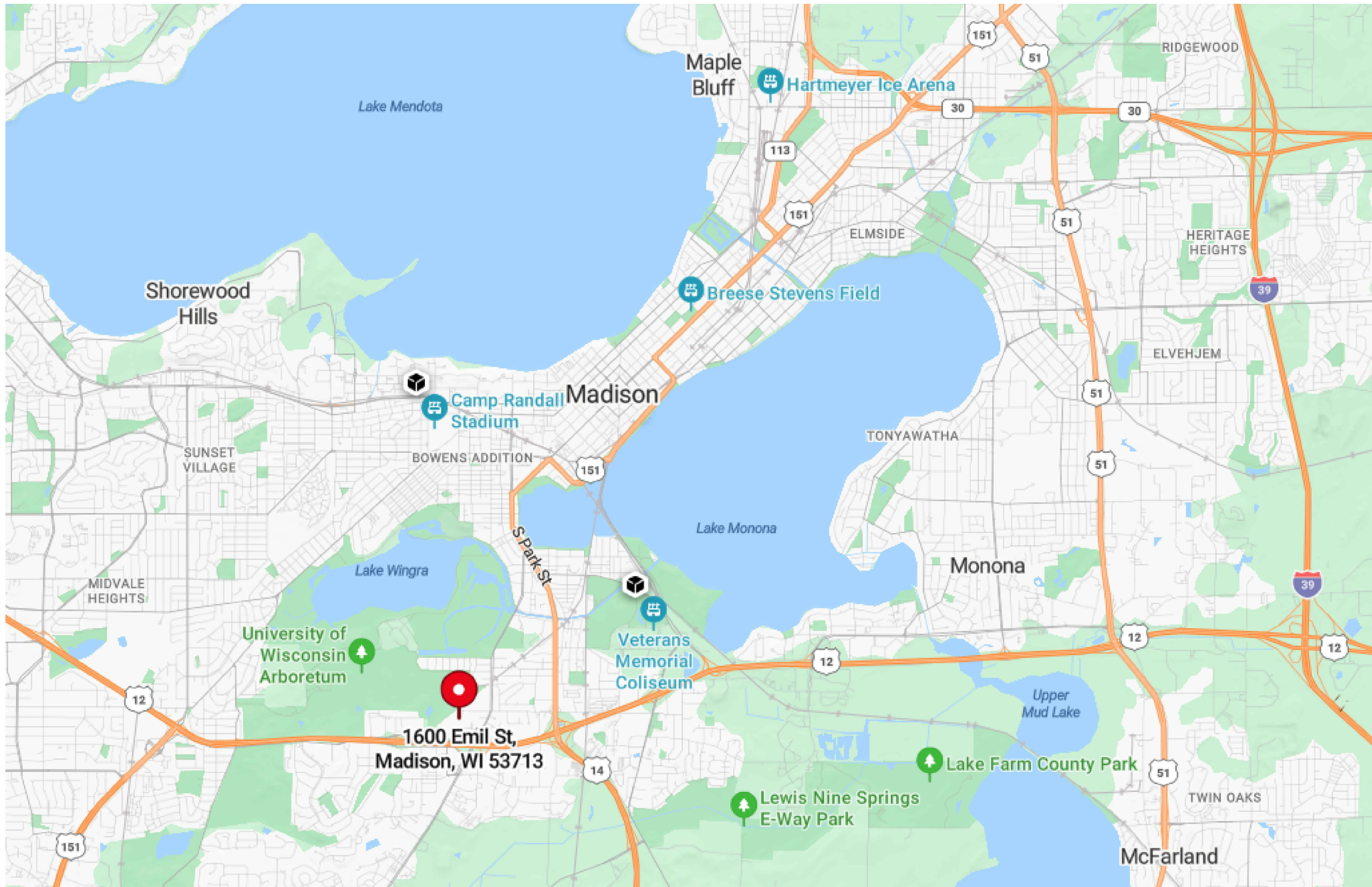


ENGINEERING OPERATIONS FACILITY LOCKER ROOM RENOVATION

CONTRACT #9659 MUNIS #14122

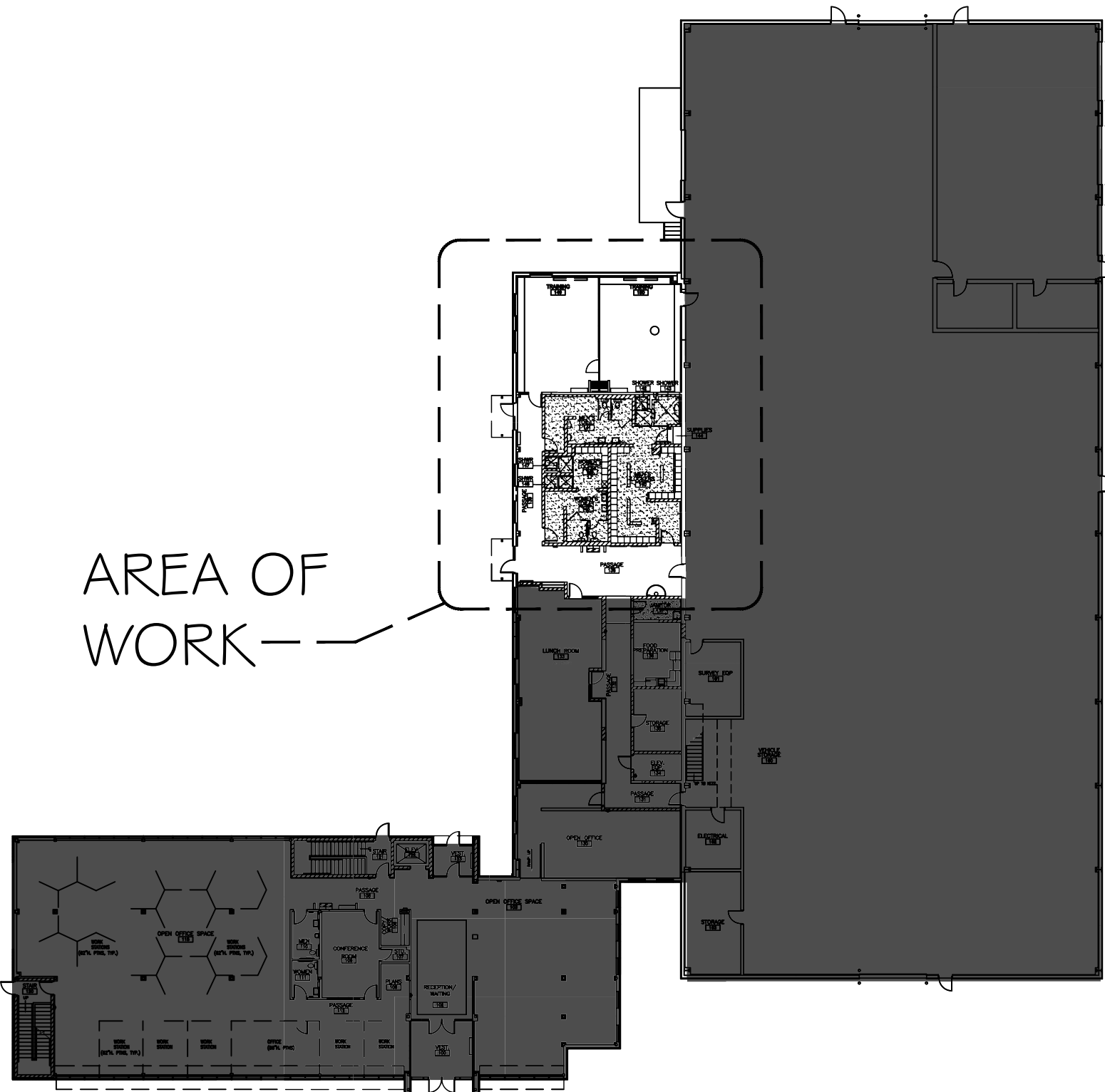
1600 EMIL STREET
MADISON, WI 53713
DATE: JULY 14, 2025



NORTH
PROJECT LOCATION



NORTH
SITE MAP



SHEET INDEX:

GENERAL	
G1.0	COVER SHEET
G1.1	BLDG CODE AND EGRESS
DEMOLITION	
AD1.1	EXISTING/DEMOLITION PLAN
STRUCTURAL	
S0.0	GENERAL NOTES
S0.1	GENERAL NOTES
S0.2	TESTING AND INSPECTION
S1.0	FOUNDATION PLAN
S1.1	EXISTING ROOF FRAMING PLAN
S3.0	STRUCTURAL DETAILS
ARCHITECTURAL	
A1.2	NEW FLOOR PLAN
A1.4	REFLECTED CEILING PLAN
A3.1	BUILDING CROSS SECTIONS
A4.1	ENLARGED RESTROOM PLANS
A4.2	RESTROOM ELEVATIONS AND DETAILS
A6.1	FINISH AND DOOR SCHEDULES
A6.2	WALL PAINT DESIGN ELEVATIONS
FIRE PROTECTION	
FA001	FIRE ALARM
FX001	FIRE SUPPRESSION
PLUMBING	
P001	GENERAL PLUMBING
P100	PLUMBING LAYOUT
P110	3D SANITARY AND VENT
P120	3D WATER
P200	SCHEDULES
MECHANICAL	
M001	GENERAL MECHANICAL
M100	LOADS AND ZONING
M110	HVAC LAYOUT
M120	3D FROM NW
M130	3D FROM SE
M200	DETAILS AND CONTROL SEQUENCES
M300	SCHEDULES
ELECTRICAL	
E001	GENERAL ELECTRICAL
EL100	LIGHTING
EP100	POWER
EP200	POWER SCHEDULES

EXHIBIT "A"



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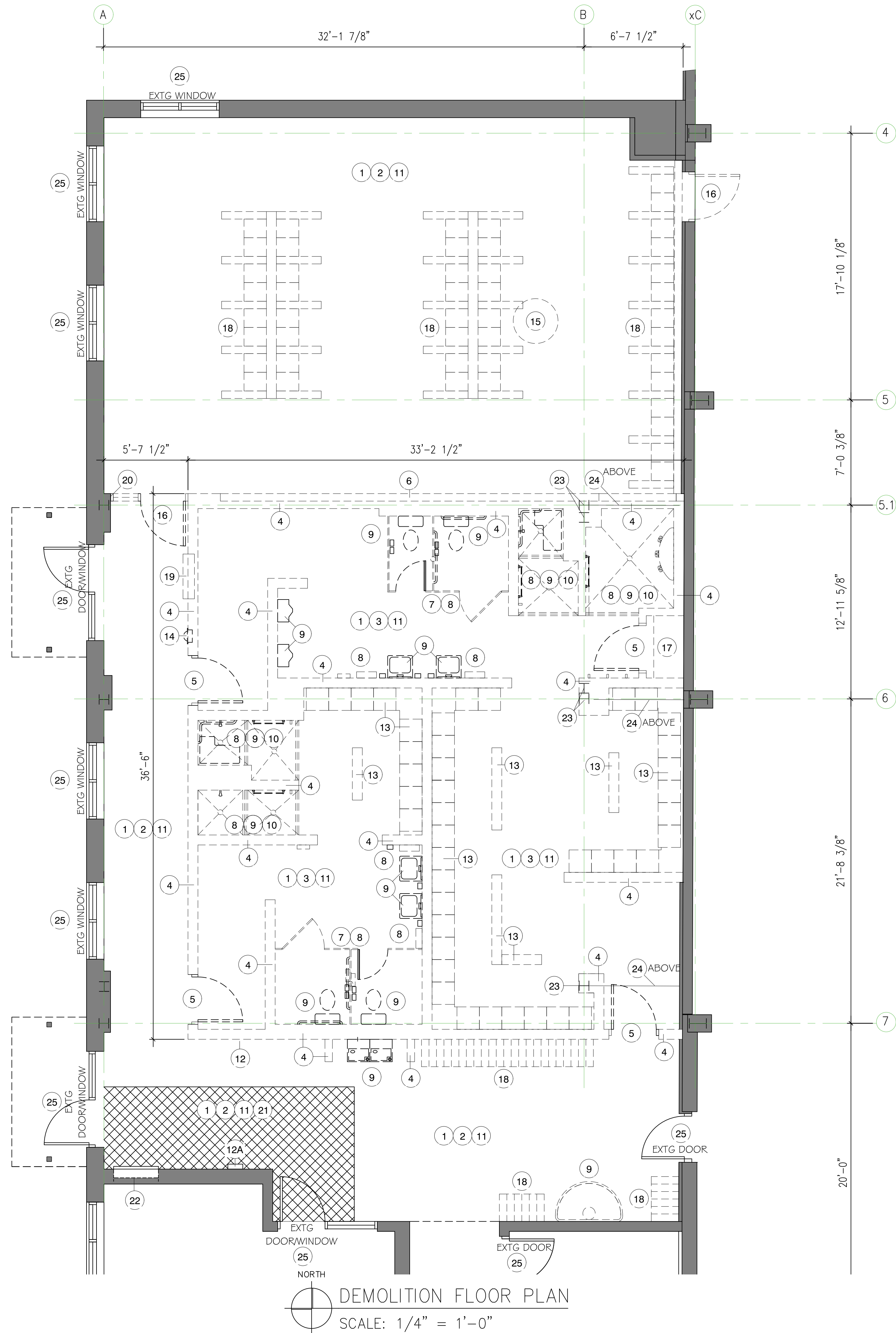
ENG OP FACILITY LOCKER ROOM RENOVATION
1600 EMIL STREET
MADISON, WI 53713

ARCHITECTURAL DESIGNED BY:	STRUCTURAL DESIGNED BY:	MEP DESIGNED BY:
G1.0-AD1.1; A1.2-A6.2	S0.0-S3.0	FA001-EP200

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COVER SHEET

G1.0



DEMOLITION KEY NOTES

- 1 REMOVE CONCRETE FLOOR COMPLETE
- 2 REMOVE SUSPENDED CEILING SYSTEMS COMPLETE
- 3 REMOVE GYP CEILING SYSTEM COMPELTE
- 4 REMOVE MASONRY WALL AND FOOTING/THICKENED SLAB
- 5 REMOVE DOOR & FRAME
- 6 REMOVE FRAME PARTITION TO ROOF STRUCTURE COMPLETE
- 7 REMOVE TOILET PARTITIONS COMPLETE
- 8 REMOVE TOILET ROOM ACCESSORIES
- 9 PLUMBING FIXTURES TO BE REMOVED BY PLUMBING TRADE.
- 10 FLOOR DRAIN TO BE REMOVED BY PLUMBING TRADE.
- 11 REMOVE VINYL BASE COMPLETE
- 12 OWNER TO REMOVE TIME CLOCK & RELOCATE PRIOR TO CONSTRUCTION.
- 12A TIME CLOCK. PROTECT DURING ENTIRE CONSTRUCTION
- 13 REMOVE LOCKERS, BENCHES AND GYP SOFFIT SYSTEM COMPLETE. CONTRACTOR TO SALVAGE (12) SHORT LOCKERS FOR REUSE.
- 14 OWNER TO REMOVE FIRE EXTINGUISHER. CONTRACTOR TO SALVAGE FIRE EXTINGUISHER CABINET FOR REUSE
- 15 OWNER WILL REMOVE MANHOLE TRAINING STRUCTURE TO BELOW FLOOR & CAP AT EXTERIOR, PRIOR TO CONSTRUCTION.
- 16 REMOVE DOOR & FRAME AND SIDELIGHT
- 17 REMOVE SHELVING COMPLETE
- 18 OWNER TO REMOVE LOCKERS PRIOR TO CONSTRUCTION
- 19 REMOVE WALL HEATER
- 20 AFTER DEMO PATCH GYP WALL TO MATCH EXISTING
- 21 PROTECTED ENTRY AND EXIT PATH. COORDINATE WITH OWNER
- 22 EXISTING HEATING UNIT TO REMAIN - PROTECT
- 23 EXISTING COLUMNS TO BE RELOCATED AND MODIFIED - SEE S1.1
- 24 EXISTING BEAM TO BE REMOVED - SEE S1.1
- 25 EXISTING DOOR/WINDOWS TO REMAIN. PROTECT DURING ENTIRE CONSTRUCTION.

DEMOLITION LEGEND

----- INDICATES ITEM TO BE REMOVED
SEE KEY NOTES

GENERAL NOTES

1. THIS DEMOLITION PLAN HAS BEEN PREPARED TO ASSIST THE CONTRACTOR IN DETERMINING THE SCOPE OF DEMOLITION WORK TO BE INCLUDED IN THIS PROJECT. IT IS NOT INTENDED TO BE A COMPLETE INDICATION OF ALL DEMOLITION WORK REQUIRED TO COMPLETE THE PROJECT. THE CONTRACTOR SHOULD REVIEW ALL DRAWINGS AND SPECIFICATIONS, INCLUDING DEMOLITION SHOWN FOR OTHER TRADES, AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS, IN ORDER TO DETERMINE THE SCOPE OF DEMOLITION WORK.
2. HATCHED AREA IS REQUIRED FOR STAFF ENTRANCE AND EXIT. COORDINATE WITH OWNER THE AVAILABILITY OF THE AREA DURING DEMOLITION AND CONSTRUCTION.
3. PROTECT IN PLACE. ALL FINISHED SURFACES THAT WILL REMAIN, DURING THE ENTIRE CONSTRUCTION PERIOD.
4. INSTALL DUST CONTROL PROTECTION ON ALL OPENINGS AND AT THE CEILING PLENUM TO LIMIT TRANSMISSION OF DUST AND DEBRIS.
5. TURN OFF AHU DURING ANY WORK THAT CREATES DUST. CLEAN DUST FROM WORK AREA BEFORE RUNNING AHU.
6. WHERE ITEMS ARE REMOVED FROM SURFACES THAT REMAIN, FILL ALL HOLES AND PATCH ALL SURFACES TO MATCH SURROUNDING CONSTRUCTION. MATCH MATERIALS AND APPEARANCE.
7. ALL FURNISHINGS AND MOVABLE ITEMS WILL BE REMOVED BY THE OWNER.
8. ALL DEMOLITION ITEMS TO BE PROPERLY RECYCLED OR DISPOSED OF BY THE CONTRACTOR PER APPROVED REUSE AND RECYCLING PLAN.



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DEMO FLOOR

AD1.1

DESIGN CRITERIA

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH IBC 2015 AND SUBSEQUENT REFERENCE STANDARDS.
2. RISK CATEGORY:
3. SUPERIMPOSED DEAD LOADS:

ROOF TYPICAL15 PSF
4. SUPERIMPOSED LIVE LOADS: LIVE LOAD REDUCTION USED AS ALLOWED PER CODE

ROOF TYPICAL20 PSF
5. SNOW:

GROUND SNOW30 PSF

SNOW EXPOSURE FACTOR

THERMAL FACTOR

IMPORTANCE FACTOR

FLAT-ROOF SNOW21 PSF

DESIGN SNOW22 PSF
6. LATERAL LOAD RESISTING SYSTEM IS NOT IMPACTED BY THIS PROJECT.

GENERAL

1. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY INANCES. TEMPORARY BRACING, SHORING, GUYING, ETC. SHALL AVOID EXCESSIVE STRESSES AND HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. THE STRUCTURE SHOULD NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK THAT DEVIATES FROM OR IS PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR THE DESIGN PROFESSIONALS.
3. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALLOWABLE CONSTRUCTION LOADS AND FOR DETERMINING SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKERS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: FALSEWORK, FORMWORK, STAGING, BRACING, AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
4. ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SIGNED AND SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS. ALL PRODUCT SUBSTITUTIONS SHALL INCLUDE A CODE EVALUATION REPORT SPECIFIC TO THE BUILDING CODE LISTED IN THE DESIGN CRITERIA.
6. STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DESIGN.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT .
9. TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
10. SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, PITS, TRENCHES, PADS, DEPRESSIONS, ROOF / FLOOR OPENINGS, TOP OF WALL ELEVATIONS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS. FOR THESE NON-STRUCTURAL ELEMENTS SHOWN ON STRUCTURAL DRAWINGS, THEY ARE FOR GENERAL INFORMATION ONLY.
11. COORDINATE FLOOR FINISH INCLUDING, BUT NOT LIMITED TO THE "FLATNESS" AND "LEVELNESS" REQUIREMENTS, WITH THE FLOOR FINISH CONTRACTOR. PROVIDE UNDERLAYMENT / TOPPING WHERE REQUIRED TO PROVIDE A SURFACE ACCEPTABLE FOR INSTALLATION OF FLOOR FINISHES. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
12. NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
13. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, CONTRACTOR SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH FIELD CONDITIONS, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.
14. ELEMENTS SUCH AS NON-BEARING PARTITIONS, ETC. ATTACHED TO AND/OR SUPPORTED BY THE STRUCTURE SHALL TAKE INTO ACCOUNT DEFLECTIONS AND OTHER STRUCTURAL MOVEMENTS. THE STRUCTURAL FRAMING WAS DESIGNED TO LIMIT DRIFT AND DEFLECTION OF THE STRUCTURAL SYSTEM TO LESS THAN THE MAXIMUM PERMITTED DEFLECTIONS LISTED IN THE BUILDING CODE. THE CONTRACTOR SHALL COORDINATE THE WORK OF OTHER TRADES TO ACCOMMODATE THESE DEFLECTIONS AND TO ACCOMMODATE CONSTRUCTION TOLERANCES.

SUBMITTALS

1. SUBMITTALS ARE:

1.1. CONCRETE MIX DESIGNS

1.2. MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS

1.3. CONCRETE AND MASONRY REINFORCING

1.4. STEEL FABRICATION AND MISCELLANEOUS METALS
2. SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT . EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE DESIGN PROFESSIONALS.
3. SUBMITTALS SHALL BE REVIEWED BY THE DESIGN PROFESSIONALS FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE DESIGN PROFESSIONALS ON THE SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
4. FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

EXISTING CONDITIONS / DEMOLITION

1. EXISTING CONDITIONS:

1.1. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS DATED JULY 1992 BY POTTER LAWSON ARCHITECTS.

1.2. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.

1.3. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS, AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT SO CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT .
2. ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY TO PREVENT DAMAGE TO EXISTING ELEMENTS WHICH ARE TO REMAIN.
3. ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDED COST. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
4. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS OF EXISTING STRUCTURE AND SITES THAT ARE AFFECTED BY NEW WORK BEFORE PROCEEDING WITH FABRICATION AND CONSTRUCTION.
5. ALL CONSTRUCTION IS NEW UNLESS IDENTIFIED AS EXISTING, "(E)". THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT. NEW SLABS ARE TO BE AT THE SAME ELEVATIONS AS ADJACENT EXISTING SLABS UON. FOUNDATION ELEVATIONS OR COLUMN LENGTHS SHALL BE ADJUSTED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER TO ACHIEVE MATCHING SLAB ELEVATIONS.
6. REINFORCING STEEL IN EXISTING CONCRETE SHALL BE LOCATED PRIOR TO INSTALLATION OF NEW OPENINGS OR CORING OF HOLES IN THE CONCRETE. REINFORCING STEEL MAY NOT BE CUT WITHOUT APPROVAL FROM THE ENGINEER.
7. SHORING:

1.1. SHORING DRAWINGS AND CALCULATIONS BY OTHERS, AS REQUIRED, ARE NOT INCLUDED IN THIS PACKAGE. SHORING DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE PROVIDED BY CONTRACTOR FOR REVIEW.

1.2. SHORING OF EXISTING BUILDINGS OR IMPROVEMENTS SHALL BE PROVIDED BEFORE EXISTING SUPPORTING WALLS, SLABS, FOUNDATIONS, PAVEMENT, ETC. ARE CUT, MODIFIED, OR REMOVED.

EARTHWORK

1. FOUNDATION DESIGN IS IN ACCORDANCE WITH THE BUILDING CODE ALLOWABLE BEARING PRESSURES. NO NEW GEOTECHNICAL REPORT HAS BEEN PROVIDED BY THE OWNER FOR THIS PROJECT.
2. A GEOTECHNICAL ENGINEER SHALL BE EMPLOYED TO VERIFY THAT THE PRESUMED ALLOWABLE BEARING PRESSURE WILL BE ACHIEVED PRIOR TO CONSTRUCTION. THAT ENGINEER SHALL DEVELOP AND ENSURE IMPLEMENTATION OF A SITE SUBGRADE PREPARATION PROGRAM AS REQUIRED TO ACHIEVE THE PRESUMED SOIL BEARING PRESSURE. FOOTING AND SLAB-ON-GRADE SUBGRADE PREPARATION SHALL BE IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
3. ANY TESTS, INSPECTIONS, FIELD OBSERVATIONS, OR APPROVAL FROM THE GEOTECHNICAL ENGINEER SHALL BE PERFORMED PRIOR TO PLACEMENT OF CONCRETE. ALTERATIONS TO SITE PREPARATION OR GRADING SHALL BE REPORTED TO THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.

SHALLOW FOUNDATIONS

1. SHALLOW FOUNDATIONS SHALL HAVE THE FOLLOWING MINIMUM NET ALLOWABLE SERVICE LOAD BEARING PRESSURES:

SERVICE LOAD BEARING PRESSURES:

NET ALLOWABLE BEARING PRESSURE 1500 PSF
2. FOUNDATION ELEVATIONS SHOWN INDICATE LOCATIONS WHERE ADEQUATE SOIL BEARING PRESSURE IS ANTICIPATED. IF INADEQUATE BEARING CAPACITY IS ENCOUNTERED, CONTACT STRUCTURAL ENGINEER FOR RESOLUTION. BEARING ELEVATIONS ARE ESTIMATED FROM SOIL BORING DATA INDICATED IN THE GEOTECHNICAL REPORT. DETERMINATION OF FINAL BEARING ELEVATIONS AND FIELD VERIFICATION OF ALLOWABLE BEARING PRESSURE SHALL BE MADE BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS.
3. FOUNDATIONS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL, AND CLEAN AND FREE OF LOOSE DEBRIS AND STANDING WATER AT TIME OF CONCRETE PLACEMENT.
4. WHERE FOUNDATIONS BEAR ON ROCK, FOUNDATIONS SHALL BEAR ON THAT ROCK OR ON LEAN CONCRETE FILL.
5. NEW FOOTING BEARING ELEVATIONS SHALL MATCH ADJACENT EXISTING FOOTING BEARING ELEVATIONS WHERE OCCURRING UON.
6. 7.THE SLOPE BETWEEN THE LOWER EDGES OF ADJACENT FOOTINGS SHALL NOT EXCEED 45 DEGREES WITH THE HORIZONTAL UON IN THE GEOTECHNICAL REPORT. CONTACT STRUCTURAL ENGINEER WHERE ADEQUATE SLOPE IS NOT ACHIEVED.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AND ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE UON.
2. CONCRETE MATERIALS SHALL CONFORM TO:

PORTLAND LIMESTONE CEMENTASTM C595, TYPE IL

FLY ASHASTM C618, TYPE C OR F

SLAG CEMENTASTM C989

FINE AND COARSE AGGREGATEASTM C33

WATERPOTABLE

AIR-ENTRAINING ADMIXTUREASTM C260

WATER REDUCING ADMIXTUREASTM C4943.
3. CONCRETE STRENGTHS SHALL CONFORM TO:

LOCATION	f'c AT 28 DAYS (PSI)	MAX PERMITTED W/C	EXPOSURE CLASS
ALL FOUNDATION CONCRETE UON	3000	0.55	F0
SLAB-ON-GRADE UON	3000	0.55	

NOMINAL MAXIMUM AGGREGATE SIZE	REQUIRED AIR CONTENT PER EXPOSURE CATEGORY	
	F1	F2
1"	4.5%	6%

4. AIR ENTRAINMENT:

1. CONCRETE IN ALL LOCATIONS SHALL BE AIR ENTRAINED WITH THE APPROPRIATE PERCENTAGE AIR CONTENT LISTED IN THE TABLE ABOVE AS APPLICABLE FOR THE INDICATED EXPOSURE CLASS AND NOMINAL MAXIMUM AGGREGATE SIZE IN THE CONCRETE MIX. THE PERMITTED TOLERANCE ON THE REQUIRED AIR CONTENT IS ±1.5%.

2. AIR ENTRAINMENT SHALL CONFORM TO UL RATING REQUIREMENTS FOR FIRE RESISTANCE.
5. REQUIRED NOMINAL MAXIMUM COARSE AGGREGATE SIZE:
- | CONCRETE ELEMENT | REQUIRED NOMINAL MAXIMUM COARSE AGGREGATE SIZE" |
|------------------|---|
| ALL CONCRETE UON | 1" |

*SMALLER NOMINAL MAXIMUM COARSE AGGREGATE SIZE SHALL BE USED WHERE REQUIRED PER ACI 318.
6. ALL FOUNDATION ELEMENTS SHALL BE CENTERED UNDER WALLS, PIERS, OR COLUMNS UON.
7. "ROUGH JOINTS" ARE JOINTS ROUGHENED TO AN AMPLITUDE OF 1/4" AND FREE AND CLEAN OF LAITANCE. PROVIDE ROUGH JOINTS AT ALL CONSTRUCTION JOINTS UON.
8. CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS OF ALL CONSTRUCTION JOINTS WHERE JOINTS ARE NOT INDICATED ON THE DRAWINGS.
9. JOINTS ABUTTING EXISTING CONCRETE CONSTRUCTION SHALL BE ROUGH JOINTS UON.
10. PROVIDE TEMPLATES TO SET EMBEDDED ITEMS.
11. SLOPE SLABS TO DRAINS. SEE ARCHITECTURAL AND MEP DRAWINGS FOR DRAIN LOCATIONS AND SLOPE REQUIREMENTS. SLAB THICKNESSES SHOWN ON DRAWINGS ARE MINIMUMS.
12. AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS UNLESS THE WORK IS SHORED.
13. ALL FORMWORK, SHORING, AND RESHORING SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER LICENSED IN THE PROJECT'S JURISDICTION. ALL SUBMISSIONS SHALL BE SIGNED AND SEALED.
14. REINFORCING STEEL SHALL NOT BE DAMAGED WHEN DRILLING CONCRETE.
15. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AND INSPECTION AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
16. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, LOCATIONS, AND DETAILS OF ALL ARCHITECTURAL FEATURES IN THE CONCRETE. SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR ALL CONCRETE FINISHES.



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GENERAL NOTES

S0.0

STEEL

- | | | |
|---------------------------------|------------------------------|-------------|
| WIDE FLANGE AND WT SHAPES | ASTM A992 | Fy=50 KSI |
| CHANNEL SHAPES | ASTM A992 | Fy=50 KSI |
| ANGLE SHAPES | ASTM A572 | Fy=50 KSI |
| PLATES | ASTM A572 | Fy= 50 KSI |
| ANCHOR RODS | ASTM F1554, GR 36 | Fy= 36 KSI |
| HIGH STRENGTH BOLTS | ASTM F3125, GRA325 | Fu= 120 KSI |
| HEAVY HEX NUTS | ASTM A563 | |
| WASHERS FOR HIGH STRENGTH BOLTS | ASTM F436 | |
| WELDING | AWS D1.1, 70KSI FILLER METAL | |
1. STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "DETAILING FOR STEEL CONSTRUCTION" AND FABRICATED AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".

2.STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW:

3. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". SEE DETAILS FOR BOLT SIZE AND MATERIAL ASTM DESIGNATION.

4. ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS UON. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM SNUG TIGHT CONDITION UON.

5. WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.

6. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING INDICATED. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES" OF THE AMERICAN WELDING SOCIETY (AWS).

7. SPlicing OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE, AND CONNECTION TO BE MADE.

8. MATCH EXISTING FINISH ON ALL STRUCTURAL STEEL NOT COVERED WITH CONCRETE, FIREPROOFING, MASONRY, OR AT CONTACT SURFACES AT HIGH STRENGTH BOLTS.

9 .CUTS, HOLES, OPENINGS, ETC. REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OR TORCHING OF HOLES, CUTS, AND OTHER FIELD MODIFICATIONS SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.

10.SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC. FOR MISCELLANEOUS STEEL NOT DETAILED SPECIFICALLY ON THE STRUCTURAL DRAWINGS.

11.GROUT FOR BASE AND BEARING PLATES SHALL BE A NON-SHRINK, NON-METALLIC PRODUCT. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 7000 PSI. INSTALL GROUT PRIOR TO APPLYING SIGNIFICANT LOADING TO MEMBER.

12.THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR REVIEW AND APPROVAL BEFORE FABRICATION.
- POST-INSTALLED ANCHORS
1. BASIS OF DESIGN ANCHORS:
- | INSTALLATION CONDITION | ANCHOR TYPE |
|--|--|
| EXPANSION ANCHORS INTO CONCRETE | HILTI Kwik BOLT T22 (ESR-4266) |
| SCREW ANCHORS > 1/4"Ø INTO CONCRETE | HILTI Kwik HUS-EZ (ESR-3027) |
| ADHESIVE ANCHORS INTO CONCRETE | HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HIT-Z ROD (ESR-4868) |
| EXPANSION ANCHORS INTO GROUTED CMU | HILTI Kwik T22 (ESR-4561) |
| SCREW ANCHORS > 1/4"Ø INTO GROUTED CMU | HILTI Kwik HUS-EZ (ESR-3056) |
| SCREW ANCHORS = 1/4"Ø INTO CONCRETE OR GROUTED CMU | HILTI Kwik-CON II+ |
| ADHESIVE ANCHORS IN GROUTED CMU OR SOLID BRICK | HILTI HIT-HY 270 SYSTEM w/ HAS-E THREADED ROD (ESR-4143) |
| ADHESIVE ANCHORS INTO HOLLOW CMU, BRICK OR MULTI-WYTHE BRICK WALLS | HILTI HIT-HY 270 SYSTEM w/ HAS-E THREADED ROD AND APPROPRIATE SCREEN TUBE (ESR-4144) |
| ADHESIVE DOWELING FOR ANCHORING REINFORCING BARS INTO (E) CONCRETE | HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 ADHESIVE (ESR-4868)
or
HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 ADHESIVE (ESR-3814) |
| POWDER-ACTUATED FASTENERS (PAFs) IN CONCRETE | HILTI X-U FASTENERS (ESR-2269) |
2. ALTERNATIVE ANCHORS MAY BE USED IF APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. THE CONTRACTOR SHALL SUBMIT CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION VERIFYING PROPOSED ALTERNATIVE ANCHORS WILL PROVIDE THE SAME OR GREATER LOAD-CARRYING CAPACITY AS THE SPECIFIED ANCHORS. THE CONTRACTOR SHALL SUBMIT EVALUATION REPORTS. EACH ANCHOR CONFIGURATION SHALL BE EVALUATED AND COMPARED TO THE SPECIFIED ANCHOR.

3. CRACKED CONCRETE IS ASSUMED FOR ALL ANCHORAGE DESIGN CONDITIONS UNLESS IT CAN BE DEMONSTRATED THROUGH ENGINEERING ANALYSIS THAT THE CONCRETE REMAINS UNCRACKED DURING THE GOVERNING ULTIMATE LOAD STATE.
4. POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.

5. THE CONTRACTOR SHALL ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR EACH SPECIFIED ANCHOR TYPE. THE STRUCTURAL ENGINEER SHALL RECEIVE DOCUMENTATION VERIFYING ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS HAVE BEEN TRAINED PRIOR TO COMMENCEMENT OF INSTALLING ANCHORS.

6. INSTALLATION OF ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPROVED CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR EQUIVALENT. THE ACCEPTABILITY OF CERTIFICATIONS OTHER THAN THE ACI/CRSI ADHESIVE INSTALLER CERTIFICATION WILL BE DETERMINED BY THE STRUCTURAL ENGINEER.

7. CONCRETE SHALL HAVE ACHIEVED DESIGN STRENGTH PRIOR TO INSTALLING POST-INSTALLED ANCHORS. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE THAT HAS CURED FOR A MINIMUM OF 21 DAYS.

8. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ANCHORS AND PROXIMITY OF ANCHORS TO EDGES OF CONCRETE OR MASONRY. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

9. POST-INSTALLED ANCHORS AND DOWELS SHALL BE INSTALLED IN A MANNER THAT DOES NOT DAMAGE REINFORCING STEEL, CONDUIT OR OTHER EMBEDDED ITEMS. REINFORCING STEEL SHALL BE LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO DRILLING HOLES. PLATES AND BRACKETS THROUGH WHICH ANCHORS WILL BE INSTALLED SHALL NOT BE FABRICATED UNTIL AFTER REINFORCING STEEL IS LOCATED AND ANCHOR LOCATIONS ARE ADJUSTED. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER TO OBTAIN ALTERNATIVE ANCHOR LAYOUT WHERE ANCHORS MUST BE RELOCATED TO AVOID INTERFERENCE WITH REINFORCING STEEL.

10. ADHESIVE ANCHORING SYSTEMS ARE PERMITTED TO BE USED FOR INSTALLATION OF REINFORCING STEEL INTO EXISTING CONCRETE ONLY WHERE SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS OR WITH APPROVAL FROM THE STRUCTURAL ENGINEER. LOCATIONS WHERE REINFORCING STEEL WAS INCORRECTLY PLACED OR MISSED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

11. WHERE POST-INSTALLED MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE SPECIFIED, THOSE DEPTHS ARE THE REQUIRED MINIMUM NOMINAL EMBEDMENT DEPTHS. WHERE MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE NOT INDICATED, THE ANCHORS SHALL BE INSTALLED TO THE MAXIMUM EMBEDMENT DEPTH NOTED IN THE MANUFACTURER'S PRODUCT TECHNICAL GUIDE.

12. ADHESIVE ANCHORS SHALL BE INSTALLED WITH A MINIMUM 6" EMBEDMENT DEPTH UON.
-
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- | |
|---------------|
| CONTRACT |
| #9659 |
| MUNIS |
| #14122 |
| DRWN BY: LA |
| DATE 07/14/25 |
| REV: XX/XX/XX |
- GENERAL NOTES
- S0.1
- F:\Encommon\Facilities Management\Building_Project_Documents\Engineering\Engineering_Service_Building\ESB_2023_LockerRoom\Drawings\BASE_LockerRm_202502.dwg, 7/11/2025 2:15:34 PM, AutoCAD PDF (High Quality Print).pc3

- GENERAL (2015)
1. THE STRUCTURAL ENGINEER DOES NOT PROVIDE INSPECTIONS OF CONSTRUCTION. STRUCTURAL ENGINEER MAY MAKE PERIODIC OBSERVATIONS OF THE CONSTRUCTION. SUCH OBSERVATIONS SHALL NOT REPLACE REQUIRED INSPECTIONS BY THE GOVERNING AUTHORITIES OR SERVE AS "SPECIAL INSPECTIONS" AS MAY BE REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
2. SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS OR SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.
3. DUTIES OF THE INSPECTION AGENCY PER IBC CHAPTER 17:
- a. SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.
- b. PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.
- c. FURNISH INSPECTION REPORT TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, STRUCTURAL ENGINEER AND THE GENERAL CONTRACTOR. THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK.
- d. SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTION AGENCY'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
4. SPECIAL INSPECTIONS AND TESTS ARE REQUIRED FOR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN CHAPTER 17 OF THE IBC OR IN STANDARDS REFERENCED BY THE IBC. THESE ITEMS INCLUDE:
- a. POST-INSTALLED ANCHORS – INSPECTION
5. THE FOLLOWING WORK SHALL BE INSPECTED BY THE SPECIAL INSPECTOR UNLESS SPECIFICALLY WAIVED BY THE BUILDING OFFICIAL.

CONCRETE CONSTRUCTION (2015)

VERIFICATION AND TESTING	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
INSPECT REINFORCEMENT AND VERIFY PLACEMENT	-	X	ACI 318: CH 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4
INSPECT ANCHORS CAST IN CONCRETE	-	X	ACI 318: 17.8.2	-
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X	-	ACI 318: 17.8.2.4	-
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE	-	X	ACI 318: 17.8.2	-
VERIFY USE OF REQUIRED DESIGN MIX	-	X	ACI 318: CH 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	-	ASTM C172, ASTM C31, ACI 318: 26.4.5, 26.12	1908.1
INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	X	ACI 318: 26.4.7-26.4.9	1908.9
INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	X	ACI 318: 26.10.1(b)	-

STRUCTURAL STEEL – INSPECTION TASKS PRIOR TO BOLTING (AS A MINIMUM) (2015)

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	RCSC SECTIONS
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	TABLE N5.6-1	2.1, 9.1
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	TABLE N5.6-1	FIG. C-2.1, 9.1
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O	TABLE N5.6-1	2.3.2, 2.7.2, 9.1
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O	TABLE N5.6-1	4, 8
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O	TABLE N5.6-1	3, 9.1, 9.3
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O	TABLE N5.6-1	7, 9.2
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	O	O	TABLE N5.6-1	2.2, 8, 9.1

STRUCTURAL STEEL – INSPECTION TASKS PRIOR TO BOLTING (AS A MINIMUM) (2015)

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	RCSC SECTIONS
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P	TABLE N5.6-3	-

STRUCTURAL STEEL – INSPECTION TASKS PRIOR TO WELDING (AS A MINIMUM) (2015)

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	AWS D1.1 CLAUSES
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	P	P	TABLE N5.4-1	6.3
MANUFACTURER CERTIFICATES FOR WELDING CONSUMABLES AVAILABLE	P	P	TABLE N5.4-1	6.2
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O	TABLE N5.4-1	6.2
WELDER IDENTIFICATION	O	O	TABLE N5.4-1	6.4 (WELDER QUALIFICATION)
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O	TABLE N5.4-1	6.5.2, 5.17 (& SEE AISC 360 SECT. J1.6)
FIT-UP OF FILLET WELDS	O	O	TABLE N5.4-1	
a. DIMENSIONS (ALIGNMENT, GAPS AT ROOT)	O	O	TABLE N5.4-1	5.22.1
b. CLEANLINESS (CONDITION OF STEEL SURFACES)	O	O	TABLE N5.4-1	5.15
c. TACKING (TACK WELD QUALITY AND LOCATION)	O	O	TABLE N5.4-1	5.18
d. CHECK WELDING EQUIPMENT	O	-	TABLE N5.4-1	6.2, 5.11

STRUCTURAL STEEL – INSPECTION TASKS DURING WELDING (AS A MINIMUM) (2015)

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	AWS D1.1 CLAUSES
USE OF QUALIFIED WELDERS	O	O	TABLE N5.4-2	6.4
CONTROL AND HANDLING OF WELDING CONSUMABLES	O	O	TABLE N5.4-2	6.2
a. PACKAGING	O	O	TABLE N5.4-2	5.3.1
b. EXPOSURE CONTROL	O	O	TABLE N5.4-2	5.3.2 (FOR SMAW), 5.3.3 (FOR SAW)
NO WELDING OVER CRACKED TACK WELDS	O	O	TABLE N5.4-2	5.18
ENVIRONMENTAL CONDITIONS				
a. WIND SPEED WITHIN LIMITS	O	O	TABLE N5.4-2	5.12.1
b. PRECIPITATION AND TEMPERATURE	O	O	TABLE N5.4-2	5.12.2
WPS FOLLOWED	O	O	TABLE N5.4-2	6.3.3, 6.5.2, 5.5, 5.21
a. SETTINGS ON WELDING EQUIPMENT	O	O	TABLE N5.4-2	
b. TRAVEL SPEED	O	O	TABLE N5.4-2	
c. SELECTED WELDING MATERIALS	O	O	TABLE N5.4-2	
d. SHIELDING GAS TYPE/FLOW RATE	O	O	TABLE N5.4-2	
e. PREHEAT APPLIED	O	O	TABLE N5.4-2	5.6, 5.7
f. INTERPASS TEMPERATURE MAINTAINED (MIN/MAX)	O	O	TABLE N5.4-2	
g. PROPER POSITION (F, V, H, OH)	O	O	TABLE N5.4-2	
WELDING TECHNIQUES	O	O	TABLE N5.4-2	6.5.2, 6.5.3, 5.24
a. INTERPASS AND FINAL CLEANING	O	O	TABLE N5.4-2	5.30.1
b. EACH PASS WITHIN PROFILE LIMITATIONS	O	O	TABLE N5.4-2	
c. EACH PASS MEETS QUALITY REQUIREMENTS	O	O	TABLE N5.4-2	

STRUCTURAL STEEL – INSPECTION TASKS AFTER WELDING (AS A MINIMUM) (2015)

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	AWS D1.1 CLAUSES
WELDS CLEANED	O	O	TABLE N5.4-3	5.30.1
SIZE, LENGTH, AND LOCATION OF WELDS	P	P	TABLE N5.4-3	6.5.1
WELDS MEET VISUAL ACCEPTANCE CRITERIA			TABLE N5.4-3	6.5.3
a. CRACK PROHIBITION	P	P	TABLE N5.4-3	TABLE 6.1(1)
b. WELD/BASE-METAL FUSION	P	P	TABLE N5.4-3	TABLE 6.1(2)
c. CRATER CROSS-SECTION	P	P	TABLE N5.4-3	TABLE 6.1(3)
d. WELD PROFILES	P	P	TABLE N5.4-3	TABLE 6.1(4), 5.24
e. WELD SIZE	P	P	TABLE N5.4-3	TABLE 6.1(6)
f. UNDERCUT	P	P	TABLE N5.4-3	TABLE 6.1(7)
g. POROSITY	P	P	TABLE N5.4-3	TABLE 6.1(8)
ARC STRIKES	P	P	TABLE N5.4-3	5.29
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P	TABLE N5.4-3	5.10, 5.31
REPAIR ACTIVITIES	P	P	TABLE N5.4-3	6.5.3, 5.26
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	TABLE N5.4-3	6.5.4, 6.5.5

SOILS (2015)

VERIFICATION AND TESTING	CONTINUOUS	PERIODIC
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	X
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	-	X
PERFORM CLASSIFICATIONS AND TESTING OF COMPACTED FILL MATERIAL	-	X
VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X	-
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	-	X

STRUCTURAL STEEL – INSPECTION TASKS DURING BOLTING (AS A MINIMUM) (2015)

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	RCSC SECTIONS
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O	TABLE N5.6-2	8.1, 9.1
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O	TABLE N5.6-2	8.2, 9.2



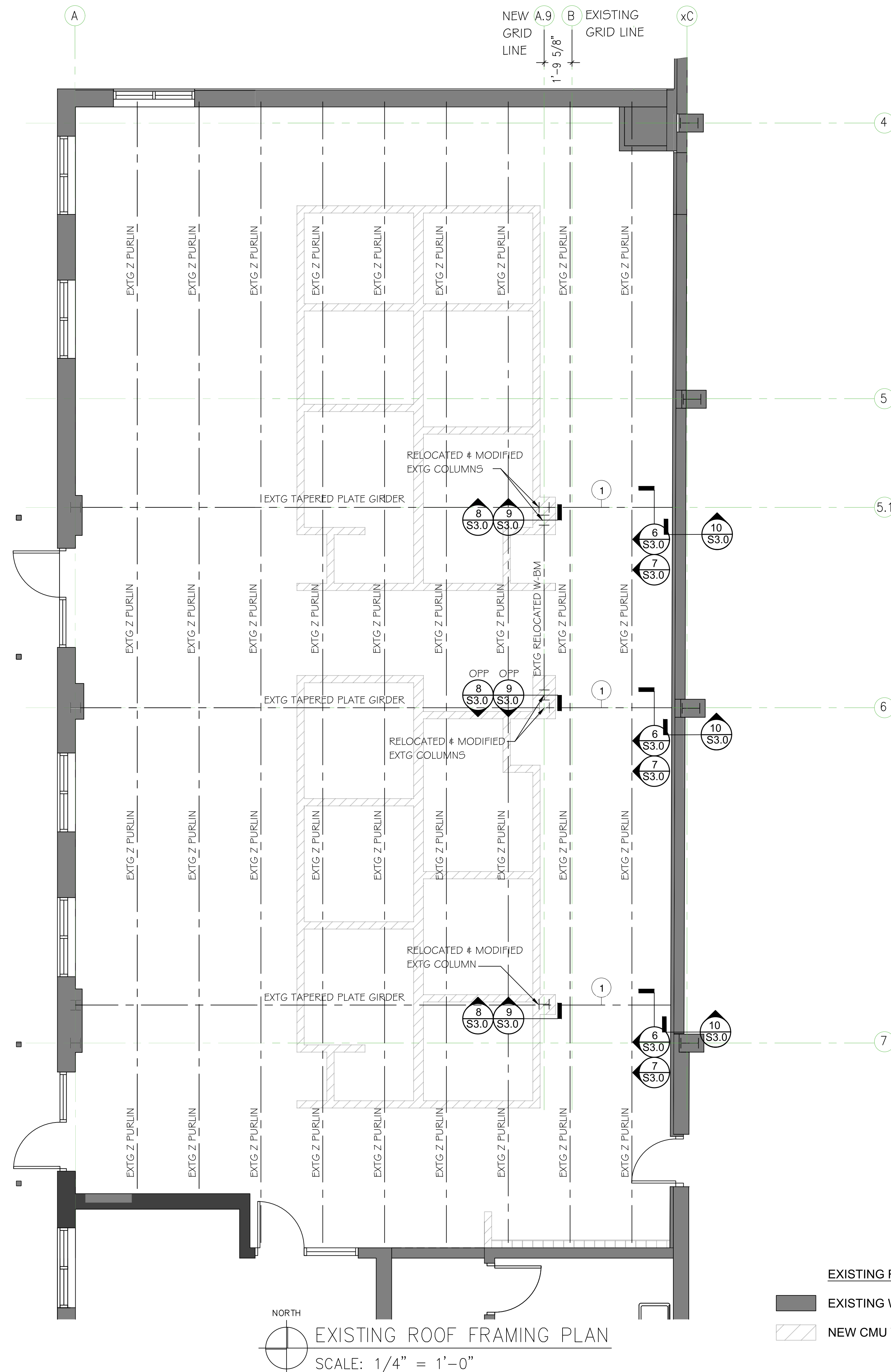
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ENG OP FACILITY LOCKER ROOM RENOVATION
1600 EMIL STREET
MADISON, WI 53713

CONTRACT
#9659
MUNIS
#14122
DRWN BY: LA
DATE 07/14/25
REV: XX/XX/XX

TESTING AND INSPECTION

S0.2



- KEY NOTES
- 1 REMOVE (E) STEEL BEAM AND REPLACE WITH W8X10



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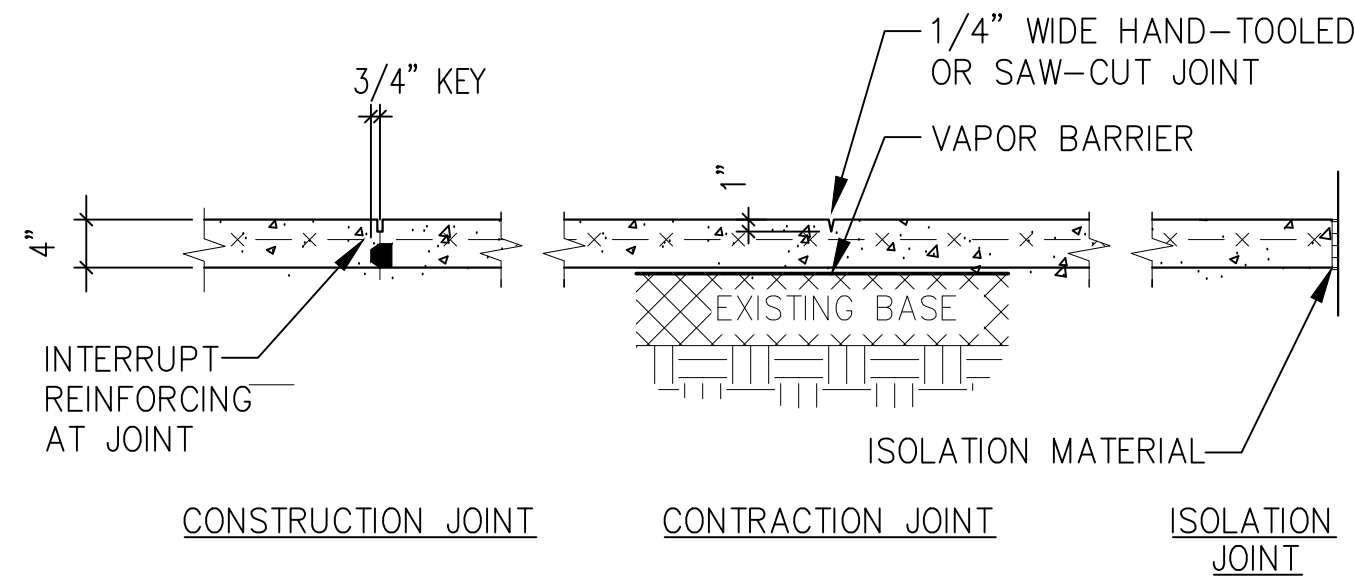
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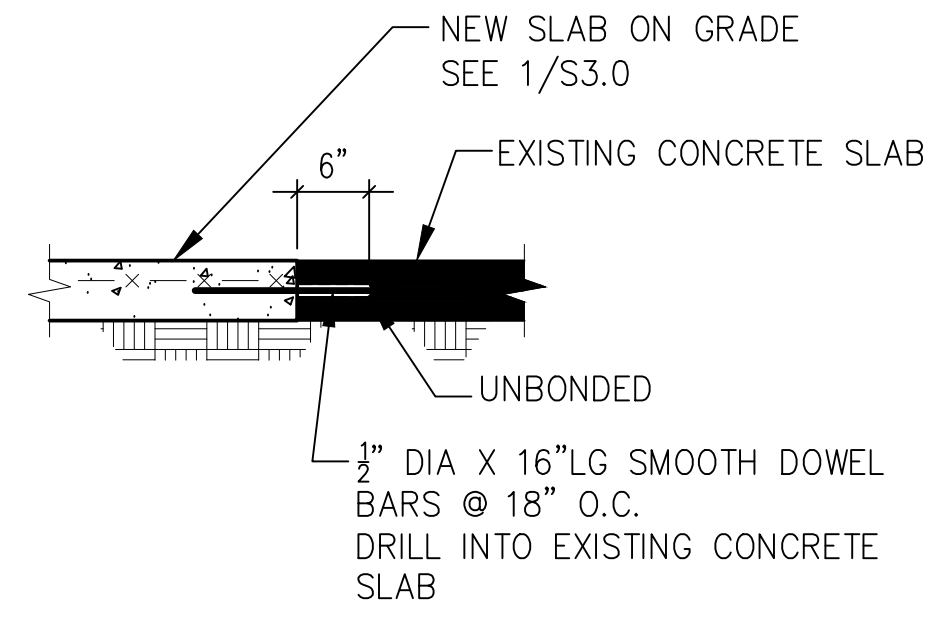
EXTG ROOF

S1.1

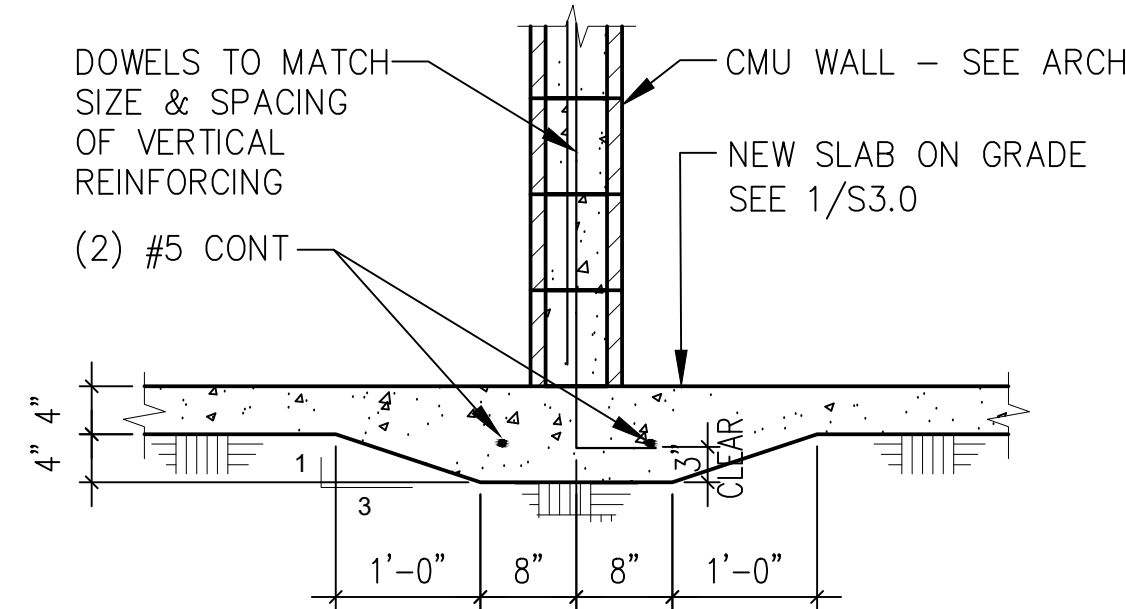
JOINTS SHALL BE INSTALLED
IMMEDIATELY UPON COMPLETION
OF FINISHING OPERATIONS



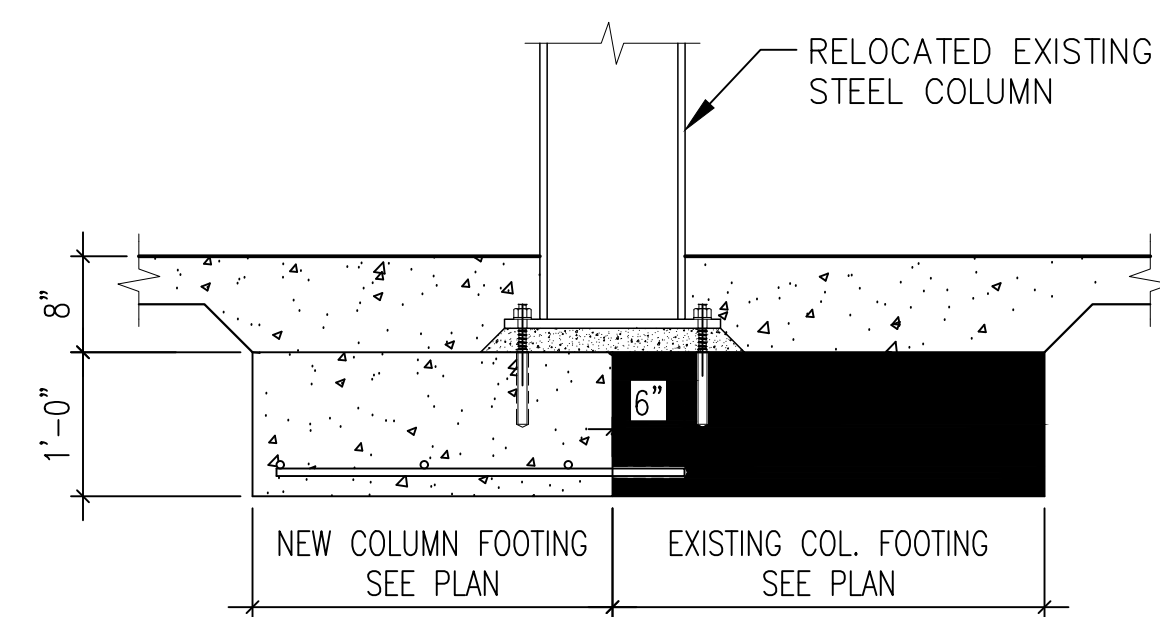
1 SLAB ON GRADE CONSTRUCTION
3/4" = 1'-0"



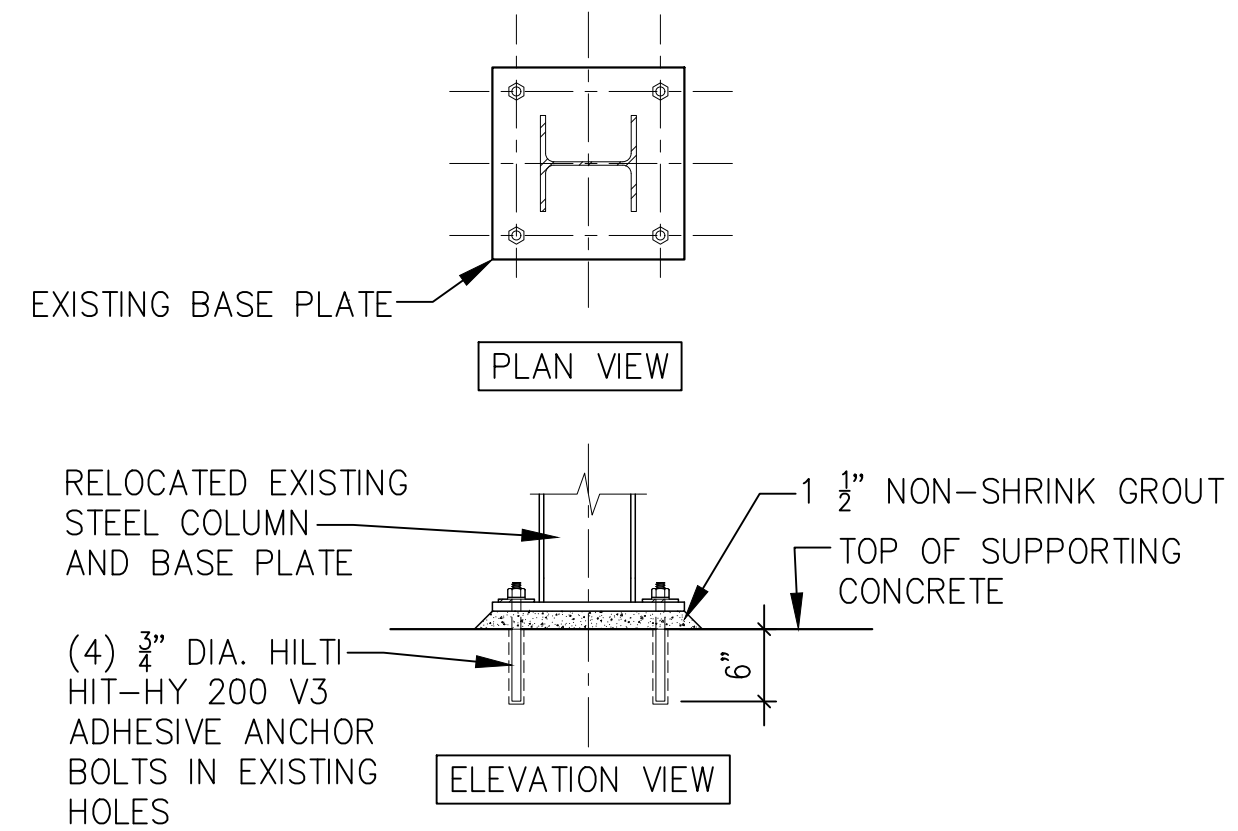
2 NEW TO EXISTING SLAB DETAIL
3/4" = 1'-0"



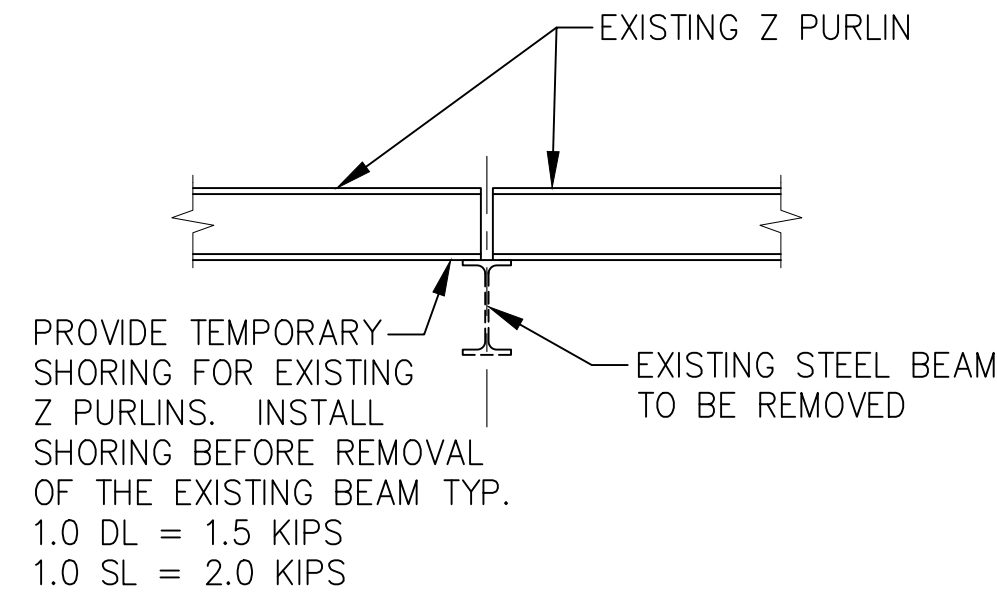
3 NON-STRUCTURAL CMU WALL DETAIL
3/4" = 1'-0"



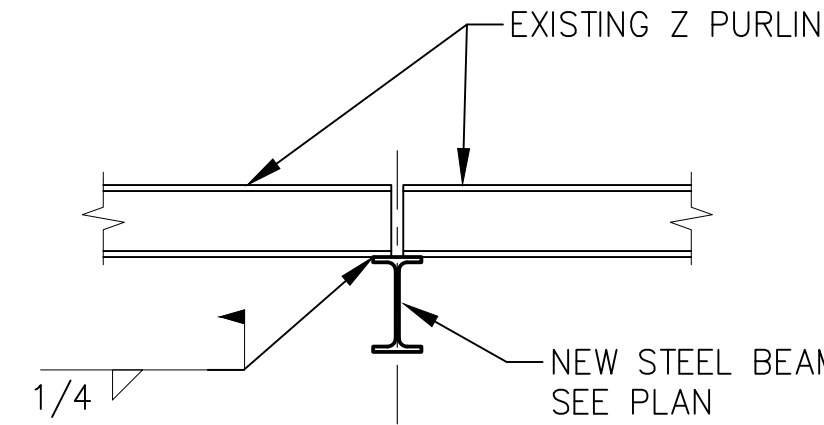
4 SPREAD FOOTING SUPPORTING
RELOCATED STEEL COLUMN
3/4" = 1'-0"



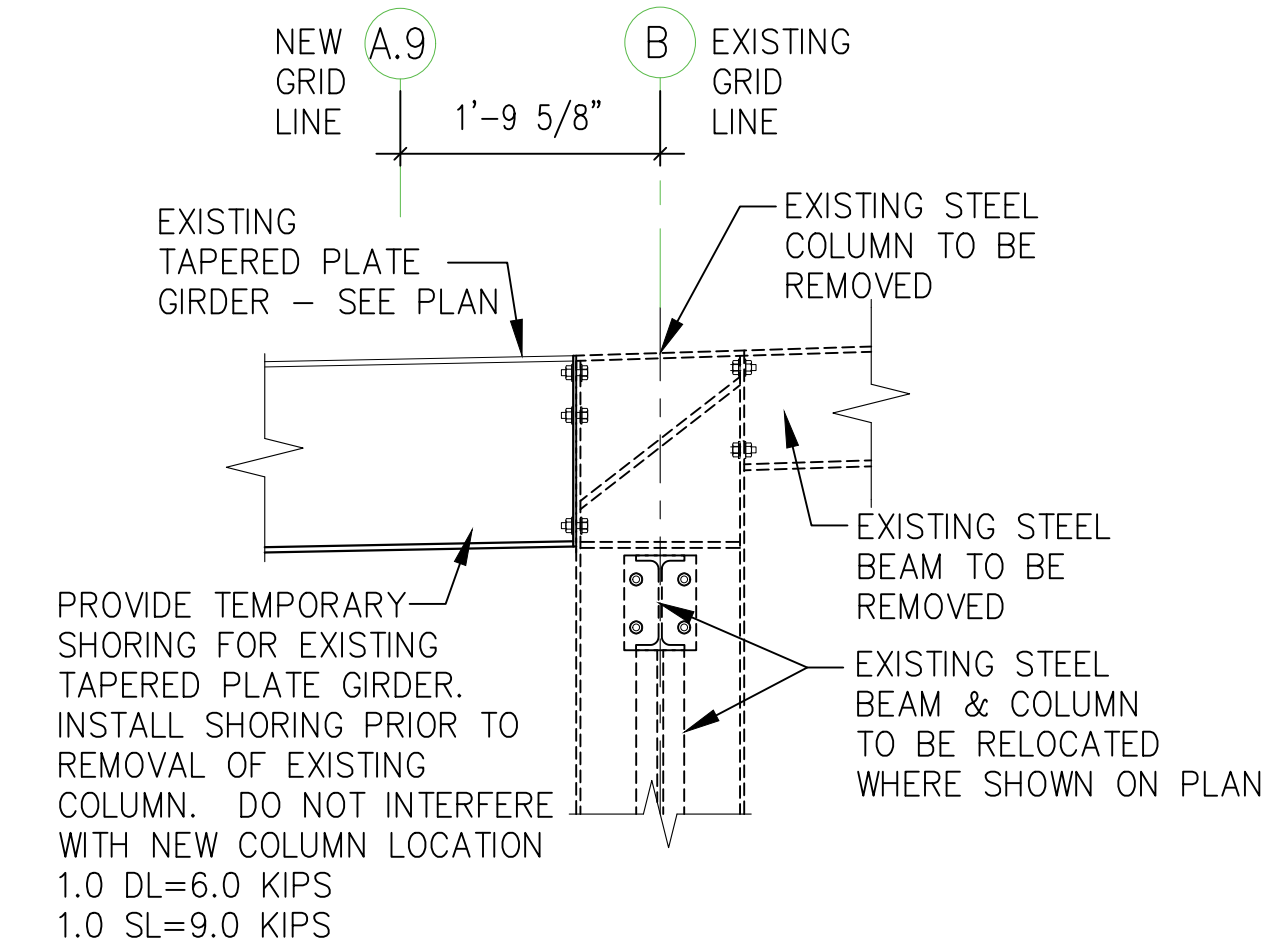
5 RELOCATED COLUMN BASE PLATE
3/4" = 1'-0"



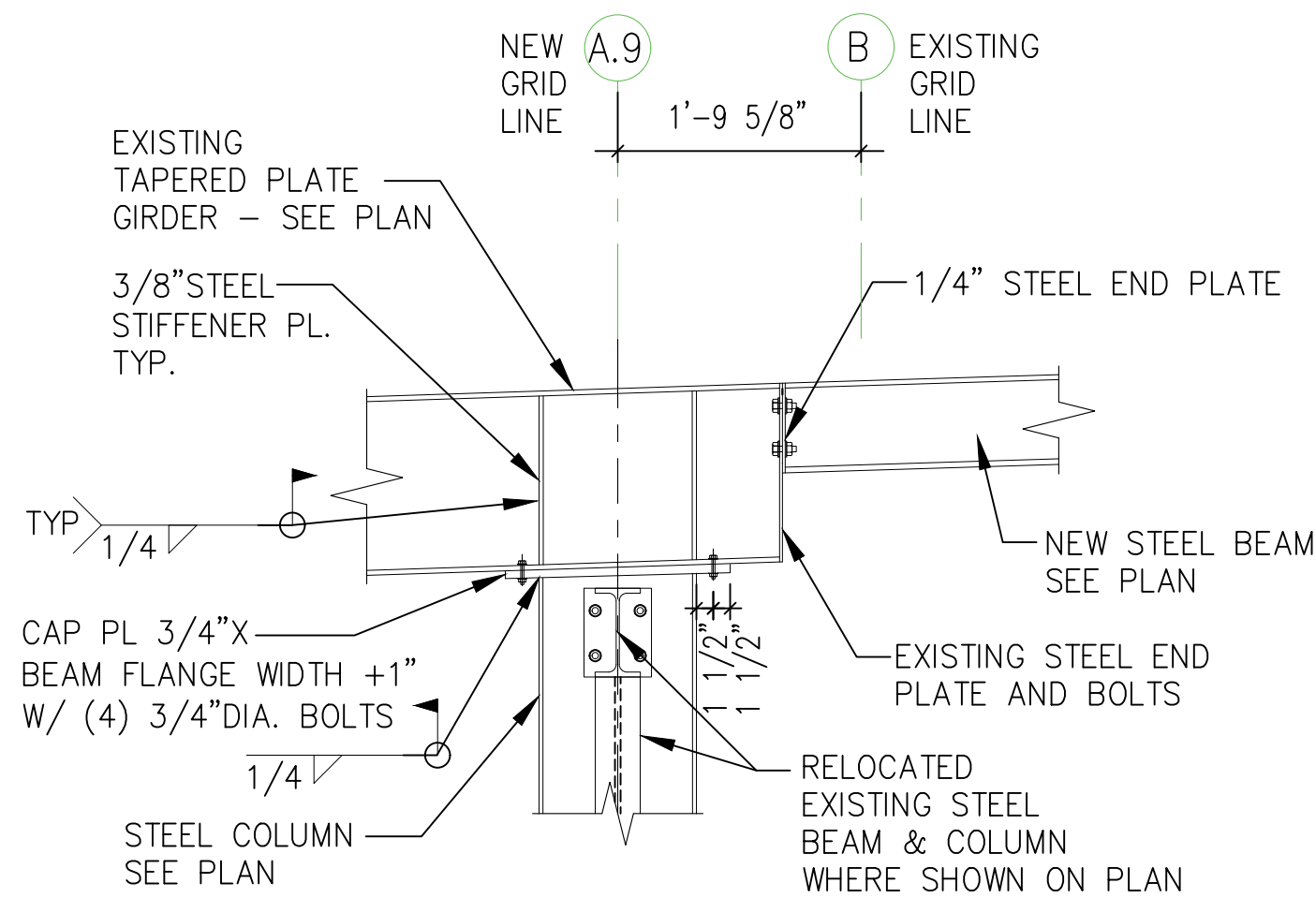
6 PURLIN AT EXISTING BEAM
3/4" = 1'-0"



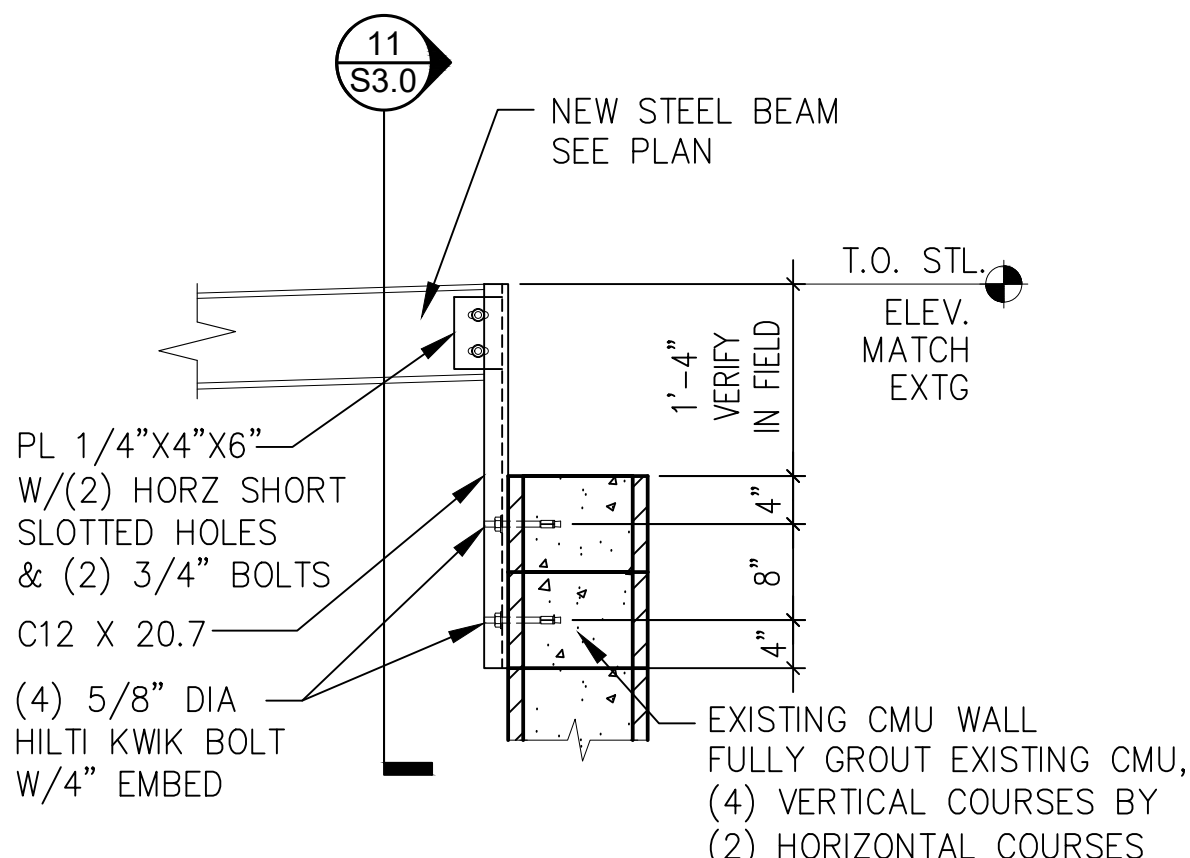
7 PURLIN AT NEW WIDE FLANGE BEAM
3/4" = 1'-0"



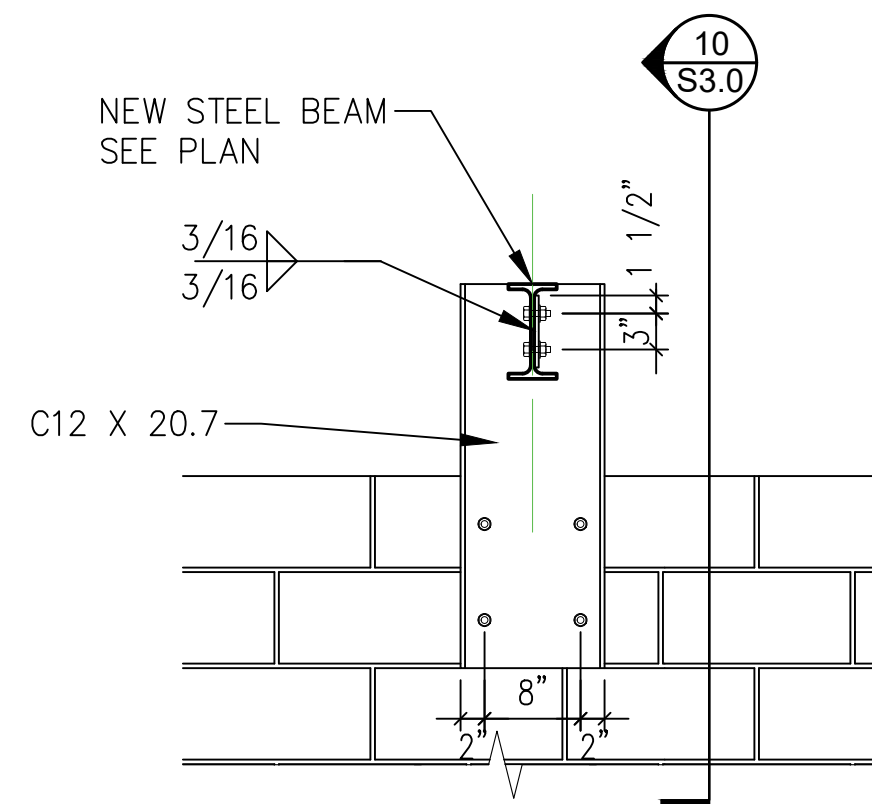
8 EXISTING GIRDER AT EXISTING COLUMN
3/4" = 1'-0"



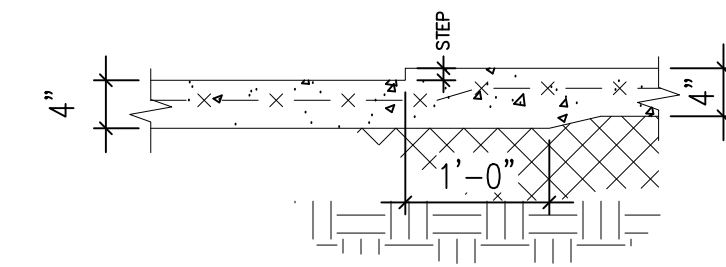
9 EXISTING GIRDER BEARING ON COLUMN
3/4" = 1'-0"



10 BEAM AT EXISTING MASONRY WALL
3/4" = 1'-0"



11 BEAM AT EXISTING MASONRY WALL
3/4" = 1'-0"



12 SLAB ON GRADE DEPRESSION
3/4" = 1'-0"



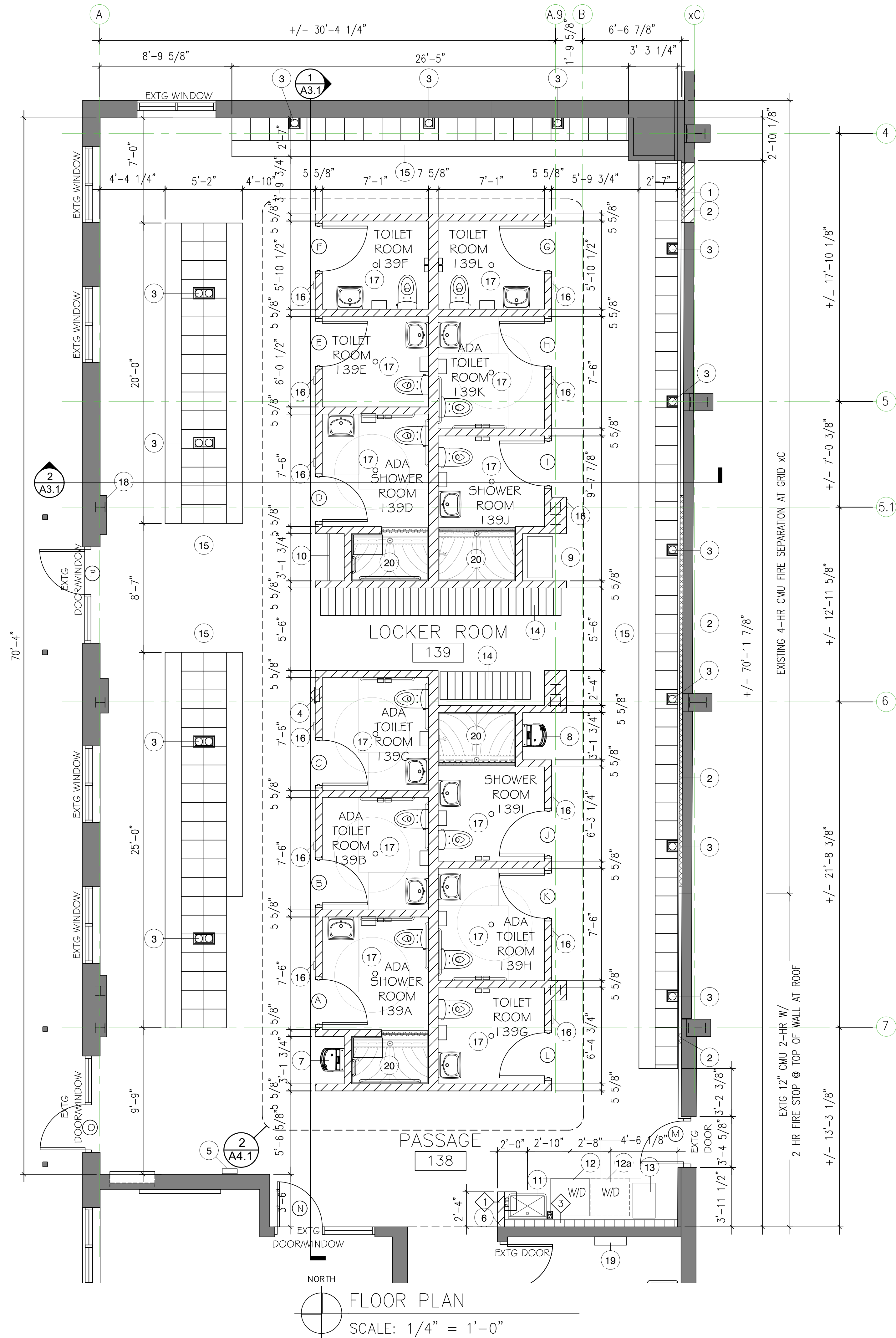
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DETAILS

S3.0



- FLOOR PLAN KEY NOTES**
- 1 INFILL OPENING WITH CMU TO MATCH EXISTING
 - 1 5/8" METAL STUD FURRING AT 24" O.C. (SHIM TO MATCH EXISTING) W/ 5/8" GYP BD TO MATCH EXISTING. EXTEND 4" MIN ABOVE CEILING.
 - 3 MECHANICAL CHASE (or round duct only?) - VERIFY SIZE WITH MECHANICAL TRADE.
 - 4 RECESSED FIRE EXTINGUISHER CABINET @ <X>" AFF
 - 5 TIME CLOCK BY OWNER
 - 6 CMU DRILL AND EPOXY DOWEL TO EXISTING
 - 7 ELKAY BOTTLE FILLER/DRINKING FOUNTAIN ADA HEIGHT; MODEL EZS8WSLK NON-FILTERED
 - 8 ELKAY BOTTLE FILLER/DRINKING FOUNTAIN STANDING HEIGHT
 - 9 BOOT DRYER - FURNISHED BY OWNER. INSTALLED BY CONTRACTOR; ELEC OUTLET REQ'D.
 - 10 CLOTHES HANGING ROD - SEE ACCESSORY LEGEND ON SHT A4.1
 - 11 UTILITY SINK
 - 12 CONDENSING WASHER/DRYER UNIT BY OWNER
 - 12a FUTURE COMBO CONDENSING WASHER/DRYER UNIT
 - 13 UTILITY CART BY OWNER
 - 14 JEAN LOCKERS FURNISHED & INSTALLED BY OWNER; (88) TOTAL
 - 15 SPACESAVER LOCKER SYSTEM FURNISHED & INSTALLED UNDER SEPARATE CONTRACT. 84"H X 15"W X 18" D. W/ 8" HIGH SLOPED TOP; (134) W/BENCH DRAWER & WOOD TOP AND (7) ADA WITH EXTERNAL DRAWER - NO BENCH
 - 16 RESTROOM / SHOWER SIGNAGE - SEE 1/A1.2
 - 17 FLOOR DRAIN - SEE PLUMBING PLANS PITCH FLOOR 1/8" / FT TO DRAIN
 - 18 PATCH WALL TO MATCH EXISTING
 - 19 ADDED SUB PANEL - SEE ELECTRICAL PLANS
 - 20 CUSTOM SOLID SURFACE SHOWER BASE WITH TRENCH RECEPTER AND 1/4" THICK ADD-ON THRESHOLD (ADA COMPLIANT) AND 1/4" THICK FULL HEIGHT SHOWER WALL PANELS. BASIS OF DESIGN "INPRO PRISM SOLID SURFACE"

- FLOOR PLAN LEGEND**
- EXISTING WALLS
 - NEW CMU WALLS
 - NEW 6" STUD WALL

1 RESTROOM SIGNAGE

1. 6" W. X 9" H. X 1/8" NON-GLARE CLEAR ACRYLIC
2. COLOR: BLACK
3. ADA COMPLIANT
4. 1/32" RAISED TACTILE LETTERING AND GRAPHICS IN WHITE WITH 5/8" HELVETICA FONT
5. GRAPHIC TO BE +/- 4" TALL
6. CLEAR BRAILE BEADS UNDER LETTERS TO COMPLY WITH ADA REGULATIONS
7. 1/4" RADIUS CORNERS
8. FASTEN TO CMU USING WITH DOUBLE SIDED FOAM MOUNTING TAPE



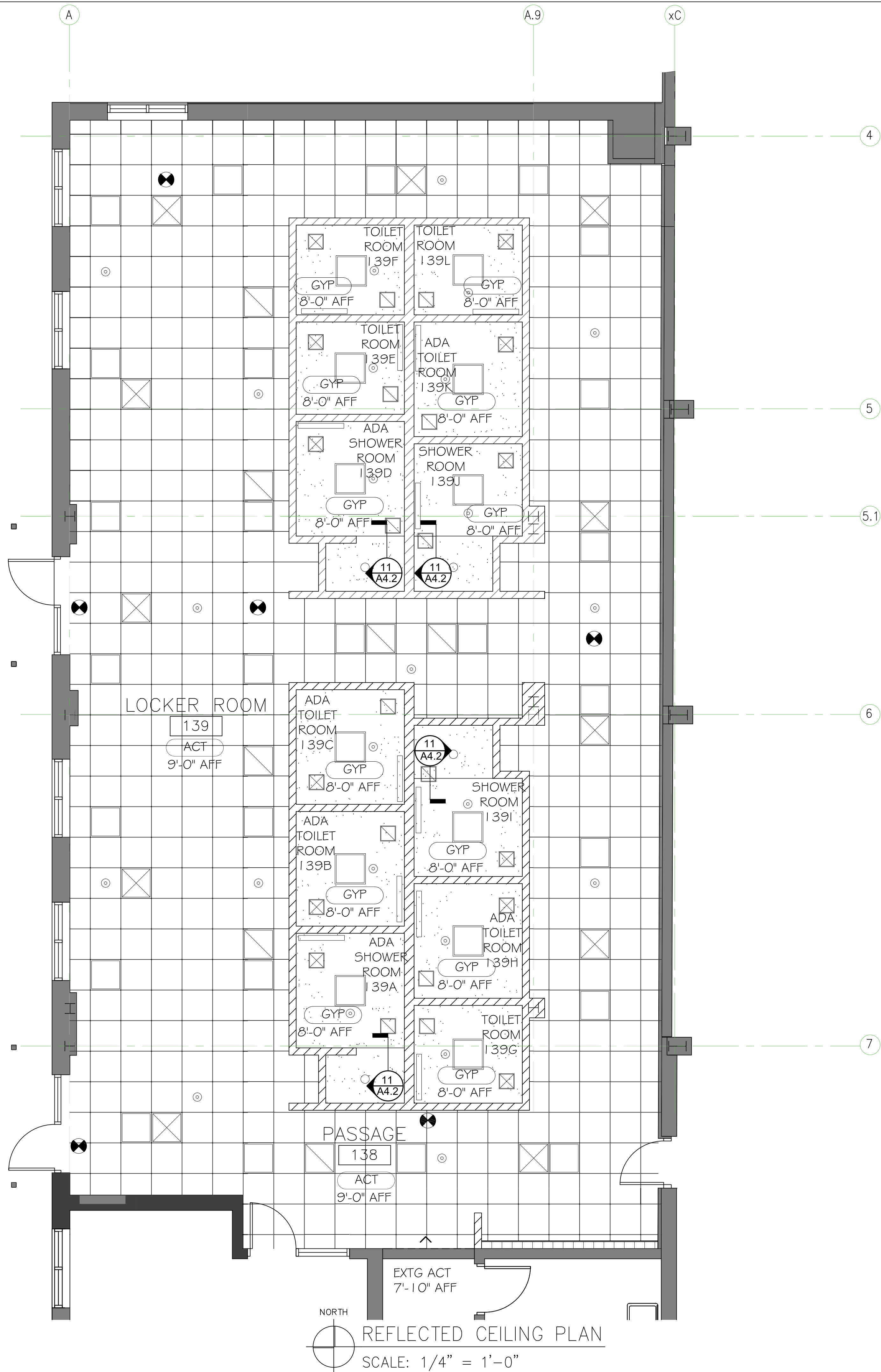
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PHONE: 608-266-4751

ENG OP FACILITY LOCKER ROOM RENOVATION
1600 EMIL STREET
MADISON, WI 53713

CONTRACT
#9659
MUNIS
#14122
DRWN BY: LA
DATE 07/14/25
REV: XX/XX/XX

FLOOR PLAN

A1.2



GENERAL NOTES

1. CEILING HEIGHTS ARE LISTED NEXT TO APPROPRIATE KEYNOTE. HEIGHT IS GIVEN ABOVE FINISHED FLOOR U.N.O.
2. PERIMETER CEILING TILES SHALL NOT BE LESS THAN 4" – TYP.
3. LOCATE ALL SPRINKLER HEADS, SMOKE DETECTORS, AUDIO SPEAKER AND CEILING MOUNTED EQUIPMENT IN THE CENTER OF CEILING TILE – TYP.
4. REFER TO ARCHITECTURAL DRAWINGS FOR ALL MECHANICAL AND ELECTRICAL DEVICE LOCATIONS AND MOUNTING HEIGHTS. IF NOT CLEARLY SPECIFIED, CONTACT ARCHITECT FOR FURTHER CLARIFICATION. MECHANICAL AND ELECTRICAL DRAWINGS ARE FOR FIXTURE TYPE REFERENCE ONLY.
5. RESTROOM CEILINGS TO BE RESILIENT CHANNEL CEILING FRAMING SYSTEM W/ 3/4" XP GYP BOARD
6. SHOWER CEILINGS TO BE RESILIENT CHANNEL CEILING FRAMING SYSTEM W/ 3/4" XP GYP BOARD & 1/4" SOLID SURFACE

REFLECTED CEILING PLAN SYMBOLS/LEGEND

- 2' X 2' LED FIXTURE
- 2' X 2' SUPPLY
- 2' X 2' RETURN
- 1' X 1' SUPPLY
- 1' X 1' RETURN
- VANITY LIGHT - 3'-0"
- CAN LIGHT
- OCCUPANCY SENSOR
- EXIT SIGN
- SMOKE DETECTOR



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REFLECTED
CEILING PLAN
A1.4



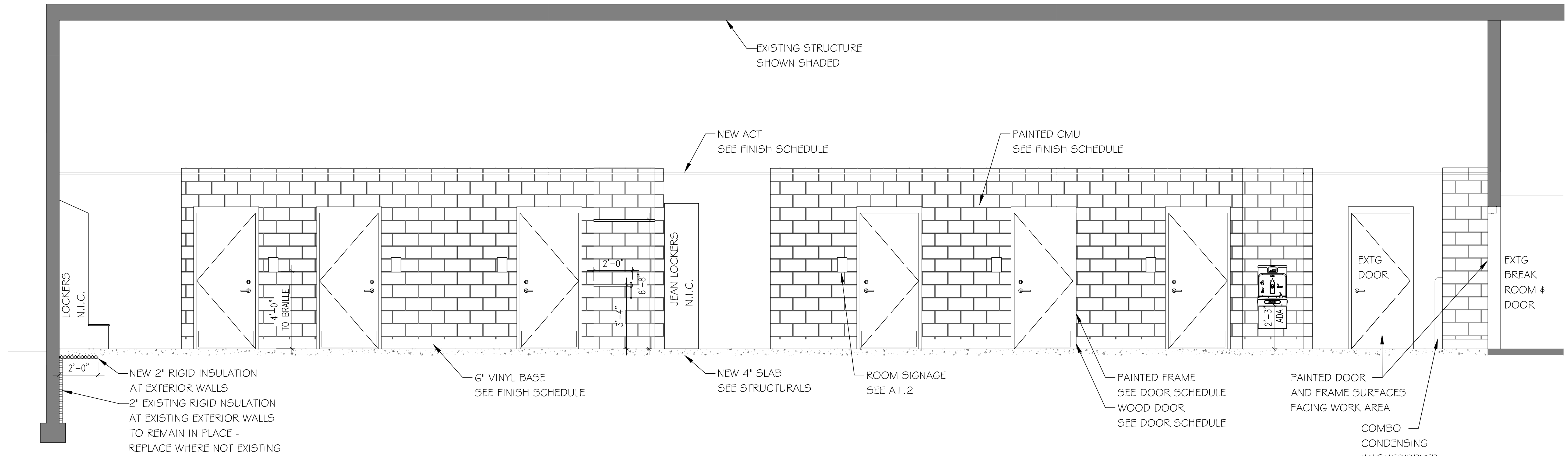
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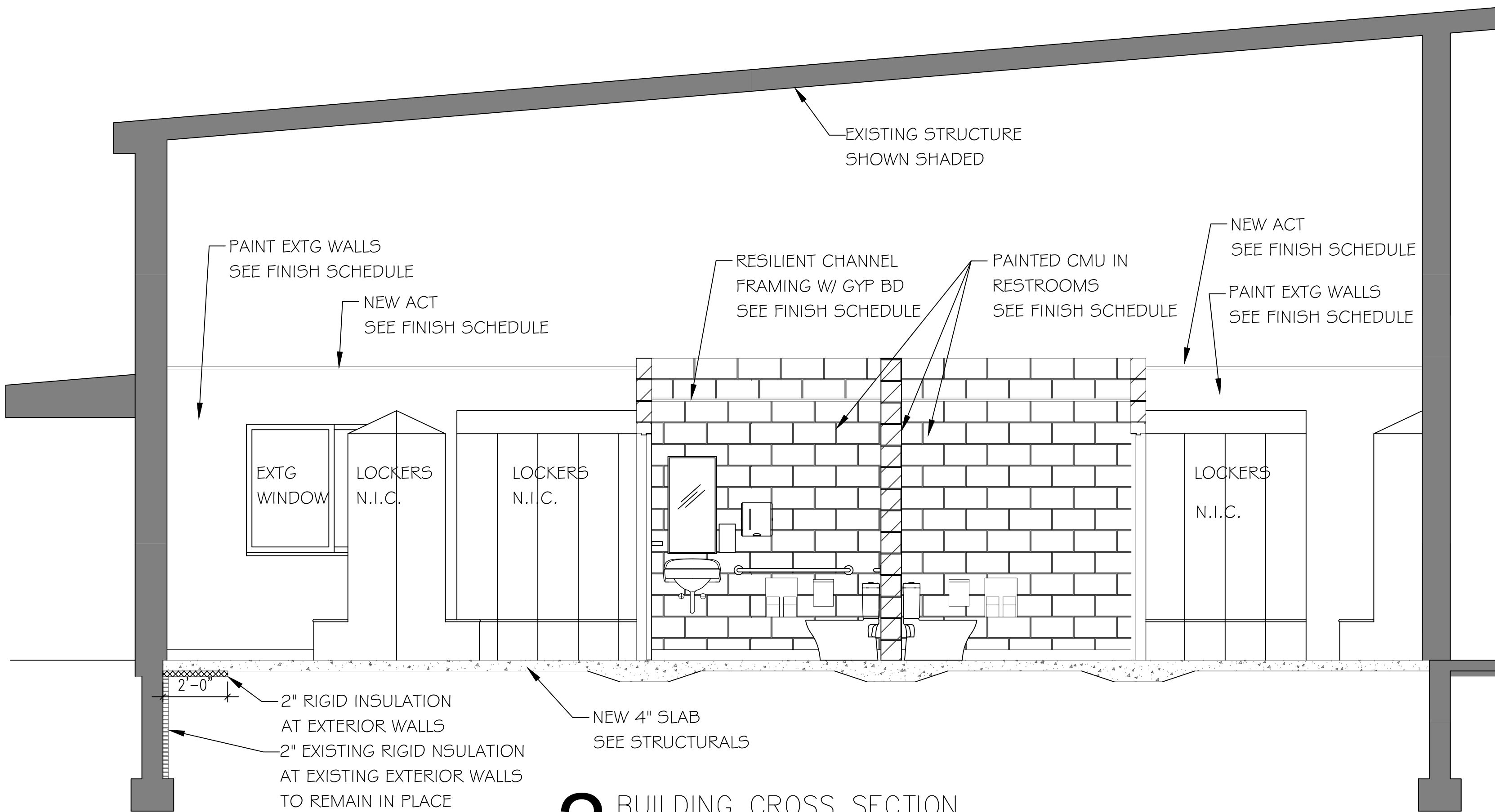
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BLDG. SECTIONS

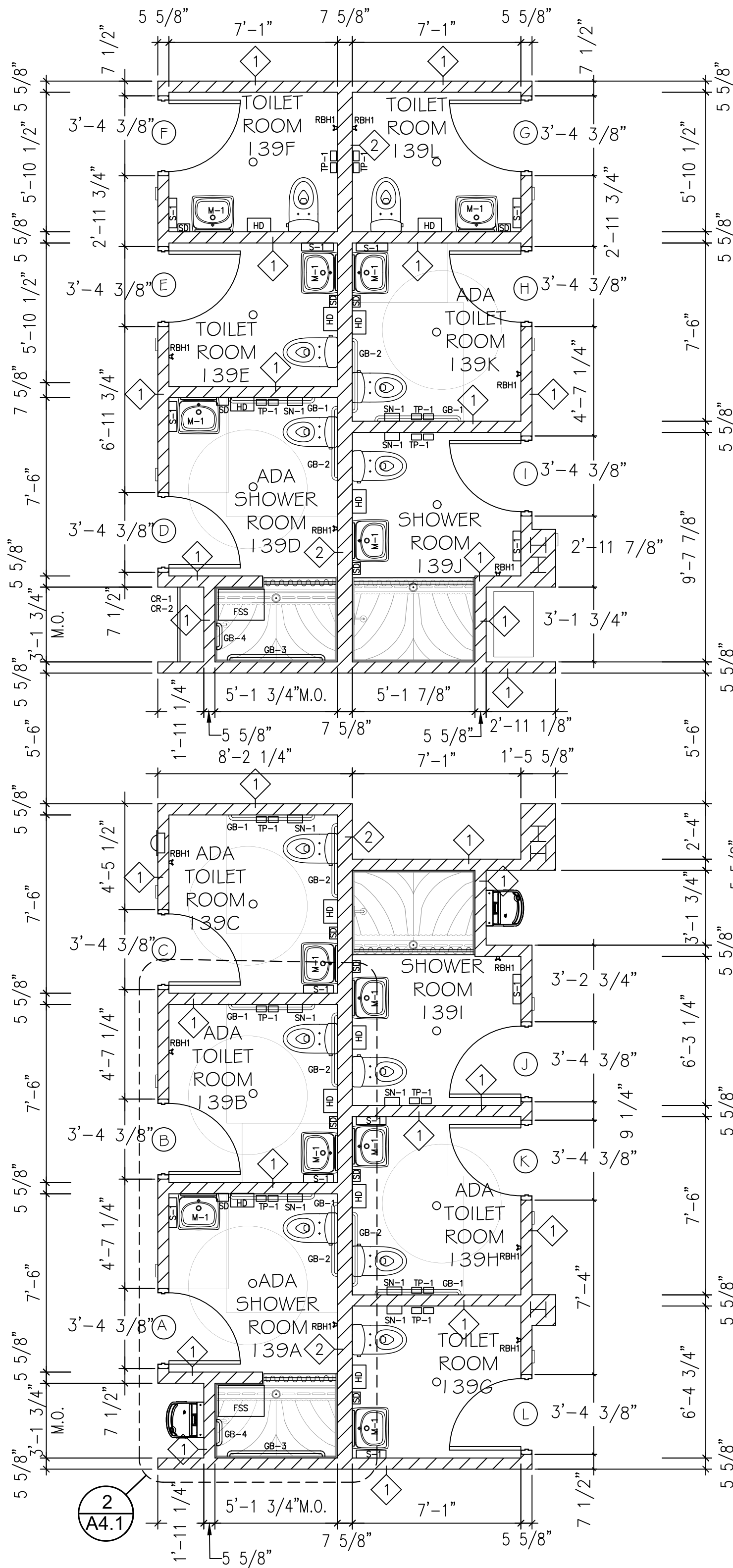
A3.1



1 BUILDING CROSS SECTION
SCALE: 3/8" = 1'-0"

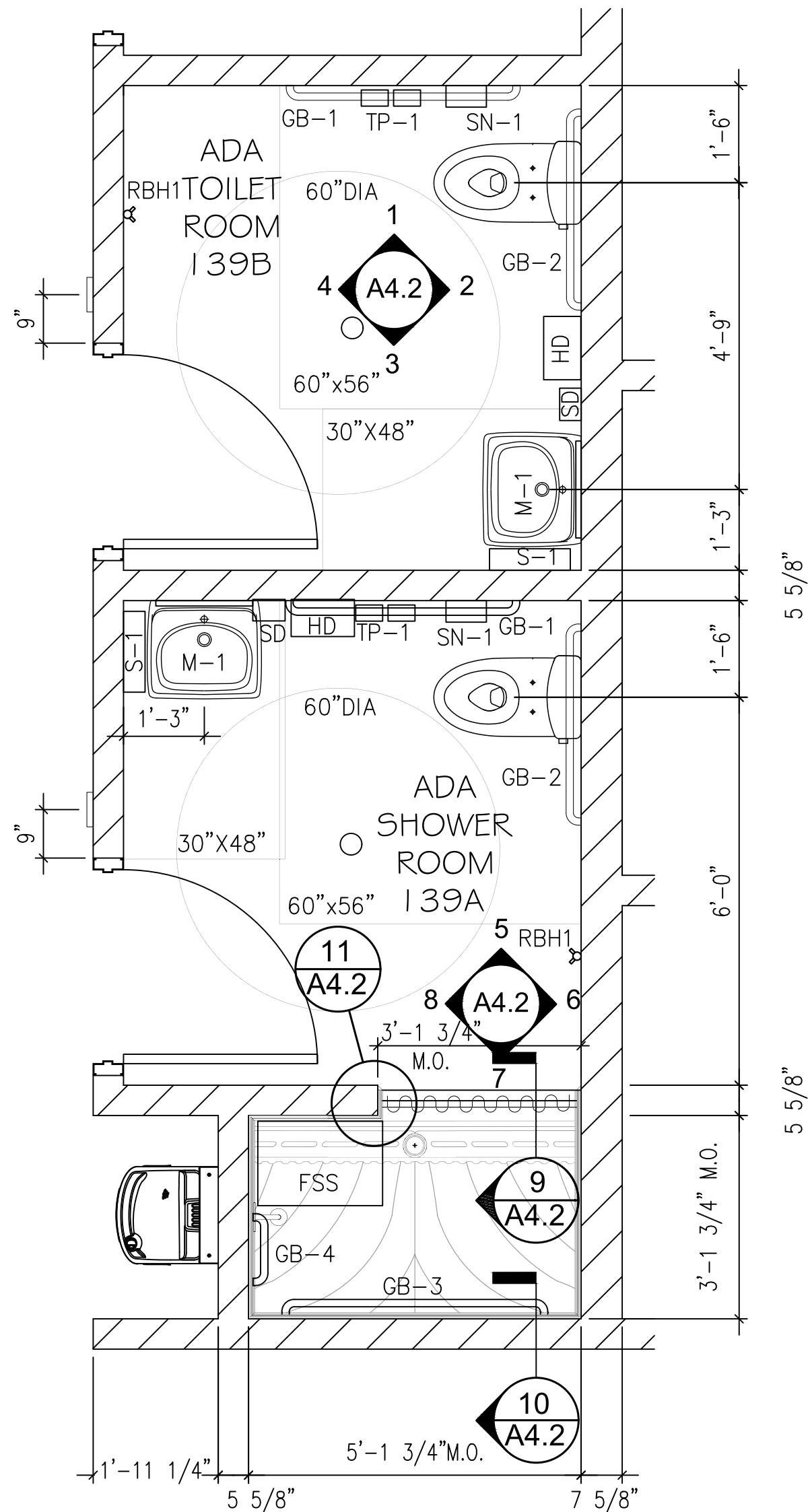


2 BUILDING CROSS SECTION
SCALE: 3/8" = 1'-0"



1 ENLARGED RESTROOMS
SCALE: 1/4" = 1'-0"

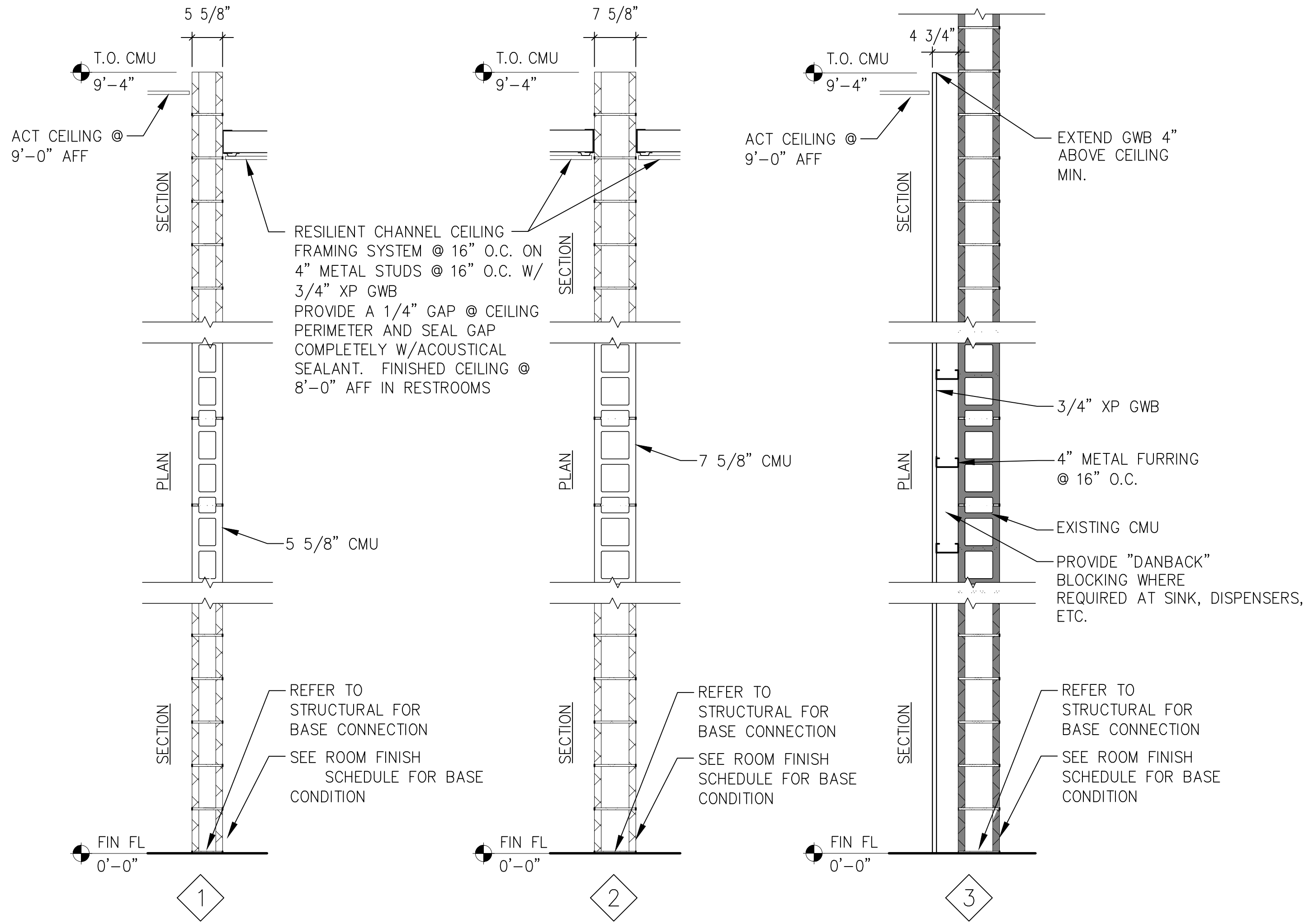
- FLOOR PLAN LEGEND
- NEW CMU WALLS
 - WALL TYPE - SEE DETAILS ON SHT A4.1



NOTE:
MASONRY ROUGH OPENING SIZE IS SHOWN FOR
SHOWERS. MINIMUM FINISHED OPENING MUST BE
36" DOOR AND INTERIOR DIMENSION OF 36"x60"
FOR ADA COMPLIANCE. TYP. @ ALL SHOWERS.

2 ENLARGED ADA SHOWER & RESTROOM
SCALE: 1/2" = 1'-0"

ACCESSORY/LEGEND					
MARK	DESCRIPTION	MANUFACTURER/MODEL	SIZE	MTGHT AFF	NOTES
M-1	MIRROR	BRADLEY 781	18"X36"	40" BTM GLASS	EACH LAV/SINK
SD	SOAP DISPENSER	OWNER FURNISHED - HILLYARD	6.5"X10.5"X3.75"	40" TO SOAP RELEASE	EACH LAV/SINK/UTILITY SINK; O.F.C.I.
PTD	PAPER TOWEL DISPENSER	OWNER FURNISHED - GEORGIA PACIFIC	14.7"X17.3"X9.5"	40" TO OPENING	UTILITY SINK; O.F.C.I.
HD	HAND DRYER - S.S. BRUSHED	XLERATOR XL-SB	11.75"X12.9"X6.9"	46" TO EXHAUST	
TP-1	QUAD TOILET PAPER DISPENSER	OWNER FURNISHED - GEORGIA PACIFIC	12.1"X14.4"X6.9"	16" TO BTM	SIDE OF WC; O.F.C.I.
SN-1	SANITARY NAPKIN DISPOSAL - S.S. SATIN	BOBRICK B-35139	8"X14.13"X4 1/2"	30" TO TOP	SIDE OF WC
GB-1	GRAB BAR - S.S. - CONCEALED MOUNT	BRADLEY SERIES 812 PEENED FINISH	1 1/2"X42"	34" TOP OF BAR	SIDE OF WC
GB-2	GRAB BAR - S.S. - CONCEALED MOUNT	BRADLEY SERIES 812 PEENED FINISH	1 1/2"X36"	34" TOP OF BAR	BACK OF WC
GB-3	GRAB BAR - S.S. - CONCEALED MOUNT	BRADLEY SERIES 812 PEENED FINISH	1 1/2"X48"	34" TOP OF BAR	SHOWER SIDE
GB-4	GRAB BAR - S.S. - CONCEALED MOUNT	BRADLEY SERIES 812 PEENED FINISH	1 1/2"X12"	34" TOP OF BAR	UNDER SHOWER FIXTURE
FSS	FOLDING SHOWER SEAT	DELTA 5SE-ADA-6 TILT UP SEAT	15 1/2" X 24"	18" TOP OF SEAT	ADA SHOWER
RBH-1	ROBE HOOK	HARNEY: BOCA GRANDE CHROME		48" & 60"	ADA & STD ROOMS [(2) PER RM]
S-1	SHelf	VANDAL: AA-VRS-04	16"X1 1/2"X4"	42"	ALL ROOMS
SCR	SHOWER CURTAIN ROD & (2) FLANGES	BRADLEY 9531	1 1/4" X 36"	(CONFIRM W/OWNER)	ADA & STD SHOWER ROOMS
CR-1	CLOTHES ROD W/ (1) FLANGE & (1) BRACKET		1 1/4" X 24"	40"	304 STAINLESS STEEL 14 GA - BRUSHED
CR-2	CLOTHES ROD & (2) FLANGES		1 1/4" X 37"	80"	304 STAINLESS STEEL 14 GA - BRUSHED
---	SHARPS CONTAINER	OWNER FURNISHED - (1) REQ'D		40" TO OPENING	VERIFY LOCATION IN FIELD WITH OWNER



WALL TYPES

SCALE: 3/4" = 1'-0"



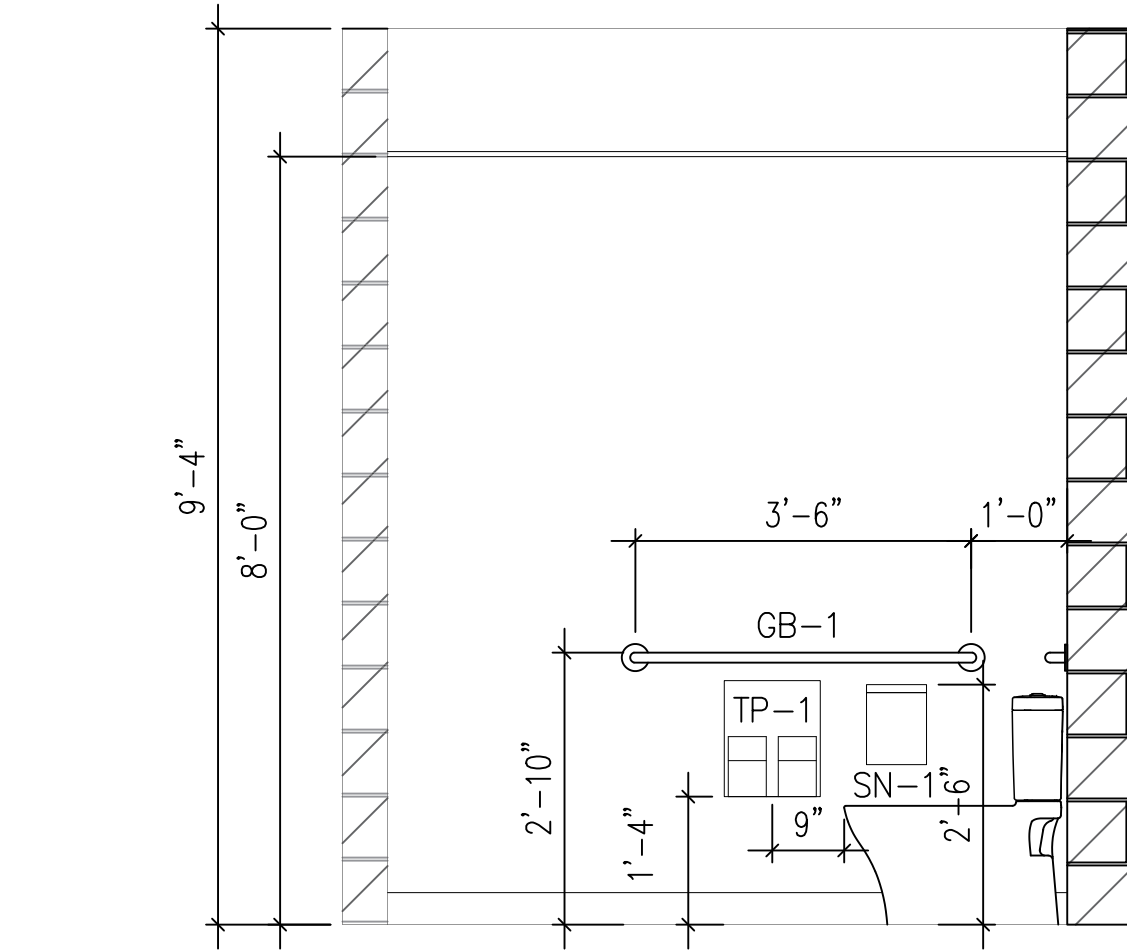
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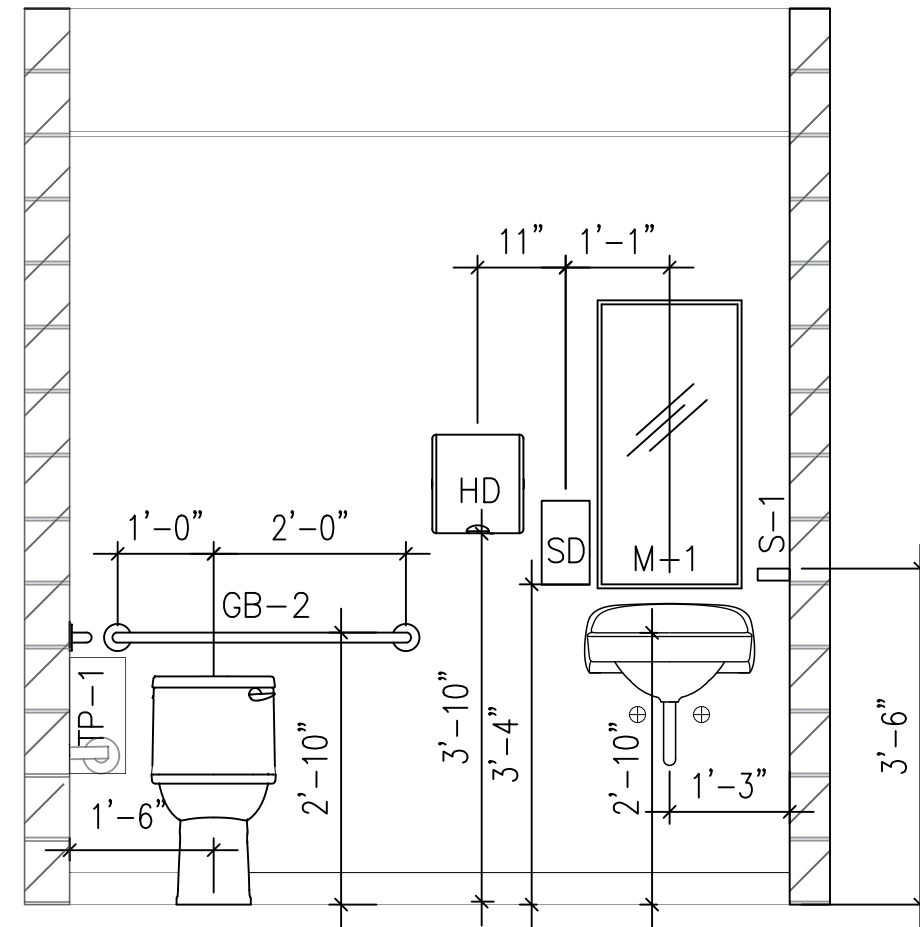
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ENLARGED
FLOOR PLAN

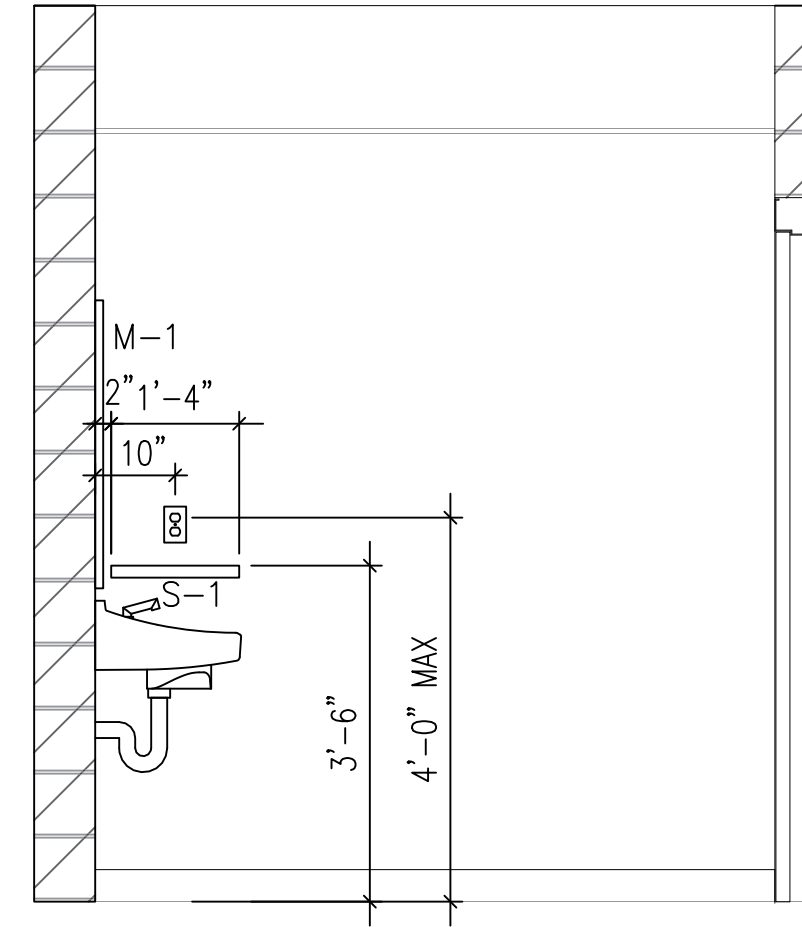
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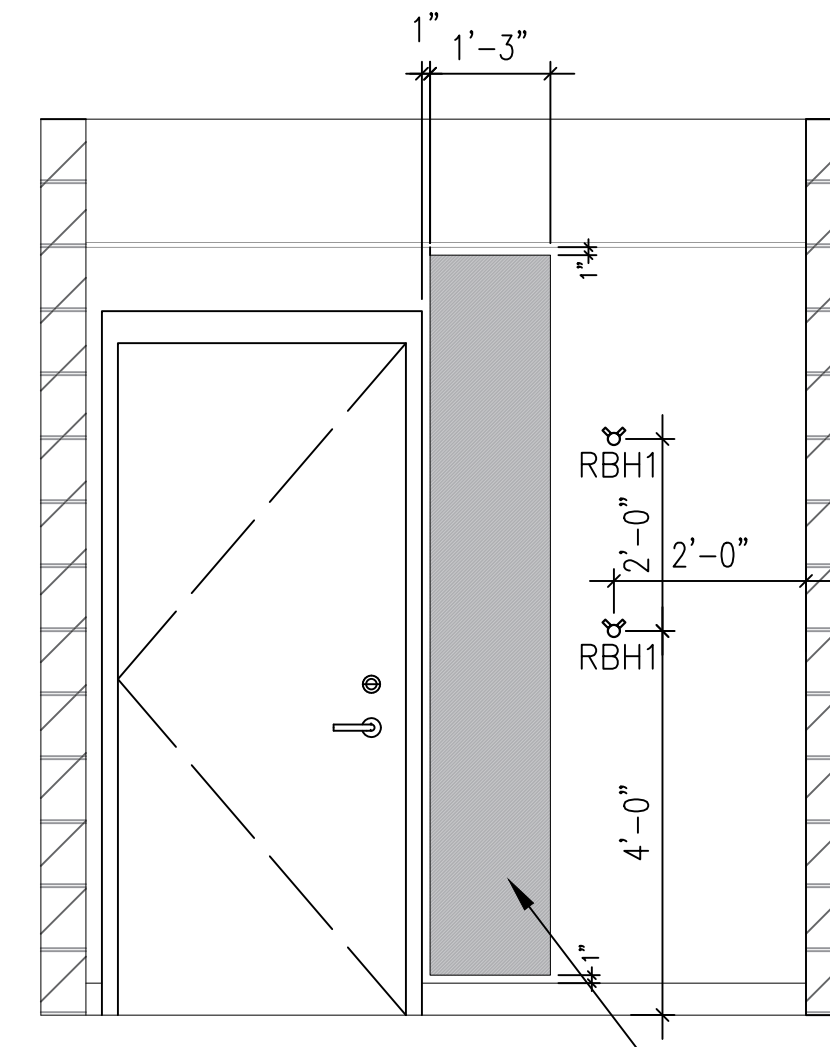
1 ADA TOILET 139B NORTH
1/2" = 1'-0"



2 ADA TOILET 139B EAST
1/2" = 1'-0"

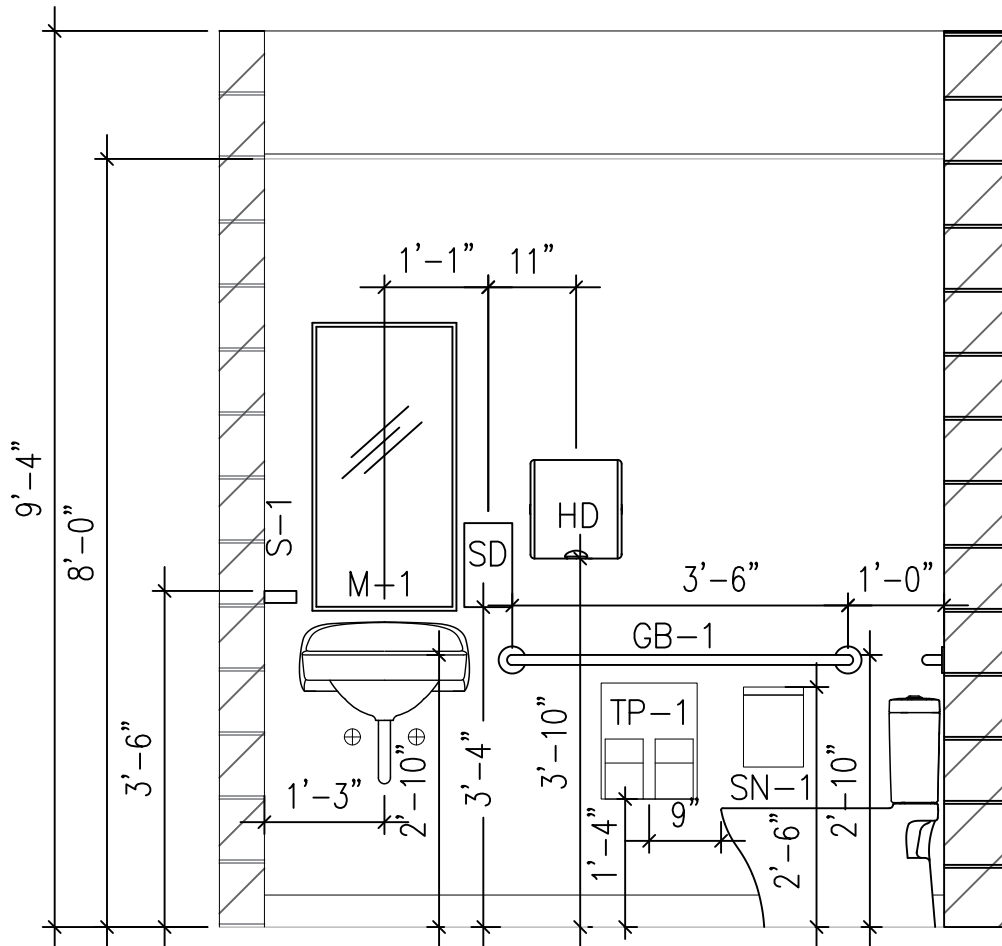


3 ADA TOILET 139B SOUTH
1/2" = 1'-0"

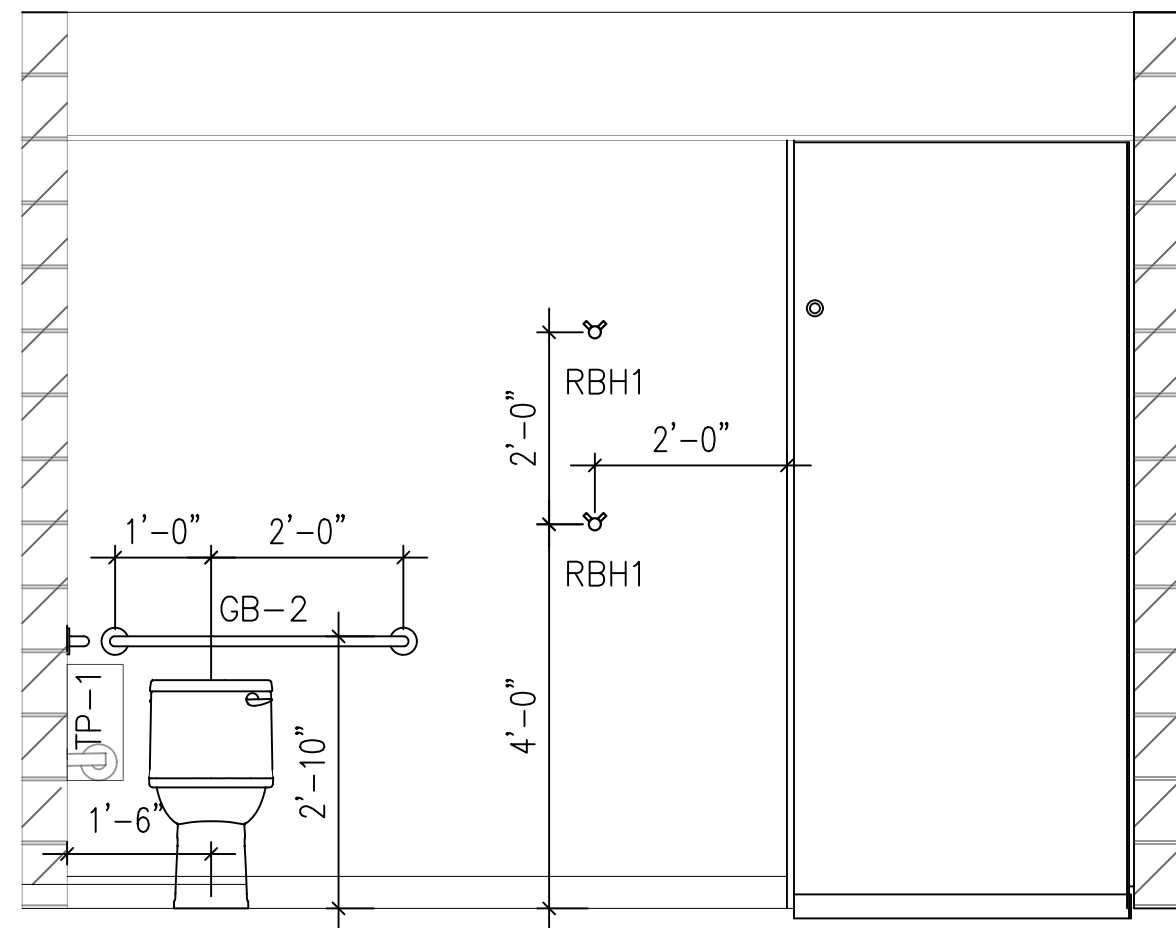


4 ADA TOILET 139B WEST
1/2" = 1'-0"

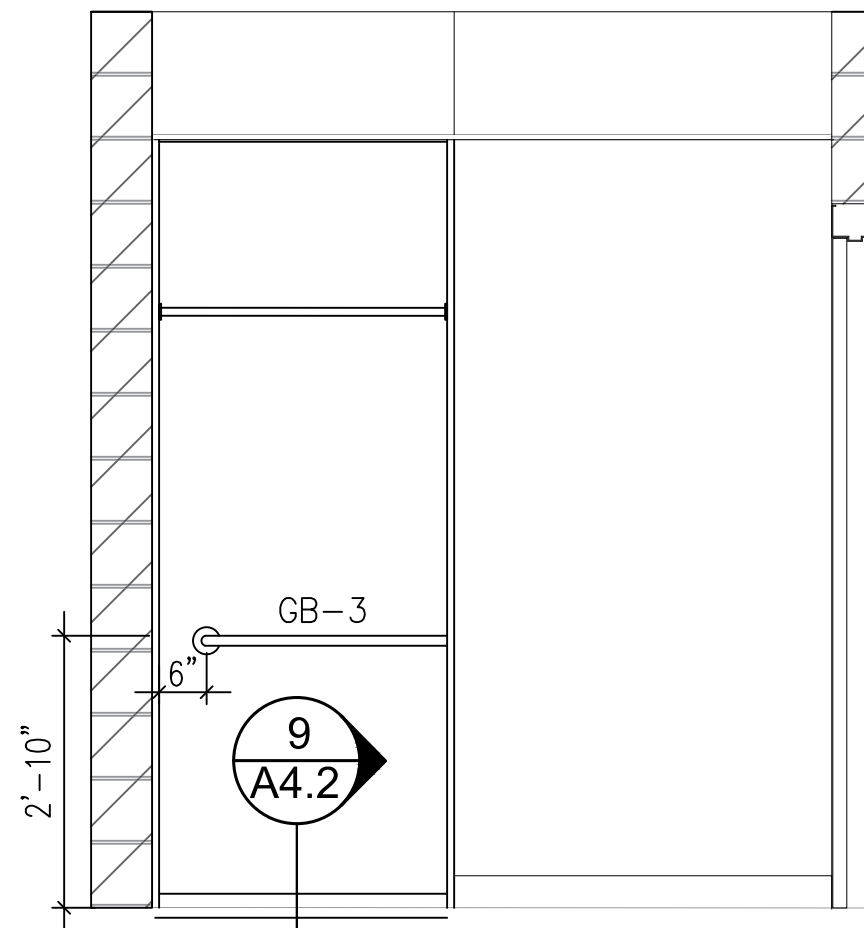
ACCENT PAINT AREA LOCATED ON PULL SIDE OF THE DOOR. COORDINATE COLOR WITH PAINTED GRAPHIC COLORS ON LOCKER ROOM SIDE OF WALL. TYP AT INTERIOR OF ALL RESTROOM AND SHOWER ROOMS.



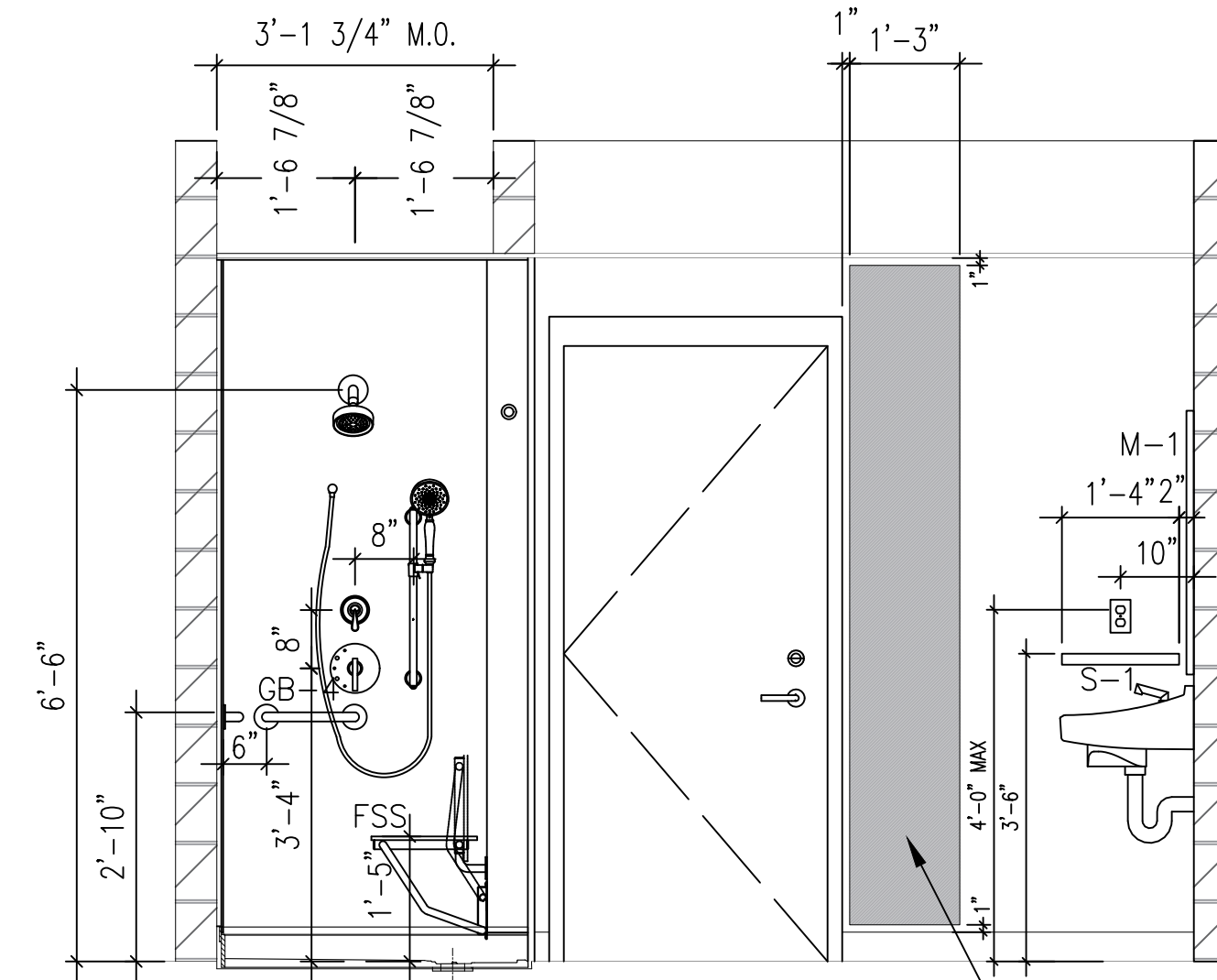
5 ADA SHOWER RM 139A NORTH
1/2" = 1'-0"



6 ADA SHOWER RM 139A EAST
1/2" = 1'-0"

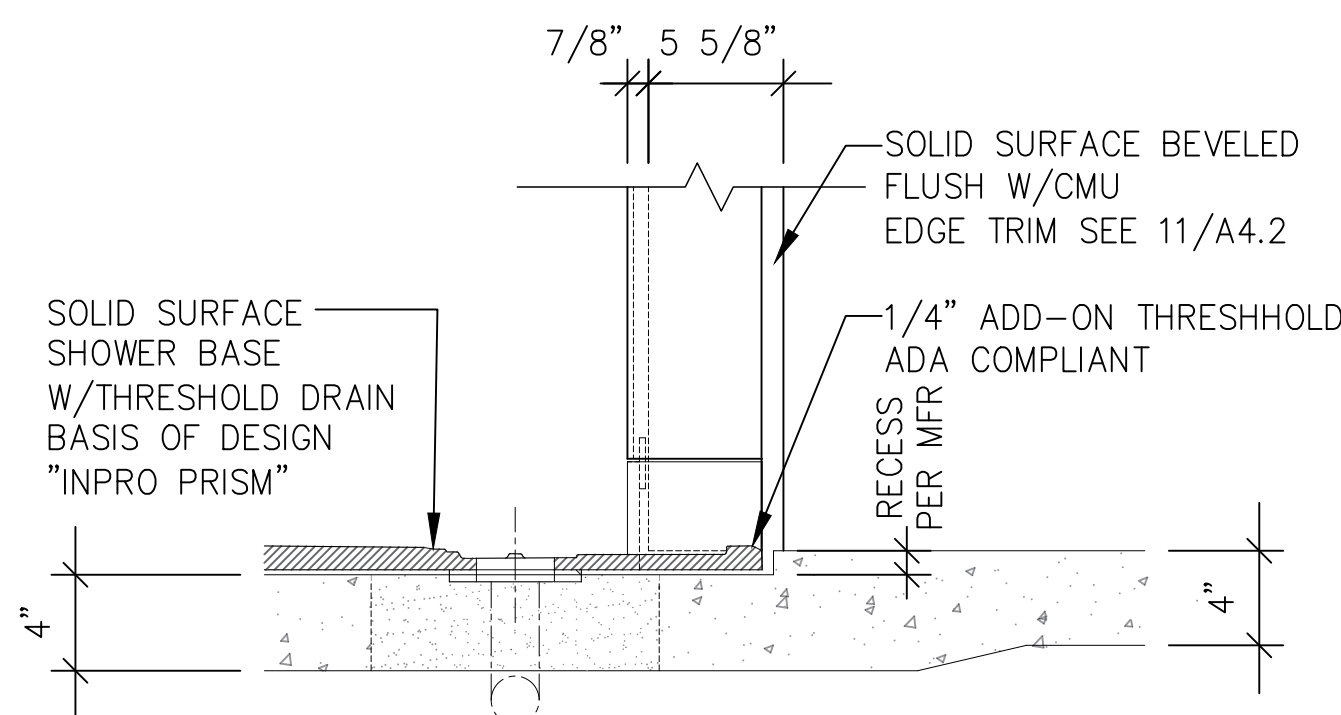


7 ADA SHOWER RM 139A SOUTH
1/2" = 1'-0"

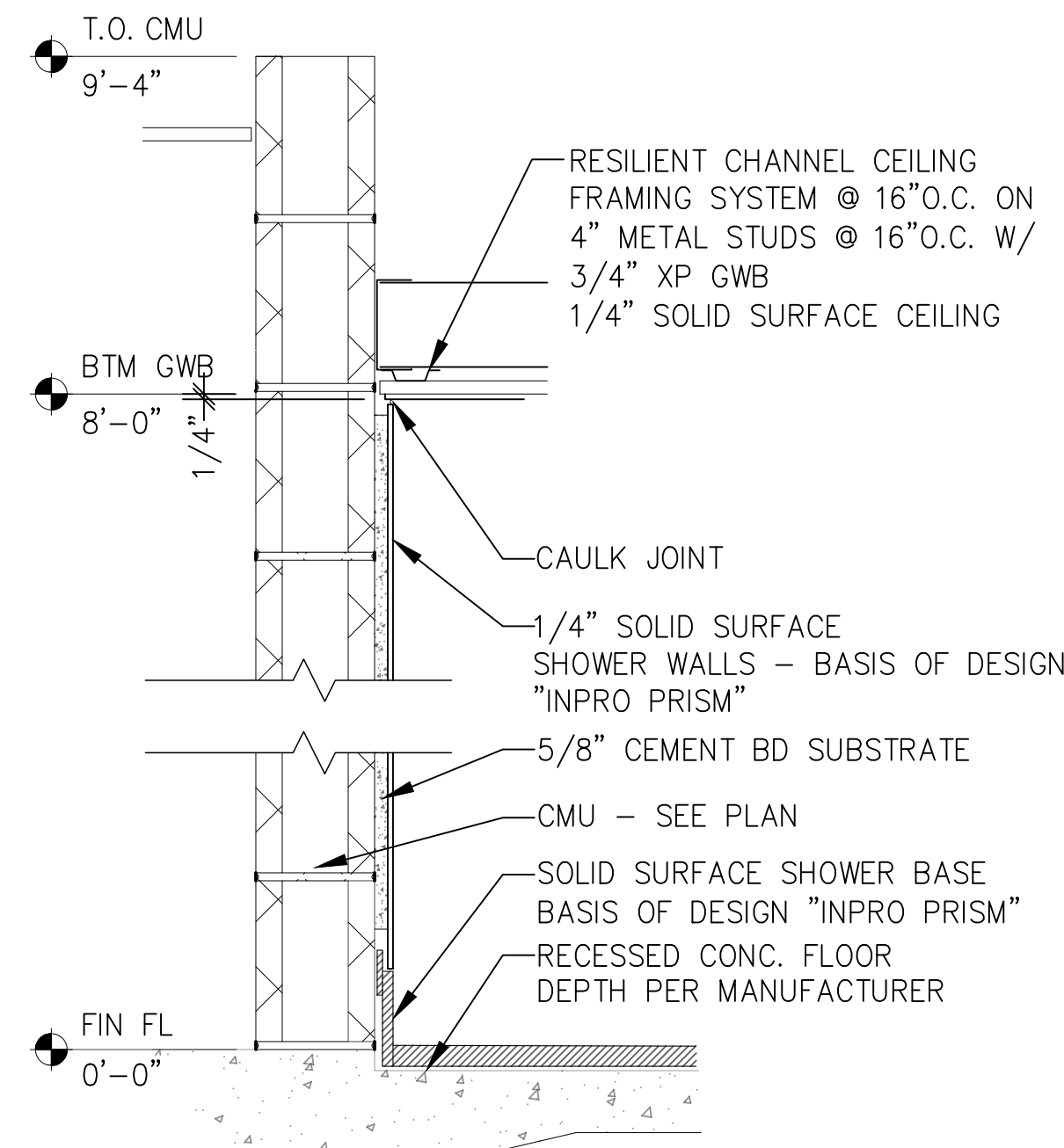


8 ADA SHOWER RM 139A WEST
1/2" = 1'-0"

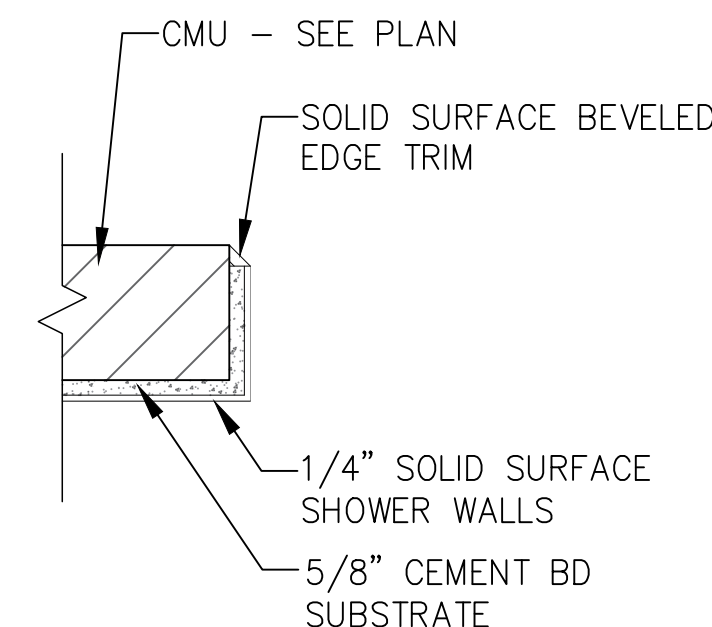
ACCENT PAINT AREA LOCATED ON PULL SIDE OF THE DOOR. COORDINATE COLOR WITH PAINTED GRAPHIC COLORS ON LOCKER ROOM SIDE OF WALL. TYP AT INTERIOR OF ALL RESTROOM AND SHOWER ROOMS.



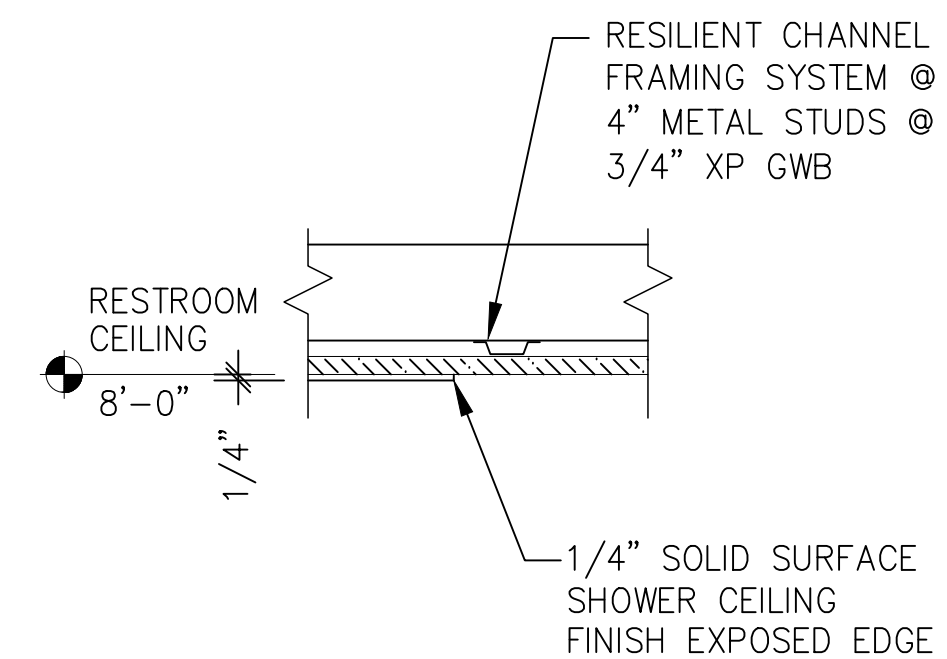
9 ADA SHOWER BASE AT THRESHOLD
1 1/2" = 1'-0"



10 SHOWER WALL PANELS AT CMU
1 1/2" = 1'-0"



11 SHOWER WALL PANELS EDGE FINISH
1 1/2" = 1'-0"



12 SHOWER TO RESTROOM CEILING
1 1/2" = 1'-0"



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RESTROOM
ELEVATIONS

A4.2

DOOR SCHEDULE									
DOOR			FRAME		DETAILS		OTHER		
DOOR NUMBER	SIZE	TYPE	MTL	DEPTH	TYPE	HEAD	JAMB	HRDWR GROUP	NOTES
A	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
B	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
C	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
D	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
E	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
F	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
G	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
H	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
I	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
J	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
K	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
L	3'-0" X 7'-0"	A	STL	4 3/4"	1	1/A6.1	2/A6.1	PRIVACY	
M	EXTG	---	---	---	---	---	---	---	PAINT FRAMES & DOOR @ INT
N	EXTG	---	---	---	---	---	---	---	PAINT FRAMES & DOOR @ INT
O	EXTG	---	---	---	---	---	---	---	PAINT FRAMES & DOOR @ INT
P	EXTG	---	---	---	---	---	---	---	PAINT FRAMES & DOOR @ INT

GENERAL NOTES

1. NEW DOOR VENEER SPECIES & FINISH COLOR TO MATCH EXISTING BUILDING DOORS.
2. FRAMES ARE WELDED STEEL WITH PAINTED FINISH - SEE FINISH SCHEDULE.
3. PROVIDE ROCK WOOL IN FRAME VOID.
4. PROVIDE 1/8" GAP FROM BOTTOM OF THE DOOR TO FINISH FLOOR TO ACCOMODATE FUTURE NEOPRENE SEAL.
5. PAINT DOOR FRAMES AND METAL DOOR SLABS FACING THE AREA OF WORK. DO NOT PAINT WOOD SLABS. PAINT INFORMATION IN PAINT SPECIFICATION.

HARDWARE GROUP

PRIVACY: THUMBTURN LOCK ON INSIDE WITH EMERGENCY RELEASE ON OUTSIDE AND OCCUPIED/VACANT INDICATOR. NEW DOOR HARDWARE TO MATCH EXISTING HARDWARE IN STYLE AND FINISH.

ROOM FINISH SCHEDULE						
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL	CEILING	NOTES
138	PASSAGE	CONC	VINYL	EXIST; CMU	ACT	D
139	LOCKER ROOM	CONC	VINYL	EXIST; CMU	ACT	D
139A	ADA SHOWER RM	CONC	VINYL	CMU	RCF GYP	A, B, C, D
139B	ADA TOILET RM	CONC	VINYL	CMU	RCF GYP	D
139C	ADA TOILET RM	CONC	VINYL	CMU	RCF GYP	D
139D	ADA SHOWER RM	CONC	VINYL	CMU	RCF GYP	A, B, C, D
139E	TOILET ROOM	CONC	VINYL	CMU	RCF GYP	D
139F	TOILET ROOM	CONC	VINYL	CMU	RCF GYP	D
139G	TOILET ROOM	CONC	VINYL	CMU	RCF GYP	D
139H	ADA TOILET RM	CONC	VINYL	CMU	RCF GYP	D
139I	SHOWER ROOM	CONC	VINYL	CMU	RCF GYP	A, B, C, D
139J	SHOWER ROOM	CONC	VINYL	CMU	RCF GYP	A, B, C, D
139K	ADA TOILET RM	CONC	VINYL	CMU	RCF GYP	D
139L	TOILET ROOM	CONC	VINYL	CMU	RCF GYP	D

LEGEND

- EXIST

CONC

VINYL

CMU

GWB

ACT

RCF GYP
- EXISTING MATERIALS TO REMAIN – PATCH & PAINT

SEALED CONCRETE FLOOR W/ SLIP RESISTANT COATING

VINYL COVED BASE JOHNSONITE TRADITIONAL 6" HIGH X 1/8" THICK; COLOR: BLACK (40)

CONCRETE MASONRY UNIT – PAINT

GYPSUM WALL BOARD – PAINT

ACOUSTICAL CEILING TILE

RESILIENT CHANNEL FRAMING W/ GYPSUM BOARD – PAINT

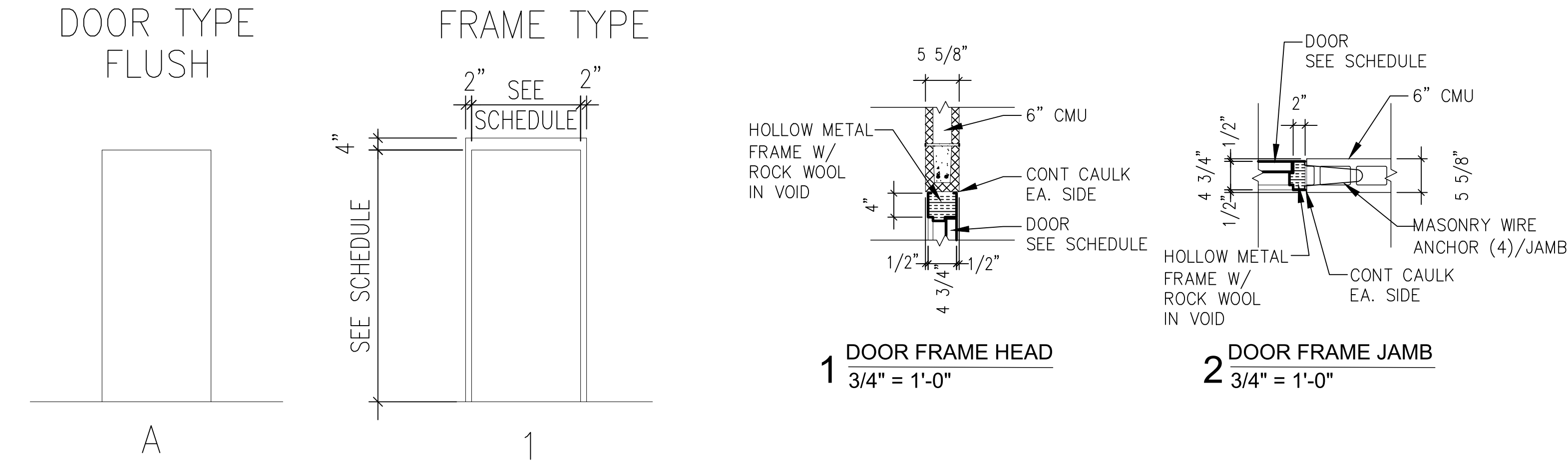
FINISH SCHEDULE NOTES

- A
- B
- C
- D
- SOLID SURFACE SHOWER WALLS

SOLID SURFACE CUSTOM SHOWER BASE

SHOWER CEILING TO BE SOLID SURFACE ON RESILIENT CHANNEL FRAMING W/(2) LAYERS OF GYP BD

SEE REFLECTED CEILING PLAN FOR ADDITIONAL INFO



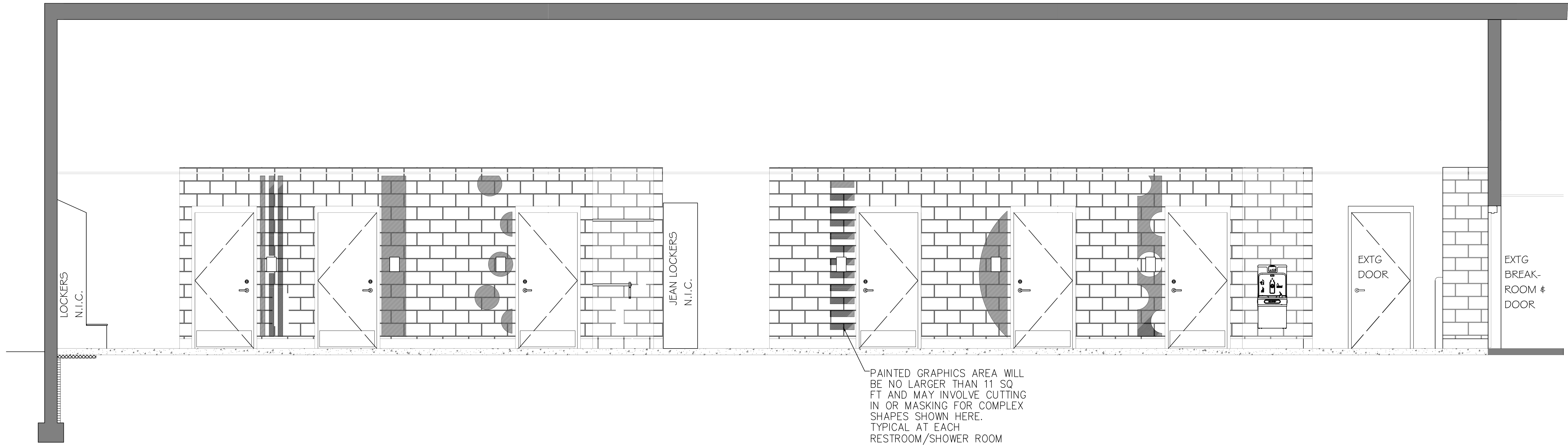
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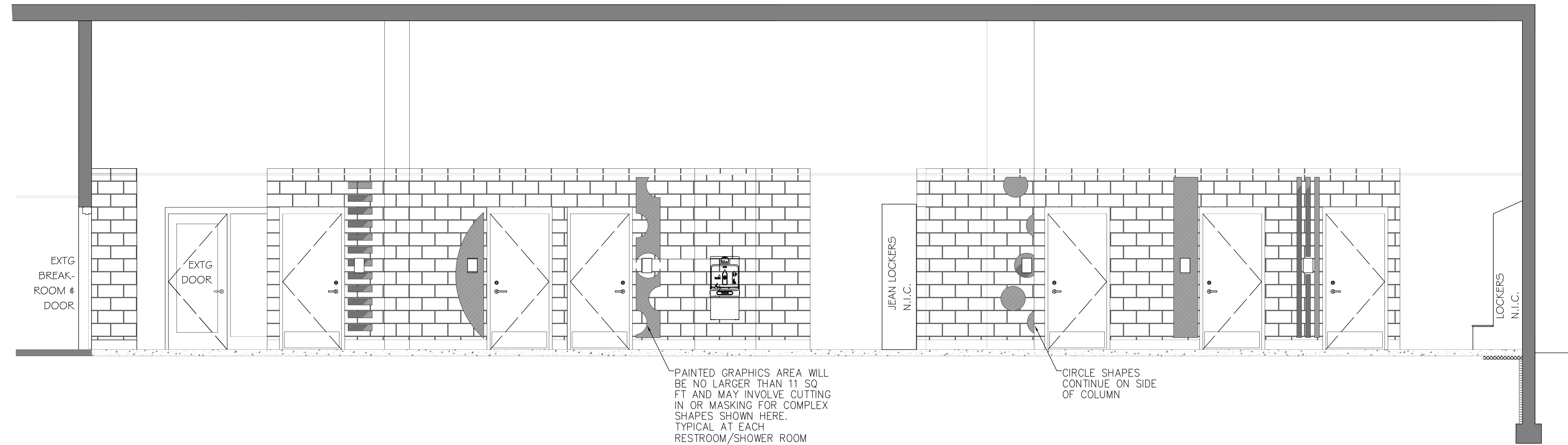
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DOOR & FINISH
SCHEDULES

A6.1



1 WEST WALL PAINT DESIGN
SCALE: 3/8" = 1'-0"



2 EAST WALL PAINT DESIGN
SCALE: 3/8" = 1'-0"



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WALL DESIGNS

A6.2

Sheetlist Fire Alarm	
Sheet Number	Sheet Name
FA 001	Fire Alarm



① FA - Level 1 $3/16" = 1'-0"$

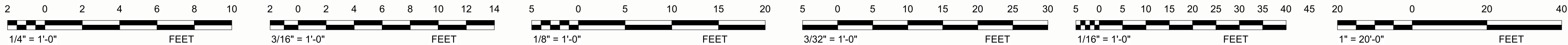
Fire Alarm per NFPA 72 (28 46 00 - Fire Detection and Alarm)			
Level	Number	Name	Fire Alarm Type
Level 1	138	Janitor	Existing Alarm (to remain)
Level 1	138	Passage	Heat, Smoke, Annunciation
Level 1	139	Locker	Heat, Smoke, Annunciation
Level 1	139	Locker East	Heat, Smoke, Annunciation
Level 1	139A	Showroom ADA	Heat, Smoke, Annunciation
Level 1	139B	Restroom ADA	Heat, Smoke, Annunciation
Level 1	139C	Restroom ADA	Heat, Smoke, Annunciation
Level 1	139D	Showroom ADA	Heat, Smoke, Annunciation
Level 1	139E	Restroom	Heat, Smoke, Annunciation
Level 1	139F	Restroom	Heat, Smoke, Annunciation
Level 1	139G	Showroom	Heat, Smoke, Annunciation
Level 1	139H	Restroom ADA	Heat, Smoke, Annunciation
Level 1	139I	Restroom	Heat, Smoke, Annunciation
Level 1	139J	Showroom	Heat, Smoke, Annunciation
Level 1	139K	Restroom ADA	Heat, Smoke, Annunciation
Level 1	139L	Restroom	Heat, Smoke, Annunciation
Level 1	157	Garage (not in project)	Existing Alarm (to remain)
Level 1	A1	Adiabatic (not in project)	Existing Alarm (to remain)
Level 1	A2	Adiabatic (not in project)	Existing Alarm (to remain)

- | | | |
|----|---|--|
| A. | Scope: | Provide Fire Alarm system with necessary equipment, apparatuses, controls, completely coordinated with other disciplines. |
| | Contractor shall provide all required detailed design and shall meet all permitting requirements. These plans are diagrammatic and schematic only. Work shall be in accordance with AHJ, local codes, ordinances and including, but not limited to BSIF 907, NFA 70, 72, and 90A. | |
| B. | Coordination: | See HVAC plans for smoke detector locations. |
| | 1. | Minimize interruption of service to areas outside the work area. |
| C. | 2. | Ensure complete fire protection in existing buildings at all time. |
| | 3. | Review electrical sheets for control requirements. |
| D. | 4. | Coordinate with the Sprinkler contractor and incorporate their Demolition. |
| | 5. | Where Fire Alarm devices are removed, all associated conduit and wiring shall be removed unless needed for new installation. |
| E. | 6. | All boxes that remain in place shall receive a cover plate. |
| | Installation: | |
| F. | 1. | Flush-mount all pull stations 42" AFF to center of device unless noted otherwise. |
| | 2. | Flush-mount notification devices 50" AFF to top of device or 6" below ceiling (whichever is lower) unless noted otherwise. |
| G. | Rebuild Installation: | |
| | 1. | Demolish all to be replaced systems including detectors, panels, and annunciators. |
| H. | 2. | Unless noted otherwise, install new system in same location as old system. |
| | 3. | Add any additional devices required by AHJ even if the old system did not require them. |

2 General Fire Alarm Notes

Fire Alarm (FA) Project Scope

- A. Demolish existing FA Elements in work area
- B. Install new FA system
 - 1. Obtain AHJ approval and meet all AHJ requirements
 - 2. Tie new system into existing system
 - a. Existing FA panel is located in main entrance area
- C. Space above ceiling is an Air Handler return plenum.



Client:
Engineering

Location:
1600 Emil St., Madison
WI 53711

Contract: 9659
Project: 14122

Engineering
Operations Facility
Locker Room
Renovation (Bid)

[illegible]

Project North

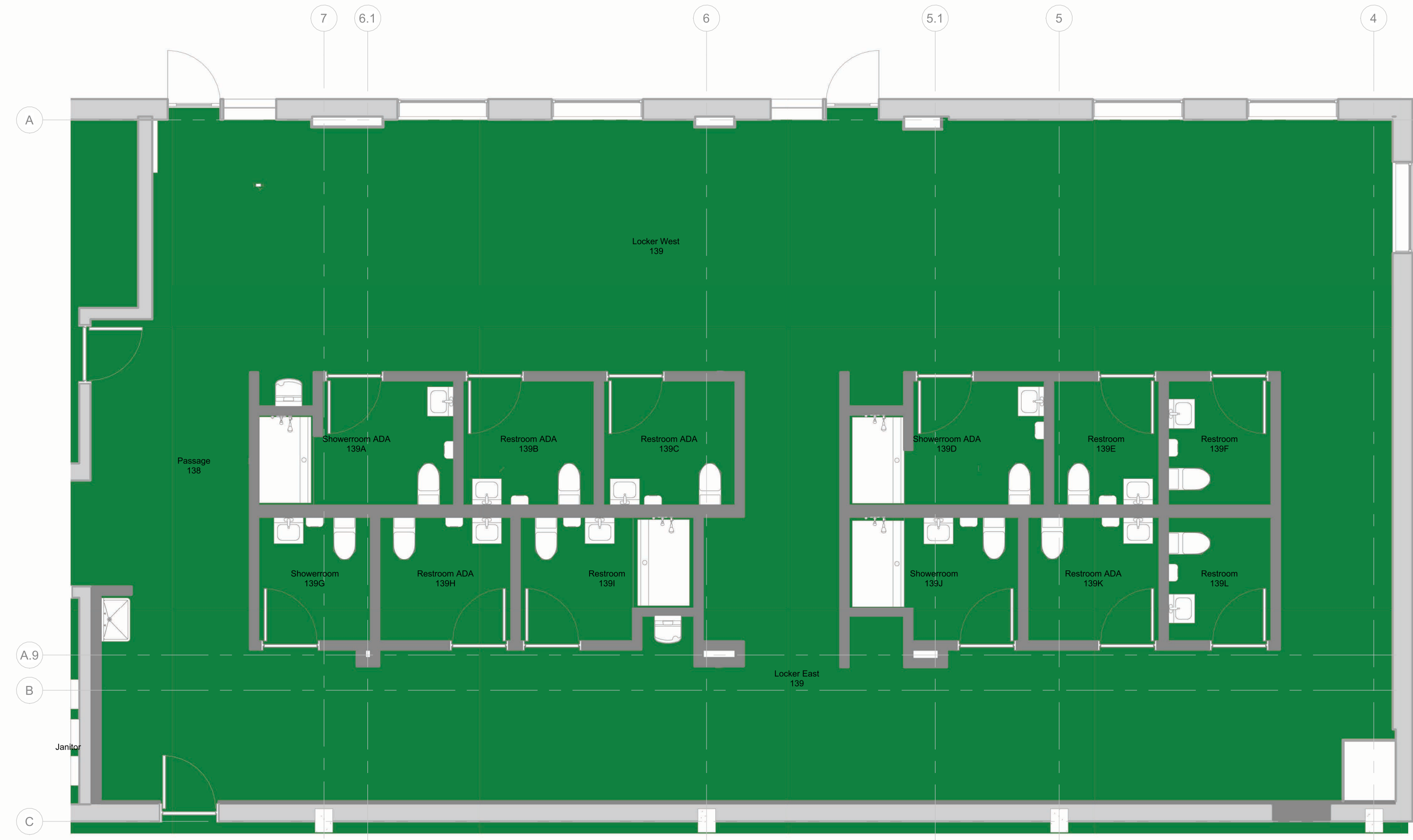


Fire Alarm

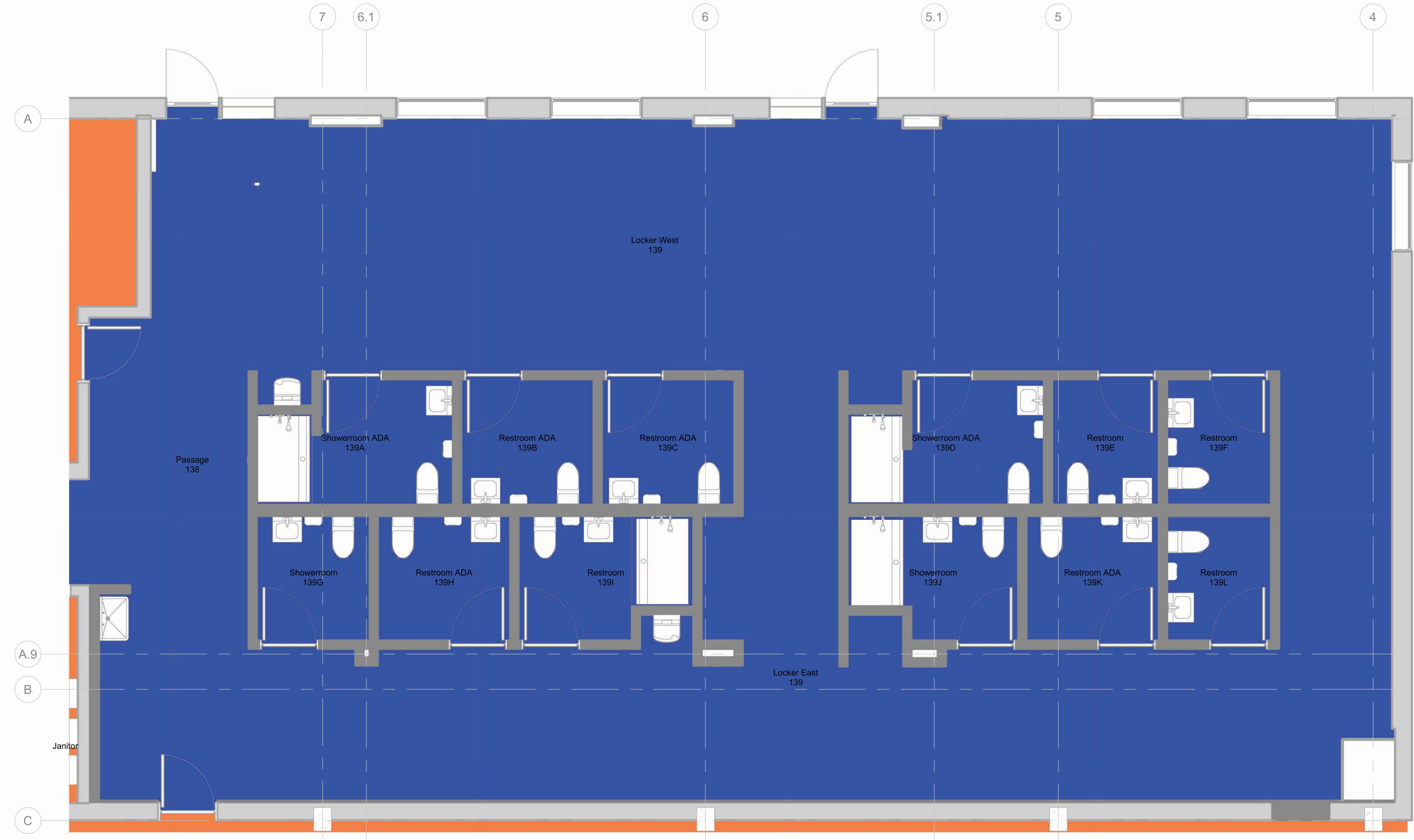
FA 001

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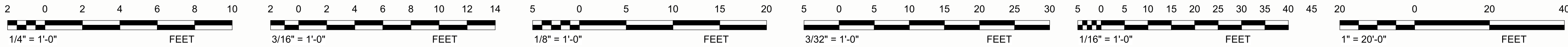
Sheetlist Fire Suppression	
Sheet Number	Sheet Name
FX 001	Fire Suppression



① FX - Hazard Classification - Level 1 $3/16" = 1'-0"$



② FX - Sprinkler Types - Level 1 Copy 1 3/16" = 1'-0"



Hazard Classifications

■ Light Hazard - Office

Hazard Classifications per NFPA 13 (21 10 00 - Water-Based Fire-Suppression Systems)							
Level	Number	Name	Area	Hazard Description	Hazard Classification	Comment	Sprinkler System Type
Wet - Existing (to remain)							
Level 1		Janitor	58 R'	Light Hazard - Office	Light Hazard		Wet - Existing (to remain)
Level 1	157	Garage (not in project)	763 R'	Light Hazard - Office	Light Hazard		Wet - Existing (to remain)
Level 1	A1	Adiabatic (not in project)	143 R'	Light Hazard - Office	Light Hazard		Wet - Existing (to remain)
Level 1	A2	Adiabatic (not in project)	29 R'	Light Hazard - Office	Light Hazard		Wet - Existing (to remain)
Wet - New							
Level 1	138	Passage	408 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139	Locker West	830 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139	Locker East	692 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139A	Showroom ADA	71 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139B	Restroom ADA	53 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139C	Restroom ADA	53 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139D	Showroom ADA	71 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139E	Restroom	43 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139F	Restroom	42 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139G	Showroom	45 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139H	Restroom ADA	53 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139I	Restroom	63 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139J	Showroom	61 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139K	Restroom ADA	53 R'	Light Hazard - Office	Light Hazard		Wet - New
Level 1	139L	Restroom	42 R'	Light Hazard - Office	Light Hazard		Wet - New

General Fire Suppression Notes

1. Plans will show areas in scope, type of fire suppression, and specific considerations.
2. All areas in scope will be protected by fire suppression for all other project areas not included by AHJ and all applicable NFPA.
3. Install all areas requiring fire suppression. Contractor shall furnish materials themselves with existing conditions and new equipment installed as per the following:
 - a. Ducts, equipment
 - b. Machines
 - c. Walkways
 - d. Overhead Doors
- B. Installation:
 1. Unless noted otherwise, install piping in open areas close to building structure and avoid free-air installation.
 2. Coordinate with other trades. Generally the fire sprinkler piping has lower routing priority than ducts, and other pipes (especially sloped pipes).
 3. Demolish all to be replaced systems including pipes, fittings, and apparatus.
 4. Unless noted otherwise, install new system in same location as old.
 5. Add any additional devices required by AHJ even if the old system did not require them.

3) General Fire Suppression Notes

Fire Suppression Project Scope
A. Demolish existing fire suppression system.

- A. Demolish existing fire suppression in work area
- B. Install new FA system
 1. Obtain AHJ approval and meet all AHJ requirements
 2. Tie new system into existing system
- C. Space above ceiling is an Air Handler return plenum.

Designed by:
City of Madison
Facilities Management
City-County Building, Room 115
210 Martin Luther King Jr. Boulevard
Madison, WI 53703



Client:
Engineering

Location:
1600 Emil St., Madison
WI 53711

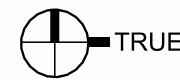
Contract: 9659
Project: 14122

Engineering
Operations Facility
Locker Room
Renovation (Bid)

Revisions

[illegible]

Project North



Fire Suppression

FX 001

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Sheetlist Plumbing	
Sheet Number	Sheet Name
P 001	General Plumbing
P 100	Plumbing Layout
P 110	3D Sanitary and Vent
P 120	3D Water
P 200	Schedules

Plumbing Project Scope:

- A. Demolish all plumbing in the scope area
 - 1. Re-use 4" underground pipe required for new plumbing
- B. Install all new plumbing
 - 1. Connect to existing services
- C. Space above ceiling is an Air Handler return plenum

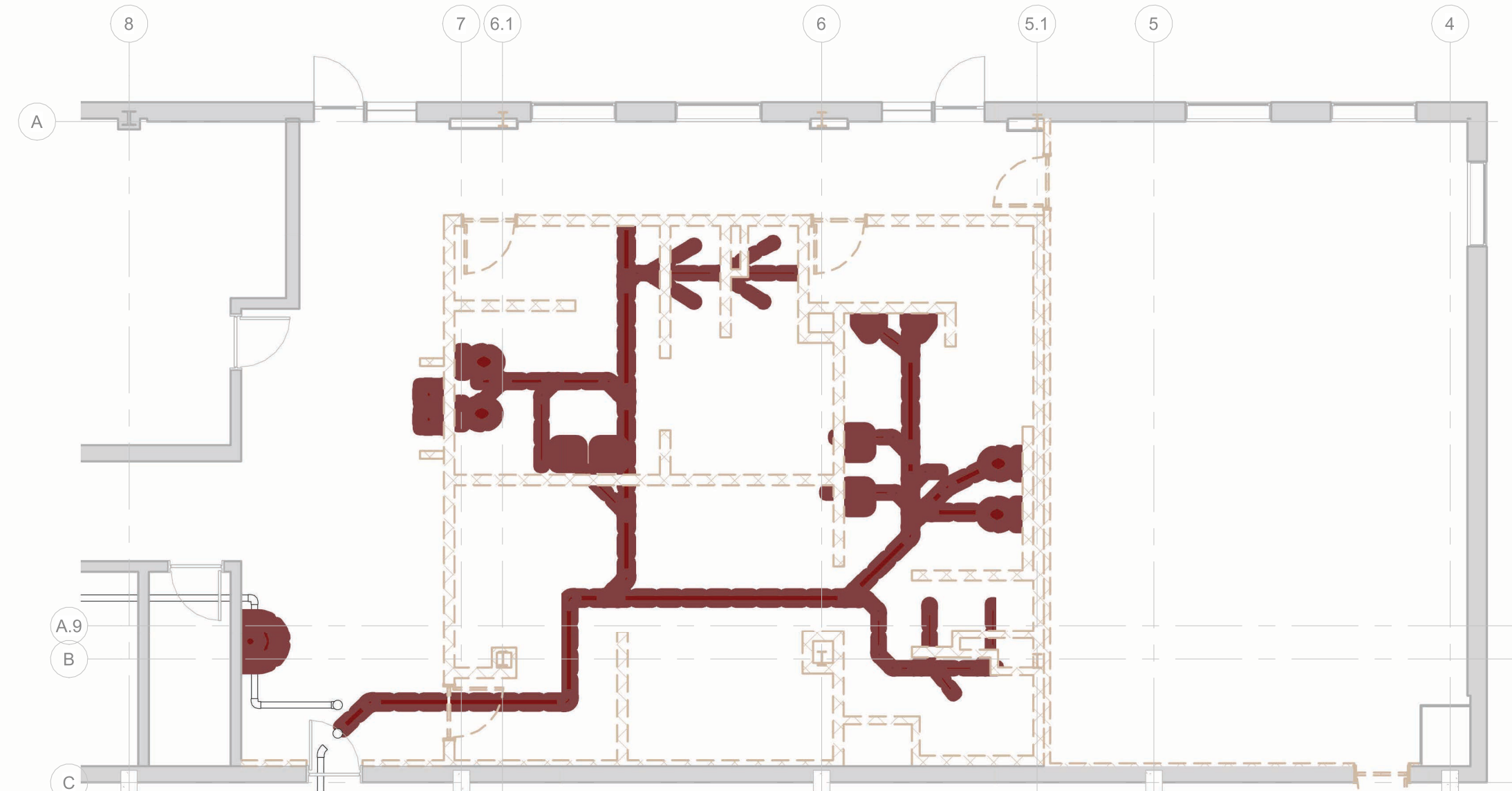
A.	Codes:	1.	Contractor shall meet all applicable codes and standards.
		2.	Applicable codes include, but may not be limited to Wisconsin SPS 380 - 387
		3.	Meet all standards related to potable water safety and environmental protection
B.	Coordination:	1.	Coordinate with structural construction. Pipes, especially sanitary and vent, shall have priority.
		2.	Structural elements and other obstacles may require layout modification. Contractor shall review all trades' plans and discuss with all trades before ordering and installing piping. Special attention is required for pipes and elements requiring sloped installation.
		3.	Refer to architectural plans for exact location, and height of fixtures. ADA and other requirements may require deviation from Plumbing plans.
		4.	Coordinate all roof penetrations with all relevant trades including, but not limited to, roofer, mechanical, roof equipment installer.
		5.	Coordinate exact location of floor drains with all related trades including, but not limited to, HVAC contractor and equipment installers.
C.	Design Intent	1.	Plans will show proposed layout, slopes, fittings and sizes. Information is diagrammatic and may not reflect specific fittings and other elements accurately. Deviations may include, but are not limited to, actual radii, type of fitting, pipe location, and other properties.
		2.	Contractor is responsible for code-compliant installation meeting the design intent.
		3.	Contractor may propose deviations that meet code and design intent.
		4.	Unless noted otherwise, all drain pipe 2" and smaller shall be installed at 1/4"ft and all 3" and larger shall be installed at 1/8"ft.
		5.	Invert elevations and existing pipe sizes are may not be accurate. Verify in field before starting work.
		6.	Provide all insulation per specifications and code requirements
D.	Demolition:	1.	Demolition plans are schematic and will generally show systems and equipment to be removed.
		2.	Contractor shall demolish all pipes, parts, insulation, and equipment not needed for new systems. Remove pipe back to next branch that is to remain. Install caps or plugs on openings. Avoid dead-legs.
		a.	Pipe in CMU may be abandoned in place
		3.	Where fixtures are removed, also remove all associated rough-in piping.
		4.	Patch existing roofs, walls, and floors disturbed by this work.
E.	Installation:	1.	Contractor shall install to meet all codes, achieve design intent and ensure other trades' work related to plumbing is not hindered by Plumbing work.
		2.	Install all interior horizontal storm, waste, and vent piping as high as possible. All horizontal piping at ceilings shall be installed within joist space unless noted otherwise.
		3.	Traps at sinks and lavatories shall be installed straight back to the wall. All piping offsets shall be within the wall.
		4.	Locate all vent terminals at least 10' from any outside air intakes or operable windows or doors.
		5.	All valves, shock arrestors or other maintainable equipment shall be installed accessible. Provide access panels.
		6.	Provide Reduced Pressure Backflow prevention devices where required.
F.	Retrofit/Remodel:	1.	Connect new plumbing systems into existing systems.
		2.	Connection points are shown diagrammatically only. Contractor has to design detail of connection. Existing connection points may not have been accessible during design and the exact location may differ from design plans.
G.	Cleanouts:	1.	Contractor shall provide all required cleanouts, even if not shown.
		2.	Install cleanouts at base of all roof conductors and waste stacks.
		3.	Install where easily accessible. Coordinate locations with all equipment, cabinets etc.
		4.	

Pipe Service Types:

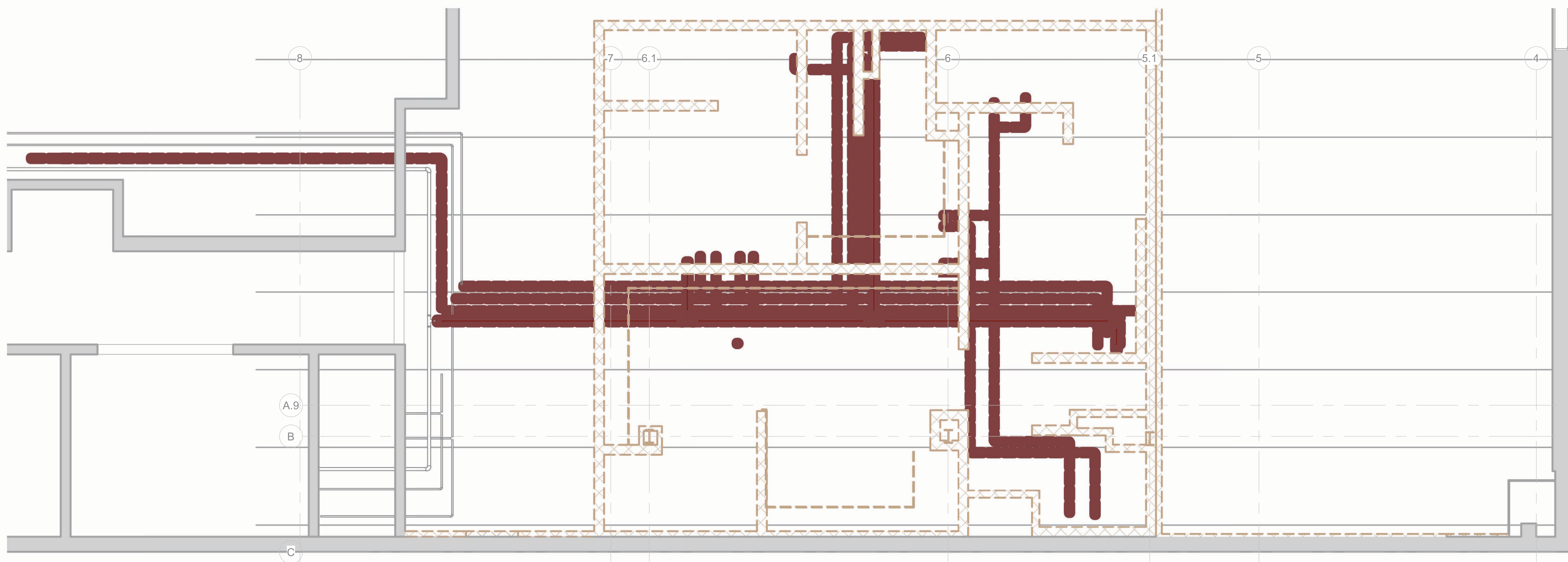
- Hot Domestic Water: —————
- Hot Return: - - - - -
- Cold Domestic Water: —————
- Sanitary: —————
- Vent: —————

1 General Plumbing Notes

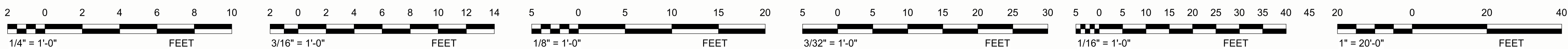
System Size:
Hot Water Supply: 20 FU (14 gpm)
Cold Water: 59.5 FU (32 gpm)
Sanitary: 121 FU (4")



② PD - Level 1 - Below Grade 1/8" = 1'-0"



③ PD Ceiling - Level 1 3/16" = 1'-0"



Client:
Engineering

Location:
1600 Emil St., Madison
WI 53711

Contract: 9659
Project: 14122

Engineering
Operations Facility
Locker Room
Renovation (Bid)

Revisions

[illegible]

Project North



General Plumbing

P 001


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P 110

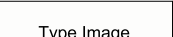
Keynote Legend	
1. Keynotes can apply to multiple similar situations, even if not each element or situation is tagged.	
Key Value	Keynote Text
1	Ten sanitary pipes into existing under ground sanitary pipe. The actual layout of existing pipe may differ from shown.
2	Ten 12" vent header (400 gpm) to existing 30" vent and cold penetrations. Event layout of existing vent penetrations is not shown.


[illegible]


WC Schedule (22 40 00 - Plumbing Fixtures)											
1. Select lever to be on non-wall side of tank.											
Type Mark	Description	ADA Compliant	CFWFU	WFU	Pressure Required	Manufacturer	URL	Model	Type Image	Type Remark	Estimated Count
WC-T-ADA	Tank Toilet, Two-Piece, Skirted	Yes	3	6	20 psi	American Standard	www.americanstandard-us.com	Aspirations 252AA999 w/Tank - White		Seat 5901.100SG - White	12


Lavatory Schedule (22 40 00 - Plumbing Fixtures)																	
1. Refer to Architectural Plans for exact mounting Height. 2. Provide Power supply for Faucet, Coordinate with Electrical Contractor.																	
Type Mark	Description	ADA Compliant	CW/FU	HW/FU	TW/FU	WFU	Pressure Required	Lavatory			Faucet				Type Remark	Estimated Count	
								Manufacturer	URL	Model	Image	Manufacturer	Model	URL			Image
LAV-W-ADA	Lavatory, Viscous White, Single Hole	Yes	0.5	0.5	1	1	20 psi	American Standard	www.americanstandard-us.com	Lucerne 0356		Chicago Faucets	116.122.AB.1T	www.chicago faucets.com		Install in 34 inch height or as required for ADA compliance	12



Drinking Fountains Schedule (22 40 00 - Plumbing Fixtures)															
1. Refer to Architectural Plans for exact mounting Height. 2. Provide power - coordinate with electrical contractor															
Type Mark	Description	ADA Compliant	CWFU	TWUF	WUFU	Pressure Required	Manufacturer	URL	Model	Type Image	Voltage	Electrical Apparent Power	Full Load Amps	Type Remark	Estimated Count
DF-BF-ADA	Bottle Filling Station & Cooler Non-Filtered Refrigerated	Yes	0.5	0.5	0.5	20 psi	Elkay	www.elkay.com	EZS1L6WBLK		115 V	411 VA	6 A		2

Utility Sink Schedule (22 11 00 - Facility Water Distribution)													
1. Refer to Architectural Plans for exact mounting Height.													
Type Mark	Description	ADA Compliant	CW/FU	HW/FU	TW/FU	WFU	Pressure Required	Manufacturer	URL	Model	Type Image	Type Remark	Estimated Count
US-ADA	Utility Sink, Stainless Steel, Manual Faucet	Yes	2	2	3	2	20 psi	Columbia	www.columbiasinks.com	SA1F		Mount in 35 inch height or as required to meet ADA requirements	1

Washing Machine Supply Box Schedule (22 40 00 - Plumbing Fixtures)												
1. Refer to Architectural Plans for exact mounting Height.												
Type Mark	Description	CWFU	HWFU	TWUF	WFU	Pressure Required	Manufacturer	URL	Model	Type Image	Type Remark	Estimated Count
WASHB-1	Residential Washing Machine Box with water hammer arrestors	2	2	3	4	20 psi	Oatey	www.oatey.com	38 Series		Select appropriate model for type or bottom feed and type of pipe. Select or modify model for the required mounting method and/or fire rating	2

Shower Base Schedule (22 40 00 - Plumbing Fixtures)											
1. Refer to Architectural Plans for final dimensions											
Type Mark	Description	ADA Compliant	WFU	Manufacturer	URL	Model	Nominal Width	Nominal Depth	Type Image	Type Remark	Estimated Count
SB-EO36	Solid Surface Shower Base with French Drain and integrated water channels	Yes	2	Inpro	www.inprocorp.com	Prism	5'-0"	3'-0"		Sizes are nominal. Adjust size to fit architectural requirements. Custom product may be required. Refer to Architectural details	4

Shower Schedule (22 40 00 - Plumbing Fixtures)												
1. Refer to Architectural Plans for exact mounting Height.												
Type Mark	Description	ADA Compliant	CWFL	HWFL	TWFL	Pressure Required	Manufacturer	URL	Model	Type Image	Type Remark	Estimated Count
SH-2-Head	Shower system w/ showerhead and handheld shower, transfer valve and pressure-balancing valve	Yes	2		3	45 psi	Moen	www.moencommercial.com	8342EP15			4

Floor Drain Schedule (22 40 00 - Plumbing Fixtures)								
1. Models listed indicate the design intent and aesthetics. Some floor construction types require different models. Those shall be of equal aesthetics and level of quality.								
Type Mark	Description	Manufacturer	URL	Model	Image	Size	WFU	Type Remark
FD-2	Floor Drain w/ Nickel-Bronze strainer	Zum	www.zum.com	FD2210		2"	2	Model is an example for Concrete floor. Provide equivalent model for other type of floor
FD-3	Floor Drain w/ Nickel-Bronze strainer	Zum	www.zum.com	FD2210		3"	3	Model is an example for Concrete floor. Provide equivalent model for other type of floor

Type Mark	Size	Description	Estimated Count
V-0.5	0.5"	Plumbing Valve	3
V-1	1"	Plumbing Valve	4
V-1.5	1.5"	Plumbing Valve	2
V-1.25	1.25"	Plumbing Valve	2

Type Mark	Size	Description	Estimated Count
B-0.5	0.5"	Thermostatic Balancing Valve	1
B-0.5	0.5"	Thermostatic Balancing Valve	1
B-0.5	0.5"	Thermostatic Balancing Valve	1



Client:
Engineering

Location:
1600 Emil St., Madison
WI 53711

Contract: 9659
Project: 14122

Engineering
Operations Facility
Locker Room
Renovation (Bid)

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Schedules

P 200

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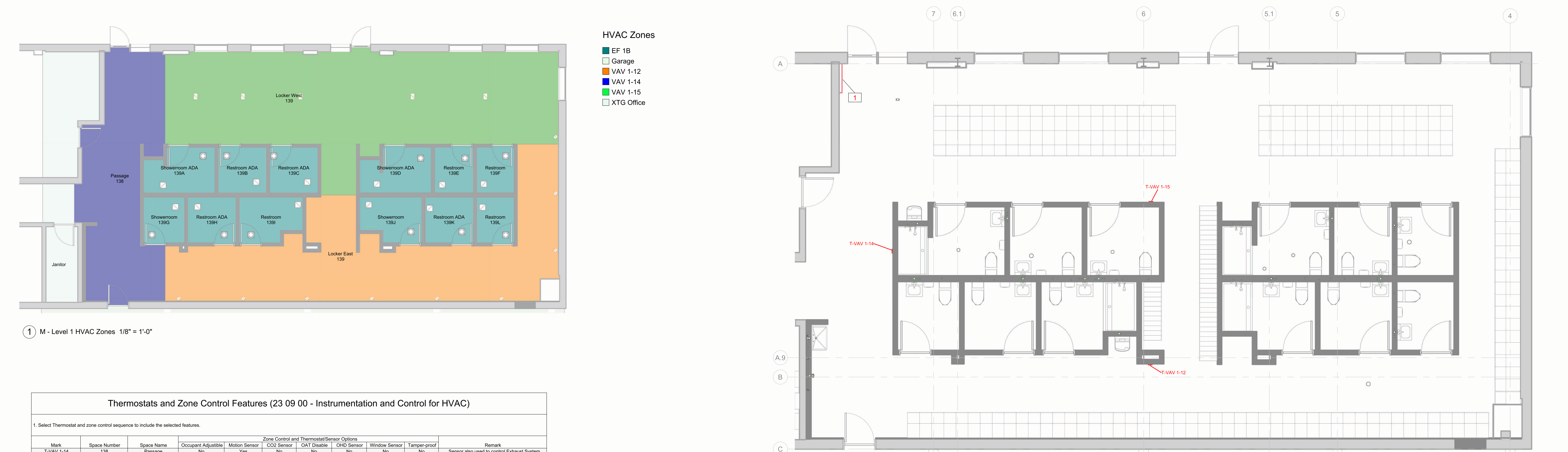
Engineering
Operations Facility
Locker Room
Renovation (Bid)

Revisions

No.	Description
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Loads and
Zoning

M 100



1 M - Level 1 HVAC Zones 1/8" = 1'-0"

2 M - Level 1 - Floor Level 3/16" = 1'-0"

Thermostats and Zone Control Features (23 09 00 - Instrumentation and Control for HVAC)

1. Select Thermostat and zone control sequence to include the selected features.

Zone Control and Thermostat/Sensor Options											Remark
Mark	Space Number	Space Name	Occupant Adjustable	Motion Sensor	CO2 Sensor	OAT Disable	OHD Sensor	Window Sensor	Tamper-proof		
T-VAV 1-14	139	Passage	No	Yes	No	No	No	No	No	Sensor also used to control Exhaust System	
T-VAV 1-12	139	Locker East	No	Yes	No	No	No	No	No	Sensor also used to control Exhaust System	
T-VAV 1-15	139	Locker West	No	Yes	No	No	No	No	No	Sensor also used to control Exhaust System	

Keynote Legend

1. Keynotes can apply to multiple similar situations, even if not each element or situation is tagged.

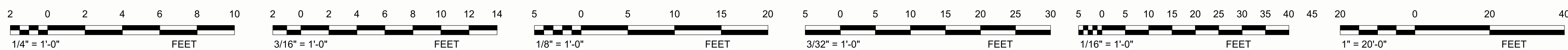
Key Value	Keynote Text
1	Re-use XTG heater. Add to Zone VAV 1-14

Calculated Space HVAC Loads

Number	Name	Area (ft²)	Condition Type	Zone	Cooling Temperature Setpoint	Heating Temperature Setpoint	Space Type (determines internal loads)	Construction Type (determines external loads)	People Loads			Assumed Internal Loads			Lighting Loads			Electrical Loads			Calculated Cooling Loads			Calculated Heating Loads												
									Occupancy Unit	Number of People	Area per Person (SF)	People Per 1000 ft² (Calculated)	Heat Load Values	Heat Gain Per Person			Base Lighting Load On	Specified Loads - User Defined			Actual Loads - Read from Lighting Fixtures in Space	Power Load Units	Power Load (W)	Power Load (W)	Actual Power Load (W)	Actual Power Load (W)	Calculated Cooling Load (Btu/h)	Calculated Cooling Load (Btu/h)	Cooling Load (Btu/h)	Space Latent Cooling Load (Btu/h)	Space Sensible Cooling Load (Btu/h)	Calculated Heating Load (Btu/h)	Calculated Heating Load per area (Btu/h-ft²)			
														Sensible (Btu/h)	Latent (Btu/h)	Total (Btu/h)		Specified Lighting Load (W)	Specified Lighting Load (W)	Specified Lighting Load (W)														Lighting Load (W)	Lighting Load (W)	Lighting Load (W)
138	Passage	408	Heated and cooled	VAV 1-14	75 °F	70 °F	00 Corridor	<Building>	By Space Type	0	0	0	By Space Type	250	200	450	By Space Type	Power Density	245	0.6	92	0.23	By Space Type	Power Density	4	0.01	5010	12.29	4,889	12	1,001 ft²	0	4,889	7,216	16	
139	Locker West	930	Heated and cooled	VAV 1-15	75 °F	70 °F	00 Locker	<Building>	By Space Type	4.6	200	5	By Space Type	250	200	450	By Space Type	Power Density	651	0.7	290	0.31	By Space Type	Power Density	93	0.1	2400	2.58	20,718	22	539 ft²	930	19,788	29,105	31	
139	Locker East	692	Heated and cooled	VAV 1-12	75 °F	70 °F	00 Locker	<Building>	By Space Type	3.5	200	5	By Space Type	250	200	450	By Space Type	Power Density	485	0.7	207	0.30	By Space Type	Power Density	68	0.1	3060	4.42	17,059	25	487 ft²	692	16,366	17,861	26	
139A	Showroom ADA	71	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.4	200	5	By Space Type	250	200	450	By Space Type	Power Density	50	0.7	37	0.52	By Space Type	Power Density	7	0.1	0	0.00	548	8	1,564 ft²	71	475	211	3	
139B	Restroom ADA	53	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.3	200	5	By Space Type	250	200	450	By Space Type	Power Density	37	0.7	28	0.52	By Space Type	Power Density	5	0.1	0	0.00	407	8	1,564 ft²	53	354	158	3	
139C	Restroom	53	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.3	200	5	By Space Type	250	200	450	By Space Type	Power Density	37	0.7	28	0.52	By Space Type	Power Density	5	0.1	0	0.00	407	8	1,564 ft²	53	354	158	3	
139D	Showroom ADA	71	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.4	200	5	By Space Type	250	200	450	By Space Type	Power Density	50	0.7	37	0.52	By Space Type	Power Density	7	0.1	0	0.00	801	11	1,061 ft²	71	730	1,328	19	
139E	Restroom	43	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.2	200	5	By Space Type	250	200	450	By Space Type	Power Density	30	0.7	28	0.65	By Space Type	Power Density	4	0.1	0	0.00	330	8	1,564 ft²	43	287	129	3	
139F	Restroom	42	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.2	200	5	By Space Type	250	200	450	By Space Type	Power Density	29	0.7	28	0.67	By Space Type	Power Density	4	0.1	0	0.00	321	8	1,564 ft²	42	279	125	3	
139G	Showroom	45	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.2	200	5	By Space Type	250	200	450	By Space Type	Power Density	32	0.7	28	0.61	By Space Type	Power Density	5	0.1	0	0.00	395	9	1,378 ft²	45	349	302	7	
139H	Restroom ADA	53	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.3	200	5	By Space Type	250	200	450	By Space Type	Power Density	37	0.7	28	0.52	By Space Type	Power Density	5	0.1	0	0.00	407	8	1,564 ft²	53	354	158	3	
139I	Restroom	53	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.3	200	5	By Space Type	250	200	450	By Space Type	Power Density	44	0.7	37	0.58	By Space Type	Power Density	6	0.1	0	0.00	485	8	1,564 ft²	63	422	187	3	
139J	Showroom	61	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.3	200	5	By Space Type	250	200	450	By Space Type	Power Density	43	0.7	37	0.60	By Space Type	Power Density	6	0.1	0	0.00	860	14	858 ft²	61	786	1,731	28	
139K	Restroom ADA	53	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.3	200	5	By Space Type	250	200	450	By Space Type	Power Density	37	0.7	28	0.52	By Space Type	Power Density	5	0.1	0	0.00	408	8	1,564 ft²	53	354	158	3	
139L	Restroom	42	Heated and cooled	EF 1B	75 °F	70 °F	00 Locker	<Building>	By Space Type	0.2	200	5	By Space Type	250	200	450	By Space Type	Power Density	29	0.7	28	0.67	By Space Type	Power Density	4	0.1	0	0.00	321	8	1,564 ft²	42	279	125	3	
157	Garage (not in project)	763	Unconditioned	Garage	100 °F	55 °F	<Building>	<Building>	By Space Type	0	0	0	By Space Type	275	275	550	By Space Type	Power Density	610	0.8	0	0.00	By Space Type	Power Density	763	1	0	0.00	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	
A1	Asbestos (not in project)	143	Unconditioned	XTG Office	75 °F	70 °F	<Building>	<Building>	By Space Type	0	0	0	By Space Type	275	275	550	By Space Type	Power Density	115	0.8	0	0.00	By Space Type	Power Density	143	1	0	0.00	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	
A2	Asbestos (not in project)	29	Unconditioned	XTG Office	75 °F	70 °F	<Building>	<Building>	By Space Type	0	0	0	By Space Type	275	275	550	By Space Type	Power Density	24	0.8	0	0.00	By Space Type	Power Density	29	1	0	0.00	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	
Grand total: 18																																				
			</																																	

① M Ceiling - Level 1 $3/16" = 1'-0"$

④ M - Level 1 - Above Ceiling 1/4" = 1'-0"



② M Section - Locker East facing East $3/16" = 1'-0"$

③ M Section - Locker West facing East $3/16" = 1'-0"$

⑤ M Section - Locker North facing North $3/16" = 1'-0"$

6 M Section - EF 1B $3/16" = 1'-0"$

7 M Section - EF 1A $3/16" = 1'-0"$

Keynote Legend

1. Keynotes can apply to multiple similar situations, even if not each element or situation is tagged.

Key Value	Keynote Text
1	Install accessible outside drywall ceiling.
2	Insulate up to AHU/Fan/Control Damper.
3	Connect VAV ducting into existing supply duct.
4	Connect duct into existing exhaust tower. Re-use or create plenum. Insulate up to control damper.
5	Connect to existing noise abatement with in-wall header (for duct).



Client:
Engineering

Location:
1600 Emil St., Madison
WI 53711

Contract: 9659
Project: 14122

Engineering
Operations Facility
Locker Room
Renovation (Bid)

Revisions

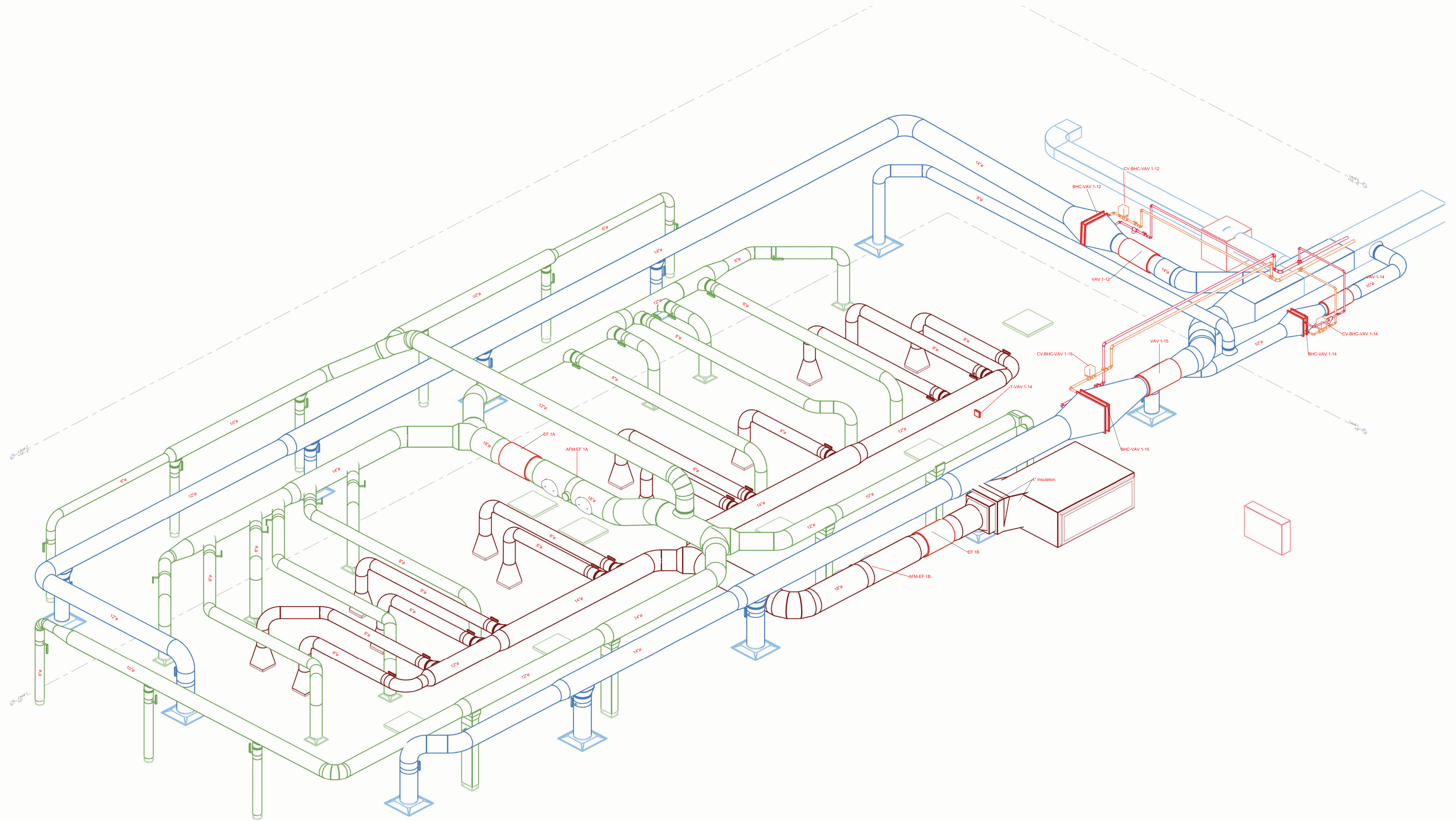
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Project North



HVAC Layout

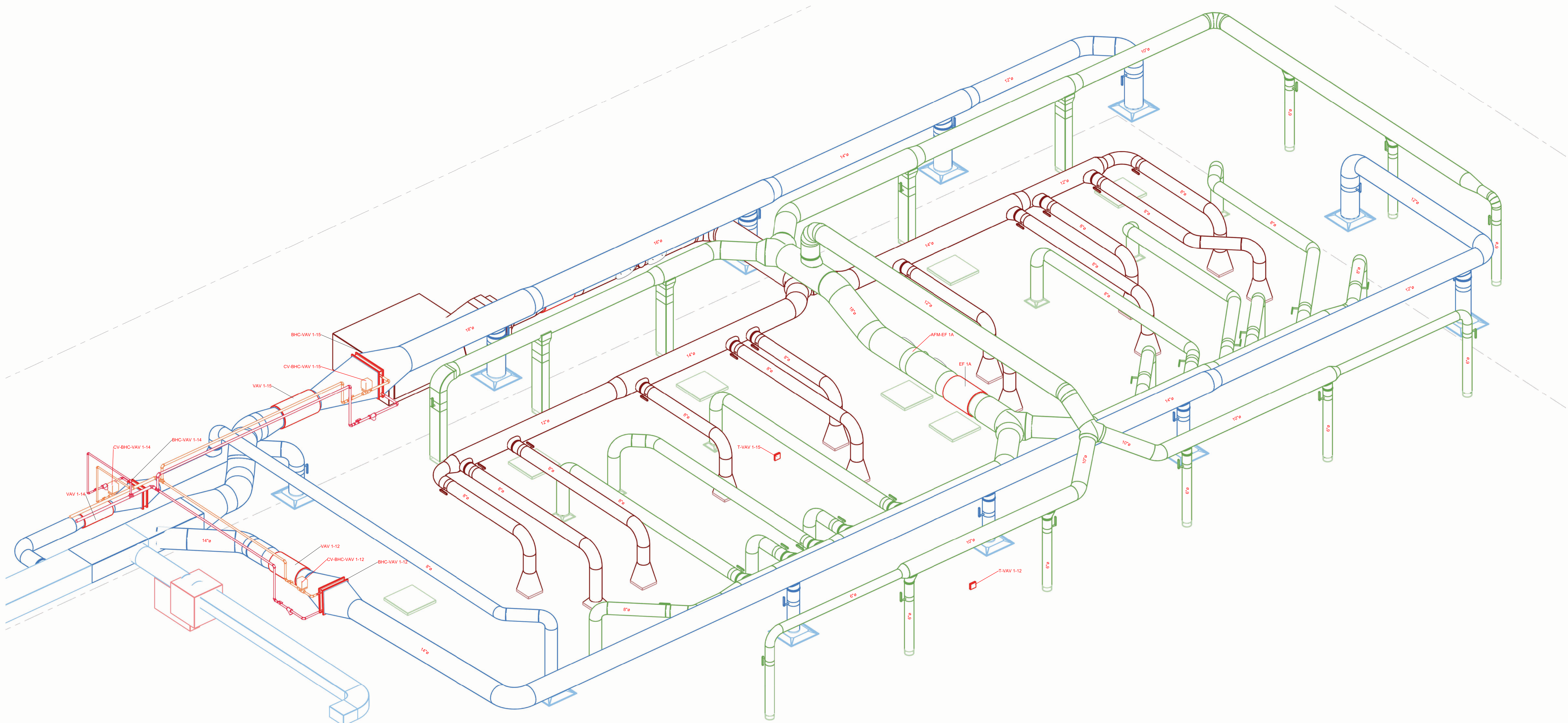
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Engineering
Operations Facility
Locker Room
Renovation (Bid)

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① M 3D - from South East

Diffusers, Registers and Grilles (23 37 00 - Air Outlets and Inlets)							
Type Mark	Description	Neck Size	Manufacturer	URL	Model	Type Image	Type Remark
DSP-12x12-08	Diffuser, Square Plaque, Steel	8"ø	Price Industries	www.priceindustries.com	SPD		
DSP-24x24-08	Diffuser, Square Plaque, Steel	8"ø	Price Industries	www.priceindustries.com	SPD		4
DSP-24x24-10	Diffuser, Square Plaque, Steel	10"ø	Price Industries	www.priceindustries.com	SPD		2
DSP-24x24-12	Diffuser, Square Plaque, Steel	12"ø	Price Industries	www.priceindustries.com	SPD		5
GEG-12x12	Grille, Egg Crate, Angled Core, Aluminum	12"x12"	Price Industries	www.priceindustries.com	85		12 Provide integrated plenum with round inlet and installation frame as required
GEG-24x24	Grille, Egg Crate, Angled Core, Aluminum	24"x24"	Price Industries	www.priceindustries.com	85		7 Provide integrated plenum with round inlet and installation frame as required
GLO-06	Exhaust from Locker	6"ø					9 Integrate into Locker Plenum
GLO-08x10	Exhaust from Locker	8"x10"					5 Integrate into Locker Plenum

Balancing Dampers (23 31 00 - HVAC Duct and Casings)						
Type Mark	Description	Width	Height	Est. Count	Specification	
BD-RO	Balancing Damper - Round	6"	6"	9	23 31 00 - HVAC Duct and Casings	
BD-RE	Balancing Damper - Rectangular	6"	10"	5	23 31 00 - HVAC Duct and Casings	
BD-RO	Balancing Damper - Round	8"	8"	27	23 31 00 - HVAC Duct and Casings	
BD-RO	Balancing Damper - Round	10"	10"	2	23 31 00 - HVAC Duct and Casings	
BD-RO	Balancing Damper - Round	12"	12"	5	23 31 00 - HVAC Duct and Casings	

Control Dampers (23 31 00 - HVAC Duct And Casings)				
Mark	System Name	Description	Width	Height
CD-EF 1B	EF 1B	Rectangular Control Damper - Insulated	18"	18"

Booster Heating Coils (23 82 00 - Convection Heating and Cooling Units)																					
Mark		Description	Construction				Pipe Size	Weight	Air				Liquid						Special Features	Type Remark	Specific Remark
			Width (Length)	Height	Depth				Airflow	External Static Pressure	EAT	LAT	Heat Output	Flowrate Liquid	Fluid	Pressure/ud Liquid	EWT	LWT			
BHC-VAV 1-12		Hot Water Coil	19.5"	16.5"	3"	1/2"	31 lbm	800 CFM	0.15 in-wg	60 °F	97 °F	31,700 Btu/h	2.2 GPM	Water	3.5 RH2O	140 °F	110 °F	125in, 2-row			
BHC-VAV 1-14		Hot Water Coil	13.5"	12"	3"	1/2"	20 lbm	275 CFM	0.09 in-wg	60 °F	98 °F	10,600 Btu/h	0.7 GPM	Water	0.3 RH2O	140 °F	110 °F	125in, 2-row			
BHC-VAV 1-15		Hot Water Coil	25.5"	19.5"	3"	3/4"	36 lbm	1,400 CFM	0.17 in-wg	60 °F	95 °F	52,200 Btu/h	3.2 GPM	Water	2.7 RH2O	140 °F	110 °F	125in, 2-row			

VAV Terminals (23 36 00 - Air Terminal Units)														
Mark	Manufacturer	Model	Size	Description	System Name	Insulated	Design Pressuredrop	Weight	Actual Terminal Flow (HIDEI)	Cooling Flow	Heating Flow	Minimum Flow	Type Remark	Specific Remark
VAV 1-12	Accutrol	AVT4000-12	12" Round	VAV Airvalve	VAV 1-14	Yes	0.107 in-wg	16 lb	910 CFM	910 CFM	800 CFM	400 CFM		Elevated min. flow due to exhaust fan operation
VAV 1-14	Accutrol	AVT4000-08	8" Round	VAV Airvalve	VAV 1-14	Yes	0.11 in-wg	12 lb	275 CFM	325 CFM	275 CFM	100 CFM		Elevated min. flow due to exhaust fan operation
VAV 1-15	Accutrol	AVT4000-14	14" Round	VAV Airvalve	VAV 1-14	Yes	0.112 in-wg	20 lb	1,400 CFM	1,100 CFM	1,400 CFM	400 CFM		Elevated min. flow due to exhaust fan operation

Air Flow Meters (23 09 00 - Instrumentation And Control For HVAC)							
Mark	Description	System	Width	Height	Enclosure	Type Remark	Specific Remark
AFM-EF 1A	Air Flow Meter - Round	EF 1A	18"	18"			
AFM-EF 1B	Air Flow Meter - Round	EF 1B	18"	18"			

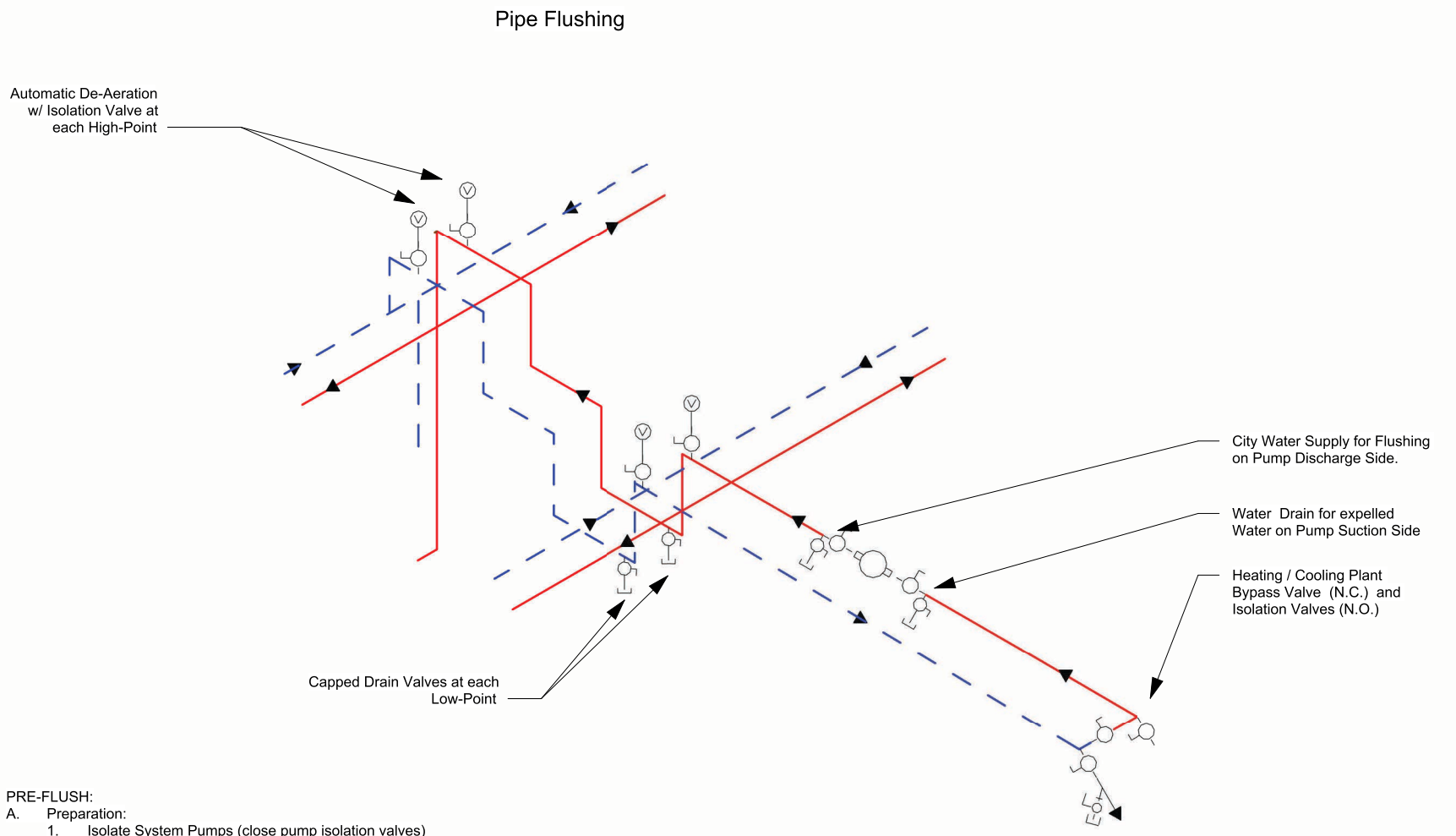
Access Doors (23 31 00 - HVAC Duct And Casings)				
Type Mark	Description	Width	Height	Est. Count
ADRO-18x12	Oval Access Door for Round/Oval Ducts	18"	12"	4

Fans (23 34 00 - HVAC Fans)																		
Mark	System Name	Description	Space Name	Space Number	Manufacturer	URL	Fan											
							Model	Model Addr	Airflow	Static Pressure	Fan Type	Design Fan RPM	Brake Horsepower	FEI	Motor Type	Horsepower	Voltage	Poles
EF 1A	EF 1A	Axial Fan (Mixed Flow)	Locker East	139	Greenheck	www.greenheck.com	QED-12-100		1560 CFM	0.75 in-wg	Direct Drive Mixed Flow	1648	0.39 hp	1.65	ECM	1 hp	480 V	3
EF 1B	EF 1B	Axial Fan (Mixed Flow)	Locker West	139	Greenheck	www.greenheck.com	QED-12-100		1680 CFM	0.75 in-wg	Direct Drive Mixed Flow	1711	0.39 hp	1.62	ECM	1 hp	480 V	3

Isolation Valves (23 20 00 - HVAC Piping and Pumps)			
Type Mark	Description	Size	Est. Count
VS-0.5"	Ball Valve Soldered	1/2"	2
VS-0.75"	Ball Valve Soldered	3/4"	2
VS-1"	Ball Valve Soldered	1"	2

Control Valves (23 09 00 - Instrumentation and Control for HVAC)					
Mark	Description	Flow	Failure Mode	Type Remark	Specific Remark
CV-BHC-VAV 1-12	Control Valve - Pressure Independent	2.2 GPM	Last Position		
CV-BHC-VAV 1-14	Control Valve - Pressure Independent	0.7 GPM	Last Position		
CV-BHC-VAV 1-15	Control Valve - Pressure Independent	3.2 GPM	Last Position		

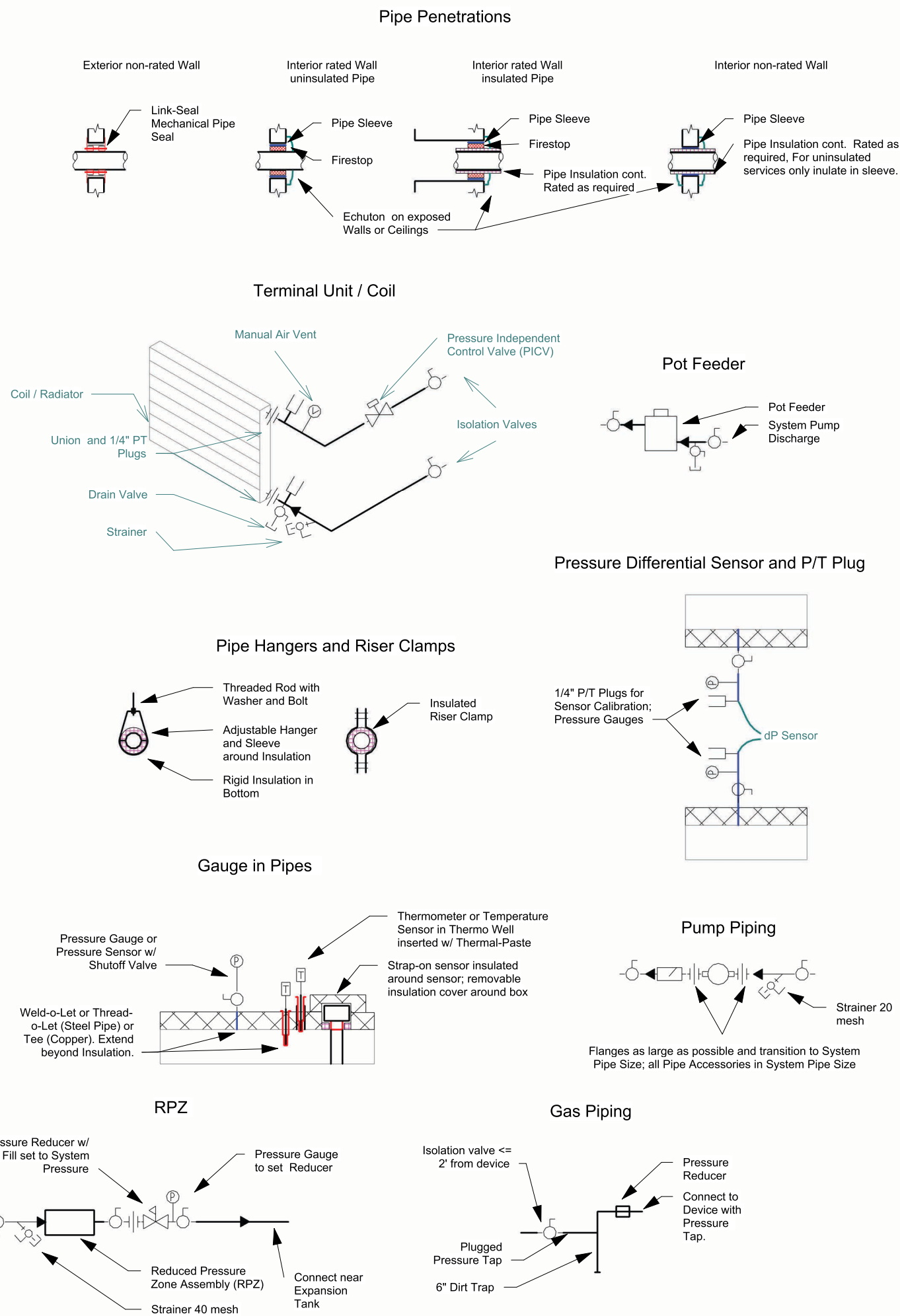
Pipe Accessories (23 20 00 - HVAC Piping and Pumps)			
Type Mark	Description	Size	Count
SS-0.5"	Strainer Y - Soldered	0.5"	1
SS-0.75"	Strainer Y - Soldered	0.75"	2
SS-1"	Strainer Y - Soldered	1"	1



- PRE-FLUSH:
- A. Preparation:
1. Isolate System Pumps (close pump isolation valves)
 2. Open at Control valves and remove pressure-independent cartridges
 3. Connect City Water (line pipe size or as large as City water is available) downstream of system Pump. Connect suction side of pumps to sewer (same size as supply). Note that system with pumps upstream of the plant (chiller or boiler) still connect the same way seen from the pumps (city water on discharge side and drain on suction side).
 4. Isolate and bypass plant (close isolation valves, open bypass valve).
 5. Close all coil and terminal device isolation valves; open plant bypass valves.
 6. Close de-aerator isolation valves.
- B. System Flushing:
1. Open all drain valves in supply line. Close each valve after 10 minutes of high rate of clear discharge.
 2. Open all coil and terminal supply (inlet) isolation valves and respective flush or strainer flush valves. Keep return (outlet) isolation valves closed. Before opening isolation valves ensure the design strainers are installed. Close each flush valve after 10 minutes of high rate of clear discharge. Remove, clean, and re-insert each strainer.
 3. Open all drain valves in return line.
 - a. Open one coil or terminal return (outlet) isolation valve. Close after the nearest flush valve in return line discharged clear water for 10 minutes. If the devices are small enough to restrict overall flow, open multiple zones for flushing while keeping flow in each device high enough to flush out dirt.
 - b. Continue with additional valves until all zones are clear.
 - c. Open all zone isolation valves and close return line drain valves after 10 minutes of clear discharge. Start closing drain valves at far end of system and move towards system pumps.
- C. Plant Flushing:
1. Close the plant bypass valve.
 2. Ensure the design strainer is installed in each boiler or chiller's return line.
 3. Open the return (inlet) isolation valve and the drain valve or strainer flushvalve. Close each flush valve after 10 minutes of high rate of clear discharge. Remove, clean, and re-insert each strainer.
 4. Open each chiller's or boiler's supply (outlet) isolation valve.
 5. Open nearest flush valve and close after 10 minutes of high rate of clear discharge.
 6. Ensure all sections were properly flushed. Engineer may add flushing requirements and procedures.
- D. Ensure all sections were properly flushed. Engineer may add flushing requirements and procedures.

- CLEANING:
- A. Preparation:
1. Open all isolation valves, operate all pumps and add cleaner per manufacturer instructions
 2. For cold systems clean for 96 hours (4 days)
 3. For hot systems circulate at 160°F for 24 hours
 4. Amend procedures to more stringent if cleaning product manufacturer recommends differently.
- POST-FLUSH:
- A. Flush after Cleaning applying same procedure as for Pre-Flush.

- WATER SYSTEMS:
- A. De-aerate entire system.
- B. Add corrosion inhibitor chemicals in bypass feeder and operate pumps with all isolation valves open (design operation) with bypass feeder in bypass mode. Frequently adjust chemicals in feeder to meet required concentration and pH levels.
- C. After 1 week close bypass-feeder bypass valves.
- GLYCOL SYSTEMS:
- A. After Post-Flush, drain all water.
- B. Estimate remaining water and add equal amount of pure glycol.
- C. Close all but one zone. Add pre-mixed glycol of the design concentration. Until system is filled and pumps can operate.
- D. Operate pumps to mix all fluid. Measure glycol concentration. If glycol concentration is below design, add pure glycol.
- E. Open and de-aerate one zone after another. Re-measure glycol concentration frequently and add pure glycol if required. Note the zones may contain some residual water that could dilute glycol.
- F. De-aerate entire system.
- G. Operate system with all zones open and adjust glycol concentration if required. Allow glycol concentration to be 5% design concentration (no dilution required). Completely fill fillstation with pre-mixed glycol.



1 Piping Details and Flushing

Designed by:
City of Madison
Facilities Management
City-County Building, Room 115
210 Martin Luther King Jr. Boulevard
Madison, WI 53703



Client:
Engineering

Location:
1800 Emil St., Madison
WI 53711

Contract: 9659
Project: 14122

Engineering
Operations Facility
Locker Room
Renovation (Bid)

Revisions

No.	Description
-----	-------------

Schedules

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Electrical Project Scope:

- Space above ceiling is an Air Handler return plenum. All devices and installations need to be plenum-rated.
- Demolish all equipment in Locker room area inc. removal of old circuits equipment in janitor's room.
- Install all new lighting, power and equipment as shown on all trade plans.
- Provide emergency power from existing emergency panel
 - a. Tie into existing FA panel
 - Keep all junction boxes, relays, power packs etc. requiring access outside drywall ceiling area to allow access

- A. Space above ceiling is an Air Handler return plenum. All devices and installations need to be plenum-rated.
- B. Demolish all equipment in Locker room area inc. removal of old circuits equipment in janitor's room.
- C. Install all new lighting, power and equipment as shown on all trade plans.
- D. Provide emergency power from existing emergency panel
 - a. Tie into existing FAS panel
- E. Keep all junction boxes, relays, power packs etc. requiring access outside drywall ceiling area to allow access



- ## ② General Electrical Notes

F	Fused	Client: Engineering
FLA	Full Load Amps	
GFI	Ground Fault Interrupter	

Contract: 9659
Project: 14122

General Electrical

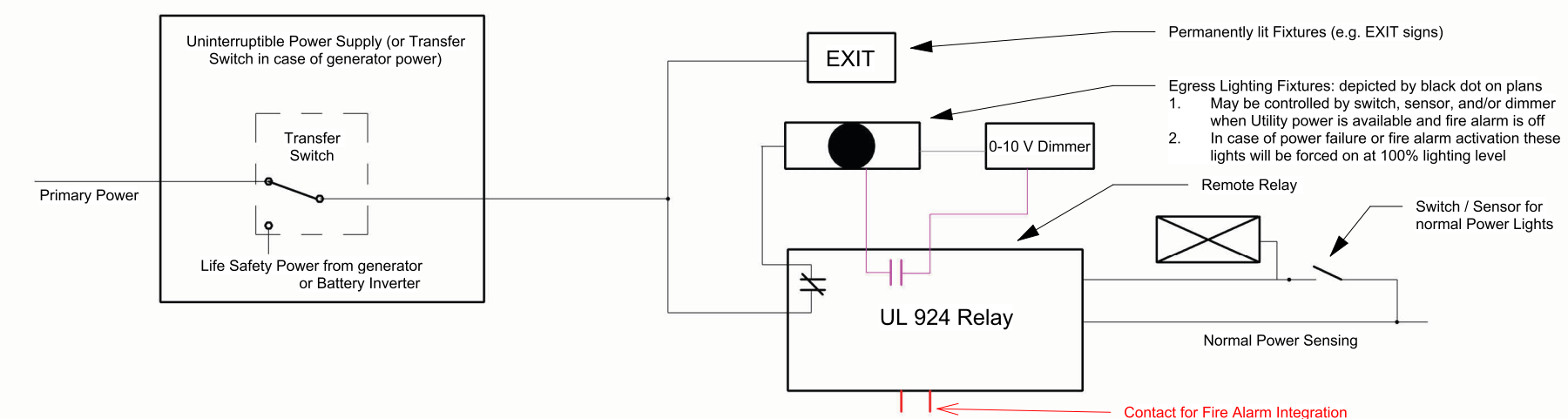
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① EL - Level 1 $3/16" = 1'-0"$

② EL Egress - Level 1 $1/8" = 1'-0"$

IECC 2015 Lighting Levels and Lighting Power Densities													
Space Number	Space Name	Area sq ft	IECC Space Type	Workplane Height ft	Min. Required Illumination fc	Actual Average Illumination fc	Illumination Goal fc	Max Allowed Power Density IECC 2015 0.7 W/ft ²	Actual Power Density W/ft ²	Actual Lighting Power Density W/ft ²	Allowed Lighting Power Density W/ft ²	Actual Lighting Power Density W/ft ²	Space Lighting Load W/ft ²
138	Locker East	692	Restroom - otherwise	2'-6"	20 fc	38.75	194%	0.58 W/ft ²	0.3	31%	67% VA	207 VA	0.06 VA/ft ²
139	Locker East	930	Restroom - otherwise	2'-6"	20 fc	37.5	187%	0.57 W/ft ²	0.3	31%	67% VA	207 VA	0.06 VA/ft ²
139	Locker East	692	Locker	2'-6"	20 fc	31.55	158%	0.75 W/ft ²	0.3	40%	51% VA	207 VA	0.06 VA/ft ²
139A	Showers Area	53	Restroom - otherwise	2'-6"	20 fc	32.1	160%	0.58 W/ft ²	0.52	53%	70% VA	27 VA	0.01 VA/ft ²
139B	Restroom Area	53	Restroom - otherwise	2'-6"	20 fc	32.05	160%	0.58 W/ft ²	0.52	53%	52% VA	28 VA	0.01 VA/ft ²
139C	Restroom Area	53	Restroom - otherwise	2'-6"	20 fc	32.55	163%	0.58 W/ft ²	0.52	53%	53% VA	29 VA	0.01 VA/ft ²
139D	Showers Area	53	Restroom - otherwise	2'-6"	20 fc	32.05	160%	0.58 W/ft ²	0.52	53%	53% VA	29 VA	0.01 VA/ft ²
139E	Restroom Area	53	Restroom - otherwise	2'-6"	20 fc	32.5	163%	0.58 W/ft ²	0.65	66%	42% VA	28 VA	0.01 VA/ft ²
139F	Showers Area	45	Restroom - otherwise	2'-6"	20 fc	35.75	178%	0.58 W/ft ²	0.61	63%	44% VA	28 VA	0.01 VA/ft ²
139G	Restroom Area	63	Restroom - otherwise	2'-6"	20 fc	32.6	162%	0.58 W/ft ²	0.61	63%	44% VA	28 VA	0.01 VA/ft ²
139H	Restroom Area	63	Restroom - otherwise	2'-6"	20 fc	39.4	197%	0.58 W/ft ²	0.58	58%	62% VA	37 VA	0.01 VA/ft ²
139I	Restroom Area	61	Restroom - otherwise	2'-6"	20 fc	38.95	194%	0.58 W/ft ²	0.58	58%	62% VA	37 VA	0.01 VA/ft ²
139K	Restroom Area	53	Restroom - otherwise	2'-6"	20 fc	32.25	161%	0.58 W/ft ²	0.52	53%	53% VA	29 VA	0.01 VA/ft ²
139L	Restroom Area	42	Restroom - otherwise	2'-6"	20 fc	38.95	194%	0.58 W/ft ²	0.67	68%	41% VA	28 VA	0.01 VA/ft ²
		5,321									2,796	1,158	







Emergency Lighting Load			
Type Mark	Count	Real Power	Estimated UL 924 Relays required
EX-AC	5	5 VA	0
EX-AC-2	1	4 VA	0
PR-2x2-2.0K	12	168 VA	12
PR-2x2-3.4K	7	161 VA	7



- Objective:**
- Emergency light fixtures (indicated by a black dot) will exist and will be powered by the Uninterruptible AC Power Supply (UPS) or generator. Review plans for detail.
1. When normal power is present and fire alarm is OFF, lighting will be controlled by lighting control system. Load switches, timers, dimmers and sensors control on/off and dimming.
2. When normal power is not present, the emergency power and exit signs will be powered by the battery for over 90 minutes. These fixtures will be forced on at 100% (no dimming).
3. Contractor shall verify availability of contacts in fire alarm panel and add relay(s) if required.
4. Contractor must meet NEC 700, 10 requirements. This includes, but is not limited to:
- a. Separate emergency runway, Raceway shall be marked.
 - b. Wiring shall be labeled "Warning: 2 power sources or as required by code."
 - c. Label indicates panel, circuit, and voltage
 - d. Conduit for emergency lighting shall be color-coded as specified in Division 26
5. When accessible installation of UL 924 relay is not possible (e.g. dropwell, external), install the relay in near-by accessible location. Verify location with engineer.
6. Contractor is responsible for all wiring from uninterruptible power supply and fire alarm panel to the zones.
7. Outdoor fixtures: install relay inside above a ground ceiling or other accessible location.
8. Fixtures with built-in sensor shall be re-wired for UL 924 relay to bypass sensor (e.g. exterior fixture with included photoeye).
9. Contractor is responsible for all wiring from uninterruptible power supply and fire alarm panel to the zones.
10. Re-wire fire internal shall be integrated sensor and other lighting control.
11. Retention of VOTG fixtures: Re-arrange wiring and existing control to allow emergency lighting operation like a new fixture. Note that schedules that show number of relays required only account for relays of NEW fixtures.
- Testing:**
- 1. Test by applying emergency power and normal power. Turn off local switch and set local timer to lowest dimming level.
 - 2. Disconnect the appropriate wire to simulate lighting being turned off.
 - 3. If no local dimmer is available and dimming by sensor is scheduled, program sensor to turn dim to low level.
 - 4. Test by applying emergency power and verify emergency light turns on at 100%.
 - 5. Re-install normal power and activate fire alarm and verify emergency light turns on at 100%.

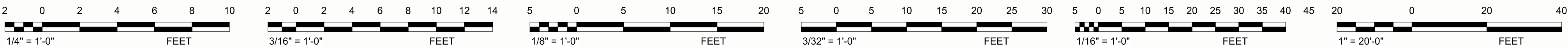
③ Lighting Control with UPS

- Lighting Control:
- A. Provide Lutron Athena system compatible with the office lighting control
1. Coordinate with Lutron representative Todd Klimke tk@engineeredrepcinc.com
 2. Install DIN-Rail panels in Janitor closet
 3. Use wired sensors
- B. Zoning:
1. Each restroom shall be one zone
 2. Locker room zoning and sensor layout shall be designed by Lutron
 - a. adapt electrical circuiting shown on EP sheet as required.
 - b. Assure good coverage in all areas. Avoid blind corners.
 - c. Sensors shown on plans are suggestions to indicate a design intent.
- C. Emergency Lighting:
1. Provide intended emergency lighting control:
 - a. emergency lighting power is provided by a 120V panel
 - b. Normal lighting is provided by 277V panel
 - c. Emergency lighting shall be forced on at 100% when Fire Alarm is activated, and/or when normal power is disrupted.

1. For plenum application, select fixture model with appropriate plenum rating 2. For applications with insulation contact, select fixture model with appropriate IC rating 3. Use Wide-range voltage drivers where available. Where not available, select the driver voltage based on circuit voltage.																	
Type Mark	Description	Length	Width	Height	Diameter	Type Image	Est Count	Model	URL	Real Power	Luminous Flux	Color Temperature	Efficacy	Lumen Maintenance	Environmental Rating	Unified Glare Rating (highest value)	Type Remark
CA-3-1.0K	Can Light 3" 80" Beam			3 1/2"	3"		4	Zenboni LU2NG-09-40-MC08CRI-8-S-WS-Z0-R0-W	www.zenbonilighting.com	9 W	979 lm	4000 K	109 lm/W	L80 @ 55K hours	Wet Location, IP 65		For grid ceiling, provide B0 housing, for plenum and IC locations use F0
EX-AC	Exit Sign, Standard, no Battery		11 3/4"	7 1/2"			5	Lithonia LQM-S-W-3-G-120/277	www.aaculbrandslighting.com	1 W					Damp Location		Select # of faces, stem, and mounting as required for location
EX-AC-2	Exit Sign Triangular, 2-Face, no Battery		1'-6 1/2"	7 1/2"			1	Big Beam TRXL-ACLED-2-G-W	www.bigbeam.com	3.5 W							Select Voltage version based on circuit connected to
LR-2-1000L	Linear Recessed	2'-0"	3"	4"			12	Pinnacle EV3D-HE-40VHO-U-FSD-1-0-W	www.pinnacle-tlg.com	13.8 W	2,000 lm	4000 K	145 lm/W	L70 @ 121K hours	Damp Location		Select mounting options and wiring options as required. Review plans for emergency fixture and control options. Use RC-option for drywall.
PR-2x2-2.0K	Panel Recessed	2'-0"	2'-0"	3"			13	Lithonia SPX-2x2-2000LM-80CRI-40K-BFR-LUGR-MINI-ZT-MVOLT-WH	www.aaculbrands.com	14 W	2,111 lm	4000 K	151 lm/W	L90 @ 50K hours	IPX5, NSF Splash Zone	16.1	
PR-2x2-3.4K	Panel Recessed	2'-0"	2'-0"	3"			26	Lithonia SPX-2x2-3400LM-80CRI-40K-BFR-LUGR-MINI-ZT-MVOLT-WH	www.aaculbrands.com	23 W	3,438 lm	4000 K	149 lm/W	L90 @ 50K hours	IPX5, NSF Splash Zone	17.8	
							60										

Lighting Control Programming Guide							
Programming Scheme	Trigger ON	Trigger Off	Time Delay to Dim-Down	Time to Off (or lowest dimming state)	Lowest Dimming Range	Photocell Setting	Note
O-Q	Occupancy	NA	15 min	10 min	1V / 10%	NA	Fixture is dim (e.g. 10%) when space is not occupied.
O-Q-P	Occupancy	NA	15 min	10 min	1V / 10%	Auto-Setpoint to match artificial lighting levels	Fixture is dim (e.g. 10%) when space is not occupied. Fixture turns off when daylight is sufficient.
O	Occupancy / Switch	Occupancy / Switch	15 min	10 min	0%/OFF	NA	Fixture is off when space is not occupied. User can turn off or dim lights (if dimmer / switch scheduled).
O-P	Occupancy / Switch	Occupancy / Switch	15 min	10 min	0%/OFF	Auto-Setpoint to match artificial lighting levels	Auto lights (if dimmer / switch scheduled). Fixture dims down or turns off when daylight is sufficient.

Lighting Device Schedule						
Type Mark	Description	Est. Count	Model	URL	Environmental Rating	Type Remark
M-A	Motion Sensor for Athens Control	24	Sensorswitch-Selected by Lutron	www.lutron.com		Exact layout performed by Lutron for optimized coverage
						26 09 43 - Network Lighting Controls



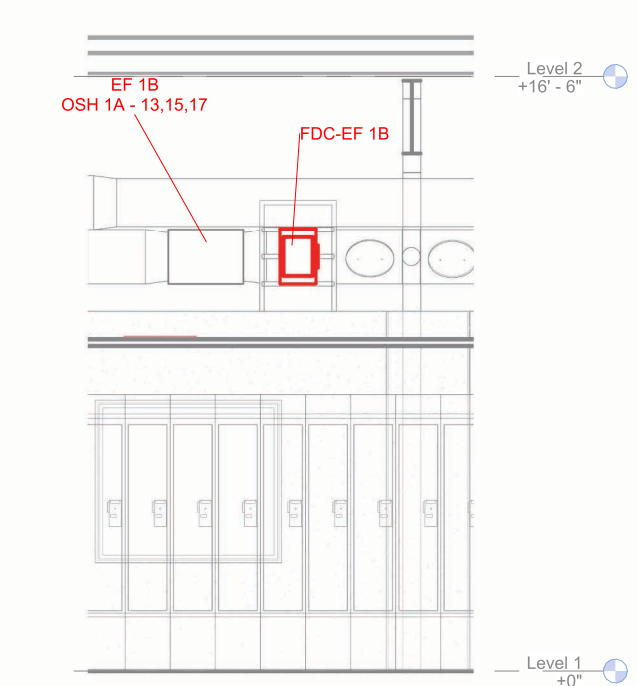
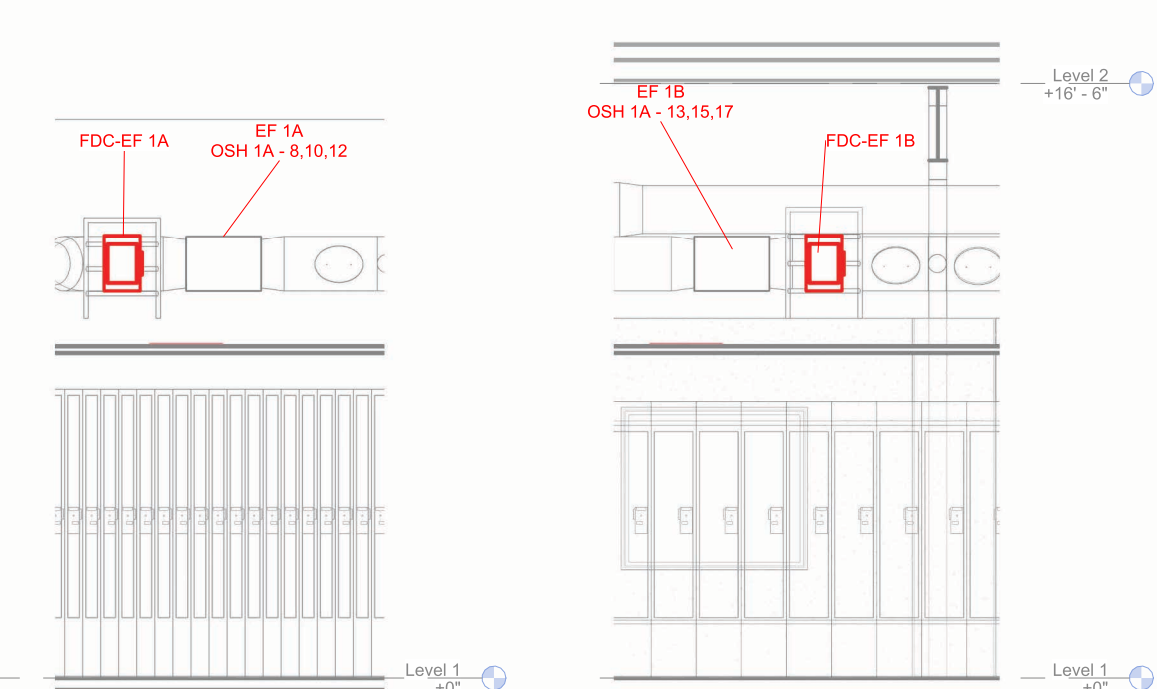
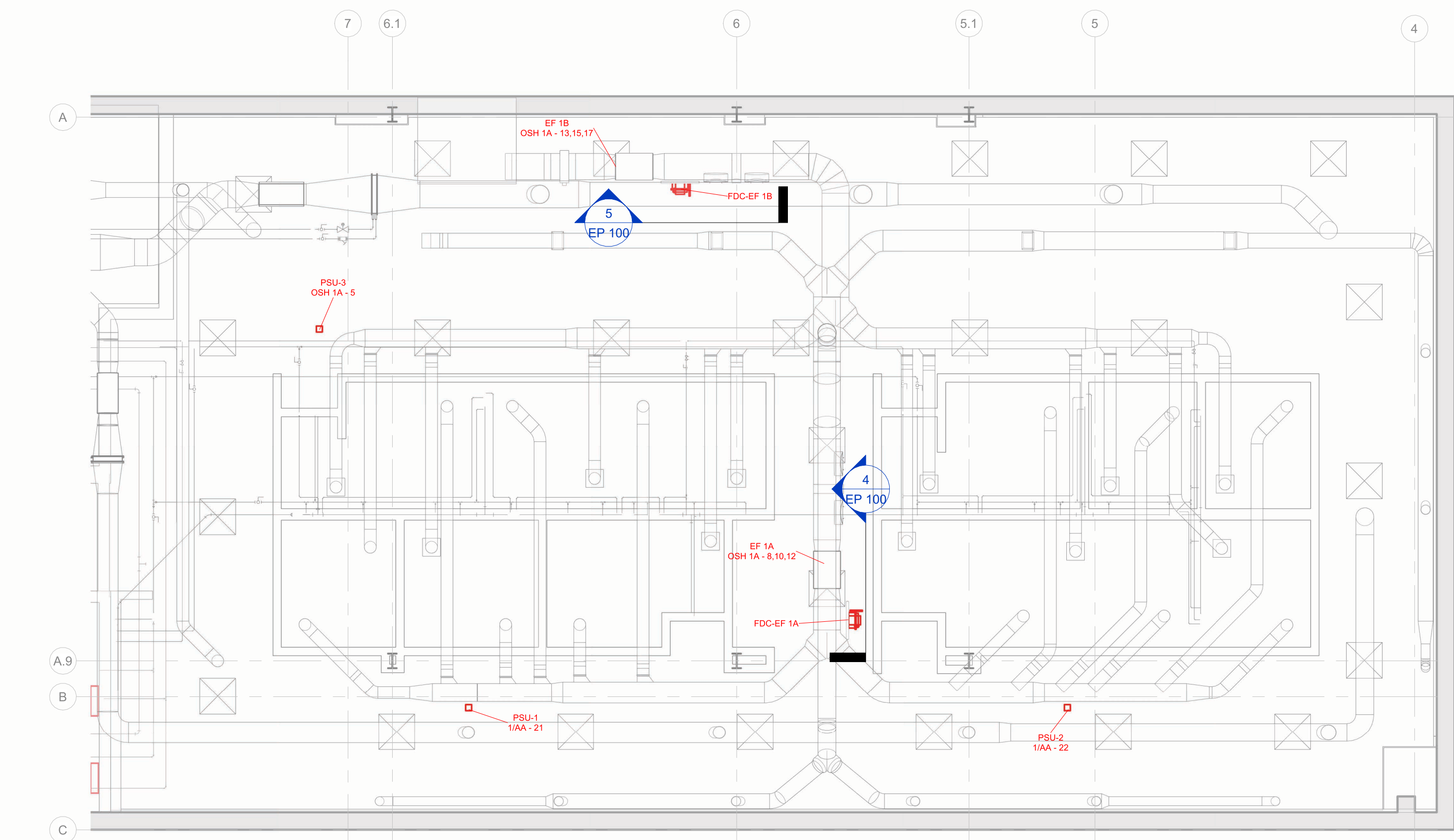
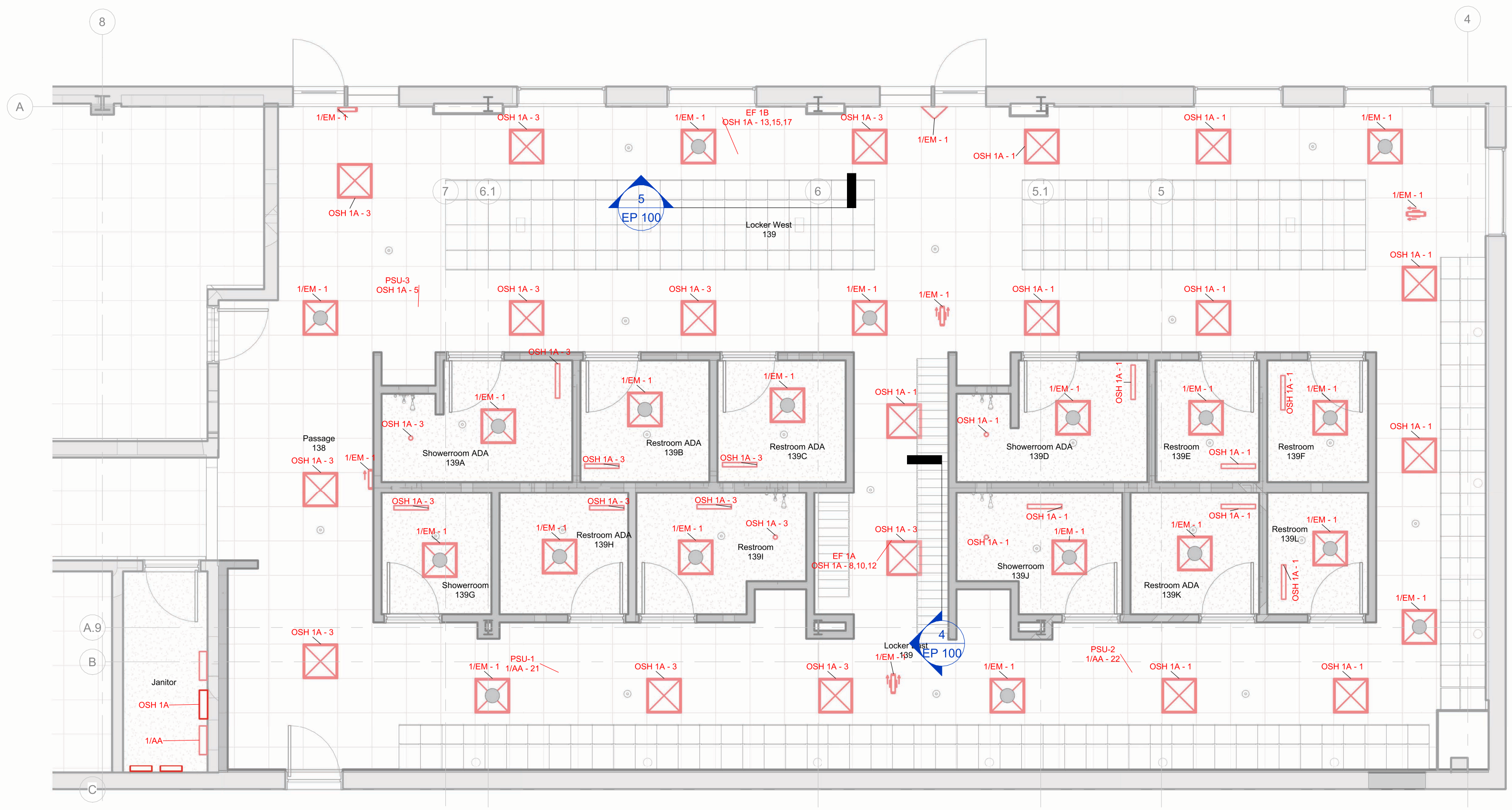
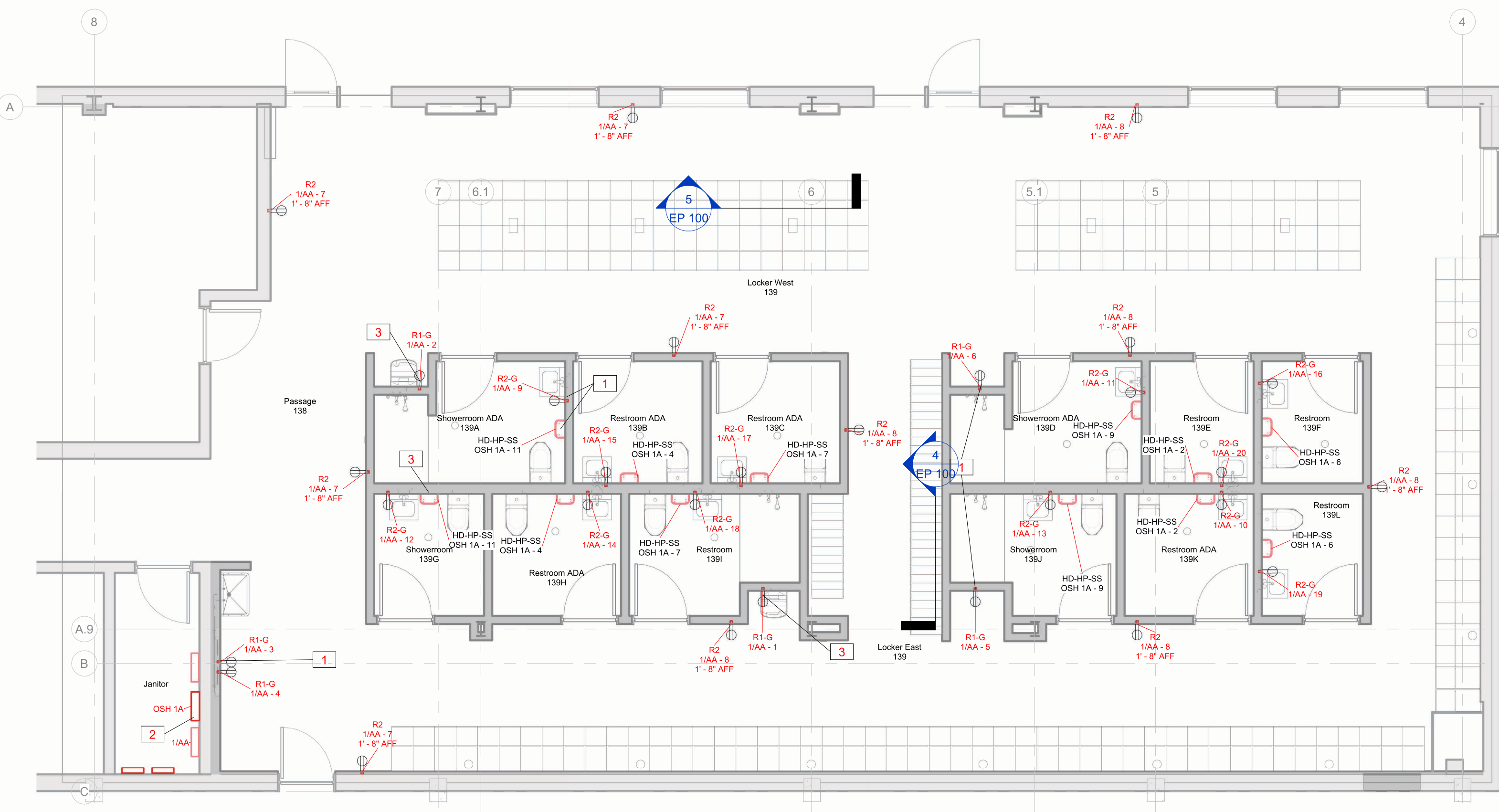
Revisions

[illegible]

Project North

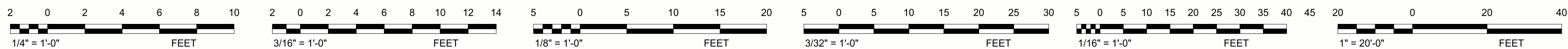


Lighting



Keynote Legend	
1. Keynotes can apply to multiple similar situations, even if not each element or situation is tagged.	
Key Value	Keynote Text
1	Coordinate Exact location with architectural plans and seek approval by architect. This Note applies to all similar situations in this project.
2	Add 3 spare conduits 1" to penetrate ceiling. Repair ceiling.
3	Coordinate location to ensure racecable (or other power feed) is concealed by device being fed

General Notes:
A. Coordinate receptacle and hand dryer locations with Architectural design. Height and location on electrical plans are schematic only to provide circuiting information



Client:
Engineering

Location:
1600 Emil St., Madison
WI 53711

Contract: 9659
Project: 14122

Engineering
Operations Facility
Locker Room
Renovation (Bid)

Revisions

[illegible]

Project North



Power

EP 100

Print Date:
7/14/2025 8:58:34 AM
Print in color on 24" x 36"

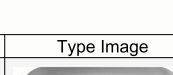
Panel: OSH 1A										26 24 00 - Switchboards and Panelboards										
Notes:																				
Main Breaker: 125 A			Location: Janitor			Supplied From: OSH 1			System Type: 480V / 3											
Main:			Installed: New Construction			Enclosure: Type 1			Panel Slots: 42											
Mounting: Surface						AIC:			Wires: 4											
Circuit Number	Rating	Wire Size	Load Classification			A		B		C		Load Classification			Wire Size	Rating	Circuit Number			
1	15 A	#12	Lighting			1.1 A	12.4 A					Appliance			#10	20 A	2			
3	15 A	#12	Lighting					1.2 A	12.4 A			Appliance			#10	20 A	4			
5	15 A	#12	Power							2.7 A	12.4 A	Appliance			#10	20 A	6			
7	20 A	#10	Appliance			12.4 A	2 A					Motor			#12	15 A	8,10,12			
9	20 A	#10	Appliance					12.4 A	2 A											
11	20 A	#10	Appliance						12.4 A	2 A										
3,15,17																				
	15 A	#12	Motor			2 A		2 A		2 A							14			
																	16			
19																	18			
21																	20			
23																	22			
25																	24			
27																	26			
29																	28			
31																	30			
33																	32			
35																	34			
37																	36			
39																	38			
41																	40			
						29.9 A		30 A		31.5 A							42			
						8.3 kVA		8.3 kVA		8.7 kVA										

Panel: 1/AA										26 24 00 - Switchboards and Panelboards									
Notes: Remove old obsolete ciruits																			
Main Breaker: 100 A			Location: Janitor			Supplied From: 1/A			System Type: 208V / 3										
Main:			Installed: Existing			Enclosure: Type 1			Panel Slots: 24										
Mounting: Surface						AIC:			Wires: 4										
Circuit Number	Rating	Wire Size	Load Classification		A		B		C		Load Classification		Wire Size	Rating	Circuit Number				
1	15 A	#12	Receptacle		6 A	6 A					Receptacle		#12	15 A	2				
3	20 A	#10	Receptacle				12.5 A	12.5 A			Receptacle		#10	20 A	4				
5	20 A	#6	Receptacle						12.5 A	12.5 A	Receptacle		#6	20 A	6				
7	20 A	#10	Receptacle		7.5 A	9 A					Receptacle		#6	20 A	8				
9	20 A	#10	Receptacle				0 A	0 A			Receptacle		#10	20 A	10				
11	20 A	#10	Receptacle						0 A	0 A	Receptacle		#10	20 A	12				
13	20 A	#10	Receptacle		0 A	0 A					Receptacle		#10	20 A	14				
15	20 A	#10	Receptacle				0 A	0 A			Receptacle		#10	20 A	16				
17	20 A	#10	Receptacle						0 A	0 A	Receptacle		#10	20 A	18				
19	20 A	#10	Receptacle		0 A	0 A					Receptacle		#10	20 A	20				
21	15 A	#12	Power				1.3 A	1.3 A			Power		#12	15 A	22				
23															24				
					28.9 A		27.9 A		25 A										
					3.4 kVA		3.3 kVA		3 kVA										

Panel: 1/EM				26 24 00 - Switchboards and Panelboards											
Notes: Existing ciruits not shown															
Main Breaker: 100 A			Location:		Supplied From:				System Type: 208V / 3						
Main:			Installed: Existing		Enclosure: Type 1				Panel Slots: 30						
Mounting: Surface					AIC:				Wires: 4						
Circuit Number	Rating	Wire Size	Load Classification		A		B		C		Load Classification		Wire Size	Rating	Circuit Number
1	15 A	#8	Other; Lighting		2.8 A										2
3															4
5															6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
					2.8 A	0 A	0 A								
					0.3 kVA	0 kVA	0 kVA								

Receptacle Schedule (26 27 00 - Low-Voltage Distribution Equipment)				
1. Coordinate Height and location with Architectural Plans				
2. Use GFCI receptacle or breaker if required by application. For multiple receptacles on a circuit, a single GFCI device suffices.				
Type Mark	Description	Voltage	Current	Count
R1-G	Simplex GFCI	120 V	20 A	6
R2	Duplex	120 V	20 A	11
R2-G	Duplex GFCI	120 V	20 A	12

Power Supplies Units (PSU)					
1. Refer to other trade construction documents for devices requiring PSU					
2. PSU input voltage determined by panel connected to					
Mark	Apparent Power Output	Voltage	Remark	Panel	Circuit Number
PSU-1	100 VA	120 V	Faucet	1/AA	21
PSU-2	100 VA	120 V	Faucet	1/AA	22
PSU-3	500 VA	277 V	BAS (HVAC)	OSH 1A	5

Electric Hand Dryers (10 28 00 – Restroom and Shower Room Accessories)								
1. Coordinate Mounting Height with Architectural Plans								
2. Voltage selected based on circulted connected to								
Type Mark	Type Comments	Description	Manufacturer	URL	Model	Type Image	Apparent Power	Estimated Count
HD-HP-SS	Hand Dryer Electric	Electric Hand Dryer w/ Heat Feature - High Performance	Excel Dryer	www.exceldryer.com	XL-SS		1,771 VA	12