

**Department of Licensing and Regulatory Affairs**

1st Floor Ottawa Building  
611 W. Ottawa Street  
Lansing, MI 48933



**Final Report - Resubmittal Requested**

**Application Number: PR2023BCC-001595**

**Report Date: 10/24/2023**

**Description : BLDG23-01596 Renovate Detroit Light Guard Armory**

**Address : 4400 8 MILE RD, DETROIT, MI, 48234**

**Record Type : Bureau of Construction Codes Plan Review Application**

**Document Filename : 26A8023010 Renovate Armory DLG LARA Drawing Set REV001.pdf**

Reviewer Contact Information:

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Neil Pline	PlineN@michigan.gov	517-280-9516
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General Comments

Corrections in the following table need to be applied before a permit is issued

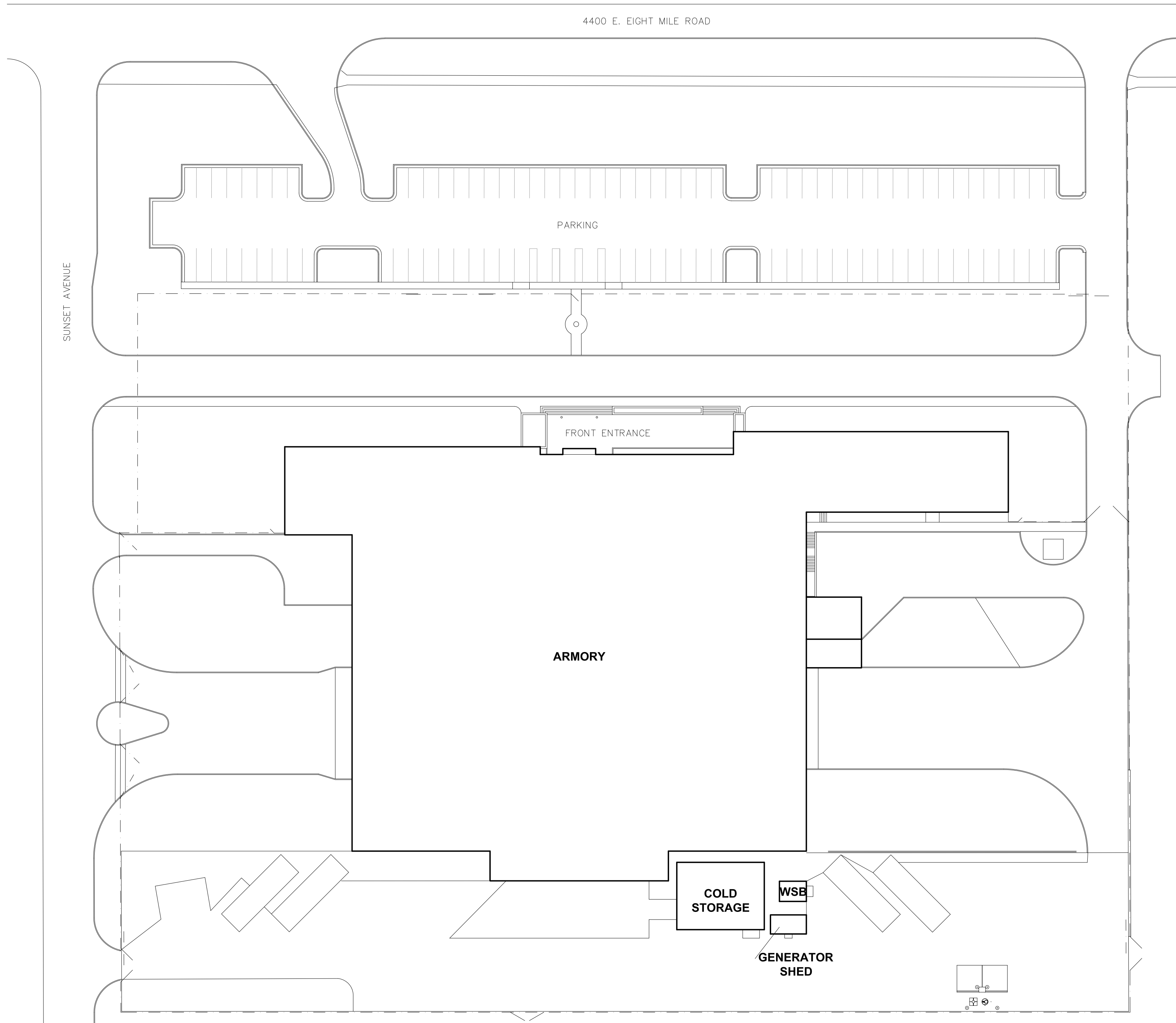
Comment ID	Page Ref	Reviewer : Department	Review Comments
1	X1	Kevin Oglesbee : Building	MRHB2015 - 1505.2 Maintenance of means of egress. Required means of egress shall be maintained at all times during construction, demolition, remodeling or alterations and additions to any building.
2	E2	Neil Pline : Electrical	NEC, Section 406.9 - Receptacles in wet and damp locations are required to be a listed weather resistant type. Provide for GFCI's in locker room.
5	E10	Neil Pline : Electrical	NEC, Section 700.4 - An emergency system shall have adequate capacity and rating for all loads to be operated simultaneously. Generator is undersized. Provide all breaker sizes on generator.

Comment ID	Page Ref	Reviewer : Department	Review Comments
7	E10	Neil Pline : Electrical	NEC, Section 445.18 - Generators other than cord- and plug-connected portable shall have one or more disconnecting means. Each disconnecting means shall simultaneously open all associated ungrounded conductors. Each disconnecting means shall be lockable in the open position in accordance with 110.25. Generators shall have provisions to shut down the prime mover. The means of shutdown shall comply with all of the following: (1) Be equipped with provisions to disable all prime mover start control circuits to render the prime mover incapable of starting. (2) Initiate a shutdown mechanism that requires a mechanical reset. The provisions to shut down the prime mover shall be permitted to satisfy the requirements of 445.18(A) where is it capable of being locked in the open position in accordance with 110.25. Generators with greater than 15 KW rating shall be provided with an additional requirement to shut down the prime mover. This additional shutdown means shall be located outside the equipment room or generator enclosure and shall also meet the requirements of 445.18(B)(1) and (B)(2).
8	E10	Neil Pline : Electrical	NEC, Sections 250.3, 250.4, 250.8, 250.24, 250.50, 250.52, and table 250.66 - Properly sized and type of service grounding electrode conductors are required from the service equipment to all electrodes that are present. Provide a grounding detail with the connection at the ATS. Remove the connection at MDB.
9	E10	Neil Pline : Electrical	NEC, Sections 215.2, Table 310.15(B)(16), and Chapter 9 - Proper number of conductors, size, type and conduit size is required for feeders less than 600 volts. Provide conductor sizes from ATS to MDB.
15	E10	Neil Pline : Electrical	NEC, Sections 110.3(A) and (B) - The wiring method(s) used shall be suitable for the installation and use in conformity with the provisions of the NEC. Listed or labeled equipment shall be used or installed in accordance with any instructions included in the listing or labeling. The installation of the ATS to MDB shall not void the listing and labeling of that equipment.
16	E10	Neil Pline : Electrical	Part 8 Rules, Section 80.21 - Diagrams of feeders are required showing demand loads, connected loads, demand factors used, and load calculations for each panel individually and the total service. Provide existing load calculation for the total service of MDP.
17	E10	Neil Pline : Electrical	Electrical plan review will proceed when all discrepancies are addressed on signed and seal construction drawings.
10	E12	Neil Pline : Electrical	NEC, Article 515 - Bulk storage plants shall comply with code requirements for hazardous location wiring methods. Seal-offs are required on all conduits.
11	M2	Daniel Morris : Mechanical	MMC, Section 1011.1 - Tests. Upon completion of the assembly and installation of boilers and pressure vessels, acceptance tests shall be conducted in accordance with the requirements of the ASME Boiler and Pressure Vessel Code or the manufacturer's requirements, and such tests shall be approved. A copy of all test documents along with all manufacturer's data reports required by the ASME Boiler and Pressure Vessel Code shall be submitted to the code official.
12	M2	Daniel Morris : Mechanical	MMC, Section 1005.2 - Potable water supply. The water supply to all boilers shall be connected in accordance with the International Plumbing Code.
13	M2	Daniel Morris : Mechanical	MMC, Section 1004.1 - Standards. Boilers shall be designed, constructed and certified in accordance with the ASME Boiler and Pressure Vessel Code, Section I or IV. Controls and safety devices for boilers with fuel input ratings of 12,500,000 Btu/hr (3,662,500 W) or less shall meet the requirements of ASME CSD-1. Controls and safety devices for boilers with inputs greater than 12,500,000 Btu/hr (3,662,500 W) shall meet the requirements of NFPA 85. Packaged oil-fired boilers shall be listed and labeled in accordance with UL 726. Packaged electric boilers shall be listed and labeled in accordance with UL 834. Solid-fuel-fired boilers shall be listed and labeled in accordance with UL 2523.

Comment ID	Page Ref	Reviewer : Department	Review Comments
14	P2	Allon Robbins : Plumbing	<p>MPC, Section 405.3.5 - Each urinal utilized by the public or employees shall occupy a separate area with walls or partitions to provide privacy. The horizontal dimension between walls or partitions at each urinal shall be not less than 30 inches (762 mm). The walls or partitions shall begin at a height not greater than 12 inches (305 mm) from and extend not less than 60 inches (1524 mm) above the finished floor surface. The walls or partitions shall extend from the wall surface at each side of the urinal not less than 18 inches (457 mm) or to a point not less than 6 inches (152 mm) beyond the outermost front lip of the urinal measured from the finished backwall surface, whichever is greater. Exceptions: 1) Urinal partitions shall not be required in a single-occupant or family/assisted-use toilet room with a lockable door. 2) 2. Toilet rooms located in child day care facilities and containing two or more urinals shall be permitted to have one urinal without partitions.</p>

# DETROIT LIGHTGUARD ARMORY - RENOVATE ARMORY

4400 E. EIGHT MILE ROAD DETROIT, MI. 48234-1003  
**PROJECT NO. 26A8023010**



**BUILDING**  
 These documents are approved for compliance with the STATE OF MICHIGAN BUILDING CODE subject to field inspection and the conditions of approval.

**1 SITE PLAN**  
 X1 SCALE 1" = 40'

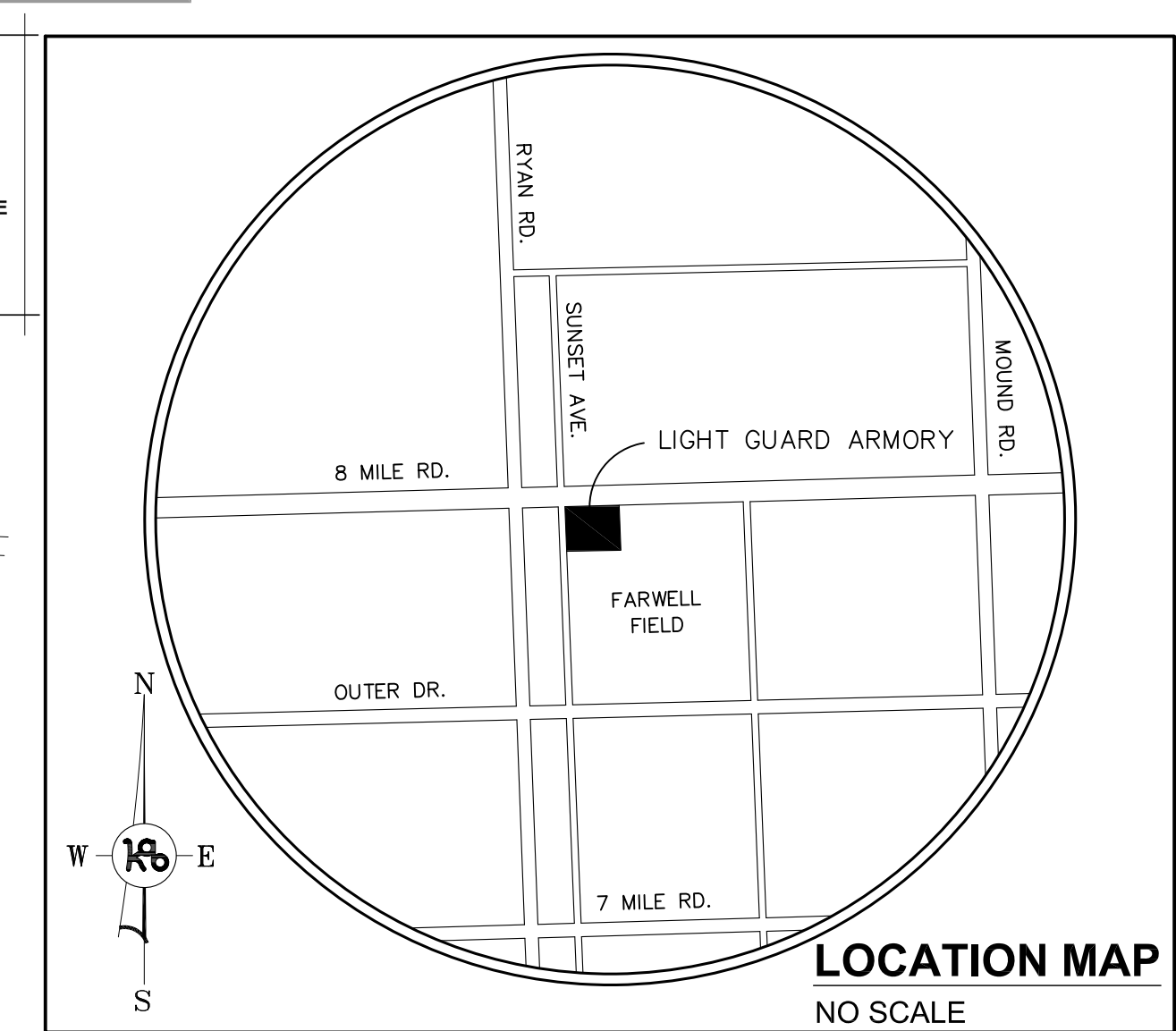
**FOOTING/FOUNDATION**  
 These documents are approved for compliance with the STATE OF MICHIGAN BUILDING CODE FOOTING/FOUNDATION ONLY subject to field inspection and the conditions of approval.

**PLUMBING**  
 These documents are approved for compliance with the STATE OF MICHIGAN PLUMBING CODE subject to field inspection and the conditions of approval.

STATE OF MICHIGAN  
 KURT M. MAIBERGER  
 ENGINEER  
 No. 58932

**MECHANICAL**  
 These documents are approved for compliance with the STATE OF MICHIGAN MECHANICAL CODE subject to field inspection and the conditions of approval.

**2 SITE PLAN**  
 A2 NOT TO SCALE



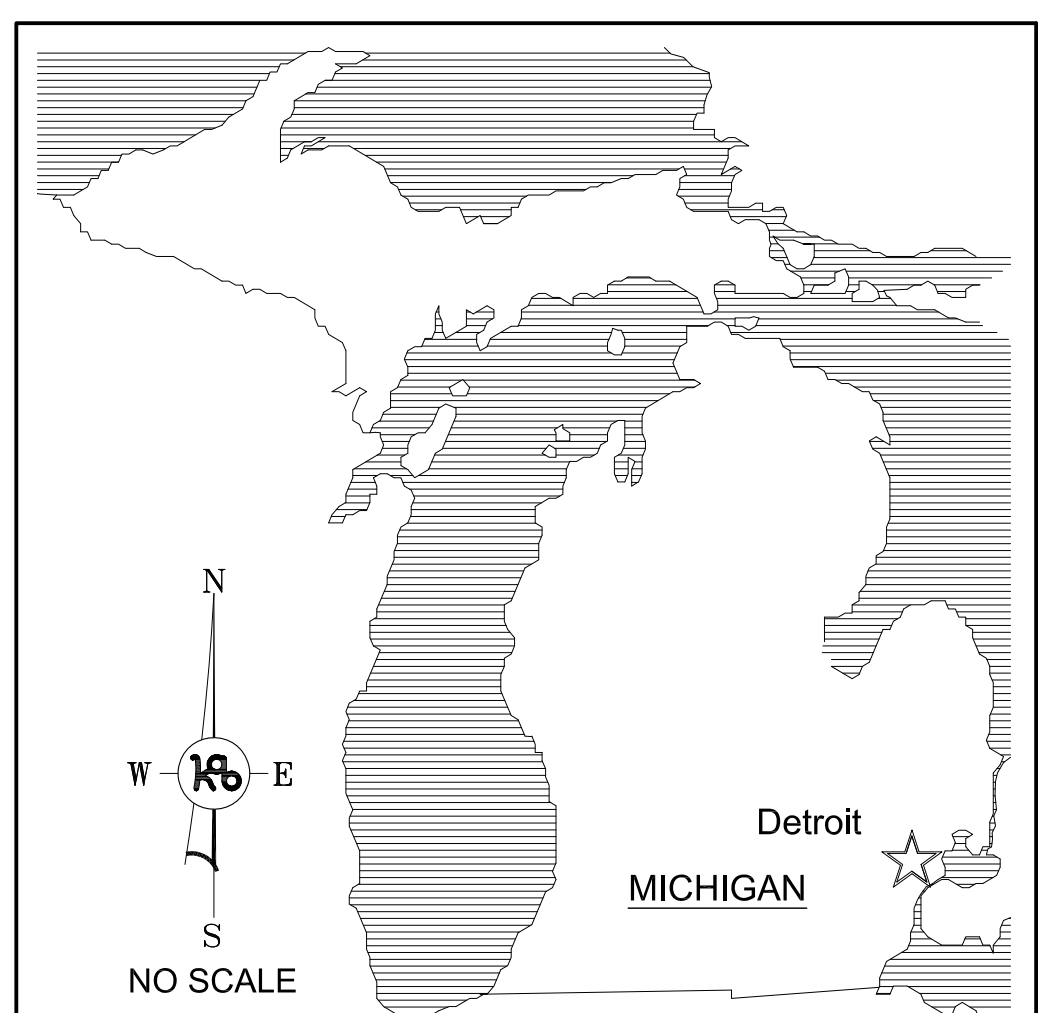
**DRAWING SHEET CONTENTS**

Sheet No.	Drawing Title
X1	TITLE AND SITE LOCATION SHEET
G1	FIRST FLOOR & SECOND FLOOR CODE COMPLIANCE PLAN AND INFORMATION
G2	BASEMENT/LOWER FLOOR PLAN CODE COMPLIANCE PLAN AND INFORMATION
C1	SITE SESC PLAN AND MISC SESC DETAILS; PARTIAL ARMORY SITE PLAN; AREA OF EXTERIOR WORK
C2	EXISTING/DEMOLITION SITE GRADING PLAN; PARTIAL ARMORY SITE PLAN
C3	NEW SITE GRADING PLAN; PARTIAL ARMORY SITE PLAN
C4	RETAINING WALL SECTION ELEVATION DETAILS
C5	NEW DIESEL TANK LOCATION AND MISC DETAILS
C6	GENERATOR FOUNDATION PLAN AND DETAILS
A1	BUILDING FLOOR PLANS - LOCATION PLAN
A2	AREA 1 WORK - COAL BIN CLOSURE
A3	AREA 2 WORK - NEW LACTATION ROOM, INCLUDING PLUMBING FOR THIS ROOM.
A4	AREA 3 - NEW DOOR AT MEDICAL LAB AREA
A5	AREA 4 - BASEMENT CLASSROOM ALTERATION PLANS DETAILS
A6	AREA 4 - BASEMENT CLASSROOM ALTERATION PLANS AND DETAILS
A7	AREA 5 - SECOND FLOOR ALTERATION PLANS AND DETAILS
A7a	AREA 5 - SECOND FLOOR ALTERATION PLANS AND DETAILS
A7b	AREA 5 - SECOND FLOOR ALTERATION PLANS AND DETAILS
A8	AREA 6 - SECOND FLOOR RESTROOM ALTERATIONS AND DETAILS
A9	AREA 7 - FIRST FLOOR OFFICE AREA ALTERATIONS AND DETAILS
A10	AREA 7 - FIRST FLOOR OFFICE AREA ALTERATIONS AND DETAILS
A11	AREA 8 - FIRST FLOOR RESTROOM/SHOWER ROOM ALTERATIONS AND DETAILS
A12	AREA 8 - FIRST FLOOR RESTROOM/SHOWER ROOM ALTERATIONS AND DETAILS
A12a	AREA 8 - FIRST FLOOR RESTROOM/SHOWER ROOM ALTERATIONS AND DETAILS
A13	AREA 9 WORK - BASEMENT WINDOW TO BE FILLED IN, DOOR SCHEDULE, DOOR HARDWARE SCHEDULE
A14	NOT USED
A15	ROOM/BUILDING SIGNAGE - FIRST FLOOR PLAN
A15a	ROOM/BUILDING SIGNAGE - BASEMENT FLOOR PLAN
A15b	ROOM/BUILDING SIGNAGE - SECOND FLOOR PLAN AND SIGNAGE DETAILS
P1	AREA 8 - FIRST FLOOR RESTROOM/SHOWER PLUMBING PLANS AND DETAILS
P2	AREA 8 - FIRST FLOOR RESTROOM/SHOWER PLUMBING PLANS AND DETAILS
P3	AREA 5 & 6 - SECOND FLOOR PLUMBING PLANS AND DETAILS
M1	BASEMENT CLASSROOM MECHANICAL ALTERATIONS
M2	MECHANICAL DETAILS SECOND FLOOR AREA
M3	MECHANICAL DETAILS FIRST FLOOR RESTROOM AND NEW LACTATION ROOM ALTERATIONS
M4	MECHANICAL ALTERATIONS - CRAWL SPACE PLAN AND BOILER ROOM PLAN
M5	MECHANICAL SCHEDULES AND DETAILS
M6	ENERGY MANAGEMENT DETAILS, SCHEDULES AND NOTES
M7	DDC SCHEDULE, SCHEMATIC, NOTES AND DETAILS
E1	AREAS OF WORK
E2	FIRST FLOOR RESTROOM/SHOWER ROOM ELECTRICAL ALTERATIONS
E3	FIRST FLOOR OFFICE AREA ELECTRICAL ALTERATIONS
E4	FIRST FLOOR COVID DOOR & DETAILS
E5	BASEMENT CLASSROOM AREA ELECTRICAL ALTERATION
E6	BASEMENT AREA ELECTRICAL GEAR WORK
E7	GENERATOR BUILDING ELECTRICAL WORK
E8	SECOND FLOOR ELECTRICAL ALTERATIONS
E9	EXISTING ELECTRICAL ONE-LINE DIAGRAMS
E10	PROPOSED ELECTRICAL ONE-LINE DIAGRAMS
E11	SCHEDULES & DETAILS
E12	GENERATOR & BOILER ROOM AREAS RELATED DETAILS

**DAILY INSPECTIONS:**  
 THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR TAKING **DAILY DIGITAL PHOTOS** (\*.JPG) OF THE CONSTRUCTION PROGRESS. THESE DIGITAL PHOTOS WILL BE A PART OF THE **ELECTRONIC** DAILY PROGRESS INSPECTION REPORTS SPECIFIED TO BE **COMPLETED EACH DAY**. UPON COMPLETION OF THE PROJECT AND PRIOR TO FINAL PAYMENT ALL DIGITAL PHOTOS SHALL BE TURNED OVER TO DMVA PROJECT MANAGER ON DIGITAL MEDIA SUCH AS CDs OR DVDs INCLUDED IN THE CLOSEOUT DOCUMENTS.

**GENERAL NOTES:**

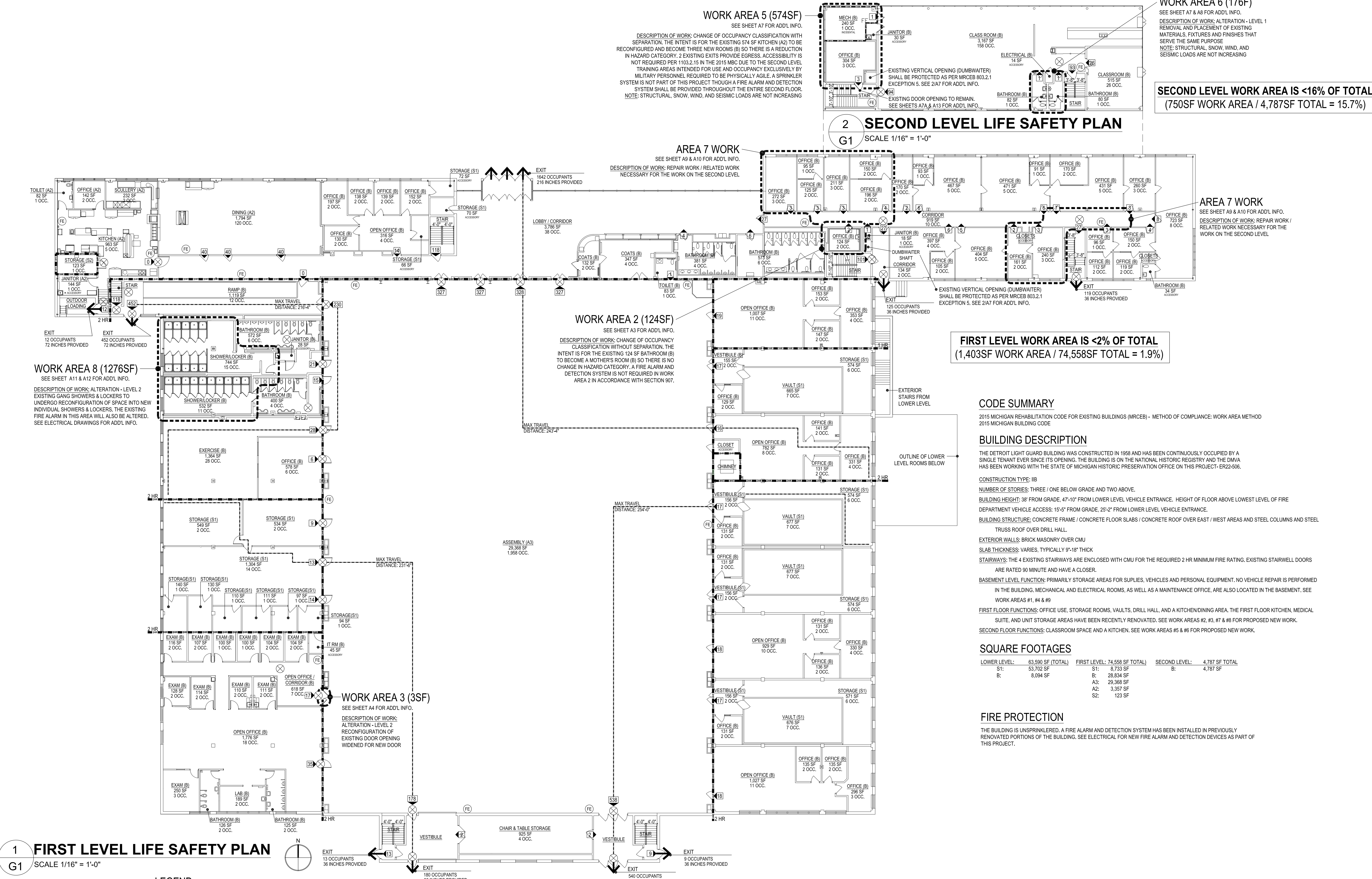
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE PRIOR TO BIDDING TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING HIS SUBCONTRACTORS AND SUPPLIERS ALL THE NECESSARY CONTRACT DOCUMENTS TO ENSURE THEY INCLUDE ALL ITEMS IN THEIR BID THAT ARE WITHIN THEIR DISCIPLINE.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL WORK REQUIRED AND PERFORMED TO CARRY OUT THE INTENT OF THIS PROJECT, INCLUDING THAT WORK REQUIRED AND PERFORMED BY THE SUBCONTRACTORS.
- THE GENERAL CONTRACTOR SHALL HAVE A RESPONSIBLE REPRESENTATIVE FROM THEIR COMPANY ON SITE AT ALL TIMES DURING HIS COMPANY'S WORK, OR THE WORK OF ONE OF THE SUBCONTRACTORS. THIS REPRESENTATIVE SHALL HAVE ON SITE, HIS OWN COPY OF THE CONTRACT SPECIFICATIONS, DRAWINGS AND DMVA APPROVED SHOP DRAWINGS.
- DISCREPANCIES FOUND BETWEEN THE SPECIFICATIONS AND THE DRAWINGS SHALL BE SUBMITTED TO DMVA IN THE FORM OF AN RFI FOR CLARIFICATION PRIOR TO ANY WORK INVOLVING THIS DISCREPANCY.
- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.



STATE OF MICHIGAN  
 DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET  
 FACILITIES AND BUSINESS SERVICES ADMINISTRATION  
**DESIGN AND CONSTRUCTION DIVISION**  
 ADAM LACHT, P.E., DIRECTOR

**RENOVATE ARMORY**  
 DEPARTMENT OF MILITARY AND VETERANS AFFAIRS  
 DETROIT LIGHT GUARD ARMORY DETROIT, MICHIGAN

DESIGNED	DATE	ISSUED FOR	IDENTIFICATION NO.	SHEET
K.A.B.	AUG 2021	PRELIMINARY	26A8023010	X1
K.A.B.	MAY 2023	CONSTRUCTION		
B.A.B.		FINAL RECORD		
B.A.B.		APPROVED		



**1 FIRST LEVEL LIFE SAFETY PLAN**  
SCALE 1/16" = 1'-0"

**2 SECOND LEVEL LIFE SAFETY PLAN**  
SCALE 1/16" = 1'-0"

**WORK AREA 6 (176F)**  
SEE SHEET A7 & A8 FOR ADDL. INFO.  
DESCRIPTION OF WORK: ALTERATION - LEVEL 1  
REMOVAL AND PLACEMENT OF EXISTING MATERIALS, FIXTURES AND FINISHES THAT SERVE THE SAME PURPOSE  
NOTE: STRUCTURAL, SNOW, WIND, AND SEISMIC LOADS ARE NOT INCREASING

**WORK AREA 5 (574SF)**  
SEE SHEET A7 FOR ADDL. INFO.  
DESCRIPTION OF WORK: CHANGE OF OCCUPANCY CLASSIFICATION WITH SEPARATION. THE INTENT IS FOR THE EXISTING 574 SF KITCHEN (A2) TO BE RECONFIGURED AND BECOME THREE NEW ROOMS (B) SO THERE IS A REDUCTION IN HAZARD CATEGORY. 2 EXISTING EXITS PROVIDE EGRESS. ACCESSIBILITY IS NOT REQUIRED PER 1103.2.15 IN THE 2015 IBC DUE TO THE SECOND LEVEL TRAINING AREAS INTENDED FOR USE AND OCCUPANCY EXCLUSIVELY BY MILITARY PERSONNEL REQUIRED TO BE PHYSICALLY AGILE. A SPRINKLER SYSTEM IS NOT PART OF THIS PROJECT THOUGH A FIRE ALARM AND DETECTION SYSTEM SHALL BE PROVIDED THROUGHOUT THE ENTIRE SECOND FLOOR.  
NOTE: STRUCTURAL, SNOW, WIND, AND SEISMIC LOADS ARE NOT INCREASING

**SECOND LEVEL WORK AREA IS <16% OF TOTAL**  
(750SF WORK AREA / 4,787SF TOTAL = 15.7%)

**AREA 7 WORK**  
SEE SHEET A9 & A10 FOR ADDL. INFO.  
DESCRIPTION OF WORK: REPAIR WORK / RELATED WORK NECESSARY FOR THE WORK ON THE SECOND LEVEL

**AREA 7 WORK**  
SEE SHEET A9 & A10 FOR ADDL. INFO.  
DESCRIPTION OF WORK: REPAIR WORK / RELATED WORK NECESSARY FOR THE WORK ON THE SECOND LEVEL

**WORK AREA 2 (124SF)**  
SEE SHEET A3 FOR ADDL. INFO.  
DESCRIPTION OF WORK: CHANGE OF OCCUPANCY CLASSIFICATION WITHOUT SEPARATION. THE INTENT IS FOR THE EXISTING 124 SF BATHROOM (B) TO BECOME A MOTHER'S ROOM (B) SO THERE IS NO CHANGE IN HAZARD CATEGORY. A FIRE ALARM AND DETECTION SYSTEM IS NOT REQUIRED IN WORK AREA 2 IN ACCORDANCE WITH SECTION 907.

**FIRST LEVEL WORK AREA IS <2% OF TOTAL**  
(1,403SF WORK AREA / 74,558SF TOTAL = 1.9%)

**CODE SUMMARY**

2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS (MRCEB) - METHOD OF COMPLIANCE: WORK AREA METHOD  
2015 MICHIGAN BUILDING CODE

**BUILDING DESCRIPTION**

THE DETROIT LIGHT GUARD BUILDING WAS CONSTRUCTED IN 1958 AND HAS BEEN CONTINUOUSLY OCCUPIED BY A SINGLE TENANT EVER SINCE ITS OPENING. THE BUILDING IS ON THE NATIONAL HISTORIC REGISTRY AND THE DMVA HAS BEEN WORKING WITH THE STATE OF MICHIGAN HISTORIC PRESERVATION OFFICE ON THIS PROJECT-ER22-506.

**CONSTRUCTION TYPE: IB**

NUMBER OF STORIES: THREE / ONE BELOW GRADE AND TWO ABOVE.  
BUILDING HEIGHT: 38' FROM GRADE, 47'-10" FROM LOWER LEVEL VEHICLE ENTRANCE. HEIGHT OF FLOOR ABOVE LOWEST LEVEL OF FIRE DEPARTMENT VEHICLE ACCESS: 15'-5" FROM GRADE, 25'-2" FROM LOWER LEVEL VEHICLE ENTRANCE.  
BUILDING STRUCTURE: CONCRETE FRAME / CONCRETE FLOOR SLABS / CONCRETE ROOF OVER EAST / WEST AREAS AND STEEL COLUMNS AND STEEL TRUSS ROOF OVER DRILL HALL.

EXTERIOR WALLS: BRICK MASONRY OVER CMU  
SLAB THICKNESS: VARIES, TYPICALLY 9"-18" THICK  
STAIRWAYS: THE 4 EXISTING STAIRWAYS ARE ENCLOSED WITH CMU FOR THE REQUIRED 2 HR MINIMUM FIRE RATING. EXISTING STAIRWELL DOORS ARE RATED 90 MINUTE AND HAVE A CLOSER.

BASEMENT LEVEL FUNCTION: PRIMARILY STORAGE AREAS FOR SUPPLIES, VEHICLES AND PERSONAL EQUIPMENT. NO VEHICLE REPAIR IS PERFORMED IN THE BUILDING. MECHANICAL AND ELECTRICAL ROOMS, AS WELL AS A MAINTENANCE OFFICE, ARE ALSO LOCATED IN THE BASEMENT. SEE WORK AREAS #1, #4 & #9

FIRST FLOOR FUNCTIONS: OFFICE USE, STORAGE ROOMS, VAULTS, DRILL HALL, AND A KITCHEN/DINING AREA. THE FIRST FLOOR KITCHEN, MEDICAL SUITE, AND UNIT STORAGE AREAS HAVE BEEN RECENTLY RENOVATED. SEE WORK AREAS #2, #3, #7 & #8 FOR PROPOSED NEW WORK.  
SECOND FLOOR FUNCTIONS: CLASSROOM SPACE AND A KITCHEN. SEE WORK AREAS #5 & #6 FOR PROPOSED NEW WORK.

**SQUARE FOOTAGES**

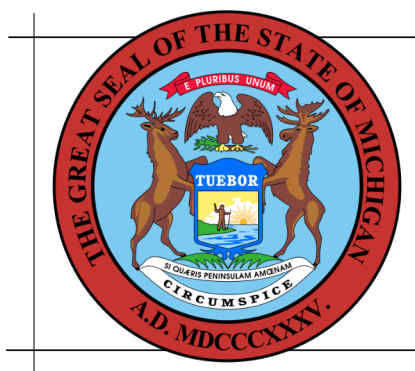
LEVEL	USE	AREA (SF)	TOTAL (SF)
LOWER LEVEL:	S1:	53,702 SF	63,590 SF (TOTAL)
	B:	8,094 SF	
FIRST LEVEL:	S1:	8,733 SF	74,558 SF (TOTAL)
	B:	28,834 SF	
SECOND LEVEL:	A3:	29,368 SF	4,787 SF (TOTAL)
	A2:	3,357 SF	
	S2:	123 SF	

**FIRE PROTECTION**

THE BUILDING IS UNSPRINKLERED. A FIRE ALARM AND DETECTION SYSTEM HAS BEEN INSTALLED IN PREVIOUSLY RENOVATED PORTIONS OF THE BUILDING. SEE ELECTRICAL FOR NEW FIRE ALARM AND DETECTION DEVICES AS PART OF THIS PROJECT.

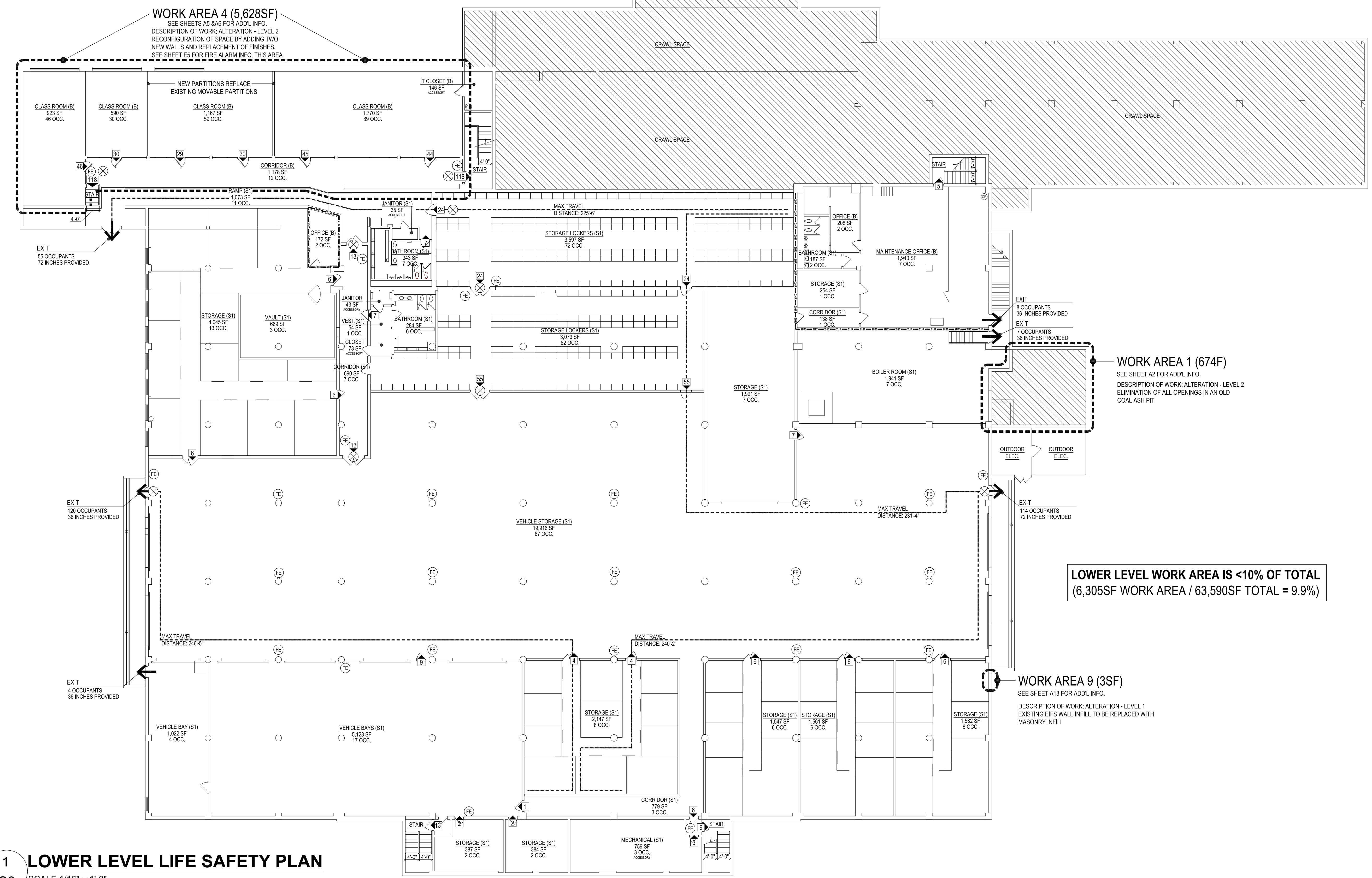
**LEGEND**

FIRE RATED SEPARATIONS		ROOM DATA		EXITING DATA	
1-HOUR	--- ---	USE (B)	USE & OCCUPANCY CLASSIFICATION	→	PATH OF EGRESS
2-HOUR	--- ---	XX SF	ROOM AREA	→	EXIT DISCHARGE
EXIT SIGN	⊗	# OCC.	# OF OCCUPANTS / LOAD FACTOR	→	CUMULATIVE OCC. LOAD / DIRECTION OF TRAVEL
FIRE EXTINGUISHER	⊕	ACCESSORY	ACCESSORY OR INCIDENTAL USE NOTE IF APPLICABLE	→	# OCCs.
		UNINHABITABLE SPACE	UNINHABITABLE SPACE	→	36 Inches
				→	EXIT WIDTH PROVIDED



**BUILDING**

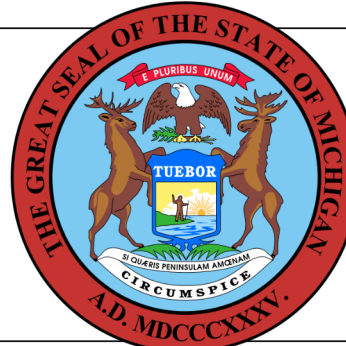
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**1 LOWER LEVEL LIFE SAFETY PLAN**  
 G2 SCALE 1/16" = 1'-0"

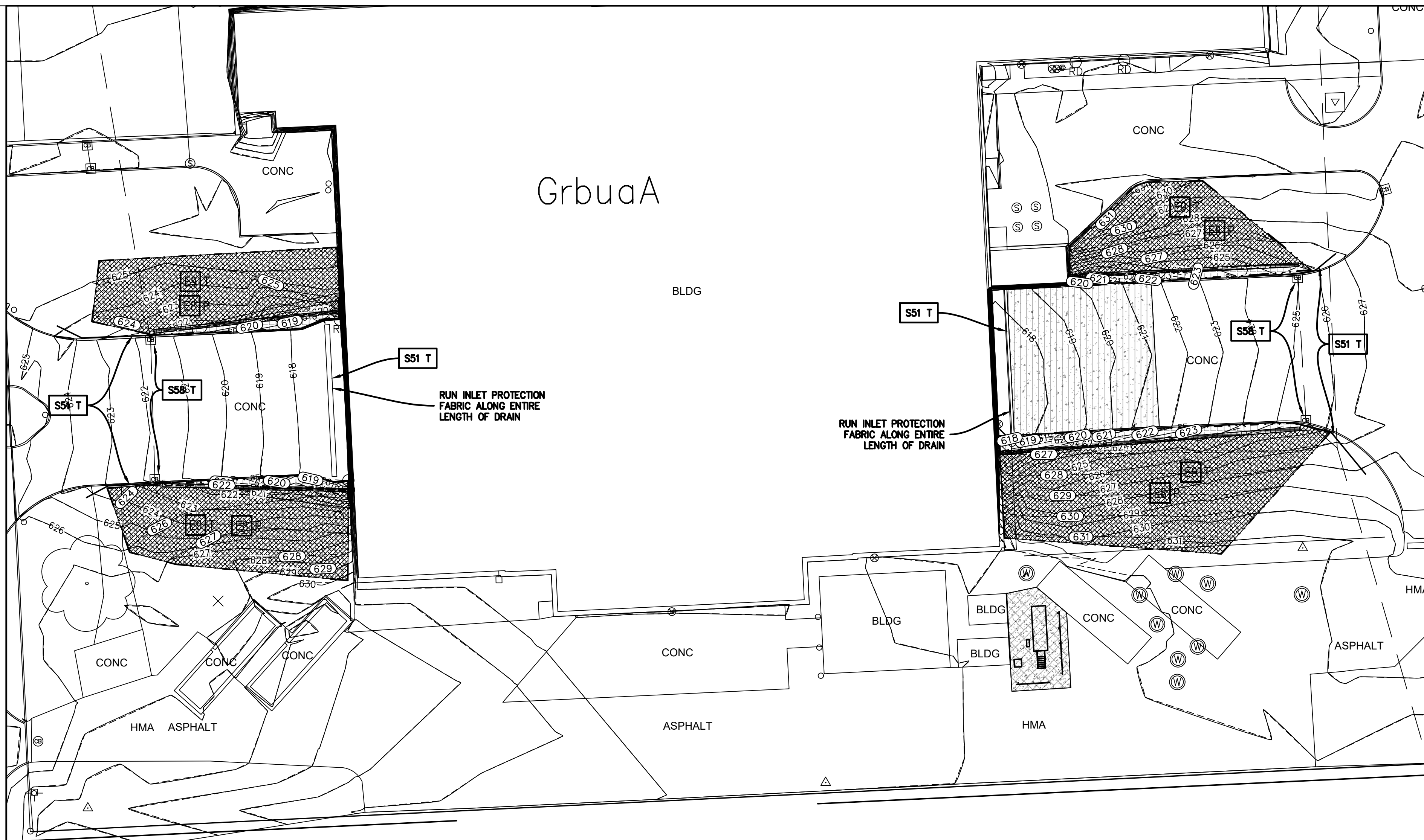
**LEGEND**

<b>FIRE RATED SEPARATIONS</b>	<b>ROOM DATA</b>	<b>EXITING DATA</b>
--- 1-HOUR --- 2-HOUR	USE (B) --- USE & OCCUPANCY CLASSIFICATION XX SF --- ROOM AREA # OCC. --- # OF OCCUPANTS / LOAD FACTOR --- ACCESSORY OR INCIDENTAL USE NOTE IF APPLICABLE [Hatched] UNINHABITABLE SPACE (FE) FIRE EXTINGUISHER	--- PATH OF EGRESS --- EXIT DISCHARGE --- CUMULATIVE OCC. LOAD / DIRECTION OF TRAVEL EXIT # Occs. --- OCCUPANTS 36 Inches --- EXIT WIDTH PROVIDED

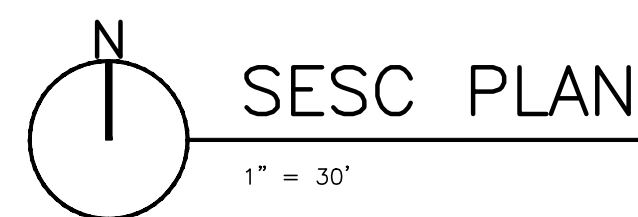


**BUILDING**

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DISTURBANCE AREA 0.344 ACRES



SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE.  
 GrbuA - Granby-Urban land complex, dense substratum, 0 to 2 percent slopes.  
 THIS SOIL TYPE ENCOMPASSES THE ENTIRE PROPERTY.

----- SOIL TYPE LIMIT

A parcel of land located south of Eight Mile Road and east of Sunset Avenue in the City of Detroit, Wayne County, Michigan, described as follows: The north 550 feet of the west 600 feet of that part of the NW 1/4 of section 5, T1S, R12E, City of Detroit, lying south of and adjoining the south line of Eight Mile Road, 204 feet wide as now established and east of and adjoining the east line of Sunset Avenue, 60 feet wide as now established.

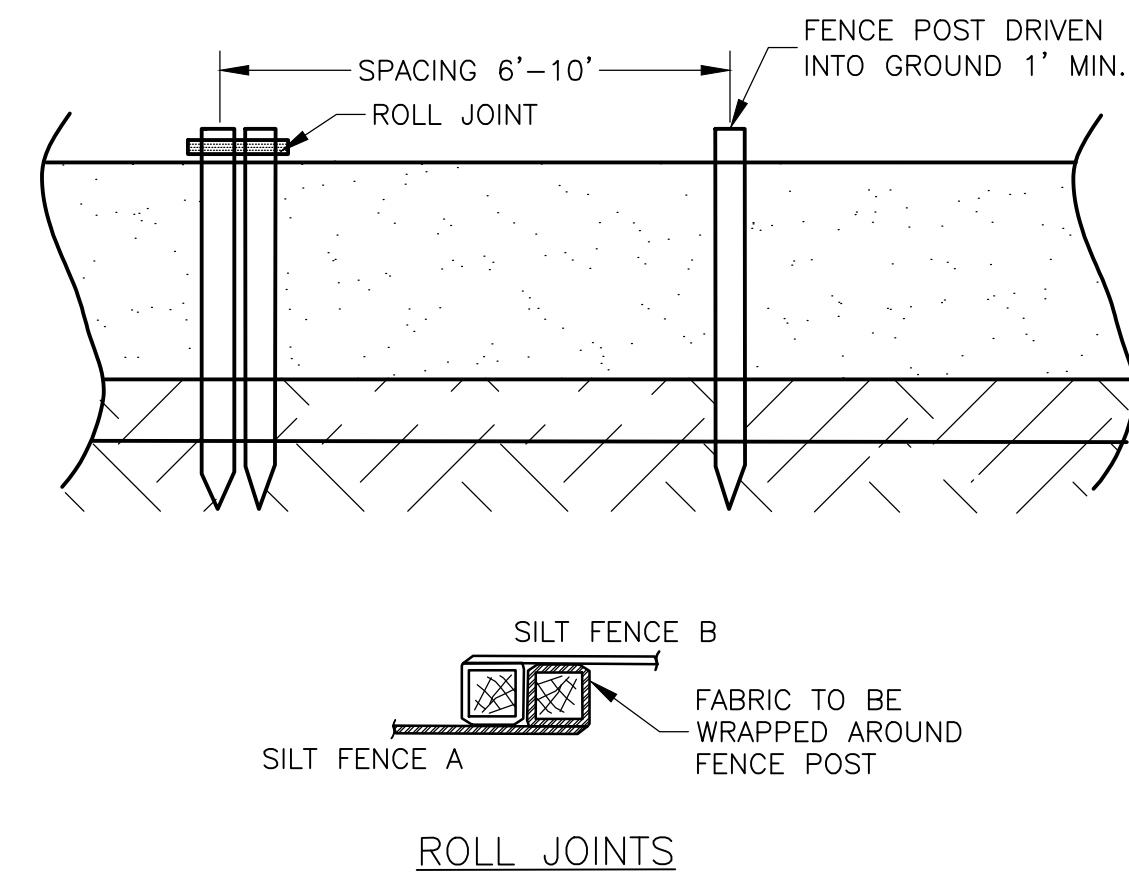
The above parcel being more particularly described and surveyed as follow: A parcel of land in the NW 1/4 of section 5, T1S, R12E, Hamtramck Township, City of Detroit, Wayne County, Michigan; Commencing at the northwest corner of said section 5; thence S88°56'00"E 621.69 feet, on the north line of said section 5; thence S00°56'19"W 161.00 feet, to the point of beginning of this description, said point being the intersection of the south line of Eight Mile Road and the east line of Sunset Avenue; thence S88°56'00"E 600.00 feet, on the south line of said Eight Mile Road; thence S00°56'19"W 550.00 feet; thence N88°56'00"W 600.00 feet, to the east line of said Sunset Avenue; thence N00°56'19"E 550.00 feet, on the east line of said Sunset Avenue to the point of beginning, containing 7.58 acres.

**SESC NOTES**

- ALL WORK SHALL COMPLY WITH THE APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL (SESC) RULES AND REGULATIONS (SOIL EROSION AND SEDIMENTATION CONTROL - 1994 PA 451, PART 91, AS AMENDED, MCL 324.9101 ET SEQ.).
- THE CONTRACTOR SHALL REVIEW THE SESC MEASURES IN ORDER TO PREPARE AND ISSUE FOR APPROVAL AN "SESC IMPLEMENTATION PLAN", WHICH INDICATES THE CONTRACTOR'S INTENDED IMPLEMENTATION OF THE SESC PLAN FOR THE PROJECT, INCLUDING A SCHEDULE.
- THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO OR UPON COMMENCEMENT TO EARTHWORK ACTIVITIES.
- THE CONTRACTOR WILL PERFORM SWEEPING AS NEEDED TO REMOVE ANY SEDIMENT TRACKED OFF SITE. FREQUENCY OF SWEEPING WILL BE BASED ON SITE CONDITIONS.
- THE CONTRACTOR WILL PERFORM DUST CONTROL AS NEEDED BASED ON SITE CONDITIONS.
- DISTURBED AREAS THAT WILL REMAIN IDLE DURING CONSTRUCTION MUST BE TEMPORARILY STABILIZED, INCLUDING SOIL STOCKPILES.
- THE CONTRACTOR SHALL MAINTAIN AND INSPECT SESC MEASURES THROUGHOUT THE COURSE OF THE PROJECT. AT A MINIMUM, THE CONTRACTOR SHALL INSPECT AND MAINTAIN SESC MEASURES ONCE A WEEK AND AFTER RAIN EVENTS.
- THE CONTRACTOR SHALL CORRECT NON-COMFORMING SESC MEASURES WITHIN 24 HOURS, IF WATERS OF THE STATE ARE BEING IMPACTED OR WITHIN 48 HOURS FOR ROUTINE MAINTENANCE ITEMS. OTHER SESC MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NEVER MORE THAN FIVE (5) DAYS AFTER DETECTION.
- THE CONTRACTOR SHALL COMPLETE PERMANENT SOIL EROSION CONTROL MEASURES FOR ANY DISTURBED LAND AREA WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. THE CONTRACTOR SHALL MAINTAIN TEMPORARY CONTROL MEASURES UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.
- THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER PERMANENT SOIL EROSION MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.
- CONTRACTOR AND ENGINEER SHALL DISCUSS APPROPRIATE CONSTRUCTION ACCESS ROUTES DURING PRE-CONSTRUCTION MEETING. CONTRACTOR & ENGINEER SHALL MARK UP CONSTRUCTION PLAN AND AGREE TO CONSTRUCTION ACCESS ROUTES FOR ALL MATERIALS AND EQUIPMENT. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO ANY DEVIATION FROM ROUTES.

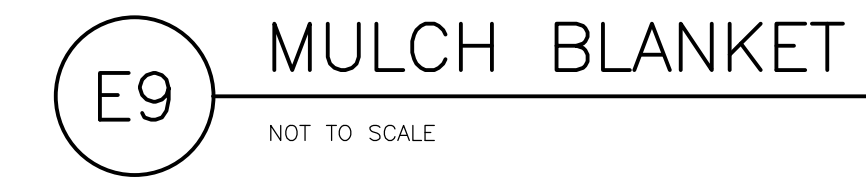
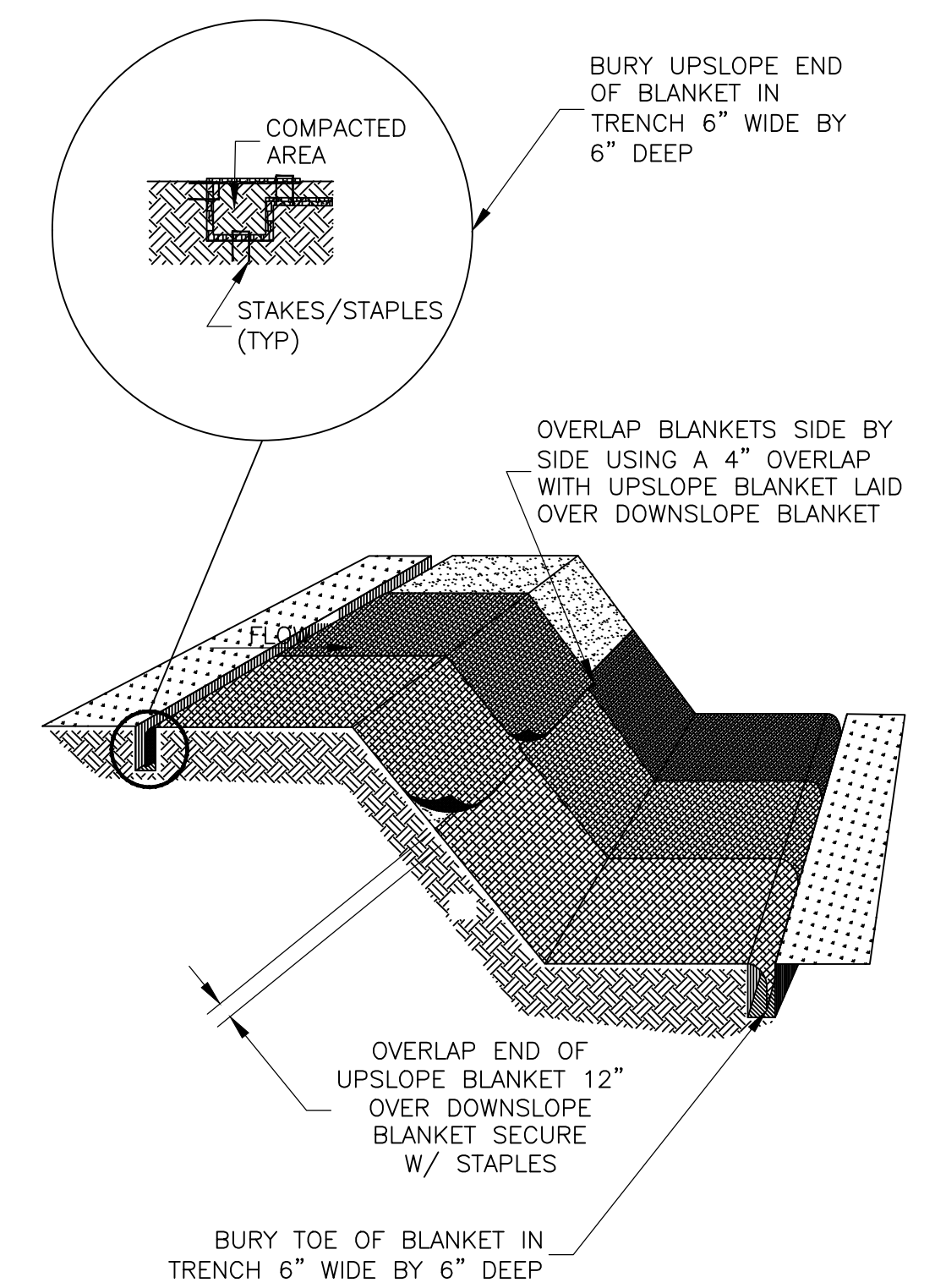
**SILT FENCE NOTES**

- INSTALL PARALLEL TO A CONTOUR.
- SILT FENCE SHALL BE MADE OF WOVEN GEOTEXTILE FABRIC.
- DIG A 6" TRENCH ALONG THE AREA WHERE THE FENCE IS TO BE INSTALLED.
- PLACE 6" OF THE SILT FENCE BOTTOM FLAP INTO THE TRENCH.
- BACKFILL THE TRENCH WITH SOIL AND COMPACT THE SOIL ON BOTH SIDES. CREATE A SMALL RIDGE ON THE UP-SLOPE SIDE OF THE FENCE.
- INSTALL WOODEN STAKES 6 - 10' APART AND DRIVE INTO THE GROUND A MINIMUM OF 12".
- STAPLE THE GEOTEXTILE FABRIC TO THE WOODEN STAKES.
- JOIN SECTIONS OF SILT FENCE BY WRAPPING ENDS TOGETHER (SEE DRAWING).
- INSPECT FREQUENTLY AND IMMEDIATELY AFTER EACH STORM EVENT. CHECK SEVERAL TIMES DURING PROLONGED STORM EVENTS. IF NECESSARY, REPAIR IMMEDIATELY.
- IF THE SEDIMENT HAS REACHED 1/3 THE HEIGHT OF THE FENCE, THE SOIL SHALL BE REMOVED AND DISPOSED OF IN A STABLE UPLAND SITE.
- THE FENCE SHALL BE RE-INSTALLED IF WATER IS SEEPING UNDERNEATH IT OR IF THE FENCE HAS BECOME INEFFECTIVE.
- SILT FENCE SHALL BE REMOVED ONCE VEGETATION IS ESTABLISHED AND UP-SLOPE AREA HAS STABILIZED.



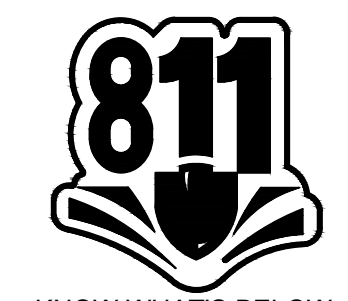
**MULCH BLANKET NOTES**

- PREPARE SUBGRADE TO PROPER GRADE AND COMPACTION REQUIREMENTS.
- REMOVE RUTS, ROOTS, SOIL CLODS, OR OTHER DEBRIS FROM SURFACE SUBJECT TO MULCH BLANKET INSTALLATION.
- SPREAD SEED.
- PLACE MULCH BLANKET PARALLEL TO FLOW AND ANCHOR SECURELY.
- WHEN BLANKETS ARE USED IN FLOWING DITCH, BLANKETS SHOULD NOT OVERLAP IN DITCH CENTER PARALLEL TO FLOW.
- STAPLES INSTALLED/SECURED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- INSTALL BLANKET AT TOP OF SLOPE, FIRST ANCHORING TOE IN TRENCH 6" WIDE X 6" DEEP, PROGRESSING DOWN-SLOPE OR DOWN-GRADIENT WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH.
- APPLY SEED TO COMPACTED SOIL AND FOLD THE 12" PORTION OF THE BLANKET OVER COMPACTED AREA AND SECURE WITH A ROW OF STAPLES/STAKES PLACED 12" APART ACROSS THE WIDTH OF THE BLANKET.
- UNROLL THE BLANKETS DOWN OR HORIZONTALLY ACROSS THE SLOPE.
- OVERLAP BLANKET EDGES BY A MINIMUM OF 4" AND BLANKET ENDS BY A MINIMUM OF 12". OVERLAPS SHOULD BE IN THE DIRECTION OF EXPECTED FLOW WITH THE UP-SLOPE BLANKET PLACED OVER THE DOWN-SLOPE BLANKET EDGE.
- SECURE DOWN-SLOPE END OF BLANKET WITH STAPLES/STAKES AND TRENCH IN.
- CHECK AFTER A RAIN EVENT TO ENSURE THE BLANKET IS STILL IN PLACE.
- KEEP ERODED SOIL, VEHICULAR AND PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF AWAY FROM THE BLANKETED AREA.



**LEGEND**

- X DEMOLISH AND DISPOSE OF ITEM
- GRADING LIMITS
- SF- SILT FENCE, 505' TOTAL
- 100- EXISTING CONTOUR

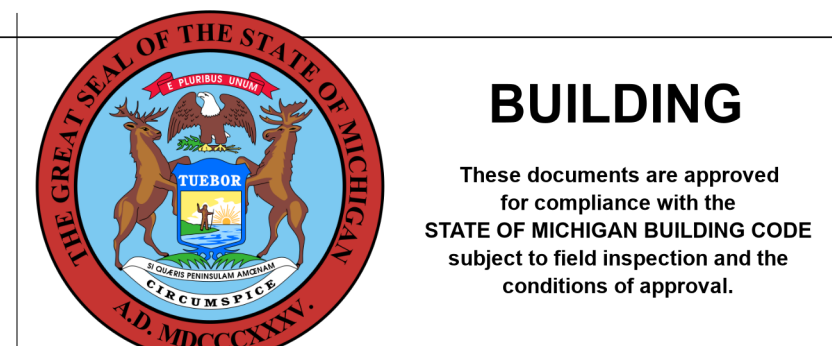


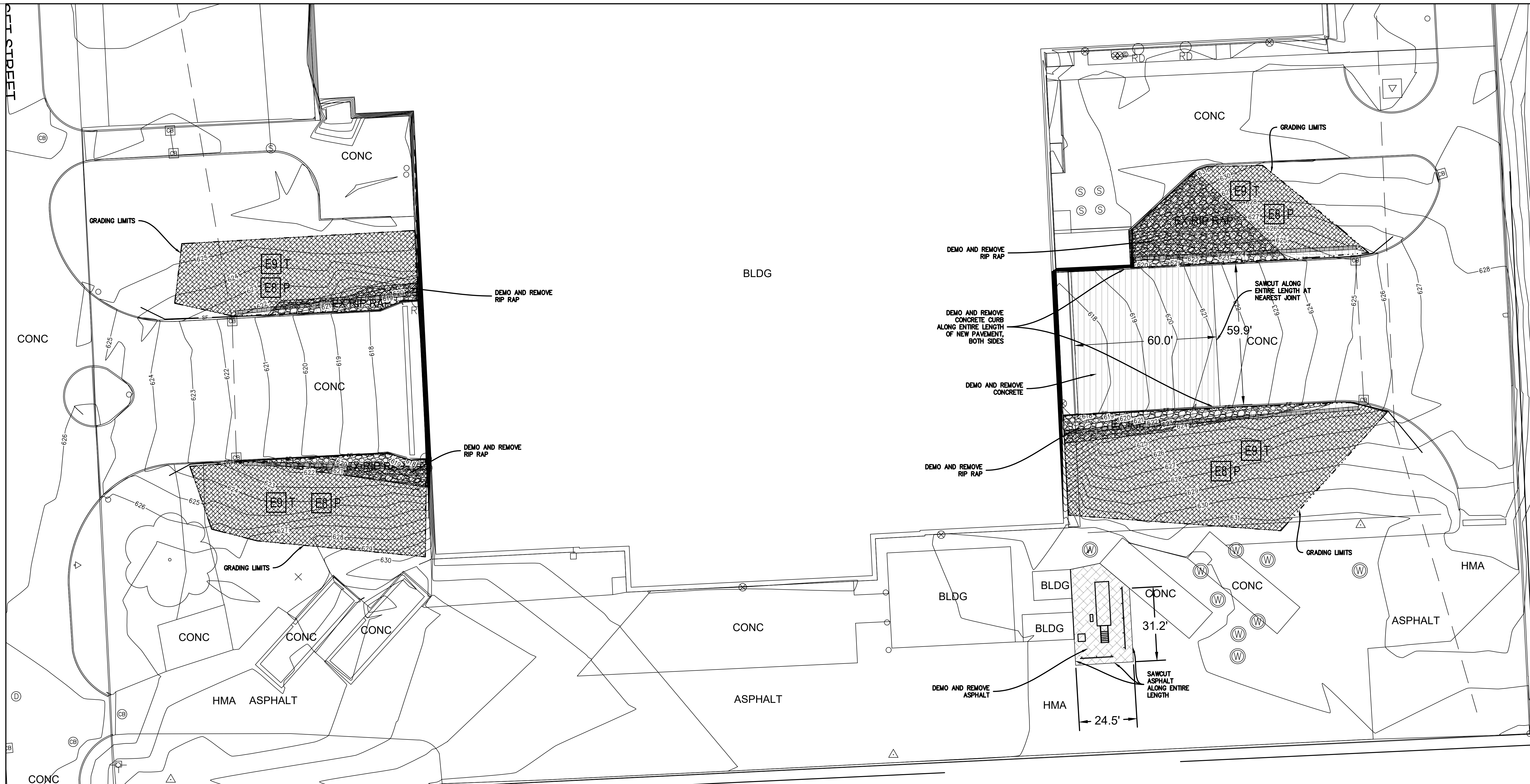
- DETAIL # 1/5 DETAIL CALLOUT
- SHEET SHOWN
- REMOVE TOPSOIL, STOCKPILE. GRADE FOR NEW ELEVATION PLAN - 1,668 SY
  - DEMOLISH AND REMOVE RIP RAP - 373 SY TOTAL
  - MULCH BLANKET AND PERMANENT SEEDING - 000 SY TOTAL
- \* SOME AREAS HAVE MULTIPLE AREA TYPES FOR WORK

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY EROSION CONTROL MEASURES												
TEMP. CONSTRUCTION ROADS												
STRIP & STOCKPILE TOPSOIL												
ROUGH GRADE SEDIMENT CONTROL												
STORM DRAINAGE REQUIREMENTS												
FINISH GRADING												
PERMANENT EROSION CONTROL MEASURES												

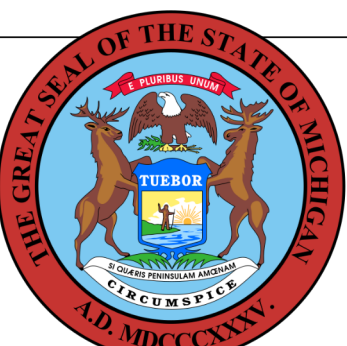
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
<b>EROSION CONTROLS</b>			
E8	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained).
E9	MULCH BLANKETS		On exposed slopes, newly seeded areas, new ditch bottoms, or areas subject to erosion.
E12	RIPRAP		Use along shorelines, waterways, or where concentrated flows occur. Slows velocity, reduces sediment load, and reduces erosion.
<b>SEDIMENT CONTROLS</b>			
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.
S58	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites.

E6T \*T\* NOTES TEMPORARY EROSION CONTROL MEASURE  
 E6P \*P\* NOTES PERMANENT EROSION CONTROL MEASURE





**DEMO PLAN**  
1" = 20'



**BUILDING**

These documents are approved for compliance with the STATE OF MICHIGAN BUILDING CODE subject to field inspection and the conditions of approval.

**LEGEND**

- DEMOLISH AND DISPOSE OF ITEM
  - GRADING LIMITS
  - SILT FENCE, 2147' TOTAL
  - EXISTING CONTOUR
  - CONTROL POINT
  - DETAIL # 1/5 DETAIL CALLOUT
  - SHEET SHOWN REMOVE TOPSOIL, STOCKPILE. GRADE FOR NEW ELEVATION PLAN - 1,668 SY
  - DEMOLISH AND REMOVE RIP RAP - 373 SY TOTAL
  - DEMOLISH AND REMOVE CONCRETE - 401 SY TOTAL
  - DEMOLISH AND REMOVE ASPHALT - 401 SY TOTAL
- \* SOME AREAS HAVE MULTIPLE AREA TYPES FOR WORK

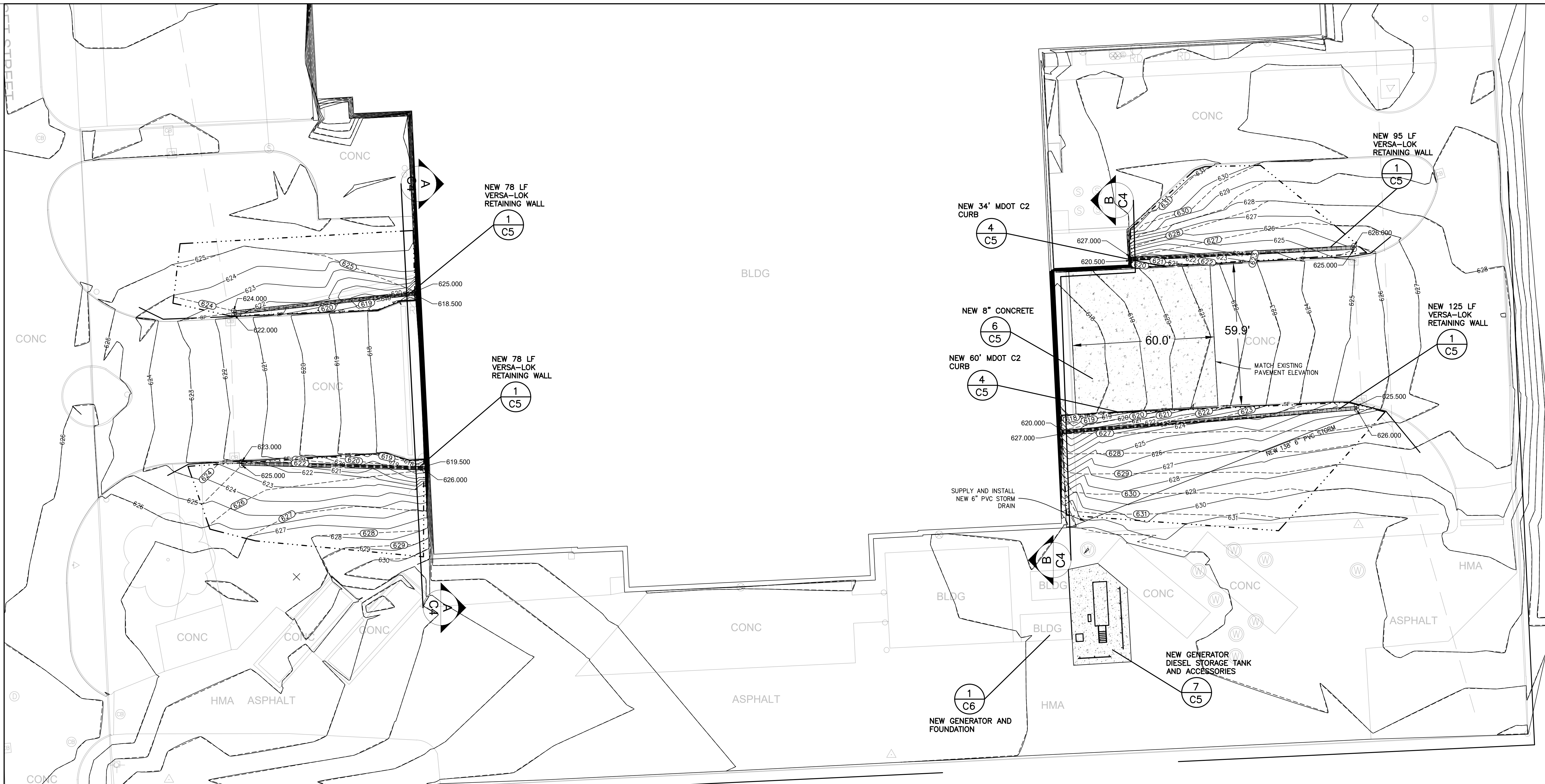


DESIGNED	K.M.M.
DRAWN	K.M.M.
CHECKED	K.M.M.
APPROVED	K.M.M.

ISSUED FOR	DATE
PRELIMINARY	DEC 2022
CONSTRUCTION	DEC 2022
FINAL RECORD	

IDENTIFICATION NO.	2848023010
PROJECT INDEX CODE	





**SITE PLAN**  
1" = 20'



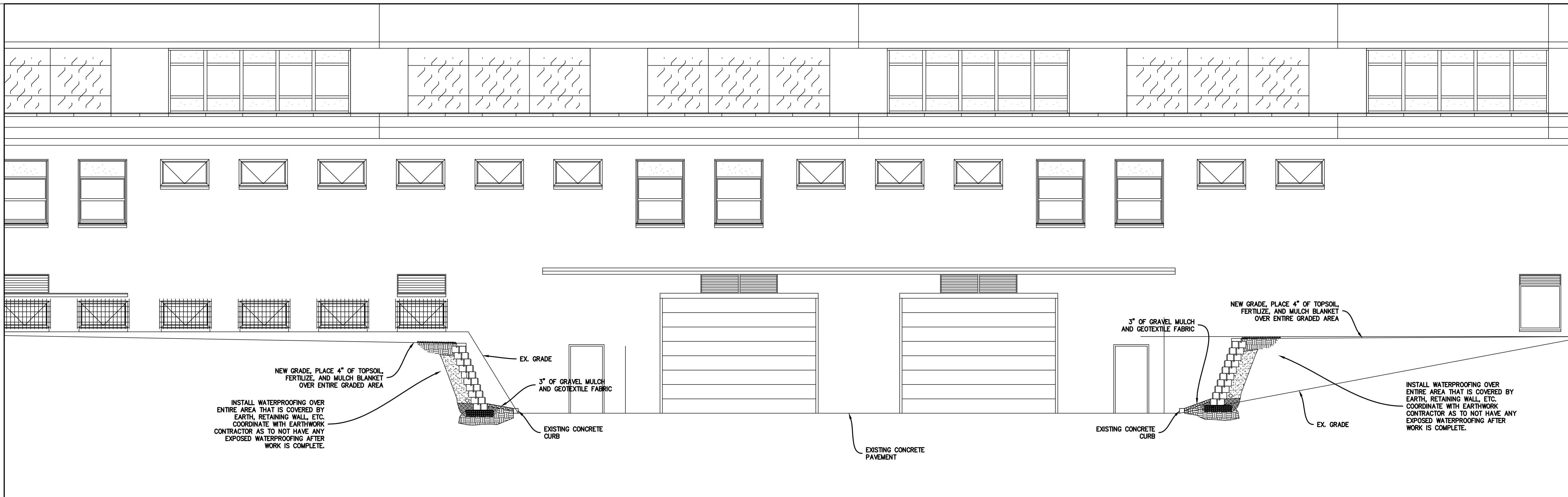
**BUILDING**  
These documents are approved for compliance with the STATE OF MICHIGAN BUILDING CODE subject to field inspection and the conditions of approval.

**LEGEND**

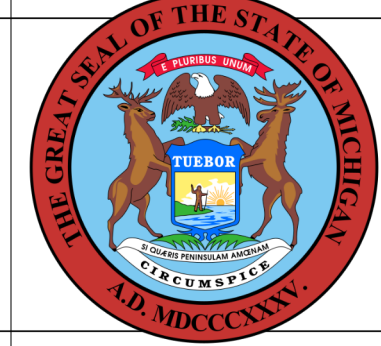
- GRADING LIMITS
- SF- SILT FENCE, 2147' TOTAL
- 100- EXISTING CONTOUR
- 1100- PROPOSED CONTOUR
- CONTROL POINT
- DETAIL # 1/5 DETAIL CALLOUT
- PROPOSED VERSA-LOK BRUTE RETAINING WALL SYSTEM, 376 LF TOTAL
- PROPOSED 8" CONCRETE - 400 SY TOTAL



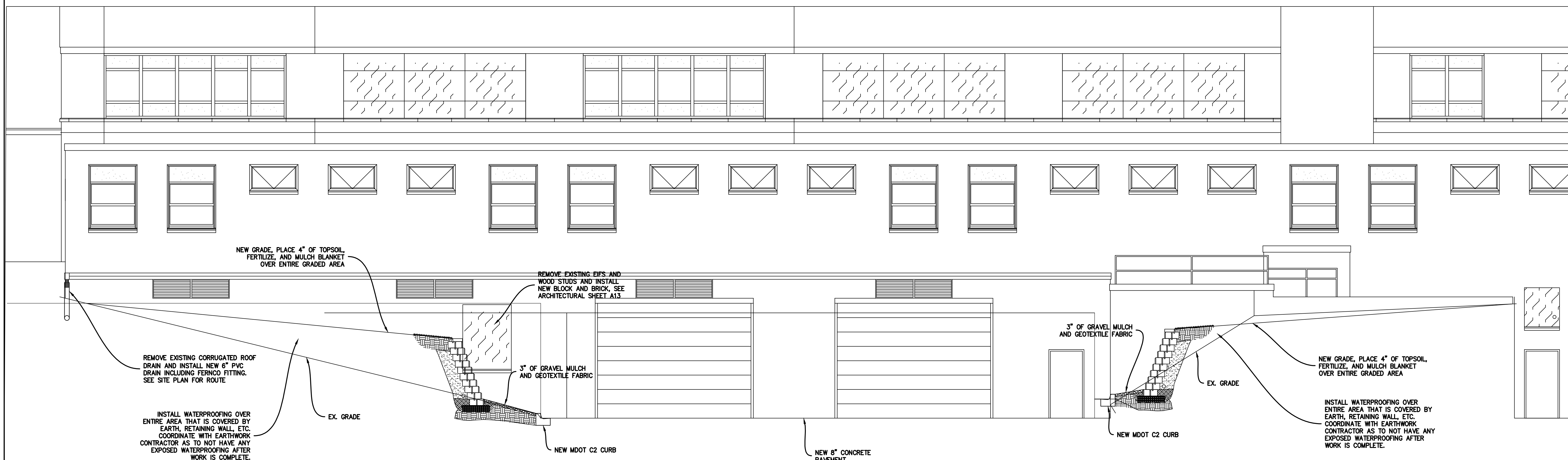
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	PROJECT INDEX CODE	C3	
	ISSUED FOR	PRELIMINARY CONSTRUCTION FINAL RECORD	
	DATE	DEC 2022 DEC 2022	
DESIGNED	DRAWN	CHECKED	APPROVED



**A** SECTION VIEW A  
C4 1" = 5'

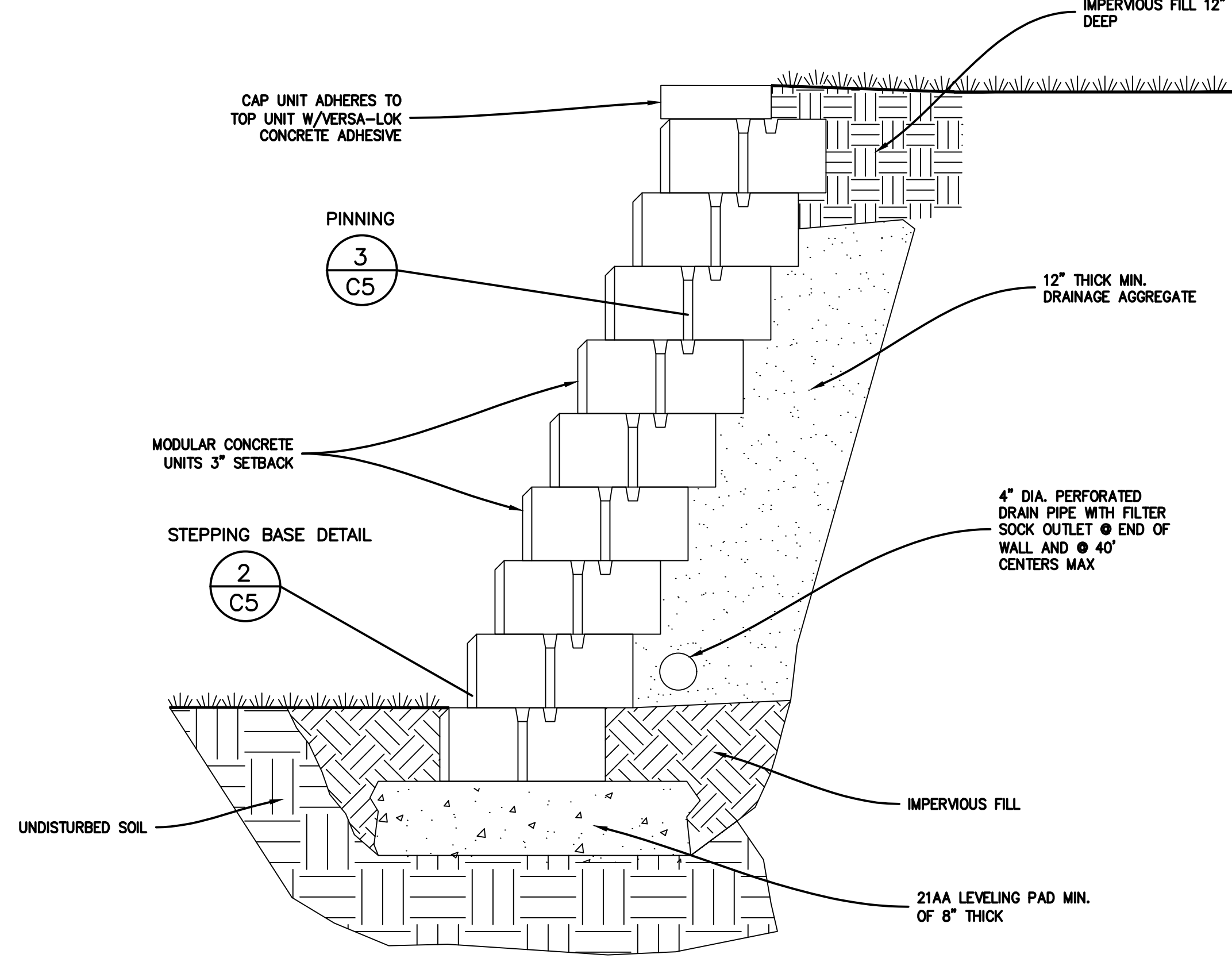


**BUILDING**  
These documents are approved for compliance with the STATE OF MICHIGAN BUILDING CODE subject to field inspection and the conditions of approval.

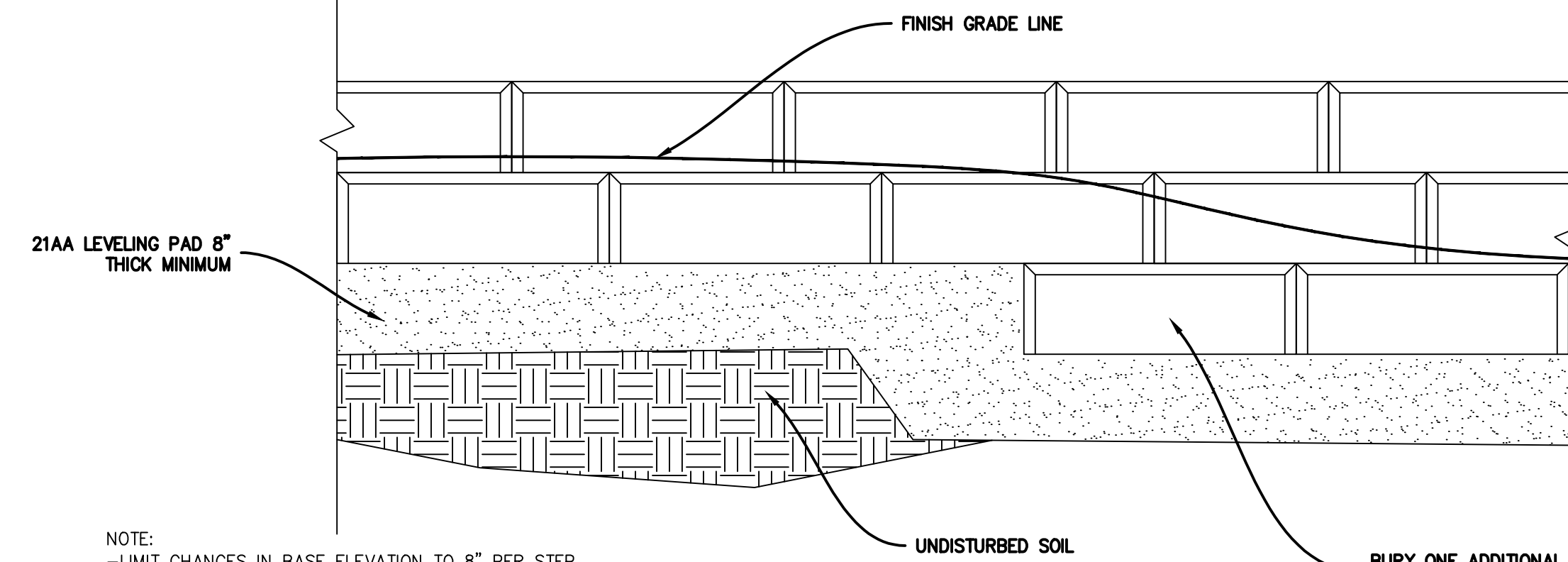


**B** SECTION VIEW B  
C4 1" = 5'

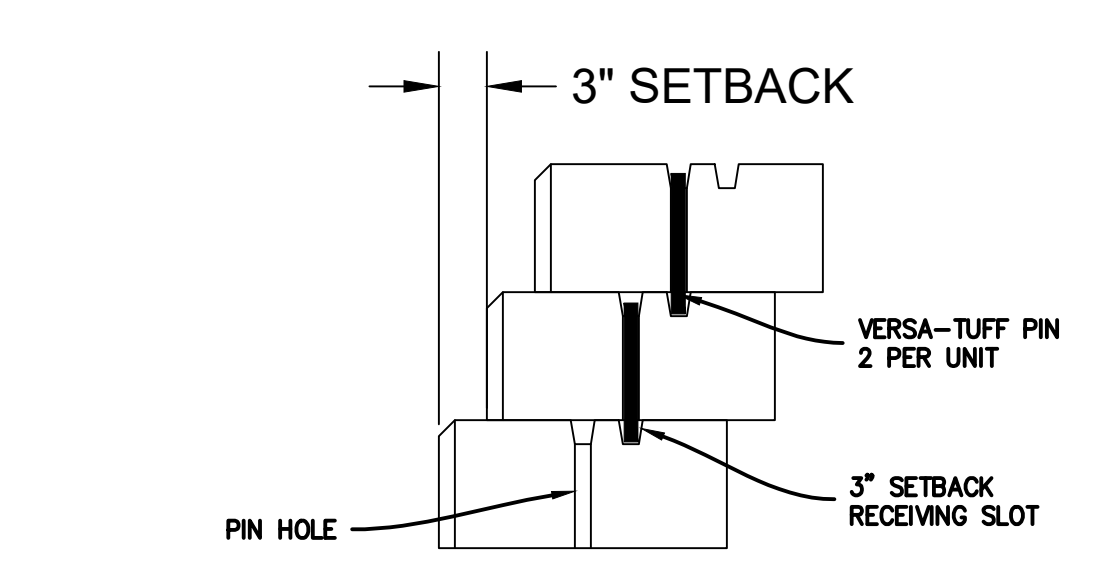
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	PROJECT INDEX CODE	C4
	ISSUED FOR	<input checked="" type="checkbox"/> PRELIMINARY <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> FINAL RECORD
	DATE	DESIGNED: JCL/ML DRAWN: JCL/ML CHECKED: JCL/ML APPROVED: JCL/ML DEC 2022 DEC 2022



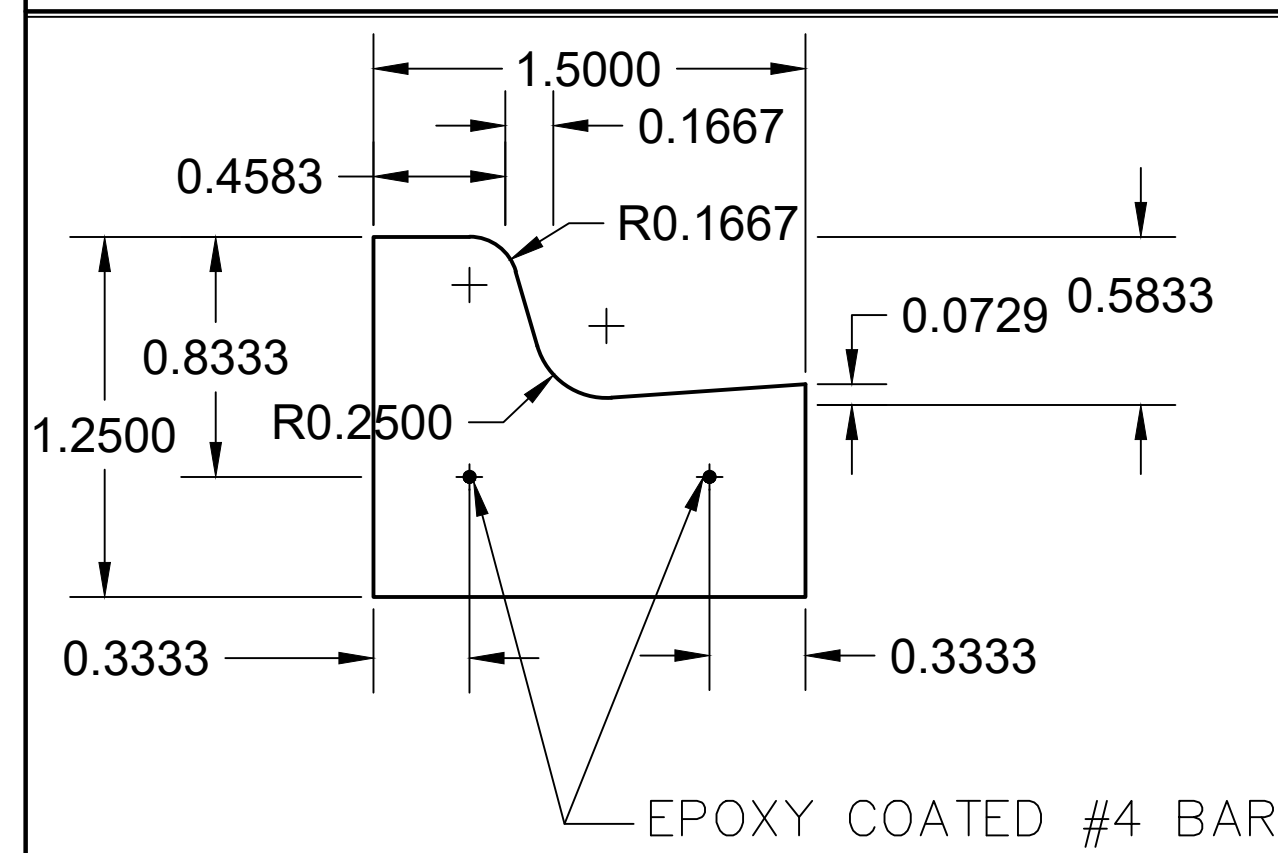
1 TYPICAL SECTION - UNREINFORCED RETAINING WALL  
1" = 1"



2 STEPPING BASE DETAIL  
1" = 1"

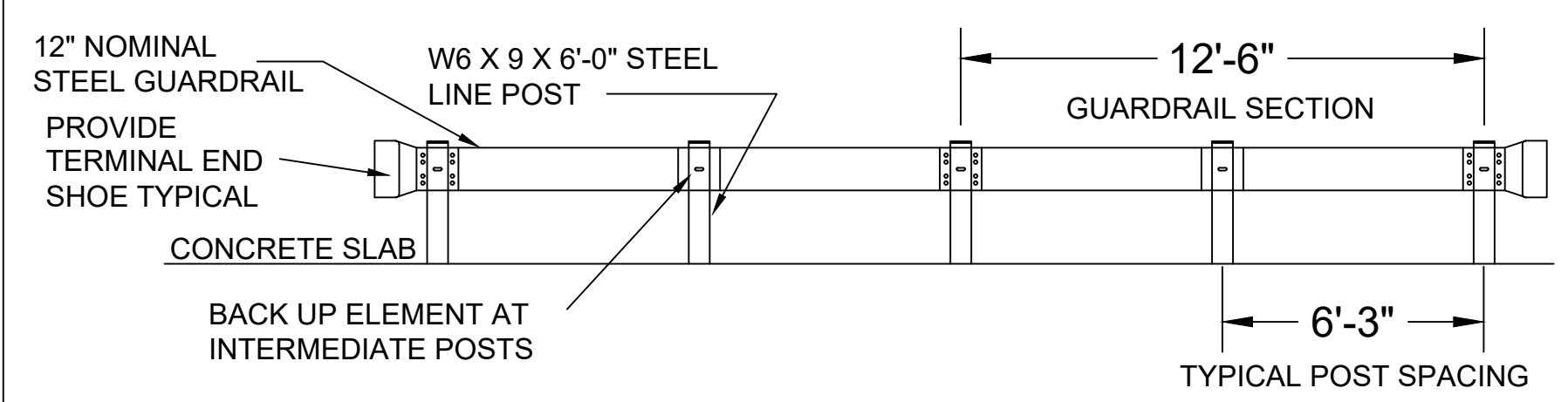


3 SETBACK PINNING DETAIL  
1" = 1"

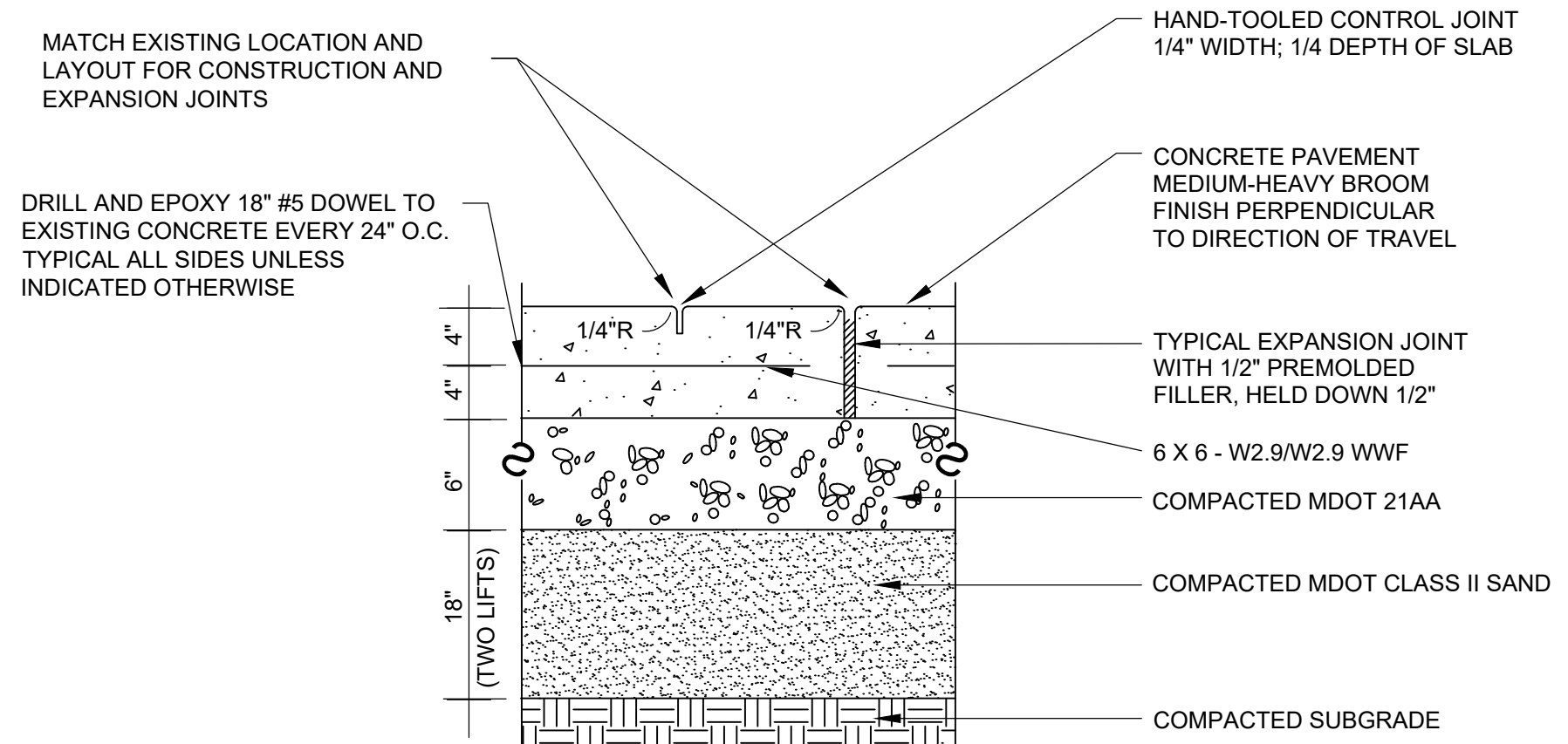


4 MDOT C2 CURB  
NTS

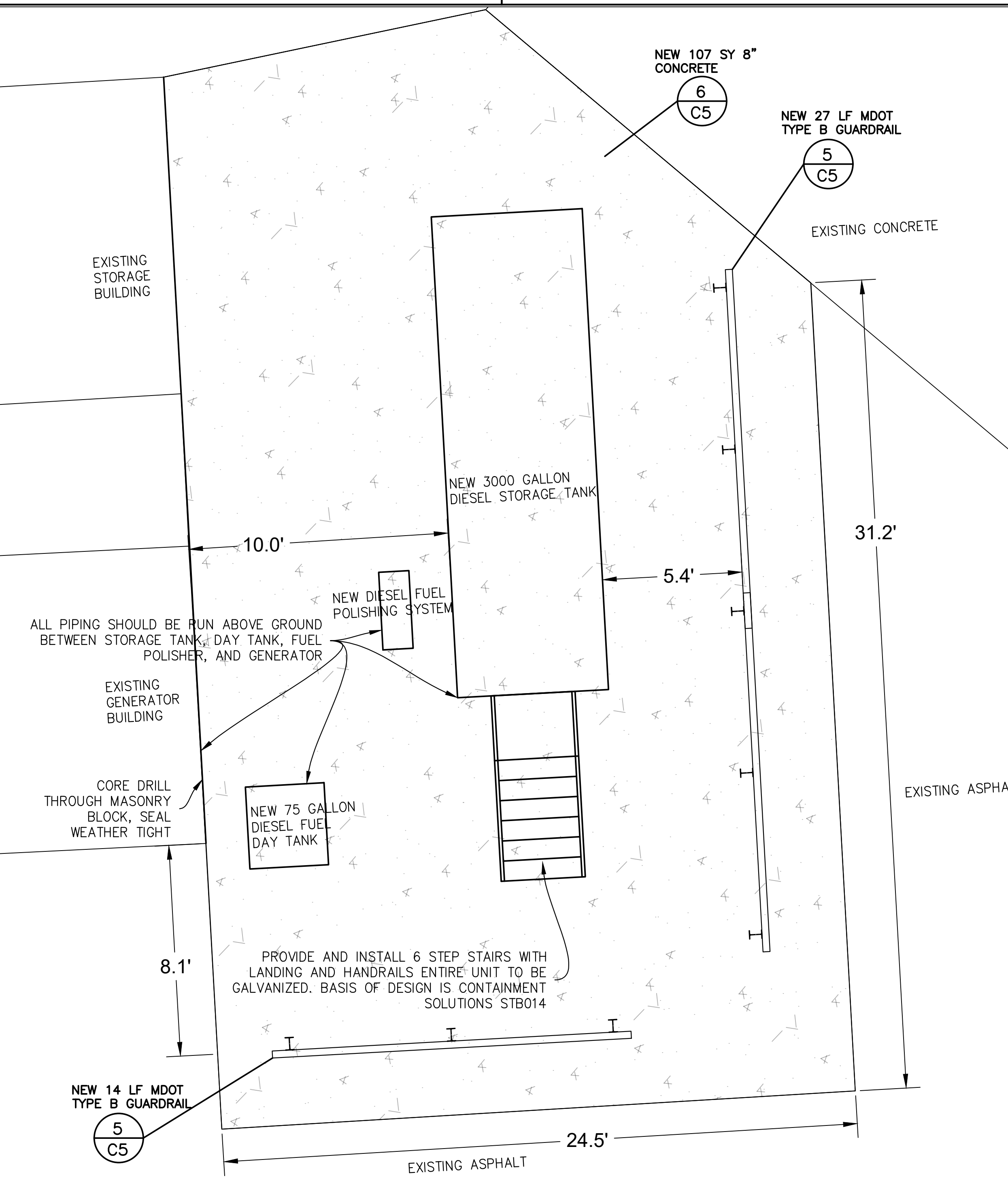
NOTE:  
ALL GUARDRAIL DETAILS SHOWN ARE M.D.O.T. BEAM GUARDRAIL-TYPE B DETAILS



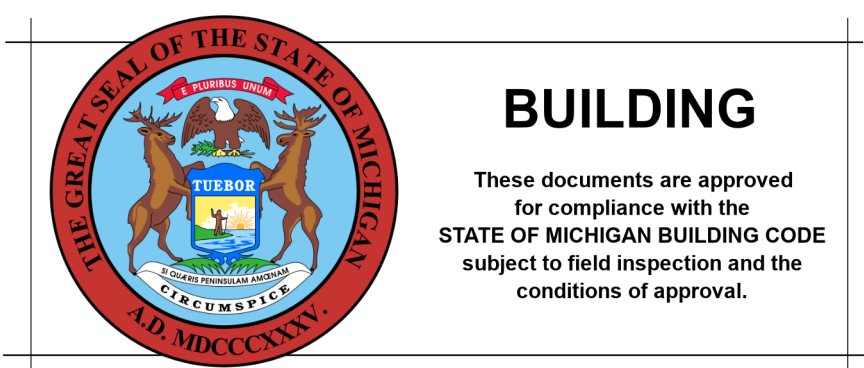
5 GUARDRAIL DETAIL  
NTS



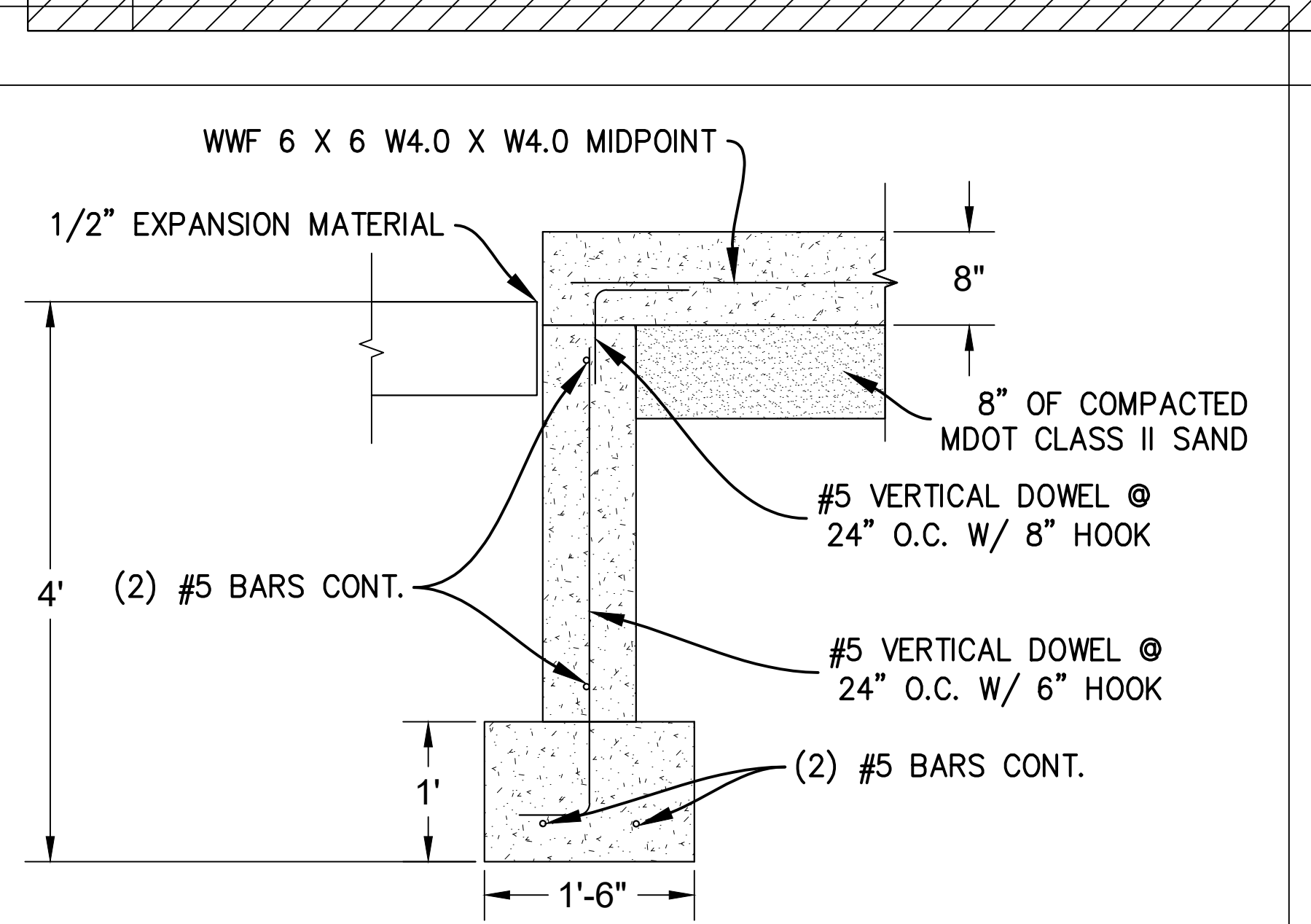
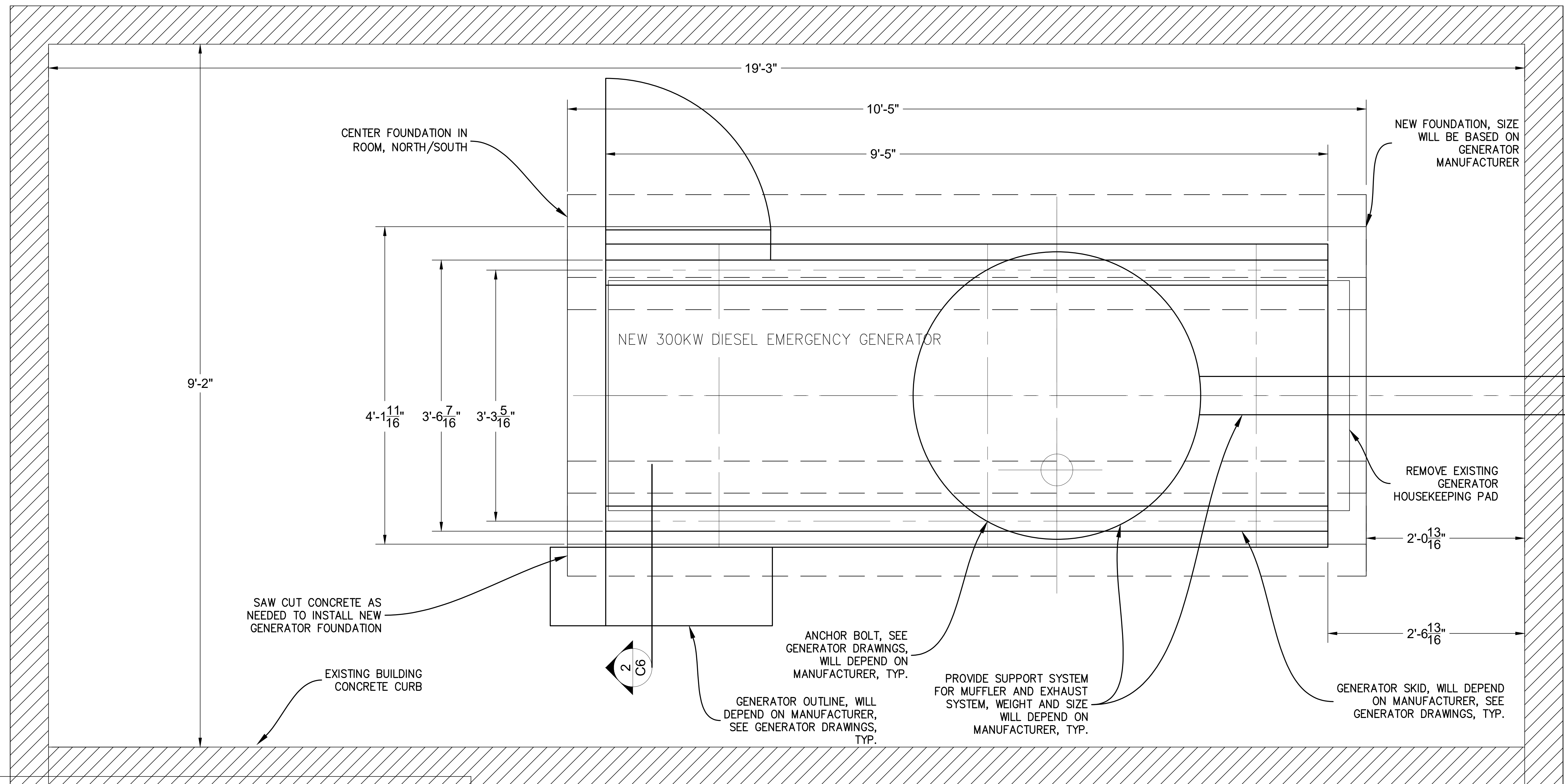
6 CONCRETE PAVEMENT DETAIL  
NTS



7 GENERATOR DIESEL STORAGE TANK LAYOUT  
1" = 3"

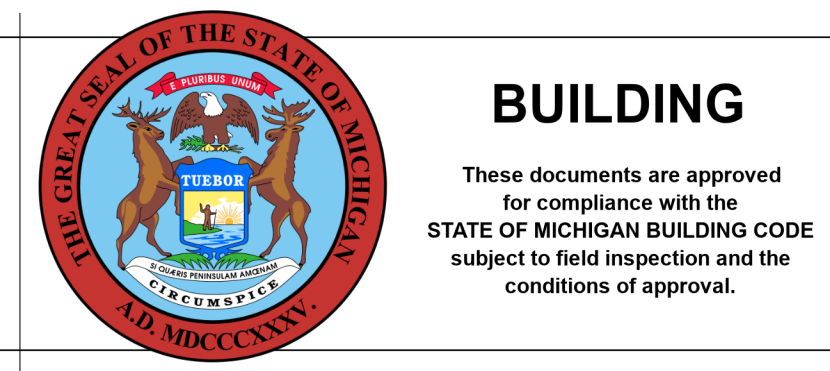


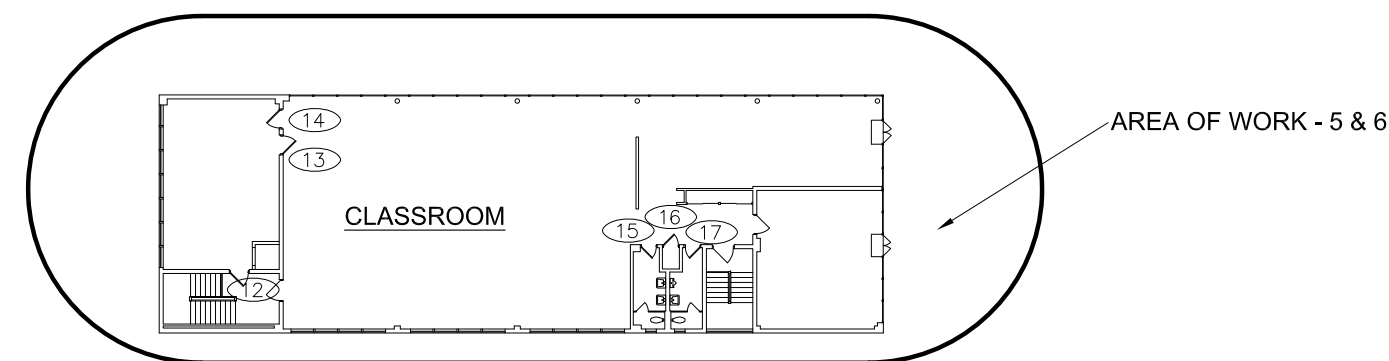
DESIGNED	DATE	ISSUED FOR	IDENTIFICATION NO.	SHEET
DRAWN	DEC 2022	PRELIMINARY	28A8023010	C5
CHECKED	DEC 2022	CONSTRUCTION		
APPROVED		FINAL RECORD		



1 GENERATOR FOUNDATION LAYOUT  
1.5" = 1'

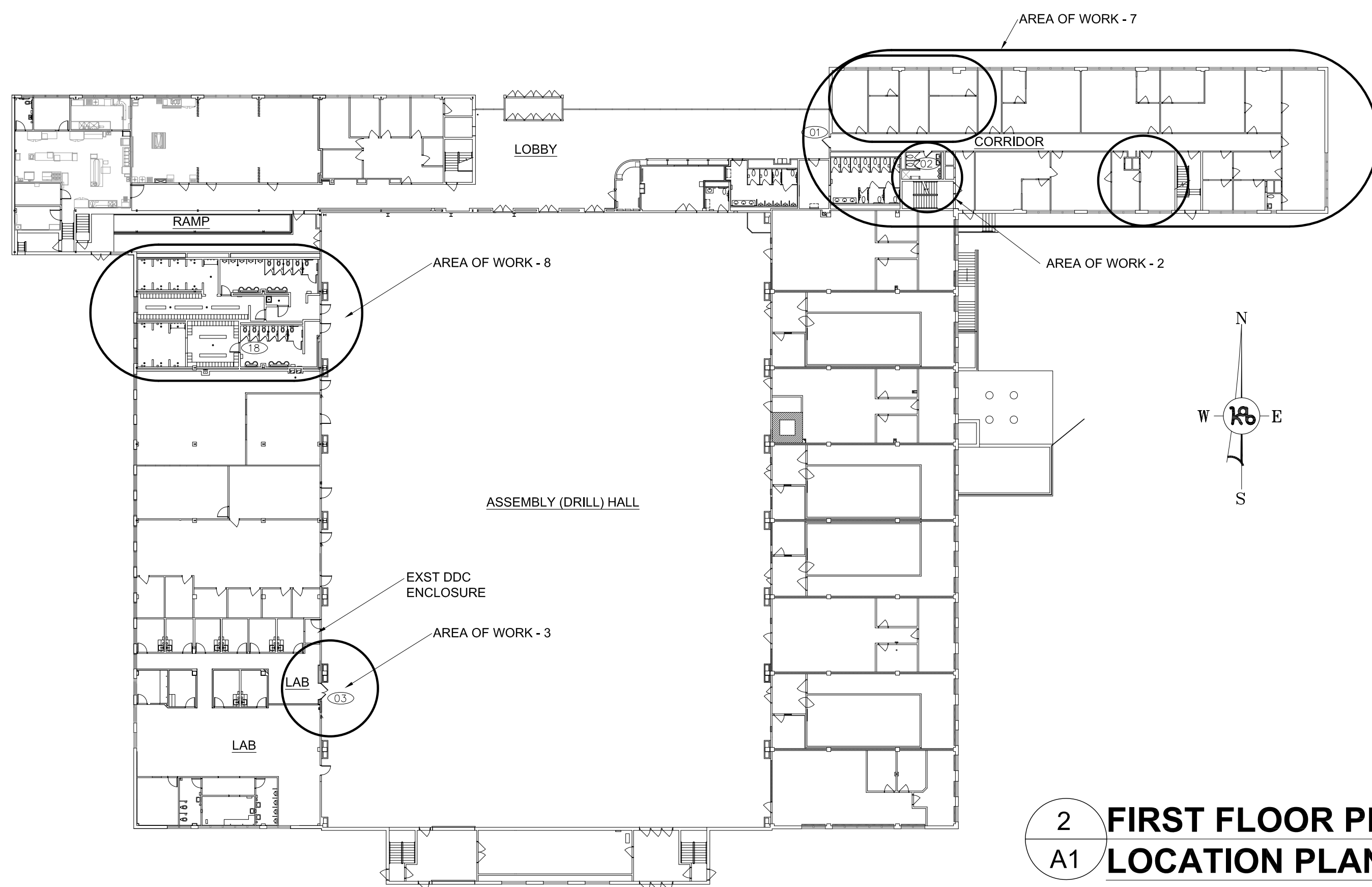
2 TYPICAL SECTION - GENERATOR FOUNDATION  
1" = 1'





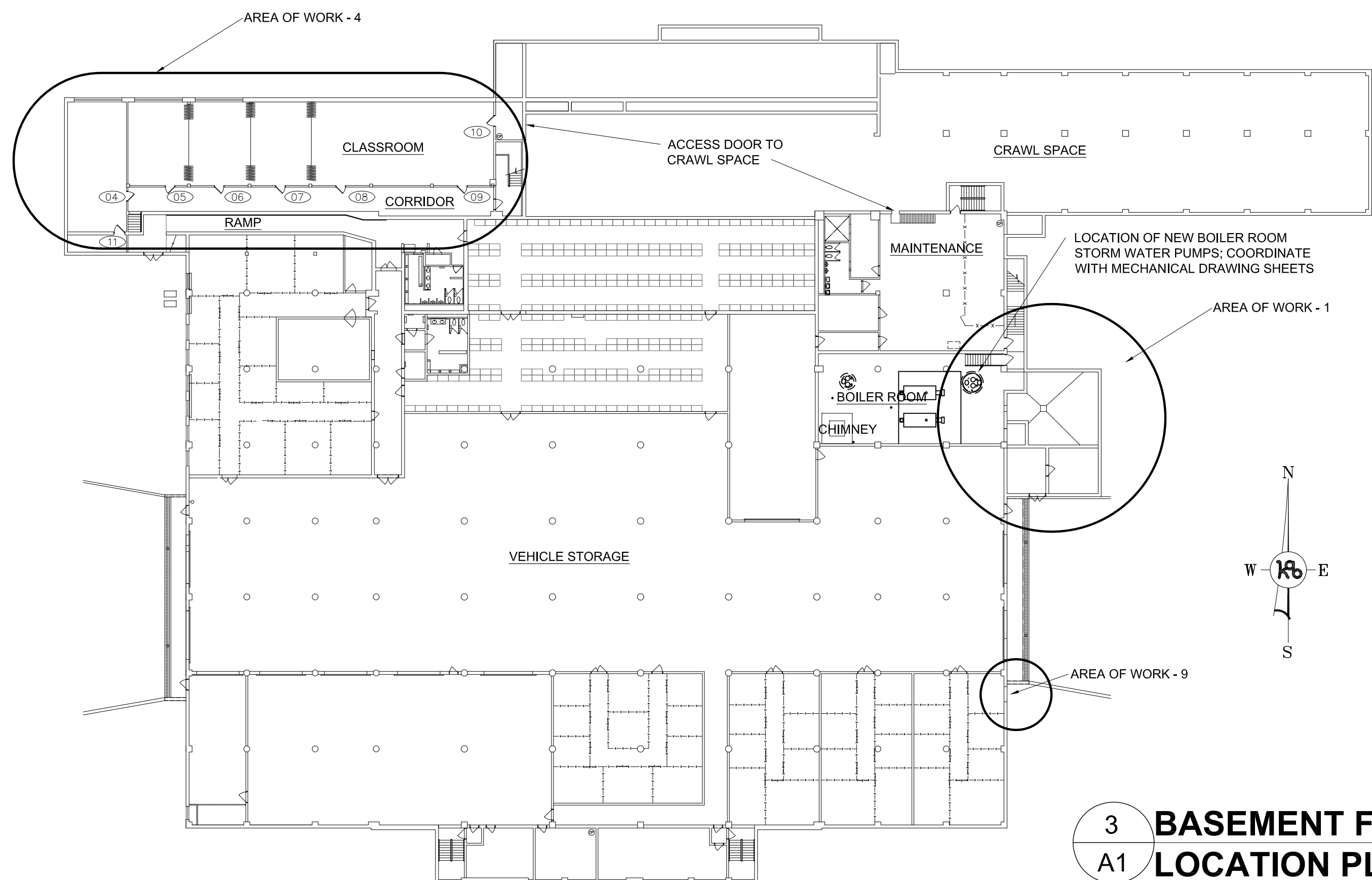
**1 SECOND FLOOR PLAN - AREA OF WORK; LOCATION PLAN**

SCALE 1/32" = 1'-0"



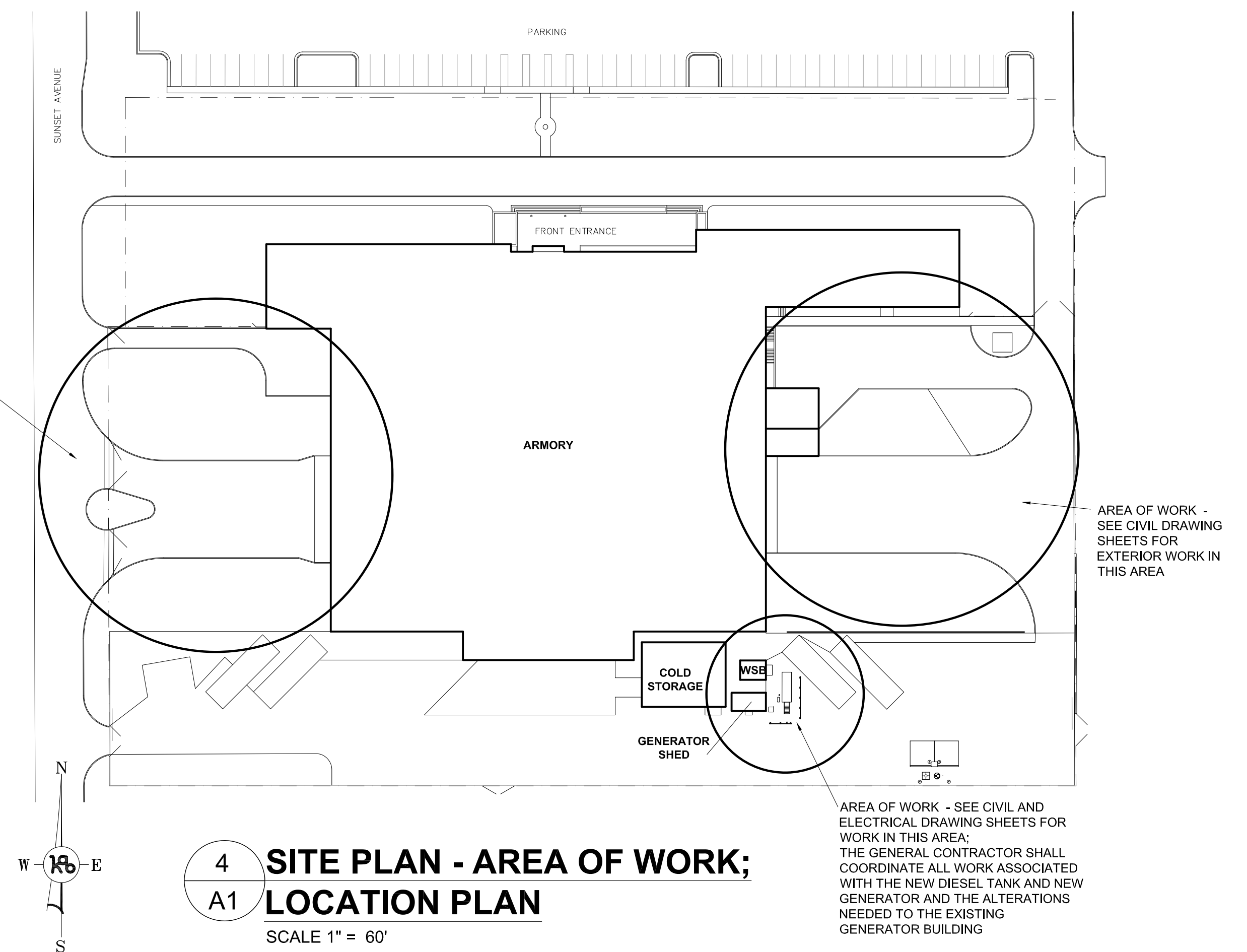
**2 FIRST FLOOR PLAN - AREA OF WORK; LOCATION PLAN**

SCALE 1/32" = 1'-0"



**3 BASEMENT FLOOR PLAN - AREA OF WORK; LOCATION PLAN**

SCALE 1/32" = 1'-0"



**4 SITE PLAN - AREA OF WORK; LOCATION PLAN**

SCALE 1" = 60'

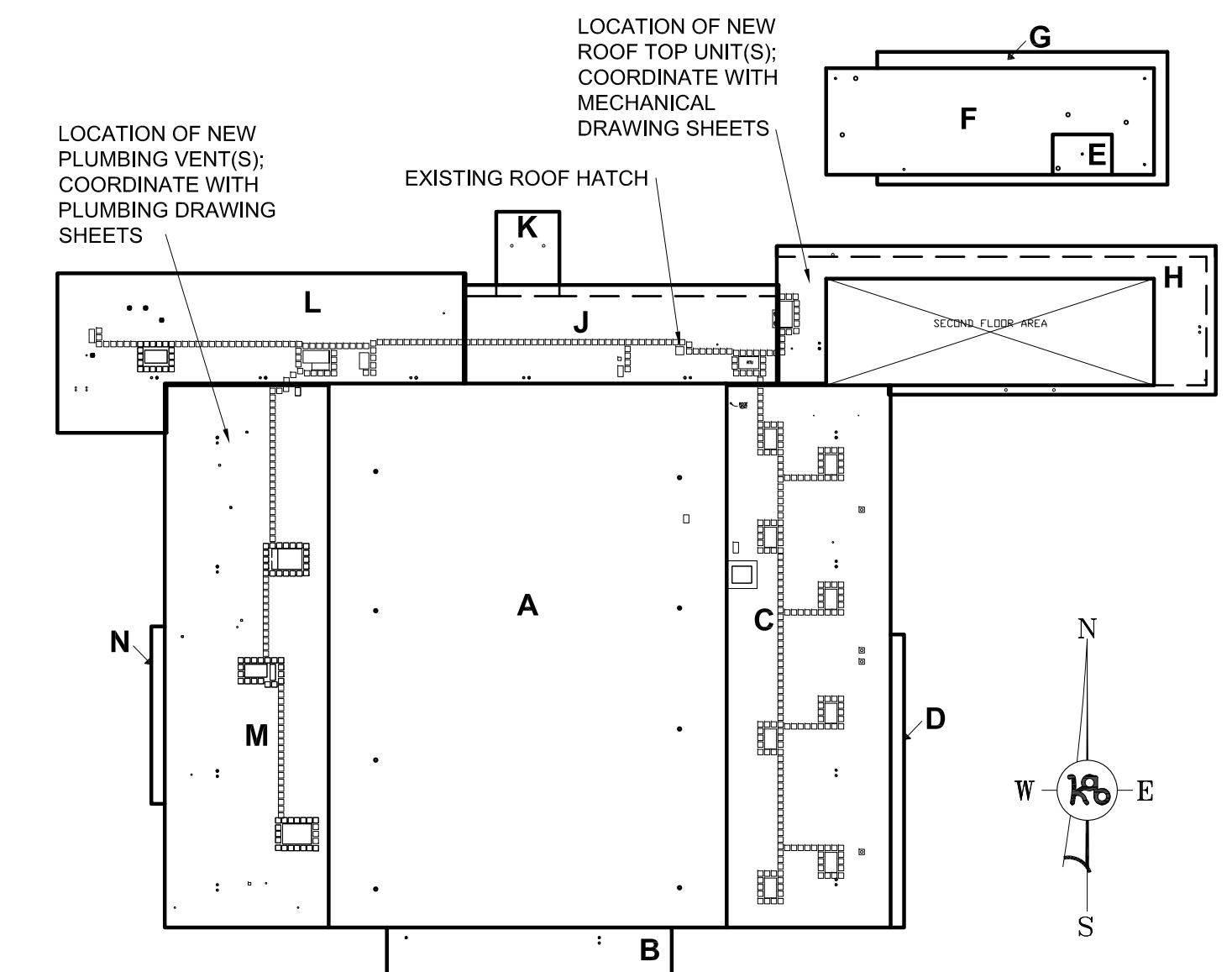
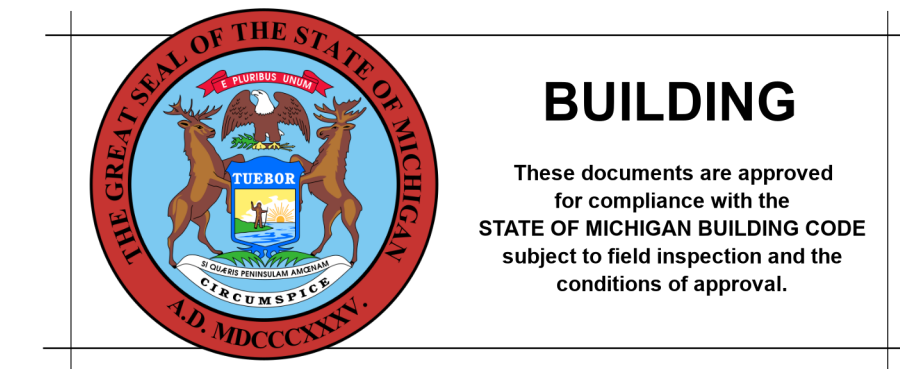
**GENERAL NOTES:**

- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE PRIOR TO BIDDING TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING HIS SUBCONTRACTORS AND SUPPLIERS ALL THE NECESSARY CONTRACT DOCUMENTS TO ENSURE THEY INCLUDE ALL ITEMS IN THEIR BID THAT ARE WITHIN THEIR DISCIPLINE.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL WORK REQUIRED AND PERFORMED TO CARRY OUT THE INTENT OF THIS PROJECT; INCLUDING THAT WORK REQUIRED AND PERFORMED BY THE SUBCONTRACTORS.
- THE GENERAL CONTRACTOR SHALL HAVE A RESPONSIBLE REPRESENTATIVE FROM THEIR COMPANY ON SITE AT ALL TIMES DURING HIS COMPANY'S WORK, OR THE WORK OF ONE OF THE SUBCONTRACTORS. THIS REPRESENTATIVE SHALL HAVE ON SITE, HIS OWN COPY OF THE CONTRACT SPECIFICATIONS, DRAWINGS AND DMVA APPROVED SHOP DRAWINGS.
- DISCREPANCIES FOUND BETWEEN THE SPECIFICATIONS AND THE DRAWINGS SHALL BE SUBMITTED TO DMVA IN THE FORM OF AN RFI FOR CLARIFICATION PRIOR TO ANY WORK INVOLVING THIS DISCREPANCY.
- CONTRACTORS ARE REQUIRED TO FOLLOW ALL LOCAL AND STATE CODES.
- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.

**ROOFING NOTE:**

- CONTRACTOR SHALL BE AWARE THAT THERE IS CURRENTLY A ROOF SYSTEM WARRANTY FOR EVERY ROOF OF THE ARMORY BUILDING: ANY WORK INVOLVING ALTERATIONS TO ANY OF THE EXISTING ROOFS (SUCH AS NEW PLUMBING/MECHANICAL VENTING OR REMOVAL THERE OF) SHALL REQUIRE THE ASSOCIATED ROOF WORK TO BE COMPLETED BY A CERTIFIED FIRESTONE ROOFING CONTRACTOR AND ASSOCIATED ROOF WILL NEED IT'S CURRENT ROOF WARRANTY RECERTIFIED IN WRITING BY FIRESTONE.

**CURRENT ROOF WARRANTY:**  
 FIRESTONE 60MIL EPDM  
 WARRANTY NUMBER: RO098509  
 FBPCO #: CH0414  
 20 YEAR 55MPH WARRANTY



**5 ROOF PLAN - FOR REFERENCE ONLY**

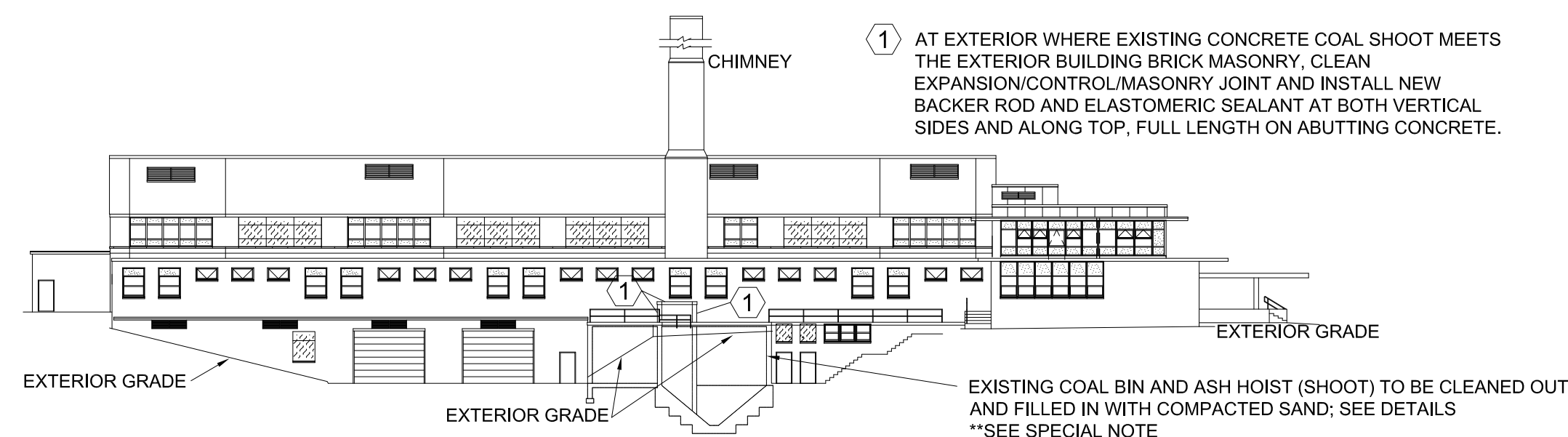
SCALE 1" = 60'

5" INSULATION THROUGHOUT WITH TAPER FOAM INSULATION SADDLES, AND 60 MIL EPDM MEMBRANE ON 1-3/4" TECTUM DECK, POSSIBLY A GL POLYISOCYANURATE BOARD ALSO



KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

SHEET	IDENTIFICATION NO.	ISSUED FOR	DATE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	280802010	PRELIMINARY	AUG 2021	KAB	KAB	KAB	KAB
		CONSTRUCTION	MAY 2023				
		FINAL RECORD					



**1 BUILDING EAST ELEVATION**

A2 SCALE 1/32" = 1'-0"

**COAL BIN/ASH HOIST EXISTING LIQUID NOTES:**

THE CONTRACTOR SHALL BE REQUIRED TO HIRE AN OUTSIDE SERVICE FOR ACTIVITIES RELEVANT TO THE REMOVAL, TRANSPORT AND DISPOSAL OF NON-HAZARDOUS LIQUIDS AND SOLIDS EXTRACTED FROM THE EXISTING COAL BIN/ASH HOIST.

THE EXISTING LIQUID HAS ENTERED THE PIT BY WAY OF LEAKS IN THE INFRASTRUCTURE ALLOWING RAINWATER AND SNOWMELT TO ENTER. IT IS LIKELY MOSTLY WATER.

THE EXISTING LIQUID WAS TESTED FOR ANY METALS THAT COULD BE PRESENT. THE SAMPLE WAS FOUND TO NOT HAVE PRESENCE OF HAZARDOUS WASTE METALS. THEREFORE, DMVA CONSIDERS THE LIQUID AS NON-HAZARDOUS LIQUID INDUSTRIAL BYPRODUCT. SEE THE LAB REPORT ATTACHED TO THE SPECIFICATION DOCUMENTS. NO OTHER CONTAMINATION OF THE LIQUID EXCEPT FOR DIRT AND DUST IS ASSUMED. DMVA ENVIRONMENTAL HAS DETERMINED THE LIQUID IS NOT SUITABLE FOR DISPOSAL THROUGH THE SANITARY SEWER.

THE CONTRACTOR WILL BE REQUIRED TO HIRE SERVICES TO PUMP THE LIQUID FROM THE "COAL PIT", TRANSPORT AND DISPOSE OF THE LIQUID IN ACCORDANCE WITH ALL STATE OF MICHIGAN LIQUID INDUSTRIAL BYPRODUCT REGULATIONS, FEDERAL AND LOCAL REGULATIONS.

THESE SERVICES SHALL BE PROVIDED BY A QUALIFIED AND LICENSED LIQUID INDUSTRIAL BYPRODUCT TRANSPORTER WITH CAPABILITIES TO REMOVE LIQUID FROM THE PIT. THE COMPANY SHALL BE CAPABLE OF ROUND-TRIP MOBILIZATION. THE PIT ONLY NEEDS TO BE DEWATERED BUT DOES NOT NEED TO BE CLEANED OR PRESSURE WASHED.

THE TRANSPORTER SHALL PROVIDE DMVA WITH A DETAILED LIST OF THE WORK PERFORMED, GALLONS OF LIQUID REMOVED AND TECHNICIAN PRESENT. THE TRANSPORTER SHALL PROVIDE AND COMPLETE APPROPRIATE MANIFESTS FOR LIQUID INDUSTRIAL BYPRODUCT TRANSPORTATION AND DISPOSAL TO DMVA. A SIGNED MANIFEST FROM THE DISPOSAL FACILITY MUST BE RECEIVED WITHIN 30 DAYS OF THE PUMPING AND TRANSPORT.

THE TRANSPORTER MUST HOLD AND PROVIDE USDOT MOTOR CARRIER IDENTIFICATION NUMBER, EPA TRANSPORTER IDENTIFICATION NUMBER AND MEGLE ASSIGNED TRANSPORTATION IDENTIFICATION NUMBERS IN THE BID.

**GENERAL NOTES:**

- FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.

\*PRIOR TO ANY WORK WITHIN THE ASH HOIST AREA THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL PLATE LID AND REMOVE ANY AND ALL WATER AND/OR HYDRAULIC FLUID THAT MAY BE PRESENT IN THE HOIST AREA.

CONTRACTOR IS RESPONSIBLE FOR REMOVING THE HYDRAULIC CYLINDER AND FLUIDS PRIOR TO FILLING THE CHAMBER WITH COMPACTED SAND.

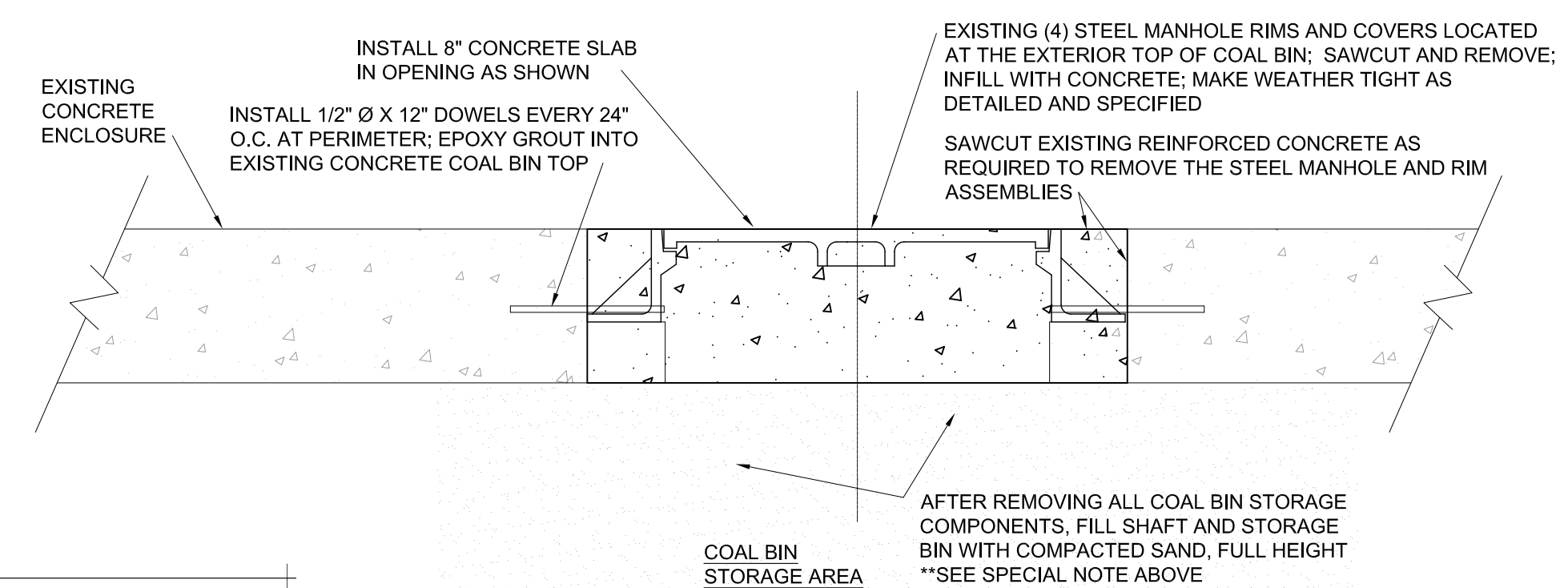
THE EXISTING LIQUID/FLUIDS WERE ENVIRONMENTALLY TESTED AND THE RESULTS CAME BACK ND FOR TCLP METALS. THE CONTRACTOR SHALL REMOVE/DISPOSE OF ALL LIQUIDS PRIOR TO FILLING WITH THE SPECIFIED MATERIALS.

THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS AND WORK NEEDED AS THIS SPACE MAYBE CONSIDERED "CONFINED WORK SPACE." THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.

ALL ITEMS REMOVED WITHIN THE BIN AND HOIST AREAS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE.

CONTRACTOR IS TO PAINT THE ENTIRE EAST MASONRY WALL WITHIN THE BOILER ROOM UPON COMPLETION.

**SPECIAL NOTE:** CONTRACTOR HAS THE OPTION OF INSTALLING PEA STONE IN THE COAL BIN AND ASH HOIST AREAS IN PLACE OF THE SPECIFIED COMPACTED SAND.



**4 MANHOLE INFILL DETAIL**

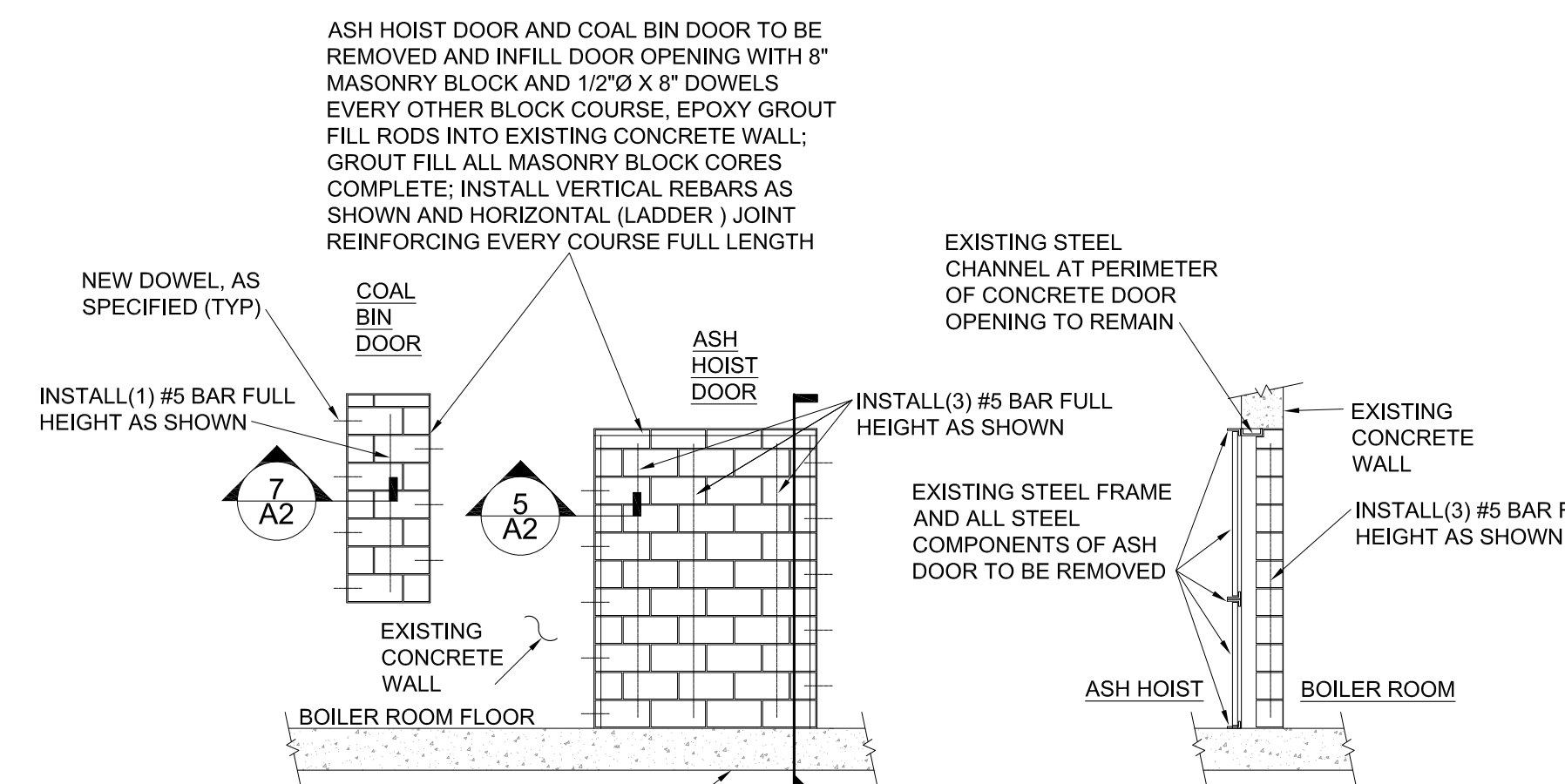
A2 SCALE 1" = 1'-0"

**5 ASH HOIST DOOR INFILL DETAIL**

A2 SCALE 1" = 1'-0"

**7 COAL BIN DOOR INFILL DETAIL**

A2 SCALE 1" = 1'-0"

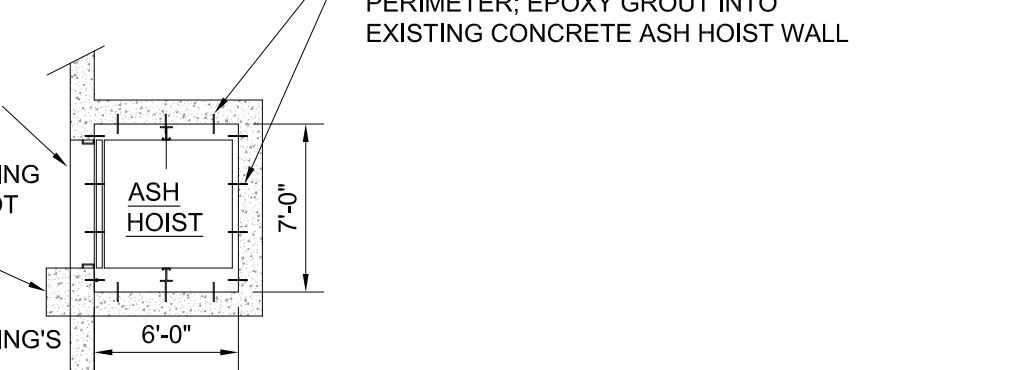


**6 SECTION DETAIL**

A2 SCALE 1/4" = 1'-0"

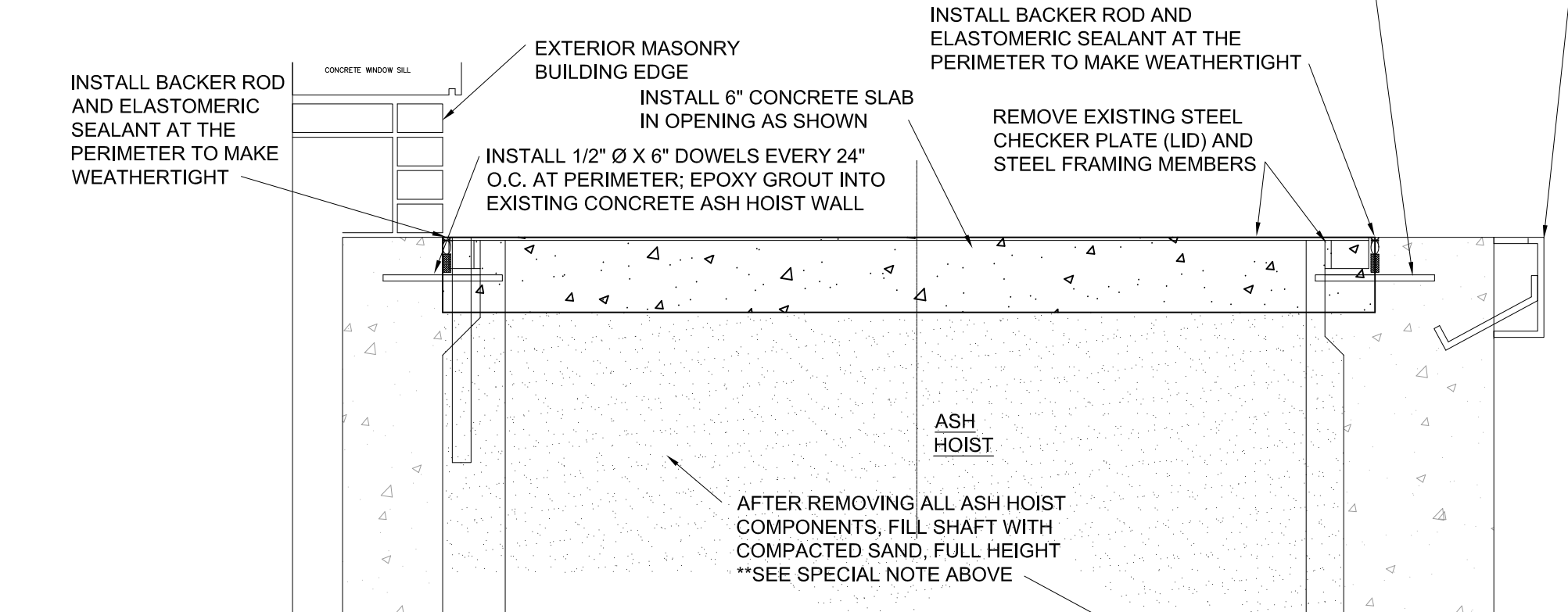
**3 WALL ELEVATION**

A2 SCALE 1/4" = 1'-0"



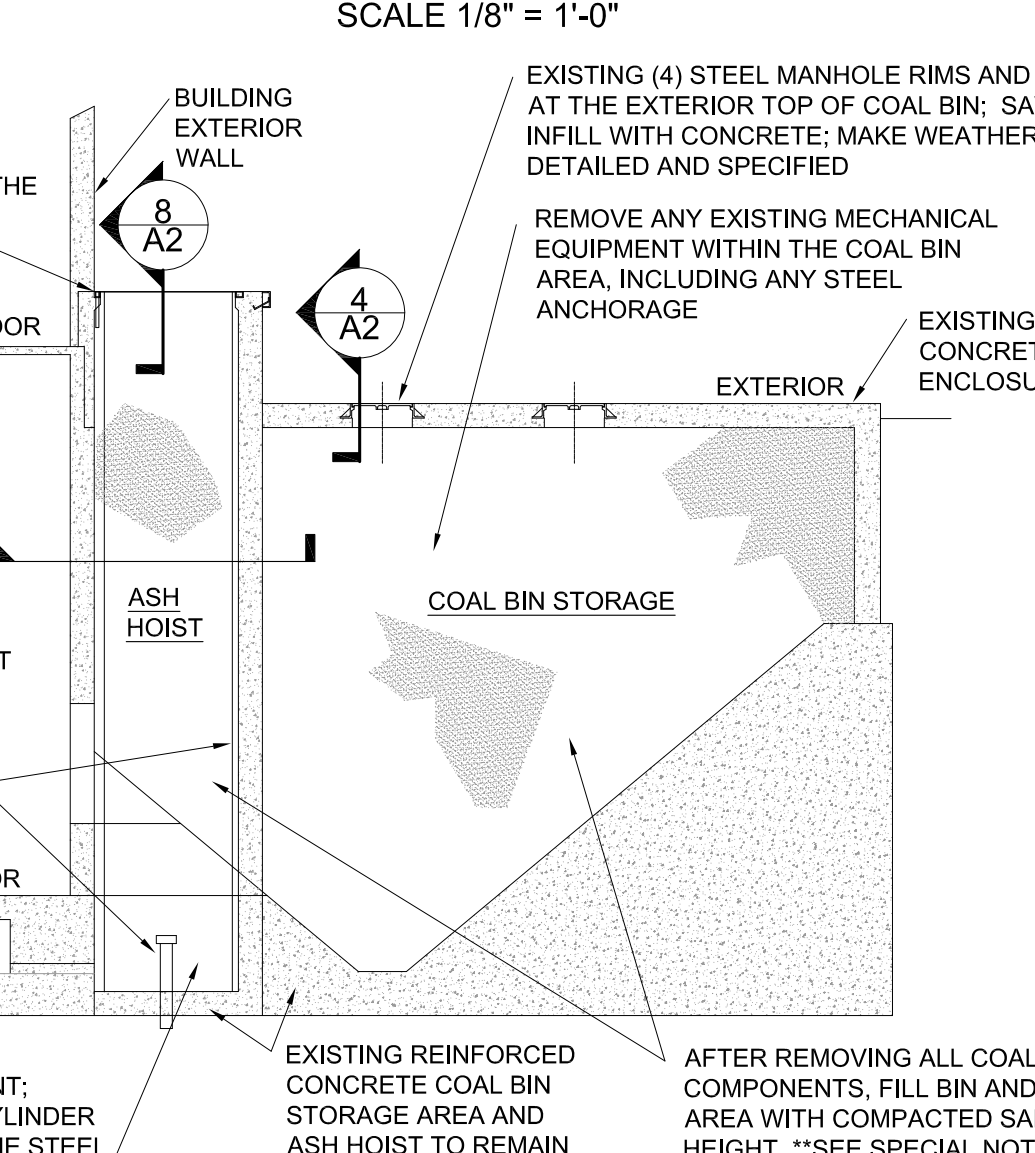
**9 TOP/PLAN VIEW OF ASH HOIST**

A2 SCALE 1/8" = 1'-0"



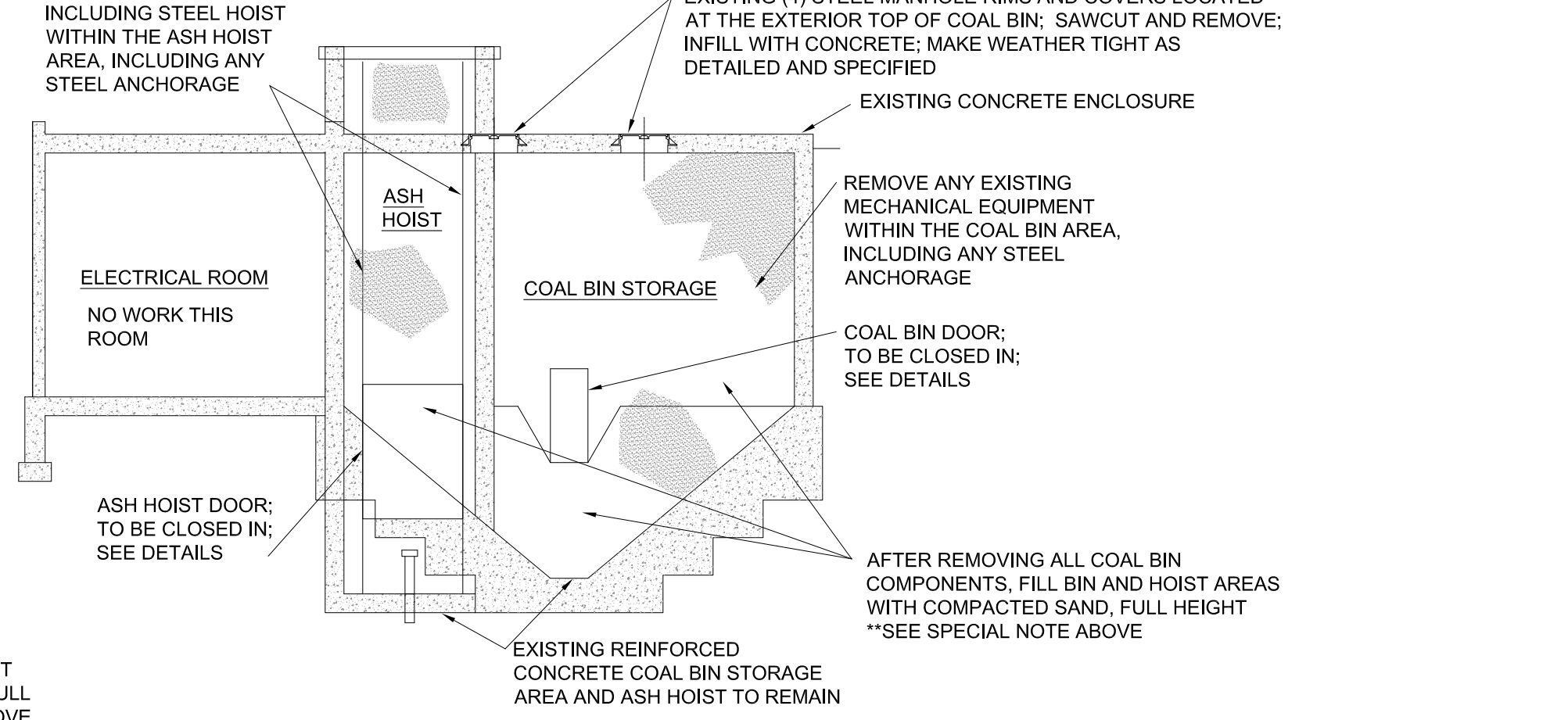
**8 ASH HOIST NEW LID DETAIL**

A2 SCALE 1" = 1'-0"



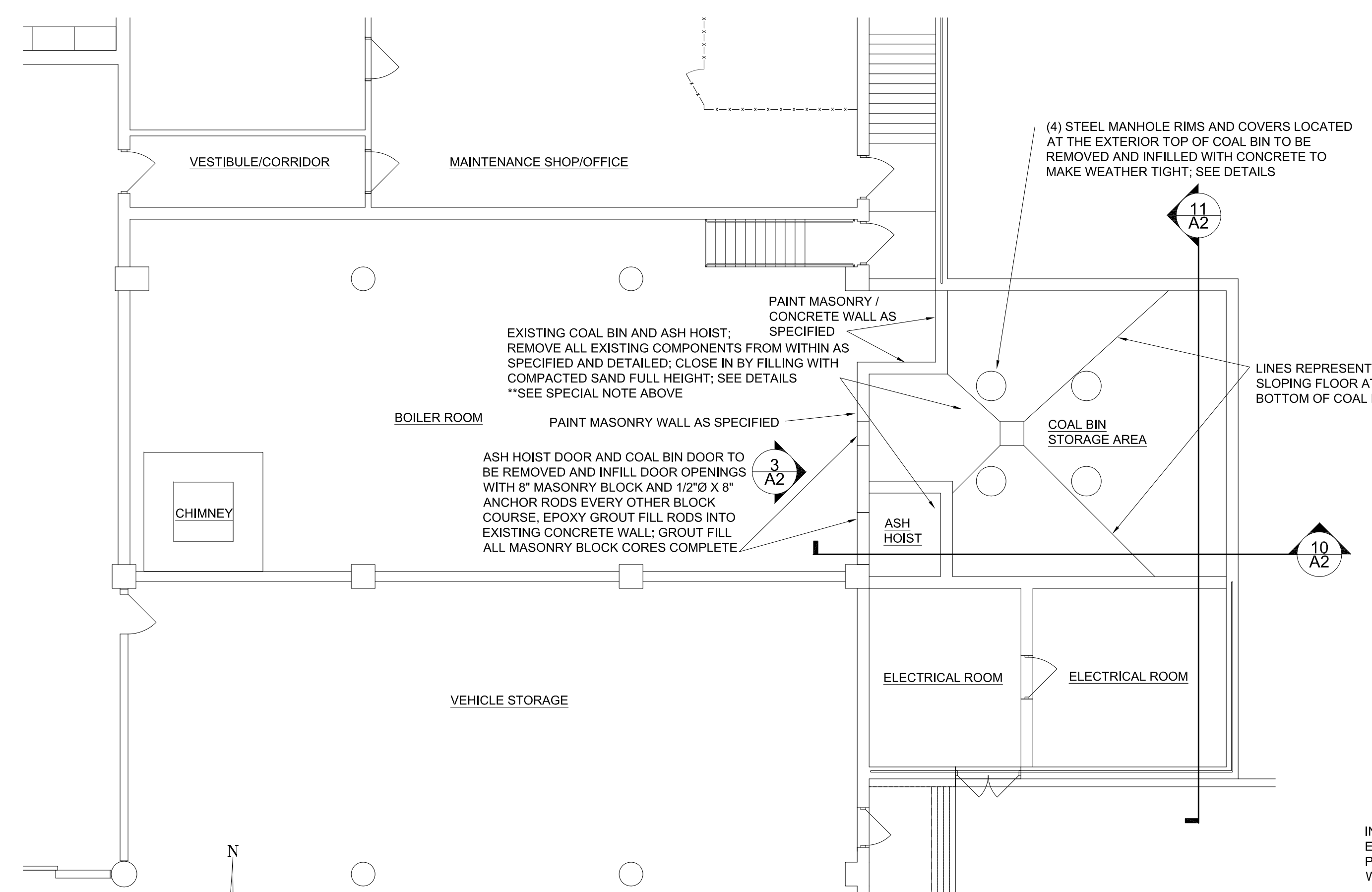
**10 SECTION ELEVATION DETAIL**

A2 SCALE 1/8" = 1'-0"



**11 SECTION ELEVATION DETAIL**

A2 SCALE 1/8" = 1'-0"



**2 PARTIAL BASEMENT FLOOR PLAN; BOILER ROOM AND EXTERIOR TOP VIEW OF COAL BIN STORAGE AREA**

A2 SCALE 1/8" = 1'-0"

ROOM FINISH SCHEDULE										
ROOM NO.	ROOM NAME	FLOOR		WALLS				CEILING		REMARKS
		FINISH	BASE	NORTH	SOUTH	EAST	WEST	FINISH		
	BOILER ROOM	CONC	EXTG			EXP-P				
LEGEND/NOTES/SYMBOLS										
	EXP-P	EXPOSED MASONRY BLOCK - PAINT 2 COATS EPOXY SEMI-GLOSS - COLOR TO MATCH EXISTING								
	1.									

STATE OF MICHIGAN  
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET  
DIVISION OF BUSINESS SERVICES ADMINISTRATION  
**DESIGN AND CONSTRUCTION DIVISION**  
ADAM LACHT, P.E., DIRECTOR

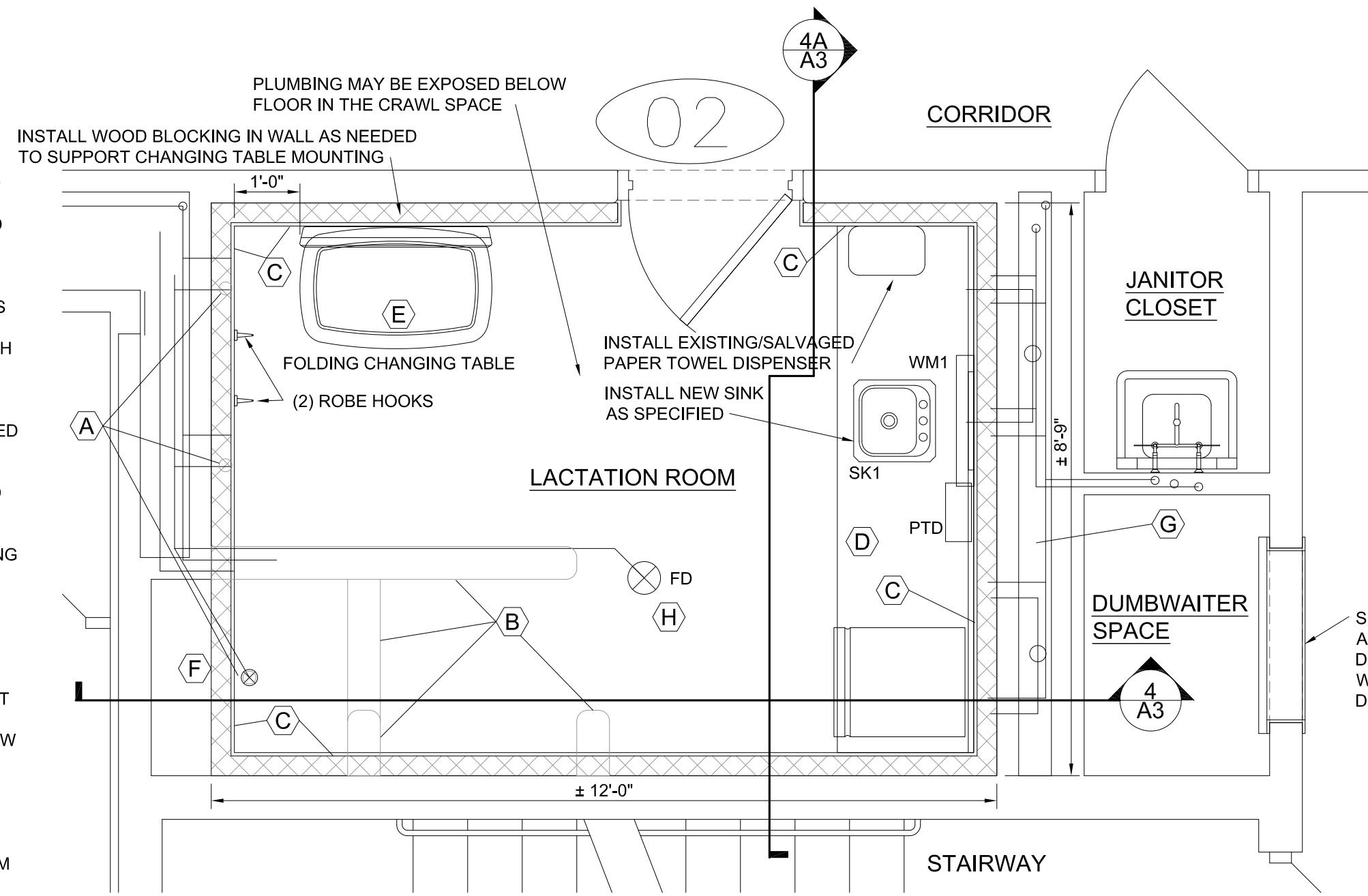
RENOVATE ARMORY  
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS  
DETROIT LIGHT GUARD ARMORY DETROIT, MICHIGAN

DESIGNED	K.A.B.	DATE	AUG 2021
DRAWN	K.A.B.	CHECKED	MAY 2023
ISSUED FOR	PRELIMINARY	CONSTRUCTION	FINAL RECORD
IDENTIFICATION NO.	280802010	PROJECT INDEX CODE	

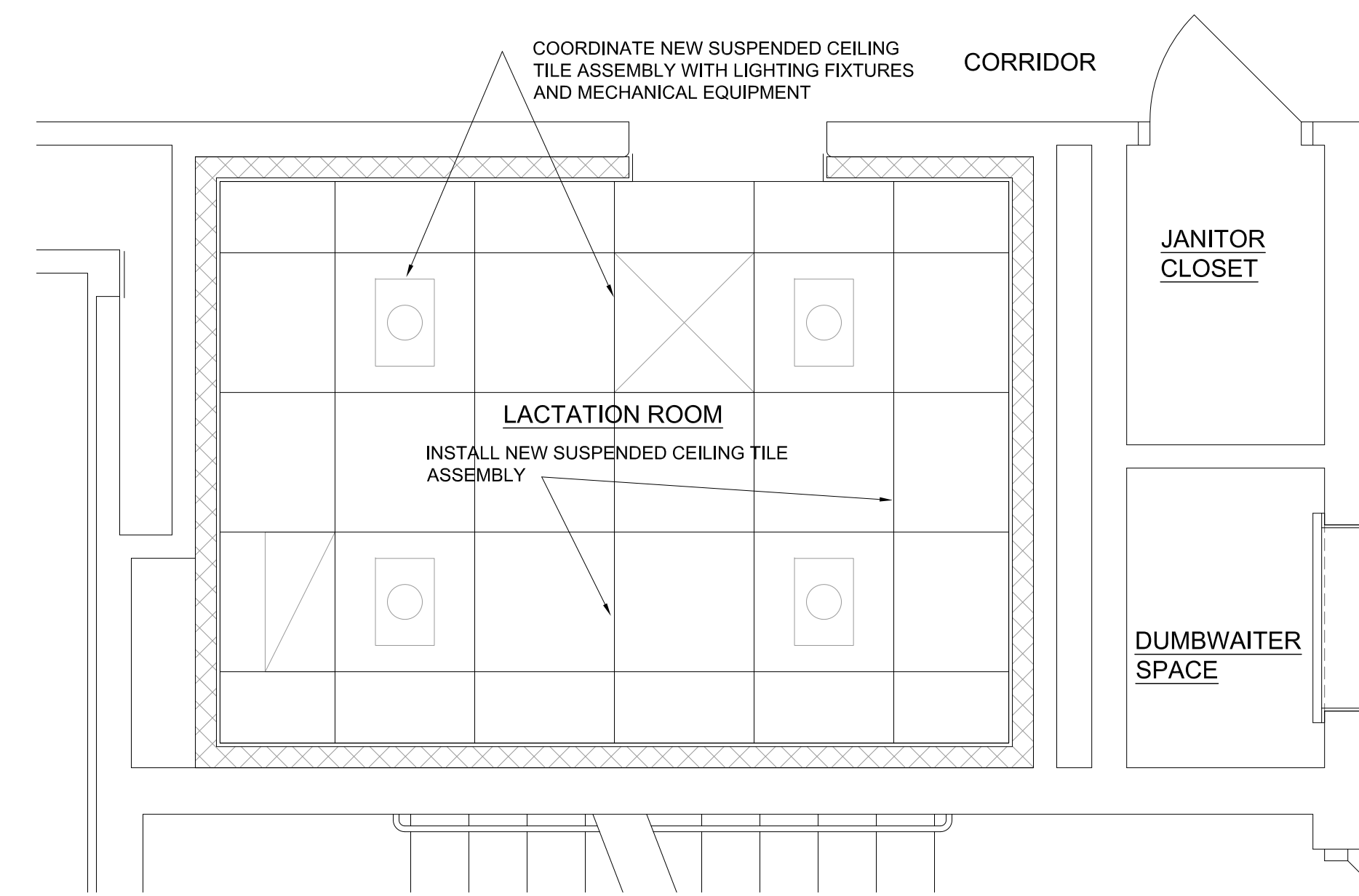
SHEET **A2**

### NEW WORK NOTES:

- A AFTER THE EXISTING PLUMBING FIXTURES (WATER CLOSETS AND FD TO THE SHOWER) HAVE BEEN REMOVED, THE CONTRACTOR IS TO PLUG THE WASTE LINE AT THE FLOOR FIXTURE LOCATION AND FILL WITH EPOXY GROUT FULL, FLUSH AND SMOOTH WITH THE EXISTING FLOOR TILE.
- B AFTER THE EXISTING GLAZED TILE AND MASONRY IS REMOVED AS SPECIFIED, THE CONTRACTOR IS TO FILL THE FLOOR AREA IN THESE LOCATIONS WITH EPOXY GROUT FULL, FLUSH AND SMOOTH WITH THE EXISTING FLOOR TILE.
- C INSTALL NEW 3-5/8" STEEL (MIN. 0.0329") STUDS, 16" O.C. WITH 5/8" TYPE X MR GYPSUM WALL BOARD AND 3-1/2" FIBERGLASS UNFACED BATT INSULATION; FRICTION FIT - FULL HEIGHT, FULL THICKNESS. PAINT NEW WALLS FOLLOWING SPECIFICATIONS. INSTALL WOOD BACKER MEMBERS FOR ALL WALL HUNG FIXTURES, FINISHES AND ACCESSORIES; COORDINATE LOCATIONS.
- D INSTALL NEW BASE CABINETS AND LAMINATE COUNTER, INCLUDING NEW SINK, AS SPECIFIED AND DETAILED.
- E INSTALL WALL MOUNTED FOLDING BABY CHANGING STATION. HEIGHT OF STATION IN OPEN POSITION SHALL BE 32" ABOVE THE FLOOR.
- F PROVIDE ANY NECESSARY WALL BRACING AS NEW WALL WILL NOT BUTT UP TO EXISTING, IN THE EXISTING SHOWER. ALSO PROVIDE NETTING AS NEEDED TO HOLD SPECIFIED BATT INSULATION IN NEW STUD WALL.
- G SEE GENERAL NOTE - COORDINATING PLUMBING IN CHASE WITH PLUMBING GOING UP TO SECOND FLOOR.
- H INSTALL BRASS RING AS REQUIRED AT EXISTING FLOOR DRAIN RIM TO ALLOW IT TO BECOME LEVEL WITH NEW FLOORING; SECURE AND SEAL PERIMETER WATER TIGHT.



**1 PARTIAL FLOOR PLAN  
NEW LACTATION ROOM**  
SCALE 1/2" = 1'-0"

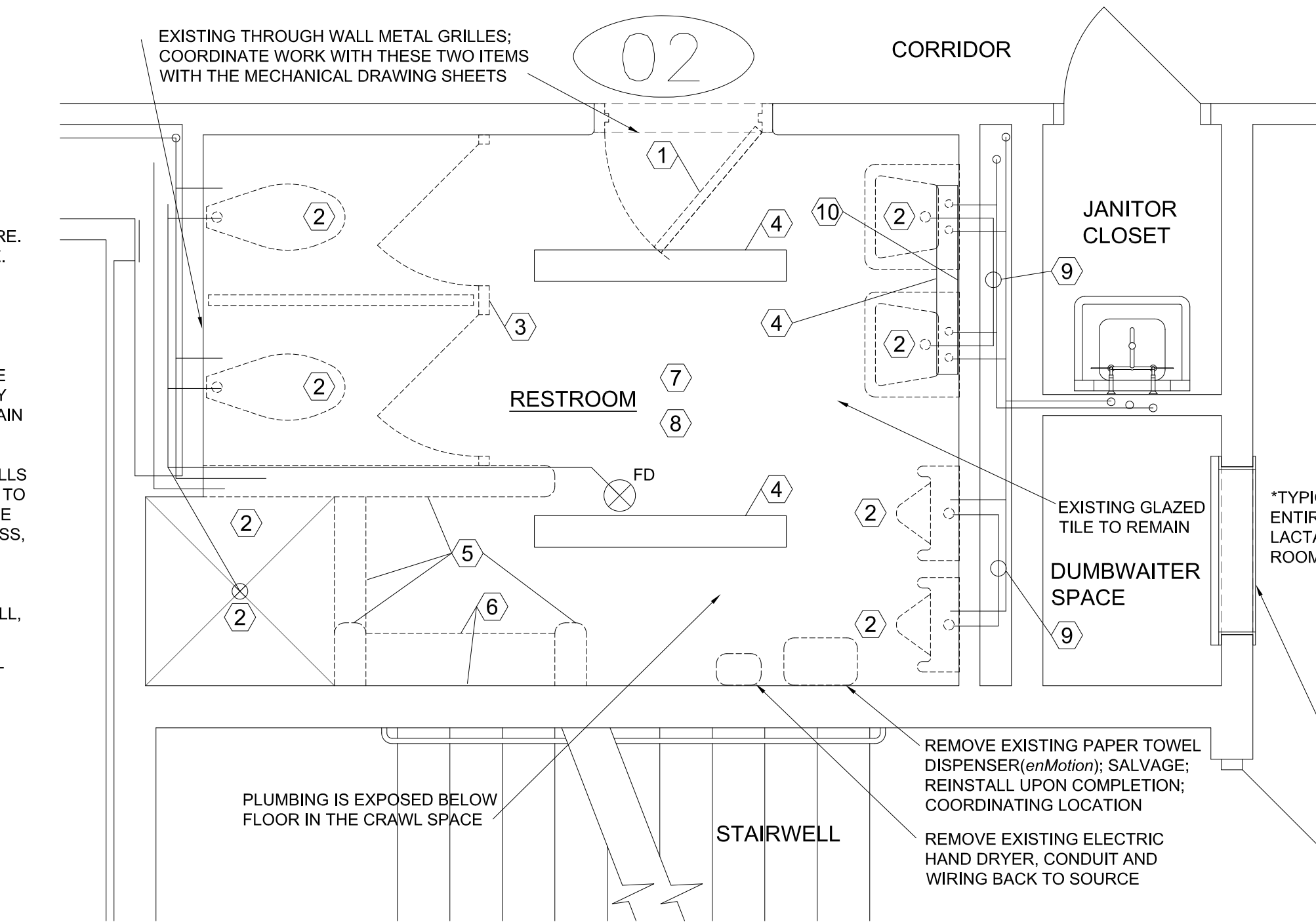


**2 REFLECTIVE CEILING PLAN  
NEW LACTATION ROOM**  
SCALE 1/2" = 1'-0"

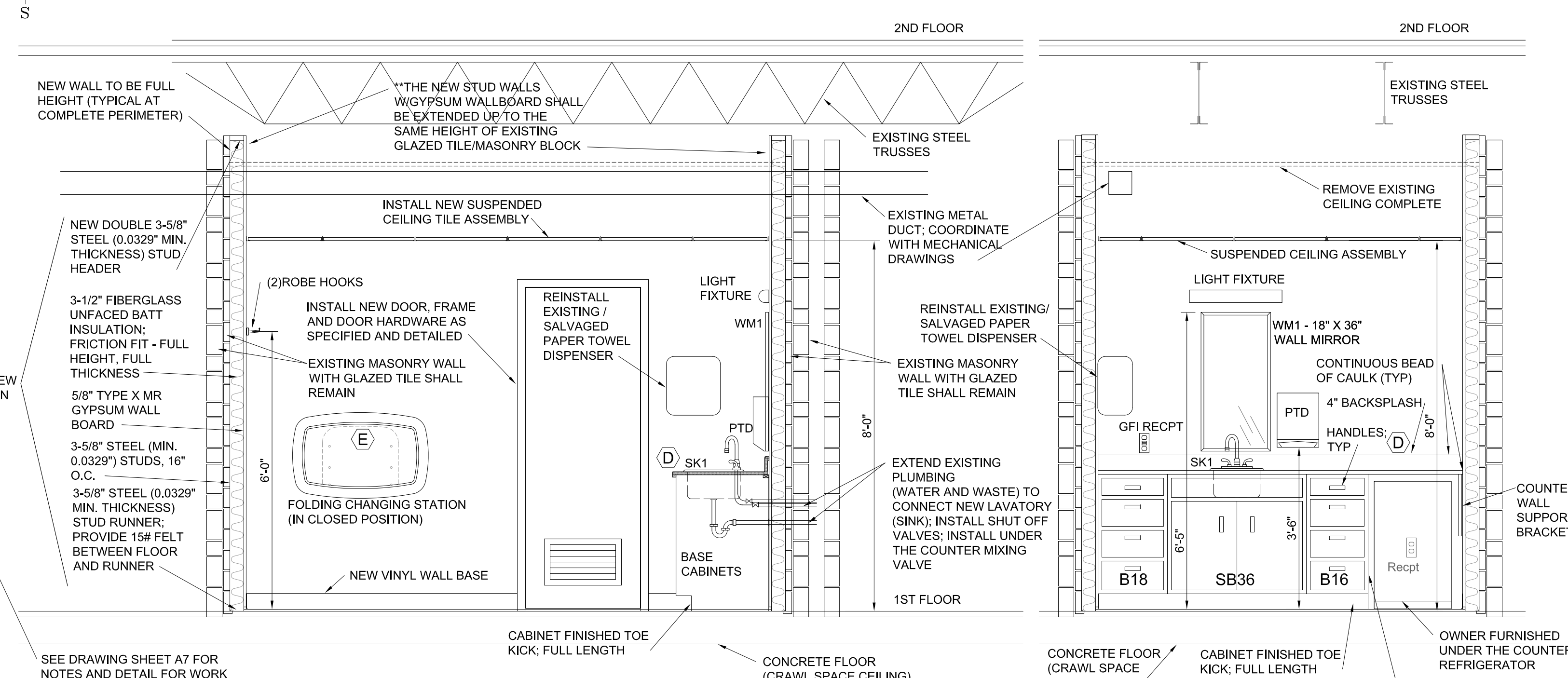
PLUMBING FIXTURE NOMENCLATURE	
MARK	FIXTURE ITEM
FD	FLOOR DRAIN, TO REMAIN
PTD	PAPER TOWEL DISPENSER, INSTALL NEW
SK1	COUNTER SINK, INSTALL NEW
WM1	WALL MIRROR, INSTALL NEW

### DEMOLITION NOTES:

- 1 REMOVE EXISTING DOOR, FRAME AND EXISTING DOOR HARDWARE. PREP OPENING TO RECEIVE NEW DOOR, FRAME AND HARDWARE. TURN EXISTING DOOR HARDWARE OVER TO ARMORY MAINTENANCE WORKER.
- 2 THE CONTRACTOR SHALL REMOVE THE EXISTING PLUMBING FIXTURES FROM THIS ROOM. THE EXISTING FLOOR DRAIN SHALL REMAIN ACTIVE AND ONE LAVATORY SINK LOCATION SHALL HAVE ITS WATER AND WASTE DRAIN ACTIVE SO THAT A NEW LAVATORY SINK CAN BE CONNECTED TO THIS PLUMBING. THE SHOWER DRAIN IS TO BE REMOVED/CAPPED. AT THE LOCATIONS OF THOSE FIXTURES REMOVED, CAP EXISTING WATER PIPING FLUSH WITH THE WALL AND OR FLOOR. THE EXISTING PLUMBING BEHIND WALLS AND UNDER THE FLOOR SHALL REMAIN ACTIVE AS IT CONNECTS TO EXISTING PLUMBING THAT NEEDS TO REMAIN ACTIVE. PATCH THE HOLES IN THE FLOOR WITH EPOXY GROUT FULL FLOOR THICKNESS, FLUSH AND SMOOTH.
- 3 REMOVE EXISTING TOILET PARTITIONS COMPLETE. PATCH THE HOLES IN THE FLOOR FROM FASTENERS WITH EPOXY GROUT FULL, FLUSH AND SMOOTH.
- 4 REMOVE EXISTING LIGHT FIXTURES. EXISTING LIGHTING CIRCUIT CAN BE UTILIZED FOR NEW LIGHT FIXTURES; COORDINATE.
- 5 REMOVE EXISTING MASONRY WALLS. CARE SHALL BE TAKEN TO KEEP THE FLOOR TILE AT THESE LOCATIONS FROM BECOMING DAMAGED. CARE SHALL BE TAKEN AT THE ABUTTING WALLS TO REMAIN, NOT TO DAMAGE THE GLAZED TILE.
- 6 REMOVE EXISTING BENCH, ROBE HOOK AND SHOWER CURTAIN ROD ASSEMBLIES COMPLETE.
- 7 REMOVE EXISTING CEILING, COMPLETE.
- 8 EXISTING GLAZED TILE FLOORING TO REMAIN.
- 9 APPROX LOCATION OF PLUMBING VENT TO REMAIN ACTIVE.
- 10 REMOVE EXISTING WALL MIRRORS AND SHELF.



**3 PARTIAL FLOOR PLAN DEMOLITION  
EXISTING RESTROOM**  
SCALE 1/2" = 1'-0"

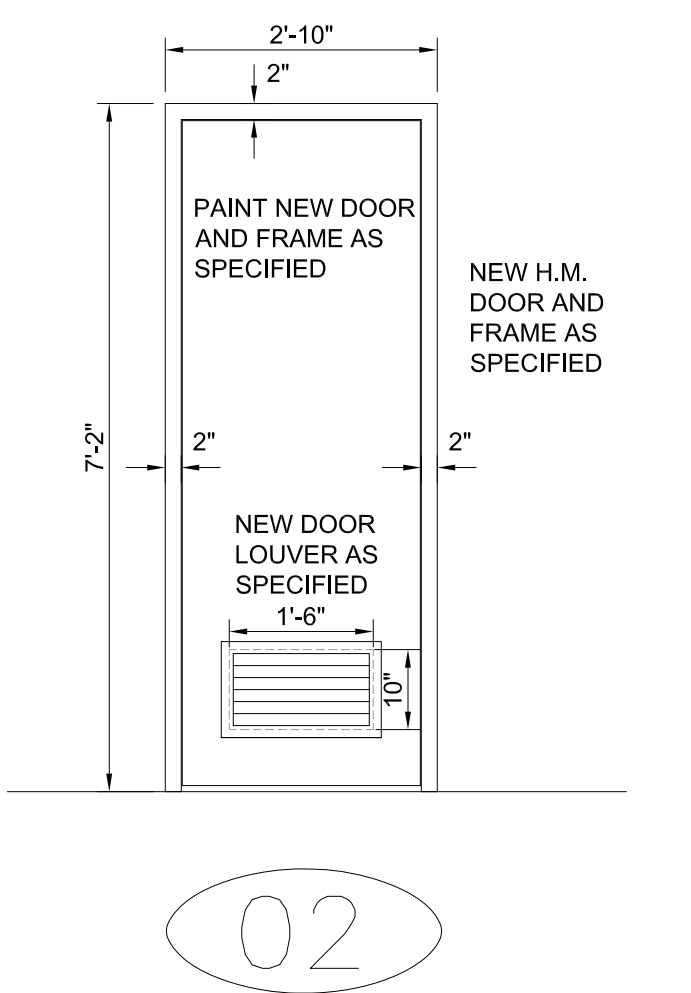


**4 SECTION / ELEVATION**  
SCALE 1/2" = 1'-0"

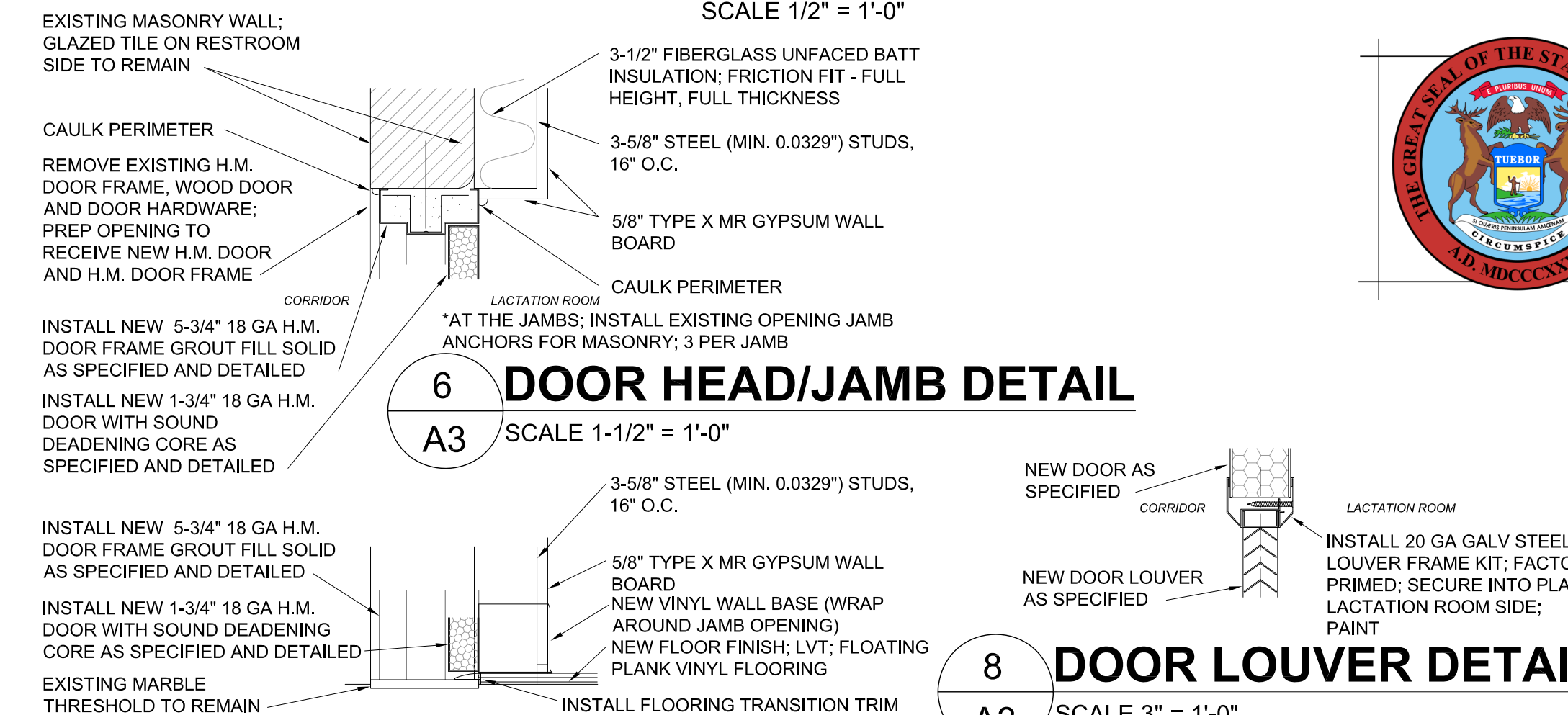
**4A SECTION / ELEVATION**  
SCALE 1/2" = 1'-0"

**THERMOSTATIC MIXING VALVE**  
EQUAL TO HEATGUARD 135 SERIES TEMPERATURE ACTUATED MIXING VALVE. INSTALL AT EACH SINGLE POINT OF USE FIXTURE. MIXING VALVE SHALL MEET ASSE 1070 STANDARDS.

PLUMBING FIXTURE SCHEDULE						
MARK	FIXTURE ITEM	WASTE	VENT	TRAP	CW	HW
FD	FLOOR DRAIN	3"	2"	2"	1/2"	-
SK1	SINK / LAVATORY	1 1/4"	1 1/2"	1 1/4"	3/8"	3/8"



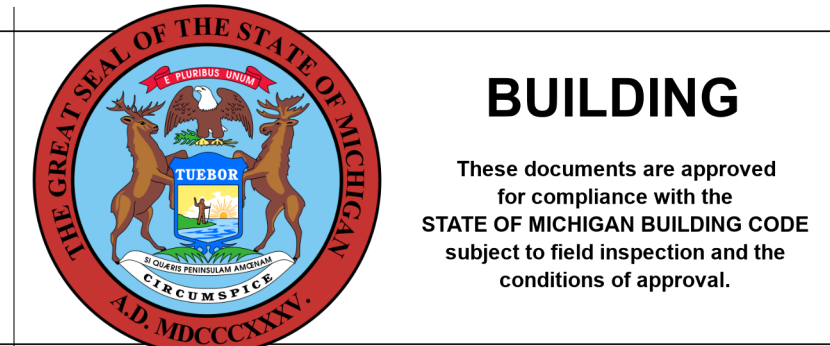
**5 DOOR ELEVATION**  
SCALE 1/2" = 1'-0"



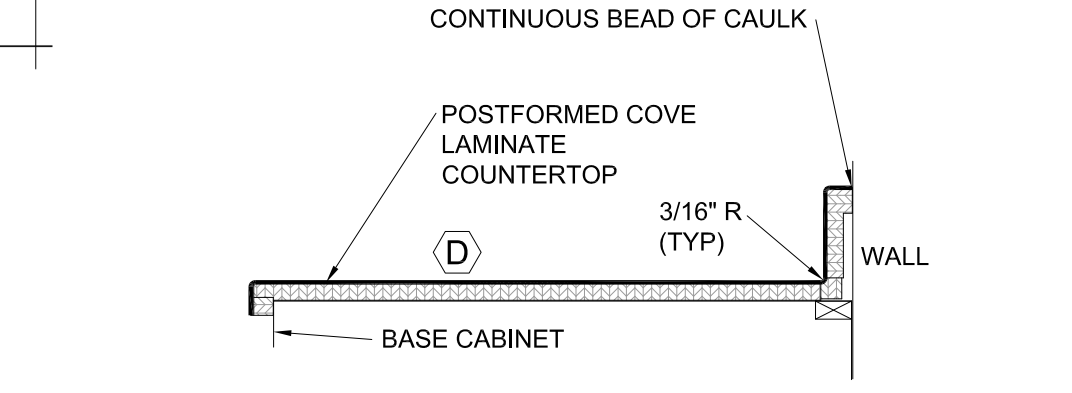
**6 DOOR HEAD/JAMB DETAIL**  
SCALE 1-1/2" = 1'-0"

**8 DOOR LOUVER DETAIL**  
SCALE 3" = 1'-0"

**7 DOOR THRESHOLD DETAIL**  
SCALE 1-1/2" = 1'-0"



**BUILDING**  
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**9 COUNTER SECTION DETAIL**  
SCALE 1-1/2" = 1'-0"

ROOM FINISH SCHEDULE			
ROOM	FLOOR	CEILING	WALLS
LACTATION ROOM	LACTATION	NEW SUSPENDED CEILING TILE	NEW MASONRY WALL WITH GLAZED TILE

**REMARKS:**  
1. NEW SUSPENDED CEILING TILE HEIGHT SHALL BE 8'-0" UNLESS OTHERWISE NOTED; INSTALL THE NECESSARY TRIM & RUNNERS ALONG PERIMETER WALLS.

2. AREA 2 WORK LOCATION

### GENERAL NOTES:

FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.

EXISTING RESTROOM TO BE CONVERTED TO A WOMENS LACTATION ROOM.

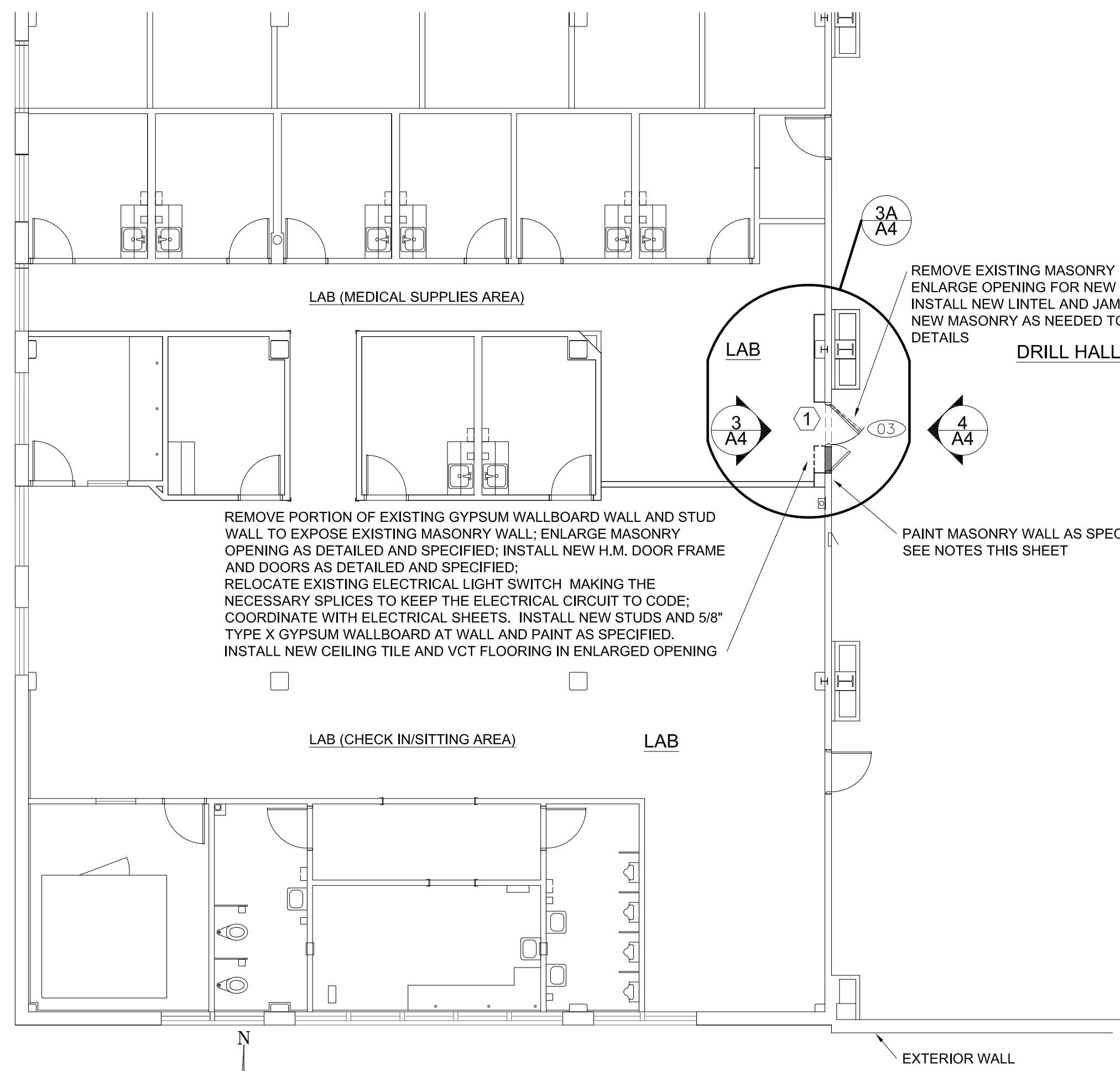
COORDINATE WORK IN THIS AREA WITH ALL DISCIPLINES; PLUMBING, ELECTRICAL, MECHANICAL, ETC.

PLEASE NOTE THERE IS NO SEPARATE PLUMBING DRAWING FOR THE WORK INVOLVING THE PLUMBING WORK IN THIS WORK LOCATION. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND COMPLETING THIS ROOM MEETING LOCAL AND STATE PLUMBING CODE REQUIREMENTS.

SOME OF THE EXISTING PLUMBING CAN BE ACCESSED FROM THE BUILDING'S CRAWLSPACE BELOW THIS ROOM. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.

PLUMBING PIPING; DOMESTIC WATER SUPPLIES, VENTING AND SEWER PIPING SERVICING THE SECOND FLOOR EXISTING KITCHEN AREA SPECIFIED TO HAVE PIPING REPLACED/REMOVED AND ALTERED GOES TO THE SECOND FLOOR THRU THE CHASE SHOWN ON THESE PLANS; COORDINATE. ALL EXISTING SEWER, VENT AND REVENT PIPING SHALL REMAIN IN PLACE AND REMAIN ACTIVE, AS IT MAY SERVICE THE SECOND FLOOR PLUMBING.

AT THE EXISTING FLOOR DRAIN (FD) TO REMAIN, THE CONTRACTOR SHALL INSTALL A STATE OF MICHIGAN APPROVED (APPROVAL NUMBER 1623-PA EFFECTIVE 11-5-2011) INLINE FLOOR DRAIN TRAP SEALER. THIS FLOOR DRAIN TRAP SEAL PROTECTION DEVICE MUST ALSO BE ASSE 1072 APPROVED. THE CONTRACTOR MUST SUBMIT DOCUMENTS SHOWING PROOF OF THE (LARA) APPROVAL.



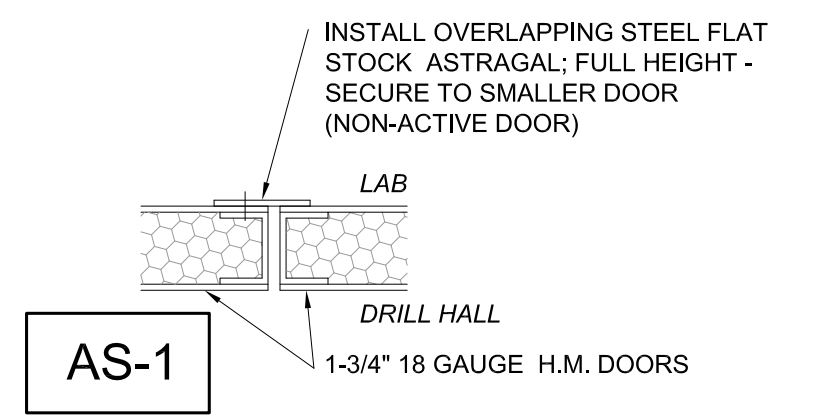
**1 PARTIAL FIRST FLOOR PLAN - LOCATION PLAN**  
 A4 SCALE 1/8" = 1'-0"

**GENERAL NOTES:**

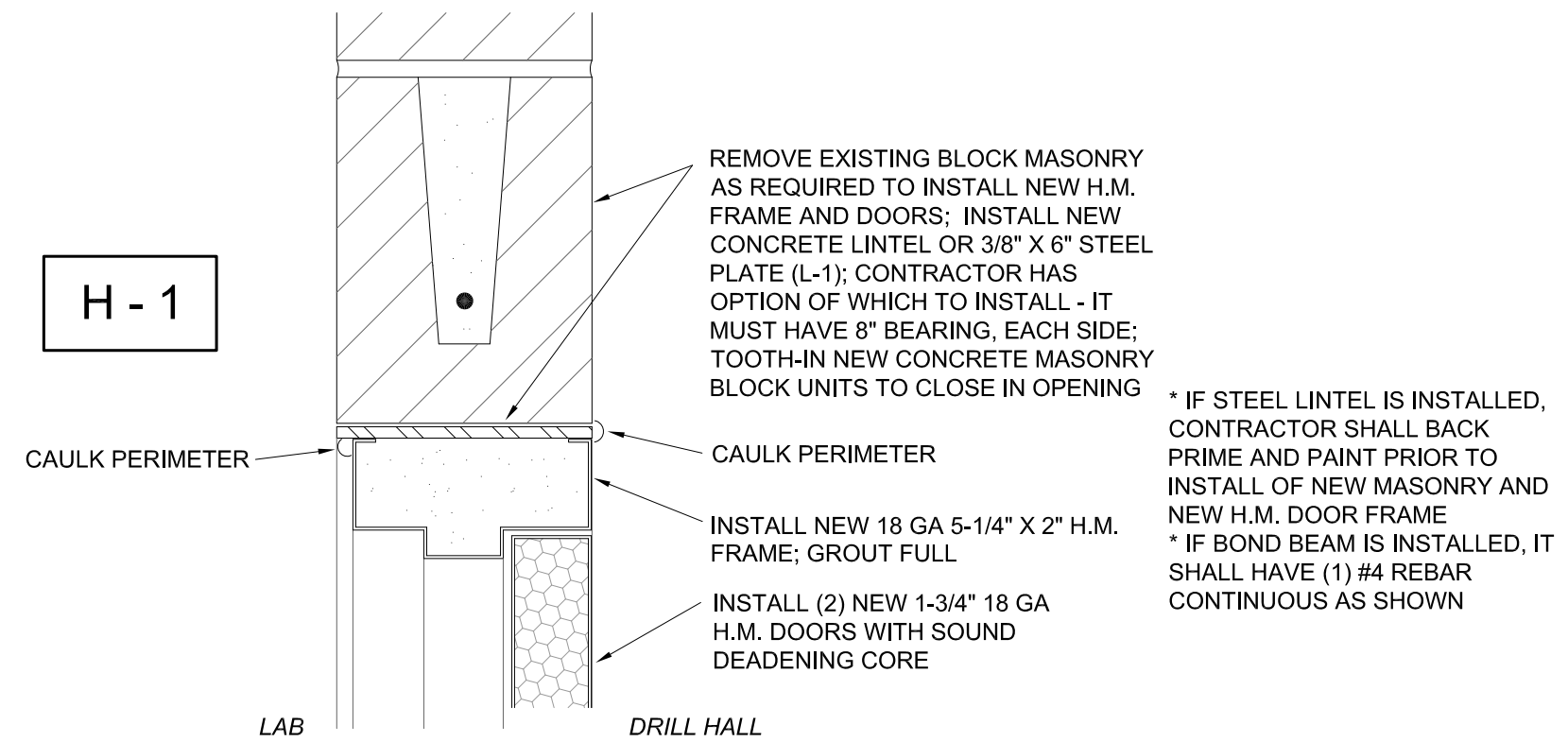
- FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.
- NEW H.M. DOORS AND FRAME ASSEMBLY SHALL HAVE A 90 MINUTE RATING.

**DEMOLITION / NEW WORK NOTES:**

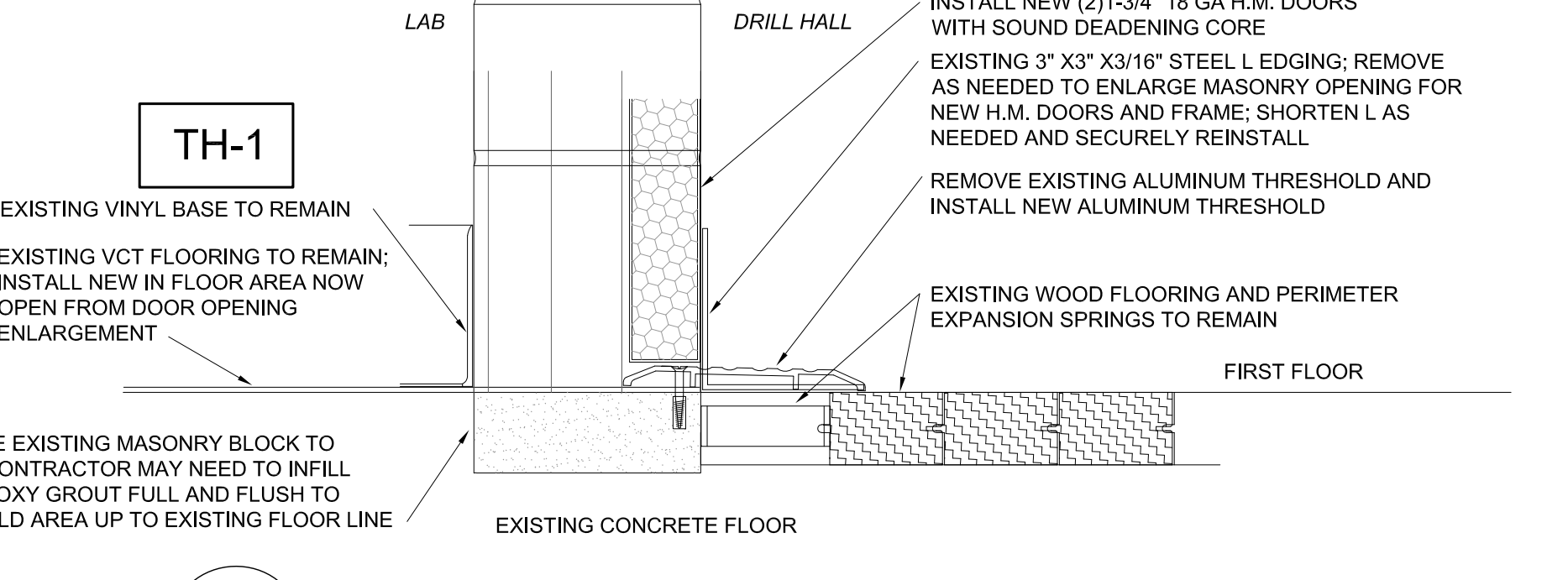
- REMOVE EXISTING DOOR, FRAME AND EXISTING DOOR HARDWARE. ENLARGE AND PREP OPENING TO RECEIVE NEW DOOR, FRAME AND HARDWARE. TURN EXISTING DOOR HARDWARE OVER TO THE ARMORY MAINTENANCE WORKER.
  - (HATCHED AREA) PORTION OF EXISTING GYPSUM WALLBOARD AND STUD WALL BUMP-OUT WITHIN LAB AREA TO BE REMOVED FOR NEW H.M. DOOR FRAME AND H.M. DOORS. SEE DETAILS. INSTALL NEW ST20 (MIN 0.0329") STEEL STUD FRAMING AND 5/8" TYPE X GYPSUM WALLBOARD, INCLUDING NEW CORNER BEAD TO CLOSE IN AREA TO FINISH OPENING. SEE NOTES ON FLOORING AND SUSPENDED CEILING TILE ASSEMBLY. PATCH AND PAINT NEW CMU, TO INCLUDE, EXISTING THAT NOW IS EXPOSED AND ANY THAT BECAME DAMAGED DURING WORK.
- ALL NEW MASONRY SHALL BE PAINTED, INCLUDED ANY MASONRY THAT BECOMES DAMAGED OR EFFECTED BY THE INSTALLATION OF THE NEW H.M. DOORS AND FRAME; BLEND THESE EFFECTED AREAS INTO EXISTING, OVERLAPPING THE NEW PAINT WITH THE EXISTING UNEFFECTED AREAS SO WALLS, WHEN COMPLETED DO NOT SHOW ANY DELINEATIONS BETWEEN EXISTING AND NEW. A LARGE AMOUNT OF THE EXISTING WALL MAY NEED TO BE PAINTED FOR THIS TO BE COMPLETED. THIS IS TO APPLY TO BOTH THE ASSEMBLY, DRILL HALL SIDE AS WELL AS LAB ROOM SIDE.
- AS NEEDED, CARE SHALL BE TAKEN IF EXISTING SUSPENDED CEILING TILE ASSEMBLY SYSTEM NEEDS TO BE REMOVED FOR ANY WORK INCLUDING NEW LINTEL WORK OR TO RELOCATE ELECTRICAL FOR THE RELOCATION OF THE EXISTING LIGHT SWITCH, ETC., UPON COMPLETION SECURELY REINSTALL SUSPENDED CEILING TILE ASSEMBLY. REPLACE WITH NEW ANY DAMAGED COMPONENTS. INSTALL NEW METAL GRID AND TILES IN LOCATION WHERE GYPSUM WALL WAS REMOVED TO ENLARGE DOOR OPENING.
- MASONRY COURSING, NEW TOOTHING-IN, SHALL MATCH EXISTING INCLUDING TYPE AND SIZES.



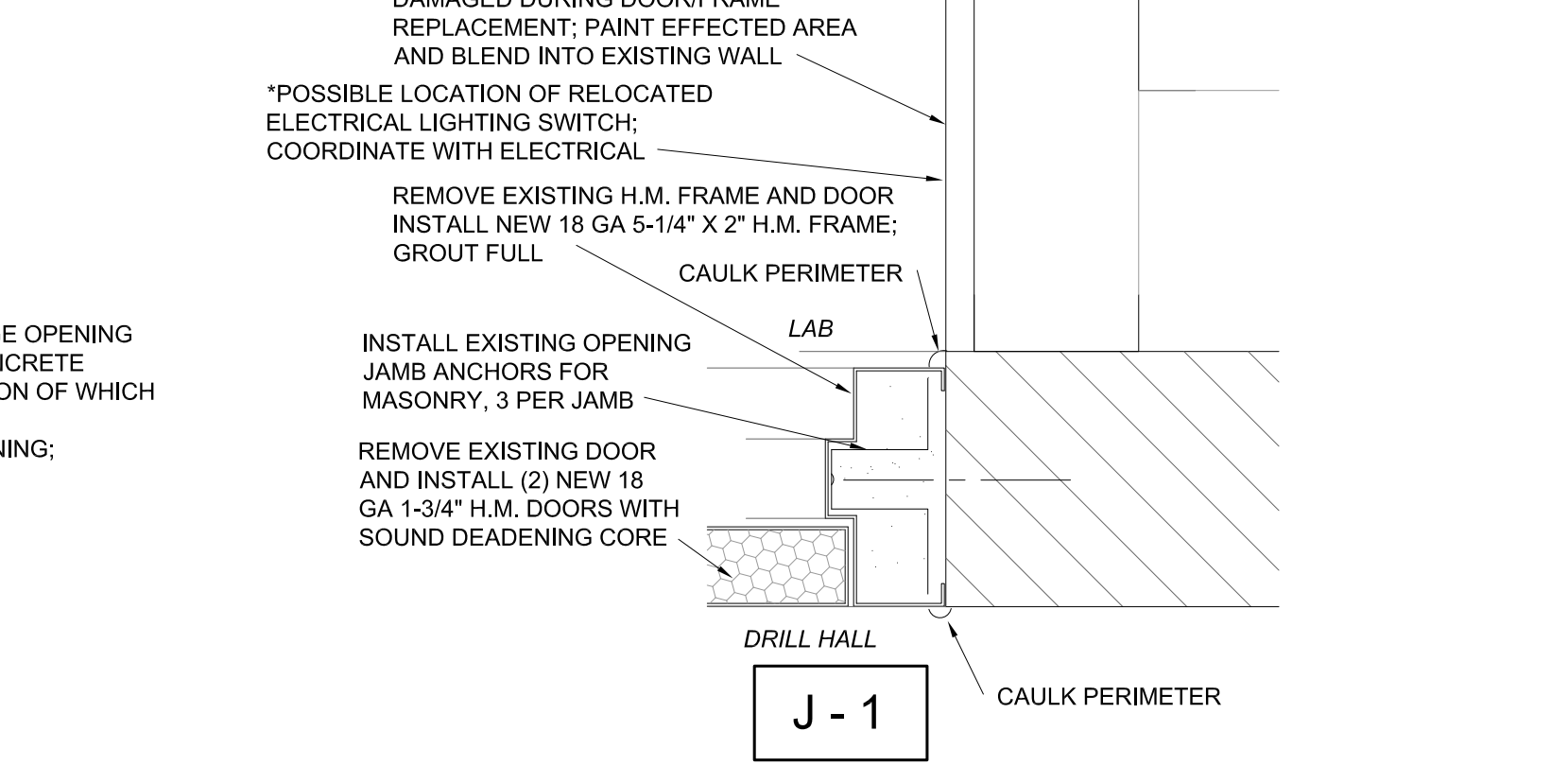
**9 DOOR DETAIL - ASTRAGAL**  
 A4 SCALE 3" = 1'-0"



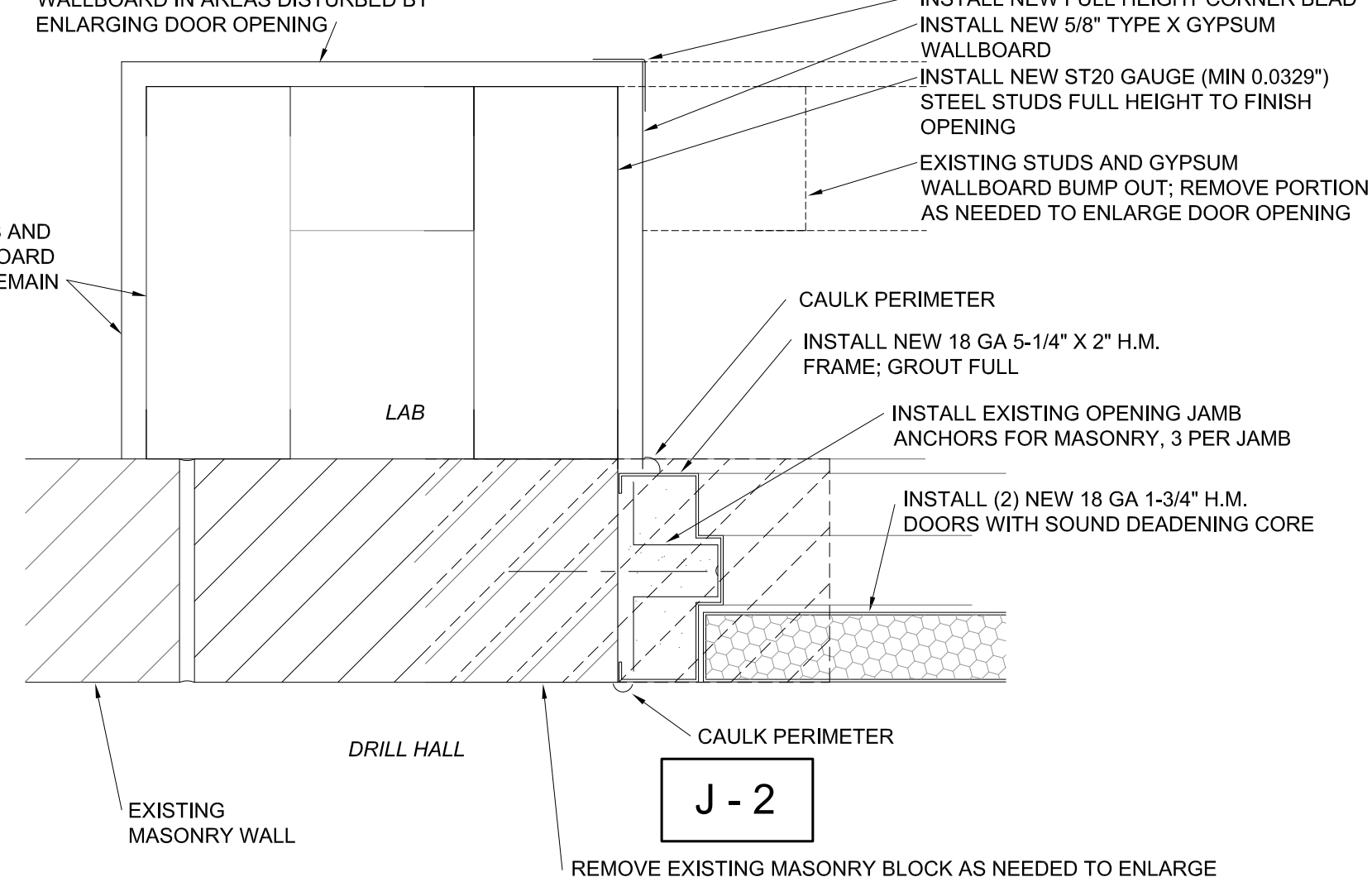
**5 DOOR DETAIL - HEAD**  
 A4 SCALE 3" = 1'-0"



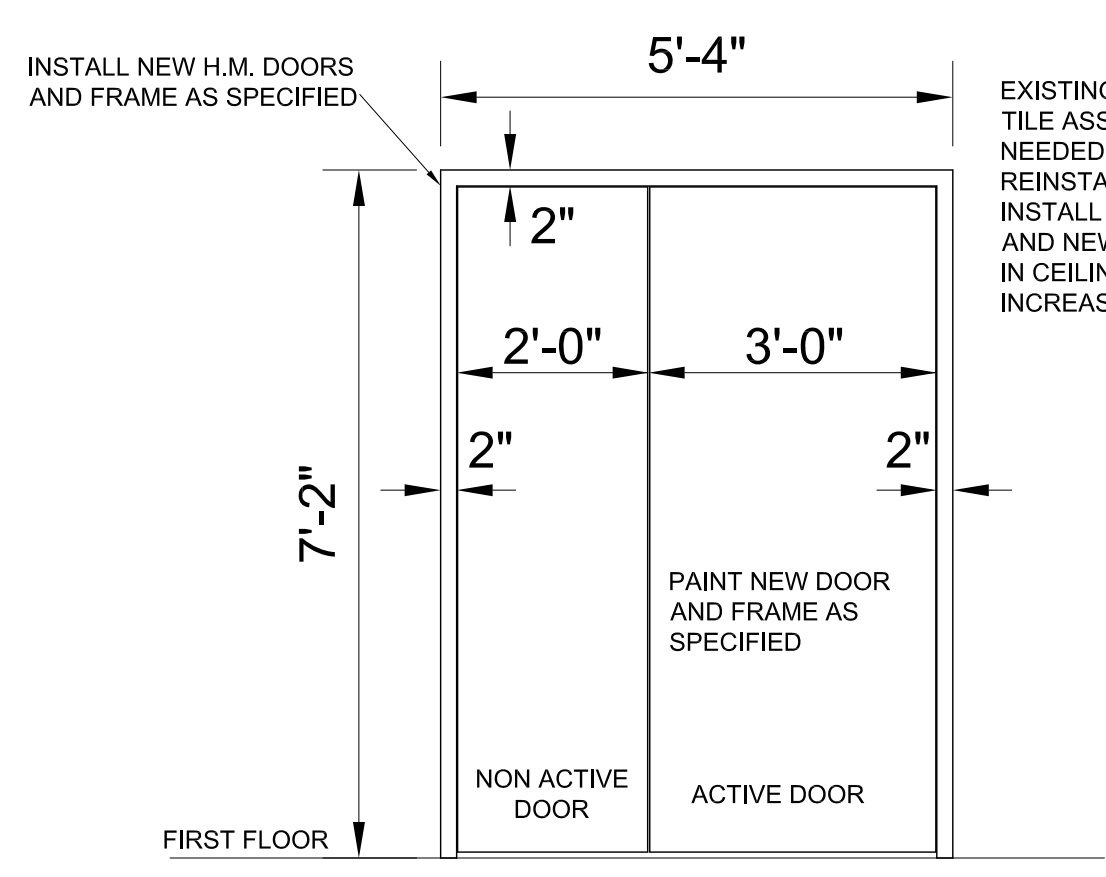
**6 DOOR DETAIL - THRESHOLD**  
 A4 SCALE 3" = 1'-0"



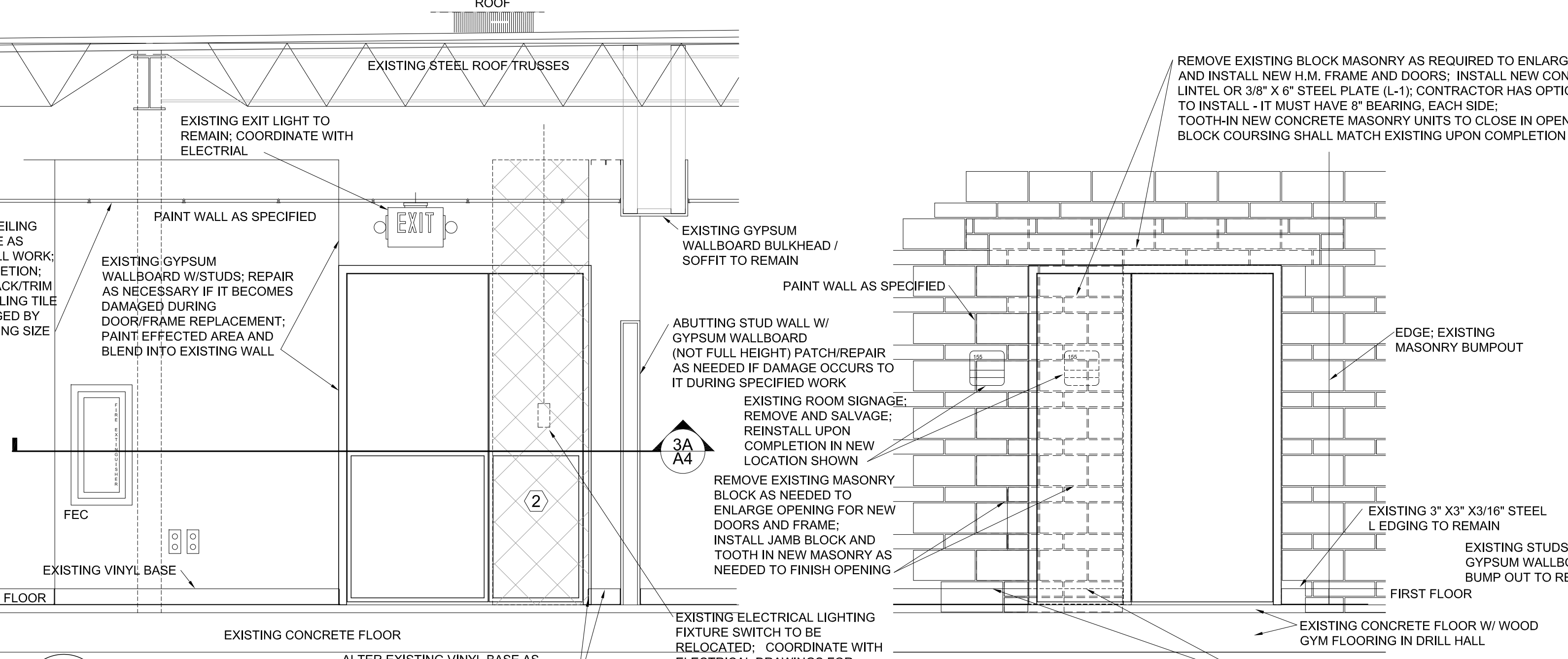
**7 DOOR DETAIL - JAMB**  
 A4 SCALE 3" = 1'-0"



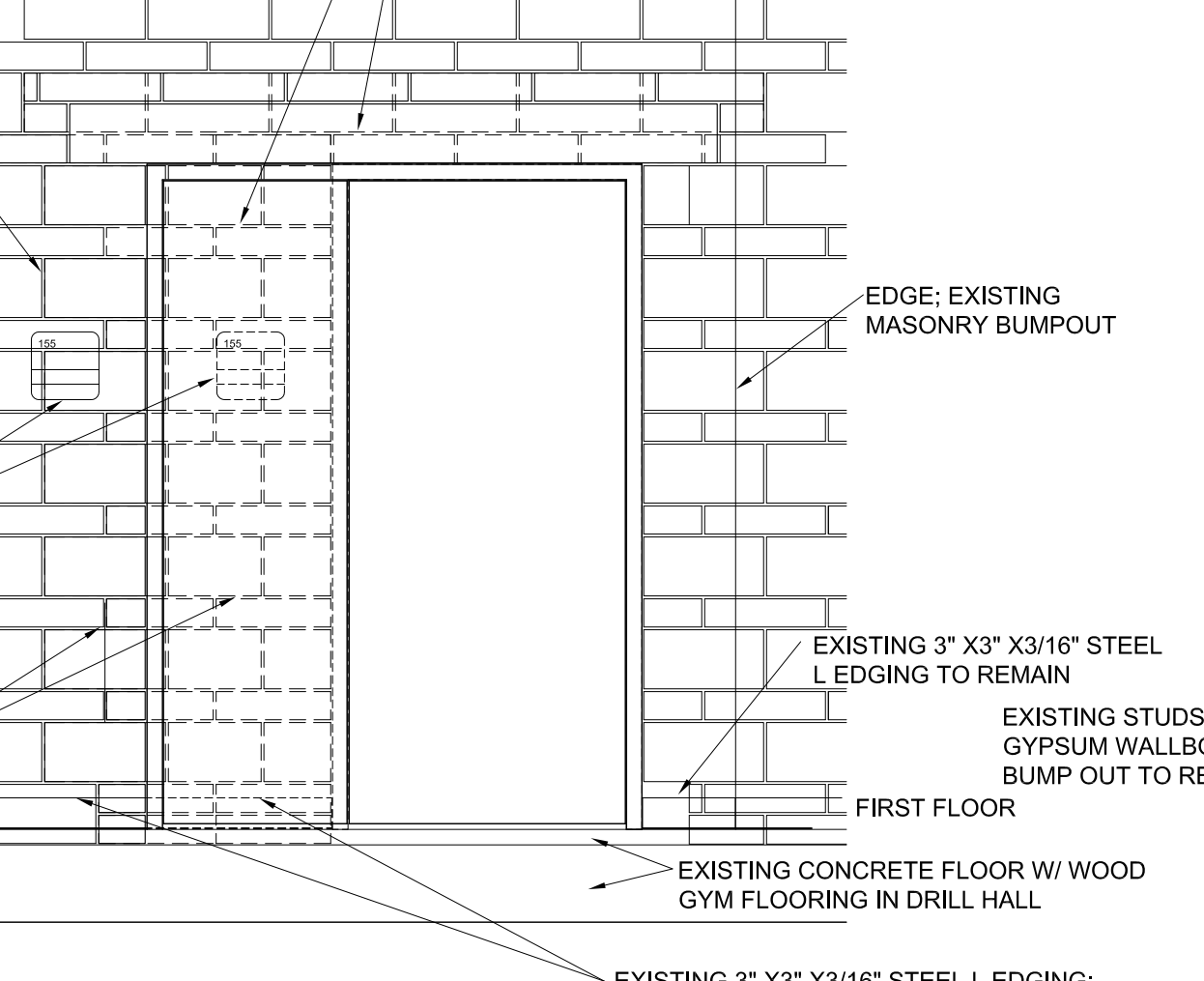
**8 DOOR DETAIL - JAMB**  
 A4 SCALE 3" = 1'-0"



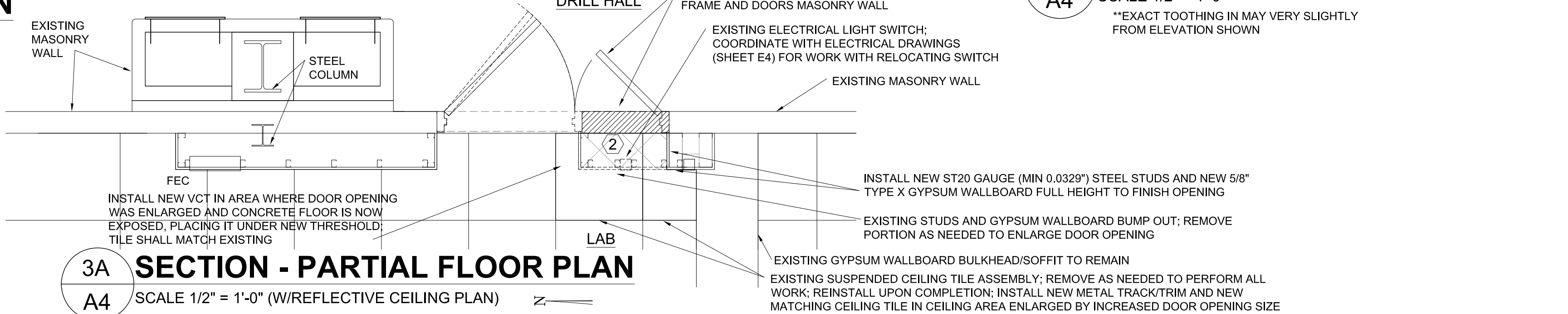
**2 NEW DOOR ELEVATION**  
 A4 SCALE 1/2" = 1'-0"



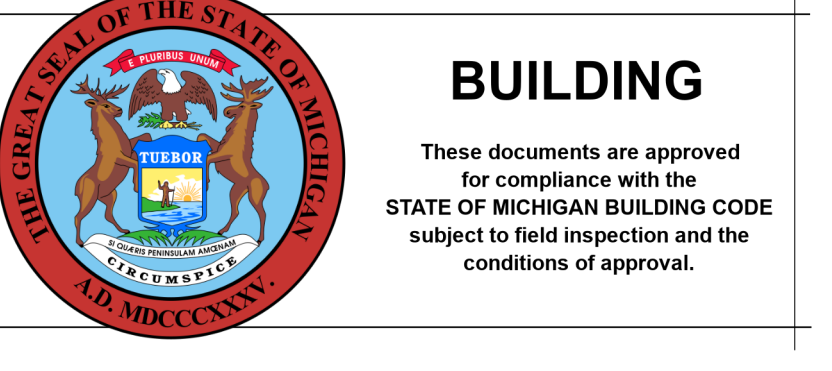
**3 ELEVATION**  
 A4 SCALE 1/2" = 1'-0"



**4 ELEVATION**  
 A4 SCALE 1/2" = 1'-0"



**3A SECTION - PARTIAL FLOOR PLAN**  
 A4 SCALE 1/2" = 1'-0" (W/REFLECTIVE CEILING PLAN)



**BUILDING**  
 These documents are approved for compliance with the STATE OF MICHIGAN BUILDING CODE subject to field inspection and the conditions of approval.

DESIGNED	DRAWN	CHECKED	APPROVED
K.A.B.	K.A.B.	K.A.B.	K.A.B.

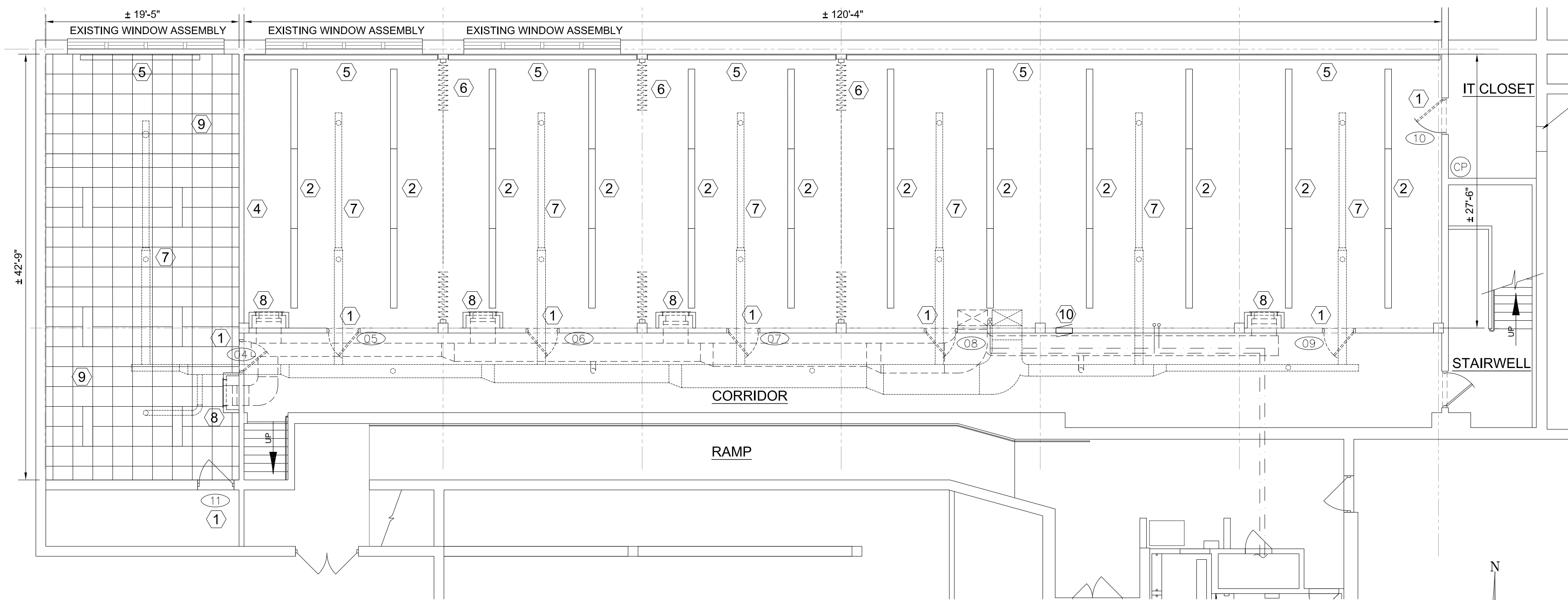
  

ISSUED FOR	DATE
PRELIMINARY	AUG 2021
CONSTRUCTION	MAY 2023
FINAL RECORD	

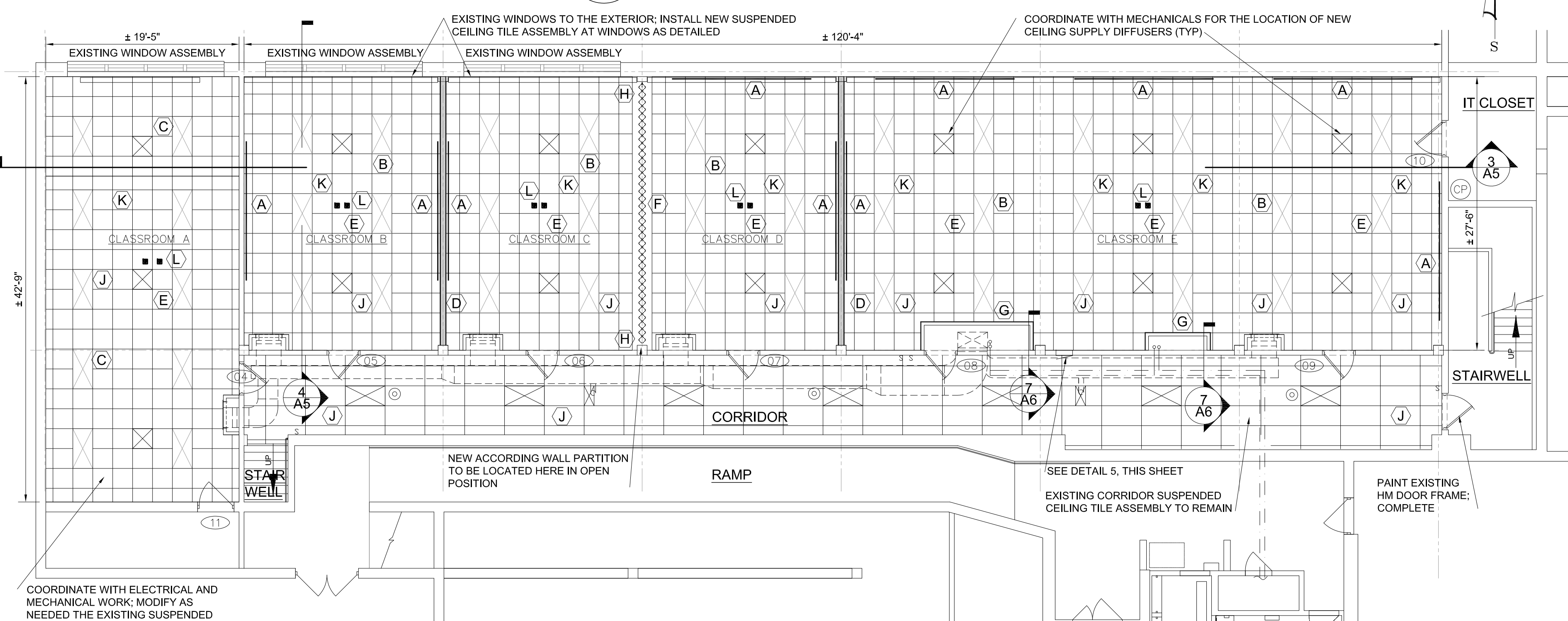
  

IDENTIFICATION NO.	PROJECT	INDEX CODE
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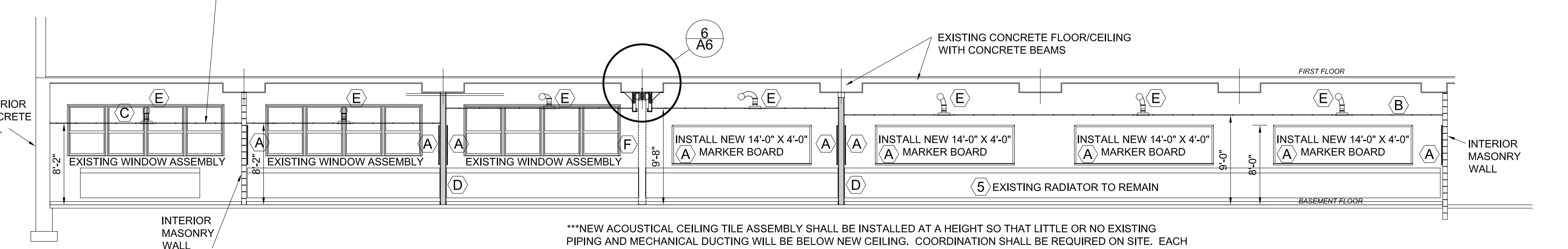




**1 PARTIAL BASEMENT FLOOR PLAN - EXISTING**  
A5 SCALE 1/8" = 1'-0"



**2 PARTIAL BASEMENT FLOOR PLAN - NEW**  
A5 SCALE 1/8" = 1'-0" (WITH NEW REFLECTIVE CEILING PLAN SHOWN)



**3 PARTIAL BASEMENT FLOOR ELEVATION SECTION**  
A5 SCALE 1/8" = 1'-0"

**DEMOLITION NOTES:**

- 1 REMOVE EXISTING DOOR, FRAME AND EXISTING DOOR HARDWARE. PREP OPENING TO RECEIVE NEW DOOR, FRAME AND HARDWARE. TURN EXISTING DOOR HARDWARE OVER TO THE ARMORY MAINTENANCE WORKER.
- 2 REMOVE EXISTING LIGHT FIXTURE, MODIFY THE ELECTRICAL AS NEEDED AND SPECIFIED AND INSTALL NEW LIGHT FIXTURES INTO THE NEW SUSPENDED CEILING ASSEMBLY. COORDINATE WITH ELECTRICAL DRAWING SHEETS.
- 3 MODIFY EXISTING SUPPLY DUCTING AS NEEDED TO ADAPT DIFFUSERS TO THE SPECIFIED AND PLACED INTO THE NEW SUSPENDED CEILING ASSEMBLY. COORDINATE WITH MECHANICAL DRAWING SHEETS.
- 4 REMOVE EXISTING CHALK BOARD ASSEMBLY COMPLETE. REMOVE EXISTING METAL WALL CABINET COMPLETE. PATCH WALL WITH EPOXY GROUT AT ALL FASTENER LOCATIONS.
- 5 EXISTING WALL RADIATOR TO REMAIN.
- 6 REMOVE EXISTING PARTITION WALL COMPLETE. REMOVE WOOD BLOCKING AT JAMBS USED BY EXISTING PARTITIONS. PATCH WALLS AND CEILINGS WITH EPOXY GROUT SMOOTH WERE FASTENERS WERE. COORDINATE THE EXISTING HEADER WERE NEW PARTITION IS TO BE INSTALLED. SEE DETAILS.
- 7 EXISTING SUPPLY DUCT RUN TO REMAIN. ALTER DIFFUSER LOCATIONS TO EXTEND DOWN TO NEW SUSPENDED CEILING SYSTEM AND INSTALL NEW DIFFUSERS AS SPECIFIED TO FIT AT THE NEW CEILING. COORDINATE WITH MECHANICAL DRAWING SHEETS.
- 8 EXISTING RETURN DUCT IN A VERTICAL CHASE TO REMAIN.
- 9 EXISTING SUSPENDED CEILING TILE ASSEMBLY TO REMAIN.
- 10 COORDINATE WITH ELECTRICAL; PANEL IS GETTING REPLACED; CONTRACTOR SHALL PATCH/INFILL MASONRY WALL IN THIS AREA; REPAIR/PATCH PRIOR TO THE SPECIFIED PAINTING.

**GENERAL NOTES:**

FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.

UPON COMPLETION, CONTRACTOR SHALL INSTALL NEW VINYL BASE IN EACH OF THE CLASSROOMS AND CORRIDOR AND PAINT WALLS FOLLOWING THE SPECIFICATIONS.

EXISTING FLOORING TO REMAIN.

NEW ACOUSTICAL SUSPENDED CEILING TILE ASSEMBLY SHALL BE INSTALLED AT A HEIGHT SO THAT LITTLE OR NO EXISTING PIPING AND MECHANICAL DUCTING WILL BE BELOW NEW CEILING. COORDINATION SHALL BE REQUIRED ON SITE.

WHEN REPLACING THE DOORS AND FRAMES AS SPECIFIED, IF THE EXISTING MASONRY WALLS BECOME DAMAGED, THE CONTRACTOR SHALL PATCH/REPAIR AS NEEDED PRIOR TO THE SPECIFIED PAINTING.

COORDINATE WORK IN THIS AREA WITH ALL DISCIPLINES; PLUMBING, ELECTRICAL, MECHANICAL, ETC.

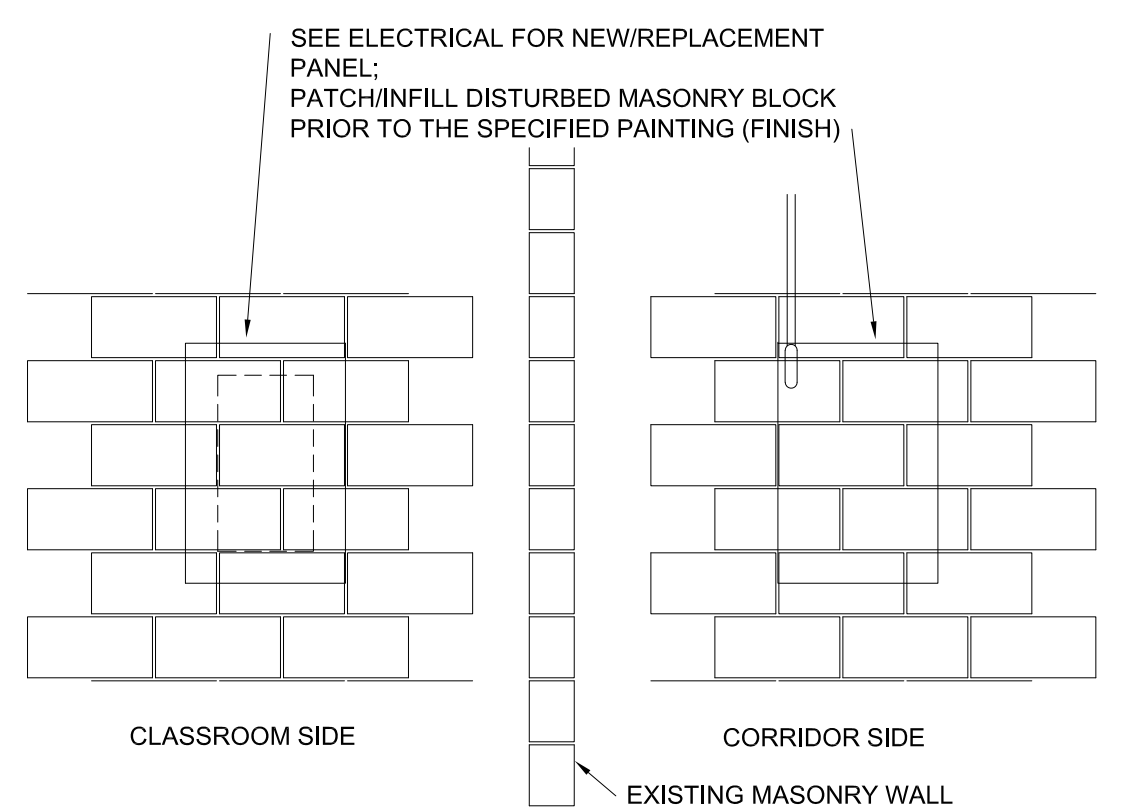
**ROOM FINISH SCHEDULE**

Room Name	FLOOR		CEILING		WALLS		Remarks
	1	2	3	4	5	6	
CLASSROOM A	•	•	•	•	•	•	•
CLASSROOM B	•	•	•	•	•	•	1, 2, 4, 5, 6
CLASSROOM C	•	•	•	•	•	•	1, 2, 4, 5, 6
CLASSROOM D	•	•	•	•	•	•	1, 2, 4, 6
CLASSROOM E	•	•	•	•	•	•	1, 2, 4, 6
CORRIDOR	•	•	•	•	•	•	4, 6
I.T. CLOSET	•	•	•	•	•	•	1, 2, 3, 4, 5, 6, 7

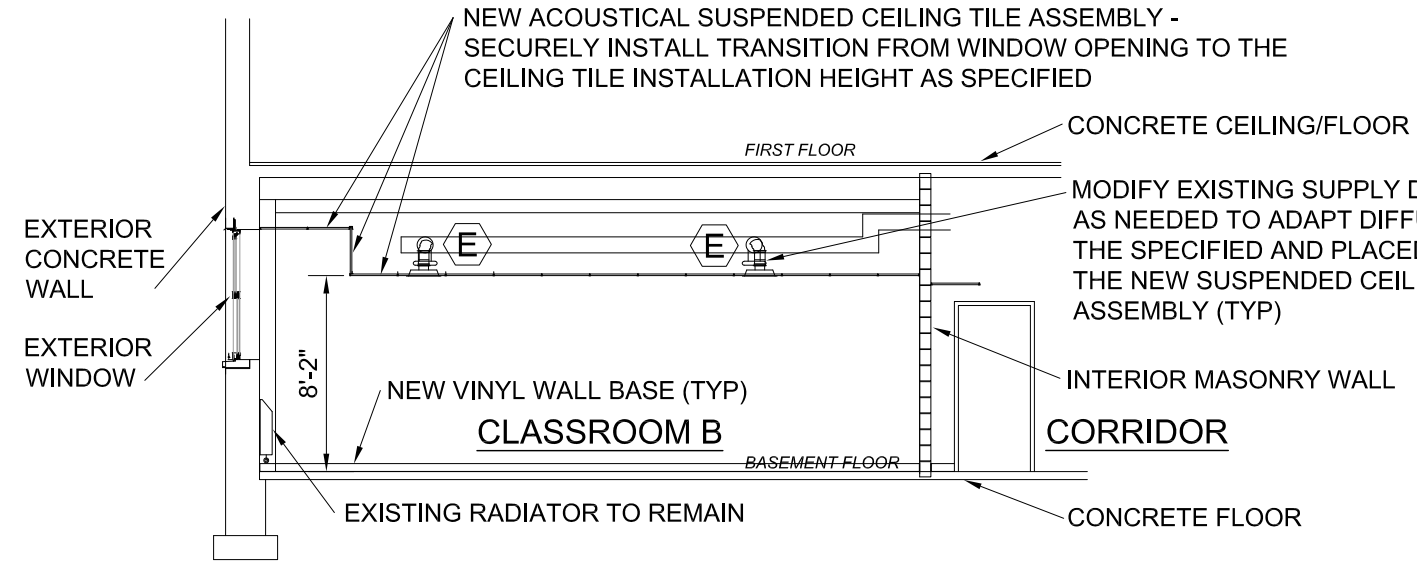
**NEW WORK NOTES:**

- A INSTALL NEW MARKER BOARD - 14'-0" X 4'-0" AS DETAILED AND SPECIFIED WITH A FULL LENGTH METAL CHALKTRAY AT THE BOTTOM INCORPORATED IN THE FRAME.
- B INSTALL NEW ACOUSTICAL SUSPENDED CEILING TILE ASSEMBLY AT HEIGHTS AS INDICATED. ASSEMBLY WILL NEED TO BE ALTERED TO FIT AROUND ALL EXISTING VERTICAL PIPING.
- C EXISTING ACOUSTICAL SUSPENDED CEILING TILE ASSEMBLY TO BE COMPLETED IN THIS ROOM. IF POSSIBLE, MISSING TILE SPECIFIED TO BE INSTALLED IN THIS ROOM, TO MATCH EXISTING.
- D CONSTRUCT WALL - INSTALL 6" STEEL STUDS (MIN 0.0329") 16" O.C. WITH 5/8" TYPE X GYPSUM WALL BOTH SIDES AND UNFACED BATT INSULATION FULL HEIGHT, FULL THICKNESS - SEE WALL DETAIL. PAINT AS SPECIFIED. INSTALL MATCHING VINYL BASE, BOTH SIDES OF NEW WALL.
- E EXISTING SUPPLY DUCT RUN TO REMAIN. MODIFY EXISTING SUPPLY DUCTING AS NEEDED TO ADAPT DIFFUSERS TO THE SPECIFIED. ALTER DIFFUSER LOCATIONS TO EXTEND DOWN TO NEW SUSPENDED CEILING SYSTEM AND INSTALL NEW DIFFUSERS AS SPECIFIED TO FIT AT THE NEW CEILING. COORDINATE WITH MECHANICAL DRAWINGS.
- F INSTALL NEW ACCORDING PARTITION WITH MODERATE SOUND ATTENUATION AS SPECIFIED.
- G INSTALL STUD HEADER/SOFFIT ENCLOSURE AROUND THE EXISTING PIPING AND DUCT AS NEEDED TO SEPARATE FROM NEW ACOUSTICAL SUSPENDED CEILING TILE ASSEMBLY. SEE DETAILS. EXACT SIZE OF ENCLOSURE IS DEPENDANT UPON EXISTING CONDITIONS.
- H INSTALL BUILD-OUTS AS REQUIRED BY ACCORDING PARTITION MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR PROPER JAMB ATTACHMENT FOR CONNECTING AT THE WALL AND FOR THE LOCKING DEVICE AT OPPOSITE JAMB END.
- J ROOM TO BE PAINTED AS SPECIFIED.
- K INSTALL NEW LIGHT FIXTURES INTO THE NEW SUSPENDED CEILING ASSEMBLY. COORDINATE WITH ELECTRICAL DRAWING SHEETS.
- L INSTALL NEW FLUSH MOUNTED JB BOXES IN THE NEW SUSPENDED CEILING TILE ASSEMBLY FOR CAT 6 DATA DROPS; COORDINATE WITH ELECTRICAL DRAWING SHEETS; COORDINATE THE LOCATION AND SECURE INTO PLACE.

- REMARKS:**
1. NEW SUSPENDED CEILING TILE HEIGHT; SEE DETAILS.
  2. PAINT ALL NEW GYPSUM WALLBOARD/SOFFIT ASSEMBLIES.
  3. PLASTER CEILING REPAIR; TEXTURE SHALL MATCH & BLEND INTO EXISTING.
  4. ROOM SIGNAGE; SEE DETAILS.
  5. INSTALL WINDOW BLINDS/SHADES AS SPECIFIED.
  6. PAINT EXISTING METAL WALL GRILLES AND METAL RADIATOR COVERS.
  7. COMPLETE EXISTING SUSPENDED CEILING TILE SYSTEM.

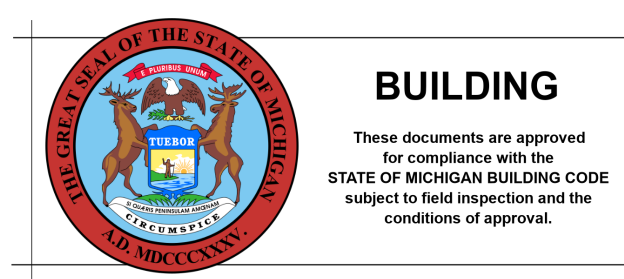


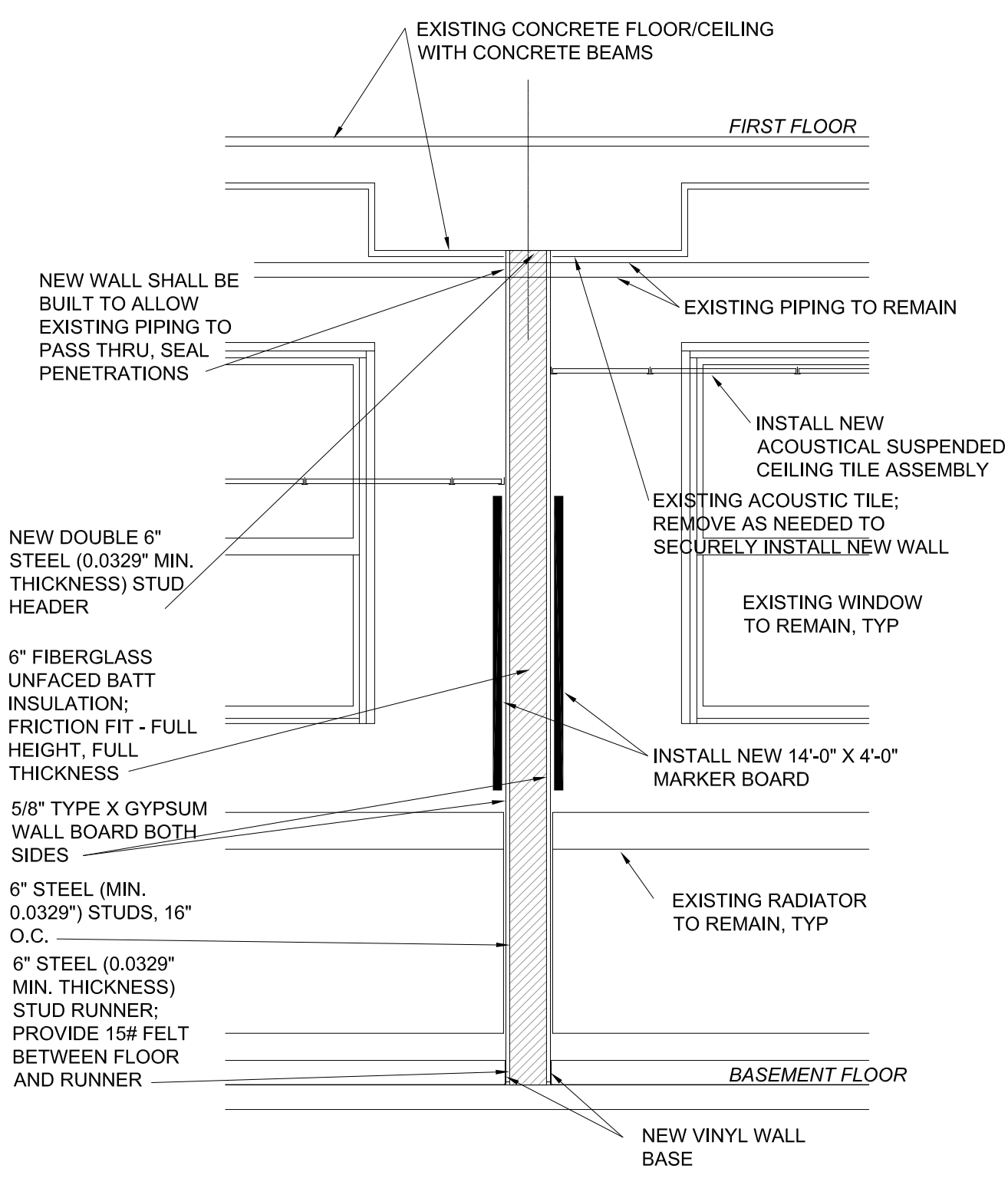
**5 ELECTRICAL PANEL REPLACEMENT; ELEVATION SECTION**  
A5 SCALE 1/8" = 1'-0"



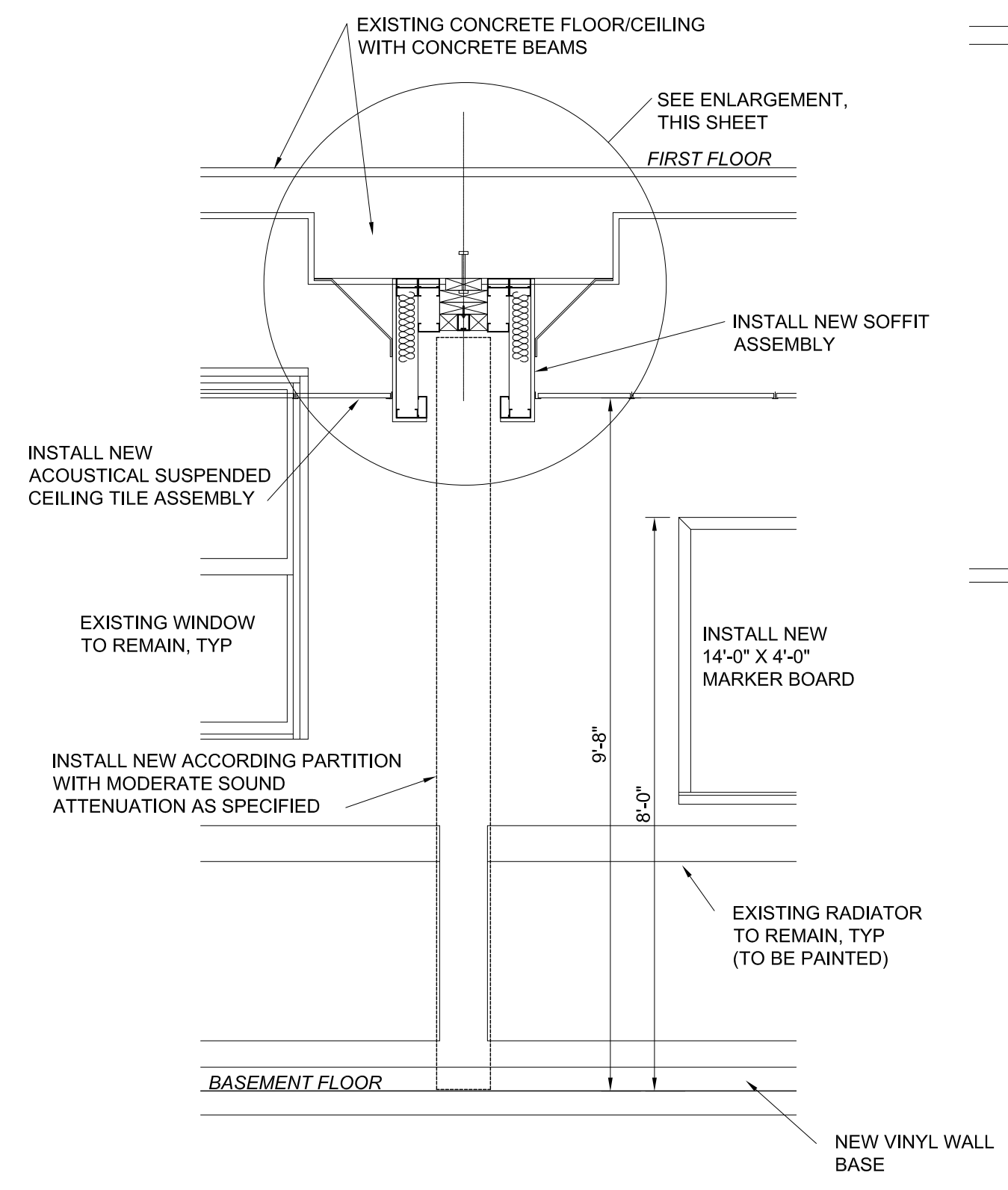
**4 PARTIAL BASEMENT FLOOR ELEVATION SECTION**  
A5 SCALE 1/8" = 1'-0"

AREA 4 WORK LOCATION

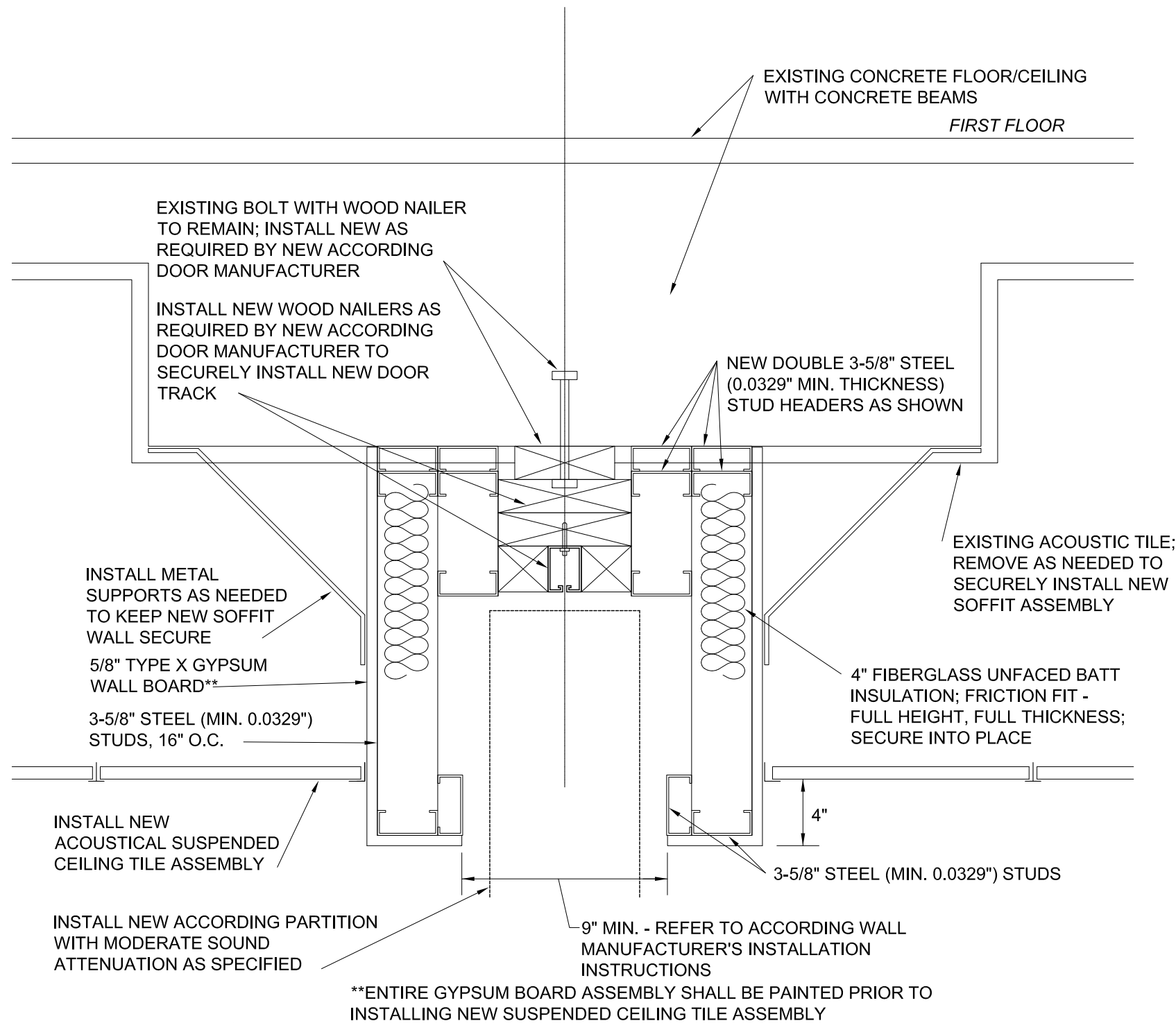




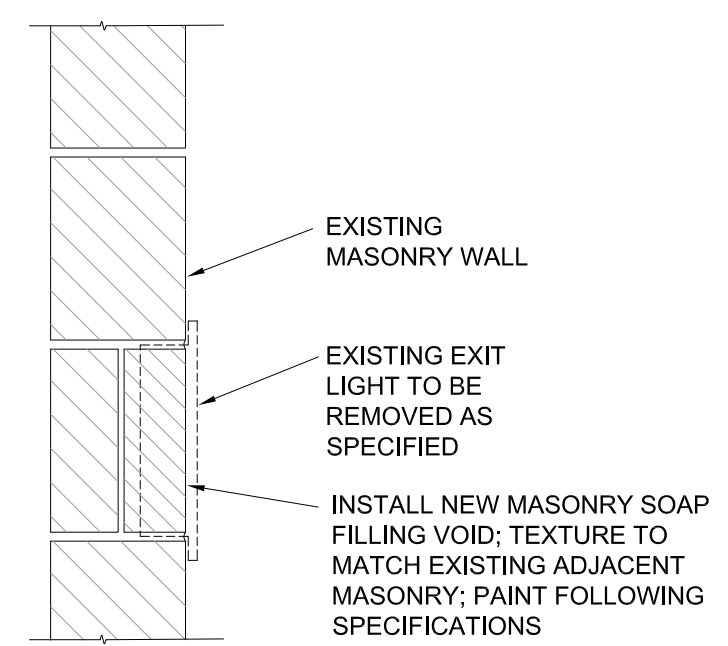
**1 PARTIAL BASEMENT FLOOR ELEVATION SECTION**  
 A6 SCALE 1/2" = 1'-0"



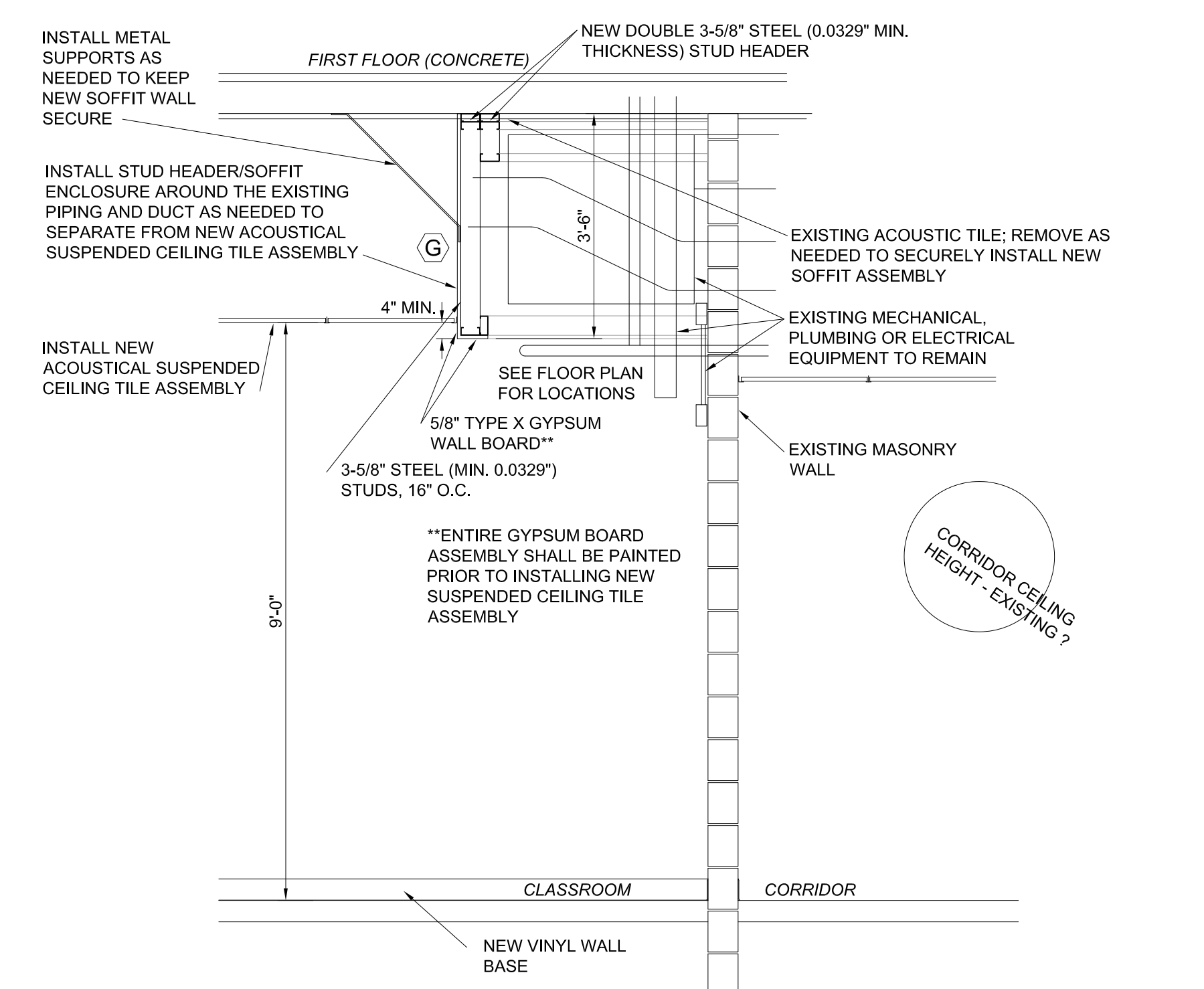
**2 PARTIAL BASEMENT FLOOR ELEVATION SECTION**  
 A6 SCALE 1/2" = 1'-0"



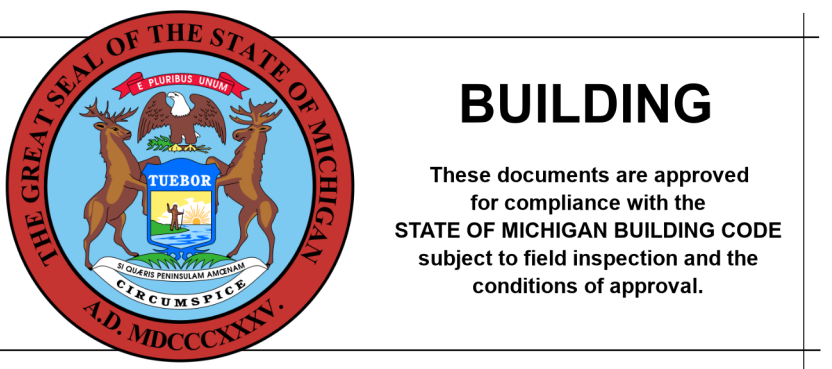
**6 ENLARGEMENT SECTION AT ACCORDING PARTITION WALL**  
 A6 SCALE 1-1/2" = 1'-0"



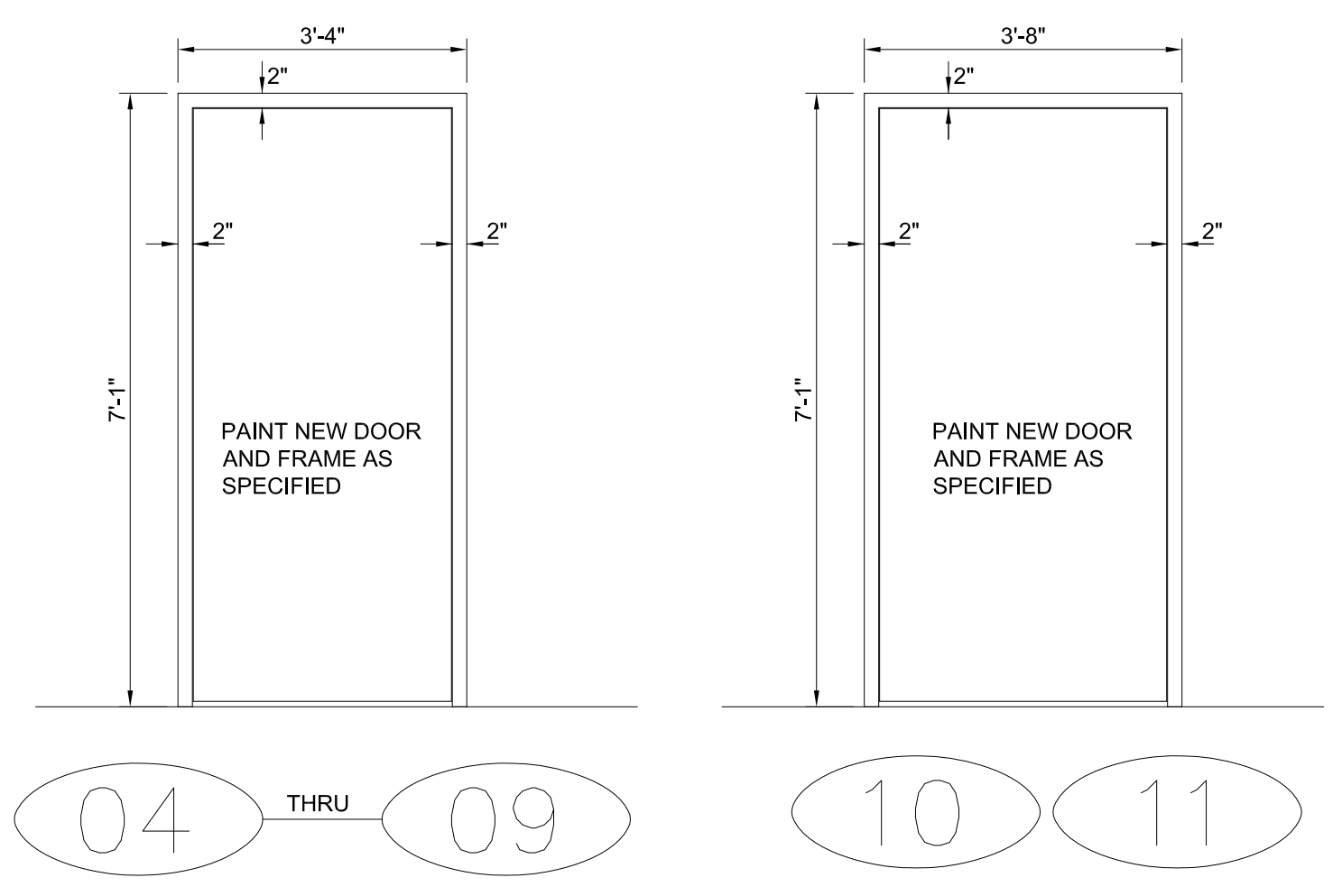
**aa INFILL WALL DETAIL**  
 A6 SCALE 1-1/2" = 1'-0"



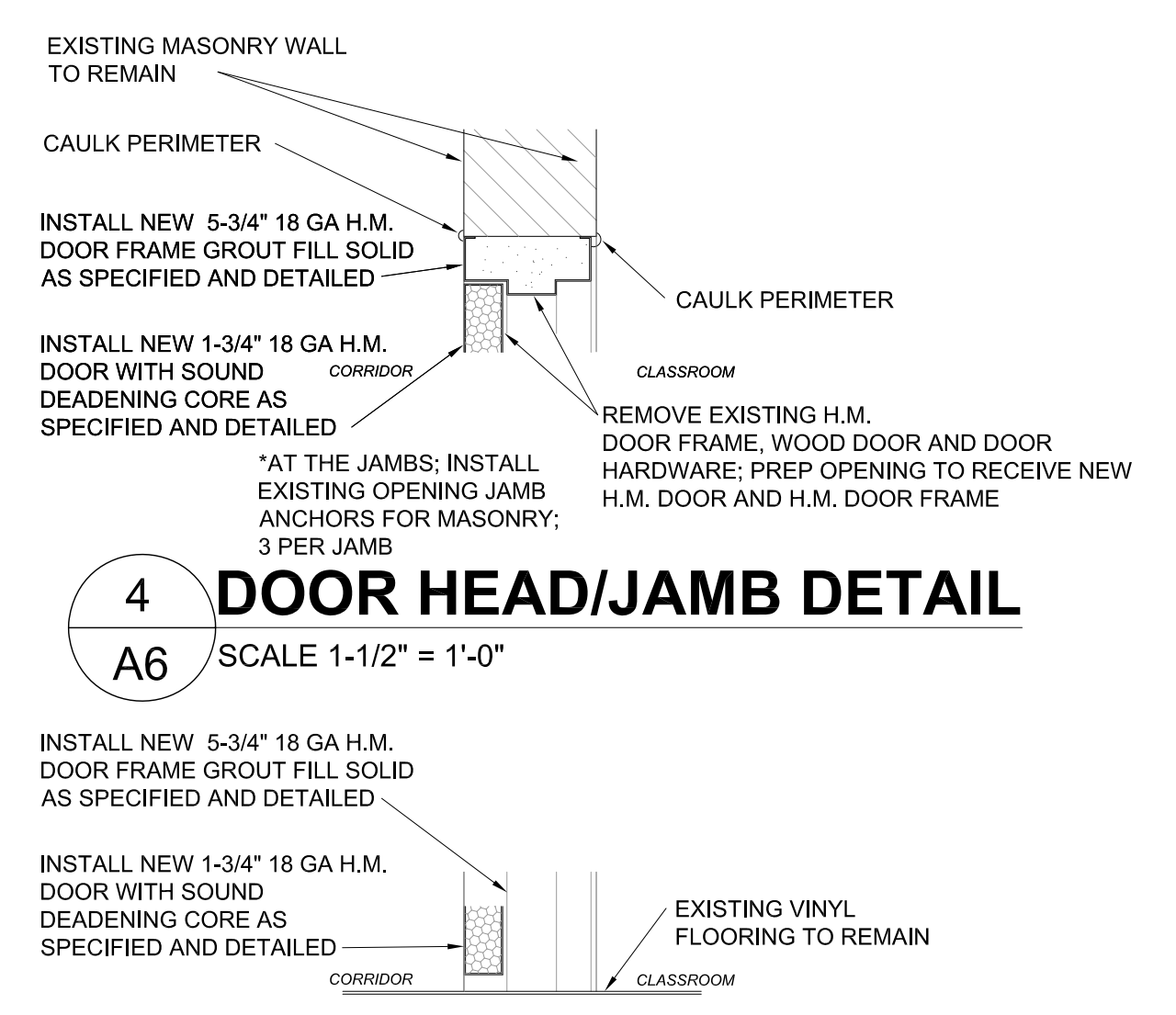
**7 SOFFIT/WALL DETAIL AT EXISTING PLUMBING/MECHANICAL THAT EXTENDS DOWN BELOW NEW CEILING**  
 A6 SCALE 1/2" = 1'-0"



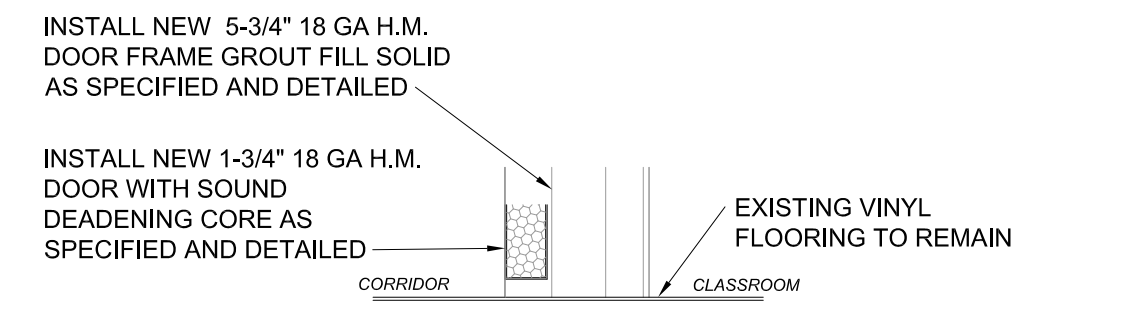
**GENERAL NOTES:**  
 UPON COMPLETION, THE CONTRACTOR SHALL INSTALL NEW VINYL BASE IN EACH OF THE CLASSROOMS AND PAINT WALLS FOLLOWING THE SPECIFICATIONS.  
 EXISTING FLOORING TO REMAIN.  
 NEW ACOUSTICAL CEILING TILE ASSEMBLY SHALL BE INSTALLED AT A HEIGHT SO THAT LITTLE OR NO EXISTING PIPING AND MECHANICAL DUCTING WILL BE BELOW NEW CEILING. COORDINATION SHALL BE REQUIRED ON SITE.  
 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXISTING MASONRY DOOR OPENINGS; DIMENSIONS AND CONDITIONS.



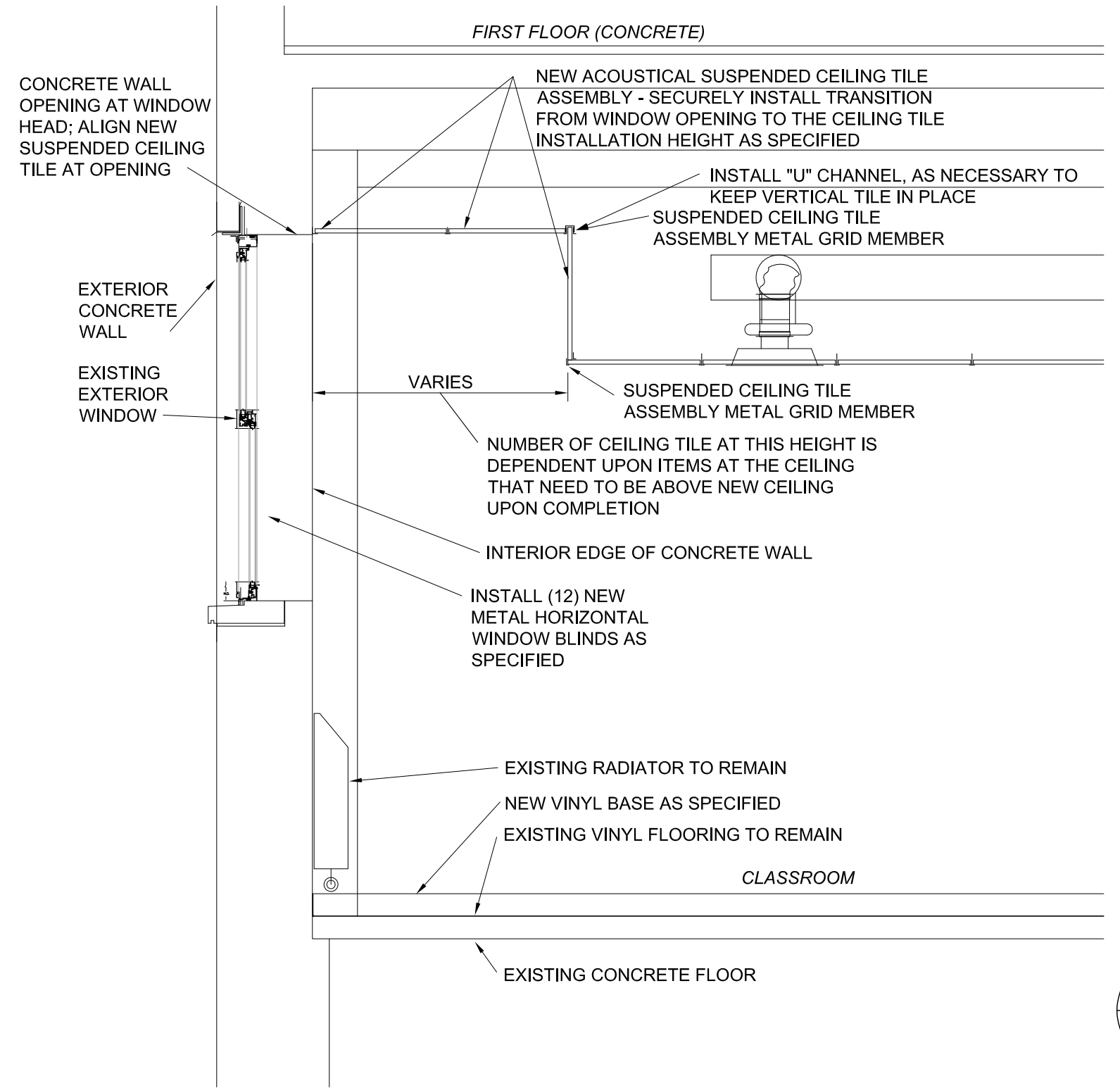
**3 DOOR ELEVATIONS**  
 A6 SCALE 1/2" = 1'-0"



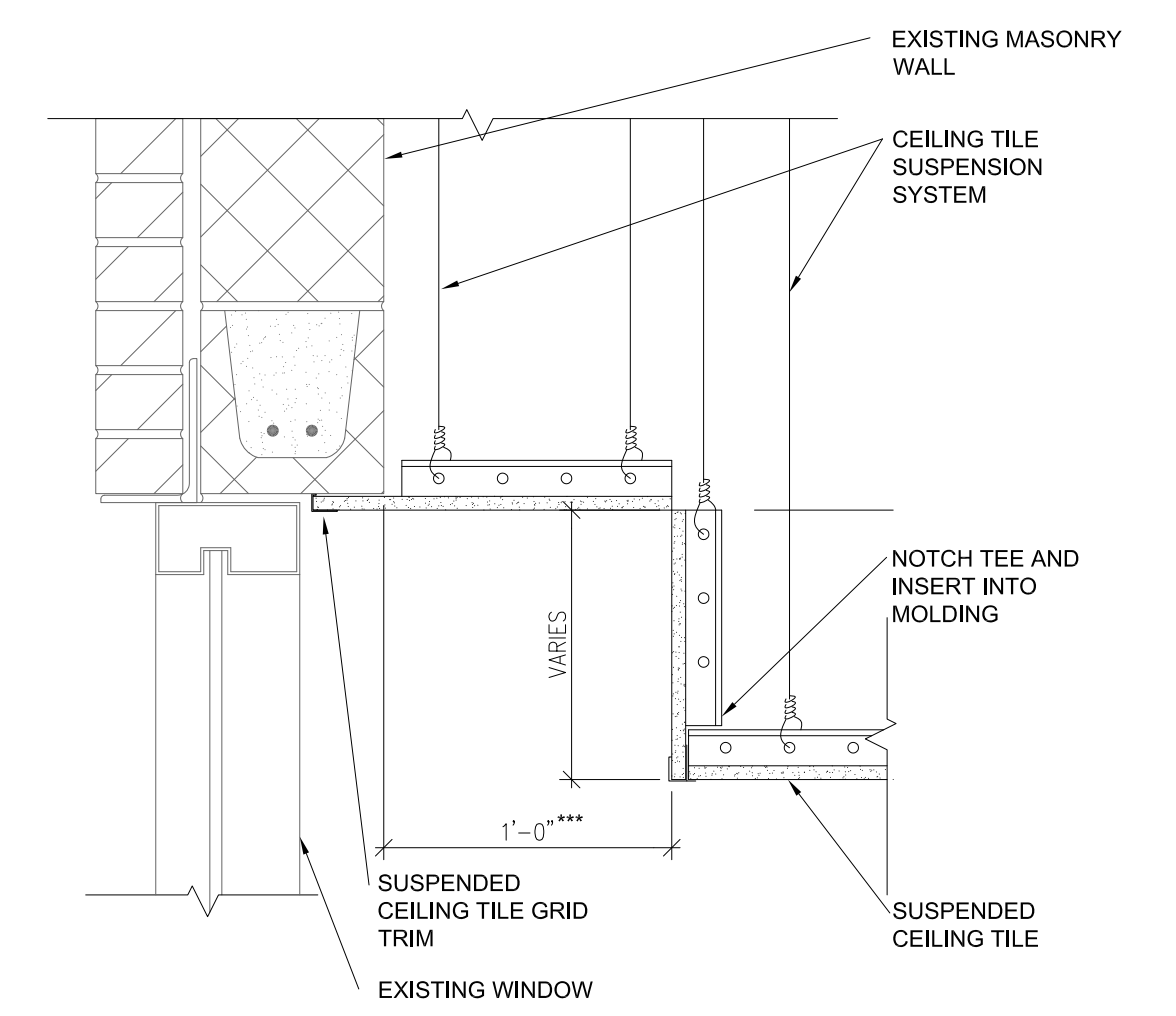
**4 DOOR HEAD/JAMB DETAIL**  
 A6 SCALE 1-1/2" = 1'-0"



**5 DOOR THRESHOLD DETAIL**  
 A6 SCALE 1-1/2" = 1'-0"

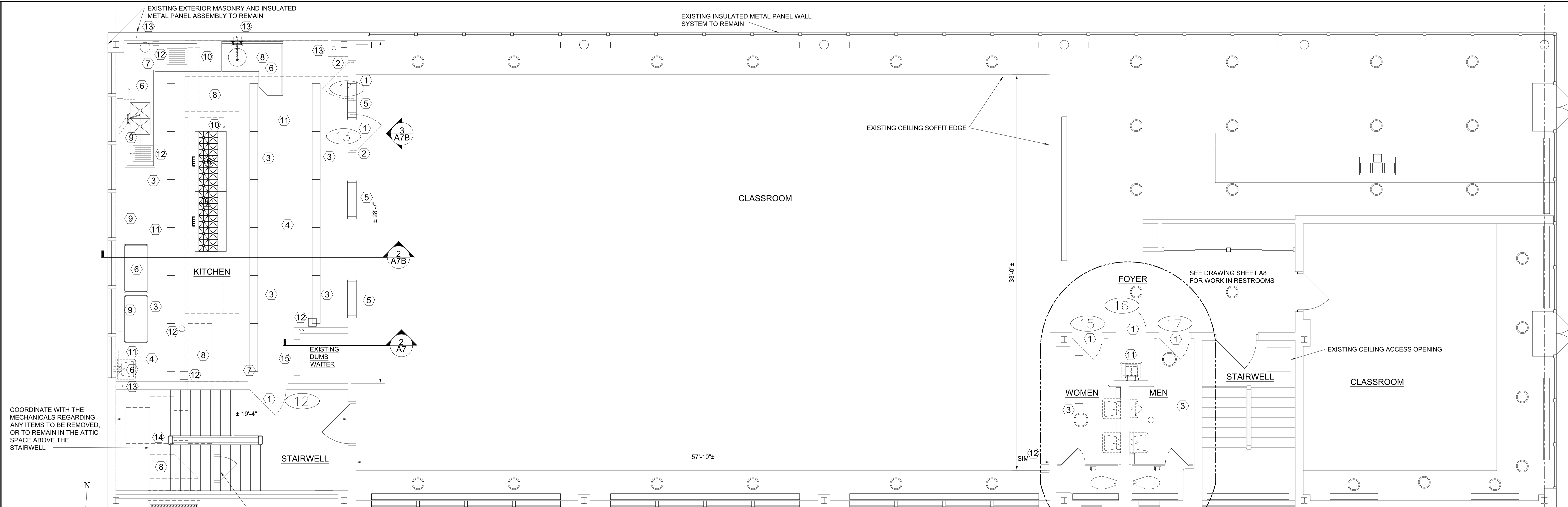


**8 TYPICAL NEW SUSPENDED CEILING TILE ASSEMBLY INSTALL AT WINDOWS**  
 A6 SCALE 1/2" = 1'-0"



**9 TYPICAL NEW SUSPENDED CEILING TILE ASSEMBLY INSTALL AT WINDOWS ENLARGEMENT**  
 A6 SCALE 1-1/2" = 1'-0"

\*\*CONTRACTOR IS RESPONSIBLE FOR INSTALLING CEILING TILE ASSEMBLY IN A SECURE MANNER.  
 \*\*\*THIS DISTANCE MAY VARY; DEPENDING ON CONDITIONS.



**1 EXISTING SECOND FLOOR PLAN - DEMOLITION**  
 SCALE 1/4" = 1'-0"

**DEMOLITION NOTES:**

- 1 REMOVE EXISTING DOOR, FRAME AND EXISTING DOOR HARDWARE. PREP OPENING TO RECEIVE NEW DOOR, FRAME AND HARDWARE. TURN EXISTING DOOR HARDWARE OVER TO THE ARMORY MAINTENANCE WORKER.
- 2 PATCH FLOOR WHERE DOOR HINGE COMPONENT WAS REMOVED.
- 3 REMOVE EXISTING LIGHT FIXTURES. EXISTING LIGHTING CIRCUIT CAN BE UTILIZED FOR NEW LIGHT FIXTURES. COORDINATE WITH ELECTRICAL.
- 4 REMOVE EXISTING CEILING, COMPLETE.
- 5 EXISTING GRILLE; COORDINATE WITH MECHANICAL SHEETS FOR IT TO REMAIN OR GET REMOVED; IF REMOVED, SPACE SHALL BE FILLED WITH STEEL STUDS, GYPSUM WALLBOARD, BOTH SIDES AND BATT INSULATION, FULL THICKNESS; SEE DETAIL.
- 6 REMOVE ALL KITCHEN EQUIPMENT. SEE MECHANICAL SHEETS FOR ADDITIONAL NOTES AND COORDINATE REMOVAL.
- 7 REMOVE EXISTING KITCHEN FIRE SYSTEM, COMPLETE. SEE MECHANICAL SHEETS FOR ADDITIONAL NOTES AND COORDINATE REMOVAL.
- 8 REMOVE EXISTING HOOD AND RELATED DUCTWORK COMPLETE; COORDINATE WITH MECHANICAL DISCIPLINE. SEE MECHANICAL SHEETS FOR ADDITIONAL NOTES AND COORDINATE REMOVAL.
- 9 EXISTING RADIATOR ASSEMBLIES TO BE REMOVED; COORDINATE WITH MECHANICALS FOR PARTIAL OR COMPLETE REMOVAL. SEE MECHANICAL SHEETS FOR ADDITIONAL NOTES AND COORDINATE REMOVAL.
- 10 EXISTING NATURAL GAS PIPING; SEE MECHANICAL PLANS FOR WORK INVOLVED WITH REMOVING/REPLACING/INSTALLING NEW, ETC., FOR REPIPING TO NEW MECHANICAL EQUIPMENT. SEE MECHANICAL SHEETS FOR ADDITIONAL NOTES AND COORDINATE REMOVAL.
- 11 EXISTING PLUMBING SHALL BE REMOVED AND CAPPED AT THE WALL FLUSH. REMOVE MOST ALL EXPOSED PLUMBING PIPING BELOW THE FLOOR (IN THE 1ST FLOOR CEILING) FURNISHING THE JANITOR SINK BEING REMOVED. ALL VENT PIPING SHALL BE CAPPED AT THE WALL OR FLOOR BUT SHALL BE MADE TO REMAIN OPERATIONAL AS IT MAY FEED PLUMBING FROM BELOW AND GO TO A VENT STACK THRU THE ROOF.
- 12 EXISTING FLOOR GREASE TRAP INTERCEPTOR OR FLOOR DRAIN TO BE REMOVED; SEE DETAILS.
- 13 EXISTING VENTS THRU THE ROOF TO REMAIN; VENTS TO REMAIN ACTIVE; CAP/REMOVE KITCHEN PIPING GOING TO VENTS AS THE KITCHEN EQUIPMENT SHALL BE REMOVED UNDER THIS CONTRACT. CONTRACTOR TO VERIFY THE EXACT LOCATION AND QUANTITY OF EXISTING VENTS.
- 14 IF CONTRACTOR NEEDS TO ACCESS THE SPACE ABOVE STAIRWELL HE SHALL TAKE THE NECESSARY PRECAUTIONS AND WORK NEEDED AS THIS SPACE MAYBE CONSIDERED "CONFINED WORK SPACE." THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.
- 15 EXISTING DUMBWAITER S.S. METAL DOOR, AND ALL FRAMING IS TO BE REMOVED. TO INCLUDE REMOVING ACCESS DOOR AND FRAME COMPLETE. PREP OPENINGS TO RECEIVE NEW MASONRY AS DETAILED AND SPECIFIED TO CLOSE IN OPENING. COORDINATE WITH NEW SPECIFIED STUD WALL AND GYPSUM WALLBOARD.

**GENERAL NOTES:**

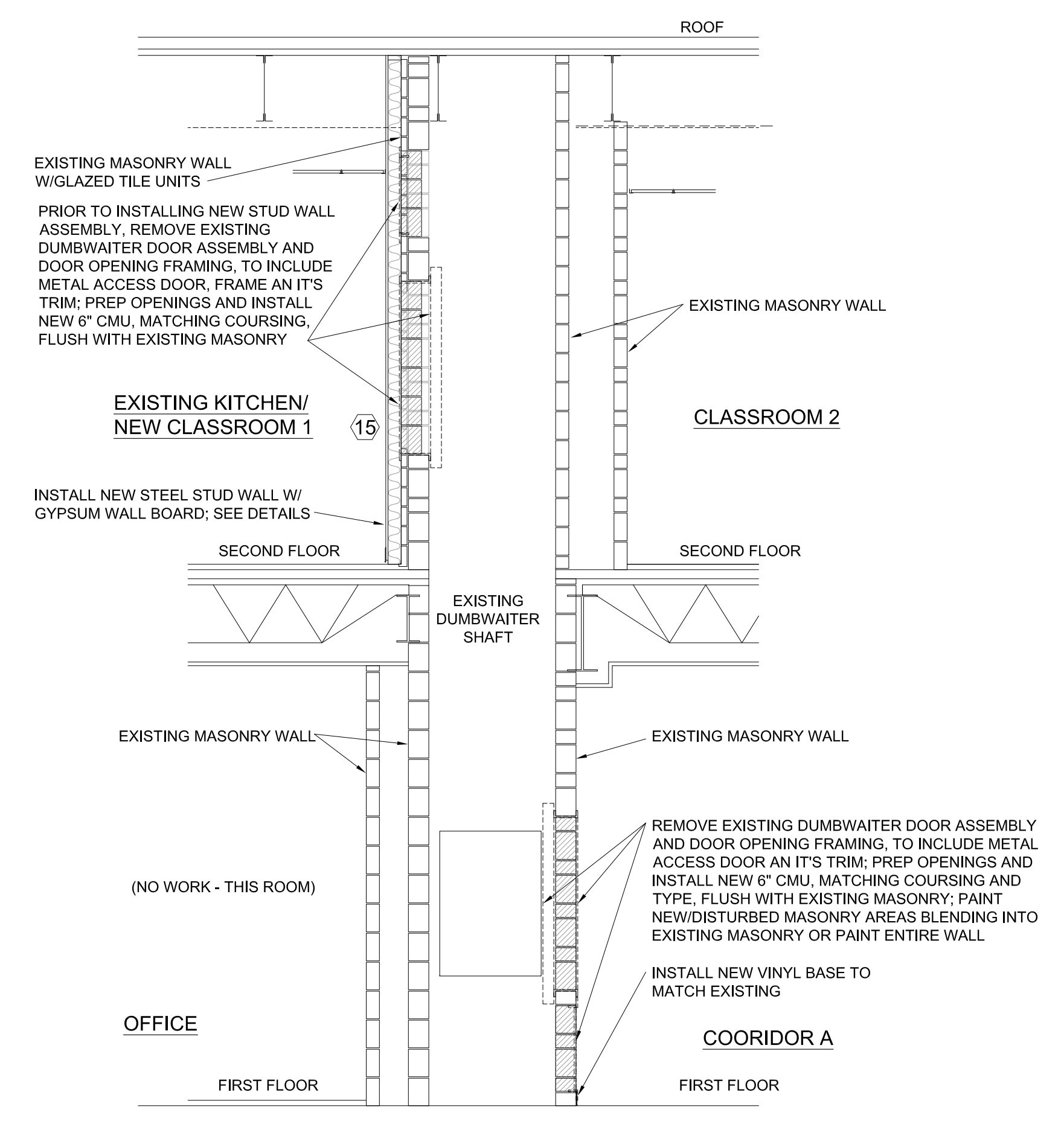
FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.

CARE SHALL BE TAKEN NOT TO REMOVE ANY PORTION OF THE PIPING FURNISHING ANY OF THE ROOF DRAINS.

\*\*EXACT LOCATION OF PIPING WILL NOT BE DETERMINED UNTIL THE EXISTING FIRST FLOOR PLASTER CEILINGS ARE REMOVED. SEE DRAWING SHEETS A9 AND A10 FOR AREA WORK 7.

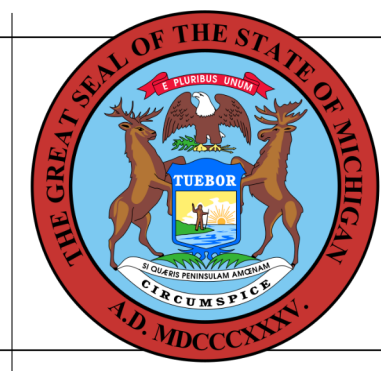
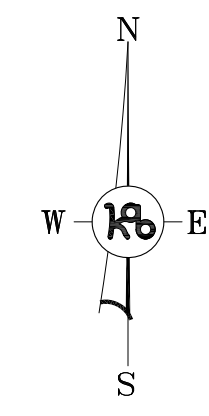
COORDINATE THE SPECIFIED EXISTING PLUMBING PIPING TO BE REPLACED OR REMOVED SERVICING THE SECOND FLOOR FIXTURES; THIS PIPING IS LOCATED/RUNS JUST BELOW THE SECOND FLOOR AND SHOULD BE EXPOSED DURING THIS SPECIFIED WORK OF THE FIRST FLOOR CEILINGS.

COORDINATE ALL WORK ON THE SECOND FLOOR WITH ALL DISCIPLINES: PLUMBING, ELECTRICAL, MECHANICAL, ETC.



**2 EXISTING DUMBWAITER DETAILS - DEMOLITION SECTION ELEVATION**  
 SCALE 3/8" = 1'-0"

COORDINATE WITH THE MECHANICALS REGARDING ANY ITEMS TO BE REMOVED, OR TO REMAIN IN THE ATTIC SPACE ABOVE THE STAIRWELL

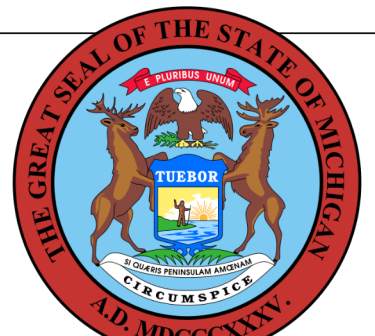


**BUILDING**  
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SHEET	IDENTIFICATION NO.	DESIGNED	DATE	ISSUED FOR
	2808023010	K.A.B.	AUG 2021	PRELIMINARY
PROJECT	INDEX CODE	DRAWN	MAY 2023	CONSTRUCTION
	A7	K.A.B.		FINAL RECORD
		CHECKED		APPROVED
				K.A.B.

Room Name	FLOOR				CEILING				WALLS				Remarks	
	Concrete	VCY	VCY	VCY	Plaster	Plaster	Plaster	Plaster	Paint	Paint	Paint	Paint		Paint
CLASSROOM 1														1, 2, 3, 4, 5, 6, 7
CLASSROOM 2														2, 3, 4, 5, 6, 7
CLASSROOM 3														3, 4, 5, 6, 7
CLASSROOM 4														4, 5, 6, 7
STAIRWELL A														3, 4, 5, 6, 7
STAIRWELL B														3, 4, 5, 6, 7
FOYER														3, 4, 5, 6, 7
MENS RESTROOM														3, 4, 5, 6, 7
WOMENS RESTROOM														3, 4, 5, 6, 7
ELECTRICAL														4, 5, 6, 7
JANITOR														4, 5, 6, 7
MECHANICAL														4, 5, 6, 7

- REMARKS:**
- NEW SUSPENDED CEILING TILE HEIGHT SHALL BE 9'-0" UNLESS OTHERWISE NOTED; INSTALL THE NECESSARY TRIM & RUNNERS ALONG PERIMETER WALLS.
  - NEW SUSPENDED CEILING TILE HEIGHT TO BE AT THE SAME HEIGHT AS THE BOTTOM OF THE SOFFIT AS DETAILED; INSTALL THE NECESSARY TRIM & RUNNERS ALONG PERIMETER WALLS.
  - PLASTER CEILING REPAIR; TEXTURE SHALL MATCH & BLEND INTO EXISTING.
  - ROOM SIGNAGE; SEE DETAILS.
  - IF STAIRWELL STEPS AND LANDINGS HAVE A TERRAZZO FLOORING; DO NOT DISTURB TERRAZZO; PAINT WALLS, CEILING AND EXPOSED STEEL STAIR STRINGERS INCLUDING STEEL RAILINGS.
  - CLEAN AND PAINT EXISTING CEILING METAL GRILLES.
  - PAINT ALL WALLS, INCLUDING FINISHED COLUMNS WITHIN ROOM.

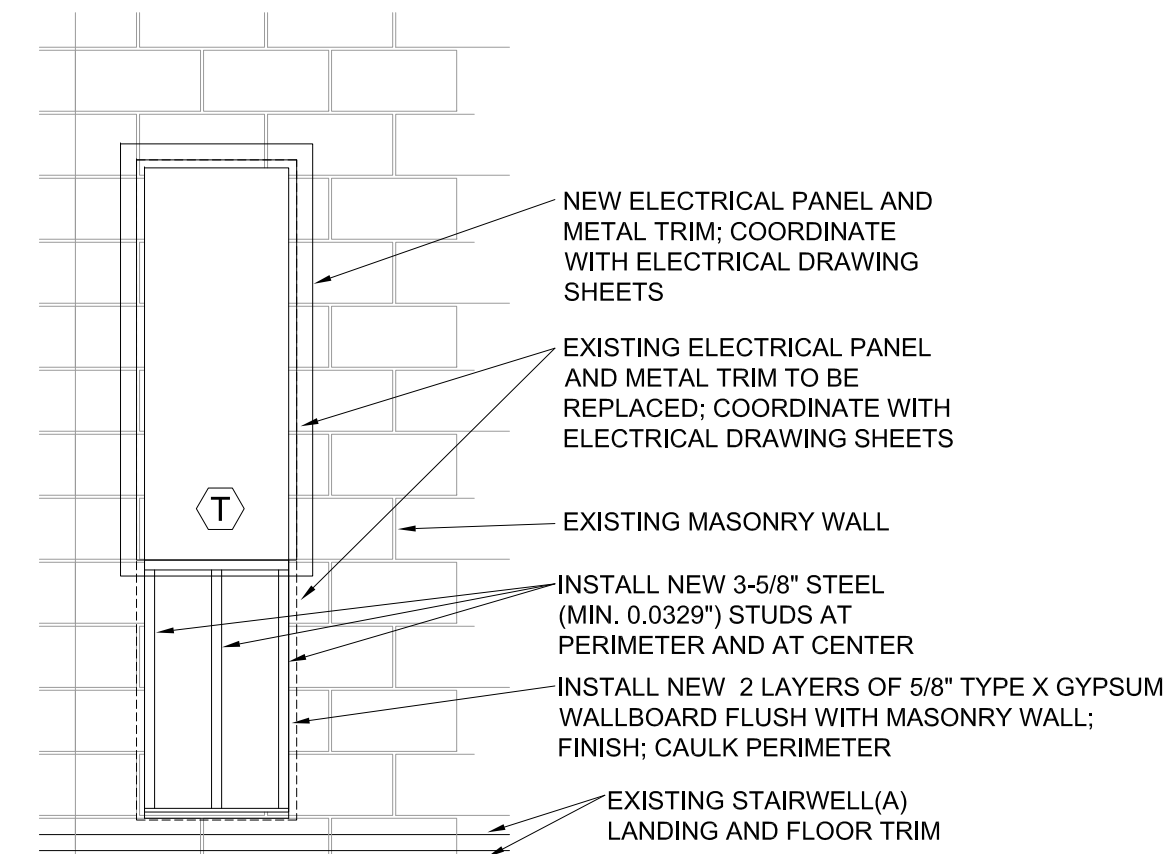


**BUILDING**

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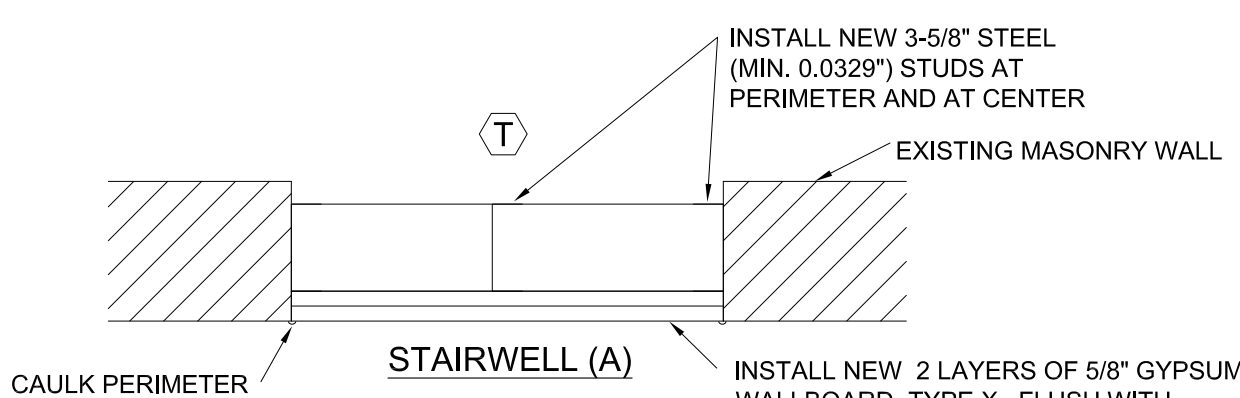
**NEW WORK NOTES:**

- (A) INSTALL NEW DOOR, FRAME AND HARDWARE AS SPECIFIED.
- (B) CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS AND WORK NEEDED AS THIS SPACE MAY BE CONSIDERED "CONFINED WORK SPACE." THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.
- (C) INSTALL NEW 3-5/8" STEEL (MIN. 0.0329") STUDS, 16" O.C. WITH 5/8" TYPE X GYPSUM WALL BOARD AND 3-1/2" FIBERGLASS UNFACED BATT INSULATION; FRICTION FIT - FULL HEIGHT, FULL THICKNESS. FRAME AROUND EXISTING WINDOWS. WALL TO EXTEND TO BOTTOM OF THE EXISTING ROOF DECK.
- (D) INSTALL NEW SUSPENDED CEILING TILE ASSEMBLY. SEE DETAILS. EXISTING PLASTER CEILING TO REMAIN.
- (E) INSTALL FILM TO THE (7) EXISTING WINDOW'S GLAZING AS SPECIFIED.
- (F) INSTALL NEW PLUMBING AND/OR PLUMBING FIXTURES; COORDINATE WITH OTHER DRAWING SHEETS FOR PLUMBING WORK.
- (G) INSTALL NEW SUSPENDED CEILING TILE ASSEMBLY. SEE DETAILS. EXISTING PLASTER CEILING TO BE REMOVED.
- (J) INSTALL NEW 6" STEEL (MIN. 0.0329") STUDS, 16" O.C. WITH 5/8" TYPE X GYPSUM WALL BOARD AND 6" FIBERGLASS UNFACED BATT INSULATION; FRICTION FIT - FULL HEIGHT, FULL THICKNESS. FRAME IN AT EXISTING WINDOW AS DETAILED. WALL TO EXTEND TO BOTTOM OF THE EXISTING ROOF DECK. **WALL TO MEET UL FIRE RESISTANCE U 419 1 HOUR DESIGN ASSEMBLY RATING. ALL PENETRATIONS SHALL BE FIRE-CAULKED TO ALLOW WALL TO MEET UL RATING.**
- (K) CORE DRILL CONCRETE FLOOR WITH MINIMAL DEMO, KEEPING THE EXISTING FLOOR FINISH INTACT; INSTALL NEW FLOOR DRAIN; EPOXY GROUT FLUSH SMOOTH WITH EXISTING FLOORING; COORDINATE WITH PLUMBING AND MECHANICAL.
- (L) AFTER EXISTING JANITOR SINK AND ASSOCIATED PLUMBING IS REMOVED (COORDINATE WITH PLUMBING DISCIPLINE) FLOOR SHALL BE PATCHED FULL AND FLUSH WITH EPOXY GROUT. WALLS TO BE PATCHED; CEILING PATCHED; ROOM TO BE PAINTED, INCLUDING CEILING METAL GRILLE.
- (M) INSTALL NEW INLINE FLOOR DRAIN TRAP SEALERS IN ALL FLOOR DRAINS. THE TRAP SEALS MUST BE MICHIGAN APPROVED (APPROVAL NUMBER 1623-PA EFFECTIVE 11-5-2011) INLINE FLOOR DRAIN TRAP SEALERS. THESE FLOOR DRAIN TRAP SEAL PROTECTION DEVICES MUST ALSO BE ASSE 1072 APPROVED. THE CONTRACTOR MUST SUBMIT DOCUMENTS SHOWING PROOF OF THE (LARA) APPROVAL. COORDINATE WITH PLUMBING.
- (N) PRIOR TO INSTALLING STEEL STUD WALL ASSEMBLY, INSTALL NEW MASONRY IN DUMBWAITER DOOR AND ACCESS DOOR OPENINGS; COORDINATE WITH DETAILS SHOWN ON DRAWING SHEET A7.
- (P) INSTALL NEW LIGHTING FIXTURES; COORDINATE WITH ELECTRICAL DRAWING SHEETS.
- (R) INSTALL NEW FLUSH MOUNTED JB BOXES IN THE NEW SUSPENDED CEILING TILE ASSEMBLY FOR CAT 6 DATA DROPS; COORDINATE WITH ELECTRICAL DRAWING SHEETS; COORDINATE THE LOCATION AND SECURE INTO PLACE.
- (S) COORDINATE WITH MECHANICAL DESIGN/DRAWING SHEETS FOR REPLACEMENT OF CEILING DIFFUSERS. REPAIR EXISTING PLASTER CEILING AS REQUIRED, MATCHING EXISTING TEXTURE, AND FINISH; PAINT CEILING AS SPECIFIED; SEE FINISH SCHEDULE.
- (T) EXISTING ELECTRICAL PANEL IS BEING REPLACED; COORDINATE WITH ELECTRICAL. NEW PANEL WILL BE SMALLER; INFILL REMAINING AREA WITH 3-5/8" STEEL (MIN. 0.0329") STEEL STUDS AND 2 LAYERS OF 5/8" TYPE X GYPSUM WALLBOARD; FINISHED AS SPECIFIED. CAULK PERIMETER.



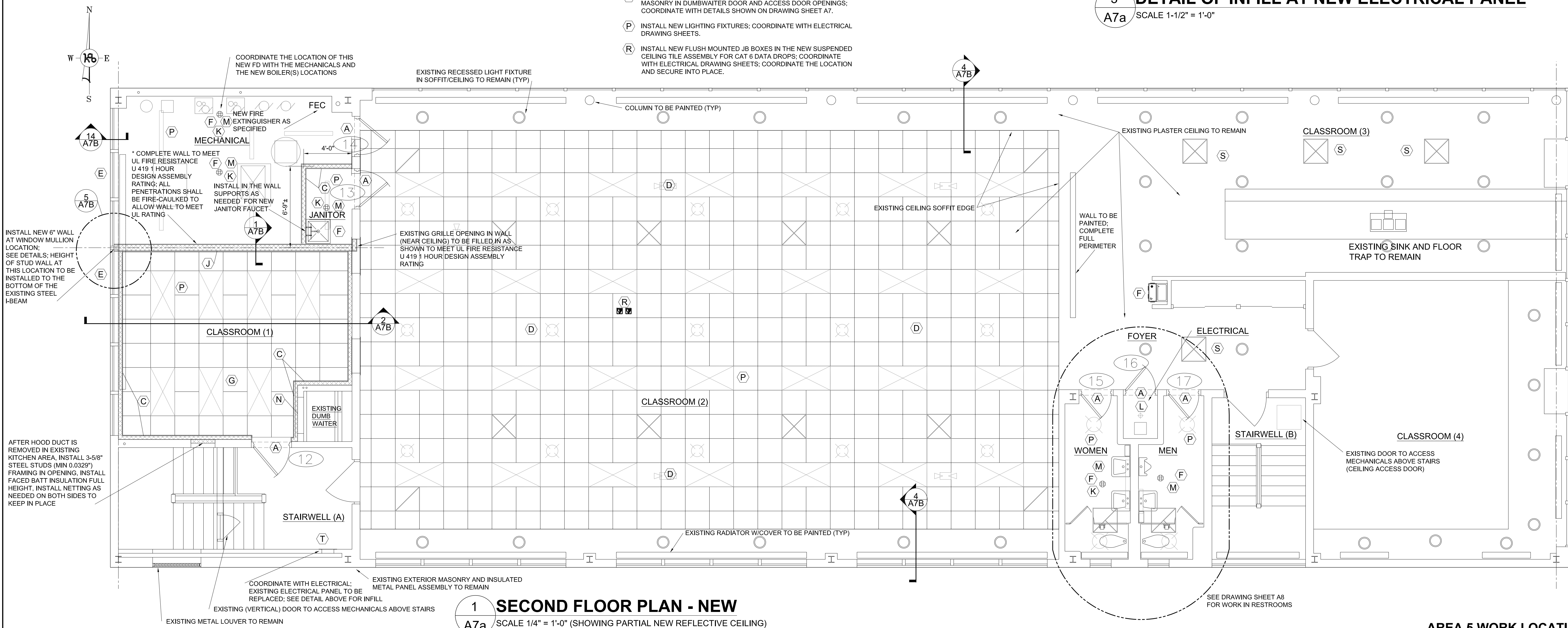
**2 DETAIL OF INFILL AT NEW ELECTRICAL PANEL**

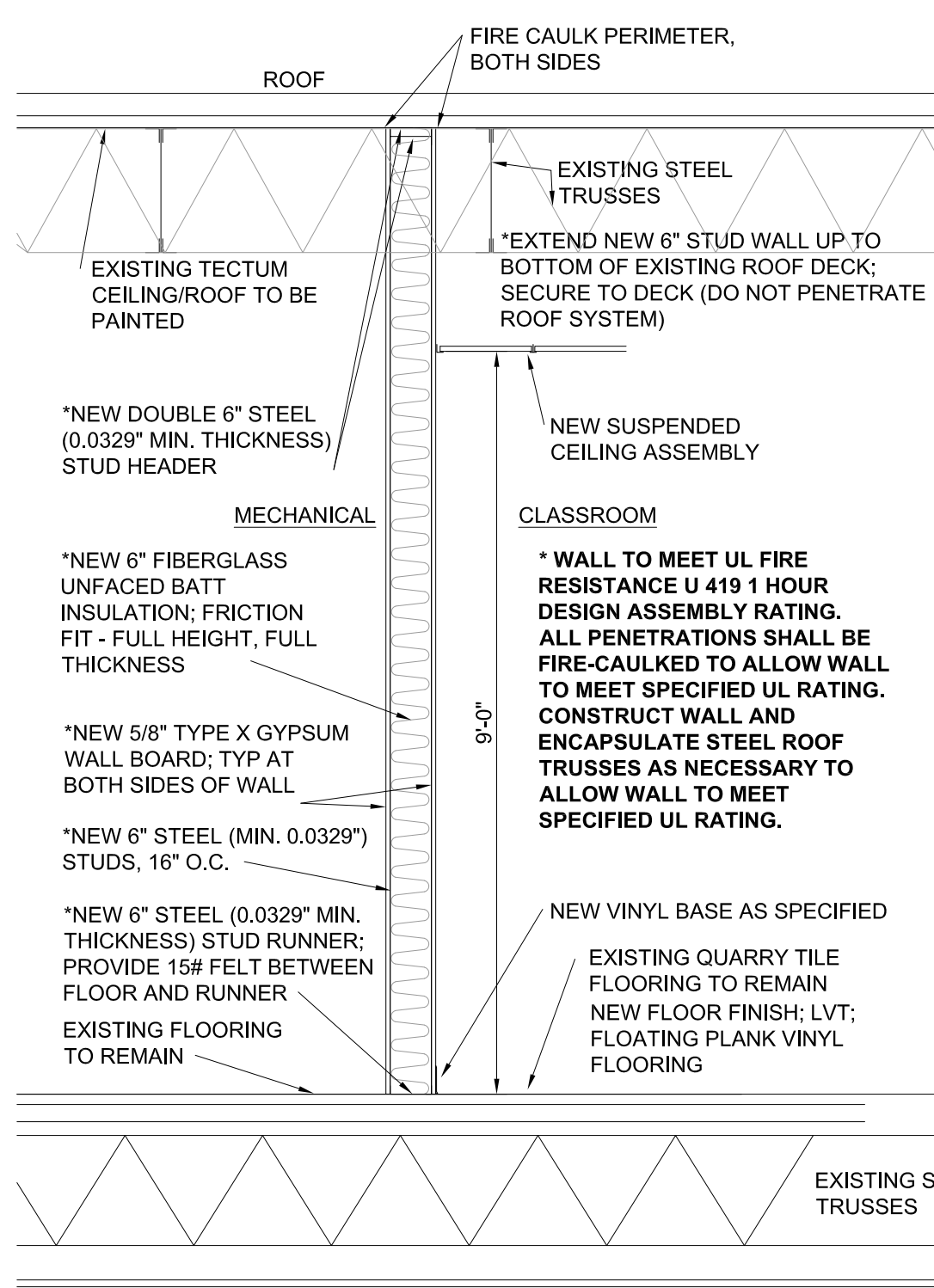
A7a SCALE 1/2" = 1'-0"



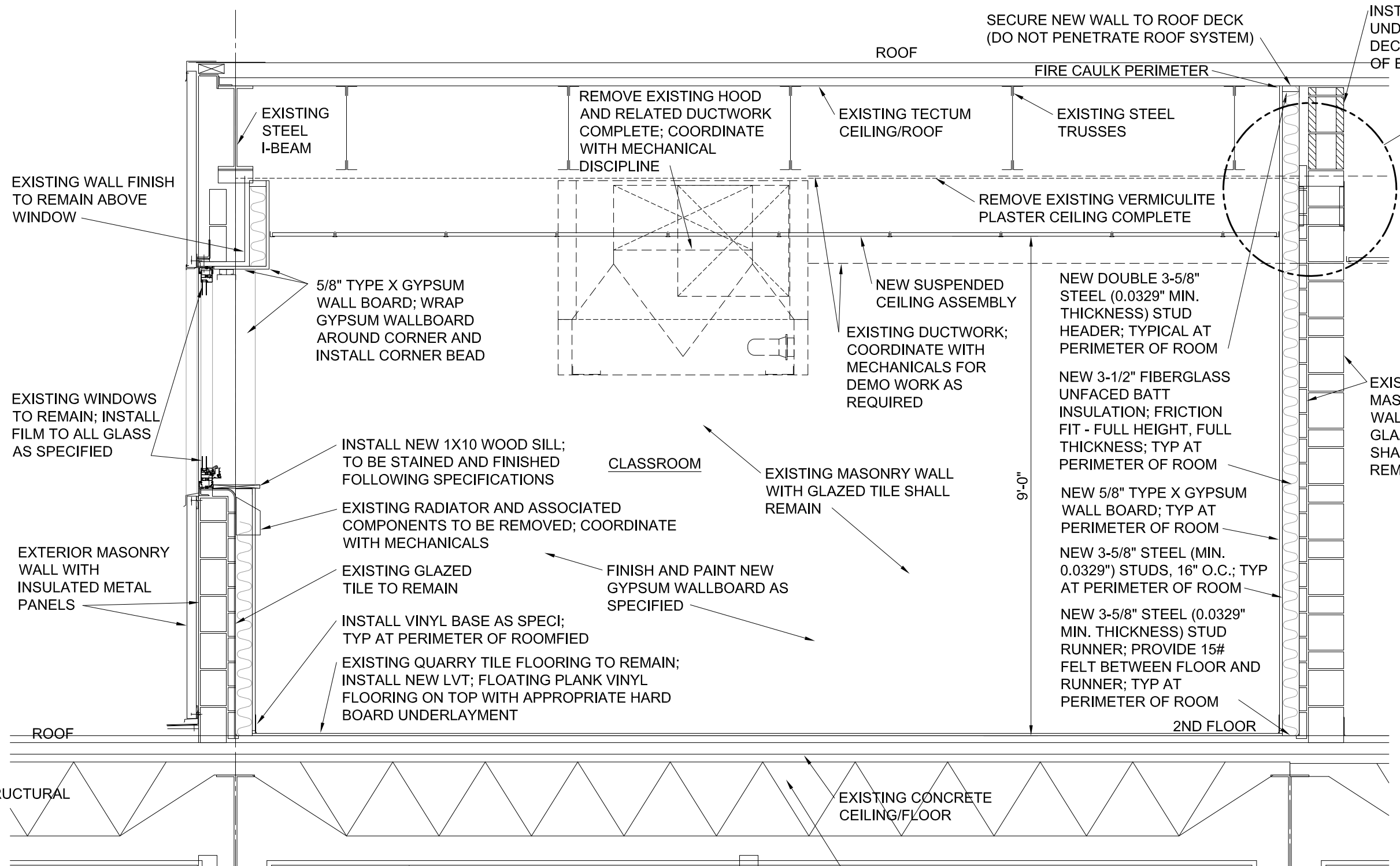
**3 DETAIL OF INFILL AT NEW ELECTRICAL PANEL**

A7a SCALE 1-1/2" = 1'-0"

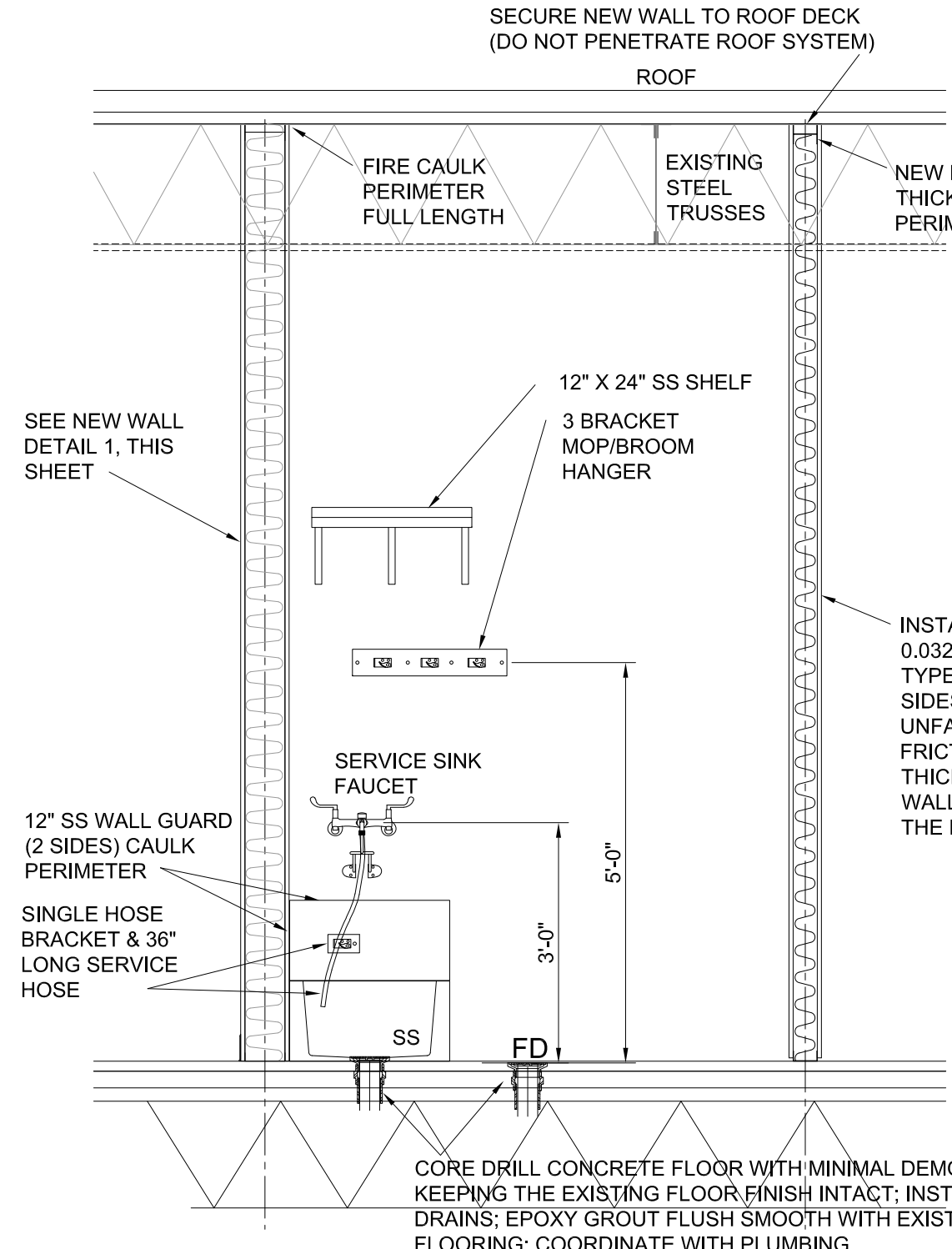




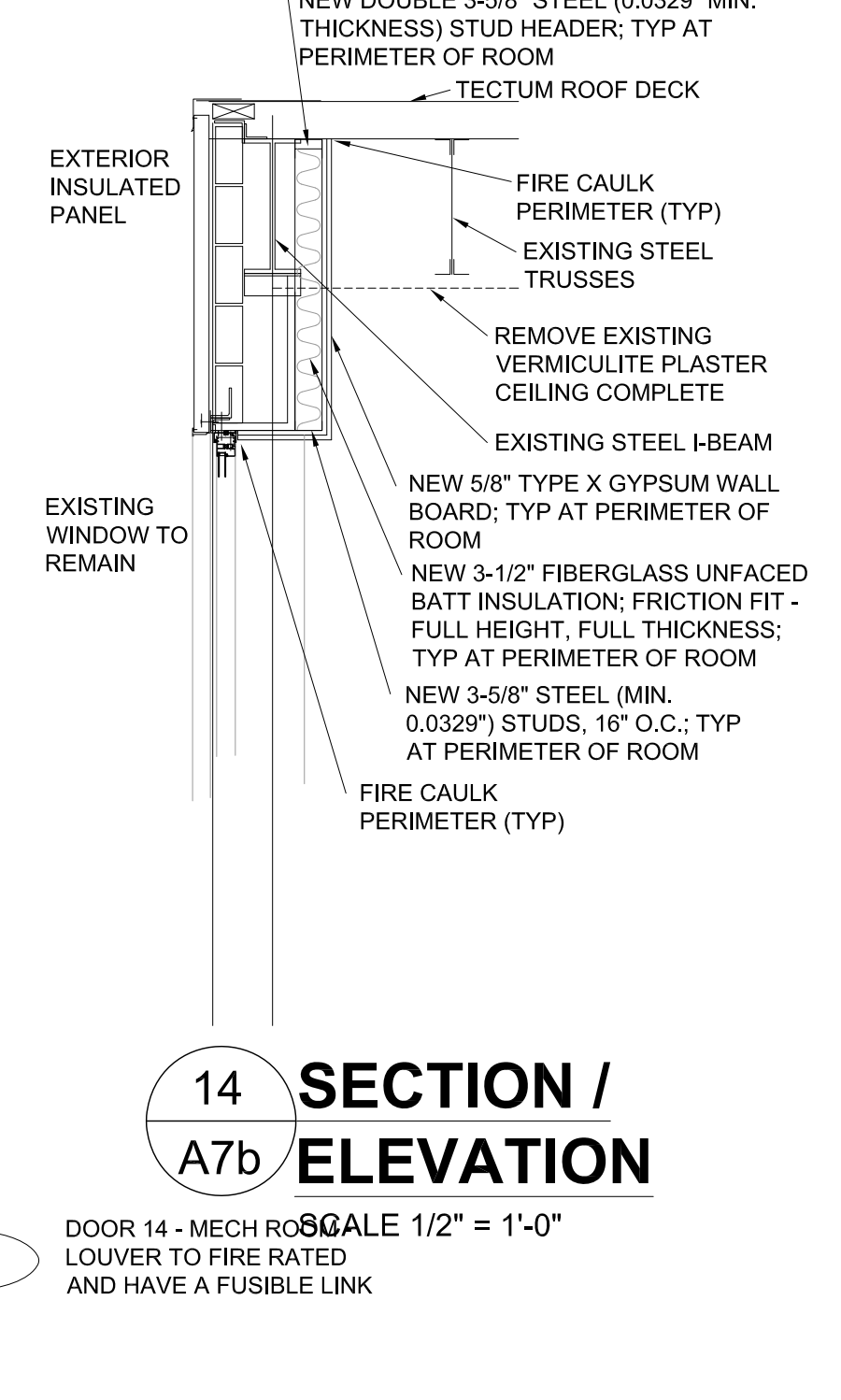
**1 SECTION / ELEVATION**  
A7b SCALE 1/2" = 1'-0"



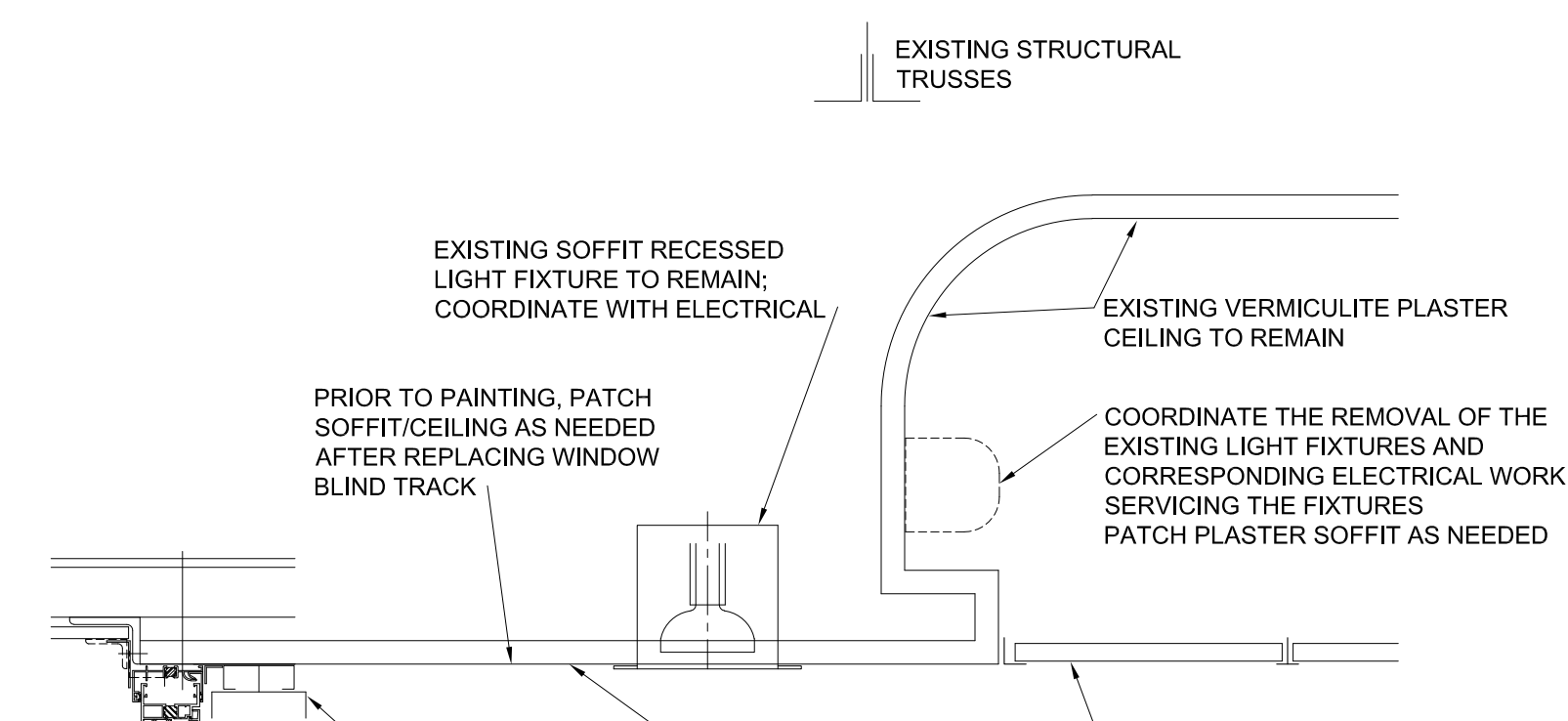
**2 SECTION / ELEVATION**  
A7b SCALE 1/2" = 1'-0"



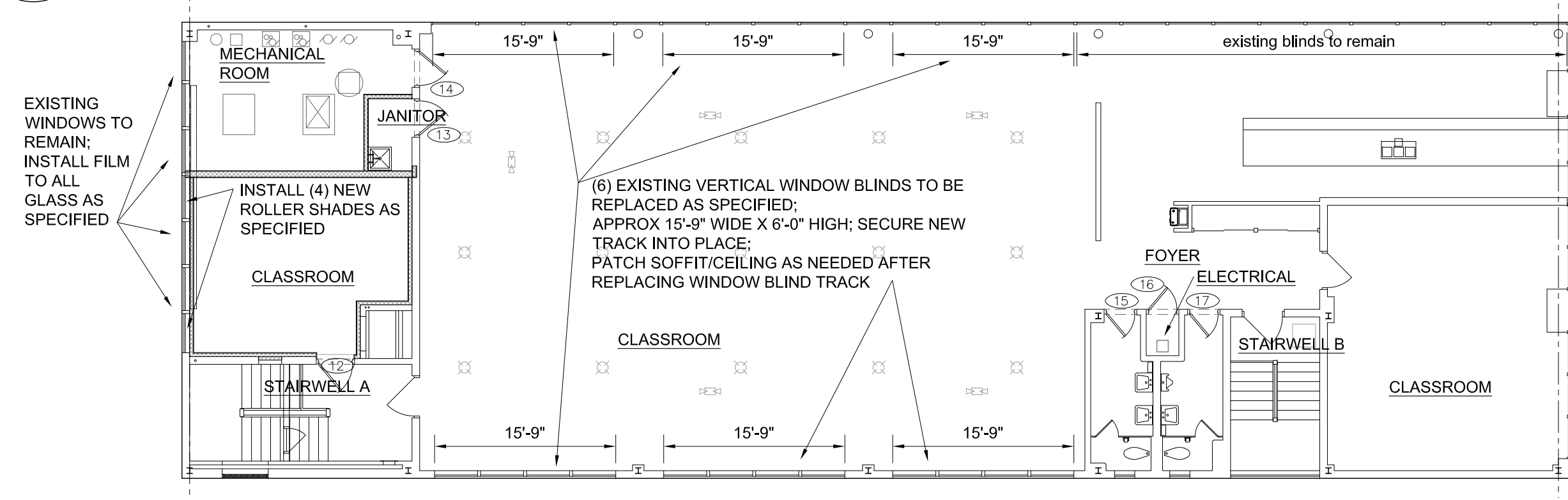
**2a NEW JANITOR CLOSET ELEVATION**  
A7b SCALE 1/2" = 1'-0"



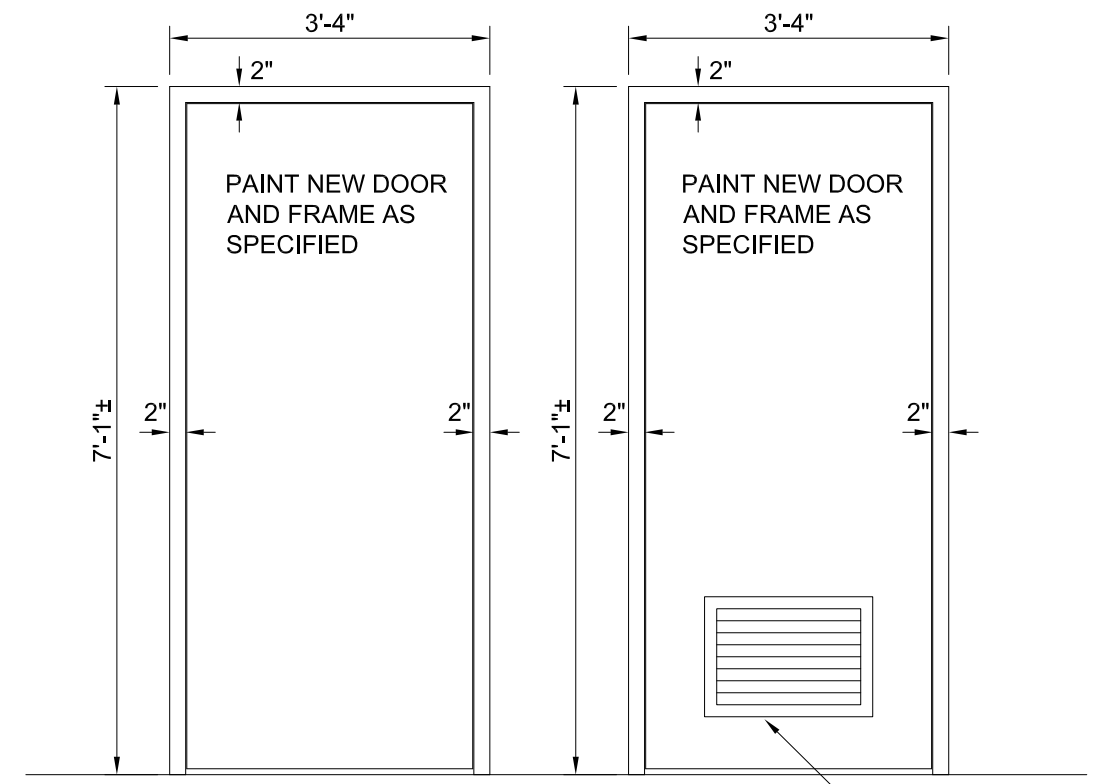
**14 SECTION / ELEVATION**  
A7b SCALE 1/2" = 1'-0"



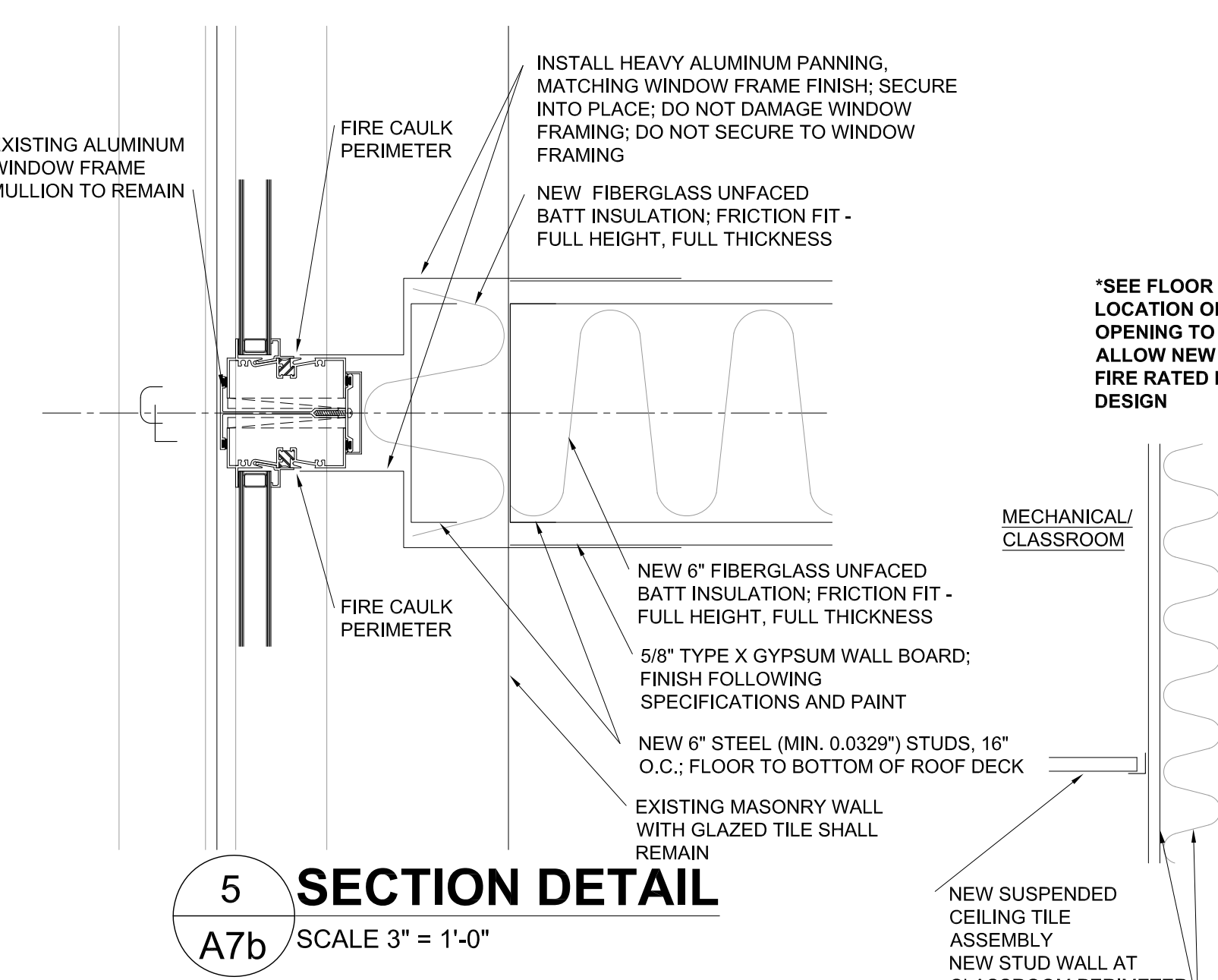
**4 FINISH CEILING DETAIL**  
A7b SCALE 1-1/2" = 1'-0"



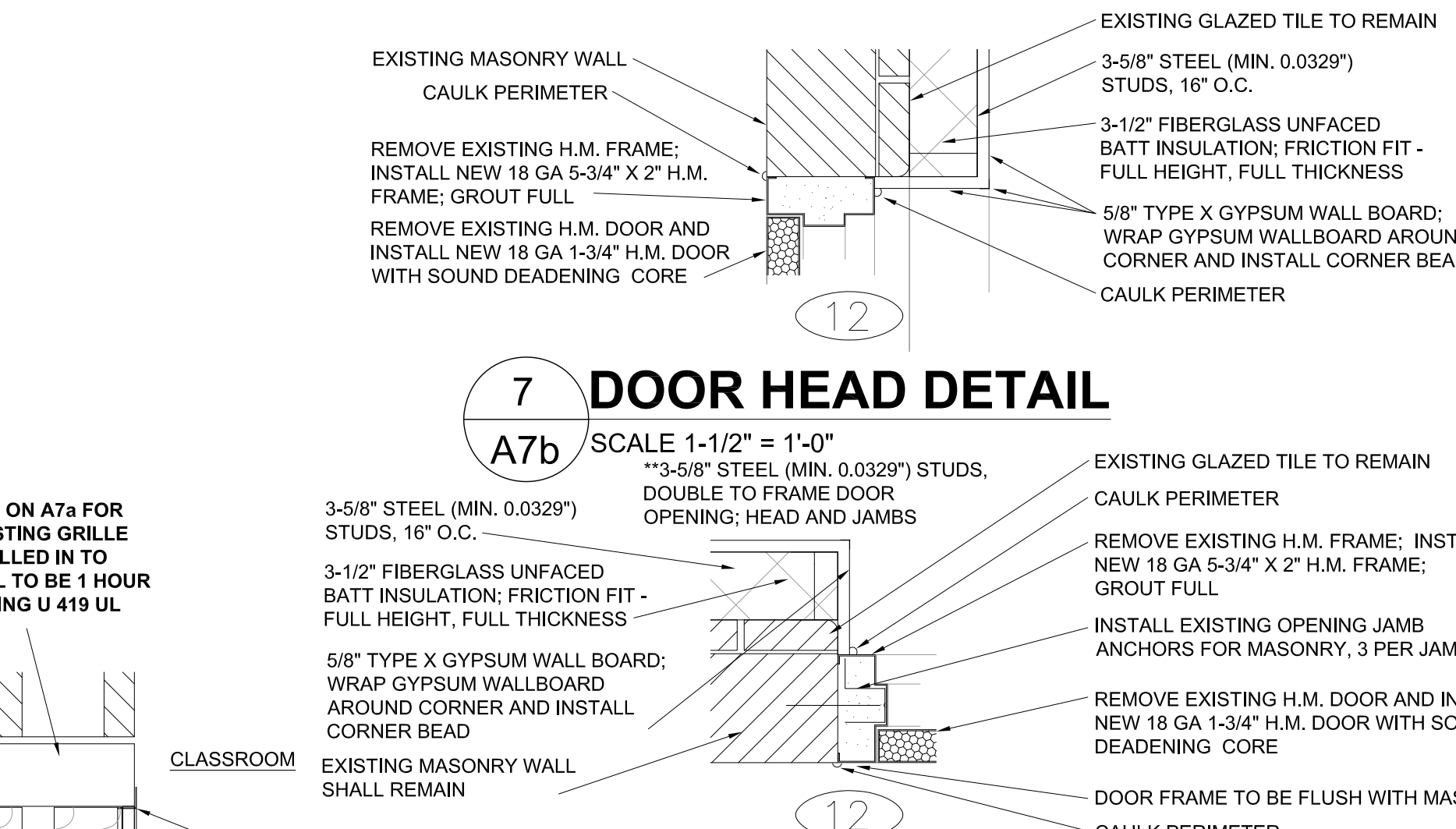
**16 SECOND FLOOR PLAN**  
A7b SCALE 3/32" = 1'-0"



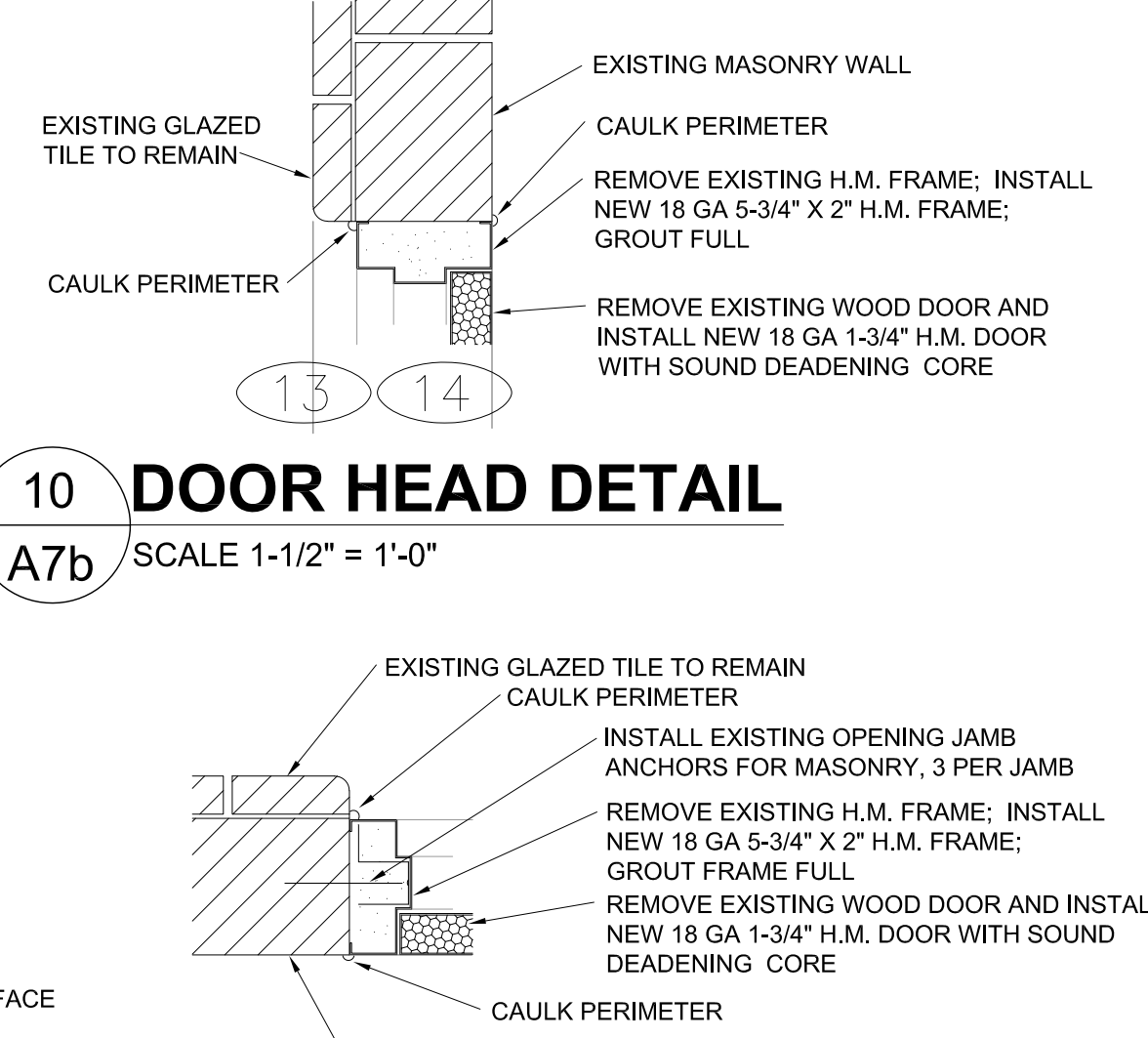
**3 DOOR ELEVATIONS**  
A7b SCALE 1/2" = 1'-0"



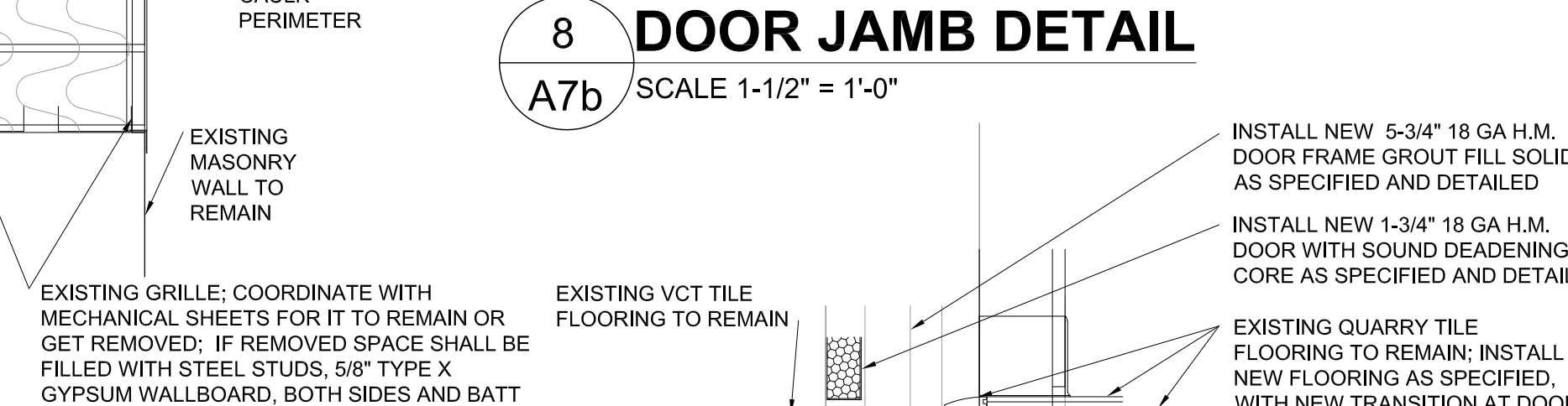
**5 SECTION DETAIL**  
A7b SCALE 3" = 1'-0"



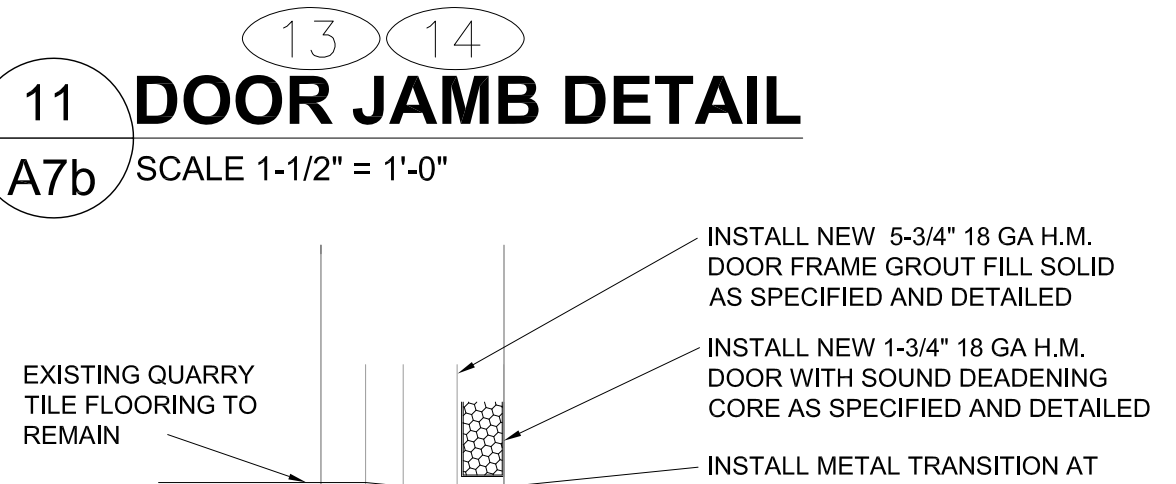
**7 DOOR HEAD DETAIL**  
A7b SCALE 1-1/2" = 1'-0"



**10 DOOR HEAD DETAIL**  
A7b SCALE 1-1/2" = 1'-0"



**8 DOOR JAMB DETAIL**  
A7b SCALE 1-1/2" = 1'-0"



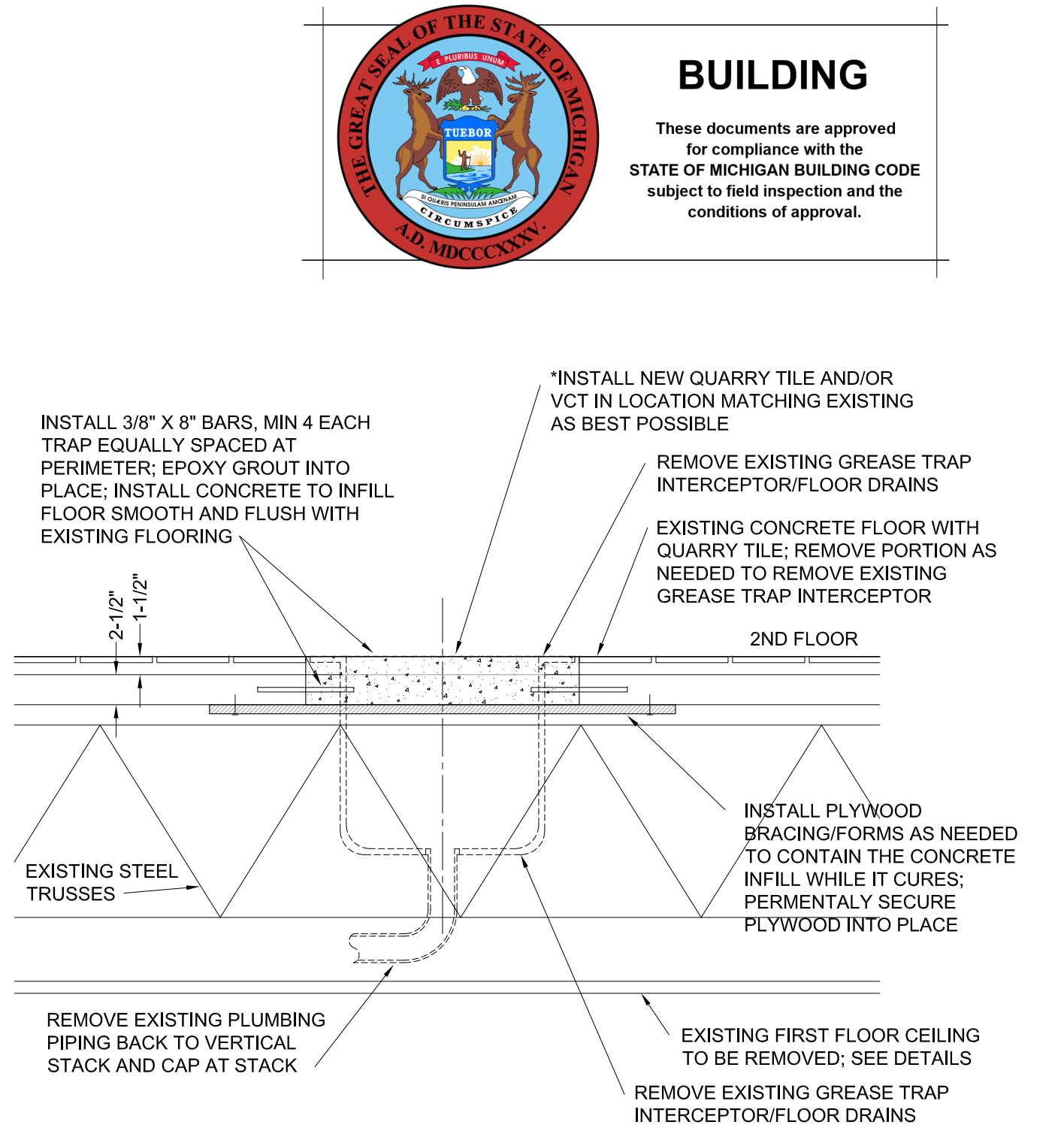
**11 DOOR JAMB DETAIL**  
A7b SCALE 1-1/2" = 1'-0"



**9 DOOR THRESHOLD DETAIL**  
A7b SCALE 1-1/2" = 1'-0"



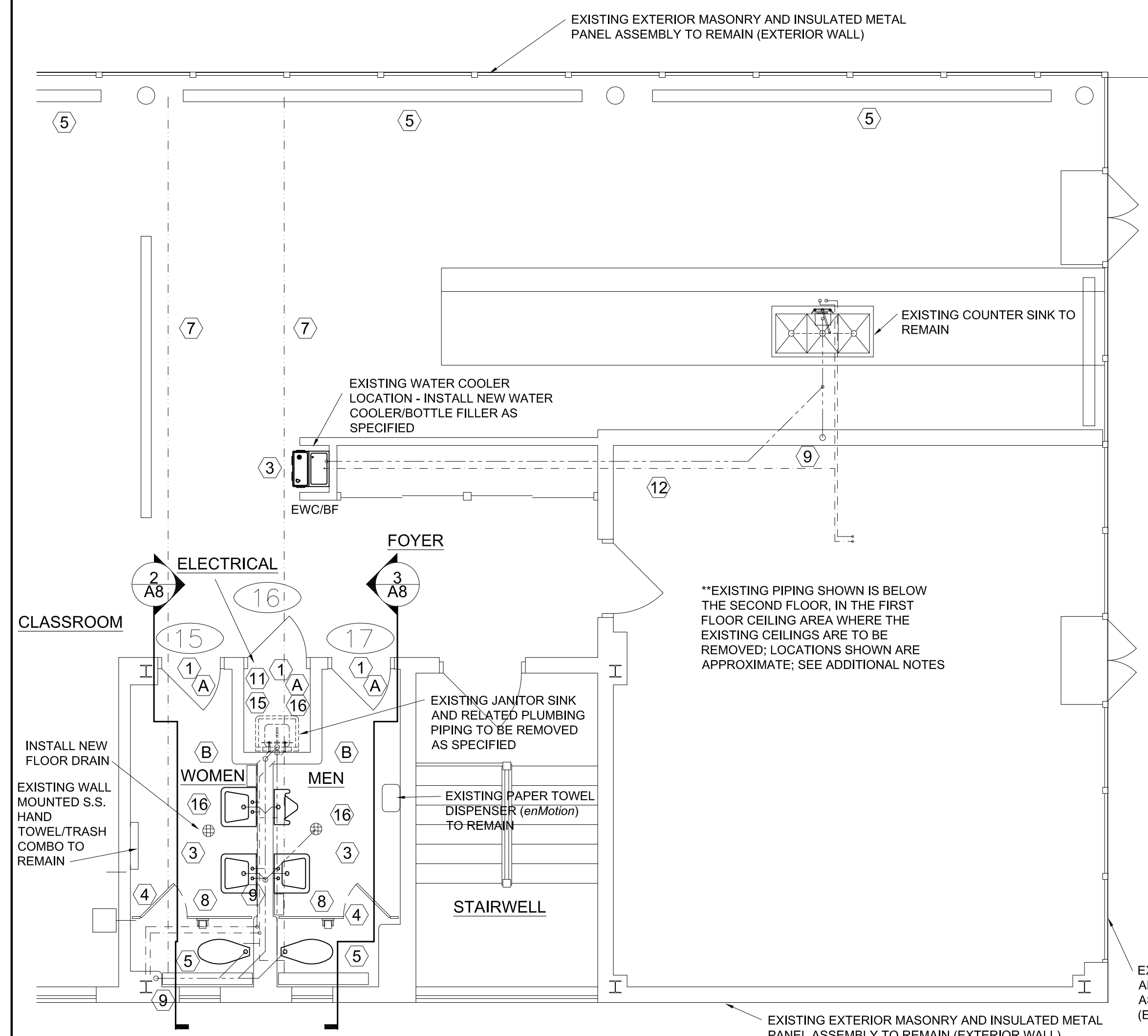
**12 DOOR THRESHOLD DETAIL**  
A7b SCALE 1-1/2" = 1'-0"



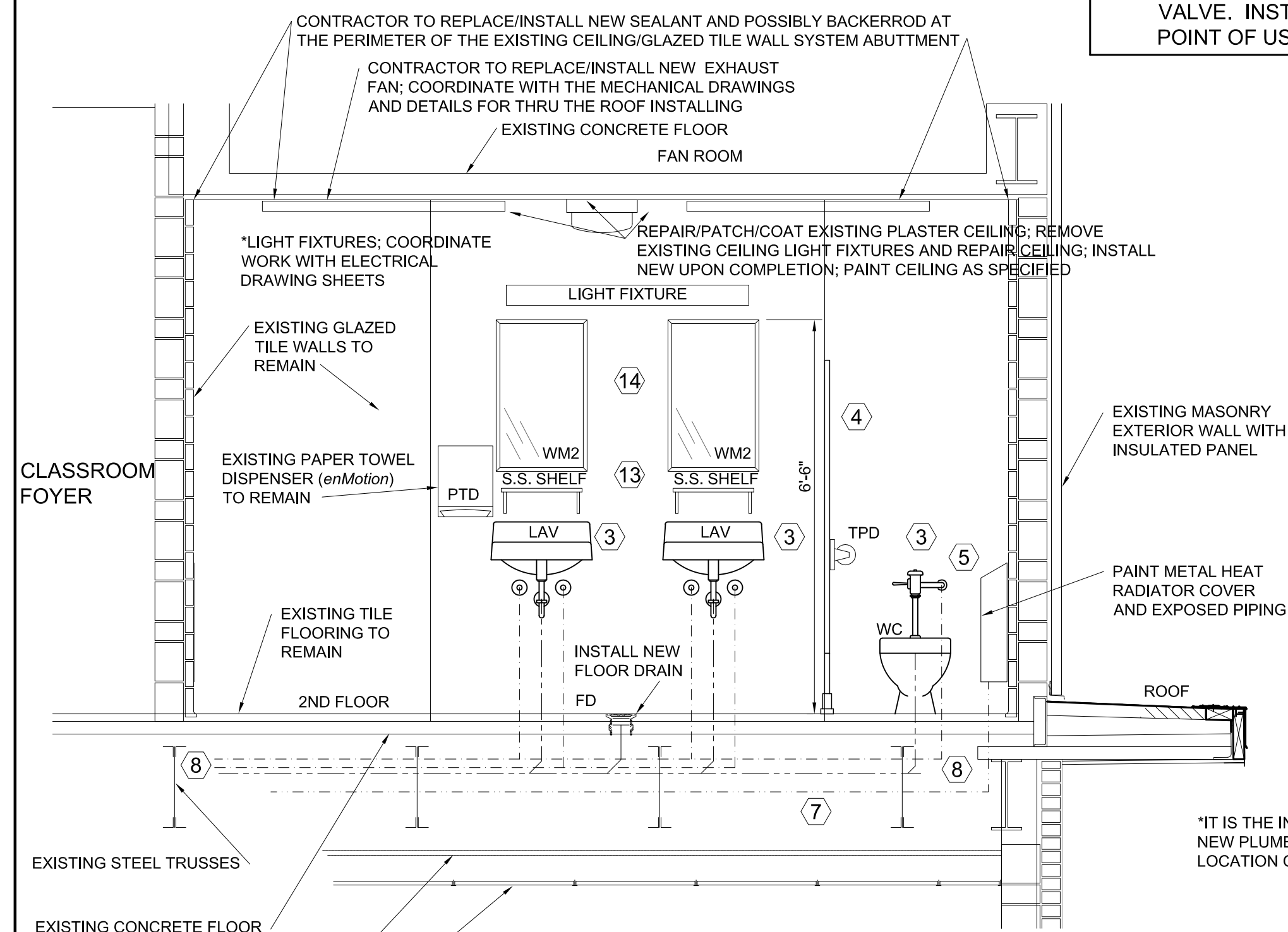
**13 GREASE INTERCEPTOR DEMO DETAIL**  
A7b SCALE 1" = 1'-0"

**BUILDING**

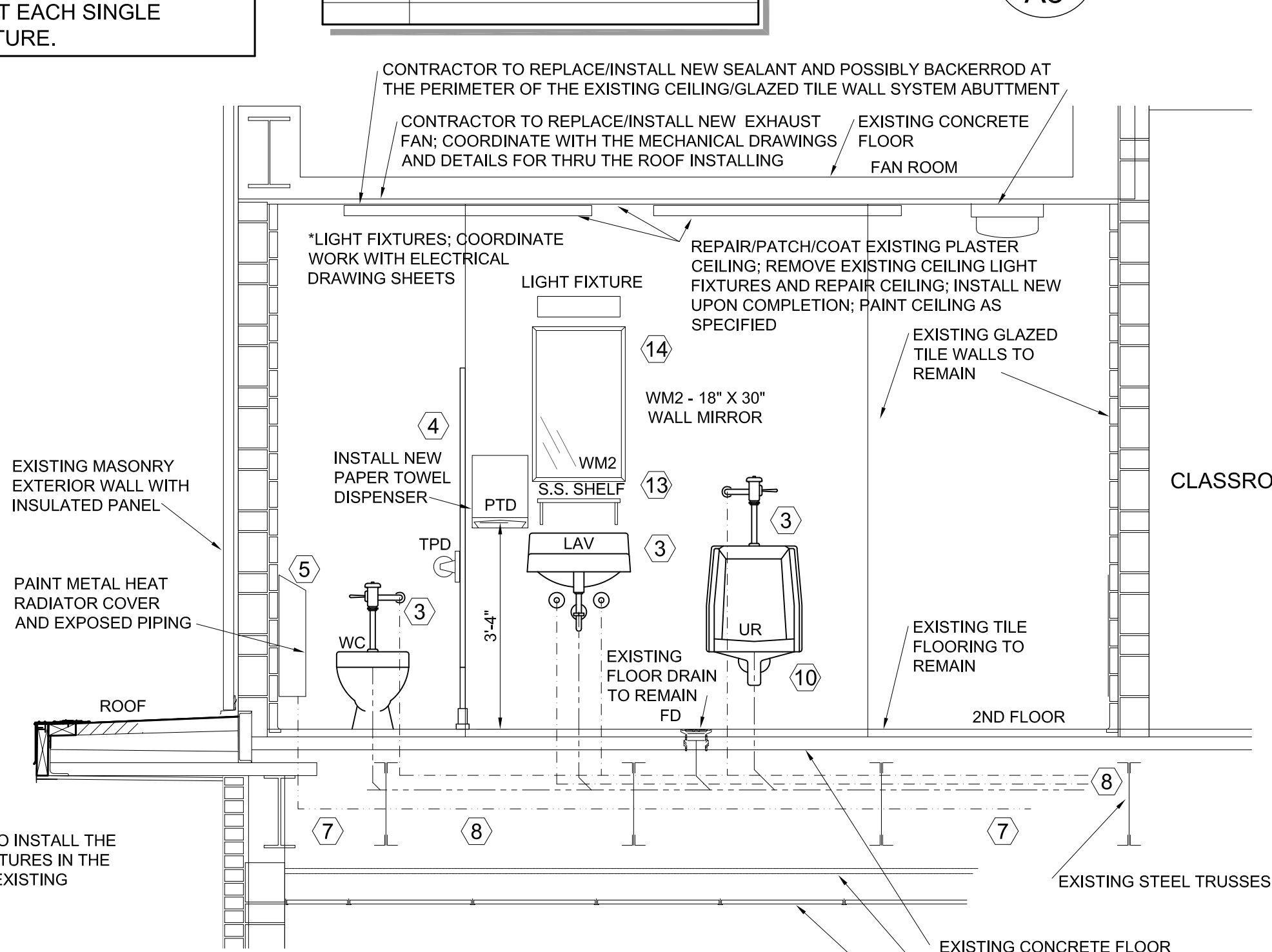
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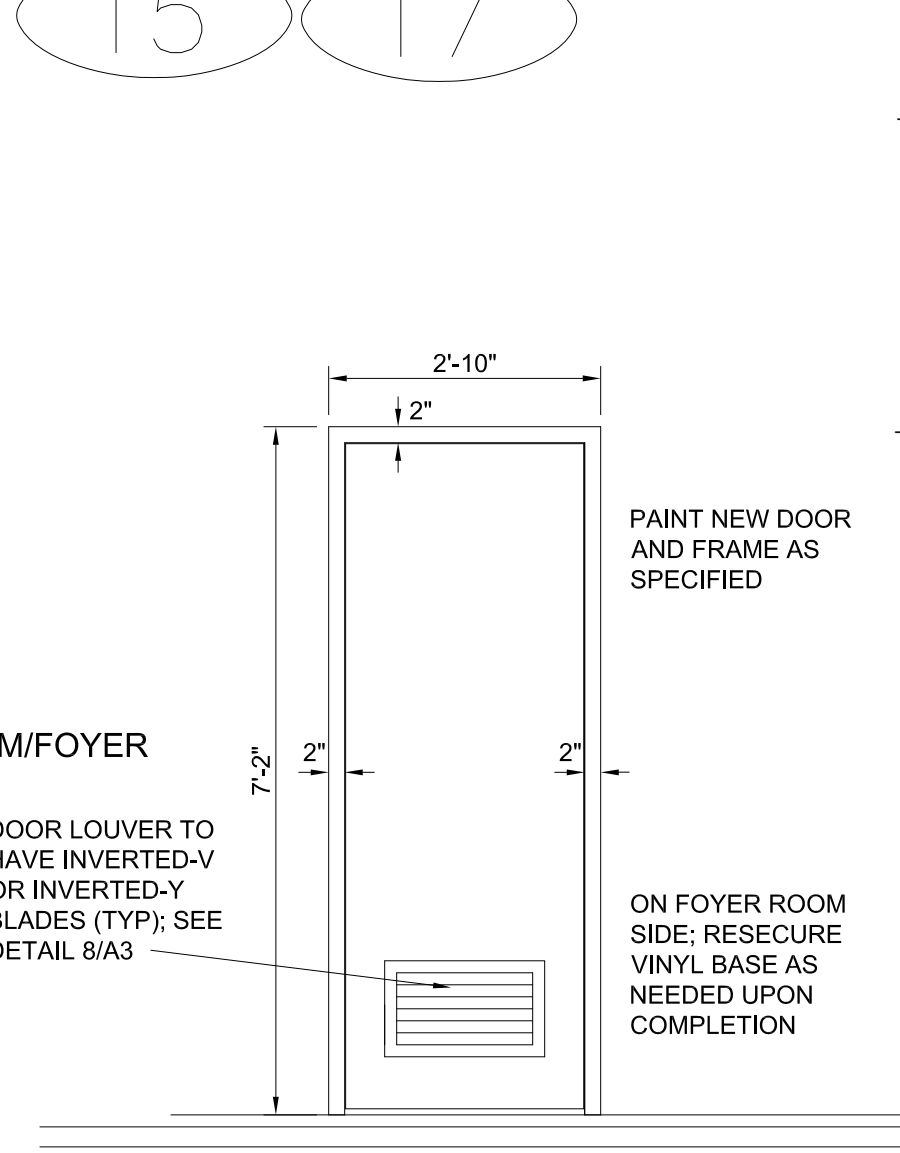
**1 PARTIAL EXISTING SECOND FLOOR PLAN - DEMOLITION/NEW**  
 A8 SCALE 1/4" = 1'-0" (PLUMBING PIPING SHOWN IN REFLECTED FIRST FLOOR CEILING)



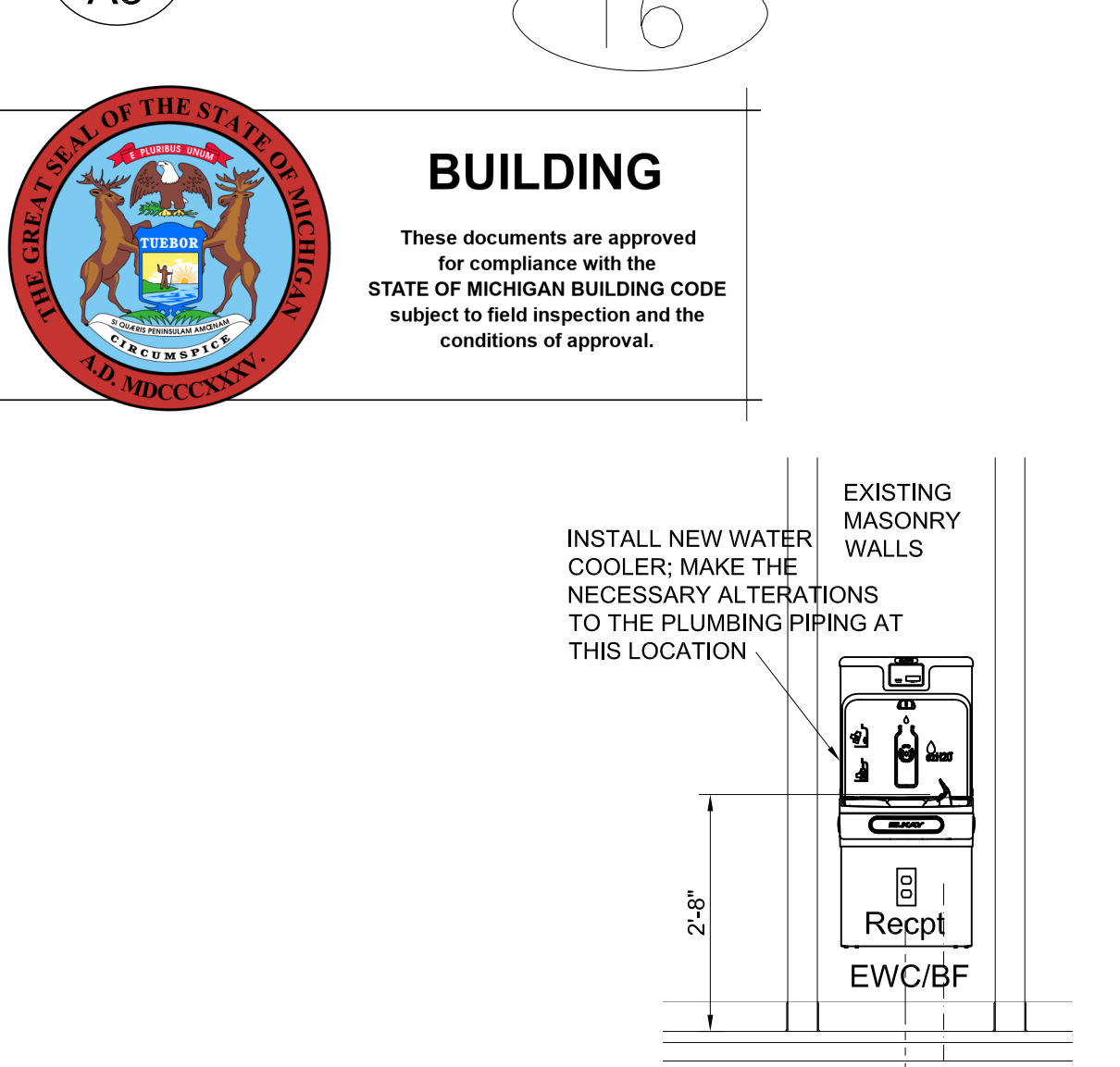
**2 SECTION / ELEVATION WOMEN**  
 A8 SCALE 1/2" = 1'-0"



**3 SECTION / ELEVATION MEN**  
 A8 SCALE 1/2" = 1'-0"



**4 DOOR ELEVATION**  
 A8 SCALE 1/2" = 1'-0"



**12 WATER COOLER ELEVATION**  
 A8 SCALE 1/2" = 1'-0"

**DEMOLITION / NEW WORK NOTES:**

- REMOVE EXISTING DOOR, FRAME AND EXISTING DOOR HARDWARE. PREP OPENING TO RECEIVE NEW DOOR, FRAME AND HARDWARE. TURN EXISTING DOOR HARDWARE OVER TO THE ARMORY MAINTENANCE WORKER.
- EXISTING PIPING IS BELOW THE CONCRETE FLOOR ABOVE THE FIRST FLOOR CEILING THAT IS TO BE REMOVED UNDER THIS PROJECT. REPLACE ALL EXPOSED SEWER PIPING WITH NEW AS SPECIFIED.
- REPLACE EXISTING PLUMBING FIXTURE(S) AS SPECIFIED. MAKE THE NECESSARY ALTERATIONS TO THE PLUMBING PIPING TO CONNECT NEW FIXTURE. INSTALL NEW SHUT OFF VALVES AND/OR FLUSH VALVES.
- REPLACE EXISTING TOILET PARTITIONS AS SPECIFIED; FLOOR MOUNTED, OVERHEAD BRACED, 1" PLASTIC PARTITIONS.
- EXISTING RADIATOR TO REMAIN; SEE MECHANICAL DRAWINGS FOR WORK INVOLVING WITH THESE UNITS AND COORDINATE.
- APPROXIMATE LOCATION OF WHERE EXISTING RADIANT PIPING GOES UP TO THE UNIT ON THE SECOND FLOOR.
- EXISTING RADIANT HEAT PIPING TO UNITS ON THE SECOND FLOOR, LOCATED IN THE CEILING SPACE OF THE FIRST FLOOR.
- EXISTING PLUMBING PIPING TO THE FIXTURES ON THE SECOND FLOOR. REMOVE ALL HORIZONTAL AND EXPOSED VERTICAL PIPING IN THE FIRST FLOOR CEILING AREAS AND THE EXPOSED VERTICAL PIPING GOING UP TO THE FIXTURES ON THE SECOND FLOOR; INSTALL ALL NEW PIPING AS SPECIFIED AND SECURE INTO PLACE. \*\*EXACT LOCATION OF PIPING WILL NOT BE DETERMINED UNTIL THE EXISTING FIRST FLOOR PLASTER CEILINGS ARE REMOVED.
- APPROXIMATE LOCATION OF EXISTING VENT THRU THE ROOF OR REVENTING PIPING; TO REMAIN AND UTILIZED UNDER THIS WORK.
- PATCH HOLES IN THE EXISTING GLAZED TILE WALLS; INSTALL NEW TILE, MATCHING EXISTING IN AREAS PATCHED.
- REPAIR/PATCH/COAT EXISTING PLASTER CEILING; REMOVE EXISTING CEILING LIGHT FIXTURE AS NEEDED TO REPAIR CEILING; REINSTALL UPON COMPLETION; PAINT CEILING AS SPECIFIED
- EXISTING PLUMBING PIPING TO THE FIXTURES ON THE SECOND FLOOR, (LOCATED IN THE FIRST FLOOR CEILING). REMOVE ALL HORIZONTAL AND EXPOSED VERTICAL SEWER PIPING IN THE FIRST FLOOR CEILING AREAS GOING UP TO THE DRINKING FOUNTAIN ON THE SECOND FLOOR AND REPLACE WITH NEW; COORDINATE WITH PLUMBING DISCIPLINE DRAWING SHEETS.
- INSTALL NEW WALL HUNG MIRROR, SHELF AND PAPER TOWEL DISPENSER.
- INSTALL NEW LIGHT FIXTURES; COORDINATE WITH ELECTRICAL.
- REMOVE EXISTING VCT FLOORING IN THIS ROOM; INSTALL NEW AS SPECIFIED.
- CLEAN ALL WALLS OF EXISTING CAULK/SEALANTS AT EXISTING FIXTURE PERIMETERS.

**GENERAL NOTES:**

FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.  
 CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND DIMENSIONS.  
 AT THE EXISTING AND NEW FLOOR DRAIN (FD), THE CONTRACTOR SHALL INSTALL TRAP PRIMER VALVES; INSTALL NEW INLINE FLOOR DRAIN TRAP SEALERS IN ALL FLOOR DRAINS. THE TRAP SEALS MUST BE MICHIGAN APPROVED (APPROVAL NUMBER 1623-PA EFFECTIVE 11-5-2011) INLINE FLOOR DRAIN TRAP SEALERS. THESE FLOOR DRAIN TRAP SEAL PROTECTION DEVICES MUST ALSO BE ASSE 1072 APPROVED. THE CONTRACTOR MUST SUBMIT DOCUMENTS SHOWING PROOF OF THE (LARA) APPROVAL.  
 COORDINATE WORK IN THIS AREA WITH ALL DISCIPLINES; PLUMBING, ELECTRICAL, MECHANICAL, ETC.  
 THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.

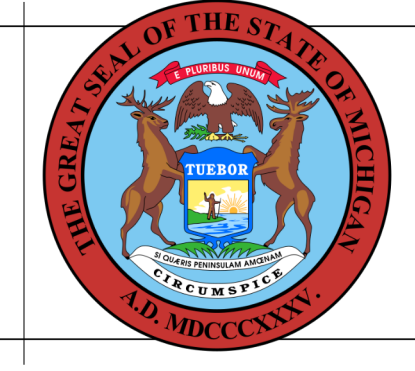
**NEW WORK NOTES:**

- INSTALL NEW DOOR, FRAME AND HARDWARE AS SPECIFIED. PAINT NEW DOOR AND FRAME.
- INSTALL NEW PLUMBING FIXTURES AS SPECIFIED.  
 ALL PLUMBING FIXTURES SHALL HAVE ACCESSIBLE SHUT OFF VALVES INSTALLED.  
 CONTRACTOR SHALL CLEAN FLOOR AND WALL AREAS WHERE EXISTING FIXTURES WERE REPLACED; CLEAN UP OLD CAULK AND SEALANT MAKING NEWLY EXPOSED AREA CLEAN.  
 FILL/PATCH HOLES IN ALL GLAZED TILE WALL AREAS; SMOOTH AND FLUSH WITH GLAZED TILE. INSTALL NEW TILE AS NEEDED.  
 FILL/PATCH HOLES IN ALL CERAMIC TILE FLOOR AREAS; SMOOTH AND FLUSH WITH CERAMIC TILE. INSTALL NEW TILE AS NEEDED.  
 \*\*SEE DRAWING SHEET A7a FOR ROOM FINISH SCHEDULE.

**PLUMBING FIXTURE NOMENCLATURE**

MARK	FIXTURE ITEM
EWC/BF	ELECTRIC WATER COOLER/BOTTLE FILLER
FD	FLOOR DRAIN
LAV	LAVATORY
PTD	PAPER TOWEL DISPENSER
SS	SERVICE SINK (FLOOR)
TPD	TISSUE PAPER DISPENSER
UR	URINAL; WALL MOUNTED
WC	WATER CLOSET; FLOOR MOUNTED
WM2	WALL MIRROR AND SHELF

**THERMOSTATIC MIXING VALVE**  
 EQUAL TO HEATGUARD 135 SERIES TEMPERATURE ACTUATED MIXING VALVE. INSTALL AT EACH SINGLE POINT OF USE FIXTURE.



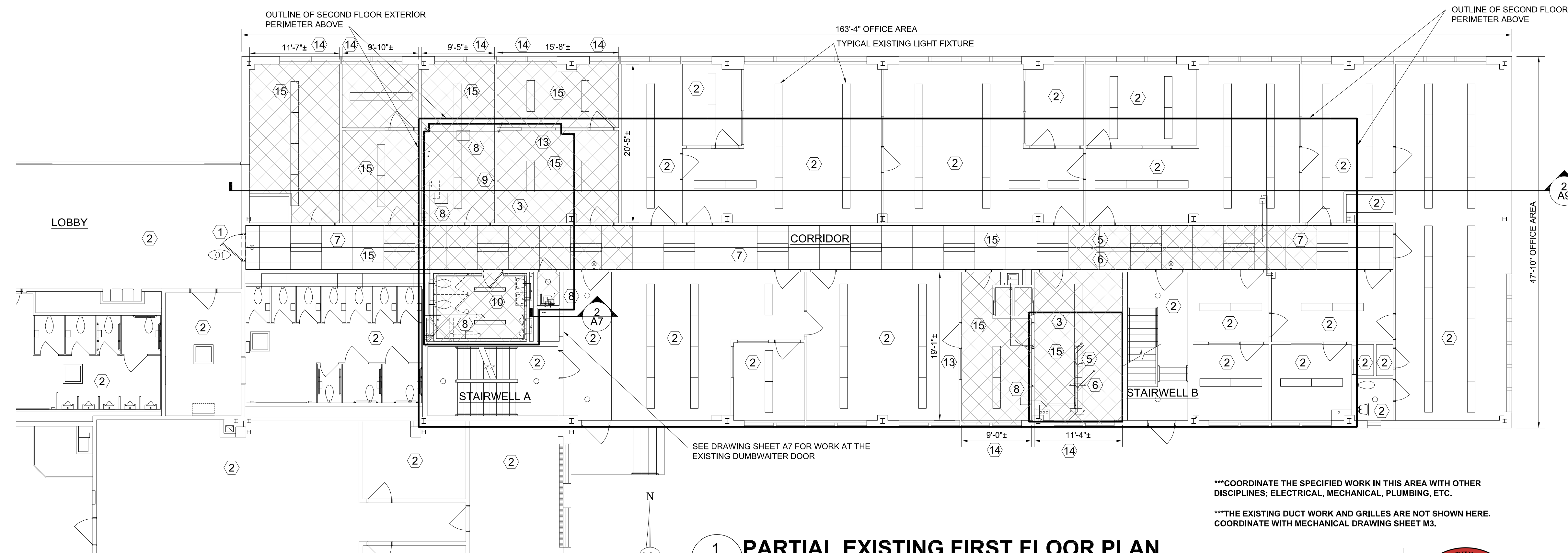
**BUILDING**  
 These documents are approved for compliance with the STATE OF MICHIGAN BUILDING CODE subject to field inspection and the conditions of approval.

**GENERAL NOTES:**

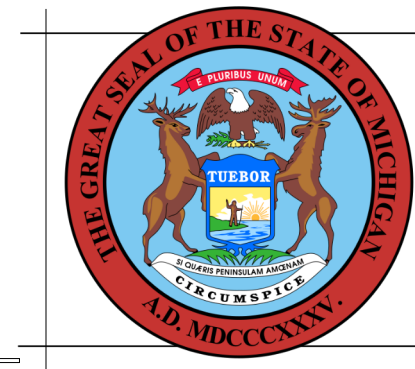
FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.  
 CARE SHALL BE TAKEN NOT TO REMOVE ANY PORTION OF THE PIPING FURNISHING ANY OF THE ROOF DRAINS.  
 COORDINATE WORK IN THIS AREA WITH ALL DISCIPLINES: PLUMBING, ELECTRICAL, MECHANICAL, ETC.  
 COORDINATE THE SPECIFIED EXISTING PLUMBING PIPING TO BE REPLACED OR REMOVED SERVICING THE SECOND FLOOR FIXTURES; THIS PIPING IS LOCATED/DRAINS JUST BELOW THE SECOND FLOOR AND SHOULD BE EXPOSED DURING THIS SPECIFIED WORK OF THE FIRST FLOOR CEILINGS.

**DEMOLITION / NEW WORK NOTES:**

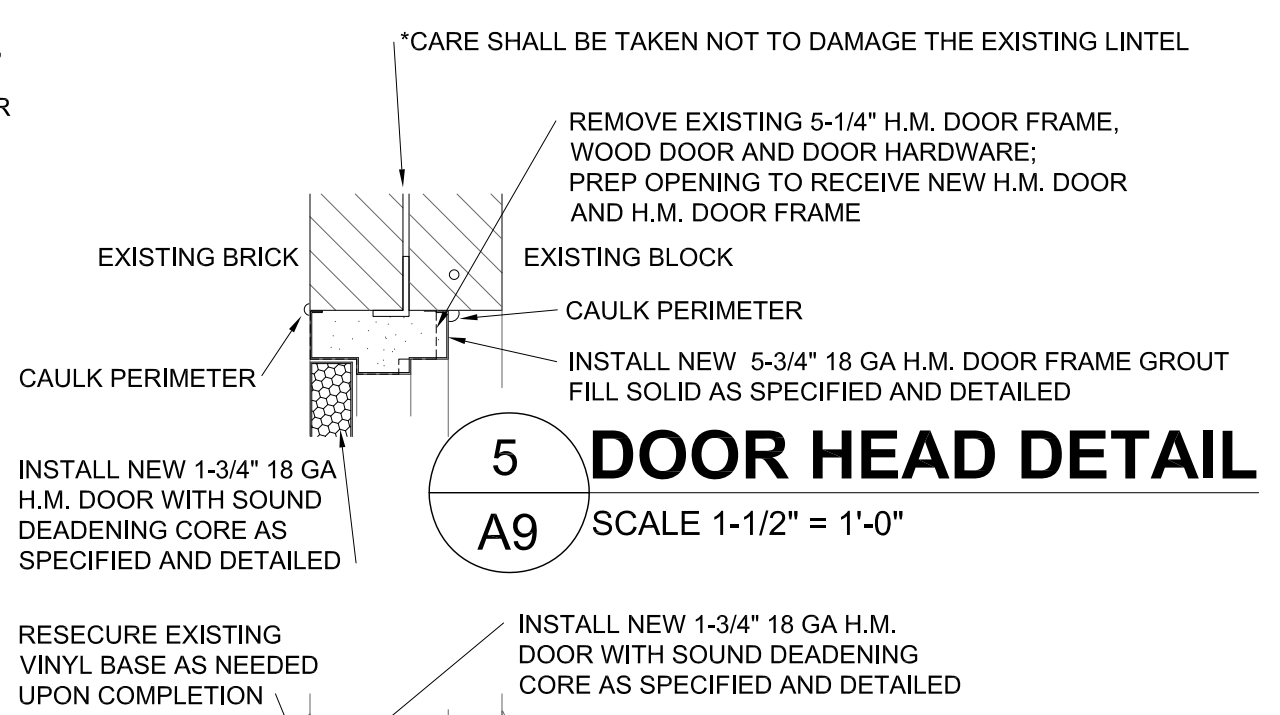
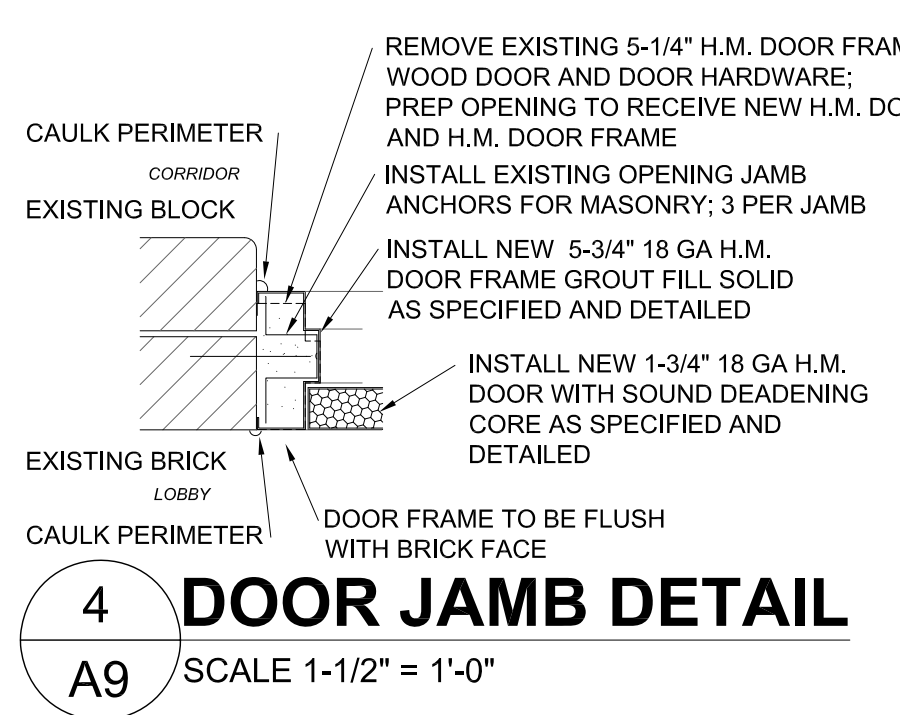
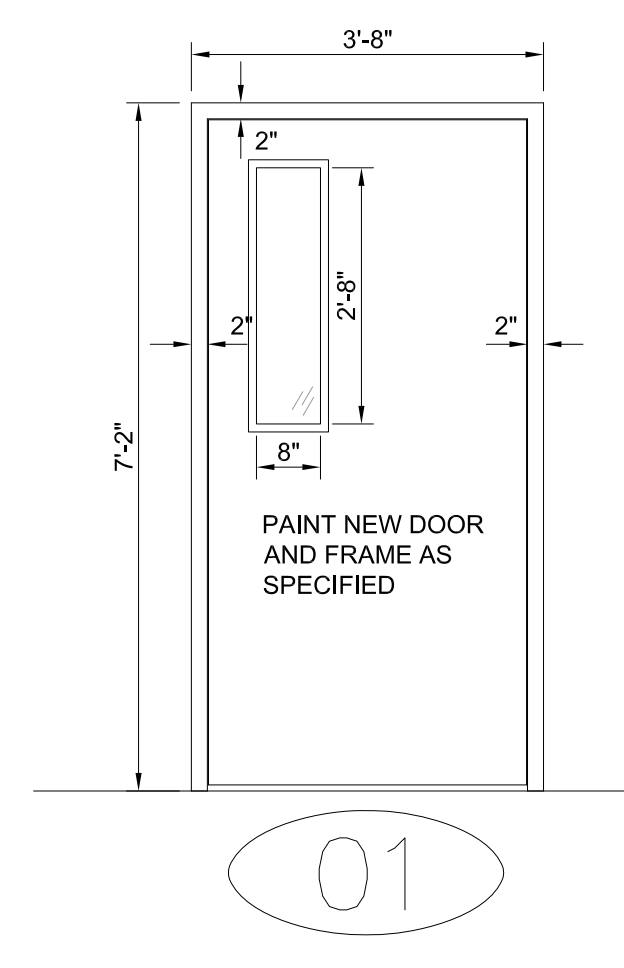
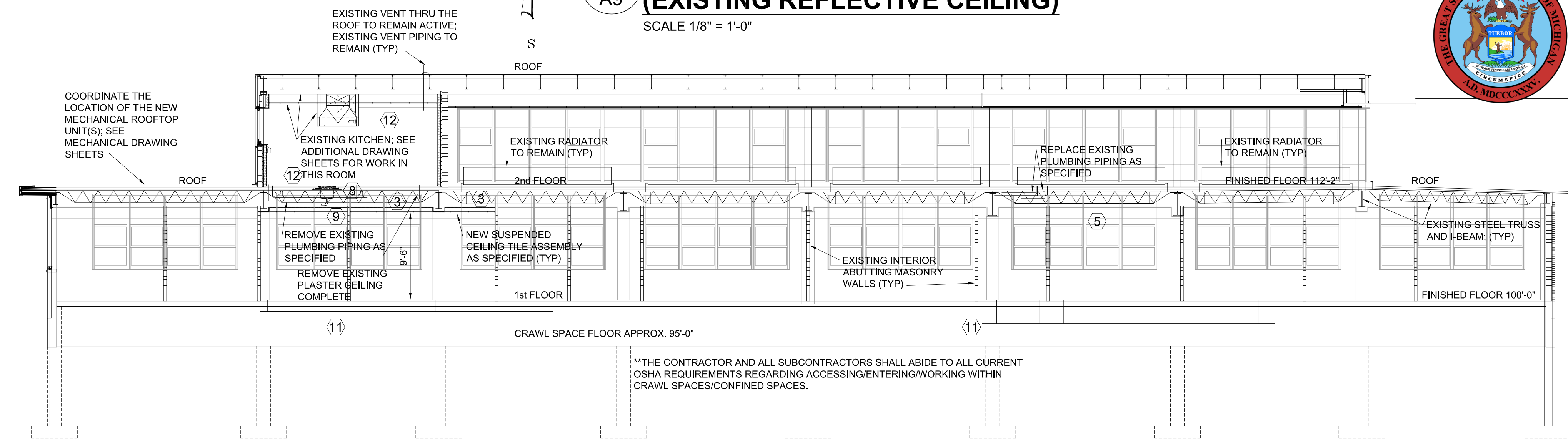
- EXISTING PLASTER CEILING TO BE COMPLETELY REMOVED; REMOVE ASSOCIATED LIGHT FIXTURES AND CEILING HVAC DIFFUSERS AND RETURN GRILLES; INSTALL NEW AS SPECIFIED. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING WALL FINISHES.  
 EXISTING LIGHTING CIRCUIT CAN BE UTILIZED FOR NEW LIGHT FIXTURES.
- 1 REMOVE EXISTING DOOR, FRAME AND EXISTING DOOR HARDWARE. PREP OPENING TO RECEIVE NEW DOOR, FRAME AND HARDWARE. TURN EXISTING DOOR HARDWARE OVER TO THE ARMY MAINTENANCE WORKER.
- 2 EXISTING ROOM'S CEILING TO REMAIN.
- 3 EXISTING RADIANT HEAT PIPING TO UNITS ON THE SECOND FLOOR. REMOVE ALL HORIZONTAL AND EXPOSE VERTICAL PIPING IN THE FIRST FLOOR CEILING AREAS AND THE VERTICAL PIPING GOING UP TO THE UNIT ON THE SECOND FLOOR; INSTALL ALL NEW PIPING AS SPECIFIED AND SECURE INTO PLACE. \*EXACT LOCATION OF PIPING WILL NOT BE DETERMINED UNTIL THE EXISTING FIRST FLOOR PLASTER CEILINGS ARE REMOVED. COORDINATE WITH MECHANICAL WORK.
- 4 APPROXIMATE LOCATION OF WHERE EXISTING RADIANT PIPING GOES UP TO THE UNIT ON THE SECOND FLOOR.
- 5 EXISTING PLUMBING PIPING TO THE FIXTURES ON THE SECOND FLOOR. REMOVE ALL HORIZONTAL AND EXPOSE VERTICAL PIPING IN THE FIRST FLOOR CEILING AREAS AND THE VERTICAL PIPING GOING UP TO THE FIXTURES ON THE SECOND FLOOR; INSTALL ALL NEW PIPING AS SPECIFIED AND SECURE INTO PLACE. \*EXACT LOCATION OF PIPING WILL NOT BE DETERMINED UNTIL THE EXISTING FIRST FLOOR PLASTER CEILINGS ARE REMOVED.
- 6 APPROXIMATE LOCATION OF WHERE EXISTING PLUMBING PIPING GOES UP TO THE FIXTURES ON THE SECOND FLOOR.
- 7 EXISTING CORRIDOR HAS AN EXISTING SUSPENDED CEILING ASSEMBLY AND LIGHTS THAT WILL NEED TO BE REMOVED TO ACCESS THE PLASTER CEILING TO BE REMOVED AND THE PIPING THAT IS SPECIFIED TO BE REMOVED AND REPLACED. CONTRACTOR HAS THE OPTION OF REINSTALLING THIS SUSPENDED CEILING TILE ASSEMBLY IF IT IS NOT DAMAGED FROM THE WORK. IF IT IS DAMAGED, THE CONTRACTOR SHALL REPLACE WITH NEW FOLLOWING THE SPECIFICATIONS AND MATCHING EXISTING ASSEMBLY. THE SUSPENDED CEILING TILE ASSEMBLY SHALL BE INSTALLED AT THE EXISTING HEIGHT.
- 8 LOCATION OF EXISTING SECOND FLOOR GREASE INTERCEPTOR/ FLOOR DRAIN TO BE REMOVED; SEE DRAWING SHEET A7a FOR DETAILS.
- 9 IF THE EXISTING NATURAL GAS PIPING SERVING THE GRIDDLES AND STOVES OF THIS ROOM IS EXPOSED WHEN THE FIRST FLOOR CEILING IS REMOVED, THE CONTRACTOR COORDINATE ITS MOVE (REMOVING SOME PIPING AND INSTALLING NEW AS REQUIRED FOR THE NEW MECHANICAL ROOM EQUIPMENT ON THE SECOND FLOOR. THIS MAY REQUIRE THE CONTRACTOR TO BORE A NEW HOLE THROUGH THE FLOOR FOR ITS NEW LOCATION. EPOXY GROUT FILL HOLE THROUGH FLOOR THAT MAY NOT BE NEEDED AFTER NEW WORK. SEE MECHANICAL DRAWINGS FOR NATURAL GAS PIPING WORK.
- 10 COORDINATE THE REMODEL OF THE EXISTING RESTROOM. SEE ADDITIONAL DRAWING SHEETS FOR DETAILS.
- 11 CONTRACTOR MAY BE REQUIRED TO ENTER THE CRAWL SPACE TO REMOVE OR CAP ANY PLUMBING PIPING FURNISHING THE FIRST FLOOR RESTROOM THAT IS SPECIFIED TO BE REMODELED INTO A LACTATION ROOM. SEE DETAILS. ANY PLUMBING PIPING SERVING OTHER AREAS OF THE BUILDING SHALL REMAIN ACTIVE.
- 12 THE CONTRACTOR SHALL REMOVE THE EXISTING PLUMBING FIXTURES AND KITCHEN EQUIPMENT FROM THIS ROOM. AT THE LOCATIONS OF THOSE FIXTURES REMOVED, CAP EXISTING WATER PIPING FLUSH WITH THE WALL AND/OR FLOOR. THE EXISTING PLUMBING UNDER THE FLOOR THAT BECOMES EXPOSED FROM THE REMOVAL OF THE FIRST FLOOR CEILING BEING REMOVED SHALL BE REMOVED BACK TO THE WALL OR FIRST FLOOR. PATCH THE HOLES IN THE FLOOR/CEILING WITH EPOXY GROUT FLUSH AND SMOOTH. ALL VENT PIPING SHALL REMAIN ACTIVE AND NOT REMOVED.
- 13 EXISTING INTERIOR OFFICE DOOR ASSEMBLY WITH WOOD DOOR, WOOD FRAMING, SIDELITES AND SINGLE GLASS PANES ABOVE; THE CONTRACTOR SHALL VERIFY EACH OPENING; CONTRACTOR SHALL REMOVE EXISTING GLASS IN UPPER GLASS UNITS AND INSTALL A 3/4" 2 SIDED MELAMINE WHITE PANEL AND PERIMETER COVE WOOD (PAINTED) TRIM TO SECURE INTO PLACE. NEW SUSPENDED CEILING WILL BUTT UP TO THESE ASSEMBLIES. \*CONTRACTOR SHALL VERIFY THE NUMBER AND SIZE OF PANELS NEEDED AT EACH LOCATION; SEE DETAILS.
- 14 EXISTING WINDOW SHADES AND/OR BLINDS; REMOVE AS NEEDED TO PREFORM WORK IN THIS ROOM. UPON COMPLETION REINSTALL - SHORTEN BLINDS/SHADE AS REQUIRED TO FIT OPENING WITH NEW SOFFIT AS SPECIFIED AND DETAILED. INSTALL ADDITIONAL BRACKETS TO MAKE SECURE; DO NOT SECURE TO WINDOW ASSEMBLY.
- 15 PROTECT EXISTING FLOORING DURING WORK IN THIS ROOM SO IT DOES NOT BECOME DAMAGED, AS IT IS TO REMAIN.



\*\*\*COORDINATE THE SPECIFIED WORK IN THIS AREA WITH OTHER DISCIPLINES; ELECTRICAL, MECHANICAL, PLUMBING, ETC.  
 \*\*\*THE EXISTING DUCT WORK AND GRILLES ARE NOT SHOWN HERE. COORDINATE WITH MECHANICAL DRAWING SHEET M3.



**BUILDING**  
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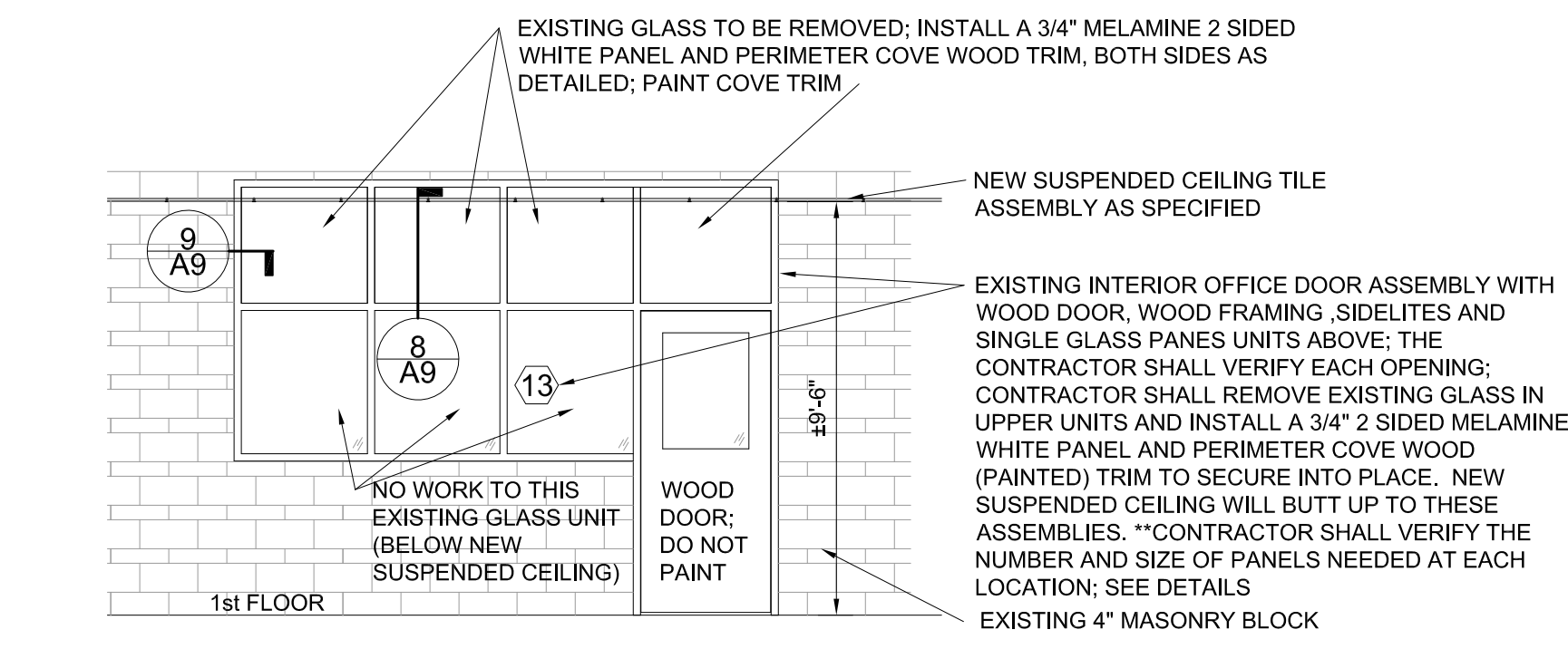


**2 PARTIAL BUILDING SECTION/ELEVATION**  
 A9 SCALE 1/8" = 1'-0"

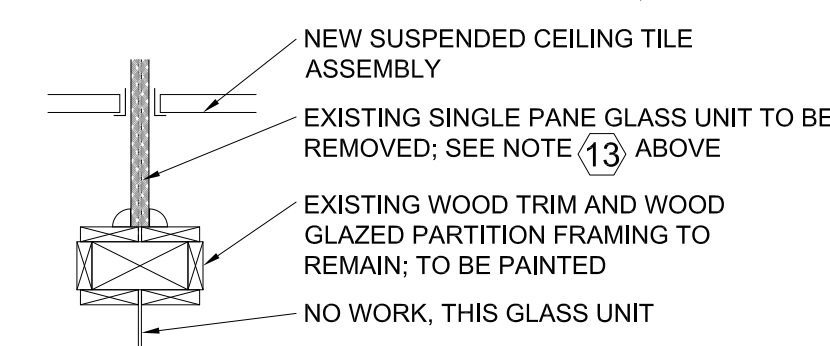
**5 DOOR HEAD DETAIL**  
 A9 SCALE 1-1/2" = 1'-0"

**4 DOOR JAMB DETAIL**  
 A9 SCALE 1-1/2" = 1'-0"

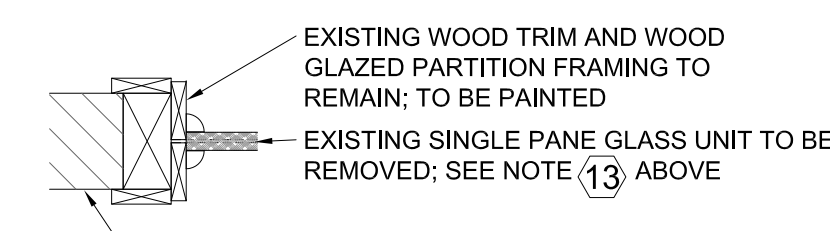
**6 DOOR THRESHOLD DETAIL**  
 A9 SCALE 1-1/2" = 1'-0"



**7 TYPICAL INTERIOR DOOR ASSEMBLY (BETWEEN OFFICES) ELEVATION**  
 A9 SCALE 1/4" = 1'-0"



**8 INTERIOR DOOR ASSEMBLY DETAIL**  
 A9 SCALE 1-1/2" = 1'-0"



**9 INTERIOR DOOR ASSEMBLY DETAIL**  
 A9 SCALE 1-1/2" = 1'-0"

AREA 7 WORK LOCATION

STATE OF MICHIGAN  
 DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET  
 FACILITIES AND BUSINESS SERVICES ADMINISTRATION  
**DESIGN AND CONSTRUCTION DIVISION**  
 ADAM LACHT, P.E., DIRECTOR

**RENOVATE ARMY**  
 DEPARTMENT OF MILITARY AND VETERANS AFFAIRS  
 DETROIT LIGHT GUARD ARMY, DETROIT, MICHIGAN

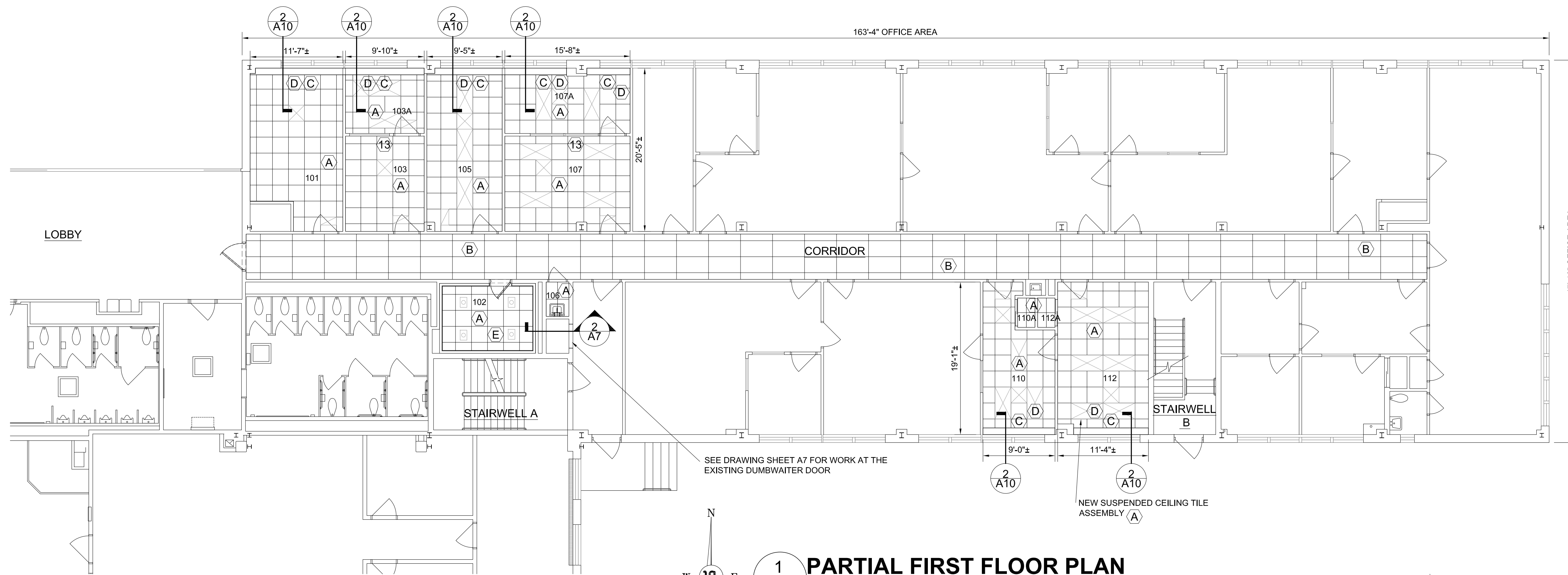
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DRAWN	3/24/23
CHECKED	3/24/23
APPROVED	3/24/23
ISSUED FOR	
PRELIMINARY	<input checked="" type="checkbox"/>
CONSTRUCTION	<input type="checkbox"/>
FINAL RECORD	<input type="checkbox"/>
IDENTIFICATION NO.	2808023010
PROJECT INDEX CODE	
SHEET	A9

**GENERAL NOTES:**

- FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.
- CARE SHALL BE TAKEN NOT TO REMOVE ANY PORTION OF THE PIPING FURNISHING ANY OF THE ROOF DRAINS.
- COORDINATE WORK IN THESE AREAS WITH ALL DISCIPLINES: PLUMBING, ELECTRICAL AND MECHANICAL, ETC.

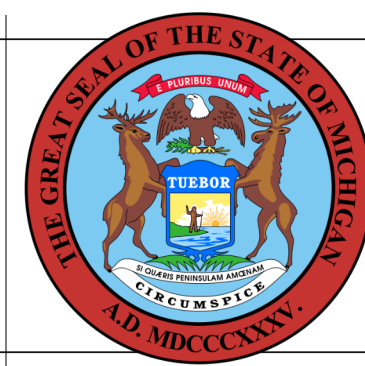
**NEW WORK NOTES:**

- (A)** INSTALL NEW SUSPENDED CEILING TILE ASSEMBLY AS SPECIFIED AND DETAILED.
- (B)** EXISTING CORRIDOR HAS AN EXISTING SUSPENDED CEILING ASSEMBLY AND LIGHTS THAT WILL NEED TO BE REMOVED TO ACCESS THE PLASTER CEILING TO BE REMOVED AND THE PIPING THAT IS SPECIFIED TO BE REMOVED AND REPLACED. CONTRACTOR HAS THE OPTION OF REINSTALLING THIS SUSPENDED CEILING TILE ASSEMBLY IF IT IS NOT DAMAGED FROM THE WORK. IF IT IS DAMAGED, THE CONTRACTOR SHALL REPLACE WITH NEW FOLLOWING THE SPECIFICATIONS AND MATCHING EXISTING ASSEMBLY. THE SUSPENDED CEILING TILE ASSEMBLY SHALL BE INSTALLED AT THE EXISTING HEIGHT. INSTALL ALL NECESSARY WIRE TIES, HANGERS, ETC., AS NEEDED TO SECURELY INSTALL CEILING TILE ASSEMBLY. REINSTALL ANY/LIGHT FIXTURES REMOVED DURING THIS WORK.
- (C)** AT EACH EXTERIOR WINDOW, THE CONTRACTOR SHALL CONSTRUCT A BULKHEAD/SOFFIT; SEE DETAILS. THE CONTRACTOR SHALL INSTALL THE NEW BULKHEAD ACROSS THE ENTIRE ROOM AT THE EXTERIOR WALL.
- (D)** EXISTING WINDOW SHADES AND/OR BLINDS; REMOVE AS NEEDED TO PREFORM WORK IN THIS ROOM. UPON COMPLETION REINSTALL - SHORTEN BLIND/SHADE AS REQUIRED TO FIT OPENING WITH NEW SOFFIT AS SPECIFIED AND DETAILED. INSTALL ADDITIONAL BRACKETS TO MAKE SECURE; DO NOT SECURE TO WINDOW ASSEMBLY.
- (E)** SEE ADDITIONAL PROJECT DRAWING SHEETS FOR WORK IN THIS ROOM.



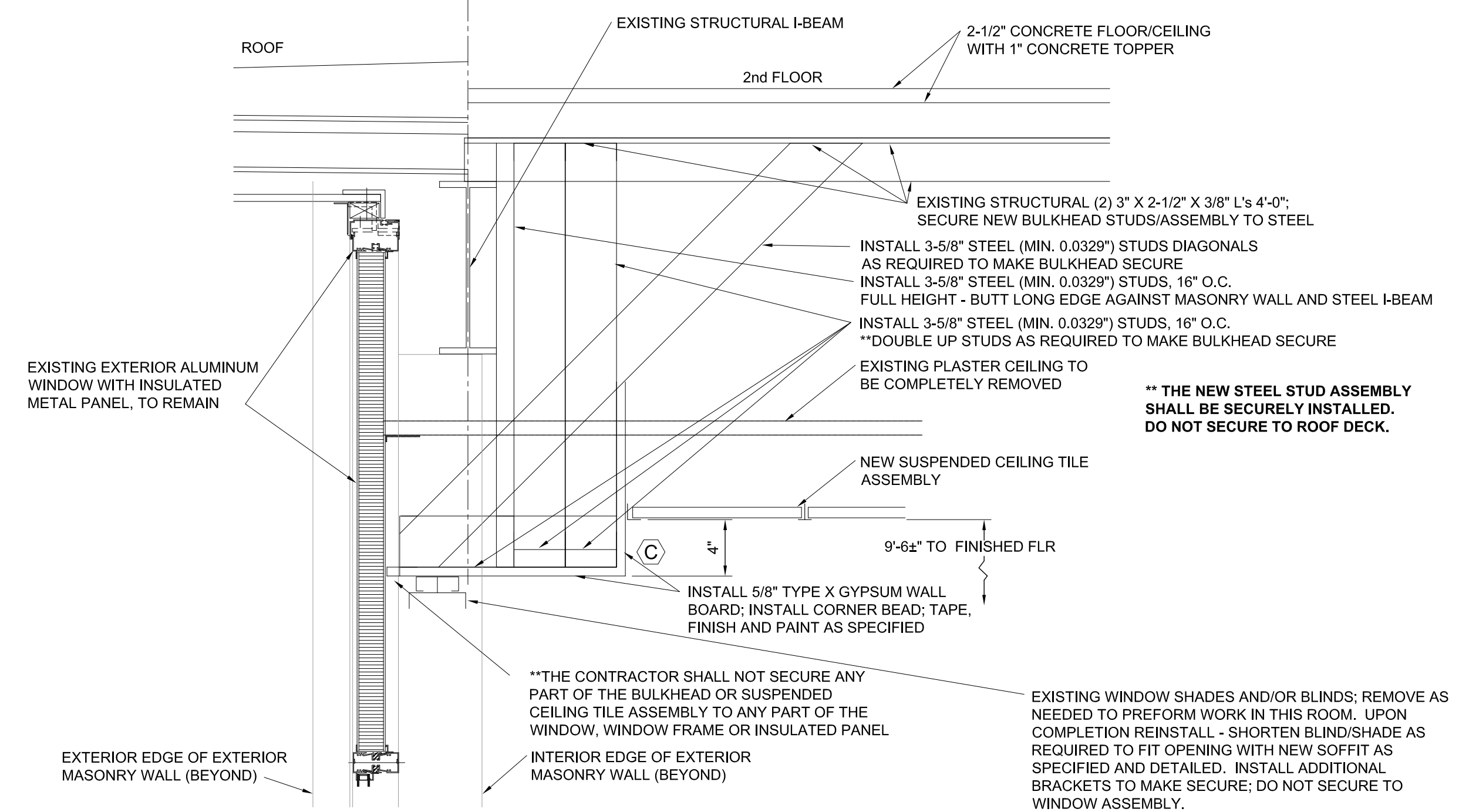
ROOM FINISH SCHEDULE		FLOOR	CEILING	WALLS	REMARKS
101	OFFICE	•	•	•	1. 5.
102	LACATION ROOM	•	•	•	1. 5.
103	OFFICE	•	•	•	1. 5.
103A	OFFICE	•	•	•	1. 5.
105	OFFICE	•	•	•	1. 5.
107A	OFFICE	•	•	•	1. 5.
110	OFFICE	•	•	•	1. 5.
110A	CLOSET	•	•	•	1. 5.
112	OFFICE	•	•	•	1. 5.
112A	CLOSET	•	•	•	1. 5.
	CORRIDOR	•	•	•	1. 5.
	STAIRWELL A	•	•	•	2.
	STAIRWELL B	•	•	•	2.
106	JANITOR CLOSET	•	•	•	1. 2. 3. 4. 5. 6. 7.

- REMARKS:**
- NEW SUSPENDED CEILING TILE HEIGHT SHALL BE 9'-6" UNLESS OTHERWISE NOTED; INSTALL THE NECESSARY TRIM & RUNNERS ALONG PERIMETER WALLS. \*CEILING HEIGHT MAY NEED TO BE LOWERED AS NEEDED AND COORDINATED AND AGREED UPON WITH DMVA PROJECT INSPECTOR/PROJECT MANAGER AS THE EXISTING METAL DUCT RUN HEIGHTS MAY REQUIRE CEILING TO BE INSTALLED AT A LOWER HEIGHT.
  - IF STAIRWELL STEPS AND LANDINGS HAVE A TERRAZZO FLOORING; DO NOT DISTURB/PAINT. PAINT WALLS, CEILING AND EXPOSED STEEL STAIR STRINGERS INCLUDING STEEL RAILINGS.
  - PLASTER CEILING REPAIR; TEXTURE SHALL MATCH & BLEND INTO EXISTING.
  - ROOM SIGNAGE; SEE DETAILS.
  - ALTER WINDOW BLINDS/SHADES AS SPECIFIED.



**BUILDING**

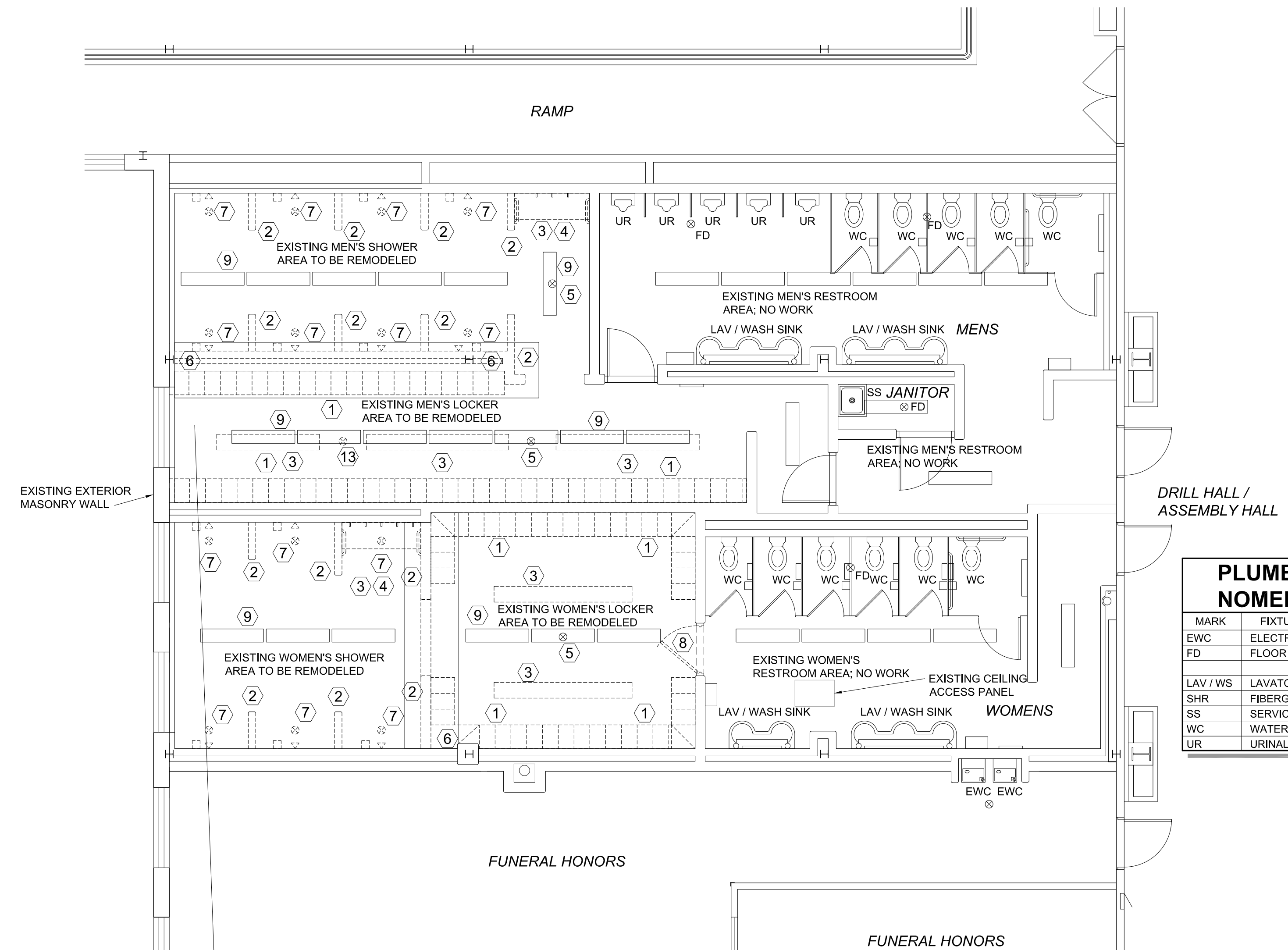
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2 NEW BULKHEAD DETAIL SCALE 1-1/2" = 1'-0"

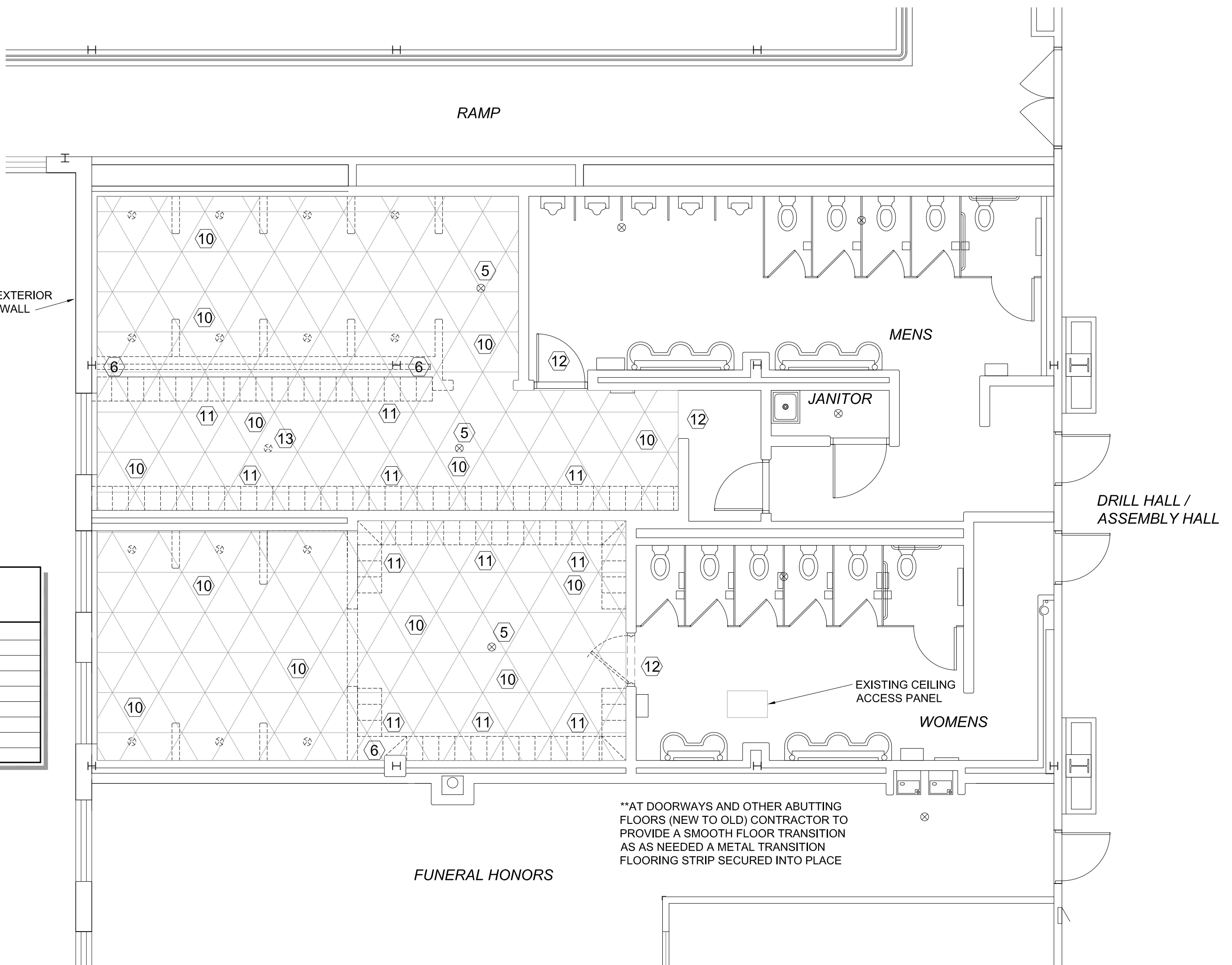
DESIGNED	DATE	ISSUED FOR	IDENTIFICATION NO.
DRAWN	AUG 2021	PRELIMINARY	2808023010
CHECKED	MAY 2023	CONSTRUCTION	
APPROVED		FINAL RECORD	





**1 PARTIAL EXISTING FIRST FLOOR PLAN - DEMOLITION PLAN, GENERAL**  
SCALE 3/16" = 1'-0"

**GENERAL NOTES:**  
• FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.  
COORDINATE WORK IN THIS AREA WITH ALL DISCIPLINES: PLUMBING, ELECTRICAL, MECHANICAL, ETC.  
THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.

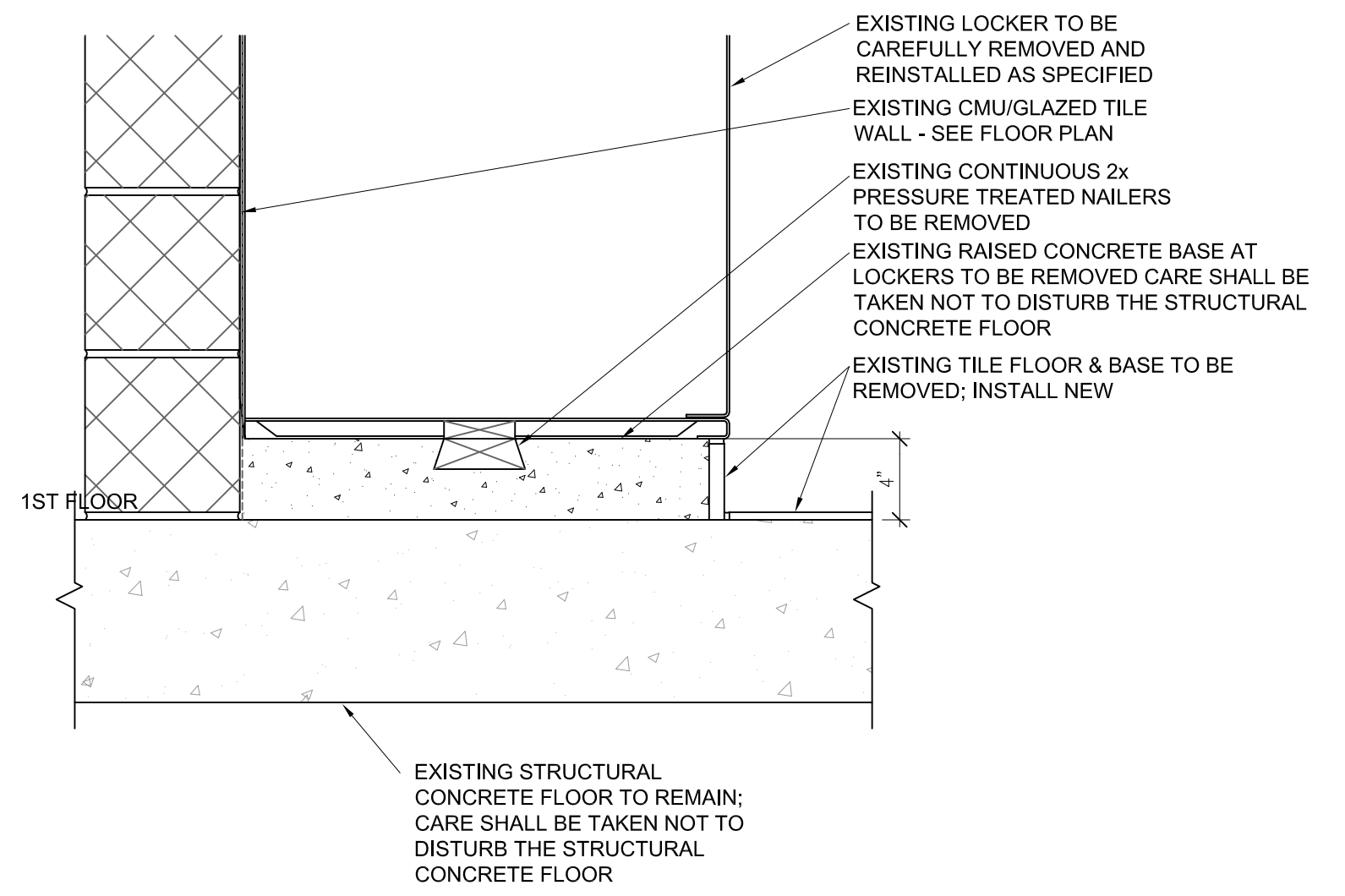


**2 PARTIAL EXISTING FIRST FLOOR PLAN - DEMOLITION PLAN OF EXISTING FLOOR**  
SCALE 3/16" = 1'-0"

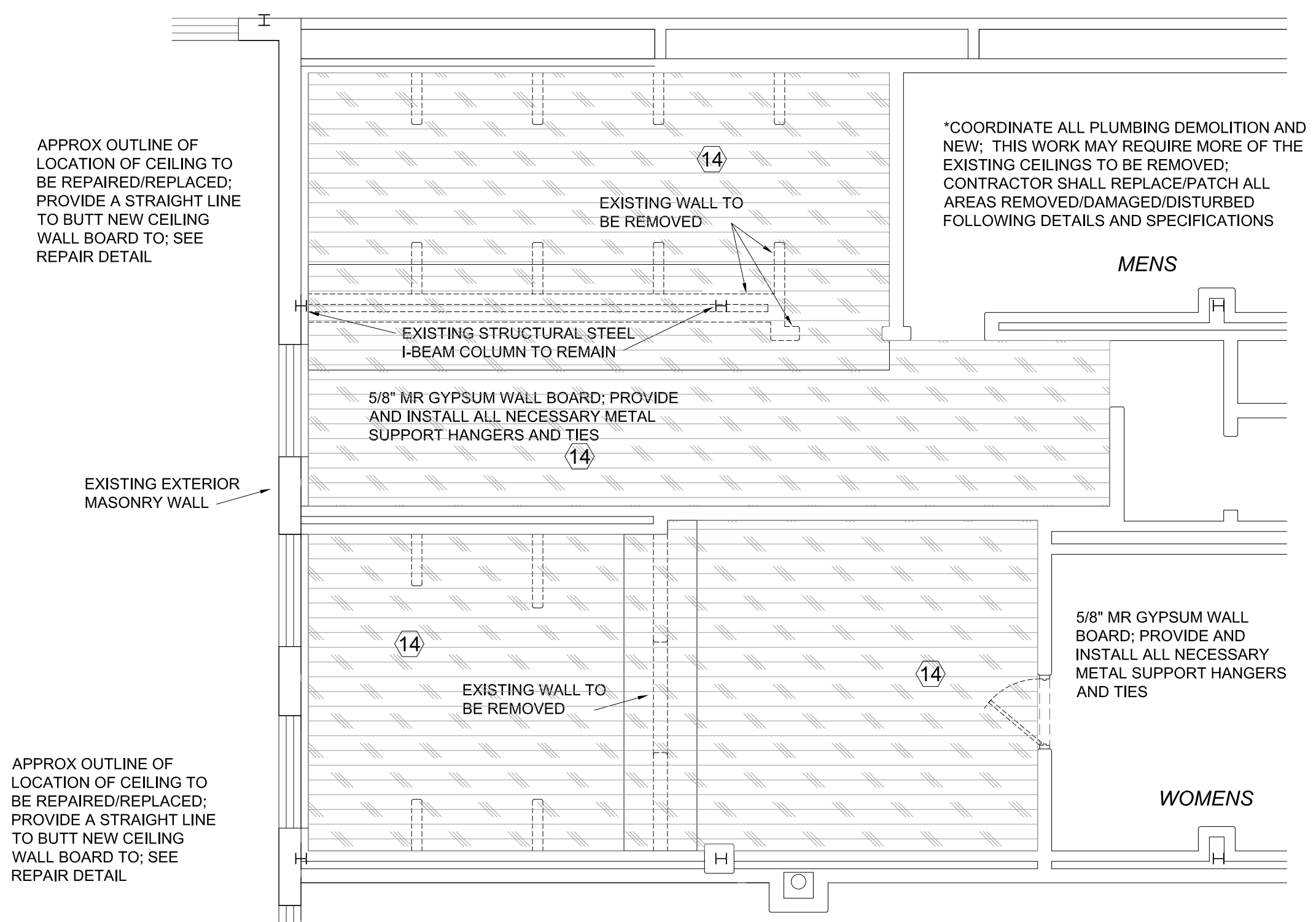
**DEMOLITION NOTES:**

- CONTRACTOR SHALL REMOVE ALL LOCKERS AS REQUIRED TO COMPLETE WORK; CARE SHALL BE TAKEN NOT TO DAMAGE LOCKERS AS THEY WILL BE SALVAGED AND REINSTALLED AS SPECIFIED.
- REMOVE EXISTING MASONRY WALL AND GLAZED TILE WALL. CARE SHALL BE TAKEN AT THE ABUTTING WALLS TO REMAIN, NOT TO DAMAGE THE GLAZED TILE.
- REMOVE EXISTING BENCH; SALVAGE FOR REINSTALLATION.
- REMOVE EXISTING ROBE HOOKS AND GRAB HANDLE ASSEMBLIES COMPLETE.
- EXISTING FLOOR DRAIN TO BE REPLACED. COORDINATE WITH PLUMBING AND NEW FLOORING.
- EXISTING STRUCTURAL STEEL I-BEAM TO REMAIN.
- REMOVE EXISTING SHOWER HEAD, VALVE, FLOOR DRAIN AND PIPING TO BELOW CONCRETE FLOOR. TO INCLUDE EACH SOAP DISH IN EACH SHOWER STALL. AT EACH FLOOR DRAIN LOCATION, THE CONTRACTOR SHALL PATCH/FILL, FULL THICKNESS THE CONCRETE STRUCTURAL FLOOR.
- REMOVE EXISTING H.M. DOOR, FRAME AND HARDWARE. PREP OPENING TO RECEIVE NEW H.M. FRAME, DOOR AND HARDWARE. TURN SALVAGED DOOR AND ALL HARDWARE OVER TO BUILDING MAINTENANCE MECHANIC.
- EXISTING LIGHT FIXTURE; COORDINATE WITH NEW LIGHTING LAYOUT AND REUSE EXISTING CIRCUITRY AS SPECIFIED. SEE ELECTRICAL DRAWING SHEETS AND COORDINATE.
- REMOVE EXISTING CERAMIC TILE FLOOR IN HATCHED AREAS INCLUDING THE CONCRETE/MORTAR BASE DOWN TO THE EXISTING STRUCTURAL CONCRETE FLOOR. CARE SHALL BE TAKEN NOT TO DISTURB THE STRUCTURAL CONCRETE FLOOR.
- AFTER SPECIFIED LOCKERS ARE REMOVED, THE EXISTING 4" CONCRETE BASE SHALL BE REMOVED DOWN TO THE EXISTING STRUCTURAL CONCRETE FLOOR. CARE SHALL BE TAKEN NOT TO DISTURB THE STRUCTURAL CONCRETE FLOOR; SEE DETAIL 5/A11.
- EXISTING GLAZED TILE FLOORING TO REMAIN. CARE SHALL BE TAKEN NOT TO DISTURB TILE THAT IS TO REMAIN. SAWCUT AS NEEDED TO CREATE A STRAIGHT LINE ACROSS THE THRESHOLD OPENING. SALVAGE EXISTING MARBLE THRESHOLD FOR REINSTALL.
- EXISTING FLOOR DRAIN TO BE REMOVED. THE CONTRACTOR SHALL PATCH/FILL, FULL THICKNESS THE CONCRETE STRUCTURAL FLOOR.
- REMOVE EXISTING CEILING TO ACCESS EXISTING PLUMBING PIPING AND INSTALL NEW PLUMBING PIPING; ALSO TO ACCESS MECHANICAL AND ELECTRICAL; INSTALL NEW 5/8" MR GYPSUM WALL BOARD CEILING; PROVIDE AND INSTALL ALL NECESSARY SUPPORT/HANGING MATERIALS TO ENSURE CEILING IS SECURE; CEILING ELEVATION SHALL MATCH EXISTING; TAP FINISH AND PAINT AS SPECIFIED; COORDINATE ALL ELECTRICAL AND MECHANICALS

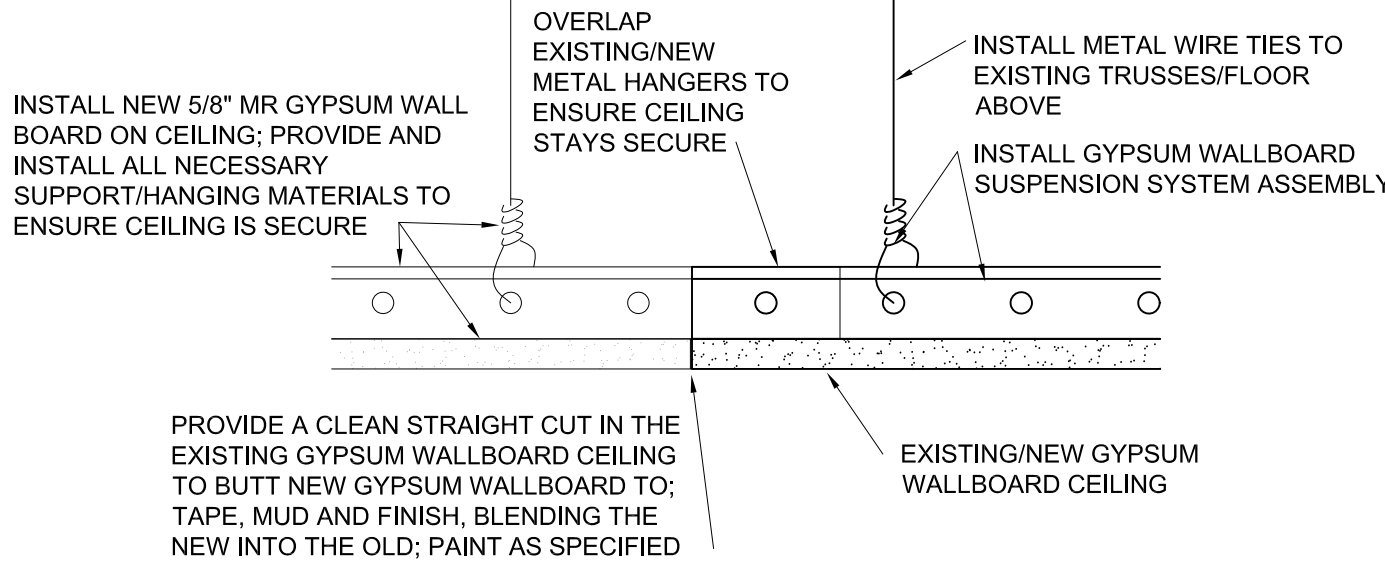
COORDINATE AND PROVIDE ACCESS DOORS WITHIN NEW INACCESSIBLE CEILING, SHAFT AND CHASE AREAS AND COMPONENTS WHICH REQUIRE SERVICE ACCESS.  
PROVIDE NEW VENTING THRU THE ROOF AS REQUIRED BY LOCAL AND STATE PLUMBING CODES. THERE IS CURRENTLY A SYSTEM ROOF WARRANTY. ALL WORK WITH THE NEW VENTING SHALL BE RECERTIFIED BY THE ROOFING WARRANTY COMPANY IN WRITING.  
CURRENT ROOF WARRANTY:  
FIRESTONE 60MIL EPDM.  
WARRANTY NUMBER: R0098509.  
FBPCO #: CH0414.  
20 YEAR 55MPH WARRANTY



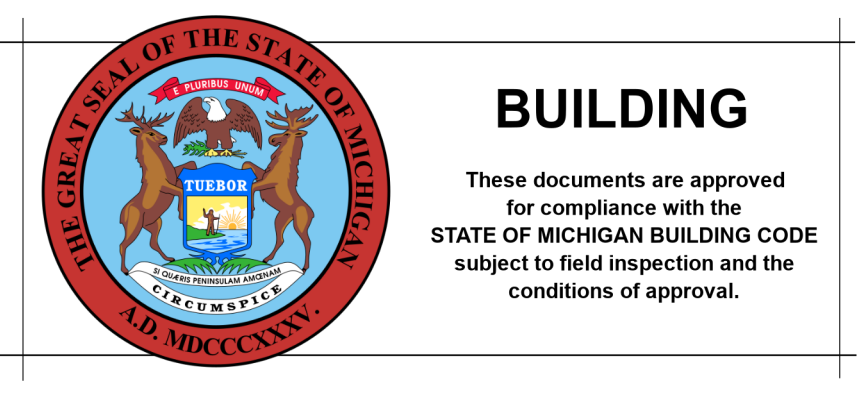
**5 EXISTING LOCKER BASE TO BE REMOVED**  
SCALE 1-1/2" = 1'-0"

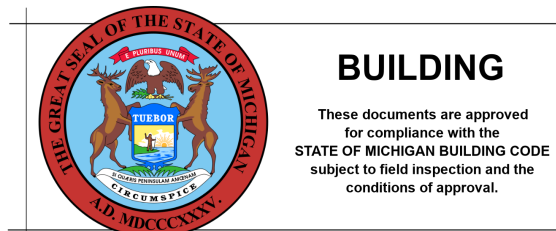
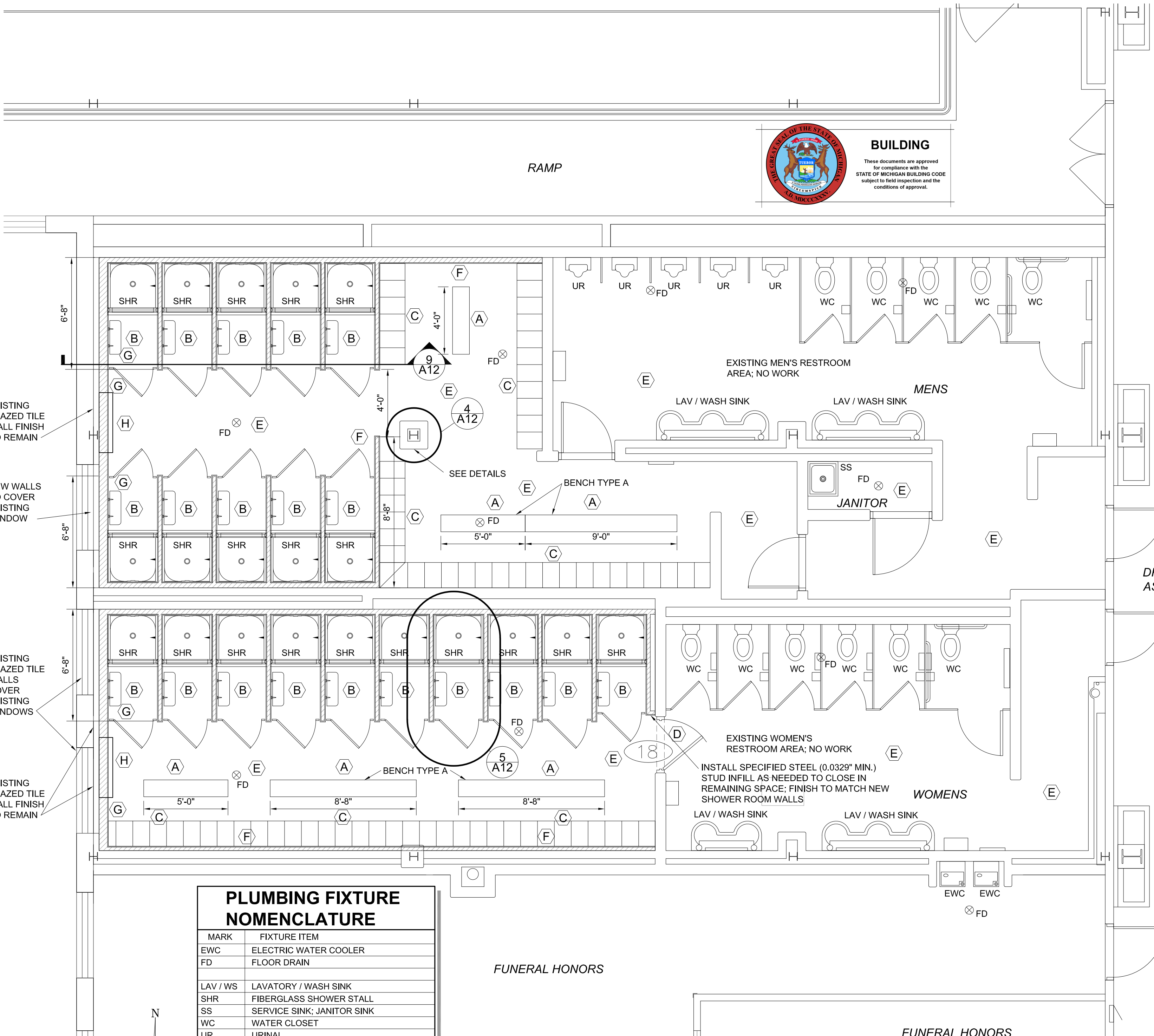


**3 PARTIAL EXISTING FIRST FLOOR PLAN - REFLECTED CEILING PLAN, REPAIR/REPLACE**  
SCALE 3/16" = 1'-0" (LIGHT FIXTURES ARE NOT SHOWN)



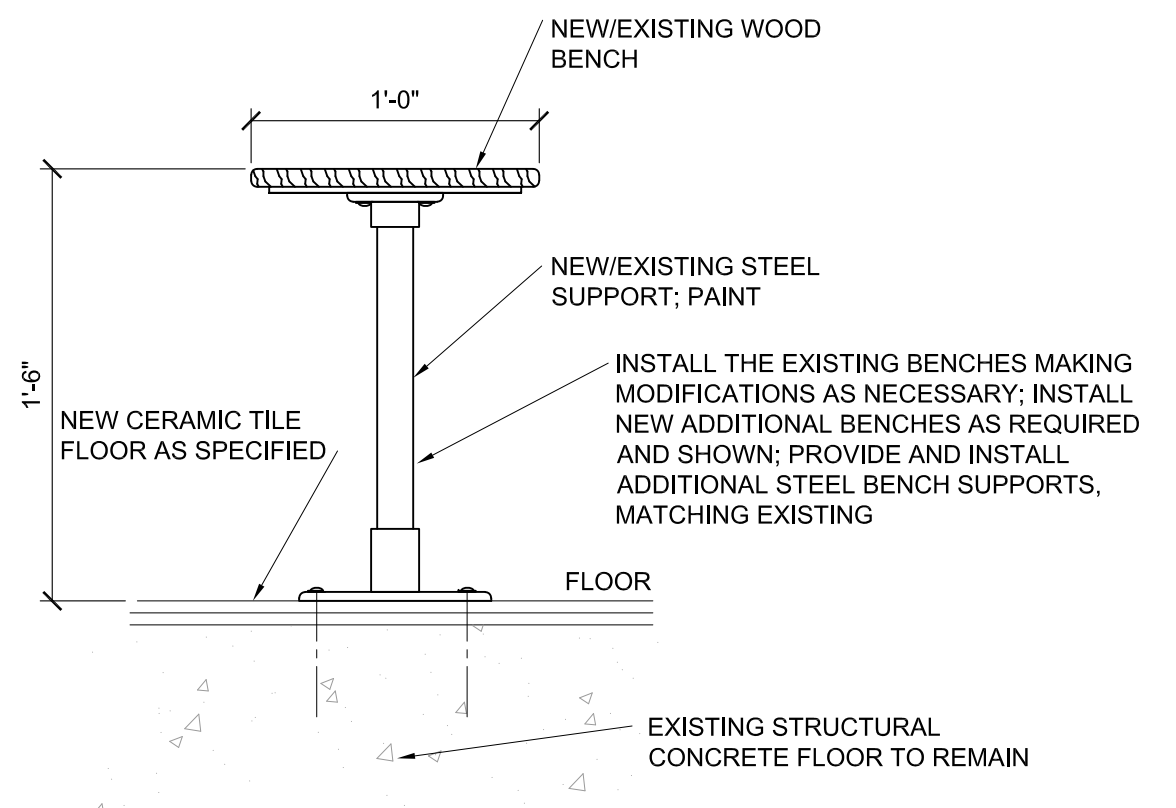
**4 CEILING REPAIR DETAIL**  
SCALE 3" = 1'-0"



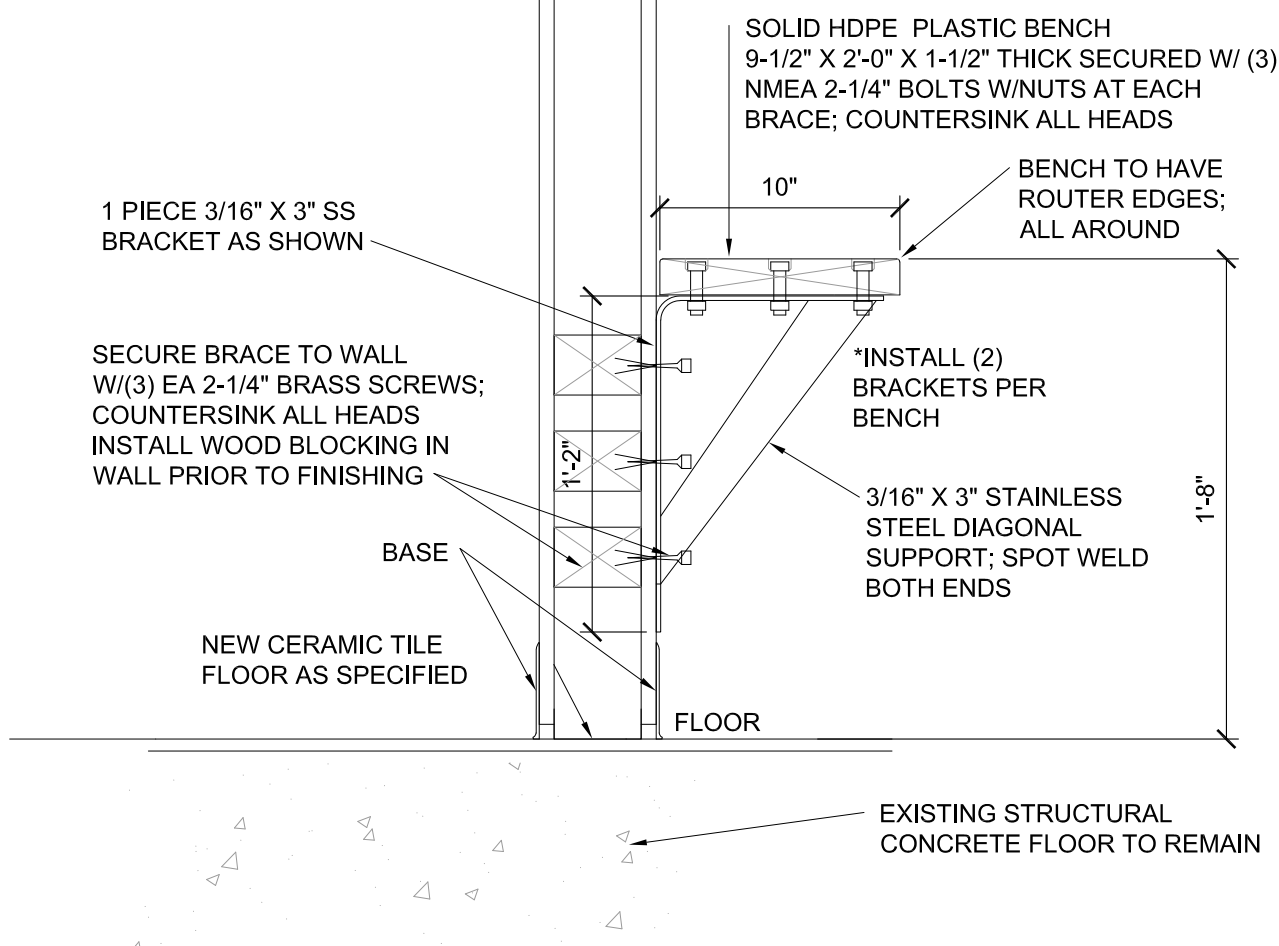


PLUMBING FIXTURE NOMENCLATURE	
MARK	FIXTURE ITEM
EWC	ELECTRIC WATER COOLER
FD	FLOOR DRAIN
LAV / WS	LAVATORY / WASH SINK
SHR	FIBERGLASS SHOWER STALL
SS	SERVICE SINK; JANITOR SINK
WC	WATER CLOSET
UR	URINAL

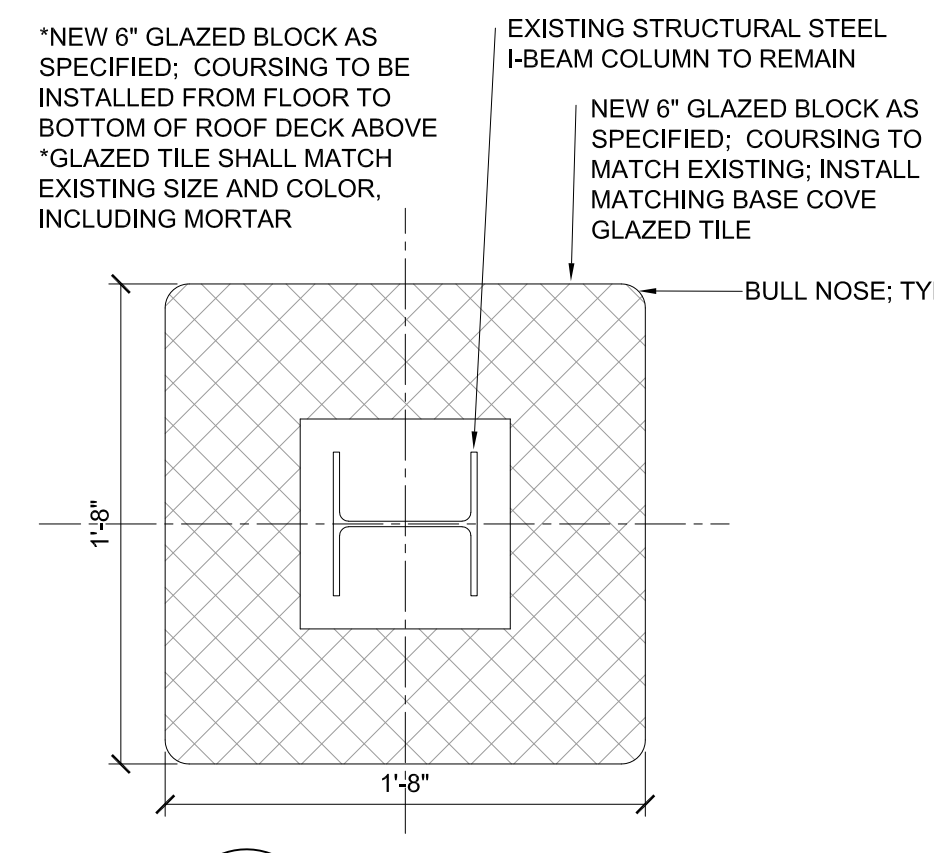
**1 PARTIAL NEW FIRST FLOOR PLAN**  
A12 SCALE 1/4" = 1'-0"



**2 BENCH DETAIL - TYPE A**  
A12 SCALE 1-1/2" = 1'-0"

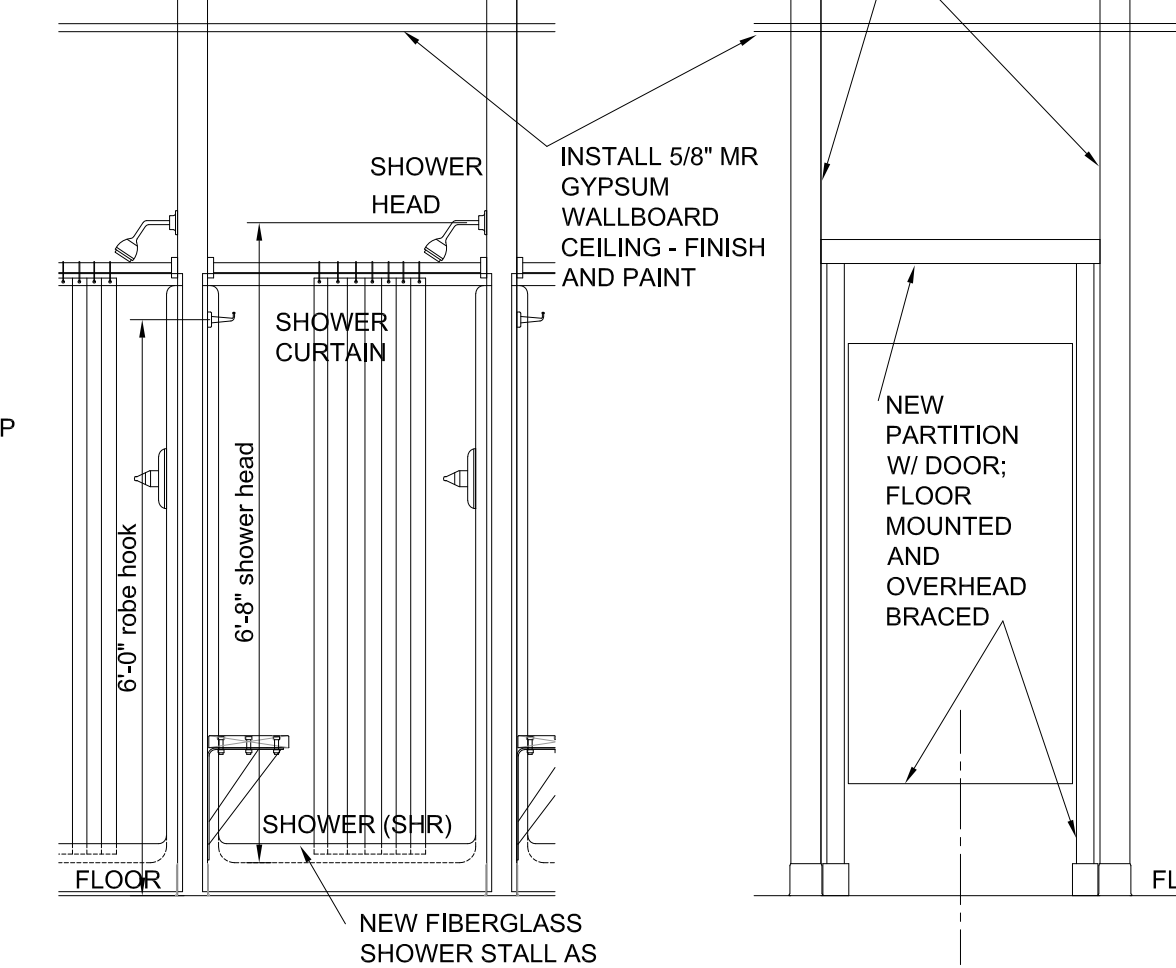


**3 BENCH DETAIL - TYPE B**  
A12 SCALE 1-1/2" = 1'-0"



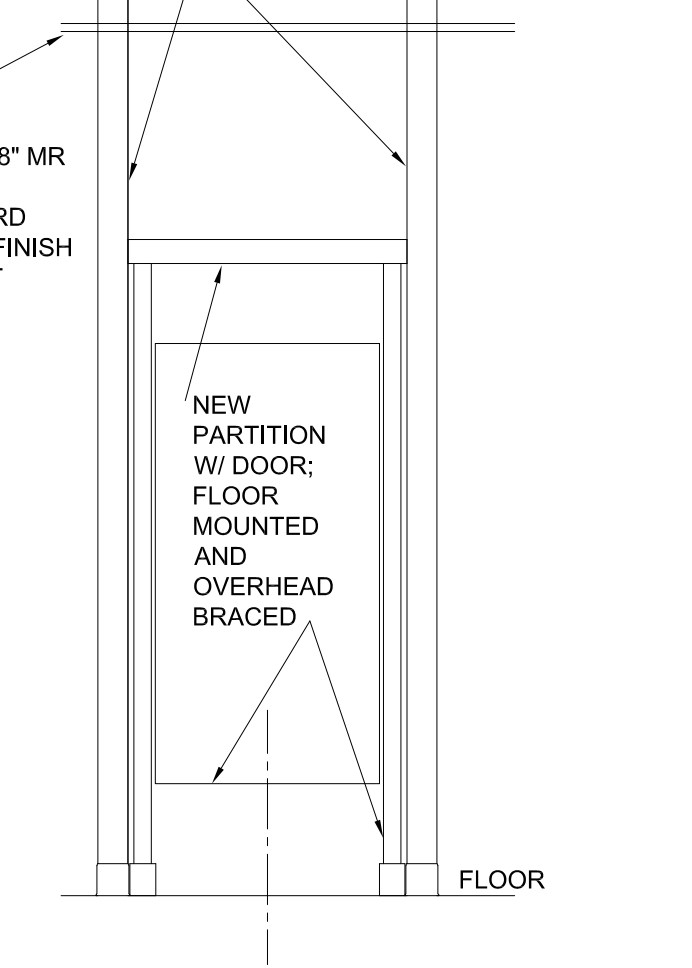
**4 DETAIL**  
A12 SCALE 1-1/2" = 1'-0"

**5 NEW SHOWER STALL - TYPICAL; PLAN VIEW**  
A12 SCALE 1/2" = 1'-0"

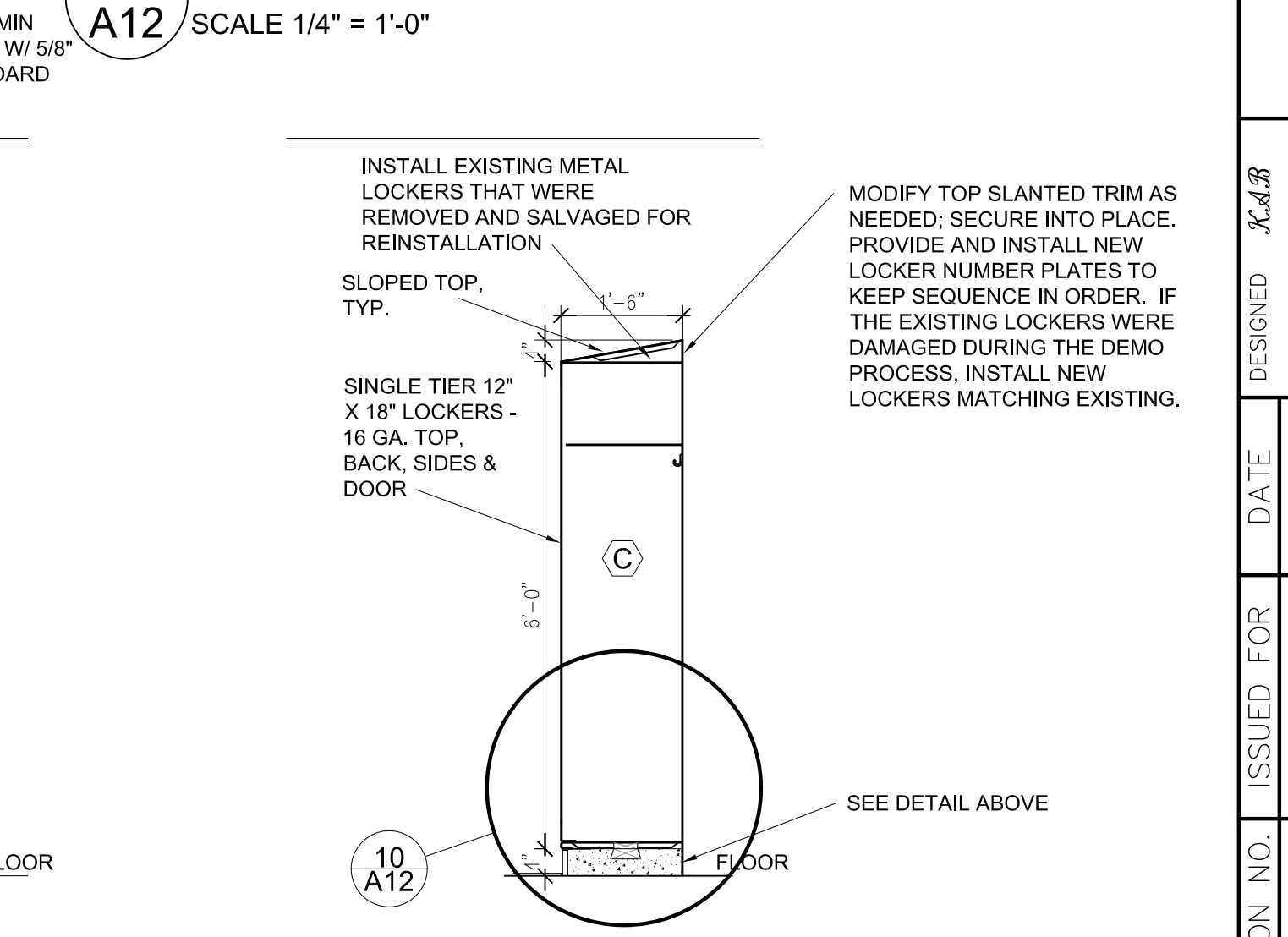


**6 NEW SHOWER STALL - TYPICAL; ELEVATION**  
A12 SCALE 1/2" = 1'-0"

**7 NEW SHOWER PARTITION - TYPICAL; ELEVATION**  
A12 SCALE 1/2" = 1'-0"



**9 PARTIAL ROOM SECTION/ELEVATION**  
A12 SCALE 1/4" = 1'-0"



**8 LOCKER DETAIL - TYPICAL**  
A12 SCALE 1/2" = 1'-0"

**NEW WORK NOTES:**

- A INSTALL THE EXISTING BENCHES (TYPE A) MAKING MODIFICATIONS AS NECESSARY; INSTALL NEW ADDITIONAL BENCHES AS REQUIRED AND SHOWN; PROVIDE AND INSTALL ADDITIONAL STEEL BENCH SUPPORTS.
- B INSTALL NEW BENCH (TYPE B) AS DETAILED AND SPECIFIED.
- C INSTALL EXISTING LOCKERS AS SHOWN; MODIFY TOP SLANTED TRIM AS NEEDED; SECURE INTO PLACE. PROVIDE AND INSTALL NEW LOCKER NUMBER PLATES TO KEEP SEQUENCE IN ORDER. IF THE EXISTING LOCKERS WERE DAMAGED DURING THE DEMO PROCESS, INSTALL NEW LOCKERS MATCHING EXISTING. INSTALL NEW CONCRETE RAISED BASE AS DETAILED. UNUSED UNDAMAGED EXISTING LOCKERS TO BE TURNED OVER TO THE BUILDING OWNER.
- D INSTALL NEW H.M. DOOR, FRAME AND HARDWARE IN EXISTING OPENING.
- E UPON COMPLETION, ENTIRE RESTROOM CEILINGS, INCLUDING MASONRY WALLS, STEEL DOORS AND FRAMES SHALL BE PAINTED.
- F INSTALL NEW STEEL 2-1/2" ST20 (0.0329) STUDS, 16" O.C.; SECURE INTO PLACE; INSTALL BATT INSULATION FULL HEIGHT, FULL (FRICTION) FIT; INSTALL NEW 5/8" MR GYPSUM WALLBOARD FULL HEIGHT; FINISH AND PAINT (TYP)
- G ALONG ENTIRE EXTERIOR WALL; INSTALL NEW STEEL 6" ST20 (0.0329) STUDS, 16" O.C.; SECURE INTO PLACE; INSTALL BATT INSULATION FULL HEIGHT, FULL (FRICTION) FIT; INSTALL NEW 5/8" MR GYPSUM WALLBOARD FULL HEIGHT; FINISH AND PAINT (TYP)
- H INSTALL NEW RECESSED STEAM CABINET UNIT HEATERS CUH-1 & CUH-2 18" FROM CEILING PER MANUFACTURER'S RECOMMENDATIONS; COORDINATE WITH THE MECHANICAL DRAWINGS. INSTALL UNITS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. FRAME IN NEW STUD WALL ACCORDINGLY.

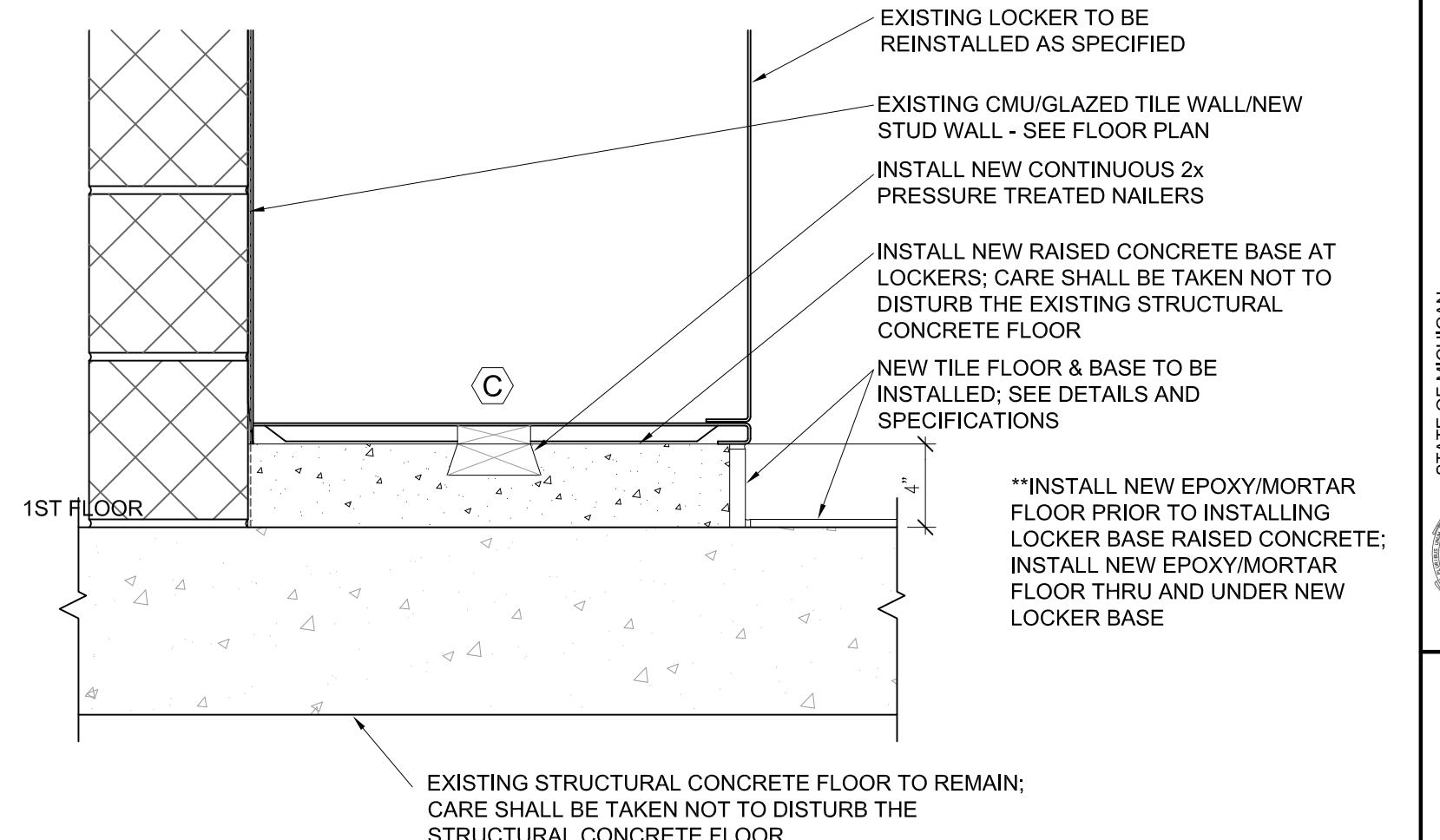
PATCH EXISTING CEILINGS IN ALL DISTURBED AREAS, BLEND IN AND MAKE SMOOTH MATCHING ADJACENT CEILING SURFACES. PAINT ENTIRE CEILING AS SPECIFIED.

EXISTING LIGHT FIXTURE: COORDINATE WITH NEW LIGHTING LAYOUT AND REUSE EXISTING CIRCUITRY.

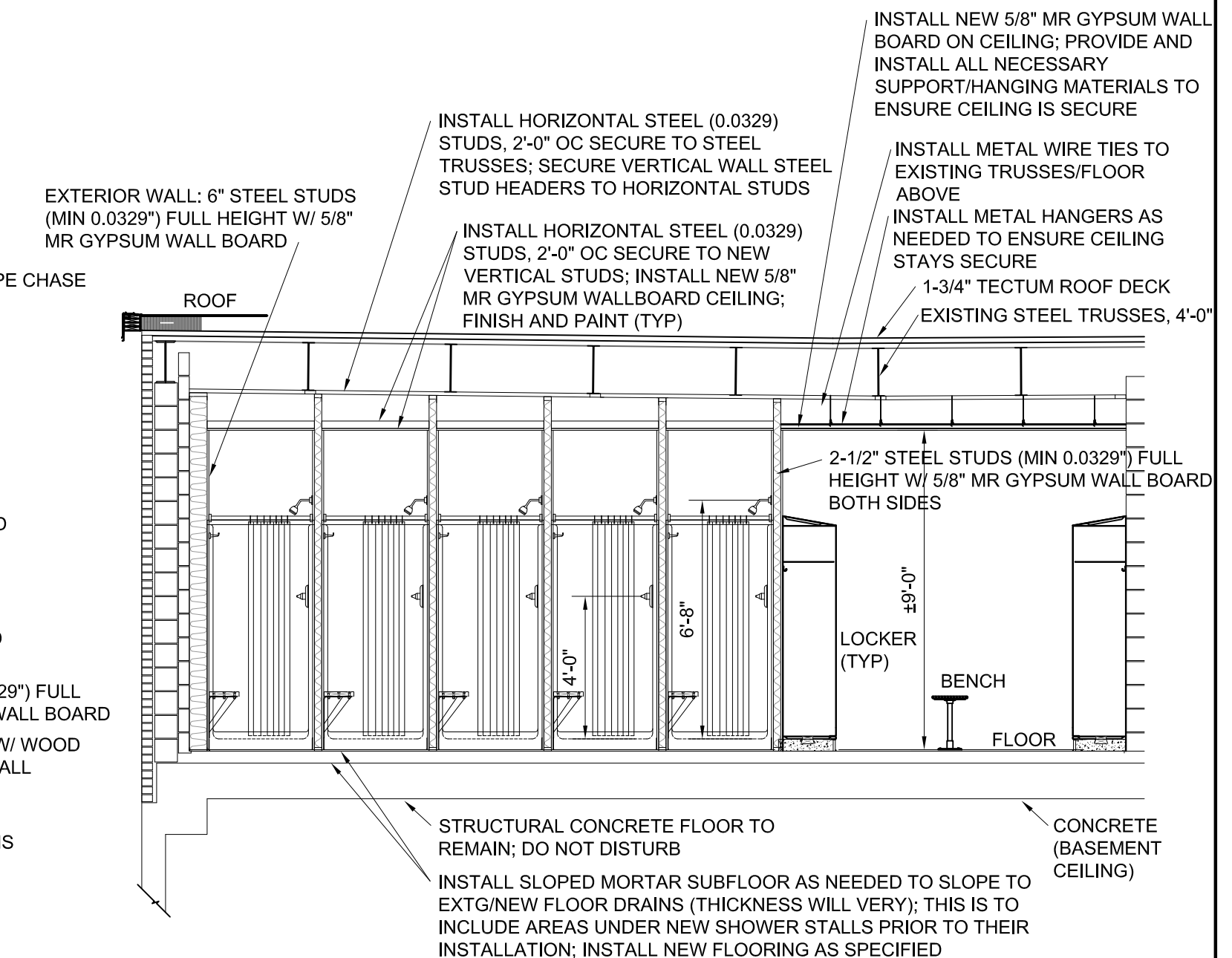
IN AREAS OF WORK AT EXISTING/NEW SHOWERS, PATCH FLOOR AS NEEDED WITH LEVELING COMPOUND/GROUT TO ENSURE NEW SHOWER STALLS ARE INSTALLED LEVEL.

**GENERAL NOTES:**

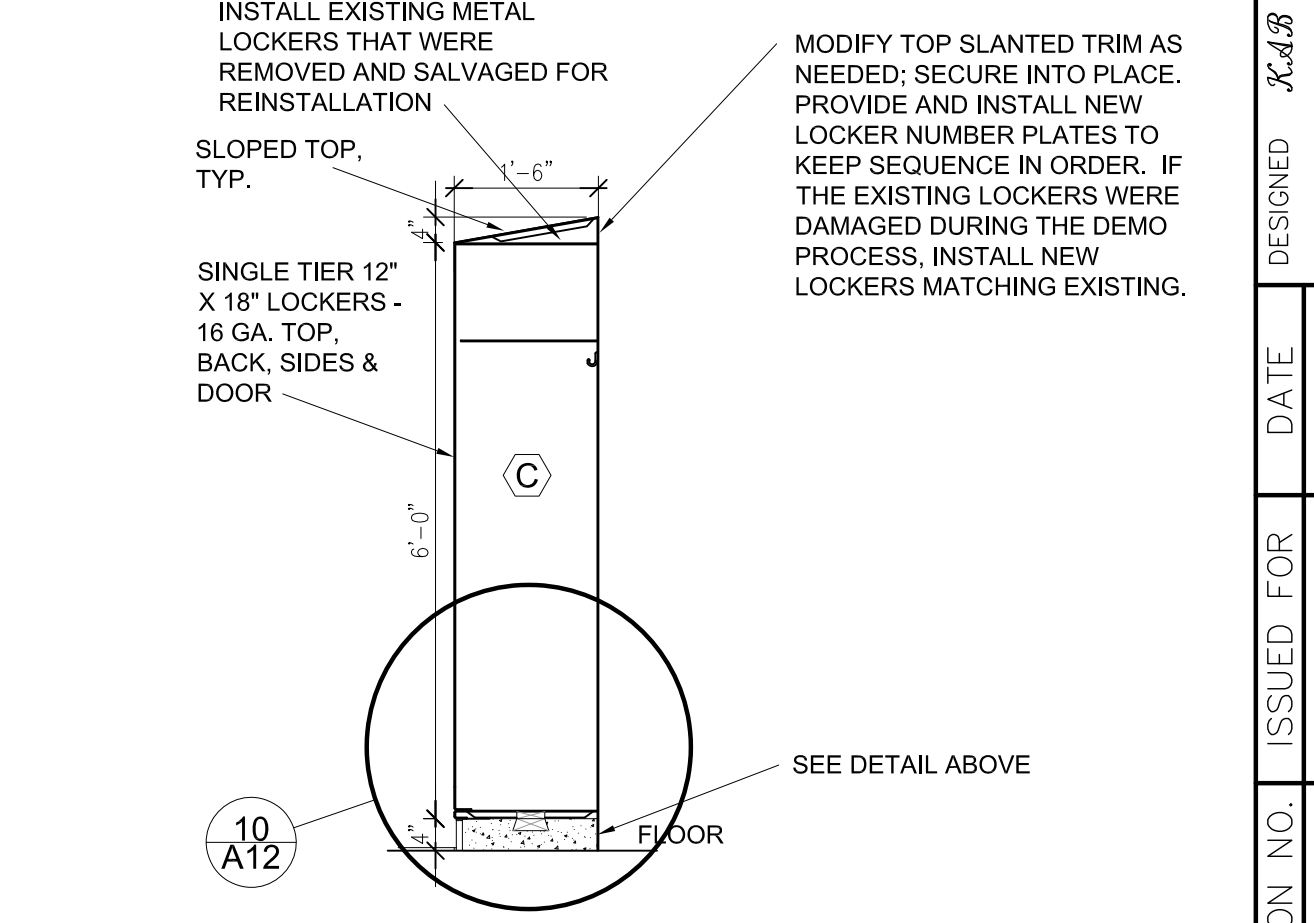
- FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.
- COORDINATE WORK IN THIS AREA WITH ALL DISCIPLINES; PLUMBING, ELECTRICAL, MECHANICAL, ETC.
- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.



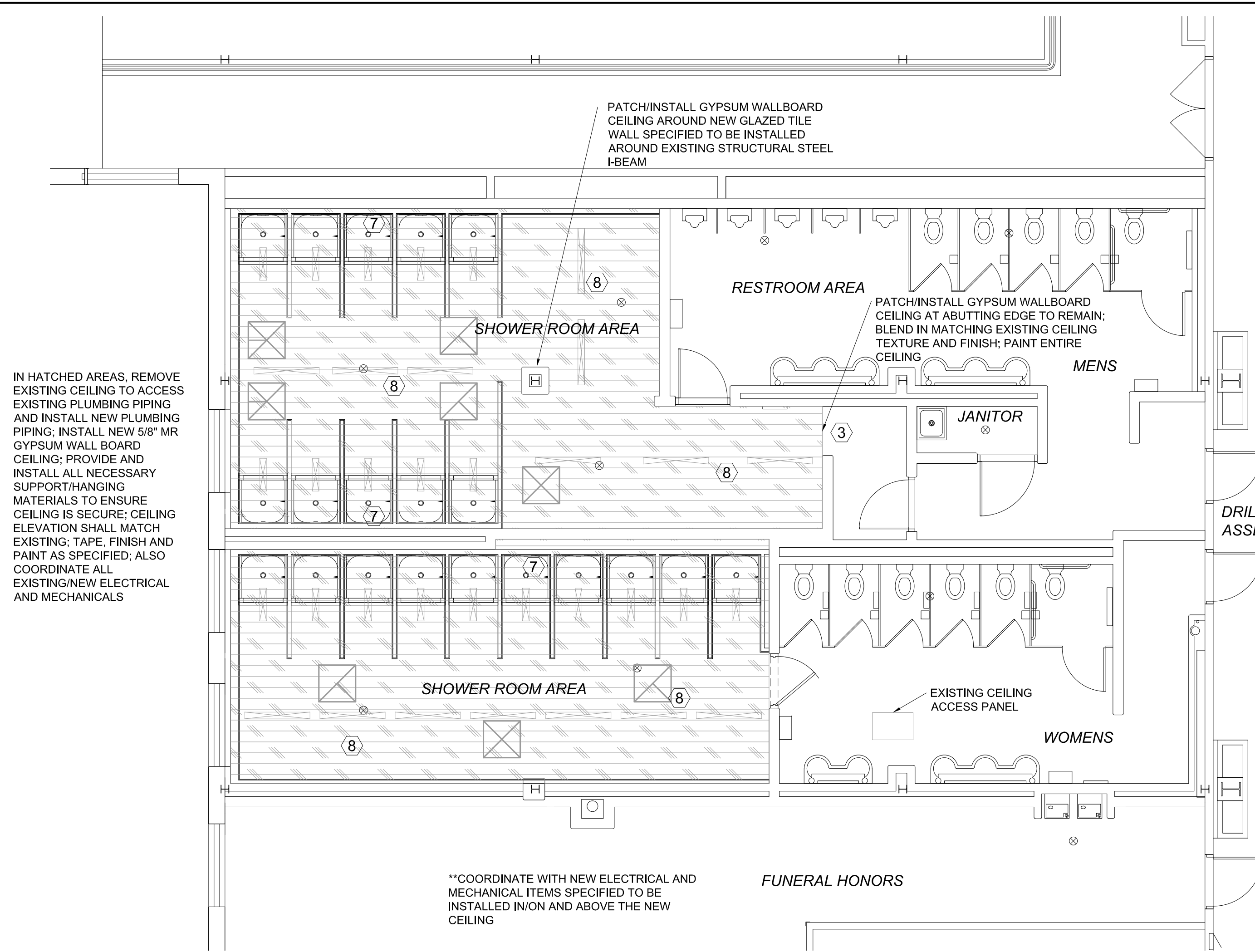
**10 NEW LOCKER BASE**  
A12 SCALE 1-1/2" = 1'-0"



**9 PARTIAL ROOM SECTION/ELEVATION**  
A12 SCALE 1/4" = 1'-0"



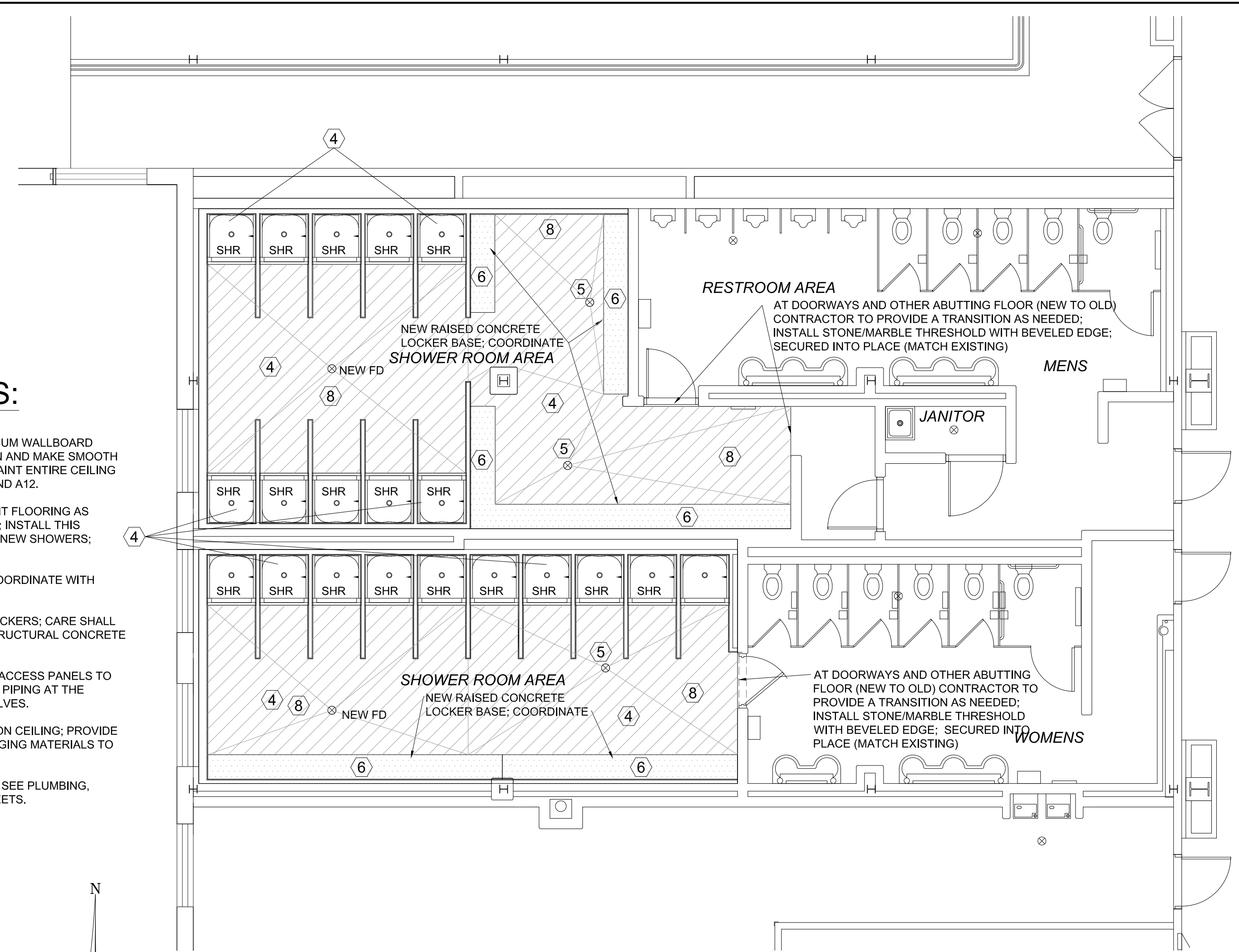
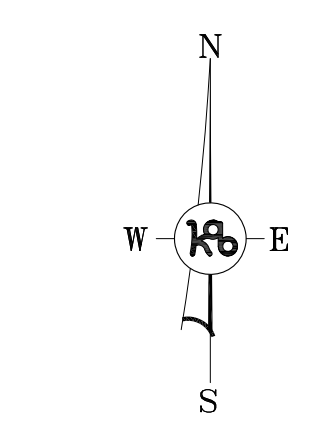
**8 LOCKER DETAIL - TYPICAL**  
A12 SCALE 1/2" = 1'-0"



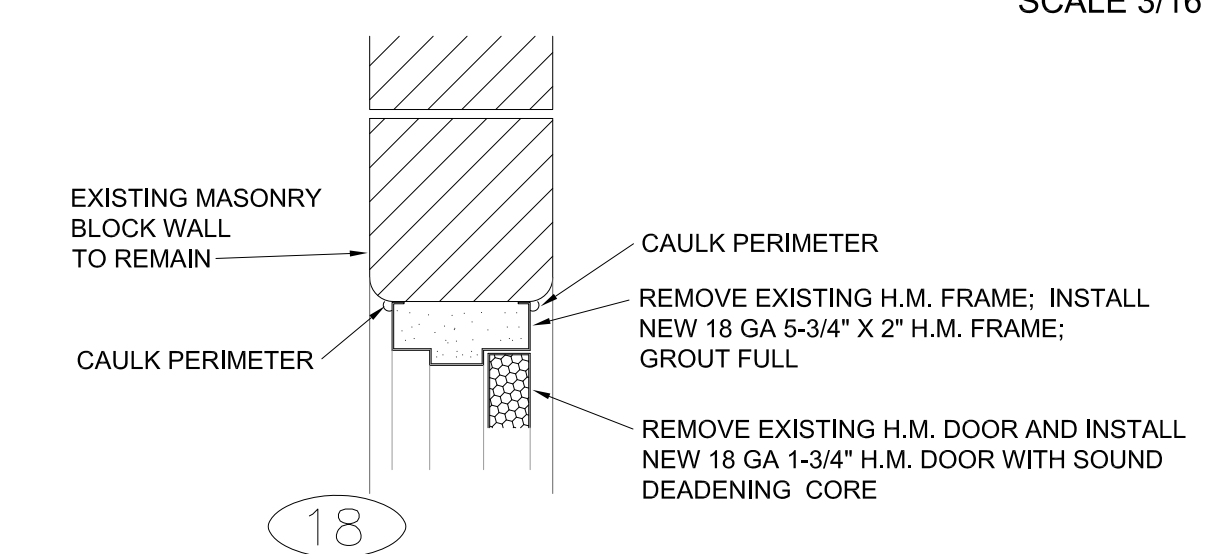
**1 PARTIAL FIRST FLOOR PLAN - NEW CEILING (PATCH/REPLACE W/NEW) AREAS**  
 A12a SCALE 3/16" = 1'-0"

**NEW WORK NOTES:**

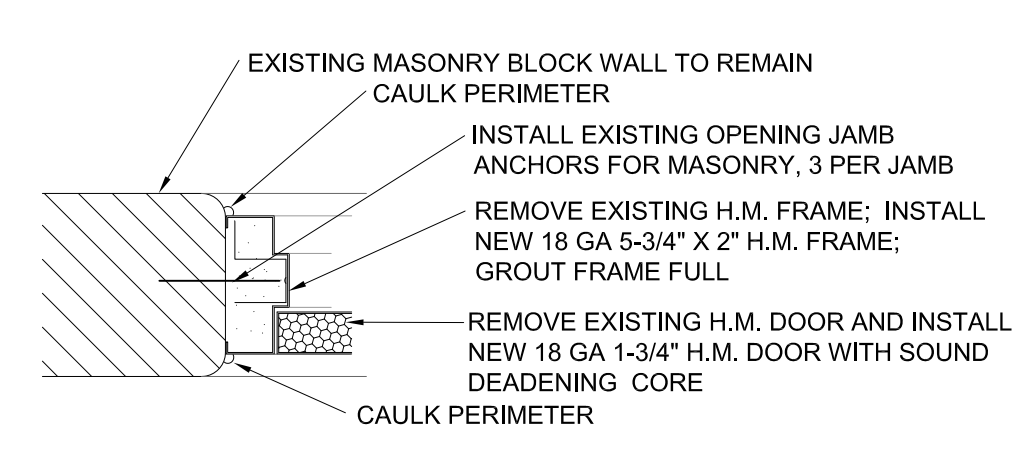
- 3 REMOVE/REPLACE/PATCH EXISTING MR GYPSUM WALLBOARD CEILING IN ALL DISTURBED AREAS. BLEND IN AND MAKE SMOOTH MATCHING ADJACENT CEILING SURFACES. PAINT ENTIRE CEILING AS SPECIFIED. SEE DETAILS ON SHEET A11 AND A12.
  - 4 INSTALL NEW CEMENT/EPOXY UNDERLAYMENT FLOORING AS NEEDED TO SLOPE FLOOR TO FLOOR DRAINS; INSTALL THIS CEMENT/EPOXY UNDERLAYMENT UNDER ALL NEW SHOWERS; PRIOR TO SHOWERS BEING SET INTO PLACE.
  - 5 EXISTING FLOOR DRAIN TO BE REPLACED. COORDINATE WITH PLUMBING AND NEW FLOORING.
  - 6 INSTALL NEW RAISED CONCRETE BASE AT LOCKERS; CARE SHALL BE TAKEN NOT TO DISTURB THE EXISTING STRUCTURAL CONCRETE FLOOR; SEE DETAILS.
  - 7 COORDINATE THE LOCATION OF NEW METAL ACCESS PANELS TO ALLOW ACCESS TO THE NEW WATER SUPPLY PIPING AT THE LOCATION OF THE NEW WATER SHUT OFF VALVES.
  - 8 INSTALL NEW 5/8" MR GYPSUM WALL BOARD ON CEILING; PROVIDE AND INSTALL ALL NECESSARY SUPPORT/HANGING MATERIALS TO ENSURE CEILING IS SECURE. SEE DETAILS.
- \*\*COORDINATE WORK WITH ALL DISCIPLINES: SEE PLUMBING, MECHANICAL AND ELECTRICAL DRAWING SHEETS.



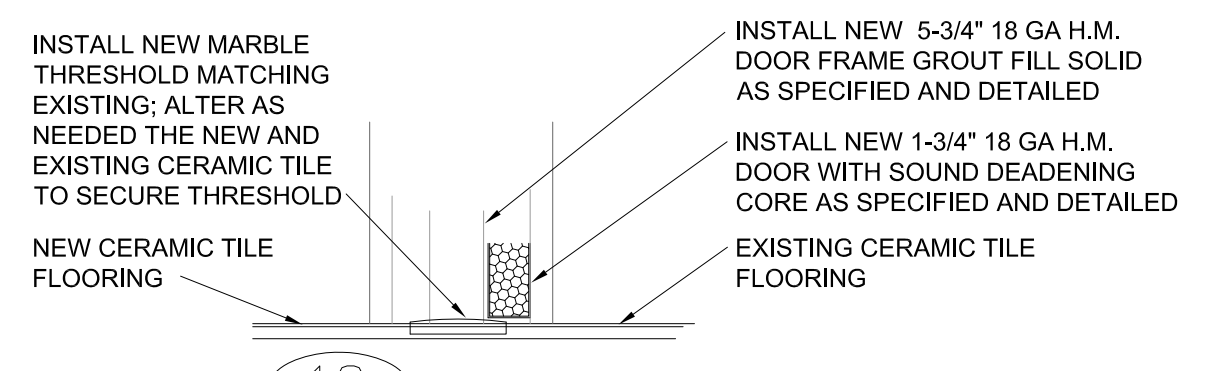
**2 PARTIAL FIRST FLOOR PLAN - NEW TILE FLOORING AREAS**  
 A12a SCALE 3/16" = 1'-0"



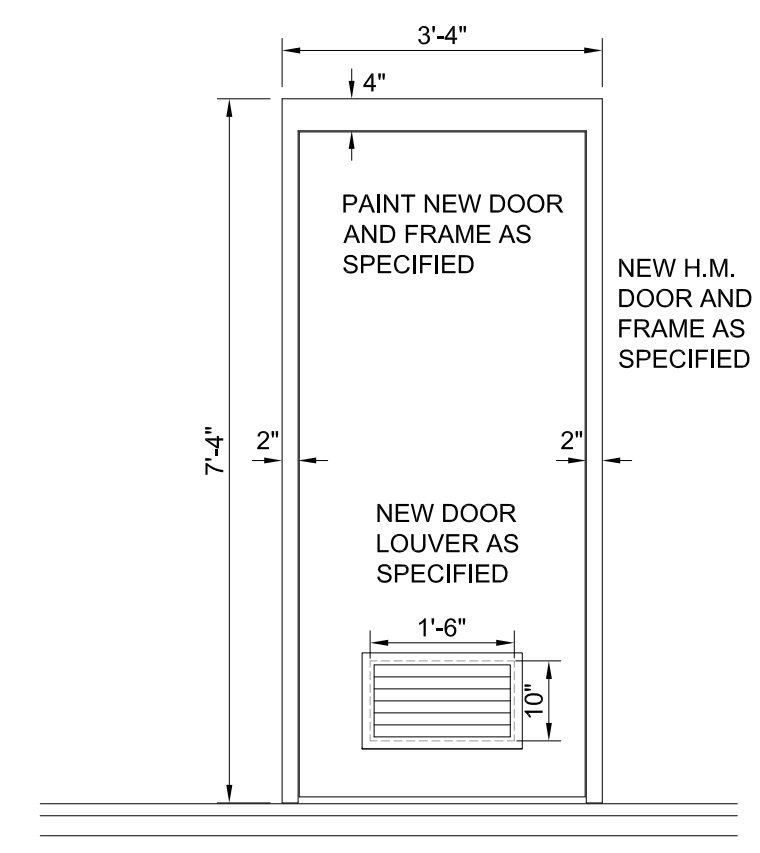
**3 DOOR HEAD DETAIL**  
 A12a SCALE 1-1/2" = 1'-0"



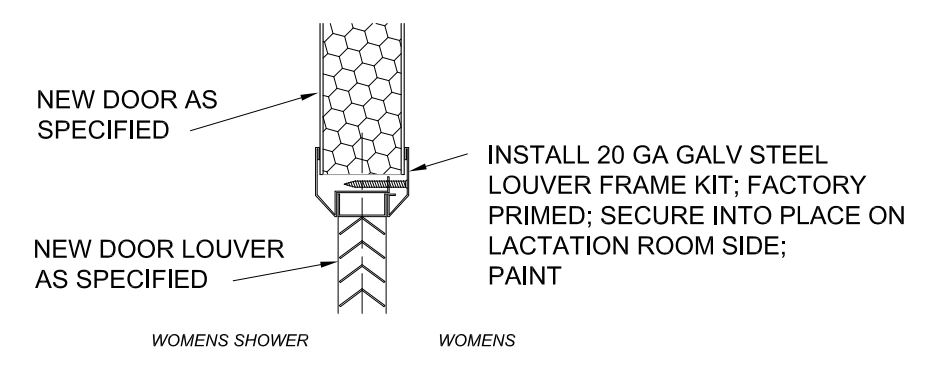
**4 DOOR JAMB DETAIL**  
 A12a SCALE 1-1/2" = 1'-0"



**5 DOOR THRESHOLD DETAIL**  
 A12a SCALE 1-1/2" = 1'-0"



**6 DOOR ELEVATION**  
 A12a SCALE 1-1/2" = 1'-0"



**7 DOOR LOUVER DETAIL**  
 A12a SCALE 3" = 1'-0"

Room Name	FLOOR		CEILING		WALLS		Remarks
	1	2	3	4	5	6	
MENS RESTROOM AREA							
MENS SHOWER AREA							
MENS LOCKER AREA							
WOMENS RESTROOM AREA							
WOMENS SHOWER AREA							
JANITOR							

**REMARKS:**  
 1.  
 2.  
 3. CEILING REPAIR; TEXTURE SHALL MATCH & BLEND INTO EXISTING.

**BUILDING**

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**DOOR AND FRAME SCHEDULE**

MASONRY OPENING	DOOR NO.	FLOOR / LOCATION	OPENING					DOOR					FRAME			HRDWR SET	REMARKS	DOOR NO.				
			FROM	TO	OPENING TYPE	OPENING	STATUS	TYPE	NOMINAL DOOR SIZE	STATUS	MATERIAL	CORE	FINISH	TYPE	DEPTH				STATUS	MATERIAL	FINISH	
3'-8" x 7'-2"	01	FIRST FLOOR	LOBBY	CORRIDOR	MASONRY	EXISTING	INTERIOR			3'-4" x 7'-0"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-1/4"	REPLACE	18 GA	PTD		NOTE 1	01
2'-10" x 7'-2"	02	FIRST FLOOR	CORRIDOR	LACTATION RM	MASONRY	EXISTING	INTERIOR			2'-6" x 7'-0"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	02
5'-4" x 7'-2"	03	FIRST FLOOR	ASSEMBLY HALL	LAB	MASONRY	*EXISTING	INTERIOR	90		2'-0" x 7'-0", 3'-0" X 7'-0"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-1/4"	REPLACE	18 GA	PTD		NOTE 1 NOTE 2	03
3'-4" x 7'-1"	04	BASEMENT	CORRIDOR	CLASSROOM A	MASONRY	EXISTING	INTERIOR			3'-0" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	04
3'-4" x 7'-1"	05	BASEMENT	CORRIDOR	CLASSROOM B	MASONRY	EXISTING	INTERIOR			3'-0" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	05
3'-4" x 7'-1"	06	BASEMENT	CORRIDOR	CLASSROOM C	MASONRY	EXISTING	INTERIOR			3'-0" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	06
3'-4" x 7'-1"	07	BASEMENT	CORRIDOR	CLASSROOM D	MASONRY	EXISTING	INTERIOR			3'-0" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	07
3'-4" x 7'-1"	08	BASEMENT	CORRIDOR	CLASSROOM E	MASONRY	EXISTING	INTERIOR			3'-0" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	08
3'-4" x 7'-1"	09	BASEMENT	CORRIDOR	CLASSROOM E	MASONRY	EXISTING	INTERIOR			3'-0" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	09
3'-8" x 7'-1"	10	BASEMENT	CLASSROOM E	IT CLOSET	MASONRY	EXISTING	INTERIOR			3'-4" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	10
3'-8" x 7'-1"	11	BASEMENT	CLASSROOM A	MECHANICAL	MASONRY	EXISTING	INTERIOR			3'-4" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	11
3'-4" x 7'-1"	12	SECOND FLOOR	STAIRWELL	CLASSROOM	MASONRY	EXISTING	INTERIOR	20		3'-0" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	12
3'-4" x 7'-1"	13	SECOND FLOOR	CLASSROOM	JANITOR	MASONRY	EXISTING	INTERIOR			3'-0" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	13
3'-4" x 7'-1"	14	SECOND FLOOR	CLASSROOM	MECHANICAL	MASONRY	EXISTING	INTERIOR	20		3'-0" x 6'-11"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	14
2'-10" x 7'-2"	15	SECOND FLOOR	FOYER	WOMEN	MASONRY	EXISTING	INTERIOR			2'-6" x 7'-0"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-1/4"	REPLACE	18 GA	PTD		NOTE 1	15
2'-10" x 7'-2"	16	SECOND FLOOR	FOYER	ELECTRICAL	MASONRY	EXISTING	INTERIOR			2'-6" x 7'-0"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-1/4"	REPLACE	18 GA	PTD		NOTE 1	16
2'-10" x 7'-2"	17	SECOND FLOOR	FOYER	MEN	MASONRY	EXISTING	INTERIOR			2'-6" x 7'-0"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-1/4"	REPLACE	18 GA	PTD		NOTE 1	17
3'-4" x 7'-4"	18	FIRST FLOOR	WOMENS RESTROOM	WOMENS SHOWER	MASONRY	EXISTING	INTERIOR			3'-0" x 7'-0"	1-3/4"	REPLACE	18 GA	SDC	PTD	5-3/4"	REPLACE	18 GA	PTD		NOTE 1	18

\*EXISTING OPENING TO BE ENLARGED

NOTE 1 - SEE BUILDING LOCATIONS FOR INDIVIDUAL DOOR AND FRAME ELEVATIONS AND DETAILS.  
NOTE 2 - EXISTING MASONRY OPENING TO BE ENLARGED TO ACCEPT NEW FRAME AND DOORS.

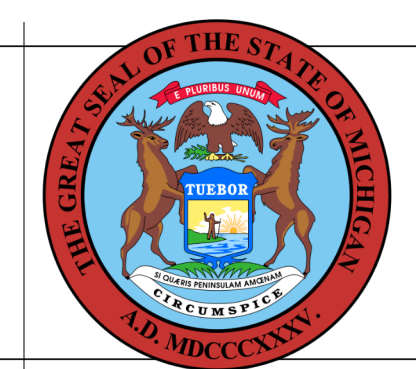
**DOOR HARDWARE SCHEDULE**

DOOR NO.	FLOOR	FROM	TO	HINGES	LOCKSET	CLOSER	PULL PLATE	PUSH PLATE	KICKPLATE	WALL BUMPER	THRESHOLD	ASTRAGAL	STOP & HOLDER	FLUSH BOLTS	REMARKS	DOOR NO.
01	FIRST FLOOR	LOBBY	CORRIDOR	H1		PED1	C1									01
02	FIRST FLOOR	CORRIDOR	LACTATION	H1	L5		C4									02
03	FIRST FLOOR	ASSEMBLY HALL	LAB	H1 (a.)	L3 (d.)		C3(1 ea dr)		A (1 ea dr)	WS (1 ea dr)	T1 (f.)		LG		FB	03
04	BASEMENT	CORRIDOR	CLASSROOM A	H1		PED1	C1									04
05	BASEMENT	CORRIDOR	CLASSROOM B	H1		PED1	C1									05
06	BASEMENT	CORRIDOR	CLASSROOM C	H1		PED1	C1									06
07	BASEMENT	CORRIDOR	CLASSROOM D	H1		PED1	C1									07
08	BASEMENT	CORRIDOR	CLASSROOM E	H1		PED1	C1									08
09	BASEMENT	CORRIDOR	CLASSROOM E	H1		PED1	C1									09
10	BASEMENT	CLASSROOM E	IT CLOSET	H1	L2											10
11	BASEMENT	CLASSROOM A	MECHANICAL	H1	L2											11
12	SECOND FLOOR	STAIRWELL	CLASSROOM	H1	L3		C3					T3				12
13	SECOND FLOOR	CLASSROOM	JANITOR	H1	L2							T3				13
14	SECOND FLOOR	CLASSROOM	MECHANICAL	H1	L2				A	WB	T3					14
15	SECOND FLOOR	FOYER	WOMEN	H1		TB1	C2	PU1		K	WS					15
16	SECOND FLOOR	FOYER	ELECTRICAL	H1	L2					K	WS					16
17	SECOND FLOOR	FOYER	MEN	H1		TB1	C2	PU1		K	WS					17
18	FIRST FLOOR	WOMENS RESTROOM	WOMENS SHOWER	H1		TB1	C1	PU1		K	WS		T2			18

REMARKS  
(a.) 2 Sets Required; 1 Set ea Door (A SET IS 1-1/2 PAIR)  
(b.) Push Side  
(c.) Pull Side  
(d.) Active Door - RHR  
(e.) Non-Active - Door - LHR  
(f.) 1 Piece, opening Width  
(g.) Mount On Wall In a Location That Will Allow Bumper To Function Properly

**GENERAL NOTES:**

- FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.
- DOOR DETAILS FOR EACH DOOR ARE LOCATED WITHIN THE ASSOCIATED DRAWINGS FOR THE AREA IN WHICH THE DOOR(S) ARE LOCATED.
- MEET ALL FIRE DOOR REQUIREMENTS FOR LISTED DOOR LABEL.



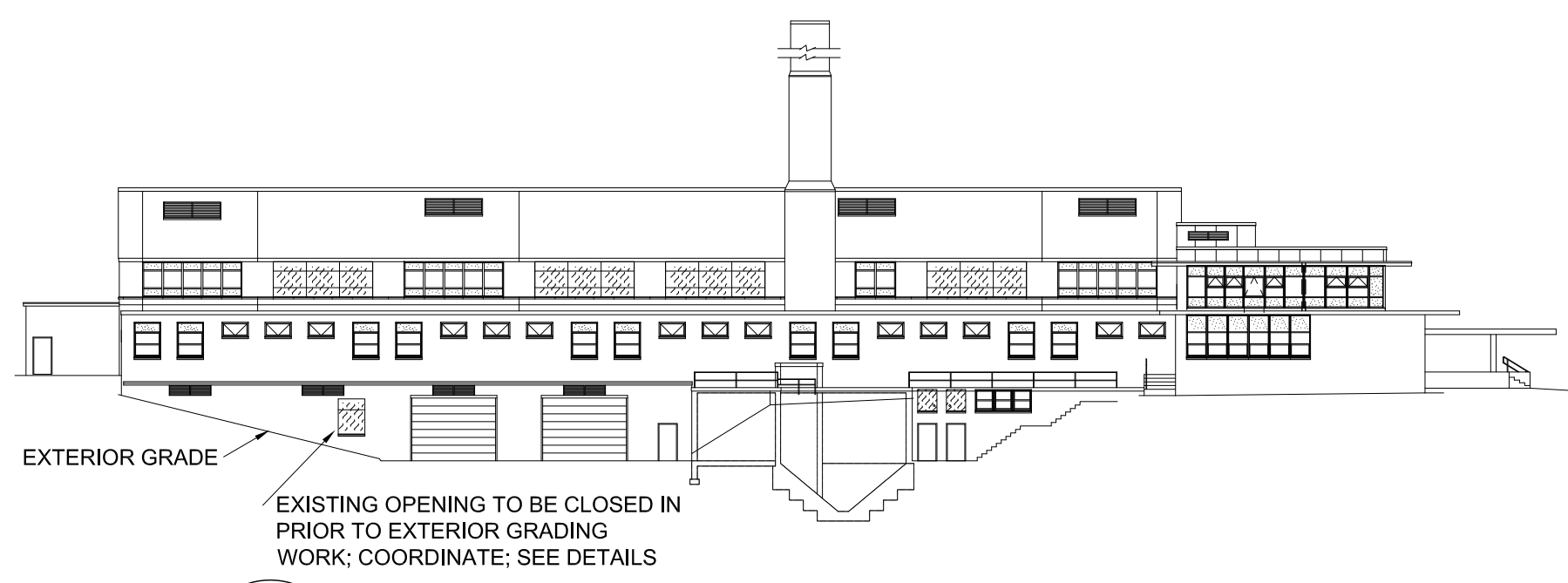
**BUILDING**

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**GENERAL NOTES:**

- FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.

**GENERAL NOTES:**

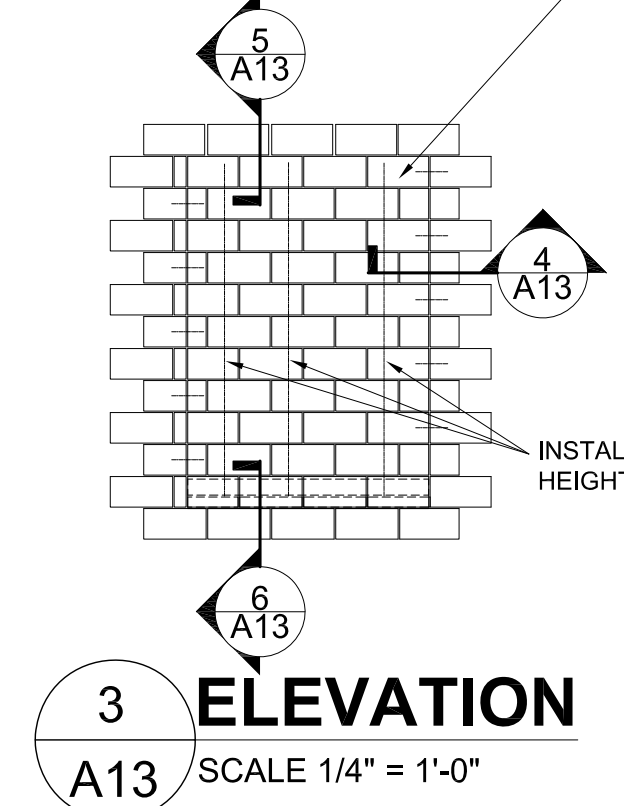


**1 BUILDING EAST ELEVATION**  
A13 SCALE 1/32" = 1'-0"

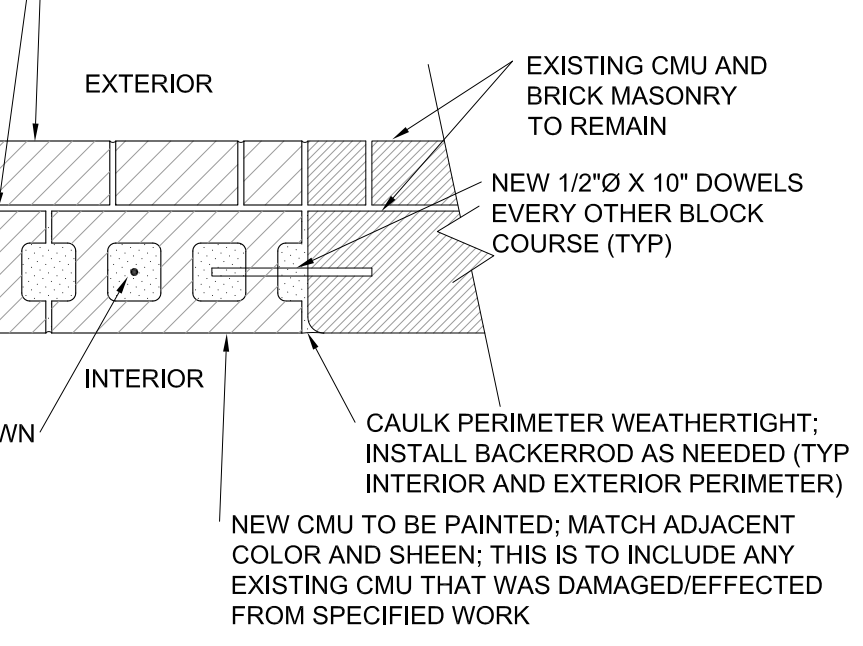
**2 PARTIAL BASEMENT FLOOR PLAN; VEHICLE STORAGE AND SUPPLY ROOM AREA**

A13 SCALE 1/8" = 1'-0"

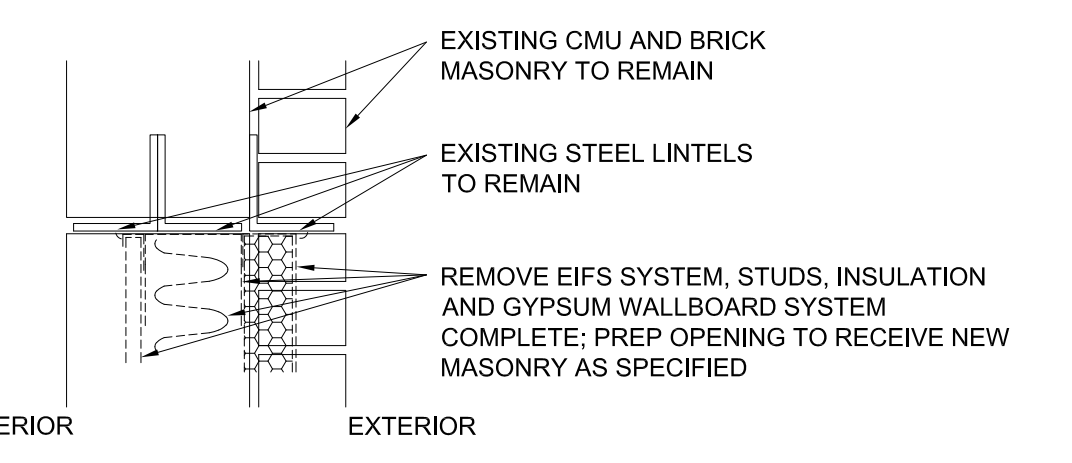
AFTER REMOVING EIFS SYSTEM COMPLETE AS SPECIFIED, INFILL OPENING WITH MASONRY BLOCK AND BRICK; 1/2"Ø X 10" DOWELS EVERY OTHER BLOCK COURSE; EPOXY GROUT FILL RODS INTO EXISTING BLOCK MASONRY WALL; GROUT FILL ALL MASONRY BLOCK CORES COMPLETE; INSTALL VERTICAL REBARS AS SHOWN AND HORIZONTAL (LADDER) JOINT REINFORCING EVERY COURSE FULL LENGTH.



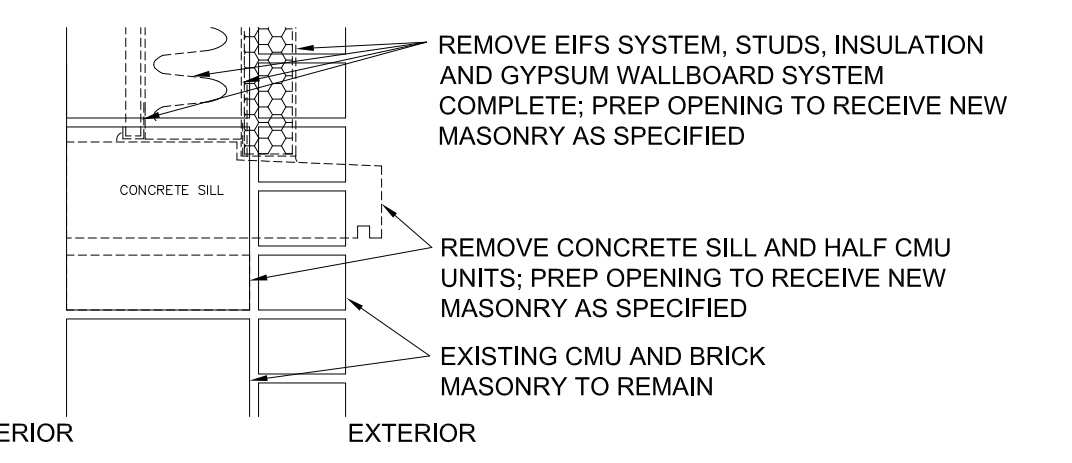
**3 ELEVATION**  
A13 SCALE 1/4" = 1'-0"



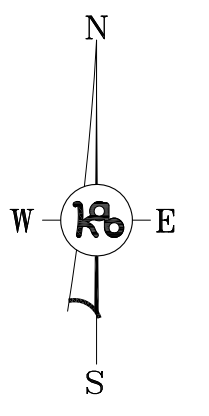
**4 INFILL DETAIL**  
A13 SCALE 1/4" = 1'-0"



**5 INFILL HEAD DETAIL**  
A13 SCALE 1" = 1'-0"

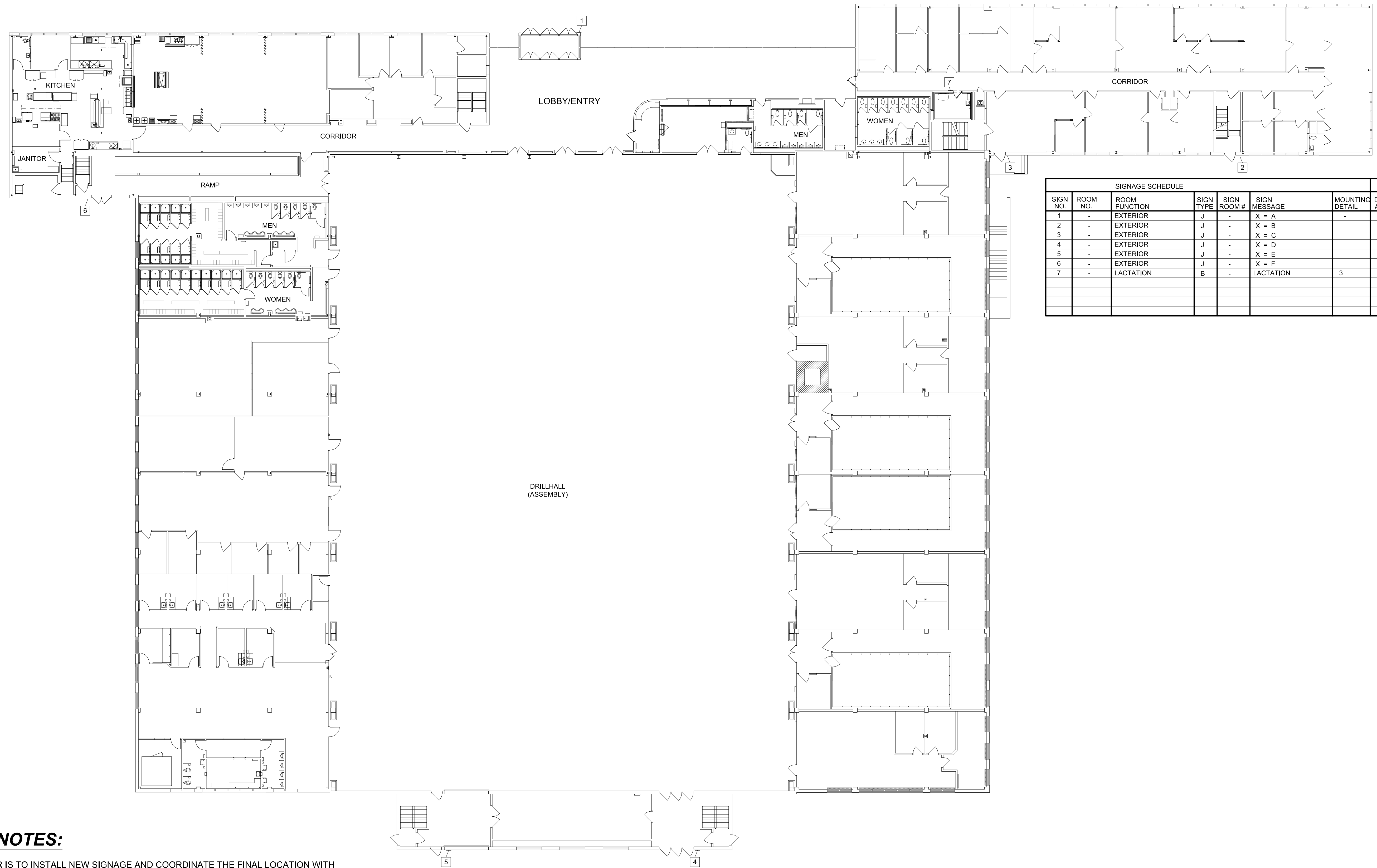


**6 INFILL SILL DETAIL**  
A13 SCALE 1" = 1'-0"



**AREA 9 WORK LOCATION**

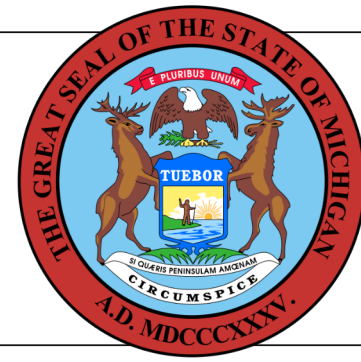
SHEET	PROJECT INDEX CODE	IDENTIFICATION NO.	ISSUED FOR		DATE	DESIGNED	DRAWN	CHECKED	APPROVED
			PRELIMINARY	CONSTRUCTION					
A13	280802010		<input type="checkbox"/>	<input checked="" type="checkbox"/>	AUG 2021	K.A.B.	K.A.B.	B.A.B.	B.A.B.
			<input type="checkbox"/>	<input type="checkbox"/>	AUG 2021				



SIGNAGE SCHEDULE						
SIGN NO.	ROOM NO.	ROOM FUNCTION	SIGN TYPE	SIGN ROOM #	SIGN MESSAGE	MOUNTING DETAIL
1	-	EXTERIOR	J	-	X = A	-
2	-	EXTERIOR	J	-	X = B	-
3	-	EXTERIOR	J	-	X = C	-
4	-	EXTERIOR	J	-	X = D	-
5	-	EXTERIOR	J	-	X = E	-
6	-	EXTERIOR	J	-	X = F	-
7	-	LACTATION	B	-	LACTATION	3

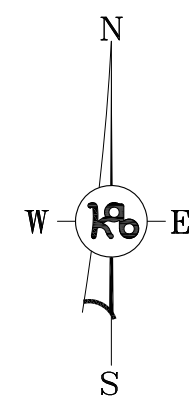
**GENERAL NOTES:**

- THE CONTRACTOR IS TO INSTALL NEW SIGNAGE AND COORDINATE THE FINAL LOCATION WITH PROJECT INSPECTOR AND BUILDING MANAGER.
- COORDINATE SIGN TYPE AND MOUNTING WITH SIGN SCHEDULE AND FLOOR PLAN.



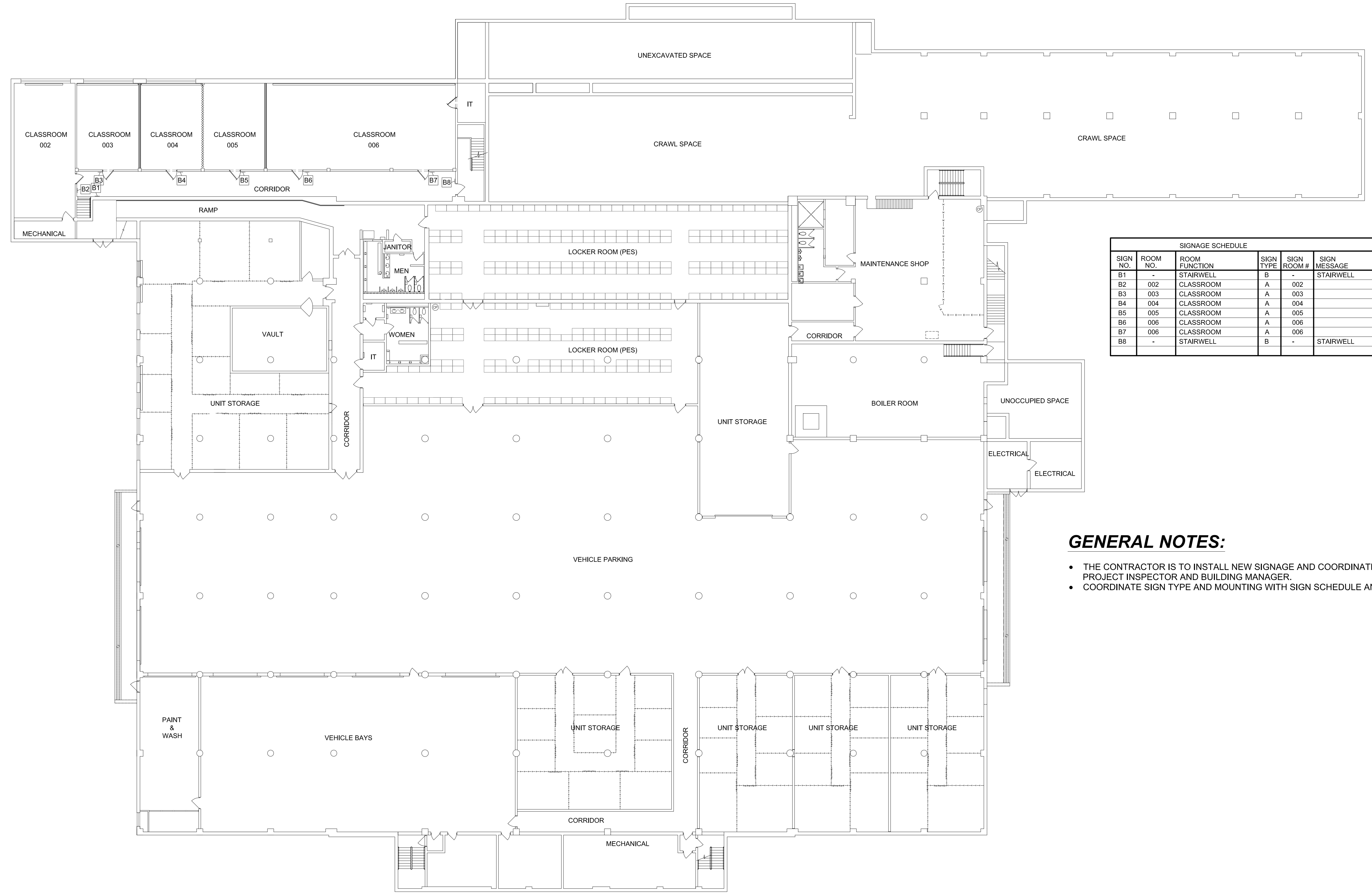
**BUILDING**

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1  
A15  
SCALE 1/16" = 1'-0"

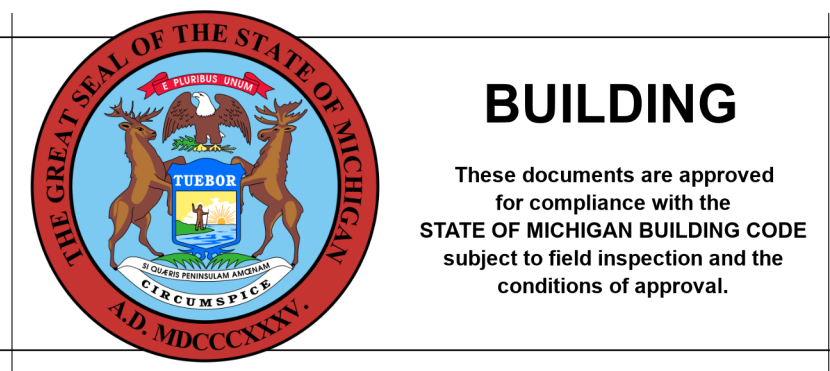
**FIRST FLOOR PLAN - ROOM SIGNAGE**



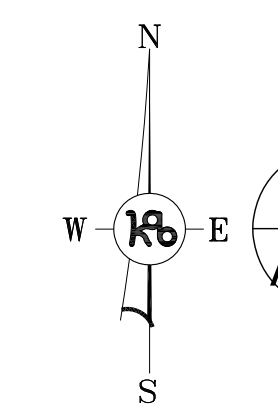
SIGNAGE SCHEDULE							
SIGN NO.	ROOM NO.	ROOM FUNCTION	SIGN TYPE	SIGN ROOM #	SIGN MESSAGE	MOUNTING DETAIL	DIRECTIONAL ARROW
B1	-	STAIRWELL	B	-	STAIRWELL	3	
B2	002	CLASSROOM	A	002		3	
B3	003	CLASSROOM	A	003		3	
B4	004	CLASSROOM	A	004		3	
B5	005	CLASSROOM	A	005		3	
B6	006	CLASSROOM	A	006		3	
B7	006	CLASSROOM	A	006		3	
B8	-	STAIRWELL	B	-	STAIRWELL	3	

**GENERAL NOTES:**

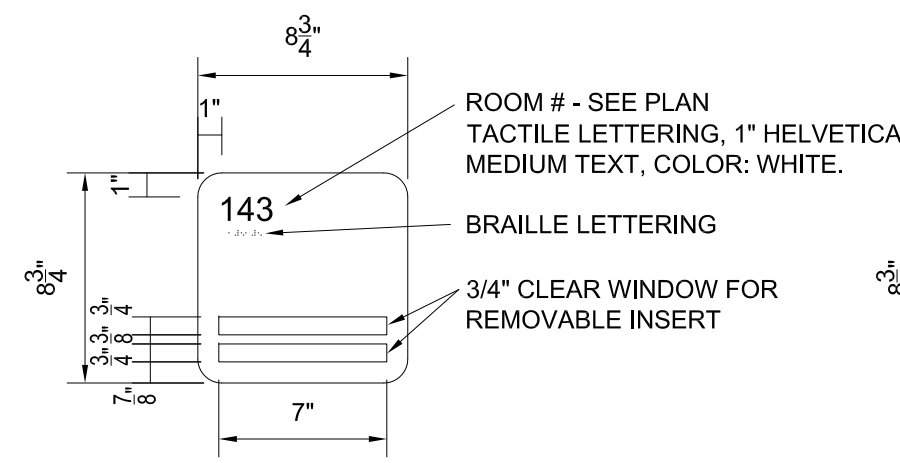
- THE CONTRACTOR IS TO INSTALL NEW SIGNAGE AND COORDINATE THE FINAL LOCATION WITH PROJECT INSPECTOR AND BUILDING MANAGER.
- COORDINATE SIGN TYPE AND MOUNTING WITH SIGN SCHEDULE AND FLOOR PLAN.



**BUILDING**  
 These documents are approved for compliance with the STATE OF MICHIGAN BUILDING CODE subject to field inspection and the conditions of approval.

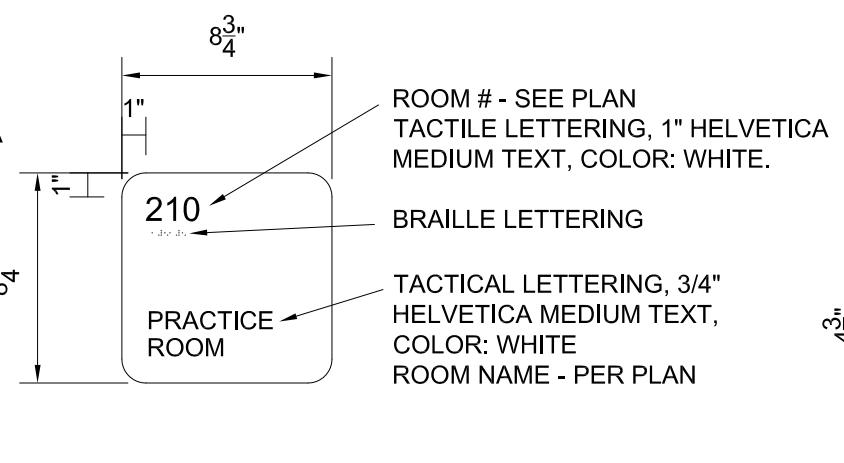


**1 BASEMENT FLOOR PLAN - ROOM SIGNAGE**  
 A15A SCALE 1/16" = 1'-0"



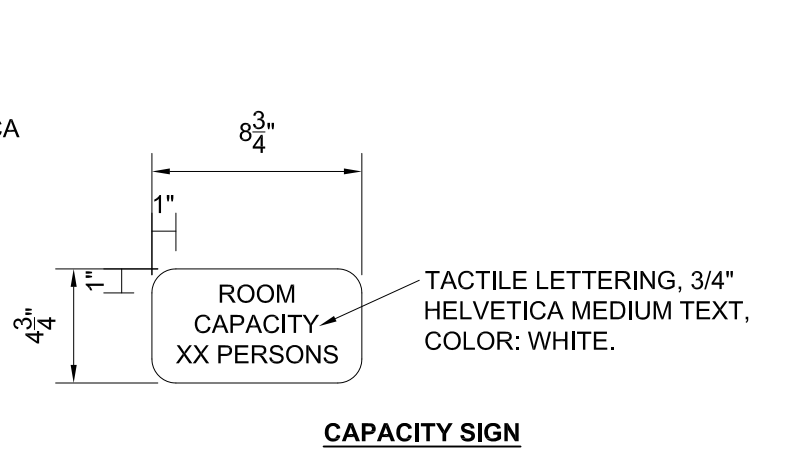
**GENERAL NOTES:**  
1. MOUNT SIGN w/ CENTERLINE AT 4'-7 1/2" A.F.F.

**SIGN TYPE 'A'**



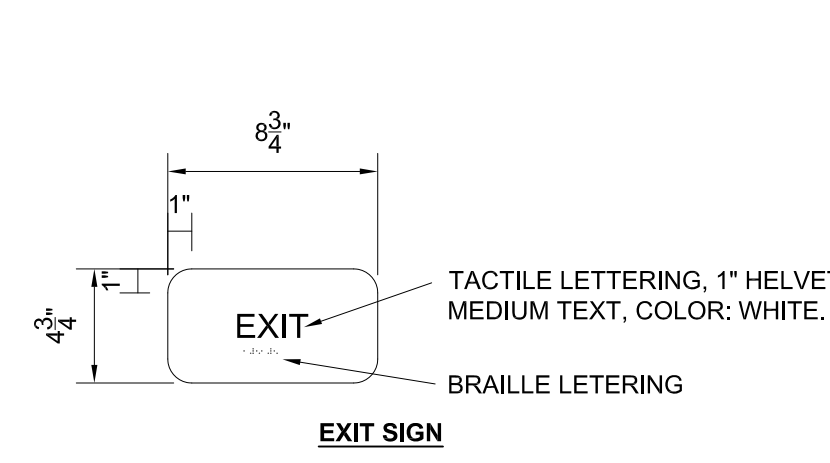
**GENERAL NOTES:**  
1. MOUNT SIGN w/ CENTERLINE AT 4'-7 1/2" A.F.F.

**SIGN TYPE 'B'**



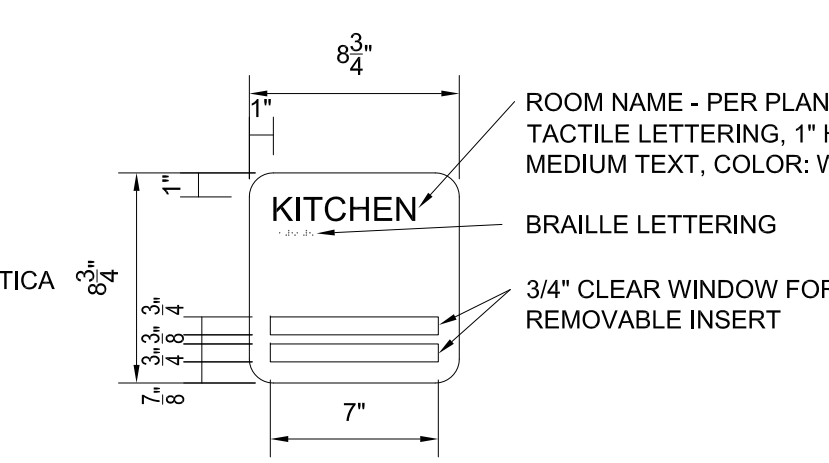
**GENERAL NOTES:**  
1. MOUNT SIGN w/ CENTERLINE AT 4'-7 1/2" A.F.F.

**SIGN TYPE 'C'**



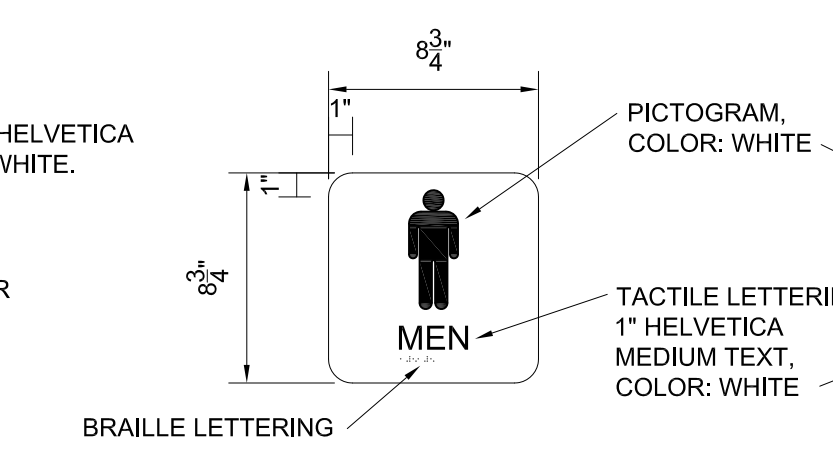
**GENERAL NOTES:**  
1. MOUNT SIGN w/ CENTERLINE AT 4'-7 1/2" A.F.F.

**SIGN TYPE 'D'**



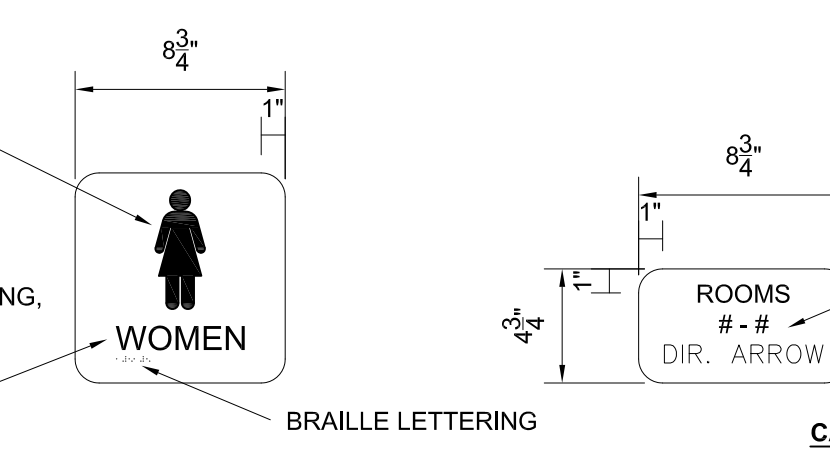
**GENERAL NOTES:**  
1. MOUNT SIGN w/ CENTERLINE AT 4'-7 1/2" A.F.F.

**SIGN TYPE 'E'**



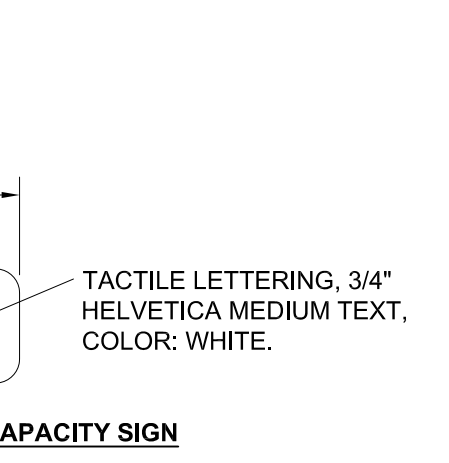
**GENERAL NOTES:**  
1. MOUNT SIGN w/ CENTERLINE AT 4'-7 1/2" A.F.F.

**SIGN TYPE 'F'**



**GENERAL NOTES:**  
1. MOUNT SIGN w/ CENTERLINE AT 4'-7 1/2" A.F.F.

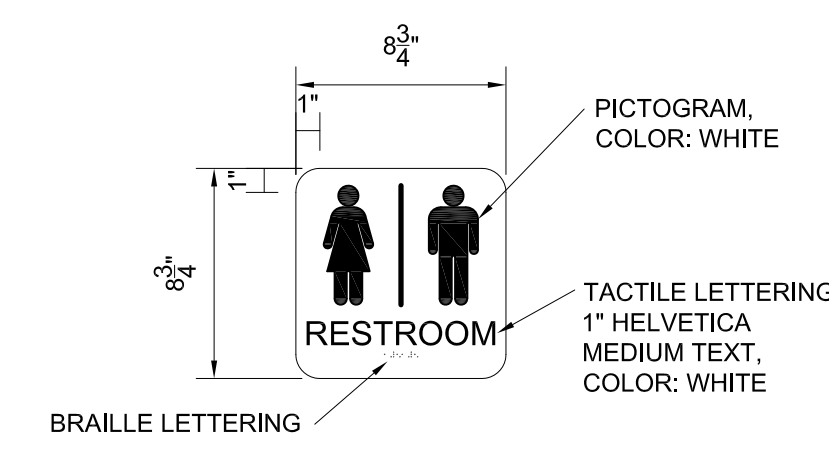
**SIGN TYPE 'G'**



**GENERAL NOTES:**  
1. MOUNT SIGN w/ CENTERLINE AT 4'-7 1/2" A.F.F.

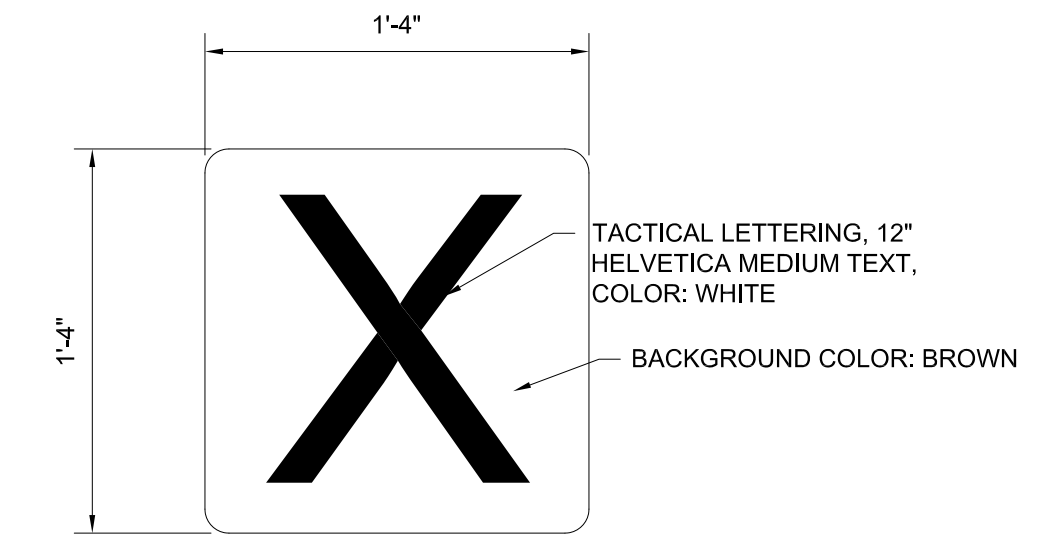
**SIGN TYPE 'H'**

**1 SIGN TYPE DETAILS**  
A15B SCALE 1-1/2" = 1'-0"



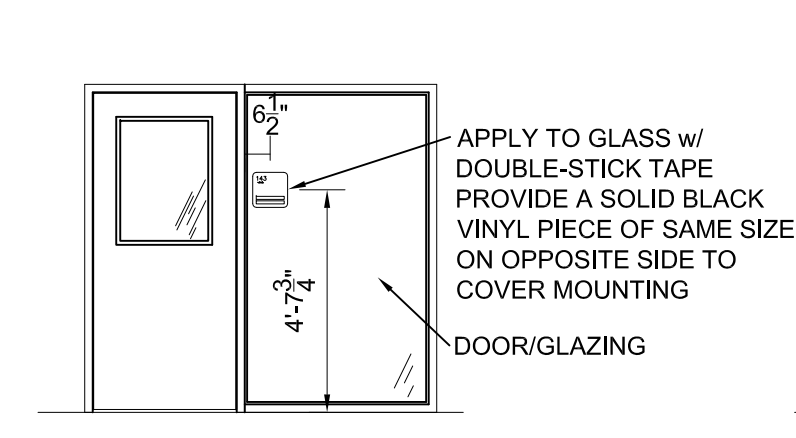
**GENERAL NOTES:**  
1. MOUNT SIGN w/ CENTERLINE AT 4'-7 1/2" A.F.F.

**SIGN TYPE 'I'**

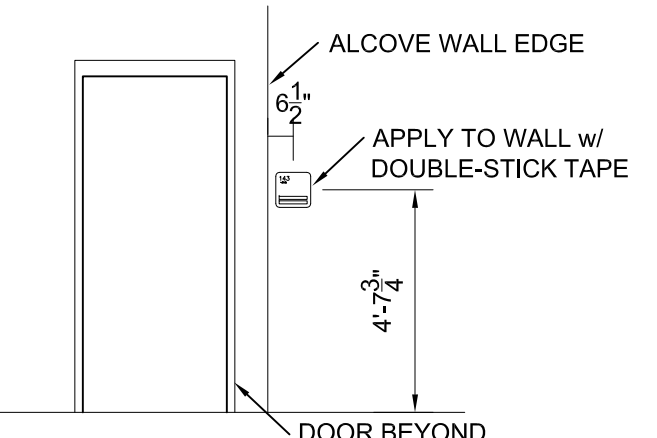


**SIGN TYPE 'J'**

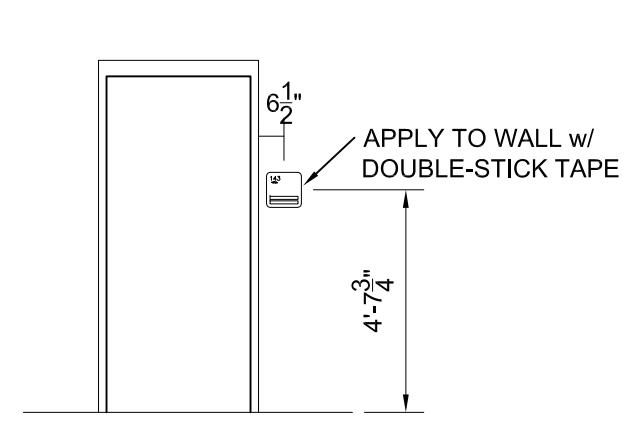
EXTERIOR SIGNAGE LOCATION WILL BE DETERMINED ON SITE WITH THE PROJECT INSPECTOR AND ARMORY MANAGER FOR THE BEST LOCATION. CONTRACTOR SHALL SECURE TO THE EXTERIOR OF BUILDING. CONTRACTOR SHALL SECURE TO THE EXTERIOR OF BUILDING WITH 3/8" DIAMETER GALV TOGGLE BOLTS.  
16" X 16" ALUMINUM EXTERIOR SIGNS  
WHITE LETTERS ON BROWN BACKGROUND  
1/2" CORNER RADIUS



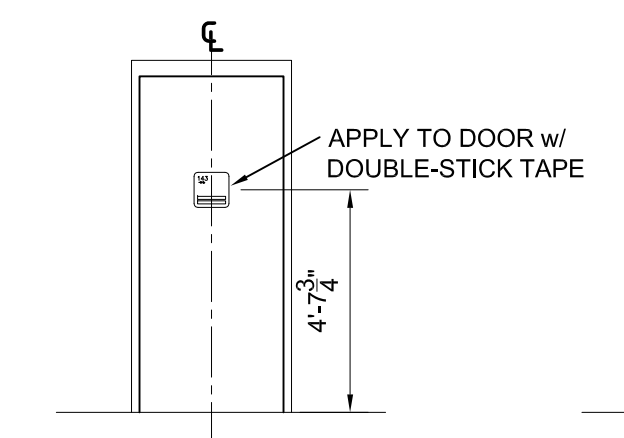
**1** TYPICAL MOUNTING AT SIDELITES



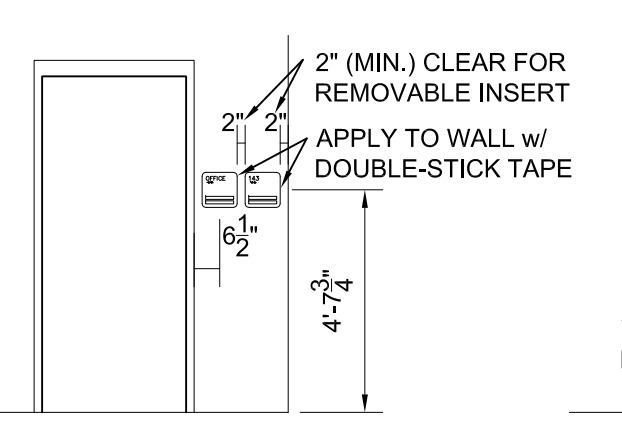
**2** TYPICAL MOUNTING AT ALCOVES



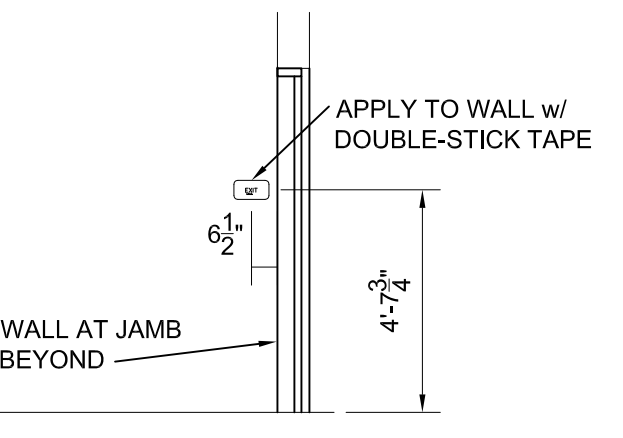
**3** TYPICAL MOUNTING ADJACENT TO DOOR ON WALL



**4** TYPICAL MOUNTING ADHERED TO INTERIOR DOOR



**5** TYPICAL MOUNTING ADJACENT TO DOOR ON WALL FOR DOUBLE SIGNS

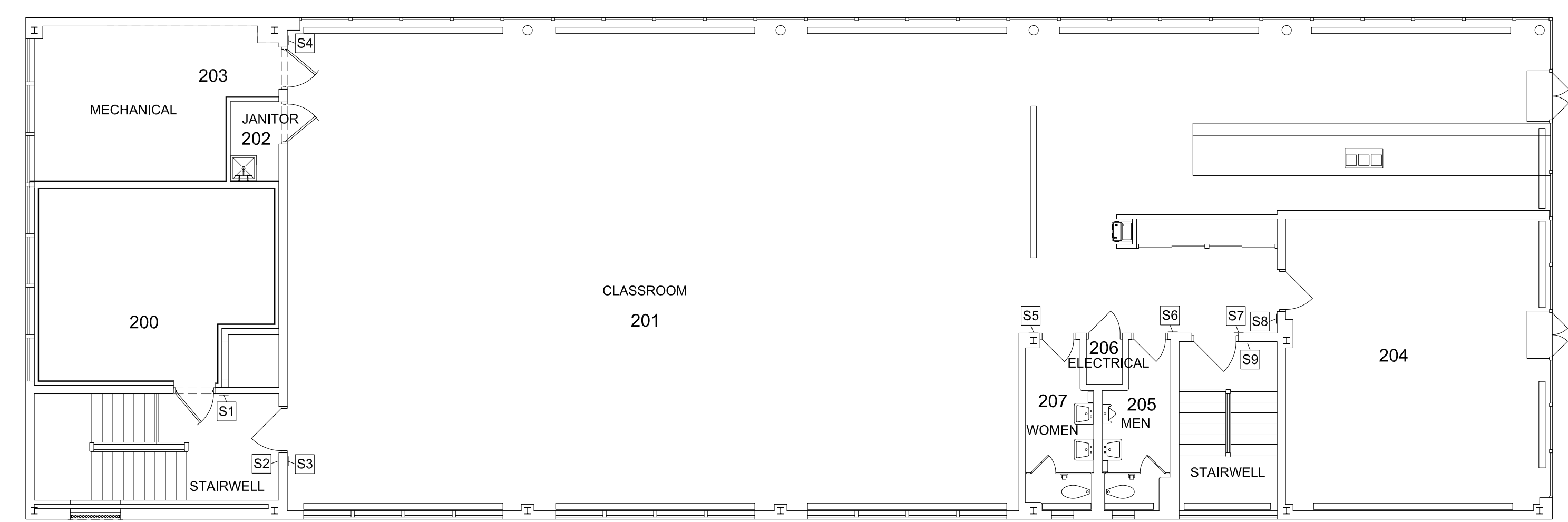


**6** TYPICAL MOUNTING ADJACENT TO DOOR ON PERPENDICULAR WALL

**2 MOUNTING DETAILS**  
A15B SCALE 1/4" = 1'-0"

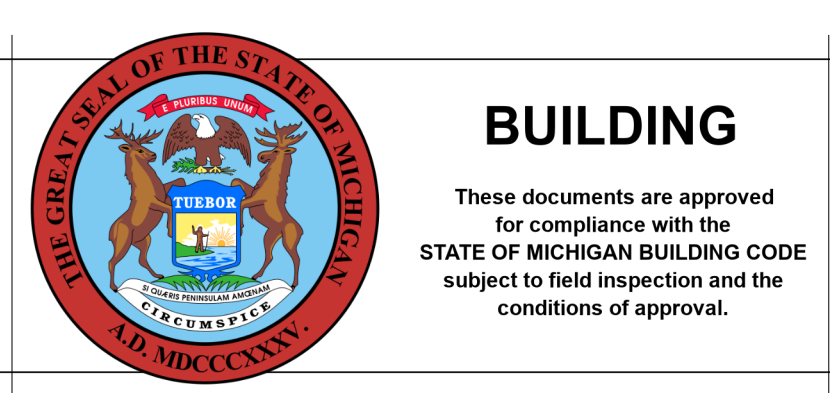
**GENERAL NOTES:**

- THE CONTRACTOR IS TO INSTALL NEW SIGNAGE AND COORDINATE THE FINAL LOCATION WITH PROJECT INSPECTOR AND BUILDING MANAGER.
- COORDINATE SIGN TYPE AND MOUNTING WITH SIGN SCHEDULE AND FLOOR PLAN.



**3 SECOND FLOOR PLAN**  
A15B SCALE 1/8" = 1'-0"

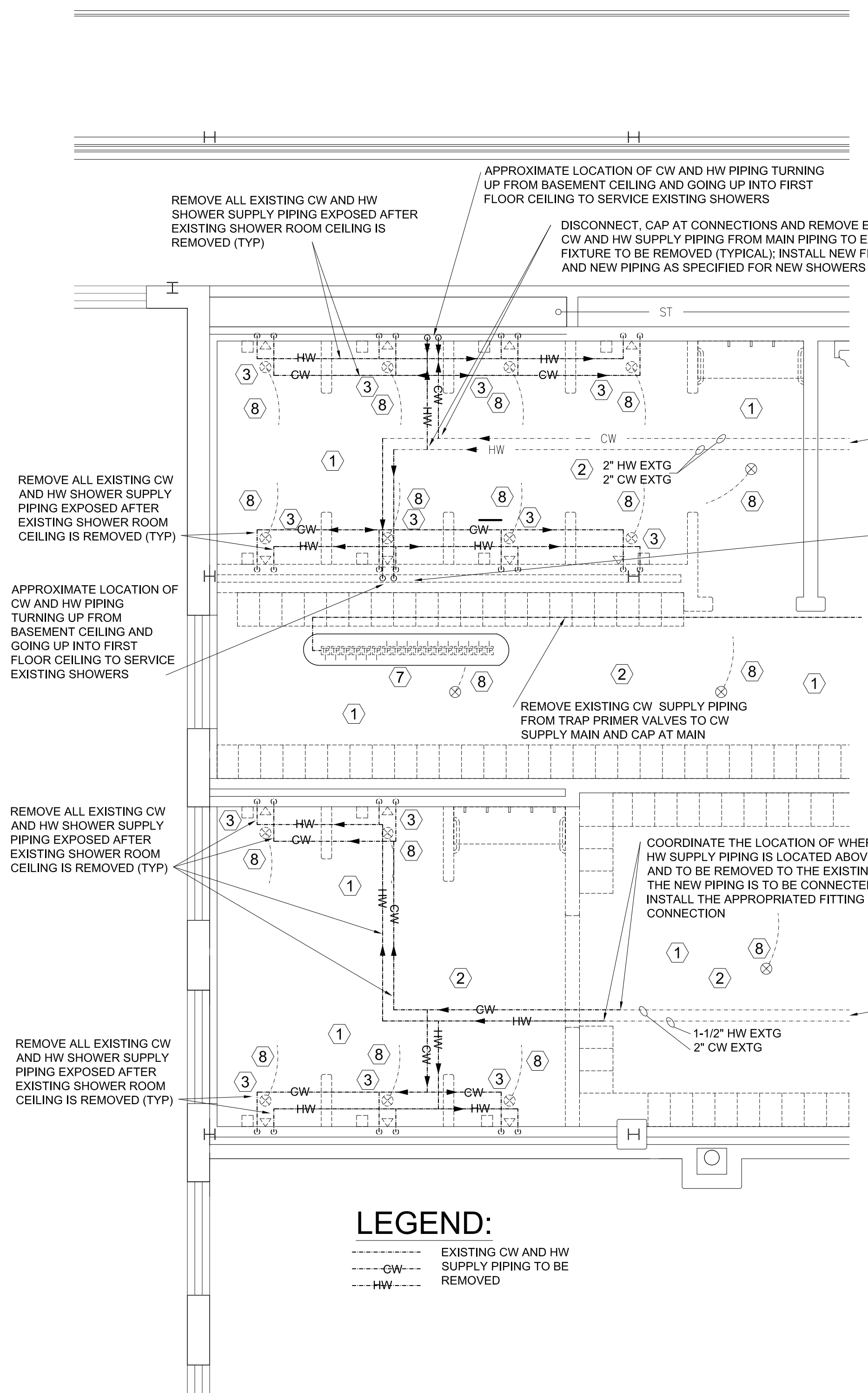
SIGNAGE SCHEDULE							
SIGN NO.	ROOM NO.	ROOM FUNCTION	SIGN TYPE	SIGN ROOM #	SIGN MESSAGE	MOUNTING DETAIL	DIRECTIONAL ARROW
S1	200		A	200		3	
S2			G	-	# - # = 201 - 207	3	-
S3		STAIRWELL	B	-	STAIRWELL	3	
S4	203	MECHANICAL	B	203	MECHANICAL	4	
S5	207	WOMEN	F	-	WOMEN	3	
S6	205	MEN	F	-	MEN	3	
S7		STAIRWELL	B	-	STAIRWELL	3	
S8	204		A	204		3	
S9			G	-	# - # = 200 - 207	3	-



**BUILDING**  
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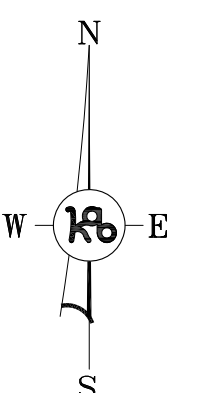
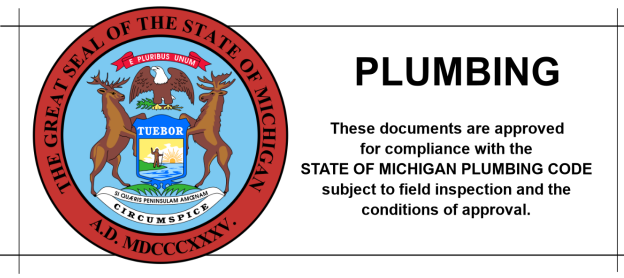




**1 PARTIAL NEW FIRST FLOOR PLAN  
P2 DEMOLITION PLAN - DOMESTIC WATER**  
SCALE 1/4" = 1'-0" (ALSO SHOWS THE PIPING REFLECTIVE CEILING PLAN OF THE BASEMENT)

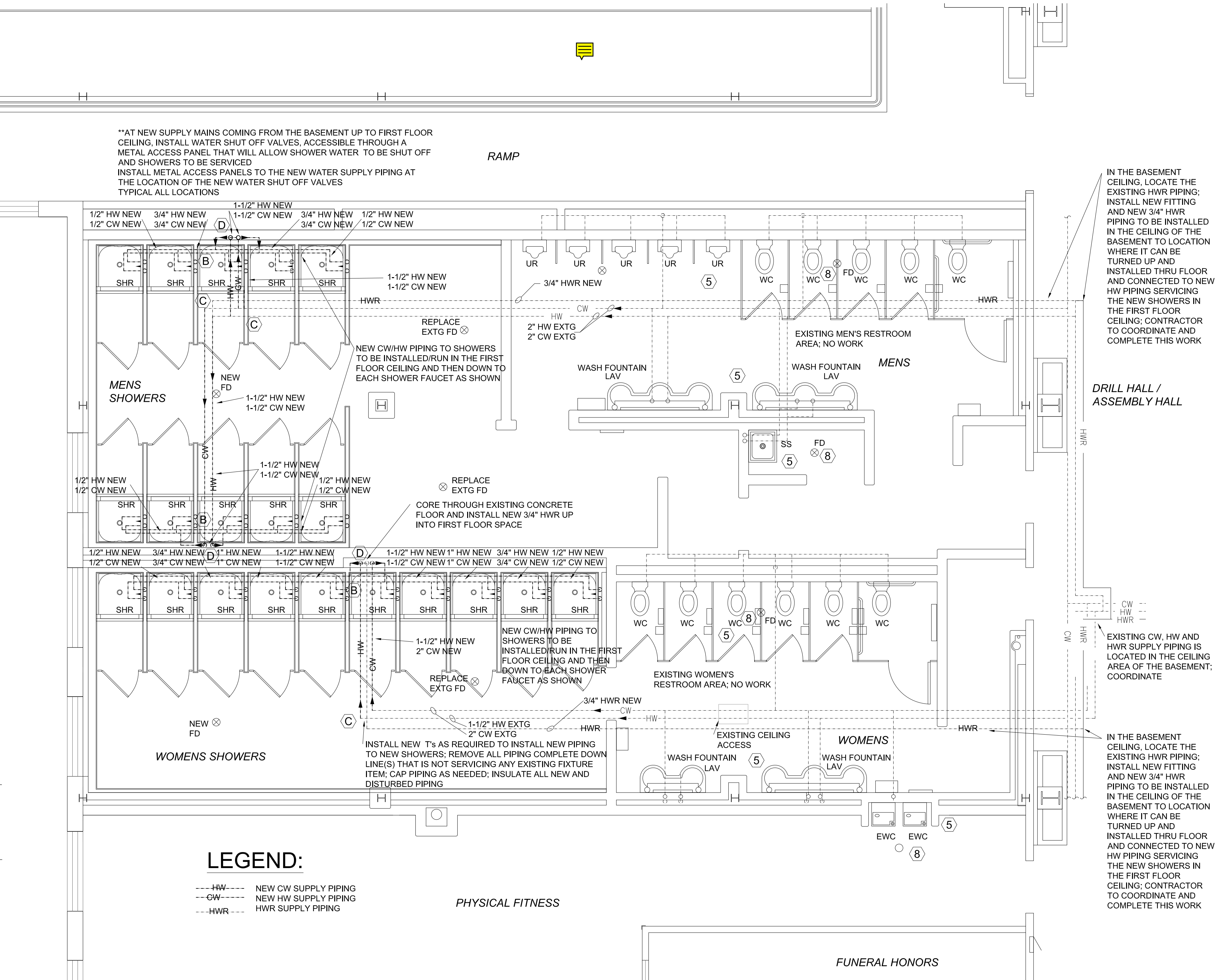
**DEMOLITION NOTES:**

- SEE ADDITIONAL PLUMBING SHEETS AND NOTES FOR THE WORK REQUIRED WITH THE EXISTING TRAP PRIMER VALVES AND WATER PIPING TO EACH FD/SHOWER DRAIN.
- EXISTING SHOWER AREA CEILING IS TO BE REMOVED AND REPLACED AS PART OF THIS CONTRACT; COORDINATE. SEE ADDITIONAL DRAWING SHEETS REGARDING THIS WORK.
- REMOVE EXISTING SHOWER HEAD, FAUCET VALVE, FLOOR DRAIN AND PIPING TO BELOW CONCRETE FLOOR. AT EACH FLOOR DRAIN REMOVED, THE CONTRACTOR SHALL PATCH/FILL, FULL THICKNESS THE CONCRETE STRUCTURAL FLOOR AND PREP FOR NEW FLOORING. REMOVE SHOWER FLOOR DRAIN PIPING LOCATED IN THE BASEMENT BACK TO THE SEWER/SANITARY MAIN AND CAP.
- NOT USED.
- EXISTING PLUMBING FIXTURE TO REMAIN.
- NOT USED.
- IN BASEMENT CEILING, LOCATION OF EXISTING TRAP PRIMER VALVES; REMOVE ALL VALVES AND SUPPLY LINES TO THESE VALVES. CAP BACK AT MAIN SUPPLY; REMOVE ALL CW PIPING FROM EACH VALVE TO THE FIXTURE IT WAS SERVICING. CAP AT EACH FIXTURE THAT IS TO REMAIN. INSTALL INLINE FLOOR DRAIN TRAP SEALERS AS NOTED; COORDINATE.
- IN BASEMENT CEILING, REMOVE ALL EXISTING TRAP PRIMER CW SUPPLY PIPING; CAP PIPING BACK AT MAIN SUPPLY; REMOVE ALL CW PIPING FROM EACH VALVE TO THE FIXTURE IT WAS SERVICING. CAP AT EACH FIXTURE THAT IS TO REMAIN. INSTALL INLINE FLOOR DRAIN TRAP SEALERS AS NOTED; COORDINATE.



PLUMBING FIXTURE SCHEDULE						
MARK	FIXTURE ITEM	WASTE	VENT	TRAP	CW	HW
EWC	ELECTRIC WATER COOLER	1 1/4"	1 1/2"	1 1/4"	3/8"	-
FD	FLOOR DRAIN	3"	2"	2"	1/2"	-
LAV	LAVATORY	1 1/4"	1 1/2"	1 1/4"	3/8"	3/8"
SHR	SHOWER	2"	2"	2"	1/2"	1/2"
SS	SERVICE SINK (FLOOR)	2"	2"	2"	1/2"	1/2"
UR	URINAL	1 1/2"	1 1/2"	1 1/2"	3/4"	-
WC	WATER CLOSET	4"	4"	4"	1"	-

PLUMBING FIXTURE NOMENCLATURE	
MARK	FIXTURE ITEM
EWC	DRINKING FOUNTAIN, TO REMAIN
FD	FLOOR DRAIN
LAV	LAVATORY
SHR	FIBERGLASS SHOWER STALL
SS	SERVICE SINK; JANITOR SINK
UR	URINAL
WC	WATER CLOSET



**2 PARTIAL NEW FIRST FLOOR PLAN  
P2 NEW PLUMBING - DOMESTIC WATER**  
SCALE 1/4" = 1'-0" (ALSO SHOWS THE PIPING REFLECTIVE CEILING PLAN OF THE BASEMENT)

**NEW WORK NOTES:**

- INSTALL SHUT OFF VALVES AT ALL SHOWER LOCATIONS ACCESSIBLE FROM THE CEILING AREA IN NEW ACCESS PANELS LOCATED IN THE FIRST FLOOR CEILING, TYPICAL ALL LOCATIONS.
- AT NEW SUPPLY MAINS COMING FROM THE BASEMENT UP TO FIRST FLOOR CEILING, INSTALL WATER SHUT OFF VALVES, ACCESSIBLE THROUGH A METAL ACCESS PANEL THAT WILL ALLOW SHOWER WATER TO BE SHUT OFF AND SHOWERS TO BE SERVICED. INSTALL METAL ACCESS PANELS TO THE NEW WATER SUPPLY PIPING AT THE LOCATION OF THE NEW WATER SHUT OFF VALVES.
- LOCATION ON NEW ELBOW/TEE FITTING TO CONNECT NEW PIPING TO EXISTING PIPING.
- APPROXIMATE LOCATION TO CORE THROUGH EXISTING CONCRETE FLOOR AND INSTALL NEW DOMESTIC SUPPLY PIPING.

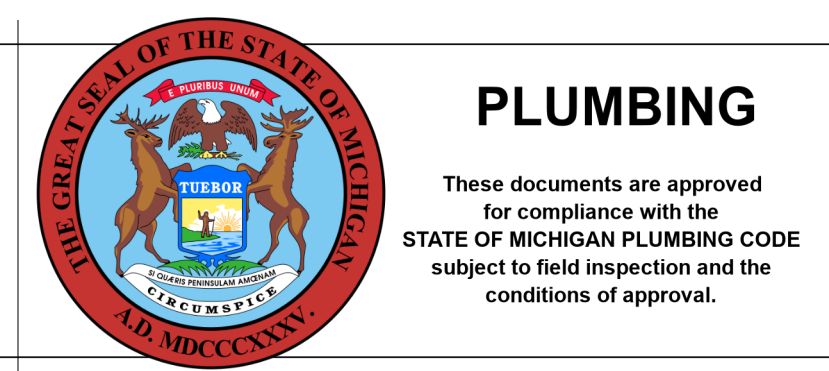
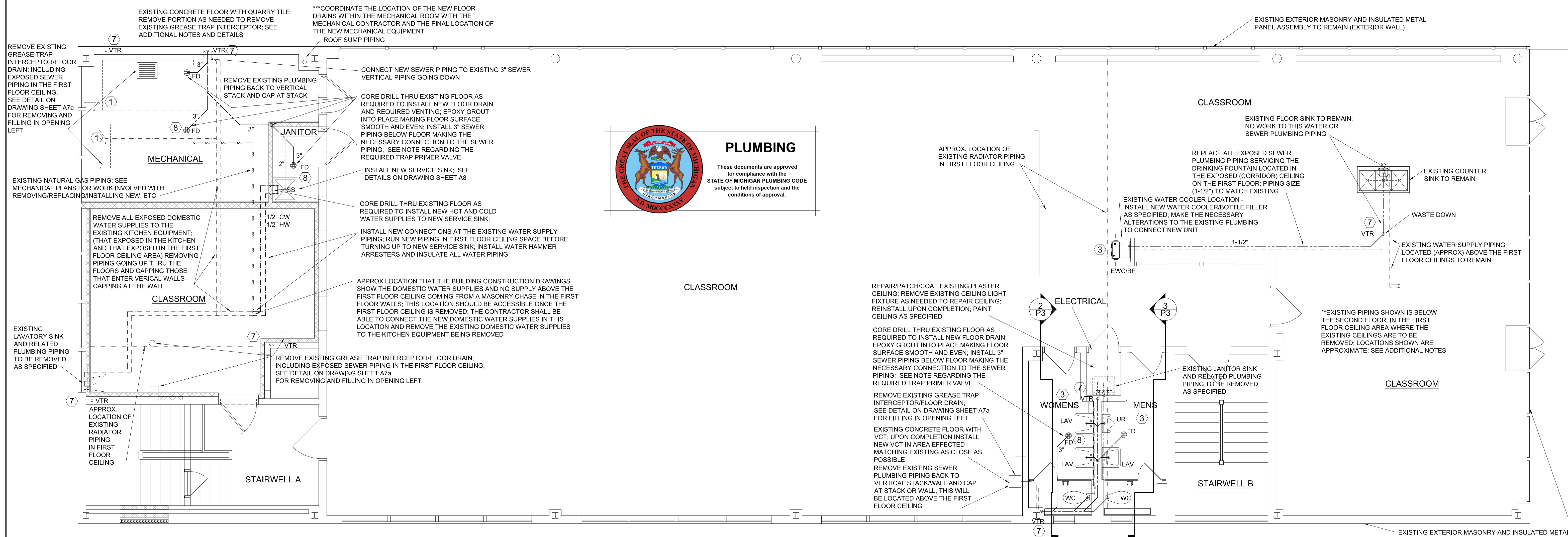
\*\*THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.

**GENERAL NOTES:**

- FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.
- COORDINATE ALL PLUMBING WORK WITH THE REMODEL WORK FOR AREA 8, DRAWING SHEETS A11, A12, A12a.
- VERIFY THE EXISTING PLUMBING THAT IS LOCATED/EXPOSED IN THE BASEMENT CEILING AREA.
- THE CONTRACTOR IS TO COORDINATE ALL PLUMBING WORK WITH THE DEMO/NEW OF THE NEW SHOWER AREAS WHILE KEEPING THE EXISTING PLUMBING; WATER, WASTE AND VENTING ACTIVE TO THE FIXTURES TO REMAIN.
- CONTRACTOR TO INSTALL/FILL FULL WITH MORTAR/EPOXY MIX FULL THICKNESS THE CONCRETE FLOOR WHERE SEWER AND WATER PIPING WILL BE REMOVED UNDER THIS PROJECT.
- UNLESS OTHERWISE NOTED, ALL FIXTURES IN THE RESTROOM AREA; URINALS, WATER CLOSETS, WASH SINKS, FLOOR DRAINS SHALL REMAIN ACTIVE; NO WORK REQUIRED.
- UNLESS OTHERWISE NOTED, ALL EXISTING VENTING AND REVENTING PIPING SHALL REMAIN IN PLACE AND REMAIN ACTIVE; INSTALL THE NECESSARY PIPING TO CONNECT THE NEW PLUMBING PIPING SERVING THE NEW SHOWERS AND FLOOR DRAINS TO THE EXISTING VENTING/REVENTING PIPING.
- INSTALL HAMMER ARRESTERS ON ALL NEW WATER PIPING LINES.
- UPON COMPLETION, ALL PLUMBING PIPING SHALL BE INSULATED AND ALL INSULATION JOINTS TAPED.
- INSTALL NEW CEILING ACCESS PANELS - THEY SHALL BE COORDINATED WITH THE NEW SHUT OFF VALVES AS WELL AS THE CEILING ELECTRICAL LIGHT FIXTURES AND MECHANICAL DUCTING EQUIPMENT.
- EACH OF THE NEW SHOWER FAUCET/VALVES SHALL CONFORM TO ASSE 1016 FOR THERMOSTATIC MIXING VALVE.

**AREA 8 WORK LOCATION**

SHEET	IDENTIFICATION NO.	PROJECT	ISSUED FOR	DATE	DESIGNED	DRAWN
					PRELIMINARY	CONSTRUCTION
P2	2848023010		CONSTRUCTION	AUG 2021	KCLB	KCLB
				MAY 2023	KCLB	KCLB



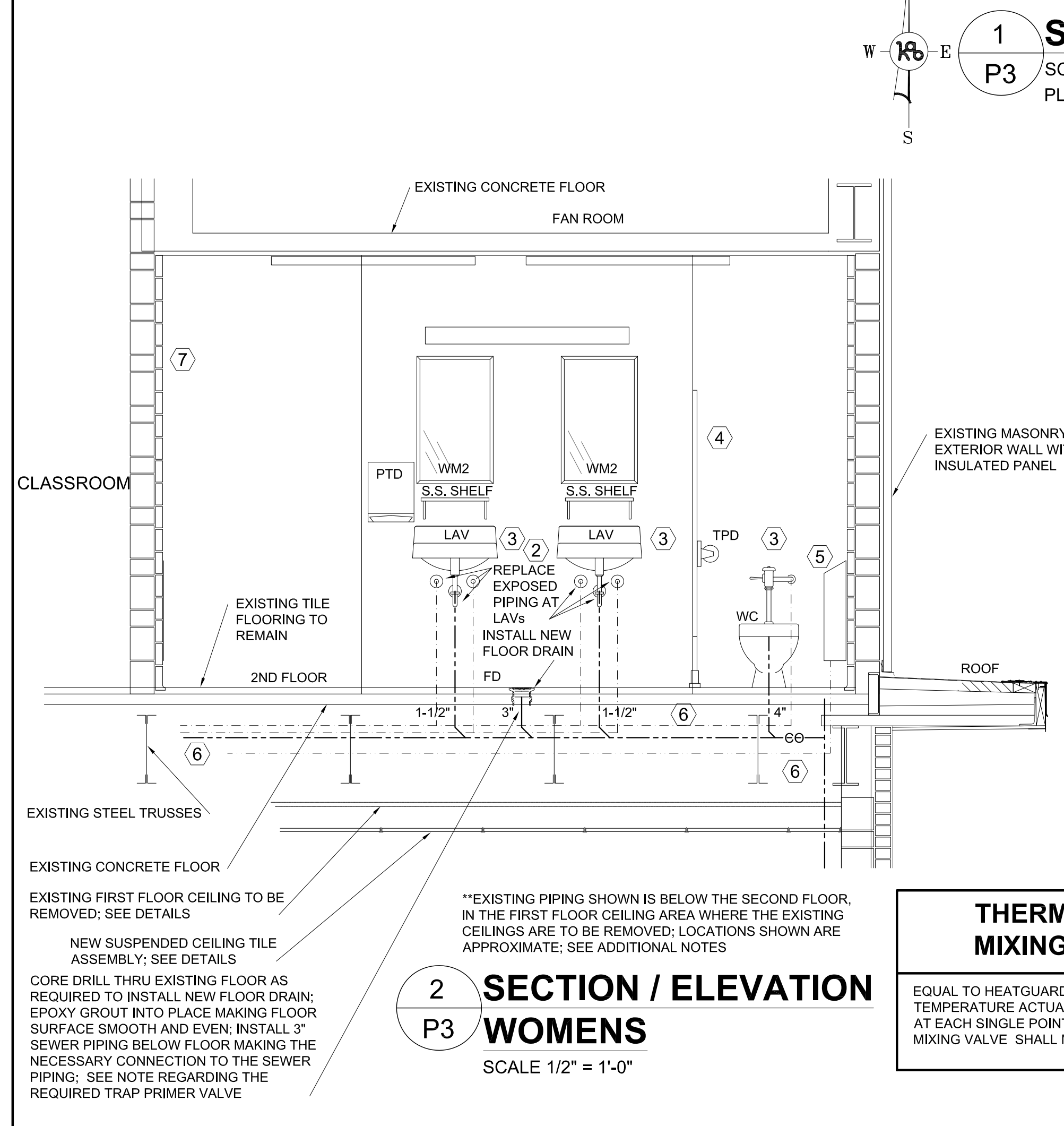
MARK	FIXTURE ITEM	WASTE	VENT	TRAP	CW	HW
EWC/BF	ELECTRIC WATER COOLER	1 1/4"	1 1/2"	1 1/4"	3/8"	-
FD	FLOOR DRAIN	3"	2"	2"	1/2"	-
LAV	LAVATORY	1 1/4"	1 1/2"	1 1/4"	3/8"	3/8"
SHR	SHOWER	2"	2"	2"	1/2"	1/2"
SS	SERVICE SINK (FLOOR)	2"	2"	2"	1/2"	1/2"
UR	URINAL	1 1/2"	1 1/2"	1 1/2"	1"	-
WC	WATER CLOSET	4"	4"	-	1"	-

MARK	FIXTURE ITEM
EWC/BF	ELECTRIC WATER COOLER/BOTTLE FILLER
FD	FLOOR DRAIN
LAV	LAVATORY
PTD	PAPER TOWEL DISPENSER
SS	SERVICE SINK (FLOOR)
TPD	TISSUE PAPER DISPENSER
UR	URINAL; WALL MOUNTED
WC	WATER CLOSET; FLOOR MOUNTED
WM2	WALL MIRROR W/SHELF

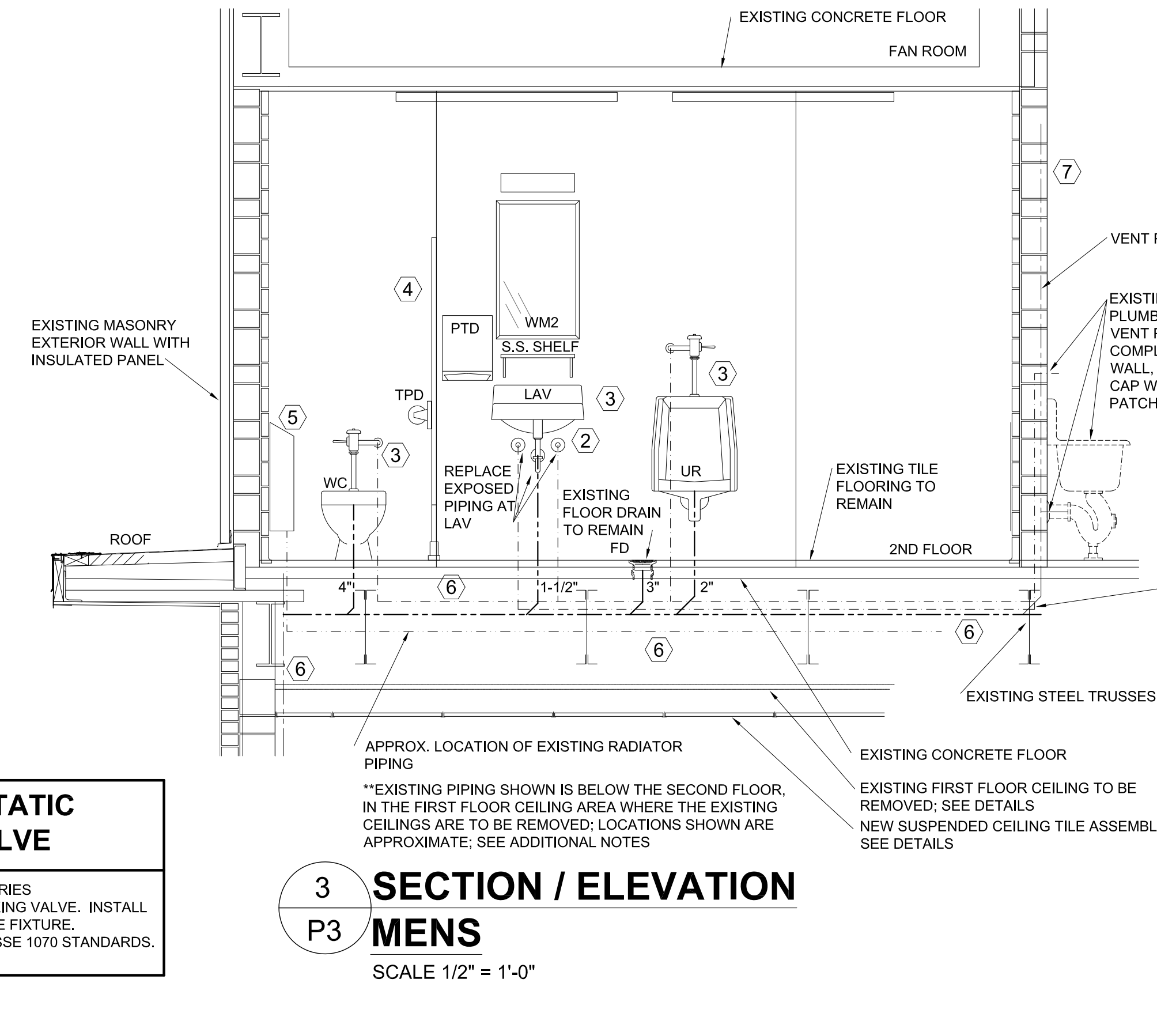
**GENERAL NOTES:**  
FOR LOCATION OF THIS WORK, SEE THE LOCATION PLAN ON DRAWING SHEET A1.  
CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND DIMENSIONS.  
INSTALL NEW PLUMBING FIXTURES AS SPECIFIED.  
ALL PLUMBING FIXTURES SHALL HAVE ACCESSIBLE SHUT OFF VALVES INSTALLED.  
CONTRACTOR SHALL CLEAN FLOOR AND WALL AREAS WHERE EXISTING FIXTURES WERE REPLACED; CLEAN OF OLD CAULK AND SEALANT MAKING NEWLY EXPOSED AREAS CLEAN.  
ALL NEW PLUMBING PIPING TO BE INSULATED AND LABELED AS SPECIFIED UPON COMPLETION.  
AT THE EXISTING AND NEW FLOOR DRAINS (FD), THE CONTRACTOR SHALL INSTALL TRAP PRIMER VALVES; IN LEU OF INSTALLING THESE TRAP PRIMER VALVES AND THE ASSOCIATED 1/2" WATER PIPING AS DIRECTED BY STATE PLUMBING CODES, THE CONTRACTOR MAY HAVE THE OPTION OF INSTALLING STATE OF MICHIGAN APPROVED (APPROVAL NUMBER 1623-PA EFFECTIVE 11-5-2011) INLINE FLOOR DRAIN TRAP SEALERS. THESE FLOOR DRAIN TRAP SEAL PROTECTION DEVICES MUST ALSO BE ASSE 1072 APPROVED. THE CONTRACTOR MUST SUBMIT DOCUMENTS SHOWING PROOF OF THE (LARA) APPROVAL.  
ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH LOCAL AND STATE PLUMBING CODES. INSTALL THE NECESSARY VENTING AND REVENTING AS REQUIRED TO MEET THESE CODES.  
THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.

**DEMOLITION / NEW WORK NOTES:**

- IN LOCATIONS WHERE PLUMBING PIPING; WATER PIPING; SEWER PIPING OR VENTING WAS REMOVED, FILL VOIDS IN THE CONCRETE FLOOR WITH EPOXY GROUT FULL, FLUSH AND SOLID WITH THE FLOOR.
- ALL PLUMBING FIXTURES RECEIVING HOT WATER (LAV) SHALL HAVE A THERMOSTATIC MIXING VALVE AT EACH OF THESE FIXTURES MEETING ASSE 1070.
- REPLACE EXISTING PLUMBING FIXTURE AS SPECIFIED. MAKE THE NECESSARY ALTERATIONS TO THE PLUMBING PIPING AT THIS LOCATION TO CONNECT NEW FIXTURE. INSTALL NEW SHUT OFF VALVES AND/OR FLUSH VALVES.
- EXISTING TOILET PARTITIONS TO BE REPLACED.
- EXISTING RADIATOR TO REMAIN; SEE MECHANICAL DRAWINGS FOR WORK INVOLVING WITH THESE UNITS AND COORDINATE.
- EXISTING PLUMBING PIPING TO THE FIXTURES ON THE SECOND FLOOR; REMOVE ALL EXPOSED HORIZONTAL AND EXPOSED VERTICAL SEWER PIPING IN THE FIRST FLOOR CEILING AREAS GOING UP TO THE FIXTURES ON THE SECOND FLOOR AND INSTALL ALL NEW SEWER PIPING AND SECURE INTO PLACE. \*\*EXACT LOCATION OF PIPING WILL NOT BE DETERMINED UNTIL THE EXISTING FIRST FLOOR PLASTER CEILINGS ARE REMOVED. THIS IS TO INCLUDE INSTALLING NEW P-TRAPS.
- APPROXIMATE LOCATION OF EXISTING VENT THRU THE ROOF OR REVENTING PIPING; TO REMAIN AND UTILIZED UNDER THIS WORK. IT SHALL BE NOTED THAT NOT ALL VENT PIPING IS SHOWN AS THE EXACT LOCATIONS ARE UNKNOWN. UPON THE FIRST FLOOR CEILING BEING REMOVED, AS SPECIFIED, THE LOCATIONS OF THE EXISTING VENT PIPING WILL BE LOCATED.
- AT NEW FLOOR DRAIN LOCATIONS: CORE DRILL CONCRETE FLOOR WITH MINIMAL DEMO, KEEPING THE EXISTING FLOOR FINISH INTACT; INSTALL NEW DRAINS; EPOXY GROUT FLUSH SMOOTH WITH EXISTING FLOORING. COORDINATE LOCATION OF NEW FLOOR DRAIN WITH EQUIPMENT AND OTHER FIXTURES WITHIN THE ROOM.



**THERMOSTATIC MIXING VALVE**  
EQUIL TO HEATGUARD 135 SERIES TEMPERATURE ACTUATED MIXING VALVE. INSTALL AT EACH SINGLE POINT OF USE FIXTURE. MIXING VALVE SHALL MEET ASSE 1070 STANDARDS.



**BASEMENT CLASSROOMS MECHANICAL DEMO NOTES**

- 1 REMOVE EXISTING SUPPLY AIR DIFFUSER AND TAKEOFF. PREPARE DUCT FOR NEW TAKEOFF.

**LEGEND**

- MECHANICAL DEMO
- - - EXISTING SUPPLY DUCT
- - - EXISTING RETURN DUCT
- NEW SUPPLY DUCT
- - - NEW RETURN DUCT
- NEW NATURAL GAS PIPING
- RT 175 NEW RETURN AIR GRILLE (DESIGNATION & VOLUME)
- S1 175 NEW SUPPLY AIR DIFFUSER (DESIGNATION & VOLUME)
- S1 225 NEW SUPPLY AIR DIFFUSER (DESIGNATION & VOLUME)

**GENERAL MECHANICAL DEMO NOTES**

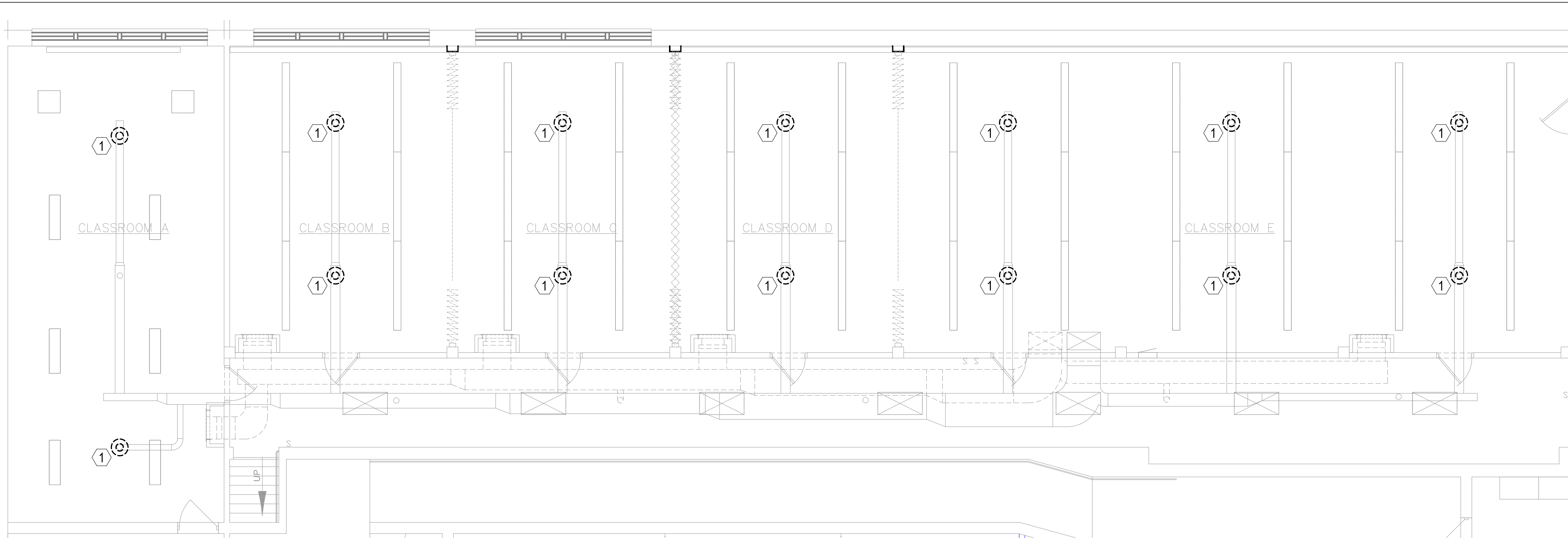
- CONTRACTOR TO PROVIDE PROPER DUST CONTROL MEASURES PER SPECIFICATIONS.
- CONTRACTOR TO MAINTAIN A CLEAN WORKSPACE AT THE END OF EACH DAY PER SPECIFICATIONS.
- DURING DEMOLITION, KEEP ALL ROOF AND EXTERIOR WALL PENETRATIONS SEALED OFF FROM EXTERIOR.

**BASEMENT CLASSROOMS MECHANICAL PLAN NOTES**

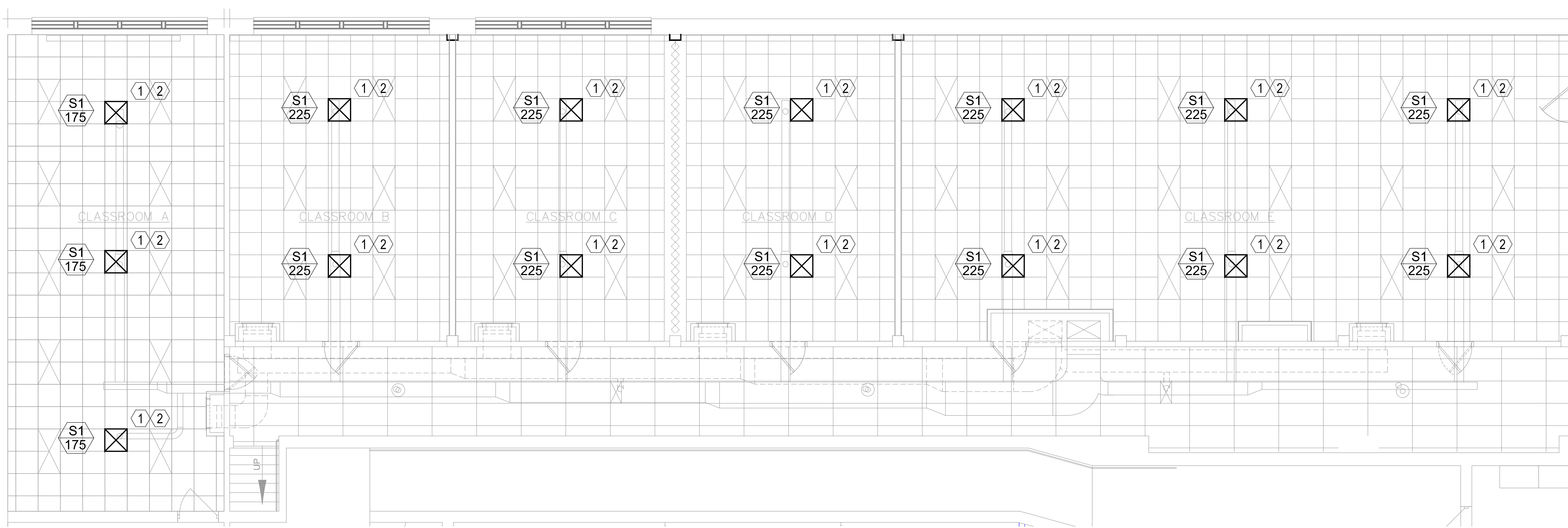
- 1 INSTALL NEW SUPPLY DUCT WITH BALANCE DAMPER TO NEW LAY-IN SUPPLY DIFFUSER. BALANCE DAMPER TO BE INSTALLED PRIOR TO FLEX DUCT. CONNECT TO EXISTING SUPPLY DUCT BRANCH WITH NEW TAKEOFF AS REQUIRED.
- 2 CONTRACTOR TO PROVIDE AIR BALANCE & REPORT OF ALL NEW SUPPLY DIFFUSERS, REFER TO SPECIFICATION.

**GENERAL MECHANICAL NOTES**

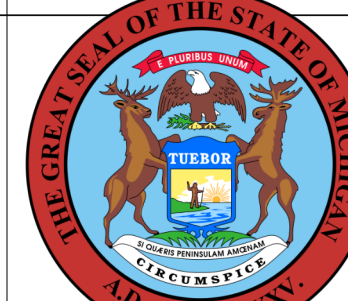
- CONTRACTOR SHALL PROVIDE AND INSTALL CEILING/WALL ACCESS PANELS IN APPROPRIATE LOCATIONS AS REQUIRED FOR VALVES, FIRE DAMPERS, OR ANY MECHANICAL EQUIPMENT NEEDING ACCESS.
- INSTALL ALL DUCT PER CURRENT SMACNA REQUIREMENTS. ALL BRANCH DUCTS MUST INCLUDE TAKEOFFS PER CURRENT SMACNA REQUIREMENTS.
- INSTALL NEW DUCT INSULATION PER SPECIFICATIONS.
- ALL SUPPLY, RETURN & DOMESTIC PIPING TO BE INSULATED, SEE SPECIFICATIONS.
- INSTALL NEW BALANCING DAMPER ON ALL SUPPLY DUCT BRANCHES UNLESS OTHERWISE NOTED ON GRD SCHEDULE. INSTALL UPSTREAM FROM FLEXIBLE DUCT AND BE A LOCKABLE TYPE.
- SEAL ALL DUCT SEAMS AND JOINTS PER SPECIFICATIONS.
- FIRE CAULK ALL PENETRATIONS THRU FIRE WALLS, CEILINGS AND FLOORS. REFER TO SHEET G1 FOR FIRE WALL LOCATIONS.
- PERFORM AIR AND WATER TEST AND BALANCE PER SPECIFICATIONS.
- CONTRACTOR TO COORDINATE ALL NEW EQUIPMENT STARTUP AND TESTING. PROVIDE ALL TRAINING PER SPECIFICATIONS.
- MECHANICAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR/DDC CONTRACTOR FOR SUPPLY DIFFUSER, RETURN GRILLE AND EQUIPMENT LOCATIONS.
- COORDINATE THE INSTALLATION OF NEW PIPING WITH NEW PLUMBING PIPING, ELECTRICAL CONDUIT & DDC WIRING.
- CONTRACTOR TO MEET ALL EQUIPMENT CLEARANCES. ANY CHANGES TO EQUIPMENT MUST MEET ANY NEW CLEARANCE REQUIREMENTS.



1 BASEMENT CLASSROOMS MECHANICAL DEMO PLAN  
M1 SCALE: 3/16" = 1'-0" AREA OF WORK #4



2 BASEMENT CLASSROOMS MECHANICAL PLAN  
M1 SCALE: 3/16" = 1'-0" AREA OF WORK #4



**MECHANICAL**

These documents are approved for compliance with the STATE OF MICHIGAN MECHANICAL CODE subject to field inspection and the conditions of approval.

DESIGNED	BOK
DRAWN	BOK
CHECKED	KMM
APPROVED	BAB

DATE	30 MAR 2023
	7 APRIL 2023

ISSUED FOR	<input checked="" type="checkbox"/> PRELIMINARY	<input checked="" type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> FINAL RECORD
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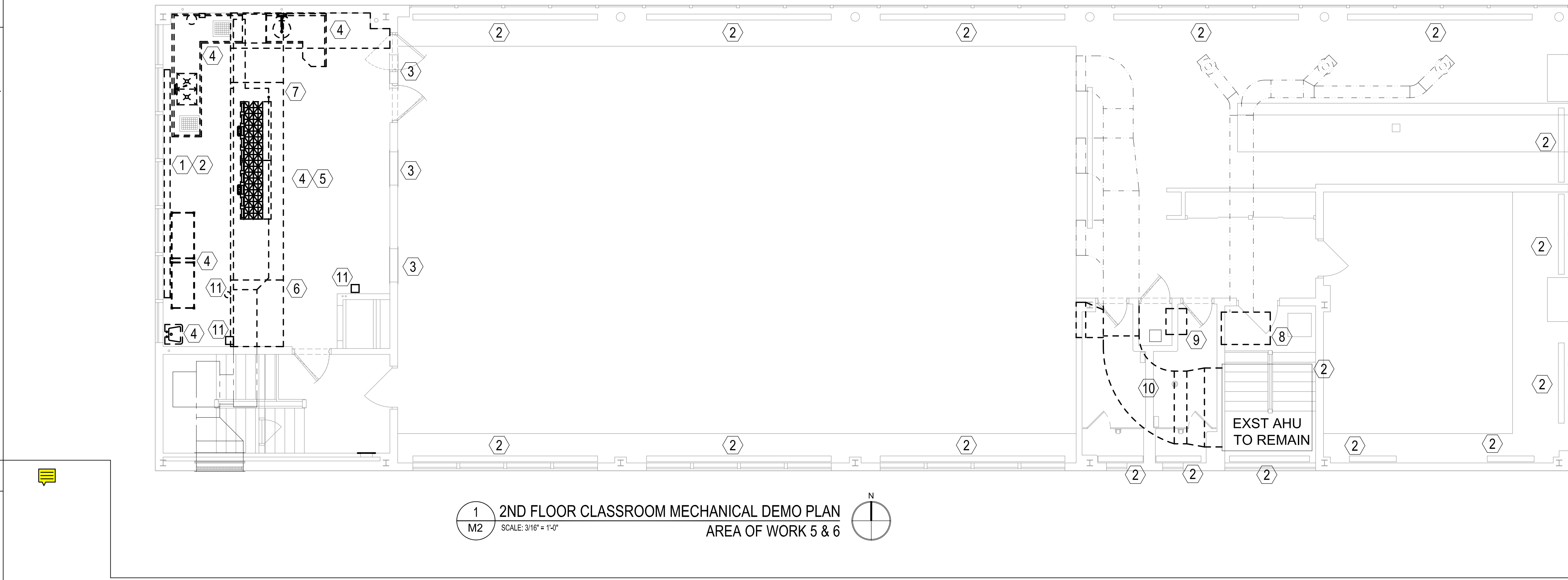
IDENTIFICATION NO.	PROJECT 26A6023010
	INDEX CODE

2ND FLOOR CLASSROOM MECHANICAL DEMO NOTES

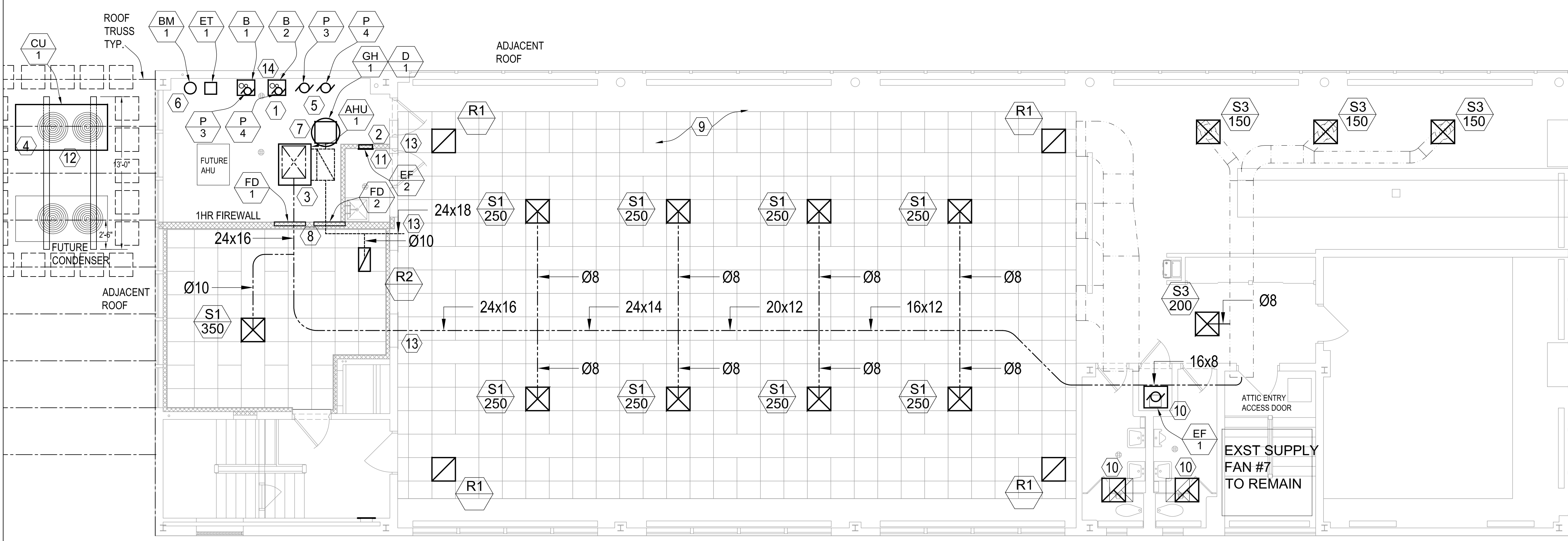
- 1 REMOVE RADIANT FIN TUBE HEATER AND CORRESPONDING STEAM SUPPLY AND CONDENSATE RETURN PIPING.
- 2 LOCATE THE STEAM SUPPLY AND CONDENSATE RETURN PIPES IN THE BASEMENT CRAWL SPACE FOR RADIANT FIN TUBE HEATER & SUPPLY FAN #7. CUT AND CAP STEAM SUPPLY AND CONDENSATE RETURN PIPING IN BASEMENT CRAWL SPACE. REFER TO SHEET M4 FOR BASEMENT CRAWL SPACE LAYOUT.
- 3 EXISTING GRILLE; COORDINATE WITH MECHANICAL SHEETS FOR IT TO REMAIN OR GET REMOVED; IF REMOVED SPACE SHALL BE FILLED WITH STEEL STUDS, GYPSUM WALLBOARD, BOTH SIDES AND BATT INSULATION, FULL THICKNESS; SEE DETAIL 6 ON SHEET A7d.
- 4 REMOVE ALL KITCHEN EQUIPMENT. OWNER WILL REMOVE ALL EQUIPMENT BEING RELOCATED PRIOR TO NOTICE TO PROCEED.
- 5 REMOVE EXISTING KITCHEN FIRE SYSTEM, COMPLETE. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT ELECTRICAL CIRCUITS.
- 6 REMOVE EXISTING HOOD AND RELATED DUCTWORK COMPLETE.
- 7 REMOVE EXISTING NATURAL GAS PIPING AND PREPARE TO EXTEND GAS PIPING TO NEW MECHANICAL EQUIPMENT.
- 8 REMOVE EXISTING OLD BAR LOUNGE AREA EXHAUST FAN IN THIS AREA. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT ELECTRICAL CIRCUIT.
- 9 REMOVE EXISTING BATHROOM EXHAUST FAN IN THIS AREA. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT ELECTRICAL CIRCUIT.
- 10 REMOVE EXISTING DUCT AS REQUIRED TO INSTALL NEW SUPPLY DUCT IN THIS AREA. REFER TO NEW MECHANICAL PLAN FOR NEW DUCT LAYOUT AND SIZE.
- 11 EXISTING FLOOR GREASE TRAP INTERCEPTOR OR FLOOR DRAIN TO BE REMOVED; SEE DETAIL 13 ON SHEET A7b.

2ND FLOOR CLASSROOM MECHANICAL PLAN NOTES

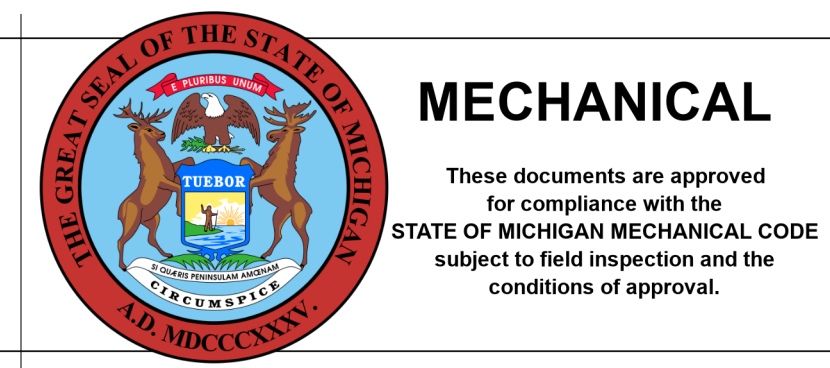
- 1 INSTALL NEW CONDENSING BOILERS B-1, B-2, HYDRAULIC AIR DIRT SEPARATOR HAS-1, & EXPANSION TANK ET-1 PER MANUFACTURER'S RECOMMENDATIONS. SEE HYDRONIC PIPING DETAIL ON SHEET M4. INSTALL DIRECT PIPED BOILER COMBUSTION AIR INTAKE AND BREACHING THRU ROOF PER MANUFACTURER'S RECOMMENDATIONS. INSTALL NEW ROOF MEMBRANE FLASHING PER ROOFING MANUFACTURER. PROVIDE WARRANTY CERTIFICATION FOR ALL ROOF WORK. REFER TO SHEET A1 FOR ADDITIONAL ROOF WARRANTY INFORMATION. ROUTE BOILER OUTDOOR RESET SENSOR ON EXTERIOR WALL IN 3/4" CONDUIT FROM SENSOR TO BOILER CONTROLLER, MAKE WEATHERTIGHT. COORDINATE WITH ELECTRICAL TO WIRE BOILERS FOR CASCADE OPERATION. SECONDARY BOILER TO BE A 'REDUNDANT LEADER' IN CASE OF PRIMARY BOILER POWER LOSS. INSTALL NEW GAS SHUTOFF VALVE, UNION, AND 6" MIN DIRT LEG. INSTALL GAS PIPING PER NATIONAL FUEL GAS CODE AND SPECIFICATIONS. PAINT GAS PIPE SAFETY YELLOW. CONTRACTOR IS RESPONSIBLE TO COORDINATE BOILER STARTUP, TEST AND CHECK WITH BOILER MANUFACTURER AND DMVA ENGINEERING. CONTRACTOR IS RESPONSIBLE TO PERFORM A CSD-1 ON NEW BOILERS AND PROVIDE BOILER TRAINING.
- 2 MECHANICAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR TO INSTALL EMERGENCY BOILER SHUTOFF SWITCH, SEE ELECTRICAL SHEETS.
- 3 INSTALL AHU-1 PER MANUFACTURER'S RECOMMENDED INSTALLATION. CONTRACTOR IS RESPONSIBLE TO COORDINATE AHU STARTUP, TEST AND CHECK WITH MANUFACTURER AND DMVA ENGINEERING. ROUTE AHU CONDENSATE DRAINS TO FLOOR DRAINS.
- 4 INSTALL NEW CONDENSER CU-1 PER MANUFACTURER'S RECOMMENDED INSTALLATION. INSTALL NEW EQUIPMENT SUPPORTS PER DETAIL ON SHEET M4. COORDINATE WITH ELECTRICAL CONTRACTOR TO CONNECT TO CONDENSER ELECTRICAL CIRCUIT. CONTRACTOR IS RESPONSIBLE TO COORDINATE CONDENSER STARTUP, TEST AND CHECK WITH MANUFACTURER AND DMVA ENGINEERING. ROUTE LIQUID AND SUCTION LINES INTO 1ST FLOOR TIGHT ALONG CEILING AND UP THRU ROOF PENETRATION CURB/BOOT SIMILAR TO ROOF PRODUCTS & SYSTEMS PIPE PORTAL W/ RC-2A CURB. COORDINATE WITH ELECTRICAL AND DDC CONTRACTOR TO SIZE CAP AS REQUIRED. LIQUID AND GAS AC LINES ARE TO BE STRAIGHT AND NEAT. NO LARGE SWEEPING BENDS ALLOWED. REFER TO MANUFACTURER'S IOM FOR CORRECT PIPING PROCEDURES FOR LONGER PIPING LENGTH. PROVIDE PIPING PLAN WITH CONDENSER SUBMITTAL TO DMVA ENGINEERING.
- 5 INSTALL NEW PUMPS IN THIS AREA. SEE SCHEDULE ON SHEET M4.0. COORDINATE W/ ELECTRICAL, DDC CONTRACTOR & BOILER MANUFACTURER TO INSTALL A NEW COMBINATION MOTOR STARTER/DISCONNECT AND RELAY FOR EACH CIRCULATION PUMPS PER SPECIFICATION. COORDINATE WITH ELECTRICAL & DDC CONTRACTORS TO INSTALL SEQUENCER FOR NEW SYSTEM PUMPS P-3 & P-4.
- 6 INSTALL NEW BOILER MAKE-UP TANK BM-1 IN MECHANICAL ROOM AND CONNECT TO BOILER SYSTEM. SEE SCHEDULE ON SHEET M4.0. COORDINATE WITH ELECTRICAL CONTRACTOR FOR MAKEUP TANK RECEPTACLE LOCATION.
- 7 INSTALL NEW GRAVITY FRESH AIR INTAKE, GH-1, PER MANUFACTURER'S RECOMMENDATIONS THRU ROOF. INSTALL NEW 22"x22", 18" TALL INSULATED ROOF CURB. INSTALL NEW ROOF MEMBRANE FLASHING PER ROOFING MANUFACTURER. PROVIDE WARRANTY CERTIFICATION FOR ALL ROOF WORK. CONNECT NEW 16"x12" FA DUCT TO RETURN DUCT ON AHU-1 W/ NEW CONTROL DAMPER, D-1. COORDINATE WITH DDC CONTRACTOR TO INSTALL NEW EXTERNAL DAMPER ACTUATOR ON CONTROL DAMPER. PROVIDE OPTIONAL KIT AS REQUIRED.
- 8 INSTALL FIRE DAMPERS ON ALL DUCT INTO MECHANICAL ROOM. REFER TO SCHEDULE ON SHEET M4. PROVIDE SPARE FUSIBLE LINK FOR ALL FIRE DAMPERS.
- 9 INSTALL NEW SUPPLY DUCT BRANCH WITH BALANCE DAMPER TO ALL NEW SUPPLY DIFFUSERS UNLESS OTHERWISE SPECIFIED IN GRD SCHEDULE. BALANCE DAMPER TO BE INSTALLED PRIOR TO FLEX DUCT. CONNECT TO EXISTING SUPPLY DUCT MAIN WITH TAKEOFF AS REQUIRED. CONTRACTOR TO PROVIDE AIR BALANCE & REPORT, REFER TO SPECIFICATION.
- 10 INSTALL NEW EXHAUST FAN EF-1 IN MEZZANINE ABOVE BATHROOMS. CONNECT TO EXISTING DUCT, MODIFY AS REQUIRED. INSTALL NEW EXHAUST GRILLES IN BOTH MENS AND WOMENS BATHROOMS. MATCH EXISTING SIZE.
- 11 INSTALL NEW EXHAUST FAN EF-2 INSIDE STUD WALL IN JANITOR'S CLOSET PER MANUFACTURER'S RECOMMENDATIONS. INSTALL NEW EXHAUST DUCT UP AND CONNECT TO NEW 18" TALL INSULATED ROOF CURB. INCLUDE OPTIONAL CURB CAP RCC-7. INSTALL NEW ROOF MEMBRANE FLASHING PER ROOFING MANUFACTURER. PROVIDE WARRANTY CERTIFICATION FOR ALL ROOF WORK. REFER TO SHEET A1 FOR ADDITIONAL ROOF WARRANTY INFORMATION.
- 12 INSTALL ROOFTOP SUPPORT BEAM IN THIS LOCATION. REFER TO DETAIL ON SHEET M5. CONNECT CONDENSERS TO NEW ROOFTOP EQUIPMENT SUPPORT BEAM. REFER TO DETAIL ON THIS SHEET. INSTALL STRUCTURAL TUBING SUPPORTS ON (3) ROOF TRUSSES ALONG BOTH SIDES. (6) LOCATIONS TOTAL. DISTANCE BETWEEN BEAM BASED ON EQUIPMENT MOUNTING HOLE LOCATIONS. REFER TO MANUFACTURER'S INSTALLATION MANUAL. INSTALL NEW ROOF MEMBRANE FLASHING PER ROOFING MANUFACTURER. PROVIDE WARRANTY CERTIFICATION FOR ALL ROOF WORK. INSTALL NEW WALKING PADS AROUND NEW MECHANICAL EQUIPMENT, SEE SPECIFICATIONS.
- 13 MODIFY EXISTING OPENINGS AS REQUIRED TO FIT NEW DUCTWORK. COORDINATE WITH GC DURING CONSTRUCTION OF NEW WALLS.
- 14 INSTALL NEW GAS PIPE TO EACH BOILER AS REQUIRED PER NATIONAL GAS FUEL CODE. CONNECT TO EXISTING GAS PIPE PREVIOUSLY SERVING GAS FIRED KITCHEN EQUIPMENT. ROUTE TIGHT ALONG 1ST FLOOR CEILING AS REQUIRED. PAINT ALL NEW GAS LINES SAFETY YELLOW. REFER TO PIPING DETAIL ON SHEET M4.



1 2ND FLOOR CLASSROOM MECHANICAL DEMO PLAN  
SCALE: 3/16" = 1'-0"  
AREA OF WORK 5 & 6



2 2ND FLOOR CLASSROOM MECHANICAL PLAN  
SCALE: 3/16" = 1'-0"  
AREA OF WORK 5 & 6



STATE OF MICHIGAN  
 DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET  
 PROCUREMENT AND REAL ESTATE SERVICES ADMINISTRATION  
**DESIGN AND CONSTRUCTION DIVISION**  
 ADAMI LACH, P.E., DIRECTOR

**RENOVATE ARMORY - DLG**  
 DEPARTMENT OF MILITARY AND VETERANS AFFAIRS  
 DETROIT LIGHT GUARD ARMORY DETROIT, MICHIGAN

DESIGNED	BOK
DRAWN	BOK
CHECKED	KMM
APPROVED	BAB

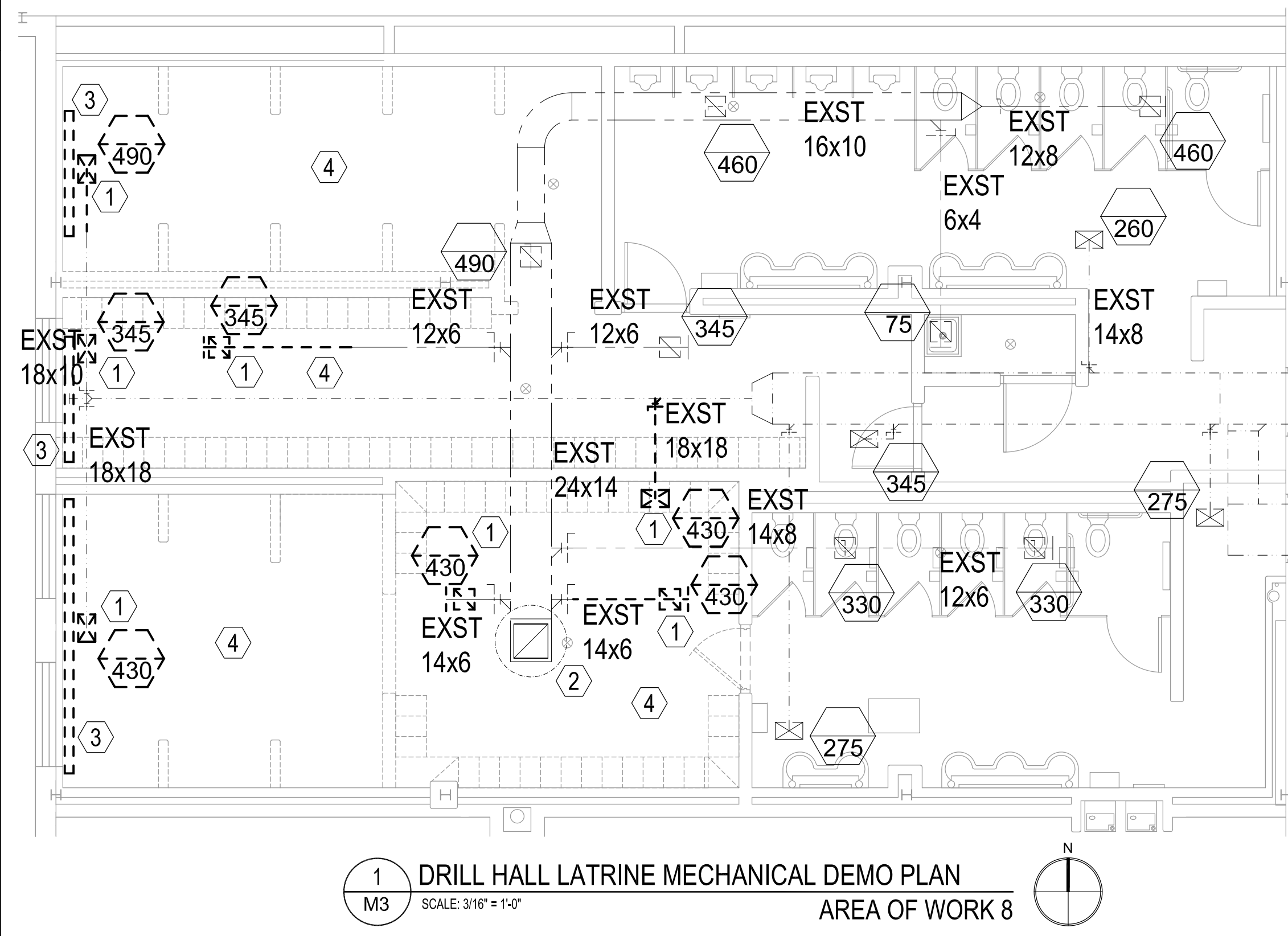
DATE	ISSUED FOR
30 MAR 2023	PRELIMINARY
7 APRIL 2023	CONSTRUCTION
	FINAL RECORD

IDENTIFICATION NO. PROJECT 2646023010 INDEX CODE

SHEET MECHANICAL PLAN **M2.0**

**DRILL HALL LATRINE MECHANICAL DEMO PLAN NOTES**

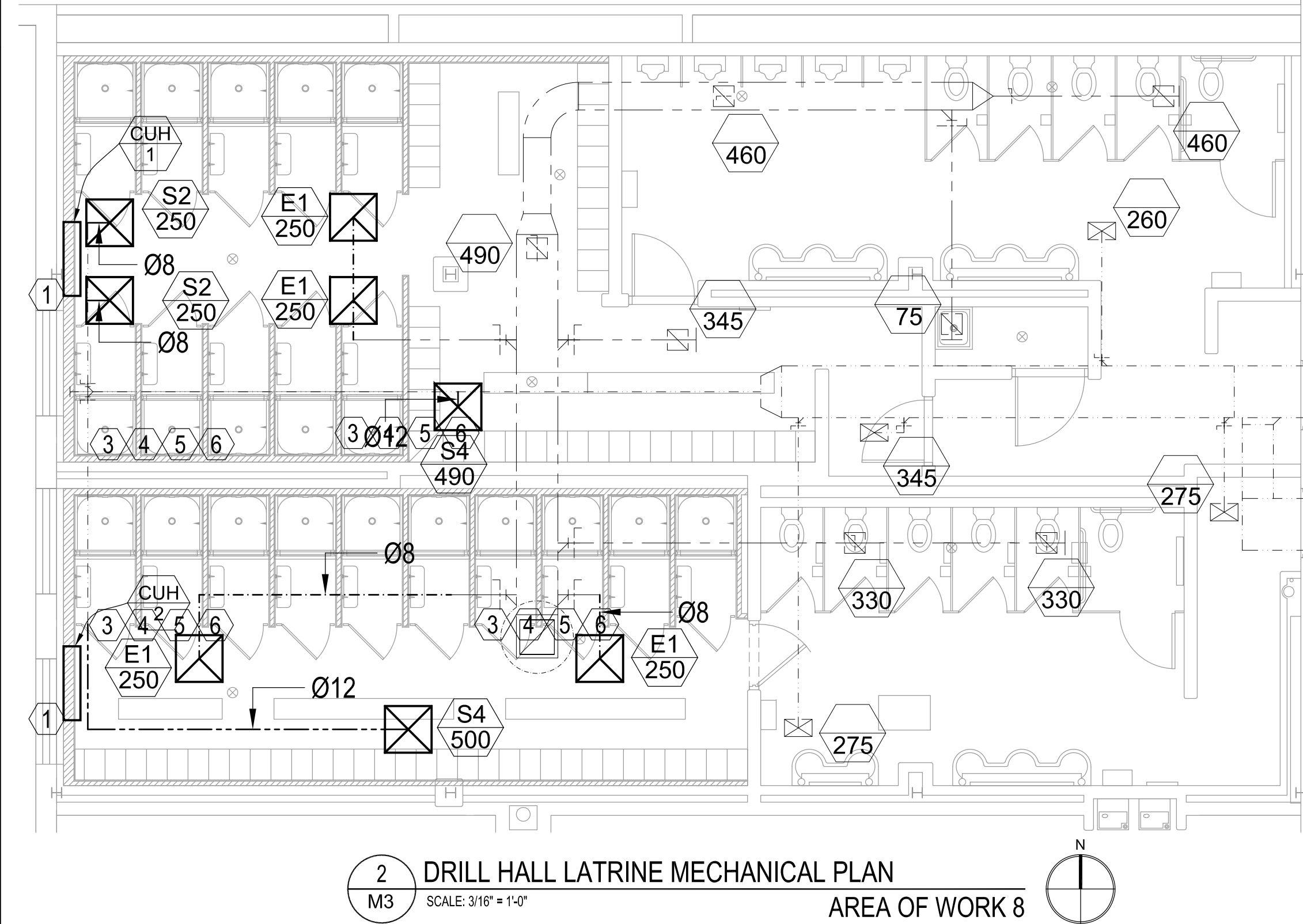
- REMOVE SUPPLY DIFFUSERS AND EXHAUST GRILLES AS SHOWN. REMOVE ALL SUPPLY AND EXHAUST DUCT AS REQUIRED. REFER TO DRILL HALL LATRINE MECHANICAL PLAN FOR NEW SUPPLY DIFFUSER AND EXHAUST GRILLE LAYOUT.
- EXISTING EXHAUST FAN TO REMAIN.
- REMOVE EXISTING STEAM FIN TUBE AND ALL CORRESPONDING COMPONENTS AND PREPARE FOR NEW STEAM CABINET UNIT HEATER.
- COORDINATE WITH DDC CONTRACTOR TO DISCONNECT AND REMOVE ALL EXISTING BUILDING MANAGEMENT SYSTEM CONTROLS IN THE MEN'S & WOMEN'S LOCKER AND SHOWER ROOMS.



**1 DRILL HALL LATRINE MECHANICAL DEMO PLAN**  
SCALE: 3/16" = 1'-0"  
AREA OF WORK 8

**DRILL HALL LATRINE MECHANICAL PLAN NOTES**

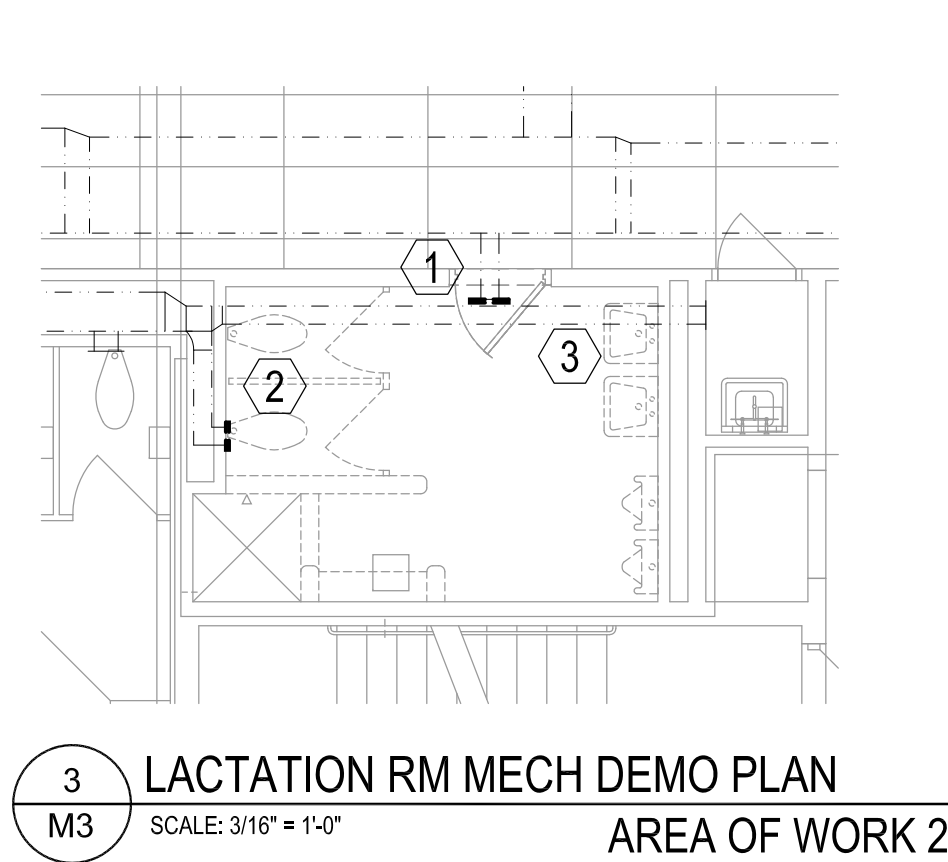
- INSTALL NEW STEAM CABINET UNIT HEATERS CUH-1 & CUH-2 18" FROM CEILING PER MANUFACTURER'S RECOMMENDATIONS. SEE SCHEDULE ON SHEET M4. INSTALL NEW STEAM CONTROL VALVE W/ ACTUATOR AND EXTEND EXISTING STEAM AND CONDENSATE PIPING AS REQUIRED. INSTALL NEW CONDENSATE TRAP. SEE STEAM PIPING DETAIL ON SHEET M4.
- EXHAUST FAN TO REMAIN. EXISTING ON ROOF.
- INSTALL NEW SUPPLY DIFFUSERS AND EXHAUST GRILLES AS SHOWN. MODIFY AND EXTEND SUPPLY AND EXHAUST DUCT AS REQUIRED. SEAL ALL NEW DUCT PER SPECIFICATIONS.
- INSTALL NEW BALANCING DAMPERS ON ALL NEW SUPPLY DIFFUSERS AND EXHAUST GRILLES.
- INSTALL NEW DUCT INSULATION ON ALL SUPPLY & EXHAUST DUCT.
- PROVIDE AIR BALANCE AND REPORT FOR ALL NEW/EXISTING SUPPLY DIFFUSERS & EXHAUST GRILLES. REFER TO SPECIFICATION.



**2 DRILL HALL LATRINE MECHANICAL PLAN**  
SCALE: 3/16" = 1'-0"  
AREA OF WORK 8

**LACTATION RM MECH DEMO NOTES**

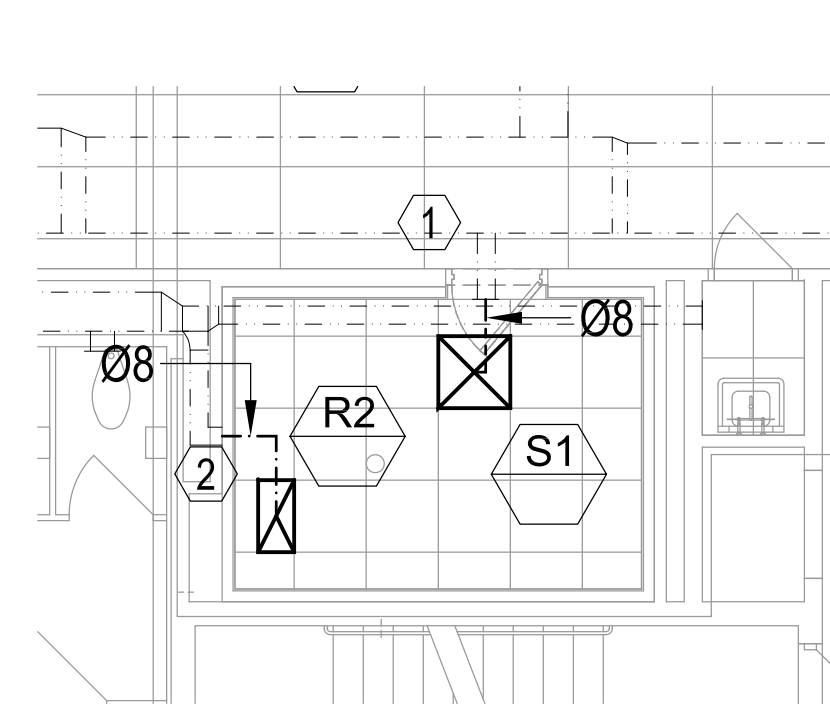
- REMOVE EXISTING SUPPLY GRILLE.
- REMOVE EXISTING EXHAUST GRILLE.
- EXISTING DUCT TO REMAIN.



**3 LACTATION RM MECH DEMO PLAN**  
SCALE: 3/16" = 1'-0"  
AREA OF WORK 2

**LACTATION RM MECH PLAN NOTES**

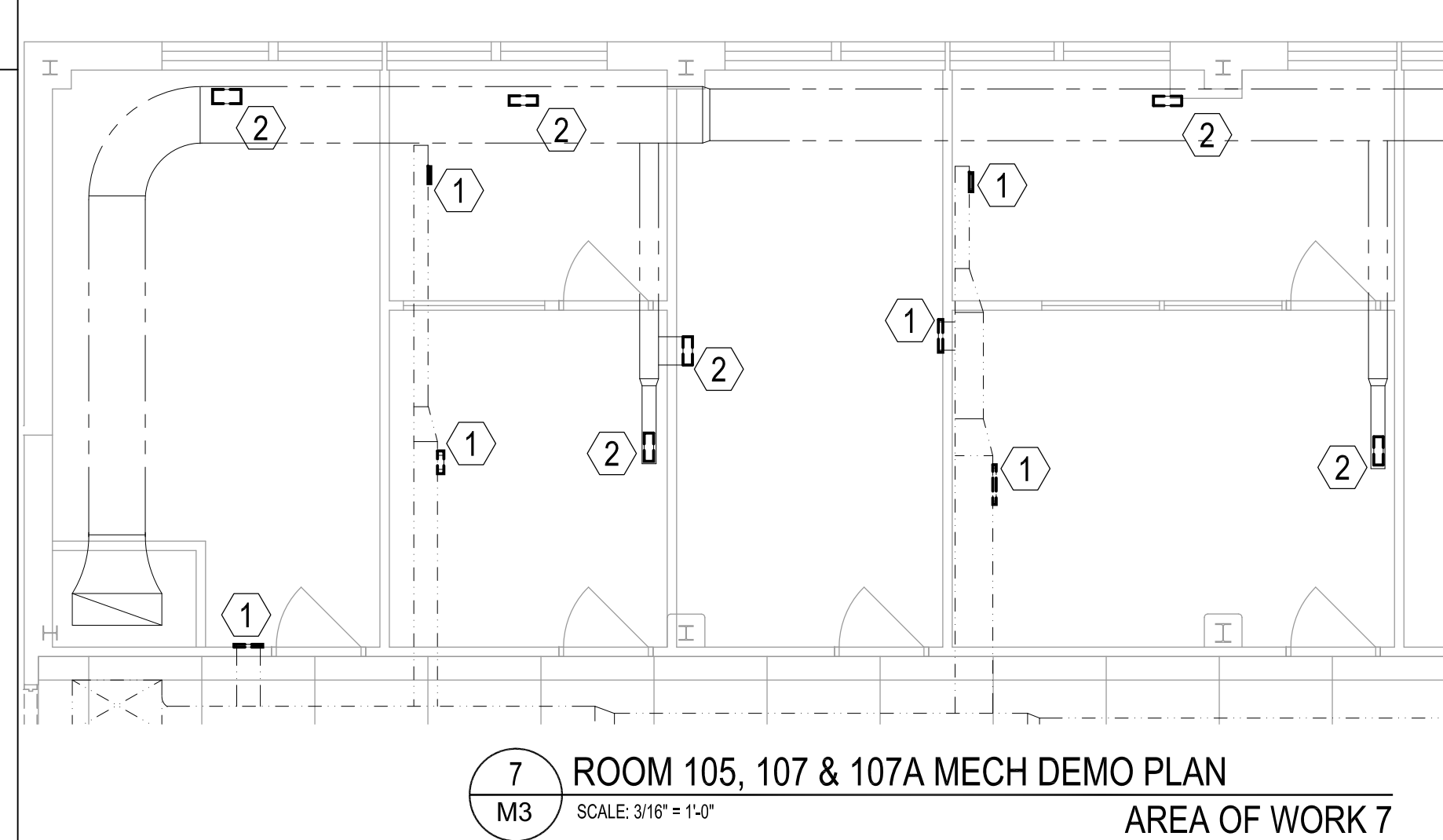
- EXTEND SUPPLY DUCT FROM EXISTING OPENING TO NEW 2-WAY LAY-IN SUPPLY DIFFUSER. INSTALL BALANCING DAMPER ON NEW SUPPLY DUCT BRANCH. LEAVE BALANCE DAMPER FULLY OPEN.
- EXTEND EXHAUST DUCT FROM EXISTING OPENING TO NEW 12x24 EGG CRATE EXHAUST GRILLE. INSTALL NEW DUCT TRANSITION AS REQUIRED TO CONNECT TO NEW EXHAUST GRILLE.



**4 LACTATION RM MECH PLAN**  
SCALE: 3/16" = 1'-0"  
AREA OF WORK 2

**OFFICE AREA MECH DEMO NOTES**

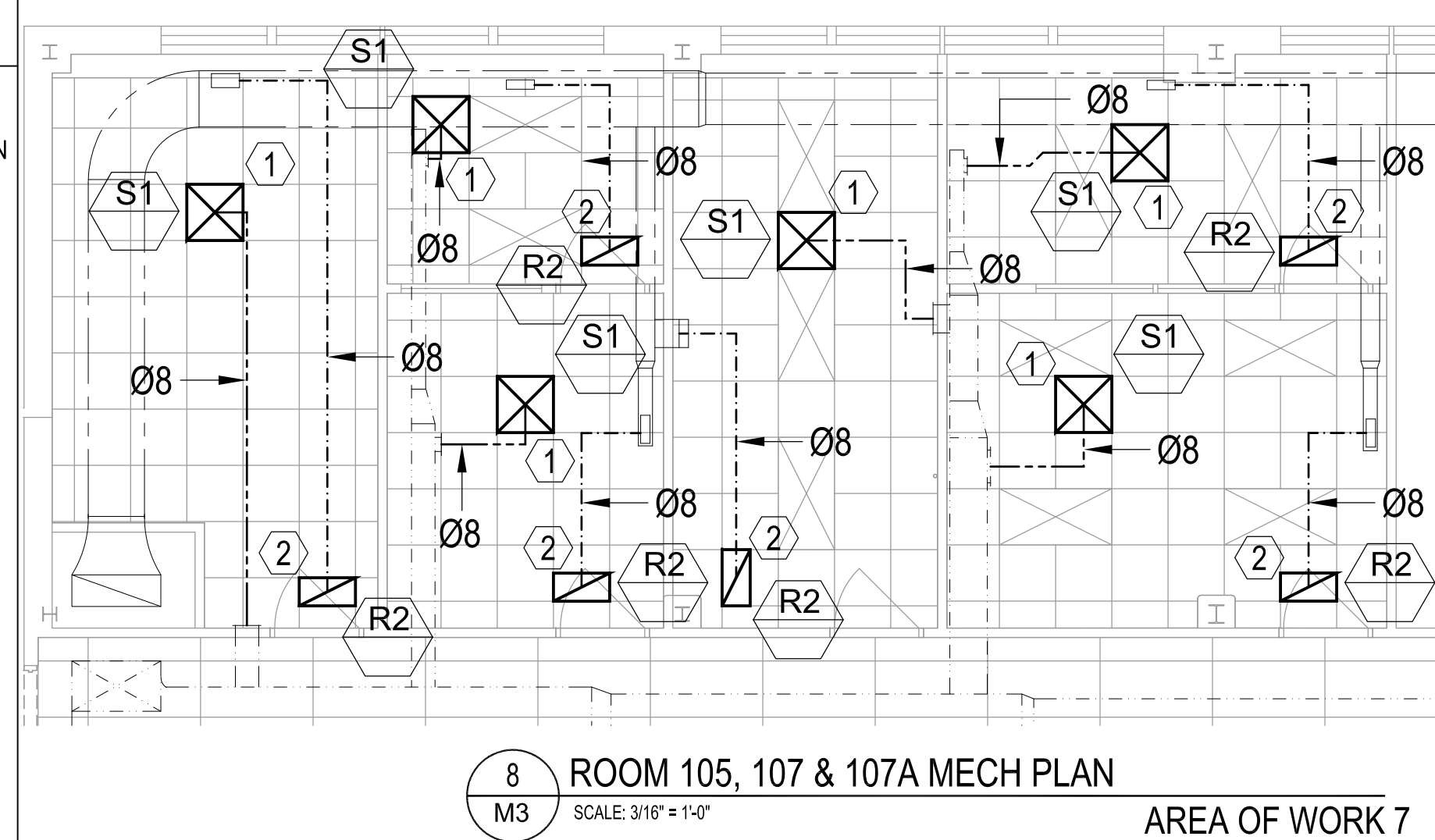
- REMOVE EXISTING SUPPLY GRILLE.
- REMOVE EXISTING RETURN GRILLE.



**7 ROOM 105, 107 & 107A MECH DEMO PLAN**  
SCALE: 3/16" = 1'-0"  
AREA OF WORK 7

**OFFICE AREA MECH NOTES**

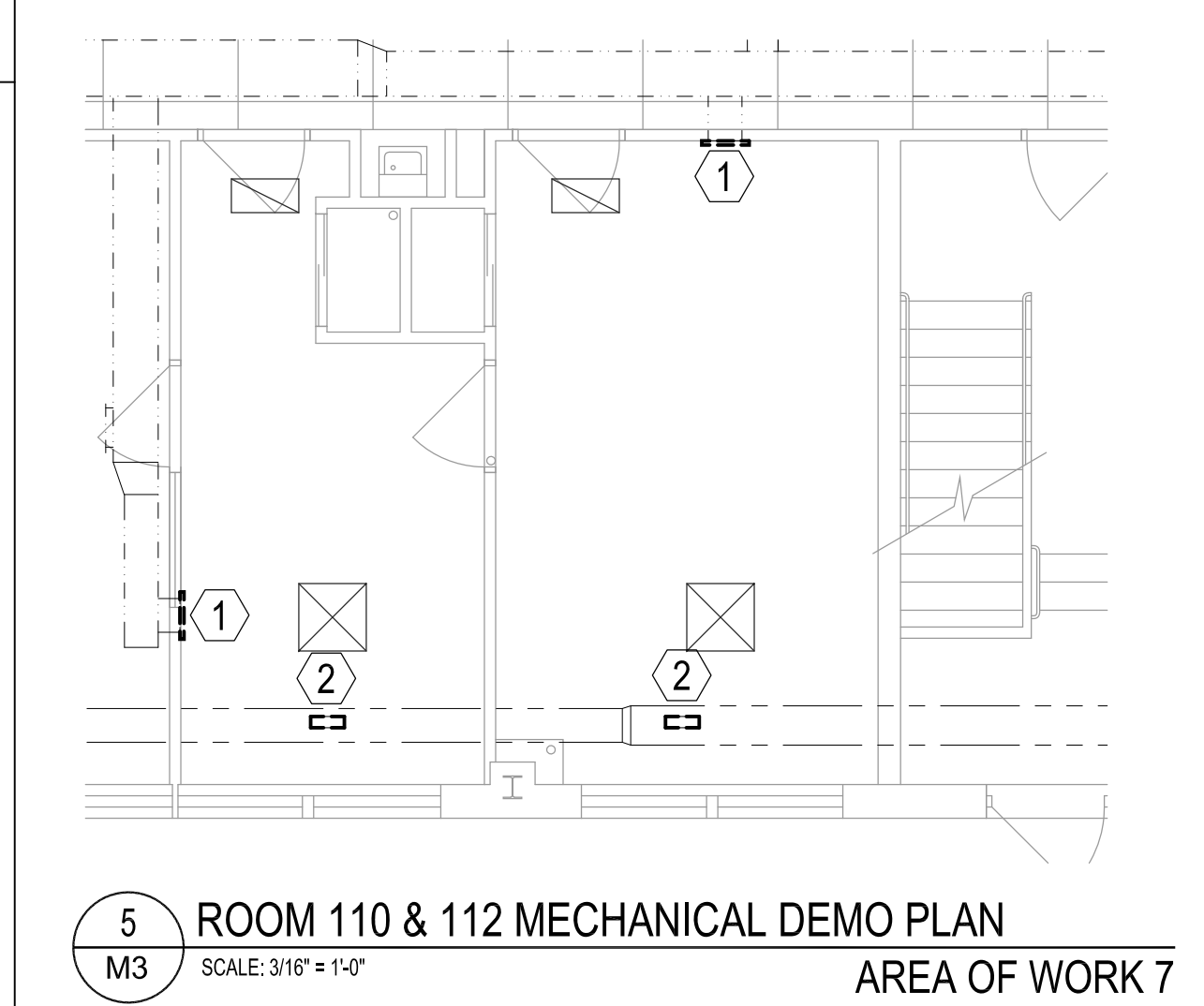
- EXTEND SUPPLY DUCT FROM EXISTING OPENING TO NEW LAY-IN SUPPLY DIFFUSER. INSTALL BALANCING DAMPER ON NEW SUPPLY DUCT BRANCH. LEAVE BALANCE DAMPER FULLY OPEN.
- EXTEND RETURN DUCT FROM EXISTING OPENING TO NEW 12x24 EGG CRATE EXHAUST GRILLE. INSTALL NEW DUCT TRANSITION AS REQUIRED TO CONNECT TO NEW EXHAUST GRILLE.



**8 ROOM 105, 107 & 107A MECH PLAN**  
SCALE: 3/16" = 1'-0"  
AREA OF WORK 7

**ROOM 110 & 112 MECHANICAL DEMO PLAN NOTES**

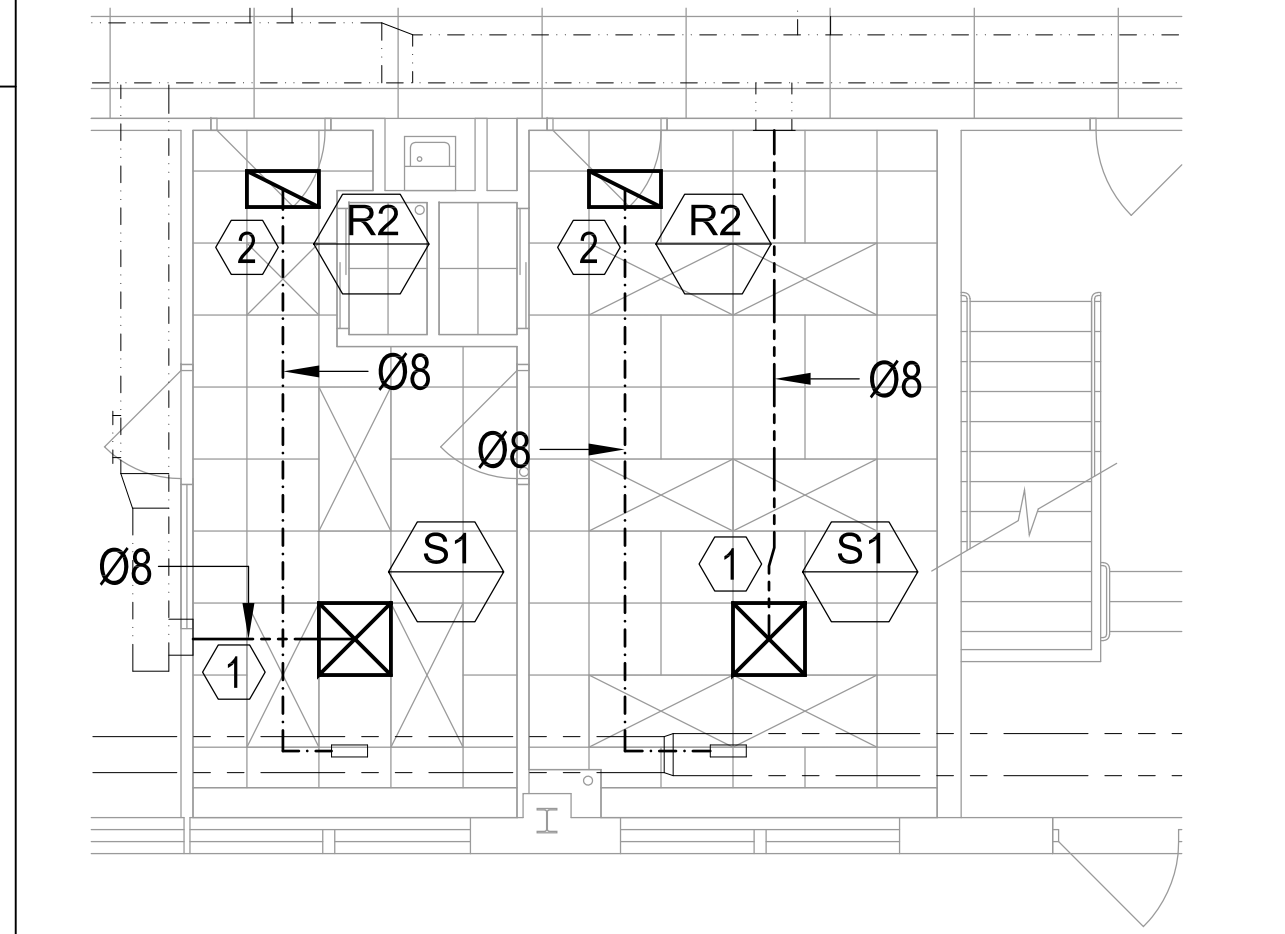
- REMOVE EXISTING SUPPLY GRILLE.
- REMOVE EXISTING RETURN GRILLE.



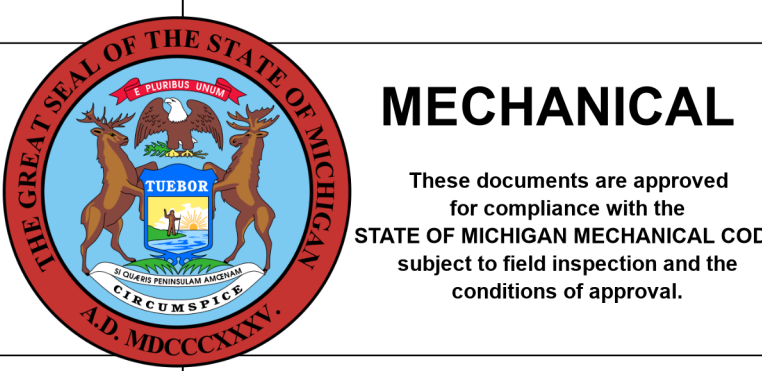
**5 ROOM 110 & 112 MECHANICAL DEMO PLAN**  
SCALE: 3/16" = 1'-0"  
AREA OF WORK 7

**ROOM 110 & 112 MECHANICAL PLAN NOTES**

- EXTEND SUPPLY DUCT FROM EXISTING OPENING TO NEW LAY-IN SUPPLY DIFFUSER. INSTALL BALANCING DAMPER ON NEW SUPPLY DUCT BRANCH. LEAVE BALANCE DAMPER FULLY OPEN.
- EXTEND RETURN DUCT FROM EXISTING OPENING TO NEW 12x24 EGG CRATE EXHAUST GRILLE. INSTALL NEW DUCT TRANSITION AS REQUIRED TO CONNECT TO NEW EXHAUST GRILLE.

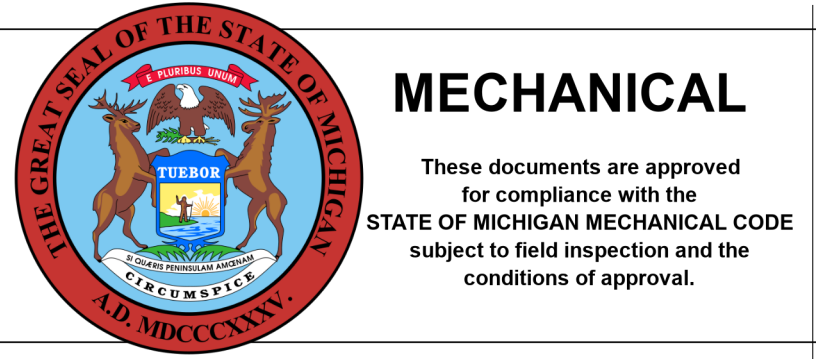


**6 ROOM 110 & 112 MECHANICAL PLAN**  
SCALE: 3/16" = 1'-0"  
AREA OF WORK 7



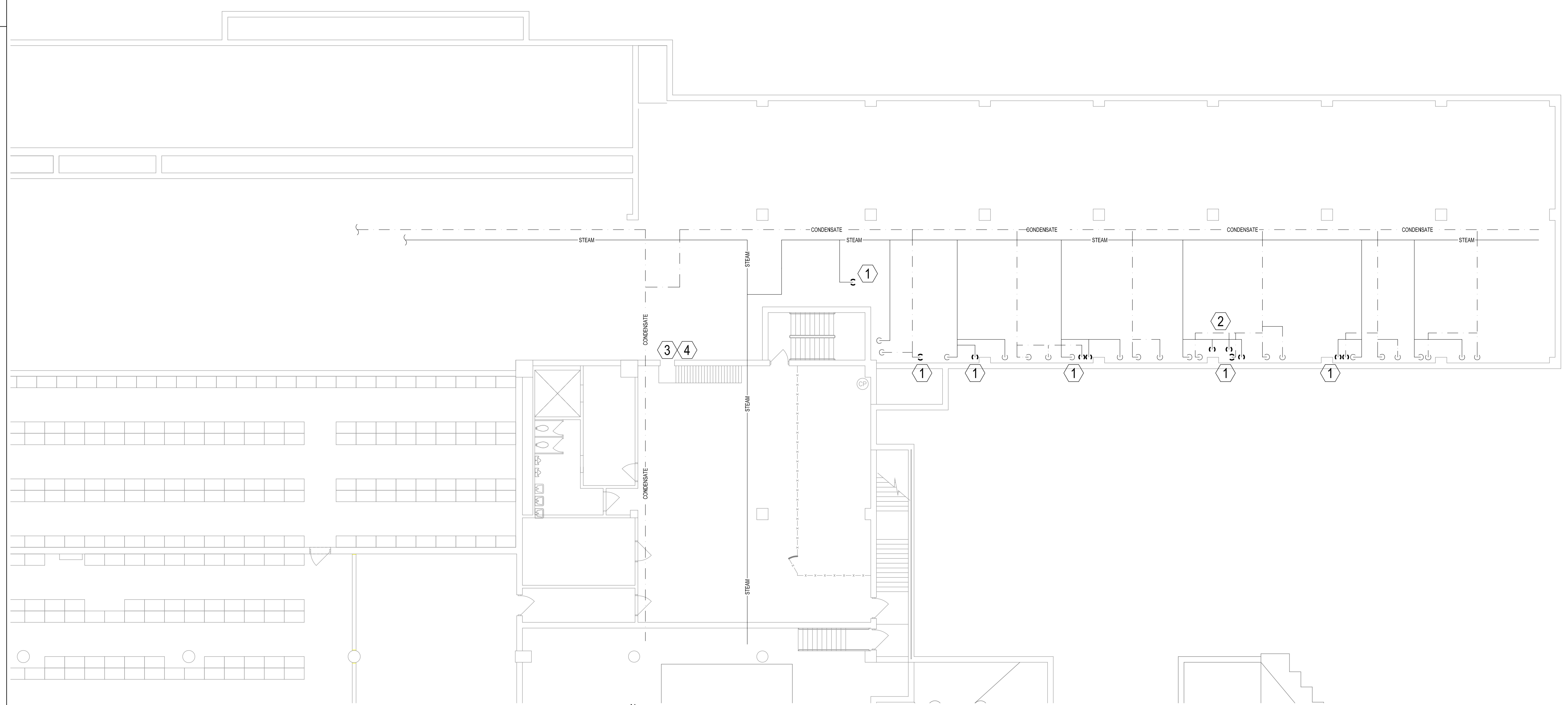
**BASEMENT CLASSROOMS MECHANICAL DEMO NOTES**

- 1 CUT AND CAP STEAM SUPPLY AND CONDENSATE RETURN PIPING AT THIS LOCATION FEEDING 2ND FLOOR RADIANT FIN TUBE STEAM PIPING. REFER TO SHEET M2 FOR STEAM RADIANT FIN TUBE LOCATIONS. CONTRACTOR TO VERIFY PIPE IS GOING TO 2ND FLOOR PRIOR TO CUTTING. ALL 1ST FLOOR STEAM AND CONDENSATE PIPING TO REMAIN.
- 2 CUT AND CAP STEAM SUPPLY AND CONDENSATE RETURN PIPING AT THIS LOCATION FEEDING 2ND FLOOR SUPPLY FAN #7. REFER TO SHEET M2 FOR SUPPLY FAN #7 LOCATION. CONTRACTOR TO VERIFY PIPE IS GOING TO SUPPLY FAN #7 PRIOR TO CUTTING.
- 3 FOR ALL WORK IN THE BASEMENT CRAWL SPACE, THE CONTRACTOR, AND ALL SUBCONTRACTORS SHALL ABIDE TO ALL CURRENT OSHA REQUIREMENTS REGARDING ACCESSING/ENTERING/WORKING WITHIN CRAWL SPACES/CONFINED SPACES.
- 4 REFER TO SPECIFICATION FOR ASBESTOS INFORMATION FOR THIS AREA.



**MECHANICAL**

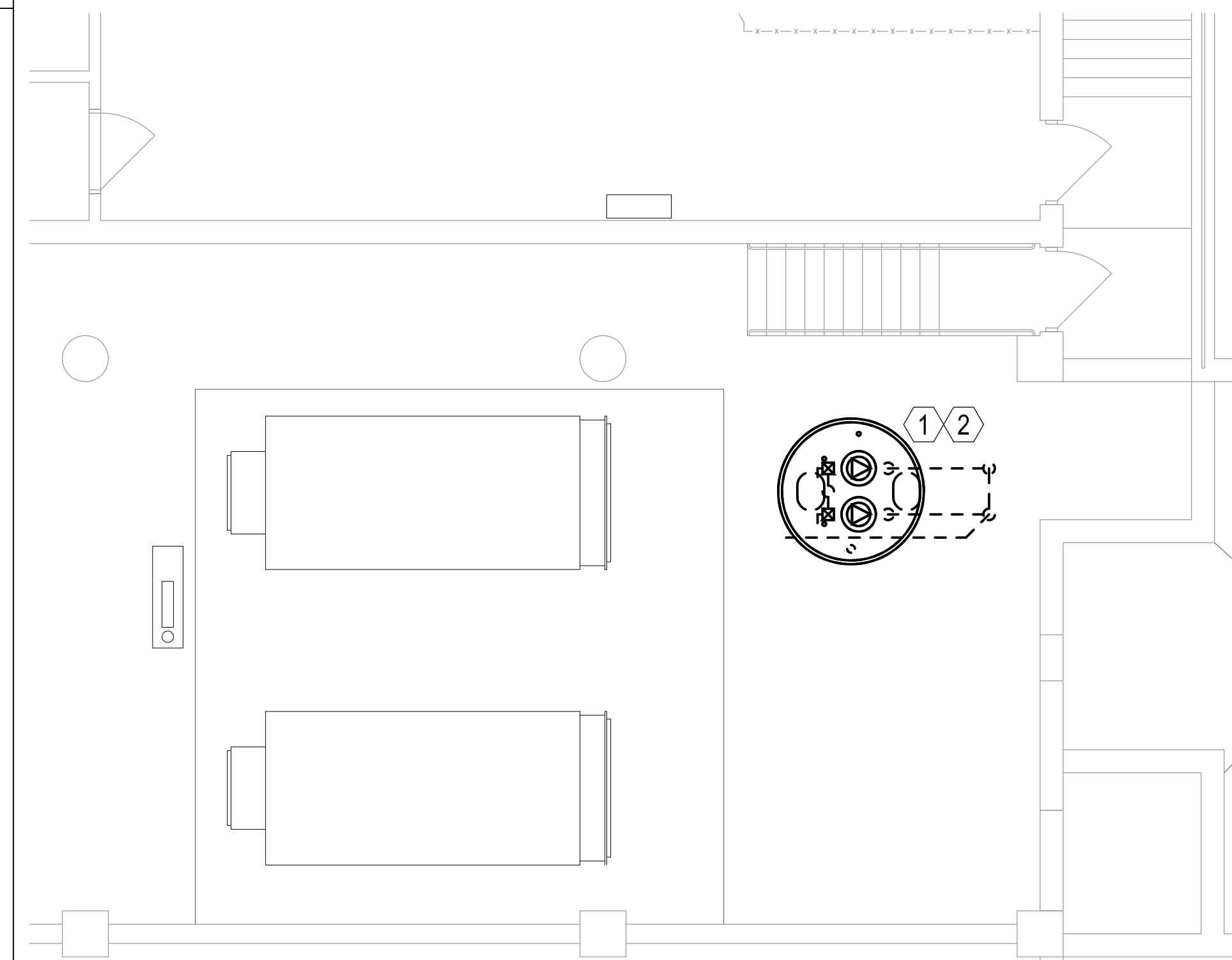
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1 M4 BASEMENT CRAWL SPACE MECHANICAL PLAN  
SCALE: 3/32" = 1'-0"  
AREA OF WORK #4

**BASEMENT BOILER ROOM MECH DEMO PLAN NOTES**

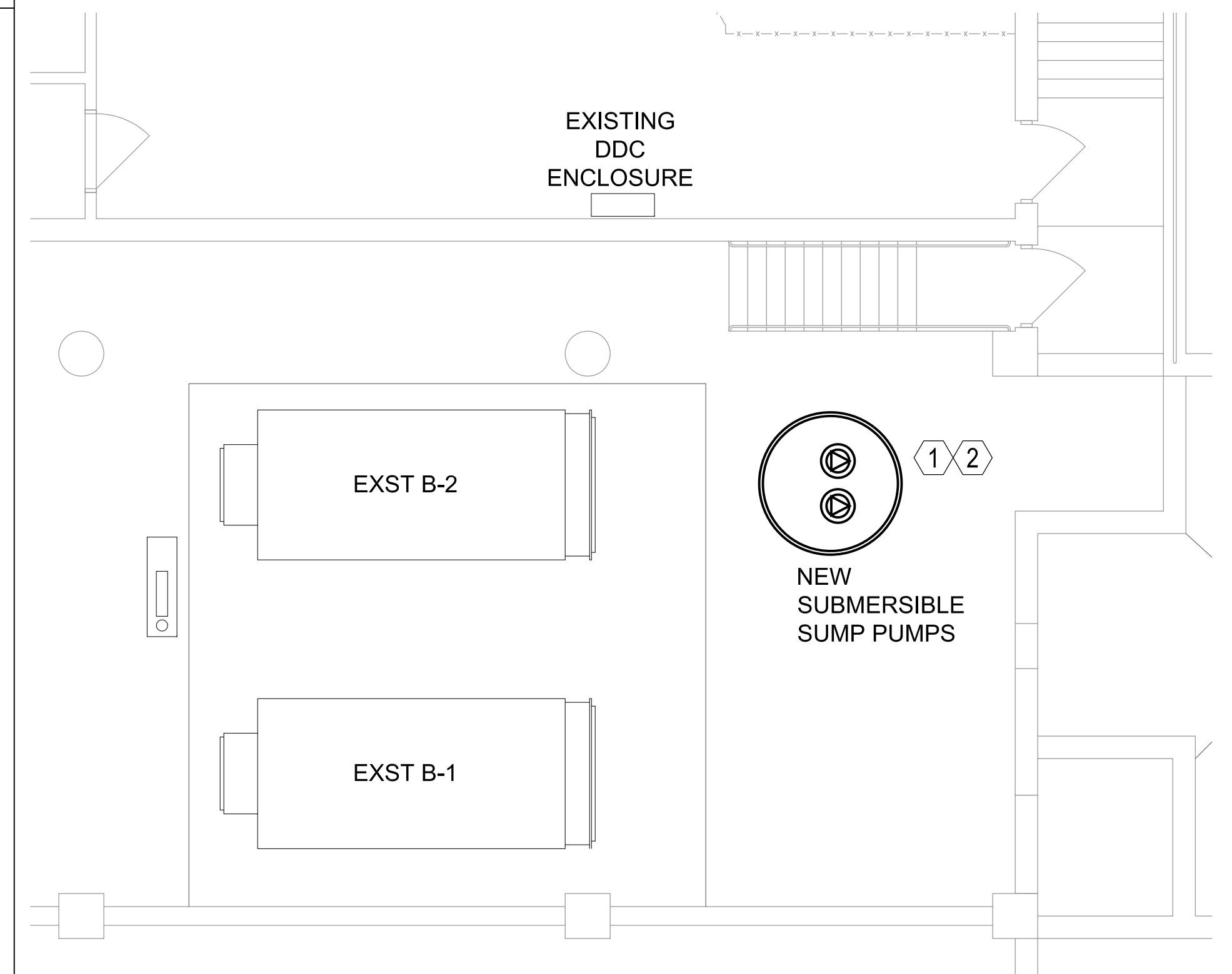
- 1 DISCONNECT AND REMOVE EXISTING DUPLEX STORM WATER SUMP PUMPS AND ALL CORRESPONDING COMPONENTS TO INSTALL NEW SUBMERSIBLE STORM WATER SUMP PUMPS.
- 2 COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT ELECTRICAL CIRCUITS AS REQUIRED TO REMOVE EXISTING EQUIPMENT AND INSTALL NEW EQUIPMENT.



2 M4 BOILER ROOM MECHANICAL DEMO PLAN  
SCALE: 3/16" = 1'-0"  
AREA OF WORK #1

**BASEMENT BOILER ROOM MECHANICAL PLAN NOTES**

- 1 INSTALL (2) NEW SUBMERSIBLE RECESSED IMPELLER STORM WATER SUMP PUMPS WITH OPTIONAL SLIDE RAIL SYSTEM AND MOISTURE DETECTION PER MANUFACTURER'S RECOMMENDATIONS, REFER TO SPECIFICATIONS. BASIS-OF-DESIGN - GOULD HSUL 3x3x10, 2,800 GPM CAPACITY, HEADS UP TO 140FT, OR APPROVED EQUAL. MODIFY EXISTING PIPING AS REQUIRED. CONTRACTOR TO REUSE EXISTING SHUTOFF VALVES AND CHECK VALVES IF POSSIBLE. REPLACE OR MODIFY EXISTING STEEL COVER AS REQUIRED. NEW STORM WATER SUMP PUMP SYSTEM TO INCLUDE VISUAL ALARM IN CASE OF SYSTEM FAILURE. INSTALL NEW RIGGING AS REQUIRED TO UTILIZE NEW SLIDE RAILS. RUN NEW PUMPS IN A LEAD LAG MANNER UNLESS BOTH PUMPS ARE REQUIRED. INSTALL NEW FLOAT & CONTROL SYSTEM PER MANUFACTURER. NEW STORM WATER SUMP PUMP SYSTEM TO INCLUDE VISUAL ALARM IN CASE OF SYSTEM FAILURE.
- 2 COORDINATE WITH ELECTRICAL CONTRACTOR TO CONNECT NEW SUMP PUMP SYSTEM.



3 M4 BOILER ROOM MECHANICAL PLAN  
SCALE: 3/16" = 1'-0"  
AREA OF WORK #1

DESIGNED	BOK
DRAWN	BOK
CHECKED	KMM
APPROVED	BAB

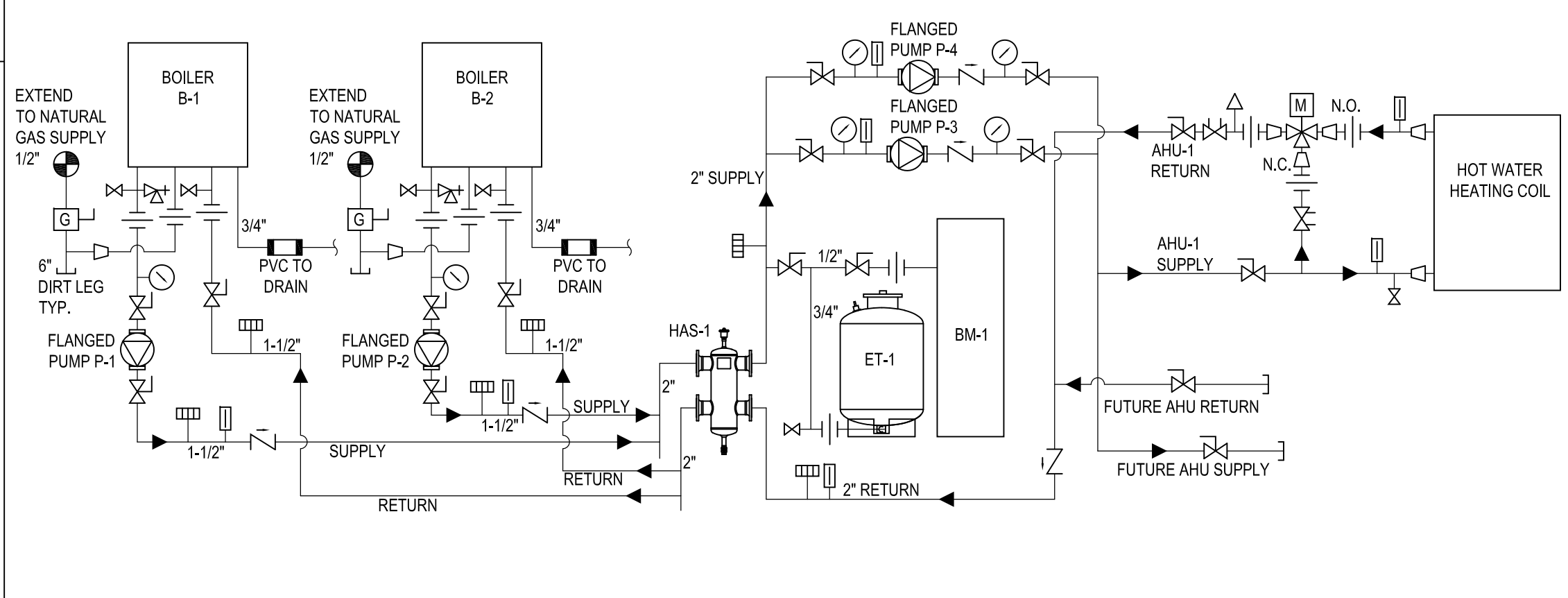
DATE	30 MAR 2023
DATE	7 APRIL 2023

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IDENTIFICATION NO.	PROJECT 26A6023010
INDEX CODE	

**PIPING DETAIL NOTES:**

1. INSTALL REDUCERS AT CONTROL VALVES AS REQUIRED.
2. DELETE REDUCERS AT COILS AND BOILER IF COIL CONNECTION IS SAME AS PIPE SIZE.
3. INSTALL UNIONS AT ALL PUMPS UNLESS PUMP IS FLANGED.
4. INSTALL AIR VENT ON ALL ZONES AT HIGH POINT AS SHOWN.
5. LABEL ALL EQUIPMENT AND HVAC PIPING PER SPECIFICATION.
6. INSTALL INSULATION ON ALL HYDRONIC PIPING, SEE SPECIFICATIONS.
7. ROUTE BOILER CONDENSATE DRAIN TO NEUTRALIZING KIT THEN TO FLOOR DRAIN.
8. ROUTE AHU CONDENSATE DRAIN TO FLOOR DRAIN.

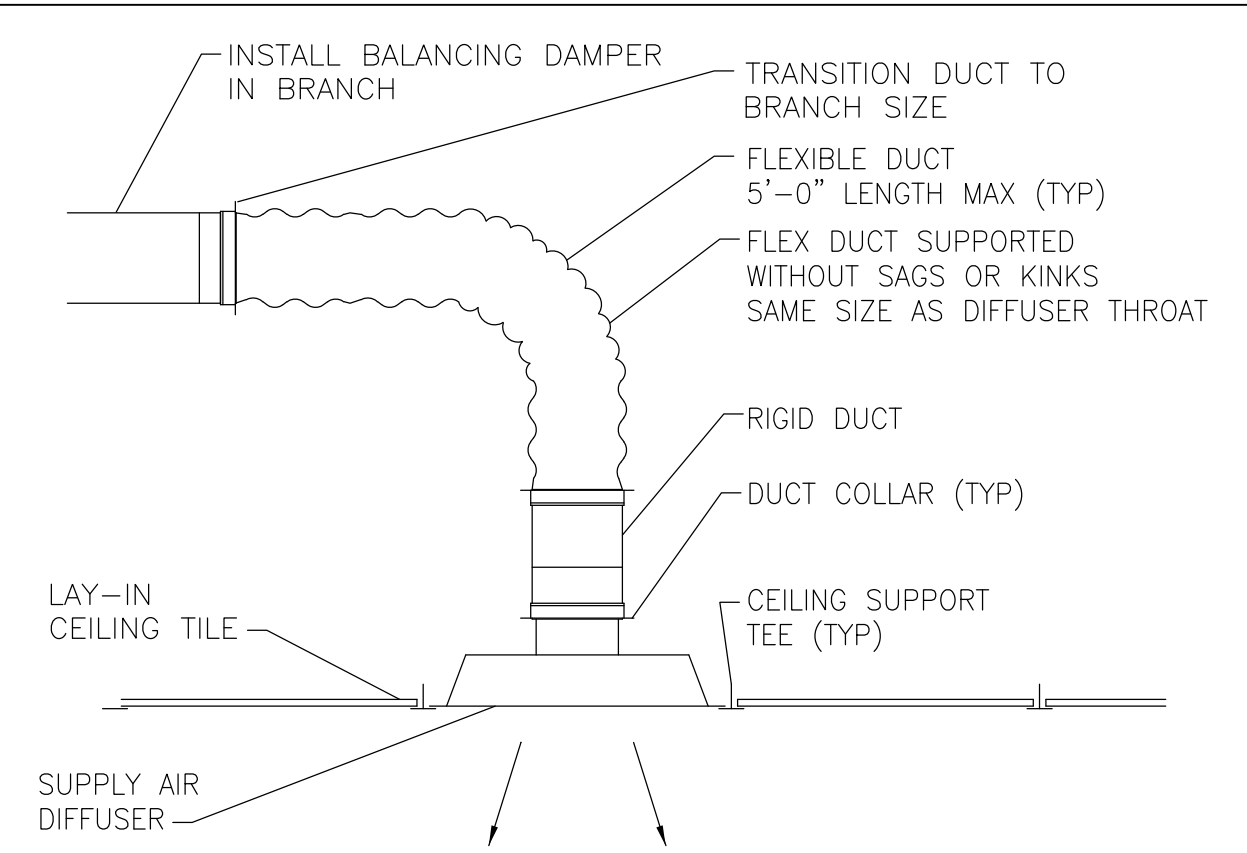
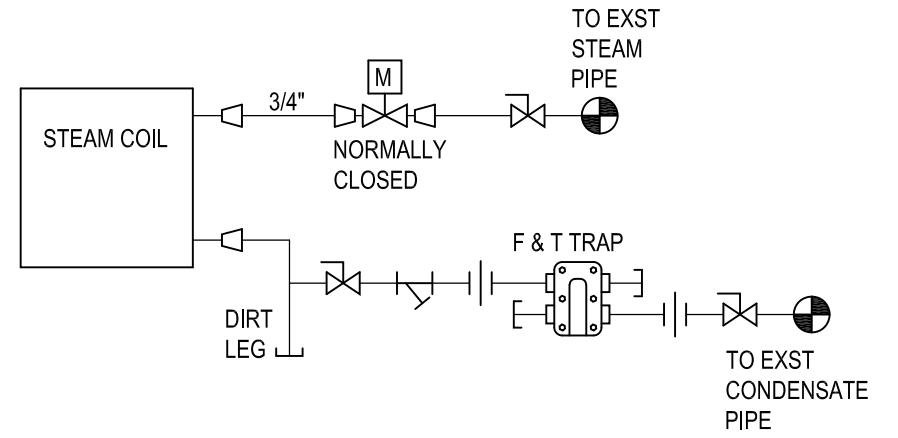


**1 HYDRONIC PIPING DETAIL**  
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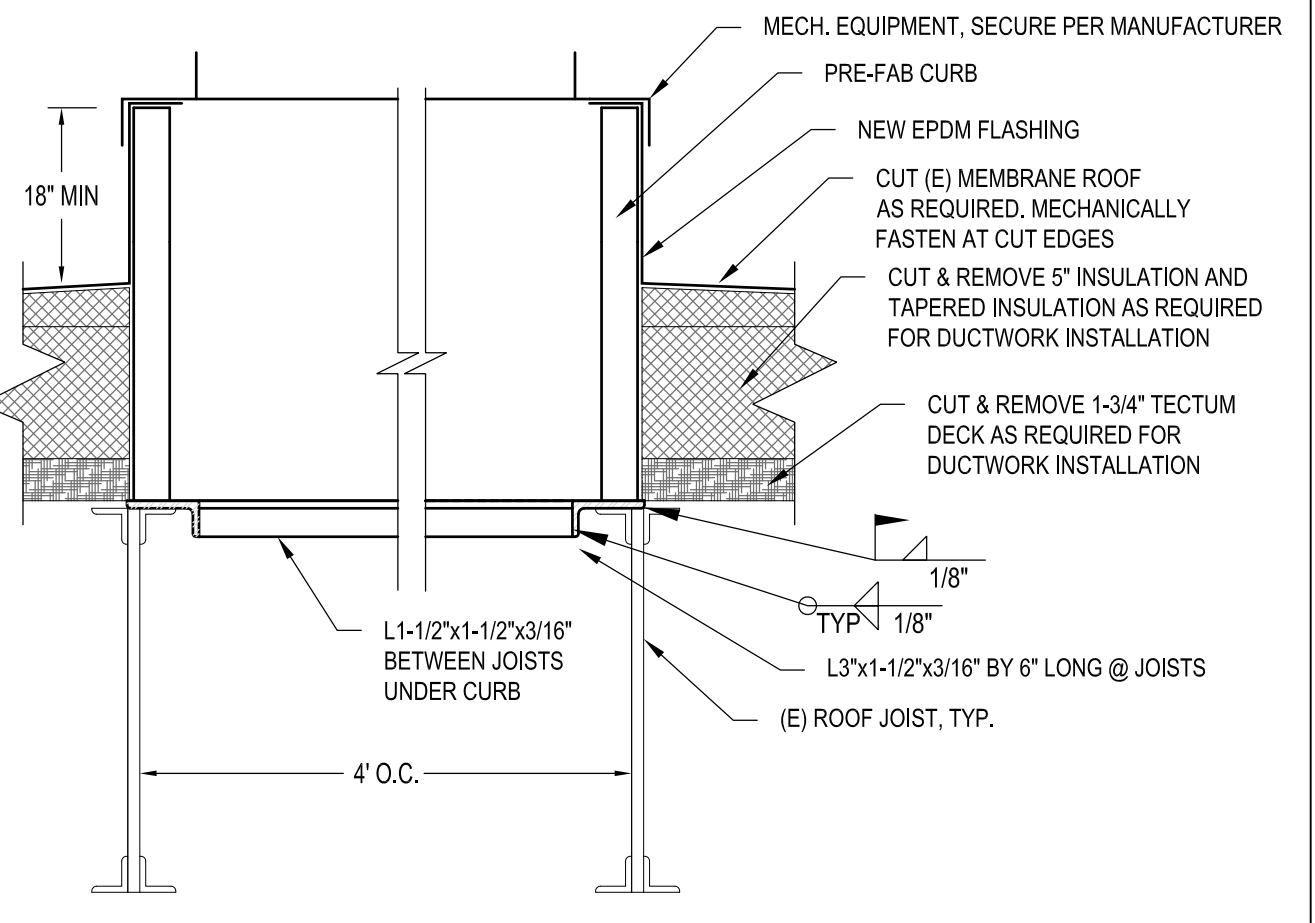
**LEGEND**

- NEUTRALIZING KIT
- SHUTOFF VALVE
- UNION
- REDUCER AS REQUIRED
- PUMP
- PRESSURE GAUGE
- PRESSURE RELIEF/SAFETY VALVE
- MANUAL AIR VENT @ HIGH POINT
- TEMPERATURE GAUGE
- TEMP SENSOR BY DDC CONTRACTOR
- CALIBRATED BALANCING VALVE
- GAS VALVE
- END CAP
- TEMPERATURE CONTROL VALVE
- 3-WAY CONTROL VALVE
- ACTUATOR BY DDC CONTRACTOR
- DRAIN VALVE W/ CAP
- CHECK VALVE
- STRAINER
- POINT OF NEW CONNECTION

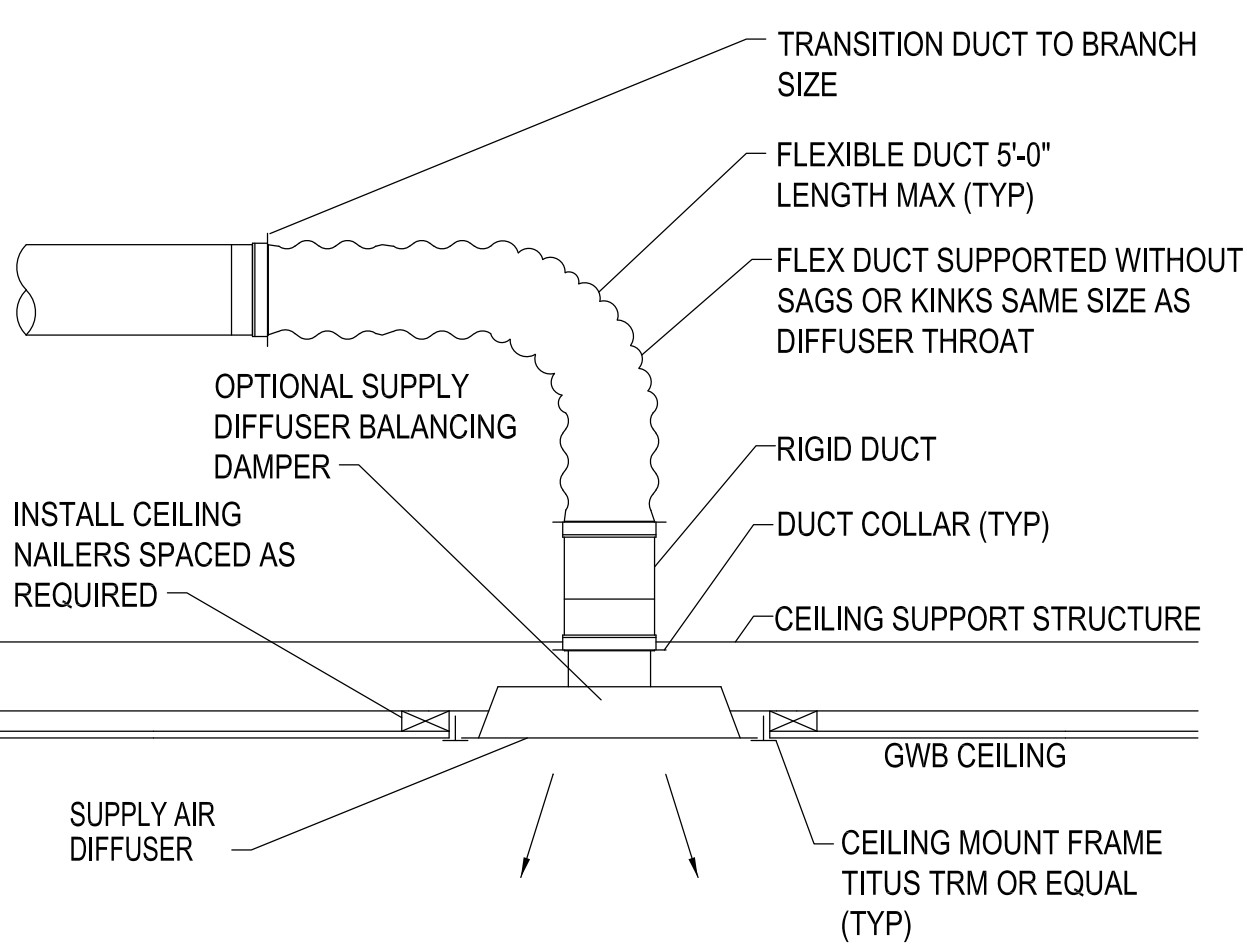
**2 STEAM PIPING DETAIL**  
SCALE: NO SCALE



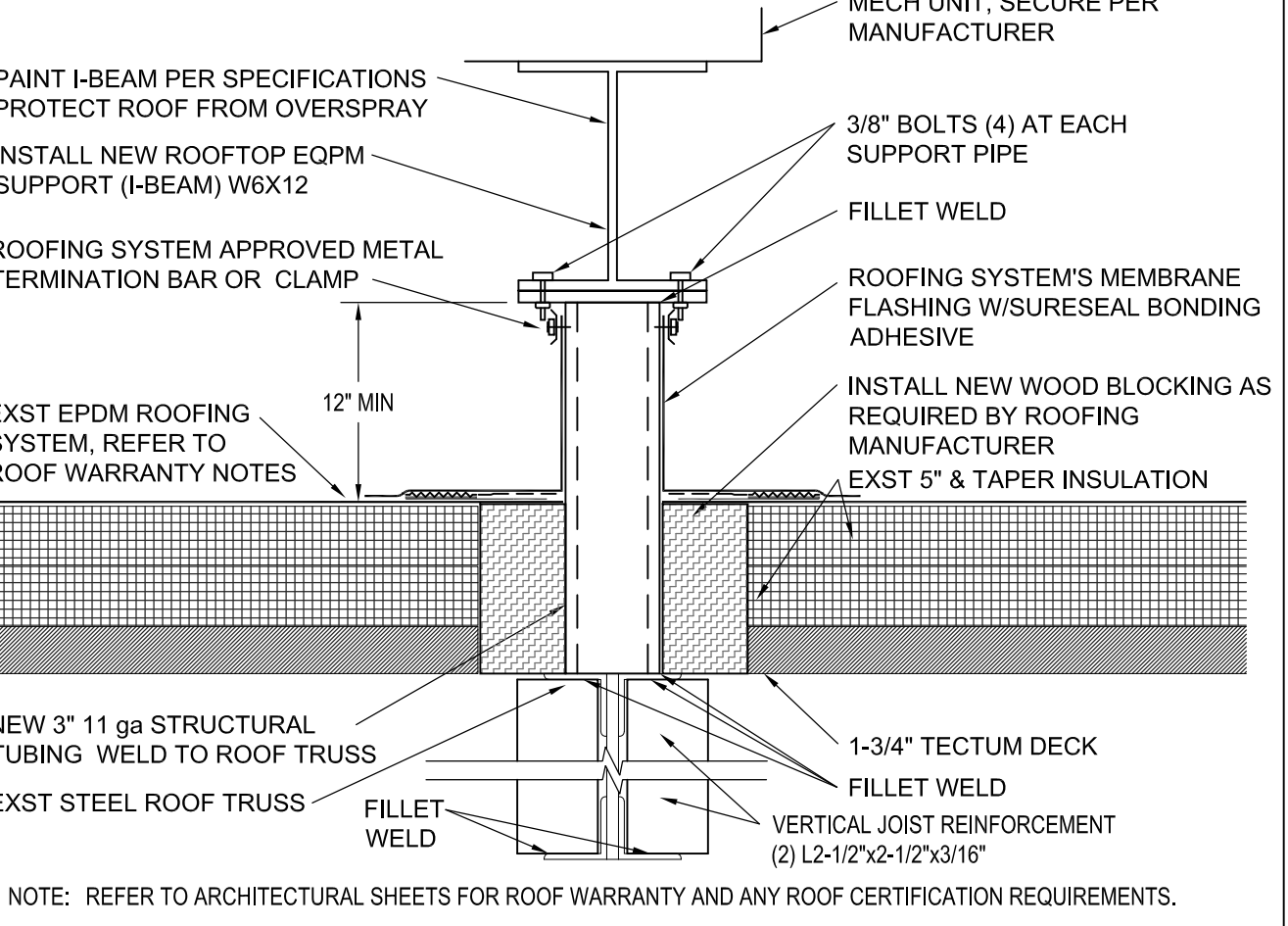
**3 SUPPLY DIFFUSER S1 DETAIL**  
SCALE: NO SCALE



**5 ROOF CURB FLASHING DETAIL**  
SCALE: NO SCALE



**4 SUPPLY DIFFUSER S2/S4 DETAIL**  
SCALE: NO SCALE



**6 ROOFTOP SUPPORT BEAM DETAIL**  
SCALE: NO SCALE

**EXPANSION TANK SCHEDULE**

MARK	SERVING	SELECTION BASED ON		TYPE	CAP (GAL)	FILL PSIG	RELIEF PSIG	MAX OPERATING PSIG	NOTES
		MFR	TYPE						
ET-1	HEATING WATER	AMTROL	ASME	DIAPHRAGM	33.6	30	50	50	VERTICAL UNIT MODEL AX-60V

**MAG / AIR / DIRT SEPARATOR SCHEDULE**

MARK	SERVING	MFR	MODEL	CONNECTION SIZE (IN)	FLOW (GPM)	NOTES
HAS-1	HEATING WATER	CALEFFI	549552A	2	47	MAGNETIC, FLANGE CONNECTION

**BOILER MAKE-UP TANK SCHEDULE**

MARK	DESCRIPTION	BASIS OF DESIGN	SERVICE	NOTES
BM-1	BOILER MAKE-UP TANK	AXIOM - DMF300	HYDRONIC SYSTEM	19 GALLON

**GRILLES, REGISTERS, DIFFUSERS, HOODS & DAMPERS**

Mark No.	Type	Unit Size	Connection Size	Design CFM	Mounting	Pattern	Throw @ 50 fpm	P.D.	Material	Finish	Remarks
S1	SUPPLY DIFFUSER	24"x24"	SEE PLANS	SEE PLAN	LAY-IN	4-WAY	10'	.03	STEEL	WHITE	TITUS TMS, DAMPER IN BRANCH
S2	SUPPLY DIFFUSER	12"x12"	SEE PLANS	SEE PLAN	LAY-IN W/ TRM FRAME	4-WAY	10'	.03	ALUM.	WHITE	TITUS TMS, W/ OPTIONAL DAMPER & TRM FRAME
S3	SUPPLY DIFFUSER	MATCH EXST	MATCH EXST	SEE PLAN	DRYWALL CEILING	ROUND	9'	.03	ALUM.	WHITE	TITUS TMR W/ OPTIONAL DAMPER
S4	SUPPLY DIFFUSER	20"x20"	SEE PLANS	SEE PLAN	LAY-IN W/ TRM FRAME	4-WAY	10'	.03	ALUM.	WHITE	TITUS TMS, W/ OPTIONAL DAMPER & TRM FRAME
R1	CEILING RETURN	24"x24"	SEE PLANS	SEE PLAN	LAY-IN	-----	-----	-----	ALUM.	WHITE	TITUS 50F
R2	CEILING RETURN	12"x24"	SEE PLANS	SEE PLAN	LAY-IN	-----	-----	-----	ALUM.	WHITE	TITUS 50F W/ SQUARE TO ROUND ADAPTER (SRG)
E1	CEILING EXHAUST	12"x12"	SEE PLANS	SEE PLAN	LAY-IN W/ TRM FRAME	-----	-----	-----	ALUM.	WHITE	TITUS 50F W/ SQUARE TO ROUND ADAPTER (SRG), TRM FRAME & OPTIONAL DAMPER
GH-1	GRAVITY INTAKE HOOD	MODEL 12	22"x22"	1213	22"x22" CURB	-----	-----	-----	ALUM.	MILL	GREENHECK GRSI MODEL 12 W/ GRAVITY DAMPER
D-1	CONTROL DAMPER	16"x12"	-	1213	DUCT	-----	-----	-----	G. STEEL	MILL	GREENHECK VCD-33 LOW LEAK, EXTERNAL ACTUATOR BY DDC CONTRACTOR

**PUMP SCHEDULE**

MARK	BASIS OF DESIGN	SERVICE	GPM	HEAD FT	HP	RPM	ELECTRICAL			NOTES
							VOLTS	PH	HZ	
P-1	GRUNDFOS UPMXL 15-124	BOILER B-1	27	4	120W	1750	120	1	60	INCLUDED STANDARD W/ BOILER, NOTE 1
P-2	GRUNDFOS UPMXL 15-124	BOILER B-2	27	4	120W	1750	120	1	60	INCLUDED STANDARD W/ BOILER, NOTE 1
P-3	GRUNDFOS MAGNA 3 40-80 F	AHU-1 & FUTURE AHU-2	47	18	285W	VSD	120	1	60	LEAD/LAG W/ P-4
P-4	GRUNDFOS MAGNA 3 40-80 F	AHU-1 & FUTURE AHU-2	47	18	285W	VSD	120	1	60	LEAD/LAG W/ P-3

1. REFER TO BOILER INSTALLATION MANUAL FOR PUMP INSTALLATION

**CONDENSER SCHEDULE**

UNIT NO.	MANUF.	MODEL OR SERIES	FAN MOTOR		VOLTAGE	MCA/MOP	MAX AMBIENT TEMP	COMPRESSOR			REMARKS	
			RPM	NO.				HEAT REJECTION	TYPE	NO.		RLA
CU-1	AAON	CFA-009-B	1,075	2	100 MBH	208/1/60	52/70	95°F	SCROLL	2	20,21,2	2 STAGE, DIGITAL SCROLL COMPRESSOR 1ST STAGE

**BOILER SCHEDULE**

MARK	BASIS OF DESIGN	INPUT MBH	OUTPUT MBH	GAS PRESSURE MIN/MAX IN W.C.	GAS SIZE IN.	VENT SIZE IN.	INTAKE SIZE IN.	WATER CONNECTION IN.	WATER PRESSURE DROP FT.	GPM MAX	EWT °F	LWT °F	ELECTRICAL			NOTES		
													FLA	MCA	VOLTS		PH	HZ
B-1	LOCHINVAR KNIGHT WHB285N	285	284	4/14	1/2"	3"	3"	1-1/4"	2.42	27	120°F	140°F	3.6	4.5	120	1	60	NOTE 1, OPTIONAL EQUIPMENT - BMS GATEWAY (LOWWORKS), CONDENSATE NEUTRALIZING KIT
B-2	LOCHINVAR KNIGHT WHB285N	285	284	4/14	1/2"	3"	3"	1-1/4"	2.42	27	120°F	140°F	3.6	4.5	120	1	60	NOTE 1, OPTIONAL EQUIPMENT - BMS GATEWAY (LOWWORKS), CONDENSATE NEUTRALIZING KIT

1. INSTALL INDIVIDUAL BOILER VENTS AND COMBUSTION AIR INTAKES PER MANUFACTURER'S RECOMMENDATIONS.

**AIR HANDLING UNIT SCHEDULE**

MARK	MANUFACTURER	MODEL	T.S.P.	CFM	VOLTAGE	COOLING COIL				HEATING CAPACITY				CFM OUTSIDE AIR PER CODE / MIN CFM DURING OCCUPIED	REMARKS					
						TYPE	EAT DB (F)	EAT WB (F)	LAT DB (F)	LAT WB (F)	FACE VEL.	FACE AREA (SQ.FT.)	MIN. ROW			TOTAL	OUTPUT MBH	WATER TEMP	DELTA T (F)	GPM
AHU-1	AAON	V3-CRB	1.58	3000	208/1/60	DX	80.0	67.0	56.7	55.9	422	7.1	4	100	188.4	140°F	22.8°F	15	1213 / 121	VERTICAL UPFLOW, CO2 DEMAND CONTROLLED

- NOTES:
1. AHU TO BE "DDC READY"
  2. AHU TO INCLUDE FACTORY INSTALLED DUCT SMOKE DETECTOR.
  3. AHU TO INCLUDE FACTORY MOUNTED GFCI CONVENIENCE RECEPTACLE
  4. PROVIDE 2" 30% EFFICIENT FILTERS
  5. PROVIDE INSULATED SIDE WALLS FOR ALL UNITS
  6. PROVIDE R-410A REFRIGERANT FOR UNITS WITH COOLING
  7. PROVIDE PREMIUM EFFICIENCY MOTORS
  8. PROVIDE DIGITAL SCROLL COMPRESSOR
  9. PROVIDE ECONOMIZER
  10. PROVIDE FACTORY MOUNTED VFD DRIVE
  11. UNIT TO HAVE HINGE DOORS & TWIST HANDLE ENTRY

**STEAM CABINET UNIT HEATER SCHEDULE**

MARK	SERVING	MFR	MODEL	MBH	CFM	ROWS	ELECTRICAL DATA			NOTES		
							HP	AMPS	VOLTAGE		PH	HZ
CUH-1	MENS SHOWER RM	MODINE	CW00398ALL130P00	17.7	195	1	0.03	0.7A	115V	1	60	LOW SPEED, RECESSED WALL ARRANGEMENT 98 W/ PERMA-LAP FRAME, PROVIDE COLOR OPTIONS
CUH-2	WOMENS SHOWER RM	MODINE	CW00398ALLR130P00	15.9	195	1	0.03	0.7A	115V	1	60	LOW SPEED, RECESSED WALL ARRANGEMENT 98 W/ PERMA-LAP FRAME, PROVIDE COLOR OPTIONS

**FIRE DAMPER SCHEDULE (BEARING UL LABEL)**

TAG	*QUANT.	LOCATION	SUPPLY/RETURN	SERVICING	DESCRIPTION	SIZE (W X H)	MFG/MODEL
FD-1	1	AT MECH ROOM WALL	SUPPLY	2ND FLR CLASSROOMS	CURTAIN NOT IN AIRSTREAM 165" F	SEE PLAN	NATIONAL CONTROLLED AIR, INC., TYPE B; PROVIDE THERMAL BLANKET AS NEEDED
FD-2	1	AT MECH ROOM WALL	RETURN	2ND FLR CLASSROOMS	CURTAIN NOT IN AIRSTREAM 165" F	SEE PLAN	NATIONAL CONTROLLED AIR, INC., TYPE B; PROVIDE THERMAL BLANKET AS NEEDED

**EXHAUST FAN**

MARK	LOCATION	SERVING	SELECTION BASED ON 0.250 SP			RPM	MOTOR			NOTES	
			MFR	MODEL	CFM		PHASE	VOLTAGE	HERTZ		HP
EF-1	MEZZANINE	2ND FLR BATHROOMS	GREENHECK	SQ-75-VGD	210	1550	1	120	60	1/30	INLINE
EF-2	JAN. CLOSET	JAN. CLOSET	GREENHECK	SP-L80	67	850	1	120	60	26 WATTS	WALL MOUNT, RUN ON LOCAL SWITCH

**MECHANICAL**

These documents are approved for compliance with the STATE OF MICHIGAN MECHANICAL CODE subject to field inspection and the conditions of approval.

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 ADAMI LACH, P.E., DIRECTOR

**RENOVATE ARMORY - DLG**  
 DEPARTMENT OF MILITARY AND VETERANS AFFAIRS  
 DETROIT LIGHT GUARD ARMORY - DETROIT, MICHIGAN

BOK  
 BOK  
 KMM  
 BAB

DESIGNED  
 DRAWN  
 CHECKED  
 APPROVED

DATE  
 30 MAR 2023  
 7 APRIL 2023

ISSUED FOR  
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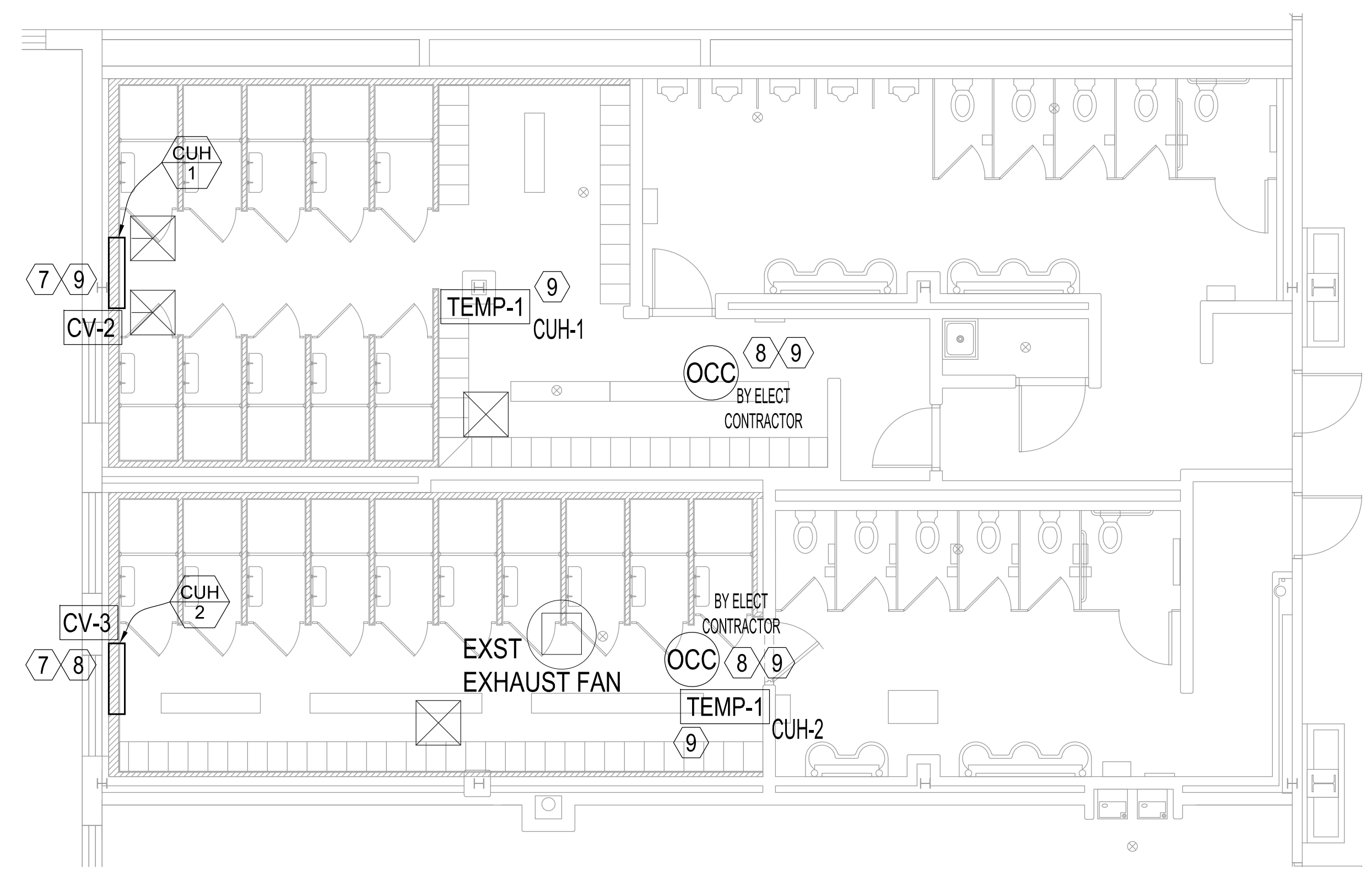
SHEET  
 MECHANICAL SCHEDULES  
 & DETAILS  
**M5.0**

**ENERGY MANAGEMENT PLAN NOTES:**

- 1 REFER DDC SCHEMATIC ON SHEET M6 FOR ADDITIONAL DDC POINTS/EQUIPMENT. COORDINATE WITH MECHANICAL CONTRACTOR FOR DDC EQUIPMENT LOCATIONS. COORDINATE WITH ELECTRICAL CONTRACTOR TO INSTALL MECHANICAL EQUIPMENT RELAYS & SENSORS.
- 2 INSTALL NEW DDC ENCLOSURE ENC-1. REFER TO DDC EQUIPMENT ELEVATION DETAIL ON ENERGY MANAGEMENT SHEET M6.0. ALL DDC POINTS TO BE LOCATED ON AS-BUILT CONTROL DRAWINGS. SUBMIT WITH FINAL CLOSEOUT DOCUMENTS. INCLUDE A COPY IN DDC ENCLOSURE.
- 3 COORDINATE WITH BOILER MANUFACTURER TO CONTROL BOILER PUMPS AND SECONDARY LOOP PUMP. PROVIDE PUMP RELAYS AS REQUIRED. ALL PUMPS WILL HAVE MOTOR STARTERS.
- 4 INSTALL NEW 3/4" CONDUIT FROM DDC ENCLOSURE DDC-1 TO EXISTING DDC ENCLOSURE IN MAINTENANCE MECHANIC'S AREA IN BASEMENT. INSTALL NEW LONBUS COMMUNICATION WIRE IN CONDUIT AND CONNECT TO EXISTING DDC SYSTEM. CONDUIT MAY NEED TO ROUTED INTO BASEMENT CRAWL SPACE. REFER TO SHEET M4 FOR EXISTING DDC ENCLOSURE LOCATION. SEE SPECIFICATIONS FOR CORRECT WIRE TYPE.
- 5 CONTRACTOR TO UPDATE EXISTING DDC LONWORKS BMS TO INCLUDE NEW DDC EQUIPMENT ON THIS PROJECT. UPDATE FRONT END INTERFACE TO INCLUDE ALL NEW AREAS OF WORK. REFER TO SPECIFICATIONS.
- 6 COORDINATE WITH ELECTRICAL CONTRACTOR TO CONNECT NEW EXHAUST FAN TO 24V AUXILIARY OUTPUT ON LIGHTING OCCUPANCY SENSOR. INSTALL NEW DPDT RELAY. INPUT FROM EACH LIGHTING OCCUPANCY IN THE MENS AND WOMENS BATHROOMS. OUTPUT TO ENABLE/DISABLE THE EXHAUST FAN AND TO THE DDC SYSTEM FOR STATUS.
- 7 COORDINATE WITH MECHANICAL CONTRACTOR TO INSTALL NEW STEAM CONTROL VALVES INSIDE STEAM CABINET UNIT HEATERS CUH-1 & CUH-2.
- 8 COORDINATE WITH ELECTRICAL CONTRACTOR TO CONNECT TO 24V AUXILIARY OUTPUT ON LIGHTING OCCUPANCY SENSOR TO CONTROL NEW CABINET UNIT HEATER FAN. INSTALL NEW RELAY AS REQUIRED.
- 9 INSTALL NEW CONDUIT AS REQUIRED FROM STEAM CONTROL VALVE ACTUATORS, SPACE TEMP SENSORS, AND OCCUPANCY OUTPUT SIGNALS TO EXISTING DDC ENCLOSURE SHOWN IN DETAIL 2 SHEET A1 FOR ALL NEW DDC CONTROL WIRE IN THIS AREA. INSTALL NEW CIRCON CONTROLLER DDC-1 AS REQUIRED IN EXISTING DDC ENCLOSURE. PROVIDE NEW CIRCUIT BREAKER BRKR FOR ANY NEW CONTROLLERS.



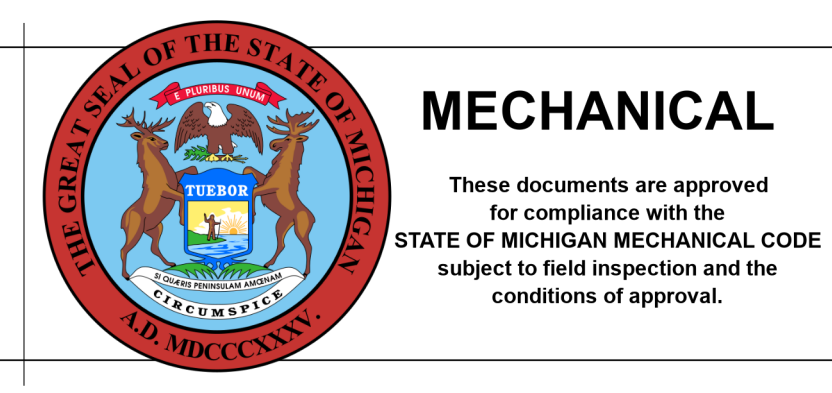
1 2ND FLOOR CLASSROOM ENERGY MANAGEMENT PLAN  
M6 SCALE: 3/16" = 1'-0" AREA OF WORK 5 & 6



2 DRILL HALL LATRINE ENERGY MANAGEMENT PLAN  
M6 SCALE: 3/16" = 1'-0" AREA OF WORK 8

**GENERAL ENERGY MANAGEMENT NOTES:**

1. PRIOR TO ANY INSTALLATION OF DDC EQUIPMENT OR DDC WIRING, CONTRACTOR SHALL REQUEST A DDC PRECONSTRUCTION MEETING WITH DMVA ENGINEERING TO DISCUSS CONSTRUCTION SCHEDULING, PRECISE DDC EQUIPMENT LOCATIONS, STARTUPS, LABELING PROCEDURES, AND COMMISSIONING.
2. ALL DDC PROGRAMMING / SOURCE CODE INCLUDING ANY CUSTOM USER DEFINED DEVICES OR UDD ALONG WITH ANY SOFTWARE NECESSARY TO RUN THE SYSTEM TO BE TURNED OVER TO DMVA DDC TECHNICIAN UPON PROJECT COMPLETION.
3. ROUTE ALL DDC CONTROL WIRES PER SCHEDULE AND SPECIFICATIONS.
4. REFER TO DDC SCHEMATIC THIS SHEET FOR ADDITIONAL END DEVICES NOT SHOWN ON PLANS.
5. CONTRACTOR TO INSTALL A MINIMUM 3/4" CONDUIT FOR ALL DDC WIRING. CONTRACTOR IS ALLOWED TO INSTALL J-HOOKS 4" O.C. FOR DDC CONTROL WIRING ONLY IN AREAS ABOVE A SUSPENDED CEILING. ALL CONDUIT IN WALLS TO BE STUBBED INTO CEILING SPACE.
6. CONTRACTOR SHALL PULL ALL DDC WIRING AS SHOWN ON DDC FLOOR PLAN AND DDC EQUIPMENT SCHEDULE. ALL WIRES SHALL BE LABELED WITH A LABEL MAKER APPROVED BY DMVA ENGINEERING. NO HAND WRITTEN LABELS WILL BE ALLOWED. ALL LABELS LOCATED IN ENCLOSURE ENC-1 & 2 MUST BE PLACED 6" DOWN ON WIRE ONCE INSIDE THE ENCLOSURE. DO NOT LOCATE LABEL AT THE END OF WIRE.
7. ALL INPUT/OUTPUT CONTROL WIRES TO BE LON RATED. SEE SPECIFICATIONS.
8. DDC SEQUENCE AND PROGRAMMING WILL BE COMPLETED BY A DMVA APPROVED SUBCONTRACTOR, SEE SPECIFICATIONS.
9. CONTRACTOR TO PURCHASE (1) BUILDING MANAGEMENT WORKSTATION AND TURN OVER TO DMVA ENGINEERING. SEE SPECIFICATIONS FOR FURTHER DETAIL.
10. INSTALL TEMPERATURE SENSORS, TEMP-1, 60" AFF.
11. INSTALL OCCUPANCY SENSORS, OCC-1, 6" FROM CEILING.
12. INSTALL ALL OAT-1 ON NORTH FACING EXTERIOR WALL. MAKE WEATHERTIGHT
13. PRINT COPY OF DDC WIRE COLOR SCHEDULE AND SCHEMATIC AND SECURE TO THE BACK OF THE DOOR IN ENC-1 & 2. LABEL ALL MECHANICAL EQUIPMENT TO CORRESPOND TO DDC SCHEMATIC.
14. PROVIDE AND INSTALL ALL END DEVICES SHOWN ON PLANS, DDC SCHEMATIC AND DETAILS.
15. COORDINATE WITH ELECTRICAL TO INSTALL NEW RELAYS. ELECTRICAL CONTRACTOR WILL INSTALL J-BOX FOR NEW RELAYS TO MOUNT ON.
16. RELAYS FOR EXHAUST FANS TO BE LOCATED IN ELECTRICAL CLOSET. COORDINATE WITH ELECTRICAL.



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DRAWN	BOK
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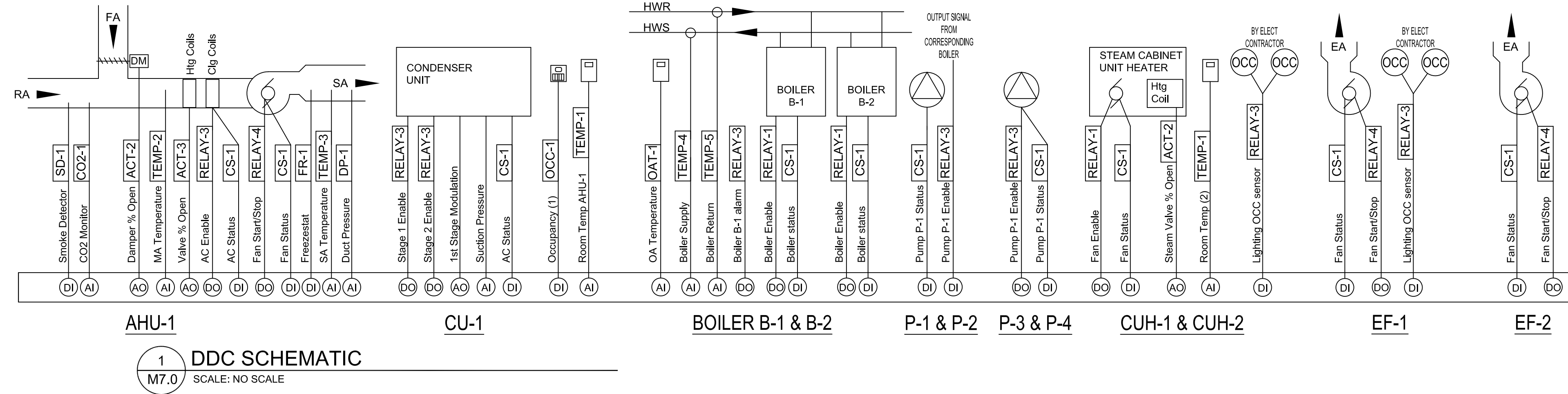
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 INDEX CODE

SHEET ENERGY MANAGEMENT PLAN  
**M6.0**



**DDC SCHEMATIC NOTES:**

- INSTALL ADDITIONAL PROGRAMMABLE CONTROLLERS AS REQUIRED FOR ALL MECHANICAL EQUIPMENT. PROVIDE PRELIMINARY AS-BUILT CONTROL DRAWINGS PRIOR TO CONSTRUCTION.
- REFER TO ENERGY MANAGEMENT PLAN FOR ALL DDC SENSOR AND EQUIPMENT LOCATIONS.
- ROUTE ADDITIONAL POWER TO ANY DDC EQUIPMENT AS REQUIRED. INSTALL ADDITIONAL TRANSFORMERS AND/OR AC/DC CONVERTERS AS REQUIRED.
- REFER TO ENERGY MANAGEMENT SHEETS FOR ADDITIONAL BMS SEQUENCE OF OPERATIONS.
- INDIVIDUAL CURRENT STATUS RELAY NOT REQUIRED IF CONTROL RELAY PROVIDES CURRENT STATUS.
- LOCAL OCCUPANCY SWITCHES NOT CONNECTED TO BMS WILL NOT REQUIRE CURRENT STATUS SENSOR FOR EQUIPMENT IT CONTROLS UNLESS LOCAL OCCUPANCY INPUT POINT IS SHOWN ON SCHEMATIC.
- ALL EQUIPMENT RUN OFF OCCUPANCY SWITCHES CONNECTED TO BMS WILL REQUIRE CURRENT STATUS SENSOR FOR EQUIPMENT IT CONTROLS.
- INSTALL ADDITIONAL CONTROL RELAYS AS REQUIRED FOR MULTI STAGE EQUIPMENT REFER TO MECHANICAL SHEETS FOR MORE DETAIL.
- COORDINATE WITH MANUFACTURER FOR ANY ADDITIONAL CONTROL REQUIREMENTS.



**1 DDC SCHEMATIC**  
SCALE: NO SCALE

**SPACE TEMPERATURE SET POINTS (ADJUSTABLE)**

OCCUPIED COOLING: 74.0 F  
OCCUPIED HEATING: 70.0 F  
UNOCCUPIED COOLING: 80.0 F  
UNOCCUPIED HEATING: 62.0 F

**SEQUENCE OF OPERATION FOR EQUIPMENT**

**GENERAL**

OCCUPANCY SENSORS (OCC-1) & AUXILIARY OUTPUT ON LIGHTING OCCUPANCY SENSORS WILL HAVE AN ADJUSTABLE SOFTWARE SET POINT (IN MINUTES) TO TELL THE CONTROL SYSTEM THE DESIRED DURATION OF THE OCCUPIED MODE EACH TIME THE SENSOR IS ACTIVATED.  
MECHANICAL COOLING AND OUTDOOR AIR DAMPERS WILL NOT BE UTILIZED WITHOUT PROOF OF SUPPLY FAN OPERATION THRU THEIR RESPECTIVE CURRENT SENSING SWITCHES.

**AIR HANDLING UNITS (AHU-1)**

SPACE TEMPERATURE WILL BE DIRECTLY CONTROLLED BY THE ASSOCIATED 3-WAY MODULATING VALVE.  
DURING OCCUPIED MODE WILL BE INITIATED THRU EITHER THE BUILDINGS OCCUPANCY SCHEDULE, AS SET THRU THE WEB SERVER USER INTERFACE, OR BY THE CLASSROOM AREA OCCUPANCY SENSOR (OCC-1). DURING THIS MODE, THE SUPPLY FAN WILL RUN CONTINUOUSLY AND THE OUTDOOR AIR DAMPER WILL OPEN TO ITS PROGRAMMABLE MINIMUM POSITION SET POINT ( 10.0%, ADJUSTABLE). THE RETURN AIR CARBON DIOXIDE LEVEL WILL BE MONITORED AND CONTROLLED TO A MAXIMUM LEVEL OF 800PPM (ADJUSTABLE) BY MODULATING THE OUTDOOR AIR DAMPERS BETWEEN THE MINIMUM POSITION SET POINT AND 50% OPEN.  
HEATING MODE WILL BE ALLOWED WHENEVER EITHER ASSOCIATED HOT WATER HEATING BOILER HAS BEEN ENABLED. COOLING MODE WILL BE ALLOWED WHENEVER THE OUTDOOR AIR TEMPERATURE IS ABOVE THE COOLING LOCKOUT SET POINT (55.0 F, ADJUSTABLE).

WHENEVER EITHER HOT WATER HEATING BOILER HAS BEEN ENABLED, THE SECONDARY HEATING PUMP WILL ALSO BE ENABLED, PROVIDING HEAT TO AHU-1.  
DURING HEATING MODE THE HOT WATER CONTROL VALVE (CV-1) WILL BE MODULATED TO MAINTAIN THE OCCUPIED HEATING SET POINT.  
DURING COOLING MODE THE MECHANICAL COOLING WILL BE STAGED WITH MINIMUM ON AND OFF TIMES TO MEET THE OCCUPIED COOLING SET POINT.  
SHOULD THE DUCT MOUNT SMOKE DETECTOR SENSE PRODUCTS OF COMBUSTION, THE SUPPLY FAN WILL BE DE-ENERGIZED AND ALL DAMPERS AND DEVICES WILL GO TO THEIR RESPECTIVE FAIL-SAFE POSITION.

DURING UNOCCUPIED MODE THE OUTDOOR AIR DAMPER WILL REMAIN CLOSED, AND THE SUPPLY FAN CYCLED AS NECESSARY.  
A CALL FOR HEATING WILL CAUSE THE HEATING VALVE TO OPEN TO 100% AND THE SUPPLY FAN TO BE ENERGIZED UNTIL THE SPACE TEMPERATURE RISES THREE (3.0) DEGREES F ABOVE THE UNOCCUPIED HEATING SET POINT.  
A CALL FOR COOLING WILL CAUSE THE MECHANICAL COOLING AND SUPPLY FAN TO BE ENERGIZED UNTIL THE SPACE TEMPERATURE FALLS THREE (3.0) DEGREES F BELOW THE UNOCCUPIED COOLING SET POINT. THE SUPPLY FAN WILL CONTINUE TO RUN FOR A PERIOD OF THREE (3.0) MINUTES AFTER THE MECHANICAL COOLING IS DE-ENERGIZED.

**CABINET UNIT HEATERS (CUH-1 & CUH-2)**

SPACE TEMPERATURE WILL BE DIRECTLY CONTROLLED BY THE ASSOCIATED 2-WAY ON/OFF STEAM VALVE  
DURING OCCUPIED MODE WILL BE INITIATED THRU EITHER THE BUILDINGS OCCUPANCY SCHEDULE, AS SET THRU THE WEB SERVER USER INTERFACE, OR BY THE BUILDINGS COMMON AREA OCCUPANCY SENSOR (OCC-1). DURING THIS MODE, THE UNIT SUPPLY FAN WILL RUN CONTINUOUSLY AND THE STEAM VALVE WILL OPEN 100% AND CLOSE TO MAINTAIN THE OCCUPIED HEATING SET POINT.

DURING UNOCCUPIED MODE A CALL FOR HEATING WILL CAUSE THE STEAM VALVE TO

OPEN TO 100% AND THE UNIT SUPPLY FAN TO BE ENERGIZED UNTIL THE SPACE TEMPERATURE RISES THREE (3.0) DEGREES F ABOVE THE UNOCCUPIED HEATING SET POINT.

**EXHAUST FAN (EF-1)**

EXHAUST FAN WILL BE ENABLED THRU NETWORK COMMUNICATION CONTROLLED RELAY WHENEVER THE LOCAL OCCUPANCY SENSOR IS ACTIVATED.

**EXHAUST FAN (EF-2)**

JANITOR CLOSET EXHAUST FAN WILL BE ENABLED AND DISABLED ON A REPEATING CYCLE OF 5 MINUTES ON FOLLOWED BY 55 MINUTES OFF REGARDLESS OF BUILDING OCCUPANCY OR SCHEDULE.

**HEATING HOT WATER BOILERS (B-1 & B-2)**

THE BOILER AND ASSOCIATED HEATING PUMP WILL BE ENABLED TO RUN WHEN THE OUTDOOR AIR TEMPERATURE FALLS BELOW THE PROGRAMMABLE BOILER ENABLE SET POINT, (60.0 DEGREES, ADJUSTABLE). A TWO DEGREE THROTTLING RANGE WILL PREVENT SHORT CYCLING OF THE BOILER.

**HEATING SEQUENCE**

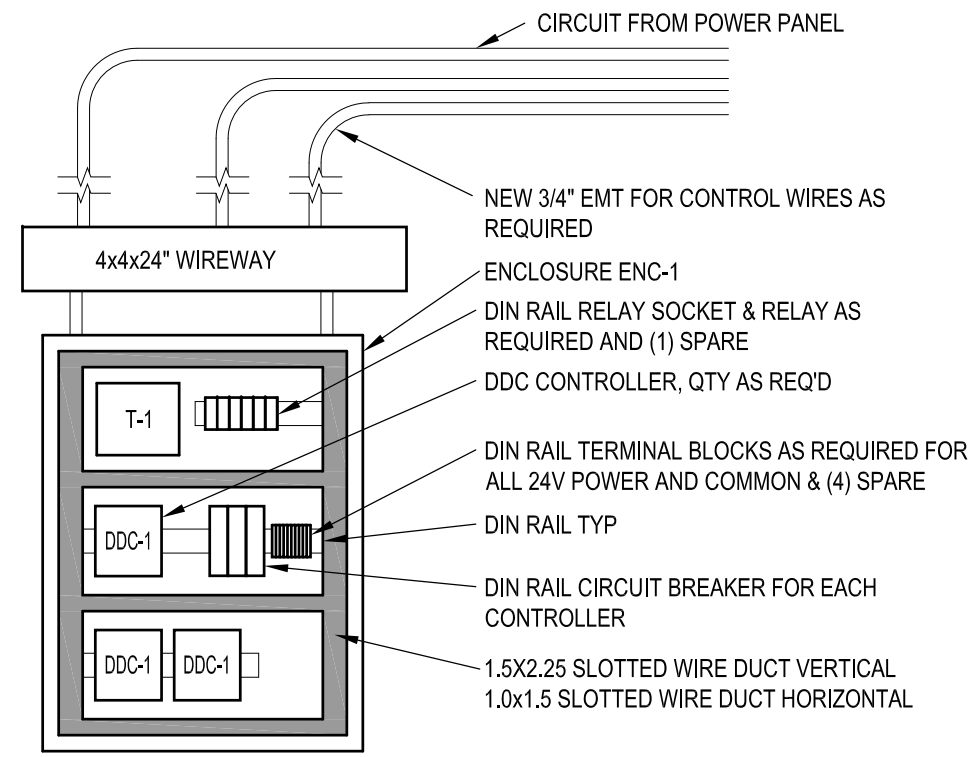
UPON A CALL FOR HEATING, THE LEAD HOT WATER CIRCULATING PUMP WILL BE ENERGIZED, ONCE WATER FLOW HAS BEEN CONFIRMED, THRU THE PUMPS ASSOCIATED CURRENT SENSOR, THE BOILERS WILL BE ENABLED.  
THE BOILERS WILL BE STAGED TO MAINTAIN SET POINT BASED UPON THEIR INTERNAL OPERATING CONTROLS.  
BOTH THE PUMPS AND THE BOILERS WILL BE OPERATED IN A LEAD/LAG MANNER. THE LEAD PUMP AND BOILER WILL BE ROTATED AFTER EACH 7 DAYS OF ACTUAL RUN TIME. A LEAD BOILER OR PUMP FAILURE WILL RESULT IN THE LAG PIECE OF EQUIPMENT BEING ENERGIZED AFTER A 10 SECOND DELAY.  
THE HOT WATER SUPPLY AND RETURN TEMPERATURE, BOILER STATUS AND PUMP STATUS WILL BE MONITORED.  
FAILURE OF A BOILER TO MAINTAIN HEATING HOT WATER WILL ENERGIZE ITS ASSOCIATED

BOILER ALARM RELAY.

**ALARMS**

AN ALARM CONDITION WILL BE REPORTED TO THE WEB SERVER USER INTERFACE FOR THE FOLLOWING; ALL EQUIPMENT TYPES ARE LISTED BELOW, INCLUDE ALL EQUIPMENT LISTED ON PLANS FOR EXACT QUANTITY.

- LOW SPACE TEMPERATURE
- HIGH SPACE TEMPERATURE
- AIR HANDLING UNIT AHU-1 SUPPLY FAN FAILURE
- AIR HANDLING UNIT AHU-1 FREEZE-STAT TRIPPED
- AIR HANDLING UNIT AHU-1 SMOKE DETECTOR TRIPPED
- AIR HANDLING UNIT AHU-1 LOW SUPPLY AIR TEMP
- COOLING FAILURE
- BOILER B-1 FAILURE
- BOILER B-2 FAILURE
- BOILER PUMP P-1 FAILURE
- BOILER PUMP P-2 FAILURE
- LOW HEATING LOOP HOT WATER SUPPLY TEMPERATURE
- SYSTEM PUMP P-3 FAILURE
- SYSTEM PUMP P-4 FAILURE
- EXHAUST FAN EF-1 FAILURE
- EXHAUST FAN EF-2 FAILURE
- STEAM CABINET UNIT HEATER FAN CUH-1 FAILURE
- STEAM CABINET UNIT HEATER FAN CUH-2 FAILURE



**2 DDC EQUIPMENT ENCLOSURE DETAIL**  
SCALE: 1" = 1'-0"

**GENERAL ENERGY MANAGEMENT NOTES:**

- PRIOR TO ANY INSTALLATION OF DDC EQUIPMENT OR DDC WIRING, CONTRACTOR SHALL REQUEST A DDC PRECONSTRUCTION MEETING WITH DMVA ENGINEERING TO DISCUSS CONSTRUCTION SCHEDULING, PRECISE DDC EQUIPMENT LOCATIONS, STARTUPS, LABELING PROCEDURES, AND COMMISSIONING.
- NEW DDC PROGRAMMING TO BE INTEGRATED WITH EXISTING LONWORKS OPEN PROTOCOL BUILDING MANAGEMENT SYSTEM. REFER TO SPECIFICATIONS FOR PROGRAMMING / PROGRAMMER REQUIREMENTS.
- DDC CONTRACTOR TO INCLUDE 8 HOURS OF DDC COMMISSIONING WITH IN-HOUSE DDC / MECHANICAL TECHNICIAN.
- ROUTE ALL DDC CONTROL WIRES PER SCHEDULE AND SPECIFICATIONS.
- REFER TO DDC SCHEMATIC THIS SHEET FOR ADDITIONAL END DEVICES NOT SHOWN ON PLANS.
- CONTRACTOR TO INSTALL A MINIMUM 3/4" CONDUIT FOR ALL DDC WIRING. CONTRACTOR IS ALLOWED TO INSTALL J-HOOKS 4" O.C. FOR DDC CONTROL WIRING ONLY IN AREAS ABOVE A SUSPENDED CEILING. ALL CONDUIT IN WALLS TO BE STUBBED INTO CEILING SPACE.
- CONTRACTOR SHALL PULL ALL DDC WIRING AS SHOWN ON DDC FLOOR PLAN AND DDC EQUIPMENT SCHEDULE. ALL WIRES SHALL BE LABELED WITH A LABEL MAKER APPROVED BY DMVA ENGINEERING. NO HAND WRITTEN LABELS WILL BE ALLOWED. ALL LABELS LOCATED IN ENCLOSURE ENC-1 & 2 MUST BE PLACED 6" DOWN ON WIRE ONCE INSIDE THE ENCLOSURE, DO NOT LOCATE LABEL AT THE END OF WIRE.
- ALL INPUT/OUTPUT CONTROL WIRES TO BE LON RATED, SEE SPECIFICATIONS.
- DDC SEQUENCE AND PROGRAMMING WILL BE COMPLETED BY A DMVA APPROVED SUBCONTRACTOR, SEE SPECIFICATIONS.
- CONTRACTOR TO PURCHASE (1) BUILDING MANAGEMENT WORKSTATION AND TURN OVER TO DMVA ENGINEERING. SEE SPECIFICATIONS FOR FURTHER DETAIL.
- INSTALL TEMPERATURE SENSORS, TEMP-1, 60" AFF.
- INSTALL OCCUPANCY SENSORS, OCC-1, 6" FROM CEILING.
- INSTALL ALL OAT-1 ON NORTH FACING EXTERIOR WALL, MAKE WEATHERTIGHT PRINT COPY OF DDC WIRE COLOR SCHEDULE AND SCHEMATIC AND SECURE TO THE BACK OF THE DOOR IN ENC-1 & 2. LABEL ALL MECHANICAL EQUIPMENT TO CORRESPOND TO DDC SCHEMATIC.
- PROVIDE AND INSTALL ALL END DEVICES SHOWN ON PLANS, DDC SCHEMATIC AND DETAILS.
- COORDINATE WITH ELECTRICAL TO INSTALL NEW RELAYS. ELECTRICAL CONTRACTOR WILL INSTALL J-BOX FOR NEW RELAYS TO MOUNT ON.
- RELAYS FOR EXHAUST FANS O BE LOCATED IN ELECTRICAL CLOSET. COORDINATE WITH ELECTRICAL.

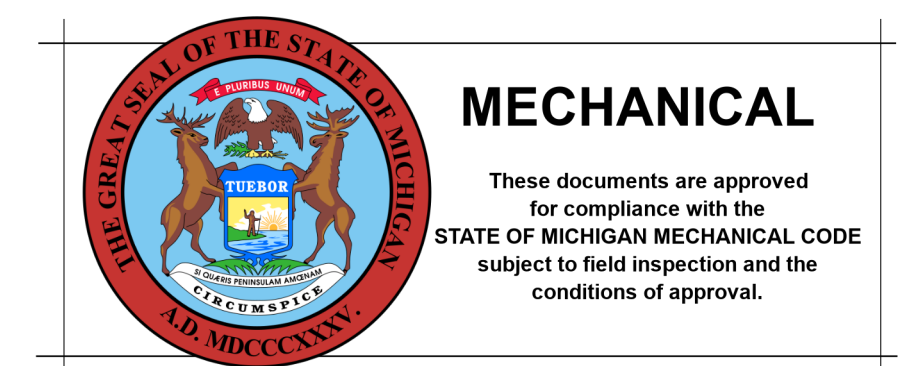
MARK	LABEL	DESCRIPTION	BASIS OF DESIGN	SERVICE	LOCATION	QTY / WIRE SIZE TO EQUIPMENT	NOTES
ENC-1	ENC-1	DDC ENCLOSURE	KELE - RET2620	DDC EQUIPMENT ENCLOSURE	MECHANICAL ROOM	-	NO SUBSTITUTIONS, STANDARD BROWN
DDC-1	DDC-1	PROGRAMMABLE CONTROLLER	CIRCON - UHC400	DDC	DDC ENCLOSURE	-	NO SUBSTITUTIONS
DDC-2	CATNET	CATNET INTERFACE W/ LON CARD	CATNET - CLF-FT	ENC-1	ONE PER BUILDING, ENC-1	-	NO SUBSTITUTIONS
DDC-3	WEBSERVER	CATNET WEBSERVER	CATNET - HMI CH-2	ENC-1	ONE PER BUILDING, ENC-1	-	NO SUBSTITUTIONS
DDC-4	MODBUS	INTERFACE MODBUS	CATNET - CMI-485	ENC-1	DDC ENCLOSURE	-	NO SUBSTITUTIONS
T-1	T-1-ENC#	TRANSFORMER w/ OUTLET	AIR PROD. & CONTROLS - T-PB-202-0	DDC ENCLOSURE EQUIPMENT	DDC ENCLOSURE	-	
T-2	T-1-ENC#	VAV-1 TRANSFORMER	RIB - PSMN300A or PSMN500A	VAV-1 CONTROLLERS	ENCLOSURE	-	100VA FOR EACH VAV-1, W/ NEMA 1 ENCLOSURE
TEMP-1	TEMP-1-AREA	ROOM TEMPERATURE SENSOR	SAP - SAP-10K-3-B4	ROOM TEMP	SEE LAYOUT, WALL MOUNTED 60" AFF	3 CONDUCTOR / 18 GA.	18 INCHES, TEMP. AVERAGING
TEMP-2	TEMP-2-AHU# or RTU#	DUCT TEMPERATURE SENSOR	SAP - SAP-10K-3-18"	MIXED AIR TEMP	RETURN DUCT AFTER FRESH AIR	3 CONDUCTOR / 18 GA.	18 INCHES, TEMP. AVERAGING
TEMP-3	TEMP-3-AHU# or RTU#	PIPE TEMPERATURE SENSOR	SAP - SAP-10K-3-S	DISCHARGE AIR TEMP	SUPPLY DUCT	3 CONDUCTOR / 18 GA.	
HD-1	HD-1-AHU# or RTU#	DUCT HUMIDITY SENSOR	VERIS - HD2XV5X w/ (1) SPARE SENSOR HS2xxx	HUMIDITY	RETURN DUCT BEFORE FRESH AIR	2 CONDUCTOR / 18 GA. SHIELD, 2 CONDUCTOR / 18 GA. DC PWR. USE 16 GA. ON RUNS OVER 150FT	
OAT-1	OAT-1	OUTDOOR AIR TEMP SENSOR	SAP - SAP-10K-3-O-EU	OAT	BLDG EXTERIOR	4 CONDUCTOR / 18 GA.	(2) SINGLE POLE DOUBLE THROW 15A
CS-1	CS-1-(DEVICE NAME)	CURRENT SENSOR	ACI - AMSCS	AHU/PUMPS/EXHAUST FANS	VARIES	3 CONDUCTOR / 18 GA.	
CO2-1	CO2-1-AHU# OR RTU#	DUCT CO2 SENSOR	VERIS - CDE	CO2	RETURN DUCT	3 CONDUCTOR / 18 GA.	
SD-1	SD-1	SMOKE DETECTOR	AIR PRODUCTS & CONTROLS - SL-2000-P	AHURTU	RETURN DUCT BEFORE FRESH AIR	2 CONDUCTOR / 18 GA.	
DIN RAIL	-	DIN RAIL	KELI - BAM-1000	MECHANICAL EQUIP	DDC ENCLOSURE / RTU	-	
WIRE DUCT	-	SLOTTED WIRE DUCT	IBOCO - T1E-1522W & T1E-1015W	MECHANICAL EQUIP	DDC ENCLOSURE	-	
RELAY-1	(VARIES ON DEVICE)	RELAY	RIB - RIBU1S	MECHANICAL EQUIP	VARIES	-	
RELAY-2	(VARIES ON DEVICE)	RELAY	RIB -	MECHANICAL EQUIP	VARIES	2 CONDUCTOR / 18 GA.	
RELAY-3	(VARIES ON DEVICE)	DIN RAIL RELAY DPDT	VERIS - VMD2B-F24A w/ RELAY SOCKET VERIS - VBD1B-F	AHURTU/JAC	DDC ENCLOSURE	2 CONDUCTOR / 18 GA.	SINGLE POLE DOUBLE THROW 2A
RELAY-4	(VARIES ON DEVICE)	RELAY	RIB - RIBX24SBA	24V INPUT, 120V OUTPUT MECH EQIP	VARIES	-	HAND, OFF, AUTO
VAV-#	VAV-#-RM#	VAV UNIT CONTROLLER	CIRCON - VAV-332-IMV	VAV UNIT	VARIES	LONBUS COMM / 2 CONDUCTOR / 18 GA. PWR. USE 16 GA. ON RUNS OVER 150FT	
DP-1	DP-1-AHU# or RTU#	DUCT PRESSURE SENSOR	ACI - ALP2-3-10	AHURTU VFD	2/3 DOWN MAIN SUPPLY DUCT	2 CONDUCTOR / 18 GA.	
TBLCK	-	TERMINAL BLOCK	KELE - CDU4N	MECHANICAL EQUIP	DDC ENCLOSURE / RTU	2 CONDUCTOR / 18 GA.	
BRKR	-	CIRCUIT BREAKER FOR CONTROLLER	CBI ELECTRIC - QL-2	PROGRAMMABLE CONTROLLER	DDC ENCLOSURE / RTU	2 CONDUCTOR / 18 GA. SHIELD, 2 CONDUCTOR / 18 GA. PWR. USE 16 GA. ON RUNS OVER 150FT	
ACT-1	ACT-1-(DEVICE NAME)	DAMPER ACTUATOR	KMC CONTROLS - MEP-7552	CONTROL DAMPERS	VARIES	2 CONDUCTOR / 18 GA. SHIELD, 2 CONDUCTOR / 18 GA. PWR. USE 16 GA. ON RUNS OVER 150FT	
ACT-2	ACT-2-(DEVICE NAME)	1/2" & 3/4" VALVE ACTUATOR	KMC CONTROLS - MEP-4252V	CONTROL VALVES	VARIES	2 CONDUCTOR / 18 GA. SHIELD, 2 CONDUCTOR / 18 GA. PWR. USE 16 GA. ON RUNS OVER 150FT	
ACT-3	ACT-3-(DEVICE NAME)	1" - 3" VALVE ACTUATOR	KMC CONTROLS - MEP-4552V	CONTROL VALVES	VARIES	2 CONDUCTOR / 18 GA. SHIELD, 2 CONDUCTOR / 18 GA. PWR. USE 16 GA. ON RUNS OVER 150FT	
OCC-1	OCC-1-RM#	OCCUPANCY SENSOR	WATTSTOPPER - CX100	ROOM OCCUPANCY	SEE LAYOUT, WALL MOUNTED 6" FROM CEILING	2 CONDUCTOR / 18 GA. SHIELD, 2 CONDUCTOR / 18 GA. DC PWR. USE 16 GA. ON RUNS OVER 150FT	
ACDC-1	ACDC-1	AC TO DC VOLTAGE CONVERTER	IDEC - P55R-VA24	OCCUPANCY & HUMIDITY SENSORS	DDC ENCLOSURE		

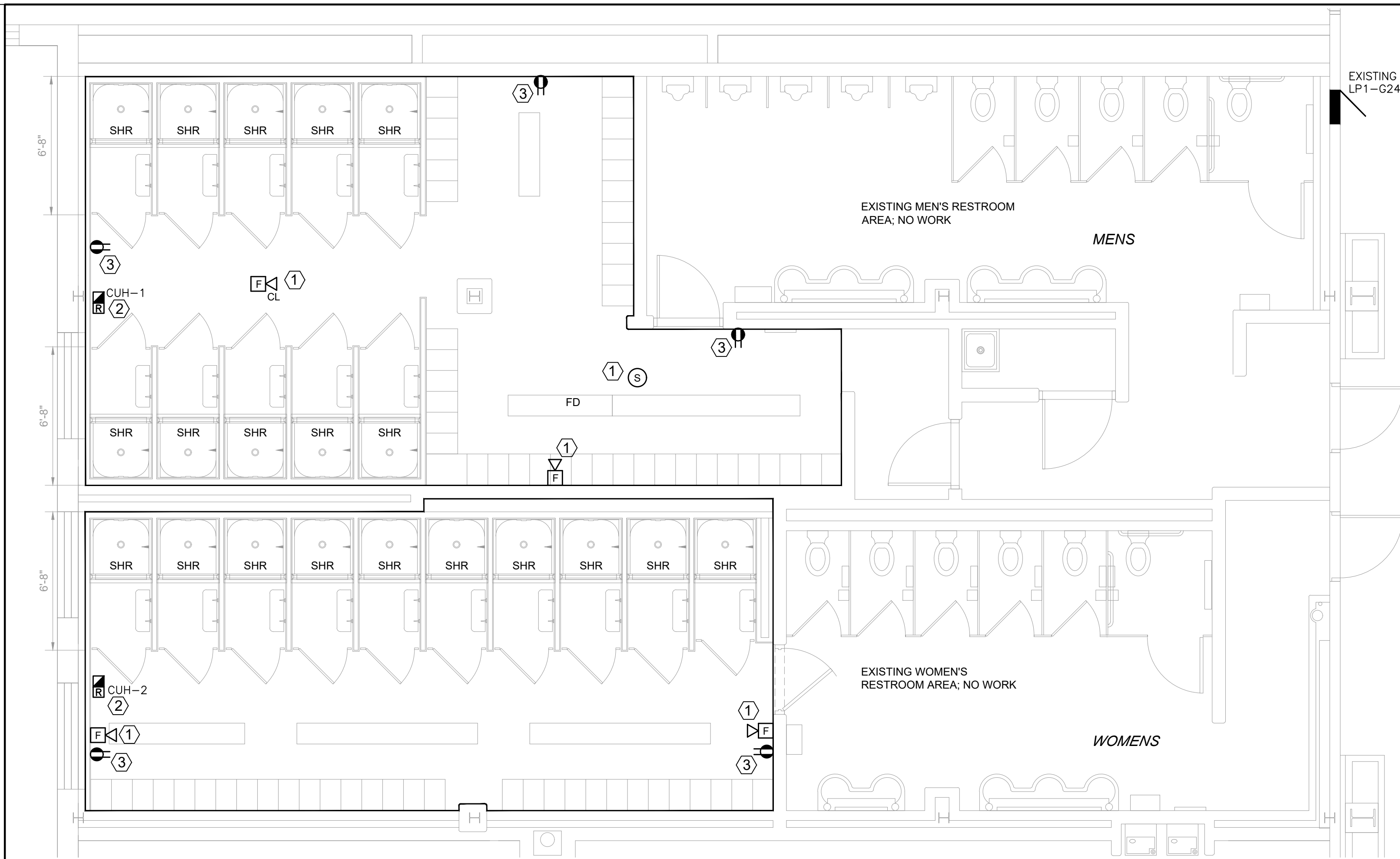
- NOTES:**
- CONTRACTOR TO FURNISH AND INSTALL MATERIALS IN SCHEDULE. WIRE SHOWN TO BE PULLED INTO ENCLOSURES / MECHANICAL EQUIPMENT AND LABELED AT EACH END.
  - SUBSTITUTIONS SHALL BE REVIEWED AND APPROVED BY DMVA ENGINEERING PRIOR TO INSTALLATION.
  - INSTALL CAT & DATA CABLE TO DDC ENCLOSURE W/ CATNET WEBSERVER

**HYDRONIC/STEAM CONTROL VALVES**

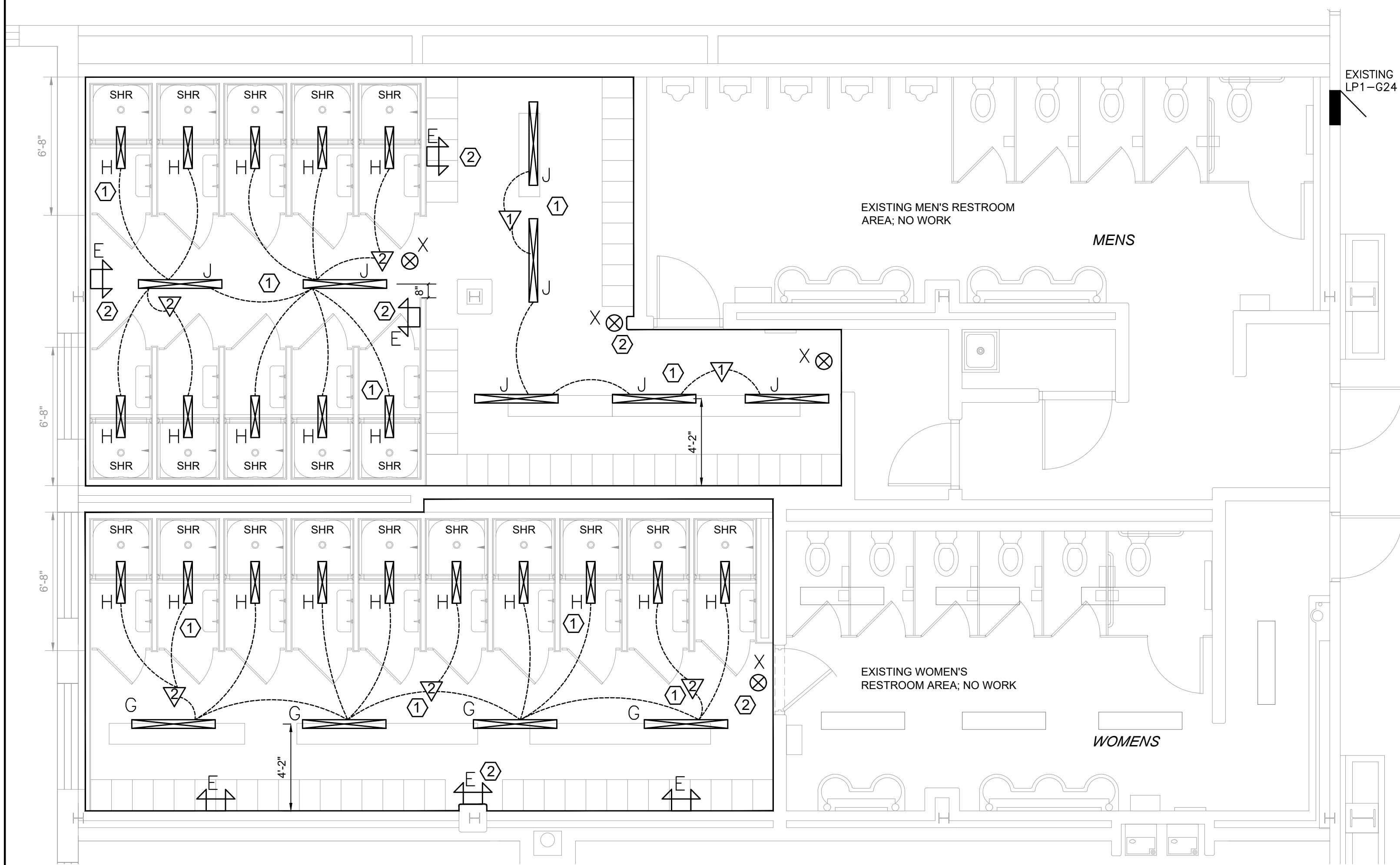
MARK	BASIS OF DESIGN	TYPE	GPM	PIPE SIZE	VALVE SIZE	SERVICING	NOTES
CV-1	GRISWOLD - UR3ECFBM7T	MODULATING 3-WAY	15	1-1/2"	1-1/2"	AHU-1	*COMPATIBLE W/ KMC ACTUATORS, INCLUDE VALVE TAG
CV-2	MCMASTER-CARR	STEAM ON/OFF	-	3/4"	1/2"	CUH-1	BRASS, PTFE SEAL, 4 CV, NORMALLY CLOSED, INCLUDE VALVE TAG
CV-3	MCMASTER-CARR	STEAM ON/OFF	-	3/4"	1/2"	CUH-2	BRASS, PTFE SEAL, 4 CV, NORMALLY CLOSED, INCLUDE VALVE TAG

\*SEE DDC EQUIPMENT SCHEDULE FOR CONTROL VALVE ACTUATORS





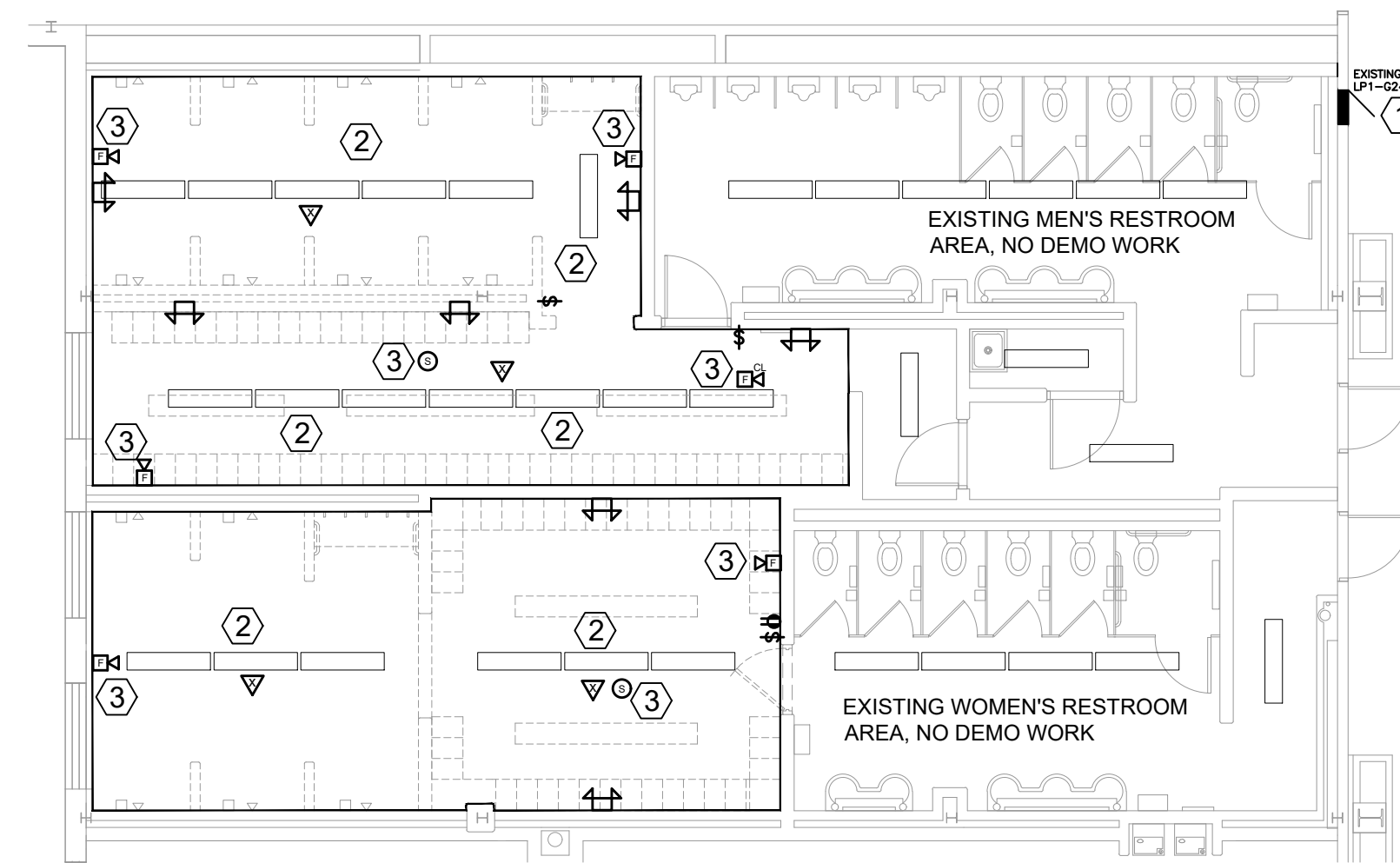
**PARTIAL FIRST FLOOR SHOWER/LOCKER POWER AND FIRE ALARM PLAN**  
SCALE 1/4" = 1'-0"



**PARTIAL FIRST FLOOR SHOWER/LOCKER LIGHTING PLAN**  
SCALE 1/4" = 1'-0"

**PARTIAL FIRST FLOOR SHOWER/LOCKER POWER AND FIRE ALARM PLAN NOTES:**

- ① INSTALL THE REMOVED AND SAVED FIRE ALARM SIGNALING AND SENSOR DEVICES WHERE INDICATED. ADD NEW FA DEVICES AS REQUIRED. EXTEND THE CABLING AS NEEDED.
- ② PROVIDE AND INSTALL A MANUAL MOTOR STARTER/RIB RELAY UNIT WITHIN EACH OF THE CABINET UNIT HEATERS, CUH-1 & CUH-2. MOUNT WITHIN THE UNIT BEHIND A REMOVABLE CABINET COVER. CONNECT TO AREA 120VAC RECEPTACLE CIRCUIT.
- ③ CONNECT THE NEW RECEPTACLES TO THE EXISTING AREA RECEPTACLE CIRCUIT.



**PARTIAL FIRST FLOOR SHOWER/LOCKER DEMO PLAN**  
SCALE 1/8" = 1'-0"

**PARTIAL FIRST FLOOR SHOWER/LOCKER DEMO PLAN NOTES:**

- ① EXISTING PANELBOARD LP1-G24 TO REMAIN.
- ② REMOVE THE EXISTING LIGHTING FIXTURES IN THIS ROOM AND TURN OVER TO THE OWNER. PROVIDE AND INSTALL TEMPORARY LIGHTING IN THIS ROOM FOR CONSTRUCTION USE.
- ③ REMOVE THE EXISTING FIRE ALARM AUDIO/VISUAL UNITS AS WELL AS THE DETECTOR UNITS AND SAVE FOR REINSTALLATION ONCE THE NEW CONSTRUCTION WALLS AND CEILINGS ARE FINISHED. EXTEND THE FIRE ALARM CABLING AS REQUIRED.

**PARTIAL FIRST FLOOR SHOWER/LOCKER LIGHTING PLAN NOTES:**

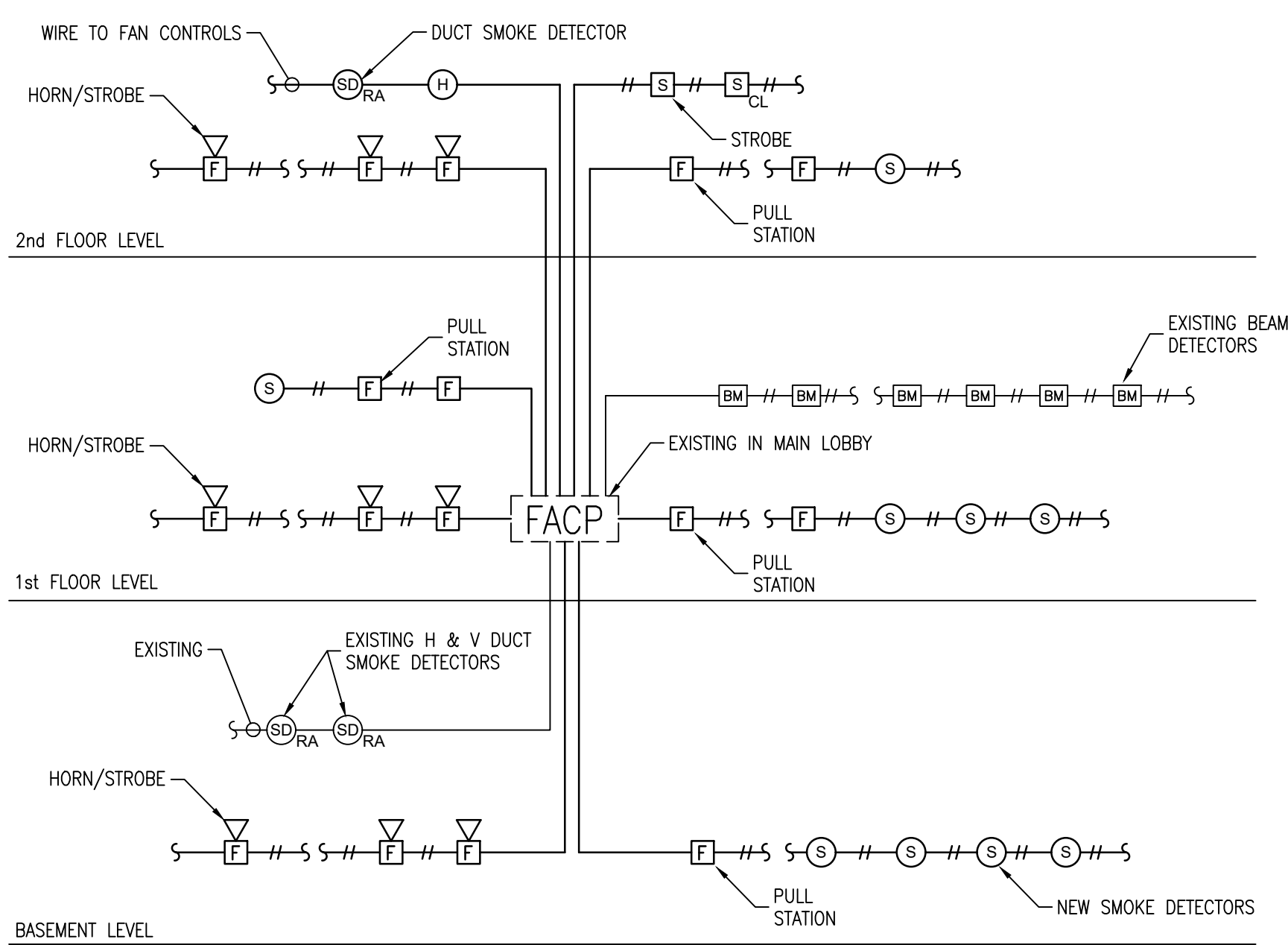
- ① CONNECT NEW LIGHTING FIXTURES TO THE EXISTING LIGHTING CIRCUIT IN ROOM.
- ② CONNECT NEW EMERGENCY LIGHTING AND NEW EXIT LIGHT UNITS TO AN UN-SWITCHED FEED FROM THE SAME EXISTING LIGHTING CIRCUIT AS THE NEW ROOM LIGHTING FIXTURES ARE CONNECTED TO.

1st FLOOR SHOWER/LOCKER AREA LOAD SUMMARY	
PANEL LP1-G24:	
	VOLT-AMPS
EXISTING PANEL OLD LIGHTING LOAD	1,900
EXISTING PANEL NEW LIGHTING LOAD	2,958
NET LIGHTING ADDITION	1,058
EXISTING RECEPTACLE LOAD REMOVED	180
NEW RECEPTACLE LOAD	900
NET RECEPTACLE ADDITION	720
EXISTING HVAC LOAD REMOVED	0
NEW HVAC LOAD ADDED	8
NET RECEPTACLE ADDITION	8
NET EXISTING PANEL LOAD ADDITION	1,786
NET AMPS ADDED	5.0Amps
FOR THIS WORK AREA, THERE ARE NO "KITCHEN, MOTOR, OR OTHER" LOADS ADDED OR REMOVED.	

PROJECT ELECTRICAL LOAD SUMMARY		
SHEET NO. AND DESCRIPTION	NO LOADS ADDED OR REMOVED	AMPERES
E1 AREAS OF WORK PLAN	NO LOADS ADDED OR REMOVED	
E2 PARTIAL FIRST FLOOR SHOWER/LOCKER LOAD CHANGE	ADDED	+5.0 AMPS
E3 FIRST FLOOR EAST OFFICE LOAD CHANGE	REMOVED	-4.1 AMPS
E4 FIRST FLOOR COVID DOOR AREA LOAD CHANGE	ADDED	+5.3 AMPS
E5 BASEMENT CLASSROOM AREA LOAD CHANGE	REMOVED	-16.4 AMPS
E6 BASEMENT EAST SIDE	NO LOADS ADDED OR REMOVED	
E7 GENERATOR BLDG. INTERIOR LOAD CHANGE	ADDED	+4.6 AMPS
E8 2nd FLOOR CLASSROOMS, MECH. ROOM LOAD CHANGE	REMOVED	-88.7 AMPS
E9 EXISTING ONE-LINE DIAGRAM	NO LOADS ADDED OR REMOVED	
E10 PROPOSED ONE-LINE DIAGRAM	NO LOADS ADDED OR REMOVED	
E11 SCHEDULES & DETAILS	NO LOADS ADDED OR REMOVED	
E12 GENERATOR BUILDING AREA	REFER TO SHEET E7 FOR LOADS ADDED	
NET TOTAL REVISED AMPERAGE LOAD		REMOVED: 356.1 AMPS

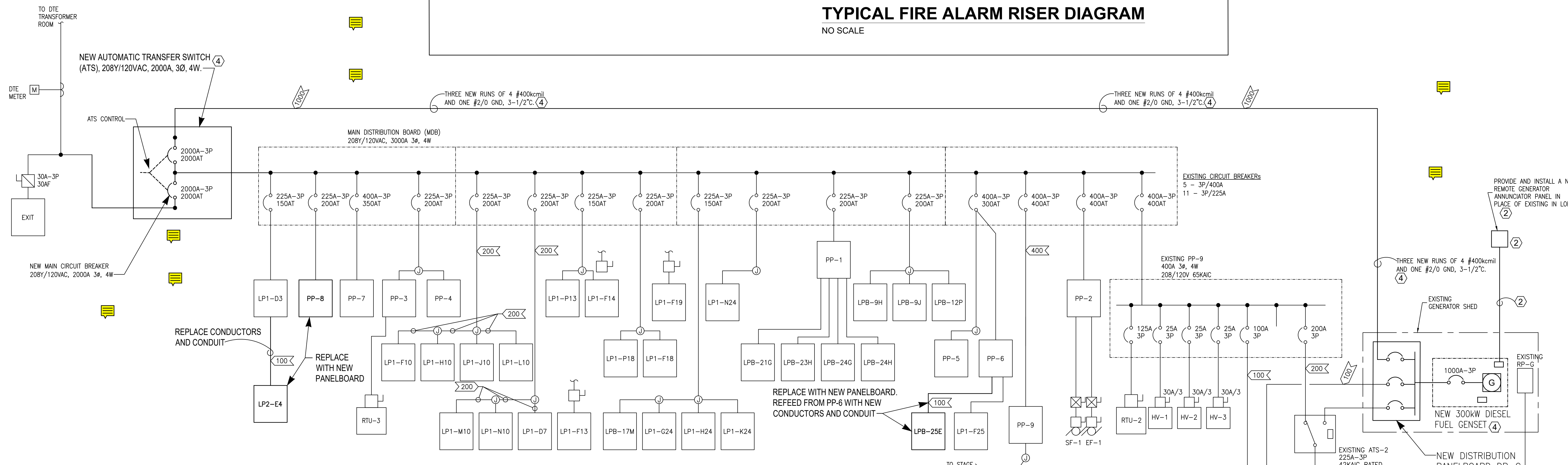
**TYPICAL FIRE ALARM RISER DIAGRAM NOTES:**

- FIRE ALARM SYSTEM WIRING SHALL BE INSTALLED ABOVE ACCESSIBLE CEILING IN CONDUIT.
- VERIFY EXACT QUANTITY AND LOCATIONS OF ALL SMOKE DETECTORS, DUCT SMOKE DETECTORS, SIGNAL MODULES, PULL STATIONS, STROBES AND HORN/STROBES DEVICES WITH FLOOR PLANS.
- DUCT DETECTORS SHALL BE WIRED TO THEIR RESPECTIVE FAN STARTERS FOR AUTOMATIC SHUT DOWN, BY ELECTRICAL TRADES.
- PROVIDE REMOTE NOTIFICATION APPLIANCE CIRCUIT PANEL AS REQUIRED. CONNECT TO SPARE CIRCUIT BREAKER IN RECEPTACLE PANEL. ADD LOCK-ON DEVICES. FIRE ALARM MANUFACTURER MUST SUPPLY SMOKE DETECTOR FOR EACH REMOTE POWER SUPPLY.
- PROVIDE ALL REQUIRED FIRE ALARM EQUIPMENT PER MANUFACTURER'S REQUIREMENTS AND/OR SHOP DRAWINGS AND NFPA. ALL VISUAL DEVICES SHALL ALSO BE SIZED PER NFPA. ELECTRICAL CONTRACTOR SHALL FIELD ADJUST EACH AREA'S VISUAL DEVICE CANDELA SETTING PER NFPA AFTER INSTALLATION. MAKE ALL NECESSARY REVISIONS FOR A COMPLETE INSTALLATION.
- PROVIDE ALL REQUIRED FIELD TESTING AND REPROGRAMMING OF EXISTING FIRE ALARM SYSTEM TO ACCEPT THE MODIFICATIONS. UPDATE RECORD DRAWINGS. SUBMIT TO STATE OF MICHIGAN FOR REVIEW AND APPROVAL.
- CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE, CERTIFIED AND STAMPED DESIGN OF THE NEW FIRE ALARM WORK. QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL FIRE ALARM JUNCTION BOXES ARE TO BE PAINTED RED. ALL CONDUIT ABOVE CEILINGS SHALL BE PAINTED RED.
- DEVICE MOUNTING HEIGHTS SHALL MATCH SIMILAR EXISTING DEVICE MOUNTING UNLESS NOTED OTHERWISE.
- FIRE ALARM SUPPLIER (NATIONAL TIME & SIGNAL) INDICATES NEED TO UPDATE THE FIRE ALARM CONTROL PANEL'S (FACP) AND NOTIFICATION APPLIANCE CONTROL PANEL (NACP) FIRMWARE. INCLUDE THIS IN YOUR BID AMOUNT.



**TYPICAL FIRE ALARM RISER DIAGRAM**  
 NO SCALE

ALL GENERATOR AND/OR SWITCHGEAR WORK REQUIRING SHUTDOWNS NEED TO BE ACCOMPLISHED DURING NON-DRILL WEEKENDS. COORDINATE WITH THE OWNERS REPRESENTATIVE. NOTICE IS REQUIRED AT LEAST TWO (2) WEEKS BEFORE THE SHUTDOWN DATE.



**PROPOSED ONE-LINE DIAGRAM**  
 208Y/120VAC, 3Ø, 4W

**PROPOSED ONE-LINE DIAGRAM NOTES:**

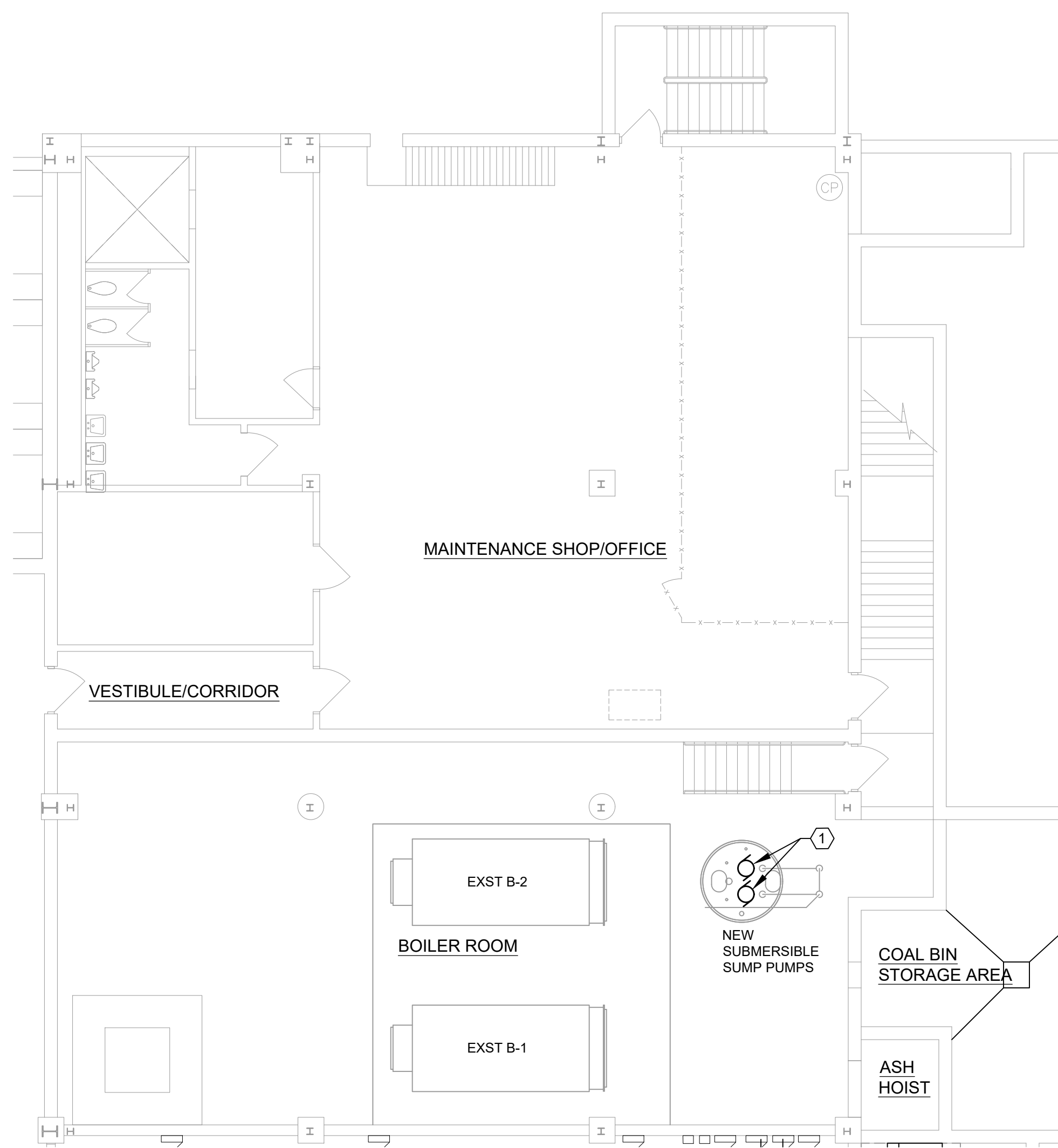
- INSTALL NEW CONDUIT & CONDUCTORS BETWEEN NEW DP-G AND THE NEW ATS SWITCH NEXT TO MDP. REFER TO EXISTING ONE-LINE DIAGRAM NOTE #1, SHEET E9.
- INSTALL A NEW GENERATOR ANNUNCIATOR, AND ANNUNCIATOR CABLE IN CONDUIT BETWEEN THE NEW GENERATOR CONTROL PANEL AND THE ARMORIES LOBBY WHERE AN OLDER ANNUNCIATOR IS LOCATED. REFER TO SHEET E1 FOR EXISTING ANNUNCIATOR LOCATION.
- ALL PANELBOARDS AND SWITCHGEAR ARE EXISTING UNLESS OTHERWISE NOTED.
- ALL GENERATOR AND/OR SWITCHGEAR WORK REQUIRING SHUTDOWNS NEED TO BE ACCOMPLISHED DURING NON-DRILL WEEKENDS. COORDINATE WITH THE OWNERS REPRESENTATIVE. NOTICE IS REQUIRED AT LEAST TWO (2) WEEKS BEFORE THE SHUTDOWN DATE.

**REFER TO SPECIFICATION SECTION 260573 FOR ONE-LINE INVESTIGATION & REPORT TASKS WHICH ARE INCLUDED IN THIS PROJECT**

FEEDER (AMPS)	COND. SIZE	FEEDER AND CONDUIT SIZES (COPPER ONLY)
		4 WIRE WITH GROUND
> 20	12	3/4", 4#12 & 1#12 GRD.
> 30	10	3/4", 4#10 & 1#10 GRD.
> 40	8	1", 4#8 & 1#10 GRD.
> 50	8	1", 4#8 & 1#10 GRD.
> 60	6	1", 4#6 & 1#10 GRD.
> 70	4	1 1/4", 4#4 & 1#8 GRD.
> 80	4	1 1/4", 4#4 & 1#8 GRD.
> 90	3	1 1/4", 4#3 & 1#8 GRD.
> 100	3	1 1/4", 4#3 & 1#8 GRD.
> 125	1	1 1/2", 4#1 & 1#6 GRD.
> 150	1/0	1 1/2", 4#1/0 & 1#6 GRD.
> 175	2/0	1 1/2", 4#2/0 & 1#6 GRD.
> 200	3/0	2", 4#3/0 & 1#6 GRD.
> 225	4/0	2", 4#4/0 & 1#4 GRD.
> 250	1-250	2 1/2", 4#250 & 1#4 GRD.
> 300	1-350	2 1/2", 4#350 & 1#4 GRD.
> 400	1-500	3 1/2", 4#500 & 1#3 GRD.
> 1000	1-500	THREE PARALLEL RUNS OF 3 1/2", 4#400 & 1#2/0 GRD.

**GENERAL ELECTRICAL CONSTRUCTION NOTES (APPLIES TO ALL ELECTRICAL DRAWINGS & DETAILS):**

1. SEAL ALL FIRE RATED WALL & CEILING PENETRATIONS.
2. COORDINATE LOCATIONS OF LIGHT FIXTURES WITH ALL PIPING, DUCTWORK, AND EQUIPMENT. MOUNT LIGHT FIXTURES TO ALLOW THE GREATEST POSSIBLE HEADROOM.
3. UNLESS OTHERWISE NOTED OR DETAILED, INSTALL ALL CONDUCTORS IN CONDUIT.
4. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODES.
5. PROVIDE EQUIPMENT GROUNDING CONDUCTORS IN EVERY POWER AND LIGHTING CONDUIT, ONE GROUNDING CONDUCTOR FOR EACH CIRCUIT.
6. ALL LIGHTING AND POWER CONDUCTORS SHALL BE 12 AWG MINIMUM.
7. MINIMUM CONDUIT SIZE SHALL BE 3/4" INTERNAL DIAMETER.
8. MC (METAL CLAD) CABLE SHALL NOT BE USED ON THIS PROJECT.
9. CONTRACTOR SHALL TRANSITION FROM PVC CONDUIT TO GALVANIZED RIGID METALLIC CONDUIT WHEN TURNING UP FROM BELOW A CONCRETE SLAB OR FROM BELOW GRADE TO ABOVE GRADE, WEATHER INDOORS OR OUTDOORS, BY INSTALLING A GALVANIZED METALLIC NINETY DEGREE ELBOW AND THEN CONTINUING ABOVE SLAB OR GRADE UTILIZING GALVANIZED RIGID METAL CONDUIT. THIS APPLIES TO ALL RACEWAYS FOR ALL SYSTEMS INCLUDING VOICE/DATA, UTILITY POWER AND/OR EMERGENCY POWER, LIGHTING, & COMMUNICATIONS SYSTEMS.

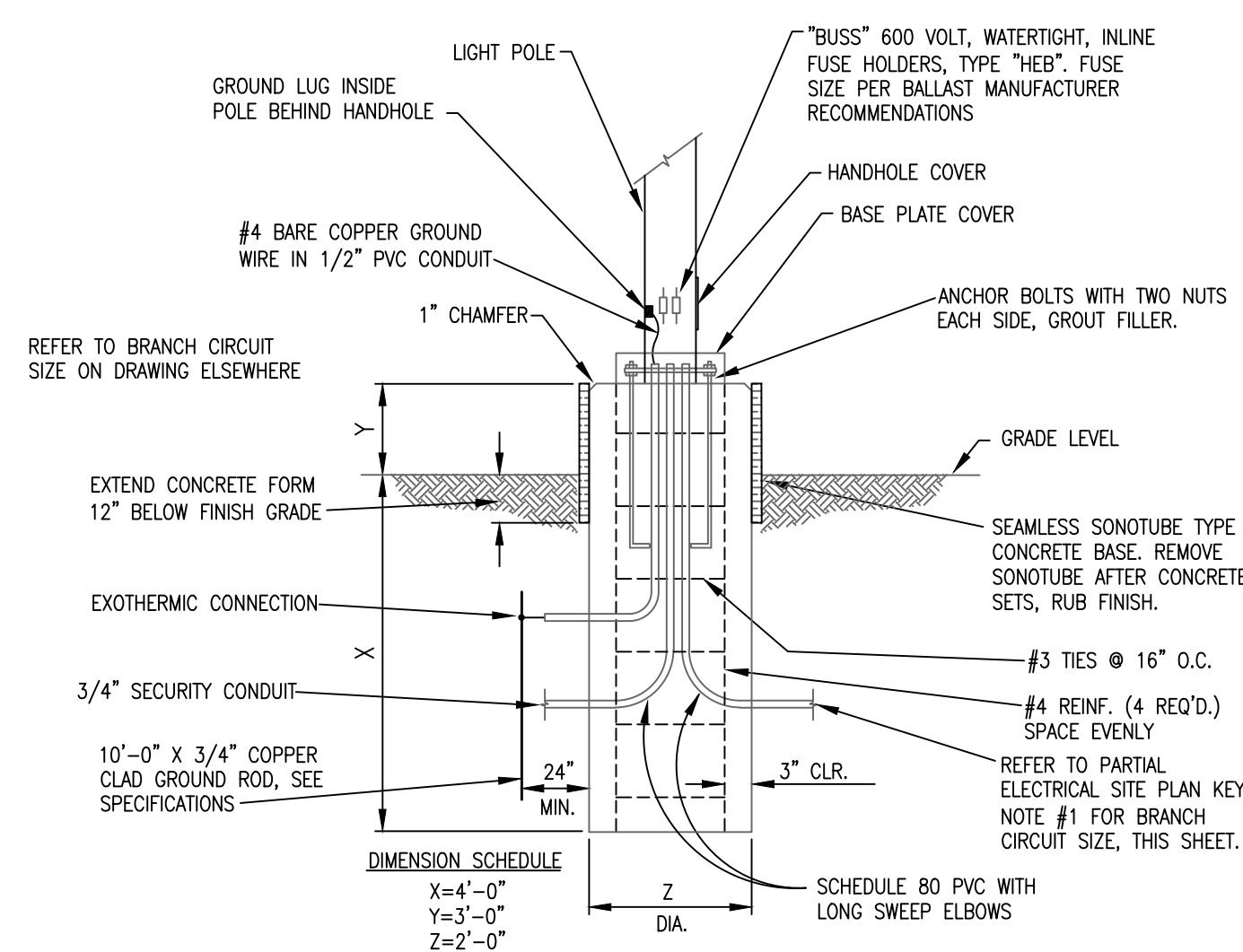


**PARTIAL BASEMENT SUMP PUMP REPLACEMENT PLAN**

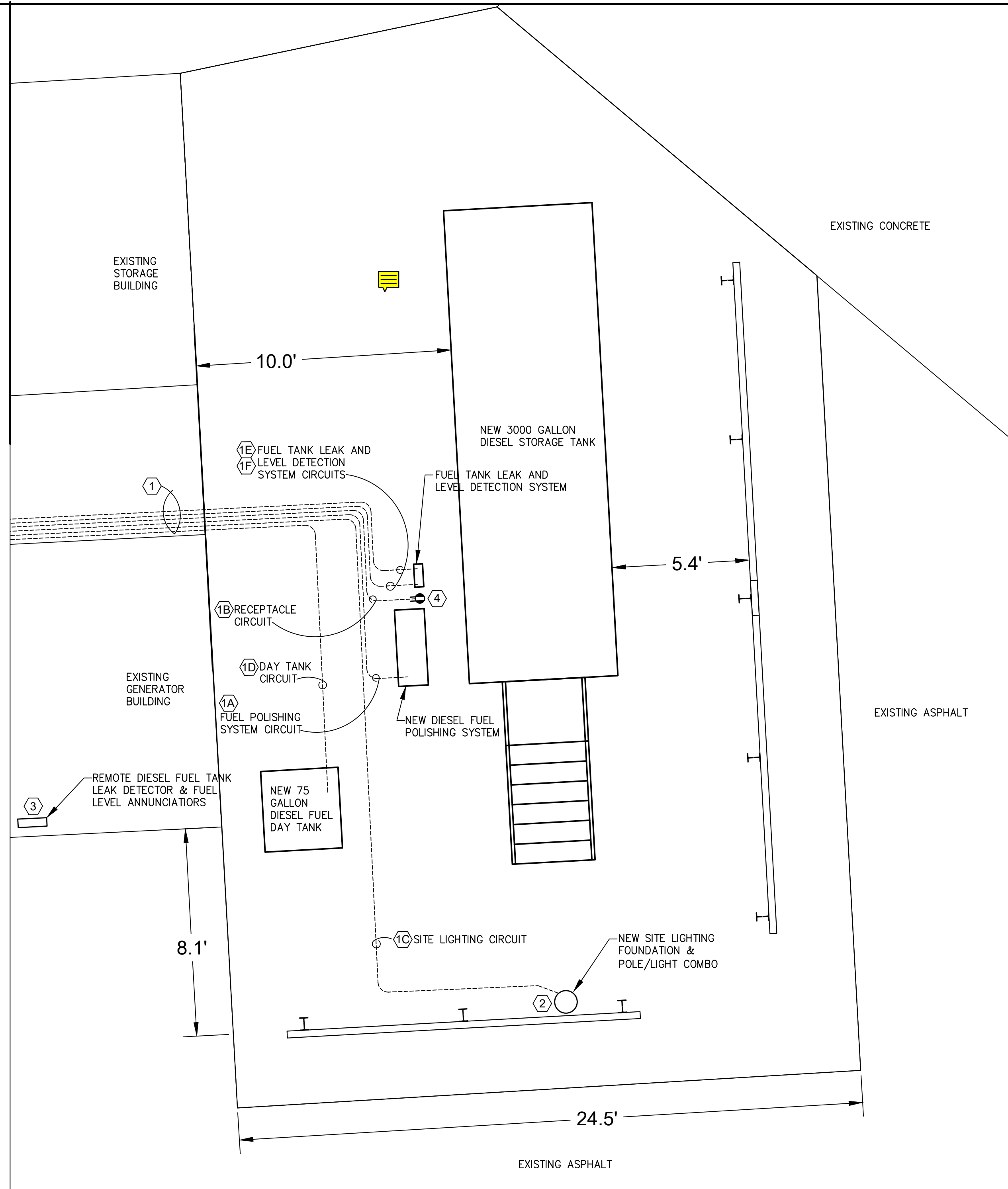
1/8" = 1' - 0"

PARTIAL BASEMENT SUMP PUMP REPLACEMENT PLAN NOTES:

- 1 DISCONNECT THE EXISTING SUMP PUMPS AND THEIR CONTROL PANEL. ONCE THE NEW SUBMERSIBLE PUMP ARE INSTALLED, RECONNECT THE NEW PUMPS, CONTROL PANEL, AND LEVEL SENSORS TO THE EXISTING WIRING.



**GENERATOR FUEL TANK LIGHTING POLE BASE DETAIL**  
NO SCALE



**GENERATOR DIESEL STORAGE TANK ELECTRICAL PLAN**  
SCALE: 1" = 3' - 0"

GENERATOR DIESEL STORAGE TANK ELECTRICAL PLAN:

- 1 INSTALL THE FOLLOWING NEW BRANCH CIRCUITS UNDER SLAB FROM THE EXISTING INTERIOR PANELBOARD RP-G, WHICH IS LOCATED IN THE EXISTING GENERATOR SHED, TO THE NEW FIELD DEVICES INDICATED.

ITEM	BRANCH CIRCUIT & RACEWAY SIZE
A FUEL POLISHER CONTROL PANEL	2 #10 & 1 #12GND, 3/4" C
B RECEPTACLE CIRCUIT	2 #12 & 1 #12GND, 3/4" C
C SITE LIGHTING CIRCUIT	2 #12 & 1 #12GND, 3/4" C
D DAY TANK PUMP	2 #12 & 1 #12GND, 3/4" C
E I.G. FUEL TANK LEAK DETECTION C.P.	2 #12 & 1 #12GND, 3/4" C
F I.L.G. FUEL TANK LEVEL DETECTION C.P.	2 #12 & 1 #12GND, 3/4" C

- 2 PROVIDE AND INSTALL A LIGHTING POLE FOUNDATION AND A NEW TYPE S LED LIGHTING FIXTURE ON THE POLE; REFER TO THE LIGHTING FIXTURE SCHEDULE, SHEET E11. PROVIDE AND INSTALL A NEW CONCRETE LIGHTING POLE BASE. REFER TO THE "GENERATOR FUEL TANK LIGHTING POLE BASE DETAIL", THIS SHEET.
- 3 ROUTE A 3/4" CONDUITS FROM THE LARGE FUEL TANK LEAK DETECTOR AND FUEL LEVEL CONTROL PANELS UNDERSLAB TO THE CONDUIT RACK THAT ROUTES THE POWER CONDUITS INTO THE BUILDING, AND TO THE REMOTE FUEL TANK LEAK DETECTOR & FUEL LEVEL ANNUNCIATOR UNITS IN THE LOCATION SHOWN. MOUNT THE REMOTE ANNUNCIATOR ENCLOSURES 55" AFF INSIDE THE GENERATOR BUILDING. COORDINATE THE EXACT LOCATION OF THESE REMOTE ANNUNCIATORS WITH THE OWNER'S REPRESENTATIVE.
- 4 PROVIDE AND INSTALL A GFCI RECEPTACLE IN A WEATHERPROOF ENCLOSURE WITH A WEATHERPROOF COVER. MOUNT ON THE CONTROL PANEL RACK 36" ABOVE THE CONCRETE SLAB. CONNECT RECEPTACLE TO PANEL RP-G, CIRCUIT INDICATED IN PANELBOARD SCHEDULE ON SHEET E7.



KNOW WHAT'S BELOW.  
CALL BEFORE YOU DIG.