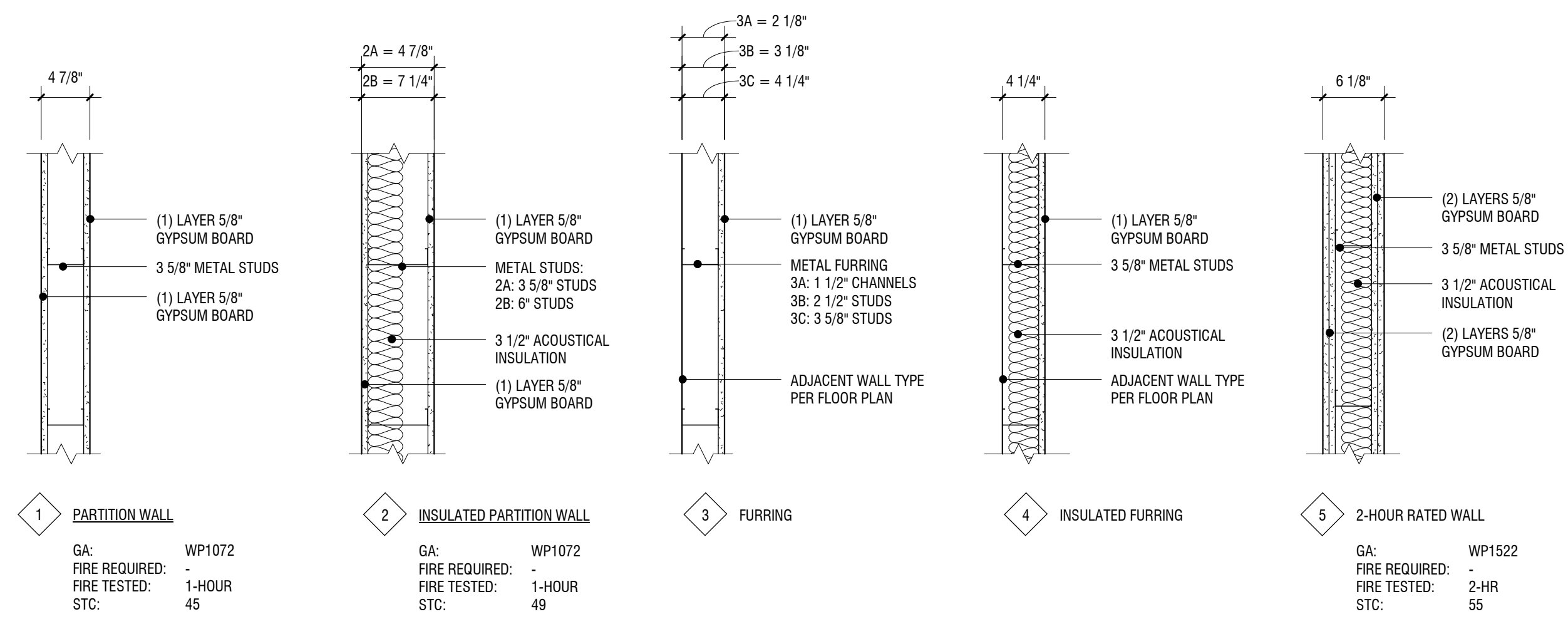
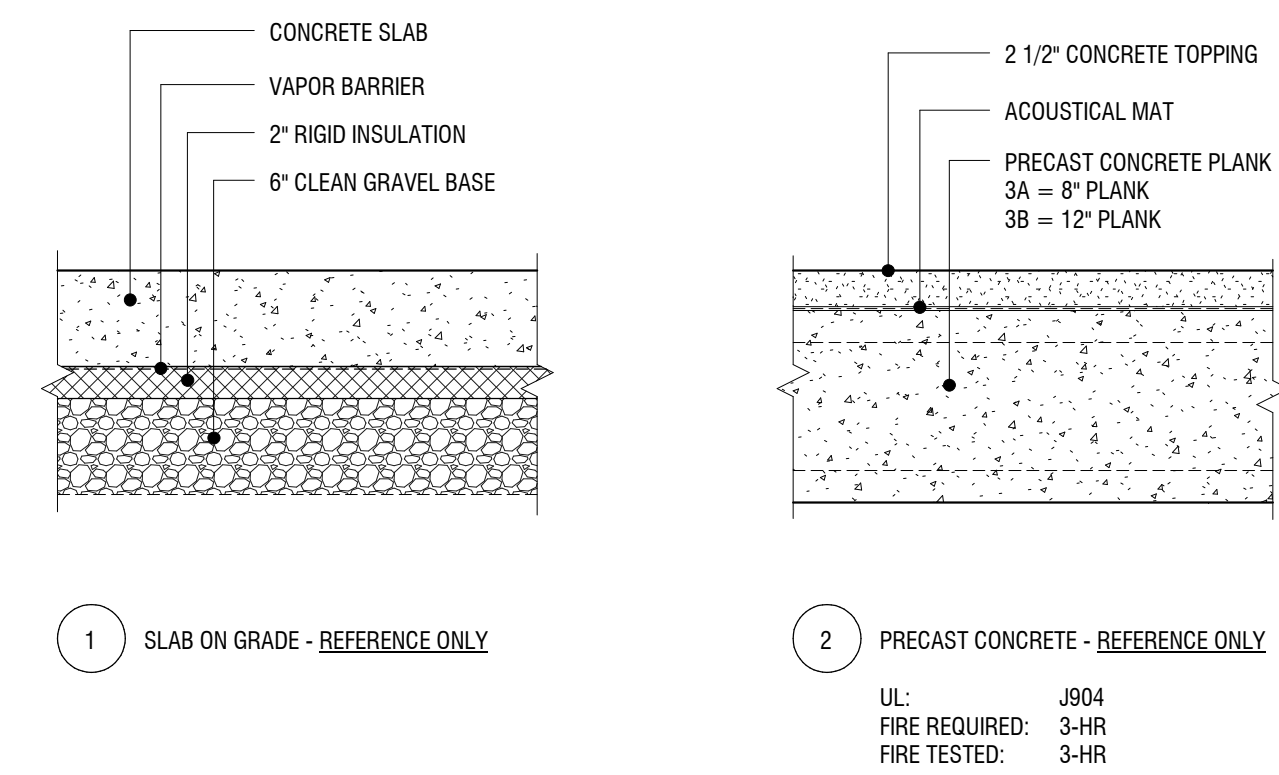


WALL ASSEMBLIES



FLOOR ASSEMBLIES - REFERENCE ONLY



EMANUEL CLINIC

TENANT IMPROVEMENT

814 South 3rd Street Minneapolis, Minnesota 55415

SHEET INDEX

- A0.0 TITLE SHEET, VICINITY MAP, CODE ANALYSIS AND TYPICAL ASSEMBLIES
- A2.1 LOWER LEVEL FLOOR PLAN AND REFLECTED CEILING PLAN
- A2.2 UPPER LEVEL FLOOR PLAN AND REFLECTED CEILING PLAN
- A2.3 ENLARGED FLOOR PLANS
- A3.1 INTERIOR ELEVATIONS
- A3.2 INTERIOR ELEVATIONS
- A8.1 DOOR SCHEDULE AND TYPES AND FINISH AND SIGNAGE SCHEDULES
- A9.1 INTERIOR DETAILS
- M0.1 MECHANICAL TITLE SHEET
- M2.0 PLUMBING PLAN - UNDERFLOOR
- M2.1 LOWER LEVEL PLUMBING PLAN
- M2.2 UPPER LEVEL PLUMBING PLAN
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- M7.1 MECHANICAL SCHEDULES
- M8.1 MECHANICAL DETAILS
- E0.0 ELECTRICAL TITLE SHEET
- E1.0 LIGHTING PLANS
- E2.0 POWER AND AUX PLANS

CODE ANALYSIS

CODES USED
2007 Minnesota State Building Code, Chapter 1305
BUILDING IS FULLY SPRINKLERED

OCCUPANCY AND CONSTRUCTION TYPE

Floor	Use	Construction type	Gross area, s.f.	
Upper Level	Clinic	IA	2,002	MSBC 304.1
Lower Level	Clinic support	IA	1,065	MSBC 312.1
Lower Level	Storage	IA	909	MSBC 303.1
Total			3,976	

OCCUPANCY SEPARATIONS
MSBC 508.3.3

Occupancy	B	S
B (incidental to B)	0	0

FIRE-RESISTIVE REQUIREMENTS
MSBC Tables 601 and 602

Component	Rating, hr.
Structural frame	3
Bearing walls - exterior	3
Bearing walls - interior	3
Non-bearing walls - exterior	1
Non-bearing walls - interior	0
Floor construction	3
Shaft enclosures	2
Stair enclosures	1
Minimum roof class	Class C

OCCUPANCY LOADS AND EXITING
MSBC Tables 1505.1, 1004.1.1, 1005.1, 1015.1 and 1019.1

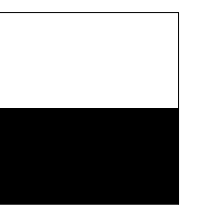
Room/Space	Occupancy	Net area, s.f.	Load factor	Occupancy	Egress width required, in. (assumes sprinkler system)	Exits required from each space
					Stairs	Other
Clinic	B	2,002	100	21.00	4.20	3.15
Clinic Support	B	1,065	100	11.00	2.20	1.65
Storage	S (incidental to B)	909	300	4.00	0.80	0.60
Total				36.00		

Spaces with B occupancy and maximum occupant load less than 50 require only 1 means of egress. Spaces with S occupancy and maximum occupant load less than 30 require 1 means of egress.
If building is sprinklered, the separation distance of the exit doors shall not be less than one-third the length of the maximum overall diagonal dimension.
MSBC 1015.2.1
MSBC 2902.1

MINIMUM PLUMBING FACILITIES
MSBC 2902.2
MSBC 2902.4.1

Occupancy	WC		Lavatories		Drinking Fountains	Service Sinks
	Male	Female	Male	Female		
B (upper level)	0.44	0.44	0.28	0.28	0.21	1.00
B (lower level)	0.24	0.24	0.15	0.15	0.11	
S	0.02	0.02	0.02	0.02	0.00	
total	1.00	1.00	1.00	1.00	1.00	1.00

Where plumbing fixtures are required, separate facilities shall be provided for each sex.
Toilet facilities shall be located not more than one stor above or below the space required to be served and the path of travel shall not exceed 500'.



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Signed:

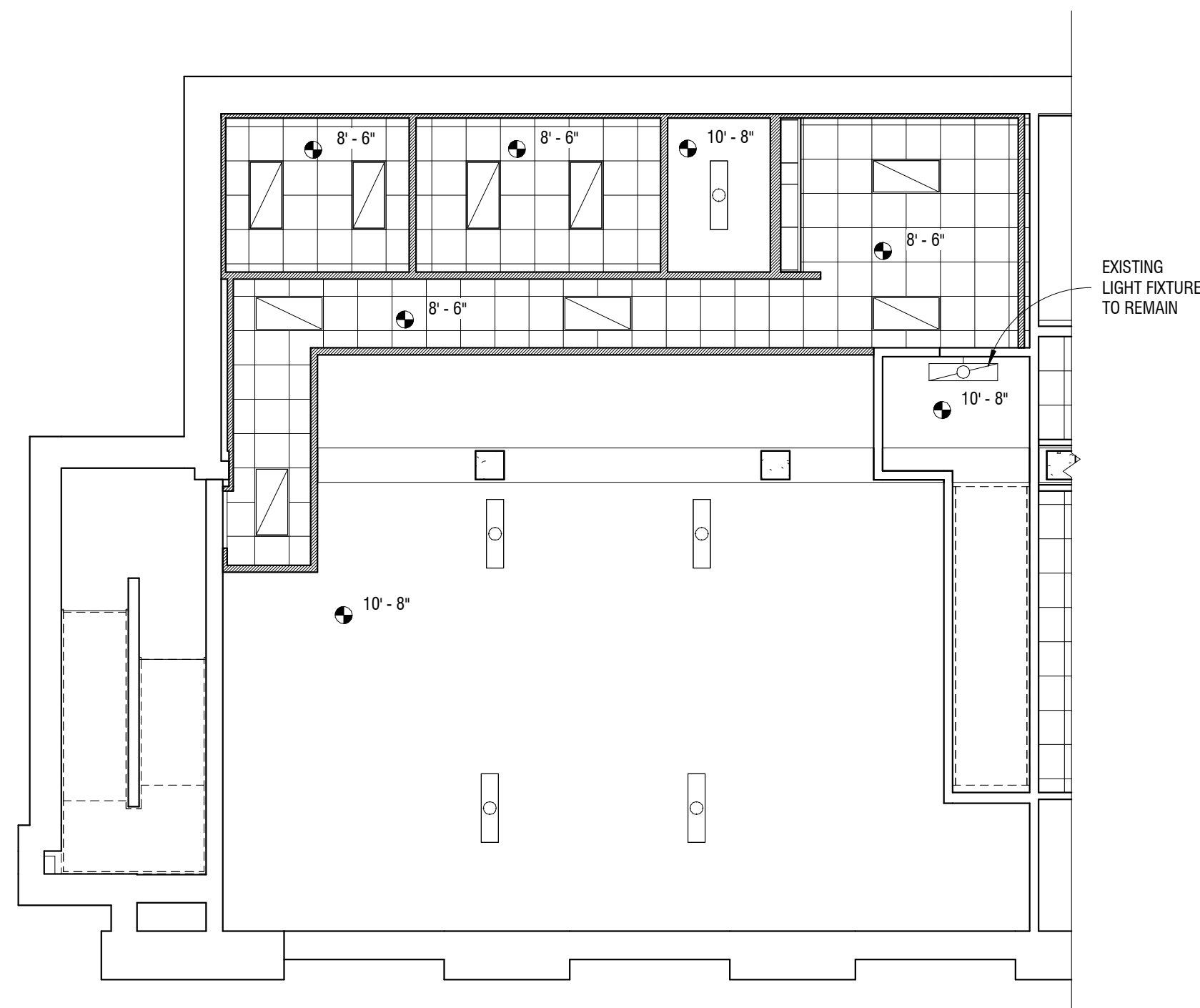
Date: 05/15/2014
Reg. No: 22055

TITLE SHEET, VICINITY MAP, CODE ANALYSIS AND TYPICAL ASSEMBLIES

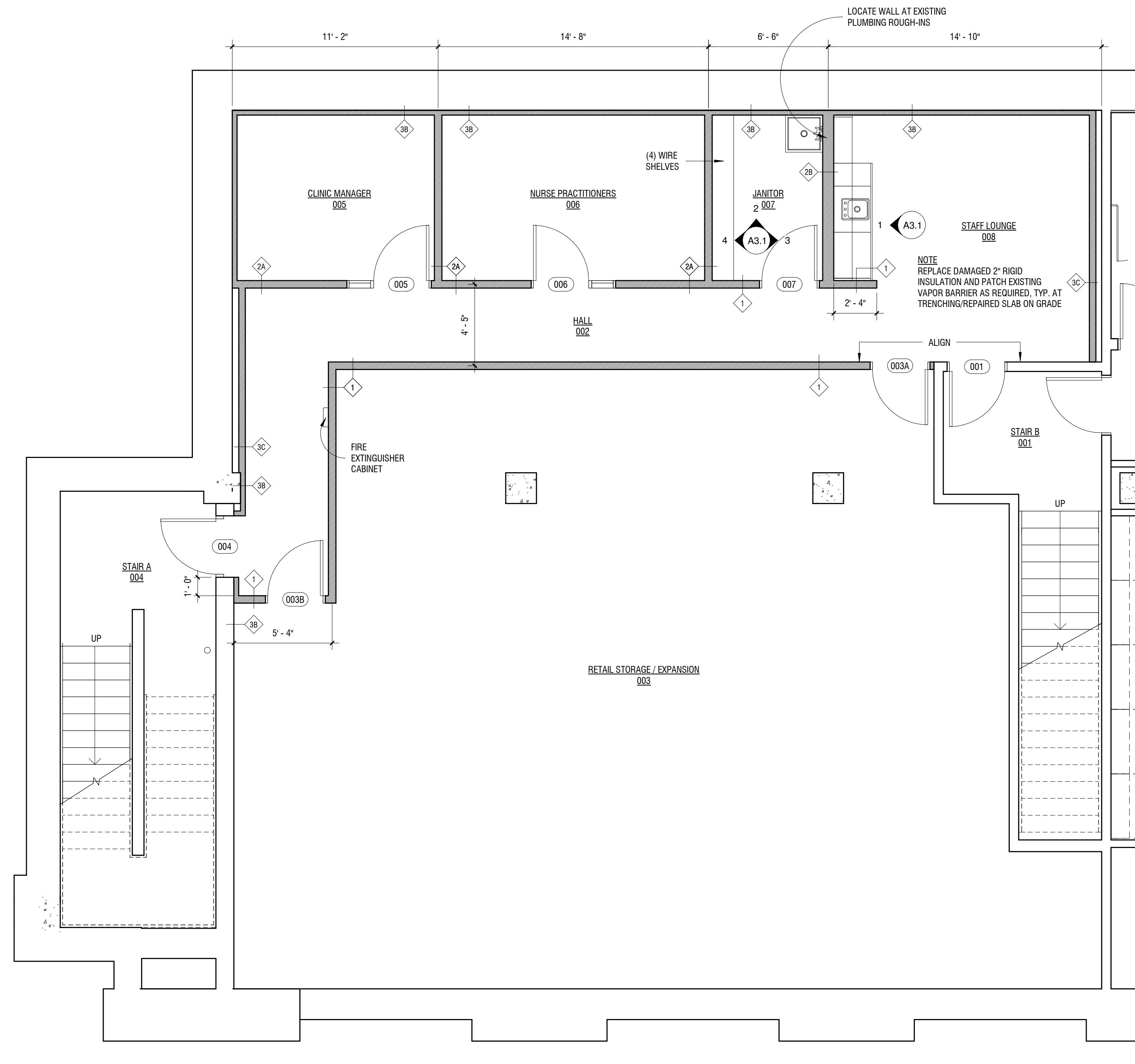
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RS EDEN
814 SOUTH 3RD STREET
MINNEAPOLIS, MN 55415

Revisions:
Date issued: 05/15/2014
Job No: 1339

A0.0



2 LOWER LEVEL REFLECTED CEILING PLAN
1/8" = 1'-0"



1 LOWER LEVEL FLOOR PLAN
1/4" = 1'-0"



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Reg. No.: Approver

LOWER LEVEL FLOOR PLAN AND REFLECTED CEILING PLAN

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A2.1



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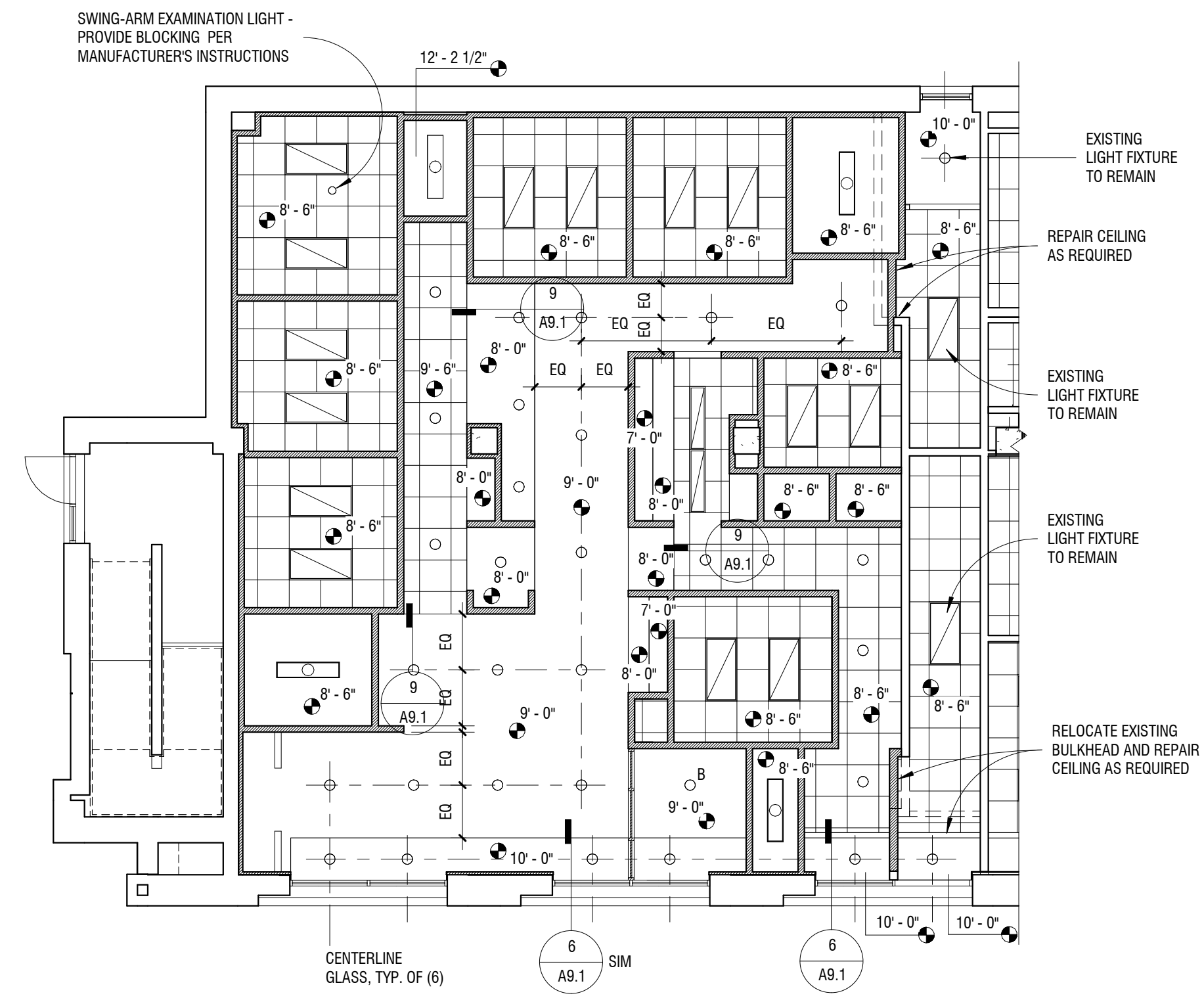
Date: 05/15/2014
 Reg. No. Approver

UPPER LEVEL FLOOR PLAN AND REFLECTED CEILING PLAN

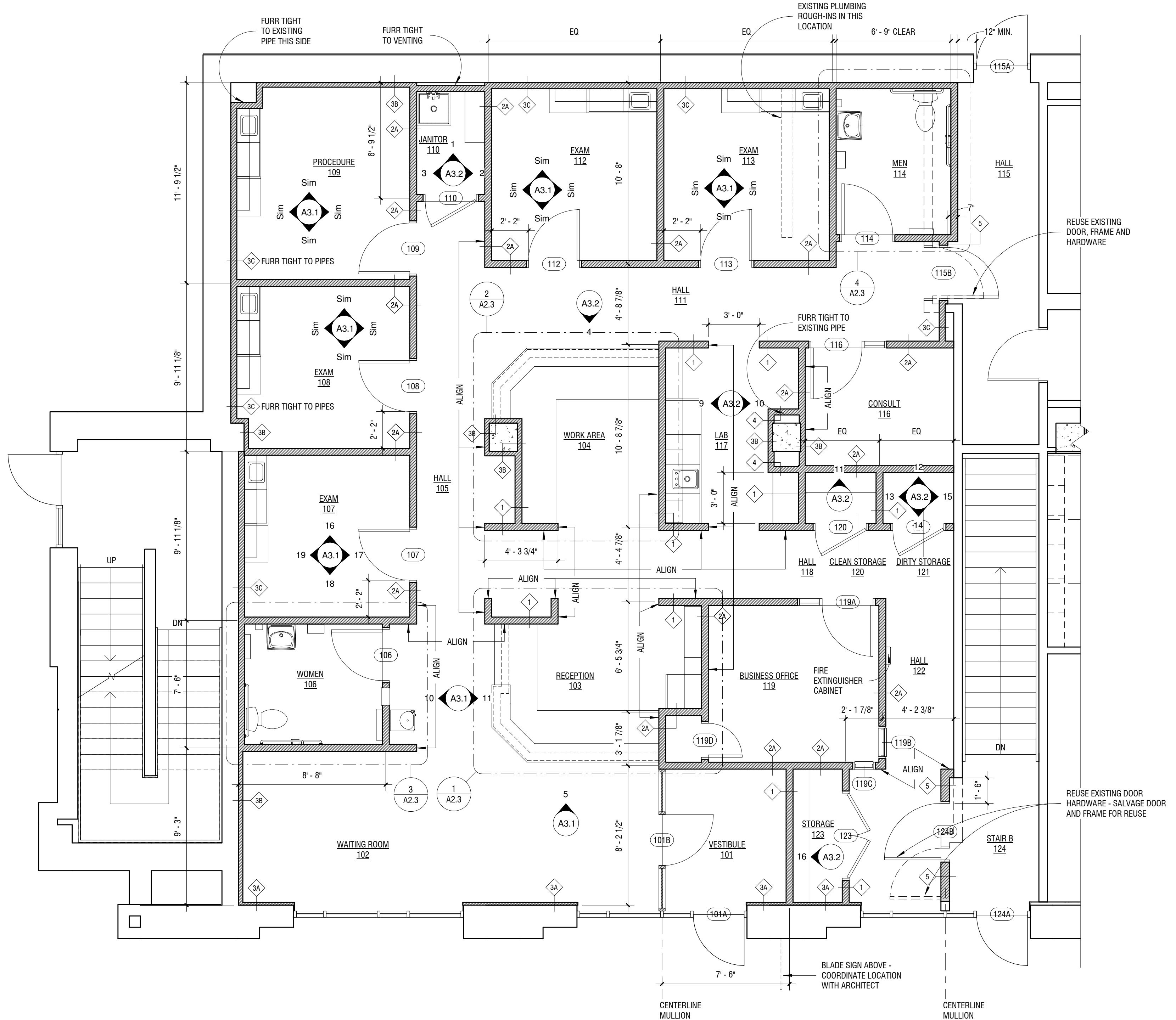
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Revisions:
 Date issued: 05/15/2014
 Job No: 1339

A2.2



2 UPPER LEVEL REFLECTED CEILING PLAN
 1/8" = 1'-0"



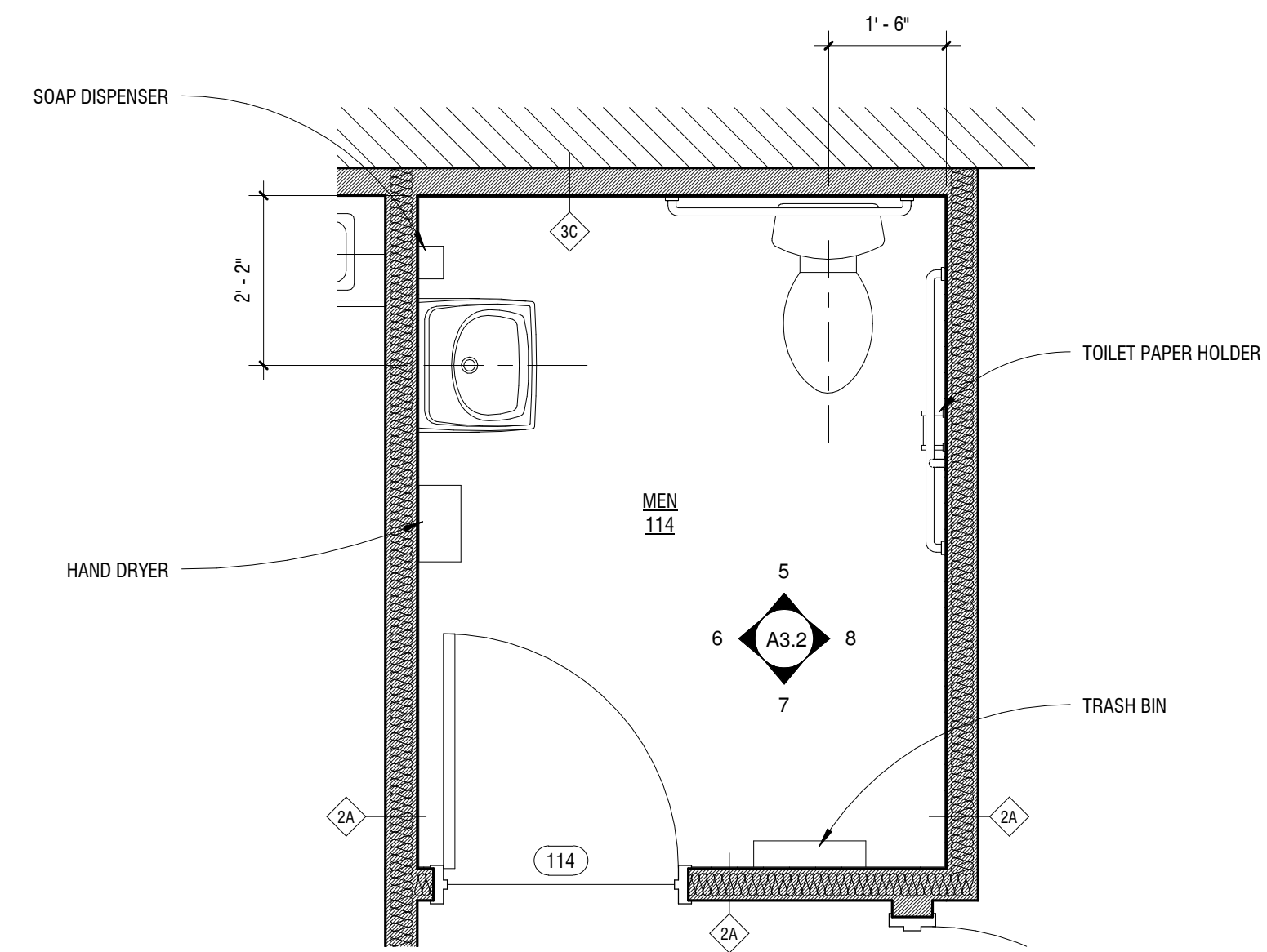


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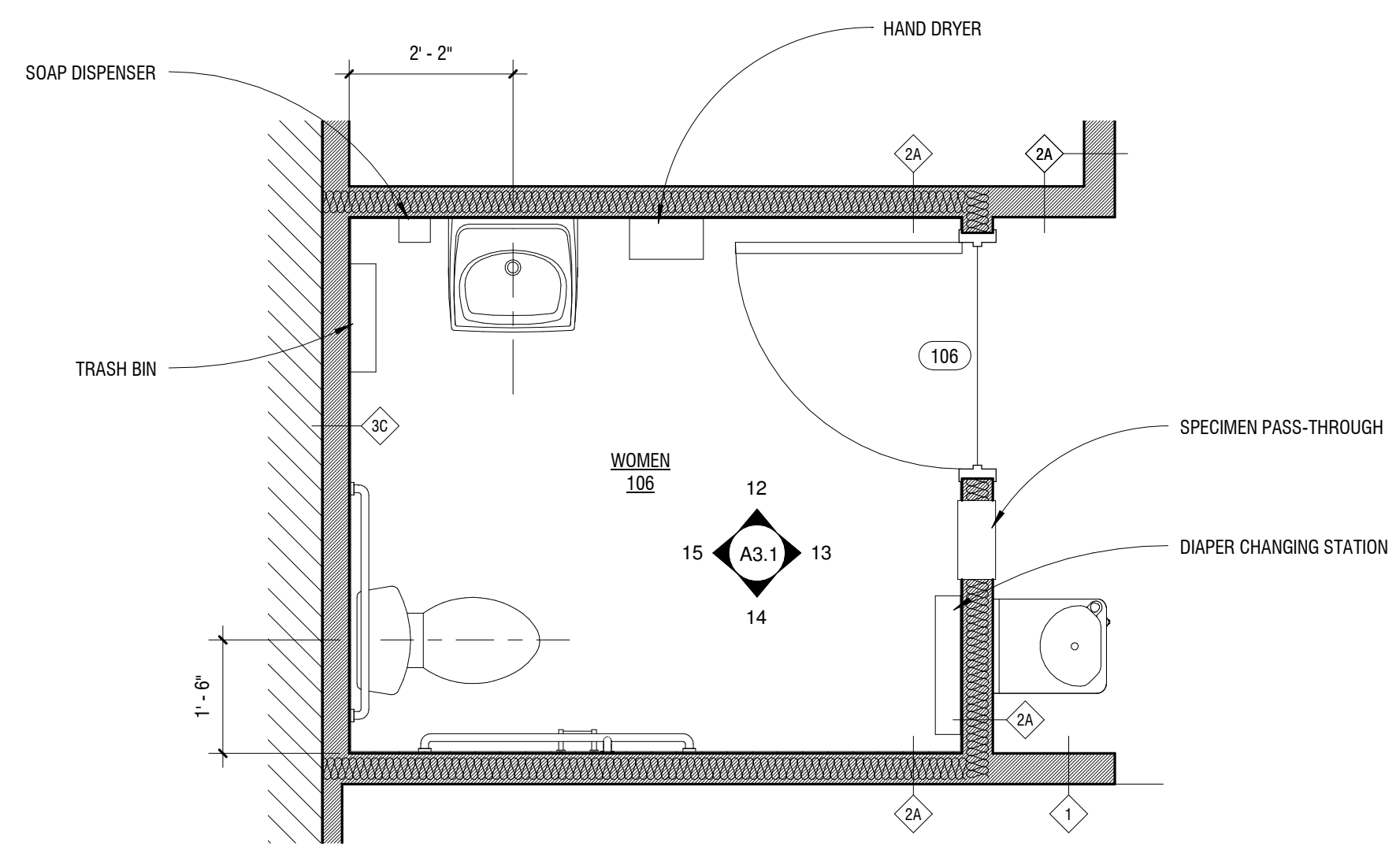
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Date: 05/15/2014

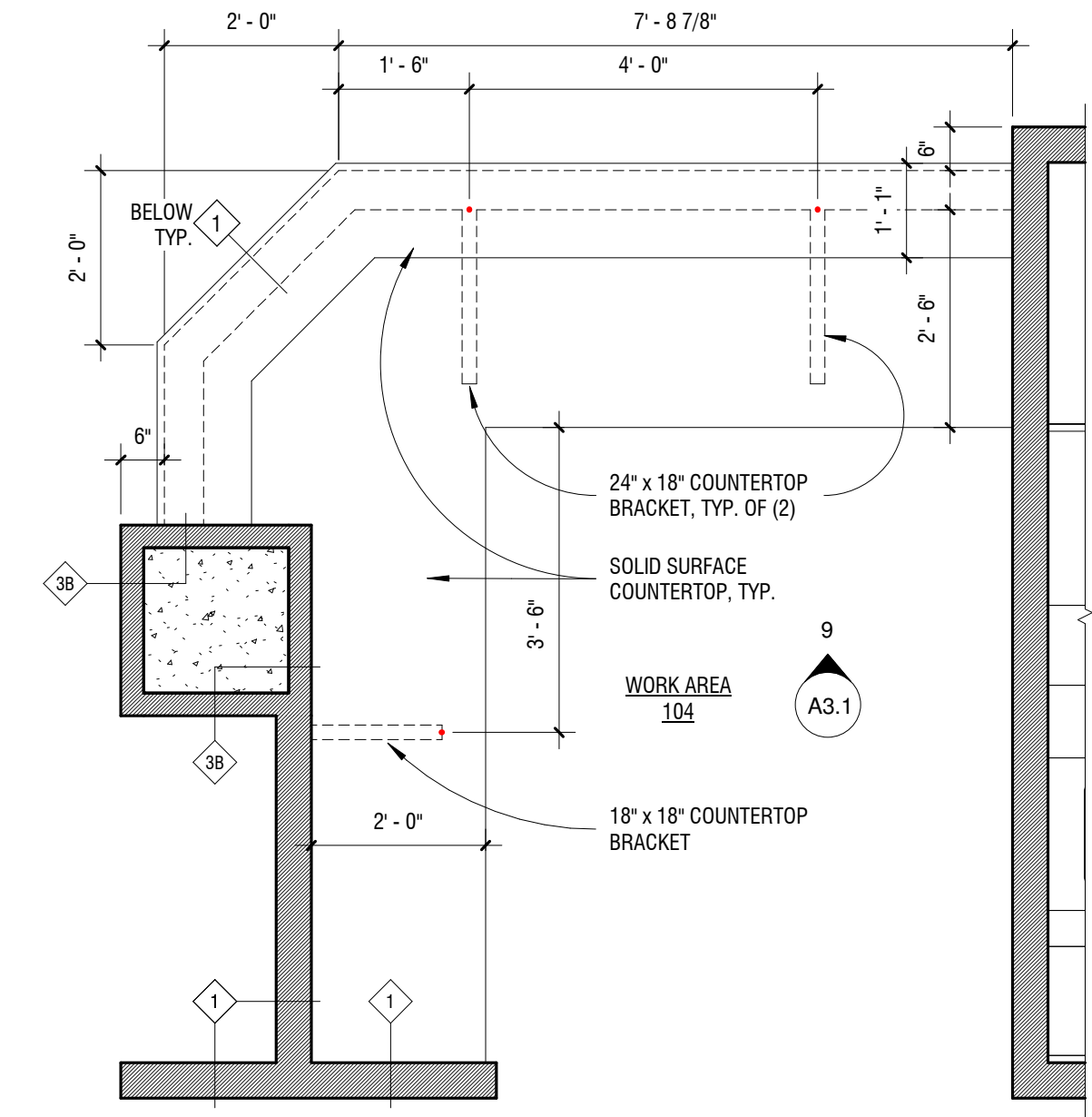
Reg. No: Approver



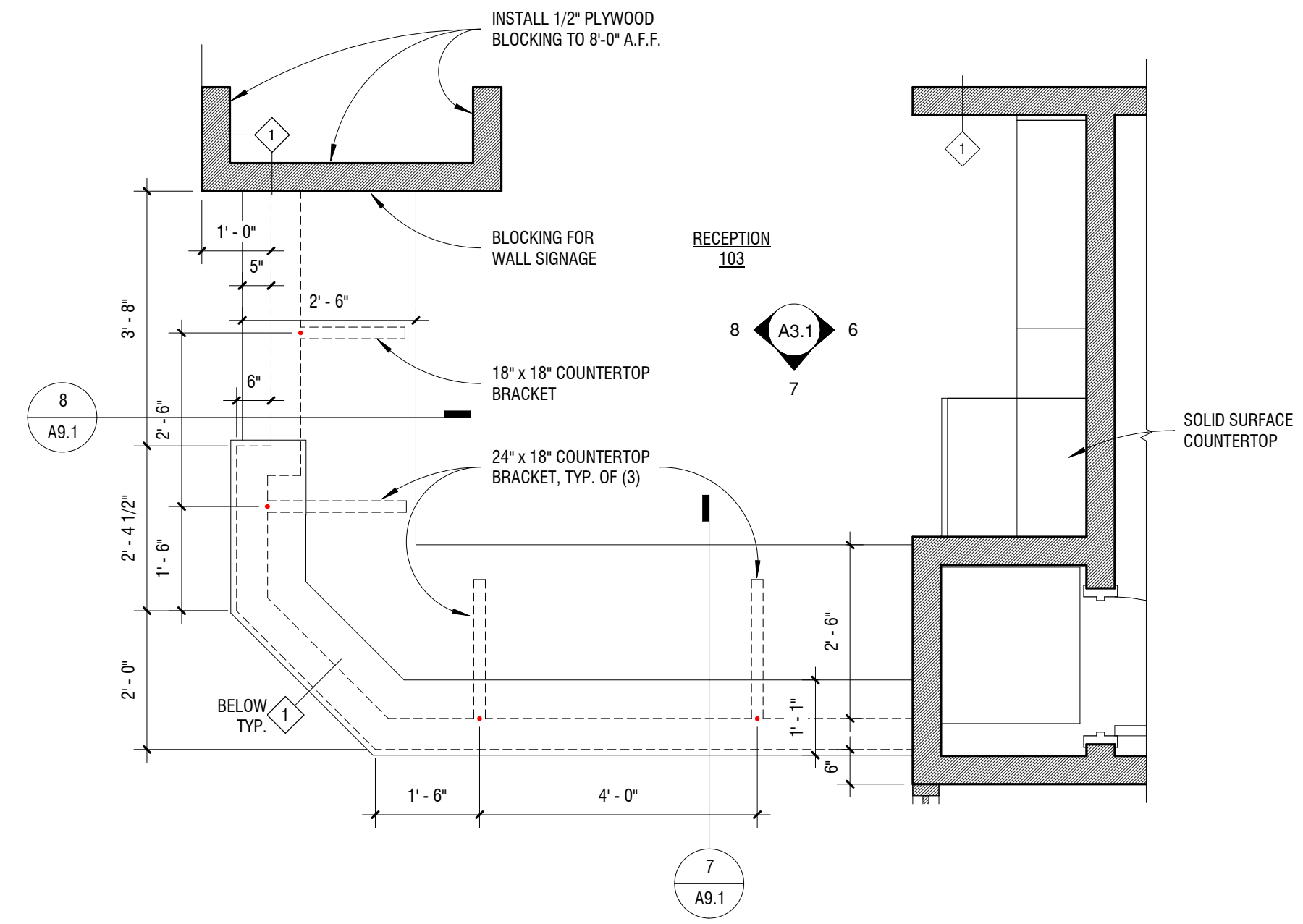
4 MEN 114 ENLARGED FLOOR PLAN
 1/2" = 1'-0"



3 WOMEN 106 ENLARGED FLOOR PLAN
 1/2" = 1'-0"



2 WORK AREA 104 ENLARGED FLOOR PLAN
 1/2" = 1'-0"



1 RECEPTION 103 ENLARGED FLOOR PLAN
 1/2" = 1'-0"

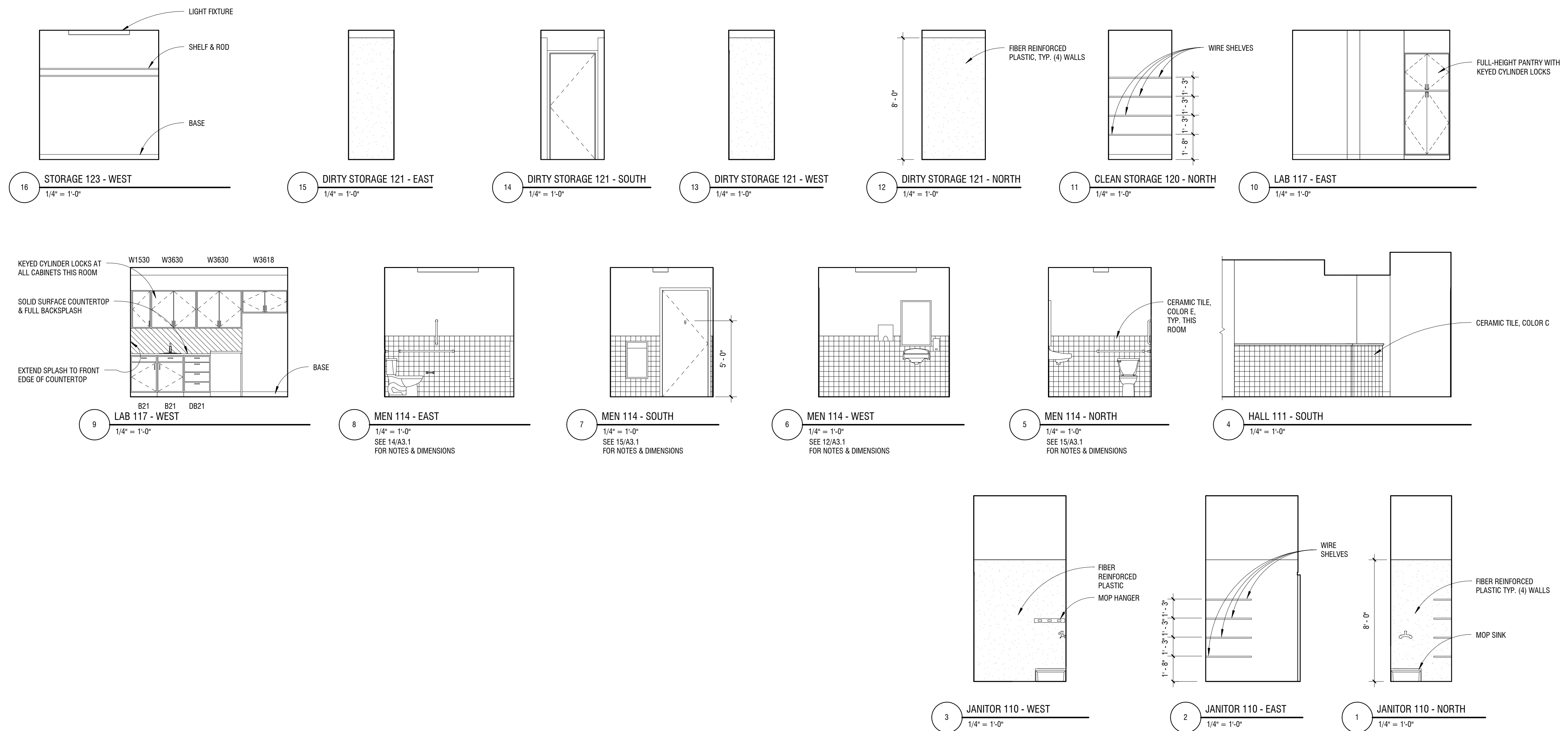


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INTERIOR ELEVATIONS

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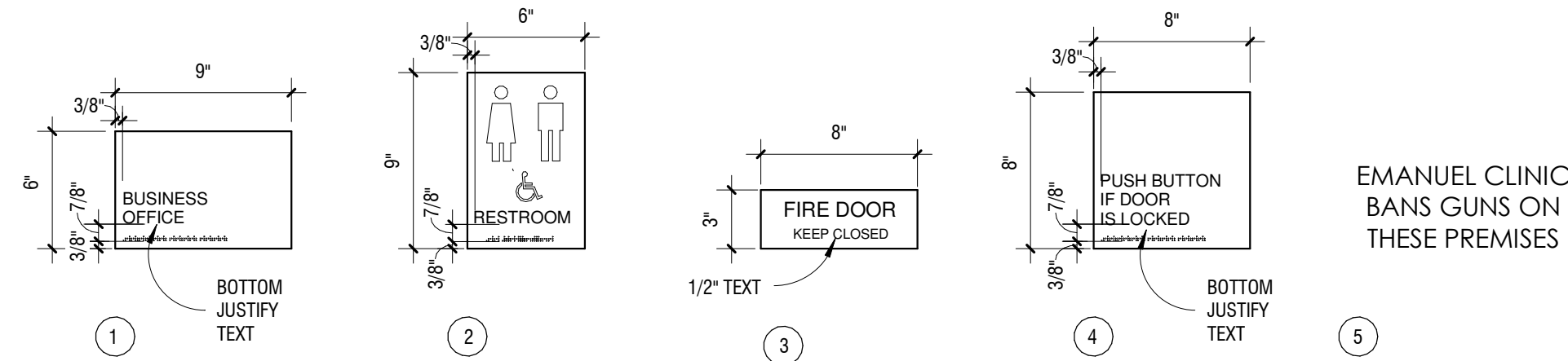
Date issued: 05/15/2014

Job No.: 1339

FINISH ABBREVIATIONS	
ACT	ACOUSTICAL TILE
CPT	CARPET
CT	CERAMIC TILE
EXST	EXISTING TO REMAIN
FRP	FIBERGLASS REINFORCED PLASTIC PANEL
LVT	LUXURY VINYL TILE
PTD GB	PAINTED GYPSUM BOARD, 2 COLORS TYP. PER ROOM U.N.O.
QT	QUARRY TILE
RB	RESILIENT BASE
SLD CONC	SEALED CONCRETE
STRUCT	EXPOSED STRUCTURE
WD	WOOD, W/ BASE SHOE AT ALL FLOORS EXCEPT CPT, U.N.O.

NUMBER	NAME	FINISH SCHEDULE					NOTES	Area
		FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH			
001	STAIR B	LVT	RB	PTD GB	STRUCT		142 SF	
002	HALL	LVT	WD	PTD GB	ACT	PATCH EXISTING FINISHES AS REQUIRED	210 SF	
003	RETAIL STORAGE / EXPANSION	SLD CONC	RB	PTD GYP BD/EXST	STRUCT		1346 SF	
004	STAIR A	EXST	EXST	EXST	EXST		195 SF	
005	CLINIC MANAGER	CPT	WD	PTD GYP BD	ACT		96 SF	
006	NURSE PRACTITIONERS	CPT	WD	PTD GYP BD	ACT		128 SF	
007	JANITOR	SLD CONC	-	FRP	STRUCT		54 SF	
008	STAFF LOUNGE	LVT	WD	PTD GYP BD	ACT		163 SF	
101	VESTIBULE	QT	QT	PTD GB	PTD GB		61 SF	
102	WAITING ROOM	CPT	WD	PTD GYP BD	PT GYP BD		229 SF	
103	RECEPTION	CPT	WD	PTD GB	PTD GB		100 SF	
104	WORK AREA	CPT	WD	PTD GB	PTD GB		98 SF	
105	HALL	CPT	WD	PTD GB	PTD GB		148 SF	
106	WOMEN	CT	-	CT/PTD GB	PTD GB		58 SF	
107	EXAM	LVT	WD	PTD GB	ACT		93 SF	
108	EXAM	LVT	WD	PTD GB	ACT		96 SF	
109	PROCEDURE	LVT	WD	PTD GB	ACT		113 SF	
110	JANITOR	SLD CONC	-	FRP	STRUCT		24 SF	
111	HALL	CPT	WD	PTD GB	ACT		126 SF	
112	EXAM	LVT	WD	PTD GB	ACT		98 SF	
113	EXAM	LVT	WD	PTD GB	ACT		98 SF	
114	MEN	CT	-	CT/PTD GB	PTD GB		58 SF	
115	HALL	CPT	WD	PTD GB	ACT/PTD GB	PATCH EXISTING FINISHES AS REQUIRED	102 SF	
116	CONSULT	CPT	WD	PTD GB	ACT		60 SF	
117	LAB	LVT	WD	PTD GB	ACT		75 SF	
118	HALL	CPT	WD	PTD GB	PTD GB		101 SF	
119	BUSINESS OFFICE	CPT	WD	PTD GB	ACT		93 SF	
120	CLEAN STORAGE	LVT	RB	PTD GB	ACT		12 SF	
121	DIRTY STORAGE	LVT	-	FRP	ACT		12 SF	
122	HALL	CPT	WD	PTD GB	ACT		102 SF	
123	STORAGE	LVT	WD	PTD GB	ACT		23 SF	
124	STAIR B	LVT	RB	PTD GB	EXST	PATCH EXISTING FINISHES AS REQUIRED	128 SF	

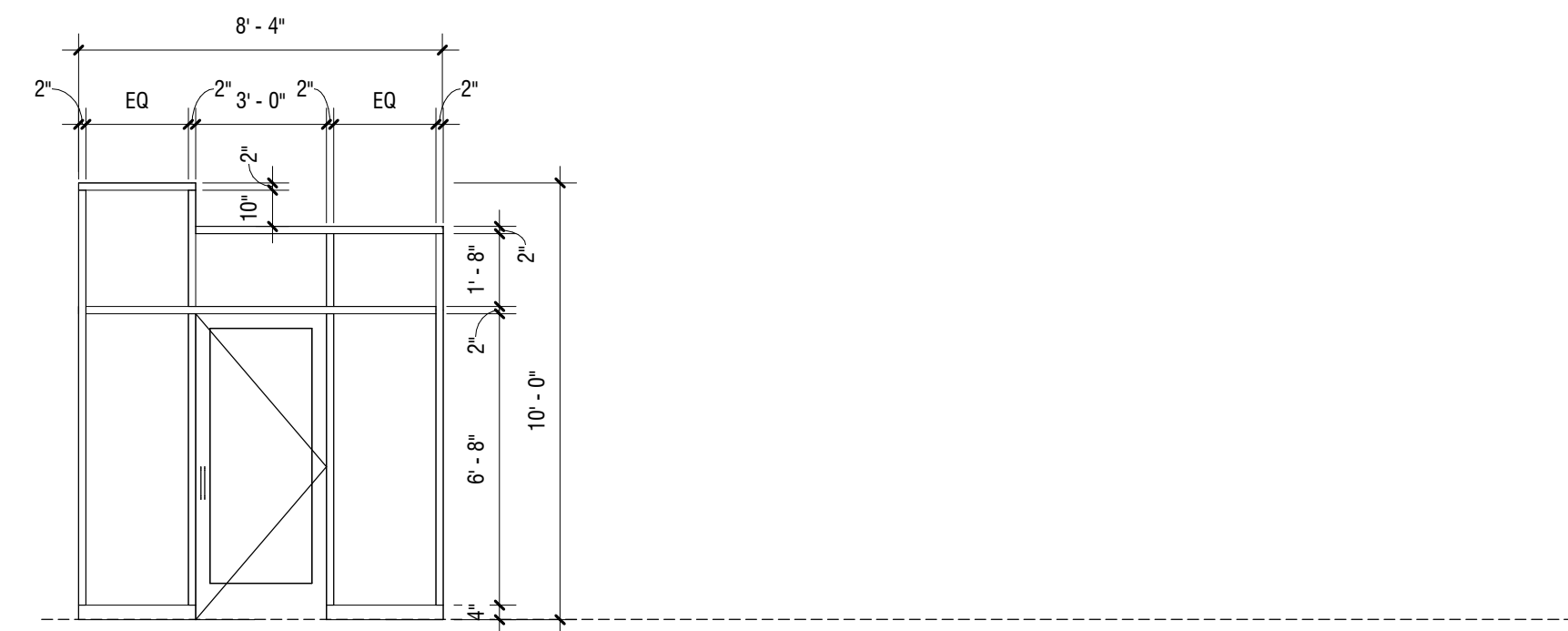
- SIGN TYPES 1 THROUGH 4**
- ACRYLIC SHEET
 - FONT: ARIAL, 5/8" HIGH UNLESS NOTED OTHERWISE
 - 1/32" RAISED TEXT AND SYMBOLS
 - BRIGHT WHITE TEXT ON BLACK
 - CLEAR BRAILLE, WHERE OCCURS
- SIGN TYPE 5**
- DIE-CUT ADHESIVE VINYL
 - FONT: GILL SANS MT REGULAR, 1 1/2" HIGH UNLESS NOTED OTHERWISE
 - ADHESIVE FRONT
 - BLACK



EMANUEL CLINIC
BANS GUNS ON
THESE PREMISES

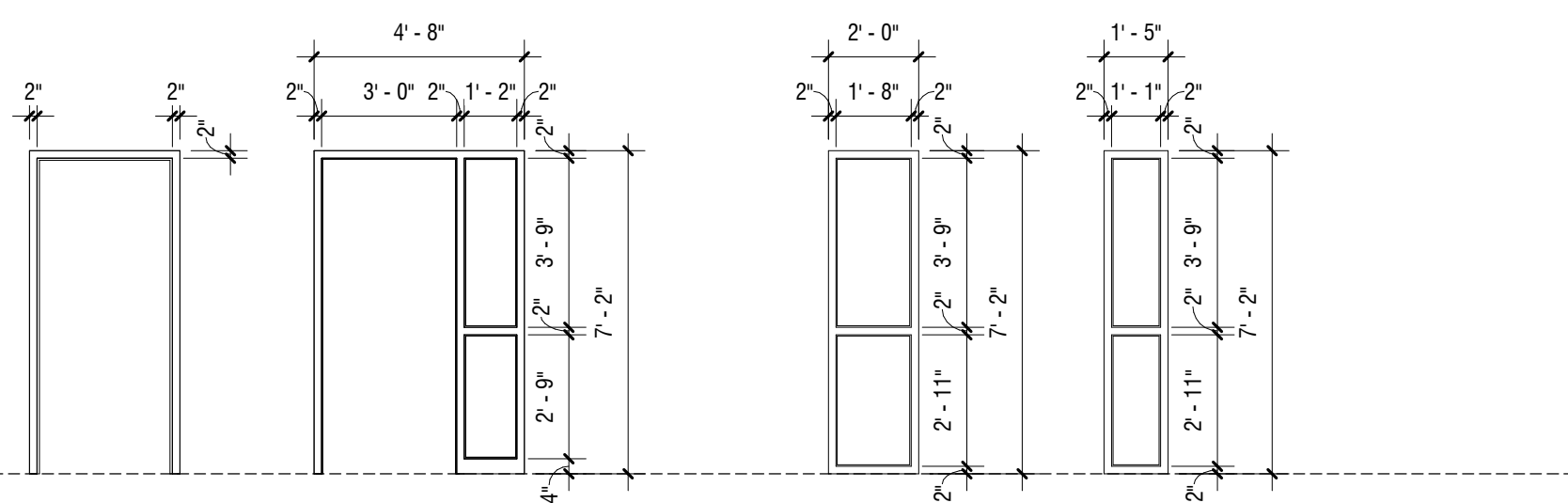
SIGN TYPE	SIGNAGE TEXT	SIZE		LOCATION		MOUNTING DIMENSIONS		FROM FLOOR TO BOTTOM OF SIGN
		WIDTH	HEIGHT	ROOM	DOOR NO.	HORIZONTAL		
1	STORAGE	9"	6"	Hall 002	003A	On wall, 3" from edge of door frame on latch side		54"
1	STORAGE	9"	6"	Hall 002	003B	On wall, 3" from edge of door frame on latch side		54"
1	CLINIC MANAGER	9"	6"	Hall 002	005	On wall, 3" from edge of sidelite frame on latch side		54"
1	NURSE PRACTITIONERS	9"	6"	Hall 002	006	On wall, 3" from edge of sidelite frame on latch side		54"
1	MAINTENANCE	9"	6"	Hall 002	007	On wall, 3" from edge of door frame on latch side		54"
4	PUSH BUTTON IF DOOR IS LOCKED	8"	8"	Vestibule 101	-	Coordinate with architect		54"
5	EMANUEL CLINIC BANS GUNS ON THESE PREMISES	12"	12"	Vestibule 101	101A	Centered on glazed sidelite to east of door		48"
2	RESTROOM	6"	9"	Hall 105	106	Centered on door		54"
1	EXAM 1	9"	6"	Hall 105	107	On wall, 3" from edge of door frame on latch side		54"
1	EXAM 2	9"	6"	Hall 105	108	On wall, 3" from edge of door frame on latch side		54"
1	EXAM 3	9"	6"	Hall 105	109	On wall, 3" from edge of door frame on latch side		54"
1	MAINTENANCE	9"	6"	Hall 111	110	Centered on door		54"
1	EXAM 4	9"	6"	Hall 111	112	On wall, 3" from edge of door frame on latch side		54"
1	EXAM 5	9"	6"	Hall 111	113	On wall, 3" from edge of door frame on latch side		54"
2	RESTROOM	6"	9"	Hall 111	114	On wall, 3" from edge of door frame on latch side		54"
1	CONSULTATION	9"	6"	Hall 111	116	On wall, 3" from edge of sidelite frame on latch side		54"
1	LABORATORY	9"	6"	Hall 111	Opening to Lab 117	On wall, 3" from west edge opening		54"
1	LABORATORY	9"	6"	Hall 118	Opening to Lab 117	On wall, 3" from west edge opening		54"
1	BUSINESS OFFICE	9"	6"	Hall 118	119A	On wall, 3" from edge of sidelite frame on latch side		54"
1	STORAGE 1	9"	6"	Hall 118	120	Centered on door		54"
1	STORAGE 2	9"	6"	Hall 118	121	Centered on door		54"
1	STORAGE 3	9"	6"	Hall 122	123	Centered on active leaf		54"
3	FIRE DOOR - KEEP CLOSED	8"	3"	Hall 122	124B	Centered on door		54"

MARK	WIDTH	HEIGHT	PANEL TYPE	FRAME TYPE	FIRE RATING	HARDWARE GROUP	NOTES
001	3'-0"	7'-0"	B1	HM1	-		EXISTING TO REMAIN, 90-MINUTE RATED
003A	3'-0"	7'-0"	B1	HM1	-		
003B	3'-0"	7'-0"	B1	HM1	-		
004	EXISTING TO REMAIN						EXISTING-QUARTER LITE WOOD TO REMAIN, 90 MINUTE RATED
005	3'-0"	7'-0"	B1	HM2	-		
006	3'-0"	7'-0"	B1	HM2	-		
007	3'-0"	7'-0"	B1	HM1	-		
101A	EXISTING TO REMAIN						EXISTING FULL-LITE ALUMINUM TO REMAIN
101B	3'-0"	7'-0"	C1	AL1	-		
106	3'-0"	7'-0"	B1	HM1	-		
107	3'-0"	7'-0"	B1	HM1	-		
108	3'-0"	7'-0"	B1	HM1	-		
109	3'-0"	7'-0"	B1	HM1	-		
110	3'-0"	7'-0"	B1	HM1	-		
112	3'-0"	7'-0"	B1	HM1	-		
113	3'-0"	7'-0"	B1	HM1	-		
114	3'-0"	7'-0"	B1	HM1	-		
115A	EXISTING TO REMAIN						EXISTING FULL-LITE ALUMINUM TO REMAIN
115B	3'-0"	7'-0"	B1	HM1	-		EXISTING DOOR, FRAME & HARDWARE TO BE REUSED
116	3'-0"	7'-0"	B1	HM2	-		
119A	3'-0"	7'-0"	B1	HM2	-		
119B	1'-8"	7'-0"	WDW	HM3	-		
119C	1'-1"	7'-0"	WDW	HM4	-		
119D	2'-0"	7'-0"	B1	HM1	-		
120	3'-0"	7'-0"	B1	HM1	-		
121	3'-0"	7'-0"	B1	HM1	-		
123	3'-0"	7'-0"	B2	HM1	-		
124A	EXISTING TO REMAIN						EXISTING FULL-LITE ALUMINUM TO REMAIN
124B	3'-4"	7'-0"	B1	HM1	90		



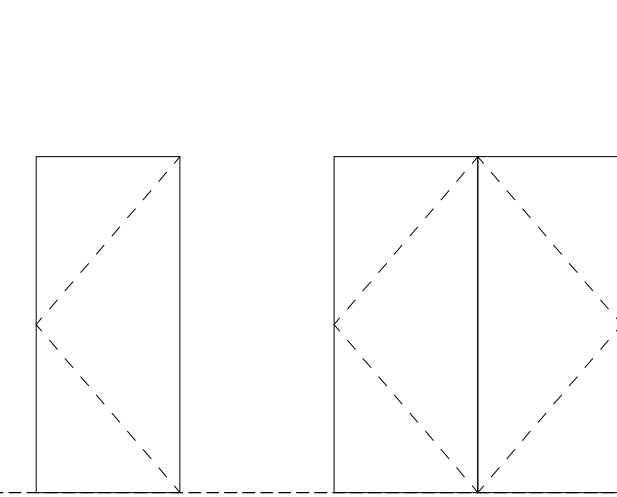
AL1

STOREFRONT TYPES



HM1
WELDED STEEL FRAME
GYP. BD. WALLS

HOLLOW METAL FRAMES

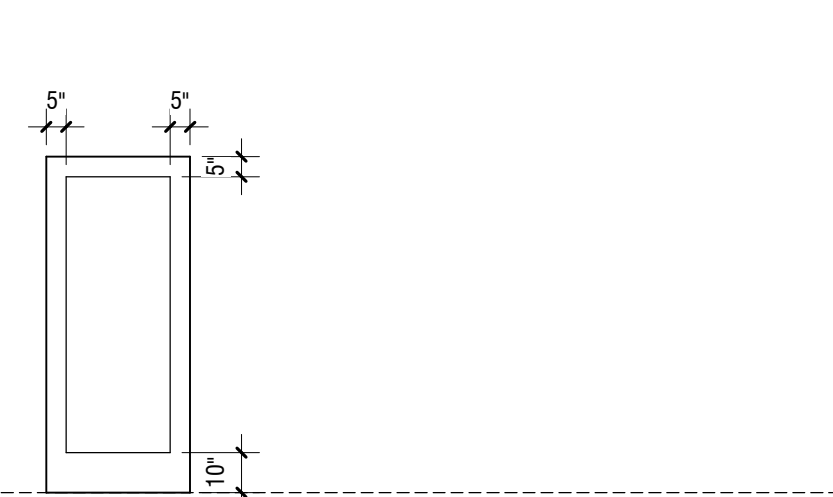


B1
1 3/4" FLUSH
SOLID CORE

WOOD DOORS

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

HOLLOW METAL WINDOWS



C1
1 3/4" FLUSH,
FULL LITE

ALUMINUM DOORS

DOOR SCHEDULE AND TYPES AND FINISH AND SIGNAGE SCHEDULES

EMANUEL CLINIC

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Revisions:

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A8.1



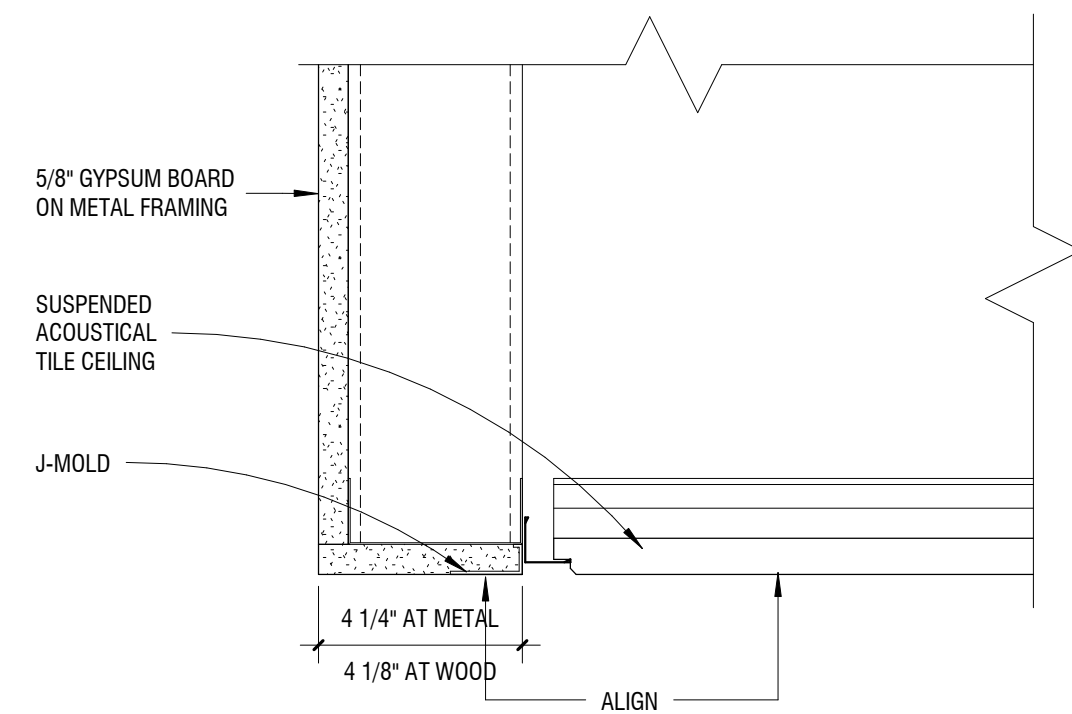
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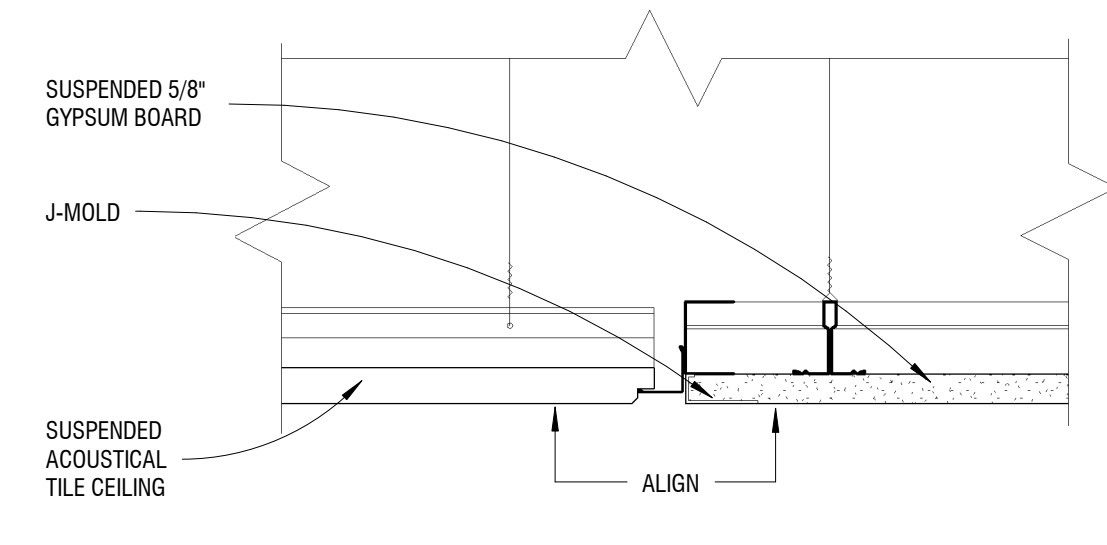
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Date: 05/15/2014

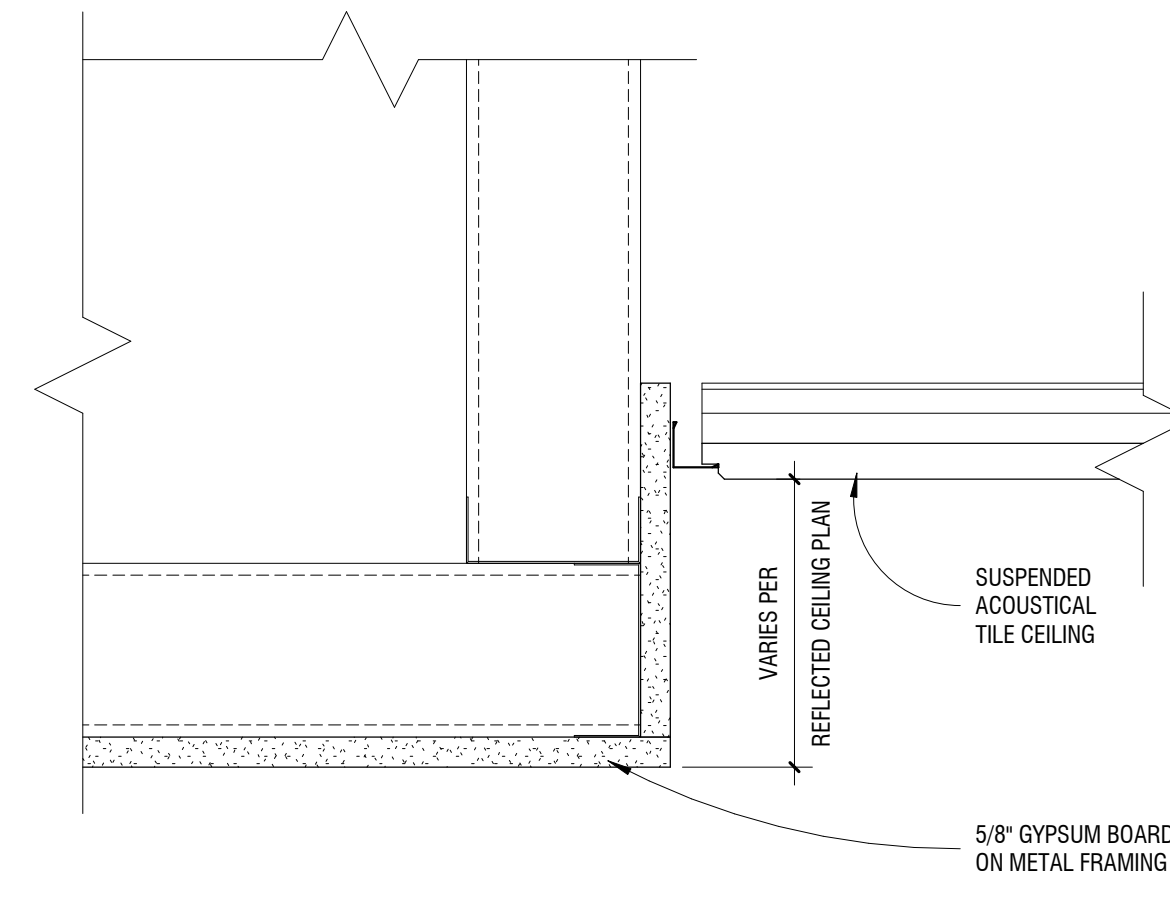
Reg. No: 22055



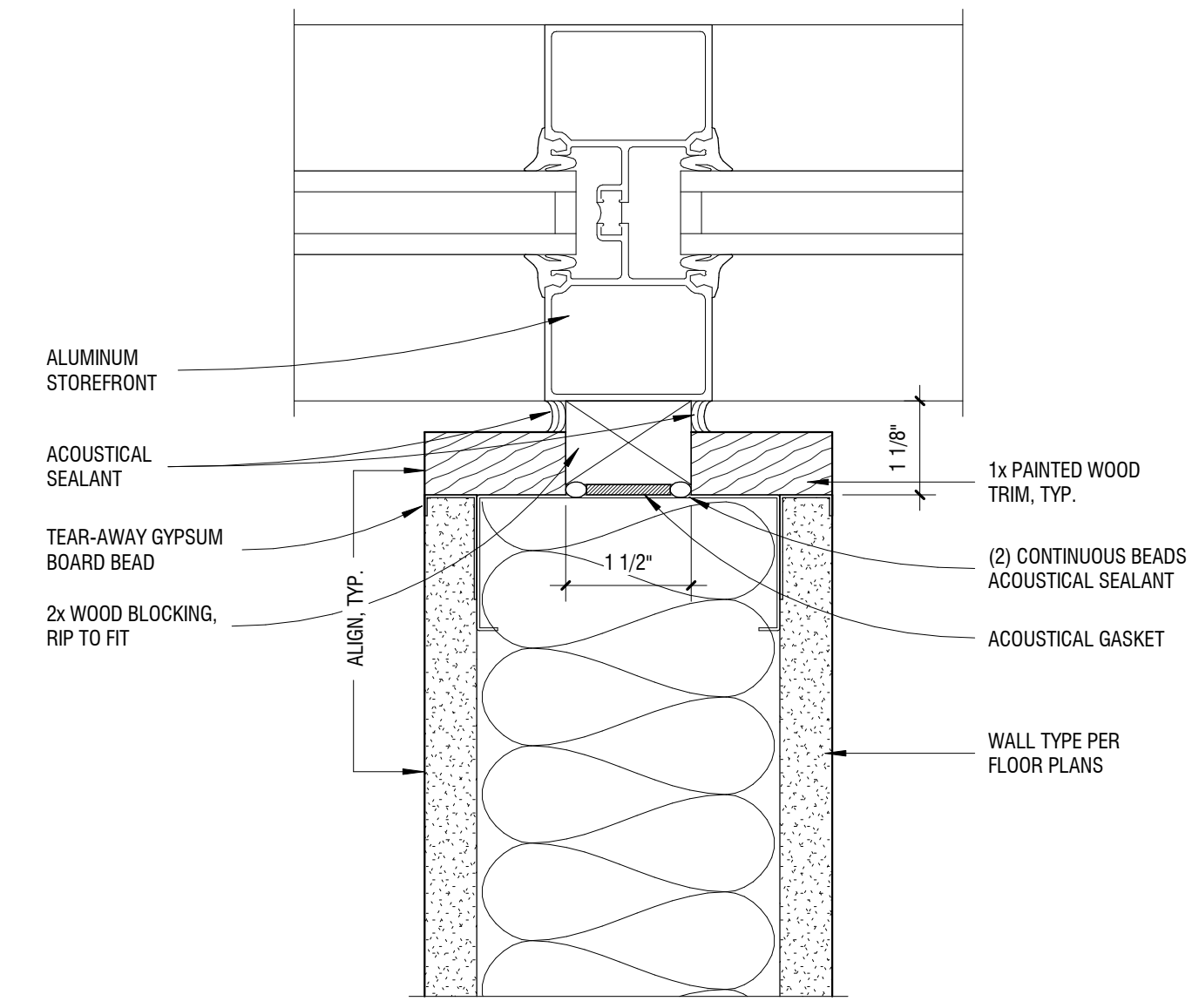
11 GYPSUM BOARD CEILING STEP-DOWN AT ACT
3" = 1'-0"



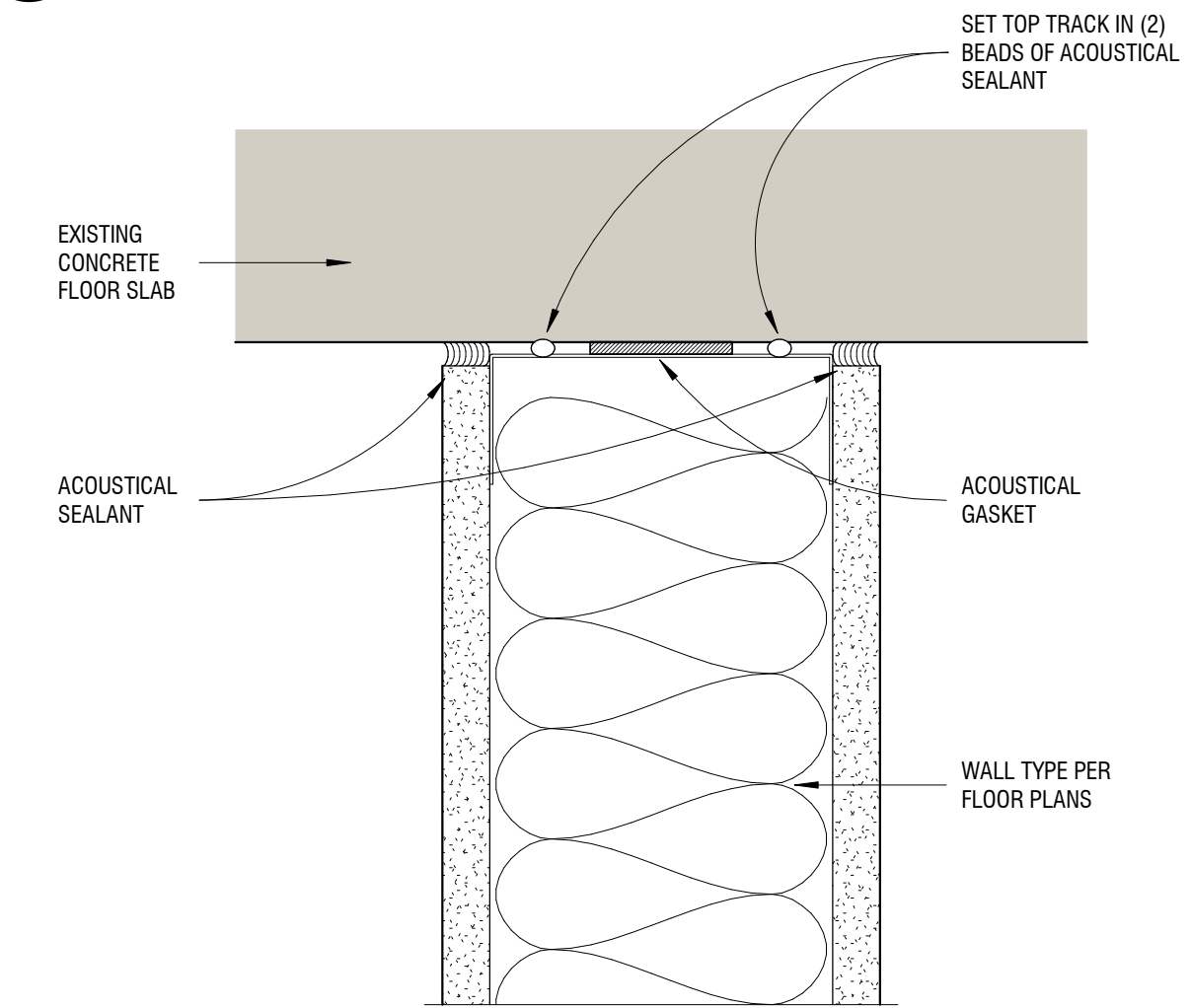
10 GYPSUM BOARD TO ACT CEILING TRANSITION
3" = 1'-0"



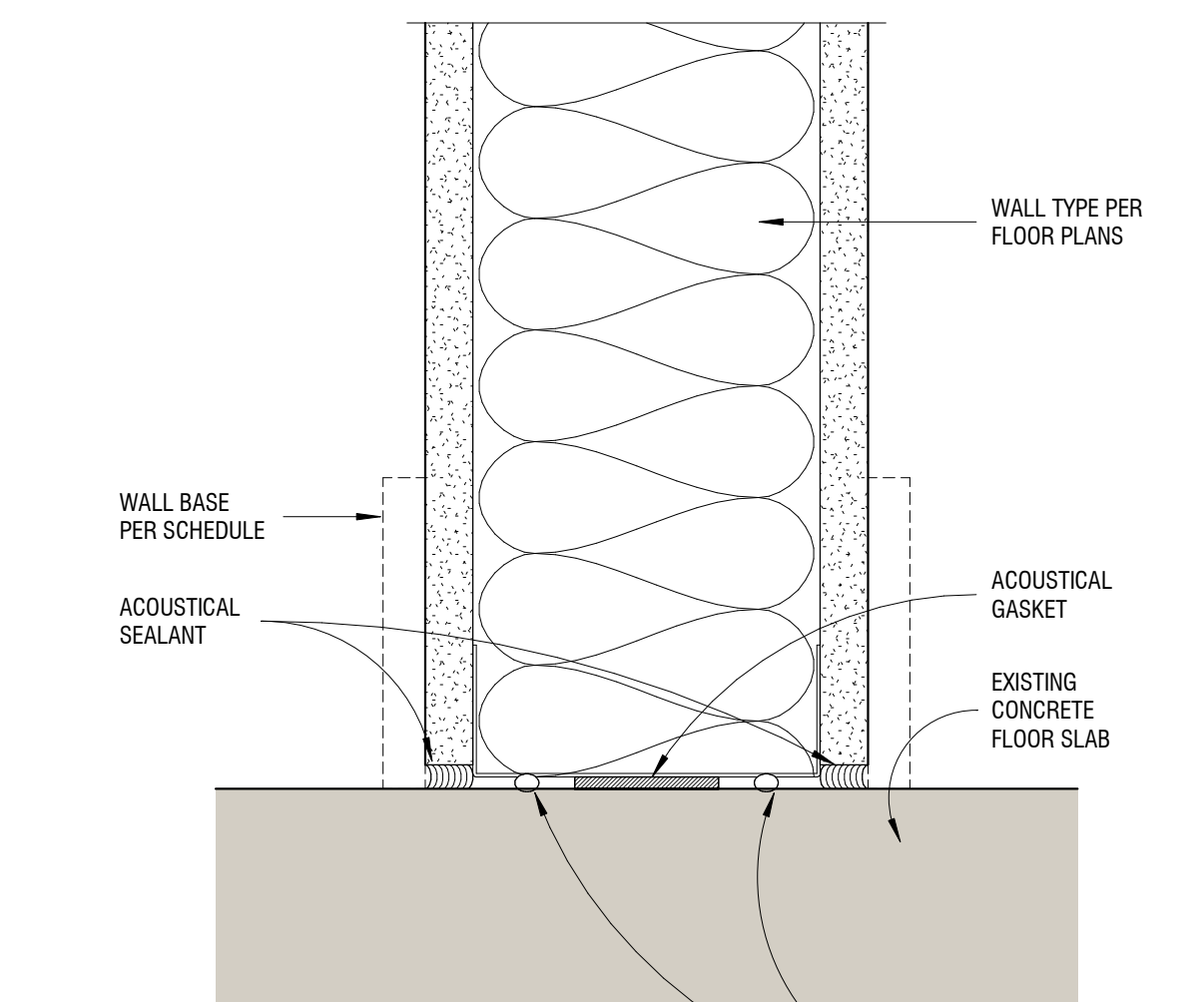
9 GYPSUM BOARD SOFFIT AT ACT CEILING
3" = 1'-0"



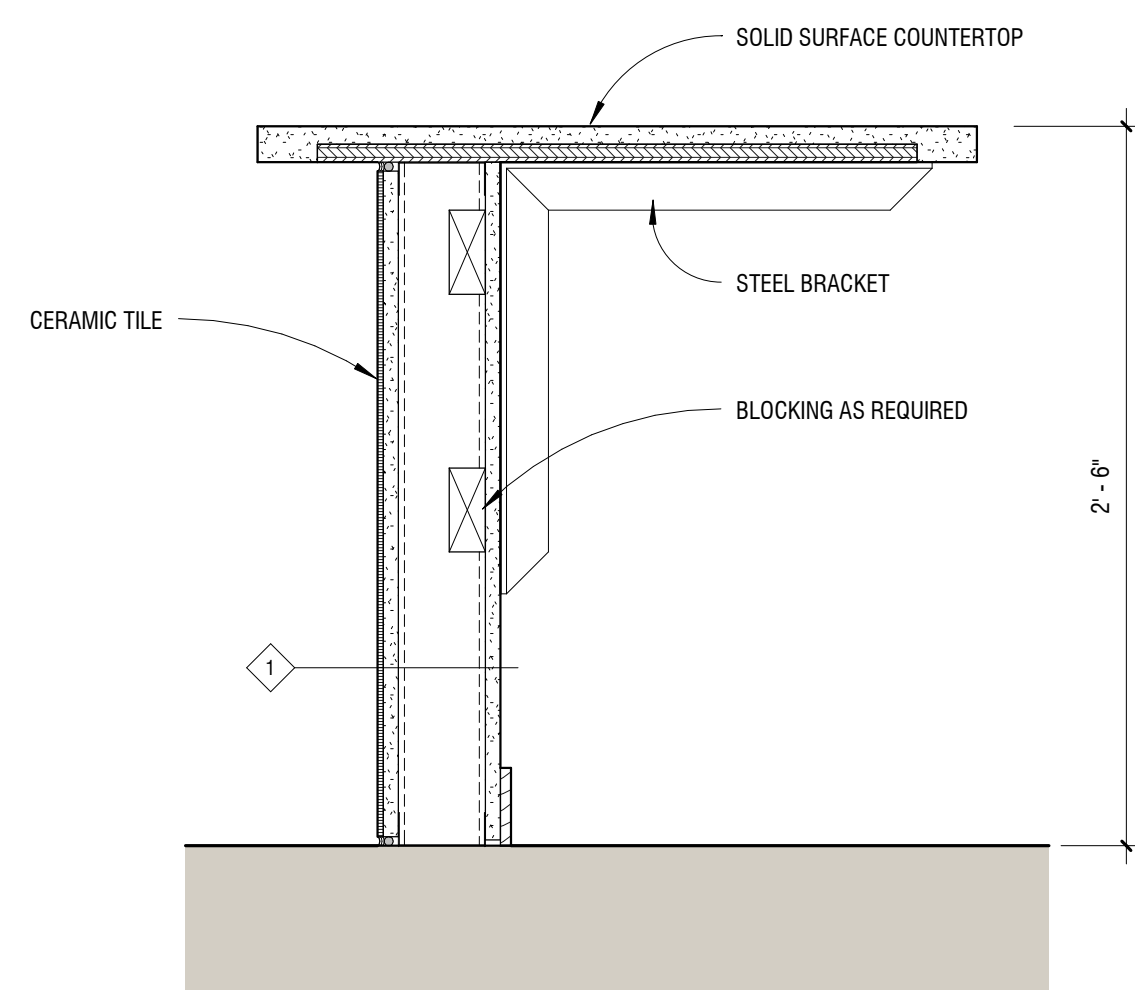
3 INTERIOR PARTITION AT STOREFRONT MULLION
6" = 1'-0"



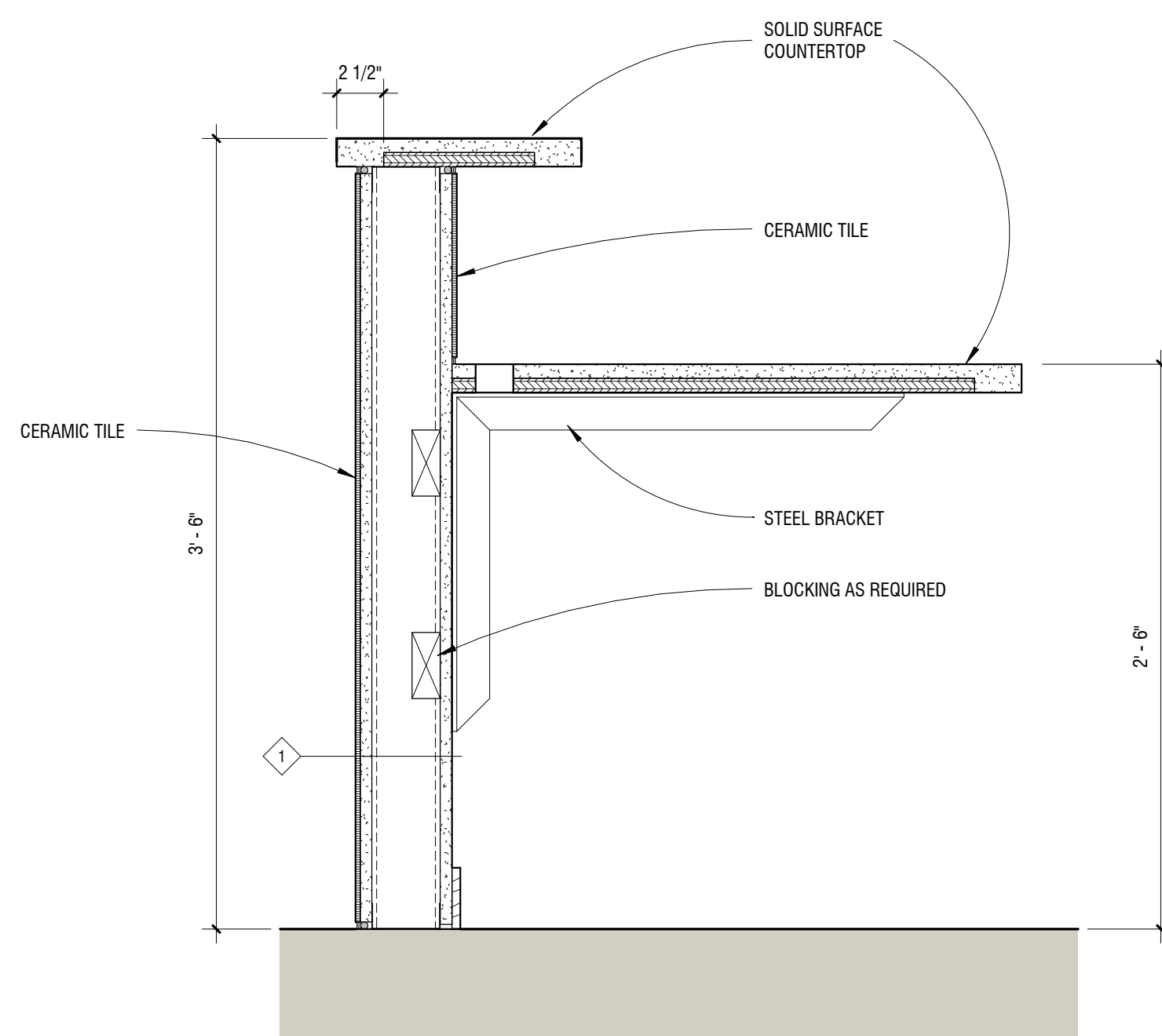
2 TYPICAL INTERIOR WALL AT FLOOR ABOVE
6" = 1'-0"



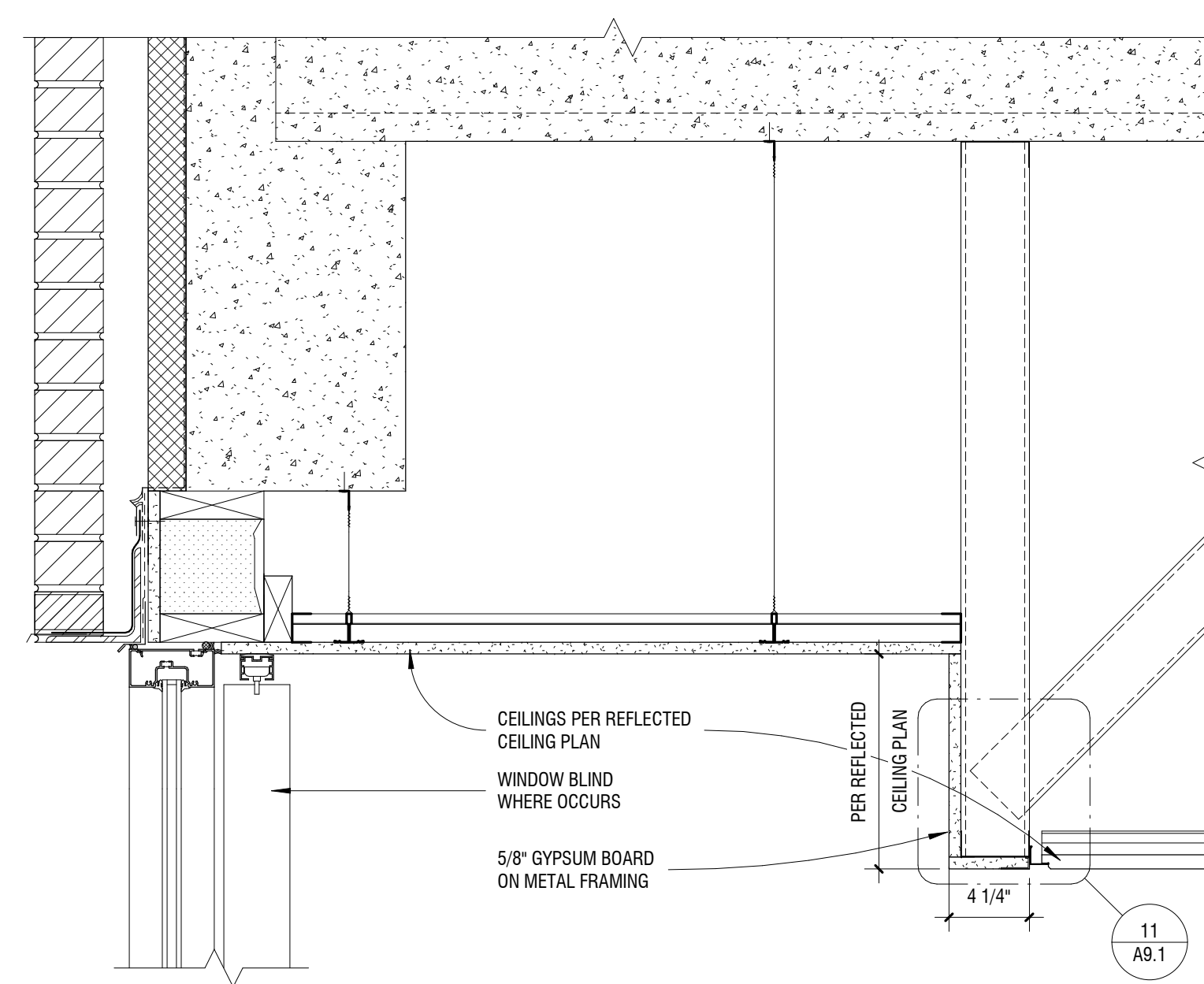
1 TYPICAL INTERIOR PARTITION WALL AT FLOOR
6" = 1'-0"



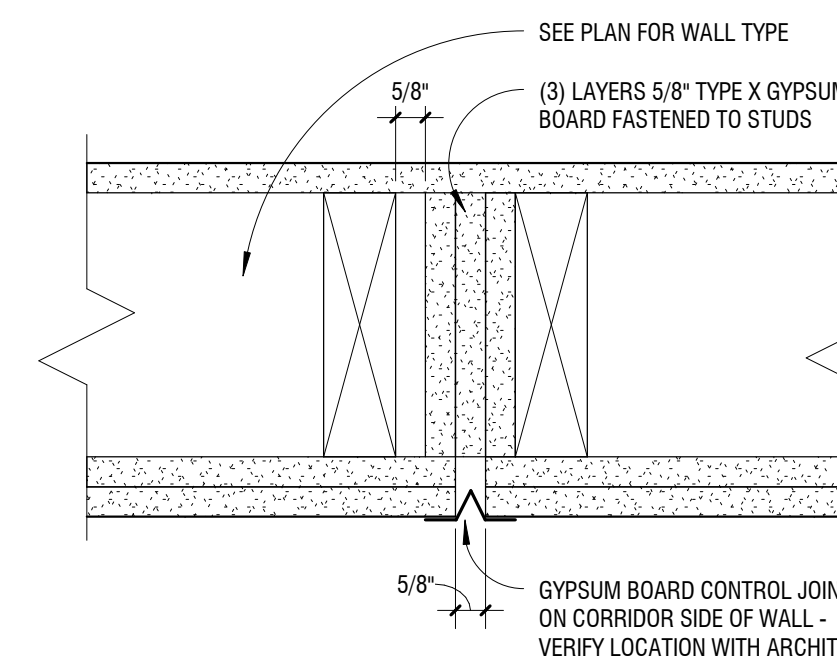
8 RECEPTION DESK AT LOW COUNTER
1 1/2" = 1'-0"



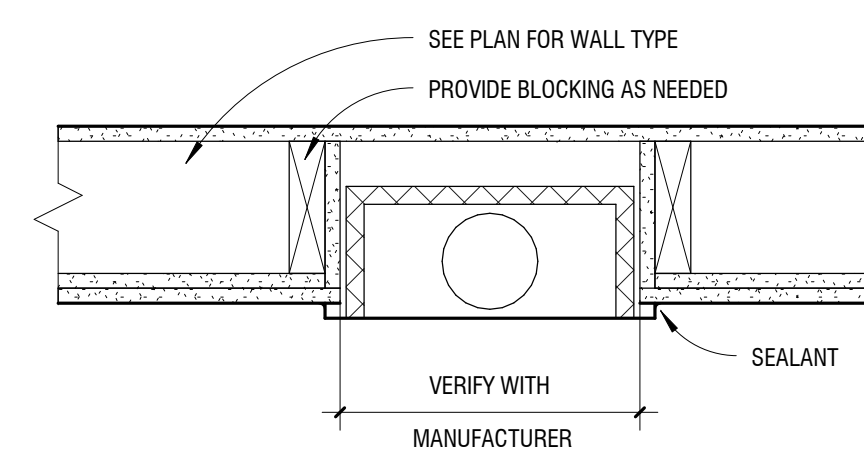
7 RECEPTION DESK AT HIGH COUNTER
1 1/2" = 1'-0"



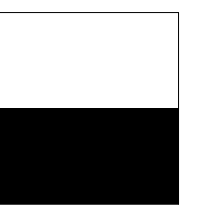
6 CEILING STEP AT STOREFRONT - LEVEL 1W
1 1/2" = 1'-0"



5 GYPSUM BOARD CONTROL JOINT IN RATED WALL
3" = 1'-0"



4 FIRE EXTINGUISHER CABINET
1 1/2" = 1'-0"



CERMAK RHOADES ARCHITECTS
225 East Fourth Street, Suite 800, St. Paul, MN, 55101
P: 651.225.8623 F: 651.225.8720 www.cermakrhoades.com

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly registered Architect under the laws of the State of Minnesota.

Signed:

Date: 05/15/2014
Reg. No.: 22055

INTERIOR DETAILS

EMANUEL CLINIC
RS EDEN
814 SOUTH 3RD STREET
MINNEAPOLIS, MN 55415

Revisions:
Date issued: 05/15/2014
Job No.: 1339

A9.1

MECHANICAL SYMBOL LEGEND

—	DOMESTIC COLD WATER (CW)
—H—	DOMESTIC HARD COLD WATER (CW)
—T—	TEMPERED DOMESTIC HOT WATER (110° F)
—120—	DOMESTIC HOT WATER (120° F)
—140—	DOMESTIC HOT WATER (140° F)
—180—	DOMESTIC HOT WATER (180° F)
—	RECIRCULATION HOT WATER (CHW)
—W—	SANITARY WASTE UNDERGROUND
—W—	SANITARY WASTE ABOVE GROUND
—V—	VENT
—SD—	STORM DRAIN UNDERGROUND
—RWL—	RAINWATER LEADER (RWL)
—ORWL—	RAINWATER LEADER (ORWL)
—V—	SANITARY VENT
—VTR—	VENT THRU ROOF
—G—	NATURAL GAS
—FG—	NATURAL GAS (FIRM)
—IG—	NATURAL GAS (INTERRUPTABLE)
—FOS—	FUEL OIL SUPPLY
—FOR—	FUEL OIL RETURN
—FOV—	FUEL OIL VENT
—P—	PROPANE
—LO—	LUBRICATING OIL (LUBE)
—CWS—	CHILLED WATER SUPPLY
—CWR—	CHILLED WATER RETURN
—CLWS—	CORE LOOP WATER SUPPLY
—CLWR—	CORE LOOP WATER RETURN
—GWS—	GEOTHERMAL WATER SUPPLY
—GWR—	GEOTHERMAL WATER RETURN
—DTCLWS—	DUAL TEMPERATURE CORE LOOP WATER SUPPLY
—DTCLWR—	DUAL TEMPERATURE CORE LOOP WATER RETURN
—CDS—	CONDENSER WATER SUPPLY
—CDR—	CONDENSER WATER RETURN
—LPS—	LOW PRESSURE STEAM SUPPLY
—LPR—	LOW PRESSURE STEAM RETURN
—HWS—	HEATING WATER SUPPLY
—HWR—	HEATING WATER RETURN
—CD—	CONDENSATE DRAIN PIPING
—RL—	LIQUID REFRIGERANT
—RS—	SUCTION REFRIGERANT
—AV—	ACID WASTE VENT
—AW—	ACID WASTE
—AW—	ACID WASTE UNDERGROUND
—CA—	COMPRESSED AIR
—F—	FIRE PROTECTION
—WPS—	DUAL TEMPERATURE SUPPLY PIPING
—WPR—	DUAL TEMPERATURE RETURN PIPING
—MV—	MEDICAL VACUUM
—OX—	MEDICAL OXYGEN
—MA—	MEDICAL COMPRESSED AIR
⊖	THERMOSTAT
⊖ _N	THERMOSTAT - NIGHT SET BACK
⊖	SPACE TEMPERATURE SENSOR
⊖	HUMIDISTAT
⊖	STATIC PRESSURE SENSOR
⊖	CARBON DIOXIDE SENSOR
⊖	NITROGEN SENSOR
⊖	NITROUS OXIDE SENSOR
⊖	AQUASTAT
⊖	PRESSURE SWITCH
⊖	FLOW SWITCH
⊖	TEMPERATURE GAUGE

⊖	DPS	DIFFERENTIAL PRESSURE SENSOR	
⊖	DPS	DIFFERENTIAL PRESSURE SENSOR	
N.O.	NORMALLY OPEN		
N.C.	NORMALLY CLOSED		
VFD	VARIABLE FREQUENCY DRIVES		
⊖	SENSOR TAP		
⊖	WATER HAMMER ARRESTER WITH		
⊖	PRESSURE GAUGE WITH ISOLATION VALVE		
⊖	SHOCK ABSORBER/VIBRATION ISOLATOR		
⊖	ELBOW UP (PIPE)		
⊖	ELBOW DOWN (PIPE)		
⊖	WATER ELBOW DOWN (PIPE)		
⊖	WATER ELBOW UP (PIPE)		
⊖	TEE UP		
⊖	TEE UP OR DOWN (PIPE)		
⊖	TEE-OFF THE BOTTOM / DOWN		
⊖	TEE-OFF THE TOP		
⊖	FCO	HCO	CLEANOUT FLOOR / CEILING CLEANOUT
⊖	PIPE CAP		
⊖	ECCENTRIC REDUCER		
⊖	CONCENTRIC REDUCER		
⊖	FLEXIBLE CONNECTION (PIPE)		
⊖	EXPANSION JOINT (LOOP)		
⊖	PIPE ANCHOR		
⊖	ALIGNMENT GUIDES		
⊖	CHECK VALVE		
⊖	GATE VALVE		
⊖	GAS COCK VALVE		
⊖	STOP & WASTE VALVE		
⊖	CIRCUIT BALANCING VALVE		
⊖	STRAINER		
⊖	STRAINER WITH BLOW DOWN		
⊖	PRESSURE REDUCING VALVE		
⊖	PRESSURE RELIEF VALVE		
⊖	BALL VALVE		
⊖	BUTTERFLY/SHUT-OFF VALE		
⊖	GLOBE VALVE		
⊖	OS&Y VALVE / OS&Y VALVE WIRED		
⊖	SOLENOID VALVE		
⊖	(GPM) FLOW MEASURING STATION		
⊖	FLOW LIMITING VALVE		
⊖	CONTROL VALVE (TWO-WAY)		
⊖	CONTROL VALVE (THREE-WAY)		
⊖	GLOBE ANGLED VALVE		
⊖	FLOW DIRECTION		
⊖	PIPE PITCH DIRECTION		
⊖	PIPE UNION		
⊖	IN-LINE PUMP		
⊖	AIR VENT - AUTOMATIC		
⊖	AIR VENT - MANUAL		
⊖	RPZ VALVE (REDUCED PRESSURE BACKFLOW)		
⊖	BACKFLOW PREVENTOR		
⊖	BACKWATER VALVE		
⊖	HOPPER DRAIN OR FLOOR SINK		
⊖	FLOOR DRAIN		
⊖	ROOF DRAIN		
⊖	ROOF OR FLOOR DRAIN ABOVE		
⊖	TRENCH DRAIN		
⊖	UNION		
⊖	STEAM TRAP (BUCKET OR THERMOSTATIC)		
⊖	MANOMETER		

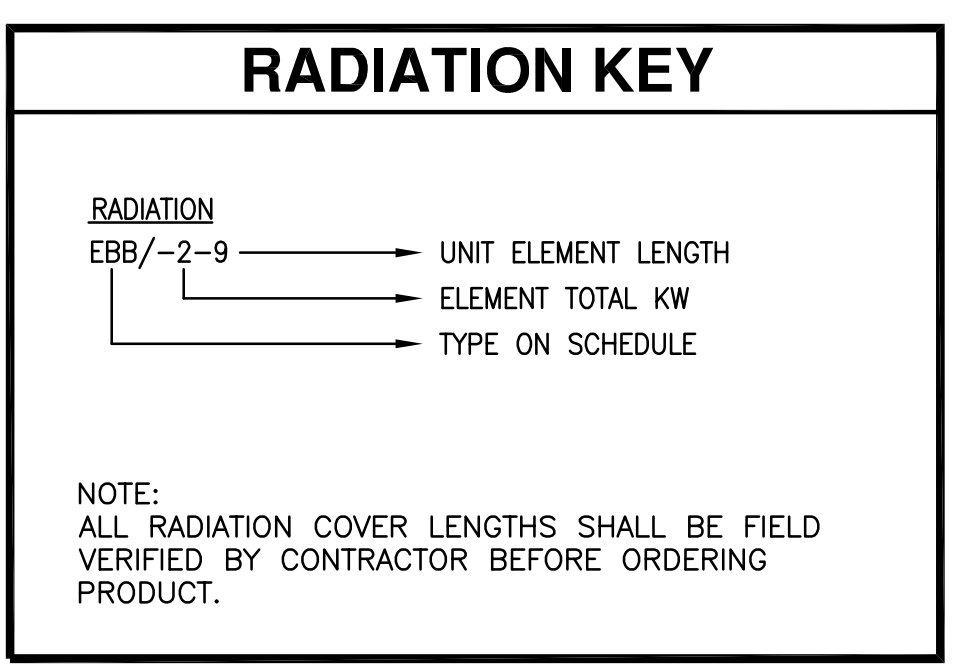
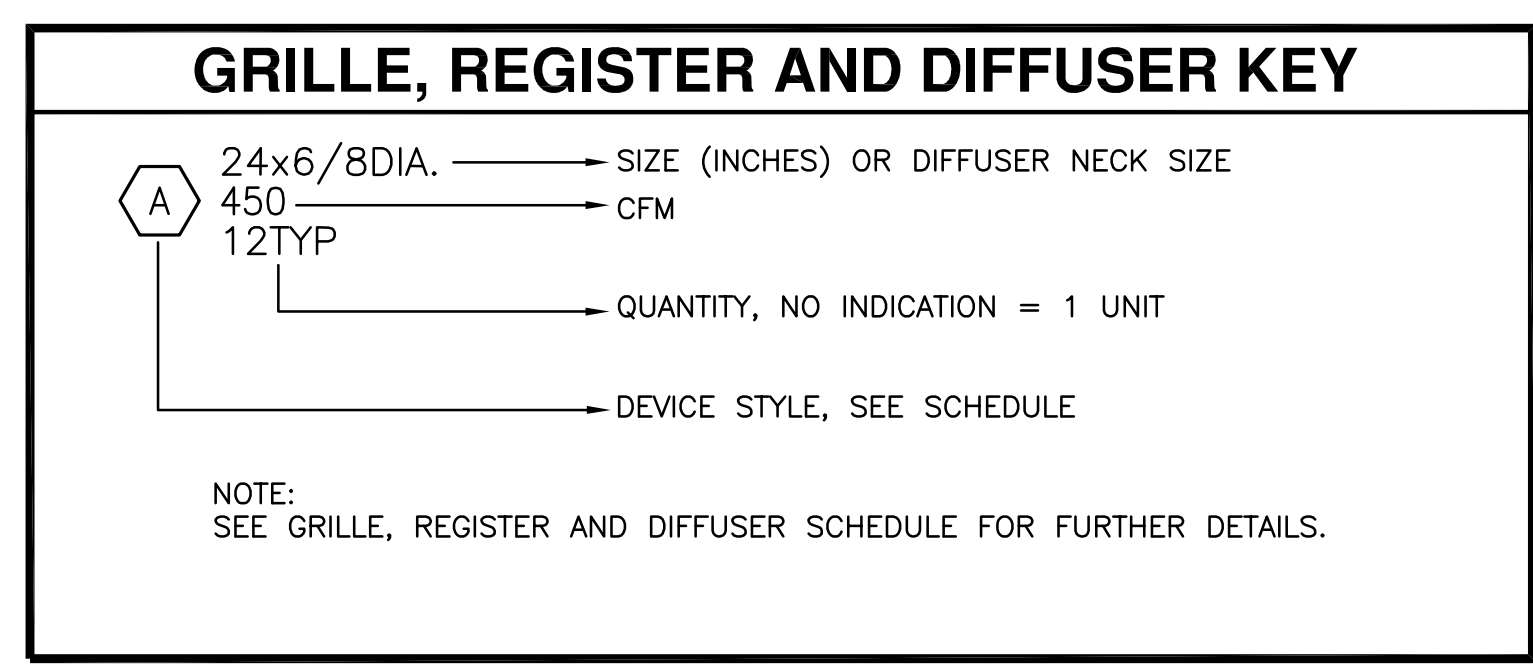
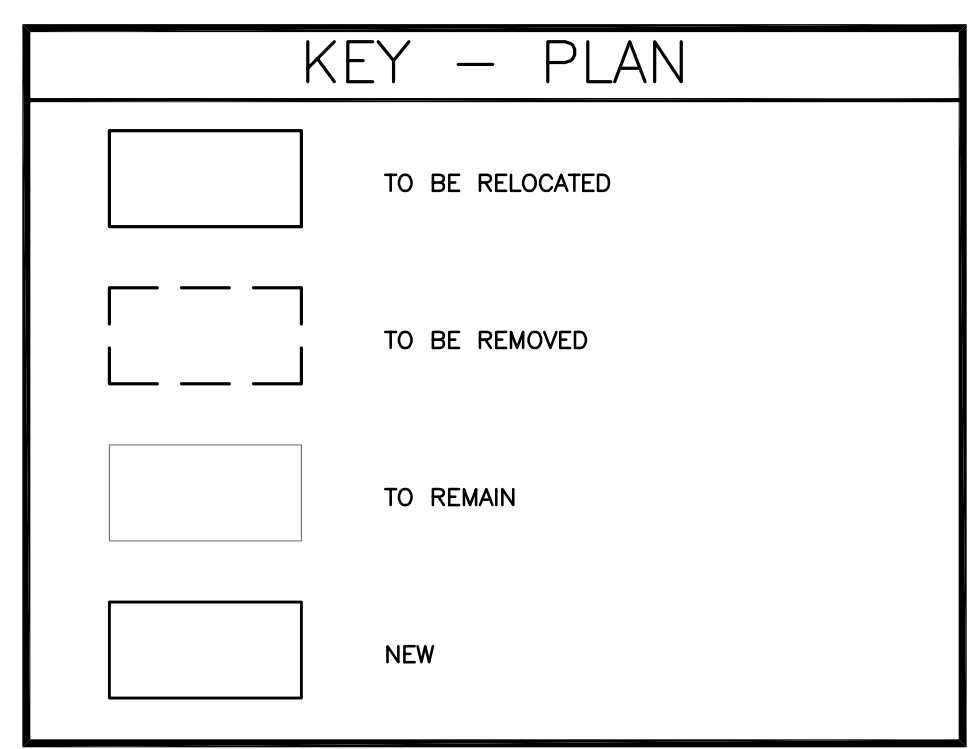
⊖	BREAK IN MATERIAL FOR VISUAL PURPOSES
⊖	DRAIN VALVE
⊖	FINISHED FLOOR ELEVATION
⊖	SIAMESE FIRE DEPT. CONNECTION
⊖	BASEBOARD RADIATION
⊖	CONNECT TO EXISTING
⊖	SUPPLY, RETURN AND EXHAUST AIR
⊖	MOTORIZED DAMPER
⊖	BACKDRAFT DAMPER
⊖	FIRE/SMOKE DAMPER
⊖	SMOKE DAMPER
⊖	FIRE DAMPER
⊖	LOW-LEAK SMOKE DAMPER
⊖	VOLUME DAMPER (MANUAL)
⊖	SECURITY BARS
⊖	EXHAUST REGISTER
⊖	CEILING SUPPLY DIFFUSER
⊖	RETURN AIR GRILLE/REGISTER
⊖	RETURN AIR GRILLE/REGISTER WITH SOUND BOOT.
⊖	SIDEWALL SUPPLY REGISTER
⊖	SIDEWALL RETURN OR EXHAUST GRILLE
⊖	FLOOR REGISTER
⊖	LINEAR DIFFUSER
⊖	FLEX DUCT
⊖	ROOF (PRV) EXHAUST FAN
⊖	UNIT HEATER
⊖	CABINET UNIT HEATER
⊖	CONNECTOR
⊖	VAV BOX WITH COIL
⊖	HEAT PUMP
⊖	SUPPLY DUCT ELBOW WITH TURNING VANES
⊖	STANDARD OR LINED DUCT (SUPPLY, RETURN, EXHAUST), DUCT IS LABELED TO INDICATE INTERNAL DUCT DIMENSION. SEE SPECIFICATION FOR INSULATION.
⊖	STANDARD ROUND TAKEOFF (CONICAL BELL MOUTH) WITH VOLUME DAMPER
⊖	AIR FLOW MEASURING STATION
⊖	GAS PRESSURE REGULATOR
⊖	WALL HYDRANT
⊖	HOSE BIBB
⊖	THERMOMETER
⊖	FLOW SWITCH
⊖	DOUBLE WALL (SUPPLY, RETURN, EXHAUST). DUCT IS LABELED TO INDICATE INTERNAL DUCT DIMENSION.

GENERAL NOTES

- Work to be accomplished on these Drawings and the accompanying specifications includes the furnishing of all labor, materials, equipment, and services necessary for the proper completion of all mechanical work.
- Before submitting a proposal on the work contemplated on these drawings and accompanying specifications, each bidder shall examine the site, check as to the means of making connections to services, and shall become familiar with all the existing conditions and limitations. No extras will be allowed because of the contractor's misunderstanding as to the amount of work involved or his lack of knowledge of any site conditions which may affect his work. Any apparent variance of the plan or specification from existing conditions at the site shall be called to the attention of the Engineer during the bid period so clarification can be made by addendum.
- Existence of any wires, conduits, pipes, ducts, or other facilities are shown in a general way only. It will be the duty of the contractor to visit the site and make exact determination of the existence of any such facilities prior to the submission of his bid. It is understood that he will be responsible for making the exact determination of the location and condition of such facilities.
- All required fees, permits, and inspections shall be obtained and/or arranged for by the contractor under the section of the Specifications for which they are required.
- Regular inspections shall be arranged by the contractor as required by any and all regulations. All charges from regulating agencies for inspections of installations or review of plans and Specifications shall be paid by the contractor.
- Certificate of Final Inspection. Under each applicable section of the Specifications, contractor shall, upon completion of the work under that section, furnish a Certificate of Final Inspection to the Engineer from the inspection department having jurisdiction.
- All materials and workmanship shall comply with all current and applicable codes, specifications, ordinances, laws, regulations, industry standards, and utility company regulations.
- In case of difference among building codes, specifications, state laws, local ordinances, industry standards, and utility company regulations and the Contract Documents, the most stringent shall govern. Contractor shall promptly notify the Engineer in writing of any such difference.
- All applicable federal, state, and local laws and ordinances shall be adhered to throughout the construction project.
- Non-Compliance. Should the contractor perform any work that does not comply with the requirements of the applicable building codes, state laws, local ordinances, industry standards, and utility company regulations, he shall bear all costs arising to correct the deficiencies.
- Contractor shall initiate, maintain, and supervise all safety pre-cautions required for his work, including regulations of the Occupational Safety and Health Administration (OSHA).
- Drawings are to scale as noted, but the contractor shall refer to Architectural and Structural Drawings for exact location of partitions, walls, beams, shafts, equipment, etc.
- Each trade shall obtain drawings and specifications of all other trades and coordinate his work with all other trades.
- Drawings show the general arrangement of ductwork, piping, equipment, and appurtenances and shall be followed as closely as actual building construction and work of other trades will permit. Mechanical work shall conform to the requirements shown on all of the drawings. Architectural and Structural Drawings shall take precedence over Mechanical Drawings. Because of the small scale of the Mechanical Drawings, it is not possible to indicate all offsets, fittings, and accessories that may be required.
- Discrepancies discovered before or after work has started shall be brought to the attention of the Engineer immediately, and the Engineer reserves the right to require minor changes in the work of any contractor to eliminate such discrepancies with no change in contract cost.
- Plans and specifications are complementary, and what is called for in either one shall be as binding as if called for in both.
- Where a disagreement exists between the plans and specifications, the item or arrangement of better quality, greater quality, or higher cost shall be included in the bid.
- Normal use of the facility shall not be disturbed, except within the immediate construction area. All walks, driveways, and entrances shall be kept clear and free of all contractor's equipment, material, and debris at all times.
- All materials and equipment shall be stored in such a place and in such a manner that a minimum of congestion will result. The placing of such materials and equipment shall be subject to the approval of the owner.
- Contractor shall thoroughly examine the existing building with regard to what temporary measures he must take in order to permit the owner to occupy specific areas of the building during the various construction phases. Refer to division 1, section 1010, "summary of work" for construction sequencing schedule. In general, systems must remain in use in those designated areas to permit the owner to function in a pre-construction manner.
- Each contractor shall coordinate work with other trades in the installation of equipment, piping, conduit, and ductwork.
- HVAC/sheet-metal contractor shall initiate the coordination process by providing reproducible plan drawings showing ductwork and equipment.
- Drawings will be forwarded to the piping contractor and electrical contractor for inclusion of their systems work.
- Contractors shall solve all coordination conflicts among themselves when possible. Engineer will arbitrate when necessary, and his judgment will stand, with no additional cost to the owner.
- Access panels shall be furnished by the trade requiring them and delivered to the general contractor for installation.
- Access panels shall be as indicated under specification section 8 or approved equal by the Architect, and of type that is compatible with construction and finish of the wall and/or ceiling.
- Each trade shall perform all cutting and patching necessary in order to perform the work, unless such work has been delegated to the general contractor/another trade. However, special permission shall be obtained from the engineer before cutting structural members or finished materials. All patching shall be performed in such manner as to leave no visible trace and to return the part affected to the condition of undisturbed work. Patching work shall be performed by persons experienced, skilled, and licensed for the particular type of work involved. Inferior work will not be accepted. All holes in masonry shall be drilled with rotary drills. Impact tools shall not be used.
- Each trade shall bear the expense of all cutting, patching, repairing, or replacing of the work of other trades required because of his fault, error, or tardiness because of any damage done by him.
- Each trade shall provide all holes and openings required for his work, unless such holes and openings are shown to be provided on the architectural or structural drawings.
- Each trade shall remove existing work that is shown, specified, or obviously necessary for completion of his work. Owner shall have the option of retaining any item or material removed under this contract. Items or materials not retained by owner shall become the property of the trade and shall be removed from the premises.
- Each trade shall periodically clear away all debris, surplus materials, etc., resulting from his work or operations, leaving the job and the equipment furnished under any or all contracts in a clean condition.
- Each trade shall test the equipment provided and/or installed under the specification and shall demonstrate its proper operation to the owner's operating engineer.
- Each trade shall furnish, without additional expense to the owner, the services of competent instructors, who will give full instruction in the care, adjustment, and operation and maintenance of all parts of the equipment to the owner's permanent employees who are to have charge of the equipment.
- HVAC subcontractor shall be responsible for tested & rated fire stop systems for all thru-penetration of walls, floors & roof assemblies resulting from piping & other work under his contract. Refer to specification section for fire stopping for requirements.
- All wood nailers and other lumber which is installed in contact with metal, concrete, or masonry shall be pressure treated against decay (unless otherwise noted).
- Contractor to verify with owner what if any equipment existing equipment being remove they wish to retain. If the owner does not to keep any existing equipment the contractor is responsible to removal and disposal of such equipment.

INDEX TO MECHANICAL SHEETS

M0.1	MECHANICAL TITLE SHEET
M2.0	UNDERFLOOR PLUMBING PLANS
M2.1	LOWER LEVEL PLUMBING PLANS
M2.2	UPPER LEVEL PLUMBING PLANS
M2.3	PLUMBING RISERS
M4.1	LOWER LEVEL HVAC PLAN
M4.2	UPPER LEVEL HVAC PLANS
M7.1	MECHANICAL SCHEDULES
M8.1	MECHANICAL DETAILS



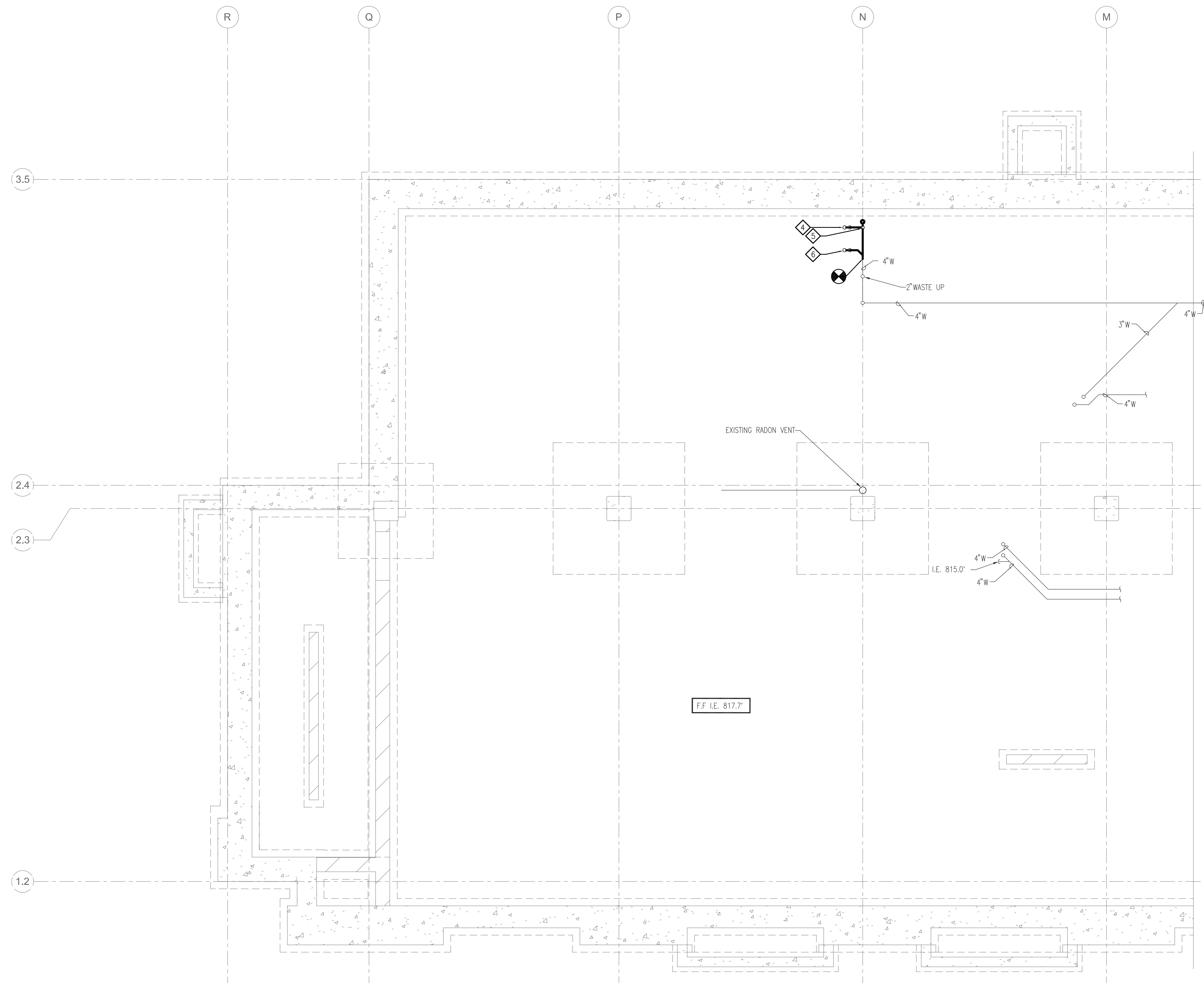
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly registered Engineer under the laws of the State of Minnesota

Signature: *Daniel R. Dahlgren*
 DANIEL R. DAHLGREN
 Date: 05/14/2014
 Reg. No: 23794

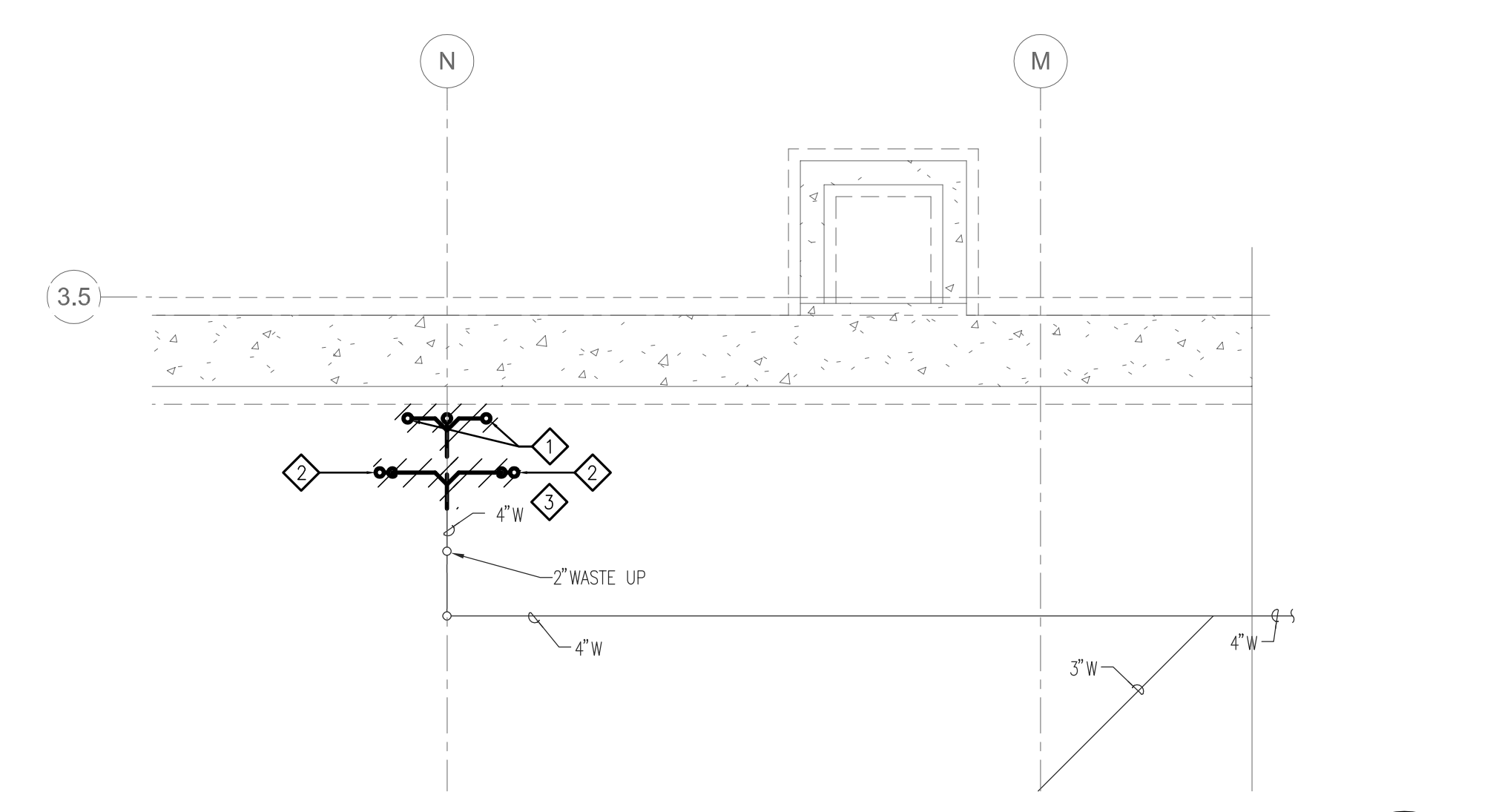
Consultant:

emanuelson-podas
 consulting engineers
 10401 Bren Road East
 Minnetonka, MN 55343
 ph: 952-930-0050
 fax: 952-930-0777
 www.epinc.net

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1 UNDERFLOOR PLUMBING PLAN
1/4" = 1'-0"



2 UNDERFLOOR PLUMBING DEMOLITION PLAN
1/4" = 1'-0"

PLAN GENERAL NOTES

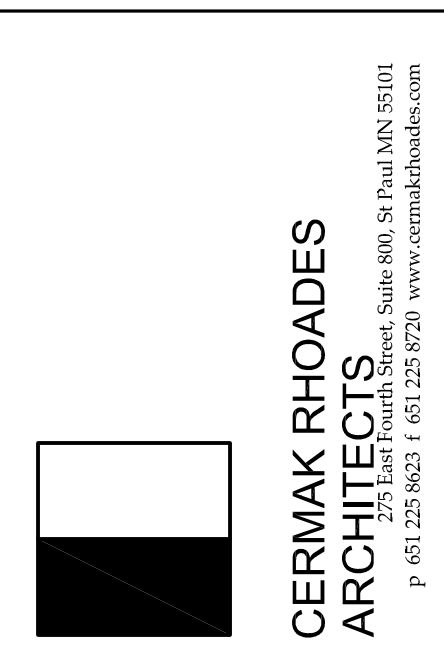
- SEE STRUCTURAL DOCUMENTS WHEN DRILLING PIPE OPENINGS IN STRUCTURAL MEMBERS.
- ALL PIPING PENETRATIONS INCLUDING FLOOR DRAIN ASSEMBLIES AND PLUMBING FIXTURES IN FLOOR SLAB SHALL BE SEALED AIR TIGHT (IN CONJUNCTION WITH VAPOR BARRIER), TO PREVENT RADON GAS FROM ENTERING THE GARAGE LEVEL. SEAL PENETRATIONS WITH ELASTOMERIC JOINT SEALANT COMPLYING WITH ASTM C20-87.

DEMO NOTES

- MECHANICAL TO SAW CUT FLOOR AS NEEDED FOR DEMO OF EXISTING UNDERFLOOR WASTE PIPING. DEMO WATER CLOSET WASTE BACK TO MAIN. REFER TO ARCHITECTURAL SPECIFICATION FOR SAWCUTTING DETAIL.
- DEMO FLOOR DRAIN.
- MECHANICAL TO SAW CUT FLOOR AS NEEDED FOR DEMO AND INSTALLATION OF NEW SANITARY PIPING AND PATCH TO MATCH EXISTING FLOOR. REFER TO ARCHITECTURAL SPECIFICATION FOR SAWCUTTING DETAIL.

PLAN NOTES

- 3" WASTE UP.
- 2" VENT UP.
- UP TO 2" FLOOR DRAIN.



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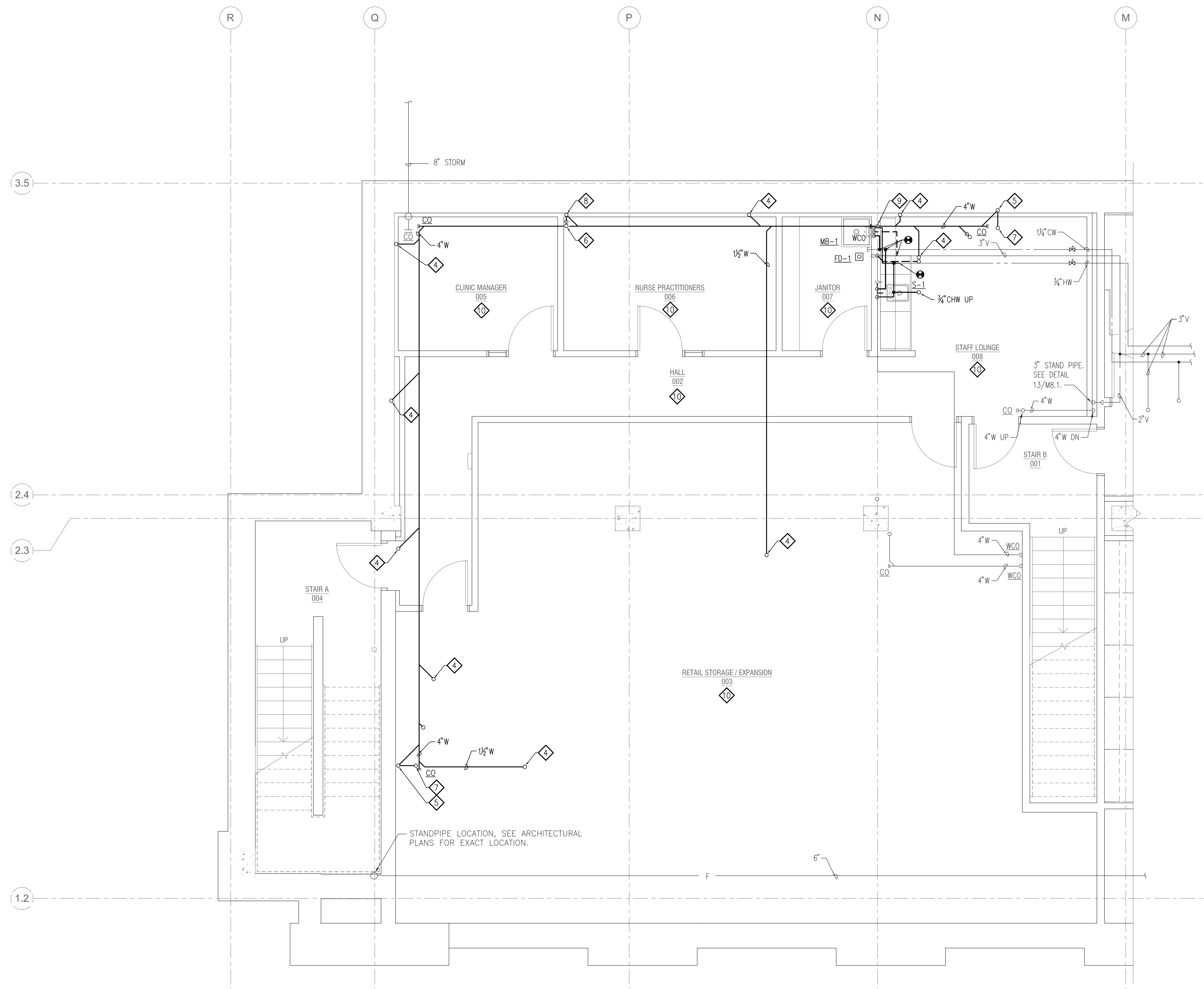
Consultant:

ep
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 10401 Bren Road East
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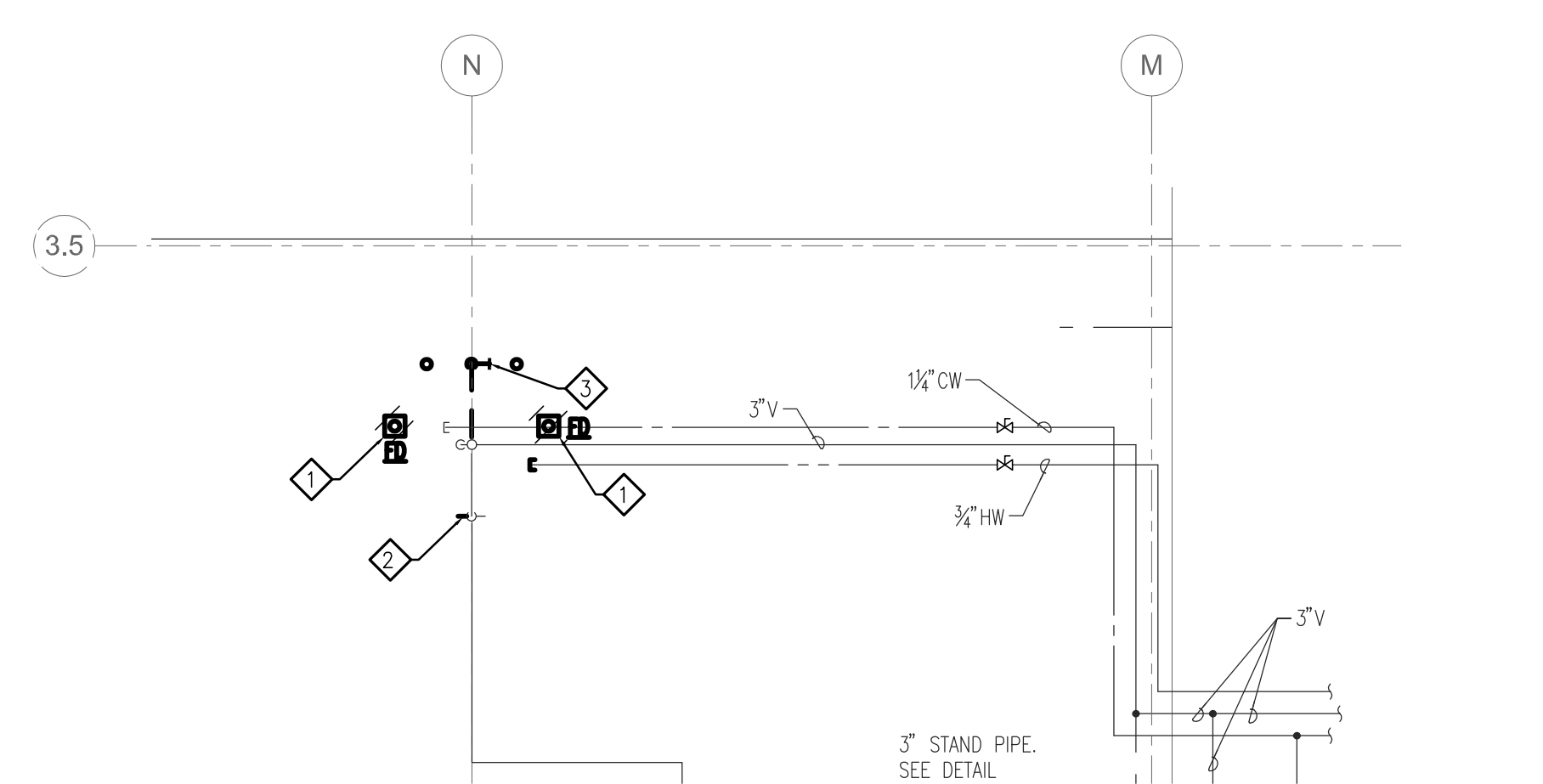
UNDERFLOOR PLUMBING PLANS
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M2.0



1 LOWER LEVEL PLUMBING PLAN
1/4" = 1'-0"



1 LOWER LEVEL PLUMBING DEMOLITION PLAN
1/4" = 1'-0"

PLAN GENERAL NOTES

- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR TESTED & RATED FIRE STOP SYSTEMS FOR ALL THRU-PENETRATION OF WALLS, FLOORS & ROOF ASSEMBLIES RESULTING FROM PIPING & OTHER WORK UNDER HIS CONTRACT. REFER TO SPEC SECTION FOR FIRE STOPPING REQUIREMENTS. ALL OTHER NON-RATED THRU-PENETRATION OF WALLS SHALL BE CAULKED TO REDUCE SOUND TRANSMISSION.
- COORDINATE PLUMBING PIPING WITH DUCTWORK, HYDRONIC PIPING, SPRINKLER PIPING AND LIGHTING.
- COORDINATE WITH STRUCTURAL AND GENERAL CONTRACTOR DOCUMENTS WHEN DRILLING PIPE OPENINGS IN STRUCTURAL MEMBERS.
- PROVIDE ACCESS PANEL IN HARD CEILING TO SERVICE MECHANICAL DEVICES.
- ALL PLUMBING PIPING IS TO BE CPVC UNLESS OTHERWISE NOTED ON PLANS.

DEMO NOTES

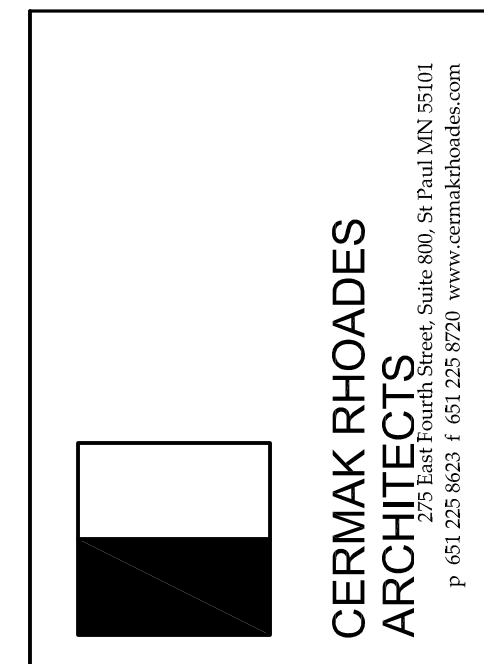
- ◇ DEMO FLOOR DRAIN.
- ◇ MODIFY EXISTING LAVATORY WASTE / VENT PIPING TO ACCOMMODATE NEW SINK.
- ◇ MODIFY EXISTING WALL CLEANOUT.

PLUMBING PLAN NOTES

- ◇ 1-1/2" WASTE UP.
- ◇ 2" VENT UP.
- ◇ 3" WASTE UP.
- ◇ 4" WASTE UP.
- ◇ 1-1/2" VENT UP.
- ◇ DROP NEW 4" WASTE INTO EXISTING 4", MODIFY AS NECESSARY.

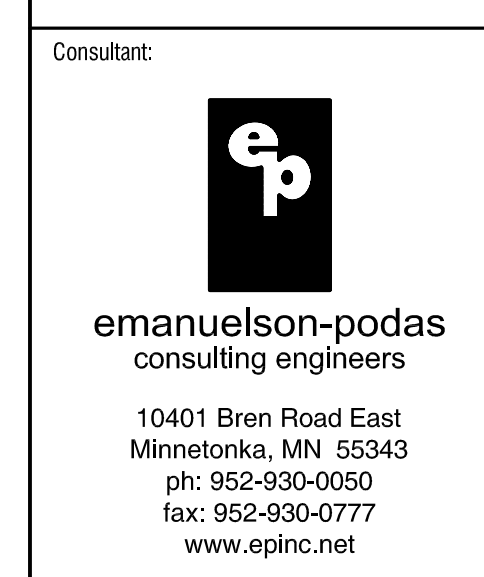
FIRE PROTECTION NOTES

- ◇ REVISE FIRE PROTECTION DISTRIBUTION TO PROVIDE COMPLETE COVERAGE OF REMODELED AREAS. PROVIDE SEMI-RECESSED SPRINKLER HEADS IN LAY-IN CEILINGS AND UPRIGHT HEADS IN AREAS OPEN TO STRUCTURE.



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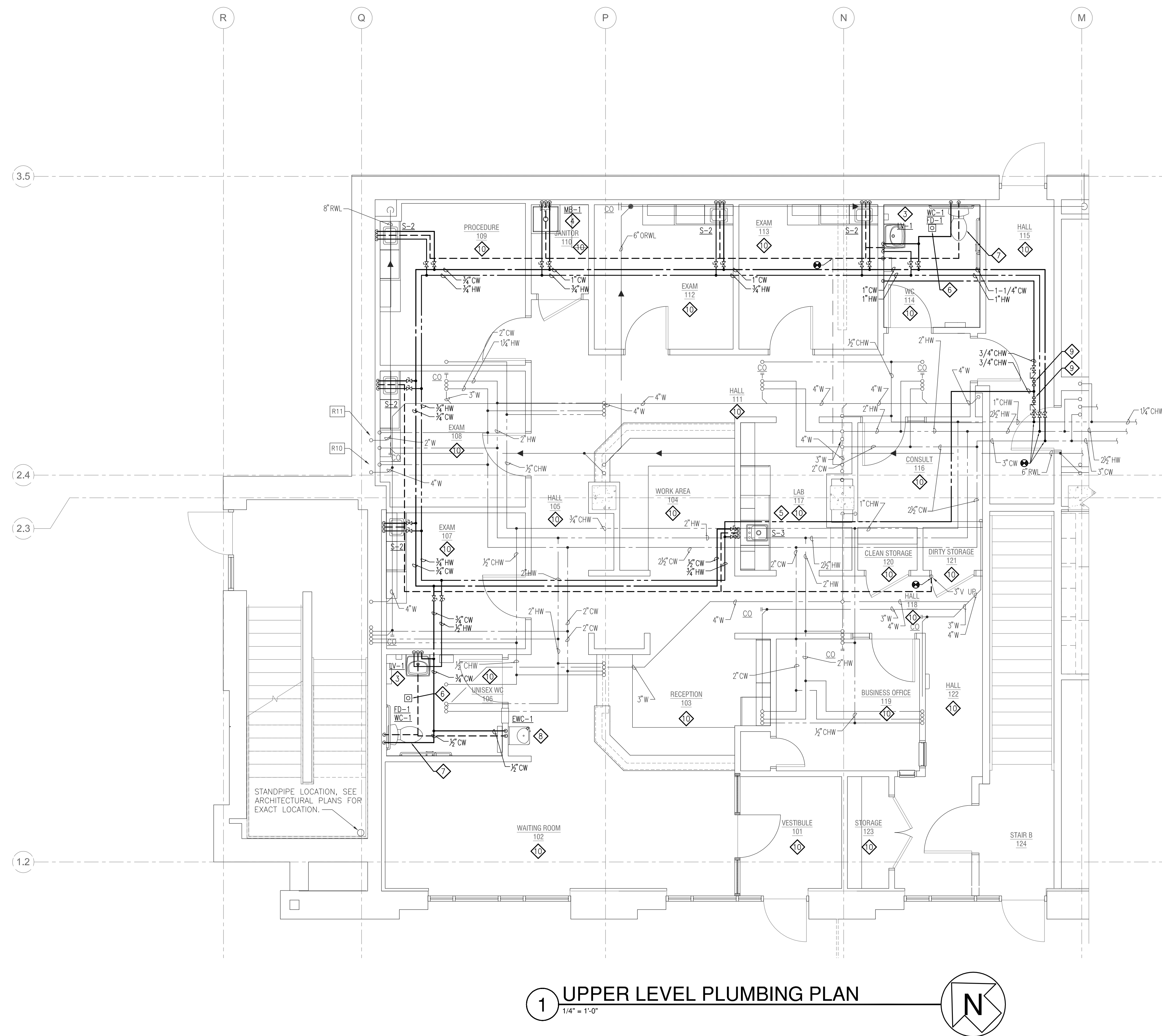
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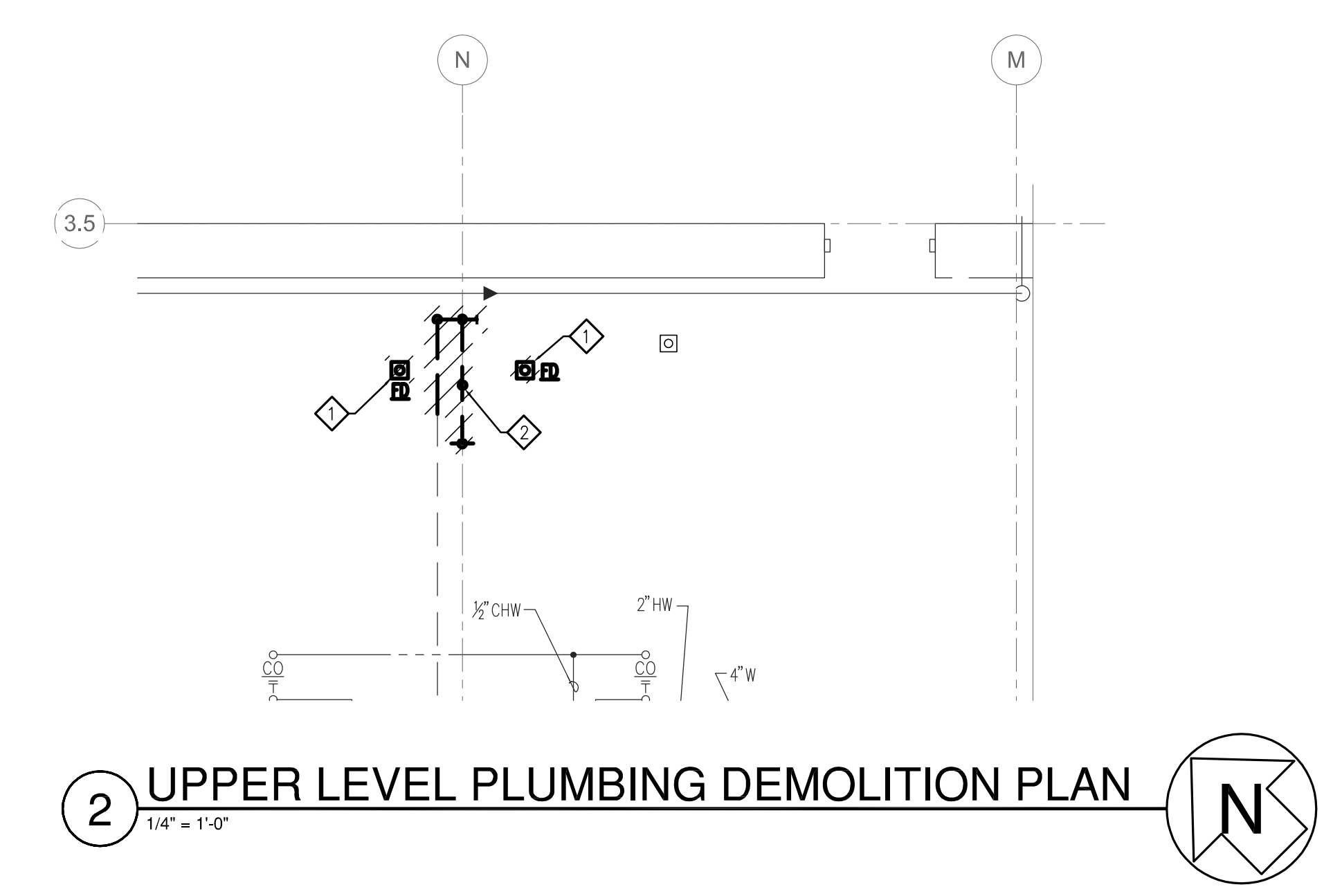
LOWER LEVEL PLUMBING PLANS
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M2.1



1 UPPER LEVEL PLUMBING PLAN
1/4" = 1'-0"



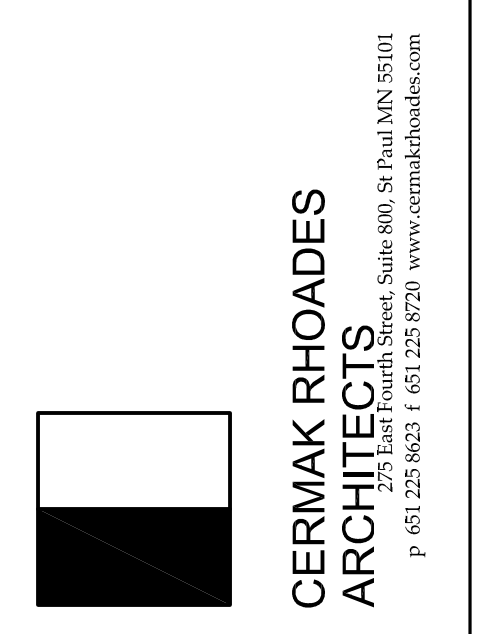
2 UPPER LEVEL PLUMBING DEMOLITION PLAN
1/4" = 1'-0"

- ### PLAN GENERAL NOTES
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR TESTED & RATED FIRE STOP SYSTEMS FOR ALL THRU-PENETRATION OF WALLS, FLOORS & ROOF ASSEMBLIES RESULTING FROM PIPING & OTHER WORK UNDER HIS CONTRACT. REFER TO SPEC SECTION FOR FIRE STOPPING REQUIREMENTS. ALL OTHER NON-RATED THRU-PENETRATION OF WALLS SHALL BE CAULKED TO REDUCE SOUND TRANSMISSION.
 - COORDINATE PLUMBING PIPING WITH DUCTWORK, HYDRONIC PIPING, SPRINKLER PIPING AND LIGHTING.
 - COORDINATE WITH STRUCTURAL AND GENERAL CONTRACTOR DOCUMENTS WHEN DRILLING PIPE OPENINGS IN STRUCTURAL MEMBERS.
 - PROVIDE ACCESS PANEL IN HARD CEILING TO SERVICE MECHANICAL DEVICES.
 - ALL PLUMBING PIPING IS TO BE CPVC UNLESS OTHERWISE NOTED ON PLANS.

- ### DEMO NOTES
- ◇ DEMO FLOOR DRAIN.
 - ◇ DEMO EXISTING WASTE / VENT PIPING. REROUTE PLUMBING VENT FOR LOWER LEVEL.

- ### PLUMBING PLAN NOTES
- ◇ LAVATORY: REFER TO PLUMBING FIXTURE SCHEDULE. PROVIDE 1/2" CW, 3/4" HW AND 1/2" VENT. 1/2" WASTE DOWN THROUGH FLOOR TO CEILING SPACE BELOW.
 - ◇ MOP BASIN: REFER TO PLUMBING FIXTURE SCHEDULE. PROVIDE 3/4" CW, 3/4" HW AND 1/2" VENT. 3" WASTE PIPING IN CEILING BELOW.
 - ◇ LAB SINK: REFER TO PLUMBING FIXTURE SCHEDULE. PROVIDE 1/2" CW AND 1/2" HW, 1/2" VENT. 1/2" WASTE PIPING DOWN THROUGH FLOOR TO CEILING SPACE BELOW.
 - ◇ FLOOR DRAIN: REFER TO PLUMBING FIXTURE SCHEDULE.
 - ◇ WATER CLOSET: REFER TO PLUMBING FIXTURE SCHEDULE. PROVIDE 1/2" CW AND 2" VENT. 4" WASTE DOWN THROUGH FLOOR TO CEILING SPACE BELOW.
 - ◇ ELECTRIC WATER COOLER: REFER TO PLUMBING FIXTURE SCHEDULE. PROVIDE 1/2" CW AND 1/2" VENT. 1/2" WASTE DOWN THROUGH FLOOR TO CEILING SPACE BELOW.
 - ◇ PROVIDE ISOLATION VALVE, CHECK VALVE AND BALANCING VALVE. BALANCE VALVE TO BE CIRCUIT SETTER MODEL CS-3/4-110. BALANCE VALVE TO 0.2 GPM.

- ### FIRE PROTECTION NOTES
- ◇ REVISE FIRE PROTECTION DISTRIBUTION TO PROVIDE COMPLETE COVERAGE OF REMODELED AREAS. PROVIDE SEMI-RECESSED SPRINKLER HEADS IN LAY-IN CEILINGS AND UPRIGHT HEADS IN AREAS OPEN TO STRUCTURE.



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Signature: *Daniel R. Dahlan*
 DANIEL R. DAHLMAN
 Date: 05/14/2014
 Reg. No: 23794

Consultant:

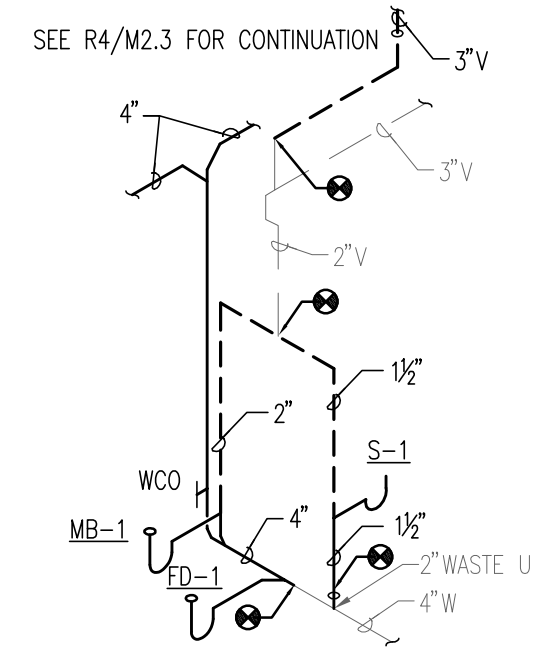
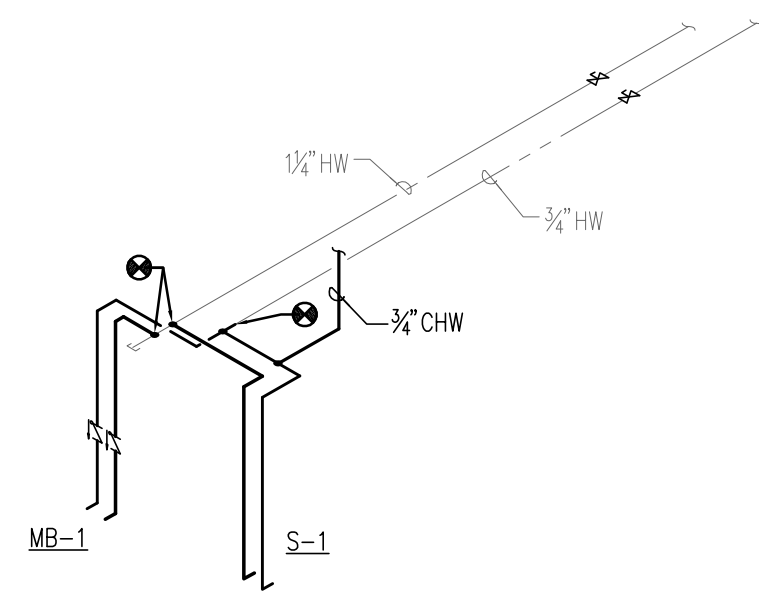
emanuelson-podas
 consulting engineers
 10401 Bren Road East
 Minnetonka, MN 55343
 ph: 952-930-0050
 fax: 952-930-0777
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UPPER LEVEL PLUMBING PLANS
EMANUEL CLINIC
 RS EDEN
 814 SOUTH 3RD STREET
 MINNEAPOLIS, MN 55415

Revisions:

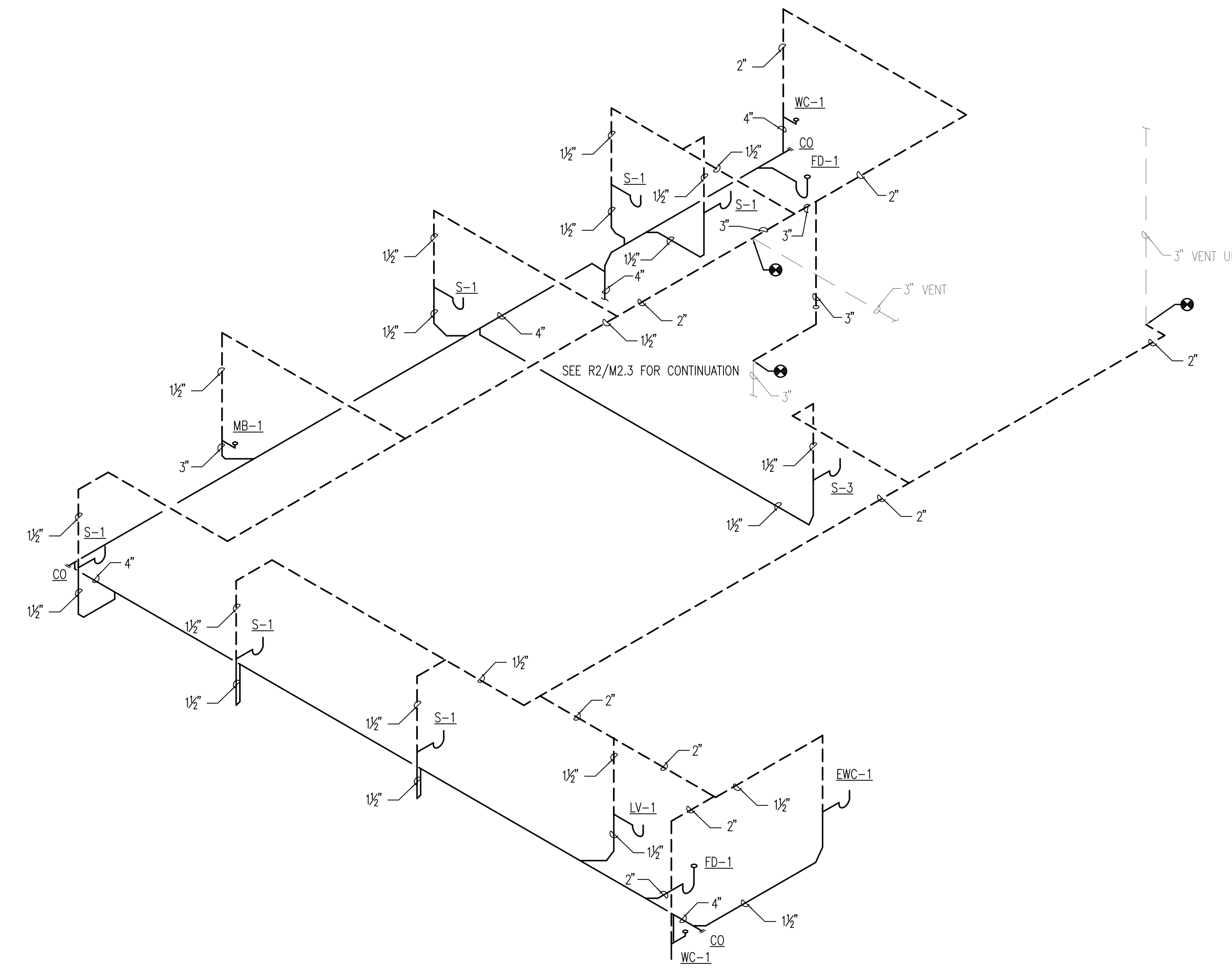
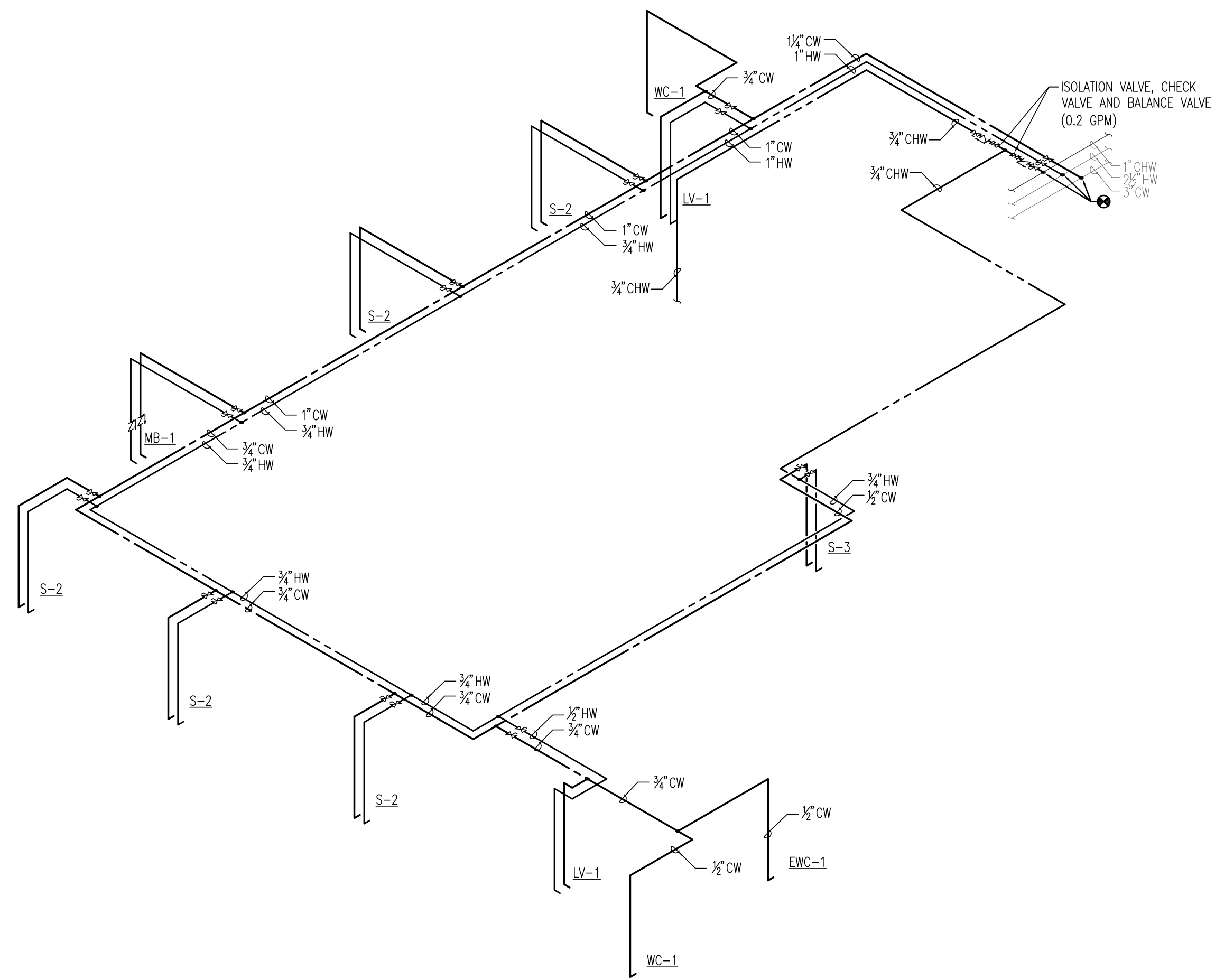
 Date issued: 05/14/2014
 Job No: CRA-1339/EP-3373

M2.2



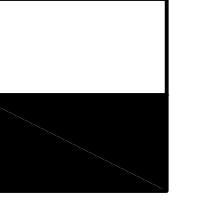
R1 PLUMBING WATER RISER
SCALE: NONE

R2 PLUMBING WASTE RISER
SCALE: NONE



R3 PLUMBING WATER RISER
SCALE: NONE

R4 PLUMBING WASTE RISER
SCALE: NONE



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ARCHITECTS**
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Signature:
Daniel R. Dahlgren

DANIEL R. DAHLGREN

Date: 05/14/2014

Reg. No: 23794

Consultant:



emanuelson-podas
consulting engineers

10401 Bren Road East
Minnetonka, MN 55343
ph: 952-930-0050
fax: 952-930-0777
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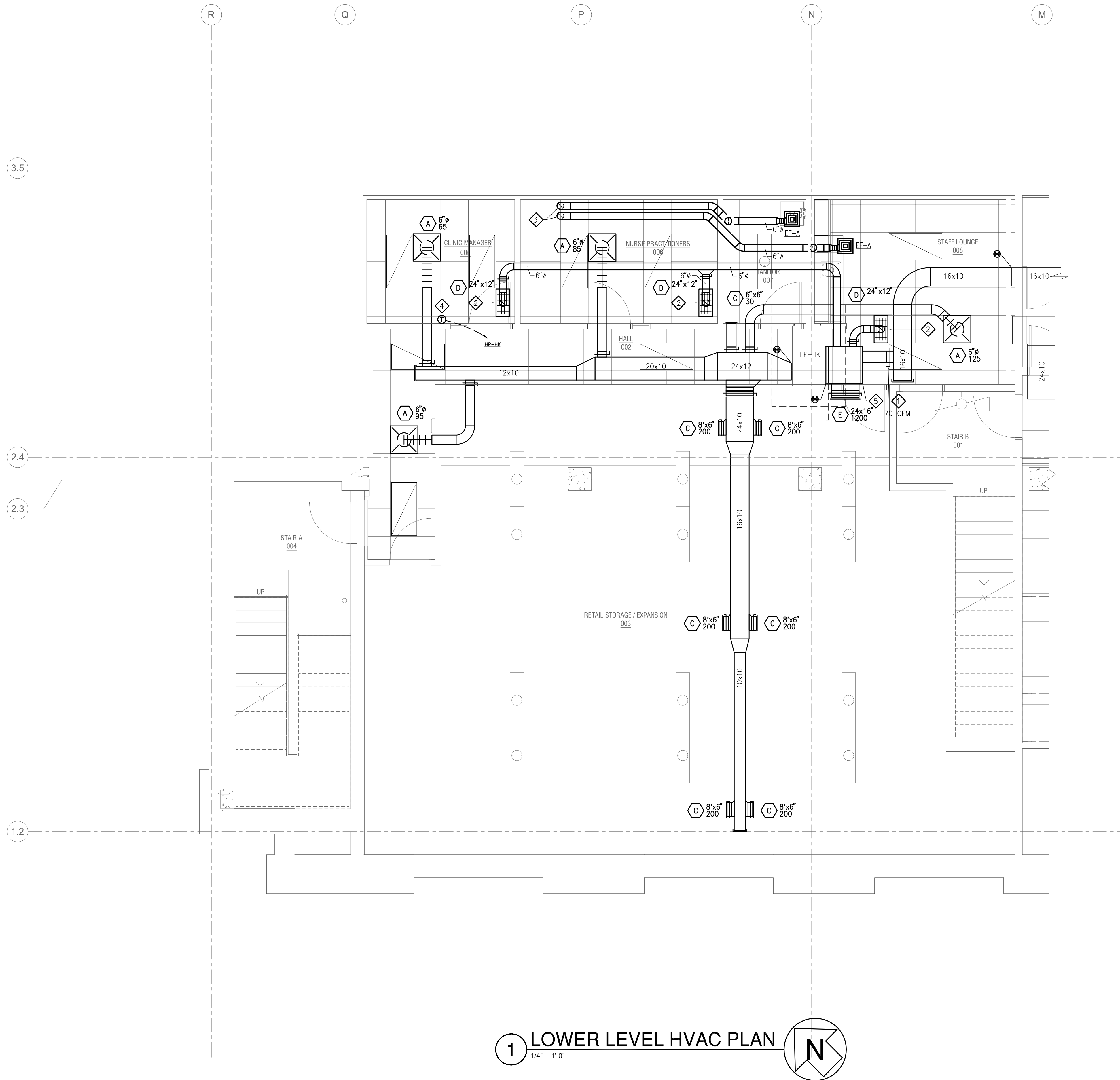
PLUMBING RISERS
EMANUEL CLINIC
RS EDEN
814 SOUTH 3RD STREET
MINNEAPOLIS, MN 55415

Revisions:

Date issued: 05/14/2014

Job No: CRA-1339/EP-3373

M2.3

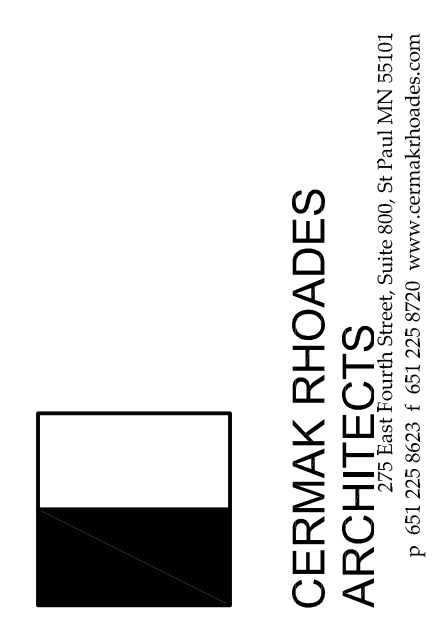


PLAN GENERAL NOTES

- A. PROVIDE ALL SUPPLY DUCT TAPS SERVING SINGLE DIFFUSER WITH VOLUME DAMPER. LOCATE DAMPER IN ACCESSIBLE LOCATION AT SPIN-IN FITTING OR NEAR DIFFUSER.
- B. ALL EXHAUST DUCTWORK SHALL BE INSULATED WITH EXTERIOR WRAP TYPE INSULATION.
- C. ALL DUCT DIMENSIONS ARE INSIDE DIMENSIONS.
- D. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR TESTED AND RATED FIRE STOP SYSTEMS FOR ALL THRU PENETRATION OF WALL, FLOOR AND ROOF ASSEMBLIES RESULTING FROM PIPING AND OTHER WORK UNDER THEIR CONTRACT. REFER TO SPEC SECTION FOR FIRE STOPPING REQUIREMENTS. ALL OTHER NON-RATED THRU-PENETRATION OF WALLS SHALL BE CAULKED/SEALED TO REDUCE SOUND TRANSMISSION. COORDINATE DUCTWORK LOCATIONS WITH PIPING, PLUMBING AND LIGHTING.
- E. PROVIDE ALL ACCESS PANELS IN HARD CEILING TO ACCESS MECHANICAL EQUIPMENT/DEVICES. SEE SPECIFICATION DIVISION 8 FOR DETAILS OF ACCESS PANELS.
- F. MECHANICAL CONTRACTOR SHALL HIRE A DUCT CLEANING SPECIALIST THAT IS CERTIFIED BY THE NATIONAL AIR DUCT CLEANING ASSOCIATION. SUB-CONTRACTOR TO PERFORM DUCT CLEANING OF ALL EXISTING SUPPLY AND RETURN DUCTWORK INCLUDING GRILLES AND REGISTERS. THE DUCT CLEANING SUB-CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BID TO DETERMINE EXTENT OF CLEANING.
- G. NOT ALL DUCT DROPS AND RISES ARE INDICATED ON PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DUCT ROUTING WITH BUILDING STRUCTURE AND OTHER TRADES.
- H. ALL EXHAUST OUTLETS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM AND BUILDING OR MECHANICAL EQUIPMENT INTAKE.
- I. ALL EXTERIOR DUCTWORK, WALL CAPS, EQUIPMENT FLUE AND COMBUSTION AIR, ETC. SHALL BE PREPPED AND PRIMED FOR PAINTING BY GENERAL CONTRACTOR.
- J. VERIFY FIRE/SMOKE DAMPER HOUR RATINGS WITH ARCHITECTURAL CODE PLAN.

PLAN NOTES

- ◇ PROVIDE 6" OUTSIDE AIR DUCT CONNECTED TO RETURN INLET OF HEAT PUMP WITH VOLUME DAMPER. LOCATE VOLUME DAMPER IN ACCESSIBLE LOCATION. BALANCE INDICATED CFM.
- ◇ PROVIDE LINED RETURN AIR DUCT WITH RETURN AIR GRILLE. SEE DETAIL 3/MB.1.
- ◇ PROVIDE 6" INSULATED EXHAUST DUCT UP. SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS. COORDINATE FLOOR CORE DRILLING WITH GENERAL CONTRACTOR.
- ◇ RELOCATE EXISTING THERMOSTAT.
- ◇ PROVIDE RETURN AIR PLENUM SAME SIZE AS UNIT CONNECTION. ACCOMMODATE FILTER PULL/ACCESS.



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly registered Engineer under the laws of the State of Minnesota

Signature: *Daniel R. Dahlgren*
 DANIEL R. DAHLGREN
 Date: 05/14/2014
 Reg. No: 23794

Consultant:

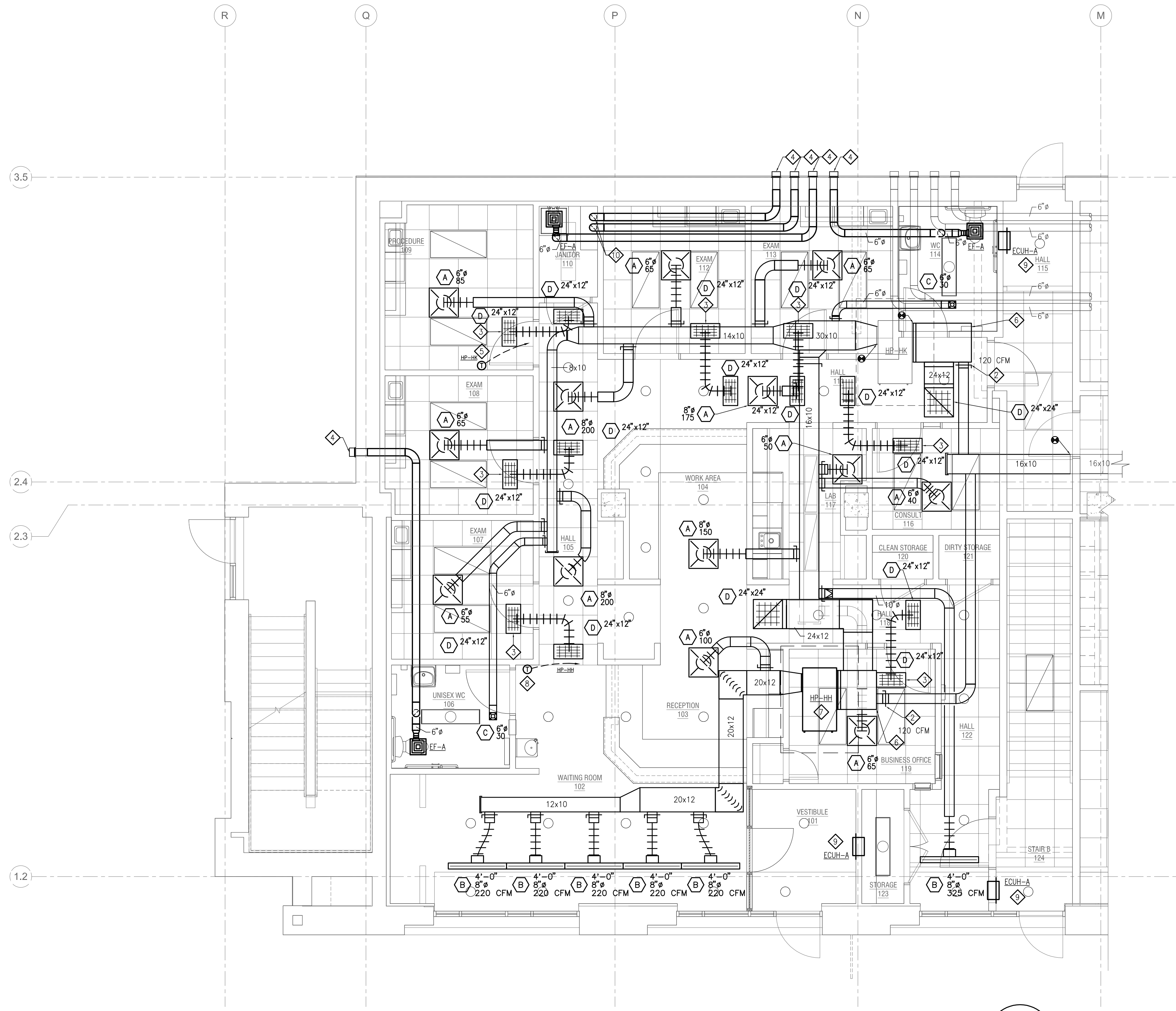
 emanuelson-podas
 consulting engineers
 10401 Bren Road East
 Minnetonka, MN 55343
 ph: 952-890-0050
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LOWER LEVEL HVAC PLAN
 EMANUEL CLINIC
 RS EDEN
 814 SOUTH 3RD STREET
 MINNEAPOLIS, MN 55415

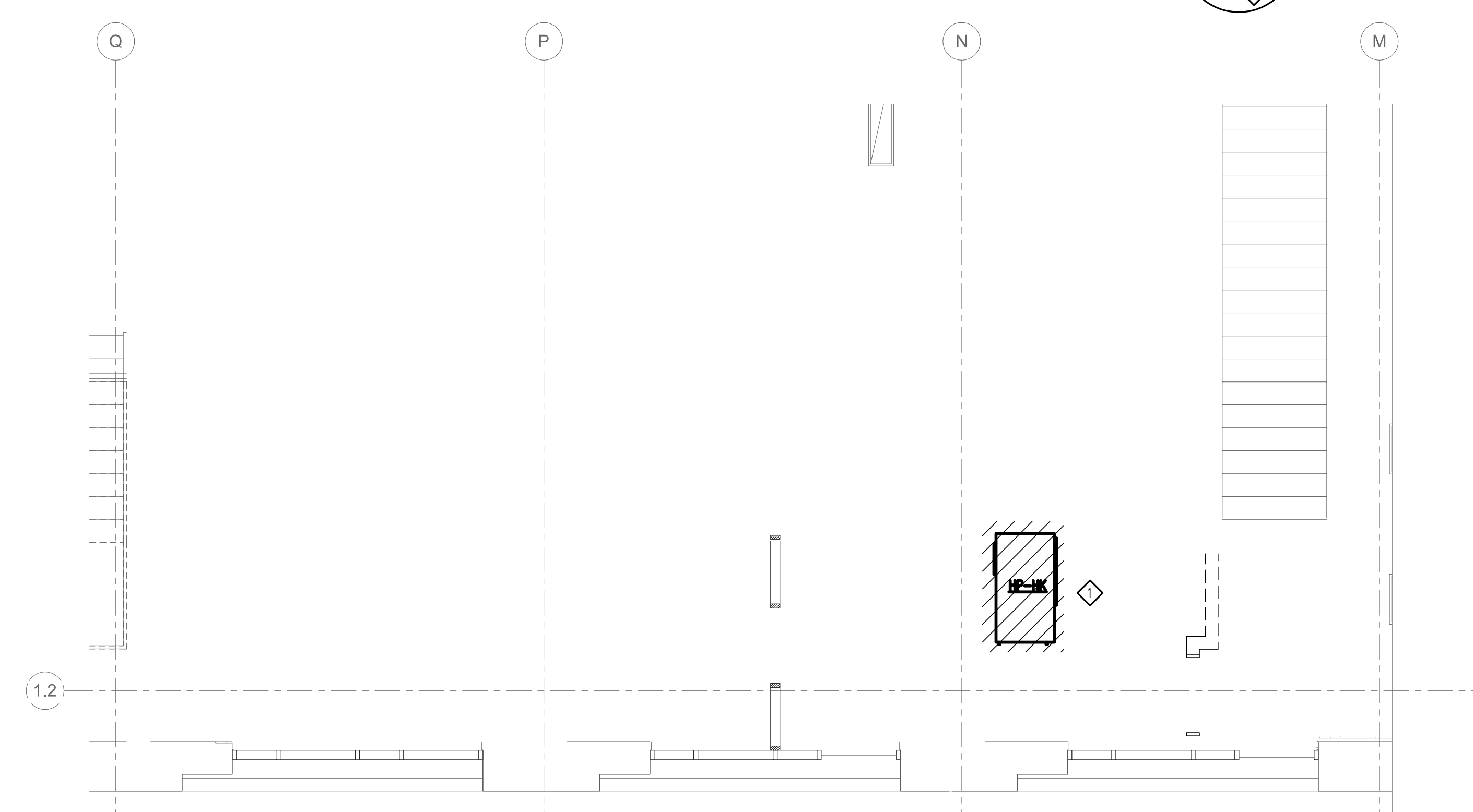
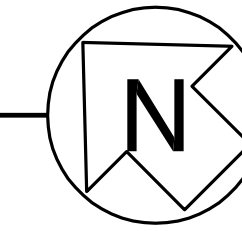
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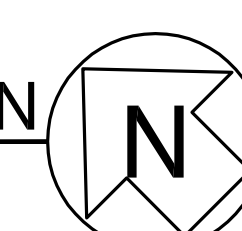
M4.1



1 UPPER LEVEL HVAC PLAN
1/4" = 1'-0"



1 UPPER LEVEL HVAC DEMOLITION PLAN
1/4" = 1'-0"



PLAN GENERAL NOTES

- A. PROVIDE ALL SUPPLY DUCT TAPS SERVING SINGLE DIFFUSER WITH VOLUME DAMPER. LOCATE DAMPER IN ACCESSIBLE LOCATION AT SPIN-IN FITTING OR NEAR DIFFUSER.
- B. ALL EXHAUST DUCTWORK SHALL BE INSULATED WITH EXTERIOR WRAP TYPE INSULATION.
- C. ALL DUCT DIMENSIONS ARE INSIDE DIMENSIONS.
- D. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR TESTED AND RATED FIRE STOP SYSTEMS FOR ALL THRU PENETRATION OF WALL, FLOOR AND ROOF ASSEMBLIES RESULTING FROM PIPING AND OTHER WORK UNDER THEIR CONTRACT. REFER TO SPEC SECTION FOR FIRE STOPPING REQUIREMENTS. ALL OTHER NON-RATED THRU-PENETRATION OF WALLS SHALL BE CALKED/SEALED TO REDUCE SOUND TRANSMISSION. COORDINATE DUCTWORK LOCATIONS WITH PIPING, PLUMBING AND LIGHTING.
- E. PROVIDE ALL ACCESS PANELS IN HARD CEILING TO ACCESS MECHANICAL EQUIPMENT/DEVICES. SEE SPECIFICATION DIVISION 8 FOR DETAILS OF ACCESS PANELS.
- F. MECHANICAL CONTRACTOR SHALL HIRE A DUCT CLEANING SPECIALIST THAT IS CERTIFIED BY THE NATIONAL AIR DUCT CLEANING ASSOCIATION. SUB-CONTRACTOR TO PERFORM DUCT CLEANING OF ALL EXISTING SUPPLY AND RETURN DUCTWORK INCLUDING GRILLES AND REGISTERS. THE DUCT CLEANING SUB-CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BID TO DETERMINE EXTENT OF CLEANING.
- G. NOT ALL DUCT DROPS AND RISES ARE INDICATED ON PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DUCT ROUTING WITH BUILDING STRUCTURE AND OTHER TRADES.
- H. ALL EXHAUST OUTLETS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM AND BUILDING OR MECHANICAL EQUIPMENT INTAKE.
- I. ALL EXTERIOR DUCTWORK, WALL CAPS, EQUIPMENT FLUE AND COMBUSTION AIR, ETC. SHALL BE PREPARED AND PRIMED FOR PAINTING BY GENERAL CONTRACTOR.
- J. VERIFY FIRE/SMOKE DAMPER HOUR RATINGS WITH ARCHITECTURAL CODE PLAN.

DEMO NOTES

- ◇ REMOVE EXISTING 4 TON HEAT PUMP AND TURN OVER TO OWNER. THERMOSTAT AND WIRING TO BE REUSED.

PLAN NOTES

- ◇ PROVIDE 8" OUTSIDE AIR DUCT CONNECTED TO RETURN INLET OF HEAT PUMP WITH VOLUME DAMPER. LOCATE VOLUME DAMPER IN ACCESSIBLE LOCATION. BALANCE INDICATED CFM.
- ◇ PROVIDE LINED TRANSFER AIR DUCT WITH GRILLE. SEE DETAIL 3/MB.1.
- ◇ PROVIDE 6" INSULATED EXHAUST DUCT WITH WALL CAP (BROWN MODEL 843 OR PRIOR APPROVED EQUAL) AND BIRD SCREEN. PRIME ALL EXTERIOR VENTING FOR PAINTING BY OTHERS. SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS. SEE DETAIL 4/MB.1.
- ◇ RELOCATE EXISTING THERMOSTAT.
- ◇ PROVIDE RETURN AIR PLENUM SAME SIZE AS UNIT CONNECTION. ACCOMMODATE FILTER PULL/ACCESS.
- ◇ PROVIDE NEW HEAT PUMP IN NEW LOCATION. REFER TO HEAT PUMP SCHEDULE. SEE DETAIL 8/MB.1. EXTEND HYDRONIC SUPPLY, RETURN AND CONDENSATE PIPING TO EXISTING MAINS.
- ◇ REUSE EXISTING THERMOSTAT AND WIRING FROM REMOVED HEAT PUMP.
- ◇ PROVIDE NEW ELECTRIC CABINET UNIT HEATER. COORDINATE FURRING WITH GENERAL CONTRACTOR. MAINTAIN WALL RATING.
- ◇ COORDINATE CORE DRILLING WITH GENERAL CONTRACTOR. VERIFY WITH STRUCTURAL ENGINEER.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly registered Engineer under the laws of the State of Minnesota.

Signature: Daniel R. Dahlman

DANIEL R. DAHLMAN

Date: 05/14/2014

Reg. No: 23794

Consultant:



emanuelson-podas consulting engineers
10401 Bren Road East
Minnetonka, MN 55343
ph: 952-890-0050
fax: 952-900-0777
www.epinc.net

HEAT PUMP -- WATER TO AIR SCHEDULE																												
MARK	TYPE	MANUFACTURER	MODEL #	AIRFLOW (CFM)	ESP (IN WG)	CONDENSER DATA					COOLING DATA					HEATING DATA					ELECTRICAL DATA				OPTIONS		NOTES	
						EWT CLG (°F)	EWT HTG (°F)	FLUID FLOW (GPM)	PD (FT WG)	CONN SIZE (IN)	EAT DB/WB (°F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	HEAT OF REJECTION (MBH)	EER	EAT DB (°F)	CAPACITY (MBH)	HEAT OF EXTRACTION (MBH)	COP	LAT (°F)	VOLTAGE-PHASE	FULL LOAD AMPS	MIN CIRCUIT AMPS	MAX FUSE SIZE	FAN MOTOR	2-WAY MOTORIZED VALVE PACKAGE		HOT GAS REHEAT
HP-HH	HORIZONTAL	MCQUAY	WCCH4036	1200	0.6	85	70	9.0	10.8	3/4	80/74	35.6	28.1	44.1	15.3	77	42.6	35.0	4.74	102.9	208/230-1	20.6	24.8	35	ECM	-	-	2, 4, 6, 7, 8, 9

NOTES
1. LOW PROFILE, SLOPE TOP CONSOLE UNIT (UNLESS NOTED ON PLAN TO BE FLAT TOP) & CABINET MOUNTED THERMOSTAT CONTROL PANEL.
2. SEE SPECIFICATION FOR ADDITIONAL ACCESSORIES AND HEAT PUMP REQUIREMENTS.
3. PROVIDE WITH MANUFACTURERS PIPING PACKAGE, CONTRACTOR TO DETERMINE RIGHT OR LEFT HAND SUPPLY & RETURN PIPE CONNECTION. SUPPLY & RETURN SHUT-OFF VALVES, UNIONS, AUTO-FLOW BALANCING VALVE & 2-WAY CONTROL VALVE PER UNIT. DELETE CONTROL VALVE ONLY WHERE NOTED ON PLANS.
4. CAPACITIES BASED UPON 30% PROPYLENE GLYCOL.
5. ALL UNITS MAY NOT BE REQUIRED, VERIFY UNIT QUANTITIES WITH PLANS.
6. SEE PLANS FOR RIGHT OR LEFT HAND RETURN DUCT CONNECTION.
7. PROVIDE WITH MANUFACTURERS REMOTE HARD WIRED PROGRAMMABLE 7-DAY THERMOSTAT. ALL CONTROL WIRE PROVIDED BY MECHANICAL CONTRACTOR.
8. PROVIDE WITH MANUFACTURERS HOSE KIT PIPING PACKAGE -- SUPPLY & RETURN SHUT-OFF VALVES, UNIONS, AUTO-FLOW BALANCING VALVE & 2-WAY CONTROL VALVE PER UNIT. DELETE CONTROL VALVE ONLY WHERE NOTED ON PLANS.
9. PROVIDE UNIT WITH MANUFACTURERS DRAIN PAN WATER LEVEL SHUT-DOWN, TO TURN OFF UNIT IF DRAIN PAN IS PLUGGED.
10. PROVIDE WITH UNIT MOUNTED FUSED DISCONNECT SWITCH UNDER UNIT ENCLOSURE.

FAN SCHEDULE														
UNIT	LOCATION	MANUFACTURER	MODEL	SERVES	FAN DATA			MOTOR DATA			ELECTRICAL DATA			NOTES
					AIRFLOW (CFM)	EXTERNAL SP (IN WC)	SPEED (RPM)	DRIVE TYPE	HP	WATTS	VOLTAGE	PHASE	FLA	
EF-A	VARIES	PANASONIC	FY-0BVK53	EXHAUST	80	0.25	1,100	DIRECT	-	24.5	115	1	0.2	1, 2, 3, 4, 5

NOTES
1. PROVIDE UNIT WITH GRAVITY BACKDRAFT DAMPER.
2. FAN MUST BE ENERGY STAR RATED.
3. FAN TO OPERATE THROUGH LIGHT SWITCH AND UNIT TIMER; FAN SHALL OPERATE FOR 20MIN. (ADJUSTABLE) AFTER SWITCH IS OFF.
4. PROVIDE UNIT WITH VARIABLE SPEED CONTROL AND TIMER DELAY.
5. SEE PLANS FOR UNIT OUTLET TYPE: ROOF GOOSENECK, ROOF DOG-HOUSE WITH WALL CAP OR SIDE WALL, PRIME ALL EXTERIOR MATERIAL FOR PAINTING BY G.C.

DIFFUSER, REGISTER & GRILLE SCHEDULE									
UNIT	MANUFACTURER	MODEL	LOCATION	SYSTEM	TYPE	SIZE (IN)	FINISH	NOTES	
A	TITUS	OMNI-AA	CEILING	SUPPLY	DIFFUSER	24"x24"	SEE NOTE 1	1, 3 NECK SIZE ON PLANS	
B	TITUS	ML-39	CEILING	SUPPLY	DIFFUSER	SEE DWG.	SEE NOTE 1	3, (2)-1" SLOT W/ INSULATED PLENUM BOX	
C	TITUS	300FL	VARIES	SUPPLY	REGISTER	SEE DWG.	SEE NOTE 1	1, 2, 3, 4	
D	TITUS	50F	VARIES	RETURN / EXHAUST	REGISTER	SEE DWG.	SEE NOTE 1	1, 2, 3, 4	
E	TITUS	350ZFL	VARIES	RETURN / EXHAUST	REGISTER	SEE DWG.	SEE NOTE 1	1, 2, 3, 4	
F	TITUS	63FL	WALL	RETURN / EXHAUST	GRILLE	SEE DWG.	SEE NOTE 1	1, 2, 3	

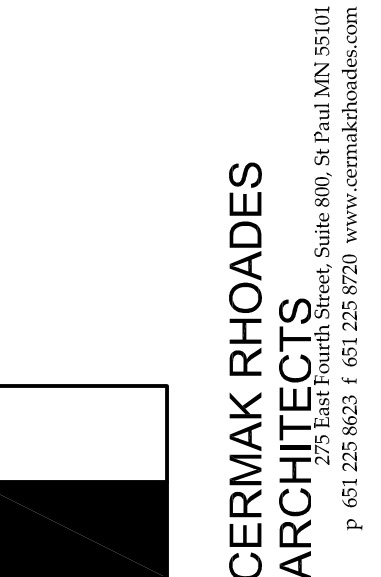
NOTES
1. COLOR TO BE SELECTED BY ARCHITECT FROM STANDARD COLOR CHART, PROVIDE COLOR CHART WITH SHOP DRAWINGS.
2. ALL PARTS OF THIS GRILLE TO BE ALUMINUM INCLUDING OPPOSED BLADE DAMPER IF APPLICABLE.
3. VERIFY MOUNTING FRAME WITH UNIT LOCATION, PROVIDE FLANGE ON 4 SIDE FOR HARD CEILING.
4. PROVIDE UNIT WITH OPPOSED BLADE DAMPER.
5. DIFFUSER MOUNTED TO ROUND DUCT, WITH BALANCING DAMPER.

CABINET UNIT HEATER -- ELECTRIC SCHEDULE											
UNIT	LOCATION	MANUFACTURER	MODEL	AIRFLOW (CFM)	MOUNTING	STYLE	CAPACITY (BTUH)	ELECTRICAL DATA			NOTES
								AMPS	KW	VOLTS/PHASE	
ECUH-A	VARIES	QMARK	AHH450B3	100	WALL	RECESSED	16,380	13.3	5	208/3	1, 2, 3, 4, 5, 6, 7

NOTES
1. PROVIDE UNIT WITH BUILT IN TAMPER PROOF THERMOSTAT. UNIT FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR.
2. PROVIDE UNIT WITH MOUNTING HARDWARE TO SECURE TO WALL.
3. UNIT TO BE SURFACE MOUNTED.
4. SEE ELECTRICAL PLANS FOR ELECTRICAL REQUIREMENTS.
5. CONTRACTOR TO SEE PLANS FOR UNIT QUANTITIES, UNIT MAY BE USED IN MULTIPLE LOCATIONS.
6. UNIT TO BE RECESSED IN WALL, SEE ARCHITECTURAL PLANS FOR DETAILS.
7. PROVIDE UNIT WITH INTEGRAL FACTORY DISCONNECT.

PLUMBING FIXTURE SCHEDULE												
MARK	FIXTURE	MANUFACTURER	MODEL NAME/NUMBER	TRIM	SUPPLIED BY	LOCAL CONNECTIONS				HEIGHT	FINISH	NOTES
						WASTE	VENT	C.W.	H.W.			
WC-1	WATER CLOSET, FLOOR-MOUNTED, TANK, ADA	AMERICAN STANDARD	CADET 3 2989	-	CONTRACTOR	4"	2"	1/2"	-	18" (ADA)	WHITE	1, 3, 6, 7, 12
LV-1	LAVATORY, WALL-MOUNTED, WITH SHROUD, 4" O.C., ADA	TOTO	SUPREME LHT241.4G AND HT242	FAUCET DELTA 541, SINGLE HANDLE, LESS POP-UP, CHROME, 1.5 GPM	CONTRACTOR	1-1/2"	1-1/2"	1/2"	1/2"	SEE ARCH. (ADA)	WHITE	3, 4, 7, 6, 12
EW-1	ELECTRIC WATER COOLER, SINGLE HEIGHT	ELKAY	EZ59L	FAUCET DELTA CER-TECK 26C3-9-2-4, CHROME	CONTRACTOR	1-1/2"	1-1/2"	1/2"	-	SEE ARCH.	STAINLESS STEEL	2, 3, 5
S-1	SINK, UNDERMOUNT, WITH DRAIN, 18 GA. (LOUNGE)	ELKAY	GOURMET ELUHAD 141855PD	FAUCET CHICAGO 895-317GN2FCBCP, 4" O.C., TWO HANDLES, CHROME, 1.5 GPM, LAMINAR FLOW	CONTRACTOR	1-1/2"	1-1/2"	1/2"	1/2"	SEE ARCH.	STAINLESS STEEL	4, 5, 9, 12
S-2	SINK, UNDERMOUNT, 18 GA. (EXAM)	ELKAY	DPC1202010	FAUCET CHICAGO 786-GN2FCBCP, 8" O.C., TWO HANDLES, CHROME, 1.5 GPM, LAMINAR FLOW	CONTRACTOR	1-1/2"	1-1/2"	1/2"	1/2"	SEE ARCH.	STAINLESS STEEL	5, 9, 10, 12
S-3	SINK, DROP-IN, 18 GA. (LAB)	DAYTON	MSB 2424	FAUCET CHICAGO 305-VBCP, 8" O.C., TWO HANDLE, CHROME, VACUUM BREAKER SPOUT	CONTRACTOR	3"	1-1/2"	3/4"	3/4"	SEE ARCH.	WHITE	5, 9, 12
MB-1	MOP BASIN	FIAT										

NOTES
1. LOCATE FLUSH CONTROLS ON OPEN SIDE OF TOILET STALL.
2. FURNISH WITH FIXTURE CARRIER.
3. ADA APPROVED.
4. TRAP AND SUPPLY WRAP.
5. VERIFY HEAD HEIGHT ON ARCHITECTURAL PLANS.
6. PROVIDE WITH BEMIS 2155SSOT WHITE TOILET SEAT.
7. PROVIDE LOOSE KEY STOP(S) WITH SEMI RIGID SUPPLY AND ESCUTCHEON PLATES.
8. PROVIDE GRID STRAINER AND C.P. 1-1/4" x 1-1/2" P-TRAP WITH CLEANOUT PLUG AND ESCUTCHEON PLATE.
9. PROVIDE C.P. 1-1/2" x 1-1/2" P-TRAP WITH CLEANOUT PLUG, LOOSE KEY STOPS, SEMI RIGID SUPPLIES AND ESCUTCHEON PLATES.
10. PROVIDE ELKAY LK36 BASKET STRAINER.
11. PROVIDE 4FT. HOSE AND MOP RACK.
12. SEAL JOINTS BETWEEN FIXTURES AND WALLS, FLOORS AND COUNTERS USING MILDEW-RESISTANT, 100% SILICONE SEALANT. MATCH SEALANT COLOR TO FIXTURE COLOR.



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly registered Engineer under the laws of the State of Minnesota

Signature:
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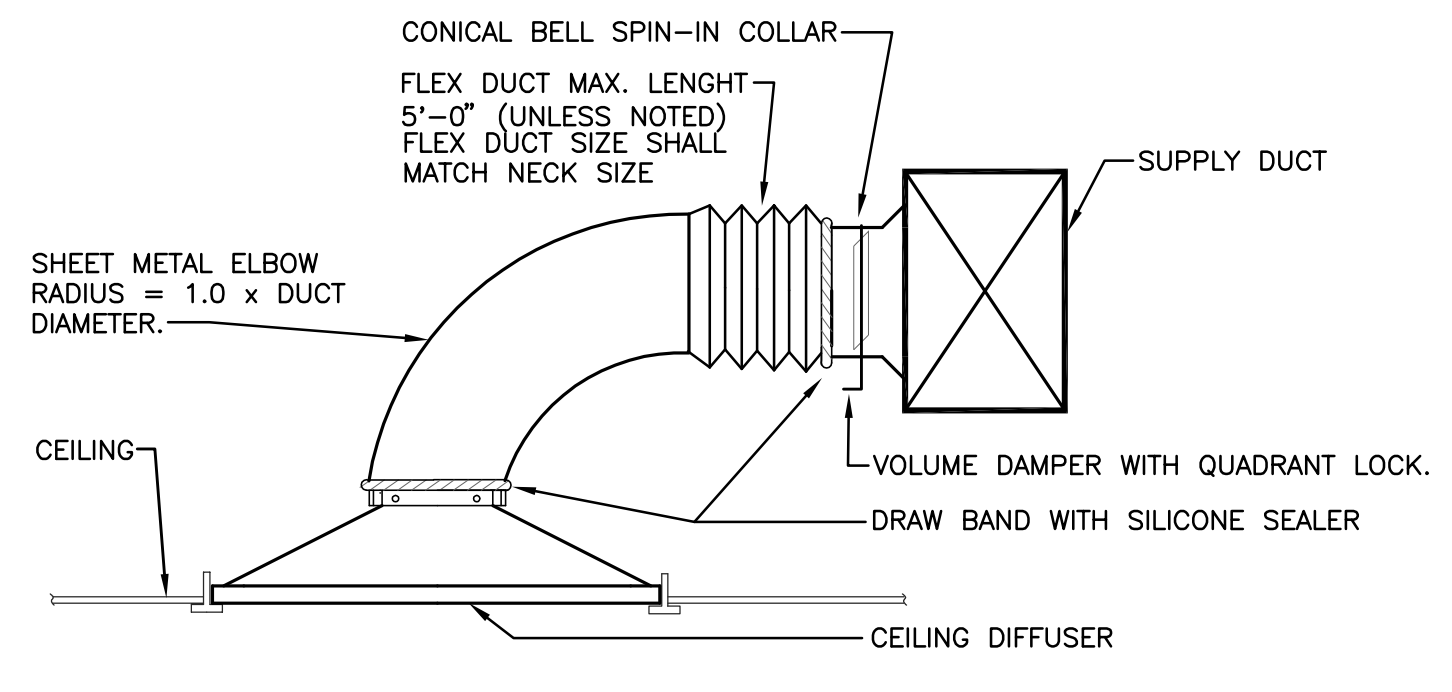
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN 55343
ph: 952-930-0050
fax: 952-930-0777
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MECHANICAL SCHEDULES
EMANUEL CLINIC
RS EDEN
814 SOUTH 3RD STREET
MINNEAPOLIS, MN 55415

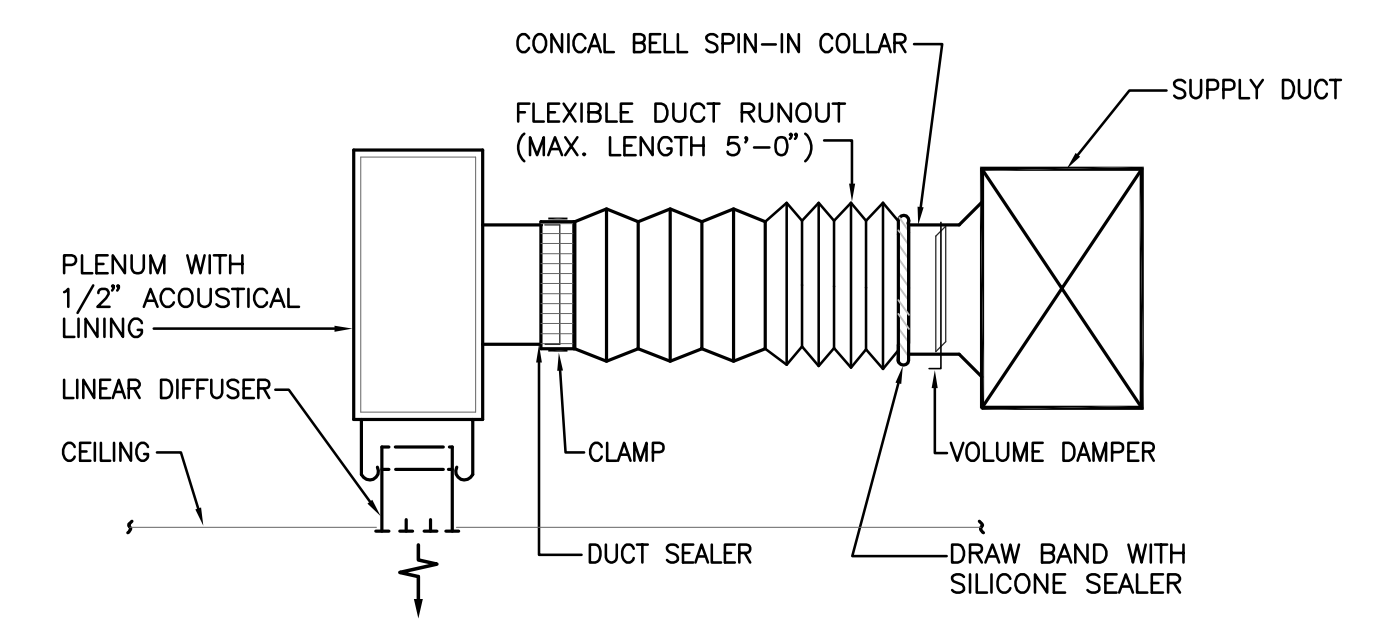
Revisions:

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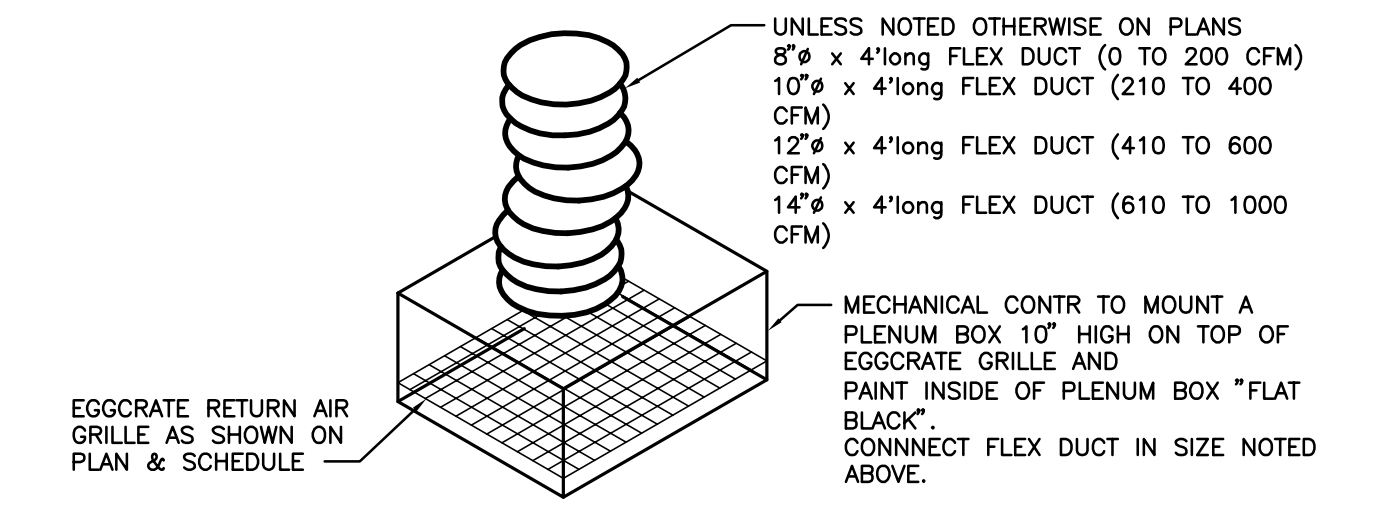
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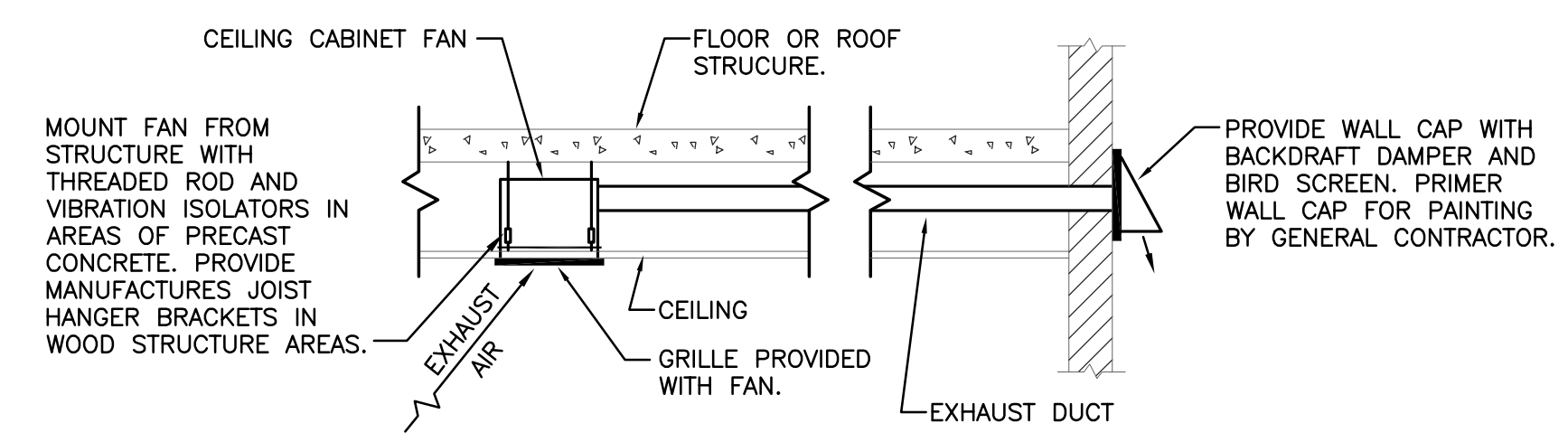
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SCALE: NONE



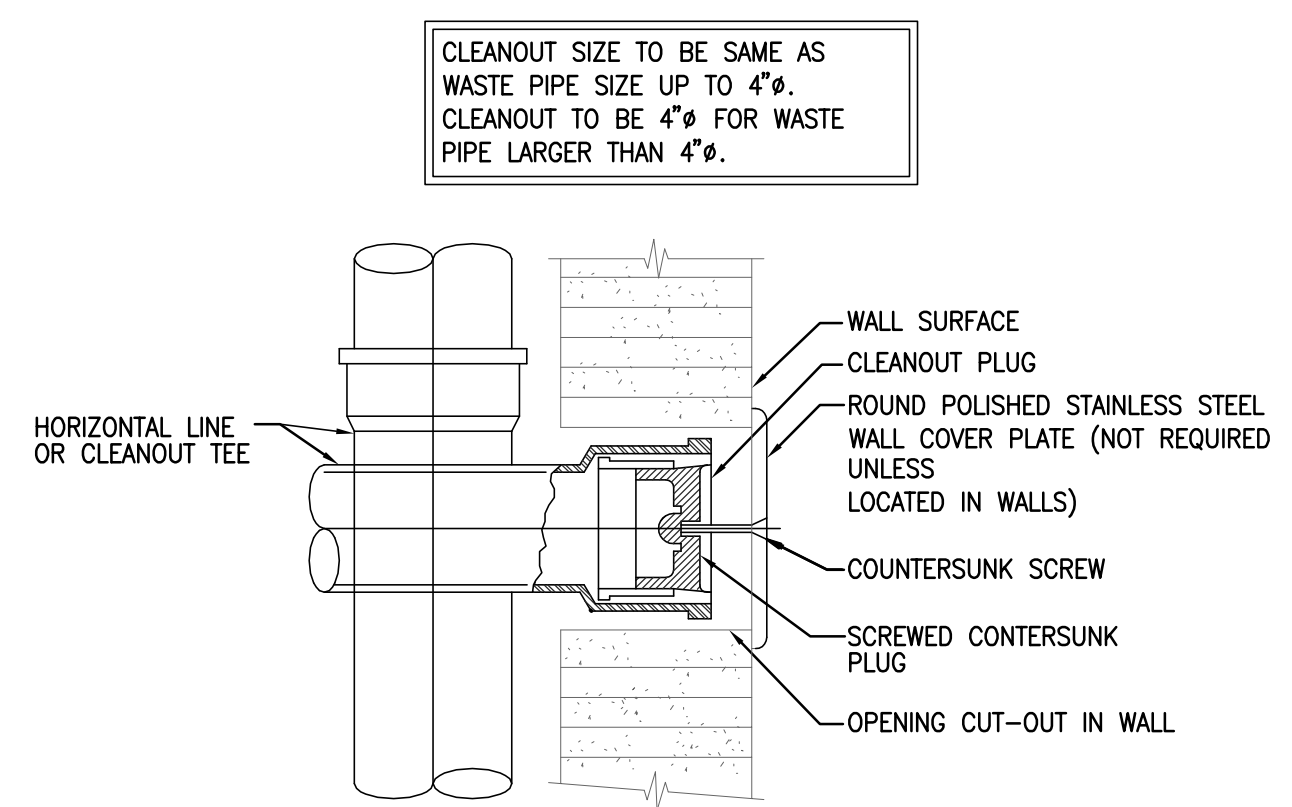
2 TYPICAL LINEAR DIFFUSER CONNECTION
SCALE: NONE



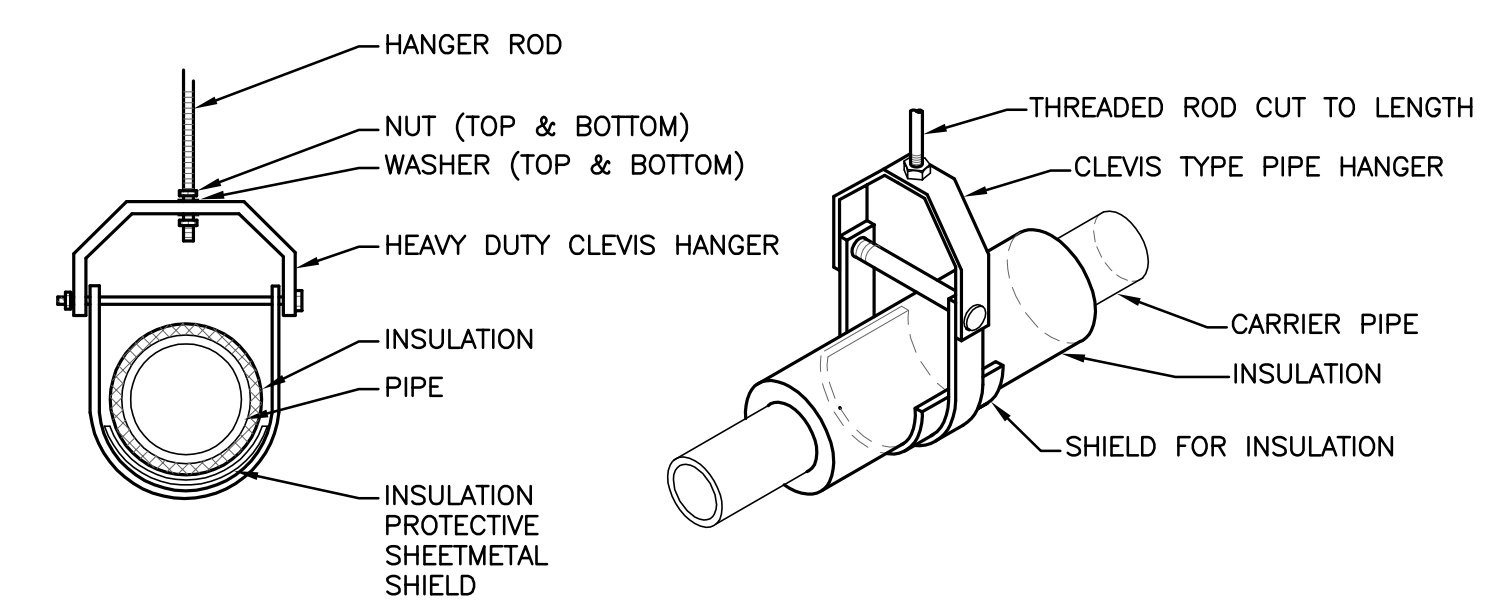
3 TYPICAL RETURN GRILLE
SCALE: NONE



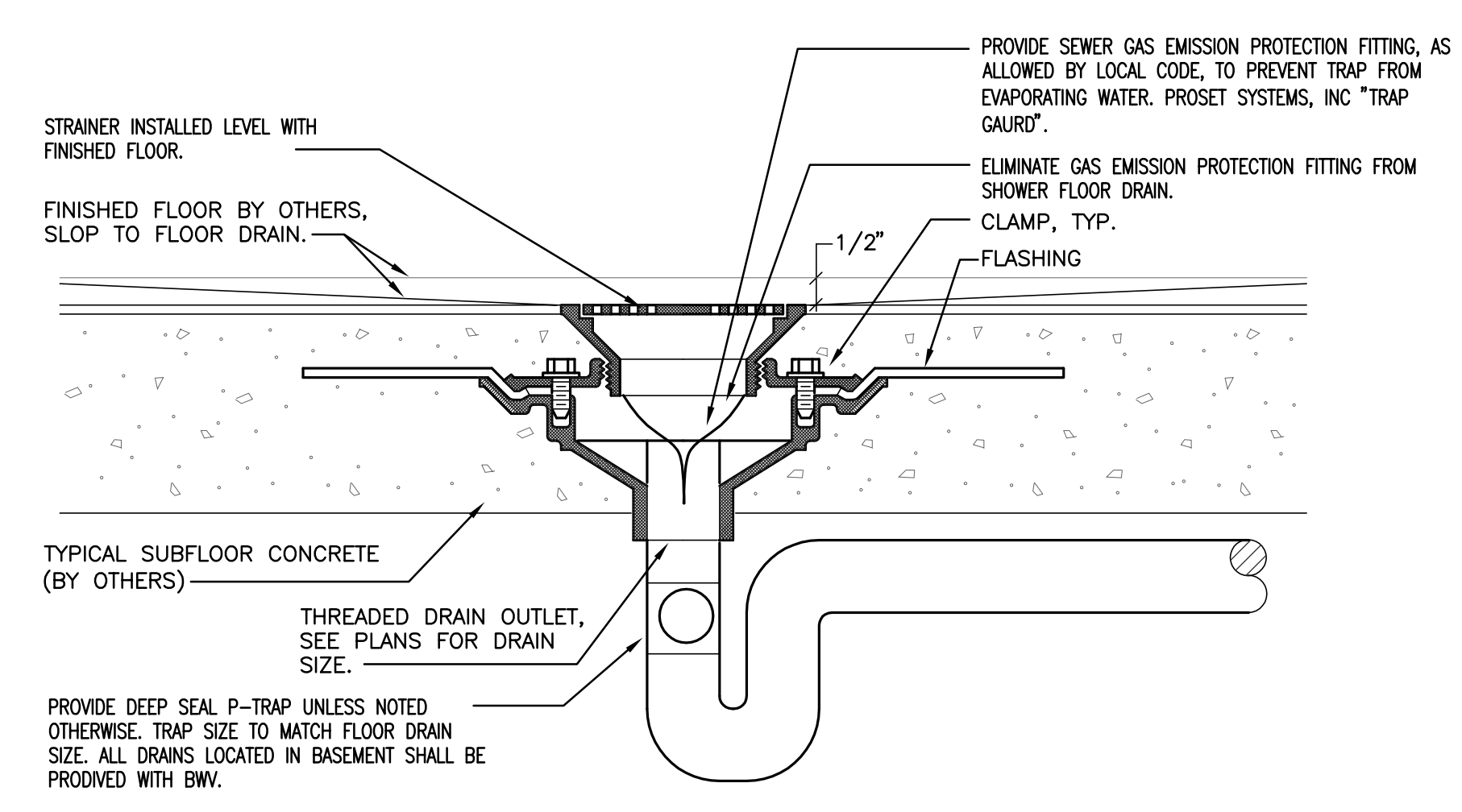
4 EXHAUST DETAIL
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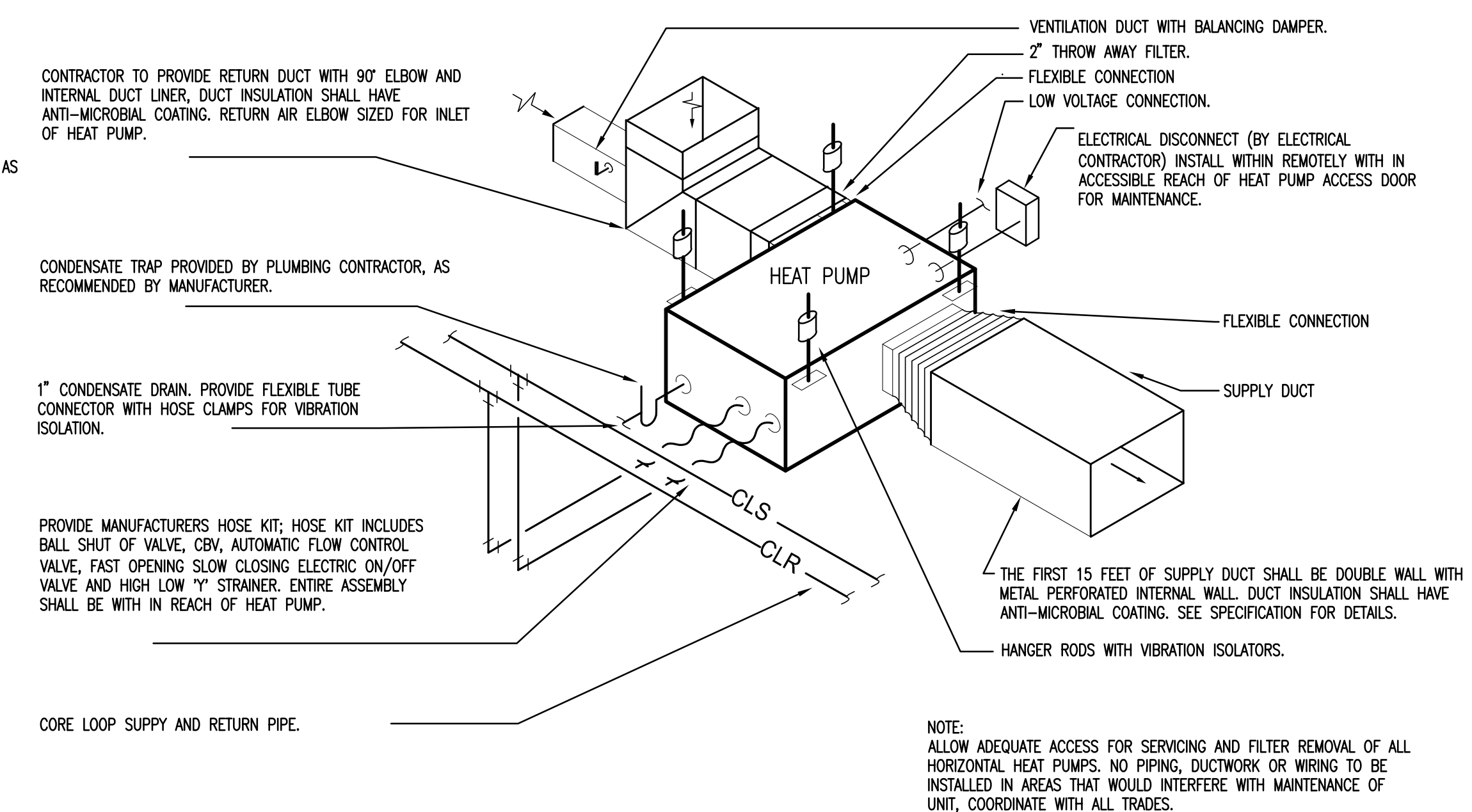
5 WALL CLEANOUT DETAIL
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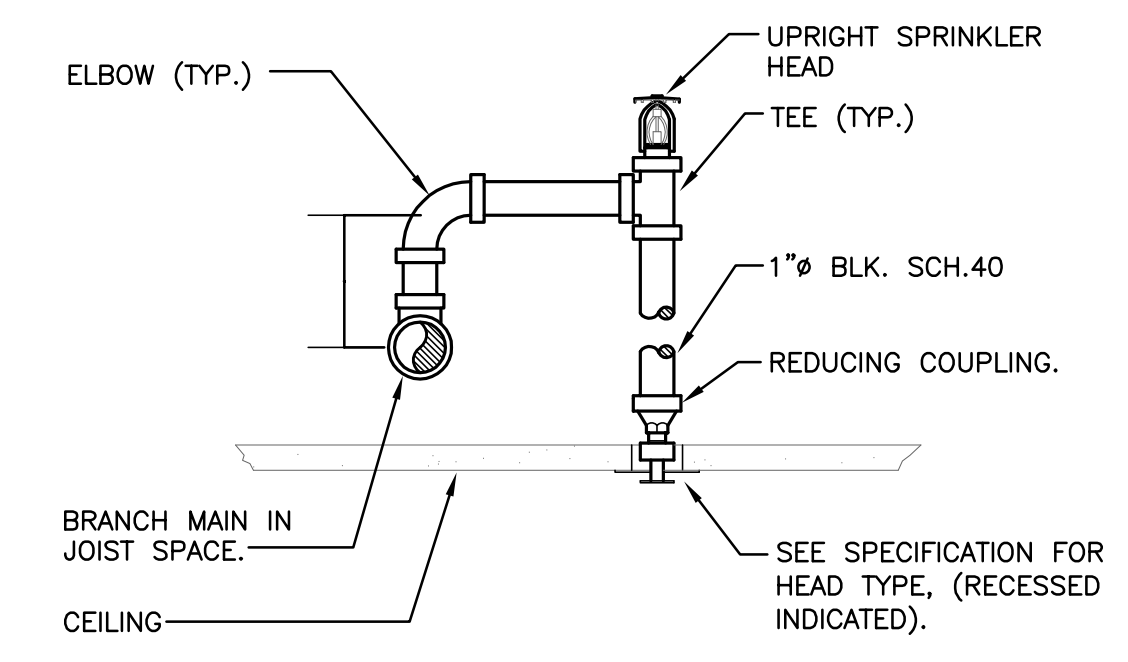
6 PIPE HANGER SUPPORT DETAIL
SCALE: NONE



7 TYPICAL FLOOR DRAIN DETAIL
SCALE: NONE



8 HEAT PUMP DETAIL
SCALE: NONE



9 SPRINKLER HEAD INSTALLATION
SCALE: NONE

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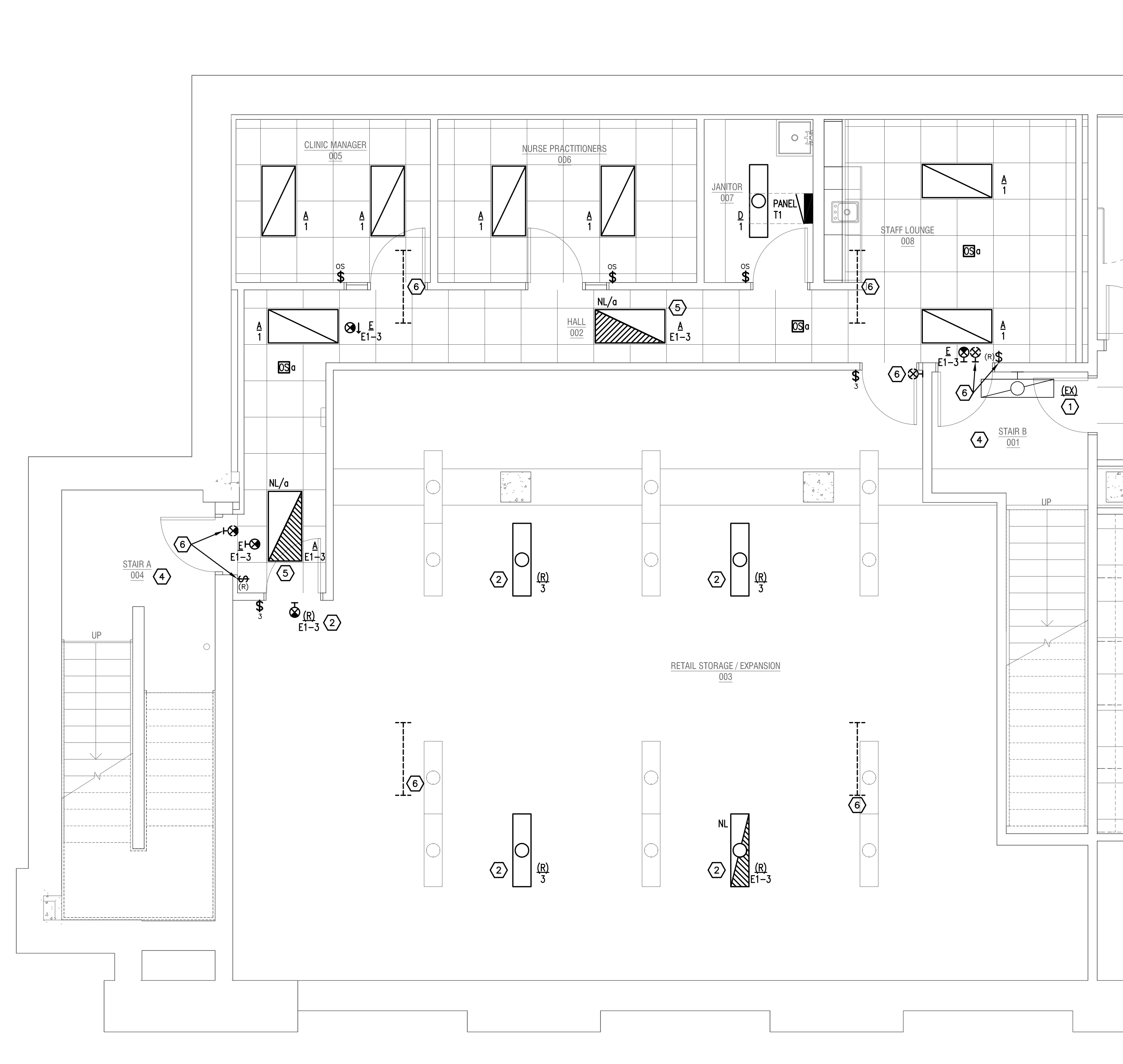
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emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN 55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

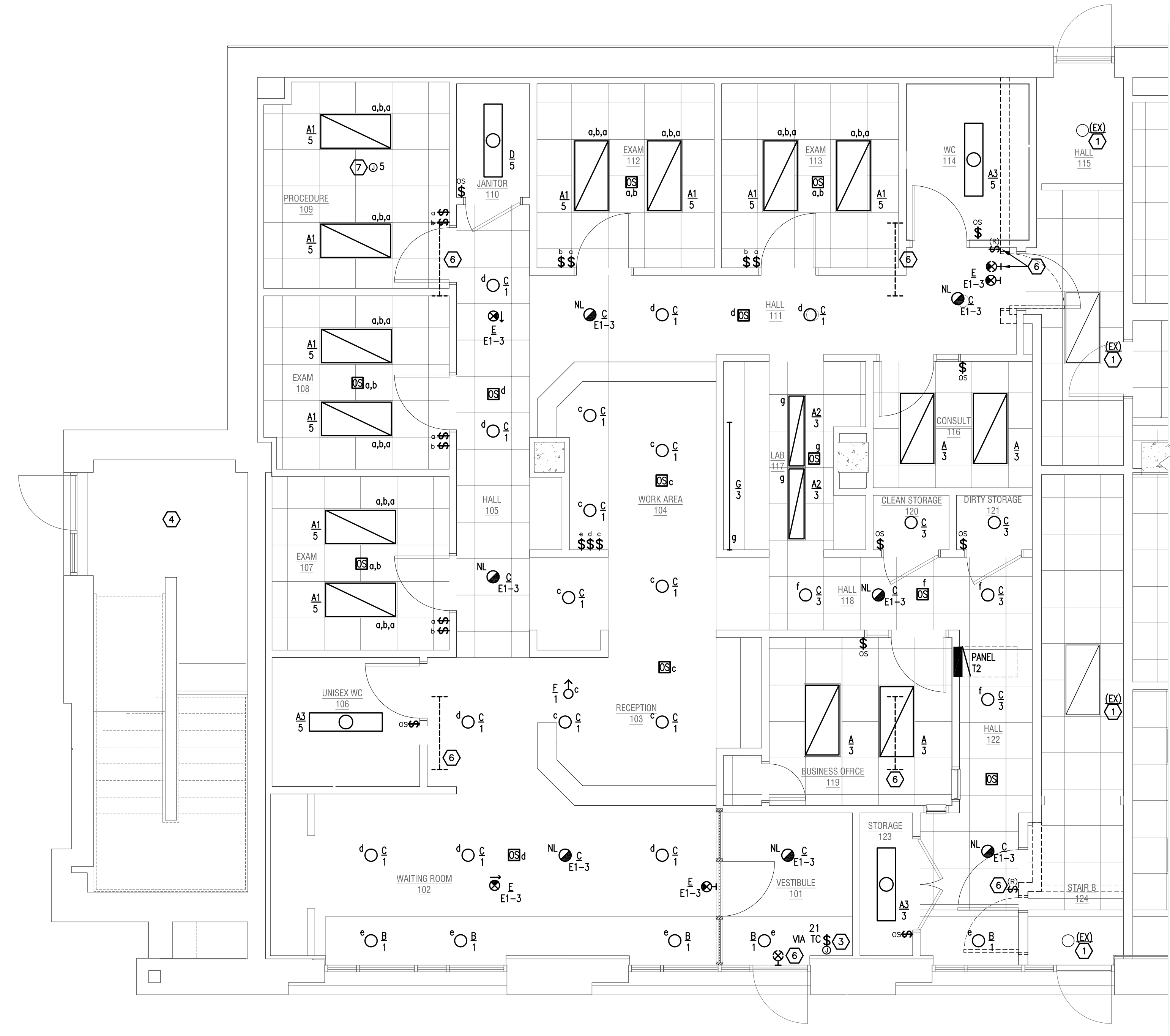
MECHANICAL DETAILS
EMANUEL CLINIC
RS EDEN
814 SOUTH 3RD STREET
MINNEAPOLIS, MN 55415

Revisions:

Date issued: 05/14/2014
Job No: CRA-1339/EP-3373



1 LOWER LEVEL LIGHTING PLAN
1/4" = 1'-0"



2 UPPER LEVEL LIGHTING PLAN
1/4" = 1'-0"

TYPE	DESCRIPTION	VOLTAGE	LAMPS		TOTAL WATTAGE	DIFFUSER	MOUNTING (NOTE 2)	MANUFACTURER (NOTE 1)	CATALOG NUMBER
			QUANTITY	TYPE					
A	2'x4' SLAMP RECESSED DIRECT/INDIRECT BASKET STYLE TROFFER	120	2	32W T8	64	PERFORATED BASKET W/ ACRYLIC OVERLAY	RECESSED	LITHONIA H.E. WILLIAMS DAYBRITE FOCAL POINT	ZVTR 3 30 ADP M/OLT GB/YRS L/RS3
A1	2'x4' SLAMP RECESSED DIRECT/INDIRECT BASKET STYLE TROFFER	120	3	32W T8	96	PERFORATED BASKET W/ ACRYLIC OVERLAY	RECESSED	LITHONIA H.E. WILLIAMS DAYBRITE FOCAL POINT	ZVTR 3 30 ADP M/OLT GB/YRS L/RS3
A2	1'x4' SLAMP RECESSED WITH FROSTED ACRYLIC DIFFUSER GRID INSTALLATION	120	2	32W T8	64	FROSTED ACRYLIC DIFFUSER	RECESSED	H.E. WILLIAMS LITHONIA DAYBRITE FOCAL POINT	NET 06 1422 AEB/ANY
A3	1'x4' SLAMP RECESSED WITH FROSTED ACRYLIC DIFFUSER FLANGE INSTALLATION	120	1	32W T8	32	FROSTED ACRYLIC DIFFUSER	FLUSH	H.E. WILLIAMS LITHONIA DAYBRITE FOCAL POINT	NET 6 14132 AEB/ANY DPK
B	1" HORIZONTAL COMPACT FLUORESCENT DOWNLIGHT W/ Baffle and Reflector	120	1	32W T8T	32	...	RECESSED	MAXLINE H.E. WILLIAMS OMEGA	HHBPL1X26R801SHD/WH
C	1" LED DOWNLIGHT WITH 3000K COLOR TEMPERATURE AND 1800 LUMEN OUTPUT, WHITE TRIM	120	1	L.E.D.	25	...	RECESSED	PRESCOUTE H.E. WILLIAMS MAXLINE	LOWLED101 R/CLED758/WY
D	2' SLAMP STRIP FLUORESCENT	120	2	32W T8	64	...	...	LITHONIA H.E. WILLIAMS DAYBRITE FOCAL POINT	C232 120 GB/YRS
E	1" x 1/2" L.E.D. EXIT LIGHT WITH RED BY ENCL LETTERS WHITE THERMOPLASTIC HOUSING UNIVERSAL MOUNTING UNIVERSAL CHEVRON ARROWS, DAMP LOCATION LISTED	120	FURNISHED WITH UNIT	L.E.D.	2	...	UNIVERSAL	LITHONIA LIT/ITAL/ARMS MCPHILBEN LIT/OUT/BLK	EXR LED/16
F	1" LED WALL WASH DOWNLIGHT 1100 LUMEN, 3000K COLOR TEMPERATURE	120	...	L.E.D.	15	...	RECESSED	PRESCOUTE H.E. WILLIAMS MAXLINE	LFALED04 4L/ESS04 3K/WY
G	L.E.D. UNDER CABINET LIGHT, LENGTHS AS REQUIRED	120	...	L.E.D.	10	...	SURFACE	LITHONIA H.E. WILLIAMS MAXLINE	UGLD
(BX)	EXISTING FIXTURE TO REMAIN	..	..	..	..	..	..	..	..
(R)	EXISTING FIXTURE TO BE RELOCATED	..	..	..	..	..	..	..	..

GENERAL NOTES:
 A. FLUORESCENT LAMP BALLAST SHALL BE ELECTRONIC, ENERGY-EFFICIENT, HIGH-POWER FACTOR, WITH MINIMUM OPERATING FREQ. OF 20,000 HZ.
 B. MANUFACTURERS: EBT, ADVANCE, MAGNETEK, KINTEC, OR APPROVED EQUAL.
 C. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE UNIT MEETING FIXTURE SCHEDULE DESCRIPTION AND SPECIFICATION REQUIREMENTS. THE FIXTURE CATALOG NUMBERS MAY NOT BE COMPLETE. USE ONLY AS A GUIDELINE.

SPECIFIC NOTES:
 1. CATALOG NUMBER INDICATES BASIC FIXTURE TYPE REQUIRED FOR THIS PROJECT. VERIFY WITH MANUFACTURER TO INCLUDE ALL OPTIONS AND ACCESSORIES REQUIRED FOR THIS INSTALLATION.
 2. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING FIXTURE LOCATION, MOUNTING AND REQUIREMENTS WITH ARCHITECTURAL PLANS, SECTIONS, ELEVATIONS, AND REFLECTED CEILING PLANS PRIOR TO ORDERING FIXTURES.

GENERAL NOTES

- A. ALL NORMAL POWER LIGHTS SHOWN ON PLAN 1/E1.0 SHALL BE CIRCUITED TO PANEL T1 UNLESS INDICATED OTHERWISE.
- B. ALL NORMAL POWER LIGHTS SHOWN ON PLAN 2/E1.0 SHALL BE CIRCUITED TO PANEL T2 UNLESS INDICATED OTHERWISE.
- C. ALL EMERGENCY LIGHTS SHOWN ON PLANS SHALL BE CIRCUITED TO EXISTING PANEL E1, LOCATED IN ROOM 153, UNLESS INDICATED OTHERWISE. UTILIZE EXISTING CIRCUIT IN SHELL SPACE AS REQUIRED.

KEYNOTES

- 1. EXISTING LIGHT FIXTURE TO REMAIN. MAINTAIN EXISTING CIRCUITING AND CONTROL.
- 2. EXISTING LIGHT FIXTURE TO BE RELOCATED. CLEAN, REPAIR, AND RELAMP AS REQUIRED. CIRCUIT AS INDICATED.
- 3. ELECTRICAL CONTRACTOR TO PROVIDE JUNCTION BOX, TOGGLE DISCONNECT SWITCH WITHIN 5 FEET OF SIGN IN CONCEALED SPACE. SIGN FURNISHED BY OTHERS. FINAL CONNECTION OF SIGNS BY ELECTRICAL CONTRACTOR. ALL OUTLETS, BOXES, CONDUITS, ETC. SHALL BE CONCEALED FROM VIEW. PROVIDE LOCK OFF DEVICE ON CIRCUIT BREAKER.
- 4. EXISTING AREA TO REMAIN. NO WORK UNLESS INDICATED OTHERWISE.
- 5. ONE LAMP SHALL BE CONNECTED TO THE EMERGENCY CIRCUIT AS A NIGHT LIGHT, THE OTHER LAMP SHALL BE SWITCHED WITH OTHER HALLWAY FIXTURES. PROVIDE 2 BALLASTS IN FIXTURE.
- 6. DISCONNECT EXISTING FIXTURE OR DEVICE. REMOVE NON-EMERGENCY CONDUIT AND WIRING TO NEXT "UPSTREAM" FIXTURE OUTSIDE TENANT FOOTPRINT. REMOVE CONDUIT AND WIRING TO PANEL IF FIXTURE WAS ON A DEDICATED CIRCUIT. UPDATE PANELBOARD DIRECTORY. REUSE EMERGENCY CIRCUIT CONDUIT AND WIRING IN TENANT SPACE AS NEEDED.
- 7. INSTALL CEILING MOUNTED EXAM LIGHT FURNISHED BY OTHERS AND MAKE FINAL CONNECTIONS. FIXTURE IS CONTROLLED BY INTEGRAL SWITCH.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly registered Engineer under the laws of the State of Minnesota.

Signature: _____
 Date: 12/20/13
 Reg. No: _____

NOT FOR CONSTRUCTION

Consultant:

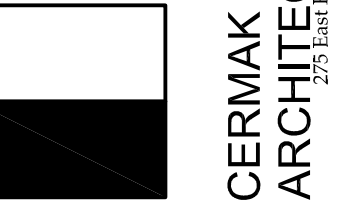
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E1.0



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly registered Engineer under the laws of the State of Minnesota.

Signed: _____

Date: 12/20/13

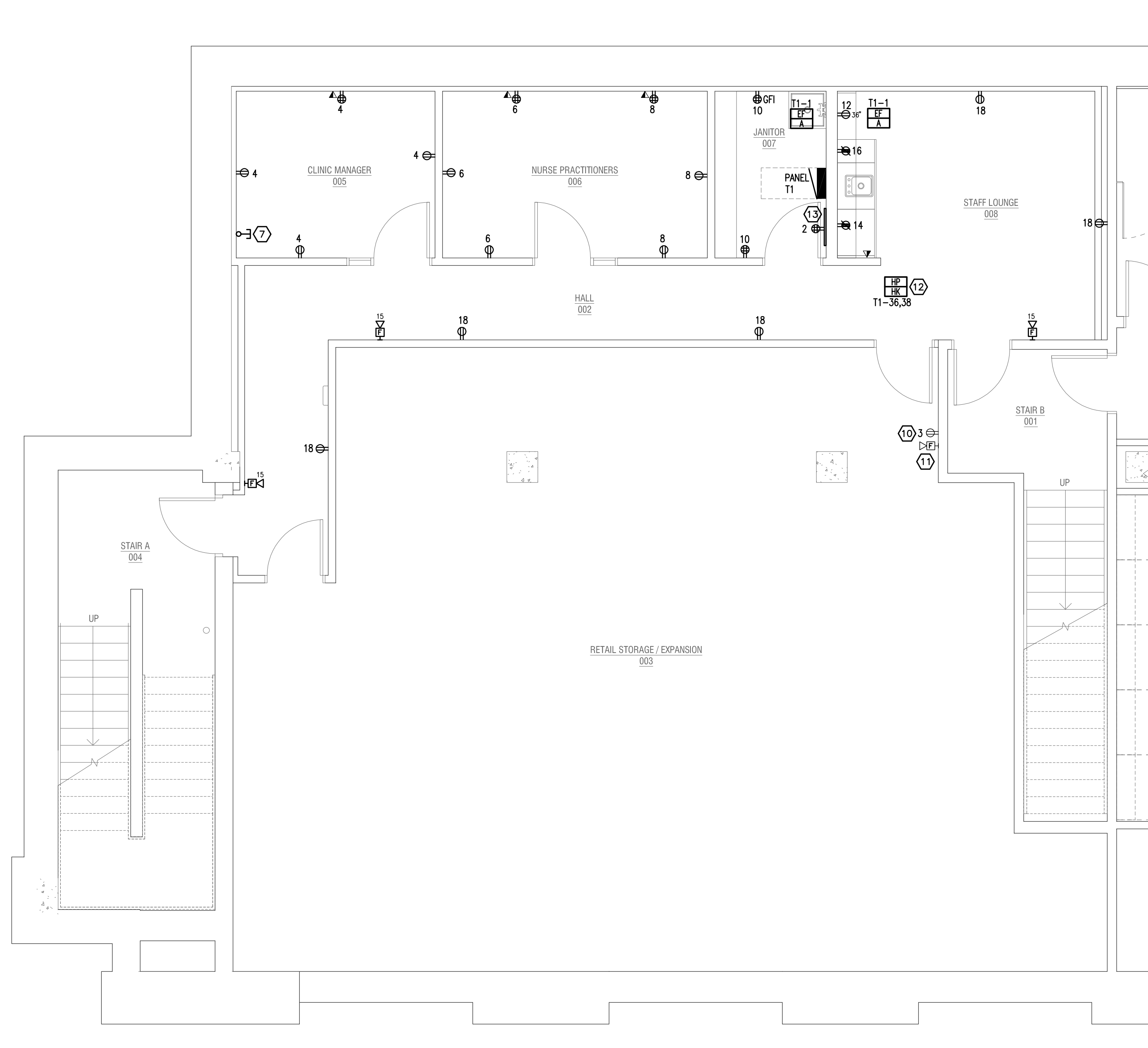
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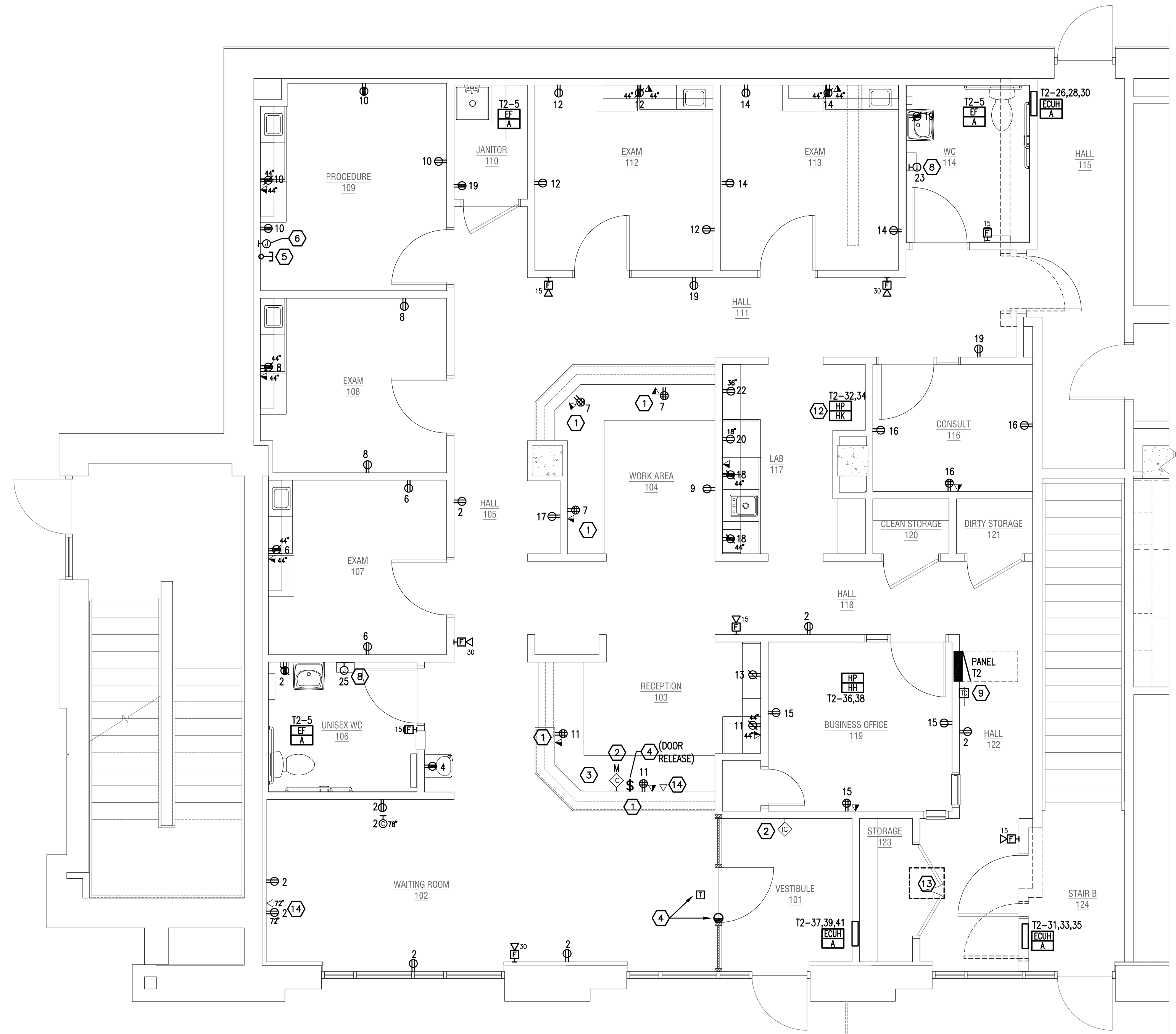
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1 LOWER LEVEL POWER AND AUX PLAN
1/4" = 1'-0"



2 UPPER LEVEL POWER AND AUX PLAN
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PANEL SCHEDULE											
PANEL: T1		LOCATION: RM 007		VOLTS: 208 Y1 120		Ph: 3-Phase		W: 4-Wire			
AMP MAIN BRKR: -		AMP MLC: 225		AIC RATING: 22,000		MOUNT: SURFACE		FED FROM: MSA			
LOAD	CR	F	P	LOAD	CR	F	P	LOAD	CR	F	P
GROUP DESCRIPTION	VA	BRK	F	GROUP DESCRIPTION	VA	BRK	F	GROUP DESCRIPTION	VA	BRK	F
LOWER LEVEL LIGHTING (2) FANS EFA	522	20	1	1	A	2	1	20	300	TELECOMM RECEPTACLES	
RETAIL STORAGE EXPANSION LTGRCC	357	20	1	3	B	4	1	20	900	CLINIC MGR RM 005 RECEPTACLES	
SPARE	20	1	5	C	6	1	20	720	NURSE PRACT. RM 006 RECEPTACLES		
SPARE	20	1	7	A	8	1	20	720	NURSE PRAC. RM 008 RECEPTACLES		
SPARE	20	1	9	B	10	1	20	720	JANITOR RM 007 RECEPTACLES		
SPARE	20	1	11	C	12	1	20	1020	STAFF LOUNGE RM 008 RECEPTACLES		
SPARE	20	1	13	A	14	1	20	1100	STAFF LOUNGE RM 009 MICROWAVE		
SPARE	20	1	15	B	16	1	20	180	STAFF LOUNGE RM 008 RECEPTACLES		
SPARE	20	1	17	C	18	1	20	900	HALL 000/LAUNGE 008 RECEPTACLES		
SPARE	20	1	19	A	20	1	20	SPARE			
SPARE	20	1	21	B	22	1	20	SPARE			
SPARE	20	1	23	C	24	1	20	SPARE			
SPARE	20	1	25	A	26	1	20	SPARE			
SPARE	20	1	27	B	28	1	20	SPARE			
SPARE	20	1	29	C	30	1	20	SPARE			
SPARE	20	1	31	A	32	1	20	SPARE			
SPARE	20	1	33	B	34	1	20	SPARE			
SPARE	20	1	35	C	36	2	50	3224	HP/HK HEAT PUMP (EXISTING) LOUNGE 008		
SPARE	20	1	37	A	38	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	39	B	40	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	41	C	42	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	43	A	44	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	45	B	46	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	47	C	48	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	49	A	50	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	51	B	52	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	53	C	54	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	55	A	56	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	57	B	58	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	59	C	60	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	61	A	62	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	63	B	64	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	65	C	66	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	67	A	68	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	69	B	70	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	71	C	72	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	73	A	74	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	75	B	76	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	77	C	78	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	79	A	80	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	81	B	82	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	83	C	84	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	85	A	86	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	87	B	88	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	89	C	90	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	91	A	92	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	93	B	94	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	95	C	96	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	97	A	98	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	99	B	100	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	101	C	102	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	103	A	104	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	105	B	106	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	107	C	108	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	109	A	110	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	111	B	112	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	113	C	114	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	115	A	116	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	117	B	118	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	119	C	120	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	121	A	122	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	123	B	124	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	125	C	126	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	127	A	128	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
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SPARE	20	1	143	C	144	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	145	A	146	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
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SPARE	20	1	149	C	150	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	151	A	152	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	153	B	154	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	155	C	156	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	157	A	158	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	159	B	160	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	161	C	162	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	163	A	164	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	165	B	166	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	167	C	168	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
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SPARE	20	1	171	B	172	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
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SPARE	20	1	175	A	176	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	177	B	178	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	179	C	180	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	181	A	182	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	183	B	184	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
SPARE	20	1	185	C	186	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
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SPARE	20	1	197	C	198	2	50	3224	HP/HK HEAT PUMP (EXISTING) LAB 117		
SPARE	20	1	199	A	200	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
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SPARE	20	1	205	A	206	2	50	3224	HP/HK HEAT PUMP (NEW) OFFICE 119		
SPARE	20	1	207	B	208	2	50	3224	HP/HK HEAT PUMP (NEW) VESTIBULE 101		
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SPARE	20	1	215	C							