1. ALL WORK SHALL CONFORM TO 2018 INTERNATIONAL BUILDING CODE AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT, MISSOURI.
2. DESIGN LOADS

A.	OVERALL BUILDING CLASSIFICATIONS		
	1.	RISK CATEGORY	III
	2.	SNOW IMPORTANCE FACTOR, I_s	1.10
	3.	ICE IMPORTANCE FACTOR - WIND, I_w	1.00
	4.	SEISMIC IMPORTANCE FACTOR, I_e	1.25
B.	SLAB ON GRADE FLOOR LOADS		
	1.	LIVE LOAD	100 PSF
	2.	CONCENTRATED LOAD	3000 LB ACTING ON AN AREA 4.5 IN. BY 4.5 IN.
C.	ROOF DEAD AND LIVE LOADS		
	1.	DEAD LOAD TOP CHORD	20 PSF
	2.	DEAD LOAD BOT. CHORD	5 PSF
	3.	LIVE LOAD TOP CHORD	20 PSF
	4.	LIVE LOAD BOT. CHORD	0 PSF (U.N.O)
D.	ROOF SNOW LOADS		
	1.	GROUND SNOW LOAD, P_g	20 PSF
	2.	FLAT ROOF SNOW LOAD, P_f	15.4 PSF
	3.	SNOW EXPOSURE FACTOR, C_e	1.00
	4.	THERMAL FACTOR, C_t	1.00
	5.	SLOPE FACTOR, C_s	1.00
	6.	DRIFTING	PER CODE
E.	WIND LOADS		
	1.	BASIC WIND SPEED (3 SECOND GUST)	120 MPH
	2.	EXPOSURE CATEGORY	C
	3.	INTERNAL PRESSURE COEFFICIENT, GC_{pi}	+/- 0.18
	4.	COMPONENTS AND CLADDING PER ASCE 7-16.	
F.	SEISMIC LOADS		
	1.	S_S	0.100
	2.	S_1	0.068
	3.	SITE CLASS	C
	4.	S_{DS}	0.087
	5.	S_{D1}	0.068
	6.	SEISMIC DESIGN CATEGORY	B
	7.	SEISMIC FORCE RESISTING SYSTEM	STEEL ORDINARY MOMENT FRAMES; ORDINARY REINFORCED MASONRY SHEAR WALLS
	8.	DESIGN BASE SHEAR	C_SW
	9.	DESIGN RESPONSE COEFFICIENT, C_S	0.054
	10.	RESPONSE MODIFICATION COEFFICIENT, R	3.5; 2
	11.	ANALYSIS PROCEDURE USED	EQUIVALENT LATERAL FORCE (ELF) PROCEDURE
G.	ROOF RAIN LOADS		
	1.	60-MIN DURATION/100 YEAR RAIN INTENSITY, i	3.91 IN/HR
	2.	15-MIN DURATION/100 YEAR RAIN INTENSITY, i	8.3 IN/HR

3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO FABRICATION.
4. IF DISCREPANCIES EXIST BETWEEN CONTRACT DRAWINGS, AND/OR SHOP DRAWINGS NOTIFY THE ENGINEER OF RECORD.
5. THE CONTRACTOR SHALL REVIEW DRAWINGS FROM ALL OTHER DISCIPLINES FOR PERTINENT MISC. ITEMS OR INFORMATION RELATED TO THE STRUCTURAL WORK AND COORDINATE AS REQUIRED.
6. THE BUILDING IS NOT STRUCTURALLY STABLE UNTIL ALL CONNECTIONS, FRAMING, SHEAR WALLS, PERMANENT BRACING, AND EXTERIOR LOAD-BEARING WALLS ARE COMPLETE AND HAVE ACHIEVED THEIR RESPECTIVE DESIGN STRENGTHS. CONTRACTOR IS SOLELY RESPONSIBLE FOR MAINTAINING STRUCTURAL STABILITY DURING ERECTION AND CONSTRUCTION. TEMPORARY BRACING SYSTEMS ARE NOT TO BE REMOVED UNTIL STRUCTURAL WORK IS COMPLETE.
7. PROVIDE ADEQUATE SHORING DURING CONSTRUCTION TO RESIST FORCES SUCH AS WIND AND UNBALANCED LOADS DUE TO CONSTRUCTION. DO NOT BACKFILL UNTIL CONCRETE HAS CURED 14 DAYS.
8. FOUNDATIONS
   - A. FOUNDATIONS ARE DESIGNED TO BEAR ON 2000 PSF FOR STRIP FOOTINGS ON SOIL AND 2400 PSF FOR SPREAD FOOTINGS ON SOIL.
   - B. COMPLY WITH ALL ASPECTS OF SOILS REPORT "AOG 230378 E" DATED JULY 07, 2023 PREPARED BY ALPHA-OMEGA GEOTECH, INC.
   - C. CONTRACTOR SHALL REMOVE EXISTING FOOTINGS AND FOUNDATIONS THAT ARE LOCATED WITHIN THE FOOTPRINT OF THE NEW BUILDING.
   - D. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNUSUAL SOIL CONDITIONS THAT ARE IN VARIANCE WITH THE GEOTECHNICAL REPORT OR WHEN DIFFERENT BEARING MATERIAL IS EVIDENT AND THERE IS A QUESTION OF BEARING CAPACITY.
9. CONCRETE
   - A. CAST-IN-PLACE CONCRETE CONSTRUCTION SHALL CONFORM TO LATEST APPLICABLE AMERICAN CONCRETE INSTITUTE DOCUMENTS, ACI-301, 305, 306, 315, 318, AND 347 UNLESS NOTED OTHERWISE IN THESE CONTRACT DOCUMENTS.
   - B. ALL CONCRETE, UNLESS NOTED OTHERWISE, SHALL DEVELOP A 28 DAY COMPRESSIVE STRENGTH AND HAVE MAXIMUM DRY SHRINKAGE PER ASTM C157 AS FOLLOWS:
     - 1. FOOTINGS, GRADE BEAMS, WALLS, BEAMS, COLUMNS: 4000 PSI (DS MAX 0.05%)
     - 2. SLAB ON GRADE: 4000 PSI (DS MAX 0.05%)
     - 3. REFER TO THE SPECIFICATION FOR AIR-ENTRAINED CONCRETE.
   - C. SLABS-ON-GRADE SHALL DEVELOP A 90 DAY COMPRESSIVE STRENGTH.
   - D. IT IS THE INTENT OF THESE CONCRETE SPECIFICATIONS THAT THE CONTRACTOR SUPPLY CONCRETE MIXES WITH A MINIMUM AMOUNT OF WATER IN ORDER TO LIMIT PLASTIC SHRINKAGE CRACKING IN FRESHLY PLACED CONCRETE. IT IS EXPECTED THAT PRODUCING WORKABILITY FOR CONCRETE MIXES WILL REQUIRE THE ADDITION OF WATER-REDUCING CHEMICAL ADMIXTURES.
   - E. CONCRETE MIX DESIGNS SHALL INCLUDE ALL APPLICABLE ADMIXTURES.
   - F. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C-145) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY IF ADMIXTURE IS TO BE ADDED IN THE FIELD IS SHALL BE ADDED THROUGH THE USE OF AN EXTERNAL MEASURING DEVICE (I.E. 5 GALLON BUCKET).
   - G. CONCRETE EXPOSED TO WEATHER, PARKED VEHICLES, AND/OR DEICING CHEMICAL SHALL CONTAIN 6% (+/- 1%) ENTRAINED AIR BY VOLUME.
   - H. CHAMFER ALL EXPOSED CORNERS OF CONCRETE WALLS, 3/4" UNLESS NOTED OTHERWISE.
   - I. ALL CONTROL JOINTS IN CONCRETE SLABS-ON-GRADE SHALL BE CUT TO 1/3 OF DEPTH WHEN USING WET-CUTTING PROCESS AND 1/4 OF DEPTH WHEN USING EARLY-ENTRY DRY-CUT PROCESS. CUT JOINTS AS SOON AS APPLICABLE PER PROCESS USED AFTER CONCRETE HAS BEEN PLACED WITHOUT DISLODGING AGGREGATE, OR USE A KEYED COLD JOINT.
   - J. CUT SLABS-ON-GRADE INTO AREAS OF APPROXIMATELY 225 SQUARE FEET MAINTAINING AS CLOSE TO SQUARE AREAS AS POSSIBLE. LENGTH TO WIDTH RATIOS OF JOINTED PANELS SHALL NOT EXCEED 1.5:1. COORDINATE LOCATIONS OF CONTROL JOINTS WITH ARCHITECT.
   - K. CONTROL JOINTS IN WALLS SHALL BE PLACED AT 20'-0" O.C. MAXIMUM UNLESS NOTED OTHERWISE. LOCATE JOINTS BESIDE PIERS INTEGRAL WITH WALLS, NEAR CORNERS, AND IN CONCEALED LOCATIONS WHERE POSSIBLE. CONSTRUCTION JOINTS MAY BE PLACED IN LIEU OF CONTROL JOINTS AT CONTRACTOR'S DISCRETION. COORDINATE LOCATION OF CONTROL JOINTS WITH ARCHITECT.
   - L. PRIOR TO PLACING CONCRETE IN ANY LOCATION, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO HAVE THOROUGHLY CHECKED AND COORDINATED ALL DIMENSIONS, ELEVATIONS, OPENINGS, RECESS, AND BLOCKOUTS AS SHOWN ON ANY CONTRACT DRAWINGS. IN THE EVENT ERRORS, CONFLICTS, OR OMISSIONS EXIST, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE ARCHITECT OR ENGINEER FOR NECESSARY CORRECTIVE ACTION.
   - M. EMBEDDED ITEMS ARE TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR PRIOR TO PLACING CONCRETE.
   - N. ANCHOR RODS AND ANCHOR BOLTS SHALL BE HELD IN PLACE WITH A RIGID TEMPLATE
   - O. HORIZONTAL JOINTS BEYOND THOSE SHOWN IN THE CONTRACT DOCUMENTS SHALL NOT BE CONSTRUCTED WITHOUT THE APPROVAL OF THE ARCHITECT AND ENGINEER.
10. REINFORCING STEEL
   - A. ALL REINFORCING SHALL BE ASTM A615 GRADE 60, EXCEPT WELDED REINFORCING WHICH SHALL BE ASTM A706 GRADE 60.
   - B. ALL WELDED WIRE FABRIC SHALL BE ASTM A82 COLD DRAWN WIRE.
   - C. ALL ACCESSORIES FOR SUPPORTING REINFORCING SHALL BE GALVANIZED OR HAVE PLASTIC-COATED FEET.
   - D. PROVIDE CORNER BARS AT THE EXTERIOR FACE OF ALL WALL AND FOOTING CORNERS EQUAL TO HORIZONTAL BARS.
   - E. REINFORCING SHALL BE DETAILED, FABRICATED, PLACE, AND SUPPORTED IN ACCORDANCE WITH ACI 315, LATEST APPLICABLE EDITION.
   - F. STANDARD COVERAGE OF REINFORCING SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE.

1.	PERMANENTLY EXPOSED TO WEATHER		
	A.	CAST AGAINST EARTH	3"
	B.	IN CONTACT WITH WATER	3"
	C.	FORMED	2"
2.	NOT EXPOSED TO EARTH OR WEATHER		
	A.	SLABS AND WALLS	3/4"
	B.	BEAMS AND COLUMNS	1 1/2"

   - G. SPLICE LENGTH

1.	3000 PSI CONCRETE		
	A.	NON-COATED	55 db (BAR DIAMETER)
	B.	EPOXY COATED	83 db
2.	4000 PSI CONCRETE		
	A.	NON-COATED	48 db
	B.	EPOXY COATED	72 db
3.	5000 PSI CONCRETE		
	A.	NON-COATED	43 db
	B.	EPOXY COATED	64 db

   - H. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN AND NOTED ON THE CONTRACT DRAWINGS OR PERMITTED BY THE ENGINEER OF RECORD.
   - I. ALL REINFORCEMENT AND EMBEDDED ITEMS INCLUDING PLATES AND ANCHOR RODS SHALL BE ACCURATELY PLACED, ADEQUATELY SUPPORTED, AND SECURED AGAINST DISPLACEMENT BEFORE CONCRETE IS PLACED. NEITHER REINFORCEMENT NOR EMBEDDED ITEMS SHALL BE PLACED INTO FRESHLY PLACED CONCRETE UNLESS APPROVED BY THE ENGINEER OF RECORD.
11. MASONRY
   - A. MASONRY UNIT COMPRESSIVE STRENGTH (f'_m) = 1500 PSI. MORTAR - TYPE S.
   - B. LINTELS SHALL BE STEEL BEAMS OR MASONRY BOND BEAMS AS SHOWN ON THE PLANS. OPENINGS LESS THAN 4'-0" WIDE SHALL BE A BOND BEAM WITH (2) #5 CONTINUOUS EXTENDING PAST OPENINGS A MIN. OF 2'-0".
   - C. GROUT ALL REINFORCED CELLS AND CELLS BELOW GRADE SOLID.
   - D. PLACE A BOND BEAM WITH/ (2) #5 CONTINUOUS AT THE TOP OF WALLS & 8'-0" O.C. VERTICALLY.
   - E. REINFORCE 8" CMU WALLS WITH #5 @ 32" O.C. VERT. AND 12" CMU WALLS WITH #5 @ 24" O.C. VERT. UNLESS NOTED OTHERWISE. IN ADDITION, REINFORCE WALL CORNERS AND JAMBS OF WINDOWS AND DOORS WITH (2) #5 EXTENDING PAST OPENINGS A MIN. OF 2'-0".
   - F. BRACE THE TOPS OF PARTITION WALLS TO THE UNDERSIDE OF DECK.
12. COLD-FORMED STEEL
   - A. ALL LIGHT GAGE METAL FRAMING AND CONNECTIONS SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH AISI (SPECIFICATION FOR THE SIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS) (AND NAAMM ML/SFA540 LIGHTWEIGHT STEEL FRAMING SYSTEMS MANUAL). DESIGN TO BE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF KANSAS.
   - B. ALL LIGHT GAGE METAL FRAMING SHOWN IN THESE DOCUMENTS SHALL BE IN ACCORDANCE WITH THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA).
   - C. ALL STRUCTURAL MEMBERS SHALL BE FORMED FROM STEEL HAVING A GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A-655 STEEL MATERIAL AND SHALL HAVE A MINIMUM YIELD STRESS OF 33 KSI UNLESS NOTED OTHERWISE.
   - D. WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.3 - LATEST EDITION, STRUCTURAL WELDING CODE, SHEET STEEL.
   - E. SUGGESTED WELD METAL AND PROCESS FOR SHOP WELDING ARE, 70 KSI WELD METAL STRENGTH. SUGGESTED METHODS FOR FIELD WELDING, 1/8" E70XX ELECTRODE-SMAW OR GASLESS M16.
   - F. MINIMUM WELD THROAT THICKNESS (t) MUST MATCH OR EXCEED THE BASE STEEL THICKNESS OF THE THINNEST CONNECTED PART UNLESS NOTED OTHERWISE
   - G. WEB STIFFENERS FOR STUD JOISTS SHALL BE PROVIDED AT ALL REACTION POINTS, INTERMEDIATE CONCENTRATED LOADS, AND WHERE INDICATED ON THE DRAWINGS.
   - H. SEQUENCING OF WELDS SHALL BE SO AS TO AVOID DISTORTION OF MEMBERS. REPLACE ALL MEMBER WHEN BURN THROUGH DURING WELDING.
   - I. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED ON ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.
   - J. NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE.
   - K. TOP AND BOTTOM TRACKS TO MATCH GAGE OF STUD UNLESS NOTED OTHERWISE.
   - L. INSTALL CONTINUOUS HORIZONTAL BRIDGING IN STUD SYSTEM, SPACED (VERTICAL DISTANCE) NOT TO EXCEED 4'-0" O.C. WELD OR FASTEN TO EACH STUD.
13. STRUCTURAL STEEL
   - A. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST APPLICABLE EDITION AND AISC CODE OF STANDARD PRACTICE.
   - B. ALL STRUCTURAL STEEL FOR WIDE FLANGE SHALL BE A992 GRADE 50 UNLESS NOTED OTHERWISE. ALL ANGLES, PLATES AND CHANNELS SHALL BE ASTM A36 UNLESS NOTED OTHERWISE. ALL RECTANGULAR AND ROUND HSS SHAPES SHALL BE ASTM A500, GRADE B.
   - C. ALL BOLTS SHALL BE 3/4" Ø A-325 BOLTS WITH HEAVY HEX HEADS UNLESS NOTED OTHERWISE. ALL CONNECTIONS SHALL HAVE A MINIMUM OF (2) 3/4" Ø BOLTS, BEARING TYPE CONNECTIONS ONLY.
   - D. ALL STRUCTURAL STEEL WELDS IN THE SHOP OR IN THE FIELD SHALL BE PERFORMED BY A QUALIFIED WELDER AND SHALL CONFORM TO THE CURRENT REQUIREMENTS OF A.W.S.
   - E. SHOP WELDED AND FIELD BOLTED CONNECTIONS ARE PREFERRED UNLESS NOTED OTHERWISE.
   - F. ALL STEEL EXPOSED TO THE EXTERIOR, EXHIBITS, POOLS, AND LSS AREAS SHALL BE HOT-DIP GALVANIZED AND PAINTED PER ARCHITECT UNLESS NOTED OTHERWISE.
   - G. THE CONTRACTOR SHALL PROVIDE SHELF ANGLES, GLASS SUPPORTS, LINTELS, AND OTHER MISC. STEEL AS SHOWN ON THESE DRAWINGS AS REQUIRED TO PROVIDE SUPPORT (STABILIZATION) AROUND AND THROUGHOUT THE BUILDING. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL MISC. STEEL DETAILS.
14. STEEL BAR JOISTS AND JOIST GIRDERS
   - A. END SUPPORT AND END ANCHORAGE
     - 1. PROVIDE STANDARD DEPTH OF BEARING FOR ALL JOISTS AND JOIST GIRDERS AS SHOWN BELOW UNLESS NOTED OTHERWISE ON THESE DRAWINGS
       - a. K SERIES -2 1/2"
       - b. LH SERIES -5"
     - 2. PROVIDE FLAT BEARING FOR ALL JOISTS AND JOIST GIRDERS, UNLESS NOTED OTHERWISE ON THESE DRAWINGS. INCREASE THE DEPTH OF THE SEAT ON THE HIGH END OF SLOPED JOISTS AS REQUIRED TO PROVIDE CLEARANCE FOR THE CONNECTION.
   - B. DESIGN
     - 1. ALL JOISTS AND JOIST GIRDERS SHALL CARRY THE DESIGN LOADS AS SPECIFIED IN THE SJI TABLES AS THE MINIMUM REQUIREMENT. ADDITIONALLY, THE JOISTS AND JOIST GIRDERS SHALL BE DESIGNED TO CARRY ANY OTHER LOAD TYPES AND PATTERNS AS INDICATED ON THESE DRAWINGS.
     - 2. STEEL JOISTS, JOIST GIRDERS, BRIDGING, AND THEIR CONNECTIONS SHALL BE DESIGNED BY THE MANUFACTURER FOR A NET UPLIFT AS INDICATED ON THESE DRAWINGS.
     - 3. JOIST GIRDERS SHALL BE DESIGNED BY THE MANUFACTURER FOR THE CONCENTRATED LOADS SHOWN ON THESE DRAWINGS.
15. POST CONSTRUCTION ANCHORS
   - A. POST INSTALLED ANCHORS ARE NOT TO BE SUBSTITUTED FOR ANCHORS SHOWN ON THE DRAWINGS. IF CAST IN PLACE ANCHOR IS DETERMINED TO BE OUT OF TOLERANCE OR OMITTED, CONTRACTOR MUST GENERATE A REQUEST FOR INFORMATION IN REGARDS TO THE SOLUTION.
   - B. EMBEDMENT DEPTH SHALL BE DEFINED AS THE DISTANCE FROM THE SURFACE OF THE LOAD-BEARING BASE MATERIAL TO THE DEEPEST PART OF THE ANCHOR AFTER THE ANCHOR HAS BEEN DRIVEN INTO THE HOLE.
   - C. OBSERVATION AND VERIFICATION OF EMBEDMENT HOLE CLEANING, DEPTH, AND ANCHOR INSTALLATION IS REQUIRED FOR ALL EPOXY ANCHORS.
   - D. EQUIVALENT ANCHORS MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL. SUBMITTALS ARE THE CONTRACTOR'S RESPONSIBILITY AND MUST INCLUDE EVALUATION REPORTS FROM THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS, CURRENT WITH THE REQUIREMENTS OF THE PROJECT.
16. STRUCTURAL ENGINEER SITE OBSERVATIONS
   - A. THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCES.
   - B. THE ENGINEER SHALL NOT HAVE CONTROL NOR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, PROCEDURES,TECHNIQUES, OR SEQUENCES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR AN OTHER PERSONS PERFORMING ANY OF THE WORK, OR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
   - C. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF LEIGH & O'KANE L.L.C. IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS AND DEFICIENCIES IN THE WORK OF THE CONTRACTOR.
17. SUBMITTALS
   - A. ALL SHOP DRAWINGS AND SUBMITTALS MUST BE REVIEWED AND APPROVED BY THE CONTRACTOR PRIOR TO SUBMITTAL. ENGINEER'S REVIEW OF SHOP DRAWINGS IS LIMITED TO CHECKING FOR GENERAL CONFORMANCE WITH DESIGN DRAWINGS AND STRENGTH OF COMPONENTS AND MATERIALS. CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES FROM THE DESIGN DRAWINGS, QUANTITIES, DIMENSIONAL ERRORS, OR OMISSIONS IN THE SHOP DRAWINGS.
   - B. ALL SHOP DRAWINGS MUST BE ORIGINAL DOCUMENTS AND SHALL NOT BE REPRODUCTIONS OF THESE CONTRACT DOCUMENTS.
   - C. SUBMIT SHOP DRAWINGS DETAILING FABRICATION OF EACH MEMBER AND ITS CONNECTIONS. DETAIL DRAWINGS ARE TO BE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI FOR THE FOLLOWING ITEMS.
     - 1. STRUCTURAL STEEL CONNECTIONS
     - 2. COLD-FORMED METAL FRAMING
     - 3. STEEL BAR JOISTS AND JOIST GIRDERS
   - D. CONTRACTOR SHALL SUBMIT STRUCTURAL SHOP DRAWINGS FOR THE FOLLOWING ITEMS.
     - 1. CONCRETE MIX DESIGN AND MATERIALS
     - 2. CONCRETE REINFORCING STEEL
     - 3. MASONRY REINFORCING STEEL
     - 4. STRUCTURAL STEEL
     - 5. STEEL DECKING
     - 6. COLD-FORMED METAL FRAMING
     - 7. STEEL BAR JOISTS AND JOIST GIRDERS
   - E. PROVIDE A FINAL, "FOR CONSTRUCTION" SET OF ALL SHOP DRAWINGS TO THE ENGINEER OF RECORD PRIOR TO FABRICATION OR CONSTRUCTION OF THOSE ITEMS.
18. SPECIAL INSPECTIONS
   - A. THE FOLLOWING MINIMUM ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH THE BUILDING CODE.
     - 1. CONCRETE PLACING
     - 2. CONCRETE REINFORCING
     - 3. STEEL BOLTING
     - 4. STEEL WELDING
     - 5. BOLTS EMBEDDED IN CONCRETE / POST-INSTALLED ANCHORS
     - 6. MASONRY
     - 7. ANCHOR RODS
     - 8. ROOF DIAPHRAGM ATTACHMENT
     - 9. SOIL VERIFICATION
     - 10. STEEL FRAME
   - B. THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

SCHEDULE OF MINIMUM SPECIAL INSPECTIONS

	INSPECTION FREQUENCY	
	CONTINUOUS	PERIODIC
REQUIRED VERIFICATION AND INSPECTION OF STRUCTURAL STEEL CONSTRUCTION		
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:		
A. IDENTIFICATION MARKING TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	-	X
2. INSPECTION OF HIGH-STRENGTH BOLTING: (INSPECTION SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS)		X
A. SNUG-TIGHT JOINTS.	-	X
B. PRE-TENSIONED AND SLIP-CRITICAL JOINTS USING THE TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT DIRECT TENSION INDICATOR METHODS OF INSTALLATION.	-	X
C. PRE-TENSIONED AND SLIP-CRITICAL JOINTS USING THE CALIBRATED WRENCH OR TURN-OF-NUT METHOD WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION.	X	-
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:		
A. FOR STRUCTURAL STEEL, INDENTIFICATION MARKING TO CONFORM TO AISC 360.	-	X
B. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X
C. MANUFACTURERS' CERTIFIED TEST REPORTS.	-	X
4. MATERICAL VERIFICATION OF WELD FILLER MATERIALS:		
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE.	-	X
5. INSTPECTION OF WELDING: (WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1)(IN COOPERATION WITH OWNER'S TESTING LAB)		
A. STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:		
1. COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS.	X	-
2. MULTIPASS FILLET WELDS.	X	-
3. SINGLE-PASS FILLET WELDS > 5/16.	X	-
4. PLUG AND SLOT WELDS.	X	-
5. SINGLE PASS FILLET WELDS ≤ 5/16.	-	X
6. FLOOR AND ROOF DECK WELDS.	-	X
B. REINFORCING STEEL:		
1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.	-	X
2. REINFORCING STEEL-RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	X	-
3. SHEAR REINFORCEMENT.	X	-
4. OTHER REINFORCING STEEL.	-	X
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:		
A. DETAILS SUCH AS BRACING AND STIFFENING.	-	X
B. MEMBER LOCATIONS.	-	X
C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	-	X
7. INSPECTION OF COLD-FORMED STEEL TRUSSES SPANNING 60 FT OR GREATER:		
A. VERIFY TEMPORARY INSTALLATION RESTRAINT/BRACING AND THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.	-	X
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION		
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT. VERIFY GRADE, SIZE, QUANTITY, AND SPACING OF REINFORCING BARS FOR COMPLIANCE WITH CONTRACT DOCUMENTS AS WELL AS APPROVED SHOP DRAWINGS. REPORT ANY NOTED CONFLICT BEFORE CONCRETE IS POURED SO THAT CORRECTIONS MAY BE MADE. (INSPECTION MAY BE PERIODIC BUT ALL REBAR TO BE INSPECTED).	X	-
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.3 (REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION, INSPECTION OF WELDING, REINFORCING STEEL).	X	-
3. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	X	-
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.	X	-
5. VERIFYING USE OF REQUIRED DESIGN MIX.	X	-
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X
9. INSPECTION OF PRESTRESSED CONCRETE:		
A. APPLICATION OF PRESTRESSING FORCES.	-	X
B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	-	X
10. ERECTION OF PRECAST CONCRETE MEMBERS.	-	X
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POSTTENSIONED CONRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF CONCRETE MEMBER BEING FORMED.	-	X
REQUIRED VERIFICATION AND INSPECTION OF SOILS (IN COOPERATION WITH OWNERS' GEOTECHNICAL TESTING AGENCY)		
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X
3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.	-	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		
REQUIRED VERIFICATION AND INSPECTION OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS (IN COOPERATION W/ OWNER'S GEOTECHNICAL TESTING AGENCY)		
1. OBSERVE DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	X	-
2. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), EMBEDMENT INTO BEDROCK (IF APPLICABLE) AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES.	X	-
3. FOR CONCRETE ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH THE REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION NOTED ABOVE.	-	X
REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION		
1. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS.	-	X
2. VERIFICATION OF F'M AND F'AAC PRIOR TO CONSTRUCTION AND FOR EVERY 5000 SQUARE FEET DURING CONSTRUCTION.	-	X
3. VERIFICATION OF PROPORTIONS OF MATERIALS IS PREMIXED OR PREBLEDED MORAR AND GROUT AS DELIVERED TO THE SITE.	-	X
4. VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERD TO THE SITE FOR SELF-CONSOLIDATION GROUT.	X	-
5. THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
A. PROPORTIONS OF SITE-PREPARED MORTAR, GROUT, AND PRESTRESSING FOR BONDED TENDONS.	-	X
B. PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORAR JOINTS.	-	X
C. PLACEMENT OF REINFORCEMENT CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGES.	-	X
D. GROUT SPACE PRIOR TO PLACEMENT.	X	-
E. PLACEMENT OF GROUT.	X	-
F. PLACEMENT OF PRESTRESSING GROUT.	X	-
G. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	-	X
H. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.	-	X
I. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES.	-	X
J. WELDING OF REINFORCING BARS.	X	-
K. PREPARATION OF ANY REQUIRED GROUT SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	-	X
L. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	X	-

PLAN SYMBOL KEY

F? = FOOTING TYPE (REFER TO FOOTING SCHEDULE)
C? = COLUMN TYPE (REFER TO COLUMN SCHEDULE)
W? = WOOD WALL TYPE (REFER TO WOOD WALL SCHEDULE)
SW? = SHEAR WALL TYPE (REFER TO WOOD WALL SCHEDULE)
CW? = CONCRETE WALL TYPE (REFER TO CONCRETE WALL SCHEDULE)
MW? = MASONRY WALL TYPE (REFER TO MASONRY WALL SCHEDULE)
● = SHEAR WALL HOLDOWN
├─┤ = MOMENT FRAME CONNECTION
─┤├─ = BEAM SPLICE CONNECTION

WALL TYPE KEY

═ = LOAD BEARING WALL
═ = NON-LOAD BEARING WALL
▨ = SHEAR WALL

HATCH PATTERN KEY

▨ = CONCRETE IN SECTION
▨ = EARTH IN SECTION
▨ = EPOXY IN SECTION
▨ = EXISTING IN PLAN AND SECTION
▨ = GRANULAR FILL IN SECTION
▨ = GRATING IN PLAN AND SECTION
▨ = GROUT IN SECTION
▨ = INSULATION IN SECTION
▨ = PLYWOOD IN SECTION
▨ = SNOW DRIFT LOADING IN PLAN
▨ = STEEL IN SECTION
▨ = TOPPING IN SECTION
▨ = WOOD END GRAIN IN SECTION
▨ = WOOD FACE GRAIN IN SECTION

STANDARD ABBREVIATIONS

ALT.	ALTERNATE
A.B.	ANCHOR BOLT
ARCH.	ARCHITECT
@	AT
BM.	BEAM
BOT.	BOTTOM
B.O.	BOTTOM OF
BLDG.	BUILDING
CL.	CENTER LINE
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
C.J.	CONTROL JOINT
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DWG(S)	DRAWING(S)
EA.	EACH
ELEV.	ELEVATION
EL.	ELEVATION
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXIST.	EXISTING
EXT.	EXTERIOR
F.S.	FAR SIDE
FIN.	FINISH
FLR.	FLOOR
FTG.	FOOTING
FOUND.	FOUNDATION
GALV.	GALVANIZED
GYP.	GYPSUM
H.S.	HEADED STUD
HI	HIGH
HORIZ.	HORIZONTAL
INSUL.	INSULATION
INT.	INTERIOR
LOC.	LOCATION
LLH	LONG LEG HORIZONTAL
LLO	LONG LEG OUT
LLV	LONG LEG VERTICAL
LONG.	LONGITUDINAL
LO	LOW
MSRY.	MASONRY
MAX.	MAXIMUM
MECH.	MECHANICAL
MIN.	MINIMUM
MIR.	MIRRORED
N.S.	NEAR SIDE
N.A.	NOT APPLICABLE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OPNG.	OPENING
PL.	PLATE
R.	RADIUS
RE:	REFERENCE
REINF.	REINFORCING
REQ'D	REQUIRED
SCHED.	SCHEDULE
SEC.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SQ.	SQUARE
S.S.	STAINLESS STEEL
STL.	STEEL
T&B	TOP & BOTTOM
T.O.	TOP OF
TRANS.	TRANSVERSE
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/	WITH
W/O	WITHOUT

GLMV Architecture

ADAM
CHRISTOPHER
O'KANE
NUMBER
PE-2017000344
10/30/23

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	KDH
CHECKED BY:	ACO

GENERAL NOTES

S-001

FOUNDATION PLAN NOTES

1. TOP OF CONCRETE SLAB ELEVATION = 100'-0".
2. 4" SLAB ON GRADE TO BE REINFORCED WITH #4 @ 16" O.C. OVER 4" GRANULAR FILL AND 15 MIL VAPOR BARRIER, UNLESS NOTED OTHERWISE. PROVIDE APPROPRIATE HEIGHT CHAIRS AT 48" O.C. MAX. CONTINUOUS UNDER REINFORCING TO PLACE REINFORCING 1 1/2" FROM TOP OF SLAB.
3. VERIFY ALL LOCATIONS OF THICKENED SLAB AREAS PRIOR TO POURING CONCRETE.
4. PROVIDE #4 X 5'-0" LONG AT ALL RE-ENTRANT CORNERS.
5. DURING INSTALLATION OF POST CONSTRUCTION ANCHORS, CARE MUST BE TAKEN TO AVOID ALL REINFORCING.
6. REFER TO SHEET S-301 & S-302 FOR TYPICAL DETAILS.
7. COORDINATE ALL FLOOR AND WALL PENETRATIONS WITH ALL OTHER DISCIPLINES.
8. REFER TO ARCHITECTURAL DRAWINGS FOR ALL NON-LOAD BEARING WALL LOCATIONS.
9. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.

ISOLATED FOOTING SCHEDULE

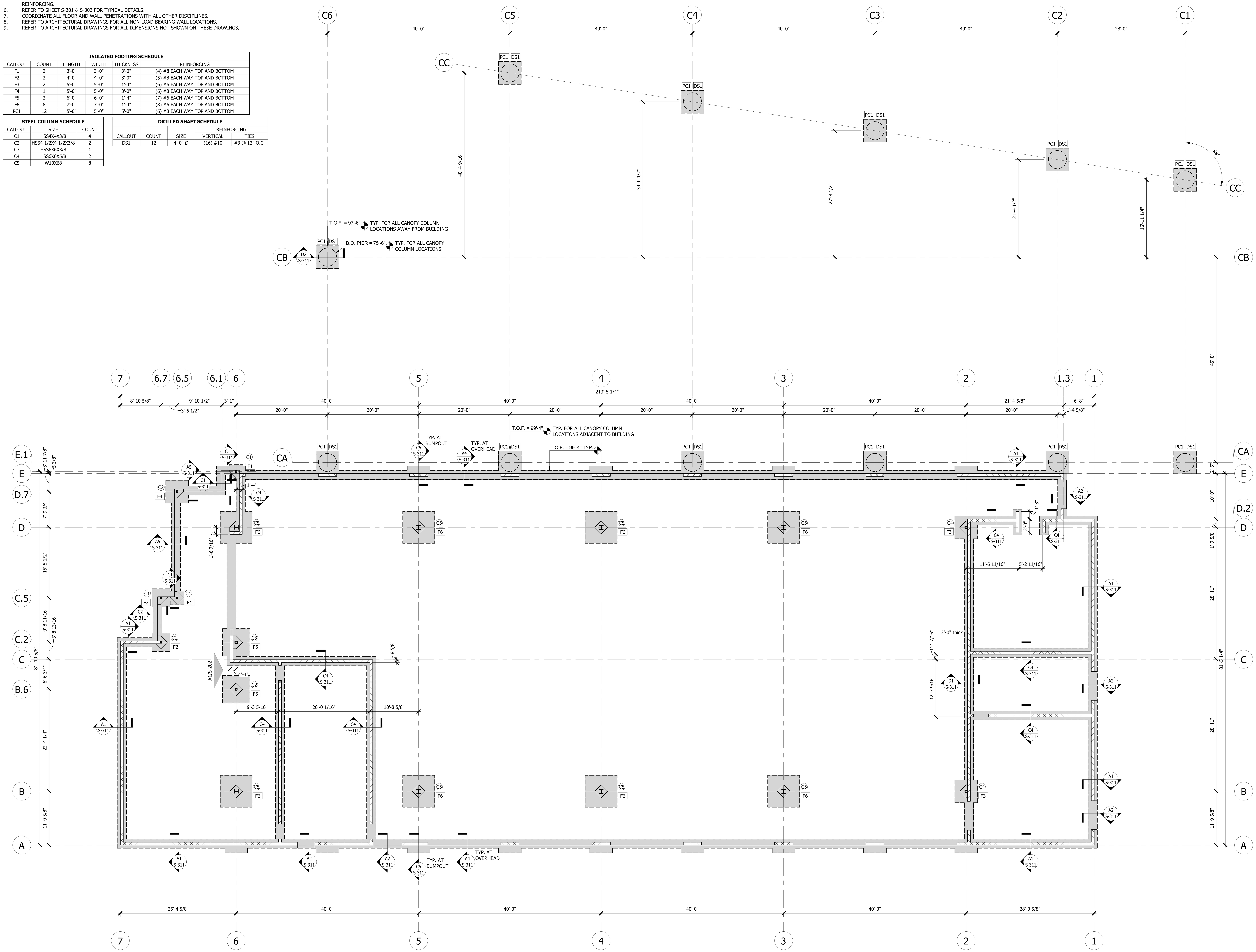
CALLOUT	COUNT	LENGTH	WIDTH	THICKNESS	REINFORCING
F1	2	3'-0"	3'-0"	3'-0"	(4) #8 EACH WAY TOP AND BOTTOM
F2	2	4'-0"	4'-0"	3'-0"	(5) #8 EACH WAY TOP AND BOTTOM
F3	2	5'-0"	5'-0"	1'-4"	(6) #6 EACH WAY TOP AND BOTTOM
F4	1	5'-0"	5'-0"	3'-0"	(6) #8 EACH WAY TOP AND BOTTOM
F5	2	6'-0"	6'-0"	1'-4"	(7) #6 EACH WAY TOP AND BOTTOM
F6	8	7'-0"	7'-0"	1'-4"	(8) #6 EACH WAY TOP AND BOTTOM
PC1	12	5'-0"	5'-0"	5'-0"	(6) #8 EACH WAY TOP AND BOTTOM

STEEL COLUMN SCHEDULE

CALLOUT	SIZE	COUNT
C1	HSS4X4X3/8	4
C2	HSS4-1/2X4-1/2X3/8	2
C3	HSS6X6X3/8	1
C4	HSS6X6X5/8	2
C5	W10X68	8

DRILLED SHAFT SCHEDULE

CALLOUT	COUNT	SIZE	REINFORCING	
			VERTICAL	TIES
DS1	12	4'-0" Ø	(16) #10	#3 @ 12" O.C.



A1 FOUNDATION PLAN

1/8" = 1'-0"

0 4' 8' 16'

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GLMV Architecture

CITY OF LEE'S SUMMIT

LEE'S SUMMIT - MARKET PLAZA

LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
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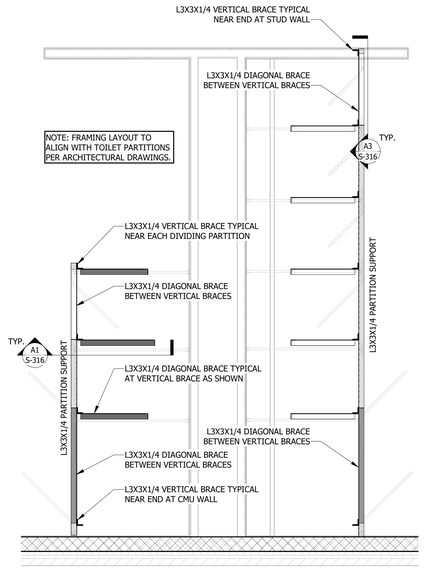
DATE:	11/01/2023
DRAWN BY:	KDH
CHECKED BY:	ACO

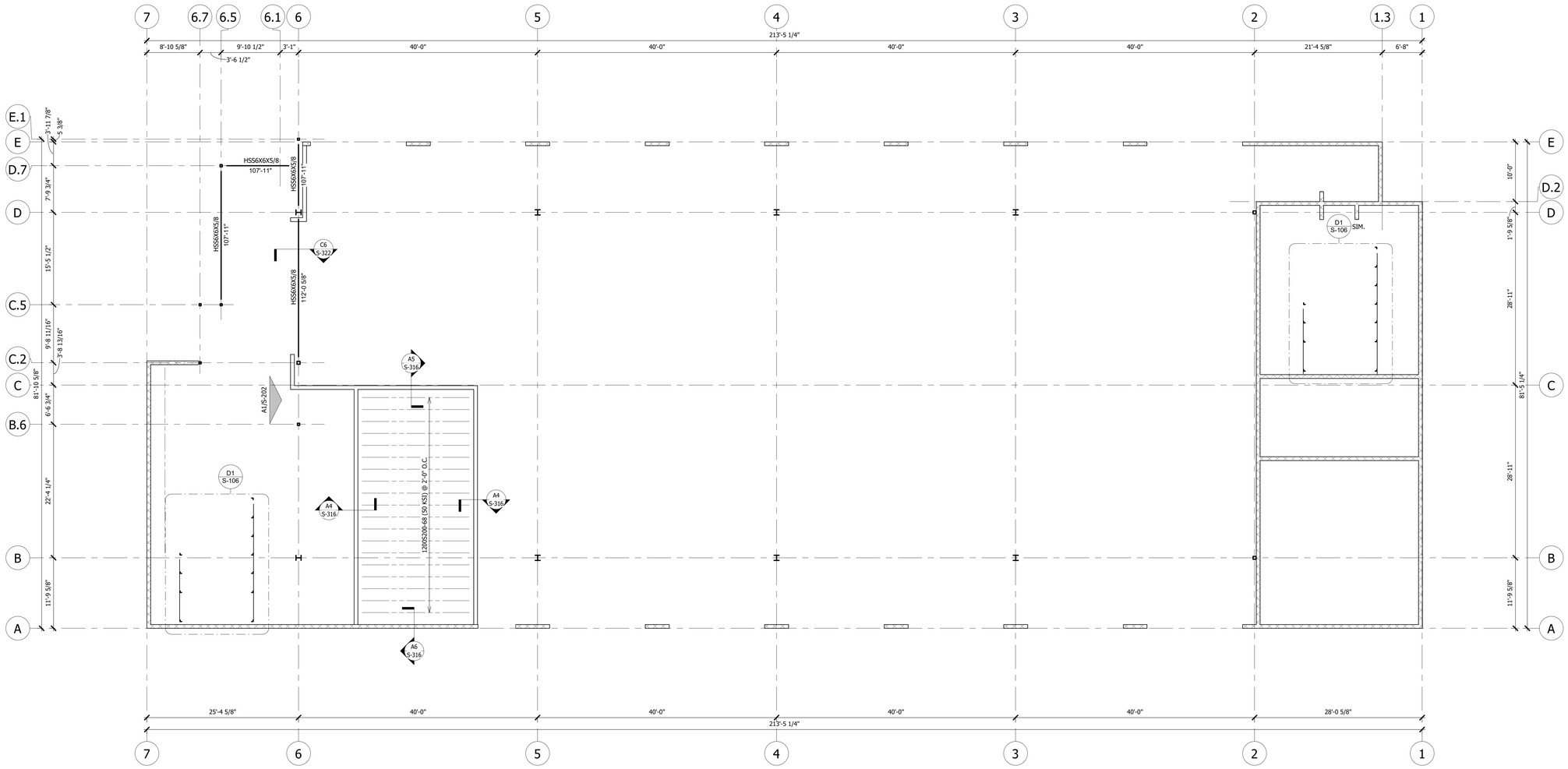
FOUNDATION PLAN

S-101



D1 TOILET PARTITION SUPPORT FRAMING PLAN

3/8" = 1'-0"



A1 CEILING FRAMING PLAN

1/8" = 1'-0"

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LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

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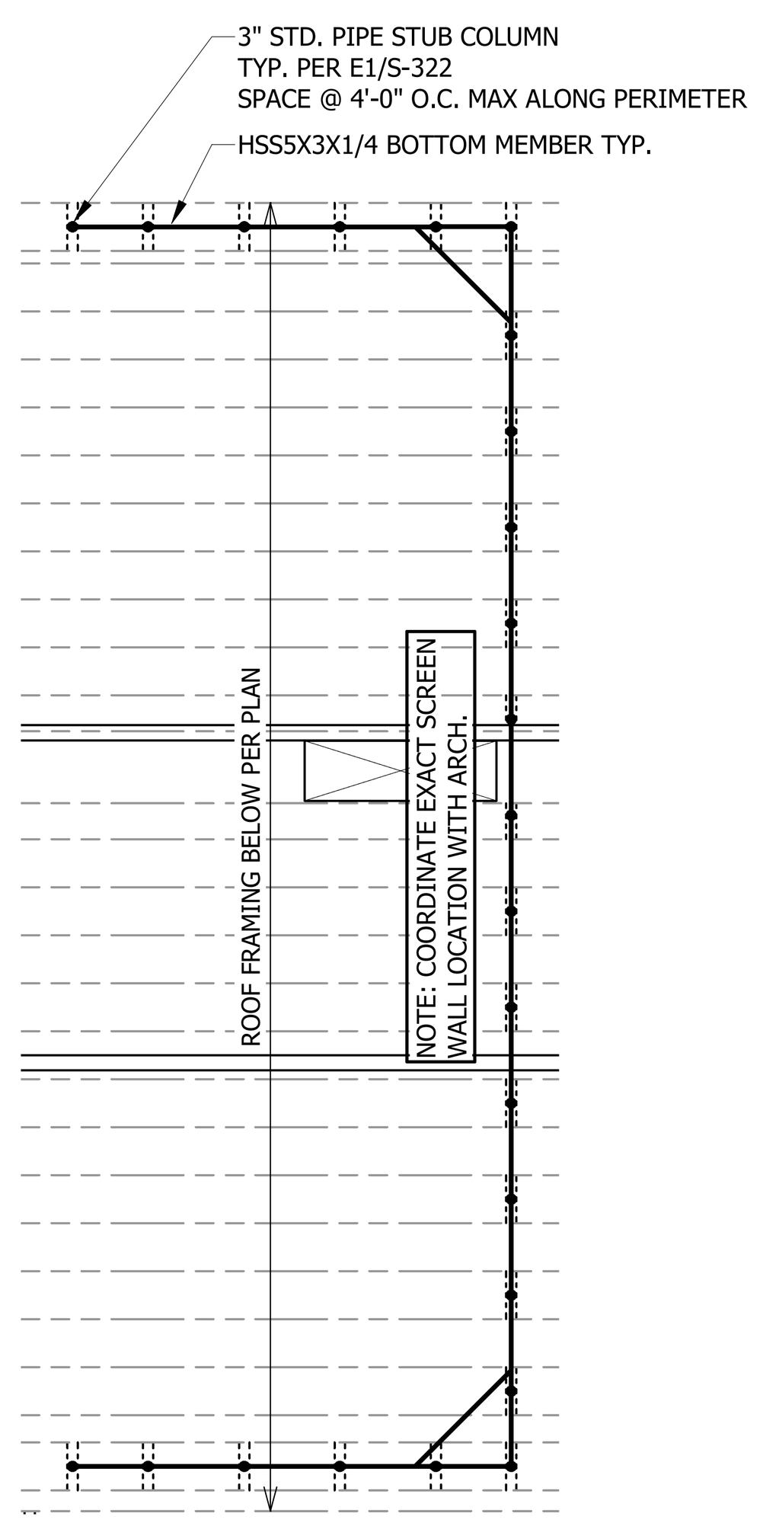
CHECKED BY:	ACO

CEILING FRAMING PLAN

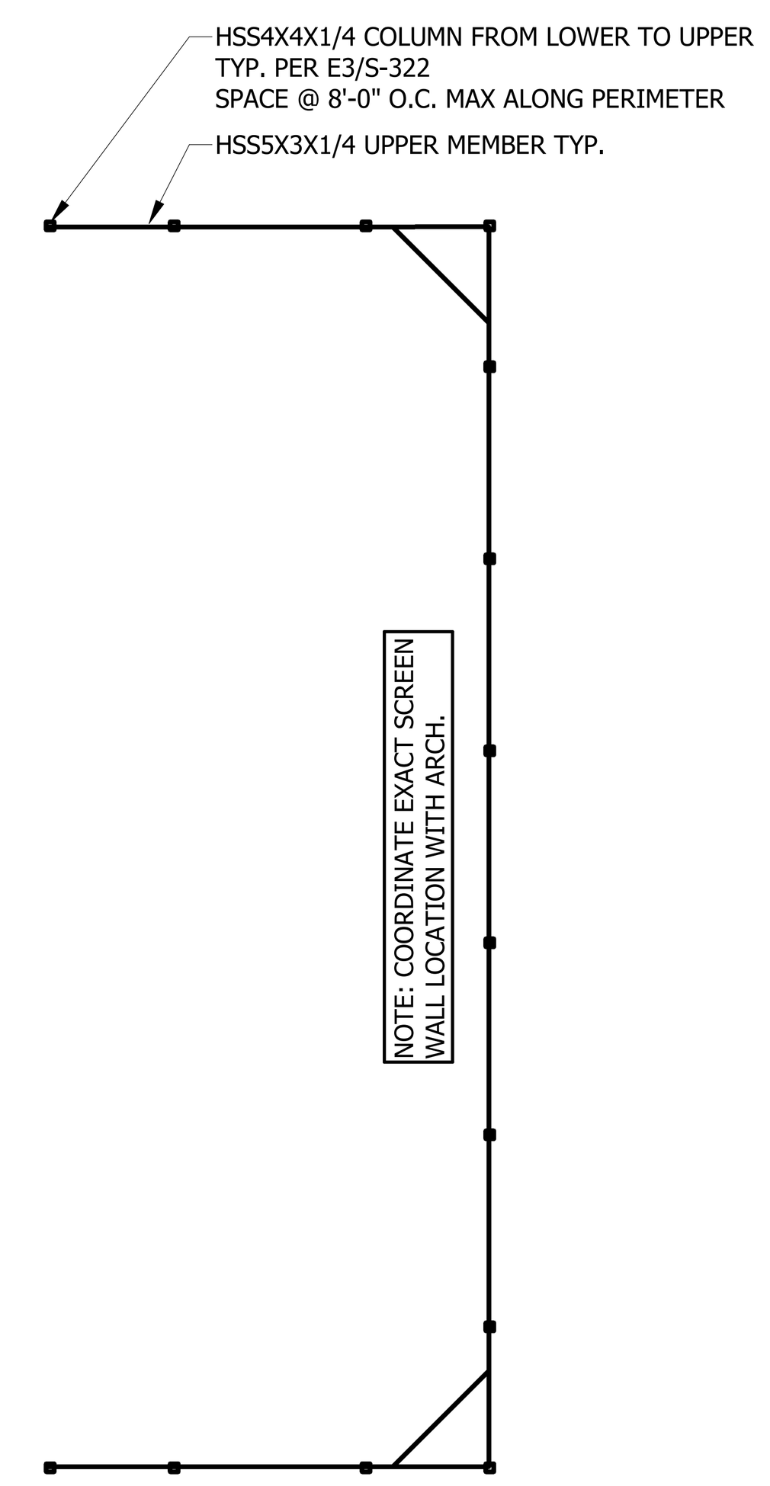
S-106

ROOF FRAMING PLAN NOTES

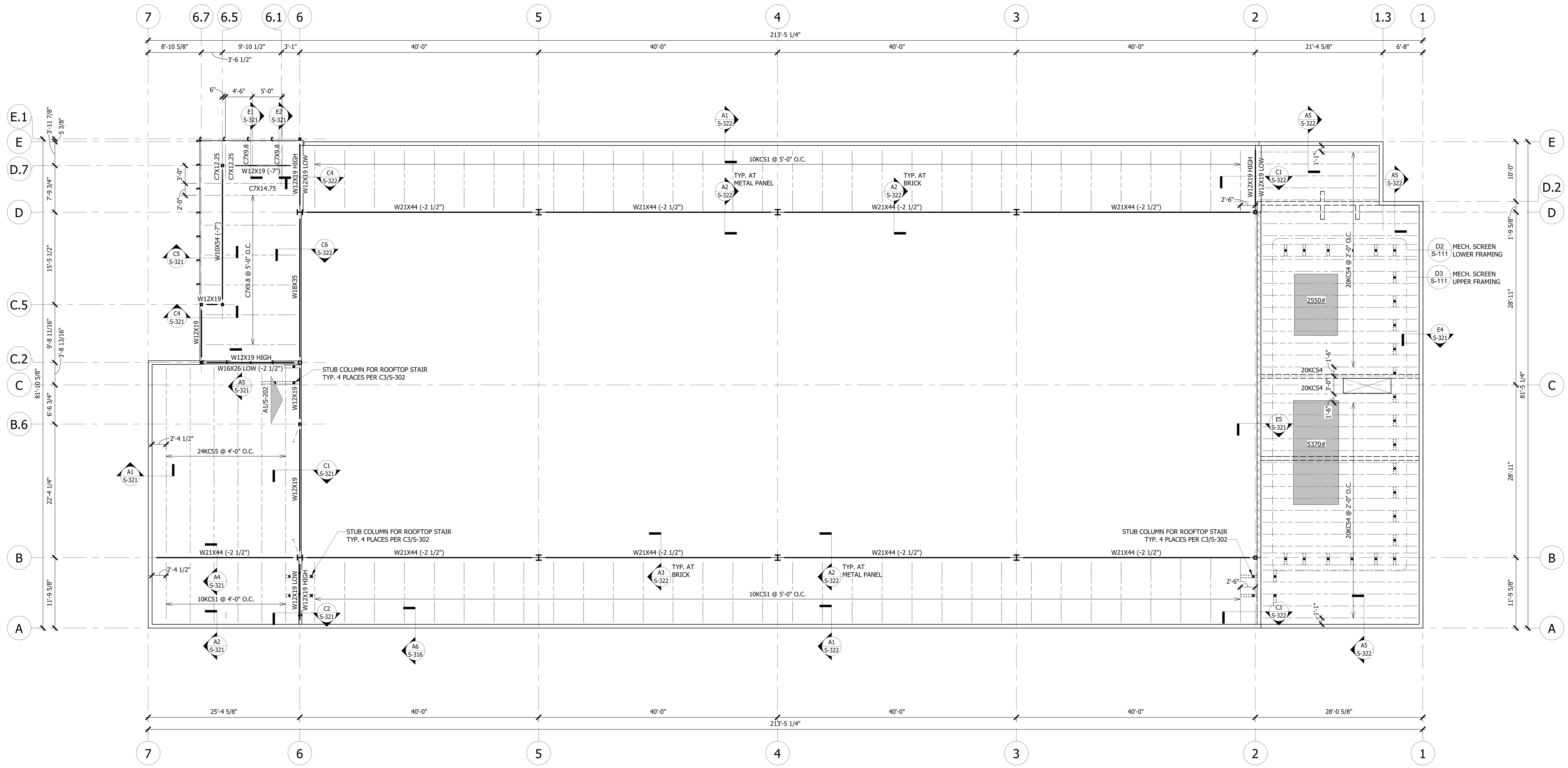
1. UPPER ROOF DECK TO BE 2.0DA 20 GAGE ACOUSTICAL DOVETAIL METAL ROOF DECK. ATTACH TO SUPPORTING STEEL IN A 24.5/4 PATTERN WITH #12 TEK SCREWS AND AT SIDELAPS WITH (5) #10 TEK SCREWS BETWEEN SUPPORTS.
2. LOWER ROOF DECK TO BE 1.5B 20 GAGE METAL ROOF DECK. ATTACH TO SUPPORTING STEEL IN A 36/5 PATTERN WITH #12 TEK SCREWS AND AT SIDELAPS WITH (2) #10 TEK SCREWS BETWEEN SUPPORTS.
3. REFER TO PLAN FOR TOP OF STEEL ELEVATIONS AND SLOPING INFORMATION.
4. ROOF EDGE ANGLE SHOWN IN SECTIONS TO BE CONTINUOUS AROUND PERIMETER OF ROOF.
5. ROOF JOISTS TO BE DESIGNED FOR 10 PSF UPLIFT INTERIOR, NET 10 PSF EDGE, AND NET 10 PSF CORNER.
6. ROOF JOISTS TO BE DESIGNED FOR MAXIMUM SNOW DRIFT OF 42 PSF AT PARAPET WITH A BASE SNOW OF 15.4 PSF. BALANCED SNOW PER GENERAL NOTES.
7. STEEL AND JOIST FABRICATOR RESPONSIBLE FOR ANY POINT LOADS IN EXCESS OF 100# NOT OCCURING AT A JOIST PANEL POINT. PROVIDE REINFORCEMENT PER TYPICAL DETAIL. COORDINATE LOCATIONS WITH MECHANICAL.
8. REFER TO SHEET S-301 & S-302 FOR TYPICAL DETAILS.
9. COORDINATE ALL ROOF AND WALL PENETRATIONS WITH ALL OTHER DISCIPLINES.
10. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.



D2 MECH. SCREEN LOWER FRAMING PLAN
1/8" = 1'-0"



D3 MECH. SCREEN UPPER FRAMING PLAN
1/8" = 1'-0"



A1 LOWER ROOF FRAMING PLAN
1/8" = 1'-0"

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CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

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LOWER ROOF FRAMING PLAN

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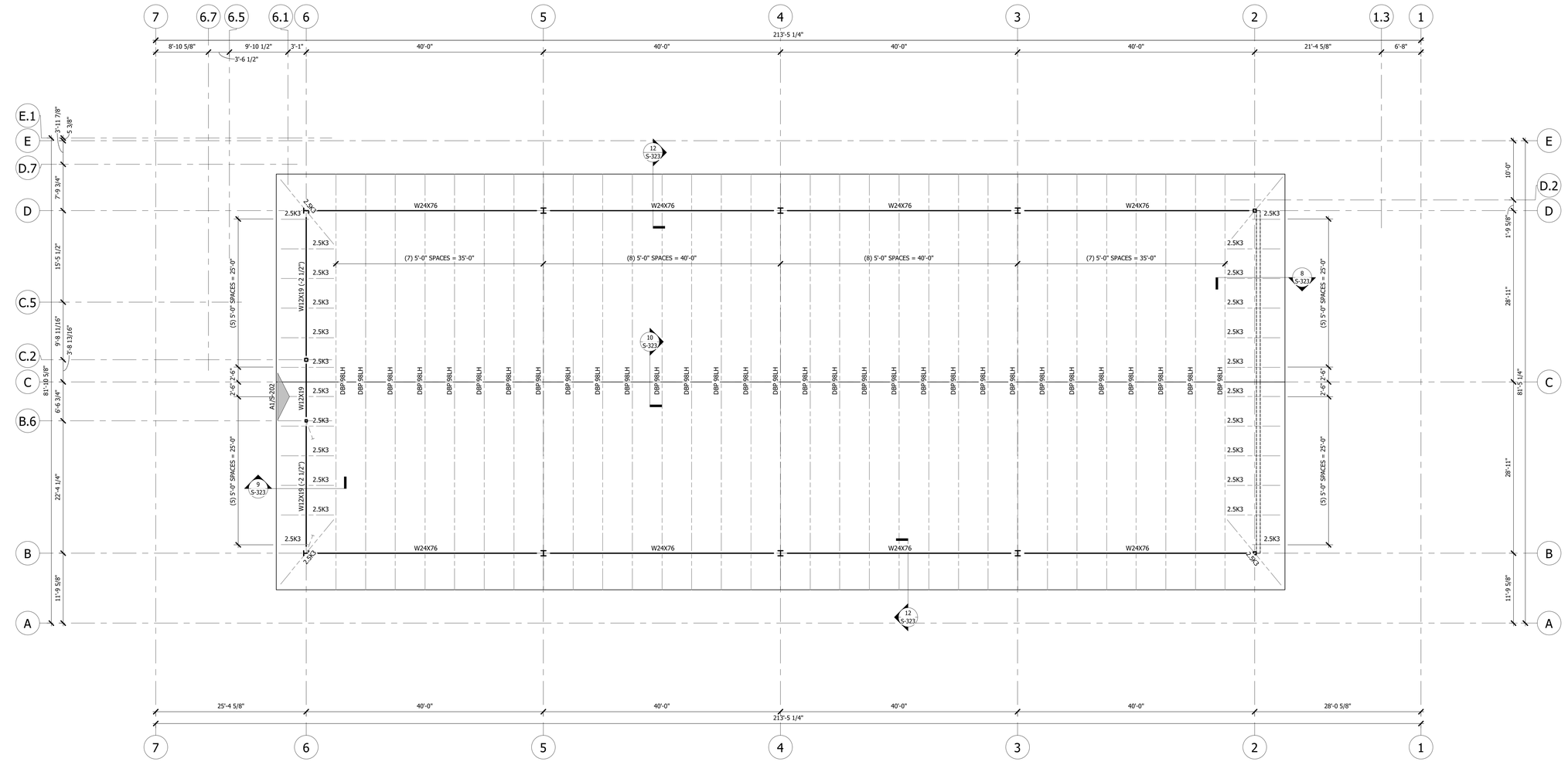
ROOF FRAMING PLAN NOTES

1. UPPER ROOF DECK TO BE 2.0DA 20 GAGE ACOUSTICAL DOVETAIL METAL ROOF DECK. ATTACH TO SUPPORTING STEEL IN A 24.5/4 PATTERN WITH #12 TEK SCREWS AND AT SIDELAPS WITH (5) #10 TEK SCREWS BETWEEN SUPPORTS.
2. LOWER ROOF DECK TO BE 1.5B 20 GAGE METAL ROOF DECK. ATTACH TO SUPPORTING STEEL IN A 36/5 PATTERN WITH #12 TEK SCREWS AND AT SIDELAPS WITH (2) #10 TEK SCREWS BETWEEN SUPPORTS.
3. REFER TO PLAN FOR TOP OF STEEL ELEVATIONS AND SLOPING INFORMATION.
4. ROOF EDGE ANGLE SHOWN IN SECTIONS TO BE CONTINUOUS AROUND PERIMETER OF ROOF.
5. ROOF JOISTS TO BE DESIGNED FOR 10 PSF UPLIFT INTERIOR, NET 10 PSF EDGE, AND NET 10 PSF CORNER.
6. ROOF JOISTS TO BE DESIGNED FOR MAXIMUM SNOW DRIFT OF 42 PSF AT PARAPET WITH A BASE SNOW OF 15.4 PSF. BALANCED SNOW PER GENERAL NOTES.
7. STEEL AND JOIST FABRICATOR RESPONSIBLE FOR ANY POINT LOADS IN EXCESS OF 100# NOT OCCURING AT A JOIST PANEL POINT. PROVIDE REINFORCEMENT PER TYPICAL DETAIL. COORDINATE LOCATIONS WITH MECHANICAL.
8. REFER TO SHEET S-301 & S-302 FOR TYPICAL DETAILS.
9. COORDINATE ALL ROOF AND WALL PENETRATIONS WITH ALL OTHER DISCIPLINES.
10. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.



A1 UPPER ROOF FRAMING PLAN

1/8" = 1'-0"

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CITY OF LEE'S SUMMIT

LEE'S SUMMIT - MARKET PLAZA

LEE'S SUMMIT, MO

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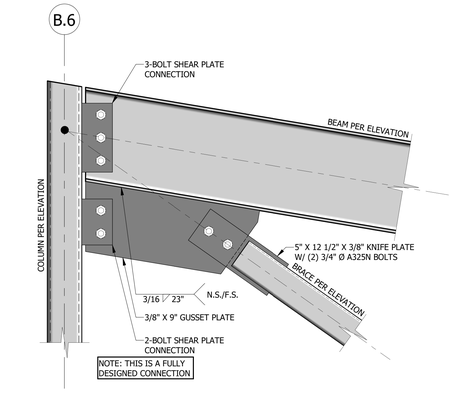
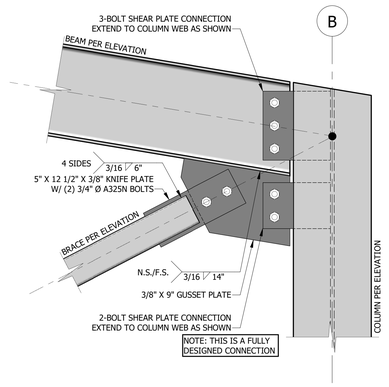
UPPER ROOF FRAMING PLAN

S-121



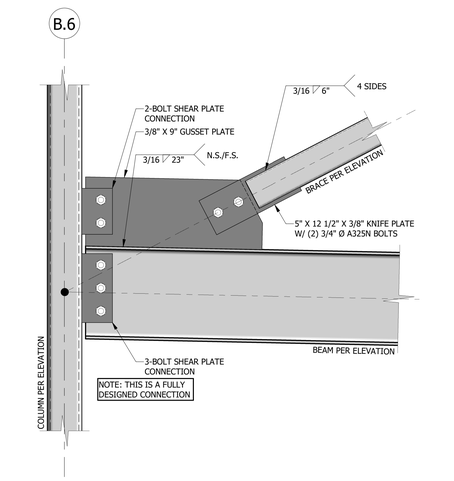
E1 CONNECTION - B.6 AT UPPER ROOF

1 1/2" = 1'-0"



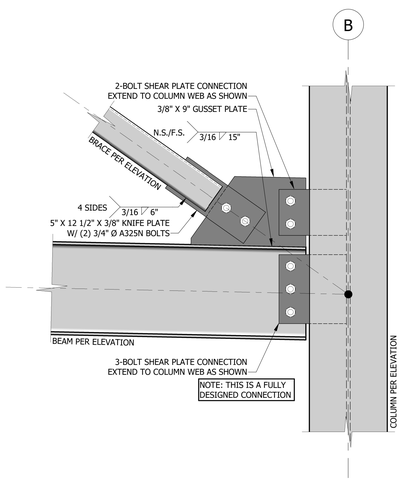
E2 CONNECTION - B AT UPPER ROOF

1 1/2" = 1'-0"



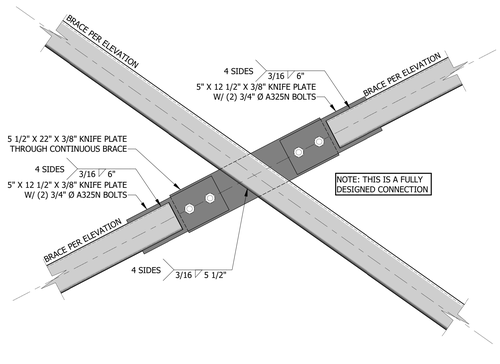
C1 CONNECTION - B.6 AT LOWER ROOF

1 1/2" = 1'-0"



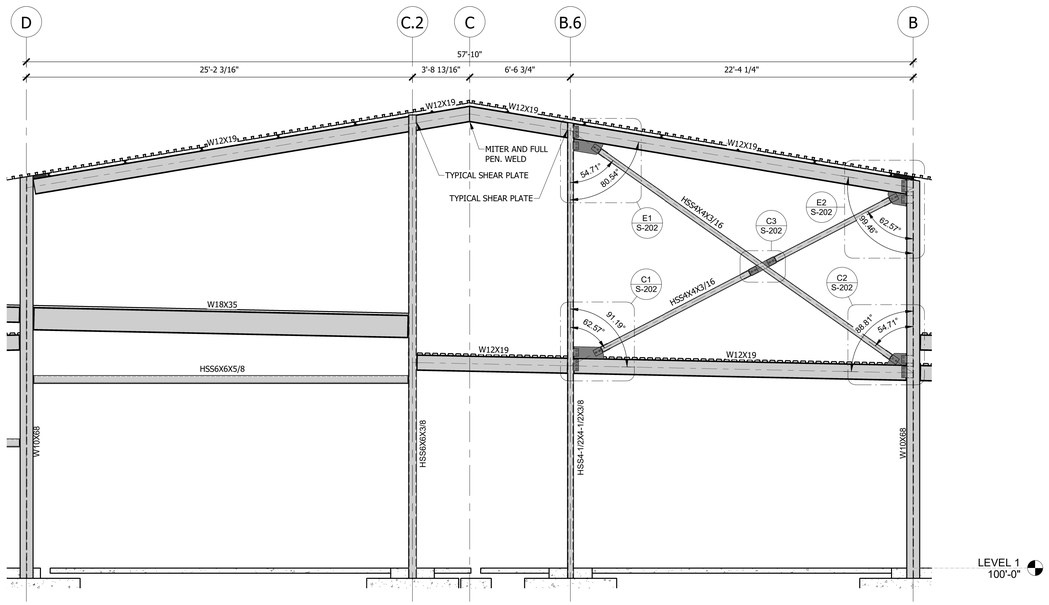
C2 CONNECTION - B AT LOWER ROOF

1 1/2" = 1'-0"



C3 CONNECTION - BRACE INTERSECTION

1 1/2" = 1'-0"



A1 BRACED FRAME ELEVATION ALONG GRIDLINE 6

1/4" = 1'-0"

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CITY OF LEE'S SUMMIT

LEE'S SUMMIT - MARKET PLAZA

LEE'S SUMMIT, MO

DESCRIPTION	DATE
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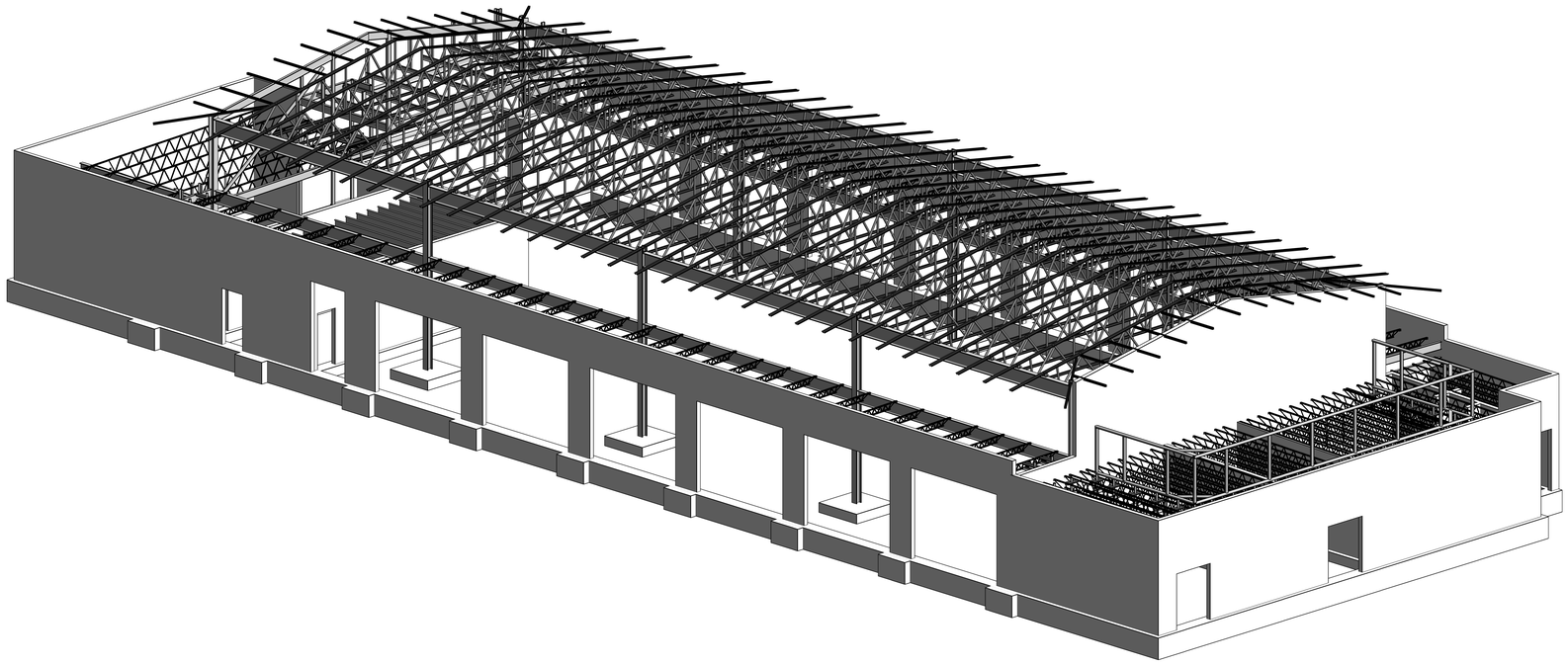
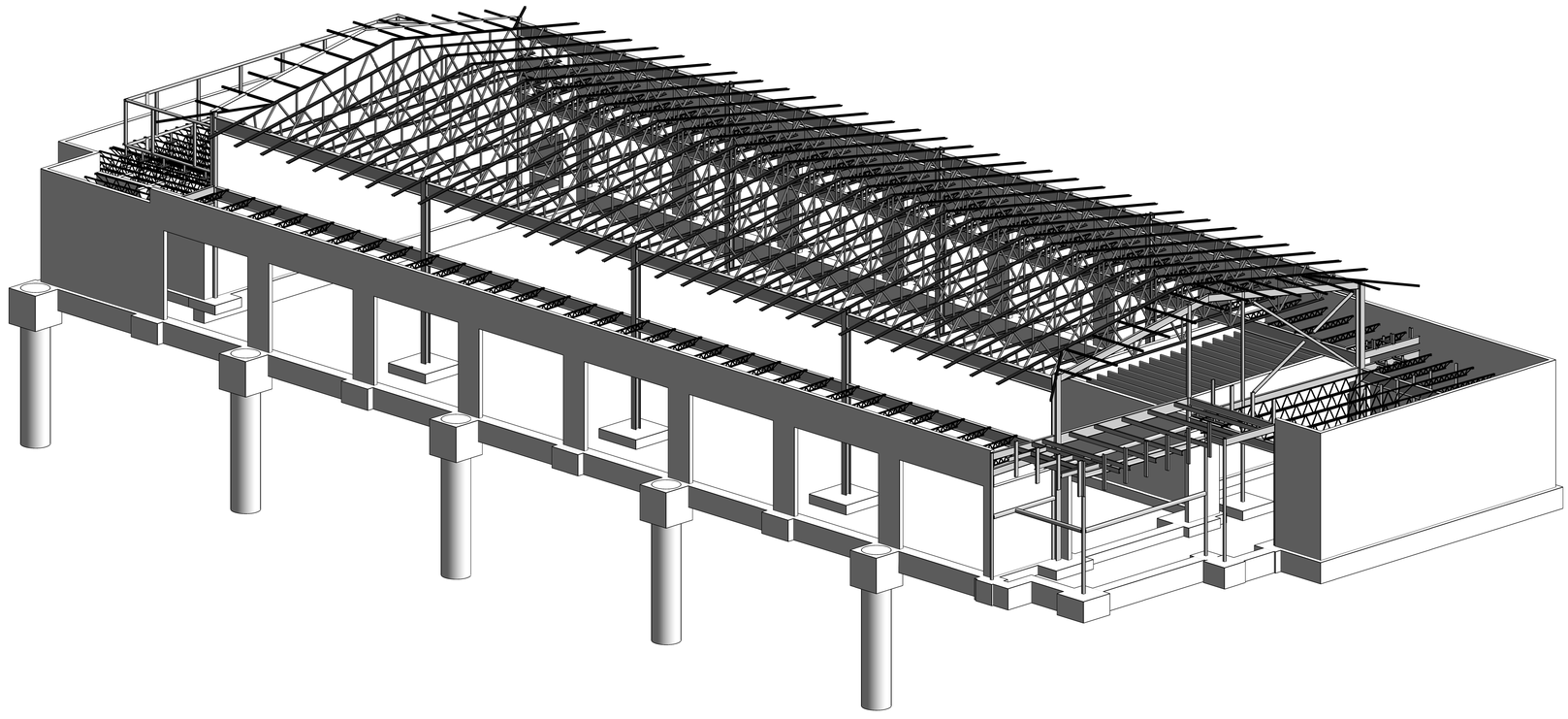
BRACED FRAME ELEVATION AND DETAILS

S-202



C1 OVERALL 3D DETAIL FROM SOUTHEAST



A1 OVERALL 3D DETAIL FROM NORTHWEST

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CITY OF LEE'S SUMMIT

LEE'S SUMMIT - MARKET PLAZA

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DRAWN BY:	KDH
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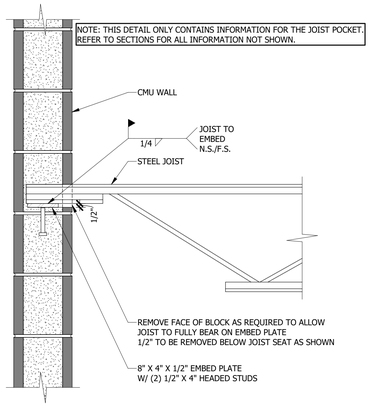
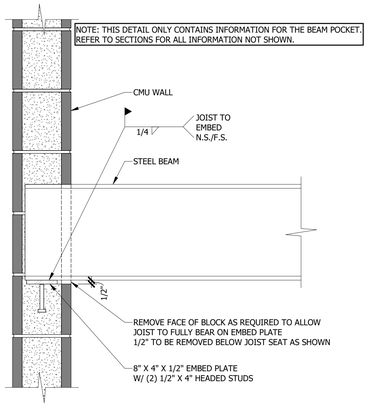
OVERALL 3D DETAILS

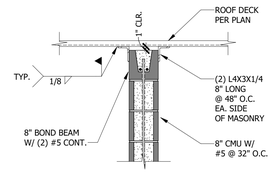
S-251



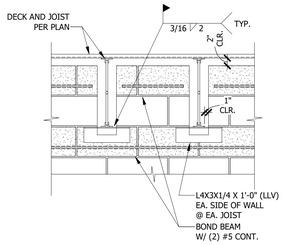
D1 TYPICAL JOIST POCKET
1 1/2" = 1'-0"



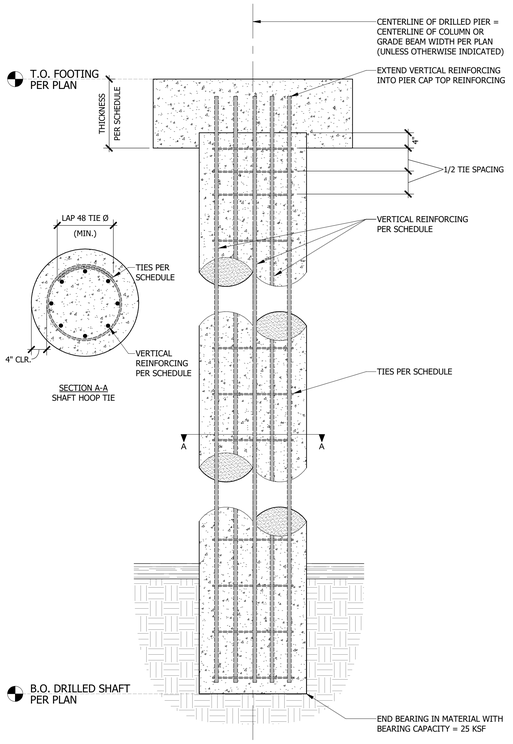
D2 TYPICAL BEAM POCKET
1 1/2" = 1'-0"



E3 CMU WALL SUPPORT SECTION
3/4" = 1'-0"

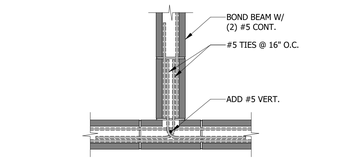


D3 CMU WALL SUPPORT DETAIL
3/4" = 1'-0"

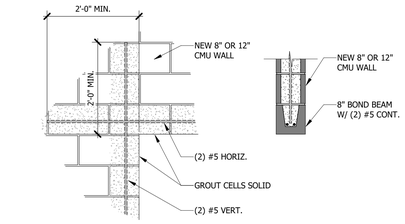


BEDROCK BEARING ELEVATION MAY VARY ACROSS PROJECT FOOTPRINT. SCHEDULE ELEVATION BOTTOM OF SHAFT IS ESTIMATED BASED ON AVAILABLE SOILS INFORMATION, AND COULD CONCEIVABLY VARY FROM ACTUAL REQUIRED ELEVATION BY SEVERAL FEET. CAREFUL ATTENTION MUST BE PAID DURING SHAFT PLACEMENT TO ASSURE PROPER BEARING IN ACCEPTABLE BEDROCK MATERIAL AS IDENTIFIED BY THE SOILS ENGINEER REGARDLESS OF ELEVATION ENCOUNTERED.

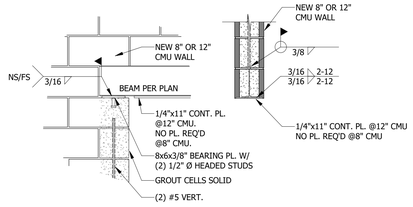
C4 TYP. DRILLED SHAFT DETAIL
3/4" = 1'-0"



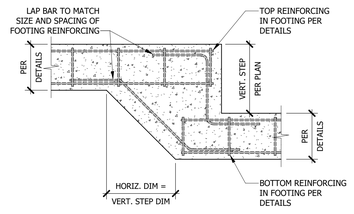
C1 BOND BEAM INTERSECTION DETAIL
3/4" = 1'-0"



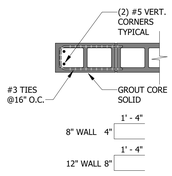
C2 TYP. MASONRY LINTEL DETAIL
3/4" = 1'-0"



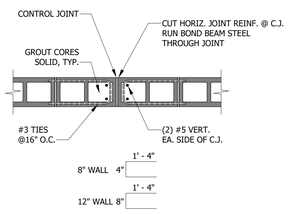
C3 TYP. STEEL LINTEL DETAIL
3/4" = 1'-0"



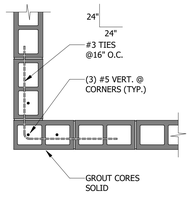
B1 TRENCH FOOTING STEP DETAIL
3/4" = 1'-0"



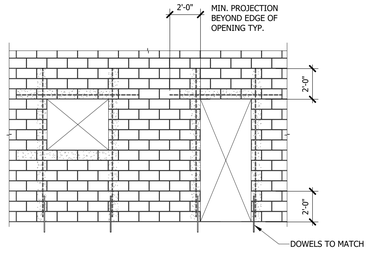
B2 CMU WALL END DETAIL
3/4" = 1'-0"



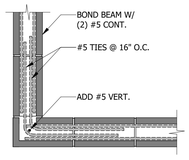
B3 CMU WALL CONTROL JOINT DETAIL
3/4" = 1'-0"



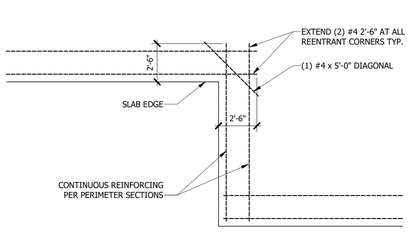
B4 CMU WALL CORNER DETAIL
3/4" = 1'-0"



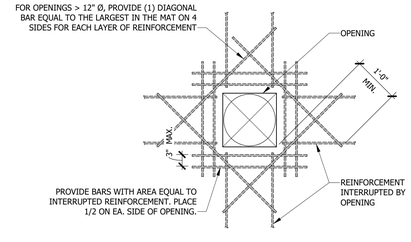
B5 TYP. CMU WALL OPENINGS DETAIL
1/4" = 1'-0"



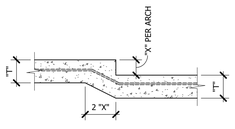
B6 BOND BEAM CORNER DETAIL
3/4" = 1'-0"



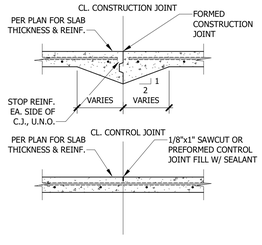
A1 REENTRANT CORNER REINF. DETAIL
1/4" = 1'-0"



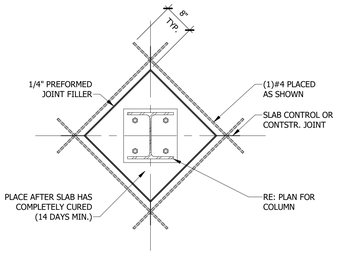
A2 WALL & FLOOR PENETRATION DETAIL
3/4" = 1'-0"



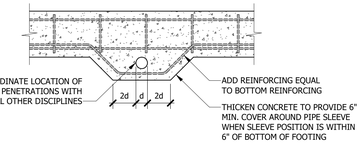
A3 SLAB DEPRESSION DETAIL
3/4" = 1'-0"



A4 SLAB JOINT DETAILS
3/4" = 1'-0"



A5 ISOLATION JOINT
3/4" = 1'-0"



A6 FOUNDATION SLEEVE DETAIL
3/4" = 1'-0"

GLMVArchitecture

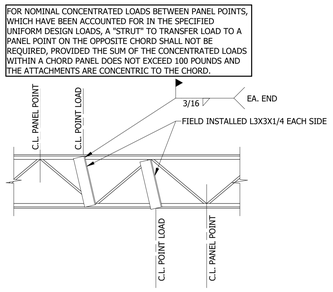
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	KDH
CHECKED BY:	ACO

TYPICAL DETAILS

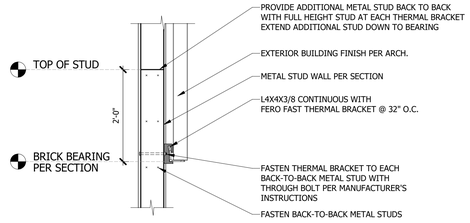
S-301

PLOT DATE: 10/30/2023 3:09:06 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMJW-Structural.rvt



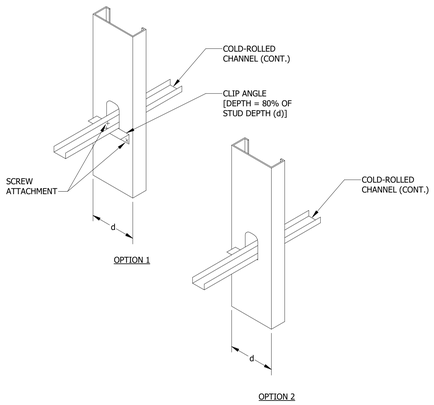
E1 JOIST REINFORCING AT POINT LOADS

3/4" = 1'-0"



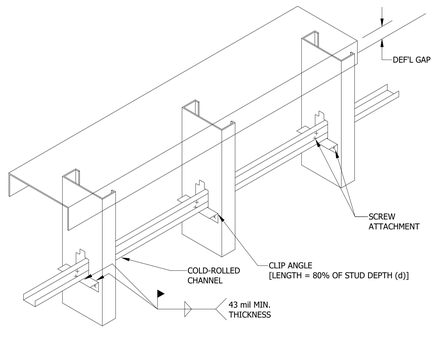
E2 TYPICAL BRICK ANGLE ON METAL STUDS

3/4" = 1'-0"



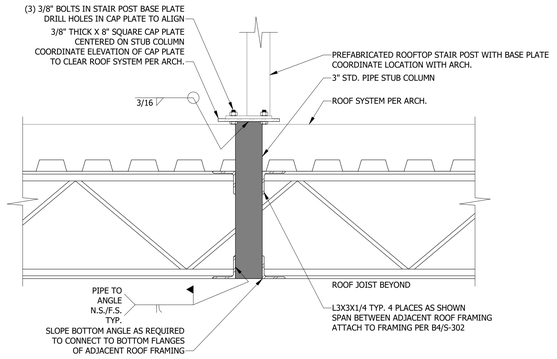
C1 U-CHANNEL BRIDGING DETAIL

1 1/2" = 1'-0"



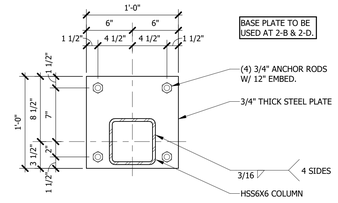
C2 SLIP TRACK CONNECTION DETAIL

1 1/2" = 1'-0"

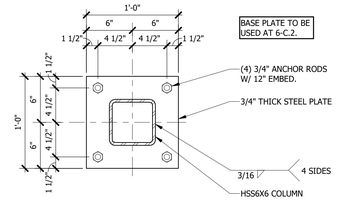


C3 ROOFTOP STAIR POST SUPPORT

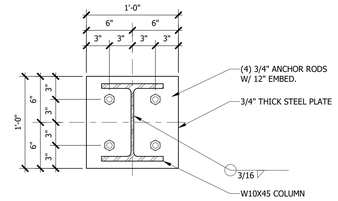
1 1/2" = 1'-0"



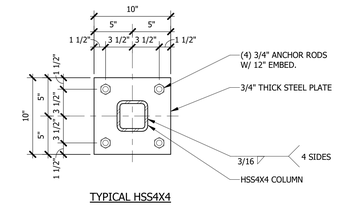
OFFSET HSS6X6



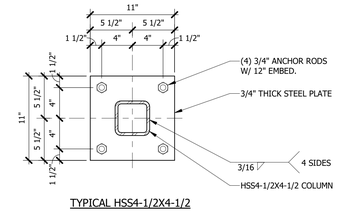
TYPICAL HSS6X6



TYPICAL W10X45



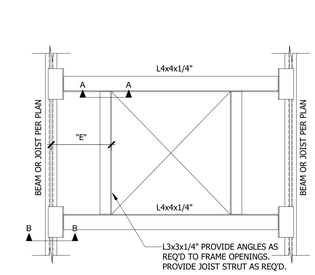
TYPICAL HSS4X4



TYPICAL HSS4-1/2X4-1/2

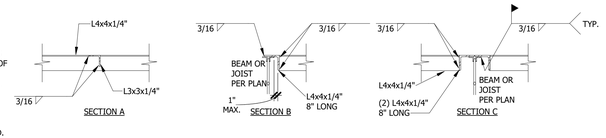
B5 BASE PLATE DETAILS

1 1/2" = 1'-0"



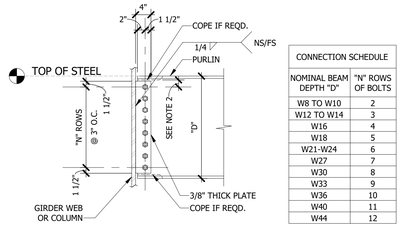
NOTE:
TYP. ROOF OPENING DETAIL SHOWN APPLIES TO ALL ROOF OPENINGS WHERE LEAST DIM. IS 13" OR LARGER. REINFORCE ROOF OPENINGS LESS THAN 13" BY WELDING 16 GAGE SHEET METAL 1'-0" WIDER THAN OPENING TO METAL ROOF DECK.

WHERE DIMENSION "E" IS LESS THAN 6" ANGLE MAY BE OMITTED.



B1 ROOF OPENING AND RTU SUPPORT DETAILS

3/4" = 1'-0"



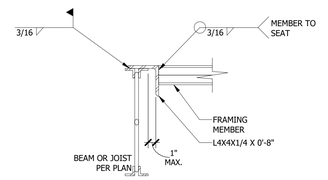
CONNECTION SCHEDULE	
NOMINAL BEAM DEPTH "D"	"N" ROWS OF BOLTS
W8 TO W10	2
W12 TO W14	3
W16	4
W18	5
W21-W24	6
W27	7
W30	8
W33	9
W36	10
W40	11
W44	12

NOTE:

1. PROVIDE MINIMUM BOLT NUMBER AND 3/4" Ø A325N BOLTS AS THE TYPICAL CONNECTION.
2. MINIMUM DISTANCE FROM TOP BOLT TO A COPE SHALL BE 1 1/2". INCREASE DISTANCE FROM TOP OF BEAM TO TOP OF BOLT, IF REQUIRED.
3. USE ONLY STANDARD HOLES TO GIRDER WEB. USE HORIZONTAL SHORT SLOTTED HOLES TO PURLIN WEB.

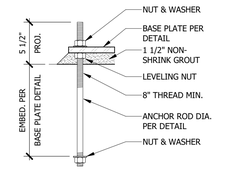
B3 TYP. SHEAR PLATE CONNECTION

3/4" = 1'-0"



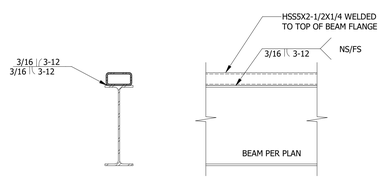
B4 TYP. SEAT ANGLE CONNECTION

1 1/2" = 1'-0"



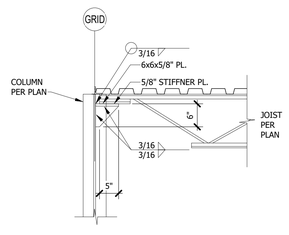
A1 ANCHOR BOLT DETAIL

1 1/2" = 1'-0"



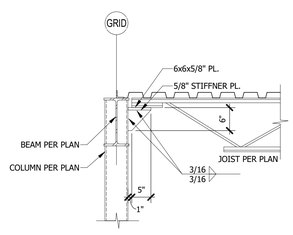
A2 HSS INFILL BETWEEN JOIST

1" = 1'-0"



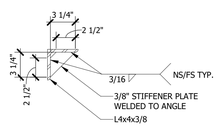
A3 JOIST BEARING ON WF COLUMN

3/4" = 1'-0"



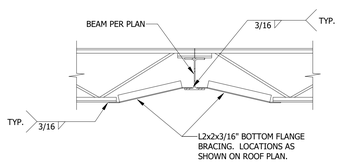
A4 JOIST BEARING ON HSS COLUMN

3/4" = 1'-0"



A5 JOIST SUPPORT AT BEAM WEB

1 1/2" = 1'-0"



A6 TYP. BOTTOM CHORD BRACING

3/4" = 1'-0"

GLMVArchitecture

STATE OF MISSOURI
ADAM CHRISTOPHER QUANT
NUMBER PE-2010008344
PROFESSIONAL ENGINEER
10/30/23

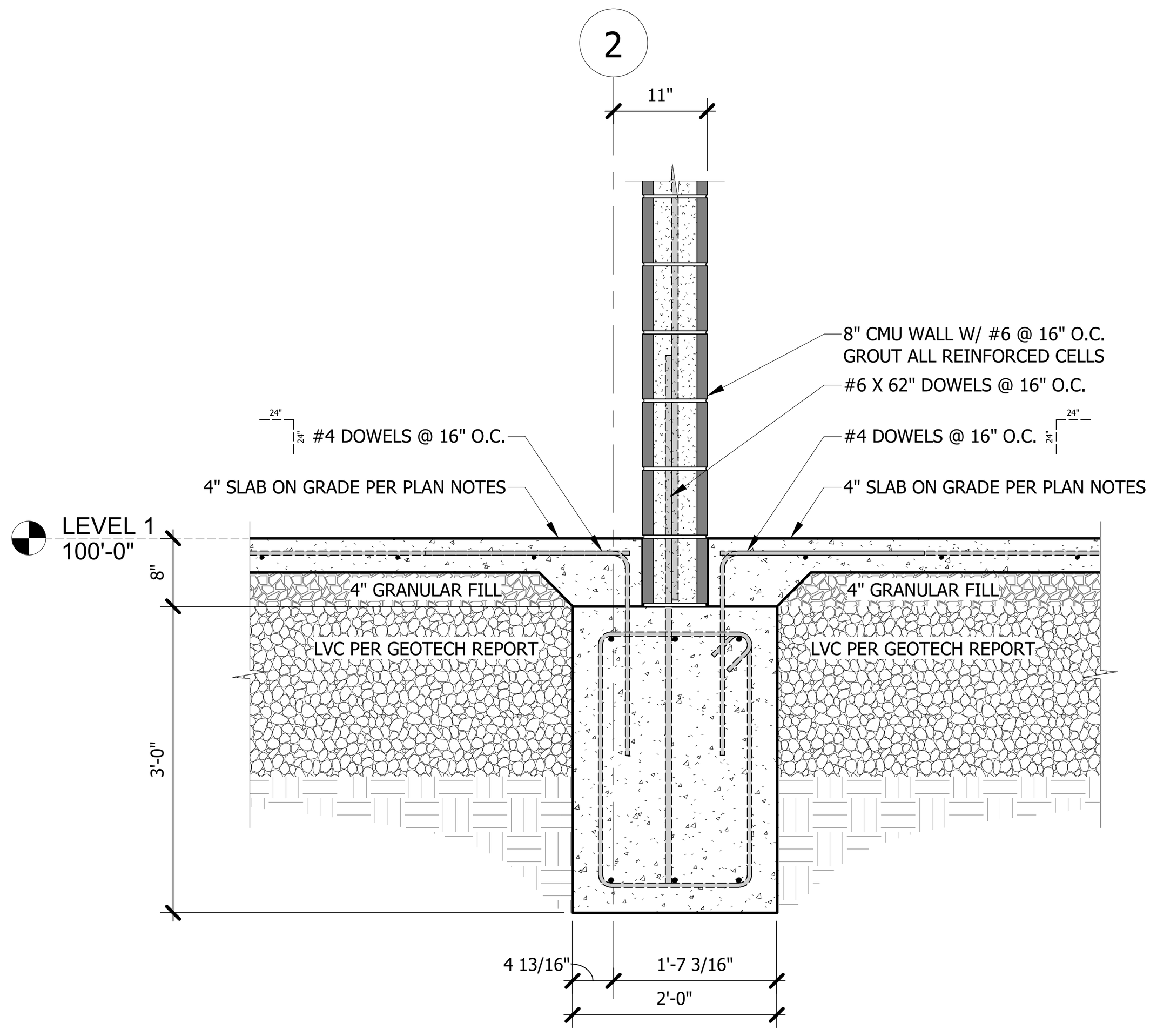
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	KDH
CHECKED BY:	ACO

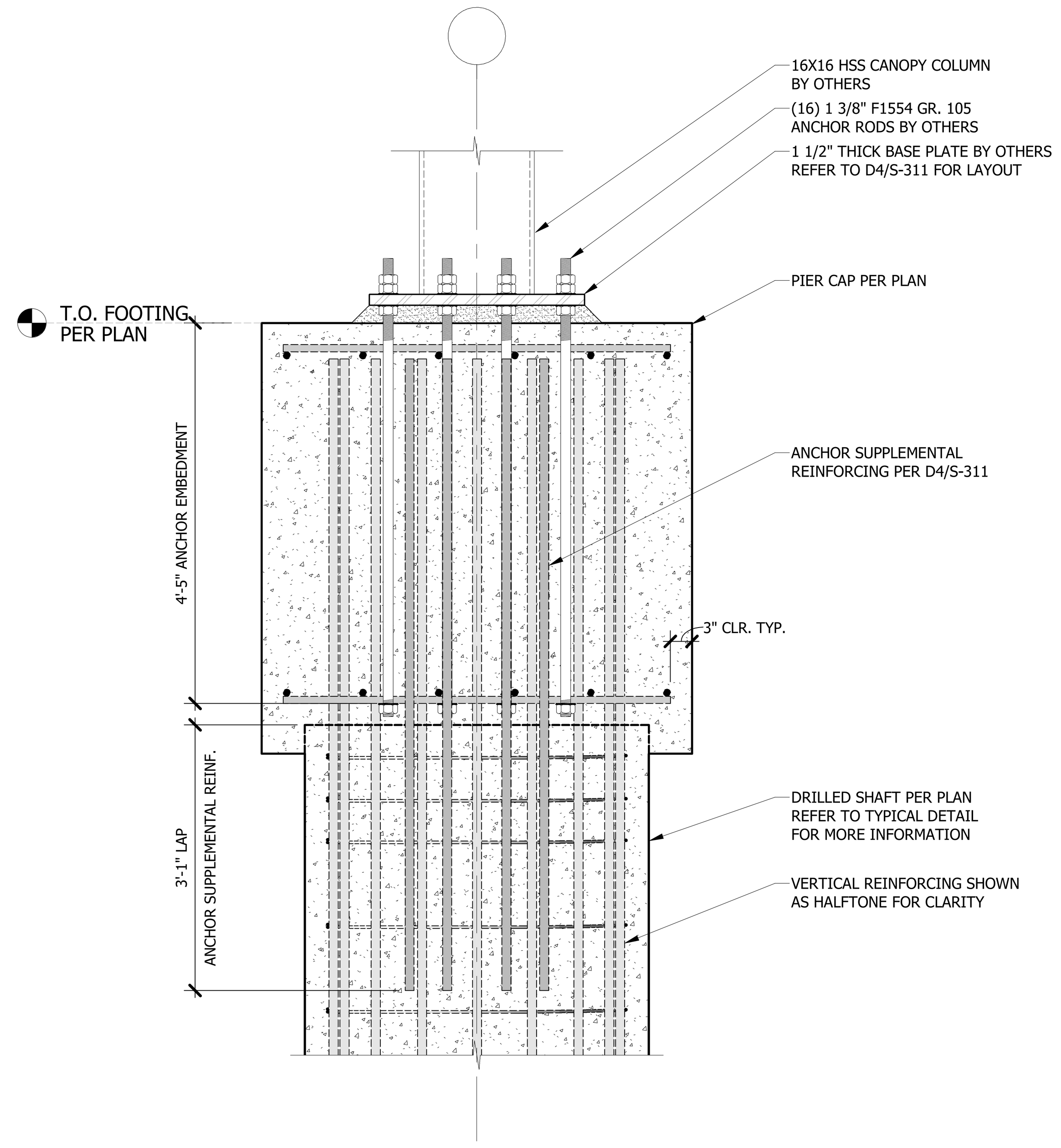
TYPICAL DETAILS

S-302

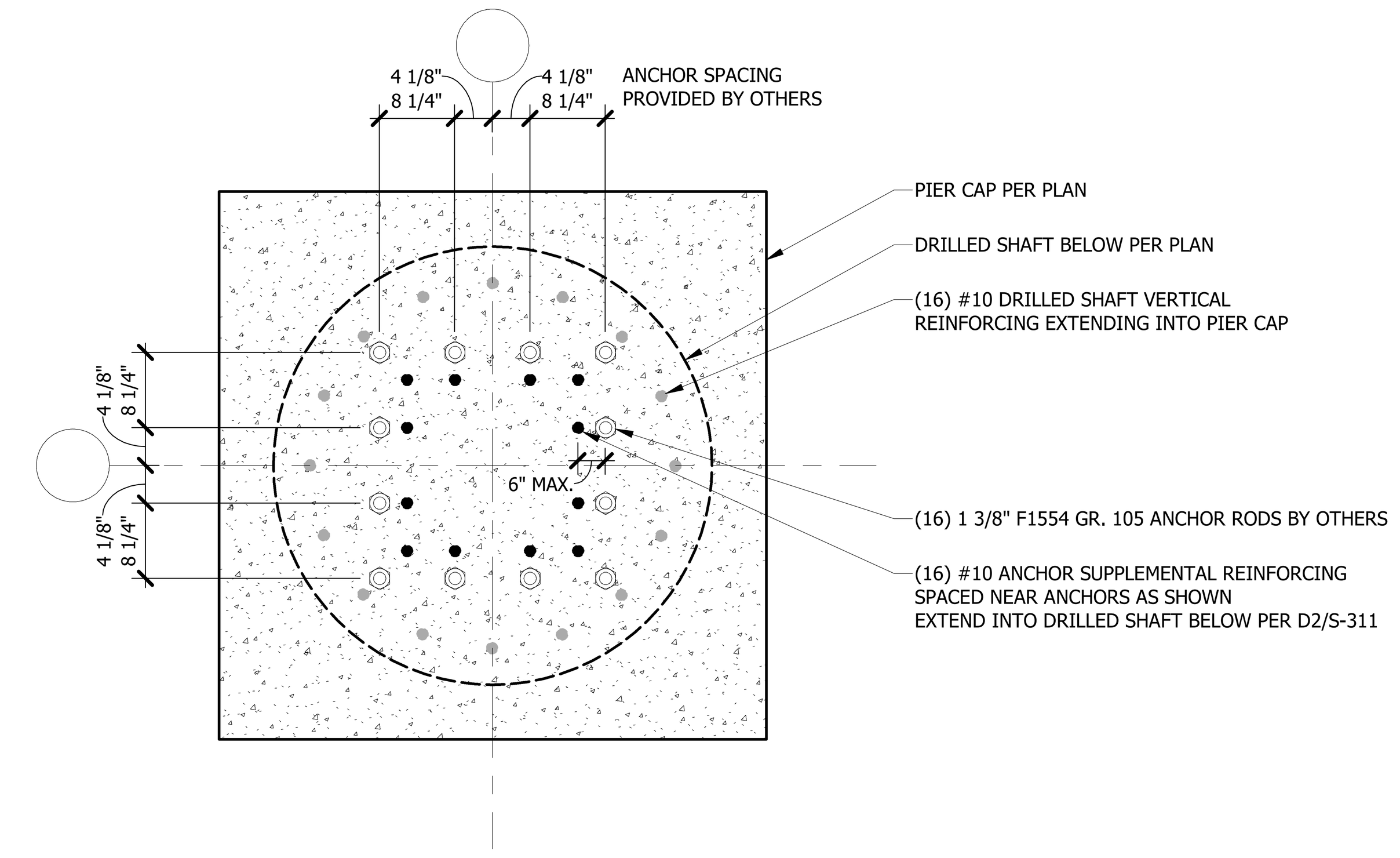
PLOT DATE: 10/30/2023 3:09:07 PM
FILE PATH: Autodesk Docs://18225R21006_Lee's Summit Market/LSMCNN-Structural.rvt



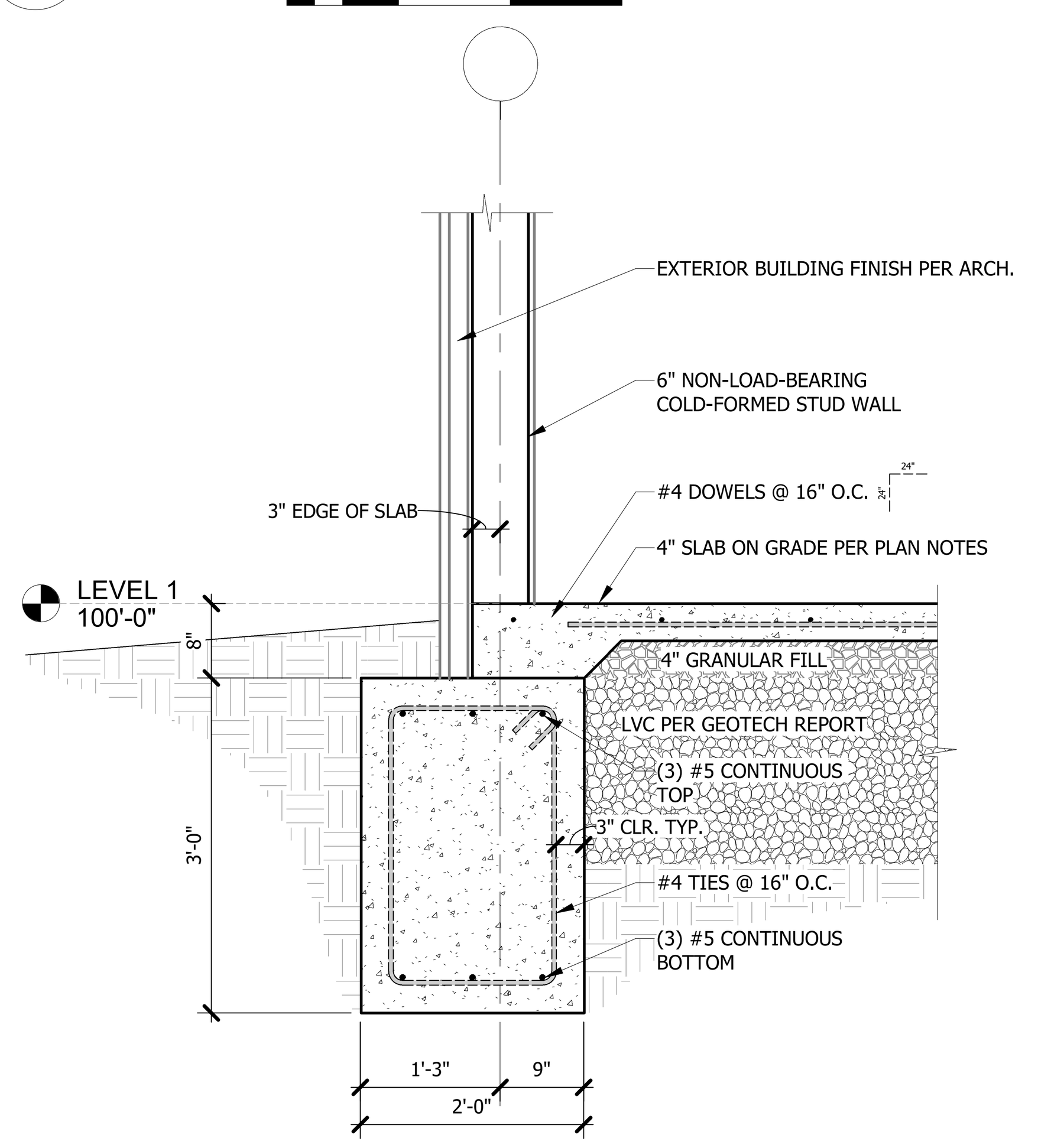
D1 FOUNDATION SECTION
3/4" = 1'-0"



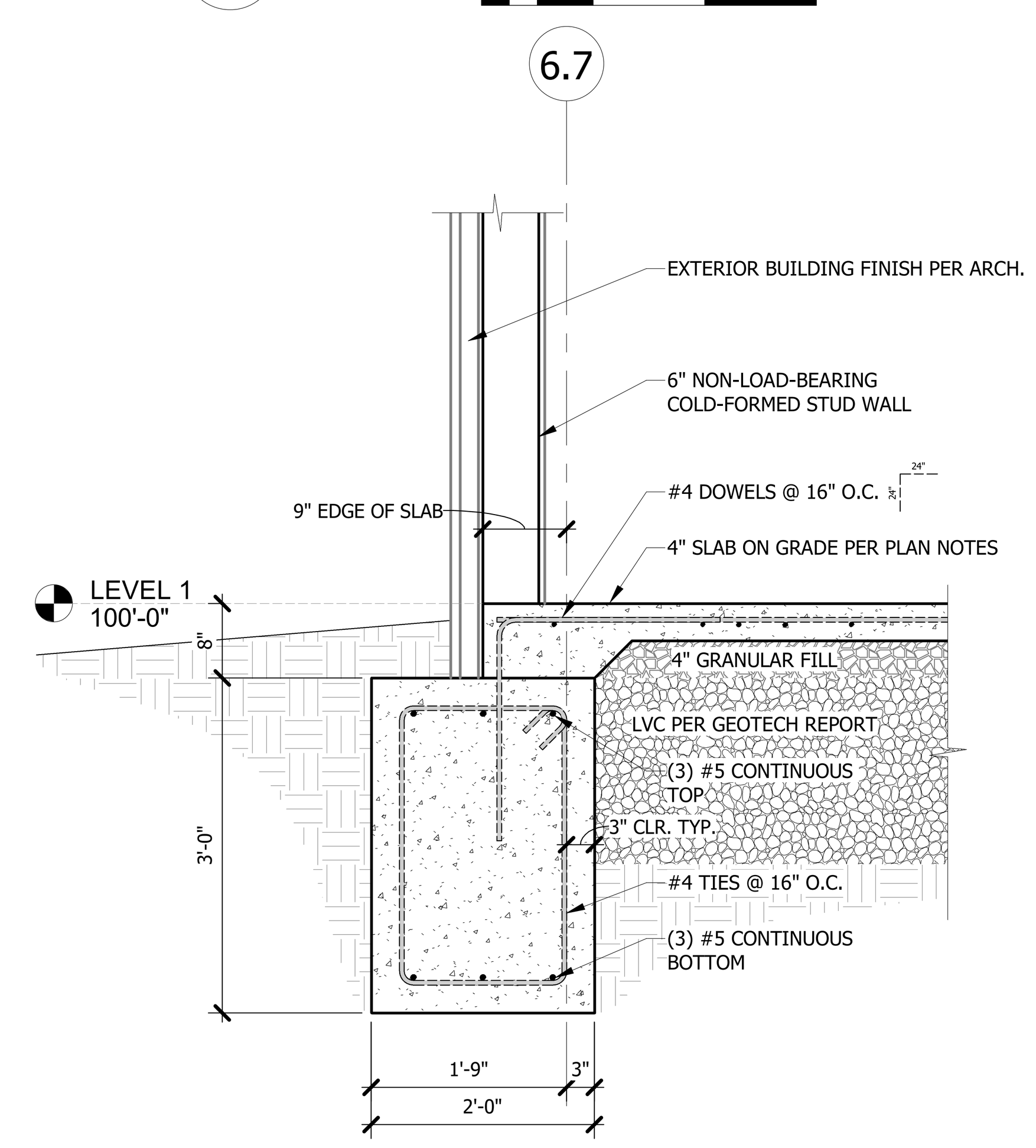
D2 TYPICAL CANOPY COLUMN
3/4" = 1'-0"



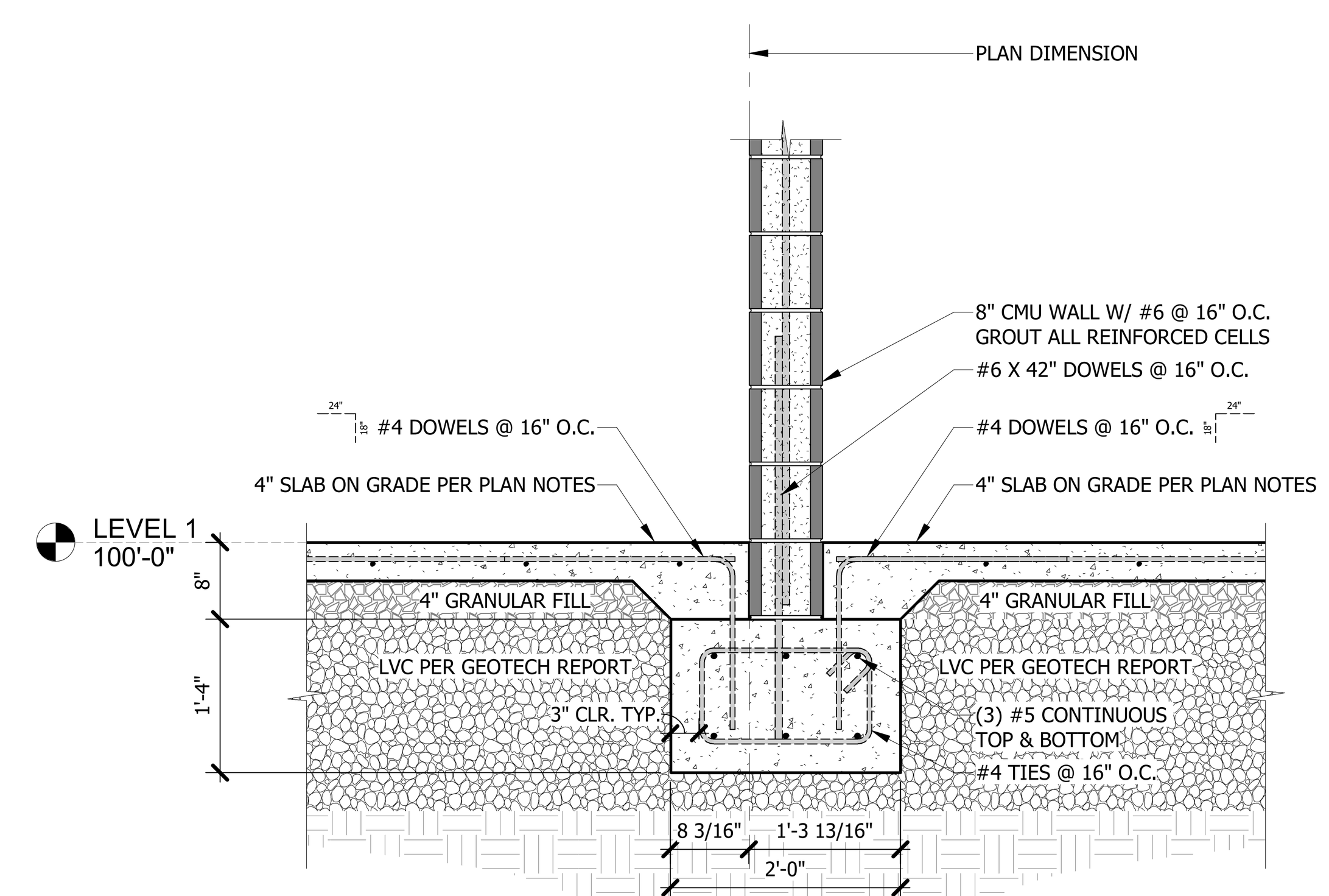
D4 CANOPY COLUMN ANCHOR SUPPLEMENTAL REINFORCING
3/4" = 1'-0"



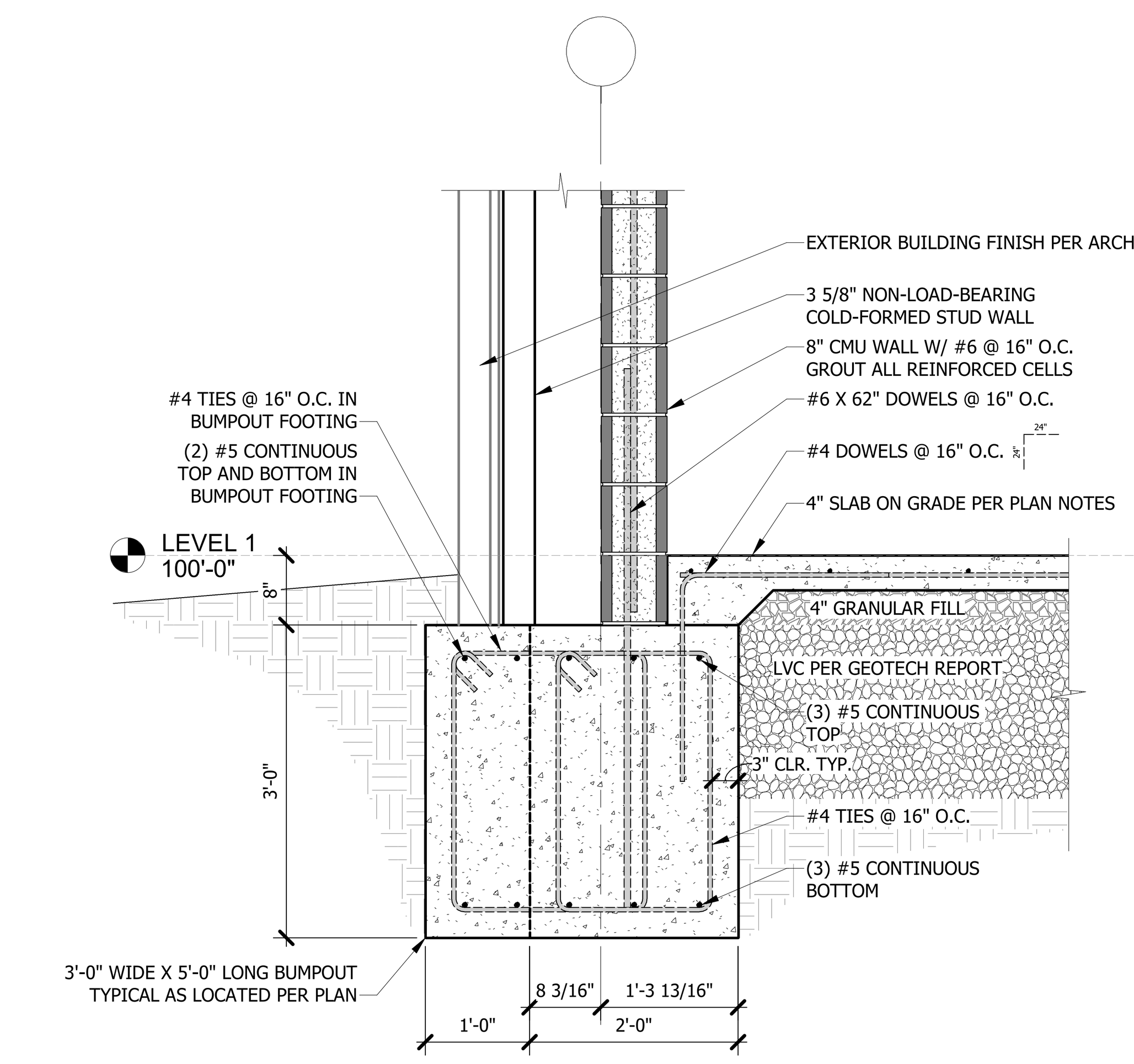
C1 FOUNDATION SECTION
3/4" = 1'-0"



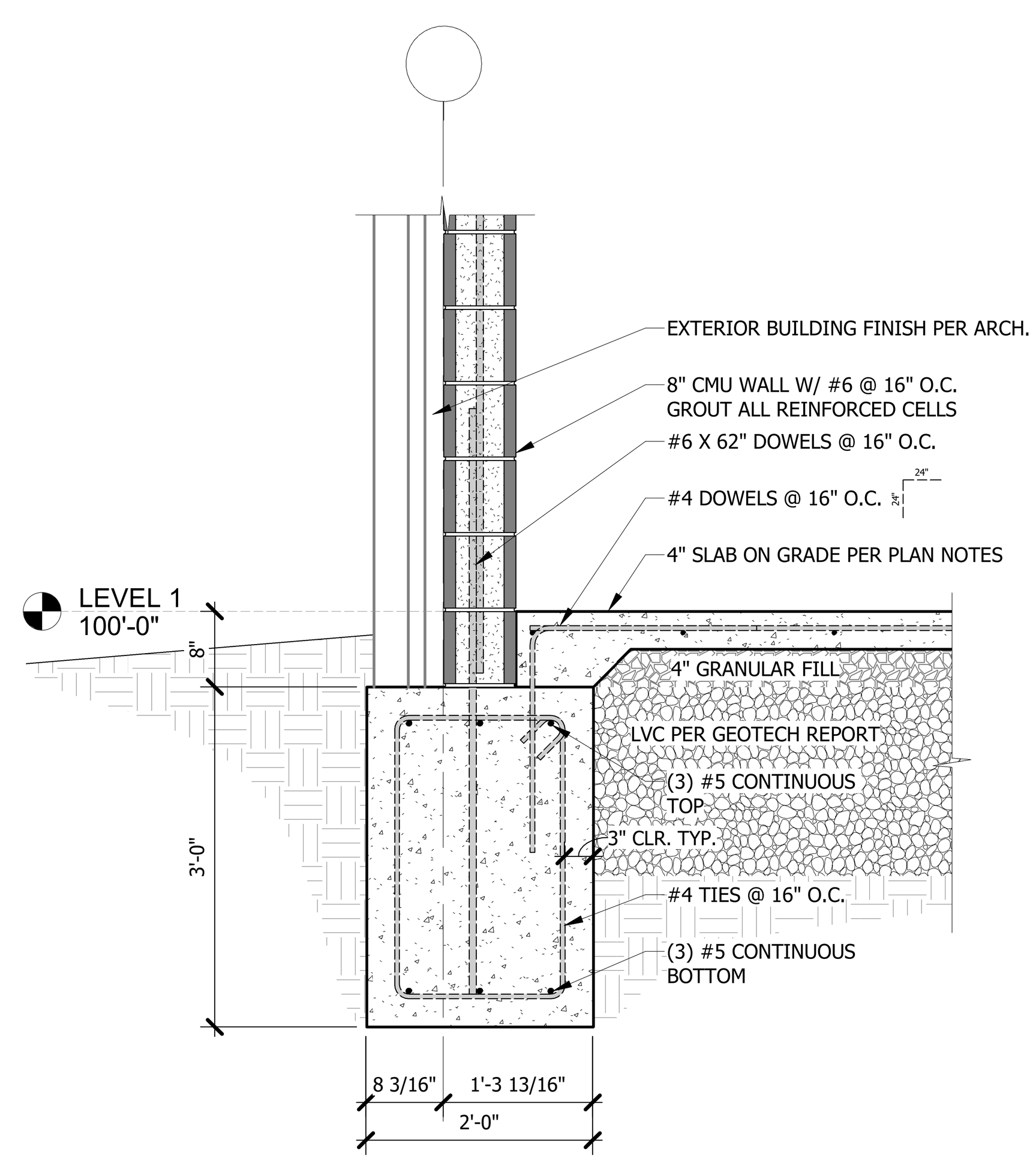
C2 FOUNDATION SECTION
3/4" = 1'-0"



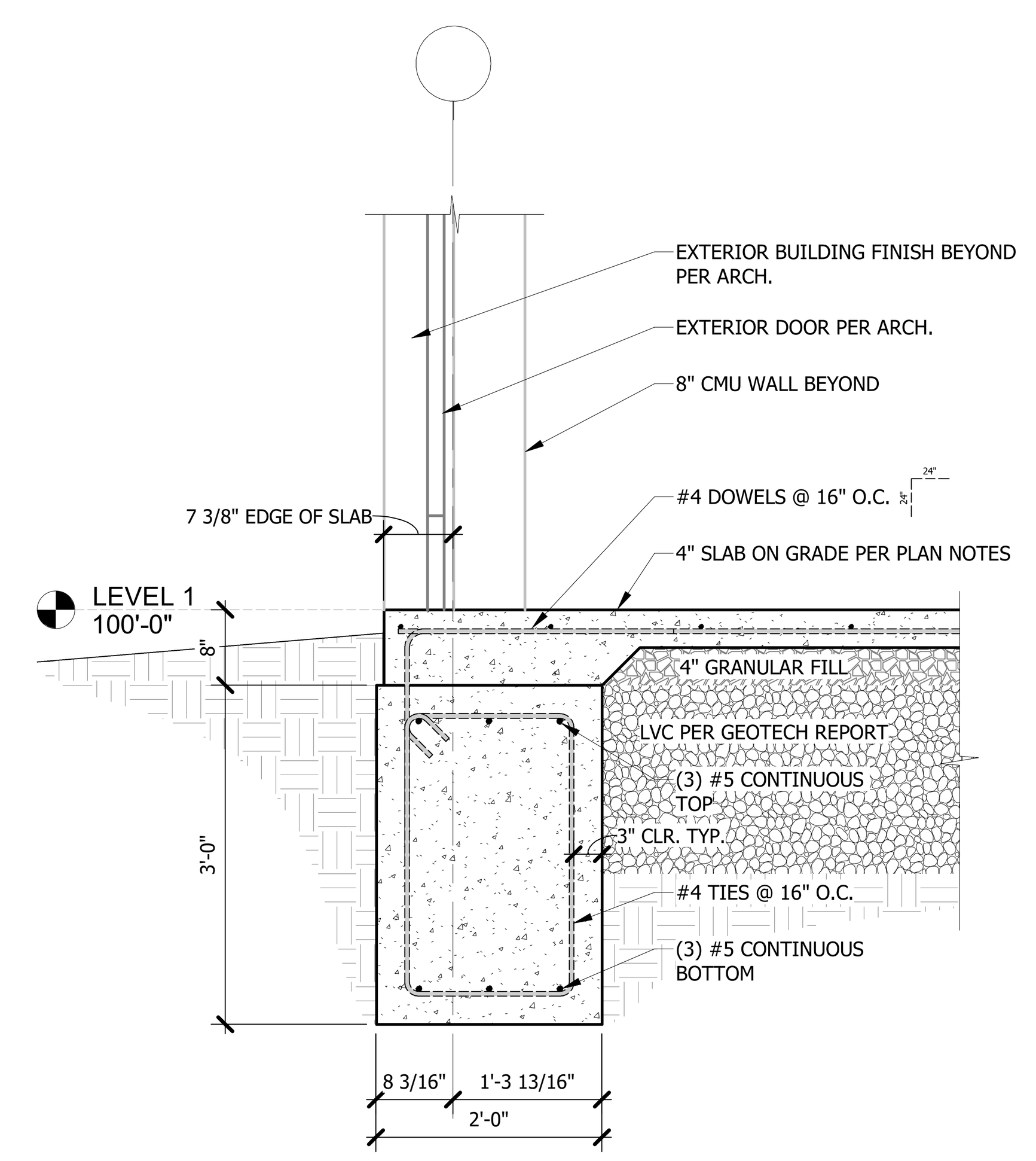
C4 FOUNDATION SECTION
3/4" = 1'-0"



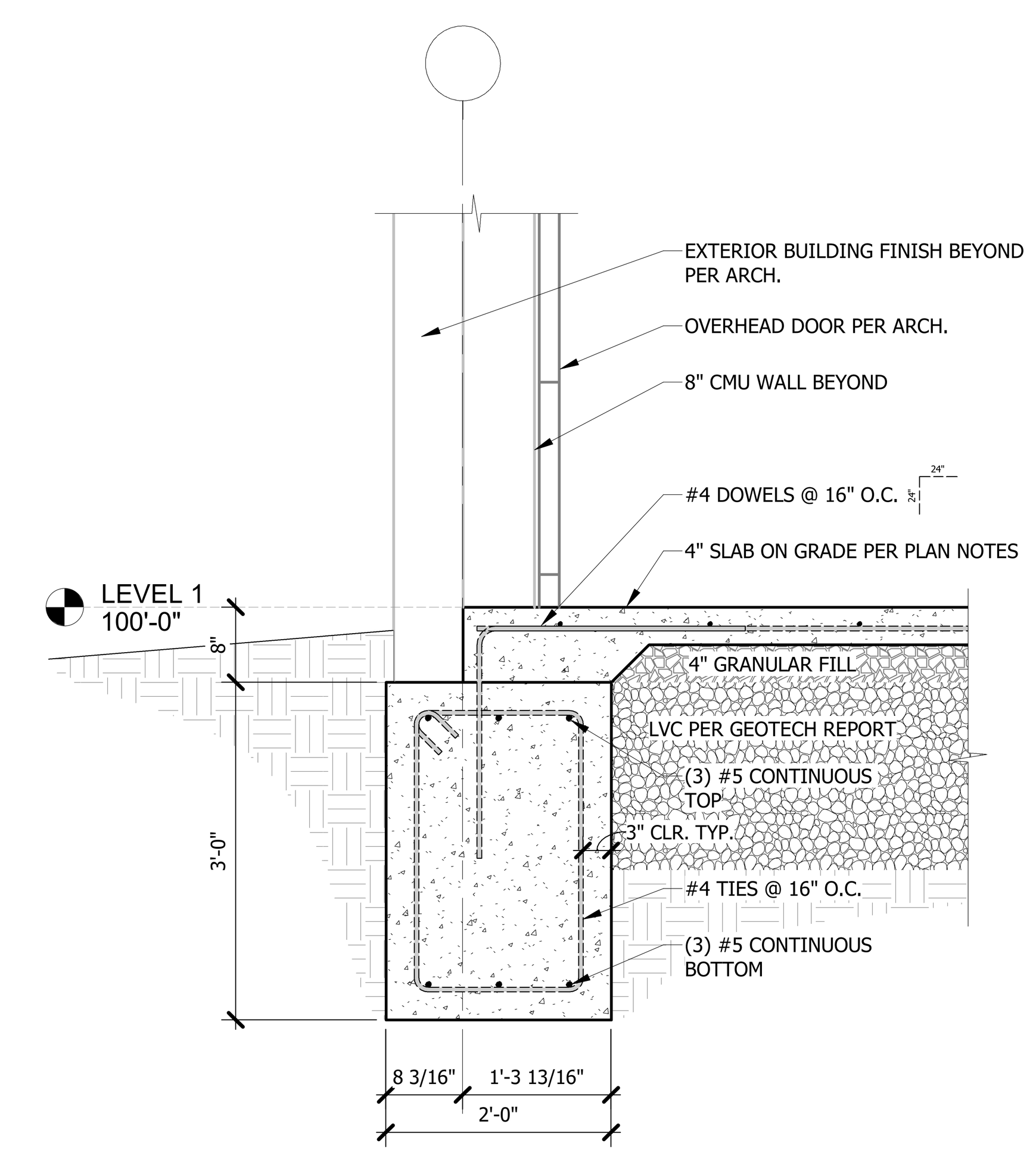
C5 FOUNDATION SECTION
3/4" = 1'-0"



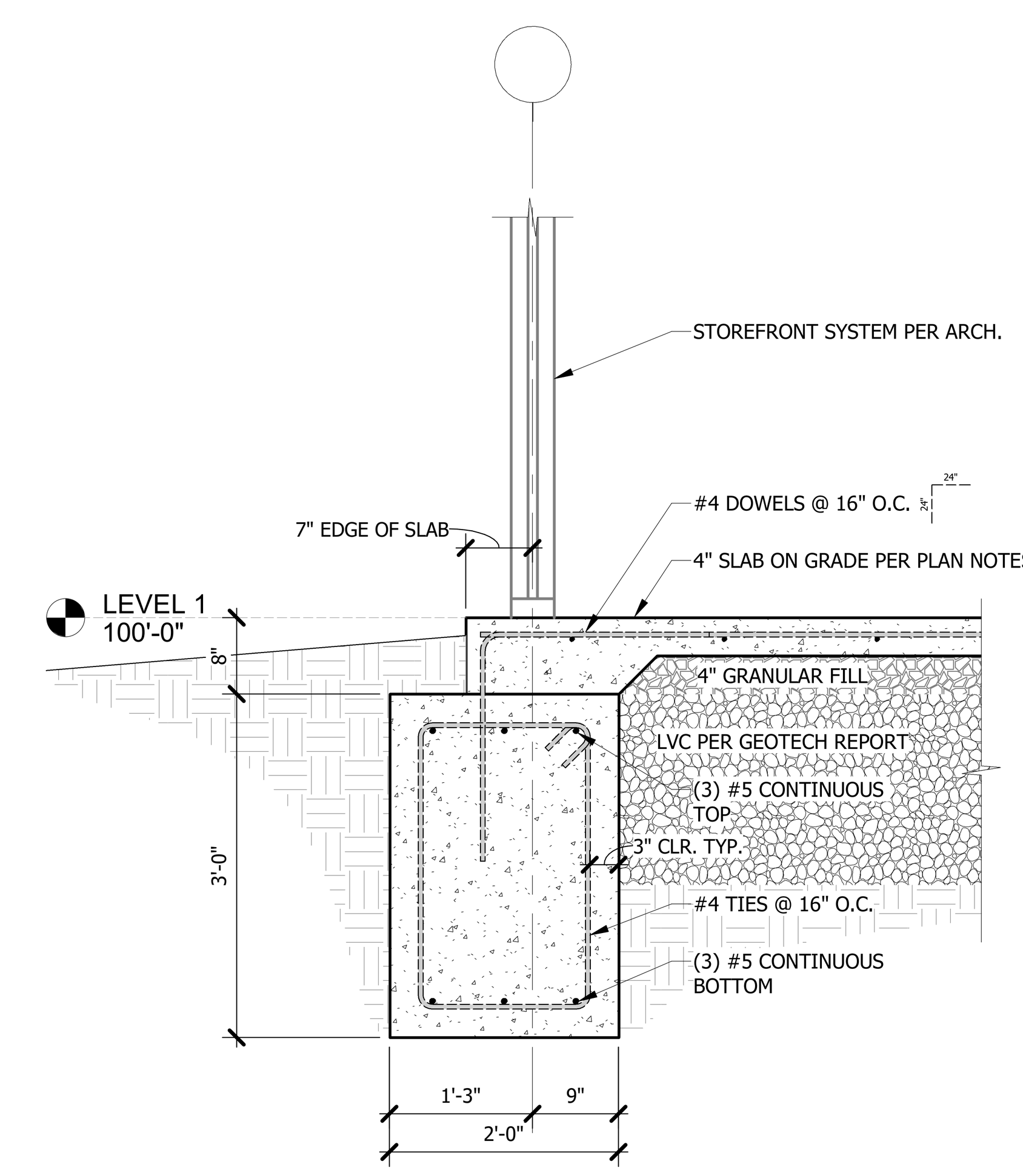
A1 FOUNDATION SECTION
3/4" = 1'-0"



A2 FOUNDATION SECTION
3/4" = 1'-0"



A4 FOUNDATION SECTION
3/4" = 1'-0"



A5 FOUNDATION SECTION
3/4" = 1'-0"

GLMV Architecture

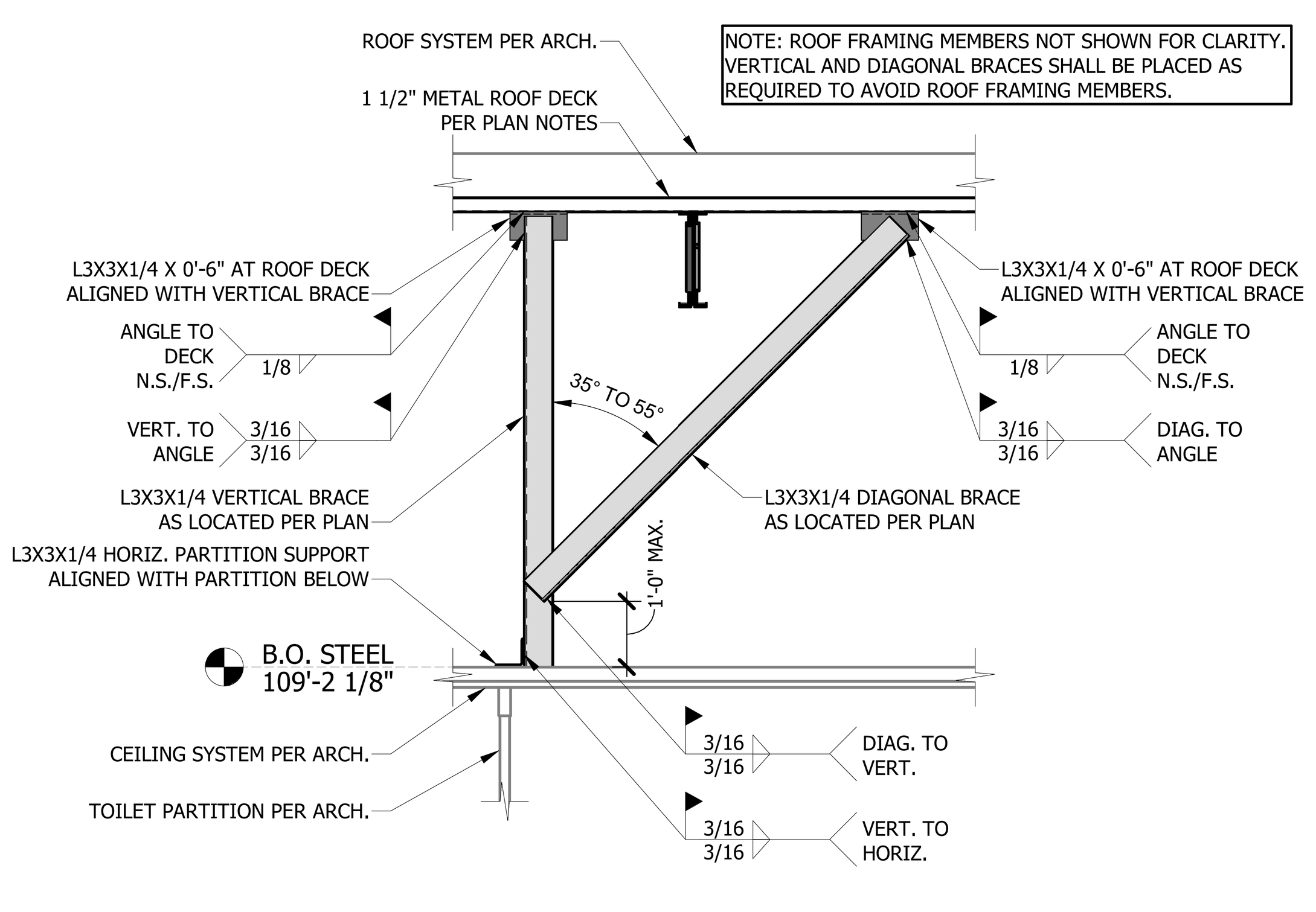
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		KDH
CHECKED BY:		ACO

FOUNDATION SECTIONS

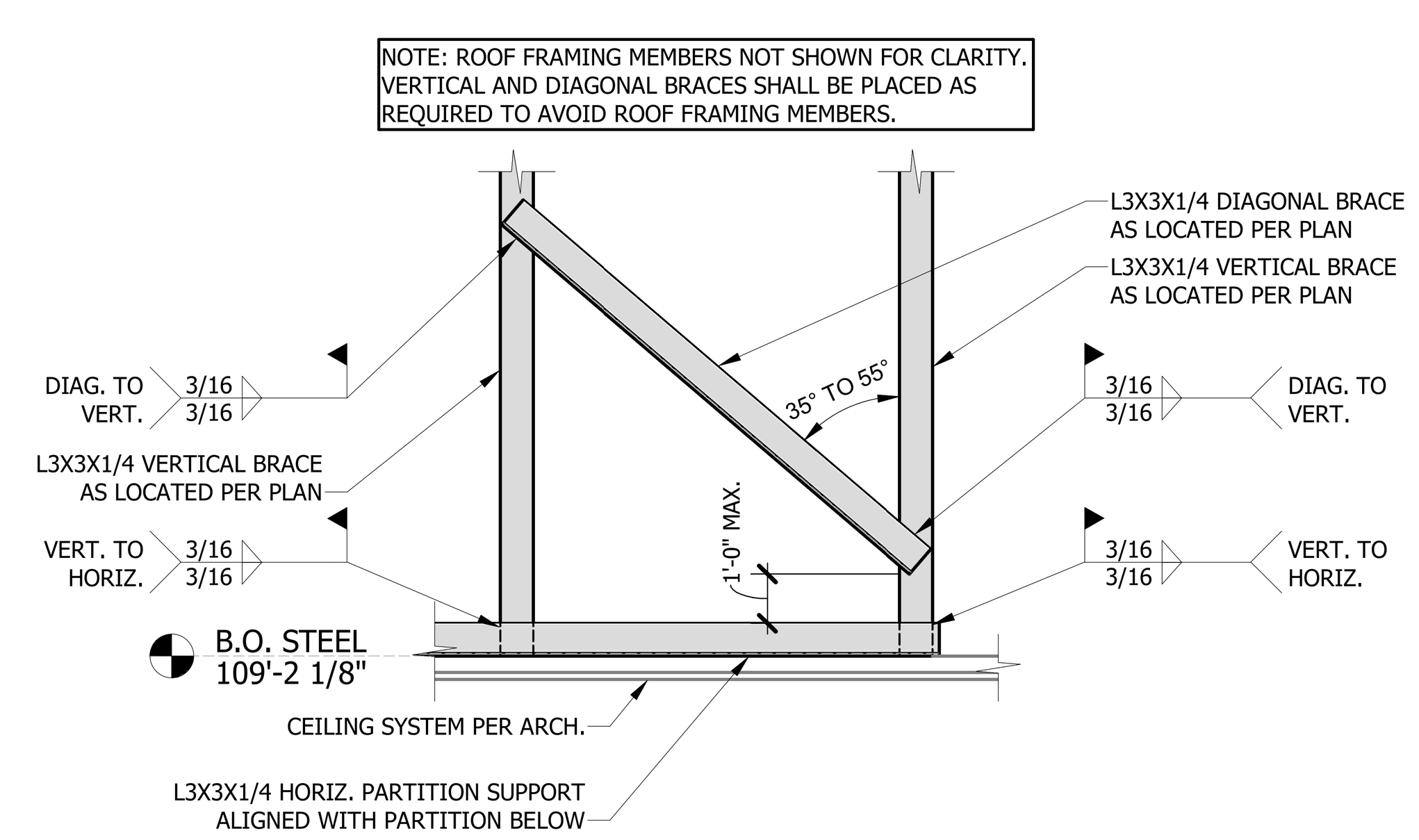
S-311

PLOT DATE: 10/30/2023 3:09:14 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Structural.rvt



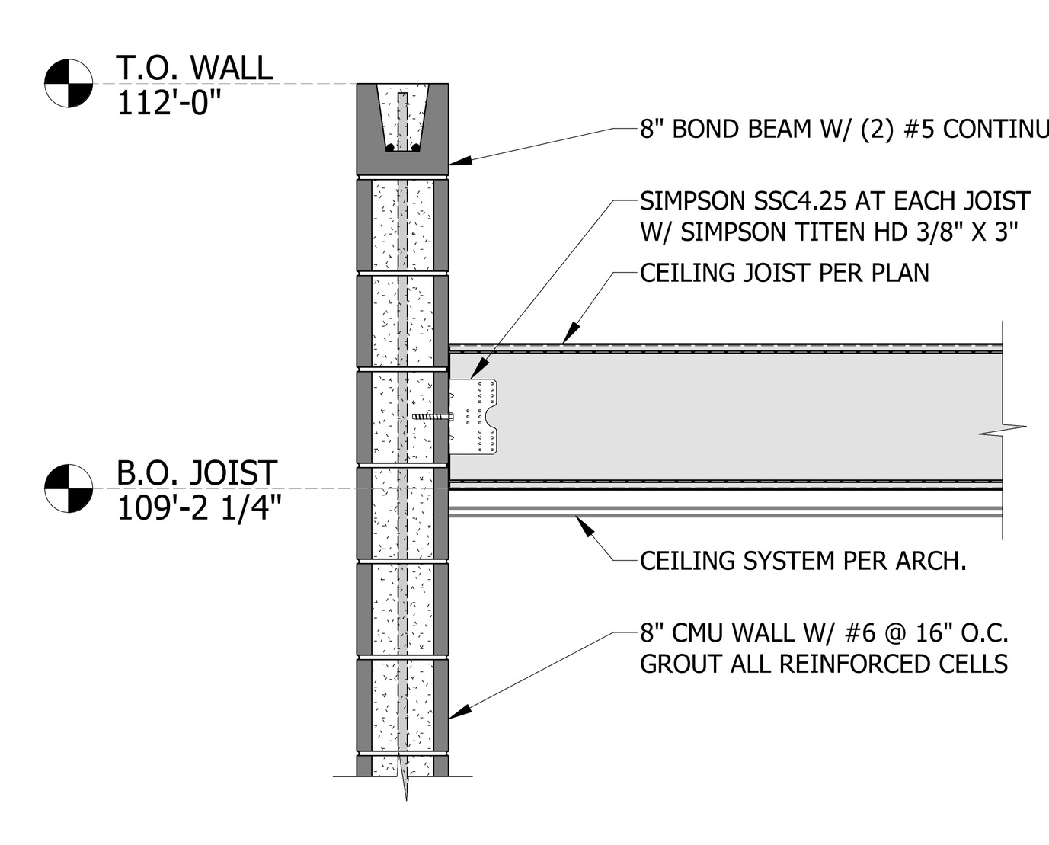
A1 TYPICAL TOILET PARTITION SUPPORT

3/4" = 1'-0"



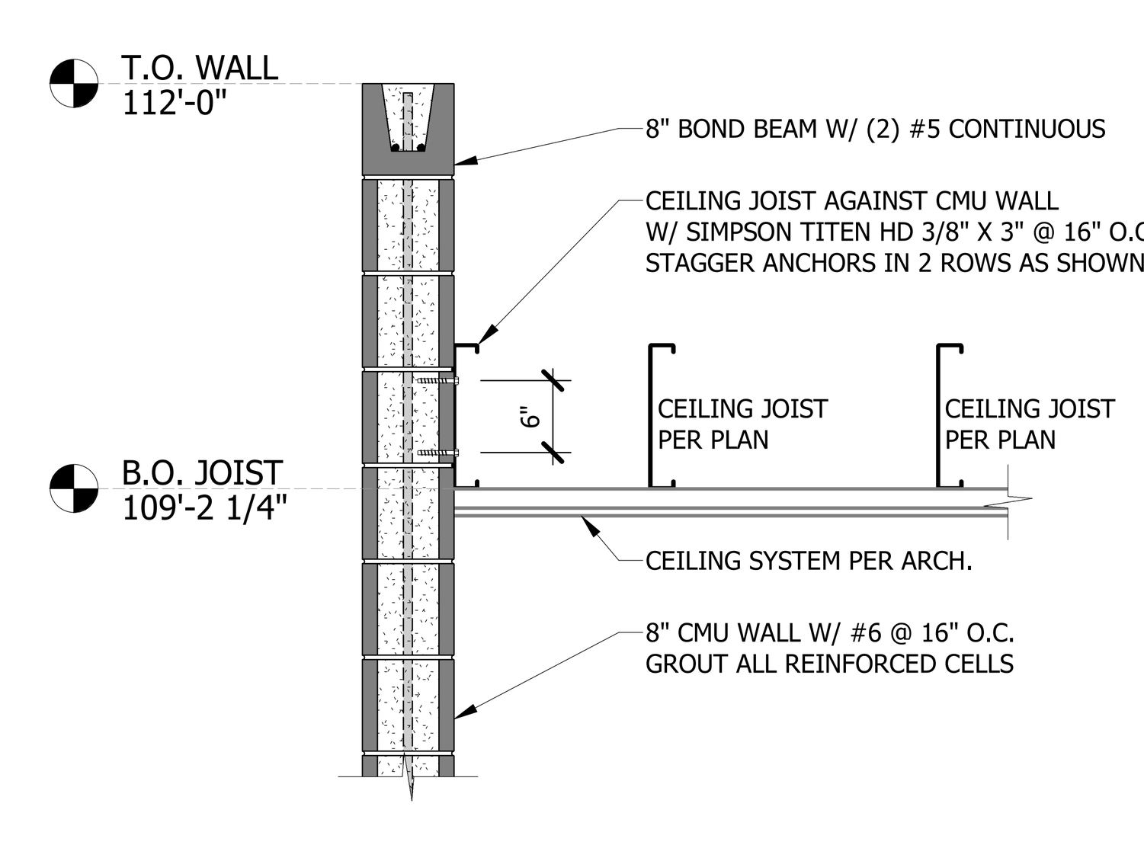
A3 TYPICAL TOILET PARTITION SUPPORT BRACING

3/4" = 1'-0"



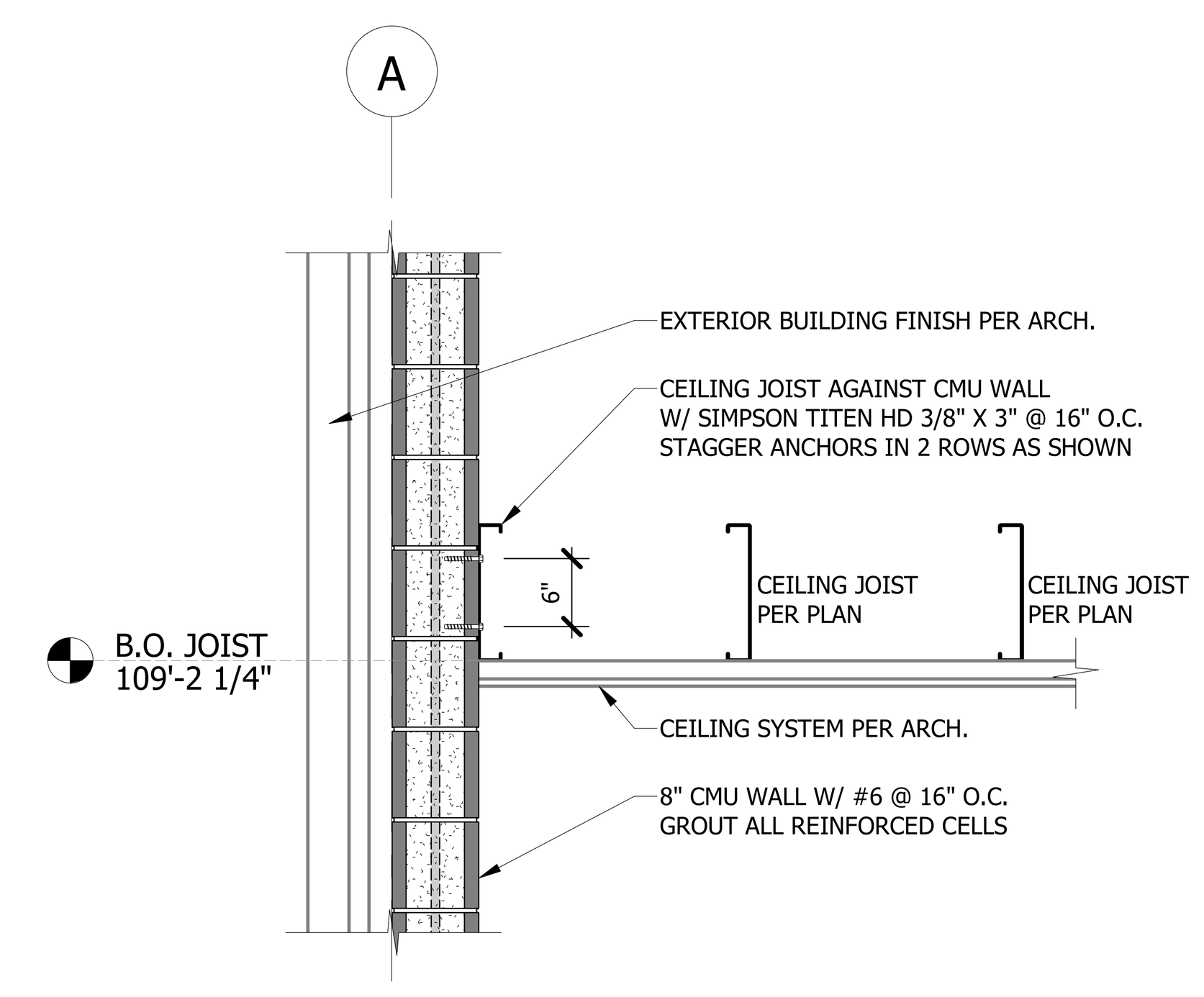
A4 CATERING KITCHEN CEILING SECTION

3/4" = 1'-0"



A5 CATERING KITCHEN CEILING SECTION

3/4" = 1'-0"



A6 CATERING KITCHEN CEILING SECTION

3/4" = 1'-0"

GLMV Architecture

CITY OF LEE'S SUMMIT

LEE'S SUMMIT - MARKET PLAZA

LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		KDH
CHECKED BY:		ACO

CEILING FRAMING SECTIONS

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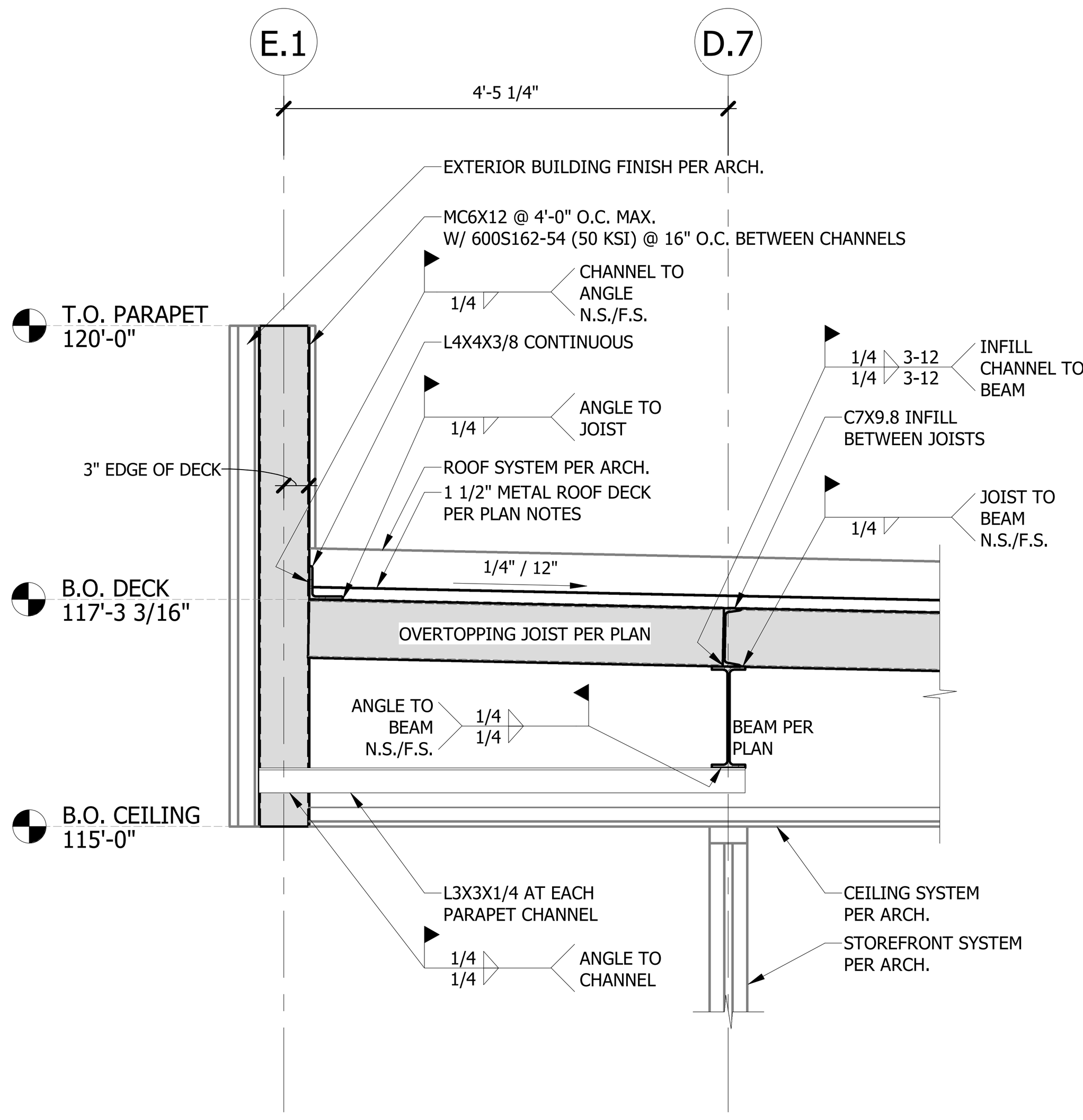
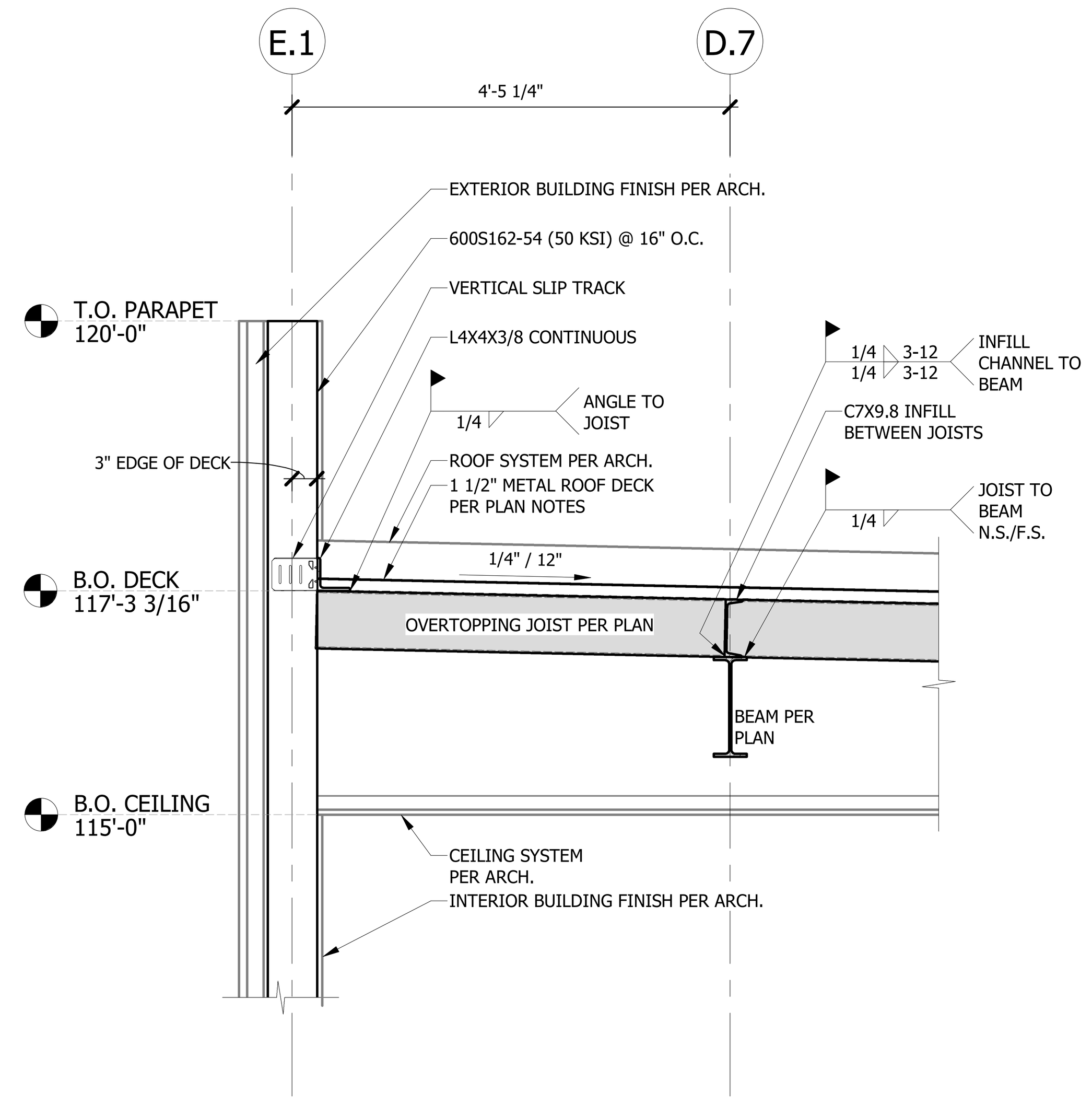
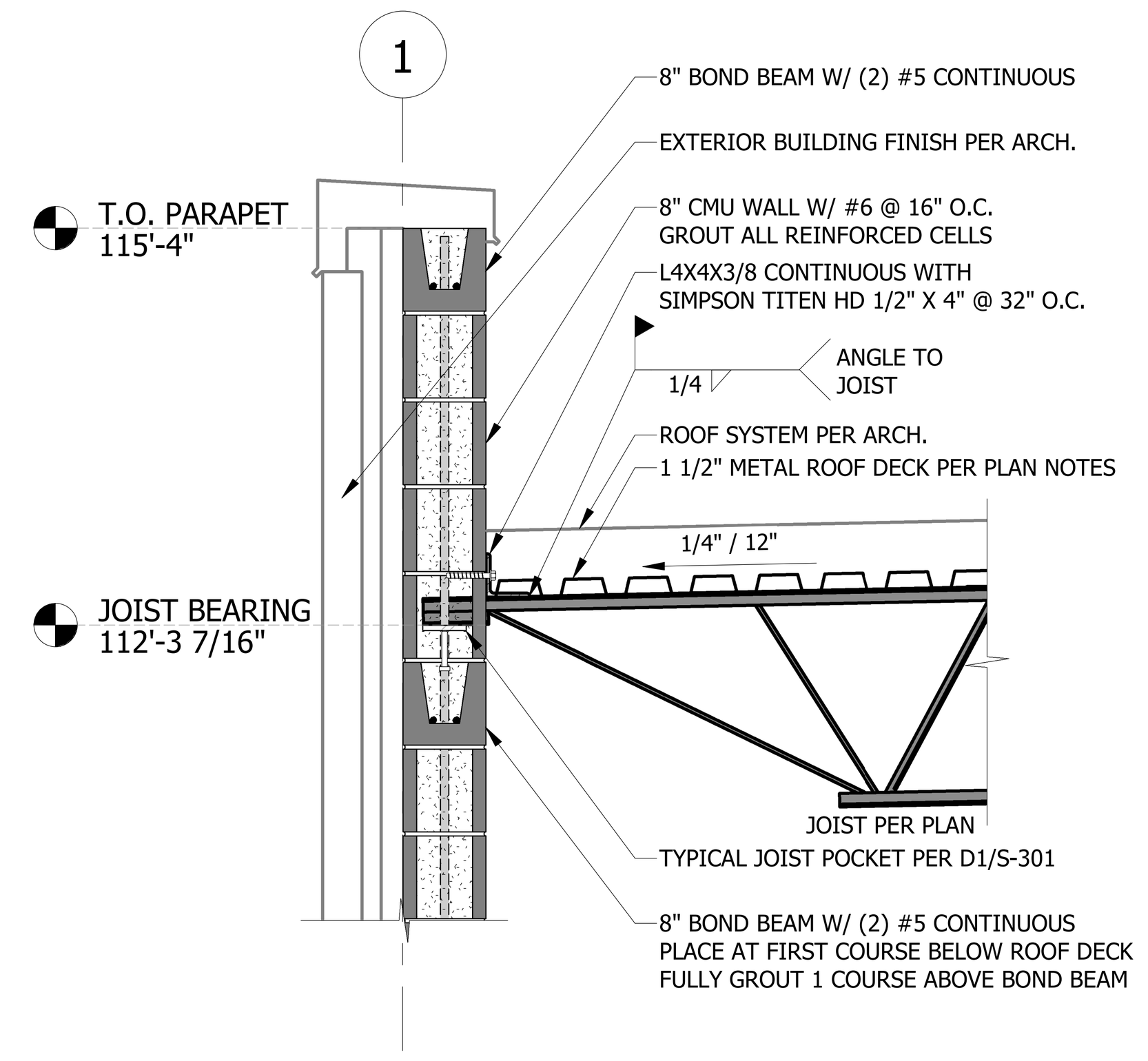
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Structural.rvt



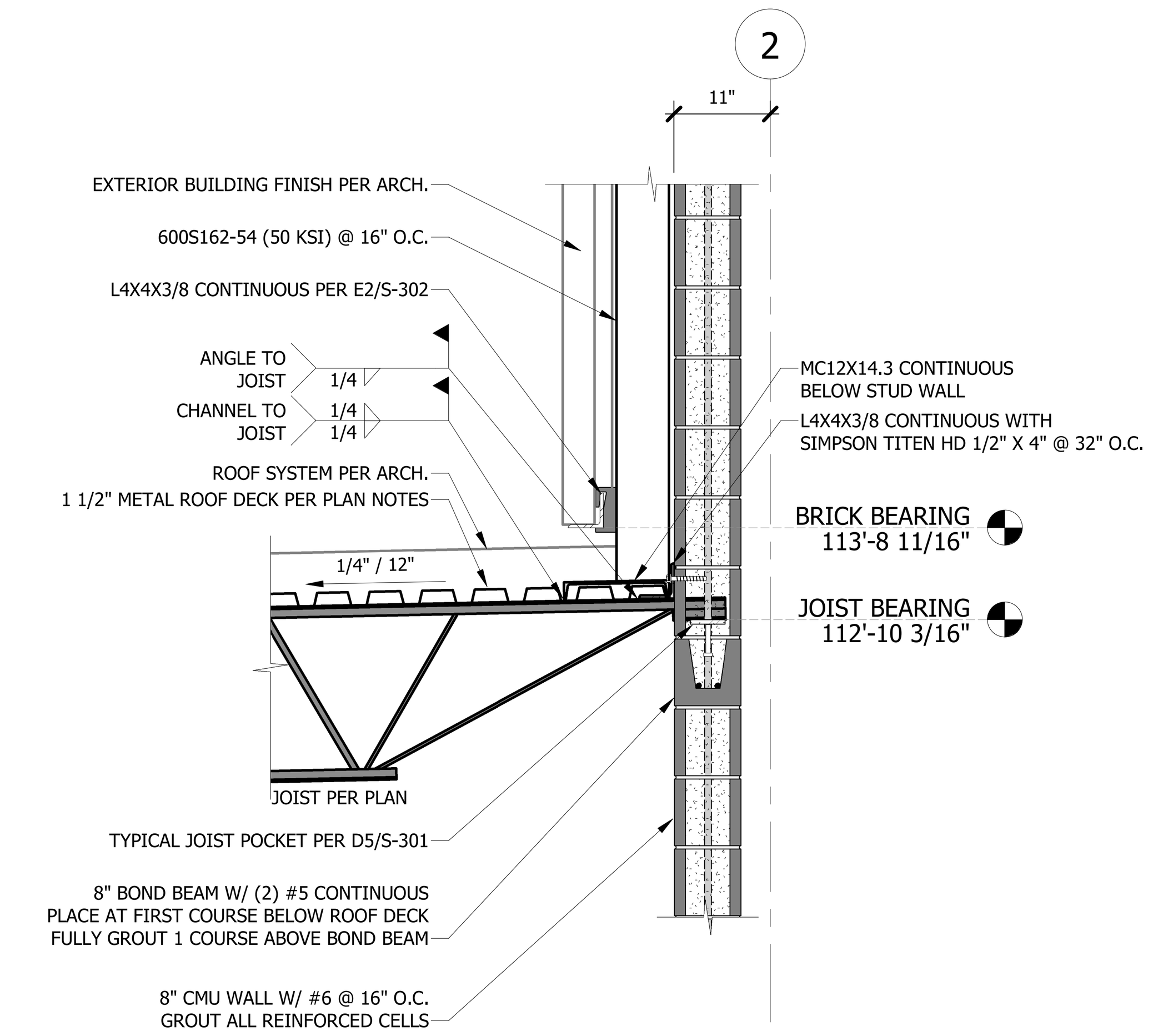
E1 **ROOF FRAMING SECTION**
3/4" = 1'-0"



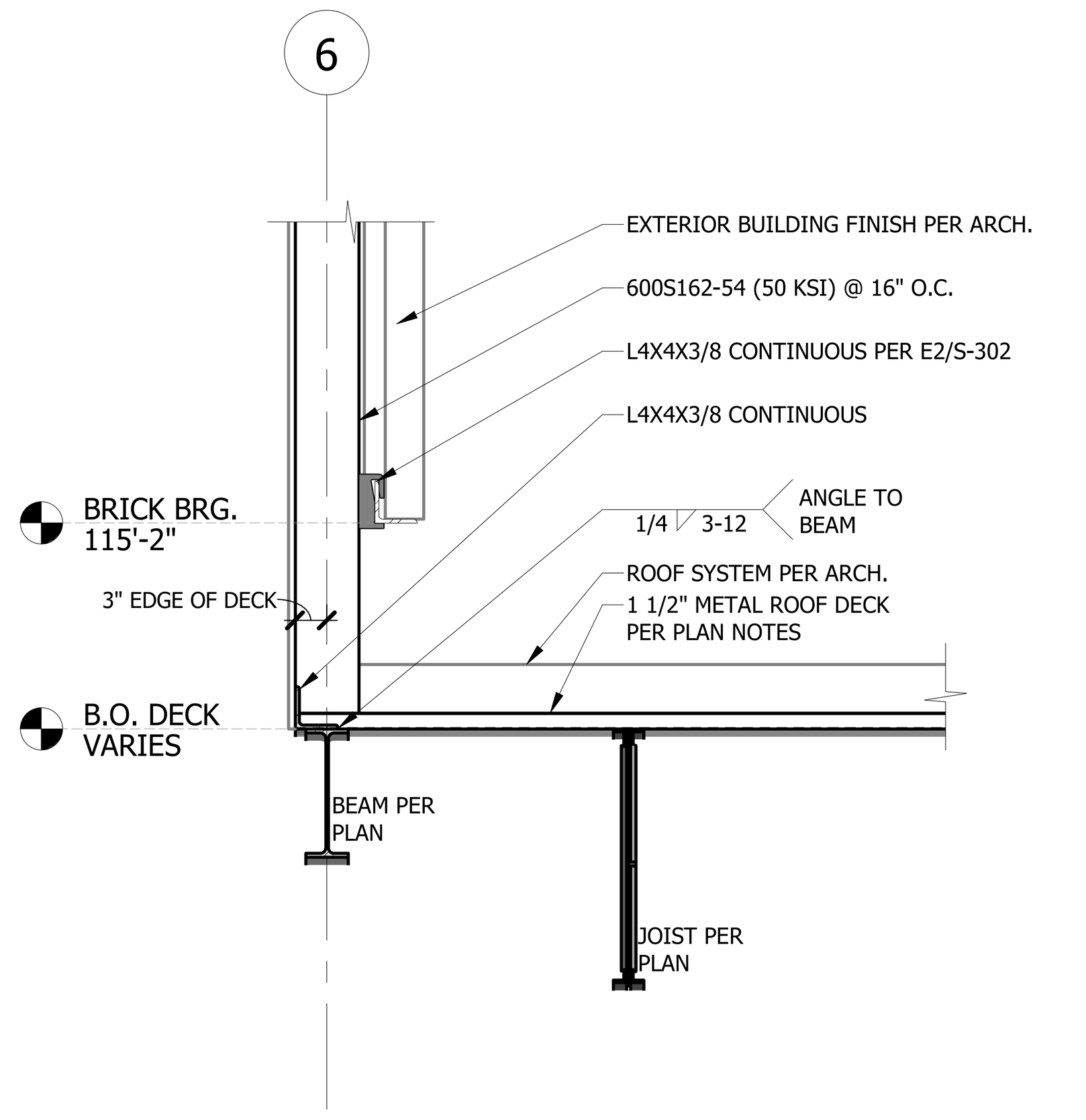
E2 **ROOF FRAMING SECTION**
3/4" = 1'-0"



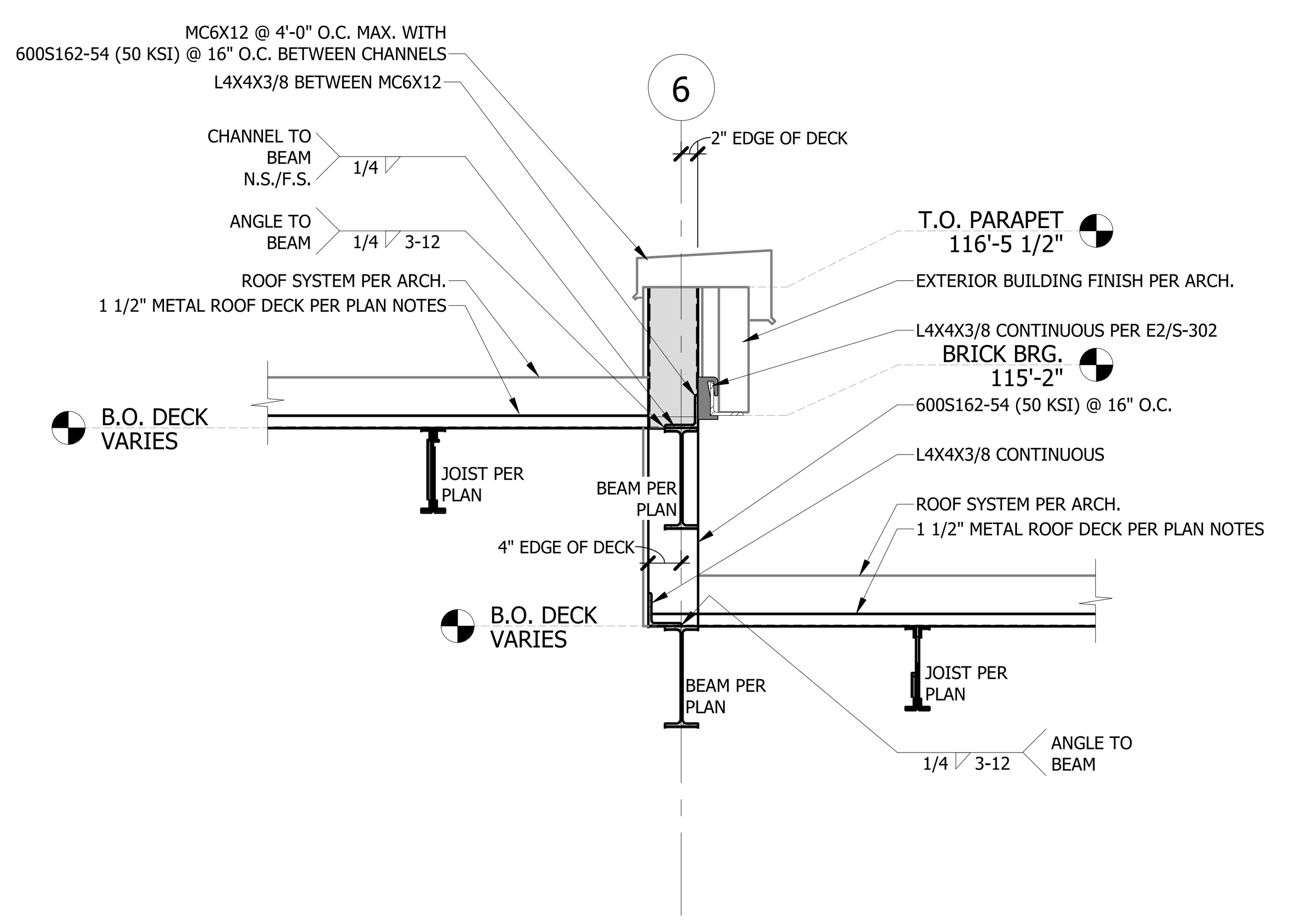
E4 **ROOF FRAMING SECTION**
3/4" = 1'-0"



E5 **ROOF FRAMING SECTION**
3/4" = 1'-0"



C1 **ROOF FRAMING SECTION**
3/4" = 1'-0"



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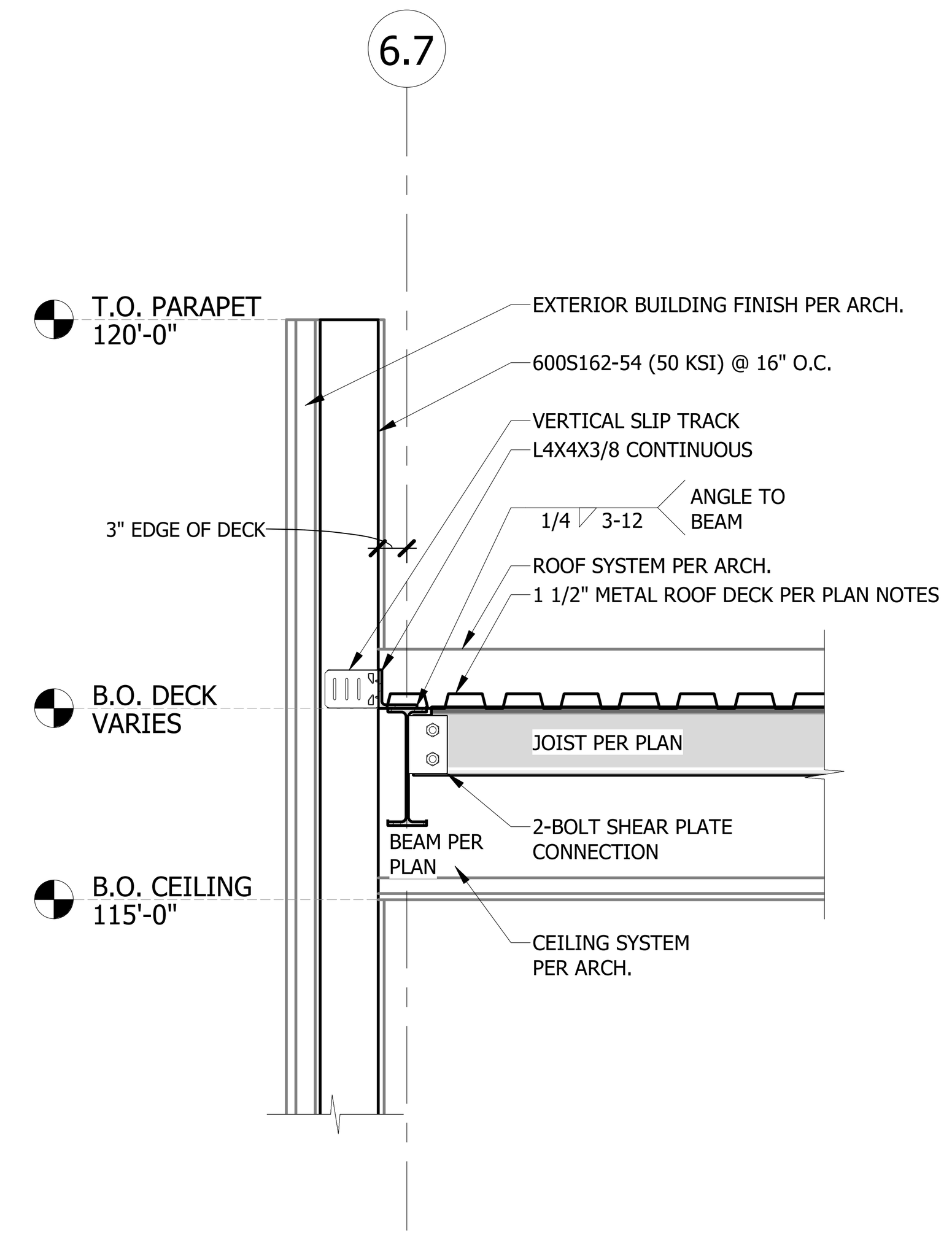
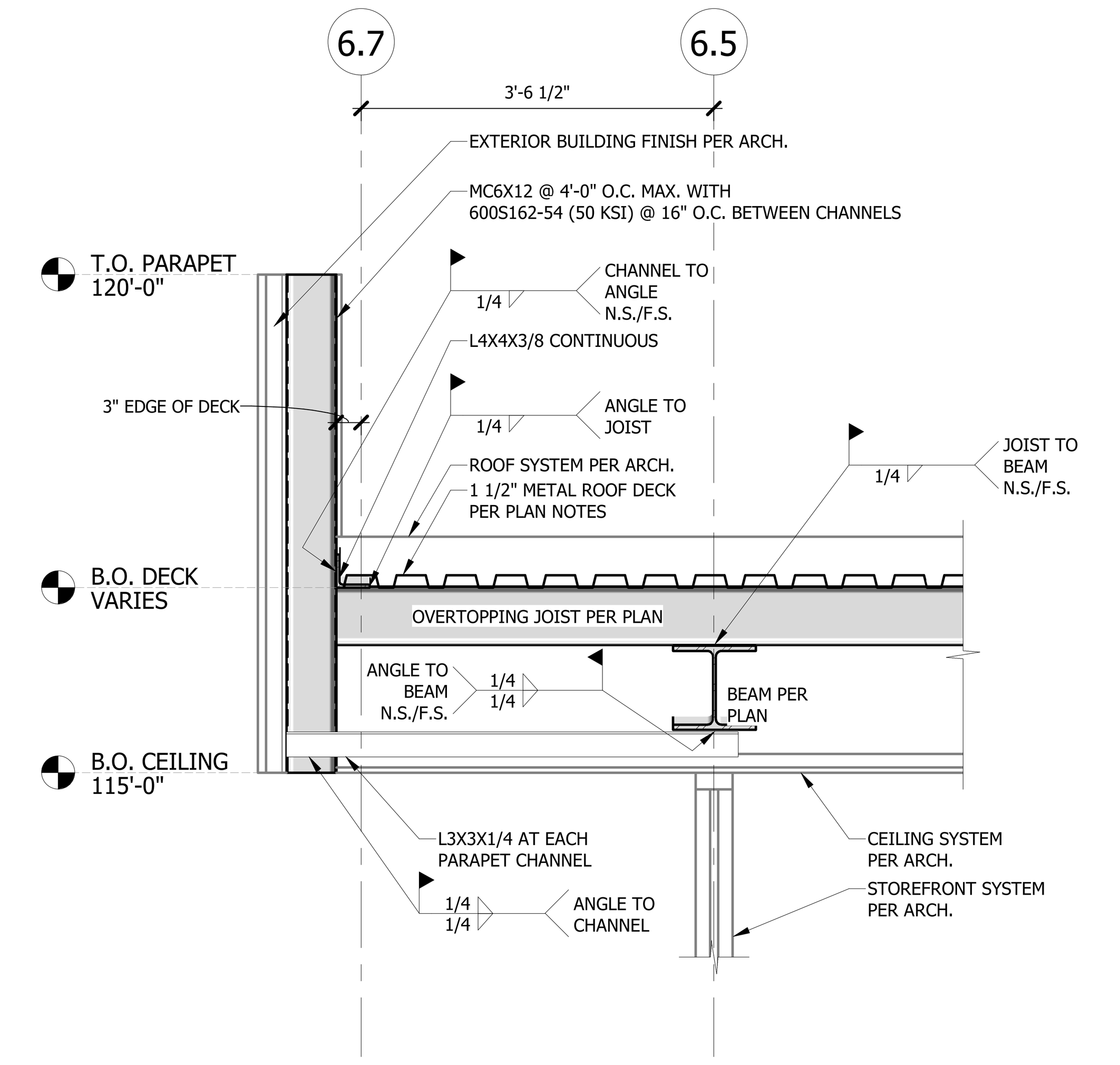
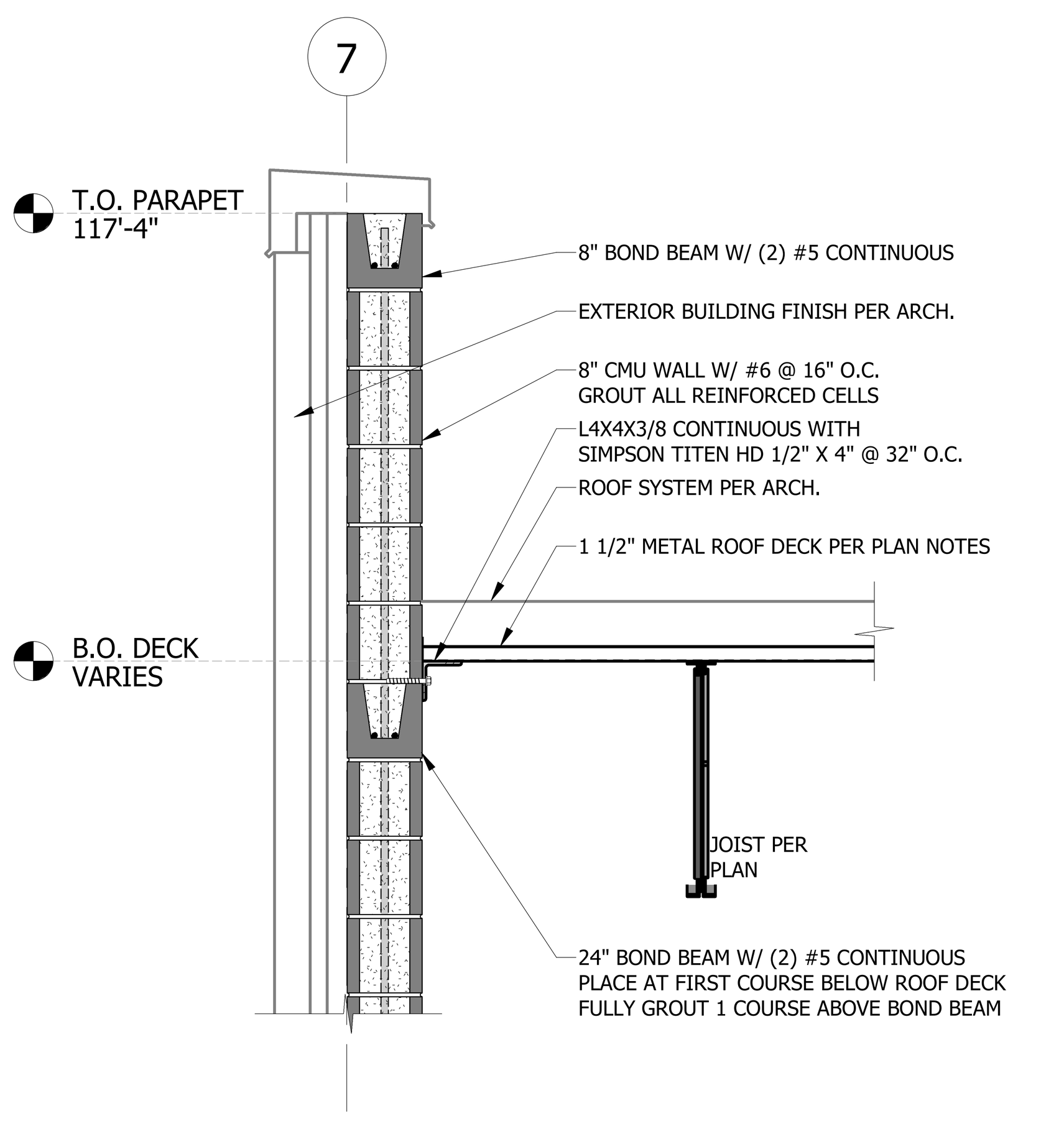
3/4" = 1'-0"



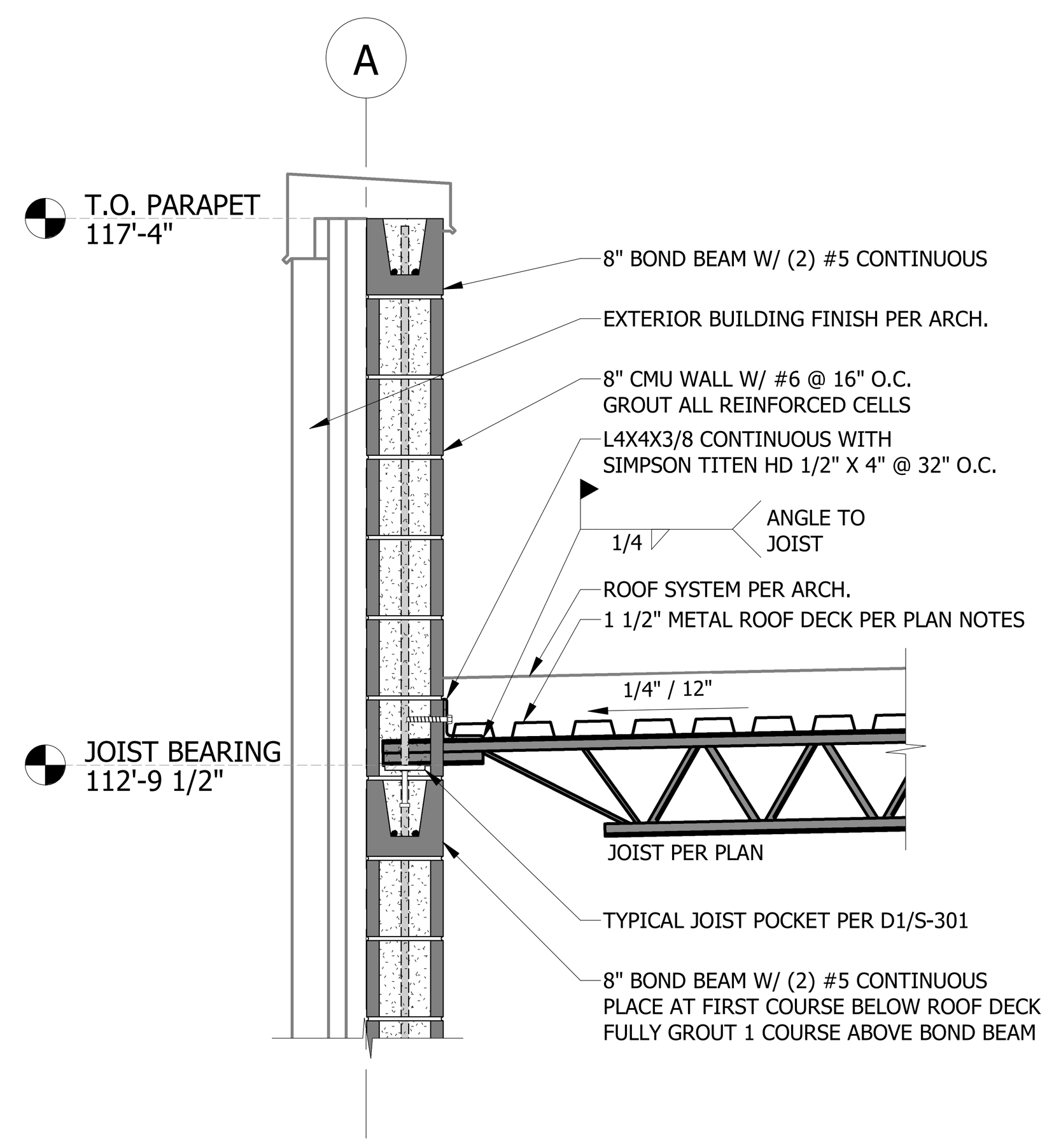
C4 **ROOF FRAMING SECTION**
3/4" = 1'-0"



C5 **ROOF FRAMING SECTION**
3/4" = 1'-0"



A1 **ROOF FRAMING SECTION**
3/4" = 1'-0"



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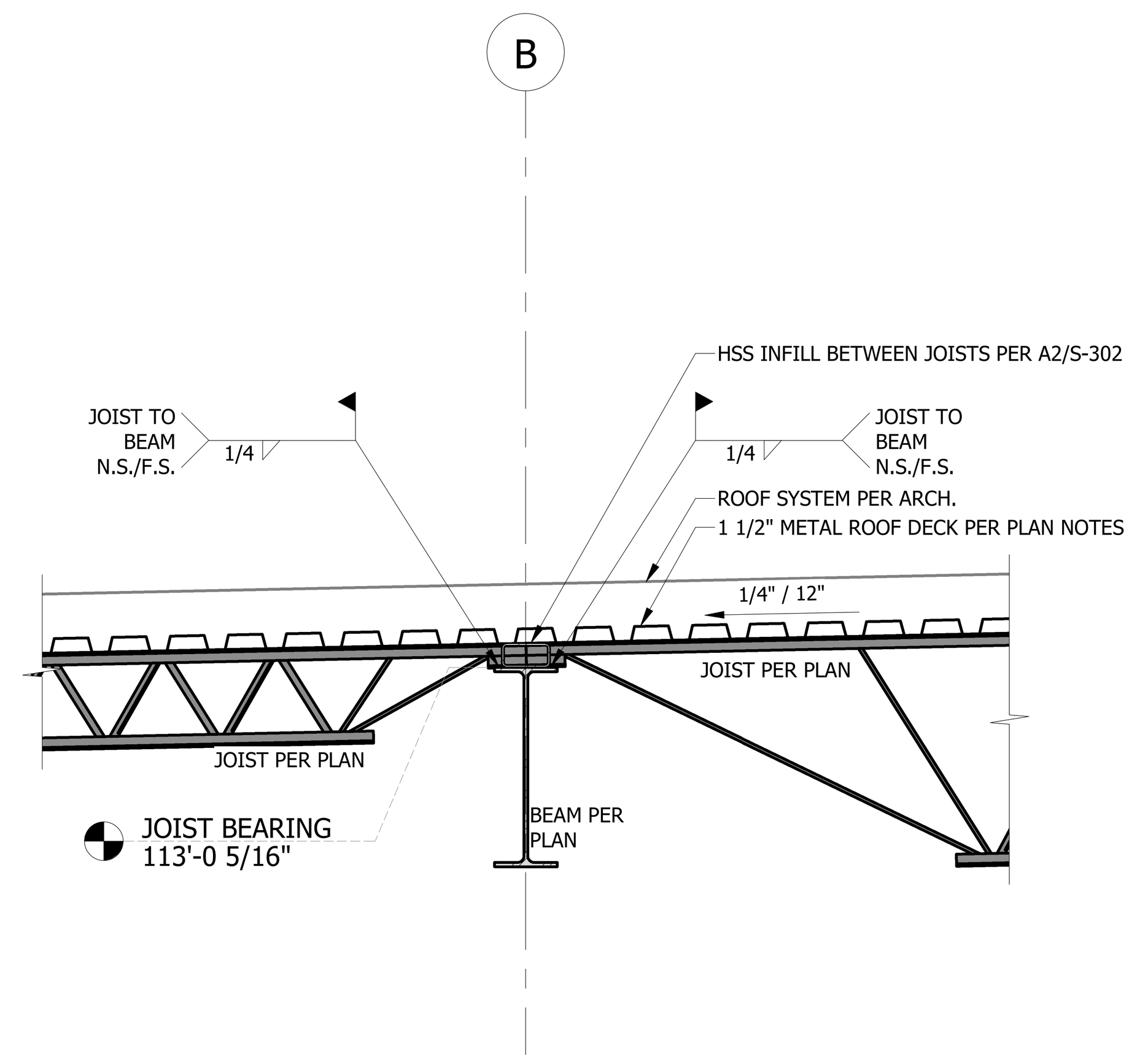
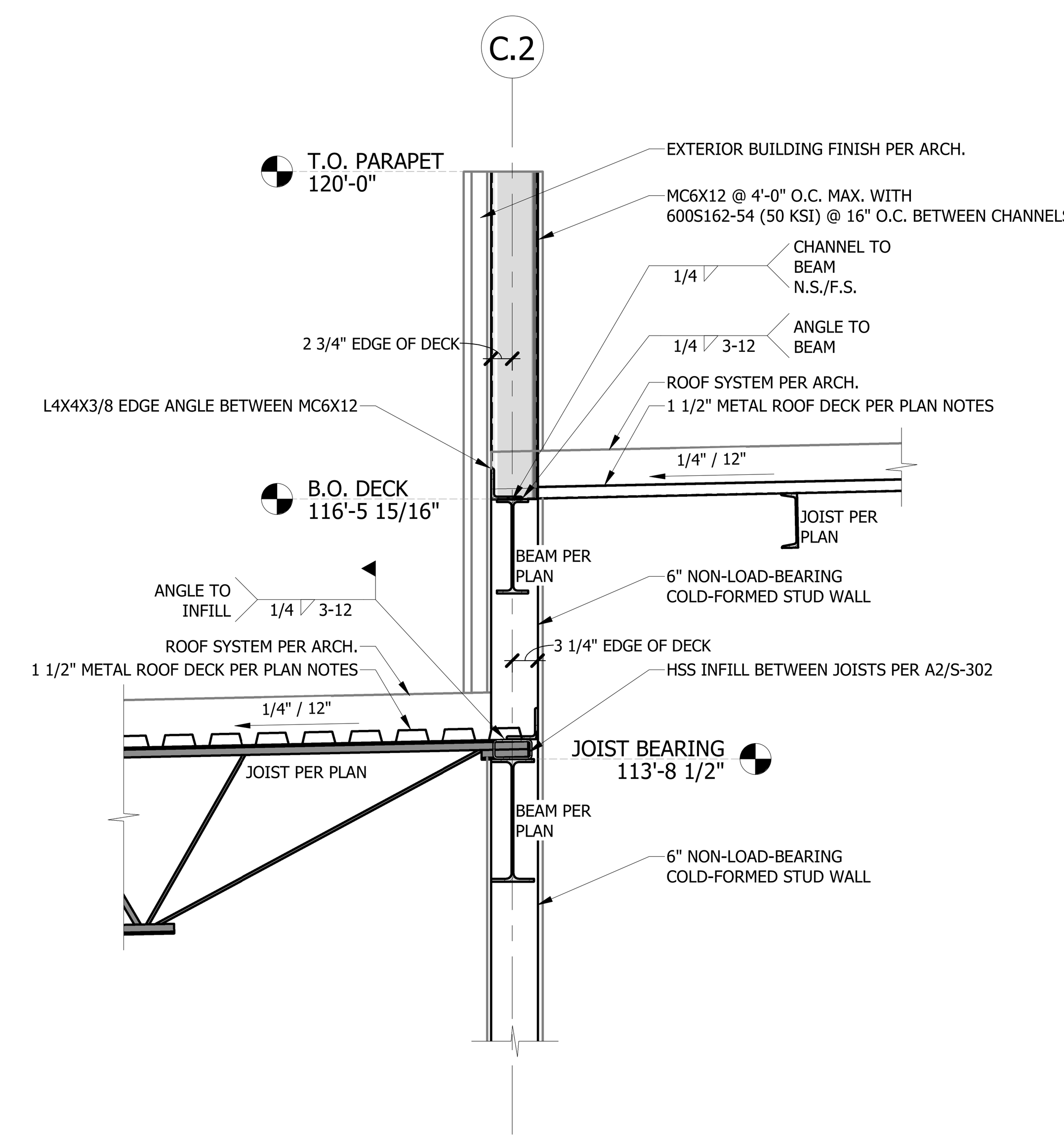
3/4" = 1'-0"



A4 **ROOF FRAMING SECTION**
3/4" = 1'-0"



A5 **ROOF FRAMING SECTION**
3/4" = 1'-0"

GLMVArchitecture

STATE OF MISSOURI
ADAM CHRISTOPHER
PROFESSIONAL ENGINEER
10/30/23

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

	DESCRIPTION	DATE
PROJECT NO:	18225R21006	
STATUS:	PERMIT SET	
DATE:	11/01/2023	
DRAWN BY:	KDH	
CHECKED BY:	ACO	

ROOF FRAMING SECTIONS

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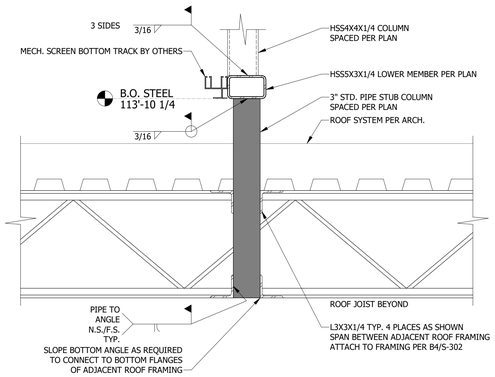
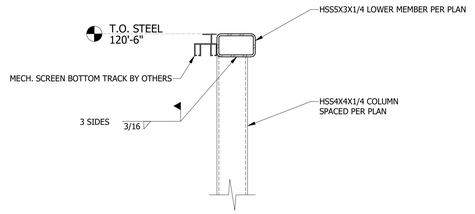
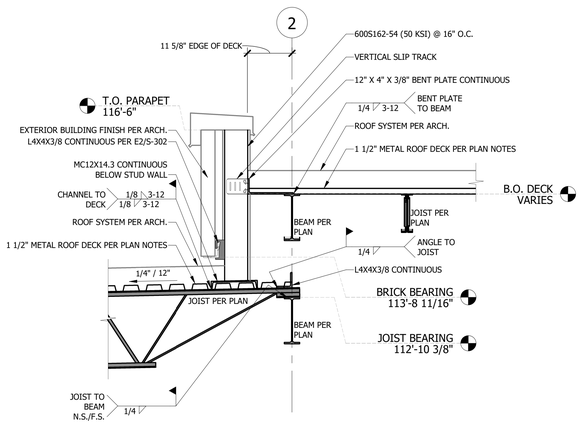


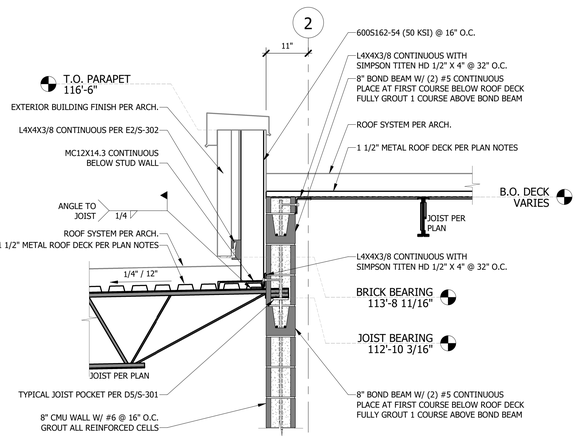
E1 MECHANICAL SCREEN STUB COLUMN
1 1/2" = 1'-0"



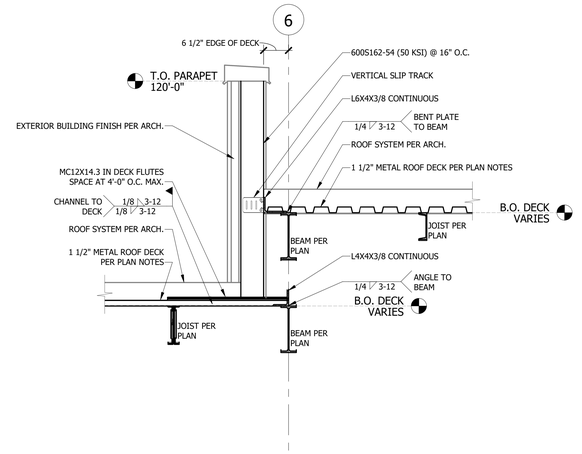
E3 MECHANICAL SCREEN TOP MEMBER
1 1/2" = 1'-0"



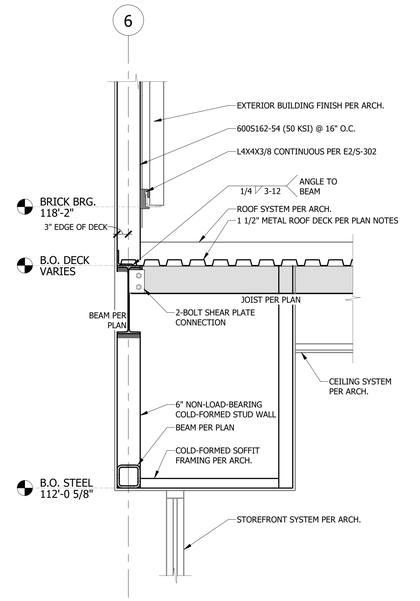
C1 ROOF FRAMING SECTION
3/4" = 1'-0"



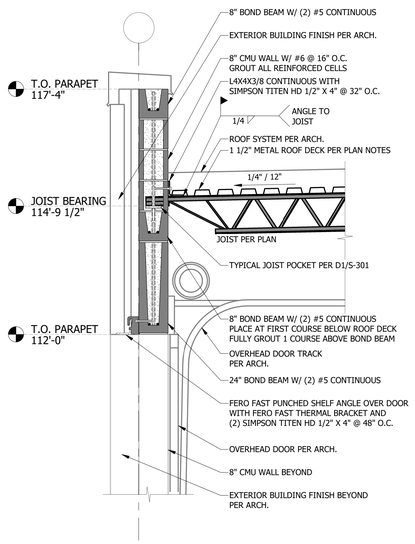
C3 ROOF FRAMING SECTION
3/4" = 1'-0"



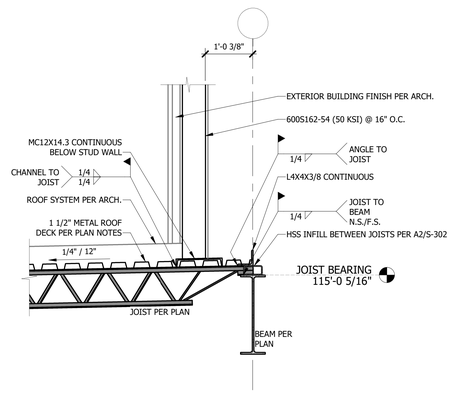
C4 ROOF FRAMING SECTION
3/4" = 1'-0"



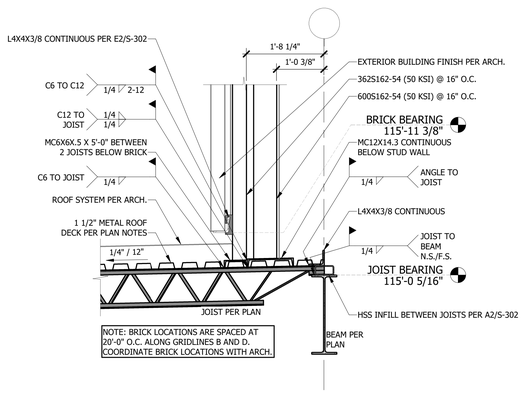
C6 ROOF FRAMING SECTION
3/4" = 1'-0"



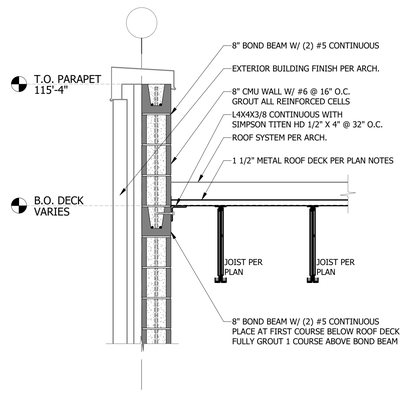
A1 ROOF FRAMING SECTION
3/4" = 1'-0"



A2 ROOF FRAMING SECTION
3/4" = 1'-0"



A3 ROOF FRAMING SECTION
3/4" = 1'-0"



A5 ROOF FRAMING SECTION
3/4" = 1'-0"

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CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
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CHECKED BY:		ACO

ROOF FRAMING SECTIONS

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PLOT DATE: 10/30/2023 3:09:30 PM
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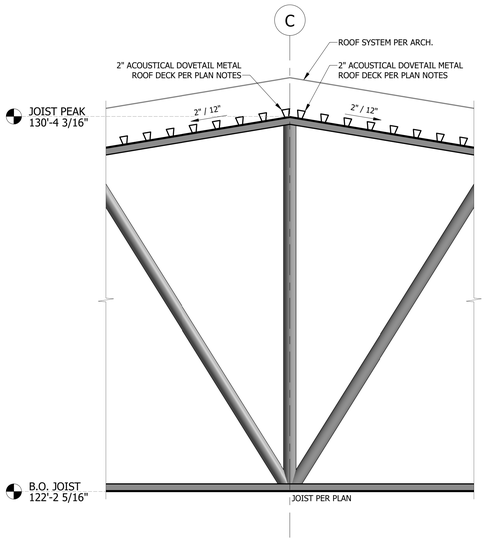
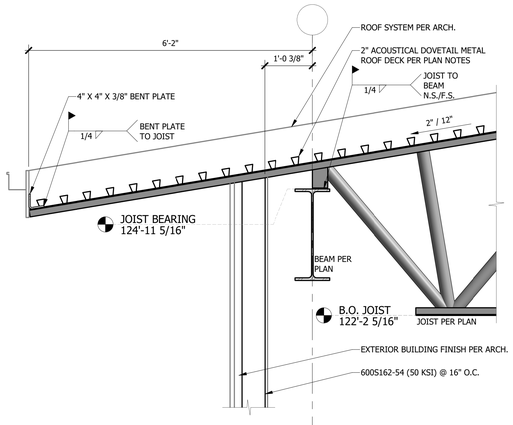
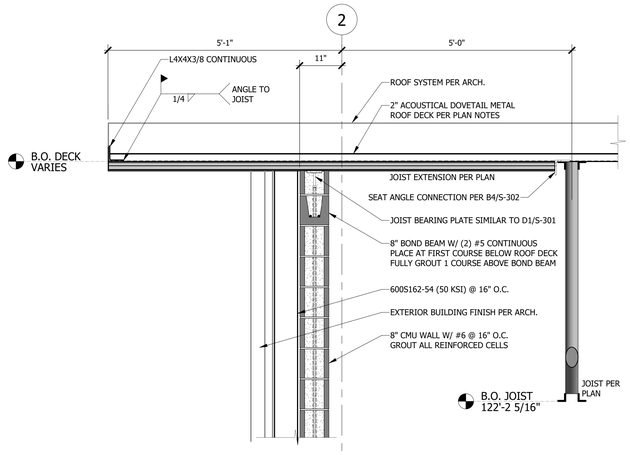


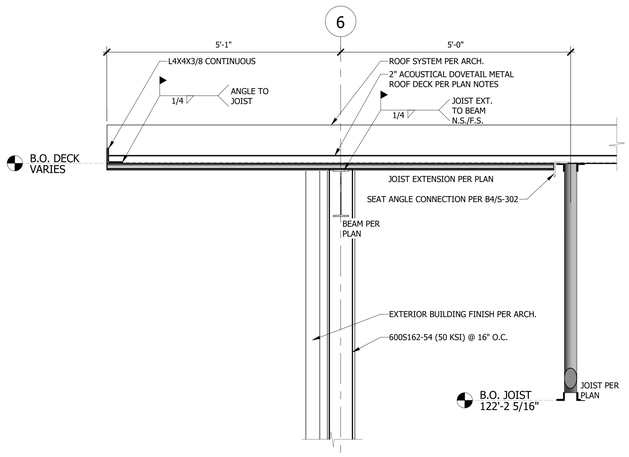
10 ROOF FRAMING SECTION
3/4" = 1'-0"



12 ROOF FRAMING SECTION
3/4" = 1'-0"



8 ROOF FRAMING SECTION
3/4" = 1'-0"



9 ROOF FRAMING SECTION
3/4" = 1'-0"

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CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
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STATUS:	PERMIT SET
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ROOF FRAMING SECTIONS

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TERMS AND ABBREVIATIONS

ABBREVIATION	TERMINOLOGY
A	
ABV / ABV.	ABOVE
AFF / A.F.F.	ABOVE FINISH FLOOR
ACS PNL	ACCESS PANEL
ACT / A.C.T.	ACOUSTICAL CEILING PANEL
ADJ / ADJ.	ADJACENT
A/C / A.C.	AIR CONDITIONING
ALT / ALT.	ALTERNATE
ALUM / ALUM.	ALUMINUM
AIA	AMERICAN INSTITUTE OF ARCHITECTS
ADA	AMERICANS WITH DISABILITIES ACT
ANOD / ANOD.	ANODIZED
APPROX / APPROX.	APPROXIMATE
ARCH / ARCH.	ARCHITECT (URAL)
AUTO	AUTOMATIC
AVG / AVG.	AVERAGE
B	
BSMT / BSMT.	BASEMENT
BATH	BATHROOM
BRG / BRNG.	BEARING
BLW / BLW.	BELOW
BTWN / BTWN.	BETWEEN
BLK / BLK.	BLOCK
BLKG / BLKG.	BLOCKING
BD / BD.	BOARD
B.O.	BOTTOM OF
BLDG / BLDG.	BUILDING
BIM / B.I.M.	BUILDING INFORMATION MODEL
C	
CIP / C.I.P.	CAST IN PLACE
CLK	CAULK (ING)
CLG	CEILING
CL / C.L.	CENTER LINE
C/C	CENTER TO CENTER
CO / C.O.	CLEAN OUT
CLR	CLEAR (ANCE)
CLO / CLOS.	CLOSET
COL / COL.	COLUMN
CONC / CONC.	CONCRETE
CMU / C.M.U.	CONCRETE MASONRY UNIT
CONST / CONST.	CONSTRUCTION
CJ / C.J.	CONSTRUCTION JOINT / CONTROL JOINT
CONT / CONT.	CONTINUE (CONTINUOUS)
CI / C.I.	CONTINUOUS INSULATION
CG / C.G.	CORNER GUARD
CORR / CORR.	CORRIDOR
CU FT.	CUBIC FEET
CU YD	CUBIC YARD
D	
DEMO / DEMO.	DEMOLTION
DTL / DTL.	DETAIL
DIA / DIA.	DIAMETER
DIM / DIM.	DIMENSION
DW / D.W.	DISH WASHER
DBL / DBL.	DOUBLE
DN	DOWN
DS / D.S.	DOWNSPOUT
DWG / DWG.	DRAWING (S)
DF/ D.F.	DRINKING FOUNTAIN
E	
EA / EA.	EACH
ELEC / ELEC.	ELECTRIC (AL)
ELEV / ELEV.	ELEVATION / ELEVATOR
EQ / EQ.	EQUAL
EQUIP / EQUIP.	EQUIPMENT
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EXIST / EXIST.	EXISTING
EXP / EXP.	EXPANSION / EXPOSED
EJ / E.J.	EXPANSION JOINT
EXT / EXT.	EXTERIOR
EIFS / E.I.F.S.	EXTERIOR INSULATION AND FINISH SYSTEM
F	
FAB / FAB.	FABRICATE / FABRICATION
FOW / F.O.W.	FACE OF WALL
F/F	FACE TO FACE
FRP / F.R.P.	FIBERGLASS REINFORCED PANEL
FV / F.V.	FIELD VERIFY
FIN / FIN.	FINISH
FF / F.F.	FINISH FLOOR
FDC / F.D.C.	FIRE DEPARTMENT CONNECTION
FE / F.E.	FIRE EXTINGUISHER
FEC / F.E.C.	FIRE EXTINGUISHER CABINET
FH / F.H.	FIRE HYDRANT
FRT / F.R.T.	FIRE RETARDANT TREATED
FCO / F.C.O.	FLOOR CLEAN OUT
FD / F.D.	FLOOR DRAIN
FT / FT. / (')	FOOT
FTG	FOOTING
FDTN	FOUNDATION
FR / F.R.	FRAME (D) (ING) / FIRE RATED
F.O.	FRONT OF / FACE OF
FURN / FURN.	FURNITURE
G	
GA / GA.	GAGE / GAUGE
GALV / GALV.	GALVANIZED
GC / G.C.	GENERAL CONTRACTOR
GEN / GEN.	GENERATOR
GLZ	GLAZING
GLULAM	GLUE LAMINATED LUMBER
GB / G.B.	GRAB BAR
GSF / G.S.F.	GROSS SQUARE FEET
GYP / GYP.	GYPSUM
GWB / G.W.B. / GYP. BD.	GYPSUM WALL BOARD
H	
HW / H.W.	HARDWARE
HDWD	HARDWOOD
HDR	HEADER
HVAC / H.V.A.C.	HEATING, VENTILATIN AND AIR CONDITIONING
HT.	HEIGHT
HC / H.C.	HOLLOW CORE / HANDICAP
HM / H.M.	HOLLOW METAL
HORIZ / HORIZ.	HORIZONTAL
HR	HOUR
HYD / HYD.	HYDRANT
I	
ID / I.D.	IDENTIFICATION / INSIDE DIAMTER (DIMENSION)
IN / IN. / (")	INCH
INSUL / INSUL.	INSULATION
INT / INT.	INTERIOR
IBC / I.B.C.	INTERNATIONAL BUILDING CODE
J	
JAN / JAN.	JANITORS CLOSET
JT / J.T.	JOINT
JST / JST.	JOIST
L	
LAM / LAM.	LAMINATE (D)
LVL / L.V.L.	LAMINATED VENEER LUMBER
LAV / LAV.	LAVATORY
LH / L.H.	LEFT-HAND
LHR / L.H.R.	LEFT-HAND REVERSE
LF / L.F.	LINEAR FEET (FOOT)
LKR / LKR.	LOCKER

TERMS AND ABBREVIATIONS

ABBREVIATION	TERMINOLOGY
M	
MFD / MFD.	MANUFACTURED
MFR / MFR.	MANUFACTURER
MAS / MAS.	MASONRY
MATL / MATL.	MATERIAL
MAX / MAX.	MAXIMUM
MECH / MECH.	MECHANICAL
MDF / M.D.F.	MEDIUM-DENSITY FIBERBOARD
MEMB / MEMB.	MEMBRANE
MTL / MTL.	METAL
MIN / MIN.	MINIMUM
MIR / MIR.	MIRROR
MISC / MISC.	MISCELLANEOUS
MOD / MOD.	MODULAR / MODIFY
MR / M.R.	MOISTURE RESISTANT
MTD / MTD.	MOUNTED
N	
NFPA / N.F.P.A.	NATIONAL FIRE PREVENTION ASSOCIATION
NRC / N.R.C.	NOISE REDUCTION COEFFICIENT
NOM / NOM.	NOMINAL
NA / N/A / N.A.	NOT APPLICABLE
NIC / N.I.C.	NOT IN CONTRACT
NTS / N.T.S.	NOT TO SCALE
NO / NO.	NUMBER
O	
OCC / OCC.	OCCUPANT (S)
OSFM / O.S.F.M.	OFFICE OF STATE MARSHALL
OC / O.C.	ON CENTER (S)
OPNG / OPNG.	OPENING
OPP / OPP.	OPPOSITE
OD / O.D.	OUTSIDE DIAMETER (DIMENSION)
ORD / O.R.D.	OVERFLOW ROOF DRAIN
OH / OVHD	OVERHEAD
P	
PNT / PNT.	PAINT
PR / PR.	PAIR / PIPE RAIL
PTN / PTN.	PARTITION
PVMT / PVMT.	PAVEMENT
PERF / PERF.	PERFORATED / PERFORM
PERIM / PERIM.	PERIMETER
PH / P.H.	PHASE
PLBG. / PLUMB.	PLUMBING
PLYWD / PLYWD.	PLYWOOD
POLYISO / POLYISO.	POLYISOCYANURATE
PVC / P.V.C.	POLYVINYL CHLORIDE
LBS / lb / #	POUNDS
PCF / P.C.F.	POUNDS PER CUBIC FOOT
PLF / P.L.F.	POUNDS PER LINEAR FOOT
PSF / P.S.F.	POUNDS PER SQUARE FOOT
PSI / P.S.I.	POUNDS PER SQUARE INCH
PREFIN / PREFIN.	PREFINISHED
PT / P.T.	PRESSURE-TREATED
PROJ / PROJ.	PROJECT / PROJECTOR
PL / P.L.	PROPERTY LINE
Q	
QTY / QTY.	QUANTITY
R	
REF / REF.	REFERENCE / REFRIGERATOR
RCP / R.C.P.	REFLECTED CEILING PLAN
REINF / REINF.	REINFORCE (MENT)
REQ / REQ. / REQ'D	REQUIRE (D)
REQMT (S)	REQUIREMENT (S)
RESIST / RESIST.	RESISTANT
REV / REV.	REVISE (D) / REVISION / REVERSE
RH / R.H.	RIGHT HAND / ROOF HATCH
RHR / R.H.R.	RIGHT-HAND REVERSE
ROW / R.O.W.	RIGHT-OF-WAY
RD / R.D.	ROOF DRAIN / ROAD
RTU / R.T.U.	ROOF TOP UNIT
RM / RM.	ROOM
RO / R.O.	ROUGH OPENING
S	
SAN / SAN.	SANITARY
SCHED / SCHED.	SCHEDULE
SECT / SECT.	SECTION
SHT / SHT.	SHEET
SIM / SIM.	SIMILAR
SC / S.C.	SOLID CORE
STC / S.T.C.	SOUND TRANSMISSION CLASS
SPEC / SPEC.	SPECIFICATION
SB / S.B.	SPLASH BLOCK
SQ / SQ.	SQUARE
SF / S.F.	SQUARE FOOT / SUPPLY FAN
SS / S.S.	STAINLESS STEEL
ST / ST.	STAIRS
STD / STD.	STANDARD
STL / STL.	STEEL
STOR / STOR.	STORAGE
SD / S.D.	STORM DRAIN / SMOKE DETECTOR
STRUC. / STRUCT.	STRUCTURAL / STRUCTURE
SUSP / SUSP.	SUSPEND (ED)
T	
TV / TV.	TELEVISION
TEMP / TEMP.	TEMPORARY / TEMPERATURE
TERM / TERM.	TERMINATE
TPO / T.P.O.	THERMOPLASTIC POLYOLEFIN
THK / THK.	THICK
TLT / TLT.	TOILET
T&G	TONGUE AND GROOVE
T.O.	TOP OF
TOC / T.O.C.	TOP OF CURB (CONCRETE)
TOS / T.O.S.	TOP OF STEEL
TOW / T.O.W.	TOP OF WALL
TJI / T.J.I.	TRUSS JOIST / I-JOIST
TYP / TYP.	TYPICAL
U	
UGND / UGND.	UNDERGROUND
UL / U.L.	UNDERWRITER'S LABORATORIES
UNO / U.N.O.	UNLESS NOTED OTHERWISE
V	
VTR / V.T.R.	VENT THROUGH ROOF
VIF / V.I.F.	VERIFY IN FIELD
VERT / VERT.	VERTICAL
VEST / VEST.	VESTIBULE
W	
WC / W.C.	WATER CLOSET / WALL COVERING / WHEELCHAIR
WH / W.H.	WATER HEATER / WEEP HOLE / WALL HUNG
WT / W.T.	WEIGHT / WINDOW TREATMENT
WWF / W.W.F.	WELDED WIRE FABRIC
WWM / W.W.M.	WELDED WIRE MESH
WNDW / WN	WINDOW
W/	WITH
W/O	WITHOUT
WD / WD.	WOOD
X, Y, & Z	
YD / YD.	YARD

GRAPHIC SYMBOLS LEGEND

FLOOR PLAN REFERENCE INDICATORS

NAME
NO
150 SF — ROOM TAG

101
101 — DOOR TAG

ID — REVISION TAG

ID — WINDOW TAG

ID — PARTITION TAG

1 — KEYNOTE TAG

100'-0" — SPOT ELEVATION TAG

℄ — CENTER LINE

ID — EQUIPMENT TAG

NORTH INDICATOR

PLAN NORTH
PROJECT NORTH LINE
TRUE NORTH LINE

COLUMN LINE GRID INDICATOR

ID — GRID IDENTIFICATION
ID

DRAWING BLOCK TITLE

VIEW NUMBER
C4
DRAWING BLOCK TITLE
VIEW NAME
1/8" = 1'-0" — VIEW SCALE
0 4' 8' 16' — GRAPHIC SCALE

DETAIL/CALLOUT IDENTIFICATION

DETAIL NUMBER
NO
SHT
SIM
SHEET NUMBER

LEVEL IDENTIFICATION

LEVEL NAME
LEVEL NAME
ELEVATION
ELEVATION

BUILDING SECTION IDENTIFICATION

SECTION NUMBER
NO
SHT
SIM
SHEET NUMBER

EXTERIOR ELEVATION IDENTIFICATION

Ref
ELEVATION NUMBER
ELEV NO
SHEET
Ref
Ref
SHEET NUMBER

WALL SECTION IDENTIFICATION

SECTION NUMBER
NO
SHT
SIM
SHEET NUMBER

INTERIOR ELEVATION IDENTIFICATION

ELRef
ELEVATION NUMBER
ELRef
SHEET
ELRef
SHEET NUMBER

MATERIAL SYMBOLS LEGEND

- CONCRETE, CAST-IN-PLACE
- BRICK/CUT STONE COMMON/FACE
- CONCRETE MASONRY UNIT
- ALUMINUM
- STEEL AND OTHER METALS
- INSULATION, LOOSE FILL OR BLANKET
- INSULATION, RIGID BOARD
- PLASTER, GYPSUM, SAND, MORTAR OR PORTLAND CEMENT
- GLASS, ELEVATION
- EARTH, CRUISHED ROCK GRAVEL
- EARTHWORK, COMPACTED FILL
- PLYWOOD
- CMU BOND BEAM LINTEL
- CMU, END
- WOOD BLOCKING OR SHIM
- WOOD FRAMING, CONTINUOUS

GENERAL NOTES

1. TERMS AND ABBREVIATIONS SHOWN ON THIS SHEET FOLLOW INDUSTRY STANDARDS. TERMS AND ABBREVIATIONS MAY DIFFER ON DRAWING SHEETS AND SHALL FOLLOW THE ASSOCIATED SHEET LEGENDS U.N.O.
2. MATERIAL SYMBOLS LEGEND SHOWN ON THIS SHEET FOLLOWS INDUSTRY STANDARDS. MATERIAL SYMBOLS MAY DIFFER ON DRAWING SHEETS AND SHALL FOLLOW THE ASSOCIATED SHEET LEGENDS U.N.O.

GLMV Architecture

STATE OF MISSOURI
ROBERT C. PRUENTE JR.
NUMBER A-2010040105
11-1-23

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

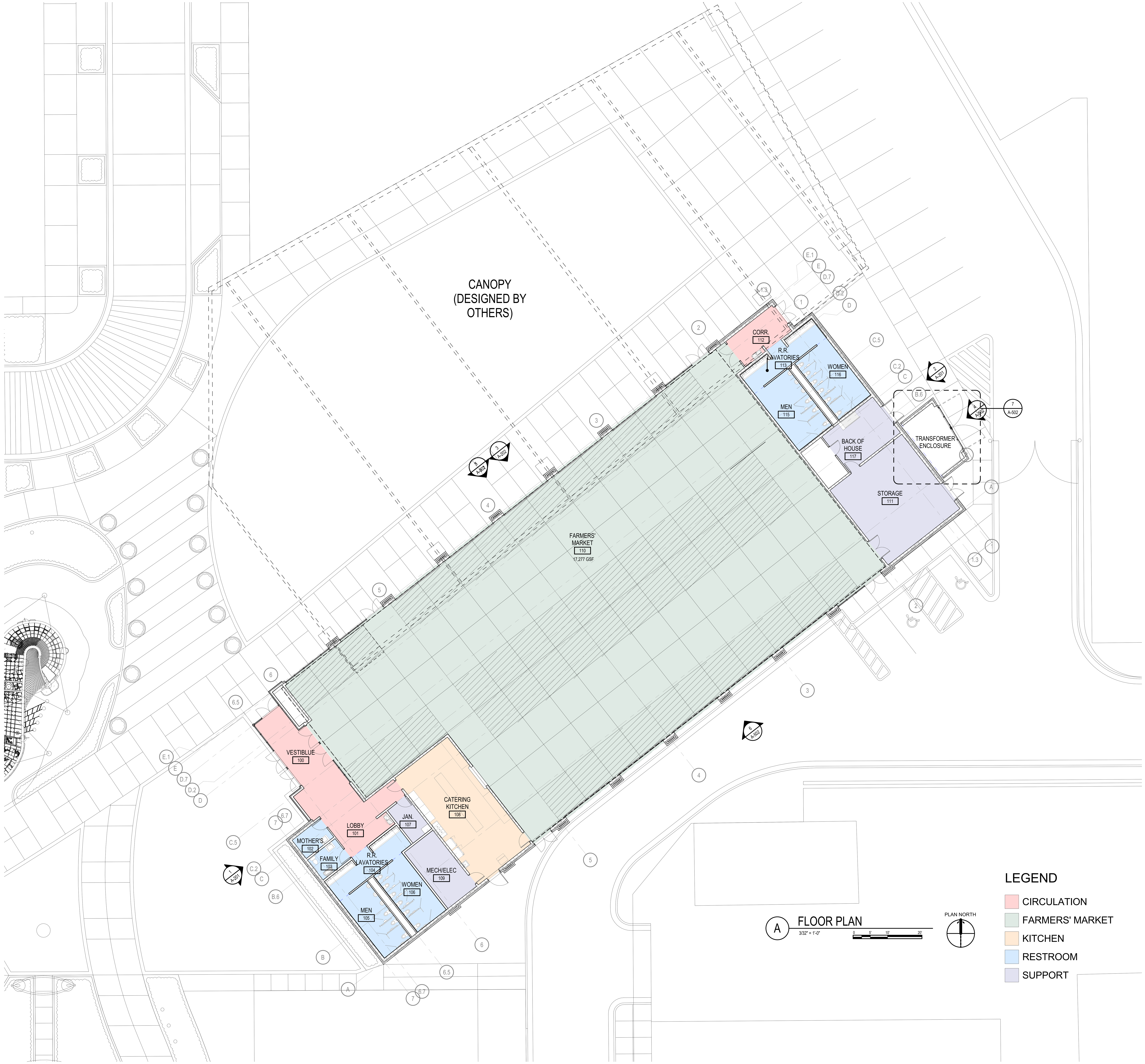
△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	Author
CHECKED BY:	Checker

LEGENDS, SYMBOLS, & ABREVIATIONS

A-001

PLOT DATE: 10/31/2023 @ 10:22 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMCW Single Story.rvt



A FLOOR PLAN
3/32" = 1'-0"

PLAN NORTH

LEGEND

- CIRCULATION
- FARMERS' MARKET
- KITCHEN
- RESTROOM
- SUPPORT

GLMVArchitecture

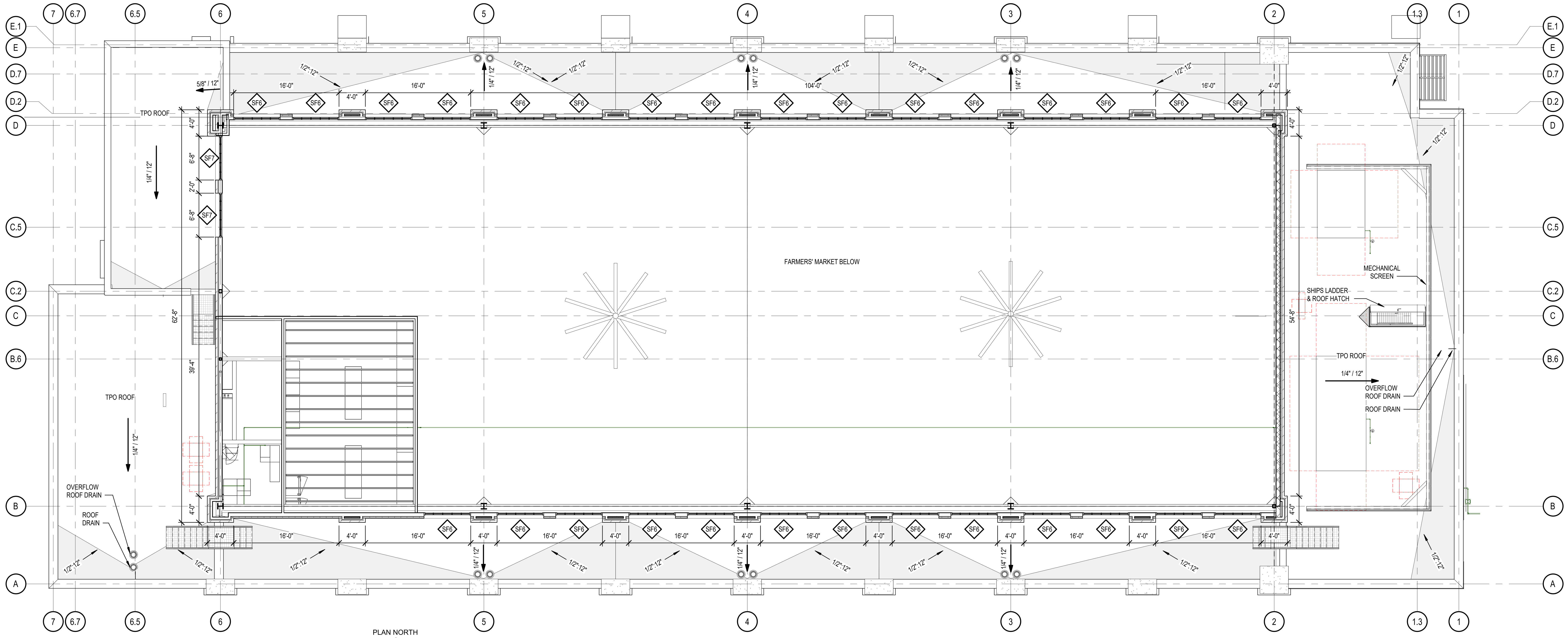
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		Author
CHECKED BY:		Checker

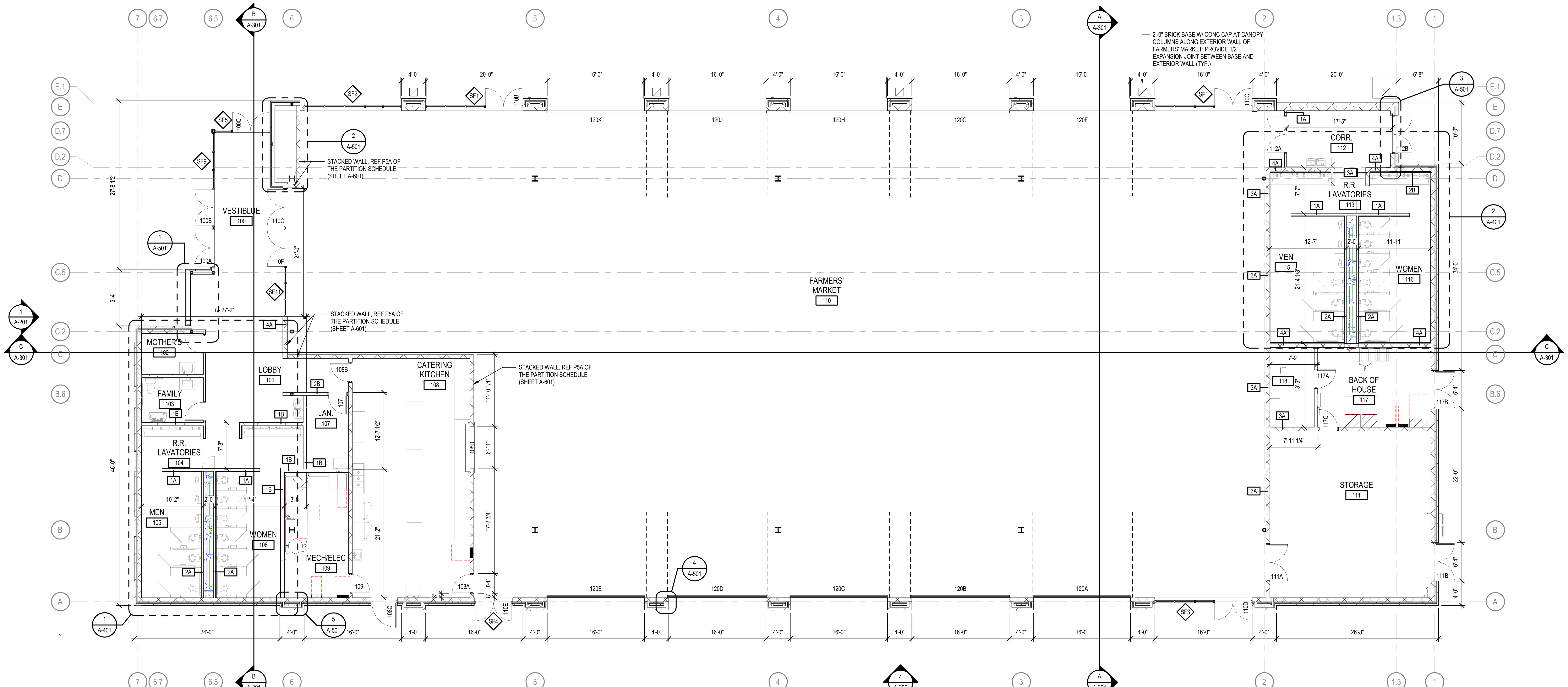
CONTEXTUAL FLOOR PLAN

A-100

PLOT DATE: 11/1/2023 11:34:51 AM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



B LOW ROOF / CLERESTORY PLAN
1/8" = 1'-0"
PLAN NORTH



A FLOOR PLAN
1/8" = 1'-0"
PLAN NORTH

GLMV Architecture

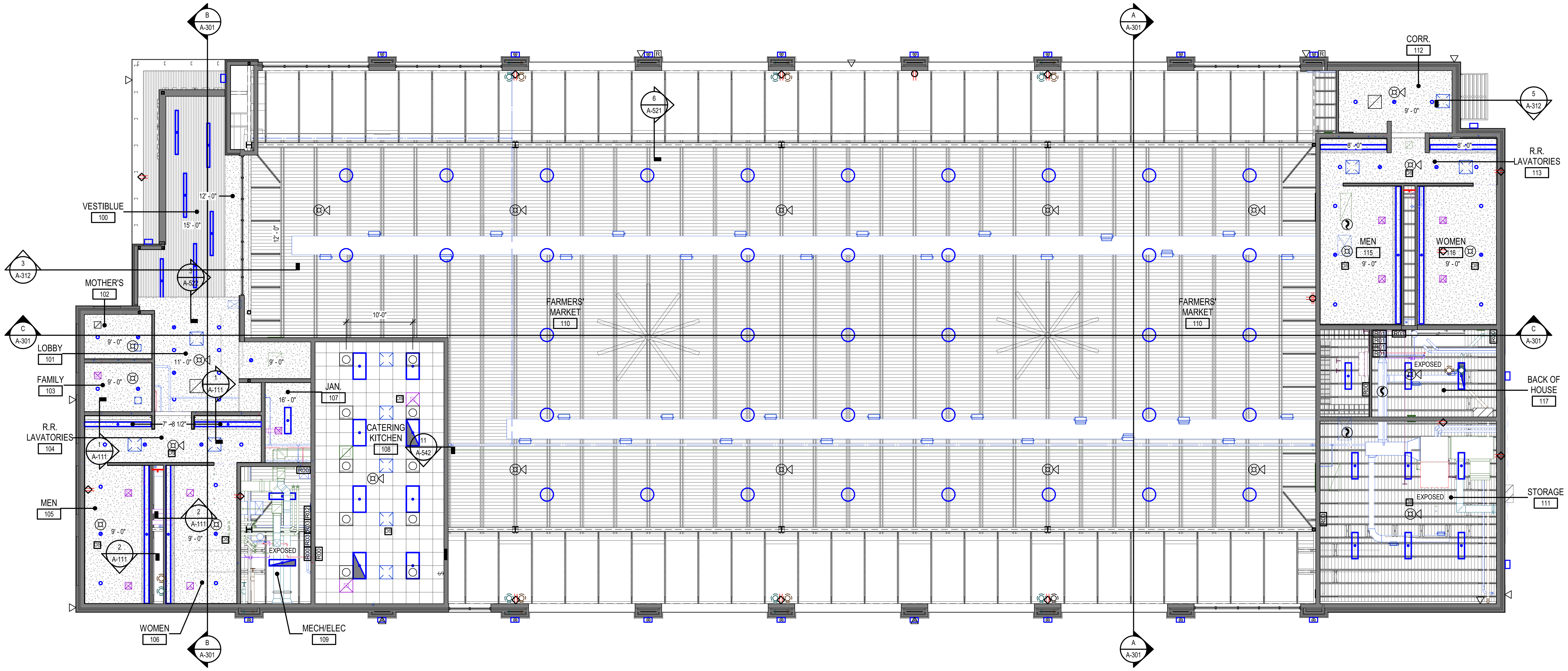
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

	DESCRIPTION	DATE
PROJECT NO:	18225R21006	
STATUS:	PERMIT SET	
DATE:	11/01/2023	
DRAWN BY:	DRWN	
CHECKED BY:	CHKD	

ARCHITECTURAL FLOOR PLAN

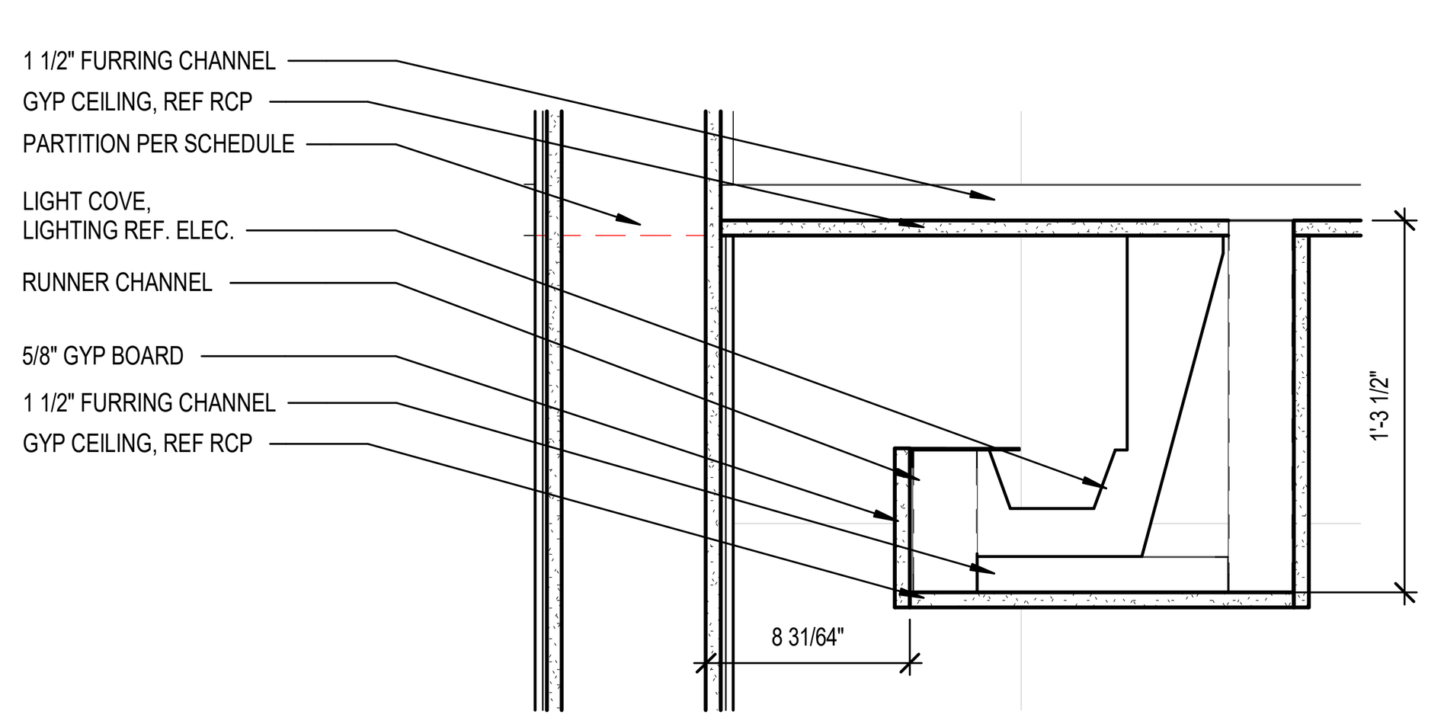
A-101

PLOT DATE: 11/1/2023 11:34:53 AM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



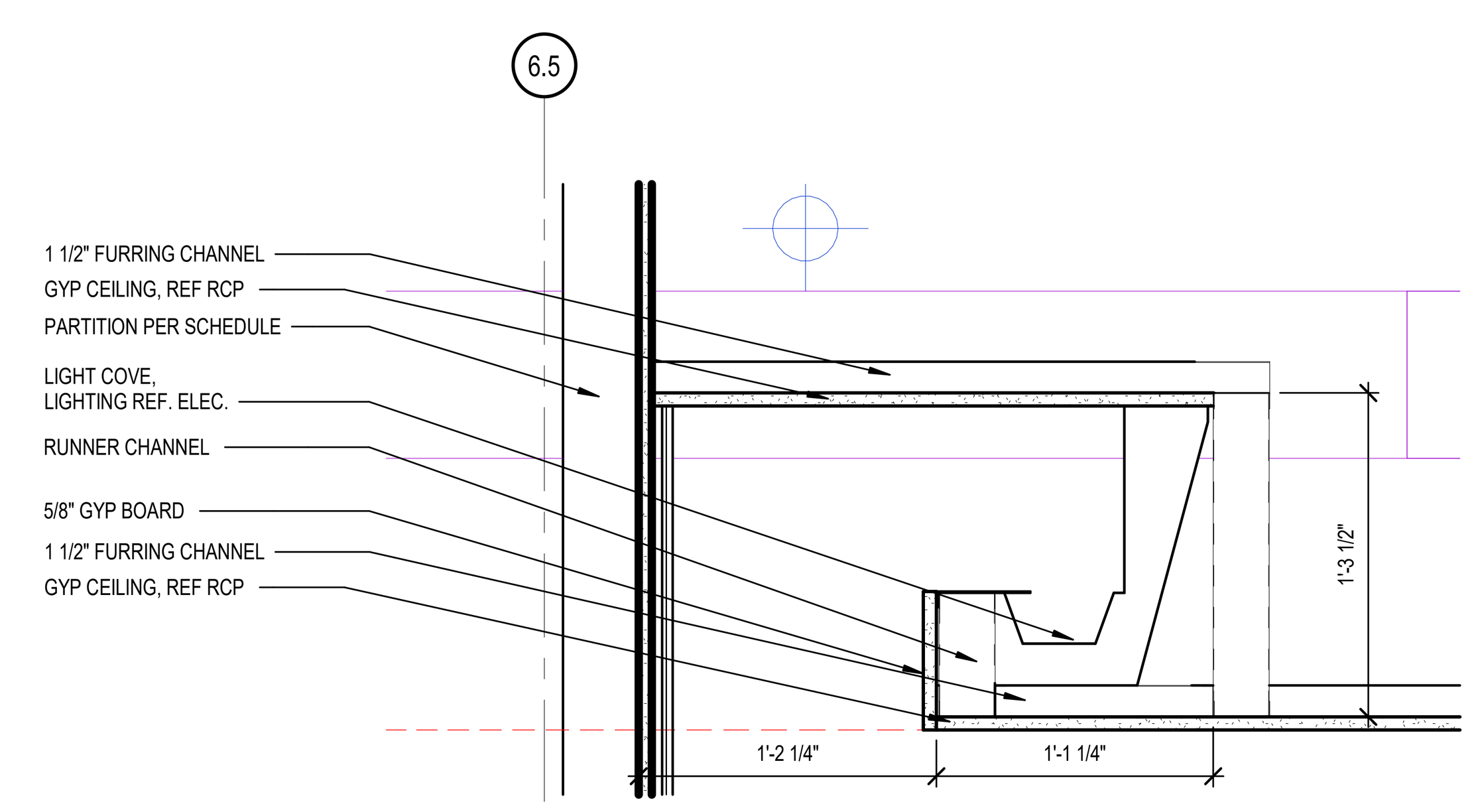
A REFLECTED CEILING PLAN

1/8" = 1'-0"



1 LAVATORY SOFFIT

1 1/2" = 1'-0"



2 WET WALL - LIGHT COVE

1 1/2" = 1'-0"

LINETYPE LEGEND

- LIGHT THIN LINE INDICATES EXISTING ELEMENT TO REMAIN
- HEAVY SOLID LINE INDICATES NEW ELEMENT
- HEAVY DASHED LINE INDICATES EXISTING ELEMENT TO BE REMOVED IN ITS ENTIRETY

CEILING PLAN LEGEND

- GYPSUM BOARD
- ACOUSTICAL METAL DECK BASIS OF DESIGN: TORIS A (NRC: 0.95)
- LONG BOARD CEILING
- 1' - 0" CEILING HEIGHT TAG
- AIR TERMINAL SUPPLY DIFFUSER
- AIR TERMINAL RETURN GRILLE
- LIGHT FIXTURE 2x2 / 2x4
- LIGHT FIXTURE SUSPENDED, LINEAR
- LIGHT FIXTURE CAN LIGHT (RECESSED)
- EXIT SIGN CEILING MOUNTED
- EXIT SIGN WALL MOUNTED
- AIR TERMINAL EXHAUST GRILLE

GENERAL NOTES

#	NOTES
A	DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. WHERE PARTITION TYPES CHANGE, FACE OF GYPSUM BOARD MUST ALIGN WITH ADJACENT FACE OF GYPSUM BOARD.
B	CENTER ALL CEILING-MOUNTED EQUIPMENT/DEVICES AT CENTER OF CEILING TILES UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL/ELECTRICAL DRAWINGS.
C	PROVIDE CORNER GUARDS AT ALL OUTSIDE CORNERS AND ENDWALL CONDITIONS. REF. INTERIOR DRAWINGS FOR MORE INFORMATION.
D	ALL DIMENSIONS FROM EXISTING WALLS ARE FROM FINISHED FACE OF WALL.
E	ALL DIMENSIONS ON REFLECTED CEILINGS PLANS ARE TO FINISHED FACES U.N.O.

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CITY OF LEE'S SUMMIT

LEE'S SUMMIT - MARKET PLAZA

LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	DRWN
CHECKED BY:	CHKD

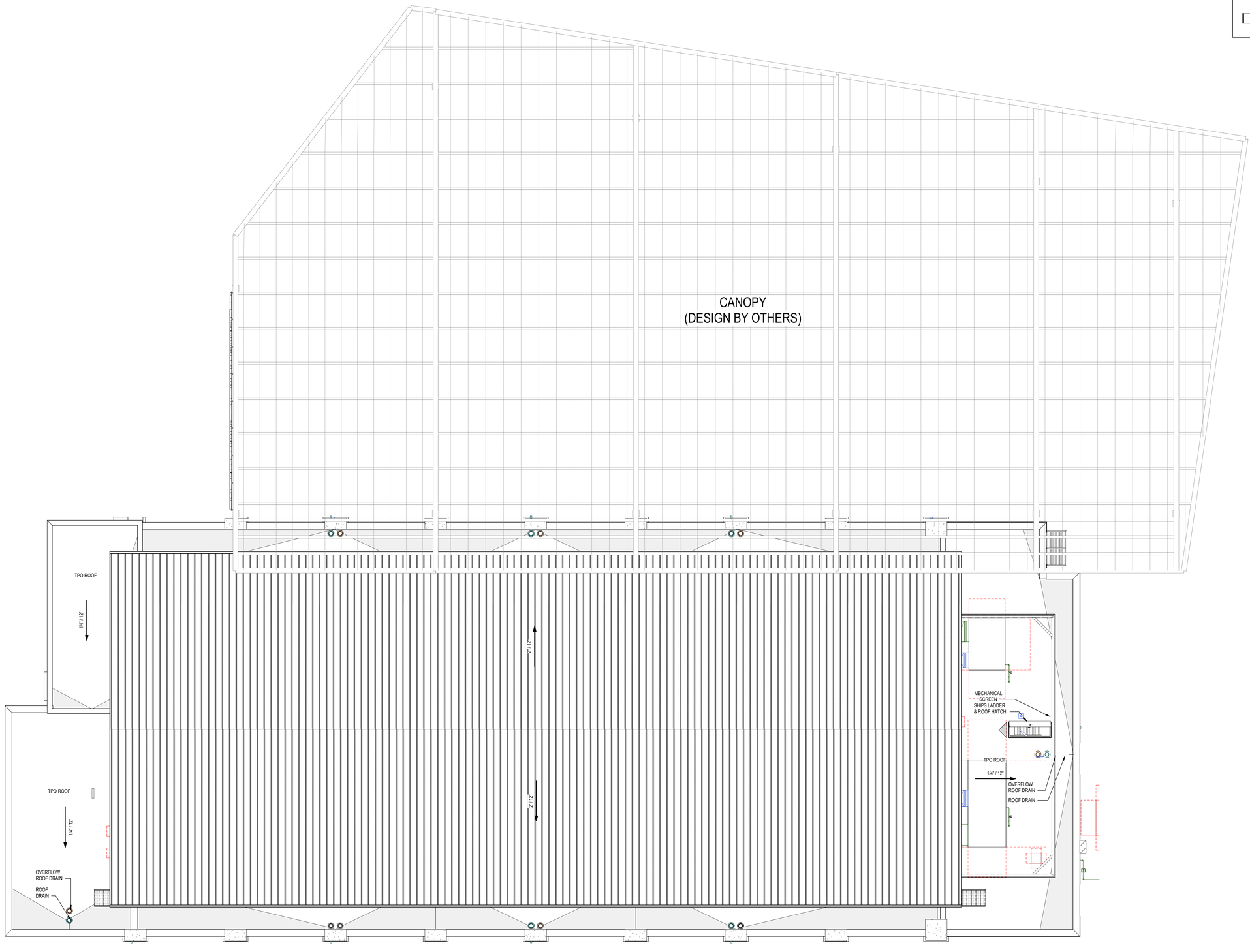
REFLECTED CEILING PLAN

A-111

PLOT DATE: 10/31/2023 9:10:33 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt

ROOF LEGEND

- AREA NOT IN SCOPE OF WORK U.N.O.
- ROOF CRICKET
- EXPANSION JOINT LOCATION
- INDICATES DIRECTION OF FLOW / ROOF SLOPE
- TPO ROOF
- STANDING SEAM METAL ROOF



A ROOF PLAN
1/8" = 1'-0"
0 8" 16" 32"

GLMVArchitecture

STATE OF MISSOURI
ROBERT C. FRUENTE JR.
NUMBER A-2014041020
11-1-23

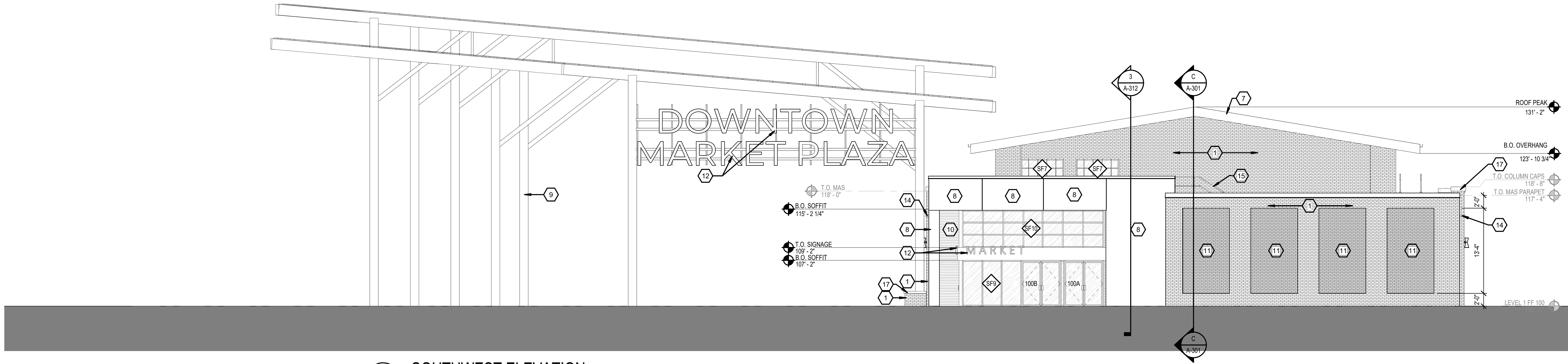
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	DRWN
CHECKED BY:	CHKD

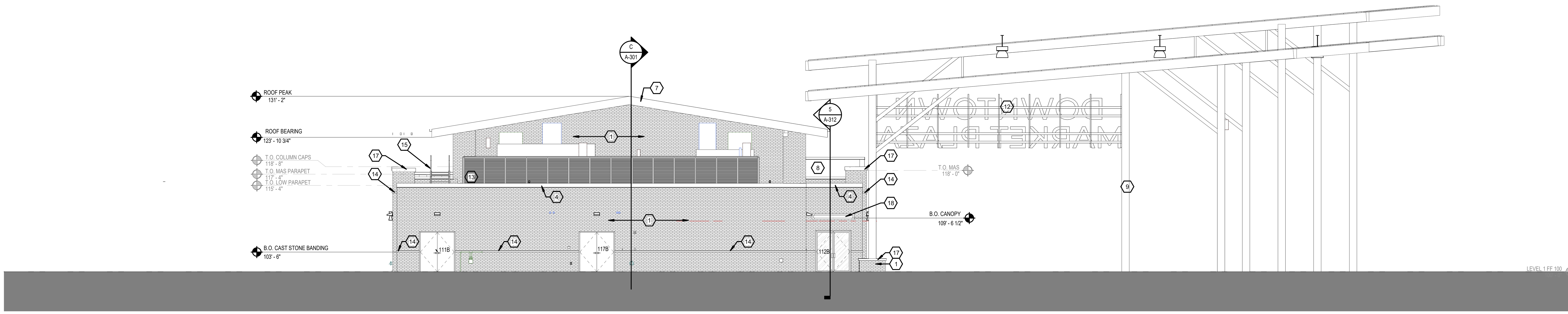
ROOF PLAN

A-121

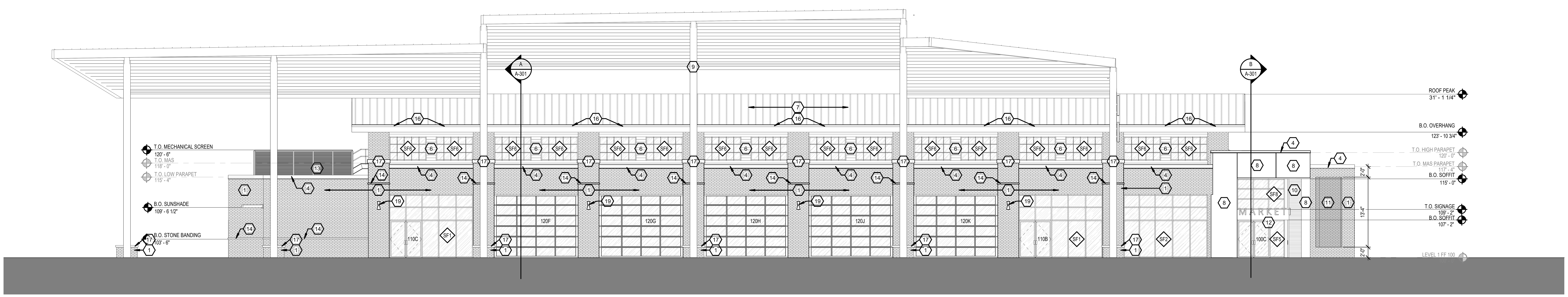
PLOT DATE: 10/31/2023 9:10:43 PM
FILE PATH: Autodesk Docs://18225R21006 Lees Summit Market/LSMUW-Single Story.rvt



1 SOUTHWEST ELEVATION
1/8" = 1'-0"



2 NORTHEAST ELEVATION
1/8" = 1'-0"



3 NORTHWEST ELEVATION
1/8" = 1'-0"

ELEVATION KEYNOTES

NUMBER	MATERIAL
1	BRICK - MODULAR BERWICK BLEND`
2	STOREFRONT SYSTEM - DARK BRONZE
3	STOREFRONT- DARK BRONZE
4	PRE MANUFACUTURED CONTIUOUS CLEAT COPING CAP
5	OVERHEAD GARAGE DOOR
6	FIBER CEMENT PANEL :BASIS OF DESIGN NICHIHA; RIBBED; INDIGO
7	STANDING SEAM METAL ROOF
8	BACK LIT RAINSCREEN: BASIS OF DESIGN MOZ DESIGNS BACKLIT METAL PANEL (CUSTOM)
9	PAINTED STEEL - DARK BRONZE
10	EXTRUDED ALUMINUM - LIGHT CHERRY WOOD GRAIN
11	CHANGEABLE ART INSTALLATION - BRICK ACCENT
12	SIGNAGE- INTERNALLY ILLUMINATED CHANNEL LETTERS
13	MECHANICAL SCREEN
14	4" CAST STONE PROFILE
15	PREFAB STAIR, REF SPECS
16	PREFINISHED MTL GUTTER & DOWNSPOUTS
17	CAST STONE COLUMN CAP
18	PREFABRICATED CANOPY
19	EXTERIOR WALL SCONCE, REF ELEC.

GLMV Architecture

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE

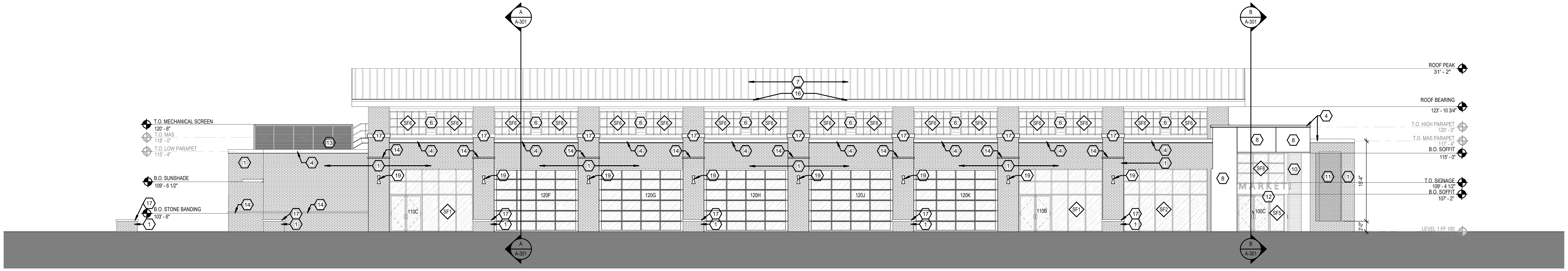
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	Author
CHECKED BY:	Checker

EXTERIOR ELEVATIONS

A-201

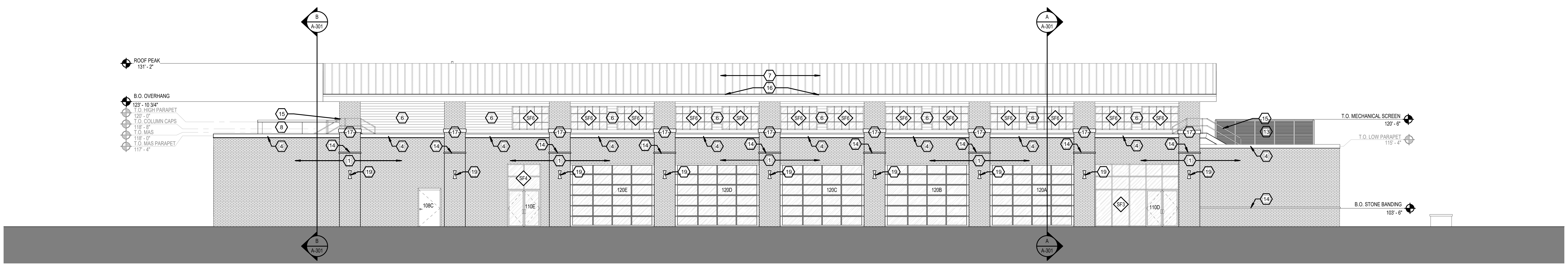
PLOT DATE: 11/1/2023 11:34:59 AM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt

GLMV Architecture



3 NORTHWEST ELEVATION W/O CANOPY

1/8" = 1'-0"



4 SOUTHEAST ELEVATION W/O CANOPY

1/8" = 1'-0"

ELEVATION KEYNOTES	
NUMBER	MATERIAL
1	BRICK - MODULAR BERWICK BLEND`
2	STOREFRONT SYSTEM - DARK BRONZE
3	STOREFRONT- DARK BRONZE
4	PRE MANUFACUTURED CONTIUOUS CLEAT COPING CAP
5	OVERHEAD GARAGE DOOR
6	FIBER CEMENT PANEL :BASIS OF DESIGN NICHIHA; RIBBED; INDIGO
7	STANDING SEAM METAL ROOF
8	BACK LIT RAINSCREEN: BASIS OF DESIGN MOZ DESIGNS BACKLIT METAL PANEL (CUSTOM)
9	PAINTED STEEL - DARK BRONZE
10	EXTRUDED ALUMINUM - LIGHT CHERRY WOOD GRAIN
11	CHANGEABLE ART INSTALLATION - BRICK ACCENT
12	SIGNAGE- INTERNALLY ILLUMINATED CHANNEL LETTERS
13	MECHANICAL SCREEN
14	4" CAST STONE PROFILE
15	PREFAB STAIR, REF SPECS
16	PREFINISHED MTL GUTTER & DOWNSPOUTS
17	CAST STONE COLUMN CAP
18	PREFABRICATED CANOPY
19	EXTERIOR WALL SCONCE, REF ELEC.

STATE OF MISSOURI
ROBERT C. PRUENTE JR.
NUMBER A-2014041026
ARCHITECT
11-1-23

CITY OF LEE'S SUMMIT

LEE'S SUMMIT - MARKET PLAZA

LEE'S SUMMIT, MO

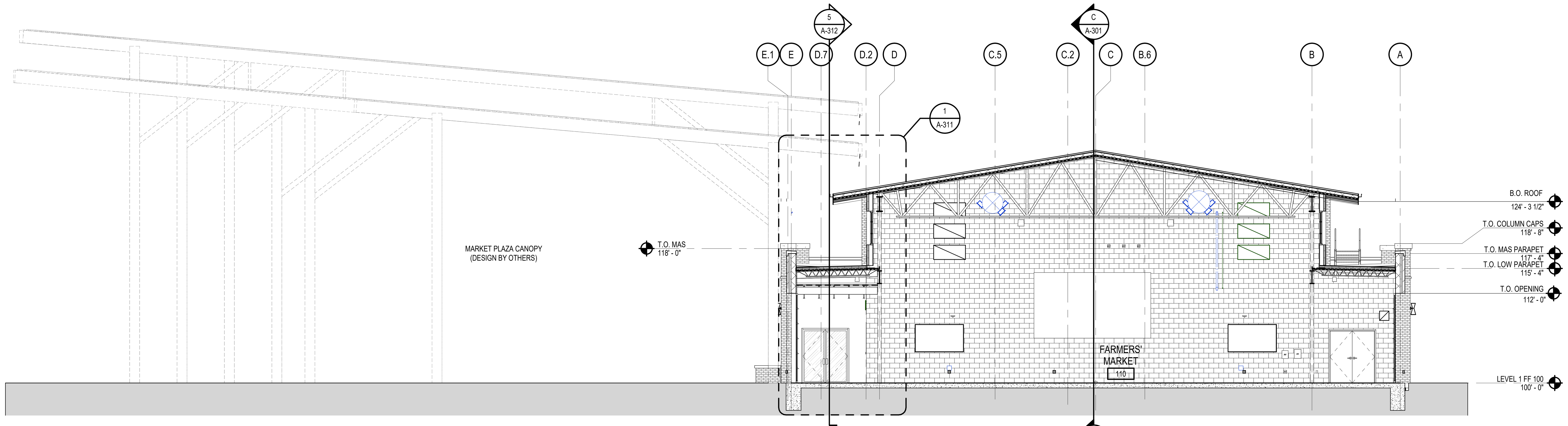
△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	Author
CHECKED BY:	Checker

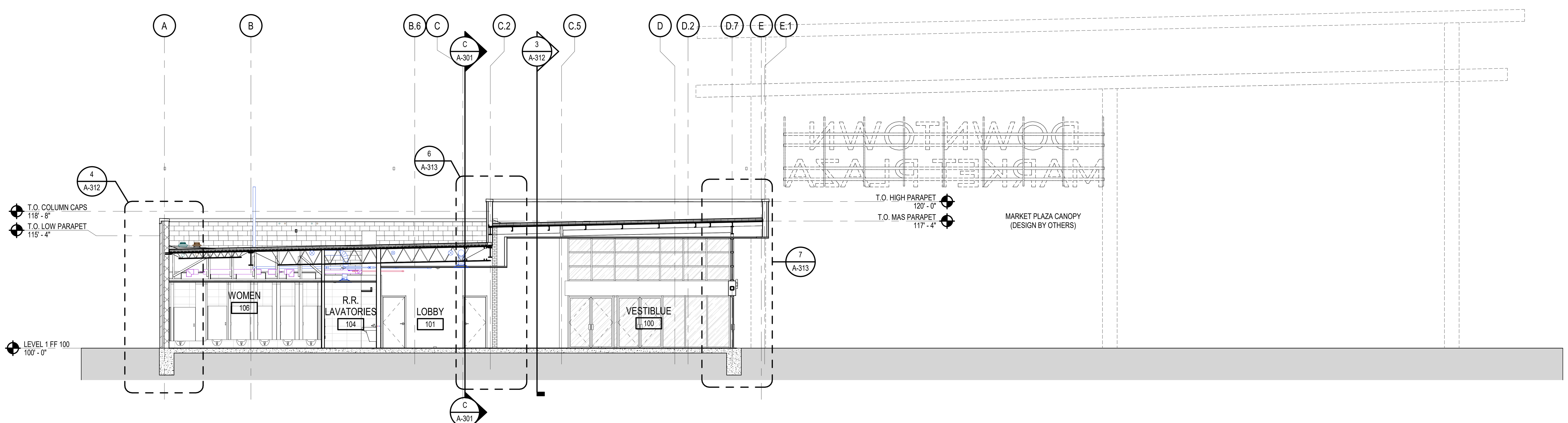
EXTERIOR ELEVATIONS

A-202

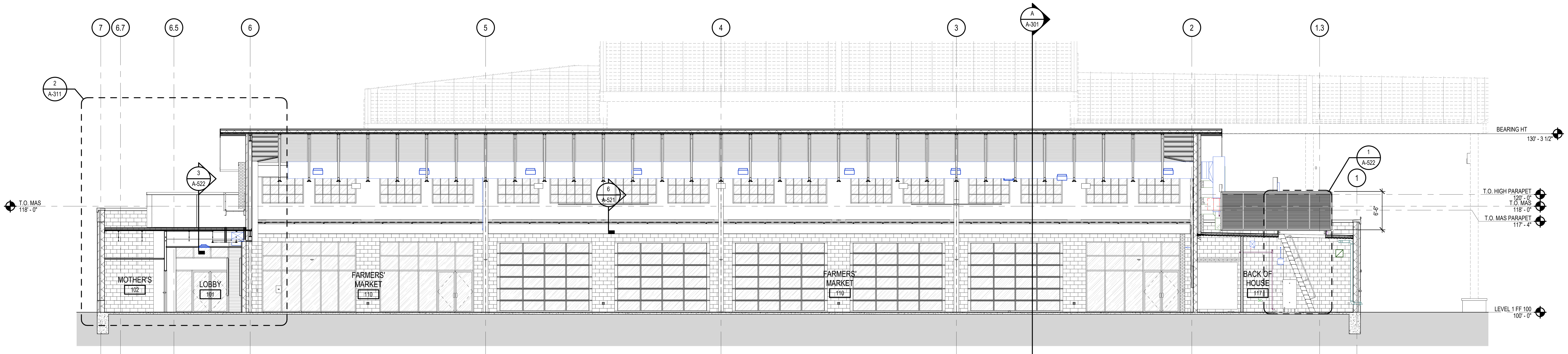
PLOT DATE: 11/1/2023 11:35:05 AM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



A BUILDING SECTION
1/8" = 1'-0"



B BUILDING SECTION
1/8" = 1'-0"



C BUILDING SECTION
1/8" = 1'-0"

GLMV Architecture

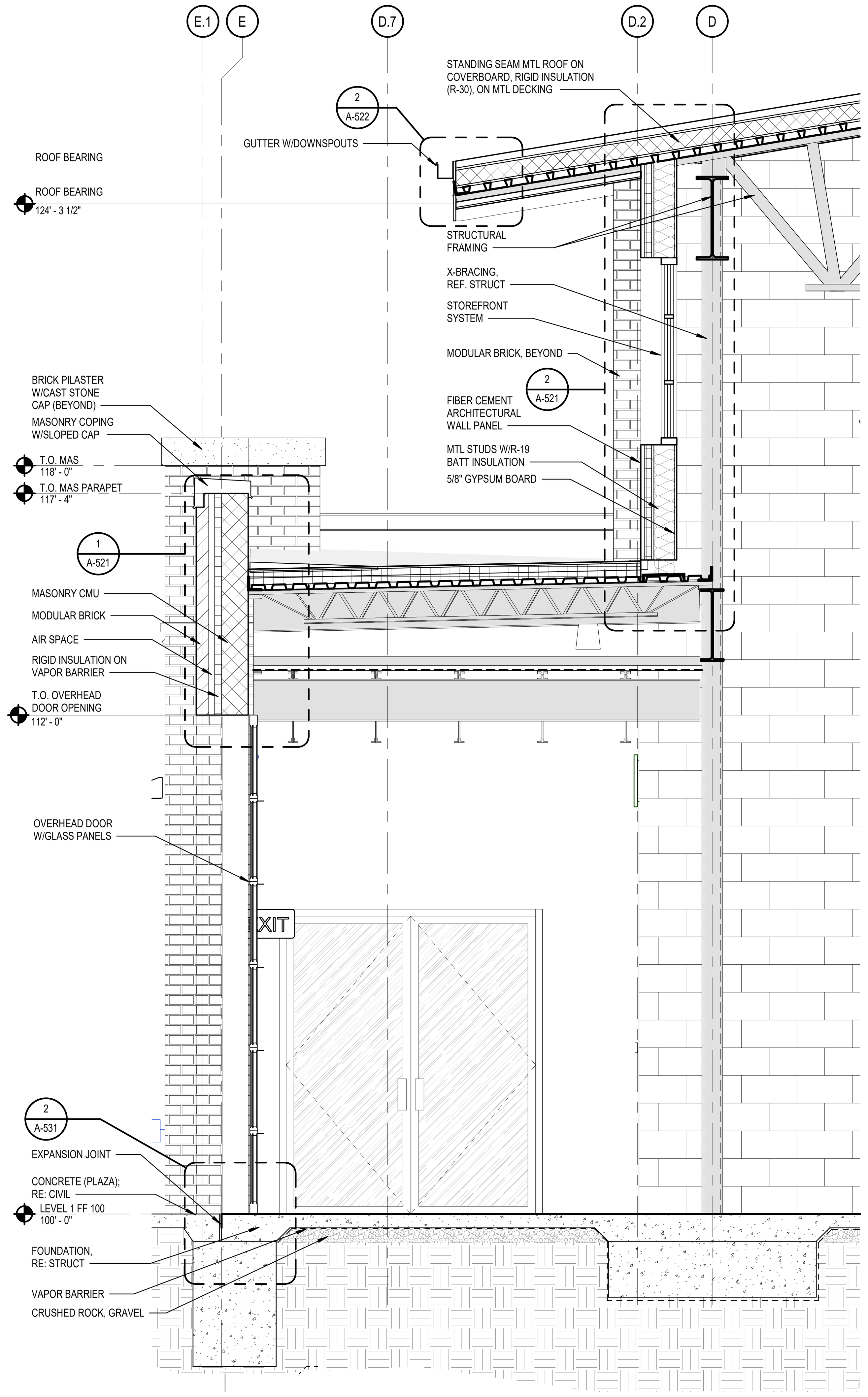
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		JSR
CHECKED BY:		FAB

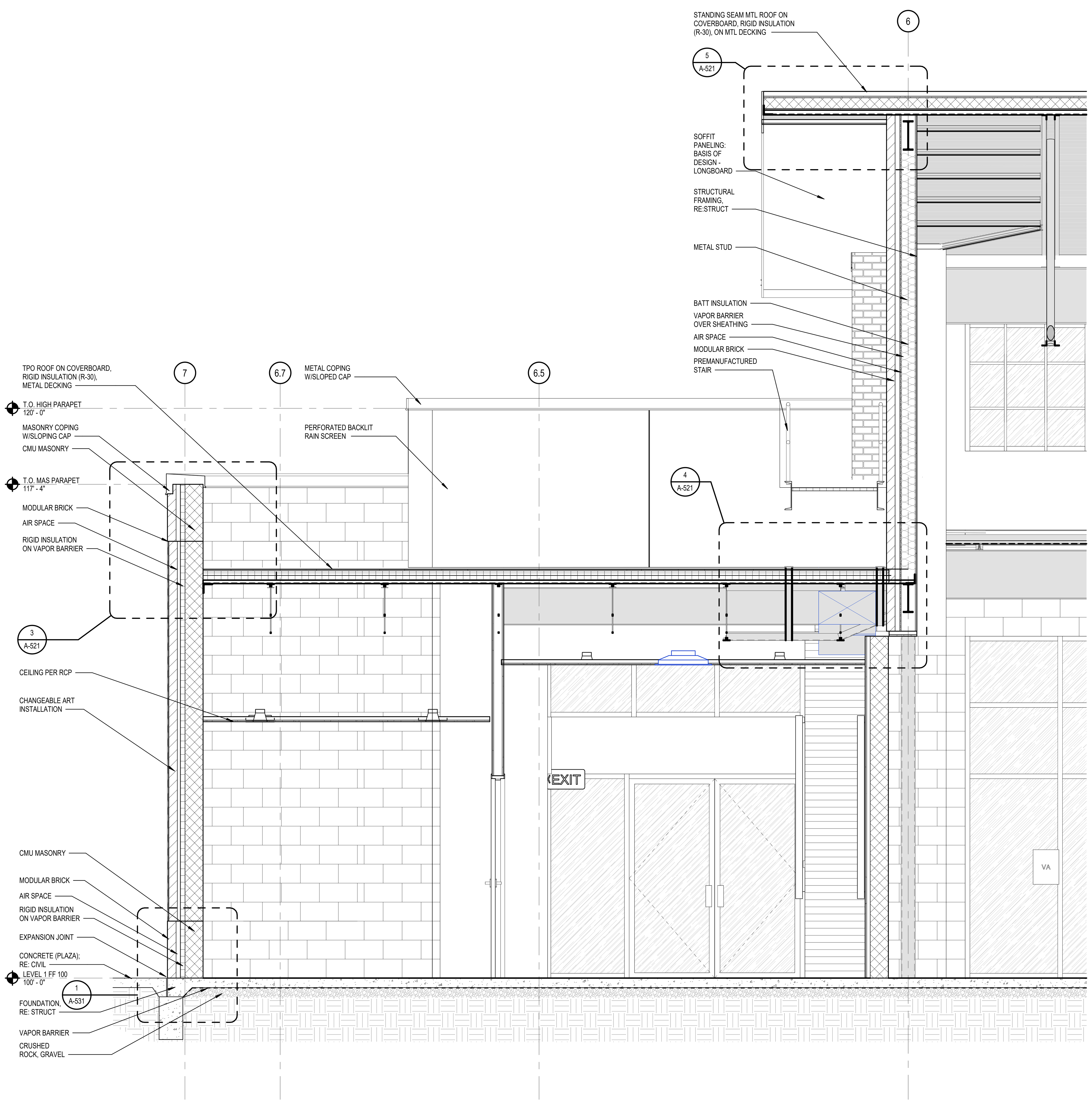
BUILDING SECTIONS

A-301

PLOT DATE: 11/1/2023 11:35:08 AM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



1 WALL SECTION 1
1/2" = 1'-0"



2 WALL SECTION 2
1/2" = 1'-0"

GLMV Architecture

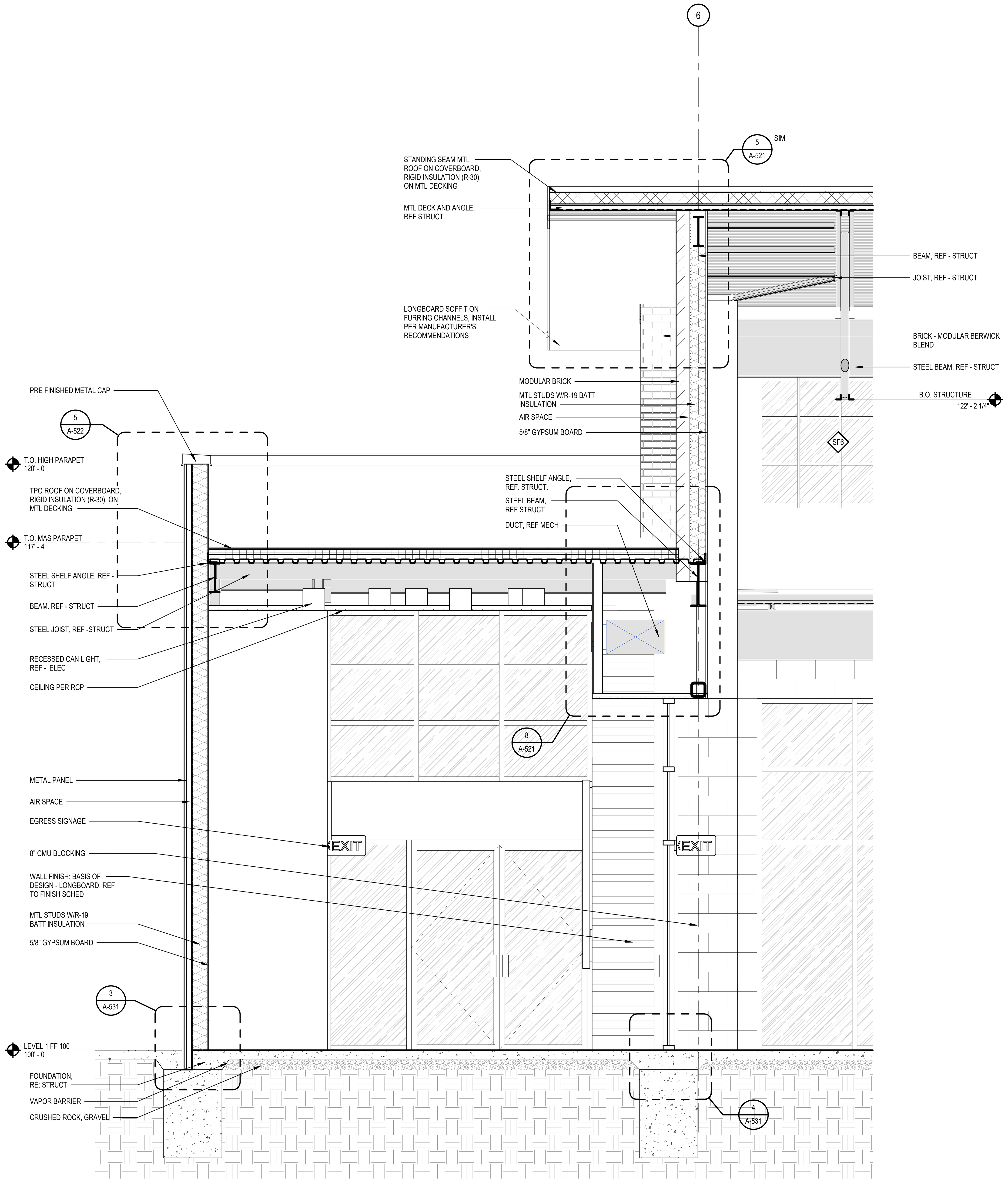
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		
CHECKED BY:		

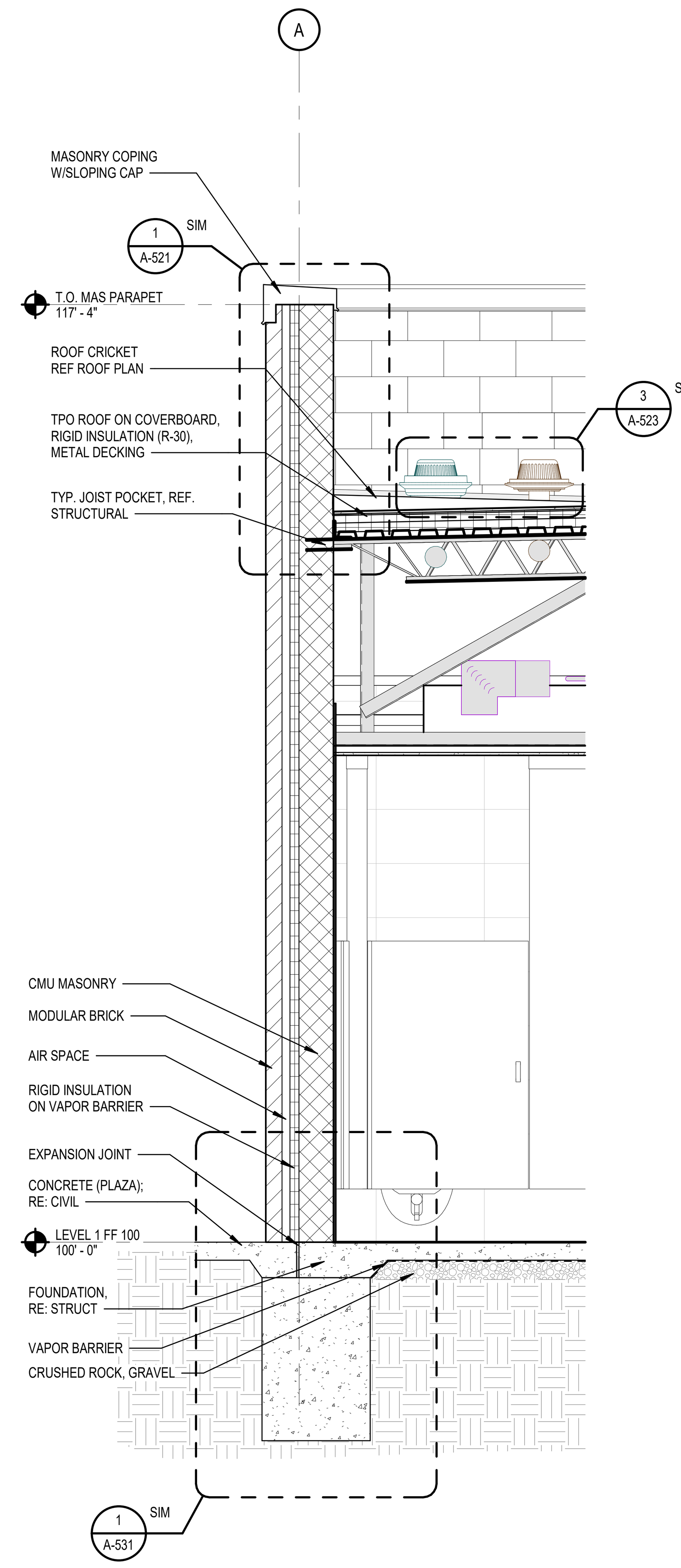
WALL SECTIONS

A-311

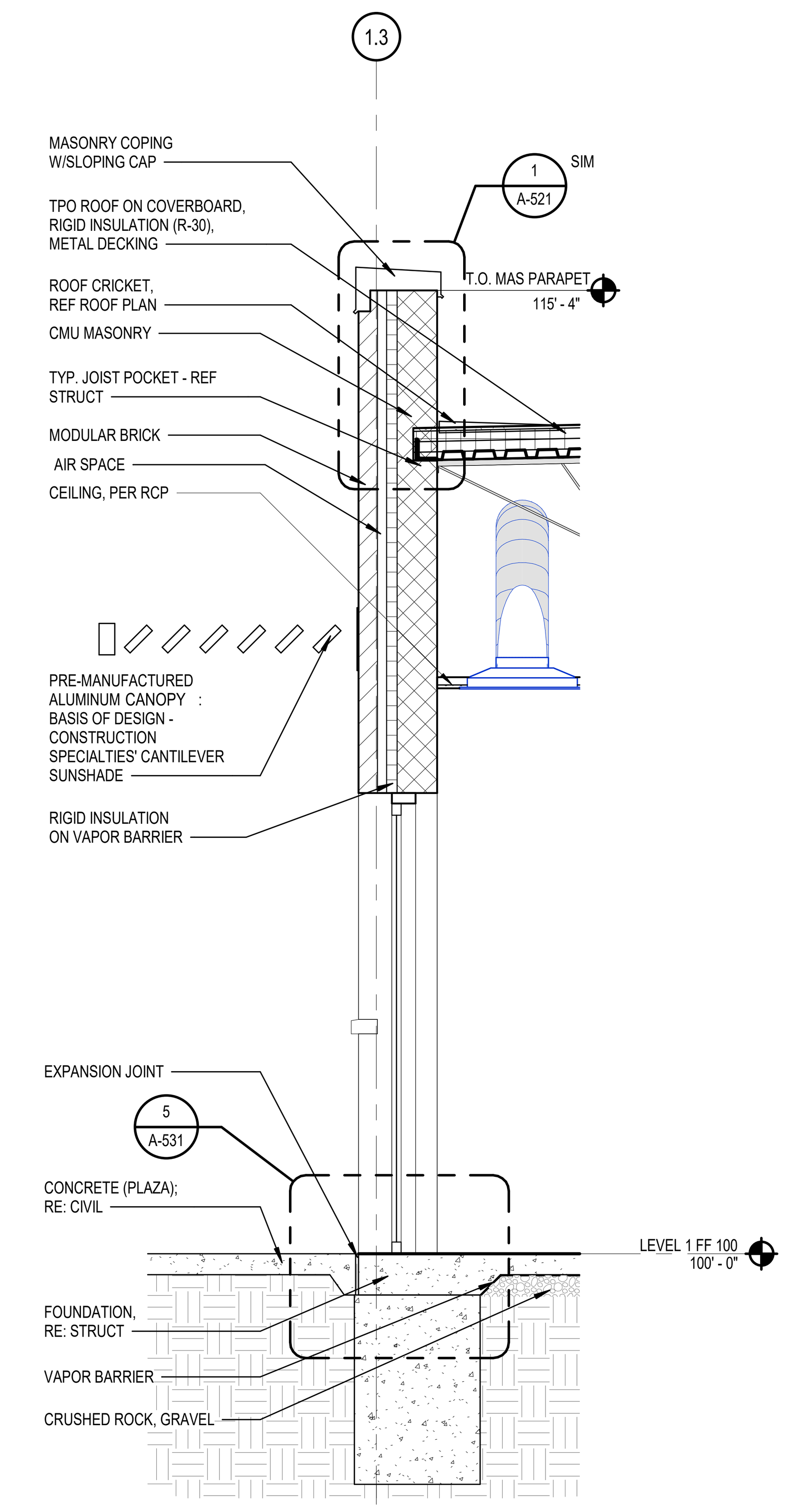
PLOT DATE: 10/31/2023 9:11:01 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



3 **WALL SECTION 3**
1/2" = 1'-0"



4 **WALL SECTION 4**
1/2" = 1'-0"



5 **WALL SECTION 5**
1/2" = 1'-0"

GLMVArchitecture

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	Author
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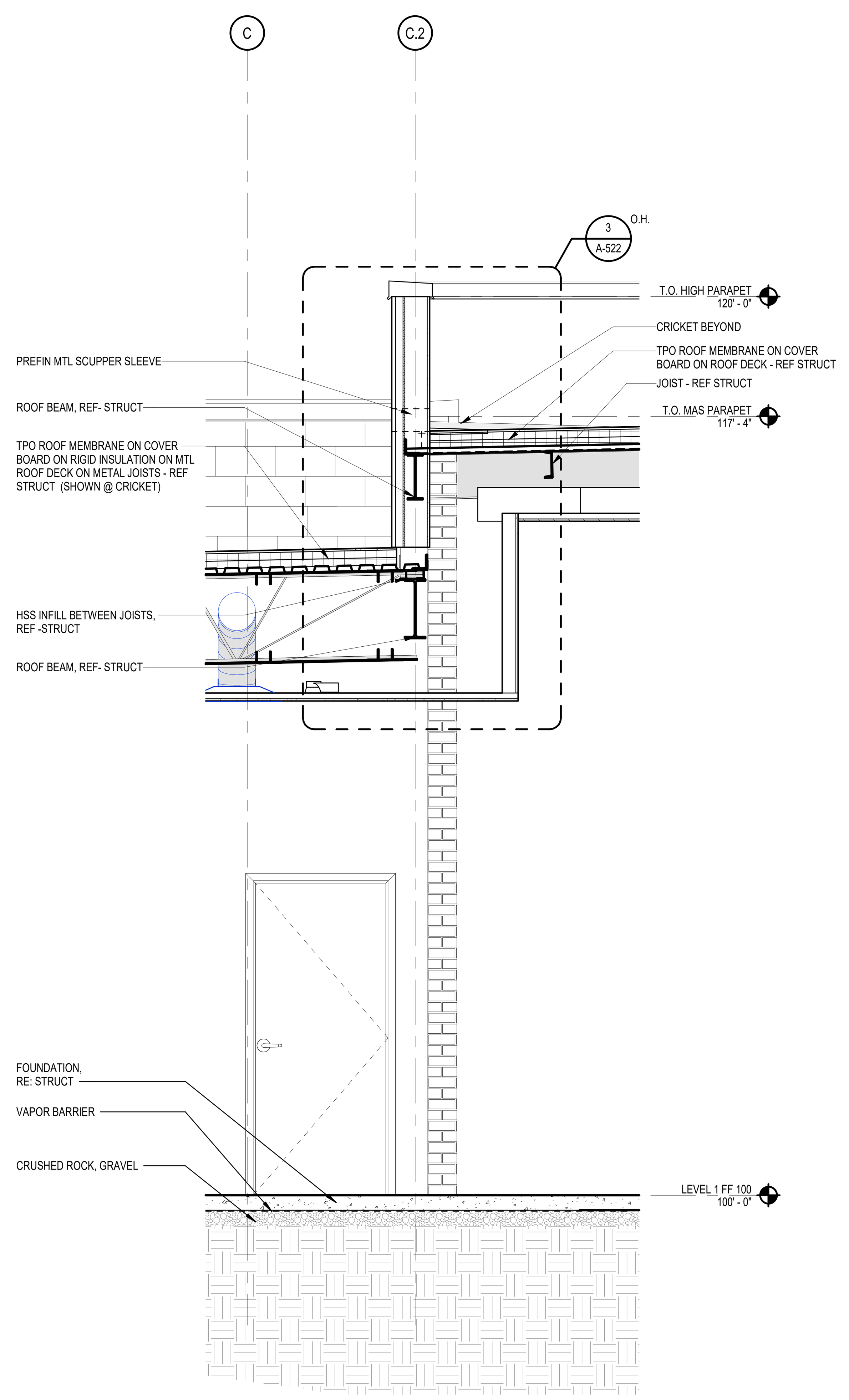
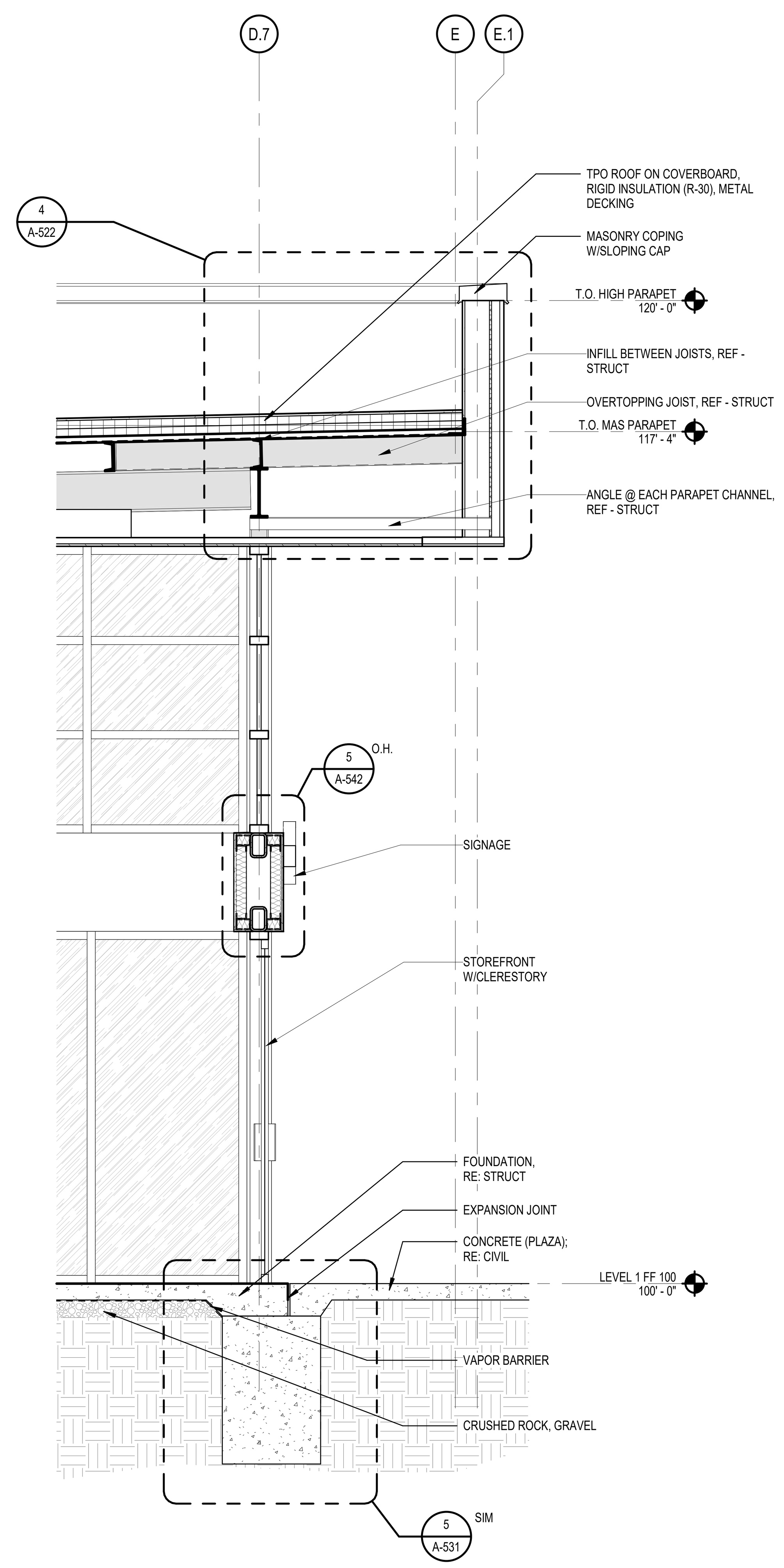
WALL SECTIONS

A-312

PLOT DATE: 10/31/2023 9:11:02 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



6 WALL SECTION 6
1/2" = 1'-0"



7 WALL SECTION 7
1/2" = 1'-0"

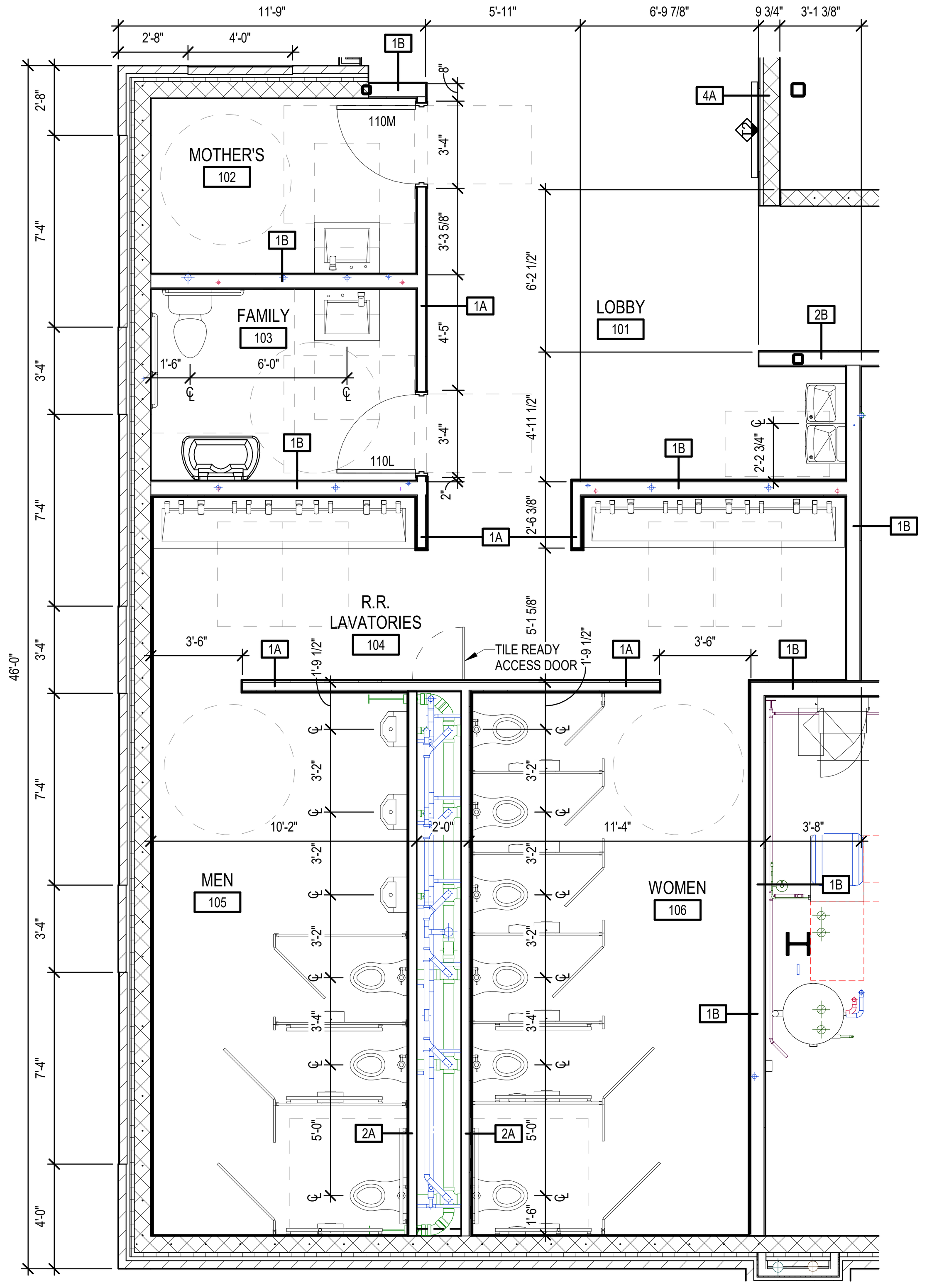
GLMVArchitecture

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

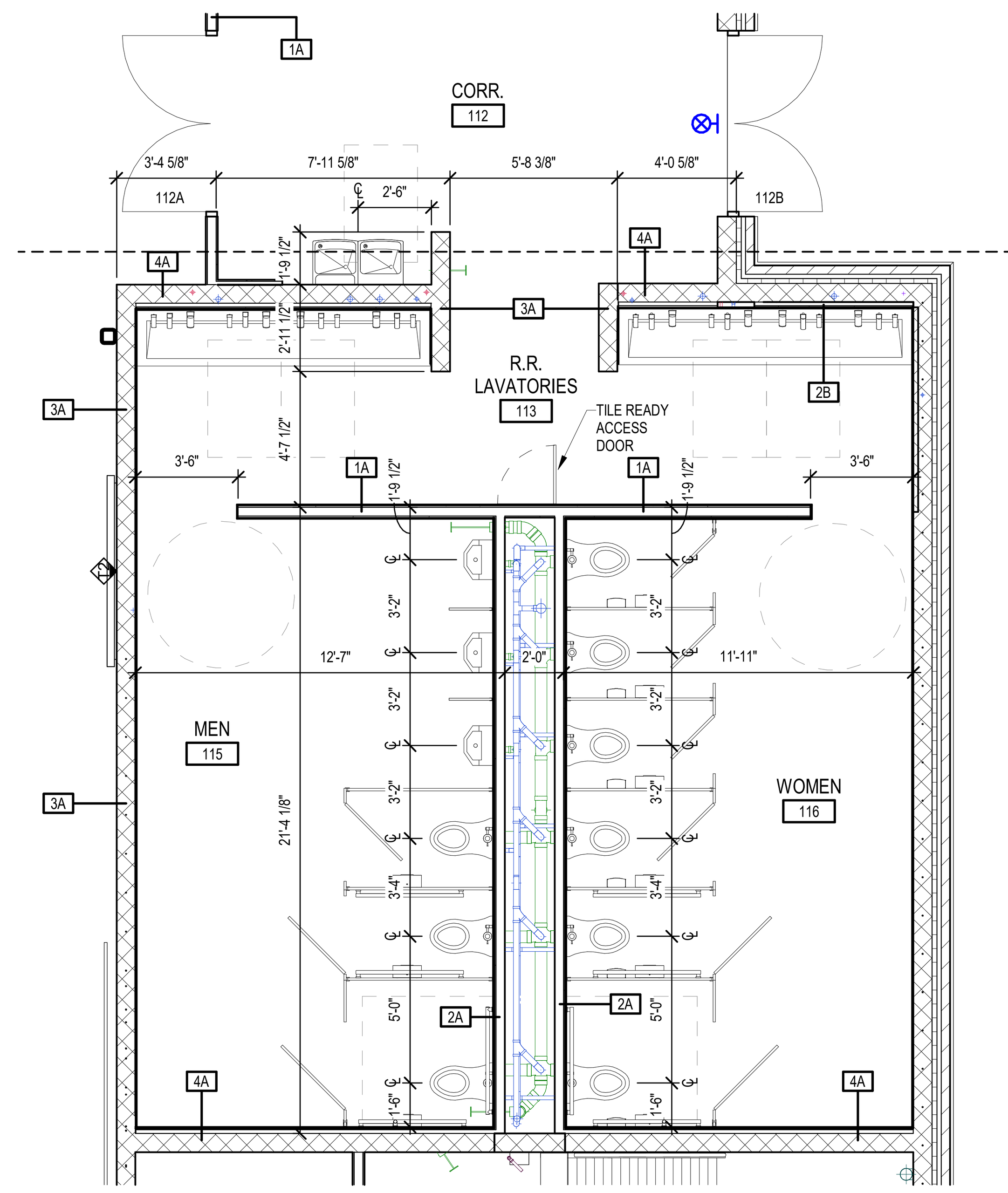
DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	Author
CHECKED BY:	Checker

WALL SECTIONS

A-313



1 SOUTHWEST ENLARGED RESTROOM PLAN
1/4" = 1'-0"



2 NORTHEAST ENLARGED RESTROOM PLAN
1/4" = 1'-0"

PLOT DATE: 10/31/2023 9:11:04 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt

GLMV Architecture

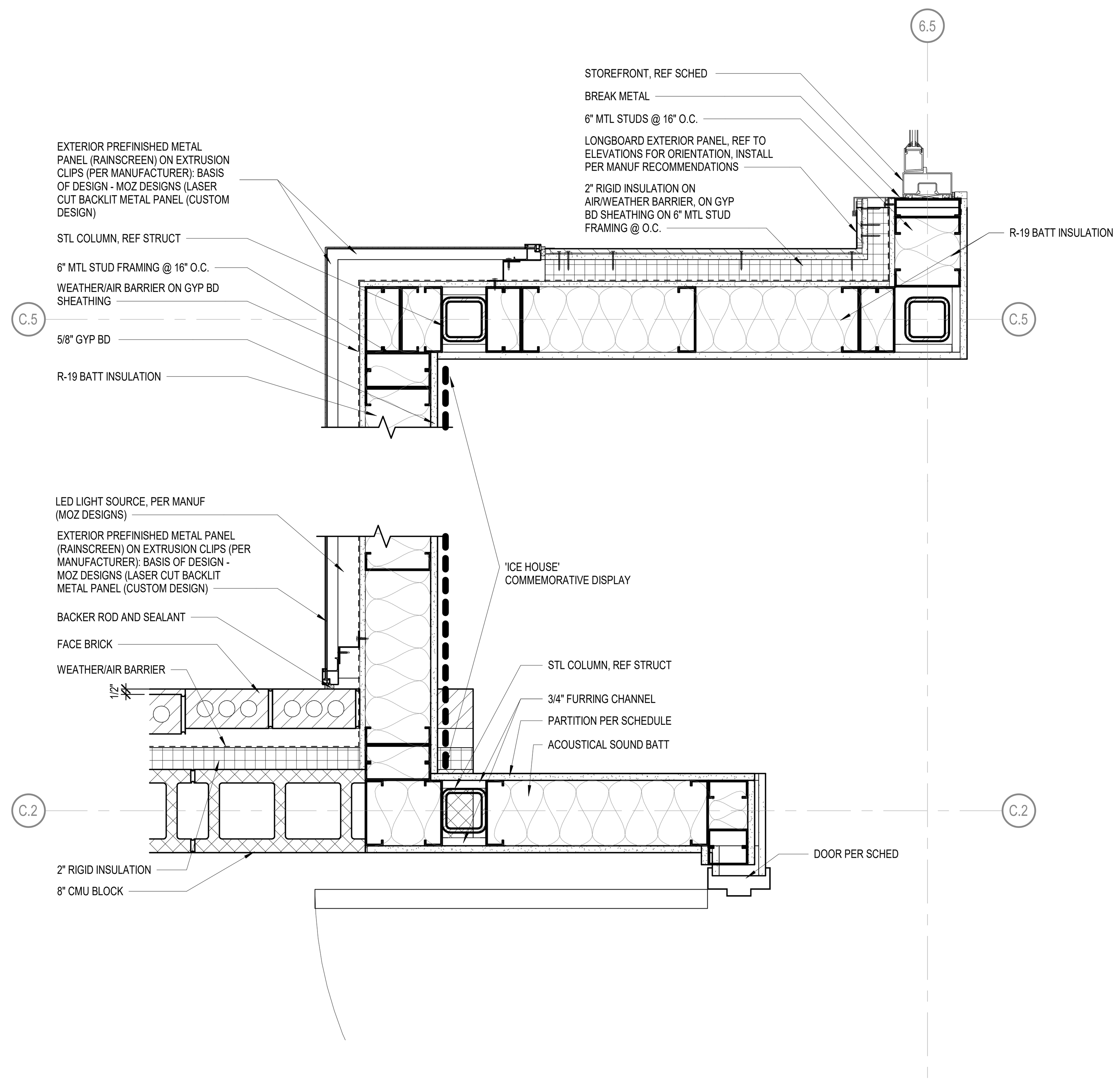
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

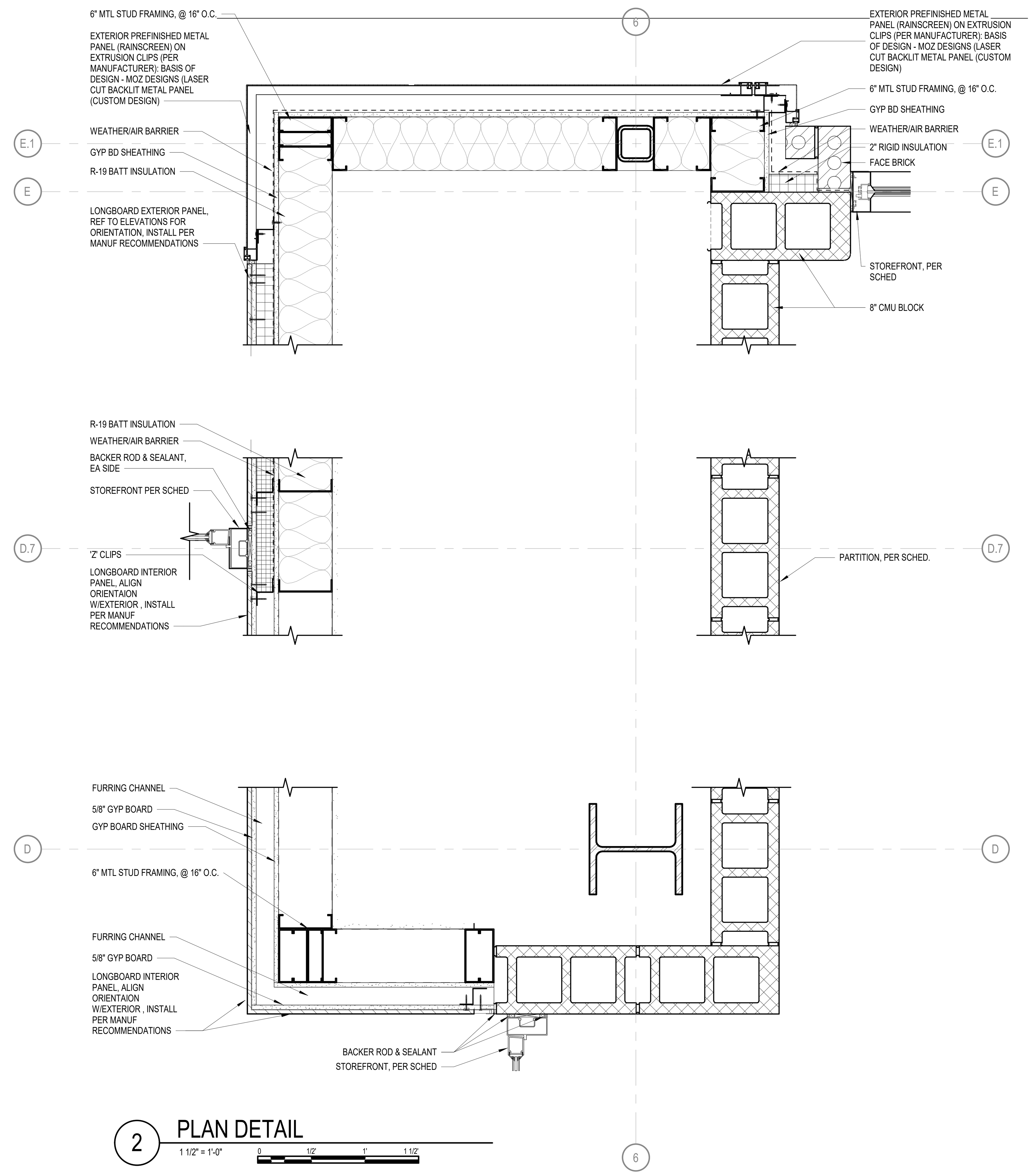
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	JSR
CHECKED BY:	FAB

ENLARGED RESTROOM PLANS

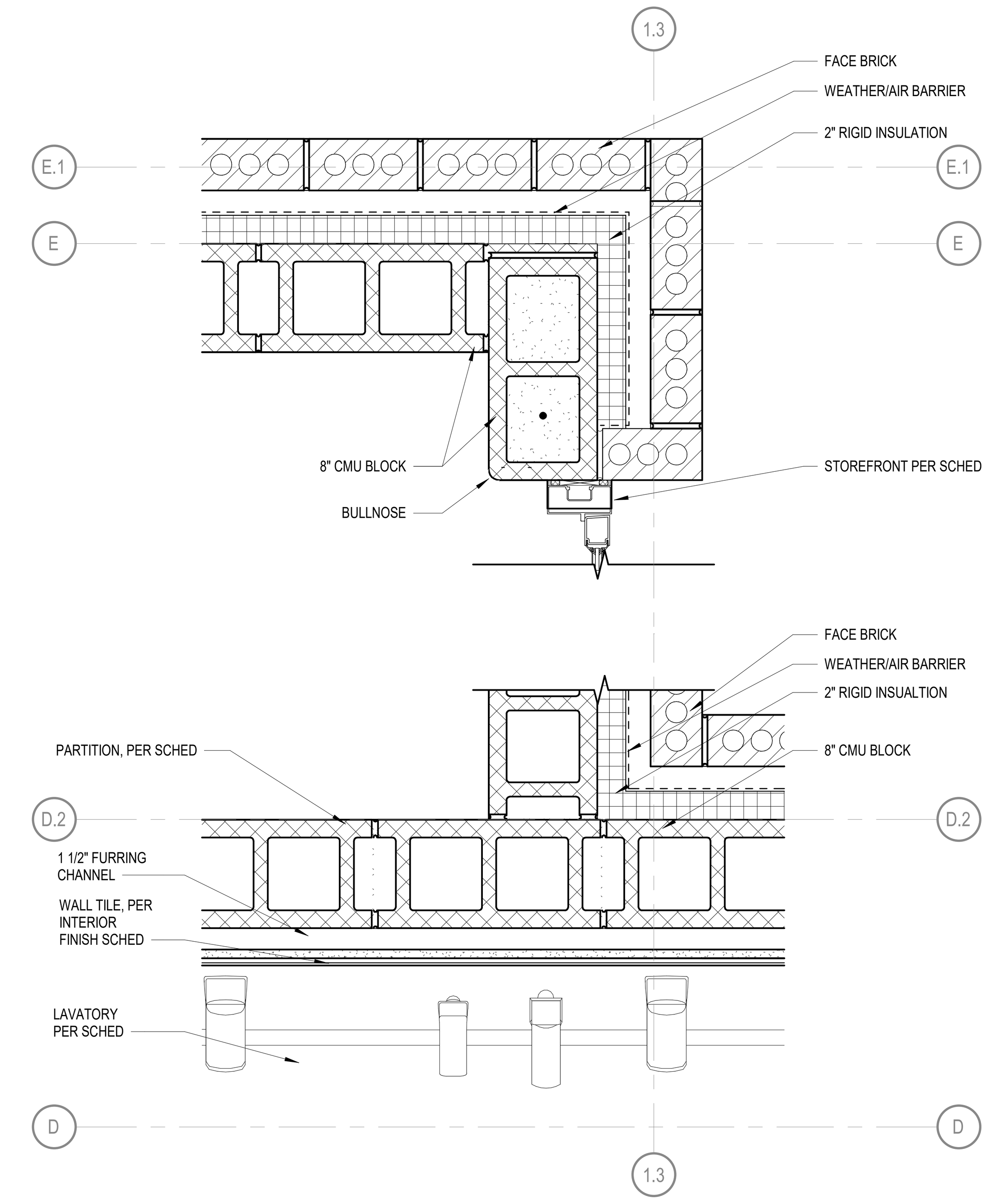
A-401



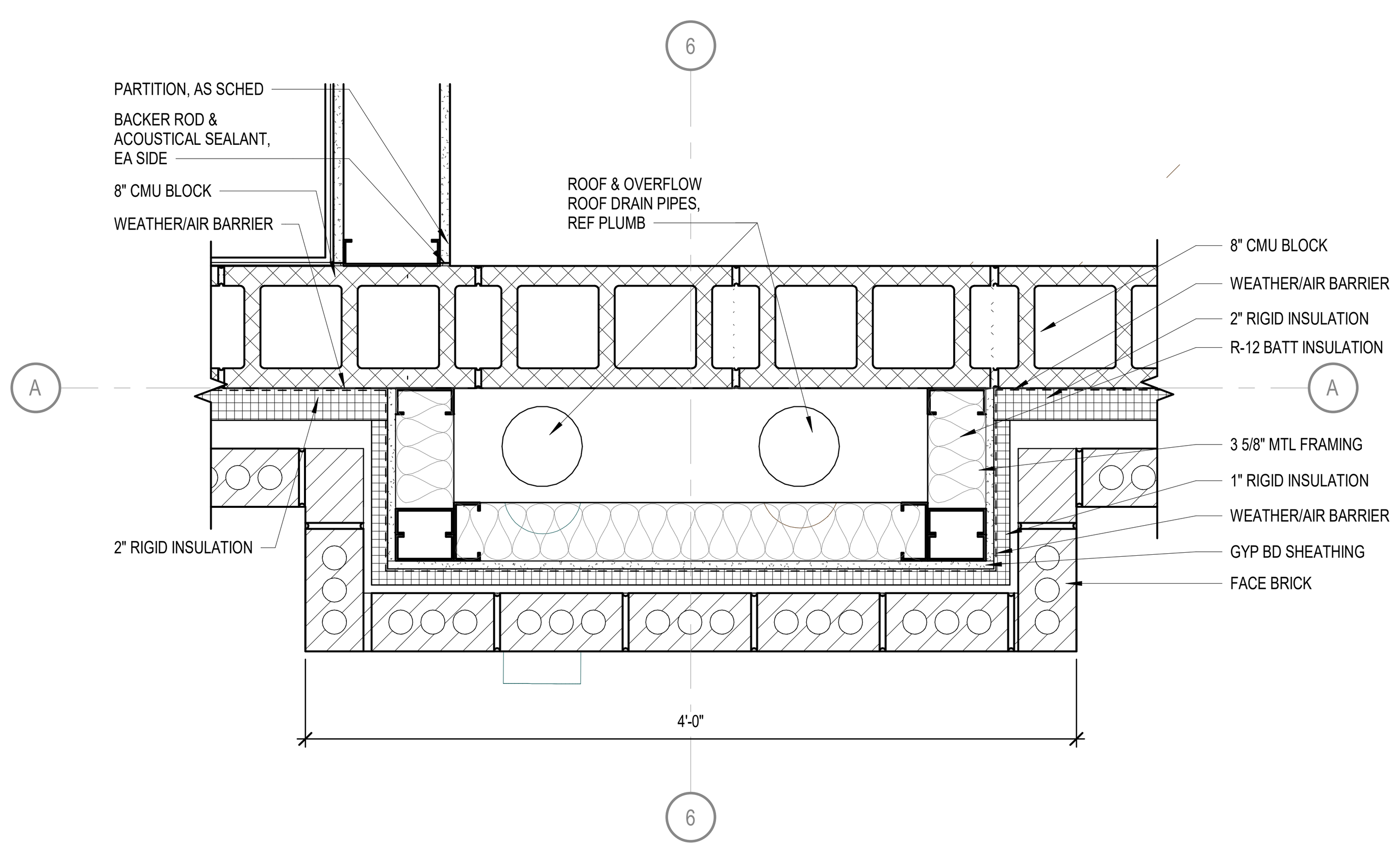
1 PLAN DETAIL
1 1/2" = 1'-0"



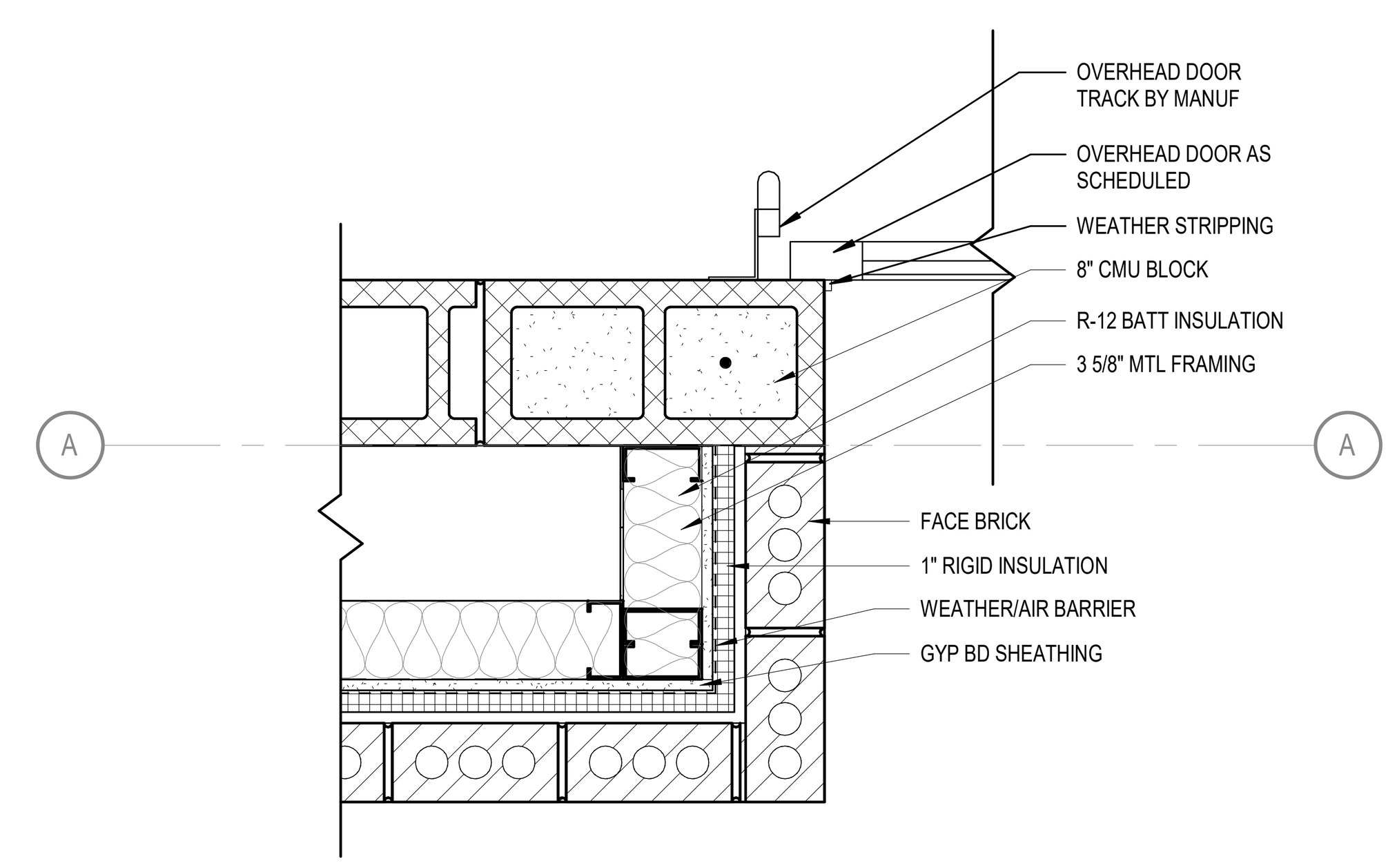
2 PLAN DETAIL
1 1/2" = 1'-0"



3 PLAN DETAIL
1 1/2" = 1'-0"



5 PLAN DETAIL @ ROOF DRAIN
1 1/2" = 1'-0"



4 OVERHEAD JAMB DTL
1 1/2" = 1'-0"

GLMV Architecture

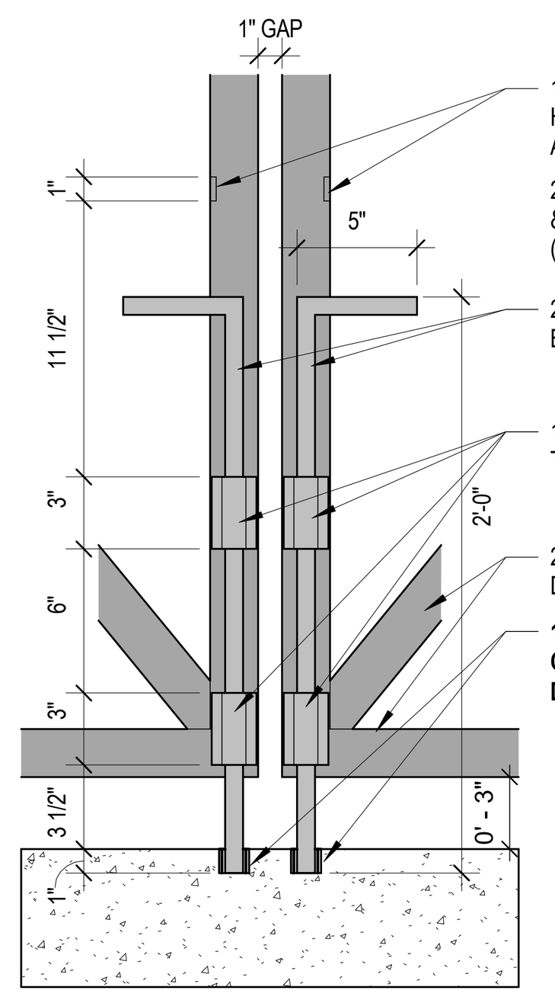
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	DRWN
CHECKED BY:	CHKD

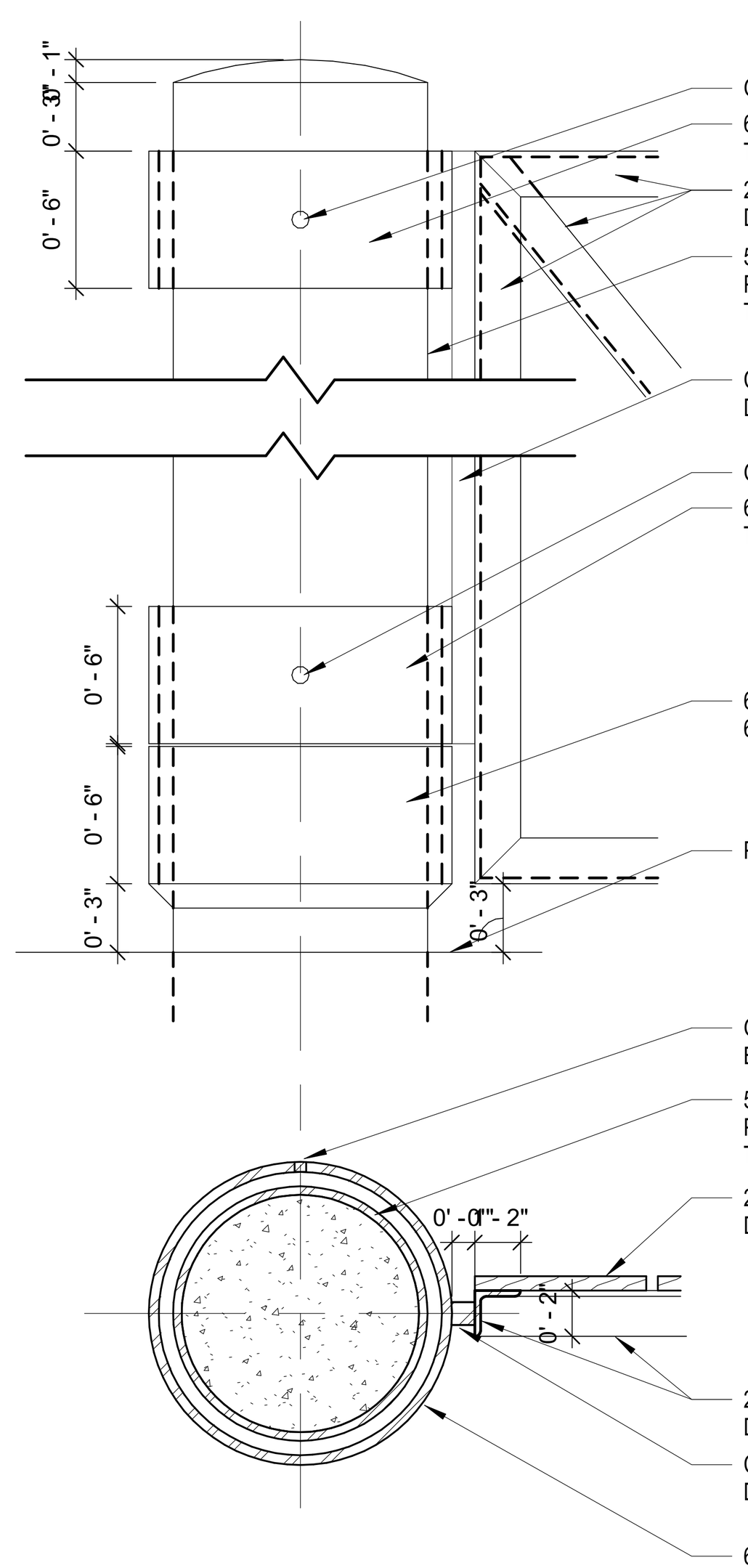
PLAN DETAILS

A-501

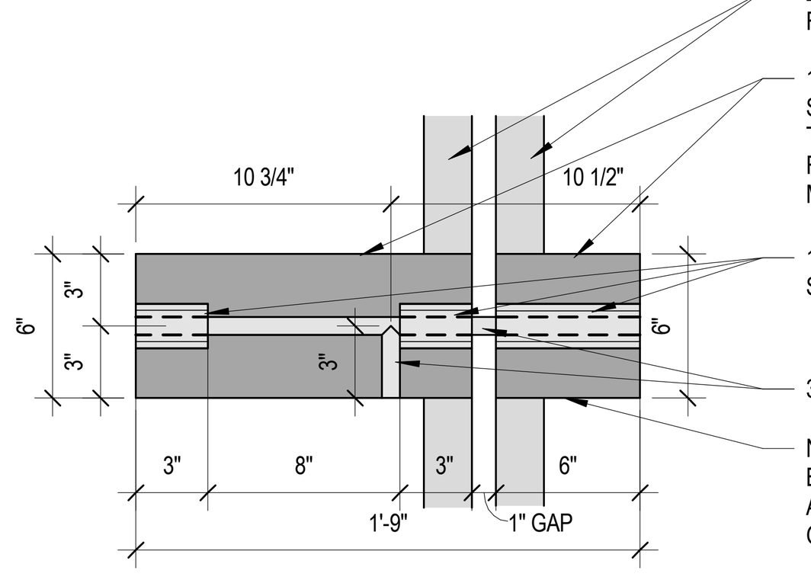
PLOT DATE: 10/31/2023 9:11:06 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



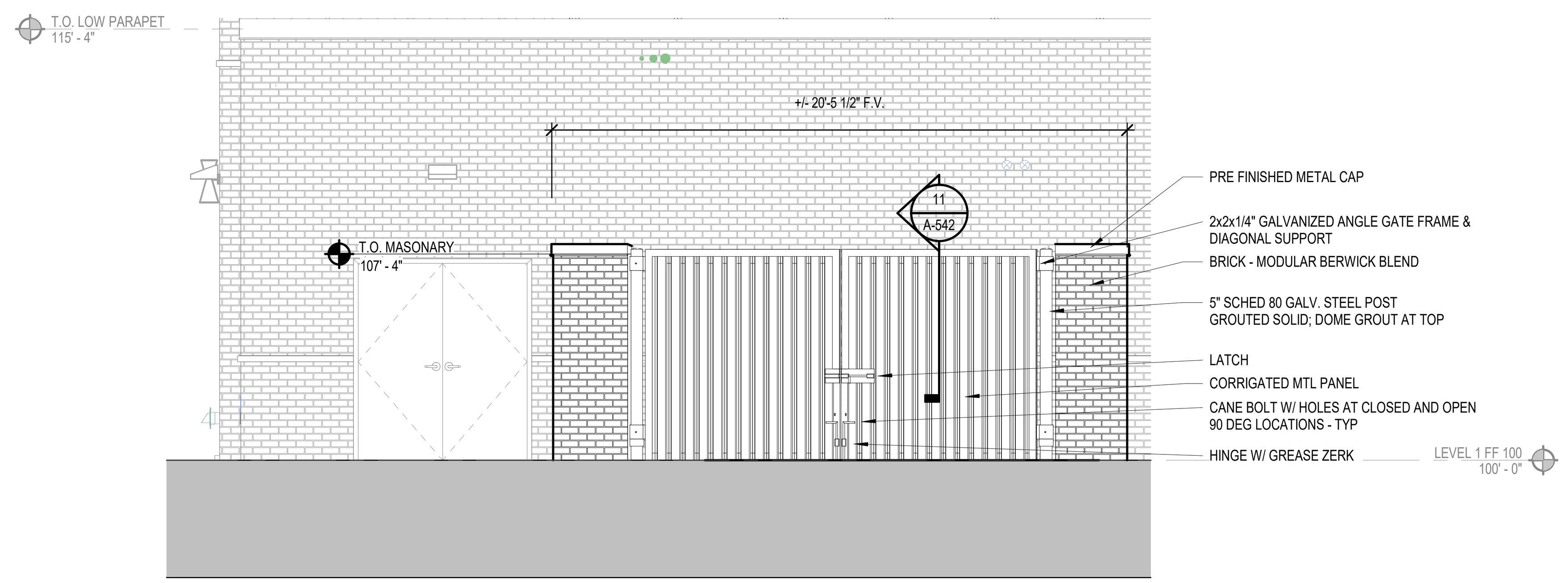
1 CANE BOLT DETAIL
1 1/2" = 1'-0"



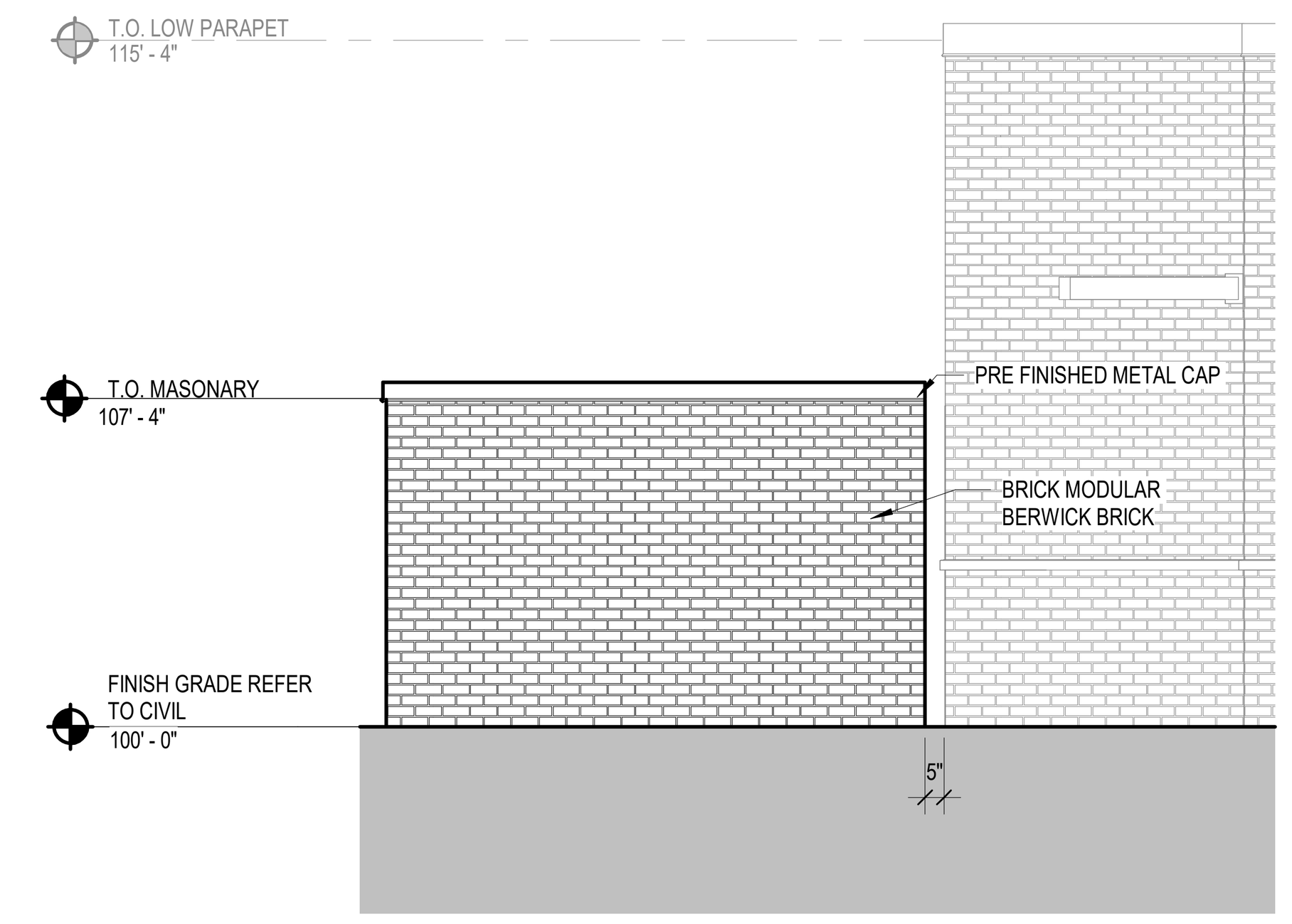
2 GATE HINGE DETAIL
1 1/2" = 1'-0"



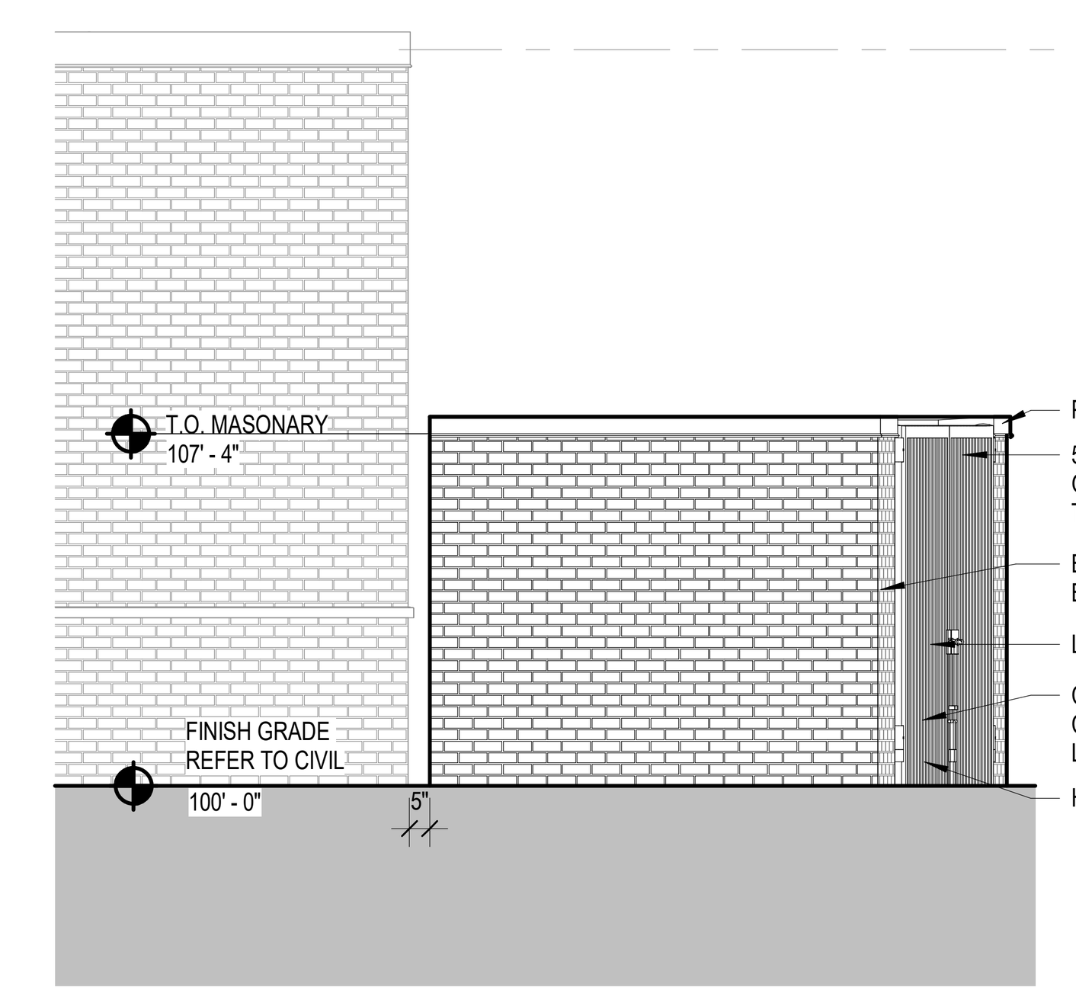
3 LATCH DETAILS
1 1/2" = 1'-0"



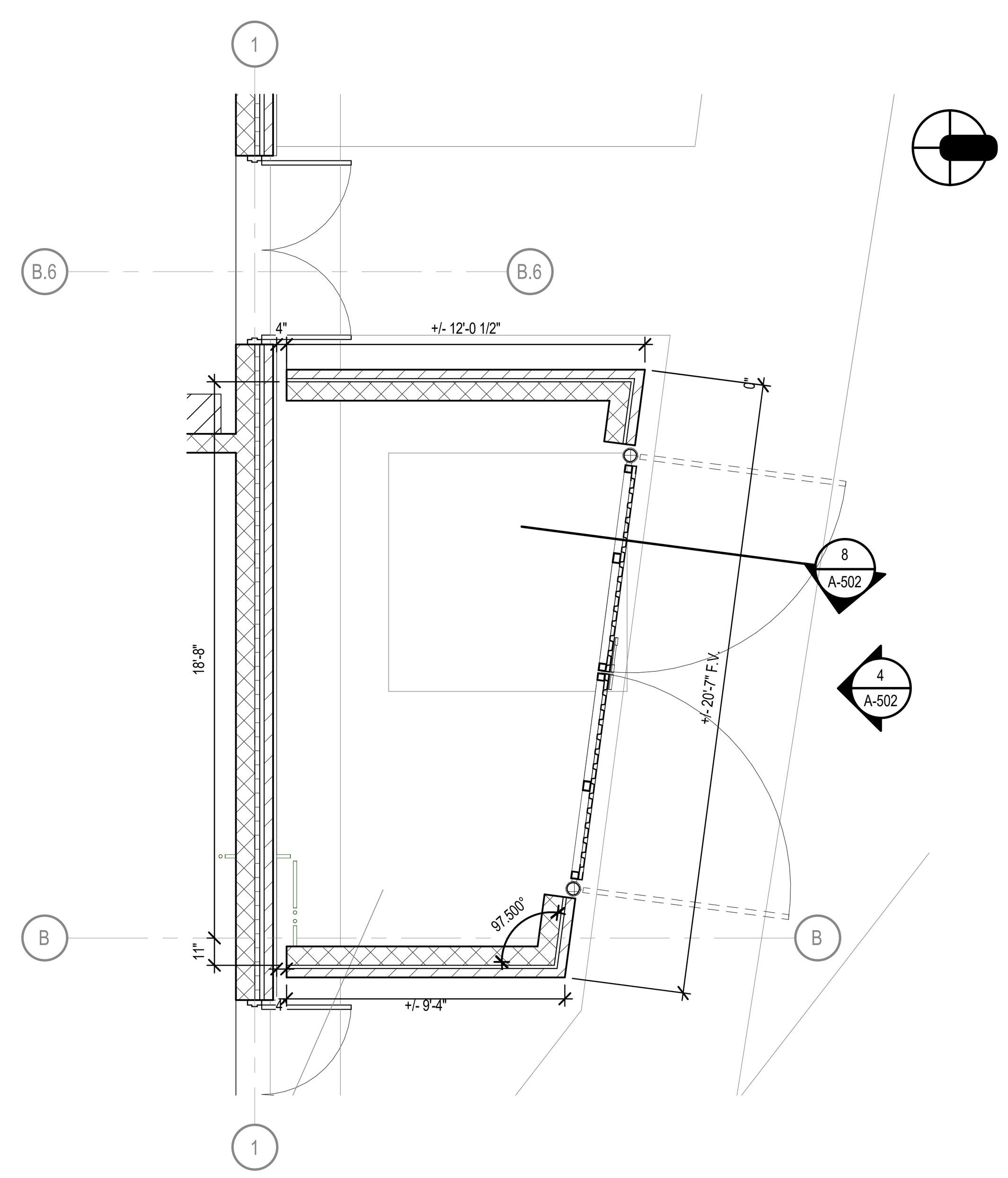
4 TRANSFORMER ENCLOSURE FRONT ELEVATION
1/4" = 1'-0"



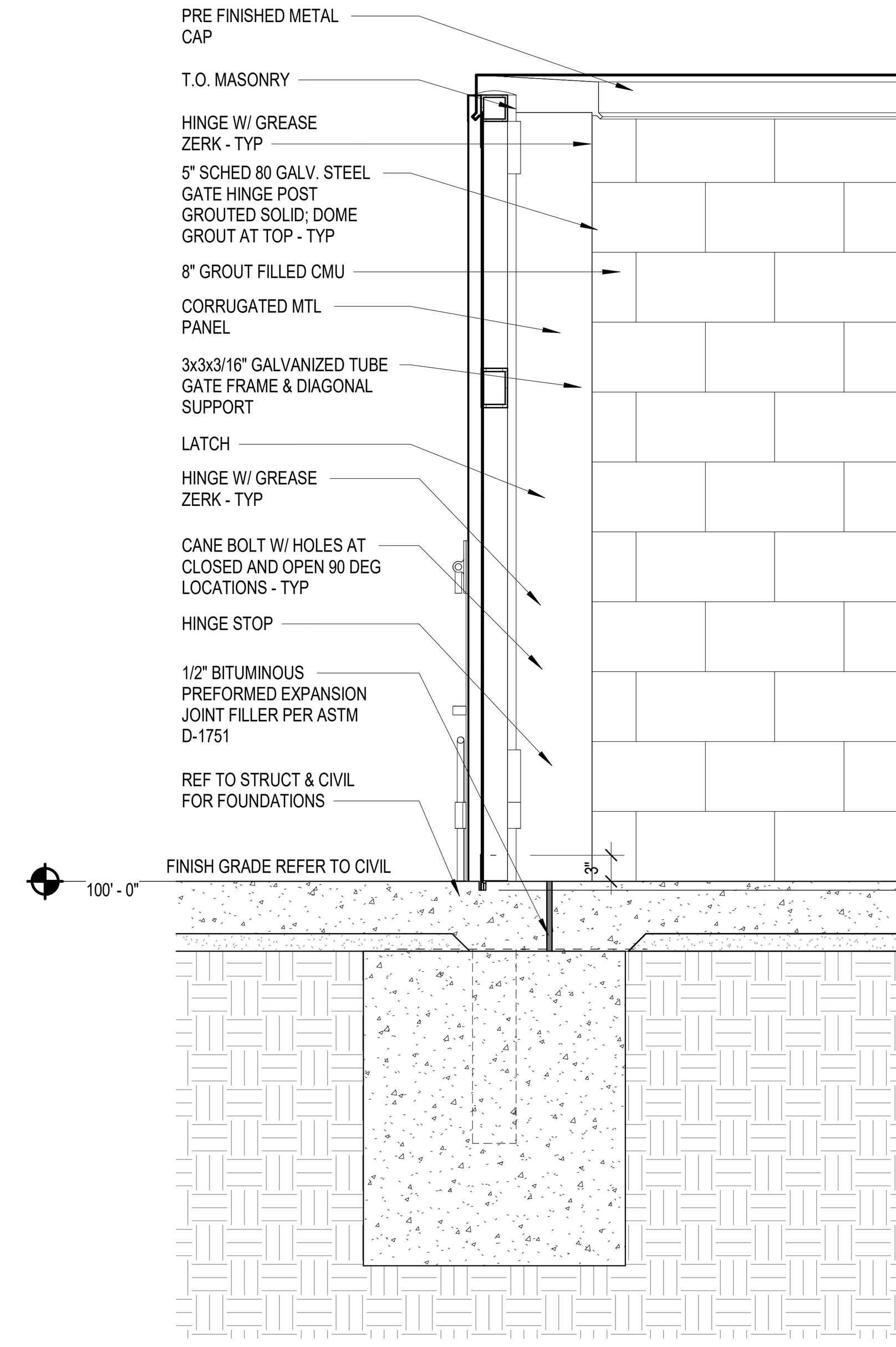
5 TRANSFORMER ENCLOSURE NORTH ELEVATION
1/4" = 1'-0"



6 TANSFORMER ENCLOSURE SOUTH ELEVATION
1/4" = 1'-0"



7 TRANSFORMER ENCLOSURE - FLOOR PLAN
1/4" = 1'-0"



8 SITE TRANSFORMER ENCLOSURE SECTION
3/4" = 1'-0"

GLMV Architecture

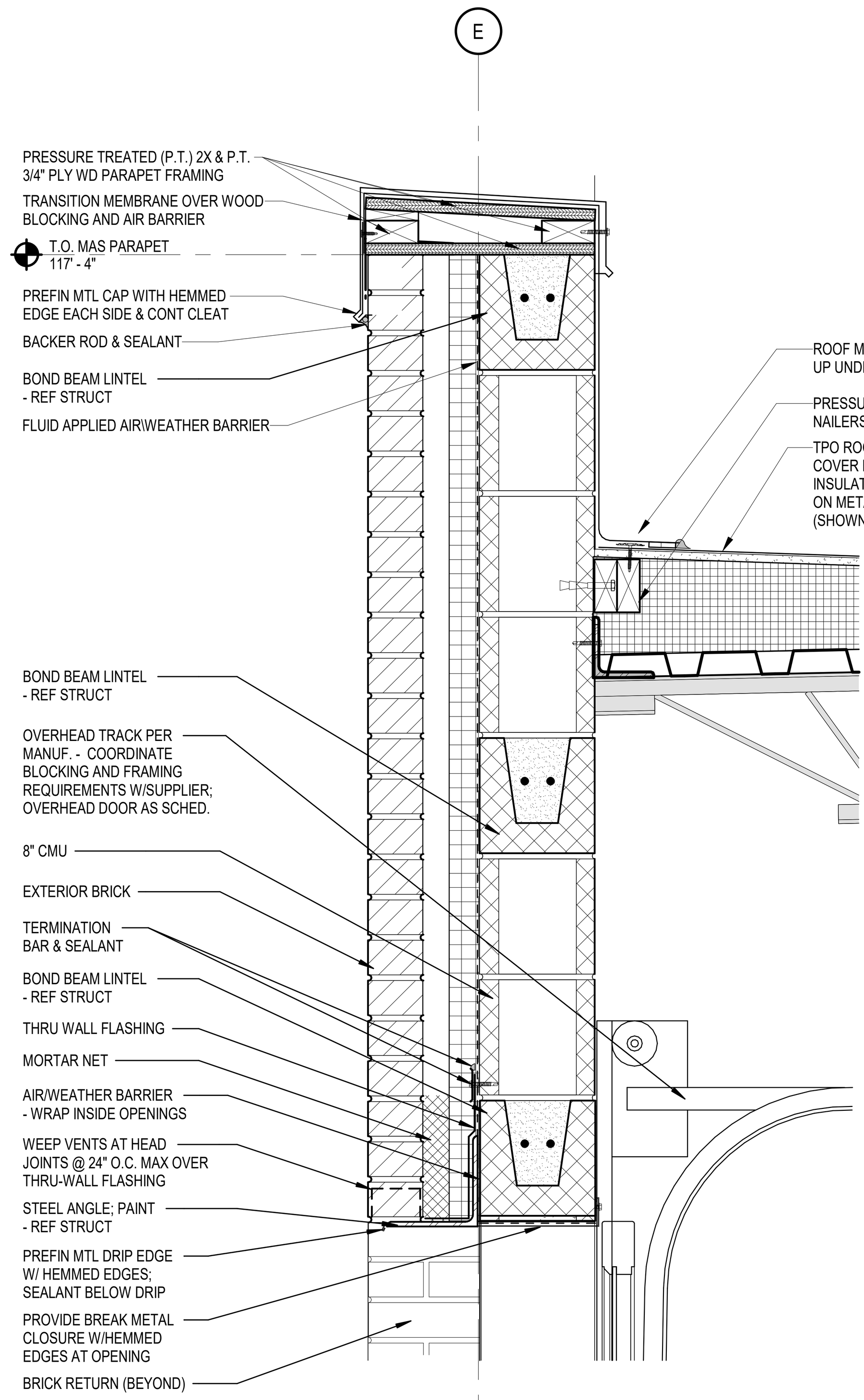
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	DRWN
CHECKED BY:	CHKD

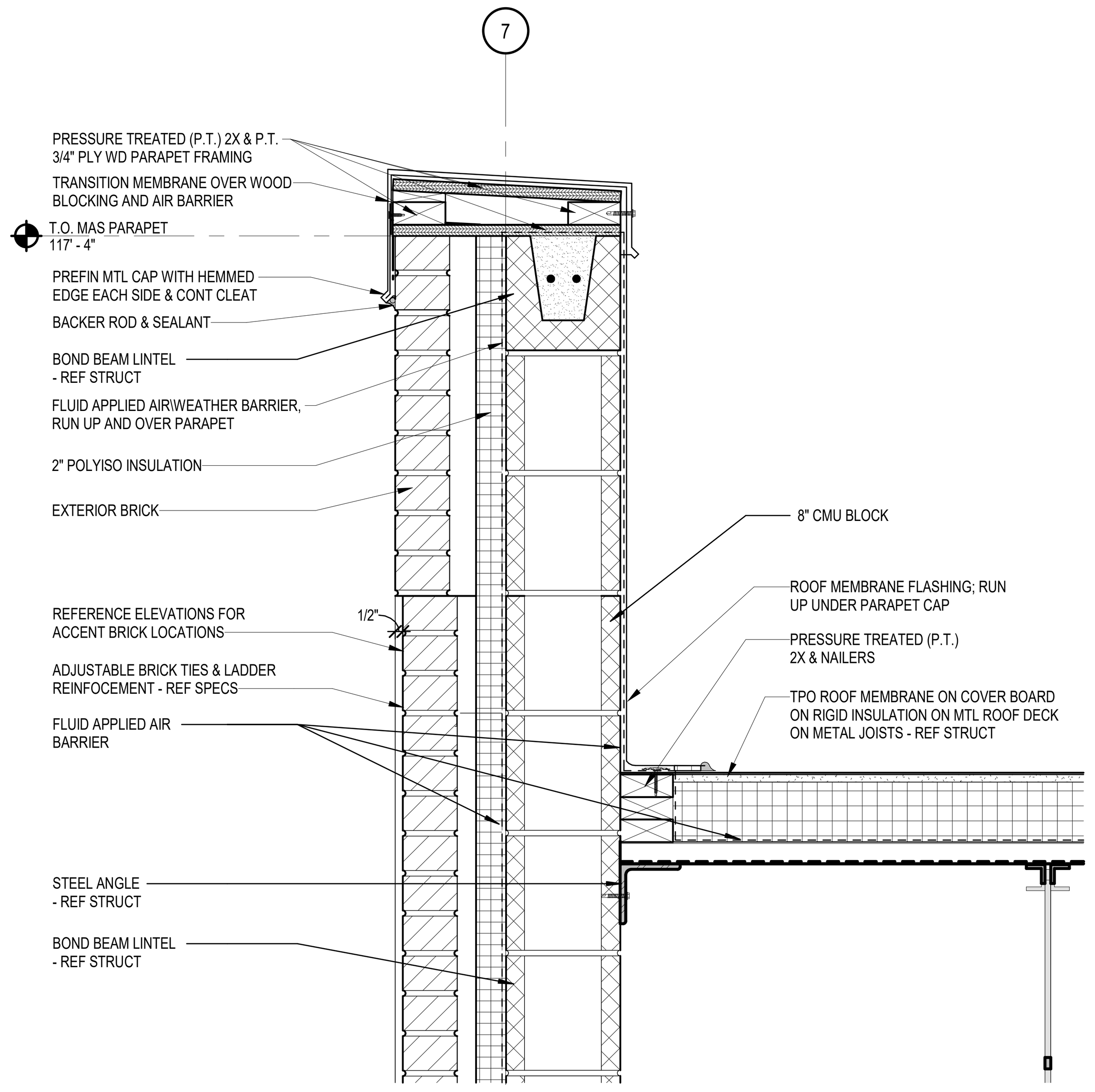
SERVICE ENCLOSURE DETAILS

A-502

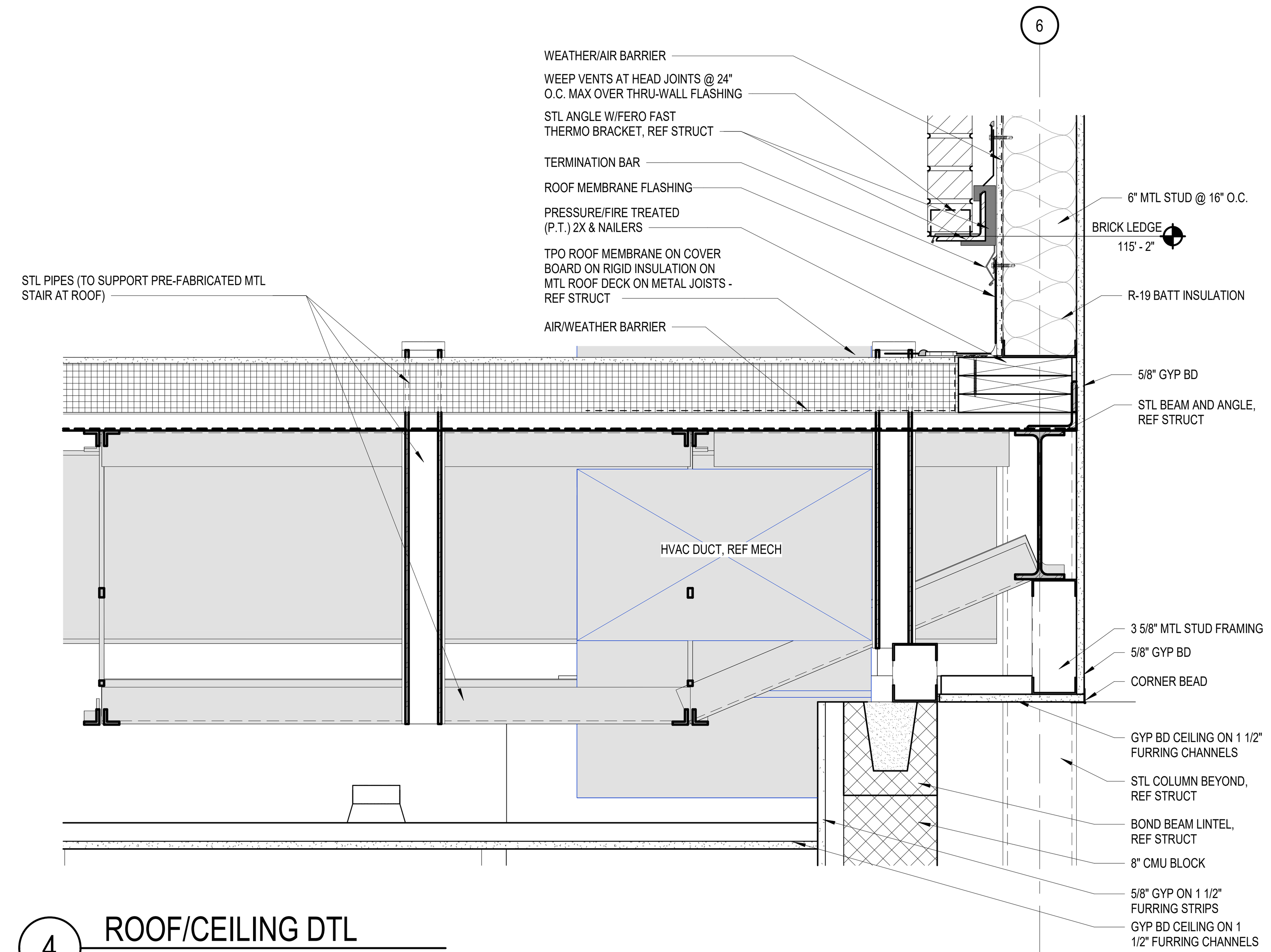
PLOT DATE: 10/31/2023 9:11:08 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



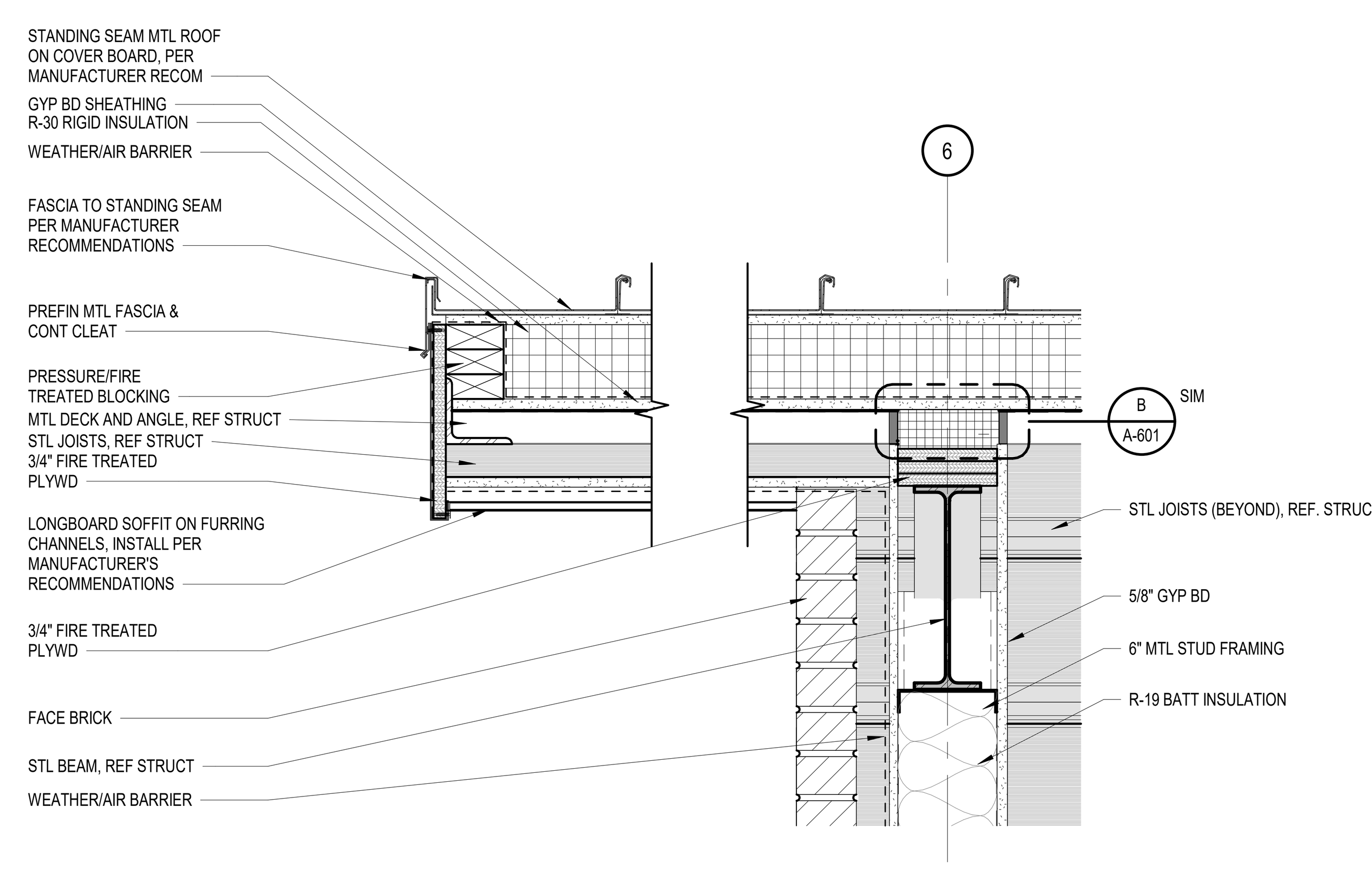
1 OVERHEAD DOOR HEAD DTL @ PARAPET
1 1/2" = 1'-0"



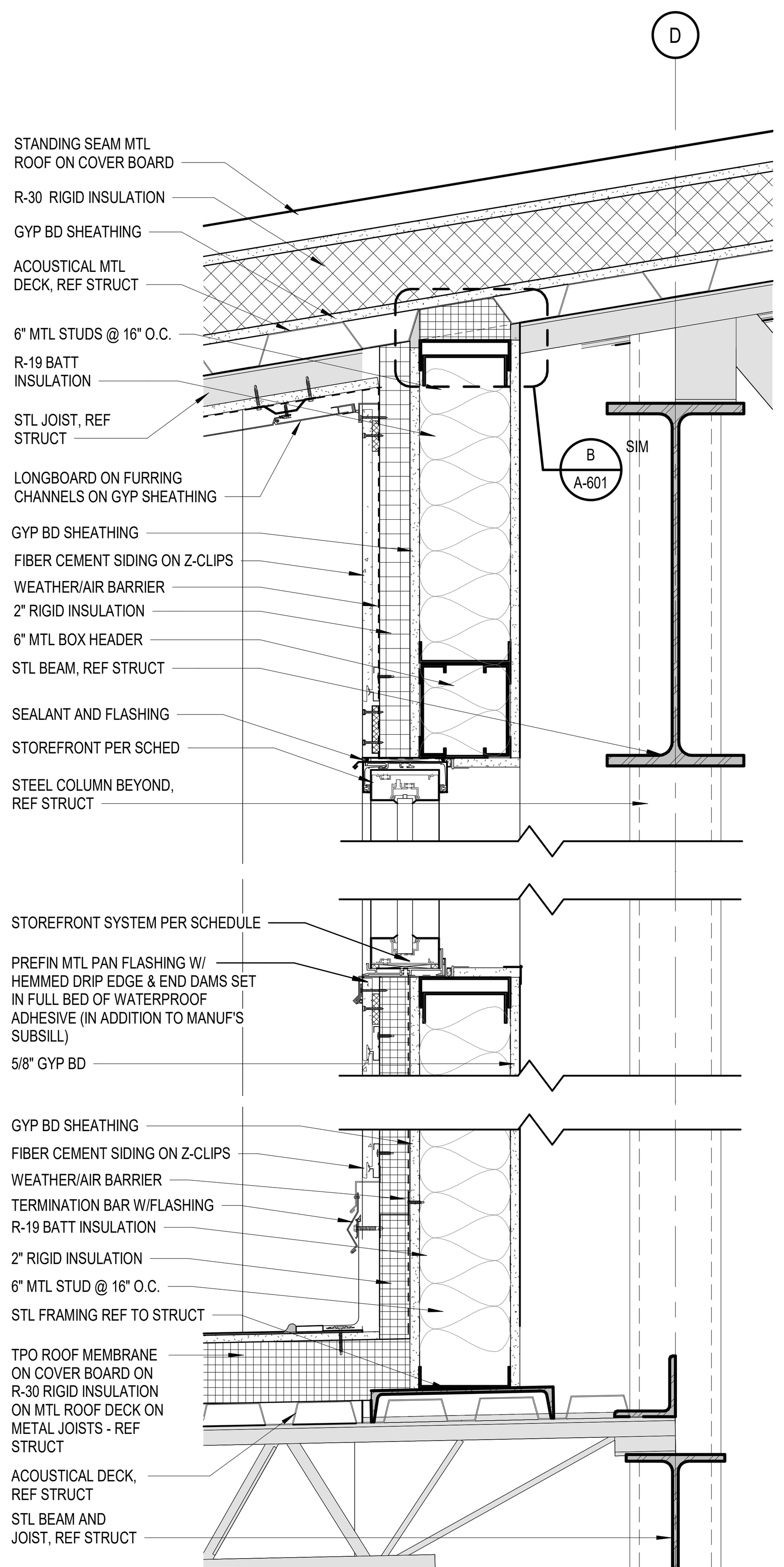
3 ACCENT WALL - PARAPET DTL
1 1/2" = 1'-0"



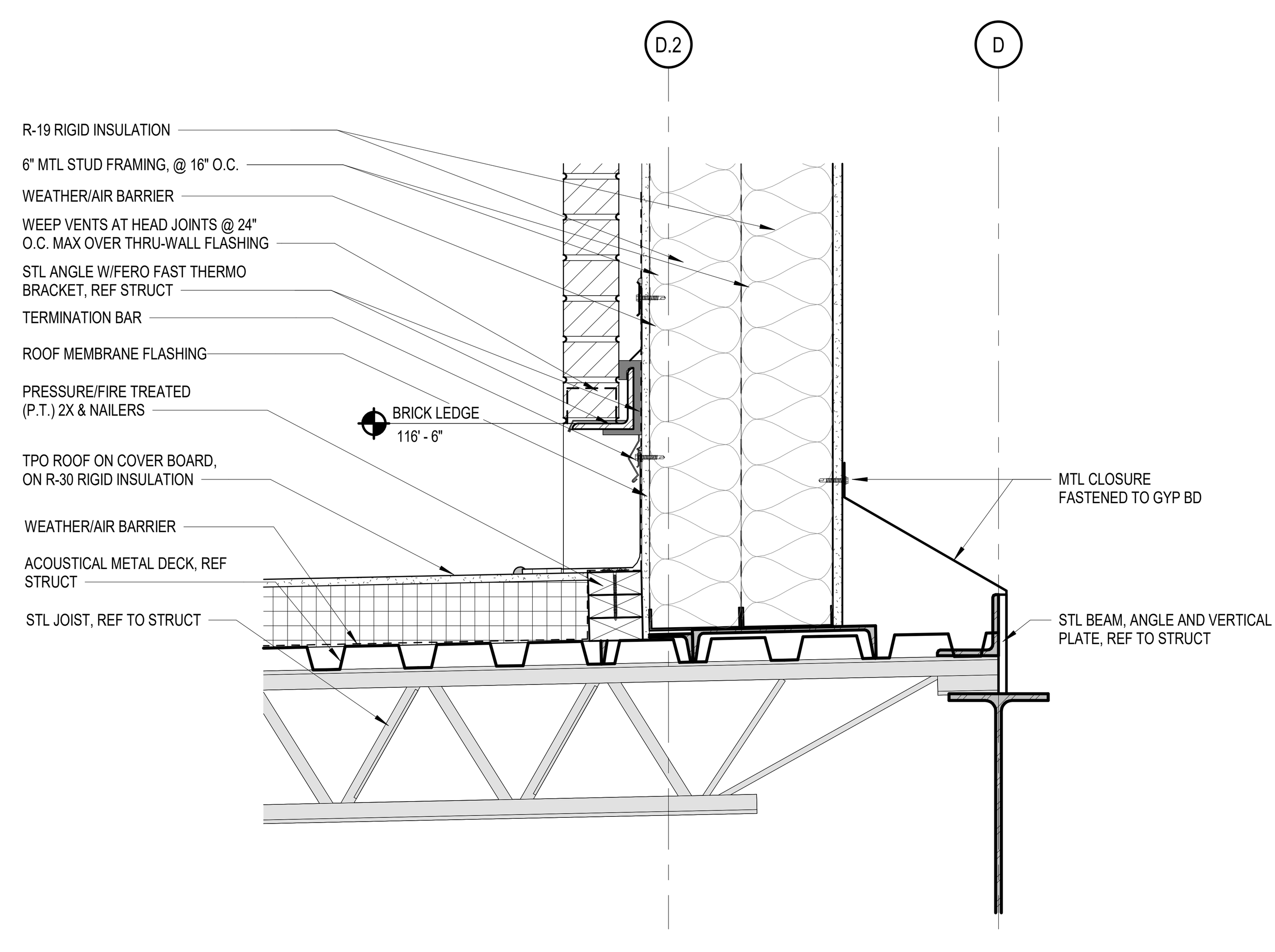
4 ROOF/CEILING DTL
1 1/2" = 1'-0"



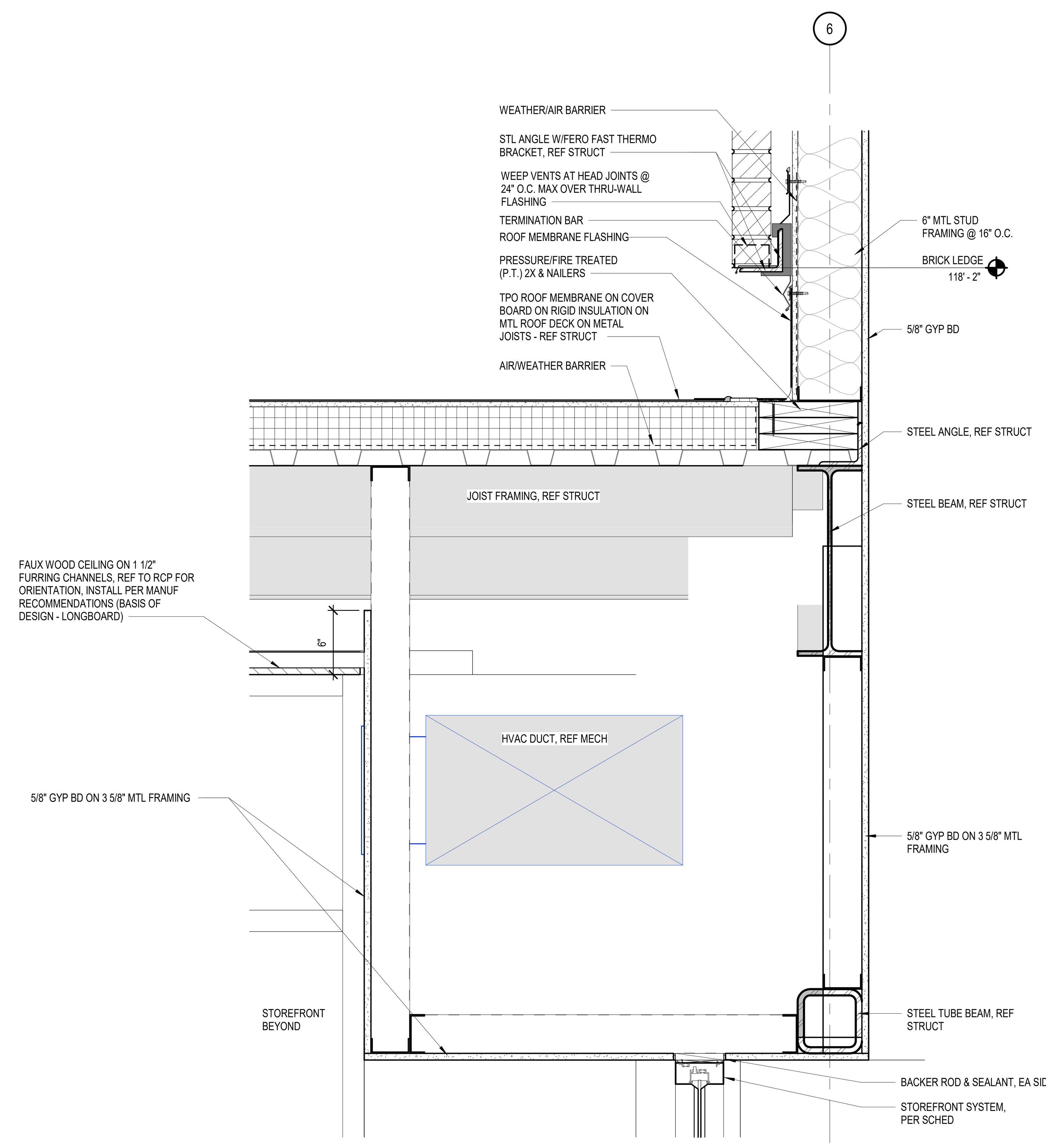
5 STANDING SEAM ROOF DTL
1 1/2" = 1'-0"



2 CLERESTORY AT STOREFRONT
1 1/2" = 1'-0"



6 CLERESTORY AT BRICK PILASTER
1 1/2" = 1'-0"



8 SOFFIT AT INTERIOR STOREFRONT
1 1/2" = 1'-0"

GLMV Architecture

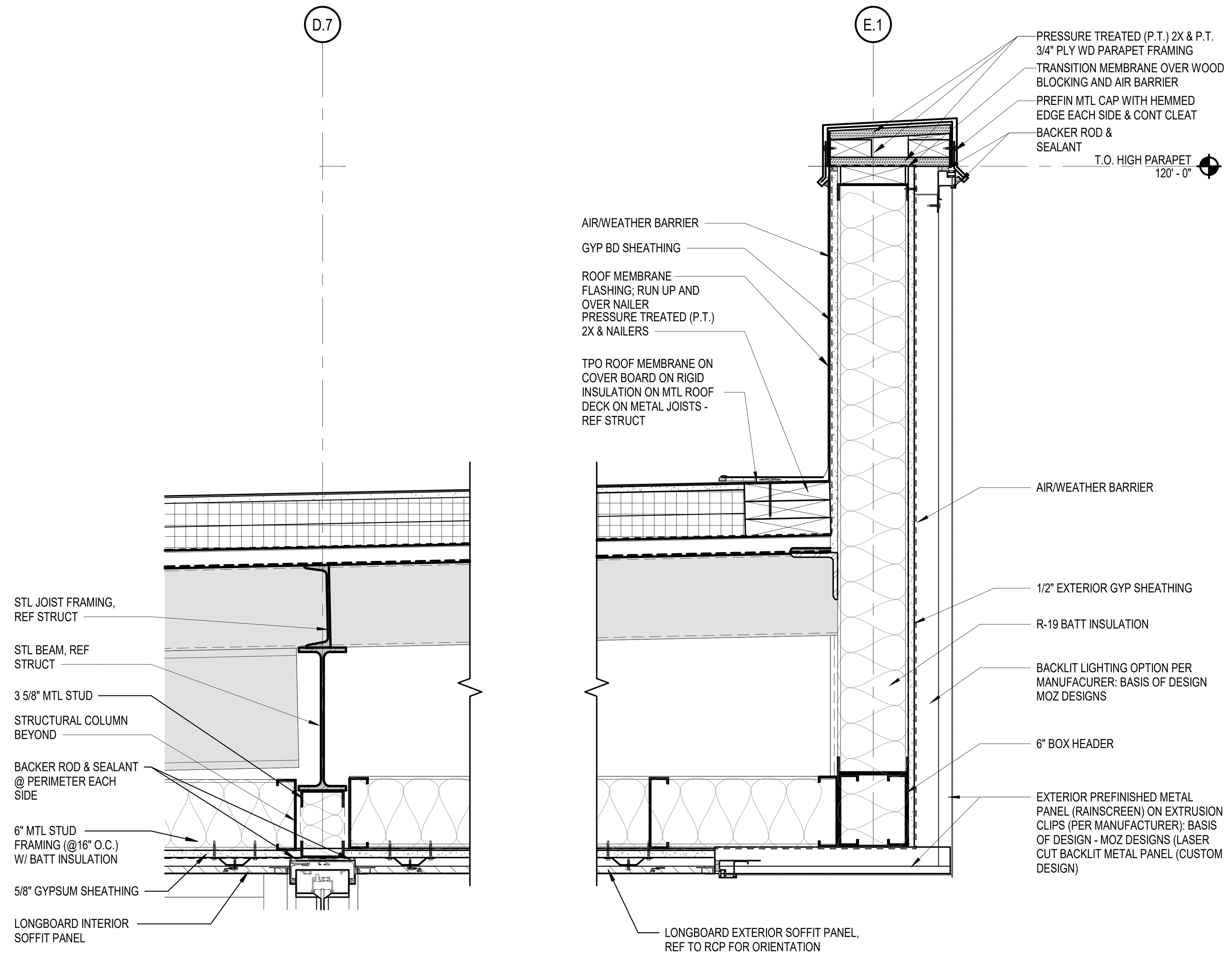
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	DRWN
CHECKED BY:	CHKD

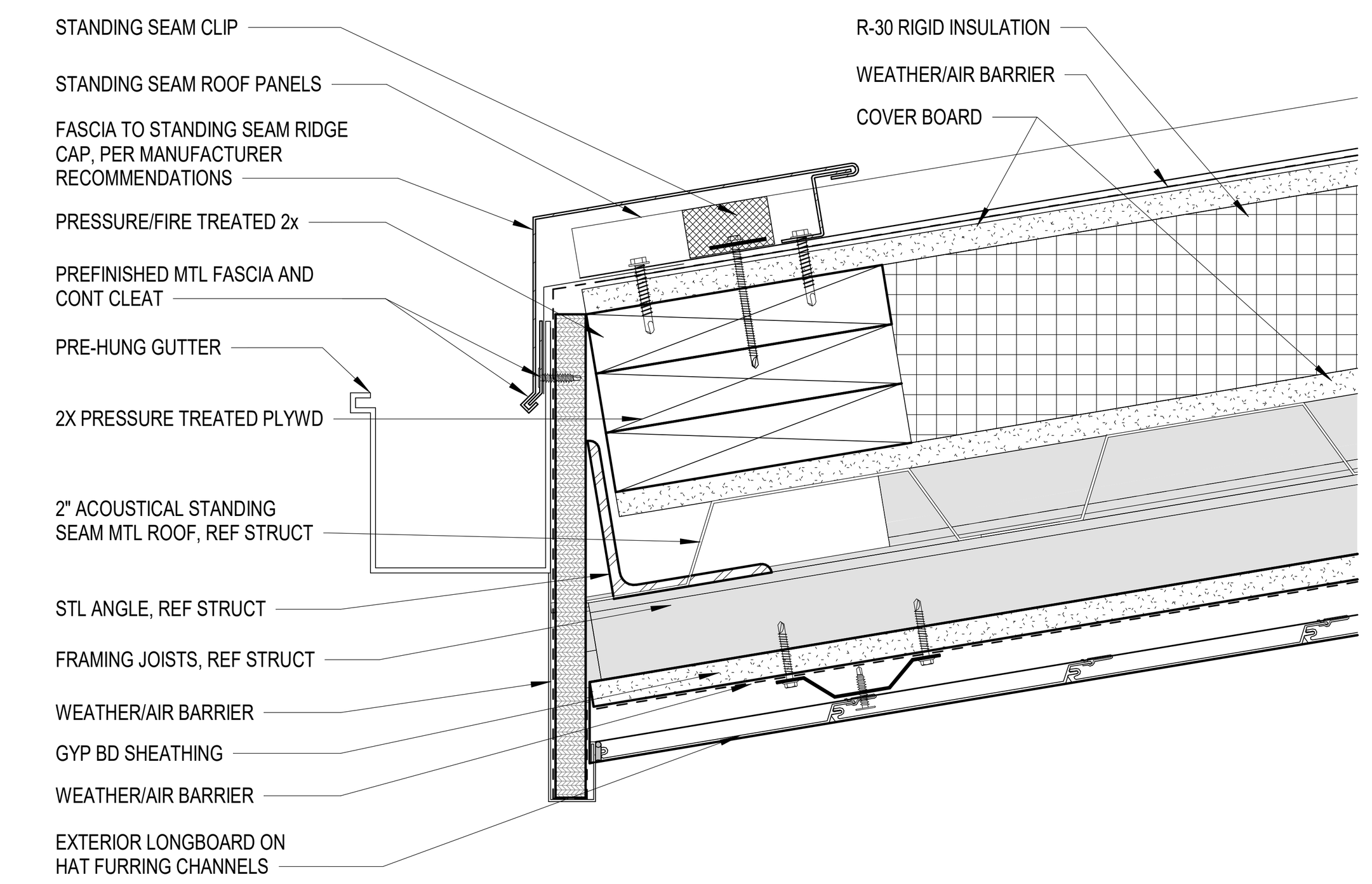
ROOF DETAILS

A-521

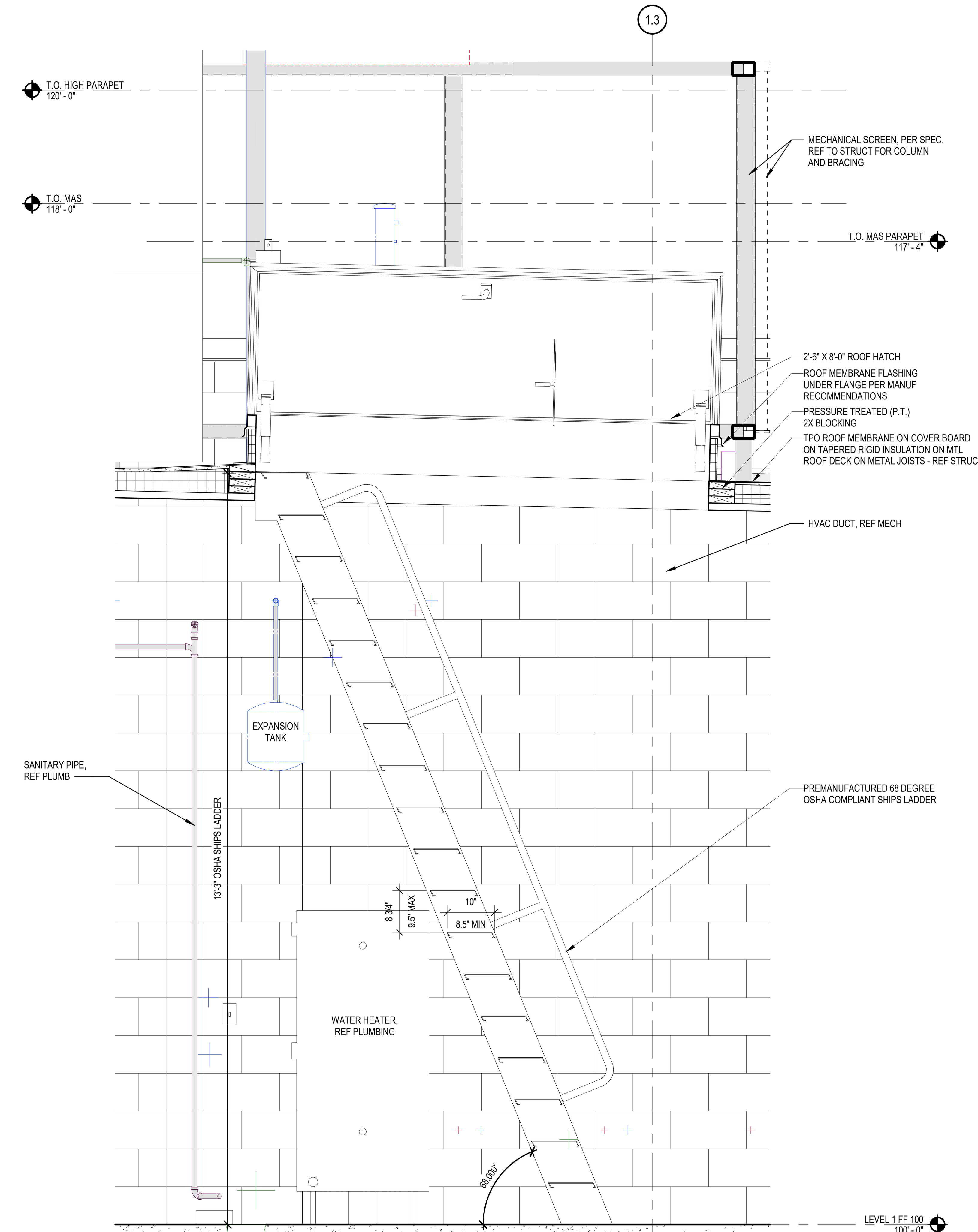
PLOT DATE: 10/31/2023 9:11:10 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



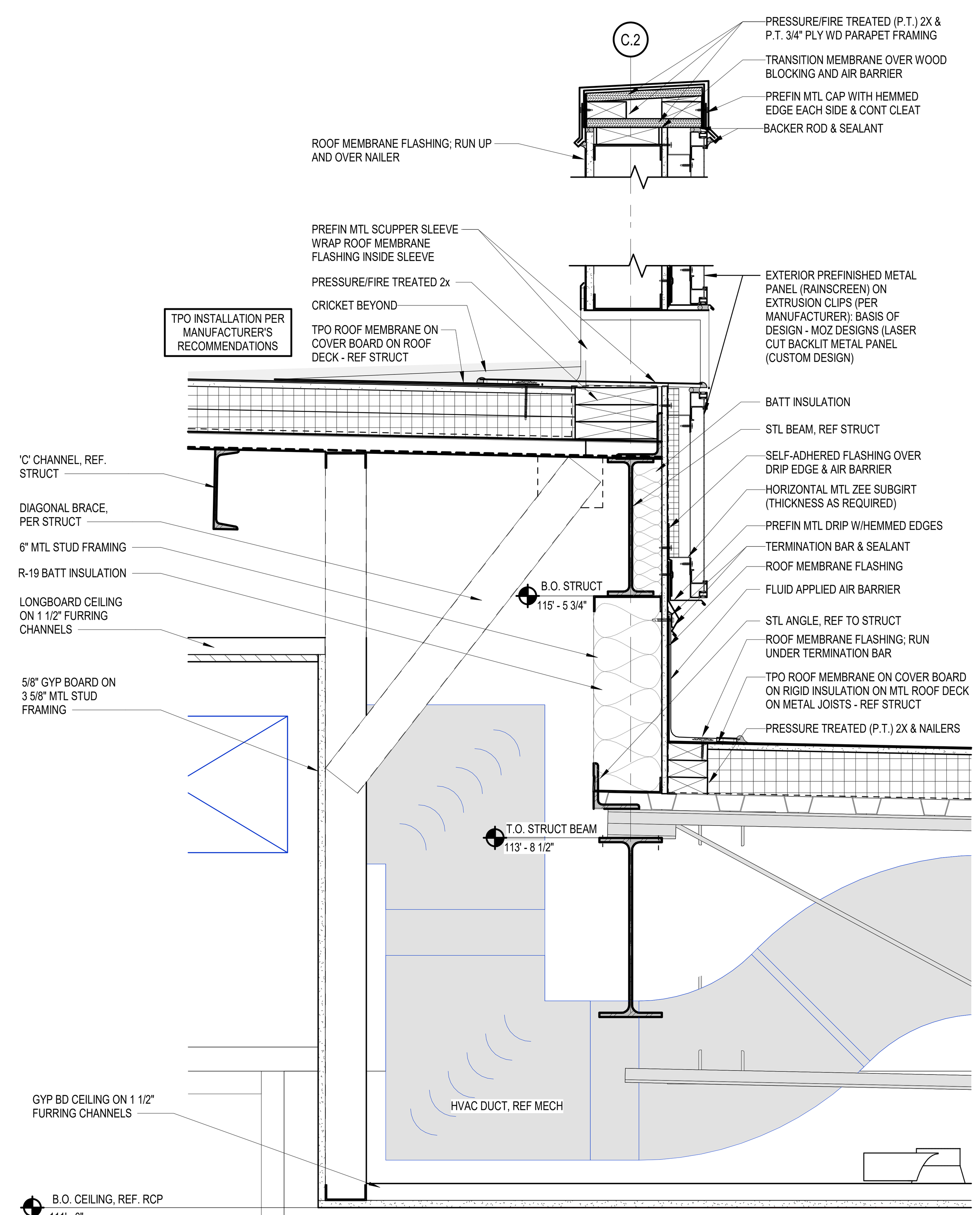
4 FRONT ENTRY SOFFIT DETAIL
1 1/2" = 1'-0"



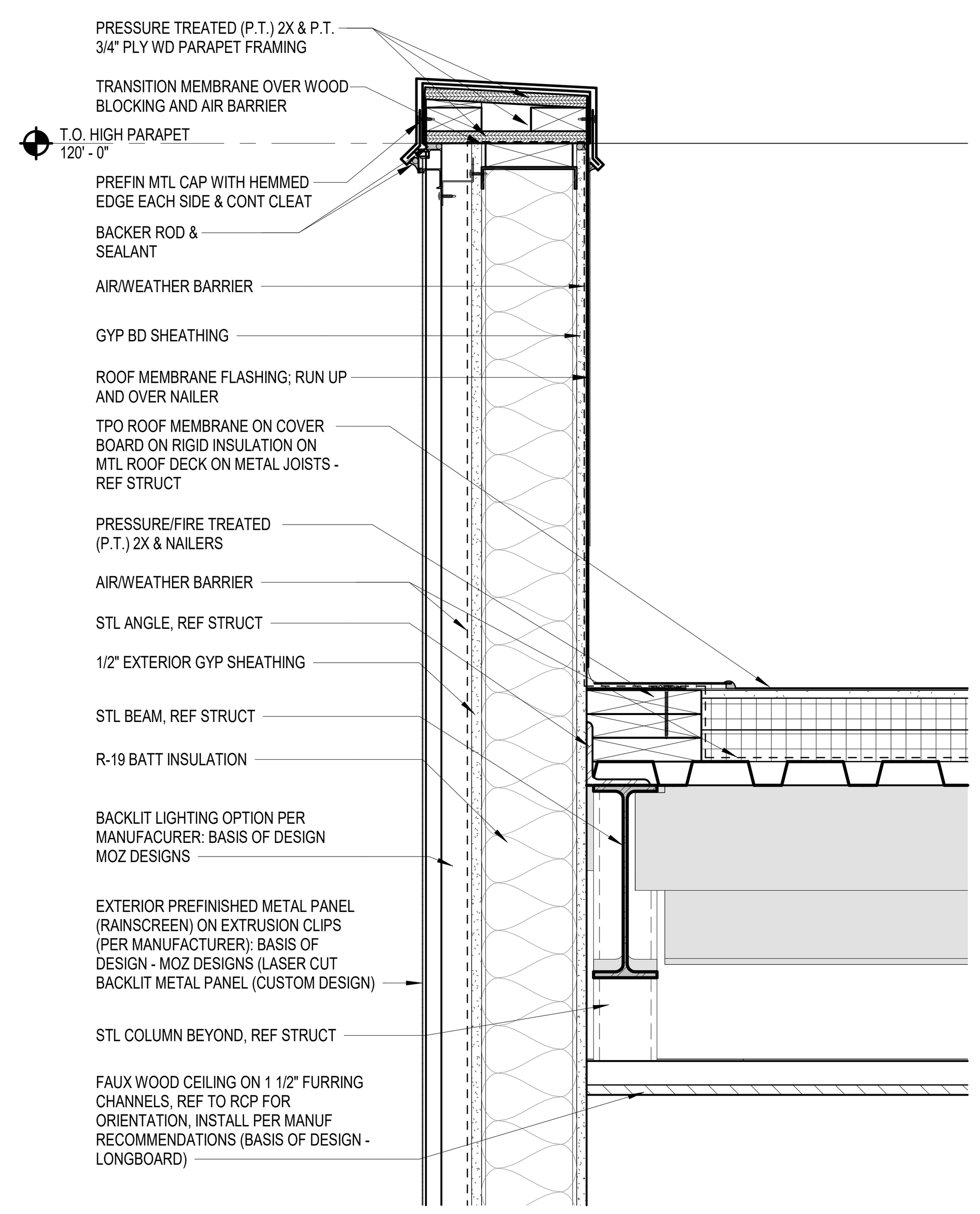
2 STANDING SEAM ROOF SOFFIT DTL
3" = 1'-0"



1 SHIPS LADDER SECTION
3/4" = 1'-0"



3 SCUPPER SLEEVE @ PARAPET DTL
1 1/2" = 1'-0"



5 ROOF DETAIL
1 1/2" = 1'-0"

GLMV Architecture

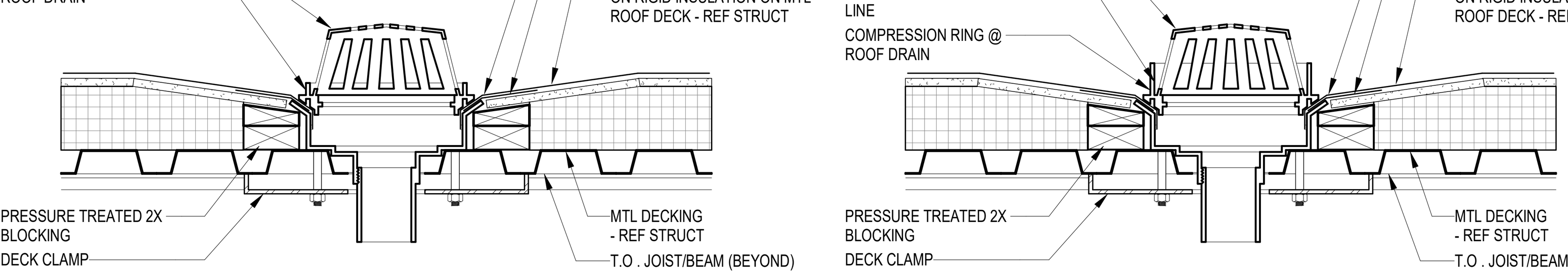
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	Author
CHECKED BY:	Checker

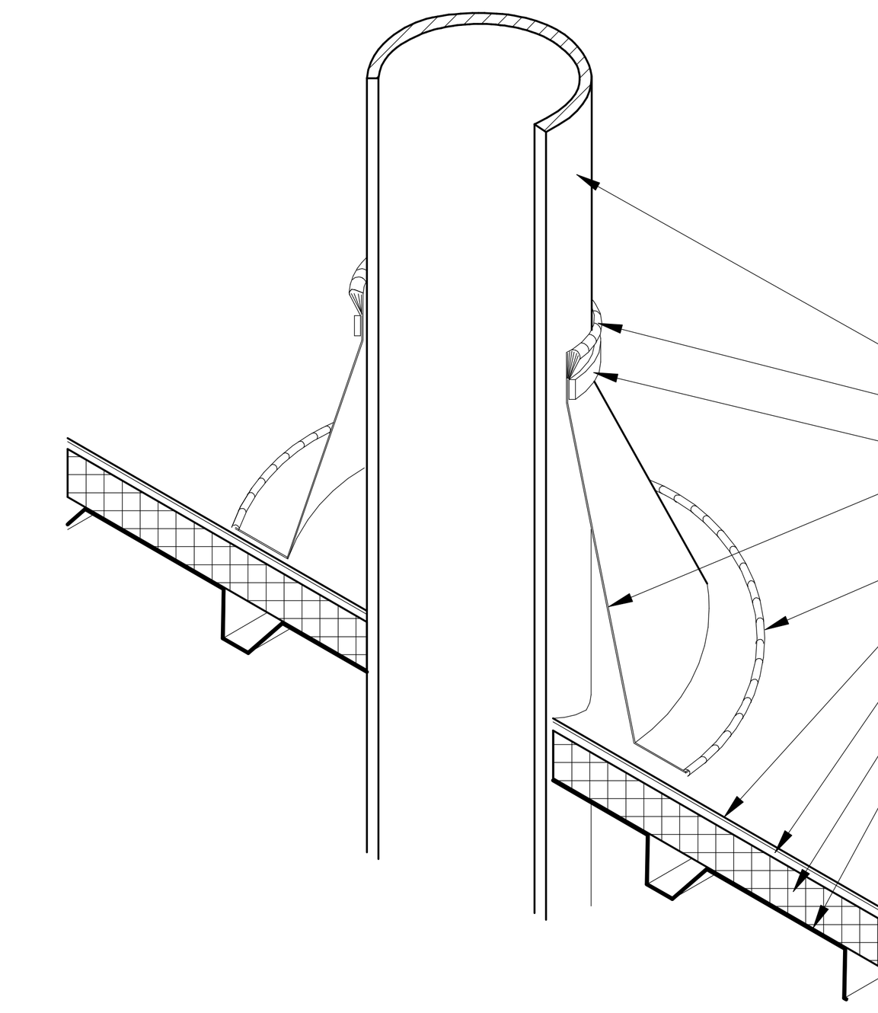
ROOF DETAILS

A-522

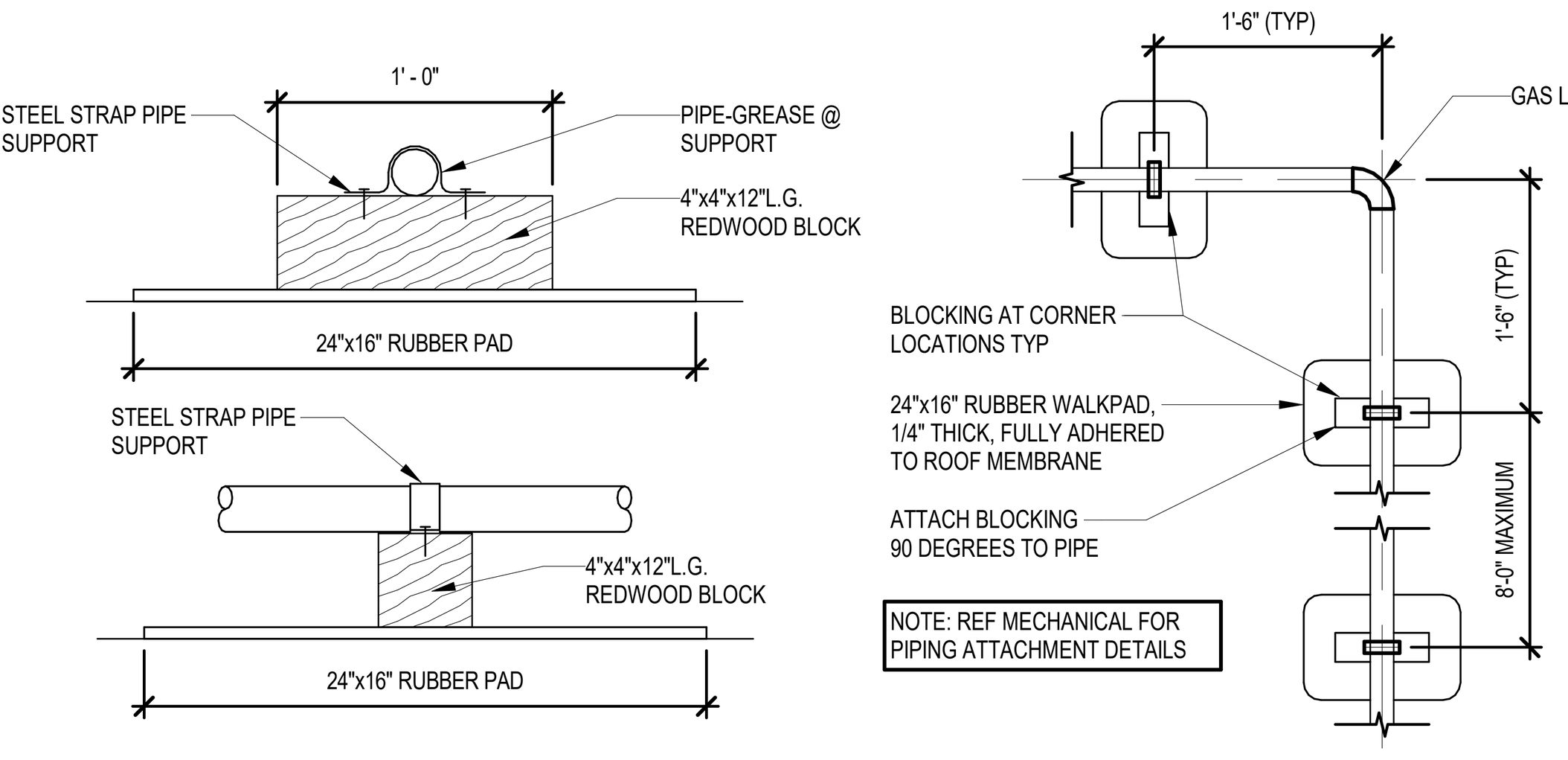
PLOT DATE: 10/31/2023 9:11:11 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



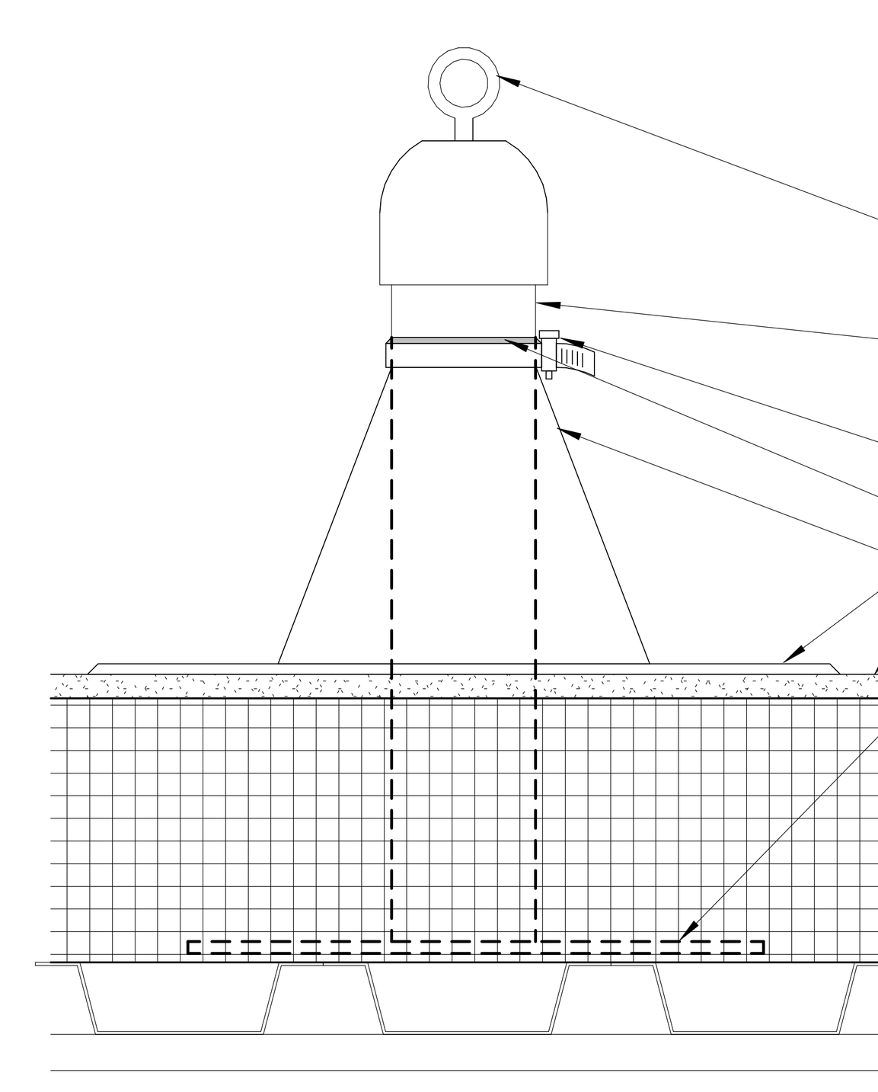
3 ROOF DRAIN & OVERFLOW DRAIN DETAILS
1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'



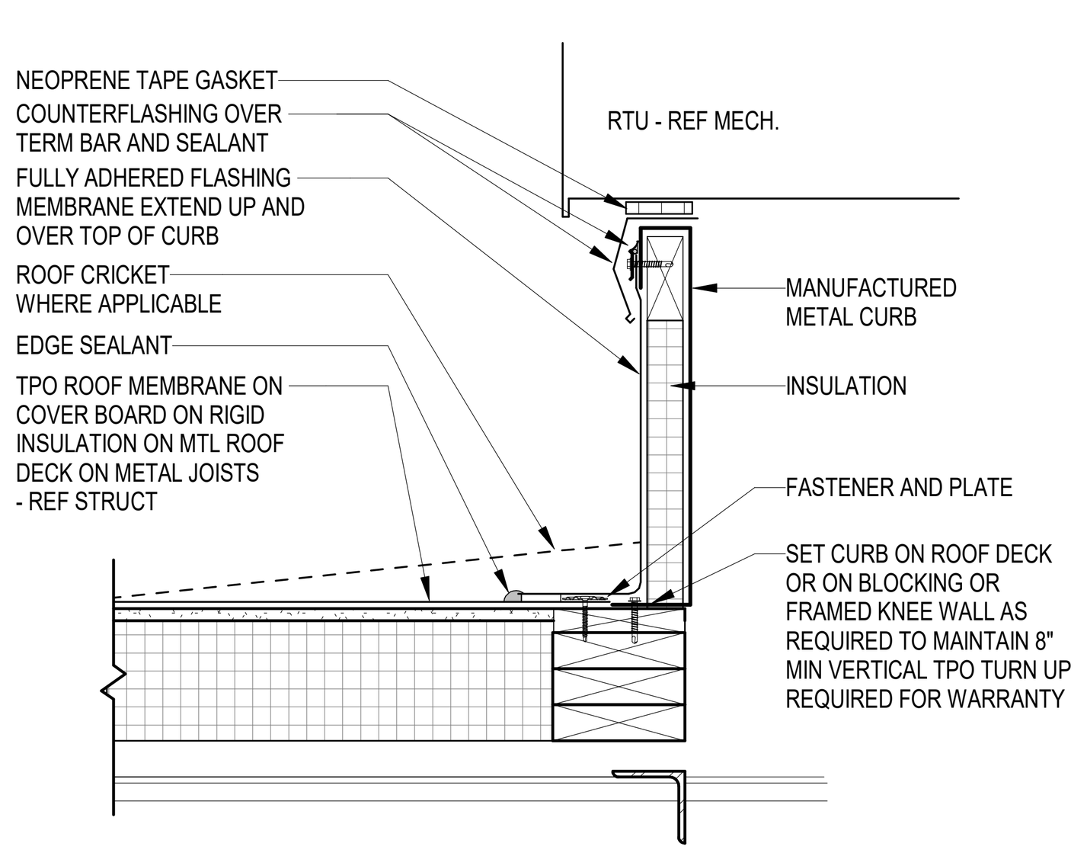
2 PLUMBING VENT FLASHING
1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'



1 PIPE SUPPORT PLAN, SECTION, & ELEVATION
1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'



5 ROOF TIE DOWN
3" = 1'-0"
0 3" 6" 9"



4 TYP ROOF CURB DETAIL
1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'

GLMVArchitecture

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

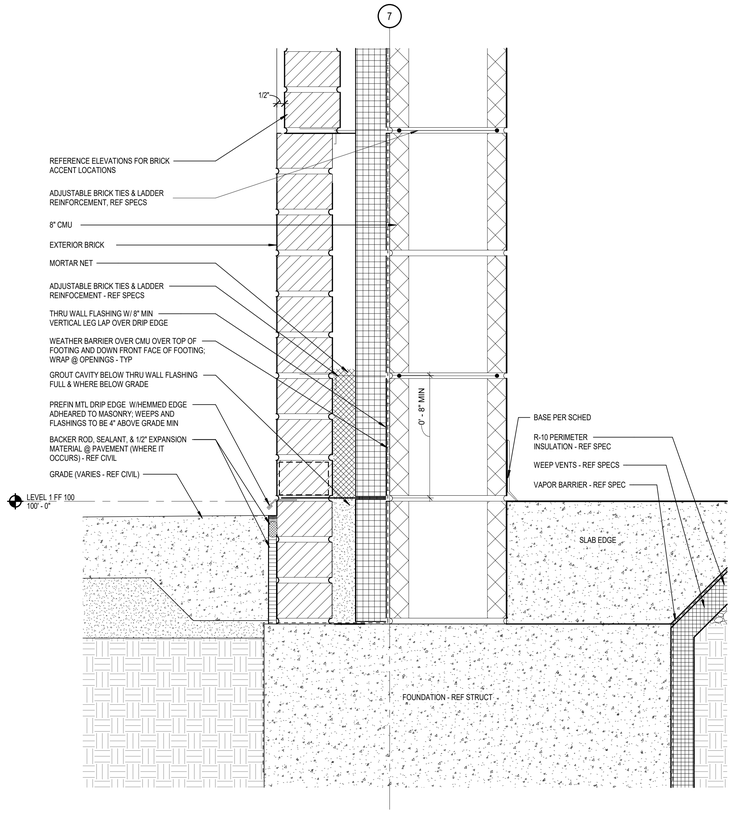
△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	Author
CHECKED BY:	Checker

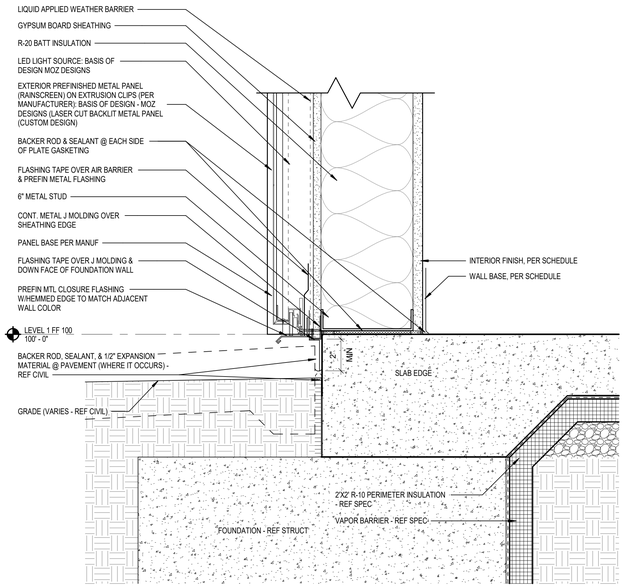
TYPICAL ROOF DETAILS

A-523

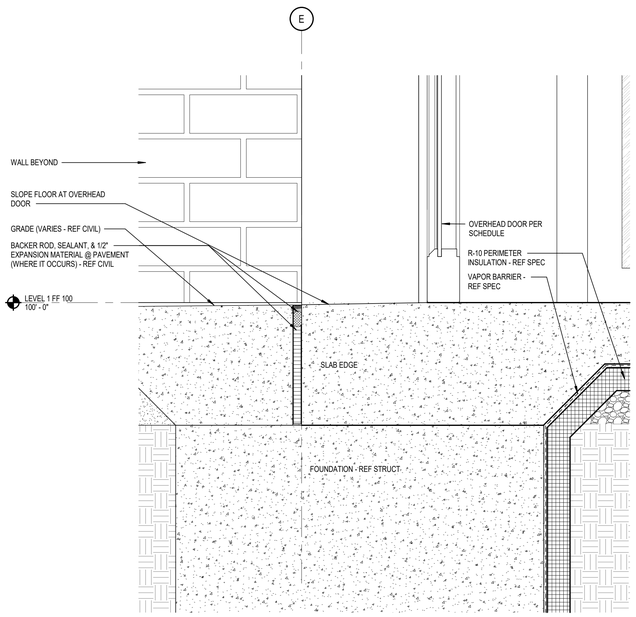
PLOT DATE: 10/31/2023 9:11:12 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



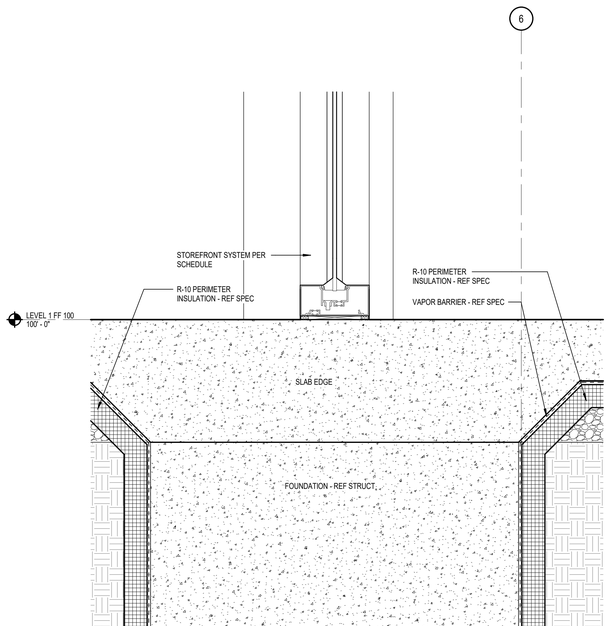
1 FOUNDATION DTL @ BRICK
3" = 1'-0"



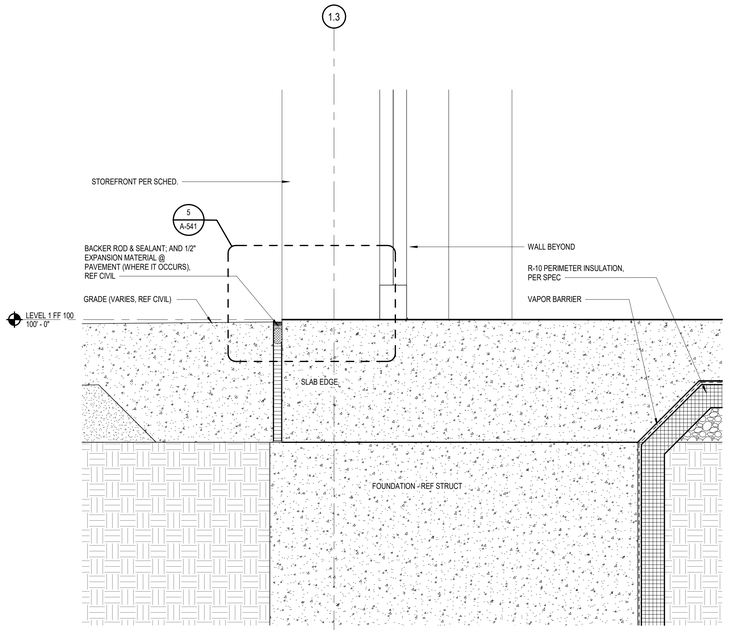
3 FOUNDATION AT METAL PANEL
3" = 1'-0"



2 FOUNDATION @ OVERHEAD DOOR
3" = 1'-0"



4 FOUNDATION DETAIL
3" = 1'-0"



5 FOUNDATION @ STOREFRONT SILL
3" = 1'-0"

GLMVArchitecture

STATE OF MISSOURI
ROBERT C. FRENTER, JR.
NUMBER A-2014041029
11-1-23

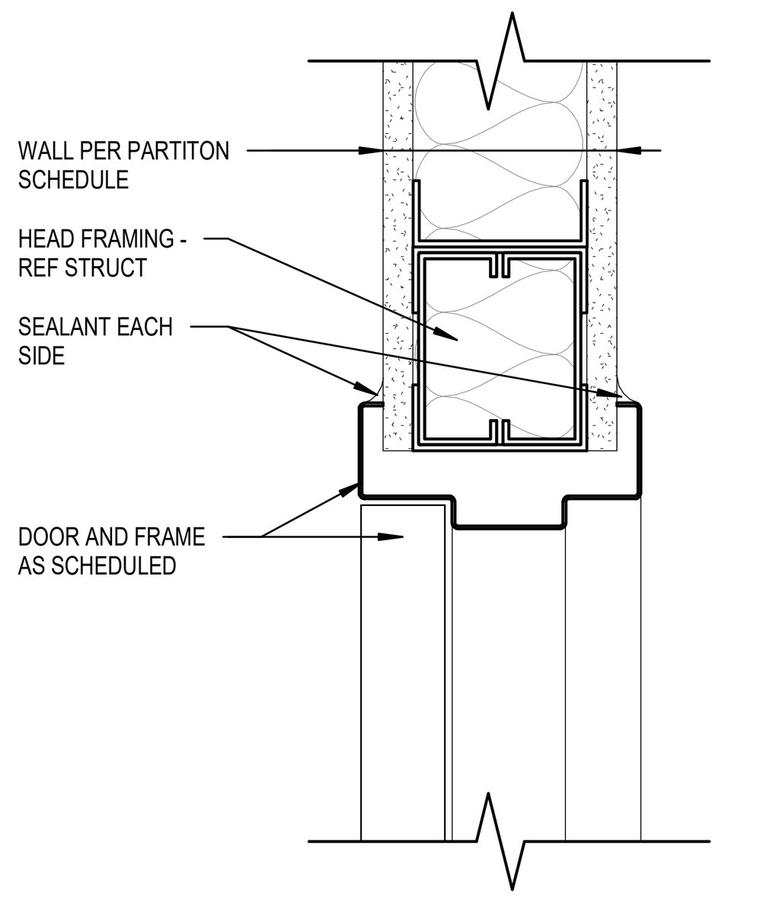
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		DRWN
CHECKED BY:		CHKD

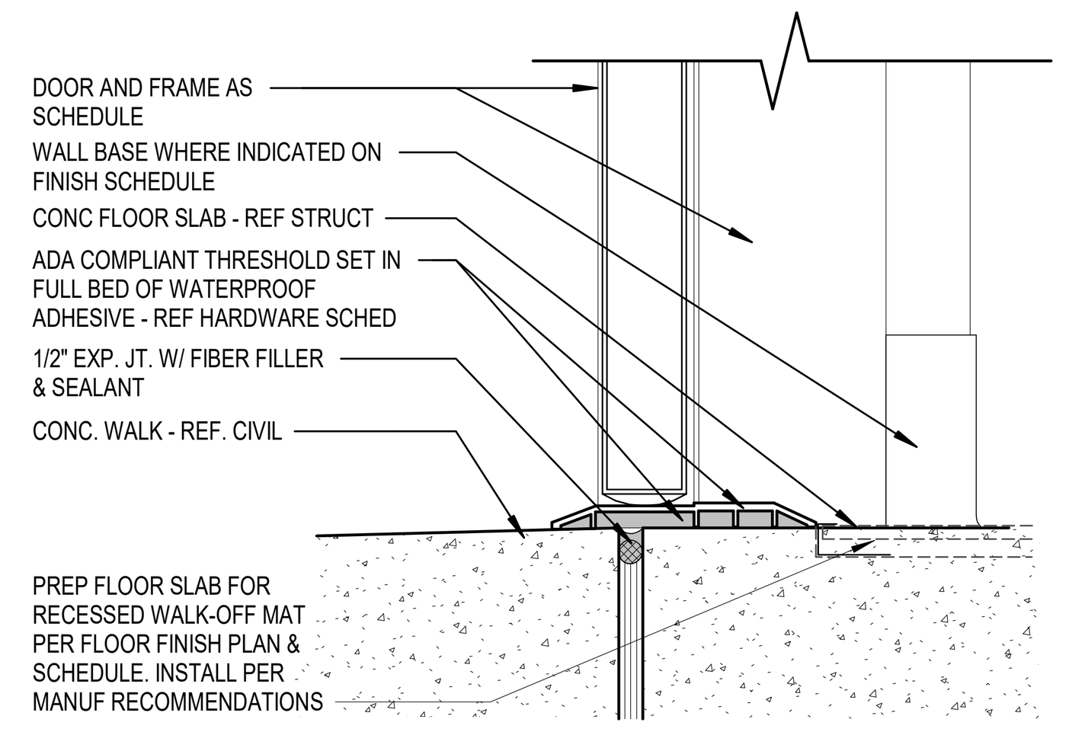
FOUNDATION DETAILS

A-531

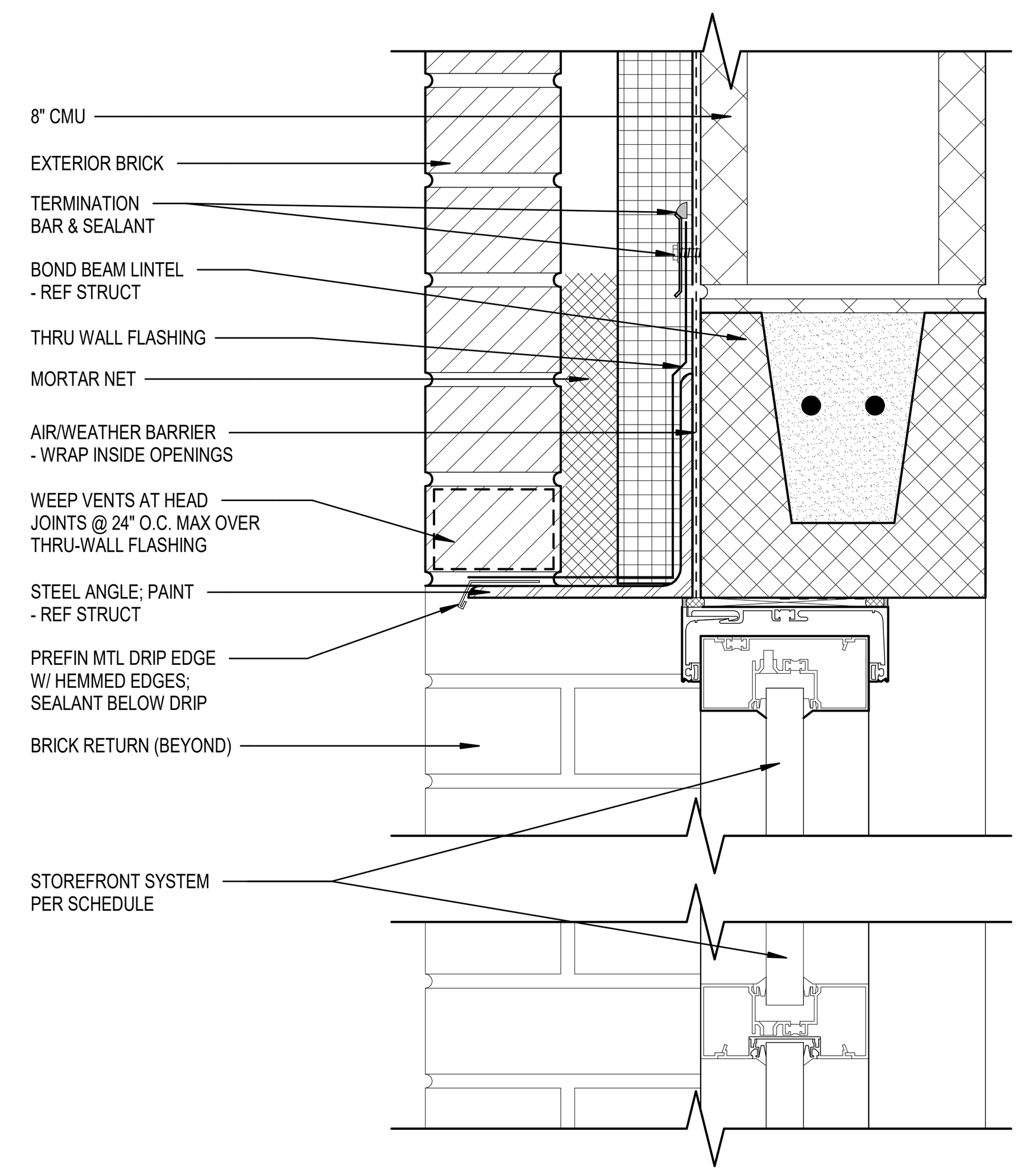
PLOT DATE: 10/31/2023 9:11:13 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



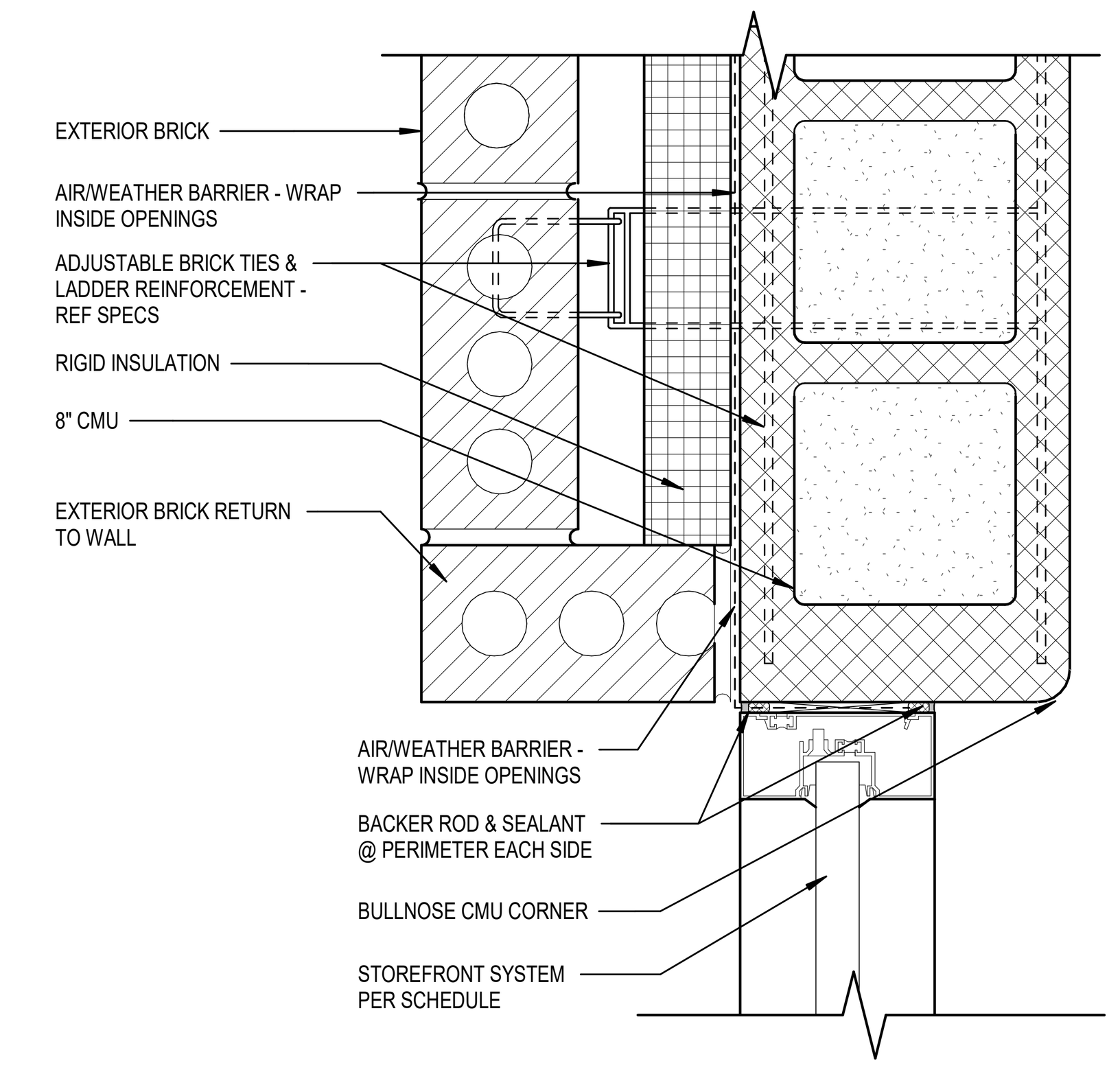
1 INTERIOR HM DOOR HEAD
3" = 1'-0"



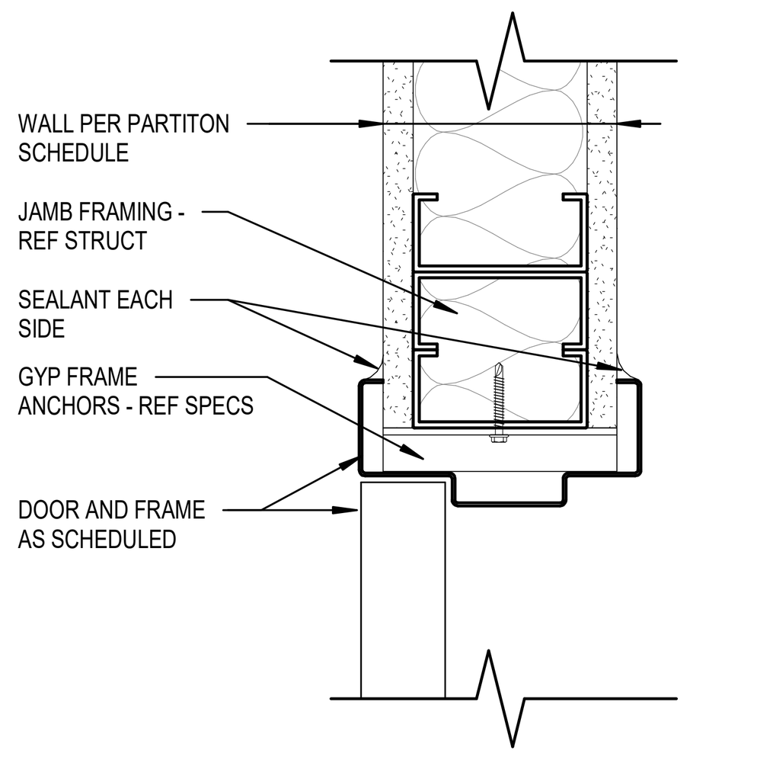
5 TYP THRESHOLD DETAIL
3" = 1'-0"



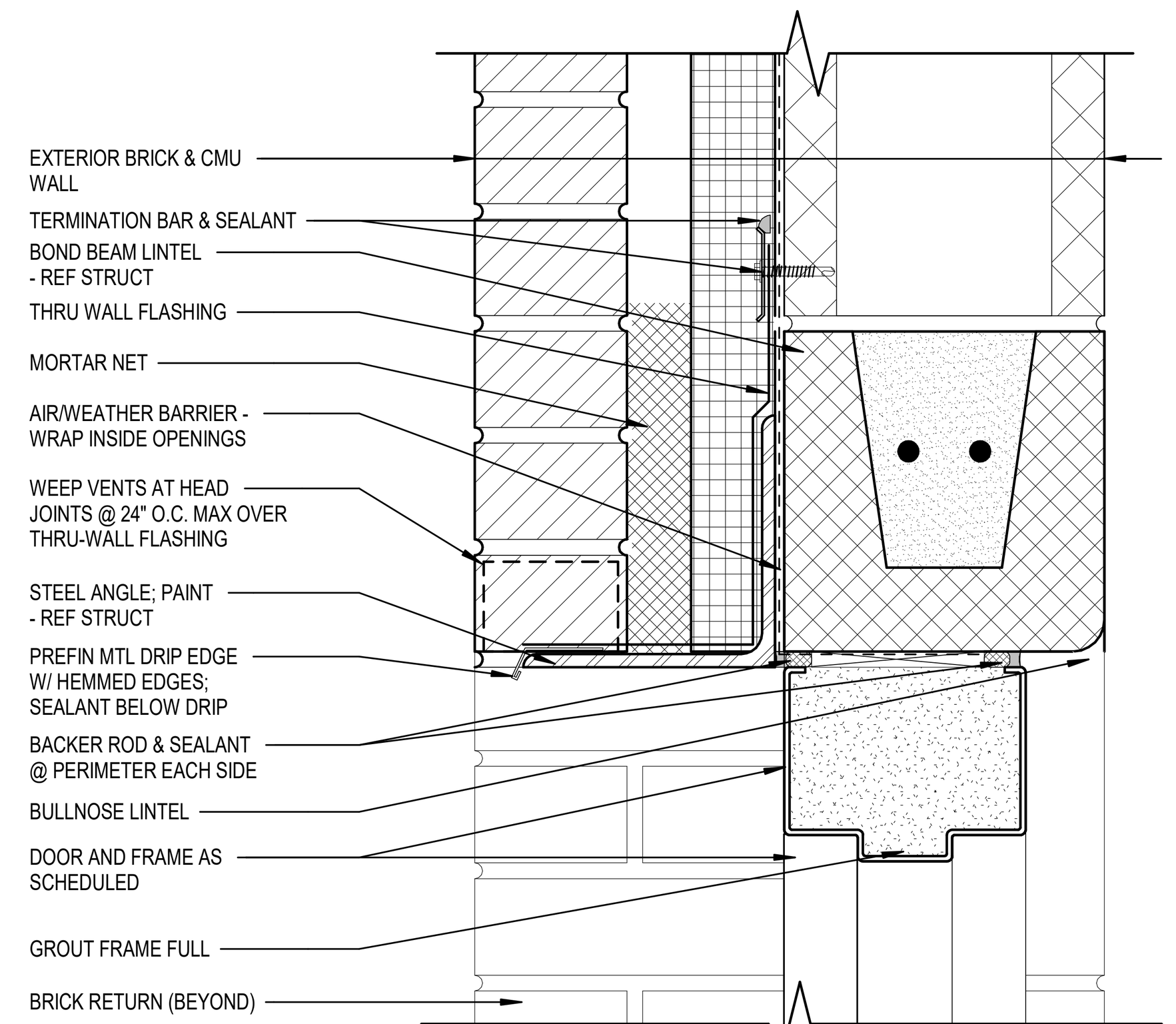
9 STOREFRONT HEAD @ BRICK
3" = 1'-0"



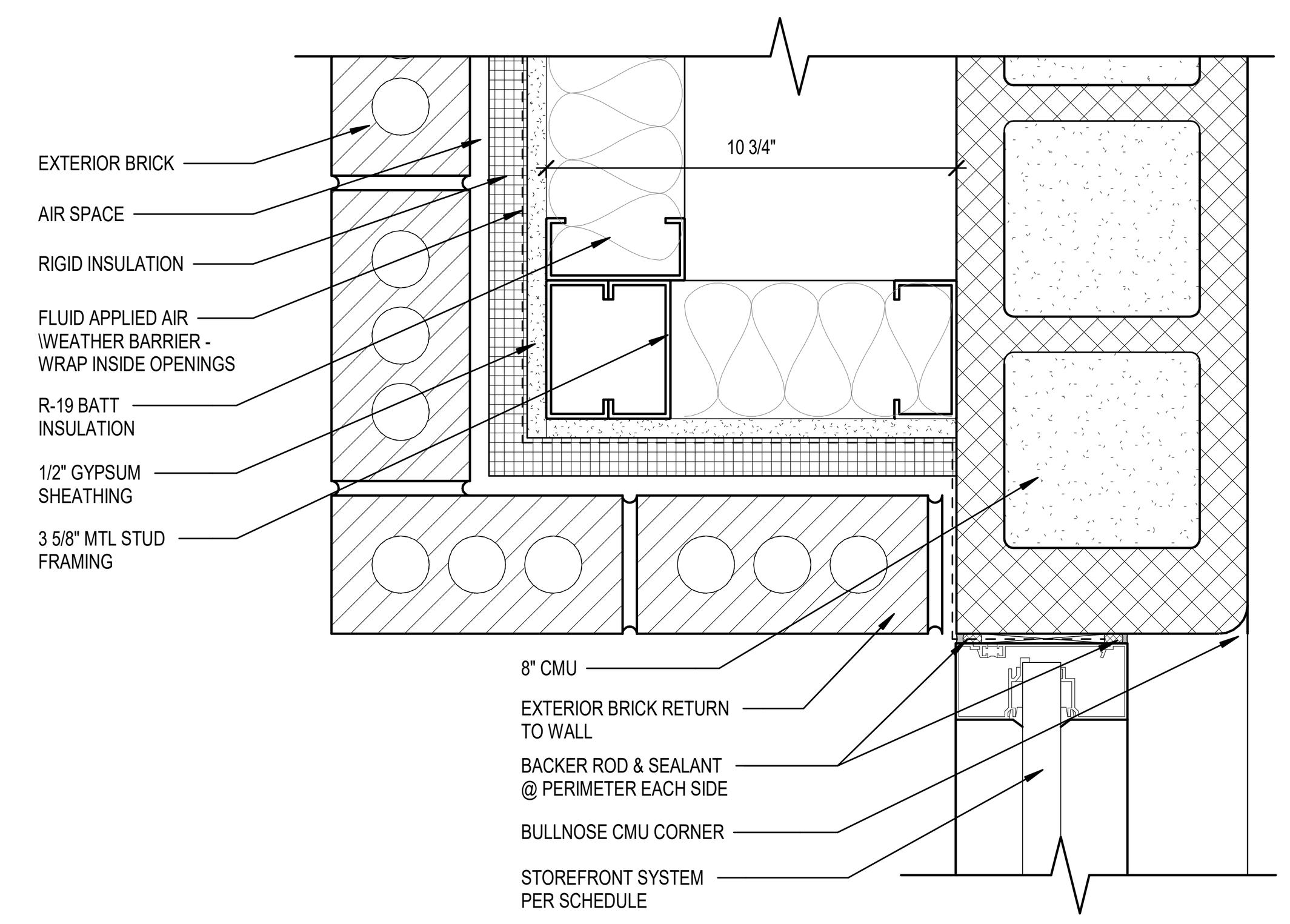
12 STOREFRONT JAMB @ BRICK
3" = 1'-0"



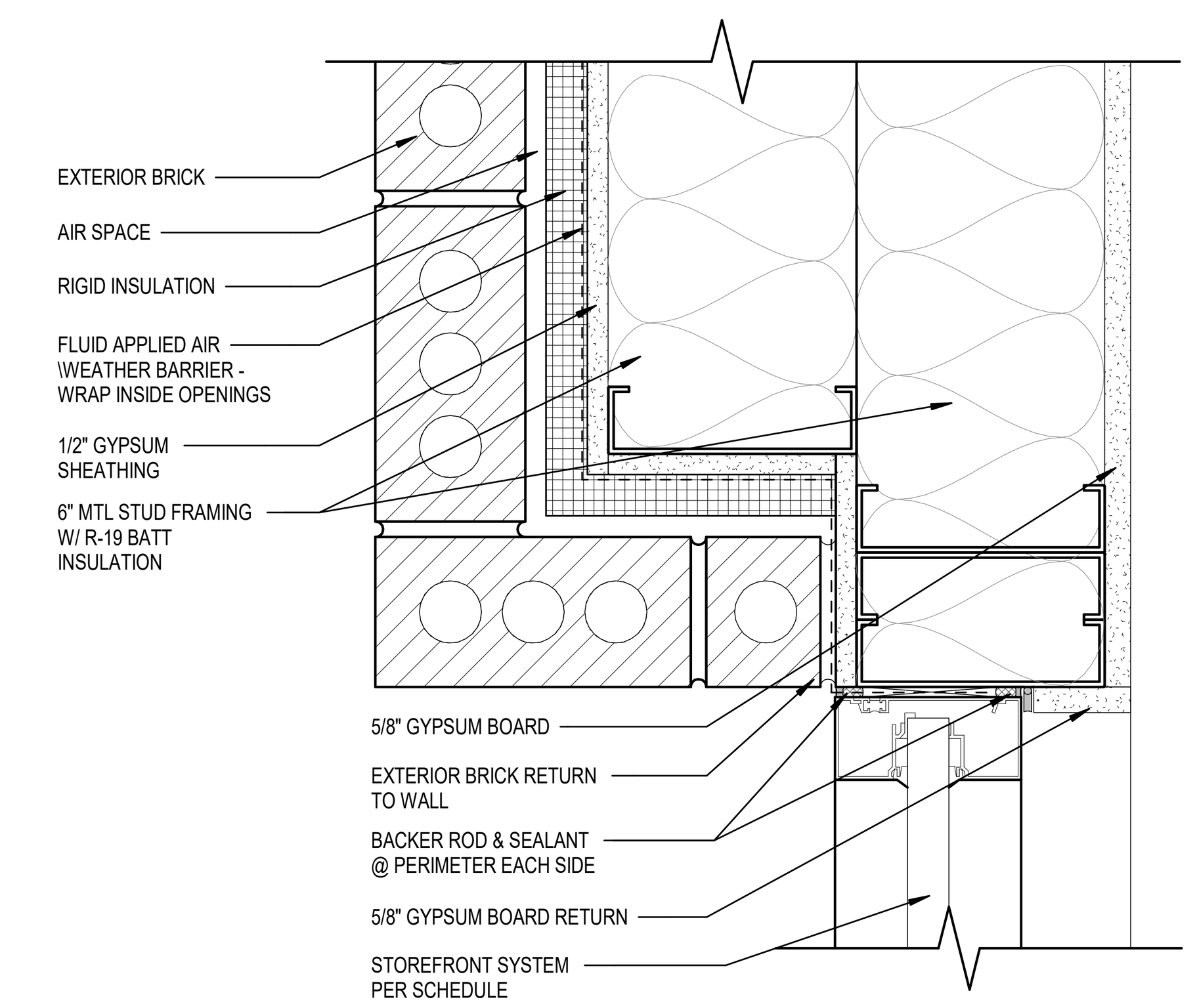
2 INTERIOR HM DOOR JAMB
3" = 1'-0"



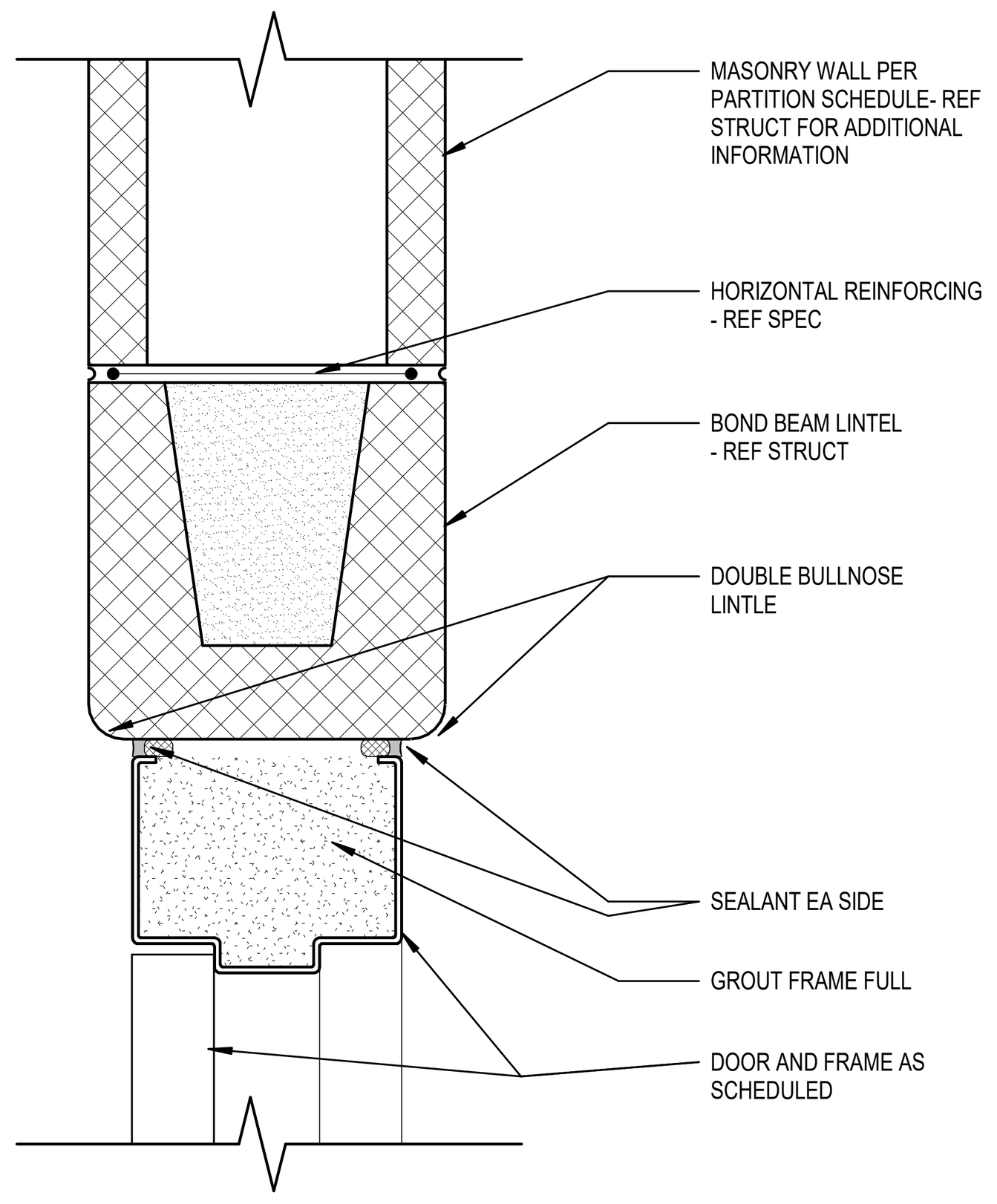
6 HM DOOR HEAD @ BRICK
3" = 1'-0"



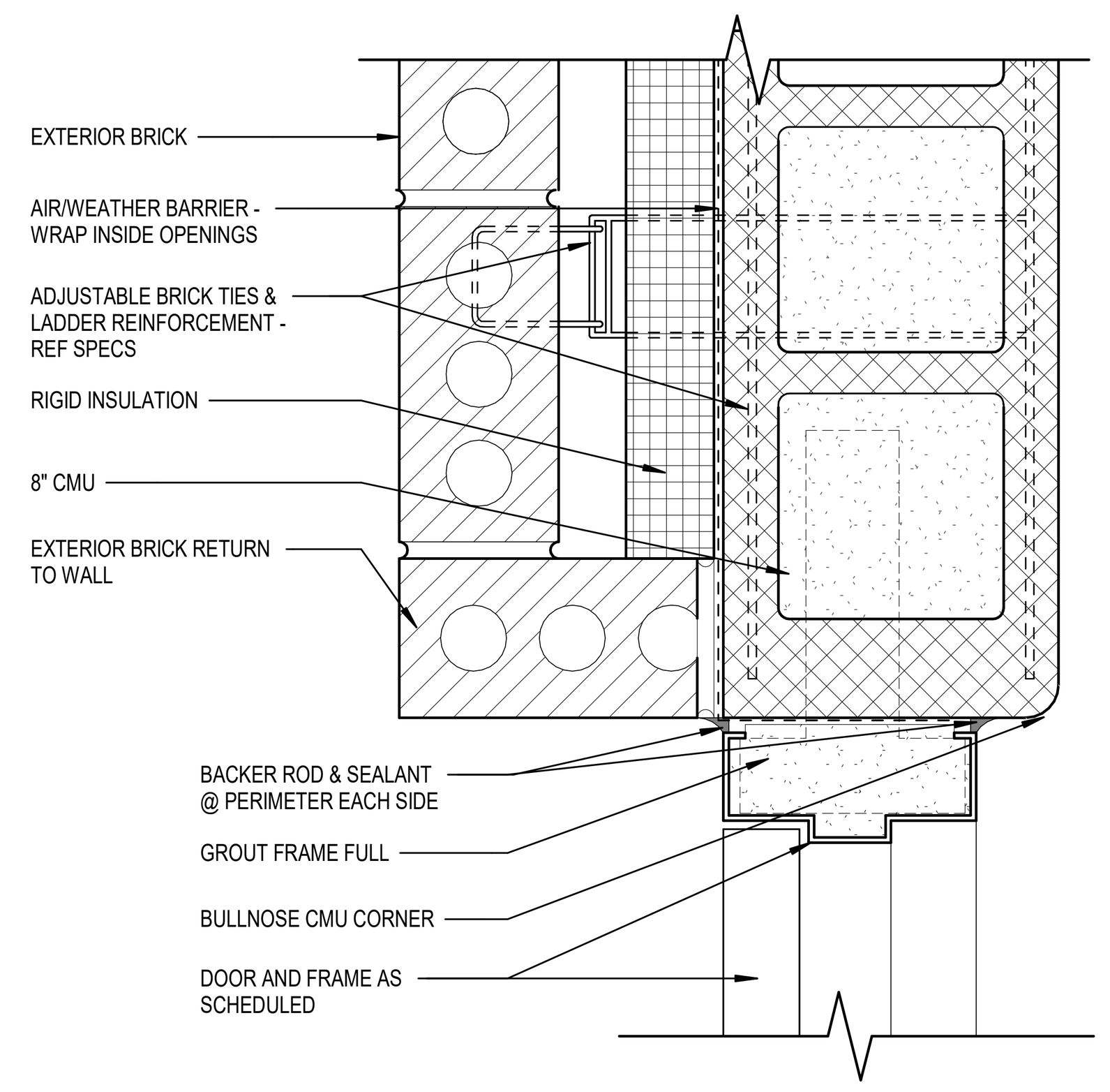
10 STOREFRONT JAMB @ BRICK
3" = 1'-0"



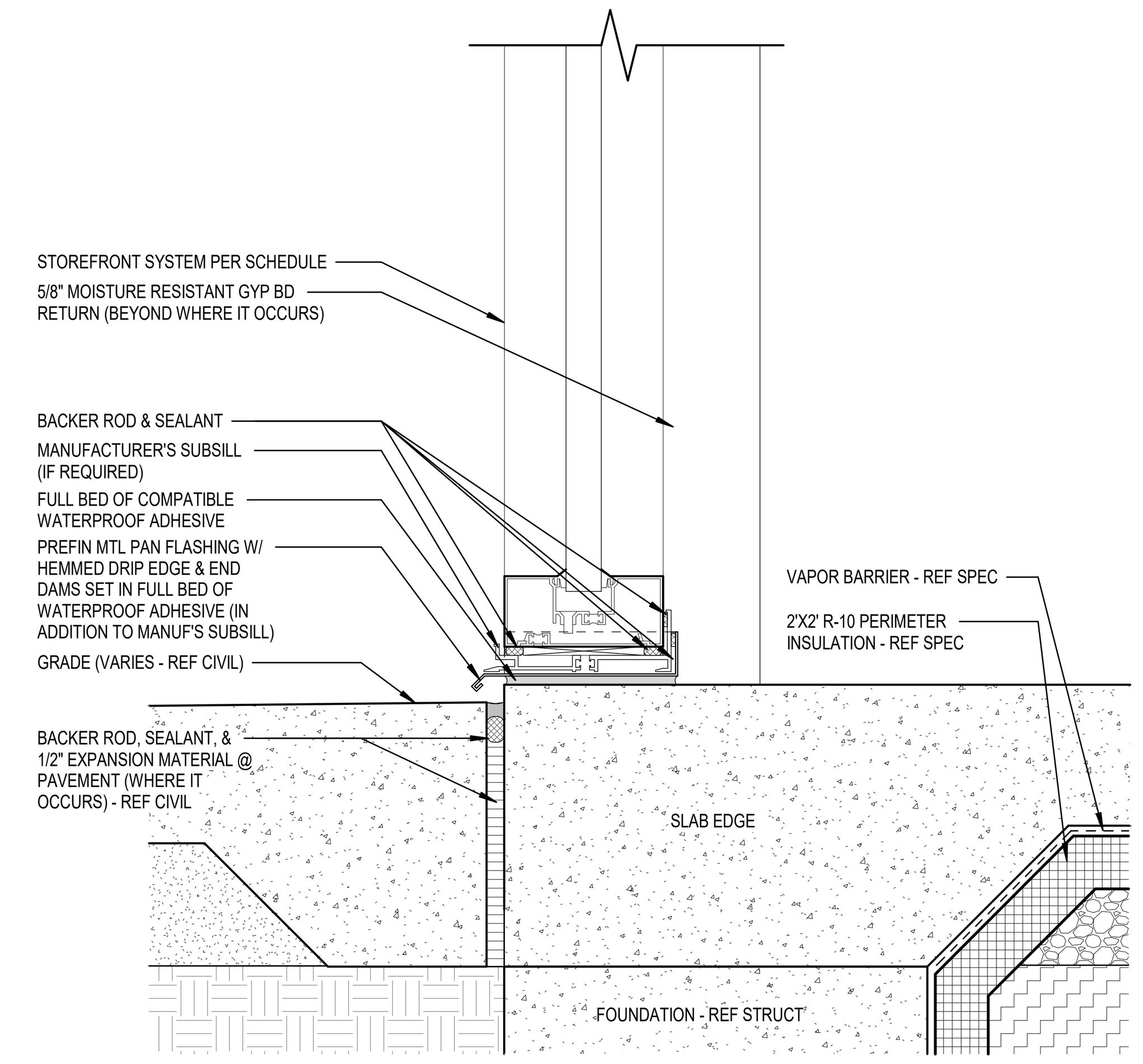
13 STOREFRONT JAMB @ BRICK
3" = 1'-0"



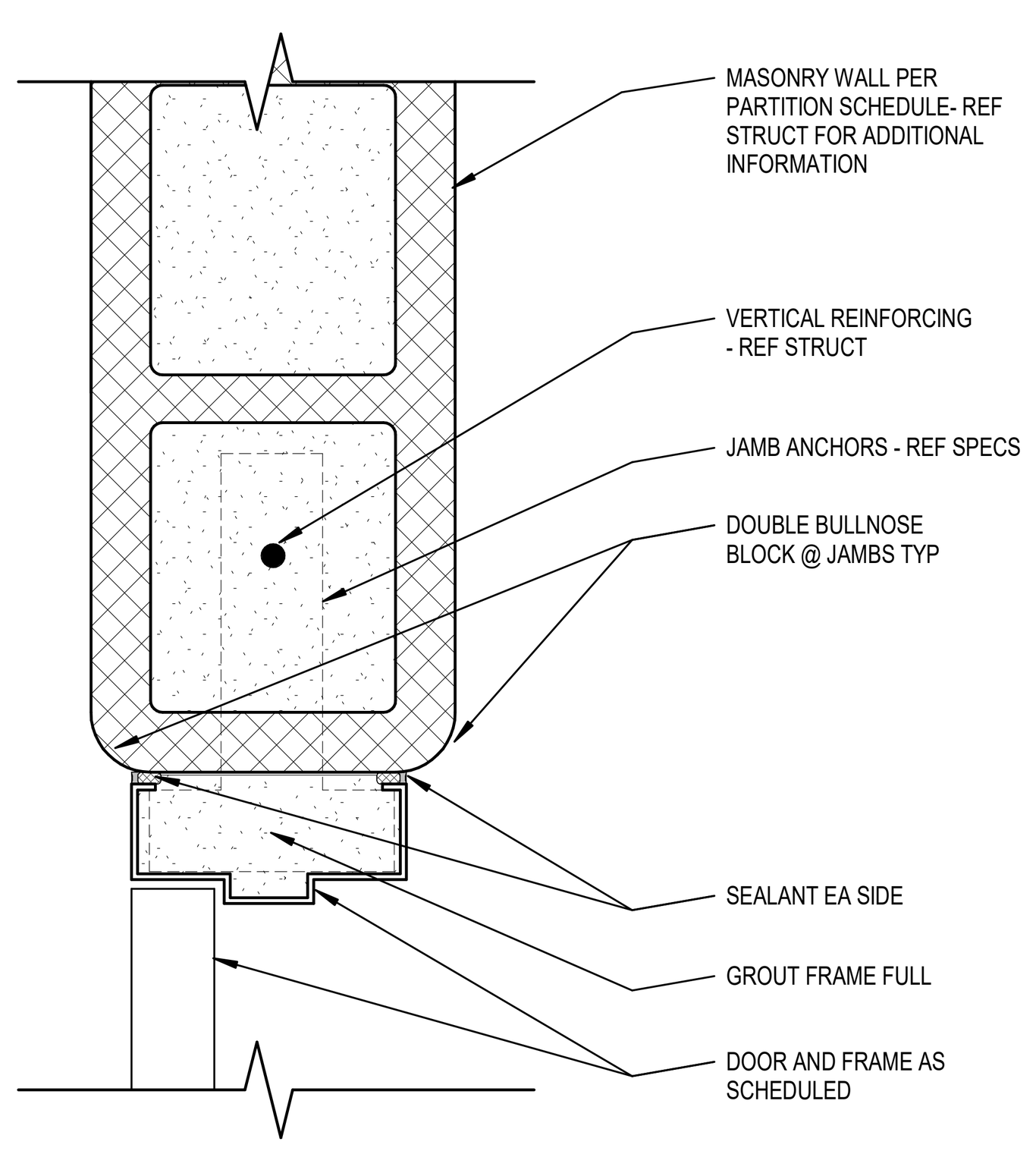
3 HM DOOR HEAD @ CMU
3" = 1'-0"



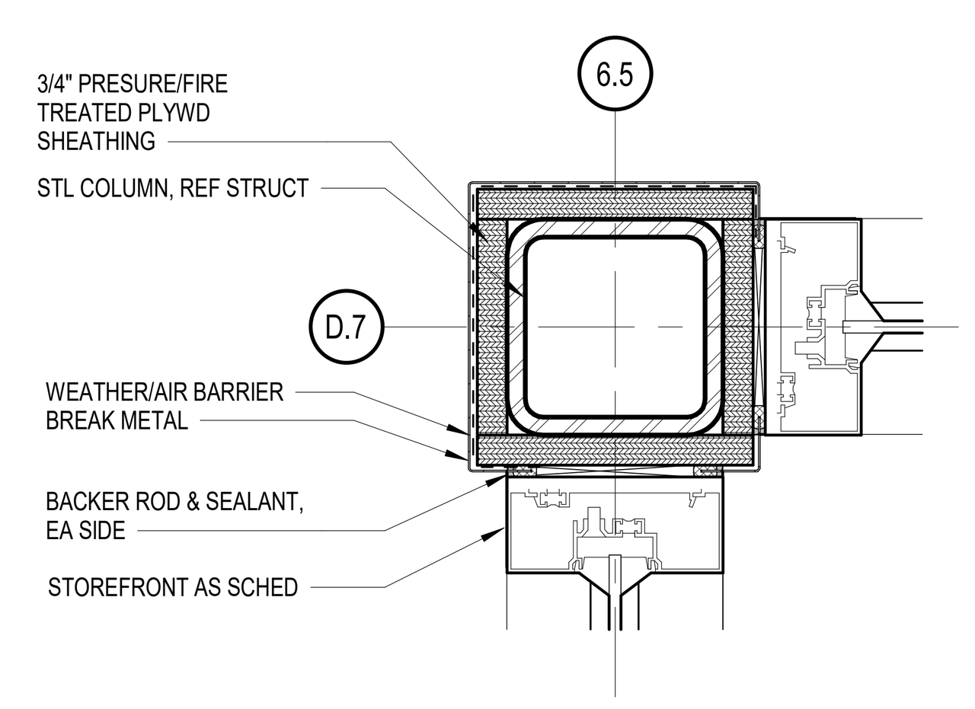
7 HM DOOR JAMB @ BRICK
3" = 1'-0"



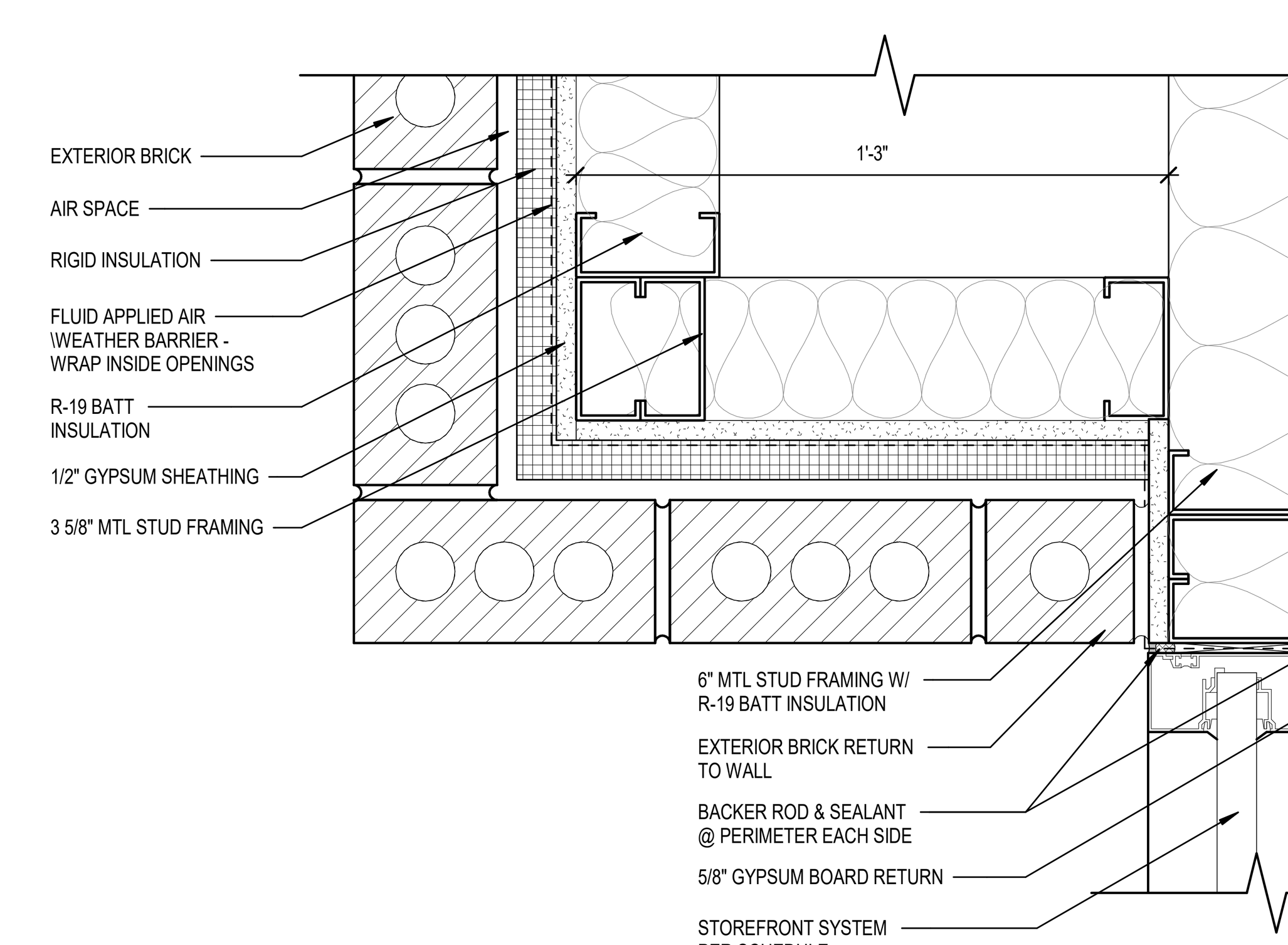
11 TYP STOREFRONT SILL
3" = 1'-0"



4 HM DOOR JAMB @ CMU
3" = 1'-0"



8 STOREFRONT AT COLUMN (JAMB DTL)
3" = 1'-0"



14 STOREFRONT JAMB @ BRICK
3" = 1'-0"

GLMV Architecture

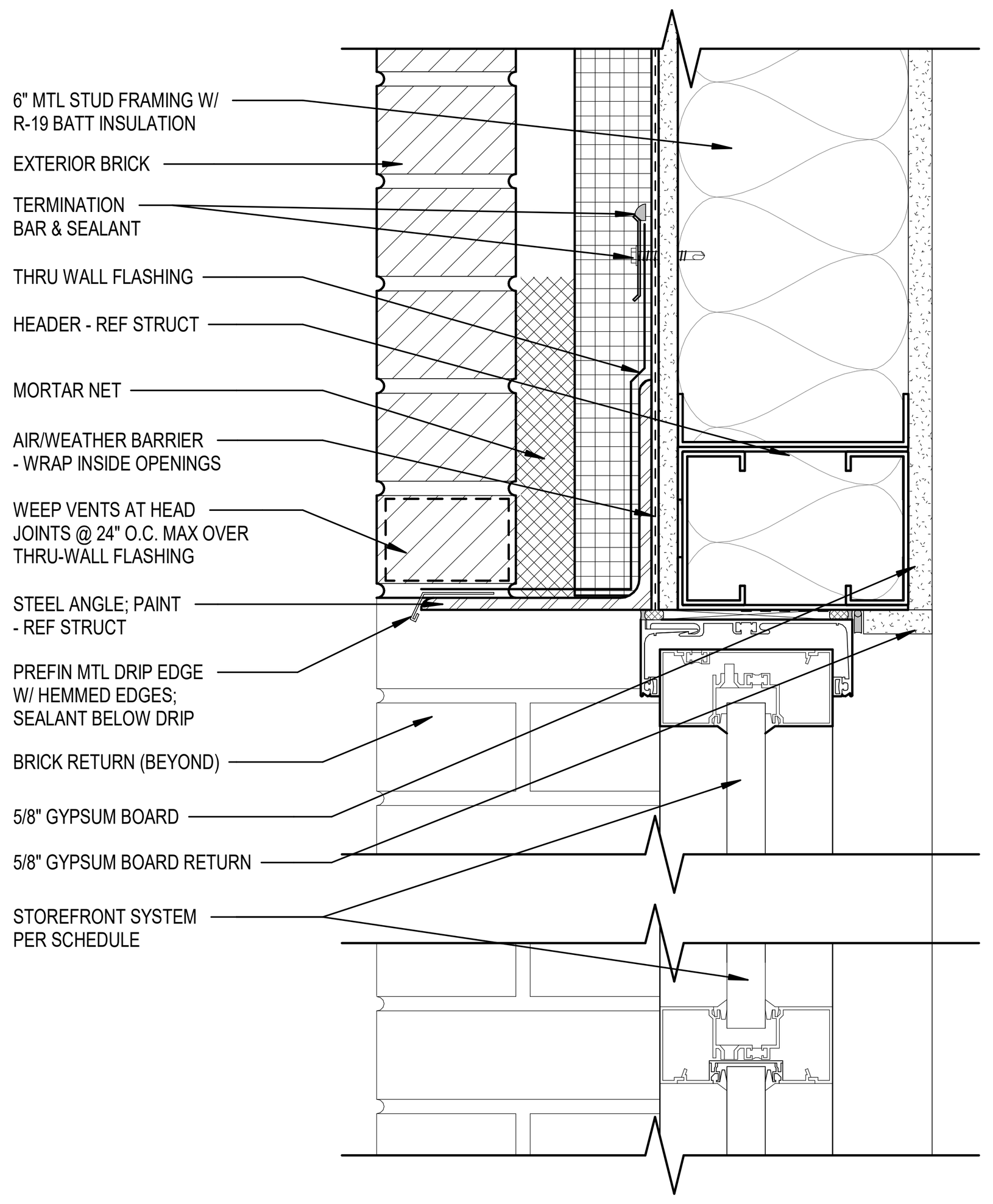
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	DRWN
CHECKED BY:	CHKD

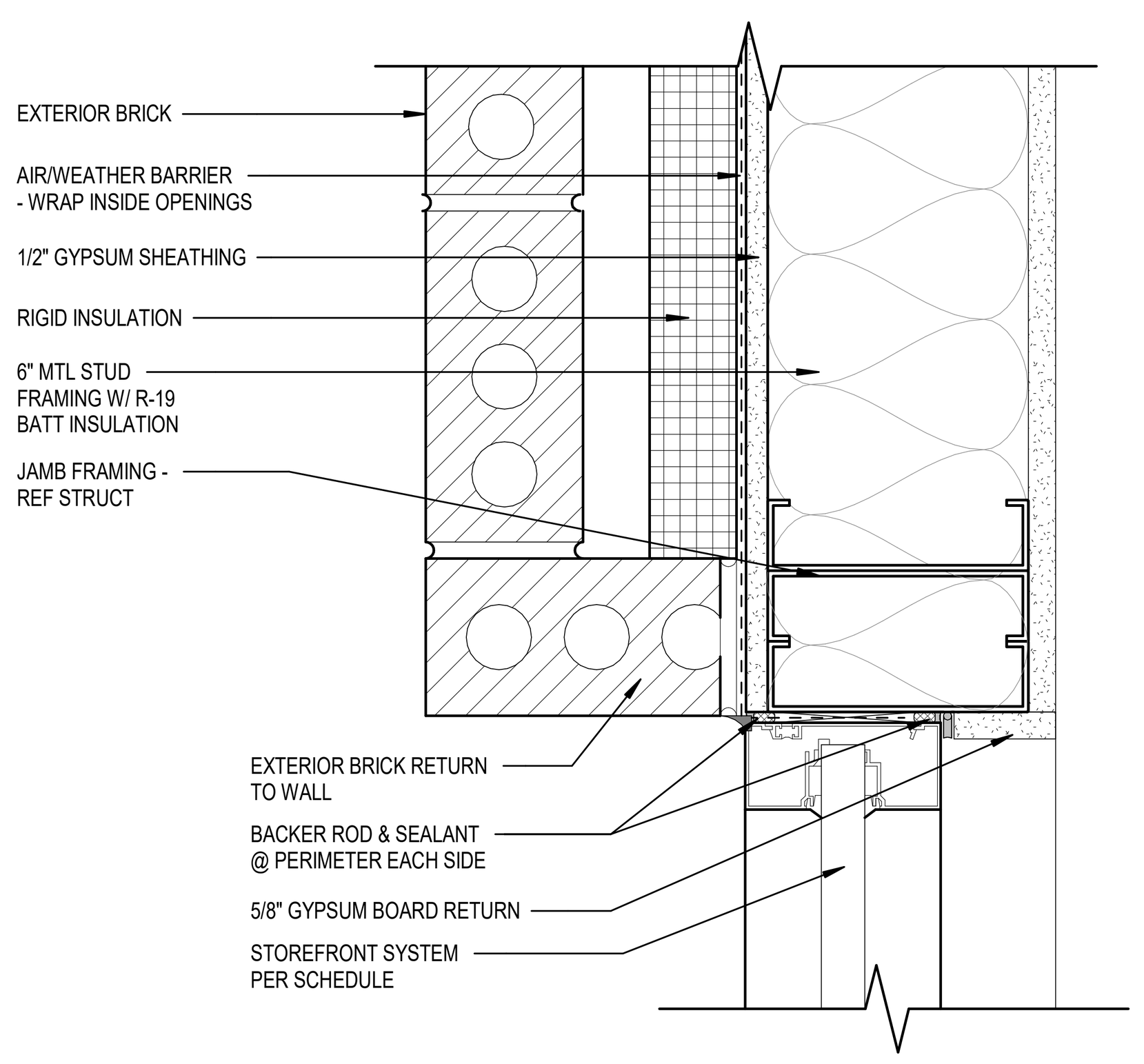
DOOR/ STOREFRONT DETAILS

A-541

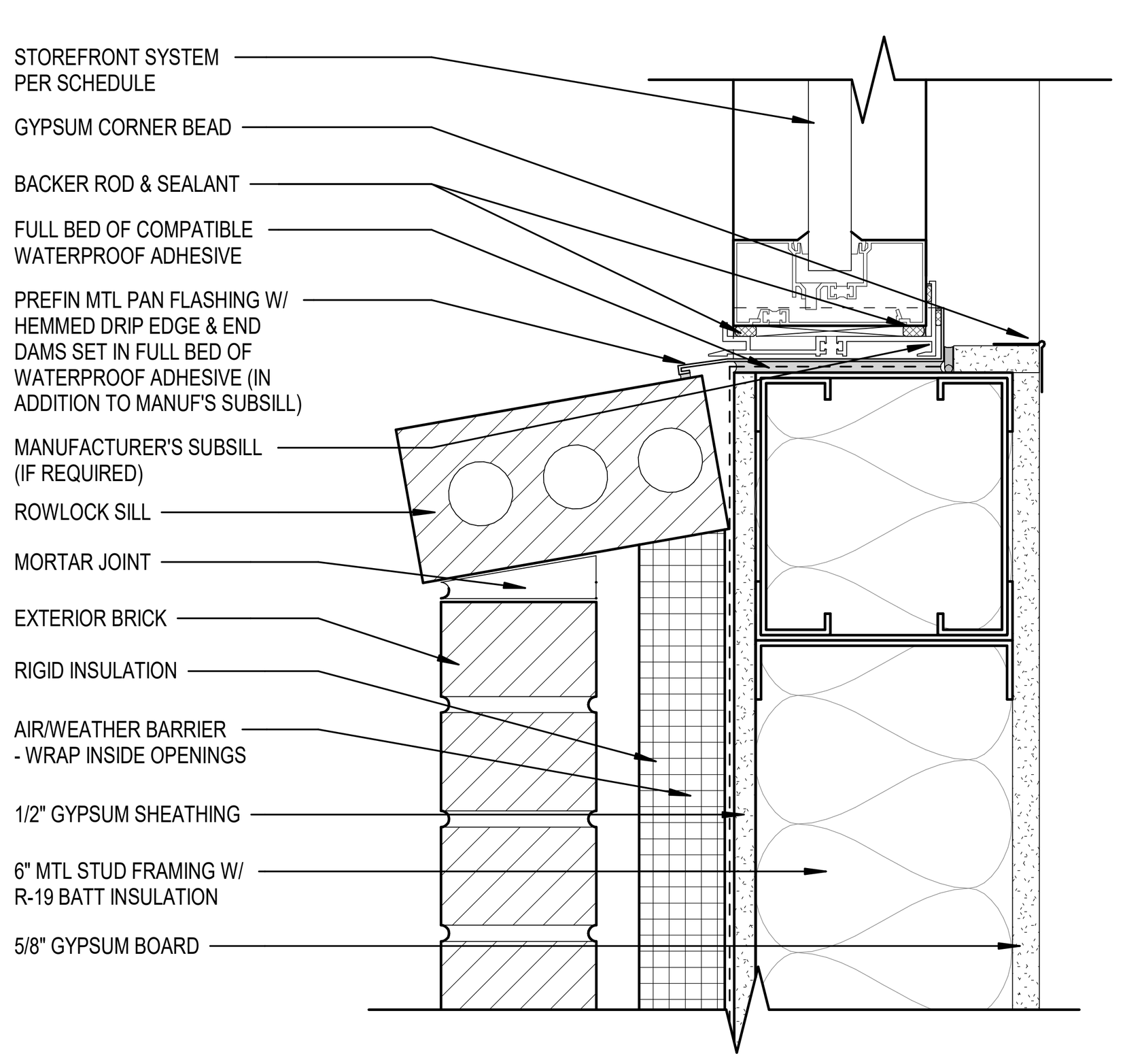
PLOT DATE: 10/31/2023 9:11:14 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



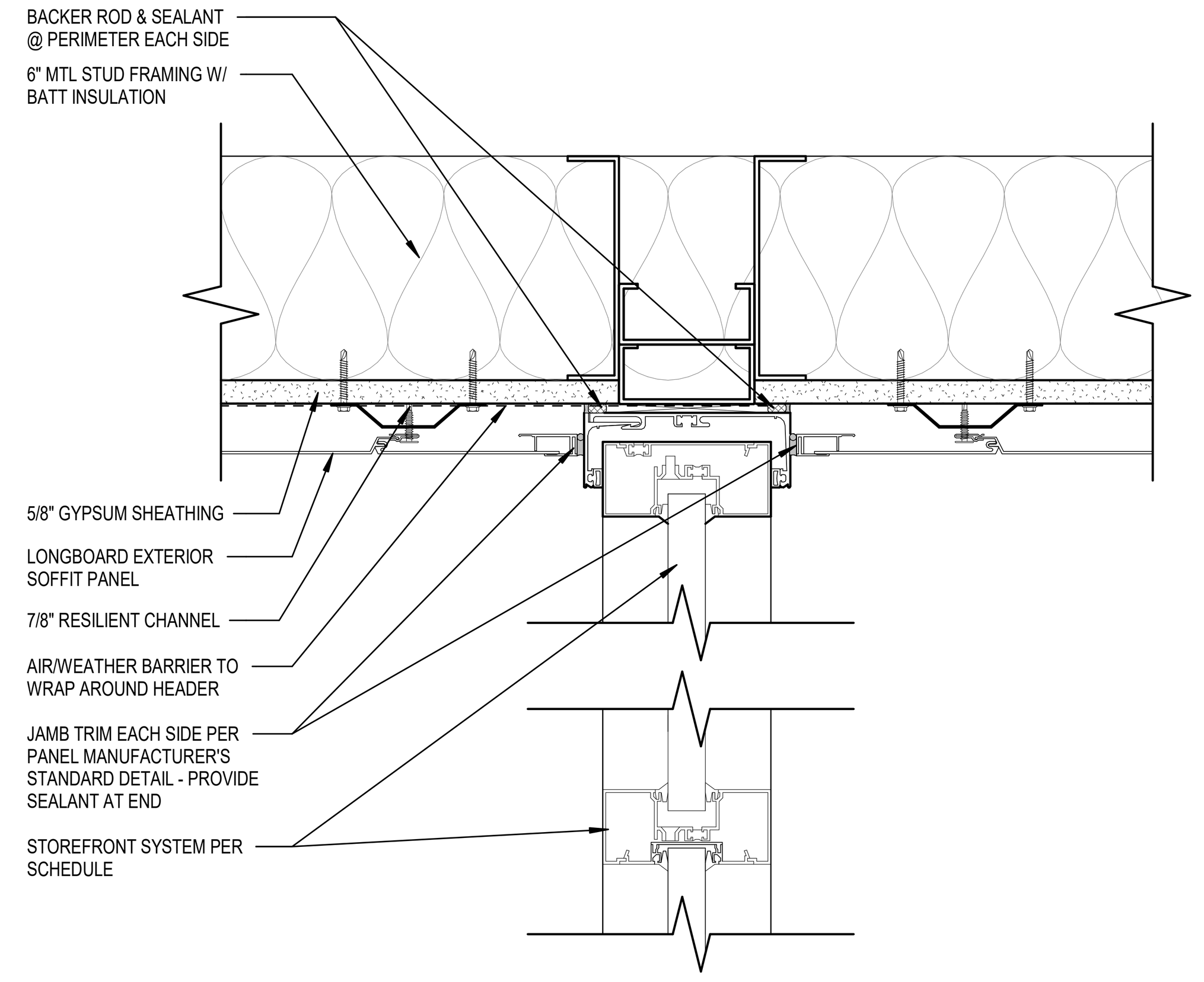
1 STOREFRONT HEAD @ BRICK
3" = 1'-0"



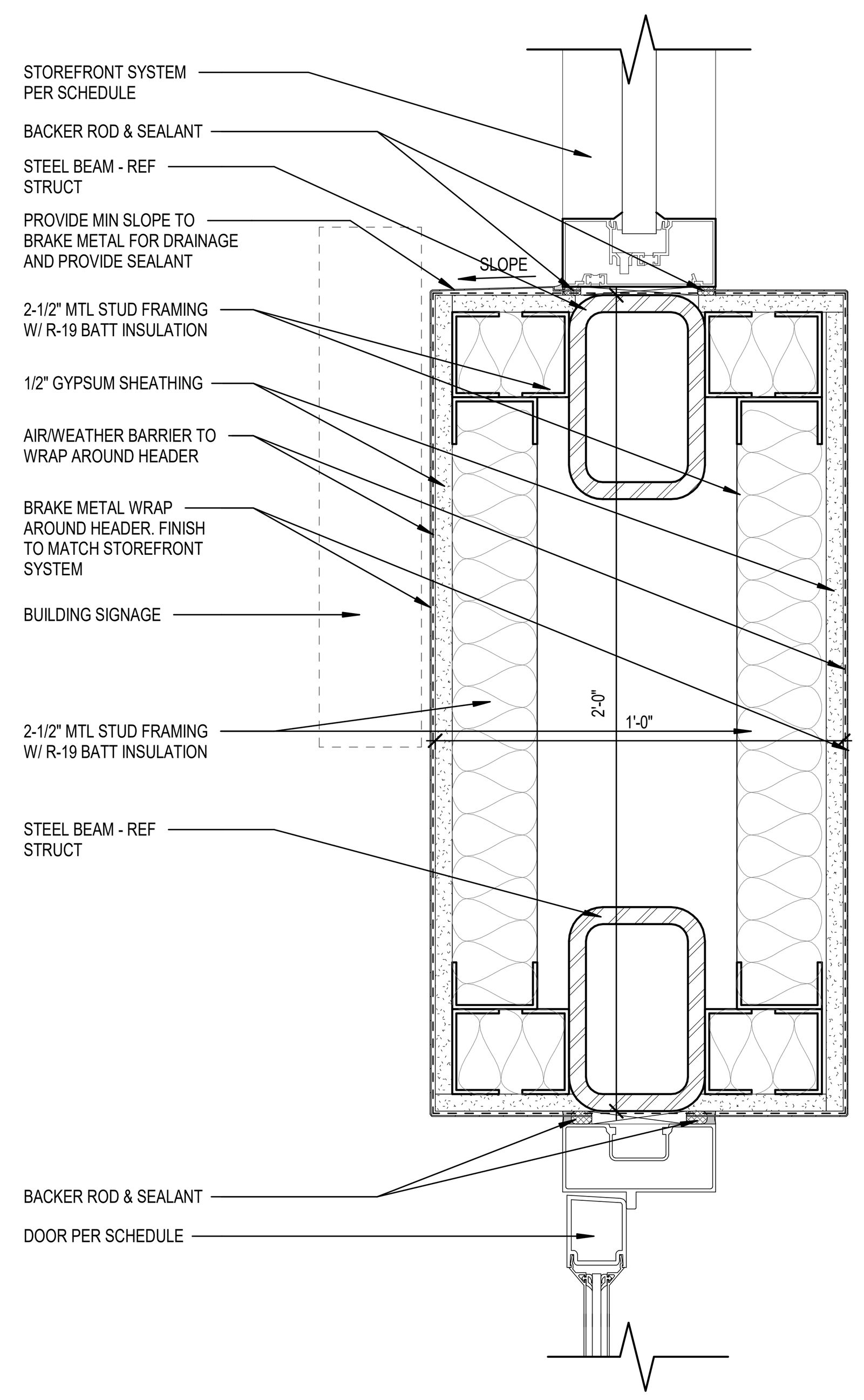
2 STOREFRONT JAMB @ BRICK
3" = 1'-0"



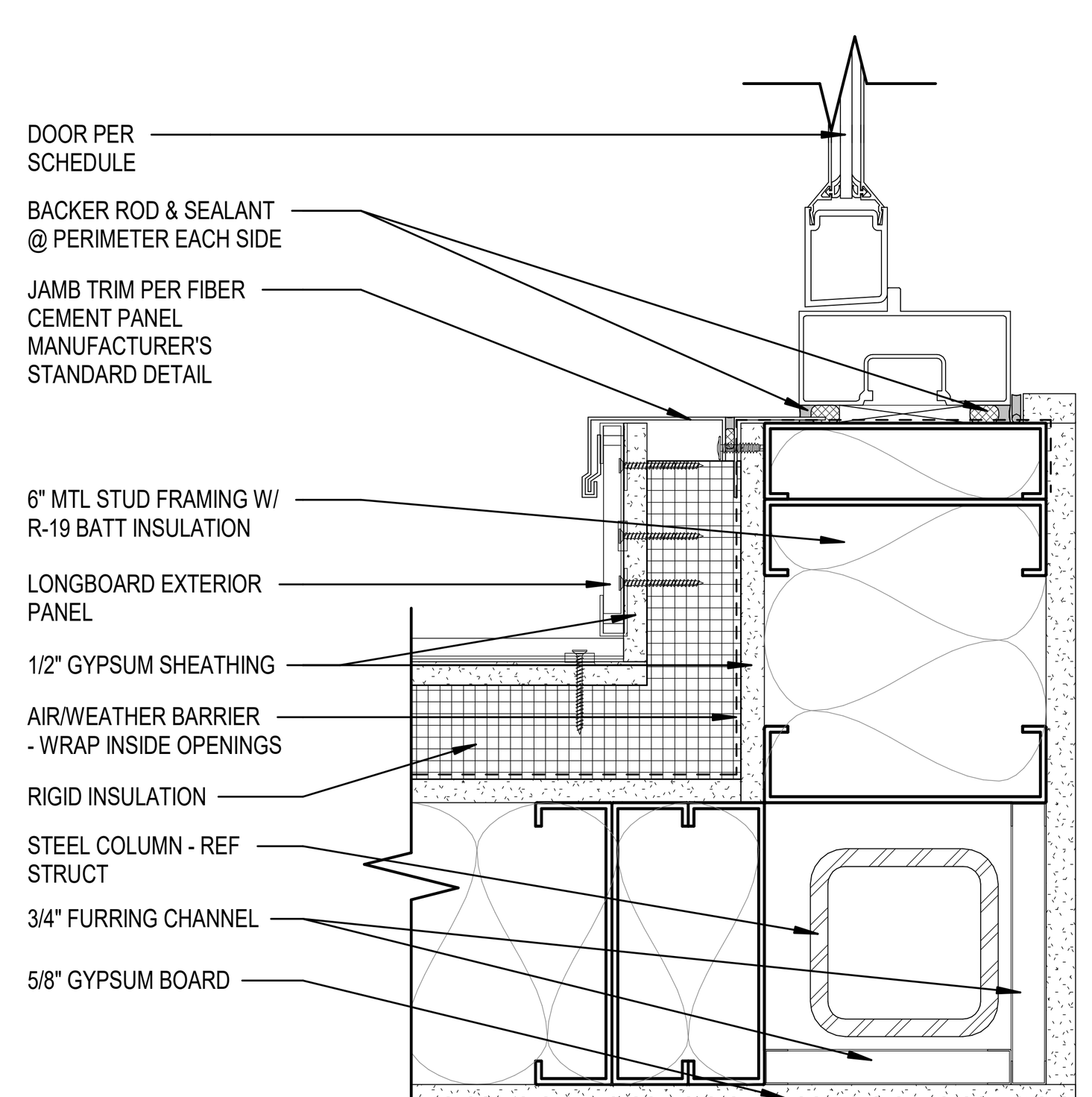
3 STOREFRONT JAMB @ BRICK
3" = 1'-0"



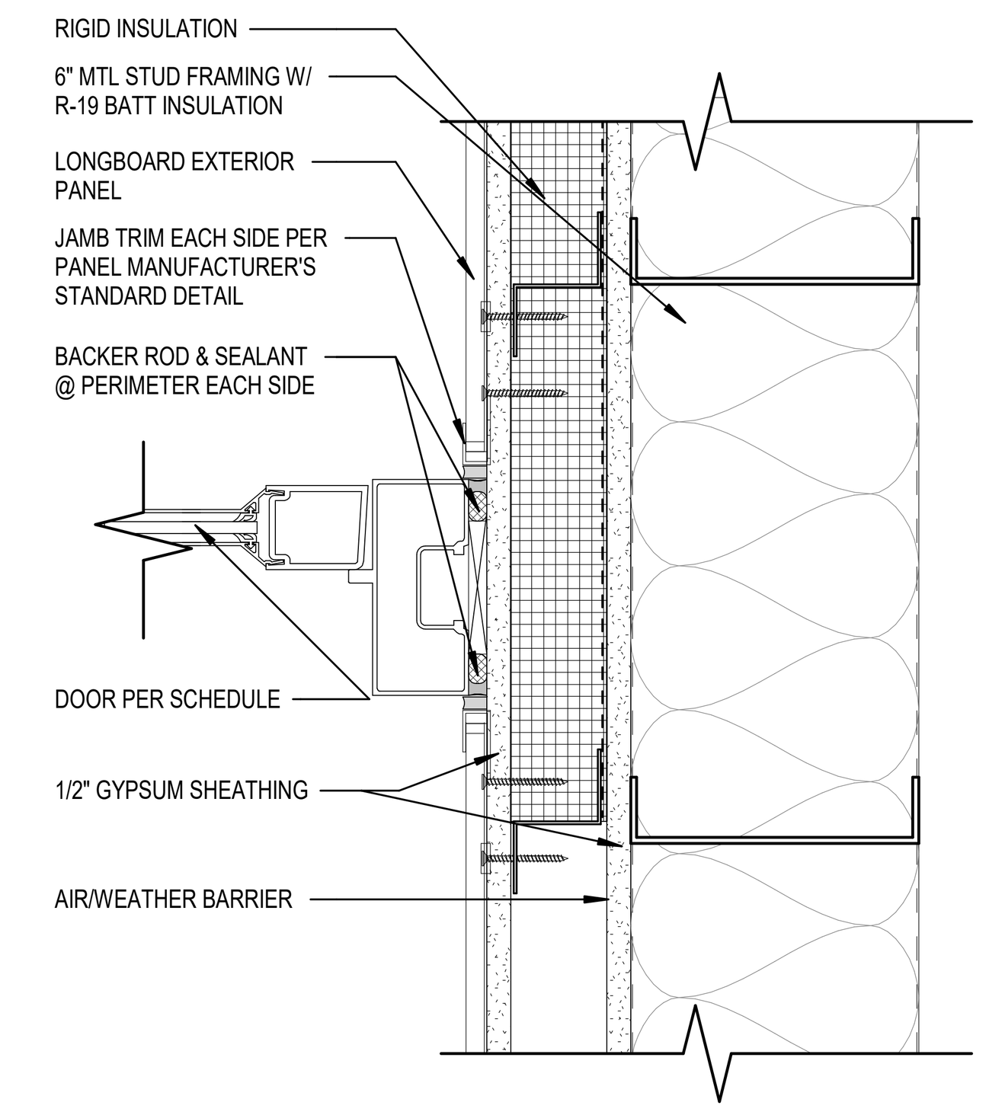
4 STOREFRONT HEAD @ LONGBOARD
3" = 1'-0"



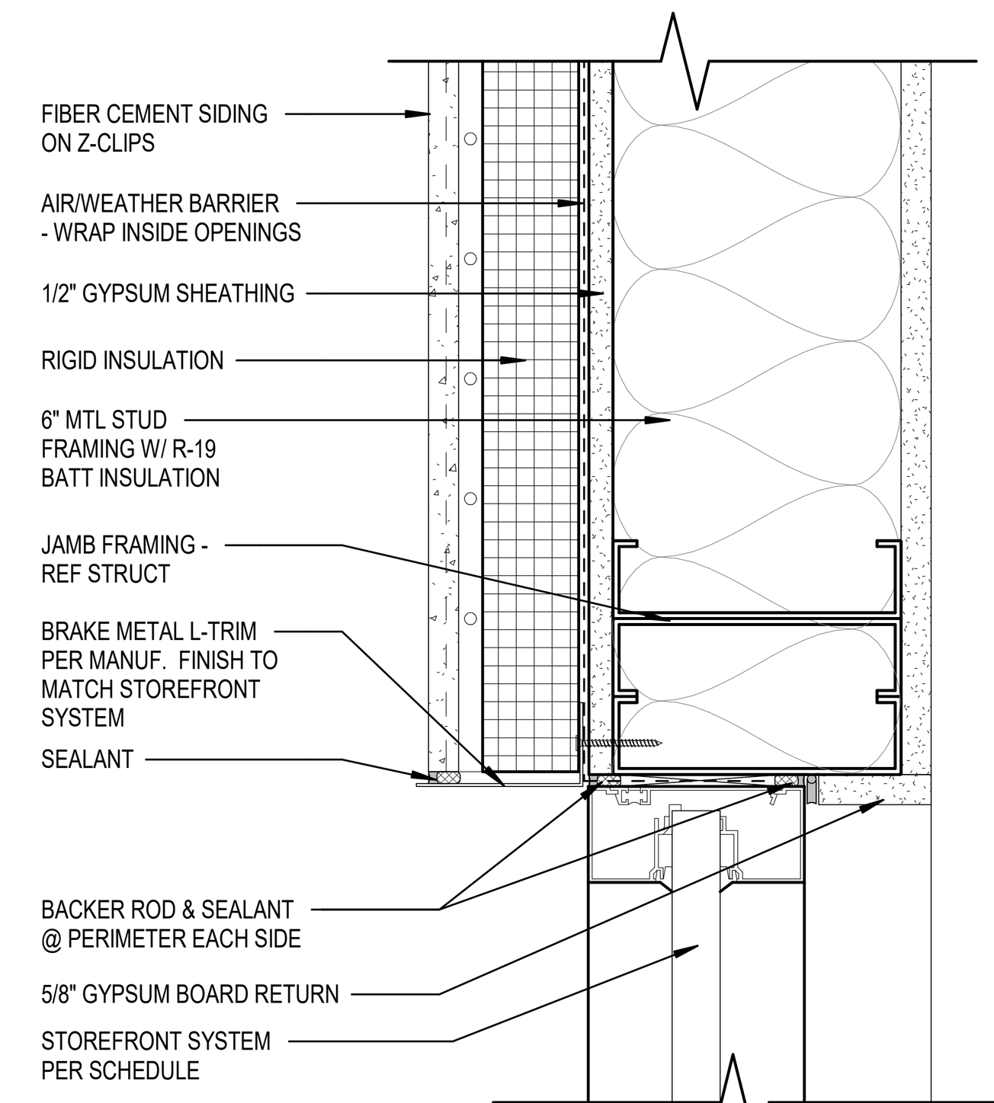
5 STOREFRONT HEAD/SILL @ ENTRY
3" = 1'-0"



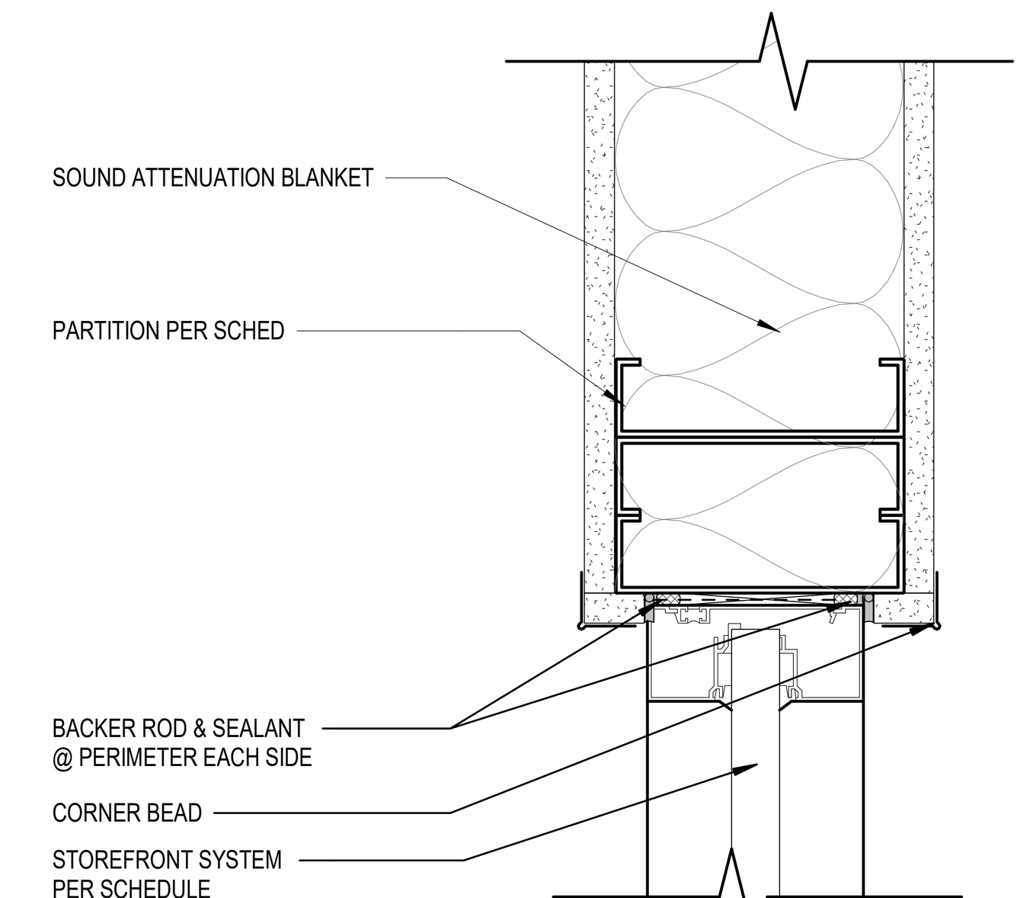
6 STOREFRONT DOOR JAMB @ LONGBOARD
3" = 1'-0"



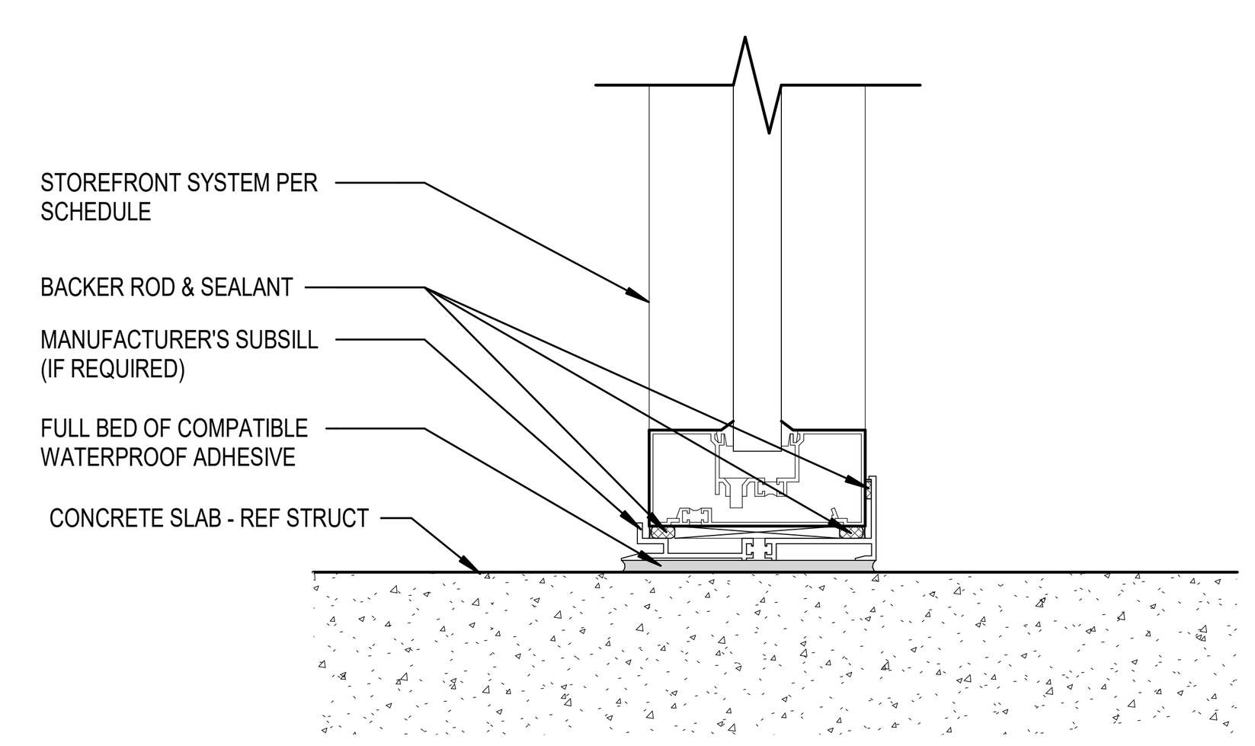
7 STOREFRONT DOOR JAMB @ LONGBOARD
3" = 1'-0"



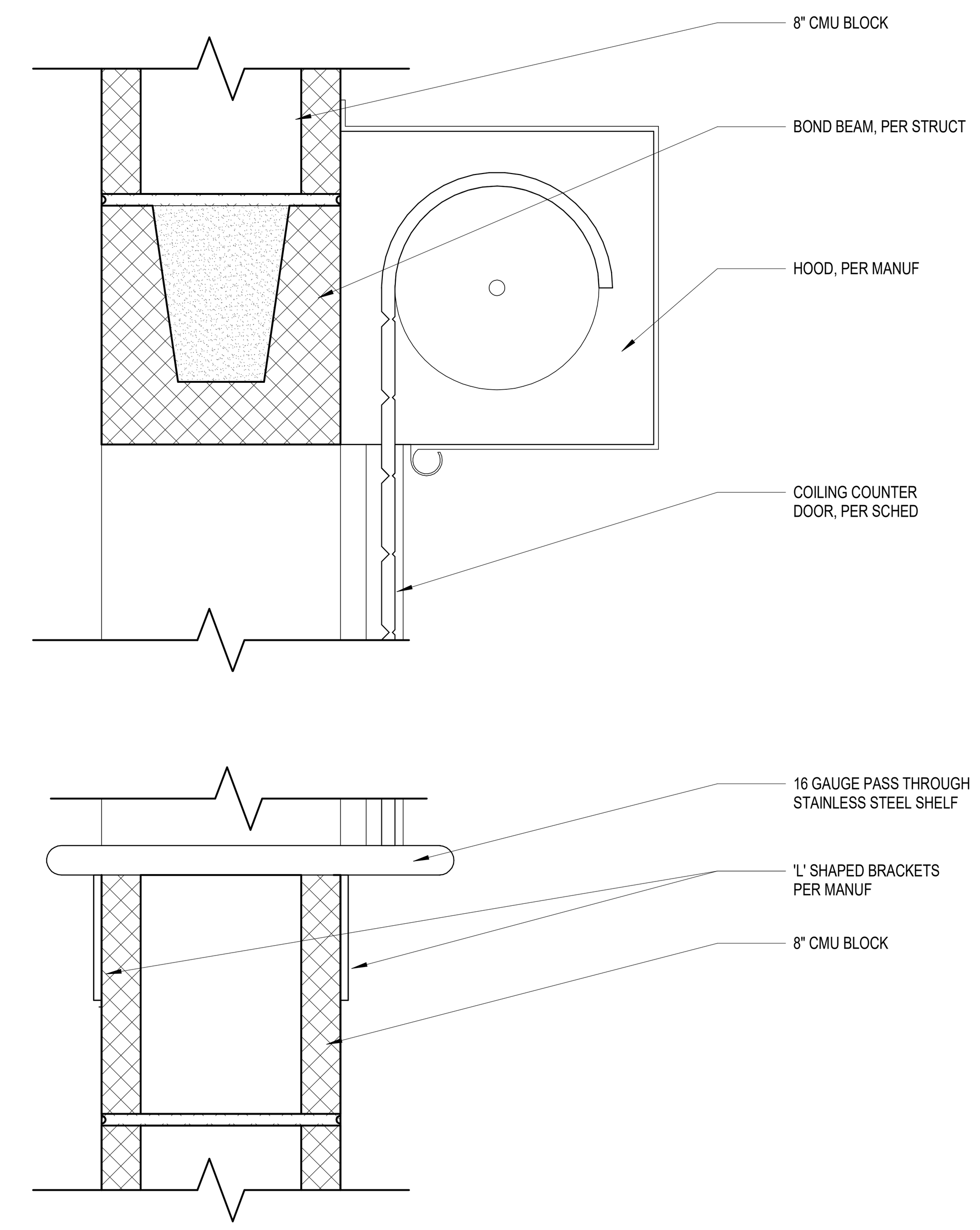
8 STOREFRONT JAMB @ NICHIHA
3" = 1'-0"



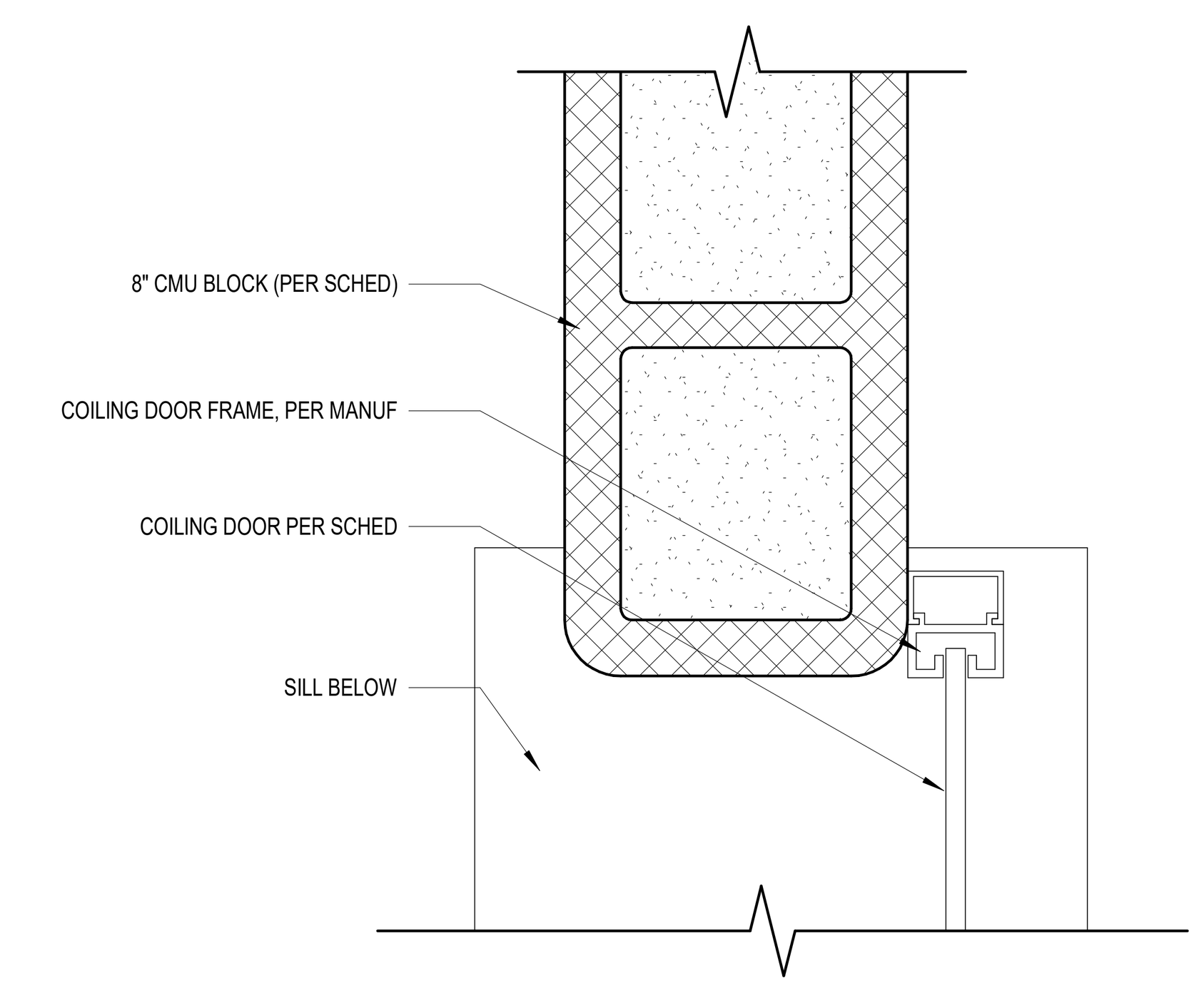
9 INTERIOR STOREFRONT HEAD / JAMB
3" = 1'-0"



10 INTERIOR STOREFRONT SILL
3" = 1'-0"



11 COILING DOOR HEAD & SILL DTL
3" = 1'-0"



12 COILING DOOR JAMB
3" = 1'-0"

GLMV Architecture

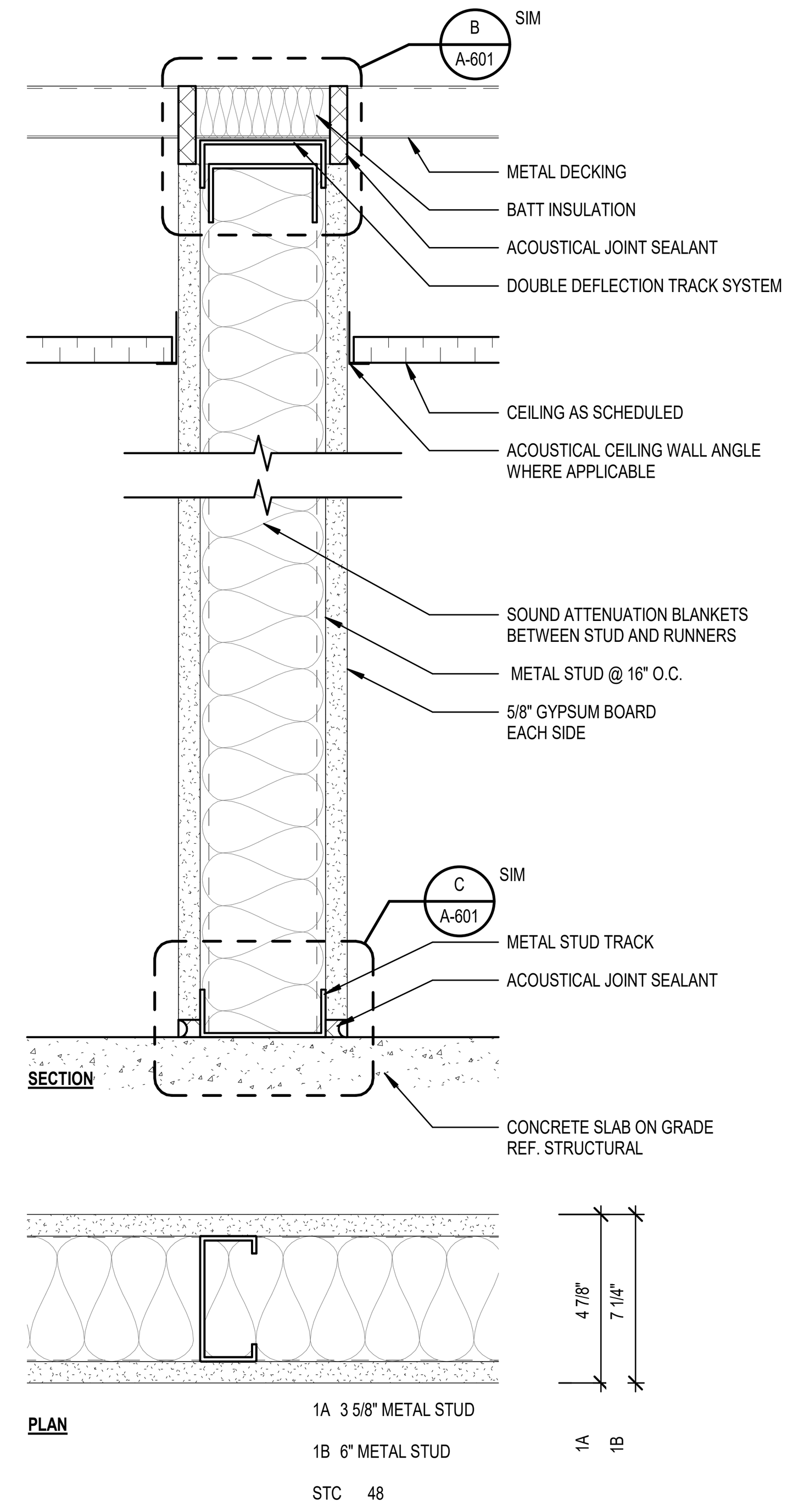
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	DRWN
CHECKED BY:	CHKD

DOOR/ STOREFRONT DETAILS

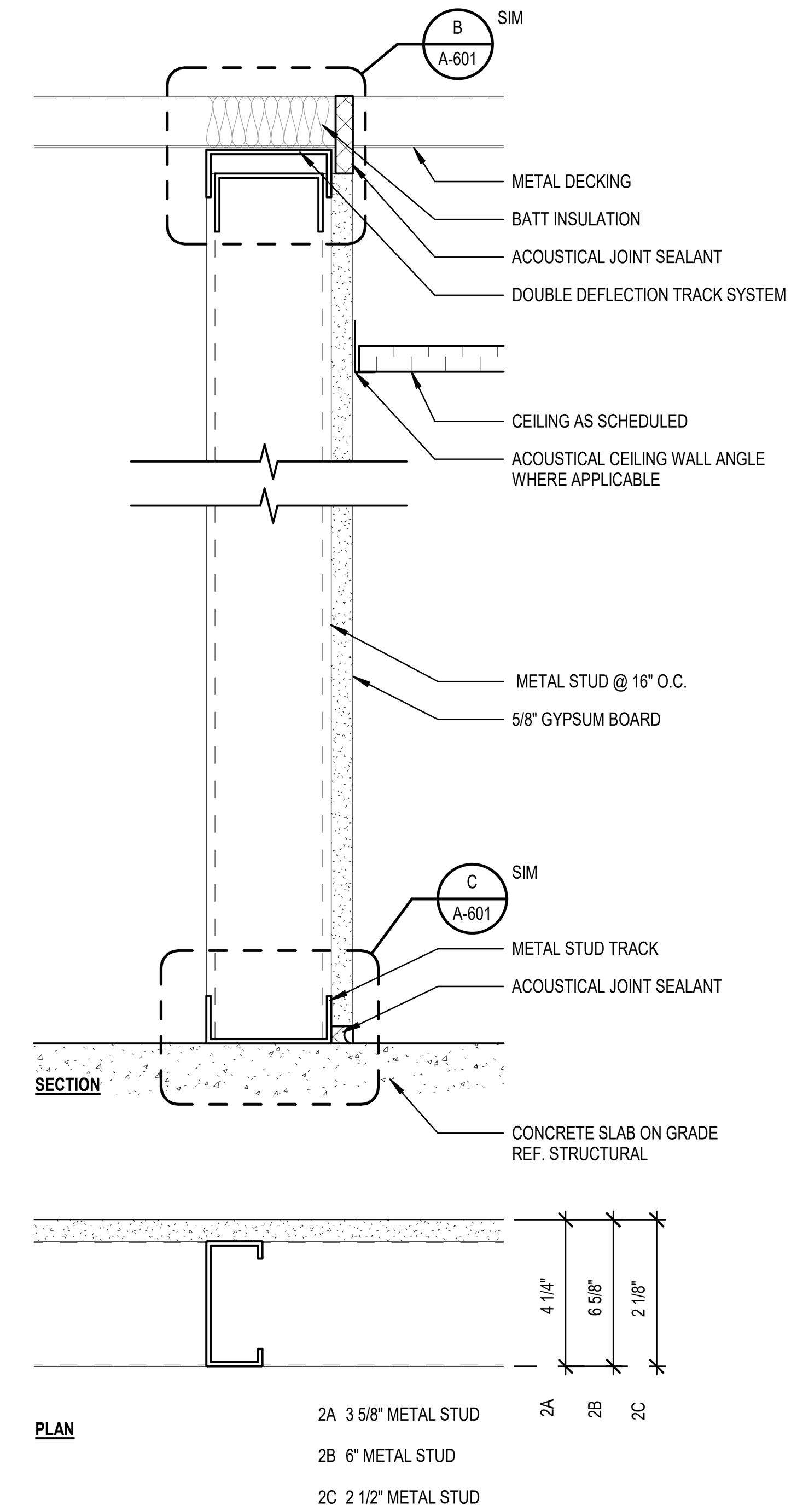
A-542

PLOT DATE: 10/31/2023 9:11:15 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt

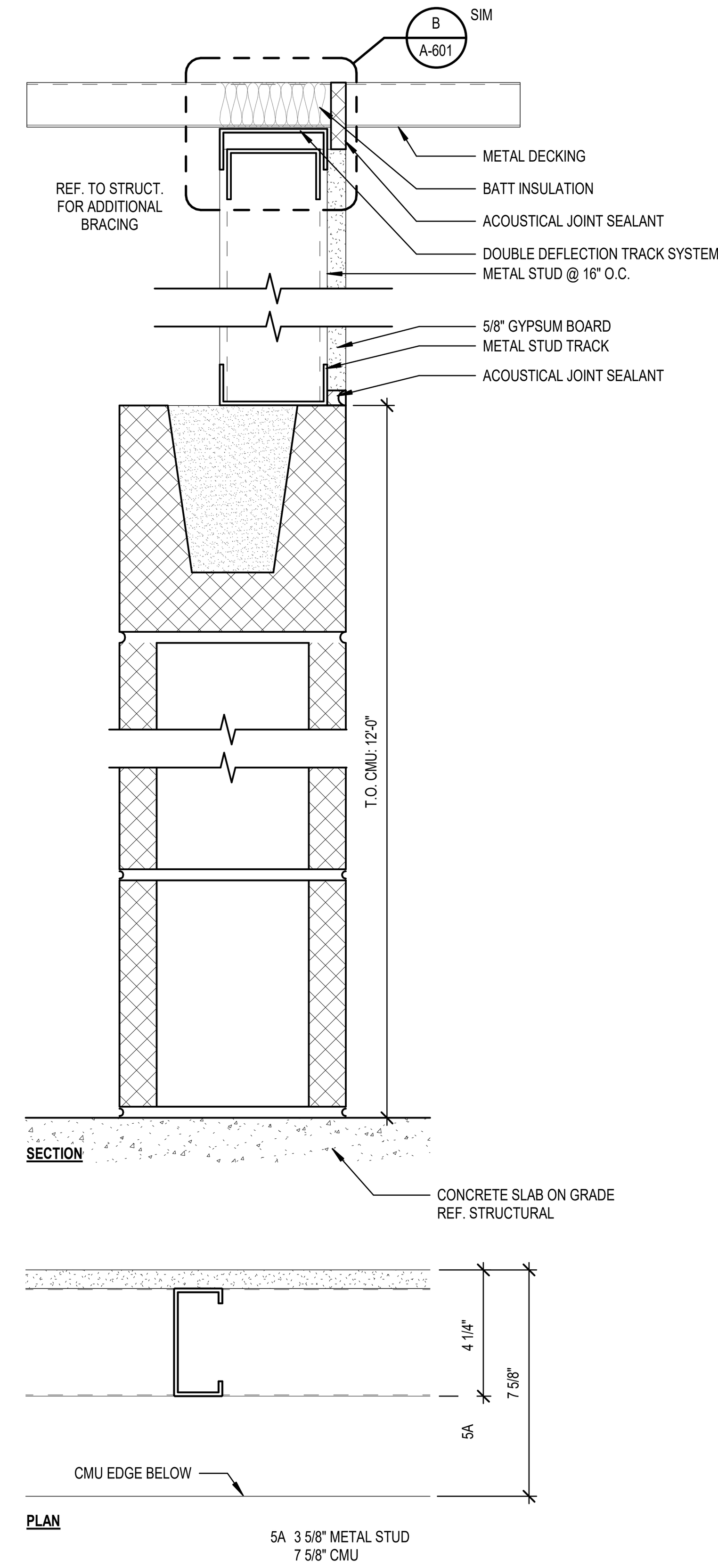


1 SERIES 1 PARTITION - NR

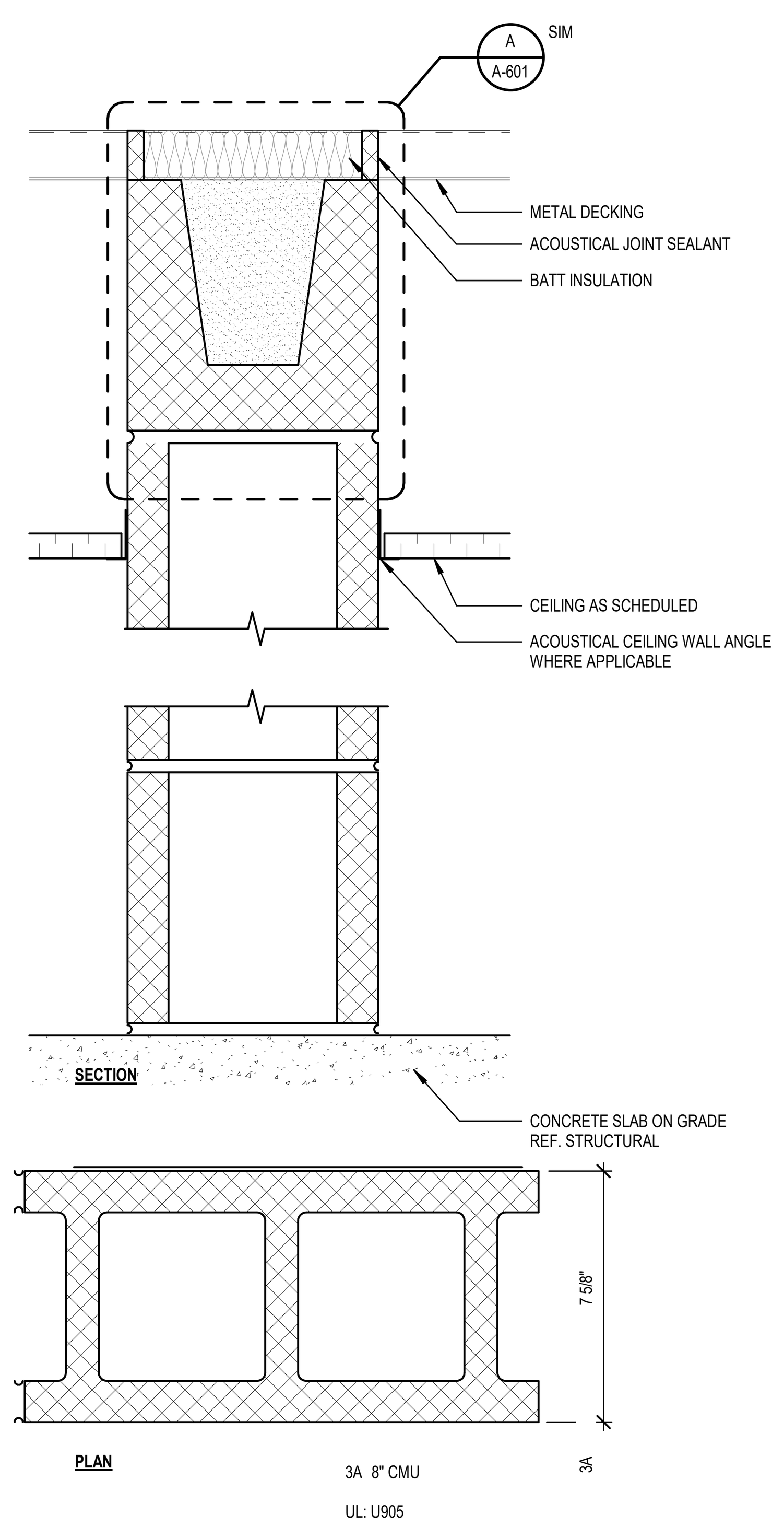
3" = 1'-0"



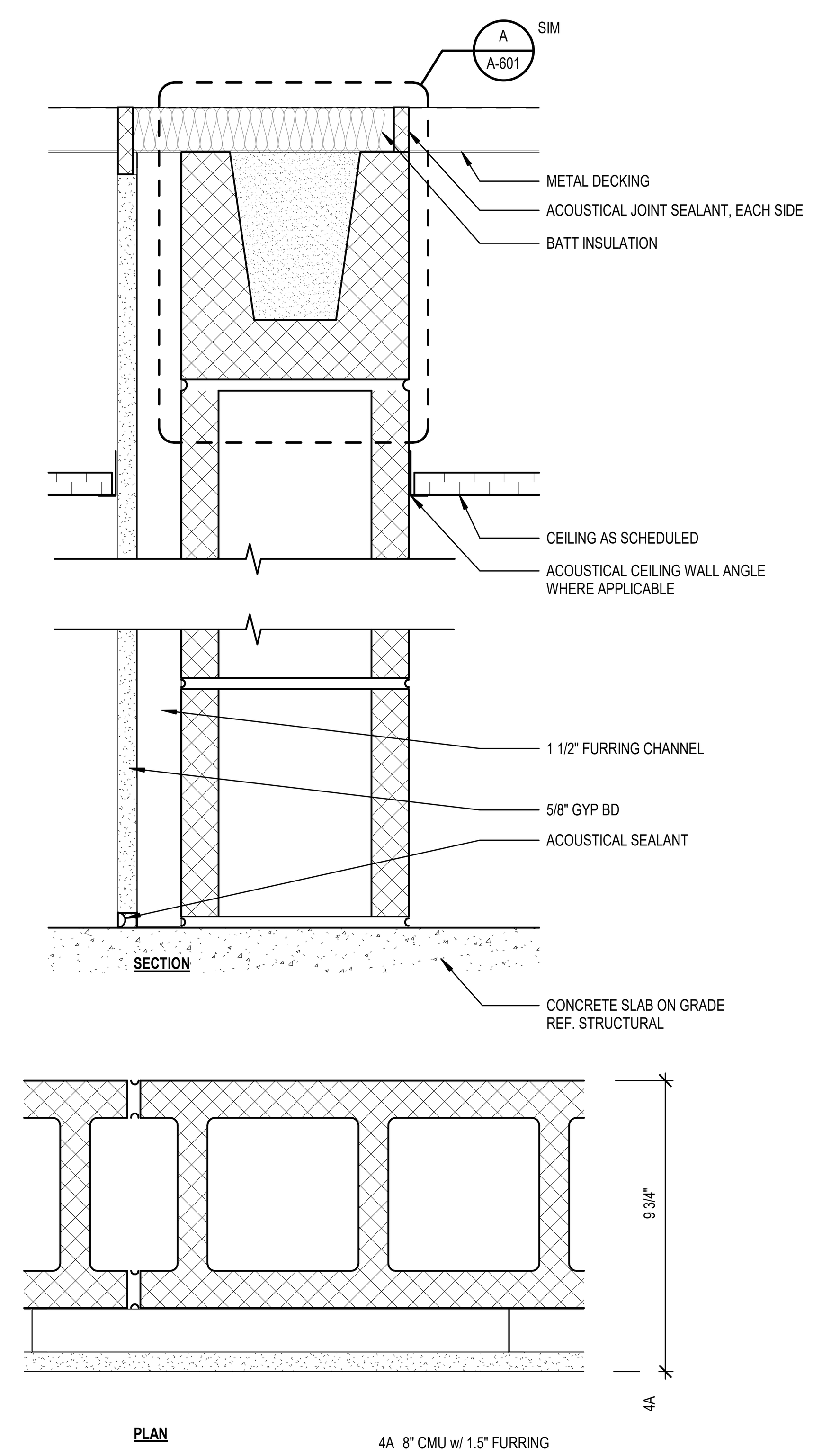
2 SERIES 2 PARTITION - NR



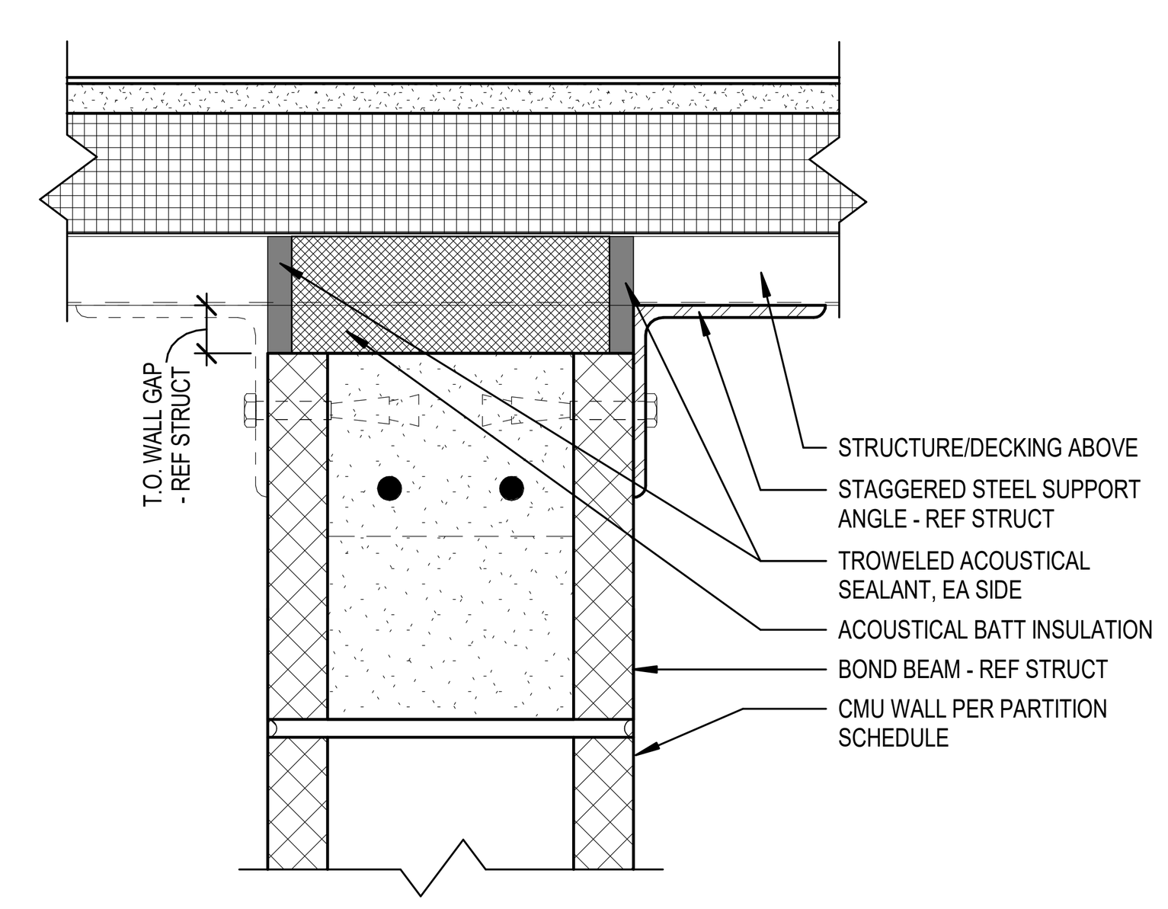
5 SERIES 5 PARTITION - NR



3 SERIES 3 PARTITION - 1HR

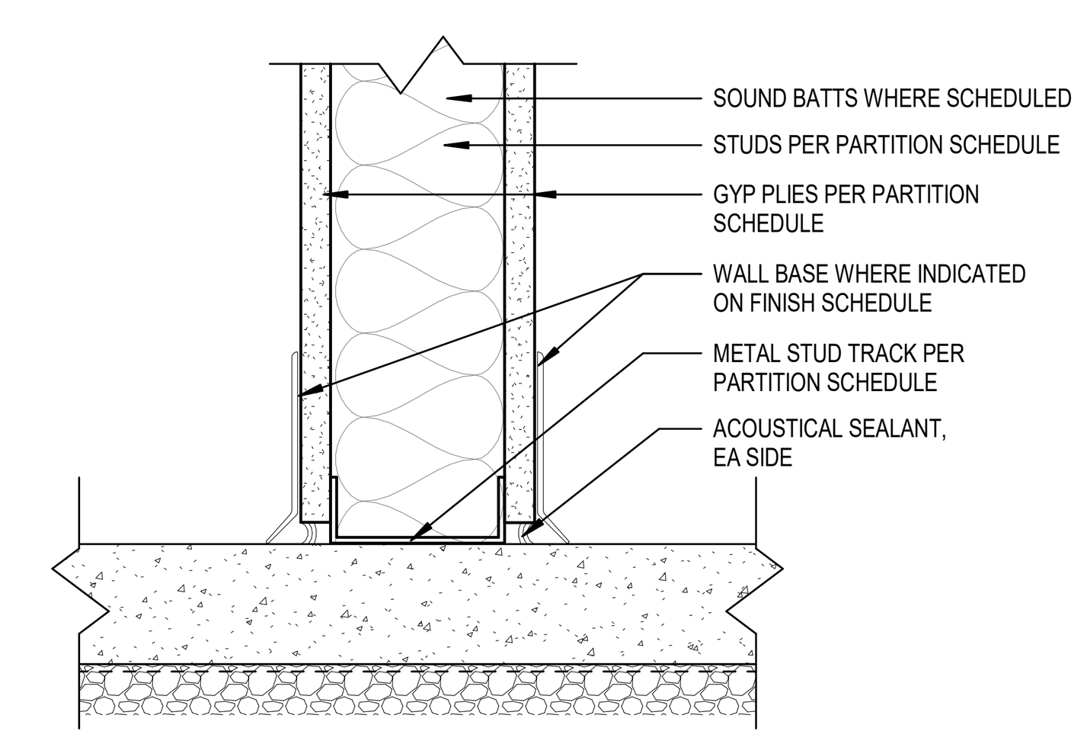


4 SERIES 4 PARTITION - NR



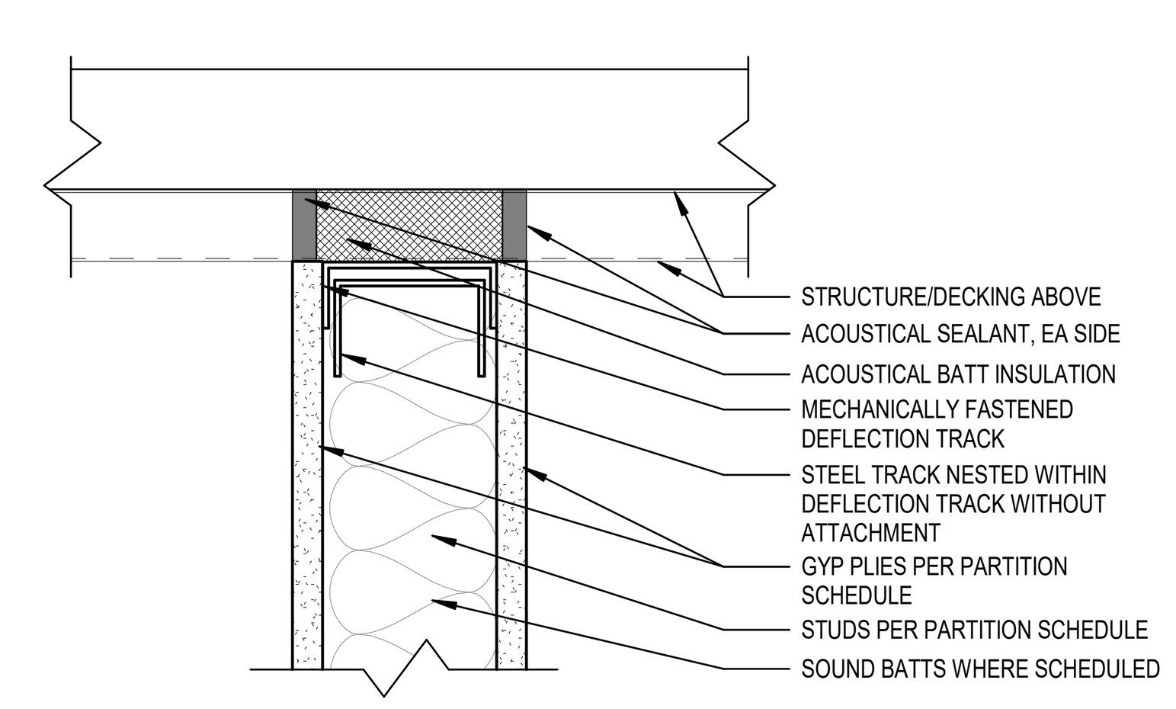
A T.O. CMU DTL

3" = 1'-0"



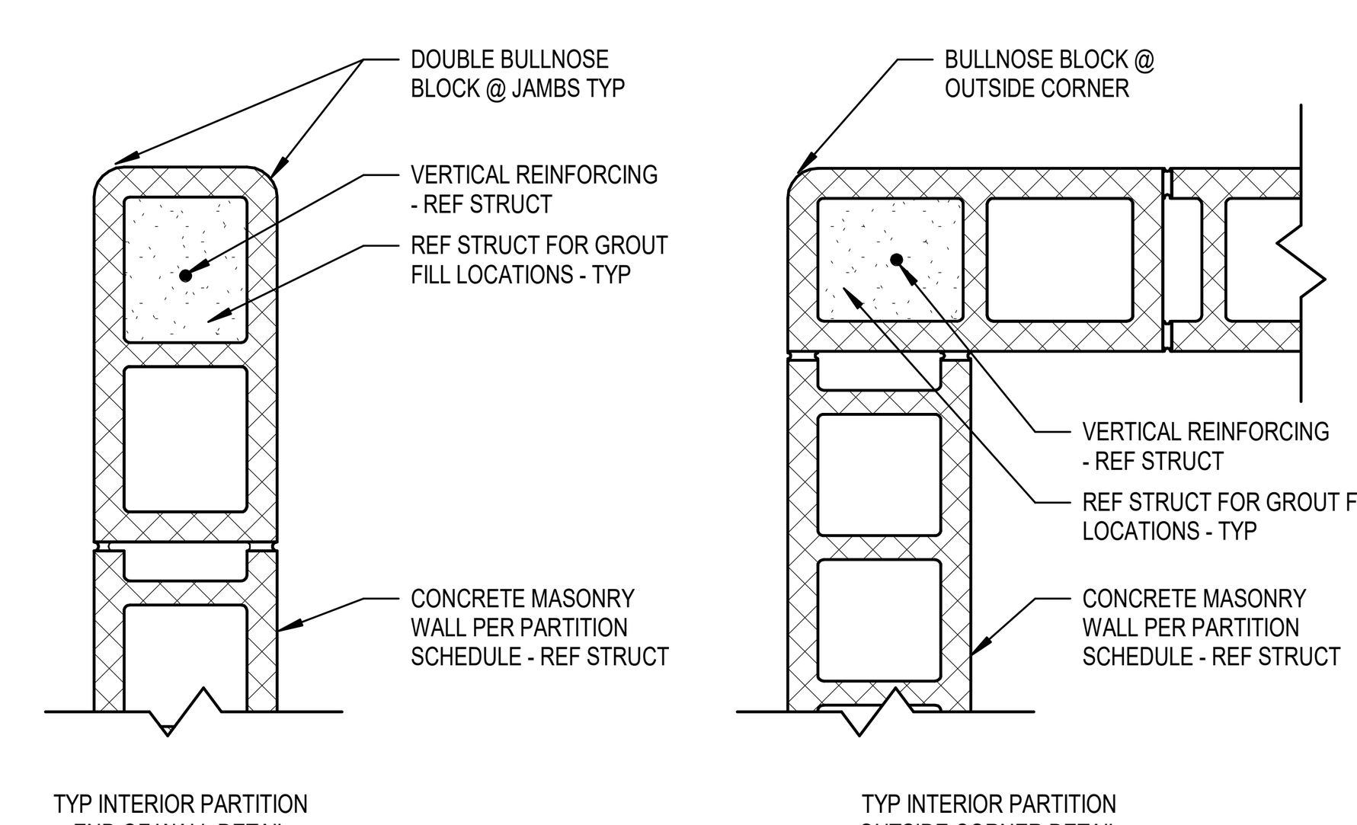
C B.O.WALL DTL

3" = 1'-0"



B T.O. MTL STUD DTL

3" = 1'-0"



D TYP INTERIOR BULLNOSE CMU DETAILS

1 1/2" = 1'-0"

UNBRACED STUD LENGTHS

UNBRACED LENGTH/LIMITING HEIGHTS FOR INTERIOR STUDS - 1 HR FIRE-RATED PARTITIONS AND NON-RATED PARTITIONS		
STUD SIZE	STUD GAUGE	LIMITING HEIGHT
2 1/2"	25	9' - 9"
2 1/2"	22	10' - 6"
2 1/2"	20	11' - 6"
3 5/8"	25	12' - 9"
3 5/8"	22	14' - 0"
3 5/8"	20	15' - 0"
6"	25	18' - 9"
6"	22	20' - 9"
6"	20	23' - 3"
8"	25	25' - 9"
8"	22	28' - 3"
8"	20	30' - 3"
UNBRACED LENGTH/LIMITING HEIGHT FOR NON-RATED PARTITIONS		
STUD SIZE	STUD GAUGE	LIMITING HEIGHT
1 5/8"	25	9' - 8"
1 5/8"	20	8' - 4"
UNBRACED LENGTH/LIMITING HEIGHTS FOR INTERIOR STUDS - 2, 3, AND 4 HOUR FIRE-RATED PARTITIONS		
STUD SIZE	STUD GAUGE	LIMITING HEIGHT
3 5/8"	20	10' - 3"
3 5/8"	18	11' - 3"
3 5/8"	16	12' - 3"
3 5/8"	14	13' - 3"
4"	20	11' - 3"
4"	18	12' - 3"
4"	16	13' - 3"
4"	14	14' - 3"
6"	20	15' - 6"
6"	18	17' - 0"
6"	16	18' - 6"
6"	14	19' 9"
8"	--	--
8"	18	21' - 6"
8"	16	23' - 3"
8"	14	25' - 0"

STUD GAUGE NOTES

#	NOTES
1	USE THESE CHARTS TO DETERMINE THE REQUIRED STUD GAUGE FOR THE VARIOUS PARTITION TYPES. REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR EXTERIOR WALL AND/OR LIGHT GAUGE (CFMF) REQUIREMENTS.
2	REFER TO STRUCTURAL FOR ADDITIONAL REQUIREMENTS.
3	AT GENERAL CONTRACTORS OPTION STUD GAUGES MAY BE ENGINEERED BY A REGISTERED PROFESSIONAL IN THE STATE OF THIS PROJECT.
4	ABOVE CEILING BRACING (@ NOT LESS THAN 4' - 0" OC) IS PERMITTED FOR NON-FIRE RATED PARTITIONS TO HELP REDUCE THE UNBRACED LENGTH OF PARTITON. PROVIDE HORIZONTAL STUD CHANNEL STRONGBACK.

PARTITION NOTES

#	NOTES
1	STUD SPACINGS SHALL BE 16" O.C. UNLESS NOTED OTHERWISE.
2	REFER TO HNBRACED LENGTH/LIMITING HEIGHT CHARTS FOR STUD GAUGE REQUIREMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR USE OF HEAVIER LIGHT GAUGE METAL FRAMING IN LIEU OF THOSE SHOWN.
3	REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS FOR CONCRETE MASONRY UNIT REINFORCING AND GROUTING.
4	REFER TO STRUCTURAL DRAWINGS FOR MASONRY DETAILS FOR ANCHORAGE OF TOP OF MASONRY WALLS TO STRUCTURE.
5	REFERENCE THE BUILDING CODE PLAN SHEETS FOR FIRE RATED AND SMOKE PARTITION INFORMATION.
6	PENETRATIONS, INCLUDING BUT NOT LIMITED TO PIPING, ELECTRICAL ACCESS, OR AIR DISTRIBUTION, SHALL MEET THE REQUIREMENTS OF UL DESIGN REQUIREMENTS FOR WALLS AND PENETRATION OF RATED WALLS. REFERENCE THE BUILDING CODE PLANS FOR ADDITIONAL INFORMATION
7	FOR ALL INSULATED CONCRETE FORM PARTITIONS, PROVIDE TYPE X GYPSUM BOARD ON EACH SIDE PER CHAPTER 26 OF THE INTERNATIONAL BUILDING CODE.
8	FOR AIR BARRIER SYSTEM REQUIREMENTS, REFER SPECIFICATIONS SECTION 07 25 00.00 06.
9	REFERENCE ENLARGED INTERIOR ELEVATIONS FOR ADDITIONAL WALL FINISH INFORMATION.
10	REFERENCE ROOM FINISH SCHEDULE FOR WALL SUBSTRATE INFORMATION.

GYPSUM SUBSTRATE GENERAL NOTES

TYPICAL WALL SUBSTRATE:

ALL GYP ON THE PROJECT IS TO BE MOISTURE RESISTANT GYP BD. MOST WALLS ON THE PROJECT ARE PRONE TO MOISTURE AND THE OWNER MAY NOT RUN THE AIR CONDITIONER WHEN THE BUILDING IS NOT IN USE OR OCCUPIED.

GLMV Architecture

CITY OF LEE'S SUMMIT

LEE'S SUMMIT - MARKET PLAZA

LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

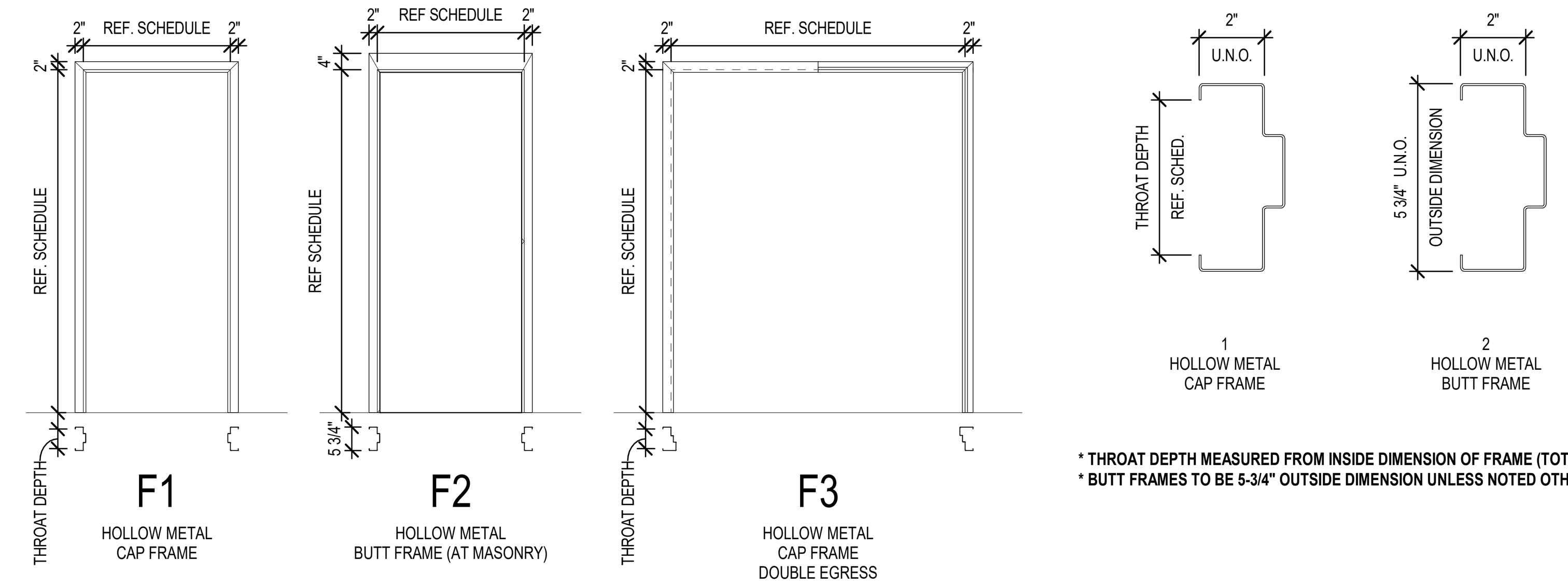
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	DRWN
CHECKED BY:	CHKD

PARTITION TYPES

A-601

PLOT DATE: 10/31/2023 9:11:16 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt

DOOR FRAME ELEVATION



*** THROAT DEPTH MEASURED FROM INSIDE DIMENSION OF FRAME (TOTAL WALL THICKNESS)**
*** BUTT FRAMES TO BE 5-3/4" OUTSIDE DIMENSION UNLESS NOTED OTHERWISE (U.N.O.)**

GLAZING SCHEDULE

MARK	DESCRIPTION
G1	1/4" GLASS
G2	1/4" TEMPERED
IG1	1" INSULATED GLASS, TEMPERED
IG2	1/2" INSULATED GLASS, TEMPERED

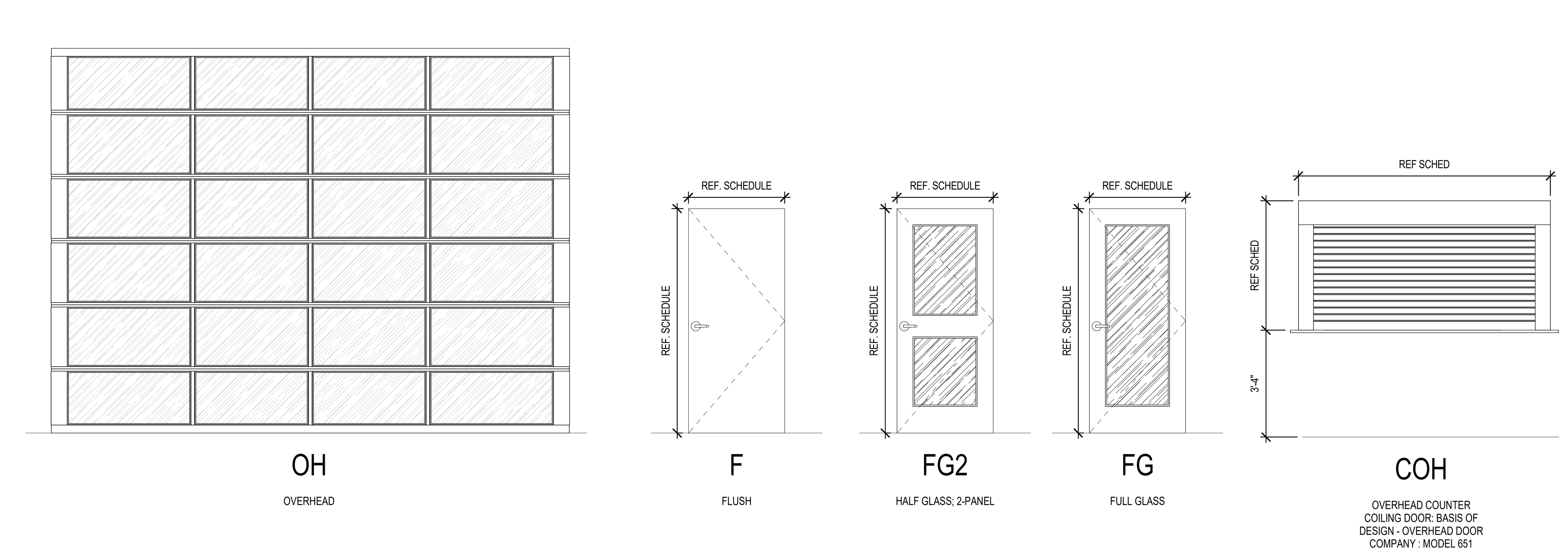
DOOR HARDWARE SETS

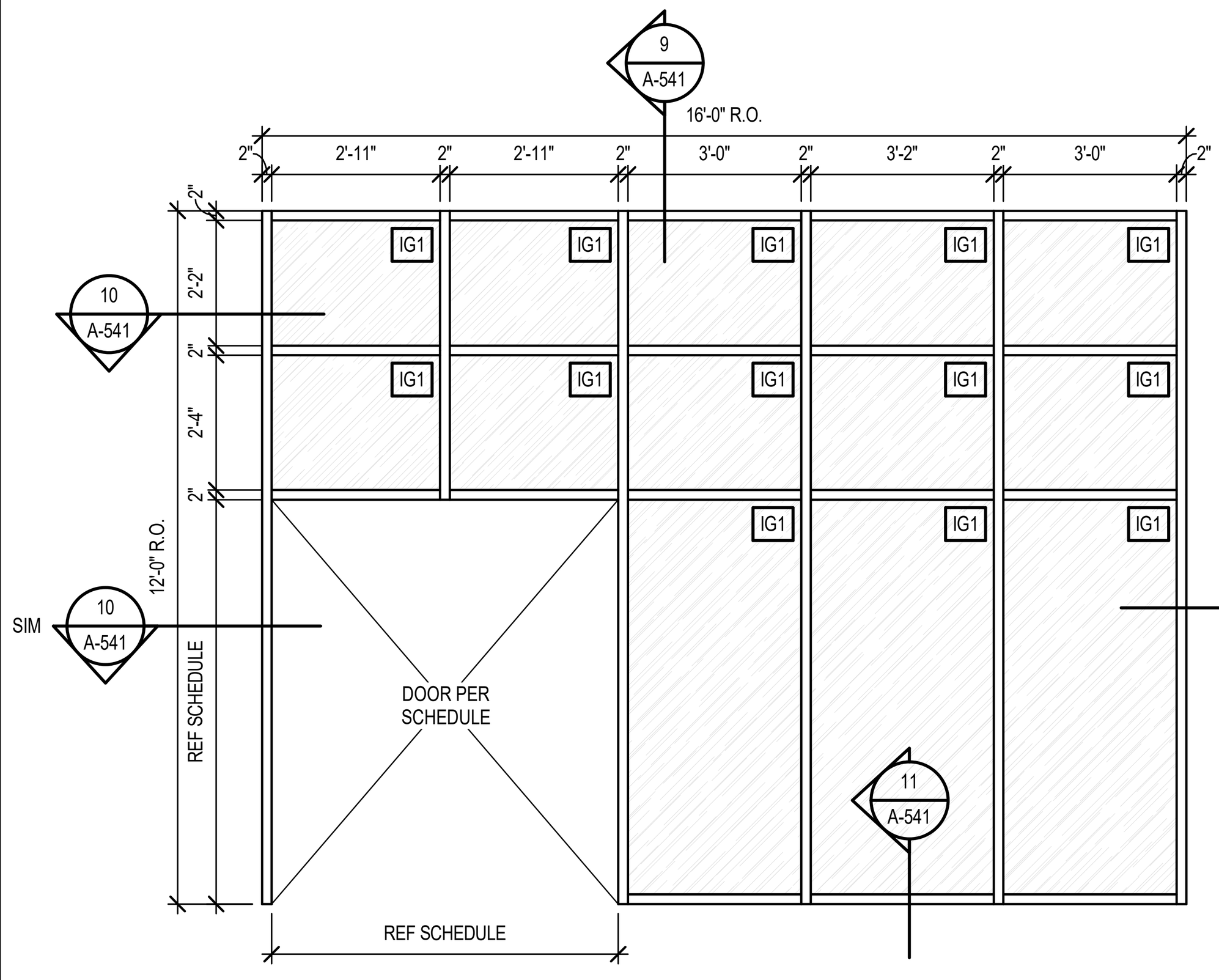
#	NOTES
1.0	ELECTRIFIED LOCKSET W/CARD READER, PANIC HARDWARE,WEATHER STRIPPING, THRESHOLD, 3-HINGE, CLOSER
2.0	PRIVACY LOCKSET, 3-HINGE, CLOSER
3.0	STOREROOM LOCKSET, 3-HINGE
4.0	PASSAGE SET, 3-HINGE
5.0	ELECTRIFIED LOCKSET W/CARD READER, THRESHOLD, 3- HINGE, CLOSER

DOOR AND FRAME SCHEDULE

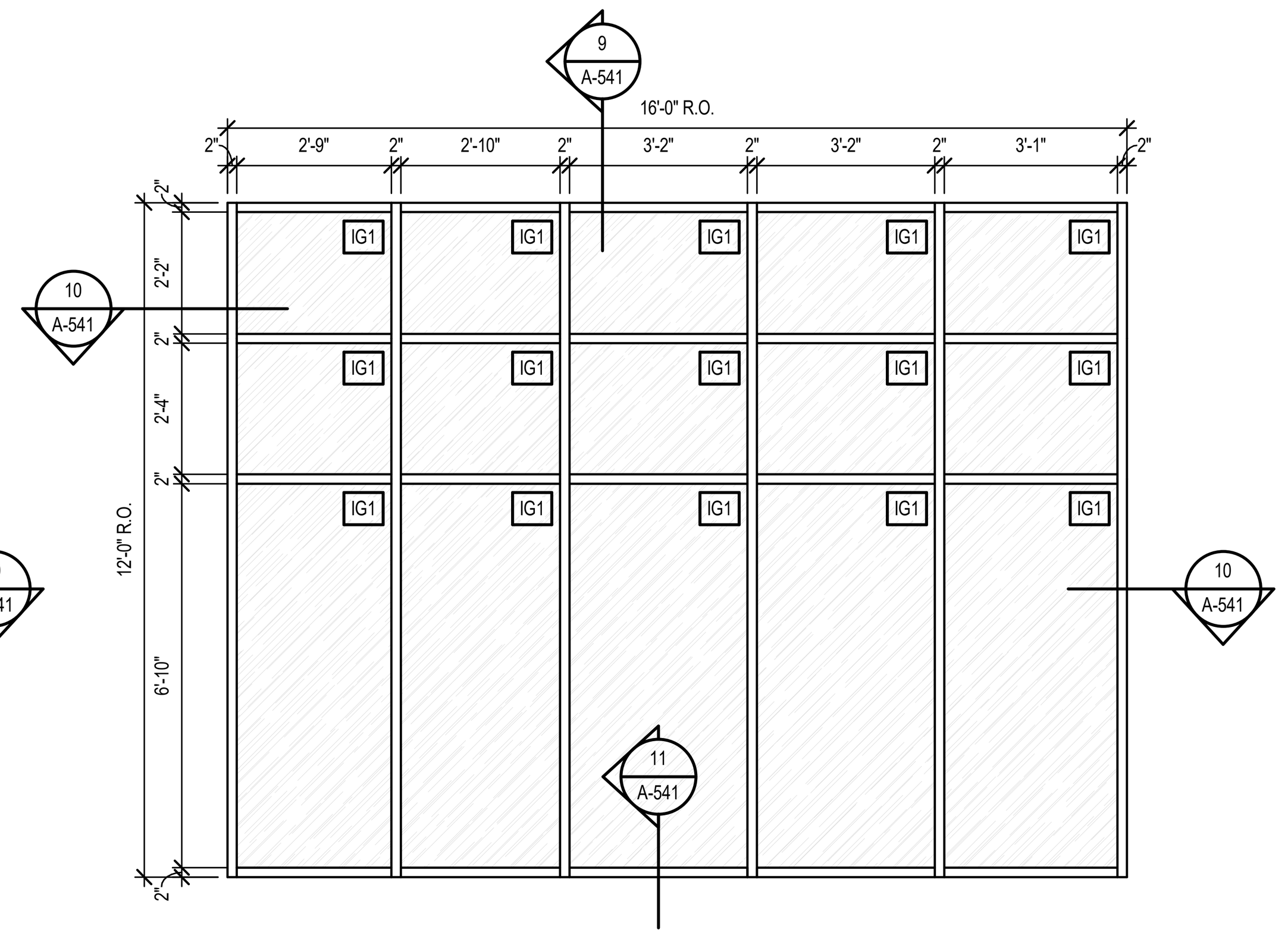
	PANEL								FRAME								
	SIZE											DETAIL			FIRE RATING LABEL		
			PAIR														
MARK	WIDTH	HEIGHT	LEAF 1	LEAF 2	TYPE	MATERIAL	FINISH	GLAZING	TYPE	MATERIAL	FINISH	HEAD	JAMB	SILL		HW SET NO.	NOTES
100A	6' - 0"	7' - 0"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	IG1	SF	ALUM	DARK BRONZE	5/A542	6/A542	5/A541	-	1.0	
100B	6' - 0"	7' - 0"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	IG1	SF	ALUM	DARK BRONZE	5/A542	PER MANUF	5/A541	-	1.0	
100C	6' - 0"	7' - 0"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	IG1	SF	ALUM	DARK BRONZE	5/A542	7/A542	5/A541	-	1.0	
107	3' - 0"	7' - 0"	0' - 0"	0' - 0"	F	HM	PAINT	-	F1	HM	PAINT	1/A541	2/A541	-	-	3.0	
108A	3' - 0"	7' - 0"	0' - 0"	0' - 0"	F	HM	PAINT	-	F2	HM	PAINT	3/A541	4/A541	-	-	4.0	
108B	3' - 0"	7' - 0"	0' - 0"	0' - 0"	F	HM	PAINT	-	F2	HM	PAINT	3/A541	4/A541	-	-	5.0	
108C	4' - 0"	7' - 0"	0' - 0"	0' - 0"	F	HM	PAINT	-	F2	HM	PAINT	6/A541	7/A541		-	1.0	
108D	6' - 11"	6' - 6"	0' - 0"	0' - 0"	CO	STAINLESS STL	PAINT	-	-	STAINLESS STL	PAINT	11/A541	12/A541	11/A541	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER
109	3' - 0"	7' - 0"	0' - 0"	0' - 0"	F	HM	PAINT	-	F2	HM	PAINT	3/A541	4/A541	-	-	3.0	
110B	6' - 0"	7' - 0"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	IG1	SF	ALUM	DARK BRONZE	9/A541	10/A541	5/A541	-	1.0	
110C	6' - 0"	7' - 0"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	IG1	SF	ALUM	DARK BRONZE	9/A541	10/A541	5/A541	-	1.0	
110D	6' - 0"	7' - 0"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	IG1	SF	ALUM	DARK BRONZE	9/A541	10/A541	5/A541	-	1.0	
110E	6' - 0"	7' - 0"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	IG1	SF	ALUM	DARK BRONZE	9/A541	12/A541	5/A541	-	1.0	
110F	6' - 0"	7' - 0"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	G2	SF	ALUM	DARK BRONZE	8/A521	PER MANUF	-	-	5.0	
110G	6' - 0"	7' - 0"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	G2	SF	ALUM	DARK BRONZE	8/A521	2/A501	-	-	5.0	
110L	3' - 0"	7' - 0"	0' - 0"	0' - 0"	F	HM	PAINT	-	F1	HM	PAINT	1/A541	2/A541	-	-	2.0	
110M	3' - 0"	7' - 0"	0' - 0"	0' - 0"	F	HM	PAINT	-	F1	HM	PAINT	1/A541	2/A541	-	-	2.0	
111A	6' - 0"	7' - 0"	3' - 0"	3' - 0"	F	HM	PAINT	-	F2	HM	PAINT	3/A541	4/A541		-	3.0	
111B	6' - 0"	7' - 0"	3' - 0"	3' - 0"	F	HM	PAINT	-	F2	HM	PAINT	6/A541	7/A541	5/A541	-	1.0	
112A	6' - 0"	7' - 2"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	IG1	SF	ALUM	DARK BRONZE	9/A541	9/A541	-	-	5.0	
112B	6' - 0"	7' - 2"	3' - 0"	3' - 0"	FG	ALUM	DARK BRONZE	IG1	SF	ALUM	DARK BRONZE	9/A541	3/A501	5/A541	-	1.0	
117A	3' - 0"	7' - 0"	0' - 0"	0' - 0"	F	HM	PAINT	-	F1	HM	PAINT	3/A541	4/A541	-	-	3.0	
117B	6' - 0"	7' - 0"	3' - 0"	3' - 0"	F	HM	PAINT	-	F2	HM	PAINT	6/A541	7/A541	5/A541	-	1.0	
117C	3' - 0"	7' - 0"	0' - 0"	0' - 0"	F	HM	PAINT	-	F2	HM	PAINT	3/A541	4/A541	-	-	3.0	
120A	16' - 0"	12' - 0"	0' - 0"	0' - 0"	OH	ALUM	DARK BRONZE	IG2		ALUM	DARK BRONZE	1/A521	4/A501	2/A531	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER
120B	16' - 0"	12' - 0"	0' - 0"	0' - 0"	OH	ALUM	DARK BRONZE	IG2		ALUM	DARK BRONZE	1/A521	4/A501	2/A531	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER
120C	16' - 0"	12' - 0"	0' - 0"	0' - 0"	OH	ALUM	DARK BRONZE	IG2		ALUM	DARK BRONZE	1/A521	4/A501	2/A531	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER
120D	16' - 0"	12' - 0"	0' - 0"	0' - 0"	OH	ALUM	DARK BRONZE	IG2		ALUM	DARK BRONZE	1/A521	4/A501	2/A531	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER
120E	16' - 0"	12' - 0"	0' - 0"	0' - 0"	OH	ALUM	DARK BRONZE	IG2		ALUM	DARK BRONZE	1/A521	4/A501	2/A531	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER
120F	16' - 0"	12' - 0"	0' - 0"	0' - 0"	OH	ALUM	DARK BRONZE	IG2		ALUM	DARK BRONZE	1/A521	4/A501	2/A531	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER
120G	16' - 0"	12' - 0"	0' - 0"	0' - 0"	OH	ALUM	DARK BRONZE	IG2		ALUM	DARK BRONZE	1/A521	4/A501	2/A531	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER
120H	16' - 0"	12' - 0"	0' - 0"	0' - 0"	OH	ALUM	DARK BRONZE	IG2		ALUM	DARK BRONZE	1/A521	4/A501	2/A531	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER
120J	16' - 0"	12' - 0"	0' - 0"	0' - 0"	OH	ALUM	DARK BRONZE	IG2		ALUM	DARK BRONZE	1/A521	4/A501	2/A531	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER
120K	16' - 0"	12' - 0"	0' - 0"	0' - 0"	OH	ALUM	DARK BRONZE	IG2		ALUM	DARK BRONZE	1/A521	4/A501	2/A531	-	PER MANUF	SAMPLES REQ FOR FINAL COLOR SELECTION BY ARCHITECT, APPROVED BY OWNER

DOOR ELEVATION





SF1 STOREFRONT 1
3/8" = 1'-0"



SF2 STOREFRONT 2
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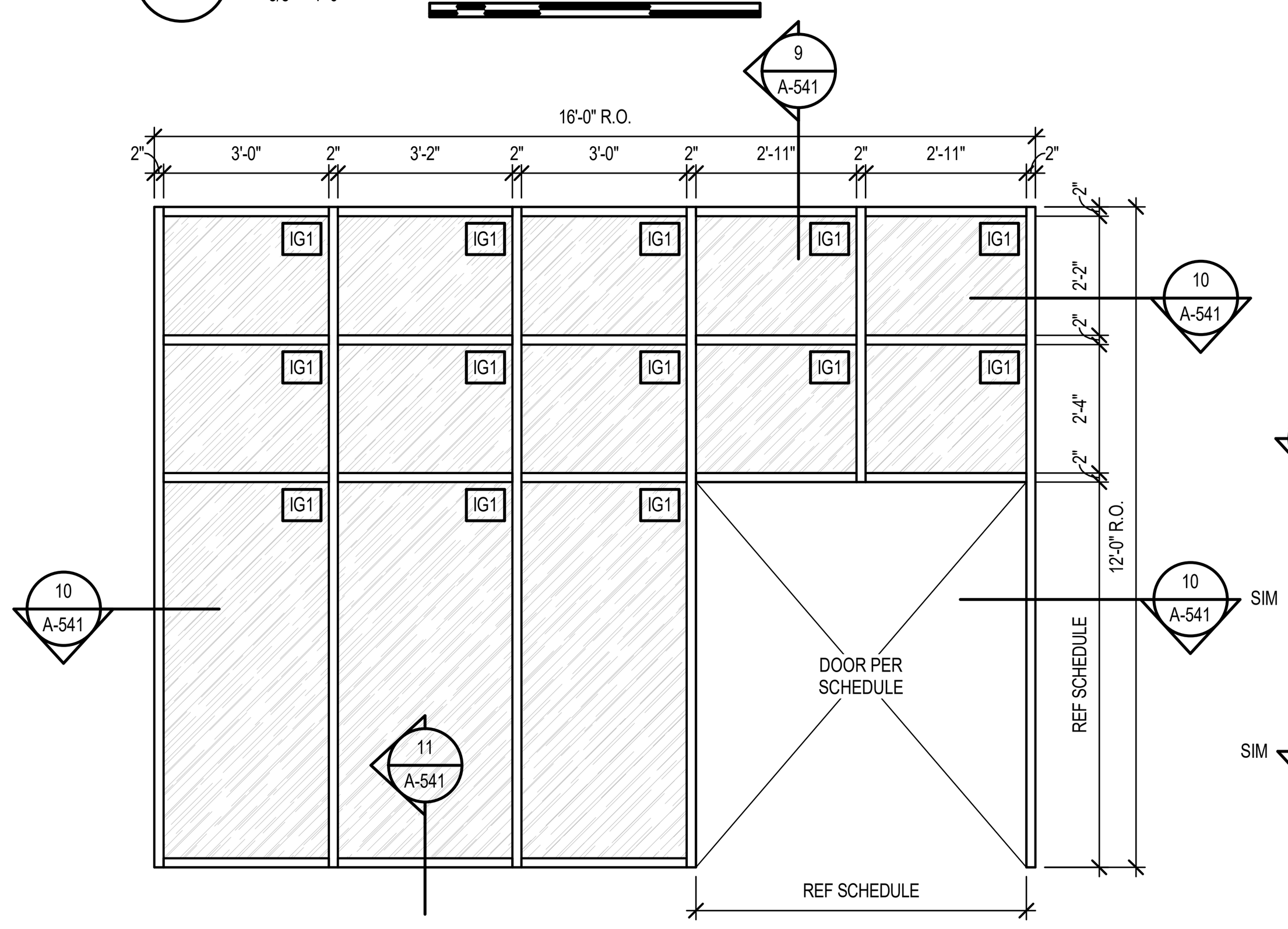
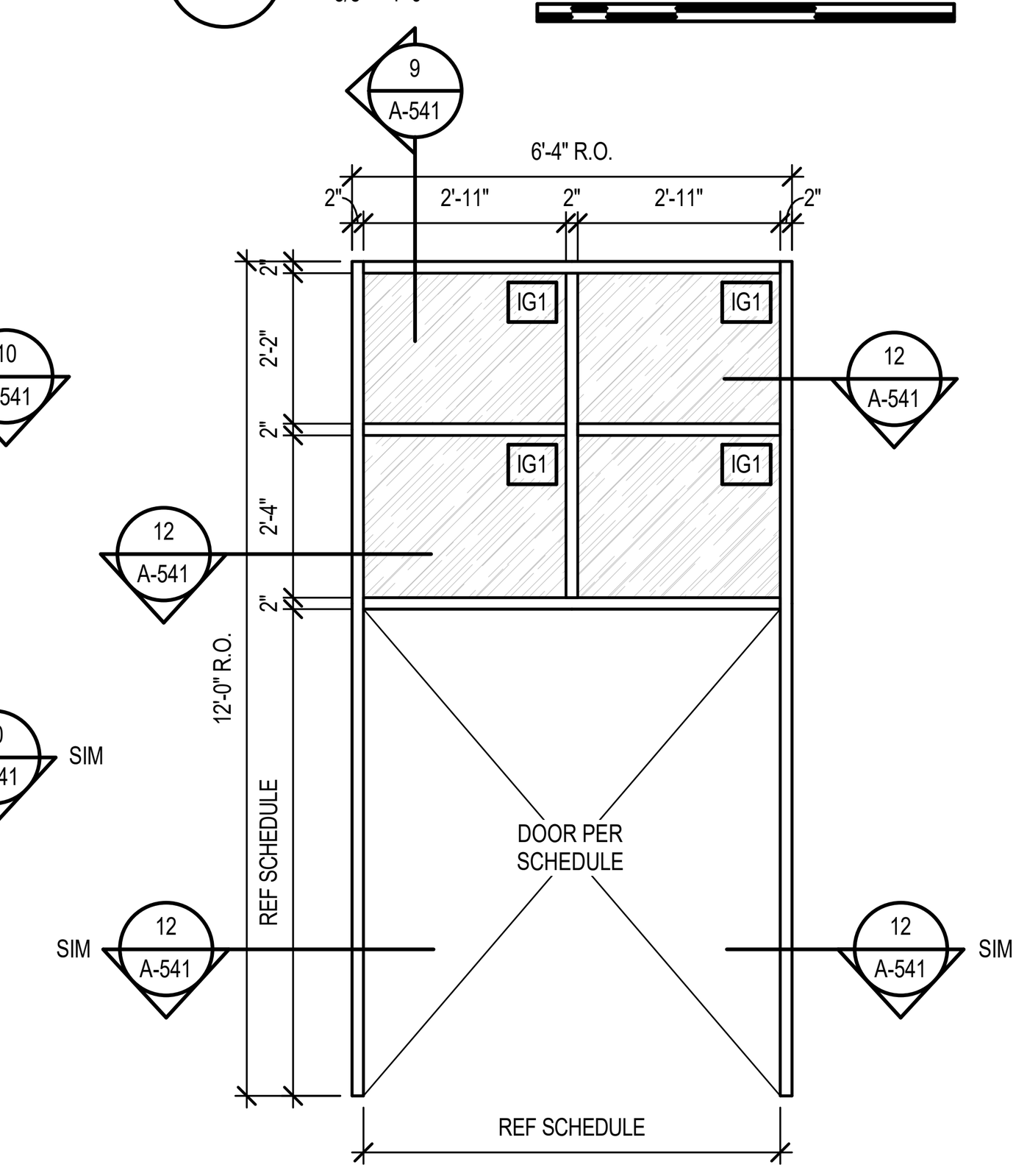
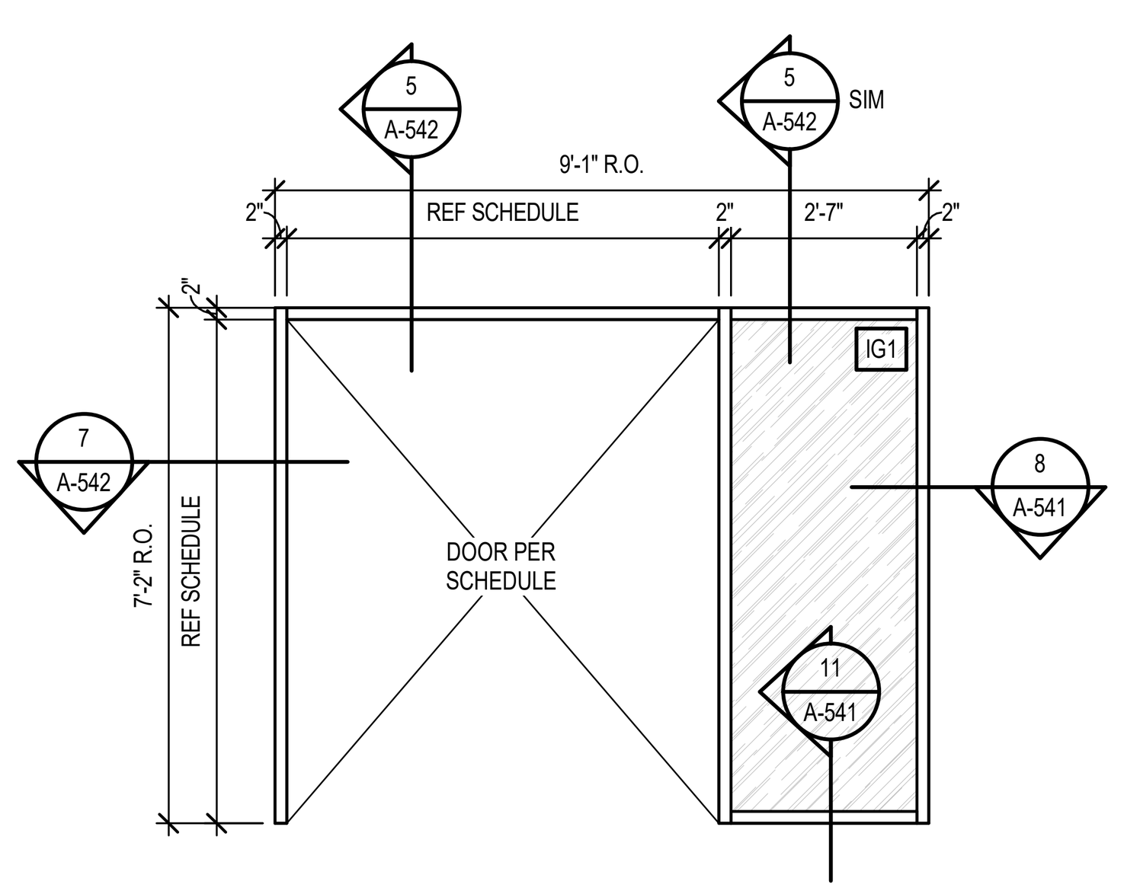


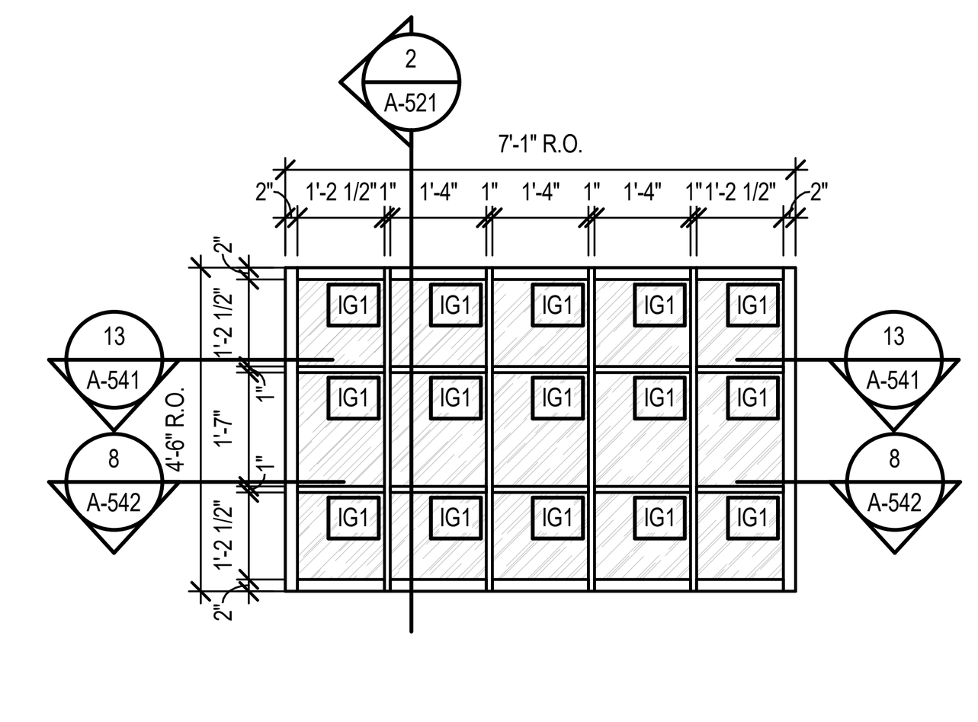
SF3 STOREFRONT 3
3/8" = 1'-0"



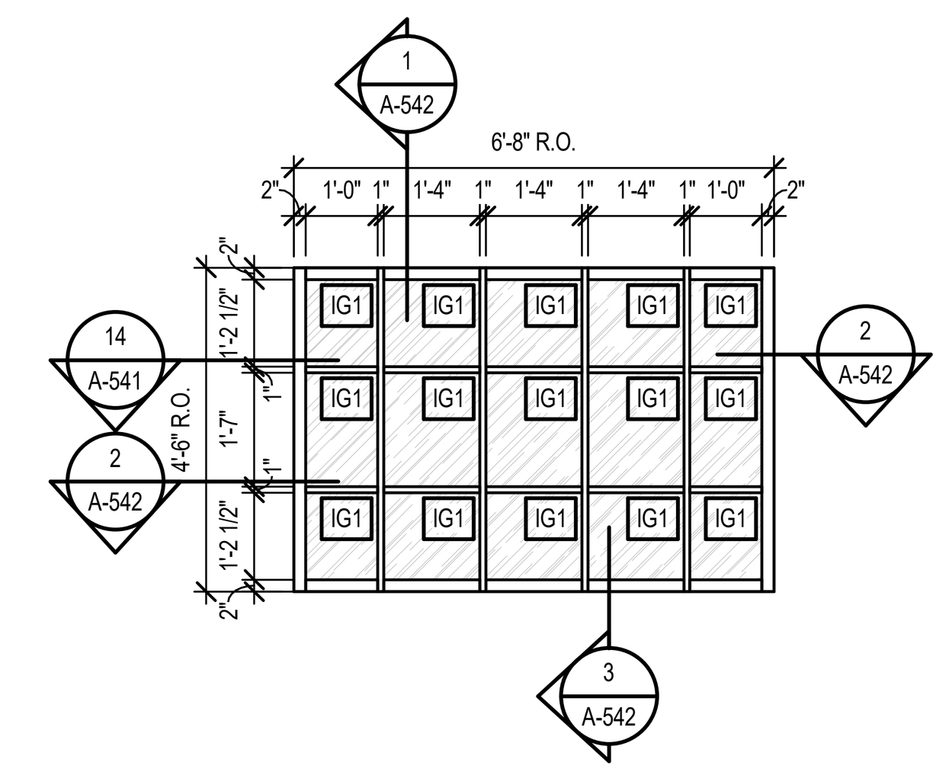
SF4 STOREFRONT 4
3/8" = 1'-0"



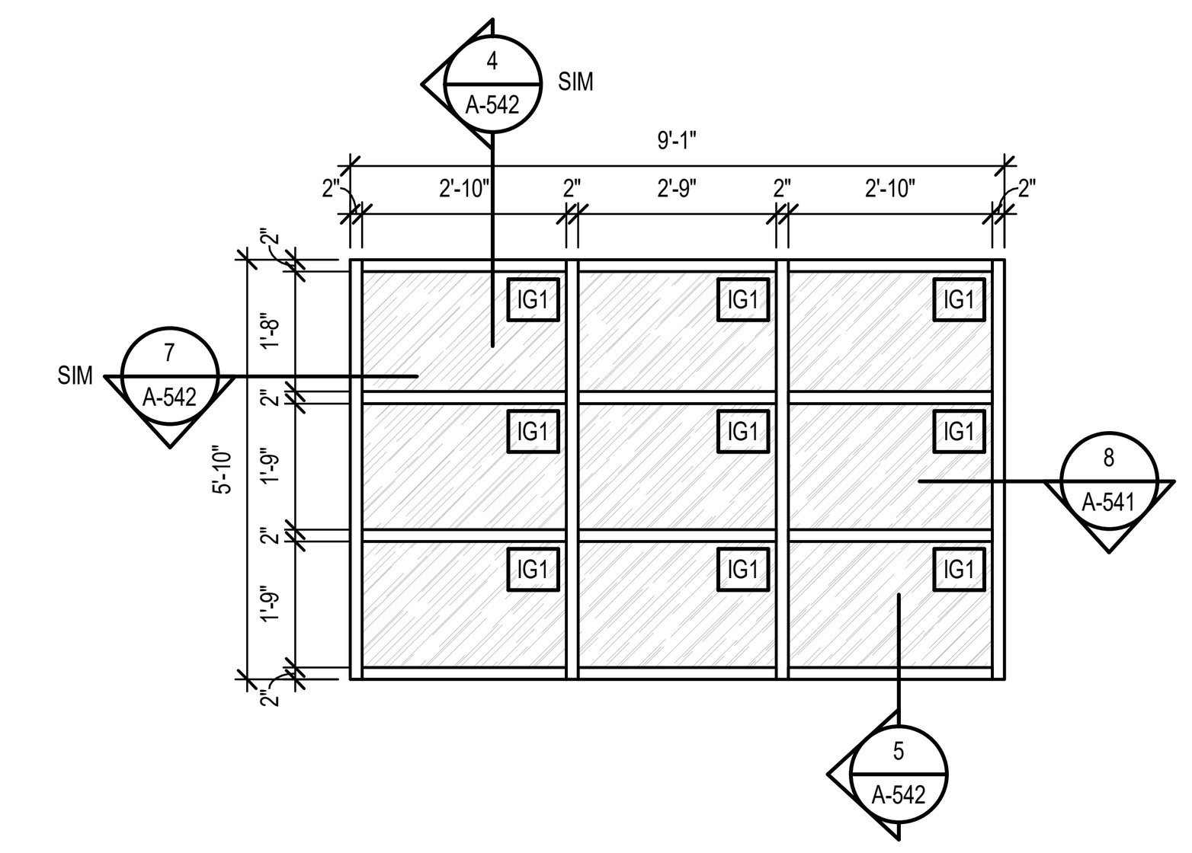
SF5 STOREFRONT 5
3/8" = 1'-0"



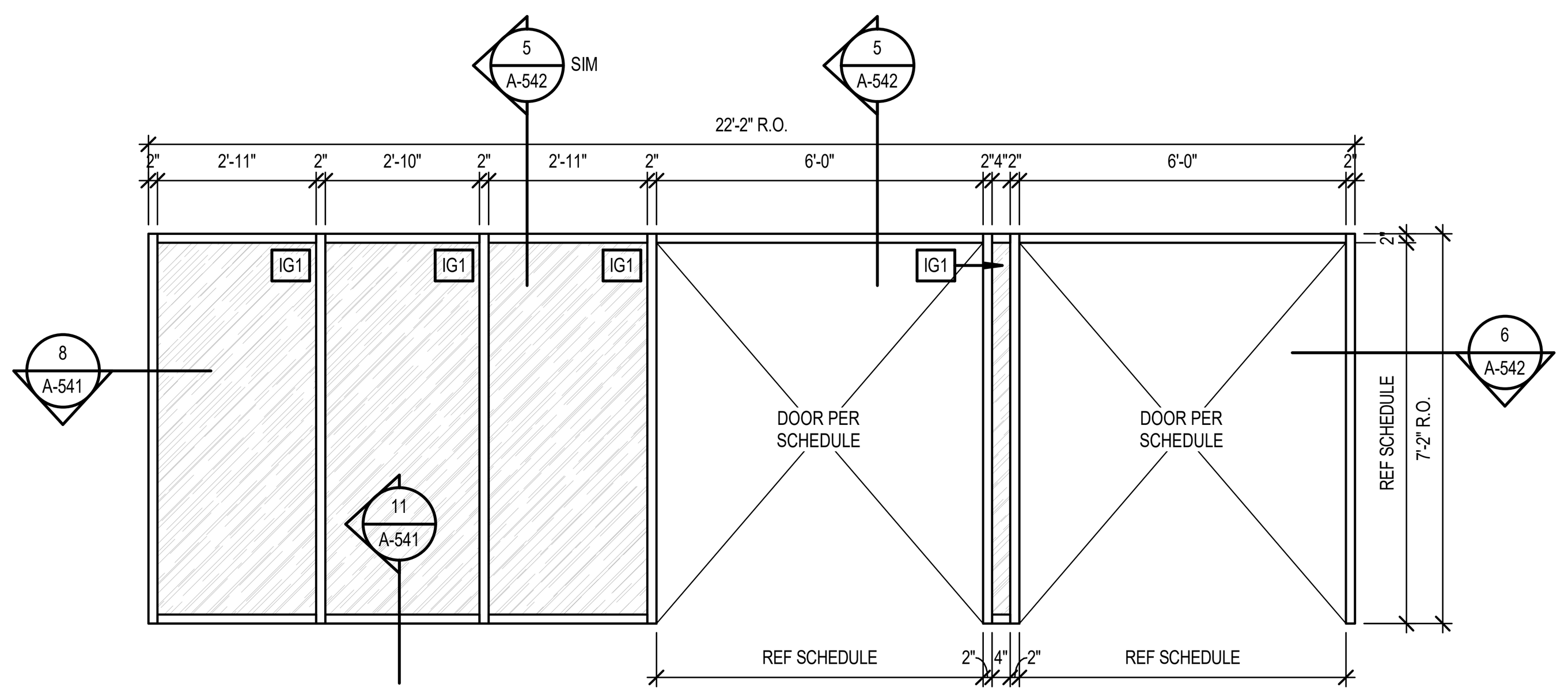
SF6 STOREFRONT 6
3/8" = 1'-0"



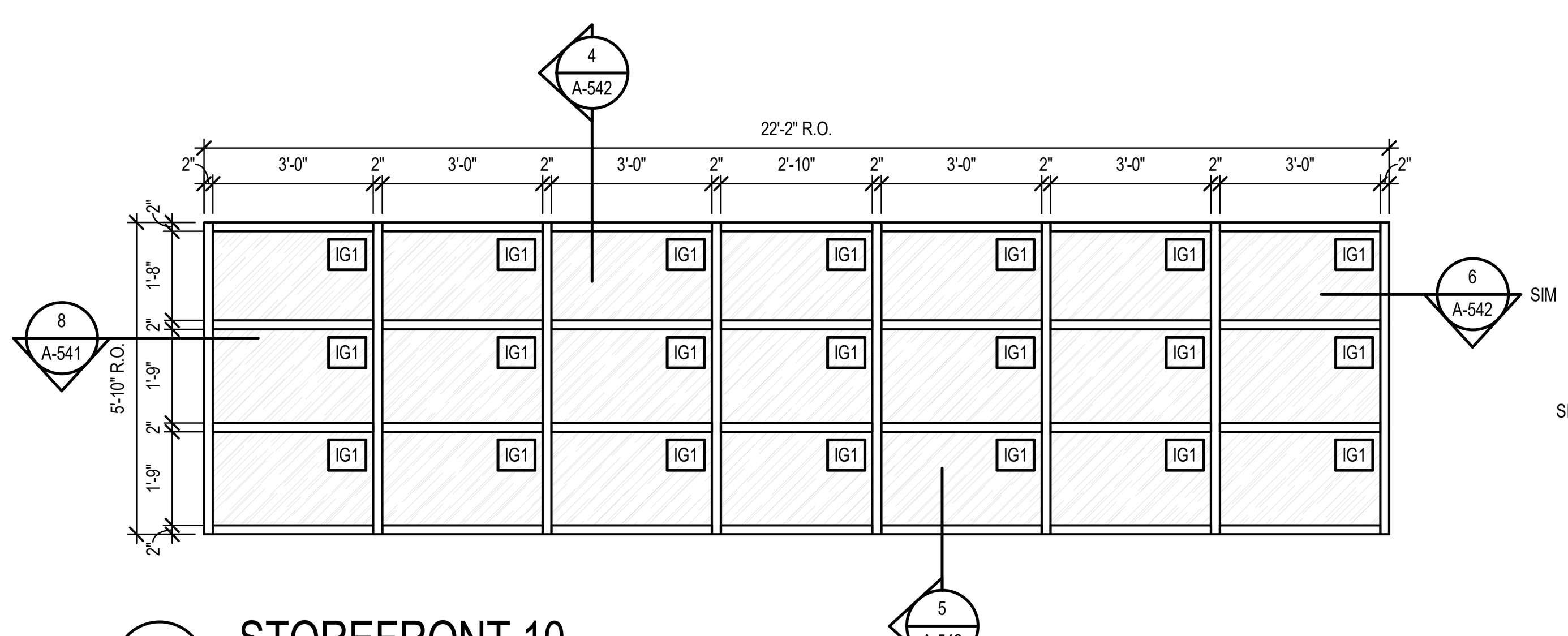
SF7 STOREFRONT 7
3/8" = 1'-0"



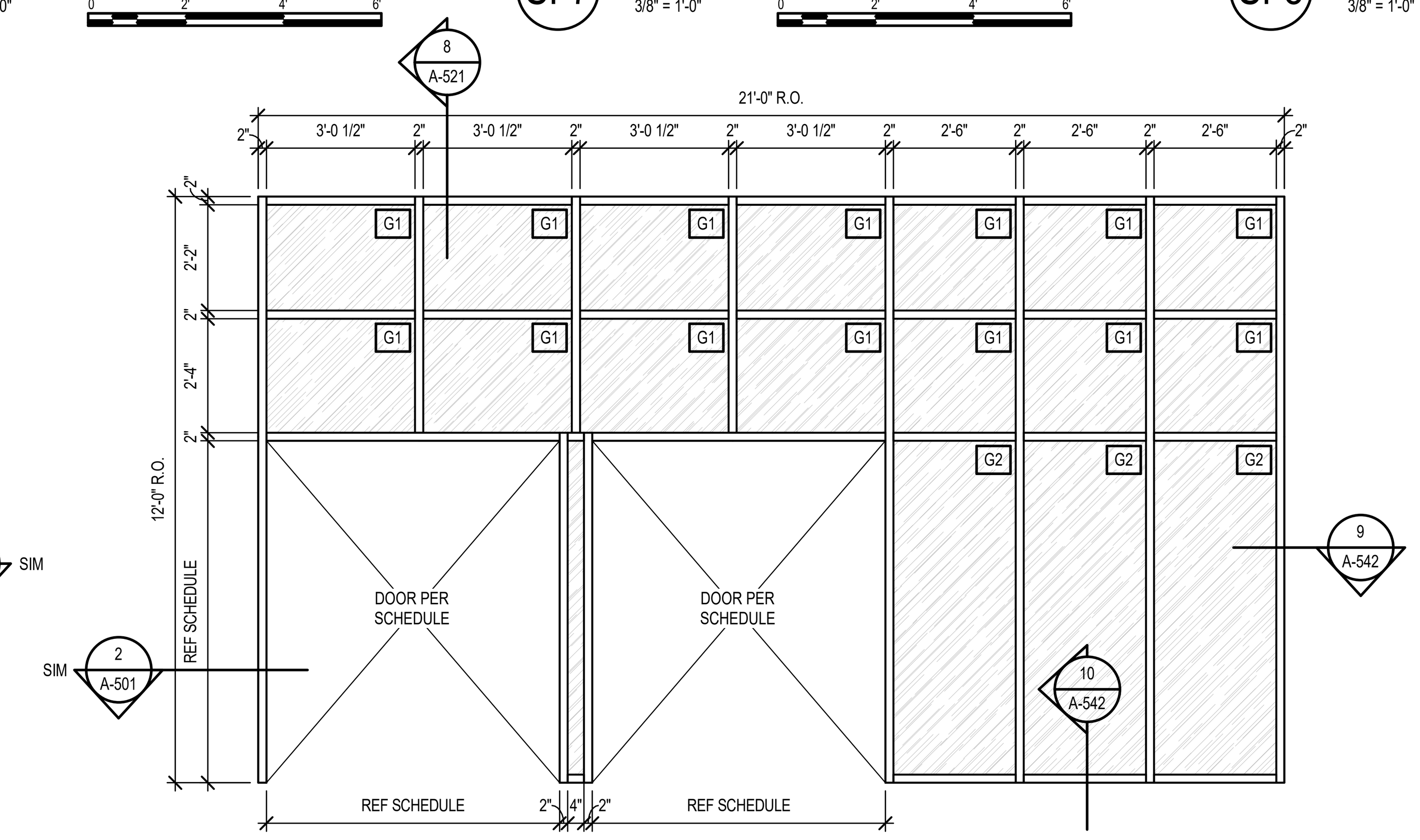
SF8 STOREFRONT 8
3/8" = 1'-0"



SF9 STOREFRONT 9
3/8" = 1'-0"



SF10 STOREFRONT 10
3/8" = 1'-0"



SF11 STOREFRONT 11
3/8" = 1'-0"

GLMVArchitecture

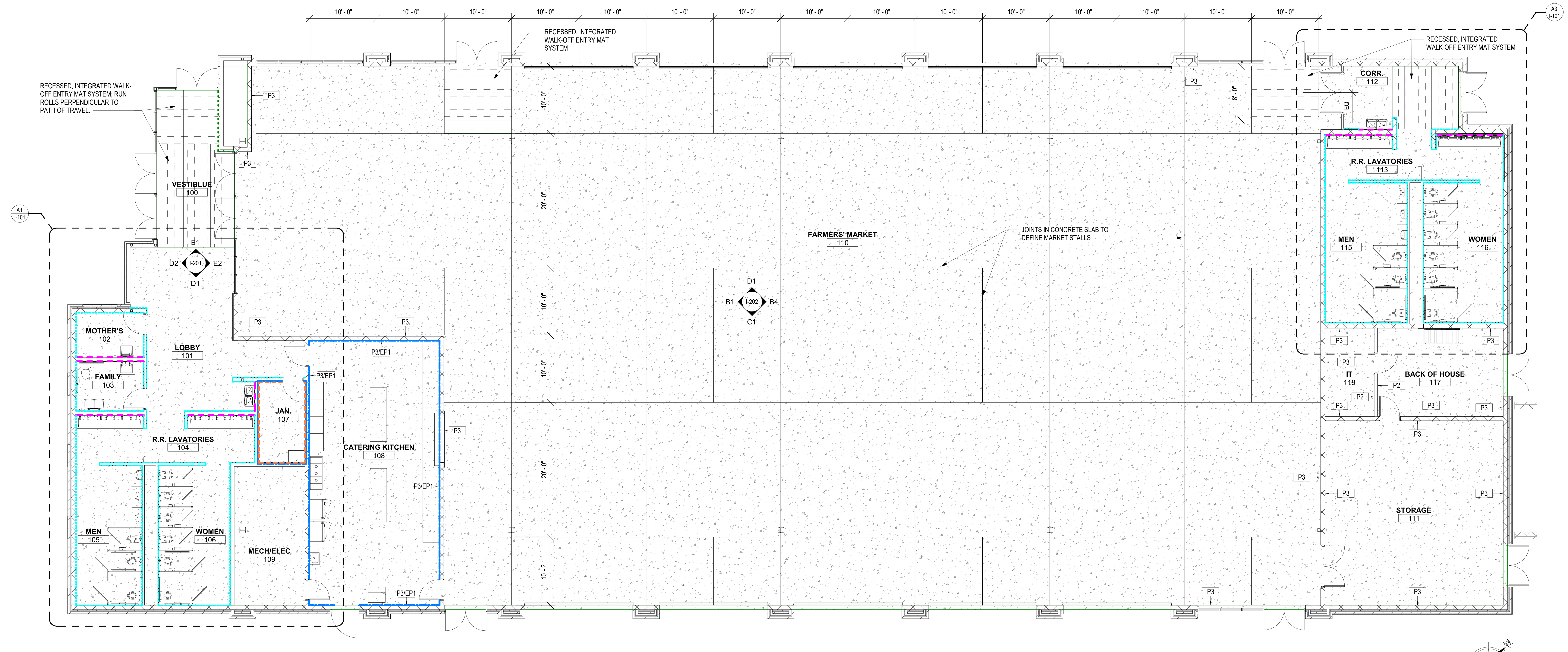
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	DRWN
CHECKED BY:	CHKD

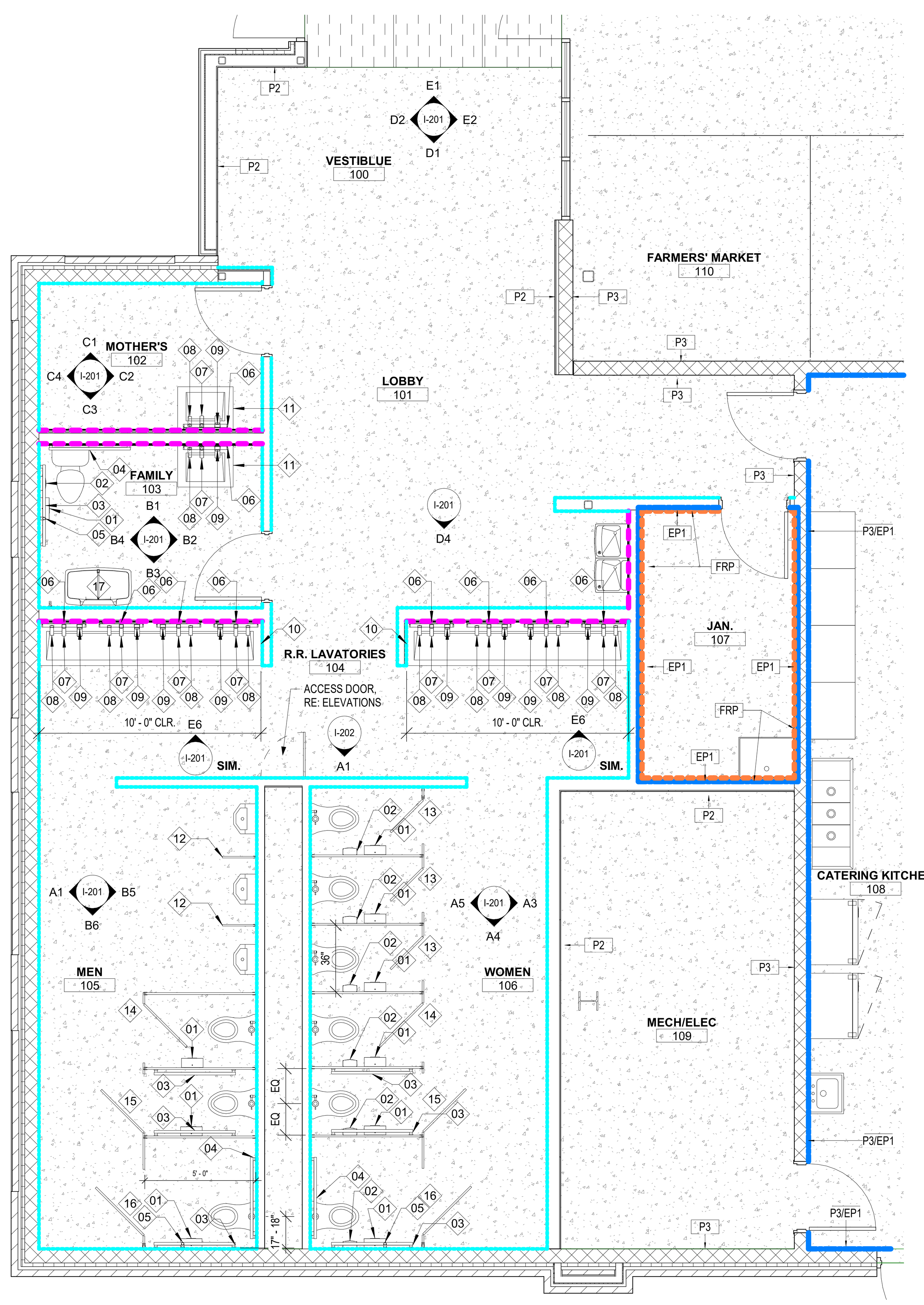
DOOR AND STOREFRONT SCHEDULE

A-611

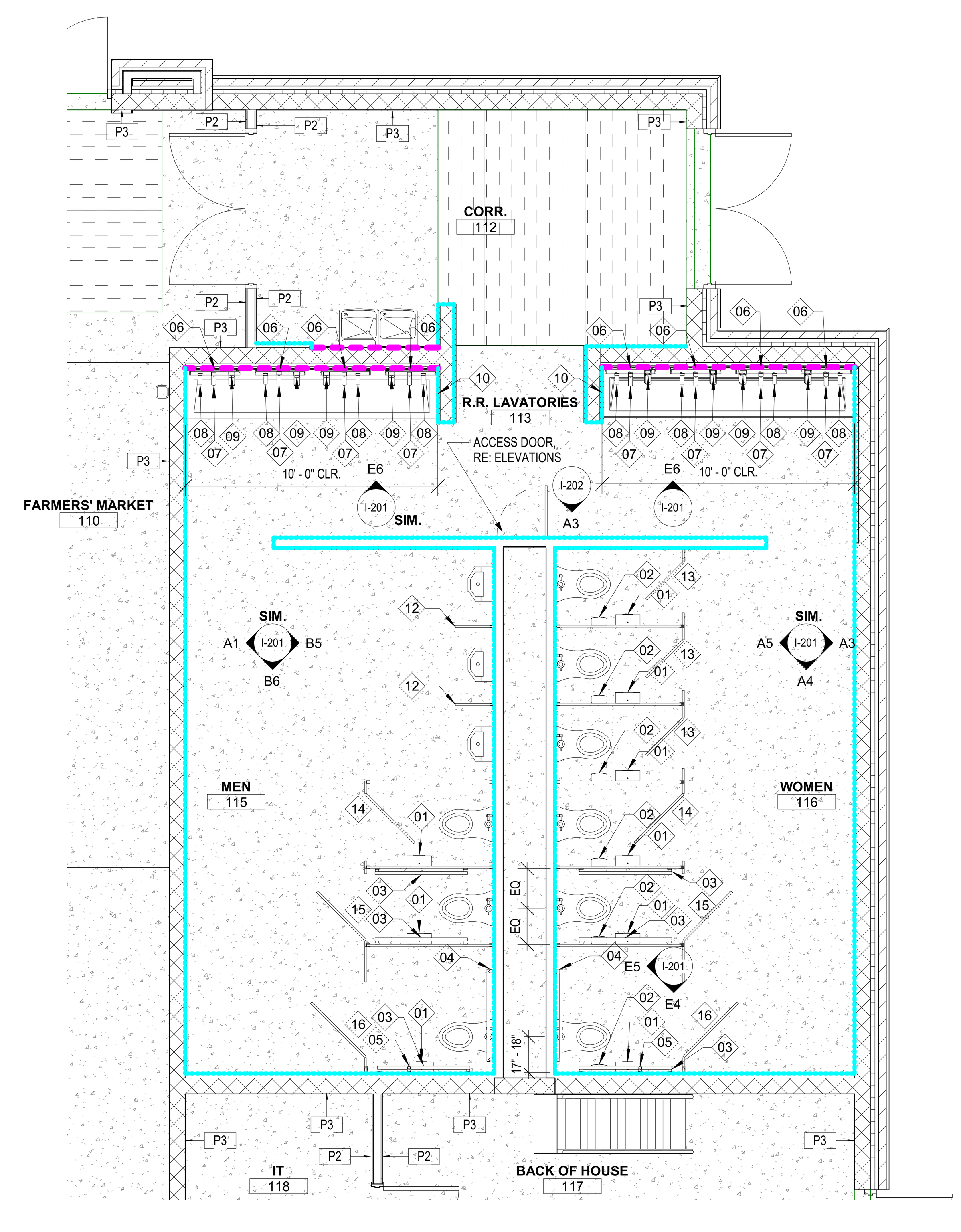
PLOT DATE: 10/31/2023 9:11:19 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMOW-Single Story.rvt



D1 OVERALL FINISH PLAN
1/8" = 1'-0"



A1 SW RESTROOM FINISH PLAN
1/4" = 1'-0"



A3 NE RESTROOM FINISH PLAN
1/4" = 1'-0"

GENERAL NOTES: FLOOR FINISH PLANS

1. RE: ARCHITECTURAL SHEETS FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FINISH LEGEND, FINISH SCHEDULE, AND FLOOR FINISH PLANS FOR SPECIFIC FLOOR FINISH INFORMATION AND LOCATIONS.
3. FLOOR FINISHES SHOWN ARE FOR ACCENT CLARIFICATION ONLY. RE: FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
4. INSTALL TRANSITION STRIPS AT ALL FLOOR FINISH MATERIAL CHANGES, UNLESS NOTED OTHERWISE.
5. RE: FINISH DETAILS SHEET FOR ADDITIONAL FINISH AND FLOOR TRANSITION CONDITIONS.
6. FLOOR FINISH PATTERN SHALL BE CENTERED IN ROOM, UNLESS NOTED OTHERWISE.
7. ALIGN ALL WALL TILE JOINTS WITH FLOOR TILE JOINTS, UNLESS NOTED OR SHOWN OTHERWISE.
8. ALL CLOSETS & ALCOVES W/OUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FLOOR FINISHES AS ADJOINING SPACES.
9. FLOOR FINISH MATERIAL &/ OR PATTERN SHALL BE INSTALLED UNDER TOE KICKS OF CASEWORK/ MILLWORK, UNDER OPEN COUNTERTOPS, & UNDER EQUIPMENT.
10. FLOOR MATERIAL / COLOR TRANSITIONS TO ALIGN WITH ROOM SIDE OF DOOR STOP, UNLESS NOTED OTHERWISE.

WALL FINISH / WALL PROTECTION

1. RE: ARCHITECTURAL SHEETS FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FINISH LEGEND & FINISH SCHEDULE FOR SPECIFIC FINISH INFORMATION & LOCATIONS.
3. CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING FOR WALL PROTECTION ATTACHMENT. THIS INCLUDES, BUT IS NOT LIMITED TO: HANDRAILS, TV MONITORS, BATHROOM ACCESSORIES, FIRE EXTINGUISHERS AND EQUIPMENT. RE: ROUGH CARPENTRY SPECIFICATION SECTION FOR CLARIFICATION.
4. CONTRACTOR SHALL PROVIDE MANUFACTURER'S STANDARD ACCESSORY MOLDING OR TRIM FOR WALL PROTECTION ITEMS, UNLESS NOTED OTHERWISE.
5. IF WALL IS LESS THAN 18" WIDE DO NOT PROVIDE HANDRAIL. HANDRAILS SHOULD STOP APPROXIMATELY 3" FROM THE OPEN SWING OF A DOOR. HANDRAILS SHOULD STOP APPROXIMATELY 3" FROM A CORNER GUARD.

INTERIOR FINISHES

1. RE: ARCHITECTURAL SHEETS FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: ARCHITECTURAL SHEETS FOR ACCESSIBILITY GUIDELINES.
3. RE: I-SHEETS FOR ADDITIONAL CEILING, WALL, & FLOOR FINISH INFORMATION.
4. HOLLOW METAL FRAMES SHALL RECEIVE SEMI-GLOSS FINISH. WHERE WALL COLOR IS DIFFERENT ON EACH SIDE OF THE HOLLOW METAL FRAME, PAINT FRAME TO MATCH CORRIDOR WALL, UNLESS NOTED OR SHOWN OTHERWISE.
5. CONTINUE WALL FINISH AS SCHEDULED BEHIND EQUIPMENT.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CASEWORK FABRICATION AND INSTALLATION.
7. ALL EXPOSED CASEWORK SURFACES SHALL BE FINISHED PLASTIC LAMINATE AS SCHEDULED, UNLESS NOTED OTHERWISE (U.N.O.)
8. ALL PLASTIC LAMINATE DOOR AND DRAWERS TO RECEIVE 1MM PVC EDGEBAND AND ALL COUNTERTOPS TO RECEIVE 3MM PVC EDGEBANDING.
9. ALL BACKSPLASH MATERIAL SHALL MATCH COUNTERTOP MATERIAL.
10. WHERE TWO MODULAR TILES (PORCELAIN, MARBLE, OR QUARRY) OF VARYING THICKNESSES MEET, THE SETTING BED FOR THE THINNER TILE SHALL BE BUILT UP TO ENSURE THAT THE FACES OF THE DIFFERENT TILES ARE FLUSH.
11. TRANSITION ALL WALL FINISHES/COLOR CHANGES AT INSIDE CORNERS, UNLESS NOTED OTHERWISE (U.N.O.)
12. TRANSITION WALL BASE AT INSIDE CORNERS, U.N.O.
13. INSTALL METAL TRANSITION STRIP WHERE WALL TILE MEETS PAINTED GYP. BD. WALL IN ALL VERTICAL AND/ OR HORIZONTAL CONDITIONS, UNLESS NOTED OTHERWISE (U.N.O.)

CASEWORK

1. RE: FINISH LEGEND AND FINISH SCHEDULE FOR SPECIFIC FINISH INFORMATION AND LOCATIONS
2. ALL MILLWORK / CASEWORK CONSTRUCTION SHALL MEET AWI PREMIUM STANDARDS, UNLESS NOTED OR SPECIFIED OTHERWISE.
3. ALL EXPOSED MILLWORK / CASEWORK SURFACES SHALL BE FINISHED W/ PLASTIC LAMINATE TO MATCH ADJACENT PLASTIC LAMINATE SURFACES, UNLESS NOTED OTHERWISE.
4. ALL CASEWORK INTERIORS SHALL BE WHITE MELAMINE, UNLESS NOTED OTHERWISE.
5. ALL FILLER PANELS SHALL BE 1-1/2 INCH WIDE MINIMUM, FINISHED TO MATCH ADJACENT FINISH SURFACES, AND SCRIBED TO FIT ADJACENT WALL, UNLESS NOTED OTHERWISE.
6. ALL BACKSPLASH FINISHES SHALL MATCH COUNTERTOP MATERIAL AND FINISH, UNLESS NOTED OTHERWISE. PLASTIC LAMINATE SIDE/BACKSPLASHES TO HAVE SELF EDGE LAMINATE, UNLESS NOTED OTHERWISE.
7. CONTRACTOR SHALL APPLY CLEAR MILDEW RESISTANT SILICONE SEALANT WHERE BACKSPLASH MEETS WALL AND COUNTERTOP.
8. THE UNDERSIDE OF COUNTERTOPS WITH KNEE OPENINGS, MUST HAVE A WHITE MELAMINE FINISH, UNLESS NOTED OTHERWISE.
9. WATER AND SUPPLY DRAIN PIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES AND SINKS.

INTERIOR DETAILS

1. RE: ARCHITECTURAL SHEETS FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: INTERIOR ELEVATIONS AND ARCHITECTURAL SHEETS FOR ACCESSIBILITY GUIDELINES FOR MOUNTING HEIGHTS OF FIXTURES AND ACCESSORIES.
3. RE: FINISH LEGEND AND FINISH SCHEDULE FOR SPECIFIC FINISH INFORMATION AND LOCATIONS.
4. RE: FINISH FLOOR PLANS FOR ADDITIONAL WALL FINISH CLARIFICATIONS.
5. RE: I-SHEETS FOR REVEAL AND CONTROL JOINT DETAILS, WALL PROTECTION DETAILS, AND FLOOR TRANSITION / WALL BASE DETAILS.
6. RE: I-SHEETS FOR TOILET ACCESSORY SCHEDULE.
7. PROVIDE GYPSUM BOARD CONTROL JOINTS AT DOOR HEADERS WHERE EXPOSED/FINISHED GYPSUM BOARD EXCEEDS 30 FEET (TYP.), UNLESS SHOWN OTHERWISE. JOINTS TO BE LINED UP WITH BOTH SIDES OF DOOR FRAMES FOR DOORS 4'-0" AND OVER AND ALL DOORS THAT ARE LEAD LINED. CONTROL JOINTS NOT NECESSARY AT WALLS WHERE ACOUSTICAL WALLCOVERING IS SPECIFIED.
8. CONTINUE WALL FINISH AS SCHEDULED BEHIND ALL FURNITURE AND EQUIPMENT, INCLUDING UNDER OPEN COUNTERS.
9. TRANSITION ALL WALL AND BASE FINISHES, AND/ OR COLOR CHANGES AT INSIDE CORNERS, UNLESS NOTED OTHERWISE. CONSULT ARCHITECT FOR CLARIFICATION, IF NECESSARY.
10. CONTINUE WALL BASE AT ALL WALLS, FURRED OUT COLUMNS & COLUMN COVERS, AND AT ALL CASEWORK TOE KICKS, SIDE PANELS, AND UNDER OPEN COUNTERS, UNLESS NOTED OTHERWISE.
11. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO MILLWORK/ CASEWORK FABRICATION & INSTALLATION.
12. CONTRACTOR SHALL PROVIDE & INSTALL GROMMETS AT 48" O.C. MAX. AT ALL WORK STATIONS WITH OPEN KNEE SPACE. COORDINATE LOCATIONS DIRECTLY WITH ELECTRICAL/DATA DRAWINGS FOR OUTLET LOCATIONS. COLOR TO BE SELECTED BY ARCHITECT.
13. CONTRACTOR SHALL PROVIDE COUNTERTOP BRACKETS AT OPEN KNEE SPACES WIDER THAN 42" (TYP.). CENTER IN OPEN AREA AND PAINT TO MATCH WALL COLOR, UNLESS NOTED OR SHOWN OTHERWISE.
14. ALIGN ALL WALL TILE JOINTS WITH FLOOR TILE JOINTS, UNLESS NOTED OR SHOWN OTHERWISE.
15. RE: EQUIPMENT DRAWINGS & SPECS. FOR EQUIPMENT ITEMS SHOWN DASHED, PROVIDED BY EQUIP. CONSULTANT AND/ OR SUPPLIED BY OWNER. COORDINATE WITH OTHER TRADES AS NECESSARY.
16. MECH. & ELEC. SYMBOLS AND OUTLETS ARE SHOWN FOR REFERENCE ONLY. COORDINATE LOCATIONS WITH MEP DRAWINGS. CONSULT ARCHITECT FOR CLARIFICATION, IF NECESSARY.

LEGENDS

FINISH LEGEND	
(blue dash line)	EPOXY PAINT (EP1)
(magenta dash line)	WALL TILE (T1)
(cyan dotted line)	WALL TILE (T2)
(orange dash line)	WALL PROTECTION (FRP)
(green dotted line)	METAL PANEL (LB2)
(hatch)	WALK-OFF CARPET SYSTEM (C1)
(hatch)	POLISHED / SEALED CONCRETE (PC1)

NOT ALL FINISHES ARE GRAPHICALLY SHOWN . REFER TO FINISH SCHEDULE AND INTERIOR ELEVATIONS FOR SPECIFIC LOCATIONS AND MATERIALS.

GLMV Architecture, Inc.
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#F00364807

SAM COLLINS - ARCHITECT
MO# A-2017002629

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DATE: 11/1/2023 9:17:12 AM

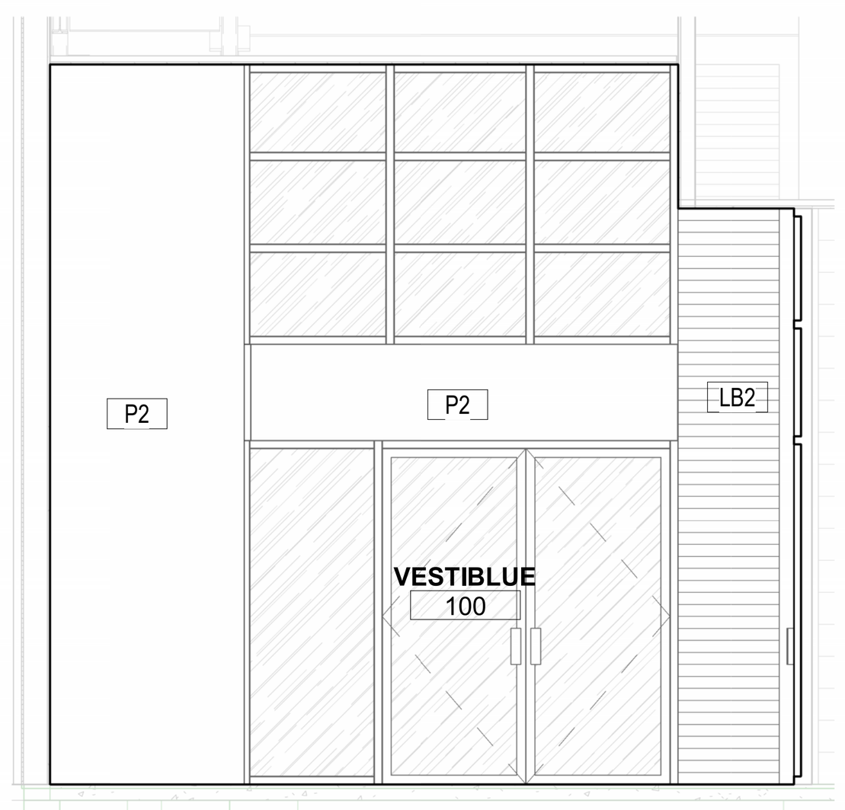
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

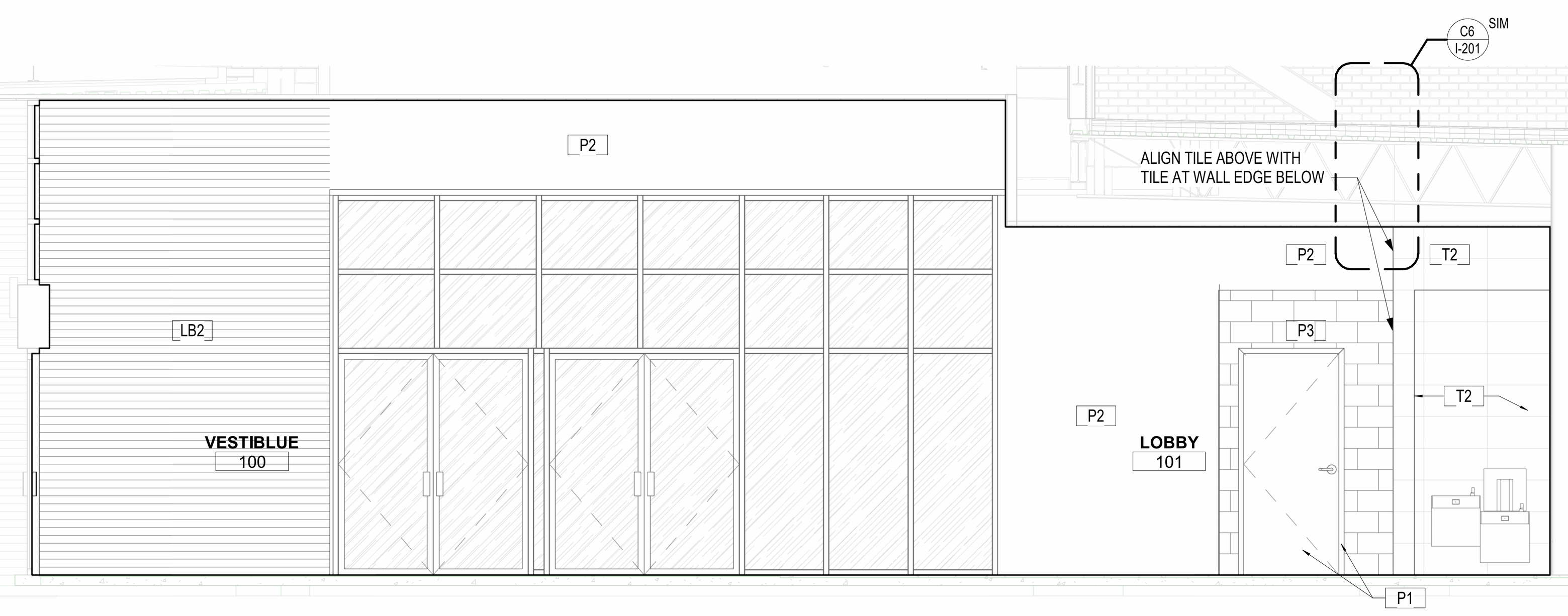
PROJECT NO:	22003
STATUS:	PERMIT SET
DATE:	01 NOVEMBER 2023
DRAWN BY:	CWA
CHECKED BY:	

INTERIOR DESIGN - PLANS & GENERAL NOTES

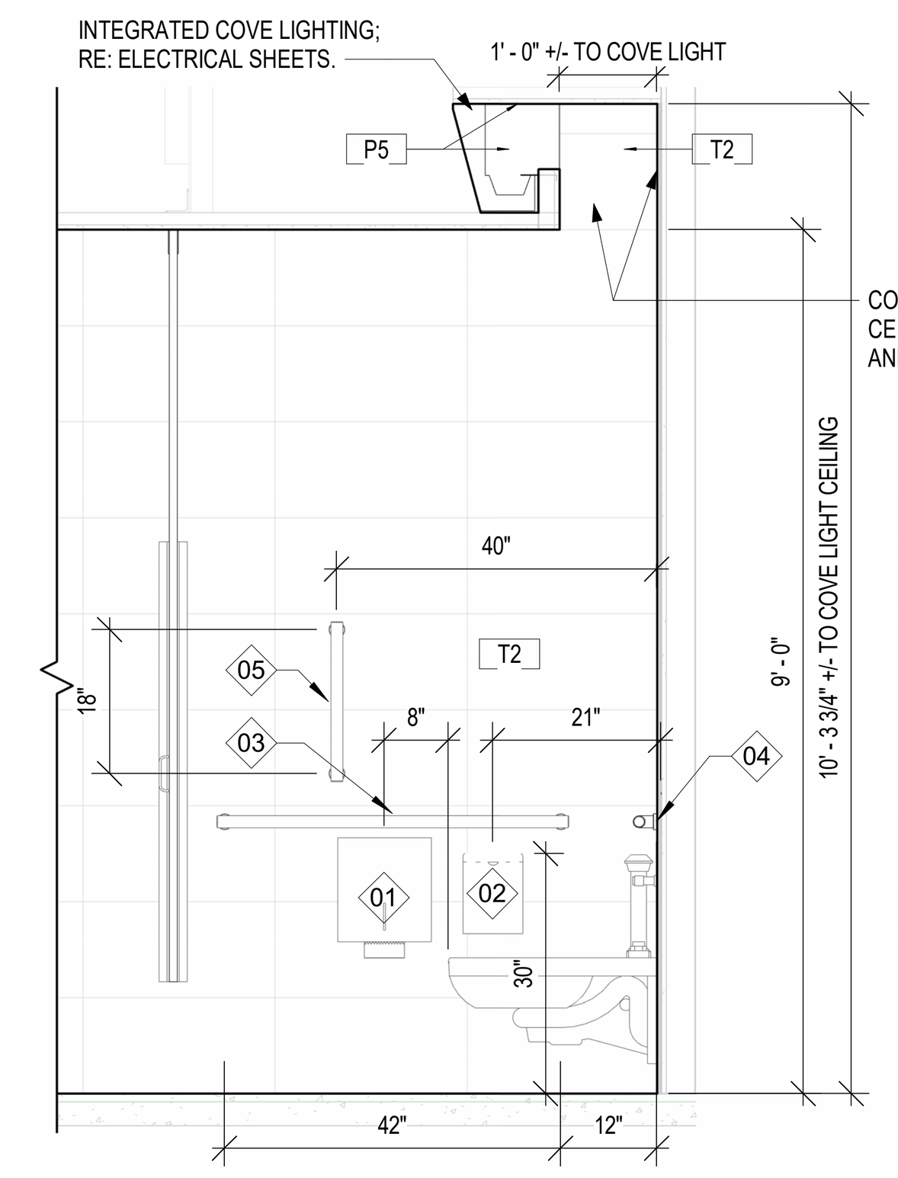
I-101



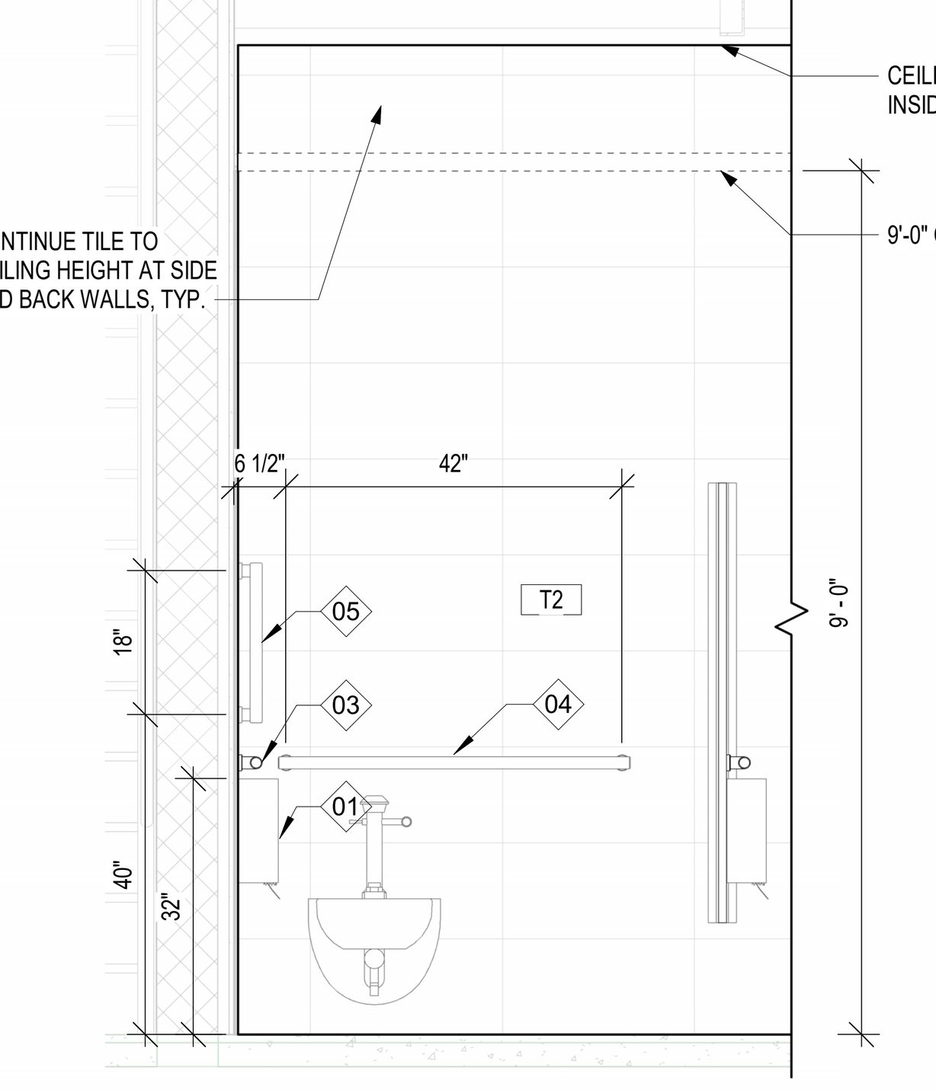
E1 ELEVATION - 100 VESTIBULE NORTH
1/4" = 1'-0"



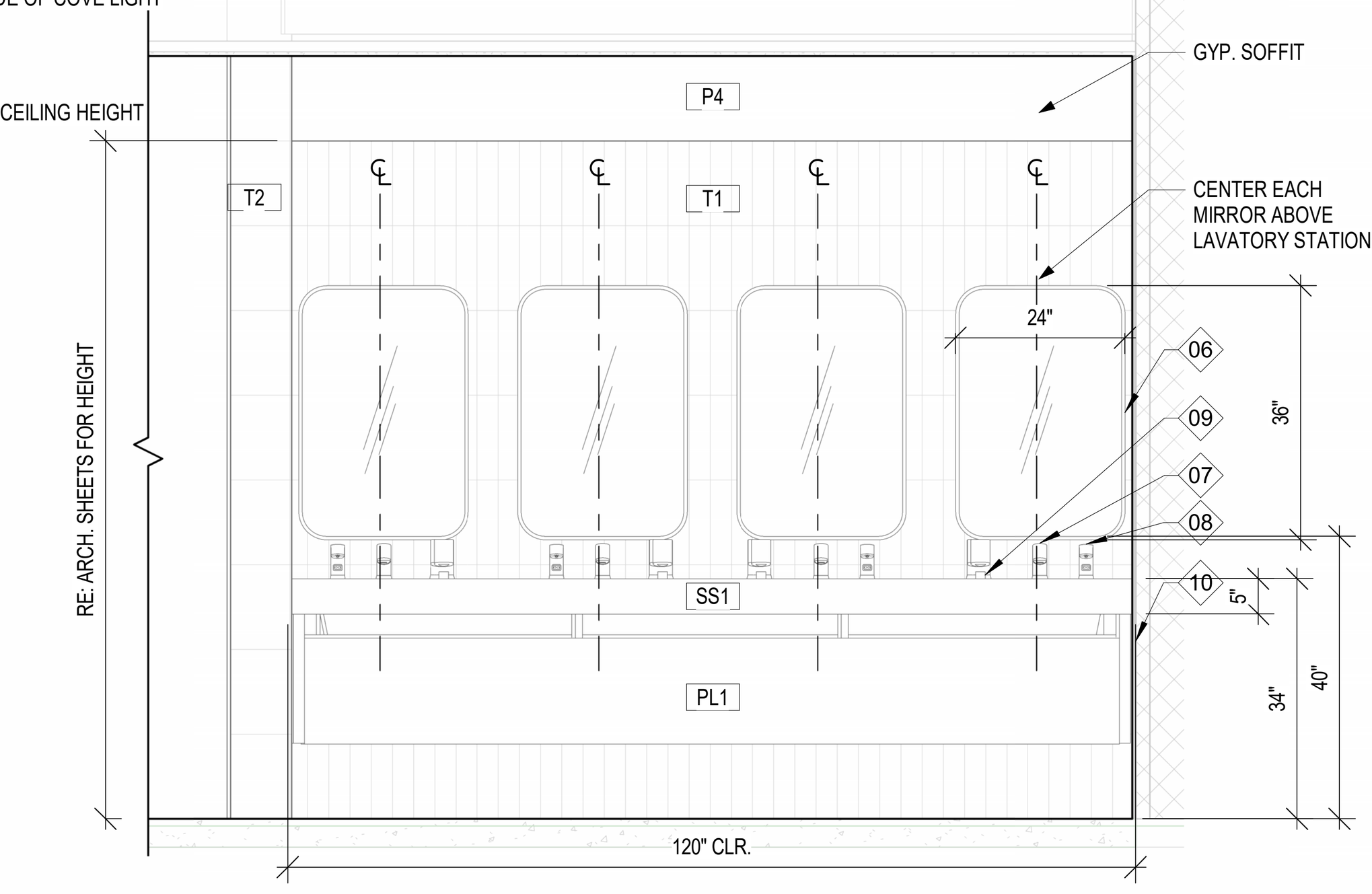
E2 ELEVATION - 100 VESTIBULE EAST
1/4" = 1'-0"



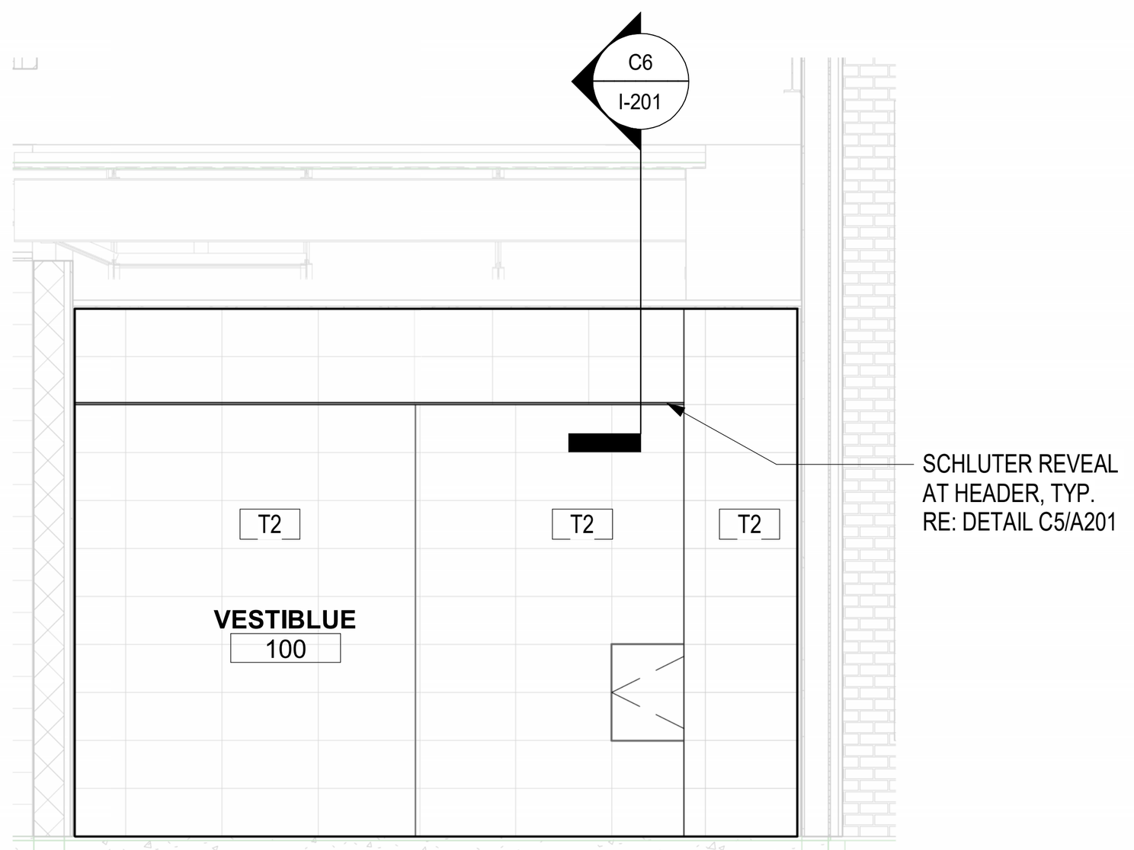
E4 TYP. ADA TOILET ELEVATION A
1/2" = 1'-0"



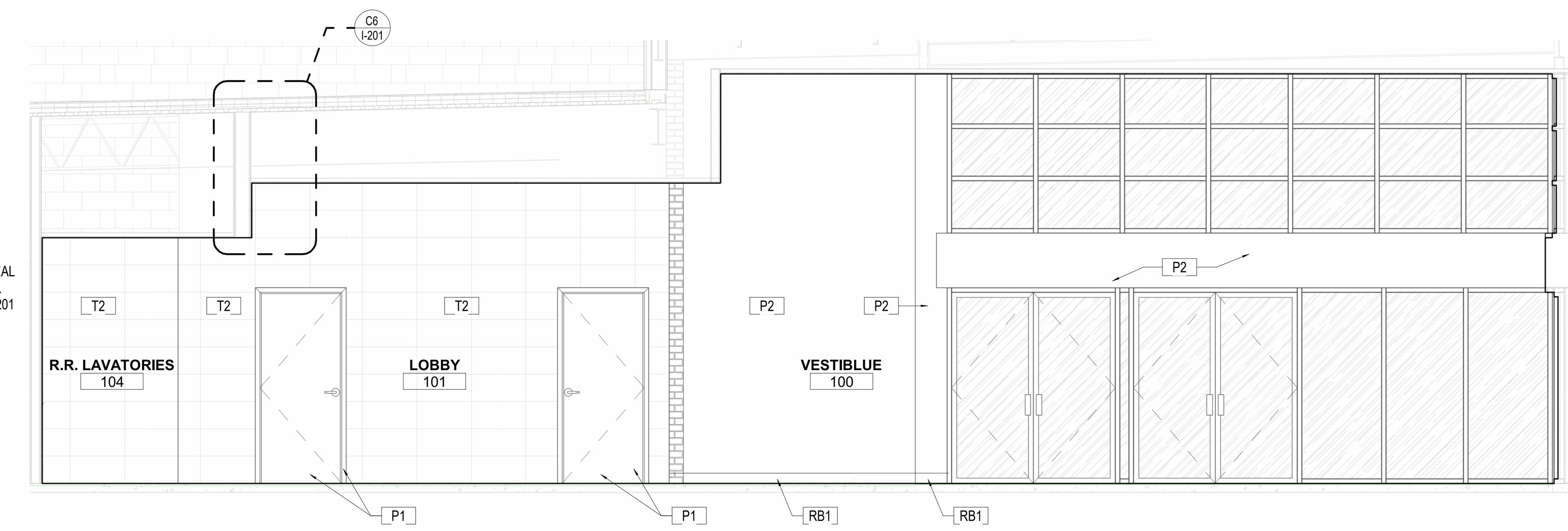
E5 TYP. ADA TOILET ELEVATION B
1/2" = 1'-0"



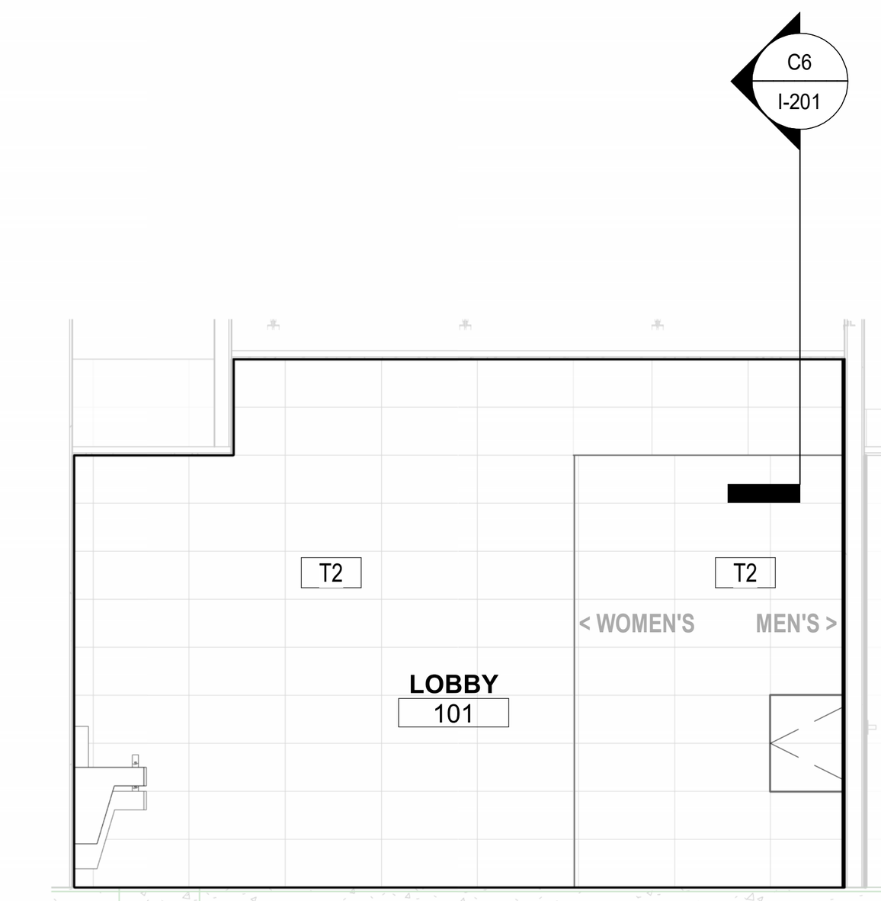
E6 TYP. VANITY ELEVATION
1/2" = 1'-0"



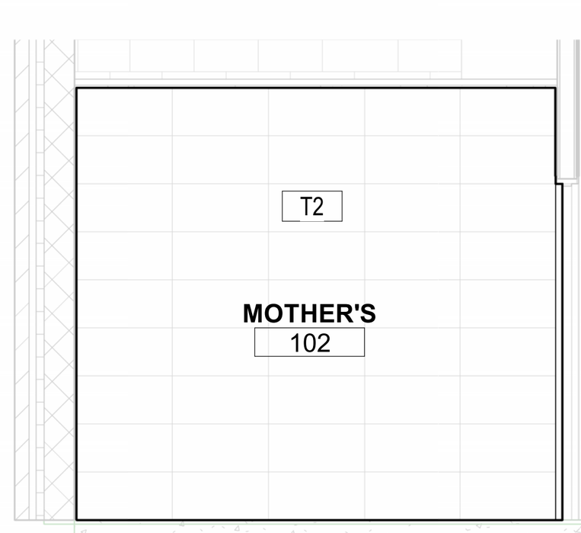
D1 ELEVATION - 100 VESTIBULE SOUTH
1/4" = 1'-0"



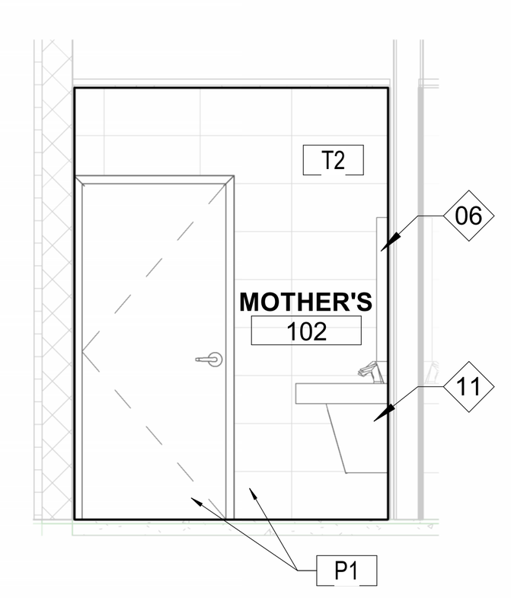
D2 ELEVATION - 100 VESTIBULE WEST
1/4" = 1'-0"



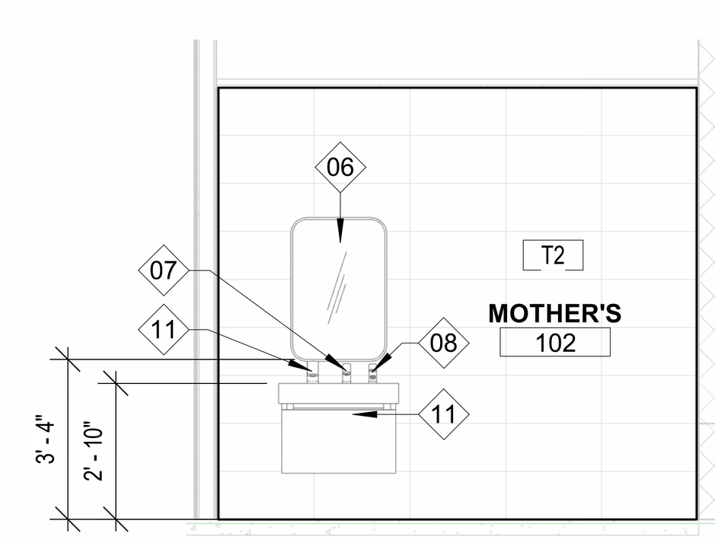
D4 ELEVATION - 101 LOBBY SOUTH
1/4" = 1'-0"



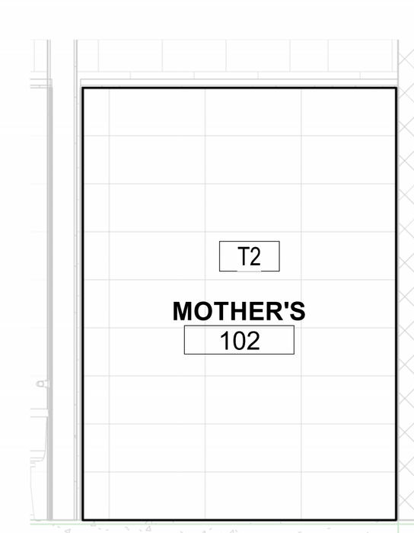
C1 ELEVATION - 102 MOTHER'S NORTH
1/4" = 1'-0"



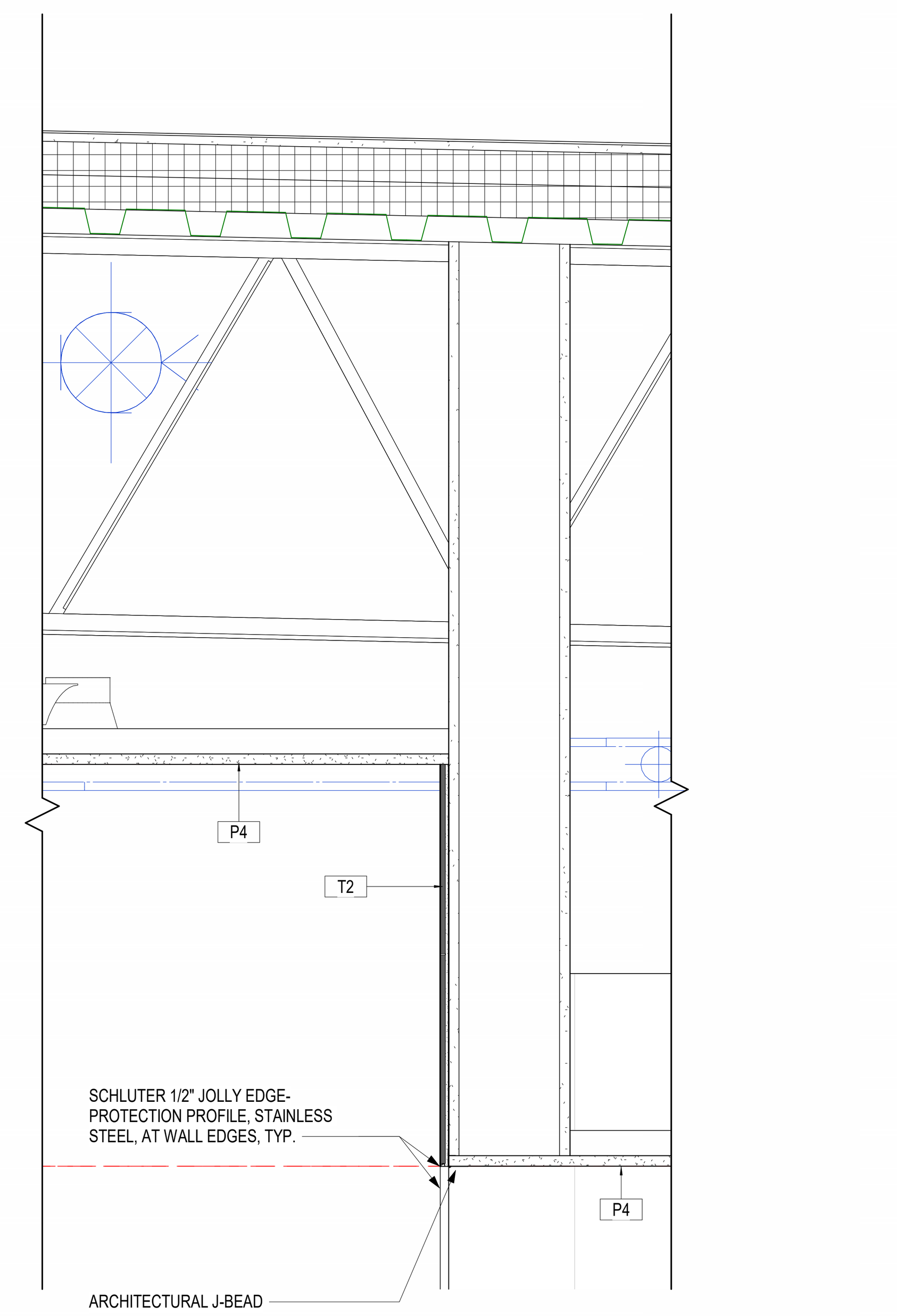
C2 ELEVATION - 102 MOTHER'S EAST
1/4" = 1'-0"



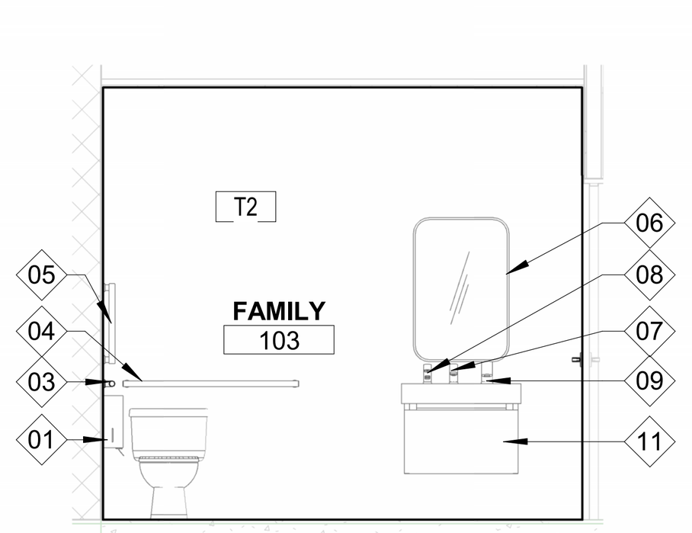
C3 ELEVATION - 102 MOTHER'S SOUTH
1/4" = 1'-0"



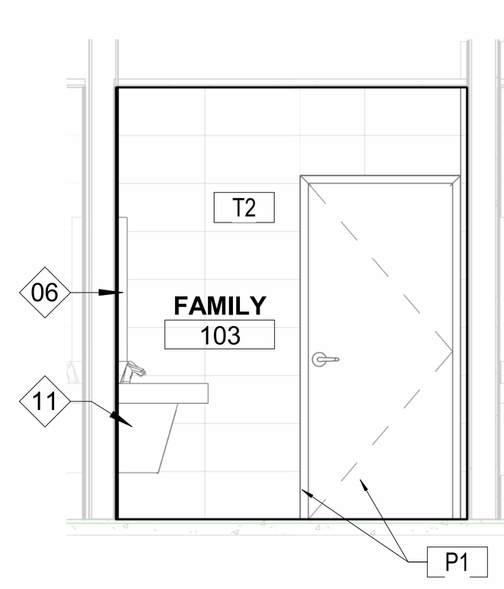
C4 ELEVATION - 102 MOTHER'S WEST
1/4" = 1'-0"



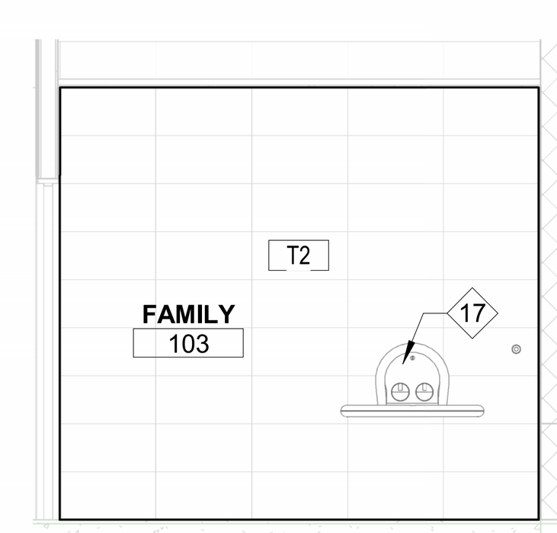
C6 OVERHEAD DETAIL AT TILE HEADER
1 1/2" = 1'-0"



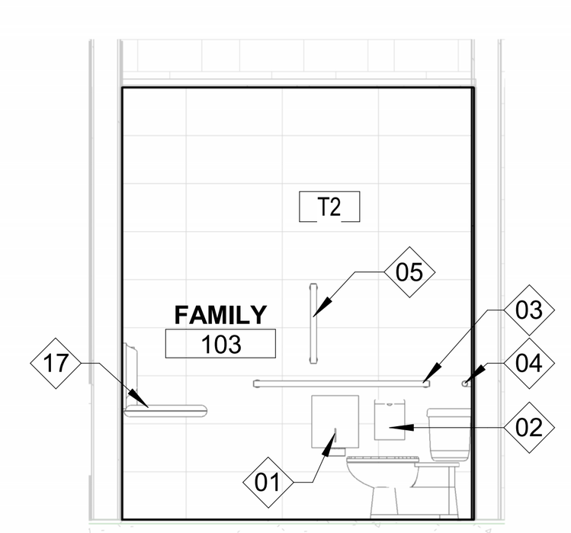
B1 ELEVATION - 103 FAMILY NORTH
1/4" = 1'-0"



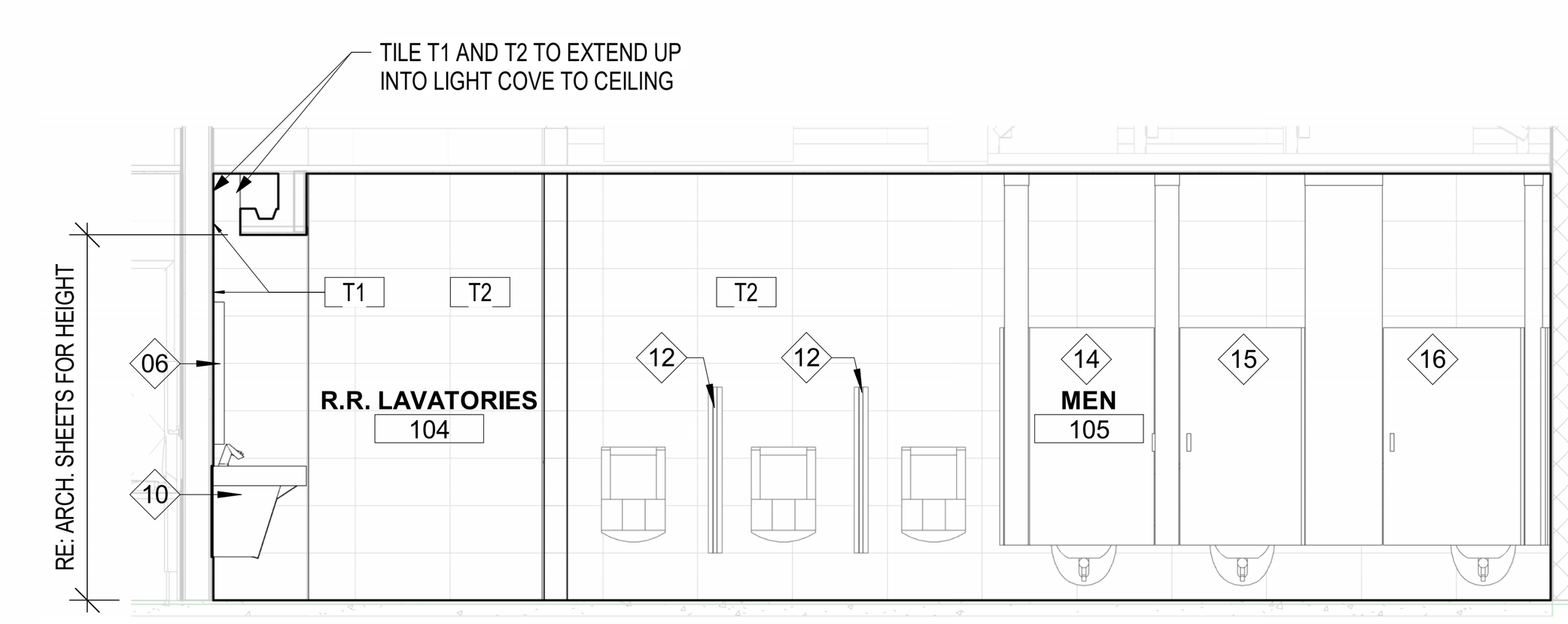
B2 ELEVATION - 103 FAMILY EAST
1/4" = 1'-0"



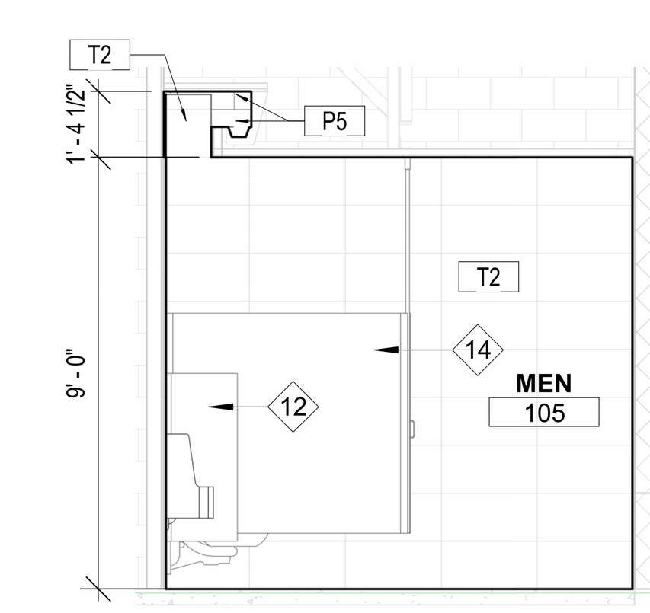
B3 ELEVATION - 103 FAMILY SOUTH
1/4" = 1'-0"



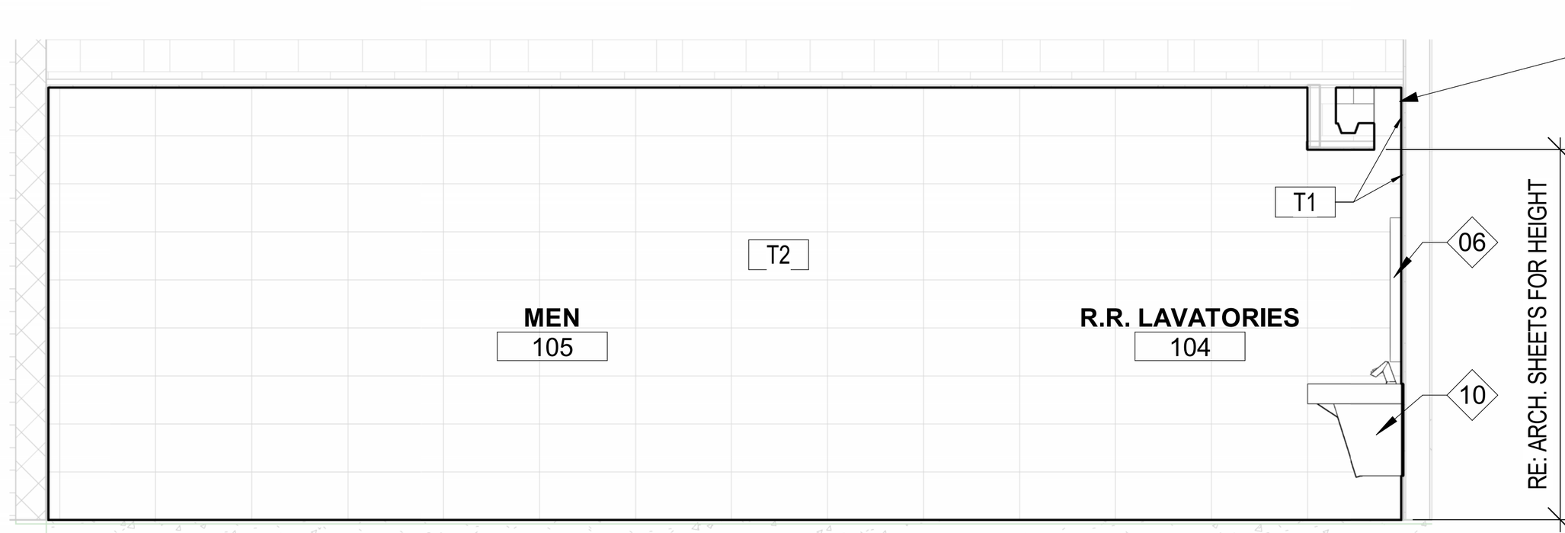
B4 ELEVATION - 103 FAMILY WEST
1/4" = 1'-0"



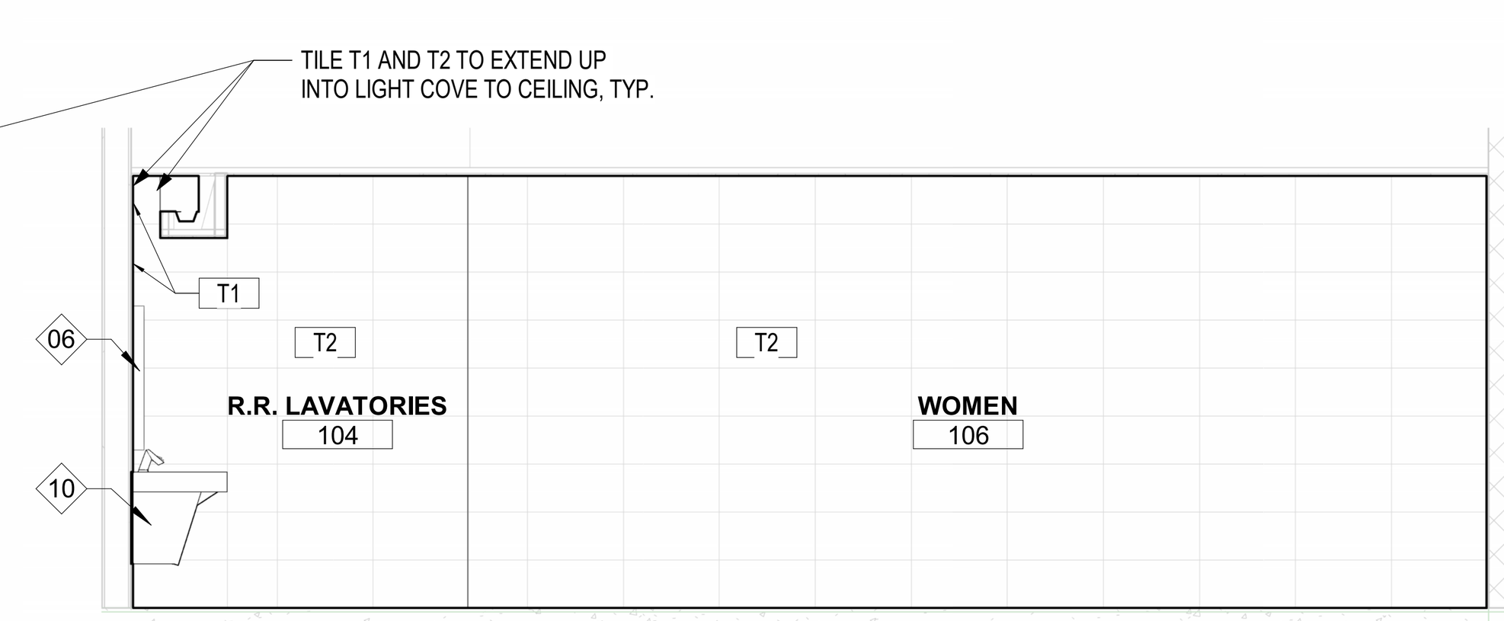
B5 ELEVATION - 105 MEN EAST
1/4" = 1'-0"



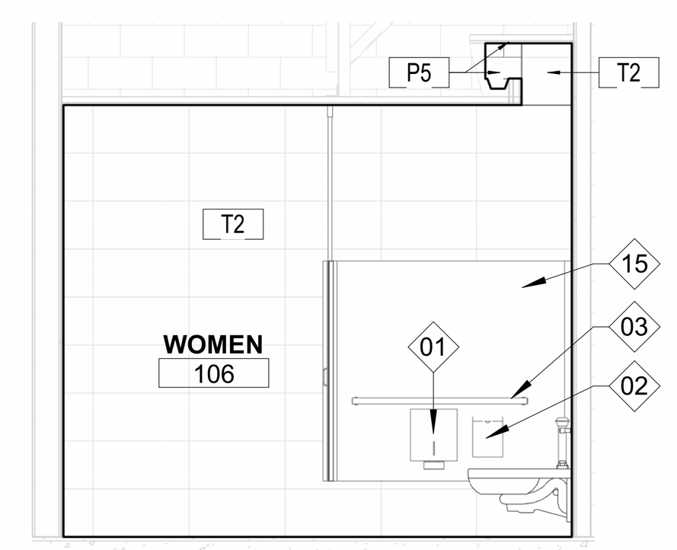
B6 ELEVATION - 105 MEN SOUTH
1/4" = 1'-0"



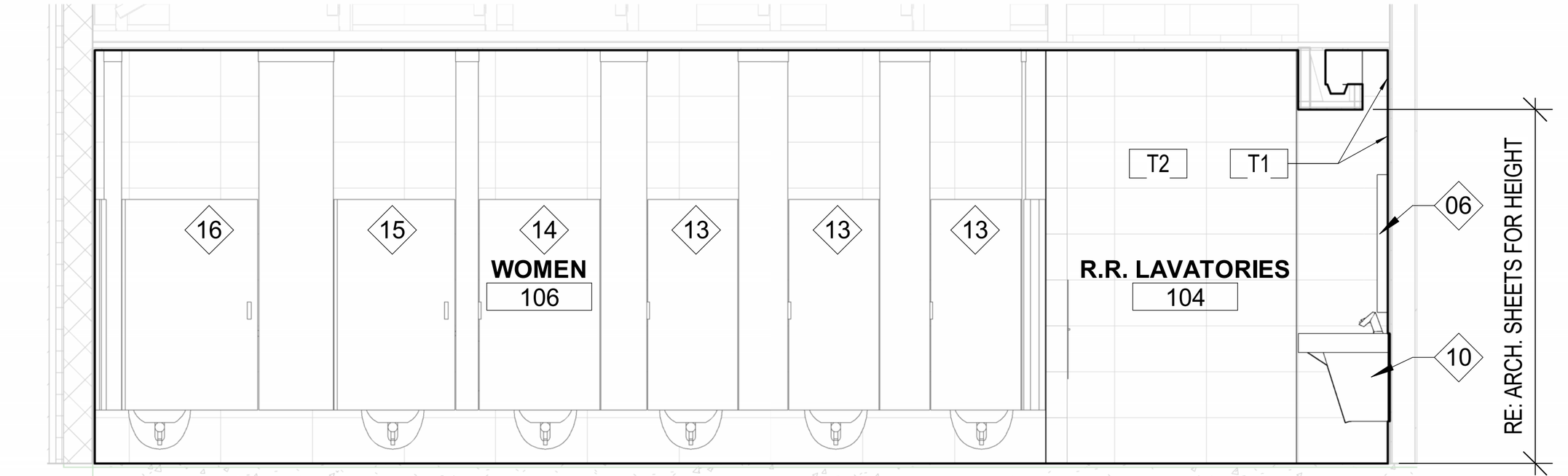
A1 ELEVATION - 105 MEN WEST
1/4" = 1'-0"



A3 ELEVATION - 106 WOMEN EAST
1/4" = 1'-0"



A4 ELEVATION - 106 WOMEN SOUTH
1/4" = 1'-0"



A5 ELEVATION - 106 WOMEN WEST
1/4" = 1'-0"

GLMV Architecture

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Missouri State Certificate of Authority
#F00364807

SAM COLLINS - ARCHITECT
MO# A-2017002629

DATE: 11/1/2023 9:17:24 AM

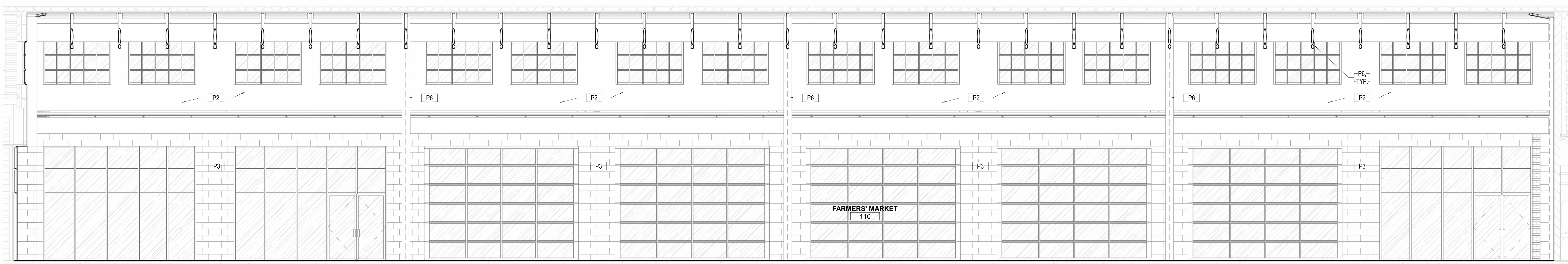
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	22003
STATUS:	PERMIT SET
DATE:	01 NOVEMBER 2023
DRAWN BY:	CWA
CHECKED BY:	

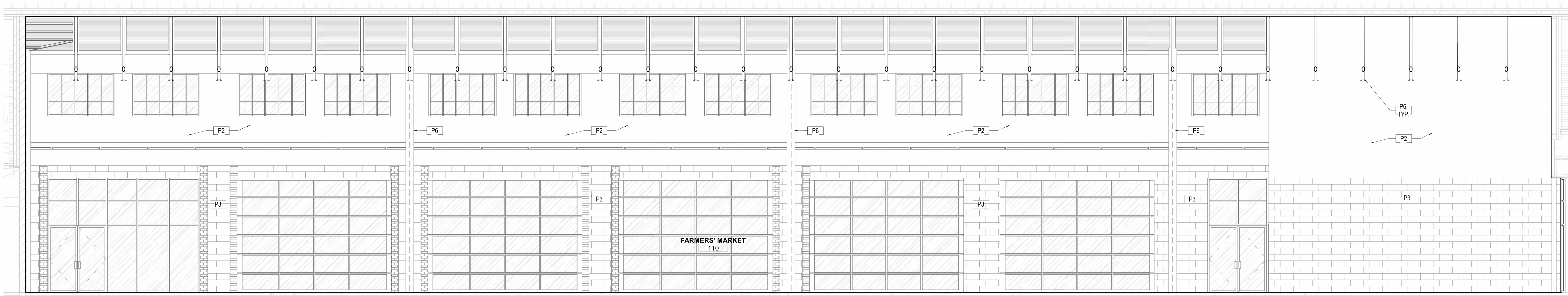
INTERIOR DESIGN - DETAILS & ELEVATIONS

I-201

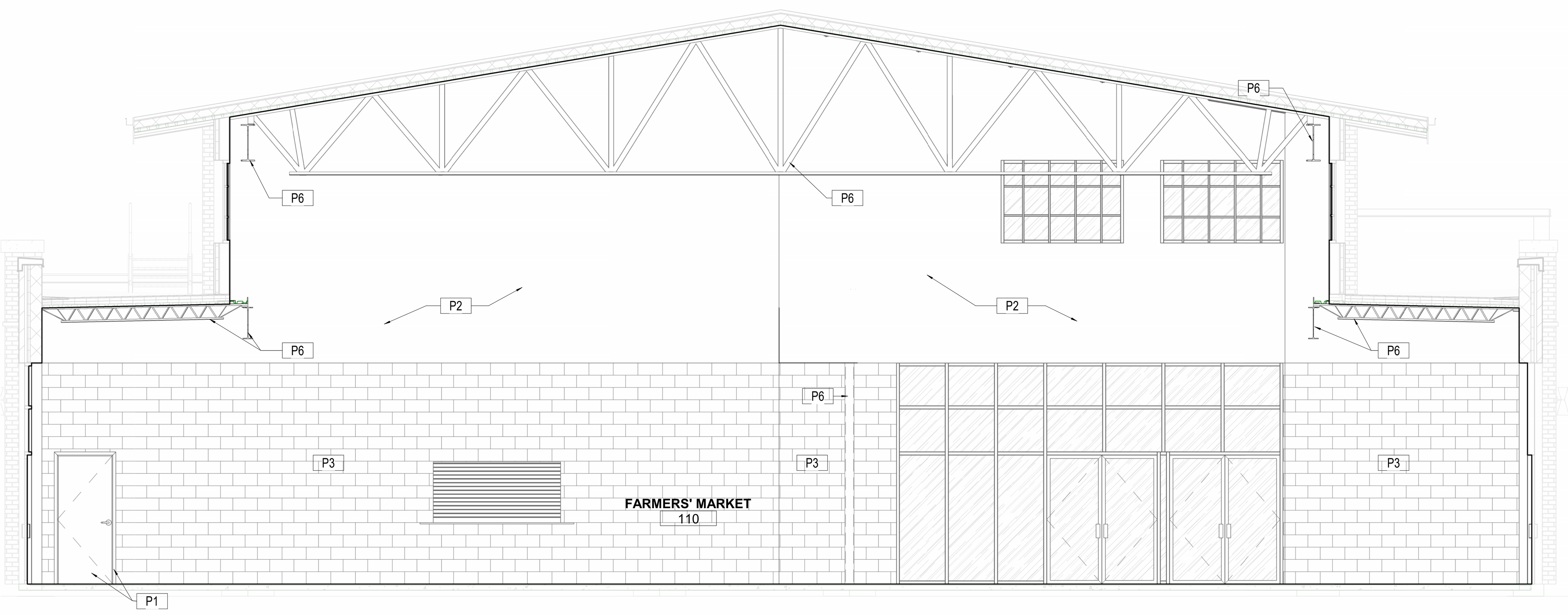
PLOT DATE: 11/1/2023 9:17:24 AM



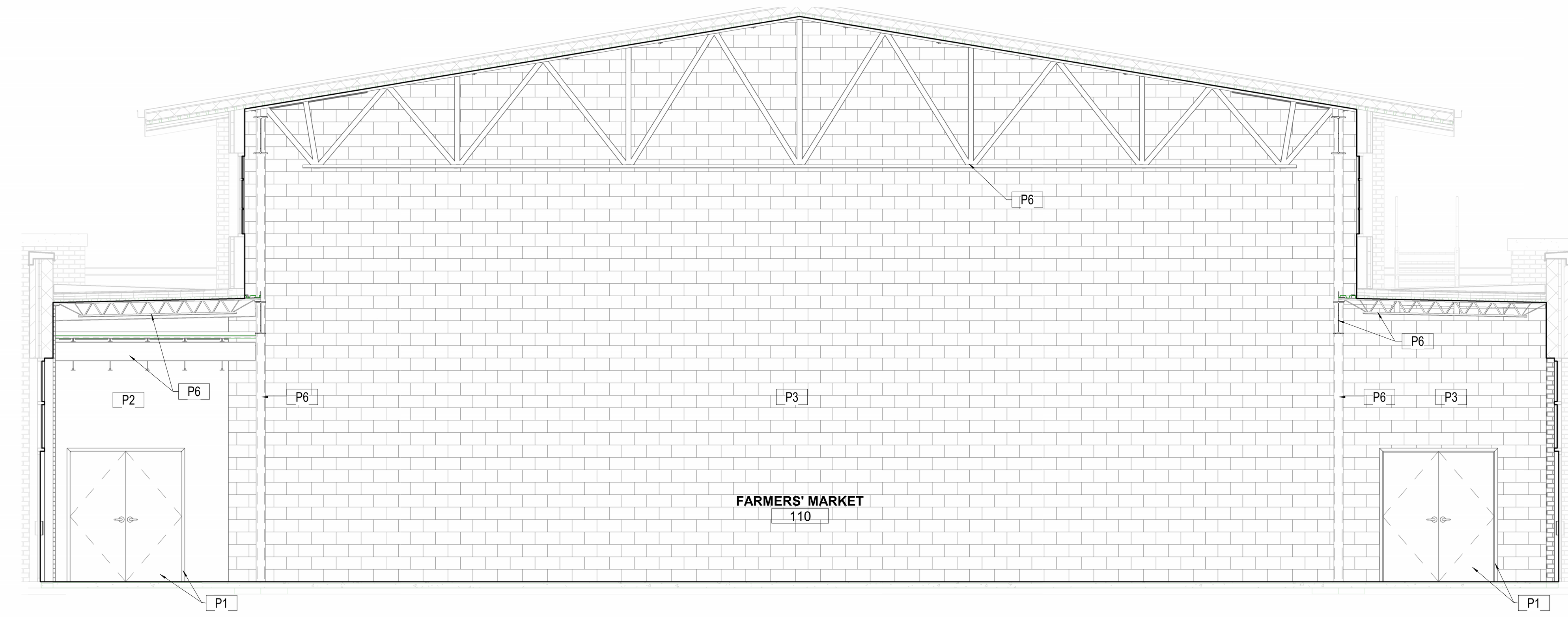
D1 ELEVATION - 110 FARMERS MARKET NORTH
3/16" = 1'-0"



C1 ELEVATION - 110 FARMERS MARKET SOUTH
3/16" = 1'-0"



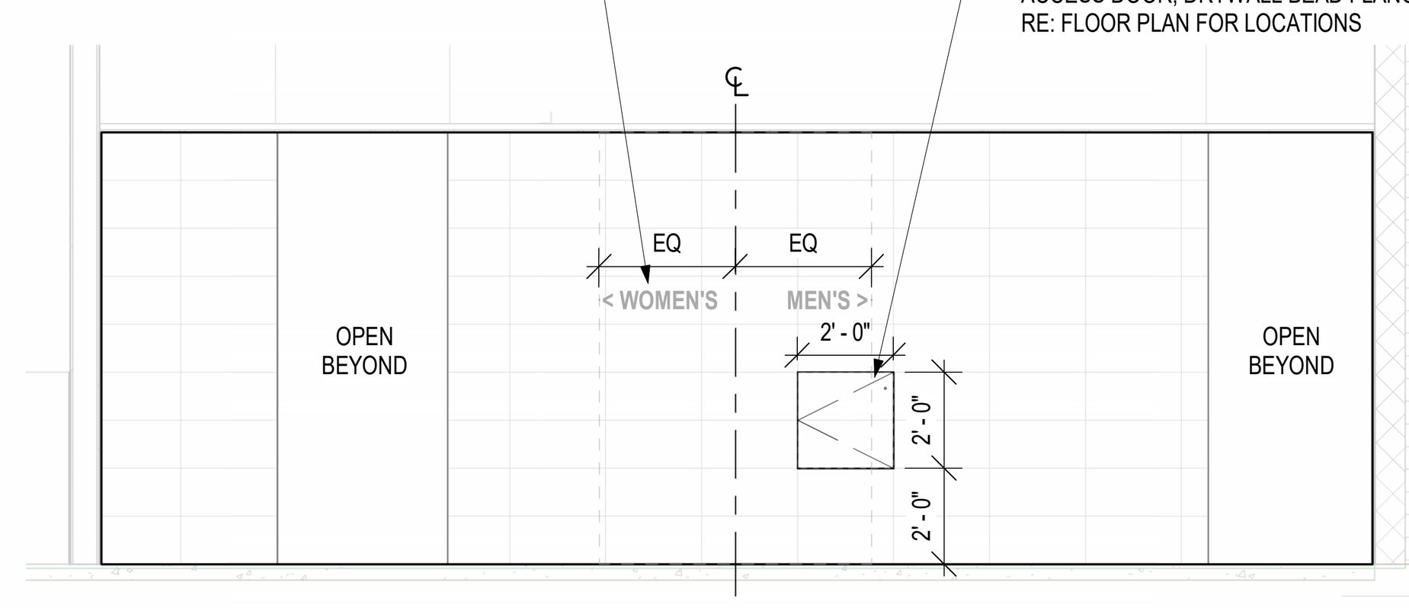
B1 ELEVATION - 110 FARMERS MARKET WEST
3/16" = 1'-0"



B4 ELEVATION - 110 FARMERS MARKET EAST
3/16" = 1'-0"

SIGNAGE CENTERED ON WALL ALIGNED WITH OPENING; DESIGN AND INSTALLATION BY OTHERS.

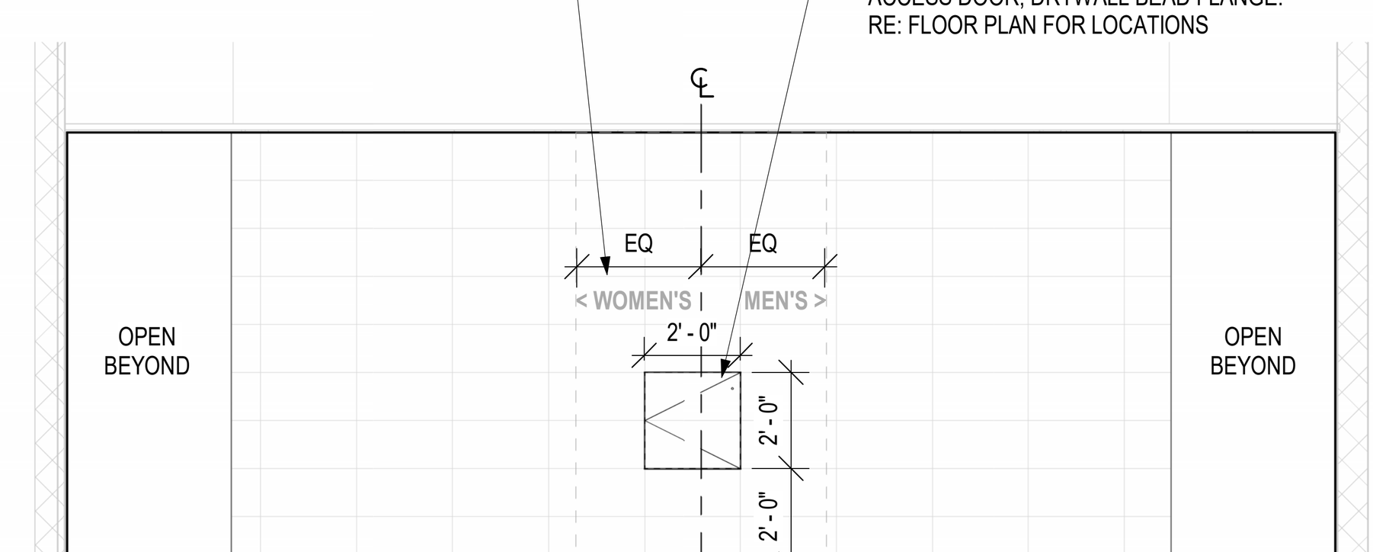
LOCKABLE , TILE-READY ACCESS DOOR, 24"X24", TYP. AT EACH RESTROOM; **BASIS OF DESIGN**: BABCOCK-DAVIS TILE READY ACCESS DOOR, DRYWALL BEAD FLANGE. RE: FLOOR PLAN FOR LOCATIONS



A1 ELEVATION - 104 RR LAVATORIES
1/4" = 1'-0"

SIGNAGE CENTERED ON WALL ALIGNED WITH OPENING; DESIGN AND INSTALLATION BY OTHERS.

LOCKABLE , TILE-READY ACCESS DOOR, 24"X24", TYP. AT EACH RESTROOM; **BASIS OF DESIGN**: BABCOCK-DAVIS TILE READY ACCESS DOOR, DRYWALL BEAD FLANGE. RE: FLOOR PLAN FOR LOCATIONS



A3 ELEVATION - 113 RR LAVATORIES
1/4" = 1'-0"

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STATE OF MISSOURI
SAM COLLINS
NUMBER
A-2017002629
ARCHITECT

SAM COLLINS - ARCHITECT
MO# A-2017002629

DATE: 11/1/2023 9:17:36 AM

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

PROJECT NO:	22003
STATUS:	PERMIT SET
DATE:	01 NOVEMBER 2023
DRAWN BY:	CWA
CHECKED BY:	

INTERIOR DESIGN - ELEVATIONS

I-202

ROOM FINISH SCHEDULE

RM. NO.	ROOM NAME	FLOORS: FLOOR	FLOORS: WALL BASE	WALL FINISH: NORTH WALL	WALL FINISH: EAST WALL	WALL FINISH: SOUTH WALL	WALL FINISH: WEST WALL	CEILING FINISH	CASEWORK: COUNTERTOP	CASEWORK: BASE CABINET	CASEWORK: UPPER CABINET	REMARKS
100	VESTIBULE	C1	RB1	LB2	LB2, P2	T2	P2	LB1	-	-	-	
101	LOBBY	PC1, C1	RB1	P2, P3	P2, P3, T1, T2	T2	P2, T2	LB1, P4	-	-	-	
102	MOTHER'S	PC1	-	T2	T2	T1	T2	P4	SS1	PL1	-	2
103	FAMILY	PC1	-	T1	T2	T2	T2	P4	SS1	PL1	-	2
104	R.R. LAVATORIES	PC1	-	T1, T2	T2	T2	T2	P4	SS1	PL1	-	
105	MEN	PC1	-	T2	T2	T2	T2	P4, P5	-	-	-	1
106	WOMEN	PC1	-	T2	T2	T2	T2	P4, P5	-	-	-	1
107	JANITOR	PC1	RB2	EP1, FRP	EP1, FRP	EP1, FRP	EP1, FRP	O.T.S.	-	-	-	4
108	CATERING KITCHEN	PC1	-	EP1	EP1	EP1	EP1	ACT1	?	?	-	
109	MECH/ELEC	PC1	RB2	P2	P3	P3	P2	O.T.S.	-	-	-	
110	FARMERS' MARKET	PC1, C1	-	P3, P2	P3, P2	P3, P2	P3, P2	O.T.S.	-	-	-	
111	STORAGE	PC1	?	P3	P3	P3	P3	ACT1	-	-	-	
112	CORRIDOR	PC1, C1	RB1	P3	P3	T1, T2	P2	O.T.S.	-	-	-	
113	R.R. LAVATORIES	PC1	-	T1, T2	T2	T2	T2	P4	SS1	PL1	-	
114	-										-	
115	MEN	PC1	-	T2	T2	T2	T2	P4, P5	-	-	-	1
116	WOMEN	PC1	-	T2	T2	T2	T2	P4, P5	-	-	-	1
117	BACK OF HOUSE	PC1	?	P3	P3	P3	P2	ACT1	-	-	-	
118	IT	PC1	?	P3	P2	P3	P3	ACT1	-	-	-	

ROOM FINISH SCHEDULE REMARKS:

AREAS WITH MULTIPLE DESIGNATED FINISHES, RE: FINISH FLOOR PLANS & INTERIOR ELEVATIONS FOR ADDITIONAL CLARIFICATION.

1. PROVIDE FULL HEIGHT WALL TILE AT WET WALL, RE: INTERIOR ELEVATIONS.
2. PROVIDE FULL HEIGHT WALL TILE ON ALL WALLS IN ROOM/SPACE, RE: INTERIOR ELEVATIONS.
3. PROVIDE FRP FULL HEIGHT.
4. PROVIDE FRP TO 4'-0" AFF.

FINISH LEGEND

SYMBOL	MATERIAL	MANUFACTURER	TYPE	COLOR	TYP. AREA / REMARKS
FLOOR FINISH					
C1	WALK-OFF ENTRY CARPET SYSTEM - 4'x40'x5/16" ROLL	MATTER SURFACES	ULTRA ENTRY - LOOSE LAY SHALLOW RECESSED	GRAY BASE, CHARCOAL SPLASH INSERTS	VESTIBULE, CORRIDOR 112, FARMERS MARKET, AS NOTED IN PLAN
PC1	POLISHED CONCRETE, HIGH GLOSS	SCOFIELD	LITHOCHROME, HIGH GLOSS	GRAY / NATURAL FINISH	ALL FLOORS, U.N.O.
WALL BASE					
RB1	RUBBER WALL BASE	JOHNSONITE	MILLWORK WALL BASE - 4.5"H MANDALAY - MW-XX-H	TG1 SNOWBOUND W	ALL GYPSUM WALLS AT VESTIBULE, LOBBY, CORRIDOR
RB2	RUBBER WALL BASE	JOHNSONITE	DURACOVE THERMOPLASTIC RUBBER 1/8" (TYPE TP), W/ TOE	199 DOCKSIDE WG	WALL GYPSUM OR FRP WALLS AT JANITOR ROOM, MECH/ELEC. ROOM, I.T. ROOM, BACK OF HOUSE
WALL FINISH					
EP1	PAINT - EPOXY	SHERWIN WILLIAMS	SATIN ENAMEL	SW 7004 SNOWBOUND	KITCHEN, JANITOR
FRP1	FIBER REINFORCED PLASTIC PANEL (4'x8' OR 10')	MARLITE	TEXTURED - PEBBLED	P145 SILVER	JANITOR ROOM, INSTALLED TO 4'-0" A.F.F.
LB2	TONGUE & GROOVE INTERIOR WALL SYSTEM	LONGBOARD PRODUCTS	V-GROOVE 6"x12' PLANK W/ QUICK SCREEN CLIPS	LIGHT CHERRY WOOD GRAIN	VESTIBULE WALLS
P1	PAINT - WATER-BASED ALKYD URETHANE ENAMEL	SHERWIN WILLIAMS	SEMI-GLOSS	SW 6003 PROPER GRAY	HM DOOR FRAMES
P2	PAINT - ZERO V.O.C. INTERIOR LATEX	SHERWIN WILLIAMS	SATIN	SW 7004 SNOWBOUND	ALL GYPSUM WALLS, U.N.O.
P3	PAINT - ACRYLIC MASONRY BLOCK FILLER / PRIMER	SHERWIN WILLIAMS	SATIN	SW 7004 SNOWBOUND	ALL CMU WALLS, U.N.O.
P6	PAINT - WATER-BASED INTUMESCENT FIRE PROTECTION COATING	SHERWIN WILLIAMS	FLAT	SW 7069 IRON ORE	ALL EXPOSED STRUCTURAL STEEL (COLUMNS, TRUSSES, JOISTS, ETC.), U.N.O.
P6-ALT	PAINT - WATER-BASED INTUMESCENT FIRE PROTECTION COATING	SHERWIN WILLIAMS	FLAT	SW 6003 PROPER GRAY	ALL EXPOSED STRUCTURAL STEEL (COLUMNS, TRUSSES, JOISTS, ETC.), U.N.O. (ALTERNATE COLOR OPTION)
T1	GLAZED CERAMIC WALL TILE (3"x12"x5/16")	DALTILE	MESMERIST GLAZED CERAMIC	CHARM MM32	ACCENT TILE @ RESTROOM VANITIES, WATER FOUNTAINS
T2	GLAZED PORCELAIN TILE (12"x24"x5/16")	DALTILE	BRYNE	MIST BR31	FIELD TILE @ RESTROOMS, WATER FOUNTAINS, LOBBY
TG1	TILE GROUT - EPOXY (1/8" GROUT JOINTS)	TEC	EPOXY	SILVERADO	TO BE USED WITH T1
TG2	TILE GROUT - EPOXY (1/16" GROUT JOINTS)	TEC	EPOXY	TBD	TO BE USED WITH T2
MILLWORK / CASEWORK					
FTX1	FIXTURE FINISH	SLOAN		BRUSHED NICKEL (BN)	SLOAN AER-DEC FIXTURES
HDPE1	HDPE RESTROOM PARTITIONS	SCRANTON PRODUCTS	ORANGE PEEL	SHALE	RESTROOM PARTITIONS, RE: ACCESSORY SCHEDULE; CLASS B CEILING HUNG
PL1	PLASTIC LAMINATE	WILSONART	PREMIUM, GLOSS LINE W/ AEON SCRATCH RESISTANCE FINISH	8213K-28 PHANTOM COCOA	SLOAN AER-DEC CABINET STYLE LAMINATED DOOR MOUNTING
SS1	SIMULATED STONE / QUARTZ	CORIAN QUARTZ	2CM, POLISHED	LONDON SKY	SLOAN AER-DEC LAVATORY DECKS
CEILING FINISH					
ACT1	VINYL-FACED CEILING TILE (2'x2')	CERTAINTEED CEILINGS	VINYL SHIELD A, 1100-CRF-1	WHITE	CATERING KITCHEN, STORAGE, BACK OF HOUSE
ACT1 GRID	15/16" SUSPENSION SYSTEM	CERTAINTEED CEILINGS	CLEANROOM STAB SYSTEM (GALVANIZED STEEL)	WHITE	CATERING KITCHEN, STORAGE, BACK OF HOUSE
LB1	ENDURA LINEAR DIRECT MOUNT CEILING SYSTEM	LONGBOARD PRODUCTS	PERFORATED V-GROOVE 6"x12' PLANK CEILING SYSTEM W/ QUICK SCREEN CLIPS & SOUNDTEX	LIGHT CHERRY WOOD GRAIN	VESTIBULE CEILING
P4	PAINT - ZERO V.O.C. INTERIOR LATEX	SHERWIN WILLIAMS	FLAT	SW 7004 SNOWBOUND	GYP CEILING / SOFFITS, RESTROOM CEILINGS
P5	PAINT - ZERO V.O.C. INTERIOR LATEX	SHERWIN WILLIAMS	FLAT	SW 7757 HIGH REFLECTIVE WHITE	LIGHT COVE @ RESTROOM WET WALLS

GENERAL FINISH LEGEND NOTES:

1. FINISH MATERIALS TO BE PROCURRED FROM SPECIFIED VENDOR, AS LISTED ABOVE. ALTERNATES OR SUBSTITUTIONS WILL NOT BE ACCEPTED UNLESS VERIFIED TO BE EQUAL IN PERFORMANCE, QUALITY, VISUAL APPEARANCE, AND APPROVED BY ARCHITECT, INTERIOR DESIGNER, AND OWNER.
2. FINISH SELECTIONS ARE PROVIDED FOR DESIGN INTENT ONLY; ALL FINAL SELECTIONS TO BE VERIFIED AND APPROVED BY OWNER.

PLUMBING & TOILET ACCESSORY SCHEDULE

NO.	MANUFACTURER	DESCRIPTION	MODEL	FINISH	H	W	D	QTY.	COMMENTS	REMARKS
01	BOBRICK WASHROOM EQUIPMENT, INC.	SURFACE MOUNTED SINGLE JUMBO TOILET ROLL HOLDER - FINO COLLECTION	B-9890	STAINLESS STEEL, SATIN FINISH	1' - 0 3/4"	11' - 0 11/16"	5"	19		3
02	BOBRICK WASHROOM EQUIPMENT, INC.	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL - CONTURA SERIES	B-270	STAINLESS STEEL, SATIN FINISH	10"	7 1/2"	3 13/16"	13		3
03	BOBRICK WASHROOM EQUIPMENT, INC.	1½" (38mm) DIA. STAINLESS STEEL GRAB BARS WITH CONCEALED FLANGE - FINO COLLECTION	B-9806-42	STAINLESS STEEL, SATIN FINISH		3' - 6"	1 1/2"	13		3
04	BOBRICK WASHROOM EQUIPMENT, INC.	1½" (38mm) DIA. STAINLESS STEEL GRAB BARS WITH CONCEALED FLANGE - FINO COLLECTION	B-9806-36	STAINLESS STEEL, SATIN FINISH		3' - 0"	1 1/2"	5		3
05	BOBRICK WASHROOM EQUIPMENT, INC.	1½" (38mm) DIA. STAINLESS STEEL GRAB BARS WITH CONCEALED FLANGE - FINO COLLECTION	B-9806-18	STAINLESS STEEL, SATIN FINISH		1' - 6"	1 1/2"	5		3
06	ELECTRIC MIRROR	EMINENCE LIGHTED MIRROR - LED	EMN3-24.00X36.00-01L-D1-OS-RC6.0-WG3-30K	MATTE BLACK	3' - 0"	2' - 0"	2 195/256"	18	BACKLIT, EDGELIT FRAME	5
07	SLOAN VALVE	BASYS FAUCET - LOW BODY, HARDWIRED-POWERED, DECK-MOUNTED	EFX-300-4-PLG-BDT-BN-0.5GPM-MLM-CAP-BAA-FCT	BRUSHED NICKEL				18	RE: PLUMBING SHEETS	
08	SLOAN VALVE	BASYS FOAM SOAP DISPENSER - DECK-MOUNTED, WITH AC ADAPTOR (PART 0346090)	ESD-500-BN	BRUSHED NICKEL				18	RE: PLUMBING SHEETS	
09	SLOAN VALVE	HAND DRYER - SLOAN® AER-DEC	EHD-511-BN	BRUSHED NICKEL				18	RE: PLUMBING SHEETS	
10	SLOAN VALVE	AER-DEC® 4-STATION WALL-MOUNTED SINK, VERTICAL CABINET STYLE LAMINATED DOORS	AD-84000	CORIAN QUARTZ - LONDON SKY, WILSONART - PHANTOM COCOA	2' - 10"	10' - 0"	1' - 11 1/2"	4	RE: PLUMBING & STRUCTURAL SHEETS	3
11	SLOAN VALVE	AER-DEC® 1-STATION WALL-MOUNTED SINK, VERTICAL CABINET STYLE LAMINATED DOORS	AD-81000	CORIAN QUARTZ - LONDON SKY, WILSONART - PHANTOM COCOA	2' - 10"	2' - 6"	1' - 11 1/2"	2	RE: PLUMBING & STRUCTURAL SHEETS	3
12	SCRANTON PRODUCTS	HINY HIDERS - WALL MOUNTED URINAL PARTITION	TRADITIONAL 2600	SHALE, ORANGE PEEL	3' - 6"	1' - 6"		4	WALL-HUNG, FLANGE	
13	SCRANTON PRODUCTS	HINY HIDERS - 24" INSWING STANDARD PARTION & DOOR	TRADITIONAL 2600	SHALE, ORANGE PEEL	6' - 10"			6	CEILING HUNG, 55"H DOOR	
14	SCRANTON PRODUCTS	HINY HIDERS - 32" INSWING STANDARD PARTION & DOOR	TRADITIONAL 2600	SHALE, ORANGE PEEL	6' - 10"			4	CEILING HUNG, 55"H DOOR	
15	SCRANTON PRODUCTS	HINY HIDERS - 32" OUTSWING AMBULATORY PARTITION & DOOR	TRADITIONAL 2600	SHALE, ORANGE PEEL	6' - 10"			4	CEILING HUNG, 55"H DOOR	
16	SCRANTON PRODUCTS	HINY HIDERS - 36" OUTSWING ADA PARTION & DOOR	TRADITIONAL 2600	SHALE, ORANGE PEEL	6' - 10"			4	CEILING HUNG, 55"H DOOR	
17	KOALA KARE	BABY CHANGING STATION	KB300-05SS	WHITE GRANITE 05	1' - 8 3/4"	2' - 11 15/16"	1' - 9 3/16"	1	CLOSED DEPTH 4"	3

PLUMBING & TOILET ACCESSORY NOTES:

GENERAL NOTES;
A. ALL TOILET ACCESSORY LOCATIONS BASED ON FLOOR PLAN LAYOUT.
B. REFER TO INTERIOR ELEVATIONS FOR ANY ACCESSORIES THAT MAY NOT SHOW UP ON THE PLANS.
C. REFER TO ELEVATIONS AND MANUFACTURER'S SPECIFICATIONS FOR MOUNTING HEIGHTS.
D. COORDINATE ALL MOUNTING HEIGHTS W/ PLUMBING FIXTURES TO ALLOW PROPER OPERATION & INFORM ARCHITECT IN WRITING OF ANY CONFLICTS.
E. G.C. TO VERIFY DIRECTLY W/ OWNER TO DETERMINE MOUNTING HEIGHTS, U.N.O.
F. REFER TO PLANS AND ELEVATIONS FOR ITEMS NOTED AS FF&E.
G. PROVIDE ALLOWANCE FOR ALL ROUNDED VANITY MIRRORS.

REMARKS:
1. OWNER FURNISHED, OWNER INSTALLED.
2. FF&E ITEM - OWNER FURNISHED, CONTRACTOR INSTALLED. REFER TO PLANS AND ELEVATIONS FOR FURTHER CLARIFICATION.
3. SURFACE MOUNTED.
4. RECESSED.
5. MIRRORS TO BE CENTERED AT LAVATORY STATIONS, TYP; RE: ELEVATIONS.

GLMV Architecture
GLMV Architecture, Inc.
Missouri State Certificate of Authority
#F00364807

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SAM COLLINS
NUMBER
A-2017002629
ARCHITECT

SAM COLLINS - ARCHITECT
MO# A-2017002629

DATE: 11/1/2023 9:17:36 AM

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

PROJECT NO: 22003
STATUS: PERMIT SET
DATE: 01 NOVEMBER 2023
DRAWN BY: CWA
CHECKED BY:

INTERIOR DESIGN - LEGENDS & SCHEDULES

I-301

PLOT DATE: 11/1/2023 9:17:36 AM
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GENERAL NOTES:

1. PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS, REFER TO SPECIFICATIONS.
2. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
3. PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
4. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
5. VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
6. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
7. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
8. INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE.
9. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
10. INSTALL EXPOSED PIPING, WHERE NECESSARY, IN FINISHED AREAS TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. INSTALL PIPING PARALLEL AND / OR PERPENDICULAR TO WALLS.
11. INSTALL VALVES AND APPURTENANCES A MAXIMUM OF 24" ABOVE CEILING IN ACCESSIBLE LOCATION WITHIN 24" OF ACCESS DOORS OR ACCESSIBLE CEILING TILES. PROVIDE PIPE AND FITTINGS TO INSTALL VALVES AND APPURTENANCES AT REQUIRED HEIGHT AND WITHIN 24" OF ACCESS DOORS OR ACCESSIBLE CEILING TILES.
12. INSTALL NO PLASTIC PIPE OF ANY KIND ABOVE SLAB INSIDE OR UNDER THE BUILDING. INSTALL NO PLASTIC PIPE IN THE CEILING RETURN AIR PLENUM.
13. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
14. COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED.
15. CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
16. PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
17. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
18. PAINT ALL EXPOSED GAS AND WATER PIPING USING RUST INHIBITOR PAINT. PAINT AND COLOR SHALL BE COORDINATED WITH THE ARCHITECT AND / OR OWNER.
19. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
20. INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.
21. PROVIDE "HEAVY-DUTY" NO-HUB COUPLINGS ON SANITARY PIPING 3" AND LARGER, SOIL STACKS 4" AND LARGER AND CONNECTIONS TO SOIL STACKS. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT AND PIPING SPECIALTIES" FOR MORE INFORMATION.
22. PROVIDE "HEAVY-DUTY" NO-HUB COUPLINGS ON STORM PIPING, INCLUDING CONNECTIONS TO ROOF DRAINS. SEE DIVISION 22 SPECIFICATION SECTION "STORM DRAINAGE PIPING AND SPECIALTIES" FOR MORE INFORMATION.
23. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION FOR MORE INFORMATION.
24. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT PIPING AND SPECIALTIES" FOR MORE INFORMATION.
25. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON STORM PIPE AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION SECTION "STORM DRAINAGE PIPING AND SPECIALTIES" FOR MORE INFORMATION.
26. WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.
27. PROVIDE VERTICAL LIFT SPRING LOADED CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR MOP SINK FAUCETS DOWNSTREAM OF SHUTOFF VALVES.
28. PROVIDE SIZE AND LENGTH OF HOT WATER FIXTURE SUPPLY PIPE FROM CIRCULATED HOT WATER BRANCH OR MAIN TO TERMINATION OF HOT WATER FIXTURE SUPPLY PIPE AT EACH FIXTURE PER 2015 INTERNATIONAL ENERGY CONSERVATION CODE, TABLE C404.3.1. FOR ½" HOT WATER FIXTURE SUPPLY PIPE SIZE TO INDIVIDUAL LAVATORIES, PROVIDE MAXIMUM LENGTH OF TWO FEET. FOR ½" HOT WATER FIXTURE SUPPLY PIPE SIZE TO INDIVIDUAL SINKS, PROVIDE MAXIMUM LENGTH OF 43 FEET. FOR 3/4" HOT WATER FIXTURE SUPPLY PIPE SIZE TO INDIVIDUAL SINKS, PROVIDE MAXIMUM LENGTH OF 21 FEET.

PLUMBING SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V2.02

STANDARD MOUNTING HEIGHTS

CLINIC SERVICE SINKS (RIM)	30"
HOSE BIBB (CENTERLINE)	36"
ICE MAKER OUTLET BOX (CENTER OF BOX)	24"
JANITOR'S SINK FAUCET FITTINGS (CENTERLINE)	42"
LAVATORY OR SINK	
STANDARD HEIGHT (RIM)	31"
ADA ACCESSIBLE (RIM)	34"
CHILD HEIGHT (RIM)	24"
NON FREEZE WALL HYDRANT (AFG TO CENTERLINE)	18"
SHOWER HEAD	
MEN (CENTERLINE)	78"
WOMEN (CENTERLINE)	72"
SHOWER VALVE	
STANDARD HEIGHT - MEN (CENTERLINE)	48"
STANDARD HEIGHT - WOMEN (CENTERLINE)	42"
ADA ACCESSIBLE (CENTERLINE)	38" TO 48"
SURGEON'S SCRUB-UP SINK (FRONT RIM)	35"
TUB VALVE	
STANDARD HEIGHT (CENTERLINE)	32"
ADA ACCESSIBLE	CENTER BETWEEN GRAB BAR AND TUB RIM
URINAL	
STANDARD HEIGHT (RIM)	24"
ADA ACCESSIBLE (RIM)	17"
CHILD HEIGHT (RIM)	14"
WASHING MACHINE OUTLET BOX (RIM)	42"
WATER CLOSET	
STANDARD HEIGHT (RIM)	15"
ADA ACCESSIBLE (TOP OF SEAT)	17" TO 19"
CHILD HEIGHT (RIM)	10"
WATER COOLER OR DRINKING FOUNTAIN	
STANDARD HEIGHT (SPOUT)	41"
ADA ACCESSIBLE (SPOUT)	36"
CHILD HEIGHT (SPOUT)	30"

INSTALL PLUMBING FIXTURES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE ARCHITECTURAL DRAWINGS OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS. FINAL APPROVAL OF LOCATIONS BY ARCHITECT. MOUNTING HEIGHTS LISTED ABOVE, OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS, ARE AFF, UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ANNOTATION

1	PLUMBING PLAN NOTE CALLOUT
1	PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES
1	EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED)
CU 1	MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
	CONNECTION POINT OF NEW WORK TO EXISTING
1 P1	DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
1 P1	SECTION CUT DESIGNATION
	DEDICATED EQUIPMENT ACCESS TILE
	ACCESS PANEL

ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT	MIN	MINIMUM
AFF	ABOVE FINISHED FLOOR	N/C	NORMALLY CLOSED
AFG	ABOVE FINISHED GRADE	N/O	NORMALLY OPEN
AHU	AIR HANDLING UNIT	NIC	NOT IN CONTRACT
AP	ACCESS PANEL	ORD	OVERFLOW ROOF DRAIN
BAS	BUILDING AUTOMATION SYSTEM	PDI	PLUMBING DRAINAGE INSTITUTE
BFF	BELOW FINISHED FLOOR	PH/Ø	PHASE
BFG	BELOW FINISHED GRADE	PRV	PRESSURE REDUCING VALVE
BOP	BOTTOM OF PIPE	PVC	POLYVINYL CHLORIDE
BOS	BOTTOM OF STRUCTURE	RCP	REINFORCED CONCRETE PIPE
BTU	BRITISH THERMAL UNIT	RD	ROOF DRAIN
CP	CONDENSATE PUMP	RPM	REVOLUTIONS PER MINUTE
CPVC	CHLORINATED POLYVINYL CHLORIDE	RTU	ROOFTOP UNIT
CU	COPPER	SF	SQUARE FEET
DI	DUCTILE IRON	SP	SUMP
DN	DOWN	SS	STAINLESS STEEL SANITARY SEWER, SOIL STACK
DFU	DRAINAGE FIXTURE UNIT	TDH	TOTAL DYNAMIC HEAD
DS	DOWNSPOUT	TFA	TO FLOOR ABOVE
(E)	EXISTING	TFB	TO FLOOR BELOW
EMS	ENERGY MANAGEMENT SYSTEM	TYP	TYPICAL
ETR	EXISTING TO REMAIN	UL	UNDERWRITERS LABORATORIES, INC.
EWC	ELECTRIC WATER COOLER	UNO	UNLESS NOTED OTHERWISE
FD	FLOOR DRAIN	UPS	UNINTERRUPTIBLE POWER SUPPLY
FFA	FROM FLOOR ABOVE	VCP	VITRIFIED CLAY PIPE
FFB	FROM FLOOR BELOW	VFD	VARIABLE FREQUENCY DRIVE
FF	FINISHED FLOOR	VS	VENT STACK
FL	FLOW LINE	VTR	VENT THROUGH ROOF
FLA	FULL LOAD AMPS	W/	WITH
FLR	FLOOR	W/O	WITHOUT
GPM	GALLONS PER MINUTE	WC	WATER COLUMN
HD	HEAD, HUB DRAIN	WS	WASTE STACK
HZ	HERTZ	WSFU	WATER SUPPLY FIXTURE UNIT
IE	INVERT ELEVATION	WVS	WASTE VENT STACK
IN WC	INCHES OF WATER COLUMN		
JB	JUNCTION BOX		
J-BOX	JUNCTION BOX		
KW	KILOWATT		
MAU	MAKE-UP AIR UNIT		
MAX	MAXIMUM		
MBH	1000 BTU PER HOUR		
MH	MANHOLE		

PIPING SYMBOLS

- OXYGEN OUTLET
- NITROUS OXIDE OUTLET
- MEDICAL AIR OUTLET
- NITROGEN OUTLET
- MEDICAL VACUUM INLET
- FLOOR SINK (FS), SIZE & TYPE
- FLOOR DRAIN (FD), SIZE & TYPE
- ROOF DRAIN (RD), SIZE & TYPE
- BALL VALVE
- CONTROL VALVE
- SHUTOFF VALVE
- CHECK VALVE
- BALANCING VALVE WITH PRESSURE PORTS
- WATER METER
- STRAINER
- STRAINER WITH BLOWOFF
- RELIEF/SAFETY VALVE
- SOLENOID VALVE
- PRESSURE REDUCING VALVE
- GAS PRESSURE REGULATOR
- THERMOSTATIC MIXING VALVE
- PA — PIPE ANCHOR
- EXPANSION JOINT
- BACKFLOW PREVENTER
- PRESSURE GAUGE
- THERMOMETER
- UNION
- FLANGE CONNECTION
- HOSE BIBB (HB)
- NON-FREEZING WALL HYDRANT (NW)
- MANUAL / AUTOMATIC AIR VENT OR VACUUM RELIEF VALVE
- PRESSURE / VACUUM SWITCH
- CLEANOUT
- CAP
- WALL CLEANOUT (WCO)
- FLOOR CLEANOUT (FCO)
- EXTERIOR CLEANOUT (ECO)
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- ELBOW UP WITH SHUT-OFF VALVE (SOV)
- ELBOW DOWN WITH SHUT-OFF VALVE (SOV)
- TEE UP WITH SHUT-OFF VALVE (SOV)
- TEE DOWN WITH SHUT OFF VALVE (SOV)
- "A" — WATER HAMMER ARRESTER (WHA) WITH PDI SIZES, (A, B, C, D, & E)
- RECIRCULATION PUMP
- P-TRAP
- GAS COCK
- TRAP PRIMER
- TRAP PRIMER WITH DISTRIBUTION UNIT

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING — NEW
DEMOLISH — FUTURE

PIPING LINETYPES

CW	DOMESTIC COLD WATER (CW)
SCW	SOFTENED COLD WATER (SCW)
HW	DOMESTIC HOT WATER (HW)
HWR	DOMESTIC HOT WATER RECIRC. (HWR)
140°	DOMESTIC HOT WATER (140°)
T	TRAP PRIMER LINE (T)
S	SOIL PIPING - ABOVE FLOOR (S)
S	SOIL PIPING - BELOW FLOOR (S)
W	WASTE PIPING - ABOVE FLOOR (W)
W	WASTE PIPING - BELOW FLOOR (W)
GW	GREASE WASTE - ABOVE FLOOR (GW)
GW	GREASE WASTE - BELOW FLOOR (GW)
CGWV	COMBINATION GREASE WASTE AND VENT (CGWV)
CWV	COMBINATION WASTE AND VENT (CWV)
ST	STORM DRAIN - ABOVE FLOOR (ST)
ST	STORM DRAIN - BELOW FLOOR (ST)
OST	OVERFLOW STORM DRAIN - ABOVE FLOOR (OST)
VBG	VENT BELOW GRADE (VBG)
VBF	VENT BELOW FLOOR (VBF)
ID	INDIRECT DRAIN (ID)
CDH	CONDENSATE DRAIN - HIGH EFFICIENCY RTU (CDH)
CD	CONDENSATE DRAIN (CD)
ACD	AUXILIARY CONDENSATE DRAIN (ACD)
SPD	SUMP OR SEWAGE PUMP DISCHARGE (SPD)
G	NATURAL GAS (G)
G	NATURAL GAS ON ROOF (G)
MPG	MEDIUM PRESSURE NATURAL GAS (MPG)
MPG	MEDIUM PRESSURE NATURAL GAS ON ROOF (MPG)
NPW	NON-POTABLE WATER (NPW)
LPG	LIQUEFIED PETROLEUM GAS (LPG)
WS	WATER SERVICE (WS)
DFP	FIRE PROTECTION SPRINKLER DRY (DFP)
FP	FIRE PROTECTION SPRINKLER WET (FP)
DSP	FIRE PROTECTION STANDPIPE DRY (DSP)
WSP	FIRE PROTECTION STANDPIPE WET (WSP)
PD	CONDENSATE PUMP DISCHARGE (PD)
V	VENT PIPING (V)
AW	ACID WASTE - ABOVE FLOOR (AW)
AW	ACID WASTE - BELOW FLOOR (AW)
AV	ACID VENT (AV)
GWS	GRAY WATER (GWS)
CA	COMPRESSED AIR (CA)
MA	MEDICAL AIR (MA)
MV	MEDICAL VACUUM (VE)
HE	HELIUM (HE)
IA	INSTRUMENT AIR (IA)
IV	INSTRUMENT VACUUM (IV)
N2	NITROGEN (N2)
N2O	NITROUS OXIDE (N20)
O2	OXYGEN (O2)
EV	EVAC/WAGD (EV)
CO2	CARBON DIOXIDE (CO2)
AI	MEDICAL AIR INTAKE (AI)
VE	MEDICAL VACUUM EXHAUST (VE)
DA	DENTAL AIR (DA)
DV	DENTAL VACUUM (DV)
FW1	FILTERED WATER (FW1)
FW2	FILTERED WATER W/ SCALE INHIBITOR (FW2)
RO	REVERSE OSMOSIS (RO)
ROR	REVERSE OSMOSIS REMINERALIZATION (ROR)

HATCHING LEGEND

ENLARGED PLAN

NOT IN SCOPE (NIS)

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10/30/2023

ALESSANDRO . SPINELLI
LICENSE # PE-2022017017

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

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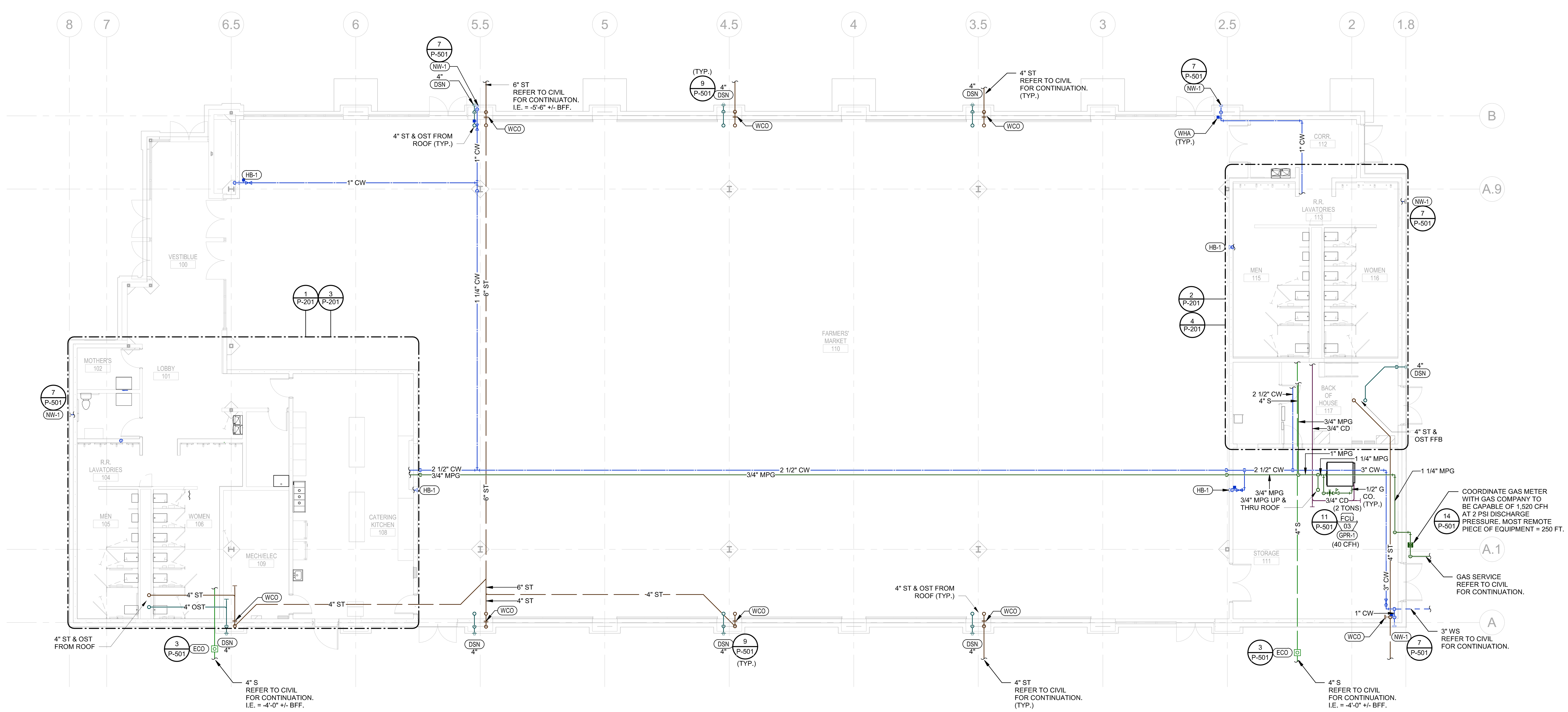
PLUMBING
GENERAL NOTES
AND LEGEND

P-000



1 PLUMBING FLOOR PLAN
1/8" = 1'-0"

KEYPLAN

PLAN NORTH

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PLUMBING PLAN

P-101

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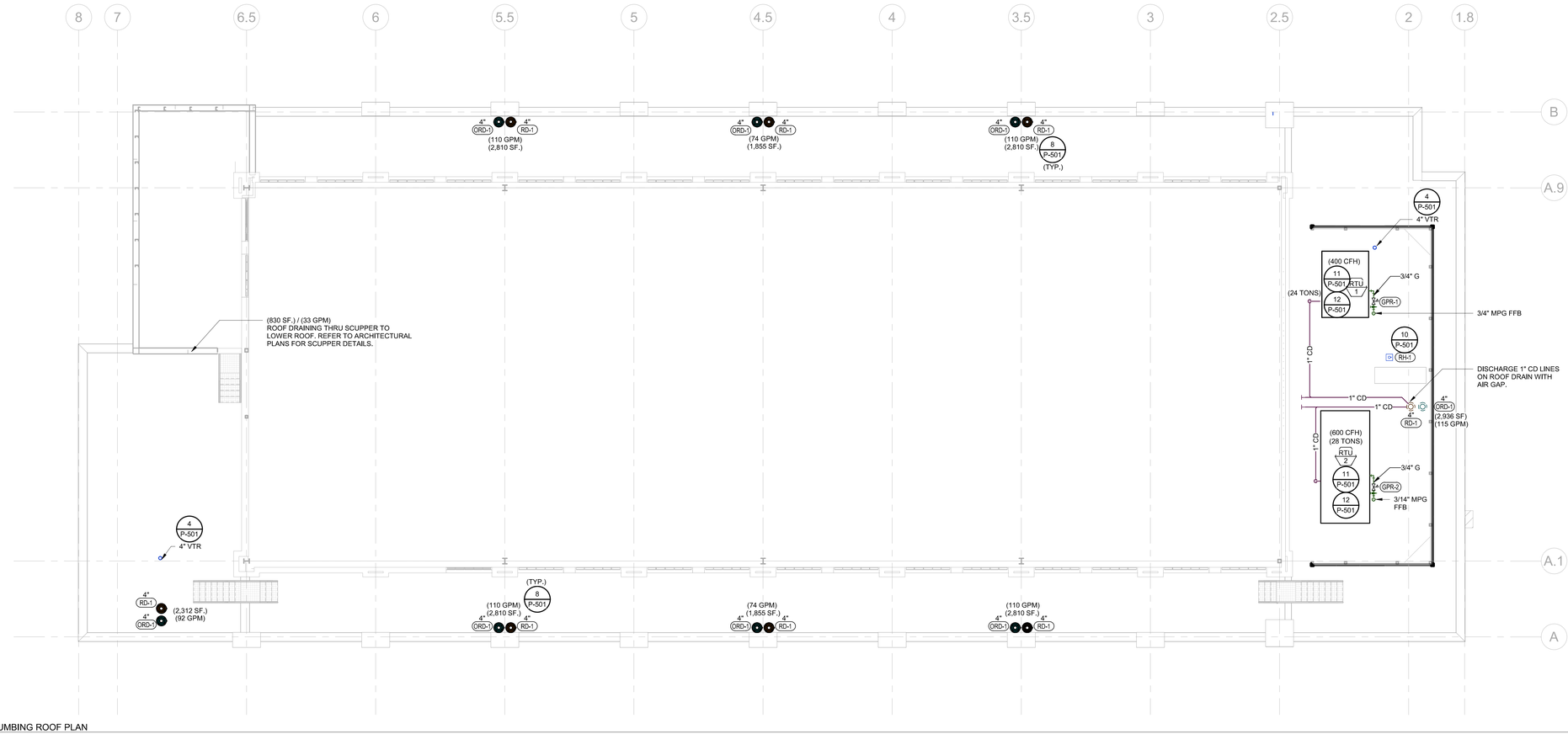

1 PLUMBING ROOF PLAN
1/8" = 1'-0"

PLAN NORTH

KEYPLAN

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LEE'S SUMMIT, MO

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PLUMBING ROOF PLAN

P-102

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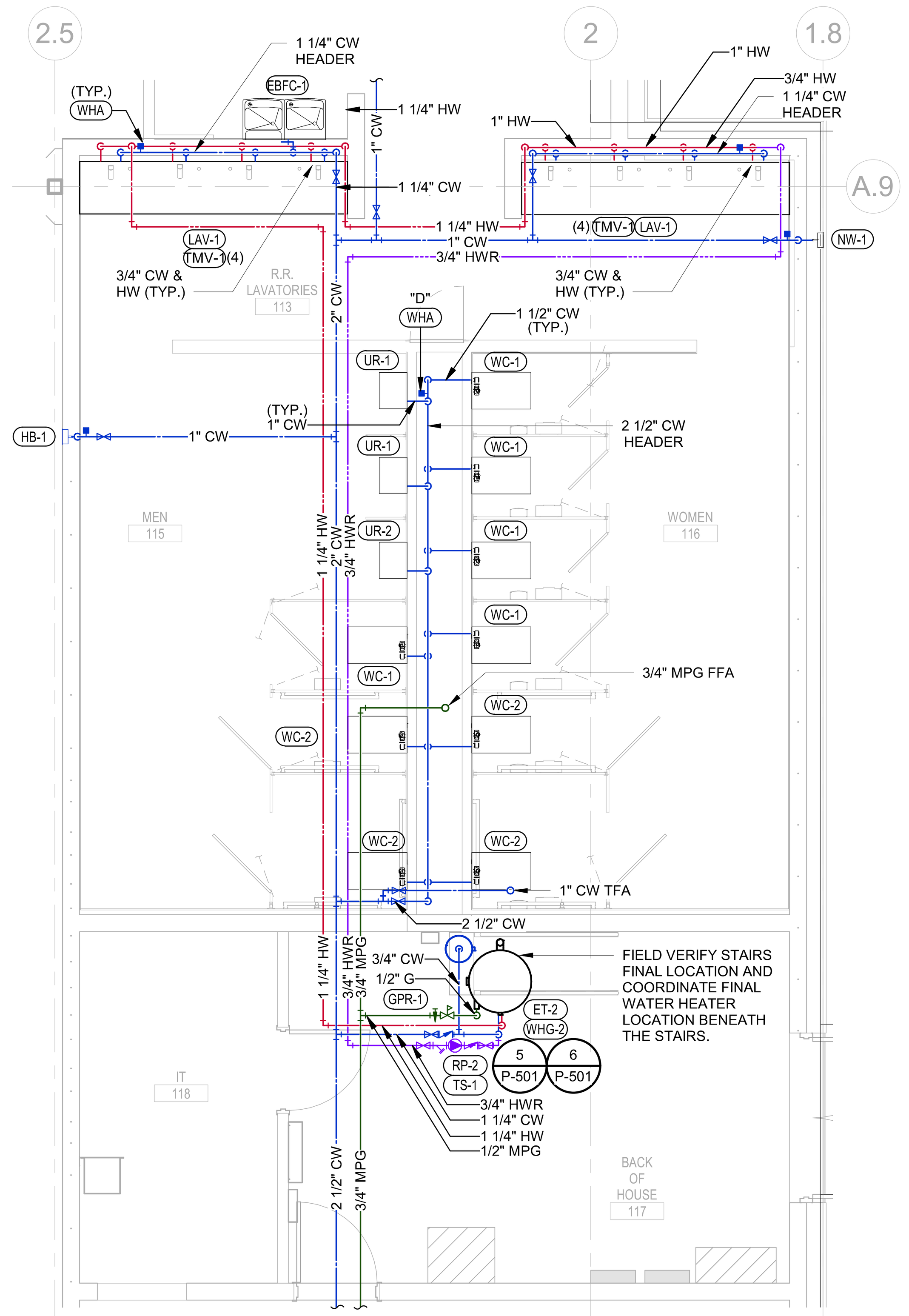
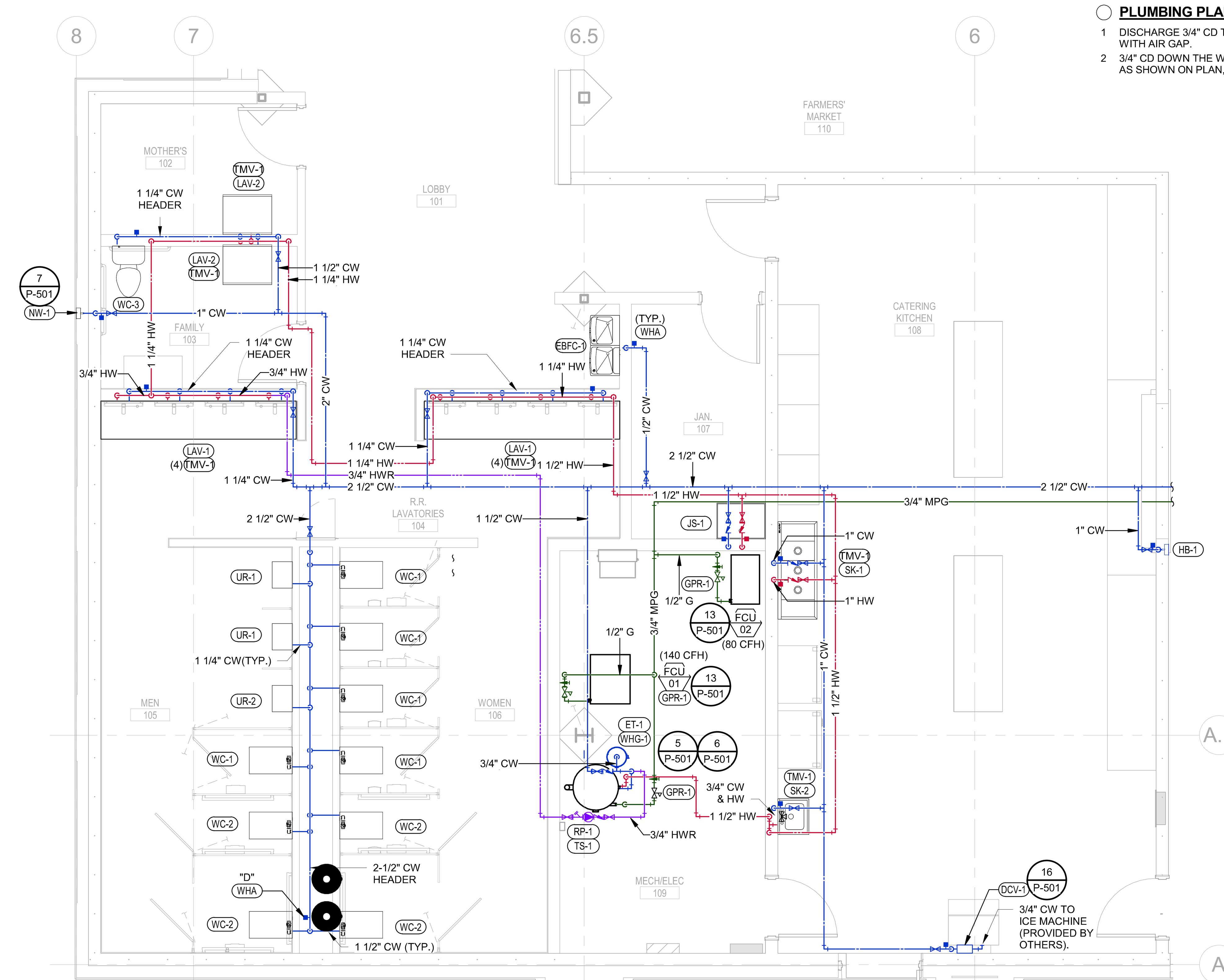


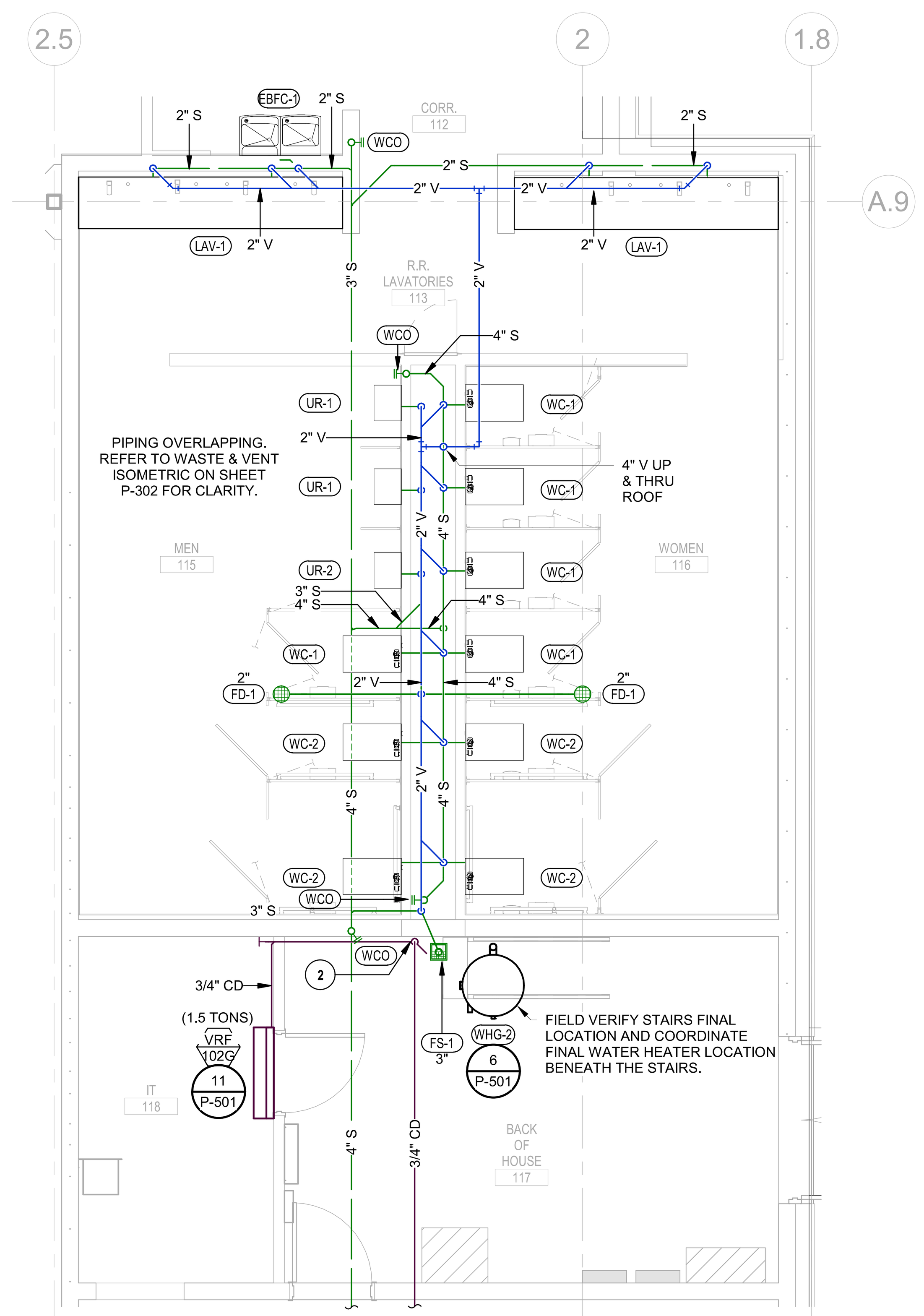
(2) ENLARGED DOMESTIC WATER PLAN - BOH / RR
1/4" = 1'-0"



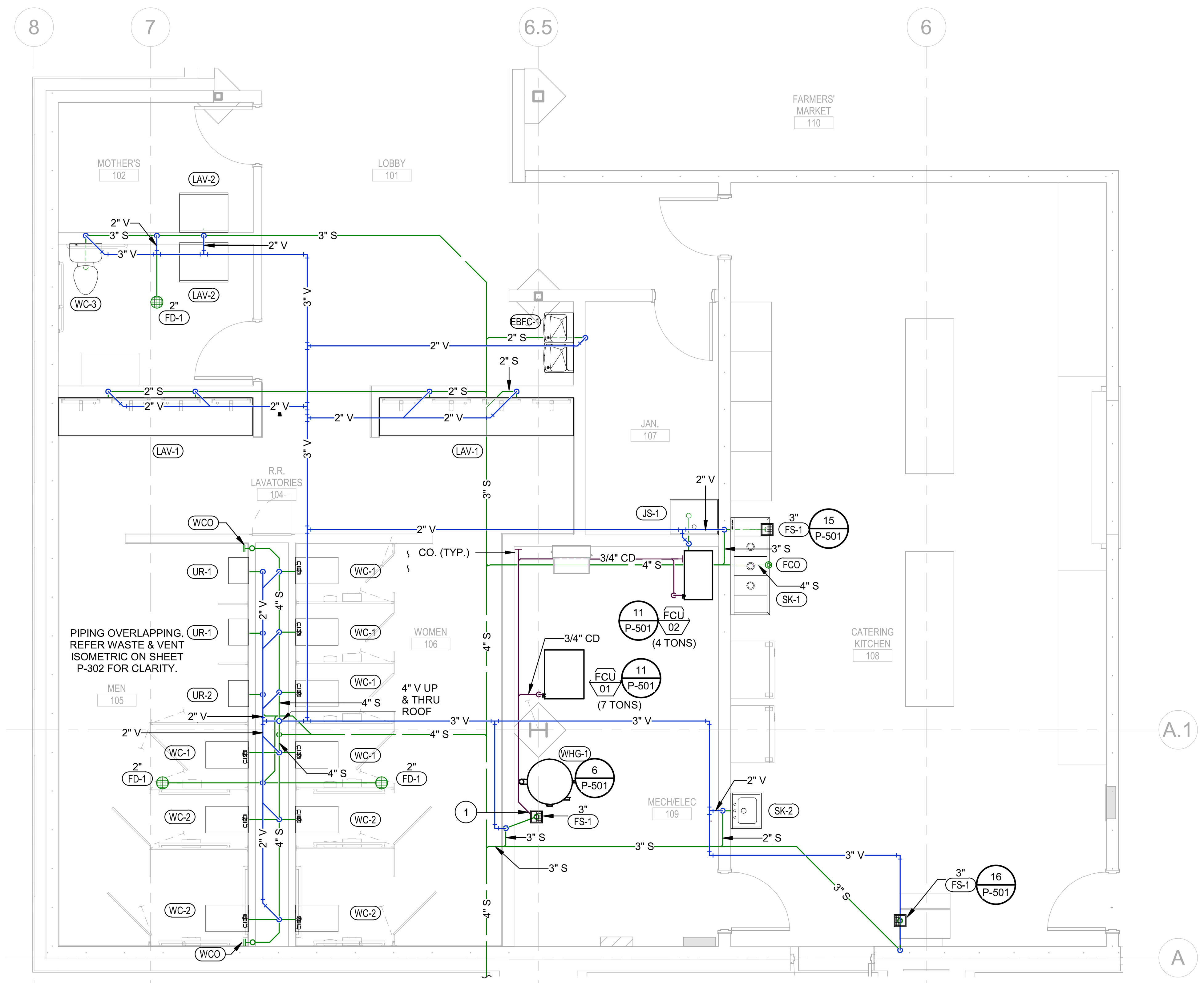
(1) ENLARGED DOMESTIC WATER PLAN - CATERING KITCHEN / FRONT RR
1/4" = 1'-0"

PLUMBING PLAN NOTES:

1. DISCHARGE 3/4" CD TO FLOOR SINK, AS SHOWN ON PLAN, WITH AIR GAP.
2. 3/4" CD DOWN THE WALL AND DISCHARGE TO FLOOR SINK, AS SHOWN ON PLAN, WITH AIR GAP.



(4) ENLARGED WASTE & VENT PLAN - BOH / RR
1/4" = 1'-0"



(3) ENLARGED WASTE & VENT PLAN - CATERING KITCHEN / FRONT RR
1/4" = 1'-0"

PLAN NORTH
KEYPLAN

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PLUMBING ENLARGED PLANS

P-201

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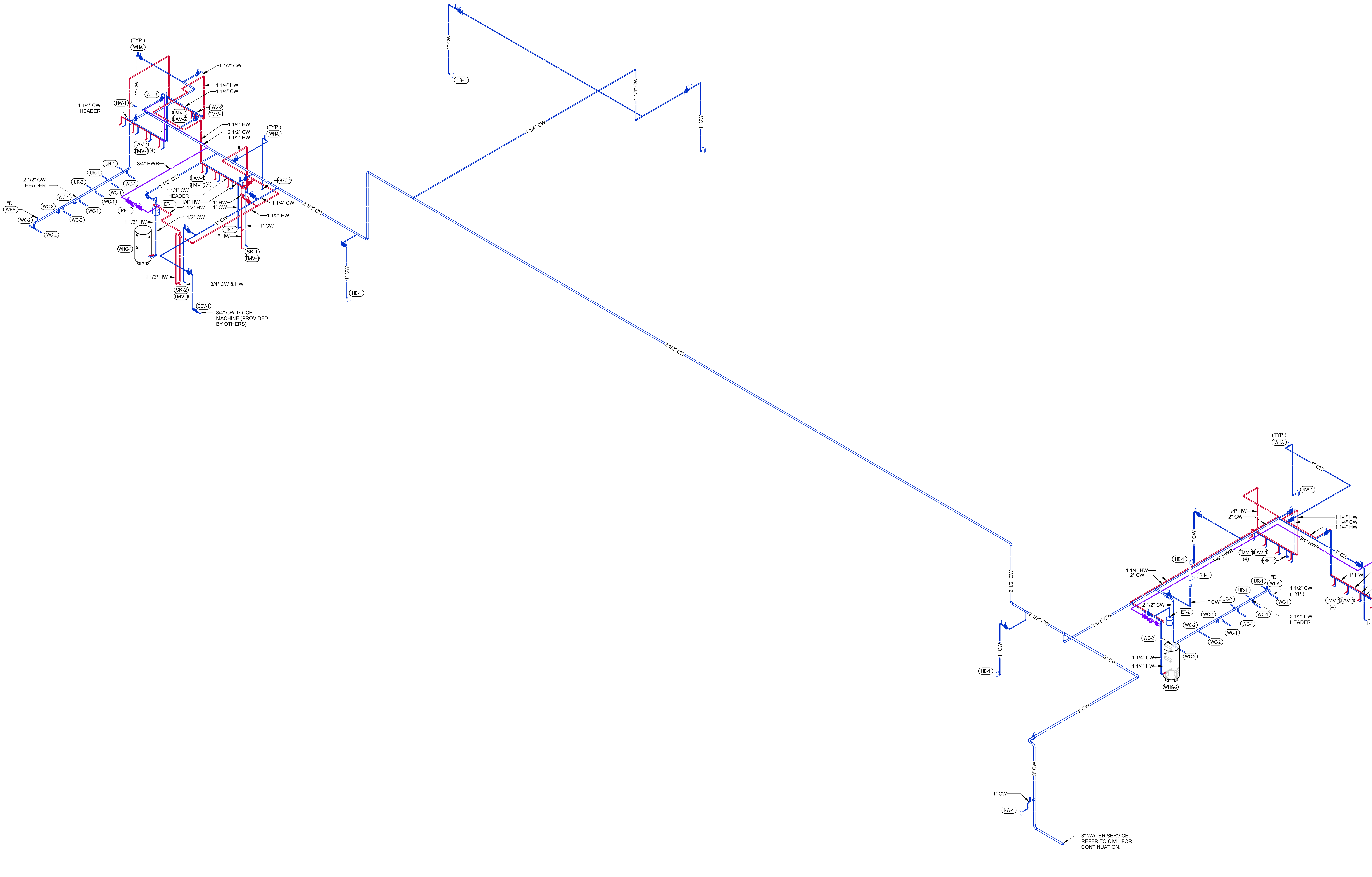

① DOMESTIC WATER ISOMETRIC
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PLUMBING
DOMESTIC WATER
ISOMETRIC

P-301

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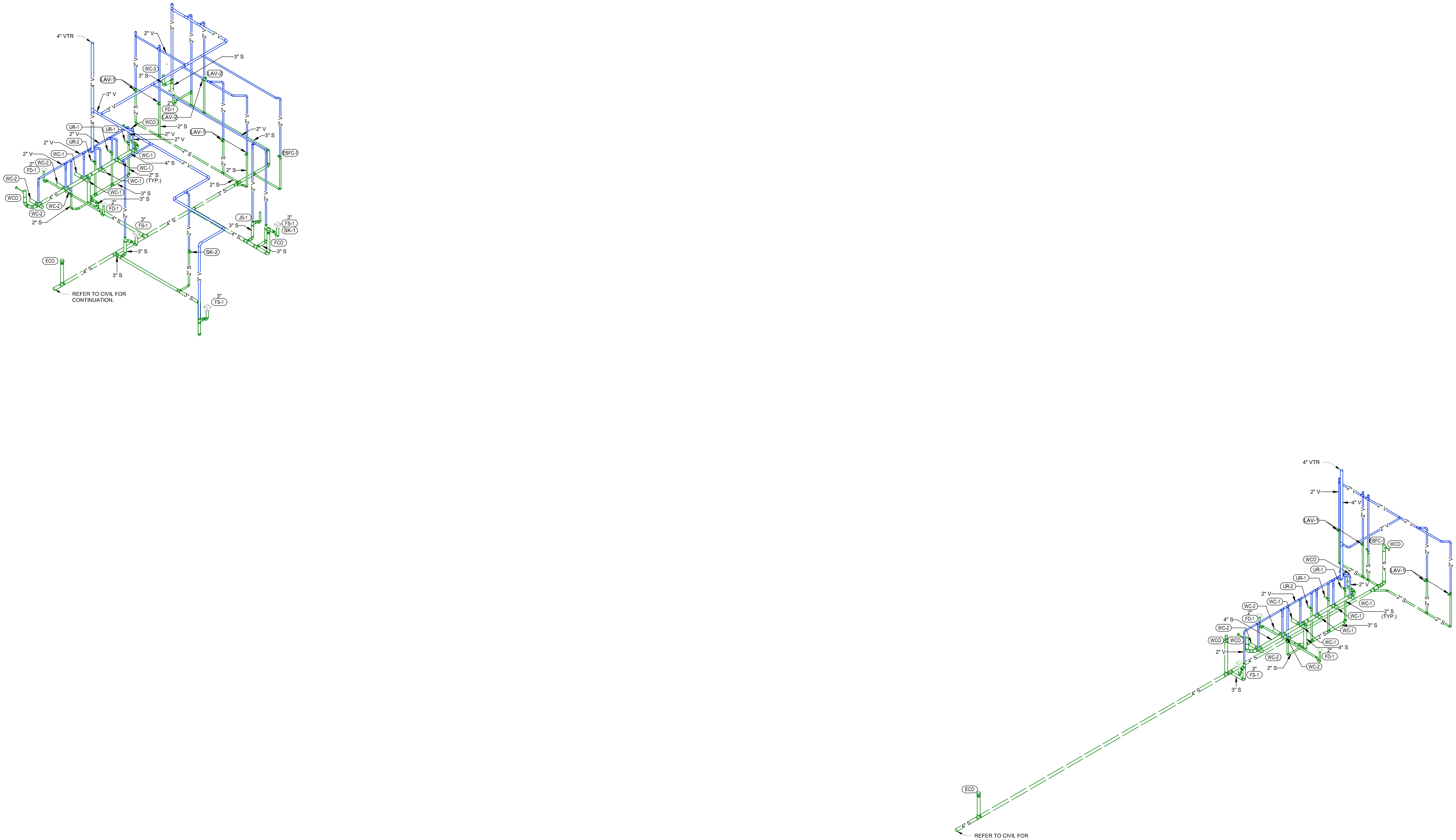

1 WASTE & VENT ISOMETRIC
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PLUMBING WASTE & VENT ISOMETRIC

P-302

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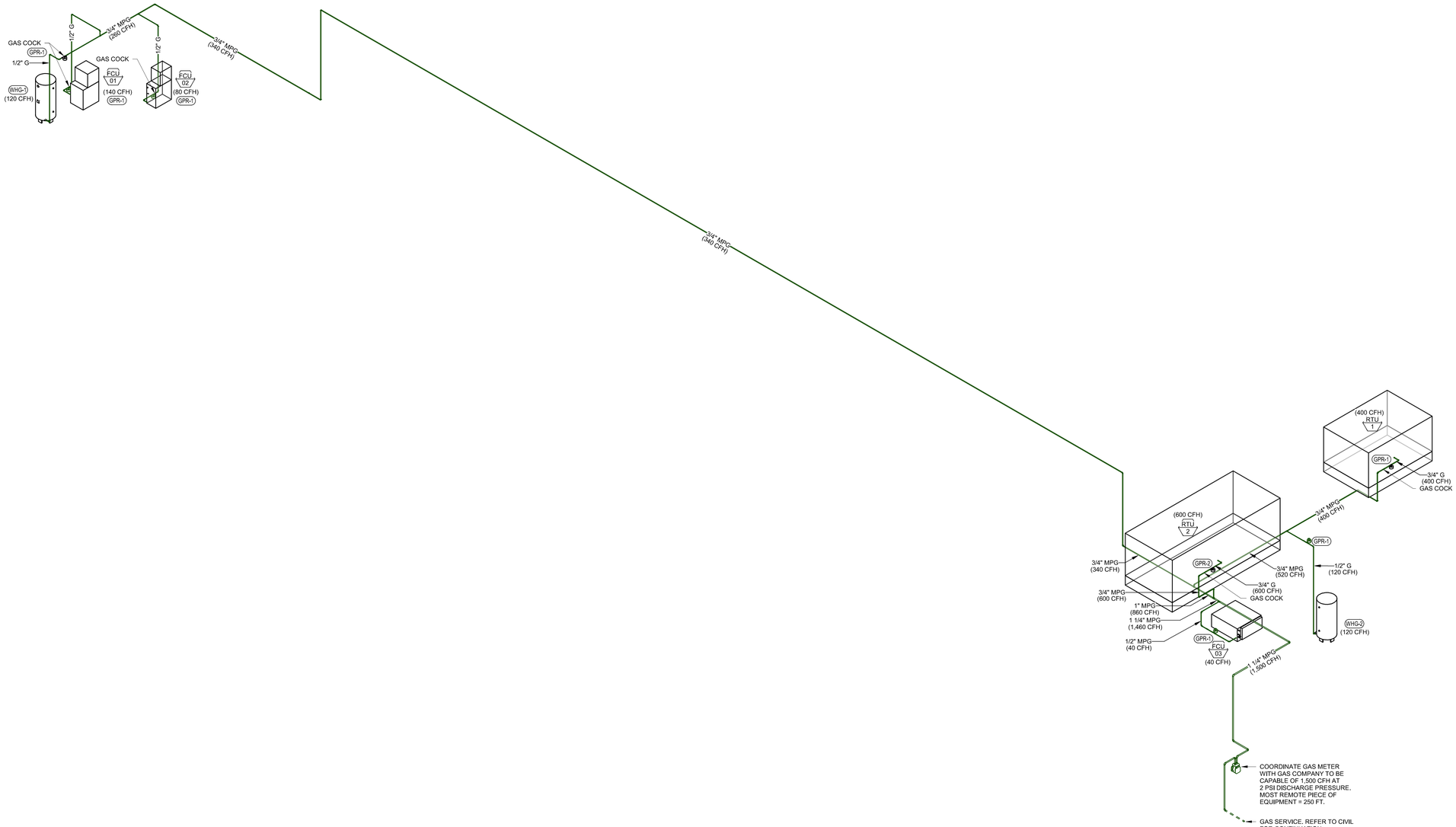

1 GAS ISOMETRIC
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PLUMBING GAS ISOMETRIC

P-303

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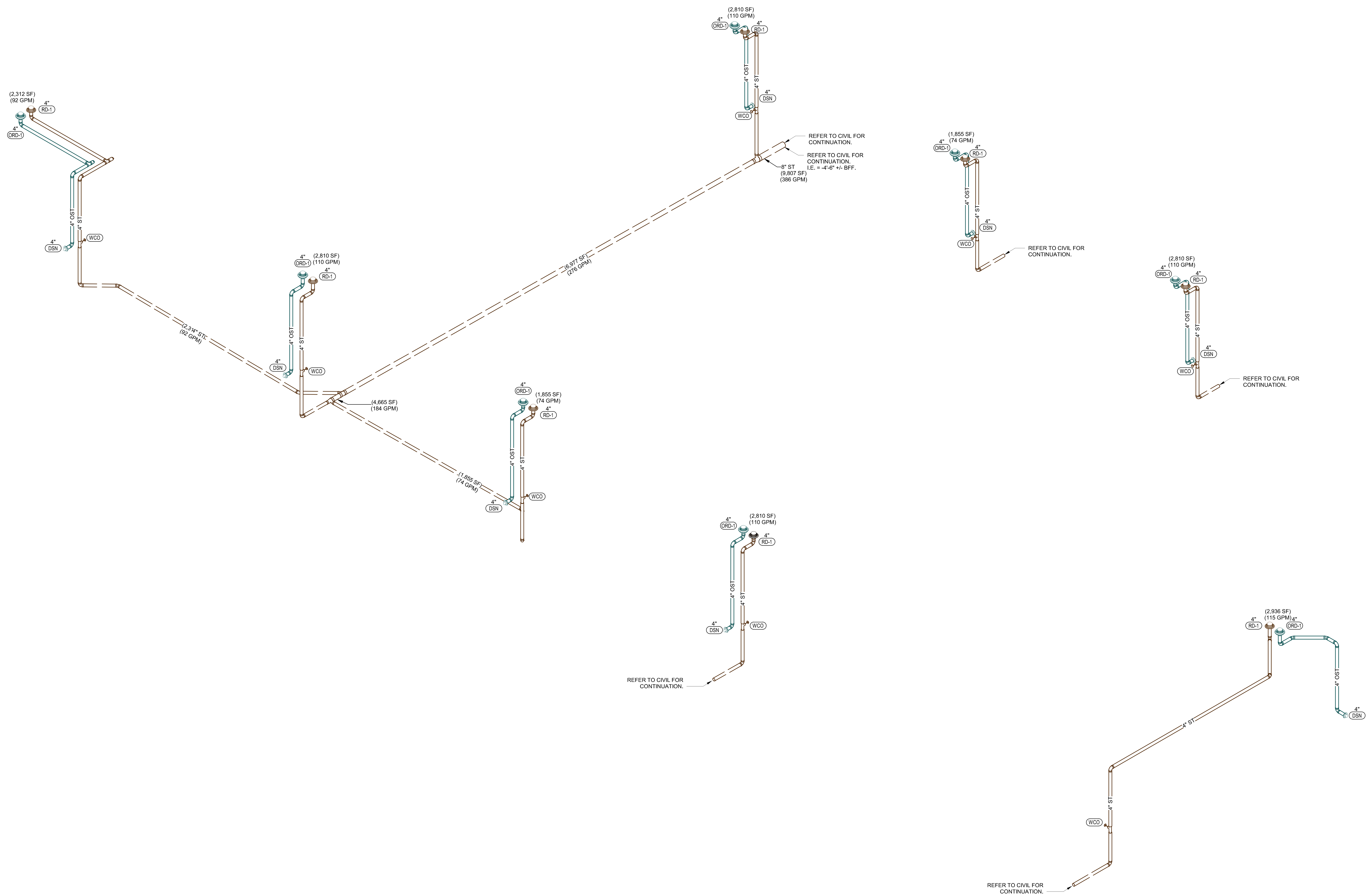

1 STORM ISOMETRIC
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PLUMBING STORM ISOMETRIC

P-304

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FIXTURE BRANCH CONNECTION SCHEDULE

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
6" FLOOR DRAIN			6"	3"
DRINKING FOUNTAIN	1/2"		2"	1 1/2"
FLOOR DRAIN			2"	2"
JANITOR'S SINK	1/2"	1/2"	3"	2"
LAVATORY/HAND SINK	1/2"	1/2"	2"	1 1/2"
SINK	1/2"	1/2"	2"	2"
URINAL	1"	1"	2"	2"
WASHFOUNTAIN	1"	1"	2"	1 1/2"
WATER CLOSET (FLUSH TANK)	1/2"		4"	2"
WATER CLOSET (FLUSH VALVE)	1 1/4"		4"	2"

NOTE: PIPE SIZES SHOWN ARE MINIMUM.

PLUMBING PIPE MATERIAL SCHEDULE

PIPING SYSTEM	ABBREVIATION	PIPING MATERIAL
SANITARY DRAINAGE & VENT (ABOVE GRADE)	S, W OR V	HUBLESS CAST IRON (PVC DWV OPTIONAL)
STORM DRAINAGE (ABOVE GRADE)	ST OR OST	PVC DWV
SANITARY DRAINAGE & VENT (BELOW GRADE)	S, W OR V	PVC DWV
STORM DRAINAGE (BELOW GRADE)	ST	PVC DWV
POTABLE WATER (ABOVE GRADE)	CW, HW OR HWR	TYPE L HARD DRAWN COPPER
POTABLE WATER - 3" & LARGER (BELOW GRADE)	CW, HW OR HWR	DUCTILE IRON
NON-POTABLE WATER (ABOVE GRADE)	NPW	TYPE L HARD DRAWN COPPER
NATURAL GAS (ABOVE GRADE & ON ROOF)	G	SCHEDULE 40 BLACK STEEL
NATURAL GAS (BELOW GRADE)	G	APPROVED 'PE' PIPE FOR GAS
CONDENSATE DRAIN - 1" & SMALLER	CD	TYPE M HARD DRAWN COPPER (PVC DWV OPTIONAL)
CONDENSATE DRAIN - 1-1/4" & LARGER	CD	TYPE DWV HARD DRAWN COPPER (PVC DWV OPTIONAL)
INDIRECT DRAIN - 1"& SMALLER	ID	TYPE M HARD DRAWN COPPER
INDIRECT DRAIN - 1-1/4" & LARGER	ID	TYPE L HARD DRAWN COPPER CLEANED FOR OXYGEN SERVICE

REFER TO SPECIFICATIONS FOR FITTINGS, INSTALLATION REQUIREMENTS AND FURTHER INFORMATION

GAS STORAGE WATER HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	AREA SERVED	TANK SIZE (GALLONS)	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PHASE	INPUT (MBH)	RECOVERY (GPH)	WEIGHT (LB)	NOTES
WHG-1	A.O. SMITH	#BTH-120	CATERING KITCHEN / FRONT RR	60	120	1	120	147	460	A-D
WHG-2	A.O. SMITH	#BTH-120	BOH RR	60	120	1	120	147	460	A-D

NOTES:

A. 100° TEMPERATURE RISE WITH 140°F OPERATING TEMPERATURE.
B. AUTOMATIC FLUE DAMPER INTERLOCKED WITH WATER HEATER FIRE CONTROL.
C. ULTRA LOW NOx TYPE - RESIDUAL NOx IS LESS THAN 14 ng / joule. COMPLIES WITH SCAQMD RULE 1146.2.
D. FURNISH WITH CONDENSATE NEUTRALIZATION KIT TO MATCH HEATER INPUT, AO SMITH # CNS SERIES.

PLUMBING EXPANSION TANK SCHEDULE

MARK	MANUFACTURER	MODEL	TANK SIZE (GALLONS)	MIN. ACCEPTANCE VOLUME (GALLONS)	SERVICE	NOTES
ET-1	AMTROL	ST-12	4.4	1.98	CATERING KITCHEN / FRONT RR	A
ET-2	AMTROL	ST-12	4.4	1.98	BOH RR	A

NOTES:

A. CHARGE TANK WITH AIR TO IDENTICAL PRESSURE AS STATIC DOMESTIC WATER PRESSURE.

RECIRCULATION PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	LOCATION	GPM	HEAD (FT.)	CONNECTION SIZE	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PH	ELECTRICAL DATA HP	NOTES
RP-1	BELL & GOSSETT	NBF-9U	MECH / ELEC 102G	2.5	11	3/4"	120	1	1/18	
RP-2	BELL & GOSSETT	NBF-9U	BOH 111	2.5	11	3/4"	120	1	1/18	

NOTES:

A. ALL LEAD FREE CAST BRONZE BOOSTER.
B. PROVIDE WITH STRAINER UPSTREAM OF PUMP.
C. PROVIDE ADJUSTABLE, SURFACE MOUNTED AQUASTAT - HONEYWELL L6006C.
D. SET AQUASTAT TO SHUT OFF RECIRCULATION PUMP AT WATER HEATER SET POINT AND ON AT 10°F BELOW SET POINT.
F. INTERLOCK PUMP "ON" - "OFF" CONTROL WITH BUILDING AUTOMATION SYSTEM, RE: MECH DRAWINGS
G. PUMP TO RUN CONTINUOUSLY
H. ALL STAINLESS STEEL CONSTRUCTION WITH ECM MOTOR

TOTAL CONNECTED NATURAL GAS LOAD

PLUMBING EQUIPMENT

EQUIPMENT DESIGNATION	DESCRIPTION		CFH (EACH)
WHG-1	WATER HEATER		120
WHG-2	WATER HEATER		120
		TOTAL =	240

MECHANICAL EQUIPMENT

EQUIPMENT DESIGNATION	DESCRIPTION		CFH (EACH)
RTU-1	ROOF TOP UNIT		400
RTU-2	ROOF TOP UNIT		600
FCU-1	FURNACE		140
FCU-2	FURNACE		80
FCU-3	FURNACE		40
		TOTAL =	1260
		TOTAL CONNECTED LOAD =	1500

NATURAL GAS SYSTEM OPERATING PRESSURE:	2 PSI
NATURAL GAS SYSTEM SIZED WITH TOTAL DEVELOPED LENGTH FROM GAS METER TO MOST REMOTE PIECE OF EQUIPMENT:	250 FEET
SYSTEM DESIGN PRESSURE DROP:	1.0 PSI

GAS PRESSURE REGULATOR SCHEDULE FOR 2 PSI SYSTEMS

MARK	MANUFACTURER	MODEL	VALVE TYPE	VALVE BODY SIZE (INCHES)	MAX. FLOW RATE (CFH)	INLET PRESSURE (PSI)	OUTLET PRESSURE (INCHES WATER COLUMN)	SERVICE	NOTES
GPR-1	PIETRO-FIORENTINI	31051	C	1/2"	552	1	7	WHG-1&2 / RTU-1 / FCU 1,2 &3	A-H
GPR-2	PIETRO-FIORENTINI	31052	C	3/4"	665	1	7	RTU-2	A-H

NOTES:
A. C = SELF CONTAINED "DIRECT ACTING" DIAPHRAGM TYPE WITH INTERNAL VENT LIMITER.
B. DROOP = 1" WATER COLUMN MAXIMUM.
C. 65# ALUMINUM BODY, SCREWED CONNECTIONS AND OVERPRESSURE PROTECTION TO 25 PSI.
D. MAXIMUM FLOW RATE SCHEDULED, MATCH BODY SIZE AND MAXIMUM FLOW RATE TO EQUIPMENT FLOW RATE. REFER TO EQUIPMENT SHOP DRAWINGS FOR EXACT LOADS.
E. LISTED TO MEET ANSI Z21.80 / CSA6.22 WITH CSA LISTING STAMP ON REGULATORY BODY.
F. GAS PRESSURE REGULATOR INLET PRESSURE = OPERATING PRESSURE - DESIGN FRICTION LOSS.
G. 2 PSI MAXIMUM INLET PRESSURE AND 1 PSI MINIMUM INLET PRESSURE.
H. PROVIDE EXTERNAL VENT LIMITER (WHERE APPROVED BY LOCAL AUTHORITIES) FOR INDOOR INSTALLATION AND INSTALL PER SPECIFICATIONS. INSTALL OUTDOORS PER SPECIFICATIONS.

PLUMBING FIXTURE SCHEDULE

FIXTURES IN THIS SCHEDULE OR THEIR APPROVED EQUIVALENT ARE PROVIDED BY THE PLUMBING CONTRACTOR. SUBMIT SHOP DRAWINGS ON EACH OF THESE ITEMS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION AND INSTALLATION REQUIREMENTS. VERIFY ROUGH-IN REQUIREMENTS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE PLUMBING FIXTURE MOUNTING HEIGHTS.

PLUMBING PLAN MARK	DESCRIPTION
DCV-1	DOUBLE CHECK VALVE BACKFLOW PREVENTER: WATTS # LF007QT-S, MEETING ASSE 1015, LEAD FREE CAST BRONZE BODY, SCREW DRIVER SLOTTED TEST COCKS, QUARTER TURN BALL VALVES, AND STRAINER.
DSN	DOWNSPOUT NOZZLE: JAY R. SMITH # 1770T, CAST BRONZE BODY AND FLANGE. PROVIDE OUTLET SIZE AS SHOWN ON PLANS.
EBFC-1	ELECTRIC NON-FILTERED BOTTLE FILLING STATION (ADA ACCESSIBLE): ELKAY #LZSTL8WS(VR)K BARRIER FREE / LEAD FREE WITH BOTTLE FILLING STATION.FRONT AND SIDE PUSH ACTUATOR BARS, STAINLESS STEEL BOWL, FLEXIBLE POLYESTER ELASTOMER SAFETY BUBBLER AND GALVANIZED STEEL FRONT AND SIDES. CHILLER WITH CAPACITY OF 8.0 GALLONS PER HOUR, 50° F DRINKING WATER AT 80° F INLET TEMPERATURE AT 90° F ROOM TEMPERATURE. BOTTLE FILLIN STATION: ELECTRONIC SENSOR FOR TOUCHLESS ACTIVATION WITH AUTO 20-SECOND SHUT-OFF TIMER, UNIT PROVIDES 1.1-1.5 GPM WITH LAMINAR FLOW TO MINIMIZE SPLASHING. FURNISHED WITH GALVANIZED STEEL WALL MOUNTING BOX FRAME. TRIM: McGUIRE # LF2165CC LEAD FREE BRASS COMPRESSION ANGLE STOP VALVE WITH RISER AND ESCUTCHEON, McGUIRE # B8872CF 1-1/4” 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, AND SUITABLE CARRIER WITH STANCHIONS TO FLOOR. ELECTRICAL REQUIREMENTS: 120-VOLT, 5 FULL LOAD AMPS
ECO	EXTERIOR CLEANOUT: JAY R. SMITH # 4261L SERIES DUCO CAST IRON DOUBLE FLANGED HOUSING WITH HEAVY DUTY SECURED SCORIATED CAST IRON COVER WITH LIFTING DEVICE AND CLEANOUT BODY WITH ABS PLASTIC PLUG WITH GASKET SEAL AND PUSH-ON JOINT. REFER TO SPECIFICATIONS FOR INSTALLATION.
FCO	FLOOR CLEANOUT: JAY R. SMITH, CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, NICKEL BRONZE, TOP. # 4031L (-F-C), SCORIATED TOP FOR EXPOSED, FLUSH WITH FINISHED FLOOR, APPLICATION(S), # 4031L (-F-C-Y), STAINLESS STEEL MARKER FOR INSTALLATION IN CARPETED FLOOR AREA(S), # 4151 (-F-C), 1/8” RECESS FOR INSTALLATION IN TILED FLOOR AREA(S), # 4191 (-F-C), 1/2” RECESS FOR INSTALLATION IN TERRAZZO AND SIMILAR POURED FLOOR AREA(S). REFER TO SPECIFICATIONS FOR INSTALLATION.
FD-1	FLOOR DRAIN: JAY R .SMITH # 2005L (-A), CAST IRON BODY AND CLAMPING COLLAR, ADJUSTABLE 6” ROUND NICKEL BRONZE STRAINER. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS. TRAP SEAL: PROVIDE TRAP SEAL PER SPECIFICATIONS FOR ACTUAL FLOOR DRAIN MODEL AND SIZE.
FS-1	FLOOR SINK: JAY R. SMITH # 3101L (-12), 6” DEEP CAST IRON BODY WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH SEEPAGE HOLES, CLAMP COLLAR, WHITE ABS SEDIMENT BUCKET, AND 8-1/2” SQUARE NICKEL BRONZE RIM AND HALF GRATE. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
HB-1	HOSE BIBB: PRIER PRODUCTS # C-255NP.75, SATIN NICKEL PLATED BRASS 3/4” FEMALE INLET, 3/4” THREADED HOSE CONNECTION, LOOSE KEY HANDLE, AND ASSE 1011 INTEGRAL VACUUM BREAKER. PROVIDE WITH HYDRANT BOX C-155BX1.
JS-1	JANITOR'S SINK: STERN-WILLIAMS # MTB-3624, 36” x 24” x 10” HIGH TERRAZZO BASIN WITH INTEGRAL STAINLESS STEEL DRAIN BODY. FAUCET: CHICAGO FAUCET # 897-CP FAUCET WITH WALL BRACE, INTEGRAL VACUUM BREAKER, PAIL HOOK, AND 3/4" MALE HOSE THREADED OUTLET. SECURE FAUCET IN WALL WITH BACKBOARD. TRIM: # BP TYPE 304, 20 GAUGE, STAINLESS STEEL WALL SURROUNDS, # T-35 THREE FOOT LONG REINFORCED HOSE WITH 3/4” CHROME COUPLING AND WALL HOOK, # V-70 EXTRUDED VINYL BUMPER GUARD, AND # T-40 24” STAINLESS STEEL MOP HANGER.
LAV-1	WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): SLOAN # AD-84000 "AER-DEC" 120" x 23-1/2" RECTANGULAR 4-STATION WALL MOUNTED CORIAN/QUARTZ SINK. FAUCET : SLOAN # ETX-250-BAT-ISM-BN-0.5GPM-MLM-IR-FCT, “BASYS” BATTERY POWERED, SENSOR OPERATED FAUCET, INTEGRATED SIDE MIXER, BRUSHED NICKEL FINISH, 0.5 GPM, MULTI-LAMINAR SPRAY, INFRARED SENSOR. SOAP DISPENSER: SLOAN # ESD-500-BN, DECK-MOUNTED FOAM DISPENSE, BRUSHED NICKEL FINISH, BATTERY POWERED, SENSORED OPERATED. TRIM: McGUIRE # 155A GRID DRAIN WITH TAILPIECE, McGUIRE # LF2165CCLK LEAD FREE BRASS LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, McGUIRE # B8872CF 1-1/4” 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, PLUMBEREX “PRO-EXTREME“ # X-4222 INSULATION KIT FOR WATER AND WASTE PIPES.
LAV-2	WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): SLOAN # AD-81000 "AER-DEC" 30" x 23-1/2" RECTANGULAR 1-STATION WALL MOUNTED CORIAN/QUARTZ SINK. FAUCET : SLOAN # ETX-250-BAT-ISM-BN-0.5GPM-MLM-IR-FCT, “BASYS” BATTERY POWERED, SENSOR OPERATED FAUCET, INTEGRATED SIDE MIXER, BRUSHED NICKEL FINISH, 0.5 GPM, MULTI-LAMINAR SPRAY, INFRARED SENSOR. SOAP DISPENSER: SLOAN # ESD-500-BN, DECK-MOUNTED FOAM DISPENSE, BRUSHED NICKEL FINISH, BATTERY POWERED, SENSORED OPERATED. TRIM: McGUIRE # 155A GRID DRAIN WITH TAILPIECE, McGUIRE # LF2165CCLK LEAD FREE BRASS LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, McGUIRE # B8872CF 1-1/4” 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, PLUMBEREX “PRO-EXTREME“ # X-4222 INSULATION KIT FOR WATER AND WASTE PIPES.
NW-1	NON-FREEZE WALL HYDRANT: PRIER PRODUCTS # C-634NBX1, SATIN NICKEL PLATED BRASS 1” MALE INLET BY 3/4” FEMALE INLET, 3/4” THREADED HOSE CONNECTION, LOOSE KEY HANDLE, HYDRANT LENGTH AS REQUIRED FOR INSTALLED WALL THICKNESS, ADJUSTABLE WALL CLAMP, BRASS BOX WITH SATIN NICKEL PLATED FINISH AND INTEGRAL ASSE 1052 DOUBLE CHECK VACUUM BREAKER.
ORD-1	OVERFLOW ROOF DRAIN: JAY R. SMITH # 1080Y (-E0X-C-R-CID), 15” DIAMETER CAST IRON BODY, FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP, SUMP RECEIVER, HUBLESS OUTLET, FIXED EXTENSION – HEIGHT AS REQUIRED BY INSTALLED INSULATION THICKNESS, CAST IRON DOME BOLTED OR LOCKED DOWN AND 2” HIGH WATER DAM. PROVIDE OUTLET SIZE AS SHOWN ON PLANS.
RD-1	ROOF DRAIN: JAY R. SMITH # 1010Y (-E0X-C-R-CID), 15” DIAMETER CAST IRON BODY, FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP, SUMP RECEIVER, HUBLESS OUTLET, FIXED EXTENSION – HEIGHT AS REQUIRED BY INSTALLED INSULATION THICKNESS, AND CAST IRON DOME BOLTED OR LOCKED DOWN. PROVIDE OUTLET SIZE AS SHOWN ON PLANS.
RH-1	ROOF NON-FREEZE POST HYDRANT: MAPA PRODUCTS # MPH-24FP FREEZE PROOF POST HYDRANT MEETING ASSE #1057 WITH BLACK POWDER COATED CAST ALUMINUM WEATHER-GUARD DOME HANDLE, STAINLESS STEEL SHROUD WITH WELDED STAINLESS STEEL FLANGE, UNDER DECK CLAMP, BRONZE GLOBE ANGLE VALVE, 3/4” HOSE CONNECTION, QUICK DISCONNECT WITH BUILT-IN VACUUM BREAKER, STAINLESS STEEL RESERVOIR.
SK-1	SINK: ELKAY # 3C10X14-2-12X, 58” x 19-13/16" X 43-3/4” DEPENDABILT STAINLESS STEEL, 16 GAUGE TYPE 300 STAINLESS STEEL, 3-COMPARTMENT SINK WITH 12” LEFT AND RIGHT DRAINBOARDS AND STAINLESS STEEL LEGS, AND CENTER DRAIN PLACEMENT. FAUCET: CHICAGO FAUCET # 631-218017AB 8” BACK MOUNT FAUCET WITH 7 ¼” – 8 ¾” ADJUSTABLE “G” SUPPLY ARMS, VANDAL RESISTANT #317 WRISTBLADE HANDLES, GN2A GOOSENECK SPOUT, # E36VP 1.5 GPM VANDAL RESISTANT LAMINAR FLOW AERATOR, QUARTER TURN CERAMIC CARTRIDGES TRIM: (3) ELKAY # LK24RT GRID STRAINERS WITH LEVER HANDLE AND 1-1/2” TAILPIECE, AND 1-1/2” HARD COPPER TYPE “DWV” FABRICATED INDIRECT WASTE LINE ROUTED TO FLOOR SINK.
SK-2	HAND SINK ADA ACCESSIBLE): ELKAY # # ELVWO2219, 22” x 19" X 5-1/2” RECTANGULAR, WALL MOUNTED, 18 GAUGE TYPE 304 STAINLESS STEEL, WITH BUFFED SATIN FINISH, REAR CENTER DRAIN PLACEMENT AND BOTTOM ONLY PADS. FAUCET: CHICAGO FAUCET # 895-207589AB 4” CENTERSET LEAD FREE FAUCET WITH VANDAL RESISTANT # 369 LEVER HANDLES, GN1A GOOSENECK SPOUT, # E67VP 0.5 GPM VANDAL RESISTANT, LAMINAR FLOW AERATOR, QUARTER TURN CERAMIC CARTRIDGES. TRIM: McGUIRE # “PRODRAIN2” GRID DRAIN WITH 1-1/2” 17 GAUGE TAILPIECE, McGUIRE # LF2165CCLK LEAD FREE BRASS LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, McGUIRE # B8912CF 1-1/2” 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, WALL BRACKET, PROVIDE BACKBOARD AND SECURE FIXTURE TO IT, AND PLUMBEREX “PRO-EXTREME“ # X-4222 INSULATION KIT FOR WATER AND WASTE PIPES.
TMV-1	THERMOSTATIC MIXING VALVE: POWERS # LFG480, SOLID LEAD FREE BRASS OR BRONZE BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 1.6 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.25 GPM. SET TEMPERATURE TO 110F FOR DUAL TEMPERATURE LAVATORIES AND HAND SINKS, 100F FOR SINGLE TEMPERATURE LAVATORIES AND HAND SINKS AND 120F FOR SINKS. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLAN(S).
TS-1	TIME SWITCH: INTERMATIC #ET1705CSPST, 7 DAY, ONE CIRCUIT-SINGLE POLE SINGLE THROW, ELECTRONIC TIME SWITCH OR EQUAL BY TORK. TIME SWITCH SHALL BE MOTOR RATED (1 H.P. @ 120 VOLT, SINGLE PHASE), MINIMUM OF 20 SET POINTS (14 ON/OFF CYCLES) AND BATTERY BACK UP. COORDINATE WITH DIVISION 16 FOR INSTALLATION AND INTERLOCK OF TIME SWITCH IN SERIES WITH THE AQUASTAT AND RECIRCULATION PUMP.
UR-1	URINAL: AMERICAN STANDARD # 6561.017 "TRIMBROOK" WHITE VITREOUS CHINA FIXTURE WITH FLUSHING RIM, 3/4" TOP SPUD, AND SIPHON FLUSH ACTION. VALVE: SLOAN "OPTIMA - SLOAN MODEL" # 186 ES-S TMO 0.125 GALLON PER FLUSH, EXPOSED CHROME-PLATED, BATTERY OPERATED, DIAPHRAGM TYPE FLUSH VALVE WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, OSCILLATING ADA COMPLIANT HANDLE WITH VANDAL RESISTANT CAP, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP, VACUUM BREAKER, 3/4” FLUSH TUBE, AND SWEAT ADAPTER KIT. TRIM: SUITABLE CARRIER WITH STANCHIONS TO FLOOR.
UR-2	URINAL (ADA ACCESSIBLE): AMERICAN STANDARD # 6561.017 "TRIMBROOK" WHITE VITREOUS CHINA FIXTURE WITH FLUSHING RIM, 3/4" TOP SPUD, AND SIPHON FLUSH ACTION. VALVE: SLOAN "OPTIMA - SLOAN MODEL" # 186 ES-S TMO 0.125 GALLON PER FLUSH, EXPOSED CHROME-PLATED, BATTERY OPERATED, DIAPHRAGM TYPE FLUSH VALVE WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, OSCILLATING ADA COMPLIANT HANDLE WITH VANDAL RESISTANT CAP, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP, VACUUM BREAKER, 3/4” FLUSH TUBE, AND SWEAT ADAPTER KIT. TRIM: SUITABLE CARRIER WITH STANCHIONS TO FLOOR.
WC-1	WALL-MOUNTED WATER CLOSET: AMERICAN STANDARD # 2257.001 "AFWALL" WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.28 GALLON PER FLUSH, AND DIRECT-FED SIPHON JET ACTION. MEETS DEFINITION FOR HIGH EFFICIENCY TOILET (HET). VALVE: SLOAN "G2 OPTIMA PLUS" # 8111-1.28, 1.28 GALLON PER FLUSH EXPOSED, CHROME-PLATED, TOP MOUNTED PLASTIC AND CHROME PLATED METAL HOUSING WITH OVERRIDE BUTTON, BATTERY POWERED SENSOR OPERATED, DIAPHRAGM TYPE FLUSH VALVE WITH CHLORAMINE RESISTANT DIAPHRAGM WITH PROTECTED ORIFICE, OSCILLATING HANDLE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP WITH VANDAL RESISTANT CAP, VACUUM BREAKER, SOLID RING PIPE SUPPORT, AND SWEAT ADAPTER KIT. TRIM CHURCH # 9500SSC WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY DUTY, SEAT LESS COVER WITH SELF-SUSTAINING CHECK HINGES AND STAINLESS STEEL BOLTS. PROVIDE SUITABLE FIXTURE CARRIER.
WC-2	WALL-MOUNTED WATER CLOSET (ADA ACCESSIBLE): AMERICAN STANDARD # 2257.001 "AFWALL" WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.28 GALLON PER FLUSH, AND DIRECT-FED SIPHON JET ACTION. MEETS DEFINITION FOR HIGH EFFICIENCY TOILET (HET). VALVE: SLOAN "G2 OPTIMA PLUS" # 8111-1.28, 1.28 GALLON PER FLUSH EXPOSED, CHROME-PLATED, TOP MOUNTED PLASTIC AND CHROME PLATED METAL HOUSING WITH OVERRIDE BUTTON, BATTERY POWERED SENSOR OPERATED, DIAPHRAGM TYPE FLUSH VALVE WITH CHLORAMINE RESISTANT DIAPHRAGM WITH PROTECTED ORIFICE, OSCILLATING HANDLE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP WITH VANDAL RESISTANT CAP, VACUUM BREAKER, SOLID RING PIPE SUPPORT, AND SWEAT ADAPTER KIT. TRIM: CHURCH # 9500SSC WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY DUTY, SEAT LESS COVER WITH SELF-SUSTAINING CHECK HINGES AND STAINLESS STEEL BOLTS. PROVIDE SUITABLE FIXTURE CARRIER.
WC-3	FLOOR-MOUNTED WATER CLOSET (ADA ACCESIBLE): AMERICAN STANDARD # 214AA.104 “CADET PRO” TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.28 GALLON PER FLUSH, AND SIPHON FLUSH ACTION WITH 3” OVERSIZED FLAPPER VALVE, MaP SCORE OF 1,000g AND CLOSE-COUPLED TANK WITH LEFT HAND TRIP LEVER. INSTALL TRIP LEVER ON THE WIDE SIDE OF THE STALL. BOWL # 3517A.101 AND RIGHT HAND TRIP LEVER TANK # 4188A.104. REFERENCE DRAWINGS FOR EXACT NUMBER OF RIGHT AND LEFT HAND TRIP LEVER TANKS REQUIRED. TRIM- CHURCH # 9500SSCT WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY DUTY, SEAT LESS COVER WITH SELF-SUSTAINING CHECK HINGES AND STAINLESS STEEL BOLTS, McGUIRE # LF2166CC LEAD FREE BRASS ANGLE STOP VALVE WITH RISER AND CHROME-PLATED ESCUTCHEON
WCO	WALL CLEANOUT: JAY R. SMITH # 4530S, CAST IRON CLEANOUT TEE, COUNTER SUNK PLUG, STAINLESS STEEL ROUND COVER AND SCREW, AND IRON PLUG WITH GASKET SEAL. REFER TO SPECIFICATIONS FOR INSTALLATION.
WHA	WATER HAMMER ARRESTER: PRECISION PLUMBING PRODUCTS, HARD DRAWN COPPER BODY WITH WROUGHT COPPER FITTINGS, PISTON TYPE WITH LUBRICATED EPDM “O” RING SEALS, MEETING ASSE 1010 OR PDI WH-201. PROVIDE PDI SIZES “A” THROUGH “F” AS SHOWN ON PLANS. PROVIDE SIZE “A” UNLESS SHOWN OTHERWISE ON THE PLANS.

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STATE OF MISSOURI
ALESSANDRO SPINELLI
NUMBER PE-2022017017
PROFESSIONAL ENGINEER
10/30/2023

ALESSANDRO . SPINELLI
LICENSE # PE-2022017017

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		Author
CHECKED BY:		Checker

PLUMBING SCHEDULES

P-401

PLOT DATE: 10/27/2023 3:54:25 PM
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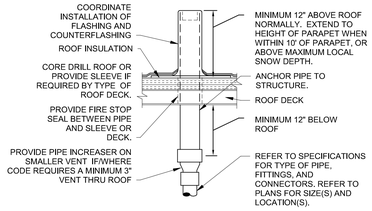
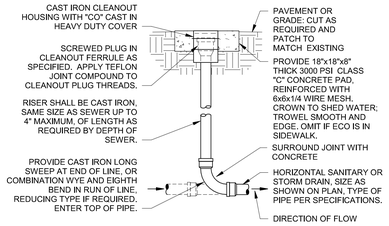


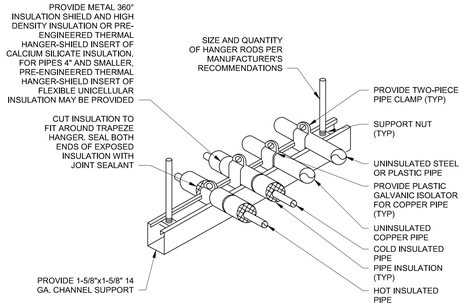
LOCATE VTR MINIMUM THREE FEET FROM PROPERTY LINE, TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, TWENTY FIVE FEET FROM ANY OPENING OR FRESH AIR INTAKE IN MEDICAL FACILITIES AND ONE FOOT FROM ANY VERTICAL SURFACE. REFER TO LOCAL CODES FOR OTHER VENT TERMINATION REQUIREMENTS. LOCATE VTR MINIMUM 18" FROM ADJACENT WALL, PARAPET, EXPANSION JOINT, ROOF DRAIN, EQUIPMENT CURB, OR OTHER ROOF FEATURE. OFFSET IN CEILING SPACE WHERE REQUIRED TO MEET THESE CONDITIONS. INSULATE LAST SIX FEET OF VENT PIPE INSIDE BUILDING PER SPECIFICATIONS.

④ VENT THRU ROOF
NTS



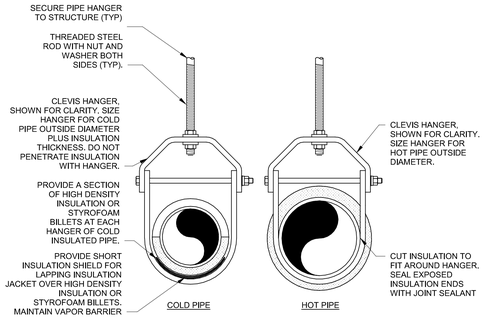
LOCATE EXTERIOR CLEANOUTS AT ENDS OF RUNS, AT TURNS OF PIPE GREATER THAN 45 DEGREES, AT MINIMUM 75 FOOT INTERVALS ON STRAIGHT RUNS, AND WHERE SHOWN ON PLANS. PROVIDE EARTH BACKFILL AND COMPACTION PER ARCHITECTURAL SPECIFICATIONS. REFER TO SPECIFICATIONS AND SCHEDULES FOR MORE INFORMATION.

③ EXTERIOR CLEANOUT
NTS



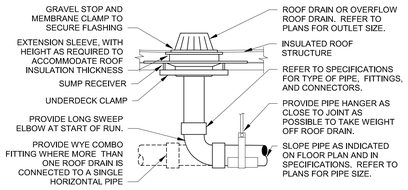
PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITONS. REFER TO SPECIFICATIONS FOR MORE INFORMATION. PIPE AND CONDUIT OF ALL TRADES MAY BE COMBINED ON THE SAME SUPPORT CHANNEL. COORDINATE SUPPORT CHANNEL LENGTH WITH PIPING AND CONDUIT TO BE SUPPORTED. SUPPORT CHANNEL SPACING SHALL BE DETERMINED BY SMALLEST PIPE TO BE SUPPORTED. CHANNEL SUPPORT MAY BE USED AS A WALL BRACKET, ATTACH TO WALL WITH ANCHOR BOLTS PER SPECIFICATIONS. FOR HORIZONTAL INSULATED PIPING, ATTACH CLAMPS AS INDICATED ABOVE, FOR VERTICAL INSULATED PIPING, ATTACH CLAMPS TO THE PIPE AND SEAL INSULATION AT BOTH CLAMP ENDS.

② TRAPEZE PIPE HANGER
NTS



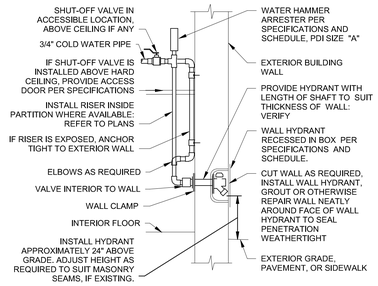
REFER TO SPECIFICATIONS FOR INSULATION TYPES. INSULATION THICKNESSES, HANGER TYPES, HANGER ROD CONNECTIONS TO STRUCTURE AND HANGER SPACING.

① PIPE HANGER DETAIL
NTS



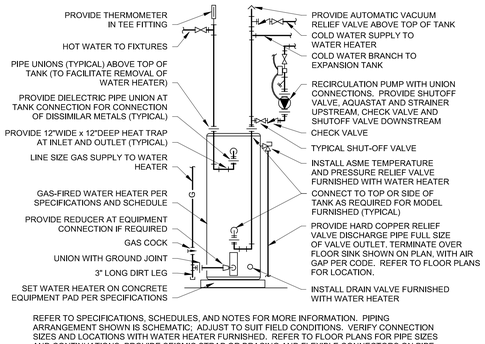
UNDERDECK CLAMP AND SUMP RECEIVER ARE NOT REQUIRED WHEN ROOF DRAIN BODY IS CAST INTO CONCRETE ROOF. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. INSULATE ROOF DRAIN SUMP AND PIPE PER SPECIFICATIONS. LOCATE DRAINS WHERE SHOWN ON ARCHITECTURAL PLANS. VERIFY WITH STRUCTURAL PLANS FOR ROOF LOW POINTS. COORDINATE WITH STRUCTURAL DRAWINGS REGARDING PROVISION FOR SUPPLEMENTARY STEEL FRAMING AROUND ROOF OPENING. COORDINATE ROOF DRAIN INSTALLATION WITH ARCHITECTURAL DETAILS AND ROOFING INSTALLATION. SET OVERFLOW DRAIN WEIR ELEVATION 2" ABOVE PRIMARY ROOF DRAIN WEIR ELEVATION.

⑧ ROOF DRAIN INSTALLATION
NTS



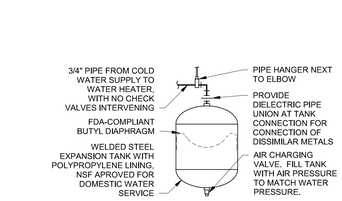
ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED TO SUIT FIELD CONDITIONS. INSTALL PER MANUFACTURER'S INSTRUCTIONS. IN NON-FREEZING CLIMATES, PIPE MAY BE INSTALLED CONCEALED IN EXTERIOR WALL RATHER THAN EXTERIOR TO WALL AS SHOWN. REFER TO PLANS FOR LOCATION.

⑦ WALL HYDRANT INSTALLATION
NTS



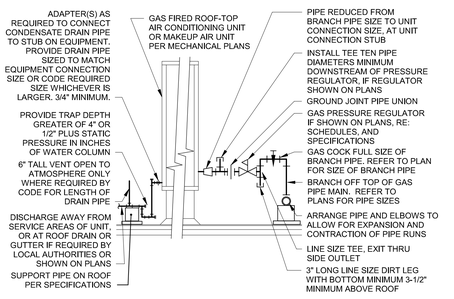
REFER TO SPECIFICATIONS, SCHEDULES, AND NOTES FOR MORE INFORMATION. PIPING ARRANGEMENT SHOWN IS SCHEMATIC; ADJUST TO SUIT FIELD CONDITIONS. VERIFY CONNECTION SIZES AND LOCATIONS WITH WATER HEATER FURNISHED. REFER TO FLOOR PLANS FOR PIPE SIZES AND CONTINUATIONS. PROVIDE SEISMIC STRAP OR BRACING AND FLEXIBLE CONNECTORS ON PIPE WHEN REQUIRED BY LOCAL AUTHORITIES. PROVIDE HEAT TRAP ON COLD WATER SUPPLY WHEN REQUIRED BY LOCAL AUTHORITIES. POWER WIRING AND DISCONNECT SWITCH ARE SPECIFIED BY ELECTRICAL. INTERLOCK OF AQUASTAT WITH RECIRCULATION PUMP IS SPECIFIED BY ELECTRICAL.

⑥ GAS FIRED WATER HEATER AND PUMP
NTS



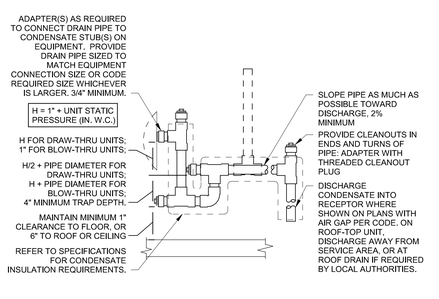
PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION PROCEDURE. VERIFY PROPER OPERATION WHEN INSTALLED. PROVIDE SEISMIC STRAP OR BRACING WHEN REQUIRED BY LOCAL AUTHORITIES.

⑤ SMALL EXPANSION TANK
NTS



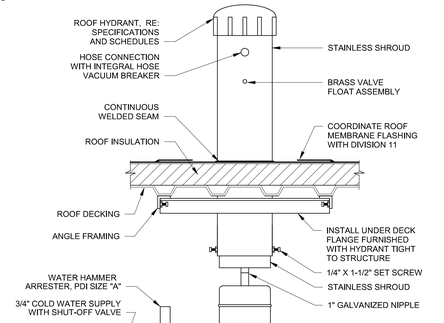
ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. PROVIDE CONNECTIONS SHOWN IN EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS. VERIFY CONNECTION LOCATIONS BEFORE INSTALLING PIPE RUNS. REFER TO SPECIFICATIONS FOR PIPE AND FITTING MATERIALS AND INSTALLATION. PROVIDE DIELECTRIC UNION IF CONNECTING DISSIMILAR METALS. FOR PIPE SIZE(S) REFER TO FLOOR PLANS, OR CODE REQUIREMENTS FOR HVAC UNIT TONNAGE. PROVIDE GAS COCK, UNION AND DIRT LEG SAME SIZE AS BRANCH PIPE. SLOPE CONDENSATE PIPE AS MUCH AS POSSIBLE TOWARD DISCHARGE, 2% MINIMUM. PROVIDE CLEANOUTS IN ENDS AND TURNS OF PIPE PER LOCAL CODE REQUIREMENTS: ADAPTER WITH THREADED CLEANOUT PLUG. PROVIDE MINIMUM 6" CLEARANCE TO ROOF UNDER PIPES.

⑫ CONNECTIONS TO ROOF-TOP UNIT
NTS



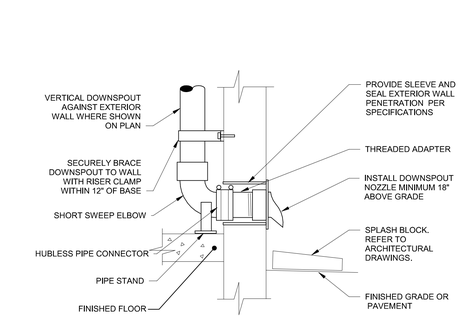
ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. PROVIDE CONNECTIONS SHOWN IN EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SPECIFICATIONS FOR PIPE AND FITTING MATERIALS AND INSTALLATION. PROVIDE DIELECTRIC UNION IF CONNECTING DISSIMILAR METALS. AT MOTORIZED EQUIPMENT ABOVE CEILING, PROVIDE NEOPRENE TUBE AND STAINLESS STEEL SCREW CLAMPS FOR FLEXIBLE CONNECTION. FOR PIPE SIZE(S) REFER TO FLOOR PLANS, OR CODE REQUIREMENTS FOR HVAC UNIT TONNAGE. PROVIDE HANGERS OR SUPPORTS PER SPECIFICATIONS. DO NOT COMBINE CONDENSATE DRAIN PIPES WITH NON-CONDENSATE INDIRECT DRAINS.

⑪ CONDENSATE DRAIN INSTALLATION
NTS



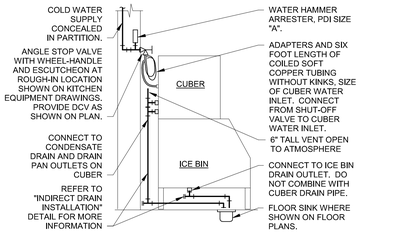
VERIFY REQUIREMENTS FOR METERING AND PIPING WITH GAS COMPANY. COORDINATE WITH GAS COMPANY WITH REGARD TO INSTALLATION OF OTHER PLUMBING UTILITIES IN VICINITY, IF ANY. APPLY FOR AND PAY GAS COMPANY FEES FOR INSTALLATION. USE WELDED OR SCREWED PIPE AND FITTINGS PER PLUMBING SPECIFICATIONS.

⑭ GAS METER SETTING
NTS



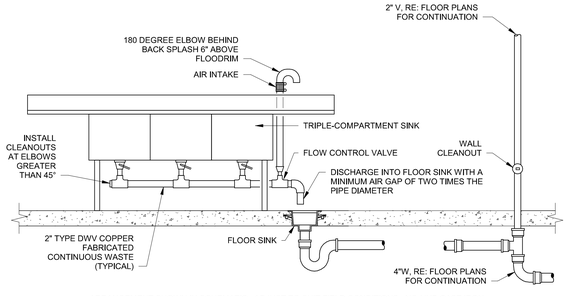
ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. REFER TO SPECIFICATIONS FOR DOWNSPOUT NOZZLE, AND TYPE OF PIPE, FITTINGS, AND CONNECTORS.

⑨ DOWNSPOUT NOZZLE
NTS



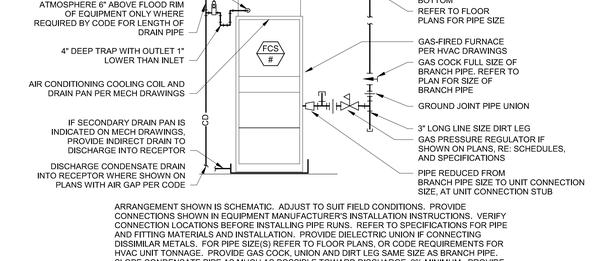
PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS AND MEET EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE DUPLICATE WATER AND DRAIN CONNECTIONS IF DUAL CUBERS ARE FURNISHED.

⑯ ICE MACHINE CONNECTIONS
NTS



ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. NO-HUB CAST IRON PIPE, FITTINGS AND CONNECTORS ALL AROUND SINK AND TRAP.

⑮ UTILITY SINK AND GREASE TRAP
NTS



ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. PROVIDE CONNECTIONS SHOWN IN EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS. VERIFY CONNECTION LOCATIONS BEFORE INSTALLING PIPE RUNS. REFER TO SPECIFICATIONS FOR PIPE AND FITTING MATERIALS AND INSTALLATION. PROVIDE DIELECTRIC UNION IF CONNECTING DISSIMILAR METALS. FOR PIPE SIZE(S) REFER TO FLOOR PLANS, OR CODE REQUIREMENTS FOR HVAC UNIT TONNAGE. PROVIDE GAS COCK, UNION AND DIRT LEG SAME SIZE AS BRANCH PIPE. SLOPE CONDENSATE PIPE AS MUCH AS POSSIBLE TOWARD DISCHARGE, 2% MINIMUM. PROVIDE CLEANOUTS IN ENDS AND TURNS OF PIPE PER LOCAL CODE REQUIREMENTS: ADAPTER WITH THREADED CLEANOUT PLUG.

⑬ GAS FURNACE CONNECTIONS
NTS

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STATE OF MISSOURI
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NUMBER PE-2022017017
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10/30/2023
ALESSANDRO . SPINELLI
LICENSE # PE-2022017017

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:	18225R21006	
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DATE:	11/01/2023	
DRAWN BY:	Author	
CHECKED BY:	Checker	

PLUMBING DETAILS

P-501

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PLOT DATE: 10/27/2023 3:54:31 PM
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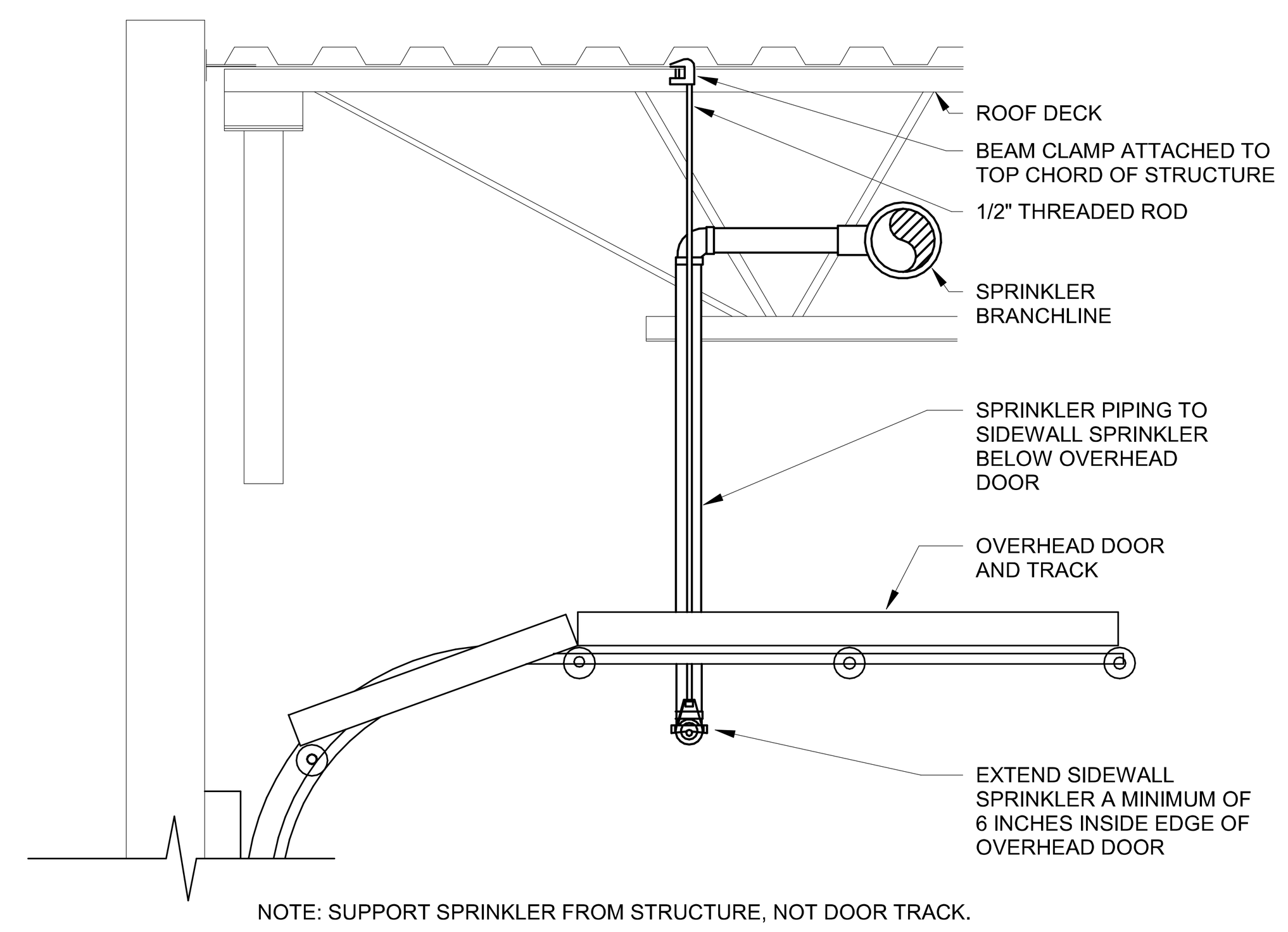
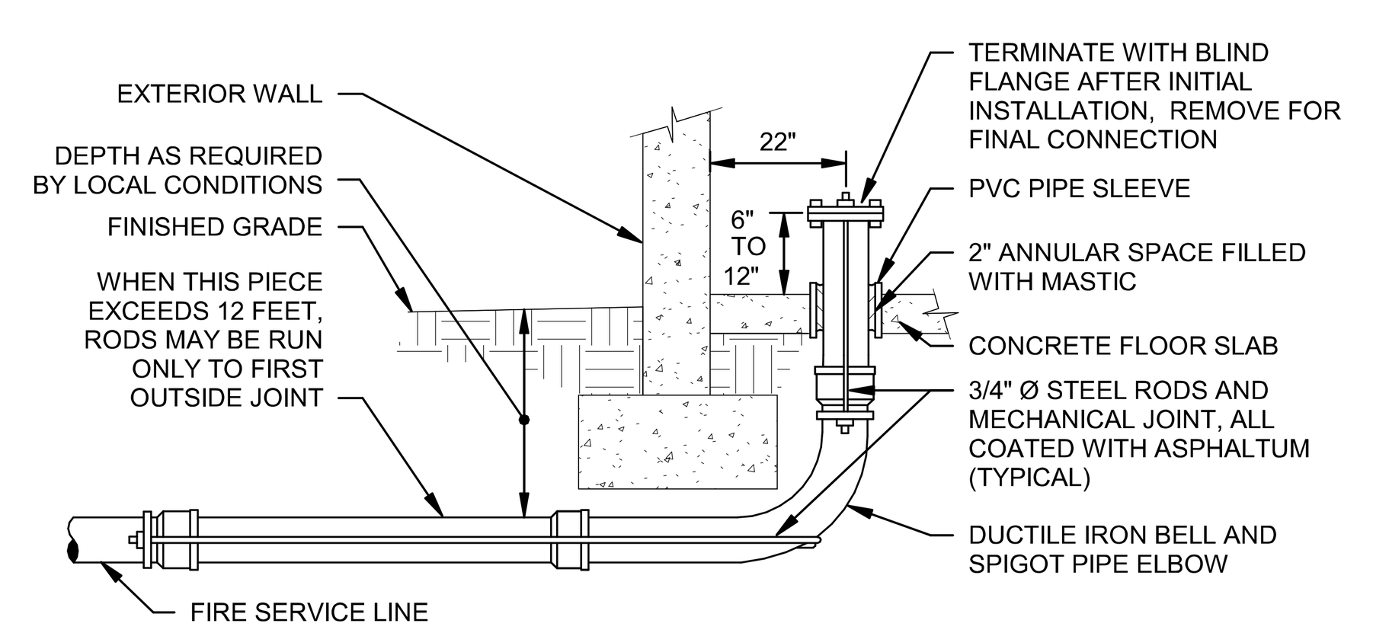
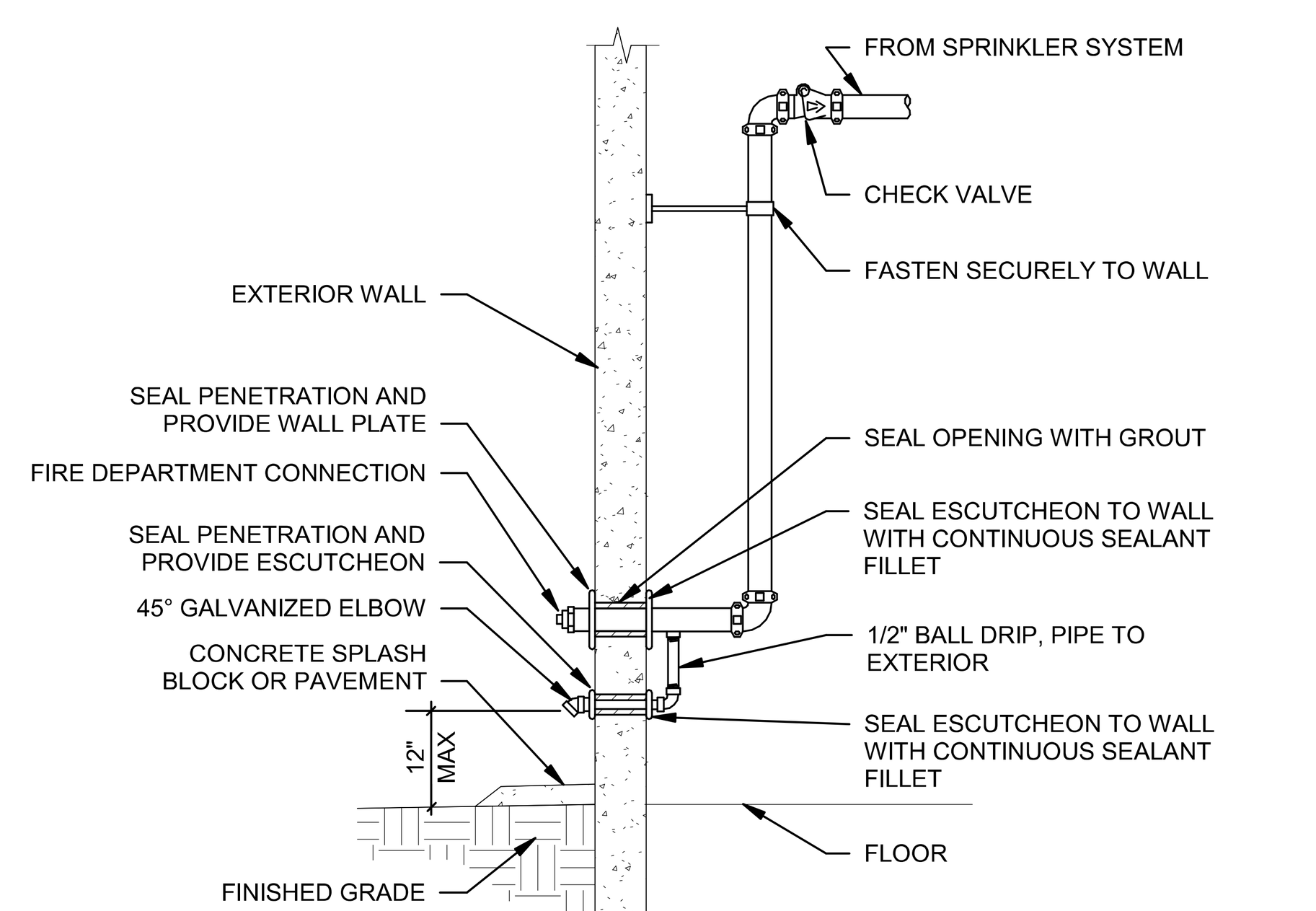


6 OVERHEAD ROLL-UP DOOR SPRINKLER DETAIL
NTS



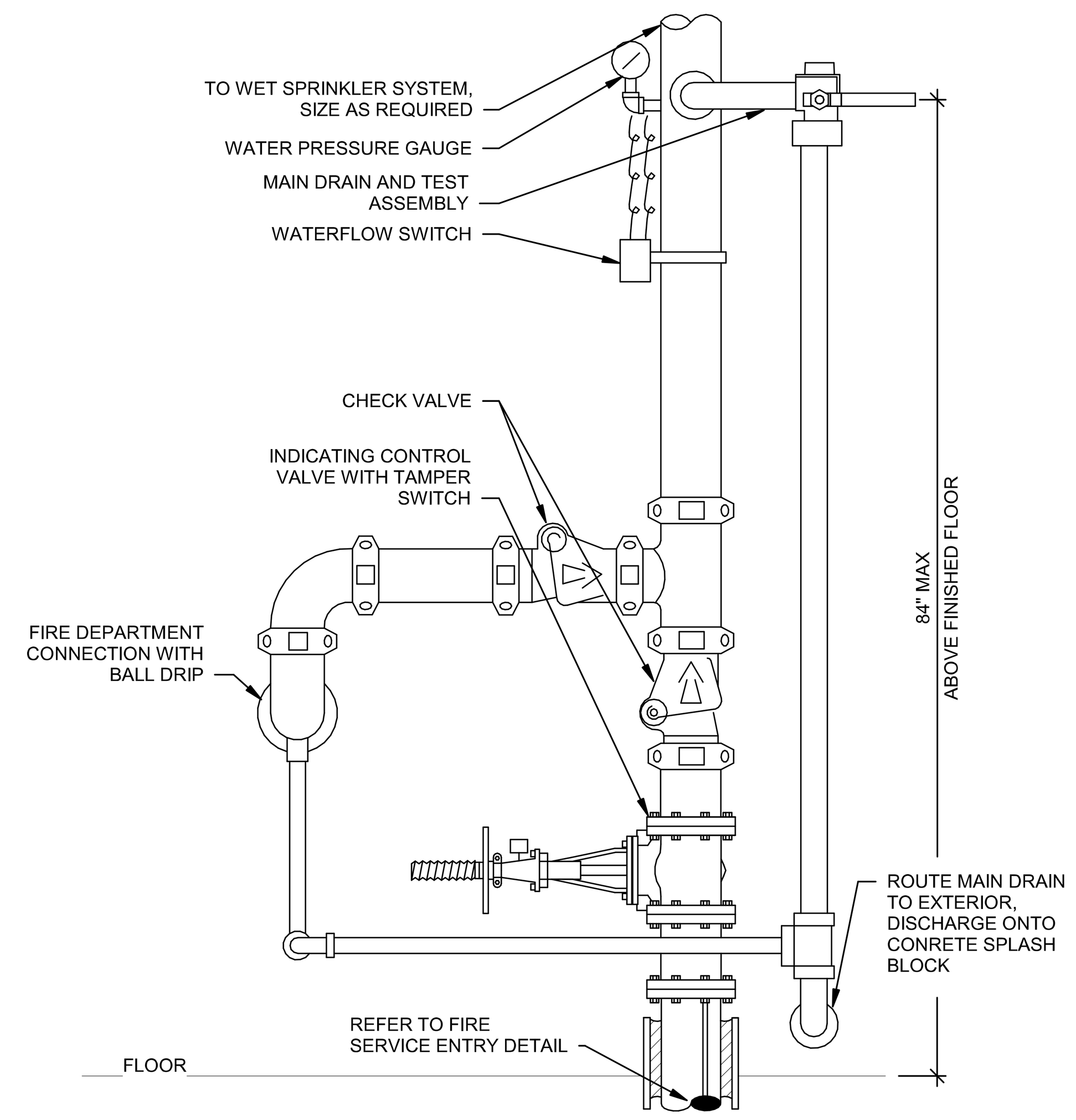
ARRANGEMENT SHOWN IS SCHEMATIC. MODIFY TO SUIT FIELD CONDITIONS AND MEET APPLICABLE CODE REQUIREMENTS. VERIFY FOUNDATION WITH ARCHITECTURAL DRAWINGS. COORDINATE WHO IS TO PROVIDE THE FIRE SERVICE ENTRY WITH THE GENERAL CONTRACTOR OR CONSTRUCTION MANAGER PRIOR TO SUBMITTING BID.

5 FIRE SERVICE ENTRY
NTS



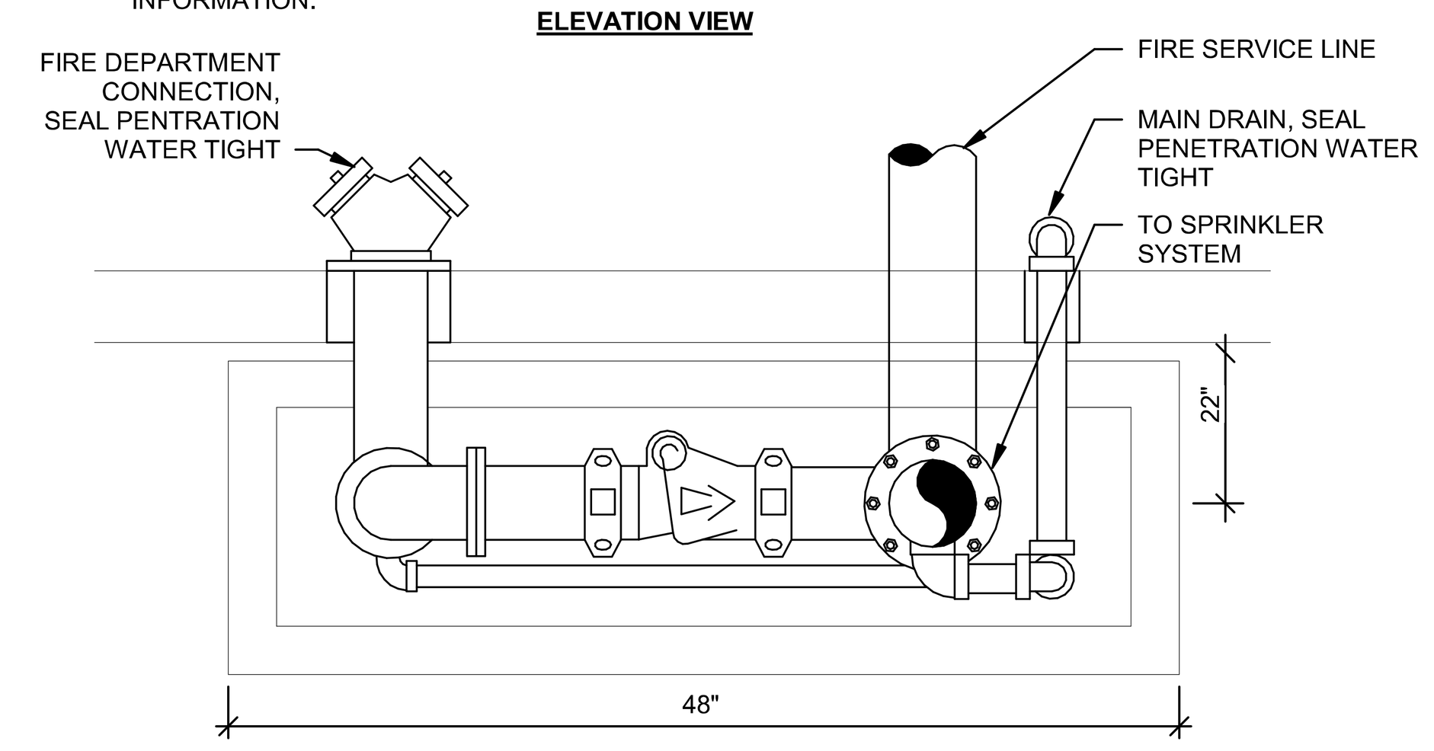
ARRANGEMENT SHOWN IS SCHEMATIC. MODIFY TO SUIT CONDITIONS AND MEET ALL APPLICABLE CODE REQUIREMENTS. EXTERIOR PIPING AND FITTINGS SHALL BE GALVANIZED. REFER TO DRAWINGS FOR APPROVED LOCATIONS.

4 FIRE DEPARTMENT CONNECTION
NTS



ARRANGEMENT SHOWN IS SCHEMATIC. MODIFY TO SUIT CONDITIONS AND MEET APPLICABLE CODE REQUIREMENTS. COORDINATE INSTALLATION OF ALARM DEVICES WITH OTHER TRADES. BACKFLOW PREVENTER LOCATION OUTSIDE ON SITE. REFER TO CIVIL FOR ADDITIONAL INFORMATION.

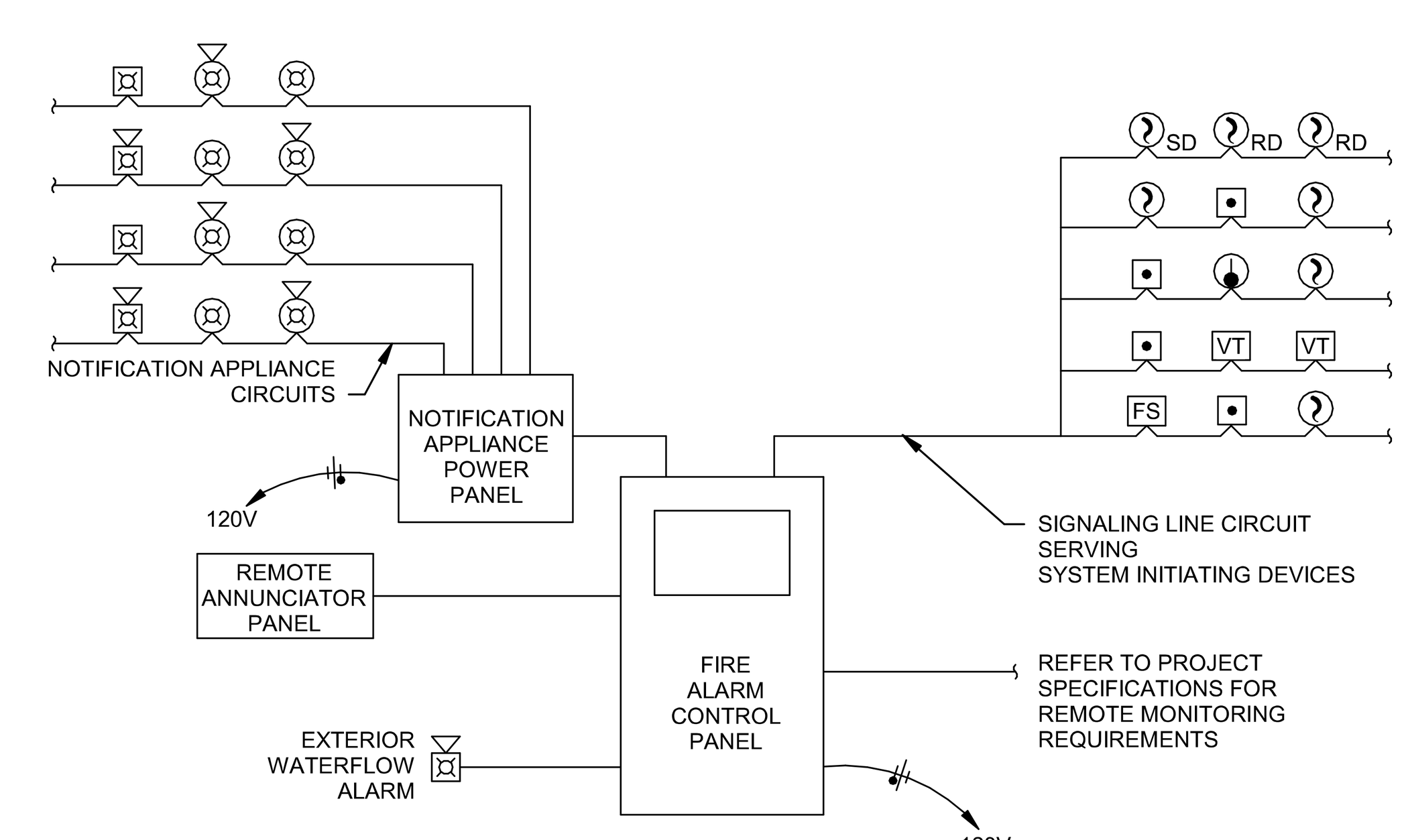
ELEVATION VIEW



CROSS HATCHED AREA IS THE MAXIMUM ALLOWABLE AREA TO BE USED FOR SPRINKLER SYSTEM RISER AND BACKFLOW PREVENTER. INSTALLATION MUST ALLOW FOR ALL REQUIRED MAINTENANCE ACCESS WITHIN CROSS HATCHED AREA.

PLAN VIEW

3 FIRE PROTECTION RISER - WET PIPE
NTS



RISER DIAGRAM IS SCHEMATIC IN NATURE. NOT ALL DEVICES ARE SHOWN. REFER TO PLANS FOR EQUIPMENT QUANTITIES AND LOCATIONS.

DUCT DETECTORS MAY HAVE INTEGRAL RELAYS FOR AIR HANDLING UNIT SHUT-DOWN AND FIRE/SMOKE DAMPER CONTROL. WIRING FOR THIS FUNCTION HAS NOT BEEN SHOWN. COORDINATE WITH MECHANICAL SYSTEM INSTALLER.

REFER TO PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

2 FIRE ALARM RISER DIAGRAM - ADDRESSABLE SYSTEM (NON-VOICE)
NTS

FIRE PROTECTION GENERAL NOTES:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS. SYSTEM SHALL ALSO MEET ALL APPLICABLE BUILDING CODES, FIRE CODES AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER. VERIFY REQUIREMENTS PRIOR TO BID SUBMITTAL.
3. INFORMATION ON CONTRACT DOCUMENTS IS GENERAL INFORMATION AND FOR BID PURPOSES ONLY. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE FINAL SYSTEM DESIGN AND LAYOUT OF ALL COMPONENTS, COORDINATION WITH ALL OTHER TRADES, AND SYSTEM CALCULATIONS REQUIRED FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION, ENGINEER, AND OWNER'S INSURER.
4. THE CONTRACTOR SHALL FOLLOW THE ENGINEER OF RECORD'S SYSTEM DESIGN AND LAYOUT OF ALL COMPONENTS EXCEPT WHERE MODIFICATION TO THE DESIGN IS NECESSARY. MODIFICATIONS SHALL BE REFLECTED IN THE CONTRACTOR'S SHOP DRAWINGS AND CALCULATIONS.
5. DEVIATIONS FROM ENGINEER'S DESIGN WILL NOT BE CONSIDERED UNLESS A FORMALLY SUBMITTED RFI IS RECEIVED AND APPROVED.
6. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND LABOR REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
7. PROVIDE ADDITIONAL MATERIALS AND LABOR REQUIRED DUE TO LACK OF COORDINATION OR TO MEET AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
8. FORWARD COMPLETED CERTIFICATE OF COMPLETION AND CONTRACTOR MATERIAL TEST CERTIFICATES TO THE OWNER.
9. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

WATER SUPPLY INFORMATION:

WATER SUPPLY INFORMATION IS NOT AVAILABLE AT THIS TIME. CONTRACTOR SHALL SUBMIT RFI OR OBTAIN CURRENT WATER SUPPLY INFORMATION IN ACCORDANCE WITH NFPA 291 PRIOR TO BID SUBMITTAL.

FIRE PROTECTION SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	NIC	NOT IN CONTRACT
AFG	ABOVE FINISHED GRADE	OC	ON CENTER
CD	CANDELA	PIV	POST INDICATOR VALVE
DI	DUCTILE IRON	PROVIDE	FURNISH AND INSTALL
ESFR	EARLY SUPPRESSION FAST RESPONSE	PRV	PRESSURE REDUCING VALVE
ETR	EXISTING TO REMAIN	RD	RETURN DUCT
FHC	FIRE HOSE CABINET	REV	REVISION
FP	FIRE PROTECTION	SD	SUPPLY DUCT
GC	CONTRACTOR	SF	SQUARE FEET
GPM	GALLONS PER MINUTE	TYP	TYPICAL
JB/J-BOX	JUNCTION BOX	UNO	UNLESS NOTES OTHERWISE
MAX	MAXIMUM	V	VOLT(S)
MIN	MINIMUM	W	WATTS
N/A	NOT APPLICABLE	WP	WEATHERPROOF

ANNOTATION

- 1 — FIRE PROTECTION PLAN NOTE CALLOUT
- CONNECTION POINT OF NEW WORK TO EXISTING
- 1 / F1 — DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- 1 / F1 — SECTION CUT DESIGNATION
- DEDICATED EQUIPMENT ACCESS TILE
- ACCESS PANEL

FIRE SPRINKLERS

- UPRIGHT SPRINKLER
- PENDENT SPRINKLER
- CONCEALED SPRINKLER
- DRY PENDENT SPRINKLER
- DRY SIDEWALL SPRINKLER
- SIDEWALL SPRINKLER

FIRE SPRINKLER PIPING

- FP — FIRE PROTECTION (FP)
- SHUTOFF VALVE
- CHECK VALVE
- BACKFLOW PREVENTER
- CAP
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- FIRE DEPARTMENT CONNECTION
- FIRE PUMP TEST HEADER
- INSPECTOR'S TEST CONNECTION / AUXILIARY DRAIN
- SPRINKLER RISER
- TOP BEAM CLAMP
- TRAPEZE HANGER

STANDARD MOUNTING HEIGHTS

AUDIBLE APPLIANCE (TOP OF APPLIANCE)	90"
FIRE ALARM ANNUNCIATOR PANEL (TOP OF DISPLAY)	60"
FIRE ALARM BELL (EXTERIOR) (CENTERLINE)	120"
FIRE ALARM CONTROL PANEL/UNIT (TOP OF DISPLAY)	60"
PULL STATION (TOP OF DEVICE)	48"
VISIBLE APPLIANCE (CENTERLINE)	84"

INSTALL DEVICES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ABOVE, OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS, ARE AFF OR AFG, UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

FIRE ALARM

- FACP — FIRE ALARM CONTROL PANEL/UNIT
- FACP — RECESSED FIRE ALARM CONTROL PANEL/UNIT
- FAAP — FIRE ALARM ANNUNCIATOR PANEL
- FAAP — RECESSED FIRE ALARM ANNUNCIATOR PANEL
- AMP — AMPLIFIER PANEL
- RPS — REMOTE POWER SUPPLY
- RT — REMOTE TEST STATION WITH INDICATING LIGHT
- RL — REMOTE INDICATING LIGHT
- PS — PRESSURE SWITCH LOW/HIGH
- FS — WATERFLOW ALARM SWITCH
- VT — CONTROL VALVE TAMPER SWITCH
- DH — MAGNETIC DOOR HOLD OPEN DEVICE
- CM — CONTROL MODULE
- MM — MONITOR MODULE
- K — FIRE DEPARTMENT KEY BOX
- PULL STATION
- F — FIREFIGHTER'S PHONE JACK
- HEAT DETECTOR (E INDICATES ELEVATOR RECALL)
- SMOKE DETECTOR (E INDICATES ELEVATOR RECALL)
- SINGLE STATION SMOKE DETECTOR
- PROJECTED BEAM SMOKE DETECTOR
- RD — DUCT MOUNTED SMOKE DETECTOR (SD=SUPPLY/RD=RETURN)
- CO — CARBON MONOXIDE DETECTOR
- AREA OF REFUGE 2-WAY COMMUNICATION SYSTEM
- #W — WALL MOUNTED AUDIBLE NOTIFICATION APPLIANCE #W INDICATES WATTAGE (VOICE EVACUATION SYSTEMS ONLY)
- ## — WALL MOUNTED VISIBLE NOTIFICATION APPLIANCE ## INDICATES CANDELA
- #W ## — WALL MOUNTED AUDIBLE/VISIBLE NOTIFICATION APPLIANCE ## INDICATES CANDELA #W INDICATES WATTAGE (VOICE EVACUATION SYSTEMS ONLY)
- #W — CEILING MOUNTED AUDIBLE NOTIFICATION APPLIANCE #W INDICATES WATTAGE (VOICE EVACUATION SYSTEMS ONLY)
- ## — CEILING MOUNTED VISIBLE NOTIFICATION APPLIANCE ## INDICATES CANDELA
- #W ## — CEILING MOUNTED AUDIBLE/VISIBLE NOTIFICATION APPLIANCE ## INDICATES CANDELA #W INDICATES WATTAGE (VOICE EVACUATION SYSTEMS ONLY)
- END OF LINE RESISTOR
- ABORT SWITCH
- BELL

HATCHING LEGEND

- ENLARGED PLAN
- NOT IN SCOPE (NIS)

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING — NEW — DEMOLISH — FUTURE

SYSTEM INPUTS	ALARM (PRIORITY)	SUPERVISORY (PRIORITY)	TROUBLE (PRIORITY)	REPORT TO FIRE ALARM CONTROL PANEL (SYSTEM OUTPUTS)	SIGNAL SUPERVISING STATION	ACTIVATE GENERAL FIRE ALARM AUDIBLE/VISIBLE NOTIFICATION APPLIANCES	ACTIVATE FDC NOTIFICATION APPLIANCE	SHUTDOWN INDIVIDUAL FAN POWERED MECHANICAL AIR HANDLING EQUIPMENT AND DAMPER(S)	SHUTDOWN ALL FAN POWERED MECHANICAL AIR HANDLING EQUIPMENT FOR AFFECTED HVAC SYSTEM	SHUTDOWN ALL FAN POWERED MECHANICAL AIR HANDLING EQUIPMENT		
SIGNALING LINE OR NOTIFICATION APPLIANCE CIRCUIT - OPEN			●	●	●							
SIGNALING LINE OR NOTIFICATION APPLIANCE CIRCUIT - SHORT			●	●	●							
SIGNALING LINE OR NOTIFICATION APPLIANCE CIRCUIT - GROUND			●	●	●							
FIRE ALARM CONTROL PANEL LOSS OF POWER			●		●							
MANUAL PULL STATION	●			●	●	●				●		
SMOKE DETECTOR - SPOT TYPE	●			●	●	●				●		
SMOKE DETECTOR - DUCT MOUNTED		●		●	●			●	●			
WATERFLOW ALARM SWITCH	●			●	●	●	●			●		
VALVE TAMPER SWITCH		●		●	●							
FIRE DEPARTMENT KEY BOX VALVE TAMPER SWITCH (KNOX BOX)		●		●	●							

CONTRACTOR TO PROVIDE ALL NECESSARY EQUIPMENT AND CONNECTIONS REQUIRED TO ACCOMPLISH THE FUNCTIONS INDICATED, AT MINIMUM.

SEQUENCE OF OPERATIONS INDICATED IS SCHEMATIC. MODIFY TO SUIT CONDITIONS AND MEET APPLICABLE CODE REQUIREMENTS.

1 FIRE ALARM SEQUENCE OF OPERATIONS
NTS

GLMV Architecture

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10/31/2023
CHRISTOPHER J. CULP
LICENSE # PE-2013037646

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
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DRAWN BY:	PO/JS
CHECKED BY:	JP/AD

FIRE PROTECTION GENERAL NOTES AND LEGEND

FP-000

PLOT DATE: 10/27/2023 3:17:20 PM
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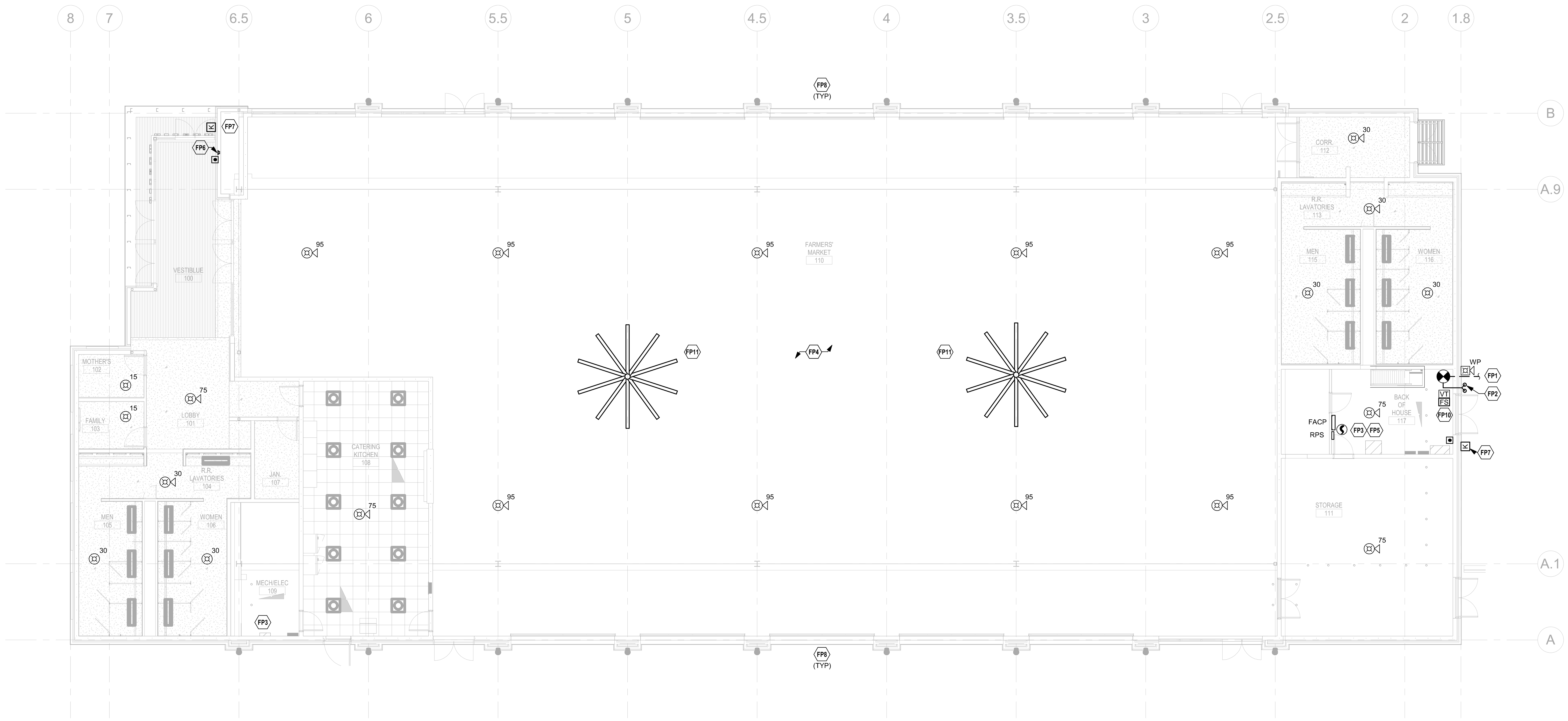
CHRISTOPHER J. CULP

FIRE SPRINKLER PLAN NOTES:

- FP1 MINIMUM 6-INCH FIRE PROTECTION SERVICE ENTRANCE. REFER TO CIVIL FOR CONTINUATION.
- FP2 FIRE DEPARTMENT CONNECTION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- FP3 DO NOT ROUTE SPRINKLER PIPING ABOVE ELECTRICAL DISTRIBUTION EQUIPMENT.
- FP4 INSTALL SPRINKLER PIPING TIGHT TO STRUCTURE
- FP5 PROVIDE NEW FIRE ALARM CONTROL PANEL AND REMOTE POWER SUPPLY. PROVIDE A SMOKE DETECTOR ABOVE THE PANEL IN ACCORDANCE WITH NFPA 72.
- FP6 PROVIDE NEW REMOTE FIRE ALARM ANNUNCIATOR PANEL.
- FP7 PROVIDE FIRE DEPARTMENT KEY BOX FOR FIRE DEPARTMENT ACCESS PROVIDE EQUIPMENT AND CONNECTIONS NECESSARY TO MONITOR KEY BOX INTERNAL SUPERVISORY SWITCH(ES), AS REQUIRED.
- FP8 PROVIDE SPRINKLERS BELOW OVERHEAD ROLL-UP DOORS. SEE FP-000/6 FOR ADDITIONAL INFORMATION.
- FP10 CONNECT FIRE SPRINKLER MONITORING DEVICES TO FIRE ALARM SYSTEM. COORDINATE QUANTITY AND LOCATION OF DEVICES WITH FIRE PROTECTION SYSTEMS.
- FP11 HIGH VOLUME LOW SPEED FAN SHALL BE CENTERED APPROXIMATELY BETWEEN FOUR ADJACENT SPRINKLERS. THE VERTICAL CLEARANCE FROM THE HVLS FAN TO SPRINKLER DEFLECTOR SHALL BE A MINIMUM OF 3 FEET.



1 FIRE PROTECTION PLAN
1/8" = 1'-0"

SCALE: 1/8"=1'-0"

GLMVArchitecture

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FIRE PROTECTION PLAN

FP-101

CHRISTOPHER J. CULP
PLOT DATE: 10/27/2023 3:17:32 PM
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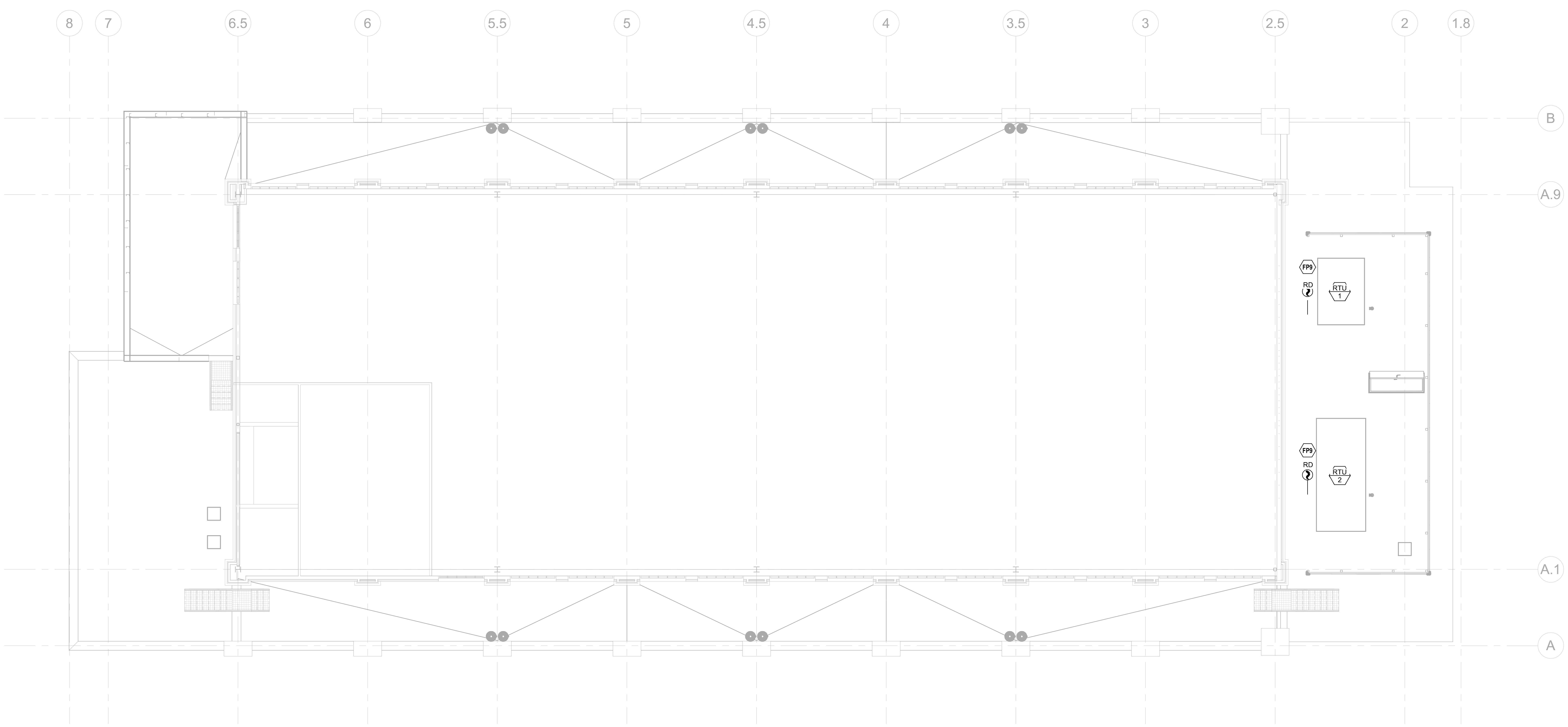
FIRE SPRINKLER PLAN NOTES:

FP9 PROVIDE DUCT MOUNTED SMOKE DETECTOR FOR FAN POWERED MECHANICAL AIR HANDLING EQUIPMENT SHUTDOWN. INSTALL DETECTOR PER MANUFACTURER'S RECOMMENDATIONS. REFER TO MECHANICAL SHEETS FOR EQUIPMENT AND DUCTWORK LAYOUT AND DETAILS.



1 FIRE PROTECTION ROOF PLAN
1/8" = 1'-0"

SCALE: 1/8"=1'-0"

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△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	PO/JS
CHECKED BY:	JP/AD

FIRE PROTECTION ROOF PLAN

FP-102

GENERAL NEW NOTES:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. PROVIDE SEISMIC RESTRAINTS AS NEEDED FOR THE MECHANICAL SYSTEMS IN THE PROJECT BASED ON THE SEISMIC ANALYSIS REQUIRED BY THE SPECIFICATIONS.
3. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
4. ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY DIVISION 23 UNLESS OTHERWISE NOTED.
5. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
6. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASES AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.
7. COORDINATE LOCATION OF ROOF MOUNTED HVAC EQUIPMENT AND ROOF PENETRATIONS WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
8. INDOOR AIR QUALITY MEASURES: PROTECT INSIDE OF (INSTALLED AND DELIVERED) DUCTWORK AND HVAC UNITS FROM EXPOSURE TO DUST, DIRT, PAINT AND MOISTURE. REPLACE INSULATION THAT HAS BECOME WET AT ANY TIME DURING CONSTRUCTION, DRYING THE INSULATION IS NOT ACCEPTABLE. SEAL ANY TEARS OR JOINTS OF INTERNAL FIBERGLASS INSULATION. REMOVE DEBRIS FROM CEILING/RETURN AIR PLENUM INCLUDING DUST. AN INDEPENDENT, PROFESSIONAL DUCT CLEANING COMPANY SHALL VACUUM CLEAN ANY DUCTWORK CONNECTED TO HVAC UNITS THAT WERE OPERATED DURING THE CONSTRUCTION PERIOD AFTER NEW FILTERS ARE INSTALLED AND PRIOR TO TURNING SYSTEM OVER TO THE OWNER. THE INTERNAL SURFACES AND ASSOCIATED COILS OF ANY HVAC UNITS THAT WERE OPERATED SHALL ALSO BE CLEANED.
9. INSTALL DUCTWORK AND PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
10. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF EXCEPT WHERE CONCRETE INSERTS IN CONCRETE SLABS ARE ALLOWED BY THE SPECIFICATIONS.
11. COORDINATE LOCATION OF EQUIPMENT SUPPORTS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.
12. SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
13. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL AND DUCT INSTALLATION REQUIREMENTS.
14. ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES AS REQUIRED TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.
15. PAINT PORTIONS OF DUCTWORK AND INSULATION THAT ARE EXPOSED TO VIEW BY THE INSTALLATION OF DIFFUSERS, REGISTERS, AND GRILLES IN CEILINGS OR WALLS FLAT BLACK. PORTIONS INCLUDE BOTH THE INTERIOR OF UNLINED DUCTWORK AND THE EXTERIOR OF DUCTWORK AND INSULATION.
16. LOCATE AND SET THERMOSTATS AND HUMIDISTATS AT LOCATIONS SHOWN ON PLANS. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. DEVICE MOUNTING HEIGHT SHALL MEET ADA REQUIREMENTS UNLESS OTHERWISE NOTED ON PLANS. PROVIDE INSULATED BACKING FOR THERMOSTATS MOUNTED ON EXTERIOR BUILDING WALLS. INSTALL WIRING IN CONDUIT PROVIDED BY DIVISION 26. AT A MINIMUM, PROVIDE CONDUIT IN THE WALL FROM THE JUNCTION BOX TO 6" ABOVE THE CEILING.
17. COORDINATE THE LOCATION AND ELEVATION OF WALL-MOUNTED DEVICES WITH PRESENTATION BOARDS, DISPLAY CABINETS, SHELVES OR OTHER COMPONENTS SHOWN ON THE ARCHITECTURAL DRAWINGS THAT ARE TO BE INSTALLED UNDER OTHER DIVISIONS. CONTRACTOR WILL NOT BE REIMBURSED FOR RELOCATION OF WALL-MOUNTED DEVICES CAUSED BY A LACK OF COORDINATION.
18. PROVIDE A MANUAL BALANCING DAMPER IN EACH DUCT TAKEOFF FROM SUPPLY, RETURN, OUTDOOR AND EXHAUST AIR DUCTS.
19. PROVIDE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES. PROVIDE WITH INTEGRAL MANUAL BALANCING DAMPER AND LOCKING QUADRANT WHERE INDICATED ON PLANS.
20. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
21. REFER TO SPECIFICATIONS FOR DUCTWORK AND PIPING INSULATION REQUIREMENTS. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS, INCREASE SHEET METAL SIZES ACCORDINGLY TO ACCOUNT FOR THICKNESS OF DUCT LINER.
22. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
23. RIGIDLY SUSPEND UNIT HEATER FROM STRUCTURE WITH SUPPORTING ANGLES AND ALL-THREAD HANGING RODS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
24. PROVIDE EQUIPMENT VENTS AND FLUES PER EQUIPMENT MANUFACTURERS RECOMMENDATIONS AND EQUIPMENT SPECIFICATIONS. KEEP PENETRATIONS THROUGH ROOF A MINIMUM OF 10'-0" FROM HVAC EQUIPMENT FRESH AIR INLETS AND 2'-0" FROM ROOF PARAPETS.
25. PROVIDE WALL MOUNTED LOUVERS AND DAMPERS WITH SUITABLE MOUNTING FRAME TO MATCH WALL CONSTRUCTION. COORDINATE WITH ARCHITECTURAL DRAWINGS.
26. PROVIDE A NEW SET OF AIR FILTERS IN UNITS PRIOR TO TESTING, ADJUSTING AND BALANCING AND BEFORE TURNING SYSTEM(S) OVER TO OWNER.
27. FIELD VERIFY THAT THE EXISTING EQUIPMENT INCLUDING ACCESSORIES BEING REUSED FOR THIS PROJECT IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE OWNER OR ARCHITECT. SUBMIT TO THE OWNER AND ARCHITECT A WRITTEN REPORT DESCRIBING TESTS PERFORMED TO VERIFY OPERATION AND RESULTS OF THE TESTS.

MECHANICAL SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V3.0

STANDARD MOUNTING HEIGHT

THERMOSTATS (USER ADJUSTABLE)	46"
CONTROLS	46"

INSTALL DEVICES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ABOVE OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS ARE AFF OR AFG TO TOP OF THE DEVICE UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ANNOTATION

- 1 — MECHANICAL PLAN NOTE CALLOUT
- CU / 1 — MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
- CONNECTION POINT OF NEW WORK TO EXISTING
- 1 / M1 — DETAIL REFERENCE. UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- 1 / M1 — SECTION CUT DESIGNATION
- DEDICATED EQUIPMENT ACCESS TILE
- ACCESS PANEL

ABBREVIATIONS

A/C	AIR CONDITIONING
ACC	AIR COOLED CHILLER
ACCU	AIR COOLED CONDENSING UNIT
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
AWG	AMERICAN WIRE GAUGE
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BB	BACKBONE
BD	BACKDRAFT DAMPER
BD	BLOWDOWN
BFC	BELOW FINISHED CEILING
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BFP	BOILER FEED PUMP
BHP	BRAKE HORSEPOWER
BI	BINARY INPUT
BO	BINARY OUTPUT
BOD	BOTTOM OF DUCT
BOS	BOTTOM OF STRUCTURE
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CLG	COOLING
CP	CONDENSATE PUMP
CPT	CONTROL POWER TRANSFORMER
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CRU	COMPUTER ROOM UNIT
CT	COOLING TOWER
CV	CONTROL VALVE
CWP	CONDENSER WATER PUMP
CU	CONDENSING UNIT
CHWP	CHILLED WATER PUMP
DB	DECIBELS
DBA	DECIBEL AVERAGE
DDC	DIRECT DIGITAL CONTROL
DI	DIGITAL INPUT
DISC	DISCONNECT
DN	DOWN
DS	DUCT SILENCER
DX	DIRECT EXPANSION
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
ED	EXHAUST DUCT
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
EFF	EFFICIENCY
EMS	ENERGY MANAGEMENT SYSTEM
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
FCU	FAN COIL UNIT
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FF	FINISHED FLOOR
FPI	FINS PER INCH
FPM	FEET PER MINUTE
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HTG	HEATING

HWP	HEATING WATER PUMP
IN WC	INCHES OF WATER COLUMN
L	LOUVER
LAT	LEAVING AIR TEMPERATURE
LDB	LEAVING DRY BULB
LP	LOW PRESSURE
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	1000 BTU PER HOUR
MD	MOTORIZED DAMPER
MFR	MANUFACTURER
MIN	MINIMUM
N/A	NOT APPLICABLE
N/C	NORMALLY CLOSED
N/O	NORMALLY OPEN
NOM	NOMINAL
NC	NOISE CRITERIA
NF	NON-FUSED
NIC	NOT IN CONTRACT
OA	OUTSIDE AIR
PICV	PRESSURE INDEP. CONTROL VALVE
PROVIDE	FURNISH AND INSTALL
QTY	QUANTITY
RA	RETURN AIR
RC	ROOM CRITERIA
RD	RETURN DUCT
REA	RELIEF AIR
RF	RETURN FAN
RFR	REFRIGERANT
RH	RELATIVE HUMIDITY
RH	ROOF HOOD
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SCP	STEAM CONDENSATE PUMP
SD	SMOKE DUCT DETECTOR
SD	SUPPLY DUCT
SF	SUPPLY FAN
SH	SENSIBLE HEAT CAPACITY
SOW	SCOPE OF WORK
SP	STATIC PRESSURE
ST	STEAM TRAP
STM	STEAM
TBD	TO BE DETERMINED
TC/C	TEMPERATURE CONTROLS CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TF	TRANSFER FAN
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TH	TOTAL HEAT CAPACITY
TSP	TOTAL STATIC PRESSURE
TT	TEMPERATURE TRANSMITTAL
TYP	TYPICAL
U/F	UNDERFLOOR
U/G	UNDERGROUND
U/S	UNDERSLAB
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VRV	VARIABLE REFRIGERANT VOLUME
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN
WPD	WATER PRESSURE DROP
XP	EXPLOSION PROOF

HVAC DUCTWORK AND ACCESSORIES

- DUCTWORK/EQUIPMENT TO BE REMOVED OR RELOCATED
- EXISTING DUCTWORK/EQUIPMENT TO REMAIN
- LINEAR SLOT DIFFUSER
- INSULATED FLEXIBLE DUCT (MAX. 5'-0" LONG)
- BRANCH DUCT WITH 45° RECTANGLE-ROUND BRANCH FITTING AND MANUAL VOLUME DAMPER
- ELBOW WITH TURNING VANES
- BRANCH DUCT WITH BELL-MOUTH FITTING & MANUAL VOLUME CONTROL DAMPER
- DUCT UP
- DUCT DOWN
- EA — EXHAUST AIR
- GEA — EXHAUST AIR - GREASE
- OA — OUTSIDE AIR
- REA — RELIEF AIR
- RA — RETURN AIR
- XEA — SPECIAL EXHAUST
- SA — SUPPLY AIR
- EQUIPMENT WITH FLEXIBLE DUCT CONNECTION
- 10" (NECK SIZE) CSD-1 (TYPE) 300 CFM (CFM OF SUPPLY DIFFUSER OR REGISTER)
- 24x24 (NECK SIZE) CEG-1 (TYPE) 800 CFM (CFM OF EXHAUST GRILLE)
- EQUIPMENT ACCESS TILE (IN ACT CEILINGS)
- ACCESS PANEL (IN GYPSUM)
- MANUAL VOLUME DAMPER
- SQUARE TO ROUND TRANSITION
- RD — DUCT MOUNTED SMOKE DETECTOR (SD=SUPPLY/RD=RETURN)
- XX" Ø — ROUND DUCT TAG INDICATING DIAMETER
- XX" x XX" — RECTANGULAR DUCT TAG INDICATING INTERNAL DUCT DIMENSIONS.
- XX" / XX" θ — FLAT OVAL DUCT TAG INDICATING INTERNAL DUCT DIMENSIONS
- # — RISER DESIGNATION
- FD — FIRE DAMPER
- FSD — FIRE SMOKE DAMPER
- SD — SMOKE DAMPER
- VD — VOLUME DAMPER
- MD — MOTORIZED DAMPER
- BD — BACKDRAFT DAMPER

ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE INSIDE DIMENSIONS. REFER TO DUCTWORK SPECIFICATIONS FOR DUCTWORK INSULATION AND LINER INFORMATION.

HVAC CONTROL DEVICES

- H — HUMIDISTAT
- T — THERMOSTAT
- CO — CARBON MONOXIDE SENSOR
- CO2 — CARBON DIOXIDE SENSOR
- DP — DIFFERENTIAL PRESSURE SENSOR
- FS — FLOW SWITCH
- HS — HUMIDITY SENSOR
- PS — PULL STATION
- RT — REMOTE TESTING STATION WITH INDICATING LIGHT
- SP — STATIC PRESSURE
- TS — TEMPERATURE SENSOR

PIPING SYMBOLS

- DIRECTION OF FLOW
- CONTROL VALVE
- THREE-WAY CONTROL VALVE
- SHUTOFF VALVE
- CHECK VALVE
- BALANCING VALVE WITH PRESSURE PORTS
- TRIPLE DUTY VALVE WITH PRESSURE PORTS
- STRAINER
- STRAINER WITH BLOWOFF
- RELIEF / SAFETY VALVE
- SOLENOID VALVE
- PRESSURE REDUCING VALVE
- GAS PRESSURE REGULATOR
- THERMOSTATIC MIXING VALVE
- PA — PIPE ANCHOR
- EXPANSION JOINT
- PIPE GUIDE
- PIPING SUPPORT
- F & T TRAP
- BUCKET TRAP
- THERMOSTATIC TRAP
- BACKFLOW PREVENTER
- PRESSURE GAUGE
- THERMOMETER
- PRESSURE AND TEMPERATURE TEST PLUG
- UNION
- FLANGE CONNECTION
- VACUUM RELIEF VALVE
- AV — AUTOMATIC AIR VENT
- MV — MANUAL AIR VENT
- PRESSURE / VACUUM SWITCH
- CLEANOUT
- CAP
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- ELBOW UP WITH SHUT-OFF VALVE (SOV)
- ELBOW DOWN WITH SHUT-OFF VALVE (SOV)
- TEE UP WITH SHUT-OFF VALVE (SOV)
- TEE DOWN WITH SHUT-OFF VALVE (SOV)
- REDUCER
- RECIRCULATION PUMP
- P-TRAP
- GAS COCK
- TOP BEAM CLAMP
- TRAPEZE HANGER
- FLEXIBLE CONNECTION

PIPING LINETYPES

- EXISTING PIPING TO BE REMOVED OR RELOCATED
- EXISTING PIPING TO REMAIN
- CD — CONDENSATE DRAIN (CD)
- ACD — AUXILIARY CONDENSATE DRAIN (ACD)
- NPW — NON-POTABLE WATER (NPW)
- G — NATURAL GAS (G)
- G — NATURAL GAS ON ROOF (G)
- MPG — MEDIUM PRESSURE NATURAL GAS (MPG)
- MPG — MEDIUM PRESSURE NATURAL GAS ON ROOF (MGP)
- FOS — FUEL OIL SUPPLY (FOS)
- FOR — FUEL OIL RETURN (FOR)
- FOV — FUEL OIL VENT (FOV)
- LPG — LIQUEFIED PETROLEUM GAS (LPG)
- BFW — BOILER FEED WATER (BFW)
- HPS — HIGH PRESSURE STEAM SUPPLY (HPS)
- HPC — HIGH PRESSURE STEAM CONDENSATE (HPC)
- LPS — LOW PRESSURE STEAM SUPPLY (LPS)
- LPC — LOW PRESSURE STEAM CONDENSATE (LPC)
- CPD — CONDENSATE PUMP DISCHARGE (CPD)
- HWS — HEATING HOT WATER SUPPLY (HWS)
- HWR — HEATING HOT WATER RETURN (HWR)
- CHWS — CHILLED WATER SUPPLY (CHWS)
- CHWR — CHILLED WATER RETURN (CHWR)
- HCS — HOT / CHILLED WATER SUPPLY (HCS)
- HCR — HOT / CHILLED WATER RETURN (HCR)
- CWS — CONDENSER WATER SUPPLY (CWS)
- CWR — CONDENSER WATER RETURN (CWR)
- RL — REFRIGERANT LIQUID (RL)
- RD — REFRIGERANT DISCHARGE (HOT GAS) (RD)
- RS — REFRIGERANT SUCTION (RS)
- RDB — REFRIGERANT DISCHARGE BYPASS (RDB)
- RV — REFRIGERANT VENT (RV)

HATCHING LEGEND

- ENLARGED PLAN
- NOT IN SCOPE (NIS)

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING / NEW / DEMOLISH / FUTURE

Sheet List - Mechanical

GLMV Architecture

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2150003907
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EXPIRES 10/31/2024

STATE OF MISSOURI
ALESSANDRO SPINELLI
NUMBER
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10/30/2023
ALESSANDRO . SPINELLI
LICENSE # PE-2022017017

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	LJ/EW
CHECKED BY:	AS

MECHANICAL GENERAL NOTES AND LEGEND

M-000

ALESSANDRO . SPINELLI
PLOT DATE: 10/30/2023 4:50:16 PM
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MECHANICAL PLAN NOTES:

M1 TERMINATE RETURN AIR DUCT OPEN-ENDED WITH WIRE MESH SCREEN.

M2 SUSPEND FAN FROM STRUCTURE ABOVE ACCORDING TO MANUFACTURER'S MINIMUM CLEARANCES. COORDINATE WITH ARCHITECT AND STRUCTURAL ENGINEER FOR SUPPORT. COORDINATE WITH FIRE ALARM INSTALLER FOR ANY CODE REQUIRED FAN SHUT DOWN UPON SPRINKLER ACTIVATION.

M3 ROUTE STAINLESS STEEL EQUIPMENT FLUE AND COMBUSTION AIR UP TO ROOF. SIZE PER MANUFACTURER RECOMMENDATIONS. TERMINATE PER MANUFACTURER INSTALLATION INSTRUCTIONS.

M4 ROUTE STAINLESS STEEL EQUIPMENT FLUE AND COMBUSTION THROUGH SIDE WALL. SIZE PER MANUFACTURER RECOMMENDATIONS. TERMINATE PER MANUFACTURER INSTALLATION INSTRUCTIONS.

M5 PROVIDE MINIMUM 18"X18" ACCESS PANEL FOR SERVICING OF EQUIPMENT.

M6 SUPPLY AIR DUCTWORK SHALL BE ROUTED THROUGH STRUCTURAL TRUSSES. COORDINATE DUCT ROUTING WITH STRUCTURAL ENGINEER PRIOR TO FABRICATING DUCTWORK. SUPPLY DUCTWORK SHALL HAVE 2" LINER FOR SOUND ATTENUATION.

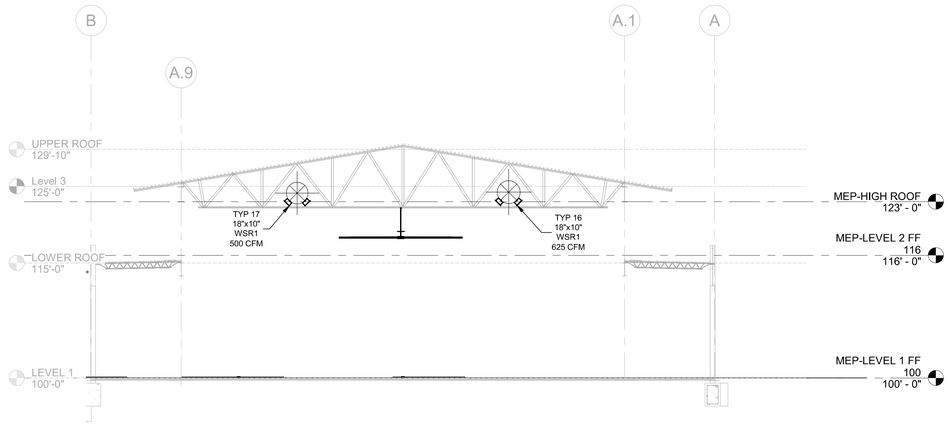
M7 ROUTE DUCTWORK IN SOFFIT, MOUNT SUPPLY GRILLES ON SOFFIT SIDEWALL EQUAL DISTANCE APART.

M8 UNDERCUT DOOR 1/2" FOR AIR TRANSFER.

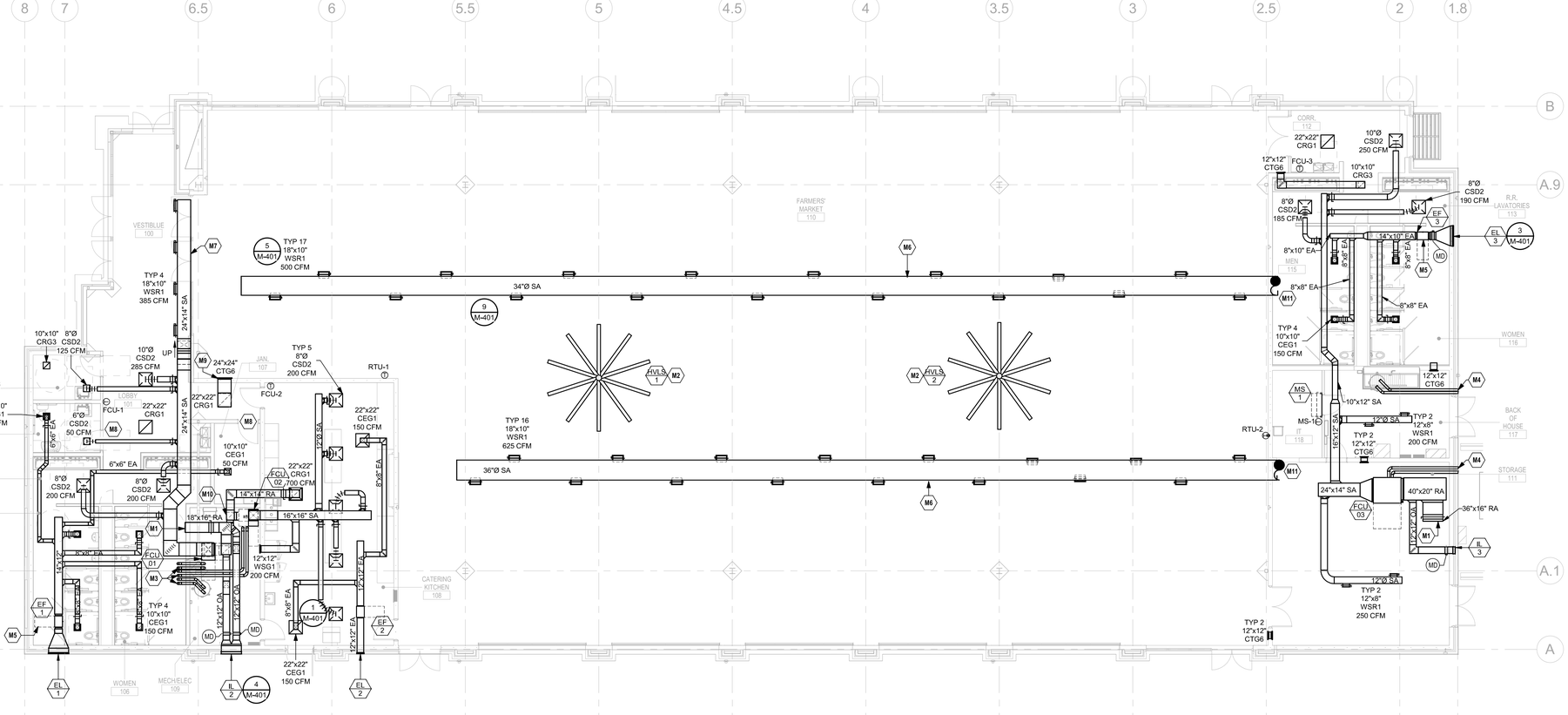
M9 PROVIDE TRANSFER GRILLE MOUNTED AT LEAST 13' AFF.

M10 PROVIDE 8"X8" RETURN AIR OPENING WITH BALANCING DAMPER IN VERTICAL RETURN AIR DUCT. BALANCE TO 200 CFM.

M11 REFER TO ROOF PLAN FOR CONTINUATION OF DUCTWORK.



② MARKET AREA SECTION
1/8" = 1'-0"



① HVAC FLOOR PLAN
1/8" = 1'-0"

GLMV Architecture

HENDERSON ENGINEERS
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MO. CERTIFICATE OF AUTHORITY E-5958
EXPIRES 10/31/2024

STATE OF MISSOURI
ALESSANDRO SPINELLI
NUMBER PE-2022017017
PROFESSIONAL ENGINEER

10/30/2023

ALESSANDRO . SPINELLI
LICENSE # PE-2022017017

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

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HVAC PLAN

M-101

ALESSANDRO . SPINELLI
PLOT DATE: 10/30/2023 5:34:22 PM
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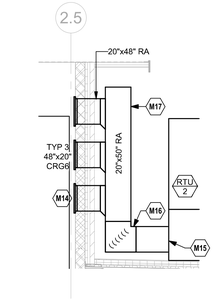
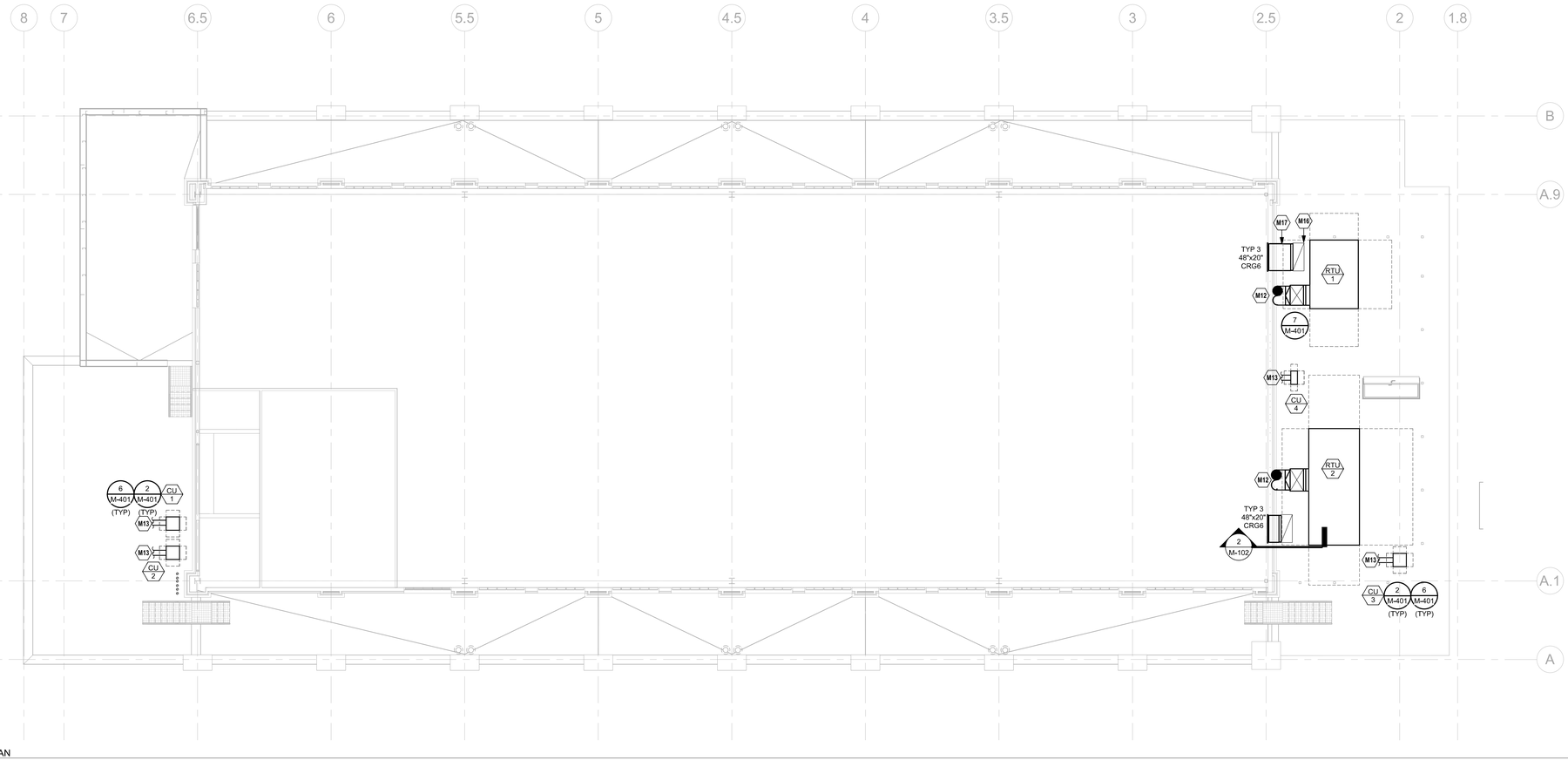
MECHANICAL PLAN NOTES:

M12 REFER TO HVAC PLAN FOR CONTINUATION OF DUCTWORK.
M13 ROUTE REFRIGERANT PIPING TO ASSOCIATED FAN COIL UNIT, SIZE AND ROUTE PER MANUFACTURER INSTRUCTIONS.
M14 FINAL GRILLE LOCATIONS SHALL BE FIELD COORDINATED WITH STRUCTURAL AND ARCHITECT PRIOR TO STARTING WORK.
M15 CONNECT RETURN AIR DUCT INTO RTU PLENUM CURB.
M16 PROVIDE DUCT SILENCER ELBOW EQUIVALENT TO KINETICS KCES.
M17 PROVIDE RETURN AIR DUCTWORK WITH 2" LINER FOR SOUND ATTENUATION. DUCTWORK SHALL STILL BE INSULATED AND JACKETED PER SPECIFICATIONS AS EXTERIOR DUCTWORK.



2 RTU RETURN AIR
1/4" = 1'-0"



1 HVAC ROOF PLAN
1/8" = 1'-0"

GLMV Architecture

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STATE OF MISSOURI
ALESSANDRO SPINELLI
NUMBER PE-2022017017
PROFESSIONAL ENGINEER
10/30/2023

ALESSANDRO . SPINELLI
LICENSE # PE-2022017017

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		LJ/EW
CHECKED BY:		AS

HVAC ROOF PLAN

M-102

ALESSANDRO . SPINELLI
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ROOFTOP UNIT SCHEDULE (DX COOLING, NATURAL GAS HEAT)

					SUPPLY FAN							COOLING COIL												GAS FIRED HEAT EXCHANGER										ELECTRICAL					
														EAT		LAT			MIN EFF																				
MARK	MANUFACTURER	MODEL	NOMINAL TONS	UNIT TYPE	FAN TYPE	CFM	ESP (IN)	TSP (IN)	BHP	NOM HP	VFD (Y/N)	TH (MBH)	SH (MBH)	(°F DB)	(°F WB)	(°F DB)	(°F WB)	REFR TYPE	(EER)	(IEER)	MIN NO STAGES	MAX VEL (FPM)	MIN OUT (MBH)	NOM INPUT (MBH)	MIN EFF (%)	EAT (°F DB)	LAT (°F DB)	MIN NO STAGES	MAX VEL (FPM)	MIN OA (CFM)	ABS MIN OA (CFM)	V/PH	MCA	MOCP	DISC TYPE	WEIGHT (LBS)	NOTES		
RTU 1	TRANE	YSJ300A3S0H	25	SINGLE	BC	8500	0.75	1.27	4.17	0.00	Yes	286.9	210.7	78.4	65.5	55.9	54.4	R-410A	9.8	13.5	3	550	324.0	400.0	81	55	90.0	MOD	600	1700	0	208 V / 3PH	119	150	NF	2600	A-U		
RTU 2	TRANE	YCD330CEP*2D1CECA0C	30	SINGLE	FC	10000	0.75	1.85	6.64	7.50	Yes	331.2	255.3	77.9	65.1	54.7	54.2	R-410A	10.9	14.9	3	550	486.0	600.0	81	57	90.0	MOD	600	1700	0	208 V / 3PH	153	175	NF	5400	A-U		

MODEL NUMBERS AND NOMINAL TONS LISTED SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER, MODEL NUMBERS, OR NOMINAL TONS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. REFER TO ROOFTOP UNIT CONTROL MATRIX FOR ADDITIONAL UNIT FEATURES, COMPONENTS, MODULES, ACCESSORIES, AND CONTROLS THAT SHALL BE PROVIDED WITH THE EQUIPMENT.
B. EQUIPMENT SIZED FOR 105 °F AMBIENT TEMPERATURE.
C. PROVIDE 4" MERV 14, EFFICIENT PLEATED THROWAWAY AIR FILTERS.
D. PROVIDE FACTORY MOUNTED DISCONNECT INSTALLED ON SERVICE SIDE OF UNIT.
E. STARTERS FOR ALL MOTORS SHALL BE FURNISHED INTEGRAL WITH UNIT.
F. PROVIDE FACTORY MOUNTED VARIABLE FREQUENCY DRIVE TO FACILITATE MODULATING FAN SPEED CONTROL.
G. PROVIDE SHAFT GROUNDING SYSTEM ON MOTOR. REFER TO MOTOR SPECIFICATION FOR ADDITIONAL INFORMATION.
H. PROVIDE SINGLE POINT POWER CONNECTION.
J. COORDINATE SIZE OF CONDUCTOR TERMINATION LUGS WITH CONDUCTOR SIZES SHOWN ON ELECTRICAL DRAWINGS.
K. PROVIDE 125 VAC, 20 AMP DUPLEX CONVENIENCE RECEPTACLE MOUNTED TO UNIT READY FOR FIELD WIRING WITH A COVER UL LISTED FOR WET AND DAMPER LOCATIONS WHEN IN USE.
L. SPECIFIED FAN ESP ACCOUNTS FOR DUCT LOSSES EXTERNAL TO UNIT.
M. SPECIFIED FAN TSP INCLUDES EXTERNAL DUCT AND INTERNAL FILTER, COIL, AND CASING LOSSES. FILTER LOSS IS AT A MAXIMUM OF 400 FPM FACE VELOCITY.
N. PROVIDE MOTOR HORSEPOWER TO OVERCOME INTERNAL UNIT STATIC PRESSURE DROP PLUS SPECIFIED EXTERNAL STATIC PRESSURE DROP. NOMINAL MOTOR HP SHALL BE NO LARGER THAN THE FIRST AVAILABLE NOMINAL MOTOR SIZE GREATER THAN THE REQUIRED BHP.
P. PROVIDE INSULATED PLENUM ROOF CURB WITH MINIMUM HEIGHT REQUIRED TO MAINTAIN BOTTOM OF EQUIPMENT A MINIMUM OF 36 INCHES ABOVE FINISHED ROOF SURFACE. PROVIDE SLOPED CURB IF NEEDED TO MATCH ROOF SLOPE. COORDINATE WITH ROOF INSULATION THICKNESS AND ROOF TAPER AT INSTALLED LOCATION. COORDINATE CURB TYPE WITH DRAWINGS.
Q. PROVIDE CURB DESIGNED TO WITHSTAND HURRICANE WIND FORCES.
R. SCHEDULED WEIGHT IS THE MAXIMUM ALLOWABLE OPERATING WEIGHT OF THE EQUIPMENT.
S. COOLING COIL LAT IS LEAVING AIR TEMPERATURE OF COIL.
T. PROVIDE GUARDS TO PROTECT CONDENSER COIL FROM HAIL OR OTHER DAMAGE.
U. PROVIDE HEATER TO MEET OR EXCEED SCHEDULED MINIMUM MBH OUTPUT. NOMINAL KW IS BASED ON LISTED MANUFACTURER'S STANDARD PRODUCT. COORDINATE EQUIPMENT POWER SUPPLY WITH ELECTRICAL CONTRACTOR IF DIFFERENT FROM THAT SCHEDULED.

COMPUTER ROOM UNIT SCHEDULE

				EVAPORATOR SECTION								CONDENSING SECTION				
MARK	MANUFACTURER	MODEL	REFR TYPE	CFM	TC (MBH)	(°F DB)	(°F WB)	V/PH	MCA	MOCP	FLA	AMB (°F)	V/PH	MCA	MOCP	NOTES
MS 1	MITSUBISHI	MSZ-GL18NA	R-410A	420	18.0	55.0	55.0	208 V / 1PH	1	15	1	105	208 V / 1PH	14	20	A-E

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. CONTRACTOR SHALL VERIFY WITH EQUIPMENT SUPPLIER EXACT ROUTING AND SIZE OF INSULATED REFRIGERANT PIPING. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
B. DIVISION 26 CONTRACTOR TO PROVIDE DISCONNECT SWITCH FOR EVAPORATOR SECTION AND CONDENSING SECTION.
C. PROVIDE WITH WALL MOUNTED THERMOSTAT BY UNIT MANUFACTURER.
D. PROVIDE WITH INTEGRAL CONDENSATE PUMP.
E. PROVIDE CONDENSER COIL HAIL GUARDS.

FURNACE/COOLING COIL SCHEDULE (NATURAL GAS HEAT)

			SUPPLY FAN			COOLING COIL						GAS FIRED HEAT EXCHANGER				ELECTRICAL					
								EAT		LAT											
MARK	MANUFACTURER	MODEL	CFM	ESP (IN)	MIN HP	TH (MBH)	SH (MBH)	(°F DB)	(°F WB)	(°F DB)	(°F WB)	MIN OUT (MBH)	NOM INPUT (MBH)	MIN EFF (%)	MIN OA (CFM)	V/PH	MCA	MOCP	DISC TYPE	STARTER TYPE	NOTES
FCU 01	TRANE	TWE07243BAA	2400	0.4	1.00	73.1	58.6	81.7	67.3	59.5	58.1	110.2	140.0	80	760	208 V / 3PH	8	20	NF	NF	A-M,P,Q
FCU 02	TRANE	4PXC+S8X1B	1200	0.4	0.75	37.1	28.6	79.9	66.9	58.3	57.6	53.2	80.0	80	350	120 V / 1PH	13	20	NF	NF	A-M,P,Q
FCU 03	TRANE	4PXC+S8X1B	800	0.4	0.00	22.5	19.4	77.1	63.9	55.1	54.9	26.6	40.0	80	100	120 V / 1PH	7	20	NF	NF	A-L,N-Q

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. ASSOCIATED CONDENSING UNIT SHALL BE BY THE SAME MANUFACTURER.
B. EQUIPMENT SIZED FOR 105 °F AMBIENT TEMPERATURE.
C. PROVIDE 4" MERV 13, PLEATED THROWAWAY AIR FILTERS.
D. PROVIDE WITH SIDE RETURN AIR CONNECTION.
E. PROVIDE WITH 7-DAY PROGRAMMABLE THERMOSTAT WITH STAGED HEATING AND COOLING CAPABILITY AS REQUIRED FOR OPERATION OF AUXILIARY HEATING AND COOLING CONTROLS. PROVIDE ACRYLIC, VANDAL-PROOF, LOCKING THERMOSTAT COVER.
F. DISCONNECT SWITCH PROVIDED BY DIVISION 26 CONTRACTOR.
G. PROVIDE UNIT WITH INTEGRAL STARTER.
H. PROVIDE SINGLE POINT POWER CONNECTION.
J. SPECIFIED FAN ESP ACCOUNTS FOR DUCT LOSSES EXTERNAL TO UNIT. FILTER LOSS IS AT A MAXIMUM OF 400 FPM FACE VELOCITY.
K. PROVIDE MOTOR HORSEPOWER TO OVERCOME INTERNAL UNIT STATIC PRESSURE DROP PLUS SPECIFIED EXTERNAL STATIC PRESSURE DROP. NOMINAL MOTOR HP SHALL BE NO LARGER THAN THE FIRST AVAILABLE NOMINAL MOTOR SIZE GREATER THAN THE BHP.
L. DIVISION 28 CONTRACTOR SHALL PROVIDE SMOKE DETECTORS IN DUCTS.
M. PROVIDE CONCRETE HOUSEKEEPING PAD.
N. PROVIDE WITH SPRING VIBRATION ISOLATION AND ALL-THREAD HANGING RODS.
P. PROVIDE HEATER TO MEET OR EXCEED SCHEDULED MINIMUM MBH OUTPUT. NOMINAL KW IS BASED ON LISTED MANUFACTURER'S STANDARD PRODUCT. COORDINATE EQUIPMENT POWER SUPPLY WITH ELECTRICAL CONTRACTOR IF DIFFERENT FROM THAT SCHEDULED.
Q. PROVIDE FLEXIBLE DUCT CONNECTORS AT ALL CONNECTIONS.

OUTSIDE AIR REQUIREMENTS, IMC-2018 (IP)

SYSTEM DESIGNATION	SYSTEM TAB NAME OR LIST 'SINGLE'	SINGLE-ZONE SYSTEMS ONLY: SINGLE-ZONE SYSTEM ASSOCIATED VENTILATION ZONE	SINGLE-ZONE SYSTEMS ONLY: SINGLE ZONE WORST CASE ZONE AIR DISTRIBUTION EFFECTIVENESS [Ez]	MULTI-ZONE SYSTEMS ONLY: SYSTEM VENTILATION EFFICIENCY [Ev]	FLOOR AREA SERVED BY SYSTEM [As] (SF)	SYSTEM AVERAGED AREA-BASED OUTDOOR AIR RATE (CFM/SF)	SYSTEM POPULATION [Ps] (PEOPLE)	SYSTEM AVERAGED PEOPLE-BASED OUTDOOR AIR RATE (CFM/P)	REQUIRED OA INTAKE FLOW [Vot] (CFM)	REQUIRED DCV OA INTAKE FLOW [Vot] (CFM)	DESIGN OA INTAKE FLOW [Vot] (CFM)	NOTES
RTU-1	SINGLE ZONE	108 NW FARMERS' MARKET	0.80	-	6,608	0.120	99.12	7.50	1,921	N/A	2,000	A-B
RTU-2	SINGLE ZONE	108 SE FARMERS' MARKET	0.80	-	5,184	0.120	77.76	7.50	1,507	N/A	1,600	A-B
FCU-1	MULTIZONE FCU-1	-	-	0.55	1,438	0.031	7.85	5.00	153	N/A	155	A-B
FCU-2	MULTIZONE FCU-2	-	-	0.75	1,059	0.087	15.38	7.50	277	N/A	280	A-B
FCU-3	MULTIZONE FCU-3	-	-	0.66	1,930	0.016	1.74	5.00	60	N/A	65	A-B
								TOTALS	3,917	0	4,100	

GENERAL NOTES:
1. VENTILATION CALCULATIONS BASED ON IMC-2018.
2. SYSTEM POPULATIONS BASED ON MAX SEATING AND/OR CODE MAXIMUM VALUES.
3. SINGLE ZONE SYSTEMS (Vot = Voz): SYSTEM VENTILATION EFFICIENCY CALCULATION IS NOT REQUIRED FOR SINGLE ZONE SYSTEMS. WORST CASE AIR DISTRIBUTION EFFECTIVENESS BETWEEN HEATING AND COOLING MODES OF OPERATION IS SHOWN IN TABLE.
4. MULTI-ZONE RECIRCULATING SYSTEMS: CALCULATOR USED TO DETERMINE VENTILATION AIRFLOW IN COMPLIANCE WITH IMC-2018 VRP AND ASHRAE 62.1-2016 APPENDIX A. VENTILATION RATE SHOWN IS ACTUAL CALCULATED WITH CORRECTION FACTORS INCLUDED. EACH ZONE IS CALCULATED WITH ITS WORST CASE ZONE AIR DISTRIBUTION EFFECTIVENESS (HEATING/COOLING) AS PART OF CALCULATIONS TO FIND Ev.

NOTES:
A. VENTILATION AIR PROVIDED VIA TRANSFER FROM SPACES/RETURN PLENUM SERVED BY AHU-X. SYSTEM INCLUDED IN MULTIPLE ZONE CALCULATIONS.
B. AIRFLOW IS FOR EXHAUST MAKEUP AS REQUIRED BY THE VENTILATION STANDARD.

CONDENSING UNIT SCHEDULE

						MIN EFF							
MARK	SERVICE	MANUFACTURER	MODEL	REFR TYPE	TH (MBH)	(EER)	(SEER)	V/PH	MCA	MOCP	DISC TYPE	WEIGHT (LBS)	NOTES
CU 1	FCU-01	TRANE	TTA07243DAA	R-410A	73.6	11.5	14.8	208 V / 3PH	23	30	NF	325	A-J
CU 2	FUC-02	TRANE	4TTA3042D3	R-410A	42.0	11.7	14	208 V / 3PH	18	30	NF	200	A-J
CU 3	FCU-03	TRANE	4TTR4024N1	R-410A	24.0	11.7	14.3	208 V / 1PH	14	25	NF	150	A-J

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. PROVIDE LOW AMBIENT CONTROL TO 0° F.
B. EQUIPMENT SIZED FOR 105°F AMBIENT TEMPERATURE.
C. COORDINATE WITH THE MANUFACTURER THE HORIZONTAL AND VERTICAL REFRIGERANT PIPE ROUTING TO DETERMINE PIPE SIZES FOR THE REFRIGERANT PIPING. MANUFACTURER SHALL PROVIDE DETAILED REFRIGERANT PIPING DIAGRAMS INCLUDING DIMENSIONAL DATA FOR ALL REFRIGERANT PIPING DEVICES. THE MANUFACTURER SHALL SIZE AND LOCATE THE ASSOCIATED REFRIGERANT TRAPS BASED ON THE ACTUAL ROUTING AND PROVIDE OTHER APPURTENANCES TO PROVIDE A FULLY FUNCTIONAL AND OPERATIONAL SYSTEM. COORDINATE WITH THE MANUFACTURER LOCATIONS FOR ALL REFRIGERANT PIPING DEVICES TO MAINTAIN SERVICEABILITY AND ACCESSIBILITY.
D. PROVIDE LIQUID LINE FILTER DRYER AND SIGHT GLASS.
E. PROVIDE PRE-ENGINEERED ROOF EQUIPMENT SUPPORTS WITH MINIMUM HEIGHT REQUIRED TO MAINTAIN BOTTOM OF EQUIPMENT A MINIMUM OF 16 INCHES ABOVE FINISHED ROOF SURFACE. COORDINATE WITH ROOF INSULATION THICKNESS AND ROOF TAPER AT INSTALLED LOCATION.
F. PROVIDE FACTORY MOUNTED DISCONNECT INSTALLED ON SERVICE SIDE OF UNIT.
G. STARTERS FOR ALL MOTORS SHALL BE PROVIDED INTEGRAL WITH UNIT.
H. COORDINATE SIZE OF CONDUCTOR TERMINATION LUGS WITH CONDUCTOR SIZES SHOWN ON ELECTRICAL DRAWINGS.
J. PROVIDE CONDENSER COIL HAIL GUARDS.

GRILLE, REGISTER AND DIFFUSER SCHEDULE

MARK	MANUFACTURER	SERVICE	MODEL	CONSTRUCTION TYPE	FACE TYPE	MOUNTING LOCATION	BORDER TYPE	FACE SIZE (IN)	MAX NC	MAX PRESS DROP (IN W.C.)	NOTES
CEG1	TITUS	EXHAUST	PAR	STEEL	PERFORATED	SURFACE	3	REFER TO PLANS	30	0.10	C,G,I-L
CRG1	TITUS	RETURN	PAR	STEEL	PERFORATED	SURFACE	3	24"x24"	30	0.10	C,G,I-L
CRG3	TITUS	RETURN	PAR	STEEL	PERFORATED	SURFACE	3	12"x12"	30	0.10	C,G,I-L
CRG6	TITUS	RETURN	3FL	STEEL	LOUVERED	WALL	-	REFER TO PLANS	30	0.10	C,E,I-L
CSD2	TITUS	SUPPLY	OMNI	STEEL	PLAQUE	SURFACE	3	REFER TO PLANS	30	0.10	A-C, I-L
CTG6	TITUS	TRANSFER	3FL	STEEL	LOUVERED	WALL	-	REFER TO PLANS	30	0.10	C,E,I-L
WSG1	TITUS	SUPPLY	300FL	ALUMINUM	LOUVERED	WALL	-	REFER TO PLANS	30	0.10	A-D, F-K
WSR1	TITUS	SUPPLY	S-DL	ALUMINUM	LOUVERED	DUCT	-	REFER TO PLANS	30	0.10	A-D, F-K

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. 4-WAY THROW PATTERN UNLESS OTHERWISE INDICATED BY FLOW ARROWS ON DRAWINGS.
B. NECK SIZE SHOWN ON DRAWINGS. PROVIDE BRANCH DUCT TO MATCH NECK SIZE UNLESS OTHERWISE SHOWN ON DRAWINGS.
C. BAKED ENAMEL FINISH, WHITE TO MATCH CEILING COLOR.
D. FRONT BLADES PARALLEL TO SHORT DIMENSION.
E. FRONT BLADES PARALLEL TO LONG DIMENSION.
F. DOUBLE DEFLECTION BARS SHALL BE ADJUSTABLE.
G. FRAME TYPE TO MATCH CEILING/WALL CONSTRUCTION, COORDINATE WITH ARCHITECTURAL REFLECTED CEILING/WALL PLAN.
H. PROVIDE OPPOSED BLADE DAMPER ADJUSTABLE FROM FACE OF DEVICE.
I. PROVIDE BORDER TYPE TO MATCH CEILING CONSTRUCTION WITH CONCEALED MOUNTING, AND INSULATED PLENUM BOX WITH NECK.
J. PROVIDE DIFFUSERS, LINEAR SLOTS, AND GRILLES WITH NO EXPOSED MOUNTING SCREWS.
K. PAINT ALL INTERIOR SURFACES SLOTS, GRILLES AND PLENUMS FLAT BLACK.
L. PROVIDE WITH RAPID MOUNT FRAMING OPTION FOR LAY-IN TYPE DIFFUSERS INSTALLED IN A HARD CEILING.

FAN SCHEDULE

												ELECTRICAL			
MARK	SERVICE DESCRIPTION	MANUFACTURER	MOUNTING	MODEL	CFM	ESP (IN)	BHP	NOM HP	FAN RPM	DRIVE (BELT/DIRECT)	VFD (Y/N)	V/PH	DISC TYPE	WEIGHT (LBS)	NOTES
EF 1	EXHAUST	GREENHECK	SUSPENDED	SQ-99-VG	725	0.5	0.22	0.25	1725	DIRECT	No	120 V / 1PH	NF	60	A-G
EF 2	EXHAUST	GREENHECK	SUSPENDED	SQ-80-VG	300	0.5	0.07	0.10	1725	DIRECT	No	120 V / 1PH	NF	50	A-G
EF 3	EXHAUST	GREENHECK	SUSPENDED	SQ-99-VG	600	0.5	0.16	0.25	1725	DIRECT	No	120 V / 1PH	NF	60	A-G
HVLS 1	CIRCULATION	BIG ASS FANS	STRUCTURE	PF8-18	[redacted]			2.00	86	DIRECT	No	208 V / 1PH	NF	240	H-K
HVLS 2	CIRCULATION	BIG ASS FANS	STRUCTURE	PF8-18				2.00	86	DIRECT	No	208 V / 1PH	NF	240	H-K

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. PROVIDE BIRDSCREEN AND MOTORIZED DAMPER.
B. PROVIDE WITH SPRING VIBRATION ISOLATION AND ALL-THREAD HANGING RODS.
C. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
D. PROVIDE SHAFT GROUNDING SYSTEM ON MOTOR. REFER TO MOTOR SPECIFICATION FOR ADDITIONAL INFORMATION.
E. PROVIDE WITH MANUFACTURER'S FAN SPEED CONTROLLER FOR BALANCING PURPOSES.
F. PROVIDE WITH MANUFACTURER'S ELECTRONICALLY COMMUTATED (EC) MOTOR.
G. NOMINAL MOTOR HP SHALL BE NO LARGER THAN THE FIRST AVAILABLE NOMINAL MOTOR SIZE GREATER THAN THE BHP.
H. MAINTAIN MINIMUM 3 FEET VERTICAL CLEARANCE BETWEEN FIRE SPRINKLER DEFLECTOR AND FAN BLADES.
I. PROVIDE WITH AUXILIARY CONTACTS FOR SHUTDOWN UPON NOTIFICATION OF FIRE ALARM SYSTEM.
J. COORDINATE MOUNTING HEIGHT WITH OTHER TRADES PRIOR TO INSTALLATION.
K. HVLS FAN SHALL CONNECT TO BMS.

LOUVER SCHEDULE

MARK	AREA SERVED	SERVICE	MANUFACTURER	MODEL	SIZE (W" x H")	CFM	MIN FREE AREA (SF)	MAX VEL (FPM)	MAX APD (IN W.C.)	NOTES
EL 1	EF-1	EXHAUST	RUSKIN	ELF15J	36" x 12"	725	1.20	600	0.10	A-G
EL 2	EF-2	EXHAUST	RUSKIN	ELF15J	12" x 12"	300	0.50	600	0.10	A-G
EL 3	EF-3	EXHAUST	RUSKIN	ELF15J	36" x 12"	600	1.00	600	0.10	A-G
IL 3	FCU-3	INTAKE	RUSKIN	ELF15J	12" x 12"	100	0.25	400	0.10	A-G
IL 2	FCU-1 + FCU-2	INTAKE	RUSKIN	ELF15J	36" x 20"	1110	2.47	450	0.10	A-G

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. PROVIDE 1/4" MESH ALUMINUM BIRD SCREEN.
B. PROVIDE ANODIZED FINISH. COLOR AS SELECTED BY ARCHITECT.
C. FRAME TYPE SHALL MATCH WALL CONSTRUCTION, COORDINATE WITH ARCHITECT.

GLMV Architecture

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EXPIRES 10/31/2024

STATE OF MISSOURI
ALESSANDRO SPINELLI
NUMBER PE-2022017017
PROFESSIONAL ENGINEER
10/30/2023
ALESSANDRO . SPINELLI
LICENSE # PE-2022017017

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	LJ/EW
CHECKED BY:	AS

MECHANICAL SCHEDULES

M-301

ALESSANDRO . SPINELLI
PLOT DATE: 10/30/2023 5:34:30 PM
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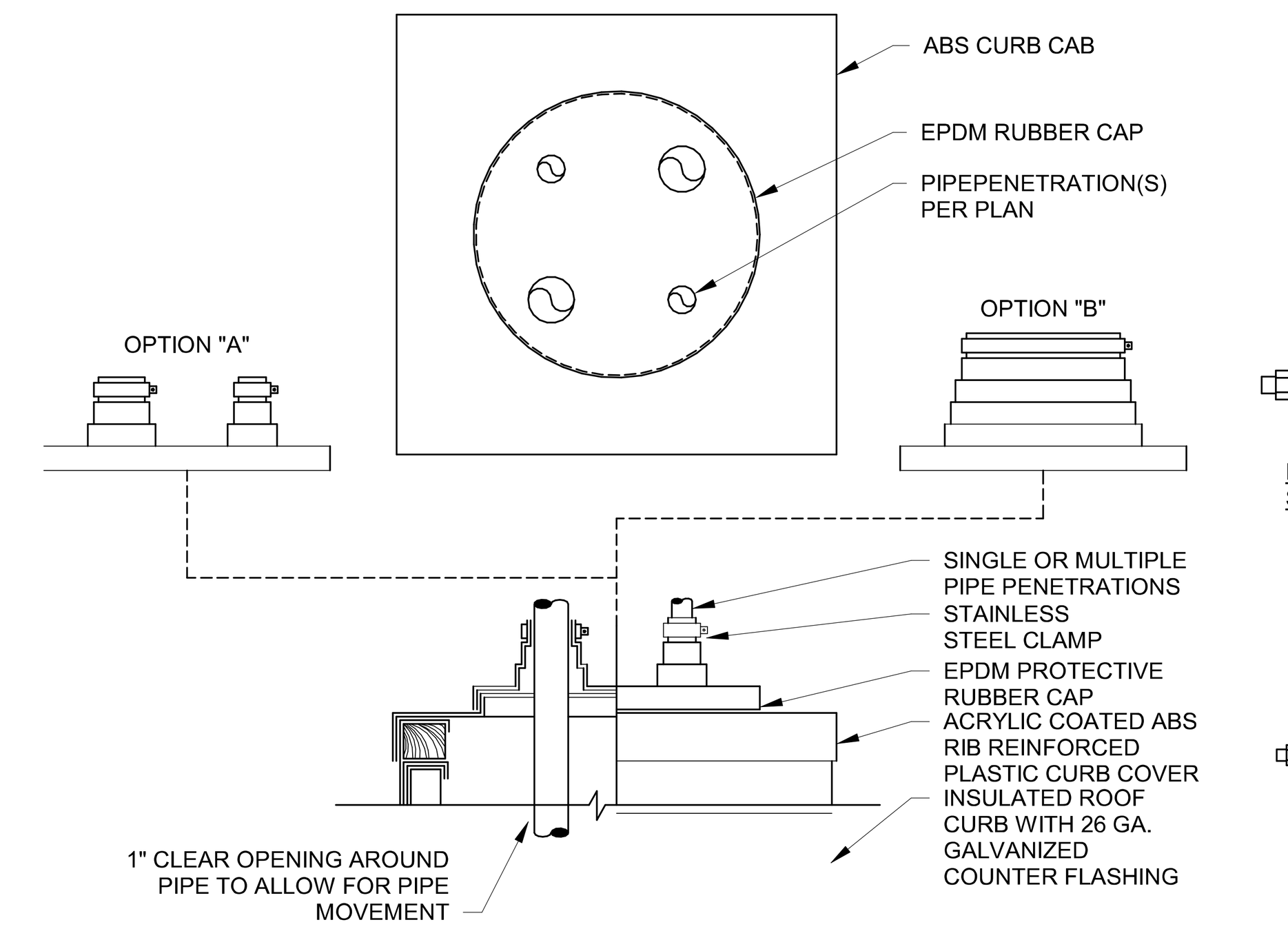
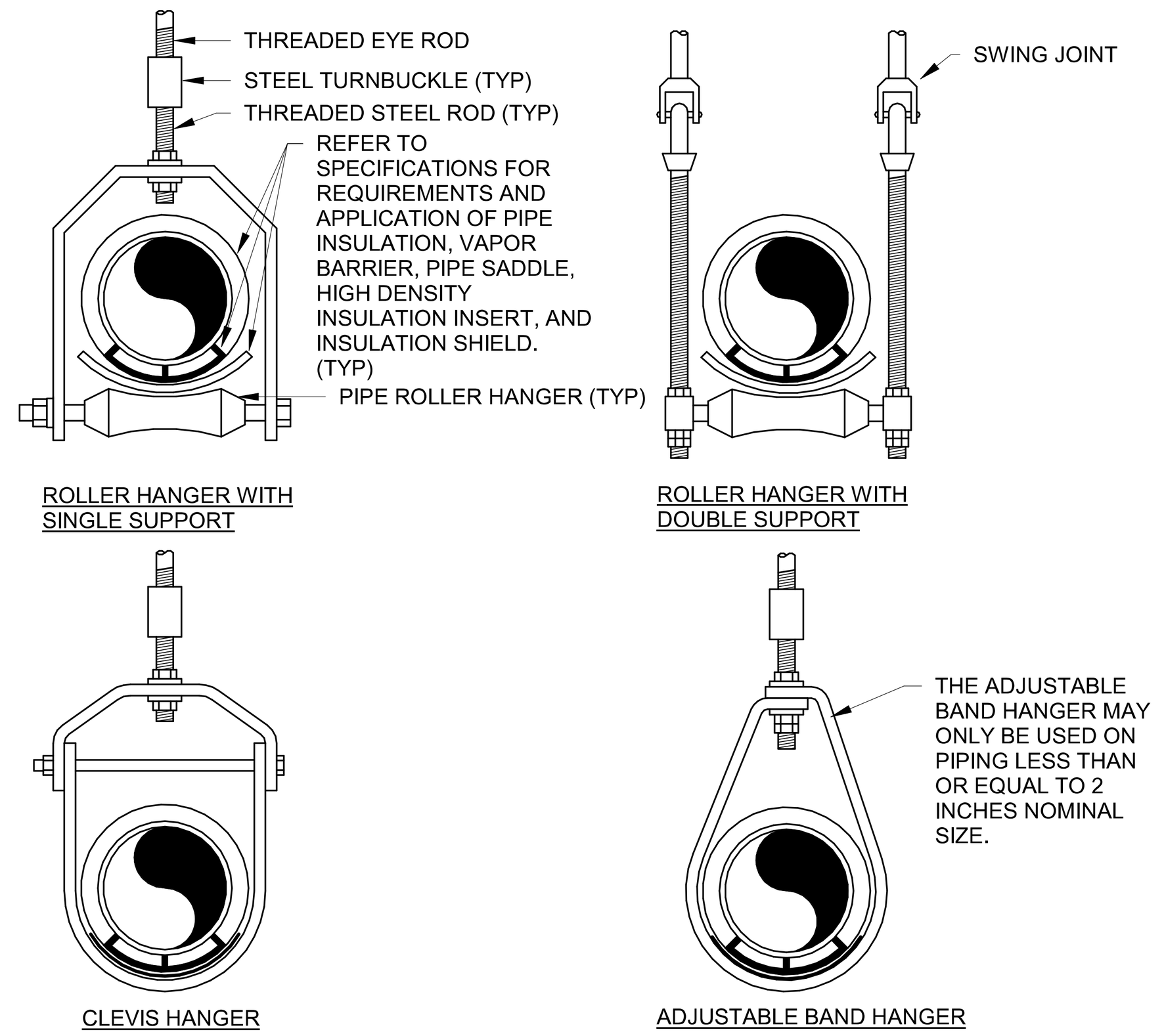
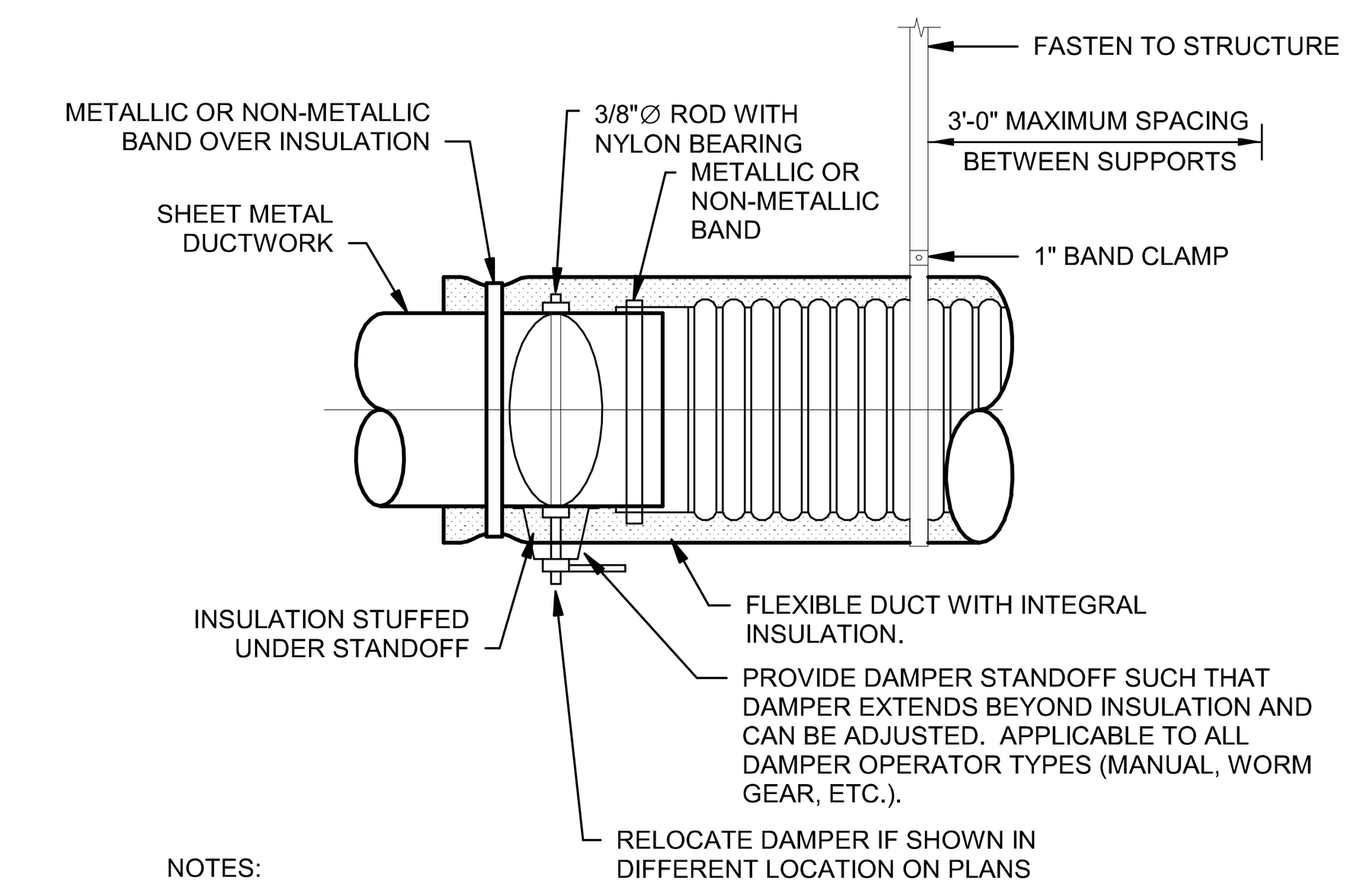


19 PIPE PORTAL ROOF PENETRATION DETAIL
NTS

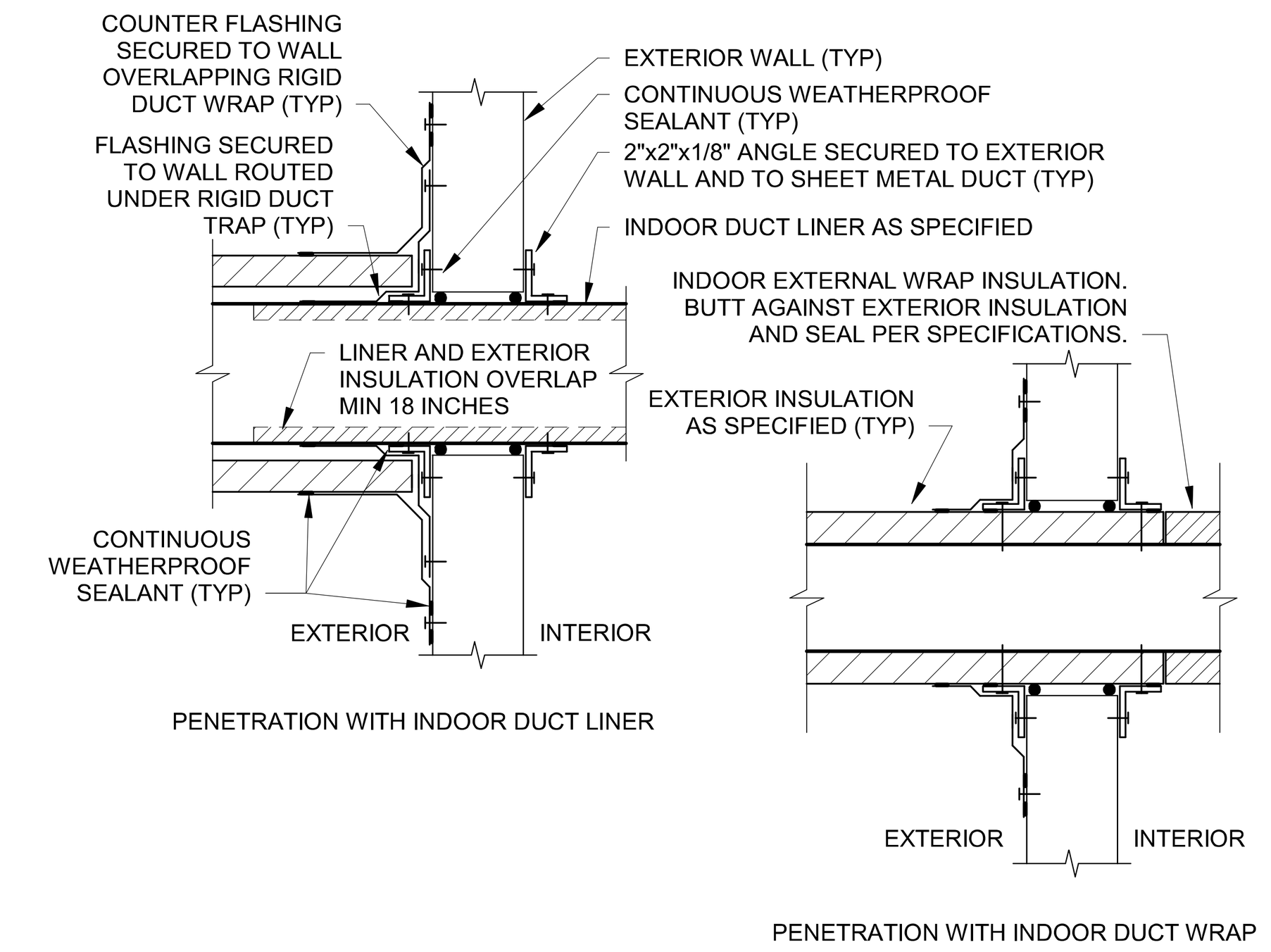


18 PIPE HANGER DETAILS
NTS



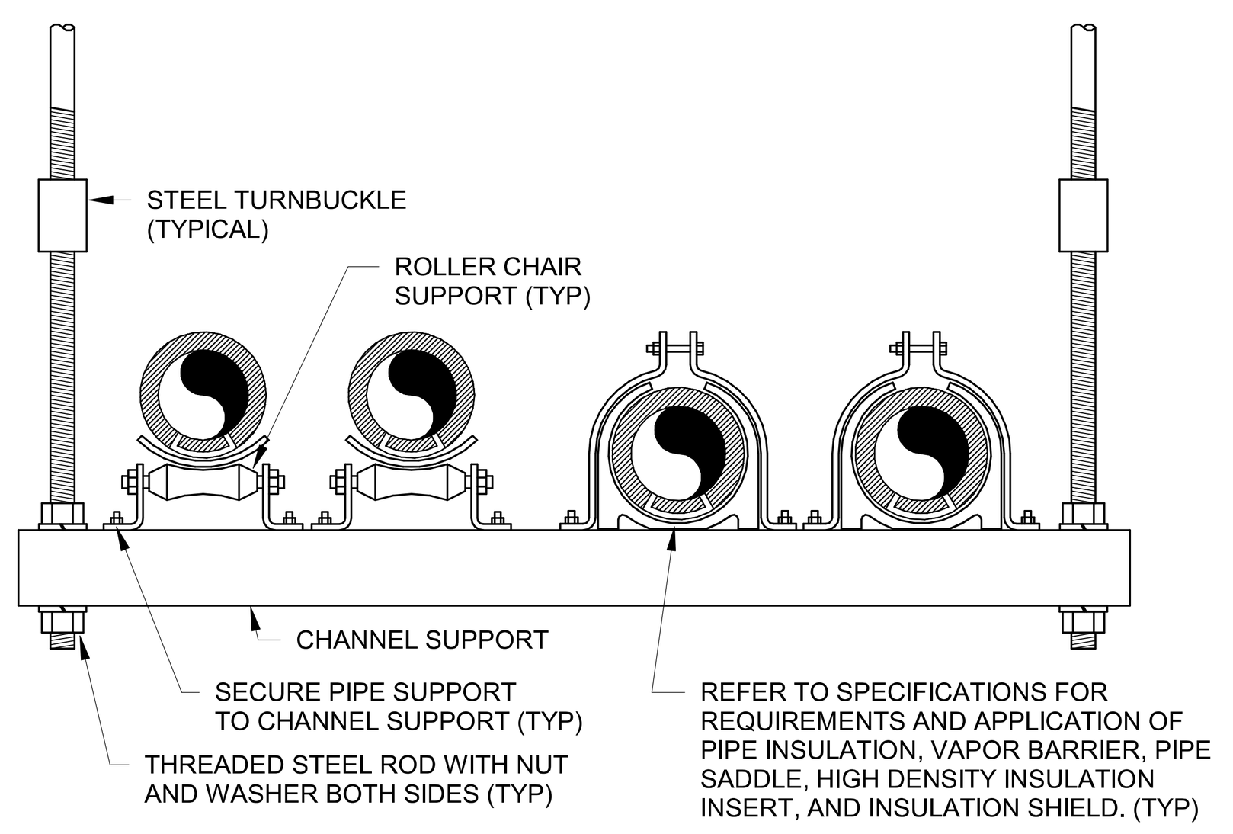
NOTES:
1. INSTALL FLEXIBLE DUCT IN AS STRAIGHT A RUN AS POSSIBLE. USE LONG RADIUS BENDS WHERE POSSIBLE. PULL DUCT TIGHT AT BOTH ENDS AND SECURE BOTH INNER LINER & OUTER INSULATION SKIN WITH TAPE & METAL CLAMPS.
2. EXTEND DAMPER ROD TO ACCOMMODATE INSULATION IF APPLICABLE. PULL ROD END TO EDGE OF DUCTWORK AS REQUIRED AND SEAL TO MAINTAIN VAPOR BARRIER.
3. INSTALL LOCKING QUADRANT TO HANDLE ON BOTTOM OF DUCT FOR EASE OF SERVICE.
4. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL HAVE NO MORE THAN ONE 90 DEGREE ELBOW.
5. DUCT SHALL EXTEND STRAIGHT FOR 6" FROM A CONNECTION BEFORE BENDING.

17 DAMPER AND FLEX DUCT CONNECTION DETAIL
NTS

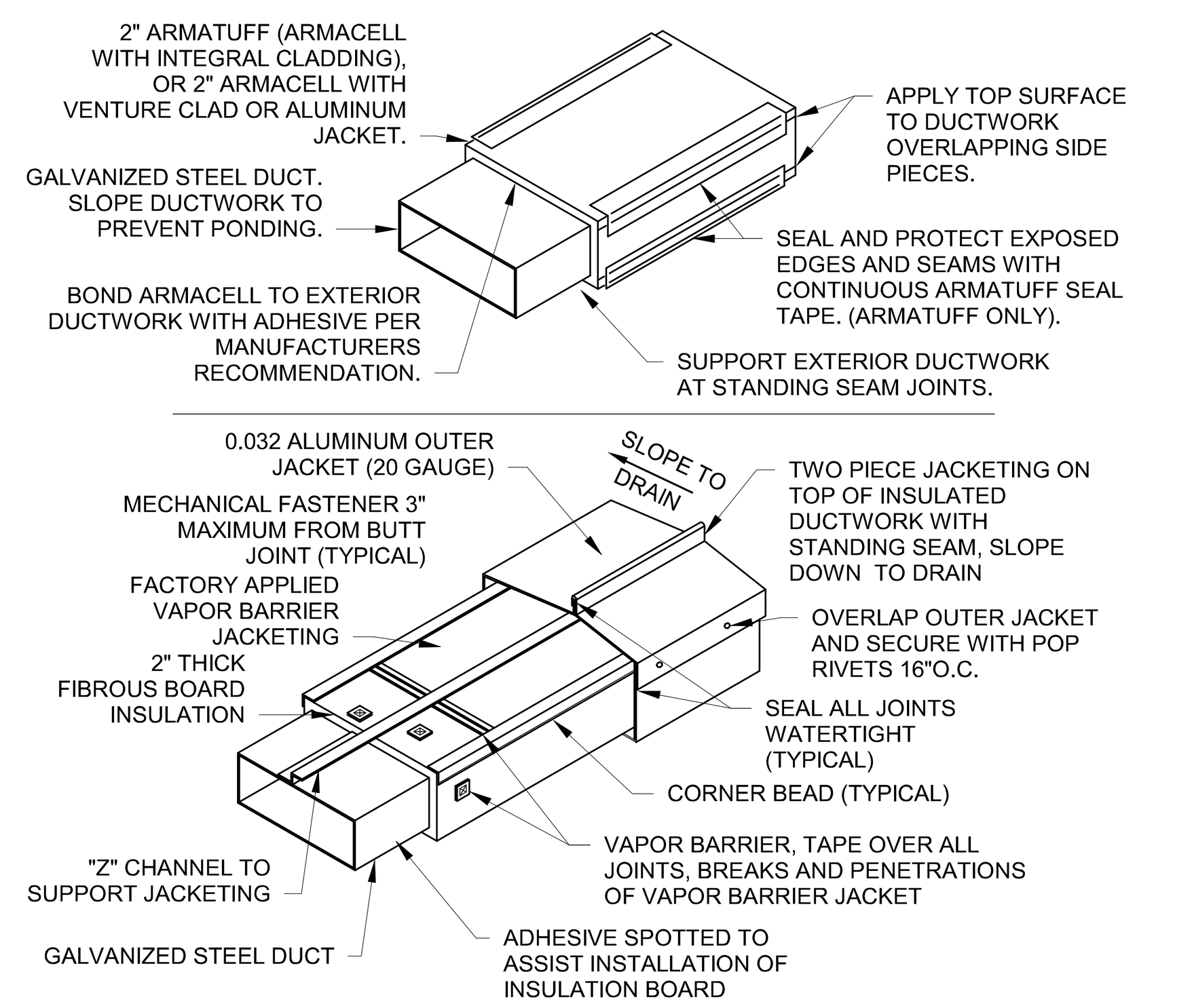


NOTES:
1. COORDINATE SIZE AND LOCATION OF DUCT WITH STRUCTURAL ENGINEER AND ARCHITECTURAL ELEVATIONS.

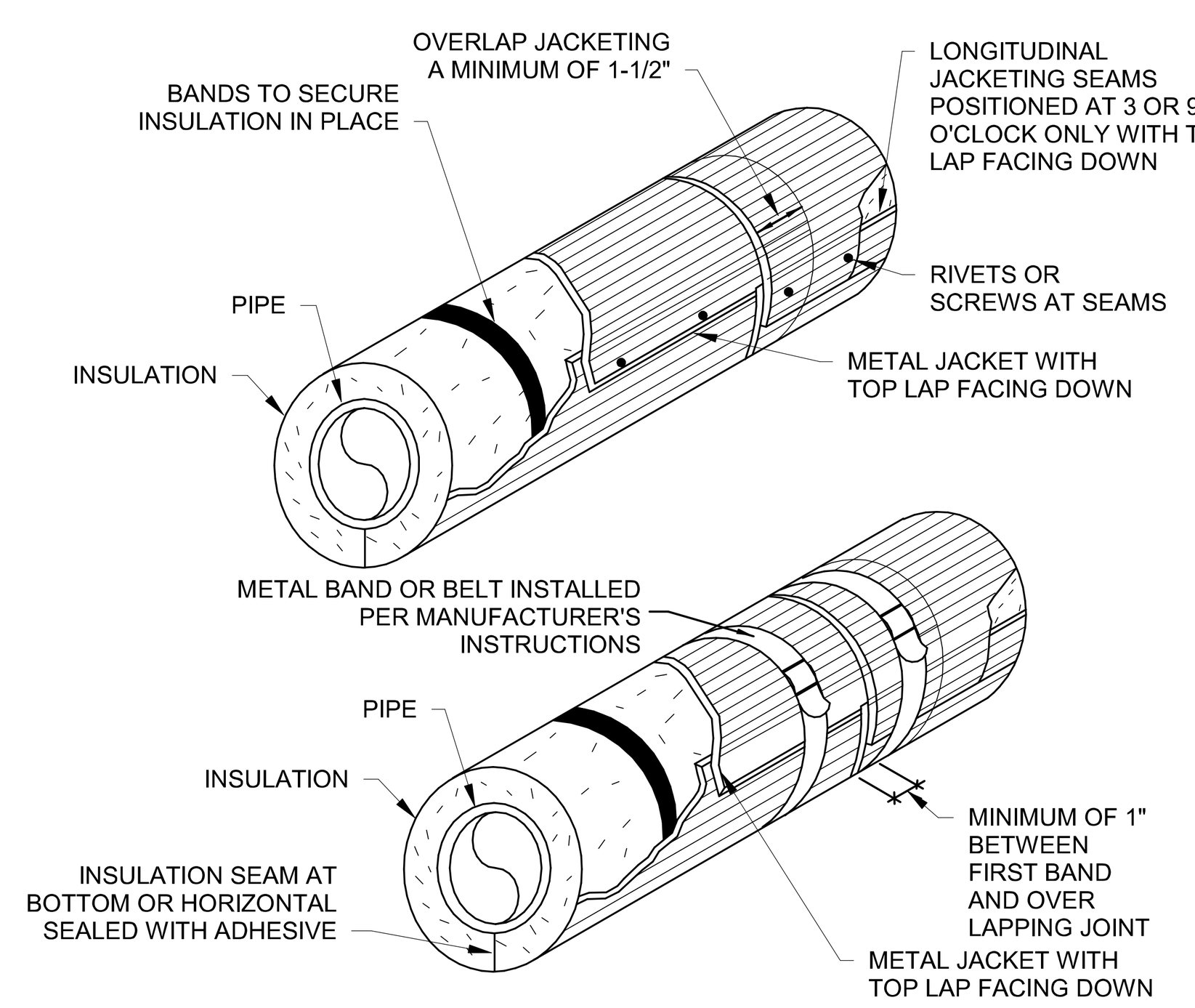
16 DUCT EXTERIOR WALL PENETRATION DETAIL
NTS



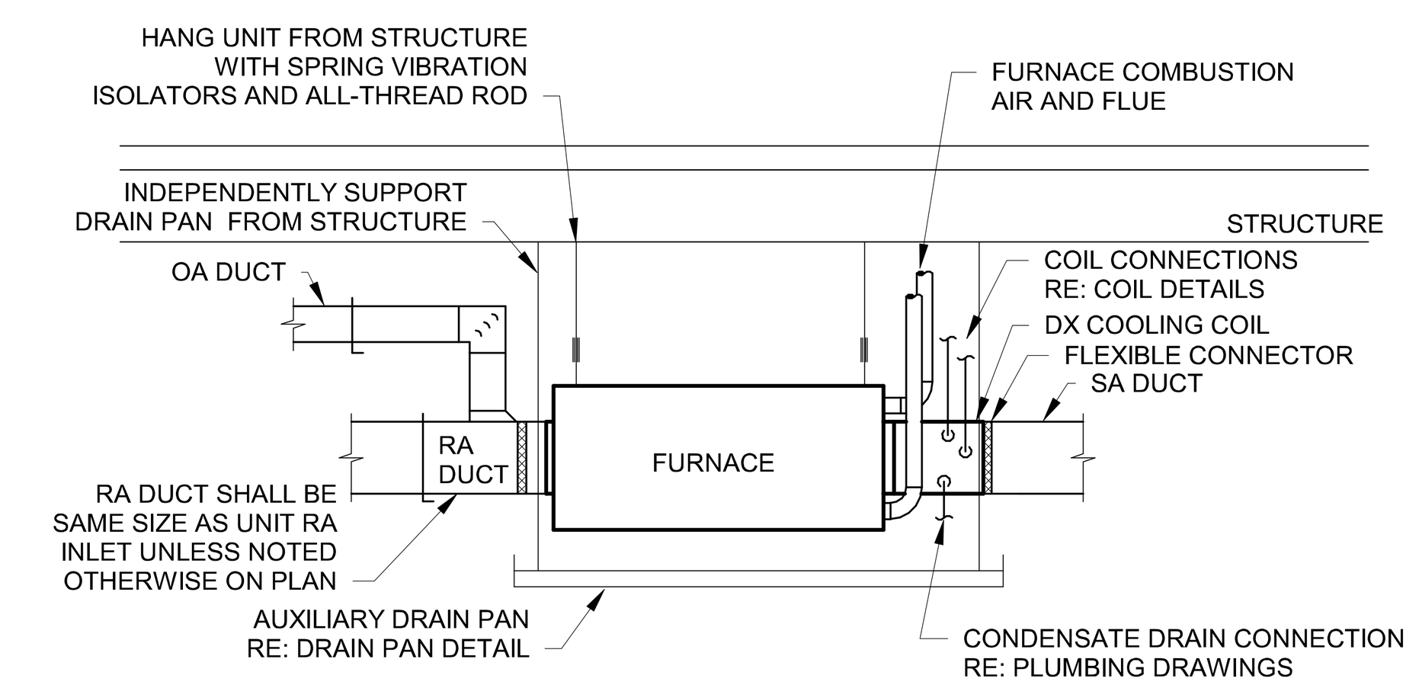
15 MULTIPLE PIPE TRAPEZE HANGER DETAIL
NTS



14 EXTERIOR DUCTWORK INSULATION DETAIL
NTS

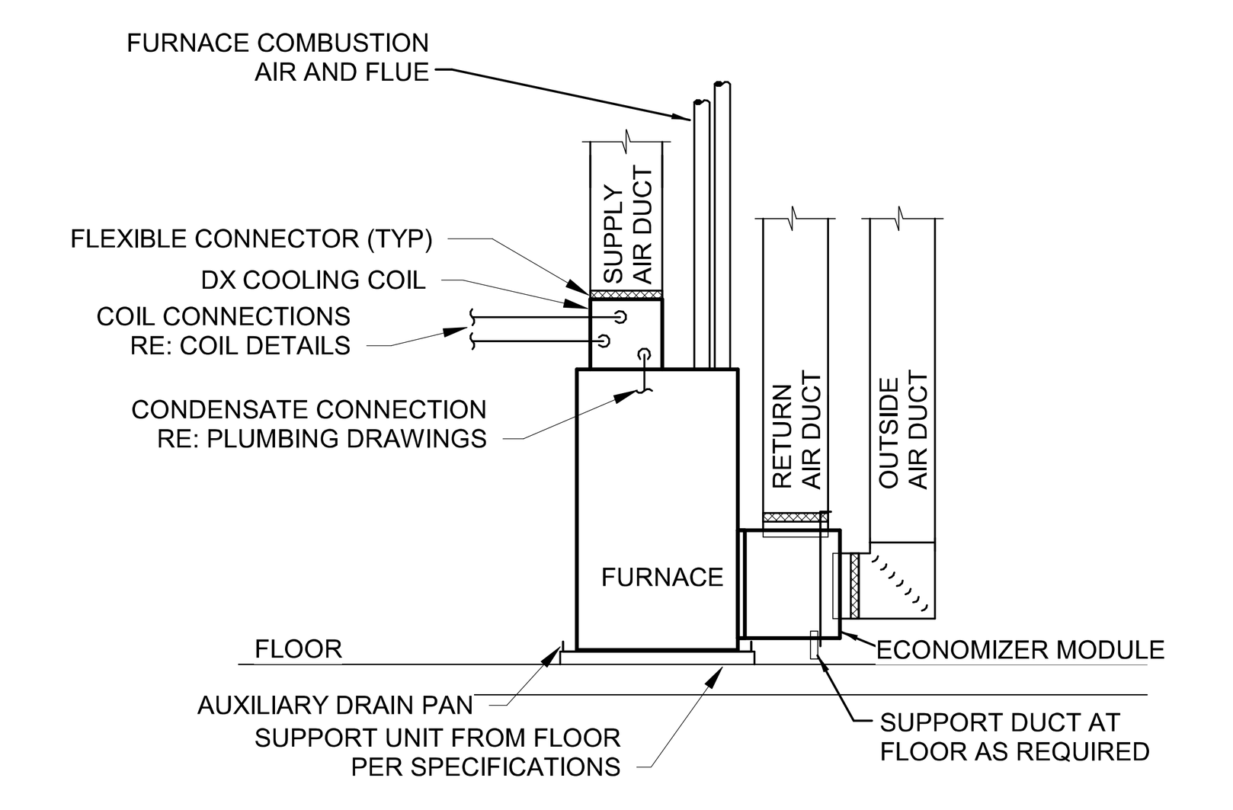


13 EXTERIOR PIPING WITH FIELD APPLIED METAL JACKET OVER INSULATION DETAIL
NTS



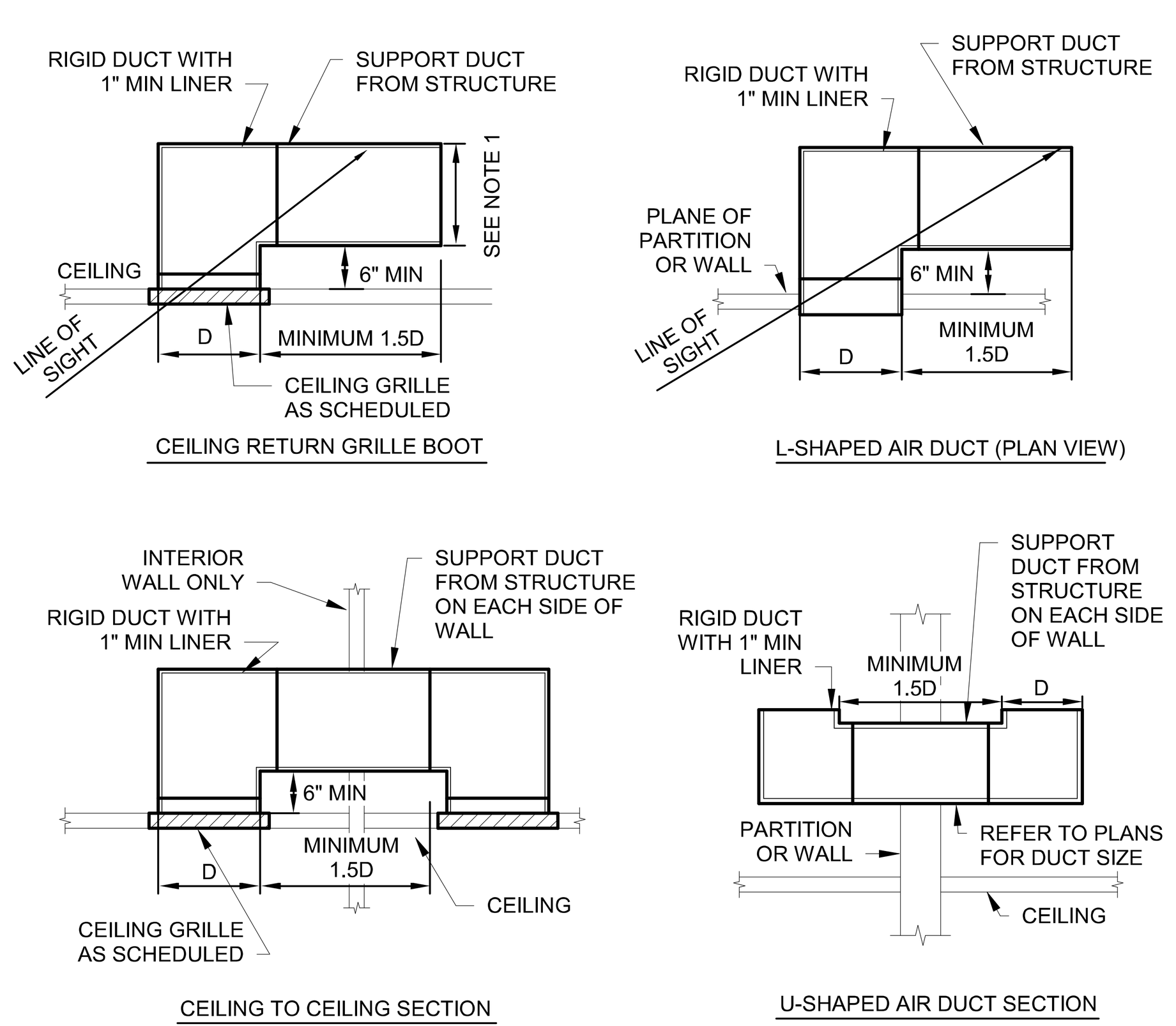
NOTES:
1. ARRANGEMENT SHOWN IS SCHEMATIC, ADJUST TO SUIT FIELD CONDITIONS AND MEET LOCAL CODE REQUIREMENTS.

12 HORIZONTAL FURNACE DETAIL
NTS



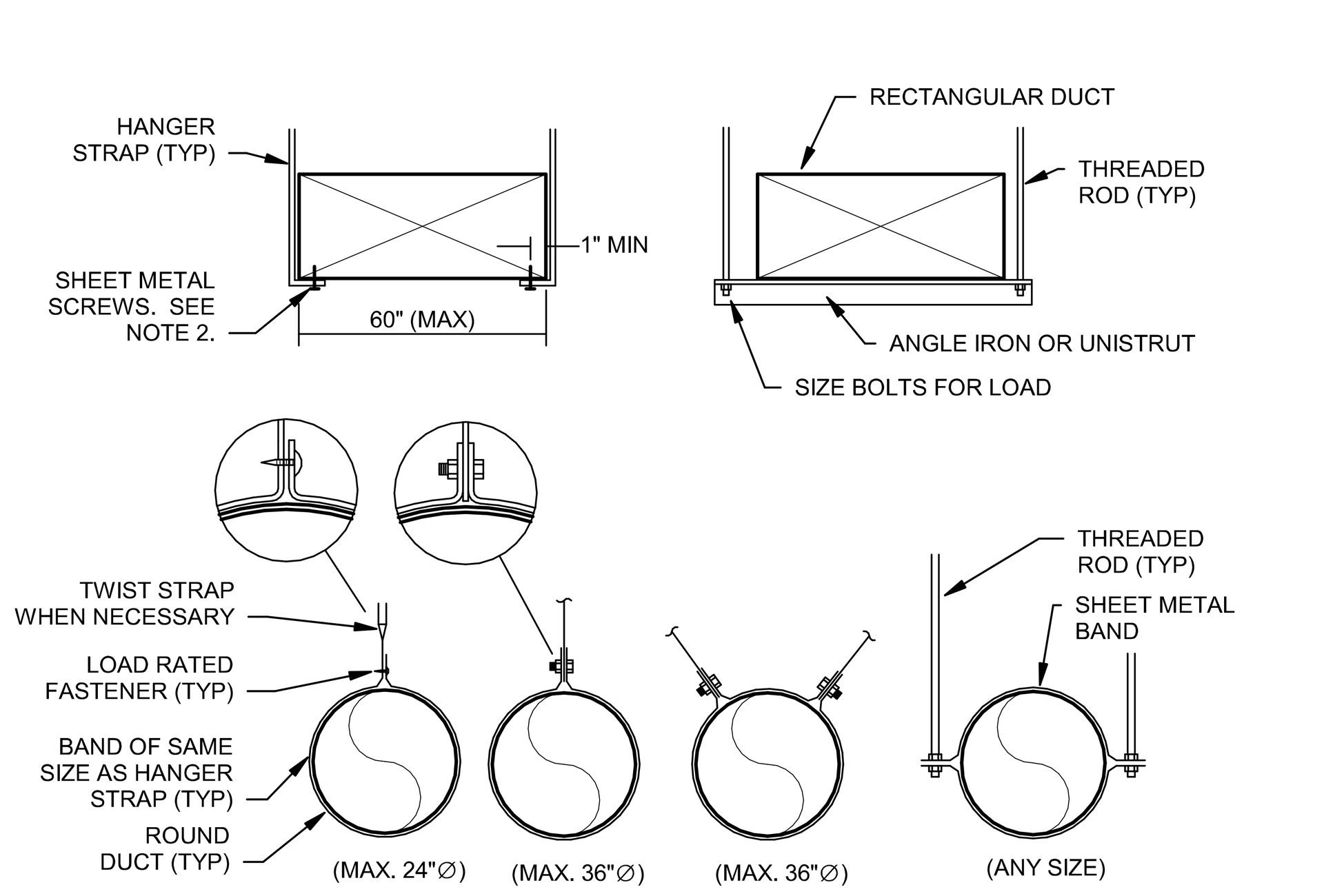
NOTES:
1. ARRANGEMENT SHOWN IS SCHEMATIC, ADJUST TO SUIT FIELD CONDITIONS AND MEET LOCAL CODE REQUIREMENTS.

11 VERTICAL FURNACE DETAIL
NTS



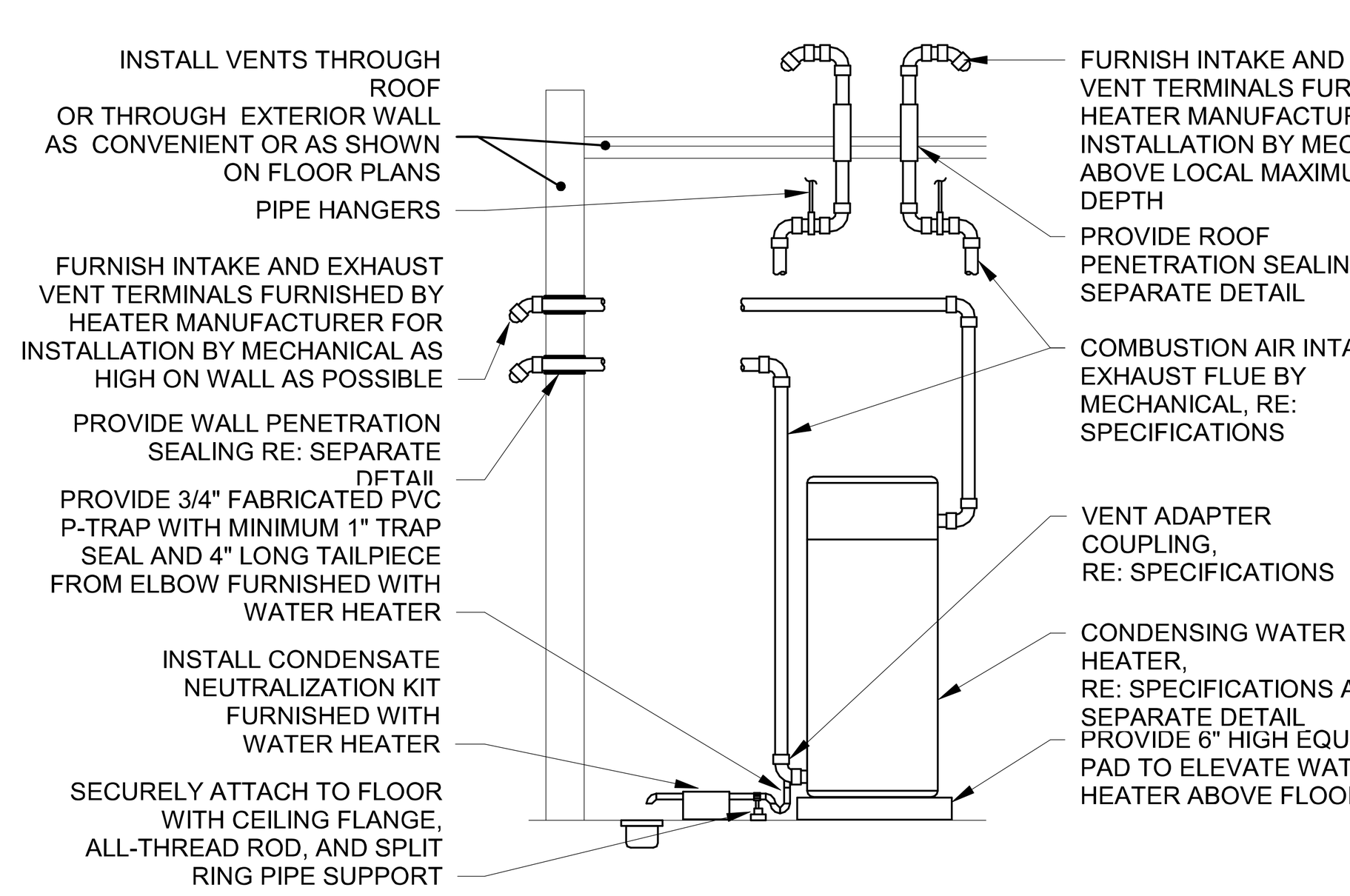
NOTES:
1. REFER TO FLOOR PLAN FOR OUTLET DEPTH. WHEN NO DEPTH IS SHOWN, MINIMUM DEPTH SHALL BE AS REQUIRED TO LIMIT AIR VELOCITY TO 500 FPM WITH A MINIMUM SIZE OF 0.5D.

10 RETURN TRANSFER AIR DUCT DETAILS
NTS



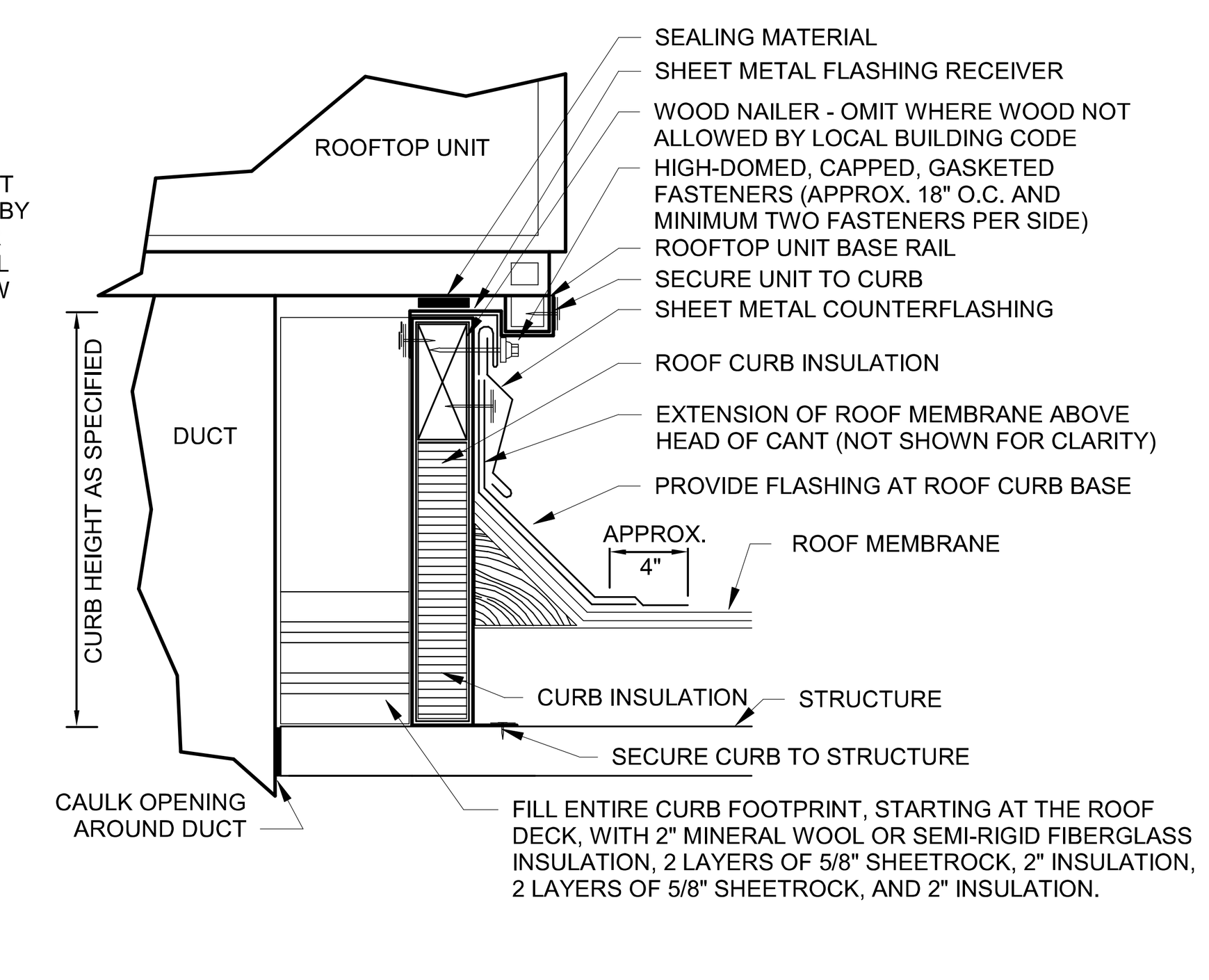
NOTES:
1. USE THREADED ROD FOR RECTANGULAR DUCTS LARGER THAN 60" WIDE.
2. OMIT SHEET METAL SCREWS IF HANGER STRAP IS CONTINUOUS AND LOOPS UNDER ENTIRE RECTANGULAR DUCT.
3. FOR ROUND DUCTS LARGER THAN 36"∅, USE TWO HANGER RODS TO SUPPORT DUCT FROM EACH SIDE.
4. HANGERS MUST NOT DEFORM DUCT SHAPE.

9 DUCT HANGER LOWER ATTACHMENT DETAILS
NTS



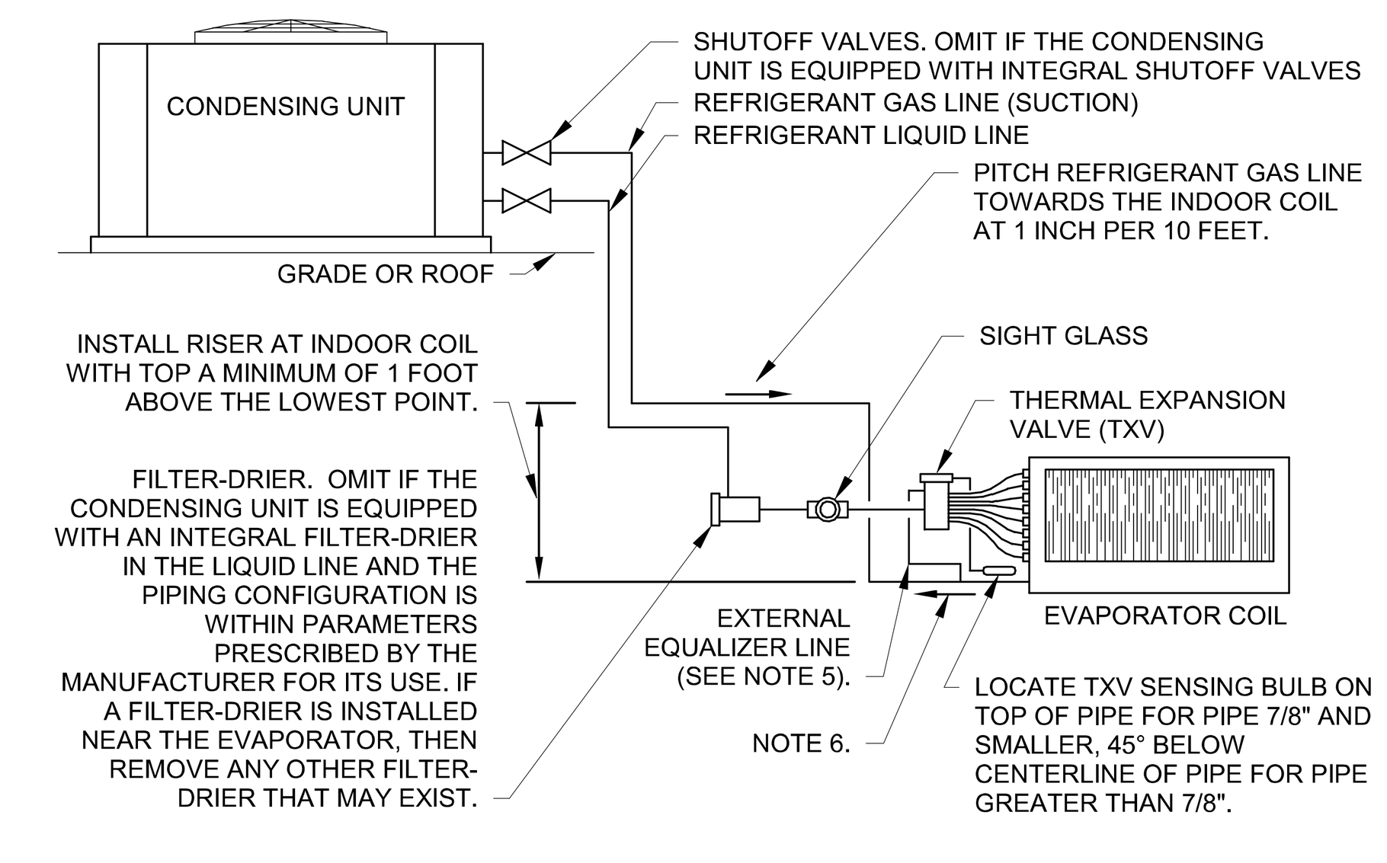
DETAIL SHOWS GENERAL SCHEMATIC REQUIREMENTS. ADJUST TO SUIT FIELD CONDITIONS. INSTALL THROUGH ROOF OR THROUGH WALL AS SHOWN ON PLANS. REFER TO MANUFACTURERS INSTALLATION MANUAL FOR MORE INFORMATION: MAINTAIN PROPER DISTANCES FROM EACH OTHER, AND FROM OTHER CONSTRUCTION FEATURES; VERIFY PIPE SIZE FOR MAXIMUM LENGTH OF RUN AND QUANTITY OF FITTINGS. VERIFY WATER HEATERS PROVIDED WITH CONDENSATE NEUTRALIZATION KITS ARE PROVIDED.

20 STAINLESS STEEL WATER HEATER EXHAUST AND INTAKE DETAIL
NTS



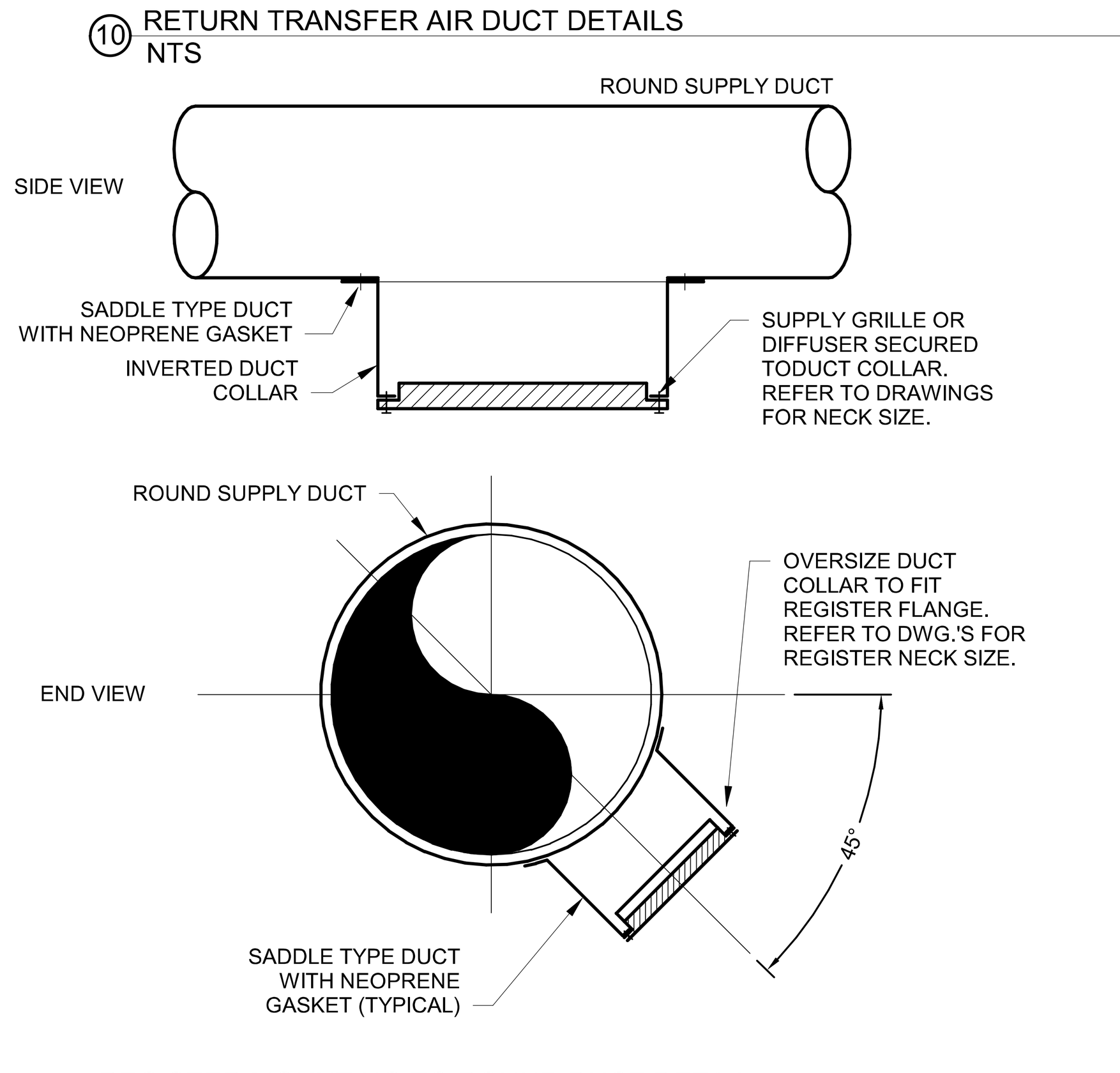
NOTES:
1. CUT METAL DECKING TO ALLOW CURB INSTALLATION ON STEEL FRAMING. AFTER CURB IS SET IN PLACE, TRIM REMAINING METAL DECKING AND INSTALL WITHIN CURB. TACK WELD DECKING TO SUPPORT STEEL. DO NOT WELD INTERIOR DECKING TO ROOF CURB. PROVIDE ADDITIONAL CROSS FRAMING TO SUPPORT INTERIOR DECKING AND FILL MATERIAL AS REQUIRED.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR ROOF CURBS, ANCHORING AND SEISMIC/WIND RESISTANCE.

7 ROOF CURB DETAIL
NTS

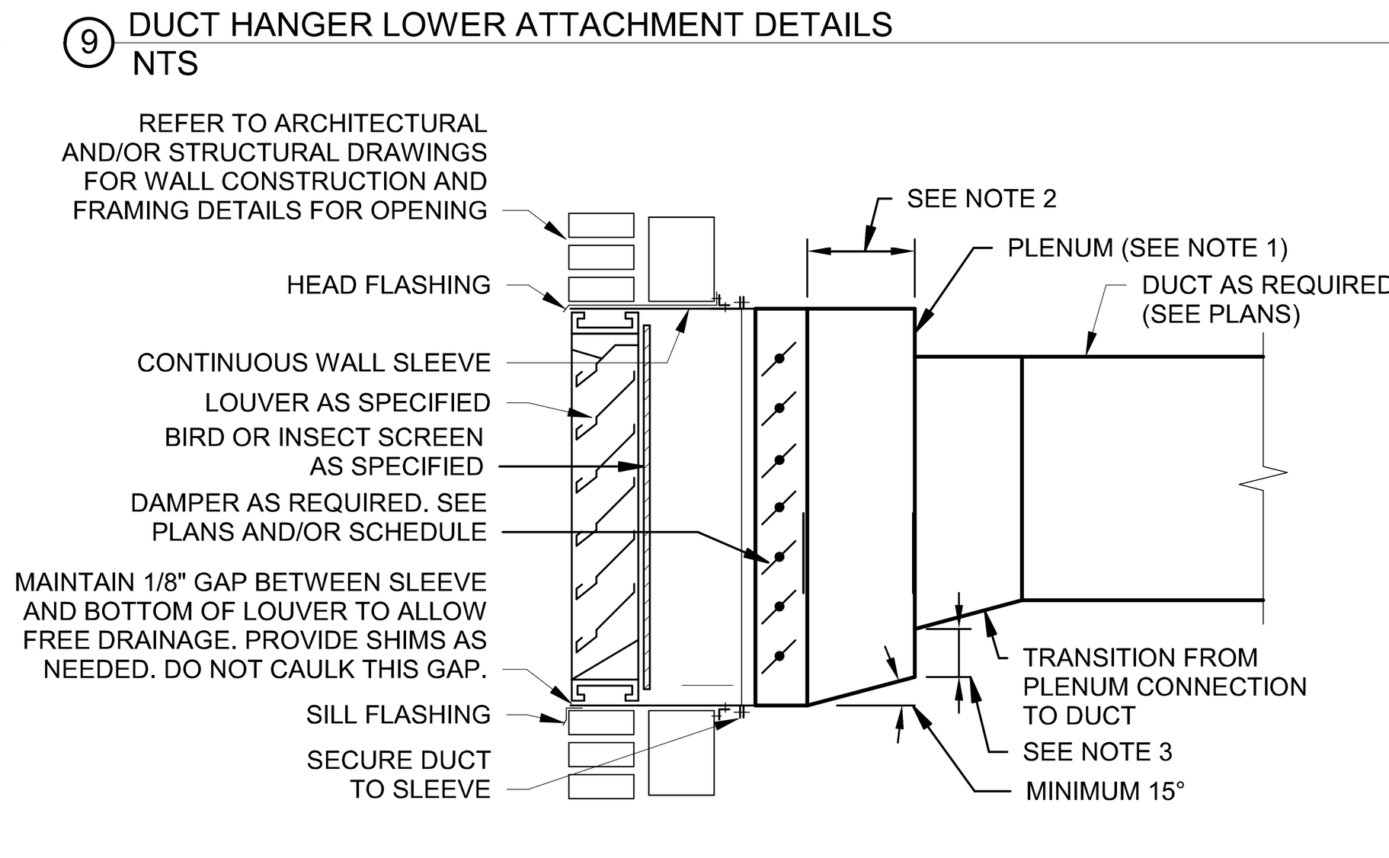


NOTES:
1. INSTALL REFRIGERANT PIPING AND COMPONENTS IN STRICT CONFORMANCE WITH ALL MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS, WHICH SHALL TAKE PRECEDENT OVER INFORMATION PRESENTED IN THIS DETAIL.
2. ALL COMPONENTS INSTALLED SHALL BE THE EXACT MODEL RECOMMENDED BY THE MANUFACTURER.
3. CONSULT THE MANUFACTURER REGARDING THE NEED TO INSTALL A SOLENOID VALVE IN THE LIQUID LINE BETWEEN THE FILTER-DRIER AND SIGHT GLASS.
4. INSTALL REFRIGERATION PIPE SIZES RECOMMENDED BY THE MANUFACTURER AND CONSULT THE MANUFACTURER REGARDING THE NEED FOR INTERMEDIATE TRAPS BASED ON THE RECOMMENDED PIPE SIZES AND PIPING CONFIGURATION.
5. INSTALL THERMAL EXPANSION VALVE WITH BALANCED PORT CONSTRUCTION AND EXTERNAL EQUALIZER LINES FOR ALL EVAPORATOR COILS EQUIPPED WITH A REFRIGERANT DISTRIBUTOR.
6. PITCH REFRIGERANT GAS LINE AWAY FROM INDOOR COIL AT 1 INCH PER 10 FEET.
7. FILTER-DRIER MAY BE OMITTED IF NOT REQUIRED BY MANUFACTURER.
8. SIGHT GLASS MAY BE OMITTED IF NOT REQUIRED BY MANUFACTURER AND SYSTEM IS LESS THAN 5 TONS.

6 SPLIT SYSTEM PIPING DETAIL
NTS

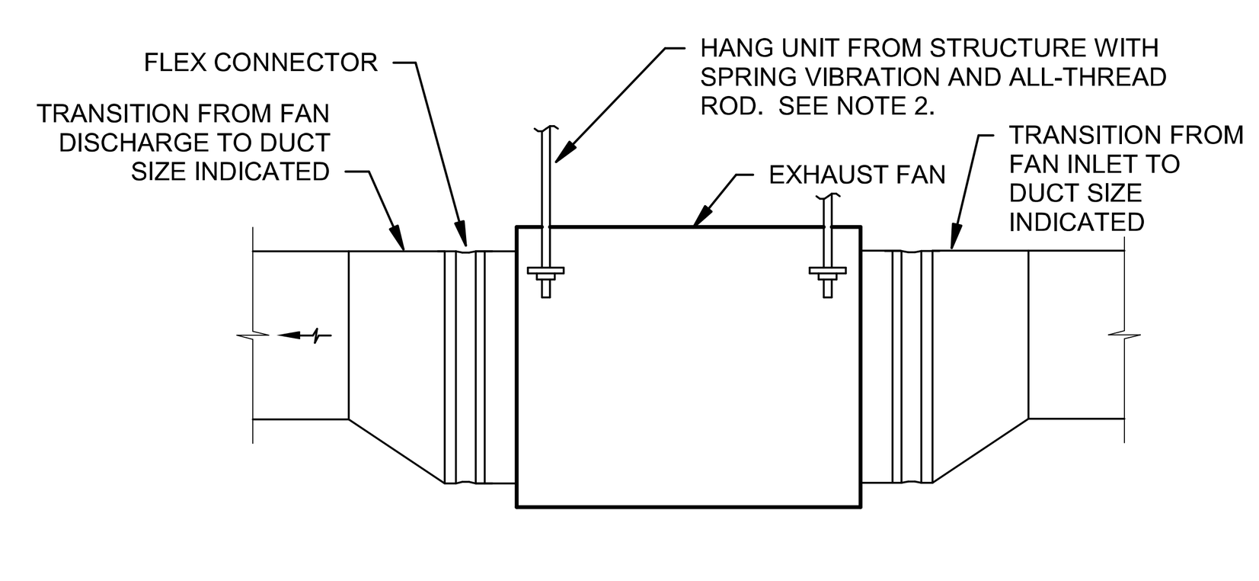


5 REGISTER MOUNTING TO ROUND DUCT DETAIL
NTS



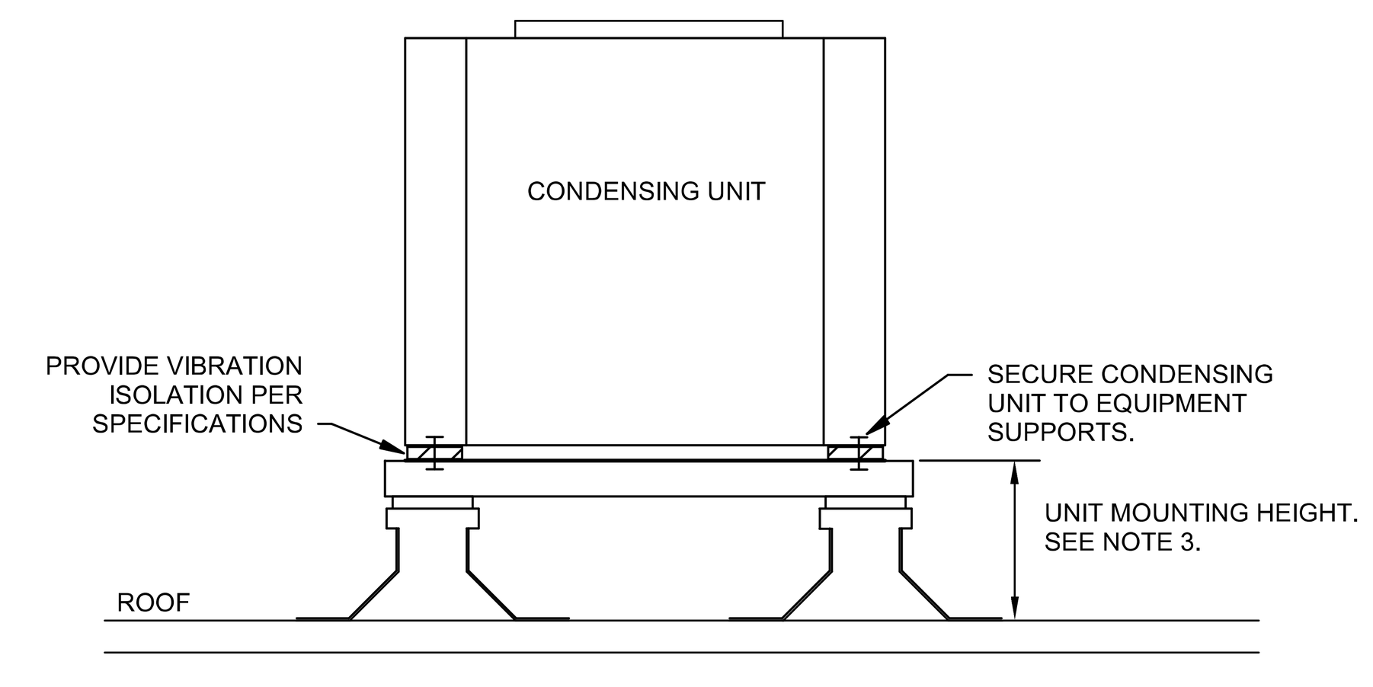
NOTES:
1. SEAL ALL JOINTS AND SEAMS OF PLENUM AND DUCT TO PROVIDE WATER TIGHT CONSTRUCTION. PROVIDE INSULATION FOR PLENUM AND DUCT PER SPECIFICATIONS.
2. MINIMUM DEPTH OF PLENUM SHALL BE 2'-0".
3. DISTANCE FROM EDGE OF PLENUM TO TRANSITION SHALL BE NOT MORE THAN DEPTH OF PLENUM ON ALL SIDES.
4. SEAL GAP BETWEEN LOUVER AND SLEEVE WATER TIGHT ON TOP AND SIDES. DO NOT SEAL THE BOTTOM SO THAT WATER MAY BE PERMITTED TO DRAIN FREELY.

4 LOUVER INSTALLATION DETAIL
NTS



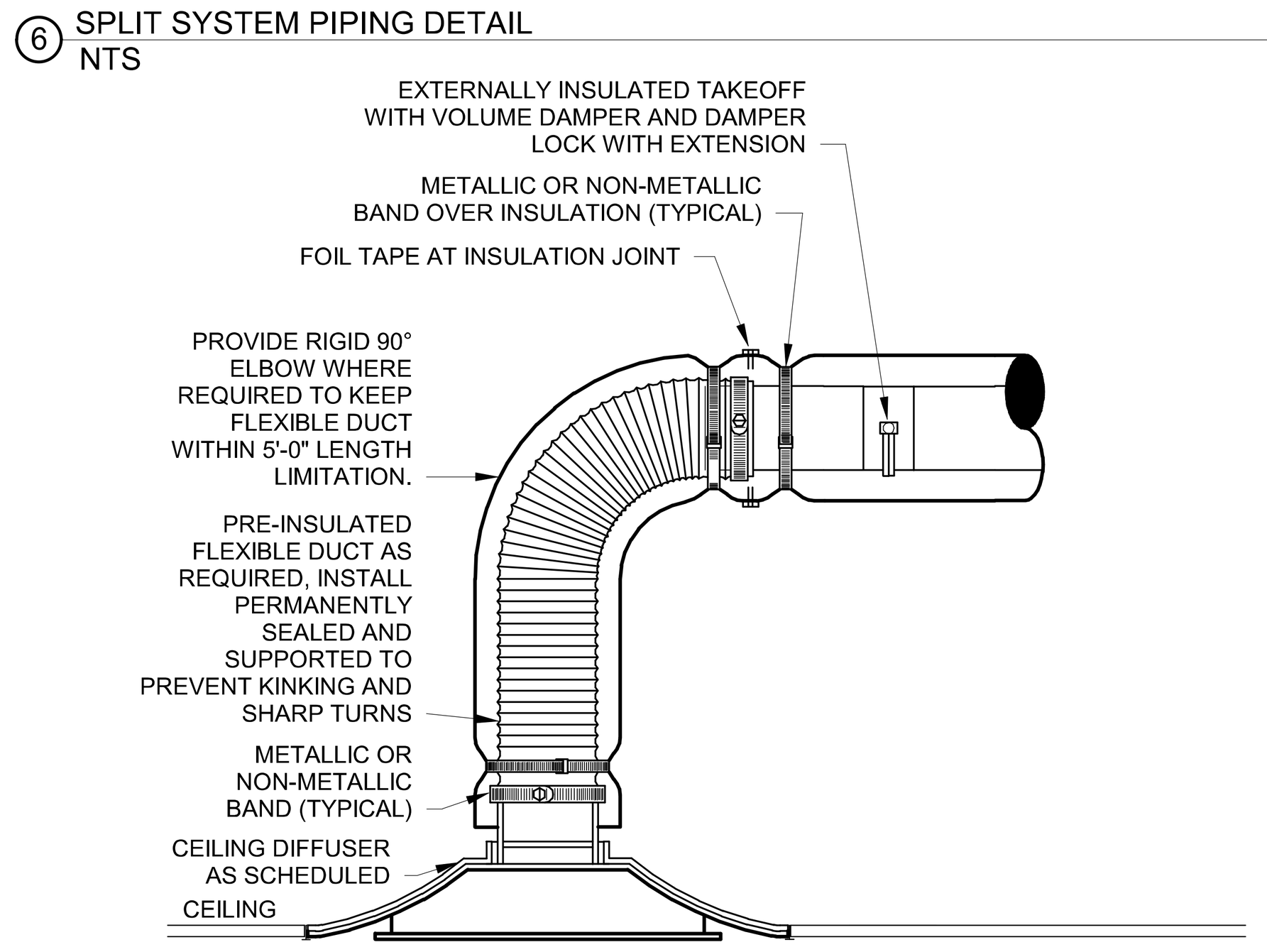
NOTES:
1. ARRANGEMENT SHOWN IS SCHEMATIC, ADJUST TO SUIT FIELD CONDITIONS AND MEET LOCAL CODE REQUIREMENTS.
2. FOR FANS 1 HP AND LESS, PROVIDE NEOPRENE RUBBER MOUNT HANGER (NR). FOR FANS LARGER THAN 1 HP, PROVIDE SPRING VIBRATION ISOLATION HANGER (SPNH).

3 IN-LINE FAN DETAIL
NTS



NOTES:
1. SUPPORT AND ANCHOR OUTDOOR UNITS IN COMPLIANCE WITH LOCAL SEISMIC AND WIND RESTRAINT REQUIREMENTS.
2. SEE MECHANICAL EQUIPMENT ANCHORS AND SUPPORT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. REFER TO THE EQUIPMENT SCHEDULE AND MANUFACTURER'S REQUIREMENTS FOR UNIT MOUNTING HEIGHT.

2 CONDENSING UNIT SUPPORT DETAIL
NTS



NOTES:
1. FLEXIBLE DUCT LENGTH MAY NOT EXCEED 5'-0". EXTEND RIGID DUCT AS REQUIRED.
2. REFER TO SPECIFICATIONS FOR FLEXIBLE DUCTWORK INSTALLATION REQUIREMENTS.

1 CEILING DIFFUSER DETAIL
NTS

GLMV Architecture

HENDERSON ENGINEERS
240 W. 37TH STREET, 3RD FLOOR
NEW YORK, NY 10018
TEL 212.413.8400 FAX 212.413.8401
WWW.HENDERSONENGINEERS.COM
2150003907
MO. CORPORATE NO. E-556D
EXPIRES 10/31/2024

STATE OF MISSOURI
ALESSANDRO SPINELLI
NUMBER PE-2022017017
PROFESSIONAL ENGINEER
10/30/2023
ALESSANDRO . SPINELLI
LICENSE # PE-2022017017

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	LJ/EW
CHECKED BY:	AS

MECHANICAL DETAILS

M-401

ALESSANDRO . SPINELLI
PLOT DATE: 10/30/2023 4:50:39 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMO-MEPF_V23.rvt

SEQUENCE OF OPERATIONS
FAN COIL UNITS

The sequence of operations is organized into the following main categories: operating modes; control setpoint resets; safeties, overrides and interlocks; and component control loops. The operating modes describe the criteria that either enable or disable the various modes of operation. If a mode of operation is not listed within a component control loop section then that mode of operation has no direct influence on the operation of the component. The control setpoint reset section describes the logic and reference variables that will be used to reset control setpoints to a new value within its reset range. The safeties, overrides, and interlocks section outlines the hardwired interlocks that are required to meet life safety requirements. Safeties and interlocks take precedence over all other control strategies outlined in this document. The control responses of each component for the various modes of operation are described in the component control loop sections. Setpoints shall be adjustable (adj.) as noted.

The sequence of operations, the points list and control diagrams shall be used to provide a complete description of the control philosophy for the controlled equipment. Individual setpoint values, reset ranges, and alarm action levels are listed in the points list. Components and control sensor locations are graphically depicted on the control diagram. The controls contractor shall be responsible for coordinating any necessary time delay setpoints to establish stable system operation.

GENERAL DESCRIPTION

The fan coil unit(s) described by this sequence of operations consist(s) of a constant speed supply fan, DX cooling coil, and gas heating furnace that operate to provide heating, ventilation, and air conditioning for the conditioned spaces as shown on the drawings.

OPERATING MODES
OCCUPIED MODE:
The unit shall be in occupied mode per the Project Design Conditions Schedule shown on the control drawings.
COOLING MODE:
The unit shall be in cooling mode when the zone temperature (Z-T) rises above the dead band (Z-T-DB).
HEATING MODE:
The unit shall be in heating mode when the zone temperature (Z-T) falls below the dead band (Z-T-DB).
UNOCCUPIED MODE:
The unit shall be in unoccupied mode for all periods not included in the occupied hours of operation. Overrides of unoccupied schedule are defined at the zone level control.
FREEZE PROTECTION MODE LEVEL 1:
The unit shall be in Freeze Protection Mode Level 1 when:
The Supply Air Temperature (SAT) is less than the Level 1 Low Limit Temperature Alarm Setpoint (LLT1-SP).
When in Freeze Protection Mode Level 1, an alarm shall generate at the operator workstation.
The alarm shall automatically reset when the temperature is above the alarm setpoint for a duration that exceeds the Freeze Protection Level 1 Delay (FZ-DLY) setpoint.
FREEZE PROTECTION MODE LEVEL 2:
The unit shall be in Freeze Protection Mode Level 2 when:
The Low Limit Temperature Controller 2 (LLT2) activates by sensing an air temperature less than its alarm setpoint.
When in Freeze Protection Mode Level 2, an alarm shall generate at the operator workstation.
The unit shall require a manual reset to exit Freeze Protection Level 2.

CONTROL SETPOINT RESETS
Not used.

SAFETIES, OVERRIDES AND INTERLOCKS
SMOKE DETECTOR INTERLOCK:
The unit shall be disabled via hard wired interlock at the fan start circuit on activation of a system smoke detector.
FIRE ALARM CONTROL PANEL INTERLOCK:
The unit shall be disabled via hard wired interlock at the fan start circuit upon receipt of signal from the fire alarm control panel.
MOTORIZED DAMPER AT AIR INTAKE/EXHAUST INTERLOCK:
Motorized isolation dampers located at air intake and exhaust locations associated with the air handling unit shall be interlocked to be open when the unit fans are on, subject to the warm-up/cool-down modes.
LEAK DETECTION INTERLOCK (FCU-CND):
The supply fan shall automatically shut down and the cooling coil shall be disabled upon detection of water in the overflow drain pan.
FREEZE PROTECTION MODE LEVEL 2 INTERLOCK:
Disable the supply fan via hard wired interlock with the Level 2 Low Limit Temperature (LLT2) controller.
The unit shall require a manual reset to exit Freeze Protection Level 2.

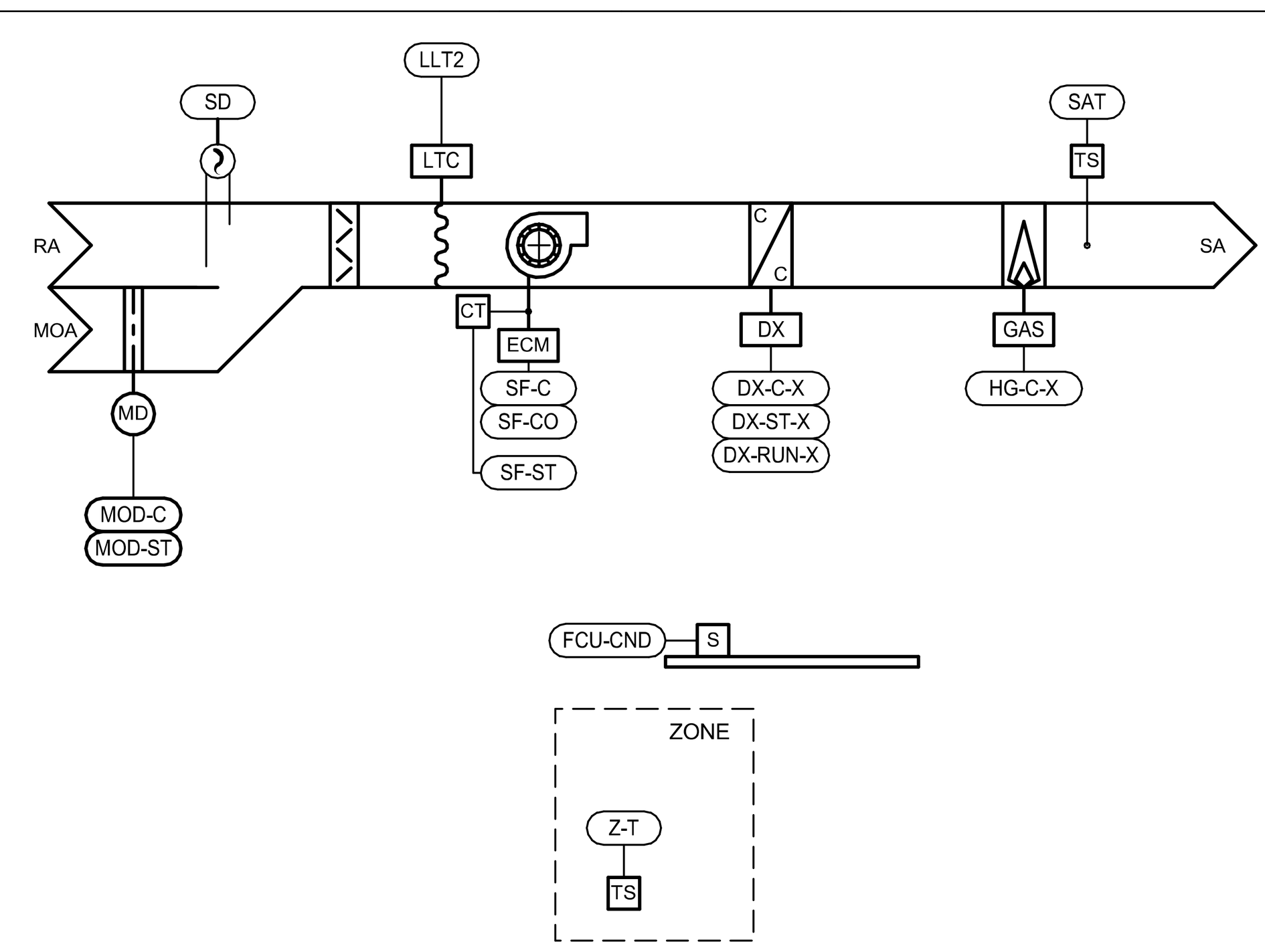
COMPONENT CONTROL LOOPS
SUPPLY FAN CONTROL
When in Occupied Mode:
The fan shall be ON.
When in Unoccupied Mode:
The fan shall be OFF. On a call for cooling/heating or override signal from the zone level, the fan shall operate as in occupied mode until the call is cleared or the override is removed.
When in Freeze Protection Level 1 Mode:
Operate as described in Occupied Mode.
When in Freeze Protection Level 2 Mode:
Turn the fan off.

MINIMUM OUTSIDE AIR DAMPER (MOA)
When in Occupied Mode:
The damper shall be open.
When in Unoccupied Mode:
The damper shall be closed.
When in Freeze Protection Level 2 Mode:
Close the OA damper. Open the RA damper to the fully open position.
FILTER MONITORING
When in All Modes:
The controller shall monitor the fan runtime to provide maintenance reminder at 50% of filter elapsed time of 1100 hours (adj.) and an alarm at 100% elapsed time of 2200 hours (adj.).
COOLING COIL DX VARIABLE CONTROL (SINGLE COMPRESSOR)
When in Occupied Mode:
When in Cooling Mode:
The compressor shall stage or modulate (subject to the unit manufacturers standard safeties) to maintain the zone temperature setpoint (Z-T).
When in Heating Mode:
The compressor shall be OFF.
When in Unoccupied Mode:
The compressor shall be OFF.
On a call for cooling or override signal from the zone level the compressor shall operate as in occupied mode until the call is cleared or the override is removed.
HEATING COIL- GAS STAGED
Operate the natural gas heating coil and burner assembly subject to the unit manufacturers standard safeties.
The natural gas heater remains off until Supply Air Fan (SF-ST) is proven on.
When in Occupied Mode:
When in Cooling Mode:
Turn off the coil.
When in Heating Mode:
Operate coil stages to maintain the Zone Temperature (Z-T) at the Zone Temperature Heating Setpoint (Z-T-H).
When in Unoccupied Mode:
When in Cooling Mode:
Turn off the coil.
When in Heating Mode:
Operate coil stages to maintain the Zone Temperature (Z-T) at the Zone Temperature Heating Setback Setpoint (Z-T-H-SB).
When in Freeze Protection Mode Level 2:
Turn off the coil.

POINTS LIST - FAN COIL UNIT

POINT ID	DESCRIPTION	POINT TYPE	DEFAULT SET POINT	FAIL POSITION	STATUS ALARM	ALARM RANGE	NOTES
AIR SENSING							
SAT	SUPPLY AIR TEMPERATURE	AI			X		
LLT1-SP	LEVEL 1 LOW LIMIT TEMPERATURE ALARM...	AV	42 F		X	SAT < LLT1-SP	A
LLT2	LOW LIMIT TEMPERATURE CONTROLLER 2	BI	35 F		X	ON ACTIVIATION	A
ZONE LEVEL SENSORS							
Z-T	ZONE TEMPERATURE	AI	SCHED.				A, B
Z-T-DB	ZONE TEMPERATURE DEADBAND	BV	5 F				A
SUPPLY FAN							
SF-C	SUPPLY FAN COMMAND (START/STOP)	BO					
SF-CO	SUPPLY FAN CONTROL OUTPUT - SPEED	AO					
SF-ST	SUPPLY FAN STATUS	BI			X	SF-ST <> SF-C	
MINIMUM OUTSIDE AIR DAMPER (2-POSITION)							
MOD-C	OUTSIDE AIR DAMPER COMMAND	BO		NC			
MOD-ST	OUTSIDE AIR DAMPER STATUS (END SWITCH)	BI			X	MOD-ST <> MOD-C	
COOLING COIL - DX BINARY STAGED							
DX-C-X	DX COMPRESSOR STAGE "X" COMMAND	BO					C
DX-ST-X	DX COMPRESSOR STAGE "X" STATUS	BI			X	DX-ST <> DX-C	C
DX-RUN-X	DX COMPRESSOR STAGE "X" RUNTIME	AV					C
LEAK DETECTION							
FCU-CND	CONDENSATE OVERFLOW DETECTION	BI			X	ON ACTIVATION	
HEATING COIL - GAS FURNACE BINARY STAGED							
HG-C-X	GAS FURNACE HEAT STAGE "X" COMMAND	BO					C
FIRE ALARM/SMOKE DETECTORS							
FA-SD	FIRE ALARM SHUTDOWN AND STATUS	BV					
SD	SMOKE DETECTOR STATUS	BI			X	ON ACTIVATION	D

NOTES:
A. POINT SHALL BE ADJUSTABLE.
B. REFERENCE PROJECT DESIGN CONDITIONS SCHEDULE FOR SETPOINT.
C. COORDINATE NUMBER OF STAGES FOR CONTROL WITH EQUIPMENT FURNISHED.
D. DEVICE AND RELAY FROM FIRE ALARM SYSTEM PROVIDED BY DIVISION 28. DISPLAY DETECTOR RELAY STATUS (NORMAL/ALARM) AT BAS FRONT END.



4 FAN COIL UNIT WITH GAS HEAT CONTROL DIAGRAM
NTS

PROJECT DESIGN CONDITIONS

CLIMATE CONDITONS

WEATHER STATION:		LEE'S SUMMIT					
CLIMATE ZONE:		4A					
HEATING (DB):	99.6%	4.5	°F				
DESIGN HEATING CONDITIONS (DB):		4.5	°F				
HUMIDIFICATION (DP/ HR/ MCDB):	99.6%	-5.5	°F/	4.3	gr/lb	7.8	°F
COOLING (DB/MCWB):	0.4%	95.5	°F/	75.3	°F/		
DESIGN COOLING CONDITIONS (DB/ MCWB):		95.5	°F/	75.3	°F/		
DEHUMIDIFICATION (DP/ HR/ MCDB):	0.4%	75.4	°F/	137.9	gr/lb	86.0	°F

BUILDING OPERATING HOURS:

MONDAY - FRIDAY	TBD BY OWNER
SATURDAY	TBD BY OWNER
SUNDAY	TBD BY OWNER
HOLIDAY	TBD BY OWNER

SPACE / UNIT DESCRIPTION	SET POINTS											SPACE OPERATING HOURS OCCUPIED / UNOCCUPIED			NOTES
	COOLING / DE-HUMIDIFICATION				HEATING		HUMIDIFICATION		ZONE VENTILATION RESET						
	OCC °F	UNOCC °F	MAX RH %	MIN RH %	OCC °F	UNOCC °F	MIN RH %	MAX RH %	CONTROL METHOD	BASE PPM	MAXIMUM PPM	M-F	SAT	SUN	
PUBLIC AREAS	72	80	60%	N/A	70	60	N/A	N/A	CO2	400	900	TBD	TBD	TBD	A-D

NOTES:
A. ZONE LEVEL SET POINT CONDITIONS SHAL...
B. ZONE LEVEL OCCUPANCY HOUR SCHEDULE SHALL BE PER BUILDING OPERATING HOURS UNLESS OTHERWISE SCHEDULED.
C. ZONE LEVEL CONTROLS SHALL BE CAPABLE OF OPERATING WITH INDEPENDENT OCCUPANCY SCHEDULES.

ROOFTOP UNIT CONTROL MATRIX

CONTROL FEATURE	UNITS	RTU-1&2 SETPOINT OR Y/N	POINT TYPE INTERFACE WITH DDC (READ/WRITE)	NOTES
BUILDING AUTOMATION SYSTEM (BAS)				
BAS MONITORING AND MANAGEMENT INTERFACE		N	BACNET	A
SETPOINTS				
COOLING - OCCUPIED SETPOINT	°F	75	READ/WRITE	
COOLING - UNOCCUPIED SETPOINT	°F	80	READ/WRITE	
HEATING - OCCUPIED SETPOINT	°F	70	READ/WRITE	
HEATING - UNOCCUPIED SETPOINT	°F	60	READ/WRITE	
DEHUMIDIFICATION SETPOINT - HUMIDITY SENSOR FEEDBACK	% RH	60%	READ/WRITE	B
PROGRAMMED CONTROL FEATURES				
HVAC SYSTEM OCCUPIED/UNOCCUPIED MODE - PROGRAMMABLE THERMOSTAT		Y	READ	B
HVAC SYSTEM OCCUPIED/UNOCCUPIED MODE - SCHEDULED THROUGH BAS		N	READ	B
MORNING WARM-UP SEQUENCE		Y	WRITE	
MORNING COOL-DOWN SEQUENCE		Y	WRITE	
EQUIPMENT ACCESSORIES AND CONTROL MODULES				
OUTSIDE AIR DAMPER - MOTOR OPERATED (MODULATING)		Y	READ POSITION	L
INTEGRATED ECONOMIZER - DIFFERENTIAL ENTHALPY ENABLE (OA ENTHALPY < RA ENTHALPY)	BTU/LB	Y	READ	E
ECONOMIZER FAULT DETECTION AND DIAGNOSTICS (FDD) SYSTEM		Y	READ	F, G
RELIEF - VARIABLE VOLUME POWERED EXHAUST FAN	IN. W.C.	Y	READ STATUS	H
COOLING COIL (DX - VARIABLE SPEED)		Y	READ STATUS	M
DEHUMIDIFICATION - HOT GAS REHEAT		Y	READ STATUS	O
HEATING COIL (NATURAL GAS)		Y	READ STATUS	M
SUPPLY FAN CONTROL METHODS				
ON DURING OCCUPIED HOURS		Y		
CYCLE WITH LOADS DURING UNOCCUPIED HOURS		Y		
OPTIMUM START SEQUENCE		Y		T
VARIABLE VOLUME - MODULATE FAN SPEED IN RESPONSE TO ZONE TEMPERATURE		N	READ STATUS	M, R
SAFETIES, INTERLOCKS, AND ALARMS				
GAS VALVE SAFETY		Y	READ	F
RETURN AIR SMOKE DETECTOR - SAFETY SHUTDOWN		Y	READ	U
LOW LIMIT FREEZESTAT - FREEZE PROTECTION SAFETY SHUTDOWN		Y	READ	F
FIRE ALARM CONTROL PANEL - SAFETY SHUTDOWN INTERLOCK		Y	READ	

DIV. 23 CONTRACTOR SHALL PROVIDE CONTROL PANEL(S), WIRING, THERMOSTAT(S), TEMPERATURE SENSOR(S), HUMIDISTAT(S), AND/OR CO2 SENSOR(S) WHERE SHOWN ON THE DRAWINGS AND AS REQUIRED TO FACILITATE THE SCHEDULED CONTROL MODULES AND SEQUENCES OF OPERATION. EACH UNIT SHALL CONTROL BASED ON ITS OWN INTERNAL SAFETIES, TIME DELAYS, AND SEQUENCES UNLESS NOTED OTHERWISE. COORDINATE WITH OWNER FINAL BUILDING AND EQUIPMENT SCHEDULES DURING STARTUP. REFERENCE DIVISION SPECIFICATIONS FOR INDIVIDUAL DEVICE REQUIREMENTS.

NOTES:
A. PROVIDE UNIT WITH FACTORY MOUNTED DDC CONTROLS AND INTEGRATE INTO THE BAS. BAS SHALL PROVIDE REMOTE SETPOINT ADJUSTMENT, SCHEDULING, AND MONITORING OF THE POINTS LISTED IN THE SCHEDULE FOR EACH UNIT.
B. DIVISION 23 CONTRACTOR SHALL PROVIDE DEVICE.
E. IF SETPOINT VALUE IS LISTED, IT INDICATES ECONOMIZER HIGH-LIMIT SHUTOFF. UNIT SHALL BE IN ECONOMIZER IF CONDITIONS ARE LESS THAN SETPOINT. THE FOLLOWING SENSORS SHALL DETERMINE ECONOMIZER ON POINT.
OUTSIDE AIR TEMPERATURE; DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE.
RETURN AIR TEMPERATURE; DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE.
OUTSIDE AIR HUMIDITY; DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE.
RETURN AIR HUMIDITY; DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE.
F. DEVICE SHALL BE FACTORY MOUNTED AND PRE-WIRED FOR OPERATION SUBJECT TO THE ONBOARD CONTROLLER.
G. PROVIDE UNIT WITH AN FDD SYSTEM CONSISTING OF PERMANENTLY INSTALLED OUTSIDE AIR, SUPPLY AIR, AND RETURN AIR TEMPERATURE SENSORS. THE UNIT CONTROLLER SHALL AT A MINIMUM BE CAPABLE OF PROVIDING SYSTEM STATUS OF ECONOMIZER, COMPRESSOR, HEATING, MIXED AIR LOW LIMIT ALARM, AND SENSOR VALUES. EACH OPERATING MODE SHALL BE CAPABLE OF INDEPENDENTLY OPERATING FOR TESTING. THE SYSTEM SHALL REPORT FAULTS TO AN APPLICATION ACCESSIBLE BY SERVICE PERSONNEL. THE FOLLOWING FAULTS SHALL BE DETECTED: AIR TEMPERATURE SENSOR FAILURE, ECONOMIZER ENABLED/DISABLED WHEN ECONOMIZER SHOULD BE OFF/ON, RESPECTIVELY, DAMPER NOT MODULATING, AND EXCESS OUTSIDE AIR.
H. POWERED EXHAUST FAN SHALL STAGE ON AND OFF ACCORDING TO DAMPER POSITION.
H. POWERED EXHAUST FAN SHALL STAGE ON AND OFF ACCORDING TO BUILDING STATIC PRESSURE SENSOR. DIVISION 23 SHALL PROVIDE SENSOR.
L. EQUIPMENT MANUFACTURER SHALL PROVIDE MODULATING DAMPER AND CONTROLS CAPABLE OF ADJUSTING THE DAMPER POSITION TO MAINTAIN THE SCHEDULED OUTSIDE AIR ON THE DRAWINGS ACROSS ALL FAN SPEEDS. DIV. 23 CONTRACTOR SHALL PROGRAM MULTIPLE DAMPER POSITION SETPOINTS IN THE FIELD DURING TESTING AND BALANCING TO MAINTAIN MINIMUM VENTILATION WHEN NOT IN ECONOMIZER. DAMPER SHALL BE CLOSED DURING UNOCCUPIED HOURS.
M. UNITARY CONTROLLER SHALL MODULATE AND/OR CYCLE SUPPLY FAN SPEED SETTING AND COIL CAPACITY STAGES SUBJECT TO THE INTERNAL SAFETIES AND SEQUENCES TO MAINTAIN SCHEDULED SETPOINTS.
O. PROGRAM DEHUMIDIFICATION SEQUENCE BASED ON RETURN AIR HUMIDITY.
R. PROVIDE MODULATING FAN CONTROL WITH MINIMUM SPEED LESS THAN 50% OF FULL SPEED. AT MINIMUM SPEED THE FAN SHALL DRAW NO MORE THAN 30% OF FULL SPEED POWER.
T. DURING OPTIMUM START SEQUENCE, THE UNIT SHALL SUPPLY THE LESSER OF THE MINIMUM RATE OF OUTDOOR AIR OR SUPPLY 3 COMPLETE AIR CHANGES DURING THE 1-HOUR PERIOD BEFORE NORMAL OCCUPIED MODE.
U. DIVISION 28 CONTRACTOR SHALL PROVIDE DEVICE.

SEQUENCE OF OPERATIONS
COOLING ONLY SPLIT SYSTEM – IT ROOM

The sequence of operations is organized into the following main categories: operating modes; control setpoint resets; safeties, overrides and interlocks; and component control loops. The operating modes describe the criteria that either enable or disable the various modes of operation. If a mode of operation is not listed within a component control loop section then that mode of operation has no direct influence on the operation of the component. The control setpoint reset section describes the logic and reference variables that will be used to reset control setpoints to a new value within its reset range. The safeties, overrides, and interlocks section outlines the hardwired interlocks that are required to meet life safety requirements. Safeties and interlocks take precedence over all other control strategies outlined in this document. The control responses of each component for the various modes of operation are described in the component control loop sections. Setpoints shall be adjustable (adj.) as noted.

The sequence of operations, the points list and control diagrams shall be used to provide a complete description of the control philosophy for the controlled equipment. Individual setpoint values, reset ranges, and alarm action levels are listed in the points list. Components and control sensor locations are graphically depicted on the control diagram. The controls contractor shall be responsible for coordinating any necessary time delay setpoints to establish stable system operation.

GENERAL DESCRIPTION

The fan coil unit(s) described by this sequence of operations consist(s) of a constant speed supply fan and DX cooling coil that operate to provide air conditioning for the conditioned spaces as shown on the drawings.

OPERATING MODES
OCCUPIED MODE:
The unit shall be in occupied mode per the Project Design Conditions Schedule shown on the control drawings.
COOLING MODE:
The unit shall be in cooling mode when the zone temperature (Z-T) rises above the dead band (Z-T-DB).
CONTROL SETPOINT RESETS
Not used.

SAFETIES, OVERRIDES AND INTERLOCKS
FIRE ALARM CONTROL PANEL INTERLOCK:
The unit shall be disabled via hard wired interlock at the fan start circuit upon receipt of signal from the fire alarm control panel.
LEAK DETECTION INTERLOCK (FCU-CND):
The supply fan shall automatically shut down and the cooling coil shall be disabled upon detection of water in the overflow drain pan.
COMPONENT CONTROL LOOPS
SUPPLY FAN CONTROL
When in Occupied Mode:
The fan shall be ON.
FILTER MONITORING
When in All Modes:
The controller shall monitor the fan runtime to provide maintenance reminder at 50% of filter elapsed time of 1100 hours (adj.) and an alarm at 100% elapsed time of 2200 hours (adj.).
COOLING COIL DX VARIABLE CONTROL (SINGLE COMPRESSOR)
When in Occupied Mode:
When in Cooling Mode:
The compressor shall stage or modulate (subject to the unit manufacturers standard safeties) to maintain the zone temperature setpoint (Z-T).

SEQUENCE OF OPERATIONS
RR EXHAUST FAN

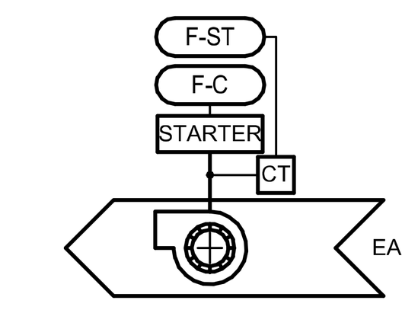
GENERAL DESCRIPTION
The units described by this sequence consist of a constant speed fan to exhaust the spaces shown in the drawings.

OPERATING MODES
OCCUPIED MODE:
The fan shall be in occupied mode during occupied hours per the project design conditions schedule shown on the control drawings.
UNOCCUPIED MODE:
The fan shall be in unoccupied mode for all periods not included in the occupied hours of operation.

CONTROL SETPOINT RESETS
Not Used.
SAFETIES, OVERRIDES AND INTERLOCKS
FIRE ALARM CONTROL PANEL INTERLOCK:
The unit shall be disabled via relay circuit signal from the fire alarm control panel. Division 28 shall provide the relay and leads from relay to unit. BAS contractor shall connect leads to unit. Display relay status (normal or alarm) at BAS front end.
Unit shall reset automatically after relay signal has been cleared.

COMPONENT CONTROL LOOPS

FAN CONTROL – CONSTANT VOLUME BAS SCHEDULED
When in Occupied Mode:
Turn on the fan.
Use the ECM motor for soft start and to balance the fan for constant speed operation at the scheduled airflow value.
When in Unoccupied Mode:
Turn off the fan.



POINTS LIST - BAS CONTROLLED EXHAUST FAN

POINT ID	DESCRIPTION	POINT TYPE	SETPOINT	FAIL POSITION	TRENDING STORAGE	GRAPHIC DISPLAY	STATUS ALARM	ALARM RANGE	NOTES
GLOBAL VALUES									
FA-SD	FIRE ALARM SHUTDOWN AND STATUS	BV					X		A
FAN									
F-C	FAN COMMAND (START/STOP)	BO							
F-ST	FAN STATUS	BI						F-ST <> F-C	

ALL POINTS SHOWN SHALL BE PROVIDED BY BAS CONTRACTOR UNLESS NOTED OTHERWISE.
PROVIDE UNIQUE POINT NAME FOR EACH CONTROL POINT CONSISTENT WITH THE MARK IDENTIFIER ON THE EQUIPMENT SCHEDULE (E.G. RH01-D-C)
REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

NOTES:
A. REFERENCE GLOBAL BUILDING MONITORING SCHEDULE FOR CONTROL POINT.

1 RR EXHAUST FAN CONTROLS DIAGRAM
NTS

SEQUENCE OF OPERATIONS
KITCHEN GENERAL EXHAUST FAN

GENERAL DESCRIPTION
The units described by this sequence consist of a constant speed exhaust fan to exhaust the catering kitchen as shown in the drawings.

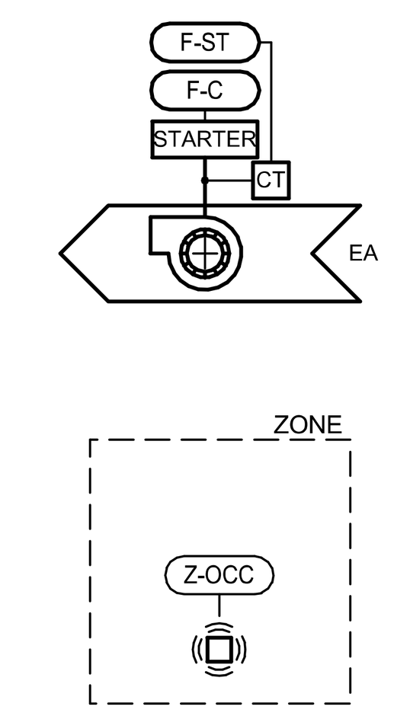
OPERATING MODES
OCCUPIED MODE:
The fan shall be in occupied mode during occupied hours per the project design conditions schedule shown on the control drawings.
UNOCCUPIED MODE:
The fan shall be in unoccupied mode for all periods not included in the occupied hours of operation.

CONTROL SETPOINT RESETS
Not Used.

SAFETIES, OVERRIDES AND INTERLOCKS
AUTOMATIC OCCUPANCY OVERRIDE:
When in Unoccupied Mode:
Override unit to Occupied Mode of operation based on input from Zone Occupancy Sensor (Z-OCC). Override shall persist until Zone Occupancy Override Delay (Z-OCC-DLY) has elapsed.
FIRE ALARM CONTROL PANEL INTERLOCK:
The unit shall be disabled via relay circuit signal from the fire alarm control panel. Division 28 shall provide the relay and leads from relay to unit. BAS contractor shall connect leads to unit. Display relay status (normal or alarm) at BAS front end.
Unit shall reset automatically after relay signal has been cleared.

COMPONENT CONTROL LOOPS

FAN CONTROL – CONSTANT VOLUME BAS SCHEDULED
When in Occupied Mode:
Turn on the fan.
Use the ECM motor for soft start and to balance the fan for constant speed operation at the scheduled airflow value.
When in Unoccupied Mode:
Turn off the fan.



POINTS LIST - CATERING KITCHEN EXHAUST FAN

POINT ID	DESCRIPTION	POINT TYPE	SETPOINT	FAIL POSITION	TRENDING STORAGE	GRAPHIC DISPLAY	STATUS ALARM	ALARM RANGE	NOTES
GLOBAL VALUES									
FA-SD	FIRE ALARM SHUTDOWN AND STATUS	BV					X		A
ZONE LEVEL SENSORS									
Z-OCC	ZONE OCCUPANCY SENSOR	BI							B
Z-OCC-DLY	ZONE OCCUPANCY OVERRIDE DELAY	AV	1 HR						C
FAN									
F-C	FAN COMMAND (START/STOP)	BO							
F-ST	FAN STATUS	BI						F-ST <> F-C	

ALL POINTS SHOWN SHALL BE PROVIDED BY BAS CONTRACTOR UNLESS NOTED OTHERWISE.
PROVIDE UNIQUE POINT NAME FOR EACH CONTROL POINT CONSISTENT WITH THE MARK IDENTIFIER ON THE EQUIPMENT SCHEDULE (E.G. RH01-D-C)
REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

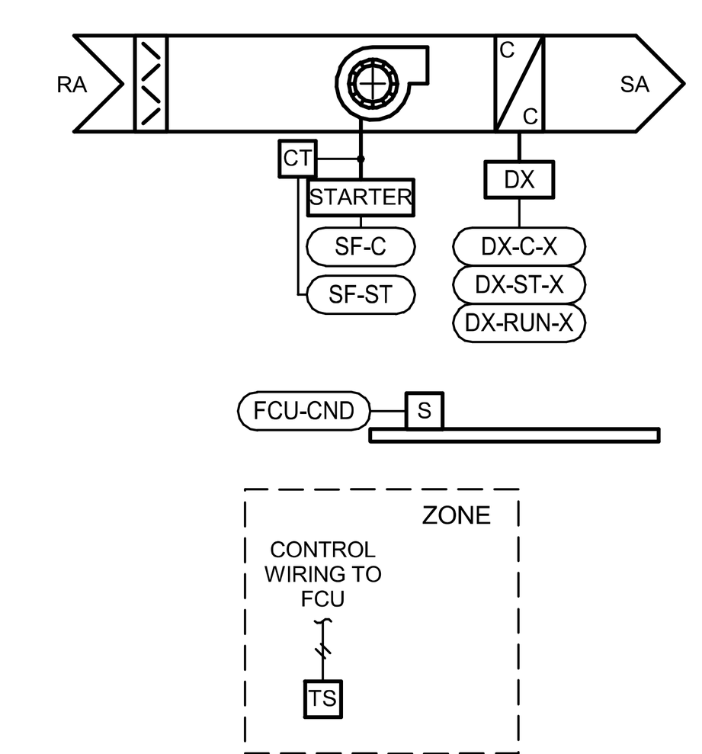
NOTES:
A. REFERENCE GLOBAL BUILDING MONITORING SCHEDULE FOR CONTROL POINT.
B. DIVISION 26 SHALL PROVIDE SENSOR WITH DRY CONTACT FOR BAS INTERFACE.
C. POINT SHALL BE ADJUSTABLE.

2 KITCHEN GENERAL EXHAUST CONTROL DIAGRAM
NTS

POINTS LIST - IT ROOM SPLIT SYSTEM

POINT ID	DESCRIPTION	POINT TYPE	DEFAULT SET POINT	FAIL POSITION	STATUS ALARM	ALARM RANGE	NOTES
ZONE LEVEL SENSORS							
Z-T	ZONE TEMPERATURE	AI	SCHED.				A, B
Z-T-DB	ZONE TEMPERATURE DEADBAND	BV	5 F				A
SUPPLY FAN							
SF-C	SUPPLY FAN COMMAND (START/STOP)	BO					
SF-ST	SUPPLY FAN STATUS	BI			X	SF-ST <> SF-C	
COOLING COIL - DX BINARY STAGED							
DX-C-X	DX COMPRESSOR STAGE "X" COMMAND	BO					C
DX-ST-X	DX COMPRESSOR STAGE "X" STATUS	BI			X	DX-ST <> DX-C	C
DX-RUN-X	DX COMPRESSOR STAGE "X" RUNTIME	AV					C
LEAK DETECTION							
FCU-CND	CONDENSATE OVERFLOW DETECTION	BI			X	ON ACTIVATION	
FIRE ALARM/SMOKE DETECTORS``							
FA-SD	FIRE ALARM SHUTDOWN AND STATUS	BV					

NOTES:
A. POINT SHALL BE ADJUSTABLE.
B. REFERENCE PROJECT DESIGN CONDITIONS SCHEDULE FOR SETPOINT.
C. COORDINATE NUMBER OF STAGES FOR CONTROL WITH EQUIPMENT FURNISHED.



3 MINI SPLIT CONTROL DIAGRAM
NTS

GLMVArchitecture

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EXPIRES 10/31/2024

STATE OF MISSOURI
ALESSANDRO SPINELLI
NUMBER PE-2022017017
PROFESSIONAL ENGINEER
10/30/2023
ALESSANDRO . SPINELLI
LICENSE # PE-2022017017

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	LJ/EW
CHECKED BY:	AS

MECHANICAL CONTROLS

M-501

ALESSANDRO . SPINELLI
PLOT DATE: 10/30/2023 8:23:41 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMO-MEPF_V23.rvt

ELECTRICAL SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED.

V4.00

STANDARD MOUNTING HEIGHTS

AUDIBLE APPLIANCE (CENTERLINE)	84"
ALARM (TOP OF DEVICE)	46"
ANNUNCIATOR PANEL (TOP OF DISPLAY)	60"
CONTROLS (TOP OF DEVICE)	46"
DATA WALL OUTLET	SAME AS ADJACENT DEVICE, UNO
EXIT SIGN (WALL MOUNTED)	92"
FIRE ALARM ANNUNCIATOR PANEL (TOP OF DISPLAY)	60"
FIRE ALARM BELL (EXTERIOR) (CENTERLINE)	120"
FIRE ALARM CONTROL PANEL/UNIT (TOP OF DISPLAY)	60"
INTERCOM (TOP OF DEVICE)	46"
PULL STATION (HANDLE)	46"
RECEPTACLE	16"
RECEPTACLE (ABOVE COUNTER)	+6" ABOVE BACKSPLASH/COUNTER, 40" MAX
RECEPTACLE (CLOCK) (CENTERLINE)	84"
RECEPTACLE (EQUIPMENT ROOMS) (TOP OF DEVICE)	46"
RECEPTACLE (EXTERIOR)	24"
RECEPTACLE (GARAGES)	24"
REMOTE INDICATING LIGHT (EQUIPMENT ROOMS) (TOP OF DEVICE)	46"
REMOTE INDICATING LIGHT (FINISHED AREAS)	CEILING
SAFETY SWITCH (TOP OF DEVICE)	46"
STARTER (TOP OF DEVICE)	46"
SWITCH (TOP OF DEVICE)	46"
TELEPHONE WALL OUTLET (TOP OF DEVICE)	46"
TELECOMMUNICATIONS BACKBOARD	6"
TELEVISION OUTLET	REFER TO DRAWINGS
VISIBLE APPLIANCE (CENTERLINE)	84"

INSTALL DEVICES/OUTLET BOXES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ABOVE, OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS, ARE AFF OR AFG TO BOTTOM, UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ABBREVIATIONS

AF	AMPERE FUSE SIZE
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AS	AMPERE SWITCH SIZE
AT	AMPERE TRIP SETTING
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
BAS	BUILDING AUTOMATION SYSTEM
BKR	BREAKER
C	CONDUIT
CAT	CATEGORY
CATV	CABLE TELEVISION SYSTEM
CCTV	CLOSED CIRCUIT TELEVISION
CD	CANDELA
CKT	CIRCUIT
CODE	APPLICABLE CODE ADOPTED BY JURISDICTION
CT	CURRENT TRANSFORMER
CTR	CENTER
CTRL	CONTROL/CONTROLLED
CVD	CUMULATIVE VOLTAGE DROP
D/DEMO	DEMOLITION
DPDT	DOUBLE-POLE, DOUBLE-THROW
DPST	DOUBLE-POLE, SINGLE-THROW
E/ETR/EX	EXISTING TO REMAIN
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
ELV	ELECTRONIC LOW-VOLTAGE
EWC	ELECTRIC WATER COOLER
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FCA	FAULT CURRENT AMPS AVAILABLE
FCU	FAN COIL UNIT
FF	FINISHED FLOOR
FLA	FULL LOAD AMPS
FLR	FLOOR
GC	GENERAL CONTRACTOR
GEC	GROUNDING ELECTRODE CONDUCTOR
GES	GROUNDING ELECTRODE SYSTEM
GFR	GROUND FAULT RELAY
G	GROUND
IG	ISOLATED GROUND
ISC	SHORT CIRCUIT CURRENT
JB/J-BOX	JUNCTION BOX
LF	LINEAR FEET
LRA	LOCKED ROTOR AMPS
LTG/LTS	LIGHTING/LIGHTS
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MLV	MAGNETIC LOW-VOLTAGE
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NIS	NOT IN SCOPE
NF	NON-FUSED
NL	NIGHT LIGHT (24HR ON)
NRTL	NATIONALLY RECOGNIZED TESTING LABORATORY (CSA, ETL, NSF, UL)
NTS	NOT TO SCALE
OS	OCCUPANCY SENSOR
P	POLE
PART	PARTIAL CIRCUIT
PH/Ø	PHASE
PNL	PANEL
PNLBD	PANELBOARD
PROVIDE	FURNISH AND INSTALL
PT	POTENTIAL TRANSFORMER
QTY	QUANTITY
R/REL	RELOCATE
RCPT	RECEPTACLE
RLA	RUNNING LOAD AMPS
RTU	ROOFTOP UNIT
SCCR	SHORT-CIRCUIT CURRENT RATING
SD	SMOKE DUCT DETECTOR
SF	SQUARE FEET
SPDT	SINGLE-POLE, DOUBLE-THROW
SPST	SINGLE-POLE, SINGLE-THROW
SSBJ	SUPPLY-SIDE BONDING JUMPER
ST	SHUNT TRIP
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TBD	TO BE DETERMINED
TGB	TELECOMMUNICATIONS GROUND BUS BAR
TL	TWISTLOCK
TMGB	TELECOMMUNICATIONS MAIN GROUND BUS BAR
TX/XFMR	TRANSFORMER
TYP	TYPICAL
U/F	UNDERFLOOR
U/G	UNDERGROUND
U/S	UNDERSLAB
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
VD	VOLTAGE DROP
VFD	VARIABLE FREQUENCY DRIVE
VS	VACANCY SENSOR
W	WIRE
W/	WITH
WP	WEATHER PROOF
WR	WEATHER RESISTANT
WT	WATERTIGHT
XP	EXPLOSION PROOF

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING ————
DEMOLISH — — — —
NEW ————
FUTURE - - - - - - - - - - -
ARTICLE 700 OR LIFE SAFETY* ————
ARTICLE 701 OR CRITICAL / EQUIPMENT BRANCH* ————
ARTICLE 702 OR OPTIONAL* ————

* APPLIES TO COLOR PLOTS ONLY

ANNOTATION

- MECHANICAL OR FIRE PROTECTION PLAN NOTE CALLOUT (1)
- PLUMBING PLAN NOTE CALLOUT (1)
- ELECTRICAL OR FIRE ALARM PLAN NOTE CALLOUT [1]
- TECHNOLOGY PLAN NOTE CALLOUT (1)
- PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED, UNO). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES (1)
- EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED, UNO) [1]
- MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED, UNO) CU 1
- CONNECTION POINT OF NEW WORK TO EXISTING
- DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER 1 E1
- SECTION CUT DESIGNATION 1 E1
- DEDICATED EQUIPMENT ACCESS TILE
- ACCESS PANEL

CIRCUITING & WIRING

- 7 5 3 OR P1-3,5,7 [R#] P1 — HOMERUN TO PANELBOARD. INFORMATION AT ARROWS ARE CIRCUIT NUMBERS AND PANELBOARD FOR TERMINATION. REFER TO PANELBOARD SCHEDULES FOR BRANCH CIRCUIT CONDUCTOR SIZES.
- INDICATES RELAY NUMBER
- CIRCUIT CONTINUATION OR PARTIAL CIRCUIT
- CONDUIT CONCEALED
- EM — CONDUIT CONCEALED (EMERGENCY)
- CONDUIT IN/UNDER FLOOR/GROUND CONSTRUCTION
- EXPOSED CONDUIT
- EM — EXPOSED CONDUIT (EMERGENCY)
- FLEXIBLE CONDUIT
- LOW VOLTAGE CABLE (NOT ROUTED IN CONDUIT)
- CONDUIT TURNING DOWN
- CONDUIT TURNING UP
- CONNECTION POINT OR EQUIPMENT TERMINATION
- EQUIPMENT TERMINATION

CONDUCTOR TICK MARK LEGEND

WHERE TICK MARKS ARE SHOWN, THE FOLLOWING SHALL GOVERN:

- SWITCHED HOT (PHASE) CONDUCTORS (SHOWN TRAILING NEUTRAL)
- NEUTRAL (GROUNDED) CONDUCTOR
- UNSWITCHED HOT (PHASE) CONDUCTORS (SHOWN LEADING NEUTRAL)
- NOTE: HASH MARKS INDICATE QUANTITY OF CONDUCTORS
- EQUIPMENT GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION OR BARE)
- ISOLATED GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION WITH YELLOW TRACER)

BRANCH CIRCUIT CONDUCTOR TABLE

WHERE TICK MARKS ARE NOT SHOWN, THE FOLLOWING SHALL GOVERN:

# OF POLES	HOT (PHASE)*	NEUTRAL (GROUNDED)**	GROUNDING***
1P	(1)	(1) UNO	(1)
2P	(2)	(1) UNO	(1)
3P	(3)	(1) UNO	(1)

* PROVIDE ADDITIONAL CONDUCTORS THROUGH ENTIRE CIRCUIT (SWITCHED, UNSWITCHED/EM, ETC.) AS INDICATED THROUGHOUT CONSTRUCTION DOCUMENTS AND AS REQUIRED FOR A COMPLETE AND WORKING SYSTEM.

** REFER TO SPECIFICATIONS FOR LIMITATIONS ON SHARING NEUTRAL (GROUNDED) CONDUCTORS. DO NOT CIRCUIT AS A MULTI-WIRE BRANCH CIRCUIT, UNO.

*** PROVIDE ADDITIONAL ISOLATED GROUNDING CONDUCTORS WHERE INDICATED.

REFER TO SPECIFICATIONS, PLANS, NOTES, WIRING AND CONTROL DIAGRAMS FOR ADDITIONAL CIRCUITING REQUIREMENTS.

HATCHING LEGEND

ENLARGED PLAN
NOT IN SCOPE (NIS)

LIGHTING

LIGHT FIXTURE

a = LOWER CASE LETTER IS SWITCH IDENTIFIER
A = UPPER CASE LETTER INDICATES LIGHT FIXTURE TYPE
[OS] = INTEGRAL OCCUPANCY SENSOR
= WALL MOUNT
= ARROW INDICATED AIMING DIRECTION

- LIGHT FIXTURE CIRCUITED AS A NIGHT LIGHT (NL)
- EMERGENCY LIGHT FIXTURE WITH EMERGENCY LIGHTING BATTERY PACK OR CONNECTED TO EMERGENCY SOURCE
- NIGHT LIGHT/EMERGENCY LIGHT FIXTURE WITH EMERGENCY BATTERY PACK OR CONNECTED TO EMERGENCY SOURCE
- LIGHT FIXTURE WITH DUAL BALLASTS CIRCUITED SEPARATELY (SHADING IMPLIES EMERGENCY LIGHT FIXTURE)
- [#] LIGHTING TRACK (# INDICATES RELAY NUMBER)
- MIRROR LIGHTS
- EXTERIOR PARKING LOT LIGHT FIXTURE
- EXTERIOR PEDESTRIAN POST TOP LIGHT FIXTURE
- EXTERIOR LIT BOLLARD LIGHT
- EXIT SIGN - CEILING / WALL MOUNTED, ARROWS AS INDICATED, FACE HATCHED
- EMERGENCY LIGHTING UNIT EQUIPMENT WITH BATTERY PACK - CEILING/WALL MOUNTED
- AFEA (AREA FOR EVACUATION ASSISTANCE) SIGN - CEILING/WALL MOUNTED, ARROWS AS INDICATED

REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION

POWER EQUIPMENT

- ELECTRICAL PANELBOARD (SURFACE OR FLUSH MOUNT)
- ELECTRICAL CABINET (SURFACE OR FLUSH MOUNT), TYPE AS NOTED
- PLYWOOD TERMINAL BOARD FOR TELEPHONE SYSTEM, UNO. SIZE AS NOTED
- ELECTRICAL EQUIPMENT ON HOUSEKEEPING PAD
- FRONT — TRANSFORMER
- 200/3/150/3R — DISCONNECT SWITCH,
  - 200/3/150/3R = AMPERES/POLE/FUSE/NEMA ENCLOSURE RATING
  - CB = CIRCUIT BREAKER (200/3/CB)
  - FM = FACTORY FURNISHED AND MOUNTED
  - NF = NON-FUSED
  - OL = SIZE INDICATED ON ONE-LINE DIAGRAM
  - NO VALUE FOR NEMA ENCLOSURE = NEMA 1
- 30/3/15/1/3R — COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER,
  - 30/3/15/1/3R = AMPERES/POLE/FUSE/NEMA STARTER SIZE/NEMA ENCLOSURE RATING
  - CB= CIRCUIT BREAKER (30/3/CB/1)
  - FM = FACTORY FURNISHED AND MOUNTED
  - NF= NON-FUSED
  - NO VALUE FOR NEMA ENCLOSURE = NEMA 1
- 2 — MAGNETIC MOTOR STARTER, NEMA SIZE AS NOTED. 3-POLE, UNO
- VFD — VARIABLE FREQUENCY DRIVE
- INDICATING LIGHT
- EMERGENCY POWER OFF BUTTON
- STOP-START PUSH BUTTON CONTROL STATION
- HAND-OFF-AUTO PUSH BUTTON CONTROL STATION
- MUSHROOM-TYPE PUSH BUTTON
- OVERHEAD PADDLE FAN

SIGNALING

- B — SIGNALING BELL
- B — SIGNALING BUZZER
- T — LV TRANSFORMER

BOXES, LIGHTING CONTROL & WIRING DEVICES

$# $ 30/3/3R — SWITCH LETTER DESIGNATIONS AS FOLLOWS:

BLANK = SINGLE POLE
2 = TWO POLE
3 = THREE-WAY
4 = FOUR-WAY
D = DIMMER
F = FAN SPEED CONTROL
FH = FRACTIONAL HORSEPOWER MANUAL CONTROLLER
IH = INTEGRAL HORSEPOWER MANUAL CONTROLLER
K = KEYED
LV# = LOW VOLTAGE / DIGITAL
M = MANUAL MOTOR STARTER DISCONNECT
OS# = OCCUPANCY SENSOR
P = SPST PILOT LIGHT
WP = WEATHER PROOF
30/3/3R = AMPERES/POLES/NEMA ENCLOSURE RATING
\# = REFER TO LIGHTING CONTROL DEVICE SCHEDULE

- ALC — AUTOMATIC LOAD CONTROL RELAY
- BTS — BRANCH CIRCUIT TRANSFER SWITCH
- # — CEILING / WALL MOUNTED OCCUPANCY SENSOR (# INDICATES TYPE PER SCHEDULE)
  - CORNER 90 DEGREE SENSING
  - ONE-DIRECTION SENSING, CEILING/WALL MOUNT
  - CEILING MOUNT, TWO-DIRECTION SENSING
  - CEILING MOUNT, FOUR-DIRECTION SENSING
- C# — CONTACTOR (SIZE, COIL VOLTAGE AND NUMBER OF POLES AS INDICATED)
- CL## — TRACK-MOUNTED CURRENT LIMITER (## INDICATES AMPERAGE)
- D# — DAYLIGHT SENSOR (# INDICATES TYPE PER SCHEDULE)
- LC — LIGHTING CONTROLS PROCESSOR AND/OR EQUIPMENT
- P# — POWER PACK (# INDICATES TYPE PER SCHEDULE)
- PS# — PHOTOELECTRIC SWITCH
- R## — ROOM CONTROLLER (# INDICATES TYPE PER SCHEDULE)
- TS# — TIME SWITCH
- SIMPLEX RECEPTACLE - NEMA 5-20R, UNO
- DUPLEX RECEPTACLE - NEMA 5-20R, UNO
- DOUBLE DUPLEX RECEPTACLE - NEMA 5-20R, UNO
- SPECIAL RECEPTACLE - NEMA TYPE AS NOTED
- TWIST-LOCK TYPE RECEPTACLE
- G — BLANK FACE GFCI FEED THROUGH DEVICE
- OR GFCI — GFCI TYPE RECEPTACLE*
- OR IG — ISOLATED GROUND TYPE RECEPTACLE*
- GFCI WITH ISOLATED GROUND TYPE RECEPTACLE*
- OR EM — EMERGENCY RECEPTACLE*
- RECEPTACLE INSTALLED ABOVE COUNTER OR BACKSPLASH*
- RECEPTACLE INSTALLED IN CEILING*
- RECEPTACLE INSTALLED IN FLOOR*
- RECEPTACLE INSTALLED VIA DROP CORD*
- OR H — RECEPTACLE INSTALLED IN HORIZONTAL ORIENTATION*
- # — ADDITIONAL RECEPTACLE LETTER DESIGNATIONS AS FOLLOWS:
  - C = AUTOMATICALLY CONTROLLED
  - CH = CLOCK HANGER TYPE
  - G=RCPT PROTECTED BY GFCI CIRCUIT BREAKER OR UPSTREAM GFCI DEVICE
  - S = MANUALLY SWITCHED
  - SP / TVSS = SURGE PROTECTION
  - TR = TAMPER RESISTANT
  - TV = TELEVISION
  - USB = USB/DUPLEX
  - WP = WEATHER PROOF COVER
  - WR = WEATHER RESISTANT
- MULTI-OUTLET ASSEMBLY
- TELEPHONE OUTLET
- DATA OUTLET
- MULTI-SERVICE OUTLET; TELEPHONE AND DATA
  - ABOVE COUNTER, TYP
  - WALL, TYP
  - FLOOR, TYP
- A — MULTI-SERVICE POWER POLE WITH TELEPHONE, DATA AND POWER OUTLETS A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- A — MULTI-SERVICE FLOOR BOX WITH TELEPHONE, DATA AND POWER OUTLETS A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- A — POKE THROUGH, A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- T — THERMOSTAT
- J J — CEILING/FLOOR MOUNT JUNCTION/OUTLET BOX
- J J — WALL MOUNT JUNCTION/OUTLET BOX

* SYMBOL DEMONSTRATED WITH DUPLEX RECEPTACLE, WHEN USED IN COMBINATION WITH OTHER DEVICES MEANING IS SIMILAR FOR THOSE DEVICE TYPES.

REFER TO LIGHTING CONTROL DEVICE SCHEDULE FOR MORE INFORMATION.

ELECTRICAL ONE-LINE & RISER DIAGRAM

- ##A 3P — SWITCH (RATING AND POLES AS INDICATED)
- ##A 3P ##AT #### — DRAWOUT CIRCUIT BREAKER (RATINGS, POLES, TRIP SIZE AND BREAKER TYPE AS INDICATED)
- ##AS 3P ##AF #### — FUSED SWITCH (RATING, POLES, FUSE SIZE AND TYPE AS INDICATED)
- ##AS 3P ##AF #### NEMA# NEMA# — COMBINATION FUSED SWITCH/STARTER (RATING, POLES, FUSE SIZE, FUSE TYPE, NEMA STARTER SIZE, NEMA ENCLOSURE TYPE AS INDICATED)
- ##A 3P ##AT #### — CIRCUIT BREAKER (RATING, POLES, TRIP SIZE AND BREAKER TYPE AS INDICATED)
- ##A 3P ##AT #### NEMA# NEMA# — COMBINATION CIRCUIT BREAKER/STARTER (RATING, POLES, TRIP SIZE, BREAKER TYPE, NEMA STARTER SIZE, NEMA ENCLOSURE TYPE AS INDICATED)
- PANELBOARD, SINGLE OR MULTI-SECTION (REFER TO SCHEDULES)
- ISOLATED POWER PANELBOARD W/ INTEGRAL TRANSFORMER (REFER TO SCHEDULES)
- TX# — TRANSFORMER (TYPE AND RATINGS AS INDICATED)
- TX# — SHIELDED TRANSFORMER (TYPE AND RATINGS AS INDICATED)
- ATS# ##A — TRANSFER SWITCH (RATINGS AS INDICATED)
  - ATS = AUTOMATIC TRANSFER SWITCH
  - MTS = MANUAL TRANSFER SWITCH
  - NTS = NON-AUTOMATIC TRANSFER SWITCH
- ATS# (W/BYPASS) ##A — TRANSFER SWITCH WITH BYPASS (RATINGS AS INDICATED)
- ##KW GENERATOR 480Y/277V, 3Ø, 4W ##A, 3P M/G — GENERATOR (RATINGS AS INDICATED)
  - INDICATES CONNECTION TO GROUNDING ELECTRODE SYSTEM IF GENERATOR IS CONNECTED AS A SEPARATELY DERIVED SOURCE
- MDP SWITCHBOARD ELEC ROOM ### AMPS 480Y/277V 3Ø 4W — SWITCHGEAR, SWITCHBOARD AND/OR DISTRIBUTION PANELBOARD (TYPE, RATING, DEVICES AND ACCESSORIES AS INDICATED)
- AS — AMMETER SWITCH
- VS — VOLTMETER SWITCH
- AM — AMMETER (RANGE AS SPECIFIED OR REQUIRED)
- VM — VOLTMETER (RANGE AS SPECIFIED OR REQUIRED)
- DIGITAL VM AM — COMBINATION DIGITAL VOLT METER/AMMETER
- UTILITY METER M — UTILITY METER (AS REQUIRED BY UTILITY)
- WH D 15 — WATT-HOUR METER, "D" DENOTES DEMAND REGISTER, "15" DENOTES MINUTES OF DEMAND INTERVAL
- CURRENT TRANSFORMER RATING AS SPECIFIED OR REQUIRED
- POTENTIAL TRANSFORMER RATING AS SPECIFIED OR REQUIRED
- ### — CIRCUIT/EQUIPMENT IDENTIFICATION (REFER TO SCHEDULE)
- ERMS — ENERGY-REDUCING MAINTENANCE SWITCH
- GFR — GROUND FAULT RELAY
- PFR — PHASE FAILURE RELAY
- PRM — PHASE ROTATION MONITOR
- R — RELAY
- KK# — KIRK-KEY INTERLOCK (# INDICATES KEY PAIR)
- ST — SHUNT TRIP
- SPD — SURGE-PROTECTIVE DEVICE
- VFD — VARIABLE FREQUENCY DEVICE
- GROUND CONNECTION
- GROUND CONNECTION WITH TEST WELL
- GROUND ROD
- LIGHTNING ARRESTER
- CAPACITOR
- = ≠ — CONTACT (OPEN OR CLOSED)
- HEATER
- HP — MOTOR
- ## — BLOCK LOAD KW OR KVA
- ×F# ×FP# — FAULT POINT REFERENCED IN SHORT CIRCUIT CURRENT AND VOLTAGE DROP SPREADSHEET

SPECIAL SYSTEMS SUPPLEMENTAL SPECIFICATIONS:

1. PROVIDE NECESSARY BOXES, CONDUIT AND MAKE FINAL CONNECTIONS TO TEMPERATURE CONTROL DEVICES PER MANUFACTURER'S RECOMMENDATIONS. THIS INCLUDES BUT IS NOT LIMITED TO: MAIN CONTROL PANELS, THERMOSTATS, HUMIDISTATS, AC SOLENOIDS, HEAT RECLAIM WIRING, AHU CONTROL WIRING, DUCT FURNACE CONTROL WIRING, TIMERS, AND SIMILAR CONTROLS. PROVIDE CONDUIT FOR ALL WIRING WITHIN WALLS. PROVIDE CONTROL AND INTERLOCK WIRING WHEN NOT PROVIDED BY OTHER TRADES. COORDINATE REQUIREMENTS WITH EQUIPMENT SUPPLIERS AND OTHER TRADES PRIOR TO ROUGH-IN.
2. PROVIDE LINE VOLTAGE WIRING AND MAKE FINAL CONNECTIONS TO ALL DUCT-MOUNTED SMOKE DETECTORS, FIRE/SMOKE AND SMOKE DAMPERS WHERE APPLICABLE. COORDINATE REQUIREMENTS WITH OTHER TRADES PRIOR TO INSTALLATION.
3. DEVICES MOUNTED ON ACOUSTICAL TILE CEILINGS SHALL BE CENTERED ON THE TILE, UNO.
4. PROVIDE BOX AND 3/4" CONDUIT FROM EACH THERMOSTAT LOCATION TO MECHANICAL EQUIPMENT, (FLUSH MOUNT BOX WHEREVER PRACTICABLE). COORDINATE LOCATION OF ALL THERMOSTAT BOXES WITH MECHANICAL/CONTROLS CONTRACTOR AND OWNER PRIOR TO ROUGH-IN.
5. PROVIDE BOXES AND CONDUITS FOR THE FIRE PROTECTION SYSTEM LOW VOLTAGE WIRING AS REQUIRED. THIS INCLUDES EXPOSED WIRING LESS THAN 96" AFF. AT A MINIMUM, PROVIDE 3/4" CONDUIT, UNLESS NOTED OTHERWISE. COORDINATE REQUIREMENTS AND LOCATIONS WITH SYSTEM INSTALLER AND FIRE ALARM SPECIFICATIONS.
6. AT A MINIMUM, PROVIDE EXTRA DEEP, DOUBLE GANG COMMUNICATION OUTLET BOXES, (FLUSH MOUNTED WHEREVER PRACTICABLE), WITH SINGLE-GANG PLASTER RING AND 1" CONDUIT STUBBED-UP CONCEALED TO ACCESSIBLE CEILING SPACE, UNLESS NOTED OTHERWISE. PROVIDE SURFACE MOUNTED DATA BOXES WITHIN CABINETRY, AND SELECT OTHER LOCATIONS AS INDICATED ON THE DRAWINGS. COORDINATE TELEPHONE/DATA BOX AND CONDUIT LOCATIONS AND SIZES WITH OWNER AND OTHER TRADES PRIOR TO ROUGH-IN.
7. PROVIDE NYLON BUSHINGS FOR ALL COMMUNICATIONS AND LOW VOLTAGE WIRING CONDUITS AND SLEEVES, UNLESS NOTED OTHERWISE.
8. ALL COMMUNICATIONS AND LOW VOLTAGE WIRING CONDUIT SHALL BE INSTALLED WITH AN ACCESSIBLE PULLBOX BETWEEN EVERY 180 DEGREE CHANGE IN DIRECTION AND AT 100' INTERVALS OF CONTINUOUS RUNS.
9. MINIMUM BEND RADIUS FOR COMMUNICATIONS CONDUIT IS 6 TIMES THE INSIDE DIAMETER FOR CONDUITS 2" IN DIAMETER AND SMALLER AND 10 TIMES THE INSIDE DIAMETER FOR CONDUITS GREATER THAN 2" IN DIAMETER, UNLESS NOTED OTHERWISE.
10. LOW VOLTAGE COMMUNICATION, ENERGY MANAGEMENT, SOUND SYSTEM, SECURITY AND RELATED WIRING IS TO BE PERFORMED BY OTHERS UNDER A SEPARATE CONTRACT, UNLESS NOTED OTHERWISE. PROVIDE BOXES AND CONDUIT IN FINISHED AND RATED FLOORS/WALLS/CEILINGS TO ACCESSIBLE LOCATIONS FOR ALL LOW VOLTAGE WIRING. PROVIDE ALL LINE VOLTAGE CIRCUITRY (120V AND HIGHER) TO OWNER FURNISHED EQUIPMENT AND LOW VOLTAGE STEP-DOWN TRANSFORMERS AS REQUIRED. COORDINATE ELECTRICAL REQUIREMENTS AND LOCATIONS WITH SYSTEM INSTALLER AND OWNER.
11. ALL LOW VOLTAGE CLASS 2 OR 3 WIRING NOT IN CONDUIT SHALL BE PLENUM RATED WHERE APPLICABLE.
12. LOW VOLTAGE CABLE SHEATH LABELS AND RELATED MANUFACTURER INFO SHALL REMAIN APPARENT IN ALL EXPOSED APPLICATIONS. PROTECT ALL EXPOSED CABLING FROM PAINTING AND OVERSPRAY (INCLUDES CABLE NOT ROUTED IN CONDUIT AND THAT IS IN CABLE TRAY).
13. CABLES SHALL BE ROUTED THROUGH THE BUILDING CABLE TRAY/RACEWAY SYSTEM, UNLESS NOTED OTHERWISE. EXPOSED CABLING SHALL NOT BE ROUTED IN AREAS EXPOSED TO STRUCTURE UNLESS SPECIFICALLY PERMITTED BY THE OWNER. IN AREAS WHERE EXPOSED CABLES ARE ALLOWED, IT SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS. WHERE REQUIRED, PROVIDE CONDUIT TO ROUTE LOW VOLTAGE CABLING TO THE CABLE TRAY OR NEAREST ACCESSIBLE CEILING SPACE.
14. CONDUITS FOR COMMUNICATIONS OUTLETS SERVING ELEVATOR EQUIPMENT ROOMS, FACP, AND SIMILAR CRITICAL EQUIPMENT AS DESIGNATED BY THE OWNER SHALL BE CONTINUOUS ("HOMERUN") FROM OUTLET TO SERVING COMMUNICATIONS ROOM.

APPLICABLE ELECTRICAL CODES:

NOTE: PROJECT IS DESIGNED IN COMPLIANCE WITH THE FOLLOWING CODES. THIS IS NOT AN EXHAUSTIVE LIST. PROJECT SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS AND LOCAL REQUIREMENTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

ELECTRICAL CODE: **2017 NATIONAL ELECTRICAL CODE, (NFPA 70)**
BUILDING CODE: **2018 INTERNATIONAL BUILDING CODE**

COMMISSIONING / FUNCTIONAL TESTING:

CONTRACTOR'S BID SHALL INCLUDE PROVISIONS TO PROVIDE ALL SERVICES RELATED TO THE CODE REQUIRED BUILDING SYSTEMS COMMISSIONING INCLUDING A COMMISSIONING PLAN, FUNCTIONAL TESTING, AND RELATED DOCUMENTATION, REPORTS AND OWNER TRAINING. THIS INCLUDES RETAINING THE SERVICES OF A 3RD PARTY REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY. REFER TO THE LATEST ADOPTED EDITION OF THE APPLICABLE ENERGY CODE FOR MORE INFORMATION. CONTRACTOR SHALL COMPLETE ALL RELATED COMMISSIONING REQUIREMENTS PRIOR TO FINAL INSPECTIONS IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, CODE AND MANUFACTURER'S INSTRUCTIONS.

ELECTRICAL SUPPLEMENTAL SPECIFICATIONS:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS. AS APPLICABLE, REVIEW THE LANDLORD CRITERIA, GENERAL NOTES, OTHER TRADE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMITTING BID.
2. ALL WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES AS WELL AS APPLICABLE INDUSTRY STANDARDS. ALL EQUIPMENT SHALL BEAR LABELS FOR THE USE INTENDED BY AN AHJ ACCEPTED NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL), SUCH AS UL OR ETL. THE FINAL ELECTRICAL INSTALLATION OF THE FACILITY OCCUPIED BY OWNER SHALL BE FREE FROM ELECTRICAL DEFECTS TO THE SATISFACTION OF THE AHJ, OWNER, ARCHITECT AND ENGINEER.
3. COORDINATE FINAL LOCATION AND INSTALLATION REQUIREMENTS OF ALL LIGHT FIXTURES, ELECTRICAL EQUIPMENT AND ELECTRICAL DEVICES WITH ARCHITECTURAL DRAWINGS, EXISTING CONDITIONS AND OTHER TRADES PRIOR TO ROUGH-IN. PROVIDE ALL NECESSARY DEVICES, CORDS, PLUGS, DISCONNECTS AND FINAL CONNECTIONS TO ELECTRICAL EQUIPMENT FOR PROPER OPERATION IN ACCORDANCE WITH CODE, OWNER AND MANUFACTURER REQUIREMENTS.
4. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC/SCHEMATIC IN NATURE AND REPRESENT THE GENERAL SCOPE OF WORK. IT IS NOT WITHIN THE SCOPE OF THE ELECTRICAL DRAWINGS TO SHOW ALL NECESSARY RACEWAY ROUTING, BENDS, OFFSETS, PULL BOXES AND OBSTRUCTIONS. CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF EQUIPMENT AND WIRING DEVICES WITH OTHER TRADES PRIOR TO INSTALLATION AND INSTALL ALL WORK TO CONFORM TO THE OWNER REQUIREMENTS.
5. ALL CONDUCTOR AND CONDUIT LENGTHS SHOWN IN THESE DESIGN DOCUMENTS ARE INTENDED SOLELY FOR USE IN THE DESIGN CALCULATIONS BY THE DESIGN PROFESSIONAL, UNLESS NOTED OTHERWISE. LENGTHS SHOWN SHALL NOT BE USED TO ASSIST IN THE BIDDING TAKEOFF PROCESS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MATERIAL QUANTITIES REQUIRED TO BID AND CONSTRUCT THE COMPLETE PROJECT.
6. PROVIDE PROPER FIRE PROOFING AND SEALANT FOR PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. THE FIRE STOPPING METHOD, MATERIAL AND ITS APPLICATION SHALL BE NRTL LISTED, CODE COMPLIANT AND APPROVED BY AHJ.
7. FOR CAST-IN-PLACE CONCRETE, TILT-UP WALLS, PRECAST OR SIMILAR PRE-ENGINEERED WALL SYSTEMS: COORDINATE THE FINAL LOCATION OF ALL ELECTRICAL DEVICES, RACEWAYS, LIGHT FIXTURES AND PENETRATIONS WITH ARCHITECT, WALL SUPPLIER AND OTHER TRADES PRIOR TO WALL CONSTRUCTION. CONDUIT/RACEWAY IMBEDDED IN CONCRETE WALLS SHALL BE SCHEDULE 80 PVC OR LFMC; OTHER TYPES MAY BE ALLOWED IF APPROVED BY WALL SYSTEM MANUFACTURER AND ENGINEER.
8. WHEN CONCRETE TRENCHING/CORING IS REQUIRED, THE METHODS, DEPTHS, AND LOCATIONS SHALL BE PRE-APPROVED BY LANDLORD, ARCHITECT, AND STRUCTURAL ENGINEER PRIOR TO THE START OF WORK. X-RAY SLAB AS NECESSARY TO AVOID DAMAGING ANY UNDER-SLAB UTILITIES OR STRUCTURE. SLAB REPLACEMENT SHALL BE INSTALLED WITH DOWELLING AND REINFORCED CONCRETE AS DIRECTED BY THE STRUCTURAL ENGINEER. WHERE SLAB ON GRADE IS SAW-CUT AND REMOVED FOR TRENCHING THE CONTRACTOR SHALL INSTALL MOISTURE BARRIER PER LANDLORD'S REQUIREMENTS. PROVIDE 3/4" MINIMUM CONDUITS ROUTED THROUGH SLAB AND STUBBED UP INTO DEVICES. FOR SLAB ON DECK, THE FLOOR SHALL BE SLEEVED AND EQUIPPED WITH THE APPROPRIATE LISTED ASSEMBLY. PROVIDE 3/4" MINIMUM CONDUITS ROUTED BELOW SLAB, TIGHT TO STRUCTURE, AND STUBBED UP INTO DEVICES.
9. ALL APPLICABLE SWITCHES, RECEPTACLES, OUTLETS, AND CONTROLS SHALL BE PLACED AT HEIGHTS THAT ARE IN ACCORDANCE WITH ADA ACCESSIBILITY GUIDELINES.
10. COORDINATE FLOOR MOUNTED BOX, RECEPTACLE, AND COVER PLATE TYPES WITH ARCHITECT AND OWNER PRIOR TO ORDER.
11. WIRING DEVICES ADJACENT TO EACH OTHER SHALL BE INSTALLED UNDER A SINGLE COVER PLATE, UNO.
12. WIRING DEVICES SHOWN BACK-TO-BACK ON A COMMON WALL SHALL BE OFFSET A MINIMUM OF 12" HORIZONTALLY TO REDUCE SOUND TRANSMISSION BETWEEN ROOMS, UNO.
13. ALL WP OUTLET BOX HOODS SHALL BE "EXTRA-DUTY" AND "WHILE-IN-USE COVER" TYPE. OUTLET BOX HOODS SHALL BE LOW PROFILE WHEREVER PRACTICABLE, UNLESS NOTED OTHERWISE. THE USE OF LARGE BUBBLE COVERS SHALL BE AVOIDED ON THE EXTERIOR OF THE BUILDING OR BEHIND EQUIPMENT IN ORDER TO PREVENT DAMAGE TO THE COVER AND TO ALLOW THE EQUIPMENT TO BE LOCATED CLOSE TO THE WALL.
14. ALL 120V RECEPTACLES 50A OR LESS, 208V AND 240V RECEPTACLES 100A OR LESS, SHALL BE GFCI PROTECTED IN LOCATIONS REQUIRED BY CODE; THIS INCLUDES BATHROOMS, KITCHENS/FOOD PREP AREAS, EXTERIOR LOCATIONS AND RECEPTACLES WITHIN 6 FEET OF A SINK. GFCI RECEPTACLES SHALL BE READILY ACCESSIBLE AND SHALL NOT BE LOCATED BEHIND STATIONARY EQUIPMENT. GFCI PROTECTION MAY BE VIA A GFCI CIRCUIT BREAKER OR GFCI RECEPTACLE, UNLESS NOTED OTHERWISE. WHERE NECESSARY, GFCI PROTECTION MAY BE ACHIEVED VIA A BLANK FACE GFCI DEVICE LOCATED IN A READILY ACCESSIBLE LOCATION NEAR RECEPTACLE BEING PROTECTED. FOR DOWNSTREAM WIRING DEVICES LOCATED ON THE SAME BRANCH CIRCUIT, THE GFCI PROTECTION MAY BE PROVIDED FOR BY A SINGLE UPSTREAM DEVICE IF ALL PROTECTED DEVICES ARE LABELED PER CODE.
15. PROVIDE TAMPER-RESISTANT (TR) TYPE RECEPTACLES AT ALL CODE REQUIRED LOCATIONS AND AT LOCATIONS WHERE RECEPTACLES ARE MOUNTED LESS THAN 5'-6" AFF AND ARE EASILY ACCESSIBLE BY CHILDREN, UNLESS NOTED OTHERWISE.
16. FLEXIBLE CONDUIT IS ONLY PERMITTED WHERE SPECIFICALLY ALLOWED IN THE CONSTRUCTION DOCUMENTS, WHERE CONCEALED FROM VIEW OR EXPOSED FINAL CONNECTIONS TO LIGHT FIXTURES AND EQUIPMENT IN LENGTHS OF 6'-0" OR LESS.
17. ALL EMPTY CONDUIT/RACEWAY SHALL BE INSTALLED WITH PULL STRINGS. TERMINATE CONDUIT STUB-UP WITH A NYLON BUSHING.
18. EXPOSED CONDUIT/RACEWAY SHALL BE PAINTED TO MATCH ADJACENT SURFACE, UNLESS NOTED OTHERWISE. COORDINATE REQUIREMENTS WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
19. CONDUITS/RACEWAYS SHALL BE CONCEALED FROM VIEW WHEREVER PRACTICABLE, UNLESS NOTED OTHERWISE. ROUTE CONDUITS SERVING ROOFTOP EQUIPMENT CONCEALED INSIDE EQUIPMENT CURB AND MINIMIZE ROOF PENETRATIONS AND EXTERIOR CONDUIT RUNS WHERE PRACTICABLE. SUPPORT RACEWAY FROM STRUCTURE, NOT ROOF DECK. MAINTAIN 2" MIN SPACING FROM BOTTOM OF ROOF DECK TO PREVENT ROOFING SCREWS FROM PENETRATING RACEWAY. DO NOT ROUTE CONDUITS ACROSS SKYLIGHTS, ACCESS PANELS, HATCHED TILES, HVAC DIFFUSERS, OR EQUIPMENT WORKING CLEARANCE SPACE. ROUTE ALL EXPOSED NON-FLEXIBLE CONDUITS TIGHT TO STRUCTURE, PARALLEL TO BUILDING LINES AND IN STRUT OR CABLE/PIPE TRAY WHERE PRACTICABLE. INSTALL CONDUITS PLUMB/LEVEL WHERE EXPOSED TO VIEW. COORDINATE RACEWAY ROUTING AND INSTALLATION WITH OTHER TRADES PRIOR TO ROUGH-IN.
20. WHERE PRACTICABLE, ALL UNDER-FLOOR/UNDER-GROUND CONDUITS/RACEWAY SHALL BE INSTALLED A MINIMUM OF 24" BELOW BOTTOM OF SLAB/PAVING/GRADE, UNLESS NOTED OTHERWISE. NOTE: THE DESIGN INTENT FOR INSTALLING ELECTRICAL CIRCUITRY AT THIS DEPTH IS TO PROTECT THE ELECTRICAL CIRCUITRY FROM DAMAGE DUE TO FUTURE WORK.
21. PROVIDE LABEL AT EACH RECEPTACLE COVER PLATE WITH THE RESPECTIVE "PNLBD-CKT#" DESIGNATION. COORDINATE LABEL REQUIREMENTS WITH THE OWNER PRIOR TO INSTALLATION. REFER TO THE SPECIFICATIONS FOR MORE INFORMATION.
22. MULTIWIRE BRANCH CIRCUITS ARE NOT ALLOWED, UNLESS NOTED OTHERWISE.
23. PROVIDE INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS, UNLESS NOTED OTHERWISE.

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CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	TJL
CHECKED BY:	JS

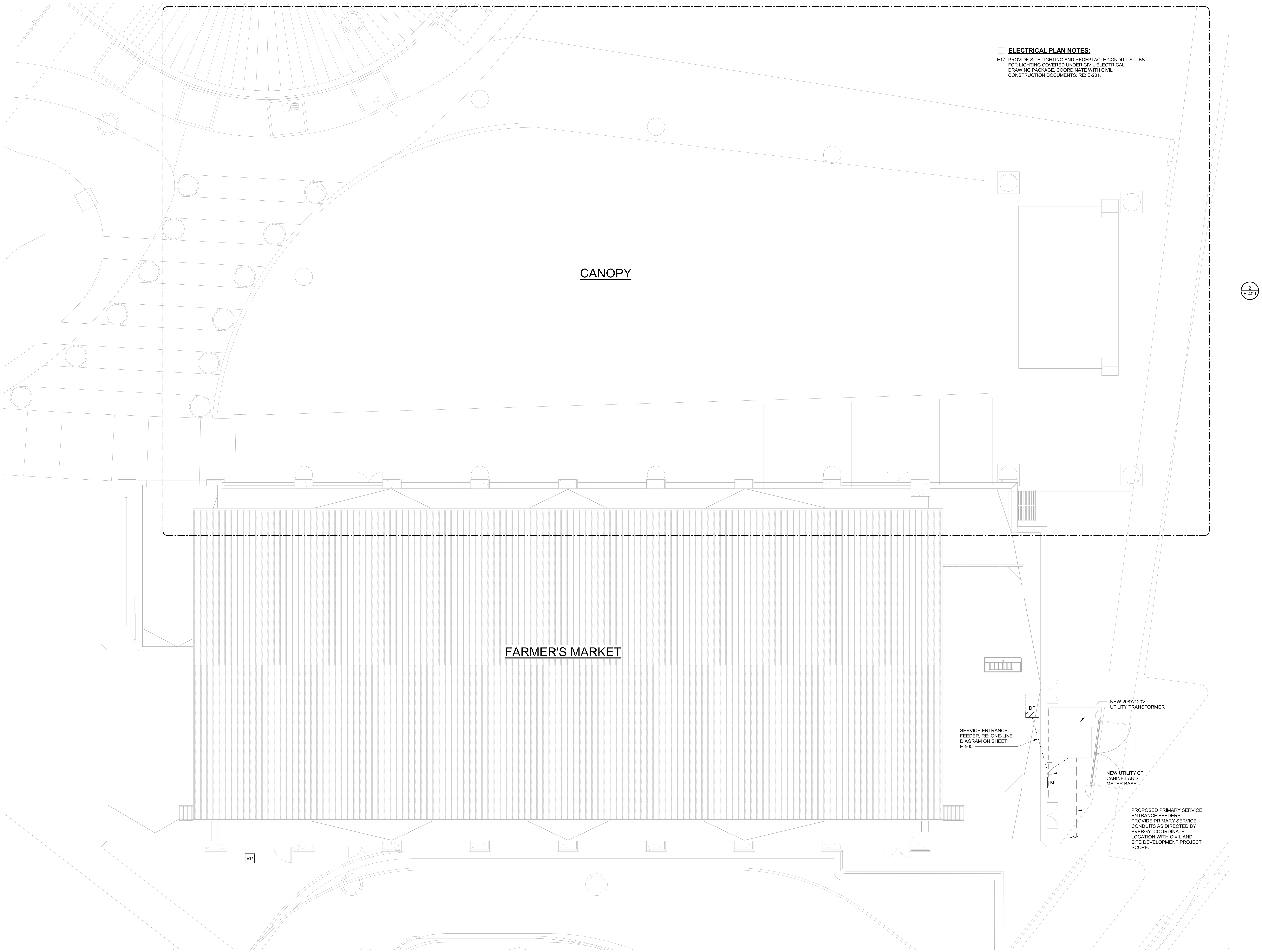
ELECTRICAL GENERAL NOTES AND LEGEND

E-000

BRIAN C. OLLIGES
PLOT DATE: 10/30/2023 5:39:56 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMO-MEP_V23.rvt

ELECTRICAL PLAN NOTES:

E17 PROVIDE SITE LIGHTING AND RECEPTACLE CONDUIT STUBS FOR LIGHTING COVERED UNDER CIVIL ELECTRICAL DRAWING PACKAGE. COORDINATE WITH CIVIL CONSTRUCTION DOCUMENTS. RE: E-201.



1 ELECTRICAL SITE PLAN
1/8" = 1'-0"

BRIAN C. OLLIGES

PLOT DATE: 10/30/2023 5:40:07 PM

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CHECKED BY:	JS

ELECTRICAL SITE PLAN

BRIAN C. OLLIGES

PLOT DATE: 10/30/2023 5:40:39 PM

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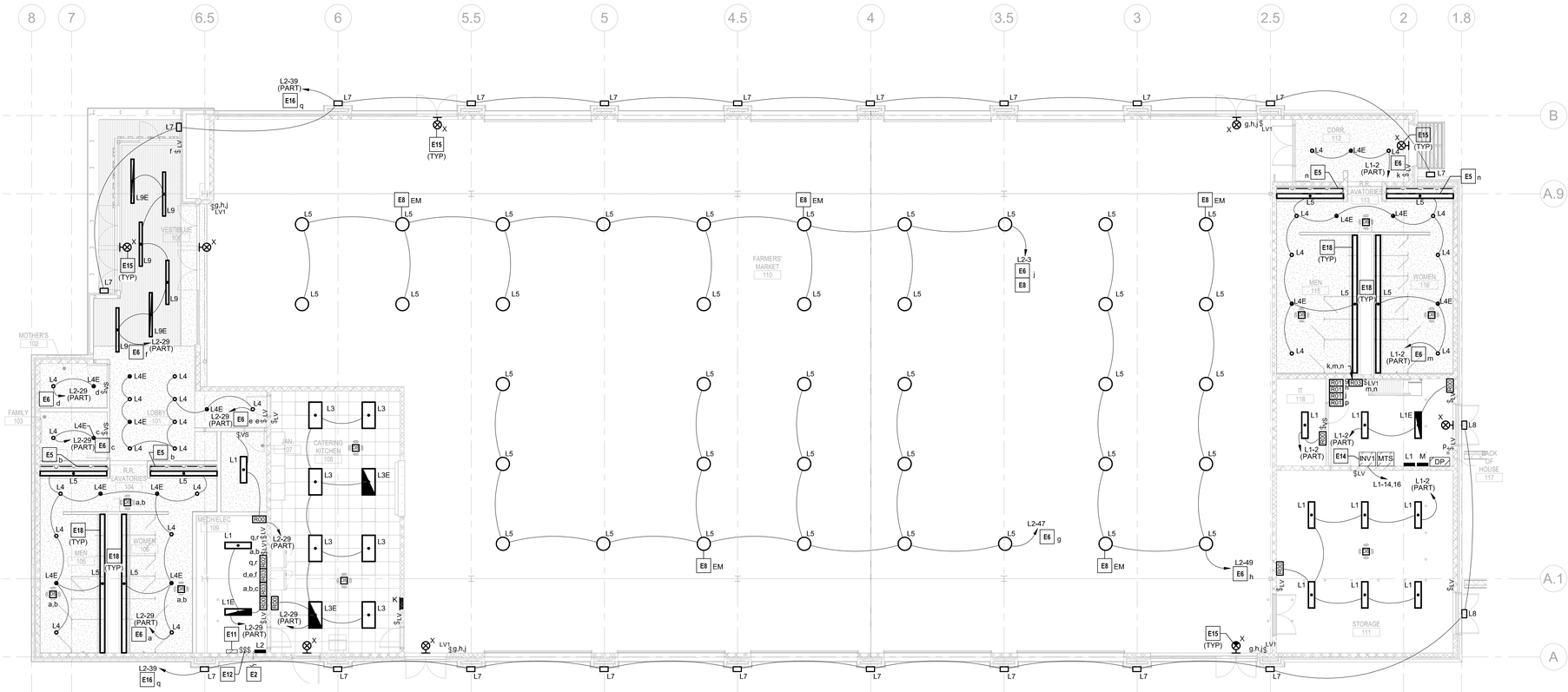
☐ ELECTRICAL PLAN NOTES:

E2	PROVIDE 1" CONDUITS WITH PULL STRINGS TO FIVE FEET OUTSIDE EXTERIOR WALL INDICATED FOR PLAZA SITE LIGHTING CIRCUITRY. REFERENCE LANDSCAPE AND CIVIL CONSTRUCTION DOCUMENTS FOR BRANCH CIRCUIT QUANTITIES AND LOCATIONS.
E5	BACK-LIT MIRRORS SPECIFIED BY OTHERS. COORDINATE CONNECTION BOX INSTALLATION REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE SEPARATE CONTROL RELAY AS INDICATED TO CONTROL MIRROR SEPARATELY FROM GENERAL RESTROOM LIGHTING.
E6	CONTROL VIA REMOTELY LOCATED ROOM CONTROLLER ON ZONE INDICATED. PROVIDE EMERGENCY BRANCH CIRCUIT FROM LIGHTING INV1. PROVIDE AUTOMATIC LOAD CONTROL RELAY AS SPECIFIED WITH IOTA LIGHTING INVERTER. RE: 01/E-500
E8	PROVIDE EMERGENCY BRANCH CIRCUIT FROM LIGHTING INV1. PROVIDE AUTOMATIC LOAD CONTROL RELAY AS SPECIFIED WITH IOTA LIGHTING INVERTER. REFERENCE 01/E-500.
E11	LIGHTING CONTROL RELAY PANEL SPECIFIED BY OTHERS. REFERENCE LANDSCAPE AND CIVIL CONSTRUCTION DOCUMENTS FOR ADDITIONAL INFORMATION.
E12	REMOTELY LOCATED SWITCHES FOR CIVIL/LANDSCAPE LIGHTING. COORDINATE WITH SITE ELECTRICAL PLANS.
E14	PROVIDE 2.25KW IOTA LIGHTING INVERTER MODEL# IIS-2250-208IN-120OUT-ST-BACNET-BATINST-5YR-OB4-IP120-20AMP-ON-EXTPASS OR APPROVED EQUAL. INVERTER SHALL BE EQUIPPED WITH MAINTENANCE BYPASS FOR CONNECTION OF TEMPORARY INVERTER PER NEC 700.3(F). ORDER WITH ALCR MODEL# ETS-20-DR ACCESSORY FOR EACH CIRCUIT BEING FED FROM INVERTER.
E15	CONNECT ALL EXIT SIGNS TO UNSWITCHED LIGHTING BRANCH CIRCUIT IN SPACE.
E16	FIELD LOCATE PHOTOCELL ON ROOF FACING NORTH. FIXTURE TO OPERATE DUSK-TO-DAWN VIA ZONE CONTROLLER INDICATED.
E18	COORDINATE COVE LIGHTING FIXTURE MOUNTING WITH ARCHITECTURAL CEILING.



① LIGHTING FLOOR PLAN
1/8" = 1'-0"

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2150003907
MO. CORPORATE NO: E-556D
EXPIRES 10/31/2024

10/30/2023

BRIAN OLLIGES
NUMBER
PE-2022017790

BRIAN C. OLLIGES
LICENSE # PE-2022017790

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

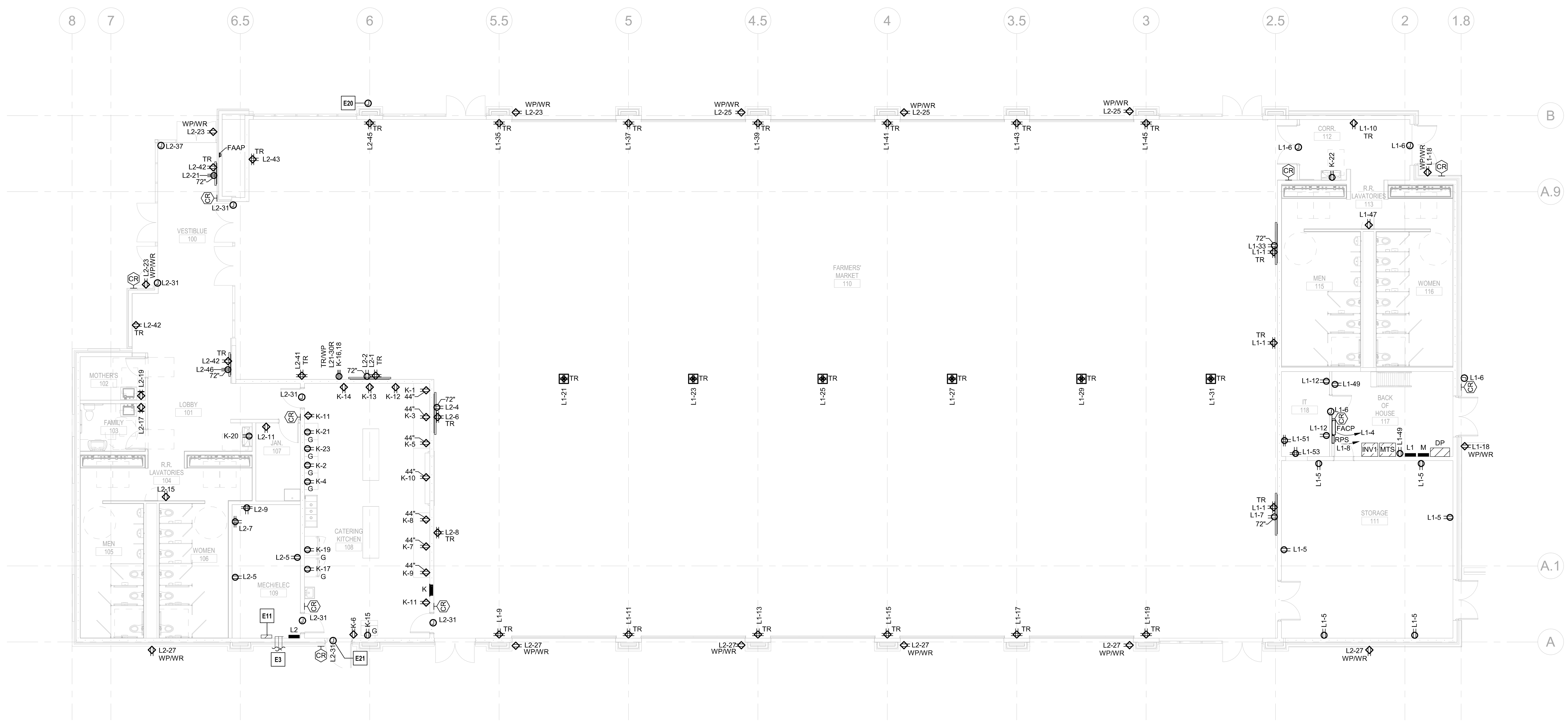
△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	TJL
CHECKED BY:	JS

LIGHTING PLAN

ELECTRICAL PLAN NOTES:

- E3 PROVIDE SIX (6) 1"C. WITH PULL STRING TO FIVE FEET OUTSIDE EXTERIOR WALL INDICATED FOR PLAZA SITE RECEPTACLE CIRCUITRY. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND BRANCH CIRCUIT FEEDERS AS INDICATED ON CIVIL CONSTRUCTION DOCUMENTS.
- E11 LIGHTING CONTROL RELAY PANEL SPECIFIED BY OTHERS. REFERENCE LANDSCAPE AND CIVIL CONSTRUCTION DOCUMENTS FOR ADDITIONAL INFORMATION.
- E20 PROVIDE 2" C. WITH PULL STRING TO MECH/ELEC 109 FOR FUTURE CANOPY SIGNAGE.
- E21 PROVIDE SINGLE-GANG JUNCTION BOX AT CARD READER LOCATION AND ABOVE DOOR JAMB FOR ELECTRIC LOCK POWER. ROUTE 3/4"C FROM DOOR JAMB TO LATCH. COORDINATE FINAL CONDUIT AND CONNECTION REQUIRES WITH DOOR MANUFACTURER SPECIFIED IN ARCHITECTURAL CONSTRUCTION DOCUMENTS.



1 POWER FLOOR PLAN
1/8" = 1'-0"

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POWER PLAN

E-201

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BRIAN OLLIGES
NUMBER PE-2022017790
PROFESSIONAL ENGINEER

BRIAN C. OLLIGES
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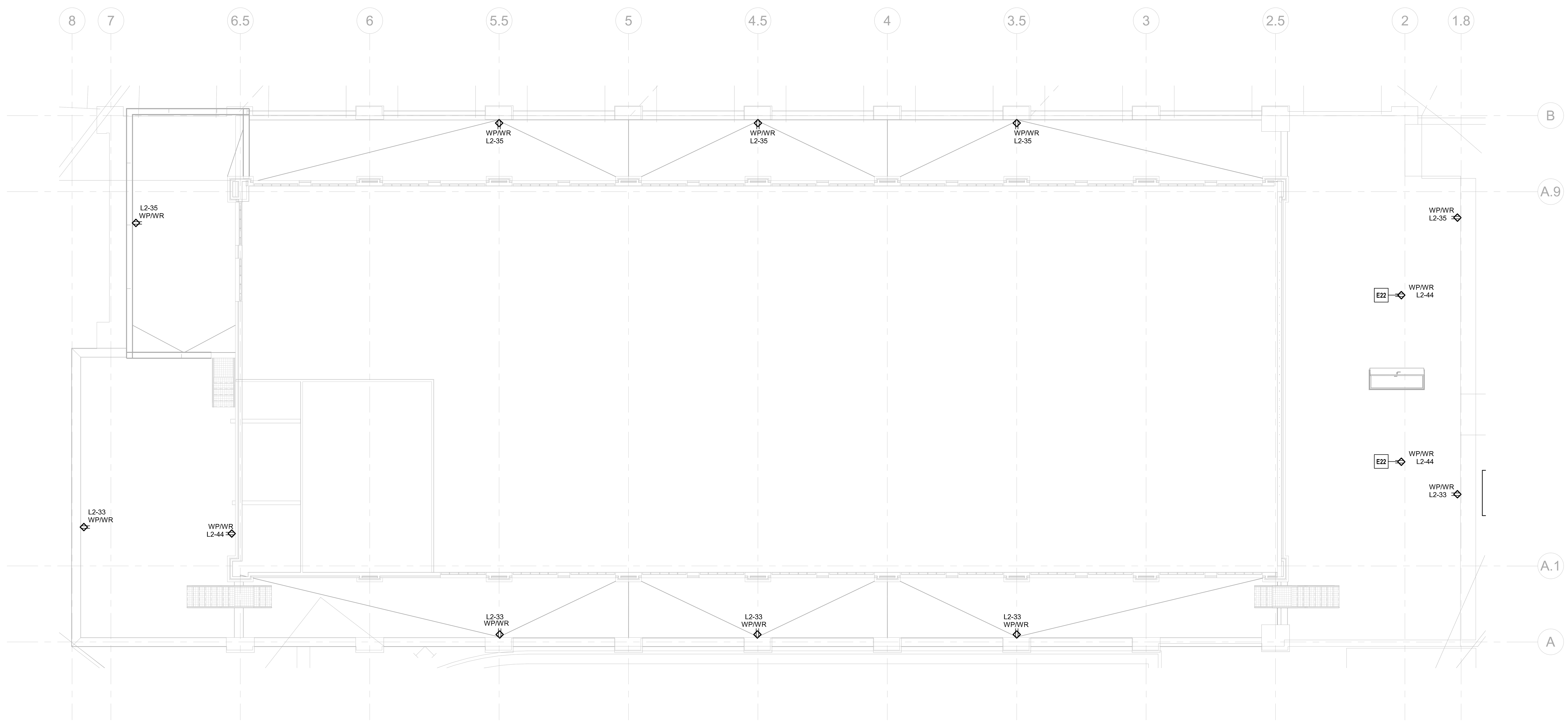
ELECTRICAL PLAN NOTES:

E22 RECEPTACLE IS INTEGRAL TO PACKAGED RTU EQUIPMENT. PROVIDE 120V BRANCH CIRCUIT AS INDICATED.



1 POWER ROOF PLAN
1/8" = 1'-0"

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

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POWER ROOF PLAN

E-202

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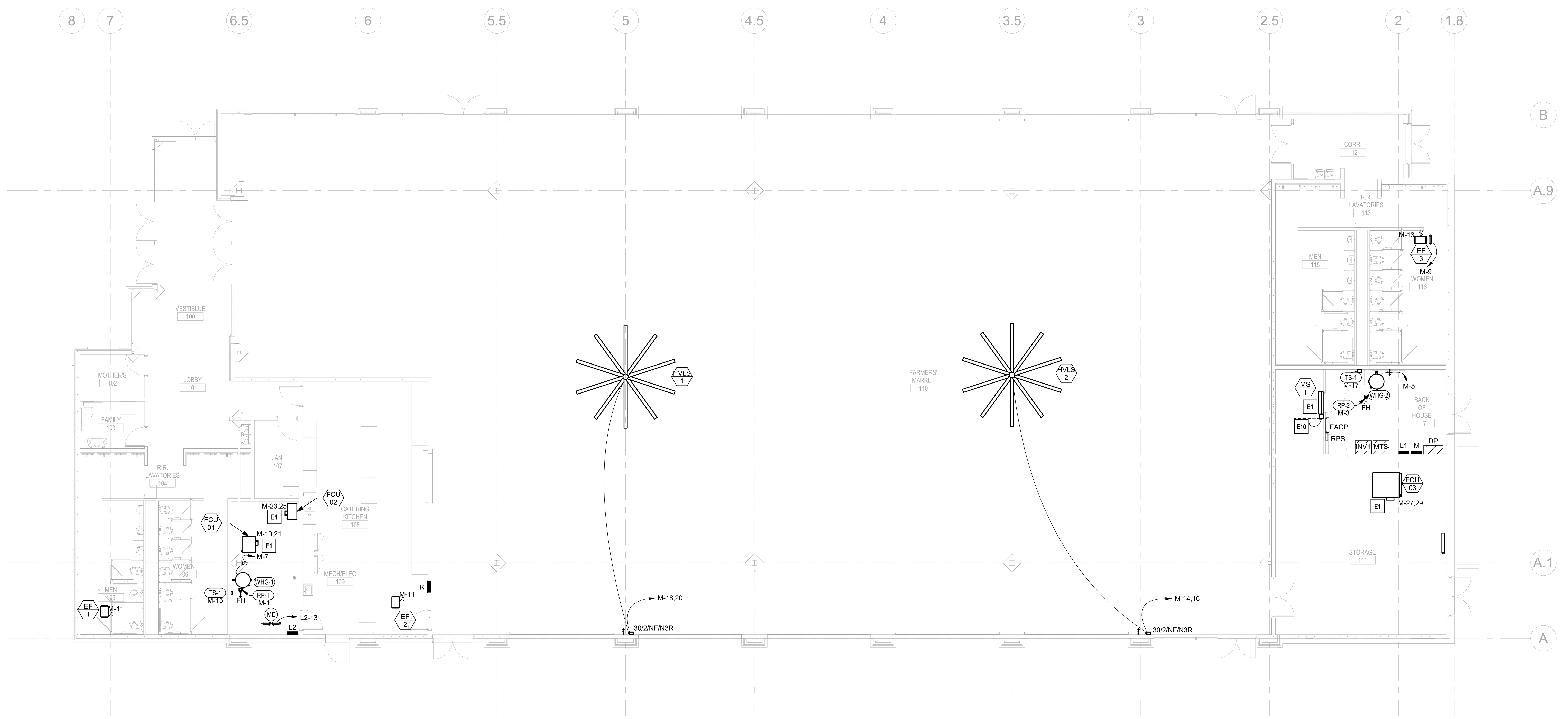

1 EQUIPMENT CONNECTION FLOOR PLAN
1/8" = 1'-0"

ELECTRICAL PLAN NOTES:

E1 DISCONNECT PROVIDED WITH EQUIPMENT BY DIVISION 23 CONTRACTOR.

E10 POWERED FROM OUTDOOR UNIT. PROVIDE (2)#10AWG, (1)#10 GND IN 3/4"C. TO CONDENSING UNIT LOCATED ON ROOF.

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EQUIPMENT CONNECTION PLAN

E-301

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ELECTRICAL PLAN NOTES:

E1 DISCONNECT PROVIDED WITH EQUIPMENT BY DIVISION 23 CONTRACTOR.

1 EQUIPMENT CONNECTION ROOF PLAN
1/8" = 1'-0"

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EQUIPMENT CONNECTION ROOF PLAN

E-302

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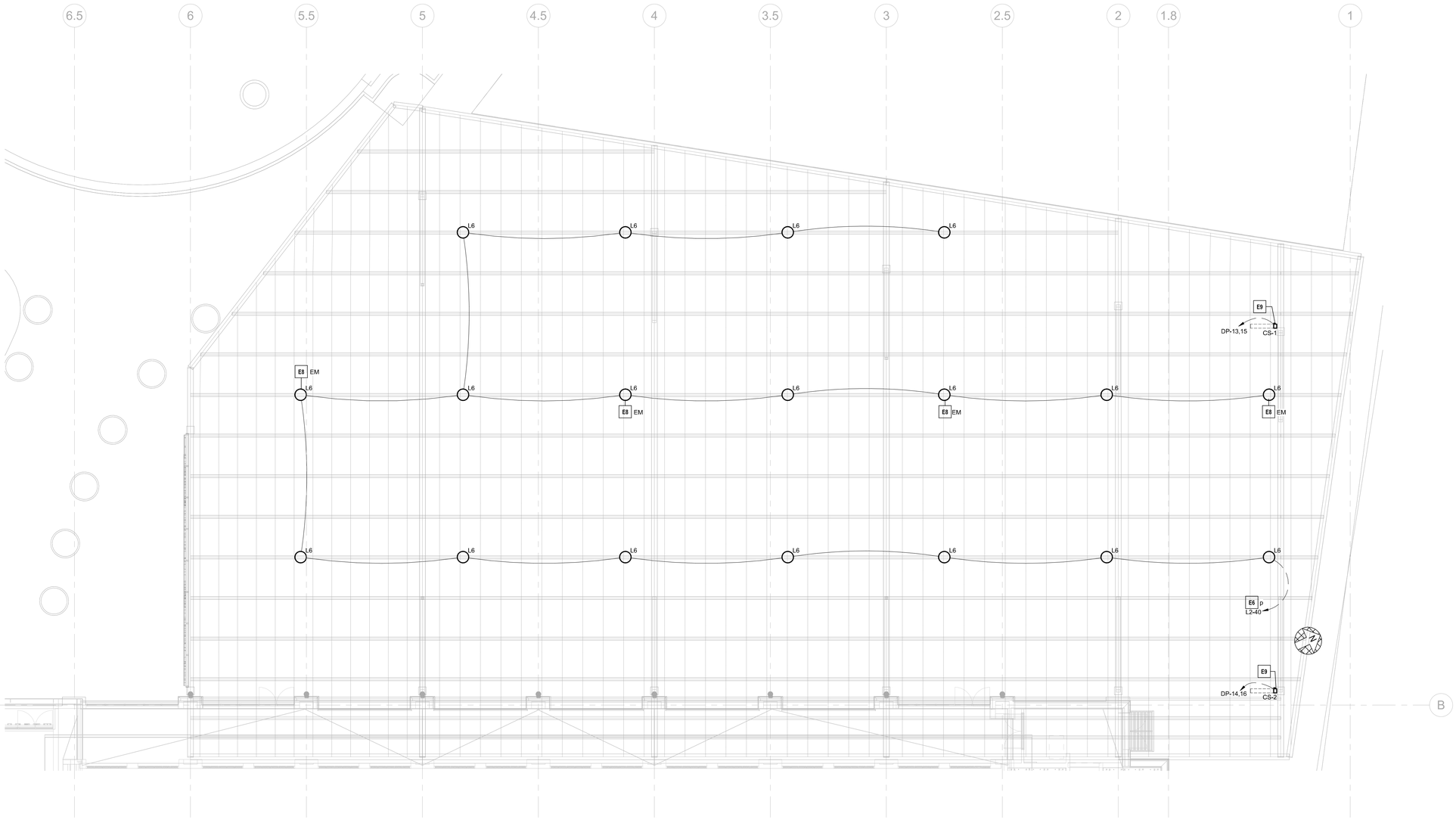

2 ENLARGED POWER & LIGHTING PLAN - CANOPY
1/8" = 1'-0"

ELECTRICAL PLAN NOTES:

E6 CONTROL VIA REMOTELY LOCATED ROOM CONTROLLER ON ZONE INDICATED. PROVIDE EMERGENCY BRANCH CIRCUIT FROM LIGHTING INV1. PROVIDE AUTOMATIC LOAD CONTROL RELAY AS SPECIFIED WITH IOTA LIGHTING INVERTER. RE: 01/E-500

E8 PROVIDE EMERGENCY BRANCH CIRCUIT FROM LIGHTING INV1. PROVIDE AUTOMATIC LOAD CONTROL RELAY AS SPECIFIED WITH IOTA LIGHTING INVERTER. REFERENCE 01/E-500.

E9 PROVIDE STAINLESS STEEL NEMA-3R DISCONNECT WITH CAMLOCK CONNECTIONS FOR STAGE POWER. MOUNT TO CANOPY COLUMN FACING TEMPORARY STAGE LOCATION. PROVIDE PADLOCK ON HANDLE.

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BRIAN C. OLLIGES
LICENSE # PE-2022017790

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
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ENLARGED PLANS

E-400

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BUILDING LOAD SUMMARY (DP)

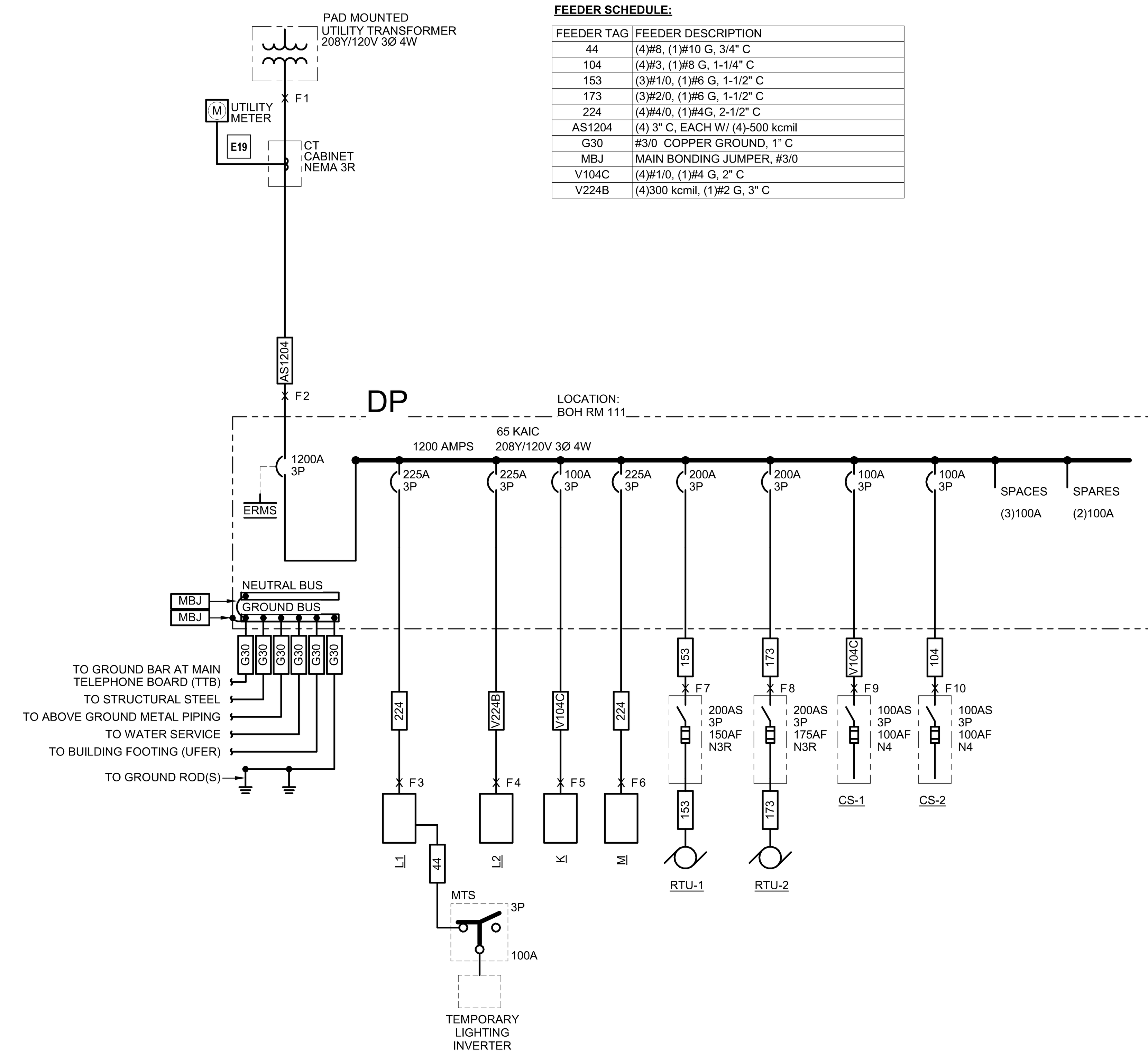
BUILDING OCCUPANCY: CLUB BUILDING SQUARE FOOTAGE: 10950			SERVICE VOLTAGE: 208Y/120 V
LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	109753 VA	100%	109753 VA
HEATING (H)	0 VA	0%	0 VA
LIGHTING (L) (PER NEC-220)	31448 VA	125%	39310 VA
RECEPTACLES (R)	89580 VA	56%	49790 VA
MOTORS (M)	3995 VA	100%	3995 VA
SUPPLEMENTAL HEAT (U)	500 VA	100%	500 VA
MISC EQUIP (Z)	60516 VA	100%	60516 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGNAGE (S)	0 VA	125%	0 VA
KITCHEN (K)	0 VA	100%	0 VA
LARGEST MOTOR (7.5HP)	9115 VA	125%	11394 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA
TOTAL LOAD	304907	VA	275258
TOTAL AMPACITY	846	AMPS	764
SERVICE AMPACITY		AMPS	1200
SPARE CAPACITY		AMPS	436

ELECTRICAL PLAN NOTES:

E19 PROVIDE METER AND CT CABINET PER UTILITY COMPANY STANDARDS.

FEEDER SCHEDULE:

FEEDER TAG	FEEDER DESCRIPTION
44	(4)#8, (1)#10 G, 3/4" C
104	(4)#3, (1)#8 G, 1-1/4" C
153	(3)#1/0, (1)#6 G, 1-1/2" C
173	(3)#2/0, (1)#6 G, 1-1/2" C
224	(4)#4/0, (1)#4G, 2-1/2" C
AS1204	(4) 3" C, EACH W/ (4)-500 kcmil
G30	#3/0 COPPER GROUND, 1" C
MBJ	MAIN BONDING JUMPER, #3/0
V104C	(4)#1/0, (1)#4 G, 2" C
V224B	(4)300 kcmil, (1)#2 G, 3" C



1 ELECTRICAL ONE-LINE DIAGRAM
NTS

Short-Circuit and Voltage Drop Calculations

Version 2.12

Distances are for calculation purposes only and shall not be used for contractor takeoffs nor bidding - Contractor shall notify Engineer of any field condition that results in a change of 10% or greater circuit distance

The following calculations are based on the "Point-by-Point" method where:

ISC (2) = ISC(1) x M(1) M= 1/(1+f)

ISC (1) = short circuit current at fault point 1

ISC (2) = short circuit current at fault point 2

Feeder: $f\ (3Ø) = \frac{1.732 \times L \times Isc}{C \times E}$

Feeder: $f\ (1Ø) = \frac{2 \times L \times Isc}{C \times E}$

XFMR: $f\ (3Ø) = \frac{IP(sca) \times Vp \times 1.73 \times \%Z}{100{,}000 \times KVA}$

XFMR: $f\ (1Ø) = \frac{IP(sca) \times Vp \times \%Z}{100{,}000 \times KVA}$

$IS(sca) = \frac{Vp \times M \times IP(sca)}{Vs}$

VOLTAGE DROP (3Ø):
%VD = ((R x cos(arccos(pf)) + X x sin (arccos(pf))) x L/# x I x 1.73) / E

VOLTAGE DROP (1Ø):
%VD = ((R x cos(arccos(pf)) + X x sin(arccos(pf))) x 2 x L/# x I) / E

E = Line to line volts
IP = Primary short circuit current
Vp = Primary voltage
IS= Secondary short circuit current
Vs= Secondary voltage
L = Length of circuit
C = "C" Factor from Bussman table where "C" = 1 / impedance per linear foot

%VD CUM = Cumulative Voltage Drop from Fault Point 1 to Fault Point #
R = resistance in ohms per LF
X = reactances in ohms per LF

Feeder Types: NM - Non Magnetic Conduit, M - Magnetic Conduit, FB - Feeder Busway, PB - Plug-in Busway, TX - Transformer

System Voltage: 208Y/120V - 3 phase

Date of Calculations: 10/25/2023

Fault Point (F#)	Bus/Feeder Description	Source (Fault Point)	Phase	Source Isc (amps)	Feeder: Conduit Type/ TX	Feeder: Material	Feeder: Quantity of Parallel Sets and Bus/ Phase & Neutral Size	Conductor 'C' Value	Busway 'C' Value	L-L Voltage (E)	Circuit Length (L)	Load Power Factor (pf)	Circuit Load (Amperage)
1	Utility Service Point			27,757	at the secondary of the utility transformer								
	Motor Contribution			480	The connected full load motor amps (includes compressors) on the system								
2	DP	1	3	30,637	NM	AL	4 Set(s) of 500 kcmil	21391	--	208	45	0.9	960
3	L1	1	3	30,637	M	CU	1 Set(s) of 4/0 AWG	15082	--	208	15	0.9	160
4	L2	1	3	30,637	M	CU	1 Set(s) of 300 kcmil	18177	--	208	205	0.9	160
5	K	1	3	30,637	M	CU	1 Set(s) of 1/0 AWG	8925	--	208	180	0.95	80
6	M	1	3	30,637	M	CU	1 Set(s) of 4/0 AWG	15082	--	208	10	0.85	160
7	RTU-1	1	3	30,637	M	CU	1 Set(s) of 3/0 AWG	12844	--	208	55	0.85	160
8	RTU-2	1	3	30,637	M	CU	1 Set(s) of 3/0 AWG	12844	--	208	40	0.85	160
9	CS-1	1	3	30,637	NM	CU	1 Set(s) of 1/0 AWG	9317	--	208	140	0.9	80
10	CS-2	1	3	30,637	NM	CU	1 Set(s) of 3	4811	--	208	80	0.9	80

Fault Point (F#)	Conductor: Resistance (R)	Conductor: Reactance (X)	Conductor: Arccos (pf) (Radians)	Transformer: Type	Transformer: Degree Rise	Transformer: kVA	Transformer: New Xfmr Z	Transformer: Existing Xfmr Z	Transformer: Secondary Voltage	Transformer: Tap Setting	f	M	Fault Current (amps)	Voltage Drop (%VD)	Cumulative Voltage Drop (%VD)	Fault Point (F#)
1										Source Isc + 6X Motor Contribution =			30,637			1
2	0.000043	0.000039	0.451027								0.134	0.88	27,013	-0.50%	-0.50%	2
3	0.000063	0.000051	0.451027								0.254	0.80	24,437	-0.16%	-0.16%	3
4	0.000045	0.000051	0.451027								2.877	0.26	7,902	-1.71%	-1.71%	4
5	0.000120	0.000055	0.317560								5.145	0.16	4,985	-1.57%	-1.57%	5
6	0.000063	0.000051	0.554811								0.169	0.86	26,204	-0.11%	-0.11%	6
7	0.000079	0.000052	0.554811								1.092	0.48	14,642	-0.69%	-0.69%	7
8	0.000079	0.000052	0.554811								0.795	0.56	17,073	-0.50%	-0.50%	8
9	0.000120	0.000044	0.451027								3.834	0.21	6,338	-1.19%	-1.19%	9
10	0.000250	0.000047	0.451027								4.242	0.19	5,844	-1.31%	-1.31%	10

ONE-LINE DIAGRAM GENERAL NOTES:

1. THE INFORMATION SHOWN IN THE SHORT-CIRCUIT AND VOLTAGE DROP CALCULATIONS SCHEDULE IS SHOWN FOR CALCULATION PURPOSES ONLY. CONTRACTOR SHALL NOT USE THE CONDUIT TYPES, CONDUCTOR TYPES, SIZES, QUANTITIES OR LENGTHS FOR TAKEOFFS OR BIDDING PURPOSES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN THIS SCHEDULE AND OTHER PORTIONS OF THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL NOTIFY ENGINEER OF AS-BUILT CONDITIONS THAT CONSTITUTE A CHANGE FROM WHAT IS SHOWN BELOW; THIS INCLUDES CONDUCTOR LENGTHS DIFFERING BY MORE THAN 10%.
2. REFER TO THE SHORT-CIRCUIT AND VOLTAGE DROP CALCULATIONS TABLE ON THIS SHEET. AVAILABLE FAULT CURRENT INFORMATION IS LISTED UNDER THE "FAULT CURRENT" COLUMN. VOLTAGE DROP VALUES ARE LISTED UNDER THE "CUMULATIVE VOLTAGE DROP" COLUMN. THE AIC/SCCR RATING OF THE EQUIPMENT SHALL NOT BE LESS THAN THE AVAILABLE 3-PHASE SYMMETRICAL FAULT CURRENT. ALL SERIES RATED EQUIPMENT SHALL BE PROPERLY LISTED AND LABELED PER CODE.
3. FEEDER NUMBER DESIGNATIONS PRECEDED BY "V" INDICATE THAT THE CONDUCTORS ARE UP-SIZED DUE TO VOLT-DROP CONSIDERATIONS. PROVIDE LUG ADAPTERS AS NEEDED IN ORDER TO PROPERLY LAND CONDUCTORS AT TERMINATION(S).
4. FEEDER SIZES ARE BASED ON COPPER (CU) THHN/THWN-2 INSULATION, UNLESS NOTED OTHERWISE. CONDUIT SIZES SHOWN ARE APPROPRIATE FOR SCHEDULE 40 PVC, EMT, GRS, IMC AND RMC; ADJUST SIZE AS NEEDED FOR OTHER RACEWAY TYPES. NUMBER DESIGNATIONS PRECEDED BY "A" INDICATE THAT THE SIZE IS BASED ON ALUMINUM (AL) WIRE. AL CONDUCTOR SIZES ARE BASED ON XHHW-2 INSULATION, UNLESS NOTED OTHERWISE. AL WIRE MAY BE SUBSTITUTED FOR CU FEEDERS AS ALLOWED BY CODE, SPECIFICATIONS AND OWNER, UNLESS NOTED OTHERWISE. AT CONTRACTOR'S OPTION, CU WIRE MAY BE SUBSTITUTED FOR AL, UNLESS NOTED OTHERWISE. ALL CONDUCTOR SIZES ARE BASED ON 75 DEG C RATED TERMINATIONS, UNLESS NOTED OTHERWISE. FOR ANY OTHER CONDITIONS MODIFY SIZES PER CODE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. BRANCH CIRCUIT SIZES ARE BASED ON COPPER (CU) THHN/THWN-2 INSULATION, UNLESS NOTED OTHERWISE. CONDUIT SIZES SHOWN ARE APPROPRIATE FOR SCHEDULE 40 PVC, EMT, GRS, IMC AND RMC; ADJUST SIZE AS NEEDED FOR OTHER RACEWAY TYPES. ALL CONDUCTOR SIZES ARE BASED ON 60 DEG C RATED TERMINATIONS, UNLESS NOTED OTHERWISE. FOR ANY OTHER CONDITIONS MODIFY SIZES PER CODE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. INSTALL FEEDERS OVERHEAD AS HIGH AS PRACTICABLE AND ORTHOGONALLY ALONG BUILDING STRUCTURE, UNLESS NOTED OTHERWISE. COORDINATE FINAL ROUTING WITH OTHER TRADES.
7. CIRCUIT BREAKERS RATED 1200A OR HIGHER SHALL HAVE APPROPRIATE DOCUMENTATION AND METHOD TO REDUCE CLEARING TIME IN ORDER TO REDUCE ARC FLASH ENERGY PER CODE. PROVIDE ELECTRONIC TRIP UNIT WITH INSTANTANEOUS TRIP AND ENERGY-REDUCING MAINTENANCE SWITCH WITH LOCAL STATUS INDICATOR FOR COMPLIANCE. PROVIDE PROVISIONS TO INTERFACE WITH OWNER ALARM/MONITORING SYSTEM TO INDICATE MAINTENANCE SWITCH STATUS.
8. PROVIDE A PERMANENT LABEL ON FRONT OF EQUIPMENT ENCLOSURE; REFER TO SPECIFICATIONS FOR LABEL REQUIREMENTS. LABEL SHALL READ AS FOLLOWS (INCLUDE RESPECTIVE NAMES IN BLANKS):

ELECTRICAL UTILITY CONTACT NOTE:

UTILITY COMPANY: EVERGY
UTILITY CONTACT: RON DEJARNETTE
EMAIL: RON.DEJARNETTE@EVERGY.COM

FAULT CURRENT GENERAL NOTE (ESTIMATED VALUE):

THE MAXIMUM AVAILABLE 3-PHASE SYMMETRICAL FAULT CURRENT VALUE AT THE UTILITY TRANSFORMER SECONDARY/POINT OF SERVICE COULD NOT BE DETERMINED AT THE TIME OF THIS SUBMITTAL. THE ESTIMATED WORST CASE VALUE OF 27,757A IS BASED ON AN INFINITE BUS CALCULATION AT THE UTILITY TRANSFORMER. CONTRACTOR SHALL VERIFY ACTUAL AVAILABLE FAULT CURRENT VALUE WITH UTILITY. NOTIFY ENGINEER IF ACTUAL VALUE EXCEEDS ESTIMATED CALCULATED VALUE. ESTIMATED DESIGN VALUE IS BASED ON THE FOLLOWING:

UTILITY TRANSFORMER SECONDARY VOLTAGE: 208Y/120V, 3Ø, 4W
UTILITY TRANSFORMER SIZE: 500KVA, Z=5.0%

OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY GENERAL NOTE:

1. CONTRACTOR SHALL PROVIDE AN OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY TO DETERMINE THE CORRECT SETTINGS FOR THE ADJUSTABLE TRIP CIRCUIT BREAKERS, TO ENSURE SELECTIVE COORDINATION AND TO DOCUMENT ARC-FLASH HAZARDS. CODE REQUIRED EMERGENCY AND LEGALLY REQUIRED STANDBY SYSTEMS SHALL BE SELECTIVELY COORDINATED WITH ALL SUPPLY-SIDE OVERCURRENT PROTECTIVE DEVICES (APPLIES TO BOTH THE NORMAL AND EMERGENCY POWER SOURCES). PROVIDE ALL NECESSARY AS-BUILT INFORMATION REQUIRED FOR COMPLETION OF THE STUDY TO THE ENGINEER DOING THE STUDY. PROVIDE SUBMITTALS INDICATED WITHIN THE SPECIFICATIONS TO OWNER AND ARCHITECT/ENGINEER TO CONFIRM STUDY HAS BEEN COMPLETED. CONTRACTOR SHALL INCLUDE THE COST FOR THIS WORK IN THEIR BID. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. THE OWNER SHALL FURNISH INDICATED PORTIONS OF THE ELECTRICAL DISTRIBUTION EQUIPMENT TO THE CONTRACTOR FOR INSTALLATION. THE OWNER WILL ALSO PROVIDE THE OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY TO THE CONTRACTOR. THE OWNER FURNISHED COORDINATION STUDY SHALL INCLUDE THE CORRECT SETTINGS FOR THE ADJUSTABLE TRIP CIRCUIT BREAKERS, ENSURE SELECTIVE COORDINATION AND DOCUMENT ARC-FLASH HAZARDS. CODE REQUIRED EMERGENCY AND LEGALLY REQUIRED STANDBY SYSTEMS SHALL BE SELECTIVELY COORDINATED WITH ALL SUPPLY-SIDE OVERCURRENT PROTECTIVE DEVICES, (APPLIES TO BOTH THE NORMAL AND EMERGENCY POWER SOURCES). THE CONTRACTOR SHALL PROVIDE NECESSARY AS-BUILT INFORMATION TO COMPLETE THE STUDY.

ONE-LINE DIAGRAM SUPPLEMENTAL SPECIFICATIONS:

1. GROUNDING ELECTRODE SYSTEM SHALL BE PER LOCAL REQUIREMENTS AND SHALL NOT BE LESS STRINGENT THAN THAT SPECIFIED IN THE CONSTRUCTION DOCUMENTS.
2. PROVIDE PROPERLY SIZED LUGS FOR ALL EQUIPMENT, CIRCUIT BREAKERS, AND OTHER ELECTRICAL DEVICES TO ACCOMMODATE INSTALLED CONDUCTORS. A LARGER FRAME, OVERSIZED LUGS OR NON-STANDARD PRODUCT MAY BE REQUIRED IN SOME INSTANCES. UTILIZE PIN ADAPTERS ONLY IF NECESSARY AND ONLY AS ALLOWED BY MANUFACTURER AND AHJ.
3. PROVIDE ANY AVAILABLE SPACE IN SWITCHBOARDS/PANELBOARDS WITH BUSSING.
4. PROVIDE (4) EMPTY 1" CONDUITS WITH PULL STRINGS FROM EACH RECESSED PANELBOARD UP TO ACCESSIBLE CEILING SPACE. CAP AND LABEL CONDUITS FOR FUTURE USE.
5. PROVIDE TYPED FINAL CIRCUIT DIRECTORY FOR ALL PANELBOARDS TO REFLECT ACTUAL AS-BUILT CONDITIONS. COORDINATE FINAL ROOM NAMES, NUMBERS AND DESCRIPTIONS WITH OWNER PRIOR TO COMPLETION. CIRCUIT DESCRIPTIONS SHALL BE PER CODE AND SHALL BE DISTINGUISHABLE FROM ALL OTHERS.

GLMV Architecture

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EXPIRES 10/31/2024

10/30/2023
STATE OF MISSOURI
BRIAN OLLIGES
NUMBER PE-2022017790
PROFESSIONAL ENGINEER

BRIAN C. OLLIGES
LICENSE # PE-2022017790

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		TJL
CHECKED BY:		JS

ELECTRICAL ONE-LINE DIAGRAM

E-500

BRIAN C. OLLIGES

PLOT DATE: 10/30/2023 5:53:02 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMO-MEPF_V23.rvt

PANELBOARD: M (NEW)

BUS AMPS: 225A
MAIN SIZE/TYPE: MLO
VOLTS/PHASE: 208Y/120 V 3P/4W
SUPPLIED BY: DP

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: MECHANICAL
MOUNTING: SURFACE
LOCATION: MECH/ELEC

EQUIPMENT GROUND BUS
LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A		PHASE B		PHASE C		P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	RP-1	Z		12	15	1	100	2392					2	30	10	VD	C	CU-1	2
3	RP-2	Z		12	15	1			100	2392									4
5	WHG-2	Z U		12	20	1					700	1872	2	30	10	VD	C	CU-2	6
7	WHG-1	Z U		12	20	1	700	1872											8
9	MOTORIZED DAMPERS - 116	Z		12	20	1			50	1456			2	25	10	VD	Z	CU-3	10
11	EF-1 & EF-2	Z		12	15	1					744	1456							12
13	EF-3	Z		12	15	1	372	1152					2	20	12		M	B.A.F. - 1	14
15	TS-1 FOH	Z		12	20	1			100	1152									16
17	TS-1 BOH	M		12	20	1					100	1152	2	20	12		M	B.A.F. - 2	18
19	FCU-1	M	VD	10	20	2	832	1152											20
21									832	1560			2	20	10		C	CU-4	22
23	FCU-2	M	VD	10	20	2					1400	1560							24
25							1400	0					1					EQUIPPED SPACE	26
27	FCU-3	M		12	20	2			728	0			1					EQUIPPED SPACE	28
29											728	0	1					EQUIPPED SPACE	30
31	EQUIPPED SPACE					1	0	0					1					EQUIPPED SPACE	32
33	EQUIPPED SPACE					1			0	0			1					EQUIPPED SPACE	34
35	EQUIPPED SPACE					1					0	0	1					EQUIPPED SPACE	36
37	EQUIPPED SPACE					1	0	0					1					EQUIPPED SPACE	38
39	EQUIPPED SPACE					1			0	0			1					EQUIPPED SPACE	40
41	EQUIPPED SPACE					1					0	0	1					EQUIPPED SPACE	42

	PHASE A	PHASE B	PHASE C
TOTAL LOAD (VA):	9973 VA	8370 VA	9712 VA
TOTAL AMPS:	85 A	70 A	83 A

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	11648 VA	100%	11648 VA
HEATING (H)	0 VA	0%	0 VA
LIGHTING (L)	0 VA	125%	0 VA
RECEPTACLES (R)	0 VA	0%	0 VA
MOTORS (M)	7820 VA	100%	7820 VA
SUPPLEMENTAL HEAT (U)	200 VA	100%	200 VA
MISC EQUIP (Z)	5578 VA	100%	5578 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGNAGE (S)	0 VA	125%	0 VA
KITCHEN (K)	0 VA	100%	0 VA
LARGEST MOTOR (2HP)	2810 VA	125%	3513 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA

PANELBOARD NOTES

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	28056 VA
TOTAL NEC LOAD	28759 VA
TOTAL CONNECTED CURRENT	78 A
TOTAL NEC DEMAND CURRENT	80 A

PANELBOARD: K (NEW)

BUS AMPS: 100A
MAIN SIZE/TYPE: MLO
VOLTS/PHASE: 208Y/120 V 3P/4W
SUPPLIED BY: DP

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: CATERING KITCHEN
MOUNTING: RECESSED
LOCATION: CATERING

EQUIPMENT GROUND BUS
LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A		PHASE B		PHASE C		P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	RCPT - CATERING KITCHEN - 4	R		12	20	1	1500	1500					1	20	12	GF	R	RCPT - WARMING CAB - 3	2
3	RCPT - CATERING KITCHEN - 5	R		12	20	1			1500	1500			1	20	12	GF	R	RCPT - WARMING CAB. - 4	4
5	RCPT - CATERING KITCHEN - 6	R		12	20	1					1500	180	1	20	12		R	RCPT - CATERING KITCHEN	6
7	RCPT - CATERING KITCHEN - 9	R		12	20	1	1500	1500					1	20	12		R	RCPT - CATERING KITCHEN - 8	8
9	RCPT - CATERING KITCHEN - 10	R		12	20	1			1500	1500			1	20	12		R	RCPT - CATERING KITCHEN - 7	10
11	RCPT - CATERING KITCHEN - GEN	R		12	20	1					360	1500	1	20	12		R	RCPT - CATERING KITCHEN - 3	12
13	RCPT - CATERING KITCHEN - 2	R		12	20	1	1500	1500					1	20	12		R	RCPT - CATERING KITCHEN - 1	14
15	RCPT - ICE MAKER	R	GF	12	20	1			1500	2400			2	30	12	GF	R	RCPT - COFFEE VENDOR	16
17	RCPT - FREEZER - 2	R	GF	12	20	1					1500	2400							18
19	RCPT - FRIDGE - 1	R	GF	12	20	1	1500	1500					1	20	12	GF	R	WATER FOUNTAIN RM 101	20
21	RCPT - WARMING CAB. - 1	R	GF	12	20	1			1500	1500			1	20	12	GF	R	WATER FOUNTAIN RM 112	22
23	RCPT - WARMING CAB. - 2	R	GF	12	20	1					1500	0	1	20				SPARE	24
25	EQUIPPED SPACE					1	0	0					1					EQUIPPED SPACE	26
27	EQUIPPED SPACE					1			0	0			1					EQUIPPED SPACE	28
29	EQUIPPED SPACE					1					0	0	1					EQUIPPED SPACE	30

	PHASE A	PHASE B	PHASE C
TOTAL LOAD (VA):	12000 VA	12900 VA	8940 VA
TOTAL AMPS:	104 A	111 A	75 A

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	0 VA	0%	0 VA
HEATING (H)	0 VA	100%	0 VA
LIGHTING (L)	0 VA	125%	0 VA
RECEPTACLES (R)	33840 VA	65%	21920 VA
MOTORS (M)	0 VA	100%	0 VA
SUPPLEMENTAL HEAT (U)	0 VA	100%	0 VA
MISC EQUIP (Z)	0 VA	100%	0 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGNAGE (S)	0 VA	125%	0 VA
KITCHEN (K)	0 VA	100%	0 VA
LARGEST MOTOR	0 VA	125%	0 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA

PANELBOARD NOTES

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	33840 VA
TOTAL NEC LOAD	21920 VA
TOTAL CONNECTED CURRENT	94 A
TOTAL NEC DEMAND CURRENT	61 A

PANELBOARD: L1 (NEW)

BUS AMPS: 225A
MAIN SIZE/TYPE: MLO
VOLTS/PHASE: 208Y/120 V 3P/4W
SUPPLIED BY: DP

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: BOH & FARMER MARKET
MOUNTING: SURFACE
LOCATION: BOH

EQUIPMENT GROUND BUS
LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A		PHASE B		PHASE C		P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	RCPT - FARMER'S MARKET - 16	R		12	20	1	1500	1596					1	20	12		L Z	LTG RMS 111-118	2
3	RCPT - TV WALL	Z		12	20	1			1920	1500			1	20	12	FA	Z	FACP	4
5	RCPT - STORAGE	R		12	20	1					1080	200	1	20	12		Z	DOOR ACCESS BOH	6
7	RCPT - TV RM 110 -3	Z		12	20	1	1920	960					1	20	12	FA	Z	FA-RPS	8
9	RCPT - FARMER'S MARKET - 2	R		12	20	1			1500	180			1	20	12		R	RCPT - CORR. 112	10
11	RCPT - FARMER'S MARKET - 3	R		12	20	1					1500	360	1	20	12		R	RCPT - IT GENERAL	12
13	RCPT - FARMER'S MARKET - 4	R		12	20	1	1500	2500					2	40	8		L	INV1	14
15	RCPT - FARMER'S MARKET - 5	R		12	20	1			1500	2500									16
17	RCPT - FARMER'S MARKET - 6	R		12	20	1					1500	360	1	20	12		R	RCPT - EXTERIOR - 3	18
19	RCPT - FARMER'S MARKET - 7	R		12	20	1	1500	0					1	20				SPARE	20
21	RCPT - FARMER'S MARKET FLOOR - 1	R		12	20	1			1500	0			1	20				SPARE	22
23	RCPT - FARMER'S MARKET FLOOR - 2	R		12	20	1					1500	0	1	20				SPARE	24
25	RCPT - FARMER'S MARKET FLOOR - 3	R		12	20	1	1500	0					1	20				SPARE	26
27	RCPT - FARMER'S MARKET FLOOR - 4	R		12	20	1			1500	0			1	20				SPARE	28
29	RCPT - FARMER'S MARKET FLOOR - 5	R		12	20	1					1500	0	1	20				SPARE	30
31	RCPT - FARMER'S MARKET FLOOR - 6	R		12	20	1	1500	0					1	20				SPARE	32
33	RCPT - TV RM 110 -2	Z		12	20	1			1920	0			1	20				SPARE	34
35	RCPT - FARMER'S MARKET - 9	R		12	20	1					1500	0	1	20				SPARE	36
37	RCPT - FARMER'S MARKET - 10	R		12	20	1	1500	0					1	20				SPARE	38
39	RCPT - FARMER'S MARKET - 11	R		12	20	1			1500	0			1	20				SPARE	40
41	RCPT - FARMER'S MARKET - 12	R		12	20	1					1500	0	1	20				SPARE	42
43	RCPT - FARMER'S MARKET - 13	R		12	20	1	1500	0					1	20				SPARE	44
45	RCPT - FARMER'S MARKET - 14	R		12	20	1			1500	0			1	20				SPARE	46
47	RCPT - R.R. LAVATORIES 113	R		12	20	1					180	0	1	20				SPARE	48
49	RCPT - BACK OF HOUSE	R		12	20	1	360	0					1	20				SPARE	50
51	RCPT - IT RACK RM 118 - 1	Z		12	20	1			1920	0			1	20				SPARE	52
53	RCPT - IT RACK RM 118 - 2	Z		12	20	1					1920	0	1	20				SPARE	54
55	EQUIPPED SPACE					1	0	0					1					EQUIPPED SPACE	56
57	EQUIPPED SPACE					1			0	0			1					EQUIPPED SPACE	58
59	EQUIPPED SPACE					1					0	0	1					EQUIPPED SPACE	60

	PHASE A	PHASE B	PHASE C
TOTAL LOAD (VA):	17835 VA	18940 VA	13100 VA
TOTAL AMPS:	155 A	164 A	109 A

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	0 VA	0%	0 VA
HEATING (H)	0 VA	100%	0 VA
LIGHTING (L)	6581 VA	125%	8226 VA
RECEPTACLES (R)	31020 VA	66%	20510 VA
MOTORS (M)	0 VA	100%	0 VA
SUPPLEMENTAL HEAT (U)	0 VA	100%	0 VA
MISC EQUIP (Z)	12275 VA	100%	12275 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGNAGE (S)	0 VA	125%	0 VA
KITCHEN (K)	0 VA	100%	0 VA
LARGEST MOTOR	0 VA	125%	0 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA

PANELBOARD NOTES

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	49876 VA
TOTAL NEC LOAD	41011 VA
TOTAL CONNECTED CURRENT	138 A
TOTAL NEC DEMAND CURRENT	114 A

PANELBOARD: L2 (NEW)

BUS AMPS: 225A
MAIN SIZE/TYPE: MLO
VOLTS/PHASE: 208Y/120 V 3P/4W
SUPPLIED BY: DP

FAULT CURRENT: REFER TO ONE-LINE DIAGRAM
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: FOH & FARMER MARKET
MOUNTING: SURFACE
LOCATION: MECH/ELEC

EQUIPMENT GROUND BUS
LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A		PHASE B		PHASE C		P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	RCPT - FARMER'S MARKET - 20	R		12	20	1	1500	1920					1	20	12		Z	RCPT - TV RM 110 -1	2
3	LTG RM 110 - CKT 1	L		12	20	1			1232	1920			1	20	12		Z	RCPT - TV RM 110 -4	4
5	RCPT - MECH/ELEC GENERAL	R		12	20	1					360	180	1	20	12		R	RCPT - FARMER'S MARKET - 21	6
7	RCPT - IT MECH/ELEC (2)	Z		12	20	1	1920	1500					1	20	12		R	RCPT - FARMER'S MARKET - 19	8
9	RCPT - IT MECH/ELEC (1)	Z		12	20	1			1920	1664			2	20	10	VD	L	LTG - SITE - 7 (FUTURE)	10
11	RCPT - JAN.	R		12	20	1					180	1664							12
13	MOTORIZED DAMPERS	Z		12	20	1	100	1664					2	20	10	VD	L	LTG - SITE - 6 (FUTURE)	14
15	RCPT - R.R. LAVATORIES	R		12	20	1			180	1664									16
17	RCPT - FAMILY	R		12	20	1					180	1664	2	20	10	VD	L	LTG - SITE - 5 (FUTURE)	18
19	RCPT - MOTHER'S	R		12	20	1	180	1664											20
21	RCPT - TV RM 100	Z		12	20	1			1920	1920			1	20	10	VD	L	LTG - SITE - 4 (FUTURE)	22
23	RCPT - EXTERIOR FOH	R		12	20	1					540	1920	1	20	10	VD	L	LTG - SITE - 3 (FUTURE)	24
25	RCPT - EXTERIOR - 1	R		12	20	1	540	1920					1	20	10	VD	L	LTG - SITE - 2 (FUTURE)	26
27	RCPT - EXTERIOR - 2	R		12	20	1			1080	1920			1	20	10	VD	L	LTG - SITE - 1 (FUTURE)	28
29	LTG RMS 100-106	L Z		12	20	1					1696	1920	1	20	10	VD	R	RCPT - SITE - 1 (FUTURE)	30
31	DOOR ACCESS FOH	Z		12	20	1	260	1920					1	20	10	VD	R	RCPT - SITE - 2 (FUTURE)	32
33	RCPT - ROOF HOLIDAY - 2	R		12	20	1			900	1920			1	20	10	VD	R	RCPT - SITE - 3 (FUTURE)	34
35	RCPT - ROOF HOLIDAY - 1	R		12	20	1					900	1920	1	20	10	VD	R	RCPT - SITE - 4 (FUTURE)	36
37	BACK-LIT ENTRANCE SIGNAGE	L		12	20	1	50	1920					1	20	10	VD	R	RCPT - SITE - 5 (FUTURE)	38
39	LTG - EXT. WALL SCONCES - 1	L		12	20	1			624	1584			1	20	10		L	LTG OUTDOOR VENUE CANOPY	40
41	RCPT - FARMER'S MARKET - 1	R		12	20	1					1500	1860	1	20	12		R	RCPT - RM 100-101	42
43	RCPT - FARMER'S MARKET - 15	R		12	20	1	1500	540					1	20	12		R	RCPT - ROOF MAINT.	44
45	RCPT - FARMER'S MARKET - 8	R		12	20	1			1500	1920			1	20	12		Z	RCPT - TV RM 101	46
47	LTG RM 110 - CKT 2	L		12	20	1					1232	0	1	20				SPARE	48
49	LTG RM 110 - CKT 3	L		12	20	1	880	0					1	20				SPARE	50
51	SPARE				20	1			0	0			1	20				SPARE	52
53	SPARE				20	1					0	0	1	20				SPARE	54
55	EQUIPPED SPACE					1	0	0					1					EQUIPPED SPACE	56
57	EQUIPPED SPACE					1			0	0			1					EQUIPPED SPACE	58
59	EQUIPPED SPACE					1					0	0	1					EQUIPPED SPACE	60

	PHASE A	PHASE B	PHASE C
TOTAL LOAD (VA):	19978 VA	23868 VA	17716 VA
TOTAL AMPS:	169 A	202 A	148 A

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	0 VA	0%	0 VA
HEATING (H)	0 VA	100%	0 VA
LIGHTING (L)	24957 VA	125%	31196 VA
RECEPTACLES (R)	24720 VA	70%	17360 VA
MOTORS (M)	0 VA	100%	0 VA
SUPPLEMENTAL HEAT (U)	0 VA	100%	0 VA
MISC EQUIP (Z)	11885 VA	100%	11885 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGNAGE (S)	0 VA	125%	0 VA
KITCHEN (K)	0 VA	100%	0 VA
LARGEST MOTOR	0 VA	125%	0 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA

PANELBOARD NOTES

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	61562 VA
TOTAL NEC LOAD	60441 VA
TOTAL CONNECTED CURRENT	171 A
TOTAL NEC DEMAND CURRENT	168 A

GLMVArchitecture

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EXPIRES 10/31/2024

10/30/2023
STATE OF MISSOURI
BRIAN OLLIGES
NUMBER PE-2022017790
PROFESSIONAL ENGINEER

BRIAN C. OLLIGES
LICENSE # PE-2022017790

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	TJL
CHECKED BY:	JS

ELECTRICAL SCHEDULES

E-501

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	SERIES / MODEL	TYPE	CRI	CCT	LUMENS	DIMMING TYPE	VOLTAGE	INPUT WATTS	INPUT VA	DESCRIPTION	NOTES
L1	LITHONIA LIGHTING	CLX-L48-5000LM-SEF-WDL-MVOLT-EZ1-35K-80CRI	LED	80	3500K	5,000	0-10V	120/277	31.8	35	4' LED FLAT LENS STRIP. PROVIDE ALL MOUNTING ACCESSORIES FOR INTENDED CEILING TYPE INDICATED ON PLANS. COORDINATE INSTALLATION WITH OTHER DISCIPLINES. MH: 10FT AFF	
L1E	LITHONIA LIGHTING	CLX-L48-5000LM-SEF-WDL-MVOLT-EZ1-35K-80CRI-E10WLP	LED	80	3500K	5,000	0-10V	120/277	31.8	35	SAME AS TYPE L1, EXCEPT WITH INTEGRAL 1400 LUMENS EMERGENCY BATTERY PACK.	
L2	MARK ARCHITECTURAL LIGHTING	MCV504-LCB-MSL4-80CRI-35K-400LMF-ASYM-MIN1-MVOLT-SGW-ZT	LED	80	3500K	400/FT	0-10V	120/277	3.6/FT	4/FT	CONTINOUS RUN LED COVE FIXTURE. MOUNT IN ARCHITECTURAL COVE WITH MARKCOVE EXTRUSION FOR INDIRECT LIGHTING. COORDINATE WITH ARCHITECTURAL COVE CEILING CONSTRUCTION.	
L3	LITHONIA LIGHTING	2TL4-40L-FW-A19-EZ1-LP840	LED	80	4000K	3,918	0-10V	120/277	32	35	RECESSED LED TROFFER SUITABLE FOR DAMP LOCATIONS.	
L3E	LITHONIA LIGHTING	2TL4-40L-FW-A19-EZ1-LP840-EL14L	LED	80	4000K	3,918	0-10V	120/277	32	35	SAME AS TYPE L3, EXCEPT WITH INTEGRAL 1400 LUMEN EMERGENCY BATTERY PACK.	
L4	LITHONIA LIGHTING	LDN6-35/20-L06-WR-LSS-TRW-MVOLT-EZ1	LED	80	3500K	2,006	0-10V	120/277	22.5	25	6" RECESSED LED DOWNLIGHT WITH WHITE OPEN TRIM AND DIFFUSING OPTICAL LENS.	
L4E	LITHONIA LIGHTING	LDN6-35/20-L06-WR-LSS-TRW-MVOLT-EZ1-EL	LED	80	3500K	2,006	0-10V	120/277	22.5	25	SAME AS TYPE L4, EXCEPT WITH INTEGRAL 10W EMERGENCY BATTERY PACK.	
L5	METEOR	DSM10-80-358-UNV-STV-WD-BLK-ST2-NO-OUT	LED	85	3500K	10,320	0-10V	120/277	80	88	10.7" HIGH BAY LED LUMINARE WITH IP65 OUTDOOR RATING. PENDANT MOUNT TO STRUCTURAL CEILNG. COORDINATE CONDUIT ROUTING STRUCTURAL FRAMING AND ARCHITECT PRIOR TO ROUGH-IN. MH:41FT AFF	
L6	METEOR	DSM10-80-358-UNV-STV-WD-BLK-BRK-NO-OUT	LED	85	3500K	10,320	0-10V	120/277	80	88	10.7" HIGH BAY LED LUMINARE WITH IP65 OUTDOOR RATING.SURFACE MOUNT TO CANOPY STRUCTURE FRAMING. COORDINATE CONDUIT ROUTING WITH CANOPY MANUFACTURER AND ARCHITECT PRIOR TO ROUGH-IN. MH: 41FT AFF	
L7	LUMENS	MXH2074443	LED A-19	90	3000K	1,000	NON-DIM	120	20	22	LARGE 5"W X 22"H X 6.25" DEEP DECORATIVE EXTERIOR WALL SCONCE. COORDINATE MOUNTED HEIGHT WITH ARACHITECTURAL ELEVATIONS.	
L8	BEGA	24 374	LED	80	3000K	1,077	0-10V	120/277	12.3	14	EXTERIOR LED WALL PACK WITH INTEGRAL PHOTOCELL. PROVIDE PRODUCT FINISH AS DIRECTED BY ARCHITECT. MOUNT BOTTOM OF FIXTURE 12" ABOVE DOOR.	
L9	MARK ARCHITECTURAL LIGHTING	SL6L-LOP-6'8"-FLP-GB-80CRI-35K-600LMF-MIN1-120-BLKT-ZT	LED	80	3500K	600/FT	0-10V	120/277	6/FT	7/FT	FLUSH MOUNTED 6" LED SLOT FIXTURE. MOUNT IN ARCHITECURAL PLANK CEILING. COORDINATE INSTALLATION REQUIREMENTS WITH CEILING MANUFACTURER. PROVIDE FLANGELESS MOUNTING ACCESSORY.	
L9E	MARK ARCHITECTURAL LIGHTING	SL6L-LOP-6'8"-FLP-GB-80CRI-35K-600LMF-MIN1-120-BLKT-1E10WLCP-ZT	LED	80	3500K	600/FT	0-10V	120/277	6/FT	7/FT	SAME AS TYPE L9, EXCEPT (4') WITH INTEGRAL 700 LUMENS EMERGENCY BATTERY PACK.	
X	LITHONIA LIGHTING	EDGE-LIT EDGR-G-EL	LED	-	-	-	-	120/277	3	3	EDGE-LIT RECESSED LED EXIT SIGN. PROVIDE MOUNTING ACCESSORIES, DIRECTIONAL CHEVRONS, AND NUMBER OF FACES AS INDICATED ON FLOOR PLANS.	

GENERAL NOTES:

A. REFER TO LIGHT FIXTURE SCHEDULE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

NOTES:

1.NOT USED.

LIGHTING CONTROL DEVICE SCHEDULE

NETWORK LIGHTING CONTROL SYSTEMS

NETWORK OCCUPANCY SENSORS

SYMBOL TAG	MANUFACTURER MODEL/SERIES	ALTERNATE MANUFACTURER	DEVICE DESCRIPTION	COVERAGE (W X D)	VOLTAGE	NOTES
OS	LEGRAND LMDC-100	ACUITY, CRESTRON ETC, HUBBELL	CEILING MOUNT DUAL TECHNOLOGY OCCUPANCY SENSOR. 360 DEGREE COVERAGE. DIGITAL. (2) RJ45 PORTS. IR TRANSCEIVER FOR WIRELESS SETUP.	PIR MAJOR 32' Ø PIR MINOR 15' Ø ULT MAJOR 25' x 25'	24	

NETWORK ROOM CONTROLLERS (POWER PACK)

SYMBOL TAG	MANUFACTURER MODEL/SERIES	ALTERNATE MANUFACTURER	DEVICE DESCRIPTION	VOLTAGE	NOTES
R00	LEGRAND LMRC-101 (NON-DIM)	ACUITY, CRESTRON ETC, HUBBELL	DIGITAL ROOM CONTROLLER FOR ON/OFF CONTROL OF LIGHTING LOADS. (1) 20A LOAD INPUT, (1) RELAY OUTPUT. MANUAL- AND AUTO-ON MODES.	120/ 277	
R01	LEGRAND LMRC-211 (0-10V)	ACUITY, CRESTRON ETC, HUBBELL	DIGITAL ROOM CONTROLLER FOR ON/OFF/0-10V DIMMING CONTROL OF LIGHTING LOADS. (1) 20A LOAD INPUT, (1) RELAY OUTPUT. 100mA SINK PER RELAY. MANUAL-, PARTIAL-, AND AUTO-ON MODES.	120/ 277	
R02	LEGRAND LMRC-212 (0-10V)	ACUITY, CRESTRON ETC, HUBBELL	DIGITAL ROOM CONTROLLER FOR ON/OFF/0-10V DIMMING CONTROL OF LIGHTING LOADS. (1) 20A LOAD INPUT, (2) RELAY OUTPUTS. 100mA SINK PER RELAY. MANUAL-, PARTIAL-, AND AUTO-ON MODES.	120/ 277	
R03	LEGRAND LMRC-213 (0-10V)	ACUITY, CRESTRON ETC, HUBBELL	DIGITAL ROOM CONTROLLER FOR ON/OFF/0-10V DIMMING CONTROL OF LIGHTING LOADS. (1) 20A LOAD INPUT, (3) RELAY OUTPUTS. 100mA SINK PER RELAY. MANUAL-, PARTIAL-, AND AUTO-ON MODES.	120/ 277	

NETWORK LIGHTING SWITCHES

SYMBOL TAG	MANUFACTURER MODEL/SERIES	ALTERNATE MANUFACTURER	DEVICE DESCRIPTION	VOLTAGE	NOTES
LV1	LEGRAND LMSW-100 SERIES	ACUITY, CRESTRON ETC, HUBBELL	DIGITAL MULTI-BUTTON SWITCH FOR MANUAL ON/OFF AND SCENE CONTROL. EACH BUTTON HAS INTEGRAL LED THAT ILLUMINATES WHEN LOAD IS ON. (2) RJ45 PORTS. IR TRANSCEIVER FOR WIRELESS SETUP. SWITCH DESIGNATIONS VARY PER PROJECT; REFER TO LIGHTING PLANS AND/OR SWITCH SCHEDULE FOR PROGRAMMING.	24	
LV	LEGRAND LMDM-101	ACUITY, CRESTRON ETC, HUBBELL	DIGITAL SWITCH FOR MANUAL ON/OFF/DIMMING CONTROL. INTEGRAL LED ILLUMINATES WHEN LOAD IS ON. (2) RJ45 PORTS. IR TRANSCEIVER FOR WIRELESS SETUP.	24	
VS	LEGRAND DW-100-24	ACUITY, CRESTRON ETC, HUBBELL	WALL MOUNT DUAL TECHNOLOGY OCCUPANCY SENSOR. AUTO ON/OFF CONTROL WITH INTEGRAL MANUAL OVERRIDE SWITCH. SINGLE RELAY. LOW-VOLTAGE.	24	

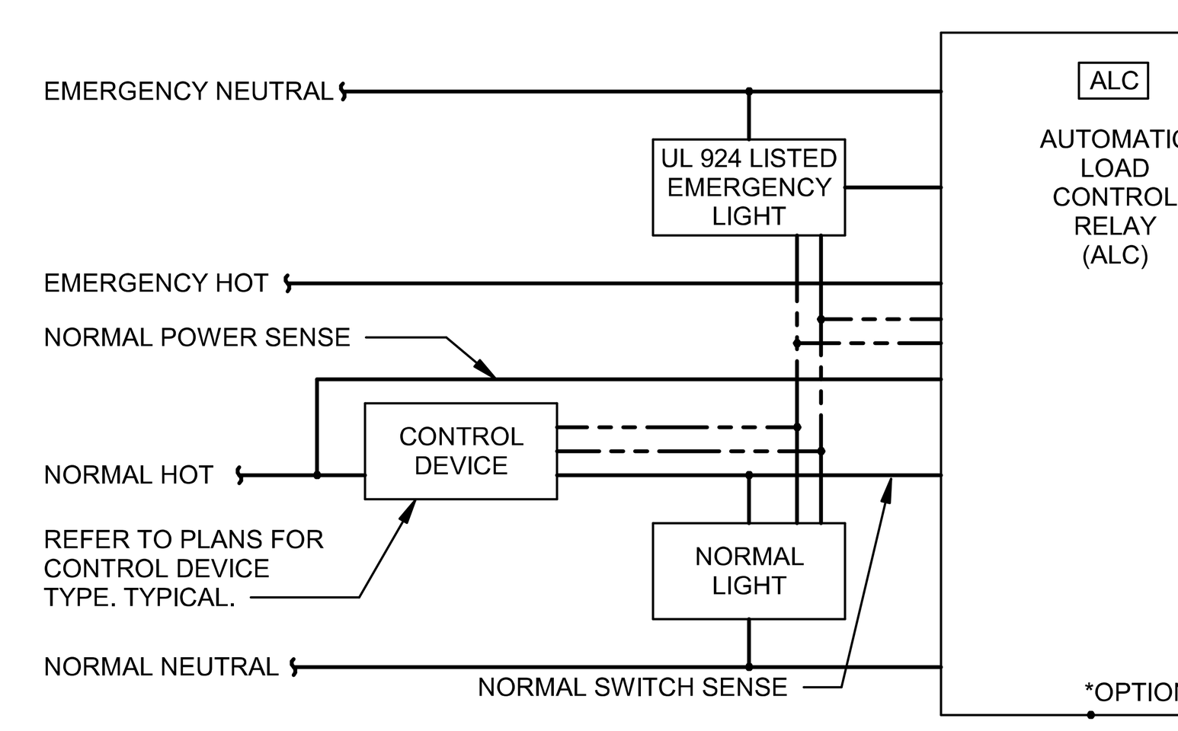
NETWORK AUXILIARY LIGHTING EQUIPMENT

SYMBOL TAG	MANUFACTURER MODEL/SERIES	ALTERNATE MANUFACTURER	DEVICE DESCRIPTION	VOLTAGE	NOTES
NONE	LEGRAND LMCT-100	ACUITY, CRESTRON ETC, HUBBELL	WIRELESS CONFIGURATION TOOL WITH USB. 2-WAY IR COMMUNICATION FOR DATA UPLOAD, DOWNLOAD, CONFIRMATION, AND STORAGE. OLED SCREEN. PROVIDE ONE TOOL PER SYSTEM AND LEAVE WITH OWNER. (3) AAA BATTERIES INCLUDED.	BATTERY	
NONE	LEGRAND INTERFACE	ACUITY, CRESTRON ETC, HUBBELL	INPUT/OUTPUT (I/O) DEVICE FOR INTERFACE WITH SECURITY, FIRE ALARM, OR OTHER THIRD PARTY DEVICE/SYSTEM. (2) RJ45 PORTS. MANUFACTURER SHALL PROVIDE DEVICE AS REQUIRED TO CONNECT TO SYSTEM(S) AS SPECIFIED ON LIGHTING CONTROL DIAGRAM.	24	
NONE	LEGRAND LMIO-201	ACUITY, CRESTRON HUBBELL	DIGITAL INPUT MODULE FOR LOW-VOLTAGE SENSORS. (2) RJ45 PORTS. CONVERTS A SINGLE CHANNEL TO DIGITAL. COMMUNICATES SINGLE STATE OF OCCUPANCY BUT MAY BE DRIVEN BY MULTIPLE SENSORS WIRED TOGETHER. PROVIDE QUANTITY AS REQUIRED TO MEET DESIGN SHOWN. LOW-VOLTAGE SENSOR(S) WILL STILL REQUIRE LOW-VOLTAGE POWER PACK(S).	24	
TC	LEGRAND LMZC-301	ACUITY, CRESTRON ETC, HUBBELL	ZONE CONTROLLER. ASTRONOMIC TIMECLOCK. 99 LIGHTING GROUPS. BACNET MS/TP COMPATIBLE. (2) RJ45 PORTS. SURFACE MOUNTED. PLENUM RATED. PROVIDE DLM 24V POWER BOOSTERS AS REQUIRED PER SYSTEM DESIGN.	120/ 277	

GENERAL NOTES:

A. OCCUPANCY SENSOR LAYOUT DESIGNED FROM BASIS-OF-DESIGN COVERAGE PATTERNS. IF SUBMITTING ALTERNATE PER 'EQUIVALENT MANUFACTURER' COLUMN, ADJUST SENSOR QUANTITIES AND LOCATIONS PER MANUFACTURER-SPECIFIC SPACING CRITERIA.
B. PROVIDE SHOP DRAWINGS FOR ENGINEER AND ARCHITECT REVIEW THAT INCLUDE PRODUCT CUTSHEETS AND PROJECT-SPECIFIC LAYOUTS. LAYOUTS MUST INCLUDE SENSOR LOCATIONS, HEIGHTS, ORIENTATION, AND COVERAGE AREAS. SHOW COORDINATION WITH ALL OTHER CEILING DEVICES INCLUDING BUT NOT LIMITED TO HVAC SUPPLY AND RETURN GRILLES, SPRINKLERS, LIGHT FIXTURES, AND OTHER OWNER-PROVIDED CEILING MOUNTED DEVICES SUCH AS SPEAKERS, SECURITY CAMERAS, PROJECTORS, ETC. (SENSORS MAY BE ADVERSELY AFFECTED IF LOCATED TOO CLOSE TO OTHER CEILING MOUNTED DEVICES). ALSO PROVIDE SCHEMATICS AND SCHEDULES WHEN APPLICABLE.
C. LIGHTING CONTROLS PRICING SHALL BE COMPLETELY SEPARATE OF ANY LIGHT FIXTURE PRICING.
D. VERIFY COLOR(S) FOR ALL WALL AND CEILING MOUNTED DEVICES WITH THE ARCHITECT.
E. ALL WALL SWITCH AND CEILING SENSORS SHALL HAVE AN ADJUSTABLE TIME DELAY RANGE OF 0-30 MIN, UNO. CONFIRM SENSOR SETTINGS WITH SEQUENCE OF OPERATIONS AND OWNER PRIOR TO SYSTEM COMMISSIONING.
F. PROVIDE COPIES OF OPERATION AND MAINTENANCE INSTRUCTIONS FOR ALL DEVICES TO OWNER.
G. PROVIDE A NEUTRAL CONDUCTOR TO ALL WALL SWITCH LOCATIONS PER NEC REQUIREMENTS.
H. DO NOT SHARE NEUTRAL CONDUCTOR ON LOAD SIDE OF DIMMERS.
J. CONTRACTOR SHALL COORDINATE MARKET BUILDING INTERIOR BUILDING LIGHTING CONTROL MANUFACTURER WITH EXTERIOR LIGHTING CONTROLS SPECIFIED IN SITE DEVELOPMENT PACKAGE TO ENSURE LIGHTING CONTROLS ARE COMPATIBLE AND COMMUNICATE AS A COMPLETE SYSTEM.

VERSION: 4.06



NOTES:

1. OPERATION: EMERGENCY AND NORMAL LIGHT FIXTURES ARE CONTROLLED TOGETHER. UPON NORMAL POWER LOSS, EMERGENCY LIGHT FIXTURES SHALL AUTOMATICALLY TURN ON TO FULL OUTPUT.
2. REFER TO SPECIFICATIONS FOR MORE INFORMATION. PROVIDE SUBMITTAL FOR ENGINEER'S REVIEW PRIOR TO PURCHASE.
3. LOCATE ALC WHERE ACCESSIBLE. REFER TO LIGHTING PLANS FOR MORE INFORMATION.
4. WIRING DETAIL IS DIAGRAMMATIC ONLY AND BASED ON LVS CONTROLS DEVICE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR SPECIFIC WIRING DIAGRAM.

PER NEC 700.24, LUMINAIRES WITH 0-10V DIMMING USED IN CONJUNCTION WITH AN INVERTER OR GENERATOR FOR EMERGENCY LIGHTING PURPOSES SHALL INCLUDE DRIVERS BUILT TO IEC 60929 ANNEX E, ANSI C82.11, OR ANSI C137. WHEN THE CONTROL SIGNAL IS NOT CONNECTED, THE DRIVER SHALL PROVIDE THE MAXIMUM VALUE OF OUTPUT POWER.

(1) (LOADS CONTROLLED TOGETHER) 0-10V AUTOMATIC LOAD CONTROL RELAY DETAIL
NTS

LIGHTING CONTROL SEQUENCE OF OPERATIONS

A. HOURS OF OPERATION

General Note: Confirm all timeclock schedules and sensor time delays with owner prior to final programming.

Business Hours: Mon-Fri 6:00 AM – 10:00 PM, Sat-Sun 6:00 AM - 11:59 PM

B. GENERAL REQUIREMENTS
1. Emergency Lighting: Unless otherwise noted, emergency egress lighting is powered from emergency battery backup units integral to fixtures.

C. EXTERIOR
1. Timeclock: Space is networked to a central timeclock via room controller.
2. Manual Control: Occupant can manually control lights via remotely local switch(es). Switch(es) can override timeclock setting for 2 hours maximum.
3. Occupancy: All controlled loads shall automatically turn on based on photocell and timeclock schedule.
4. Vacancy: Lights shall turn off automatically based on photocell and timeclock schedule.

D. LOBBY, CORRIDOR, VESTIBULE
1. Timeclock: Space is networked to a central timeclock via room controller.
2. Manual Control: Occupant can manually control lights via local switch(es). Switch(es) can override timeclock setting for 2 hours maximum.
3. Occupancy: All controlled loads shall automatically turn on based on timeclock schedule.
4. Vacancy: Lights shall turn off automatically based on timeclock schedule. Lights shall flicker-warn 5 minutes prior to turning off.

E. PUBLIC RESTROOMS
1. Timeclock: Space is networked to a central timeclock via room controller.
2. Manual Control: Employees can manually control lights via remotely located switch.
3. Occupancy: All controlled loads shall automatically turn on via occupancy sensor.
4. Vacancy: After 20 minutes, all controlled loads shall turn off.

F. FAMILY RESTROOM, MOTHERS ROOM, JANITOR'S CLOSET
1. Timeclock: Space is networked to a central timeclock via room controller.
2. Manual Control: Occupant can manually control lights via local switch(es).
3. Occupancy: All controlled loads shall automatically turn on via occupancy sensor.
4. Vacancy: After 20 minutes, all controlled loads shall turn off.

G. MECHANICAL/ELECTRICAL ROOM
1. Timeclock: Space is networked to a central timeclock via room controller.
2. Manual Control: Occupant can manually control lights via local switch(es).
3. Occupancy: Occupant must manually turn on lights.
4. Vacancy: Occupant must manually turn off lights.

H. STORAGE SPACE, BACK OF HOUSE SPACE, IT ROOM
1. Timeclock: Space is networked to a central timeclock via room controller.
2. Manual Control: Occupant can manually control lights via local switch(es).
3. Occupancy: Occupant must manually turn on lights.
4. Vacancy: After 20 minutes, all controlled loads shall turn off.

I. CATERING KITCHEN
1. Timeclock: Space is networked to a central timeclock via room controller.
2. Manual Control: Occupant can manually control lights via local switch(es). Switch(es) can override timeclock setting for 2 hours maximum.
3. Occupancy: Occupant must manually turn on lights.
4. Vacancy: After 20 minutes, all controlled loads shall turn off.

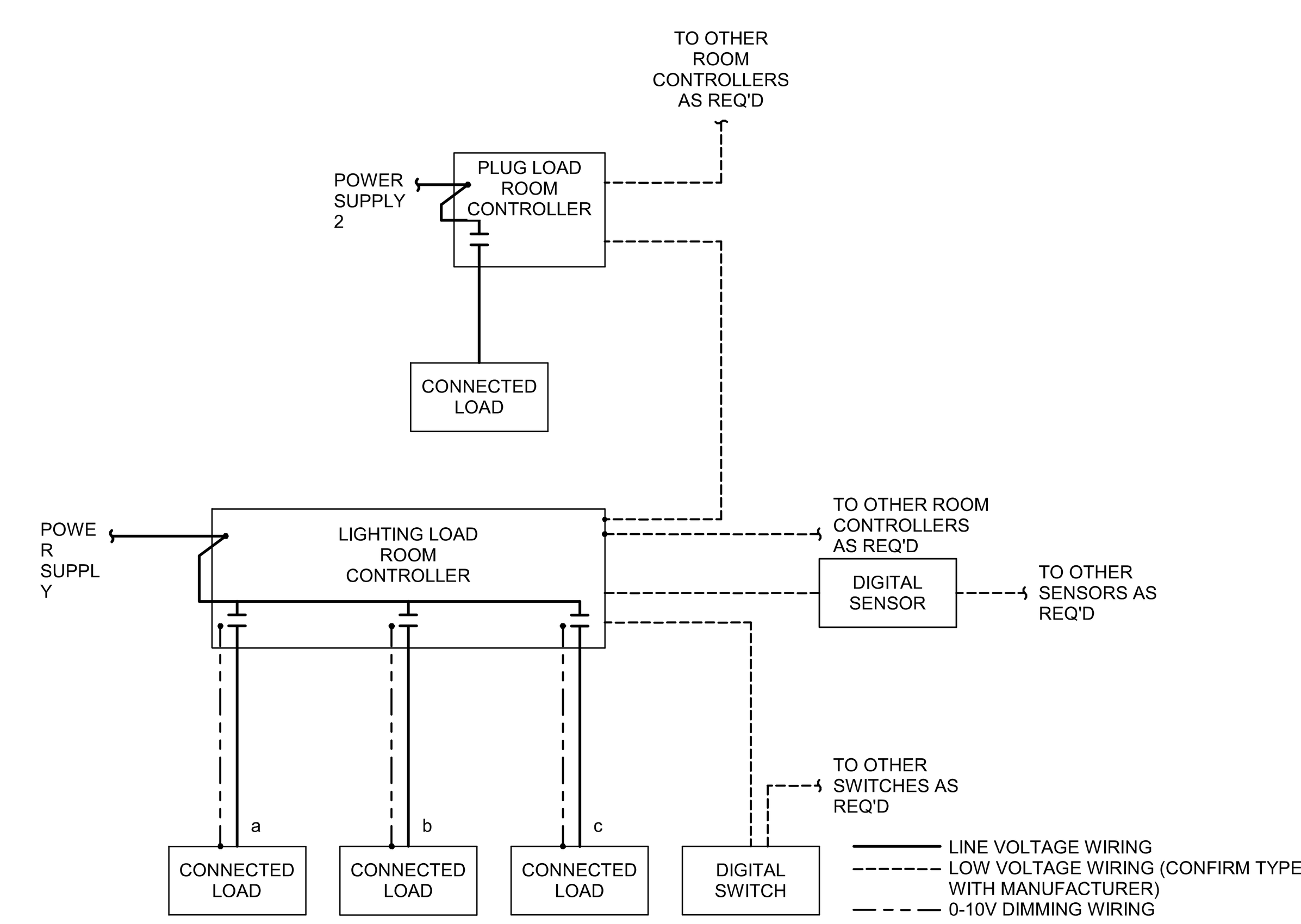
J. FARMER'S MARKET
1. Timeclock: Space is networked to a central timeclock via room controller.
2. Manual Control: Occupant can manually control lights via local switch(es). Switch(es) can override timeclock setting for 2 hours maximum.
3. Occupancy: All controlled loads shall automatically turn on based on timeclock schedule.
4. Vacancy: Lights shall turn off automatically based on timeclock schedule. Lights shall flicker-warn 5 minutes prior to turning off.
5. Emergency: Emergency lighting shall be powered via central lighting inverter.

LIGHTING GENERAL NOTES:

1. THE EMERGENCY LIGHTING SYSTEM HAS BEEN DESIGNED TO PROVIDE AN INITIAL FLOOR ILLUMINANCE LEVEL OF 1 FC AVERAGE, 0.1 FC MINIMUM AND NO MORE THAN A 40:1 MAX/MIN RATIO ALONG THE EMERGENCY EGRESS PATHS. WHERE APPLICABLE, ADJUST AIMING OF EMERGENCY LIGHTS AS REQUIRED TO PROVIDE PROPER ILLUMINATION AT FLOOR AVOIDING OBSTACLES AND SHADOWS AFTER STORE SET-UP IS COMPLETE.
2. WALL MOUNTED EXITS SIGNS SHALL BE MOUNTED 12" ABOVE DOOR FRAME AND CENTERED ABOVE DOOR OPENING, UNLESS NOTED OTHERWISE. CEILING/PENDANT MOUNTED EXIT SIGNS SHALL BE SUSPENDED TO 12'-0" AFF IN CUSTOMER AREAS OPEN TO STRUCTURE, AT BOTTOM OF BAR JOISTS IN BACKROOM AREAS AND ON FINISHED CEILING WHERE APPLICABLE, UNLESS NOTED OTHERWISE. EXIT SIGNS SHALL BE READILY VISIBLE FROM DIRECTION OF EGRESS TRAVEL. COORDINATE FINAL EXIT SIGN LOCATIONS WITH AHJ AND OWNER.
3. SUSPEND BACK OF HOUSE, RECEIVING AND STOCKROOM AREA LIGHT FIXTURES AS HIGH AS PRACTICABLE IN ORDER TO AVOID DAMAGE DURING STOCKING, UNLESS NOTED OTHERWISE. SUSPEND JUST BELOW REFRIGERATION PIPING, DUCTWORK AND SIMILAR OBSTRUCTIONS WHERE NECESSARY TO AVOID SHADOWS. COORDINATE REQUIREMENTS WITH OWNER AND OTHER DISCIPLINES PRIOR TO INSTALLATION.
4. PROVIDE LABEL AT EACH MANUAL LIGHT SWITCH INDICATING THE LIGHT FIXTURE(S) THAT THE SWITCH CONTROLS AND THE RESPECTIVE "PNLBD-CKT#" DESIGNATION. A SINGLE LIGHT SWITCH FOR A SMALL ROOM DOES NOT NEED TO INDICATE THE SPACE CONTROLLED SINCE IT IS INTUITIVELY OBVIOUS. COORDINATE LABEL REQUIREMENTS WITH THE OWNER PRIOR TO INSTALLATION. REFER TO THE SPECIFICATIONS FOR MORE INFORMATION.
5. ALL REMOTELY LOCATED LIGHT FIXTURE POWER SUPPLIES SHALL BE LOCATED IN AN ACCESSIBLE LOCATION WITH PROPER VENTILATION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CONCEAL DEVICES AND RELATED WIRING FROM CUSTOMER/PUBLIC VIEW. PROVIDE ENCOSURE IF REQUIRED. COORDINATE LOCATION AND ENCLOSURE TYPE WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
6. PER 2017 NEC 700.2 AND 700.24, ALL DIRECTLY CONTROLLED LUMINAIRES USED FOR EMERGENCY ILLUMINATION AND ALL APPLICABLE CONTROLS SHALL HAVE UL 924 LISTING OR EQUIVALENT NRTL LISTING. IF EMERGENCY LUMINAIRE OR CONTROL MANUFACTURER DOES NOT HAVE APPROPRIATE LISTING THE EMERGENCY LUMINAIRE SHALL NOT BE CONNECTED TO 0-10V DIMMING SYSTEM.
7. PER 2017 NEC 700.2 AND 700.24, ALL DIRECTLY CONTROLLED LUMINAIRES USED FOR EMERGENCY ILLUMINATION AND ALL APPLICABLE CONTROLS SHALL HAVE UL 924 LISTING OR EQUIVALENT NRTL LISTING. IF EMERGENCY LUMINAIRE OR CONTROL MANUFACTURER DOES NOT HAVE APPROPRIATE LISTING THEN FIELD LISTING OF EQUIPMENT IS ACCEPTABLE (AT CONTRACTOR'S COST), IF APPROVED BY THE AHJ. ALTERNATIVELY, AS ALLOWED PER 2017 NEC 90.4, THE CONTRACTOR MAY OBTAIN SPECIAL PERMISSION FROM THE AHJ AND SUBMIT SAID PERMISSION IN WRITING TO THE ENGINEER FOR REVIEW. IF USING NON-LISTED EQUIPMENT FOR APPLICABLE EMERGENCY SYSTEMS, THE ALTERNATIVE METHOD MUST BE FIELD TESTED AND ACHIEVE EQUIVALENT OBJECTIVES TO CODE INTENT. IN ADDITION, ALTERNATE METHOD AND EQUIPMENT USED MUST BE DEEMED SAFE AND ACCEPTABLE TO BOTH THE AHJ AND THE ENGINEER.

LIGHTING SUPPLEMENTAL SPECIFICATIONS:

1. REFER TO THE ARCHITECTURAL DRAWINGS FOR LIGHT FIXTURE LOCATIONS, MOUNTING HEIGHTS, TRACK LENGTHS AND ADDITIONAL MOUNTING INFORMATION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT COORDINATION AND CONFLICT ISSUES ARE RESOLVED PRIOR TO INSTALLATION OF LIGHT FIXTURES. CONTACT ARCHITECT/ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES.
2. THROUGH WIRING OF RECESSED LIGHT FIXTURES, IN SUSPENDED CEILINGS, IS NOT PERMITTED. CONNECT EACH LIGHT FIXTURE BY A WHIP TO A JUNCTION BOX. PROVIDE CABLE WHIPS OF SUFFICIENT LENGTHS TO ALLOW FOR RELOCATING EACH LIGHT FIXTURE WITHIN A 5'-0" RADIUS OF ITS INDICATED LOCATION. CABLE WHIPS SHALL NOT EXCEED 6'-0" OF UNSUPPORTED LENGTHS.
3. ALL EMERGENCY LIGHTS AND EXIT SIGNS WITH INTEGRAL BATTERY BACK-UP SHALL BE CONNECTED TO A SEPARATE UNSWITCHED CONDUCTOR BYPASSING ALL OTHER CONTROLS AND CONTACTORS, UNLESS NOTED OTHERWISE. EXIT SIGNS SHALL NOT BE SWITCHED. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR PROPER INSTALLATION AND TESTING. ALLOW BATTERY TO CHARGE FOR A MINIMUM OF 48 HOURS BEFORE LIGHT LEVEL TESTING. IN ORDER TO PREVENT BATTERY DAMAGE, DO NOT TURN OFF POWER FOR EXTENDED PERIODS OF TIME AFTER EMERGENCY LIGHT HAS BEEN POWERED.
4. PROVIDE A NEUTRAL CONDUCTOR TO ALL WALL MOUNTED LINE VOLTAGE LIGHT SWITCHES, UNLESS NOTED OTHERWISE. IF NEUTRAL TERMINATION IS NOT REQUIRED FOR THE DEVICE THEN CAP CONDUCTOR AND TAG AS "NEUTRAL FOR FUTURE USE".
5. COORDINATE ALL OCCUPANCY/VACANCY SENSOR SETTINGS WITH OWNER AND ADJUST AS NECESSARY FOR PROPER OPERATION. SETTINGS MUST COMPLY WITH AHJ AND LOCAL ENERGY CODE REQUIREMENTS.
6. DO NOT INSTALL OCCUPANCY/VACANCY SENSORS WITHIN 48" OF AIR DIFFUSER OR SIMILAR OBSTRUCTION THAT MAY ADVERSLY AFFECT THE SENSOR PERFORMANCE. COORDINATE FINAL SENSOR LOCATIONS WITH OTHER TRADES AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



NOTES:

1. REFER TO LIGHTING CONTROL DEVICE SCHEDULE FOR DEVICE AND EQUIPMENT SPECIFICATIONS.
2. QUANTITY OF RELAYS SHOWN IS GENERIC. REFER TO PLANS, LIGHTING CONTROL DEVICE SCHEDULE, AND SHOP DRAWINGS FOR FINAL QUANTITY PER ROOM CONTROLLER.
3. DETAIL IS DIAGRAMMATIC AND IS BASED ON LEGRAND. THIS REPRESENTS THE GENERAL SCOPE OF WORK AND LOCATION OF DEVICES IN RELATION TO EACH OTHER ALONG THE POWER CIRCUIT. DIAGRAMS MAY BE DIFFERENT FOR ALLOWED EQUIVALENT MANUFACTURERS. ELECTRICAL CONTRACTOR SHALL COORDINATE FULL SYSTEM REQUIREMENTS WITH SELECTED MANUFACTURER. PROVIDE ALL PARTS AND PIECES REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. REFER TO FINAL APPROVED MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WIRING DIAGRAMS FOR INSTALLATION.
4. CIRCUITING SHOWN ON THE PLAN CORRESPONDS TO THE LIGHTING CONTROL INTENT. IF CIRCUITING IS CHANGED IN THE FIELD, ENSURE THAT SYSTEM PROGRAMMING WITH REVISED CIRCUITING MEETS THE ORIGINAL LIGHTING CONTROL INTENT. UPDATE LIGHTING CONTROL PANEL SCHEDULES IN RECORD DRAWINGS.
5. PROVIDE SYSTEM COMMISSIONING AS REQUIRED PER ENERGY CODE.

(3) ROOM CONTROLLER DETAIL - ON/OFF OR ON/OFF/0-10V DIMMING CONTROL
12" = 1'-0"

GLMV Architecture

HENDERSON ENGINEERS
5201 TENNYSON PARKWAY, SUITE 210
PLANO, TX 75024
TEL 972.386.6888 FAX 972.386.6887
WWW.HENDERSONENGINEERS.COM
2150003907
MO. CORPORATE NO: E-556D
EXPIRES 10/31/2024

10/30/2023
STATE OF MISSOURI BRIAN OLLIGES NUMBER PE-2022017790 PROFESSIONAL ENGINEER
BRIAN C. OLLIGES
LICENSE # PE-2022017790

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		TJL
CHECKED BY:		JS

ELECTRICAL DETAILS AND LIGHTING SCHEDULES

E-502

BRIAN C. OLLIGES
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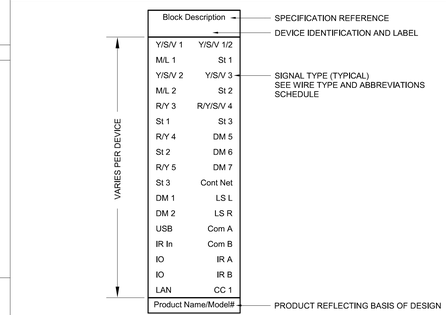

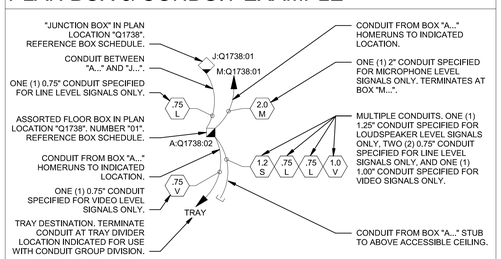

AUDIO-VIDEO SYMBOLS LEGEND

v1.00

GENERAL NOTES

SPECIFICATION REFERENCES:

1. REFER TO DIVISION 27 SPECIFICATION SECTION "AUDIO-VIDEO SYSTEMS" AND RELATED DOCUMENTS AND SECTIONS FOR PRODUCT INFORMATION AND ADDITIONAL REQUIREMENTS.
2. CATEGORY AND FIBER CABLING SHALL BE INSTALLED, TERMINATED, AND TESTED PER DIVISION 27 SECTION "TELECOMMUNICATIONS REQUIREMENTS FOR AUDIO-VIDEO SYSTEMS".

GENERAL PATHWAY NOTES:

1. ALL BUILDING INFRASTRUCTURE, CONDUIT, AND PATHWAYS INCLUDING BUT NOT LIMITED TO CONDUIT, RACEWAYS, CABLE TRAYS, PEDESTALS, BACK BOXES, JUNCTION BOXES, FLOOR BOXES, DOORS, LIDS, AND COVERS ARE PER DIVISION 27 SECTION "COMMON WORK RESULTS FOR COMMUNICATIONS" UNLESS OTHERWISE NOTED WITHIN THIS DRAWING SERIES SET.
2. REFER TO "MINIMUM SEPARATION REQUIREMENTS" ON THIS SHEET FOR CONDUIT SPACING INFORMATION.
3. PROVIDE CONTINUOUS UNOBSTRUCTED CABLE PATH FOR ENTIRE LENGTH OF CABLE RUN. EXPOSED CABLING MAY REQUIRE CONDUIT TRANSITION(S) TO ACHIEVE A COMPLETE PATHWAY. REFER TO "CIRCUIT ROUTING" ON THIS SHEET FOR ADDITIONAL REQUIREMENTS.
4. COORDINATE ANY CONFLICTS WITH APPROPRIATE DISCIPLINES.
5. REFER TO LIFE SAFETY PLANS FOR LOCATION OF FIRE-RATED AND SMOKE-RATED WALLS AND FLOORS. PROVIDE LISTED FIRESTOPPING SYSTEMS FOR PENETRATIONS PER DIVISION 27 SPECIFICATION SECTION "COMMON WORK RESULTS FOR COMMUNICATIONS".

BOX SCHEDULE NOTES:

1. VERIFY QUANTITIES, LOCATIONS, AND MOUNTING WITH PLAN, DETAIL, AND EQUIPMENT VIEW DRAWINGS.
2. ALL BOXES SHOWN IN SCHEDULE ARE PER DIVISION 27 SECTION "COMMON WORK RESULTS FOR COMMUNICATIONS" UNLESS OTHERWISE NOTED WITHIN THIS DRAWING SERIES SET.
3. FIELD VERIFY MOUNTING CONDITIONS AND BOX SIZE PRIOR TO INSTALLATION.
4. WALL MOUNTED BOXES SHOWN AT SWITCH OR CONVENIENCE OUTLET HEIGHT SHALL MATCH MOUNTING HEIGHT OF ADJACENT BOXES ON WALL UNLESS OTHERWISE NOTED.
5. WALL MOUNTED TERMINATION GANG BOXES SHALL BE MOUNTED 18" A.F.F. TO CENTER OF DEVICE UNLESS OTHERWISE NOTED.
6. WALL MOUNTED TERMINATION NEMA AND MANUFACTURER SPECIFIC BOXES SHALL BE MOUNTED 16" A.F.F. TO BOTTOM OF DEVICE UNLESS OTHERWISE NOTED.
7. SURFACE MOUNTED BOXES SHALL BE PAINTED TO MATCH SURROUNDING FINISH.
8. COORDINATE ANY CONFLICTS WITH APPROPRIATE DISCIPLINES.

GENERAL PANEL AND PLATE NOTES:

1. CUSTOM TERMINATION COVER PANELS AND PLATES SHALL BE PROVIDED PER SPECIFICATION SECTION "AUDIO-VIDEO SYSTEMS" REQUIREMENTS AND SHALL BE SIZED TO APPROPRIATELY SELF-TRIM THEIR CORRESPONDING BACK BOX.
2. ALL PANELS AND PLATES SHALL BE 1/8" THICK (MINIMUM) BLACK ANODIZED ALUMINUM WITH ENGRAVED OR LASER ETCHED LETTERING OF A CONTRASTING COLOR. DEFAULT ENGRAVED TEXT COLOR SHALL BE WHITE. UTILIZE 3/16" UPPER CASE LETTERING, SANS-SERIF FONT. VERIFY PLATE COLOR WITH ARCHITECT.
3. REINFORCE PLATE AND/OR INCREASE PLATE THICKNESS TO MINIMIZE DEFLECTION.
4. UTILIZE COUNTERSUNK SCREW HEADS. SCREWS HEADS SHALL MATCH PLATE COLOR.
5. ANY PANEL AND PLATE DETAILS OR INFORMATION RELATED TO TERMINATION PLATING CONTAINED IN THIS SET ARE INCLUDED FOR COMMUNICATION OF FABRICATION REQUIREMENTS AND ARE FOR CONCEPT ONLY. LAYOUTS DO NOT REFLECT SPECIFIC REQUIREMENTS FOR THIS PROJECT UNLESS SPECIFICALLY STATED AS SUCH. VERIFY SIZES OF ALL COMPONENTS AND BOXES PRIOR TO SUBMITTAL OF SHOP DRAWINGS.
6. FIELD VERIFY THE SIZE OF ALL COMPONENTS AND BOXES PRIOR TO INSTALLATION. MODIFY PLATE SIZES IN THE CASE OF ALTERATIONS TO FIELD CONDITIONS.
7. REFER TO SPECIFICATIONS FOR SUBMITTAL AND ADDITIONAL PANEL AND PLATE REQUIREMENTS.

CABLE TERMINATION NOTES:

1. ALL AUDIO TERMINATIONS SHOULD COMPLY WITH RANE CORPORATION RANENOTE 110 REFERENCE FOR SOUND SYSTEM INTERCONNECTION.

EQUIPMENT RACK NOTES:

1. REFER TO SPECIFICATIONS FOR RACK LAYOUT SUBMITTAL REQUIREMENTS.
2. ANY RACK LAYOUTS OR INFORMATION RELATED TO EQUIPMENT RACKING CONTAINED IN THIS SET ARE FOR CONCEPT ONLY. VERIFY RACK LAYOUT FOR EQUIPMENT FURNISHED PRIOR TO SUBMITTAL OF SHOP DRAWINGS. REVISE AS REQUIRED FOR ALTERNATES ACCEPTED OR REJECTED.
3. IF THERE ARE DIFFERENCES IN EQUIPMENT RACKING INFORMATION TO THAT SHOWN ON THE SIGNAL FLOW DIAGRAMS, SIGNAL FLOWS SHALL TAKE PRECEDENCE.

LOUDSPEAKER INSTALLATION NOTES:

1. ANY STRUCTURAL DETAILS, STRUCTURAL MEMBER TYPES, SIZES, AND ATTACHMENT METHODS CONTAINED IN THIS SET ARE SHOWN FOR CONCEPT ONLY. FINAL DESIGN, INCLUDING DOCUMENTATION STAMPED BY STRUCTURAL ENGINEER (PROVIDED AS PORTION OF SHOP DRAWING REQUIREMENTS), SHALL BE MADE BY THE CONTRACTOR AND SHALL BE VERIFIED BY THE OWNER AND AV CONSULTANT.
2. REFER TO SPECIFICATIONS FOR ALL MOUNTING, INSTALLATION, ACCESS, AND SHOP DRAWING REQUIREMENTS.
3. EXPOSED LOUDSPEAKER CIRCUITS UTILIZING STRUCTURAL STEEL PATHWAYS SHALL BE ROUTED HIGH WITHIN TRUSS SPACE OR WHERE OTHERWISE PROTECTED FROM DAMAGE. ROUTING SHALL MINIMIZE CIRCUIT LENGTH BETWEEN LOUDSPEAKER AND EQUIPMENT RACK WHERE FEASIBLE. NEATLY BUNDLE CIRCUITS AND FASTEN SECURELY TO STRUCTURE TO ENSURE PROPER SUPPORT AND PROTECTION. TO MINIMIZE DAMAGE FROM TEMPORARY RIGGING ACTIVITIES ASSOCIATED WITH SPECIAL EVENT SUPPORT, AVOID ROUTING CIRCUITS IN AREAS PRONE TO THIS USE, I.E. BOTTOM CHORDS OF TRUSSES. AVOID CONTACT OR CONFLICT WITH OTHER BUILDING ELEMENTS SUCH AS LIGHTING FIXTURES & BALLASTS, DUCTS, RIGGING, AND SHARP EDGES. CABLE COLOR SHALL MATCH SURROUNDING ELEMENTS.

WIRE TYPE AND ABBREVIATIONS

(NOTE 1)	ABBREVIATION DEFINITION OR SIGNAL TYPES	WIRE TYPE	(NOTE 2)
AB	AUDIO TRANSPORT OVER MANUF. PROPRIETARY (NON-IP) PROTO. - REQ. STP	CAT6 STP	90m
AEC	ACOUSTIC ECHO CANCELING SIGNAL	-	
AES	DIGITAL AUDIO OVER AES FORMAT - BALANCED	22 AWG	100m
	UNBALANCED	RG-6	1000m
AN	AUDIO TRANSPORT OVER IP STANDARD PROTOCOL REQUIRING STP	CAT6 STP	90m
CC	RELAY OR CONTACT CLOSURE CONTROL SIGNAL	22 AWG	
Com	CONTROL SIGNAL (RS232, RS422, RS485)	22 AWG	
	LOW CAPACITANCE CONTROL CABLE FOR LONG RUNS	(NOTE 3)	
Ctl	CONTROL SIGNAL OVER MANUF. PROPRIETARY PROTOCOL	(NOTE 3)	
D	DVI VIDEO SIGNAL	PREMADE	25'
DM	DIGITAL MEDIA AUDIO/VIDEO/CONTROL SIGNAL	CAT6 STP	90m
DP	DISPLAY PORT SIGNAL	PREMADE	3m
FW	FIREWIRE IEEE 1394	PREMADE	4.5m
GPIO	GPI/GPO/GPIO - GENERAL PURPOSE INPUT AND/OR OUTPUT	(NOTE 4)	
H	HDMI VIDEO/AUDIO SIGNAL	(NOTE 3)	
HDSDI	HD-SDI PER SMPTE 292M	RG-59	300'
		RG-6	370'
		RG-11	580'
IC	INTERCOM (PRODUCTION)	22 AWG	
IR	INFRARED CONTROL SIGNAL	PREMADE	
I/O	VARIABLE VOLTAGE CONTROL SIGNAL	22 AWG	
L	LINE LEVEL AUDIO SIGNAL	22 AWG	
LAN	ETHERNET	CAT6	90m
LS	LOUDSPEAKER LEVEL AUDIO SIGNAL 2/4/8/16OHM	(NOTE 5)	
LS70	LOUDSPEAKER LEVEL AUDIO SIGNAL 70V	(NOTE 5)	
M	MICROPHONE LEVEL AUDIO SIGNAL	22 AWG	
MADI	MADI SIGNAL PROTOCOL	RG-6	100m
		SMF	40km
MIDI	MIDI CONTROL SIGNAL	PREMADE	
MMF	MULTI-MODE FIBER	(NOTE 3)	
Mono	MONO AUDIO SIGNAL	22 AWG	
Phone	TELEPHONE SIGNAL	CAT3	
R	RGBHV VIDEO SIGNAL	PREMADE	25'
Ref	REFERENCE/SYNC/BLACK - BLACK BURST OR TRI-LEVEL SYNCHRONIZATION	RG-59	
RF	RADIO FREQUENCY	RG-58	IN RACK
	RF WIRELESS MIC ANTENNA (-5dB @ 800MHz NO AMP)	RG-8X	40'
	RF WIRELESS MIC ANTENNA (-5dB @ 800MHz NO AMP)	RG-213	65'
	RF WIRELESS MIC ANTENNA (-5dB @ 800MHz NO AMP)	RG-8/U	120'
SAT IF	SATELLITE INTERMEDIATE FREQUENCY SIGNAL (TYPICALLY L-BAND)	RG-59	IN RACK
		RG-6	DROP
		RG-11	DISTRO
SDI	SERIAL DIGITAL INTERFACE PER SMPTE 259M	PREMADE	950'
		RG-6	1150'
		RG-11	1850'
SMF	SINGLE-MODE FIBER	(NOTE 3)	2.5Km
SPDIF	DIGITAL AUDIO OVER S/PDIF	PREMADE	10m
St	STEREO AUDIO SIGNAL	PREMADE	5m
		22 AWG	
TLY	TALLY	24 AWG	
TB	THUNDERBOLT SIGNAL	PREMADE	3m
TC	TIMECODE	RG-59	
TIE LINES	MICROPHONE LEVEL	22 AWG	
	LINE LEVEL	22 AWG	
	LOUDSPEAKER LEVEL	(NOTE 4)	
	VIDEO	(NOTE 4)	
TPA	AUDIO SIGNAL OVER TWISTED PAIR	CAT6	90m
TPC	CONTROL SIGNAL OVER TWISTED PAIR	CAT6	90m
TPT	TELEVISION SIGNAL OVER TWISTED PAIR	CAT6	90m
TPV	VIDEO SIGNAL OVER TWISTED PAIR	CAT6	90m
TRIAX	TRIAX VIDEO CAMERA CABLE	RG-59/U	IN ROOM
		RG-11/U	2950'
TV	CABLE TELEVISION DISTRIBUTION SIGNAL	RG-59	IN RACK
		RG-6	DROP
		RG-11	DISTRO
		1/2" HARDLINE	TRUNK
USB	UNIVERSAL SERIAL BUS SIGNAL	PREMADE	
USB1	USB VERSION 1.0	PREMADE	5m
USB2	USB VERSION 2.0	PREMADE	5m
USB3	USB VERSION 3.0	PREMADE	5m
V	COMPOSITE VIDEO SIGNAL	RG-59	750'
		RG-6	900'
		RG-11	1200'
Y	COMPONENT VIDEO SIGNAL	RG-59	125'
		RG-6	200'
3GSDI	3G-SDI PER SMPTE 424M	RG-59	200'
		RG-6	250'
		RG-11	390'
6GSDI	6G-SDI	(NOTE 4)	
*	DENOTES PORTION OF ITEM		
NOTES	COMPLY WITH ALL MANUFACTURER REQUIREMENTS.		
1	SIGNAL FLOW SIGNAL TYPE ABBREVIATION.		
2	CABLE DISTANCE LIMITATION. CONTACT CONSULTANT FOR CONDITIONS OUTSIDE PARAMETERS.		
3	REFER TO SPECIFICATION FOR WIRE TYPE.		
4	REFER TO SIGNAL FLOWS FOR WIRE TYPE.		
5	REFER TO SCHEDULES FOR WIRE TYPE.		

SIGNAL FLOW BLOCK LEGEND

SPECIFICATION REFERENCE

DEVICE IDENTIFICATION AND LABEL

SIGNAL TYPE (TYPICAL)
SEE WIRE TYPE AND ABBREVIATIONS SCHEDULE

PRODUCT REFLECTING BASIS OF DESIGN

PLAN BOX & CONDUIT EXAMPLE

"JUNCTION BOX" IN PLAN LOCATION "Q1738". REFERENCE BOX SCHEDULE.

CONDUIT BETWEEN "A..." AND "J...".

ONE (1) 0.75" CONDUIT SPECIFIED FOR LINE LEVEL SIGNALS ONLY.

ASSORTED FLOOR BOX IN PLAN LOCATION "Q1738". NUMBER "01". REFERENCE BOX SCHEDULE.

CONDUIT FROM BOX "A..." HOMERUNS TO INDICATED LOCATION.

ONE (1) 0.75" CONDUIT SPECIFIED FOR VIDEO LEVEL SIGNALS ONLY.

TRAY DESTINATION. TERMINATE CONDUIT AT TRAY DIVIDER LOCATION INDICATED FOR USE WITH CONDUIT GROUP DIVISION.

CONDUIT FROM BOX "A..." HOMERUNS TO INDICATED LOCATION.

ONE (1) 2" CONDUIT SPECIFIED FOR MICROPHONE LEVEL SIGNALS ONLY. TERMINATES AT BOX "M...".

MULTIPLE CONDUITS. ONE (1) 1.25" CONDUIT SPECIFIED FOR LOUDSPEAKER LEVEL SIGNALS ONLY, TWO (2) 0.75" CONDUIT SPECIFIED FOR LINE LEVEL SIGNALS ONLY, AND ONE (1) 1.00" CONDUIT SPECIFIED FOR VIDEO SIGNALS ONLY.

CONDUIT FROM BOX "A..." STUB TO ABOVE ACCESSIBLE CEILING.

NOTE: FOR TYPICAL BOXES, REFER TO TYPICAL BOX SCHEDULE FOR ADDITIONAL INSTRUCTIONS. FOLLOW CONDUIT REQUIREMENTS AS LISTED IN SCHEDULE AND ANY ADDITIONAL NOTES AS INDICATED ON PLANS.

AUDIO-VIDEO SYMBOLS

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ABBREVIATIONS, ETC. ARE NECESSARILY USED ON THE DRAWINGS.

AUDIO

SIGNAL FLOW	PANEL/PLATE	DESCRIPTION
F3		FEMALE 3-PIN XLR PANEL MOUNT CONNECTOR
M3		MALE 3-PIN XLR PANEL MOUNT CONNECTOR
C3		FEMALE COMBO 3-PIN XLR AND 1/4" PANEL MOUNT CONNECTOR
F4		FEMALE 4-PIN XLR PANEL MOUNT CONNECTOR
M4		MALE 4-PIN XLR PANEL MOUNT CONNECTOR
F5		FEMALE 5-PIN XLR PANEL MOUNT CONNECTOR
M5		MALE 5-PIN XLR PANEL MOUNT CONNECTOR
F3		FEMALE XLR CABLE MOUNT CONNECTOR (NUMBER BELOW SYMBOL INDICATES NUMBER OF PINS)
M3		MALE XLR CABLE MOUNT CONNECTOR (NUMBER BELOW SYMBOL INDICATES NUMBER OF PINS)
		1/4" 3-CONDUCTOR PANEL MOUNT CONNECTOR
		1/4" 3-CONDUCTOR CABLE MOUNT CONNECTOR
		1/8" 3-CONDUCTOR MINI PANEL MOUNT CONNECTOR
		1/8" 3-CONDUCTOR MINI CABLE MOUNT CONNECTOR
4		SPEAKON JACK, 2-CONDUCTOR BLANK, 4-CONDUCTOR SHOWN
4		SPEAKON PLUG, SIMILAR TO ABOVE
		MALE DT12 PANEL MOUNT CONNECTOR
		FEMALE DT12 PANEL MOUNT CONNECTOR

DATA

SIGNAL FLOW	PANEL/PLATE	DESCRIPTION
		ST FIBER PANEL MOUNT CONNECTOR
		ST FIBER CABLE MOUNT CONNECTOR
		LC FIBER PANEL MOUNT CONNECTOR
		LC FIBER CABLE MOUNT CONNECTOR
		HYBRID FIBER PANEL MOUNT CONNECTOR
		HYBRID FIBER CABLE MOUNT CONNECTOR
		UTP PANEL MOUNT CONNECTOR
		UTP CABLE MOUNT CONNECTOR
		RJ-45 STANDARD PANEL MOUNT CONNECTOR
		RJ-45 STANDARD CABLE MOUNT CONNECTOR
		RJ-11 PANEL MOUNT CONNECTOR
		RJ-11 CABLE MOUNT CONNECTOR

NOTE: REFER TO DIVISION 27 SECTION "TELECOMMUNICATIONS REQUIREMENTS FOR AUDIO-VIDEO SYSTEMS" FOR ADDITIONAL INFORMATION

AUDIO-VIDEO

SIGNAL FLOW	PANEL/PLATE	DESCRIPTION
		FEMALE RCA PANEL MOUNT CONNECTOR
		MALE RCA CABLE MOUNT CONNECTOR
		FEMALE PANEL MOUNT MULTIPIN CONNECTOR
		FEMALE CABLE MOUNT MULTIPIN CONNECTOR
		MALE CABLE MOUNT MULTIPIN CONNECTOR
		PATCH JACK PLUG

NOTE: PANEL & PLATE CONNECTORS ARE NOT SHOWN TO SCALE.

VIDEO

SIGNAL FLOW	PANEL/PLATE	DESCRIPTION
		BNC PANEL MOUNT CONNECTOR
		CABLE END BNC CONNECTOR
		75 OHM BNC TERMINATOR
		RGBHV HD-15 PANEL MOUNT CONNECTOR
		RGBHV HD-15 CABLE MOUNT CONNECTOR
		DVI PANEL MOUNT CONNECTOR
		DVI CABLE MOUNT CONNECTOR
		HDMI PANEL MOUNT CONNECTOR
		HDMI CABLE MOUNT CONNECTOR
		DISPLAYPORT PANEL MOUNT CONNECTOR
		DISPLAYPORT CABLE MOUNT CONNECTOR
		F-STYLE RF PANEL MOUNT CONNECTOR
		F-STYLE RF CABLE MOUNT CONNECTOR
		VIDEO PATCH PANEL JACK
M		TRIAX MALE
F		TRIAX FEMALE
M		SMPTE 304 SOCKET (MALE)
F		SMPTE 304 PLUG (FEMALE)

CONTROL

SIGNAL FLOW	PANEL/PLATE	DESCRIPTION
		COM (DB-9) PANEL MOUNT CONNECTOR
		COM (DB-9) CABLE MOUNT CONNECTOR
		IR EMITTER
		USB TYPE A PANEL MOUNT CONNECTOR
		USB TYPE A CABLE MOUNT CONNECTOR
		USB TYPE B PANEL MOUNT CONNECTOR
		USB TYPE B CABLE MOUNT CONNECTOR
		USB TYPE C PANEL MOUNT CONNECTOR
		USB TYPE C CABLE MOUNT CONNECTOR

DEVICES AND CONNECTIONS

SIGNAL FLOW	DESCRIPTION
	CONNECTION TO CHASSIS GROUND
	RUBBER JACKETED EXTENSION CABLE
	PARALLEL CONNECTION OR CHANGE IN WIRE TYPE
	ANTENNA
	PATCH POINT. CONNECT TO PATCH PANEL PER SPECIFICATION REQUIREMENTS
	CONNECTION BUBBLE UPPER DESIGNATION REFERS TO CONNECTION LABEL. LOWER DESIGNATION REFERS TO THE SHEET NUMBER ON WHICH THE CONNECTION IS CONTINUED.
	EQUIPMENT / TERMINATIONS WITHIN A COMMON LOCATION AS LABELED.
	ALTERNATE OUTLINE

CONDUIT/CIRCUIT GROUP DIVISIONS

GROUP	DESCRIPTIONS	LEVEL	BANDWIDTH
A	CONTROL CIRCUITS DATA CIRCUITS FIBER CIRCUITS	0-28 VOLT INTO <50 kOHMS 2 VOLT PEAK-TO-PEAK INTO 100 OHMS	0 Hz TO 250 MHz 0 Hz TO 500 MHz
L	LINE LEVEL AUDIO CIRCUITS	-30dBU TO +24dBu	20 Hz TO 20kHz
M	MICROPHONE LEVEL AUDIO CIRCUITS	BELOW -30dBu	20 Hz TO 20kHz
P	PRODUCTION INTERCOM COMMUNICATION CIRCUITS	-30dBU TO +24dBu	20 Hz TO 20kHz
S	SPEAKER LEVEL AUDIO CIRCUITS INCLUDING BOTH LOW IMPEDANCE AND HIGH IMPEDANCE (70 VOLT) TYPES	GREATER THAN +24dBu	20 Hz TO 20kHz
V	VIDEO CIRCUITS	1 VOLT PEAK-TO-PEAK INTO 75 OHMS	0 Hz TO 250 MHz
W	RF LEVEL CIRCUITS INCLUDING WIRELESS MICROPHONE, ANTENNA CABLE, SATELLITE, ASSISTED LISTENING SYSTEM, AND TV DISTRIBUTION	GREATER THAN +24dBu	5 MHz TO 3GHz

MINIMUM SEPARATION REQUIREMENTS

GROUP	A	L	M	P	S	V	W	POWER*
A	NO SEP	ADJACENT	4"	2"	ADJACENT	ADJACENT	ADJACENT	2"
L	ADJACENT	NO SEP	ADJACENT	4"	2"	ADJACENT	2"	4"
M	4"	ADJACENT	NO SEP	4"	4"	ADJACENT	4"	12"
P	2"	4"	4"	NO SEP	4"	4"	4"	4"
S	ADJACENT	2"	4"	4"	NO SEP	2"	ADJACENT	2"
V	ADJACENT	ADJACENT	ADJACENT	4"	2"	NO SEP	2"	2"
W	ADJACENT	2"	4"	4"	ADJACENT	2"	NO SEP	2"
POWER*	2"	4"	12"	4"	2"	2"	2"	PER NEC

*POWER MULTIPLIERS FOR "MINIMUM SEPARATION REQUIREMENTS" TABLE ABOVE

CIRCUIT CONDITIONS ENVIRONMENTAL CLASS E1	KEY NOTE A				UNSCREEN POWER	BOTH SCREENED
	TABLE	2X TABLE	6X TABLE	12X TABLE		
120/230VAC 20A 1PH	30	60	91	-	2X TABLE	0.5X TABLE
120/230VAC 32A 1PH	9	19	29	-	2X TABLE	0.5X TABLE
120/230VAC 63A 1PH	3	8	15	-	2X TABLE	0.5X TABLE
120/230VAC 100A 1PH	1	2	4	-	2X TABLE	0.5X TABLE
480VAC 100A 3PH	0	0	1	2	1X TABLE	0.5X TABLE

GENERAL NOTES:
1. POWER SEPARATION ASSUMES REASONABLE CONDITIONS, REFER TO TIA-569 FOR SPECIFIC REQUIREMENTS
2. APPLY LISTED FACTORS FOR UNSCREENED POWER CABLES, INCLUDING UNDERGROUND ROUTING IN PVC OR SIMILAR
3. TABLE VALUES MAY BE HALVED WHEN BOTH POWER AND LV CABLING IS IN METAL PATHWAYS PER TIA-569

KEYED NOTES:
A. MAXIMUM QUANTITY ARMORED OR SCREENED RADIAL POWER CIRCUITS WITH NO LOW VOLTAGE CABLE PROTECTION

CIRCUIT ROUTING

	CONDUIT		J-HOOK	DIVIDED CABLE TRAY		
GROUP	HOME RUN	STUB	FROM STUB	DATA SEGMENT	SPEAKER SEGMENT	AV SEGMENT
A	ALLOWED	ALLOWED	ALLOWED	ALLOWED	PROHIBITED	ALLOWED
L	ALLOWED	ALLOWED	ALLOWED	PROHIBITED	PROHIBITED	ALLOWED
M	REQUIRED	PROHIBITED	PROHIBITED	PROHIBITED	PROHIBITED	PROHIBITED
P	ALLOWED	ALLOWED	ALLOWED	PROHIBITED	PROHIBITED	PROHIBITED
S	ALLOWED	ALLOWED	ALLOWED	PROHIBITED	ALLOWED	PROHIBITED
V	ALLOWED	ALLOWED	ALLOWED	PROHIBITED	PROHIBITED	ALLOWED
W	REQUIRED	PROHIBITED	PROHIBITED	PROHIBITED	PROHIBITED	PROHIBITED
LIFE SAFETY	REQUIRED	PROHIBITED	PROHIBITED	PROHIBITED	PROHIBITED	PROHIBITED

CIRCUIT REQUIREMENTS:
1. REFER TO SPECIFICATIONS AND NEC FOR CABLE CLASSIFICATION REQUIREMENTS
2. ALL FIBER CIRCUITS NOT IN HOME RUN CONDUIT SHALL BE ARMOR JACKETED
3. LIFE SAFETY CIRCUITS MAY BE COMPOSED OF ANY CIRCUIT GROUP WHERE THE SYSTEM OR CABLE IS SERVING AN EMERGENCY OR LIFE SAFETY FUNCTION PER NEC AND/OR NFPA
4. REFER TO SPECIFICATIONS FOR REQUIREMENTS RELATED TO CABLING WITHIN UNDERGROUND CONDUITS

HOME RUN CONDUIT REQUIREMENTS:
1. WHERE LISTED DESTINATION IS AN EQUIPMENT ROOM OR RACK WITHIN AN EQUIPMENT ROOM (E.G. R:1738), CONDUITS SHALL TERMINATE WITHIN ROOM FOR CABLE TO CONTINUE TO EQUIPMENT RACK VIA LADDER RACK OR SIMILAR
2. CIRCUITS OF LIKE GROUPS MAY BE CONSOLIDATED ALONG PATH WITH CONDUITS UPSIZED PER NEC

CONDUIT STUB & J-HOOK REQUIREMENTS:
1. PROVIDE WALL PENETRATIONS AS NECESSARY. ALL PENETRATIONS MUST CONSIST OF CONDUIT WITH BUSHINGS OR EZ-PATH PER SPECIFICATIONS
2. REFER TO SPECIFICATIONS FOR FIRE STOPPING REQUIREMENTS
3. OPEN CABLING IS NOT PERMITTED IN AREAS EXPOSED TO STRUCTURE. WHERE CABLE TRAY IS NOT PROVIDED, ROUTE IN CONDUIT UNTIL OUT OF EXPOSED AREA AT A MINIMUM

CABLE TRAY REQUIREMENTS
1. REQUIREMENTS INDICATE THE ACCEPTABLE CABLE TRAY ALLOCATION OF SIGNALS BETWEEN CABLE TRAY DIVIDERS
2. "DIVIDER" INDICATES A CABLE TRAY DIVIDER EQUAL TO THE HEIGHT OF THE TRAY AND SUFFICIENT TO PROVIDE AN EMI BARRIER. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

PLAN LEGEND

BOX AND PLAN SYMBOLS

- WALL BOX. "X" INDICATES FUNCTION OF BOX (REFER TO BOX LABEL LEGEND). "##" INDICATES BOX DESIGNATION.
- FLOOR BOX. SIMILAR TO ABOVE.
- POKE THRU. SIMILAR TO ABOVE.
- CEILING MOUNTED BOX. SIMILAR TO ABOVE.
- FLUSH MOUNTED CEILING LOUDSPEAKER. "S##" DESIGNATOR INDICATES LOUDSPEAKER IDENTIFICATION INFORMATION.
- PENDANT MOUNTED LOUDSPEAKER. "S##" DESIGNATOR INDICATES LOUDSPEAKER IDENTIFICATION INFORMATION.
- CEILING MOUNTED MICROPHONE. SIMILAR TO ABOVE. NO BACK BOX.
- CEILING MOUNTED CAMERA. SIMILAR TO ABOVE. NO BACK BOX.

TYPICAL BOX SYMBOLS

- WALL BOX. "YY" INDICATES TYPE. REFER TO TYPICAL BOX SCHEDULE FOR ADDITIONAL INFORMATION AND AS INDICATED ON PLANS AND KEY NOTES.
- FLOOR BOX. CEILING BOX. SIMILAR TO ABOVE. "YY" INDICATES SYMBOL TYPE. "-F#" INDICATES UNIQUE IDENTIFIER.

NOTE: BLANK CELLS ON TYPICAL BOX SCHEDULE INDICATE INFORMATION PROVIDED ELSEWHERE.

CONDUIT LEGEND

- INDICATES ASSORTED SIGNALS ONLY. "#" SPECIFIES SIZE OF CONDUIT.
- INDICATES LINE LEVEL SIGNALS ONLY. "#" SPECIFIES SIZE OF CONDUIT.
- INDICATES MICROPHONE LEVEL SIGNALS ONLY. "#" SPECIFIES SIZE OF CONDUIT.
- INDICATES PRODUCTION INTERCOM LEVEL SIGNALS ONLY. "#" SPECIFIES SIZE OF CONDUIT.
- INDICATES LOUDSPEAKER LEVEL SIGNALS ONLY. "#" SPECIFIES SIZE OF CONDUIT.
- INDICATES VIDEO SIGNALS ONLY. "#" SPECIFIES SIZE OF CONDUIT.
- INDICATES WIRELESS/RF SIGNALS ONLY. "#" SPECIFIES SIZE OF CONDUIT.
- 0.75" CONDUIT. X INDICATES SIGNAL TYPE, SEE ABOVE.
- 1" CONDUIT. X INDICATES SIGNAL TYPE, SEE ABOVE.
- 1.25" CONDUIT. X INDICATES SIGNAL TYPE, SEE ABOVE.
- 1.5" CONDUIT. X INDICATES SIGNAL TYPE, SEE ABOVE.
- 2" CONDUIT. X INDICATES SIGNAL TYPE, SEE ABOVE.
- 2.5" CONDUIT. X INDICATES SIGNAL TYPE, SEE ABOVE.
- 3" CONDUIT. X INDICATES SIGNAL TYPE, SEE ABOVE.

PATHWAY LEGEND

- CONDUIT PATH.
- CONDUIT PATH CONTINUES ON TO DESTINATION AS INDICATED.
- CONDUIT STUB TO ACCESSIBLE PORTION OF CEILING. BUSH CONDUIT ENDS.
- CONDUIT STUB TO BELOW RAISED FLOOR IF PRESENT, OTHERWISE BELOW FLOOR SLAB. BUSH CONDUIT ENDS.
- CONDUIT IN/UNDER FLOOR/GROUND CONSTRUCTION
- EXPOSED CABLE PATH. NO CONDUIT.
- CABLE TRAY. SIZE AS INDICATED ON PLANS.

REFER TO BOX SCHEDULE FOR ADDITIONAL INFORMATION.

LABEL LEGEND

A	ASSORTED
B	BROADCAST
C	CONTROL
D	DSS SATELLITE
E	EXISTING
F	FUTURE / BY OTHERS
G	GAME CLOCK
J	JUNCTION / PULL BOX
K	CAMERA
L	LINE-LEVEL AUDIO
M	MICROPHONE-LEVEL AUDIO
P	PRODUCTION INTERCOM
R	EQUIPMENT RACK
S	LOUDSPEAKER-LEVEL AUDIO
T	TELEVISION DISTRIBUTION
V	VIDEO
W	WIRELESS / RF
DS	DIGITAL SIGNAGE
DV	DIRECT VIEW LED
FP	FLAT PANEL DISPLAY
LS	LOUDSPEAKER
PR	PROJECTOR
PS	PROJECTION SCREEN
TV	TELEVISION
VW	VIDEO WALL

LABEL STANDARD

HATCHING LEGEND

ENLARGED PLAN

NOT IN SCOPE (NIS)

GLMVArchitecture

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EXPIRES 10/31/2024

BRIAN OLLIGES
NUMBER PE-2022017790
10/30/2023

BRIAN C. OLLIGES
LICENSE # PE-2022017790

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

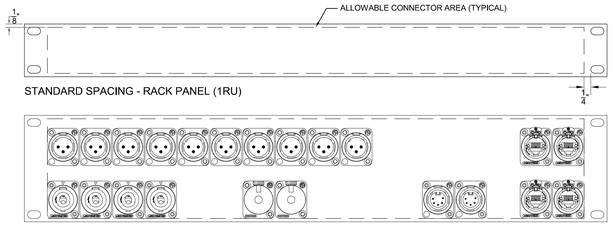
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	JFR
CHECKED BY:	JG

AUDIO-VIDEO
GENERAL NOTES
AND LEGEND

TA-000

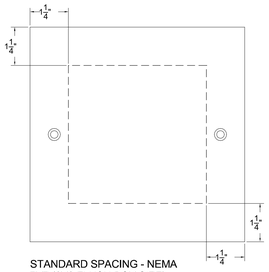
BRIAN C. OLLIGES

PLOT DATE: 10/27/2023 10:45:36 AM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMO-MEPF_V23.rvt

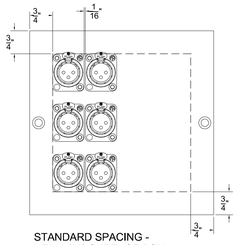


STANDARD SPACING - RACK PANEL (1RU)

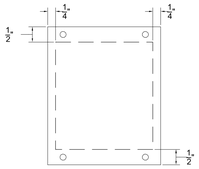
STANDARD LAYOUT - RACK PANEL (2RU)



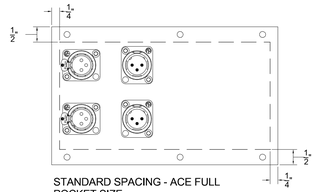
STANDARD SPACING - NEMA 7X7 (6X6 FLUSH BOX SIZE)



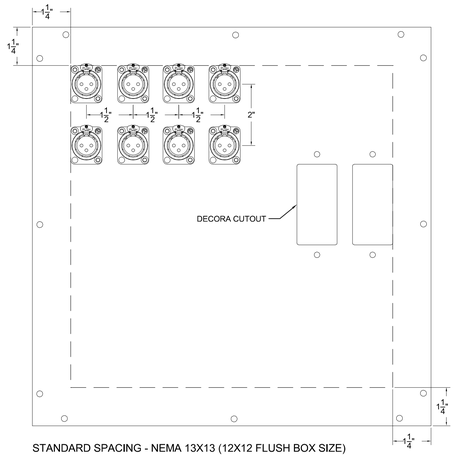
STANDARD SPACING - NEMA 6X6 SURFACE BOX



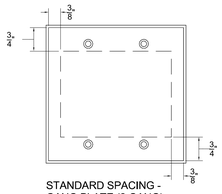
STANDARD SPACING - ACE HALF POCKET SIZE



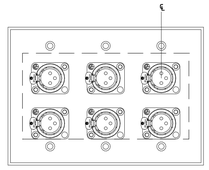
STANDARD SPACING - ACE FULL POCKET SIZE



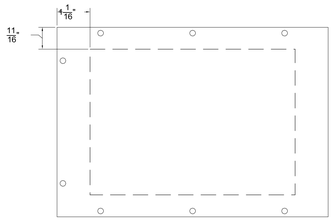
STANDARD SPACING - NEMA 13X13 (12X12 FLUSH BOX SIZE)



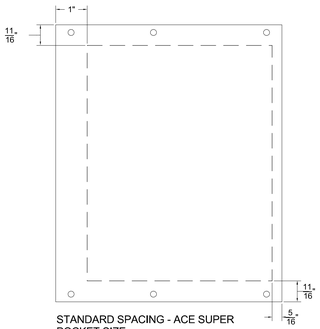
STANDARD SPACING - GANG PLATE (2 GANG)



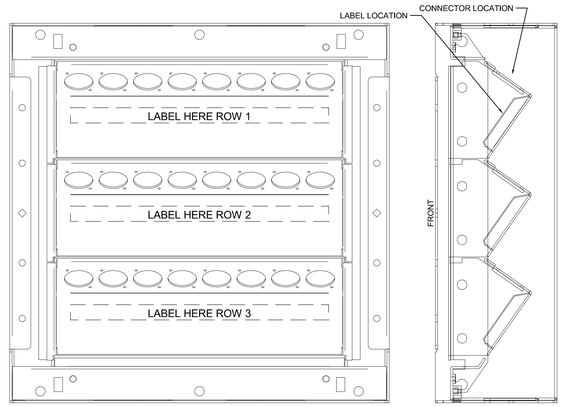
STANDARD LAYOUT - GANG PLATE (3 GANG)



STANDARD SPACING - FLOOR BOX (FSR FL-1500)



STANDARD SPACING - ACE SUPER POCKET SIZE

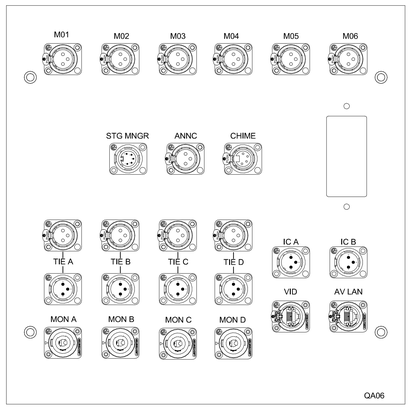


STANDARD MOUNTING AND LABELING CONDITION - FSR WB-X2-XLR (FRONT AND RIGHT SIDE)

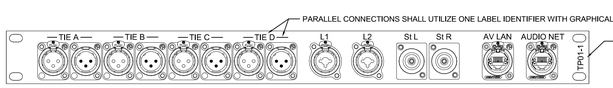
GENERAL NOTES:

1. THIS SHEET IS PROVIDED TO CONVEY PANEL AND PLATE REQUIREMENTS IN A GENERAL FASHION. IT SHALL BE USED AS A GUIDELINE FOR THE CREATION OF SHOP DRAWINGS. ALL DETAILS CONTAINED ON THIS SHEET ARE CONCEPTUAL IN NATURE AND DO NOT REFLECT SPECIFIC LAYOUTS RELATED TO THIS PROJECT.
2. DETAIL 1 DESCRIBES PLATE FABRICATION REQUIREMENTS RELATED TO PLATE LAYOUT AND CONNECTOR SPACING AND SEPERATION.
3. DETAIL 2 PROVIDES EXAMPLE PLATE LAYOUTS WITH LABELING REQUIREMENTS.
4. REFER TO LEGEND SHEET FOR GENERAL PANEL AND PLATE NOTES.

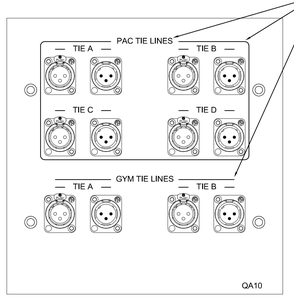
① PLATE FABRICATION REQUIREMENTS
SCALE: 6" = 1' - 0"



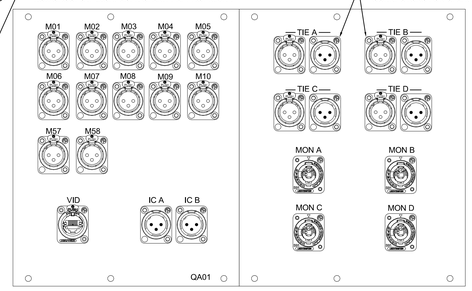
FOR 12" x 12" NEMA BACK BOX



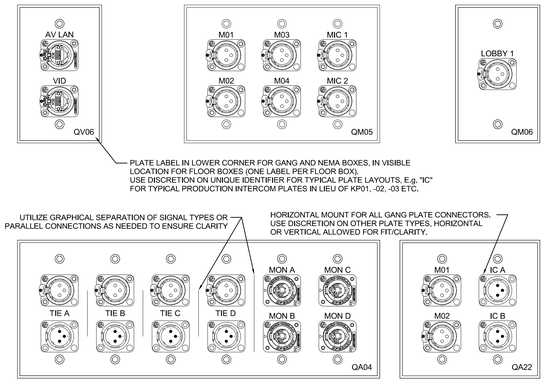
FOR RACK MOUNT



FOR 8" x 8" NEMA BACK BOX



FOR ACE BACKSTAGE SUPER DOUBLE WIDE BACK BOX



FOR STANDARD GANG BOXES

v1.00

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NUMBER PE-2022017790
PROFESSIONAL ENGINEER
10/30/2023

BRIAN C. OLLIGES
LICENSE # PE-2022017790

CITY OF LEE'S SUMMIT

LEE'S SUMMIT - MARKET PLAZA

LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		JFR
CHECKED BY:		JG

AUDIO-VIDEO PLATE REQUIREMENTS

TA-001

BRIAN C. OLLIGES
PLOT DATE: 10/27/2023 10:45:40 AM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMO-MEPF_V23.rvt

AUDIO-VIDEO SITE BOX SCHEDULE										
BOX FUNCTION		BOX PROPERTIES				BOX ACCESSORIES		CONDUIT REQUIREMENTS		
ID	DESCRIPTION	B.O.D. MANUF.	B.O.D. MODEL	INSTALL HEIGHT (CENTER OF BOX)	MOUNTING	COVER	INSERTS	SIZE	ROUTING	NOTES
JS:EXT:01	ASSORTED CONNECTION WALL BOX	RACO	674	166"	FLUSH	BLANK	1-GANG MUD RING	PER PLAN	PER PLAN	
JS:EXT:01	ASSORTED CONNECTION WALL BOX	RACO	674	166"	FLUSH	BLANK	1-GANG MUD RING	PER PLAN	PER PLAN	
JS:EXT:01	ASSORTED CONNECTION WALL BOX	RACO	674	166"	FLUSH	BLANK	1-GANG MUD RING	PER PLAN	PER PLAN	
JS:EXT:01	ASSORTED CONNECTION WALL BOX	RACO	674	166"	FLUSH	BLANK	1-GANG MUD RING	PER PLAN	PER PLAN	
JS:EXT:01	ASSORTED CONNECTION WALL BOX	RACO	674	168"	FLUSH	BLANK	1-GANG MUD RING	PER PLAN	PER PLAN	
JS:EXT:01	ASSORTED CONNECTION WALL BOX	RACO	674	166"	FLUSH	BLANK	1-GANG MUD RING	PER PLAN	PER PLAN	

SCHEDULED PARAMETER DEFINITIONS:

- POWER DRAW = DESIGNED LOAD ON CIRCUIT WITHOUT AMPLIFIER CHANNEL SIZING FACTOR (CONTINUOUS POWER RATING)
  - FOR LOW IMPEDANCE: VALUES INDICATED ARE RMS
  - FOR 70V: VALUES INDICATED ARE MAXIMUM CIRCUIT LOAD
- WIRE AWG# = ANTICIPATED WIRE GAUGE REQUIRED FOR MAXIMUM ALLOWABLE LINE LOSS OF [1.0dB]; INSTALLATION FACTORS MAY REQUIRE ADJUSTMENTS BY THE CONTRACTOR
  - MINIMUM ALLOWABLE WIRE GAUGE:
    - 70V LOUDSPEAKERS: 16AWG
    - LOW IMP LOUDSPEAKERS: 12AWG
    - SUBWOOFERS: 12AWG
- HEIGHT = MEASURED TO CENTER OF LOUDSPEAKER FACE
- YAW = HORIZONTAL ORIENTATION IN RELATION TO PLAN NORTH
- PITCH = VERTICAL ORIENTATION
- ROLL = ROTATIONAL ORIENTATION AROUND LOUDSPEAKER AXIS
- ROLL ENCLOSURE 90 = STARTING POSITION OF LOUDSPEAKER IS ROLLED 90 DEGREES
- ROTATE HORN 90 = STARTING POSTION OF HORN IS ROTATED 90 DEGREES IN THE ENCLOSURE

AUDIO-VIDEO LOUDSPEAKER SCHEDULE - AMP1														
	CIRCUIT PROPERTIES		LOUDSPEAKER PROPERTIES				LOUDSPEAKER MOUNTING		ORIENTATION			ENCLOSURE/HORN		
ID	LOAD TYPE	WIRE AWG#	SPEC NAME	B.O.D. MANUF.	B.O.D. MODEL	70V TAP (WATTS)	MOUNTING CONDITION	HEIGHT	YAW	PITCH	ROLL	ROLL ENCL. 90	ROTATE HORN 90	NOTES
5														
LS:EXT:01	70 V	12	TYPE 4	BIAMP	DESONO MASK4CT	20	SUSPENDED STRUCTURE	163"	0.00°	-45.00°	0.00°	Yes	No	
LS:EXT:02	70 V	12	TYPE 4	BIAMP	DESONO MASK4CT	20	SUSPENDED STRUCTURE	163"	0.00°	-45.00°	0.00°	Yes	No	
LS:EXT:03	70 V	12	TYPE 4	BIAMP	DESONO MASK4CT	20	SUSPENDED STRUCTURE	163"	0.00°	-45.00°	0.00°	Yes	No	
LS:EXT:04	70 V	12	TYPE 4	BIAMP	DESONO MASK4CT	20	SUSPENDED STRUCTURE	163"	0.00°	-45.00°	0.00°	Yes	No	
LS:EXT:05	70 V	12	TYPE 4	BIAMP	DESONO MASK4CT	20	SUSPENDED STRUCTURE	163"	0.00°	-45.00°	0.00°	Yes	No	
LS:EXT:06	70 V	12	TYPE 4	BIAMP	DESONO MASK4CT	20	SUSPENDED STRUCTURE	163"	0.00°	-45.00°	0.00°	Yes	No	
6														
LS:EXT:07	LOW IMP	12	TYPE 6	BIAMP	DESONO ENT206	150	POLE STRUCTURE	144"	90.00°	-14.00°	0.00°	No	No	
7														
LS:EXT:08	LOW IMP	12	TYPE 6	BIAMP	DESONO ENT206	150	POLE STRUCTURE	144"	270.00°	-14.00°	0.00°	No	No	

TO ORIENT LOUDSPEAKERS:

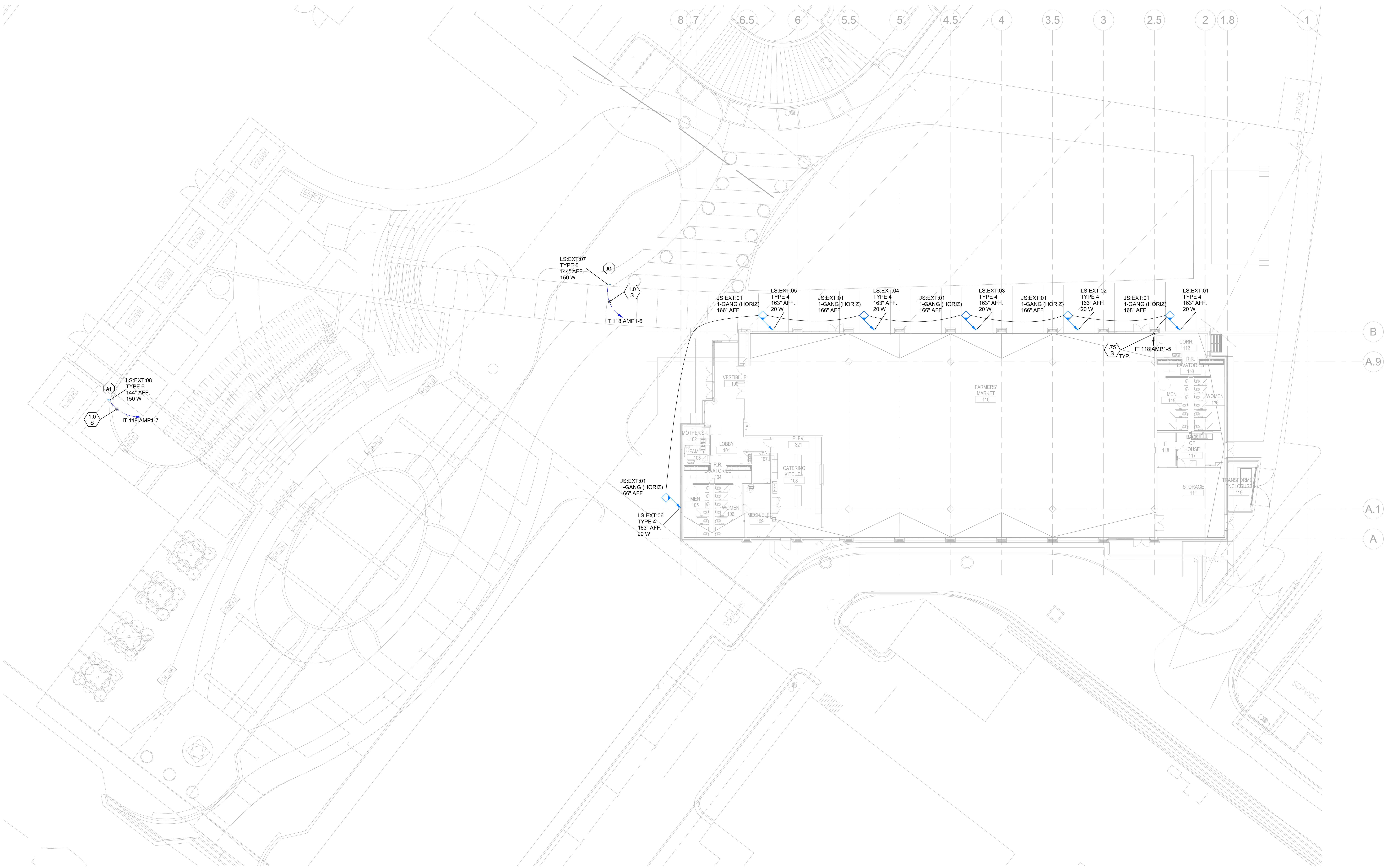
1. VERIFY "ROLL ENCLOSURE 90" AND "ROTATE HORN 90" PRIOR TO PROCEEDING
2. VIEW LOUDSPEAKERS FROM REAR (FROM PLAN SOUTH VIEWING NORTH)
3. ROTATE LOUDSPEAKER COUNTER CLOCKWISE (POSITIVE DEGREE) OR CLOCKWISE (NEGATIVE DEGREE) TO THE SCHEDULED YAW ORIENTATION
4. TILT LOUDSPEAKER TO SCHEDULED PITCH ORIENTATION
5. ROLL LOUDSPEAKER COUNTER CLOCKWISE (POSITIVE DEGREE) OR CLOCKWISE (NEGATIVE DEGREE) TO SCHEDULED ROLL ORIENTATION

FINAL ORIENTATION OF LOUDSPEAKERS:

1. SHALL BE AT THE DISCRETION OF THE CONSULTANT DURING COMMISSIONING
2. CONTRACTOR SHALL PROVIDE MEANS OF ACCESS TO ALL LOUDSPEAKER POSITIONS FOR TESTING, VERIFICATION, REORIENTATION, ETC.
3. MEANS OF ACCESS SHALL INCLUDE MOTORIZED LIFTS, SCAFFOLDING OR OTHER METHOD TO ALLOW FOR SAFE AND TIMELY OBSERVATION AND ADJUSTMENT

AUDIO-VIDEO PLAN NOTES:

A1 LOUDSPEAKER POLE MOUNTED TO LIGHT POLE. PROVIDE PULL STRING TO FIVE FEET OUTSIDE EXTERIOR WALL INDICATED FOR PLAZA SITE AUDIO-VIDEO CIRCUITRY. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AS INDICATED ON TA DRAWINGS.



1 AUDIO-VIDEO SITE PLAN
1/16" = 1'-0"

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NUMBER PE-2022017790
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10/30/2023
BRIAN C. OLLIGES
LICENSE # PE-2022017790

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	JFR
CHECKED BY:	JG

AUDIO-VIDEO SITE PLAN

TA-100

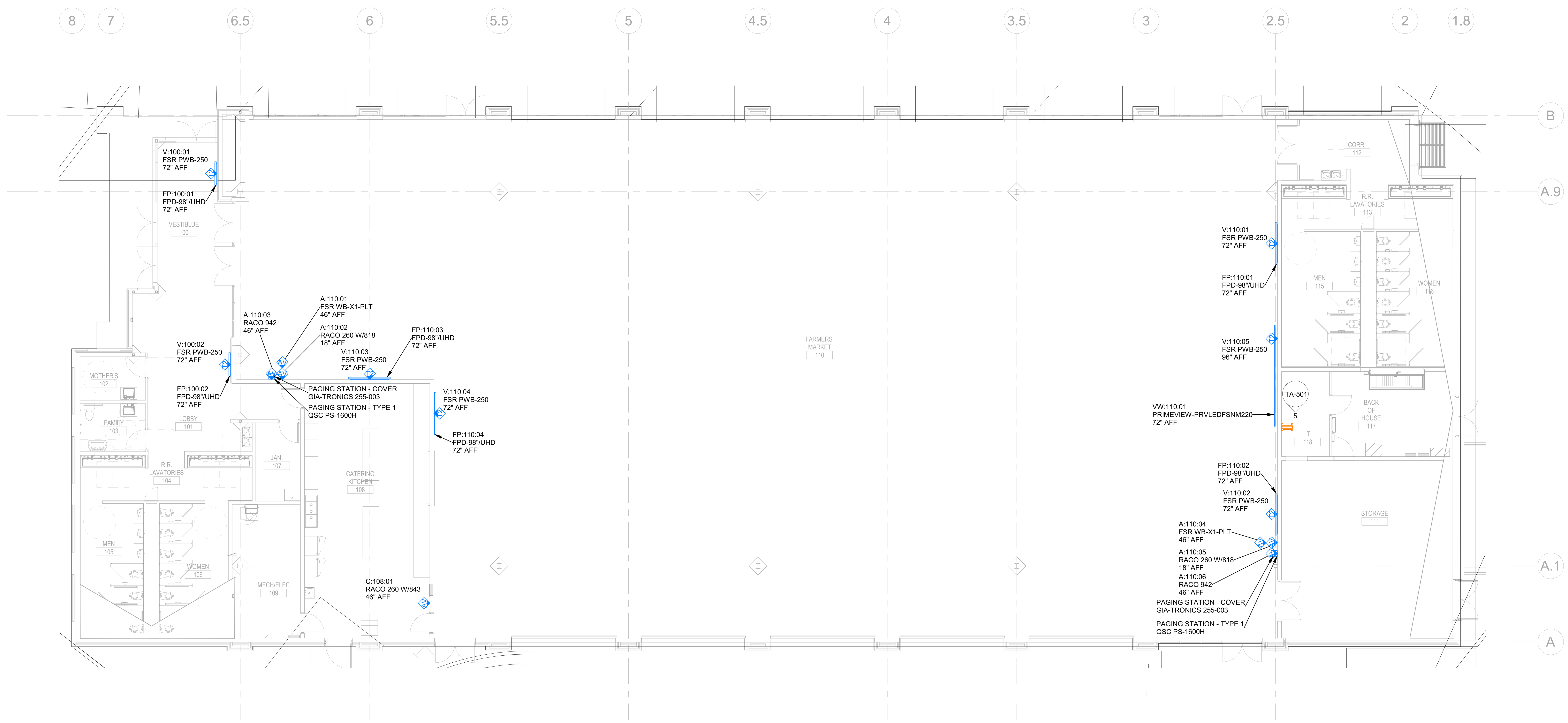
BRIAN C. OLLIGES
PLOT DATE: 10/27/2023 10:45:46 AM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMO-MEPF_V23.rvt

AUDIO-VIDEO BOX SCHEDULE

BOX FUNCTION		BOX PROPERTIES				BOX ACCESSORIES		CONDUIT REQUIREMENTS		
ID	DESCRIPTION	B.O.D. MANUF.	B.O.D. MODEL	INSTALL HEIGHT (CENTER OF BOX)	MOUNTING	COVER	INSERTS	SIZE	ROUTING	NOTES
A:110:01	ASSORTED CONNECTION WALL BOX	FSR	WB-X1-PLT	46"	FLUSH	WB-X1-SMCVR-BLK	CUSTOM PLATE	1.00"	STUB HIGH CLOSE TO CEILING DECK	
A:110:02	ASSORTED CONNECTION WALL BOX	RACO	260 W/ 818	18"	FLUSH	N/A	2-GANG MUD RING	0.75"	STUB HIGH CLOSE TO CEILING DECK	
A:110:03	ASSORTED CONNECTION WALL BOX	RACO	942	46"	FLUSH	N/A	N/A	0.75"	STUB HIGH CLOSE TO CEILING DECK	
A:110:04	ASSORTED CONNECTION WALL BOX	FSR	WB-X1-PLT	46"	FLUSH	WB-X1-SMCVR-BLK	CUSTOM PLATE	1.00"	STUB HIGH CLOSE TO CEILING DECK	
A:110:05	ASSORTED CONNECTION WALL BOX	RACO	260 W/ 818	18"	FLUSH	N/A	2-GANG MUD RING	0.75"	STUB HIGH CLOSE TO CEILING DECK	
A:110:06	ASSORTED CONNECTION WALL BOX	RACO	942	46"	FLUSH	N/A	N/A	0.75"	STUB HIGH CLOSE TO CEILING DECK	
C:108:01	ASSORTED CONNECTION WALL BOX	RACO	260 W/ 843	46"	FLUSH	N/A	1-GANG MUD RING	0.75"	STUB HIGH CLOSE TO CEILING DECK	
V:100:01	TELEVISION CONNECTION BOX	FSR	PWB-250	72"	FLUSH	PWB-250-BLK-C	N/A	0.75"	STUB HIGH CLOSE TO CEILING DECK	
V:100:02	TELEVISION CONNECTION BOX	FSR	PWB-250	72"	FLUSH	PWB-250-BLK-C	N/A	0.75"	STUB HIGH CLOSE TO CEILING DECK	
V:110:01	TELEVISION CONNECTION BOX	FSR	PWB-250	72"	FLUSH	PWB-250-BLK-C	N/A	0.75"	STUB HIGH CLOSE TO CEILING DECK	
V:110:02	TELEVISION CONNECTION BOX	FSR	PWB-250	72"	FLUSH	PWB-250-BLK-C	N/A	0.75"	STUB HIGH CLOSE TO CEILING DECK	
V:110:03	TELEVISION CONNECTION BOX	FSR	PWB-250	72"	FLUSH	PWB-250-BLK-C	N/A	0.75"	STUB HIGH CLOSE TO CEILING DECK	
V:110:04	TELEVISION CONNECTION BOX	FSR	PWB-250	72"	FLUSH	PWB-250-BLK-C	N/A	0.75"	STUB HIGH CLOSE TO CEILING DECK	
V:110:05	TELEVISION CONNECTION BOX	FSR	PWB-250	96"	FLUSH	PWB-250-BLK-C	N/A	0.75"	STUB HIGH CLOSE TO CEILING DECK	
W:110:01	WIRELESS MIC ANTENNA CONNECTION WALL BOX	HOFFMAN	ASG4X4X4	220"	FLUSH	PROVIDE	N/A	1.25"	HOME RUN TO EQUIPMENT RACK	
W:110:02	ALS ANTENNA CONNECTION WALL BOX	HOFFMAN	ASG4X4X4	220"	FLUSH	PROVIDE	N/A	1.25"	HOME RUN TO EQUIPMENT RACK	
W:110:03	WIRELESS MIC ANTENNA CONNECTION WALL BOX	HOFFMAN	ASG4X4X4	220"	FLUSH	PROVIDE	N/A	1.25"	HOME RUN TO EQUIPMENT RACK	

AUDIO-VIDEO FLAT PANEL DISPLAY SCHEDULE

	DISPLAY PROPERTIES			MOUNTING REQUIREMENTS			DISPLAY RESPONSIBILITY		
ID	SPEC NAME	B.O.D. MANUF.	B.O.D. MODEL	INSTALL HEIGHT AFF. (CENTER OF DISPLAY)	TYPE	FURNISHED BY	INSTALLED BY	PROVIDED BY	NOTES
FP:100:01	FPD-98"/UHD	NEC	M861	72"	WALL - FIXED	CONTRACTOR	CONTRACTOR	CONTRACTOR	
FP:100:02	FPD-98"/UHD	NEC	M861	72"	WALL - FIXED	CONTRACTOR	CONTRACTOR	CONTRACTOR	
FP:110:01	FPD-98"/UHD	NEC	M861	72"	WALL - FIXED	CONTRACTOR	CONTRACTOR	CONTRACTOR	
FP:110:02	FPD-98"/UHD	NEC	M861	72"	WALL - FIXED	CONTRACTOR	CONTRACTOR	CONTRACTOR	
FP:110:03	FPD-98"/UHD	NEC	M861	72"	WALL - FIXED	CONTRACTOR	CONTRACTOR	CONTRACTOR	
FP:110:04	FPD-98"/UHD	NEC	M861	72"	WALL - FIXED	CONTRACTOR	CONTRACTOR	CONTRACTOR	
VW:110:01	PRIMEVIEW-PRVLEDFSNM220	PRIMEVIEW	PRVLEDFSNM220	72"	WALL - FIXED	CONTRACTOR	CONTRACTOR	CONTRACTOR	



1 AUDIO-VIDEO FLOOR PLAN
1/8" = 1'-0"

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BRIAN C. OLLIGES
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CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE
PROJECT NO:		18225R21006
STATUS:		PERMIT SET
DATE:		11/01/2023
DRAWN BY:		JFR
CHECKED BY:		JG

AUDIO-VIDEO PLAN

TA-101

BRIAN C. OLLIGES
PLOT DATE: 10/27/2023 10:45:53 AM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMO-MEPF_V23.rvt

AUDIO-VIDEO LOUDSPEAKER SCHEDULE - AMP1

ID	CIRCUIT PROPERTIES: LOAD TYPE	CIRCUIT PROPERTIES: WIRE AWG#	LOUDSPEAKER PROPERTIES: SPEC NAME	LOUDSPEAKER PROPERTIES: B.O.D. MANUF.	LOUDSPEAKER PROPERTIES: B.O.D. MODEL	LOUDSPEAKER PROPERTIES: 70V TAP (WATTS)	LOUDSPEAKER MOUNTING: MOUNTING CONDITION	LOUDSPEAKER MOUNTING: HEIGHT	ORIENTATION: YAW	ORIENTATION: PITCH	ORIENTATION: ROLL	ENCLOSURE/HORN: ROLL ENCL. 90	ENCLOSURE/HORN: ROTATE HORN 90	NOTES
IT 118|AMP1														
1														
LS:100:01	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:100:02	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:100:03	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:101:01	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:101:02	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:102:01	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:103:01	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:104:01	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:104:02	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:104:03	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:104:04	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:111:01	70 V	14	TYPE 5	BIAMP	DESONO P30DT	3.75	SUSPENDED	108"						
LS:111:02	70 V	14	TYPE 5	BIAMP	DESONO P30DT	3.75	SUSPENDED	108"						
LS:111:03	70 V	14	TYPE 5	BIAMP	DESONO P30DT	3.75	SUSPENDED	108"						
LS:111:04	70 V	14	TYPE 5	BIAMP	DESONO P30DT	3.75	SUSPENDED	108"						
LS:112:01	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:113:01	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:113:02	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:113:03	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:113:04	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
2														
LS:108:01	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:108:02	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:108:03	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:108:04	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:108:05	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:108:08	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:109:06	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						
LS:109:07	70 V	14	TYPE 1	COMMUNITY	DESONO DX-IC4	3.75	CEILING FLUSH	108"						

AUDIO-VIDEO LOUDSPEAKER SCHEDULE - AMP1

ID	CIRCUIT PROPERTIES: LOAD TYPE	CIRCUIT PROPERTIES: WIRE AWG#	LOUDSPEAKER PROPERTIES: SPEC NAME	LOUDSPEAKER PROPERTIES: B.O.D. MANUF.	LOUDSPEAKER PROPERTIES: B.O.D. MODEL	LOUDSPEAKER PROPERTIES: 70V TAP (WATTS)	LOUDSPEAKER MOUNTING: MOUNTING CONDITION	LOUDSPEAKER MOUNTING: HEIGHT	ORIENTATION: YAW	ORIENTATION: PITCH	ORIENTATION: ROLL	ENCLOSURE/HORN: ROLL ENCL. 90	ENCLOSURE/HORN: ROTATE HORN 90	NOTES
3														
LS:110:01	70 V	14	TYPE 3	BIAMP	DESONO DX-S8	40	SUSPENDED STRUCTURE	252"	0.00°	-90.00°	0.00°	No	No	
LS:110:02	70 V	14	TYPE 3	BIAMP	DESONO DX-S8	40	SUSPENDED STRUCTURE	252"	0.00°	-90.00°	0.00°	No	No	
LS:110:03	70 V	14	TYPE 3	BIAMP	DESONO DX-S8	40	SUSPENDED STRUCTURE	252"	0.00°	-90.00°	0.00°	No	No	
LS:110:04	70 V	14	TYPE 3	BIAMP	DESONO DX-S8	40	SUSPENDED STRUCTURE	252"	0.00°	-90.00°	0.00°	No	No	
LS:110:05	70 V	14	TYPE 3	BIAMP	DESONO DX-S8	40	SUSPENDED STRUCTURE	252"	0.00°	-90.00°	0.00°	No	No	
LS:110:06	70 V	14	TYPE 3	BIAMP	DESONO DX-S8	40	SUSPENDED STRUCTURE	252"	0.00°	-90.00°	0.00°	No	No	
LS:110:07	70 V	14	TYPE 3	BIAMP	DESONO DX-S8	40	SUSPENDED STRUCTURE	252"	0.00°	-90.00°	0.00°	No	No	
LS:110:08	70 V	14	TYPE 3	BIAMP	DESONO DX-S8	40	SUSPENDED STRUCTURE	252"	0.00°	-90.00°	0.00°	No	No	
LS:110:09	70 V	14	TYPE 3	BIAMP	DESONO DX-S8	40	SUSPENDED STRUCTURE	252"	0.00°	-90.00°	0.00°	No	No	
4														
LS:110:10	70 V	14	TYPE 2	BIAMP	DESONO DX-S5	7.5	SUSPENDED STRUCTURE	163"	0.00°	-90.00°	0.00°	No	No	
LS:110:11	70 V	14	TYPE 2	BIAMP	DESONO DX-S5	7.5	SUSPENDED STRUCTURE	163"	0.00°	-90.00°	0.00°	No	No	
LS:110:12	70 V	14	TYPE 2	BIAMP	DESONO DX-S5	7.5	SUSPENDED STRUCTURE	163"	0.00°	-90.00°	0.00°	No	No	
LS:110:13	70 V	14	TYPE 2	BIAMP	DESONO DX-S5	7.5	SUSPENDED STRUCTURE	163"	0.00°	-90.00°	0.00°	No	No	
LS:110:14	70 V	14	TYPE 2	BIAMP	DESONO DX-S5	7.5	SUSPENDED STRUCTURE	163"	0.00°	-90.00°	0.00°	No	No	
LS:110:15	70 V	14	TYPE 2	BIAMP	DESONO DX-S5	7.5	SUSPENDED STRUCTURE	163"	0.00°	-90.00°	0.00°	No	No	
LS:110:16	70 V	14	TYPE 2	BIAMP	DESONO DX-S5	7.5	SUSPENDED STRUCTURE	163"	0.00°	-90.00°	0.00°	No	No	
LS:110:17	70 V	14	TYPE 2	BIAMP	DESONO DX-S5	7.5	SUSPENDED STRUCTURE	163"	0.00°	-90.00°	0.00°	No	No	
LS:110:18	70 V	14	TYPE 2	BIAMP	DESONO DX-S5	7.5	SUSPENDED STRUCTURE	163"	0.00°	-90.00°	0.00°	No	No	

SCHEDULED PARAMETER DEFINITIONS:

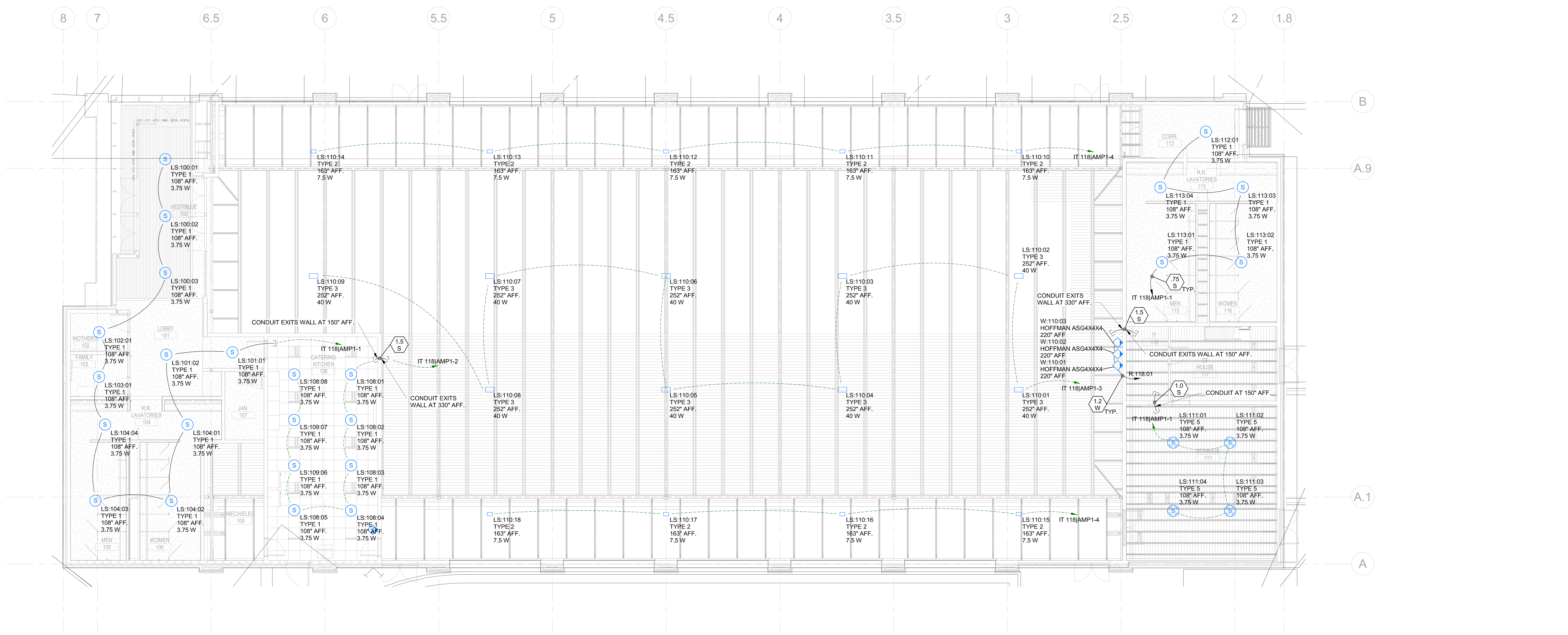
- POWER DRAW = DESIGNED LOAD ON CIRCUIT WITHOUT AMPLIFIER CHANNEL SIZING FACTOR (CONTINUOUS POWER RATING)
  - FOR LOW IMPEDANCE: VALUES INDICATED ARE RMS
  - FOR 70V: VALUES INDICATED ARE MAXIMUM CIRCUIT LOAD
- WIRE AWG# = ANTICIPATED WIRE GAUGE REQUIRED FOR MAXIMUM ALLOWABLE LINE LOSS OF [1.0dB]; INSTALLATION FACTORS MAY REQUIRE ADJUSTMENTS BY THE CONTRACTOR
  - MINIMUM ALLOWABLE WIRE GAUGE:
    - 70V LOUDSPEAKERS: 16AWG
    - LOW IMP LOUDSPEAKERS: 12AWG
    - SUBWOOFERS: 12AWG
- HEIGHT = MEASURED TO CENTER OF LOUDSPEAKER FACE
- YAW = HORIZONTAL ORIENTATION IN RELATION TO PLAN NORTH
- PITCH = VERTICAL ORIENTATION
- ROLL = ROTATIONAL ORIENTATION AROUND LOUDSPEAKER AXIS
- ROLL ENCLOSURE 90 = STARTING POSITION OF LOUDSPEAKER IS ROLLED 90 DEGREES
- ROTATE HORN 90 = STARTING POSITION OF HORN IS ROTATED 90 DEGREES IN THE ENCLOSURE

TO ORIENT LOUDSPEAKERS:

1. VERIFY "ROLL ENCLOSURE 90" AND "ROTATE HORN 90" PRIOR TO PROCEEDING
2. VIEW LOUDSPEAKERS FROM REAR (FROM PLAN SOUTH VIEWING NORTH)
3. ROTATE LOUDSPEAKER COUNTER CLOCKWISE (POSITIVE DEGREE) OR CLOCKWISE (NEGATIVE DEGREE) TO THE SCHEDULED YAW ORIENTATION
4. TILT LOUDSPEAKER TO SCHEDULED PITCH ORIENTATION
5. ROLL LOUDSPEAKER COUNTER CLOCKWISE (POSITIVE DEGREE) OR CLOCKWISE (NEGATIVE DEGREE) TO SCHEDULED ROLL ORIENTATION

FINAL ORIENTATION OF LOUDSPEAKERS:

1. SHALL BE AT THE DISCRETION OF THE CONSULTANT DURING COMMISSIONING
2. CONTRACTOR SHALL PROVIDE MEANS OF ACCESS TO ALL LOUDSPEAKER POSITIONS FOR TESTING, VERIFICATION, REORIENTATION, ETC.
3. MEANS OF ACCESS SHALL INCLUDE MOTORIZED LIFTS, SCAFFOLDING OR OTHER METHOD TO ALLOW FOR SAFE AND TIMELY OBSERVATION AND ADJUSTMENT



1 AUDIO-VIDEO RCP
1/8" = 1'-0"

GLMV Architecture

HENDERSON ENGINEERS

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10/30/2023

BRIAN C. OLLIGES
LICENSE # PE-2022017790

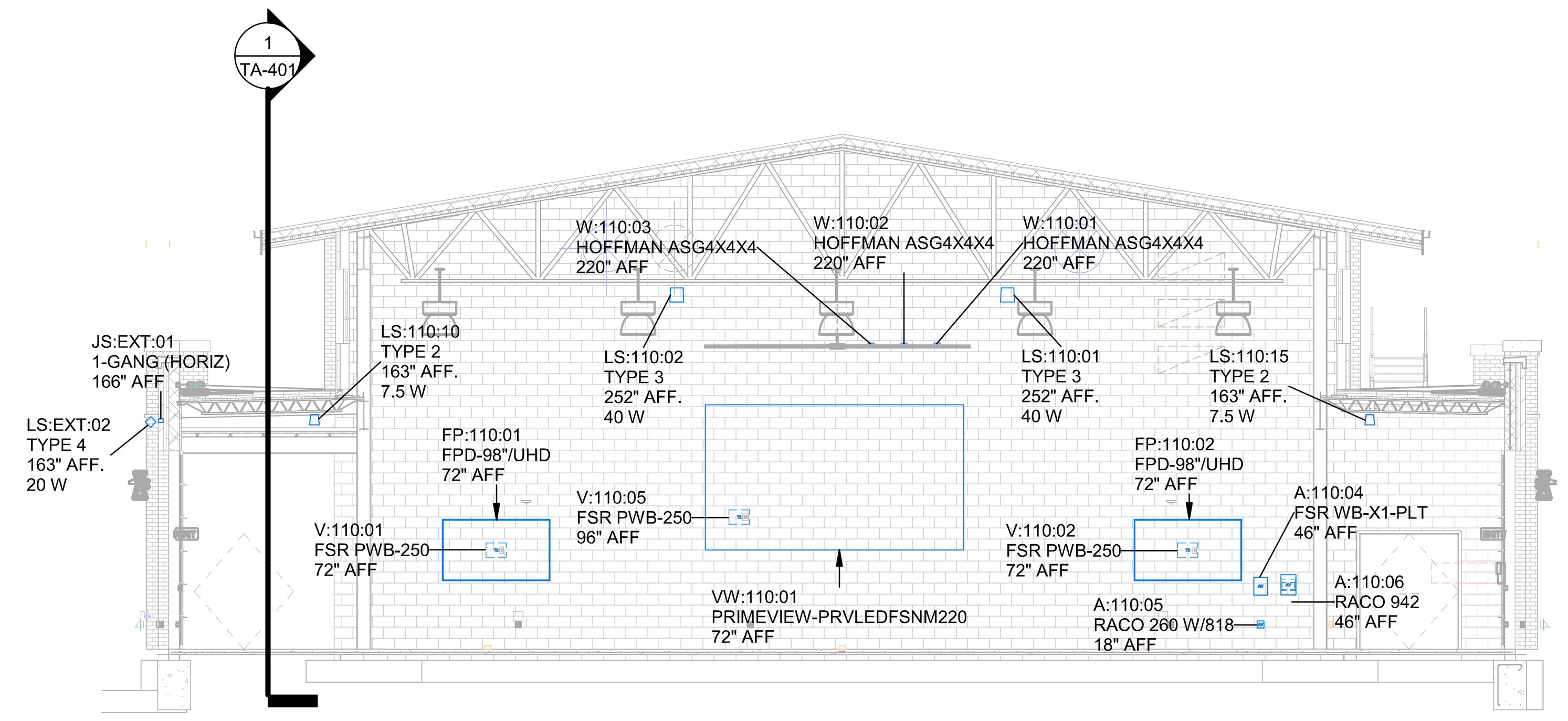
CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	JFR
CHECKED BY:	JG

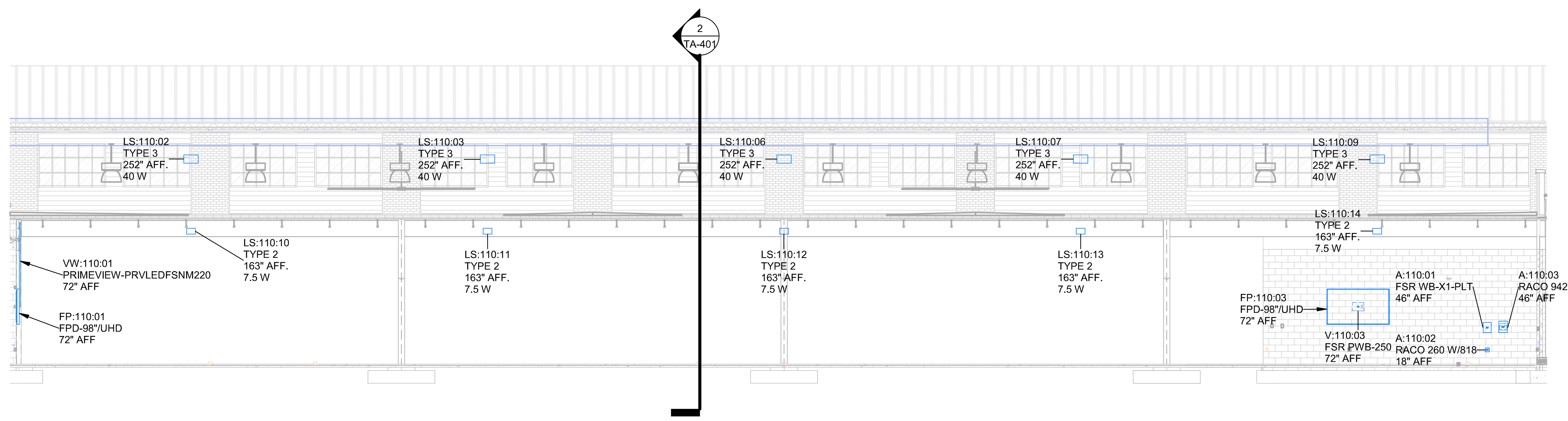
AUDIO-VIDEO RCP

TA-201

PLOT DATE: 10/27/2023 10:46:04 AM
BRIAN C. OLLIGES



(2) AUDIO-VIDEO CROSS SECTION - FARMERS MARKET
1/8" = 1'-0"



(1) AUDIO-VIDEO LONGITUDINAL SECTION - FARMERS MARKET
1/8" = 1'-0"

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CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

△	DESCRIPTION	DATE

PROJECT NO:	18225R21006
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AUDIO-VIDEO SECTIONS

TA-401

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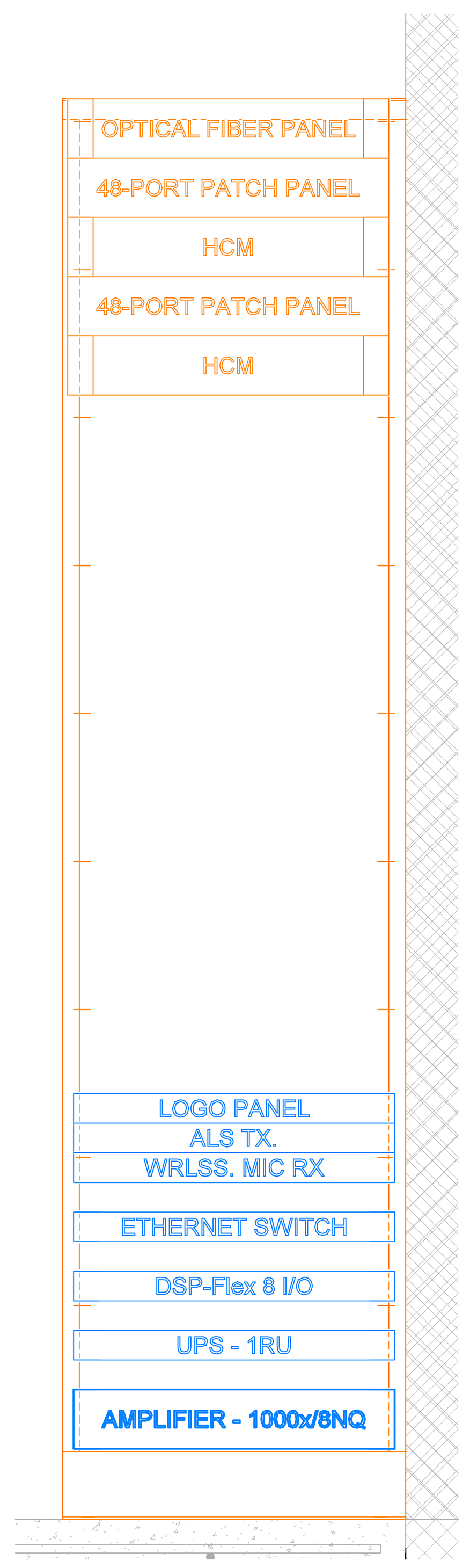
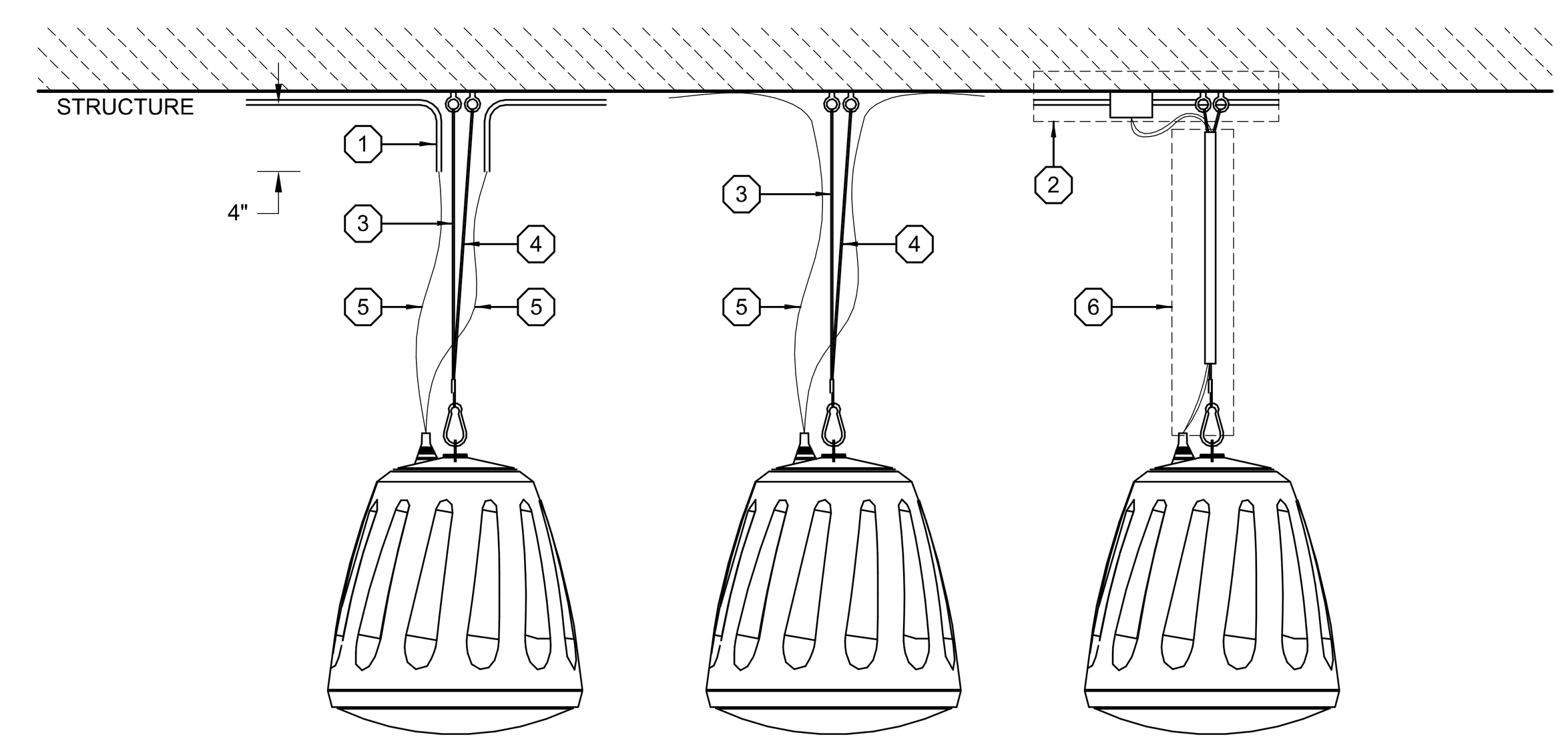


5 AUDIO-VIDEO ELEVATION - EQUIPMENT RACK
NTS



GENERAL NOTES:

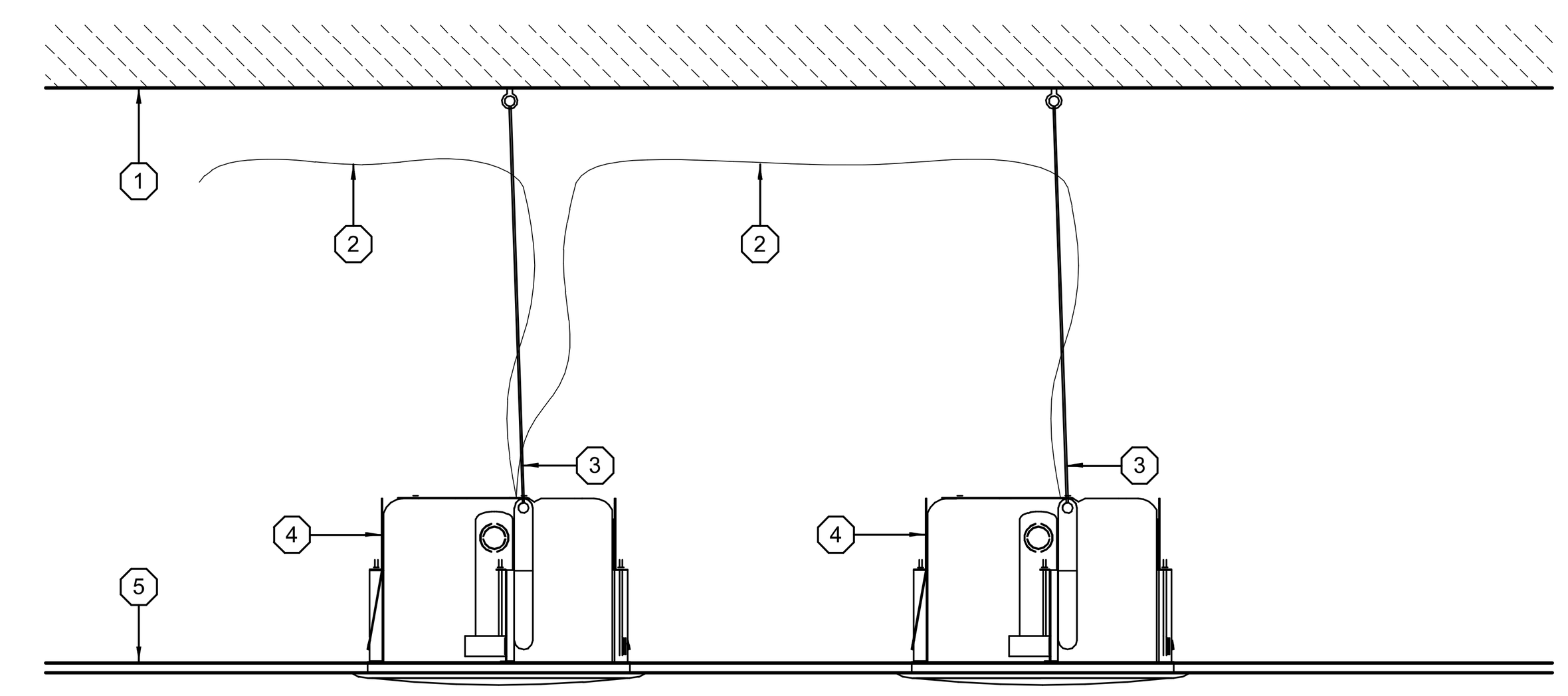
1. DETAIL SHOWN FOR CONCEPT ONLY. SHOP DRAWING REQUIRED SHOWING FINAL CONFIGURATION WITH APPROVED STRUCTURAL MOUNTING SOLUTION.
2. COMPLY WITH MANUFACTURER'S MOUNTING REQUIREMENTS AND INSTALL ALL SAFETY CABLES PER INSTRUCTIONS.
3. MOUNTING HEIGHT, SPACING, AND CABLE LENGTH VARIES BY LOCATION. REFER TO PLANS AND SECTIONS.
4. WHERE PENDANT LOUDSPEAKERS ARE FILLING GAPS BETWEEN FLUSH MOUNTED LOUDSPEAKERS IN CEILING CLOUDS, MOUNT BOTTOM OF PENDANT HEIGHT EVEN WITH BOTTOM OF CEILING CLOUD HEIGHT.

KEYED NOTES:

1. CONDUIT AS SHOWN ON PLANS. TYPICALLY TO FIRST LOUDSPEAKER ONLY. ATTACH TO STRUCTURE, STUB DOWN AT LOUDSPEAKER LOCATION TO PROVIDE CLEAN CABLE EXIT. PROVIDE PULL STRING.
2. ALTERNATE CONDUIT STRATEGY SHALL UTILIZE A BOX MOUNTED ADJACENT TO THE LOUDSPEAKER.
3. PRIMARY SUPPORT CABLE.
4. SAFETY CABLE PER MANUFACTURER'S RECOMMENDED INSTALLATION PRACTICES. SHOWN LOOSE FOR CLARITY IN THIS PORTION OF THE DETAIL.
5. LOUDSPEAKER CABLE SHOWN LOOSE FOR CLARITY IN THIS PORTION OF DETAIL.
6. COVER SUPPORT CABLES AND WIRING WITH FLEXIBLE TUBING FOR A CLEAN APPEARANCE IN ALL CASES. COLOR AS SELECTED BY THE ARCHITECT.

v1.00

4 PENDANT LOUDSPEAKER CONCEPTUAL MOUNTING DETAIL
NTS



GENERAL NOTES:

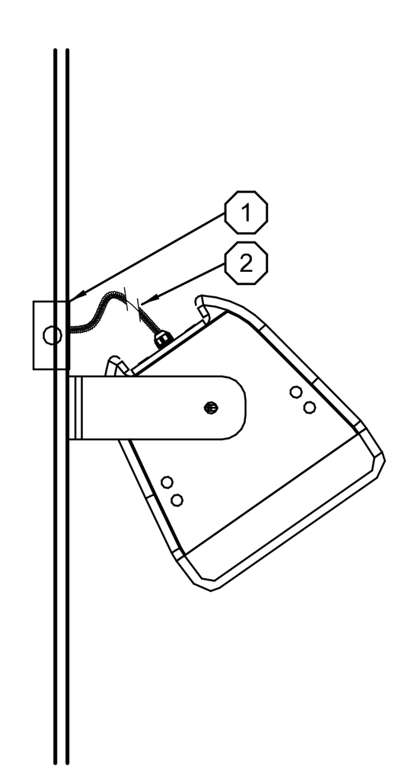
1. DETAIL APPLIES TO LOCATIONS WHERE LOUDSPEAKERS ARE MOUNTED WITHIN ACCESSIBLE CEILING.
2. DETAIL SHOWN FOR CONCEPT ONLY. SHOP DRAWING REQUIRED SHOWING FINAL CONFIGURATION WITH APPROVED STRUCTURAL MOUNTING METHOD.
3. COMPLY WITH MANUFACTURER'S MOUNTING REQUIREMENTS AND INSTALL ALL SAFETY CABLES PER INSTRUCTIONS.
4. MOUNTING HEIGHT, SPACING, AND CABLE/CONDUIT LENGTH VARIES BY LOCATION. REFER TO PLANS AND SECTIONS.
5. LOCATE CONDUIT SUCH THAT WIRE MAY BE PULLED AFTER FINISHED CEILING IS IN PLACE.

KEYED NOTES:

1. STRUCTURE
2. CABLE PATHWAY AS SHOWN ON PLANS. ATTACH TO STRUCTURE.
3. SAFETY CABLE PER MANUFACTURER'S RECOMMENDED INSTALLATION PRACTICES.
4. CEILING LOUDSPEAKER MOUNTED WITHIN ACCESSIBLE CEILING. REFER TO DRAWINGS AND SPECS FOR ADDITIONAL INFORMATION.
5. FINISHED CEILING AS SCHEDULED.

v1.00

3 CEILING LOUDSPEAKER CONCEPTUAL DETAIL - ACCESSIBLE CEILING
NTS



GENERAL NOTES:

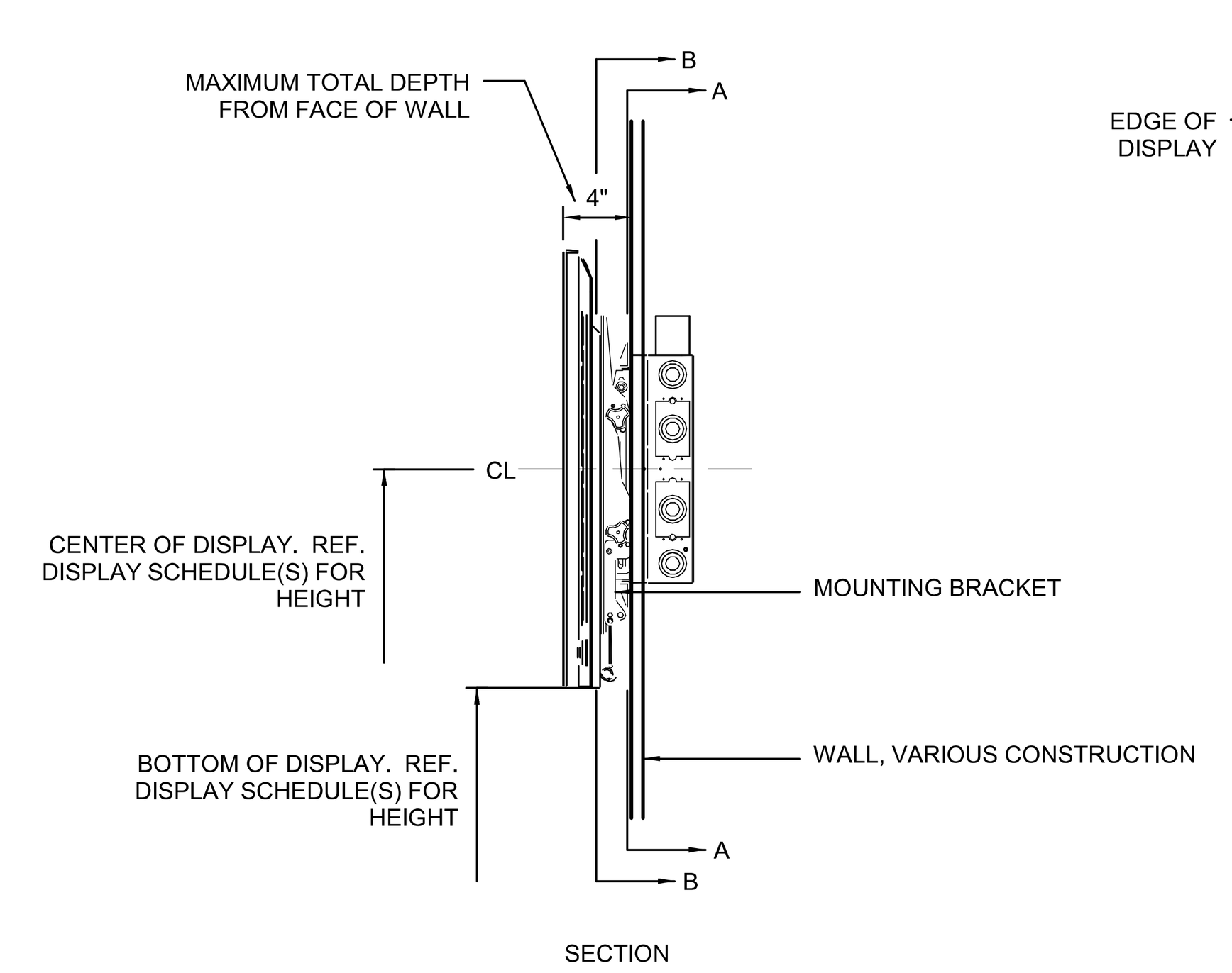
1. DETAIL SHOWN FOR CONCEPT ONLY. PROVIDE SHOP DRAWING OF FINAL CONFIGURATION WITH APPROVED STRUCTURAL MOUNTING SOLUTION.
2. COMPLY WITH MANUFACTURER'S MOUNTING REQUIREMENTS AND INSTALL ALL SAFETY CABLES WHERE APPLICABLE PER INSTRUCTIONS.
3. FOR LOUDSPEAKERS MOUNTED TO WALL SURFACES, CEILINGS, OR COLUMN WRAPS, ALL PATHWAYS SHALL BE ROUTED CONCEALED WITH A FLUSH MOUNT JUNCTION BOX BEHIND THE LOUDSPEAKER.
4. FOR LOUDSPEAKERS MOUNTED TO OPEN STRUCTURAL ELEMENTS (E.G. EXPOSED PORTIONS OF EXPO HALL), ALL PATHWAYS SHALL BE ROUTED TIGHT AND PARALLEL TO STRUCTURE.

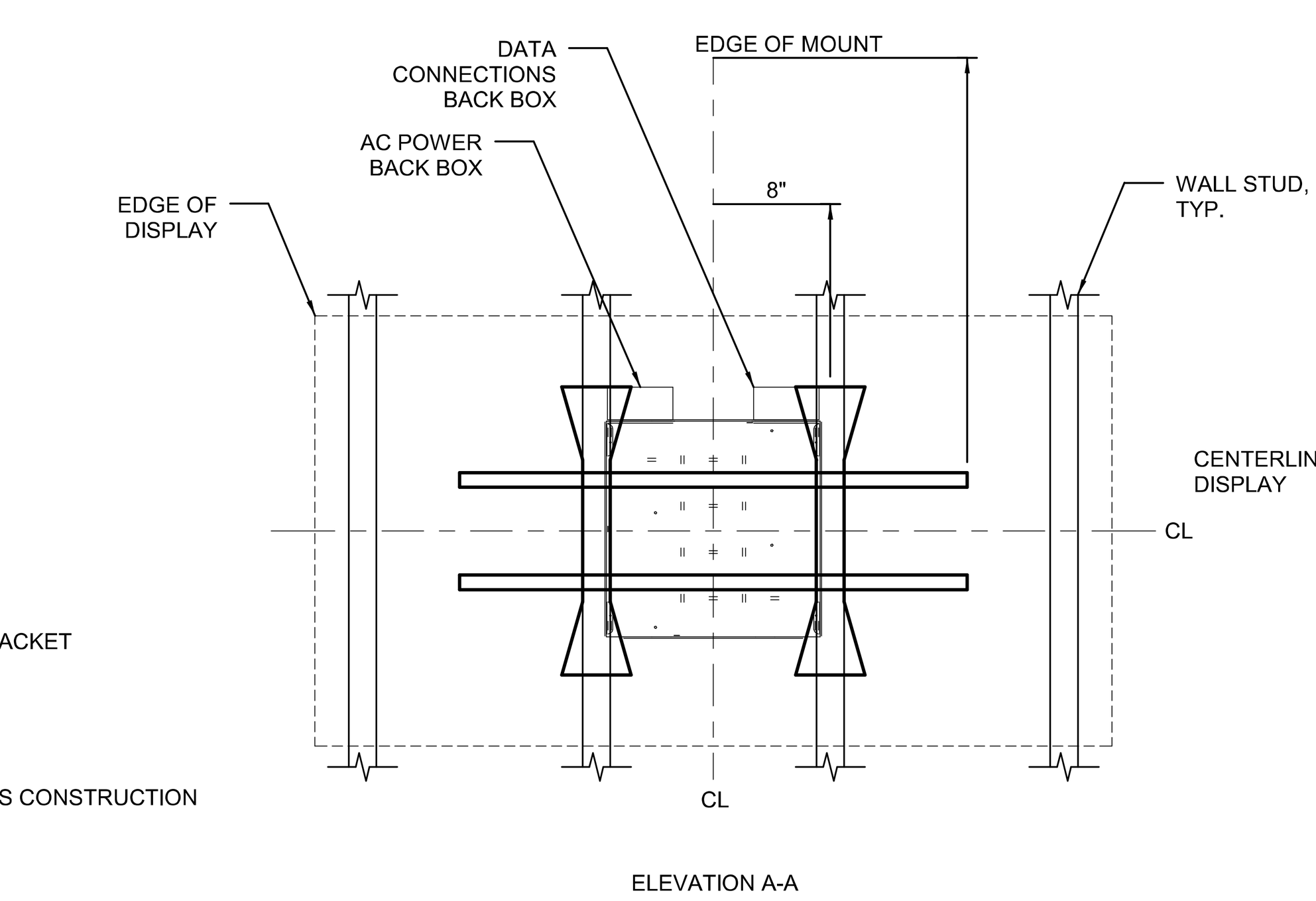
KEYED NOTES:

1. PROVIDE CONDUIT AS SHOWN ON PLANS TO BACK BOX AT LOUDSPEAKER LOCATION. PROVIDE FLUSH BACK BOX MOUNTED ADJACENT TO, AND CONCEALED BY LOUDSPEAKER AND/OR LOUDSPEAKER MOUNT. PROVIDE PULL STRING.
2. FLEXIBLE CONDUIT CONNECTION FROM BACK BOX TO LOUDSPEAKER CONNECTION POINT.

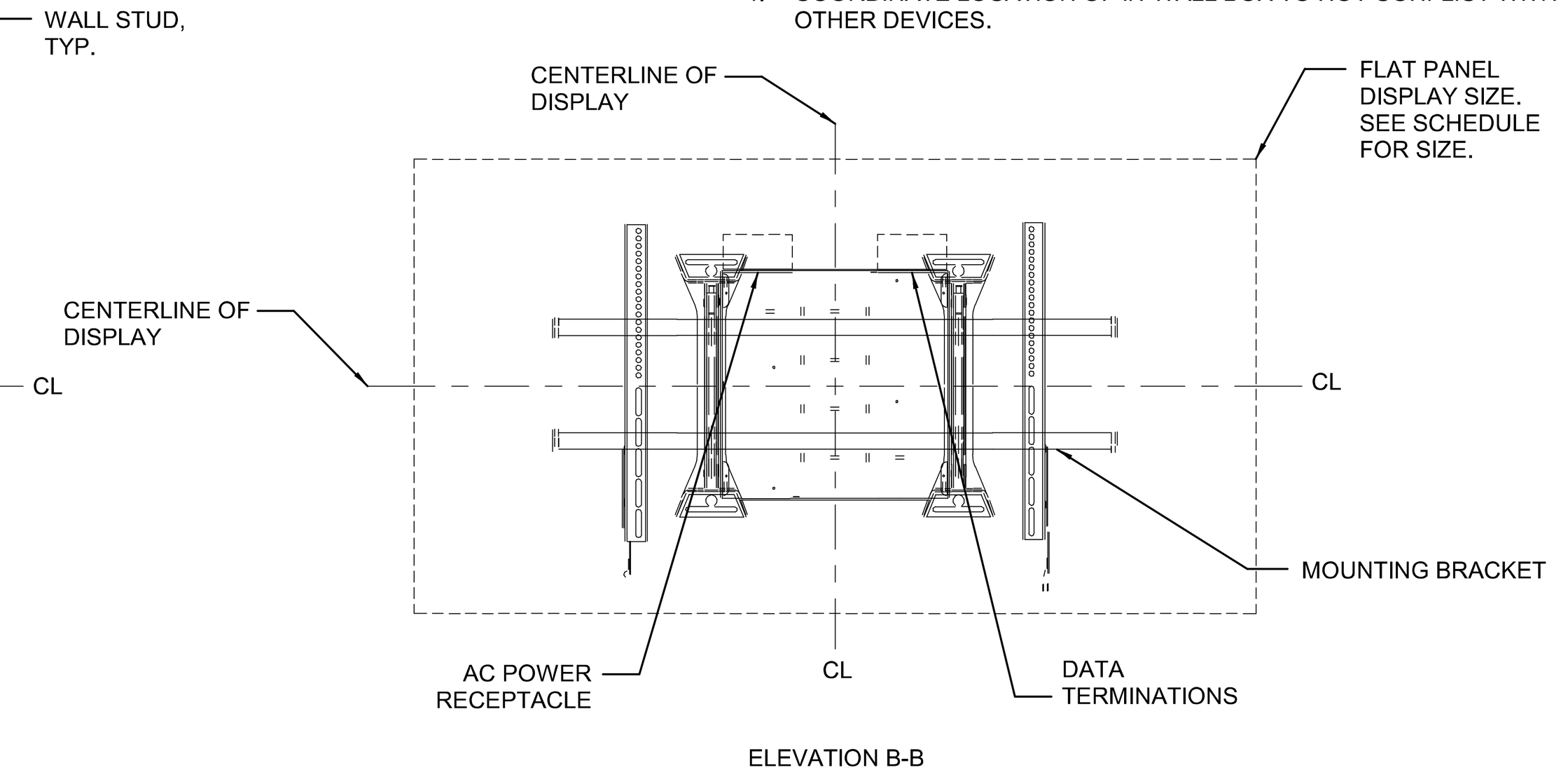
v1.00

2 SURFACE LOUDSPEAKER CONCEPTUAL MOUNTING DETAIL
NTS





GENERAL NOTES:
1. COORDINATE WITH FINAL MOUNT SELECTION PRIOR TO ROUGH-IN.
2. REFER TO MOUNT MANUFACTURER'S REQUIREMENTS FOR HORIZONTAL ADJUSTMENT ALLOWANCES.
3. REFER TO IN-WALL BOX MANUFACTURER'S INSTALLATION MANUAL FOR ROUGH-IN INFORMATION.
4. COORDINATE LOCATION OF IN-WALL BOX TO NOT CONFLICT WITH OTHER DEVICES.



v1.00

1 FLAT PANEL DISPLAY CONCEPTUAL IN-WALL BOX MOUNTING DETAIL
NTS

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LEE'S SUMMIT, MO

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AUDIO-VIDEO DETAILS

TA-501

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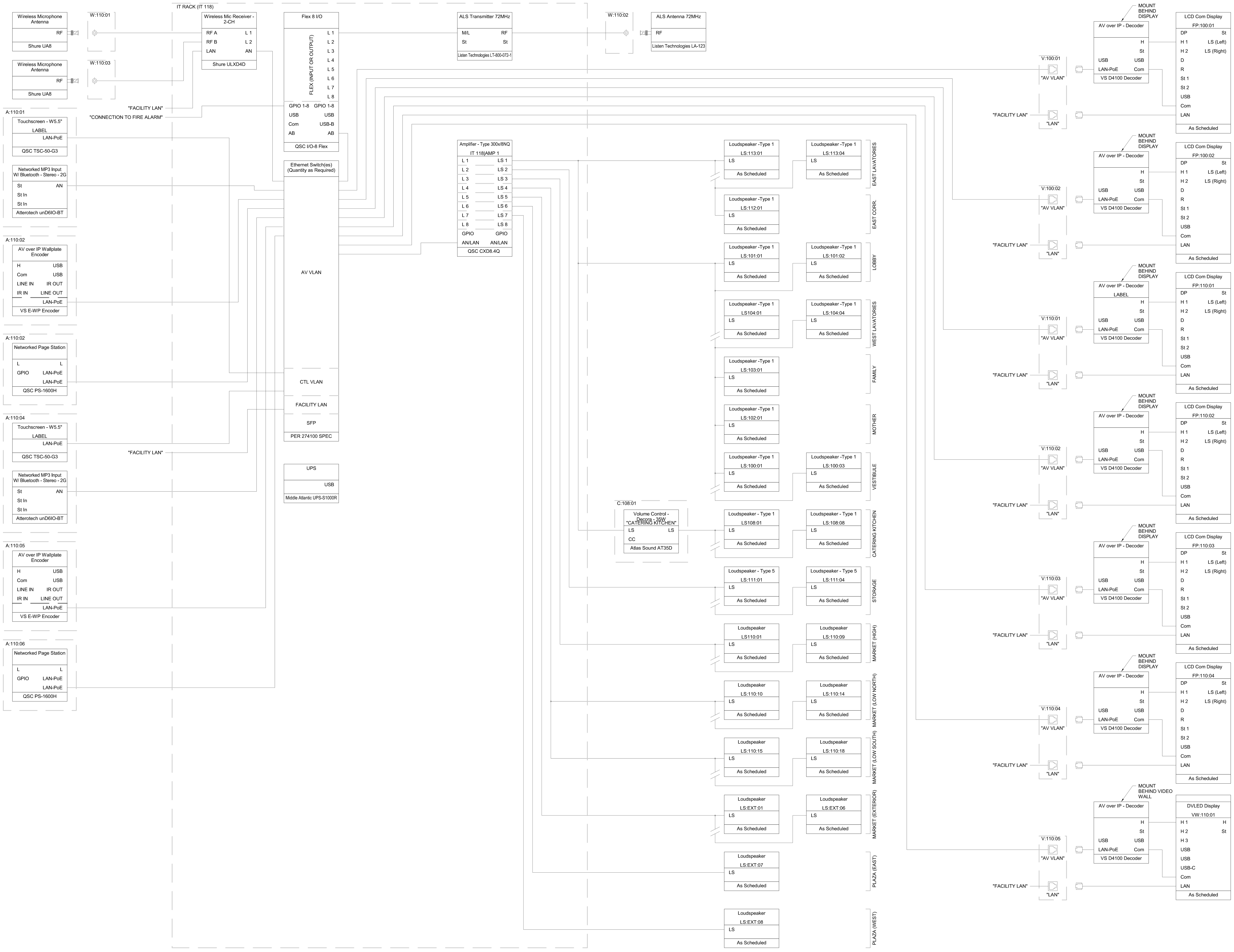

1 MULTIPURPOSE 100 - AUDIO-VIDEO SYSTEMS

GLMV Architecture

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AUDIO-VIDEO SIGNAL FLOWS

TA-701

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TELECOMMUNICATIONS SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V2.02

STANDARD MOUNTING HEIGHTS

TELECOM BACKBOARD (BOTTOM OF BACKBOARD)	4"
LADDER RACK IN TELECOM ROOMS (BOTTOM OF DEVICE)	90"
CABLE TRAY / CONDUIT AFC (BOTTOM OF PATHWAY)	3"(MIN)
LIGHT FIXTURE IN TELECOM ROOMS (BOTTOM OF DEVICE)	108"(MIN)
TELEPHONE WALL OUTLET (CENTERLINE)	48"
DATA WALL OUTLET	SAME AS ADJACENT DEVICE, UNO
TELEVISION OUTLET	REFER TO ARCH DRAWINGS
TMGB/TGB (CENTERLINE)	84"
WALL CLOCK (CENTERLINE)	84"
INTERCOM (CENTERLINE)	48"

USE THE DEFAULT MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ARE ABOVE FINISHED FLOOR (AFF) OR ABOVE FINISHED GRADE (AFG) TO BOTTOM OF OUTLET BOX. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ABBREVIATIONS

A	AMPERES
ADA	AMERICANS WITH DISABILITIES ACT
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	ACCESS POINT
AV	AUDIO-VIDEO
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BBC	BACKBONE BONDING CONDUCTOR
BD	BUILDING DISTRIBUTOR
BDF	BUILDING DISTRIBUTION FRAME
BFC	BELOW FINISHED CEILING
C	CONDUIT
CAT	CATEGORY
CATV	COMMUNITY ANTENNA TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
CD	CAMPUS DISTRIBUTOR
CMP	COMMUNICATIONS PLENUM JACKET
CMR	COMMUNICATIONS RISER JACKET
DAS	DISTRIBUTED ANTENNA SYSTEM
dB	DECIBELS
DEMO	DEMOLITION
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
ECIA	ELECTRONIC COMPONENTS INDUSTRY ASSOCIATION
EMI	ELECTROMAGNETIC INTERFERENCE
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
ER	EQUIPMENT ROOM
ETR	EXISTING TO REMAIN
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FD	FLOOR DISTRIBUTOR
FMC	FLEXIBLE METAL CONDUIT
FS	FIRE STOP SYSTEM
FLR	FLOOR
F/UTP	SCREEN TWISTED PAIR (SHIELDED)
GC	GENERAL CONTRACTOR
GYP	GYPSUM BOARD
HC	HORIZONTAL CROSS-CONNECT
HCM	HORIZONTAL CABLE MANAGER
HH	HAND HOLE
Hz	HERTZ
IMC	INTERMEDIATE METAL CONDUIT
IP	INTERNET PROTOCOL
ISP	INTERNET SERVICE PROVIDER
ISP	INSIDE PLANT CABLE
JB	JUNCTION BOX
J-BOX	JUNCTION BOX
LAN	LOCAL AREA NETWORK
LCC	LIMITED COMBUSTIBLE CABLE
LEC	LOCAL EXCHANGE CARRIER
LED	LIGHT-EMITTING DIODE
LF	LINEAR FEET
MAN	METROPOLITAN AREA NETWORK
MATV	MASTER ANTENNA TELEVISION
MC	MAIN CROSS-CONNECT
MDF	MAIN DISTRIBUTION FRAME
MFR	MANUFACTURER
MH	MAINTENANCE HOLE
MM	MULTIMODE
MPOE	MAIN POINT OF ENTRANCE
MPOP	MAIN POINT OF PRESENCE
MTD	MOUNTED
N/A	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
nm	NANOMETER
NRTL	NATIONALLY RECOGNIZED TESTING LAB
OC	ON CENTER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OSP	OUTSIDE PLANT
PBB	PRIMARY BONDING BUSBAR
PBX	PRIVATE BRANCH EXCHANGE
POE	POWER OVER ETHERNET
PON	PASSIVE OPTICAL NETWORK
POTS	PLAIN OLD TELEPHONE SERVICE
PSTN	PUBLIC SWITCHED TELEPHONE NETWORK
QTY	QUANTITY
RCDD	REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
RMC	RIGID METAL CONDUIT
RU	RACK UNIT
SBB	SECONDARY BONDING BUSBAR
SCS	STRUCTURED CABLING SYSTEM
SF	SQUARE FEET
SM	SINGLEMODE
SPECS	SPECIFICATIONS
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TBD	TO BE DETERMINED
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TR	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UL	UNDERWRITER LABORATORIES, INC.
UPS	UNINTERRUPTIBLE POWER SUPPLY
U/UTP	UNSHIELDED TWISTED PAIR
V	VOLT(S)
VCM	VERTICAL CABLE MANAGER
W	WIRE
WAN	WIDE AREA NETWORK
WAO	WORK AREA OUTLET
WAP	WIRELESS ACCESS POINT
WP	WEATHER PROOF
WR	WEATHER RESISTANT
WT	WATERTIGHT
XP	EXPLOSION-PROOF

ANNOTATION

Symbol	Description
(1)	TECHNOLOGY PLAN CALLOUT
[1]	EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED)
	CONNECTION POINT OF NEW WORK TO EXISTING
1/T1	DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER. LOWER NUMBER INDICATES SHEET NUMBER
1/T1	SECTION CUT DESIGNATION
	DEDICATED EQUIPMENT ACCESS TILE
	ACCESS PANEL

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINE-TYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF THE NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING — NEW — DEMOLISH — FUTURE

CABLE TYPES

A	CATEGORY 6 CABLE
B	CATEGORY 6A CABLE
C	COAXIAL CABLE

PATHWAYS

Symbol	Description
W"xH"	WIRE MESH CABLE TRAY ("W"=WIDTH, "H"=HEIGHT)
	VERTICAL CABLE TRAY
(#) D"	UNDERGROUND CONDUIT ("#"=QUANTITY, "D"=CONDUIT DIAMETER)
(#) D"	CONDUIT ("#"=QUANTITY, "D"=CONDUIT DIAMETER)
	CABLE SUPPORTS OR J-HOOKS
(#) D"	CONDUIT SLEEVE ("#"=QUANTITY, "D"=CONDUIT DIAMETER)
FS	UL FIRESTOP SYSTEM ASSEMBLY
PB L"XW"XH"	PULL BOX ("L"=LENGTH, "W"=WIDTH, "H"=HEIGHT)
SC	SPLICE

RISER DIAGRAMS

Symbol	Description
	FIBER OPTIC CROSS CONNECT
	COPPER UTP CROSS CONNECT
P	110-TYPE PROTECTOR BLOCK
PATCH PANEL	PATCH PANEL
SBB	SECONDARY BONDING BUSBAR (SBB)
PBB	PRIMARY BONDING BUSBAR (PBB)
	TELECOMMUNICATIONS BACKBONE CABLING (REFER TO RISER DIAGRAM FOR MORE INFORMATION)

TELECOMMUNICATIONS ROOM

Symbol	Description
	LADDER RACK
PBB	PRIMARY BONDING BUSBAR (PBB) - WALL ELEVATION VIEW
SBB	SECONDARY BONDING BUSBAR (SBB) - WALL ELEVATION VIEW
	PBB/SBB - PLAN VIEW
	TELECOM BACKBOARD
	TWO-POST EQUIPMENT RACK
	FOUR-POST EQUIPMENT RACK
	EQUIPMENT CABINET (REFER TO PLAN NOTES ON ENLARGED PLANS FOR MORE INFORMATION)

TELECOMMUNICATIONS OUTLETS

SYMBOL	DESCRIPTION	CABLE(S) A	CABLE(S) B	CABLE(S) C	DETAIL
1V	ANALOG/VOICE WALL OUTLET	1	0	0	NA
W,1V	TELEPHONE, ANALOG WALL OUTLET	1	0	0	NA
W,1D	TELEPHONE, VoIP WALL OUTLET	0	1	0	3/TN501
1D	DATA WALL OUTLET	0	1	0	1/TN501
2D	DATA WALL OUTLET	0	2	0	1/TN501
2D,WAP	DATA WALL OUTLET	0	2	0	1/TN501
2D,CAM	DATA WALL OUTLET	0	2	0	1/TN501
2D,INT	DATA WALL OUTLET	0	2	0	1/TN501
4D	DATA WALL OUTLET	0	4	0	1/TN501
6D	DATA WALL OUTLET	0	6	0	2/TN501
4D	DATA WALL OUTLET, ABOVE COUNTER	4	0	0	1/TN501
SMF	SINGLE MODE FIBER, WALL OUTLET	0	0	0	NA
1D	SYSTEMS FURNITURE DATA OUTLET	1	0	0	NA
2D	SYSTEMS FURNITURE DATA OUTLET	2	0	0	NA
3D	SYSTEMS FURNITURE DATA OUTLET	3	0	0	NA
4D	SYSTEMS FURNITURE DATA OUTLET	4	0	0	NA
2D, TYPE "X"	MULTI-SERVICE FLOOR BOX WITH DATA AND POWER OUTLETS, REFER TO SPECS FOR FLOOR BOX TYPE	2	0	0	NA
4D, TYPE "X"	MULTI-SERVICE FLOOR BOX WITH DATA AND POWER OUTLETS, REFER TO SPECS FOR FLOOR BOX TYPE	4	0	0	NA
6D, TYPE "X"	MULTI-SERVICE FLOOR BOX WITH DATA AND POWER OUTLETS, REFER TO SPECS FOR FLOOR BOX TYPE	6	0	0	NA
8D, TYPE "X"	MULTI-SERVICE FLOOR BOX WITH DATA AND POWER OUTLETS, REFER TO SPECS FOR FLOOR BOX TYPE	8	0	0	NA
2D, TYPE "X"	MULTI-SERVICE POKE THROUGH WITH DATA AND POWER OUTLETS, REFER TO SPECS FOR POKE THROUGH TYPE	2	0	0	NA
4D, TYPE "X"	MULTI-SERVICE POKE THROUGH WITH DATA AND POWER OUTLETS, REFER TO SPECS FOR POKE THROUGH TYPE	4	0	0	NA
6D, TYPE "X"	MULTI-SERVICE POKE THROUGH WITH DATA AND POWER OUTLETS, REFER TO SPECS FOR POKE THROUGH TYPE	6	0	0	NA
8D, TYPE "X"	MULTI-SERVICE POKE THROUGH WITH DATA AND POWER OUTLETS, REFER TO SPECS FOR POKE THROUGH TYPE	8	0	0	NA
1D	DATA CEILING OUTLET	0	1	0	NA
2D,WAP	DATA CEILING OUTLET FOR WAP	0	2	0	7/TN501
2D,CAM	DATA CEILING OUTLET FOR CAMERA	0	2	0	7/TN501

ROUGH-IN OUTLETS

ROUGH-IN ONLY SCHEDULE

SYMBOL	DESCRIPTION	BACK BOX	CONDUIT
R DAS	CELLULAR DAS, WALL BOX ROUGH-IN	2-GANG BACKBOX WITH 2" GROMMET	(1) 2" PVC

TELECOMMUNICATIONS RESPONSIBILITY MATRIX

Description	Furnished: Part of Bid	Furnished: OWNER	Furnished: VENDOR	Installed: Part of Bid	Installed: OWNER	Installed: VENDOR	Comments
Telecom Room Buildout							
Racks, Patch panels ,Cable management	■			■			
Patch cables and fiber cords	■			■			
IP Telehony system		■			■		
Network equipment (switches, routers, gateways, etc.)		■			■		
Grounding and Bonding	■			■			
Entrance Protection for exterior cables	■			■			
Uninterruptible power supplies and power strips	■			■			
Structured Cabling and Network Devices							
Power and rough-in requirements	■			■			
Structured Cabling (faceplates, patch panels, Category 6A cables, fiber backbone)	■			■			
End devices (PC's, network printers, network scanners, telephones, faxes, copiers, proximity cabinets, etc.)		■			■		
Station cables	■			■			
IT&S Wireless Data Networks							
Power and rough-in requirements	■			■			
Structured Cabling (faceplates, patch panels, Category 6A cables, patch cords)	■			■			
Wireless survey after doors and ceilings are installed			■			■	
Relocating cables and installing access points following wireless survey	■			■			
Wireless Access Points, mounting accessories			■			■	
Network equipment (switches, wireless controller, etc.)			■			■	
Distributed Antenna System (DAS)							
Rough-in requirements for wall mounted antenna	■			■			
Low voltage cables and associated pathways			■			■	
Wall mounted antennas and support stands			■			■	
Active equipment for all cellular carriers			■			■	
OSP cabling							
Fiber optic pathways, Rough-in conduits, manholes, handholes, Coordination with ISP Provider.	■			■			
Fiber Optic cables from City hall	■			■			
Fiber Optic Cable from ISP Provider			■			■	By ISP Provider

Notes: Filled black cell on table mean scope in that row is to be completed by entity indicated on column header.

GENERAL NEW WORK NOTES

1. READ THE SPECIFICATIONS AND REVIEW DRAWINGS OF ALL DIVISIONS OF WORK. COORDINATE THIS WORK WITH ALL OTHER DIVISIONS OF WORK AND ALL SUBCONTRACTORS.
2. ALL WORK SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS (DIVISION 26, DIVISION 27, DIVISION 28, ETC.) AND THE CUSTOMER PRE-ESTABLISHED STRUCTURED CABLING STANDARDS; SHOULD DIFFERENCES EXIST IN THE SPECIFICATIONS RELATING TO TECHNOLOGY AND THE CLIENT'S PRE-ESTABLISHED STANDARDS THE CONTRACTOR SHALL CONTACT THE LOW VOLTAGE ENGINEER FOR CLARIFICATION THROUGH THE RFI PROCESS.
3. FULLY COORDINATE ALL CABLE TRAY, FIRE STOP CONDUITS / SLEEVES, AND CONDUIT ROUTING WITH STRUCTURAL ELEMENTS. COORDINATE CABLE TRAY AND CONDUIT INSTALLATIONS WITH ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR, AND GENERAL CONTRACTOR PRIOR TO INSTALLATION. ROUTING IN CONCRETE SLAB OR UNDER SLAB (WHERE CONDUIT WOULD BE ON GRADE) REQUIRES THE USE OF WET LOCATION RATED CABLES.
4. ALL TELECOMMUNICATIONS CONTINUOUS PATHWAYS SHALL BE BONDED TO THE TELECOMMUNICATIONS BONDING BACKBONE; FOR CONDUITS, INSULATION BUSHINGS SHALL BE USED AT THE END OF THE CONDUIT THE FARTHEST AWAY FROM THE SERVING TR; A BONDING BUSHING SHALL BE USED AT THE END CLOSEST TO THE SERVING TR. CONTRACTOR TO REFER TO THE ANSI-STD-J 607 STANDARD FOR ADDITIONAL INFORMATION AS TO THE INSTALLATION OF THE TELECOMMUNICATIONS BONDING BACKBONE.
5. ALL FIRE RATED WALL / FLOOR ASSEMBLIES PENETRATED FOR TELECOMMUNICATIONS CABLING PATHWAYS SHALL BE FIRE STOPPED WITH THE APPROVED FIRE STOP SYSTEMS (F/S). ALL FIRESTOP SYSTEMS SHALL BE INSTALLED AS DIRECTED BY THE MANUFACTURER AND AS SPECIFIED IN DIVISION 07 07 84 00 - "FIRESTOPPING". FIRE STOP ASSEMBLY LOCATIONS ARE TO BE COORDINATED WITH CABLE TRAY PATHWAY TO TELECOMMUNICATIONS ROOM.
6. BACK BOXES AND CONDUIT LOCATIONS IN PRECAST CONCRETE WALLS SHALL BE COORDINATED WITH ARCHITECT, STRUCTURAL ENGINEER, AND GC PRIOR TO ORDERING THE PRECAST WALLS.
7. ROUTING OF CABLES SHALL BE CONCEALED. CABLES SHALL BE ROUTED IN CONDUIT IN EXPOSED AREAS. MINIMIZE AMOUNT OF EXPOSED CONDUIT BY EMBEDDING CONDUIT IN SLAB WHEN POSSIBLE. EMBEDDED CONDUITS AND PENETRATIONS OF STRUCTURE SHALL FOLLOW DETAILS IN STRUCTURAL DRAWINGS. WHEN CONDUITS CAN ONLY BE INSTALLED EXPOSED, NOTIFY ARCHITECT PRIOR TO START OF INSTALLATION OF CONDUITS. CABLES SHALL BE ROUTED IN CONDUIT WHEN ABOVE HARD CEILINGS. CONDUITS FOR ELEVATOR PHONES AND FIRE ALARM CONTROL PANEL SHALL BE CONTINUOUS (HOMERUN) FROM THE TELECOMMUNICATIONS ROOM TO THE APPLICABLE BOX / CABINET. CONTRACTOR SHALL SIZE AND PROVIDE CONDUITS TO MEET TIA-569.
8. TELECOMMUNICATIONS ROOMS SHALL BE DEDICATED FOR INFORMATION TECHNOLOGY USE (I.E. NO SHARED SPACE WITH A JANITOR, FIRE ALARM SYSTEM, ETC.) NO SERVICES SHALL PASS THROUGH THE SPACE UNLESS DEDICATED TO THE SPACE (NO PLUMBING, MECHANICAL, ELECTRICAL, FIRE, ETC.)
9. [LOCATIONS AND QUANTITIES SHOWN ON THE DRAWINGS FOR WIRELESS ACCESS POINTS ARE DIAGRAMMATIC IN NATURE AND INTENDED TO BE USED TO ESTIMATE COST OF INSTALLATION OF SYSTEM. PER SPECIFICATION SECTION 272233 WIRELESS NETWORK EQUIPMENT, CONTRACTOR SHALL PERFORM SIGNAL TEST ONCE BUILDING IS ENCLOSED AND IN 'CLEAN' STATE TO DETERMINE EXACT PLACEMENT OF DEVICES.]
10. [LOCATIONS AND QUANTITIES SHOWN ON THE DRAWINGS FOR DISTRIBUTED ANTENNA SYSTEMS ARE DIAGRAMMATIC IN NATURE AND INTENDED TO BE USED TO ESTIMATE COST OF INSTALLATION OF SYSTEM. PER SPECIFICATION SECTION 275319 DISTRIBUTED ANTENNA SYSTEM, CONTRACTOR SHALL PERFORM SIGNAL TEST ONCE BUILDING IS ENCLOSED AND IN 'CLEAN' STATE TO DETERMINE EXACT PLACEMENT OF DEVICES.]

GENERAL DEMOLITION NOTES

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE FACILITY, INCLUDING PATHWAY LOCATIONS AND ELEVATIONS. REVIEW THE GENERAL NOTES AND ALL OTHER TRADE DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS, INCLUDING ALL DEMOLITION AND NEW WORK DOCUMENTS. NOTIFY ARCHITECT, ENGINEER OR OWNER, AS SPECIFIED, OF ANY CONFLICTS OR DISCREPANCIES.
2. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
3. AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN FOR NEW INSTALLATION. REPAIR DAMAGE CAUSED DURING WORK AT NO EXTRA COST TO OWNER.
4. REMOVE ALL PATHWAYS, CABLING AND ASSOCIATED DEVICES FOR ALL ITEMS INTENDED TO BE REMOVED. ABANDONING UNUSED PORTIONS WILL NOT BE ACCEPTABLE.
5. REMOVE EXISTING ITEMS AS REQUIRED TO ACCOMMODATE THE GENERAL DEMOLITION SCOPE. ANY SYSTEMS PASSING THROUGH THE SPACE INTENDED TO REMAIN IN SERVICE SHALL BE PROTECTED, OR RELOCATED AS REQUIRED TO MAINTAIN SERVICE AND ACCOMMODATE THE GENERAL DEMOLITION AND NEW SCOPE OF WORK.
6. REFER TO ARCHITECTURAL PLANS FOR SCOPE OF AREAS THAT ARE TO BE DEMOLISHED UNDER THIS PHASE OF CONSTRUCTION. NOTE THAT IN SOME CASES, MEPFT DEMOLITION WORK EXTENDS BEYOND SCOPE OF AREA IDENTIFIED DUE TO EXISTING SYSTEM DESIGN. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO STARTING WORK.
7. COORDINATE THE INTERMEDIATE STORAGE, REMOVAL AND FINAL DISPOSITION OF TELECOMMUNICATIONS SCS COMPONENTS (PATHWAYS, CABLE, TERMINATION COMPONENTS, ETC.) AND THE REQUIRED PROTECTION OF EXISTING SPECIAL SYSTEMS EQUIPMENT WITH OWNER PRIOR TO IMPLEMENTATION THAT ARE TO BE REMOVED AS A RESULT OF THE DEMOLITION / RENOVATION WORK.
8. EXISTING TELECOMMUNICATIONS CABLES AND COMPONENTS THAT PASS THROUGH THE CONSTRUCTION ZONE SHALL BE PROTECTED AND REMAIN IN PLACE SO AS TO MAINTAIN SERVICE WHILE ALSO ACCOMMODATING THE GENERAL DEMOLITION AND NEW SCOPE OF WORK. CONTRACTOR SHALL COORDINATE ALL SUCH EFFORTS WITH THE CLIENT PRIOR TO IMPLEMENTATION. DAMAGE TO EXISTING AND TO REMAIN IN PLACE TELECOMMUNICATIONS CABLES AND COMPONENTS CAUSED BY THE CONTRACTOR SHALL BE REPAIRED IN A TIMELY MANNER AND TO THE WRITTEN SATISFACTION OF THE CLIENT AND AT NO ADDITIONAL COST TO THE CLIENT. CONTRACTOR SHALL PROVIDE CABLE SUPPORTS FOR ANY EXISTING CABLES THAT ARE NOT PROPERLY SUPPORTED.

TWO-WAY COMMUNICATIONS GENERAL NOTES AND LEGEND

1. TWO-WAY COMMUNICATION SYSTEM SHALL PROVIDE COMMUNICATION AT EACH LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPARTMENT. WHERE THE CENTRAL CONTROL POINT IS NOT A CONSTANTLY ATTENDED LOCATION, THE TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO A MONITORING LOCATION OR 9-1-1. (PER IBC 1009.8.1)
2. DIRECTIONS FOR USE OF THE TWO-WAY COMMUNICATION SYSTEM AND WRITTEN IDENTIFICATION OF THE LOCATION SHALL BE POSTED ADJACENT TO THE TWO-WAY COMMUNICATION SYSTEM. SIGNAGE SHALL COMPLY WITH THE ICC A117.1 REQUIRMENTS FOR VISUAL CHARACTERS. (PER IBC 1009.8.2)
3. THE TWO-WAY COMMUNICATION SHALL BE HANDS-FREE DEVICE AND SHALL PROVIDE BOTH AUDIBLE AND VISIBLE SIGNALS TO INDICATE COMMUNICATION HAS OCCURRED, AND INDICATE TO THE RECIEVER THE LOCATION SENDING THE SIGNAL. (PER IBC 1009.8.1 AND NFPA 72, 24.10.7)

TW — TWO-WAY COMMUNICATION DEVICE. PROVIDE CABLE FROM CALL BOX TO COMMAND CENTER PER MANUFACTURER'S RECOMMENDATIONS. REFER TO KEYNOTES FOR ADDITIONAL INFORMATION.

HATCHING LEGEND

ENLARGED PLAN

NOT IN SCOPE (NIS)

Sheet List - Technology

Sheet Number	Sheet Name	Sheet Order
TN000	TECHNOLOGY GENERAL NOTES AND LEGEND	
TN001	TECHNOLOGY SITE PLAN	
TN101	TECHNOLOGY PLAN	
TN201	TECHNOLOGY - MDF ROOM ENLARGED PLAN AND ELEVATION	
TN401	TECHNOLOGY RISER DIAGRAM	
TN501	TECHNOLOGY DETAILS - 1	
TN502	TECHNOLOGY DETAILS - 2	
TN503	TECHNOLOGY DETAILS - 3	

Grand total: 8

GLMV Architecture

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PROFESSIONAL ENGINEER
BRIAN C. OLLIGES
LICENSE # PE-2022017790

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	O.B
CHECKED BY:	B.W

TECHNOLOGY GENERAL NOTES AND LEGEND

TN000

PLOT DATE: 10/26/2023 1:13:44 PM
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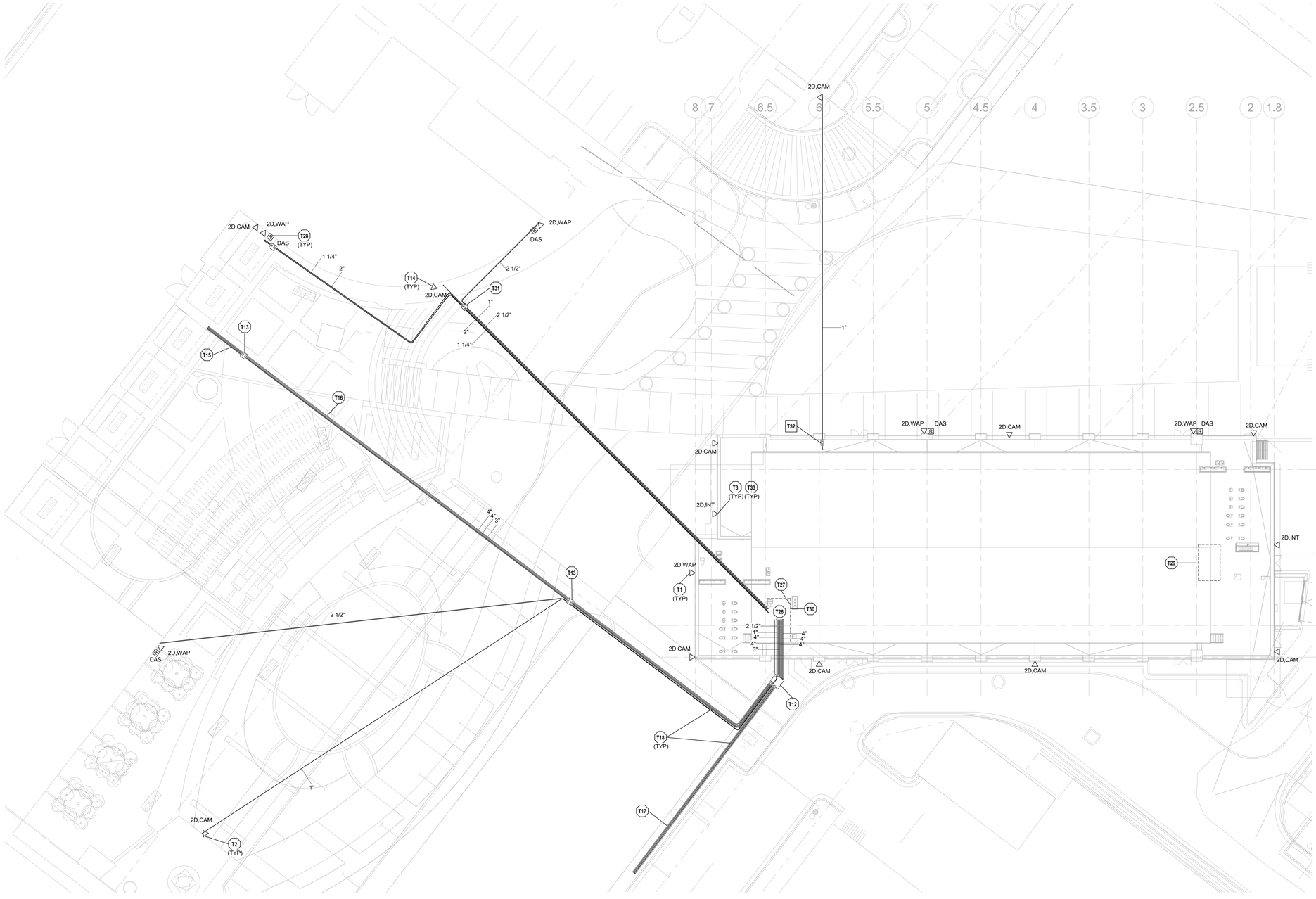
BRIAN C. OLLIGES



1 TECHNOLOGY SITE PLAN
1/16" = 1'-0"

TECHNOLOGY PLAN NOTES:

T1 FOR WIRELESS ACCESS POINT. COORDINATE EXACT LOCATION WITH VENDOR.

T2 FOR SECURITY CAMERA. COORDINATE EXACT LOCATION WITH SECURITY SYSTEM VENDOR.

T3 FOR SECURITY INTERCOM. COORDINATE EXACT LOCATION WITH SECURITY SYSTEM VENDOR.

T12 PROVIDE 4X'4X'4' COMMUNICATION MAINTENANCE HOLE FOR ISP ENTRY CABLING AS PER DETAIL 1 ON SHEET TN503.FOR SPECIFICATION REFER TO DIV 27 SECTION 270543.

T13 PROVIDE 2X'2X'2' COMMUNICATION HAND HOLE FOR FIBER CONNECTION WITH CITY HALL AND EXTERIOR WAP AND CAMERAS DATA CABLING AS PER DETAIL 3 ON SHEET TN503.FOR SPECIFICATION REFER TO DIV 27 SECTION 270543.

T14 RUN DATA CABLES FOR WAP AND CAMERAS TO THE IDF THROUGH THE NEAREST HANDHOLE / MAINTENANCE HOLE. PROVIDE MIN (1) 1" CONDUIT FOR (2) DATA CABLES AND 1-1/4" CONDUIT FOR (4) DATA CABLES.

T15 COORDINATE FINAL LOCATION OF HANDHOLE AND ROUTING OF FIBER CABLE CONNECTED TO THE CITY HALL WITH OWNER (ITS).

T16 (1) 24 STRANDS SINGLE MODE FIBER CABLE FOR CONNECTION WITH CITY HALL , (1) 4" CONDUIT FOR DATA CABLES SERVING WAP AND CAMERAS AND (1) 4" SPARE CONDUIT.

T17 COORDINATE FINAL ROUTING OF (3)4" CONDUITS FOR ISP FIBER CABLES WITH ISP PROVIDER.

T18 FOR OSP UNDERGROUND CONDUIT INSTALLATION REFER TO DETAIL 2 ON SHEET TN503.

T26 SEAL ALL TELECOM PATHWAY PENETRATIONS OF CEILING AND WALLS, BOTH BELOW AND ABOVE CEILING. AIRTIGHT. COORDINATE WITH OTHER TRADES TO ENSURE ALL PENETRATIONS OF WALLS AND CEILINGS ARE SEALED. SEE DETAIL 1 & 3 ON SHEET TN502.

T27 SPACE RESERVED FOR FUTURE DAS SYSTEM. PROVIDE PULL BOX FOR 2" CONDUITS FOR DAS ANTENNAS SHOWN ON PLAN TN001.

T28 PROVIDE 2" CONDUIT FOR FUTURE DAS ANTENNA FROM PULL BOX AT MECH/ELEC ROOM # 109.

T29 LIMIT OF MDF ROOM.

T30 LOCATION OF DEMARCATION POINT IN MECH/ELEC ROOM 109..

T31 PROVIDE 2X'2X'2' COMMUNICATION HAND HOLE FOR EXTERIOR WAP AND CAMERAS DATA CABLING AS PER DETAIL 3 ON SHEET TN503.FOR SPECIFICATION REFER TO DIV 27 SECTION 270543.

T32 PROVIDE PULL BOX AT HIGH LEVEL. REFER TO DETAIL 6 ON SHEET TN502. CONDUIT PATH SHOULD NOT EXCEED 285 FEET.

T33 PROVIDE LABELING FOR STRUCTURED CABLING AS PER DETAIL 6 ON SHEET TN501.

KEYPLAN

PLAN NORTH

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CHECKED BY:		B.W

TECHNOLOGY SITE PLAN

TN001

BRIAN C. OLLIGES

PLOT DATE: 10/26/2023 1:13:54 PM
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TECHNOLOGY PLAN NOTES:

T1 FOR WIRELESS ACCESS POINT. COORDINATE EXACT LOCATION WITH VENDOR.

T2 FOR SECURITY CAMERA. COORDINATE EXACT LOCATION WITH SECURITY SYSTEM VENDOR.

T5 PROVIDE TELECOMMUNICATIONS BACKBOARD. GRADE A/C 3/4" PLYWOOD BACKBOARD FIRE RATED STARTING AT 4" AFF AND EXTEND UPWARDS 8'-0" ON ALL WALLS AS INDICATED ON DRAWINGS. THE A SIDE SHALL BE EXPOSED TO THE INTERIOR OF THE ROOM AND THE C SIDE PLACED AGAINST THE BUILDING STRUCTURE. SEE TELECOMMUNICATIONS SPECS FOR FURTHER DETAILS.

T8 PROVIDE TELECOMMUNICATIONS SECONDARY BONDING BUSBAR (SBB) MOUNTED AT 7'-0" AFF. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS, DETAIL 4 ON SHEET TN502 AND GROUNDING AND BONDING RISER DIAGRAM ON SHEET TN401 FOR FURTHER DETAILS.

T9 SPACE RESERVED FOR ACCESS CONTROL EQUIPMENT. COORDINATE OUTLET LOCATION WITH SECURITY EQUIPMENT PRIOR TO ROUGH-IN. SEE TY-SERIES SHEETS FOR FURTHER DETAILS.

T10 PROVIDE WALL MOUNTED PIVOT CABINET TO SERVE PLAZA AREA DATA OUTLETS . FOR SPECIFICATION REFER TO SECTION 271100.

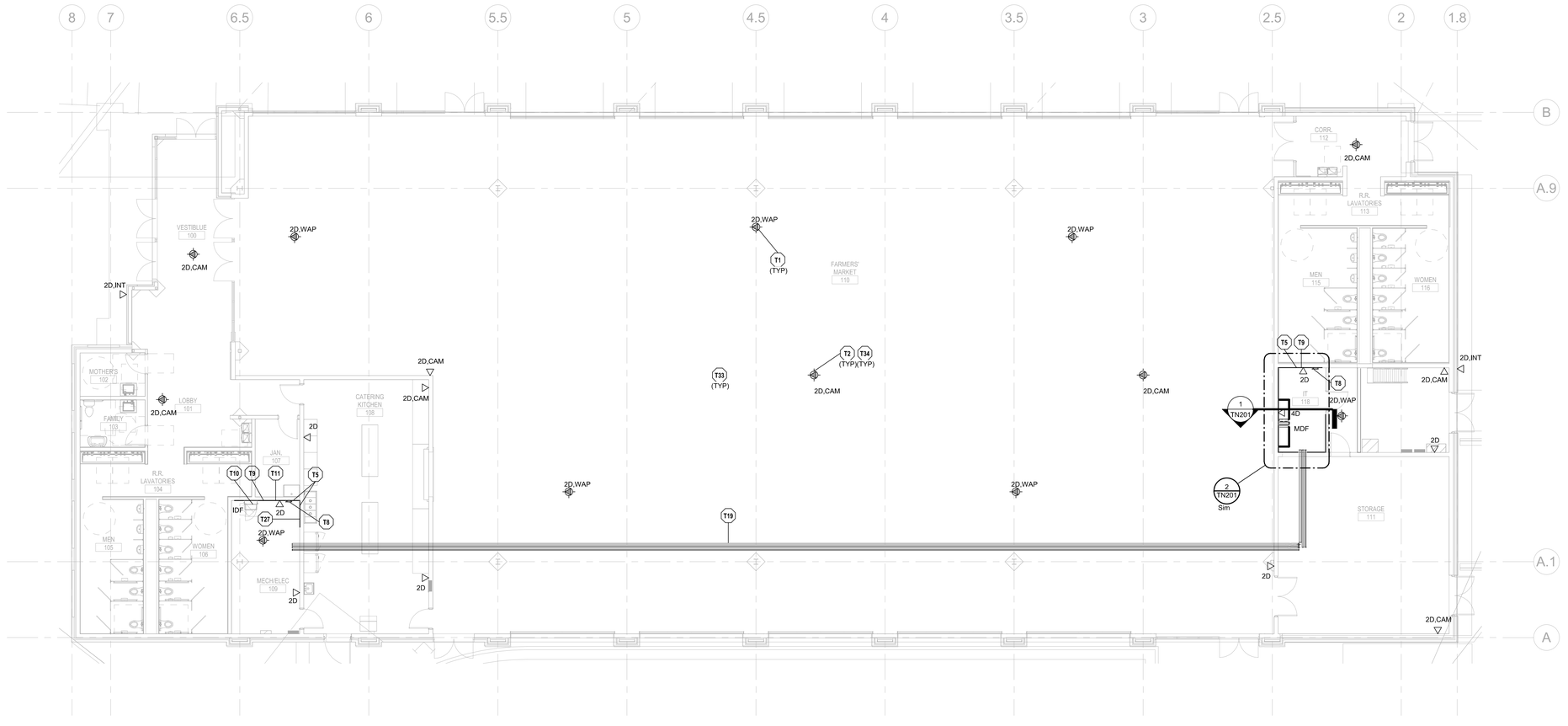
T11 SPACE RESERVED FOR EQUIPMENT BY INTERNET SERVICE PROVIDER.

T19 (1)4",(1) 3" AND (1) 2" EMT CONDUITS RUN ABOVE FALSE CEILING , REFER TO TELECOMMUNICATIONS BACKBONE DIAGRAM ON SHEET TN401. COORDINATE WITH OTHER SERVICES.

T27 SPACE RESERVED FOR FUTURE DAS SYSTEM. PROVIDE PULL BOX FOR 2" CONDUITS FOR DAS ANTENNAS SHOWN ON PLAN TN001.

T33 PROVIDE LABELING FOR STRUCTURED CABLING AS PER DETAIL 6 ON SHEET TN501.

T34 FOR CEILING COMMUNICATION OUTLET INSTALLATION REFER TO DETAIL 4 & 8 ON SHEET TN501.



1 TECHNOLOGY FLOOR PLAN
1/8" = 1'-0"

PLAN NORTH

KEYPLAN

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CITY OF LEE'S SUMMIT

LEE'S SUMMIT - MARKET PLAZA

LEE'S SUMMIT, MO

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CHECKED BY:		B.W

TECHNOLOGY PLAN

TN101

BRIAN C. OLLIGES

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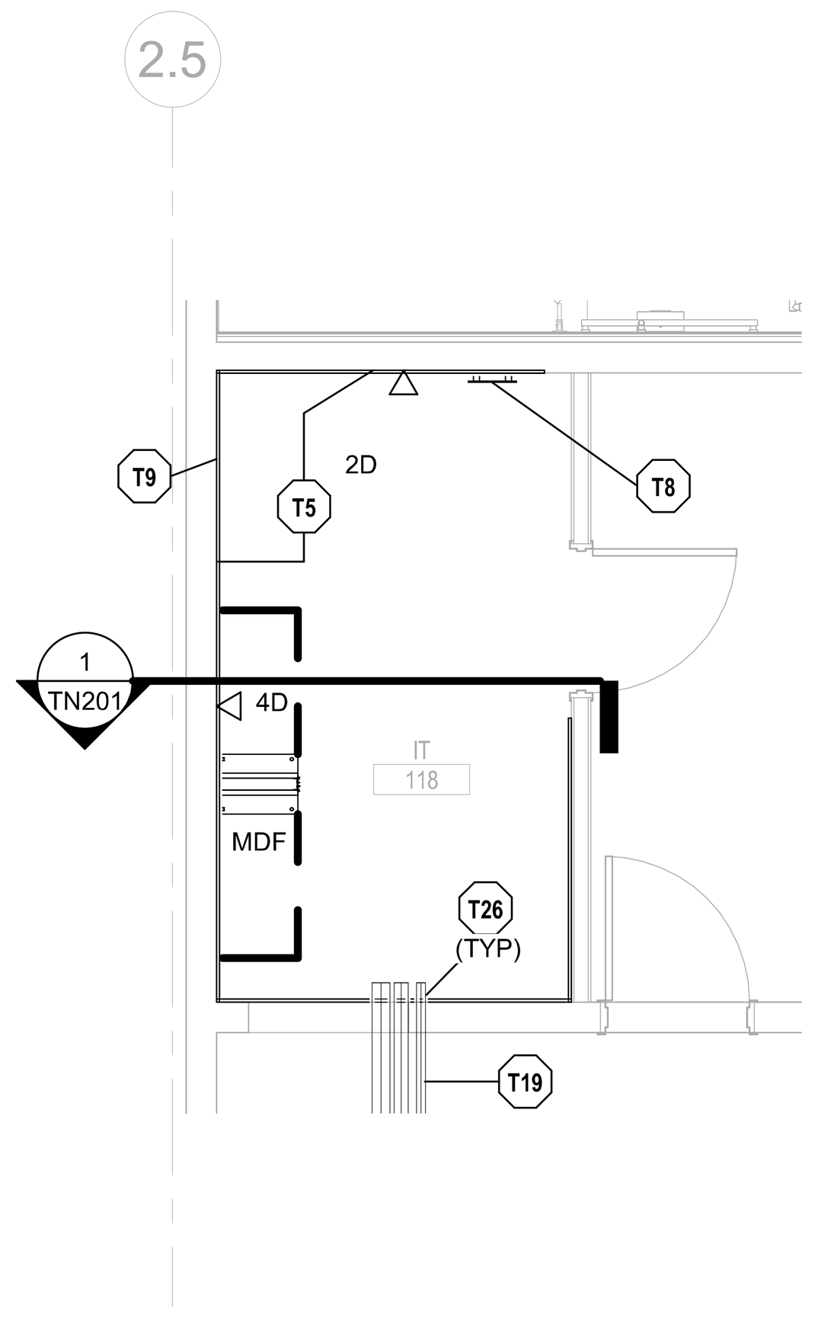
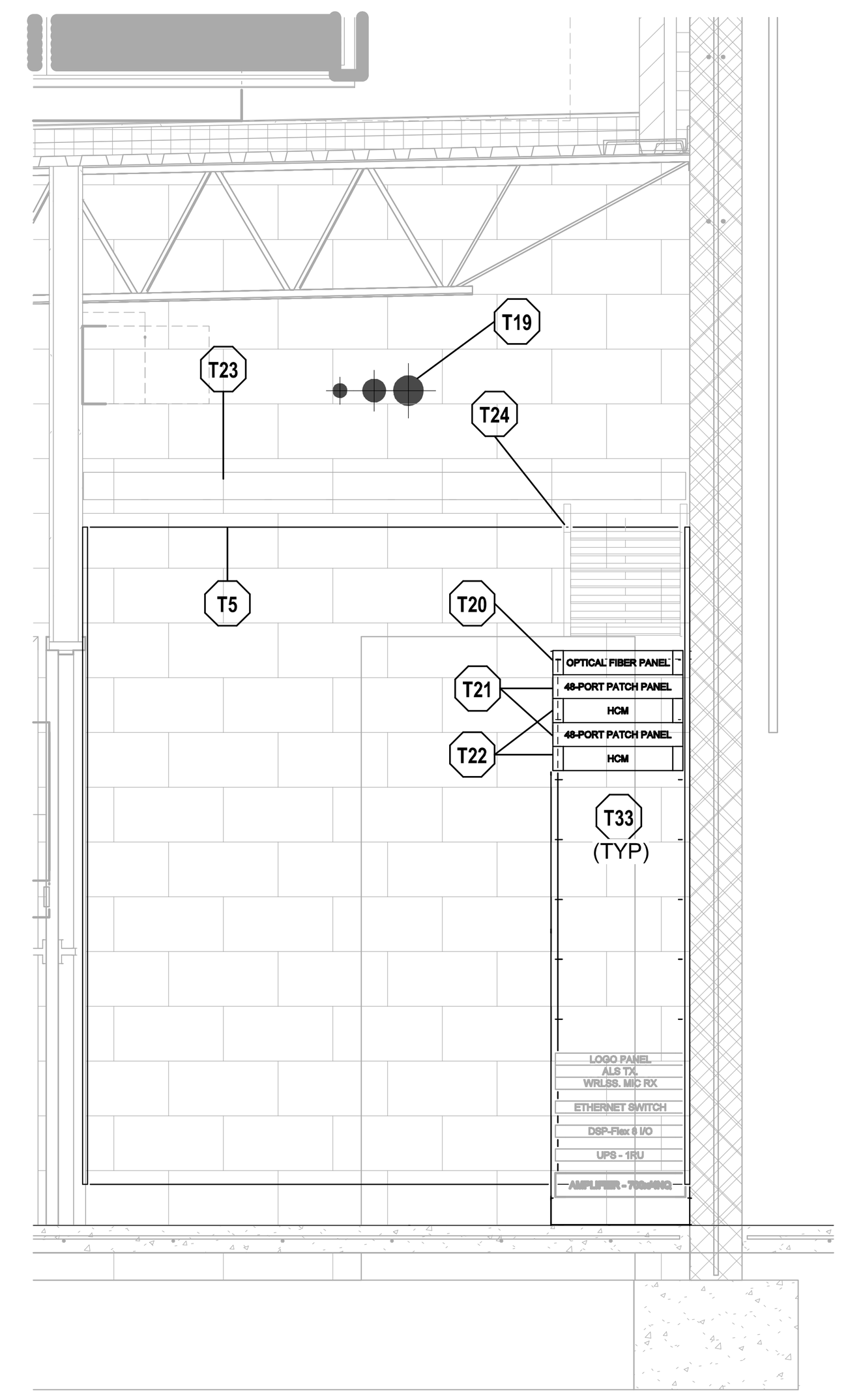
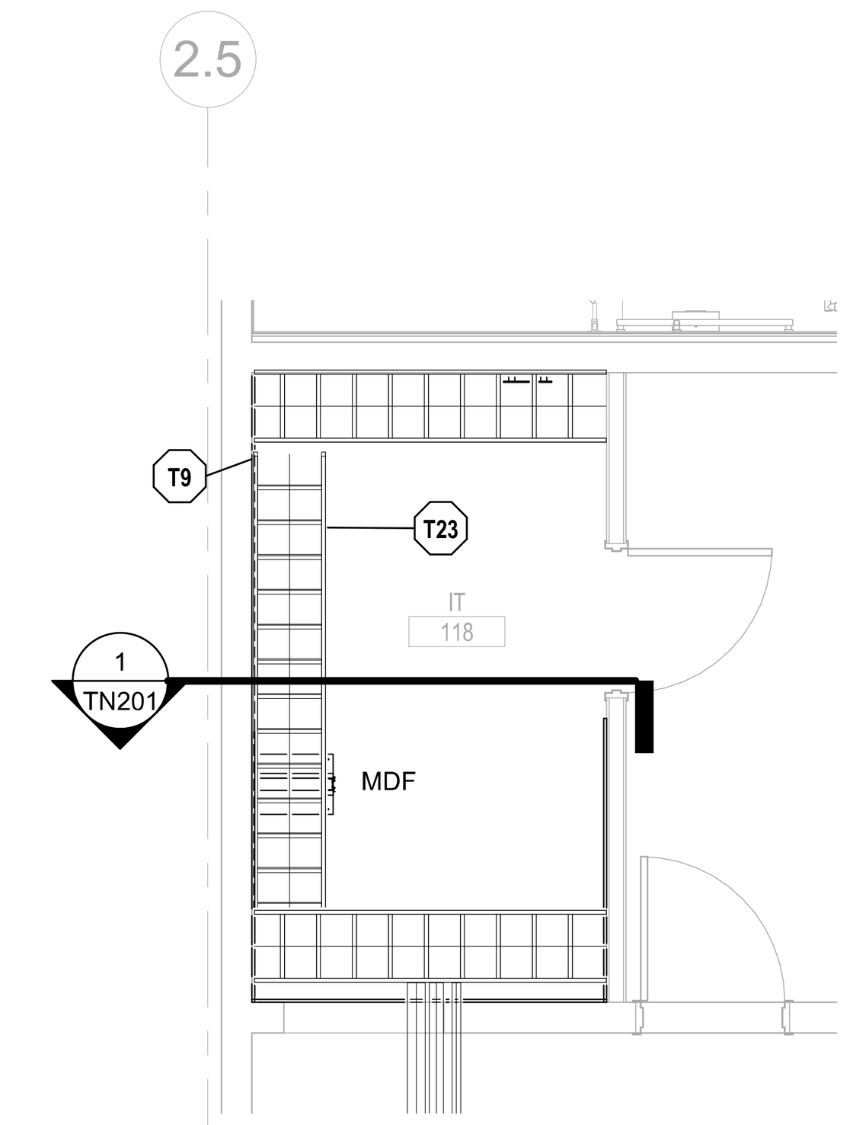


② TECHNOLOGY - MDF ROOM ENLARGED PLAN
1/4" = 1'-0"



① IT 118 ROOM - SECTION
1/2" = 1'-0"



③ TECHNOLOGY - MDF ROOM ENLARGED CEILING PLAN
1/4" = 1'-0"

Data Device Schedule			
Family and Type	TELECOMMUNICATIONS ZONE	NUMBER OF CABLE A	NUMBER OF CABLE B
Device - Wall - Data: 2D		0	2
Device - Wall - Data: 2D,CAM		0	2
: 2		0	4
Device - Ceiling - Data: 2D, WAP	IDF	0	2
Device - Wall - Data: 2D	IDF	0	2
Device - Wall - Data: 2D	IDF	0	2
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Device - Wall - Data: 2D,CAMERA	IDF	0	2
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Device - Wall - Data: 2D,CAM	IDF	0	2
Device - Wall - Data: 2D,CAM	IDF	0	2
Device - Wall - Data: 2D,CAM	IDF	0	2
Device - Wall - Data: 2D,CAM	IDF	0	2
Device - Ceiling - Data: 2D, CAM	IDF	0	2
Device - Ceiling - Data: 2D, CAM	IDF	0	2
Device - Wall - Data: 2D,INT	IDF	0	2
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Device - Wall - Data: 2D	IDF	0	2
Device - Wall - Data: 2D,WAP	IDF	0	2
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Device - Wall - Data: 2D,WAP	MDF	0	2
Device - Wall - Data: 2D,WAP	MDF	0	2
Device - Ceiling - Data: 2D, CAM	MDF	0	2
Device - Ceiling - Data: 2D, CAM	MDF	0	2
Device - Wall - Data: 2D,CAM	MDF	0	2
Device - Wall - Data: 2D,CAM	MDF	0	2
Device - Wall - Data: 2D,CAM	MDF	0	2
Device - Wall - Data: 2D,CAM	MDF	0	2
Device - Wall - Data: 2D,CAM	MDF	0	2
Device - Wall - Data: 2D,CAM	MDF	0	2
Device - Ceiling - Data: 2D, CAM	MDF	0	2
Device - Wall - Data: 2D,INT	MDF	0	2
Device - Wall - Data: 4D	MDF	0	4
Device - Wall - Data: 2D	MDF	0	2
MDF: 21		0	44

TECHNOLOGY PLAN NOTES:

T5 PROVIDE TELECOMMUNICATIONS BACKBOARD. GRADE A/C 3/4" PLYWOOD BACKBOARD FIRE RATED STARTING AT 4" AFF AND EXTEND UPWARDS 8'-0" ON ALL WALLS AS INDICATED ON DRAWINGS. THE A SIDE SHALL BE EXPOSED TO THE INTERIOR OF THE ROOM AND THE C SIDE PLACED AGAINST THE BUILDING STRUCTURE. SEE TELECOMMUNICATIONS SPECS FOR FURTHER DETAILS.

T8 PROVIDE TELECOMMUNICATIONS SECONDARY BONDING BUSBAR (SBB) MOUNTED AT 7'-0" AFF. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS, DETAIL 4 ON SHEET TN502 AND GROUNDING AND BONDING RISER DIAGRAM ON SHEET TN401 FOR FURTHER DETAILS.

T9 SPACE RESERVED FOR ACCESS CONTROL EQUIPMENT. COORDINATE OUTLET LOCATION WITH SECURITY EQUIPMENT PRIOR TO ROUGH-IN. SEE TY-SERIES SHEETS FOR FURTHER DETAILS.

T19 (1)4",(1) 3" AND (1) 2" EMT CONDUITS RUN ABOVE FALSE CEILING . REFER TO TELECOMMUNICATIONS BACKBONE DIAGRAM ON SHEET TN401. COORDINATE WITH OTHER SERVICES.

T20 SLIDING RACK MOUNTED ENCLOSURE FOR FIBER CABLE ORGANIZING TO CROSSCONECT BETWEEN BACKBONE CABLE AND ACTIVE EQUIPMENT. REFER TO SECTION 271100 AND DETAIL 2 ON SHEET TN502.

T21 2RU 48 PORT PATCH PANEL. REFER TO SECTION 271100 AND DETAIL 5 ON SHEET TN501..

T22 2RU HORIZONTAL CABLE MANAGER BETWEEN PATCH PANEL AND ACTIVE EQUIPMENT.

T23 PROVIDE 18" WIDE HORIZONTAL LADDER RACK WITH 9" RUNG SPACING. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS AND DETAIL 7 ON SHEET TN502 FOR FURTHER DETAILS.

T24 PROVIDE 18" WIDE LADDER VERTICAL RACK WITH 9" RUNG SPACING. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS FOR FURTHER DETAILS.

T26 SEAL ALL TELECOM PATHWAY PENETRATIONS OF CEILING AND WALLS, BOTH BELOW AND ABOVE CEILING, AIRTIGHT. COORDINATE WITH OTHER TRADES TO ENSURE ALL PENETRATIONS OF WALLS AND CEILINGS ARE SEALED. SEE DETAIL 1 & 3 ON SHEET TN502.

T33 PROVIDE LABELING FOR STRUCTURED CABLING AS PER DETAIL 6 ON SHEET TN501.

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CITY OF LEE'S SUMMIT
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LEE'S SUMMIT, MO

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PLAN NORTH
KEYPLAN

TECHNOLOGY - MDF ROOM ENLARGED PLAN AND ELEVATION

TN201

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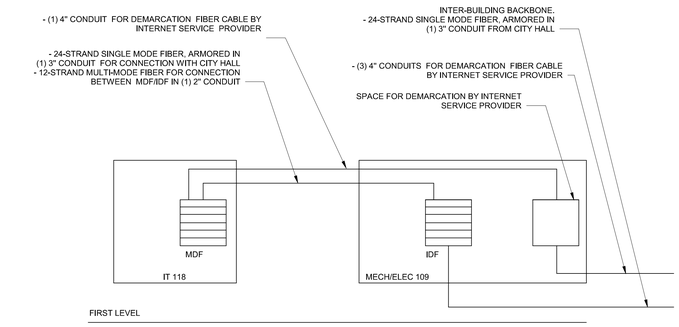
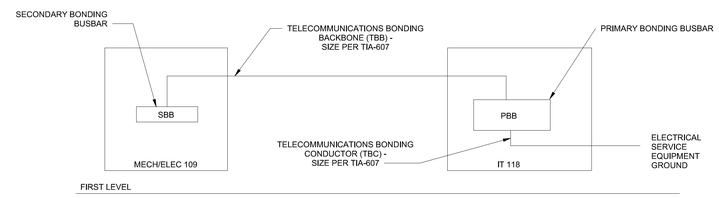


1 RISER DIAGRAM - TELECOMMUNICATIONS BACKBONE
NTS



2 RISER DIAGRAM - GROUNDING AND BONDING
NTS

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TECHNOLOGY RISER DIAGRAM

TN401

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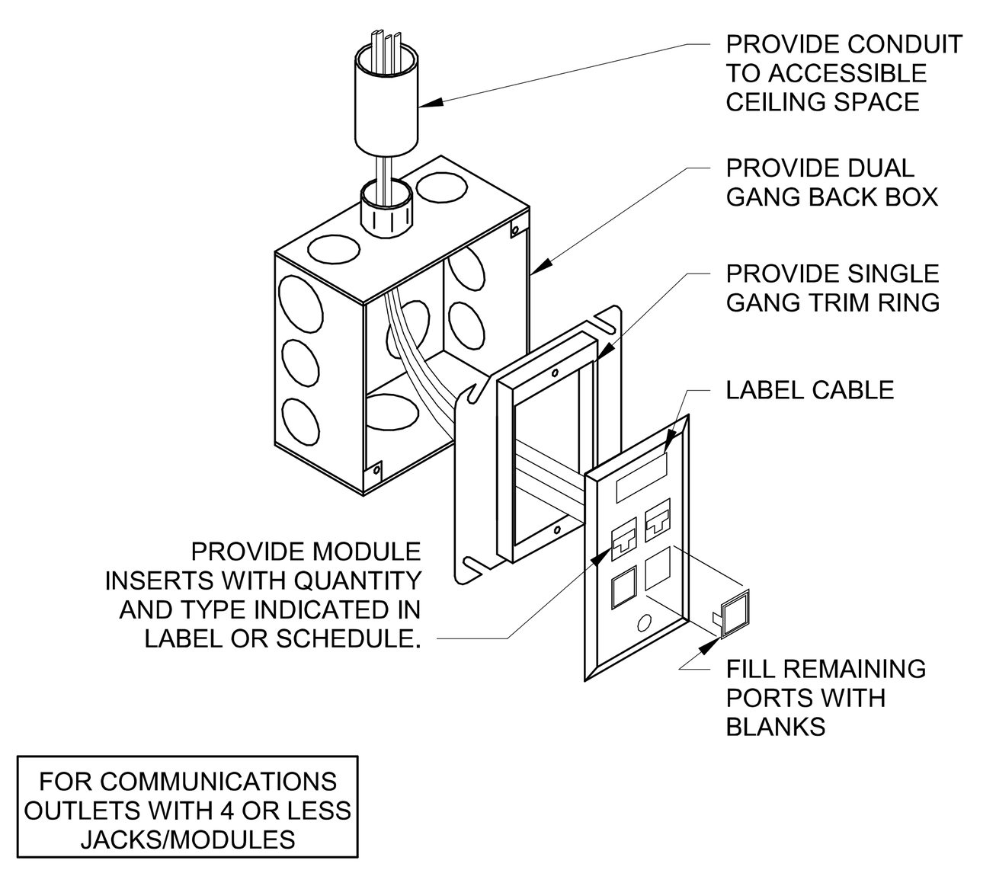
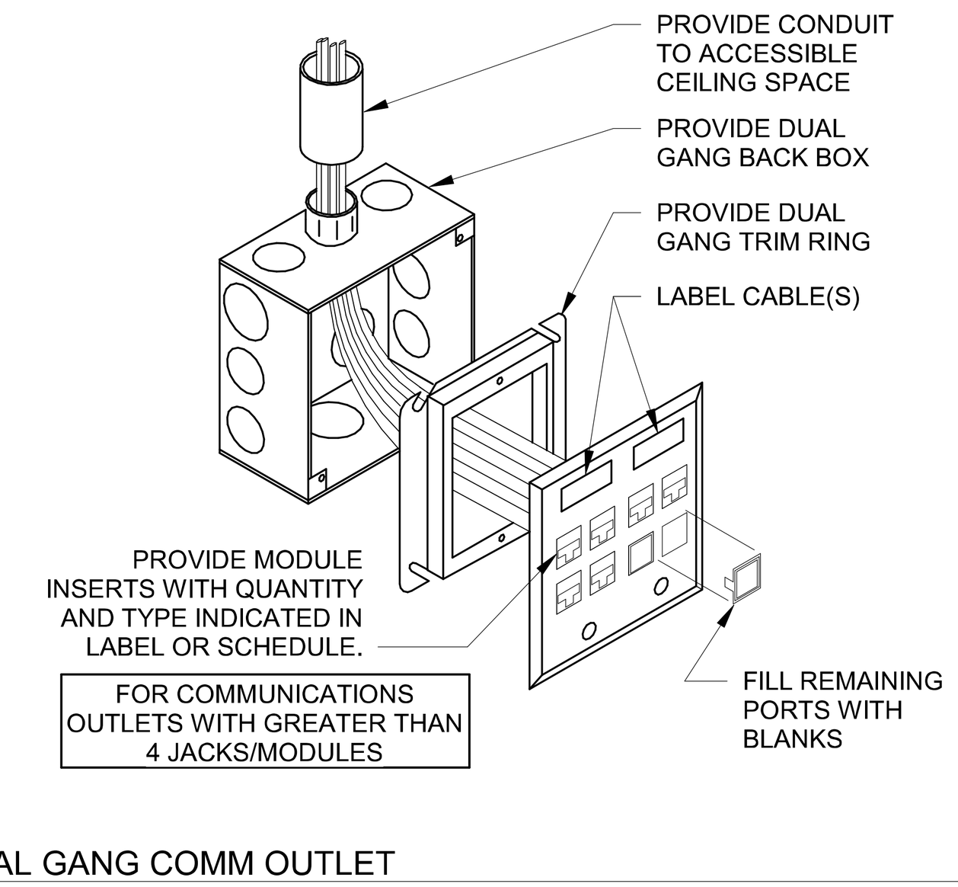


1 SINGLE GANG COMM OUTLET FOR DISPLAY
NTS



2 DUAL GANG COMM OUTLET
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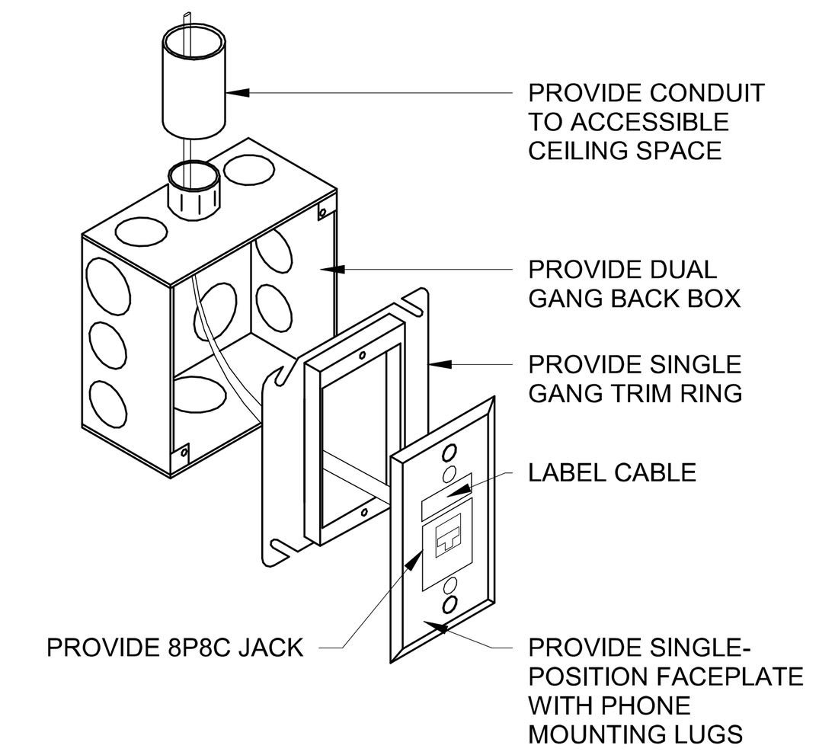
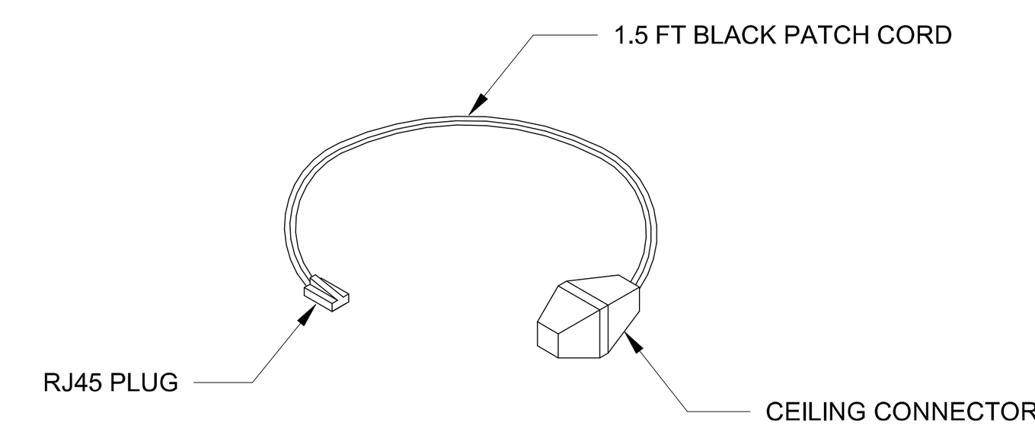
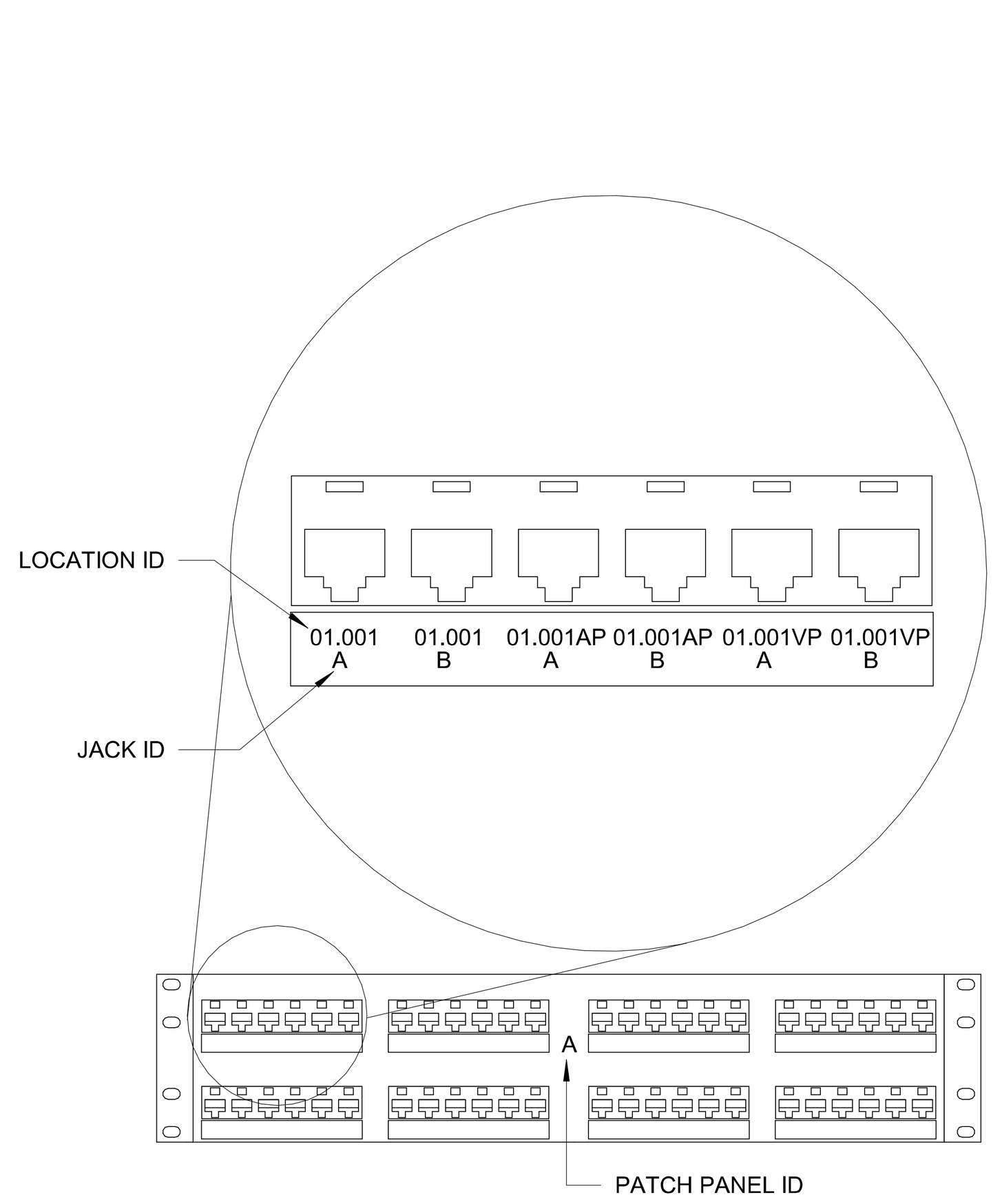


3 WALL PHONE OUTLET
NTS



4 ACCESS POINT CONNECTOR ASSEMBLY
NTS



5 TYPICAL PATCH PANEL LABELING DETAIL
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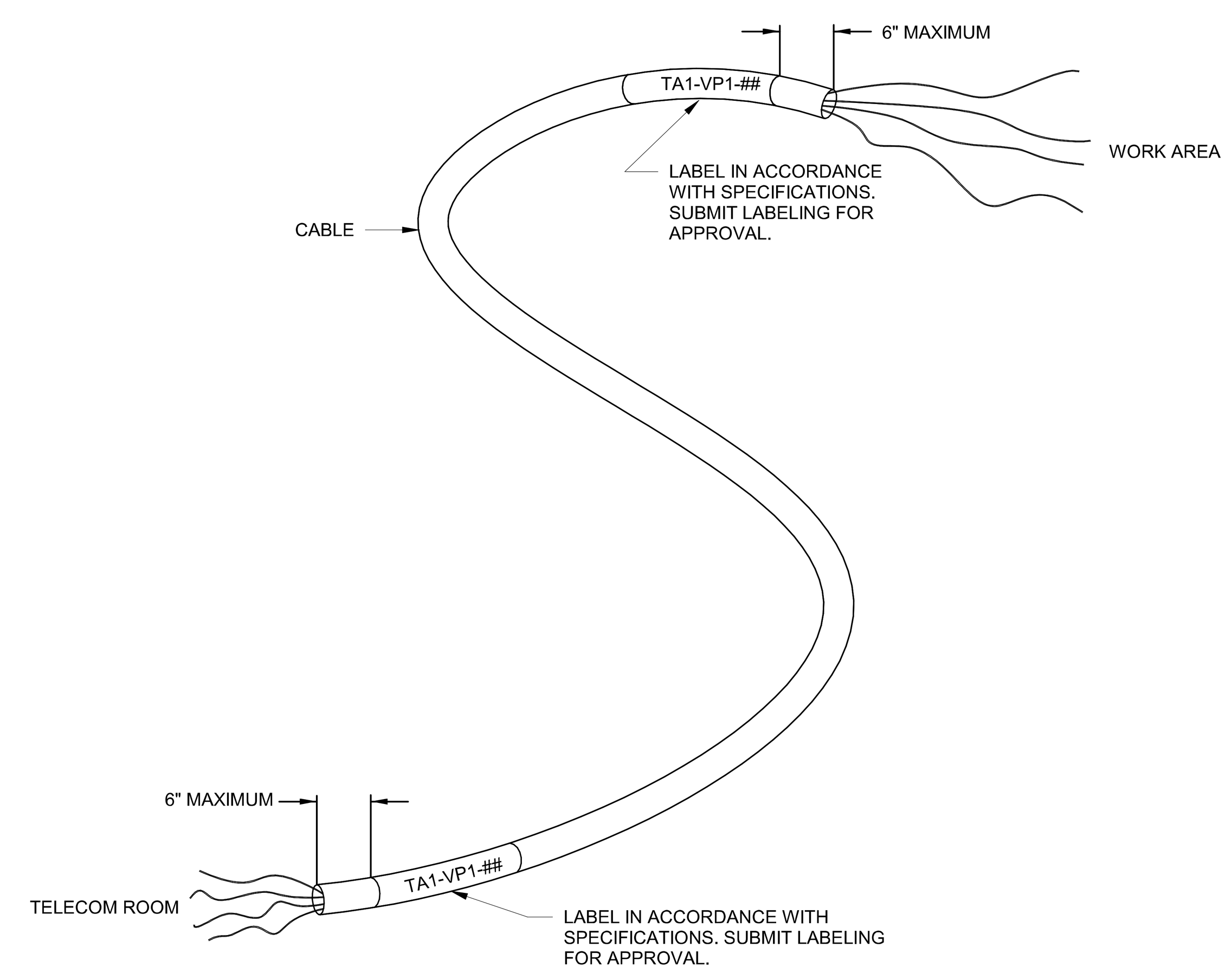
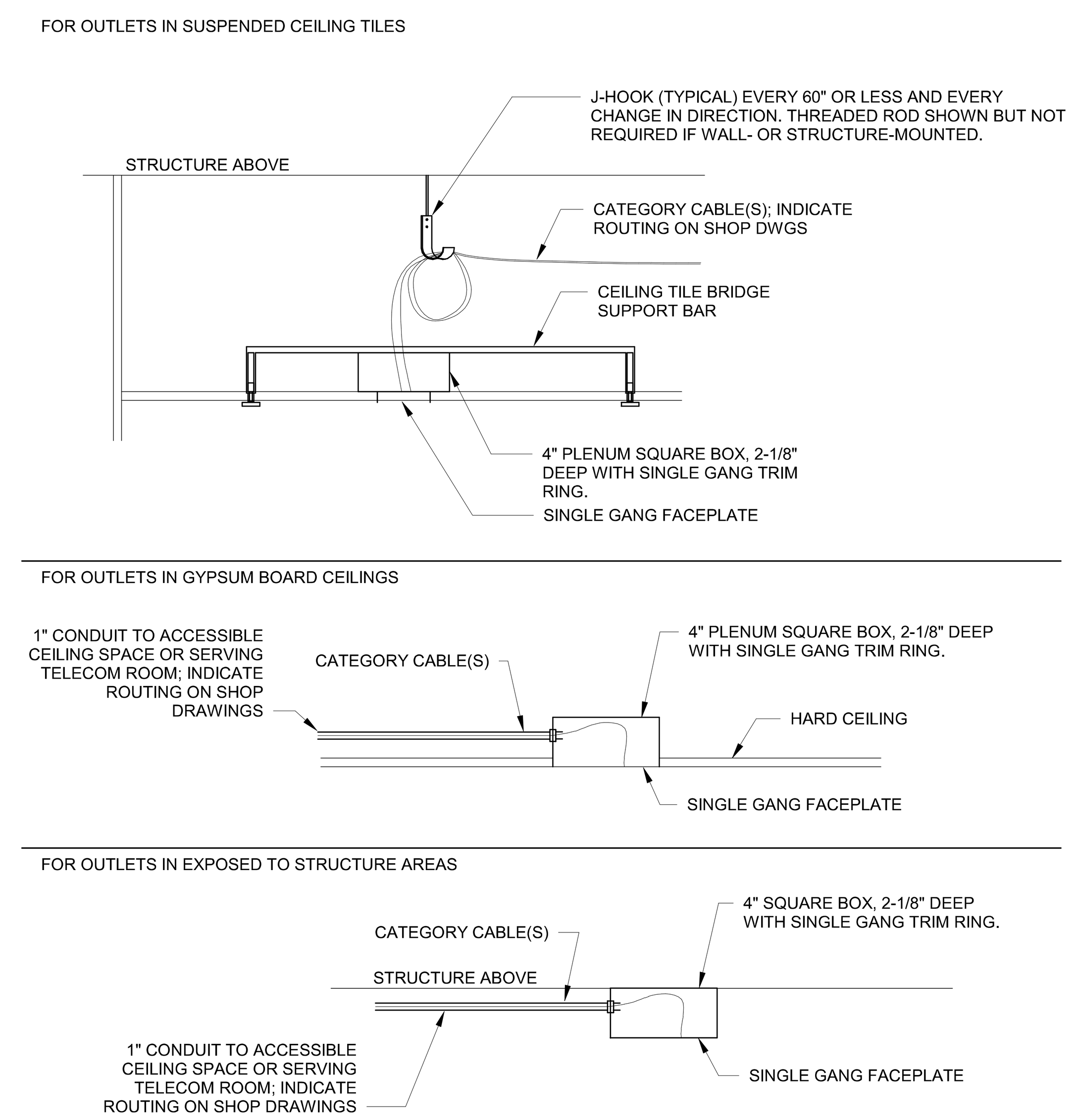
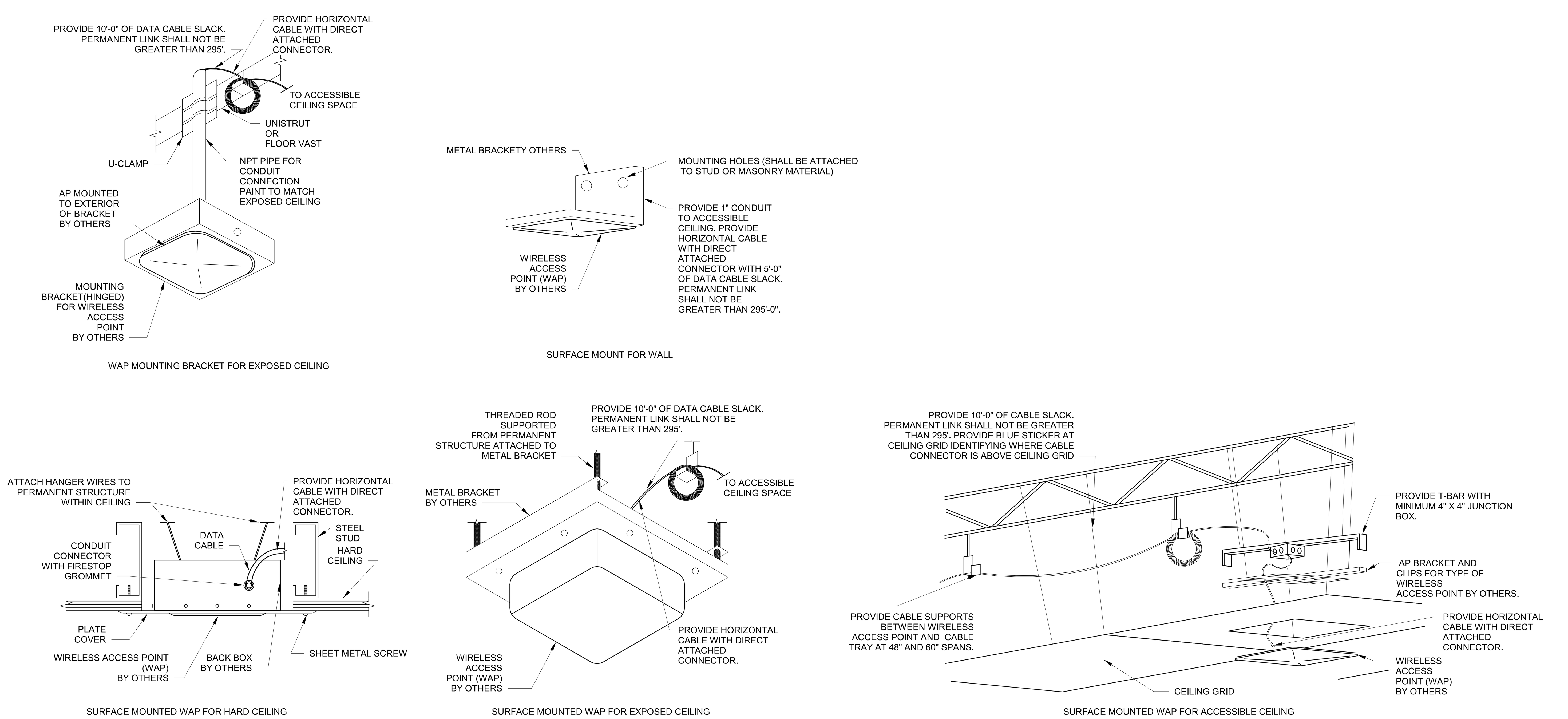


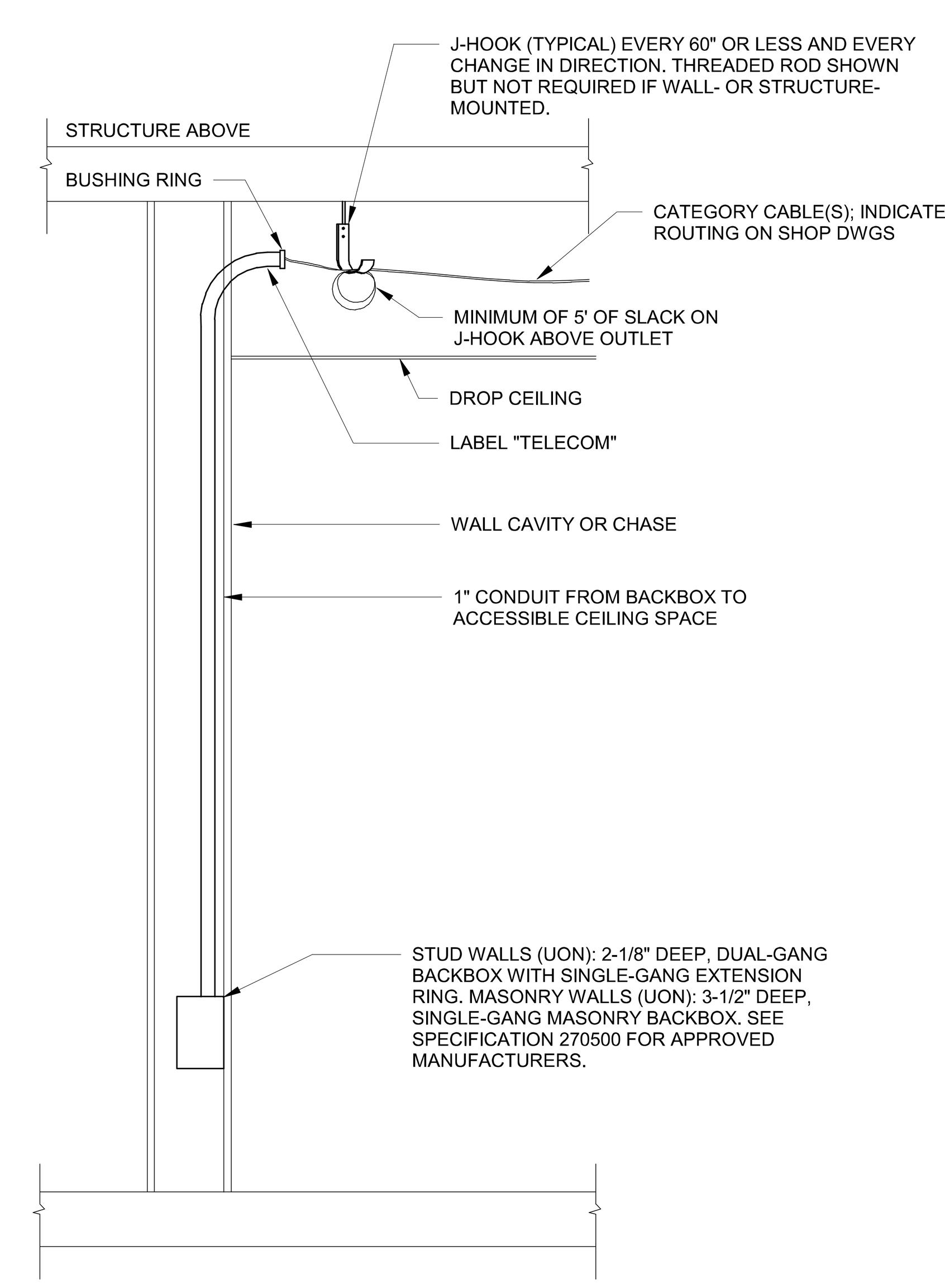
6 LABELING OF HORIZONTAL CABLE
NTS



8 CEILING COMM OUTLET
NTS



7 WIRELESS ACCESS POINT INSTALLATION
NTS



9 COMMUNICATIONS OUTLET MOUNTING
NTS

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TECHNOLOGY DETAILS - 1

TN501

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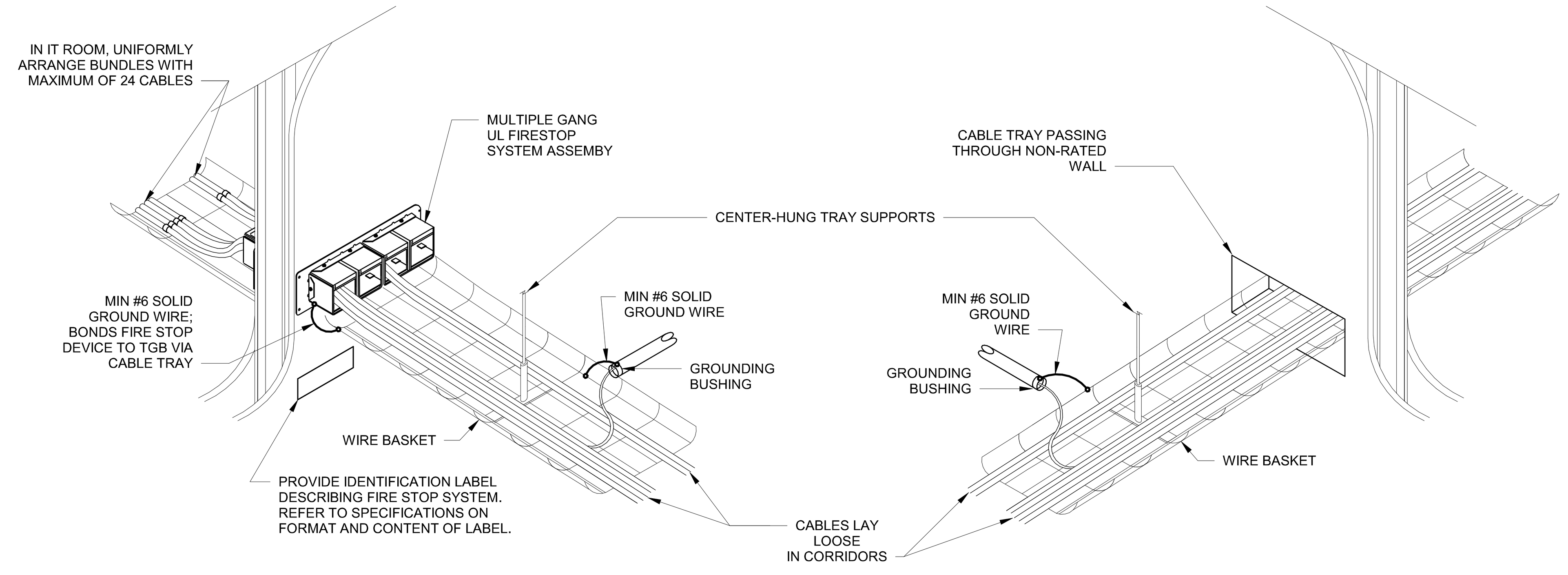
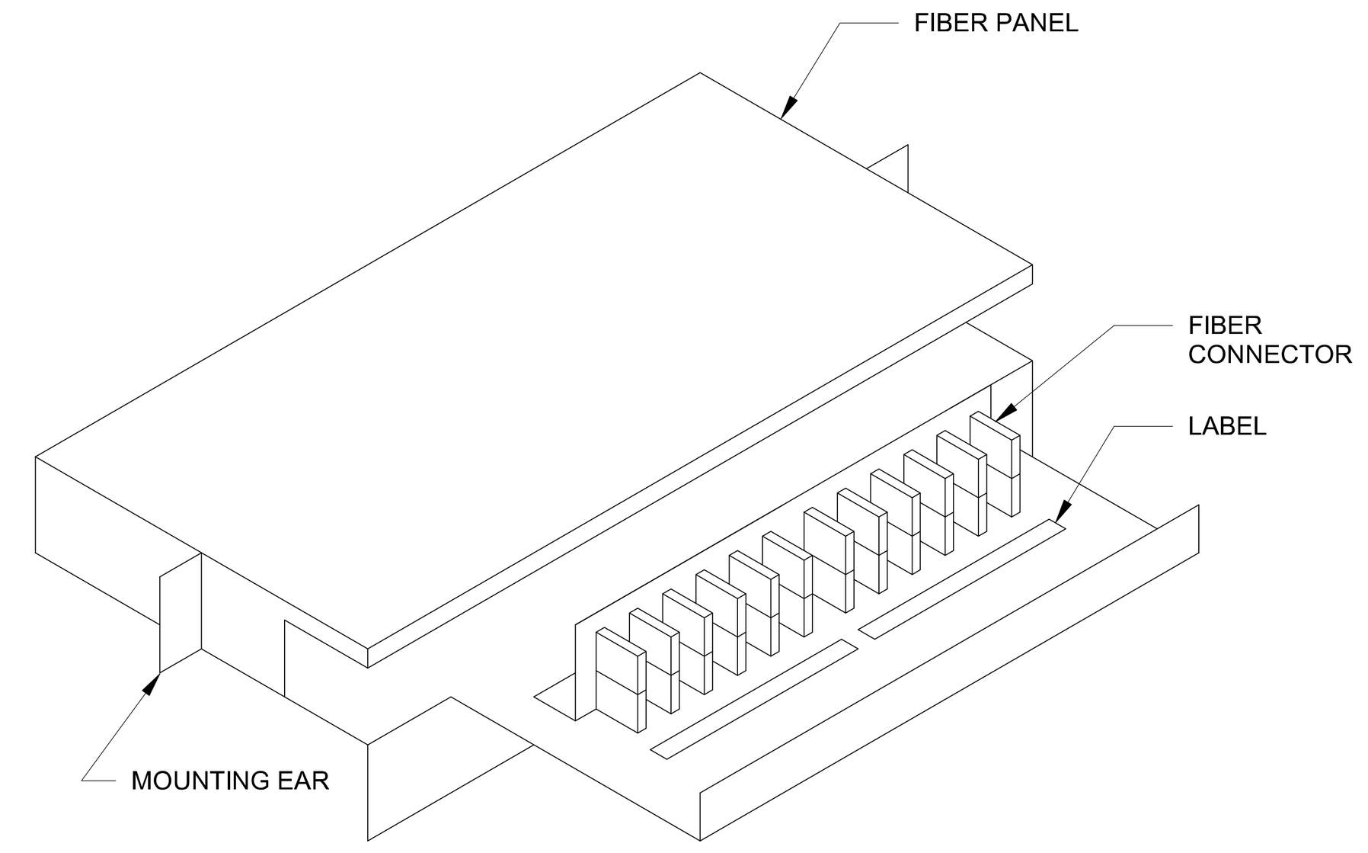
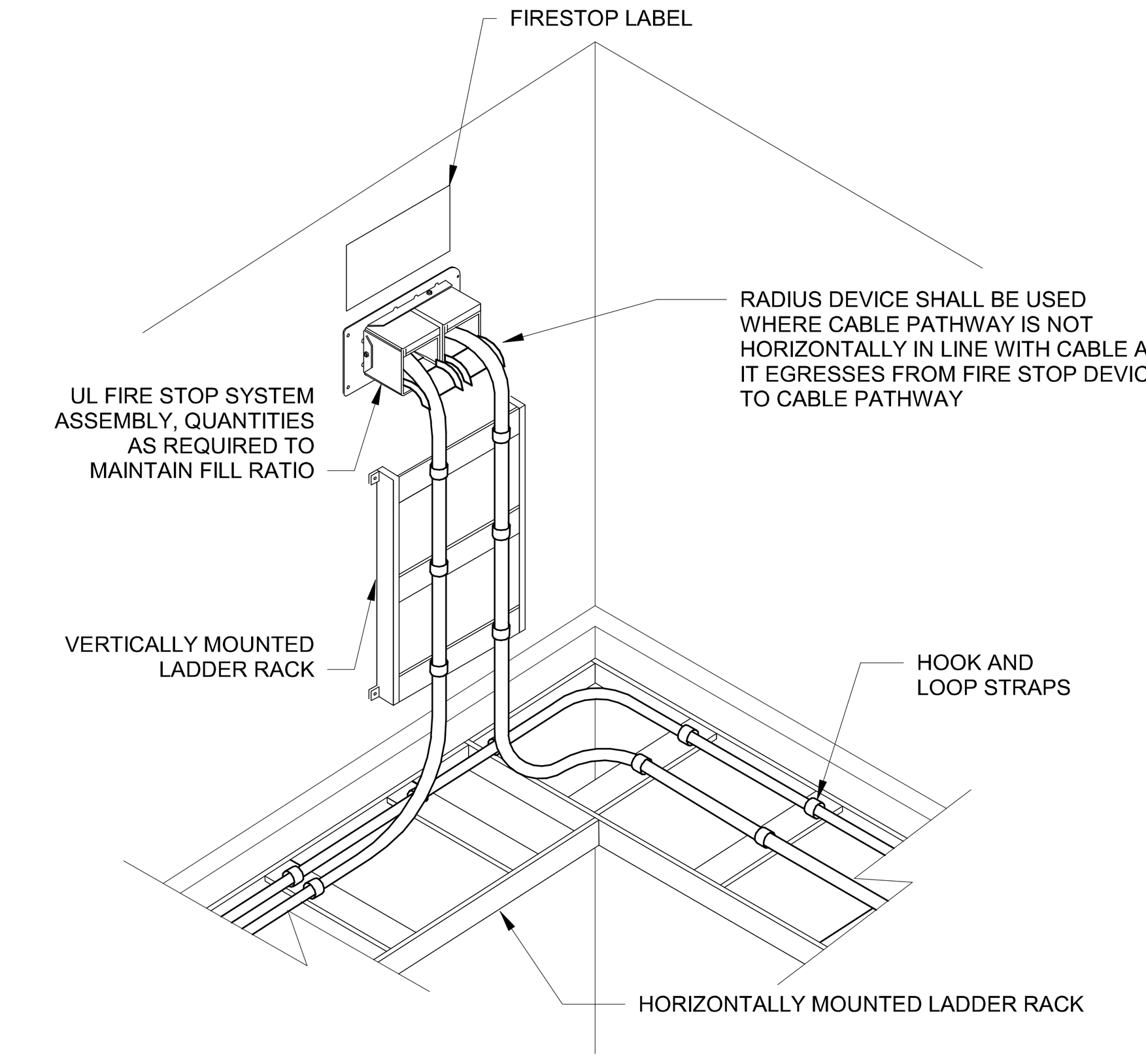


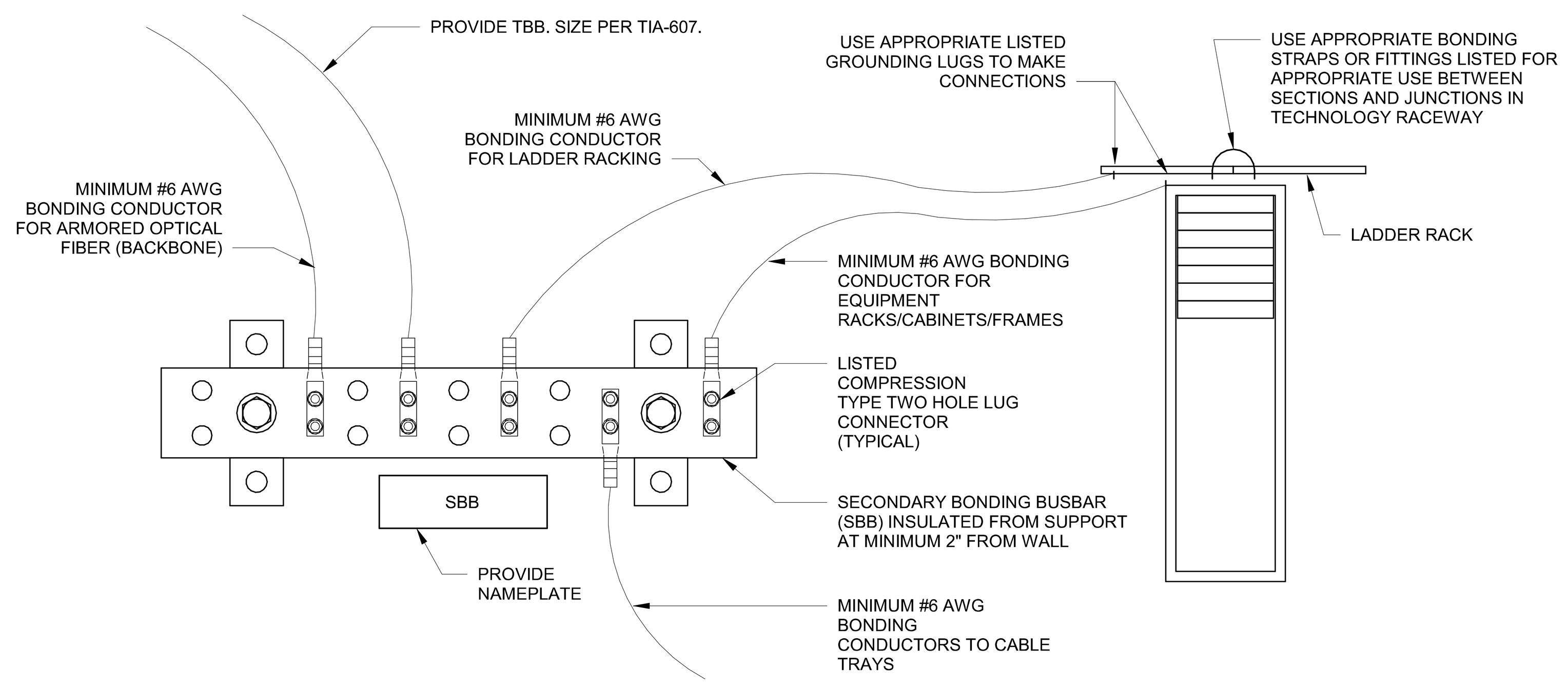
1 CORRIDOR TRAY, THROUGH WALL PENETRATIONS
NTS



2 FIBER PANEL
NTS



3 FIRE STOP SYSTEM
NTS



4 SBB CONNECTIONS DIAGRAM
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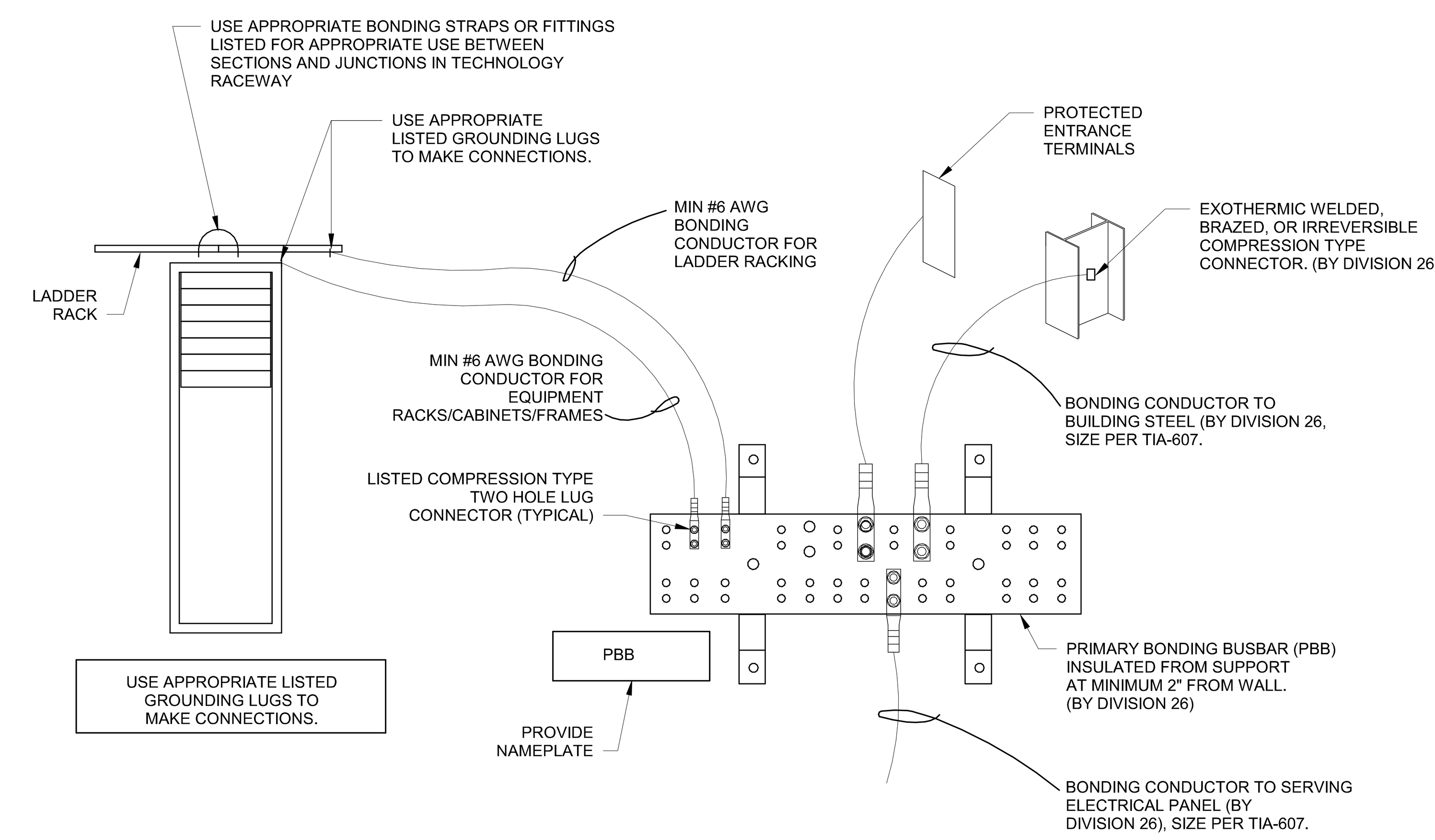

5 PBB CONNECTIONS DIAGRAM
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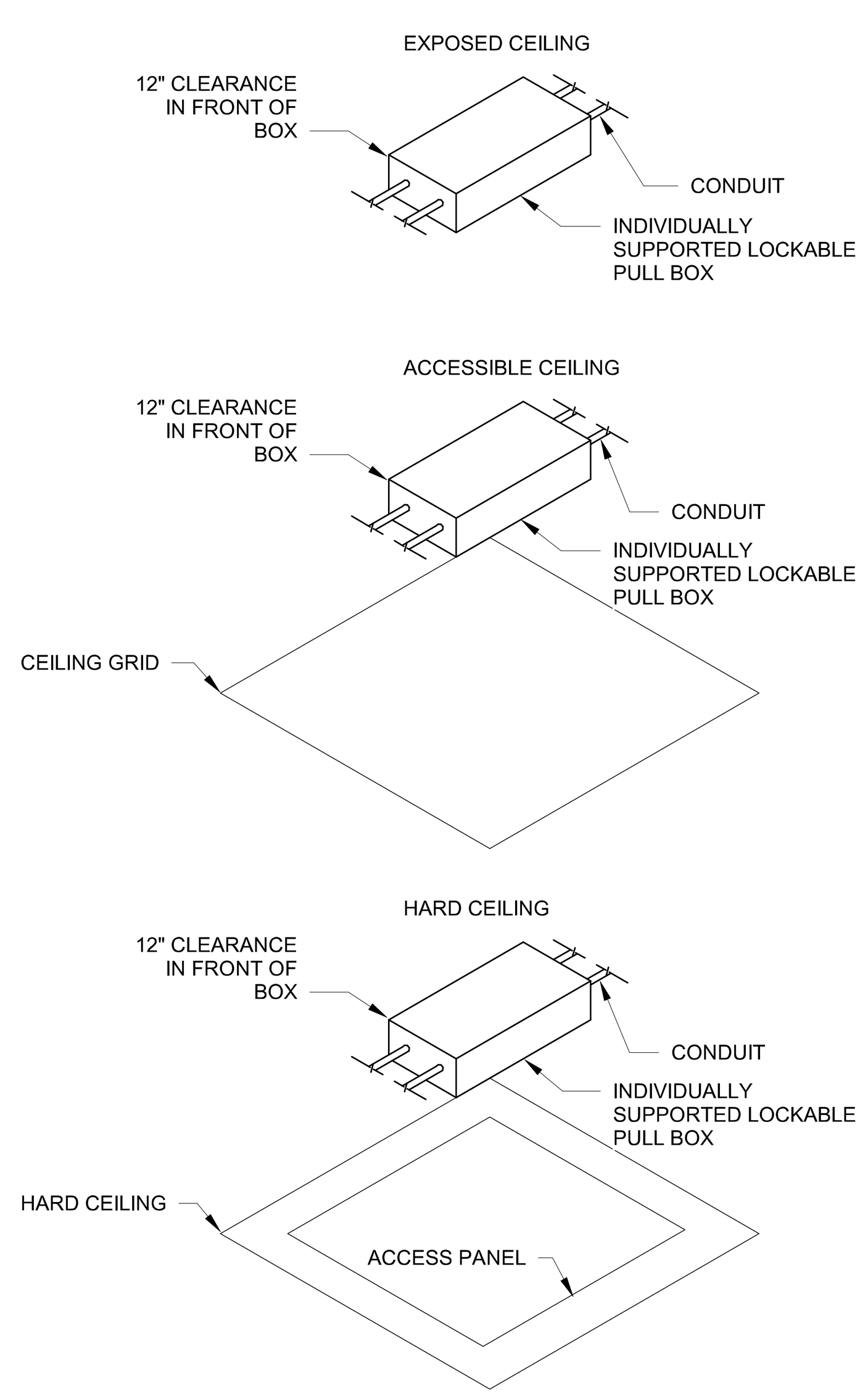

6 PULL BOX
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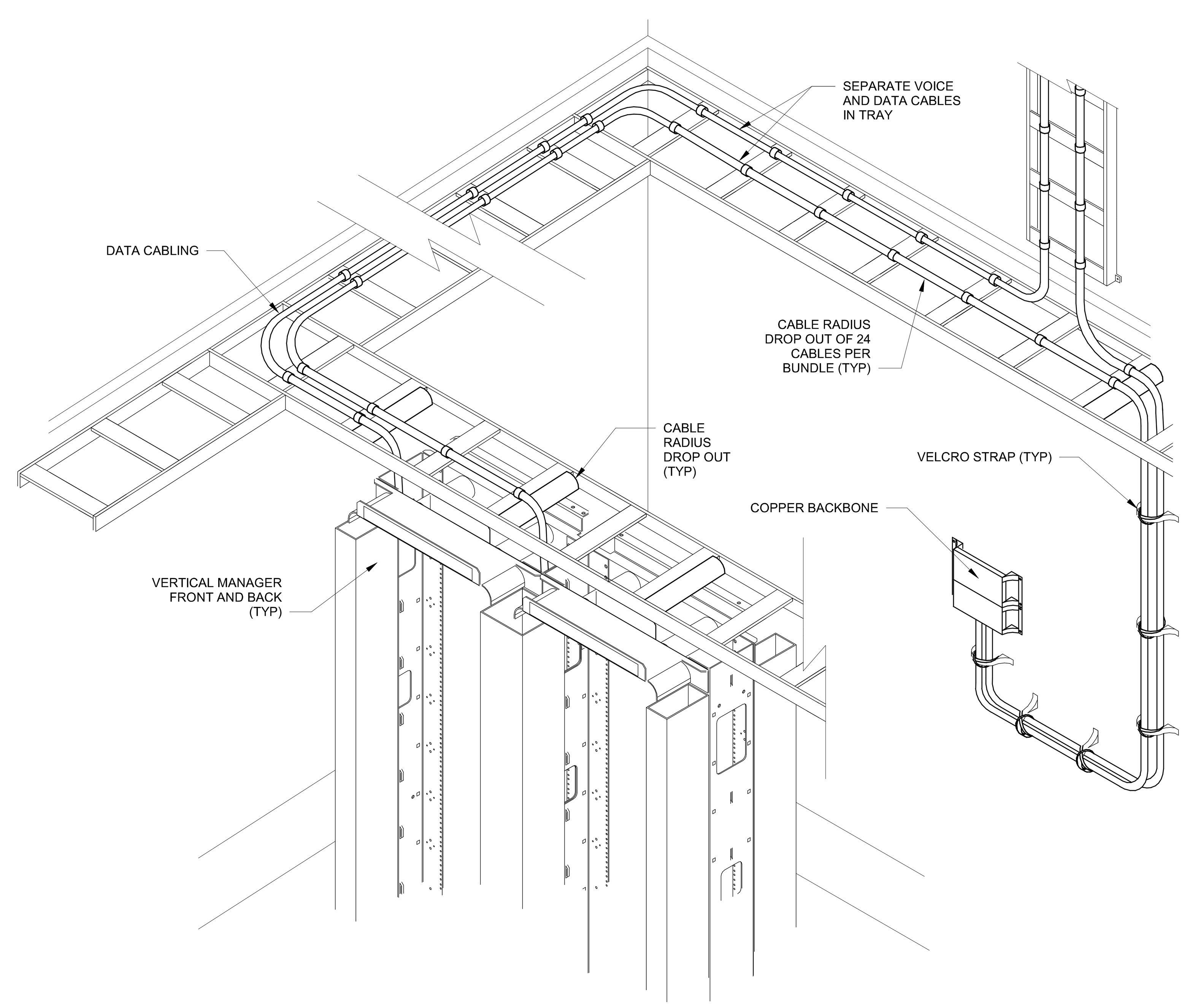

7 TELECOM ROOM TRAY ALIGNMENT, BEND RADIUS TREATMENT
NTS

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TECHNOLOGY DETAILS - 2

TN502

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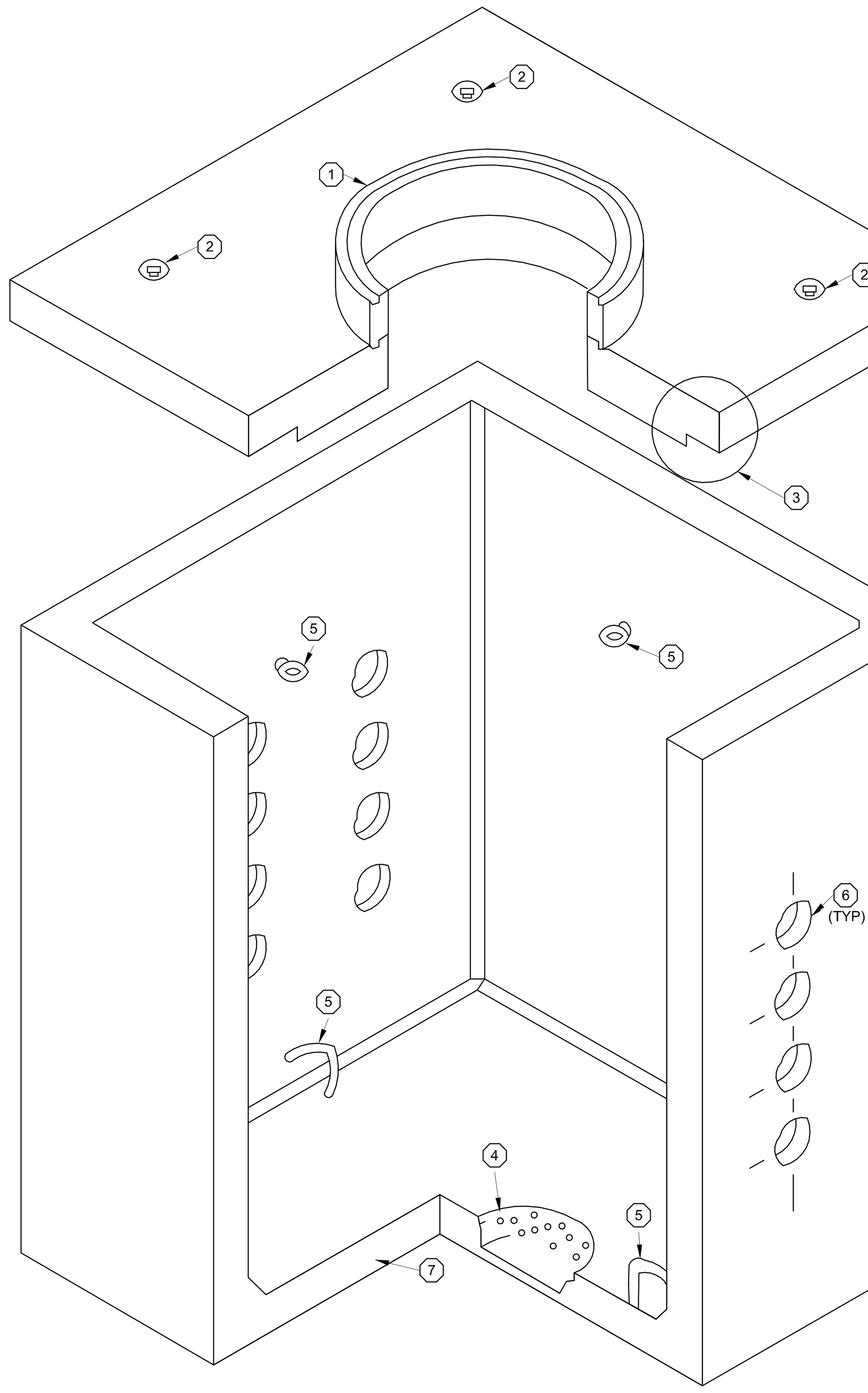


GENERAL NOTES:

1. WITHIN VAULT, PROVIDE OPTICAL FIBER ALLOWED 25'-0" OF SLACK IN THE FIGURE-8 SERVICE LOOP. THIS IS TO FACILITATE FUTURE MAINTENANCE. DO NOT LOOP CABLE IN A CIRCULAR FORMAT AS THE CABLE CANNOT BE LIFTED BY INSTALLER IF CIRCULAR PATTERN WITHOUT POSSIBLE KINKING.
2. TELECOMMUNICATIONS VAULTS SHALL NOT BE SHARED WITH ELECTRICAL INSTALLATIONS
3. EACH NEW VAULT SHALL BE EQUIPPED WITH A LID, PULL IRONS, CABLE RACKS, AND HOOKS DESIGNED FOR USE IN TELECOMMUNICATIONS SYSTEMS. CABLE HOOKS SHALL BE PLACED TO SUPPORT THE WEIGHT OF THE CABLE.

PLAN NOTES:

(1) PROVIDE CAST IRON COVER AND RING. ADJUST STUDS WITH SLOTTED HEAD FOR INSTALLING INTO COVER COLLAR. PROVIDE MAINTENANCE HOLE COVER COLLAR FOR H-20 BRIDGE LOAD. PROVIDE MINIMUM 6" PRECAST CONCRETE GRADE RING. PROVIDE LOCKDOWN SECURITY DEVICE OR EQUIVALENT.

(2) PROVIDE LIFTING ANCHORS.

(3) NOTCH ON UNDERSIDE OF TOP SLAB TO ACCEPT BASE SECTION.

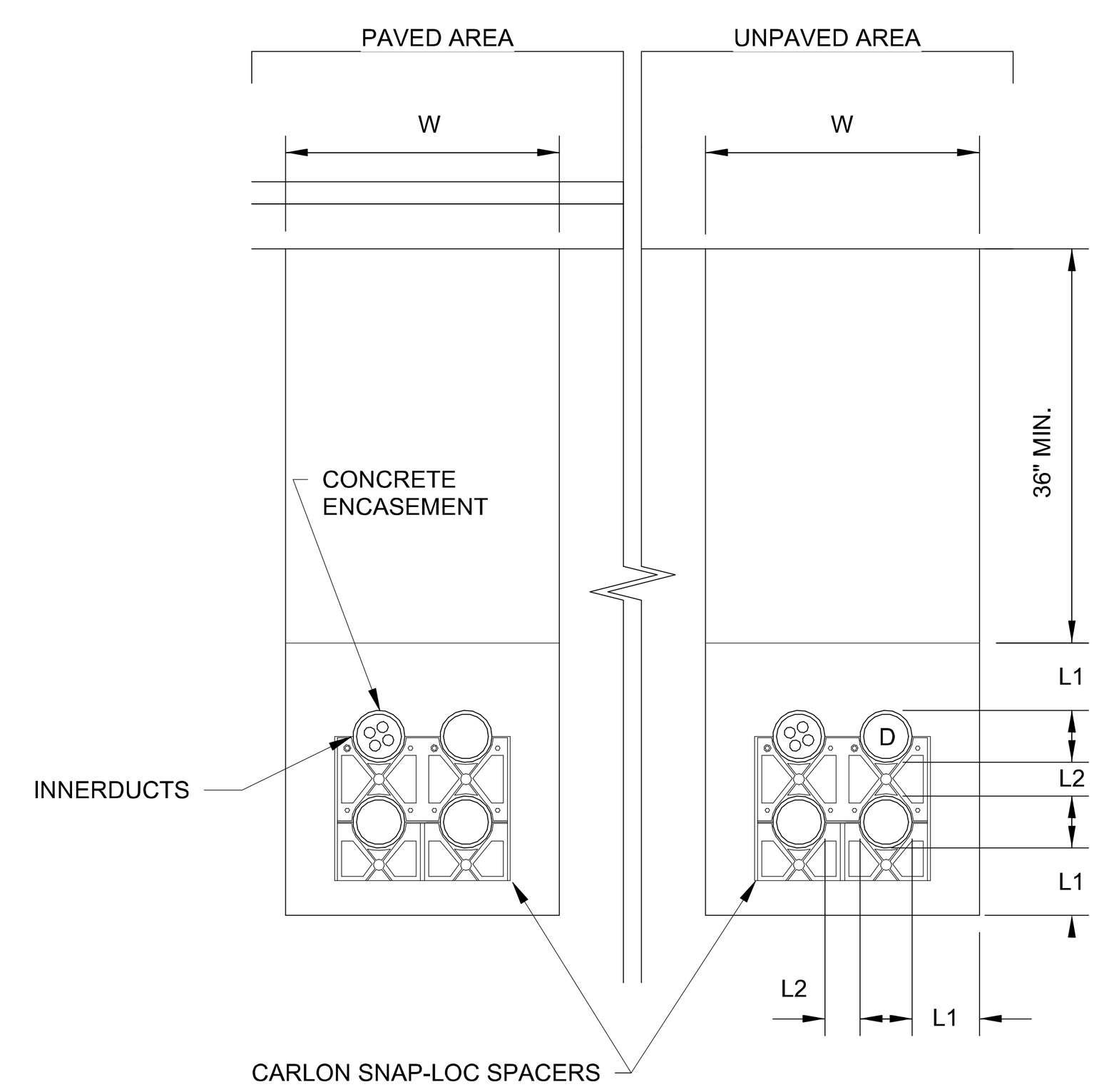
(4) PROVIDE 12" X 4" DEEP SUMP AT MAINTENANCE HOLE BOTTOM.

(5) PROVIDE PULLING EYE. PULLING EYE SHALL BE RATED FOR A MINIMUM OF 10,000 LBS.

(6) TELECOMMUNICATIONS CONDUIT DUCTS SHALL ENTER HAND HOLE FROM SIDE WALL AS INDICATED. SEAL ALL CONDUIT/DUCT ENTRANCES WITH CONDUIT/DUCT MANUFACTURER RECOMMENDED TERMINATION FITTINGS. GROUT INSIDE AND OUTSIDE OF MAINTENANCE HOLE TO SEAL DUCT/HANDHOLE GAP.

(7) PROVIDE SOLID BOTTOM.

(1) OSP MAINTENANCE HOLE
NTS



DETAIL SPECIFIC NOTES:

1. ALL DIMENSIONS APPLY TO BOTH PAVED AND UNPAVED AREAS, BUT ARE ONLY SHOWN FOR CLARITY.
2. ALL CONSTRUCTION AND MATERIALS SHALL CONFIRM TO THE TECHNICAL SPECIFICATIONS THAT HAVE BEEN PROVIDED.
3. PROVIDE WARNING TAPE. TAPE SHALL BE POLYETHYLENE PLASTIC TAPE WITH A MINIMUM WIDTH OF 6 INCHES. IT SHALL BE IMPRINTED WITH THE WORDS "WARNING-TELECOMMUNICATIONS CABLE BELOW". THE TEXT SHALL BE AT NOT MORE THAN 48 INCH INTERVALS. TAPE MUST BE EASILY DETECTABLE BY A METAL DETECTOR. IT SHALL BE INSTALLED 12 INCHES TO 18 INCHES ABOVE THE HIGHEST INSTALLED DUCT.
4. PROVIDE PERMANENT TRACER WIRE. THE TRACER WIRE SHALL BE PLACED CENTRALLY OVER THE CONDUIT FORMATION.
5. CONDUITS SHALL BE PLACED IN CARLON SNAP-LOC SPACERS TO MANUFACTURER'S STANDARD SPECIFICATIONS. MAXIMUM SPACER INTERVAL SHALL NOT EXCEED 10 FEET.
6. ALL CONDUITS SHALL BE MANDRELLED FOLLOWING INSTALLATION.
7. PROVIDE A PULL ROPE/TAPE WITHIN EACH CONDUIT AND INNER-DUCT. THE ROPE/TAPE SHALL HAVE A MINIMUM TENSILE STRENGTH OF 890 NEWTONS.
8. ALL CONDUITS SHALL BE PLUGGED WITH UNIVERSAL PLUGS.
9. ONE (1) 4" CONDUIT SHALL BE FULLY POPULATED WITH FOUR (4) 1 INCH INNER-DUCTS.
10. GRANULAR FILL TO BE CRUSHED STONE OF PEA GRAVEL WITH NOT LESS THAN 95 PERCENT PASSING 1/2 INCHES AND NOT LESS THAN 95 PERCENT TO BE RETAINED ON A NUMBER 8 SIEVE AND SHALL BE PLACED IN LAYERS NOT EXCEEDING 6 INCH DEPTH.
11. CONDUITS UNDER PAVED AREA SHALL BE ENCASED IN CONCRETE. ALL ENCASEMENT CONCRETE SHALL BE A MINIMUM 4,000 PSI.
12. THE AREA BETWEEN THE ENTRANCE CONDUITS AND BUILDING STRUCTURE SHALL BE SEALED TO BE WATER AND PEST PROOF.
13. WHERE CONDUITS TURN UP INTO BUILDING ENTRANCE, THE CONDUIT SHALL BE TRANSITIONED TO RMC BEFORE THE SWEEP BEGINS.

DIMENSIONS:
W = 24" MIN.
D = 4"
L1 = 6" MIN.
L2 = 2" MIN.

(2) OSP UNDERGROUND CONDUIT
NTS

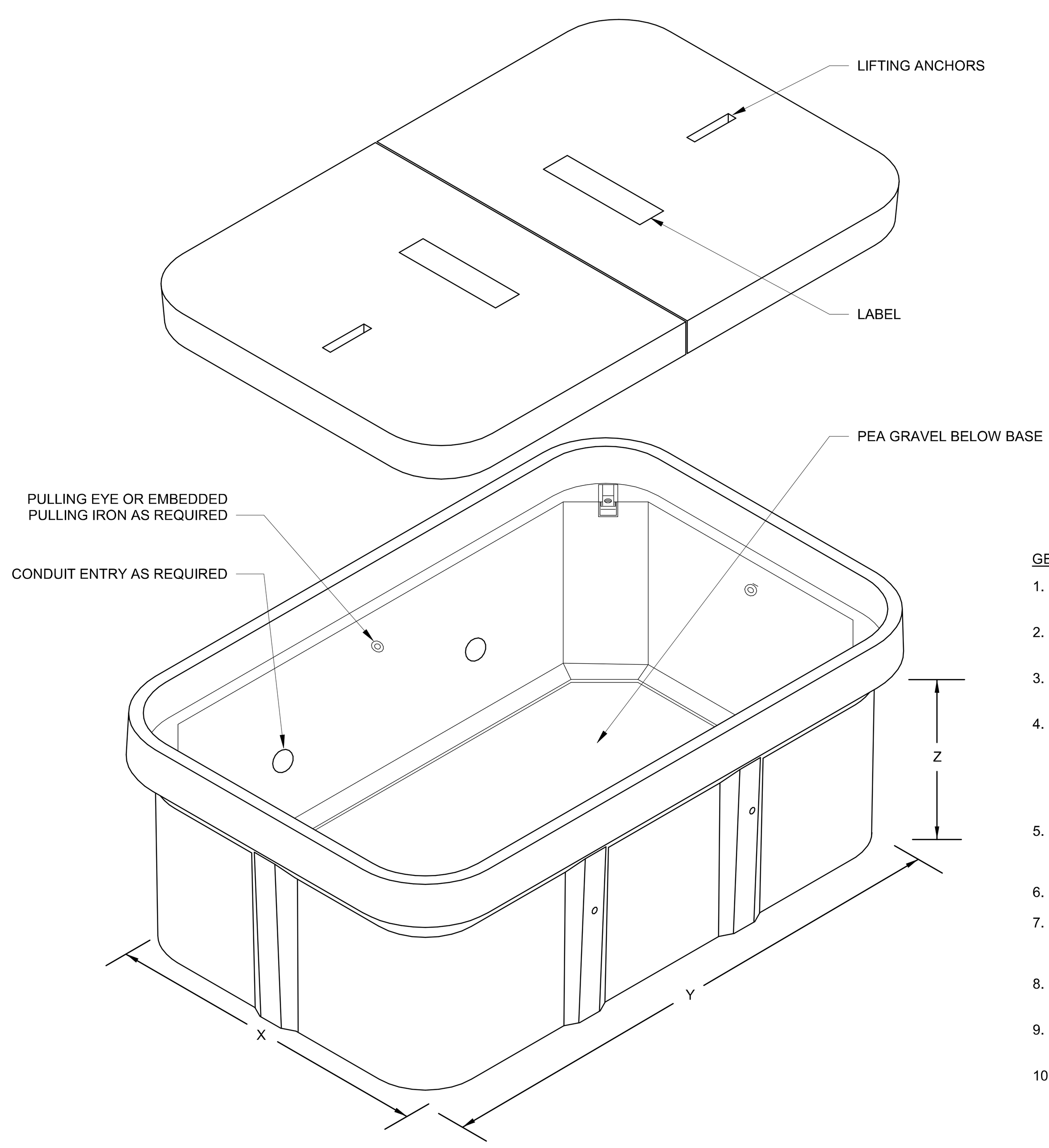


TABLE OF DIMENSIONS	
X	HAND HOLE WIDTH - PER PLANS
Y	HAND HOLE LENGTH - PER PLANS
Z	HAND HOLE HEIGHT - PER PLANS

GENERAL TELECOMMUNICATIONS HAND HOLE NOTES:

1. REFER TO PLANS FOR HAND HOLE (HH) LOCATIONS AND PATHWAY REQUIREMENTS.
2. TELECOMMUNICATIONS HH SHALL NOT BE SHARED WITH ELECTRICAL INSTALLATIONS.
3. REFER TO DUCT BANK DETAILS FOR RELATIONSHIP OF CONDUITS TO HH INGRESS.
4. HH SHALL BE EQUIPPED WITH A LID, PULL IRONS, CABLE RACKS, AND HOOKS DESIGNED FOR USE INTELECOMMUNICATIONS SYSTEMS. LID SHALL BE RATED FOR THE INSTALLATION LOCATION (MEDIUM DUTY OR TRAFFIC) AND SHALL BE MARKED IN THE MANUFACTURER'S DESIGNATED LOCATION WITH THE TERM "TELECOMMUNICATIONS". CABLE HOOKS SHALL BE PLACED TO SUPPORT THE WEIGHT OF THE CABLE.
5. CONDUIT INGRESS/EGRESS LOCATIONS AND QUANTITIES SHOWN ON THIS DETAIL ARE FOR ILLUSTRATIVE PURPOSES ONLY. CONDUIT SIZE AND QUANTITY AS PER PLANS AND DUCT BANK DETAILS.
6. HH ENTRANCE SHALL BE INSTALLED FLUSH WITH FINISHED GRADE.
7. SHOWN HH IS FOR ILLUSTRATIVE PURPOSES ONLY. FOR ADDITIONAL DETAILS CONCERNING REQUIREMENTS, REFER TO SPECIFICATION SECTION 270443 UNDERGROUND DUCTS AND RACEWAYS.
8. WHEN SPLICING IN HH, PROVIDE 3/4" DIAMETER GROUND ROD 9'-0" IN LENGTH, BONDING RIBBON, AND BOND CABLE RACKS TO GROUND.
9. PROVIDE CONDUIT SEPARATION OF 2" BETWEEN ALL CONDUITS. MAXIMUM OF (3) 4" CONDUITS IN HH.
10. INSTEAD OF USING HH BOTTOM, PROVIDE 1 - 2' OF PEA GRAVEL BELOW BASE FOR PROPER DRAINAGE.

(3) OSP HAND HOLE
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TECHNOLOGY DETAILS - 3

TN503

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SECURITY SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V2.1

STANDARD MOUNTING HEIGHTS

INTERCOM (OPERABLE PART)	48"
CARD READER (CENTER OR TOP WHERE OPERABLE PARTS EXIST)	48"
EMERGENCY LOCK RELEASE	48"
EMERGENCY PHONE (OPERABLE PARTS)	48"

DEFAULT MOUNTING HEIGHTS SHOWN ABOVE WHERE NO CALL-OUT IS PROVIDED. MOUNTING HEIGHTS LISTED ARE ABOVE FINISHED FLOOR (AFF) OR ABOVE FINISHED GRADE (AFG). ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ABBREVIATIONS

A	AMPERS
ACP	ACCESS CONTROL PANEL
ADA	AMERICANS WITH DISABILITIES ACT
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AV	AUDIO-VIDEO
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BD	BUILDING DISTRIBUTOR
BDF	BUILDING DISTRIBUTION FRAME
BFC	BELOW FINISHED CEILING
BR	BIOMETRIC READER
C	CONDUIT
CAT	CATEGORY
CC	CENTRAL CONTROL
CCTV	CLOSED CIRCUIT TELEVISION
CD	CAMPUS DISTRIBUTOR
CMP	COMMUNICATIONS PLENUM JACKET
CMR	COMMUNICATIONS RISER JACKET
(D)	REMOTE DEVICE
DAS	DISTRIBUTED ANTENNA SYSTEM
dB	DECIBELS
DCS	DOOR CONTROL SYSTEM
DEMO	DEMOLITION
DSP	DIGITAL SIGNAL PROCESSOR
DVR	DIGITAL VIDEO RECORDER
(E)	EXISTING DEVICE
EC	ELECTRICAL CONTRACTOR
ECIA	ELECTRONIC OMPONENTS INDUSTRY ASSOCIATION
EMI	ELECTROMAGNETIC INTERFERENCE
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
ER	EQUIPMENT ROOM
(ETR)	EXISTING TO REMAIN
(F)	DOOR FRAME MOUNTED DEVICE
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FD	FLOOR DISTRIBUTOR
FMC	FLEXIBLE METAL CONDUIT
FOR	FIBER OPTIC RACK
FS	FIRE STOP SYSTEM
FLR	FLOOR
GC	GENERAL CONTRACTOR
(GT)	GUARD TOUR
GYP	GYPSUM BOARD
HH	HAND HOLE
Hz	HERTZ
IMC	INTERMEDIATE METAL CONDUIT
ICS	INTERCOM CONTROL SYSTEM
IP	INTERNET PROTOCOL
ISP	INSIDE PLANT CABLE
J-BOX	JUNCTION BOX
(K)	ELECTRICALLY OPERATED BY KEY
KP	KEY PAD
KVM	KEYBOARD VIDEO MOUSE SWITCH
LAN	LOCAL AREA NETWORK
LED	LIGHT-EMITTING DIODE
LF	LINEAR FEET
MBS	MAINTENANCE BYPASS SWITCH
MDF	MAIN DISTRIBUTION FRAME
MFR	MANUFACTURER
MH	MAINTENANCE HOLE
MM	MULTIMODE
MPOE	MAIN POINT OF ENTRANCE
MPOP	MAIN POINT OF PRESENCE
MTD	MOUNTED
N/A	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCATION
NIC	NOT IN CONTRACT
nm	NANOMETER
NRTL	NATIONALLY RECOGNIZED TESTING LAB
NVR	NETWORK VIDEO RECORDER
OC	ON CENTER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OSP	OUTSIDE PLANT
POE	POWER OVER ETHERNET
PON	PASSIVE OPTICAL NETWORK
QTY	QUANTITY
(R)	RELOCATED EXISTING DEVICE
(RE)	REMOVE EXISTING DEVICE AND INSTALL AT ANOTHER LOCATION, SEE (R)
RMC	RIGID METAL CONDUIT
RMS	REMOTE MONITORING STATION
RU	RACK UNIT
SCS	STRUCTURED CABLING SYSTEM
SF	SQUARE FEET
SM	SINGLEMODE
SP	SCRAMBLE PAD
TBD	TO BE DETERMINED
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TGB	TELECOMMUNICATIONS GROUND BUS BAR
TMGB	TELECOMMUNICATIONS MAIN GROUND BUS BAR
TR	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UL	UNDERWRITER LABORATORIES, INC.
UPS	UNINTERRUPTIBLE POWER SUPPLY
UPSDP	UNINTERRUPTIBLE POWER SUPPLY DISTRIBUTION PANEL
V	VOLT(S)
VCM	VERTICAL CABLE MANAGER
VMS	VIDEO MANAGEMENT SYSTEM
WAO	WORK AREA OUTLET
WP	WEATHER PROOF
WR	WEATHER RESISTANT
WT	WATERTIGHT
XP	EXPLOSION-PROOF

( ) - INDICATES MODIFIER FOR SPECIAL OPERATION IN LABELING SCHEME

ANNOTATION

- 1 — SECURITY PLAN CALLOUT
- CONNECTION POINT OF NEW WORK TO EXISTING
- 1 / TY1 — DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER. LOWER NUMBER INDICATES SHEET NUMBER
- 1 / TY1 — SECTION CUT DESIGNATION
- DEDICATED EQUIPMENT ACCESS TILE
- ACCESS PANEL

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINE-TYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF THE NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING ———— NEW ————
DEMOLISH — — — — — FUTURE - - - - - - - - -

SECURITY SYMBOLS

- AR — AREA OF REFUGE CALL BOX
- CR — PROXIMITY CARD READER
- CW X — CLIENT WORKSTATION WHERE X = NUMBER OF MONITORS
  - (AC) ACCESS CONTROL
  - (SM) SECURITY MANAGEMENT
  - (TS) TOUCHSCREEN CONTROL
  - (VS) VIDEO SURVEILLANCE
- DA — DOOR ANNUCATOR
- DB — DOOR BELL
  - (PB) PUSH BUTTON
  - (CH) CHIME
- DM — DOOR POSITION SWITCH ONLY
  - SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE
- DL — DOOR POSITION SWITCH AND LATCHBOLT MONITOR
  - SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE
- EL — ELECTRIFIED LOCKING DEVICE, REQUEST TO EXIT, DOOR POSITION SWITCH, AND LATCH BOLT MONITOR
  - SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE
- EO — ELECTRIFIED LOOKING DEVICE
  - SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE
- EP — EMERGENCY PHONE
- GB — GLASS BREAK DETECTOR
- IC — INTERCOM
  - (CR) WITH CARD READER
  - (DS) DOOR STATION
  - (RS) RECEIVING (MASTER) STATION
  - (VS) VIDEO STATION
- IP — INMATE PHONE
- KP — KEYPAD
  - (ID) INTRUSION DETECTION SYSTEM
  - (AC) ACCESS CONTROL
- LC — LIGHTING CONTROL RELAYS
- MD — MOTION DETECTOR
- PL — PANIC ALARM THREE-COLOR INDICATOR LIGHT
- PB — PANIC/DURESS BUTTON
- RE — REQUEST-TO-EXIT PUSH PAD
- RO — REMOTE UNLOCK/OPEN BUTTON
- ML — MICROPHONE STATUS LIGHT, WALL MOUNT
- MP — MICROPHONE
- MS — MICROPHONE MUTE ILLUMINATED SWITCH
- S — SPEAKER (DOOR BELL)
- SP — PAGING SPEAKER
- VM — VAULT MONITOR
- WC — WATER CONTROL VALVE
  - VALVE BY DIVISION 22, CONTROL BY DIVISION 28
- WT — WATCH TOUR

SECURITY CAMERAS

- FIXED CAMERA
- PTZ CAMERA
- 360 CAMERA
- 180 CAMERA
- TWO IMAGER CAMERA
- FOUR IMAGER CAMERA

MOUNTING TYPE SYMBOLS (APPLIES TO ANY SECURITY DEVICE SYMBOL)

- CEILING MOUNT
- WALL MOUNT
- POLE / BOLLARD MOUNT
- CORNER MOUNT
- PENDANT MOUNT
- WALL MOUNT PENDANT ARM

LABELING SCHEME

SECURITY DEVICES (TYPICAL)

A XX YY

- A: DEVICE SYMBOL
- XX: MODIFIER FOR SPECIAL OPERATION IF APPLICABLE
- YY: DEVICE TYPE

SEE MATCHING SCHEDULES ON THIS SHEET (IF APPLICABLE)

SECURITY CAMERAS (TYPICAL)

C-XX AA ##' AFF

- XX: CAMERA NUMBER
- AA: CAMERA TYPE (SEE CAMERA SCHEDULE ON THIS PAGE)
- FOR WALL MOUNTED CAMERAS, HEIGHT ABOVE FINISHED FLOOR

SEE MATCHING SCHEDULES ON THIS SHEET (IF APPLICABLE)

SECURITY RESPONSIBILITY MATRIX

Description	Furnished: Part of Bid	Furnished: Vendor	Installed: Part of Bid	Installed: Vendor	Comments
Access Control System					
Power and Data requirements	■		■		
Access control wiring and pathways, coordination with Vendor	■		■		
Access control headend system equipment , cabinets, UPS, switches		■		■	ADS
Access control devices (Card Readers, Panic Buttons, etc.)		■		■	ADS
Security Camera Networks					
Placement, cable requirements, and power requirements	■		■		
Faceplates, patch panels, Cat 6A cables, and associated pathways, patch cables	■		■		
Security Cameras and mounting accessories		■		■	ADS
Security camera systems equipment (NVR, licenses, etc)		■		■	ADS
Network Switches		■		■	ADS
Intercom /Emergency Phone System					
Power requirements, Coordination with Vendor	■		■		
Faceplates, patch panels, category 6A cables, and associated pathways	■		■		
Intercom system devices		■		■	ADS
Network Switches,UPS		■		■	ADS

Notes: Filled black cell on table mean scope in that row is to be completed by entity...

HATCHING LEGEND

- ENLARGED PLAN
- NOT IN SCOPE (NIS)

Sheet List - Security

Sheet Number	Sheet Name	Sheet Order
TY000	SECURITY GENERAL NOTES AND LEGEND	
TY101	SECURITY PLAN	
TY501	SECURITY DETAILS	

Grand total: 3

GLMV Architecture

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TEL 913.742.5000 FAX 913.742.5001
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2150003907
MO. CORPORATE NO: E-556D
EXPIRES 10/31/2024

10/30/2023
STATE OF MISSOURI
BRIAN OLLIGES
NUMBER PE-2022017790
PROFESSIONAL ENGINEER

CITY OF LEE'S SUMMIT
LEE'S SUMMIT - MARKET PLAZA
LEE'S SUMMIT, MO

DESCRIPTION	DATE
PROJECT NO:	18225R21006
STATUS:	PERMIT SET
DATE:	11/01/2023
DRAWN BY:	O.B
CHECKED BY:	B.W

SECURITY GENERAL NOTES AND LEGEND

TY000

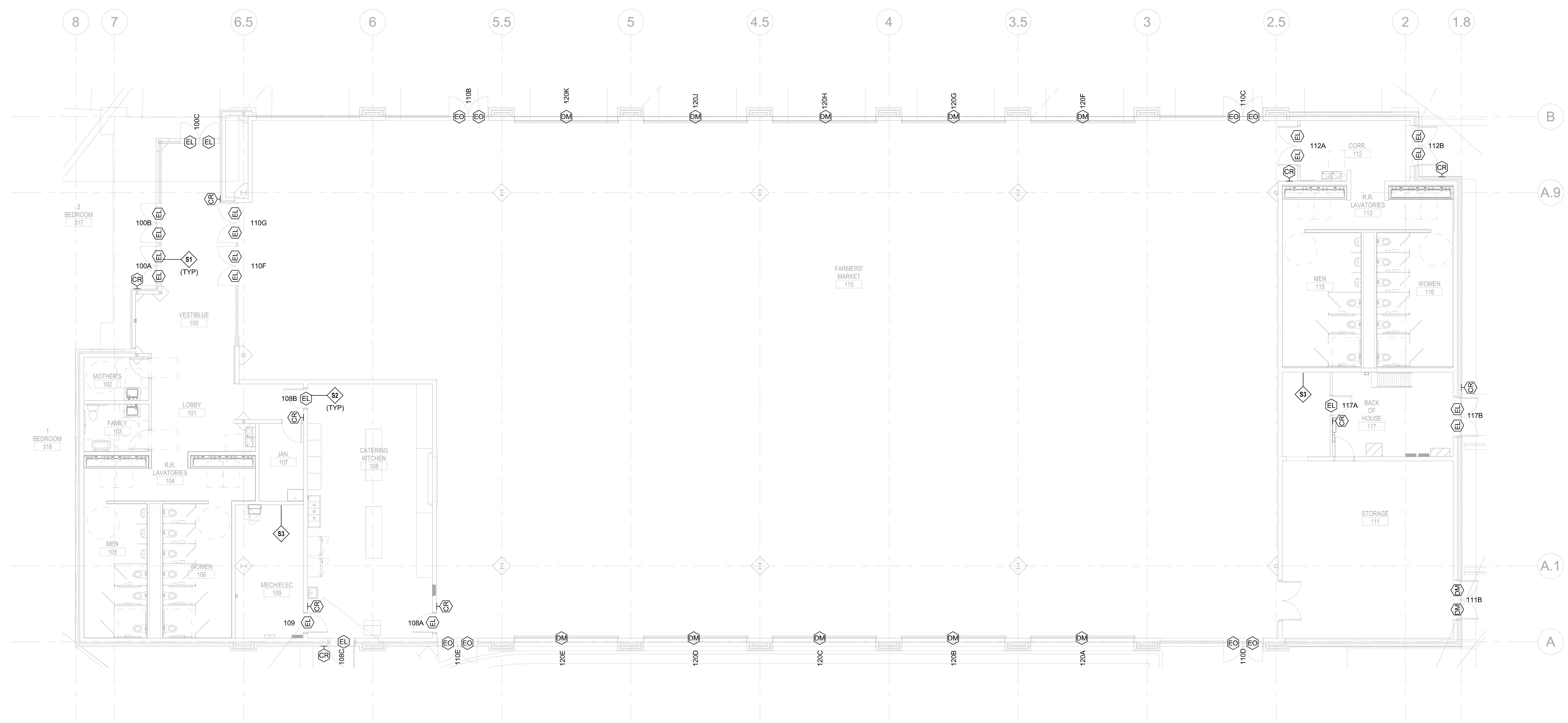
PLOT DATE: 10/26/2023 1:14:43 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMO-MEPF_V23.rvt

SECURITY PLAN NOTES:

S1 FOR DOUBLE DOOR INSTALLATION DETAIL REFER TO DETAIL 1 ON SHEET TY501.

S2 FOR SINGLE DOOR INSTALLATION DETAIL REFER TO DETAIL 2 ON SHEET TY501.

S3 LOCATION OF SECURITY AND CARD ACCESS CONTROL PANEL. COORDINATE FINAL LOCATION WITH SECURITY VENDOR.



1 SECURITY FLOOR PLAN
1/8" = 1'-0"

KEYPLAN
PLAN NORTH

GLMV Architecture

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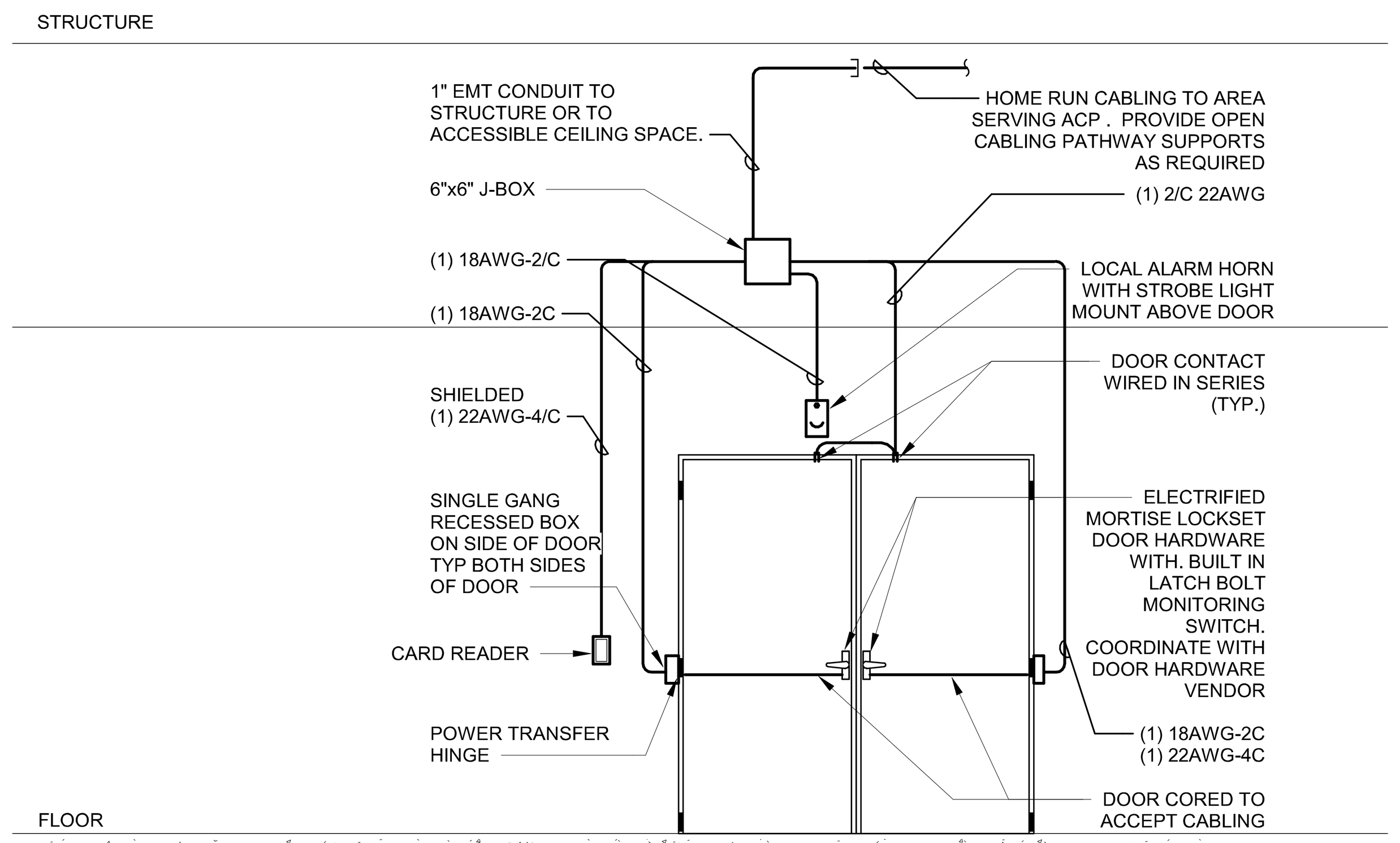
DATE:		11/01/2023
DRAWN BY:		O.B
CHECKED BY:		B.W

SECURITY PLAN

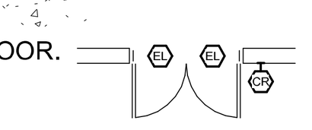
TY101

PLOT DATE: 10/26/2023 1:14:50 PM
FILE PATH: Autodesk Docs://18225R21006_LeesSummitMarket/LSMO-MEPF_V23.rvt



NOTE:

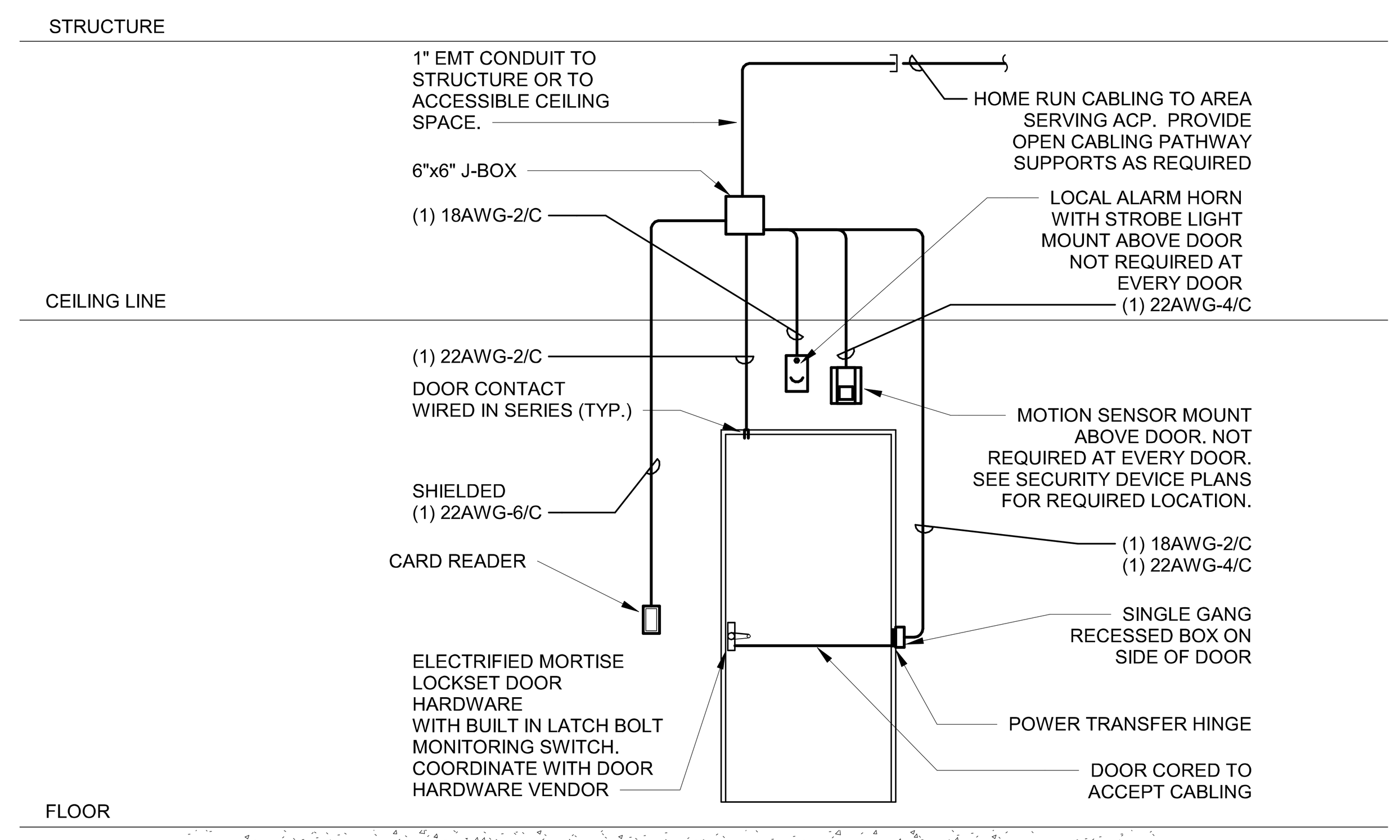
1. 3/4" EMT CONDUIT FROM EACH SECURITY DEVICE TO JUNCTION BOX MOUNTED ON SECURE SIDE ABOVE DOOR.
2. CONTRACTOR SHALL PROVIDE ALL NECESSARY BACK BOXES AND MUD RINGS.
3. CONTRACTOR SHALL PROVIDE END-OF-LINE (EOL) RESISTOR PER MANUFACTURER'S INSTRUCTIONS.



PLAN VIEW

v1.00

1 DOUBLE DOOR CARD-IN/CARD-OUT ELEC. MORTISE
NTS



NOTE:

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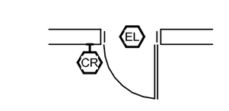
2. CONTRACTOR SHALL PROVIDE ALL NECESSARY BACK BOXES AND MUD RINGS.
3. CONTRACTOR SHALL PROVIDE END-OF-LINE (EOL) RESISTOR PER MANUFACTURER'S INSTRUCTIONS.
4. ELECTRIFIED MORTISE LOCK TO ALLOW FREE EGRESS AT ALL TIMES. VALID CREDENTIAL MUST BE PRESENTED TO AVOID FORCED OPEN/HORN ACTIVATION.



PLAN VIEW

v1.00

2 SINGLE DOOR CARD-IN/CARD-OUT ELEC. MORTISE
NTS

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△	DESCRIPTION	DATE

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SECURITY DETAILS

TY501

PLOT DATE: 10/26/2023 1:14:54 PM
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