

# RENOVATIONS TO UNION STATION RESTROOMS

ONE UNION PLACE - HARTFORD, CONNECTICUT

MAY 13, 2020  
CONSTRUCTION DOCUMENTS



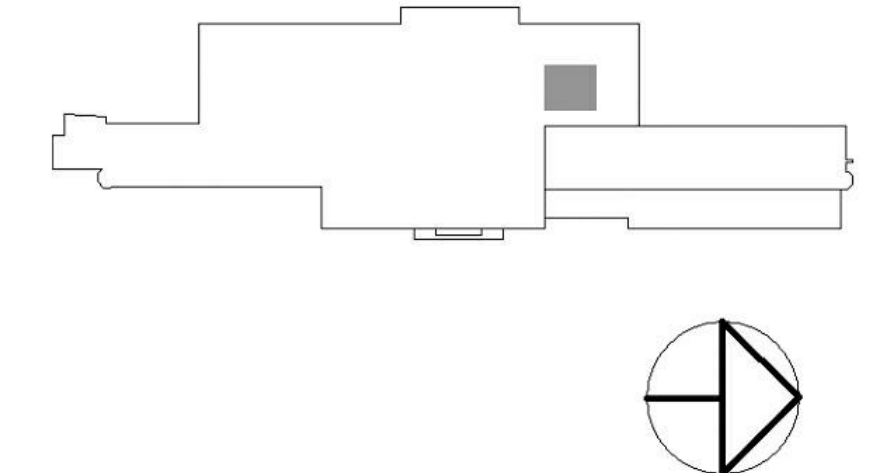
TSKP STUDIO

BEMIS ASSOCIATES, LLC - MECH./PLUMBING/ELECTRICAL/FIRE P.

## DRAWING LIST

GENERAL	
A0.00	COVER
A0.01	GENERAL INFORMATION
ARCHITECTURAL	
A0.05	SITE LOGISTICS PLAN
D1.01	FIRST FLOOR DEMOLITION PLAN
ARCHITECTURAL	
A1.11	FIRST FLOOR PLAN & REFLECTED CEILING PLAN
A1.12	INTERIOR ELEVATIONS & PARTITION TYPES/NOTES
FIRE PROTECTION	
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PLUMBING	
P0.00	PLUMBING GENERAL NOTES, SYMBOLS, SCHEDULES AND DETAILS
P1.01	PLUMBING FLOOR PLANS
P3.01	PLUMBING RISER DIAGRAM
MECHANICAL	
H0.00	MECHANICAL GENERAL NOTES SYMBOLS AND ABBREVIATIONS
H1.01	DEMOLITION AND NEW WORK PLAN
ELECTRICAL	
ED1.01	ELECTRICAL DEMOLITION PLAN
E1.01	ELECTRICAL FLOOR PLANS
E2.01	ELECTRICAL TEMPORARY RESTROOM PLAN

## LOCATION PLAN



## APPROVALS

GHTD	DATE
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AMTRAK	DATE
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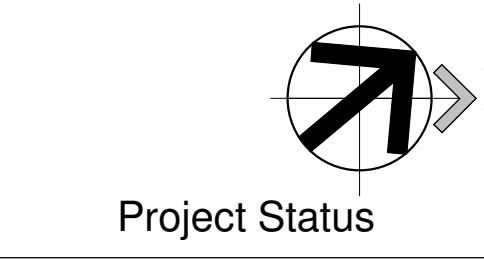


## GENERAL NOTES

1. THE DRAWINGS AND SPECIFICATIONS ARE DIVIDED INTO SECTIONS TO MEET THE NEEDS OF THE ARCHITECT, ENGINEERS, AND OTHER DESIGN CONSULTANTS. THEY ARE NOT PREPARED AS INSTRUCTIONS TO THE CONTRACTOR FOR HOW TO BUY OUT OR SUBCONTRACT THE WORK.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS, REGARDLESS OF WHERE IT IS SHOWN.
3. THE CONTRACTOR ACKNOWLEDGES THAT THEY HAVE REVIEWED ALL THE CONTRACT DOCUMENTS AND HAVE UNDERSTOOD THE SCOPE OF THE PROJECT IN ITS ENTIRETY.







Project Status

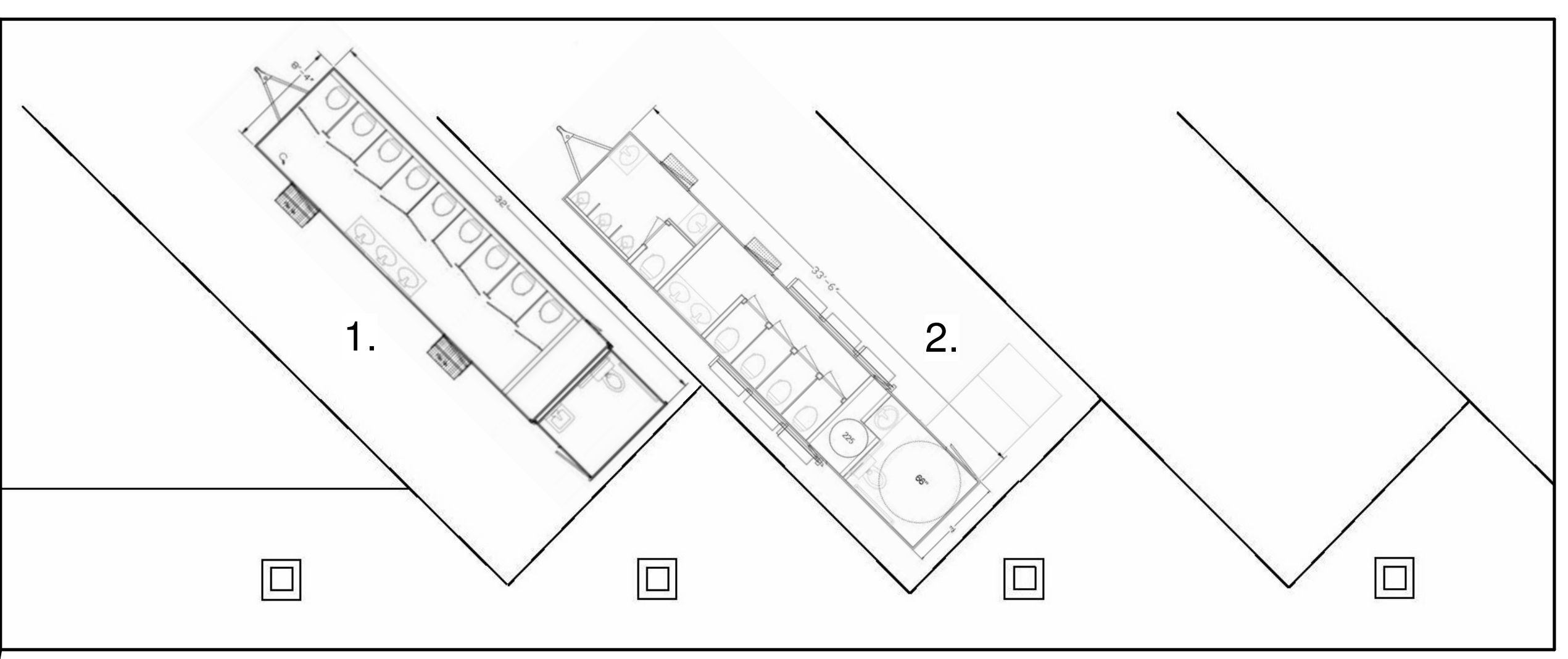
KEY PLAN

DRAWING TITLE

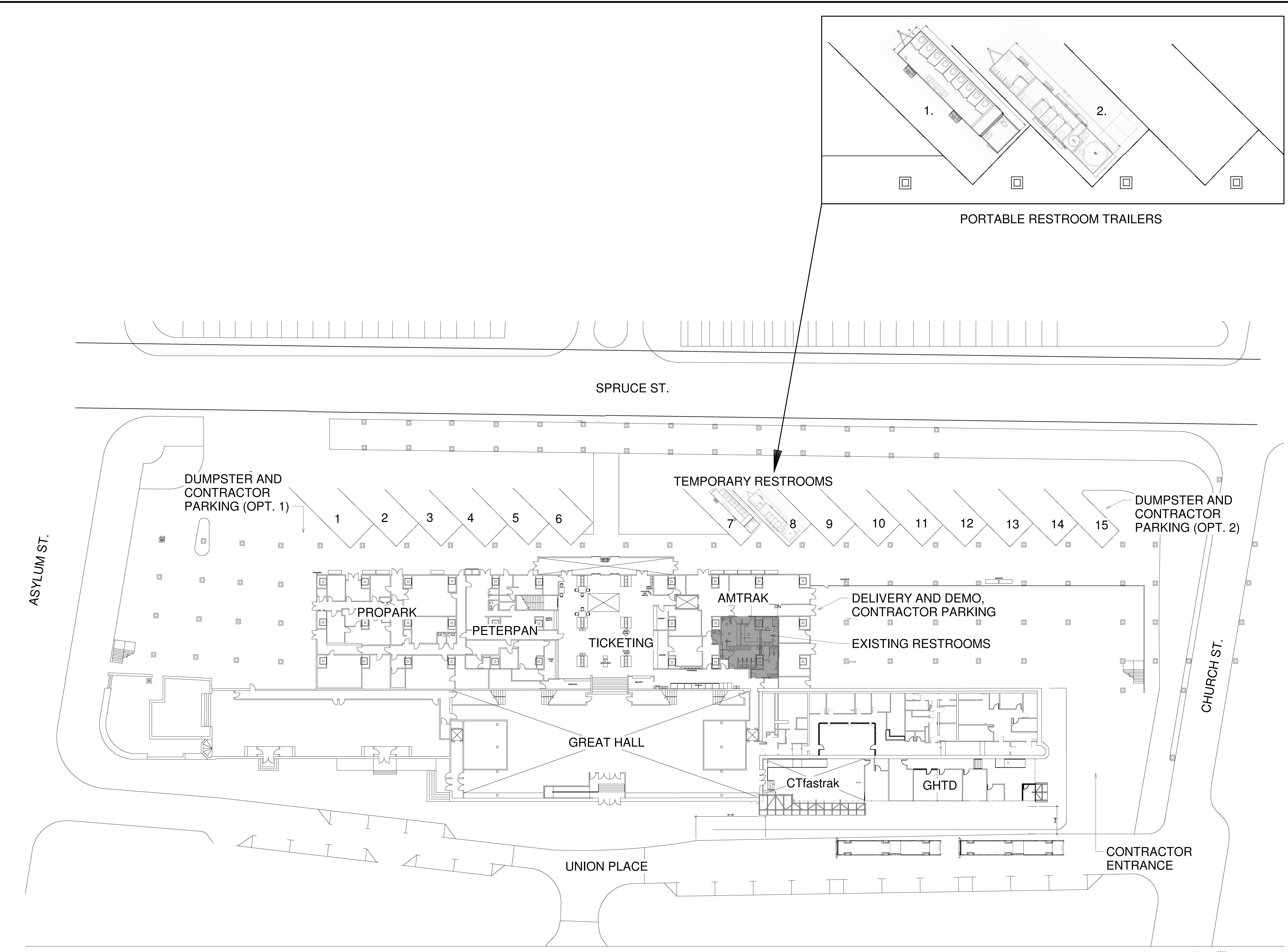
SITE LOGISTICS PLAN

STATE PROJ. NO.	
PROJ. NO.	Project Number
SCALE	As indicated
DATE	Issue Date
DRAWN BY	Author
APPROVED BY	Approver

ISSUE DATES		
NO.	DATE	PURPOSE
1	3/31/2020	SB
2	4/15/2020	DD
3	5/13/2020	CD

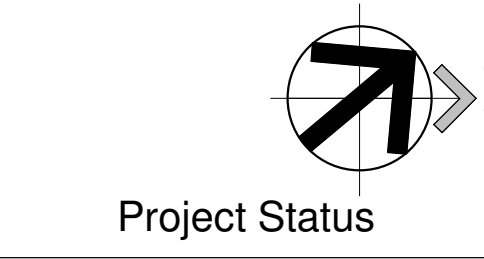


PORTABLE RESTROOM TRAILERS



1. SITE LOGISTICS PLAN  
 1" = 20'-0"





Project Status

KEY PLAN

DRAWING TITLE

FIRST FLOOR  
DEMOLITION PLAN

STATE PROJ. NO.	
PROJ. NO.	Project Number
SCALE	1/4" = 1'-0"
DATE	Issue Date
DRAWN BY	Author
APPROVED BY	Approver

ISSUE DATES		
NO.	DATE	PURPOSE
1	8/31/2020	SB
2	4/15/2020	DD
3	5/13/2020	CD

**D1.01**

**GENERAL DEMO NOTES**

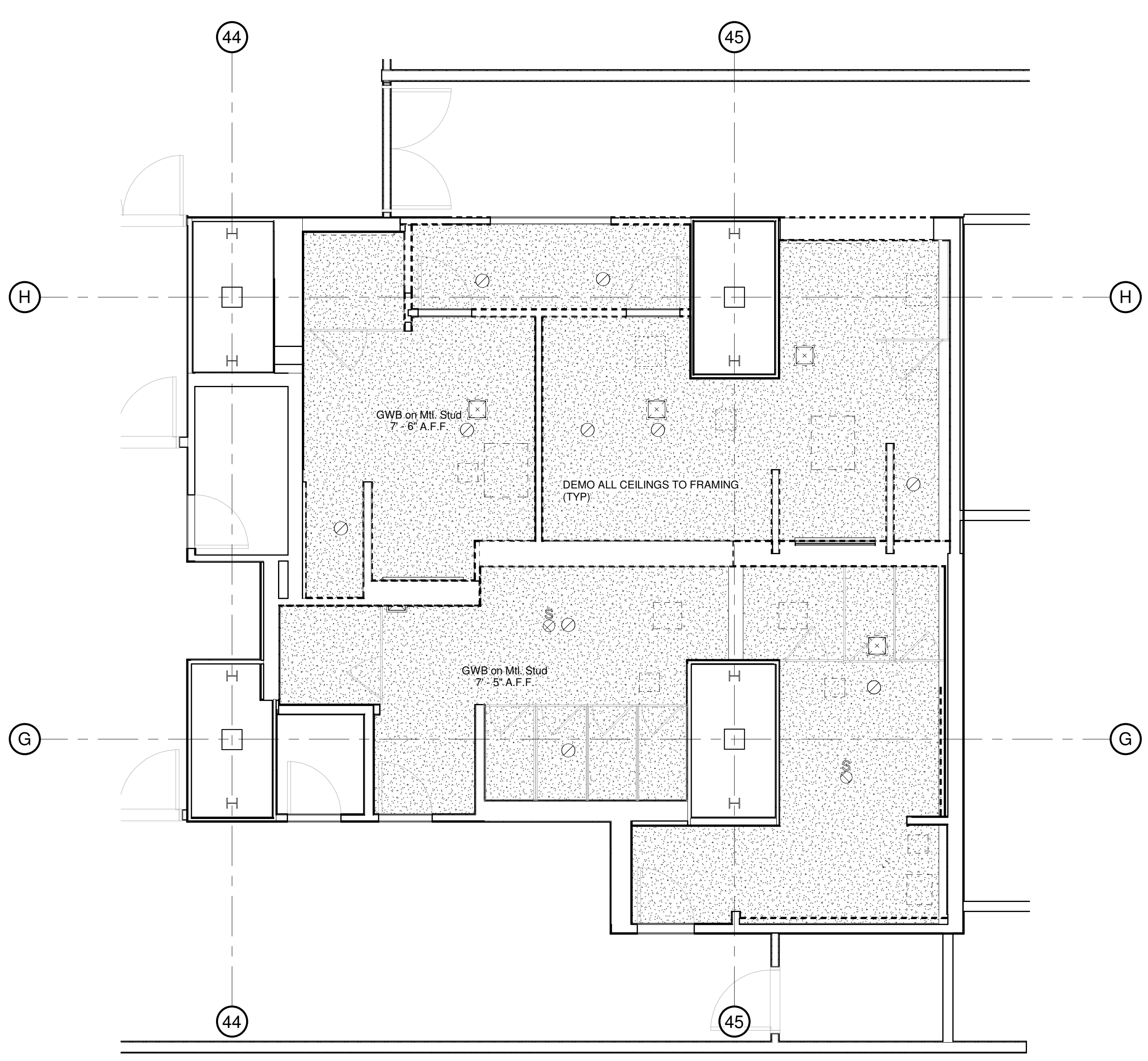
- SEE MECH. / ELEC. / PLUMBING / ABATEMENT DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION, TRENCHING, AND CUTTING RELATED TO NEW M.E.P. SYSTEMS.
- ALL INFORMATION ON DEMOLITION PLANS HAVE BEEN COMPLETED FROM EXISTING DRAWINGS AND LIMITED FIELD OBSERVATIONS. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND COORDINATE DEMOLITION WITH ALL NEW CONSTRUCTION AND WITH ALL TRADES. NO ATTEMPT HAS BEEN MADE TO ILLUSTRATE ALL REQUIRED DEMOLITION. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR ALL DEMOLITION NECESSARY TO COMPLETE THE WORK.
- KEEP PUBLIC RESTROOM DOORS SECURE AND SEALED FROM DUST AS REQUIRED. PROTECT DOORS FROM DAMAGE.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PATCH & REPAIR ALL EXISTING WORK DISTURBED BY DEMOLITION ACTIVITIES IN A MANNER THAT RESULT IN A COMPLETE AND FINISHED PRODUCT. THIS PATCH & REPAIR INCLUDES ALL FINISHES NEEDED TO MATCH ADJACENT SURFACES.
- IF A WALL OR SURFACE HAS BEEN WORKED ON THAT WALL OR SURFACE SHALL BE PATCHED & REPAIRED WITH A COMPLETE FINISH. TO THE NEAREST CORNER, CHANGE OF PLANE OR OTHER JUNCTURE WHICH ALLOWS FOR SMOOTH & CLEAN TRANSITION FROM NEWLY FINISHED SURFACE TO THE SURROUNDING EXISTING SURFACE. I.E., THE INTENT IS TO ELIMINATE THE APPEARANCE OF A PATCHED CONDITION.
- IT IS NOT THE INTENT TO SHOW EVERY PIECE OR ITEM TO BE REMOVED IN DEMOLITION WORK. MECHANICAL, ELECTRICAL, AND OTHER WORK RELATED TO A WALL OR AREA SCHEDULED FOR DEMOLITION AND REMOVAL SHALL BE PERFORMED WHETHER SO NOTED OR NOT.
- PATCH AND REPAIR ANY EXISTING CEILING, FLOORING AND/OR WALL FINISHES DAMAGED DURING THE INSULATION OF NEW WALL, PIPING, DUCTWORK, OR UNDER THIS PROJECT.
- REMOVE WALL AS INDICATED
- REMOVE & SALVAGE DOORS AND FRAMES
- REMOVE ALL CASEWORK
- REMOVE FLOORING DOWN TO CONCRETE SLAB, INCLUDING ANY BROWNSTONE PAVERS UNDER EXISTING FLOORING.
- REMOVE ALL WALL BASE
- REMOVE PLUMBING FIXTURES, CAP ASSOCIATED PIPING AT NEAREST MAIN, SEE PLUMBING DEMO DWGS.
- REMOVE SLAB WHERE REQUIRED FOR PLUMBING WORK OR OTHER UNDERSLAB WORK.
- REMOVE & SALVAGE ALL OVERHEAD ACCESS PANELS
- REMOVE ALL DOOR THRESHOLDS
- REMOVE ALL LOCKERS
- REMOVE CEILINGS
- REMOVE ALL LIGHT FIXTURES
- REMOVE EXISTING SWITCHES, SPEAKERS.
- REMOVE EVERYTHING INSIDE TOILET ROOMS AND LOCKER ROOMS DOWN TO STUD FRAMING. 2 HOUR SHAFTWALL ENCLOSURES SHALL BE REPAIRED OR REPLACED IF DAMAGED.

**DEMOLITION NOTES:**

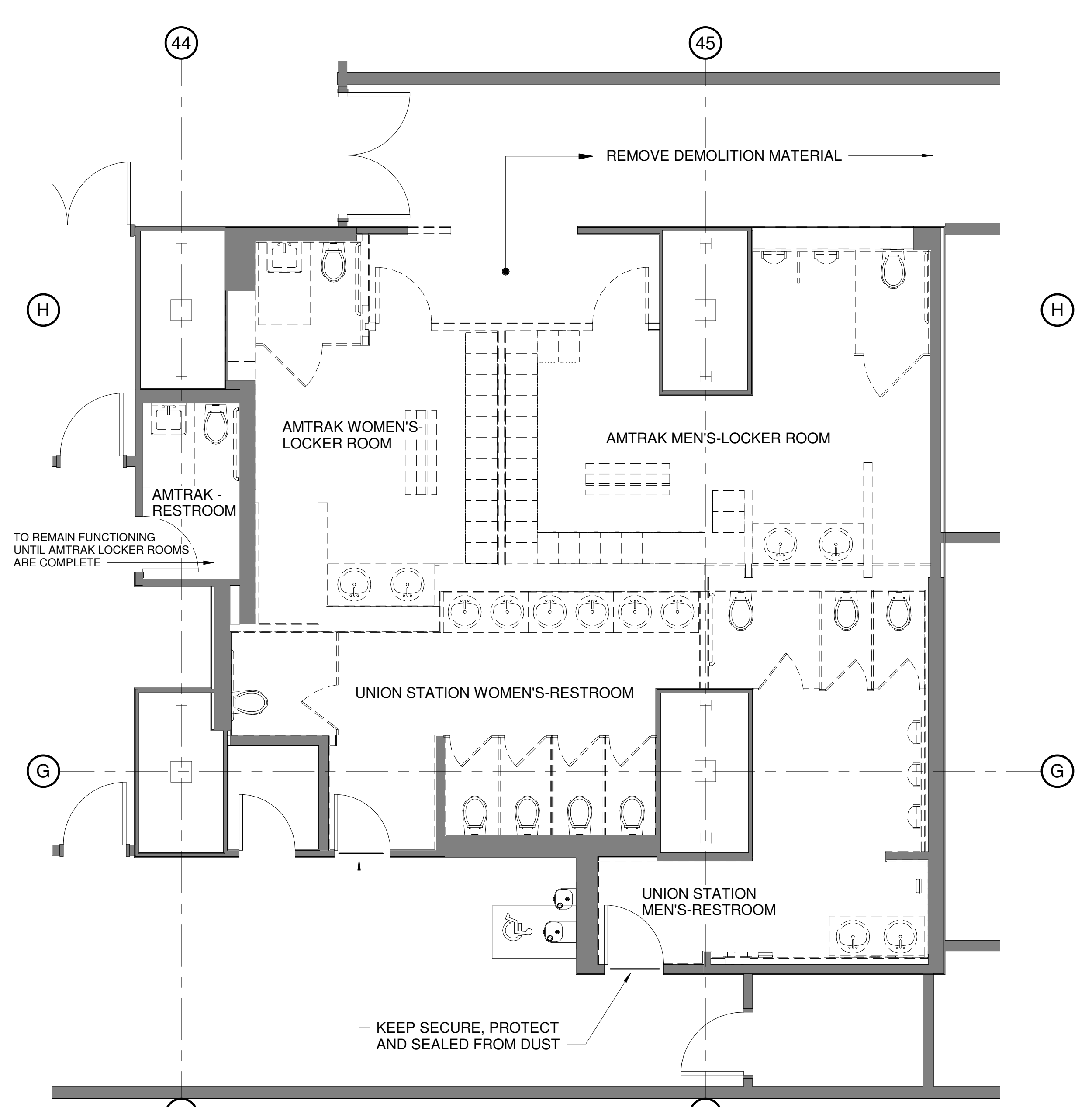
- REMOVE ALL FIXTURES, FINISHES, DRYWALL, AND WALLS AS SHOWN.
- REMOVE EXISTING TILE FLOORING, MUSET, 1 1/2" THICK BROWNSTONE PAVERS DOWN TO CONCRETE SLAB IN AMTRAK LOCKER ROOMS AND PUBLIC RESTROOMS.
- PROTECT ANY UNDERGROUND DUCTWORK DURING DEMOLITION OF TILE FLOOR AND PAVERS.

**DEMOLITION PLAN LEGEND**

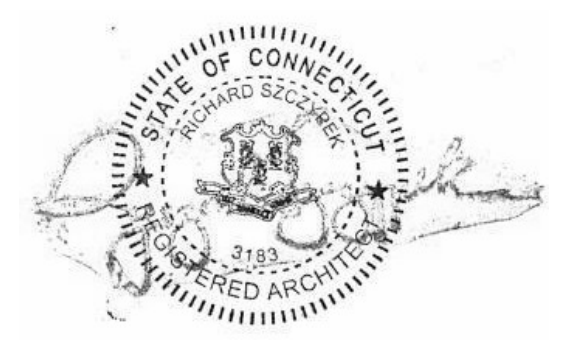
- ① KEYED DEMOLITION NOTE SYMBOL
- - - EXISTING CONSTRUCTION TO BE REMOVED
- EXISTING CONSTRUCTION TO REMAIN
- EXISTING AREAS WHERE DEMOLITION WORK TO BE DONE



2 DEMOLITION FIRST FLOOR REFLECTED  
CEILING PLAN - Exist  
1/4" = 1'-0"

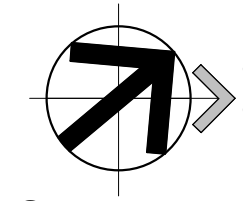


1 DEMOLITION FIRST FLOOR PLAN - Demo  
1/4" = 1'-0"



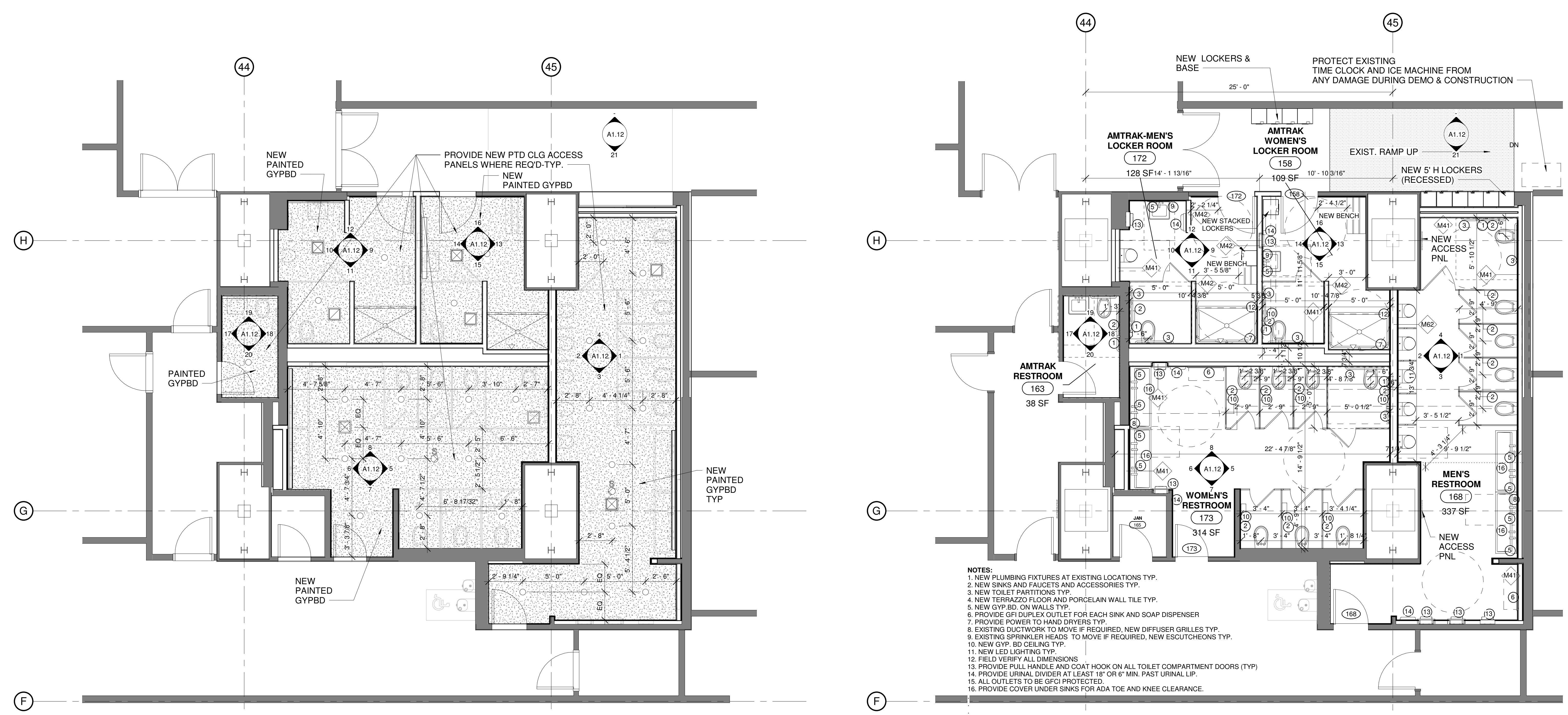


**GHTD-PUBLIC RESTROOM RENOVATIONS**  
 One Union Place, Hartford CT 06103



Project Status

KEY PLAN



- NOTES:**
1. NEW PLUMBING FIXTURES AT EXISTING LOCATIONS TYP.
  2. NEW SINKS AND FAUCETS AND ACCESSORIES TYP.
  3. NEW TOILET PARTITIONS TYP.
  4. NEW TERRAZZO FLOOR AND PORCELAIN WALL TILE TYP.
  5. NEW GYP BD. ON WALLS TYP.
  6. PROVIDE GFI DUPLEX OUTLET FOR EACH SINK AND SOAP DISPENSER
  7. PROVIDE POWERS TO HAND DRYERS TYP.
  8. EXISTING DUCTWORK TO MOVE IF REQUIRED, NEW DIFFUSER GRILLES TYP.
  9. EXISTING SPRINKLER HEADS TO MOVE IF REQUIRED, NEW ESCUTCHEONS TYP.
  10. NEW GYP. BD CEILING TYP.
  11. NEW LED LIGHTING TYP.
  12. FIELD VERIFY ALL DIMENSIONS
  13. PROVIDE PULL HANDLE AND COAT HOOK ON ALL TOILET COMPARTMENT DOORS (TYP)
  14. PROVIDE URINAL DIVIDER AT LEAST 18" OR 6" MIN. PAST URINAL LIP.
  15. ALL OUTLETS TO BE GFCI PROTECTED.
  16. PROVIDE COVER UNDER SINKS FOR ADA TOE AND KNEE CLEARANCE.
  17. PROVIDE NEW HATCH PANELS IN WALLS TO ACCESS STRUCTURE FOR AMTRAK -TYPICAL.
  18. EXISTING DOORS TO REMAIN AND REFINISHED.

2 FIRST FLOOR RCP  
 1/4" = 1'-0"

1 FIRST FLOOR PLAN  
 1/4" = 1'-0"

**CEILING LEGEND**

	GWB
	RETURN DIFFUSER
	SUPPLY DIFFUSER
	SPRINKLER HEAD
	RECESSED CAN LIGHT
	COVE LIGHT
	CEILING MOUNTED CAMERA
	CIRCLE CEILING MOUNTED SPEAKER
	SQUARE CEILING MOUNTED SPEAKER

NUMBER	DETAIL DRAWING SHEET #	DOOR		FRAME			HARDWARE - SEE SPECIFICATIONS WT										REMARKS					
		SIZE	SPECIAL - SEE REMARKS	TYPE / MATERIAL		HEAD DETAIL	JAMB DETAIL	SADDLE DETAIL	FIRE RATING (MINUTES)	DISABLED					SIGNAGE			HARDWARE SET NUMBER	SECURITY DEVICE			
				TYPE	MATERIAL					TYPE	MATERIAL	TYPE	MATERIAL	TYPE	MATERIAL	TEXT				TEXT		
173		2' - 8"	7' - 0"	WD	D1	HM	EXIST	EXIST	EXIST	T8			*	*	*	*	*	*	*	WOMEN'S RESTROOM	1	V.I.F EXISTING FRAME DIMENSIONS FOR DOOR SIZE
168		2' - 10"	7' - 0"	WD	D1	HM	EXIST	EXIST	EXIST	T8			*	*	*	*	*	*	*	MEN'S RESTROOM	1	V.I.F EXISTING FRAME DIMENSIONS FOR DOOR SIZE
158		3' - 0"	7' - 0"	HM	D1	HM	F1	H1	J1	T8			*	*	*	*	*	*	*	AMTRAK WOMEN'S LOCKER ROOM	2	
172		3' - 0"	7' - 0"	HM	D1	HM	F1	H1	J1	T8			*	*	*	*	*	*	*	AMTRAK MEN'S LOCKER ROOM	2	

**TOILET ACCESSORIES KEY**

1	CALL FOR AID
2	TOILET PAPER DISPENSER
3	GRAB BARS
4	PAPER TOWEL DISPENSER
5	BRADLEY SOAP DISPENSER - METRO
6	BABY CHANGING STATION
7	GRAB BAR SHOWER
8	FULL WIDTH X 36" MIRROR ( FRAMELESS )
9	24" X 36" MIRROR ( WITH FRAME )
10	SANITARY NAPKIN DISPOSAL
11	TOWEL HOOK
12	SHOWER CURTAIN AND ROD
13	SEMI-RECESSED HAND DRYER
14	RECESSED WASTE RECEPTACLE
15	VITREOUS CHINA SOAP DISH
16	BRADLEY FAUCET-METRO

NOTE: REFER TO GENERAL INFORMATION SHEET A0.01 FOR FIXTURE LOCATION AND HEIGHT.



**A1.11**



Project Status

KEY PLAN

1	CALL FOR AID
2	TOILET PAPER DISPENSER
3	GRAB BARS
4	PAPER TOWEL DISPENSER
5	BRADLEY SOAP DISPENSER - METRO
6	BABY CHANGING STATION
7	GRAB BAR SHOWER
8	FULL WIDTH X 36" MIRROR ( FRAMELESS )
9	24" X 36" MIRROR ( WITH FRAME )
10	SANITARY NAPKIN DISPOSAL
11	TOWEL HOOK
12	SHOWER CURTAIN AND ROD
13	SEMI-RECESSED HAND DRYER
14	RECESSED WASTE RECEPTACLE
15	VITREOUS CHINA SOAP DISH
16	BRADLEY FAUCET-METRO

DRAWING TITLE

**INTERIOR ELEVATIONS & PARTITION TYPES/NOTES**

STATE PROJ. NO.

PROJ. NO. Project Number

SCALE As indicated

DATE Issue Date

DRAWN BY Author

APPROVED BY Approver

ISSUE DATES

NO.	DATE	PURPOSE
1	3/31/2020	SD
2	4/15/2020	DD
3	5/13/2020	CD

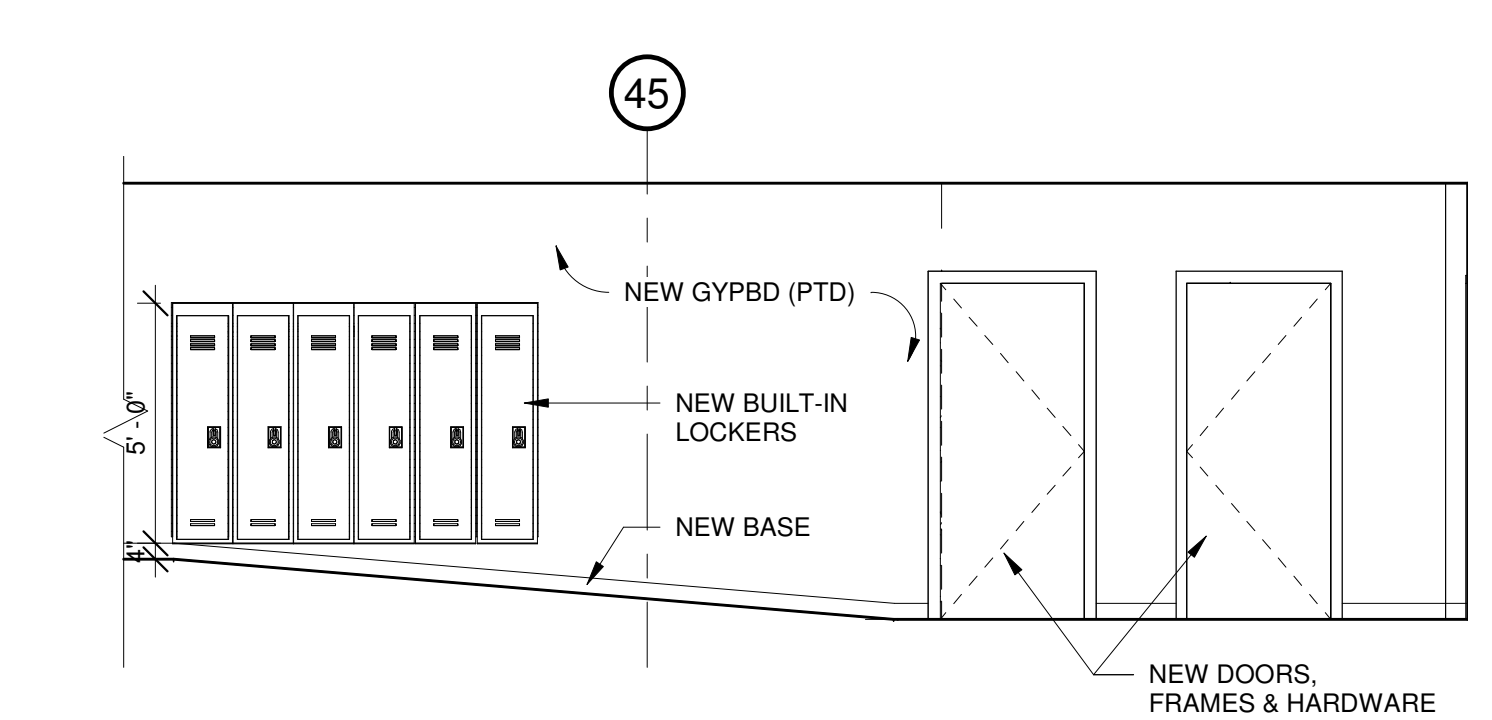
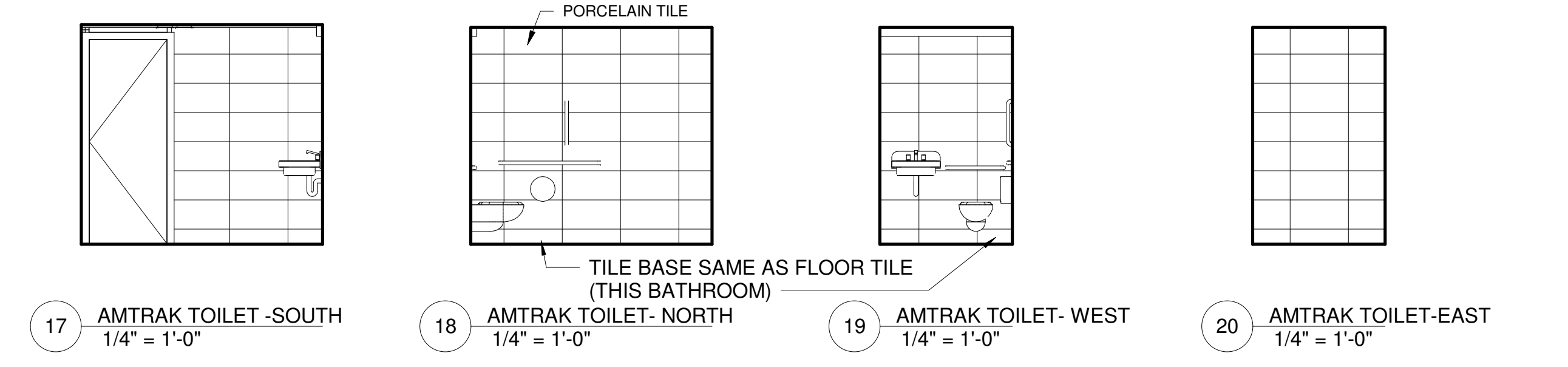
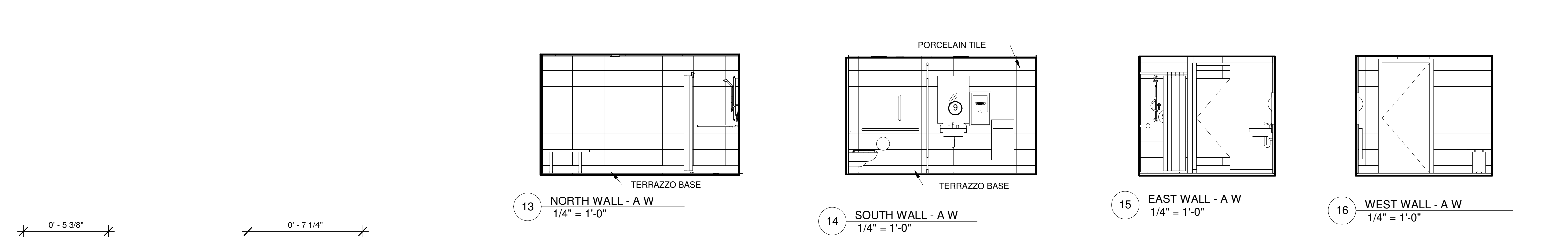
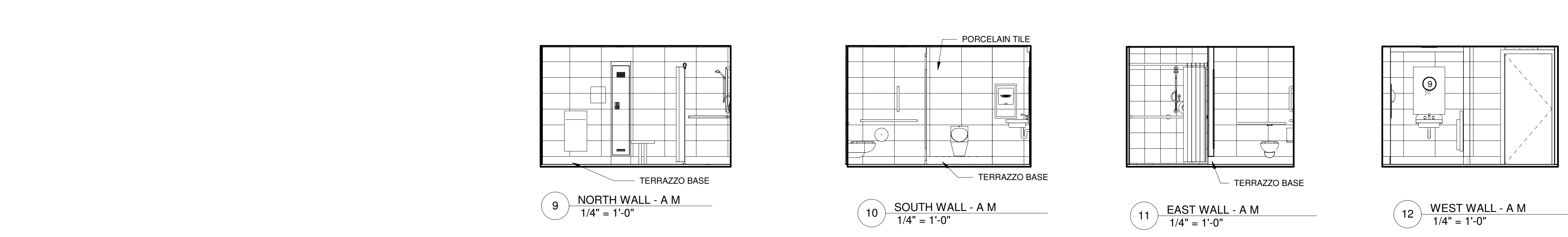
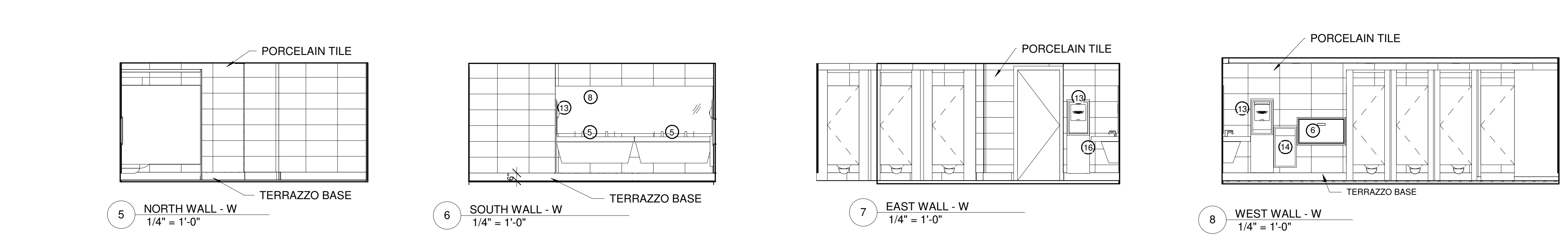
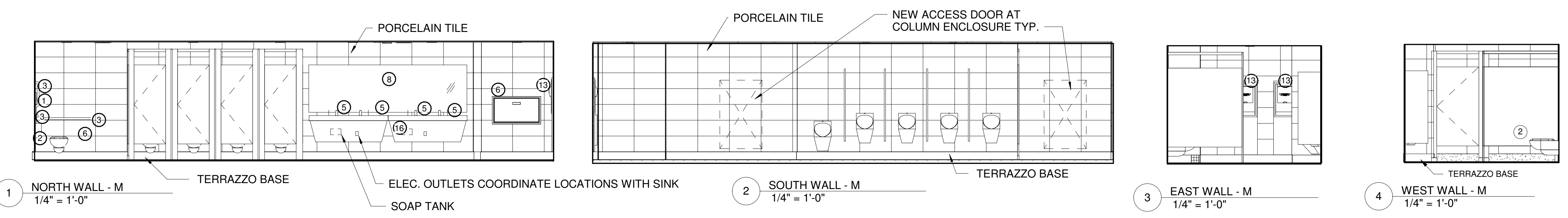
**A1.12**

**TOILET ACCESSORIES KEY**

1	CALL FOR AID
2	TOILET PAPER DISPENSER
3	GRAB BARS
4	PAPER TOWEL DISPENSER
5	BRADLEY SOAP DISPENSER - METRO
6	BABY CHANGING STATION
7	GRAB BAR SHOWER
8	FULL WIDTH X 36" MIRROR ( FRAMELESS )
9	24" X 36" MIRROR ( WITH FRAME )
10	SANITARY NAPKIN DISPOSAL
11	TOWEL HOOK
12	SHOWER CURTAIN AND ROD
13	SEMI-RECESSED HAND DRYER
14	RECESSED WASTE RECEPTACLE
15	VITREOUS CHINA SOAP DISH
16	BRADLEY FAUCET-METRO

NOTE: REFER TO GENERAL INFORMATION SHEET A0.01 FOR FIXTURE LOCATION AND HEIGHT.

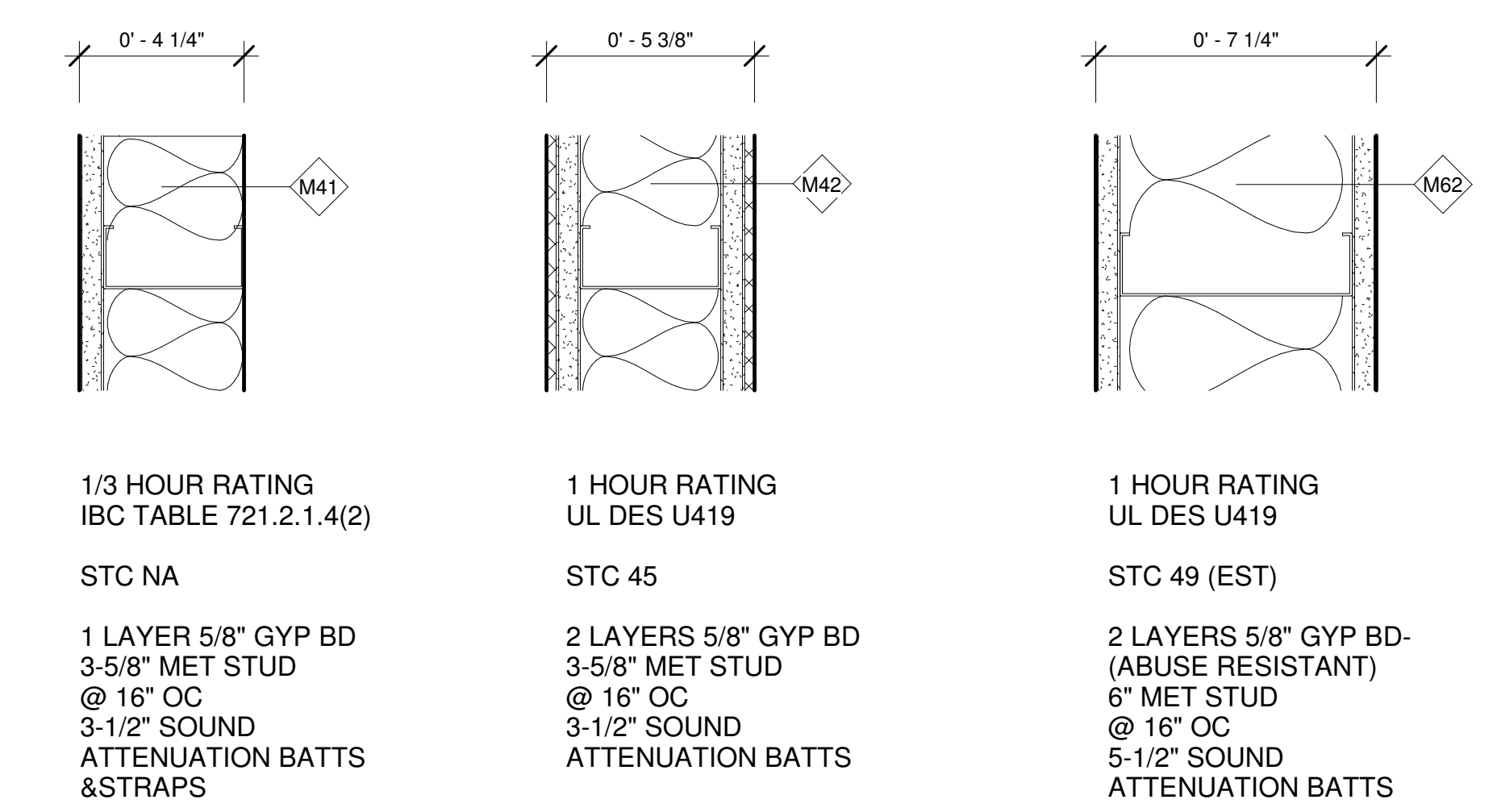
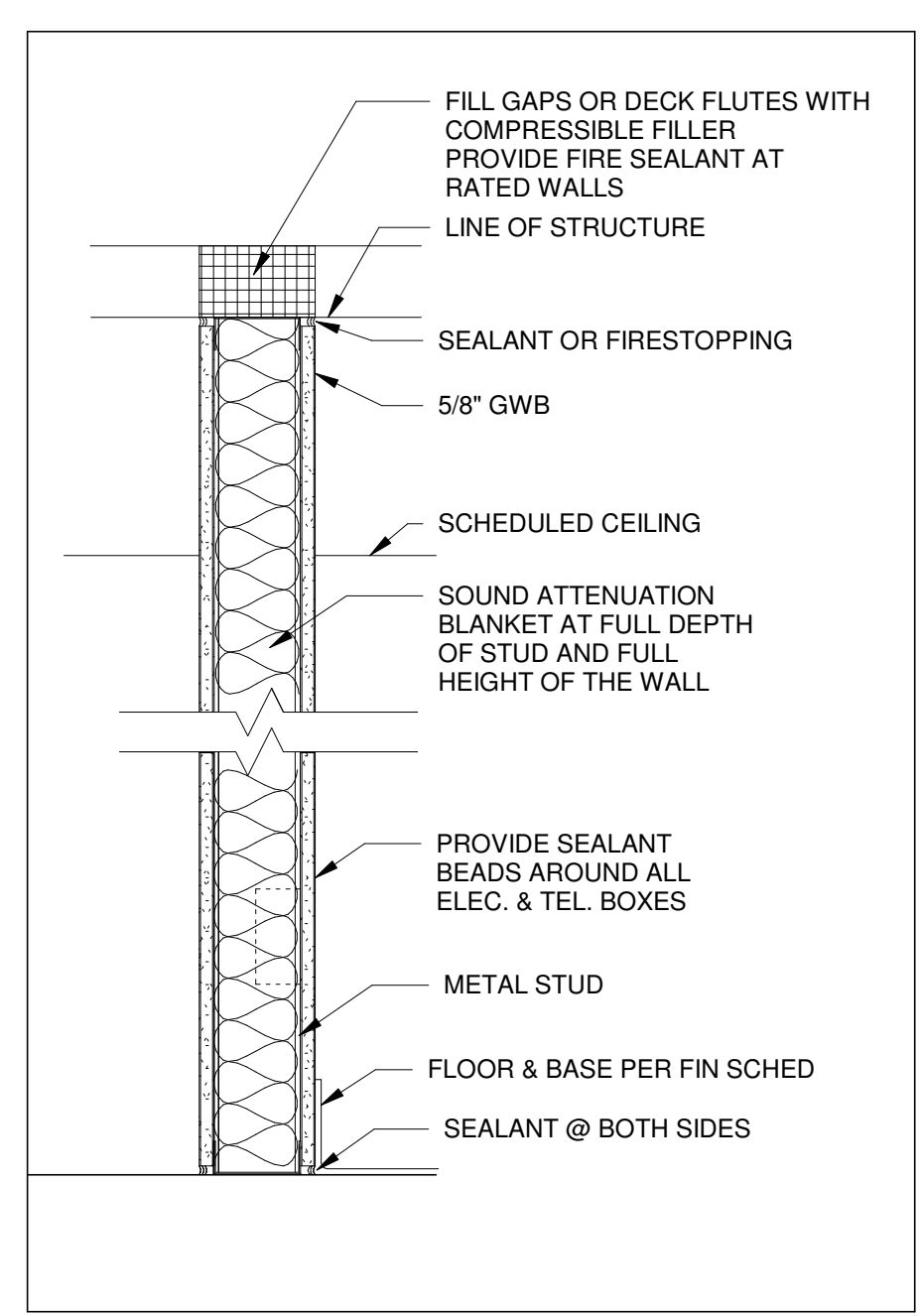
NOTE: CONTRACTOR TO ABIDE BY AWI STANDARDS FOR CUSTOM GRADE CABINETS. ECONOMY GRADE SHALL NOT BE ACCEPTED



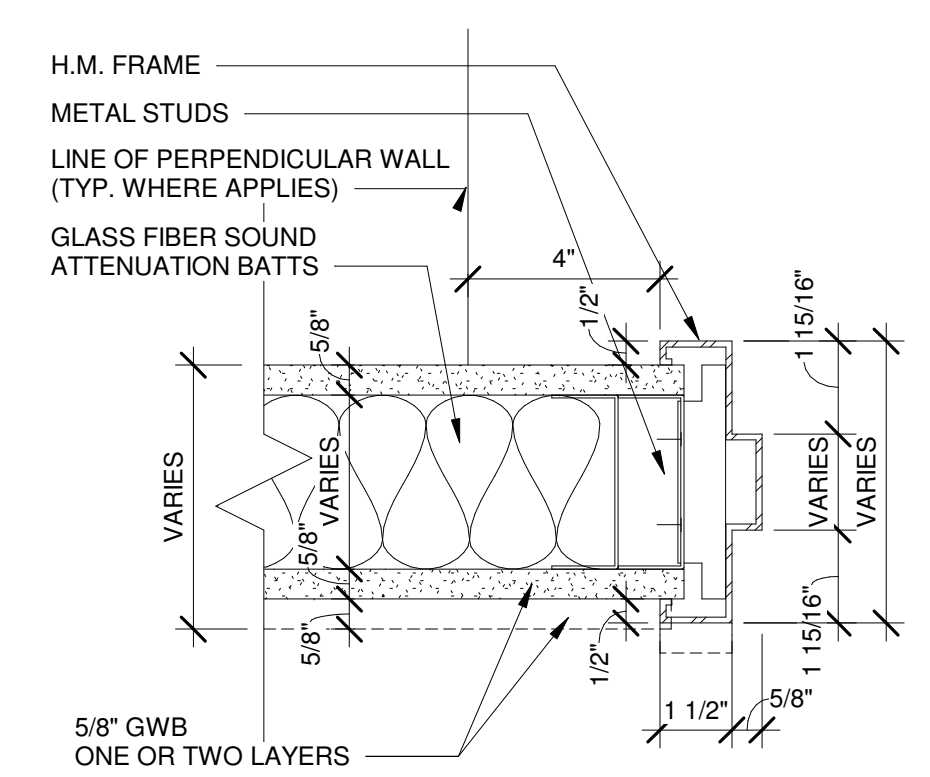
**GENERAL PARTITION NOTES:**

- ALL PARTITIONS SHALL BE PARTITION TYPE M42 UNLESS OTHERWISE NOTED.
- ALL PARTITIONS SHALL RUN TO THE UNDERSIDE OF DECK OR BEAM ABOVE.
  - A. WHERE THERE IS AN OBSTRUCTION, SUCH AS BEAM RUNNING PERPENDICULAR TO THE PARTITION, BOX AROUND THE OBSTRUCTION. COMPLETELY FILL ALL VOIDS WITH CONSTRUCTION EQUAL TO THAT OF THE PARTITION.
  - B. WHERE A NON-FIRE RATED PARTITION RUNS PARALLEL TO AND TERMINATES AT AN OPEN WEB JOIST OR TRUSS, PROVIDE METAL FRAMING AND ONE LAYER OF GWB, WITH SOUND BATTS, FROM THE BOTTOM OF THE JOIST OR TRUSS TO THE UNDERSIDE OF DECK, FOR A CONTINUOUS ACOUSTICAL SEPARATION.
  - C. WHERE A FIRE RATED PARTITION RUNS PARALLEL TO AND TERMINATES AT AN OPEN WEB JOIST OR TRUSS, PROVIDE FIRE RATED CONSTRUCTION TO THE UNDERSIDE OF DECK, WITH RATING EQUAL TO THAT OF THE WALL.
- PROVIDE MINERAL WOOL BATTS WITH 60% OVERCUT AROUND ALL PENETRATIONS, PIPING, CONDUITS, DUCTS, CABLES, WIRES AND ALL STAIR AND HAZARDOUS AREA WALLS TO ALLOW FOR COMPLETE SMOKE TIGHT CONSTRUCTION IN ACCORDANCE WITH THE CT. STATE FIRE SAFETY CODE.
- TOILET ROOM PARTITIONS:** ALL GWB PARTITIONS AT TOILET ROOMS ARE REQUIRED TO HAVE MOISTURE RESISTANT GWB ON TOILET ROOM SIDE OF PARTITION. PORCELAIN TILE WILL BE USED ON ALL WALLS.
- FIRE AND SMOKE RATED PARTITION TYPES:** FIRE STOP PERIMETER AND ALL PENETRATIONS WITH FIRESTOPPING AND FIRESTOP SEALANT IN ACCORDANCE WITH A SPECIFIED UL APPROVED SYSTEM.
- GYPSON WALL BOARD TYPES:** REFER TO SPECS FOR ABUSE RESISTANT TYPE LOCATIONS.
- ALL GYPSON BOARD AT PLUMBING CHASES SHALL BE MOISTURE RESISTANT.
- ALL GWB IN FIRE RATED PARTITIONS SHALL BE TYPE "X".
- PROVIDE BLOCKING WITHIN PARTITIONS FOR INSTALLATION OF WAINSCOTS, SUMPERS, CORNER GUARDS, SHELVING, MILWORK, EQUIPMENT AND FIXTURES.
- REFERENCE PLAN DETAILS AND WALL SECTIONS FOR ADDITIONAL INFORMATION INVOLVING PARTITION CONFIGURATION.
- WALL TYPES M11 TO M82 ARE ACOUSTICAL PARTITIONS (TYPICAL).

**GENERAL PARTITION NOTES.**  
 1/4" = 1'-0"

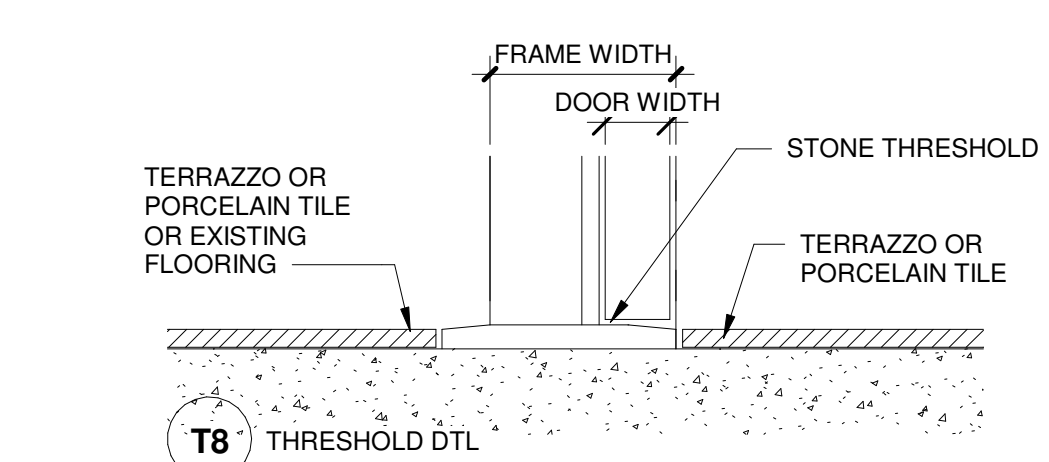


**PARTITION TYPES.**  
 3" = 1'-0"



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

**HOLLOW METAL FRAME DETAILS**  
 3" = 1'-0"



**Threshold.**  
 3" = 1'-0"

**CORRIDOR ELEVATION - LOCKER AREA**  
 1/4" = 1'-0"



**FIRE PROTECTION DEMOLITION WORK NOTES**

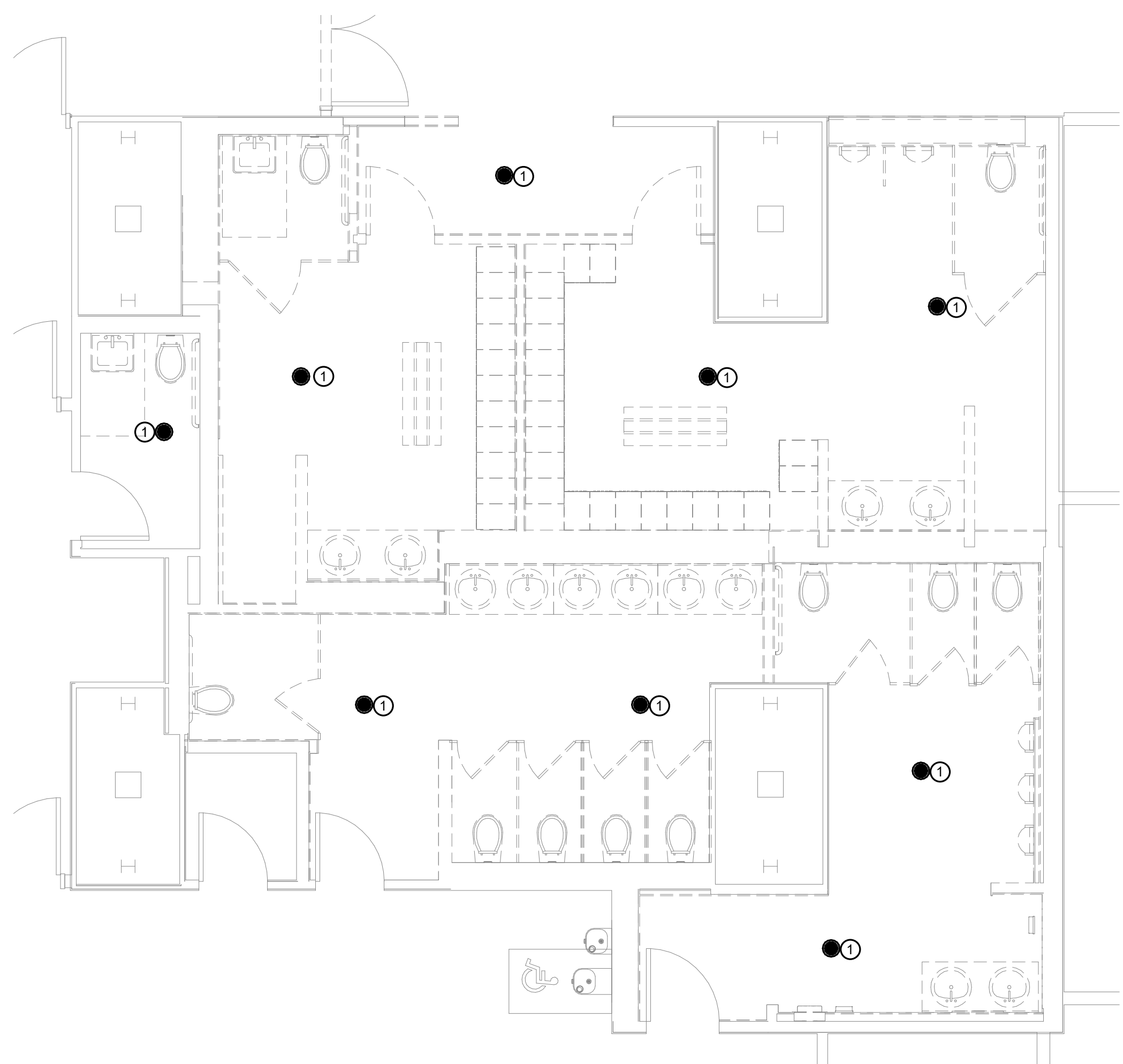
- PRIOR TO SUBMITTING BID, CONTRACTOR SHALL VISIT THE SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY CONSTRUED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION WORK REQUIRED.
- THE DEMOLITION DRAWINGS ARE INTENDED ONLY TO DEFINE THE GENERAL SCOPE OF DEMOLITION WORK AND TO ASSIST THE CONTRACTOR DURING BIDDING. THE DEMOLITION DRAWINGS MAY NOT SHOW EVERY ITEM WHICH MUST BE DISCONNECTED, REMOVED, OR RELOCATED IN ORDER TO FACILITATE NEW WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED WHETHER OR NOT SHOWN ON THE PLANS.
- COORDINATE AND SCHEDULE ALL WORK WITH THE OWNER TO MINIMIZE INCONVENIENCE TO THE BUILDING OCCUPANTS. ALL SERVICES AND SYSTEMS SERVING OCCUPIED AREAS OF THE BUILDING SHALL BE MAINTAINED IN OPERATION DURING WORKING SHIFTS. ALL LIFE SAFETY SYSTEMS SERVING OCCUPIED AREAS OF THE BUILDING SHALL BE MAINTAINED IN FULL OPERATIONAL CONDITION.
- CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY WORK REQUIRED TO KEEP THE BUILDING OCCUPIED AND REMAINING SPRINKLER SYSTEM ACTIVE DURING CONSTRUCTION. ANY REQUIRED COST FOR FIRE WATCH SHALL BE INCLUDED IN CONTRACTOR'S SCOPE OF WORK.
- REMOVE ALL EXISTING SPRINKLER WORK AS NECESSARY FOR THE PERFORMANCE OF THE WORK OF CONTRACT.
- EXISTING SPRINKLERS AND PIPING SHALL NOT BE REUSED UNLESS SPECIFICALLY NOTED OTHERWISE.
- REMOVE ALL DEMOLITION MATERIAL FROM THE JOB SITE UNLESS NOTED DIFFERENTLY.
- CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING SPRINKLER PIPING AND VERIFY PIPE SIZES.

**GENERAL DEMOLITION NOTES**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITY LINES INCLUDING ELECTRICAL, SEWER, WATER, GAS, TELEPHONE, ETC. THE DRAWINGS SHOW DIAGRAMMATICALLY THE APPROXIMATE LOCATION OF UTILITIES WHERE INFORMATION IS AVAILABLE. BUT THE DRAWINGS ARE NOT EXACT AS TO THE QUANTITY, EXTENT OR LOCATION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ALL PHASES OF THE WORK TO LOCATE, IDENTIFY AND PROTECT EXISTING UTILITIES. THE CONTRACTOR SHALL RECORD RECORD LOCATION OF AND REPAIR DAMAGE TO EXISTING UTILITIES WHICH ARE ENCOUNTERED AS A RESULT OF WORK UNDER THIS CONTRACT.
- COORDINATE ALL DEMOLITION WORK WITH THE REQUIREMENTS OF THE NEW SCOPE OF WORK.
  - EQUIPMENT REMOVED DURING DEMOLITION WORK MAY BE RETAINED BY THE OWNER AT HIS OPTION. ANY SUCH MATERIAL SHALL BE DELIVERED TO A LOCATION DESIGNATED BY THE OWNER. REMOVAL OF DEMOLITION MATERIAL FROM THE JOB SITE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
  - UNLESS NOTED OTHERWISE (I.N.O.) ALL EXISTING FIRE PROTECTION SYSTEM PIPING SHALL REMAIN. FOR DETAILS OF NEW SYSTEMS REFER TO NEW INSTALLATION DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL SIZES AND LOCATIONS.
  - REMOVE SPRINKLERS IN ALL AREAS WHERE A CEILING IS BEING REPLACED. CAP REMAINING FOR FUTURE CONNECTION.
  - THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TEMPORARY WORK REQUIRED TO KEEP THE BUILDING OCCUPIED DURING THE CONSTRUCTION PHASING, INCLUDING FIRE WATCH.

**-FIRE PROTECTION DEMOLITION WORK SYMBOLS-**

TAG	ACTION
○	REMOVE EXISTING PENDANT SPRINKLER WITH ASSOCIATED BRANCH PIPING. CAP REMAINING FOR FUTURE CONNECTION



**1 DEMO - FIRE PROTECTION FIRST FLOOR PLAN**  
 FP-101 1/4" = 1'-0"

**GENERAL NOTES:**

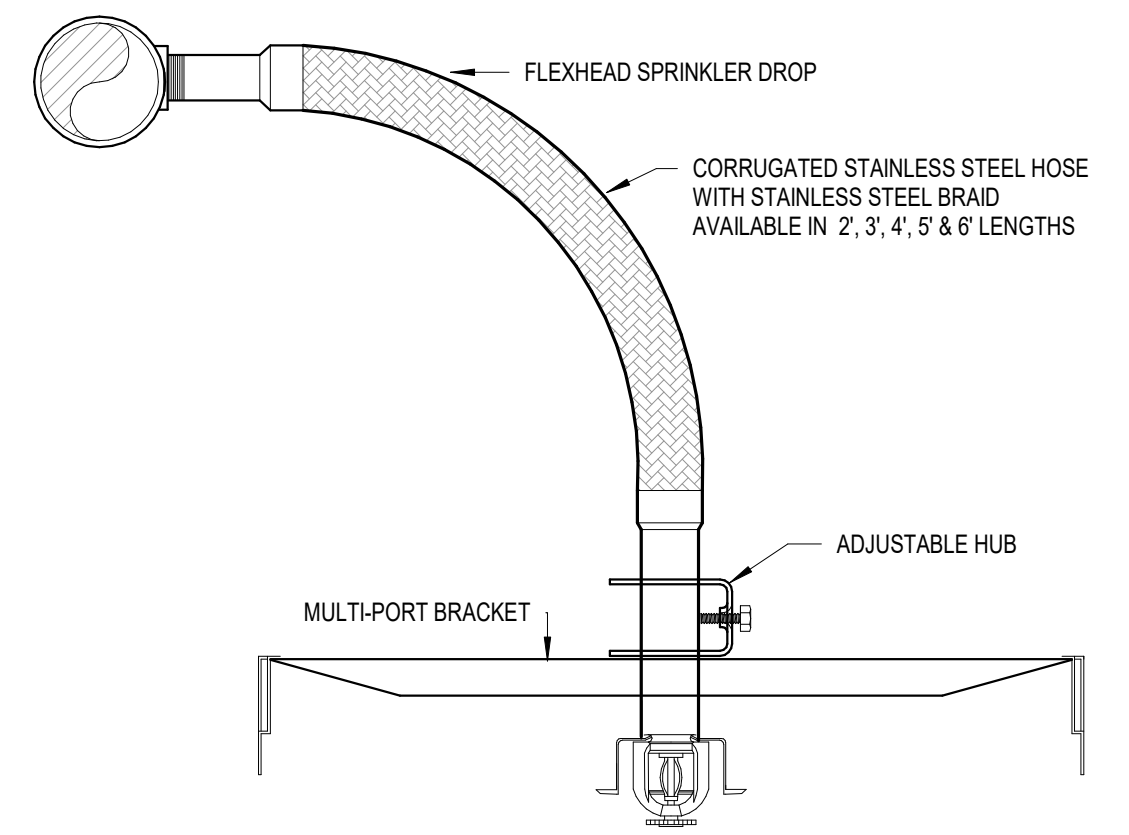
- FIRE PROTECTION SYSTEM HAS BEEN DESIGNED AND SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STANDARDS OF THE NATIONAL FIRE CODES, PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION. SYSTEM SHALL BE DESIGNED FOR LIGHT HAZARD OCCUPANCY, UNLESS OTHERWISE INDICATED ON DRAWINGS.
- ALL HANGERS AND SUPPORTS SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH NFPA 13 REQUIREMENTS.
- SPRINKLERS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13 REQUIREMENTS.
- SPRINKLER SYSTEMS SHALL BE SEISMICALLY BRACED IN ACCORDANCE WITH NFPA 13 REQUIREMENTS.
- SPRINKLER LOCATIONS SHOWN FOR REFERENCE ONLY. INSTALL SPRINKLERS IN ACCORDANCE WITH NFPA 13 REQUIREMENTS. COORDINATE SPRINKLER LOCATIONS WITH CEILING GRID. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
- PROVIDE SWING JOINTS ON ALL PENDENT SPRINKLERS. CENTER IN CEILING TILE BIDIRECTIONAL.
- FIRE STOP AROUND PIPES PENETRATING FIRE RATED PARTITIONS. USE MILTY FIRE BARRIER PRODUCTS AS RECOMMENDED BY MANUFACTURER.
- A FIELD VISIT AND FAMILIARIZATION WITH ALL EXISTING CONDITIONS AND ALL NEW TRADE WORK IS A PREREQUISITE FOR PROPOSAL SUBMISSION.
- ALL MATERIALS AND WORK SHALL FULLY MEET THE REQUIREMENTS OF NFPA, ALL APPLICABLE STATE AND LOCAL CODES AND INSURANCE UNDERWRITER.
- SIGNED AND SEALED SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE SUBMITTED FOR REVIEW TO THE INSURANCE UNDERWRITER, FIRE MARSHAL, AND ENGINEER IN THAT ORDER. ALL COMMENTS TO BE ADDRESSED AND RESOLVED PRIOR TO COMMENCEMENT OF WORK.
- DRAWINGS ARE DIAGRAMMATIC AND ONLY INTENDED TO SHOW THE GENERAL ARRANGEMENT AND EXTENT OF WORK TO BE PERFORMED. THE LOCATIONS GIVEN ARE APPROXIMATE AND SUBJECT TO MODIFICATIONS MAY BE FOUND NECESSARY TO MEET ANY STRUCTURAL OR JOB CONDITIONS. THE CONTRACTOR SHALL VISIT THE JOB SITE TO VERIFY ALL FIELD CONDITIONS.
- CONTRACTOR SHALL PERFORM FLOW TEST TO USE WITH HIS HYDRAULIC CALCULATIONS.

**-FIRE PROTECTION NEW WORK SYMBOLS-**

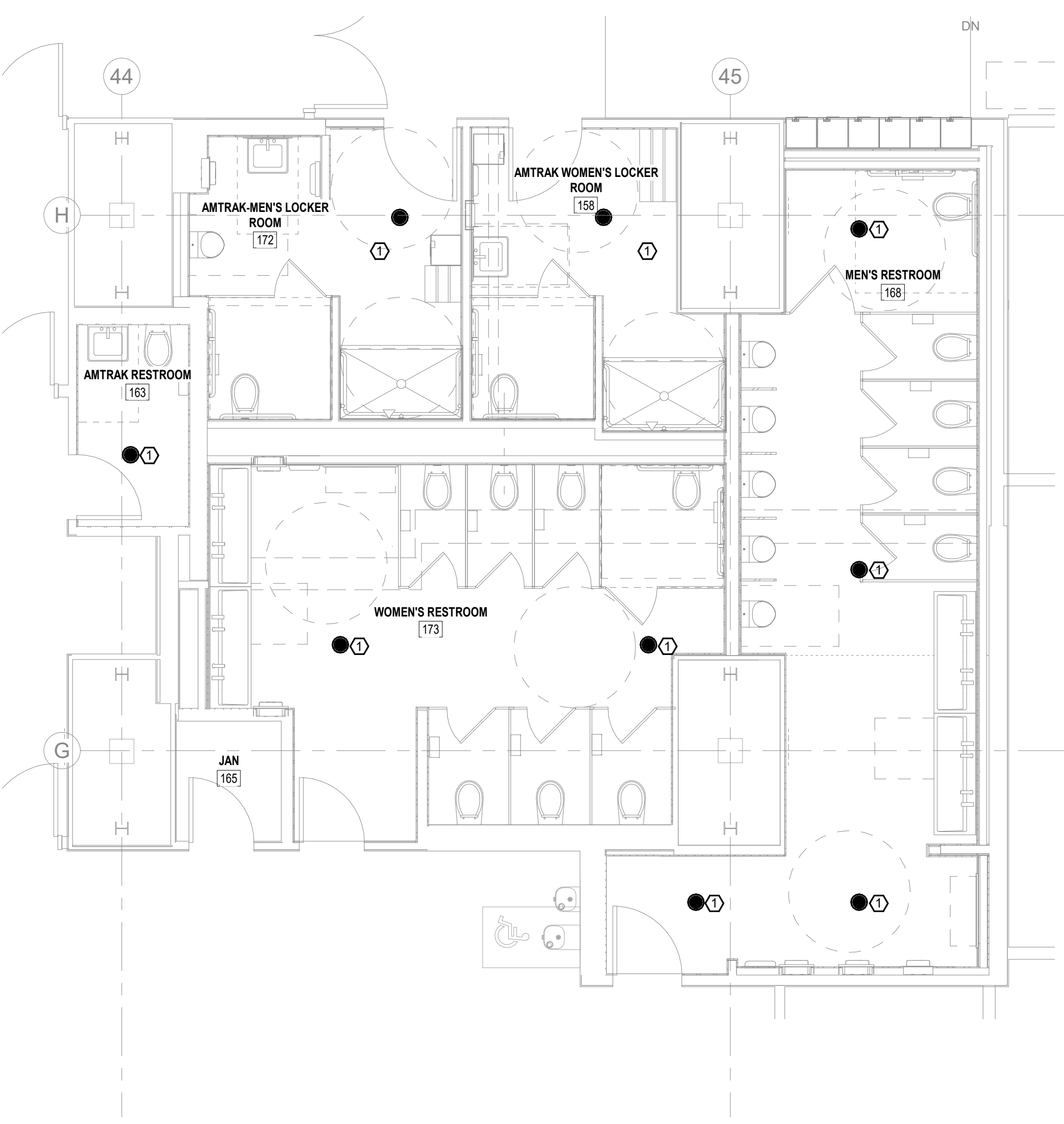
TAG	ACTION
○	NEW CONCEALED SPRINKLER. CONNECT TO EXISTING IN THIS AREA. CONTRACTOR SHALL VERIFY LOCATION.

**FIRE PROTECTION SYMBOL LIST**

SYMBOL	ABRV.	DESCRIPTION
—	ESPK	EXISTING SPRINKLER PIPE
●		EXISTING CONCEALED SPRINKLER
○		NEW CONCEALED SPRINKLER, CONNECT TO EXISTING



**3 FLEX SPRINKLER DETAIL**  
 FP-101 NOT TO SCALE

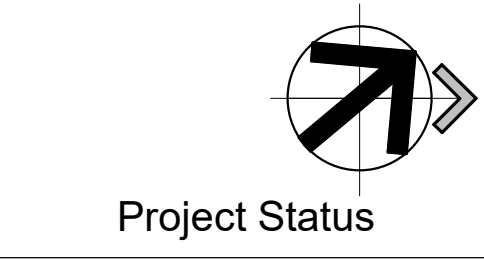


**2 NEW WORK - FIRE PROTECTION FIRST FLOOR PLAN**  
 FP-101 1/4" = 1'-0"









Project Status

KEY PLAN

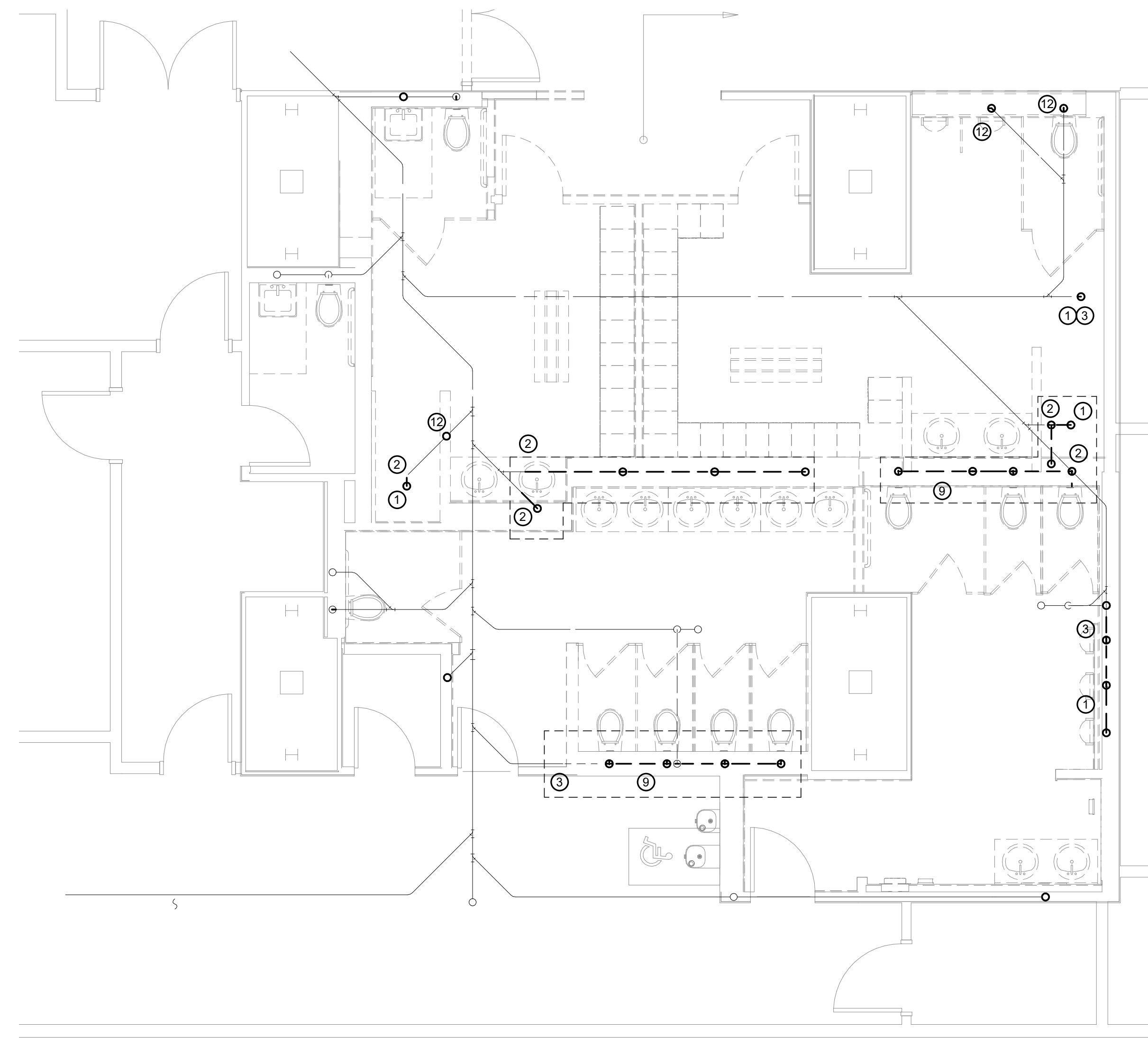
DRAWING TITLE  
**PLUMBING FLOOR PLANS**

STATE PROJ. NO.	
PROJ. NO.	Project Number
SCALE	1/4" = 1'-0"
DATE	Issue Date
DRAWN BY	Author
APPROVED BY	Approver

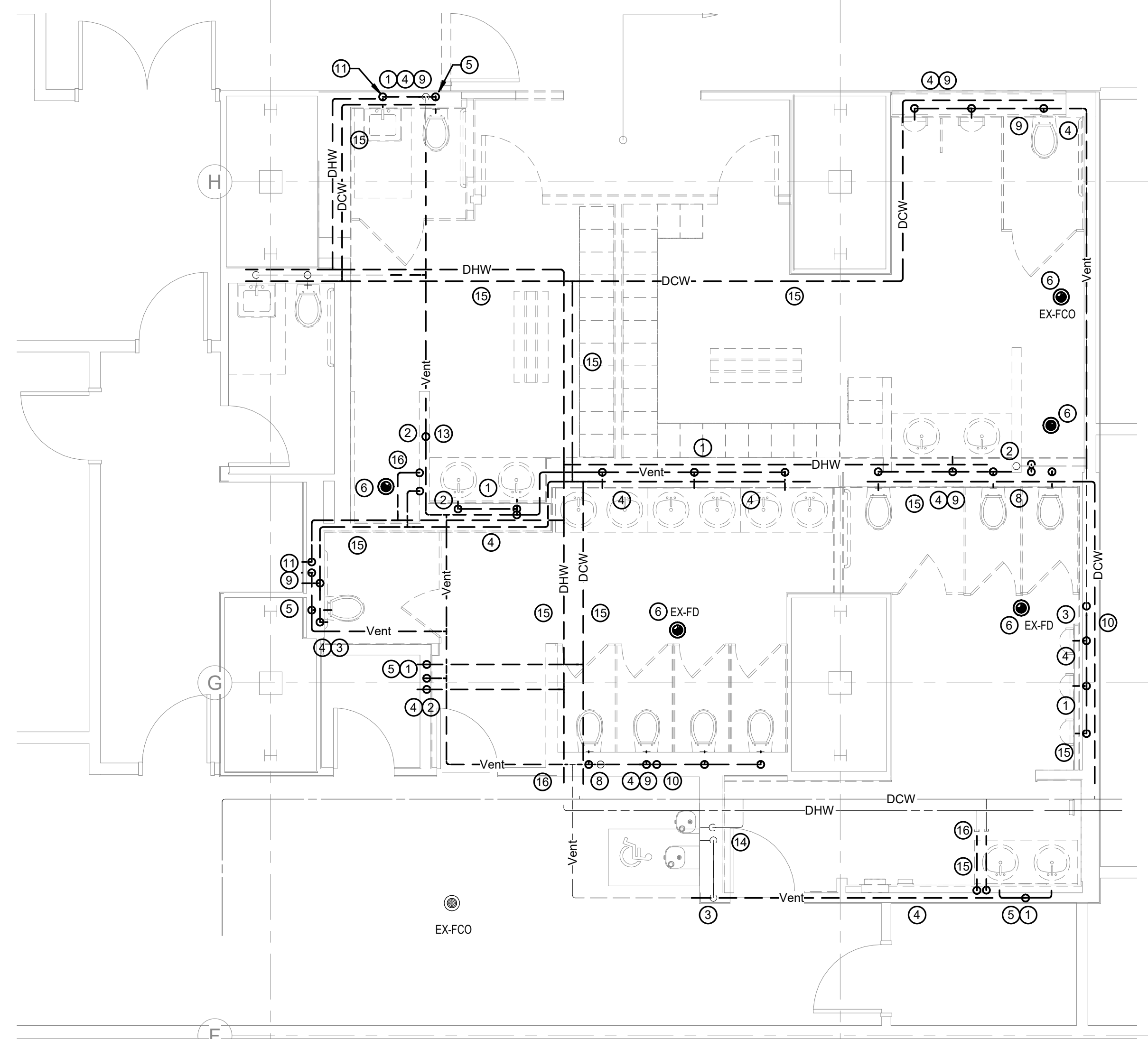
ISSUE DATES

NO.	DATE	PURPOSE

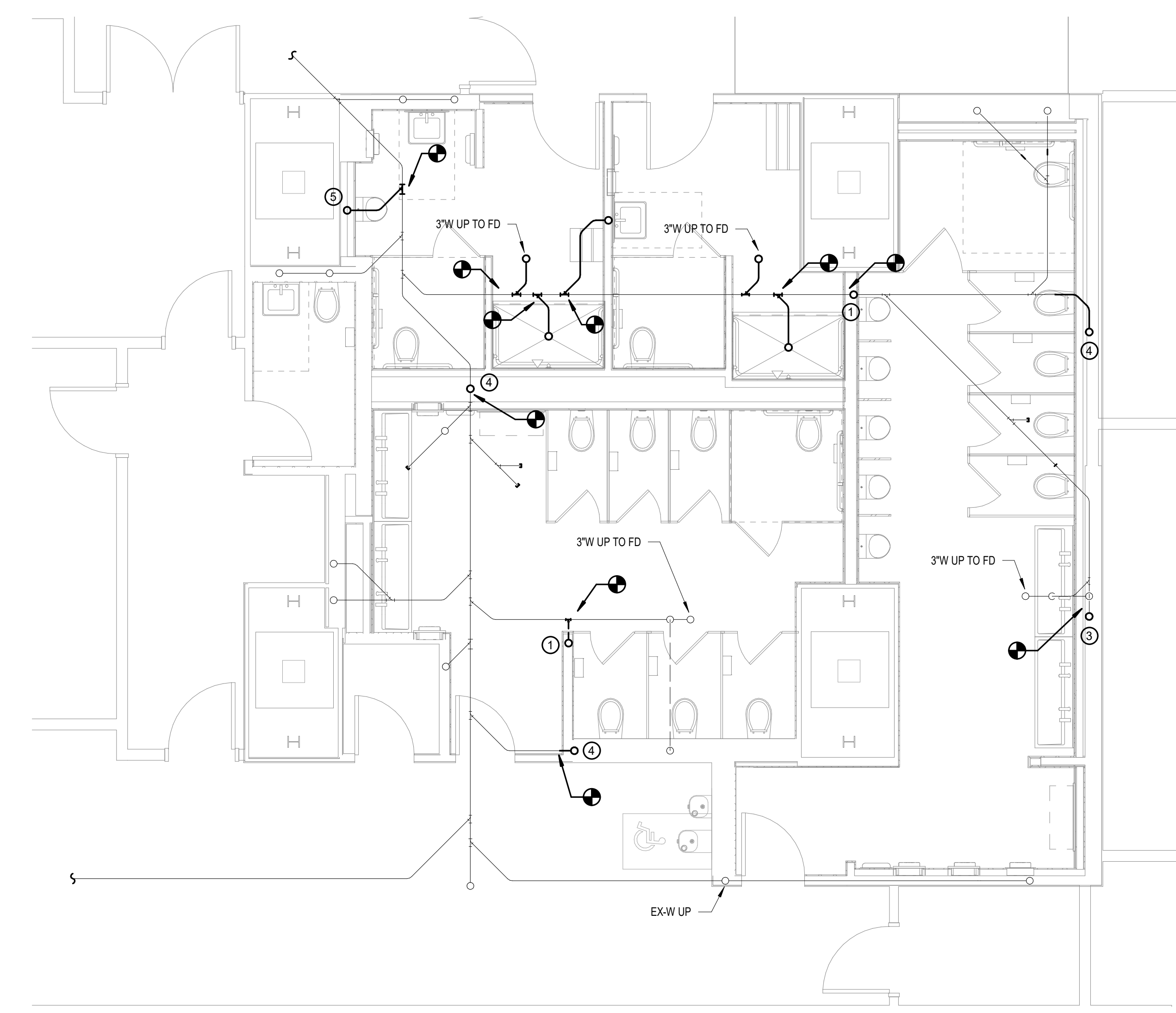
**P-101**



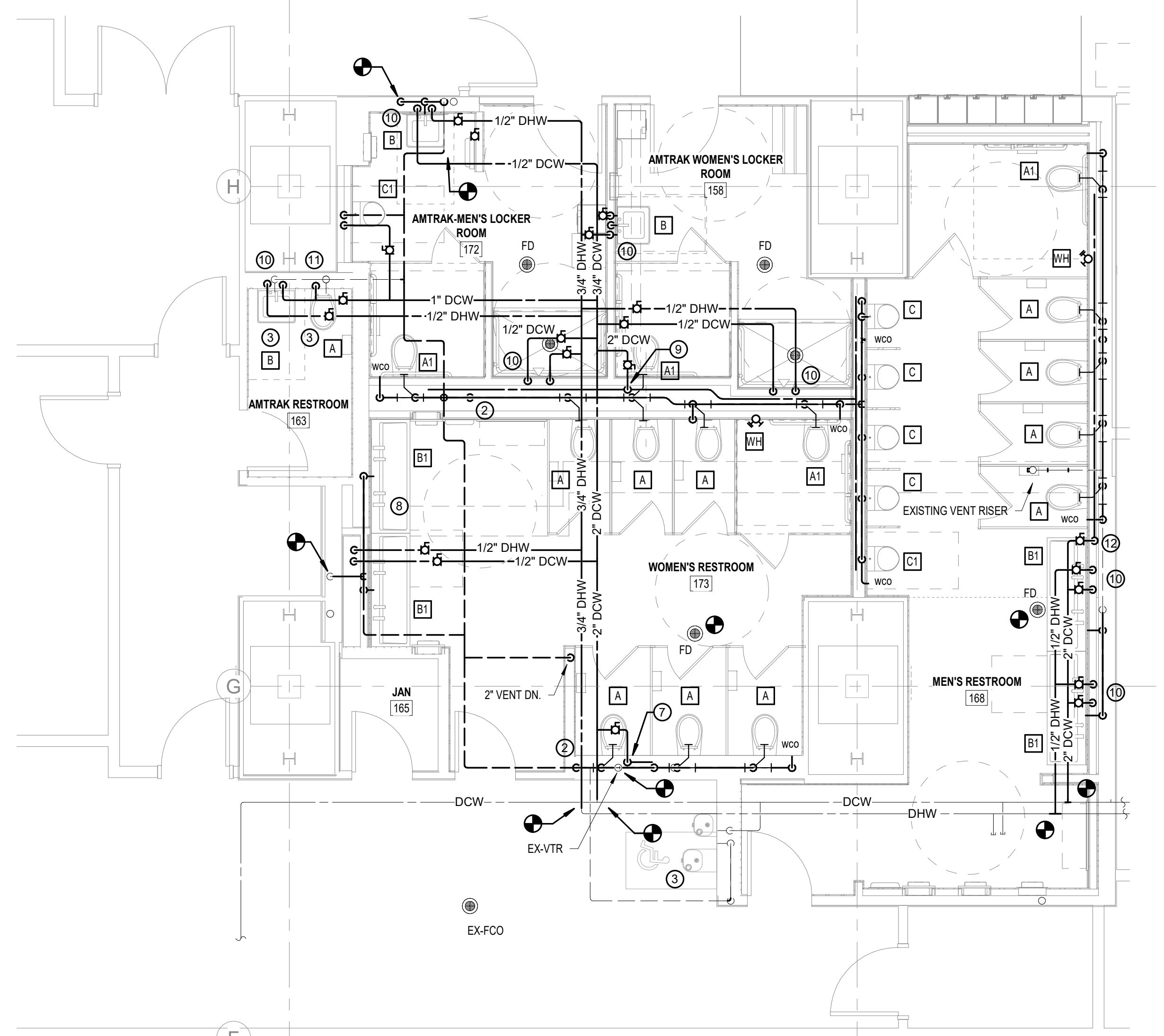
**2 DEMO - PLUMBING UNDERGROUND FLOOR PLAN**  
 P-101 1/4" = 1'-0"



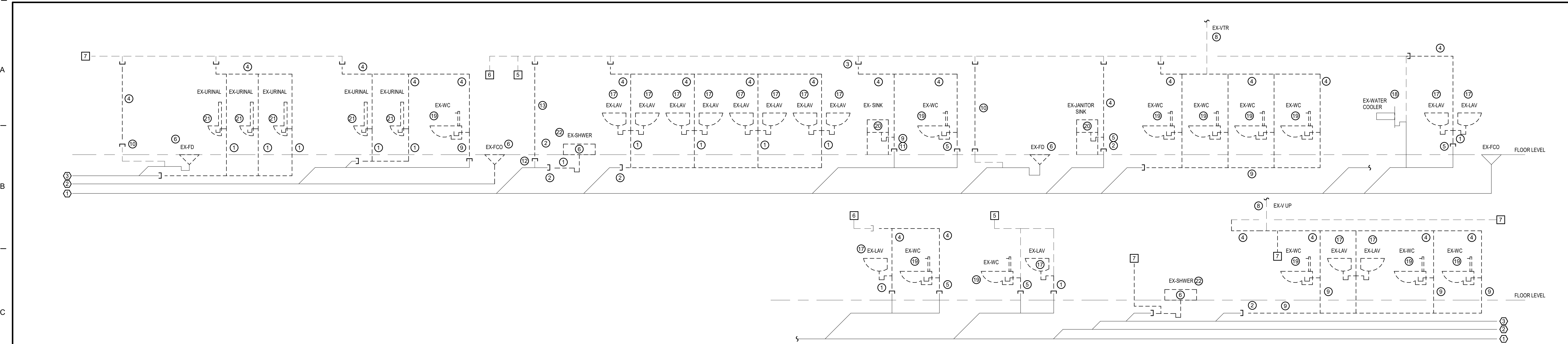
**4 DEMO - PLUMBING FIRST FLOOR PLAN**  
 P-101 1/4" = 1'-0"



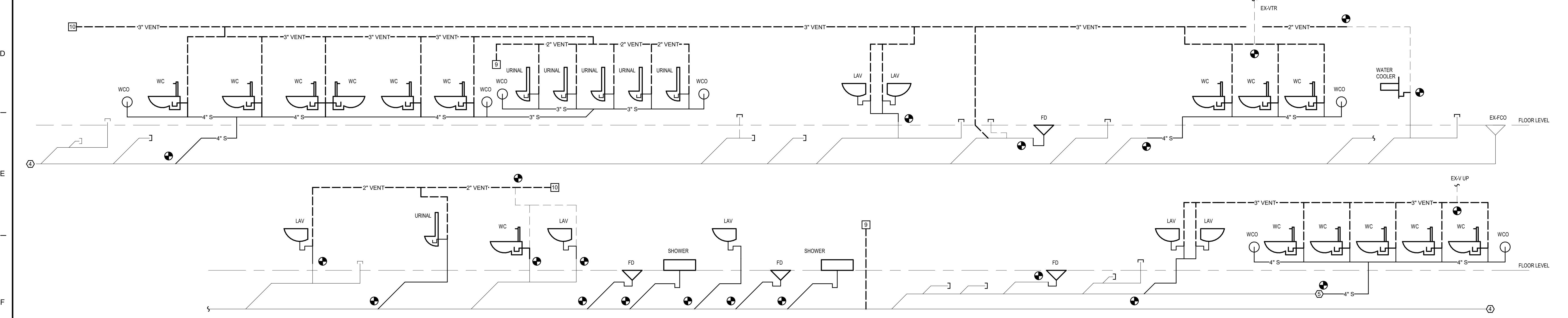
**3 NEW WORK - PLUMBING UNDERGROUND FLOOR PLAN**  
 P-101 1/4" = 1'-0"



**1 NEW WORK - PLUMBING FIRST FLOOR PLAN**  
 P-101 1/4" = 1'-0"



**1 DEMO - SANITARY, WASTE AND VENT PIPING RISER DIAGRAM**  
 P-301 / NTS



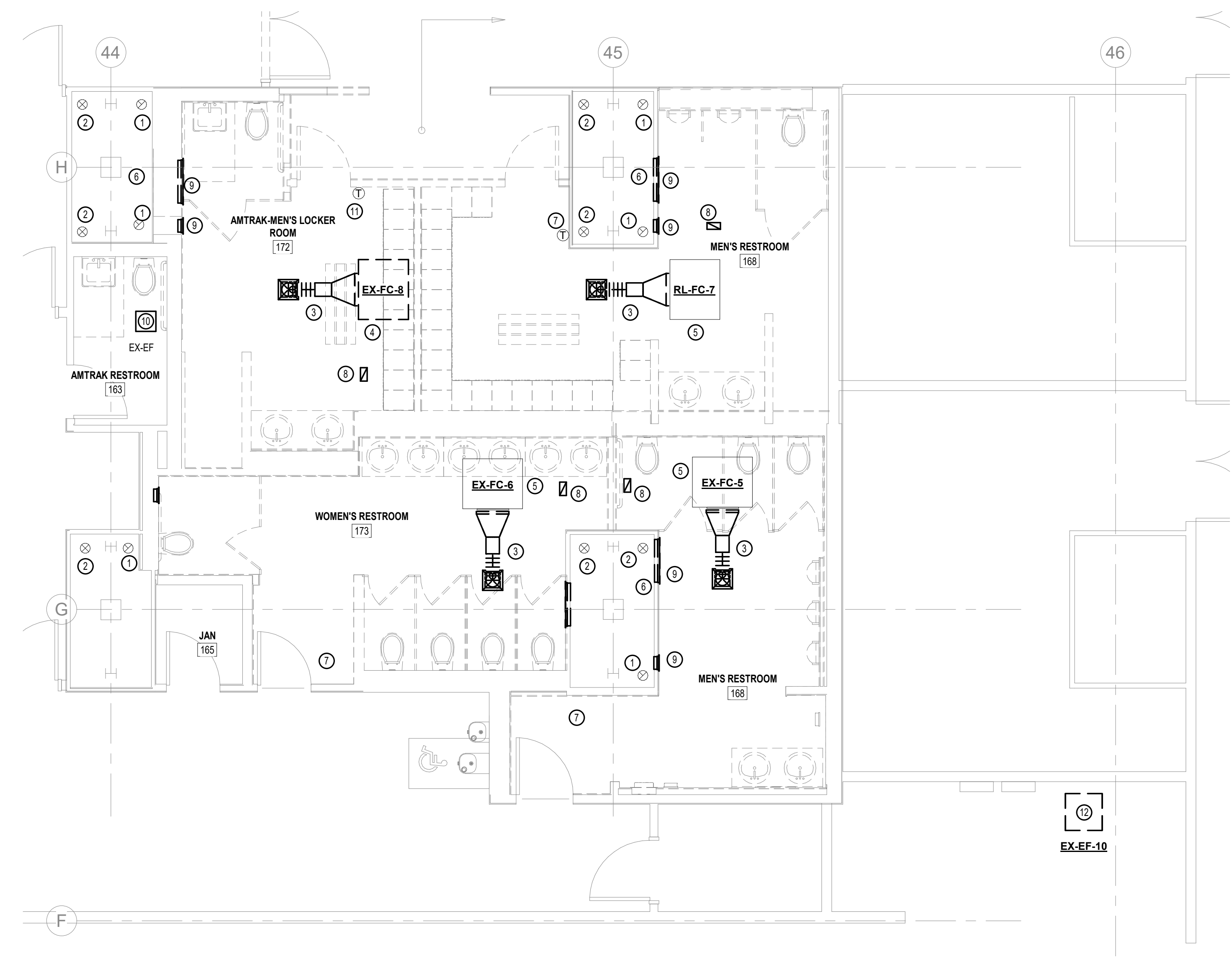
**2 NEW WORK - SANITARY, WASTE AND VENT PIPING RISER DIAGRAM**  
 P-301 / NTS



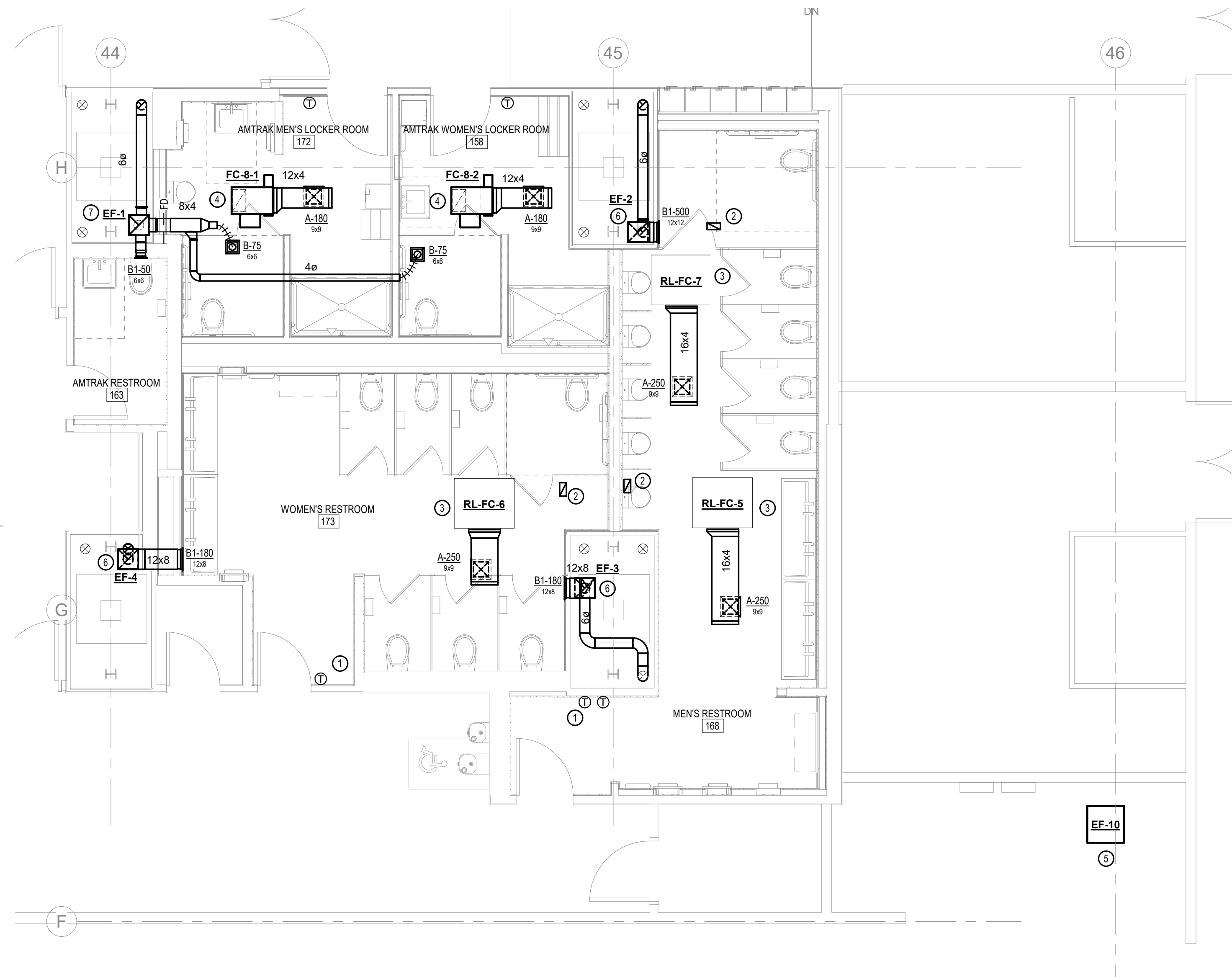


- DRAWING#H-101 - DEMO KEYED NOTES**
- 6" EX-EA TO UNDER SLAB
  - 6" EX-FA TO UNDER SLAB
  - REMOVE EXISTING DUCTWORK AND ALL ASSOCIATED SUPPORT, HANGERS, AND AIR TERMINAL.
  - REMOVE EXISTING FANCOIL UNIT, DISCONNECT CHILLED AND HOT WATER PIPING, REMOVE PIPING BACK TO FANCOIL ISOLATION VALVE, PROVIDE INSULATED PIPING CAP. REMOVE ASSOCIATED CONDENSATE PIPING, PROVIDE PIPING CAP DURING CONSTRUCTION. REMOVE CONTROL WIRING BACK TO ASSOCIATED THERMOSTAT.
  - EXISTING FANCOIL TO BE DISCONNECTED, AND RELOCATED. DISCONNECT CHILLED AND HOT WATER PIPING AND PROVIDE INSULATED PIPING CAP DURING CONSTRUCTION. DISCONNECT CONDENSATE PIPING AND PROVIDE PIPING CAP DURING CONSTRUCTION. DISCONNECT CONTROL WIRING AND KEEP SAFE.
  - REMOVE EXISTING EXHAUST FAN AND ALL ASSOCIATED DUCTWORK, SUPPORT, HANGERS, AND TERMINALS. PATCH WALL TO MATCH EXISTING.
  - REMOVE WALL MOUNTED THERMOSTAT, DISCONNECT CONTROL WIRING KEEP WIRING SAFE. KEEP THERMOSTAT IN A SAFE PLACE TO BE RE-INSTALLED ON NEW SURFACE. PATCH WALL TO MATCH EXISTING.
  - REMOVE EXISTING CEILING MOUNTED REGISTER, ASSOCIATED DUCTWORK SHALL REMAIN.
  - REMOVE EXISTING WALL MOUNTED REGISTER AND ALL ASSOCIATED DUCTWORK, SUPPORTS AND HANGERS.
  - REMOVE EXISTING CEILING EXHAUST FAN AND ALL ASSOCIATED DUCTWORK, SUPPORTS, AND HANGERS.
  - REMOVE THERMOSTAT AND CONTROL WIRING BACK TO CONTROL UNIT. PATCH WALL TO MATCH EXISTING.
  - REMOVE EXISTING EXHAUST FAN (EX-EF-10) SERVES THE RESTROOMS. REMOVE ALL ASSOCIATED SUPPORTS, HANGERS, VIBRATION ISOLATION AND DUCTWORK FLEXIBLE CONNECTION, DISCONNECT CONTROL WIRING AND KEEP SAFE.

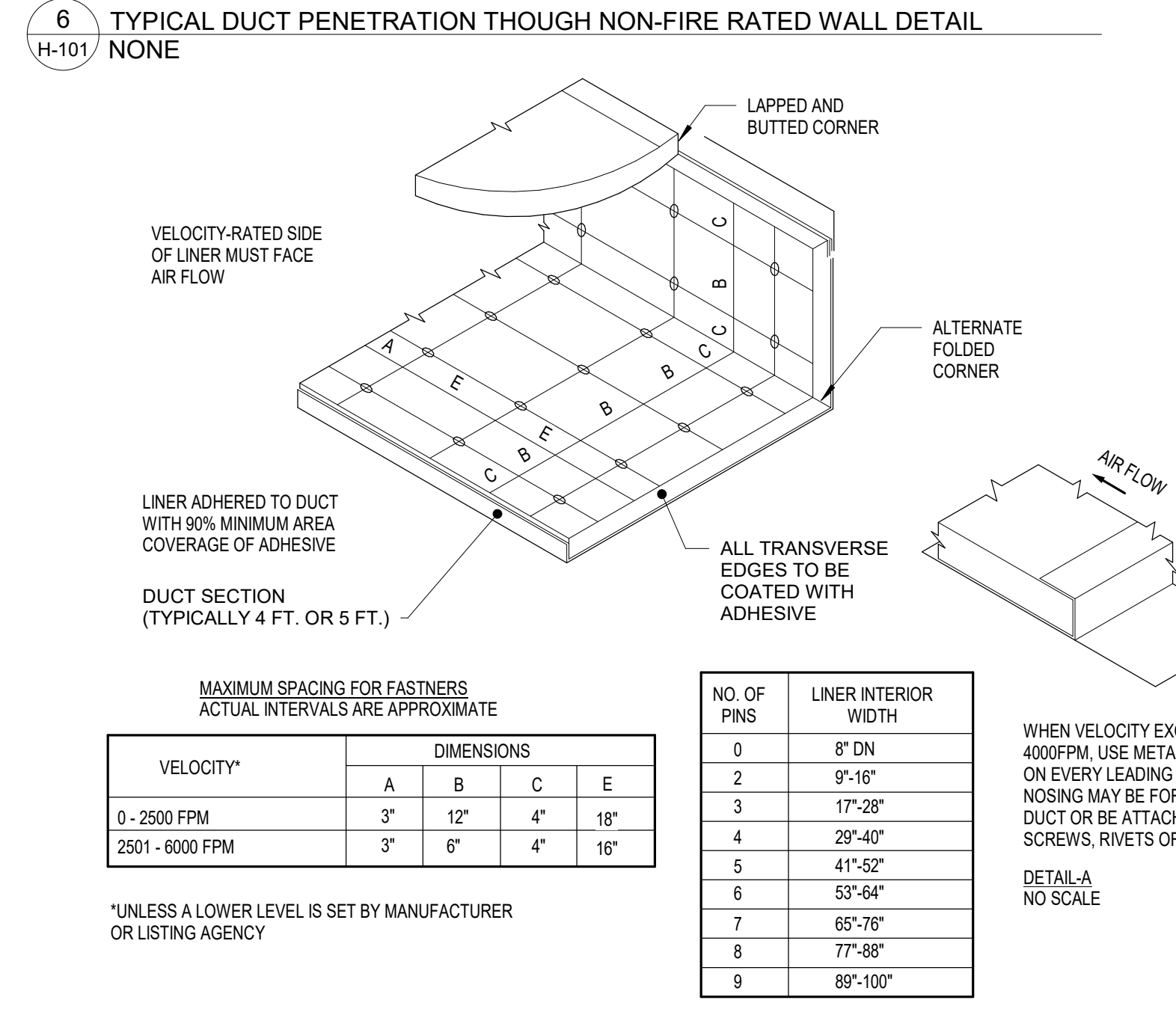
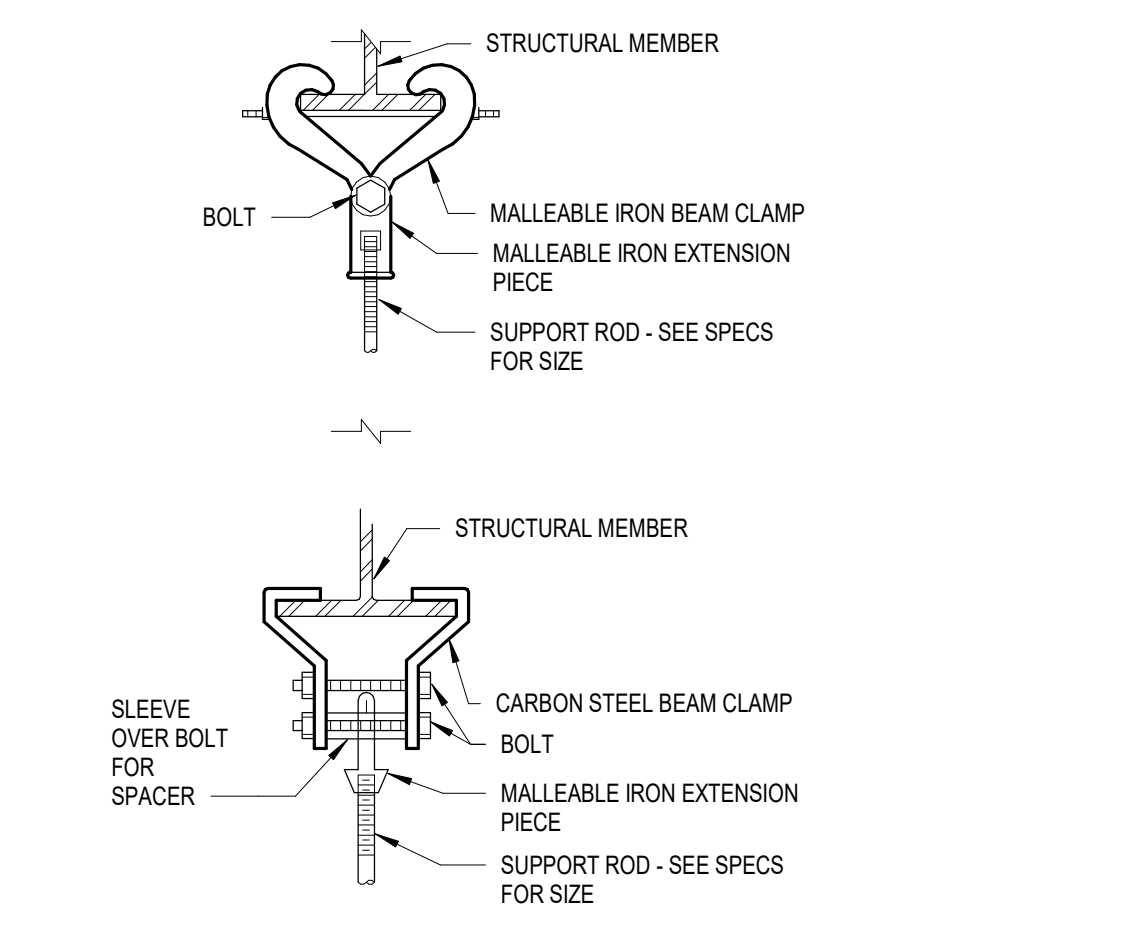
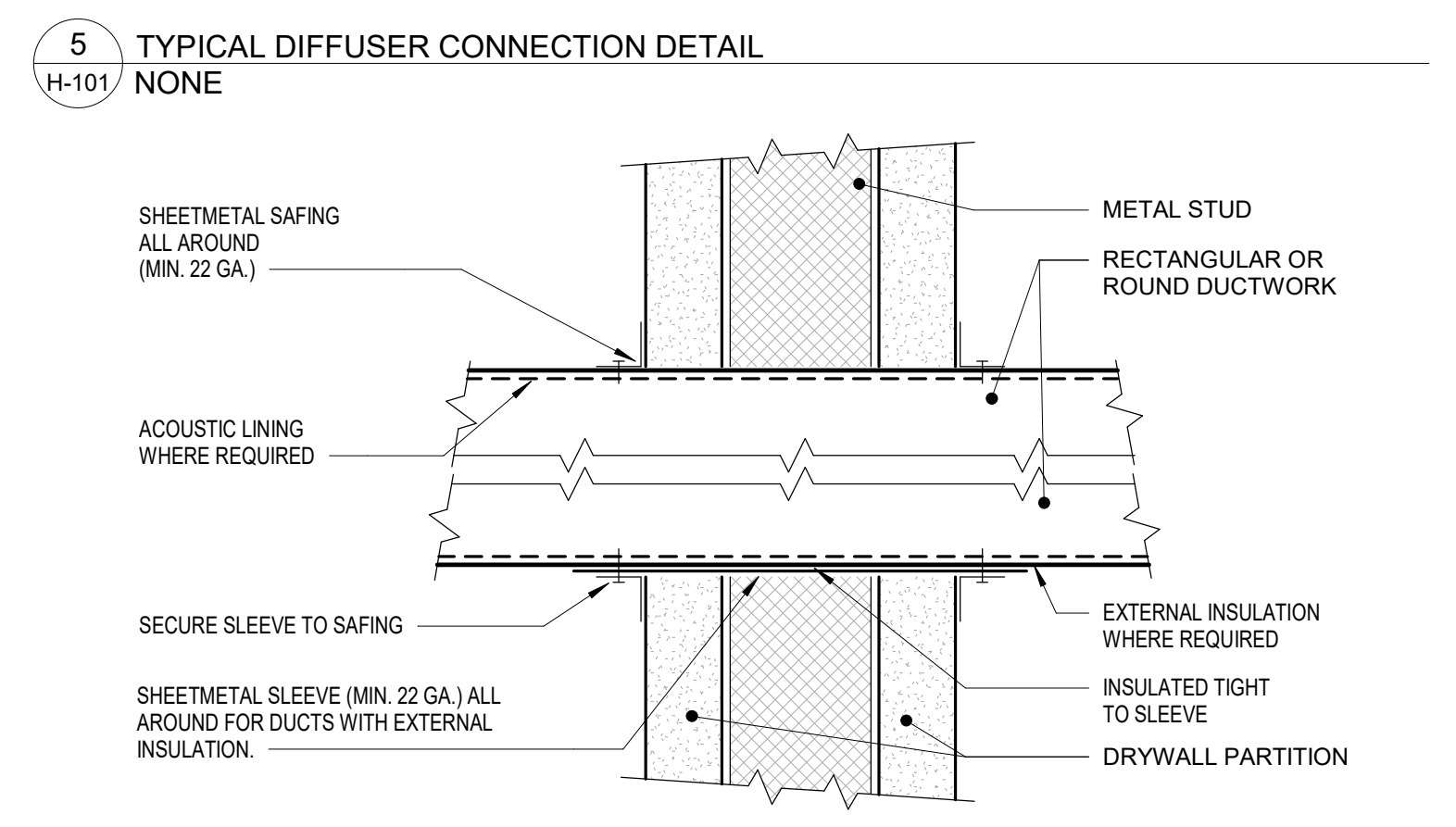
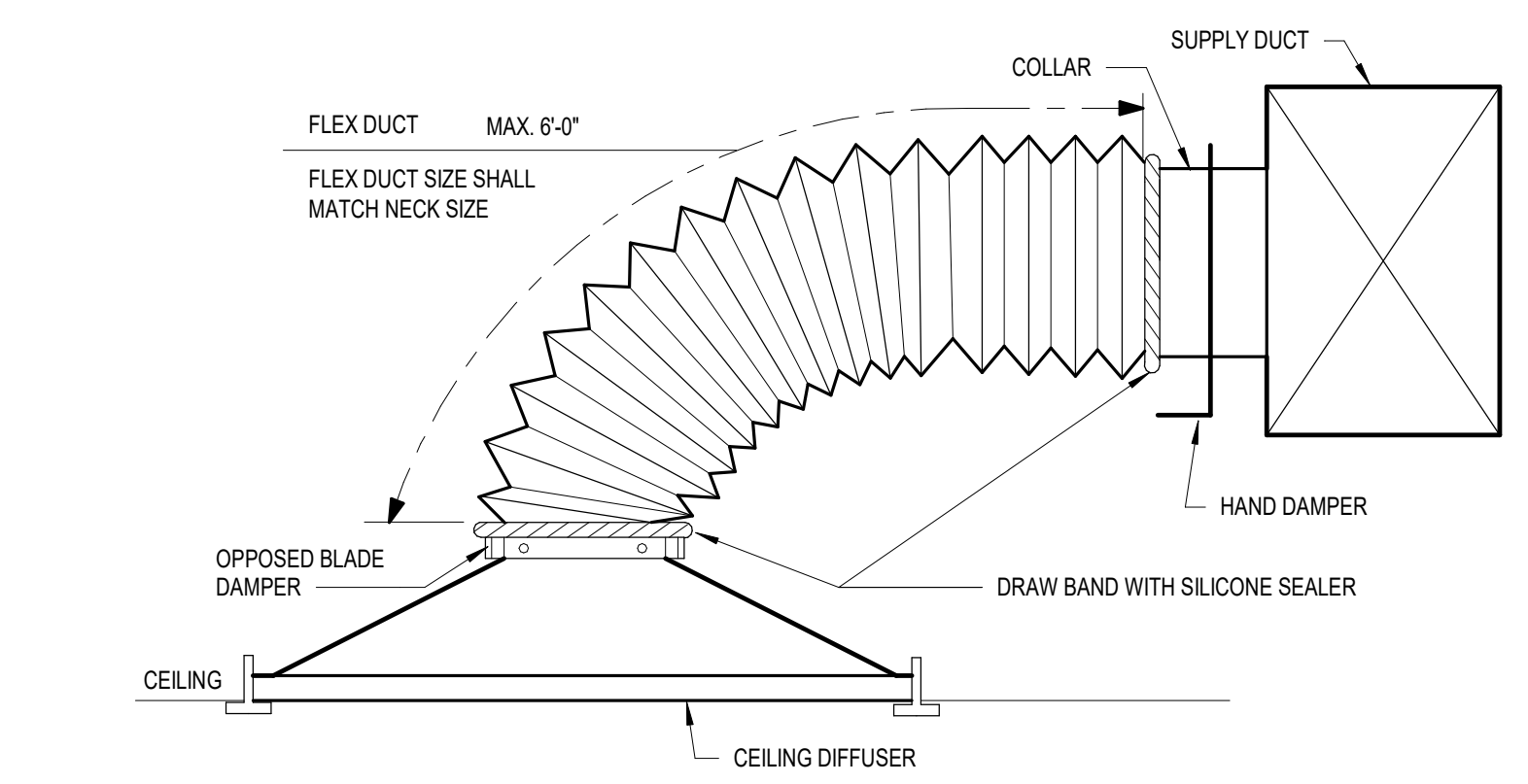
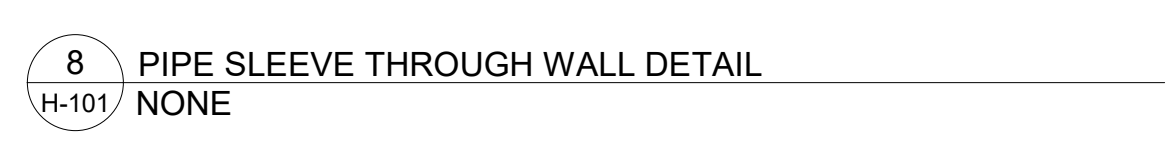
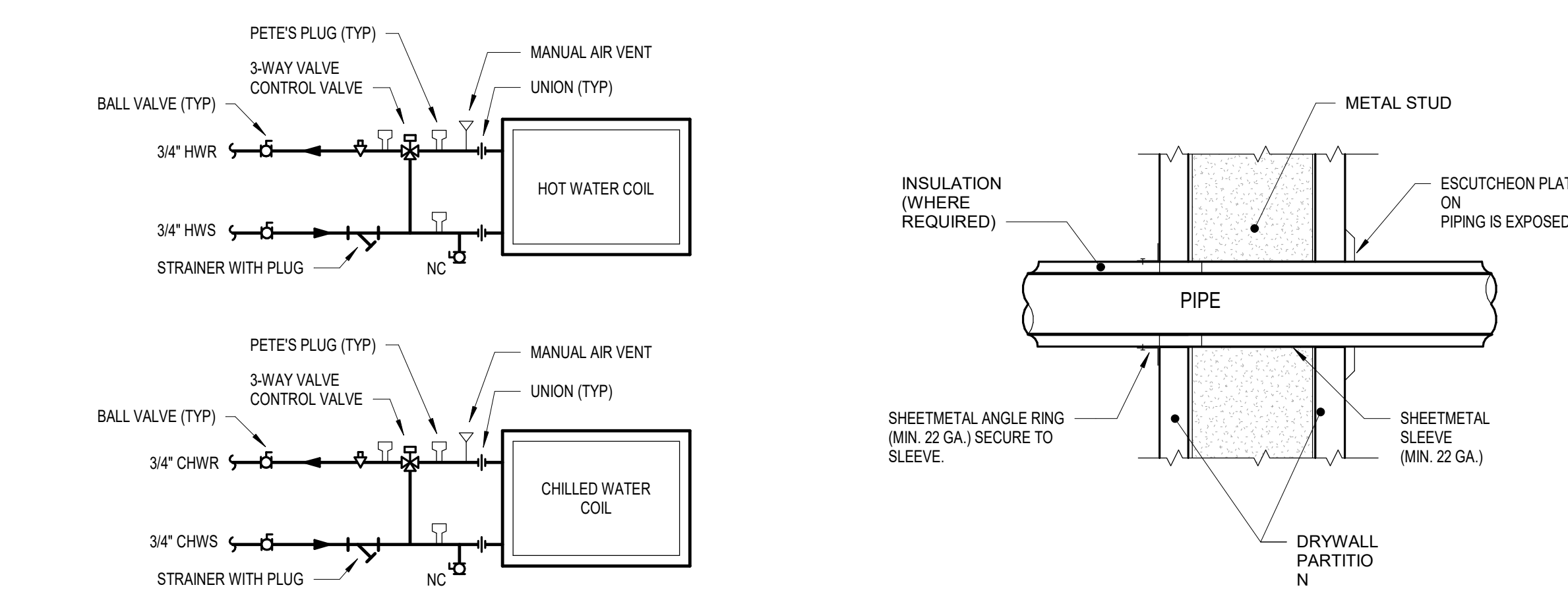
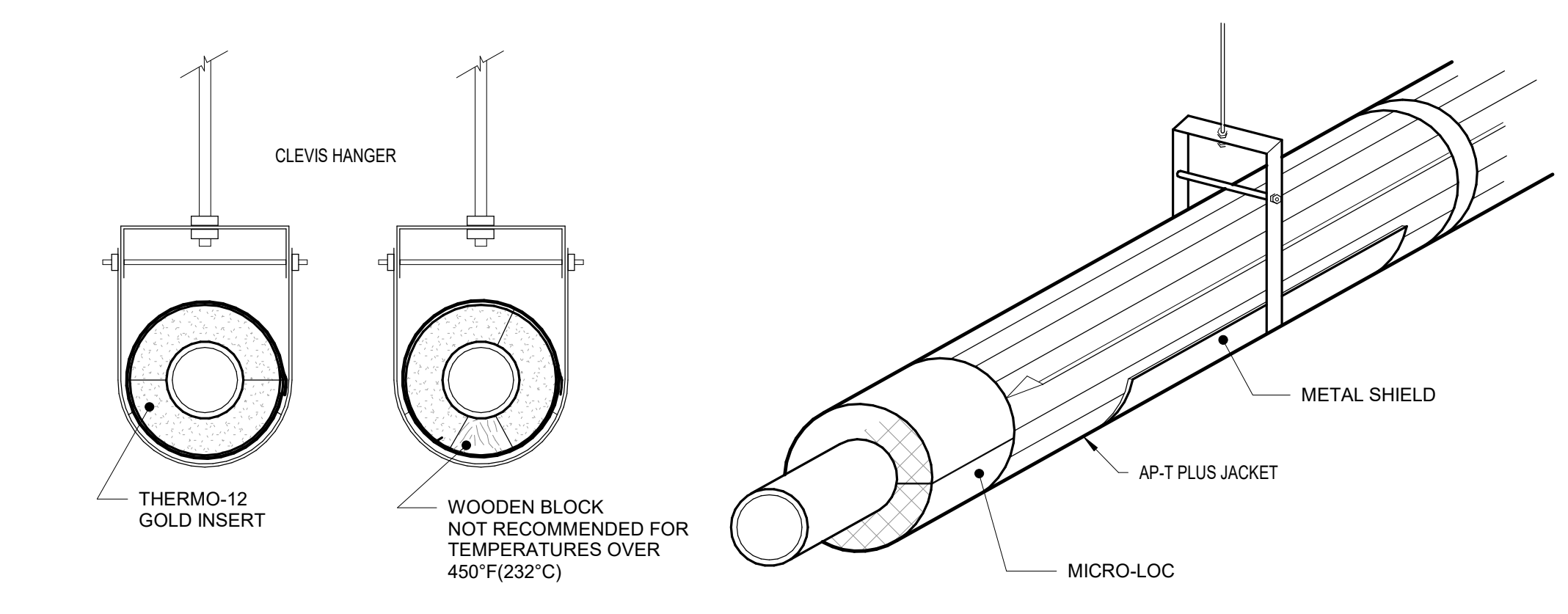
- DRAWING#H-101 - NEW WORK KEYED NOTES**
- RE-INSTALL AND RE-WIRE EXISTING THERMOSTAT. THERMOSTAT SHALL BE COMPATIBLE WITH THE EXISTING FANCOIL UNIT AND ASSOCIATED CONTROL VALVES.
  - PROVIDE NEW CEILING REGISTER THAT MATCH THE DEMOLISHED REGISTER, COLOR BY ARCHITECT.
  - CLEAN EXISTING FANCOIL UNIT AND PAINT THE BOTTOM RETURN REGISTER PANEL, COLOR BY ARCHITECT. PROVIDE NEW FILTERS THAT MATCH EXISTING. RELOCATE EXISTING FANCOIL UNIT, COORDINATE EXACT LOCATION ON SITE. EXTEND HOT AND CHILLED WATER PIPING AND PROVIDE FINAL CONNECTION TO THE EXISTING FANCOIL UNIT. EXTEND CONDENSATE PIPING AND PROVIDE FINAL CONNECTION TO FANCOIL UNIT. WIRE EXISTING CONTROL WIRING.
  - PROVIDE NEW FANCOIL UNIT. COORDINATE EXACT LOCATION ON SITE. PIPE HOT AND CHILLED WATER PIPING AND PROVIDE FINAL CONNECTION. REFER TO TYPICAL DETAIL FOR PIPING ARRANGEMENT. CONNECT PIPING TO THE EXISTING ISOLATION VALVES RELATED TO THE DEMOLISHED FANCOIL (EX-FC-8). PROVIDE CONDENSATE PIPING AND CONNECT PIPING TO THE EXISTING CONDENSATE PIPING RELATED TO (EX-FC-8). WIRE CONTROL WIRING TO THE NEW THERMOSTAT.
  - PROVIDE NEW EXHAUST FAN. EXTEND DUCTWORK AND PROVIDE FINAL CONNECTION TO THE NEW FAN. RE-CONNECT CONTROL WIRING. COORDINATE EXACT LOCATION ON SITE.
  - PROVIDE NEW EXHAUST FAN. CONNECT FAN OUTLET TO EXISTING EXHAUST DUCTWORK MULTI-TABS THAT LOCATED IN THE SHAFT. COORDINATE EXACT LOCATION ON SITE. PROVIDE ENOUGH CLEARANCE FOR MAINTENANCE. DUCTWORK SHALL AVOID CROSSING THE SHAFT ACCESS DOOR. PROVIDE NEW EXHAUST REGISTER WITH FIRE DAMPER. PROVIDE ACCESS DOOR TO MAINTAIN THE FIRE DAMPER.
  - PROVIDE NEW EXHAUST FAN. CONNECT FAN OUTLET TO EXISTING EXHAUST DUCTWORK MULTI-TABS THAT LOCATED IN THE SHAFT. COORDINATE EXACT LOCATION ON SITE. PROVIDE ENOUGH CLEARANCE FOR MAINTENANCE. DUCTWORK SHALL AVOID CROSSING THE SHAFT ACCESS DOOR. PROVIDE NEW EXHAUST REGISTER WITH FIRE DAMPER. PROVIDE DUCTWORK FIRE DAMPER. PROVIDE ACCESS DOORS TO MAINTAIN THE FIRE DAMPERS.



**2 DEMO - HVAC FIRST FLOOR PLAN**  
 1/4" = 1'-0"



**1 NEW WORK - HVAC FIRST FLOOR PLAN**  
 1/4" = 1'-0"



VELOCITY*	DIMENSIONS			
	A	B	C	E
0 - 2500 FPM	3"	12"	4"	18"
2501 - 6000 FPM	3"	6"	4"	18"

NO. OF PINS	LINER INTERIOR WIDTH
0	8" DN
2	9"-16"
3	17"-28"
4	29"-40"
5	41"-52"
6	53"-64"
7	65"-76"
8	77"-88"
9	89"-100"

\*UNLESS A LOWER LEVEL IS SET BY MANUFACTURER OR LISTING AGENCY

WHEN VELOCITY EXCEEDS 4000FPM, USE METAL NOISING ON EVERY LEADING EDGE. NOISING MAY BE FORMED ON DUCT OR BE ATTACHED BY SCREWS, RIVETS OR WELDS.

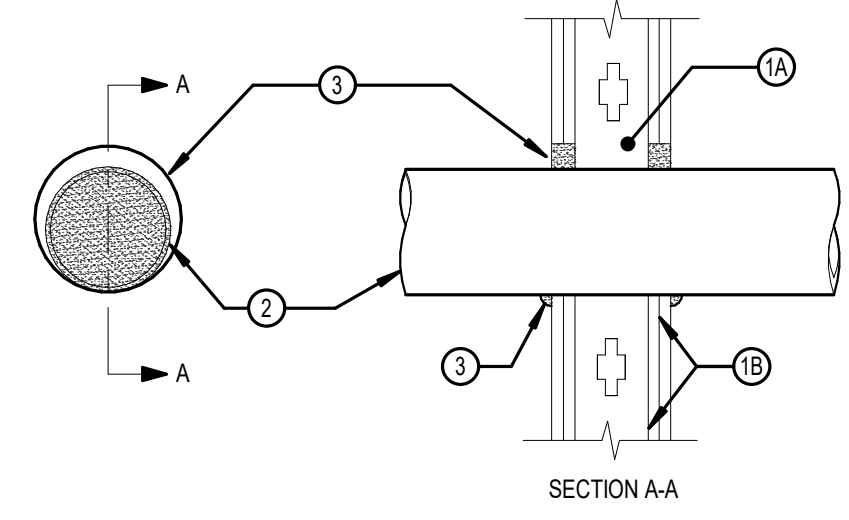
DETAIL-A  
 NO SCALE



**SYSTEM NO. W-L-1080**

F RATING-2 HR  
T RATING-0 and 3/4 HR (SEE ITEM 2)

**1. Wall Assembly** - The 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:  
**A. Studs** - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide channels spaced max 24 in. OC.  
**B. Gypsum Board** - Two layers of nom 5/8 in. thick gypsum wallboard as specified in the individual U300 and U400 Series Design in the UL Fire Resistance Directory. Max diam of circular opening is 5-1/4 in. Diam of circular opening cut through both layers of gypsum wallboard on each side of wall assembly to be min 3/4 in. to max 1-1/2 in. larger than outside diam of pipe, conduit or tube. Side edge of through opening to be min 3/4 in. from nearest stud wall cavity.  
**2. Pipe or Conduit** - Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe, nom 4 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 4 in. diam (or smaller) Class 50 (or heavier) ductile iron pressure pipe, nom 4 in. diam (or smaller) steel conduit, nom 4 in. diam (or smaller) steel electrical metallic tubing or nom 2 in. diam Type L (or heavier) copper tubing. When steel or iron pipe, conduit or tube is used, T Rating of freestop system (Item 3) is 3/4 hr. When copper tubing is used, T Rating of freestop system (Item 3) is 0 hr. A max of one pipe, conduit or tube is permitted in the freestop system. Max annular space between pipe, conduit or tube and edge of opening is 3/4 in. Min annular space between pipe, conduit or tube and edge of opening is zero in. (point contact). Pipe, conduit or tube to be rigidly supported on both sides of wall assembly.  
**3. Fill/Void or Cavity Material** - Putty - Putty fill material installed to fill annular space throughout thickness of gypsum wallboard layers on each side of wall assembly. A min 1/4 in. diam bead of putty is to be applied to the wall surface where the pipe, conduit or tube is installed in point contact with the edge of the through opening. Putty installed symmetrically on both sides of wall assembly.  
**MINNESOTA MINING & MFG CO** - Type MPS-2+ Putty  
 \*Bearing the UL Classification Marking

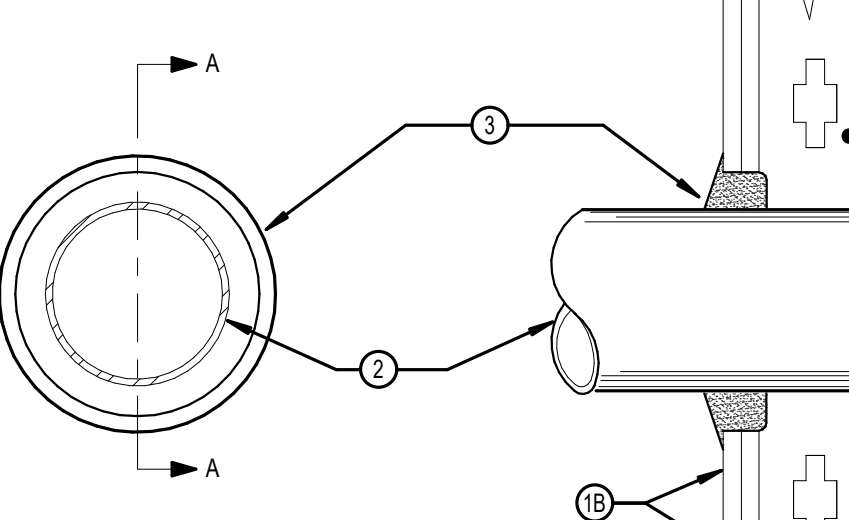


7 ELECTRICAL FIRE STOPPING DETAIL  
E1.1 N.T.S.

**SYSTEM NO. W-L-1010**

(FORMERLY SYSTEM NO. 242)  
F RATING-2 HR  
T RATING-0 HR  
L RATING AT AMBIENT-LESS THAN 1 CFM/sq ft (SEE ITEM 3)  
L RATING AT 400° F-LESS THAN 1 CFM/sq ft (SEE ITEM 3)

**1. Wall Assembly** - The fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:  
**A. Studs** - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the diam of the stud, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is centered in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing in all four sides.  
**B. Gypsum Board** - Two layers of nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 14-1/2 in. for wood stud walls and 25-1/2 in. for steel stud walls.  
**2. Through Penetrants** - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the freestop system. Max annular space between pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:  
**A. Steel Pipe** - Nom 2 1/2 in. diam (or smaller) Schedule 10 (or heavier) steel pipe. A nom annular space of 3/4 in. is required within the freestop system.  
**B. Steel Pipe** - Nom 4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe. A nom annular space of 3/4 in. is required within the freestop system.  
**C. Conduit** - Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit. A nom annular space of 3/4 in. is required within the freestop system.  
**D. Copper Tubing** - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing. A nom annular space of 3/4 in. is required within the freestop system.  
**3. Fill/Void or Cavity Material** - Sealant - Min 1-1/4 in. thickness of fill material applied within the annulus on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the penetrating item.  
**MINNESOTA MINING & MFG CO** - Types FB-2000, FB-2000+  
 (Note: L Ratings apply only when FB-2000 is used.)  
 \*Bearing the UL Classification Marking

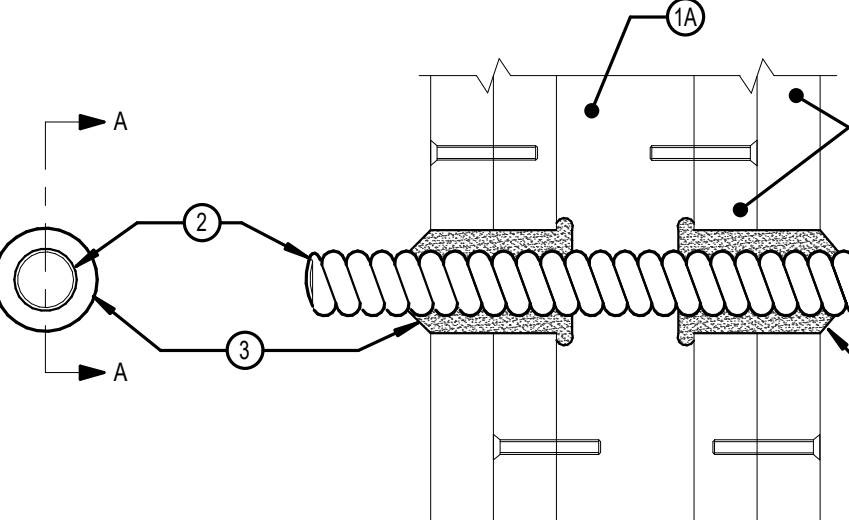


6 ELECTRICAL FIRE STOPPING DETAIL  
E1.1 N.T.S.

**SYSTEM NO. W-L-1032**

(FORMERLY SYSTEM NO. 480)  
F RATING-2 HR  
T RATINGS- 0, 1-1/2 AND 2 HR (SEE ITEM 2)  
L RATING AT AMBIENT-LESS THAN 1 CFM/sq ft  
L RATING AT 400° F-LESS THAN 1 CFM/sq ft

**1. Wall Assembly** - The fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:  
**A. Studs** - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.  
**B. Gypsum Board** - Two layers of nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 3 in.  
**2. Through Penetrating Product** - Flexible Metal Conduit - Nom 2 in. diam (or smaller) aluminum Flexible Metal Conduit. Max one flexible metal conduit installed near center of circular through opening in gypsum wallboard layers. Diam of opening cut through both layers of gypsum wallboard on each side of wall to be min 1/4 in. to max 1 in. larger than diam of flexible metal conduit. When nom 1-1/4 in. to 2 in. diam conduit is used, T Rating is 0 hr. When nom 1/2 in. to 1 in. diam conduit is used, T Rating is 1-1/2 hr. When nom 3/8 in. diam conduit is used, T Rating is 2 hr. Flexible metal conduit to be rigidly supported on both sides of wall assembly.  
**ANAMET INDUSTRIAL INC**  
**3. Fill/Void or Cavity Material** - Caulk - Caulk fill material forced into annular space around entire circumference of flexible metal conduit to completely fill nom 1-1/4 in. deep annulus in gypsum wallboard layers on each side of the wall assembly.  
**MINNESOTA MINING & MFG CO** - CP 25WB+  
 \*Bearing the UL Classification Marking

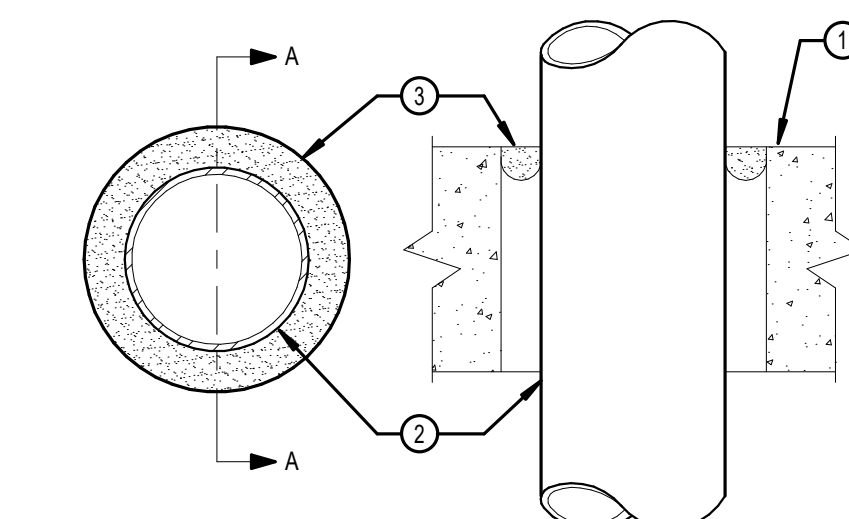


5 ELECTRICAL FIRE STOPPING DETAIL  
E1.1 N.T.S.

**SYSTEM NO C-AJ-1027**

F RATING-3 HR  
T RATING-0 HR

**1. Floor or Wall Assembly** - Min 4-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks. Max diam of through opening is 12-1/4 in.  
**Self-Consolidating Concrete (SCC)** category in the Fire Resistance Directory for names of manufacturers.  
**2. Through Penetrants** - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the freestop system. Min annular space between pipe, conduit or tubing and edge of opening is 0 in. (point contact). Max annular space is dependent on pipe, conduit or tubing type and size as well as the F Rating of the system, as shown in the table below. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:  
**A. Steel Pipe** - Nom 10 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.  
**B. Conduit** - Nom 6 in. diam (or smaller) rigid steel conduit.  
**C. Conduit** - Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.  
**D. Copper** - Tubing Nom 3 in. diam (or smaller) Type L (or heavier) copper tubing.  
**E. Copper** - Pipe Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe.  
**F. Iron Pipe** - Nom 10 in. diam (or smaller) cast or ductile iron pipe

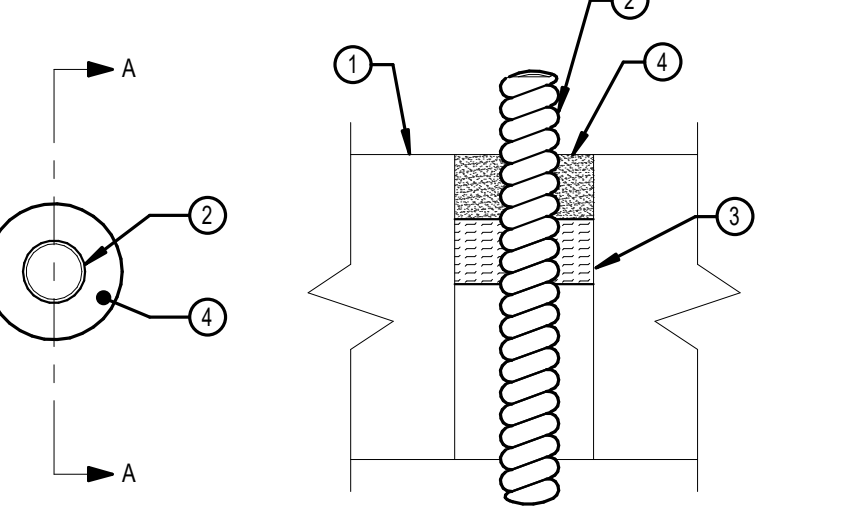


4 ELECTRICAL FIRE STOPPING DETAIL  
E1.1 N.T.S.

**SYSTEM NO C-AJ-1052**

(FORMERLY SYSTEM NO. 337)  
F RATING-2 HR  
T RATING-0 HR

**1. Floor or Wall Assembly** - Min 4-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks. Max diam of through opening in floor or wall assembly to be 3/4 in. to 1-1/2 in. larger than diam of flexible metal conduit (Item 2) installed in through opening. Max diam of opening is 6 in.  
**Self-Consolidating Concrete (SCC)** category in the Fire Resistance Directory for names of manufacturers.  
**2. Through Penetrating Product** - Nom 4 in. diam (or smaller) aluminum or steel Flexible Metal Conduit. Max one flexible metal conduit to be installed near center of circular through opening in floor or wall assembly. Flexible metal conduit to be rigidly supported on both sides of floor or wall assembly.  
**AFC CABLE SYSTEMS INC**  
**3. Packing Material** - Nom 1 in. thickness of ceramic (aluminum silico) fiber blanket or mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed min 1 in. from top surface of floor or from both surfaces of wall.  
**4. Fill/Void or Cavity Material** - Caulk - Applied to fill the annular space around the flexible metal conduit. In floors, a min 1 in. depth of fill material to be installed flush with top surface of floor. In walls, a min 1 in. depth of fill material to be installed flush with wall surface on both sides of wall assembly.  
**MINNESOTA MINING & MFG CO** - CP 25WB+  
 \*Bearing the UL Classification Marking  
 \*Please refer to the letter from UL on page 11.



3 ELECTRICAL FIRE STOPPING DETAIL  
E1.1 N.T.S.

**System No. W-L-3001**

September 07, 2004  
(Formerly System No. 149)  
F Ratings - 1 and 2 Hr (See Item 1)  
T Ratings - 3/4, 1, 1-1/2 and 2 Hr (See Item 2)  
L Rating At Ambient - 1 CFM/sq ft (See Item 3)  
L Rating At 400° F - less than 1 CFM/sq ft (See Item 3)

**1. Wall Assembly** - The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:  
**A. Studs** - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide in 1-3/8 in. deep channels spaced max 24 in. OC.  
**B. Gypsum Board** - Nom 1/2 or 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers and sheet orientation shall be as specified in the individual Wall or Partition Design. Diam of circular through opening to be 3/8 in. to 5/8 in. larger than outside diam of cable or cable bundle.  
**C. Fasteners** - When wood stud framing is employed gypsum wallboard layers attached to studs with cement coated nails as specified in the individual Wall or Partition Design. When steel channel stud framing is employed, gypsum wallboard attached to studs with Type S self-drilling, self-tapping bug-head steel screws as specified in the individual Wall or Partition Design.  
**The hourly F Rating of the freestop system is equal to the hourly fire rating of the wall assembly in which it is installed.**

**2. Cables** - Individual cable or max 1 in. diam cable bundle installed in through opening with an annular space of min 0 in. (point contact) to max 3/4 in. Cable to be rigidly supported on both sides of wall assembly. The following types and sizes of cables may be used:  
**A. Max 150 pair No. 24 AWG copper conductor telephone cable with polyvinyl chloride (PVC) insulation and jacket materials. When max 25 pair telephone cable is used.**  
**T Rating is 2 hr. When 50 to 150 pair telephone cable is used in 1 hr fire rated wall, T Rating is 3/4 hr. When 50 to 150 pair telephone cable is used in 2 hr fire rated wall, T Rating is 1 hr.**  
**B. Max No. 10 AWG multiple conductor Type NM (Romex) nonmetallic sheathed cable with PVC insulation and jacket materials. When Type NM cable is used, max T Rating is 1-1/2 hr.**  
**C. Multiple fiber optical communication cable jacketed with PVC and having a max outside diam of 5/8 in. When fiber optic cable is used, max T Rating is 2 hr.**  
**D. Max 12 AWG multi conductor (max seven conductors) power/control cable with cross-linked polyethylene (XLPE) insulation and XLP or PVC jacket material. When multi conductor power/control cable is used, max T Rating is 2 hr.**  
**E. Max four conductor with ground No. 2 AWG (or smaller) aluminum SER cables with polyvinyl chloride insulation and jacket materials.**  
**3. Fill/Void or Cavity Materials** - Caulk, Sealant or Putty - Caulk or putty fill material installed to completely fill annular space between cable and gypsum wallboard on both sides of wall and with a min 1/4 in. diam bead of caulk or putty applied to perimeter of cable(s) at its egress from each side of the wall.  
**3M COMPANY** - MP - Six putty, CP 25WB+ caulk, FB-3000 MT sealant or Cable Wrap putty (Note: L Ratings apply only when CP 25WB+ caulk or FB-3000 MT sealant is used.)  
 \*Bearing the UL Classification Mark

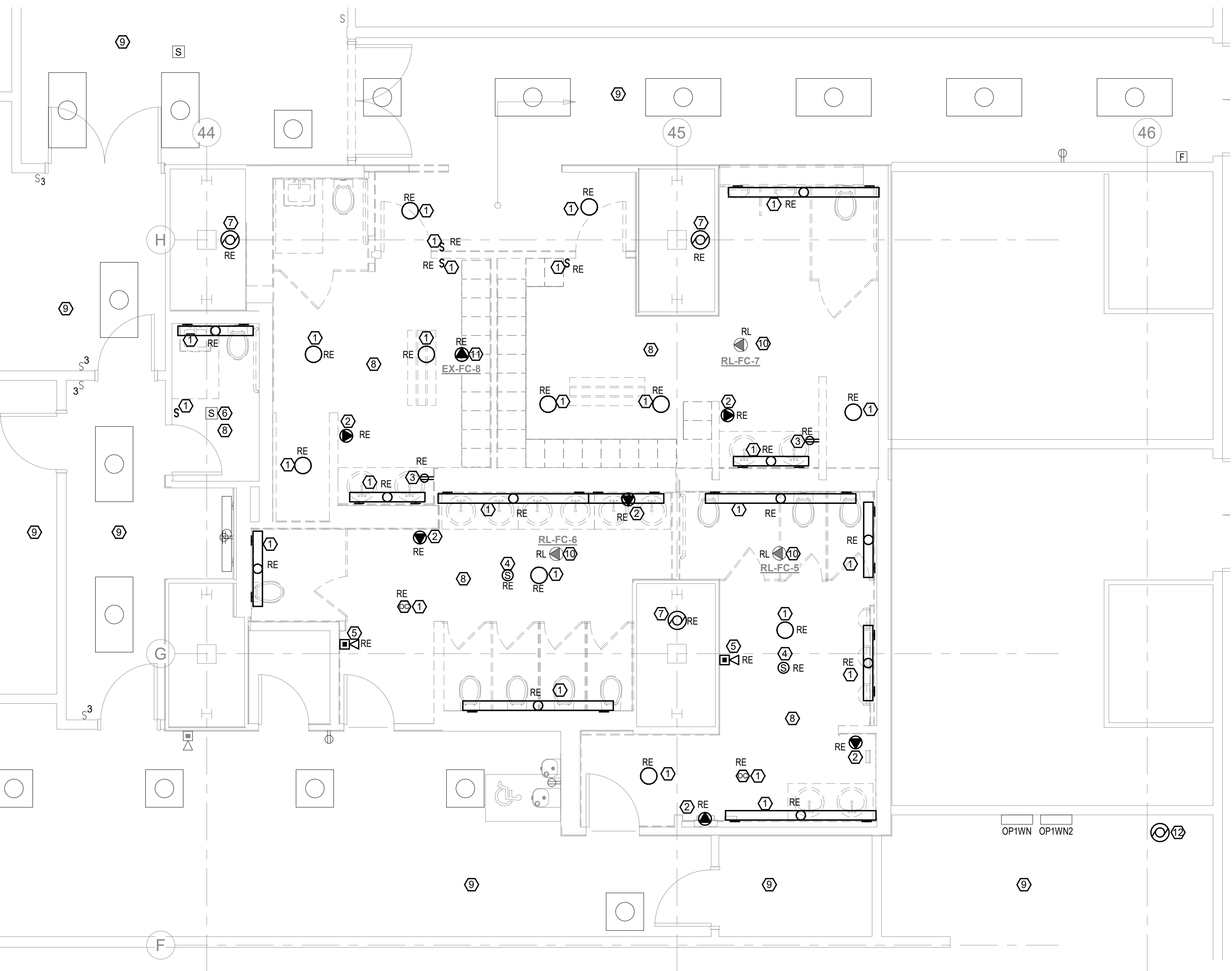
2 ELECTRICAL FIRE STOPPING DETAIL  
E1.1 N.T.S.

**SYSTEM NO. W-L-3031**

(FORMERLY SYSTEM NO. 589)  
F RATINGS-1 AND 2 HR (SEE ITEM 1)  
T RATINGS- 1/2, 1, 1-1/2 HR (SEE ITEM 3)

**1. Wall Assembly** - The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:  
**A. Studs** - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-1/2 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.  
**B. Gypsum Board** - 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 4 in.  
**The hourly F Rating of the freestop system is 1 hr when installed in a 1 hr fire rated wall and 2 hr when installed in a 2 hr fire rated wall.**  
**2. Steel Sleeve** - Cylindrical sleeve fabricated from min 0.019 in. thick (28 gauge) galv steel sheet and having a min 2 in. lap along the longitudinal seam. Length of steel sleeve to be equal to thickness of wall plus approx 7/8 to 1 in. such that, when installed, the ends of the sleeve will project approx 7/16 to 1/2 in. beyond the surface of the wall on each side of the wall assembly. Sleeve installed by coiling the sheet steel to a diam smaller than the max 4 in. diam through openings, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers.  
**3. Cables** - Aggregate cross-sectional area of cables in opening to be min 10 percent to max 40 percent of the cross-sectional area of the sleeved opening in wall. Cables to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of cable may be used:  
**A. Max 150 pair No. 24 AWG copper conductor telecommunication cables. PVC insulation and jacket materials. When multi conductor telecommunication cable is used, T Rating is 1/2 hr.**  
**B. Max 12 AWG multi conductor Type TC copper power and control cables, Type XHHW conductors (XLP insulation) with XLP or PVC jacket. When max 12 AWG multi conductor cables are used, T Rating is 1 hr.**  
**C. Multiple fiber optical communication cable jacketed with PVC and having a max outside diam of 5/8 in. When fiber optic cable is used, T Rating is 1-1/2 hr.**  
**4. Fill/Void or Cavity Materials** - Putty - Min 1 in. thickness of moldable putty packed tightly into annular space between cables and steel steel sleeve (and interstitial between cables, if possible). Flush with each end of steel sleeve. A nom 1/4 in. diam continuous "rope" or putty shall be applied around the circumference of the steel sleeve at its egress from the gypsum wallboard layers on both sides of the wall assembly.  
**MINNESOTA MINING & MFG CO** - Type MPS-2+, Cable Wrap Putty  
 \*Bearing the UL Classification Mark

1 ELECTRICAL FIRE STOPPING DETAIL  
E1.1 N.T.S.



1 ELECTRICAL FLOOR PLAN (DEMO)  
ED-101 1/4" = 1'-0"

**DEMO KEY NOTES**

- 1 DISCONNECT & REMOVE EXISTING LIGHTING FIXTURES AND ALL ASSOCIATED OBSOLETE WIRING & CONTROLS (COMPLETE). CUT BACK CONDUIT TO STRUCTURE, CAP AND SECURE.
- 2 DISCONNECT & REMOVE HAND DRYER ELECTRICAL AND ALL ASSOCIATED OBSOLETE WIRING (COMPLETE). CUT BACK CONDUIT TO STRUCTURE, CAP AND SECURE.
- 3 DISCONNECT & REMOVE RECEPTACLE AND ALL ASSOCIATED OBSOLETE WIRING (COMPLETE). CUT BACK CONDUIT TO STRUCTURE, CAP AND SECURE.
- 4 DISCONNECT & REMOVE CEILING SPEAKER AND ALL ASSOCIATED OBSOLETE WIRING (COMPLETE). CUT BACK CONDUIT TO STRUCTURE, CAP AND SECURE.
- 5 DISCONNECT & REMOVE FIRE ALARM AUDIO/VISUAL DEVICE AND ALL ASSOCIATED OBSOLETE WIRING (COMPLETE). CUT BACK CONDUIT TO STRUCTURE, CAP AND SECURE.
- 6 DISCONNECT & REMOVE SMOKE DETECTOR AND ALL ASSOCIATED OBSOLETE WIRING (COMPLETE). CUT BACK CONDUIT TO STRUCTURE, CAP AND SECURE.
- 7 DISCONNECT & EXHAUST FAN ELECTRICAL AND ALL ASSOCIATED OBSOLETE WIRING (COMPLETE). CUT BACK CONDUIT TO STRUCTURE, CAP AND SECURE. (COORDINATE WITH MECHANICAL DRAWINGS)
- 8 UNLESS SPECIFICALLY NOTED OTHERWISE ALL EXISTING ELECTRICAL IN THIS SPACE SHALL BE DISCONNECTED AND REMOVED. VERIFY FINAL QUANTITIES WITH FIELD CONDITIONS.
- 9 UNLESS SPECIFICALLY NOTED OTHERWISE ALL EXISTING ELECTRICAL IN THIS SPACE SHALL REMAIN MAINTAIN CONTINUITY.
- 10 EXISTING FAN COIL UNIT TO BE RELOCATED, DISCONNECT EXISTING ELECTRICAL, MAKE SAFE ELECTRICAL. (COORDINATE WITH MECHANICAL DRAWINGS)
- 11 DISCONNECT FAN COIL UNIT ELECTRICAL AND ALL ASSOCIATED OBSOLETE WIRING (COMPLETE). CUT BACK CONDUIT TO STRUCTURE, CAP AND SECURE. (COORDINATE WITH MECHANICAL DRAWINGS)
- 12 DISCONNECT EXISTING FAN ELECTRICAL, MAKE SAFE. (COORDINATE WITH MECHANICAL DRAWINGS)



ELECTRICAL GENERAL NOTES

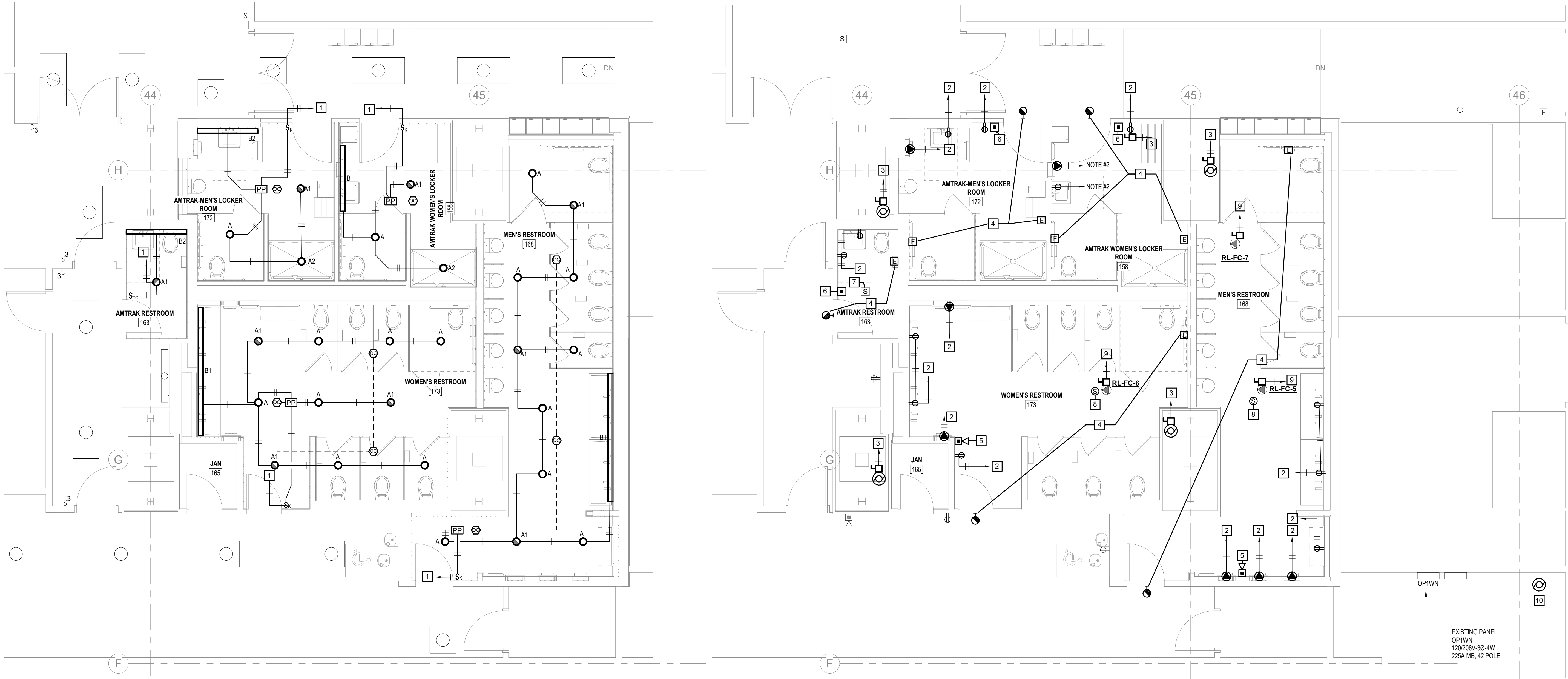
- THE CONTRACTOR SHALL VERIFY AND OBTAIN ALL NECESSARY DIMENSIONS AT THE BUILDING.
- FINISHED WORK: THE INTENT OF THE SPECIFICATIONS AND DRAWINGS IS TO CALL FOR FINISHED WORK, COMPLETED, TESTED AND READY FOR OPERATION.
- GOOD PRACTICE: IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY CONDUIT, JUNCTION BOX, FITTING OR MINOR DETAIL, AND IT IS UNDERSTOOD THAT WHILE THE DRAWINGS MUST BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT, THE SYSTEMS SHALL BE INSTALLED ACCORDING TO THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH GOOD PRACTICE.
- ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON DRAWINGS BUT MENTIONED IN SPECIFICATIONS OR VICE VERSA, OR ANY IDENTICAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- CODES AND STANDARDS - COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES AND STANDARDS WHEREVER APPLICABLE INCLUDING THE FOLLOWING:
  - 2018 CONNECTICUT STATE BUILDING CODE
  - 2015 INTERNATIONAL BUILDING CODE
  - 2018 CONNECTICUT FIRE SAFETY CODE
  - 2015 INTERNATIONAL FIRE CODE
  - 2013 NFPA 72 NATIONAL FIRE ALARM CODE
  - 2017 NFPA 70 NATIONAL ELECTRICAL CODE
  - 2015 INTERNATIONAL ENERGY CONSERVATION CODE
  - ICC/ANSI A117-2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, ADA
  - NFPA
  - UNDERWRITERS LABORATORIES
  - FACTORY MUTUAL INSURANCE COMPANY
  - NEMA STANDARDS
- NOTE THAT THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL EQUIPMENT AND SYSTEMS, WITHOUT SHOWING EVERY DETAIL AND FITTING.
- ALL CABLES AND CONDUITS PASSING THROUGH FLOORS, WALLS OR PARTITIONS SHALL BE PROVIDED WITH EMT CONDUIT SLEEVES SIZED TO GIVE A MINIMUM OF 1/2" CLEARANCE BETWEEN SLEEVE AND THE OUTSIDE DIAMETER OF THE CABLE OR CONDUIT. FLOOR SLEEVES SHALL RISE 4" ABOVE THE FLOOR SURFACE.
- ALL SLEEVES AND/OR CORE BORED HOLES AROUND CONDUIT AND CABLE SHALL BE PACKED WITH DAMMING MATERIAL AND SEALED. SEALANT SHALL ALLOW FOR MOVEMENT WITHOUT CRACKING AND SHALL BE 3M BRAND FIRE BARRIER CAULK CP25 OR APPROVED EQUAL.
- PROVIDE FIRE STOPPING AT ALL FIRE AND/OR SMOKE RATED WALL OR FLOOR PENETRATIONS IN ORDER TO MAINTAIN ITS ORIGINAL INTEGRITY.
- ALL POWER CONDUITS SHALL BE COPPER RATED 600 VOLTS, 90 DEG. C. COLOR CODED, TYPE XHHW-2 FOR FEEDERS AND TYPE THWN FOR BRANCH CIRCUITS.
- MINIMUM SIZE CONDUCTORS FOR POWER AND LIGHTING SHALL BE #12 AWG. PROVIDE MINIMUM #10 AWG SIZE FOR RUNS EXCEEDING 75' IN CONDUCTOR LENGTH, AND #8 AWG SIZE FOR RUNS EXCEEDING 150' IN CONDUCTOR LENGTH. PROVIDE LARGER SIZE CONDUCTORS AS SCHEDULED OR AS NOTED ON THE DRAWINGS.
- THE NUMBER OF WIRES ON A CONDUIT/CABLE RUN IS INDICATED ON THE DRAWINGS BY CROSS LINES ON THE CONDUIT/CABLE RUNS. PROVIDE CODE-SIZED CONDUIT FOR THE NUMBER AND SIZE OF WIRES UNLESS A LARGER SIZE IS SHOWN ON THE DRAWINGS. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- TYPE AC CABLE MAY BE USED FOR LIGHTING AND RECEPTACLE CIRCUITS WHERE CONCEALED ABOVE HUNG CEILING OR WHERE RUN WITHIN STUD WALLS.
- OUTLET BOXES SHALL BE CODE GAUGE GALVANIZED STEEL AND SHALL BE OF SHAPES AND SIZES TO SUIT THEIR RESPECTIVE LOCATIONS AND INSTALLATIONS, AND SHALL BE PROVIDED WITH COVERS TO SUITE THEIR FUNCTION AND INSTALLATION.
- OUTLET BOXES SHALL BE EQUIPPED WITH FIXTURE STUD OR STRAPS WHERE REQUIRED. MINIMUM BOX SIZE FOR FIXTURE, WALL OR SWITCH OUTLETS SHALL BE NOMINAL 4" X 4" X 2-1/8" (I.E. 2 GANG SIZE).
- INSTALL BOXES IN ACCESSIBLE LOCATIONS AND AT UNIFORM HEIGHTS. IN HUNG CEILING THEY SHALL BE READILY ACCESSIBLE BY REMOVAL OF LIGHT FIXTURE, CEILING TILE, OR ACCESS PANEL.
- SET BOXES AND COVERS SQUARE AND TRUE WITH BUILDING FINISH.
- RACEWAYS AND CABLE SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES TO WALL LINES.
- RACEWAYS AND CABLE SHALL BE SUPPORTED FROM THE STRUCTURE BY ROD HANGERS, OR RACK MOUNTED, OR OTHER APPROVED ELECTRICAL MOUNTING. DO NOT SUPPORT DIRECTLY FROM ROOF DECKING.
- RACEWAYS AND CABLE SHALL BE CONCEALED IN ALL FINISHED AREAS.
- RACEWAYS:
  - PROVIDE EMT CONDUIT FOR BRANCH CIRCUIT HOMERUNS & FOR WIRING EXPOSED TO VIEW. CONNECTORS AND COUPLINGS SHALL BE GALVANIZED STEEL SET-SCREW TYPE. PROVIDE GLAND AND COMPRESSION CONNECTORS AND COUPLINGS WHERE LOCATED IN DAMP AND WET LOCATIONS. PROVIDE FLEXIBLE STEEL CONDUIT FOR FINAL CONNECTIONS TO MOTOR DRIVEN EQUIPMENT. PROVIDE LIQUIDTIGHT FLEXIBLE STEEL CONDUIT WHERE LOCATED IN DAMP OR WET AREAS.
- WIRING DEVICES:
  - ALL DEVICES SHALL BE FURNISHED IN HUBBELL OR APPROVED EQUAL, IN COOPER, PASS & SEYMOUR, OR LEVITON. DEVICES SPECIFIED HEREIN ARE BASED ON HUBBELL UNLESS OTHERWISE NOTED. RECEPTACLE AND SWITCH COLORS SHALL BE AS DIRECTED BY THE ARCHITECT.
- LIGHTING SWITCHES SHALL BE TOGGLE TYPE, HEAVY DUTY SPECIFICATION GRADE, 20 AMP, #CS1201 FOR SINGLE POLE, DIMMER SWITCHES. PROVIDE IN LUTRON MANUFACTURE, TYPES AND CAPACITIES AS LISTED BELOW FOR DIFFERENT APPLICATIONS. FLUORESCENT DIMMERS SHALL BE COMPATIBLE WITH LUTRON HULME AND ECO-10 FLUORESCENT DIMMING BALLASTS. WHERE MULTIPLE DIMMER SWITCHES ARE SHOWN GROUPED TOGETHER SET IN GANGS WITH A COMMON WALL PLATE. WALL PLATES FOR DIMMER SWITCHES SHALL BE LUTRON WFS SERIES METAL WALL PLATES, CLEAR ANODIZED ALUMINUM FINISH. DO NOT GANG DIMMING AND NON-DIMMING SWITCHES TOGETHER.
- RECEPTACLES SHALL BE HEAVY DUTY SPECIFICATION GRADE, 2 POLE, 3 WIRE GROUNDING, NEMA 5-20R, RATED 20 AMPS AT 125 VOLTS AC, #HBL3561 FOR SINGLE RECEPTACLES, #HBL3562 FOR DUPLEX RECEPTACLES, TWO (2) #HBL3562 FOR QUADPLEX RECEPTACLES, AND #HFR3562SG FOR DUPLEX GFCI TAMPER RESISTANT RECEPTACLES, AND #R20WRTR FOR AMPER PROOF RECEPTACLES.
- WALL PLATES SHALL BE TYPE 302 STAINLESS STEEL, SATIN FINISH. FURNISH WALL PLATES IN SAME MANUFACTURER AS DEVICES.
- BRANCH CIRCUIT WIRING AND ARRANGEMENT OF HOME RUNS HAS BEEN DESIGNED FOR MAXIMUM ECONOMY CONSISTENT WITH ADEQUATE SIZING FOR VOLTAGE DROPS, CIRCUIT AMPACITIES, AND OTHER CONSIDERATIONS. INSTALL THE WIRING WITH CIRCUITS ARRANGED AS SHOWN ON THE DRAWINGS, EXCEPT AS APPROVED IN ADVANCE BY THE ARCHITECT AND ENGINEER. DO NOT MAKE CHANGES WITHOUT PRIOR APPROVAL.
- PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH 120V SINGLE PHASE CIRCUIT. DO NOT USE A COMMON NEUTRAL FOR GROUPS OF CIRCUITS. PROVIDE A SEPARATE GROUND WIRE FOR EACH CIRCUIT BACK TO THE RESPECTIVE PANEL GROUND. IF MORE THAN 3 CURRENT CARRYING CONDUCTORS ARE INSTALLED IN ONE CONDUIT THEY SHALL BE DERATED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE. DO NOT INSTALL MORE THAN THREE 30 AMP SINGLE PHASE OR FOUR 20 AMP SINGLE PHASE CIRCUITS IN THE SAME CONDUIT. DO NOT MIX LIGHTING AND POWER CIRCUITS IN THE SAME CONDUIT.
- IF EXISTING PANELBOARDS DO NOT HAVE ADEQUATE SPARE CAPACITY FOR NEW BREAKERS AS CALLED FOR ON THE DRAWINGS, THIS CONTRACTOR SHALL PROVIDE A NEW 120/208V-3 PHASE, 4 WIRE (MATCH EXISTING PANEL BOARD AIC RATING) 60A MLO LOAD CENTER ADJACENT TO EXISTING PANELBOARD. REMOVE (3) 1P-20A CIRCUIT BREAKERS AND RELOCATE EXISTING BRANCH CIRCUITS TO NEW 1P-20A CIRCUIT BREAKERS IN NEW LOAD CENTER. PROVIDE A NEW 3P-60A CIRCUIT BREAKER IN THE EXISTING PANELBOARD (IN SPACE MADE AVAILABLE BY REMOVAL) AND EXTEND 4# AWG XHHW-2 & 1#10 AWG XHHW-2 GROUND IN EMT AND CONNECT. ALL WORK SHALL BE DONE AS PART OF THE BASE CONTRACT. VERIFY FIELD CONDITIONS AND INCLUDE IN BID.

- ELECTRICAL KEY NOTES**
- EXTEND 2#12AWG XHHW-2, 1#12AWG XHHW-2 GROUND IN 3/4" TO EXISTING RECEPTACLE BRANCH CIRCUIT MADE AVAILABLE BY REMOVAL & CONNECT.
  - EXTEND 2#12AWG XHHW-2, 1#12AWG XHHW-2 GROUND IN 3/4" TO EXISTING RECEPTACLE BRANCH CIRCUIT MADE AVAILABLE BY REMOVAL & CONNECT. PROVIDE NEW GFCI TYPE CIRCUIT BREAKER IN UPSTREAM PANELBOARD (MATCH EXISTING).
  - EXTEND 2#12AWG XHHW-2, 1#12AWG XHHW-2 GROUND IN 3/4" TO EXISTING EXHAUST FAN BRANCH CIRCUIT MADE AVAILABLE BY REMOVAL & CONNECT. PROVIDE NEW GFCI TYPE CIRCUIT BREAKER IN UPSTREAM PANELBOARD (MATCH EXISTING).
  - PROVIDE NEW CALL FOR AID PULL SWITCH AND AUDIO/BUZZ UNIT (SEE DETAIL) EXTEND 2#12AWG XHHW-2, 1#12AWG XHHW-2 GROUND IN 3/4" TO LOCAL GENERAL RECEPTACLE BRANCH CIRCUIT & CONNECT (THRU TRANSFORMER).
  - PROVIDE NEW FIRE ALARM SYSTEM AUDIO/BUZZ UNIT (MATCH EXISTING) EXTEND NEW WIRING LISTED FOR USE IN FIRE ALARM SYSTEMS IN 3/4" TO EXISTING FIRE ALARM SYSTEM NOTIFICATION CIRCUIT & CONNECT.
  - PROVIDE NEW FIRE ALARM SYSTEM STROBE UNIT (MATCH EXISTING) EXTEND NEW WIRING LISTED FOR USE IN FIRE ALARM SYSTEMS IN 3/4" TO EXISTING FIRE ALARM SYSTEM NOTIFICATION CIRCUIT & CONNECT.
  - PROVIDE NEW FIRE ALARM SYSTEM SMOKE DETECTOR (MATCH EXISTING) EXTEND NEW WIRING LISTED FOR USE IN FIRE ALARM SYSTEMS IN 3/4" TO EXISTING FIRE ALARM SYSTEM INITIATION CIRCUIT & CONNECT.
  - PROVIDE NEW CEILING MOUNTED SPEAKER (MATCH EXISTING) EXTEND NEW WIRING (MATCH EXISTING) TO EXISTING AUDIO CIRCUIT MADE AVAILABLE BY REMOVAL & CONNECT.
  - NEW LOCATION OF EXISTING FAN COIL UNIT. PROVIDE NEW J BOX WITH BLANK COVER AND ACCESS PANEL AT EXISTING LOCATION. EXTEND NEW MATCHING WIRING AND CONDUIT AND RE-CONNECT AS REQUIRED.
  - CONNECT NEW FAN BY MECHANICAL CONTRACTOR (WIRED BY E.C.) CONNECT TO EXISTING FAN BRANCH CIRCUIT MADE AVAILABLE BY REMOVAL. EXTEND NEW MATCHING WIRING AND CONDUIT AS REQUIRED.

**ELECTRICAL SYMBOLS & ABBREVIATIONS**

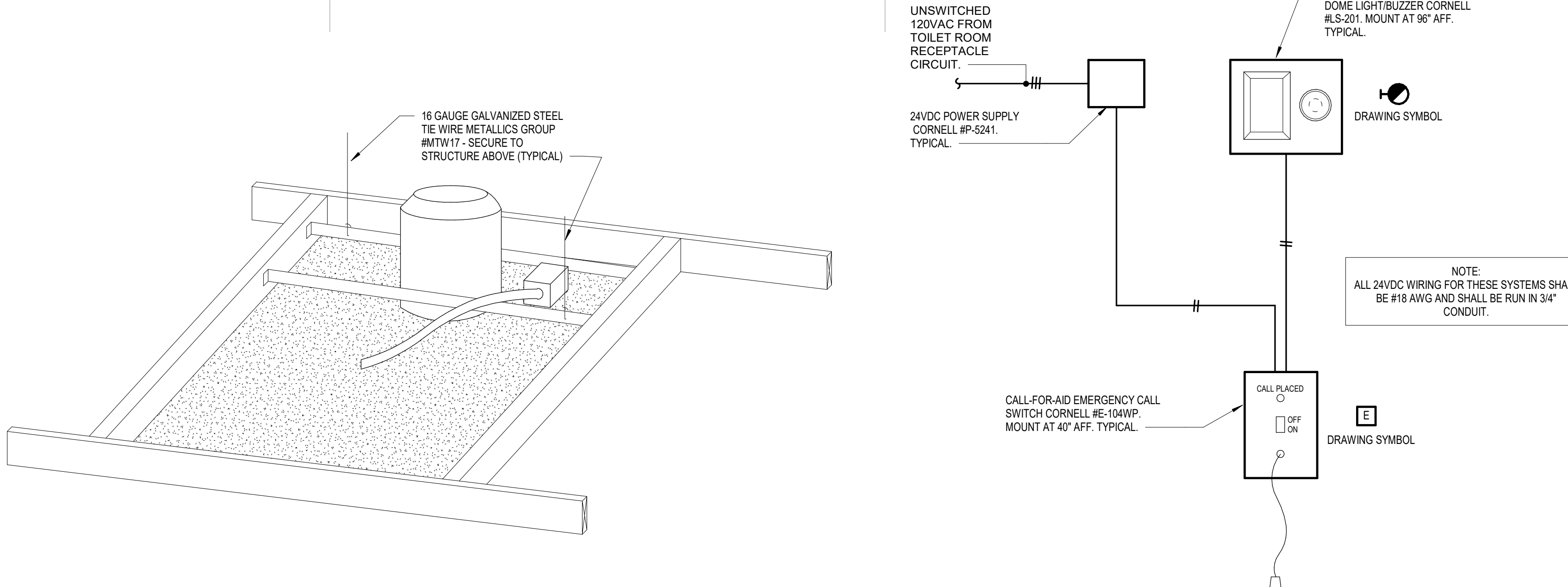
	RECESSED PERIMETER LIGHTING FIXTURE SUBLETTER INDICATES TYPE SEE LIGHTING FIXTURE SCHEDULE
	RECESSED DOWNLIGHT FIXTURE SUBLETTER INDICATES TYPE SEE LIGHTING FIXTURE SCHEDULE
	RECESSED DOWNLIGHT FIXTURE WITH INTEGRAL EMERGENCY BATTERY PACK SUBLETTER INDICATES TYPE SEE LIGHTING FIXTURE SCHEDULE
	KEY OPERATED SWITCH
	LINE VOLTAGE DUAL TECHNOLOGY OCCUPANCY SENSOR WALL SWITCH
	LOW VOLTAGE DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH
	OCCUPANCY SENSOR POWER PACK
	DUPLEX RECEPTACLE
	SPECIAL EQUIPMENT POWER CONNECTION, EQUIPMENT AS DESIGNATED
	MOTOR POWER CONNECTION
	SMOKE DETECTOR
	FIRE ALARM AUDIO / VISUAL UNIT
	FIRE ALARM STROBE
	CALL-FOR-AID SWITCH W/ CORD
	CALL-FOR-AID LIGHT AND BUZZER
	FLUSH MOUNTED CEILING SPEAKER

AMP	AMPERE
AC	ABOVE COUNTER
AWF	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTING CURRENT
AWG	AMERICAN WIRE GAUGE
C	CONDUIT(S)
CB	CIRCUIT BREAKER
CAT	CATEGORY ETHERNET CABLE
cd	CANDELA
CKT	CIRCUIT
CLG	CEILING
DEG	DEGREE
DN	DOWN
DN	DRAWING
EP	EXHAUST FAN
EMT	ELECTRICAL METALLIC TUBING
GFCI	INDICATES DEVICE WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HP	HORSEPOWER
KVA	KILOVOLT AMPERE
KW	KILOWATT
MC	METAL CLAD CABLE
MLO	MAIN LUGS ONLY
N/A	NOT APPLICABLE
NFC	NATIONAL ELECTRIC CODE
NC	NOT IN CONTRACT
NTS	NOT TO SCALE
Ø	PHASE
P	POLY(VINYL CHLORIDE)
RE	REMOVE EXISTING
RL	RELOCATE EXISTING
UL	UNDERWRITERS LABORATORY
V	VOLTS
VAC	VOLT ALTERNATING CURRENT
VDC	VOLT DIRECT CURRENT
VDC	VERIFY IN FIELD
W	WATTS
WP	WEATHER PROOF
WTR	WATER



1 ELECTRICAL LIGHTING FLOOR PLAN (NEW WORK)  
E-101 1/4" = 1'-0"

2 ELECTRICAL POWER FLOOR PLAN (NEW WORK)  
E-101 1/4" = 1'-0"



3 RECESSED CAN SUPPORT DETAIL  
E-101 NTS

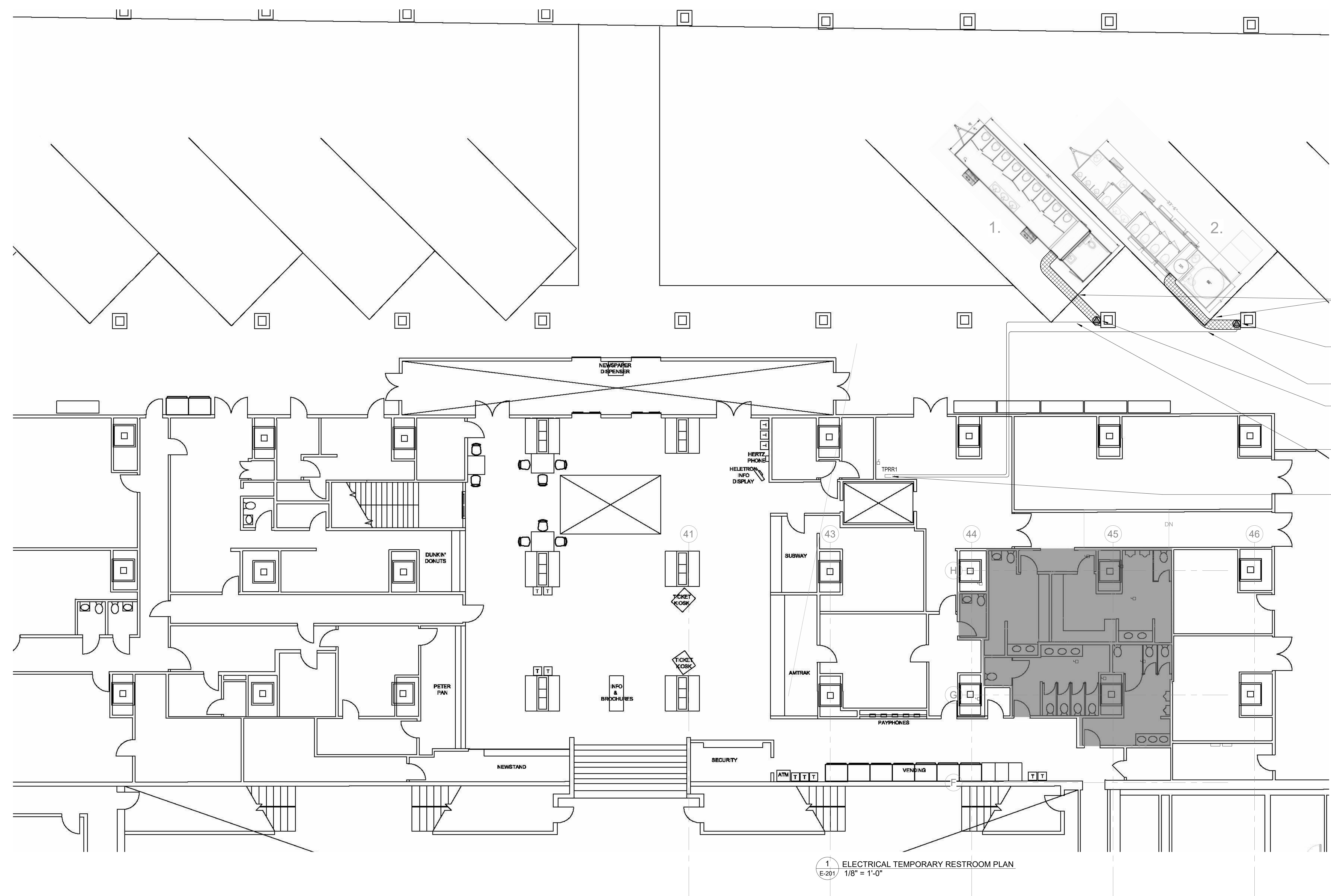
4 CALL FOR AID SYSTEM RISER DIAGRAM  
E-101 NTS

**LIGHT FIXTURE SCHEDULE**

TYPE	BASIS OF DESIGN DESCRIPTION, MANUFACTURER & MODEL #	LAMP	FIXTURE WATTS	REMARKS	ACCEPTABLE ALTERNATE MANUFACTURERS
A	8" APERTURE RECESSED OPEN DOWN LIGHT, 3.82" DEEP, SPECULAR CLEAR REFLECTOR VANTAGE MODEL# AV0F0LED5-U-20-35K-W0600-SCL	LED'S, 2,000 LUMENS, 3500°K, 80 CRI	27.7	ENERGY STAR LISTED	GOTHAM PORTFOLIO
A1	8" APERTURE RECESSED OPEN DOWN LIGHT, 3.82" DEEP, SPECULAR CLEAR REFLECTOR, WITH EMERGENCY BATTERY VANTAGE MODEL# AV0F0LED5-U-20-35K-W0600-SCL-EM17	LED'S, 2,000 LUMENS, 3500°K, 80 CRI	27.7	ENERGY STAR LISTED	GOTHAM PORTFOLIO
A2	8" APERTURE RECESSED SHOWER DOWN LIGHT, 4.5" DEEP, SPECULAR CLEAR REFLECTOR VANTAGE MODEL# AV0F0LED5-U-20-35K-W06019-SCL	LED'S, 2,000 LUMENS, 3500°K, 80 CRI	27.7	ENERGY STAR LISTED	GOTHAM PORTFOLIO
B	RECESSED PERIMETER FIXTURE, 4-1/8" W X 5" D X CUSTOM LENGTH (VERIFY WITH FIELD CONDITIONS) PRECISION ALUMINUM EXTRUSION, POWDER COATED IN WHITE, EXTRUDED FLUSH LENS WITH MESOPTICS FILM LEDALITE MODEL #90-6-L-8-K-Q-S-N-X-7	LED'S, 1,750 LUMENS, 3500°K, 80 CRI	16.5	5" APPROXIMATE LENGTH, VERIFY FINAL DIMENSIONS WITH ARCHITECT...	AXIS PRUDENTIAL
B1	RECESSED PERIMETER FIXTURE, 4-1/8" W X 5" D X CUSTOM LENGTH (VERIFY WITH FIELD CONDITIONS) PRECISION ALUMINUM EXTRUSION, POWDER COATED IN WHITE, EXTRUDED FLUSH LENS WITH MESOPTICS FILM LEDALITE MODEL #90-6-L-8-K-Q-S-N-X-7	LED'S, 2,625 LUMENS, 3500°K, 80 CRI	25	7-7" APPROXIMATE LENGTH, VERIFY FINAL DIMENSIONS WITH ARCHITECT...	AXIS PRUDENTIAL
B2	RECESSED PERIMETER FIXTURE, 4-1/8" W X 5" D X CUSTOM LENGTH (VERIFY WITH FIELD CONDITIONS) PRECISION ALUMINUM EXTRUSION, POWDER COATED IN WHITE, EXTRUDED FLUSH LENS WITH MESOPTICS FILM LEDALITE MODEL #90-6-L-8-K-Q-S-N-X-7	LED'S, 3,412 LUMENS, 3500°K, 80 CRI	32.2	9-5" APPROXIMATE LENGTH, VERIFY FINAL DIMENSIONS WITH ARCHITECT...	AXIS PRUDENTIAL

NOTES:  
1. COORDINATE FINAL MOUNTING WITH ARCHITECT'S REFLECTED CEILING PLANS.  
2. FINAL COLOR SELECTION OF ALL FIXTURES SHALL BE SUBJECT TO ARCHITECT APPROVAL.





- CORDSETS BY TRAILER EQUIPMENT SUPPLIER (VERIFY EXACT CONNECTION LOCATION) THIS CONTRACTOR SHALL PROVIDE CABLE PROTECTORS HUBBELL TRUKTRAK 5 CHANNEL SYSTEM COMPLETE WITH CORNERS FROM RECEPTACLE TO TRAILER CORDSET CONNECTION POINT(S).
- PROVIDE (4) 30A 1 POLE TWIST LOCK RECEPTACLES WITH IN-USE TYPE WEATHERPROOF COVERS FOR CONNECTION OF TEMPORARY RESTROOM TRAILER (VERIFY FINAL ELECTRICAL REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ORDERING).
- (4) 30A BRANCH CIRCUITS EACH:  
2#10 AWG XHHW-2, 1#10G AWG XHHW-2 GROUND IN 3/4" GRS CONDUIT. (RUN TIGHT TO CANOPY)
- PROVIDE (4) 20A 1 POLE TWIST LOCK RECEPTACLES WITH IN-USE TYPE WEATHERPROOF COVERS FOR CONNECTION OF TEMPORARY RESTROOM TRAILER (VERIFY FINAL ELECTRICAL REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ORDERING).
- (4) 20A BRANCH CIRCUITS EACH:  
2#12 AWG XHHW-2, 1#12G AWG XHHW-2 GROUND IN 3/4" GRS CONDUIT. (RUN TIGHT TO CANOPY)
- PROVIDE (4) NEW 1P-20A GFCI TYPE CB'S & (4) NEW 1P-30A GFCI TYPE CB'S IN EXISTING ELECTRICAL PANEL. TPRR1 AND CONNECT. NEW BREAKERS SHALL MATCH EXISTING PANEL MANUFACTURER & AIC RATING (COORDINATE WITH FIELD CONDITIONS).

**1 ELECTRICAL TEMPORARY RESTROOM PLAN**  
 E-201 1/8" = 1'-0"

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