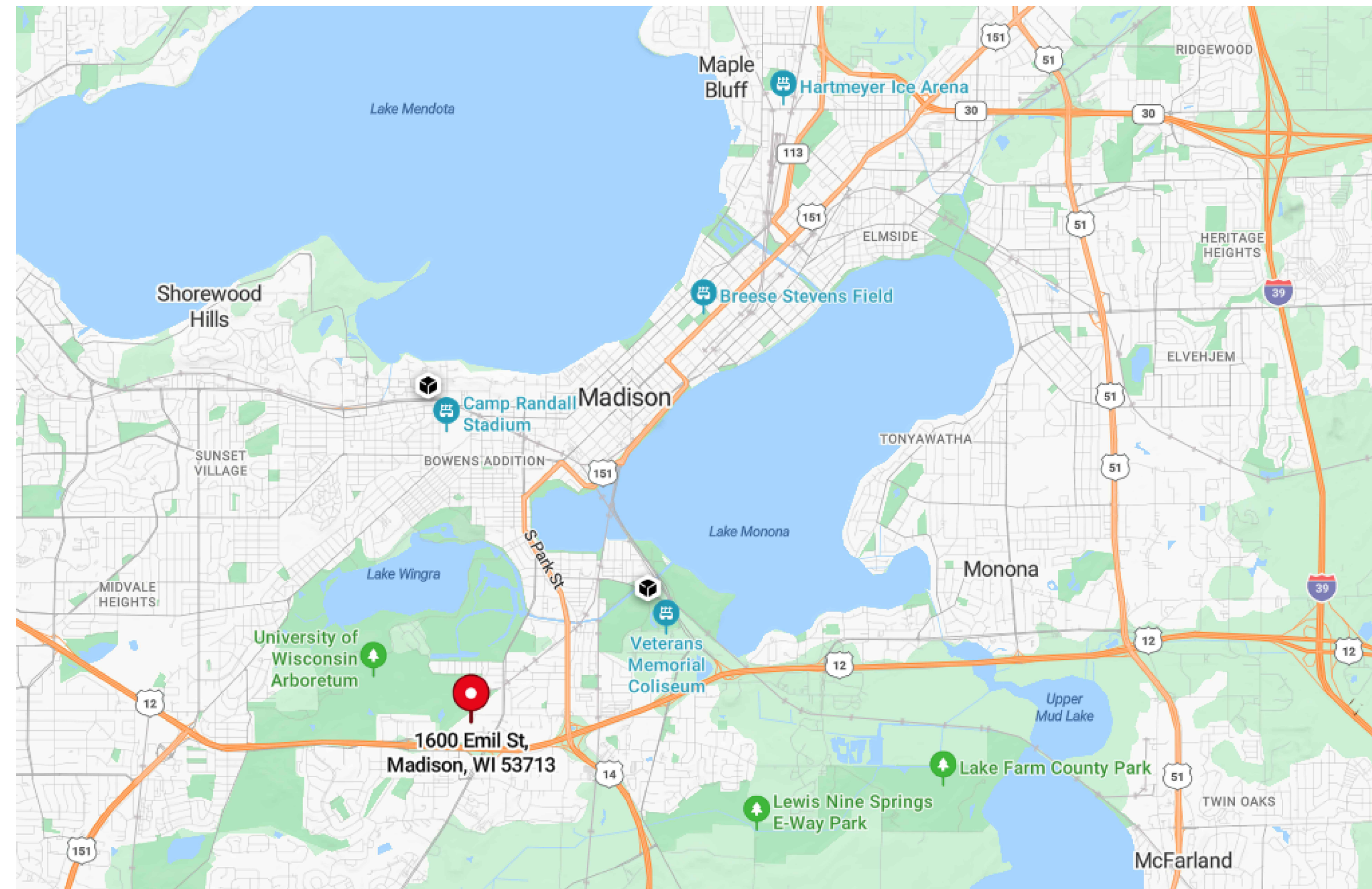


ENGINEERING OPERATIONS FACILITY LOCKER ROOM RENOVATION

CONTRACT #9659 MUNIS #14122

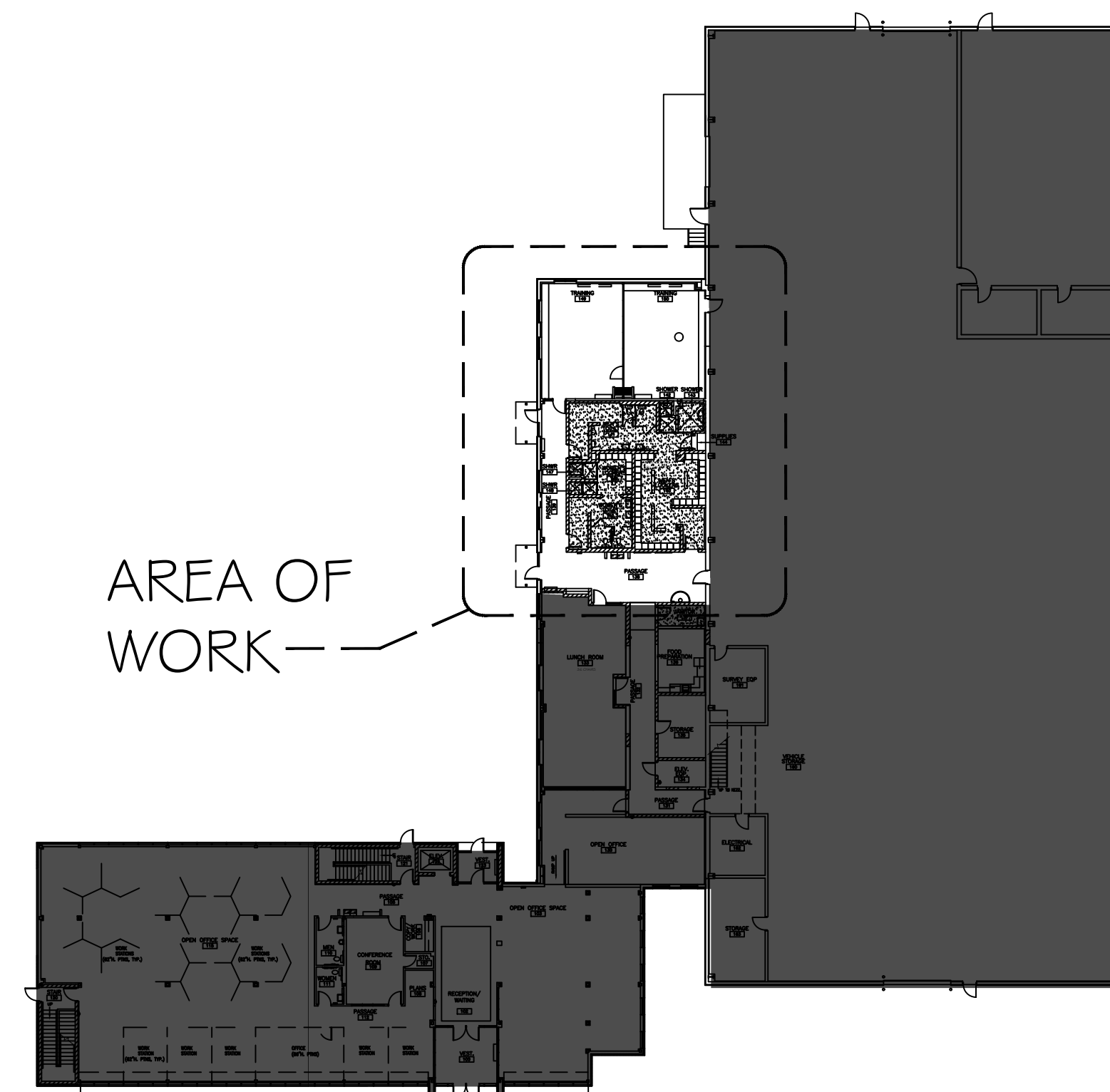
1600 EMIL STREET
MADISON, WI 53713
DATE: JULY 14, 2025



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
- P115 3D SANITARY AND VENT
- P120 3D WATER
- P125 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

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



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BLDG CODE
 AND EGRESS

G1.1

CODE ANALYSIS

APPLICABLE BUILDING CODES: WISCONSIN SPS361, 362, 366
 2015 INTERNATIONAL BUILDING CODE
 2015 INTERNATIONAL EXISTING BUILDING CODE

ACCESSIBILITY CODE: 2009 ICC/ANSI: A117.1

FIRE SAFETY CODE: WISCONSIN SPS 314
 2012 NFPA 1
 2024 INTERNATIONAL FIRE CODE
 MADISON GENERAL ORDINANCES, CHAPTER 34

PLUMBING CODE: WISCONSIN SPS 381 - 387
 2015 UNIFORM PLUMBING CODE

ELECTRICAL CODE: WISCONSIN SPS 316
 2017 NEC
 NFPA 70

MECHANICAL CODE: WISCONSIN SPS 364
 2015 INTERNATIONAL MECHANICAL CODE

ENERGY CODE: WISCONSIN SPS 363
 2015 INTERNATIONAL ENERGY CONSERVATION CODE

OCCUPANCY CLASSIFICATION B OCCUPANCY INCLUDES OFFICES AND ASSOCIATED WORKSPACES
 (CONFERENCE ROOM, BREAK ROOM, LOCKER ROOM, RESTROOMS, AND STORAGE)
 S-2 OCCUPANCY INCLUDES LOW-HAZARD VEHICLE PARKING (OPEN OR ENCLOSED) AND ASSOCIATED SUPPORT SPACES (SHOPS AND STORAGE) - NO WORK

CONSTRUCTION TYPE IIB
 ALTERATION LEVEL 2 ALTERATION
 SPRINKLERED YES PER NFPA 13
 FIRE ALARM YES
 NUMBER OF STORIES 2 TOTAL
 BUILDING AREA 2,968 SF (AREA OF ALTERATION)
 ATTACHED 14,538 SF B OFFICE AREA - NO WORK
 ATTACHED 50,329 SF S-2 GARAGES (INCLUDES STORAGE MEZZANINES) - NO WORK

TOTAL BUILDING AREA 67,835 SF

TOTAL BUILDING OCCUPANT LOAD 256
 OCCUPANT LOAD IN AREA OF ALTERATION 59
 CUMULATIVE OCCUPANT LOAD IN AREA OF ALTERATION 78
 TOTAL EXITS REQUIRED / PROVIDED FOR BUILDING 3 / 11
 EXITS REQUIRED / PROVIDED IN AREA OF ALTERATION 1 / 2
 TOTAL EXIT DOOR WIDTH IN BUILDING
 REQUIRED / PROVIDED 78.6" / 330"
 EXIT DOOR WIDTH IN AREA OF ALTERATION
 REQUIRED / PROVIDED 17.4" / 68"

PLUMBING FIXTURE COUNTS:

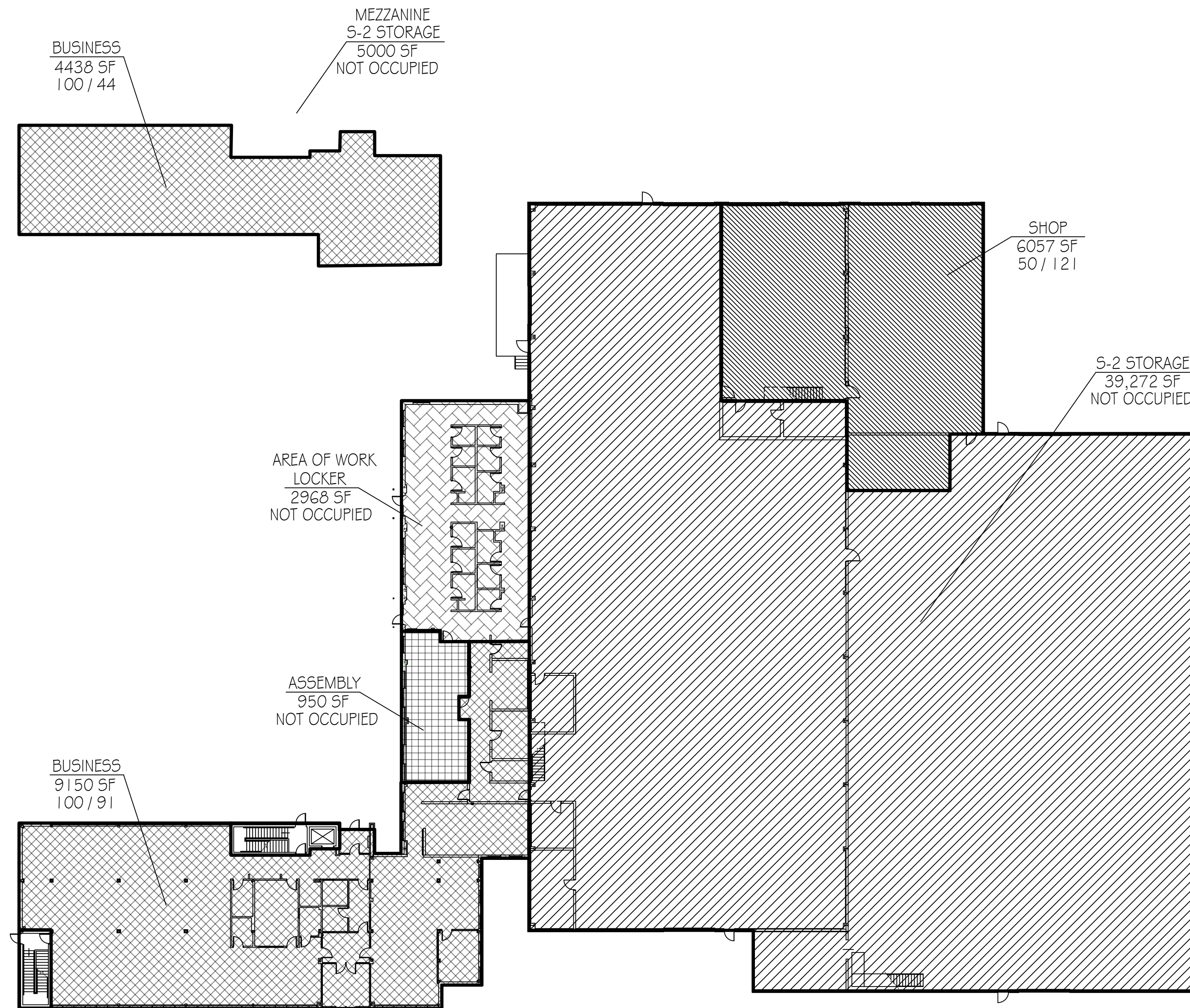
THE BUILDING OCCUPANT LOAD IS NOT BEING CHANGED BY THE PROPOSED ALTERATION WORK. THE EXISTING LOCKER ROOM AND RESTROOM SPACES ARE BEING RENOVATED.

PLUMBING FIXTURE COUNTS RELATE TO THE AREA OF ALTERATION AND NOT TO THE ENTIRE BUILDING.

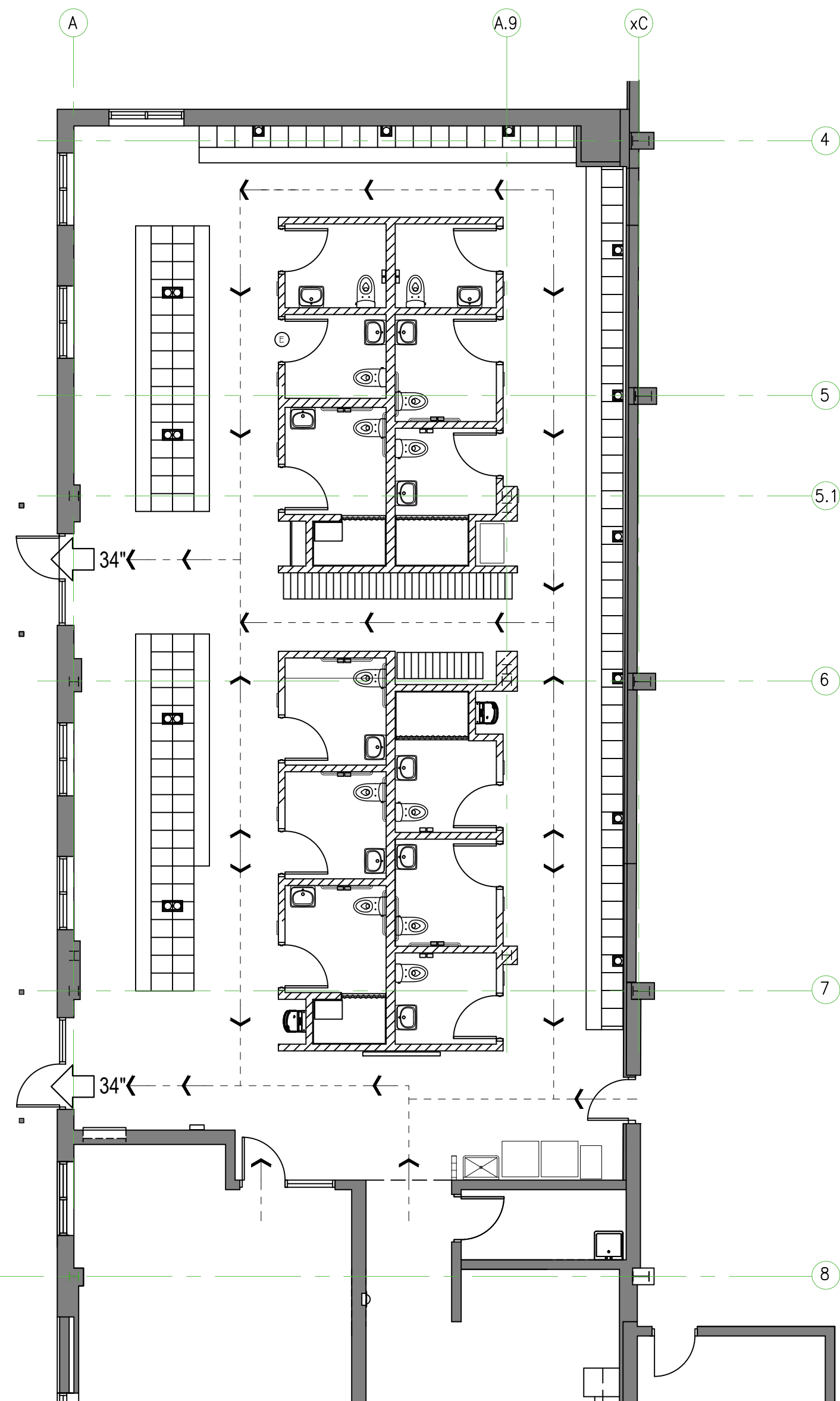
	WATERCLOSET			URINAL	LAVATORY			SHOWER			DF	SNK
	M	W	N	M	M	W	N	M	W	N		
EXISTING	2	2	0	2	2	2	0	2	2	0	2	1
PROPOSED	0	0	12	0	0	0	12	0	0	4	2	1
CODE	2	2	0	0	2	2	0	0	0	0	1	0

ENTIRE BUILDING

	WATERCLOSET			URINAL	LAVATORY			SHOWER			DF	SNK
	M	W	N	M	M	W	N	M	W	N		
EXISTING	2	2	4	3	2	2	4	2	2	0	3	1
PROPOSED	0	0	16	1	0	0	16	0	0	4	4	1
CODE			7	0			5	0	0	0	2	0

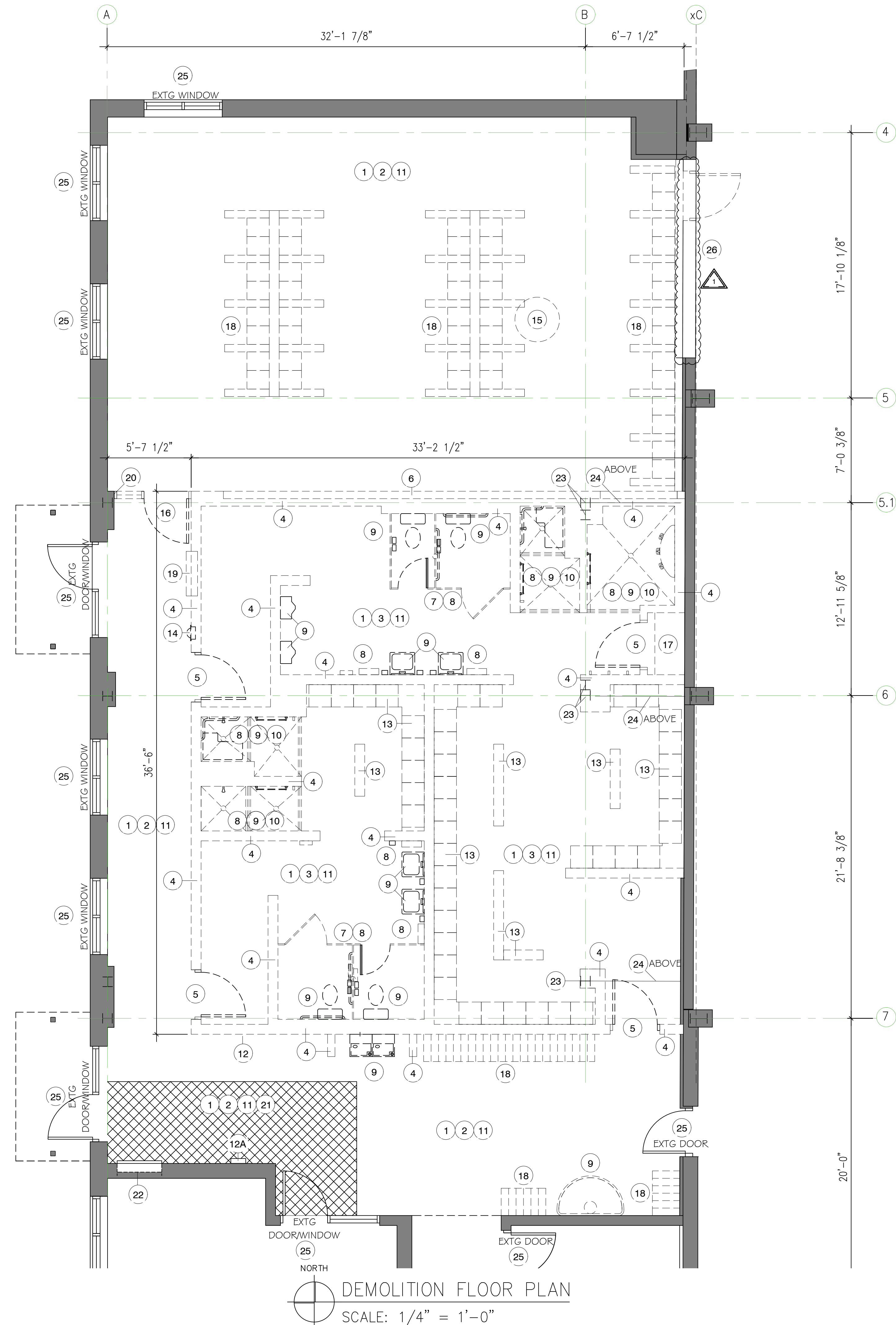


NORTH
 BUILDING CODE PLAN
 NO SCALE



NORTH
 EGRESS PLAN
 NO SCALE

- EGRESS PLAN LEGEND**
- EXISTING WALLS
 - NEW CMU WALLS
 - EXIT PATH
 - 34" EXIT CLEAR OPENING



DEMOLITION FLOOR PLAN
SCALE: 1/4" = 1'-0"

DEMOLITION KEY NOTES

- 1 REMOVE CONCRETE FLOOR COMPLETE
- 2 REMOVE SUSPENDED CEILING SYSTEMS COMPLETE
- 3 REMOVE GYP CEILING SYSTEM COMPLETE
- 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.



26 REMOVE EXISTING INFILL, DOOR AND DOOR FRAME, AND OVERHEAD DOOR FRAME.

DEMOLITION LEGEND

- - - - - INDICATES ITEM TO BE REMOVED SEE KEY NOTES
- █ EXISTING WALLS TO REMAIN
- ▨ PROTECTED ENTRY AND EXIT PATH COORDINATE WITH OWNER

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

- STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH IBC 2015 AND SUBSEQUENT REFERENCE STANDARDS.
- RISK CATEGORY:
- SUPERIMPOSED DEAD LOADS:
 ROOF TYPICAL 15 PSF
- SUPERIMPOSED LIVE LOADS: LIVE LOAD REDUCTION USED AS ALLOWED PER CODE
 ROOF TYPICAL 20 PSF
- SNOW:
 GROUND SNOW 30 PSF
 SNOW EXPOSURE FACTOR
 THERMAL FACTOR
 IMPORTANCE FACTOR
 FLAT-ROOF SNOW 21 PSF
 DESIGN SNOW 22 PSF
- LATERAL LOAD RESISTING SYSTEM IS NOT IMPACTED BY THIS PROJECT.

GENERAL

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 .
- 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.
- 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.
- 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.
- NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
- 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.
- 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

- SUBMITTALS ARE:
 - CONCRETE MIX DESIGNS
 - MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS
 - CONCRETE AND MASONRY REINFORCING
 - STEEL FABRICATION AND MISCELLANEOUS METALS
- 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.
- 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.
- FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

EXISTING CONDITIONS / DEMOLITION

- EXISTING CONDITIONS:
 - EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS DATED JULY 1992 BY POTTER LAWSON ARCHITECTS.
 - EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
 - 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 .
- ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY TO PREVENT DAMAGE TO EXISTING ELEMENTS WHICH ARE TO REMAIN.
- 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.
- 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.
- 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.
- 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.
- SHORING:
 - 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.
 - SHORING OF EXISTING BUILDINGS OR IMPROVEMENTS SHALL BE PROVIDED BEFORE EXISTING SUPPORTING WALLS, SLABS, FOUNDATIONS, PAVEMENT, ETC. ARE CUT, MODIFIED, OR REMOVED.

EARTHWORK

- 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.
- 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.
- 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

- SHALLOW FOUNDATIONS SHALL HAVE THE FOLLOWING MINIMUM NET ALLOWABLE SERVICE LOAD BEARING PRESSURES:
 SERVICE LOAD BEARING PRESSURES:
 NET ALLOWABLE BEARING PRESSURE 1500 PSF
- 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.
- 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.
- WHERE FOUNDATIONS BEAR ON ROCK, FOUNDATIONS SHALL BEAR ON THAT ROCK OR ON LEAN CONCRETE FILL.
- NEW FOOTING BEARING ELEVATIONS SHALL MATCH ADJACENT EXISTING FOOTING BEARING ELEVATIONS WHERE OCCURRING UON.
- 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

- 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.
- CONCRETE MATERIALS SHALL CONFORM TO:

PORTLAND LIMESTONE CEMENT	ASTM C595, TYPE IL
FLY ASH	ASTM C618, TYPE C OR F
SLAG CEMENT	ASTM C989
FINE AND COARSE AGGREGATE	ASTM C33
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C4943.
- 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%

- AIR ENTRAINMENT:
 - 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%.
 - AIR ENTRAINMENT SHALL CONFORM TO UL RATING REQUIREMENTS FOR FIRE RESISTANCE.
- 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.
- ALL FOUNDATION ELEMENTS SHALL BE CENTERED UNDER WALLS, PIERS, OR COLUMNS UON.
 - "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.
 - CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS OF ALL CONSTRUCTION JOINTS WHERE JOINTS ARE NOT INDICATED ON THE DRAWINGS.
 - JOINTS ABUTTING EXISTING CONCRETE CONSTRUCTION SHALL BE ROUGH JOINTS UON.
 - PROVIDE TEMPLATES TO SET EMBEDDED ITEMS.
 - SLOPE SLABS TO DRAINS. SEE ARCHITECTURAL AND MEP DRAWINGS FOR DRAIN LOCATIONS AND SLOPE REQUIREMENTS. SLAB THICKNESSES SHOWN ON DRAWINGS ARE MINIMUMS.
 - AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS UNLESS THE WORK IS SHORED.
 - 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.
 - REINFORCING STEEL SHALL NOT BE DAMAGED WHEN DRILLING CONCRETE.
 - 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.
 - 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

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STEEL

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

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	

- 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.
- ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS UON. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM SNUG TIGHT CONDITION UON.
- 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.
- 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).
- 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.
- MATCH EXISTING FINISH ON ALL STRUCTURAL STEEL NOT COVERED WITH CONCRETE, FIREPROOFING, MASONRY, OR AT CONTACT SURFACES AT HIGH STRENGTH BOLTS.
- 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.
- SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC. FOR MISCELLANEOUS STEEL NOT DETAILED SPECIFICALLY ON THE STRUCTURAL DRAWINGS.
- 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.
- THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR REVIEW AND APPROVAL BEFORE FABRICATION.

POST-INSTALLED ANCHORS

- 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)

- 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.
- 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.

- POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- ADHESIVE ANCHORS SHALL BE INSTALLED WITH A MINIMUM 6" EMBEDMENT DEPTH UON.



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GENERAL NOTES

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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) 6.5.2, 5.17
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O	TABLE N5.4-1	(& 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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TESTING AND INSPECTION

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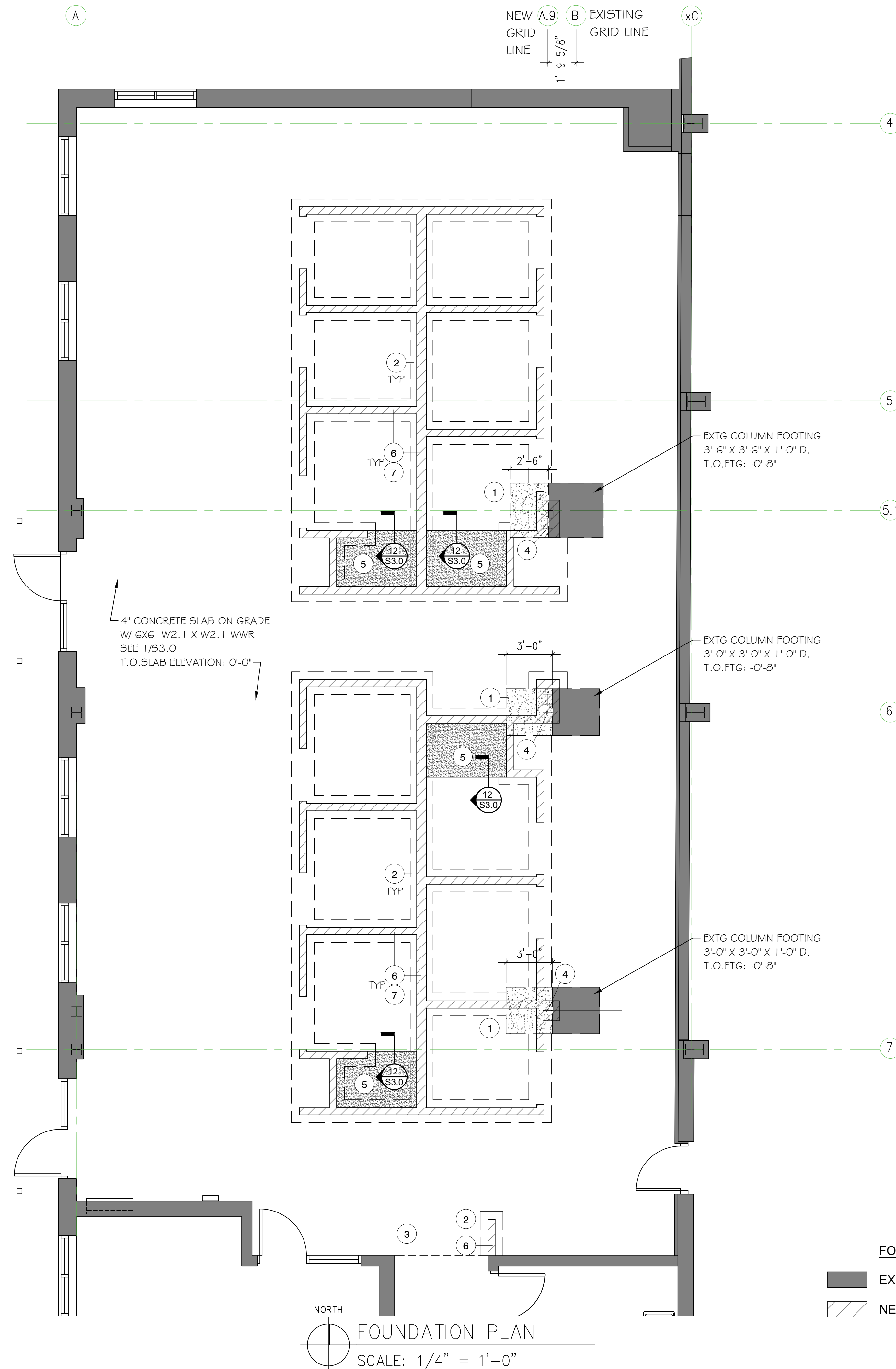
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FDN PLAN

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FOUNDATION KEY NOTES

- 1 12" DEEP FOOTING EXTENSION WITH #5 BAR @ 12" O.C. EACH WAY. DOWEL NEW FOOTING BARS TO THE EXISTING FOOTING WITH 6" EMBED. T.O.FTG: -0'-8"
- 2 PROVIDE THICKENED SLAB AT ALL NON-STRUCTURAL MASONRY WALLS PER 3/S3.0
- 3 NEW TO EXISTING SLAB TIE-IN. SEE 2/S3.0
- 4 SEE 5/S3.0 FOR BASE PLATE DETAILS
- 5 SLAB DEPRESSION FOR ADA SHOWER PAN. COORDINATE W/ MANUFACTURER DETAILS SEE DETAIL 12/S3.0 FOR BASIS OF DESIGN
- 6 REINFORCE ALL NON-STRUCTURAL CMU WALLS WITH #5 BAR @ 48" O.C.
- 7 CONTRACTOR TO COORDINATE VERTICAL WALL REINFORCING TO AVOID PIPING





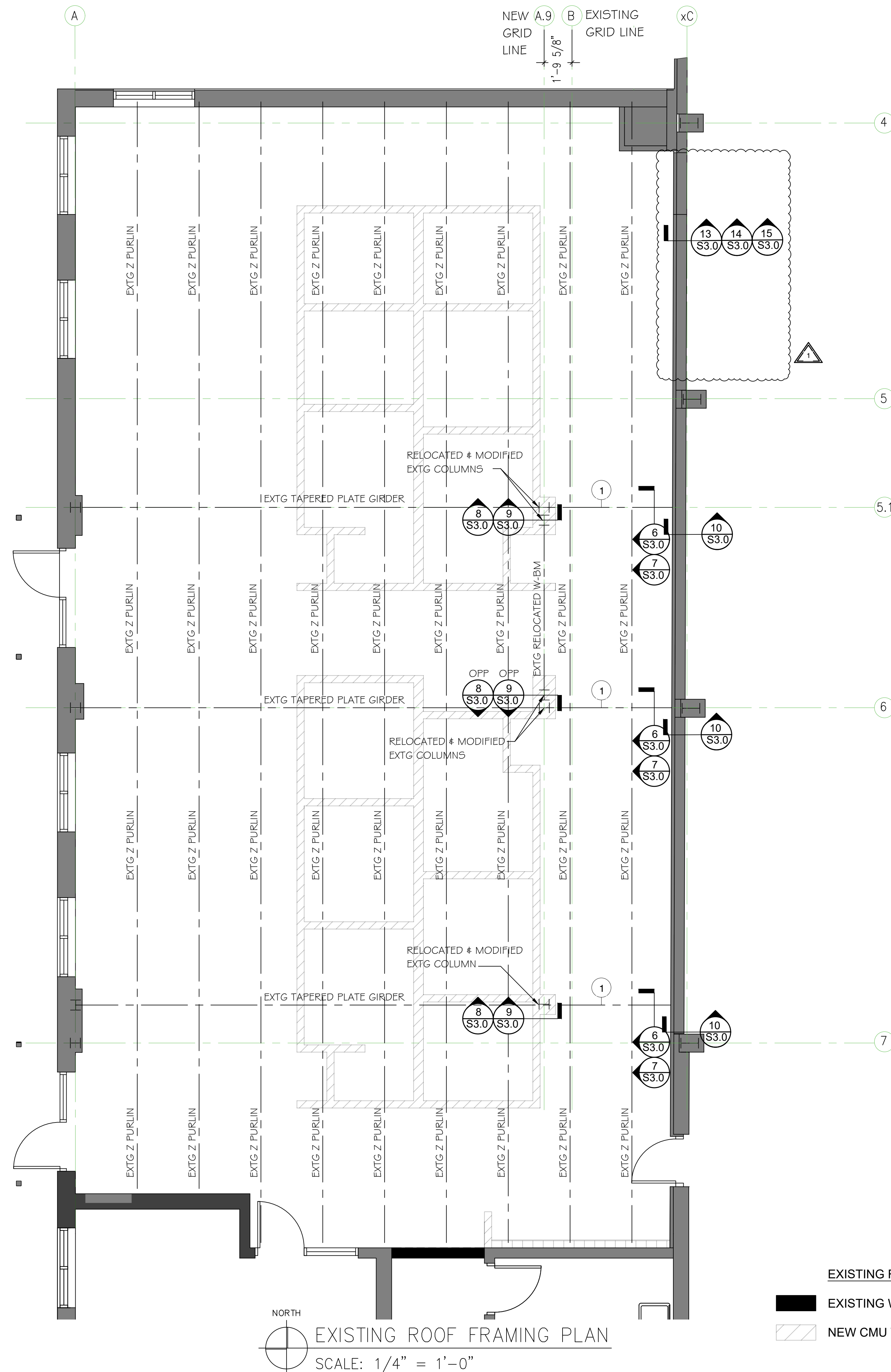
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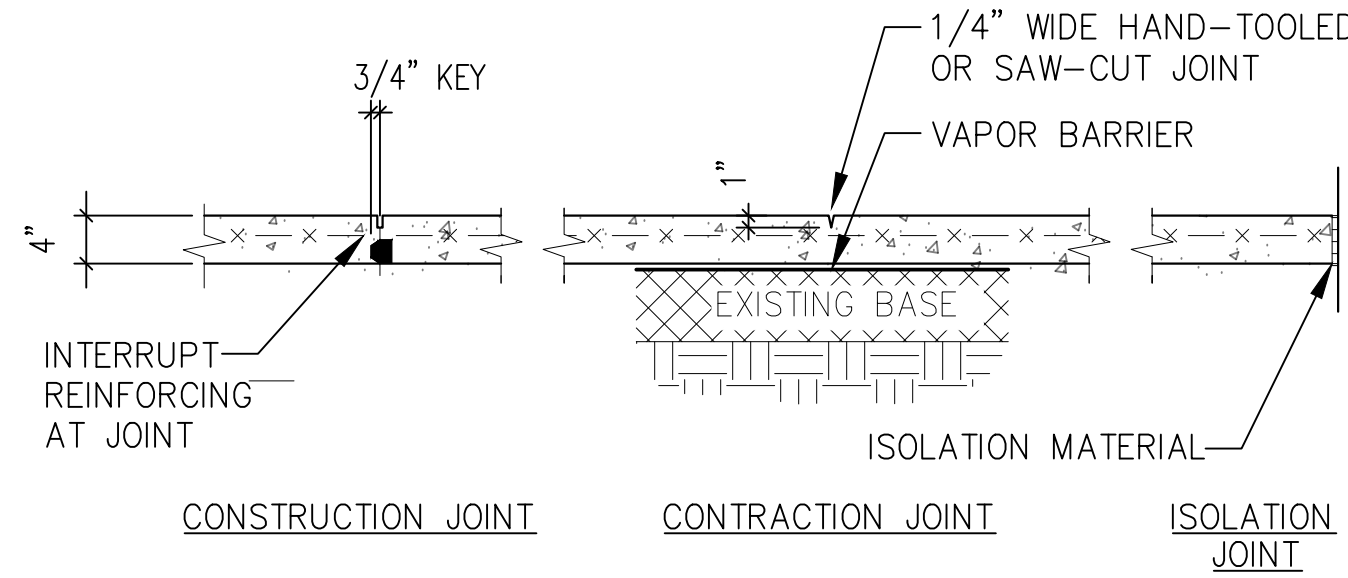
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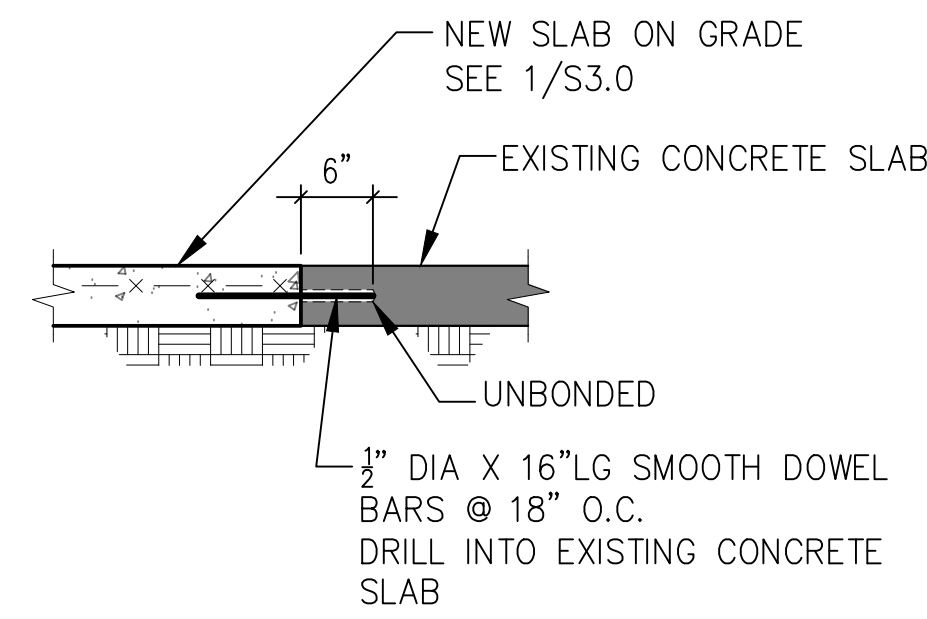
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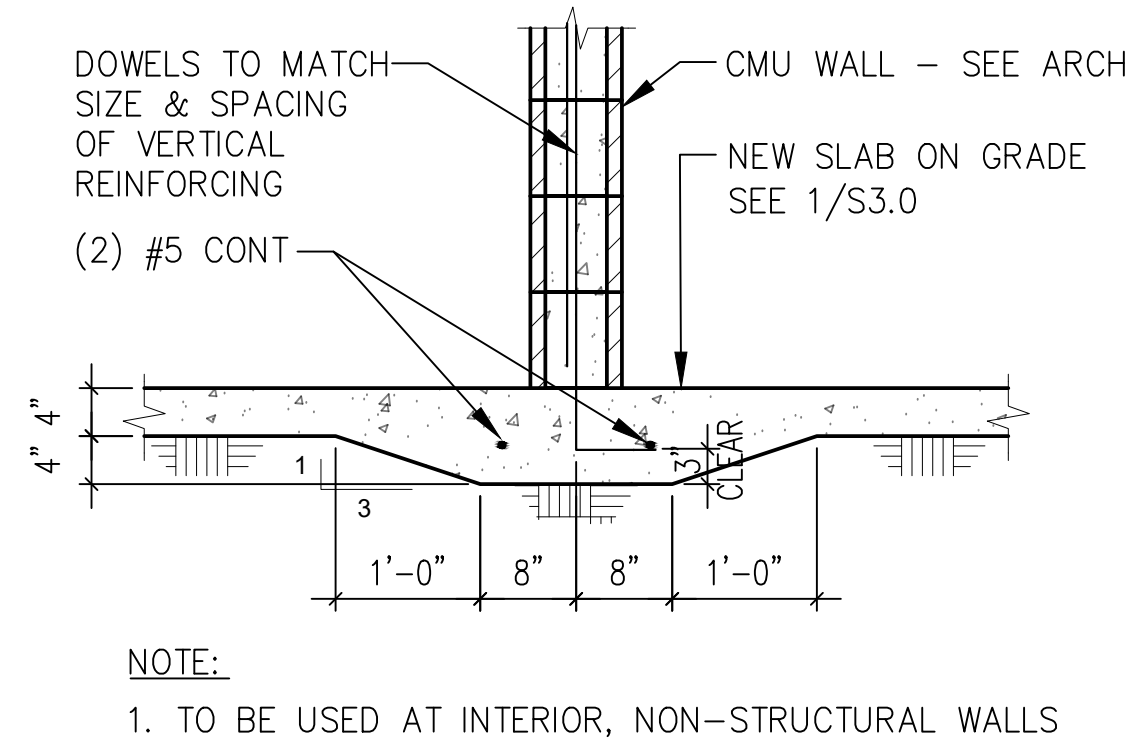
JOINTS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF FINISHING OPERATIONS



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

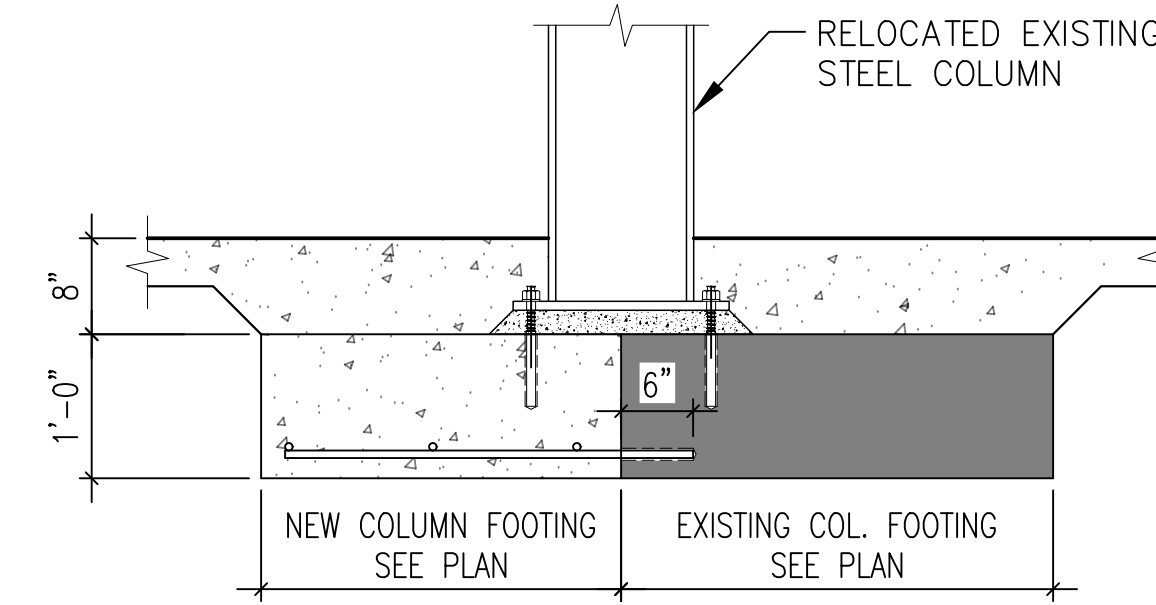


2 NEW TO EXISTING SLAB DETAIL
3/4" = 1'-0"

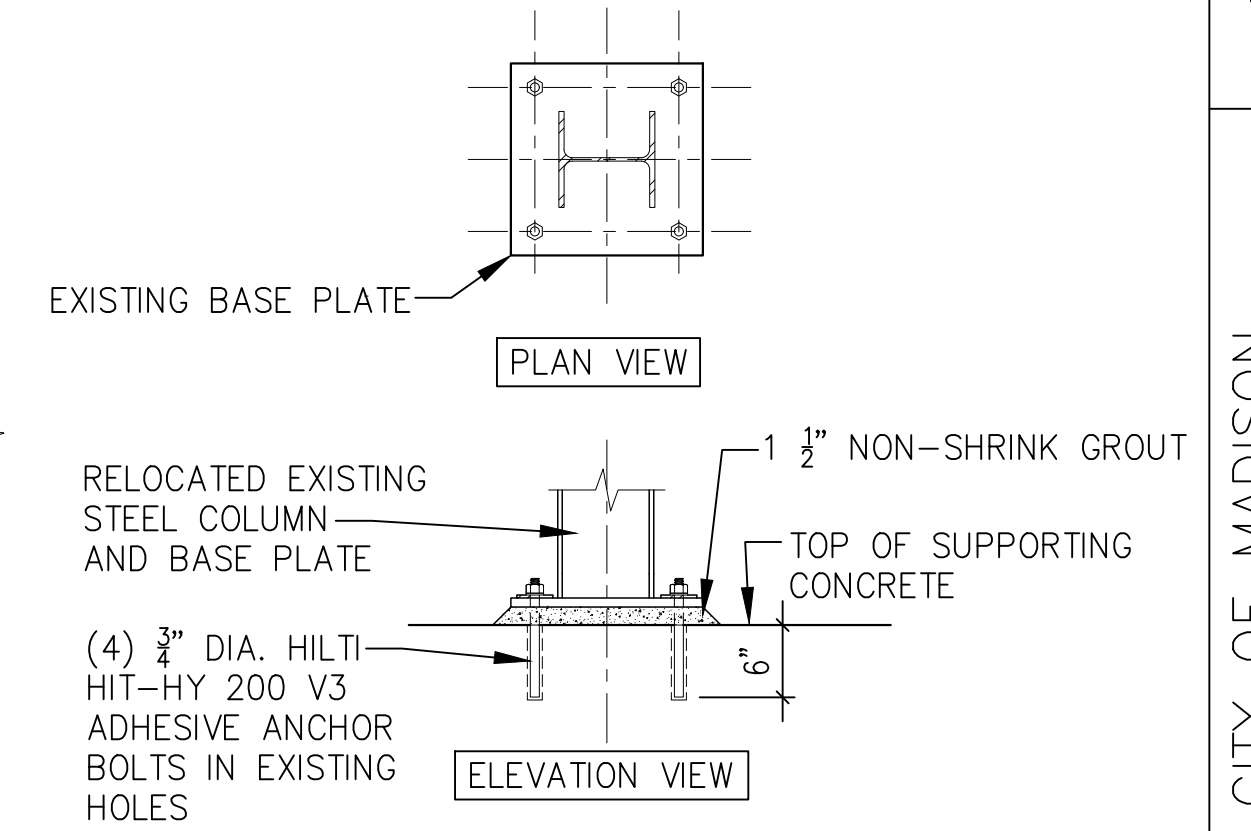


NOTE:
1. TO BE USED AT INTERIOR, NON-STRUCTURAL WALLS

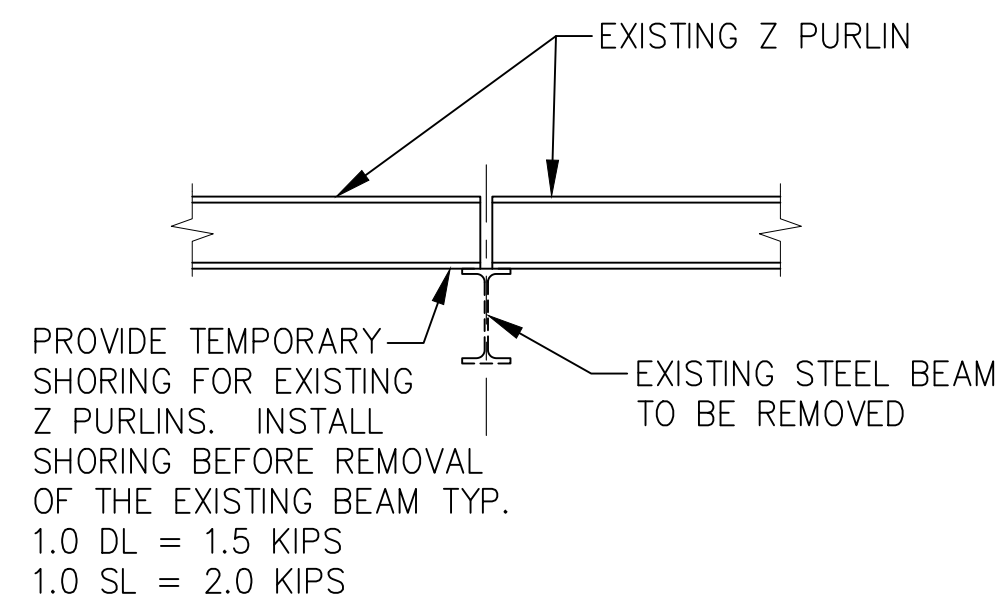
3 NON-STRUCTURAL CMU WALL DETAIL
3/4" = 1'-0"



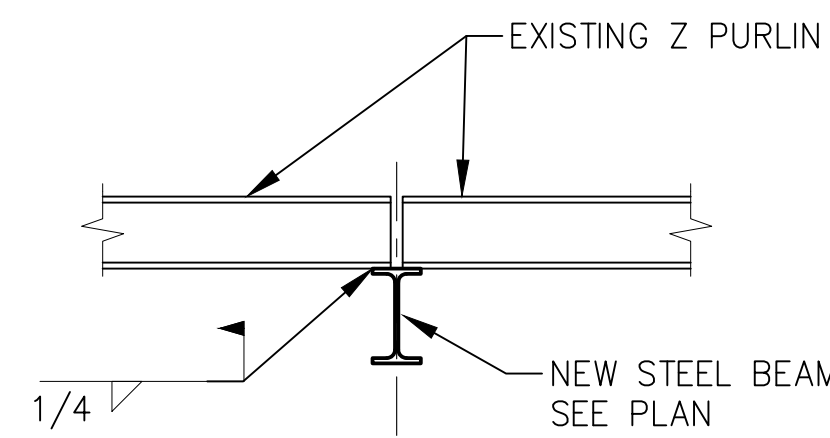
4 SPREAD FOOTING SUPPORTING RELOCATED STEEL COLUMN
3/4" = 1'-0"



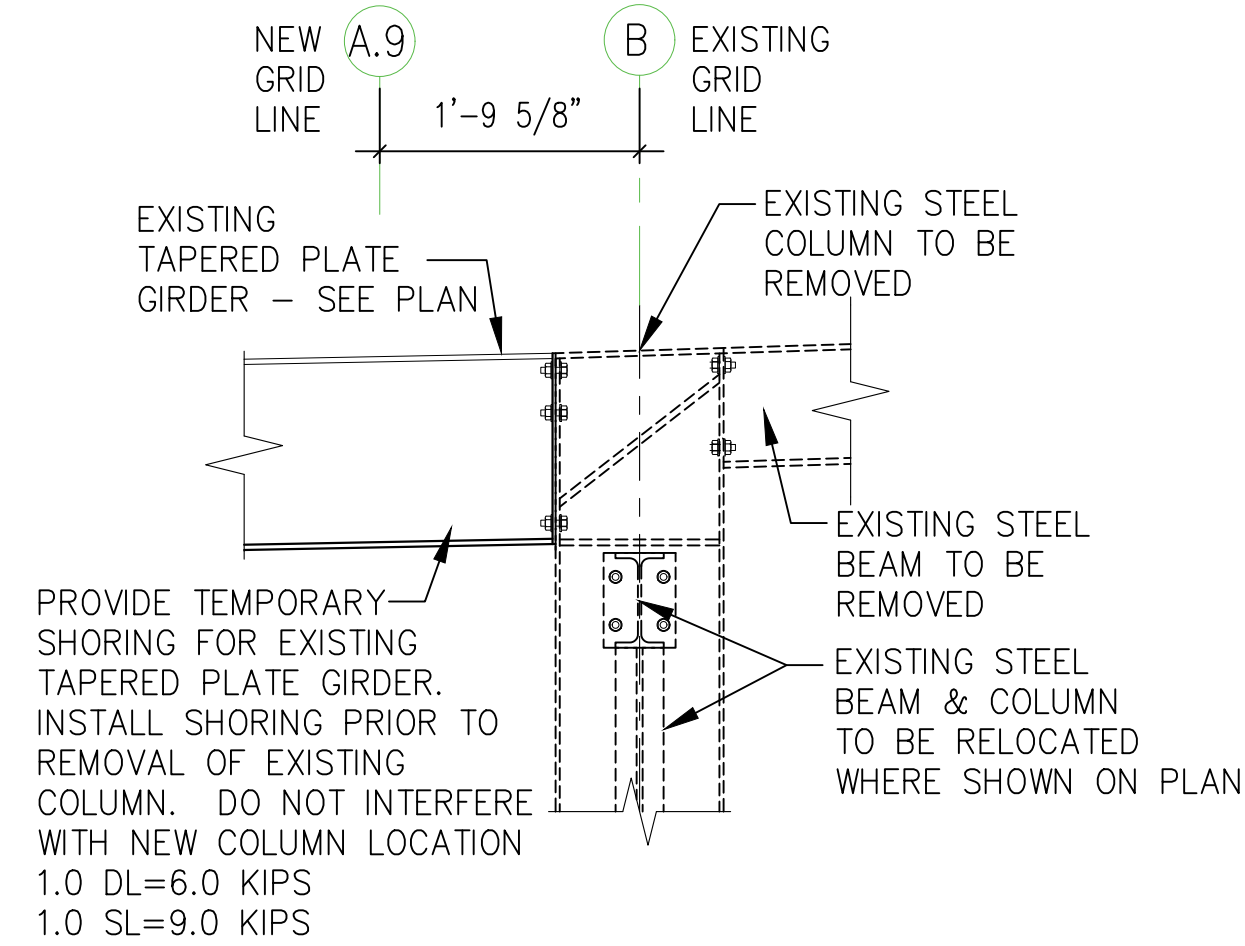
5 RELOCATED COLUMN BASE PLATE
3/4" = 1'-0"



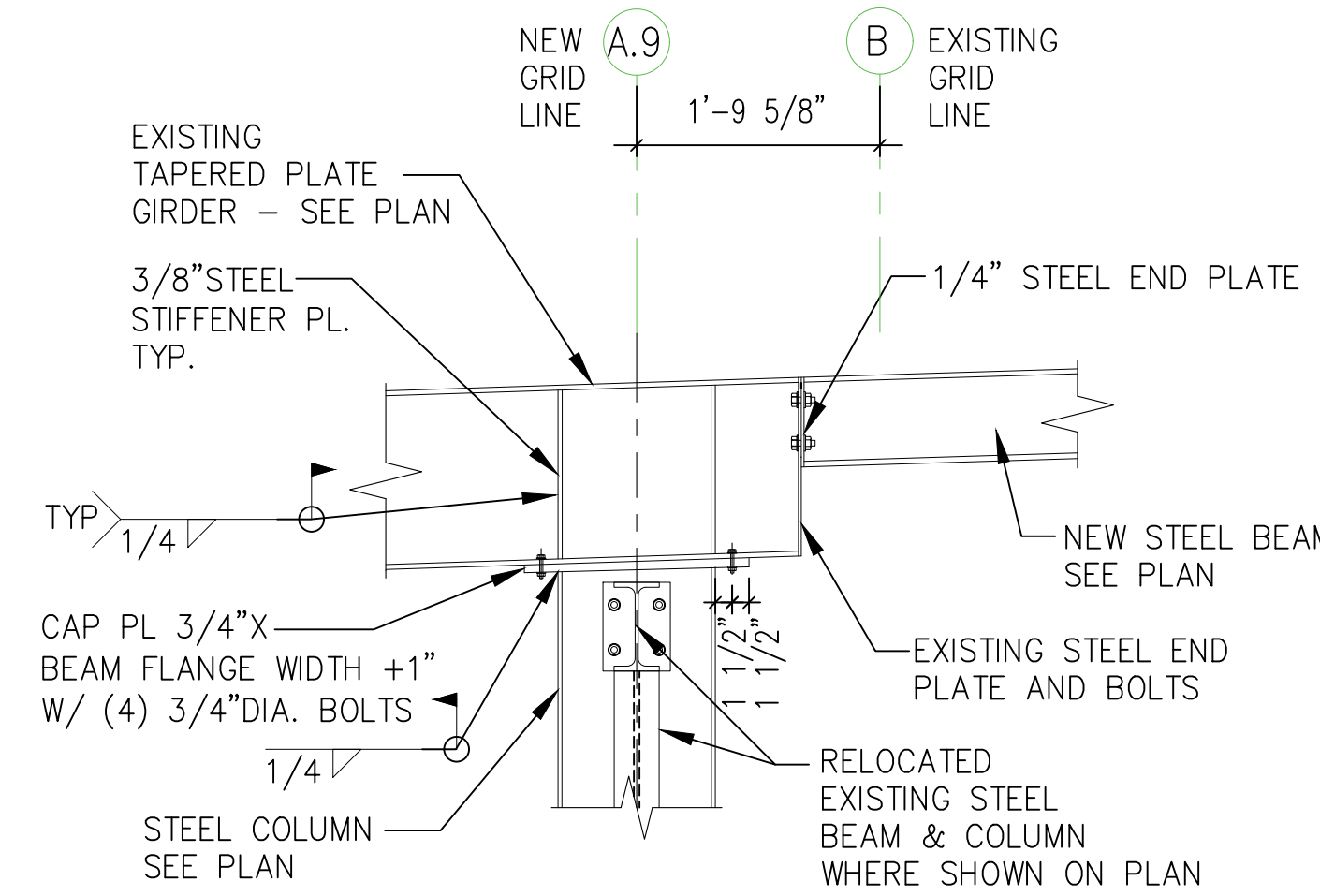
6 PURLIN AT EXISTING BEAM
3/4" = 1'-0"



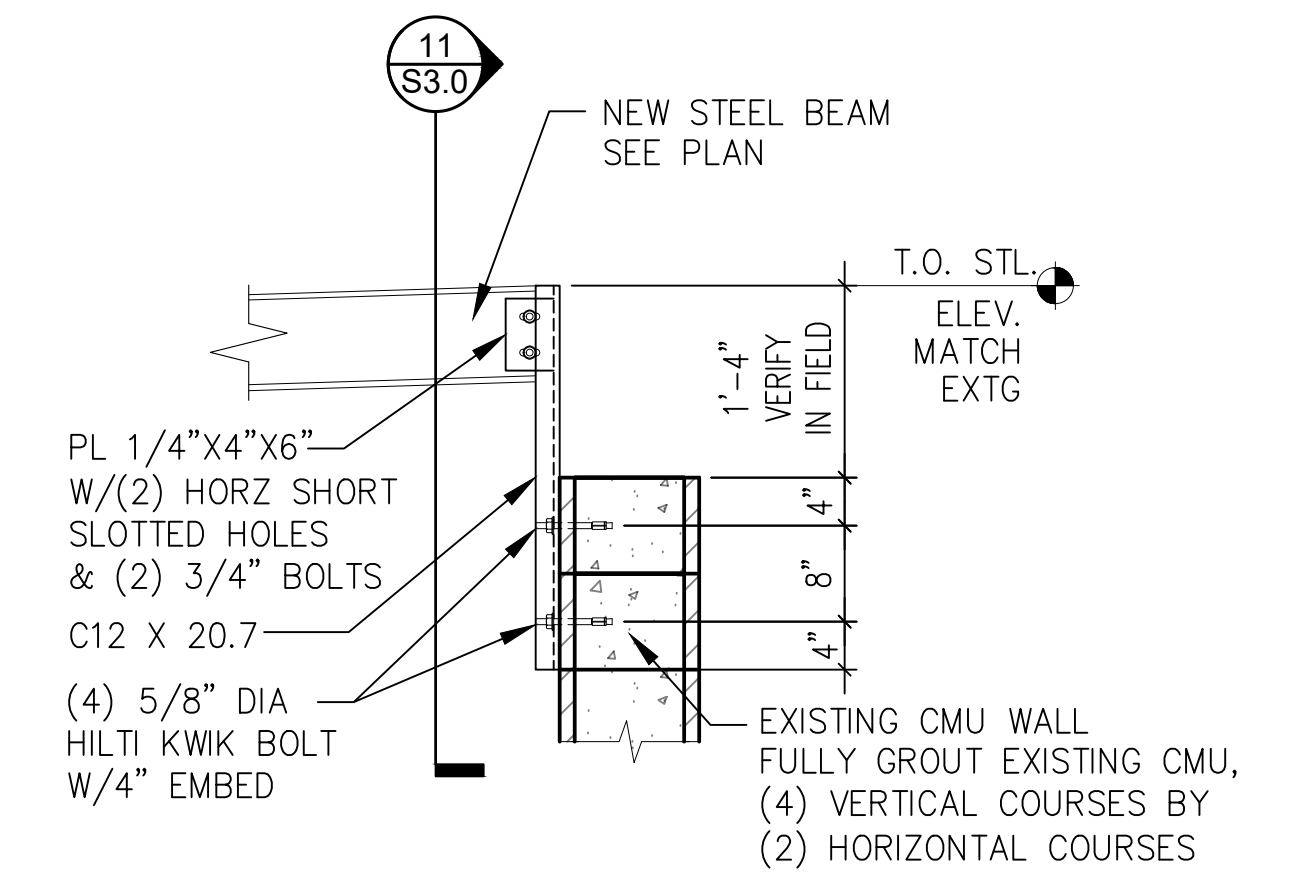
7 PURLIN AT NEW WIDE FLANGE BEAM
3/4" = 1'-0"



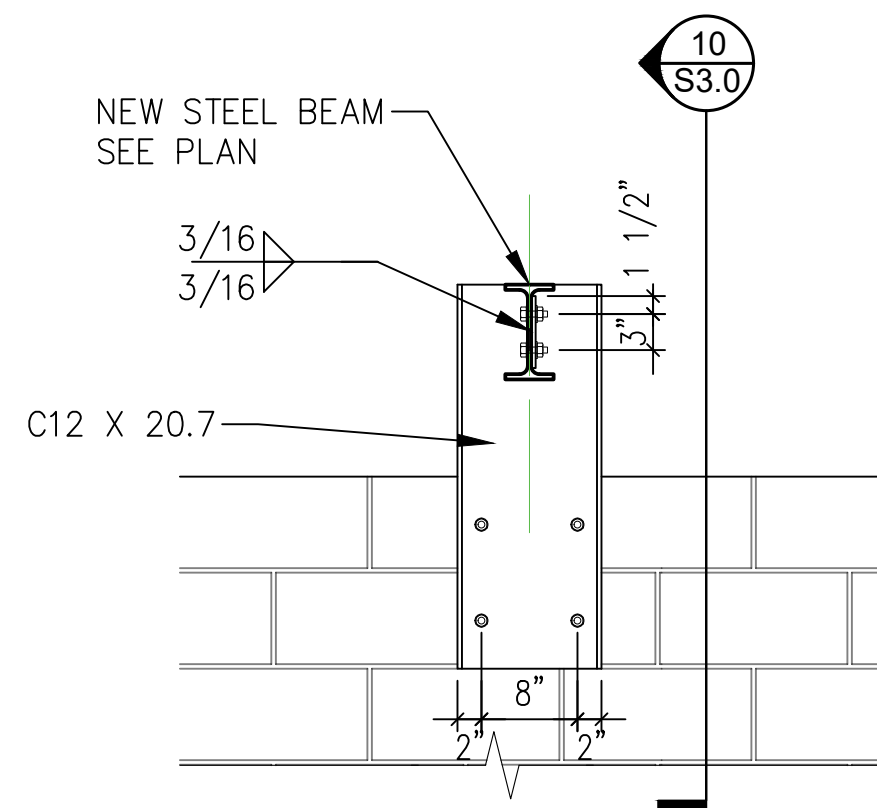
8 EXISTING GIRDER AT EXISTING COLUMN
3/4" = 1'-0"



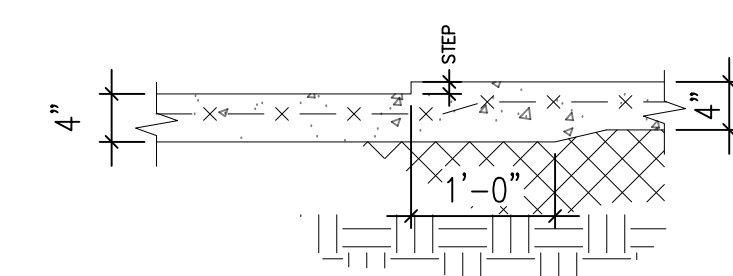
9 EXISTING GIRDER BEARING ON COLUMN
3/4" = 1'-0"



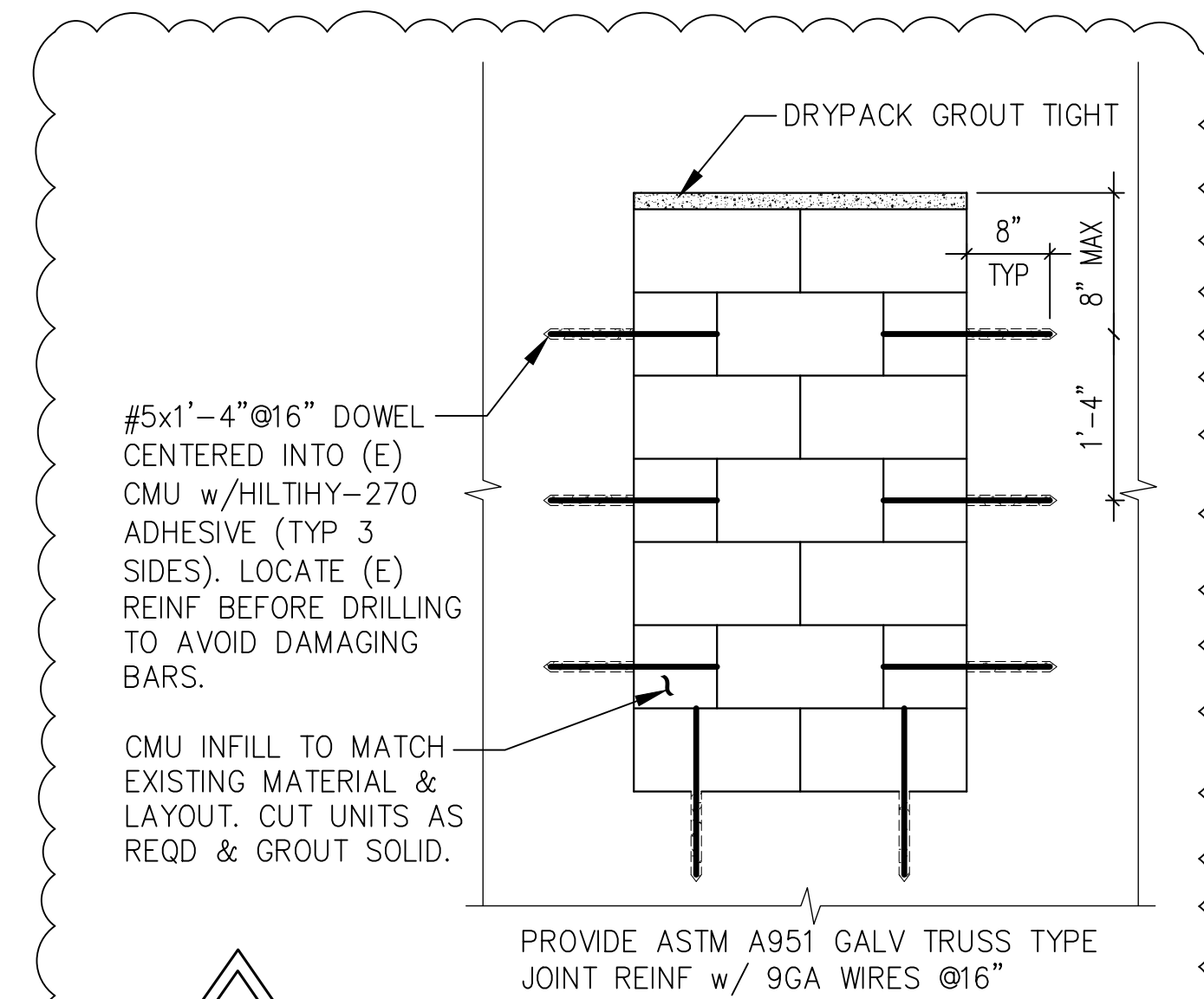
10 BEAM AT EXISTING MASONRY WALL
3/4" = 1'-0"



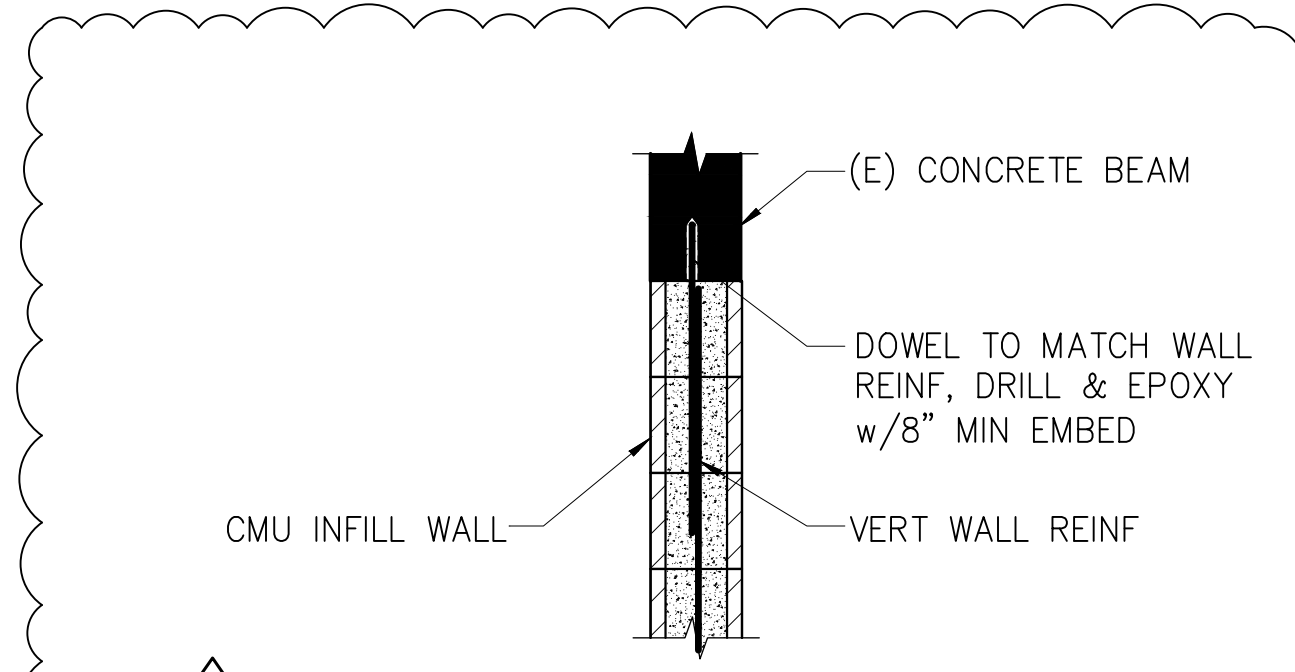
11 BEAM AT EXISTING MASONRY WALL
3/4" = 1'-0"



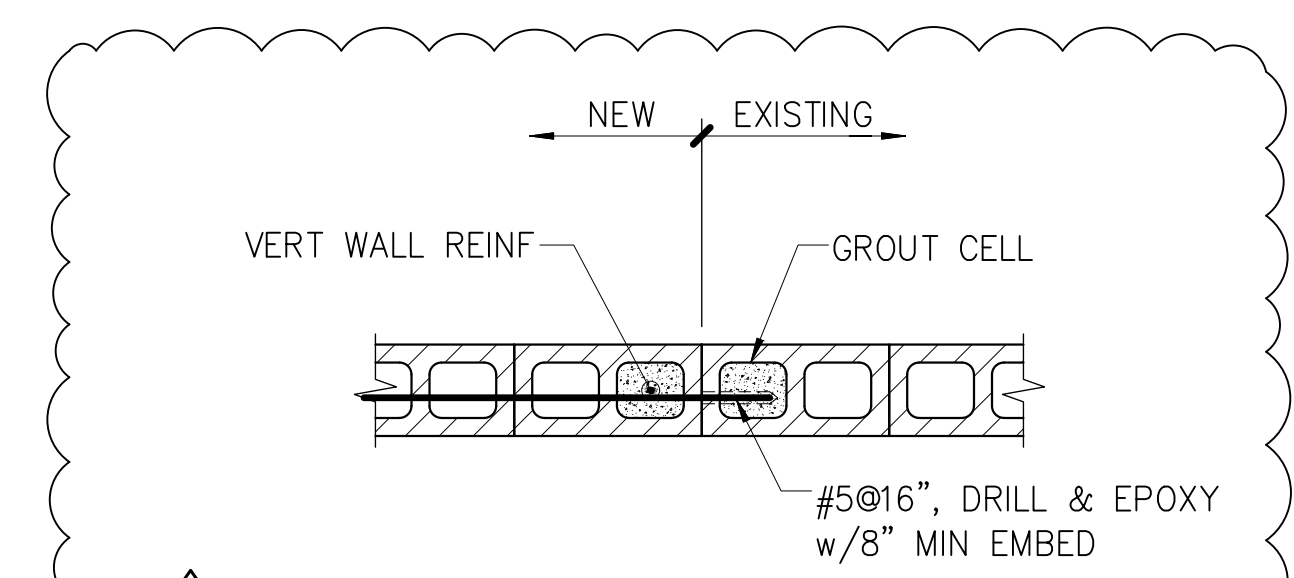
12 SLAB ON GRADE DEPRESSION
3/4" = 1'-0"



13 INFILL OF EXISTING CMU WALL OPENING
3/4" = 1'-0"



14 CMU INFILL AT EXISTING HEADER
3/4" = 1'-0"



15 CMU INFILL AT EXISTING JAMB
3/4" = 1'-0"



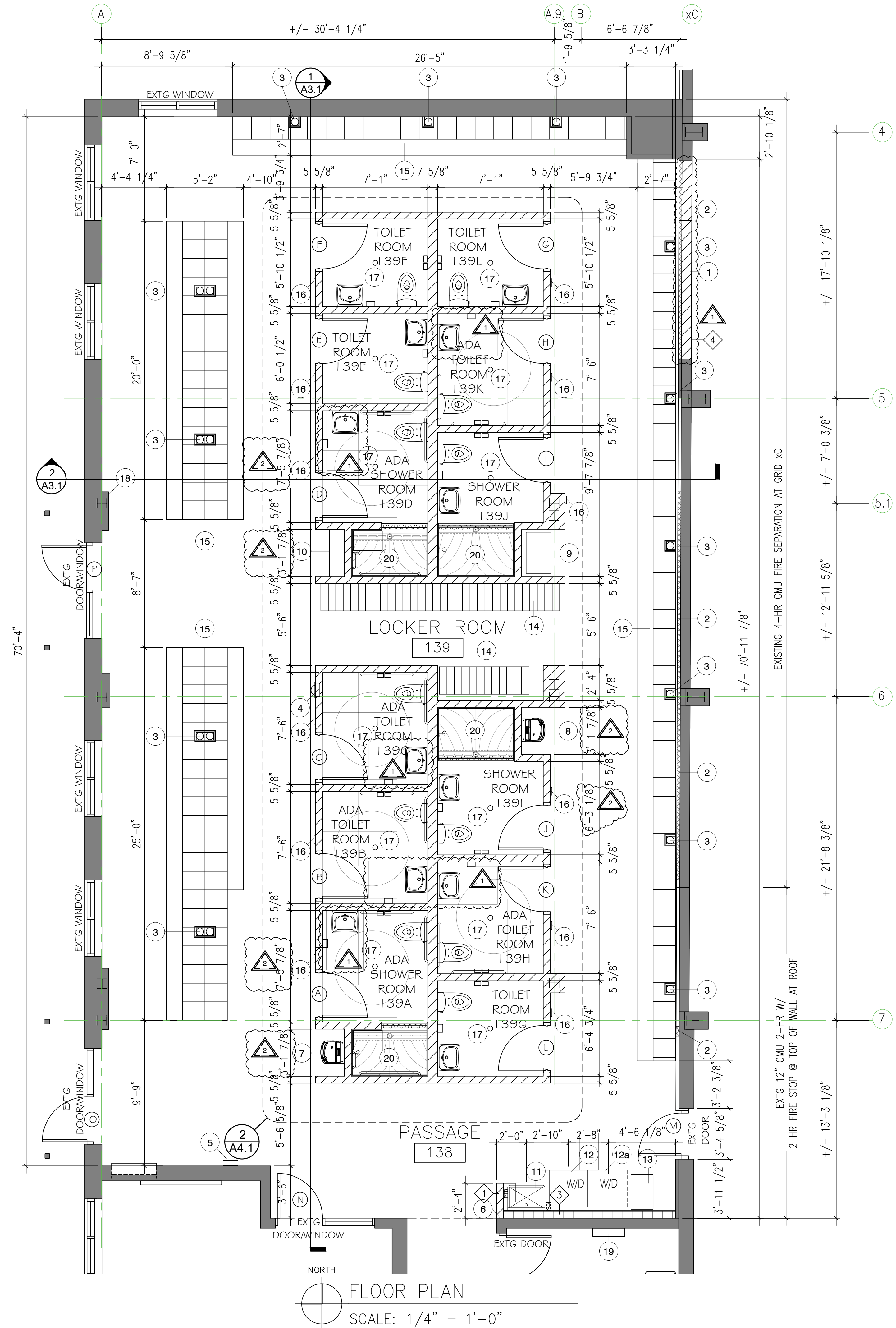
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ENG OP FACILITY LOCKER ROOM RENOVATION
1600 EMIL STREET
MADISON, WI 53713

CONTRACT #9659
MUNIS #14122
DRWN BY: LA
DATE 07/14/25
REV1:08/29/25

DETAILS

S3.0



FLOOR PLAN KEY NOTES

- 1 INFILL OPENING WITH CMU TO MATCH EXISTING. GROUT SOLID TO ACHIEVE 4 HOUR FIRE RATING.
- 2 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
- SPACESAVER LOCKER SYSTEM FURNISHED & INSTALLED UNDER SEPARATE CONTRACT.
- 15 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
- 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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FLOOR PLAN

A1.2



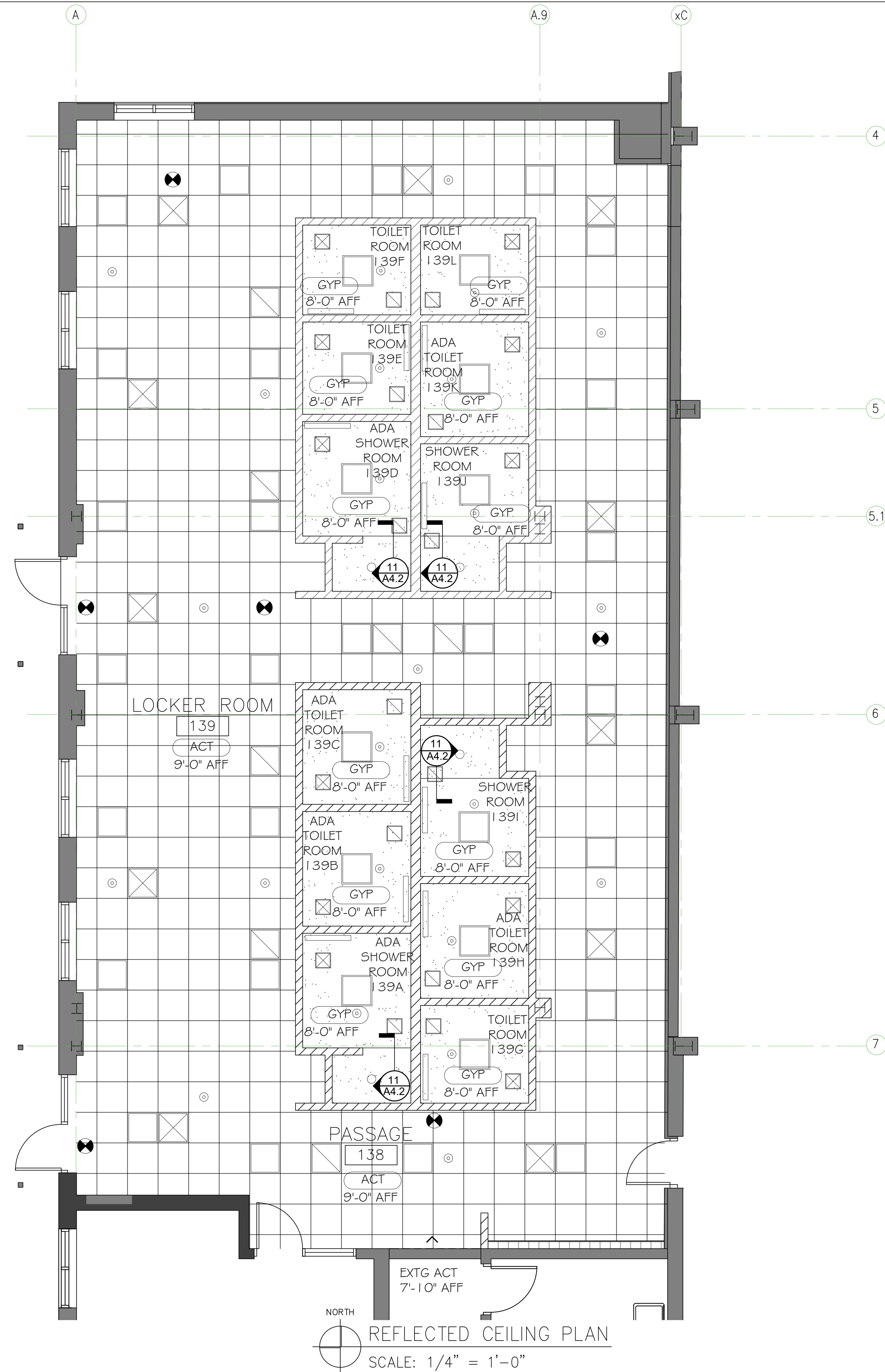
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REFLECTED
 CEILING PLAN

A1.4



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



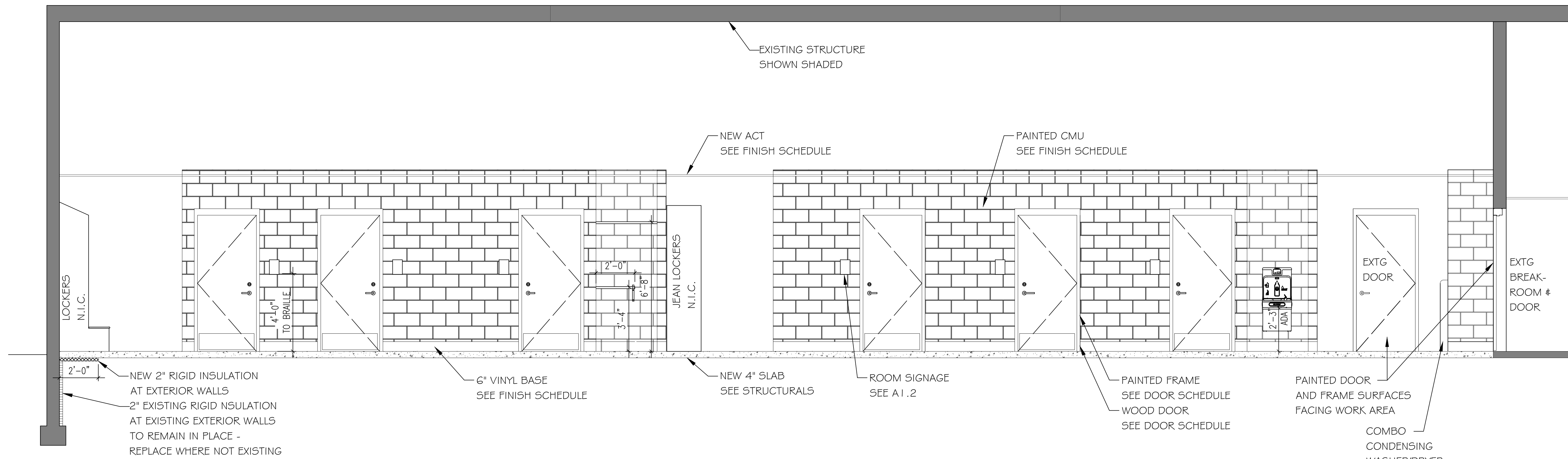
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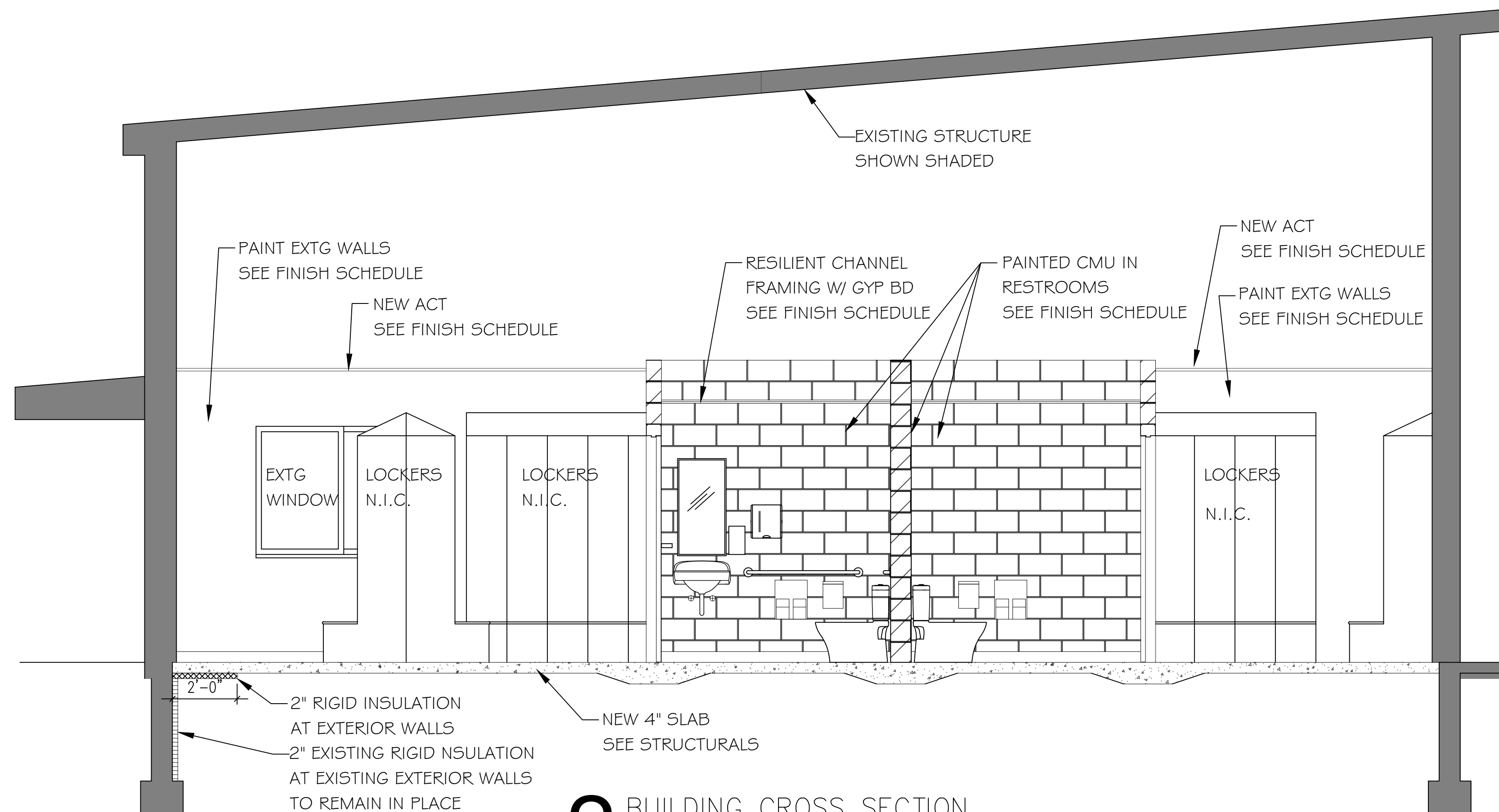
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BLDG SECTIONS

A3.1



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



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



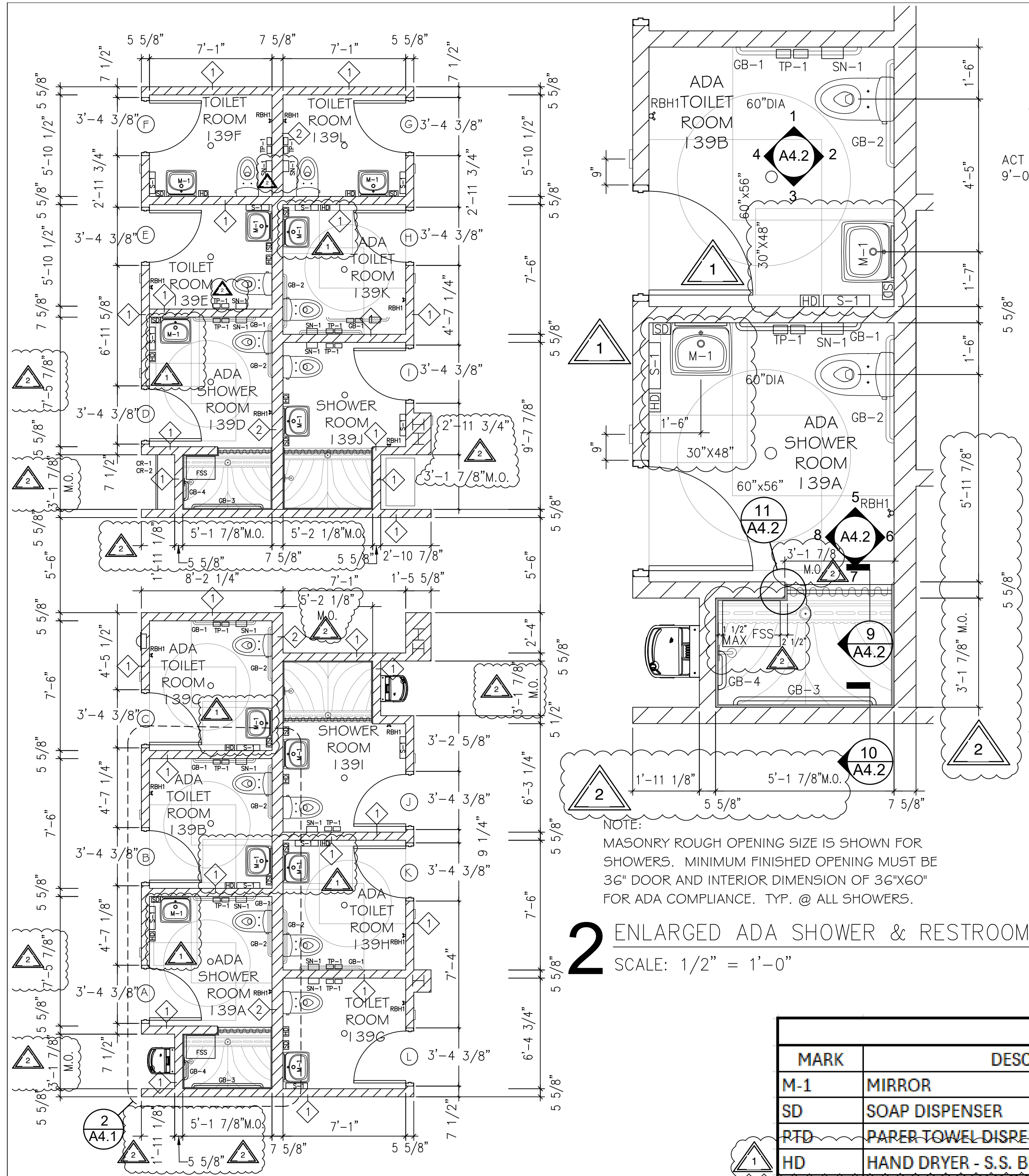
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ENLARGED FLOOR PLAN

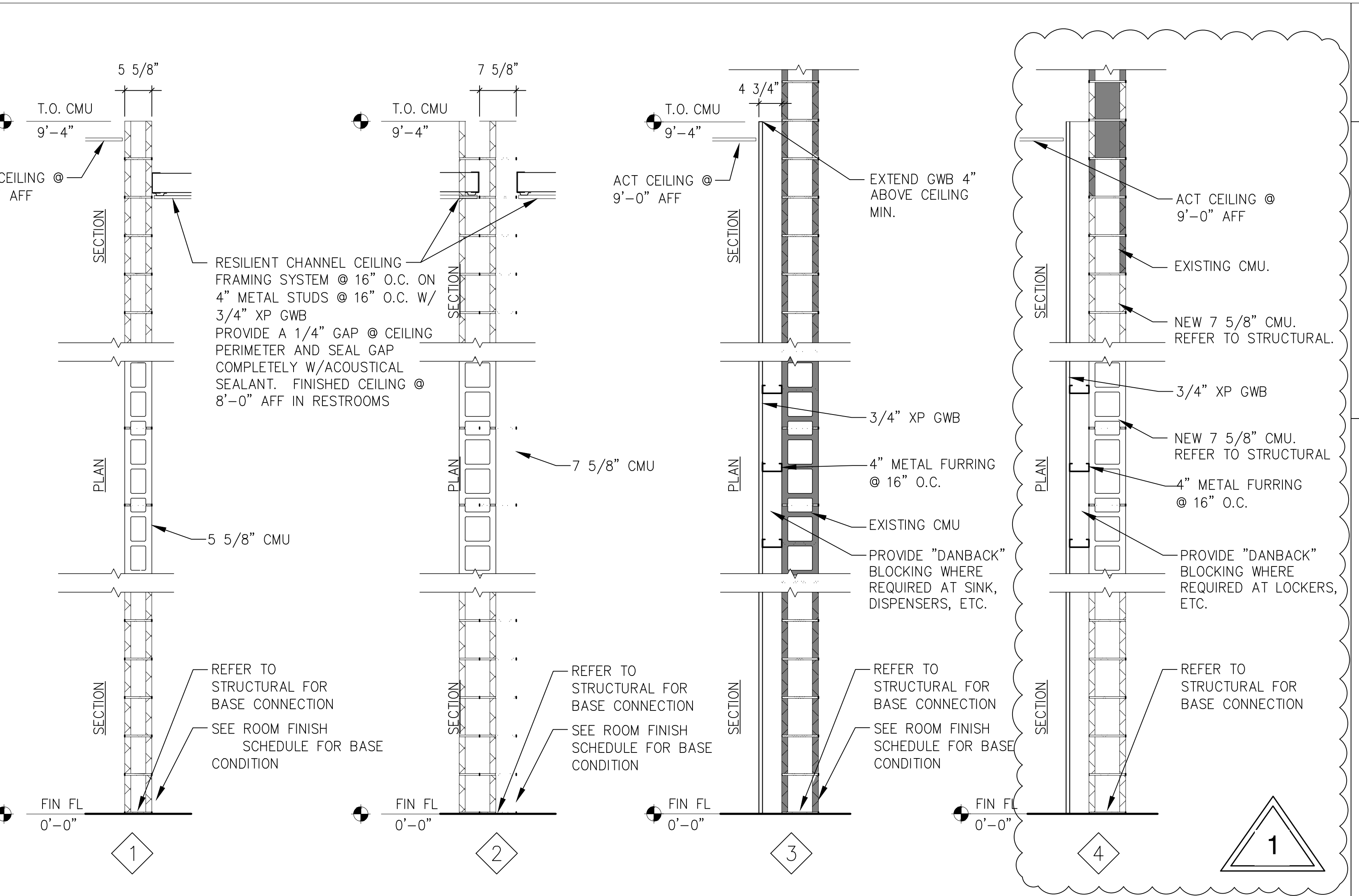
A4.1



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

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

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



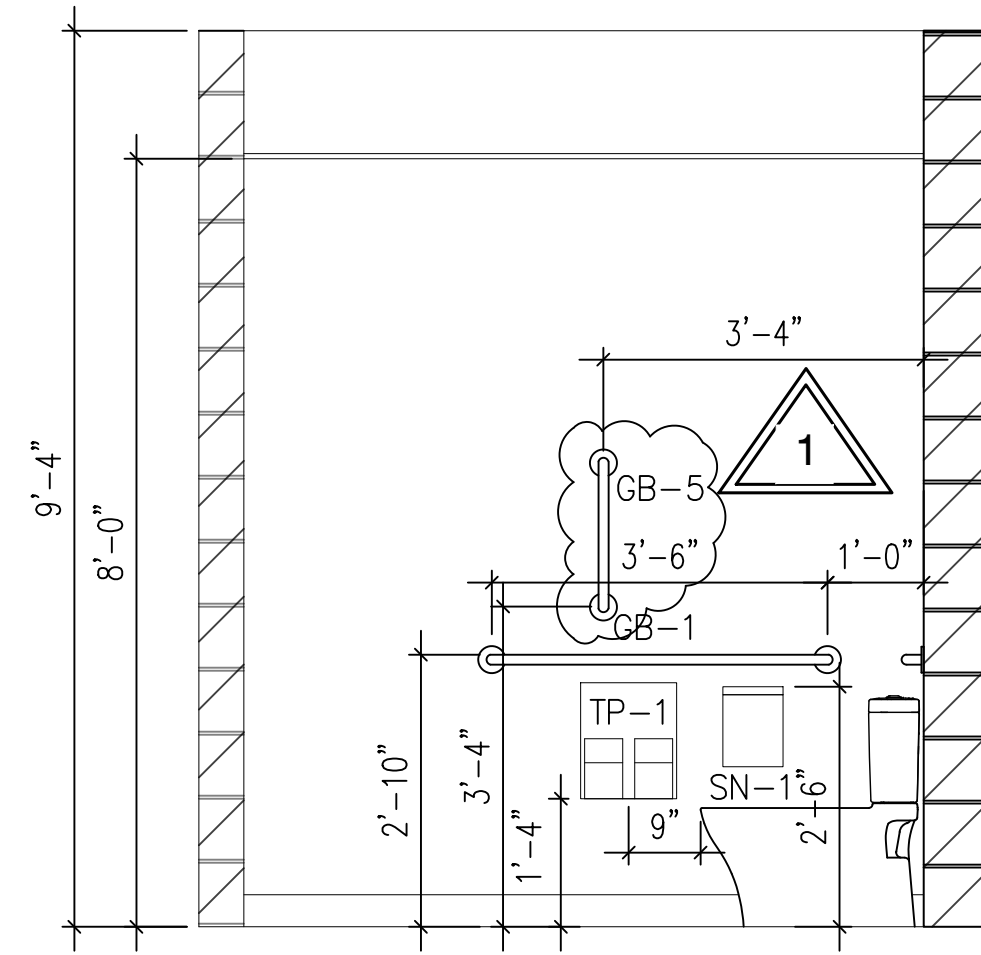
WALL TYPES
SCALE: 3/4" = 1'-0"

ACCESSORY LEGEND					
MARK	DESCRIPTION	MANUFACTURER/MODEL	SIZE	MTG HT 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	EXCEL THIN AIR TA-SB	9.25"x14"x4"	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
GB-5	GRAB BAR - S.S. - CONCEALED MOUNT	BRADLEY SERIES 812 PEENED FINISH	1 1/2"x18"	40" BOTTOM OF BAR	VERTICAL SIDE OF WC
FSS	FOLDING SHOWER SEAT	DREAMLINE SHST-02-TN	15 3/8" X 20"	18" TOP OF SEAT	ADA SHOWER
RBH1	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

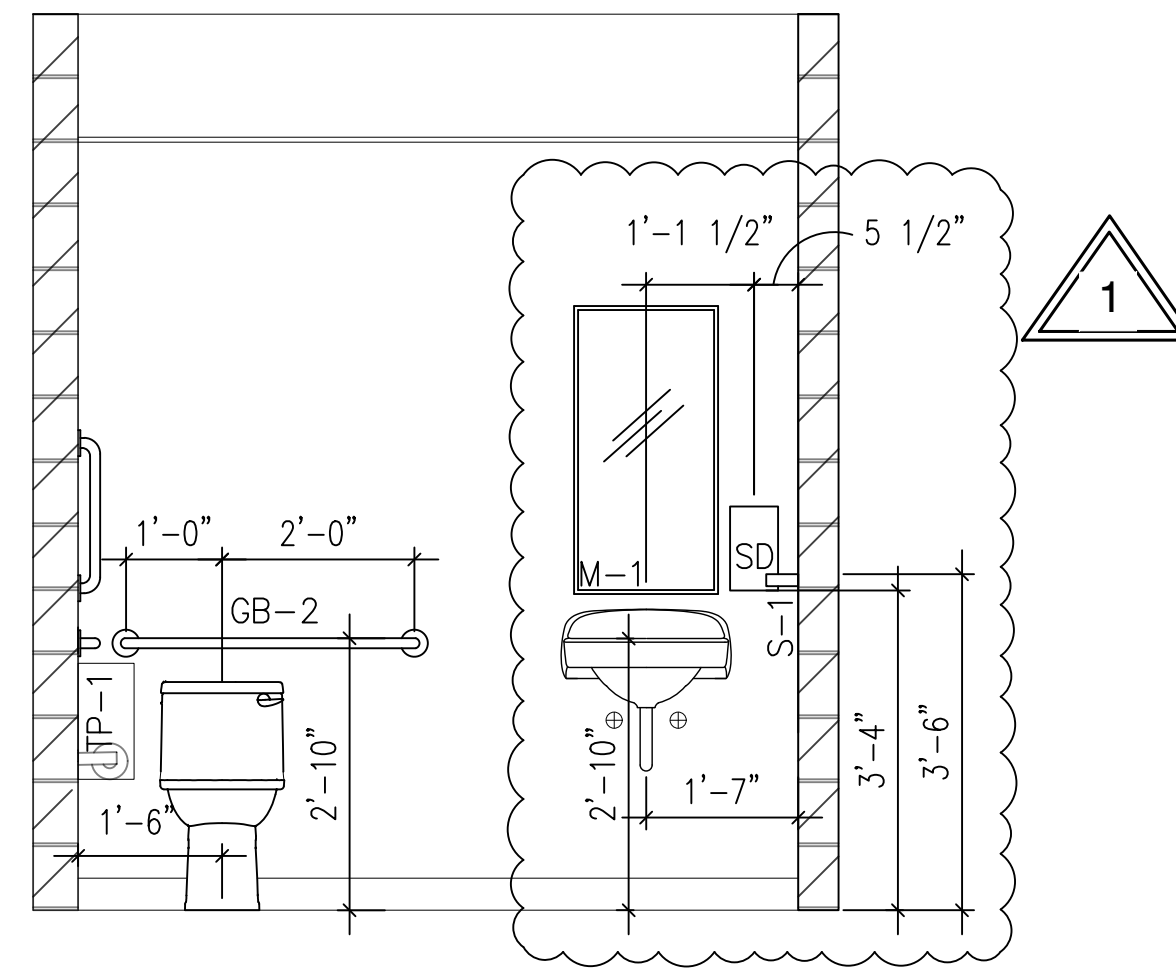


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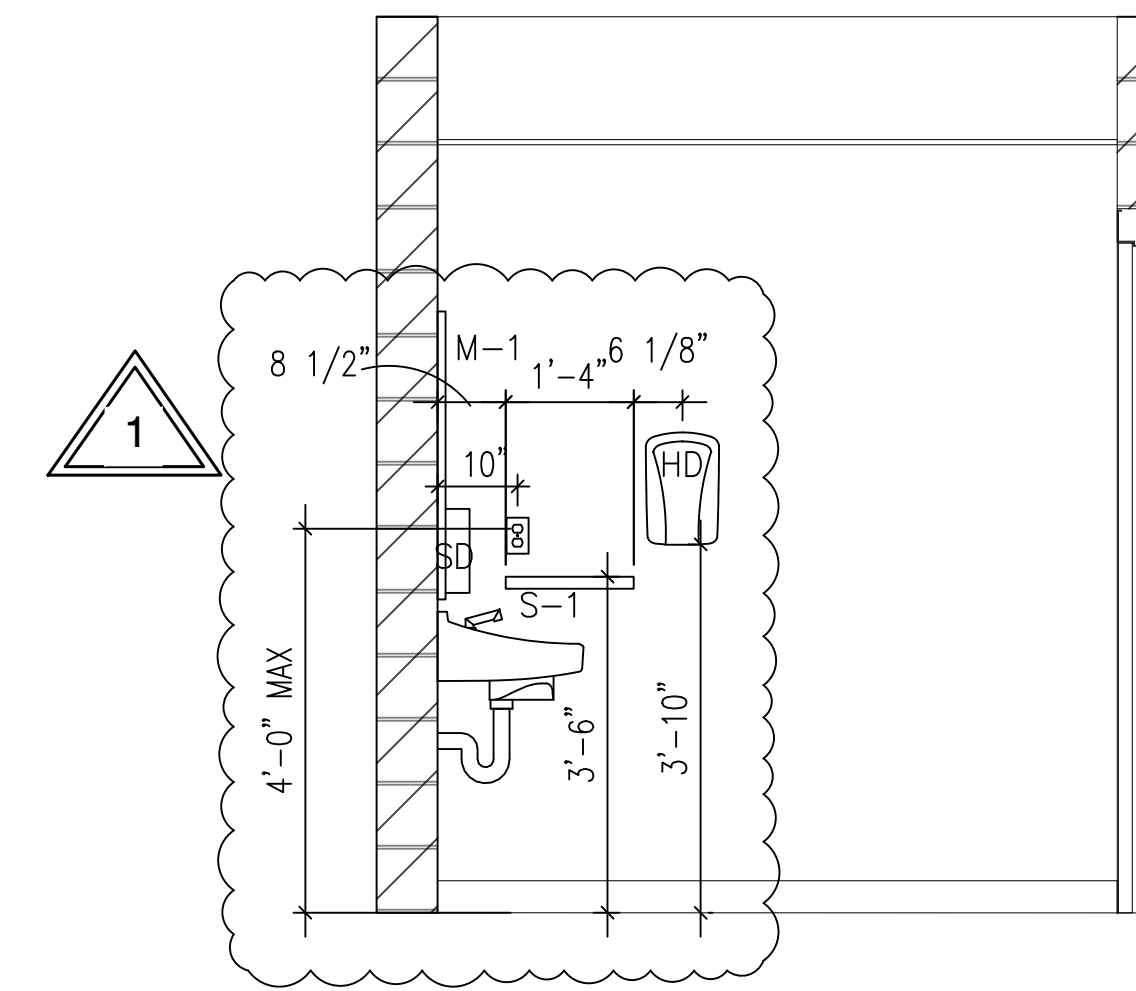
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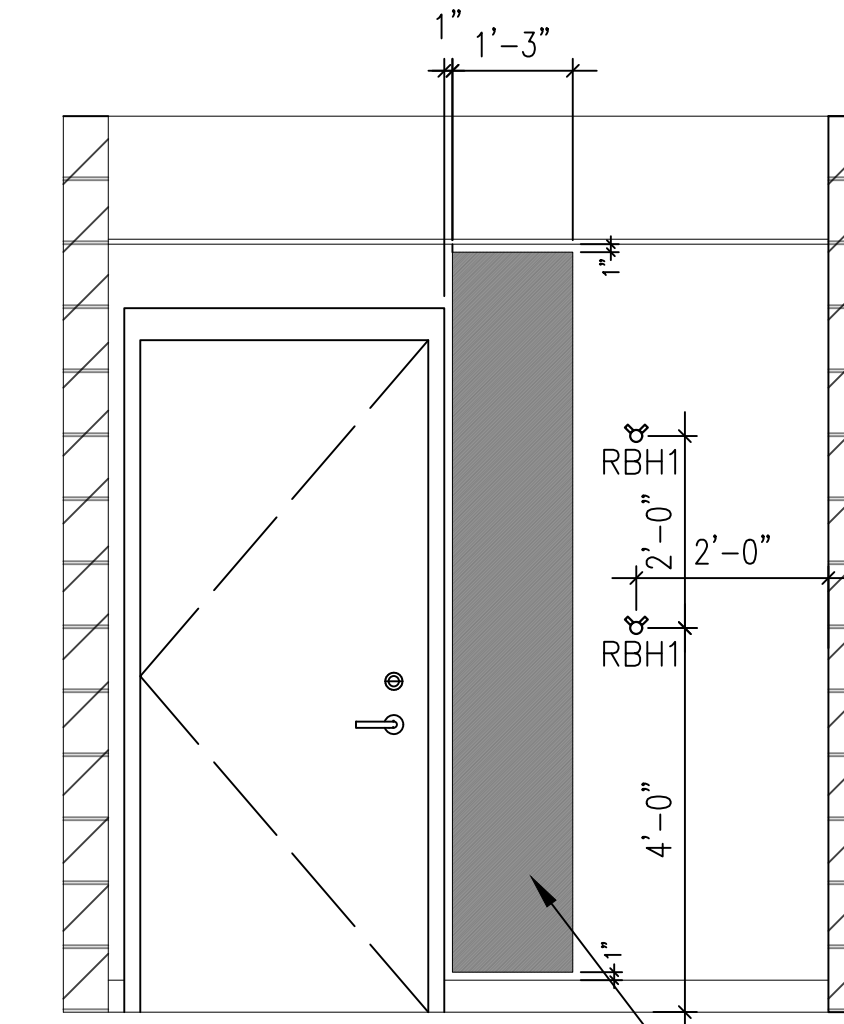
1 ADA TOILET 139B NORTH
1/2" = 1'-0"



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

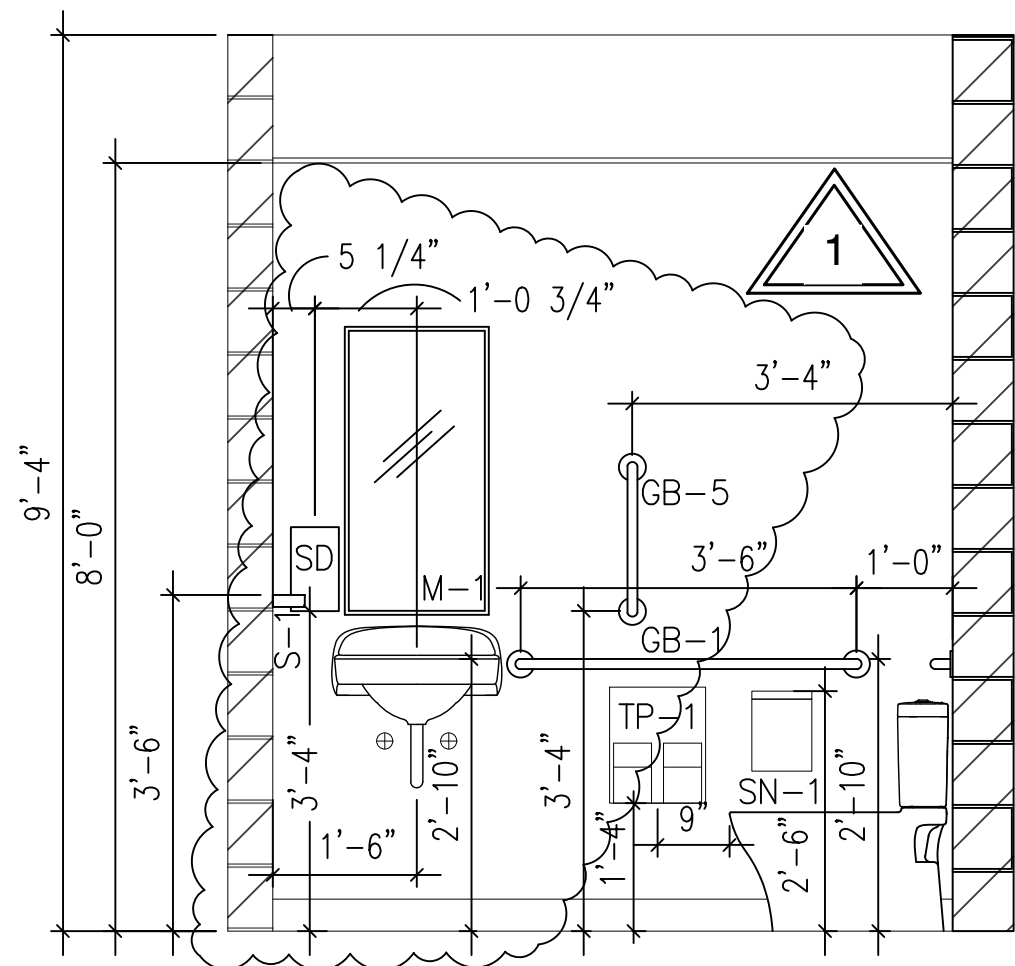


3 ADA TOILET 139B SOUTH
1/2" = 1'-0"

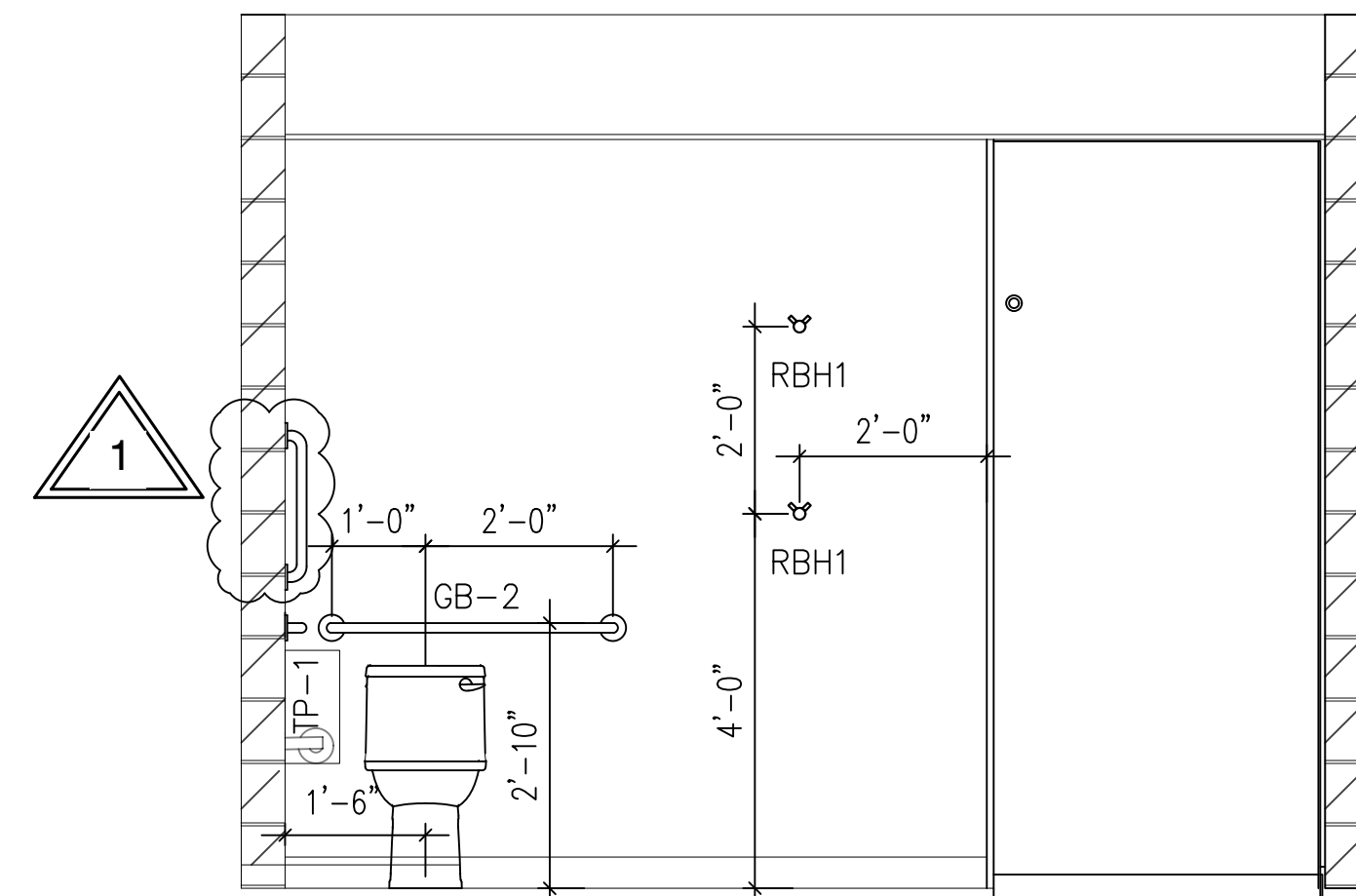


4 ADA TOILET 139B WEST
1/2" = 1'-0"

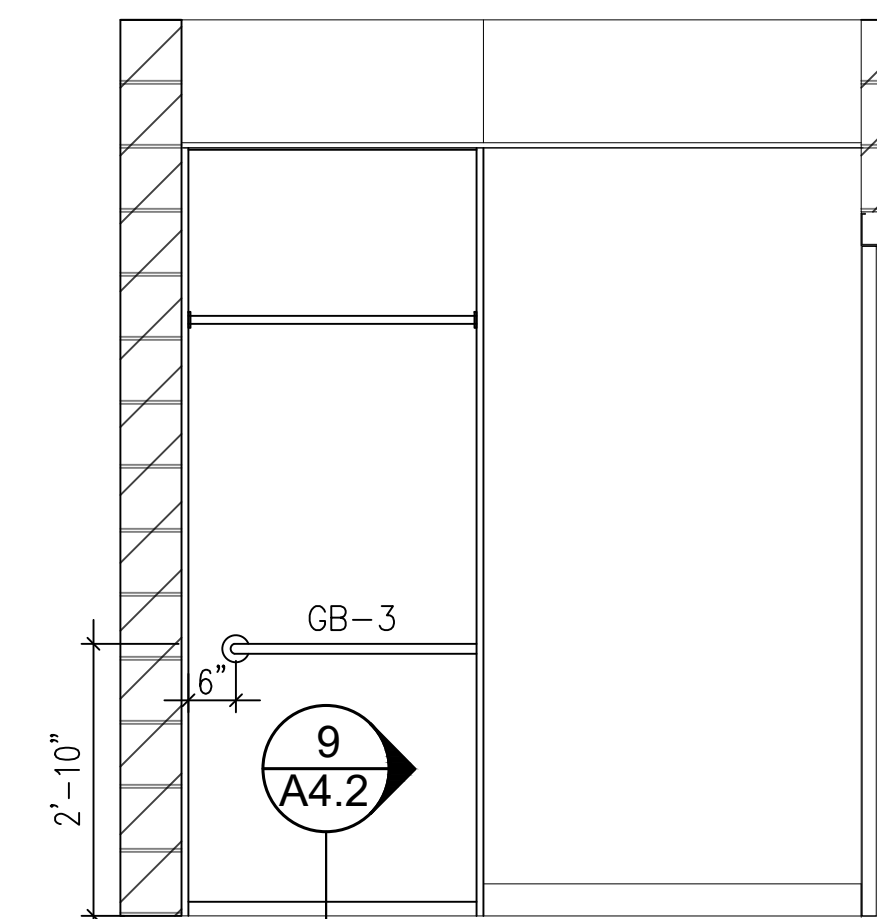
ACCENT PAINT AREA LOCATED ON PULL SIDE OF THE DOOR. COORDINATE COLOR WITH PAINTED GRAPHIC COLORS ON LOCKER ROOM SIDE OF WALL. TYP AT INTERIOR OF ALL RESTROOM AND SHOWER ROOMS.



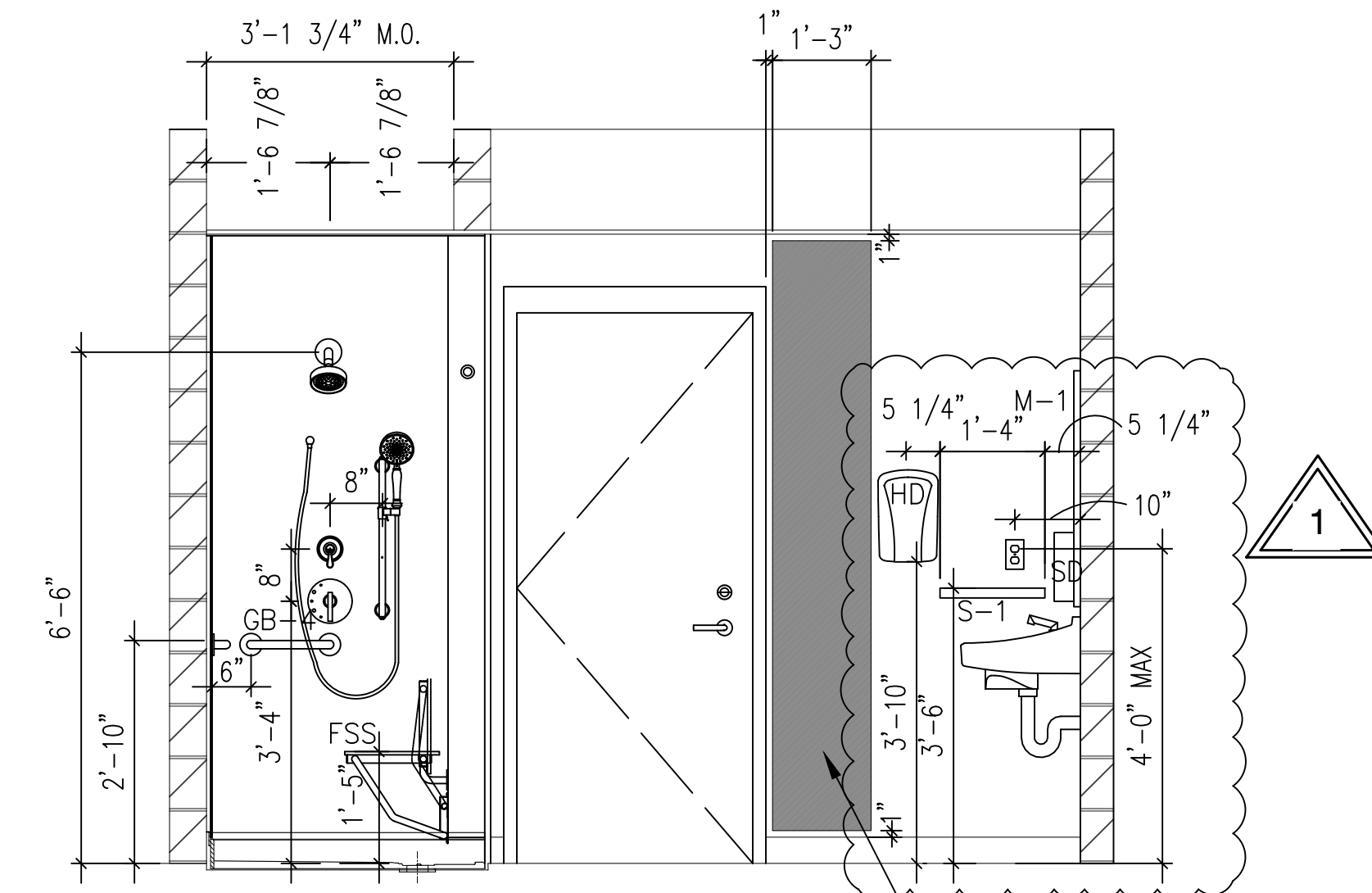
5 ADA SHOWER RM 139A NORTH
1/2" = 1'-0"



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

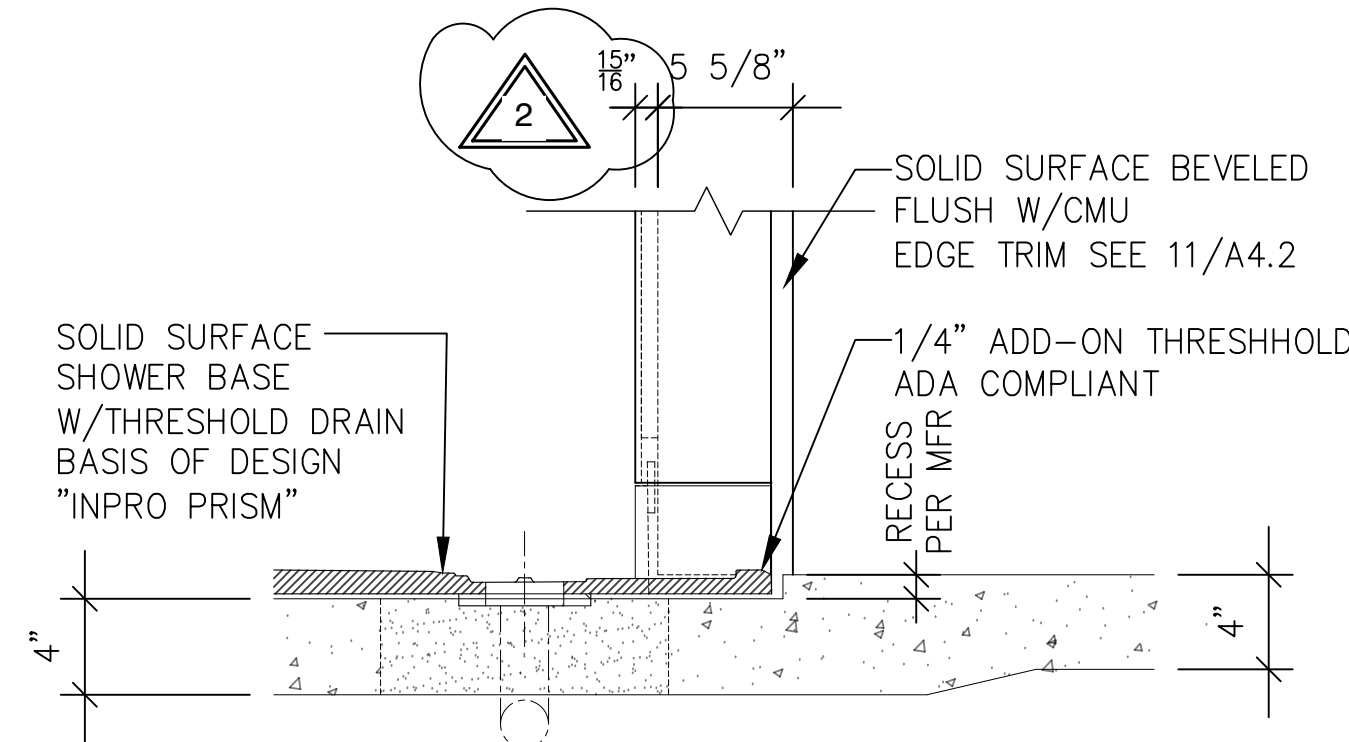


7 ADA SHOWER RM 139A SOUTH
1/2" = 1'-0"

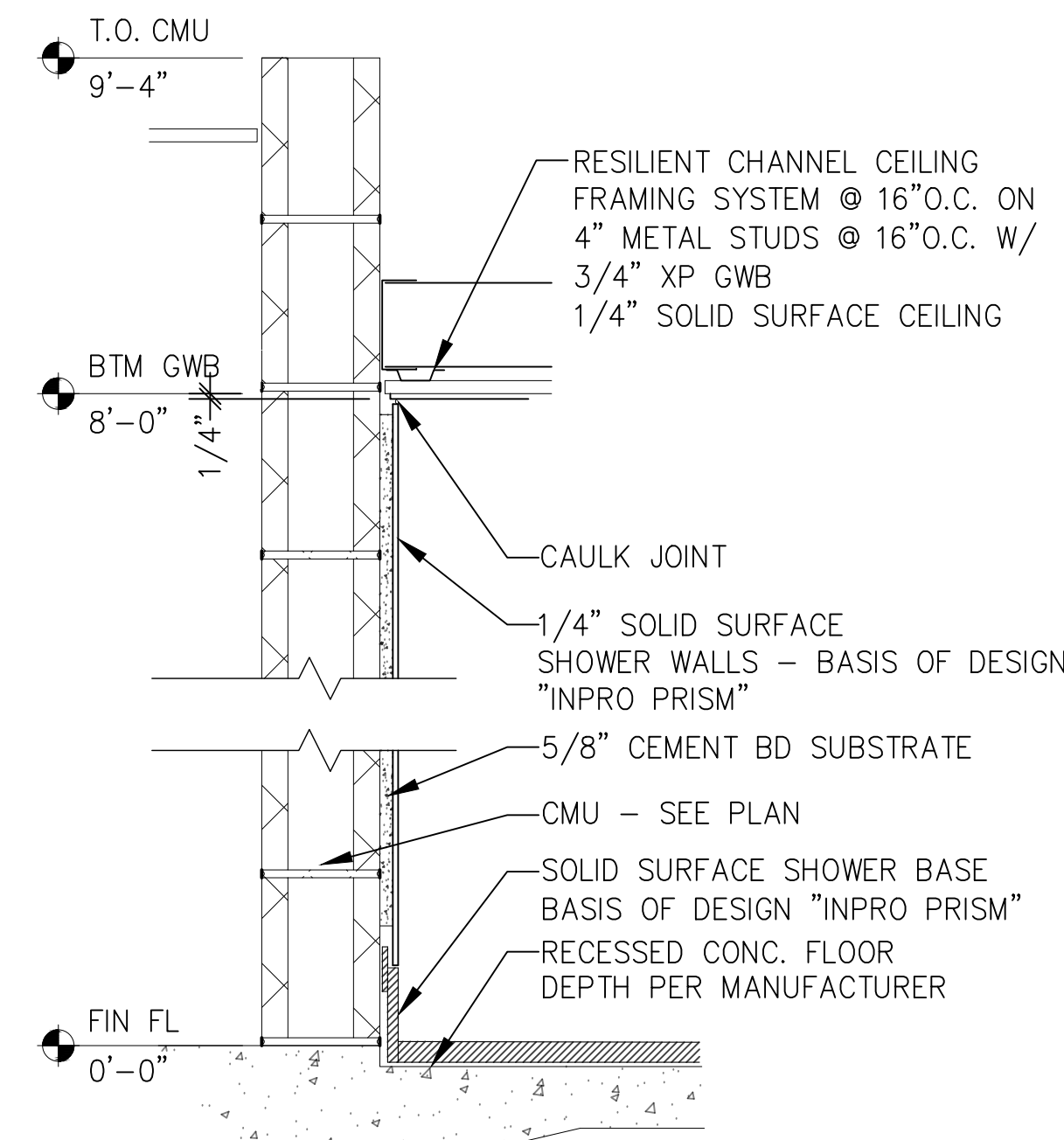


8 ADA SHOWER RM 139A WEST
1/2" = 1'-0"

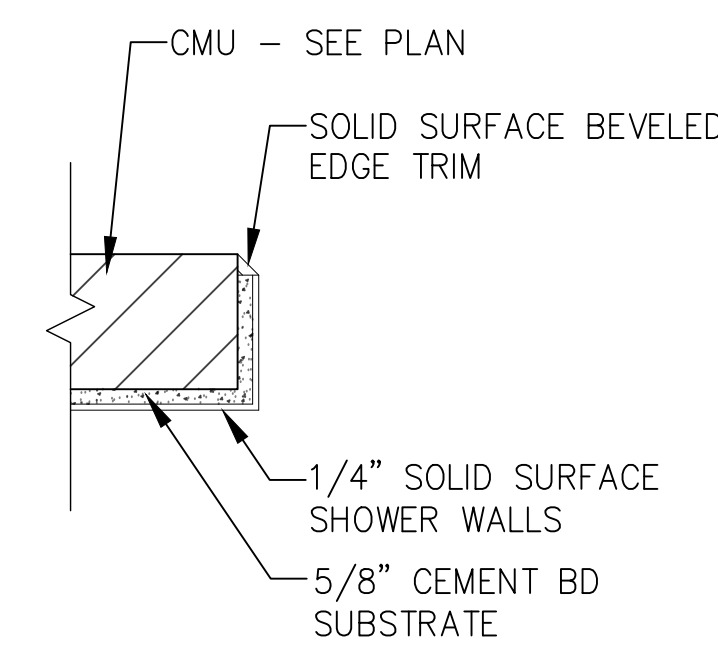
ACCENT PAINT AREA LOCATED ON PULL SIDE OF THE DOOR. COORDINATE COLOR WITH PAINTED GRAPHIC COLORS ON LOCKER ROOM SIDE OF WALL. TYP AT INTERIOR OF ALL RESTROOM AND SHOWER ROOMS.



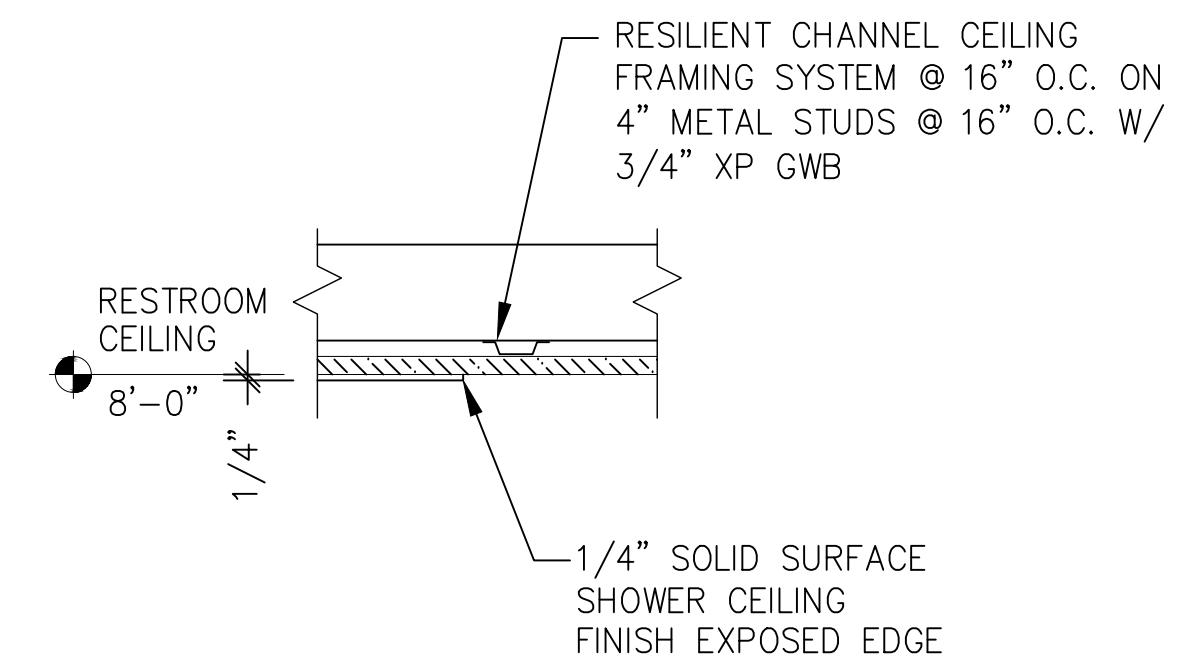
9 ADA SHOWER BASE AT THRESHOLD
1 1/2" = 1'-0"



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 ELEVATIONS
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.

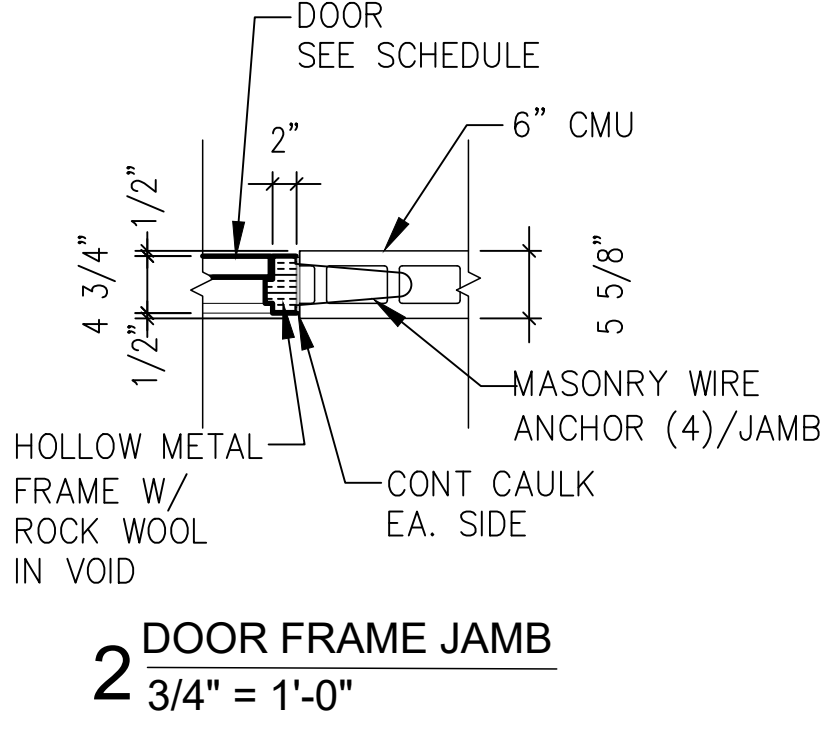
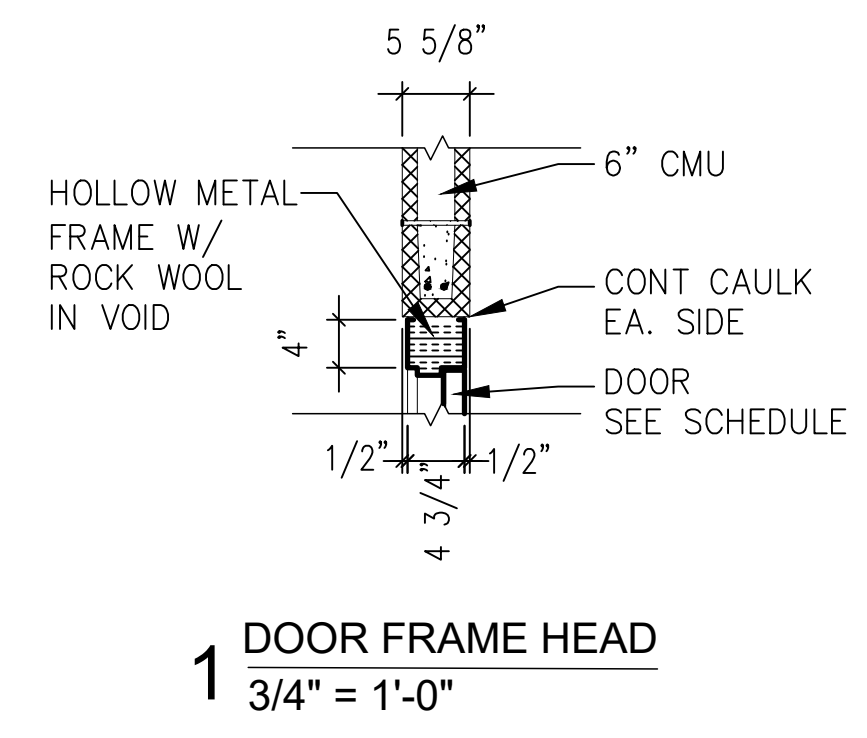
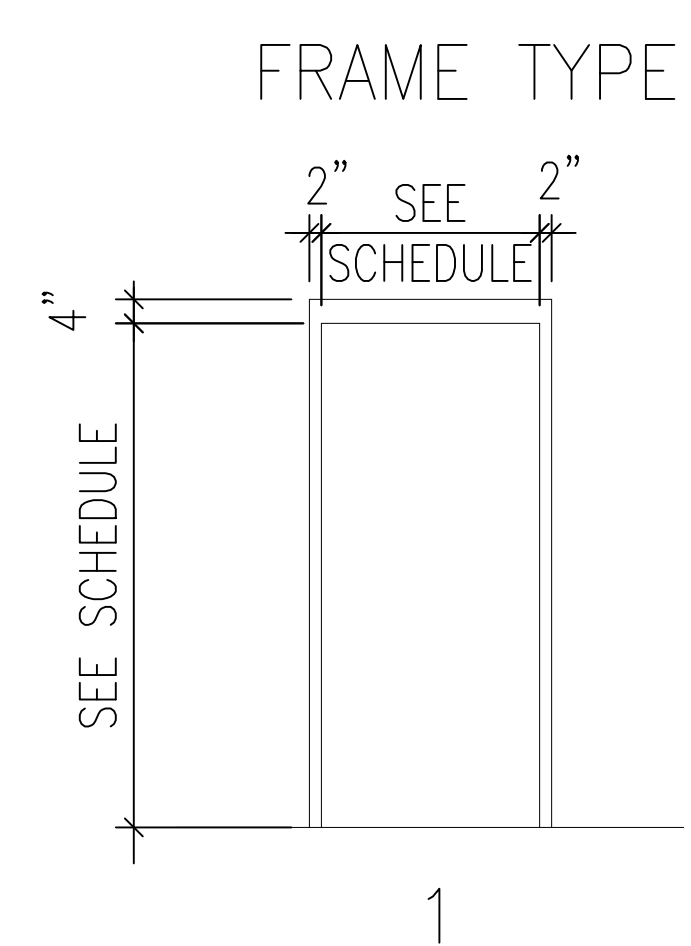
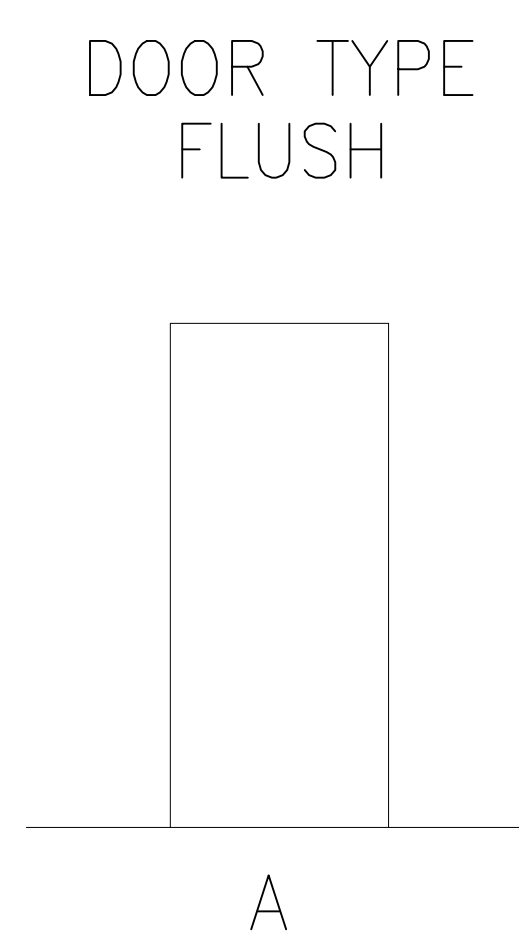
ROOM FINISH SCHEDULE						
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL	CEILING	NOTES
138	PASSAGE	CONC	VINYL	EXIST; CMU	ACT	D
139	LOCKER ROOM	CONC	VINYL	EXIST; CMU	ACT	D
139A	ADA SHOWER RM	CONC	VINYL	CMU	RCF GYP	A, B, C, D
139B	ADA TOILET RM	CONC	VINYL	CMU	RCF GYP	D
139C	ADA TOILET RM	CONC	VINYL	CMU	RCF GYP	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 EXISTING MATERIALS TO REMAIN - PATCH & PAINT
- CONC SEALED CONCRETE FLOOR W/ SLIP RESISTANT COATING
- VINYL VINYL COVERED BASE JOHNSONITE TRADITIONAL 6" HIGH X 1/8" THICK; COLOR: BLACK (40)
- CMU CONCRETE MASONRY UNIT - PAINT
- GWB GYPSUM WALL BOARD - PAINT
- ACT ACOUSTICAL CEILING TILE
- RCF GYP RESILIENT CHANNEL FRAMING W/ GYPSUM BOARD - PAINT

FINISH SCHEDULE NOTES

- A SOLID SURFACE SHOWER WALLS
- B SOLID SURFACE CUSTOM SHOWER BASE
- C SHOWER CEILING TO BE SOLID SURFACE ON RESILIENT CHANNEL FRAMING W/(2) LAYERS OF GYP BD
- D SEE REFLECTED CEILING PLAN FOR ADDITIONAL INFO



CITY OF MADISON
DEPT OF PUBLIC WORKS
ENGINEERING DIVISION
CITY COUNTY BLDG. RM 115
210 MARTIN LUTHER KING JR BLVD
MADISON, WI 53703
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

DOOR & FINISH SCHEDULES

A6.1



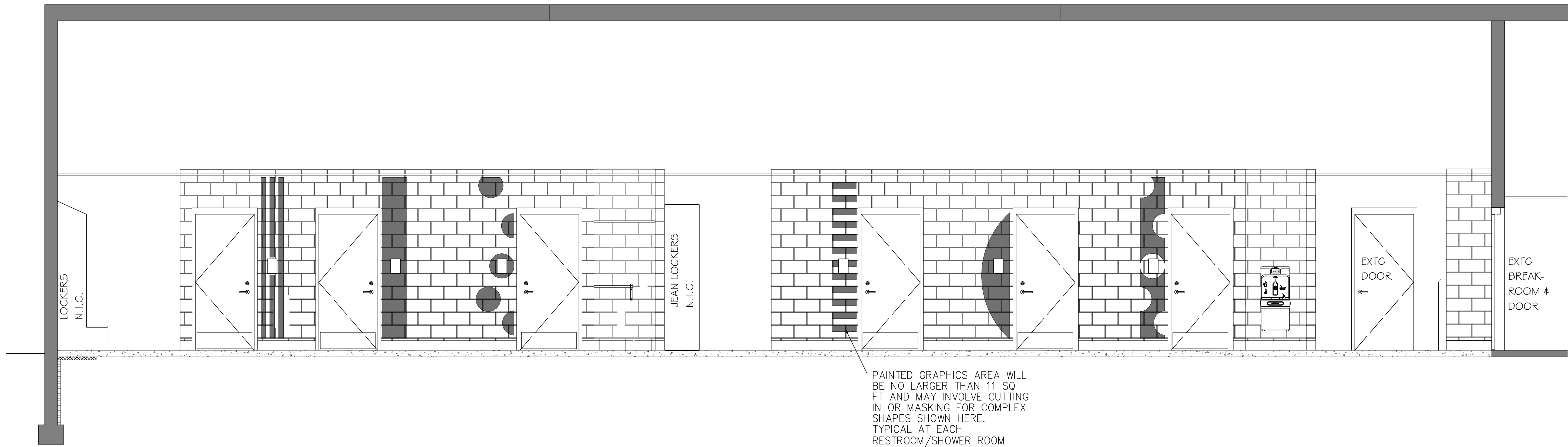
CITY OF MADISON
 DEPT OF PUBLIC WORKS
 ENGINEERING DIVISION
 CITY COUNTY BLDG RM 115
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ENG OP FACILITY LOCKER ROOM RENOVATION
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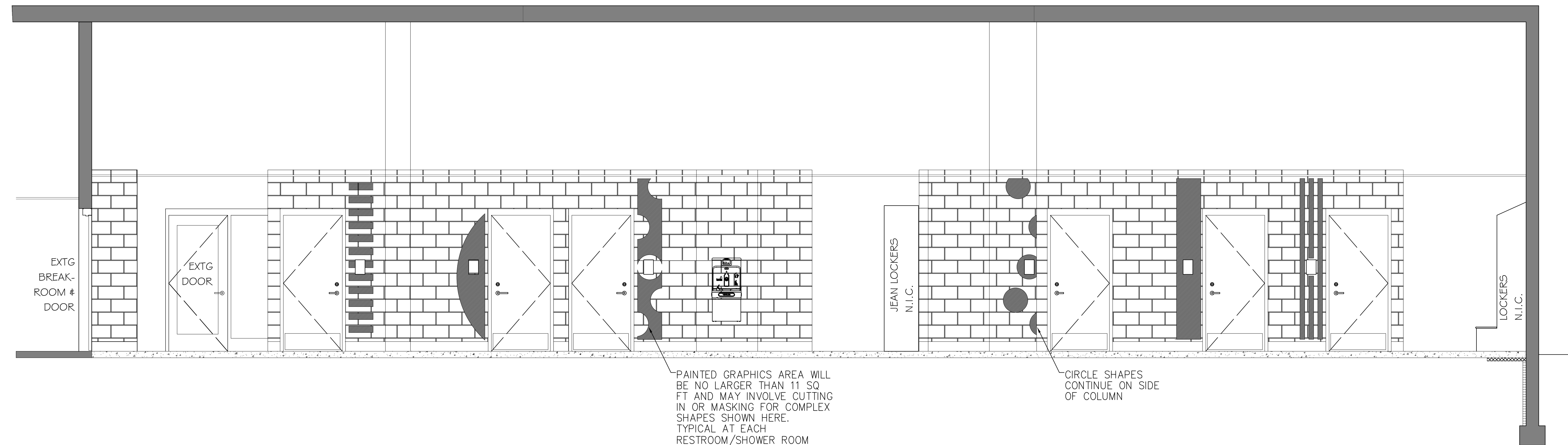
CONTRACT
 #9659
 MUNIS
 #14122
 DRWN BY: LA
 DATE 07/14/25
 REV: XX/XX/XX

WALL DESIGNS

A6.2



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



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



Client:
Engineering

Location:
1600 Emil St., Madison
WI 53711

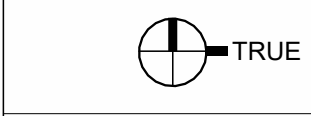
Contract: 9659
Project: 14122

Engineering
Operations Facility
Locker Room
Renovation (Bid)

Revisions

No.	Description
1	
2	Addendum 3

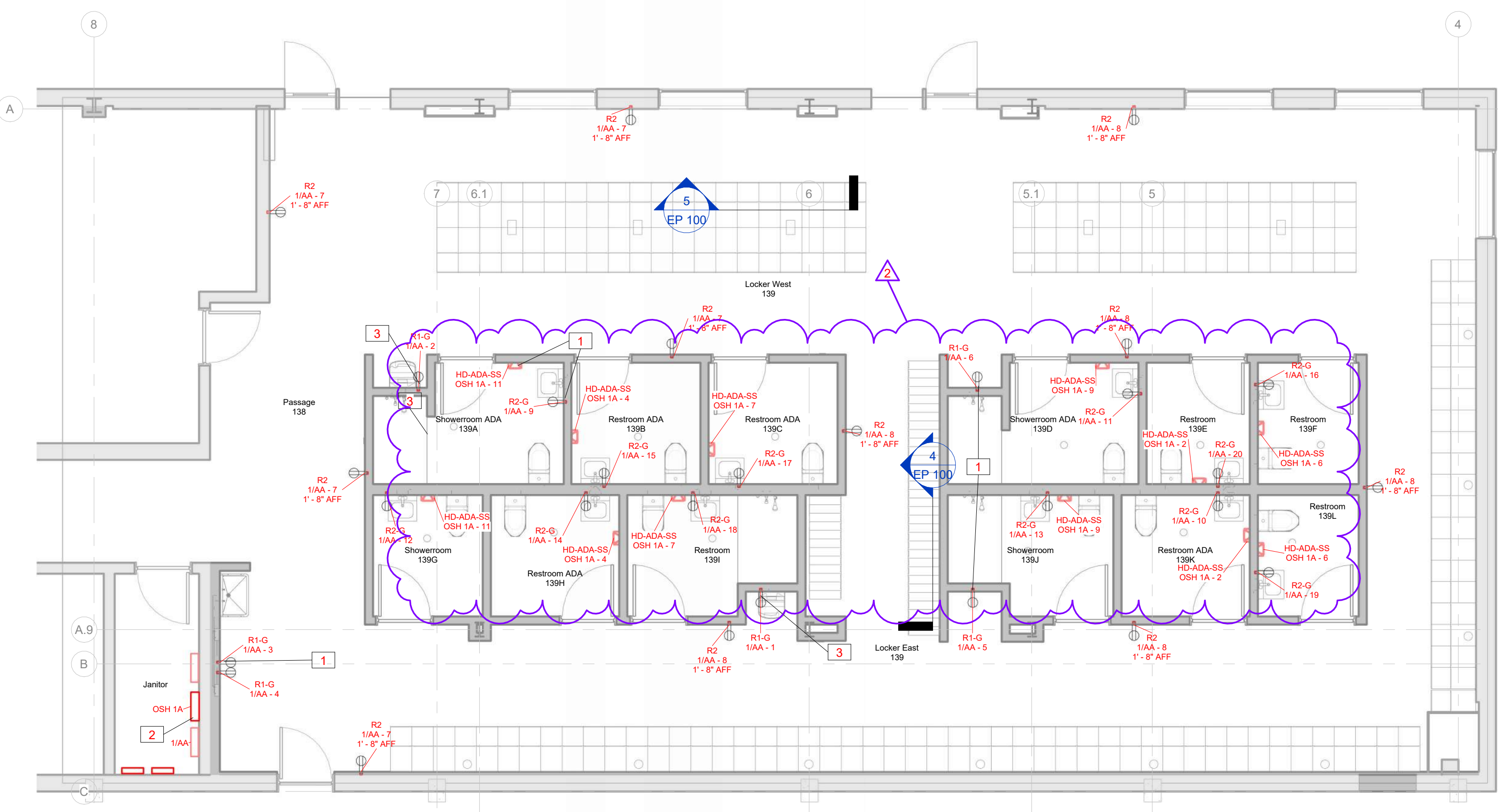
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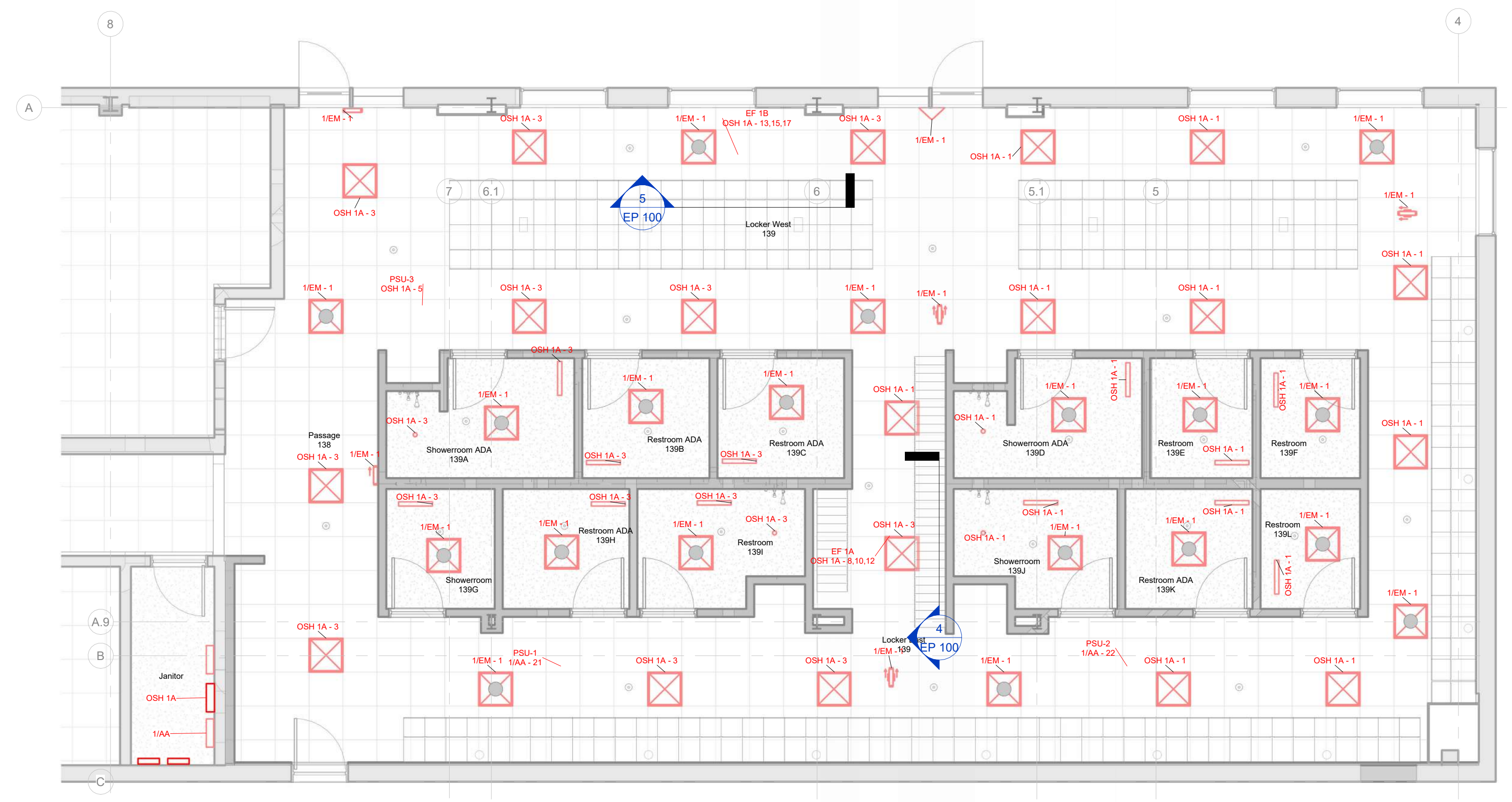
Power

EP 100

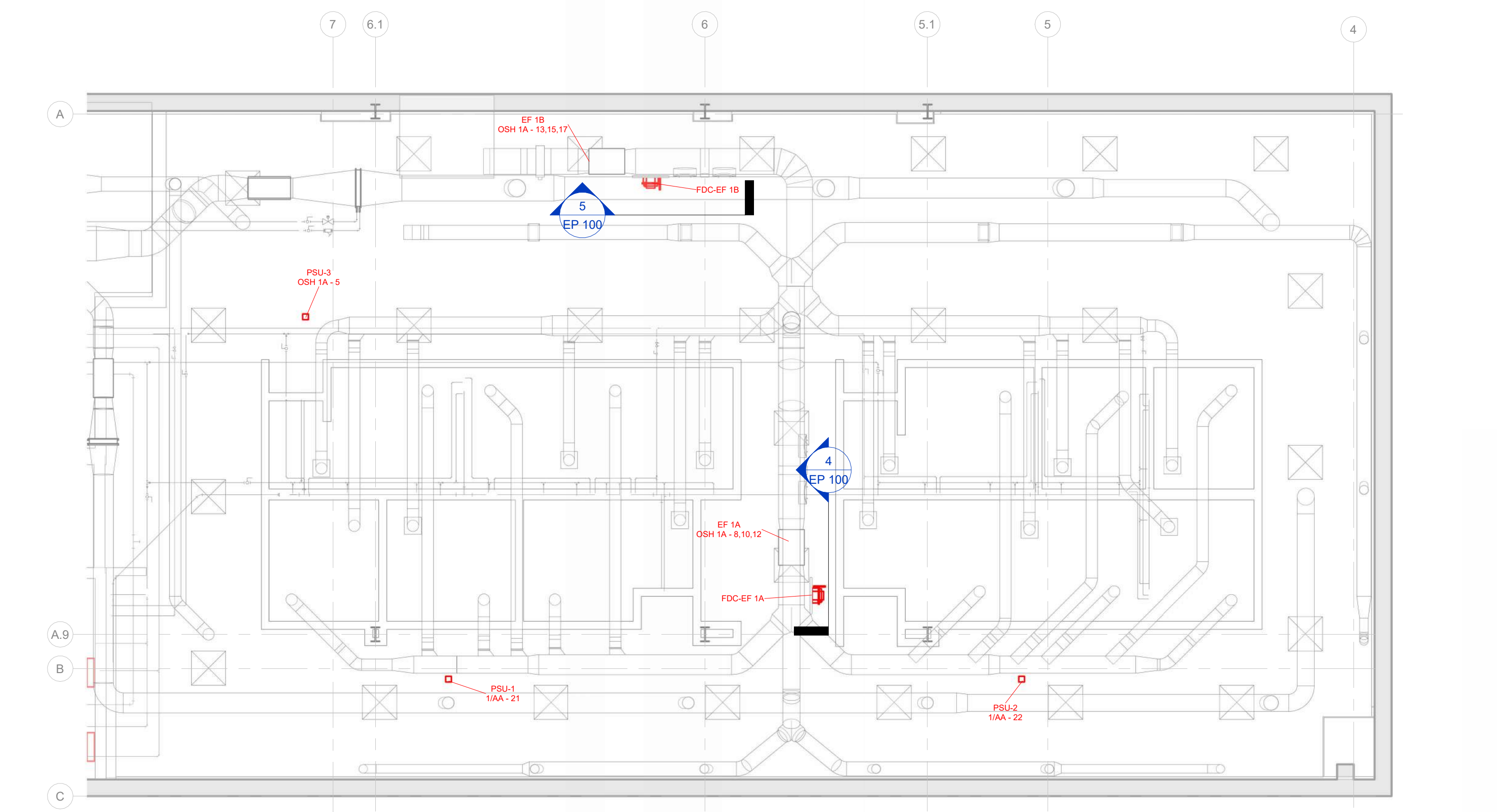
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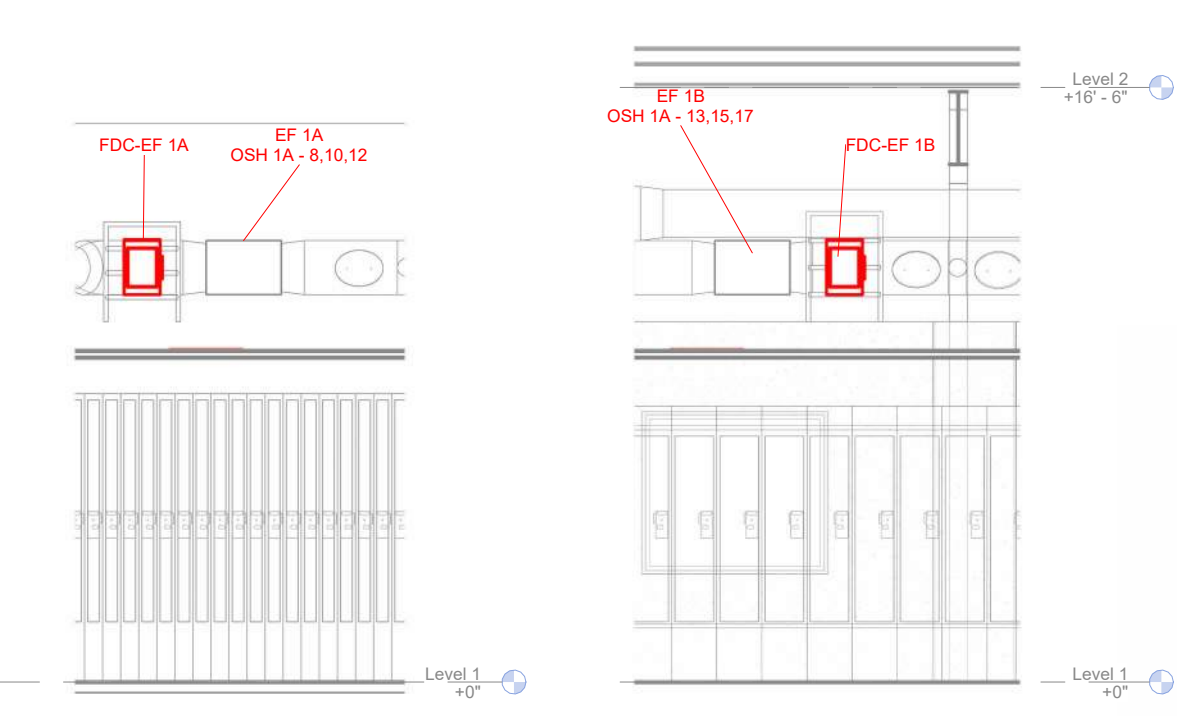
1 EP - Level 1 3/16" = 1'-0"



2 EP Ceiling - Level 1 3/16" = 1'-0"



3 EP Level 1 - Above Ceiling 3/16" = 1'-0"



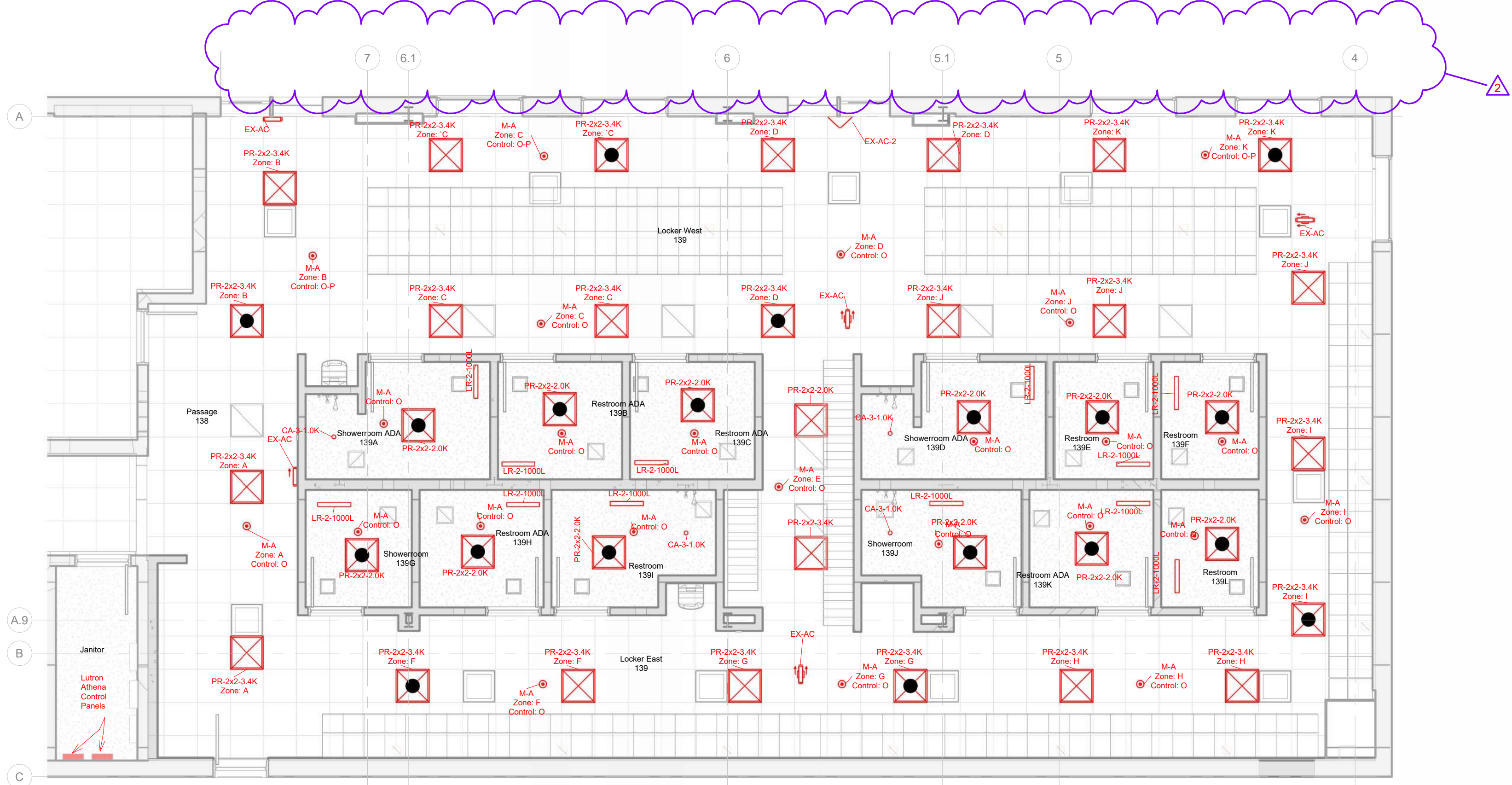
4 EP Section - EF 1A 3/16" = 1'-0"

5 EP Section - EF 1B 3/16" = 1'-0"

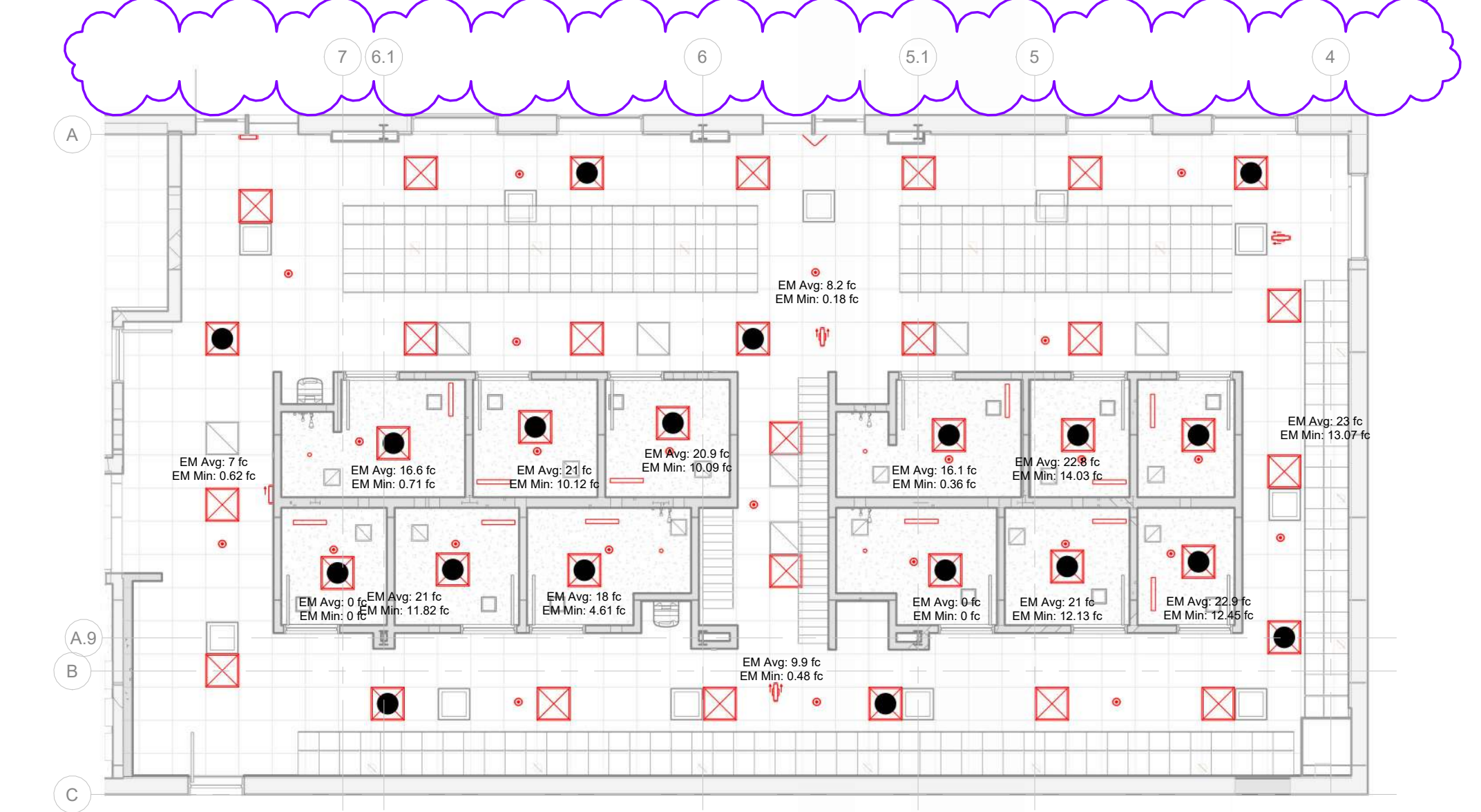
Keynote Legend	
1. Keynotes can apply to multiple similar situations, even if not each element or situation is tagged.	
Key Value	Keynote Text
1	Coordinate Exact location with architectural plans and seek approval by architect. This Note applies to all similar situations in this project.
2	Add 3 spare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





1 EL - Level 1 3/16" = 1'-0"



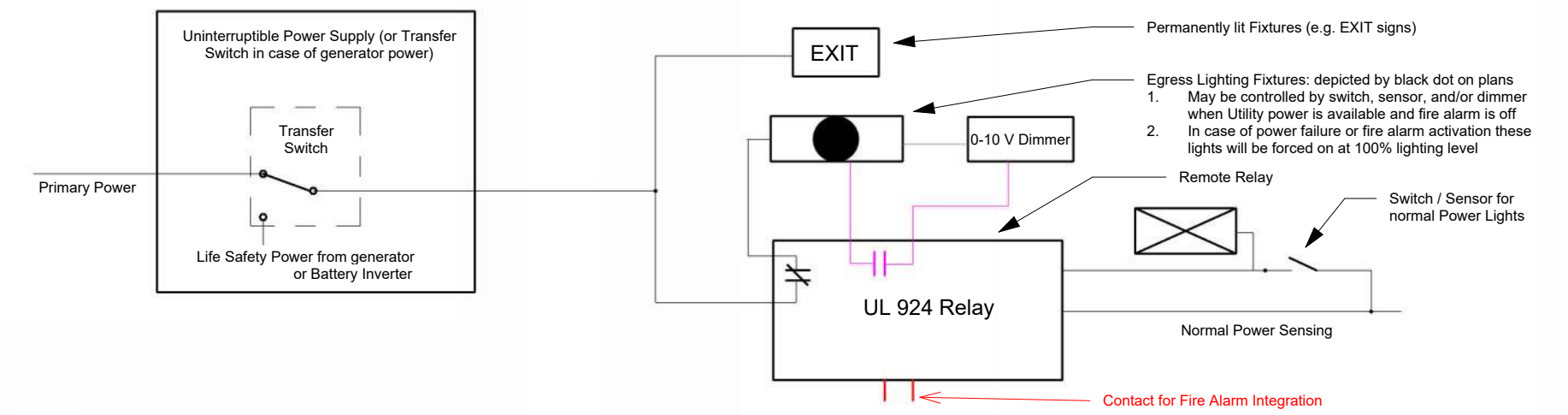
2 EL Egress - Level 1 1/8" = 1'-0"

IECC 2015 Lighting Levels and Lighting Power Densities

Space Number	Space Name	Area	IECC Space Type	Workplane Height	Min. Required Illumination	Actual Average Illumination	Actual Illumination Goal	Max. Allowed Power Density IECC 2015	Actual Power Density	Actual Lighting Power Density compared to Code	Allowed Lighting Load	Actual Lighting Load	Space Lighting Load Contributing to Total Building Lighting Load
138	Passage	408 sq ft	Locker	2'-6"	20 fc	25.8 fc	129%	0.75 W/ft²	0.23 W/ft²	30%	306 VA	92 VA	0.03 VA/ft²
139	Locker East	692 sq ft	Restroom - otherwise	2'-6"	20 fc	38.7 fc	194%	0.88 W/ft²	0.3 W/ft²	31%	679 VA	207 VA	0.06 VA/ft²
139	Locker West	930 sq ft	Locker	2'-6"	20 fc	30.9 fc	154%	0.75 W/ft²	0.31 W/ft²	42%	697 VA	260 VA	0.09 VA/ft²
139	Locker East	692 sq ft	Locker	2'-6"	20 fc	31.5 fc	158%	0.75 W/ft²	0.3 W/ft²	40%	519 VA	207 VA	0.06 VA/ft²
139A	Showers ADA	71 sq ft	Restroom - otherwise	2'-6"	20 fc	32.1 fc	160%	0.88 W/ft²	0.52 W/ft²	53%	70 VA	37 VA	0.01 VA/ft²
139B	Restroom ADA	53 sq ft	Restroom - otherwise	2'-6"	20 fc	32.5 fc	163%	0.88 W/ft²	0.52 W/ft²	53%	52 VA	28 VA	0.01 VA/ft²
139C	Restroom ADA	53 sq ft	Restroom - otherwise	2'-6"	20 fc	32.5 fc	163%	0.88 W/ft²	0.52 W/ft²	53%	52 VA	28 VA	0.01 VA/ft²
139D	Showers ADA	71 sq ft	Restroom - otherwise	2'-6"	20 fc	30.9 fc	155%	0.88 W/ft²	0.52 W/ft²	53%	69 VA	37 VA	0.01 VA/ft²
139E	Restroom	43 sq ft	Restroom - otherwise	2'-6"	20 fc	36 fc	180%	0.88 W/ft²	0.65 W/ft²	66%	42 VA	28 VA	0.01 VA/ft²
139G	Showers	45 sq ft	Restroom - otherwise	2'-6"	20 fc	35.7 fc	178%	0.88 W/ft²	0.61 W/ft²	63%	44 VA	28 VA	0.01 VA/ft²
139H	Restroom ADA	53 sq ft	Restroom - otherwise	2'-6"	20 fc	32.5 fc	162%	0.88 W/ft²	0.52 W/ft²	53%	52 VA	28 VA	0.01 VA/ft²
139I	Restroom	63 sq ft	Restroom - otherwise	2'-6"	20 fc	39.4 fc	197%	0.88 W/ft²	0.58 W/ft²	59%	62 VA	37 VA	0.01 VA/ft²
139J	Showers	61 sq ft	Restroom - otherwise	2'-6"	20 fc	39.4 fc	197%	0.88 W/ft²	0.6 W/ft²	61%	60 VA	37 VA	0.01 VA/ft²
139K	Restroom ADA	53 sq ft	Restroom - otherwise	2'-6"	20 fc	32.2 fc	161%	0.88 W/ft²	0.52 W/ft²	53%	52 VA	28 VA	0.01 VA/ft²
139L	Restroom	42 sq ft	Restroom - otherwise	2'-6"	20 fc	38.9 fc	194%	0.88 W/ft²	0.67 W/ft²	68%	41 VA	28 VA	0.01 VA/ft²
		3,331 sq ft									2,798 VA	1,138 VA	0.34 VA/ft²

Emergency Lighting Load

Type Mark	Count	Real Power	Estimated UL 924 Relays required
EX-AC	5	3 VA	0
EX-AC-2	1	4 VA	0
PR-2x2-2.0K	12	188 VA	12
PR-2x2-3.4K	7	161 VA	7
		338 VA	19



- Objective:**
- Emergency light fixtures (indicated by a black dot) and Exit signs will be powered by the Uninterruptible AC Power Supply (UPS) or generator. Review plans for detail.
 - When normal power is present and fire alarm is OFF, lighting will be controlled by lighting control system. Local switches, timers, dimmers and sensors control on/off and dimming.
 - When normal power is not present, the emergency fixtures and exit signs will be powered by the battery for over 90 minutes. These fixtures will be forced on at 100% (no dimming).
 - When fire alarm is active, all emergency light fixtures will be forced on at 100% (no dimming).
 - Contractor shall verify availability of contacts in fire alarm panel and add relays if required.
 - Wiring shall meet NEC 700.10 requirements. This includes, but is not limited to:
 - Separate emergency raceway. Raceway shall be marked.
 - Any junctions shall be labeled "Warning - 2 power sources" or as required by code.
 - Label indicates panel, circuit, and voltage.
 - Conduit for emergency lighting shall be color-coded as specified in Division 28.
 - When accessible installation of UL 924 relay is not possible (e.g. drywall, exterior), install the relay in near-by accessible location. Verify location with engineer.
 - Drywall Ceiling: If no easily accessible location is available, install relay above grid ceiling in adjacent area.
 - Outdoor fixtures: Install relay inside above a grid ceiling or other accessible location.
 - Fixtures with built-in sensor shall be re-wired for UL 924 relay to bypass sensor (e.g. exterior fixture with included photocell).
 - Contractor is responsible for all wiring from uninterruptible power supply and fire alarm panel to the zones.
 - Rewire fixture interiors if fixture has integrated sensor or other lighting control.
 - Retest of XTC fixtures: Re-arrange wiring and existing control to allow emergency fixture operation like for new fixtures. Note that schedules that show number of relays required only account for relays of NEW fixtures.
- Testing:**
- Test by applying emergency power and normal power. Turn off local switch and set local dimmer to lowest dimming level.
 - If no local switch is available, disconnect the appropriate wire to simulate light being turned off.
 - If no local dimmer is available and dimming by sensor is scheduled, program sensor to dim to low level.
 - Disconnect normal sensing power and verify emergency light turns on to 100%.
 - Re-estate normal power and activate fire alarm and verify emergency light turns on to 100%.

3 Lighting Control with UPS

- Lighting Control:**
- Provide Lutron Athena system compatible with the office lighting control
 - Coordinate with Lutron representative Todd Kimke tk@engineeredrepc.com
 - Install DIN-Rail panels in Janitor closet
 - Use wired sensors
 - Zoning:
 - Each restroom shall be one zone
 - Locker room zoning and sensor layout shall be designed by Lutron
 - adapt electrical circuiting shown on EP sheet as required.
 - Assure good coverage in all areas. Avoid blind corners.
 - Sensors shown on plans are suggestions to indicate a design intent.
 - Emergency Lighting:
 - Provide intended emergency lighting control:
 - emergency lighting power is provided by a 120V panel
 - Normal lighting is provided by 277V panel
 - Emergency lighting shall be forced on at 100% when Fire Alarm is activated, and/or when normal power is disrupted.
 - Owner-provided work:
 - Owner provides Athena processor as part of lighting project in the office building outside of this contract scope.
 - Owner will wire from Athena processor to the panels in this project.
 - This contractor shall terminate wires in new control panels.

Lighting Fixture Schedule (26 50 00 - Lighting)

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.

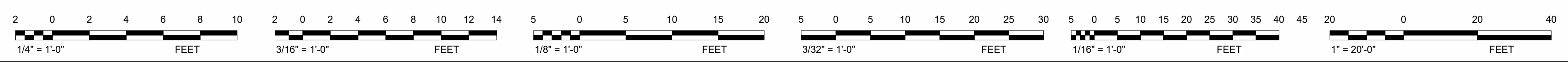
Type Mark	Description	Length	Width	Height	Diameter	Type Image	Est. Count	Model	URL	Real Power	Luminous Flux	Color Temperature	Efficacy	Lumen Maintenance	Environmental Rating	Unified Gear Rating (gearhead value)	Type Remark
CA-3-1.0K	Can Light 3" 80" Beam			3 1/2"	3"		4	Zamboni LUDNC-09-40-MOD80CR1-S-WS-Z0-R0-W	www.zambonilighting.com	9 W	979 lm	4000 K	109 lm/W	L80 @ 50k 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	1'-1 3/4"	9"				5	Chloride CLX-A-GW	www.signify.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					Damp Location		Select Voltage version based on circuit connected to
LR-2-1000L	Linear Recessed	2'-0"	3"	4"			12	Pinnacle EV3D-HE-40VHD-U-FSD-1-0-W	www.pinnacle-lg.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-80CR-40K-BFR-LUGR-MIN1-ZT-4VOLT-WH	www.acuitybrands.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"			25	Lithonia SPX-2x2-3400LM-80CR-40K-BFR-LUGR-MIN1-ZT-4VOLT-WH	www.acuitybrands.com	23 W	3,438 lm	4000 K	149 lm/W	L90 @ 50K hours	IPX5: NSF Splash Zone	17.6	

Lighting Control Programming Guide

Programming Schema	Trigger ON	Trigger OFF	Time Delay to Dim/On	Time to Off (or lowest dimming level)	Lowest Dimming Range	Photocell Setting	Note
O-D	Occupancy	NA	15 min	10 min	1V / 10%	NA	Fixture is dim (e.g. 10%) when space is not occupied.
O-D-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	Fixture is off when space is not occupied. User can turn off or dim lights (if dimmer / switch scheduled). Fixture dims down or turns off when daylight is sufficient.

Lighting Device Schedule

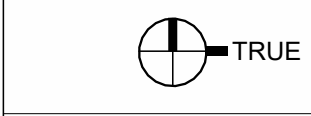
Type Mark	Description	Est. Count	Model	URL	Environmental Rating	Type Remark	Specification
M.A.	Motion Sensor for Athena Control	24	Sensorswitch Selected by Lutron	www.lutron.com		Exact layout performed by Lutron for optimized coverage	26 09 43 - Network Lighting Controls



Revisions

No.	Description
1	Addendum 1
2	Addendum 3

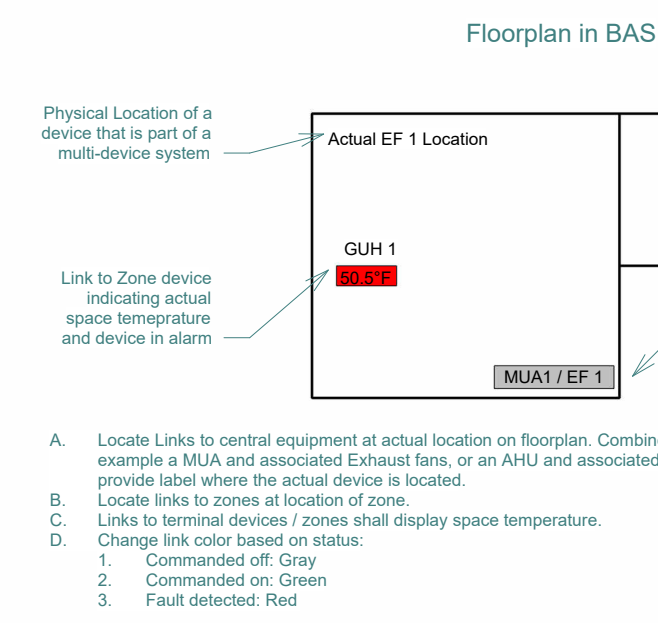
Project North



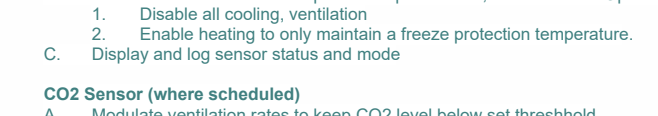
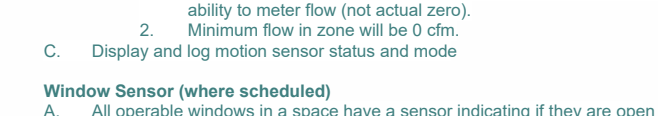
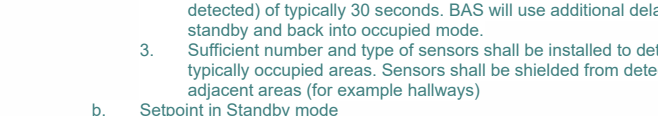
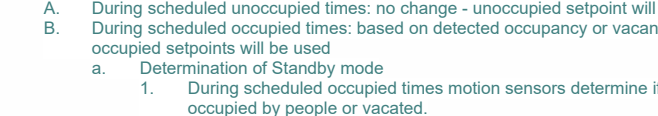
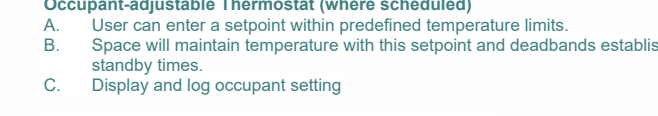
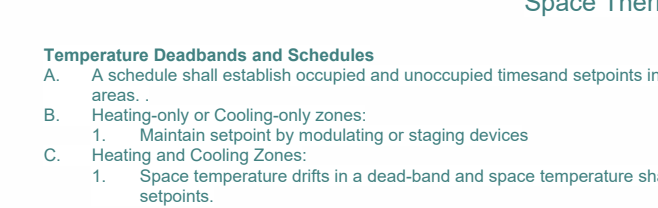
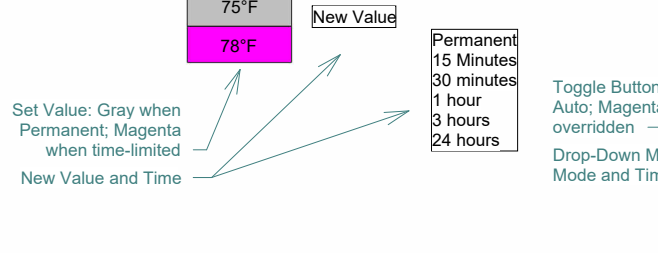
Lighting

EL 100

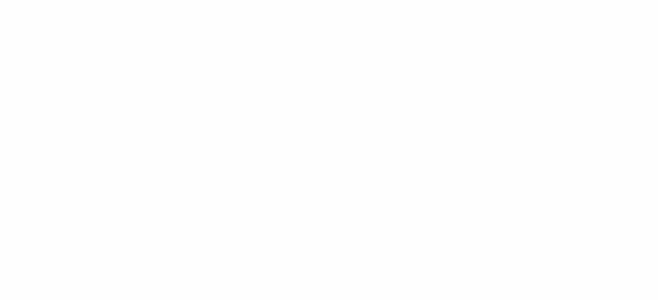
Refer to Specification 23 09 00 - Instrumentation and Control for HVAC



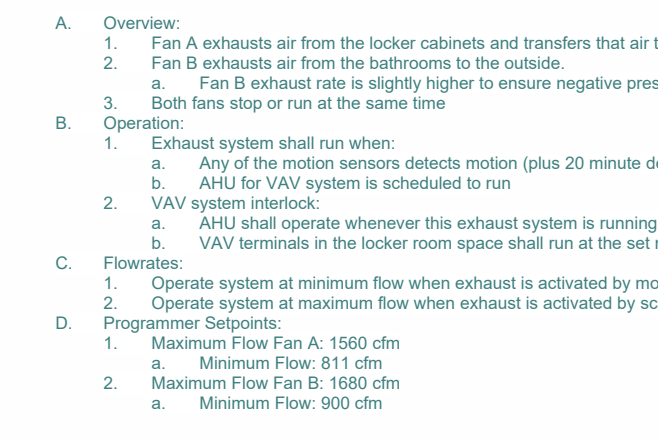
- ### Override
- Allow operator to override set (e.g. space temperature setpoint) and derived values (e.g. calendar based occupied mode)
 - An override choice shall allow to limit time frame of override. This will help to try out adjustments for trouble-shooting without forgetting re-setting them.
 - Some setpoints shall be adjustable by programmer only. Those setpoints shall be visible to operators



1 M Standard Control



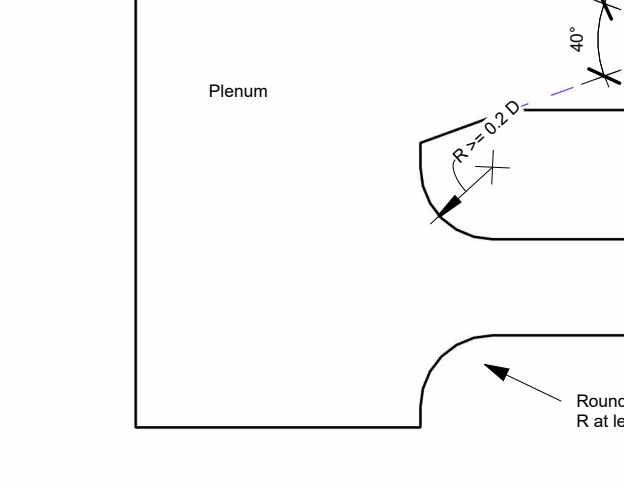
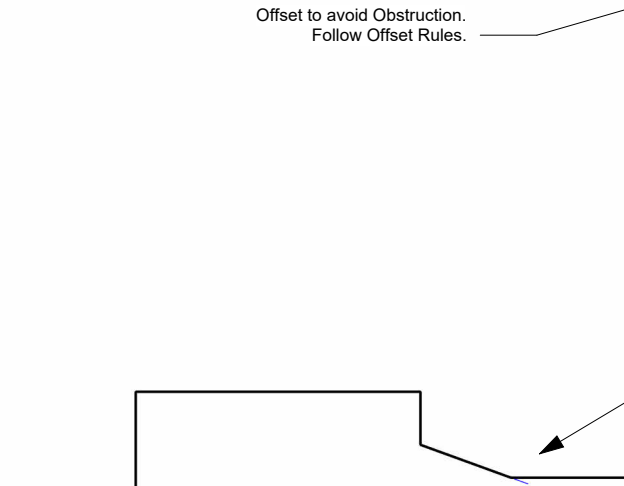
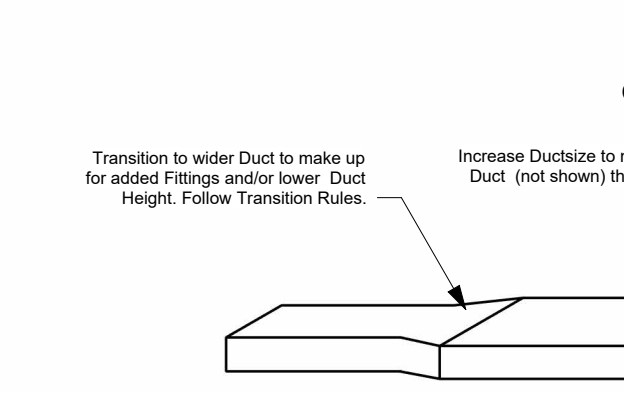
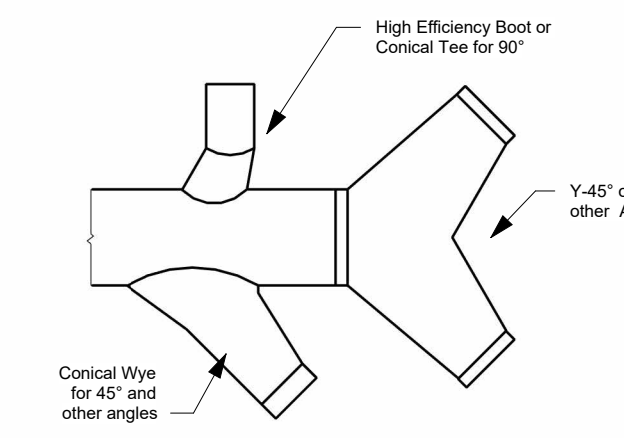
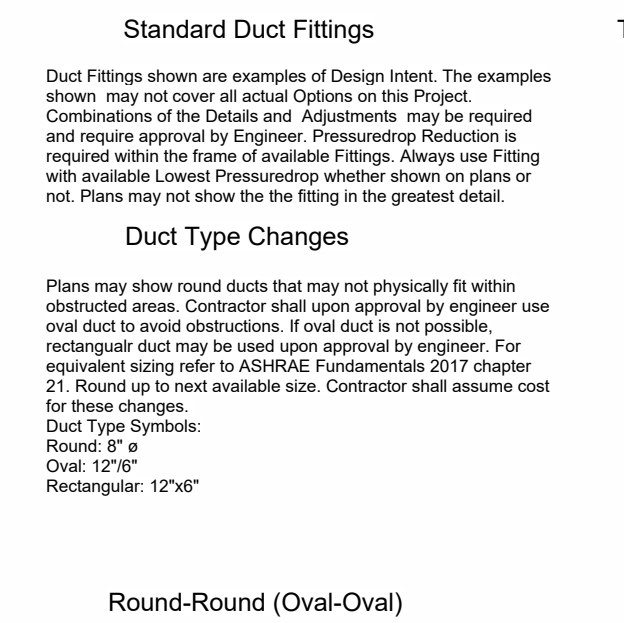
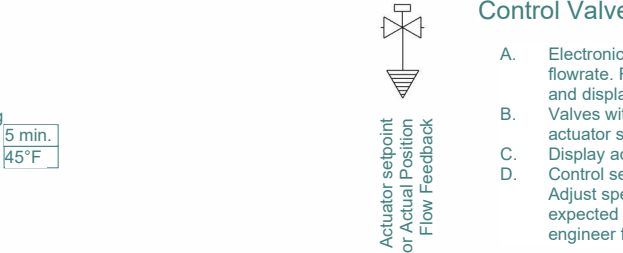
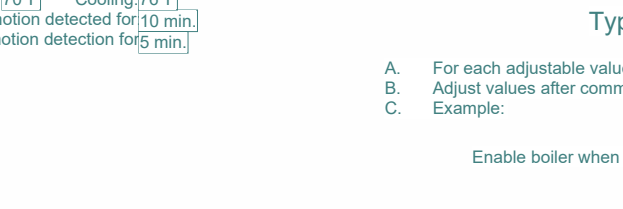
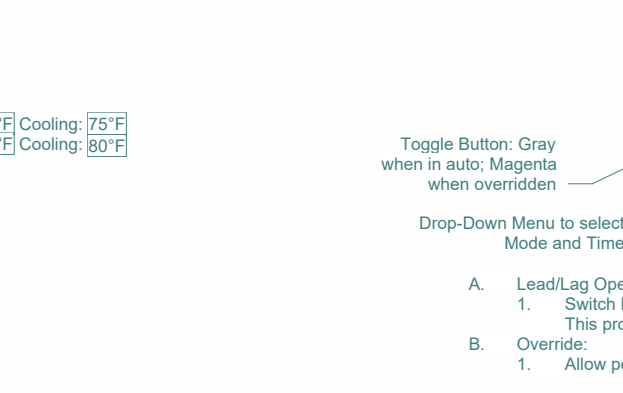
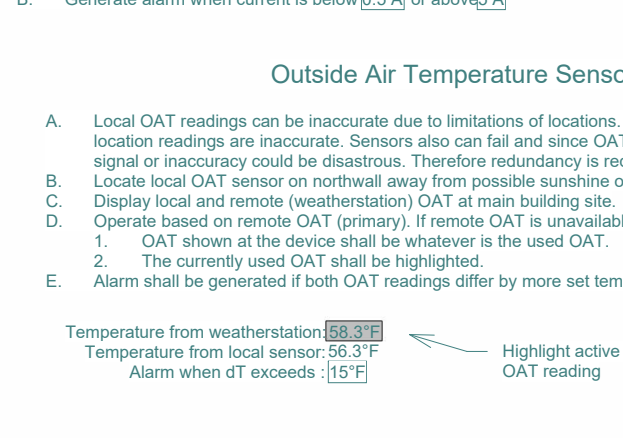
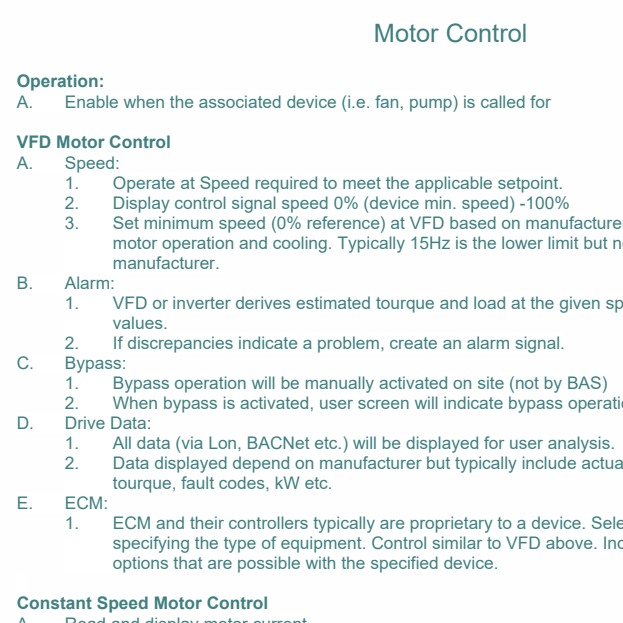
- ### Locker Room and Bathroom Exhaust System
- Overview:
 - Fan A exhausts air from the locker cabinets and transfers that air to the bathrooms
 - Fan B exhausts air from the bathrooms to the outside
 - Fan B exhaust rate is slightly higher to ensure negative pressure in bathrooms
 - Both fans stop or run at the same time
 - Operation:
 - Exhaust system shall run when:
 - Any of the motion sensors detects motion (plus 20 minute delay)
 - AHU for VAV system is scheduled to run
 - VAV system interlock:
 - AHU shall operate whenever this exhaust system is running (even if activated only by motion sensor)
 - VAV terminals in the locker room space shall run at the set minimum flow
 - Flowrates:
 - Operate system at minimum flow when exhaust is activated by motion sensor only
 - Operate system at maximum flow when exhaust is activated by scheduled AHU operation
 - Programmer Setpoints:
 - Maximum Flow Fan A: 1560 cfm
 - Minimum Flow: 811 cfm
 - Maximum Flow Fan B: 1880 cfm
 - Minimum Flow: 900 cfm



- ### Duct Connection to Locker
- Contractor shall work with locker manufacturer to ensure stable and permanent seal of locker plenum.

- ### Fan Installation
- Install fan-manufacturer bell-mouth where fan is shown to draw air from space.
 - Install fan-manufacturer provided spring isolators and flex duct connector to prevent transmission of vibrations.
 - Provide support to structure.
 - For vertical fans drawing air from floor, provide a floor-mounted steel structure that allows free air entry

5 Fan Installation

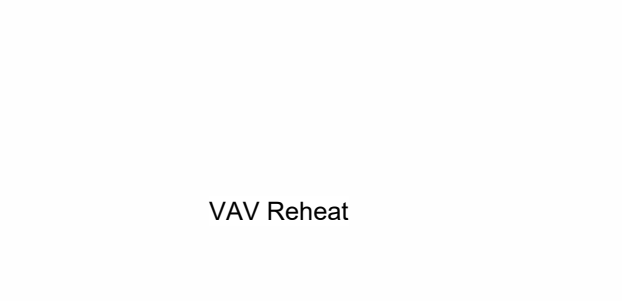
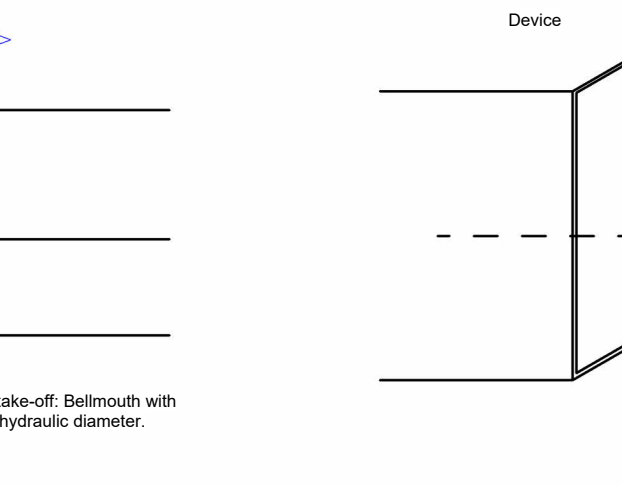
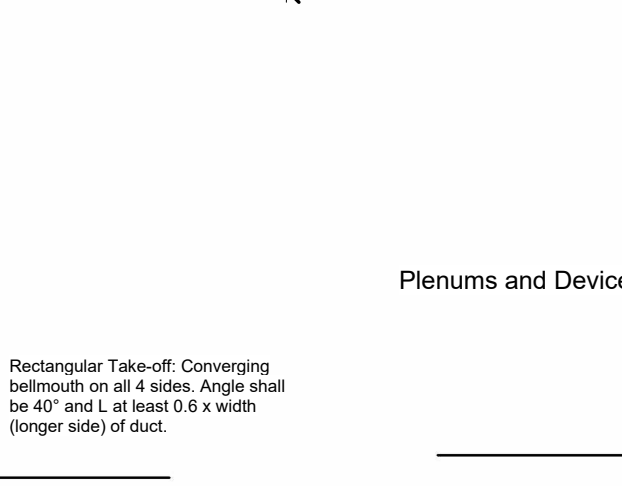
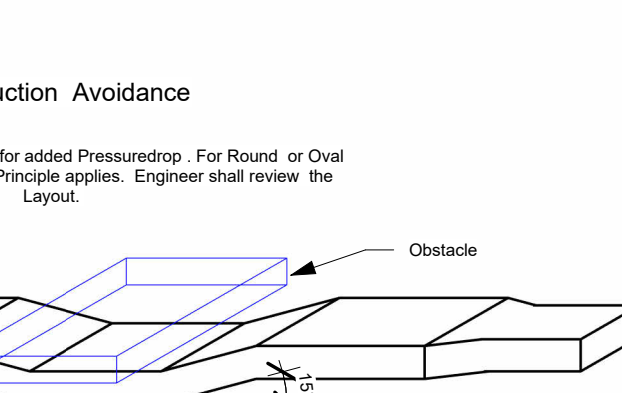
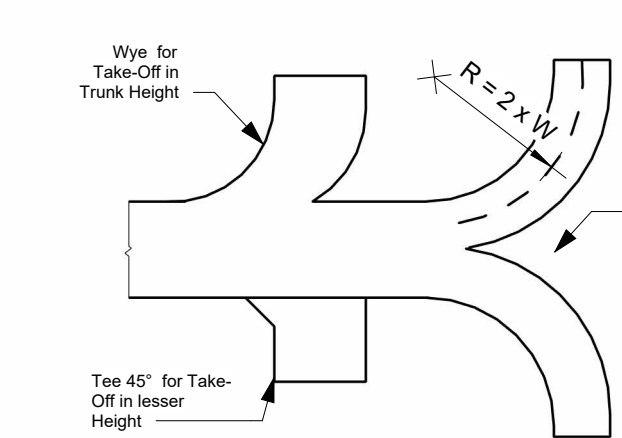
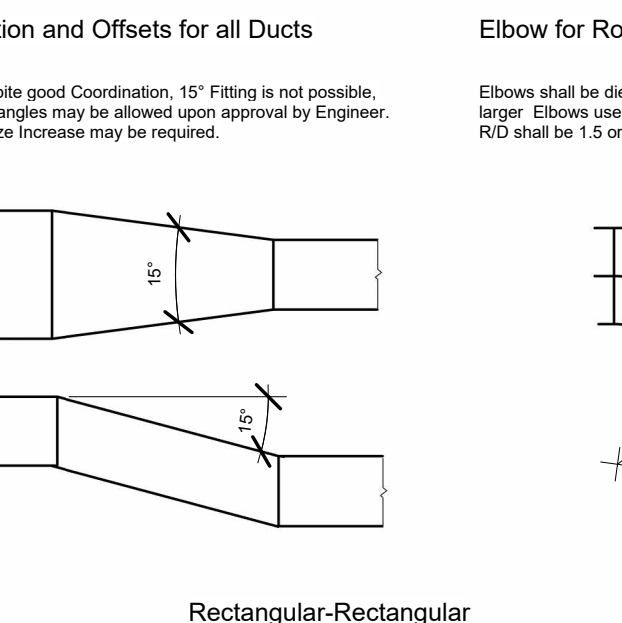


- ### VAV Cooling only
- Operation:
 - Modulate Damper to maintain flow setpoint
 - When no flow (0 cfm) is required, close damper up to point of no measurable flow. This will keep damper slightly open and allows immeasurable airflow.
 - Flowrates:
 - When zone is in cooling mode, modulate flow between minimum and maximum flow setting to achieve cooling setpoint.
 - When zone is in occupied mode, minimum flow shall be ventilation flow.
 - When zone is in unoccupied or standby mode, minimum flow shall be 0 cfm
 - When zone is in heating mode or deadband, control flow to minimum flow
 - History:
 - Damper Command and Feedback
 - DAT
 - Valve command and feedback deviate by more than 15 %
 - Alarm:
 - Damper command and feedback deviate by more than 15 %
 - Operator Setpoints:
 - Cooling Maximum Flow: cfm
 - Ventilation Flow: cfm

- ### VAV Reheat
- Applicability:
 - when plans show a reheat coil downstream of VAV terminal
 - Valve Operation:
 - Modulate valve to maintain DAT setpoint
 - Operation when heat is called:
 - Discharge air at 80°F and increase flow up to maximum heating flowrate
 - As call for heat continues, gradually increase DAT setpoint to heating DAT
 - As call for heat recedes, reduce heat output reversing above sequence.
 - History:
 - Valve Command and Feedback
 - DAT
 - Valve command and feedback deviate by more than 15 %
 - Alarm:
 - DAT
 - Valve command and feedback deviate by more than 15 %
 - Operator Setpoints:
 - Heating Maximum Flow: cfm
 - Heating DAT: °F

- ### Radiator
- Applicability:
 - when plans show a radiator in space served by VAV
 - Valve Operation:
 - Modulate valve to meet space heating setpoint
 - Operation when a VAV reheat coil is present:
 - Operate radiator primarily. Only use VAV reheat if radiator alone is not capable of maintaining heating setpoint
 - History:
 - Return Command and Feedback
 - Return temperature
 - Alarm:
 - Valve command and feedback deviate by more than 15 %
 - Operator Setpoints:
 - Fan Speed
 - Airflow
 - Damper position
 - Alarm:
 - Damper not opening
 - No airflow
 - Programmer Setpoint:
 - Minimum Fan-speed: 70% (about 10% below typical speed)
 - Flow: 3000 cfm (or from other control sequence)

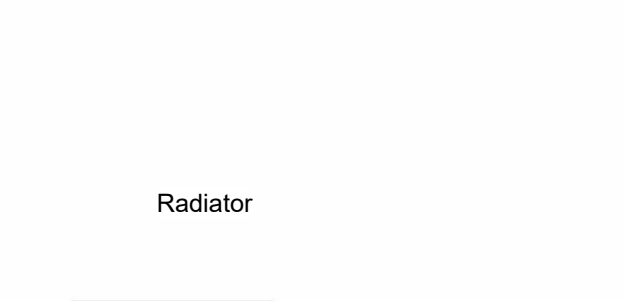
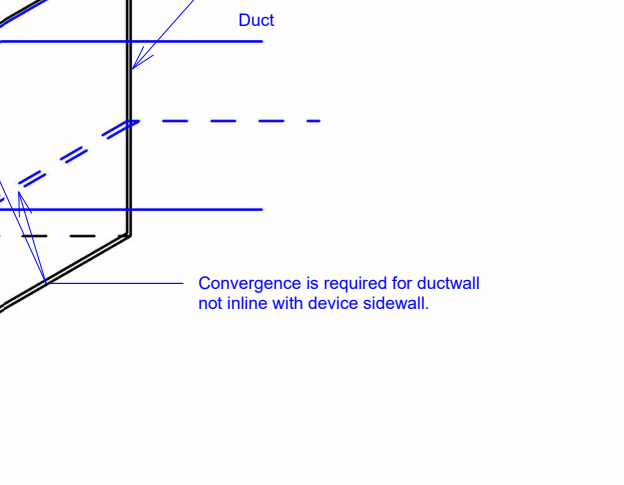
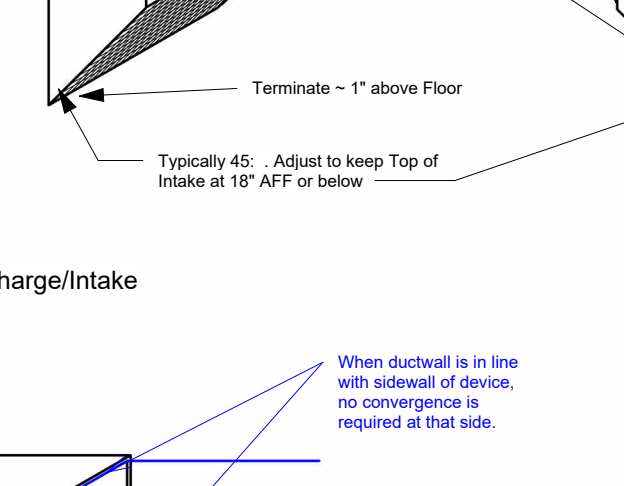
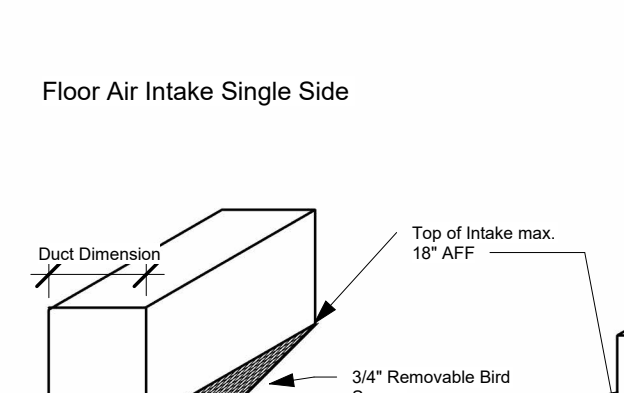
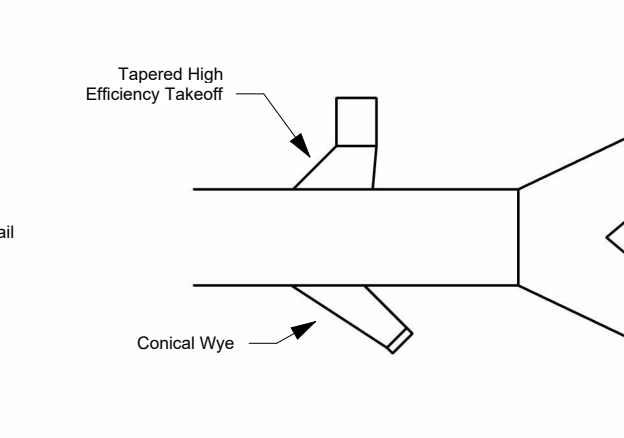
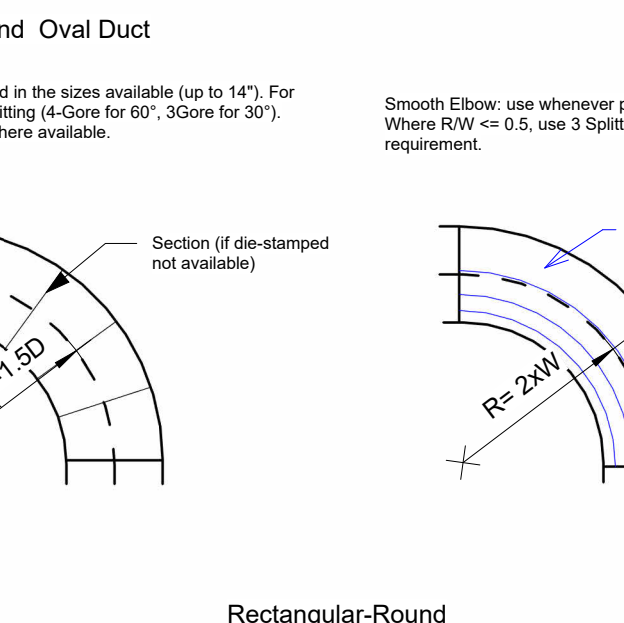
- ### Fan w/ Flowstation and Control Damper



- ### VAV Cooling only
- Operation:
 - Modulate Damper to maintain flow setpoint
 - When no flow (0 cfm) is required, close damper up to point of no measurable flow. This will keep damper slightly open and allows immeasurable airflow.
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 - History:
 - Damper Command and Feedback
 - DAT
 - Valve command and feedback deviate by more than 15 %
 - Alarm:
 - Damper command and feedback deviate by more than 15 %
 - Operator Setpoints:
 - Cooling Maximum Flow: cfm
 - Ventilation Flow: cfm

- ### VAV Reheat
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 - when plans show a reheat coil downstream of VAV terminal
 - Valve Operation:
 - Modulate valve to maintain DAT setpoint
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 - History:
 - Valve Command and Feedback
 - DAT
 - Valve command and feedback deviate by more than 15 %
 - Alarm:
 - DAT
 - Valve command and feedback deviate by more than 15 %
 - Operator Setpoints:
 - Heating Maximum Flow: cfm
 - Heating DAT: °F

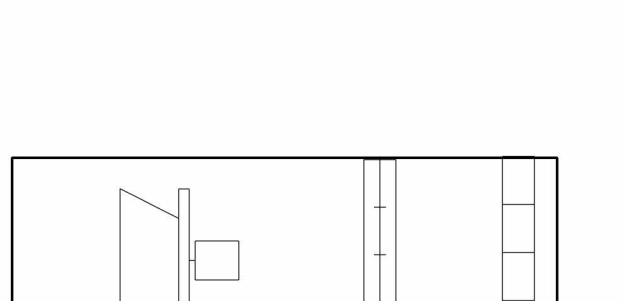
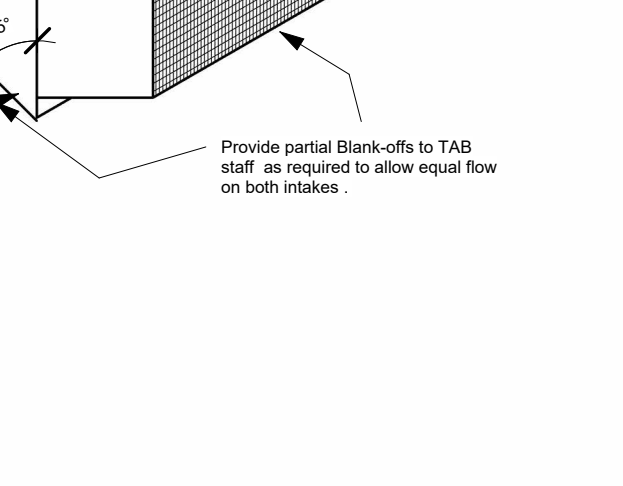
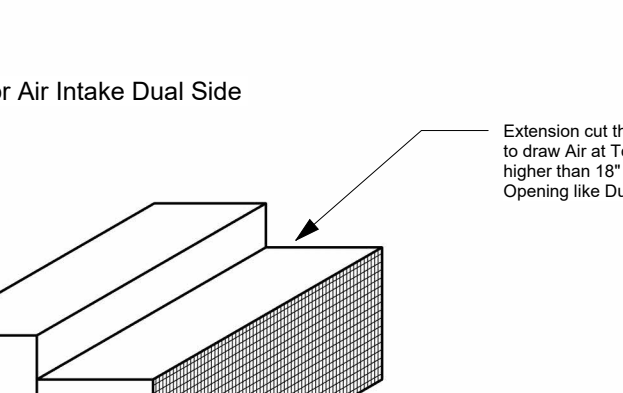
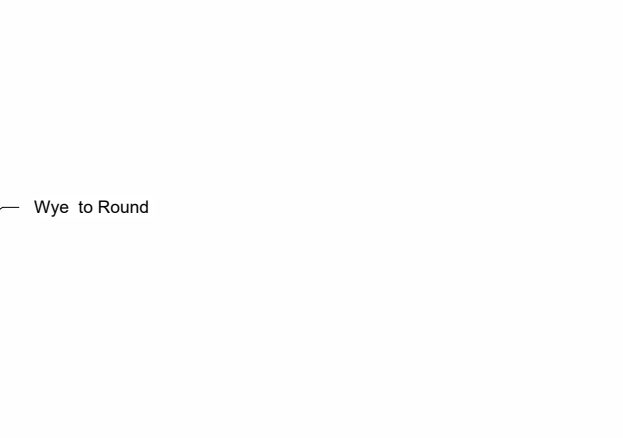
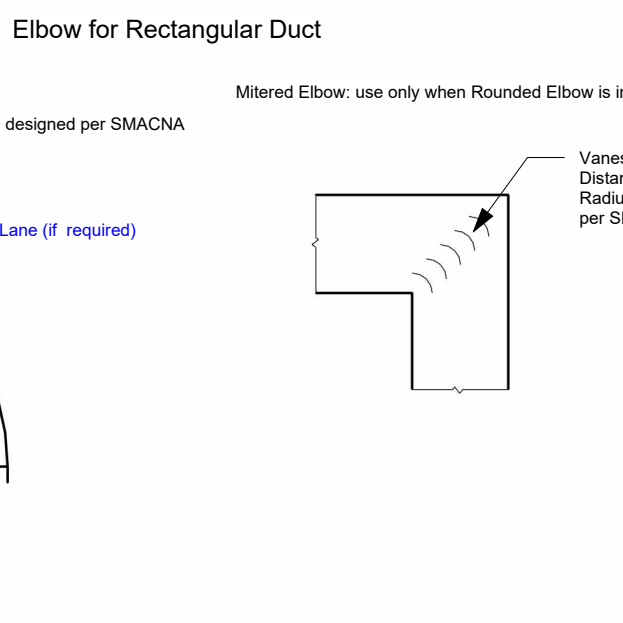
- ### Radiator
- Applicability:
 - when plans show a radiator in space served by VAV
 - Valve Operation:
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 - Operation when a VAV reheat coil is present:
 - Operate radiator primarily. Only use VAV reheat if radiator alone is not capable of maintaining heating setpoint
 - History:
 - Return Command and Feedback
 - Return temperature
 - Alarm:
 - Valve command and feedback deviate by more than 15 %
 - Operator Setpoints:
 - Fan Speed
 - Airflow
 - Damper position
 - Alarm:
 - Damper not opening
 - No airflow
 - Programmer Setpoint:
 - Minimum Fan-speed: 70% (about 10% below typical speed)
 - Flow: 3000 cfm (or from other control sequence)



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 - DAT
 - Valve command and feedback deviate by more than 15 %
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 - Damper command and feedback deviate by more than 15 %
 - Operator Setpoints:
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 - Ventilation Flow: cfm

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 - DAT
 - Valve command and feedback deviate by more than 15 %
 - Alarm:
 - DAT
 - Valve command and feedback deviate by more than 15 %
 - Operator Setpoints:
 - Heating Maximum Flow: cfm
 - Heating DAT: °F

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