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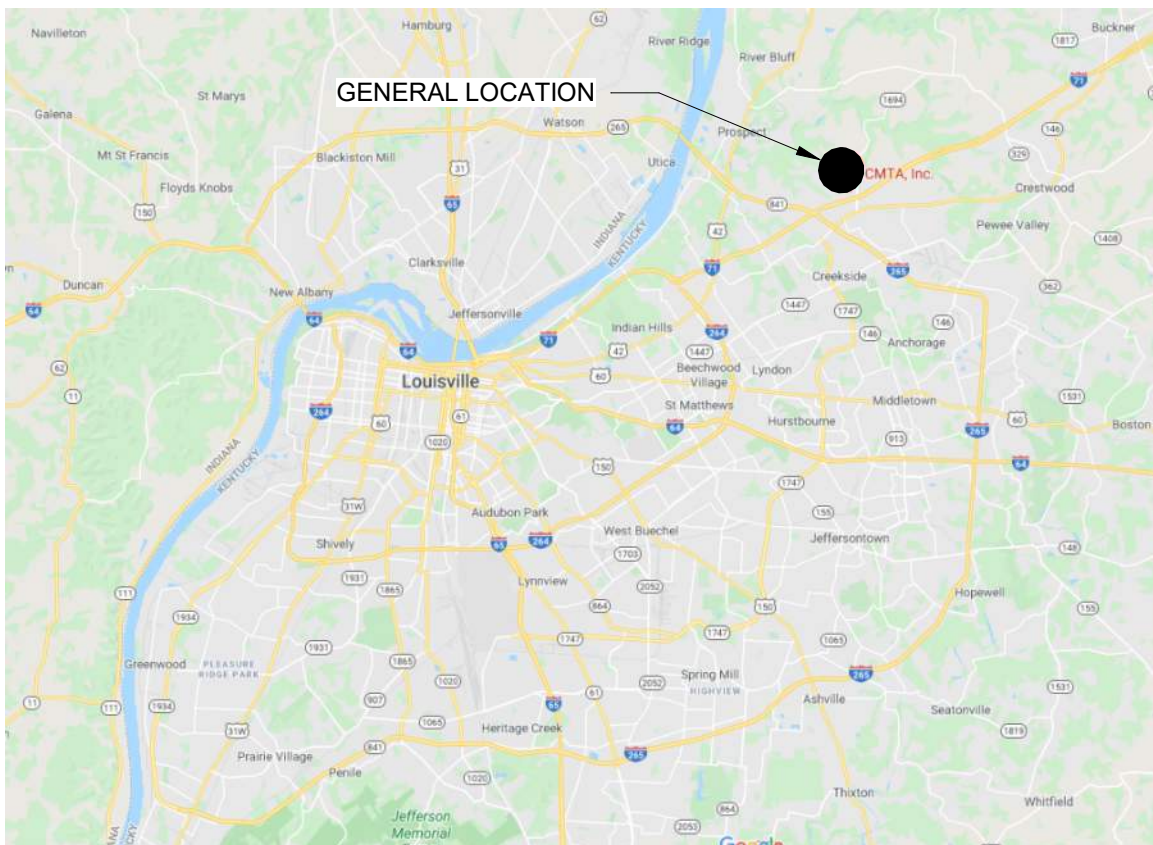
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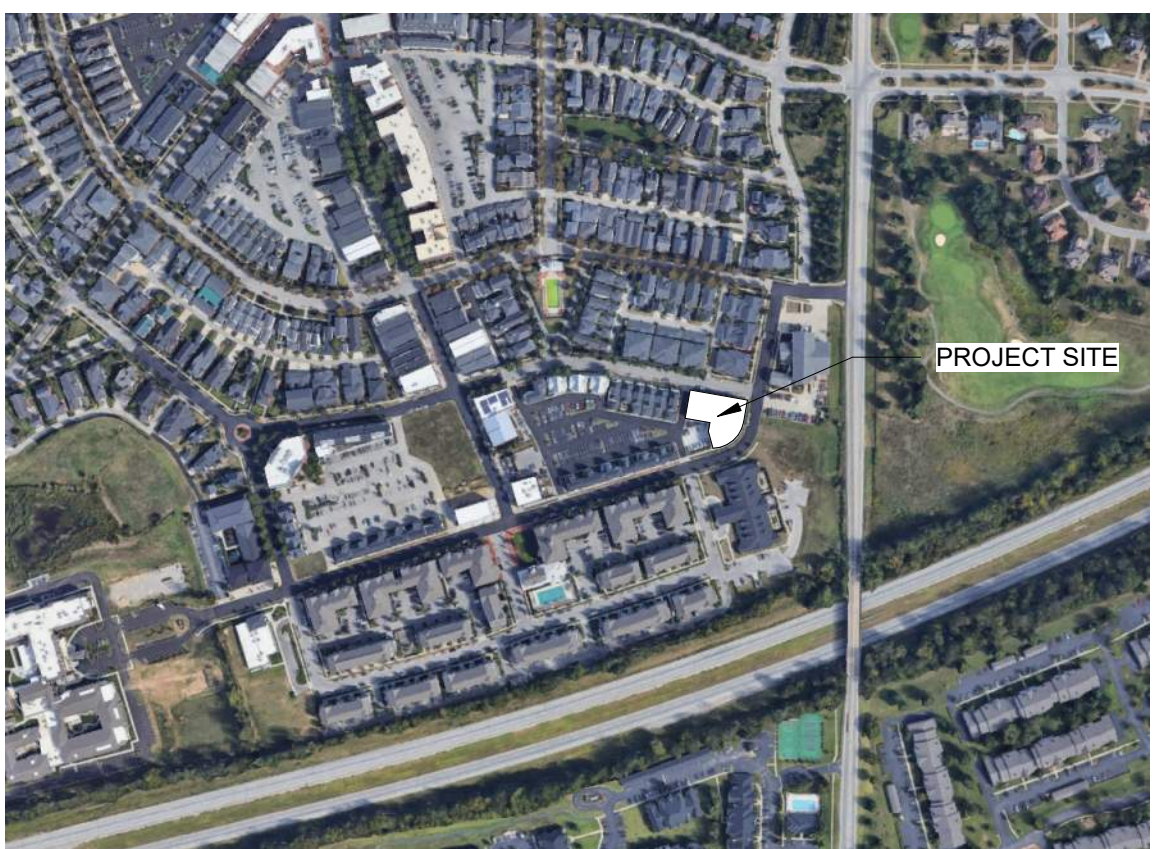
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LOUISVILLE VICINITY



PROJECT VICINITY

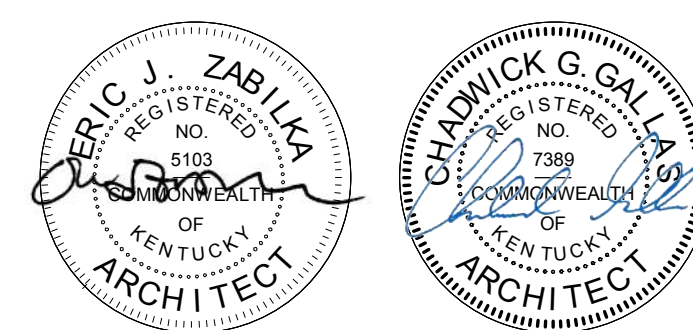
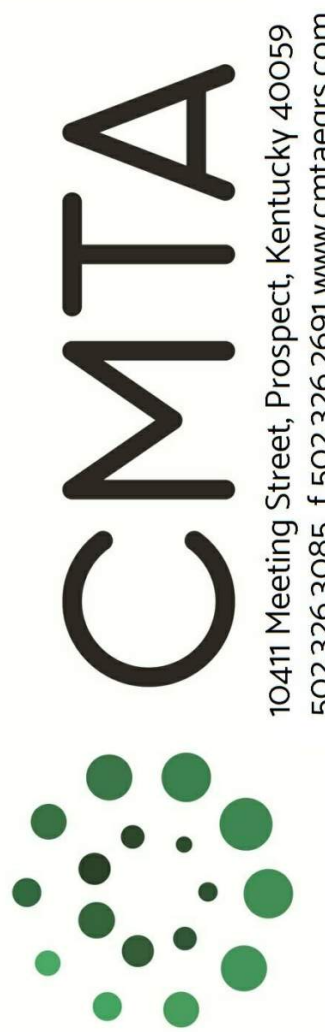


SCHEDULE OF DRAWINGS

GENERAL	
C-0.0	COVER
ARCHITECTURAL	
I2-0.1	GENERAL INFORMATION
I2-0.1a	GENERAL SPECIFICATIONS PART 1
I2-0.1b	GENERAL SPECIFICATIONS PART 2
I2-0.2	GENERAL INFORMATION AND WALL TYPES
I2-1.0	INTERIOR FIT-UP - DEMO PLAN
I2-1.1	INTERIOR FIT-UP - FLOOR PLAN AND FINISH SCHEDULE
I2-2.1	INTERIOR ELEVATIONS AND CASEWORK DETAILS
I2-3.1	REFLECTED CEILING PLAN AND DETAILS
I2-4.1	FRAME ELEVATIONS, DOOR SCHEDULE, AND DETAILS
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FIRE PROTECTION	
FP1.0	FIRE PROTECTION DETAILS, LEGEND, & NOTES
FP2.1	FIRST FLOOR PLAN - FIRE PROTECTION
PLUMBING	
P1.0	PLUMBING LEGEND
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MECHANICAL	
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ELECTRICAL	
E1.0	ELECTRICAL LEGEND
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LOUISVILLE, KENTUCKY
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CONSTRUCTION DOCUMENTS

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PROJECT NUMBER 1926

DATE JULY 1, 2020

REVISIONS

COVER

C-0.0

ARCHITECTURAL ABBREVIATIONS

WHERE ABBREVIATIONS ARE SHOWN ON DRAWINGS, FURNISH AND INSTALL MATERIALS OR BUILDING SYSTEMS PER THE FOLLOWING LEGEND

&	AND	EXIST	EXISTING	NA OR N/A	NOT AVAILABLE / APPLICABLE	STOR	STORAGE
@	AT	EXP	EXPANSION	NFC	NATIONAL FIRE CODE	STR	STAIR TREADS & RISERS (RT)
A / L	ANGLE	EXP	EXPANDED	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	STRUCT	STRUCTURE / STRUCTURAL
AC	AIR CONDITIONER / CONDITIONING	EXT	EXTERIOR	NIC	NOT IN CONTRACT	SUSP	SUSPENDED
ABV	ABOVE			NOM	NUMBER	SV	SHEET VINYL
ACC	ACCESSIBLE	F.T.	FIRE-TREATED	NOM / #	NOMINAL	SW	SWITCH
ACCS	ACCESSORIES	F.A.	FIRE ALARM	NOM	NOMINAL	SWC	SPECIAL WALL COATING
ACM	ASBESTOS CONTAINING MATERIAL	FAST	FASTENER	NTS	NOT TO SCALE	SYM	SYMMETRICAL
ACCR	ACCESS DOOR (2X2) UNLESS NOTED OTHERWISE	FCD	FLOOR CLEAN OUT			SYN	SYNTHETIC
ACST / ACSTUS	ACOUSTICAL	FD	FLOOR DRAIN	OA	OVERALL	SYN	SYSTEM
ACT	ACOUSTICAL CEILING TILE	FDN	FOUNDATION	OBS	OBSCURE	T	TREAD
AD	AREA DRAIN	FE	FIRE EXTINGUISHER	OC	ON CENTER	T&B	TOP AND BOTTOM
ADA	AMERICANS WITH DISABILITIES ACT	FEC	FIRE EXTINGUISHER CABINET, RECESSED	OD	OUTSIDE DIAMETER	T&G	TONGUE AND GROOVE
ADDL	ADDITIONAL	FEC (R)	FIRE EXTINGUISHER CABINET, RECESSED	OFCL	OWNER FURNISHED CONTRACTOR	TB	TOWEL BAR
ADDUM	ADDENDUM	FEC (SR)	FIRE EXTINGUISHER CABINET, SEMI-RECESSED	OFF	OFFICE	TB	TACK BOARD
ADJ	ADJUSTABLE / ADJACENT	FEW	FIRE EXTINGUISHER, WALL MOUNTED	OFCL	OWNER FURNISHED OWNER INSTALLED	TBD	TO BE DETERMINED
ADMIN	ADMINISTRATION	FG	FINISHED FLOOR	OPG / OPNG	OPENING	TC	TOP OF CURB
APC	ADJUSTABLE PANEL CEILING	FGL	FIBERGLASS	ORQ	OVERHEAD ROOF DRAIN	TEL	TELEPHONE
APF	ABOVE FINISHED FLOOR	FHC	FIRE HOSE CABINET	OPPOSITE	OPPOSITE	TEMP	TEMPORARY / TEMPERATURE
APG	ABOVE FINISHED GRADE	FIN	FINISHED	OZ	OUNCE	TEMP	TEMPORARY
AGF	ARCHITECTURAL GLASS FLOORING	FL	FLOOR	OPPOSITE	OPPOSITE	TERR	TERRAZZO
AGGR	AGGREGATE	FLASHING	FLASHING	PART	PARTIAL	TERRB	TERRAZZO BASE
AHR	ANCHOR	FLUOR	FLUORESCENT	PAT	PATTERN	TEXT	TEXTURE
AHJ	AIR HANDLING UNIT	FLOC	FACE OF CONCRETE	PAT	PATTERN	THK	THICK
AL / ALUM	ALUMINUM	FOF	FACE OF FINISH	PCB	POLISHED BOARD	THRU	THROUGH
ALMNT	ALIGNMENT	FOM	FACE OF MASONRY	PCF	POUNDS PER CUBIC FOOT	TLT	TOLERANCE
ALT	ALTERNATE	FOS	FACE OF STUDS	PCONC	POLISHED CONCRETE	TOS	TOP OF CONCRETE
ANOD	ANODIZED	FW	FACE OF WALL	PCONC	POLISHED CONCRETE	TOS	TOP OF STEEL
AP	ACCESS PANEL	FWR	FIRE WALL	PE	PEDESTAL	TOW	TOP OF WALL
APC	ADJUSTABLE PANEL CEILING	FR	FIRE	PER	PERIMETER	TP	TANGENT POINT
APPROX	APPROXIMATELY	FR	FIRE	PERF	PERFORATED	TPD	TRADE PACKAGE
APPROV	APPROVED	FR	FIRE	PERP	PERPENDICULAR	TPTN	TILE PARTITION
ARCH	ARCHITECTURAL	FR	FIRE	PF	PRE-FINISHED	TRSLT	TRANSLUCENT
ASB	ABRASIVE STAR NOSE	FRT	FIRE RETARDANT TREATED	PI	POURED-IN-PLACE	TS	TACKABLE SURFACE
ASPH	ASPHALT	FS	FLOOR SINK	PL	PLATE	TV	TELEVISION
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	FT	FOOTPRINT	PLAM	PLASTIC LAMINATE	TYP	TYPICAL
ATC	ACOUSTIC TILE CEILING	FTG	FOOTING	PLAS	PLASTER	UC	UNDERCUT
AUTO	AUTOMATIC	FURN	FURNISH(ED)(ING)	PLAS	PLASTER	UCNT	UNDERCOUNTER
AVG	AVERAGE	FURR	FURRING	PLP	PLASTIC PANEL	UG	UNDERGROUND
AWP	ACOUSTIC WALL PANEL	FUT	FUTURE	PLSHD	POLISHED	UL	UNDERWATERS LABORATORY
		FWP	FABRIC WRAPPED PANEL	PLYWD	PLYWOOD	UNF / UNFIN	UNFINISHED
				PMF	PRESSED METAL FRAMES	UNF	UNLESS OTHERWISE NOTED
				PMT	PORCELAIN MOSAIC TILE	UNON	UNLESS OTHERWISE NOTED
				PNT	PAINTED	UPH	UPHOLSTERY
				POP	POINT OF PRESENCE	UPS	UNINTERRUPTIBLE POWER SUPPLY
				PR	PAIR	UR	URINAL
				PRCST	PRE-CAST		
				PRFAB	PREFABRICATED		
				PRFIN	PRE-FINISHED		
				PROP	PROPERTY		
				PRT	PORCELAIN TILE		
				PRT	POLY RESIN TILE		
				PSF	POUNDS PER SQUARE FOOT		
				GRV	GRAVEL		
				GST	GLASS STAIR TILE		
				GT	GLASS TILE		
				GWB	GYPSUM WALL BOARD		
				GYP	GYPSUM		
				GYP BD	GYPSUM BOARD		
				HB	HOSE BIB		
				HC	HOLLOW CORE		
				HCP	HANDICAPPED		
				HD	HEAVY DUTY		
				HDR	HARD		
				HDR	HEADER		
				HDRW	HARDWARE		
				HI	HIGH		
				HMI	HOLLOW METAL		
				HMI	HOLLOW METAL INSULATED		
				HORI	HORIZONTAL		
				HOSP	HOSPITAL		
				HPC	HIGH POINT		
				HPC	HIGH PERFORMANCE COATING		
				HPL	HIGH PERFORMANCE DECORATIVE LAMINATE		
				HL	HANDRAIL		
				HR	HOUR		
				HSS	HOLLOW STRUCTURAL SECTION		
				HT	HEIGHT		
				HVAC	HEATING / VENTILATION / AIR CONDITIONING		
				CLR	CLEAR		
				CLRM	CLASSROOM		
				CMT	CERAMIC MOSAIC TILE		
				CMTB	CERAMIC MOSAIC TILE BASE		
				CMU	CONCRETE MASONRY UNIT		
				CO	CLEAN/CLER OUT		
				COL	COLUMN		
				COMM	COMMUNICATION		
				CONC	CONCRETE		
				CONF	CONFERENCE		
				CONST	CONSTRUCTION		
				CONT	CONTINUOUS		
				CONTR	CONTRACTOR		
				CORR	CORRIDOR		
				CPR	COPPER		
				CPT	CARPET(ED)(ING)		
				CR	CRASH RAIL		
				CT	CERAMIC TILE		
				CTB	CERAMIC TILE BASE		
				CTR	COUNTER		
				CJH	CABINET UNDER HEATER		
				CUS	CUSPIDOR		
				CW	CASEWORK		
				DBL	DOUBLE		
				DEFS	DIRECT APPLIED EXTERIOR FINISH SYSTEM		
				DEG	DEGREE		
				DEMO	DEMOLISH		
				DEP	DEPRESSION		
				DEPT	DEPARTMENT		
				DET	DETAIL		
				DF	DRINKING FOUNTAIN		
				DIA	DIAMETER		
				DIAG	DIAGONAL		
				DM	DIMENSION		
				DISP	DISPENSER		
				DIV	DIVISION		
				DN	DOWN		
				DR	DOOR		
				DS	DOWNSPOUT		
				DWG	DRAWING		
				E	EAST		
				EA	EACH		
				EF	EACH FREE		
				EFS	EXTERIOR INSUL FINISH SYSTEM		
				EJ	EXPANSION JOINT		
				EL	ELEVATION		
				ELEC	ELECTRICAL		
				ELEV	ELEVATOR		
				EM	ENTRANCE MATS		
				EMB	ELECTRONIC MARKER BOARD		
				EMER	EMERGENCY		
				ENCL	ENCLOSED / ENCLOSURE		
				ENG	ENGINEER		
				EOD	EDGE OF DECK		
				EOS	EDGE OF SLAB		
				EQ	EQUAL(LY)		
				EQPT	EQUIPMENT		
				ER	EPOXY RESIN		
				EST	ESTIMATE		
				EWC	ELECTRIC WATER COOLER		
				EXH	EXHAUSE		

GRAPHIC SYMBOLS

WHERE GRAPHIC SYMBOLS ARE SHOWN ON DRAWINGS, BUT ARE NOT SPECIFICALLY INDICATED BY NOTES OR TAG REFERENCES, FURNISH AND INSTALL COMPLETE BUILDING SYSTEMS CONSISTENT WITH THE BASIC BUILDING COMPONENTS UTILIZED.

VENTED OR NON-VENTED HOOD RESIDENTIAL EQUIPMENT	
REFRIGERATOR	
DISHWASHER	
MICROWAVE	
HIGH-LOW (ADA ACCESSIBLE) DRINKING FOUNTAINS WITH COMBINATION BOTTLE FILLER	
DRINKING FOUNTAIN/ ELECTRIC WATER COOLER BOTTLE FILLER	
MANUAL PROJECTION SCREEN, VERIFY OWNER'S PROJECTOR THROW LENGTH	
ELECTRIC PROJECTION SCREEN AND PROJECTOR MOUNT	
CARD READER	
NEW DOOR, FRAME, AND HARDWARE	
FUTURE DOOR	
EXISTING DOOR TO REMAIN	
EXISTING DOOR TO BE REMOVED	
FUTURE WALL OR WALL TO BE REMOVED	
PORTABLE AUDIO-VISUAL EQUIPMENT RACK	
FLAT SCREEN MONITOR BRACKET	
FREE-STANDING MONITOR BRACKET	
SURFACE MOUNTED CORNER GUARD	
MARKER OR BULLETIN BOARD	
TURNSTILE	
ROLLER SHADE (MANUAL AND ELECTRIC)	
ADA BOLLARD W/ OPERATOR	
BOLLARD SOLID W/ CAP	
ROOF TIEBACK ANCHOR	
ACCESS PANEL (2' X 2' MIN.) OR ROOF HATCH	
STEEL LADDER (SAFETY CAGE)	
AUTOMATIC ELECTRIC DEFIBRILLATOR CABINET (INTERNAL EQUIPMENT IS O.F.O.)	
FIRE EXTINGUISHER AND CABINET - MATCH WALL RATING	
FIRE EXTINGUISHER AND WALL BRACKET	
AUDIO-VISUAL EQUIPMENT PODIUM	
FIRE-RATED SHAFT	
FLOOR DRAIN (SLOPE TO DRAIN)	

MATERIAL SYMBOLS

WHERE BUILDING MATERIALS OR SYSTEMS ARE SHOWN ON DRAWINGS, BUT ARE NOT SPECIFICALLY INDICATED BY NOTES, FURNISH AND INSTALL COMPLETE BUILDING SYSTEMS CONSISTENT WITH INDUSTRY STANDARD DESIGNATIONS. REPRESENTATIVE SAMPLES OF MATERIAL SYMBOLS ARE SHOWN BELOW. REFER TO THE CURRENT EDITION OF THE AIA ARCHITECTURAL GRAPHIC STANDARDS AND OTHER CONTRACT DRAWINGS FOR A MORE COMPREHENSIVE RANGE OF MATERIAL SYMBOL DESIGNATIONS.

EARTH	
GRANULAR BASE	
CONCRETE	
CONCRETE MASONRY UNITS	
BRICK	
EXISTING BUILDINGS AND STRUCTURES	
STEEL	
STRUCTURAL STEEL SHAPES	
CONTINUOUS WOOD FRAMING AND BLOCKING	
NON-CONTINUOUS WOOD BLOCKING	
WOOD-FINISH	
RIGID INSULATION	
BATT INSULATION	
SPRAY INSULATION	
MINERAL-WOOL BOARD INSULATION	
PLYWOOD (ROUGH OR FOR ARCHITECTURAL WOODWORK)	
FIRE SAFING	
GROU T	
INSULATED GLAZING	
ALUMINUM	
FASTENERS (1/2" MINIMUM)	
EXPANSION JOINT MATERIAL AND SEALANT	
WATERSTOP AT CONC JOINT (HORIZONTAL AND VERTICAL)	
BACKER ROD AND SEALANT	
PARTICLE BOARD	
ACOUSTICAL CEILING (IN SECTION) INTERIOR GYPSUM BOARD OR EXTERIOR GYPSUM SHEATHING	

NOTE ON BUILDER'S PLANS

THE FOLLOWING SET OF DOCUMENTS HAS BEEN PREPARED BY THE ARCHITECT BASED ON THE EXISTING CONDITIONS AND BEST PRACTICES FOR CONSTRUCTION. IT IS THE CONTRACTOR'S OBLIGATION TO COMPLETE THE PROJECT USING HIS OWN MEANS AND METHODS, AS WELL AS MAKING THE NECESSARY ADJUSTMENTS TO ENSURE THE FINISHED PROJECT IS SAFE, MEETS CURRENT CODE, AND FULFILLS THE OWNER'S REQUIREMENTS.

THE ARCHITECT MUST BE NOTIFIED IF ANY OF THE FOLLOWING ARE FOUND:

- AMBIGUITY OR DISCREPANCIES IN THE DRAWINGS
- EXISTING CONDITIONS ARE NOT AS REPRESENTED
- MAJOR ALTERATIONS TO THE DESIGN ARE NECESSARY
- ADDITIONAL INFORMATION IS NEEDED BY THE CONTRACTOR
- HAZARDOUS MATERIALS ARE DISCOVERED

THE CONTRACTOR SHALL NOT PERFORM CHANGES TO THE PROJECT SCOPE UNTIL RECEIVING APPROVAL FROM THE ARCHITECT.

GENERAL NOTES

CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF DISCREPANCIES FOUND IN THE DRAWINGS OR ANY EXISTING CONDITIONS FOUND ON THE SITE WHICH CONFLICT WITH CONDITIONS AS SHOWN IN THE CONTRACT DOCUMENTS.

DRAWINGS ARE NOT TO BE SCALED. DIMENSIONS INDICATED ON DRAWINGS TAKE PRECEDENCE. LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS. ALL DIMENSIONS SHOWN ON PLANS ARE TO FACE OF FRAMING AND DO NOT INCLUDE THICKNESS OF DRYWALL UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION OR ORDERING ANY MATERIALS.

THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR.

THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. WHEN ON SITE, THE ARCHITECT IS RESPONSIBLE FOR HIS/HER OWN SAFETY BUT HAS NO RESPONSIBILITY FOR THE SAFETY OF OTHER PERSONNEL OR SAFETY CONDITIONS AT THE SITE.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND INFORMATION IN THESE DRAWINGS. ALL ERRORS, OMISSIONS AND INCONSISTENCIES ARE TO BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. FAILURE TO DO SO WILL RELEASE THE ARCHITECT OF ALL RESPONSIBILITY. ANY CHANGE FROM THESE DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. THESE DRAWINGS ARE NOT TO BE SCALED. IF INSUFFICIENT INFORMATION EXISTS, CONTACT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.

CONTRACTOR IS TO COMPLY WITH ALL CODES AND SAFETY REGULATIONS. ALL WORK SHALL COMPLY WITH THE AMERICANS WITH DISABILITY ACT, CURRENT EDITION.

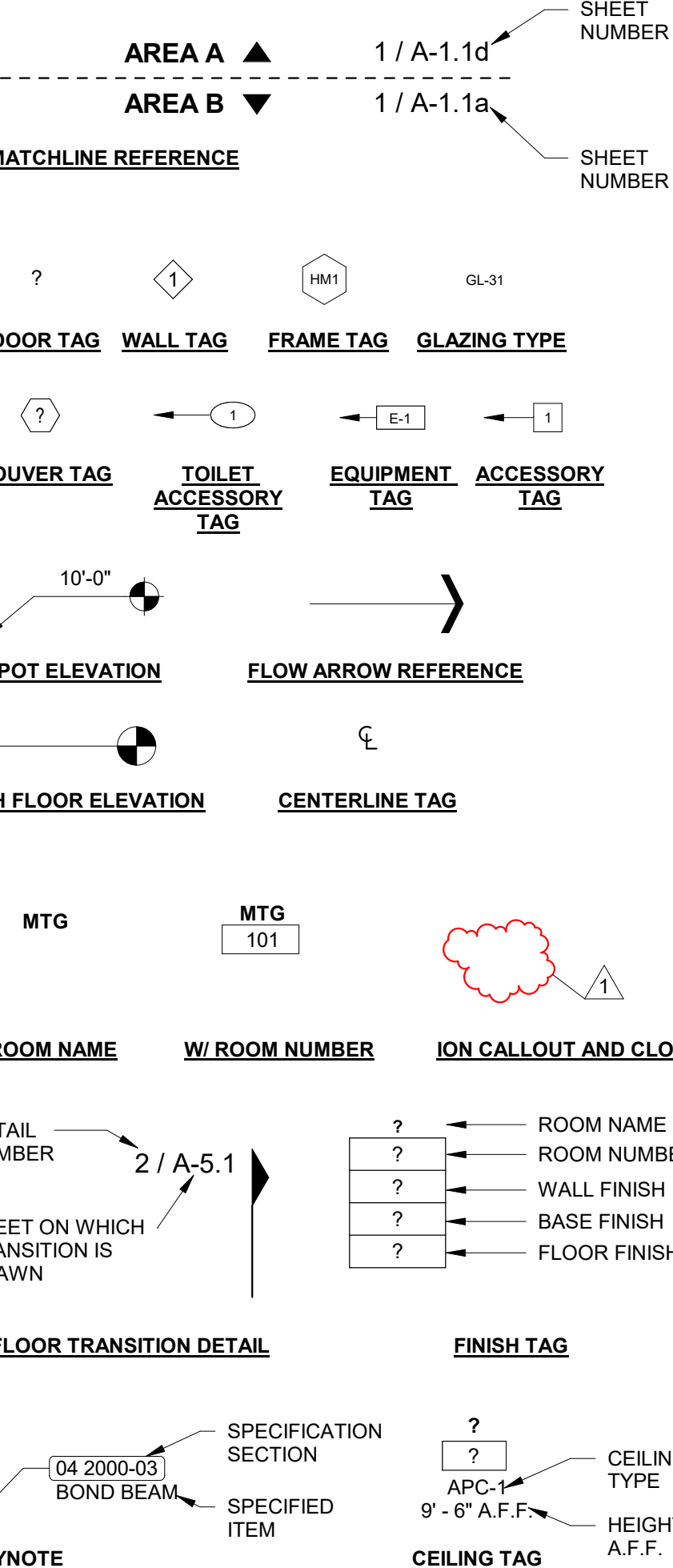
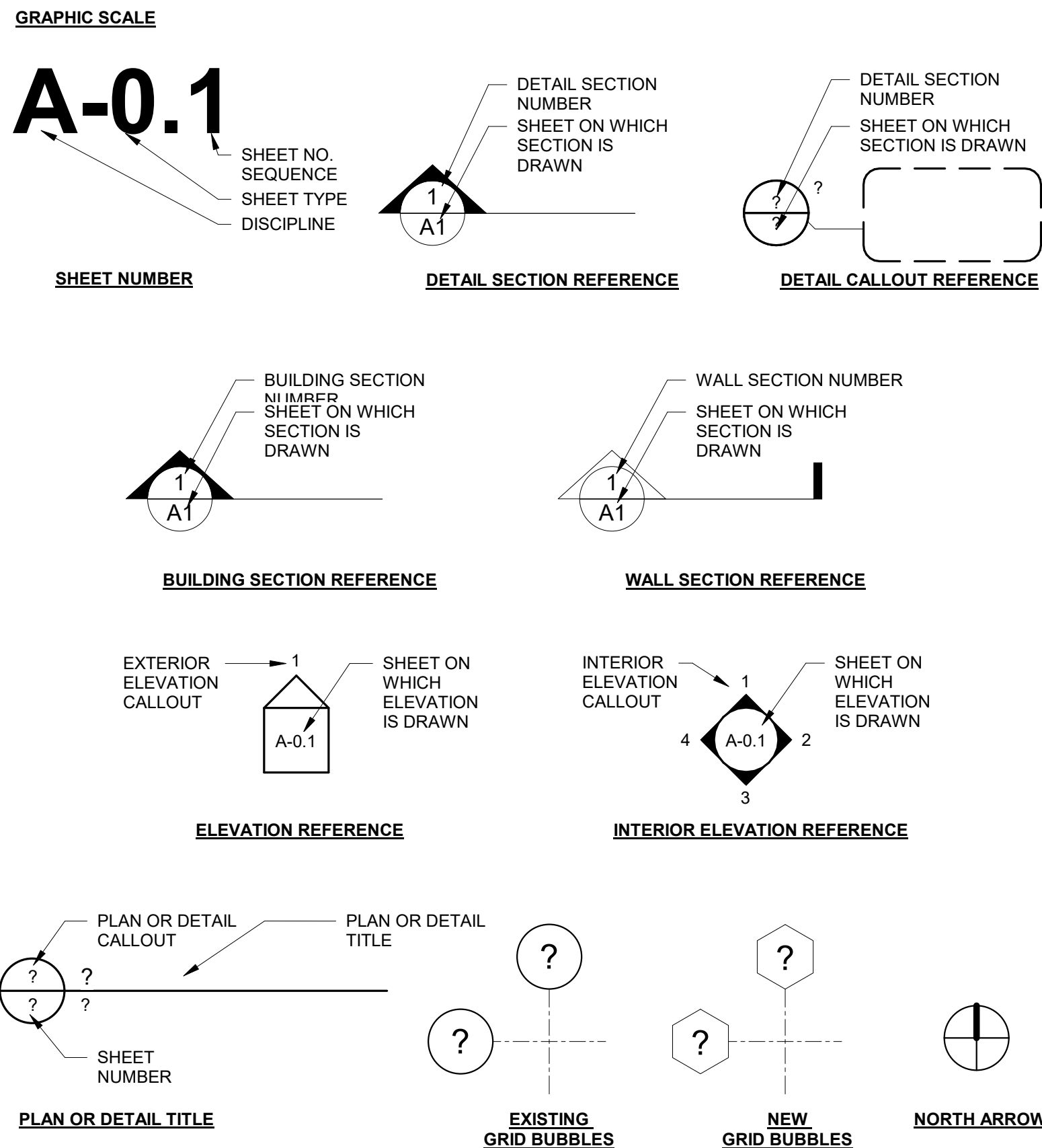
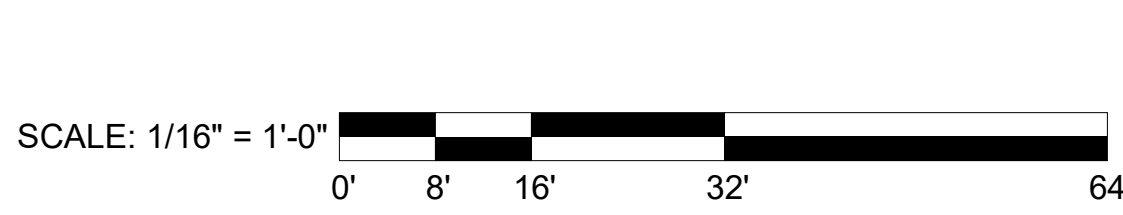
LOCATIONS OF SAFETY GLASS AND TEMPERED GLASS SHALL BE PER THE CURRENT EDITION OF THE KENTUCKY BUILDING CODE.

CONTRACTOR TO COORDINATE AND PROVIDE ALL NECESSARY HARDWARE FOR PROPER OPERATION AND COMPLIANCE WITH THE KENTUCKY BUILDING CODE, CURRENT EDITION.

PROTECT EXISTING UTILITIES IN THE WORK AREA.

SEE 12-0.1a AND 12-0.1b FOR GENERAL SPECIFICATIONS

SYMBOL LEGEND



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CONSTRUCTION DOCUMENTS

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PROJECT NUMBER **1921**

DATE **JULY 1, 2020**

REVISIONS

GENERAL INFORMATION

12-0.1

GENERAL SPECIFICATIONS

DIVISION 01 - GENERAL CONDITIONS

1. SUSTAINABLE DESIGN REQUIREMENTS - WELL BUILDING STANDARDS
- A. WELL-BUILDING CHECKLIST WILL BE AVAILABLE UPON REQUEST FOR THE CONTRACTOR'S TO REVIEW.
- B. TWO CRITICAL FEATURES TO THIS PROJECT THAT CONTRACTOR'S MUST INSURE COMPLIANCE WITH ARE:
- a. FEATURE 04, VOC REDUCTION-PRE-CONDITION
- b. FEATURE 25, TOXIC MATERIAL REDUCTION
- DIVISION 04 - MASONRY
1. UNIT MASONRY GENERAL
- A. MASONRY STANDARD: COMPLY WITH TMS 602/ACI 530.1/ASCE 6, EXCEPT AS MODIFIED BY REQUIREMENTS IN THE CONTRACT DOCUMENTS.
2. INTERIOR BRICK
- A. CLAY FACE BRICK: FACING BRICK COMPLYING WITH ASTM C 216.
- b. GRADE: FBA
- c. TYPE: FBA
- d. SIZE (ACTUAL DIMENSIONS): 3 5/8" (92 MM) WIDE BY 2 1/4" (57 MM) HIGH BY 7 5/8" (194 MM) LONG.
- e. APPLICATION: USE WHERE BRICK IS EXPOSED ON OUTSIDE OF BUILDING.
- f. THE BELDEN BRICK COMPANY; GARNET BLEND, ANTIQUE COL. (TUMBLER APPEARANCE) (14) - C216
3. MORTAR AND GROUT MATERIALS
- A. REGIONAL MATERIALS: AGGREGATE FOR MORTAR AND GROUT SHALL BE EXTRACTED, HARVESTED, OR RECOVERED, AS WELL AS MANUFACTURED, WITHIN 500 MILES (800 KM) OF PROJECT SITE.
- B. PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I OR I, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION. PROVIDE NATURAL, COLOR CEMENT.
- C. HYDRATED LIME: ASTM C 207, TYPE S
- D. PORTLAND CEMENT-LIME MIX: PACKAGED BLEND OF PORTLAND CEMENT AND HYDRATED LIME CONTAINING NO OTHER INGREDIENTS.
- E. AGGREGATE FOR MORTAR: ASTM C 144.
- a. FOR MORTAR THAT IS EXPOSED TO VIEW, USE WASHED AGGREGATE CONSISTING OF NATURAL SAND OR CRUSHED STONE.
- F. AGGREGATE FOR GROUT: ASTM C 404.
- COLD-WEATHER ADMIXTURE: NONCHLORIDE, NONCORROSIVE, ACCELERATING ADMIXTURE COMPLYING WITH ASTM C 494/C 494M, TYPE C, AND RECOMMENDED BY MANUFACTURER FOR
- G. WATER: POTABLE.
4. REINFORCEMENT
- A. MASONRY-JOINT REINFORCEMENT, GENERAL: ASTM A 951/A 951M.
- a. INTERIOR WALLS: HOT-DIP GALVANIZED CARBON STEEL
- B. MASONRY-JOINT REINFORCEMENT FOR SINGLE-WYTHE MASONRY: LADDER OR TRUSS TYPE WITH SINGLE PAIR OF SIDE RODS.
5. TIES AND ANCHORS
- A. GENERAL: TIES AND ANCHORS SHALL EXTEND AT LEAST 1-1/2 INCHES (38 MM) INTO VENEER BUT WITH AT LEAST A 5/8-INCH (16-MM) COVER ON OUTSIDE FACE.
- B. MATERIALS: PROVIDE TIES AND ANCHORS SPECIFIED IN THIS ARTICLE THAT ARE MADE FROM MATERIALS THAT COMPLY WITH THE FOLLOWING UNLESS OTHERWISE INDICATED:
- a. HOT-DIP GALVANIZED, CARBON-STEEL WIRE: ASTM A 82/A 82M, WITH ASTM A 153/A 153M, CLASS B-2 COATING.
- b. GALVANIZED-STEEL SHEET: ASTM A 653/A 653M, COMMERCIAL STEEL, 660 (2100) ZINC COATING.
- c. STEEL SHEET, GALVANIZED: AFTER FABRICATION, ASTM A 1008/A 1008M, COMMERCIAL STEEL, WITH ASTM A 153/A 153M, CLASS B COATING.
- C. CORRUGATED METAL TIES: METAL STRIPS NOT LESS THAN 7/8 INCH (22 MM) WIDE WITH CORRUGATIONS HAVING A WAVELENGTH OF 0.3 TO 0.5 INCH (7.6 TO 12.7 MM) AND AN AMPLITUDE OF 0.06 TO 0.10 INCH (1.5 TO 2.5 MM) MADE FROM 0.060-INCH (1.52-MM) THICK STEEL SHEET, GALVANIZED AFTER FABRICATION.

DIVISION 05 - METALS

1. METAL FABRICATIONS - THIS SECTION INCLUDES CUSTOM DECORATIVE STEEL FABRICATIONS
- A. FABRICATOR QUALIFICATIONS: EXPERIENCED FABRICATOR OF DECORATIVE ITEMS SIMILAR TO THOSE INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, WHOSE SOLE BUSINESS IS DECORATIVE FABRICATIONS, DECORATIVE STAIRS SHOP-FABRICATED BY BUSINESSES THAT ALSO FABRICATE STRUCTURAL STEEL OR OTHER TYPES OF METAL FABRICATIONS WILL NOT BE ACCEPTABLE.
- a. FABRICATOR - HENSLEY CUSTOM STUDIO - 225 LEE STREET, LEXINGTON, KENTUCKY 40508 - (859)338-5708

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

1. INTERIOR ARCHITECTURAL WOODWORK
- A. QUALITY ASSURANCE
- a. FABRICATOR QUALIFICATIONS: SHOP THAT EMPLOYS SKILLED WORKERS WHO CUSTOM-FABRICATE PRODUCTS SIMILAR TO THOSE REQUIRED FOR THIS PROJECT AND WHOSE PRODUCTS HAVE A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE
- b. SOURCE LIMITATIONS: ENGAGE A QUALIFIED WOODWORKING FIRM TO ASSUME UNDIVIDED RESPONSIBILITY FOR PRODUCTION OF INTERIOR ARCHITECTURAL WOODWORK
- B. COORDINATION
- a. COORDINATE SIZES AND LOCATIONS OF FRAMING, BLOCKING, FURRING, REINFORCEMENTS, AND OTHER RELATED UNITS OF WORK SPECIFIED IN OTHER SECTIONS TO ENSURE THAT INTERIOR ARCHITECTURAL WOODWORK CAN BE SUPPORTED AND INSTALLED AS INDICATED.
- b. COORDINATE SIZES AND LOCATIONS OF ELECTRICAL AND COMMUNICATIONS CONDUITS, DEVICE BOXES, WIRING, AND OTHER COMPONENTS OF BUILDING ENGINEERING SYSTEMS SPECIFIED IN OTHER SECTIONS TO ENSURE THESE ITEMS CAN BE CORRECTLY LOCATED AND INSTALLED IN INTERIOR FINISH CARPENTRY.
- c. COORDINATE INSTALLATION SEQUENCE SO INTERIOR FINISH CARPENTRY CAN BE INSTALLED BEFORE PLUMBING FIXTURES ARE SET.
- C. WOOD CABINETS FOR TRANSPARENT FINISH
- a. GRADE: CUSTOM
- b. AWWI TYPE OF CABINET CONSTRUCTION: FLUSH OVERLAY AND AS INDICATED
- c. WOOD SPECIES AND CUT FOR EXPOSED SURFACES: HICKORY, PLAIN SAWN
- d. MATCHING OF VENEER LEAVES: BOOK MATCH
- e. VERTICAL MATCHING OF VENEER LEAVES: END MATCH
- f. VENEER MATCHING WITHIN PANEL FACE: RUNNING MATCH
- g. SEMIEXPOSED SURFACES: PROVIDE SURFACE MATERIALS INDICATED BELOW:
- h. SURFACES OTHER THAN DRAWER BODIES: THERMOSET DECORATIVE PANELS.
- i. DRAWER SIDES AND BACKS: SOLID-HARDWOOD LUMBER.
- j. DRAWER BOTTOMS: HARDWOOD PLYWOOD.
- D. PLASTIC-LAMINATE CABINETS
- a. GRADE: CUSTOM
- b. AWWI TYPE OF CABINET CONSTRUCTION: FLUSH OVERLAY AND AS INDICATED
- c. LAMINATE CLADDING FOR EXPOSED SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE COMPLYING WITH THE FOLLOWING REQUIREMENTS:
- d. HORIZONTAL SURFACES OTHER THAN TOPS: GRADE HGS.
- e. POSTFORMED SURFACES: GRADE HGP.
- f. VERTICAL SURFACES: GRADE HGS.
- g. EDGES: GRADE HGS.
- h. MATERIALS FOR SEMIEXPOSED SURFACES:
- i. SURFACES OTHER THAN DRAWER BODIES: THERMOSET DECORATIVE PANELS.
- j. EDGES OF PLASTIC-LAMINATE SHELVES: PVC EDGE BANDING, 0.12-INCH (3 MM) THICK, MATCHING LAMINATE IN COLOR, PATTERN, AND FINISH.
- k. FOR SEMIEXPOSED EDGES OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES, PROVIDE SURFACE OF HIGH-PRESSURE DECORATIVE LAMINATE, GRADE CLS.
- l. DRAWER SIDES AND BACKS: SOLID-HARDWOOD LUMBER.
- m. DRAWER BOTTOMS: HARDWOOD PLYWOOD.
- e. CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC LAMINATE SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE, GRADE BKL.
- f. COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:
1. AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
2. SOLID COLORS, MATTIE FINISH.
3. PATTERNS, MATTIE FINISH.
- E. PLASTIC-LAMINATE COUNTERTOPS
- a. GRADE: CUSTOM
- b. HIGH-PRESSURE DECORATIVE LAMINATE GRADE: HGP.
- c. COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS AND TEXTURES OF EXPOSED LAMINATE SURFACES COMPLYING WITH THE FOLLOWING REQUIREMENTS:
- d. AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE IN THE FOLLOWING CATEGORIES:
1. SOLID COLORS, MATTIE FINISH.
2. PATTERNS, MATTIE FINISH.
- d. EDGE TREATMENT: SAME AS LAMINATE CLADDING ON HORIZONTAL SURFACES, AND AS INDICATED.
- e. CORE MATERIAL: PARTICLEBOARD AND FIRE-RETARDANT PARTICLEBOARD WHERE REQUIRED BY THE 2015 KENTUCKY BUILDING CODE.
- f. CORE MATERIAL: AT SINKS: EXTERIOR-GRADE PLYWOOD.
- g. PAPER BACKING: PROVIDE PAPER BACKING ON UNDERSIDE OF COUNTERTOP SUBSTRATE.
- F. SOLID-SURFACING-MATERIAL COUNTERTOPS AND WINDOW SILLS
- a. GRADE: PREMIUM
- b. SOLID-SURFACING-MATERIAL THICKNESS: 1/2 INCH (13 MM) UNLESS INDICATED OTHERWISE ON DRAWINGS.
- c. COLORS, PATTERNS, AND FINISHES: PROVIDE MATERIALS AND PRODUCTS THAT RESULT IN COLORS OF SOLID-SURFACING MATERIAL COMPLYING WITH THE FOLLOWING REQUIREMENTS:
- d. AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE, WITH UP TO FOUR DIFFERENT SELECTIONS.
- d. FABRICATE IN ONE PIECE, UNLESS OTHERWISE INDICATED, COMPLY WITH SOLID-SURFACING-MATERIAL MANUFACTURER'S WRITTEN RECOMMENDATIONS FOR ADHESIVES, SEALERS, AND FABRICATION, AND FINISHES.
- e. FABRICATE WITH SHOP-APPLIED EDGES OF MATERIALS AND CONFIGURATION INDICATED.
- G. CABINET HARDWARE AND ACCESSORIES
- a. FRAMELESS CONCEALED HINGES (EUROPEAN TYPE): BHMA A156.9, B01692, 170 DEGREES OF OPENING.
- b. BACK-MOUNTED PULLS: DARK OIL-RUBBED BRONZE, PRODUCT: "116 OF 313" BY HAFEL/AMERICA COMPANY.
- c. CATCHES: MAGNETIC CATCHES, BHMA A156.9, B03141.
- d. ADJUSTABLE SHELF STAYS: USE ONE OF THE FOLLOWING:
1. BHMA A156.9, B04071; WITH SHELF RESTS, B04081.
2. 32 MM ROW BOW BOW CONSTRUCTION WITH ANTI-TIP CLIPS.
- e. SHELF RESTS: BHMA A156.9, B04010; METAL.
- f. SHELF BRACKETS: 9-1/4-INCH (235 MM) HIGH, 12-13-1/8-INCH (325.4 MM) TALL CAST ALUMINUM BRACKETS WITH PRE-DRILLED HOLES FOR FASTENERS.
- g. DRAWER SLIDES: 9-1/4" LARGE ARC SUPPORT - SWISS BY DOUG MCKEET & COMPANY, INC.
- h. BOX DRAWER SLIDES: 42 INCHES (1066 MM) WIDE OR LESS, RATED FOR 100 LBF (440 N), PROVIDE "7434" BY ACCURIDE INTERNATIONAL INC. BY ACCURIDE INTERNATIONAL INC.
- i. KEYBOARD SLIDES: GRADE 1HD-100; FOR COMPUTER KEYBOARD SHELVES.
- j. GROMMETS FOR CABLES: THROUGH COUNTERTOPS: 2-5/8-INCH (67-MM) OD, SATIN CHROME METAL GROMMETS WITH SLOT FOR WIRE PASSAGE. PROVIDE "BRY 1 SERIES" BY DOUG MCKEET & COMPANY, INC.
- k. EXPOSED HARDWARE FINISHES: FOR EXPOSED HARDWARE, PROVIDE FINISH THAT COMPLIES WITH BHMA A156.18 FOR BHMA FINISH NUMBER INDICATED.
- l. SATIN CHROME PLATED, BHMA A156.18 FOR BRASS OR BRONZE BASE, BHMA 652 FOR STEEL BASE.
- m. SATIN STAINLESS STEEL, BHMA 630.
- j. FOR CONCEALED HARDWARE, PROVIDE MANUFACTURER'S STANDARD FINISH THAT COMPLIES WITH PRODUCT CLASS REQUIREMENTS IN BHMA A156.9.
- H. MISCELLANEOUS MATERIALS
- a. FURRING, BLOCKING, SHIMS, AND HANGING STRIPS: SOFTWOOD OR HARDWOOD LUMBER, KILN DRIED TO LESS THAN 15 PERCENT MOISTURE CONTENT.
- b. ANCHORS: SELECT MATERIAL, TYPE, SIZE, AND FINISH REQUIRED FOR EACH SUBSTRATE FOR SECURE ANCHORAGE. PROVIDE NONFERROUS-METAL OR HOT-DIP GALVANIZED ANCHORS AND INSERTS ON INSIDE FACE OF EXTERIOR WALLS AND ELSEWHERE AS REQUIRED FOR CORROSION RESISTANCE. PROVIDE TOOTHED-STEEL OR LEAD EXPANSION SLEEVES FOR DRILLED-IN-PLACE ANCHORS.
- c. ADHESIVES, GENERAL: DO NOT USE ADHESIVES THAT CONTAIN UREA FORMALDEHYDE.
- d. VOC LIMITS: FOR INSTALLATION ADHESIVES AND GLUES: USE INSTALLATION ADHESIVES THAT COMPLY WITH THE FOLLOWING LIMITS FOR VOC CONTENT WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24):
1. WOOD GLUES: 30 GL.
2. CONTACT ADHESIVE: 250 GL.
- e. ADHESIVE FOR BONDING PLASTIC LAMINATE: CONTACT CEMENT OR RESORCINOL.
- f. ADHESIVE FOR BONDING EDGES: ADHESIVE SPECIFIED ABOVE FOR FACES.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

1. JOINT SEALANTS
- A. COMPATIBILITY: PROVIDE JOINT SEALANTS, BACKINGS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY JOINT-SEALANT MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE.
- B. COLORS OF EXPOSED JOINT SEALANTS: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.
- C. JOINT SEALANT SCHEDULE:
- a. JOINT SEALANT APPLICATION: MILDEW-RESISTANT INTERIOR JOINTS IN VERTICAL SURFACES AND HORIZONTAL NONTRAFFIC SURFACES.
- b. JOINT LOCATIONS:
1. JOINTS BETWEEN PLUMBING FIXTURES AND ADJOINING WALLS, FLOORS, AND COUNTERS.
2. TILE CONTROL AND EXPANSION JOINTS WHERE INDICATED.
3. JOINT SEALANT: SILICONE, S, NS, 25, NT, SINGLE-COMPONENT, NONAC, PLUS 25 PERCENT AND MINUS 25 PERCENT MOVEMENT CAPABILITY, NONTRAFFIC-USE, NEUTRAL-CURING SILICONE JOINT SEALANT; ASTM C 920, TYPE S, GRADE NS, CLASS 25, USE NT.
- b. JOINT SEALANT APPLICATION: INTERIOR JOINTS IN VERTICAL SURFACES AND HORIZONTAL NONTRAFFIC SURFACES NOT SUBJECT TO SIGNIFICANT MOVEMENT.
- c. JOINT LOCATIONS:
1. CONTROL JOINTS ON EXPOSED INTERIOR SURFACES OF EXTERIOR WALLS.
2. PERIMETER JOINTS BETWEEN INTERIOR WALL SURFACES AND FRAMES OF INTERIOR DOORS, WINDOWS, AND ELEVATOR ENTRANCES.
3. OTHER JOINTS AS REQUIRED.
- d. JOINT SEALANT: ACRYLIC LATEX OR SILICONIZED ACRYLIC LATEX, ASTM C 834, TYPE OP, GRADE NF.

DIVISION 08 - OPENINGS

1. HOLLOW METAL FRAMES
- A. CONSTRUCT INTERIOR DOORS AND FRAMES TO COMPLY WITH THE STANDARDS INDICATED FOR MATERIALS, FABRICATION, HARDWARE
- B. LOCATIONS, HARDWARE REINFORCEMENT, TOLERANCES, AND CLEARANCES, AND AS SPECIFIED.
- C. HEAVY-DUTY FRAMES: SDI A250.8, LEVEL 2, AT LOCATIONS INDICATED IN THE DOOR AND FRAME SCHEDULE.
- D. PHYSICAL PERFORMANCE: LEVEL B ACCORDING TO SDI A250.4.
- E. FRAMES
- a. MATERIALS: STEEL SHEET, MINIMUM THICKNESS OF 0.053 INCH (1.3 MM).
- b. SIDELITE FRAMES: FABRICATED FROM SAME THICKNESS MATERIAL AS ADJACENT DOOR FRAME.
- c. CONSTRUCTION: FULL PROFILE WELDED.
- d. EXPOSED FINISH: PRIME.
- F. BORROWED LITES
- a. HOLLOW METAL FRAMES OF UNCOATED STEEL SHEET, MINIMUM THICKNESS OF 0.053 INCH (1.3MM).
- b. CONSTRUCTION: FULL PROFILE WELDED.
- G. FRAME ANCHORS
- a. JAMB ANCHORS: STUD-WALL TYPE: DESIGNED TO ENGAGE STUD, WELDED TO BACK OF FRAMES; NOT LESS THAN 0.042 INCH (1.0 MM) THICK.
- b. FLOOR ANCHORS: FORMED FROM SAME MATERIAL AS FRAMES, MINIMUM THICKNESS OF 0.042 INCH (1.0 MM), AND AS FOLLOWS:
1. MONOLITHIC CONCRETE SLABS: CLIP-TYPE ANCHORS, WITH TWO HOLES TO RECEIVE FASTENERS.
- F. FABRICATION
- a. HOLLOW-METAL FRAMES: WHERE FRAMES ARE FABRICATED IN SECTIONS DUE TO SHIPPING OR HANDLING LIMITATIONS, PROVIDE ALIGNMENT PLATES OR ANGLES AT EACH JOINT, FABRICATED OF SAME THICKNESS METAL AS FRAMES.
- b. SIDELITE AND TRANSOM FRAMES: PROVIDE CLOSED TUBULAR MEMBERS WITH NO VISIBLE FACE SEAMS OR JOINTS.
- c. FABRICATED FROM SAME MATERIAL AS DOOR FRAME. FASTEN MEMBERS AT CROSSINGS AND TO JAMBS BY BUTT WELDING.
- d. PROVIDE COUNTERSUNK FLAT- OR OVAL-HEAD EXPOSED SCREWS AND BOLTS FOR EXPOSED FASTENERS UNLESS OTHERWISE INDICATED.
- e. FLOOR ANCHORS: WELD ANCHORS TO BOTTOMS OF JAMBS WITH AT LEAST FOUR SPOT WELDS PER ANCHOR.
- f. JAMB ANCHORS: PROVIDE NUMBER AND SPACING OF ANCHORS AS FOLLOWS:
1. LOCATE ANCHORS NOT MORE THAN 16 INCHES (407 MM) FROM TOP AND BOTTOM OF FRAME. SPACE ANCHORS NOT MORE THAN 32 INCHES (813 MM) O.C. AND AS FOLLOWS:
- A. THREE ANCHORS PER JAMB UP TO 60 INCHES (1524 MM) HIGH.
- B. FOUR ANCHORS PER JAMB FROM 60 TO 90 INCHES (1524 TO 2286 MM) HIGH.
- C. FIVE ANCHORS PER JAMB FROM 90 TO 28 INCHES (2286 TO 2438 MM) HIGH.
- D. FIVE ANCHORS PER JAMB PLUS ONE ADDITIONAL ANCHOR PER JAMB FOR EACH 24 INCHES (610 MM) OR FRACTION THEREOF ABOVE 96 INCHES (2438 MM) HIGH.
2. HEAD ANCHORS: TWO ANCHORS PER HEAD FOR FRAMES MORE THAN 42 INCHES (1067 MM) WIDE AND MOUNTED IN METAL-STOP PARTITIONS.
3. DOOR SILENCERS: EXCEPT ON WEATHER-STRIPPED FRAMES, DRILL STOPS TO RECEIVE DOOR SILENCERS AS FOLLOWS. KEEP HOLES CLEAR DURING CONSTRUCTION.
4. SINGLE DOOR FRAMES: DRILL STOP IN STRIKE JAMB TO RECEIVE TWO DOOR SILENCERS.
5. DOUBLE DOOR FRAMES: DRILL STOP IN HEAD JAMB TO RECEIVE TWO DOOR SILENCERS.
- b. HARDWARE PREPARATION: FACTORY PREPARE HOLLOW-METAL WORK TO RECEIVE TEMPLATED MORTISED HARDWARE; INCLUDE CUTOUTS, REINFORCEMENT, MORTISING, DRILLING, AND TAPPING ACCORDING TO SDI A250.6, THE DOOR HARDWARE SCHEDULE, AND TEMPLATES.
- c. REINFORCE DOORS AND FRAMES TO RECEIVE NONTEMPLATED, MORTISED, AND SURFACE-MOUNTED DOOR HARDWARE.
- d. COMPLY WITH APPLICABLE REQUIREMENTS IN SDI A250.6 AND BHMA A156.115 FOR PREPARATION OF HOLLOW-METAL WORK FOR HARDWARE.
- e. STOPS AND MOLDINGS: PROVIDE STOPS AND MOLDINGS AROUND GLAZED LITES AND LOUVERS WHERE INDICATED. FORM CORNERS OF STOPS AND MOLDINGS WITH BUTTED OR MITERED HAIRLINE JOINTS.
- f. SINGLE GLAZED LITES: PROVIDE MOLDINGS WELDED ON SECURE SIDE OF HOLLOW-METAL WORK.
- g. MULTIPLE GLAZED LITES: PROVIDE FIXED AND REMOVABLE STOPS AND MOLDINGS SO THAT EACH GLAZED LITE IS CAPABLE OF BEING REMOVED INDEPENDENTLY.
- h. PROVIDE FIXED FRAME MOLDINGS ON OUTSIDE OF EXTERIOR AND ON SECURE SIDE OF INTERIOR DOORS AND FRAMES.
- i. PROVIDE LOOSE STOPS AND MOLDINGS ON INSIDE OF HOLLOW-METAL WORK.
- j. COORDINATE RABBIT WIDTH BETWEEN FIXED AND REMOVABLE STOPS WITH GLAZING AND INSTALLATION TYPES INDICATED.
- G. STEEL FINISH
- a. PRIME FINISH: CLEAN, PRETREAT, AND APPLY MANUFACTURER'S STANDARD PRIMER.
- b. SHOP PRIMER: MANUFACTURER'S STANDARD, FAST-CURING, LEAD- AND CHROMATE-FREE PRIMER COMPLYING WITH ASTM A250.10; RECOMMENDED BY PRIMER MANUFACTURER FOR SUBSTRATE, COMPATIBLE WITH SUBSTRATE AND FIELD-APPLIED COATINGS DESPITE PROLONGED EXPOSURE.
- H. INSTALLATION
- a. GENERAL: INSTALL HOLLOW-METAL WORK PLUMB, RIGID, PROPERLY ALIGNED, AND SECURELY FASTENED IN PLACE. COMPLY WITH DRAWINGS AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
- b. HOLLOW-METAL FRAMES: INSTALL HOLLOW-METAL FRAMES FOR DOORS, SIDELITES, BORROWED LITES, AND OTHER OPENINGS, OF SIZE AND PROFILE INDICATED, COMPLY WITH ASTM A250.11 OR NAAMH-HMMA 940 AS REQUIRED BY STANDARDS SPECIFIED.
- I. FLUSH WOOD DOORS
- A. BASIS OF DESIGN - ALGOMA HARDWOODS, INC.
- B. QUALITY STANDARD: IN ADDITION TO REQUIREMENTS SPECIFIED, COMPLY WITH AWTs, AVMAC's, AND WIS' ARCHITECTURAL WOODWORK STANDARDS:
- a. PROVIDE AWWI QUALITY CERTIFICATION LABELS INDICATING THAT DOORS COMPLY WITH REQUIREMENTS OF GRADES SPECIFIED.
- b. REGIONAL MATERIALS: FLUSH DOOR MANUFACTURED WITHIN 500 MILES (800 KM) OF PROJECT SITE FROM MANUFACTURER THAT HAVE BEEN EXTRACTED, HARVESTED, OR RECOVERED, AS WELL AS MANUFACTURED, WITHIN 500 MILES (800 KM) OF PROJECT SITE.
- c. LOW-EMITTING MATERIALS: FABRICATE DOORS WITH ADHESIVES AND COMPOSITE WOOD PRODUCTS THAT DO NOT CONTAIN UREA FORMALDEHYDE.
- d. WDMA I.S. 1-A PERFORMANCE GRADE: HEAVY DUTY
- F. PARTICLEBOARD-CORE DOORS
- a. PARTICLEBOARD: ANSI A208.1, GRADE LD-1 OR GRADE LD-2, MADE WITH BINDER CONTAINING NO UREA-FORMALDEHYDE.
- b. BLOCKING: PROVIDE WOOD BLOCKING IN PARTICLEBOARD-CORE DOORS AS FOLLOWS:
1. 5-INCH (125-MM) TOP-RAIL BLOCKING, IN DOORS INDICATED TO HAVE CLOSERS.
2. 5-INCH (125-MM) BOTTOM-RAIL BLOCKING, IN EXTERIOR DOORS AND DOORS INDICATED TO HAVE KICK, MOP, OR ARMOR PLATES.
- c. PROVIDE DOORS WITH GLUED-WOOD-STAVE OR STRUCTURAL-COMPOSITE-LUMBER CORES INSTEAD OF PARTICLEBOARD CORES FOR DOORS INDICATED TO RECEIVE EXIT DEVICES.
- G. STRUCTURAL-COMPOSITE-LUMBER-CORE DOORS
- a. STRUCTURAL COMPOSITE LUMBER: WDMA I.S. 10.
- b. SCREW WITHDRAWAL: FACE: 700 LBF (3100 N).
- c. SCREW WITHDRAWAL: EDGE: 400 LBF (1780 N).
- H. MINERAL-CORE DOORS
- a. CORE: NONCOMBUSTIBLE MINERAL PRODUCT COMPLYING WITH REQUIREMENTS OF REFERENCED QUALITY STANDARD AND TESTING AND INSPECTING AGENCY FOR FIRE-PROTECTION RATING INDICATED.
- b. BLOCKING: PROVIDE COMPOSITE BLOCKING WITH IMPROVED SCREW-HOLDING CAPABILITY APPROVED FOR USE IN DOORS OF FIRE-PROTECTION RATINGS INDICATED AS FOLLOWS:
1. 5-INCH (125-MM) TOP-RAIL BLOCKING.
2. 5-INCH (125-MM) BOTTOM-RAIL BLOCKING, IN DOORS INDICATED TO HAVE PROTECTION PLATES.
3. 5-INCH (125-MM) MIDRAIL BLOCKING, IN DOORS INDICATED TO HAVE ARMOR PLATES.
4. 5-INCH (125-MM) MIDRAIL BLOCKING, IN DOORS INDICATED TO HAVE EXIT DEVICES.
- c. EDGE CONSTRUCTION: AT HINGE STILES, PROVIDE LAMINATED-EDGE CONSTRUCTION WITH IMPROVED SCREW-HOLDING CAPABILITY AND SPLIT REINFORCEMENTS FOR SPECIFIED REQUIREMENTS FOR EXPOSED EDGES.
- d. SCREW-HOLDING CAPABILITY: 475 LBF (2110 N) PER WDMA T.M.-10.
- I. INTERIOR SOLID-CORE DOORS:
- a. GRADE: CUSTOM
- b. FACES: ANY CLOSED-GRAIN HARDWOOD.
- c. EXPOSED VERTICAL AND TOP EDGES: ANY CLOSED-GRAIN HARDWOOD.
- d. CORE: CONSTRUCTORS OPTION - SEE ABOVE
- e. CONSTRUCTION: FIVE OR SEVEN PLYS. STILES AND RAILS ARE BONDED TO CORE, THEN ENTIRE UNIT IS ABRASIVE PLANED BEFORE VENEERING.
- J. FABRICATION
- a. FACTORY FIT DOORS TO SUIT FRAME-OPENING SIZES INDICATED, COMPLY WITH CLEARANCE REQUIREMENTS OF REFERENCED QUALITY STANDARD FOR FITTING UNLESS OTHERWISE INDICATED.
- b. FACTORY MACHINE DOORS FOR HARDWARE THAT IS NOT SURFACE APPLIED. LOCATE HARDWARE TO COMPLY WITH DH-WDH-S-3. COMPLY WITH FINAL HARDWARE SCHEDULES. DOOR FRAME SHOP DRAWINGS, BHMA-156.115-W, AND HARDWARE TEMPLATES.
- c. COORDINATE WITH HARDWARE MORTISES IN METAL FRAMES TO VERIFY DIMENSIONS AND ALIGNMENT BEFORE FACTORY MACHINING.
- K. PREPARATIONS FOR SECURITY HARDWARE
- a. LOCK PREPARATION-SHEAR LOCKS: INSTALL ENTIRE REINFORCEMENT INTO MORTISED POCKET ON TOP RAIL OF DOOR AND SECURE WITH A MINIMUM OF 4 #10 FLATHEAD WOOD SCREWS, 2-1/2" IN LENGTH. VERIFY FIT OF DOOR IN FRAME AND PROPER MOUNTING OF STRIKE IN RELATION TO THE FRAME AND THE MAGNET PORTION OF THE LOCK.
3. ALUMINUM FRAMED ENTRANCES AND STOREFRONTS
- A. BASIS OF DESIGN: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE KAWNEER NORTH AMERICA, AN ALCOA COMPANY, TRIFAB VS 451
- B. FRAMING
- a. FRAMING MEMBERS: MANUFACTURER'S EXTRUDED- OR FORMED-ALUMINUM FRAMING MEMBERS OF THICKNESS REQUIRED AND REINFORCED AS REQUIRED TO SUPPORT IMPOSED LOADS.
- b. CONSTRUCTION: NONTHERMAL BROKEN.
- c. GLAZING SYSTEM: RETAINED MECHANICALLY WITH GASKETS ON FOUR SIDES.
- d. GLAZING PLANE: CENTER.
- e. FINISH: BLACK ANODIC OR PAINTED FINISH.
- f. FABRICATION METHOD: FIELD-FABRICATED STICK SYSTEM.
- C. ENTRANCE DOOR SYSTEMS
- a. ENTRANCE DOORS: MANUFACTURER'S STANDARD GLAZED ENTRANCE DOORS FOR MANUAL-SWING OPERATION.
- b. DOOR CONSTRUCTION: 2-INCH (50.8MM) OVERALL THICKNESS, WITH MINIMUM 0.188-INCH- (4.8MM-) THICK, EXTRUDED, ALUMINUM TUBULAR RAIL AND STILE MEMBERS, MECHANICALLY FASTEN CORNERS WITH REINFORCING BRACKETS THAT ARE DEEPLY PENETRATED AND FILLET WELDED OR THAT INCORPORATE CONCEALED THE RODS.
- c. DOOR DESIGN: MEDIUM STILE, 3 1/2 INCH NOMINAL WIDTH WITH VERTICAL, STILE AND TOP RAIL, 6 1/2 INCH BOTTOM RAIL.
1. ACCESSIBLE DOORS: SMOOTH SURFACED FOR WIDTH OF DOOR IN AREA WITHIN 10 INCHES (255 MM) ABOVE FLOOR OR GROUND PLANE.
2. GLAZING STOPS AND GASKETS: SQUARE, SNAP-ON, EXTRUDED-ALUMINUM STOPS AND PREFORMED GASKETS.
1. PROVIDE NONREMOVABLE GLAZING STOPS ON OUTSIDE OF DOOR.
- D. ENTRANCE DOOR HARDWARE
- a. DOOR HARDWARE: AS REQUIRED FOR A COMPLETE INSTALLATION AND AS FOLLOWS:
1. WEATHER STRIPPING: MANUFACTURER'S STANDARD REPLACEABLE COMPONENTS.
2. COMPRESSION TYPE: MADE OF ASTM D 2000, MOLDED NEOPRENE, OR ASTM D 2287, MOLDED PVC.
3. SLIDING TYPE: ANALOGOUS OF WOOL, POLYPROPYLENE, OR NYLON WOVEN PILE WITH NYLON-FABRIC OR ALUMINUM-STRIP BACKING.
- b. WEATHER SWEEPS: MANUFACTURER'S STANDARD EXTERIOR-DOOR BOTTOM SWEEP WITH CONCEALED FASTENERS ON MOUNTING STRIP.
- c. SILENCERS: BHMA A156.16, GRADE 1.
- E. ACCESSORIES
- a. FASTENERS AND ACCESSORIES: MANUFACTURER'S STANDARD CORROSION-RESISTANT, NONSTAINING, NONBLEEDING FASTENERS AND ACCESSORIES COMPATIBLE WITH ADJACENT MATERIALS.
- b. USE SELF-LOCKING DEVICES WHERE FASTENERS ARE SUBJECT TO LOOSENING OR TURNING OUT FROM THERMAL AND STRUCTURAL MOVEMENTS, WIND LOADS, OR VIBRATION.
- c. REINFORCE MEMBERS AS REQUIRED TO RECEIVE FASTENER THREADS.
- d. USE EXPOSED FASTENERS WITH COUNTERSUNK PHILLIPS SCREW HEADS, FINISHED TO MATCH FRAMING SYSTEM.
- e. ANCHORS: THREE-WAY ADJUSTABLE ANCHORS WITH MINIMUM ADJUSTMENT OF 1 INCH (25.4 MM) THAT ALLOWING FABRICATION AND INSTALLATION TOLERANCES IN MATERIAL AND FINISH COMPATIBLE WITH ADJOINING MATERIALS AND RECOMMENDED BY MANUFACTURER.
4. DOOR HARDWARE
- A. COORDINATION
- a. TEMPLATES: DISTRIBUTE DOOR HARDWARE TEMPLATES FOR DOORS, FRAMES, AND OTHER WORK SPECIFIED TO BE FACTORY PREPARED FOR INSTALLING DOOR HARDWARE. DISTRIBUTE TEMPLATES IN A TIMELY MANNER SO AS NOT TO DELAY SUPPLIERS. CHECK SHOP DRAWINGS OF OTHER WORK TO CONFIRM THAT ADEQUATE PROVISIONS ARE MADE FOR LOCATING AND INSTALLING DOOR HARDWARE TO COMPLY WITH INDICATED REQUIREMENTS.

DIVISION 8 OPENINGS - CONT.

5. GLAZING
- A. QUALIFICATIONS:
- a. INSTALLER QUALIFICATIONS: A QUALIFIED INSTALLER WHO EMPLOYS GLASS INSTALLERS FOR THIS PROJECT WHO ARE CERTIFIED UNDER THE NATIONAL GLASS ASSOCIATION'S CERTIFIED GLASS INSTALLER PROGRAM.
- B. MANUFACTURERS
- a. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
1. GUARDIAN INDUSTRIES CORP. SUNGUARD.
2. OLDCASTLE BUILDING ENVELOPE.
3. PPG INDUSTRIES, INC.
4. TRULITE GLASS AND ALUMINUM SOLUTIONS, LLC.
- b. SOURCE LIMITATIONS FOR GLASS: OBTAIN FROM SINGLE SOURCE FROM SINGLE MANUFACTURER FOR EACH GLASS TYPE.
- c. SOURCE LIMITATIONS FOR GLAZING ACCESSORIES: OBTAIN FROM SINGLE SOURCE FROM SINGLE MANUFACTURER FOR EACH PRODUCT AND INSTALLATION METHOD.
- C. PERFORMANCE REQUIREMENTS
- a. GENERAL: INSTALLED GLAZING SYSTEMS SHALL WITHSTAND NORMAL THERMAL MOVEMENT AND WIND AND IMPACT LOADS (WHERE APPLICABLE) WITHOUT FAILURE, INCLUDING LOSS OR GLASS BREAKAGE ATTRIBUTABLE TO THE FOLLOWING: DEFECTIVE MANUFACTURE, FABRICATION, OR INSTALLATION; FAILURE OF SEALANTS OR GASKETS TO REMAIN WATER-TIGHT AND AIR-TIGHT; DETERIORATION OF GLAZING MATERIALS; OR OTHER DEFECTS IN CONSTRUCTION.
- b. ALL GLAZING MUST COMPLY WITH THE 2015 EDITION OF THE KENTUCKY BUILDING CODE.
- D. SAFETY GLAZING: WHERE SAFETY GLAZING IS REQUIRED BY THE 2015 KENTUCKY BUILDING CODE, PROVIDE GLAZING THAT COMPLIES WITH 16 CFR 1201, CATEGORY II.
- E. GLAZING PRODUCTS, GENERAL
- a. STRENGTH: WHERE ANNEALED FLOAT GLASS IS INDICATED OR REQUIRED, PROVIDE ANNEALED FLOAT GLASS, HEAT-STRENGTHENED FLOAT GLASS, OR FULLY TEMPERED FLOAT GLASS AS NEEDED TO COMPLY WITH "PERFORMANCE REQUIREMENTS" ARTICLE, WHERE HEAT-STRENGTHENED FLOAT GLASS IS INDICATED, PROVIDE HEAT-STRENGTHENED FLOAT GLASS OR FULLY TEMPERED FLOAT GLASS AS NEEDED TO COMPLY WITH "PERFORMANCE REQUIREMENTS" ARTICLE, WHERE FULLY TEMPERED FLOAT GLASS IS INDICATED, PROVIDE FULLY TEMPERED FLOAT GLASS.
- F. GLASS PRODUCTS
- a. LEAR ANNEALED FLOAT GLASS: ASTM C 1036, TYPE I, CLASS 1 (CLEAR), QUALITY Q3.
- b. FULLY TEMPERED FLOAT GLASS: ASTM C 1048, KND FT (FULLY TEMPERED), CONDITION A (UNCOATED) UNLESS OTHERWISE INDICATED, TYPE I, CLASS 1 (CLEAR) AS INDICATED, QUALITY Q3.
- c. FABRICATION PROCESS: BY HORIZONTAL (ROLLER-HEARTH) PROCESS WITH ROLL-WAVE DISTORTION PARALLEL TO BOTTOM EDGE OF GLASS AS INDICATED, UNLESS OTHERWISE INDICATED.
- d. HEAT-STRENGTHENED FLOAT GLASS: ASTM C 1048, KND HS (HEAT STRENGTHENED), TYPE I, CONDITION A (UNCOATED) UNLESS OTHERWISE INDICATED, TYPE I, CLASS 1 (CLEAR) AS INDICATED, QUALITY Q3.
- e. FABRICATION PROCESS: BY HORIZONTAL (ROLLER-HEARTH) PROCESS WITH ROLL-WAVE DISTORTION PARALLEL TO BOTTOM EDGE OF GLASS AS INDICATED, UNLESS OTHERWISE INDICATED.
- G. GLASS TYPE
- a. GL-1: CLASS 1 (CLEAR) ANNEALED, OR HEAT-STRENGTHENED FLOAT GLASS WHERE HEAT STRENGTHENING IS REQUIRED TO RESIST THERMAL STRESSES INDUCED BY DIFFERENTIAL SHADING OF INDIVIDUAL GLASS LITES AND TO COMPLY WITH SYSTEM PERFORMANCE REQUIREMENTS, OR FULLY TEMPERED FLOAT GLASS WHERE REQUIRED BY THE 2015 KENTUCKY BUILDING CODE.
- b. MINIMUM THICKNESS: 6.0 MM, PROVIDE THICKER UNITS WHERE REQUIRED TO COMPLY WITH PERFORMANCE CRITERIA INDICATED FOR UNIT SIZES SHOWN ON DRAWINGS.
- c. SAFETY GLAZING REQUIRED WHERE REQUIRED BY THE 2015 KENTUCKY BUILDING CODE.
- d. APPLICATION: INTERIOR BORROWED LITES AND OTHER APPLICATIONS INDICATED AND REQUIRED.

DIVISION 09 - FINISHES

1. NON-STRUCTURAL METAL FRAMING
- A. FRAMING SYSTEMS
- a. RECYCLED CONTENT OF STEEL PRODUCTS: POSTCONSUMER RECYCLED CONTENT PLUS ONE-HALF OF PRECONSUMER RECYCLED CONTENT NOT LESS THAN 25 PERCENT.
- b. FRAMING MEMBERS, GENERAL: COMPLY WITH ASTM C 754 FOR CONDITIONS INDICATED.
- c. STEEL SHEET COMPONENTS: COMPLY WITH ASTM C 545 REQUIREMENTS FOR METAL UNLESS OTHERWISE INDICATED.
- d. PROTECTIVE COATING: ASTM A 653/A 653M, G40 (Z120), HOT-DIP GALVANIZED UNLESS OTHERWISE INDICATED.
- e. STUDS AND RUNNERS: ASTM C 645, USE EITHER STEEL STUDS AND RUNNERS OR EMBOSSED STEEL STUDS AND RUNNERS.
- f. THAT MAY BE PREPARED OR WATERLOOED BY THE CONTRACTOR, BUT ARE NOT LIMITED TO THE FOLLOWING: CLARKDIECH BUILDING SYSTEMS, MARINOWARE, PHILLIPS MANUFACTURING CO.
- g. MINIMUM BASE-METAL THICKNESS: 0.0329 INCH (0.838 MM).
- h. DEPTH: AS INDICATED ON DRAWINGS.
- i. EMBOSSED STEEL STUDS AND RUNNERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: CLARKDIECH BUILDING SYSTEMS, MARINOWARE, PHILLIPS MANUFACTURING CO.
- j. MINIMUM BASE-METAL THICKNESS: AS REQUIRED FOR EQUIVALENT PERFORMANCE TO STEEL STUDS AND RUNNERS INDICATED.
- k. SLIP-TYPE HEAD JOINTS: WHERE INDICATED OR REQUIRED, PROVIDE THE FOLLOWING:
1. SINGLE LONG-LEG RUNNER SYSTEM: ASTM C 645 TOP RUNNER WITH 2-INCH- (51-MM-) DEEP FLANGES IN THICKNESS NOT LESS THAN INDICATED FOR STUDS INSTALLED WITH STUDS FRICTION FIT TO TOP RUNNER AND WITH CONTINUOUS BRIDGING LOCATED WITHIN 12 INCHES (305 MM) OF THE TOP OF STUDS TO PROVIDE LATERAL BRACING.
2. FLAT STRAP AND BACKING PLATE: STEEL SHEET FOR TOPPING AND BRACING IN LENGTH AND WIDTH INDICATED.
3. MINIMUM BASE-METAL THICKNESS: 0.0329 INCH (0.838 MM).
4. COLD-ROLLED CHANNEL BRIDGING: STEEL, 0.053-INCH (1.34-MM) MINIMUM BASE-METAL THICKNESS, WITH MINIMUM 1/2-INCH- (13-MM-) WIDE FLANGES.
5. DEPTH: 1-1/2 INCHES (38 MM).
6. CLIP ANGLE: NOT LESS THAN 1-1/2 INCHES (38 BY 38 MM), 0.068-INCH- (1.72-MM-) THICK, GALVANIZED STEEL.
7. HAT-SHAPED, RIGID FURRING CHANNELS: ASTM C 645.
8. MINIMUM BASE-METAL THICKNESS: 0.033 INCH (0.84 MM).
9. DEPTH: 7/8 INCH (22 MM), AND AS INDICATED ON DRAWINGS.
10. RESILIENT FURRING CHANNELS: 1/2-INCH- (12.7-MM-) DEEP, STEEL SHEET MEMBERS DESIGNED TO REDUCE SOUND TRANSMISSION.
11. CONFIGURATION: ASYMMETRICAL OR HAT SHAPED.
12. SHAPED FURRING CHANNELS: WITH SLOTTED OR NONSLOTTED WEB, FACE FLANGE OF 1-1/4 INCHES (32 MM), WALL ATTACHMENT FLANGE OF 7/8 INCH (22 MM), MINIMUM UNCOATED-METAL THICKNESS OF 0.0179 INCH (0.455 MM), AND DEPTH REQUIRED TO FIT INSULATION THICKNESS INDICATED.
2. GYPSUM BOARD
- A. PERFORMANCE REQUIREMENTS
- a. STC-RATED ASSEMBLIES: FOR STC-RATED ASSEMBLIES, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 810 AND CLASSIFIED ACCORDING TO ASTM E 413 BY AN INDEPENDENT TESTING AGENCY.
- B. GYPSUM BOARD, GENERAL
- a. MANUFACTURER: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: CERTAINTED CORPORATION, NATIONAL GYPSUM COMPANY, USG.
- b. RECYCLED CONTENT OF GYPSUM PANEL PRODUCTS: POSTCONSUMER RECYCLED CONTENT PLUS ONE-HALF OF PRECONSUMER RECYCLED CONTENT NOT LESS THAN 25 PERCENT.
- c. REGIONAL MATERIALS: GYPSUM PANEL PRODUCTS SHALL BE MANUFACTURED WITHIN 500 MILES (800 KM) OF PROJECT SITE.
- d. SIZE: PROVIDE MAXIMUM LENGTHS AND WIDTHS AVAILABLE THAT WILL MINIMIZE JOINTS IN EACH AREA AND THAT CORRESPOND WITH SUPPORT SYSTEM INDICATED.
- e. STAGGER JOINTS: STAGGER JOINTS NOT LESS THAN ONE FRAMING MEMBER IN ALTERNATE COURSES OF PANELS. STAGGER JOINTS ON OPPOSITE SIDES.
- C. INTERIOR GYPSUM BOARD
- a. GYPSUM BOARD, TYPE X: ASTM C 1396/C 1396M.
- b. THICKNESS: 5/8 INCH (15.9 MM).
- c. LONG EDGES: TAPERED.
- d. GYPSUM CEILING BOARD TYPE X: ASTM C 1396/C 1396M.
- e. THICKNESS: 5/8 INCH (15.9 MM).
- f. LONG EDGES: TAPERED.
- g. MOLD-RESISTANT GYPSUM BOARD: ASTM C 1396/C 1396M, WITH MOISTURE- AND MOLD-RESISTANT CORE AND PAPER SURFACES.
- h. CORE: 5/8 INCH (15.9 MM) TYPE X.
- i. LONG EDGES: TAPERED.
- j. MOLD RESISTANCE: ASTM D 3273, SCORE OF 10 AS RATED ACCORDING TO ASTM D 3274.
- D. TRIM ACCESSORIES
- a. INTERIOR TRIM: ASTM C 1047.
- b. MATERIAL: GALVANIZED OR ALUMINUM-COATED STEEL SHEET OR ROLLED ZINC.
- c. SHAPES: CORNERBEAD, EXPANSION (CONTROL) JOINT, AND CUPED-EDGE CORNERBEAD, WITH NOTCHED OR FLEXIBLE FLANGES.
- b. ALUMINUM TRIM: EXTRUDED ACCESSORIES OF PROFILES AND DIMENSIONS INDICATED. PROVIDE MITERED CORNERS AND END PIECES AS REQUIRED FOR COMPLETE ASSEMBLY.
- c. MANUFACTURERS: PITTCON INDUSTRIES
- d. ALUMINUM: ALLOY AND TEMPER WITH NOT LESS THAN THE STRENGTH AND DURABILITY PROPERTIES OF ASTM B 221 (ASTM B 221M), ALLOY 6063-T5.
- e. FINISH: CORROSION-RESISTANT PRIMER COMPATIBLE WITH JOINT COMPOUND AND FINISH MATERIALS SPECIFIED.
- f. SHAPES:
1. WALL CAP: "SWC 338-8"
2. PROPRIETARY INTERIOR TRIM: ASTM D 1784.
3. BASIS-OF-DESIGN PRODUCT: TRIM-TEX, INC., "PULLAWAY"™ PRE-MASK L BEAD."
4. MATERIAL: RIGID PVC.
5. SHAPE: L-SHAPED; EXPOSED LONG FLANGE RECEIVES JOINT COMPOUND.
- E. JOINT TREATMENT MATERIALS
- a. GENERAL: COMPLY WITH ASTM C 475/C 475M.
- b. JOINT TAPE:
1. INTERIOR GYPSUM BOARD, PAPER.
2. JOINT COMPOUND FOR INTERIOR GYPSUM BOARD: FOR EACH COAT, USE FORMULATION THAT IS COMPATIBLE WITH OTHER COMPOUNDS AP

GENERAL SPECIFICATIONS

DIVISION 09 - FINISHES CONTINUED

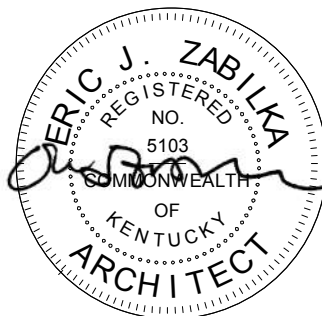
3. CERAMIC TILING
- A. QUALITY ASSURANCE - INSTALLER QUALIFICATIONS: AN EXPERIENCED INSTALLER WHO HAS COMPLETED CERAMIC TILE INSTALLATION SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT, WHOSE WORK HAS RESULTED IN CERAMIC TILE INSTALLATIONS WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, WHO EMPLOYS CERAMIC TILE INSTALLERS FOR THIS PROJECT WHO EACH HAVE A MINIMUM OF FIVE YEARS PREVIOUS EXPERIENCE IN CERAMIC TILE INSTALLATION, AND WHO IS A FIVE-STAR MEMBER OF THE NATIONAL TILE CONTRACTORS ASSOCIATION OR A TROVELOF EXCELLENCE MEMBER OF THE TILE CONTRACTORS ASSOCIATION OF AMERICA
- B. FIELD CONDITIONS - ENVIRONMENTAL LIMITATIONS: DO NOT INSTALL TILE UNTIL CONSTRUCTION IN SPACES IS COMPLETE AND AMBIENT TEMPERATURE AND HUMIDITY CONDITIONS ARE MAINTAINED AT THE LEVELS INDICATED IN REFERENCED STANDARDS AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
- C. TILE PRODUCTS:
- a. ATLAS CONCORDE - DWELL PORCELAIN TILE - GRAY HONED - 75 X 150, STACKED BOND
- b. JOINT WIDTH - MINIMUM POSSIBLE, BUT NOT LESS THAN 1/16"
- c. GROUT COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE, WITH UP TO TWO DIFFERENT COLORS.
- D. THRESHOLDS
- a. GENERAL: FABRICATE TO SIZES AND PROFILES INDICATED OR REQUIRED TO PROVIDE TRANSITION BETWEEN ADJACENT FLOOR FINISHES
- b. BEVEL EDGES AT 1:2 SLOPE WITH LOWER EDGE OF BEVEL ALIGNED WITH OR UP TO 1/16 INCH (1.5MM) ABOVE ADJACENT FLOOR SURFACE. FINISH BEVEL TO MATCH TOP SURFACE OF THRESHOLD. LIMIT HEIGHT OF THRESHOLD 1/2 INCH (12.7 MM) OR LESS ABOVE ADJACENT FLOOR SURFACE.
- c. POLYMER THRESHOLDS: MADE FROM HOMOGENEOUS SOLD SHEETS OF FILLED PLASTIC RESIN COMPLYING WITH MATERIAL AND PERFORMANCE REQUIREMENTS IN ANSI Z124.3, FOR TYPE 5 OR VOE 6, WITHOUT PRECOATED FINISH.
- d. AVAILABLE MANUFACTURERS:
- AVONITE, INC.
- DUPONT POLYMERS.
- FORMICA CORPORATION
- NEVAMAR
- WILSONART
- E. ARCHITECT TO SELECT COLOR FROM MANUFACTURER'S FULL RANGE.
- F. WATERPROOFING AND CRACK-SUPPRESSION MEMBRANES
- a. GENERAL: MANUFACTURER'S STANDARD PRODUCT THAT COMPLIES WITH ANSI A118.10 AND IS RECOMMENDED BY THE MANUFACTURER FOR THE APPLICATION INDICATED. INCLUDE REINFORCEMENT AND ACCESSORIES RECOMMENDED BY MANUFACTURER.
- b. FABRIC-REINFORCED, FLUID-APPLIED MEMBRANE. SYSTEM CONSISTING OF LIQUID-LATEX RUBBER OR ELASTOMERIC POLYMER AND CONTINUOUS FABRIC REINFORCEMENT.
- c. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
- BOARD PRODUCT CORPORATION, QEP COMPANY: ELASTIMENT 344 REINFORCED WATERPROOFING AND ANTI-FRACTURE/CRACK SUPPRESSION MEMBRANE.
- BONSAL AMERICAN, AN OLDCASTLE COMPANY: B 6000 WATERPROOF-CRACK ISOLATION MEMBRANE WITH B 6000 MESH.
- LATICRETE INTERNATIONAL, INC.: LATICRETE 9235 WATERPROOF MEMBRANE.
- G. SETTING MATERIALS
- a. LATEX-PORTLAND CEMENT MORTAR (THIN SET); ANSI A118.4.
- b. MANUFACTURER: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
1. BOARD PRODUCT CORPORATION, QEP COMPANY
2. BONSAL AMERICAN, AN OLDCASTLE COMPANY
3. LATICRETE INTERNATIONAL, INC.
- c. POLYMER TYPE: ETHYLENE VINYL ACETATE OR ACRYLIC ADDITIVE, IN DRY, REDISPERSIBLE FORM, PREPACKAGED WITH OTHER DRY INGREDIENTS.
- d. POLYMER TYPE: ACRYLIC RESIN
- H. MISCELLANEOUS MATERIALS
- a. METAL EDGE STRIPS: ANGLE OR L-SHAPED, HEIGHT TO MATCH TILE AND SETTING-BED THICKNESS, METALLIC, DESIGNED SPECIFICALLY FOR FLOORING APPLICATIONS; STAINLESS-STEEL, ASTM A 666, 300 SERIES EXPOSED-EDGE MATERIAL.
- b. MANUFACTURER: SCHLUTER SYSTEMS L.P.
- c. GROUT SEALER: MANUFACTURER'S STANDARD PRODUCT FOR SEALING GROUT JOINTS AND THAT DOES NOT CHANGE COLOR OR APPEARANCE OF GROUT.
- d. MANUFACTURER: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: BONSAL AMERICAN, AN OLDCASTLE COMPANY; CUSTOM BUILDING PRODUCTS, OR SOUTHERN GROUTS & MORTARS, INC.
- e. GROUT SEALERS SHALL COMPLY WITH REQUIREMENTS OF FLOORSORE CERTIFICATION.
- I. WATERPROOFING AND CRACK-SUPPRESSION MEMBRANE INSTALLATION
- a. INSTALL WATERPROOFING AND CRACK-SUPPRESSION MEMBRANE TO COMPLY WITH ANSI A108.13/17 AND MANUFACTURER'S WRITTEN INSTRUCTIONS TO PRODUCE MEMBRANE OF UNIFORM THICKNESS BONDED SECURELY TO SUBSTRATE.
- b. ALLOW WATERPROOFING TO CURE BEFORE INSTALLING TILE OR SETTING MATERIALS OVER IT.
- J. CERAMIC TILE INSTALLATION
- a. COMPLY WITH TCNA'S "HANDBOOK FOR CERAMIC, GLASS, AND STONE TILE INSTALLATION" FOR TCNA INSTALLATION METHODS SPECIFIED IN TILE INSTALLATION SCHEDULES. COMPLY WITH PARTS OF THE ANSI A108 SERIES "SPECIFICATIONS FOR INSTALLATION OF CERAMIC TILE" THAT ARE REFERENCED IN TCNA INSTALLATION METHODS, SPECIFIED IN TILE INSTALLATION SCHEDULES, AND APPLY TO TYPES OF SETTING AND GROUTING MATERIALS USED.
- b. FOLLOW PROCEDURES IN THE ANSI A108 SERIES OF TILE INSTALLATION STANDARDS FOR PROVIDING 95 PERCENT MORTAR COVERAGE.
- c. CONFIRM LAYOUT PATTERN WITH ARCHITECT PRIOR TO FINAL INSTALLATION.
- d. GROUT TILE TO COMPLY WITH REQUIREMENTS OF THE FOLLOWING TILE INSTALLATION STANDARDS: FOR CERAMIC TILE GROUTS (LATEX-PORTLAND CEMENT GROUTS), COMPLY WITH ANSI A108.10.
- e. EXPANSION JOINTS: PROVIDE EXPANSION JOINTS AND OTHER SEALANT-FILLED JOINTS, INCLUDING CONTROL, CONTRACTION, AND ISOLATION JOINTS, WHERE REQUIRED: FOR JOINTS DURING INSTALLATION OF SETTING MATERIALS, MORTAR BEDS, AND TILE, DO NOT SAW-CUT JOINTS AFTER INSTALLING TILES
- f. WHERE JOINTS OCCUR IN CONCRETE SUBSTRATES, LOCATE JOINTS IN TILE SURFACES DIRECTLY ABOVE THEM - CONFIRM LOCATIONS WITH ARCHITECT.
- g. METAL EDGE STRIPS: INSTALL AT LOCATIONS INDICATED; WHERE EXPOSED EDGE OF TILE FLOORING MEETS CARPET, CONCRETE, OR OTHER FLOORING THAT FINISHES FLUSH WITH TOP OF TILE, AND WHERE EXPOSED EDGE OF TILE FLOORING MEETS OTHER FLOORING THAT FINISHES FLUSH WITH OR BELOW TOP OF TILE AND NO THRESHOLD IS INDICATED.
- h. GROUT SEALER: APPLY GROUT SEALER TO CEMENTITIOUS GROUT JOINTS ACCORDING TO GROUT-SEALER MANUFACTURER'S WRITTEN INSTRUCTIONS. AS SOON AS GROUT SEALER HAS PENETRATED GROUT JOINTS, REMOVE EXCESS SEALER AND SEALER FROM TILE FACES BY WIPING WITH SOFT CLOTH.
- K. ACOUSTICAL PANEL CEILINGS
- A. PRODUCTS
- a. ACOUSTIC CEILING PANEL (APC-1) - PROVIDE ARMSTRONG WORLD INDUSTRIES, INC.; ULTIMA® REGULAR 1911 WITH PRELUDE XL HIGH RECYCLED CONTENT, 15"16" DIMENSIONAL TEE COLOR: WHITE
- b. AT CENTER ENCLOSED OFFICES, PROVIDE ARMSTRONG SINGLES-PAN ACOUSTICAL CORRIDOR SYSTEM FOR CEILING GRID, COLOR: WHITE
- c. ALL CLOUDS TO RECEIVE ARMSTRONG WORLD INDUSTRIES, INC.; AXIOM™ TRI-OF™ AT PERIMETER OF CLOUD - TYPICAL
- d. METAL SUSPENSION SYSTEMS, GENERAL: PROVIDE MANUFACTURER'S STANDARD DIRECT-HUNG METAL SUSPENSION SYSTEMS OF TYPES, STRUCTURAL CLASSIFICATIONS, AND FINISHES INDICATED THAT COMPLY WITH APPLICABLE REQUIREMENTS IN ASTM C 635/C 635M.
- B. INSTALLATION
- a. GENERAL: INSTALL ACOUSTICAL PANEL CEILINGS TO COMPLY WITH ASTM C 636/C 636M AND SEISMIC DESIGN REQUIREMENTS INDICATED, ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND CISCA'S "CEILING SYSTEMS HANDBOOK."
- L. SPECIALTY WOOD CEILING AND WALL SYSTEM
- A. PRODUCTS
- a. SLATTED WOOD CEILING - PROVIDE NORTON INDUSTRIES, WOOD GRILLE SYSTEM WITH SOLID WOOD - VERTICAL GRAIN HEMLOCK, IN PROFILE V4-1-9 WITH STAGGERED JOINTS. MOUNTING TO BE OF FLAT BACKER GRILLE TYPE
- b. ANCHORED WOOD CEILING SYSTEM TO ARMSTRONG CEILING GRID - PRELUDE XL HIGH RECYCLED CONTENT, COLOR: BLACK
- c. PROVIDE ARMSTRONG AXIOM TRIM, 2", COLOR - BLACK, AT EDGE OF SLATTED WOOD CEILING SYSTEM
- d. SLATTED WOOD WALL SYSTEM: PROVIDE NORTON INDUSTRIES, WOOD GRILLE SYSTEM WITH SOLID WOOD - VERTICAL GRAIN HEMLOCK, IN PROFILE V4-1-9 WITH STAGGERED JOINTS. MOUNTING TO BE OF FLAT BACKER GRILLE TYPE, ANCHORED TO SUBSTRATE OR UNISTRUT FRAMING PER DRAWINGS.
- B. INSTALLATION
- a. INSTALL SPECIALTY WOOD SYSTEMS PER MANUFACTURER'S RECOMMENDATION.
- b. PROVIDE UNISTRUT FRAMING AT SPACING REQUIRED FOR LOAD OF SYSTEM.
- M. RESILIENT BASE AND ACCESSORIES
- A. PRODUCTS
- a. JOHNSONITE TRADITIONAL 4" VINYL WALL BASE - COLOR - 40 BLACK B
- B. INSTALLATION MATERIALS
- a. ADHESIVES: WATER-RESISTANT TYPE RECOMMENDED BY RESILIENT-PRODUCT MANUFACTURER FOR RESILIENT PRODUCTS AND SUBSTRATE CONDITIONS INDICATED.
- b. ADHESIVES SHALL HAVE A VOC CONTENT OF 50 G/L OR LESS EXCEPT THAT ADHESIVE FOR RUBBER STAIR TREADS SHALL HAVE A VOC CONTENT OF 60 G/L OR LESS.
- C. INSTALLATION
- a. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLING RESILIENT BASE.
- b. APPLY RESILIENT BASE TO WALLS, COLUMNS, PLASTERS, CASEWORK AND CABINETS IN TOE SPACES, AND OTHER PERMANENT FIXTURES IN ROOMS AND AREAS WHERE BASE IS REQUIRED.
- c. INSTALL RESILIENT BASE IN LENGTHS AS LONG AS PRACTICAL WITHOUT GAPS AT SEAMS AND WITH TOPS OF ADJACENT PIECES ALIGNED.
- d. TIGHTLY ADHERE RESILIENT BASE TO SUBSTRATE THROUGHOUT LENGTH OF EACH PIECE, WITH BASE IN CONTINUOUS CONTACT WITH HORIZONTAL AND VERTICAL SUBSTRATES.
- e. DO NOT STRETCH RESILIENT BASE DURING INSTALLATION.
- f. JOB-FORMED CORNERS
- OUTSIDE CORNERS: USE STRAIGHT PIECES OF MAXIMUM LENGTHS POSSIBLE AND FORM WITH RETURNS NOT LESS THAN 3 INCHES (76 MM) IN LENGTH.
- FORM WITHOUT PRODUCING DISCOLORATION (WHITENING) AT BENDS.
- INSIDE CORNERS: USE STRAIGHT PIECES OF MAXIMUM LENGTHS POSSIBLE AND FORM WITH RETURNS NOT LESS THAN 3 INCHES (76 MM) IN LENGTH.
1. MITER OR COPE CORNERS TO MINIMIZE OPEN JOINTS
- N. TILE CARPETING
- A. PRODUCTS
- a. BENTLEY - MOTTO STRIPE, ON THE MONEY (408107) - 24" X 24" - MONOLITHIC
- B. QUALITY ASSURANCE
- a. SUSTAINABLE PRODUCT CERTIFICATION: PROVIDE ANSINFS 140 CERTIFICATION FOR CARPET PRODUCTS.
- b. INSTALLER QUALIFICATIONS: AN EXPERIENCED INSTALLER WHO IS CERTIFIED BY THE INTERNATIONAL CERTIFIED FLOORCOVERING INSTALLERS ASSOCIATION AT THE COMMERCIAL II CERTIFICATION LEVEL.
- C. FIELD CONDITIONS
- a. COMPLY WITH CRIS "CRI CARPET INSTALLATION STANDARD" FOR TEMPERATURE, HUMIDITY, AND VENTILATION LIMITATIONS.
- b. ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL CARPET TILES UNTIL SPACES ARE ENCLOSED AND WEATHERTIGHT, WET-WORK IN SPACES IS COMPLETE AND DRY, AND AMBIENT TEMPERATURE AND HUMIDITY CONDITIONS ARE MAINTAINED AT LEVELS PLANNED FOR BUILDING OCCUPANTS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.
- c. DO NOT INSTALL CARPET TILES OVER CONCRETE SLABS UNTIL SLABS HAVE CURED AND ARE SUFFICIENTLY DRY TO BOND WITH ADHESIVE AND CONCRETE SLABS HAVE PH RANGE RECOMMENDED BY CARPET TILE MANUFACTURER.
- D. INSTALLATION ACCESSORIES
- a. TROWELABLE LEVELING AND PATCHING COMPOUNDS: LATEX-MODIFIED, HYDRAULIC-CEMENT-BASED FORMULATION PROVIDED OR RECOMMENDED BY CARPET TILE MANUFACTURER.
- b. ADHESIVES: WATER-RESISTANT, MILDEW-RESISTANT, NONSTAINING, PRESSURE-SENSITIVE TYPE TO SUIT PRODUCTS AND SUBFLOOR CONDITIONS INDICATED, THAT COMPLY WITH FLAMMABILITY REQUIREMENTS FOR INSTALLED CARPET TILE, AND ARE RECOMMENDED BY CARPET TILE MANUFACTURER FOR RELEASABLE INSTALLATION.
- c. VOC CONTENT: 50 G/L OR LESS.
- E. INSTALLATION
- a. GENERAL: COMPLY WITH CRIS "CRI CARPET INSTALLATION STANDARD," SECTION 18, "MODULAR CARPET" AND WITH CARPET TILE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
- b. INSTALLATION METHOD: AS RECOMMENDED IN WRITING BY CARPET TILE MANUFACTURER.
- c. MAINTAIN DYE-LOT INTEGRITY: DO NOT MIX DYE LOTS IN SAME AREA.
- d. CUT AND FIT CARPET TILE TO BUTT TIGHTLY TO VERTICAL SURFACES, PERMANENT FIXTURES, AND BUILT-IN FURNITURE INCLUDING CABINETS, PIPES, OUTLETS, EDGINGS, THRESHOLDS, AND NOSINGS. BIND OR SEAL CUT EDGES AS RECOMMENDED BY CARPET TILE MANUFACTURER.
- e. EXTEND CARPET TILE INTO TOE SPACES, DOOR REVEALS, CLOSETS, OPEN-BOTTOMED OBSTRUCTIONS, REMOVABLE FLANGES, ALCOVES, AND SIMILAR OPENINGS.
- f. MAINTAIN REFERENCE MARKERS, HOLES, AND OPENINGS THAT ARE IN PLACE OR MARKED FOR FUTURE CUTTING BY REPEATING ON CARPET TILE AS MARKED ON SUBFLOOR. USE NONPERMANENT, NONSTAINING MARKING DEVICE.
- g. INSTALL PATTERN AS DIRECTED BY ARCHITECT.

DIVISION 09 - FINISHES CONTINUED

10. INTERIOR PAINTINGS
- A. PAINT, GENERAL
- a. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."
- b. MATERIAL COMPATIBILITY:
- MATERIALS FOR USE WITHIN EACH PAINT SYSTEM SHALL BE COMPATIBLE WITH ONE ANOTHER AND SUBSTRATES INDICATED, UNDER CONDITIONS OF SERVICE AND APPLICATION AS DEMONSTRATED BY MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE.
- c. VOC CONTENT: PRODUCTS SHALL COMPLY WITH VOC LIMITS OF AUTHORITIES HAVING JURISDICTION AND, FOR INTERIOR PAINTS AND COATINGS APPLIED AT PROJECT SITE, THE FOLLOWING VOC LIMITS, EXCLUSIVE OF COLORANTS ADDED TO A TINT BASE:
- FLAT PAINTS AND COATINGS: 50 G/L
- NONFLAT PAINTS AND COATINGS: 150 G/L
- DRY-FOG COATINGS: 400 G/L
- PRIMERS, SEALERS, AND UNDERCOATERS: 200 G/L
- ANTICORROSIVE AND ANTIRUST PAINTS APPLIED TO FERROUS METALS: 250 G/L
- ZINC-RICH INDUSTRIAL MAINTENANCE PRIMERS: 340 G/L
- PRETREATMENT WASH PRIMERS: 420 G/L
- FLOOR COATINGS: 100 G/L
- SHELLACS, CLEAR: 730 G/L
- SHELLACS, PIGMENTED: 850 G/L
- d. COLORS: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE, INCLUDING DEEP TONES.
- ARCHITECT MAY SELECT ACCENT COLORS FOR UP TO TWENTY PERCENT OF THE SURFACE AREA TO RECEIVE A PAINTED FINISH, INCLUDING CEILING SURFACES.
- ARCHITECT MAY SELECT UP TO FOUR DIFFERENT COLORS.
- ARCHITECT MAY SELECT CEILING COLORS THAT ARE DIFFERENT THAN THE ADJACENT WALL COLOR(S).
- B. INTERIOR PAINTING SCHEDULE
- a. STEEL SUBSTRATES
- INSTITUTIONAL LOW-ODOR/VOC LATEX SYSTEM MPI INT 5.1S:
1. PRIME COAT: PRIMER, RUST INHIBITIVE, WATER BASED MPI #107.
2. INTERMEDIATE COAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, MATCHING TOPCOAT.
3. TOPCOAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, SEMI-GLOSS (MPI GLOSS LEVEL 5), MPI #147.
- WATER-BASED DRY-FALL SYSTEM FOR CEILINGS:
1. PRIME COAT: PRIMER, ALKID, ANTI-CORROSIVE, FOR METAL, MPI #79.
2. INTERMEDIATE COAT: DRY FALL, WATER BASED, FOR GALVANIZED STEEL, MATCHING TOPCOAT.
3. TOPCOAT: DRY FALL, WATER BASED, FOR GALVANIZED STEEL, FLAT (MPI GLOSS LEVEL 1), MPI #133.
- b. GALVANIZED-METAL SUBSTRATES
- INSTITUTIONAL LOW-ODOR/VOC LATEX SYSTEM MPI INT 5.3N:
1. PRIME COAT: PRIMER, GALVANIZED, WATER BASED, MPI #134.
2. INTERMEDIATE COAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, MATCHING TOPCOAT.
3. TOPCOAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, SEMI-GLOSS (MPI GLOSS LEVEL 5), MPI #147.
- WATER-BASED DRY-FALL SYSTEM FOR CEILINGS:
1. PRIME COAT: DRY FALL, WATER BASED, FOR GALVANIZED STEEL, MATCHING TOPCOAT.
2. INTERMEDIATE COAT: DRY FALL, WATER BASED, FOR GALVANIZED STEEL, MATCHING TOPCOAT.
3. TOPCOAT: DRY FALL, WATER BASED, FOR GALVANIZED STEEL, FLAT (MPI GLOSS LEVEL 1), MPI #133.
- c. ALUMINUM (NOT ANODIZED OR OTHERWISE COATED) SUBSTRATES
- INSTITUTIONAL LOW-ODOR/VOC LATEX SYSTEM MPI INT 5.4G:
1. PRIME COAT: PRIMER, QUICK DRY, FOR ALUMINUM, MPI #95.
2. INTERMEDIATE COAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, MATCHING TOPCOAT.
3. TOPCOAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, SEMI-GLOSS (MPI GLOSS LEVEL 5), MPI #147.
- d. WOOD SUBSTRATES
- INSTITUTIONAL LOW-ODOR/VOC LATEX SYSTEM MPI INT 6.3V:
1. PRIME COAT: PRIMER, LATEX, FOR INTERIOR WOOD, MPI #39.
2. INTERMEDIATE COAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, MATCHING TOPCOAT.
3. TOPCOAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC (MPI GLOSS LEVEL 3), MPI #145.
- e. GYPSUM BOARD WALL SUBSTRATES
- INSTITUTIONAL LOW-ODOR/VOC LATEX SYSTEM MPI INT 9.2M:
1. PRIME COAT: PRIMER SEALER, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, MPI #149.
2. INTERMEDIATE COAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, MATCHING TOPCOAT.
3. TOPCOAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC (MPI GLOSS LEVEL 3), MPI #145.
- f. GYPSUM BOARD CEILING AND SOFFIT SUBSTRATES
- INSTITUTIONAL LOW-ODOR/VOC LATEX SYSTEM MPI INT 9.2M:
1. PRIME COAT: PRIMER SEALER, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, MPI #149.
2. INTERMEDIATE COAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, MATCHING TOPCOAT.
3. TOPCOAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, FLAT (MPI GLOSS LEVEL 1), MPI #143.
- g. COTTON OR CANVAS AND ASJ INSULATION-COVERING SUBSTRATES, INCLUDING PIPE AND DUCT COVERINGS.
- INSTITUTIONAL LOW-ODOR/VOC LATEX SYSTEM MPI INT 10.1D:
1. PRIME COAT: PRIMER SEALER, LATEX, INTERIOR, MPI #60.
2. INTERMEDIATE COAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, MATCHING TOPCOAT.
3. TOPCOAT: LATEX, INTERIOR, INSTITUTIONAL LOW ODOR/VOC, FLAT (MPI GLOSS LEVEL 1), MPI #143.

DIVISION 10 - SPECIALTIES

1. FIRE EXTINGUISHERS
- A. PERFORMANCE REQUIREMENTS:
- a. NFPA COMPLIANCE: FABRICATE AND LABEL FIRE EXTINGUISHERS TO COMPLY WITH NFPA 10, "PORTABLE FIRE EXTINGUISHERS".
- b. FIRE EXTINGUISHERS, LISTED AND LABELED FOR TYPE, RATING, AND CLASSIFICATION BY AN INDEPENDENT TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
- B. PORTABLE, HAND-CARRIED FIRE EXTINGUISHER
- a. FIRE EXTINGUISHERS: TYPE, SIZE, AND CAPACITY FOR FIRE PROTECTION CABINET AND MOUNTING BRACKET INDICATED.
- BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE LARSEN'S MANUFACTURING COMPANY; "MP6"
- VALVES: MANUFACTURER'S STANDARD.
- HANDLES AND LEVERS: MANUFACTURER'S STANDARD.
- INSTRUCTION LABELS: INCLUDE PICTORIAL MARKING SYSTEM COMPLYING WITH NFPA 10, APPENDIX B AND BAR CODING FOR DOCUMENTING FIRE EXTINGUISHER LOCATION, INSPECTIONS, MAINTENANCE, AND RECHARGING.
- b. MULTIPURPOSE DRY-CHEMICAL TYPE IN STEEL CONTAINER: UL-RATED 2-A-10-B-C, 5-LB (2.3-KG) NOMINAL CAPACITY, WITH MONOAMMONIUM PHOSPHATE-BASED DRY CHEMICAL IN ENAMELED-STEEL CONTAINER.
- C. MOUNTING BRACKETS
- a. MOUNTING BRACKETS: MANUFACTURER'S STANDARD STEEL, DESIGNED TO SECURE FIRE EXTINGUISHER TO WALL OR STRUCTURE, OF SIZES REQUIRED FOR TYPES AND CAPACITIES OF FIRE EXTINGUISHERS INDICATED, WITH PLATED OR RED BAKED-ENAMEL FINISH.
- BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE LARSEN'S MANUFACTURING COMPANY; "1521"
- b. IDENTIFICATION: LETTERING COMPLYING WITH AUTHORITIES HAVING JURISDICTION FOR LETTER STYLE, SIZE, SPACING, AND LOCATION. LOCATE AS INDICATED BY ARCHITECT.
- IDENTIFY BRACKET-MOUNTED FIRE EXTINGUISHERS WITH THE WORDS "FIRE EXTINGUISHER" IN RED-LETTER DECALS APPLIED TO MOUNTING SURFACE.
- ORIENTATION: AS DIRECTED BY ARCHITECT.

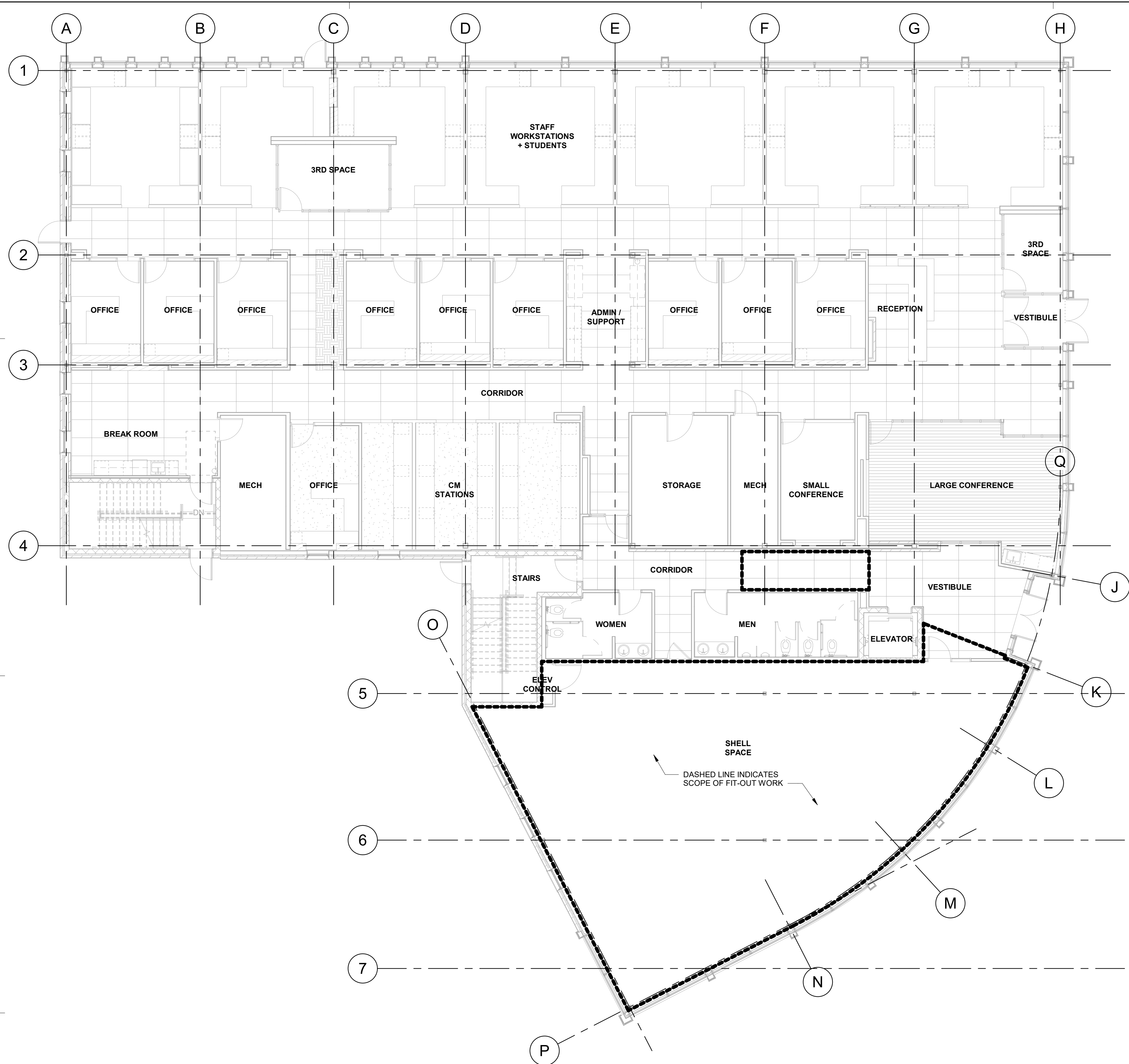


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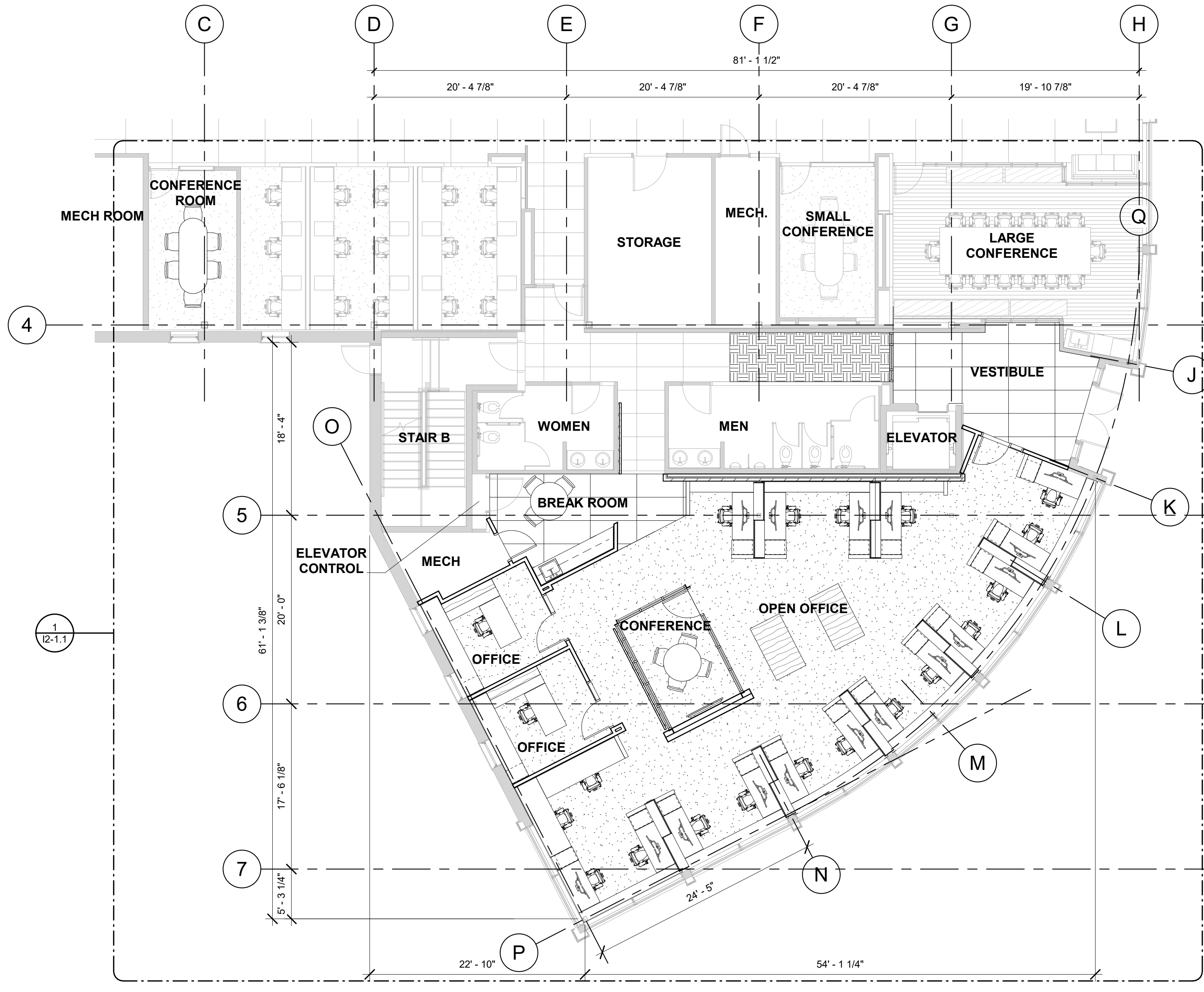
PROJECT NUMBER 1921

DATE JULY 1, 2020

REVISIONS



1 OVERALL FLOOR PLAN - EXISTING
1/8" = 1'-0"

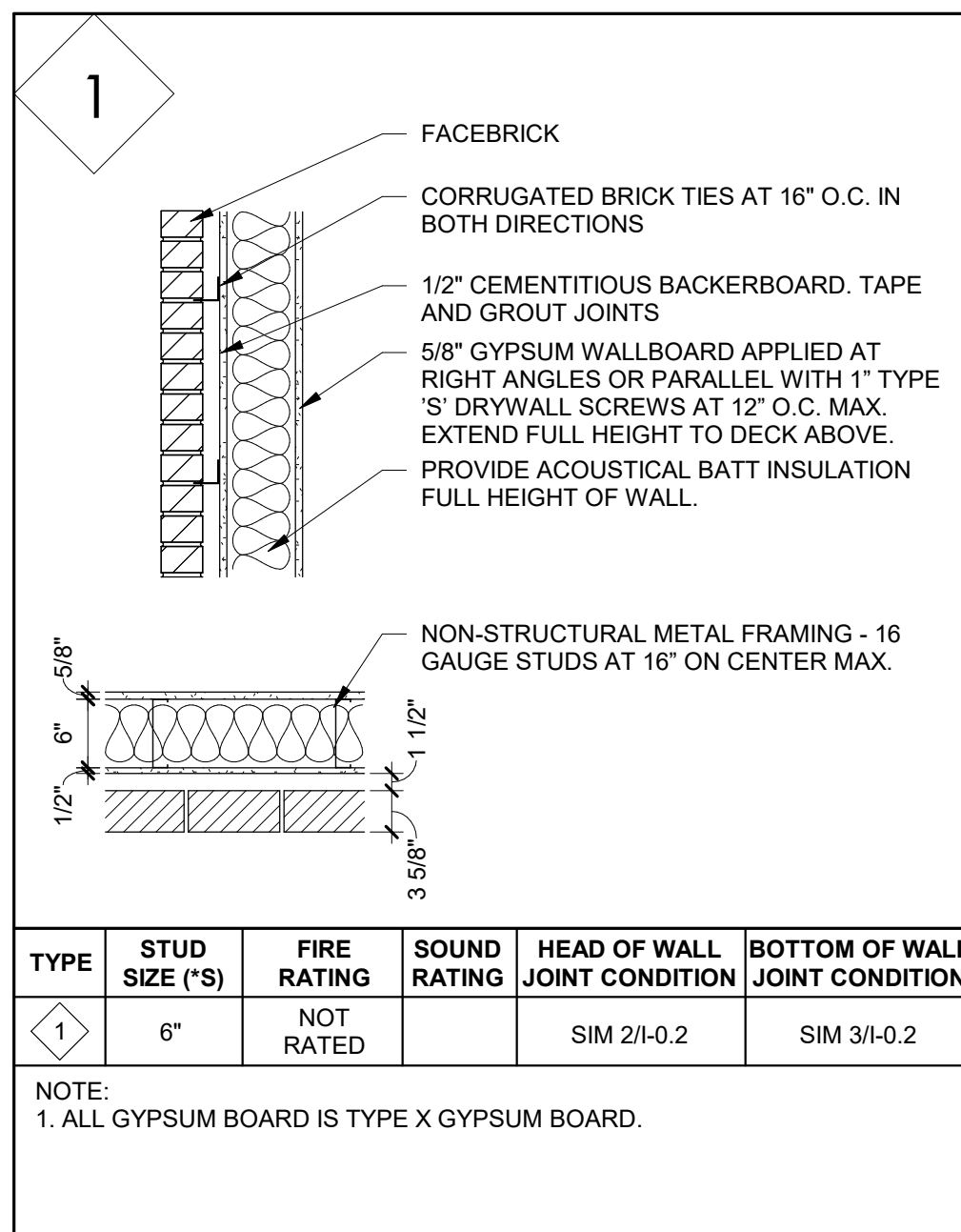


2 OVERALL FLOOR PLAN - FIT OUT
1/8" = 1'-0"

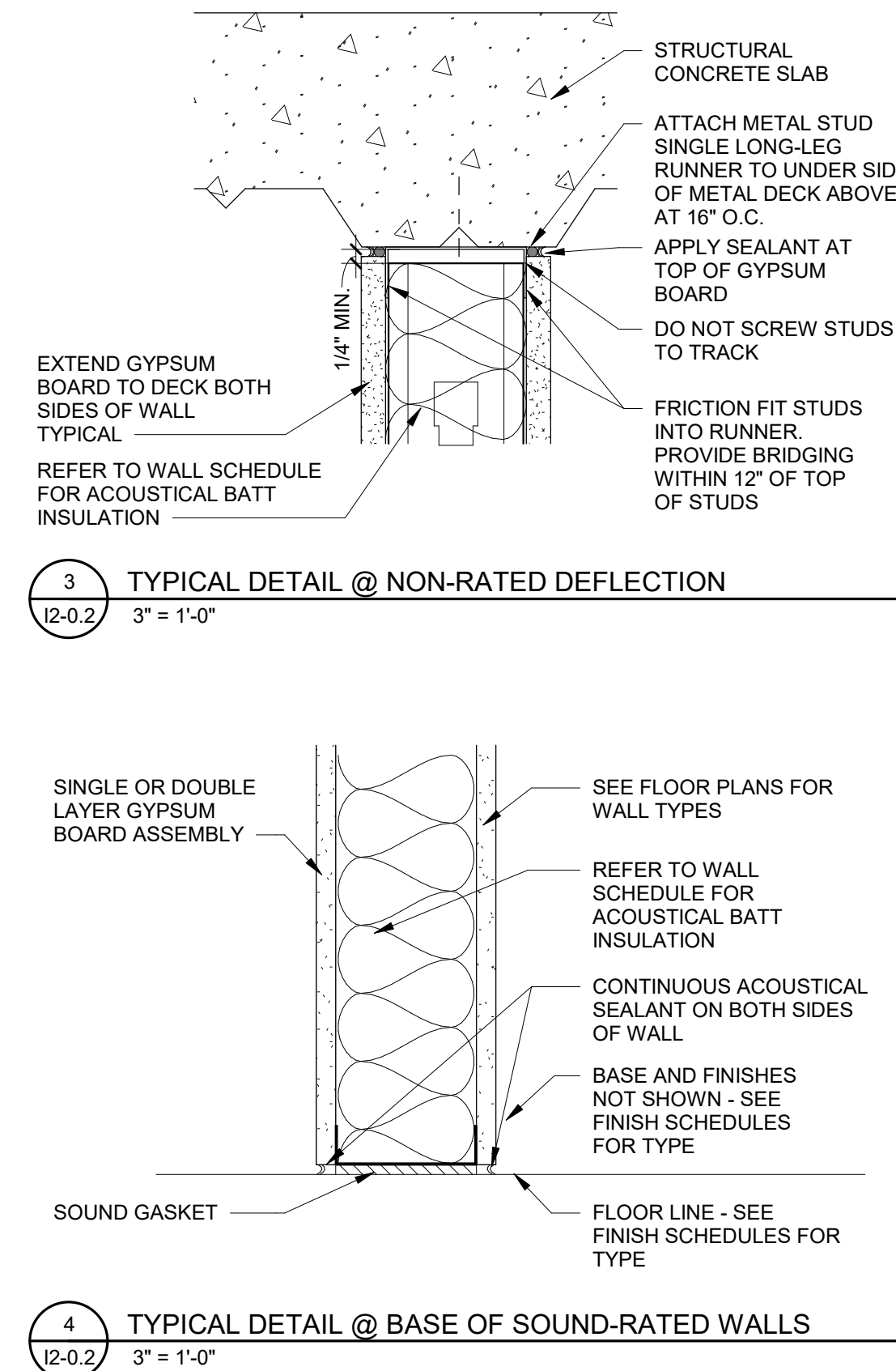
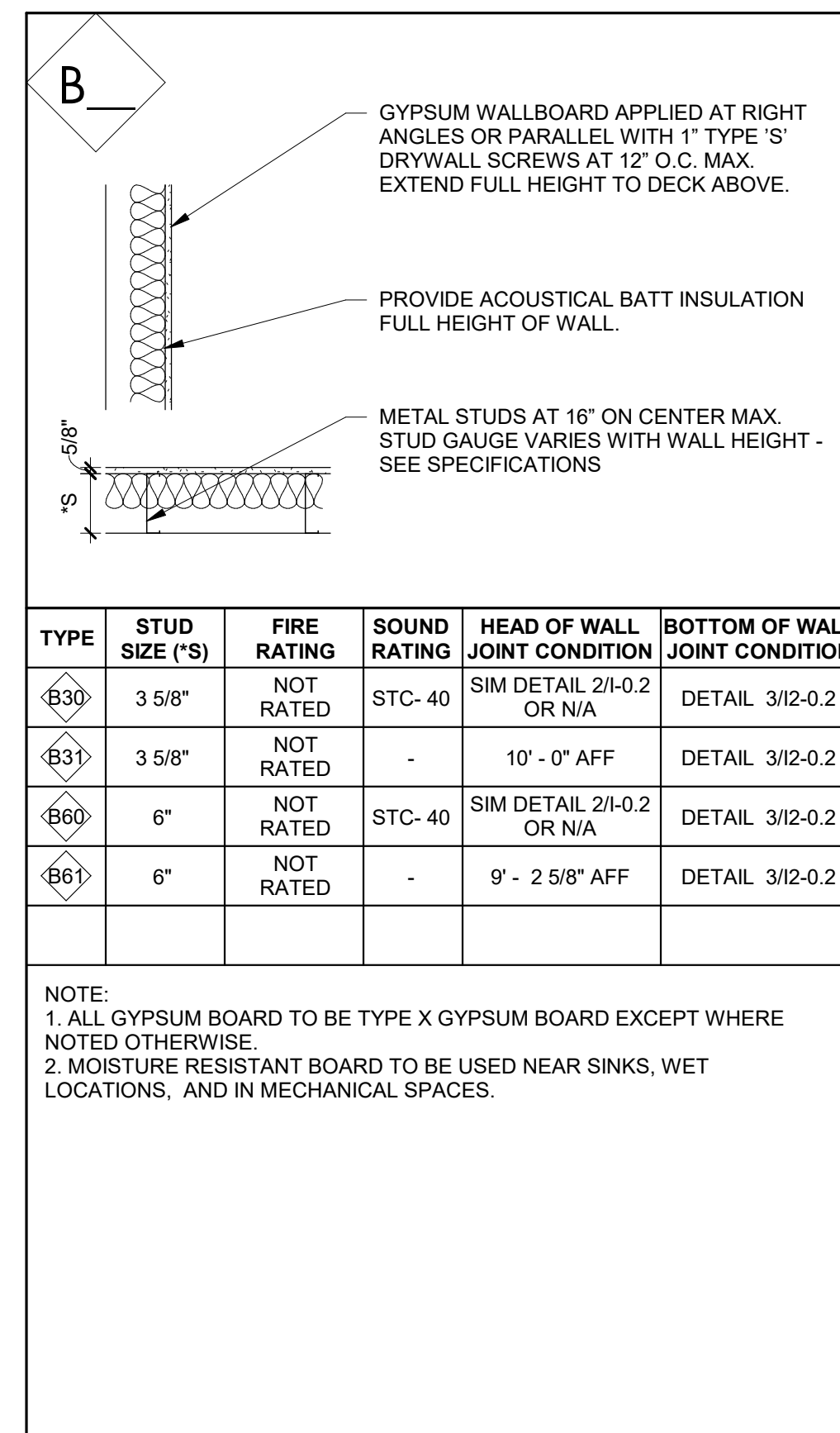
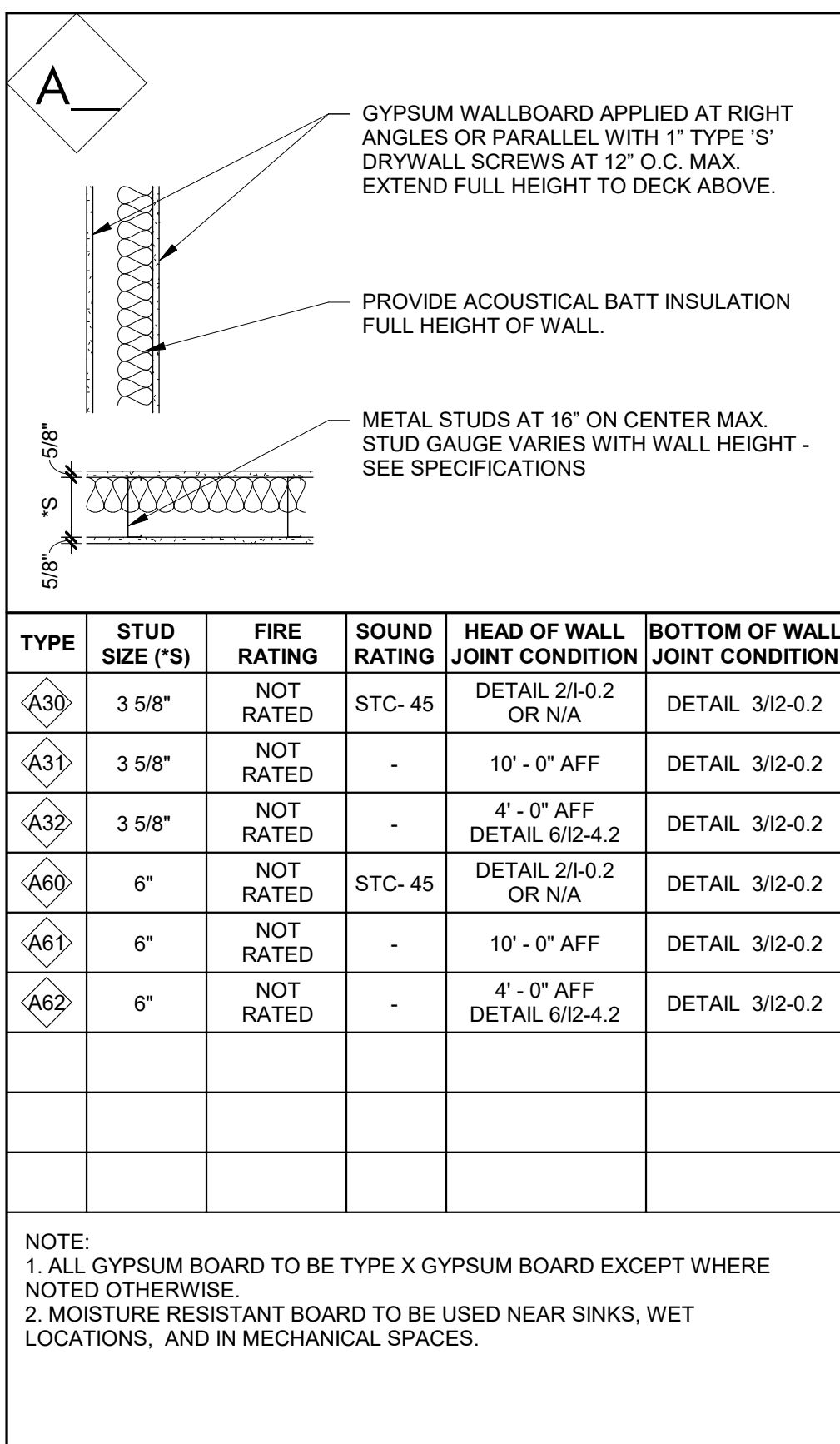
WALL TYPE GENERAL NOTES

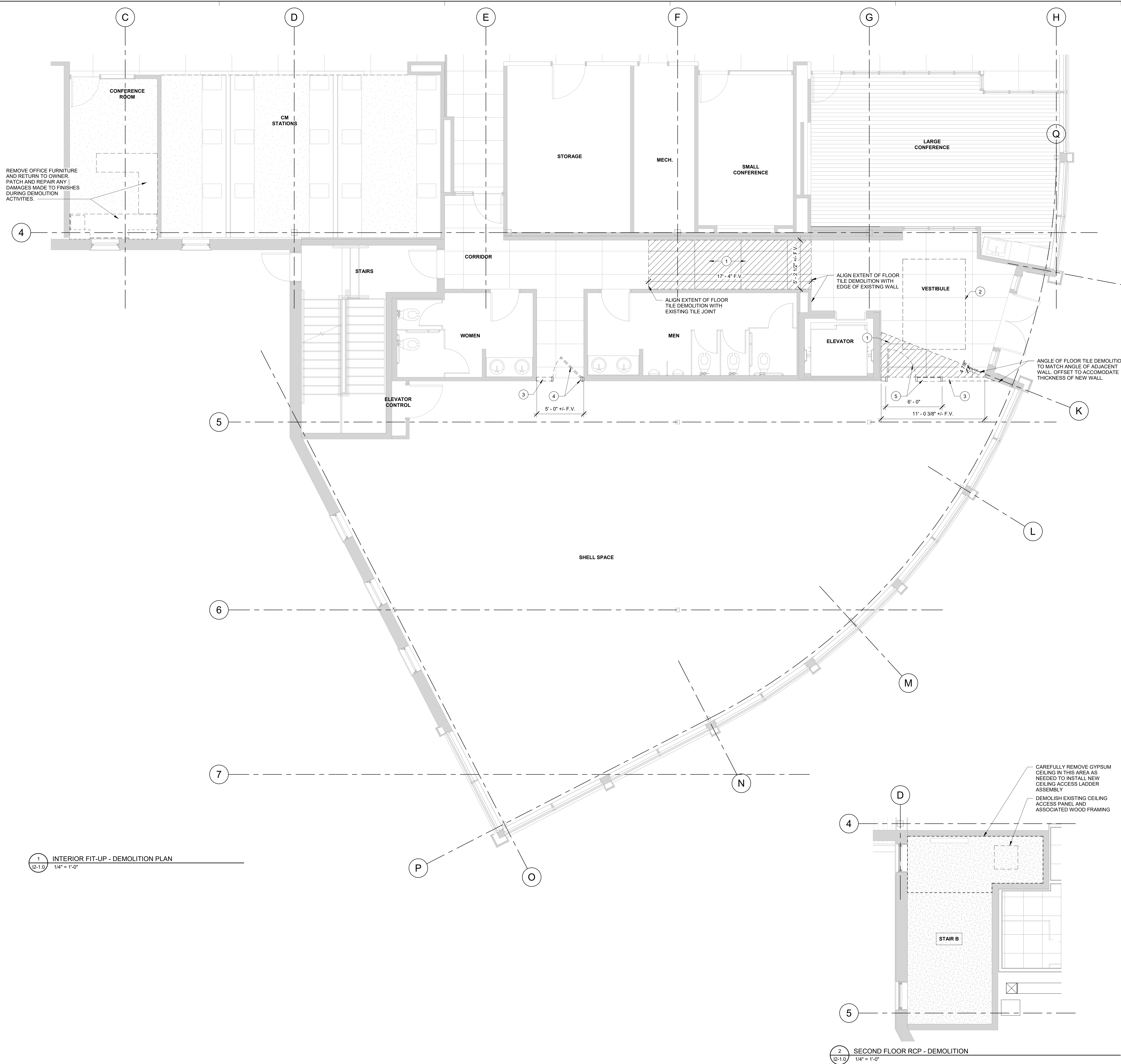
EXTEND GYPSUM WALL BOARD FULL HEIGHT WHERE EXPOSED TO VIEW AT CLOUD CEILING LOCATIONS.
ALL METAL STUD WALLS SHOWN TO BE FULL HEIGHT TO HAVE GYPSUM WALLBOARD EXTEND TO DECK ABOVE ON BOTH SIDES OF THE WALL.

SPECIALTY WALL TYPES



INTERIOR WALL TYPES





DEMOLITION KEYED NOTES

- 1 REMOVE EXISTING CERAMIC TILE FLOORING. PREPARE FLOOR SUBSTRATE TO RECEIVE NEW FINISHES.
- 2 REMOVE EXISTING LAY IN CEILING AND FIXTURES. SALVAGE ALL EXISTING LIGHTS AND RETURN TO OWNER.
- 3 REMOVE EXISTING 3-5/8" STUD WALL. PREPARE FLOOR SUBSTRATE TO RECEIVE NEW FINISHES. PATCH AND REPAIR ADJACENT SURFACES.
- 4 REMOVE EXISTING HOLLOW METAL FRAME AND WOOD DOOR. SALVAGE DOOR AND HARDWARE AND RETURN TO OWNER.
- 5 REMOVE EXISTING TILE FLOOR

DEMOLITION LEGEND

- EXISTING CONSTRUCTION TO BE REMOVED
- ZZZZ EXISTING FLOORING TO BE REMOVED
- EXISTING WALL TO REMAIN
- .-.- EXISTING DOOR AND FRAME TO BE REMOVED

DEMOLITION NOTES

ALL DIMENSIONS SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR.

CONTRACTOR TO FIELD VERIFY ALL CONDITIONS AND PHOTOGRAPH AND VIDEOTAPE ALL CONDITIONS PRIOR TO DEMOLITION.

CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING ITEMS, SYSTEMS, AND FINISHES TO REMAIN FROM ANY AND ALL DAMAGE DURING CONSTRUCTION. ANY EXISTING ITEMS OR SYSTEMS TO REMAIN THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE WITH IDENTICAL PRODUCTS.

WORK OUTSIDE THE CONSTRUCTION AREA, INCLUDING UTILITY CONNECTIONS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WORK ARE TO BE COORDINATED WITH THE OWNER IN ADVANCE.

ALL PUBLIC AREAS OUTSIDE THE CONSTRUCTION AREA ARE TO BE KEPT CLEAR AND CLEAN AT ALL TIMES.

OWNER WILL REMOVE ANY LOOSE ITEMS, EQUIPMENT, AND OTHER ARTICLES PRIOR TO BEGINNING OF CONSTRUCTION.

SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION SCOPE.

PROVIDE TEMPORARY LIGHTING AS REQUIRED FOR CONSTRUCTION ACTIVITIES FOLLOWING REMOVAL OF EXISTING LIGHT FIXTURES.

MAINTAIN EGRESS PATH AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION.

USE OF EXISTING BUILDING ELEVATOR IS PERMITTED DURING DEMOLITION AND CONSTRUCTION. CONTRACTOR TO PROTECT CAB FINISHES DURING DEMOLITION AND CONSTRUCTION ACTIVITIES.

SEPARATE AND RECYCLE DEMOLITION AND CONSTRUCTION DEBRIS. REFERENCE LEED V. 2009 MR PREREQUISITE 1.

CUTTING AND PATCHING NOTES

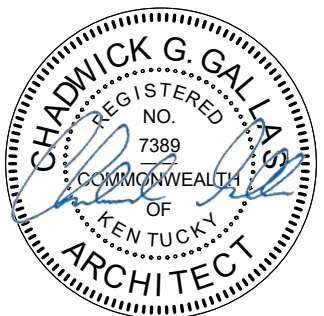
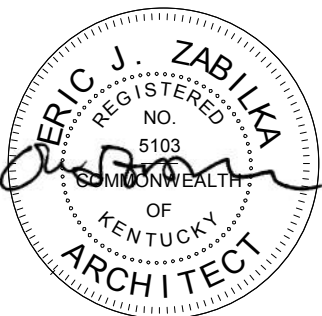
CUT IN-PLACE CONSTRUCTION TO PROVIDE FOR INSTALLATION OF OTHER COMPONENTS OR PERFORMANCE OF OTHER CONSTRUCTION, AND PATCH AS REQUIRED TO RESTORE SURFACES TO THEIR ORIGINAL CONDITION.

PROTECT IN-PLACE CONSTRUCTION DURING CUTTING AND PATCHING TO PREVENT DAMAGE. COORDINATE CUTTING AND PATCHING WITH OWNER. WHERE EXISTING SERVICES/SYSTEMS ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, BYPASS SUCH SERVICES/SYSTEMS BEFORE CUTTING.

CUTTING: CUT IN-PLACE CONSTRUCTION USING METHODS LEAST LIKELY TO DAMAGE ELEMENTS RETAINED OR ADJOINING CONSTRUCTION. IN GENERAL, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING AND GRINDING. CUT HOLES AND SLOTS NEATLY TO MINIMIZE SIZE REQUIRED, AND WITH MINIMUM DISTURBANCE OF ADJACENT SURFACES. FLOORS AND WALLS. PROVIDE AN EVEN SURFACE OF UNIFORM FINISH, COLOR, TEXTURE, AND APPEARANCE.

PATCHING: PATCH CONSTRUCTION BY FILLING, REPAIRING, REFINISHING, CLOSING UP, AND SIMILAR OPERATIONS FOLLOWING PERFORMANCE OR OTHER WORK. PATCH WITH DURABLE SEAMS THAT ARE AS INVISIBLE AS PRACTICABLE. PROVIDE MATERIALS AND COMPLY WITH INSTALLATION REQUIREMENTS SPECIFIED IN OTHER SECTIONS, WHERE APPLICABLE.

RESTORE EXPOSED FINISHES OF PATCHED AREAS AND EXTEND FINISH RESTORATION INTO RETAINED ADJOINING CONSTRUCTION IN A MANNER THAT WILL ELIMINATE EVIDENCE OF PATCHING AND REFINISHING. CLEAN AREAS AND SPACES WHERE CUTTING AND PATCHING ARE PERFORMED. REMOVE PAINT, OILS, PUTTY, AND SIMILAR MATERIALS FROM ADJACENT FINISHED SURFACES.



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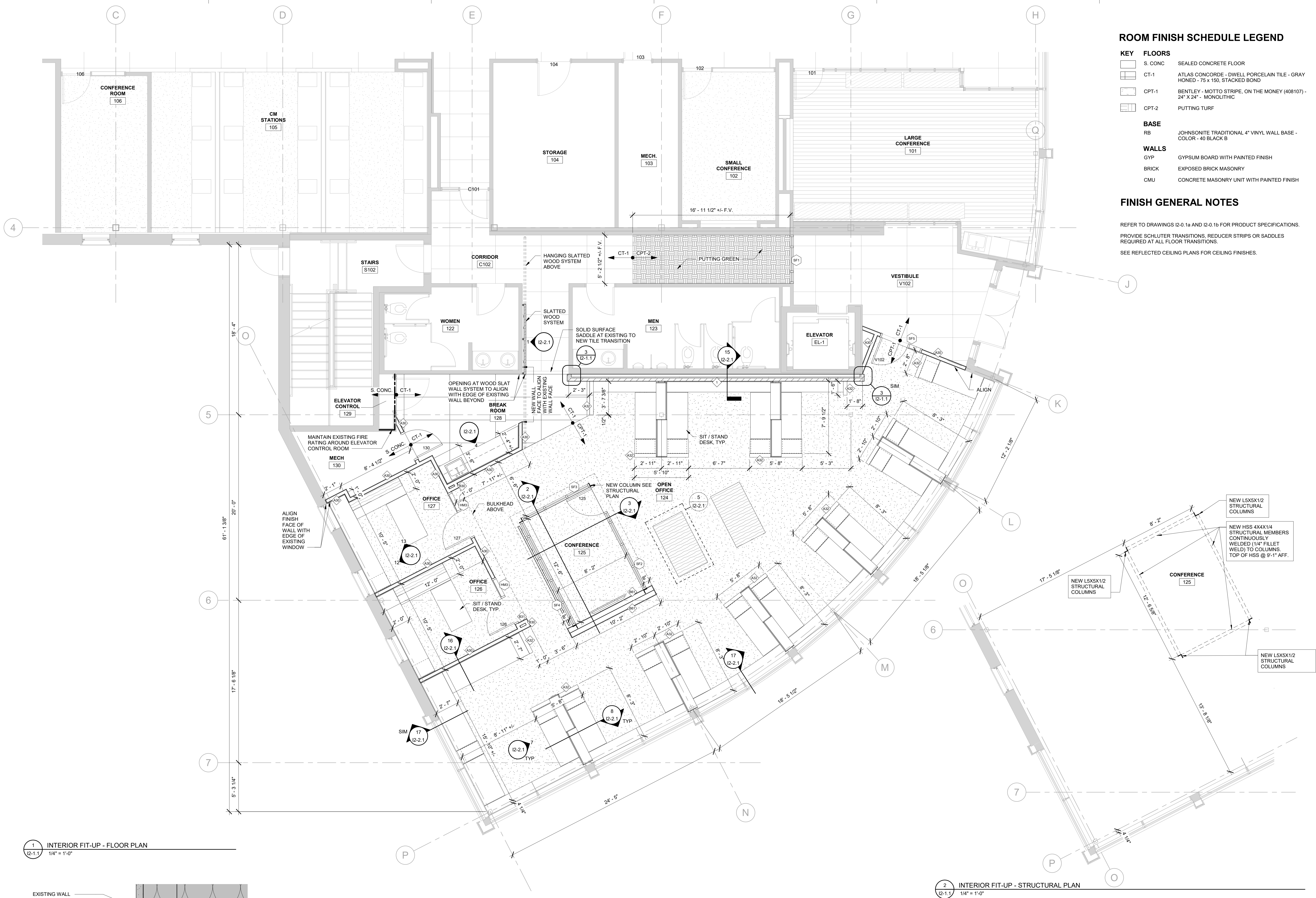
PROJECT NUMBER 1921

DATE JULY 1, 2020

REVISIONS

INTERIOR FIT-UP - DEMO
PLAN

12-1.0



ROOM FINISH SCHEDULE LEGEND

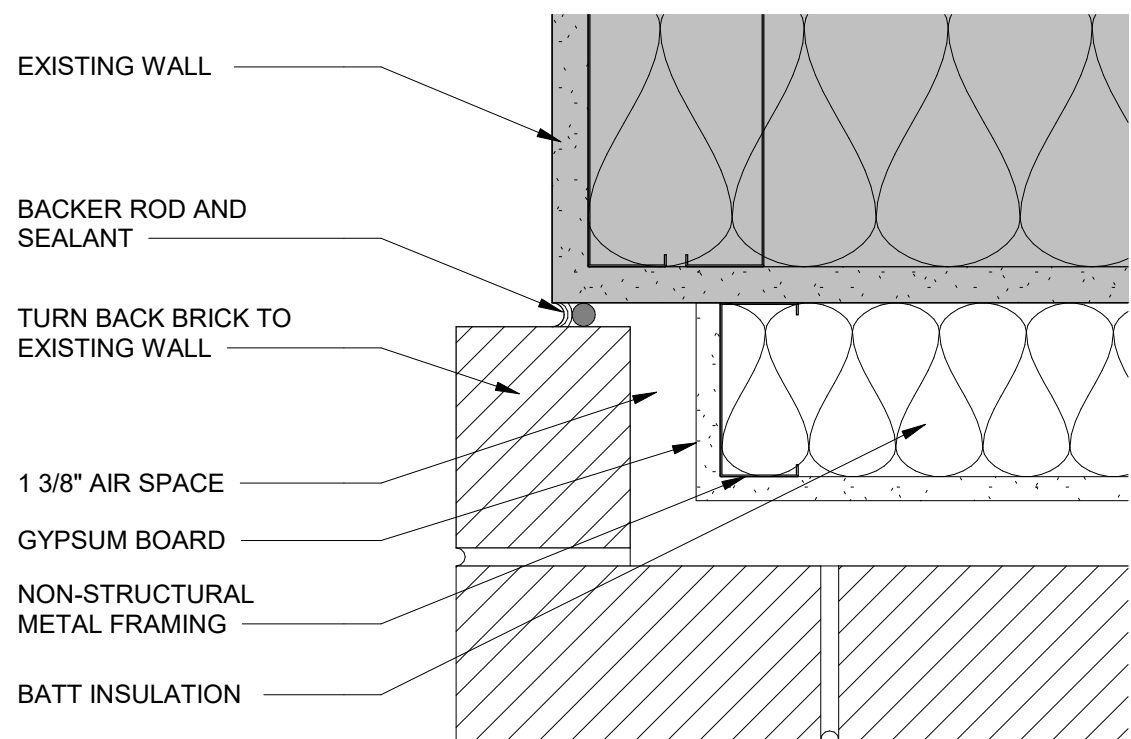
KEY	FLOORS
S. CONC	SEALED CONCRETE FLOOR
CT-1	ATLAS CONCORDE - DWELL PORCELAIN TILE - GRAY HONED - 75 x 150, STACKED BOND
CPT-1	BENTLEY - MOTTO STRIPE, ON THE MONEY (408107) - 24" X 24" - MONOLITHIC
CPT-2	PUTTING TURF
BASE	
RB	JOHNSONITE TRADITIONAL 4" VINYL WALL BASE - COLOR - 40 BLACK B
WALLS	
GYP	GYPSUM BOARD WITH PAINTED FINISH
BRICK	EXPOSED BRICK MASONRY
CMU	CONCRETE MASONRY UNIT WITH PAINTED FINISH

FINISH GENERAL NOTES

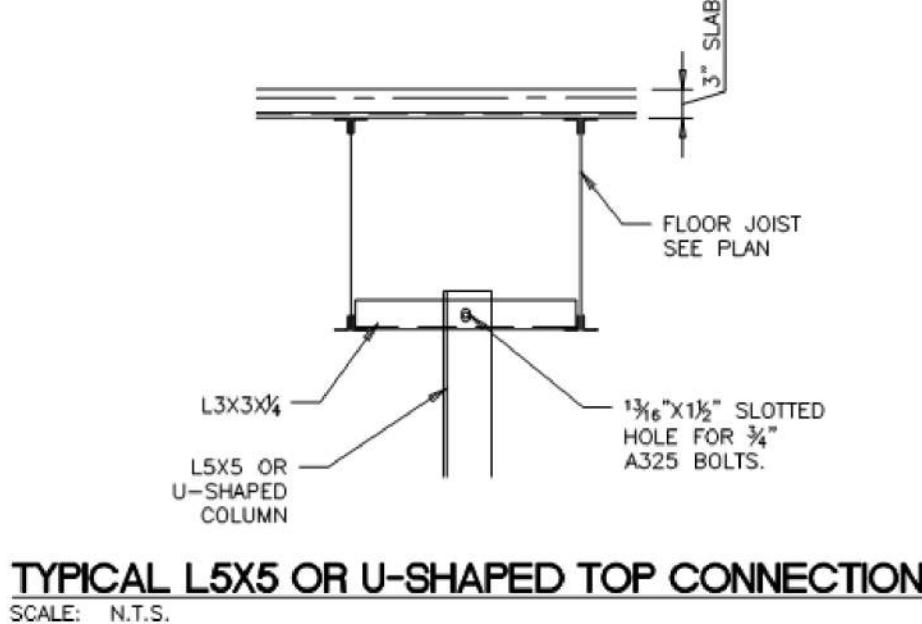
REFER TO DRAWINGS I2-0.1a AND I2-0.1b FOR PRODUCT SPECIFICATIONS.
PROVIDE SCHLUTER TRANSITIONS, REDUCER STRIPS OR SADDLES REQUIRED AT ALL FLOOR TRANSITIONS.
SEE REFLECTED CEILING PLANS FOR CEILING FINISHES.

1 INTERIOR FIT-UP - FLOOR PLAN
I2-1.1
1/4" = 1'-0"

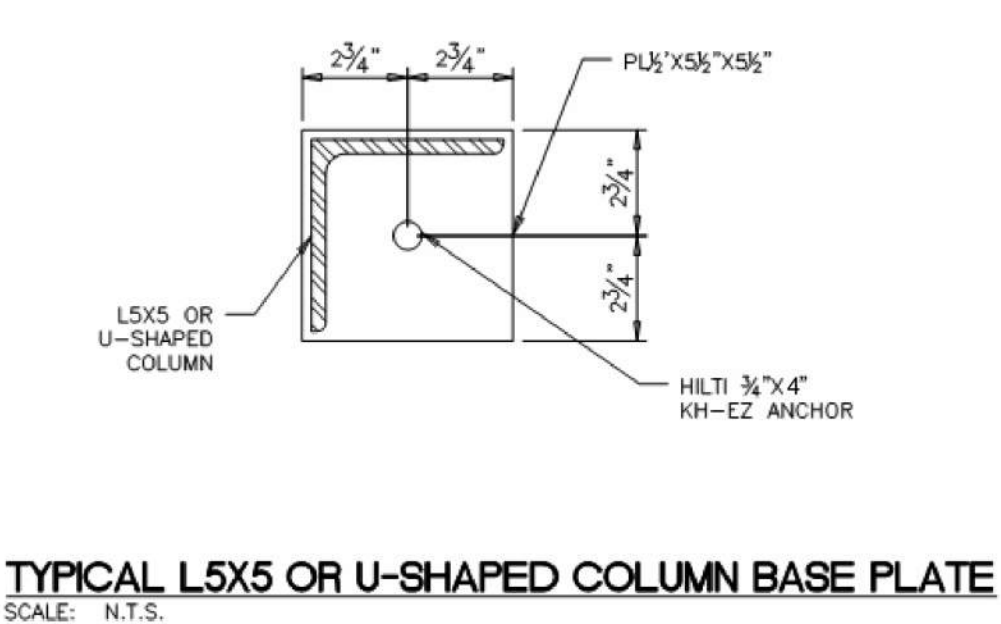
2 INTERIOR FIT-UP - STRUCTURAL PLAN
I2-1.1
1/4" = 1'-0"



3 DETAIL @ BRICK WALL
I2-1.1
3" = 1'-0"

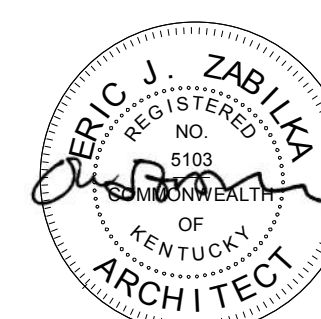


4 NEW COLUMN CONNECTION DETAIL
I2-1.1
1/2" = 1'-0"



ROOM FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR	BASE	WALL				COMMENTS	ROOM #
				NORTH	EAST	SOUTH	WEST		
124	OPEN OFFICE	CPT-1	RB	BRICK / GYP	GYP	GYP	GYP		124
125	CONFERENCE	CPT-1	RB	N/A	N/A	GYP	N/A		125
126	OFFICE	CPT-1	RB	GYP	GYP	GYP	GYP		126
127	OFFICE	CPT-1	RB	GYP	GYP	GYP	GYP		127
128	BREAK ROOM	CT-1	RB	GYP	N/A	GYP	GYP		128
129	ELEVATOR CONTROL	S. CONC	RB	GYP	GYP	GYP	CMU		129
130	MECH	S. CONC	RB	CMU / GYP	GYP	GYP	GYP		130
C102	CORRIDOR	CT-1 / CPT-2	RB	BRICK / GYP	GYP	GYP	GYP		C102
V102	VESTIBULE	CT-1	RB	BRICK / GYP	GYP	GYP	GYP		V102



LOUISVILLE, KENTUCKY
CMTA OFFICE FIT OUT 2

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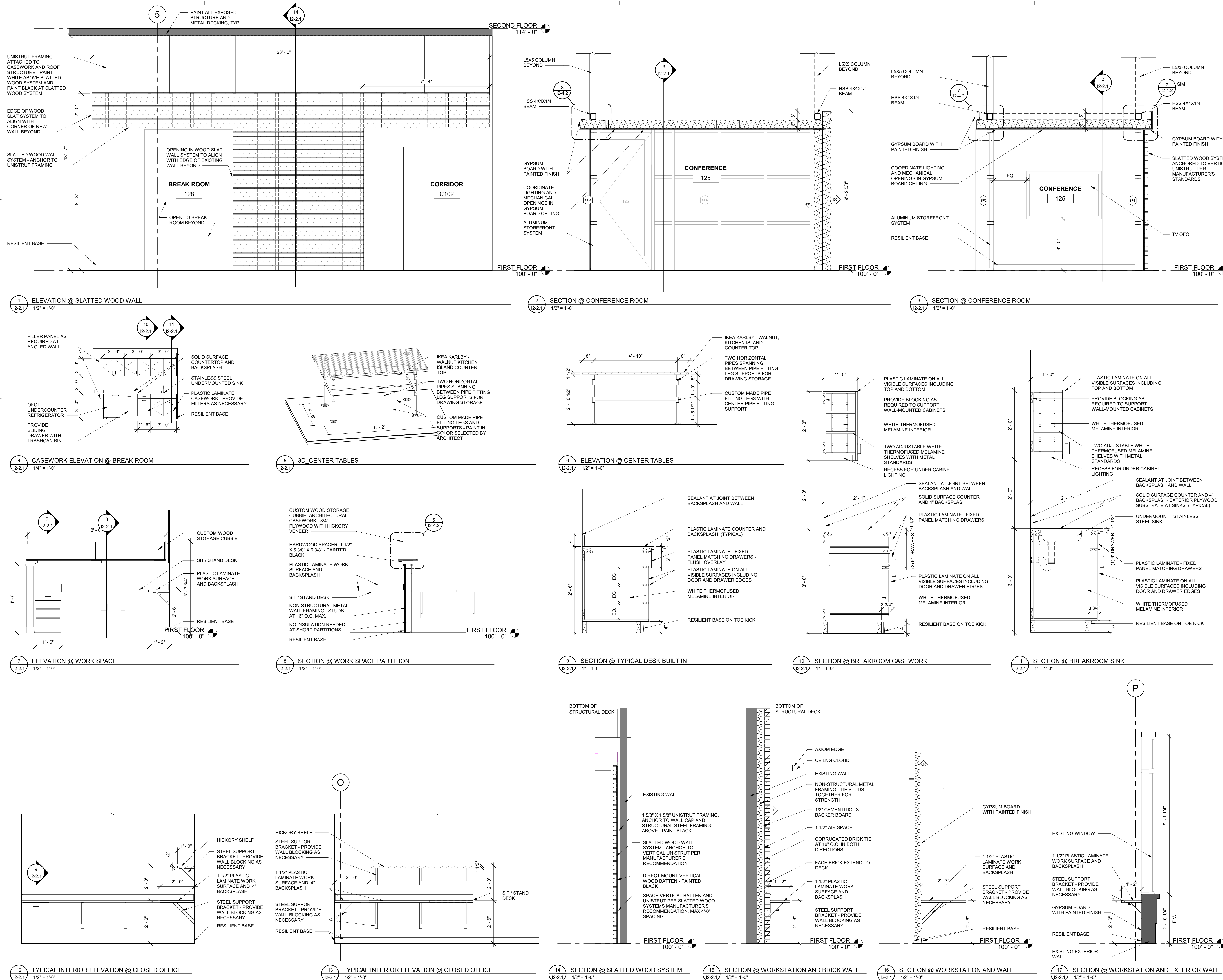
PROJECT NUMBER	1921
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DATE JULY 1, 2020

REVISIONS

INTERIOR ELEVATIONS AND CASEWORK DETAILS

12-2.1





REFLECTED CEILING PLAN LEGEND

HIGH GYPSUM BOARD CEILING / SOFFIT	2x2 RECESSED INDIRECT LIGHT FIXTURE	1x1 RETURN AIR GRILL
LOW GYPSUM BOARD CEILING / SOFFIT	2x4 RECESSED INDIRECT LIGHT FIXTURE	SLOT DIFFUSER
2x2 ACOUSTIC CEILING PANEL (ACP-1)	SUM RECESSED LIGHT FIXTURE	2x2 SUPPLY DIFFUSER
SLATTED WOOD CEILING SYSTEM	WALL WASH DOWNLIGHT	2x2 RETURN AIR GRILL
ROLLER SHADE	DOWNLIGHT	2x2 EXHAUST GRILL
	ILLUMINATED SIGN	1x1 SUPPLY DIFFUSER
	UTILITY LIGHT FIXTURE	

*REFERENCE ELECTRICAL AND MECHANICAL DRAWINGS FOR ALL LIGHTING TYPES AND COUNTS, AND DIFFUSER COUNTS AND DUCT SIZES.

GENERAL EXECUTION NOTES

- INSTALL ACOUSTICAL PANEL CEILINGS TO COMPLY WITH ASTM C 636/C 636M, ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND CISCAS 'CEILING SYSTEMS HANDBOOK'.
- INSTALL HANGERS PLUMB AND FREE FROM CONTACT WITH INSULATION OR OTHER OBJECTS WITHIN CEILING PLENUM THAT ARE NOT PART OF SUPPORTING STRUCTURE OR OF CEILING SUSPENSION SYSTEM.
- SPRAY HANGERS ONLY WHERE REQUIRED TO MISS OBSTRUCTIONS; OFFSET RESULTING HORIZONTAL FORCES BY BRACING, COUNTERSPLAYING, OR OTHER EQUALLY EFFECTIVE MEANS.
- DO NOT SPAY HANGERS ACROSS OPENINGS IN CEILING OR PAST EDGE OF FLOATING CEILING PANELS. PROVIDE DIAGONAL BRACING AS REQUIRED TO PREVENT MOVEMENT AT ALL FLOATING CEILING PANELS, WITHOUT SPAYING HANGERS PAST EDGES.
- WHERE WIDTH OF DUCTS AND OTHER CONSTRUCTION WITHIN CEILING PLENUM PRODUCES HANGER SPACINGS THAT INTERFERE WITH LOCATION OF HANGERS AT SPACINGS REQUIRED TO SUPPORT STANDARD SUSPENSION-SYSTEM MEMBERS, INSTALL SUPPLEMENTAL SUSPENSION MEMBERS AND HANGERS IN FORM OF TRAPEZES OR EQUIVALENT DEVICES.
- INSTALL EDGE MOLDINGS AND TRIM OF TYPE INDICATED AT PERIMETER OF ACOUSTICAL CEILING AREA AND WHERE NECESSARY TO CONCEAL EDGES OF ACOUSTICAL PANELS.
 - APPLY ACOUSTICAL SEALANT IN A CONTINUOUS RIBBON CONCEALED ON BACK OF VERTICAL LEGS OF MOLDINGS BEFORE THEY ARE INSTALLED.
 - SCREW ATTACH MOLDINGS TO SUBSTRATE AT INTERVALS NOT MORE THAN 16 INCHES (400 MM) O.C. AND NOT MORE THAN 3 INCHES (75 MM) FROM ENDS, LEVELING WITH CEILING SUSPENSION SYSTEM TO A TOLERANCE OF 1/8 INCH IN 12 FEET (3.2 MM IN 3.6 M). MITER CORNERS ACCURATELY AND CONNECT SECURELY.
 - DO NOT USE EXPOSED FASTENERS, INCLUDING POP RIVETS, ON MOLDINGS AND TRIM.
- INSTALL SUSPENSION-SYSTEM RUNNERS SO THEY ARE SQUARE AND SECURELY INTERLOCKED WITH ONE ANOTHER. REMOVE AND REPLACE DENTED, BENT, OR KINKED MEMBERS.
- INSTALL ACOUSTICAL PANELS WITH UNDAMAGED EDGES AND FIT ACCURATELY INTO SUSPENSION-SYSTEM RUNNERS AND EDGE MOLDINGS. SCRIBE AND CUT PANELS AT BORDERS AND PENETRATIONS TO PROVIDE A NEAT, PRECISE FIT.
 - FOR REVEAL-EDGED PANELS ON SUSPENSION-SYSTEM RUNNERS, INSTALL PANELS WITH BOTTOM OF REVEAL IN FIRM CONTACT WITH TOP SURFACE OF RUNNER FLANGES.

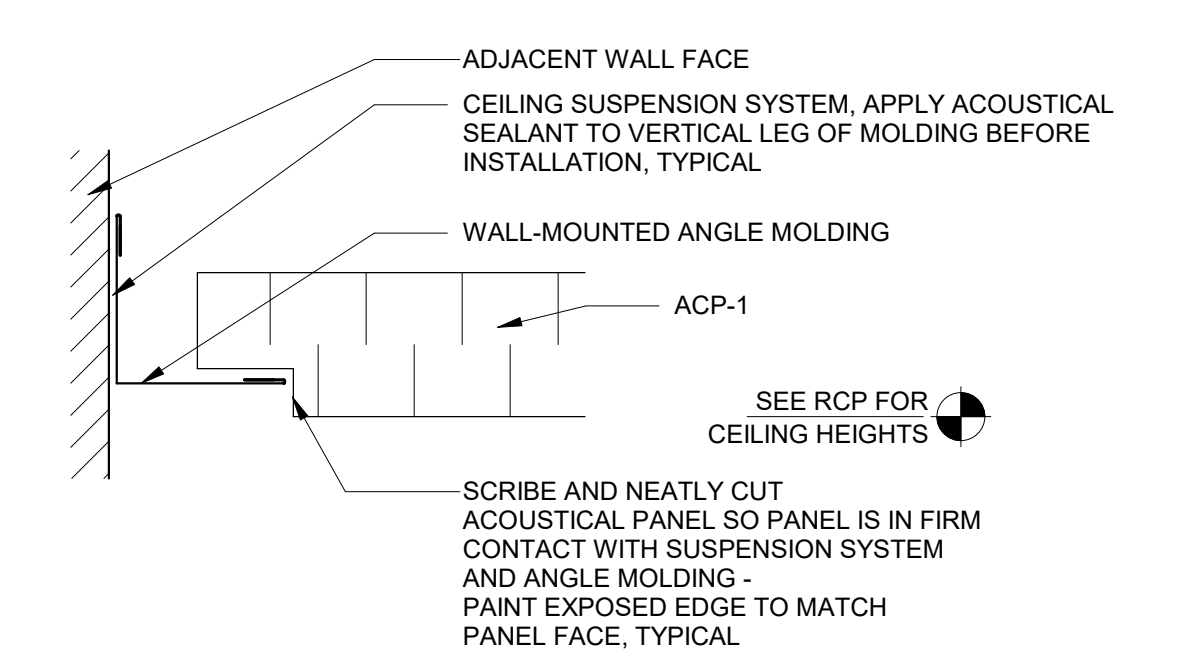
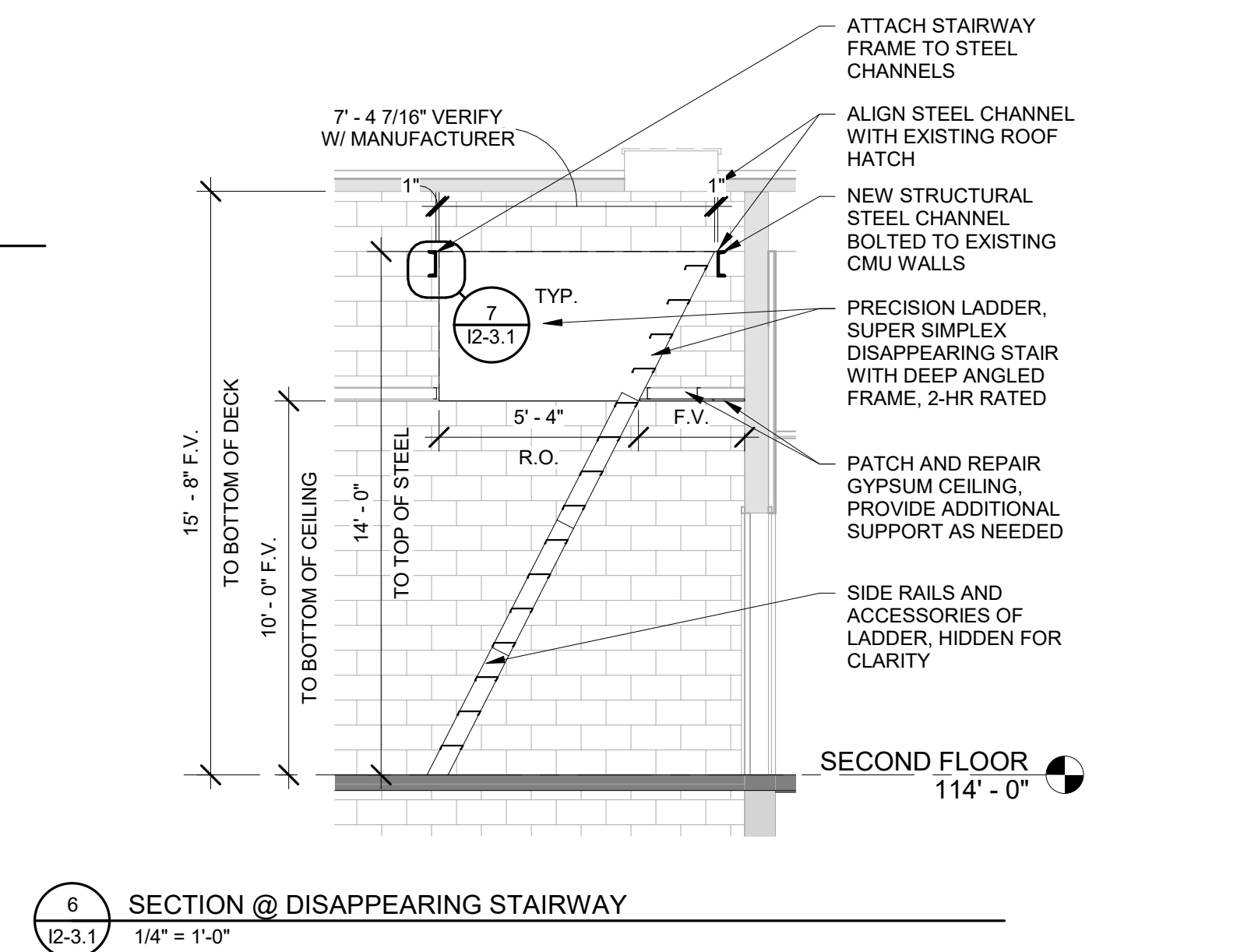
C6 CONNECTION TO CMU

- 7 (12-3.1) 1/2" = 1'-0"
- STEEL CHANNEL CONNECTION @ EXISTING MASONRY WALL

REFLECTED CEILING GENERAL NOTES

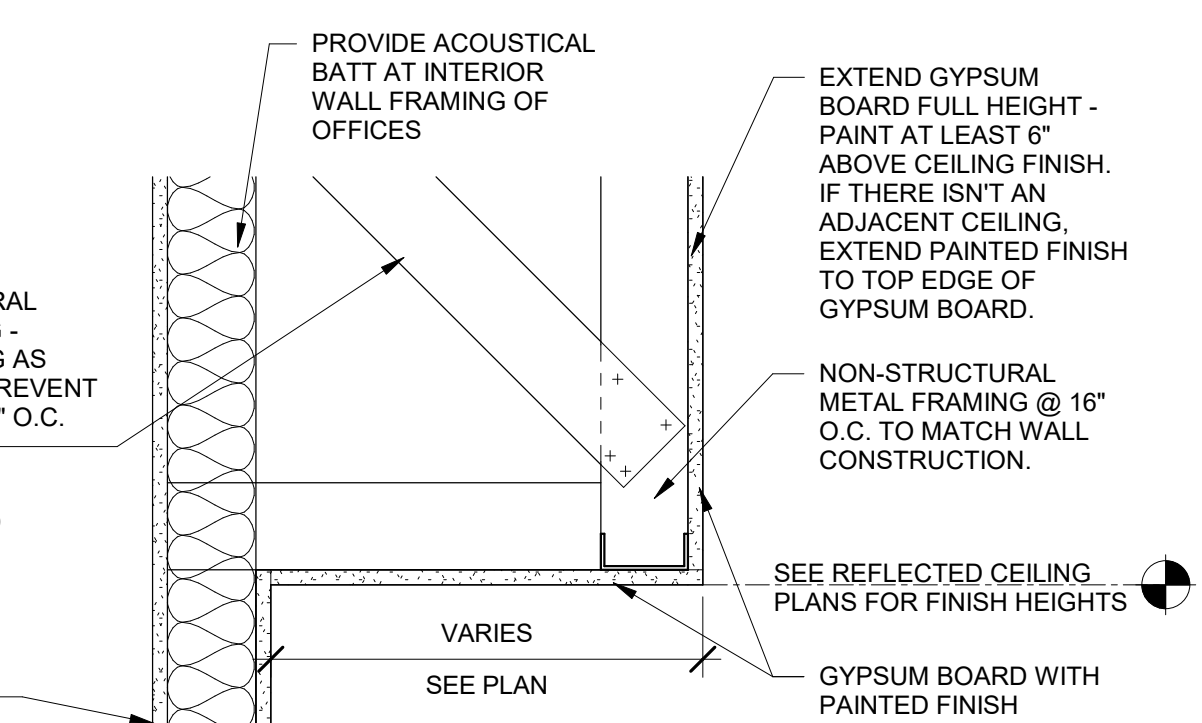
- ALL CEILING HEIGHTS ARE TO FINISHED FACE OF GYPSUM BOARD OR FINISH FACE OF ACOUSTIC CEILING PANEL.
- ALL EXPOSED TO VIEW STRUCTURAL FRAMING, METAL DECKING, AND ACCESSORIES TO RECEIVE PAINTED FINISH.
- ALL GYPSUM BOARD SOFFITS TO RECEIVE PAINTED FINISH.
- REFER TO SHEET I-0.1 AND I-0.2 FOR PRODUCT SELECTIONS.

- 5 (12-3.1) 1/4" = 1'-0"
- SECOND FLOOR RCP

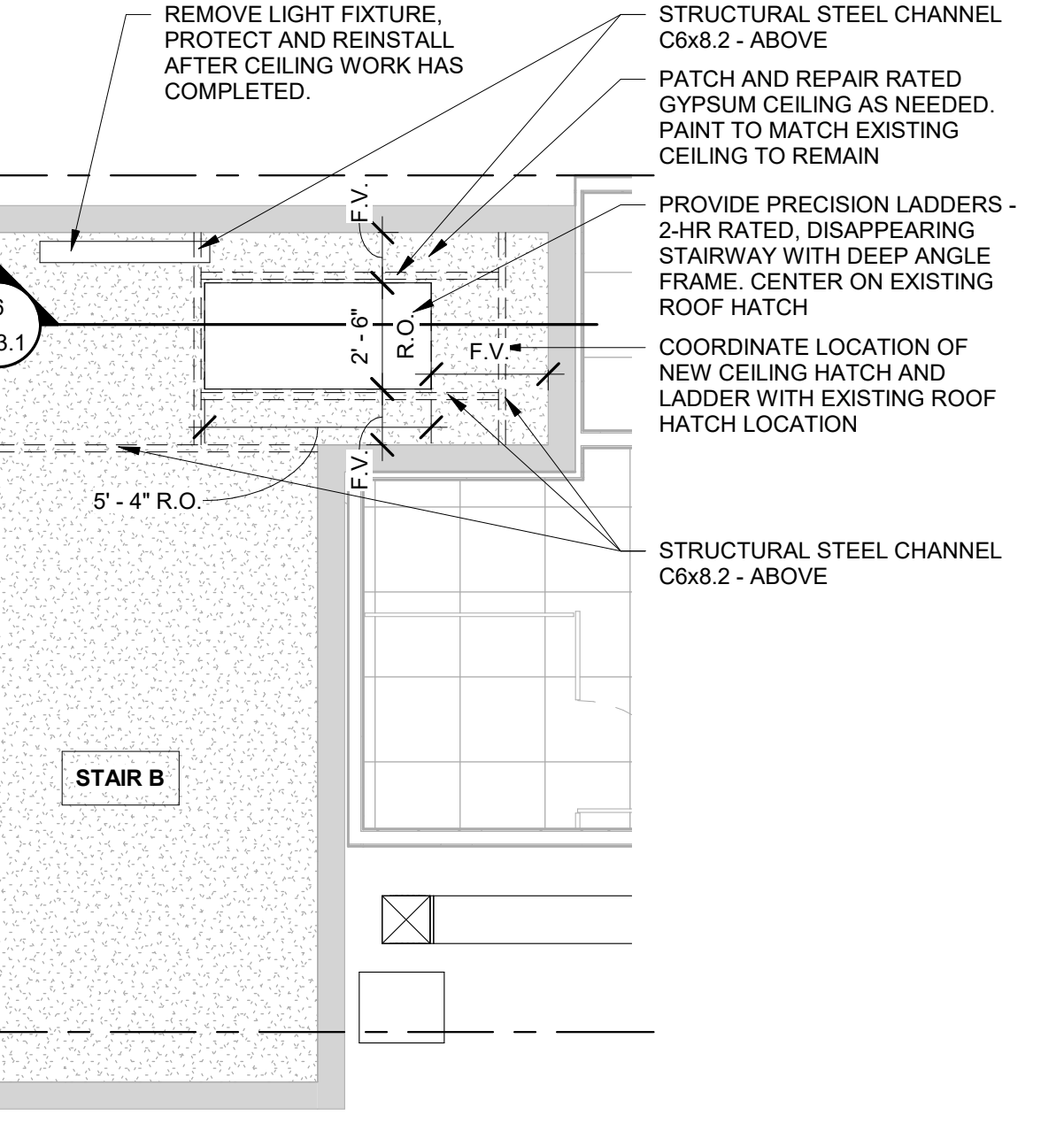


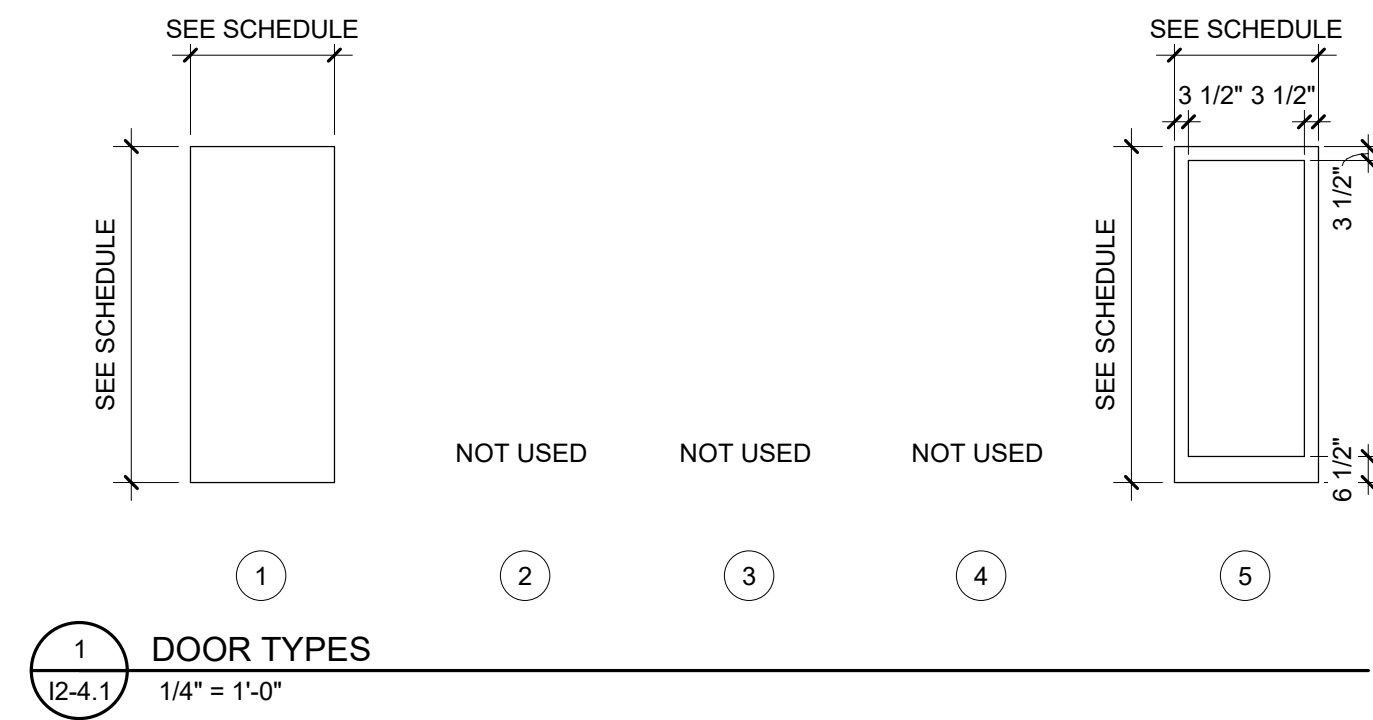
- 2 (12-3.1) 1/2" = 1'-0"
- TYPICAL DETAIL @ APC AND PARTITION INTERSECTION

- 3 (12-3.1) 1 1/2" = 1'-0"
- TYPICAL DETAIL @ CEILING CLOUD EDGE

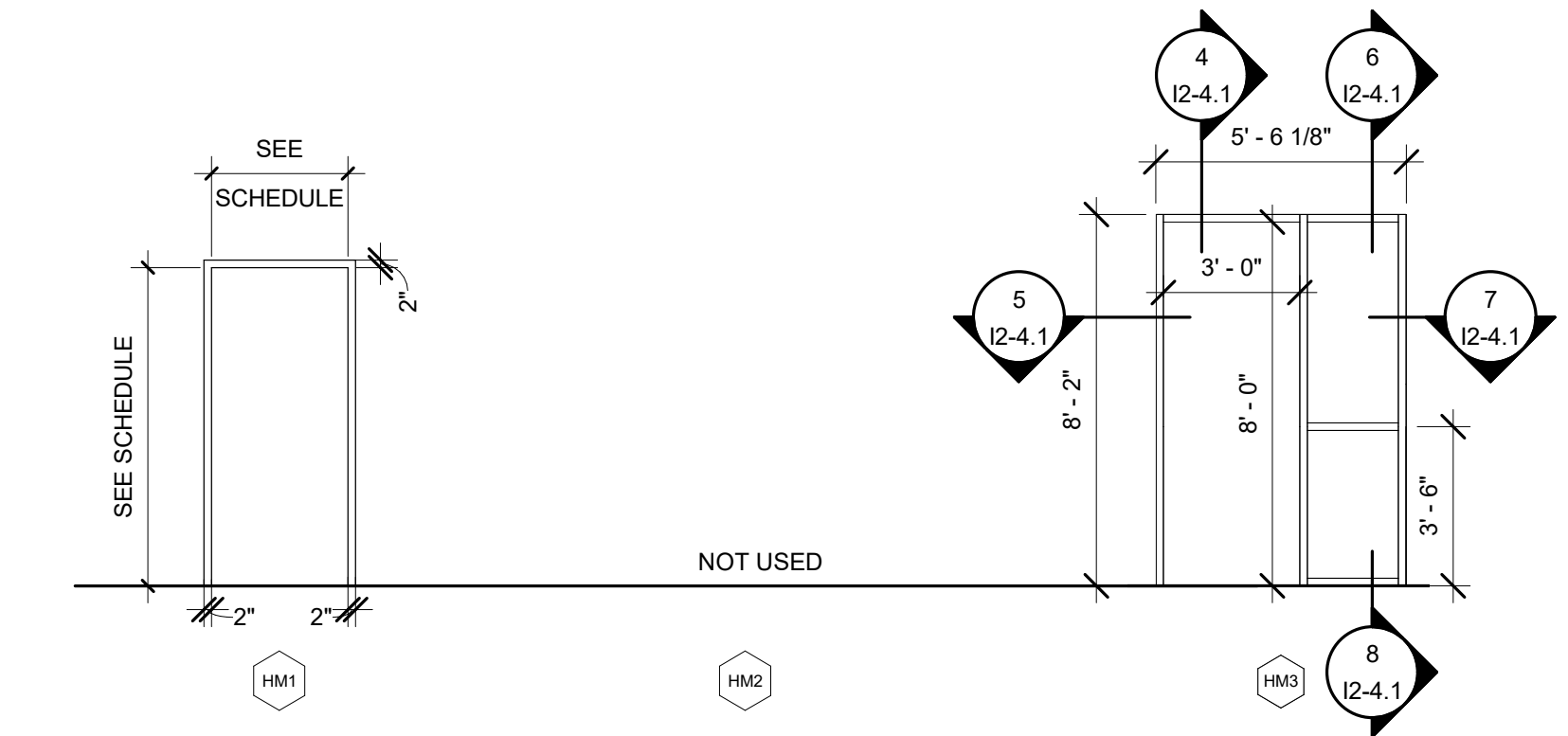


- 4 (12-3.1) 1 1/2" = 1'-0"
- TYPICAL DETAIL @ SOFFIT





1 DOOR TYPES
1/4" = 1'-0"

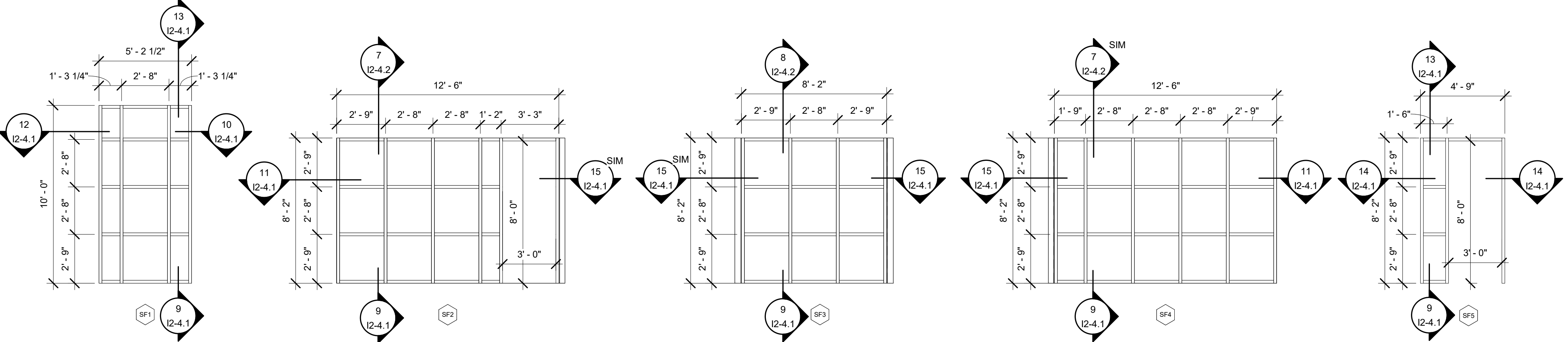


2 HOLLOW METAL FRAME TYPES
1/4" = 1'-0"

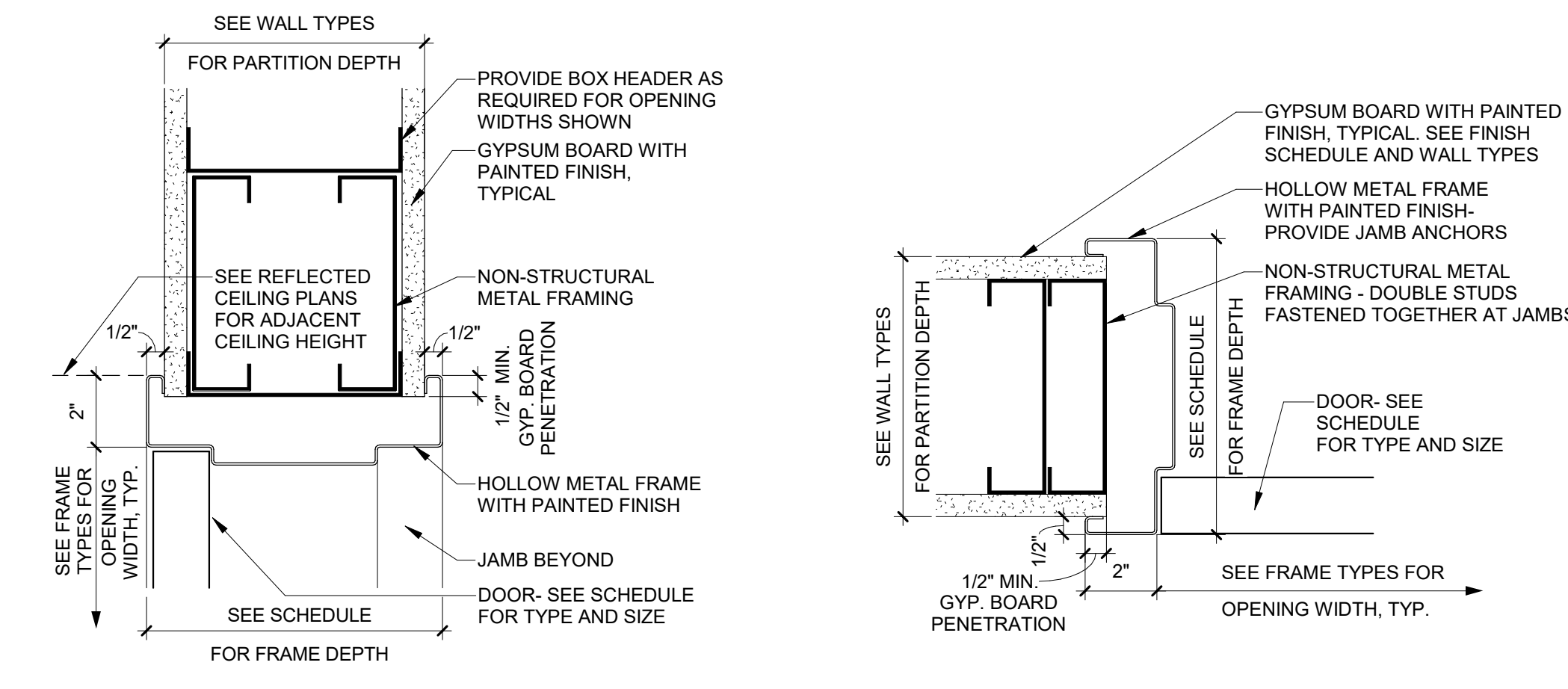
DOOR SCHEDULE														
MARK	ROOM NAME	DOOR					FRAME			DETAIL		HARDWARE SET		
		TYPE	WIDTH	SINGLE/PAIR	HEIGHT	MAT.	TYPE	DEPTH	MAT.	JAMB	HEAD			
125	CONFERENCE	5	3'-0"	S	8'-0"	AL	SF2	0'-4 1/2"	AL	15 / 12-4.1	8 / 12-4.2	HDW BY GLAZING SYSTEM MANUFACTURER. PROVIDE PASSAGE FUNCTION (F75), AND WALL STOP		
126	OFFICE	1	3'-0"	S	8'-0"	HM	HM3	0'-5 7/8"	HM	5 / 12-4.1	4 / 12-4.1	PROVIDE ENTRANCE/OFFICE FUNCTION (F82), FLOOR STOP		
127	OFFICE	1	3'-0"	S	8'-0"	HM	HM3	0'-5 7/8"	HM	5 / 12-4.1	4 / 12-4.1	PROVIDE ENTRANCE/OFFICE FUNCTION (F82), FLOOR STOP		
130	MECH	1	3'-0"	S	7'-0"	HM	HM1	0'-5 7/8"	HM	5 / 12-4.1	4 / 12-4.1	PROVIDE ENTRANCE/OFFICE FUNCTION (F82), CLOSER WITH STOP FUNCTION		
V102	VESTIBULE	5	3'-0"	S	8'-0"	AL	SF5	0'-4 1/2"	AL	14 / 12-4.1	13 / 12-4.1	HDW BY GLAZING SYSTEM MANUFACTURER. PROVIDE PASSAGE FUNCTION (F75), AND WALL STOP		

DOOR HARDWARE NOTES

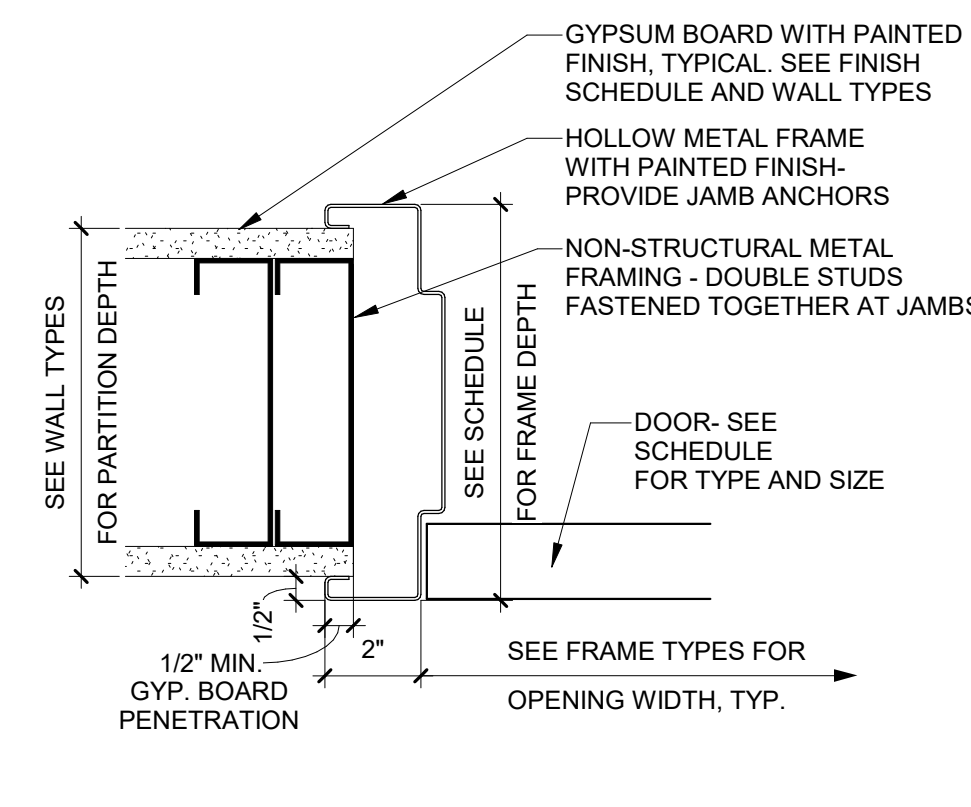
ALL LOCKSETS TO BE CYLINDRICAL LOCKS.
ALL WOOD DOORS TO RECEIVE 1 1/2 PAIRS OF 5 KNUCKLE BALL BEARING HINGES, US 32D FINISH
BASIS OF DESIGN FOR LOCKSETS IN WOOD DOORS, SCHLAGE AL SERIES WITH 626 SATIN CHROMIUM PLATED FINISH.
ALL IN ALUMINUM FRAMED ENTRANCES TO HAVE HINGES AND DOOR HARDWARE PROVIDED BY ENTRANCE FRAMING MANUFACTURER.
ACCESS CONTROL HARDWARE TO BE _____



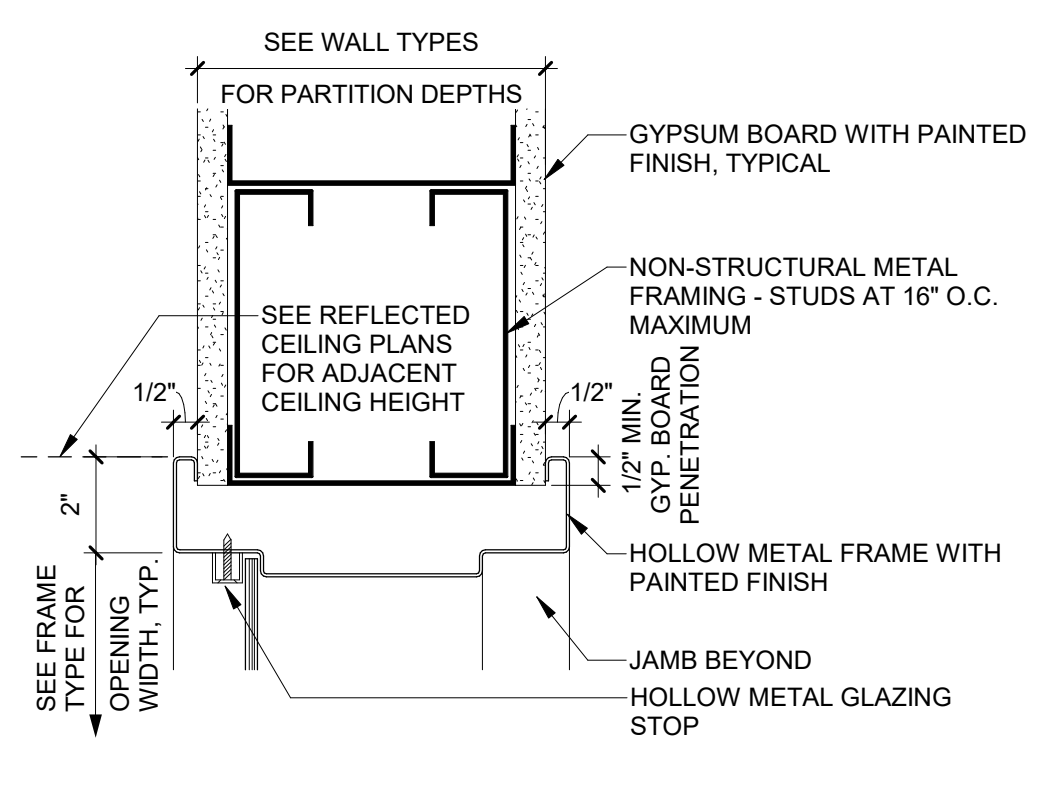
3 SF ELEVATIONS
1/4" = 1'-0"



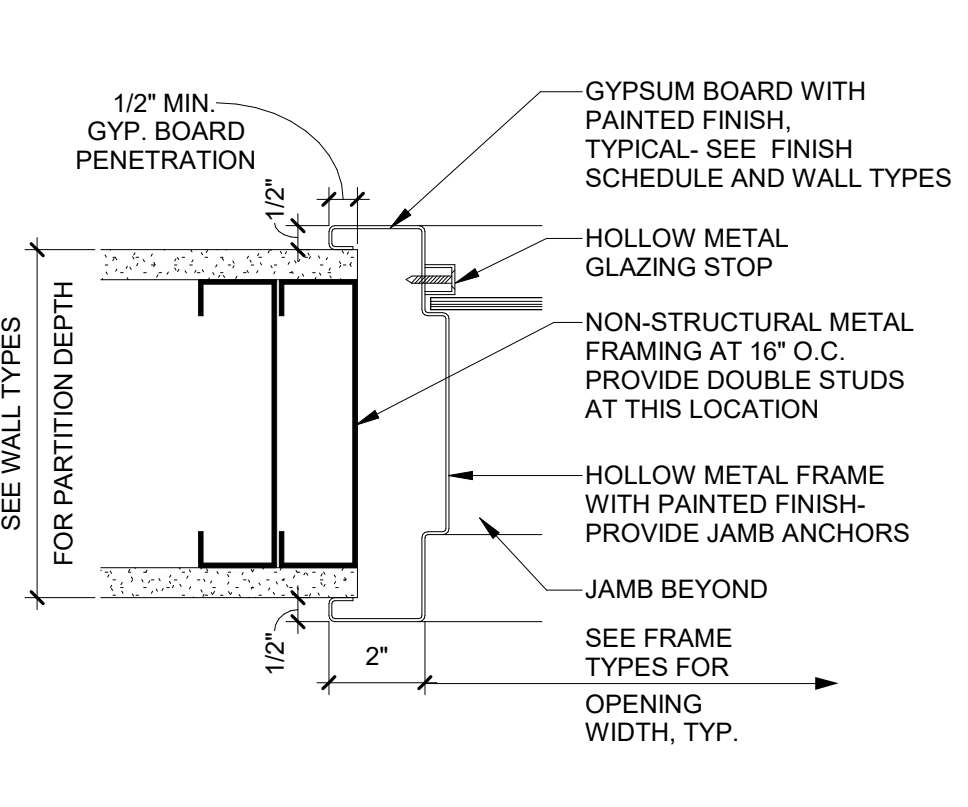
4 TYPICAL DETAIL @ DOOR HEAD
3" = 1'-0"



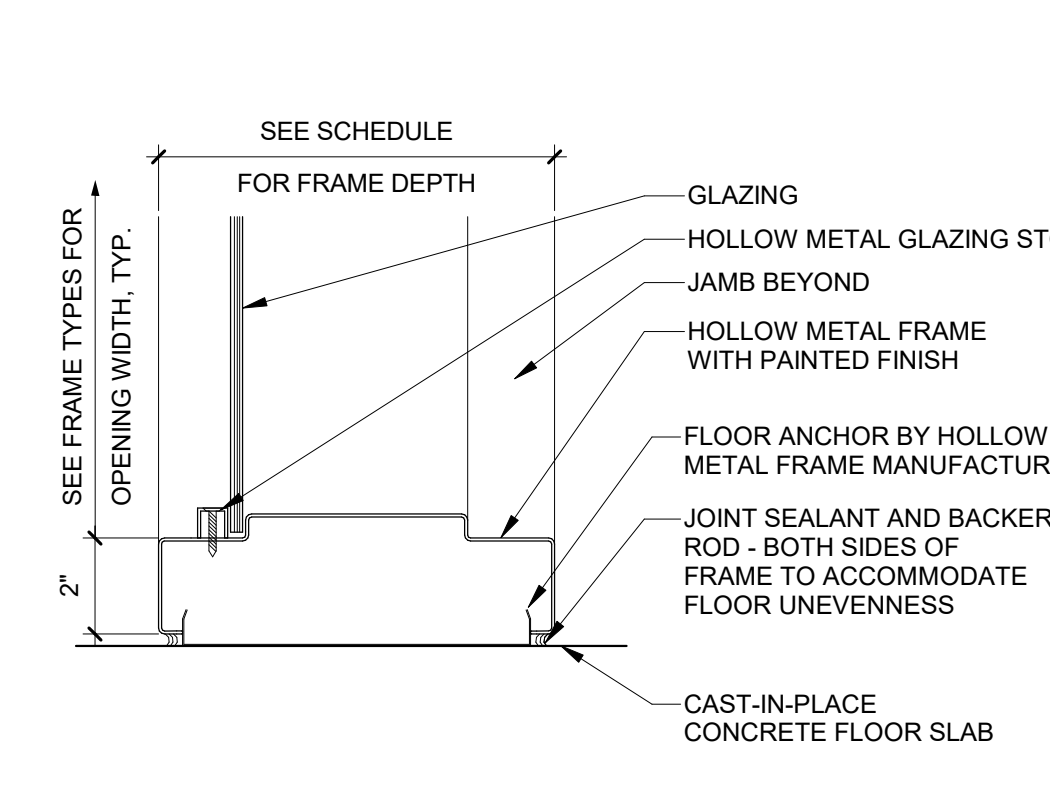
5 TYPICAL DETAIL @ DOOR JAMB
3" = 1'-0"



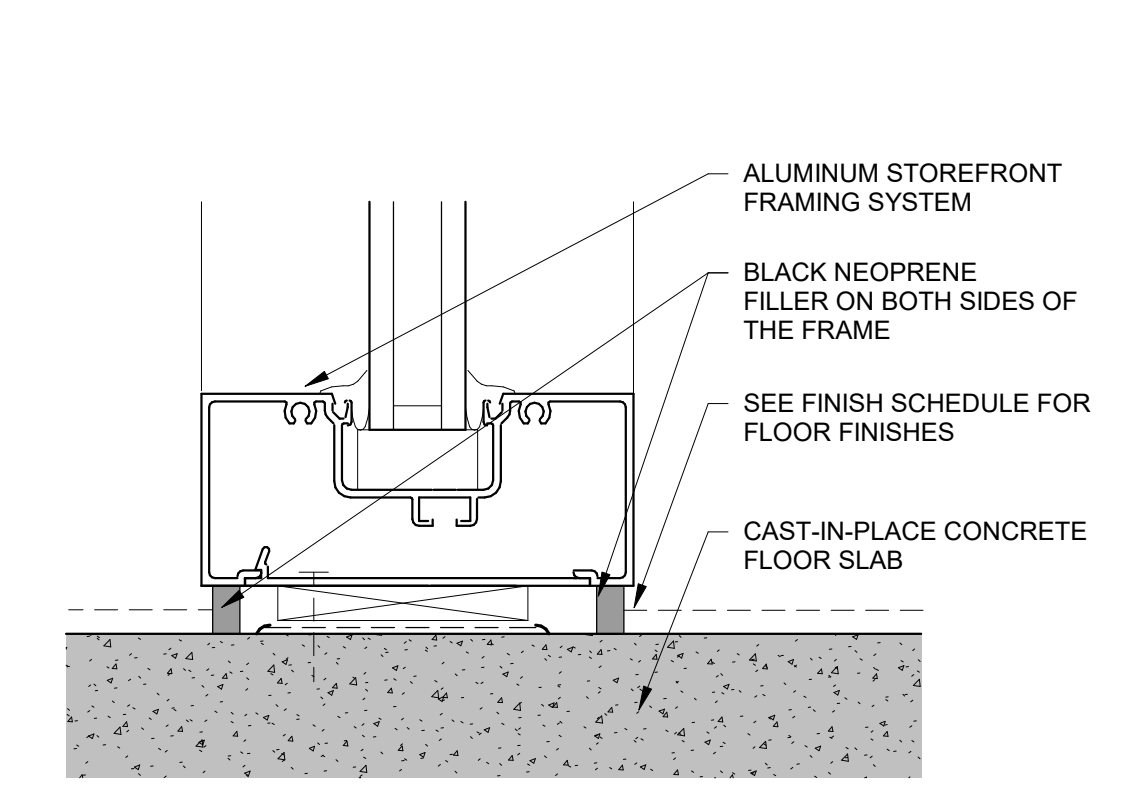
6 TYPICAL DETAIL @ HOLLOW METAL FRAME HEAD
3" = 1'-0"



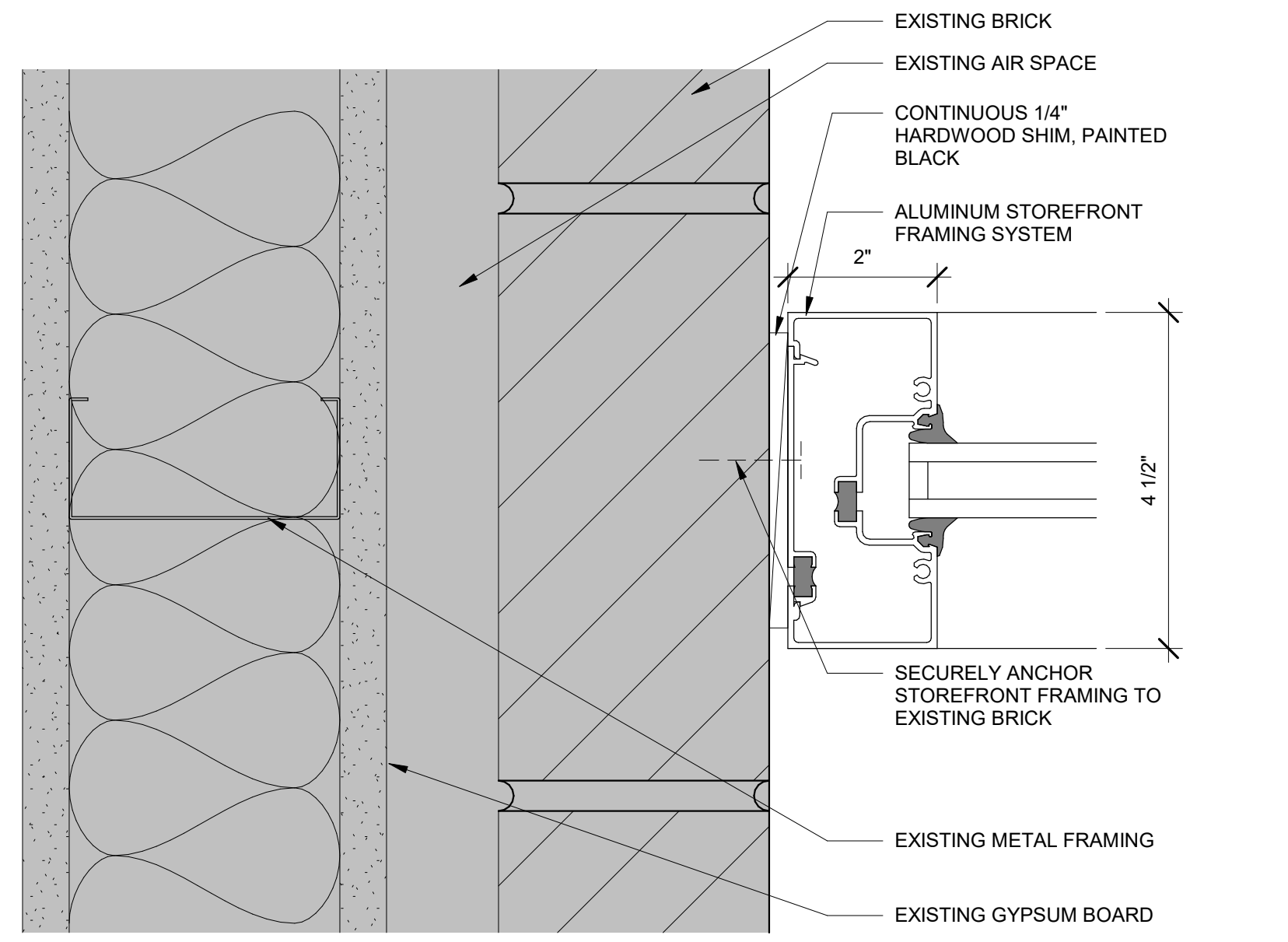
7 TYPICAL DETAIL @ HOLLOW METAL FRAME JAMB
3" = 1'-0"



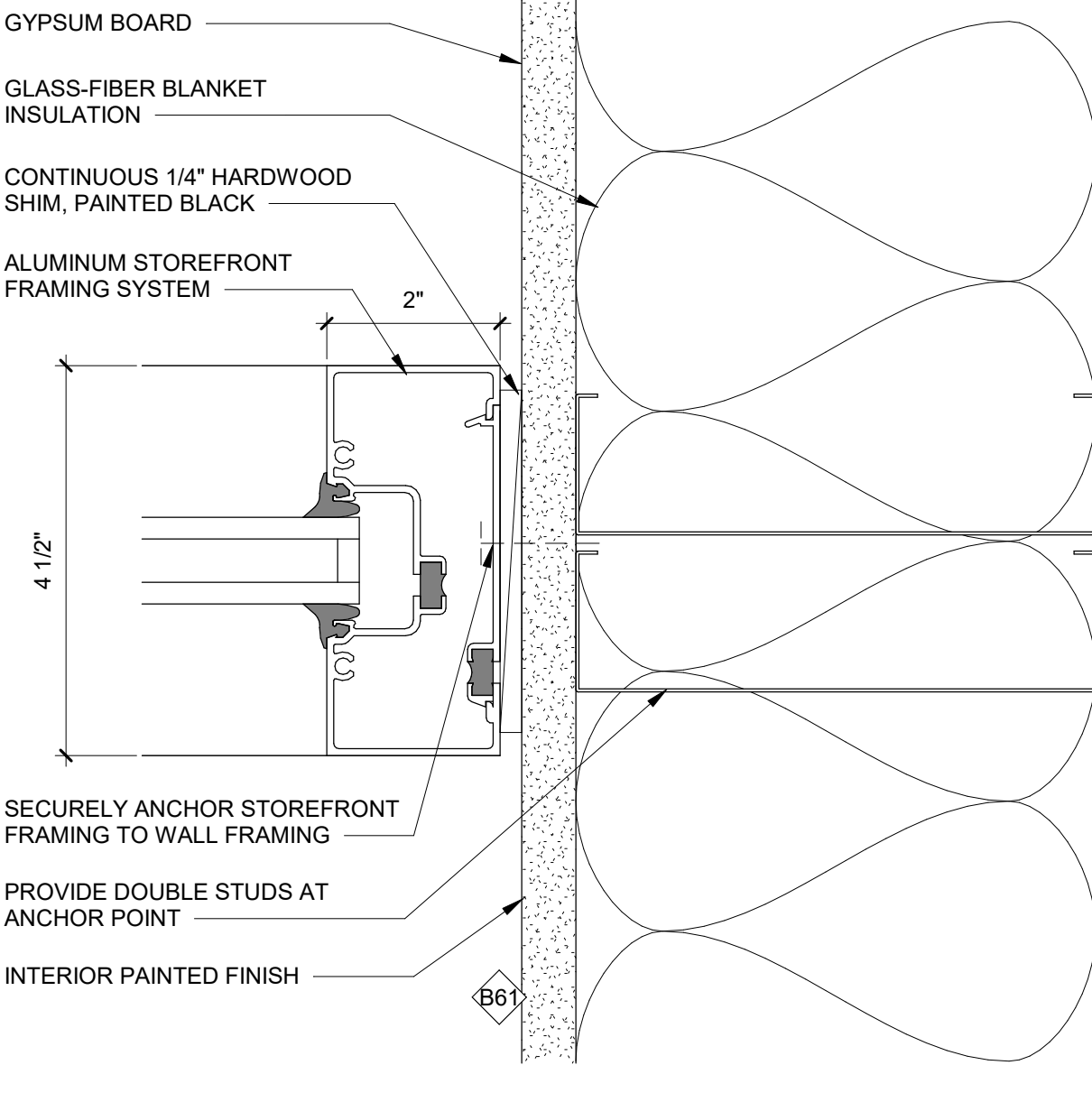
8 TYPICAL DETAIL @ HOLLOW METAL FRAME SILL
3" = 1'-0"



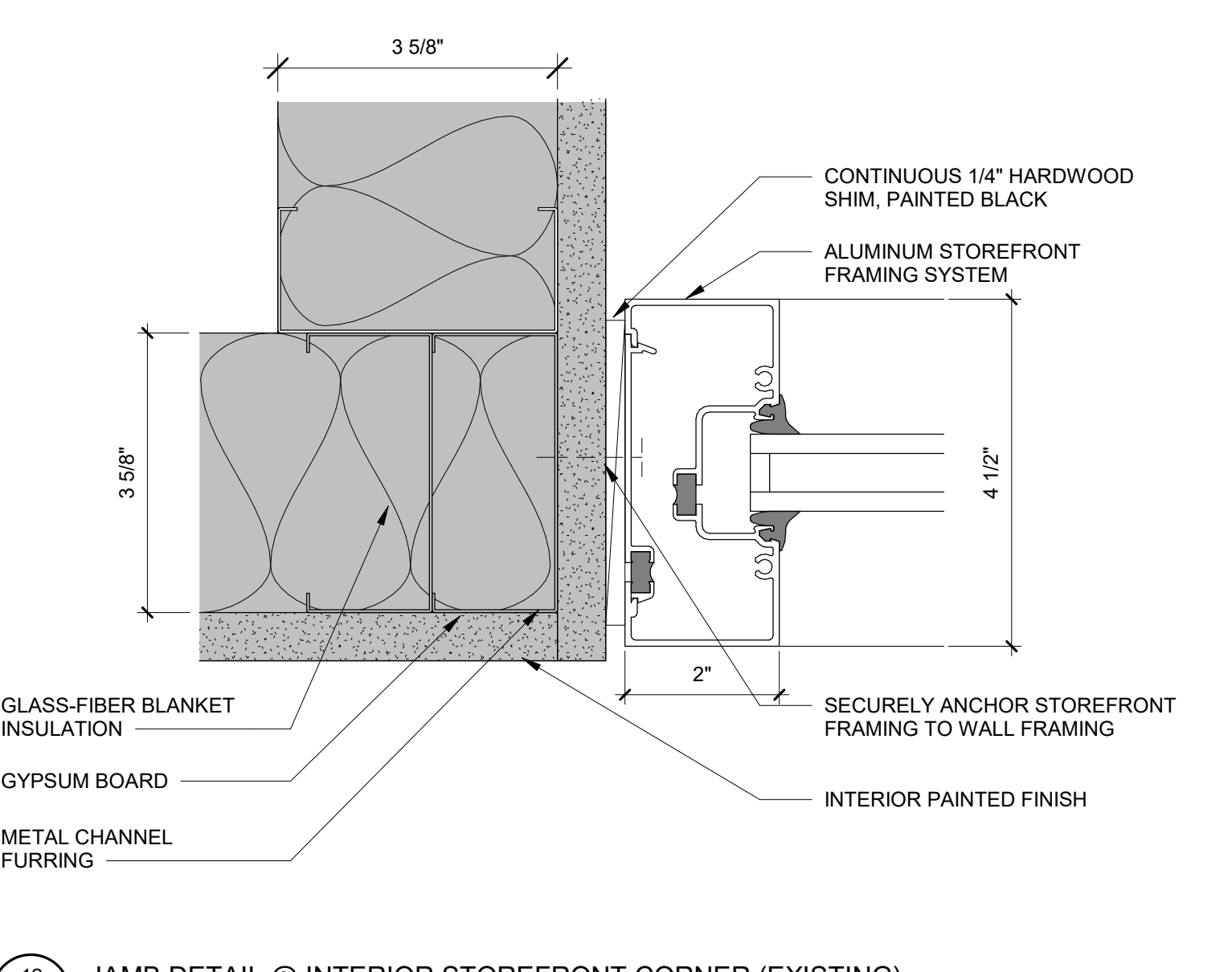
9 TYPICAL SILL DETAIL @ INTERIOR STOREFRONT
6" = 1'-0"



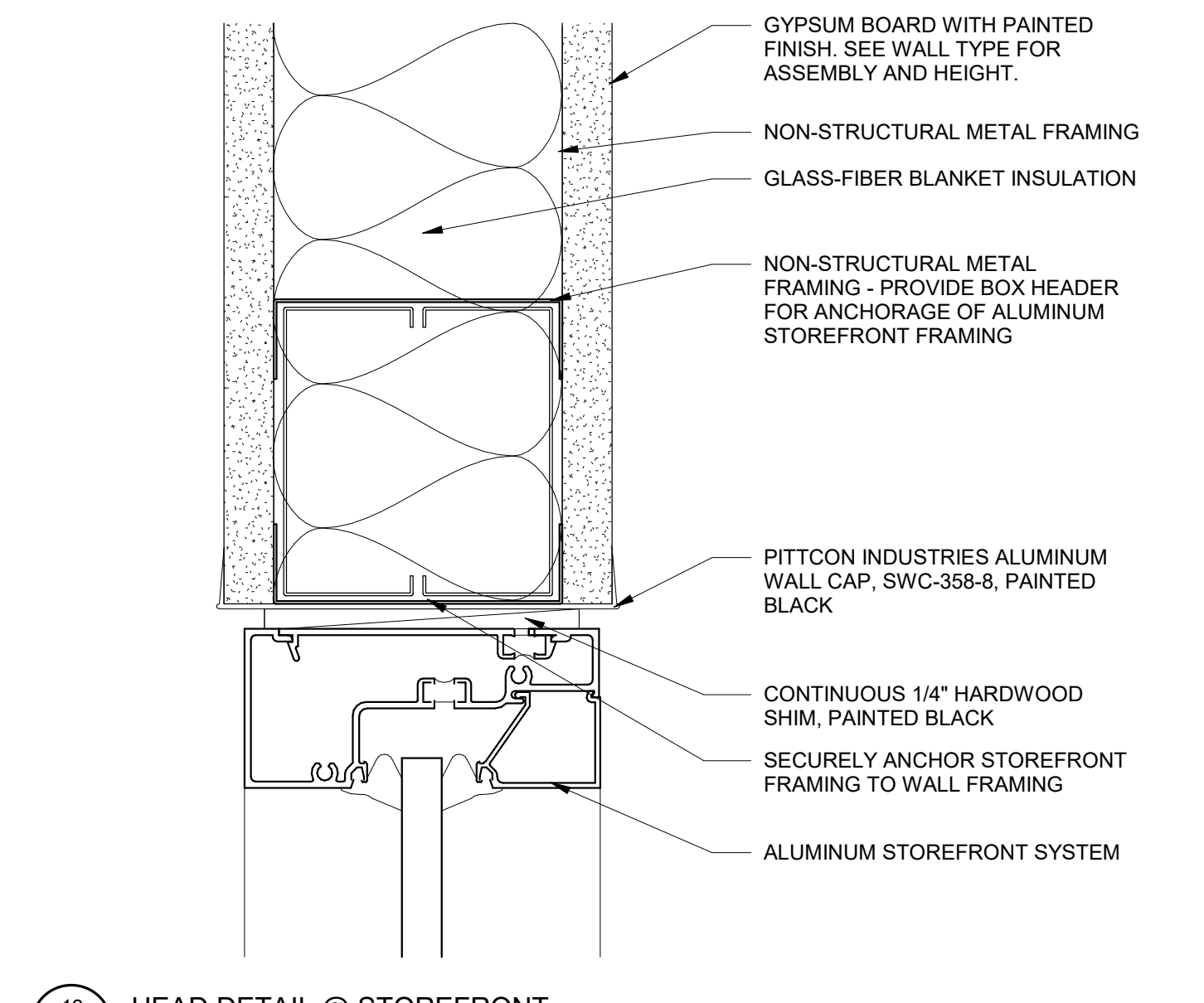
10 JAMB DETAIL @ INTERIOR STOREFRONT
6" = 1'-0"



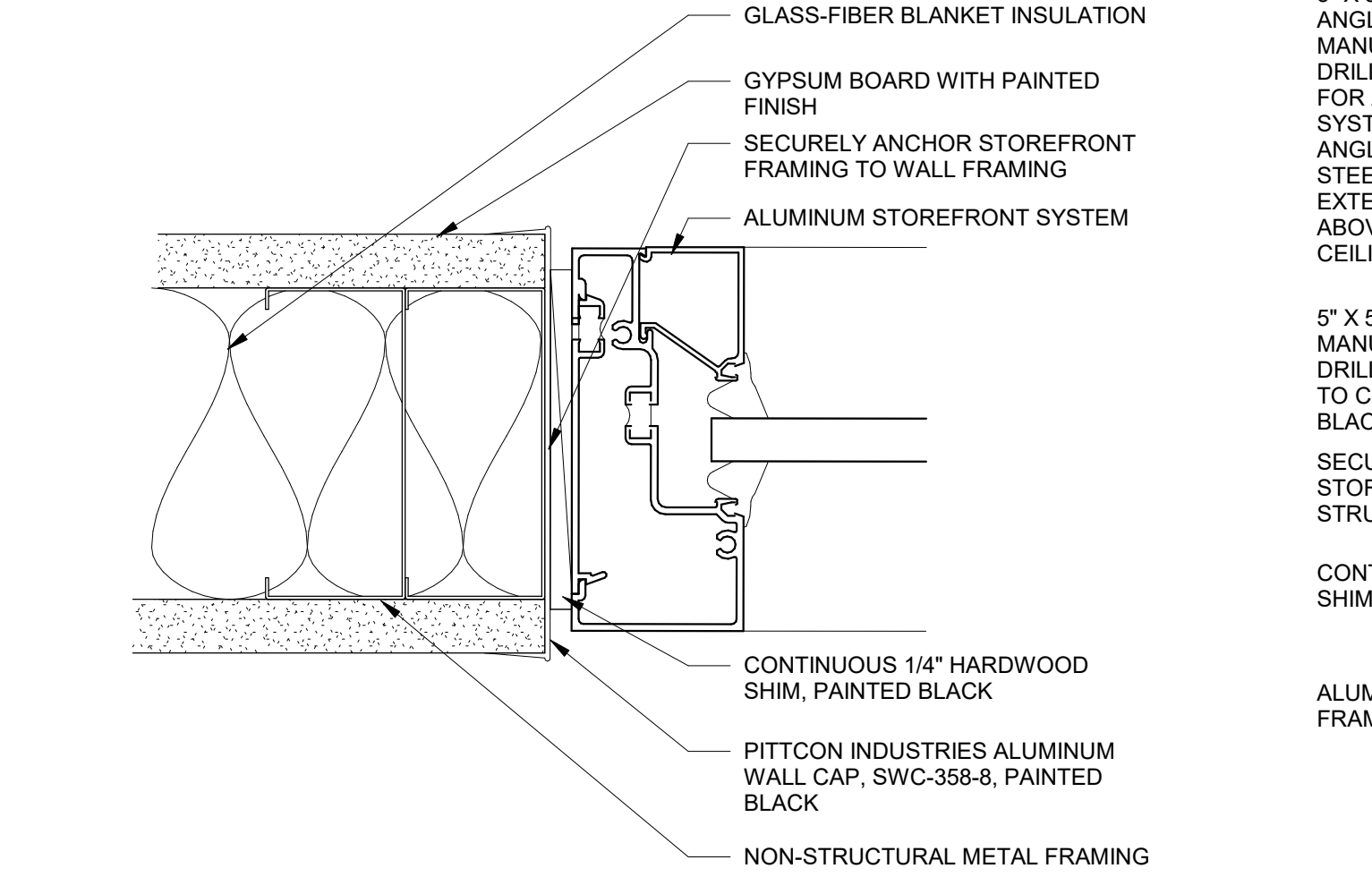
11 JAMB DETAIL @ INTERIOR STOREFRONT
6" = 1'-0"



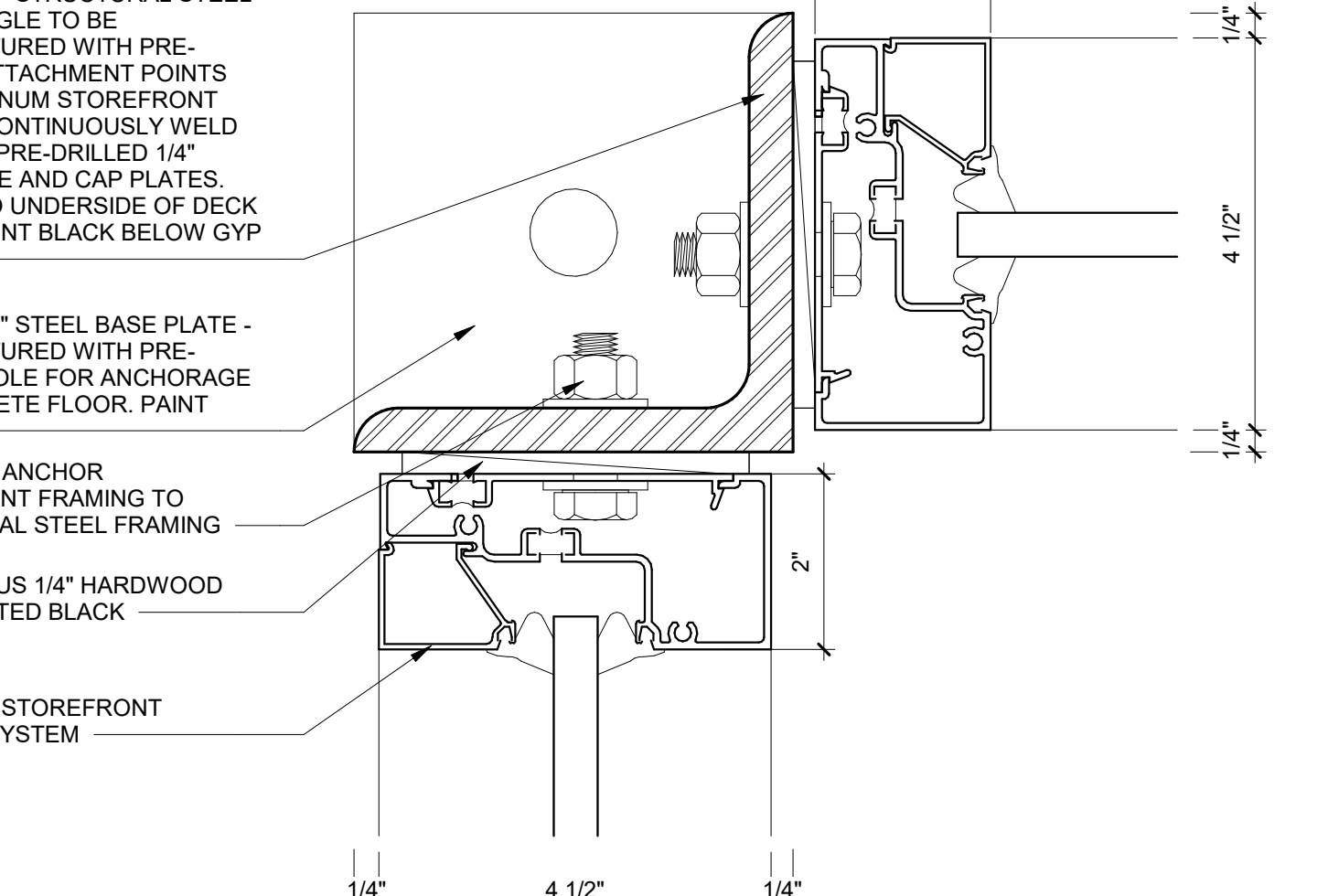
12 JAMB DETAIL @ INTERIOR STOREFRONT CORNER (EXISTING)
6" = 1'-0"



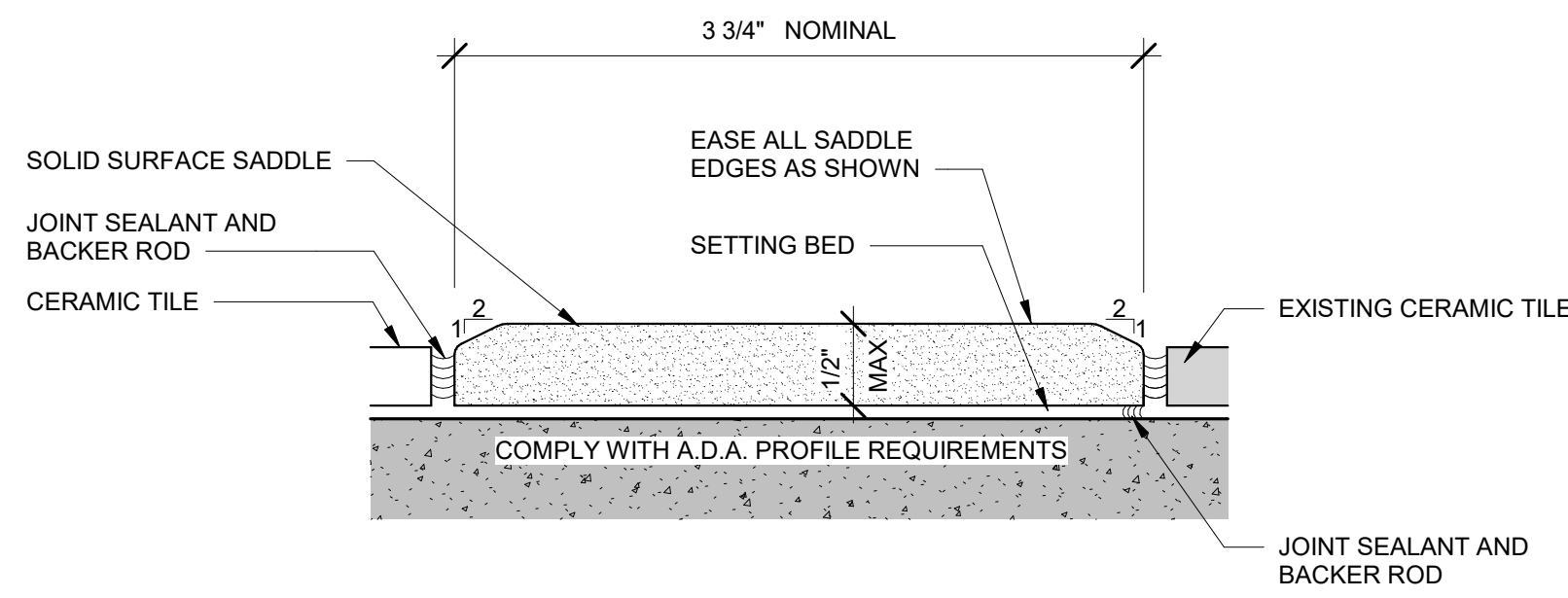
13 HEAD DETAIL @ STOREFRONT
6" = 1'-0"



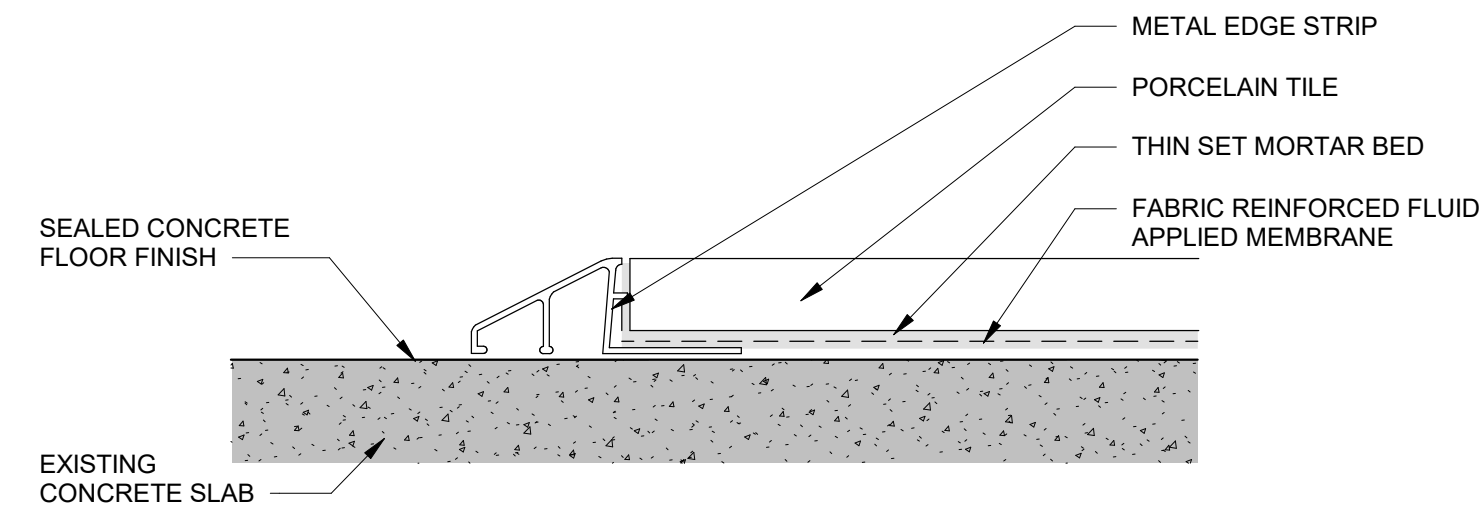
14 JAMB DETAIL @ STOREFRONT
6" = 1'-0"



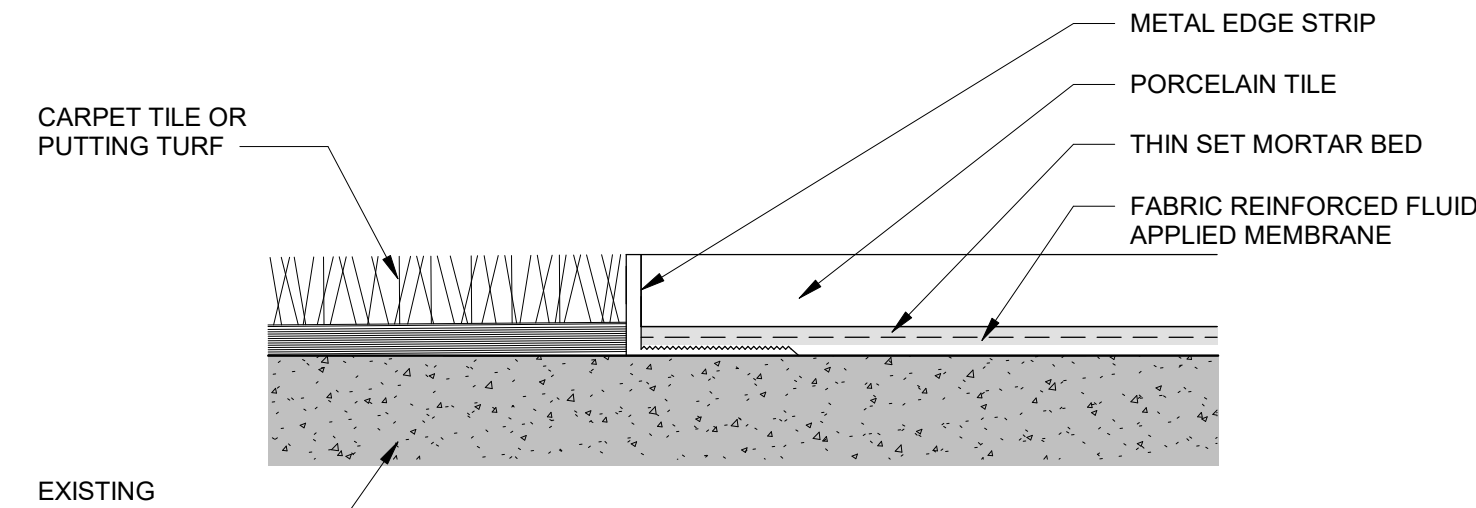
15 TYPICAL JAMB DETAIL @ INTERIOR STOREFRONT CORNER
6" = 1'-0"



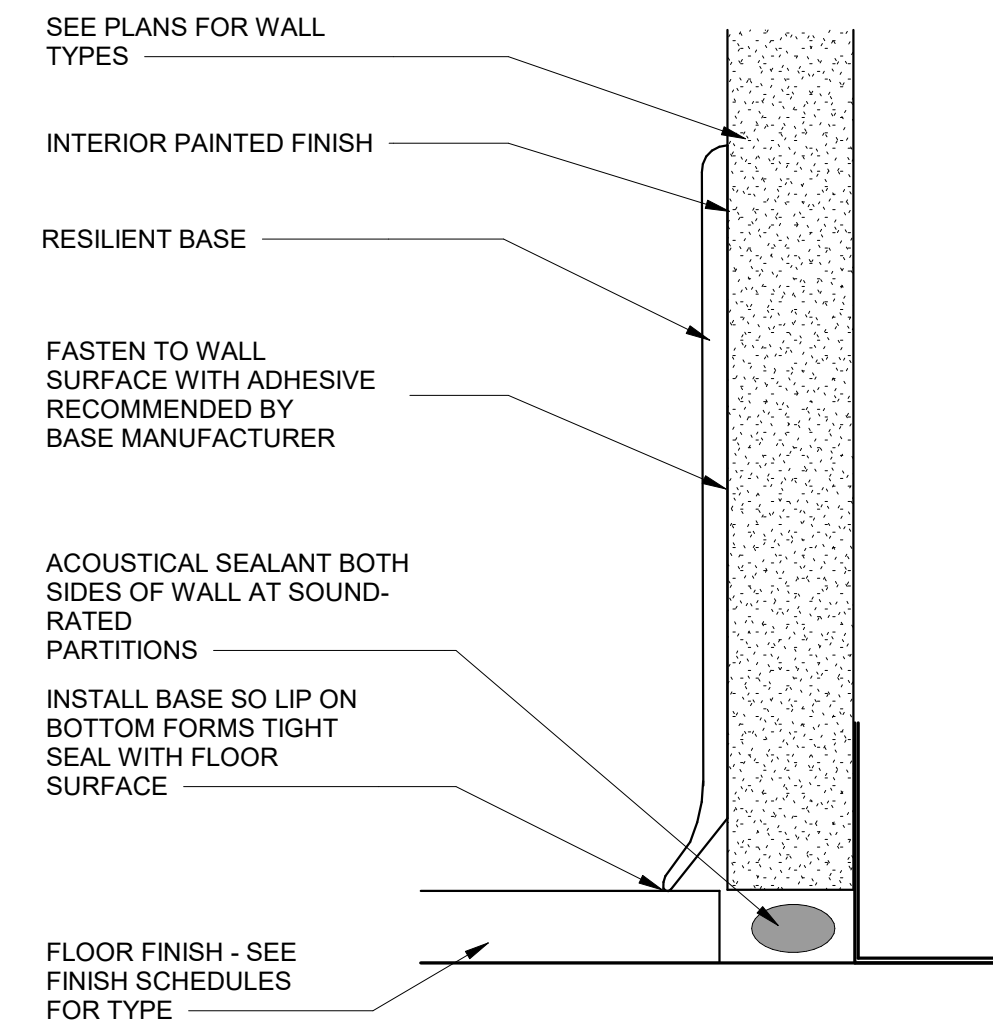
1 TYPICAL DETAIL @ SADDLE THRESHOLD
12\"/>



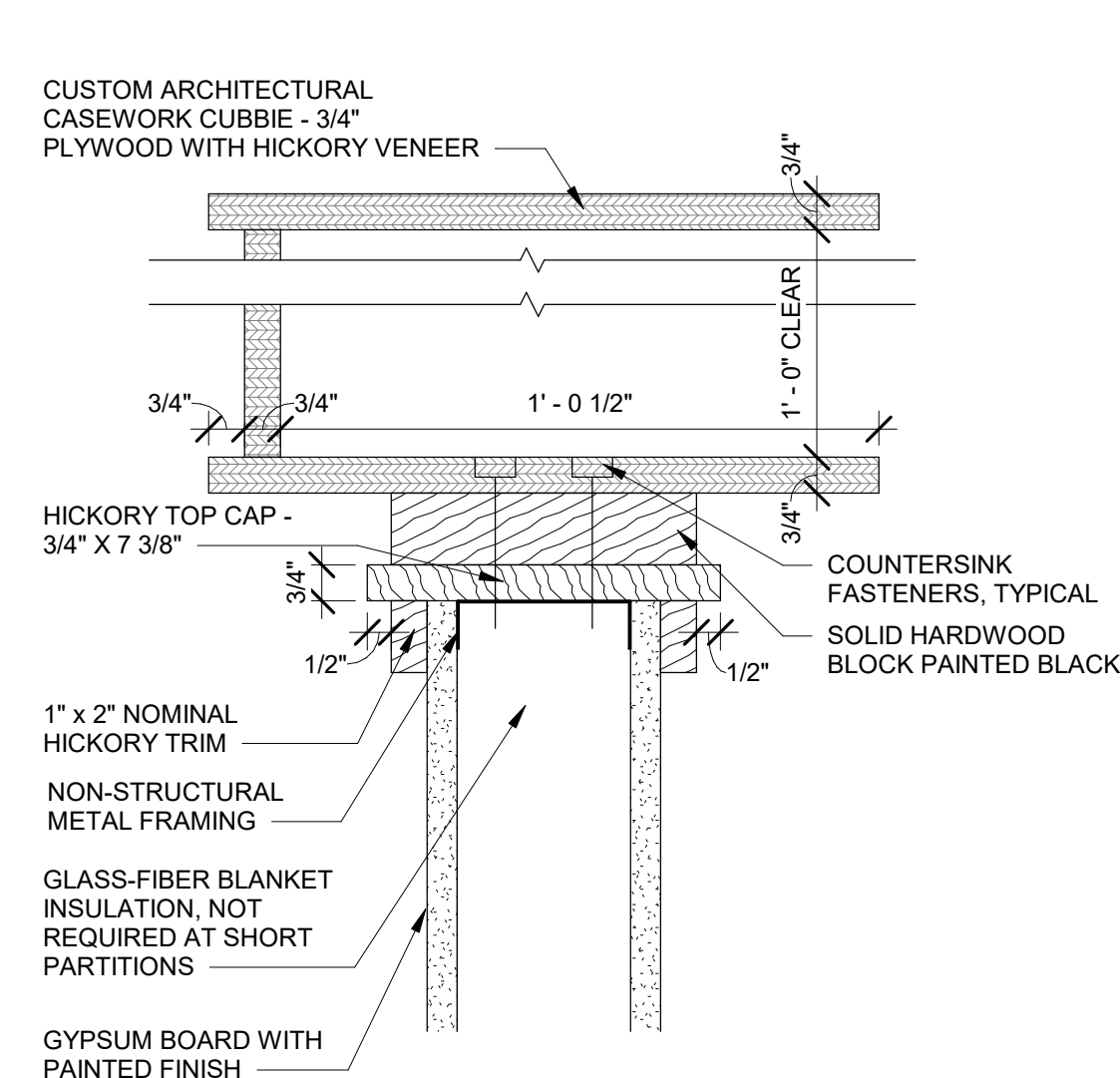
2 TRANSITION FROM PORCELAIN TILE TO SEALED CONCRETE
12\"/>



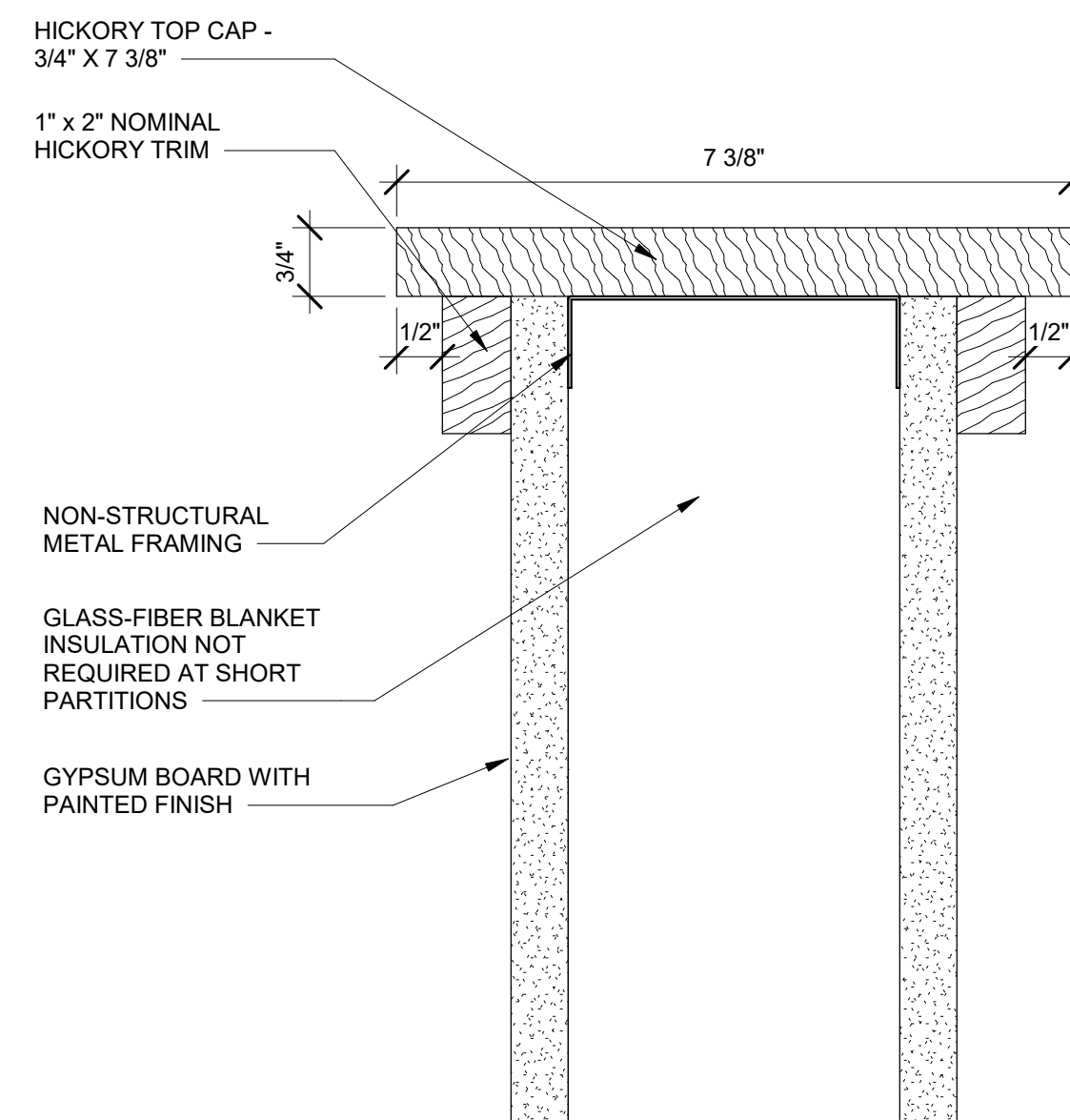
3 TRANSITION FROM CARPET TILE / PUTTING TURF TO PORCELAIN TILE
12\"/>



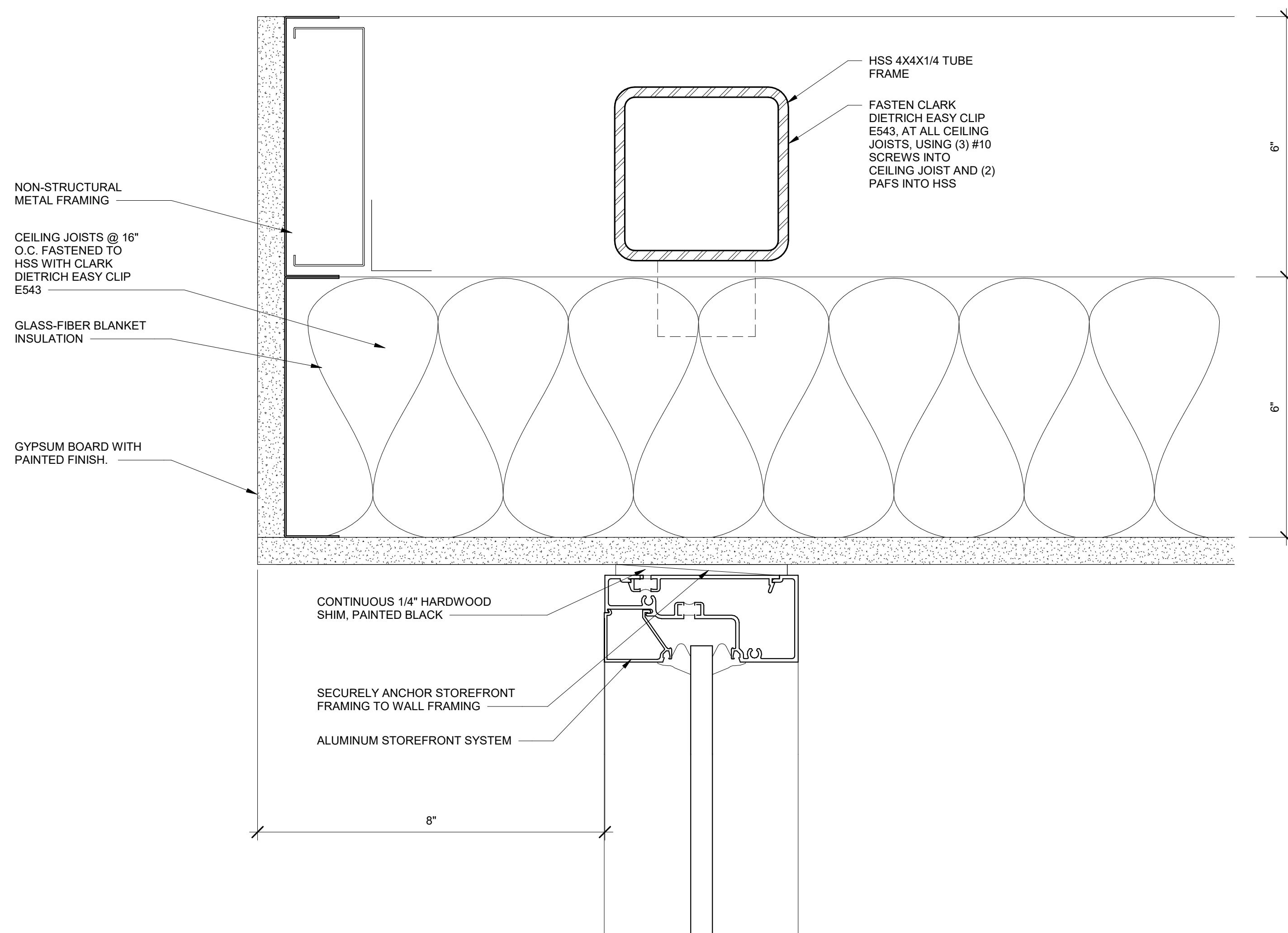
4 RESILIENT BASE DETAIL
12\"/>



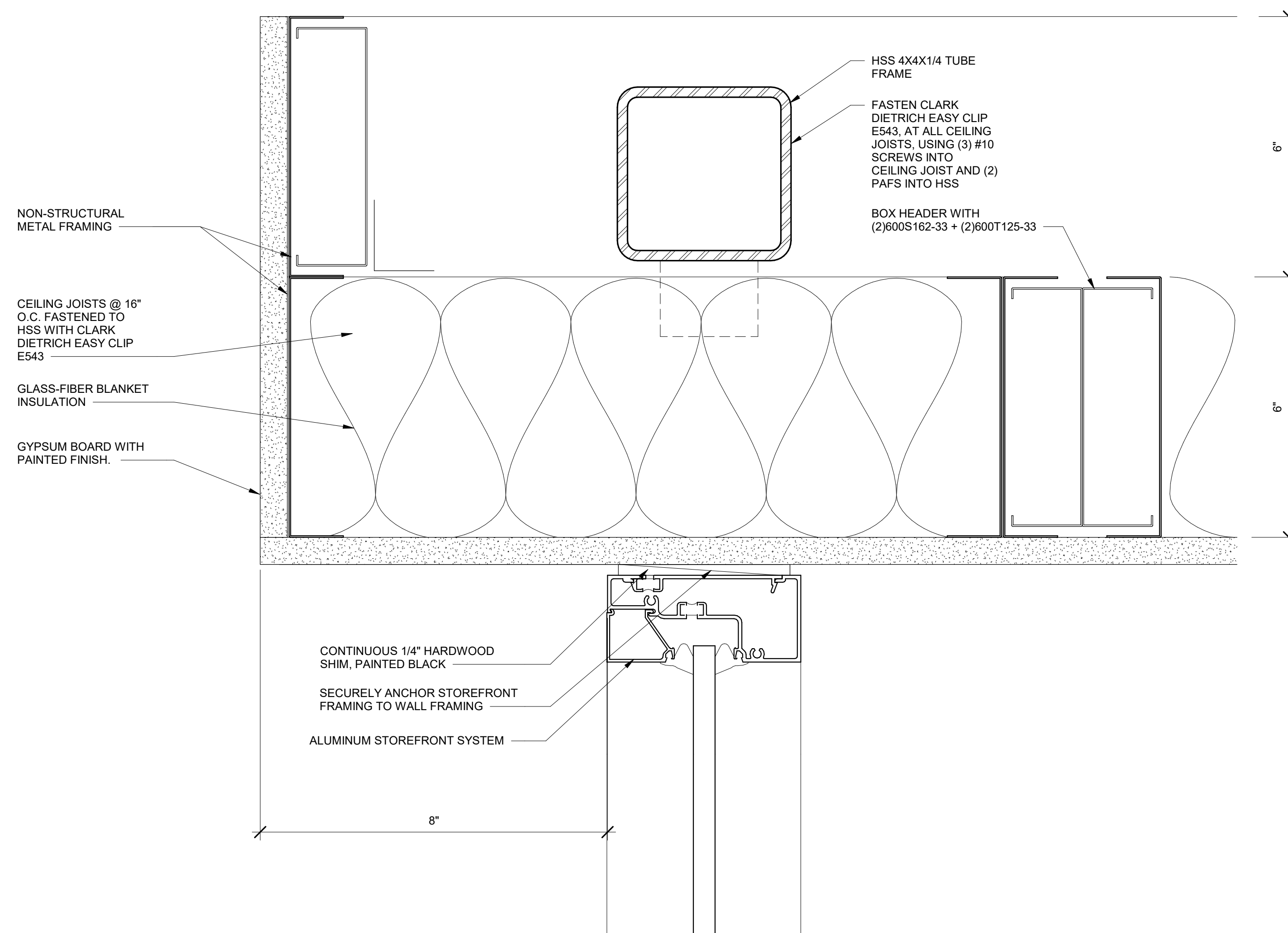
5 TYPICAL DETAIL @ STORAGE CUBBY
3\"/>



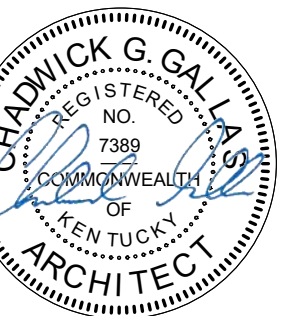
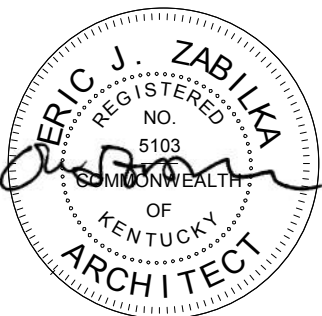
6 TYPICAL DETAIL @ SHORT PARTITION WOOD CAP
6\"/>



7 HEAD DETAIL @ STOREFRONT & CEILING
6\"/>



8 HEAD DETAIL @ STOREFRONT & CEILING
6\"/>



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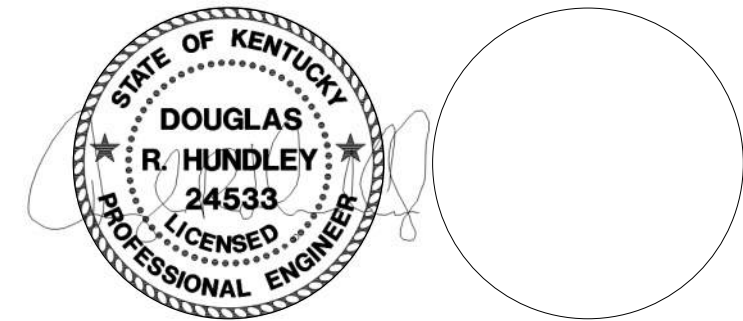
PROJECT NUMBER 1921

DATE JULY 1, 2020

REVISIONS

FINISH AND MISC.
DETAILS

12-4.2



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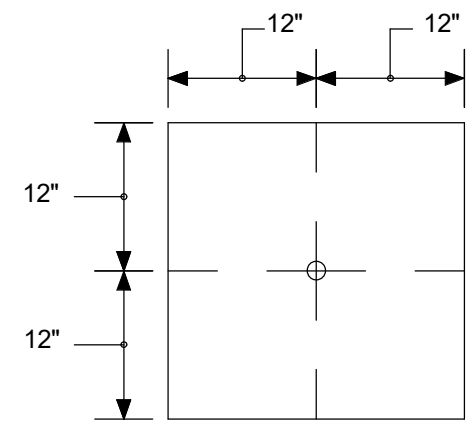
PROJECT NUMBER 1921

DATE July 1, 2020

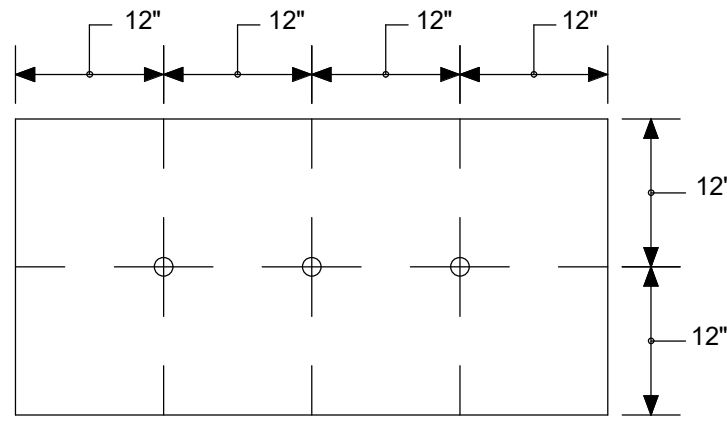
REVISIONS

Fire Protection Details,
Legend & Notes

FP1.0



2x2 CEILING TILE DETAIL
SCALE: NONE



2x4 CEILING TILE DETAIL
SCALE: NONE

FIRE PROTECTION DESIGN NOTES:

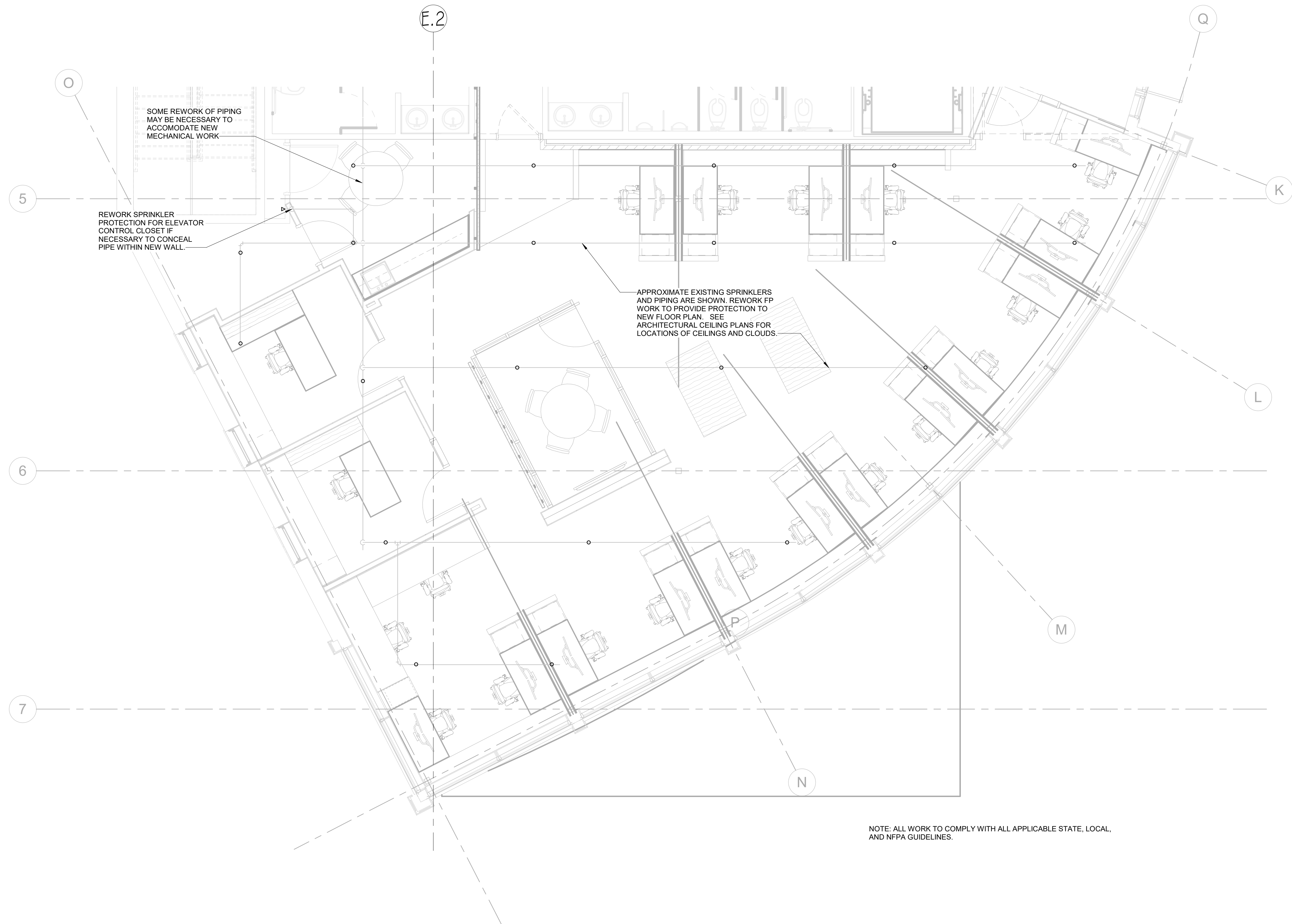
- THE ENTIRE BUILDING IS TO BE 100% COVERED WITH A WET FIRE PROTECTION SYSTEM DESIGNED IN ACCORDANCE WITH NFPA 13. THE SYSTEM SHOULD BE DESIGNED AS ORDINARY HAZARD (GROUP 1) UNLESS NOTED.
- THE SUCCESSFUL FIRE PROTECTION CONTRACTOR SHALL OBTAIN AND UTILIZE THE ARCHITECTURAL REFLECTED CEILING PLAN FOR LAYING OUT THE SPRINKLER HEADS. THE REFLECTED CEILING PLANS SHOWN ARE TO COORDINATE CEILING TYPES AND LOCATIONS, REFER TO THE MECHANICAL AND ELECTRICAL DRAWINGS FOR CEILING DEVICE LOCATIONS. REFER TO SPECIFICATIONS FOR COORDINATION DRAWING REQUIREMENTS.
- ALL AREAS SHALL BE SPRINKLED WITH A WET FIRE PROTECTION SYSTEM FED FROM A RETURN BEND ARRANGEMENT. UTILIZE QUICK RESPONSE HEADS, BUT DO NOT USE THE DESIGN REDUCTION FOR THE QUICK HEADS WHEN DOING THE CALCULATIONS. USE THE FOLLOWING HEADS IN SPECIFIC AREAS AS INDICATED BELOW. REFER TO SPECIFICATIONS FOR DIFFERENT TYPES OF SPRINKLER HEADS.
 - IN AREAS WITH LAY-IN CEILING USE SEMI-RECESSED SPRINKLER HEADS. ALL SPRINKLER HEADS SHALL BE CENTERED IN BOTH DIRECTIONS OF A LAY-IN CEILING TILE.
 - IN AREAS WITH HARD CEILINGS USE FULLY RECESSED SPRINKLED HEADS. PROVIDE COVER-PLATED TO MATCH THE CEILING COLOR.
 - IN AREAS WITHOUT CEILING USE UPRIGHT AND/OR WALL MOUNTED SPRINKLER HEADS.
- HVAC DUCTWORK MAINS SHALL BE INSTALLED PRIOR TO FIRE PROTECTION PIPING. PROVIDE DRAIN VALVES IN THE FIRE PROTECTION SYSTEM WHERE NECESSARY TO COMPLETELY DRAIN THE SYSTEM. ALL EXISTING PIPING IS TO BE REMOVED AS REQUIRED TO INSTALL NEW MAINS.
- INSTALL ALL PIPING AT LEAST 12" ABOVE FINISHED CEILING ELEVATION TO ALLOW FOR SUITABLE ACCESS TO ABOVE CEILING.
- RUN NO SPRINKLER MAINS/BRANCH PIPES OVER LIGHT FIXTURES.
- ALL PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE. LOW PIPING WILL HAVE TO BE RELOCATED, BY THE CONTRACTOR, IF IT COULD HAVE BEEN INSTALLED HIGHER. THIS WILL BE UP TO THE DISCRETION OF THE ENGINEER.
- PROVIDE ALL REQUIRED DRAIN PIPING TO TEST FLOW SWITCHES. DISCHARGE DRAIN PIPING TO OUTDOORS OR A FLOOR DRAIN.
- NO PIPING IS TO BE ROUTED ABOVE ELECTRICAL PANELS, TRANSFORMERS, COMPUTER RACKS, ETC. AS REQUIRED BY THE ELECTRICAL CODE. FIELD VERIFY ALL EXISTING ELECTRICAL LOCATIONS PRIOR TO DESIGNING THE FIRE PROTECTION PLANS.
- THE SUCCESSFUL FIRE PROTECTION CONTRACTOR WILL BE REQUIRED TO OBTAIN A NEW FLOW TEST PRIOR TO STARTING CALCULATIONS. SIZE ALL FIRE PROTECTION PIPING IN ACCORDANCE WITH NFPA 13. PIPE SIZING SHALL BE ACCOMPLISHED USING HYDRAULIC CALCULATIONS. SUBMIT HYDRAULIC CALCULATIONS AND SYSTEMS DESIGN FOR REVIEW TO: THE ME ENGINEER. USE 250 GPM FOR THE HOSE STREAM CALCULATION.
- INSTALL SPRINKLER HEADS WITHIN JANITOR'S CLOSETS DIRECTLY ABOVE THE DOOR.
- PROVIDE UPRIGHT HEADS IN SHELL AREAS BUSHED FOR FUTURE CONNECTION.
- COORDINATE SPRINKLER HEAD TYPES WITH ARCHITECTURAL PLAN FOR CEILING INFORMATION.
- COORDINATE ALL SPRINKLER PIPING/HEADS WITH ARCHITECTURAL PLAN FOR CEILING AND WALL INFORMATION.
- NO PIPING MAINS SHALL BE ROUTED THROUGH CORRIDORS WHERE PIPING IS VISIBLE. PIPING THAT CROSSES CORRIDORS SHALL BE ROUTED NEXT TO DUCTWORK OR ABOVE CLOUDS.
- FIRE PROTECTION PIPING INDICATED ON PLANS IS FOR VISUAL REPRESENTATION OF INTENDED AREA OF COVERAGE. FIRE PROTECTION CONTRACTOR SHALL FOLLOW DUCTWORK ROUTING WHEN INSTALLING FIRE PROTECTION PIPING. WHEN LAYING OUT/INSTALLING FIRE PROTECTION PIPING, ACTUAL PIPE ROUTINGS WILL BE DETERMINED BY THE FIRE PROTECTION CONTRACTOR BY UTILIZING THE ARCHITECTURAL REFLECTED CEILING PLANS TO KEEP PIPING UNVISIBLE. REFER TO ENGINEER FOR AREAS OF DESCREPANCY.

FIRE PROTECTION LEGEND

"SEMI-RECESSED" SPRINKLER HEAD WITH REMOVABLE ESCUTCHEON PLATE	
UPRIGHT TYPE SPRINKLER HEAD	
SIDEWALL TYPE SPRINKLER HEAD	
NEW FIRE PROTECTION PIPING	
PIPING RISE UP	
PIPING DOWN	
FIRE VALVE CABINET	
CONNECT TO EXISTING	
DOUBLE CHECK VALVE	
NEW O.S.&Y VALVE	
TAMPER SWITCH	
FLOW SWITCH	
PRESSURE SWITCH	
DRY PIPE OR PREACTION VALVE	
FCCP	

FIRE PUMP FLOW DATA:

STATIC PSI: 76
RESIDUAL PSI: 63
FLOW: 2200 GPM
DURATION: CONTINUOUS
DATE & TIME: 07/12/2017 @ 12:00PM
SOURCE OF WATER: MUNICIPAL
SOURCE OF DATA: LOUISVILLE WATER COMPANY
HAZARD:
OCCUPANCY OF BUILDING: LIGHT/ORDINARY



1 - Fire Protection New
1/4" = 1'-0"

LOUISVILLE, KENTUCKY
CMTA OFFICE FIT OUT 2
CONSTRUCTION DOCUMENTS

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PROJECT NUMBER 1921

DATE July 1, 2020

REVISIONS

First Floor Plan - Fire Protection

FP2.1

PLUMBING FIXTURE SIZING SCHEDULE					
P-#	PLUMBING FIXTURE	SAN	VENT	CW	HW
P-4	1 COMPARTMENT SINK - STAINLESS STEEL - UNDERMOUNT - BREAK ROOM	1-1/2"	1-1/2"	1/2"	1/2"
FD-2	FLOOR DRAIN - MECHANICAL ROOM - TRAP GUARD	3"	1-1/2"	—	—

MINIMUM 2" SANITARY WASTE UNDERSLAB. ALL PIPING TO BE SIZED ACCORDING TO CHART UNLESS OTHERWISE NOTED ON FLOOR PLANS.

PLUMBING GENERAL NOTES:

- A. COORDINATE THE LOCATION OF DRAINS, THERMOSTATS, ETC., WITH ALL CASEWORK EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC., PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
- C. ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.
- D. COORDINATE ALL WORK WITH PROJECT PHASING REQUIREMENTS.
- E. OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, COMMONWEALTH OF KENTUCKY, ETC.).
- F. IF AREA OF CONSTRUCTION HAS A POST TENSION FLOOR SLAB, CONTRACTOR SHALL USE ULTRA SOUND OR OTHER APPROVED METHODS TO SURVEY THE EXISTING FLOOR STRUCTURE BEFORE MAKING ANY AND ALL FLOOR PENETRATIONS.
- G. WHERE FIRE PROOFING IS SPRAYED ON EXISTING STRUCTURE ALL EXISTING CONDUITS, WATER, HYDRONIC, STEAM, CHILLED WATER, FIRE PROTECTION LINES, MED GAS, ETC., SHALL BE LOWERED TO BE BELOW FULL THICKNESS OF FIRE PROOFING WITH NO INTERFERENCE.
- H. ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.
- I. ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES.
- J. ALL PIPING IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.
- K. IN ACCORDANCE WITH K.R.S. ALL PLUMBING WORK SHALL BE CONSTRUCTED IN COMPLIANCE WITH PLANS APPROVED BY AND BEARING THE APPROVAL STAMP OF THE KENTUCKY DIVISION OF PLUMBING AND/OR THE DIVISION OF WATER. THE CONTRACTOR SHALL NOT BEGIN WORK UNTIL HE HAS RECEIVED SUCH APPROVED PLANS.
- L. LOCATIONS OF PIPING AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.
- M. ALL OFFSETS IN PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.
- N. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY FEES OR OTHER COSTS THAT ANY UTILITY COMPANY MAY REQUIRE TO COMPLETE THEIR WORK. (GAS, SEWER, WATER, ETC.).
- O. WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.
- P. ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.
- Q. DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC., FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
- R. VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS. IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.
- S. ALL MANHOLES, VAULTS AND SIMILAR UNDERGROUND STRUCTURES SHALL HAVE THE TOP ELEVATION SET FLUSH WITH FINISHED GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
- T. WHEN RUNNING ANY TYPE OF PIPING BELOW A FOOTER, OR IN THE ZONE OF INFLUENCE THE PIPING SHALL BE BACKFILLED WITH CEMENTITIOUS FLOWABLE FILL PER SPECIFICATIONS. WHENEVER POSSIBLE, LOCATE PIPING OUTSIDE OF THE ZONE OF INFLUENCE. THE ZONE OF INFLUENCE IS THE AREA UNDER THE FOOTER WITHIN A 45 DEGREE ANGLE PROJECTING DOWN FROM THE BOTTOM EDGE OF THE FOOTER OF ALL SIDES OF THE FOOTER. ADDITIONALLY, GREASE TRAPS, MANHOLES, VAULTS AND OTHER UNDERGROUND STRUCTURES SHALL BE HELD AWAY FROM BUILDING WALLS FAR ENOUGH TO BE OUTSIDE OF THE ZONE OF INFLUENCE.
- U. WORK IN CONFINED AREAS SHALL BE IN ACCORDANCE WITH THE OWNER'S SAFETY POLICY REQUIREMENTS.
- V. THE DOCUMENTS COMPLY WITH 2006 IMC, 2007 KBC, AND 2009 IECC.
- W. THE DOCUMENTS COMPLY WITH 2006 IMC, 2007 KBC, AND ASHRAE 90.1-2007.
- X. THE DOCUMENTS COMPLY WITH THE CURRENT VERSION OF KENTUCKY STATE PLUMBING LAW, REGULATIONS & CODE (815 KAR CHAPTER 20).
- Y. BEFORE INSTALLATION OF ANY PIPING SYSTEM, REFER TO THE ARCHITECTURAL DRAWINGS FOR CLOUD CEILING LOCATIONS. ALL PIPING SHALL BE ROUTED ABOVE CLOUD CEILINGS. IN THE CENTER TO LIMIT VISIBILITY. IF PIPING MUST GO IN CEILING AREA WHERE THERE IS NOT A CLOUD CEILING AND WILL BE IN A VISIBLE LOCATION, CONSULT WITH ENGINEER PRIOR TO LAYING OUT AND INSTALLATION.
- Z. ANY PIPING THAT IS ANSTALLED IN A VISIBLE LOCATION SHALL BE RELOCATED AT CONTRACTOR'S EXPENSE TO A LOCATION THAT IS UNVISIBLE.
- AA. REFER TO MECHANICAL DRAWINGS FOR DUCTWORK ROUTING LOCATIONS. PIPING THAT CROSSES CORRIDORS SHALL BE ROUTED ALONG WITH DUCTWORK WHERE POSSIBLE.
- BB. REFER TO ARCHITECTURAL DRAWINGS FOR WALL HEIGHTS, TYPES, LOCATIONS, CEILING HEIGHTS, TYPES, LOCATIONS.
- CC. CONTRACTOR SHALL HAVE A COMPLETE UNDERSTANDING OF ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION OF ANY PIPING.
- DD. ALL EQUIPMENT, PIPING, FIXTURES AND APPURTENANCES SHALL BE INSTALLED PLUMB, STRAIGHT AND TRUE. FINISHED PRODUCT SHALL BE "SHOW ROOM" QUALITY FOR FUTURE PRESENTATIONS.

SYMBOLS & ABBREVIATIONS

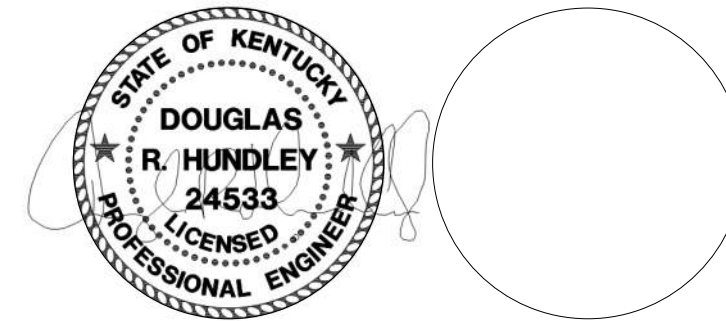
AFF	ABOVE FINISHED FLOOR		POINT OF CONNECTION
AFR	ABOVE FINISHED ROOF		PIPE ELBOW TURNING UP/TURNING DOWN
BFF	BELOW FINISHED FLOOR		PIPE TEE TURNING UP/TURNING DOWN
BFP	BACK FLOW PREVENTER		FIRE PROTECTION LINE
C.I.	CAST IRON		OVERFLOW ROOF LEADER PIPING
CO	CLEAN OUT		PUMPED DISCHARGE PIPING
CW	DOMESTIC COLD WATER		ROOF LEADER PIPING
DN	DOWN		SANITARY WASTE PIPING
ECO	EXTERIOR CLEAN OUT		STORM SEWER PIPING
FFE	FINISHED FLOOR ELEVATION		VENT PIPING
FPWH	FREEZE PROOF WALL HYDRANT		EXISTING PIPING (THIN LINE)
HB	HOSE BIBB		DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER		DOMESTIC HOT WATER SUPPLY
HWR	DOMESTIC RECIRCULATING HOT WATER		DOMESTIC RECIRCULATING HOT WATER
IAW	IN ACCORDANCE WITH		CLEANOUT IN CEILING SPACE
ID	INSIDE DIMENSION		FLOOR CLEANOUT
IE	INVERT ELEVATION		EXTERIOR CLEANOUT
Kw	KILOWATT		BALANCING VALVE
MH	MANHOLE		BALL VALVE
NTS	NOT TO SCALE		SAFETY RELIEF VALVE
NIC	NOT IN CONTRACT		SAFETY RELIEF VALVE
NO	NORMALLY OPEN		OSS&Y (GATE) VALVE
NC	NORMALLY CLOSED		PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.)
OD	OUTSIDE DIMENSION		STRAINER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED		CHECK VALVE
OFOI	OWNER FURNISHED, OWNER INSTALLED		DOUBLE CHECK VALVE ASSEMBLY
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED		PIPING UNION
OR	OPEN RECEPTACLE		FLOW SWITCH
ORL	OVERFLOW ROOF LEADER		PRESSURE SWTICH
OSD	OVERFLOW SPOUT NOZZLE		TAMPER SWITCH
PD	PUMPED DISCHARGE		THERMOMETER
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, OR GAS)		VACUUM BREAKER
PSI	POUNDS PER SQUARE INCH		LIMITED AREA SPRINKLER HEAD
RL	ROOF LEADER		PETE'S PLUG
SAN	SANITARY PIPING		DOWNSPOUT CONNECTOR DESIGNATOR
SR	SANITARY RISER		DOWNSPOUT BOOT CONNECTOR DESIGNATOR
T&P	TEMPERATURE & PRESSURE		FLOOR DRAIN DESIGNATOR
SS	STORM SEWER		OVERFLOW ROOF DRAIN SPOUT NOZZLE DESIGNATOR
TB	THRUST BLOCK		FLOOR DRAIN DESIGNATOR
TE	TOP ELEVATION		OVERFLOW ROOF DRAIN DESIGNATOR
TP	TRAP PRIMER		OVERFLOW ROOF DRAIN SPOUT NOZZLE DESIGNATOR
TYP	TYPICAL		ROOF DRAIN DESIGNATOR
UON	UNLESS OTHERWISE NOTED		PLUMBING FIXTURE DESIGNATOR
VTR	VENT THRU ROOF		EQUIPMENT TAG DESIGNATOR
W/	WITH		TAGGED NOTE DESIGNATOR
			REVISION DESIGNATOR
			TEMPERATURE SENSOR DESIGNATOR
			HOSE BIB DESIGNATOR



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LOUISVILLE, KENTUCKY

CMTA OFFICE FIT OUT 2

CONSTRUCTION DOCUMENTS

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PROJECT NUMBER 1921

DATE July 1, 2020

REVISIONS

Plumbing Legend

P1.0

DIVISION 22- PLUMBING

220500 - COMMON WORK RESULTS FOR PLUMBING

- A. SLEEVES AND SLEEVE SEALS - PROVIDE GALVANIZED PIPE SLEEVE, WITH 1" ANNULAR CLEAR SPACE FOR PIPE PENETRATIONS ON INTERIOR WALLS. USING APPROPRIATE GROUT, SEAL THE SPACE OUTSIDE OF THE SLEEVE. INSTALL SLEEVE SEALS AS SHOWN IN MANUFACTURER INSTRUCTIONS.
- B. ESCUTCHEONS - PROVIDE ONE PIECE, STAMPED STEEL TYPE WITH CHROME PLATED FINISH AND SPRING CLIPS. INSTALL AT ALL EXPOSED PIPE PENETRATIONS.
- C. RATED PENETRATIONS - CONTRACTOR SHALL MAINTAIN THE RATING OF FIRE- AND/OR SMOKE-RATED CONSTRUCTION AT ALL PIPE AND DUCTWORK PENETRATIONS. USE APPROPRIATE UL RATED FIRE PROOF SLEEVE SEALS AT FIRE RATED WALLS.
- D. PROVIDE ALL EXCAVATION, CUTTING, PATCHING, REPAIRING, FIRE STOPPING, SLEEVEING, CONCRETE WORK, ETC. REQUIRED TO CONSTRUCT THE MECHANICAL SYSTEMS

201300 - PLUMBING PIPING, PIPE FITTINGS AND PIPE SUPPORTS

SOIL, WASTE AND VENT PIPING (BELOW SLAB)

- A. SERVICE WEIGHT CAST IRON HUB AND SPIGOT PIPING WITH COMPRESSION GASKET JOINTS
- B. SCHEDULE 40 PVC WITH SOLVENT WELDED DRAINAGE FITTINGS, CELLULAR CORE PPING SHALL NOT BE ALLOWED.
- C. PIPING BELOW SLAB SHALL BE A MINIMUM OF 2" IN SIZE.

SOIL, WASTE AND VENT PIPING (ABOVE SLAB)

- A. SERVICE WEIGHT HUBLESS CAST IRON PIPE WITH MANUFACTURER'S APPROVED BANDS.
- B. SCHEDULE 40 PVC WITH SOLVENT WELDED DRAINAGE FITTINGS, CELLULAR CORE PPING SHALL NOT BE ALLOWED.
- C. SERVICE WEIGHT CAST IRON HUB AND SPIGOT PIPING WITH COMPRESSION GASKET JOINTS.

DOMESTIC COLD, HOT AND RECIRCULATING HOT WATER PIPING (ABOVE SLAB)

TYPE "L" HARD COPPER TUBING WITH WROUGHT COPPER FITTINGS WITH LEAD FREE SOLDER EQUIVALENT IN PERFORMANCE TO 95S. (MAXIMUM LEAD CONTENT OF SOLDER AND FLUX IS 2%).

CONDENSATE DRAIN LINES: TYPE "M" COPPER TUBING WITH SWEAT FITTINGS AND 95S SOLDER. SCHEDULE 40 PVC WITH SOLVENT WELDED FITTINGS.

202100 - VALVES FOR PLUMBING PIPING

A. CHECK VALVE (2" AND UNDER): CHECK VALVE SHALL HAVE BRONZE BODY, DISC AND HINGE. CHECK VALVE SHALL BE Y-PATTERN TYPE, HORIZONTAL SWING, RENEWABLE DISC AND RATED FOR 150 PSI WORKING PRESSURE. CHECK VALVE SHALL BE NIBCO T-413 FOR THREADED ENDS OR NIBCO S-413 FOR SOLDER ENDS.

B. TWO PIECE BALL VALVE (2" AND UNDER): BALL VALVE SHALL HAVE BRONZE BODY, BALL AND REINFORCED, WATER TIGHT SEAT. VALVE SHALL BE TWO PIECE CONSTRUCTION. VALVE SHALL BE "FULL-PORT" TYPE. VALVE HANDLE SHALL ONLY REQUIRE QUARTER TURN TO GO FROM FULL OPEN TO FULL CLOSE. THE HANDLE SHALL BE REMOVABLE WITH VINYL GRIP. VALVE SHALL BE RATED FOR 180 DEGREES F WATER TEMPERATURE AND 150 PSI WORKING PRESSURE. BALL VALVE SHALL BE NIBCO T-585 FOR THREADED ENDS AND NIBCO S-585 FOR SOLDER ENDS.

220553 - IDENTIFICATION FOR PLUMBING PIPING

A. IDENTIFICATION - PIPING SHALL BE MARKED ON 12FT CENTER TO INDICATE SERVICE AND DIRECTION OF FLOW WITH ANSI A13.1-81 SELF-ADHESIVE, SNAP-ON, OR STRAP-ON MARKERS. VALVE TAGS SHALL BE METAL OR PLASTIC WITH 1/2" HIGH BLACK-FILLED LETTERING. SCHEDULED EQUIPMENT SHALL BE TAGGED PROVIDED WITH A PERMANENTLY ATTACHED METAL NAMEPLATE WITH STAMPED OR ENGRAVED LETTERING. NAMEPLATE SHALL CONTAIN ALL ESSENTIAL DATA INCLUDING MANUFACTURER, PRODUCT NAME, MODEL NUMBER, SERIAL NUMBER, CAPACITY, OPERATING CHARACTERISTICS, ELECTRICAL CHARACTERISTICS, AND LABELS OF TESTED COMPLIANCE.

220529 - HANGERS AND SUPPORTS FOR PLUMBING PIPING

- A. ALL PIPING SHALL BE PROPERLY SUPPORTED AND PROVIDED WITH ALL NECESSARY HANGERS AND ACCESSORIES FOR SUPPORT OF HORIZONTAL AND VERTICAL PIPING IN ACCORDANCE WITH MSS, ANSI, AND ASTM STANDARDS AND MANUFACTURERS RECOMMENDATIONS. INSULATED PIPING SHALL BE PROVIDED WITH PIPE SHIELDS OR SADDLES AS APPROPRIATE WITH PROPERLY SIZED CLEVIS TYPE HANGERS.
- B. CARBON STEEL PIPE HANGERS AND SUPPORTS - MSS SP-58, TYPES 1 THROUGH 58, FACTORY-FABRICATED COMPONENTS

- A. HANGERS AND SUPPORTS SHALL BE PLACED AS NEAR AS POSSIBLE TO JOINTS, TURNS AND BRANCHES.
- B. SUPPORT ALL CEILING HUNG EQUIPMENT WITH APPROVED VIBRATION ISOLATORS.
- C. WHERE COPPER TUBING IS SPECIFIED, HANGERS SHALL BE OF COPPER CLAD TYPE WHEN PIPING IS UNINSULATED.
- D. UNINSULATED PIPING HUNG FROM ABOVE SHALL BE SUPPORTED WITH RING AND CLEVIS TYPE PIPE HANGERS. UNINSULATED PIPING MOUNTED ON TRAPEZE (WHEN ALLOWED) AND WALL BRACKET TYPE SUPPORT SHALL BE HELD IN PLACE WITH U-BOLTS. U-BOLTS SHALL ALLOW FOR AXIAL MOVEMENT IN THE PIPING.
- E. ALL INSULATED PIPING SHALL BE SUPPORTED WITH CLEVIS TYPE AND PIPE ROLL HANGERS. HANGERS SHALL BE SIZED TO ALLOW THE PIPE INSULATION TO PASS THROUGH THE HANGERS. INSTALL INSULATION PROTECTION SADDLES AT ALL HANGER LOCATIONS. WELDED PIPE SADDLES SHALL BE INSTALLED AT ALL HANGERS ON PIPING 2" AND LARGER. THE PIPE SADDLES SHALL BE SIZED FOR THE THICKNESS OF INSULATION USED. HANGERS SHALL FIT SNUGLY AROUND OUTSIDE OF INSULATION SADDLES.
- F. SUPPORT STEEL AND COPPER PIPING AT A MINIMUM OF EIGHT (8) FOOT INTERVALS FOR PIPING 3" AND SMALLER AND TEN (10) FOOT INTERVALS FOR LARGER PIPING. PROVIDE ADDITIONAL SUPPORT AT END OF THE BRANCHES AND CHANGE OF DIRECTION.
- G. WHERE FIREPROOFING IS DISLOODED/DAMAGED FROM THE BUILDING STRUCTURE DUE TO CONTRACTOR'S INSTALLATION OF HANGERS, CLAMPS, ETC., IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ALL DISLOODED/DAMAGED FIREPROOFING TO ORIGINAL FIREPROOFING RATING. THIS SHALL ALSO INCLUDE ALL WORK PERFORMED BY THEIR CONTRACTORS SUB-CONTRACTORS.

220700 - PLUMBING INSULATION

- A. APPLICATION OF INSULATION MATERIALS SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS. WHERE THICKNESS OF INSULATION IS NOT SPECIFIED, USE APPLICABLE THICKNESS RECOMMENDED BY MANUFACTURER FOR SPECIFIC USE.
- B. INSULATION THICKNESSES SHALL COMPLY WITH THE LATEST VERSION OF ASHRAE 90.1 AND IECC AT A MINIMUM.
- C. ALL INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OPENINGS AND SLEEVES. HOWEVER, INSULATION SHALL BE BROKEN THROUGH FIRE WALLS. ALL COVERED PIPE AND DUCTWORK IS TO BE LOCATED A SUFFICIENT DISTANCE FROM WALLS, OTHER PIPE, DUCTWORK AND OTHER OBSTACLES TO PERMIT THE APPLICATION OF THE FULL THICKNESS OF INSULATION SPECIFIED. IF NECESSARY, EXTRA FITTINGS AND PIPE ARE TO BE USED. NO NOTICEABLE DEFORMATION OF INSULATION OR DISCONTINUITY OF VAPOR SEAL, WHERE REQUIRED, WILL BE ACCEPTED. COORDINATE WORK WITH PLUMBERS, PIPE FITTERS, ETC. TO ASSURE HANGER LOCATIONS AGREE WITH LOCATION OF INSULATION INSERTS.
- D. EXISTING AND/OR NEW INSULATION REMOVED AND/OR DAMAGED DURING COURSE OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.
- E. FIBER GLASS AND MINERAL FIBER PRE-FORMED PIPE INSULATION - TYPE I, 850 DEG F MATERIALS: GLASS FIBERS BONDED WITH A THERMOSETTING RESIN, COMPLY WITH ASTM C 547, TYPE I, GRADE A, WITH FACTORY-APPLIED ASJ-SS, WITH SELF-SEALING, PRESSURE-SENSITIVE, ACRYLIC-BASED ADHESIVE COVERED BY A REMOVABLE PROTECTIVE STRIP, COMPLYING WITH ASTM C 1136, TYPE I.
- F. PIPE INSULATION SCHEDULE:
1. DOMESTIC WATER - INSULATION SHALL BE 1/2" THICK FOR PIPING UP TO 1-1/4", AND 1" THICK FOR PIPING 1-1/2" AND LARGER AND 1" THICK FOR HOT WATER RECIRCULATING PIPING.
 2. ADA-ACCESSIBLE LAVATORIES, EXPOSED PIPING - PROVIDE VANDAL-RESISTANT, MOLDED, FLEXIBLE, CLOSED CELL VINYL INSULATION SYSTEM, INCLUDING INSULATION FOR TAILPIECE, P-TRAP, WASTE ARM, 3/8" SUPPLY TUBING, AND QUARTER-TURN BALL VALVE, SUCH AS MCGUIRE PROWRAP SEAMLESS PRE-WRAPPED CAST P-TRAP INSULATION KIT, MODEL PWV8902.
 3. CONDENSATE DRAIN - INSULATION SHALL BE 1/2" THICK, PROVIDE WITH HEAT TAPE BETWEEN PIPE AND INSULATION.

G. PIPE JACKETING SCHEDULE:

1. INDOOR CONCEALED - 30MIL PVC
2. INDOOR EXPOSED - 30MIL PVC

FLOOR DRAINS: PROVIDE FLOOR DRAINS AT LOCATIONS INDICATED AND/OR AS REQUIRED BY STATE PLUMBING/BUILDING CODES. INSTALL IN A NEAT AND WORKMANLIKE MANNER. INSTALL FLOOR DRAINS IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND THE STATE PLUMBING AND BUILDING CODES. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR TO INSURE FLOOR PITCH TO DRAIN WHERE REQUIRED.

A. INSURE BY COORDINATION WITH THE GENERAL CONTRACTOR THAT SPACES SERVED WITH FLOOR DRAINS ON ALL FLOORS ABOVE THE LOWEST LEVEL HAVE A WATER SEAL EXTENDING AT LEAST THREE (3) INCHES FROM THE FLOOR. ALSO, FOR THESE LOCATIONS, PROVIDE A 36"X36", FOUR (4) POUND SHEET LEAD FLASHING SHEET AND CLAMPING COLLAR OR A 30 MIL CHLORINATED POLYETHYLENE SHOWER PAN LINER. LEAD PANS SHALL BE GIVEN A HEAVY COAT OF ASPHALTUM ON BOTTOM AND SIDES BEFORE INSTALLATION AND A HEAVY COAT ON ANY EXPOSED SURFACES. AFTER INSTALLATION, PROVIDE ONE PLY OF FIFTEEN (15) POUND ROOFING FELT BENEATH EACH PAN.

B. THE FLOOR DRAINS SHALL BE ZURN, JOSAM, SMITH, WADE, WATTS DRAINAGE, ANCON, SIMILAR TO THE FOLLOWING:

FD-2 - ZURN, 2N-511 FLOOR DRAIN WITH 9" DIA. NICKEL BRONZE STRAINER, DURA-COATED CAST IRON DEEP SUMP WITH 4" BOTTOM OUTLET, SEEPAGE PAN AND SEDIMENT BUCKET.

PLUMBING FIXTURES, FITTINGS AND TRIM

- A. ALL FIXTURES AND TRIM SHALL BE NEW. ALL FIXTURES AND TRIM SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER. ALL FIXTURES SHALL BE SET LEVEL AND TRUE AND SHALL BE GROUTED INTO FINISHED WALLS, FLOORS, ETC. IN A NEAT AND WORKMANLIKE MANNER WITH AN APPROVED WATERPROOF NON-YELLOWING GROUT FOR SUCH SERVICE. ALL FIXTURES AND TRIM SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. UNACCEPTABLE WORKMANSHIP SHALL BE REMOVED AND REPLACED AT THE INSTALLING CONTRACTOR'S COST. PAY PARTICULAR ATTENTION TO FLUSH VALVES AND BRACKET CONCEALED PORTION TO BUILDING STRUCTURE DURING ROUGH-IN. LOOSE, SHAKY FLUSH VALVES, LAVATORIES, ETC. SHALL NOT BE ACCEPTABLE.
- B. ALL EXPOSED PIPING, STOPS, TRAPS, TAILPIECES, ETC. SHALL BE CODE APPROVED CHROME PLATED BRASS UNLESS OTHERWISE INDICATED OR SPECIFIED. WHERE ACID RESISTANT PIPING IS INDICATED ON THE DRAWING OR THE SPECIFICATIONS, ALL PIPING AND ANCILLARY COMPONENTS SHALL BE ACID RESISTANT AS SPECIFIED AND REQUIRED BY CODE.
- C. WATER SUPPLIES SHALL CONNECT THROUGH WALLS WITH STOPS AND CHROME PLATED ESCUTCHEONS WITH SET SCREWS. IN GENERAL, FURNISH DRINKING FOUNTAINS, WALL-HUNG LAVATORIES AND HOSE BIBBS WITH MANUAL LOOSE KEY STOP VALVES. FOR ALL OTHER FIXTURES, FURNISH WITH MANUAL PERMANENT-KEY STOP VALVES (I.E. SINKS IN CASEWORK, ETC.). WHEN IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLATION.
- P-4 SINK - UNDERMOUNT STAINLESS STEEL COUNTERTOP BOWL, ELKAY MODEL ELUH4D RECTANGULAR 19" X 19" UNDERMOUNT BOWL, SINK SHALL BE 18 GAUGE STAINLESS STEEL, PROVIDE WITH GRID STRAINER, 3/8" CHROME SUPPLIES STOPS, TAILPIECE, P-TRAP, DRAIN, AIRGAP AND ESCUTCHEONS. COORDINATE AIRGAP COLOR WITH OWNER/ARCHITECT. SINK TRIM SHALL BE AS FOLLOWS: ZURN MODEL Z81284-3F POLISHED CHROME-PLATED CAST BRASS FAUCET BODY ON 4" CENTERS WITH QUARTER TURN CERAMIC DISC CARTRIDGES AND 5-3/8" SWING GOOSENECK SPOUT. FURNISH WITH 0.5 GPM VANDAL-RESISTANT AERATOR AND 4" COLOR-CODED METAL WRIST BLADE HANDLES. PROVIDE VALVED WATER LINE THROUGH CABINET FOR DISHWASHER, PROVIDE ALL FINAL CONNECTIONS FOR DISHWASHER. COORDINATE SINK DEPTH OF 5.5" WITH CABINETRY/CASEWORK.



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PROJECT NUMBER 1921

DATE July 1, 2020

REVISIONS

Omni

ARCHITECTS

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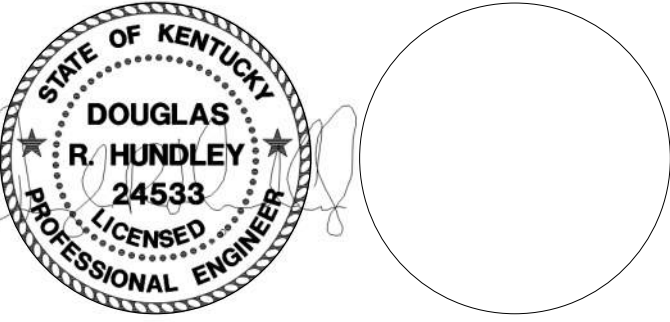
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LOUISVILLE, KENTUCKY

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CONSTRUCTION DOCUMENTS

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PROJECT NUMBER	1921
DATE	July 1, 2020
REVISIONS	

First Floor Plan - Plumbing

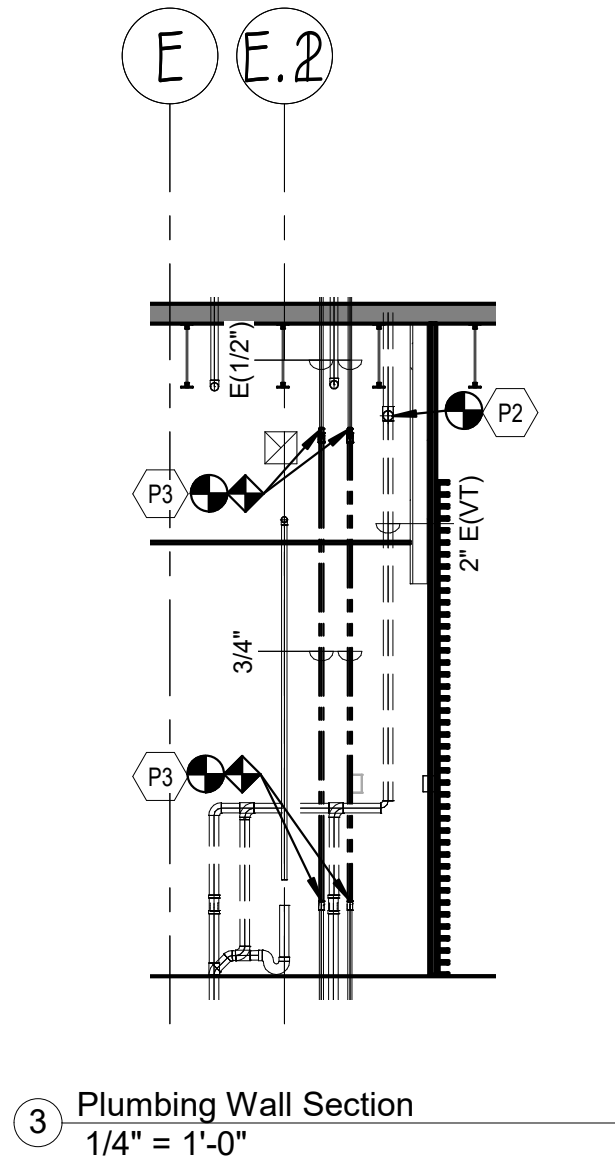
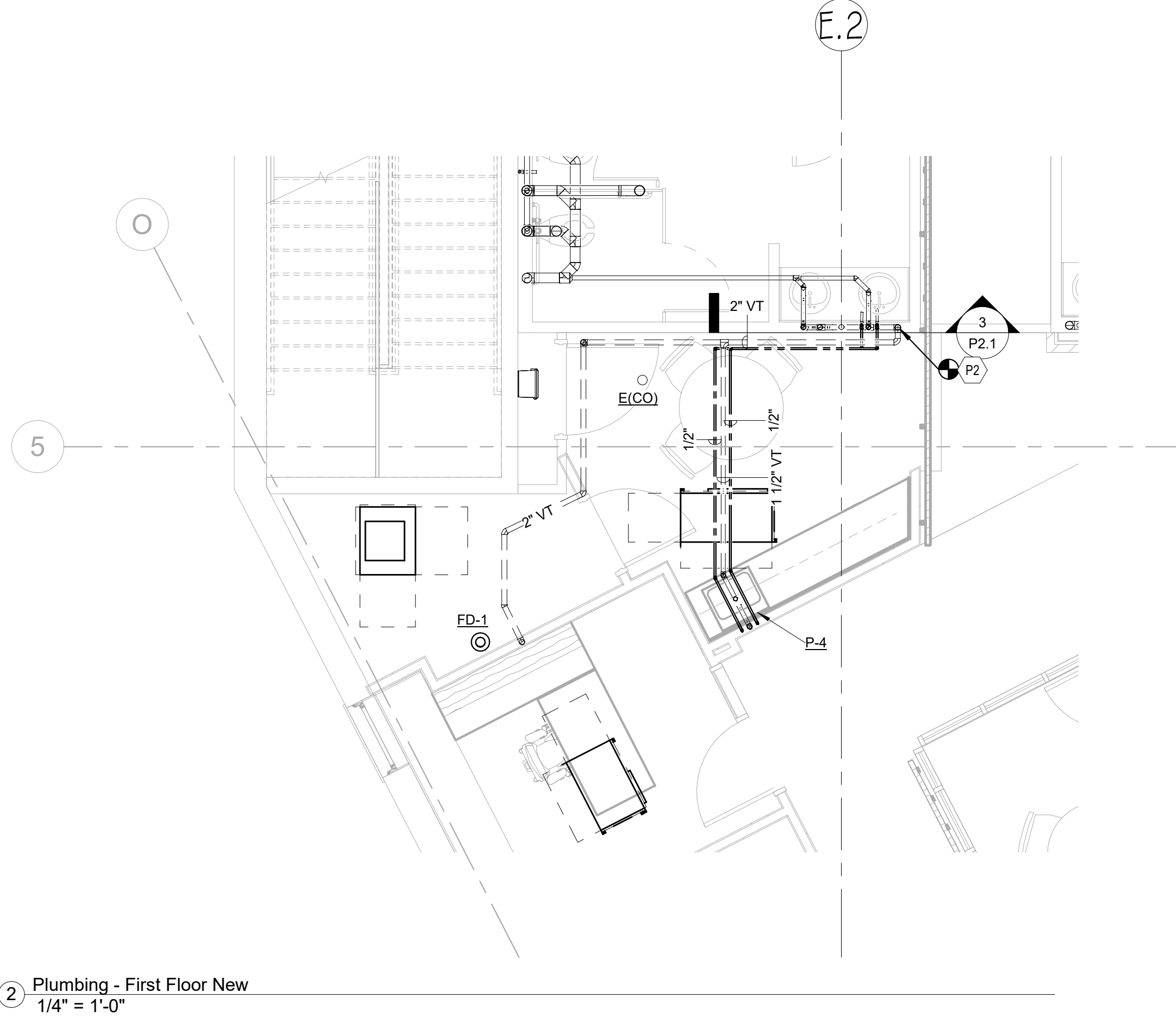
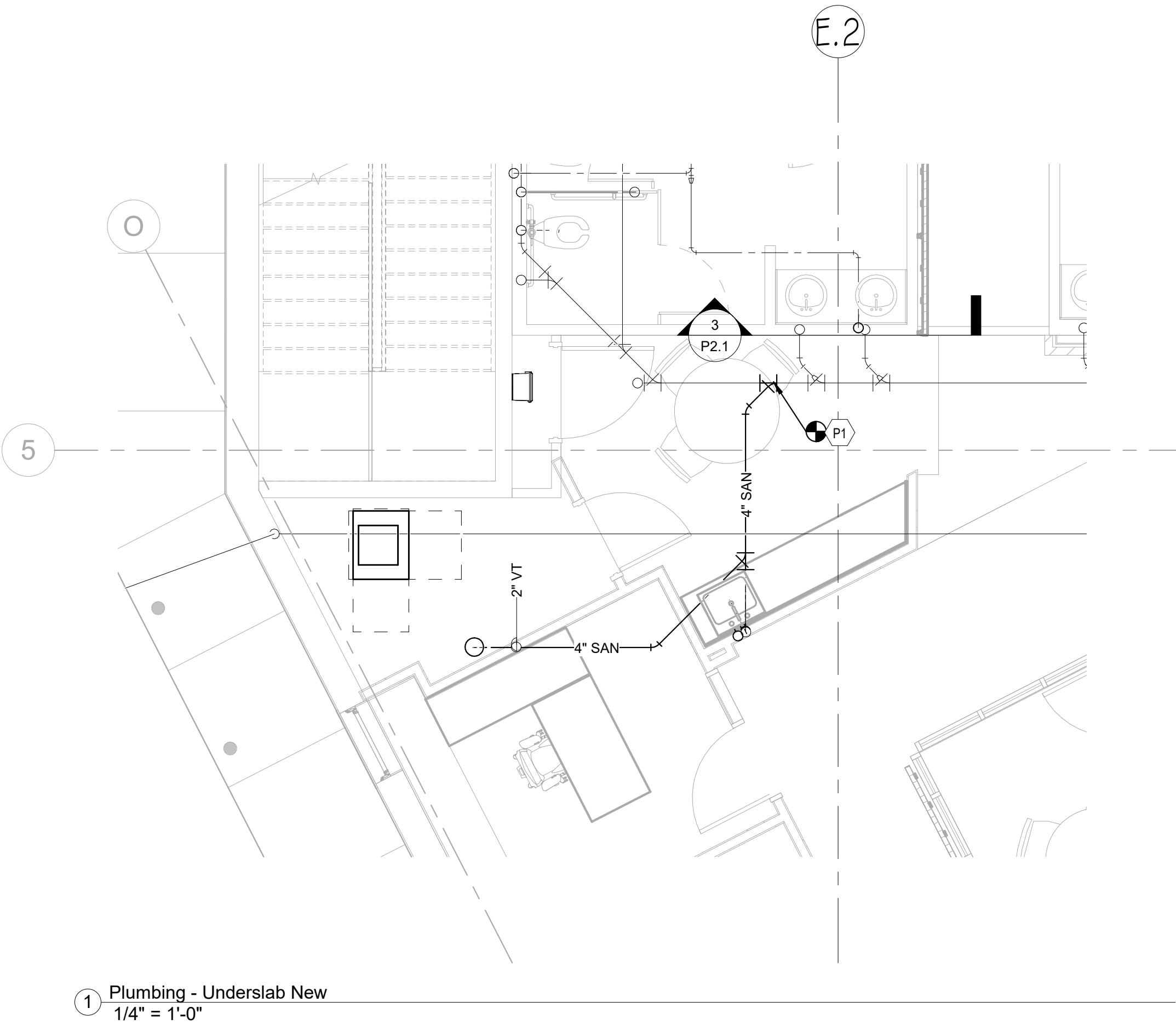
P2.1

- TAGGED NOTES
- P1

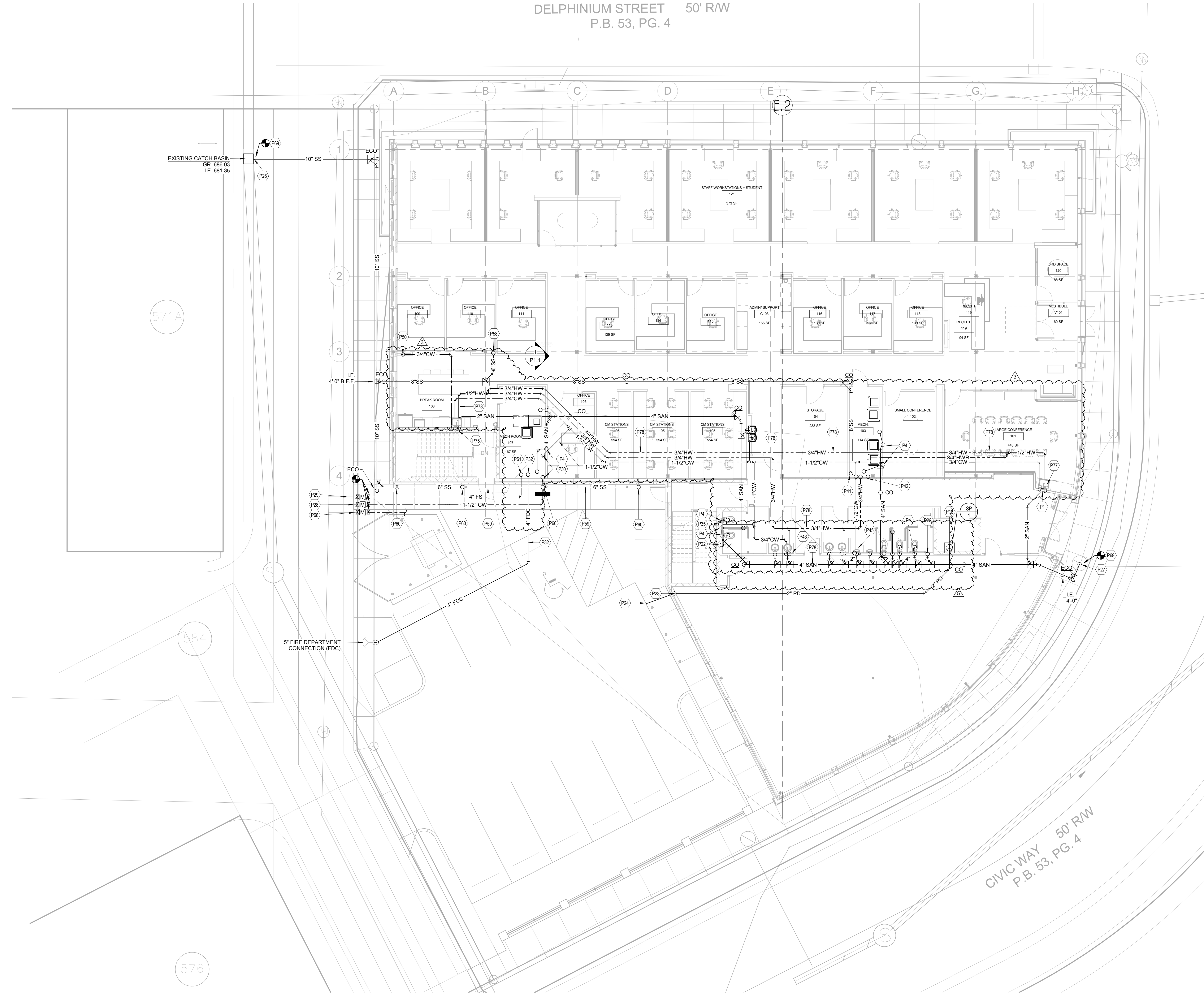
CONNECT NEW 4" SANITARY INTO EXISTING 4" SANITARY AT POINT INDICATED.
- P2

TIE INTO EXISTING VENT RISER INSIDE OF WALL.
- P3

DEMO AND REPLACE 1/2" DOMESTIC HW AND CW WITH 3/4" LINES WITHIN WALL UP TO POINT ABOVE CEILING. TIE IN NEW 1/2" CW/HW LINE FOR NEW SINK IN BREAKROOM.



SEE EXISTING PLUMBING DRAWING P2.1 FOR REFERENCE



EXISTING PLUMBING DRAWING FOR REFERENCE

TAGGED NOTES

- P1 2" SAN UP.
P4 2" VT UP.
P18 2" PD PIPE DOWN TO ELEVATOR SUMP PUMP. COORDINATE EXACT LOCATION WITH STRUCTURAL MEMBERS AND ELECTRICAL CONTRACTOR.
P22 4" SAN UP.
P23 2" PD UP.
P24 ROUTE 2" PD PIPE UNDER SIDEWALK, TERMINATE THROUGH CURB ONTO PAVEMENT. PROVIDE RODENT SCREEN. COORDINATE ROUTE WITH CIVIL DRAWINGS AND SIDEWALK.
P26 CONNECT NEW SS PIPE TO EXISTING CATCH BASIN/JUNCTION BOX. REFER TO CIVIL DRAWINGS FOR CATCH BASIN INFORMATION.
P27 CONNECT TO EXISTING 6" PROPERTY SERVICE CONNECTION. PLUMBING CONTRACTOR SHALL INCUR ALL COSTS AND COORDINATION WITH MSD. COORDINATE WITH OTHER TRADES FOR PIPE ROUTING ON SITE.
P28 WATER METER AND TAP TO EXISTING WATER MAIN BY LOUISVILLE WATER COMPANY. PLUMBING CONTRACTOR SHALL INCUR ALL COSTS AND COORDINATION FOR DOMESTIC WATER METER. COORDINATE WITH OTHER TRADES FOR PIPE ROUTING ON SITE.
P29 FIRE PROTECTION CONTRACTOR SHALL COORDINATE TAP AND METER WITH LOUISVILLE WATER COMPANY AND INCUR ALL COSTS FOR FIRE SERVICE WATER METER. COORDINATE WITH OTHER TRADES FOR PIPE ROUTING ON SITE.
P30 1 1/2" CW UP TO BACKFLOW PREVENTER ASSEMBLY.
P32 PROVIDE 4" PIPE OUT ON SITE TO 5' STORZ FIRE DEPARTMENT CONNECTION. COORDINATE EXACT LOCATION AND TYPE WITH FIRE MARSHAL PRIOR TO INSTALLATION.
P35 1" CW UP IN WALL.
P41 8" RL UP.
P42 3/4" HW, CW & HWR PIPING UP IN WALL TO WH-1 & DP-1 ON SHELF SUPPORTED FROM STRUCTURE APPROXIMATELY 7" A.F.F. TO BASE OF WATER HEATER. REFER TO DETAIL ON SHEET P1.0 FOR MORE INFORMATION.
P43 3/4" HCW DOWN UP IN WALL TO FIXTURES.
P45 1 1/2" CW, 3/4" HW UP IN WALL TO FIXTURES.
P50 3/4" CW UP IN WALL FOR FFWH.
P58 6" RL UP.
P59 EXTERIOR STORM SEWER PIPING TO BE CAST IRON.
P60 PROVIDE DOWNSPOUT BOOT CONNECTION (DBC-1), TO BE MINIMUM 24" CAST IRON, MANUFACTURED BY ZURN, NEENAH OR EQUIVALENT. CONNECTION TO DOWNSPOUT SHALL BE UNGROUTED. COORDINATE EXACT SIZE AND LOCATION WITH DOWNSPOUT AND DOWNSPOUT CONTRACTOR.
P61 4" FP PIPING UP.
P68 IRRIGATION CONTRACTOR SHALL COORDINATE TAP AND METER WITH LOUISVILLE WATER COMPANY AND INCUR ALL COSTS. COORDINATE WITH OTHER TRADES FOR PIPE ROUTING ON SITE.
P69 REFER TO CIVIL DRAWINGS FOR EXISTING STORM SEWER, SANITARY SEWER, WATER AND UTILITY INFORMATION ETC.
P75 2" 3/4" CW PIPES, 1 1/2" HW UP IN WALL.
P76 1/2" CW UP IN WALL.
P77 3/4" CW, 1/2" HW UP IN WALL.
P78 CONTRACTOR TO COORDINATE ELEVATION AND EXACT ROUTING OF UNDER SLAB PIPING WITH OTHER TRADES, STRUCTURAL, ARCHITECTURAL.

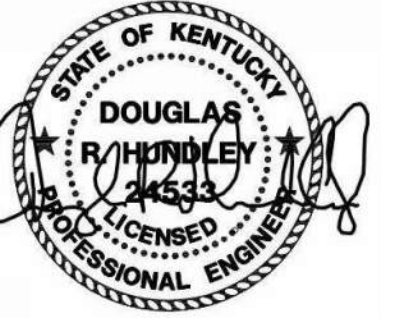


CMTA Office Building

Louisville Kentucky
First Floor Plan -
Underslab Plumbing &
Site Work

Revisions

1	09/22/17	Post Bid Addendum 1
3	10/19/17	Post Bid Addendum 3
5	11/17/17	Post Bid Addendum 5



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Project Number

CMT.1702

Date

September 22, 2017

Sheet Number

P2.1

REGISTERS, GRILLES, AND DIFFUSERS							
SYMBOL	MANUFACTURER & MODEL	MATERIAL & TYPE	CFM RANGE	PHYSICAL SIZE			REMARKS
				OVERALL FACE SIZE	NECK SIZE	INLET DUCT SIZE	
S-1	TITUS OMNI AA	ALUMINUM CONSTRUCTION SQUARE PLAQUE FACE DIFFUSER	100-225	24"x24"	8"	8"	1,3,5
S-2	TITUS 300FS	EXTRUDED ALUMINUM DOUBLE DEFLECTION 3/4" BLADE SPACING	0-250	14"x10"	12"x8"	12"x8"	3,4,9
S-3	TITUS FBP-15-HT	EXTRUDED ALUMINUM PLENUM SLOT DIFFUSER, 2-SLOT 2-WAY, 1-1/2" SLOT	0-175	9"x24"	8"	8"	1,3,7
S-4	NALOR ARJUN	EXTRUDED ALUMINUM ROUND PLAQUE FACE DIFFUSER	0-225	18.75"Ø	8"Ø	8"Ø	3,5,8
R-1	TITUS 50F	EXTRUDED ALUMINUM FRAME WITH 1/2" CUBE CORE	101-225	24"x24"	22"x22"	8"	1,2,3
R-2	TITUS 350FL	EXTRUDED ALUMINUM LOVERED 35° FIXED DEFLECTION	100-500	18"x12"	16"x10"	16"x10"	3,4
R-3	TITUS 350FL	EXTRUDED ALUMINUM LOVERED 35° FIXED DEFLECTION	1000-2000	32"x26"	30"x24"	30"x24"	3,4
R-4	SEHO EC	EXTRUDED ALUMINUM ROUND FRAME WITH 1/2" CUBE CORE	0-180	10.1"Ø	8"Ø	8"Ø	3,8
E-1	TITUS 50F	EXTRUDED ALUMINUM FRAME WITH 1/2" CUBE CORE	200-350	24"x24"	22"x22"	10"Ø	1,2,3,6

- REMARKS:
- CEILING T-BAR MOUNTED.
 - INLET TRANSITION BOX, ROUND TO RECTANGULAR.
 - PROVIDE WHITE IN COLOR.
 - SIDEWALL OR DUCT MOUNTED.
 - PROVIDE DIFFUSER WITH MOLDED INSULATION BLANKET.
 - PROVIDE WITH ANODIZED FINISH.
 - PROVIDE WITH PLENUM BOX.
 - DRYWALL CEILING MOUNTED.
 - PROVIDE INTEGRATED FACE ADJUSTABLE BALANCE DAMPER.

GEOTHERMAL WATER SOURCE HEAT PUMP SCHEDULE			
GENERAL			
SYMBOL	HHP-12	VHP-72	
MANUFACTURER	WATERFURNACE	WATERFURNACE	
CONFIGURATION	HORIZONTAL	HORIZONTAL	
NOMINAL CFM/ESP	400 / 0.4"	570 / 0.6"	
COMPRESSOR/BLOWER	SINGLE SPEED/ECM	VARIABLE SPEED/ECM	
VOLTS/PHASE/HZ	208 / 1 / 60	208 / 1 / 60	
MCA/MOCP	7.1 / 15.0	38.2 / 60.0	
REVERSE CYCLE HEATING CAPACITY --- 68°F EAT - 50°F EWT			
GPM/WPD (FT)/FLUID	3 / 3.1 / WATER	21 / 17.2 / WATER	
TOTAL HEAT (MBH)	11.28	79.27	
HEAT OF ABSORPTION (MBH)	8.5	60	
COP @ AHRI COND.	4.0	4.1	
COOLING CAPACITY --- 74°F DB / 63°F WB EAT - 90°F EWT			
GPM/WPD (FT)/FLUID	3 / 3 / WATER	21 / 15.7 / WATER	
TOTAL (MBH)	12.89	69.30	
SENSIBLE (MBH)	9.06	51.78	
HEAT OF REJECTION (MBH)	15.8	86.7	
EER @ AHRI COND.	15.3	13.6	

- REMARKS:
- SEE PLANS FOR DUCT CONFIGURATION REQUIREMENTS.
 - REFER TO HEAT PUMP DETAIL FOR VALVING AND FILTER REQUIREMENTS.
 - UNIT SHALL BE ARI STANDARD 330 LISTED FOR CLOSED-LOOP GROUND SOURCE HEAT PUMP APPLICATIONS.
 - NO FILTER BACKS. REFER TO DETAIL SHEET FOR FILTER REQUIREMENTS.
 - PROVIDE UNIT WITH FACTORY THERMOSTAT AND CONTROLS - OCCUPIED/UNOCCUPIED WITH OVERIDE AND BACKUP COMPATIBLE.
 - PROVIDE FACTORY INSTALLED INTEGRAL DISCONNECT.
 - ACCEPTABLE MANUFACTURERS: TRANE, HYDRO-TEMP, WATER FURNACE

VAV BOX SCHEDULE		
SYMBOL	VAV-04	VAV-05
MANUFACTURER & MODEL	TITUS DESV-04	TITUS DESV-05
BOX TYPE	SINGLE DUCT	SINGLE DUCT
TOTAL APD @ MAX. CFM	0.25"WG	0.25"WG
VOLUME CONTROL DAMPER		
MIN. / MAX. CFM	45 / 225	65 / 350
LEAKAGE RATE @ 2.0" S.P.	2.0%	2.0%
PRESSURE INDEPENDENT CONTROLS	YES	YES
INLET SIZE	4"ø	5"ø

- REMARKS:
- BOX SHALL BE DOUBLE WALL WITH 1/2" FOAM INSULATION.

MECHANICAL LEGEND	
XXX-XX	MECHANICAL EQUIPMENT OR SENSOR DESIGNATOR
XXX-XX XXX CFM	MECHANICAL EQUIPMENT DESIGNATOR (TOP) WITH FLOW FROM UNIT (BOTTOM)
XXX-XX X-X	MECHANICAL EQUIPMENT DESIGNATOR (TOP) WITH CONTROL SENSOR TAG (BOTTOM)
①	THERMOSTAT WITH TEMPERATURE PLUS HUMIDITY CONTROL
⑥ S	CARBON DIOXIDE SENSOR
⬤	TAGGED NOTE
⬤	CONNECT TO EXISTING
X-X XXX	INDICATES AIR DISTRIBUTION DEVICE SPECIFICATION (L=LOWER, T=TRANSFER, S=SUPPLY DIFFUSER OR REGISTER, R=RETURN GRILLE OR REGISTER, E= EXHAUST GRILLE OR REGISTER) BALANCE TO FLOW SHOWN ON BOTTOM
L	VOLUME DAMPER (MANUAL)
M	VOLUME DAMPER (MOTORIZED)
FD	FIRE DAMPER
⊠	SUPPLY AIR DIFFUSER
⊠	RETURN AIR GRILLE
⊠	EXHAUST AIR GRILLE
SA 20X12	SUPPLY AIR DUCT/DUCT DIM. 20"HORZ. X 12" VERT. (ONE LINE)
RA	RETURN AIR DUCT (ONE LINE)
EA	EXHAUST AIR DUCT (ONE LINE)
▷	TRANSITION - RECT. TO ROUND
▷	TRANSITION - RECT. TO RECT. OR ROUND TO ROUND
▷	DIRECTION OF FLOW
▷	PRESSURE REDUCING VALVE
⊙	BALL VALVE
⊙	PRESSURE GAUGE
⊠	THERMOMETER
GS	GEOTHERMAL SUPPLY
GR	GEOTHERMAL RETURN
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
CD	A/C CONDENSATE
⊙	PIPING ELBOW (TURNED UP/DOWN)
⊙	PIPING TEE (TURNED UP/DOWN)

- GENERAL NOTES (APPLICABLE TO ALL DRAWINGS)
- EACH CONTRACTOR, SUPPLIER AND, OR MANUFACTURER SHALL REFER TO ALL DOCUMENTS PERTAINING TO THIS PROJECT AND COORDINATE ACCORDINGLY SO AS TO ENSURE ADEQUACY OF FIT, COMPLIANCE WITH SPECIFICATIONS, PROPER VOLTAGE AND CURRENT CHARACTERISTICS AND AVOID CONFLICT WITH ANY OTHER BUILDINGS SYSTEMS. VERIFY SAME WITH SHOP DRAWINGS.
 - ALL OFFSETS, TURNS, FITTINGS, TRIM, DETAIL, ETC., MAY NOT BE INDICATED, BUT SHALL BE PROVIDED AS REQUIRED. ADDITIONAL ALLOWANCES SHALL BE INCLUDED FOR SAME AT EACH PROPOSER'S DISCRETION.
 - OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS (CITY, COUNTY, LOCAL, STATE, FEDERAL, MUNICIPALITY, UTILITY COMPANY, OSHA, ETC.).
 - ALL SYSTEMS, EQUIPMENT AND MATERIALS ARE TO BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. WORK NOT DONE SO SHALL BE REMOVED AND REINSTALLED SATISFACTORILY.
 - WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.
 - DO NOT SCALE FROM DRAWINGS. PRINTING DISTORTS SCALE. WORK SHALL BE Laid OUT FROM DIMENSIONED DRAWINGS, OR DIMENSIONS SUPPLIED TO THE CONTRACTOR.
 - THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR THEIR WORK. ALL CUTTING AND PATCHING SHALL MATCH ADJACENT SURFACES. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
 - TURNING VANES SHALL BE INSTALLED IN ALL SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST DUCT WORK ELBOWS.
 - WHERE PENETRATING ROOFING MEMBRANE OR OTHER MATERIALS USED FOR WEATHERPROOFING THE BUILDING, MAKE SUCH PENETRATIONS IN A WAY THAT WILL NOT VOID OR DIMINISH THE ROOFING WARRANTY OR INTEGRITY IN ANY WAY. COORDINATE ALL SUCH PENETRATIONS WITH THE ROOFING INSTALLER.
 - ADVISE THE ENGINEERS OF ANY CONFLICTS, ERRORS, OMISSIONS, ETC. AT LEAST TEN DAYS PRIOR TO BID DATE, TO ALLOW CLARIFICATION BY WRITTEN ADDENDUM.
 - DEVIATION FROM SPECIFICATIONS OR PLANS REQUIRES PRIOR WRITTEN APPROVAL FROM THE ENGINEERS AND MUST BE SUBMITTED IN WRITING NO LATER THAN TEN DAYS PRIOR TO THE BID DATE.
 - COORDINATE THE LOCATION OF DRAINS, ELECTRICAL OUTLETS, ETC. WITH ALL MECHANICAL ROOM EQUIPMENT, ETC. PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE RESPONSIBLE CONTRACTOR(S).
 - THE PURPOSE AND INTENT OF ALL THE DOCUMENTS PERTAINING TO THIS PROJECT IS TO PROVIDE A COMPLETE, FUNCTIONAL, SAFE, NEW FACILITY. ANYTHING LESS SHALL BE UNACCEPTABLE.
 - ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.
 - INSTALL EQUIPMENT, MATERIALS, ETC. IN STRICT ACCORD WITH MANUFACTURER'S RECOMMENDATIONS AND DIRECTIONS. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEERS PRIOR TO INSTALLATION FOR CLARIFICATION.
 - ALL SUPPORTS FOR EQUIPMENT, DEVICES OR FIXTURES SHALL BE UNIQUE FROM THE BUILDING STRUCTURE. DO NOT SUPPORT WORK FROM OTHER TRADES, EQUIPMENT OR SUPPORTS WITHOUT WRITTEN PERMISSION FROM THE ENGINEER AND CONSENT OF THE OTHER TRADE, IN WRITING. REFER TO SEISMIC PROTECTION DRAWINGS.
 - DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT PRIME SPECIFIED SHALL BE THE RESPONSIBILITY OF THE BID PACKAGE CONTRACTOR. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE BID PACKAGE CONTRACTOR.
 - THE BID PACKAGE CONTRACTOR SHALL ENSURE PROPER COORDINATION BETWEEN ALL TRADES SUCH THAT CONDUITS, PIPING, DUCTWORK, ETC. DO NOT BLOCK ACCESS TO VALVES, EQUIPMENT, DUCT ACCESS DOORS, ETC. ITEMS THAT HAVE BEEN INSTALLED WHERE ACCESS IS COMPROMISED SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH DRAINING AND FILLING NEW PIPING SYSTEMS AS REQUIRED TO INSTALL THEIR NEW WORK. PIPING SYSTEMS INCLUDE: A. GEOTHERMAL HEAT PUMP SYSTEMS

- GENERAL PIPING AND SHEET METAL INSTALLATION NOTES:
- GEOTHERMAL PIPING - HDPE FUSED PIPING
- PIPING INSULATION - GEOTHERMAL PIPING: 1" THICK FIBERGLASS WITH ASJ. CONDENSATE PIPING: 1/2" THICK FIBERGLASS WITH ASJ.
- BUTTERFLY VALVE - HAMMOND 6411 SERIES OR EQUAL.
- DRAIN VALVE - NIBCO T-585-70-66-HC OR EQUAL.
- BALL VALVE - NIBCO T-585-70-66 OR EQUAL.
- STRAINER - WATTS 77F SERIES OR EQUAL. PROVIDE WITH BLOWDOWN VALVE.
- BALANCE VALVE - BELL & GOSSETT MODEL CB OR EQUAL.
- ALL SHEETMETAL SHALL BE CONSTRUCTED PER SMACNA STANDARDS.
- ALL SUPPLY AIR DUCT SHALL BE CONSTRUCTED TO A 6" WG STANDARD. ALL OUTSIDE AND RETURN AIR SHALL BE CONSTRUCTED TO A 2" WG STANDARD. ALL DUCTWORK JOINTS AND SEAMS SHALL BE SEALED WITH DUCT SEALANT.
- MOTORIZED DAMPER - ULTRA LOW LEAKAGE RUSKIN CD60 OR EQUAL.
- ACCESS DOOR - FLEXMASTER TBSM - 16"x16" - OR EQUAL.
- SUPPLY AND OUTSIDE AIR DUCT INSULATION - 2.2" THICK FIBERGLASS WRAP WITH INSTALLED R VALUE OF 6.0.

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LOUISVILLE, KENTUCKY

CMTA OFFICE FIT OUT 2

CONSTRUCTION DOCUMENTS

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PROJECT NUMBER	1921
DATE	JULY 1, 2020
REVISIONS	

MECHANICAL LEGEND AND GENERAL NOTES

M1.0

PRINT DATE: 7/2/2020 2:07:00 PM

2 1 - Air Distribution - Demo
1/4" = 1'-0"

1 1 - Air Distribution - New
1/4" = 1'-0"

DIFFUSER/GRILLE DUCT RUNOUT SCHEDULE					
DIFFUSER	DUCT SIZE	GRILLE	DUCT SIZE	GRILLE	DUCT SIZE
S-1	8"Ø	R-1	8"Ø	E-1	10"Ø
S-2	12"x8"	R-2	16"x10"		
S-3	8"Ø	R-3	30"x24"		
S-4	8"Ø	R-4	8"Ø		

GENERAL AIR DISTRIBUTION NOTES

- A. THE SLOPE OF ALL DUCT TRANSITIONS ARE NOT TO EXCEED 1:4.
- B. NOT ALL MANUAL VOLUME DAMPERS ARE SHOWN ON DRAWING. SELECT DAMPERS HAVE BEEN SHOWN FOR OPTIMUM ACCESS LOCATION AND NOT FOR PROPER AIR BALANCE. REFER TO DETAIL SHEET FOR TYPICAL DAMPER INSTALLATION AND LOCATION. COORDINATE WITH ALL TRADES PRIOR TO INSTALLATION TO ENSURE ACCESSIBILITY IS MAINTAINED.
- C. DO NOT ROUTE ANY DUCTWORK OR PIPING ABOVE ELECTRICAL PANELS, TRANSFORMERS, OR DISCONNECTS. COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
- D. ENSURE THAT THE MANUFACTURER'S RECOMMENDED CLEARANCE REQUIREMENTS ARE MAINTAINED FOR ALL INSTALLED MECHANICAL EQUIPMENT.
- E. PROVIDE A HIGH EFFICIENCY TAKE-OFF AND VOLUME DAMPER AT EACH GRILLE, REGISTER, AND DIFFUSER BRANCH RUNOUT. REFER TO THE DETAIL ON SHEET M4.0 FOR SPECIFIC REQUIREMENTS.
- F. REFER TO HEAT PUMP DETAILS ON SHEET M4.0 FOR SPECIFIC SYSTEM INSTALLATION REQUIREMENTS.
- G. ALL CONTROLS SHALL BE INTEGRATED INTO EXISTING SYSTEM.

TAGGED NOTES

- M1 EXISTING HORIZONTAL HEAT PUMP UNIT HHP-18 ZONE 1-8 SHALL BE REORIENTED TO MATCH NEW PLAN. THE UNIT, FILTER BOX, AND COIL VALVE HOSE KITS SHALL BE REUSED.
- M2 DEMO SUPPLY AIR DUCTWORK FROM EXISTING UNIT.
- M5 RELOCATE THERMOSTAT TO NEW LOCATION SHOWN ON NEW PLAN FOR CONTROL OF HHP-18 ZONE 1-8.
- M6 ALL HATCHED DUCTWORK WILL BE EXPOSED TO OCCUPANTS. ALL EXPOSED DUCTS SHALL BE UNPAINTED GALVANIZED STEEL. GREAT CARE SHALL BE TAKEN TO CREATE STRAIT DUCT SEALANT LINES AND DUCT SHALL BE FREE OF DEBRIS / MARKS. SUPPLY AIR DUCTS THAT ARE EXPOSED (HATCHED), NOT INCLUDING FLEX DUCT, SHALL BE INTERNALLY INSULATED WITH 1/2" THICK ELASTOMERIC ARMAFLEX AP DUCT LINER.
- M7 ROUTE 4"x6" OA DUCT AND CONNECT TO REUTNR OF HHP-12 ZONE 1-10. BALANCE TO 40 CFM.
- M8 ROUTE 6"x6" OA DUCT AND CONNECT TO REUTNR OF HHP-18 ZONE 1-8. BALANCE TO 130 CFM.
- M9 INSTALL SIDEWALL GRILLE AT APPROX. 11'-0" AFF. PROVIDE INTEGRATED FACE OPERATED DAMPER. INTERNALLY LINE WITH 1/2" THICK ELASTOMERIC ARMAFLEX AP DUCT LINER.
- M10 INSTALL SIDEWALL GRILLE AT APPROX. 11'-0" AFF. PROVIDE INTEGRATED FACE OPERATED DAMPER.
- M11 TYPICAL OF ALL SIDE WALL GRILLES ALONG EXTERIOR WINDOWS. INSTALL ALL SIDEWALL GRILLES AT THE SAME HEIGHT AFF. PROVIDE INTEGRATED FACE OPERATED DAMPERS. INTERNALLY LINE WITH 1/2" THICK ELASTOMERIC ARMAFLEX AP DUCT LINER. GRILLES SHALL BE DOUBLE DEFLECTION AND VERTICALLY POINTED DOWN 30° AT WINDOW AND HORIZONTALLY DEFLECTED SO THAT AIRFLOW IS DIRECTED BELOW CEILING CLOUDS.
- M12 VAV SHALL BE CONSTANT VOLUME AT FLOW INDICATED IN EQUIPMENT TAG.
- M13 VAV SHALL BE VARIABLE VOLUME OPERATING BETWEEN THE FLOWS INDICATED IN THE EQUIPMENT TAG. VAV SHALL BE DEMAND CONTROLLED VIA CO2 SENSOR.
- M19 GENERAL EXHAUST SYSTEM FOR BUILDING SHALL BE REBALANCED TO MAINTAIN FLOW AT EXISTING GRILLES AND MEET FLOW AT NEW GRILLE.
- M20 ELECTRICAL CONTRACTOR SHALL INSTALL 1" CONDUIT UNDERGROUND TO LOCATION FOR CONTROLS CABLING. COORDINATE CONDUIT LOCATION WITH ELECTRICAL CONTRACTOR.
- M21 6-TON UNIT SHALL BE PROVIDE WITH 48"x24" FILTER RACK ABLE TO ACCEPT (2) 24"x24" FILTERS.

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LOUISVILLE, KENTUCKY

CMTA OFFICE FIT OUT 2

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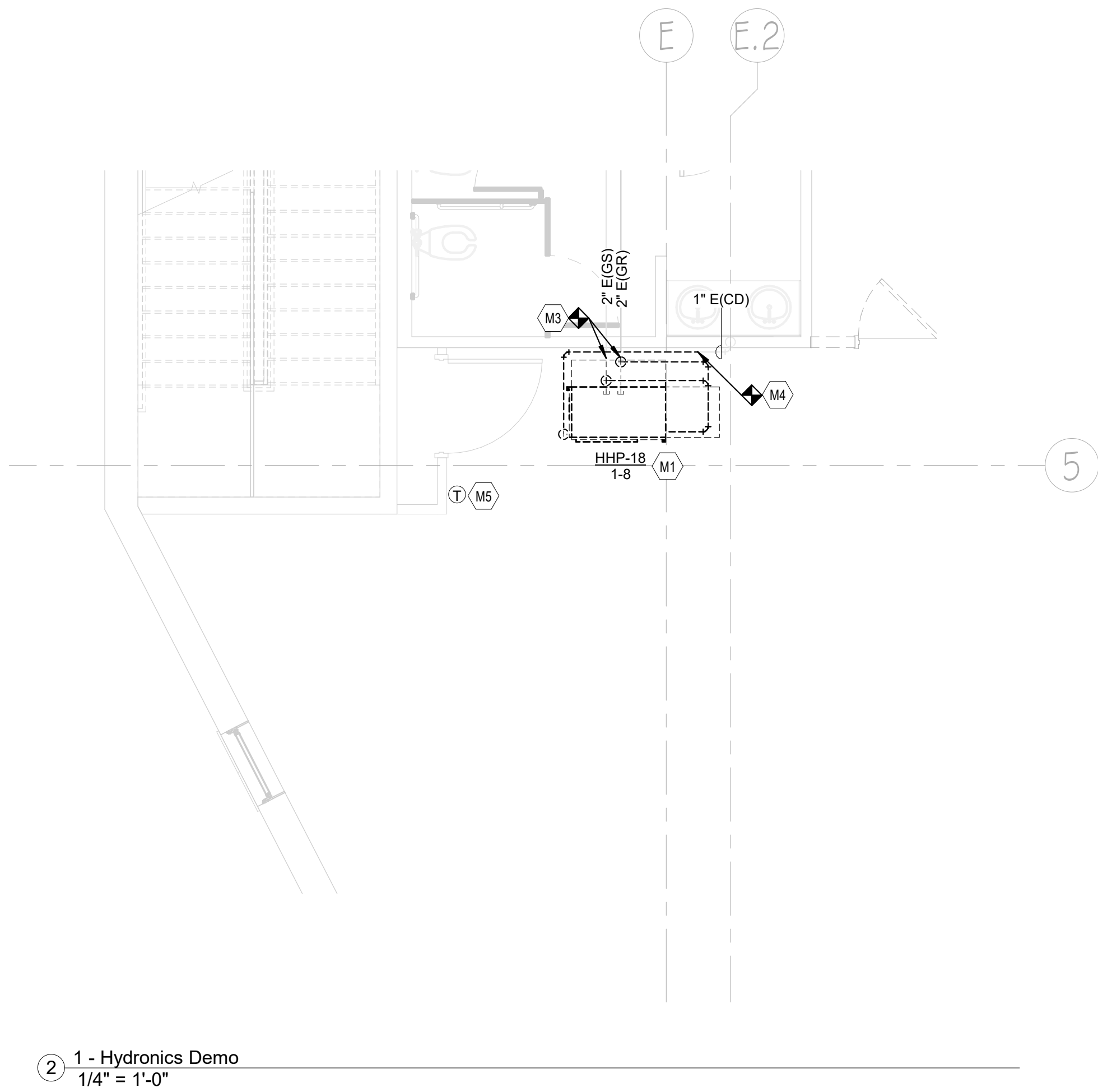
PROJECT NUMBER 1921

DATE July 1, 2020

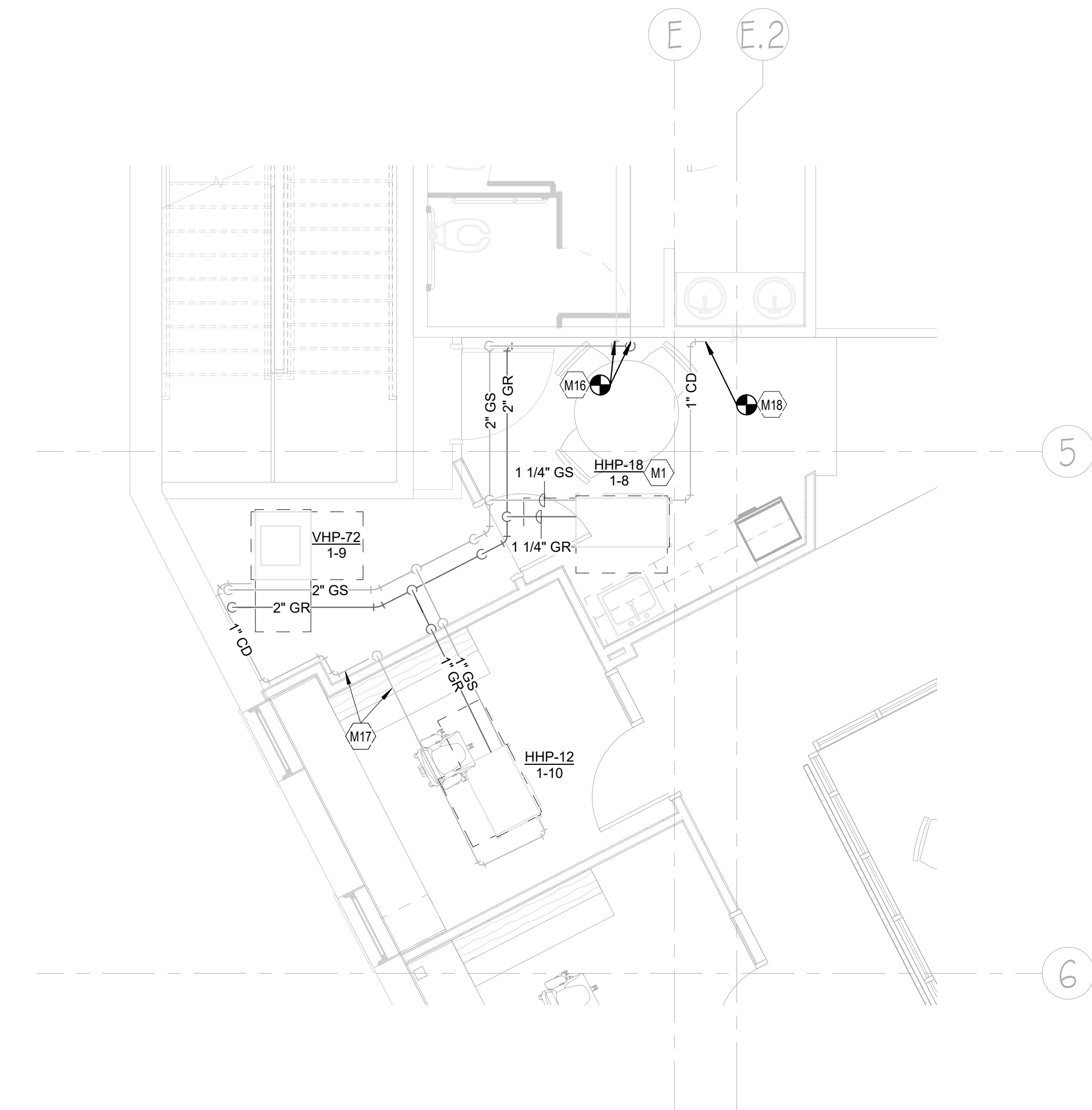
REVISIONS

First Floor Plan - Air
Distribution

M2.1



2 1 - Hydronics Demo
1/4" = 1'-0"



1 1 - Hydronics New
1/4" = 1'-0"

HYDRONIC PIPE RUNOUT SCHEDULE				
UNIT	FLOWRATE (GPM)	PIPE SIZE	HOSE KIT SIZE	CONDENSATE PIPE SIZE
HHP-12	3.0	1"	1"	1"
HHP-18	4.2	1-1/4"	1-1/4"	1"
VHP-72	21.0	2"	2"	1"

- GENERAL HYDRONIC NOTES
- A.

DO NOT BLOCK EQUIPMENT ACCESS WITH PIPING CONNECTIONS.
- B.

ROUTE CONDENSATE TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM. ROUTE AS TO NOT CREATE ANY TRIP HAZARDS.
- C.

REFER TO DETAIL SHEET M4.0 FOR ADDITIONAL HEAT PUMP INSTALLATION REQUIREMENTS.
- D.

DO NOT ROUTE ANY DUCTWORK OR PIPING ABOVE ELECTRICAL PANELS, TRANSFORMERS, OR DISCONNECTS. COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
- E.

MINIMUM CONDENSATE PIPE SIZE IS 1".
- F.

INSTALL MANUAL AIR VENTS AT ALL RISERS IN PIPE AT HIGHEST POINT.

- TAGGED NOTES
- M1

EXISTING HORIZONTAL HEAT PUMP UNIT HHP-18 ZONE 1-8 SHALL BE REORIENTED TO MATCH NEW PLAN. THE UNIT, FILTER BOX, AND COIL VALVE HOSE KITS SHALL BE REUSED.
- M3

DEMO GS AND GR PIPING APPROXIMATELY TO POINT INDICATED. VERIFY EXACT POINT OF DEMO IN ORDER TO CONNECT NEW PIPING SHOWN.
- M4

DEMO CONDENSATE PIPING APPROXIMATELY TO POINT INDICATED.
- M5

RELOCATE THERMOSTAT TO NEW LOCATION SHOWN ON NEW PLAN FOR CONTROL OF HHP-18 ZONE 1-8.
- M16

CONNECT TO EXISTING HYDRONIC MAINS IN APPROXIMATE LOCATION INDICATED. GEOTHERMAL SYSTEM SHALL BE REBALANCED AS NECESSARY FOR PROPER OPERATION OF THE FACILITY.
- M17

ROUTE CONDENSATE TO FLOOR DRAIN IN MECHANICAL CLOSET. CONDENSATE SHALL BE ROUTED AS TO NOT CREATE A TRIP HAZARD.
- M18

CONNECT CONDENSATE BACK INTO EXISTING CONDENSATE LINE PREVIOUSLY USED BY HHP-18 ZONE 1-8.



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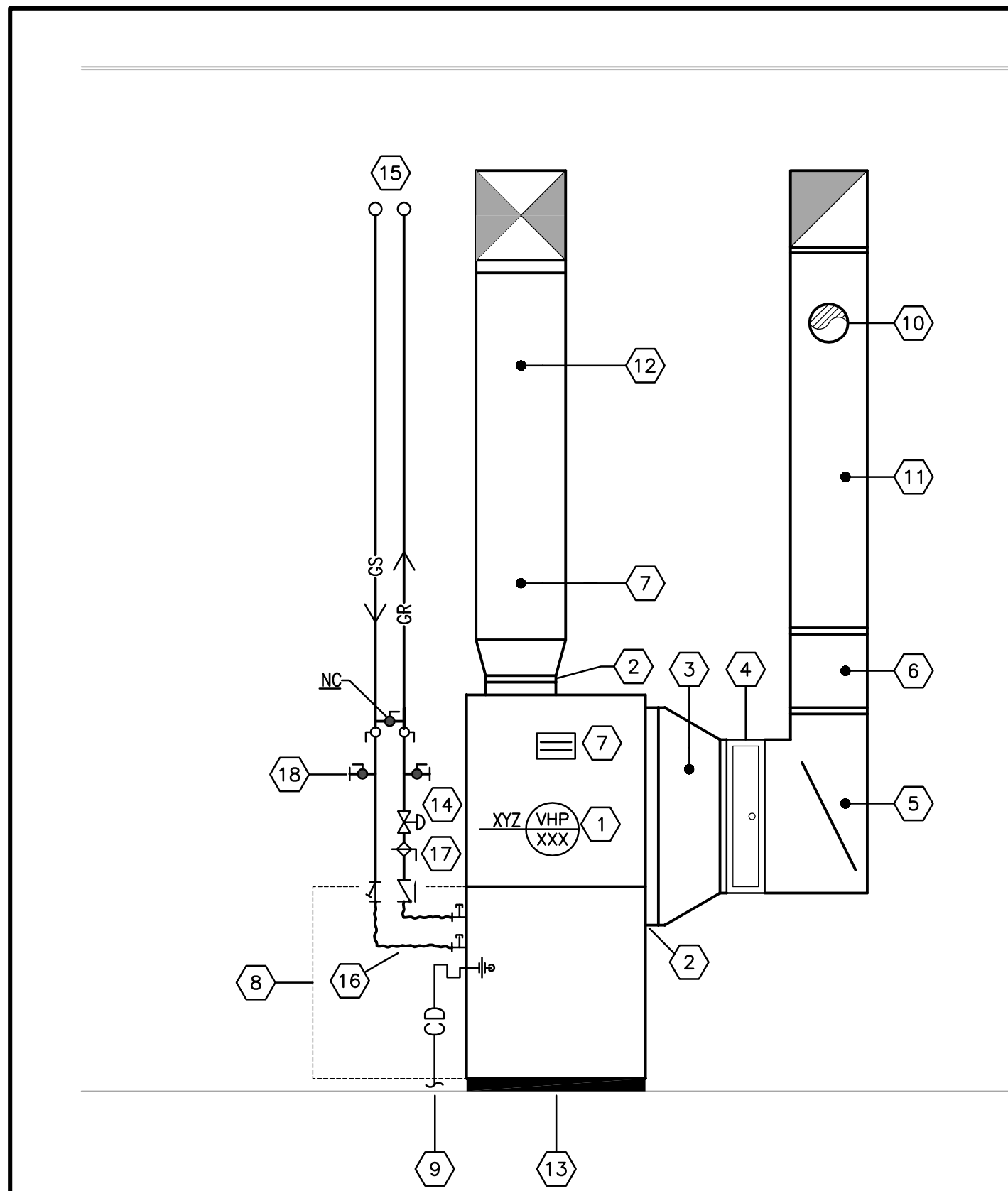
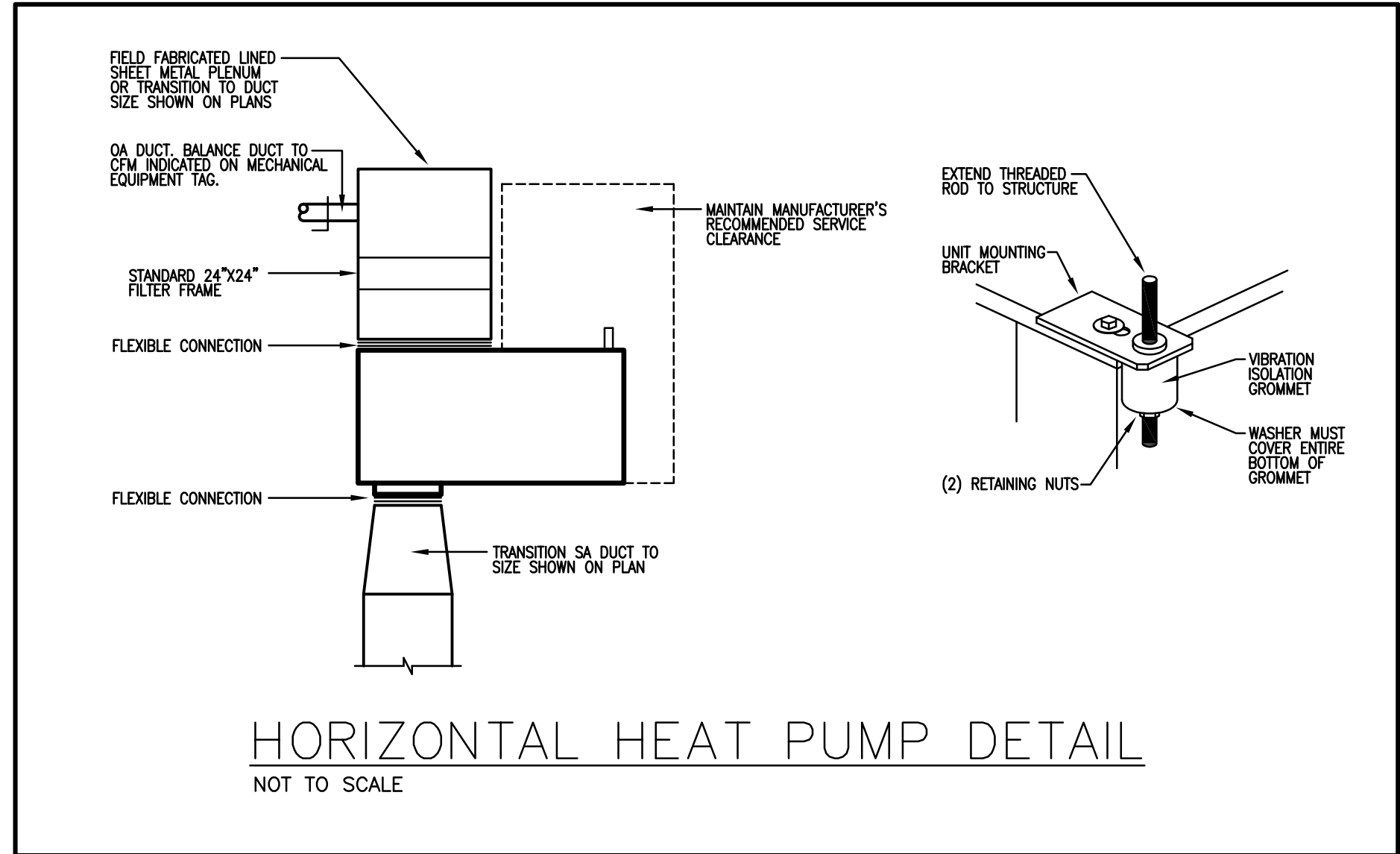
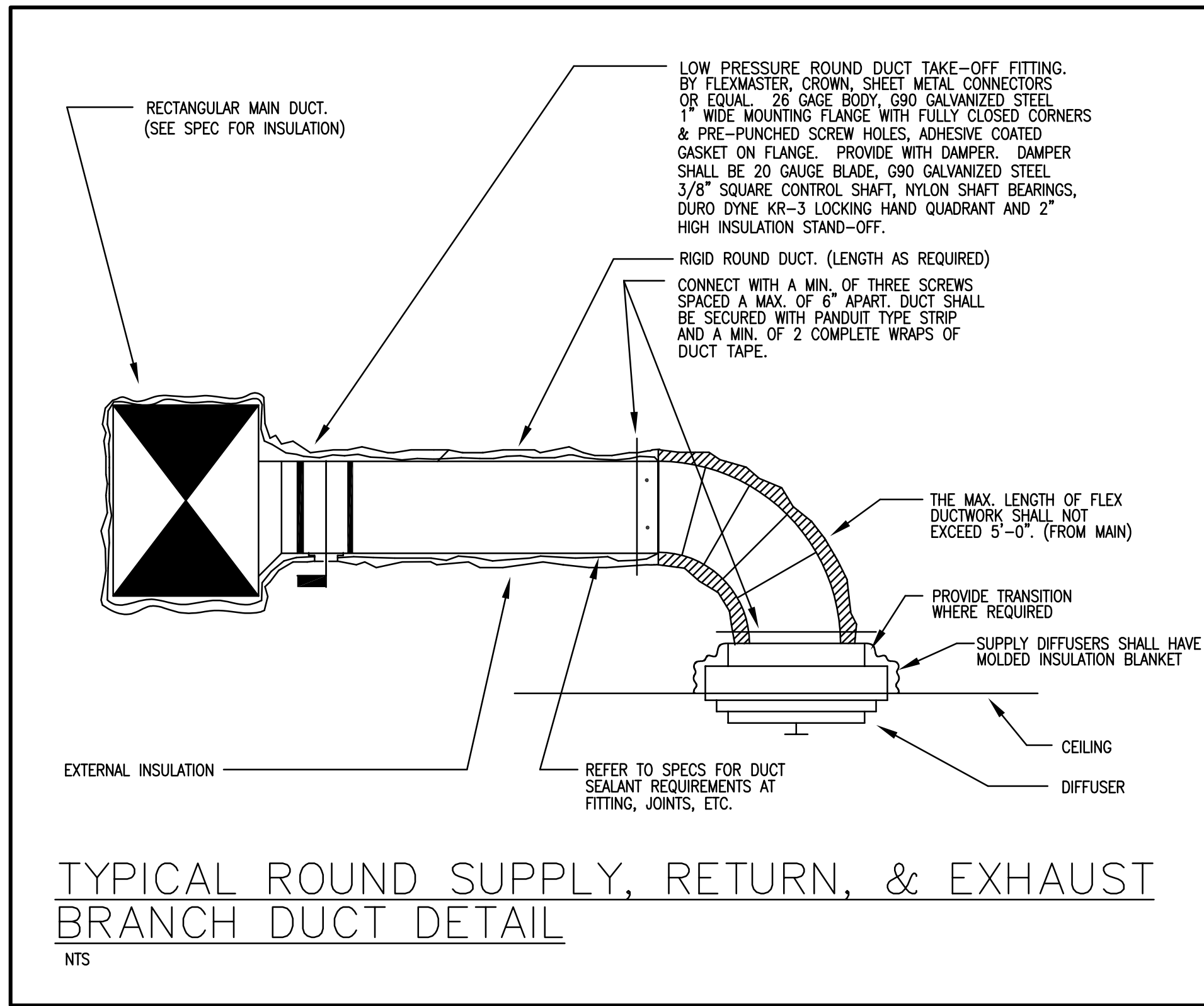
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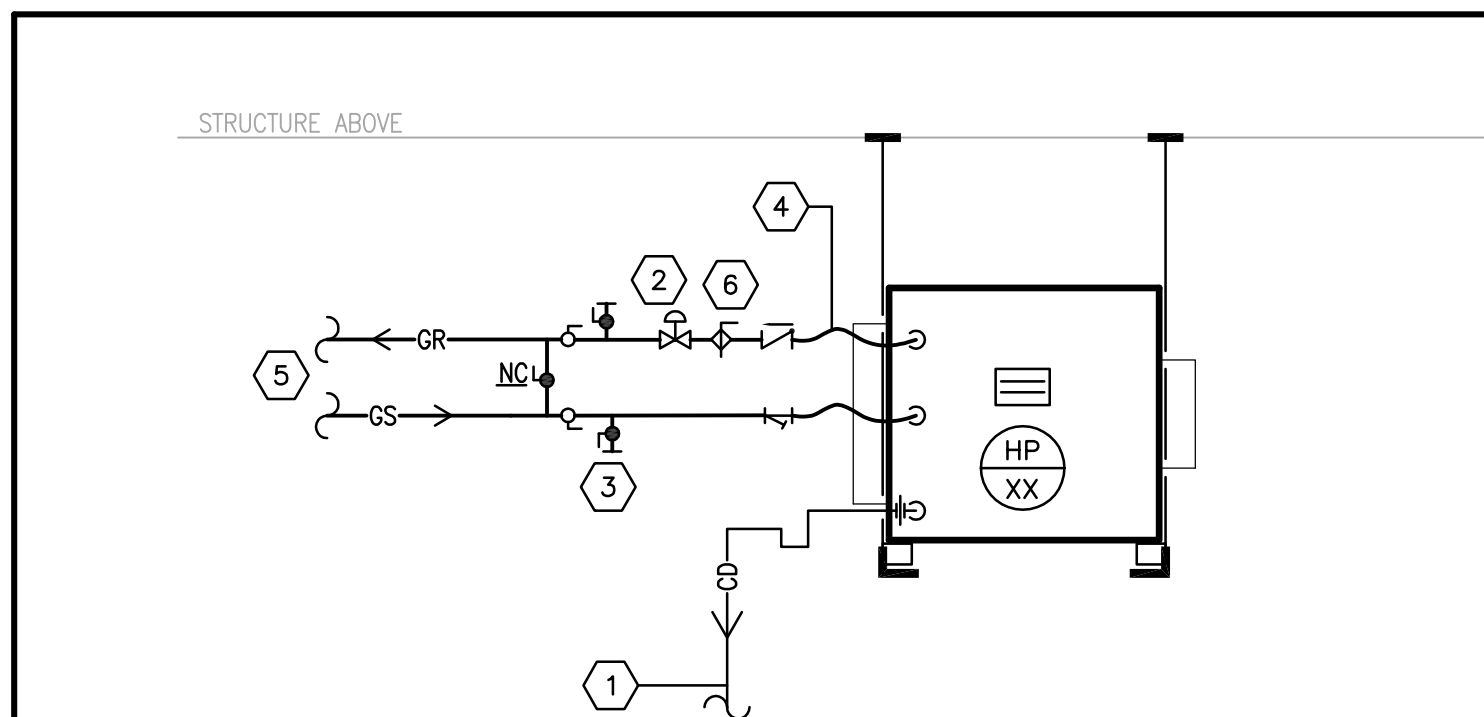
REVISIONS

Fist Floor Plan -
Hydronics

M3.1



VERTICAL WSHP INSTALLATION
DETAIL
NOT TO SCALE

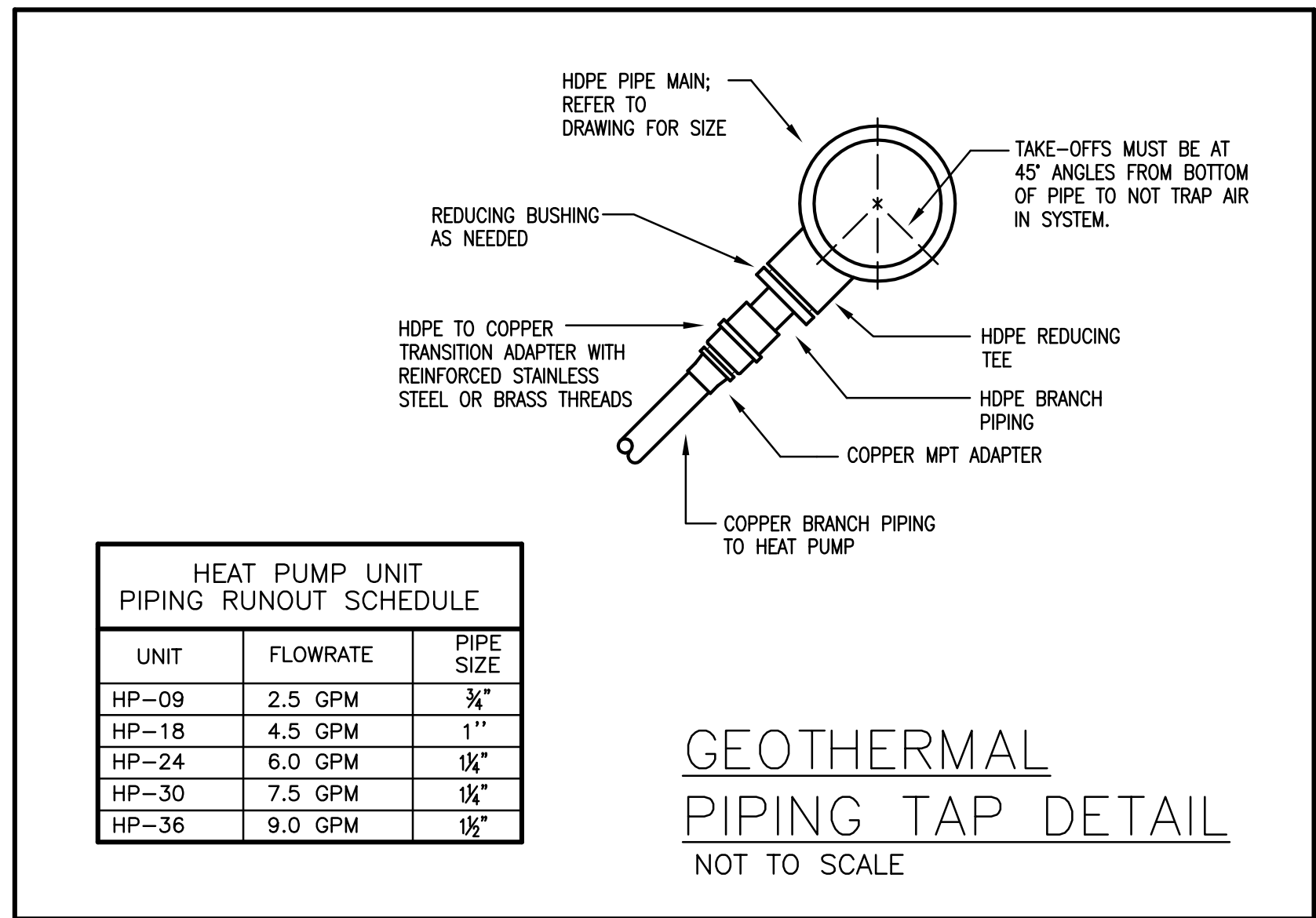
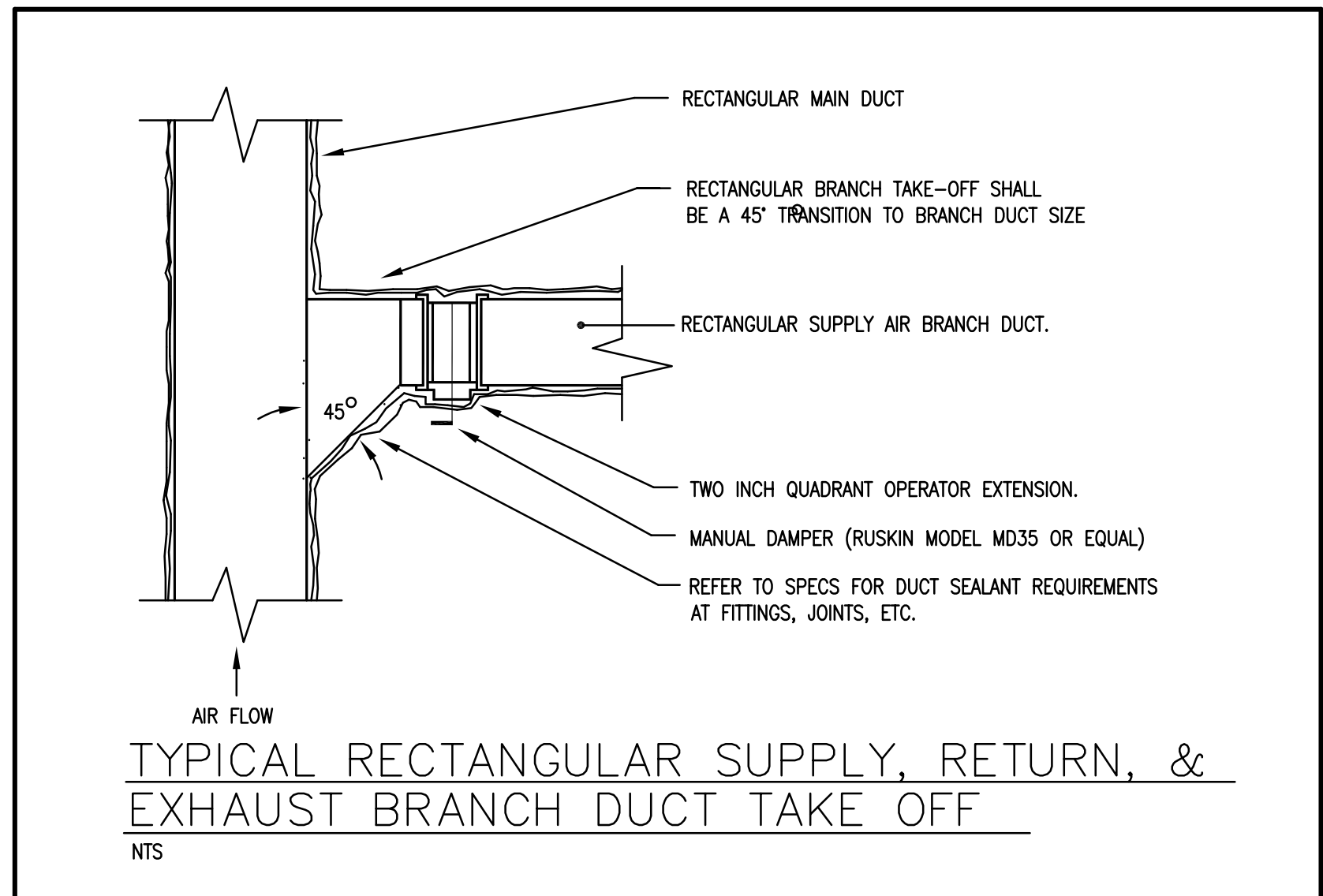


WATER-SIDE CONNECTIONS

HORIZONTAL WSHP INSTALLATION
DETAIL
NOT TO SCALE

- HEAT PUMP DETAIL TAG NOTES:
1. VERTICAL HEAT PUMP UNIT. DO NOT BLOCK ACCESS PANEL FOR HEAT PUMP UNIT WITH ANY OBJECT.
 2. PROVIDE FLEXIBLE CANVAS CONNECTIONS AT UNIT CONNECTION.
 3. TRANSITION FROM SIDE ACCESS FILTER SECTION TO FULL SIZE OF UNIT INLET DIMENSION.
 4. SIDE ACCESS FILTER SECTION. REFER TO PLANS FOR SIZE REQUIREMENTS. FILTER TYPE: 24"x24" MERV 8 FILTERS. MAGNETIC GAUGE TAPS FOR DIFFERENTIAL PRESSURE MONITORING VIA A MANUAL/PORTABLE GAUGE. FILTER RACKS SHALL BE 24"x24" FOR 5 TON AND BELOW, AND 48"x24" FOR 6 TON AND ABOVE.
 5. PROVIDE TRANSITION ELBOW WITH VANES, TYPICAL.
 6. TRANSITION DUCT FROM ELBOW TO DUCT SIZE INDICATED ON PLANS.
 7. IDENTIFICATION PLACARD. REFER TO SPECIFICATION SECTION 15075 FOR MORE INFORMATION. THE PLACARD SHALL INCLUDE THE ELECTRIC PANEL NAME AND CIRCUIT NUMBER FEEDING THE EQUIPMENT.
 8. MAINTAIN 24" CLEARANCE ON VERTICAL HEAT PUMP.
 9. ROUTE CONDENSATE DRAIN TO NEAREST FLOOR DRAIN. REFER TO PIPING RUNOUT SCHEDULE FOR PROPER SIZING. ENSURE ALL CONDENSATE PIPING IN MECHANICAL ROOMS IS ROUTED SO AS NOT TO CREATE A TRIP HAZARD.
 10. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. SEE FLOOR PLANS FOR DUCT SIZE.
 11. RETURN DUCTWORK. REFER TO FLOOR PLANS FOR DUCT SIZE.
 12. SUPPLY DUCTWORK. REFER TO FLOOR PLANS FOR DUCT SIZE.
 13. VIBRATION ISOLATION PAD (RUBBER OR CORK) AT UNIT BASE.
 14. 2-WAY CONTROL VALVE.
 15. REFER TO DRAWINGS FOR CONTINUATION OF CS/OR PIPING. REFER TO THE PIPING RUNOUT SCHEDULE FOR PROPER SIZING.
 16. FLEXIBLE HOSE KITS AND VALVES SHALL BE PIPE RUNOUT SIZE, NOT HEAT PUMP CONNECTION SIZE.
 17. AUTOMATIC FLOW CONTROL VALVE.
 18. PURGE PORT. PROVIDE A NIBCO QT57X WITH 3/4" THREADED HOSE CONNECTION, TYPICAL.

- HEAT PUMP DETAIL TAG NOTES:
1. ROUTE CONDENSATE DRAIN AS INDICATED ON THE FLOOR PLANS. REFER TO RUNOUT SCHEDULE FOR PROPER SIZING.
 2. 2-WAY CONTROL VALVE.
 3. PURGE PORT. PROVIDE A NIBCO QT57X WITH 3/4" THREADED HOSE CONNECTION, TYPICAL.
 4. FLEXIBLE HOSE KITS AND VALVES SHALL BE PIPE RUNOUT SIZE, NOT HEAT PUMP CONNECTION SIZES.
 5. REFER TO FLOOR PLANS FOR CONTINUATION OF CS/OR PIPING. REFER TO THE PIPING RUNOUT SCHEDULE FOR PROPER SIZING.
 6. AUTOMATIC FLOW CONTROL VALVE.



GENERAL NOTES (APPLICABLE TO ALL WORK AND DOCUMENTS) :

1. EACH CONTRACTOR, PROPOSER, SUPPLIER AND/OR MANUFACTURER SHALL REFER TO ALL DOCUMENTS PERTAINING TO THIS PROJECT AND COORDINATE ACCORDINGLY SO AS TO INSURE ADEQUACY OF FIT, COMPLIANCE WITH SPECIFICATIONS, PROPER VOLTAGE AND CURRENT CHARACTERISTICS TO AVOID CONFLICT WITH ANY OTHER BUILDING SYSTEMS. VERIFY SAME WITH SHOP DRAWINGS.
2. ALL OFFSETS, TURNS, FITTINGS, TRM, DETAIL, ETC. MAY NOT BE INDICATED, BUT SHALL BE PROVIDED AS REQUIRED. ADDITIONAL ALLOWANCES SHALL BE INCLUDED FOR SAME AT EACH PROPOSER'S DISCRETION.
3. INSTALL NO PIPING, CONDUIT, DUCTWORK, ETC. IN A LOCATION OR IN A MANNER WHICH WILL ALLOW FREEZING AND THE COLLECTION OF CONDENSATION THEREON. IF IN DOUBT, CONTACT THE ENGINEER.
4. ADVISE THE ENGINEERS OF ANY CONFLICTS, ERRORS, OMISSIONS, ETC. AT LEAST TEN DAYS PRIOR TO BID DATE, TO ALLOW CLARIFICATION BY WRITTEN ADDENDUM.
5. DEVIATION FROM SPECIFICATIONS OR PLANS REQUIRES PRIOR WRITTEN APPROVAL FROM THE ENGINEERS AND MUST BE SUBMITTED IN WRITING NO LATER THAN TEN DAYS PRIOR TO THE BID DATE. (SEE ALSO NOTE 21).
6. OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT (CITY, COUNTY, LOCAL, STATE, FEDERAL, MUNICIPALITY, UTILITY COMPANY, OSHA, ETC.).
7. INSTALL EQUIPMENT, MATERIALS, ETC. IN STRICT ACCORD WITH MANUFACTURER'S RECOMMENDATIONS AND DIRECTIONS. IF IN CONFLICT WITH THE DESIGN INDICATED ON CONTRACT DOCUMENTS, ADVISE THE ENGINEERS PRIOR TO INSTALLATION FOR CLARIFICATION.
8. DO NOT RECESS PANELBOARD TUBS OR OTHER FLUSH-MOUNTED EQUIPMENT IN WALLS THAT HAVE A FIRE RATING, AS REQUIRED BY CODES. NO INSTALLATION SHALL DIMINISH OR VIOLENTLY RESISTIVE RATINGS IN ANYWAY.
9. THE PURPOSE AND INTENT OF ALL OF THE DOCUMENTS PERTAINING TO THIS PROJECT IS TO PROVIDE A COMPLETE, FUNCTIONAL, SAFE, LIKE NEW FACILITY. ANYTHING LESS SHALL BE UNACCEPTABLE.
10. ALL SYSTEMS, EQUIPMENT AND MATERIALS ARE TO BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. WORK NOT MEETING THIS CRITERION SHALL BE REMOVED AND REINSTALLED SATISFACTORILY. FINAL DETERMINATION OF THE ACCEPTABILITY OF THE QUALITY OF WORK RESIDES WITH THE ENGINEER.
11. ALL WORK, MATERIALS, EQUIPMENT, ETC. SHALL BE FULLY GUARANTEED FOR ONE FULL CALENDAR YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION AS DOCUMENTED BY THE ENGINEERS. UNLESS LONGER WARRANTY PERIODS FOR EQUIPMENT ARE SPECIFIED.
12. UNLESS OTHERWISE SPECIFIED OR INDICATED, ALL EQUIPMENT AND/OR MATERIALS WITH OCCUPIED SPACES OR EXPOSED TO VIEW ON THE BUILDING EXTERIOR SHALL BE PRIMED AND FINISHED SO AS TO COMPLEMENT ADJACENT SURFACE. UNLESS OTHERWISE NOTED, COORDINATE WORK WITH ARCHITECT.
13. WHERE PENETRATING NEW/EXISTING ROOFING MEMBRANE OR OTHER MATERIALS USED FOR WEATHERPROOFING THE BUILDING, MAKE SUCH PENETRATIONS A WAY THAT WILL NOT VOID OR DIMINISH THE ROOFING WARRANTY OR INTEGRITY IN ANYWAY. COORDINATE ALL SUCH PENETRATIONS WITH THE ROOFING INSTALLER/ARCHITECT.
14. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY FEES, OR OTHER COSTS THAT THE UTILITY COMPANY MAY REQUIRE TO COMPLETE THEIR WORK (ELECTRIC, TELEPHONE, TELEVISION, ETC.).
15. COORDINATE WITH ARCHITECTURAL FLOOR PLANS, ELEVATIONS AND CASEWORK DETAILS FOR LOCATION OF RECEPTACLES, UTILITY OUTLETS, ELECTRICAL DEVICES, ETC.
16. UNLESS OTHERWISE SPECIFIED OR INDICATED, INSTALL LIGHT FIXTURES, SMOKE DETECTORS, SPEAKERS AND OTHER CEILING MOUNTED APPURTENANCES IN THE CEILING IN A SYMMETRICAL PATTERN, UNLESS SPECIFICALLY INDICATED OTHERWISE.
17. CEILING MOUNTED ELECTRICAL DEVICES SHALL BE CENTERED IN 2'x4' CEILING TILE AND INSTALLED CENTERED ON 2' DIMENSION OF 2'x4' TILE AND ON CENTERLINE OR A QUARTER POINT OR 4' DIMENSION, AS INDICATED.
18. ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPAIRED OR REPAIRED AT THE INSTALLING CONTRACTORS EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.
19. CHECK ALL THREE PHASE MOTORS WITH 0 ROTATION METER, PRIOR TO PLACING IN SERVICE.
20. PROVIDE DETAILED SHOP DRAWINGS TO ENGINEERS PRIOR TO PURCHASING AND INSTALLING ANY EQUIPMENT.
21. DEVIATIONS IN SIZES, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT PRIME SPECIFIED SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
22. THE CONSTRUCTION MANAGER, GENERAL CONTRACTOR, OR WHOMEVER HOLDS THE PRIME CONTRACTS FOR THIS CONSTRUCTION IS RESPONSIBLE FOR THE COORDINATION, APPEARANCE, SCHEDULING AND TIMELINESS OF THE WORK OF ALL TRADES, CONTRACTORS, SUPPLIERS, INSTALLERS, ETC., FROM ORIGINALLY WORK ON THE PART OF ANY SUBCONTRACTOR SHALL BE RESOLVED BY THE PARTY WHO ENGAGED THEM ON THIS PROJECT.
23. WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE AFFECTING INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL, INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAILS OF THESE DOCUMENTS, AS APPLICABLE.
24. WHERE FIRE RATED CEILING ASSEMBLIES ARE NOTED, PROVIDE RATED APPROVED DRYWALL BOARD ENCLOSURES ABOVE LIGHT FIXTURES, CEILING DEVICES, ETC. IN OR ON CEILING, TO MAINTAIN CEILING RATINGS.
25. COORDINATE THE LOCATION OF DRAIN, ELECTRICAL OUTLETS, GAS OUTLETS, ETC. WITH ALL CASEWORK, KITCHEN EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC. PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE RESPONSIBLE CONTRACTOR(S).

26. ALL ELECTRICAL COMPONENTS OR EQUIPMENT SHALL BE LABELED BY UNDERWRITERS LABORATORIES OR OTHER APPROVED LISTING AGENCY. APPROVED AND LABELING OF INDIVIDUAL COMPONENTS ON AN ASSEMBLY IS NOT ACCEPTABLE AS MEETING THIS REQUIREMENT, UNLESS WAIVED BY THE ENGINEER IN WRITING.
27. ALL WIRING SYSTEMS SHALL BE INSTALLED WITH A MINIMUM OF SPLICES. CONDUCTORS, WHETHER SINGLE OR MULTIPAIR SHALL BE INSTALLED CONTINUOUS INSOFAR AS POSSIBLE FROM TERMINAL POINT TO TERMINAL POINT.
28. ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE OR SUB-SERVICE FOR SAFETY PURPOSES. PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC. OF EACH UNDERGROUND UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARDS AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
29. ALL SUPPORTS FOR EQUIPMENT, DEVICES OR FIXTURES SHALL BE UNIQUE FROM THE BUILDING STRUCTURE. DO NOT SUPPORT WORK FROM OTHER TRACES, EQUIPMENT OR SUPPORTS WITHOUT WRITTEN PERMISSION FROM THE ENGINEER AND CONSENT OF THE OTHER TRADE. IN WRITING, SUPPORTING FROM CROSS BRACING OR ROOF DECK WILL NOT BE ALLOWED.
30. WHERE INTERRUPTING AN EXISTING UTILITY OR SERVICE DELIBERATELY OR ACCIDENTALLY, THE RESPONSIBLE CONTRACTOR SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME, PROVIDING PREMIUM TIME AS NEEDED.
31. REFER TO ARCHITECTURAL WALL ELEVATIONS (WHERE GIVEN) FOR HEIGHTS AND MOUNTING RELATIONSHIP OF OUTLETS AND EQUIPMENT. IF IN DOUBT, CONTACT THE ENGINEER FOR DIRECTION PRIOR TO INSTALLING WORK.
32. FLUSH OR PEDESTAL - TYPE FLOOR OUTLETS, AS INDICATED ON PLAN SHALL BE LOCATED BY DIMENSIONS PROVIDED BY THE ARCHITECT, UNLESS OTHERWISE SHOWN ON PLANS. IF IN DOUBT, CONTACT THE ENGINEER PRIOR TO ROUGHING IN ANY WORK.
33. AS APPLICABLE, REFER TO ARCHITECTURAL PHASING PLANS AND PHASING REQUIREMENTS ON THESE DRAWINGS FOR SEQUENCING OF WORK. FULL EXTENT OF AREAS INVOLVED, EXTENT OF CEILING WORK, ETC. PROVIDE TEMPORARY CONNECTIONS FOR CIRCUITS AND WORK AS REQUIRED TO MAINTAIN SEQUENCE OF THE WORK FROM PHASE TO PHASE.
34. WHERE EXIST LIGHTS ARE CONNECTED TO EMERGENCY CIRCUITS WITH KEYSWITCH OR CONTACTOR CONTROL, AN UNSWITCHED LINE SHALL BE PROVIDED IN TO MAINTAIN THEIR OPERATION REGARDLESS OF SWITCH POSITION.
35. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR HIS WORK. ALL CUTTING AND PATCHING SHALL BE IN ACCORD WITH THE ARCHITECT'S STANDARDS FOR SUCH WORK. ALL DAMAGE CAUSED SHALL BE REPAIRED TO ORIGINAL CONDITION. INDICATED TO BE EXPOSED, OR REQUIRED TO BE EXPOSED, IF IN DOUBT, CONTACT THE ENGINEERS FOR CLARIFICATIONS PRIOR TO INSTALLING ANY SUCH WORK.
36. INTERRUPTION OF ANY EXISTING SERVICES SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR, UTILITY COMPANY AS NECESSARY, AND THE ARCHITECT. AT LEAST ONE WEEK IN ADVANCE OF ANTICIPATED INTERRUPTION, A SCHEDULE FOR THESE OUTAGES SHALL BE DEVELOPED AND AGREED UPON BETWEEN THE PARTIES INVOLVED. TO AVOID UNNECESSARY INCONVENIENCE TO THE OWNER OR ANY AFFECTED PARTY, NOTIFY THE UTILITY COMPANY OF ANY ANTICIPATED SERVICES REQUIRED TWO WEEKS IN ADVANCE, IN WRITING. IF UTILITY COMPANY REQUIRES A LONGER NOTIFICATION PERIOD, SO PROVIDE.
37. LOCATE CHAIN HANGING INDUSTRIAL FIXTURES IN MECHANICAL ROOMS TO AVOID DUCTWORK AND PIPING. TO MAXIMIZE AVAILABLE LIGHT SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ADEQUATE LIGHTING TO ALL AREAS OF ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THE REQUIREMENT.
38. WHERE EXIST SIGNS OR EMERGENCY BATTERY PACKS ARE PROVIDED, THEY SHALL BE CONNECTED TO AN UNSWITCHED LINE.
39. ALL LIGHTING FIXTURE LENSES, PARABOLIC COVERS, DOWNLIGHTING ALUM. CONES AND "PARACHUTE" COVERS SHALL BE HANDLED WITH COTTON GLOVES DURING INSTALLATION AND LAMPING TO AVOID FINGERPRINTS OR OILY DEPOSITS. IT IS PREFERRED THAT FIXTURES BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LENSES. AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AIR FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING OILY OR FINGERPRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
40. REFER TO ARCHITECTURAL DETAILS AS APPLICABLE FOR RECESSED SOFFIT FLOURESCENT FIXTURES. ADJUST FIXTURE LENGTHS BY FIELD MEASUREMENT OF SOFFIT, AS NECESSARY.
41. WHERE OUTLETS ARE LOCATED APPROXIMATELY BACK-TO-BACK ON OPPOSITE SIDES OF A PARTY WALL, THE OUTLETS SHALL NOT BE INSTALLED IN THE SAME STUD SPACE, BUT SHALL BE SEPARATED BY A MINIMUM OF ONE STUD.
42. ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODES, NATIONAL FIRE CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION, THE REQUIREMENTS OF LOCAL UTILITY COMPANIES, AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL AGENCIES OR DEPARTMENTS HAVING JURISDICTION. IF ANY CONFLICTS OR DISCREPANCIES OCCUR THE MOST STRINGENT SHALL APPLY.
43. ALL WORK SHALL BE CONCEALED UNLESS SPECIFICALLY INDICATED TO BE EXPOSED, OR REQUIRED TO BE EXPOSED. IF IN DOUBT, CONTACT THE ENGINEERS FOR CLARIFICATION PRIOR TO INSTALLING ANY SUCH WORK.
44. DO NOT SCALE FROM DRAWINGS, AS PRINTING DISTORTS SCALE. WORK SHALL BE Laid OUT FROM DIMENSIONED DRAWINGS, OR DIMENSIONS SUPPLIED TO THE CONTRACTOR.

SYSTEM	ITEM	DEVICE MODEL # (REFER TO SPECIFICATIONS IF NONE LISTED)	BACKBOX COVER (IF APPLICABLE)	MOUNTING HEIGHT (TO BOTTOM OF BOX)	DRAWING SYMBOL
SWITCHES	LIGHT SWITCH - GENERAL PURPOSE			4"	\$
	ILLUMINATED HANDLE LIGHT SWITCH (ILLUMINATED WHEN LOAD IS OFF)			4"	\$ L
	DIMMER SWITCH			4"	\$ D
	LOW VOLTAGE SWITCH			4"	\$ LV
	VACUANCY SENSOR			4"	\$ VS
LIGHTING	PHOTO-CELL AS NOTED	SEE DETAIL			P
	WALL MOUNT	SEE SCHEDULE		6-6"	
	2'x2 TROFFER	SEE SCHEDULE		CEIL	
	2'x4 TROFFER	SEE SCHEDULE		CEIL	
	DOWNLIGHT	SEE SCHEDULE		CEIL	
	INDUSTRIAL STRIP FIXTURE	SEE SCHEDULE		CEIL	
	EXIT LIGHT	SEE SCHEDULE		AS NOTED	
	UNDERCABINET	SEE SCHEDULE		AS NOTED	
	LINEAR DIRECT/INDIRECT	SEE SCHEDULE		AS NOTED	
	IR ONLY OCCUPANCY SENSOR, CEILING MOUNTED	SEE DETAIL		SEE DETAIL	
POWER OUTLETS	DUAL TECH EXTENDED RANGE OCCUPANCY SENSOR, CEILING MOUNTED	SEE DETAIL		SEE DETAIL	
	DUAL TECH EXTENDED RANGE OCCUPANCY SENSOR, CORNER MOUNTED	SEE DETAIL		SEE DETAIL	
	SIMPLEX			1'-4"	
	DUPLEX			1'-4"	
	DUPLEX (ABOVE COUNTERTOP)			1'-4"	
MISC.	DUPLEX WITH INTEGRAL GROUND FAULT PROTECTION			1'-4"	
	GANG RECEPTACLE IN COMBINATION WITH SWITCH (PROVIDE DIVIDER IF LIGHTING CIRCUIT IS 277V)			4"	
	QUADRI-PLEX RECEPTACLE			1'-4"	
	JUNCTION BOX			1'-4"	
	DUPLEX - SURGE SUPPRESSOR TYPE			1'-4"	
	WEATHER RESISTANT GFI TYPE RECEPTACLE WITH LOCKABLE, DIE CAST WEATHERPROOF COVER (INTERMATIC ANTIWINDING OR APPROVED EQUAL)			2'	
	LOCATE SIMPLEX OUTLET RECESSED BEHIND WATER COOLER, PROVIDE REMOTE, READY ACCESSIBLE OR PROTECTION ADJACENT TO WATER COOLER AS REQUIRED BY 2011 NEC FLOOR BOX, FERRY WITH SOLID ALUMINUM COVER (1) DUPLEX RECEPTACLE (1) DATA	FSR500		AS NOTED	
	CONDUIT CONCEALED IN WALLS OR IN ABOVE CEILING, ARROWS (INDICATES) HOME RUN & # OF CIRCUITS, HASHMARKS INDICATE # OF CONDUCTORS			AS NOTED	
	DASHED LINES INDICATED CONDUIT SHALL BE ROUTED UNDER SLAB/FLOOR BELOW OR AS OTHERWISE NOTED. (SEE SPECIFICATIONS FOR DETAILS)			AS NOTED	
	DISCONNECT SWITCH			5'-0"	
ABBREVIATIONS	MAGNETIC STARTER			5'-0"	
	MAGNETIC COMBINATION STARTER			5'-0"	
	ENCLOSED FLUSH-MTD CIRCUIT BREAKER			5'-0"	
	NORMAL PANELBOARD, SURFACE OR FLUSH MOUNTED			TO TOP	
	TRANSFORMER			NOTED	
	MANUAL MOTOR STARTER	SQUARE-D (CLASS 20V)		AS NOTED	
	STARTER SWITCH			AS NOTED	
	EQUIPMENT INDICATOR			AS NOTED	
	TAGGED NOTE			AS NOTED	
	3" EMT CONDUIT (1) ON (STUB UP ABOVE SUSPENDED CEILING SEE DETAILS)			AS NOTED	
	MECHANICAL EQUIPMENT DESIGNATOR (SEE MECH. SCHEDULE)			AS NOTED	
	JUNCTION BOX	AS NOTED		AS NOTED	
	TERMINAL CABINET SURFACE OR FLUSH MOUNTED AS NOTED			AS NOTED	
	THERMOSTAT ROUGH-IN			4"	
	EQUIPMENT TARDWIRE CONNECTION (SEE DETAIL)			AS NOTED	
	REVISION NOTE			AS NOTED	
	UNLESS OTHERWISE NOTED			UNLESS OTHERWISE NOTED	
	OWNER FURNISHED CONTRACTOR INSTALLED			OFCI	
	OWNER INSTALLED			OFCI	
	CONTRACTOR FURNISHED CONTRACTOR INSTALLED			CFCI	
	CONTRACTOR FURNISHED OWNER INSTALLED			CFOI	
	INDICATES EMERGENCY POWER			E, EM	
	INDICATES INSTALLATION IN CEILING			CLG	

SYSTEM	ITEM	DEVICE MODEL # (REFER TO SPECIFICATIONS IF NONE LISTED)	BACKBOX COVER (IF APPLICABLE)	MOUNTING HEIGHT (TO BOTTOM OF BOX)	DRAWING SYMBOL
DATA / VOICE	DATA/VOICE ROUGH-IN ONLY			16"	1'-4"
SECURITY	TELECOMMUNICATIONS SYSTEM BACKBOARD, PROVIDE 96" x 34" PRE-RETARDANT PLYWOOD BACKBOARD WITH TWO (2) COATS OF NON-CONDUCTIVE, FIRE-RETARDANT LIGHT GRAY PAINT A 250 KWH TO METAL UNDERGROUND C. LINE AND A 4-0" #12 AWG RIGTAL AT BACKBOARD, LENGTH OF BOARD AS INDICATED ON FLOOR PLAN				
	ELECTRIFIED LOCK				
	CARD READER				
	MOTION DETECTOR				
	REQUEST TO EXIT				
	DOOR POSITION				
	INTERCOM REMOTE				
	INTERCOM MASTER				

VARIOUS SYSTEMS SCOPE OF WORK AND REQUIREMENTS:

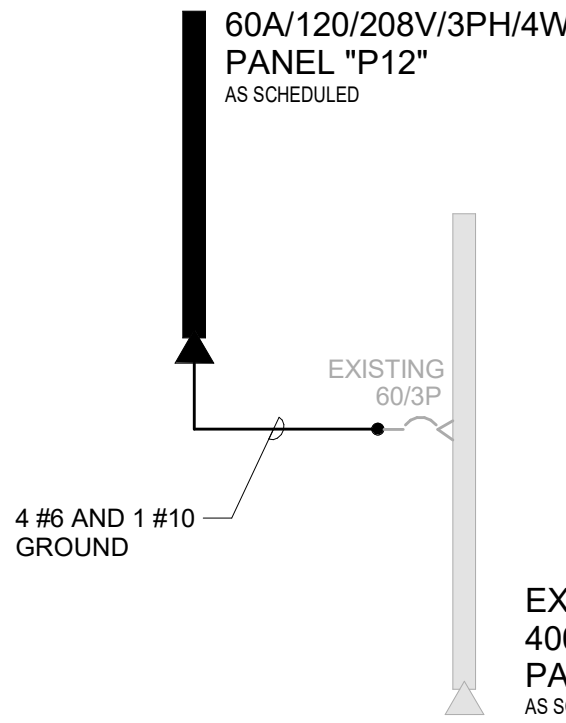
SECURITY SYSTEM:
ALL ELEMENTS OF THE SECURITY MANAGEMENT SYSTEM (SMS) SHALL BE PROVIDED BY THE OWNER AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL PROVIDE LOW-VOLTAGE WIRING BETWEEN DEVICES AND HEAD-END PANEL. OWNER SHALL PROVIDE PROGRAMMING AND SYSTEM INTEGRATION.

VOICE/DATA SYSTEMS:
CONTRACTOR IS RESPONSIBLE FOR SYSTEM ROUGH-INS AND STUB-UPS ONLY. REFER TO STUB-UP DETAIL, OWNER WILL FURNISH AND INSTALL ALL CABLEING, JACKS, PLATES, CABLEING PATHS, RACKS, SWITCHES, UPS, SERVERS, WIRELESS ACCESS POINTS, ETC.

LIGHTING:
ALL LIGHTING AND LIGHTING CONTROLS SHALL BE OWNER FURNISHED AND CONTRACTOR INSTALLED

INDICATING NO.	SIZE REQUIRED
10	4-11/16" SQUARE x 2-1/8" (80) TWO-GANG BACKBOX (STEEL CITY #72171) WITH SINGLE-GANG 3/4" RAISED EXTENSION RING (STEEL CITY #72-C-4)
20	4-11/16" SQUARE x 2-1/8" TWO-GANG BACKBOX (STEEL CITY #72171) WITH TWO-GANG 3/4" RAISED EXTENSION RING (STEEL CITY #72-C-18)
20A	6-3/8"PH x 4-1/2" H x 2-1/2" TWO-GANG BACKBOX (STEEL CITY #4800) WITH TWO-GANG 3/4" RAISED EXTENSION RING AS REQUIRED
30	6-3/8"PH x 4-1/2" H x 2-1/2" THREE-GANG BOX (STEEL CITY #4801) WITH THREE-GANG 3/4" RAISED EXTENSION RING AS REQUIRED

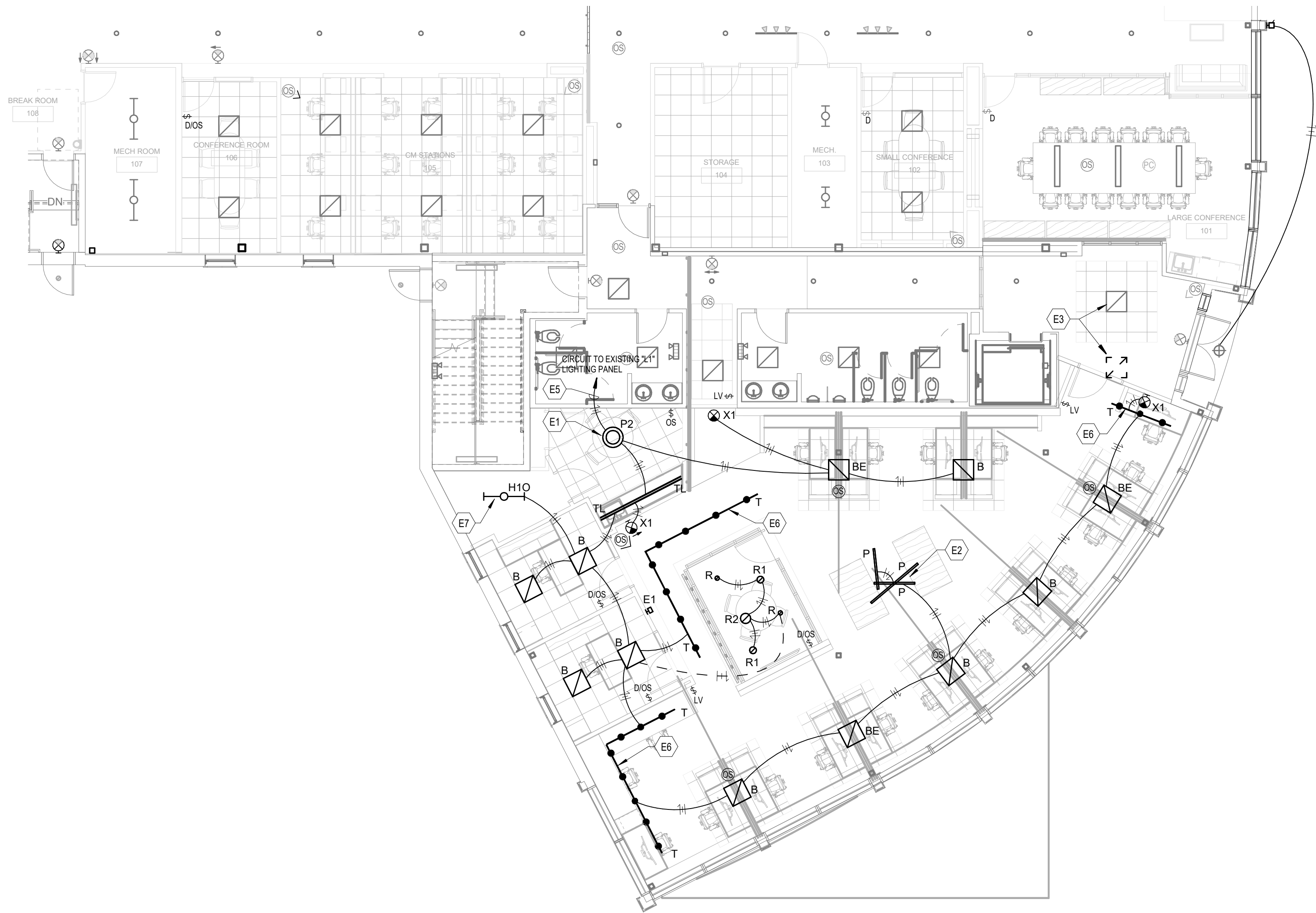
NOTE: REFER TO ARCHITECTURAL PLANS FOR NEW WALL PARTITION TYPES. WHERE ARCHITECT IS FURRING WALLS CONTRACTOR SHALL PROVIDE APPROPRIATE RECESSED BACKBOX, MINIMUM 1-1/2" DEEP. ANY EXCEPTIONS ARE TO BE COORDINATED WITH ENGINEER PRIOR TO BID.



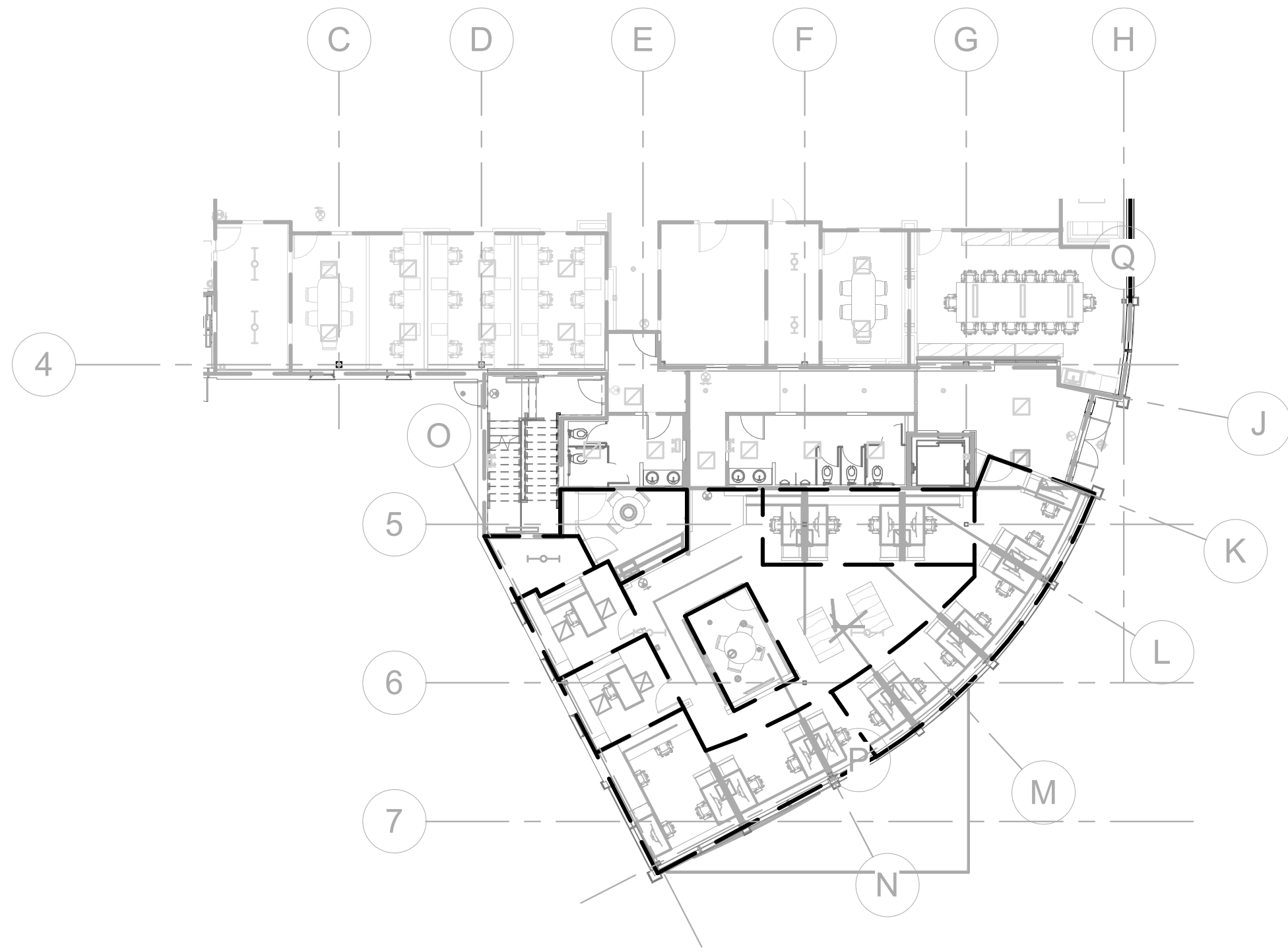
1 POWER RISER DIAGRAM
SCALE: NONE

PANELBOARD AND WIRING SCHEDULE									
PANEL: P12 VOLTAGE: 208Y/120V/3P/4W AMPERES: 60 A					KAIC VALUE: 1,500 KAIC BRACING: 10,000 LOCATION: SHELL SPACE 17 MOUNTING: SURFACE				
CIRCUIT DESCRIPTION	NOTE	WIRE	GND	C	OCF	P	CKT	A	B
REC - CLOSED OFFICE				20	1	1	1.4	0.4	
REC - OPEN OFFICE				20	1	3			0.5 0.5
REC - OPEN OFFICE				20	1	5			0.5 0.5
REC - OPEN OFFICE				20	1	7	0.5	0.4	
REC - OPEN OFFICE				20	1	9			0.5 0.4
REC - OPEN OFFICE				20	1	11			0.5 0.4
SPARE				20	1	13	0.0	0.0	
SPARE				20	1	15			0.0 0.0
SPARE				20	1	17			0.0 0.0
TOTAL LOAD (KVA):				2.7 kVA		2.0 kVA		2.0 kVA	
TOTAL CURRENT (A):				23 A		17 A		17 A	
LOAD CLASSIFICATION		CONNECTED LOAD		DEMAND FACTOR		ESTIMATED DEMAND		PANEL TOTALS	
REC		6660 VA		100.00%		6660 VA		TOTAL CONNECTED LOAD: 6660 VA	
								TOTAL ESTIMATED DEMAND: 6660 VA	
								TOTAL CONNECTED CURRENT: 18 A	
								TOTAL ESTIMATED DEMAND CURRENT: 18 A	

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.



1 FIRST FLOOR PLAN - LIGHTING
1/8" = 1'-0"



2 FIRST FLOOR PLAN - LIGHTING CONTROLS
1/16" = 1'-0"

GENERAL NOTES (LIGHTING):

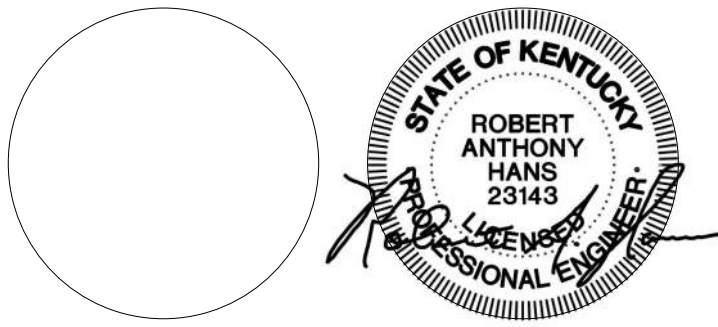
- A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED LIGHT FIXTURES ETC. REFER ALSO TO THE ARCHITECT'S CASEWORK DETAILS AND ROOM ELEVATIONS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF LIGHT FIXTURES, ETC.
- B. ALL NEW WIRING SHALL BE #12 WITH A #12 INSULATED GROUND WIRE (U.O.N.). CONDUIT SHALL BE 3/4" MINIMUM.
- C. CONTRACTOR SHALL INSTALL BRANCH CIRCUITING, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RUN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. # 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C. #100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
- D. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. IN HEALTHCARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. ALSO, MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
- E. ALL LIGHTING CIRCUIT HOMERUNS SHALL BE FED FROM 201P BREAKERS LOCATED IN PANEL "L1". NO LIGHTING CIRCUIT SHALL HAVE MORE THAN 1500W OF LOAD.
- F. MC CABLE SHALL BE ALLOWED IN ALL CONCEALED APPLICATIONS ONLY. THIS DOES NOT INCLUDE MECHANICAL ROOMS.

TAGGED NOTES

- E1 INSTALL PENDANT CANOPY ABOVE CEILING. PROVIDE CLEAR 1" DIAMETER GROMMET IN CEILING TILE AND EXTEND SUSPENSION CABLE TO FIXTURE BELOW CEILING. CONFIRM EXACT PENDANT LOCATION WITH OWNER PRIOR TO INSTALLATION.
- E2 COORDINATE EXACT MOUNTING ELEVATIONS AND CONFIGURATIONS WITH OWNER PRIOR TO INSTALLATION.
- E3 RELOCATE FIXTURE TO NEW INDICATED LOCATION CENTERED IN CEILING GRID. REMOVE SECOND FIXTURE AND TURN OVER TO OWNER.
- E5 ROUTE # OF #12 CONDUCTORS AND #12 GROUND IN 3/4" CONDUIT TO NEW 20A BREAKER IN EXISTING PANEL "L1".
- E6 TRACK LIGHTING TO BE INSTALLED AS TIGHT TO CEILING DECK AS POSSIBLE. THREAD TRACK THROUGH STRUCTURAL WEBBING.
- E7 ONE OF THE MANY EXISTING STRIP FIXTURES. RELOCATE TO THIS EXACT LOCATION. OTHER EXISTING FIXTURES TO BE HANDED OVER TO OWNER.

ELEC - LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION
B	2'x2' GRID TROFFER
BE	2'x2' GRID TROFFER W/ INTEGRAL BATTERY
E1	RECESSED EMERGENCY WALLPACK
H10	4' STRIP LIGHT W/ INTEGRAL SENSOR
P	LUMINOUS LINEAR PENDANT
P2	ROUND DECORATIVE PENDANT
R	5" RECESSED FLANGELESS DOWNLIGHT
R1	8" RECESSED FLANGELESS DOWNLIGHT
R2	12" RECESSED FLANGELESS DOWNLIGHT
T	LINE VOLTAGE TRACK LIGHT
TL	TAPE LIGHT
X1	EDGE LIT EXIT SIGN



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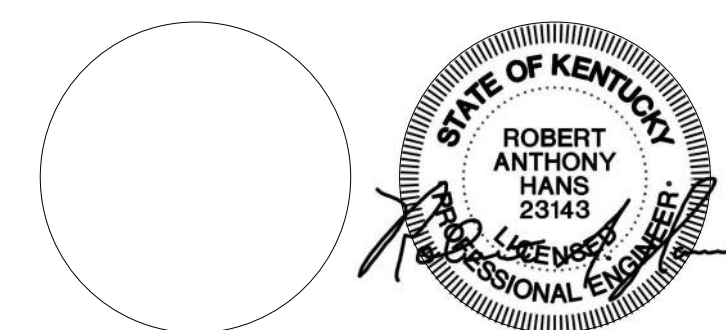
PROJECT NUMBER 1921

DATE July 1, 2020

REVISIONS

FIRST FLOOR PLAN -
LIGHTING

E2.1



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PROJECT NUMBER	1921
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DATE July 1, 2020

REVISIONS

**FIRST FLOOR PLAN -
POWER/SYSTEMS**

E3.1

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED LIGHT FIXTURES ETC. REFER ALSO TO THE ARCHITECT'S CASEWORK DETAILS AND ROOM ELEVATIONS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF LIGHT FIXTURES, ETC.

B. ALL NEW WIRING SHALL BE #12 WITH A #12 INSULATED GROUND WIRE AND SHALL BE INSTALLED IN CONDUIT.

C. CONTRACTOR SHALL INSTALL BRANCH CIRCUITING WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A 15 AMP BREAKER AND 15 AMP CIRCUIT BREAKER. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE SHOWN TO SHARE COMMON NEUTRAL CONDUCTORS, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. # 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17 AND 400.5. MULTIPLE NEUTRAL CONDUCTORS SHALL BE ALLOWED TO SHARE (1/0) 150 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.

D. ALL PANEL AND CIRCUIT NUMBER FOR ALL RECEPTABLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING, IN HEALTHCARE FACILITIES PROVIDE CONCORDANT LABELS WITH WHITE LETTERING. PROVIDE ADHESIVE LABELS, MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.

E. REFERENCE TO SYSTEM INSTALLATION MATRIX (ON SYSTEMS LEGEND SHEET) AND SPECIFICATIONS FOR CONDUIT REQUIREMENTS ON EACH SYSTEM.

F. CONTRACTOR SHALL ROUTE ALL "SYSTEM CONDUIT STUB-UPS" TO THE NEAREST CORRIDOR CABLING PATH (SEE "STUB-UP" DETAILS). REFER TO CABLING PATH INSTALLATION DETAIL FOR ADDITIONAL REQUIREMENTS.

G. ALL PENETRATIONS THROUGH THE THERMAL ENVELOPE SHALL BE THOSE DIRECTLY FEEDING EXTERIOR LOADS.

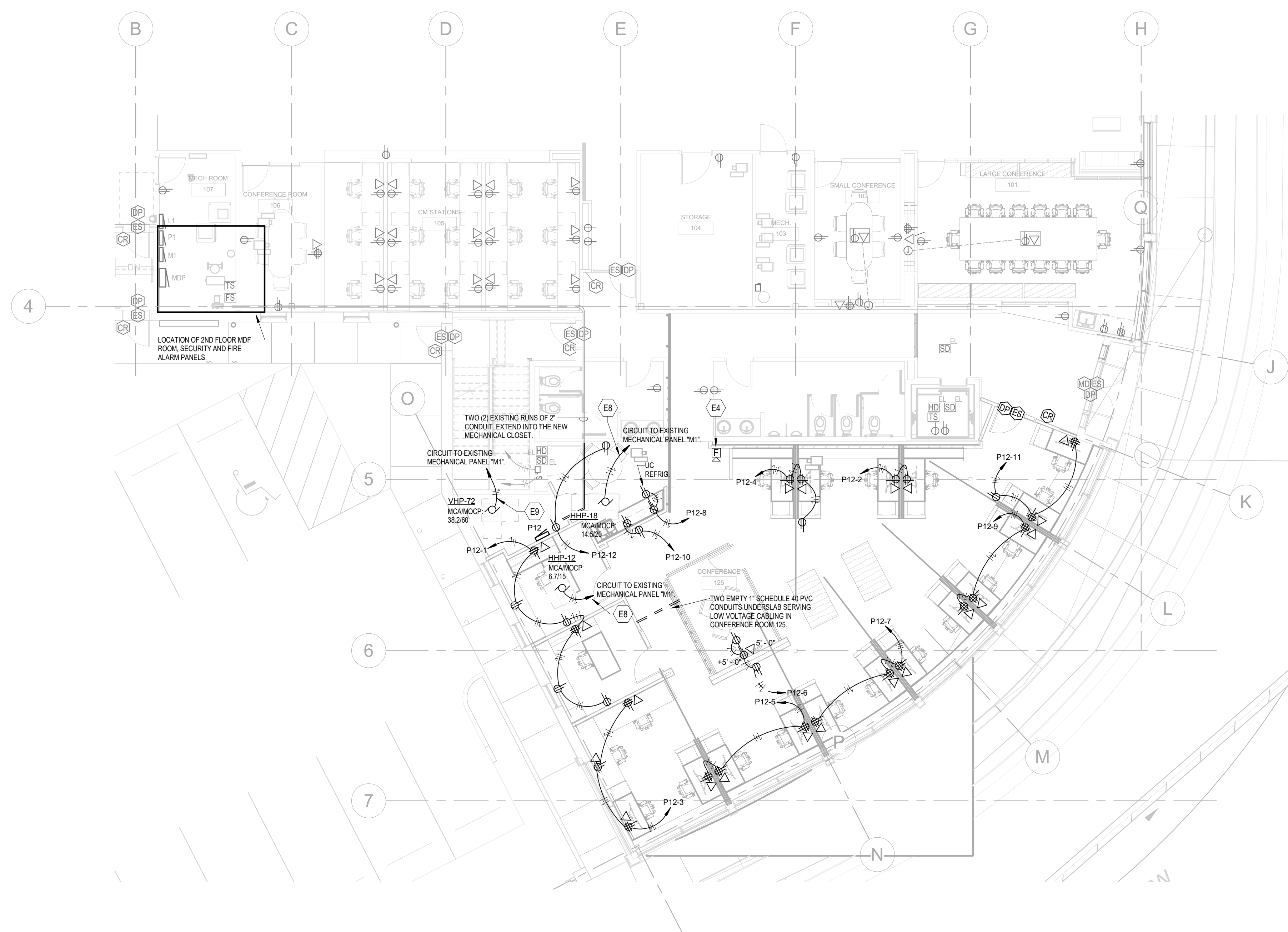
H. ALL MECHANICAL LOADS SHALL BE FED FROM PANEL "M1" REQUIREMENTS TO THE PANEL SCHEDULED FOR THE CIRCUIT. REFER TO PANEL REQUIREMENTS FOR MECHANICAL PLANS FOR LOCATIONS OF ALL EQUIPMENT.

I. MC CABLE SHALL BE ALLOWED IN ALL CONCEALED APPLICATIONS ONLY. ALL OTHER CABLE SHALL BE INSTALLED IN CONCEALED APPLICATIONS ONLY.

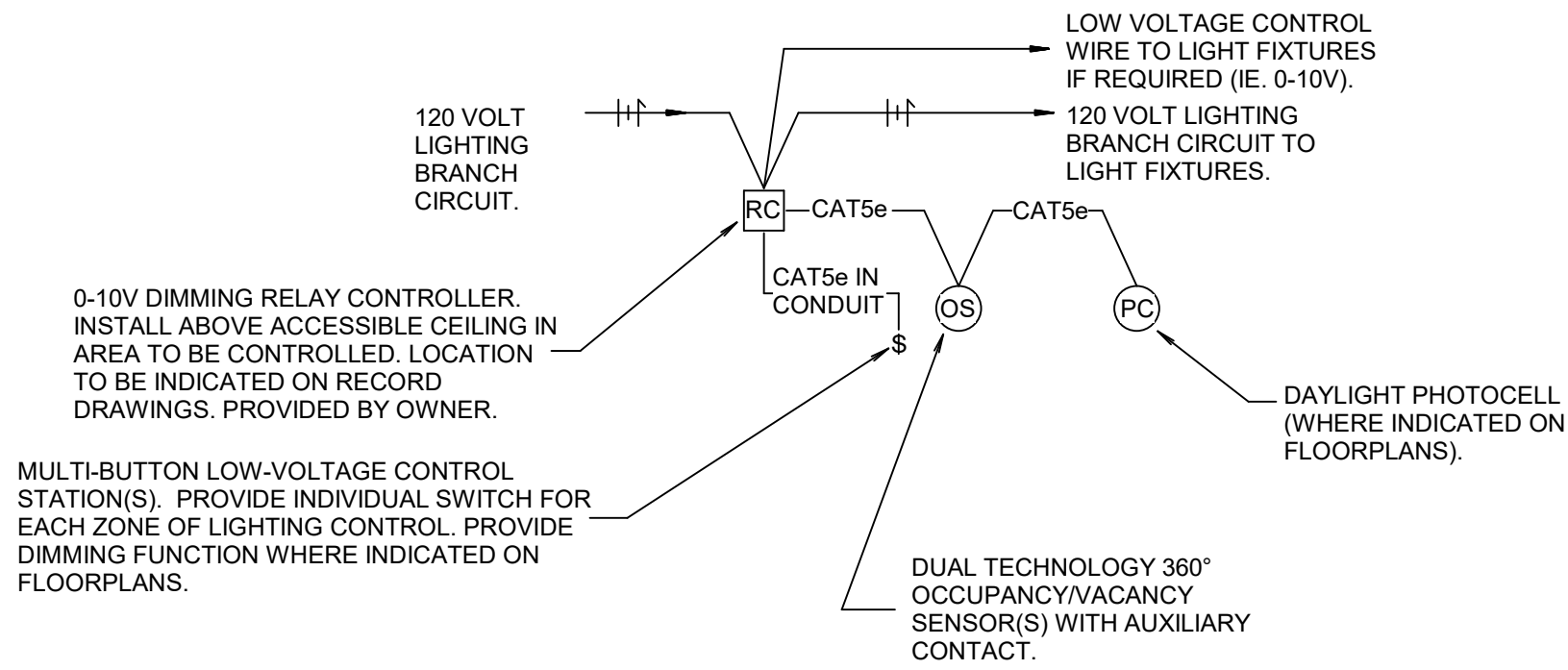
CONTRACTOR SHALL SEPARATE PRICING OF CORE/SHELL WORK FROM FIT-UP WORK.

CORE/SHELL INCLUDES ALL WORK ASSOCIATED WITH AREAS 107, C102, BOTH STAIRWELLS, WOMEN'S RESTROOM 14, MEN'S RESTROOM 15, ELEVATOR, MDF ROOM, SHELL SPACES, ALL EXTERIOR DEVICES AND ALL DISTRIBUTION EQUIPMENT INCLUDING PANELBOARDS.

- E4 PROVIDE NEW FIRE ALARM AUDIO/VISUAL UNIT AND CONNECT TO EXISTING FIRE ALARM NOTIFICATION CIRCUIT.
- E8 ROUTE # OF #12 CONDUCTORS AND #12 GROUND IN 3/4" CONDUIT TO NEW 20A BREAKER IN EXISTING PANEL "M1".
- E9 ROUTE # OF #6 CONDUCTORS AND ONE (1) #10 GROUND IN 1" CONDUIT TO NEW 60A BREAKER IN EXISTING PANEL "M1".



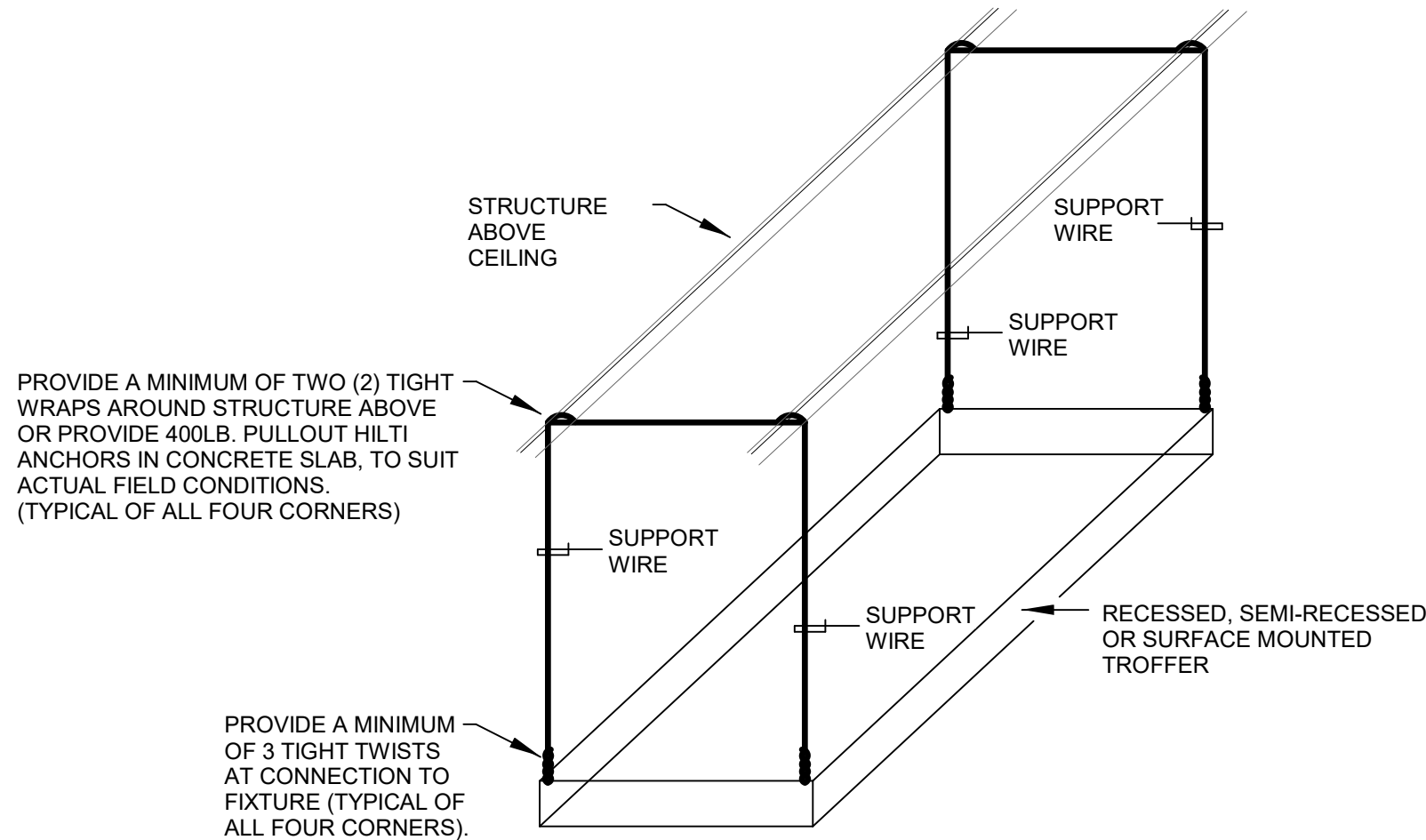
1 FIRST FLOOR PLAN - POWER/SYSTEMS
1/8" = 1'-0"



GENERAL NOTES:

- A. OCCUPANCY SENSOR CONTROL ZONES WITH NO SWITCHING INDICATED ON FLOORPLANS SHALL BE CONTROLLED BY OCCUPANCY SENSOR ONLY. CONTROL SEQUENCE SHALL BE ON/OFF DEPENDANT UPON OCCUPANT DETECTION.
- B. OCCUPANCY SENSOR CONTROL ZONES WITH SWITCHES INDICATED ON FLOORPLANS SHALL FUNCTION AS VACANCY SENSORS. FIXTURES SHALL NOT TURN ON UPON OCCUPANT DETECTION. FIXTURES SHALL TURN ON TO 70% DIMMED WHEN WALL SWITCH IS ACTIVATED. PROVIDE ADDITIONAL UP/DOWN DIMMING CONTROLS WHERE DIMMING SWITCHES ARE INDICATED ON FLOORPLANS. (FIXTURES SHALL TURN ON AT 100% UPON SWITCH ACTIVATION IF NO DIMMING IS INDICATED)
- C. ALL COMPONENTS PROVIDED BY OWNER. EC SHALL BE RESPONSIBLE FOR COMPLETE INSTALLATION.

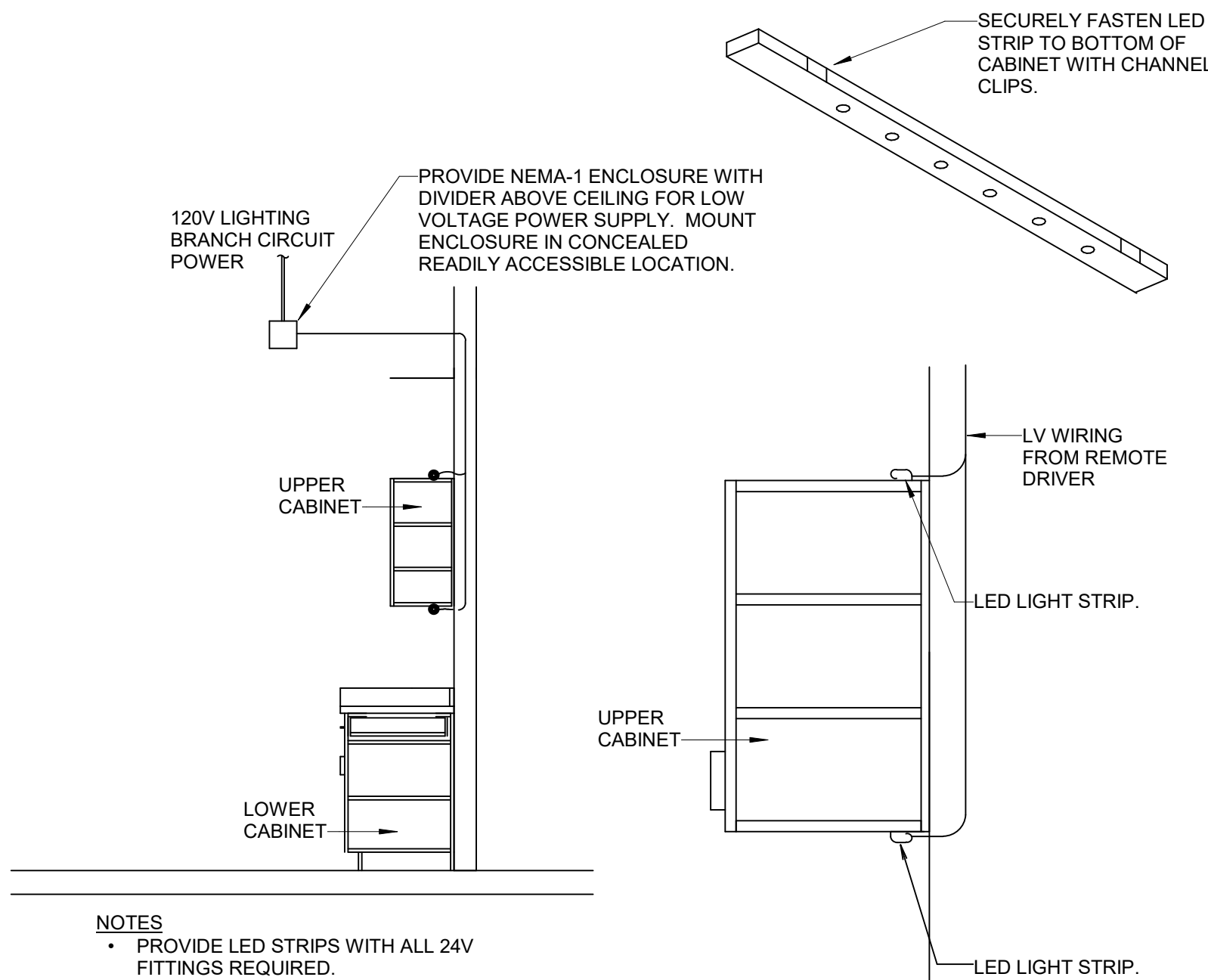
TYPICAL OCCUPANCY SENSOR LIGHTING CONTROL DIAGRAM
NO SCALE



* ALTERNATELY CONTRACTOR MAY SUPPORT FIXTURES WITH SINGLE WIRE FROM ALL FOUR CORNERS OF FIXTURE PER SPECIFICATIONS WITH NUMBER OF TWISTS AT FIXTURE AND NUMBER OF WRAPS AROUND STRUCTURE INDICATED IN THIS DETAIL.

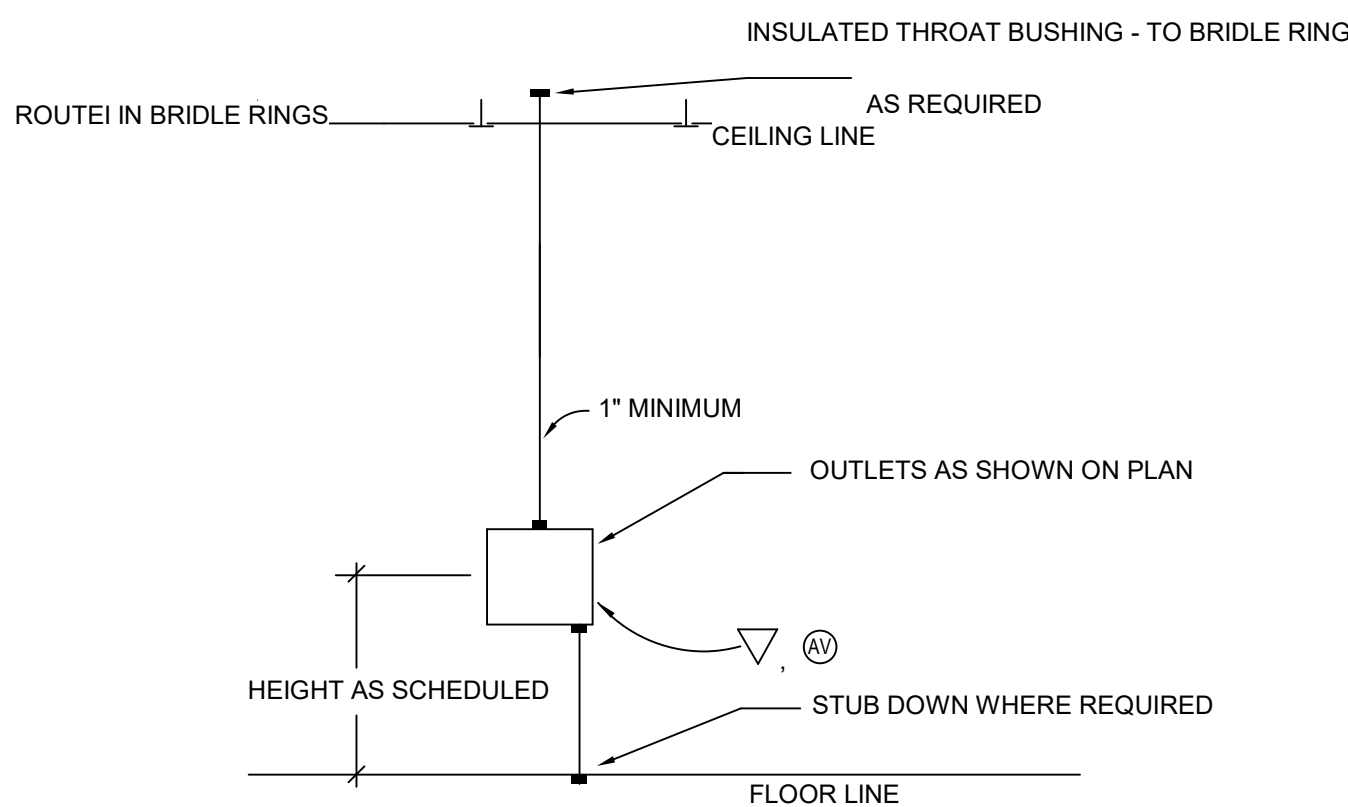
* HANGER WIRES SHALL BE INSTALLED WITHIN 15 DEGREES OF PLUMB. WHERE BUILDING STRUCTURE IS LOCATED SUCH THAT 15 DEGREES CANNOT BE OBTAINED, CONTRACTOR SHALL PROVIDE "UN-STRUT" OR SIMILAR STRUCTURE TO MEET THIS REQUIREMENT.

TROFFER SUPPORT DETAIL
NO SCALE



- NOTES:
- PROVIDE LED STRIPS WITH ALL 24V FITTINGS REQUIRED.
 - LOW VOLTAGE POWER SUPPLY SHALL REQUIRE 120V HARDWIRED CONNECTION.

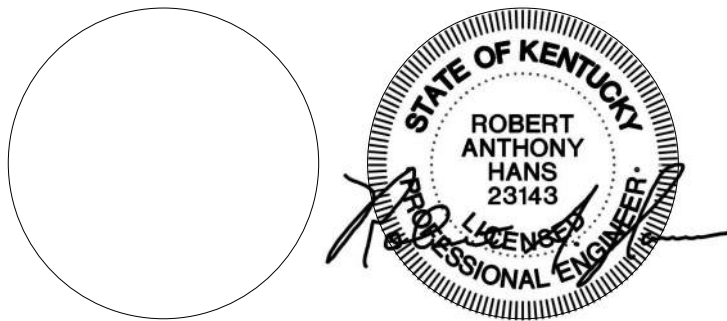
TYPICAL UNDER AND ABOVE CABINET LIGHTING INSTALLATION DETAIL
NO SCALE



NOTES:

EXTEND CONDUIT TO NEAREST CORRIDOR CEILING SPACE UNLESS VENDOR'S CABLING TERMINATES AT ANOTHER OUTLET IN SAME ROOM (IN WHICH CASE, STUB CONDUIT OUT ABOVE THAT ROOM'S SUSPENDED CEILING). REFER TO GENERAL NOTES LOCATED ON ALL SYSTEM'S DRAWINGS.

ROUGH-IN DETAIL FOR STUB-OUTS
NO SCALE



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PROJECT NUMBER 1921

DATE July 1, 2020

REVISIONS

ELECTRICAL SPECIFICATIONS

1. GENERAL

A. IN GENERAL, AND TO THE EXTENT POSSIBLE, ALL WORK SHALL BE ACCOMPLISHED WITHOUT INTERRUPTION OF THE EXISTING FACILITIES' OPERATIONS. THE CONTRACTOR SHALL ADVISE THE OWNERS AT LEAST FORTY- EIGHT HOURS PRIOR TO THE INTERRUPTION OF ANY SERVICES. THE OWNERS SHALL BE ADVISED OF THE EXACT TIME THAT INTERRUPTION WILL OCCUR AND THE LENGTH OF TIME THE INTERRUPTION WILL OCCUR. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN COMPLETE WORK STOPPAGE BY THE CONTRACTOR INVOLVED. WORK TO RESTORE SERVICE SHALL BE CONTINUOUS. MAXIMUM DOWN TIME SHALL NOT EXCEED 2 HOURS.

2. INTENT

A. IT IS THE INTENTION OF THESE SPECIFICATIONS AND ALL ASSOCIATED DRAWINGS TO CALL FOR FINISHED WORK, TESTED, AND READY FOR OPERATION. WHEREVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN "FURNISH AND INSTALL COMPLETE AND READY FOR USE."

B. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER INSTALLATION AND OPERATION, SHALL BE INCLUDED IN THE WORK. THE SAME AS IF HEREIN SPECIFIED OR SHOWN.

3. DRAWINGS AND SPECIFICATIONS

A. THE DRAWINGS ARE DIAGRAMMATIC ONLY AND INDICATE THE GENERAL ARRANGEMENT OF THE SYSTEMS AND ARE TO BE FOLLOWED INSOFAR AS POSSIBLE. IF DEVIATIONS FROM THE LAYOUTS ARE NECESSITATED BY FIELD CONDITIONS, DETAILED LAYOUTS OF THE PROPOSED DEPARTURES SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR APPROVAL BEFORE PROCEEDING WITH THE WORK. THE CONTRACT DRAWINGS ARE NOT INTENDED TO SHOW EVERY VERTICAL OR HORIZONTAL OFFSET WHICH MAY BE NECESSARY TO COMPLETE THE SYSTEMS. CONTRACTORS SHALL, HOWEVER, ANTICIPATE THAT ADDITIONAL OFFSETS MAY BE REQUIRED AND SUBMIT THEIR BID ACCORDINGLY.

B. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. NO CONTRACTOR OR SUPPLIER SHALL TAKE ADVANTAGE OF CONFLICT BETWEEN THEM, OR BETWEEN PARTS OF EITHER, BUT SHOULD THIS CONDITION EXIST, THE CONTRACTOR OR SUPPLIER SHALL REQUEST A CLARIFICATION OF THE CONDITION AT LEAST TEN (10) DAYS PRIOR TO THE SUBMISSION OF BIDS SO THAT THE CONDITION MAY BE CLARIFIED BY ADDENDUM. IN THE EVENT THAT SUCH A CONDITION ARISES AFTER WORK IS STARTED, THE INTERPRETATION OF THE ENGINEER SHALL BE THE DETERMINING FACTOR, AND THE CONTRACT TO ACCOMPLISH THE WORK SHALL BE BINDING ON THE CONTRACTOR.

C. THE DRAWINGS AND SPECIFICATIONS SHALL BE CONSIDERED TO BE COOPERATIVE AND ANYTHING APPEARING IN THE SPECIFICATIONS WHICH MAY NOT BE INDICATED ON THE DRAWINGS OR OTHERWISE, SHALL BE CONSIDERED AS PART OF THE CONTRACT AND MUST BE EXECUTED THE SAME AS THOUGH INDICATED BY BOTH.

D. SHOULD OVERLAP OF WORK BETWEEN THE VARIOUS TRADES BECOME EVIDENT, THIS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER. IN SUCH EVENT NEITHER TRADE SHALL ASSUME THE RESPONSIBILITY FOR THE WORK WHICH IS SPECIFIED UNDER HIS BRANCH UNTIL INSTRUCTIONS IN WRITING ARE RECEIVED FROM THE ENGINEER.

E. THE DRAWINGS ARE INTENDED TO SHOW THE APPROXIMATE LOCATION OF EQUIPMENT, MATERIALS, ETC. DIMENSIONS GIVEN IN FIGURES ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND ALL DIMENSIONS WHETHER GIVEN IN FIGURES OR SCALED SHALL BE VERIFIED IN THE FIELD. IN CASE OF CONFLICT BETWEEN SMALL AND LARGE SCALE DRAWINGS, THE LARGER SCALE DRAWINGS SHALL TAKE PRECEDENCE.

F. LOCATION, MATERIAL TYPES, ETC., INDICATED ON THIS DRAWING WERE TAKEN FROM VARIOUS SOURCES; NONE OF WHICH WERE INDICATED "AS-BUILT," AND ALL ARE SUBJECT TO EXTENSIVE VARIATION AS TO LOCATIONS, SIZE, MATERIALS, ETC. ALSO, CERTAIN EXISTING ELEMENTS MAY NOT BE INDICATED. CONSEQUENTLY, ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO ELECTRICAL LINES. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARDS AND SAFETY REQUIREMENTS. UTILITIES SHALL ALSO BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.

G. WHERE THE INSTALLATION OF CONDUIT, AND DUCTS IN WALLS, FLOORS, OR PARTITIONS REQUIRE THE REMOVAL OF ANY FIRESTOPPING OR PENETRATIONS OF FIRE RATED WALLS, CEILINGS, FLOORS, ETC., THE SPACE AROUND SUCH CONDUIT, DUCTS AND PIPINGS SHALL BE TIGHTLY FILLED WITH MINERAL WOOL, OR OTHER NON-COMBUSTIBLE FIRE INSULATION MATERIALS, IN ORDER TO MAINTAIN THE INTEGRITY OF THE FIRE RATING.

H. THE CONTRACTOR SHALL INFORM HIMSELF OF ALL OF THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, THE SITE OF THE WORK, THE STRUCTURE OF THE GROUND, THE OBSTACLES THAT MAY BE ENCOUNTERED, THE AVAILABILITY AND LOCATION OF NECESSARY FACILITIES AND ALL RELEVANT MATTERS CONCERNING THE WORK. THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL DRAWINGS AND SPECIFICATIONS AND DETERMINE THE KIND AND TYPE OF MATERIALS TO BE USED THROUGHOUT THE PROJECT AND WHICH MAY, IN ANY WAY, AFFECT THE EXECUTION OF HIS WORK. THE CONTRACTOR SHALL FULLY ACQUAINT HIMSELF WITH ALL EXISTING CONDITIONS AS TO INGRESS AND EGRESS, DISTANCE OF HAUL FROM SUPPLY POINTS, ROUTES FOR TRANSPORTATION OF MATERIALS, FACILITIES AND SERVICES, AVAILABILITY OF UTILITIES, ETC. HIS PROPOSAL SHALL COVER ALL EXPENSES OR DISBURSEMENTS IN CONNECTION WITH SUCH MATTERS AND CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL WORK SHOWN ON THE DRAWINGS AND CONDITIONS AT THE SITE, AND SHALL REPORT IMMEDIATELY TO THE ENGINEER TEN DAYS (10) PRIOR TO BIDDING, ANY DISCREPANCIES WHICH MAY APPEAR IN ORDER THAT MISUNDERSTANDING AT A LATER DATE MAY BE PREVENTED. NO ALLOWANCE IS TO BE MADE FOR LACK OF KNOWLEDGE CONCERNING SUCH CONDITIONS AFTER BIDS ARE ACCEPTED.

I. THE CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, APPARATUS, MATERIALS, AND WORKMANSHIP ENTERING INTO THIS CONTRACT TO THE BEST OF ITS RESPECTIVE KIND AND SHALL REPLACE ALL PARTS AT HIS OWN EXPENSE, WHICH ARE PROVEN DEFECTIVE WITHIN ONE (1) YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE ENGINEER. THE EFFECTIVE DATE OF COMPLETION OF THE WORK SHALL BE THE DATE OF THE ENGINEER'S STATEMENT OF SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL PRESENT THE ENGINEER WITH SUCH WARRANTIES AND GUARANTEES AT THE TIME OF FINAL ACCEPTANCE OF THE WORK. THE ENGINEER SHALL THEN SUBMIT THESE WARRANTIES, ETC., TO THE OWNER. THE OWNER RESERVES THE RIGHT TO USE EQUIPMENT INSTALLED BY THE CONTRACTOR PRIOR TO DATE OF FINAL ACCEPTANCE. SUCH USE OF EQUIPMENT SHALL, IN NO WAY, INVALIDATE THE GUARANTEE EXCEPT THAT OWNER SHALL BE LIABLE FOR ANY DAMAGE TO EQUIPMENT DURING THIS PERIOD, DUE TO NEGLIGENCE OF THE OPERATOR OR OTHER EMPLOYEES.

J. PATCHING AND REPAIRING MADE NECESSARY BY WORK PERFORMED UNDER THIS CONTRACT SHALL BE INCLUDED AS A PART OF THE WORK AND SHALL BE DONE BY SKILLED MECHANICS OF THE TRADE OR TRADES FOR WORK CUT OR DAMAGED. ALL WORK SHALL MATCH ADJACENT SURFACES IN A MANNER ACCEPTABLE TO THE ENGINEER.

4. CODES, RULES, PERMITS, FEES, REGULATIONS, ETC.

A. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN AND PAY FOR ALL PERMITS, GOVERNMENT SALES TAXES, FEES, AND OTHER COSTS INCLUDING UTILITY CONNECTIONS OR EXTENSIONS, IN CONNECTION WITH HIS WORK; FILE ALL NECESSARY PLANS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION; OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK AND DELIVER SAME TO THE ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK. IGNORANCE OF CODES, RULES, REGULATIONS, LAWS, ETC., SHALL NOT RENDER THE ELECTRICAL CONTRACTOR IRRESPONSIBLE FOR COMPLIANCE.

B. ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODES, NATIONAL FIRE CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION, THE REQUIREMENTS OF LOCAL UTILITY COMPANIES, AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.

D. ALL WORK IS TO BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH PLANS AND SPECIFICATIONS WHICH HAVE BEEN APPROVED IN THEIR ENTIRETY AND/OR REFLECT ANY CHANGES REQUESTED BY THE STATE FIRE MARSHAL. WORK SHALL NOT COMMENCE UNTIL SUCH PLANS ARE IN THE HANDS OF THE CONTRACTOR.

E. THE CONTRACTOR SHALL INSURE THAT HIS WORK IS ACCOMPLISHED IN ACCORD WITH OSHA STANDARDS.

F. WHERE CONFLICT ARISES BETWEEN ANY CODE AND THE PLANS AND/OR SPECIFICATIONS, THE CODE SHALL APPLY EXCEPT IN THE INSTANCE WHERE THE PLANS AND SPECIFICATIONS EXCEED THE REQUIREMENTS OF THE CODE. ANY CHANGES REQUIRED AS A RESULT OF THESE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AT LEAST TEN (10) WORKING DAYS PRIOR TO BID DATE. OTHERWISE THE CONTRACTOR SHALL MAKE THE REQUIRED CHANGES AT HIS OWN EXPENSE. THE PROVISIONS OF THE CODES CONSTITUTE MINIMUM STANDARDS FOR WIRING METHODS, MATERIALS, EQUIPMENT AND CONSTRUCTION AND COMPLIANCE THEREWITH WILL BE REQUIRED FOR ALL ELECTRICAL WORK, EXCEPT WHERE THE DRAWINGS AND SPECIFICATIONS REQUIRE BETTER MATERIALS, EQUIPMENT, AND CONSTRUCTION THAN THESE MINIMUM STANDARDS, IN WHICH CASE THE DRAWINGS AND SPECIFICATIONS SHALL BE THE MINIMUM STANDARDS.

5. INSPECTIONS, APPROVAL AND TESTS

A. THE CONTRACTOR SHALL PROVIDE AS A PART OF THIS CONTRACT ELECTRICAL INSPECTION BY A COMPETENT ELECTRICAL INSPECTION AGENCY, LICENSED TO PROVIDE SUCH SERVICES IN THE STATE OF KENTUCKY.

B. AN INSPECTION SHALL BE SCHEDULED FOR ROUGH AS WELL AS FINISHED WORK. THE ROUGH INSPECTION SHALL BE DIVIDED INTO AS MANY INSPECTIONS AS MAY BECOME NECESSARY TO COVER ALL ROUGHING-IN WITHOUT FAIL AND A REPORT OF EACH SUCH INSPECTION VISIT SHALL BE SUBMITTED TO THE ARCHITECT AND THE CONTRACTOR WITHIN THREE (3) DAYS OF THE INSPECTION.

C. BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL FURNISH THREE (3) COPIES OF THE CERTIFICATE OF FINAL APPROVAL BY THE ELECTRICAL INSPECTOR TO THE ENGINEER AND ONE (1) COPY TO THE STATE FIRE MARSHAL'S OFFICE.

D. ALL COSTS INCIDENTAL TO ELECTRICAL INSPECTIONS SHALL BE BORNE BY THE CONTRACTOR.

6. MATERIALS AND WORKMANSHIP

A. ALL CONDUIT AND/OR CONDUCTORS SHALL BE CONCEALED IN WALLS, CEILINGS OR FLOORS UNLESS OTHERWISE NOTED. ALL FIXTURES AND WIRING COVERED IN THIS SECTION SHALL BE INSTALLED TO MAKE UP COMPLETE SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN.

B. ALL MATERIALS, WHERE APPLICABLE, SHALL BEAR UNDERWRITERS' LABORATORIES LABEL WHERE SUCH A STANDARD HAS BEEN ESTABLISHED.

C. EACH LENGTH OF CONDUIT, WIREWAY, DUCT, CONDUCTOR, CABLE, FITTING, FIXTURE AND DEVICE USED IN THE ELECTRICAL SYSTEMS SHALL BE STAMPED OR INDELIBLY MARKED WITH THE MAKERS MARK OR NAME.

D. ALL EQUIPMENT SHALL BEAR THE MANUFACTURER'S NAME AND ADDRESS AND SHALL INDICATE ITS ELECTRICAL CAPACITY AND CHARACTERISTICS.

E. ALL MATERIALS, EQUIPMENT AND APPLIANCES SHALL CONFORM TO THE LATEST STANDARDS OF THE NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION (NEMA) AND THE NATIONAL BOARD OF FIRE UNDERWRITERS (NBFU) AND SHALL BE APPROVED BY THE OWNER'S INSURING AGENCY IF SO REQUIRED.

7. FINAL CONNECTIONS TO EQUIPMENT

THE ROUGHING-IN AND FINAL CONNECTIONS TO ALL ELECTRICALLY OPERATED EQUIPMENT FURNISHED UNDER THIS AND ALL OTHER SECTIONS OF THESE SPECIFICATIONS, OR BY OTHERS, SHALL BE INCLUDED IN THE CONTRACT AND CONSISTS OF FURNISHING ALL LABOR AND MATERIALS FOR CONNECTION.

8. OPERATING INSTRUCTIONS

A. UPON COMPLETION OF ALL WORK AND ALL TESTS, THE CONTRACTOR SHALL FURNISH THE NECESSARY SKILLED LABOR AND HELPERS FOR OPERATING HIS SYSTEMS AND EQUIPMENT FOR A PERIOD OF TWO (2) HOURS, OR AS OTHERWISE SPECIFIED. DURING THIS PERIOD, INSTRUCT THE OWNER OR HIS REPRESENTATIVE FULLY IN THE OPERATIONS, ADJUSTMENT, AND MAINTENANCE OF ALL EQUIPMENT FURNISHED. GIVE AT LEAST FORTY-EIGHT (48) HOURS NOTICE TO THE OWNER IN ADVANCE OF THIS PERIOD.

9. CLEANING

A. THE CONTRACTOR SHALL, AT ALL TIMES, KEEP THE AREA OF HIS WORK PRESENTABLE TO THE PUBLIC AND CLEAN OF RUBBISH CAUSED BY HIS OPERATIONS; AND AT THE COMPLETION OF THE WORK, SHALL REMOVE ALL RUBBISH, ALL OF HIS TOOLS, EQUIPMENT, TEMPORARY WORK AND SURPLUS MATERIALS, FROM AND ABOUT THE PREMISES, AND SHALL LEAVE THE WORK CLEAN AND READY FOR USE. IF THE CONTRACTOR DOES NOT ATTEND TO SUCH CLEANING IMMEDIATELY UPON REQUEST, THE FOREIGN MATTER CAUSE CLEANING TO BE DONE BY OTHERS AND CHARGE THE COST OF SAME TO THE RESPONSIBLE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE OR ALL DAMAGE FROM FIRE WHICH ORIGINATES IN, OR IS PROPOGATED BY, ACCUMULATIONS OF HIS RUBBISH OR DEBRIS.

B. AFTER COMPLETION OF ALL WORK AND BEFORE FINAL ACCEPTANCE OF THE WORK, EACH ELECTRICAL CONTRACTOR SHALL THOROUGHLY CLEAN ALL EQUIPMENT AND MATERIALS AND SHALL REMOVE ALL FOREIGN MATTER SUCH AS GREASE, DIRT, PLASTER, LABELS, STICKERS, ETC. FROM THE EXTERIOR OF MATERIALS, EQUIPMENT AND ALL ASSOCIATED FABRICATION.

10. GENERAL REQUIREMENTS

DRAWINGS SHALL NOT BE SCALED FOR FINAL DIMENSIONS. THE CONTRACTOR SHALL OBTAIN ALL DIMENSIONS FROM FIELD MEASUREMENTS.

ALL MATERIALS SHALL BE NEW AND SHALL BEAR THE U.L. LABEL, WHEREVER POSSIBLE. ALL EQUIPMENT SHALL BE CONSTRUCTED TO NEMA STANDARDS.

THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES, OBTAINING SLEEVES, TEMPLATES, INSTALLATION GUIDES, NAMEPLATE DATA, ETC., SUFFICIENTLY IN ADVANCE TO AVOID CONFLICTS AND WORK INSTALLED IN ERROR OR IN SPACES REQUIRED BY OTHERS. VERIFY ALL ROUGH-IN LOCATIONS, MOUNTING HEIGHTS, POWER REQUIREMENTS, ETC., WITH SHOP DRAWINGS TO AVOID CONFLICTS. FAILURE TO OBSERVE THESE REQUIREMENTS WILL NOT BE GROUNDS TO REQUEST AN EXTRA TO THE CONTRACT, IN MONEY OR TIME EXTENSION.

REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, FOR EXACT LOCATIONS OF ALL CEILING-MOUNTED DEVICES AND EQUIPMENT.

WHERE WORKING IN OR AROUND OR TYING INTO EXISTING CIRCUITS, EQUIPMENT, FIXTURES, DEVICES, ETC., THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND ASCERTAIN FOR HIMSELF THE SUITABILITY OF ANY INSTALLATION PRIOR TO BIDDING THE WORK. FAILURE TO OBSERVE THIS REQUIREMENT SHALL NOT BE GROUNDS FOR REQUESTING AN EXTRA TO THE CONTRACT IN FUNDS OR TIME OF COMPLETION.

REFER TO ALL OTHER DRAWINGS AND SPECIFICATIONS FOR ALL TRADES OF WORK FOR ADDITIONAL INFORMATION. ALL CONTRACT DOCUMENTS ARE INTENDED TO BE COMPLEMENTARY, ONE OF ANOTHER. SEPARATION OF DOCUMENTS INTO VARIOUS DISCIPLINES IS FOR CONVENIENCE ONLY, AND DOES NOT IMPLY ANY SPECIFIC ASSIGNMENTS.

11. WARRANTIES

THE CONTRACTOR SHALL GUARANTEE HIS WORK UNCONDITIONALLY IN WRITING TO THE OWNER FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY THE ARCHITECT AND/OR THE ENGINEER.

12. COORDINATION WITH OWNER:

THE CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH THE OWNER WHERE ROUTING CONDUIT OR WIRE THRU THE EXISTING BUILDING OR TYING INTO EXISTING DISTRIBUTION EQUIPMENT. PROVIDE 48 HOUR NOTICE TO OWNER IN ADVANCE OF INTERRUPTING ANY SERVICES - WORK CONTINUOUSLY TO RESTORE SERVICE AFTER INTERRUPTION OCCURS.

13. SHOP DRAWINGS, OPERATION AND MAINTENANCE MANUALS:

THE CONTRACTOR SHALL FURNISH SEVEN COPIES OF BOUND SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW AND APPROVAL WITHIN 30 DAYS OF AWARD OF CONTRACT. SUBMIT DRAWINGS ON THE FOLLOWING EQUIPMENT: LIGHTING FIXTURES, FIRE ALARM EQUIPMENT, WIRING DEVICES, PANELBOARDS AND DISCONNECT SWITCHES, AS WELL AS ANY OTHER COMPONENTS OF THE ELECTRICAL WORK AS REQUESTED BY THE ENGINEER. PROVIDE THREE BOUND COPIES OF INSTRUCTION AND MAINTENANCE MANUALS WITH PARTS LIST FOR ALL EQUIPMENT AT CLOSE OF PROJECT. FORWARD MANUALS TO ENGINEER FOR APPROVAL.

14. LIGHTING FIXTURES

SUPPORT FIXTURES FROM STRUCTURE INDEPENDENT OF CEILING SUPPORTS, PLACING SUPPORTS AT EACH CORNER.

15. INDEMNIFICATION

THE CONTRACTOR SHALL HOLD HARMLESS AND INDEMNIFY THE ENGINEER, EMPLOYEES, OFFICERS, AGENTS AND CONSULTANTS FROM ALL CLAIMS, LOSS, DAMAGE, ACTIONS, CAUSES OF ACTIONS, EXPENSE AND/OR LIABILITY RESULTING FROM, BROUGHT FOR, OR ON ACCOUNT OF ANY PERSONAL INJURY OR PROPERTY DAMAGE RECEIVED OR SUSTAINED BY ANY PERSON, PERSONS, (INCLUDING THIRD PARTIES), OR ANY PROPERTY GROWING OUT OF, OCCURRING, OR ATTRIBUTABLE TO ANY WORK PERFORMED UNDER OR RELATED TO THIS CONTRACT, RESULTING IN WHOLE OR IN PART FROM THE NEGLIGENCE OF THE CONTRACTOR OR, ANY SUBCONTRACTOR, ANY EMPLOYEE, AGENT OR REPRESENTATIVE.

16. METHODS AND MATERIALS

A. GROUNDING

ALL METALLIC CONDUIT, CABINETS, EQUIPMENT AND SERVICES SHALL BE GROUNDED IN ACCORDANCE WITH THE LATEST ISSUE OF THE N.E.C., AND/OR AS SPECIFIED HEREIN. PROVIDE SEPARATE GREEN EQUIPMENT GROUND FOR EACH CIRCUIT. BOND SYSTEMS TOGETHER AND WITH BUILDING GROUND AS NEEDED, AND IN ACCORD WITH N.E.C. ARTICLE 250.

B. CONDUIT

ALL CONDUIT SHALL BE 3/4" MINIMUM UNLESS OTHERWISE NOTED OR REQUIRED BY THE NATIONAL ELECTRICAL CODE.

TYPES OF CONDUITS REQUIRED ARE AS FOLLOWS:

STEEL ELECTRICAL METALLIC TUBING, (E.M.T.)
RIGID STEEL CONDUIT, (G.R.S.)
RIGID NONMETALLIC CONDUIT, (P.V.C.)
FLEXIBLE METAL CONDUIT

STEEL ELECTRICAL METALLIC TUBING (EMT) OF CORROSION-RESISTANT STEEL CONSTRUCTION SHALL BE PERMITTED FOR CONCEALED OR EXPOSED INSTALLATION IN DRY INTERIOR LOCATIONS. ELECTRICAL METALLIC TUBING SHALL NOT BE USED IN CONCRETE SLABS OR WHERE SUBJECT TO PHYSICAL DAMAGE.

RIGID GALVANIZED STEEL CONDUIT SHALL BE USED WHERE SUBJECT TO PHYSICAL DAMAGE, WHERE EXPOSED ON THE EXTERIOR OR FOR OVER 600V WIRING.

RIGID NON-METALLIC CONDUIT SHALL BE CONSTRUCTED OF P.V.C., NOMINALLY SCH. 40 WEIGHT AND SHALL BE USED AS REQUIRED FOR EXTERIOR UNDERGROUND WORK AND FOR INTERIOR UNDER-SLAB CONDUITS.

FLEXIBLE METAL CONDUIT SHALL BE STEEL, 3/4" MINIMUM, AND NOT USED IN LENGTHS OVER SIX FEET.

C. CONDUIT FITTINGS

RIGID CONDUIT FITTINGS SHALL BE OF GRAY IRON, MALLEABLE IRON OR CAST ALUMINUM. ALL COVER PLATES SHALL BE GASKETED WITH NEOPRENE, RATED FOR THE ENVIRONMENT.

EMT CONDUIT FITTINGS SHALL BE OF THE COMPRESSION TYPE. ALL EMT CONNECTORS AND COUPLINGS SHALL BE OF FORMED STEEL CONSTRUCTION.

RIGID CONDUIT FITTINGS SHALL BE GALVANIZED, TAPERED THREADS WITH ALL BURRS REMOVED, ENDS REAMED AND CUTTING OIL WIPED CLEAN.

CONDUIT BODIES, JUNCTION BOXES AND FITTINGS SHALL BE DUST TIGHT AND THREADED FOR DUSTY AREAS. WEATHERPROOF FOR EXTERIOR LOCATIONS, VAPOR TIGHT FOR DAMP AREAS. CONDUIT FITTINGS SHALL BE AS MFG'D. BY C.H. APPLETON, KILLARK OR APPROVED EQUIVALENT. ALL SURFACE MOUNTED CONDUIT FITTINGS (AS WITH "FS", "FD", "GUB" TYPES) SHALL BE PROVIDED WITH MOUNTING HUBS.

D. OUTLET BOXES

OUTLET BOXES SHALL BE INSTALLED AS INDICATED. ALL OUTLET BOXES SHALL BE INSTALLED IN A RIGID AND SATISFACTORY MANNER. OUTLET BOXES ON THE CEILING SHALL BE NO LESS THAN 4" SQUARE. OUTLET BOXES IN MASONRY WALLS SHALL BE OF THE MASONRY TYPE. OUTLET BOXES FOR CONCEALED WORK SHALL BE GALVANIZED STEEL 4" SQUARE WITH APPROPRIATELY SIZED EXTENSION RING. ALL OUTLET BOXES SHALL BE ACCESSIBLE AND ALL BOXES SHALL BE SECURELY FASTENED TO STRUCTURE.

E. CONDUCTORS

CONDUCTORS SHALL BE COPPER WITH THWN 600 VOLT INSULATION. ALL CONDUCTORS SHALL BE AWG MINIMUM #12 UNLESS OTHERWISE NOTED. ALL CONDUCTORS SHALL BE U.L. LISTED, AND MANUFACTURED BY ROME, CABLEC, G.E., GENERAL CABLE, OR EQUIVALENT. OBSERVE MINIMUM BENDING RADI IN INSTALLATION. ALL CONDUCTORS SHALL BE ENCLOSED IN METAL CONDUIT.

CONDUCTORS #10 A.W.G. AND SMALLER SHALL BE SOLID - #8 A.W.G. AND LARGER SHALL BE STRANDED. ALL WIRING SHALL BE COLOR - CODED PER THE FOLLOWING: 0A-BLACK 0B-BLUE, 0C-RED, WHITE NEUTRAL, GREEN GROUND. USE MECHANICAL CONNECTORS SUCH AS "SCOTCH LOCK", T&B, IDEAL OR EQUIVALENT, SIZED FOR THE USE INTENDED.

"MC" TYPE CABLE SHALL BE PERMITTED FOR USE FOR BRANCH CIRCUITS. OF #12 AWG. WIRE WHERE FULLY CONCEALED.

F. WIRING DEVICES

RECEPTACLE - DUPLEX TO BE 20 AMP, 125 VOLT, 5-20R CONFIGURATION, BLACK COLOR, SPECIFICATION GRADE, DECORA STYLE, HUBBELL OR EQUIVALENT.

GROUND FAULT RECEPTACLE, 20 AMP, 125 VOLT, 6-20R CONFIGURATION, BLACK COLOR, SPECIFICATION GRADE, DECORA STYLE, HUBBELL OR EQUIVALENT.

WIRING DEVICES SHALL BE HUBBELL, BRYANT, LEVITON, G.E. OR EQUIVALENT.

PLATES AND COVERS:
SHALL BE DECORA STYLE STAINLESS STEEL.

CIRCUIT BREAKERS:
CIRCUIT BREAKERS SHALL BE THERMALMAGNETIC TRIP, 10,000 A.I.C. RMS SYMMETRICAL RATING OR AS REQUIRED TO MATCH PANEL. BREAKERS SHALL BE FULL SIZE.

G. DISCONNECT SWITCHES AND FUSES

DISCONNECT SWITCHES AS REQUIRED SHALL BE NEMA 1, QUICK-MAKE, QUICK-BREAK, HEAVY DUTY OR BETTER, FUSED OR UNFUSED AS NOTED ON THE DRAWINGS. ALL SWITCHES SHALL BE FURNISHED WITH PAD LOCKING PROVISIONS. SUPPORT SWITCHES FROM STRUCTURE AS REQUIRED, AND MAINTAIN CODE REQUIRED CLEARANCES. PROVIDE CORROSION-RESISTANT FRAMING TO MOUNT AS NEEDED.

ALL FUSES SHALL BE CURRENT LIMITING, DUAL ELEMENT AND SHALL BE U.L. CLASS RK1 FOR CIRCUIT BREAKER PANELBOARD PROTECTION.

17. PANELBOARDS AND CIRCUIT BREAKERS

PANELBOARDS SHALL BE AS SCHEDULED, HINGED DOOR AND KEYED LOCKS, FLUSH OR SURFACE MOUNTED. PANELBOARDS SHALL BE SQUARE "D," CUTLER-HAMMER, I.T.E. OR EQUIVALENT. PANEL BUS SHALL BE COPPER, BRACED FOR 10,000 A.I.C. MINIMUM. PANELS SHALL BE RATED AS SCHEDULED ON THE DRAWINGS. PROVIDE PANEL WITH INSULATED NEUTRAL AND A SEPARATE GROUND BUS.

PROJECT NUMBER	1921
DATE	July 1, 2020
REVISIONS	