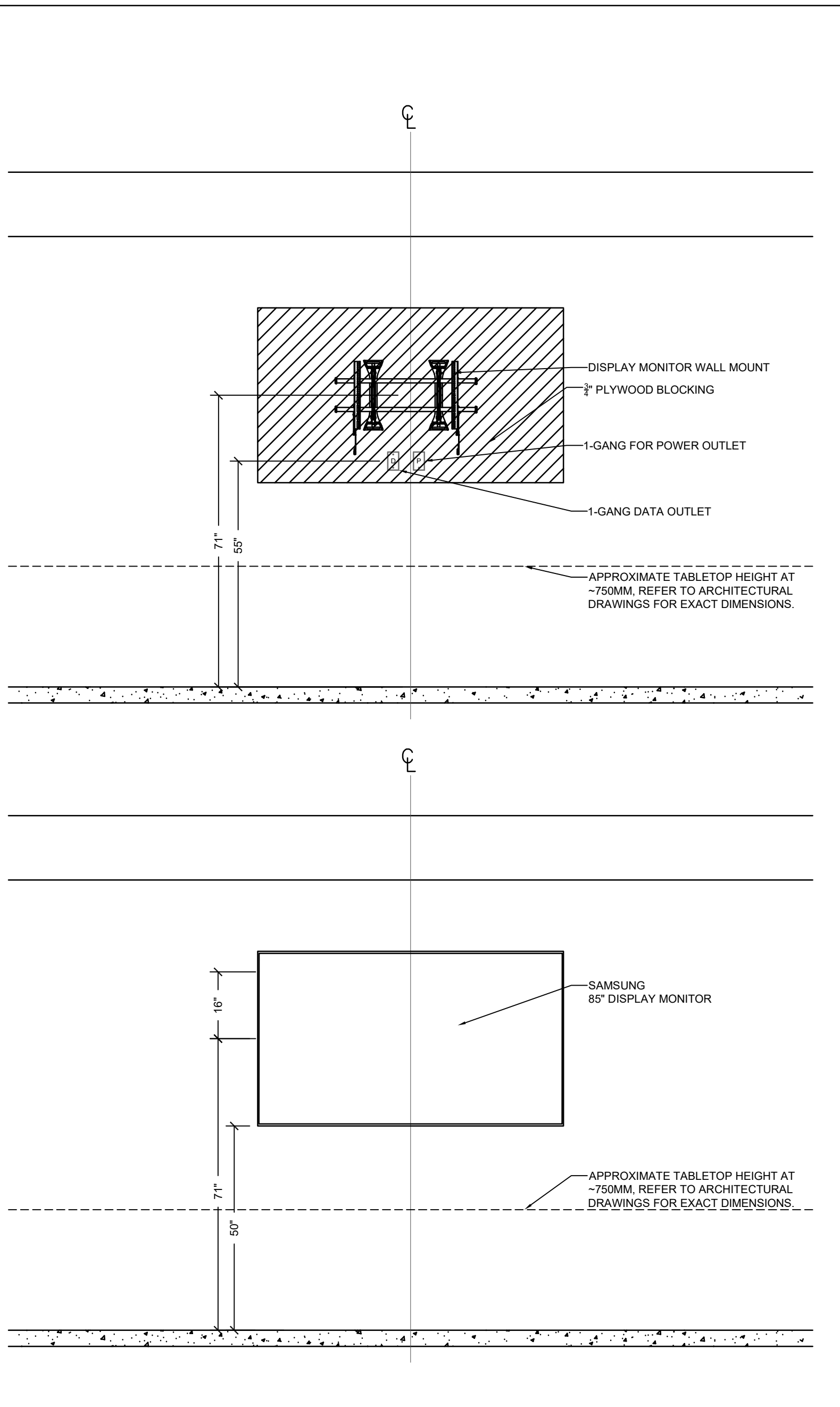
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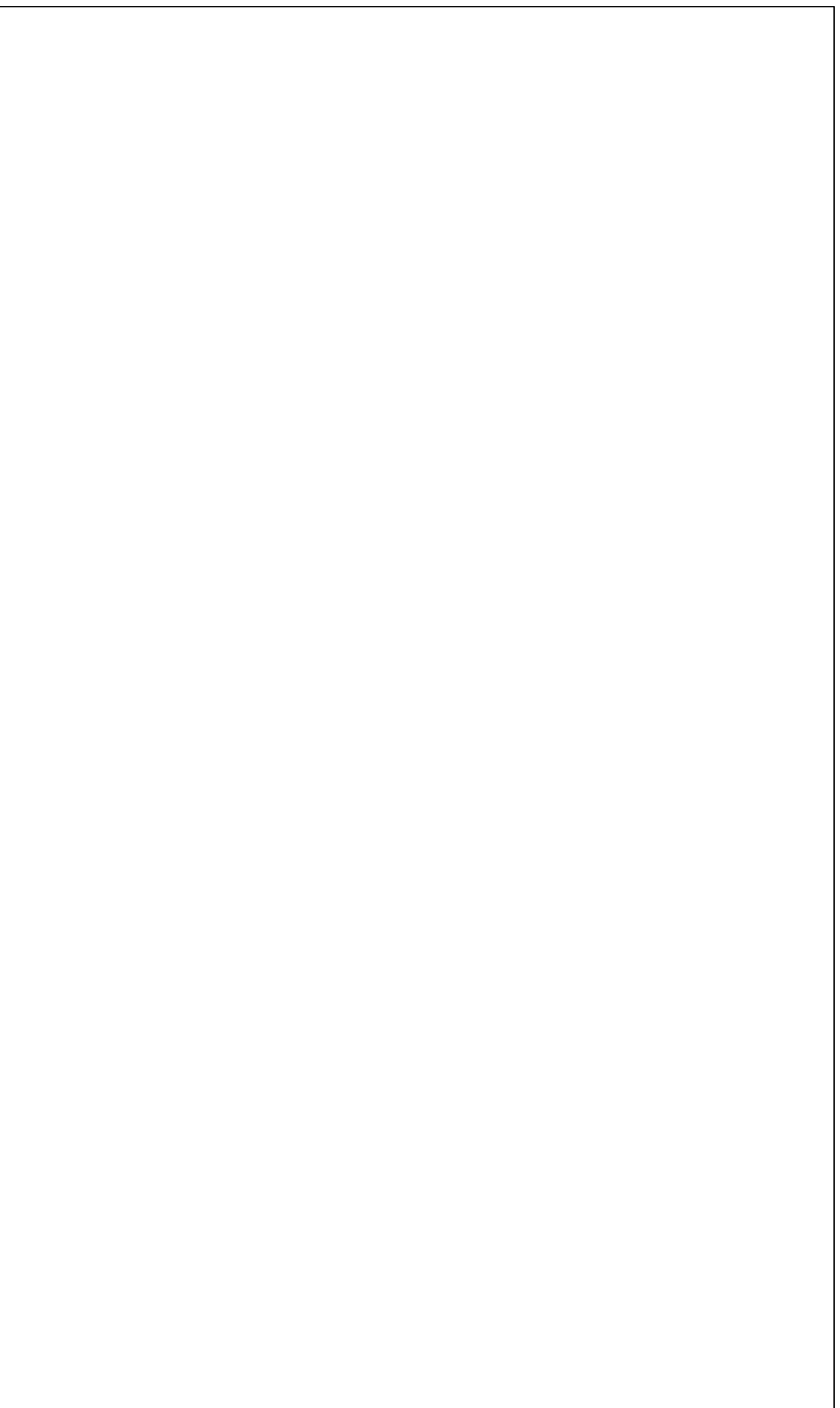
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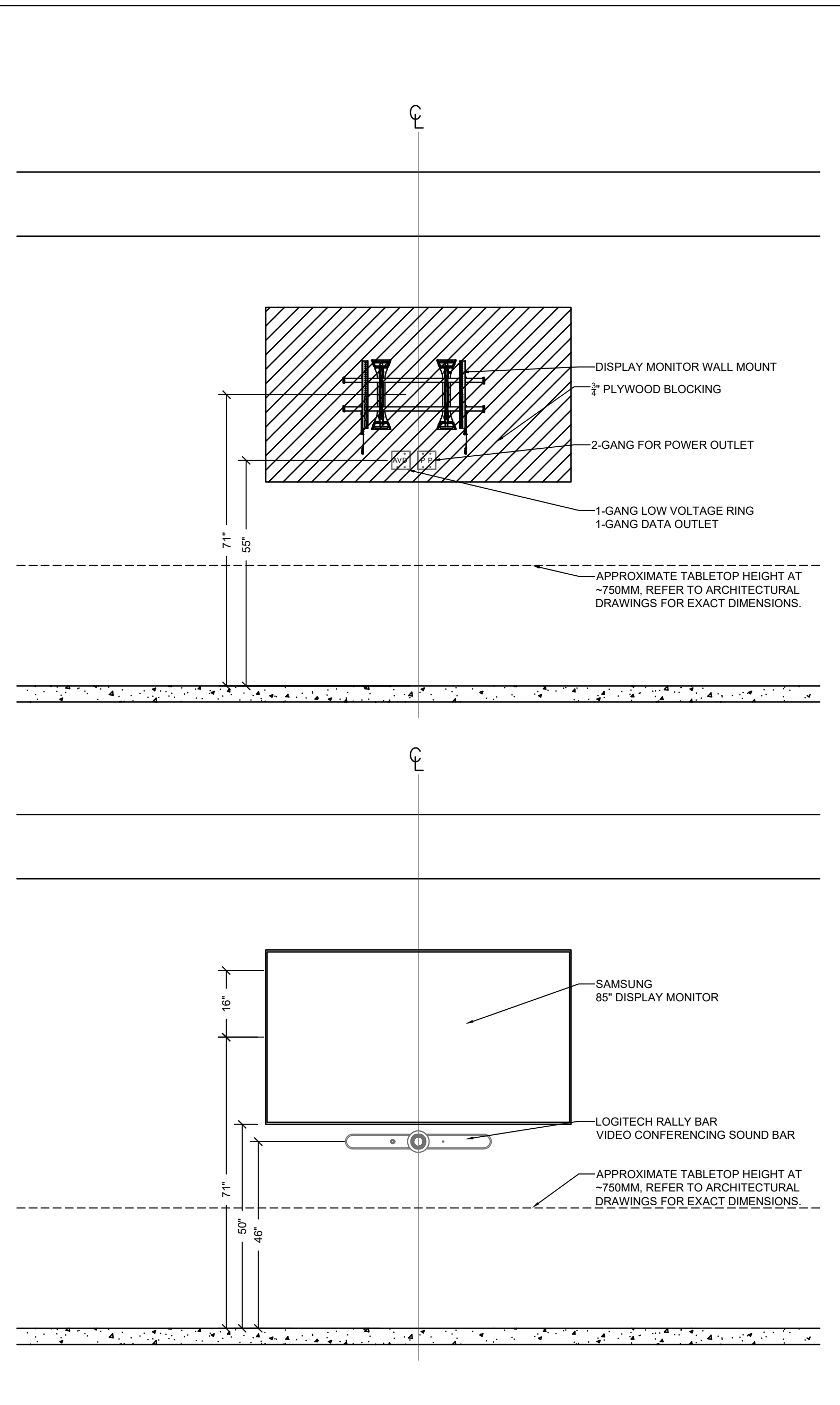
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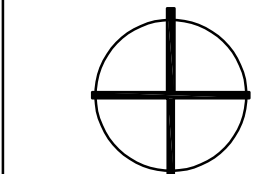
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SCALE: 1:25



3 AVS03 - ELEVATION DETAILS
SCALE: 1:25



3 AVS03 - ELEVATION DETAILS
SCALE: 1:25



4.	ISSUED FOR AV ADDENDUM 01	2024-08-10
3.	ISSUED FOR PERMIT TENDER	2024-07-12
2.	ISSUED FOR 90% PAGE TURN REVIEW	2024-07-08
1.	ISSUED FOR 75% PAGE TURN REVIEW	2024-06-28
No.	DESCRIPTION	DATE
ISSUE RECORD		

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PROJECT
**METRO HALL 11TH
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OFFICE RENOVATION**
55 JOHN STREET, 11TH
FLOOR TORONTO, ON

DRAWING
**AUDIO VISUAL
DETAIL DRAWINGS**

SCALE	N.T.S.	DATE	2024/06/11
DRAWN	TY	CHECKED	GR
PROJECT NO	241168	SHEET #	AV-701

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241168 - Metro Hall 11th Floor - Minor Renovation - AV-701.dwg