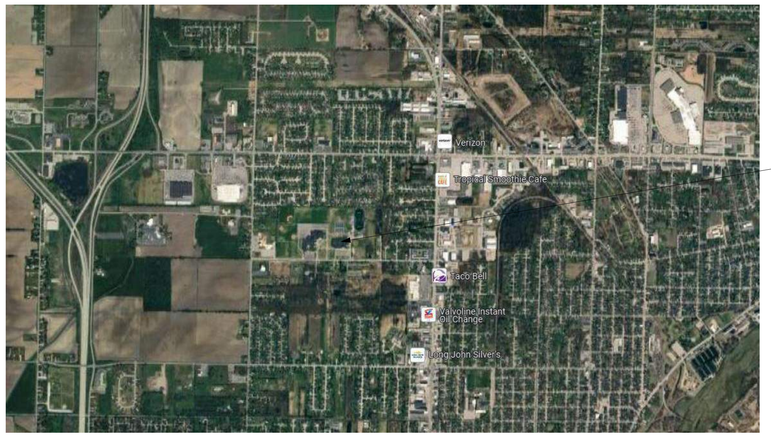
BANGOR TOWNSHIP SCHOOL DISTRICT

3281 KIESEL RD, BAY CITY, MI 48706

PHASE 3A - MIDDLE SCHOOL ADDITION & RENOVATIONS



PROJECT LOCATION

ISSUED FOR CONSTRUCTION: 12/20/24

PREPARED BY:

INTEGRATED DESIGNS, INC.
IDI ARCHITECTURE ENGINEERING CONSULTING

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NUMBER	SHEET NAME	ISSUE DATE	ISSUE NAME
G0.0	COVER		
CIVIL			
C0.1	CIVIL NOTES	12/20/24	FOR CONSTRUCTION
C1.0	DEMOLITION AND SITE PLANS	12/20/24	FOR CONSTRUCTION
C1.1	ALT BID NO.2, DEDUCT, SANITARY SEWER, DEMOLTION & SITE PLANS	12/20/24	FOR CONSTRUCTION
C2.0	GRADING & UTILITY PLANS	12/20/24	FOR CONSTRUCTION
C3.0	CIVIL DETAILS	12/20/24	FOR CONSTRUCTION
C3.1	CIVIL DETAILS	12/20/24	FOR CONSTRUCTION
STRUCTURAL			
S0.1	STRUCTURAL TESTING	12/20/24	FOR CONSTRUCTION
S0.2	STRUCTURAL NOTES	12/20/24	FOR CONSTRUCTION
S1.0	FOUNDATION PLAN	12/20/24	FOR CONSTRUCTION
S2.0	FRAMING PLAN	12/20/24	FOR CONSTRUCTION
S3.0	FOUNDATION DETAILS	12/20/24	FOR CONSTRUCTION
S4.0	FRAMING DETAILS	12/20/24	FOR CONSTRUCTION
ARCHITECTURAL			
A0.1	COMPOSITE & LIFE SAFETY PLAN	12/20/24	FOR CONSTRUCTION
A1.0	DEMOLITION PLAN	12/20/24	FOR CONSTRUCTION
A2.0	NEW WORK FLOOR PLAN	12/20/24	FOR CONSTRUCTION
A2.1	CLASSROOM ADDITION PLAN	12/20/24	FOR CONSTRUCTION
A2.2	ENLARGED RESTROOM PLANS	12/20/24	FOR CONSTRUCTION
A3.0	REFLECTED CEILING PLAN	12/20/24	FOR CONSTRUCTION
A4.0	WINDOW, DOOR & ROOM FINISH SCHEDULES	12/20/24	FOR CONSTRUCTION
A4.1	ROOM FINISH SCHEDULE	12/20/24	FOR CONSTRUCTION
A5.0	ROOF PLAN	12/20/24	FOR CONSTRUCTION
A6.0	EXTERIOR ELEVATIONS	12/20/24	FOR CONSTRUCTION
A6.1	EXTERIOR ELEVATIONS	12/20/24	FOR CONSTRUCTION
A7.0	BUILDING SECTIONS	12/20/24	FOR CONSTRUCTION
A7.1	WALL SECTIONS	12/20/24	FOR CONSTRUCTION
A7.2	WALL OPENING DETAILS	12/20/24	FOR CONSTRUCTION
A7.3	WALL OPENING DETAILS	12/20/24	FOR CONSTRUCTION
A8.0	INTERIOR ELEVATIONS	12/20/24	FOR CONSTRUCTION
A8.1	INTERIOR ELEVATIONS	12/20/24	FOR CONSTRUCTION
A9.0	DETAILS	12/20/24	FOR CONSTRUCTION
A10.0	REFERENCE INTERIOR VIEWS	12/20/24	FOR CONSTRUCTION
M0.0	MECHANICAL SYMBOLS & LEGEND	12.20.24	FOR CONSTRUCTION
M1.0	MECHANICAL DEMOLITION PLAN	12.20.24	FOR CONSTRUCTION
M2.0	MECHANICAL NEW WORK PLANS	12.20.24	FOR CONSTRUCTION
M2.1	MECHANICAL NEW WORK PLANS	12.20.24	FOR CONSTRUCTION
M3.0	MECHANICAL DETAILS	12.20.24	FOR CONSTRUCTION
M4.0	MECHANICAL SCHEDULES	12.20.24	FOR CONSTRUCTION
M5.0	TEMPERATURE CONTROLS	12.20.24	FOR CONSTRUCTION
P1.0	PLUMBING DEMOLITION PLANS	12.20.24	FOR CONSTRUCTION
P2.0	PLUMBING NEW WORK PLANS	12.20.24	FOR CONSTRUCTION
P2.1	PLUMBING NEW WORK PLANS	12.20.24	FOR CONSTRUCTION
P3.0	PLUMBING DETAILS & SCHEDULES	12.20.24	FOR CONSTRUCTION
E0.0	ELECTRICAL SYMBOL LEGEND	12.20.24	FOR CONSTRUCTION
E0.1	ELECTRICAL COMPOSITE PLAN	12.20.24	FOR CONSTRUCTION
E1.0	ELECTRICAL RENOVATION PLANS - RESTROOMS	12.20.24	FOR CONSTRUCTION
E1.1	ELECTRICAL RENOVATION PLANS - KITCHEN	12.20.24	FOR CONSTRUCTION
E2.0	ELECTRICAL ADDITION AREA PLANS	12.20.24	FOR CONSTRUCTION
E2.1	ELECTRICAL ADDITION AREA PLANS	12.20.24	FOR CONSTRUCTION
E3.0	ELECTRICAL RISER AND SCHEDULES	12.20.24	FOR CONSTRUCTION

IDI PROJECT NO. 22-011

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2012 EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED IN THE PLANS OR SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS AND SITE CONDITIONS BEFORE PROCEEDING WITH WORK. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ENGINEER BEFORE PROCEEDING.
3. THE CONTRACTOR SHALL BE REQUIRED TO RESTORE ALL EXISTING TURF AREAS WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES THROUGHOUT THE PROJECT OR AS SPECIFIED. TURF AREAS SHALL MATCH ADJACENT GRADES IN ADDITION TO GRADES SPECIFIED. TURF RESTORATION CONSISTS OF: SCREENED TOPSOIL SURFACE, 6 INCH; CHEMICAL FERTILIZER NUTRIENT, IF REQUIRED; MDOT SEED MIXTURE TDS; STRAW MULCH BLANKETS AND MULCH ANCHORING. THE CONTRACTOR SHALL BE REQUIRED TO WATER TURF AREAS TO PROMOTE HEALTHY GROWTH UNTIL THE FIRST CUTTING. AT THAT TIME THE OWNER SHALL TAKE ALL RESPONSIBILITY FOR MAINTENANCE.
4. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY AND ALL AREAS DISTURBED OR DAMAGED OUTSIDE OF THE OWNERS PROPERTY, AS A RESULT OF THE CONTRACTORS OPERATIONS, AT NO ADDITIONAL COST TO THE PROJECT.
5. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL REGULATIONS AND ORDINANCES FOR WORK AT THE SITE. THIS SHALL INCLUDE ALL M.I.O.S.H.A. REGULATIONS.
6. THE CONTRACTOR SHALL CONTROL NOISE, CARRY OUT A PROGRAM FOR DUST CONTROL AND SHALL ALLOW NO ONSITE BURNING, WITHOUT PRIOR APPROVAL FROM THE OWNER, ENGINEER AND THE LOCAL FIRE DEPARTMENT.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FEES AND OBTAINING ANY REQUIRED PERMITS FOR WORKING WITHIN THE RIGHT-OF-WAY INCLUDING PAVEMENT REPLACEMENT, DRIVEWAY(S), SEWER TAPS, OFF STREET PARKING, SIDEWALK AND/OR ROAD CLOSURES, SIDEWALK AND CURB REPLACEMENT, ETC. THE CONTRACTOR SHALL PROVIDE THE LOCAL GOVERNING AUTHORITY AND/OR LOCAL MUNICIPALITY WITH ANY ROAD CLOSURE AND DETOUR PLAN, IF REQUIRED, PRIOR TO PROCEEDING WITH WORK. CONTACT GOVERNING AUTHORITY AND/OR LOCAL MUNICIPALITY FOR REQUIREMENTS BEFORE PROCEEDING WITH WORK.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT FOR THIS PROJECT. THE CONTRACTOR SHALL PROTECT OR PLACE NEW BENCHMARKS AND/OR CONTROL POINTS, AS REQUIRED. AN ELECTRONIC COPY OF THE AUTOCAD ".DWG" FILE SHALL BE PROVIDED TO THE CONTRACTOR OR THEIR SURVEYOR.
9. ANY PROPERTY IRONS DAMAGED OR REMOVED BY THE CONTRACTORS OPERATIONS, SHALL BE REPLACED BY A SURVEYOR LICENSED IN THE STATE OF MICHIGAN AT NO COST TO THE PROJECT.
10. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE THEIR WORK WITH THE BUILDING CONTRACTORS OR UTILITY COMPANIES' WORK AT NO ADDITIONAL COST TO THE PROJECT.
11. SITE CLEARING SHALL INCLUDE SURFACE DEBRIS, REMOVING ABOVE AND BELOW GROUND IMPROVEMENTS, ROCKS, DESIGNATED TREES, SHRUBS AND OTHER VEGETATION AND ABANDONED UTILITIES AS NECESSARY TO PERFORM THE WORK IN THE CONTRACT. ALL REMOVAL ITEMS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL PROTECT ALL SURVEY CONTROL POINTS, BENCHMARKS AND/OR EXISTING STRUCTURES TO REMAIN FROM DAMAGE OR DISPLACEMENT.
12. TREES IN THE INFLUENCE OF THE PROPOSED NEW WORK SHALL BE REMOVED. TREE REMOVAL SHALL INCLUDE COMPLETE REMOVAL OF THE STUMP AND INCLUDE REMOVAL OF ANY ROOTS WHICH ARE LOCATED WITHIN THE INFLUENCE OF THE SUBBASE EXCAVATION, BUILDING CONSTRUCTION AND UTILITY TRENCH EXCAVATION. WHEN EXCAVATING THROUGH ROOTS, PERFORM WORK BY HAND AND CUT ROOTS WITH A SHARP AXE.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF REMOVED, SURPLUS AND/OR WASTE MATERIAL FROM THE SITE. ALL TRANSPORTATION AND DISPOSAL OF THE REMOVED ITEMS SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATION AND ALL LOCAL, STATE AND FEDERAL LAWS.
14. SAW CUT EXISTING PAVEMENT TO FULL DEPTH PRIOR TO REMOVAL. WHERE SAW CUT IS REQUIRED IN CONCRETE SLABS AND/OR CURB & GUTTER, SAW CUT FULL DEPTH AT THE NEAREST JOINT. IF A SAWCUT EDGE BECOMES DAMAGED PRIOR TO THE INSTALLATION OF NEW WORK, THE EDGE SHALL BE RECUT, AS DIRECTED BY THE ENGINEER, AND THE PAVEMENT REPLACED AT NO ADDITION COST TO THE PROJECT.

TRAFFIC CONTROL AND MAINTENANCE

1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD), 2011 EDITION AND ALL CURRENT MDOT STANDARD PLANS, AS REQUIRED. THE CONTRACTOR SHALL SUBMIT A TRAFFIC MAINTENANCE PLAN TO THE ENGINEER FOR APPROVAL, 10 DAYS PRIOR TO BEGINNING WORK.
2. ALL SIGNS, BARRICADES, WARNING LIGHTS AND OTHER TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE MMUTCD. SIGNING FOR STREET CLOSURES SHALL BE IN ACCORDANCE WITH THE MMUTCD. ANY SIGNS TEMPORARILY REMOVED DUE TO CONSTRUCTION ACTIVITIES, SHALL BE TEMPORARILY RELOCATED, AS DIRECTED BY THE ENGINEER, UNTIL FINAL RESTORATION IS COMPLETED AND THEN RETURNED TO THEIR ORIGINAL LOCATION.
3. DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL PLACE THE PROPER CONSTRUCTION SIGNING IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND ALL CURRENT MDOT STANDARD PLANS, AS REQUIRED.
4. THE CONTRACTOR SHALL PROVIDE THE LOCAL MUNICIPALITY WITH ANY ROAD CLOSURE AND DETOUR PLAN, IF REQUIRED, PRIOR TO PROCEEDING WITH WORK. CONTACT LOCAL MUNICIPALITY FOR REQUIREMENTS BEFORE PROCEEDING WITH WORK.

UTILITY NOTES

1. UTILITIES AND UTILITY SERVICE INFORMATION, SHOWN ON THE PLANS, ARE BASED ON UTILITY STAKING AND IS FOR INFORMATION ONLY, AS ACTUAL LOCATIONS MAY VARY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY LOCATIONS BEFORE PROCEEDING WITH WORK.
2. FOR THE PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR IS REQUIRED TO CONTACT "MISS DIG" BY PHONE AT 811 OR 800-482-7171 OR VIA THE WEB AT EITHER ELOCATE.MISSDIG.ORG FOR SINGLE ADDRESS OR RTE.MISSDIG.ORG, A MINIMUM OF 72 HOURS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) IN ADVANCE OF ANY EXCAVATION.
3. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE ALL OF THEIR WORK WITH THE UTILITY COMPANIES WORK, IF ANY, AT NO ADDITIONAL COST TO THE PROJECT.
4. COSTS AND FEES CHARGED BY THE UTILITY COMPANIES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE TO BE MADE A PART OF THE CONTRACT.
5. DAMAGE TO EXISTING UTILITIES, OUTSIDE THE SCOPE OF WORK SHOWN ON THE PLANS, IS THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIR, AS SUCH, SHALL BE AT NO ADDITIONAL COST TO THE PROJECT.
6. IN CASES WHERE EXISTING SEWERS, DRAINS, GAS SERVICE CONNECTIONS, TELEPHONE OR ELECTRICAL FACILITIES, WATER SERVICE CONNECTIONS, ETC. ARE ENCOUNTERED, THE CONTRACTOR SHALL PERFORM THEIR WORK IN SUCH A MANNER THAT THE SERVICE WILL BE UNINTERRUPTED. THE CONTRACTORS METHOD FOR MAINTAINING AND SUPPORTING THE EXISTING UTILITIES AND THEIR SERVICE CONNECTIONS, IF REQUIRED, SHALL BE AS SUCH TO AVOID SETTLEMENT OF THE UTILITIES BEFORE AND AFTER PLACING BACKFILL.
7. STORM SEWER MATERIALS AND CONSTRUCTION SHALL CONFORM TO BANGOR TOWNSHIP STANDARD SPECIFICATION FOR STORM WATER COLLECTION SYSTEMS.
8. SANITARY SEWER MATERIALS AND CONSTRUCTION SHALL CONFORM TO BANGOR TOWNSHIP STANDARD SPECIFICATION FOR SANITARY SEWER COLLECTION SYSTEMS.
9. SEE ELECTRICAL, MECHANICAL AND PLUMBING PLANS FOR EXACT CONNECTIONS TO PROPOSED BUILDING UTILITIES.
10. UTILITY DISINFECTION AND ALL OTHER TESTING AS REQUIRED BY THE GOVERNING CODE IS THE RESPONSIBILITY OF THE CONTRACTOR.

MISS DIG 811
Know what's below.
Call before you dig.

EROSION CONTROL NOTES

1. THE DISTURBANCE AREA IS LESS THAN ONE ACRE AND MORE THAN 500 FT FROM WATER. THE SITE CONTRACTOR IS NOT RESPONSIBLE FOR OBTAINING A SOIL EROSION AND SEDIMENTATION CONTROL (SESC) PERMIT FOR THIS PROJECT. CONTACT THE COUNTY DRAIN COMMISSIONER OFFICE FOR MORE INFORMATION AND REQUIREMENTS.
2. APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF EARTH DISTURBING ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL ALL AREAS ARE FULLY RESTORED.
3. ALL SOIL EROSION & SEDIMENT CONTROL (SESC) MEASURES PLACED BY THE CONTRACTOR SHALL BE IN FULL COMPLIANCE WITH PUBLIC ACT 347 OF 1972 AS AMENDED AND THE ADMINISTRATIVE RULES. THE CONTRACTOR SHALL HAVE A DEQ CERTIFIED STORM WATER OPERATOR ASSIGNED TO THIS PROJECT.
4. A TRACKING PAD IS REQUIRED AT ANY CONTRACTOR INGRESS AND/OR EGRESS LOCATION WHERE SEDIMENT MAY BE TRACKED OFF-SITE. THE CONTRACTOR IS REQUIRED TO CLEAN ADJACENT STREETS OF ACCUMULATED SEDIMENT AS A RESULT OF THE CONTRACTORS ACTIVITY, AS DIRECTED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE PROJECT.
5. INSTALL SEDIMENT CONTROL, INLET PROTECTION, FABRIC DROP (SS8) AT EXISTING AND NEWLY CONSTRUCTED CATCH BASINS. AFTER RAIN EVENTS AND AT THE COMPLETION OF THE PROJECT, REMOVE AND CLEAN ALL ACCUMULATED SEDIMENT FROM THE CATCH BASINS.
6. AT THE COMPLETION OF THE PROJECT, ONCE ALL DISTURBED AREAS HAVE BEEN FULLY RESTORED, REMOVE ALL TEMPORARY EROSION CONTROL DEVICES AND ANY ACCUMULATED SEDIMENT.
7. THE CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF THE SITE HAS BEEN ESTABLISHED.
8. THE CONTRACTOR SHALL RESTORE DISTURBED AREAS AS SOON AS POSSIBLE.

MICHIGAN UNIFIED KEYING SYSTEM
SOIL EROSION AND SEDIMENTATION CONTROL

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
	SEDIMENT CONTROLS		
E2	GRUBBING OMITTED		FOR USE ON STEEP SLOPES TO PREVENT RILLING, GULLYING AND REDUCE SHEET FLOW VELOCITY OR WHERE CLEAR VISION CORRIDORS ARE NECESSARY.
E5	DUST CONTROL		FOR USE ON CONSTRUCTION SITES, UNPAVED ROADS, ETC. TO REDUCE DUST AND SEDIMENTATION FROM WIND AND CONSTRUCTION ACTIVITIES.
E6	MULCH		FOR USE ON IN AREAS SUBJECT TO EROSIVE SURFACE FLOWS OR SEVERE WIND OR ON NEWLY SEEDED AREAS.
E7	TEMPORARY SEEDING		STABILIZATION METHOD UTILIZED ON CONSTRUCTION SITES WHERE EARTH CHANGE HAS BEEN INITIATED BUT NOT COMPLETED WITHIN A 2 WEEK PERIOD.
E8	PERMANENT SEEDING		STABILIZATION METHOD UTILIZED ON SITES WHERE EARTH CHANGE HAS BEEN COMPLETED (FINAL GRADING ATTAINED).
E9	MULCH BLANKETS		ON EXPOSED SLOPES, NEWLY SEEDED AREAS, NEW DITCH BOTTOMS OR AREAS SUBJECT TO EROSION.
E10	SODDING		ON AREAS AND SLOPES WHERE IMMEDIATE STABILIZATION IS REQUIRED.
E12	RIPRAP		USE ALONG SHORELINES, WATERWAYS, OR WHERE CONCENTRATED FLOWS OCCUR. SLOWS VELOCITY, REDUCES SEDIMENT LOAD, AND REDUCES EROSION.
	EROSION CONTROLS		
S31	CHECK DAM		USED TO REDUCE SURFACE FLOW VELOCITIES WITHIN CONSTRUCTED AND EXISTING FLOW CORRIDORS.
S51	SILT FENCE		USED ADJACENT TO CRITICAL AREAS, TO PREVENT SEDIMENT LADEN SHEET FLOW FROM ENTERING THESE AREAS.
S53	STABILIZED CONSTRUCTION ENTRANCE		USED AT EVERY POINT WHERE CONSTRUCT TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE.
S55	SEDIMENT BASIN		AT THE OUTLET OF DISTURBED AREAS AND AT THE LOCATION OF A PERMANENT DETENTION BASIN.
S56	SEDIMENT TRAP		IN SMALL DRAINAGE AREAS, ALONG CONSTRUCTION SITE PERIMETERS AND ABOVE CHECK DAMS OR DRAIN INLETS.
S57	VEGETATED BUFFER/ FILTER STRIP		USE ALONG SHORELINES, WATERWAYS, OR OTHER SENSITIVE AREAS. SLOWS VELOCITY, REDUCES SEDIMENT LOAD, AND REDUCES EROSION IN AREAS OF SHEET FLOW.
S58	INLET PROTECTION FABRIC DROP		USE AT STORM WATER INLETS, ESPECIALLY AT CONSTRUCTION SITES.
S61	TURBIDITY CURTAIN		USED DURING CONSTRUCTION ADJACENT TO A WATER RESOURCE, TO CONTAIN SEDIMENT WITHIN THE WORK AREA WHEN OTHER BMP'S CANNOT BE USED.

PROPOSED SITE WORK

1. CONCRETE FOR SIDEWALKS, DUMPSTER PADS, CURB & GUTTER, ETC. SHALL MEET EITHER MDOT GRADE P1 OR S2 SPECIFICATION, UNLESS OTHERWISE SPECIFIED.
2. PLACE ½" EXPANSION JOINT BETWEEN SIDEWALKS AND ANY STRUCTURE. CUT CONTROL JOINTS AT 5' O.C. AND PLACE EXPANSION JOINTS AT 20' O.C. OR AS DIRECTED BY THE ENGINEER.
3. PLACE 1" FIBER JOINT AT 400' MAXIMUM INTERVAL IN CURB AND GUTTER. PLACE ½" EXPANSION JOINT BETWEEN CURB AND GUTTER AND CATCH BASINS. PLACE CONTRACTION JOINTS AT 40' MAXIMUM INTERVALS.
4. ADA RAMPS SHALL COMPLY WITH CURRENT MDOT STANDARD PLAN.
5. AREAS OF UNSTABLE SUBBASE NOT MEETING COMPACTION REQUIREMENTS, SHALL BE UNDERCUT AND BACKFILLED, IN ACCORDANCE WITH MDOT SUBGRADE UNDERCUTTING, TYPE II. THIS WORK SHALL BE MEASURED BY THE CUBIC YARD (CYD) AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "SUBGRADE UNDERCUTTING".
6. CURB AND GUTTER RADII ARE DIMENSIONED FROM THE FRONT EDGE OF THE GUTTER PAN.

GRADING

1. FINAL GRADING SHALL PROVIDE POSITIVE DRAINAGE ACROSS THE ENTIRE SITE, AWAY FROM BUILDINGS, TO EXISTING OR PROPOSED CATCH BASINS, DRAINAGE SWALES/DITCHES, DETENTION/RETENTION BASIN(S) AND/OR INFILTRATION BASIN(S).
2. THE CONTRACTOR SHALL GRADE THE SITE ACCORDING TO THE GRADING PLAN. IN THE ABSENCE OF A PLAN, THE CONTRACTOR IS TO GRADE THE SITE SO THAT THE NEW GRADES BLEND GENTLY INTO THE EXISTING GRADES. CONTRACTOR TO SLOPE GRADE AWAY FROM BUILDINGS A MINIMUM OF 2 INCHES IN 10 FEET.
3. MAINTAIN OPTIMUM MOISTURE CONTENT OF MATERIALS WHEN GRADING.

NOTES APPLYING TO STANDARD PLANS & SPECIAL DETAILS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS., THEY ARE TO BE CONSTRUCTED ACCORDING TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD PLAN LISTED BELOW, UNLESS NOTED OTHERWISE. COPIES OF THESE MDOT STANDARD PLANS CAN BE OBTAINED FROM THE MDOT WEBSITE (WWW.MICHIGAN.GOV/MDOT).

ROAD STANDARD PLANS:
- R-29-I DRIVEWAY OPENINGS & APPROACHES AND CURB AND GUTTER
- R-30-G CONCRETE CURB AND CONCRETE CURB & GUTTER
- R-37-B ISOLATION JOINT DETAILS
- R-74-D BUMPER & PARKING RAILS AND MISC. WOOD POSTS
- R-80-E GRANULAR BLANKET, UNDERDRAINS, OUTLET ENDINGS FOR UNDERDRAINS, AND SEWER BULKHEADS
- R-82-D BEDDING AND FILLING AROUND PIPE CULVERTS
- R-83-C UTILITY TRENCHES
- R-95-F CULVERT SLOPED END SECTION
- R-96-E SOIL EROSION & SEDIMENTATION CONTROL MEASURES
- R-100-H SEEDING AND TREE PLANTING
- R-107-H SUPERELEVATION AND PAVEMENT CROWNS

ROAD SPECIAL DETAILS:
- R-1-G DRAINAGE STRUCTURES
- R-28-J SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

PAVEMENT MARKING STANDARD PLANS:
- PAVE-900-F PAVEMENT ARROW AND MESSAGE DETAILS
- PAVE-905-D LONGITUDINAL LINE TYPES AND PLACEMENT
- PAVE-930-C PAVEMENT MARKINGS FOR NON-SIGNALIZED INTERSECTIONS
- PAVE-935-D LEFT TURN LANE MARKINGS
- PAVE-940-C RIGHT TURN LANE AND ISLAND PAVEMENT MARKINGS
- PAVE-945-C INTERSECTION, STOP BAR AND CROSSWALK MARKINGS
- PAVE-955-B ON-STREET PARKING ZONE MARKINGS
- PAVE-956-C PARKING AREA PAVEMENT MARKINGS
- PAVE-957-A BACK-IN ANGLE PARKING
- PAVE-960-B SCHOOL MARKINGS
- PAVE-965-D RAILROAD GRADE CROSSING PAVEMENT MARKINGS

TRAFFIC SIGNING STANDARD PLANS:
- SIGN-115-C SIGN LOCATION CODES PLACEMENT
- SIGN-130-B RAILROAD CROSSING SIGN
- SIGN-150-D SIGN SUPPORT SELECTION CHARTS
- SIGN-200-D STEEL POSTS
- SIGN-210-B WOOD POSTS
- SIGN-230-A FOUNDATION (BREAK-AWAY)
- SIGN-740-B MISCELLANEOUS SIGN CONNECTION DETAILS

TRAFFIC SIGNING SPECIAL DETAILS:
- SIGN-100-G STANDARD SIGN INSTALLATIONS
- SIGN-120-E ROADSIDE SIGN LOCATIONS AND SUPPORT SPACING
- SIGN-205-A PERFORATED STEEL SQUARE TUBE SIGN BREAKAWAY SYS
- SIGN-207-D PERFORATED STEEL SQUARE TUBE SIGN BREAKAWAY SYS

LEGEND

2.00%	GRADE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	INTEGRAL CURB
	INTEGRAL CURB TAPER TO MATCH GRADE
EXISTING ELEVATION	582.34
PROPOSED ELEVATION	582.63 EIB
GND	GROUND
BDG	BUILDING
ADJ	ADJUST ITEM
EB	EDGE OF HMA
EC	EDGE OF CONCRETE
IE	INVERT ELEVATION
BW	BACK OF WALK
FW	FACE OF WALK
TW	TOP OF WALK
EX	EXISTING
PR	PROPOSED
LF	LINEAR FEET
MP	MID POINT
PC	POINT OF CURVATURE
FFE	FINISHED FLOOR ELEVATION
TR	TOP OF ROCK
GRV	GRAVEL
CB	CATCH BASIN
MH	MANHOLE
STM	STORM SEWER
SAN	SANITARY SEWER
REM	REMOVE ITEM
REL	RELOCATE ITEM
FL	FLOW LINE
BC	BACK OF CURB

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integrated designs inc.
ARCHITECTURE
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CONSULTING

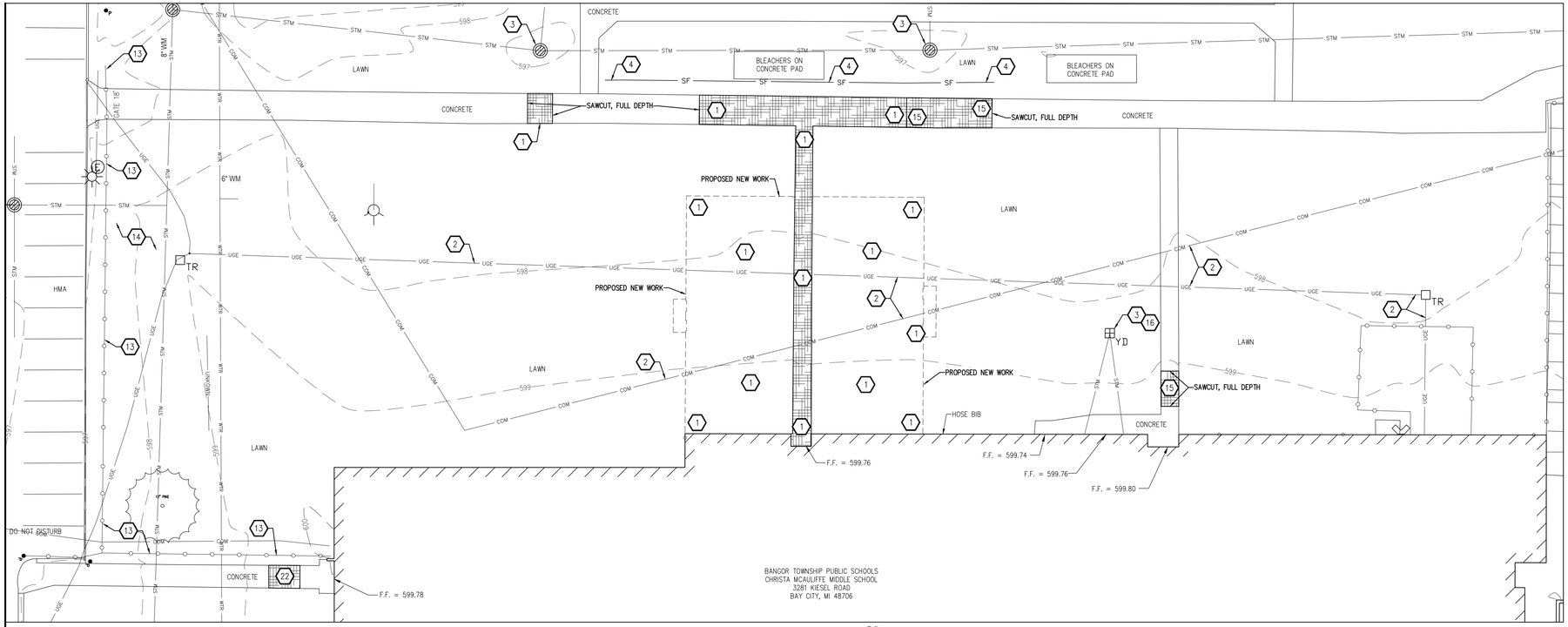
BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL CLASSROOM & ATHLETIC ADDITION
3201 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12.20.24

	BY	DATE
DESIGN	BLK	09.30.24
DRAWN	BLK	09.30.24
CHECKED	ADM	12.03.24
APPROVED	BLK	12.04.24

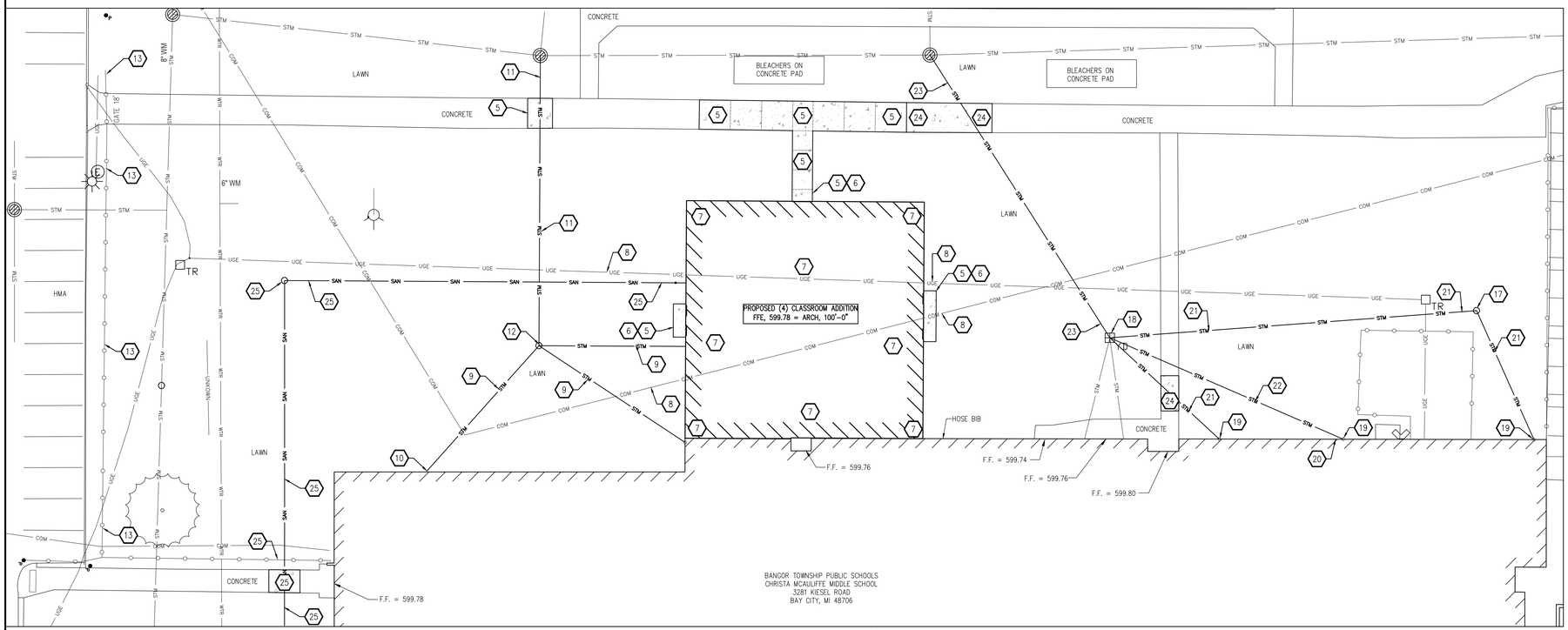
CIVIL NOTES

C0.1



DEMOLITION PLAN

SCALE: 1 INCH = 20 FEET



SITE PLAN

SCALE: 1 INCH = 20 FEET

KEYNOTES

– SEE CURRENT MDOT SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED –

1. REMOVE EXISTING CONCRETE SIDEWALKS & SLABS, TOPSOIL AND UNDERLYING MATERIAL AS REQUIRED FOR NEW WORK. SAWCUT EXISTING PAVEMENT TO FULL DEPTH PRIOR TO REMOVAL. SAWCUT(S) IN CONCRETE SHALL BE AT THE NEAREST JOINT.
2. UTILITIES IN AREA. CONTRACTOR SHALL LOCATE BY ANY MEANS NECESSARY AND PROTECT DURING CONSTRUCTION. LOCATIONS SHOWN ARE APPROXIMATE AND/OR ASSUMED.
3. INSTALL INLET PROTECTION FABRIC DROP AND MAINTAIN UNTIL PERMANENT SESC PROTECTIONS ARE IN PLACE. THEN REMOVE FABRIC AND CLEAN ANY SEDIMENT & DEBRIS FROM SUMP. SEE DETAIL SHEET.
4. INSTALL ±125 LF OF SILT FENCE AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING CULVERT(S). MAINTAIN UNTIL COMPLETION OF PROJECT AND REMOVE ONCE ALL PERMANENT SESC MEASURES ARE IN PLACE. SEE DETAIL SHEET.
5. PLACE 6 INCH THICK REINFORCED CONCRETE SIDEWALK ON SUB–BASE, 6" CIP MDOT CLASS II. REINFORCEMENT SHALL BE WWF, 6X6, W2.1XW2.1. REFER TO STRUCTURAL PLANS FOR FROST STOOP DESIGN. SEE GRADING & DETAIL SHEETS.
6. FROST STOOP. REFER TO STRUCTURAL DRAWINGS.
7. PROPOSED SINGLE STOREY CLASSROOM ADDITION. REFER TO STRUCTURAL AND ARCHITECTURAL PLANS.
8. UTILITIES IN AREA. LOCATION IS APPROXIMATE. SLEEVE THROUGH FOUNDATION AS NECESSARY. REFER TO STRUCTURAL PLANS AND COORDINATE WITH MASONRY CONTRACTOR.
9. INSTALL ±160 LF (TOTAL) OF 6 INCH SDR–35 STORM SEWER. COORDINATE WITH PLUMBING CONTRACTOR AND SEE UTILITY & DETAIL SHEETS.
10. CONNECT TO EXISTING ROOF DRAIN. REMOVE DISCHARGE FIXTURE AND BRING DRAIN 3 FT BELOW GRADE. SEE UTILITY & DETAIL SHEETS.
11. INSTALL ±93 LF (TOTAL) OF 12 INCH SDR–35 STORM SEWER. SEE UTILITY & DETAIL SHEETS.
12. INSTALL 4 FT DIAMETER PRE–CAST CONCRETE MANHOLE WITH 2 FT SUMP. SEE UTILITY & DETAIL SHEETS.
13. REMOVE & SALVAGE FENCE SYSTEM AS NEEDED TO ACCESS SITE. RE–INSTALL REMOVED FENCE SYSTEM ONCE SITE ACCESS IS NO LONGER REQUIRED. ANY DAMAGE COMPONENTS SHALL BE MATCHED & REPLACED WITH NEW.
14. INSTALL STABILIZED CONSTRUCTION PAD FOR SEDIMENT CONTROL AT ALL SET ENTRANCES AND EXITS. LOCATION SHOWN IS FOR REFERENCE ONLY AND CONTRACTOR SHALL DETERMINE EXACT PLACEMENT LOCATION(S). SEE DETAIL SHEET.

ALTERNATE BID NO.1

– ROOF DRAIN CONNECTIONS & WORK ASSOCIATED WITH IT IS AN ALTERNATE BID ITEM –

15. REMOVE EXISTING CONCRETE SIDEWALKS, AND UNDERLYING MATERIAL AS REQUIRED FOR NEW WORK. SAWCUT EXISTING PAVEMENT TO FULL DEPTH PRIOR TO REMOVAL. SAWCUT(S) IN CONCRETE SHALL BE AT THE NEAREST JOINT.
16. REMOVE YARD DRAIN.
17. INSTALL A 2 FT DIAMETER PRECAST CONCRETE CATCH BASIN WITH 2 FT SUMP. SEE UTILITY AND DETAIL SHEETS.
18. INSTALL A 4 FT DIAMETER PRECAST CONCRETE CATCH BASIN WITH 2 FT SUMP. SEE UTILITY AND DETAIL SHEETS.
19. REMOVE ROOF DRAIN DOWNSPOUT NOZZLE, CONNECT TO ROOF DRAIN, AND BRING PIPE BELOW GRADE. INCLUDE CLEAN–OUT. ALL EXTERIOR ROOF DRAIN PIPES SHALL BE PAINTED. REFER TO ARCHITECTURAL DOCUMENTS AND SEE UTILITY AND DETAIL SHEETS.
20. REMOVE ROOF DRAIN OVERFLOW DOWNSPOUT NOZZLE, CONNECT TO ROOF DRAIN, AND BRING ROOF DRAIN PIPE BELOW GRADE. INCLUDE CLEAN–OUT. ALL EXTERIOR ROOF DRAIN PIPES SHALL BE PAINTED. REFER TO ARCHITECTURAL DOCUMENTS AND SEE UTILITY AND DETAIL SHEETS. SEE UTILITY AND DETAIL SHEETS.
21. INSTALL ±210 LF (TOTAL) OF 6 INCH SDR–35 STORM SEWER. SEE UTILITY AND DETAIL SHEETS.
22. INSTALL ±82 LF (TOTAL) OF 8 INCH SDR–35 STORM SEWER. SEE UTILITY AND DETAIL SHEETS.
23. INSTALL ±110 LF (TOTAL) OF 12 INCH SDR–35 STORM SEWER. SEE UTILITY AND DETAIL SHEETS.
24. PLACE 6 INCH THICK REINFORCED CONCRETE SIDEWALK ON SUB–BASE, 6" CIP MDOT CLASS II. REINFORCEMENT SHALL BE WWF, 6X6, W2.1XW2.1. SEE GRADING & DETAIL SHEETS.

ALTERNATE BID NO.2

– INSTALLATION OF A SANITARY SEWER & WORK ASSOCIATED WITH IT IS AN ALTERNATE BID ITEM –

25. SANITARY SEWER INSTALLATION & WORK ASSOCIATED WITH IT IS AN ALTERNATE BID ITEM (BID DEDUCT). IF A CONNECTION CAN NOT BE MADE INSIDE THE BUILDING, THIS SITE WORK IS REQUIRED. SEE PLUMBING DRAWINGS, COORDINATE WITH PLUMBING CONTRACTOR, AND REFER TO SHEET C1.1.

ALL KEYNOTES ARE SPECIFIC TO THAT SHEET ONLY

LEGEND

CONCRETE REMOVAL — PROPOSED CONCRETE

GRAPHIC SCALE: 1 inch = 20 feet

0 10 20 40 60

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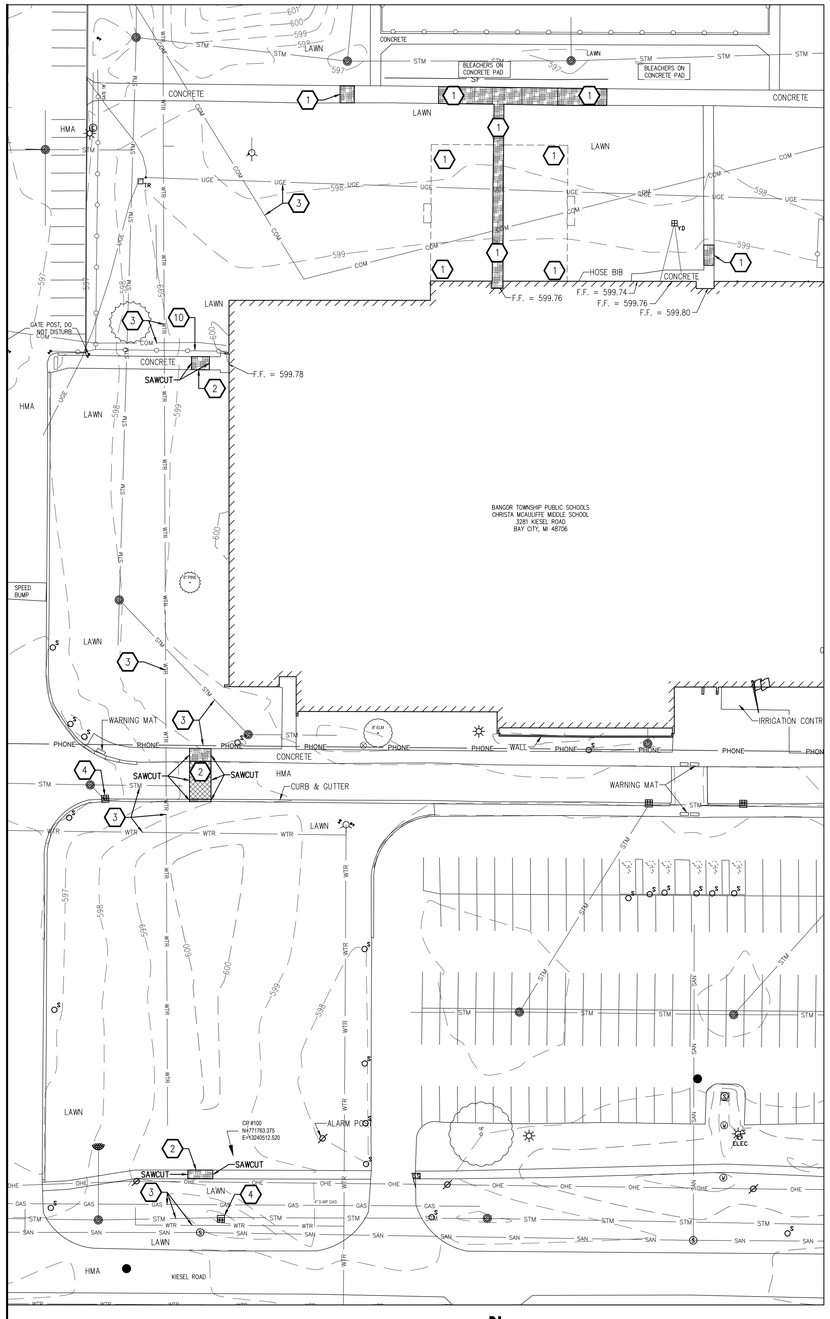
BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL CLASSROOM & ATHLETIC ADDITION
3201 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE	BY
0	FOR CONSTRUCTION	12.20.24	

DESIGN		09.30.24	BLK
DRAWN		09.30.24	BLK
CHECKED		12.03.24	ADM
APPROVED		12.04.24	BLK

DEMOLITION & SITE PLANS

C1.0

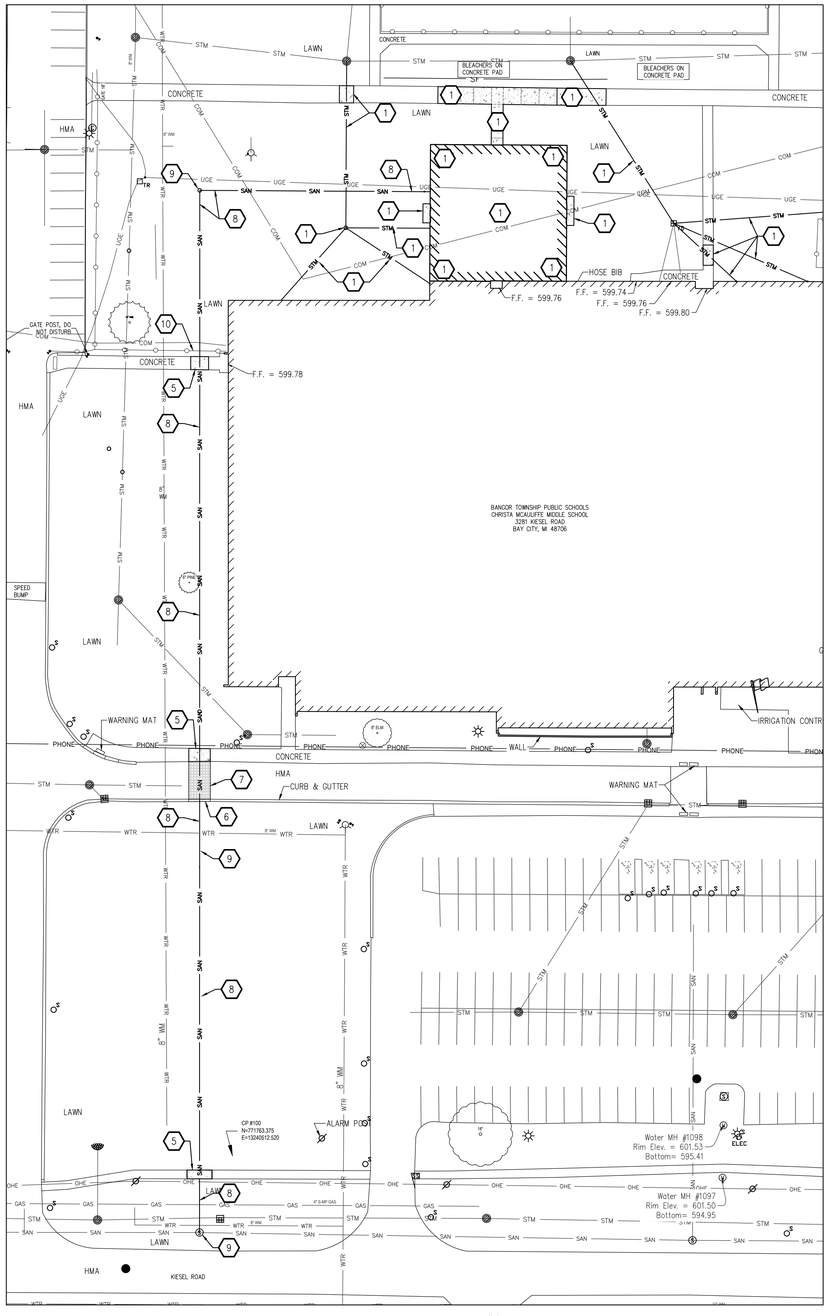


DEMOLITION PLAN

SCALE: 1 INCH = 40 FEET

GRAPHIC SCALE: 1 inch = 40 feet

0 20 40 80 120



SITE PLAN

SCALE: 1 INCH = 40 FEET

GRAPHIC SCALE: 1 inch = 40 feet

0 20 40 80 120

ALTERNATE BID NO.2

– SEE CURRENT MDOT SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED –

1. WORK ASSOCIATED WITH BASE BID & ALTERNATE BID NO.1. REFER TO SHEET C1.0.
2. REMOVE EXISTING CONCRETE SIDEWALKS, HMA, TOPSOIL, AND UNDERLYING MATERIAL AS REQUIRED FOR NEW WORK. SAWCUT EXISTING PAVEMENT TO FULL DEPTH PRIOR TO REMOVAL. SAWCUT(S) IN CONCRETE SHALL BE AT THE NEAREST JOINT.
3. UTILITIES IN AREA. CONTRACTOR SHALL LOCATE BY ANY MEANS NECESSARY AND PROTECT DURING CONSTRUCTION. LOCATION IS APPROXIMATE.
4. INSTALL INLET PROTECTION FABRIC DROP AND MAINTAIN UNTIL PERMANENT SESC PROTECTIONS ARE IN PLACE. THEN REMOVE FABRIC AND CLEAN ANY SEDIMENT & DEBRIS FROM SUMP.
5. PLACE 6 INCH THICK REINFORCED CONCRETE SIDEWALK ON SUB-BASE, 6" CIP MDOT CLASS II. REINFORCEMENT SHALL BE WWF, 6X6, W2.1XW2.1. SEE DETAIL SHEET.
6. PLACE CONCRETE CURB & GUTTER. MATCH EXISTING TYPE AND ELEVATIONS.
7. PATCH HMA. MATCH EXISTING SUB-BASE & BASE MATERIALS, DEPTHS & TYPES.
8. INSTALL ±710 LF (TOTAL) OF 6 INCH SDR-35 SANITARY SEWER. INCLUDE CLEAN-OUT NEAR NEW ADDITION. SEE UTILITY & DETAIL SHEETS.
9. INSTALL 4 FT DIAMETER PRE-CAST CONCRETE SANITARY MANHOLE. SEE UTILITY & DETAIL SHEETS.
10. REMOVE & SALVAGE FENCE SYSTEM AS NEEDED TO ACCESS SITE. RE-INSTALL REMOVED FENCE SYSTEM ONCE SITE ACCESS IS NO LONGER REQUIRED. ANY DAMAGE COMPONENTS SHALL BE MATCHED & REPLACED WITH NEW.

ALL KEYNOTES ARE SPECIFIC TO THAT SHEET ONLY

LEGEND

CONCRETE REMOVAL | HMA REMOVAL | PROPOSED CONCRETE | PROPOSED HMA

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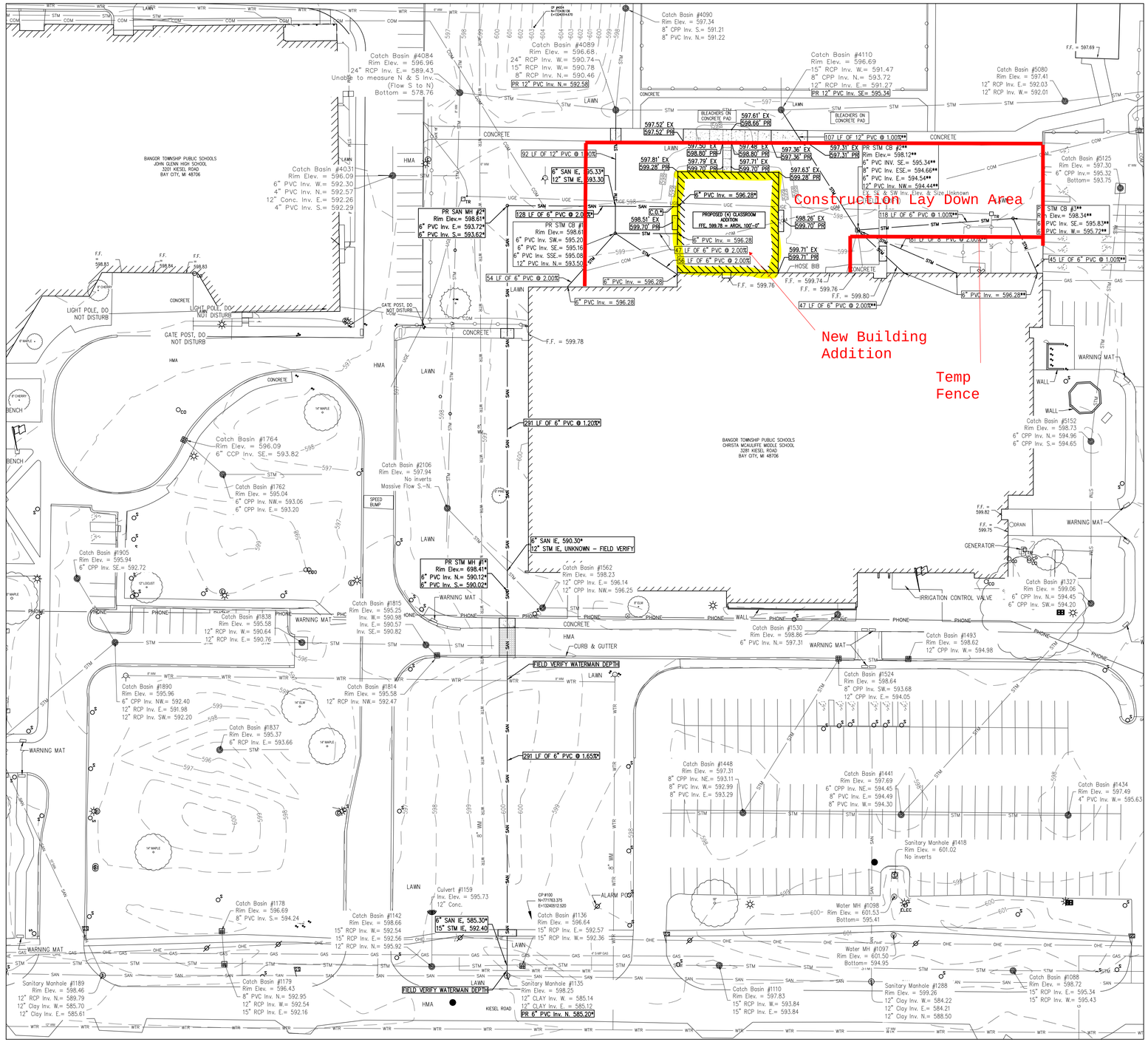
APPROVED	BLK	12.04.24

ALTERNAT BID NO.2, DEDUCT
SANITARY SEWER
DEMOLITION & SITE PLANS

C1.1



UTILITY WORK
** ALTERNATE BID NO.1, ROOF DRAIN CONNECTIONS
* ALTERNATE BID NO.2, SANITARY SEWER WORK

LEGEND

2.00%	GRADE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	INTEGRAL CURB
	INTEGRAL CURB/BACK OF CURB TAPER TO MATCH GRADE
EXISTING ELEVATION	582.34
PROPOSED ELEVATION	582.63 EB
GND	GROUND
BDG	BUILDING
ADJ	ADJUST ITEM
EB	EDGE OF HMA
EC	EDGE OF CONCRETE
IE	INVERT ELEVATION
BW	BACK OF WALK
FW	FACE OF WALK
TW	TOP OF WALK
EX	EXISTING
PR	PROPOSED
LF	LINEAR FEET
MP	MID POINT
PC	POINT OF CURVATURE
FFE	FINISHED FLOOR ELEVATION
TR	TOP OF ROCK
GRV	GRAVEL
CB	CATCH BASIN
MH	MANHOLE
STM	STORM SEWER
SAN	SANITARY SEWER
REM	REMOVE ITEM
REL	RELOCATE ITEM
FL	FLOW LINE
BC	BACK OF CURB

MISS DIG 811. Know what's below. Call before you dig.

GRADING & UTILITY PLAN

SCALE: 1 INCH = 40 FEET

GRAPHIC SCALE: 1 inch = 40 feet
0 20 40 80 120

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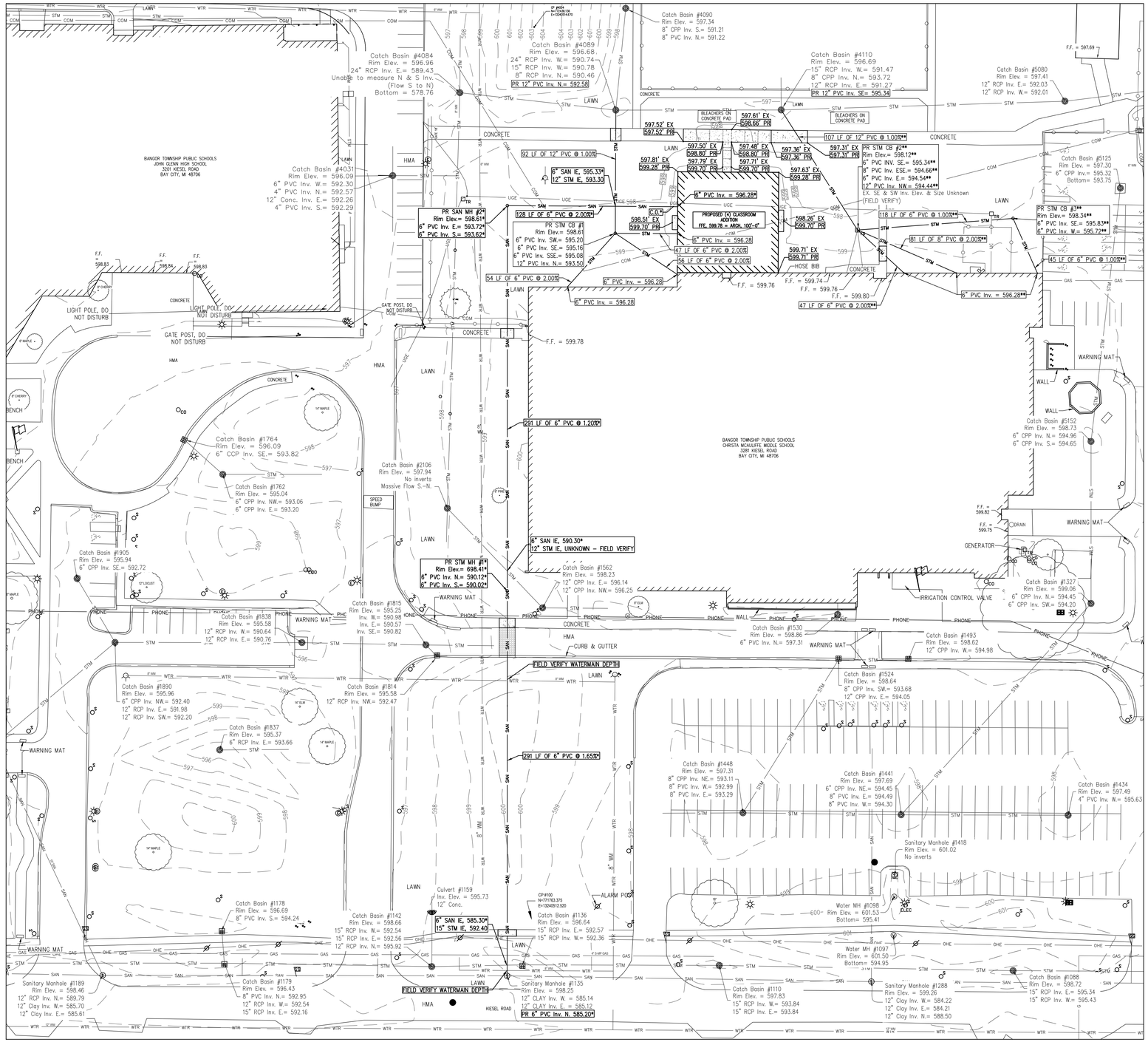
GRADING & UTILITY PLANS

C2.0



GRADING & UTILITY PLAN

SCALE: 1 INCH = 40 FEET

GRAPHIC SCALE: 1 inch = 40 feet

0 20 40 80 120

LEGEND

2.00%	GRADE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	INTEGRAL CURB
	INTEGRAL CURB/BACK OF CURB TAPER TO MATCH GRADE
EXISTING ELEVATION	582.34
PROPOSED ELEVATION	582.63 EB
GND	GROUND
BDG	BUILDING
ADJ	ADJUST ITEM
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IE	INVERT ELEVATION
BW	BACK OF WALK
FW	FACE OF WALK
TW	TOP OF WALK
EX	EXISTING
PR	PROPOSED
LF	LINEAR FEET
MP	MID POINT
PC	POINT OF CURVATURE
FFE	FINISHED FLOOR ELEVATION
TR	TOP OF ROCK
GRV	GRAVEL
CB	CATCH BASIN
MH	MANHOLE
STM	STORM SEWER
SAN	SANITARY SEWER
REM	REMOVE ITEM
REL	RELOCATE ITEM
FL	FLOW LINE
BC	BACK OF CURB

UTILITY WORK
** ALTERNATE BID NO.1, ROOF DRAIN CONNECTIONS
* ALTERNATE BID NO.2, SANITARY SEWER WORK

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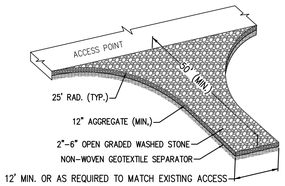
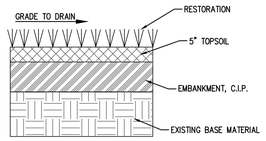
GRADING & UTILITY PLANS

C2.0



STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

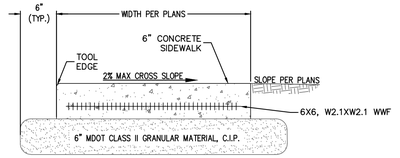


NOTE: STABILIZATION SHALL BE ACCOMPLISHED WITH SEED AND STRAW MULCH WITH A TACKIFIER OR STRAW BLANKETS PEGGED IN PLACE.

SEEDING RATE = 210 LBS PER ACRE MINIMUM
FERTILIZER RATE = 150 LBS PER ACRE MINIMUM
MULCHING RATE = MINIMUM 3" DEPTH (1.5 – 2.0 TONS PER ACRE)

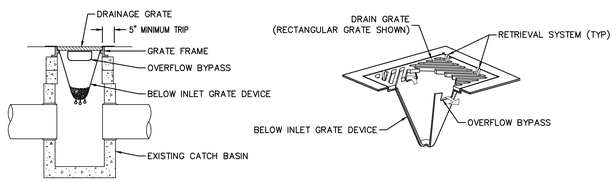
TURF RESTORATION DETAIL

NOT TO SCALE



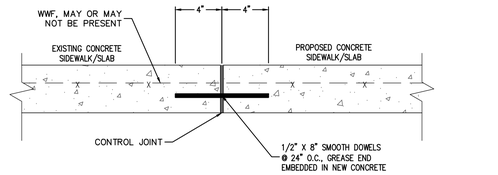
CONCRETE SIDEWALK

NOT TO SCALE



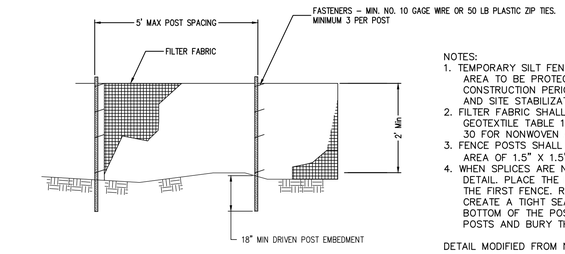
INLET PROTECTION FABRIC DROP

NO SCALE



EXISTING & PROPOSED CONCRETE INTERFACE

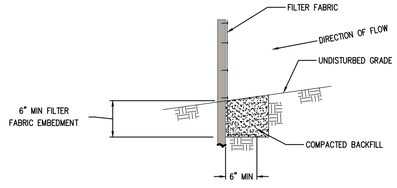
NOT TO SCALE



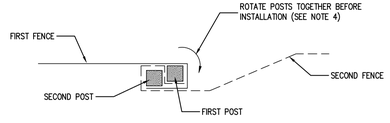
ELEVATION

NOTES:
1. TEMPORARY SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. FENCE SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS L WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
3. FENCE POSTS SHALL BE EITHER WOOD POST WITH A MINIMU CROSS–SECTIONAL AREA OF 1.5" X 1.5" OR A STANDARD STEEL POST.
4. WHEN SPLICES ARE NECESSARY MAKE SPLICE AT POST ACCORDING TO SPLICE DETAIL. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180 DEGREES TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL. CUT THE FABRIC NEAR THE BOTTOM OF THE POSTS TO ACCOMMODATE THE 6 INCH FLAP. THEN DRIVE BOTH POSTS AND BURY THE FLAP. COMPACT BACKFILL WELL.

DETAIL MODIFIED FROM NRCS–IL STANDARD DRAWING NRCS141P2_029360



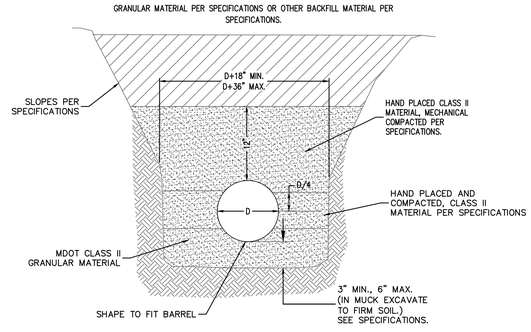
FABRIC ANCHOR DETAIL



SPLICE DETAIL–PLAN VIEW

SILT FENCE INSTALLATION DETAILS

NO SCALE



THE BACKFILL MATERIALS AND METHODS SHALL CONFORM WITH THE SPECIFICATIONS.

UTILITY TRENCH

NOT TO SCALE

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PROJECT NO. 22-011

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DRAWN	BLK	09.30.24
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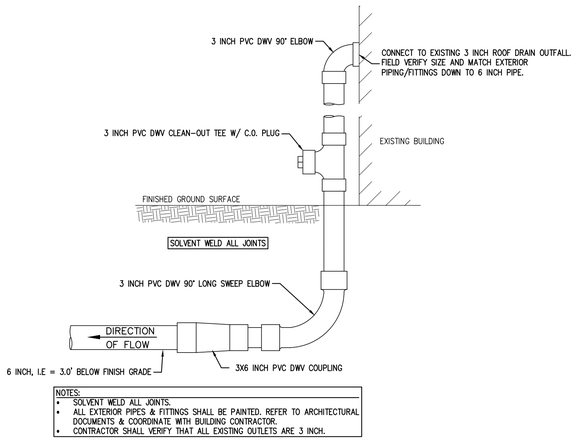
APPROVED	BLK	12.04.24

CIVIL DETAILS

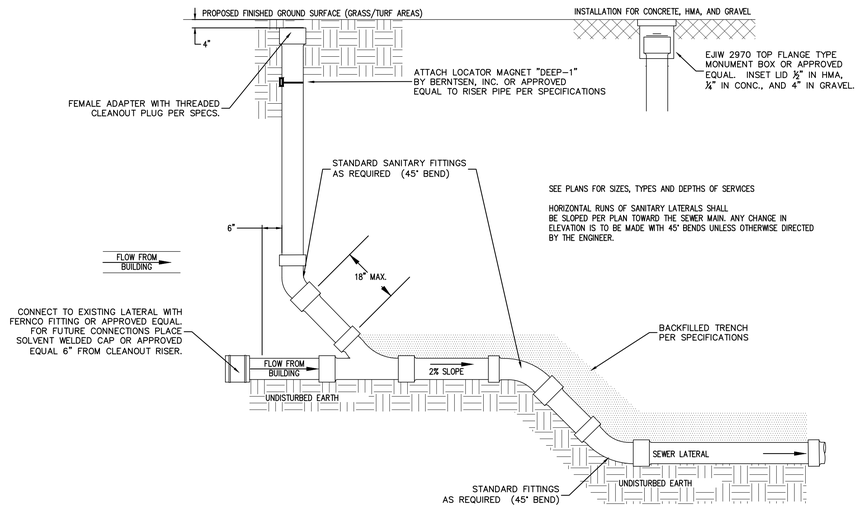
C3.0



NOTES:
- SOLVENT WELD ALL JOINTS.
- ALL EXTERIOR PIPES & FITTINGS SHALL BE PAINTED. REFER TO ARCHITECTURAL DOCUMENTS & COORDINATE WITH BUILDING CONTRACTOR.
- CONTRACTOR SHALL VERIFY THAT ALL EXISTING OUTLETS ARE 3 INCH.

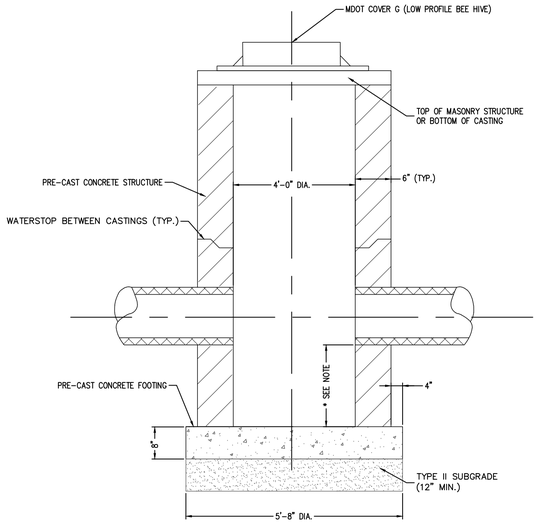
SINGLE, ABOVE GRADE, ROOF DRAIN CONNECTION, PROFILE

NOT TO SCALE



SANITARY/STORM SEWER LATERAL RISER DETAIL

NOT TO SCALE

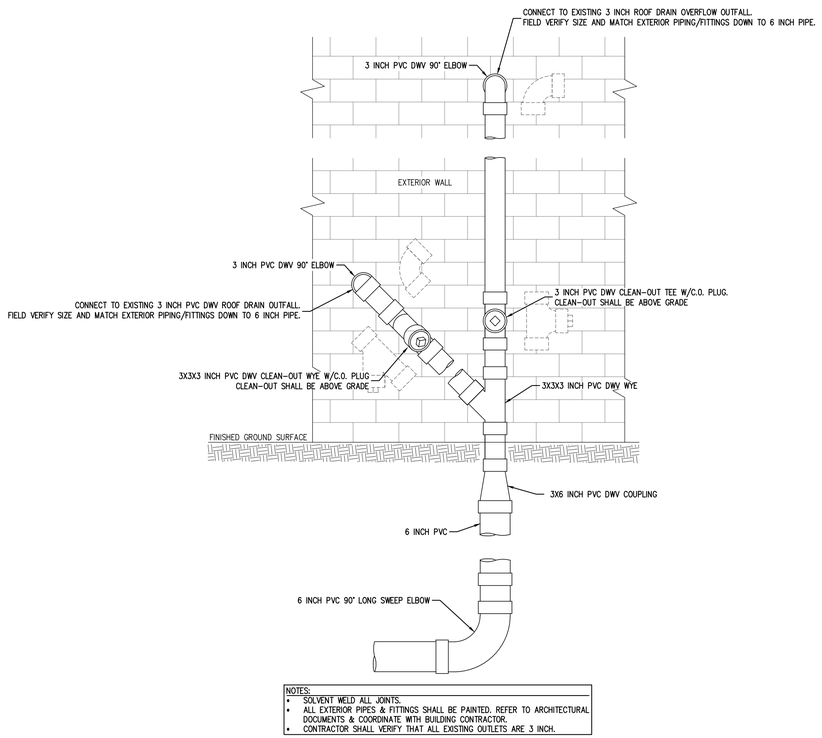


*NOTE: 2'-0" MIN. SUMP WHEN CALLED FOR ON PLANS.

NOTES:
1. MATERIALS SHALL MEET MDOT SPECIFICATIONS .
2. SUMP CAN BE PRECAST CONCRETE UNIT, OR 16" CONCRETE BLOCKS ON A PRECAST BASE.

STORM WATER STRUCTURE

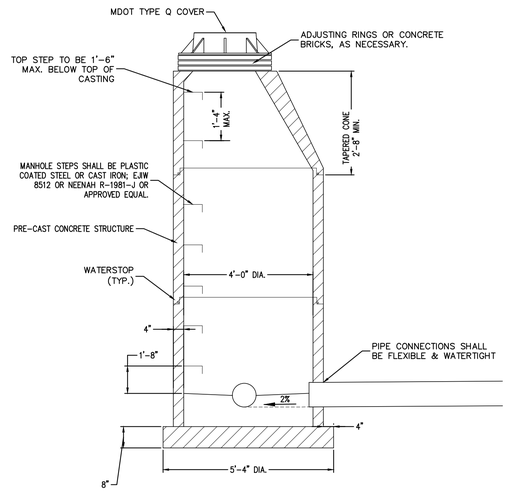
NOT TO SCALE



NOTES:
- SOLVENT WELD ALL JOINTS.
- ALL EXTERIOR PIPES & FITTINGS SHALL BE PAINTED. REFER TO ARCHITECTURAL DOCUMENTS & COORDINATE WITH BUILDING CONTRACTOR.
- CONTRACTOR SHALL VERIFY THAT ALL EXISTING OUTLETS ARE 3 INCH.

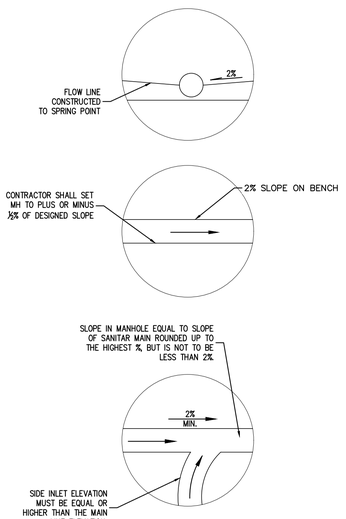
DOUBLE, ABOVE GRADE, ROOF DRAIN CONNECTION, ELEVATION VIEW

NOT TO SCALE



STANDARD SANITARY CONCRETE MANHOLE

NOT TO SCALE



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CONSULTING

BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 2 - HIGH SCHOOL CLASSROOM & ATHLETIC ADDITION
3201 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12.20.24

BY	DATE
BLK	09.30.24
BLK	09.30.24
ADM	12.03.24
BLK	12.04.24

DESIGN
DRAWN
CHECKED
APPROVED

CIVIL DETAILS

C3.1

TABLE 1705.6
REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERFLY.	-	X

TABLE 1705.3
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCED
1. INSPECTION OF REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	-	X	ACI 318:CH. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND c. INSPECT ALL OTHER WELDS	 - - X	 X X -	AWS D1.4 ACI 318: 26.6.4	
3. INSPECT ANCHORS CAST IN CONCRETE	-	X	ACI 318: 17.8.2	
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINTED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	 X -	 - X	 ACI 318: 17.8.2.4 ACI 318: 17.8.2	
5. 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
6. PRIOR TO CONCRETE PLACEMENT, FABIRCATE SPECIFMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C 172, ASTM C 31 ACI 318: 26.4, 26.12	1908.10
7. INSPECT CONCRETE AND SHORTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND THECNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	1908.9
~~9. INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCE; AND b. GROUTING OF BONDED PRESTRESSING TENDONS.~~	~~ X X~~	~~ - -~~	~~ACI 318: 26.10~~	
~~10. ERECTION OF PRECAST CONCRETE MEMBERS.~~	~~-~~	~~X~~	~~ACI 318: CH 26.8~~	
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X	ACI 318: 26.11.2	
12. INSPECT FROMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF CONCRETE BEING FORMED.	-	X	ACI 318: 26.11.1.2(b)	

TABLE 1.19.2
LEVEL C REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION

VERIFICATION AND INSPECTION	FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA		
	CONTINUOUS	PERIODIC	IBC SECTION	TMS 402/ACI 530/ASCE 5	TMS 602/ACI 530.1/ASCE 6
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS.	-	X	-	-	ART 1.5
2. VERIFICATION OF f'm AND f'aac PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE.	-	X	-	-	ART 1.4B
3. VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT.	X	-	-	-	ART 1.5B.1.b.3
4. THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:					
a. PROPORTIONS OF SITE-PREPARED MORTAR	-	X	-	-	ART 2.1, 2.6A
b. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	-	X	-	-	ART 2.4B, 2.4H
c. PLACEMENT OF MASONRY UNITS AND CONSTRUCTIONS OF MORTAR JOINTS	-	X	-	-	ART 3.3B
d. LOCATION OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES	-	X	-	-	ART 3.4, 3.6A
e. PRESTRESSING TECHNIQUE	-	X	-	-	ART 3.6B
~~f. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY~~	~~X[a]~~	~~X[b]~~	~~-~~	~~-~~	~~ART 2.1C~~
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:	-				
a. GROUT SPACE	-	X	-	-	ART 3.2D, 3.2F
b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	X	-	-	SEC 1.16	ART 2.4, 3.4
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES	-	X	-	SEC. 1.16	ART. 3.2E, 3.4, 3.6A
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	-	X	-	-	ART 2.6B, 2.4G.1.b
e. CONSTRUCTION OF MORTAR JOINTS	-	X	-	-	ART 3.3B
4. VERIFY DURING CONSTRUCTION:					
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	-	X	-	-	ART 3.3F
b. SIZE, TYPE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	-	X	-	SEC 1.16.4.3, 1.17.1	-
c. WELDING OF REINFORCENT	X	-	-	SEC 2.1.7.7.2, 3.3.3.4(c), 8.3.3.4(b)	-
d. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 °F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90° F (32.2°C))	-	X	-	-	ART 1.8C, 1.8D
e. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X	-	-	-	ART 3.6B
f. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X	-	-	-	ART 3.5,3.6C
~~g. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS~~	~~X[a]~~	~~X[b]~~	~~-~~	~~-~~	~~ART 2.1C~~
5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	-	X	-	-	ART 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3,1.4B.3, 1.4B.4

~~(a) REQUIRED FOR THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.~~
~~(b) REQUIRED AFTER THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.~~

TABLE 1705.2
REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCED
1. MATERIAL VERIFICATION OF STRUCTURAL STEEL	-	X		
2. INSPECTION TASKS FOR STRUCTURAL STEEL WELDING:				
a. PRIOR TO WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360 TABLE N5.4-1)	SEE REFERENCED TABLE	SEE REFERENCED TABLE	AISC 360, SECTION N5.4 TABLE N5.4-1, AISC N5.4	
b. DURING WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360 N5.4-2)	SEE REFERENCED TABLE	SEE REFERENCED TABLE	AISC 360, SECTION N5.4 TABLE N5.4-2, AISC N5.4	
c. AFTER WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360 N5.4-3)	SEE REFERENCED TABLE	SEE REFERENCED TABLE	AISC 360, SECTION N5.4 TABLE N5.4-3, AISC N5.4	
d. NONDESTRUCTIVE TESTING (NDT) OF WELDED JOINTS:				
1) COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY III OR IV	-	X	AISC 360, SECTION N5.5, AISC N5.5	
2) COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY II	-	X		
3) THERMALLY CUT SURFACES OF ACCESS HOLES WHEN MATERIAL T>2"	-	X		
4) WELDED JOINTS SUBJECTED TO FATIGUE WHEN REQUIRED BY AISC 360, APPENDIX 3, TABLE A-3.1	-	X	AISC 360, APPENDIX 3	
5) MANUFACTURERS NDT REPORTS WHEN PERFORMED	-	X		
2. INSPECTION TASKS FOR STRUCTURAL STEEL BOLTING:				
a. PRIOR TO BOLTING (OBSERVE, OR PERFORM TASKS FOR EACH BOLTED CONNECTION, IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360, N5.6-1)	SEE REFERENCED TABLE	SEE REFERENCED TABLE	AISC 360, SECTION N5.6 TABLE N5.6-2, AISC N5.6	
b. DURING BOLTING (OBSERVE THE QA TASKS LISTED IN AISC 360, TABLE N5.6-2)	SEE REFERENCED TABLE	SEE REFERENCED TABLE	AISC 360, SECTION N5.6 TABLE N5.6-2, AISC N5.6	
1) PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCH MARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION.	-	X	AISC 360, SECTION M2.5	
2) PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION.	X	-		
3) SNUG TIGHT JOINTS.	-	X		
c. AFTER BOLTING (PERFORM TASKS FOR EACH BOLTED CONNECTION IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360, TABLE N5.6-3)	SEE REFERENCED TABLE	SEE REFERENCED TABLE	AISC 360, SECTION N5.6 TABLE N5.6-3, AISC N5.6	
3. REINFORCING STEEL:				
a. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.	-	X		
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCMENT.	X	-		
3) SHEAR REINFORCEMENT.	X	-		
4) OTHER REINFORCING STEEL.	-	X		
4. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:				
a. DETAILS SUCH AS BRACING AND STIFFENING.	-	X		
b. MEMBER LOCATIONS.	X	-		
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	-	X		
5. MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK:				
a. IDENTIFICATION MARKINGS	-	X		
b. MANUFACTURERS CERTIFIED TEST REPORTS	-	X		
6. CONNECTION OF COLD-FORMED DECK TO SUPPORTING STRUCTURE:				
a. WELDING	-	X		
b. OTHER FASTENERS				
1) VERIFY FASTENERS ARE IN CONFORMANCE WITH APPROVED SUBMITTAL	-	X	AISC 360, SECTION N6	
2) VERIFY FASTENER INSTALLATION IS IN CONFORMANCE WITH APPROVED SUBMITTAL AND MANUFACTURER'S RECOMMENDATIONS	-	X		

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INTEGRATED DESIGNS, INC.

BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

	BY	DATE:	NO.	REVISIONS	DATE
DESIGN	NPC	09.06.22	0	FOR CONSTRUCTION	12/20/24
DRAWN	NPC	09.06.22			
CHECKED	PDN				
APPROVED	PDN				

STRUCTURAL TESTING

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SITE PREP NOTES

1. REFER TO THE GEOTECHNICAL REPORT BY DRIESENGA & ASSOCIATES, INC. IN SPECIFICATION SECTION 02010-GEOTECHNICAL REPORT. THOSE PORTIONS OF THE GEOTECHNICAL REPORT INDICATED IN THESE "SITE PREPARATION NOTES" SHALL BE CONSIDERED REQUIRED WORK FOR THE PROJECT.

2. WITHIN THE BUILDING FOOTPRINT AND 5 FEET BEYOND, REMOVE ALL MATERIAL IDENTIFIED AS TOPSOIL AND EXISTING FILL BY THE GEOTECHNICAL REPORT(SEE SECTION 3.1 OF THE GEOTECHNICAL REPORT).

3. FOOTINGS ARE DESIGNED TO BEAR ON NATURAL MATERIALS/ENGINEERED FILL WITH A NET ALLOWABLE BEARING CAPACITY OF 3000 PSF AS DESCRIBED IN SECTION 3.2 OF THE GEOTECHNICAL REPORT(CONTRACTOR TO VERIFY BY QUALIFIED TESTING AGENCY IN THE FIELD). IF MATERIAL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE LOWERED OR ENLARGED AT THE DIRECTION OF THE ARCHITECT.

4. TO ACHIEVE PROPER GRADE FOR THE BUILDING, STRUCTURAL FILL SHALL BE PROVIDED AS DESCRIBED IN SECTION 3.1 OF THE GEOTECHNICAL REPORT.

5. THE FINAL 6" OF SOIL DIRECTLY BELOW FLOOR SLABS SHALL BE WELL GRADED MATERIAL COMPACTED TO 95% OF MODIFIED PROCTOR OR 98% OF MICHIGAN CONE MDD, AS DESCRIBED IN SECTION 3.1 OF THE GEOTECHNICAL REPORT.

6. DO NOT UNDERMINE THE EXISTING FOUNDATIONS WHEN EXCAVATING ADJACENT TO THE EXISTING BUILDING. SHOULD IT BECOME NECESSARY TO EXCAVATE TO AN ELEVATION BELOW THE EXISTING FOOTINGS, THE EXCAVATION CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING & DESIGNING TEMPORARY SHORING OF EXISTING FOOTINGS, OR OTHER MEANS OF SAFEGUARDING THE EXISTING FOUNDATIONS.

7. THE GEOTECHNICAL REPORT CONSTITUTES ALL INFORMATION AVAILABLE REGARDING SUBSURFACE CONDITIONS. THE CONTRACTOR SHALL READ AND BECOME FAMILIAR WITH THE GEOTECHNICAL REPORT, WITH PARTICULAR REGARD FOR THE IMPACT OF SUBSURFACE CONDITIONS ON THE CONSTRUCTION PROCESS. ANY MEASURES NECESSARY TO FACILITATE THE CONSTRUCTION PROCESS ITSELF, INCLUDING, BUT NOT LIMITED TO, TEMPORARY SHORING OF EXCAVATIONS AND TEMPORARY DEWATERING, SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE INCLUDED IN THE BID PRICE.

STEEL NOTES

1. EXISTING STRUCTURAL INFORMATION, LOCATIONS AND ELEVATIONS ARE BASED ON RECORD DRAWINGS AND/OR FIELD OBSERVATIONS. THE CONTRACTOR SHALL FIELD VERIFY THIS INFORMATION PRIOR TO BEGINNING CONSTRUCTION.

2. STEEL MEMBER DESIGN IS BASED UPON THE ALLOWABLE STRENGTH(LOAD & RESISTANCE FACTOR) DESIGN METHOD OF THE 13TH/ EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION.

3. STRUCTURAL STEEL WIDE FLANGE("W") SHAPES-ASTM A992(50 KSI STEEL) ALL OTHER STRUCTURAL STEEL PLATES & RODS_ASTM A36 STEEL PIPE WITH WALL THICKNESS GREATER THAN 5/8"_ASTM A53, GRADE B, ALL OTHER ROUND, SQUARE & RECTANGULAR HOLLOW STRUCTURAL SECTIONS_ASTM A500 GRADE B

4. BEAM CONNECTIONS SHALL BE DESIGNED TO SUPPORT HALF THE MAXIMUM TOTAL UNIFORM LOAD, FOR THE SPAN OF THE BEAM SHOWN ON THE PLANS. MAXIMUM TOTAL UNIFORM LOADS ARE PROVIDED IN TABLE 3-6 OF THE AISC MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION.

5. ALL STEEL TO STEEL CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER ASTM A325_N HEAVY HEX HEAD, TYPE 1, HIGH STRENGTH BOLTS OR E70XX ELECTRODES, U.N.O. ALL WELDING SHALL BE IN ACCORDANCE WITH LATEST AWS SPECIFICATIONS. MINIMUM WELD SIZE SHALL BE 3/16", U.N.O.

6. ALL BOLTS SHALL BE TIGHTENED TO "SNUG TIGHT"(PER 8.1 OF AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS), U.N.O. BOLTS DESIGNATED ON THE PLANS TO BE "FULLY TENSIONED" SHALL BE TIGHTENED TO THE REQUIRED LOAD BY THE "TURN OF THE NUT" METHOD.

7. ALL FIELD CONNECTIONS SHALL BE BOLTED, U.N.O.

8. MEMBER CONNECTIONS SHALL BE DETAILED FOR A MINIMUM FORCE OF NO LESS THAN 10 KIPS.

9. ALL JOISTS AND JOIST GIRDERS SHALL CONFORM TO SJI STANDARDS. EXTEND BOTTOM CHORDS TO CONNECT AT ALL COLUMNS. PROVIDE BRIDGING PER SJI STANDARDS. JOIST CAMBER FOR FLOOR JOISTS SHALL BE PER SJI SPECIFICATIONS. ROOF JOISTS SHALL BE CAMBERED NO MORE THAN REQUIRED TO OFFSET DEFELECTION DUE TO THE JOIST'S OWN WEIGHT.

10. METAL ROOF DECK SHALL BE ASTM A611, GRADES C, D OR E, AS APPLICABLE, FOR UNCOATED OR PAINTED DECK. FOR GALVANIZED ROOF DECK, CONFORM TO ASTM A653 STRUCTURAL QUALITY GRADE 33 OR HIGHER; WITH G60 GALVANIZED COATING CONFORMING TO ASTM A525. ALL ROOF DECK SHALL CONFORM TO SDI STANDARDS, AND BE PAINTED, EXCEPT WHERE SPRAYED ON FIREPROOFING IS TO BE APPLIED, WHERE DECK SHALL BE UNCOATED.

11. OPENINGS THROUGH ROOF DECK MAY OR MAY NOT BE SHOWN ON FRAMING PLANS. GENERAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND PROVIDE FOR OPENINGS AND FRAMES/REINFORCING AS FOLLOWS:
    A. OPENINGS UP TO 18"x18"-PROVIDE L2x2x3/16 ANGLES PERPENDICULAR TO DECK FLUTES, ON BOTH SIDES OF OPENING. EXTEND ANGLES A MINIMUM OF 2 FLUTES BEYOND EDGE OF OPENING. FASTEN ANGLES TO EACH FLUTE WITH #10 TEK SCREWS.
    B. OPENINGS LARGER THAN 18"x18"-PROVIDE A WELDED L4x4x1/4 FRAME SUPPORTED BY STEEL JOISTS OR BEAMS AS SHOWN IN "TYPICAL JOIST REINFORCING DETAIL" (SEE SHEET S4.0). REINFORCE STEEL JOISTS PER THE SAME DETAIL.

12. PROVIDE CONTINUOUS 12 GAUGE, 12"(MINIMUM) WIDE COVER PLATE WHERE ROOF DECK CHANGES DIRECTION. FASTEN TO DECK ON BOTH SIDES OF JOINT WITH #10 TEK SCREWS AT 12" O.C.

13. METAL FORM DECK SHALL BE ASTM A653 STRUCTURAL QUALITY GRADE 33 OR HIGHER; WITH G60 GALVANIZED COATING CONFORMING TO ASTM A525 OR PAINTED FINISH, AS INDICATED ON PLANS.

14. UNLESS NOTED OTHERWISE, METAL DECK SHALL BE FASTENED TO SUPPORT MEMBERS AT 18" O.C. PROVIDE TWO SIDELAP FASTENERS EVENLY SPACED BETWEEN SUPPORT MEMBERS. SUPPORT MEMBER FASTENERS SHALL BE #12 TEK SCREWS. SIDELAP FASTENERS SHALL BE #10 TEK SCREWS. METAL DECK SHALL NOT BE WELDED.

15. STEEL PAINTING_PROVIDE RED OXIDE SHOP COAT.

16. LOADS INDICATED ON PLANS ARE FULLY ADJUSTED CONNECTION DESIGN LOADS DO NOT INCREASE ALLOWABLE STRESSES FOR WIND, ETC.

17. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO FABRICATION. FABRICATOR SHALL PRODUCE ERECTION DRAWINGS WITHOUT PHOTOCOPYING OR OTHERWISE REPRODUCING THE ARCHITECT'S DESIGN PLANS.

MASONRY NOTES

1. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED, INDEPENDENT, INSPECTION FIRM TO PERFORM ON-SITE INSPECTIONS OF MASONRY AS REQUIRED BY TABLE 1704.5.1 OF THE 2003 MICHIGAN BUILDING CODE. THE INSPECTION FIRM SHALL PERFORM THE FOLLOWING INSPECTION TASKS FROM THAT TABLE: 1a, 1b, 1c, 2a, 2b, 2c, 3a, 3b, 3c, 3d AND 4a.

2. ALL CONCRETE MASONRY SHALL CONFORM TO ASTM C90, HOLLOW LOADBEARING BLOCK UNITS. LAY BLOCK IN RUNNING BOND. ADD "DRY-BLOCK" BLOCK ADMIXTURE TO THE MIX FOR ALL CMU TO BE USED IN THE EXTERIOR WYTHE FOR ALL WALLS.

3. ALL MORTAR FOR CONCRETE MASONRY SHALL CONFORM TO ASTM C270, TYPE S. JOINTS SHALL BE TOOLED CONCAVE. ADD "DRY-BLOCK" MORTAR ADMIXTURE TO THE MIX FOR ALL MORTAR TO BE USED IN THE EXTERIOR WYTHE FOR ALL WALLS.

4. ALL GROUT SHALL CONFORM TO ASTM C476. MORTAR SHALL NOT BE SUBSTITUTED FOR GROUT. CORES CONTAINING REBAR SHALL BE GROUTED SOLID.

5. REBAR LAPS:
    A. VERTICAL WALL REINFORCING-48 BAR DIAMENTERS
    B. BOND BEAMS-30 BAR DIAMETERS
    C. REBAR SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO FABRICATION.

6. HORIZONTAL JOINT REINFORCEMENT SHALL BE LADDER TYPE, GALVANIZED FINISH, COLD DRAWN STEEL WITH 9 GAUGE SIDE RODS AND CROSS TIES. INSTALL JOINT REINFORCEMENT AT 16" O.C., VERTICALLY.

7. SEE LINTEL SCHEDULE FOR STEEL LINTELS. PROVIDE BOND BEAM MASONRY LINTELS OVER ALL WALL OPENINGS NOT SCHEDULED FOR STEEL LINTELS. BOND BEAM LINTELS SHALL BE 8" HIGH WITH TWO #5 BOTTOM BARS, U.N.O.

8. IN SINGLE WYTHE AND MULTI-WYTHE SOLID WALLS, STEEL LINTELS SHALL BE CENTERED ON THE WALL. IN MULTI-WYTHE CAVITY WALLS, STEEL LINTELS SHALL BE CENTERED ON THE CONCRETE MASONRY WYTHE AND THE BOTTOM PLATE FOR VENEER SUPPORT SHALL BE OFFSET AS REQUIRED.

9. STEEL BOTTOM PLATES SHALL BE WELDED TO BEAM SECTIONS TO CARRY MASONRY. PLATE WIDTH SHALL BE THE NOMINAL WALL THICKNESS MINUS 1". PLATE THICKNESS SHALL BE 1/4" FOR PLATES 12" AND LESS WIDE, AND 5/16" FOR PLATES WIDER THAN 12".

10. ALL LINTELS SHALL BEAR 8" EACH END, UNLESS A BEARING PLATE IS CALLED FOR ON THE PLANS. FIELD WELD LINTELS TO BEARING PLATES.

11. GROUT MASONRY CORES DIRECTLY BELOW JOIST, BEAM AND LINTEL BEARINGS IN NEW AND EXISTING MASONRY A MINIMUM OF ONE COURSE, U.N.O.

12. PROVIDE VERTICAL CONTROL JOINTS AT THE FOLLOWING LOCATIONS:
    A. AS SHOWN ON THE PLANS
    B. IF CONTROL JOINTS ARE NOT SHOWN ON THE PLANS, LOCATE AS FOLLOWS:
        a. INTERSECTIONS OF PERPENDICULAR WALLS
        b. CHANGES IN WALL HEIGHT
        c. CHANGES IN WALL THICKNESS
        d. TRANSITION BETWEEN SLAB & FOOTING SUPPORTED WALLS
        e. SPACED NO MORE THAN 40 FEET OR TWICE THE WALL HEIGHT APART, WHICHEVER IS LESS

13. DO NOT PLACE VERTICAL CONTROL JOINTS THROUGH BOND BEAM MASONRY LINTELS, OR WITHIN 16" OF A BEAM OR JOIST BEARING POINT.

14. ALL "CAST_IN" ANCHOR RODS FOR STRUCTURAL STEEL COLUMNS SHALL BE ASTM F1554, GRADE 36.

15. ALL FOUNDATION ANCHORS FOR WOOD CONSTRCUTION SHALL BE ASTM A307 STEEL, U.N.O. GALVANIZE TO G60 COATING PER ASTM A153 FOR EXTERIOR AND HIGH HUMIDITY LOCATIONS; GALVANIZE TO G185 COATING PER ASTM A153 FOR ITEMS IN CONTACT WITH PRESERVATIVE TREATED WOOD; PLAIN FINISH FOR ALL OTHER LOCATIONS.

16. DRILLED IN CONCRETE ANCHORS(DCA'S) FOR GROUTED MASONRY SHALL BE AS FOLLOWS:
    A. HILTI HEAVY DUTY "KWIK BOLTS"
    B. RAMSET/REDHEAD "DYNABOLT SLEEVE"
    C. POWERS/RAWL "POWERBOLT"
    D. SIMPSON STRONG-TIE "WEDGE-ALL"
    E. APPROVED EQUAL
    F. PROVIDE STAINLESS STEEL OR GALVANIZED TO G185 COATING PER ASTM A153 FOR DCA'S IN CONTACT WITH PRESERVATIVE TREATED WOOD.

17. DRILLED IN CONCRETE ANCHORS(DCA'S) FOR HOLLOW MASONRY SHALL BE AS FOLLOWS:
    A. HILTI "SLEEVE ANCHORS"
    B. RAMSET/REDHEAD "DYNABOLT SLEEVE"
    C. POWERS/RAWL "LOK/BOLT"
    D. SIMPSON STRONG-TIE "SLEEVE-ALL"
    E. APPROVED EQUAL
    PROVIDE STAINLESS STEEL OR GALVANIZED TO G185 COATING PER ASTM A153 FOR DCA'S IN CONTACT WITH PRESERVATIVE TREATED WOOD.

18. NO FILL SHALL BE PLACED AGAINST CONCRETE MASONRY WALLS UNTIL MORTAR HAS REACHED 75% OF DESIGN STRENGTH OR UNTIL DIRECTED BY THE ARCHITECT.

19. ALL INTERSECTING MASONRY WALLS(LOAD AND NONLOADBEARING) SHALL BE ANCHORED OR BONDED TOGETHER BY ONE OF THE METHODS DESCRIBED IN THE 2006 MICHIGAN BUILDING CODE 2109.7.2.1 THROUGH 2109.7.2.5, U.N.O. MASONRY WALLS INTERSECTING A PERPENDICULAR WALL OF DIFFERENT MATERIAL SHALL BE ANCHORED TO THAT WALL BY MEANS OF STEEL CONNECTORS PER THE 2006 MICHIGAN BUILDING CODE 2109.7.2.2 OR 2109.7.2.5, U.N.O.

20. INTERIOR NONLOADBEARING MASONRY WALLS, WITH AN UNSUPPORTED LENGTH BETWEEN INTERSECTING PERPENDICULAR WALLS GREATER THAN 36 TIMES THE WALL THICKNESS, SHALL BE BRACED TO THE FLOOR OR ROOF STRUCTURE ABOVE AT INTERVALS NOT EXCEEDING 36 TIMES THE WALL THICKNESS, U.N.O.

21. ALL COLD WEATHER MASONRY WORK SHALL BE DONE IN ACCORDANCE WITH "IMIAWC: RECOMMENDED PRACTICES AND GUIDE SPECIFICATION FOR COLD WEATHER MASONRY CONSTRUCTION". THE "IMIAWC" PROVISIONS SHALL BE CONSIDERED TO BE MANDATORY.

CONCRETE NOTES

1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WITH MINIMUM LAPS OF 8".

2. PROVIDE CORNER BARS TO MATCH ALL HORIZONTAL REINFORCING IN WALLS AND FOOTINGS. ALL LAPS SHALL BE A MINIMUM OF 30 BAR DIAMETERS, U.N.O.

3. PROVIDE DOWELS BETWEEN ALL FOOTINGS, WALLS, AND PIERS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING. ALL LAPS SHALL BE A MINIMUM OF 30 BAR DIAMETERS, U.N.O.

4. ALL "CAST_IN" ANCHOR RODS FOR STRUCTURAL STEEL COLUMNS SHALL BE ASTM A307.

5. ALL FOUNDATION ANCHORS FOR WOOD CONSTRCUTION SHALL BE ASTM A307 STEEL, U.N.O. GALVANIZE TO G60 COATING PER ASTM A153 FOR EXTERIOR AND HIGH HUMIDITY LOCATIONS; GALVANIZE TO G185 COATING PER ASTM A153 FOR ITEMS IN CONTACT WITH PRESERVATIVE TREATED WOOD; PLAIN FINISH FOR ALL OTHER LOCATIONS.

6. ALL CONCRETE SHALL ATTAIN THE FOLLOWING 28 DAY COMPRESSIVE STRENGTHS:
    A. FOOTINGS, WALLS, PIERS........................3000 PSI
    B. SLABS ON GRADE OR METAL DECK......4000 PSI

7. PROVIDE AIR ENTRAINING FOR ALL CONCRETE EXCEPT INTERIOR SLABS AND INTERIOR FOOTINGS.

8. CONCRETE SHALL CONFORM TO THE FOLLOWING:
    A. ACI 301: SPECIFICATIONS FOR STRUCTURAL CONCRETE
    B. ACI 305: HOT WEATHER CONCRETING
    C. ACI 306: COLD WEATHER CONCRETING

9. NO FILL SHALL BE PLACED AGAINST CONCRETE WALLS UNTIL CONCRETE HAS REACHED 75% OF DESIGN STRENGTH OR UNTIL DIRECTED BY THE ARCHITECT.

10. DRILLED IN CONCRETE ANCHORS(DCA'S) SHALL BE AS FOLLOWS:
    A. HILTI HEAVY DUTY "KWIK BOLTS"
    B. RAMSET/REDHEAD "DYNABOLT SLEEVE"
    C. POWERS/RAWL "POWERBOLT"
    D. SIMPSON STRONG-TIE "WEDGE-ALL"
    E. APPROVED EQUAL
    PROVIDE STAINLESS STEEL OR GALVANIZED TO G185 COATING PER ASTM A153 FOR DCA'S IN CONTACT WITH PRESERVATIVE TREATED WOOD.

11. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4".

12. ELECTRICAL CONDUITS, PIPES, DRAINS, ETC. SHALL BE IN PLACE BEFORE CONCRETE IS PLACED.

13. FIBER REINFORCING FOR SLABS ON GRADE SHALL BE SYNTHETIC POLYPROPYLENE FIBERS ENGINEERED AND DESIGNED FOR USE IN CONCRETE SLABS, COMPLYING WITH ASTM C 1116, TYPE III, ½ TO 1-1/2 INCHES LONG.

14. REBAR SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO FABRICATION. ALL SHOP DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI DETAILING MANUAL.

STRUCTURAL LOADS

1. DESIGN LOADS_IN ACCORDANCE WITH THE 2015 MICHIGAN BUILDING CODE & SEI/ASCE 7-10.

2. SNOW LOAD INFORMATION
    A. Pg=20 PSF
    B. Is=1.1(CATEGORY III)
    C. Ce=1.0(EXPOSURE B)
    D. Ct=1.1
    E. Pf=15.4 PSF=(20 PSF)(0.7)(1.0)(1.0)(1.1)
    F. ROOF DEAD LOAD=20 PSF
    G. ROOF SNOW LOAD=15.4 PSF UNIFORM
    ALSO SEE DRIFT LOAD AND UNBALANCED SNOW LOAD DIAGRAMS ON PLANS
    DESIGN STRUCTURAL ELEMENTS FOR SNOW LOAD CASE

3. WIND LOAD INFORMATION
    A. V_{ULT}=120 MPH Vasd= 93 MPH
    B. Iw=1.0(CATEGORY III)
    C. EXPOSURE C
    D. GCpi=+0.18 & -0.18
    E. COMPONENTS & CLADDING DESIGN WIND PRESSURE=40 PSF
    F. BASIC WIND PRESSURE = 28 PSF

4. SEISMIC LOAD INFORMATION
    A. OCCUPANCY CATERGORY III(Ie=1.25)
    B. SPECTRUAL RESPONSE ACCELERATIONS
        a. Ss=0.089g
        b. S1=0.045g
    C. SITE CLASS D
    D. SPECTRAL RESPONSE COEFFICIENTS
        a. Sds=0.095g
        b. Sd1=0.072g
    E. SEISMIC DESIGN CATEGORY B
    F. BASIC SEISMIC FORCE RESISTING SYSTEM=LIGHT FRAME WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE OR STEEL SHEETS.
    G. DESIGN BASE SHEAR=3,488 lbs. (PER 2015 MBC 1613.1)
    H. SEISMIC RESPONSE COEFFICIENT Cs=0.018
    I. RESPONSE MODIFICATION FACTOR R=6.5
    ANALYSIS PROCEDURE USED-EQUIVALENT LATERAL FORCE PROCEDURE PER ASCE 7-10 SECTION 12.8.

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ARCHITECTURE
ENGINEERING
CONSULTING

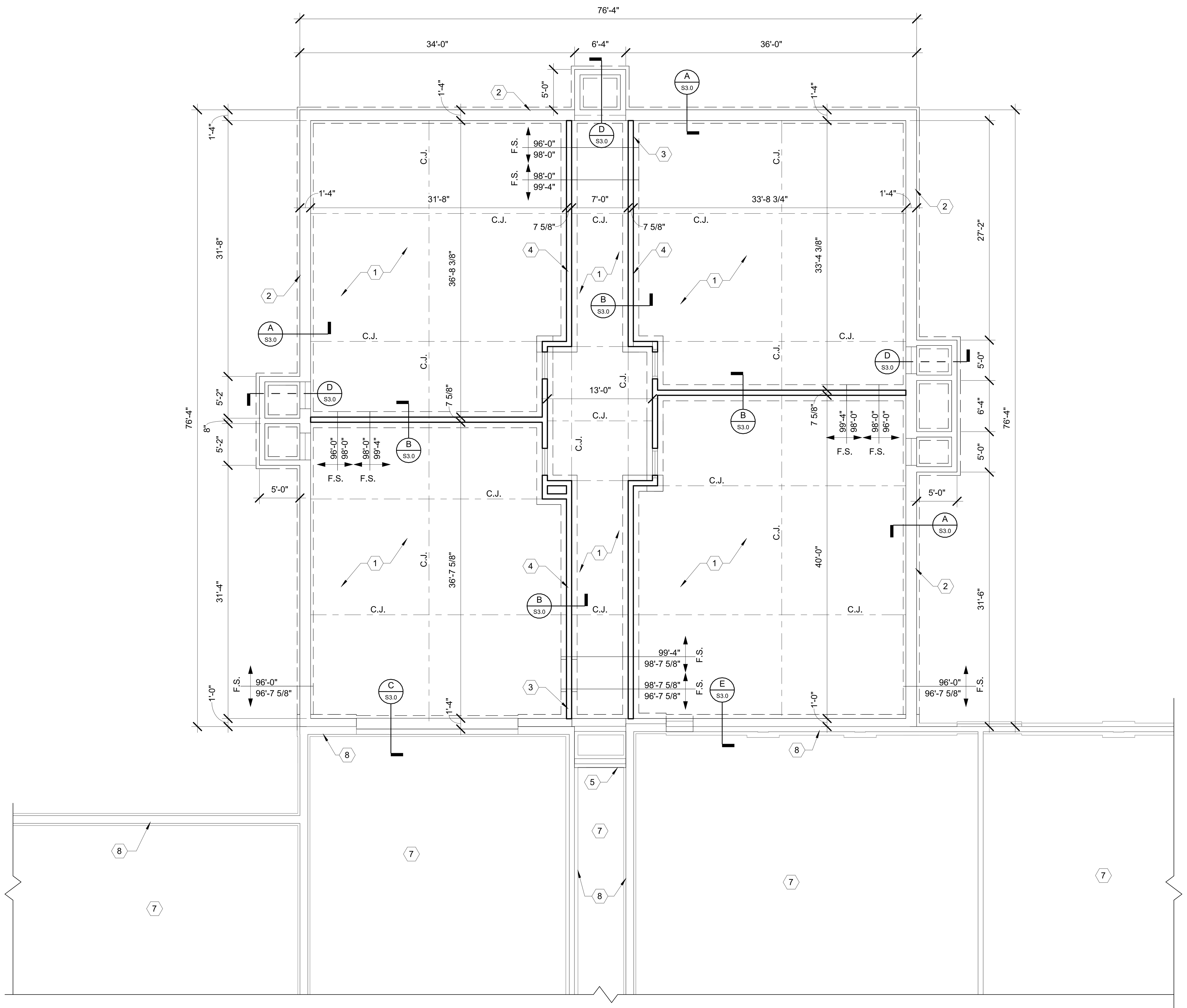
IDI
INTEGRATED DESIGNS, INC.

BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD. BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12/20/24

	BY	DATE:
DESIGN	NPC	
DRAWN	NPC	
CHECKED	PDN	
APPROVED	PDN	

STRUCTURAL NOTES



FOUNDATION PLAN

1/8" = 1'-0"

T/SLAB = 100'-0", U.N.O. =599.78' CIVIL, SEE CIVIL PLANS
T/FTG. = 96'-0", U.N.O.

N

KEYNOTES

1. 4" CONCRETE SLAB W/ W.W.F., 6x6-W1.4xW1.4 IN TOP 1/3 OF SLAB OVER 6 MIL VAPOR BARRIER ON 10" COMPACTED CLASS II FILL.
2. 16" REINF. CONCRETE FOUNDATION WALL W/ 12"x24" CONT. FOOTING, RE: DTLS.
3. 8" REINF. CONCRETE FOUNDATION WALL W/ 12"x24" CONT. FOOTING, RE: DTLS.
4. 8" CMU WALL W/ 12"x24" CONT, FOOTING, RE: DTLS.
5. DEMO CONCRETE SLAB UP TO NEAREST FLOOR JOINT FOR INSTALLATION OF NEW FLOOR SLAB. COORD. W/ ARCH. DWGS. PROVIDE #4x12" DOWELS FROM NEW SLAB INTO EXIST. SLAB @ 24" O.C. GREASE DOWEL END IN NEW POUR.
6. THRU WALL FOUNDATION WALL SLEEVE FOR PLUMBING PENETRATION, COORD. SIZE AND LOCATION W/ PLUMBING PLANS.
7. EXIST. CONC. SLAB, VERIFY.
8. EXIST. CONCRETE FOUNDATION SYSTEM, VERIFY.
9. DEMO EXIST. FOUNDATION WALL DOWN 8" AND POUR NEW SLAB OVER TOP.

LEGEND

F.S.	FOOTING STEP
T/	"TOP OF"
EXIST.	EXISTING
F-x	FOOTING MARK
T.S.	THICKENED SLAB
TYP.	TYPICAL
C.J.	CONTROL/CONSTRUCTION JOINT
SIM.	SIMILAR
T/S	TOP OF STEEL
F.V.	FIELD VERIFY
N.T.S.	NOT TO SCALE
U.N.O.	UNLESS NOTED OTHERWISE

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NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12/20/24

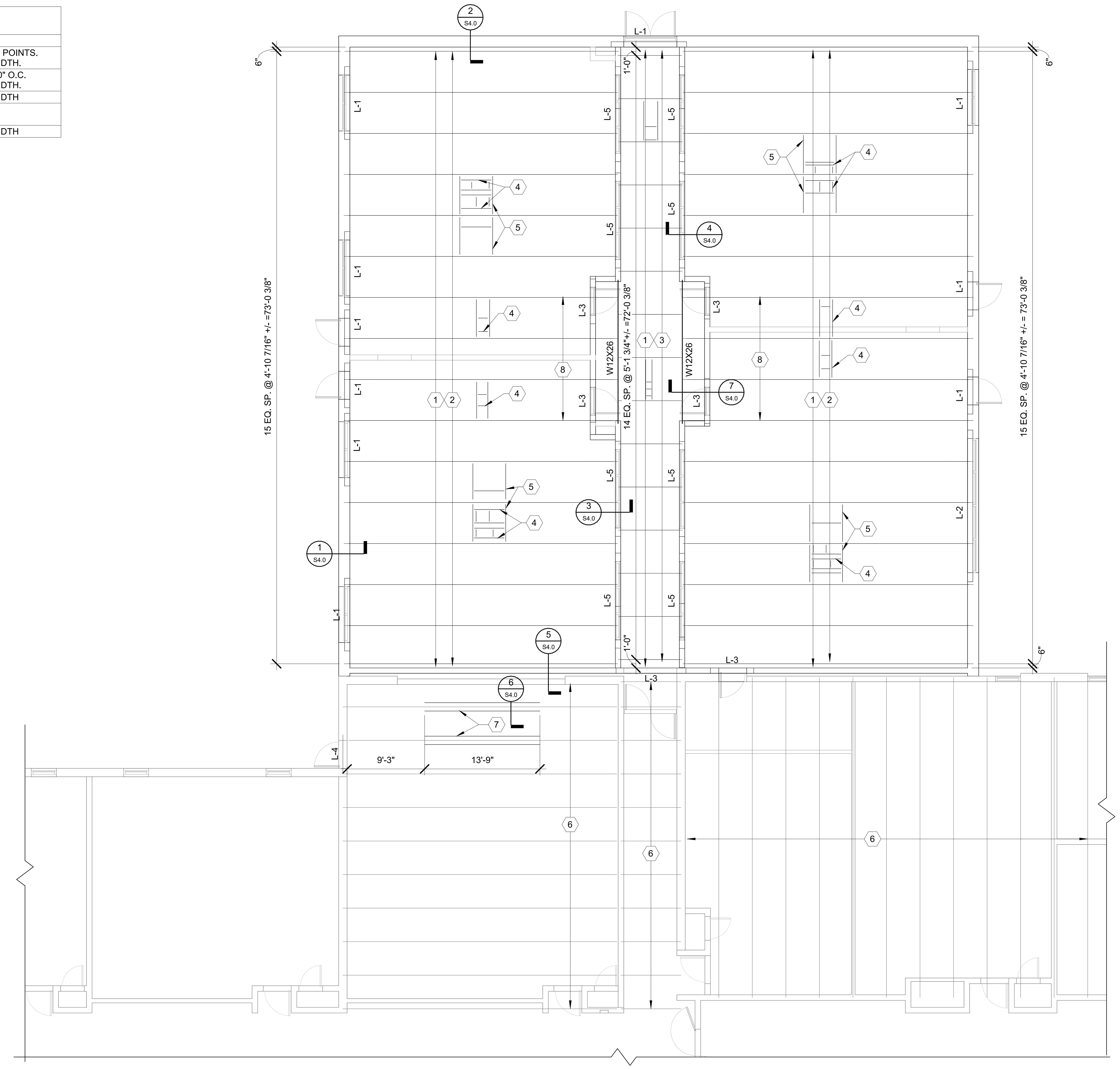
	BY
DESIGN	Designer
DRAWN	Author
CHECKED	Checker
APPROVED	Approver

FOUNDATION PLAN

S1.0

LINTEL SCHEDULE

Type Mark	SECTION	BEARING	REMARKS
L-1	16" MASONRY LINTEL W/ (4) #5 & L8x5x7/16" LEDGER ANGLE	12"	BOLT ANGLE TO MASONRY LINTEL @ 1/3 POINTS. CONTINUE REBAR 12" PAST OPENING WIDTH.
L-2	32" MASONRY LINTEL W/ (6) #7 & L8x4x7/16" LEDGER ANGLE	12"	BOLT ANGLE TO MASONRY LINTEL @ 8'-0" O.C. CONTINUE REBAR 12" PAST OPENING WIDTH.
L-3	8" MASONRY LINTEL W/ (2) #6	12"	CONTINUE REBAR 12" PAST OPENING WIDTH
L-4	W8X10 + 1/4"x 11" BOTTOM PLATE	8"	
L-5	16" MASONRY LINTEL W/ (4) #5	12"	CONTINUE REBAR 12" PAST OPENING WIDTH



FRAMING PLAN

1/8" = 1'-0"

T/JOIST = VARIES, SEE DTLS.
T/STL WEST CORRIDOR = 111'-1 1/4" +/-
T/STL EAST CORRIDOR = 111'-3"

N

KEYNOTES

1. 1 1/2", 22 GAGE, WIDE RIB, PAINTED STEEL ROOF DECK, MINIMUM 3 SPANS CONTINUOUS. FASTEN TO SUPPORT MEMBERS IN A 36/4 PATTERN WITH #12 TEK SCREWS. PROVIDE (2) EVENLY SPACED #10 TECK SCREW SIDE LAP FASTENERS.
2. 20LH03 STEEL JOIST W/ 3 ROWS WELDED HORIZONTAL BRIDGING.
3. 10K1 STEEL JOIST W/ 1 ROW WELDED HORIZONTAL BRIDGING. PROVIDE 5" BEARING SEAT EA. END.
4. ANGLE FRAME AT MECH. ROOF TOP OPENING PER "STEEL NOTES" #11. SEE TYPICAL JOIST REINF. DETAIL.
5. L4x4x1/4" ANGLE FRAME AT MECH. ROOF TOP UNIT, COORD. & VERIFY LOCATION W/ MECH. DWGS. AND MECH. CONTRACTOR. SEE TYPICAL JOIST REINF. DETAIL.
6. EXISTING ROOF FRAMING.
7. REINF. EXISTING ROOF JOIST W/ (4) #5 REBAR, SEE DETAIL.
8. JOIST TO HAVE TOP CHORD JOIST EXTENSION TYPE R1 TO STEEL BEAM, RE: DTL.

LEGEND

T/	"TOP OF"
EXIST.	EXISTING
F-x	FOOTING MARK
TYP.	TYPICAL
STEEL JOIST	
BEAM/LENTEL	
L-x	LINTEL MARK
HORIZONTAL BRIDGING	
CROSS BRIDGING	
J.B.	JOIST BEARING ELEVATION
O.H.	OPPOSITE HAND
SIM.	SIMILAR
T/S	TOP OF STEEL
F.V.	FIELD VERIFY
N.T.S.	NOT TO SCALE
U.N.O.	UNLESS NOTED OTHERWISE
C.J.	MASONRY CONTROL JOINT

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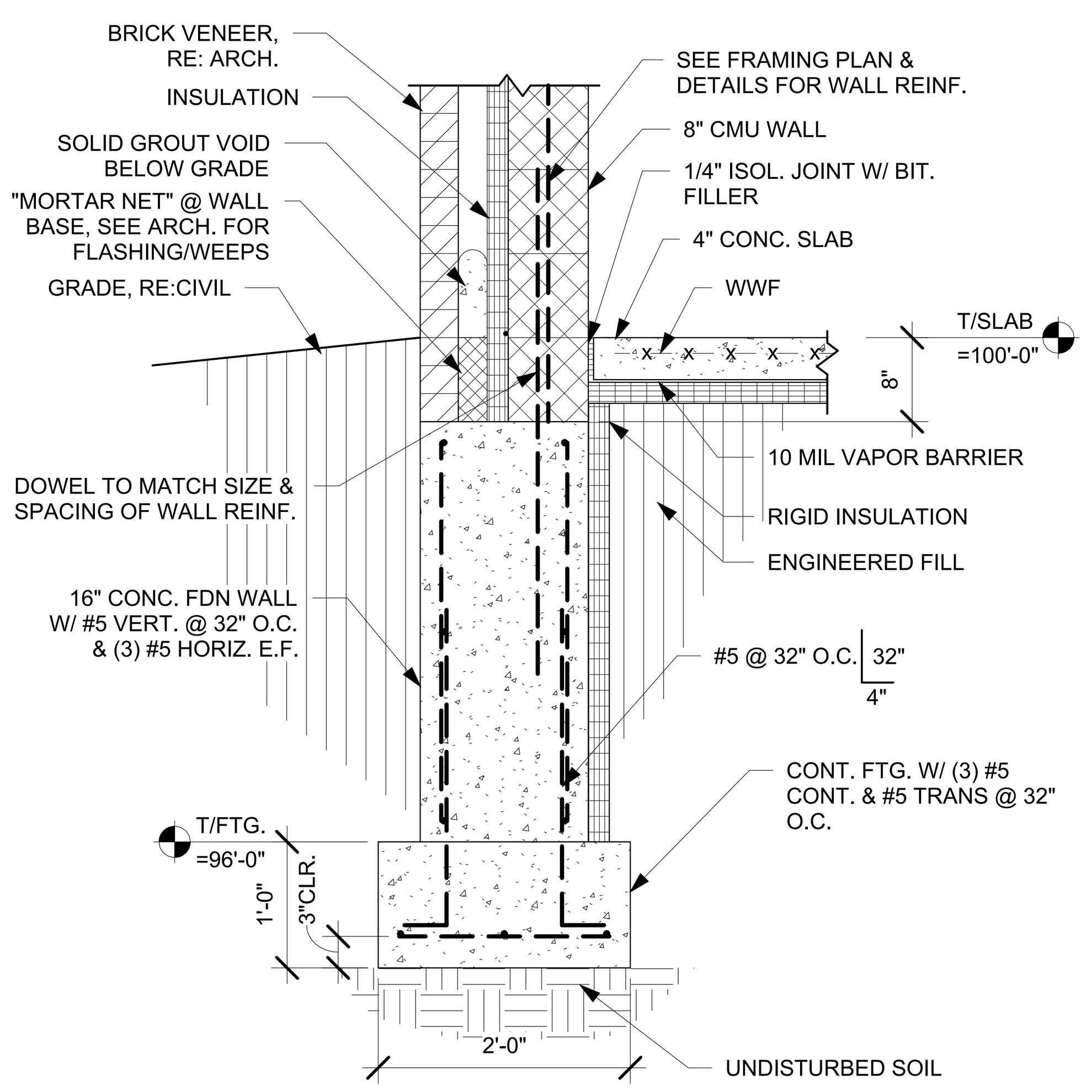
	BY
DESIGN	NPC
DRAWN	NPC
CHECKED	NPC
APPROVED	NPC

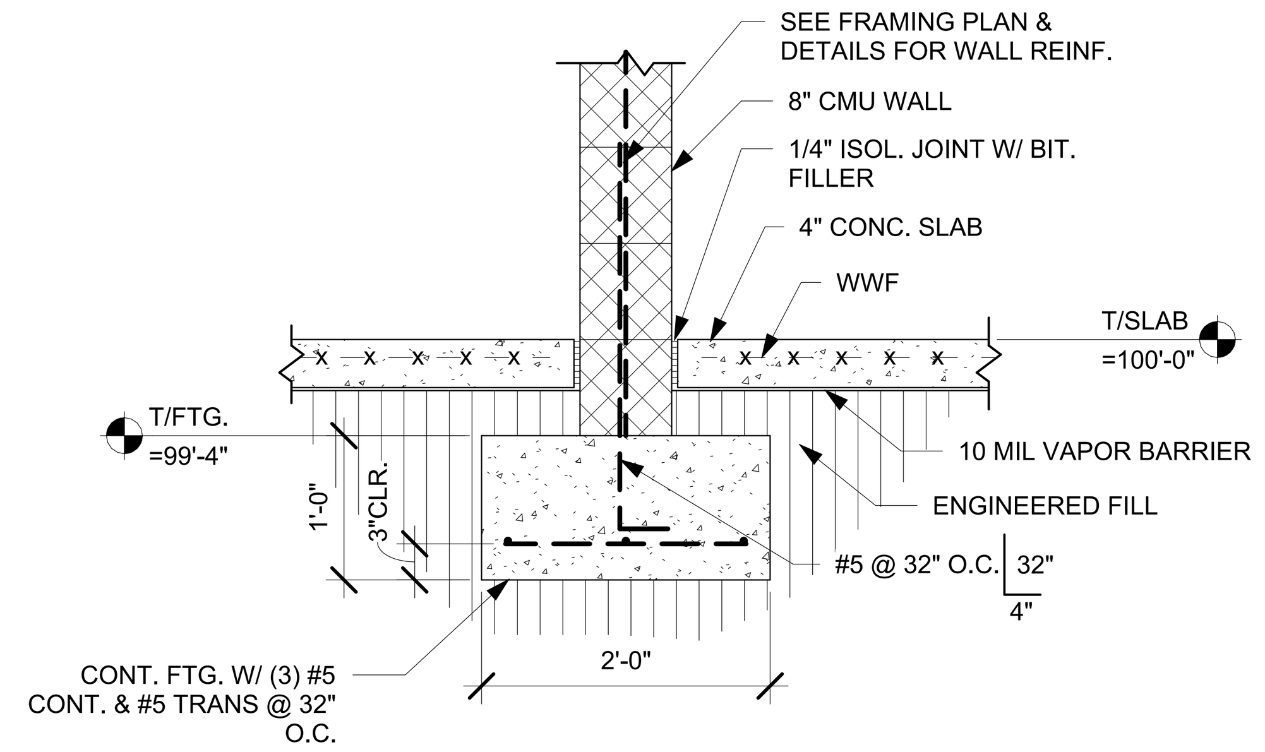
NO.	REVISIONS	DATE
A	SCHEMATIC DESIGN	9/30/24
0	FOR CONSTRUCTION	12/20/24

FRAMING PLAN

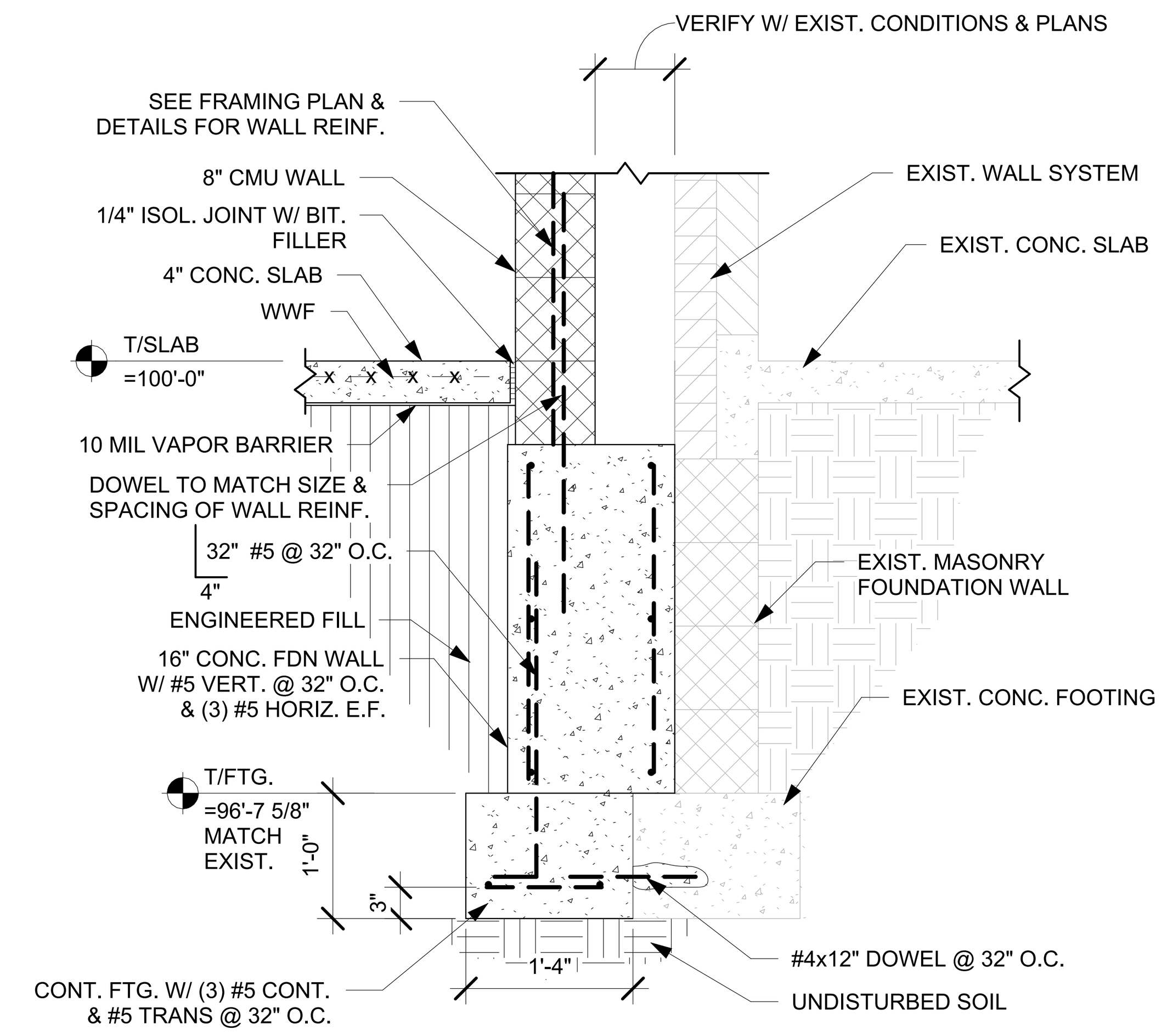
S2.0



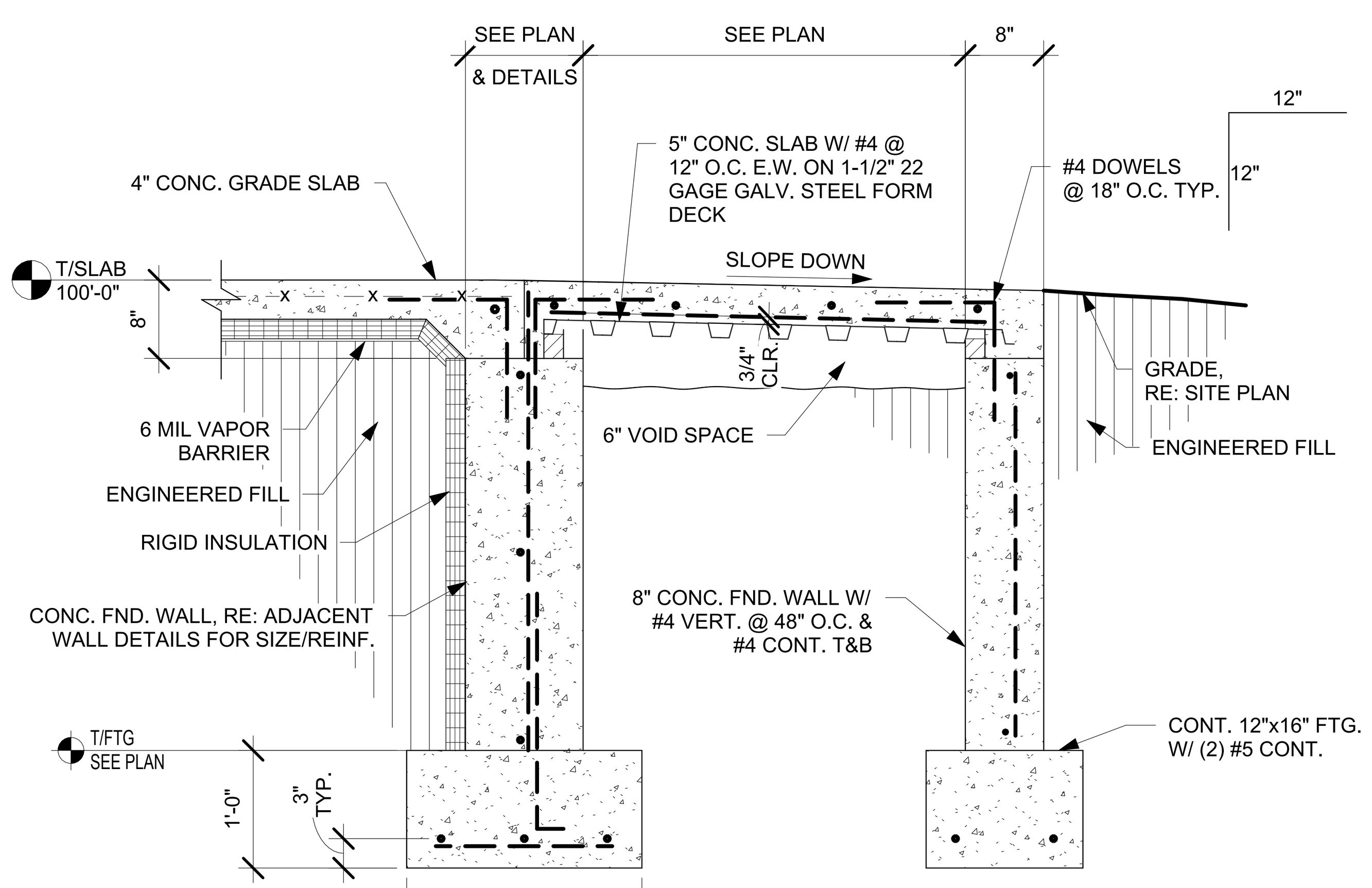
DETAIL A
3/4" = 1'-0"
S1.0



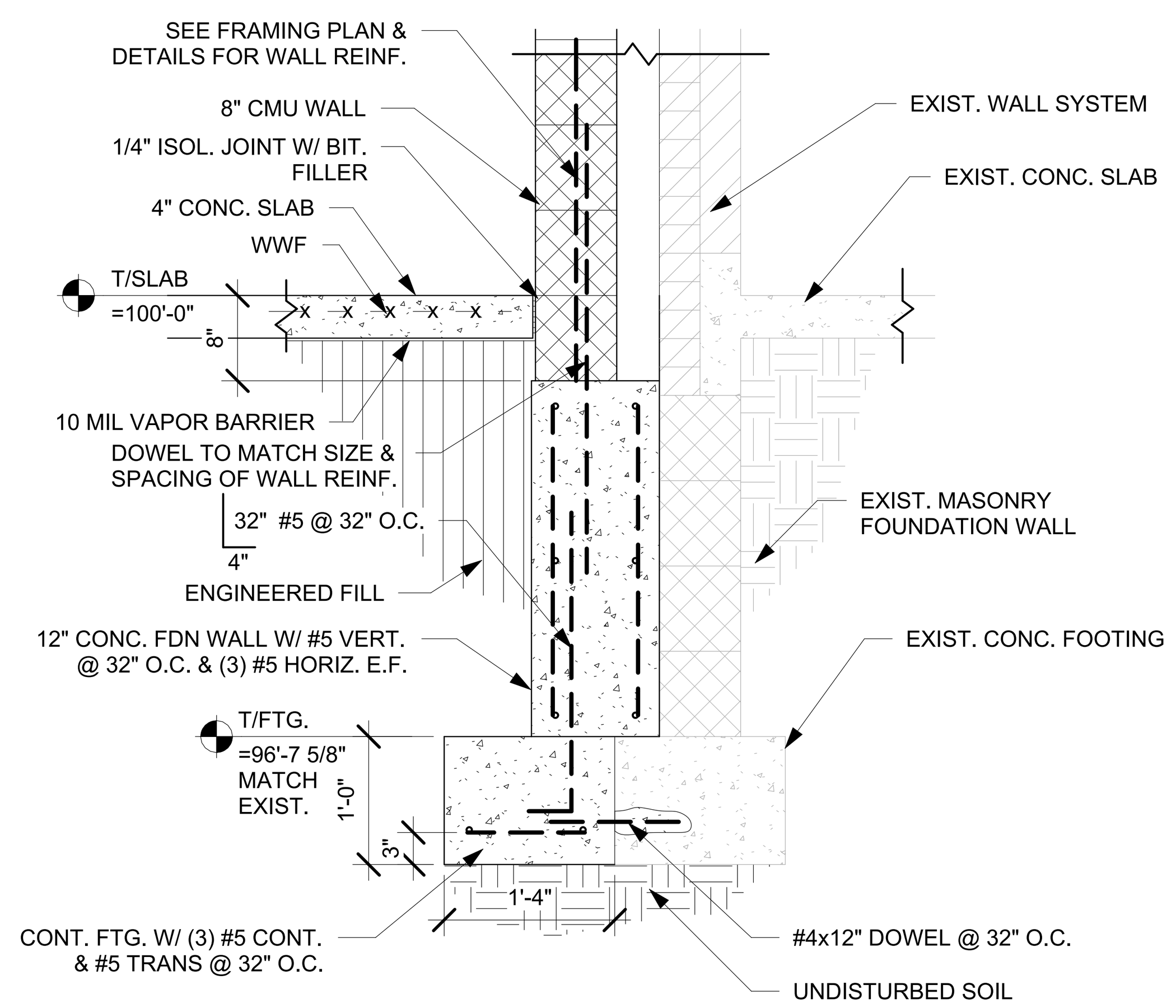
DETAIL B
3/4" = 1'-0"
S1.0



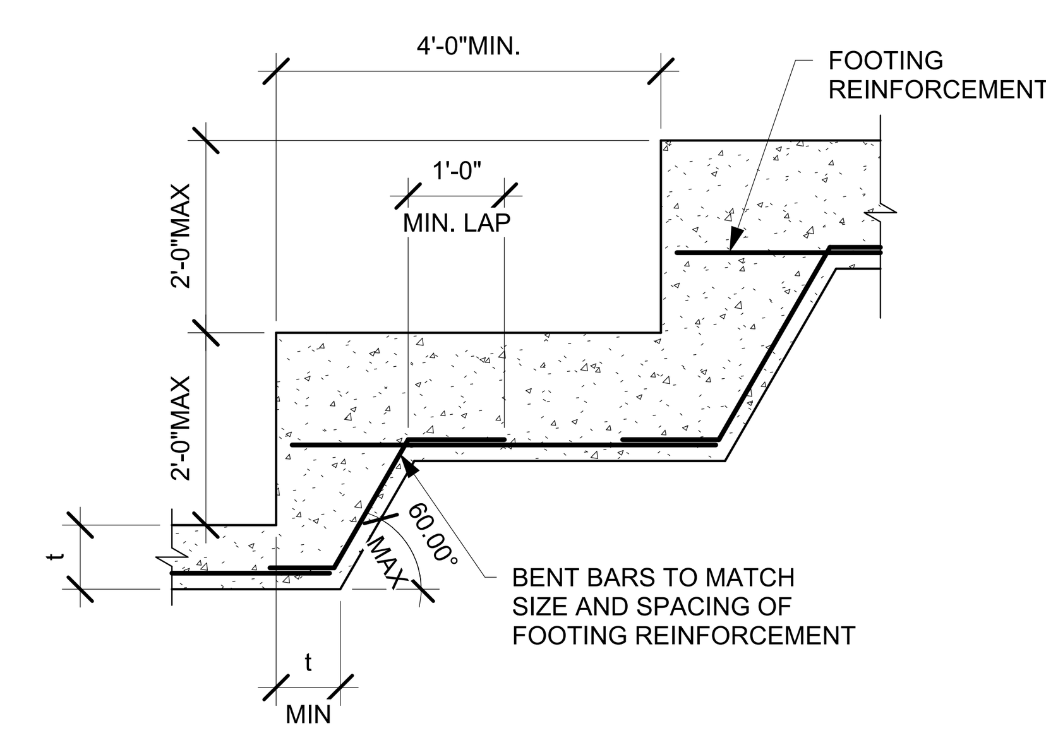
DETAIL C
3/4" = 1'-0"
S1.0



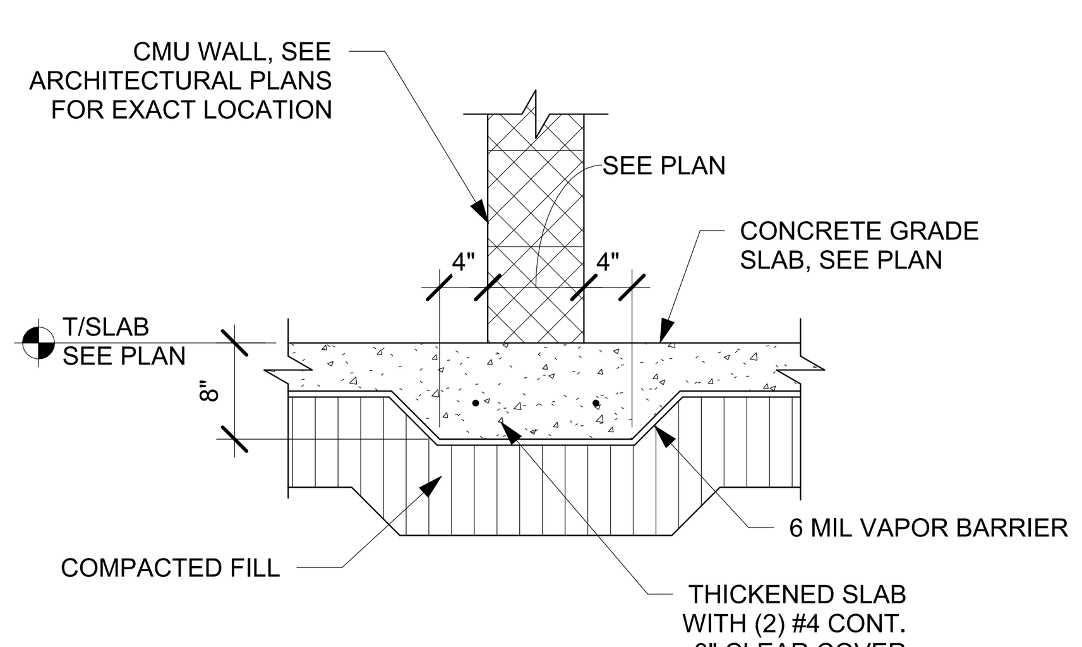
DETAIL D
3/4" = 1'-0"
S1.0



DETAIL E
3/4" = 1'-0"
S1.0



FOOTING STEP DETAIL
1/2" = 1'-0"



THICKENED SLAB
3/4" = 1'-0"

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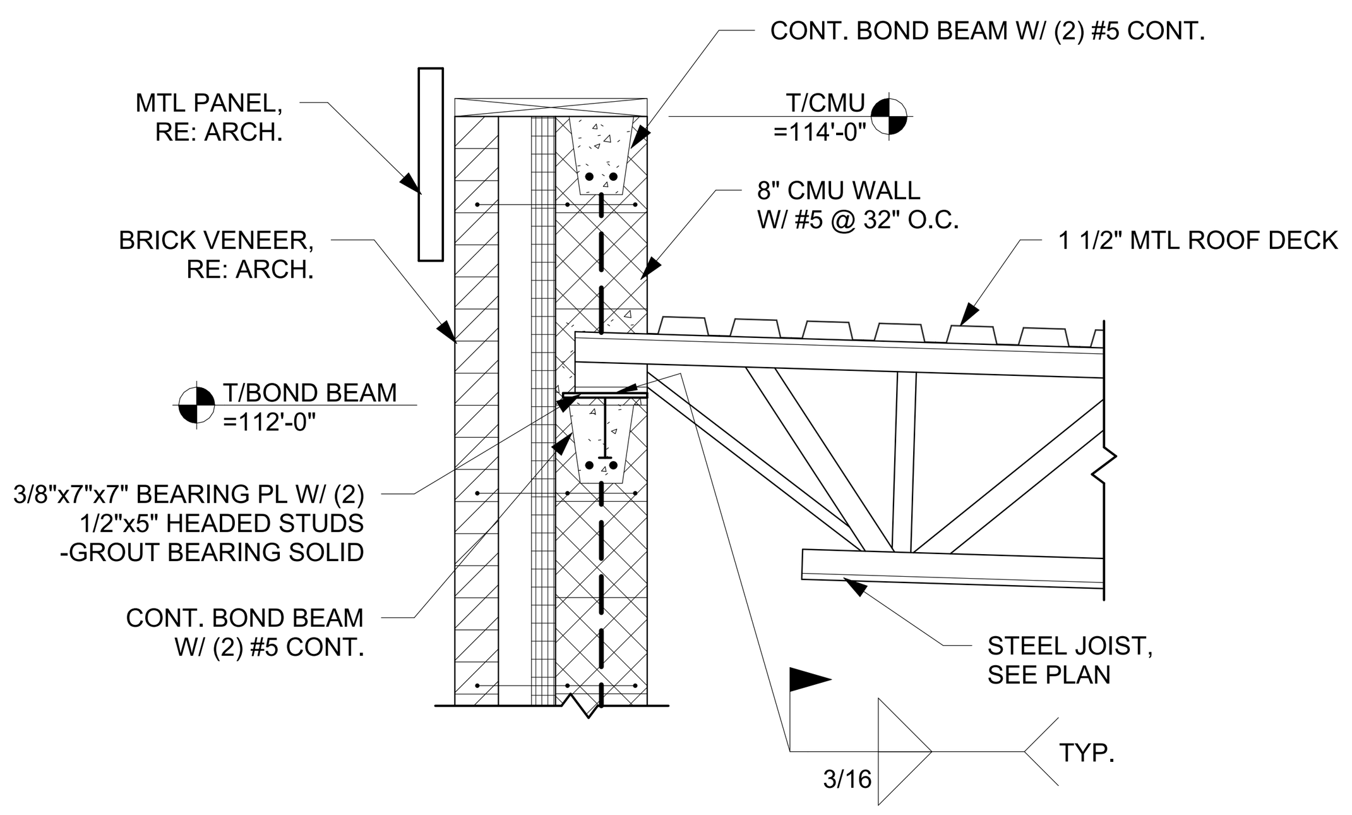
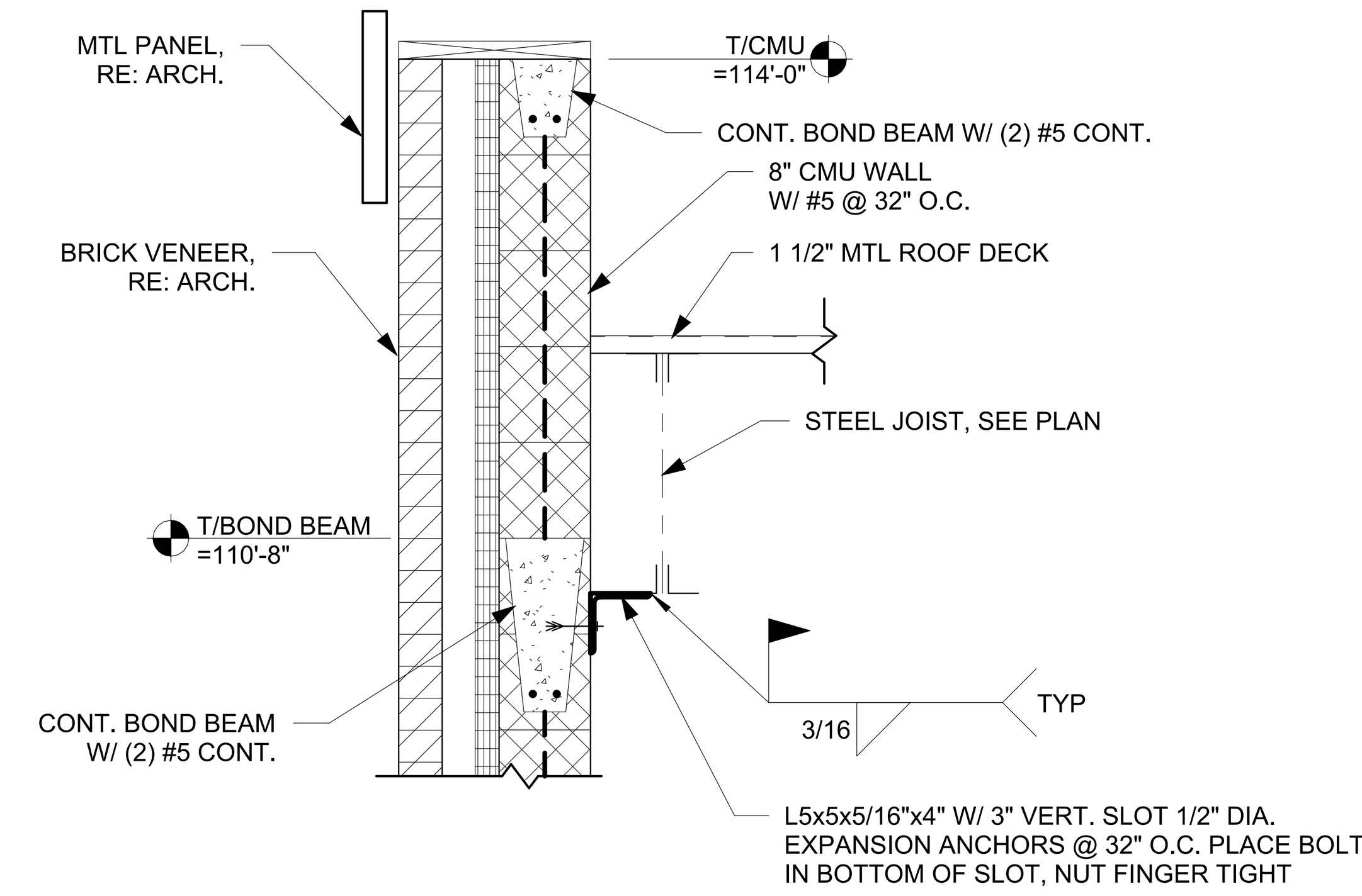
	BY
DESIGN	Designer
DRAWN	Author
CHECKED	Checker
APPROVED	Approver

FOUNDATION DETAILS

S3.0



DETAIL 1 S2.0
3/4" = 1'-0"



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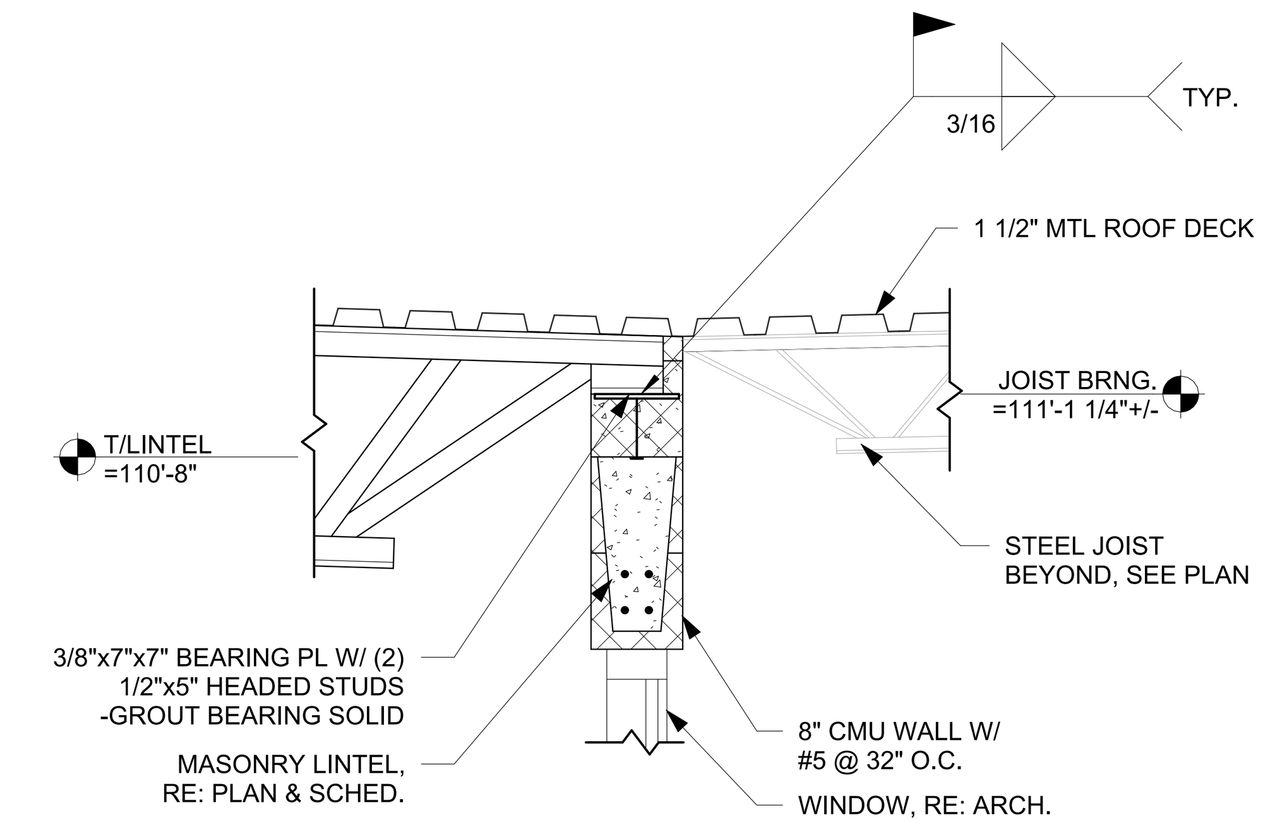
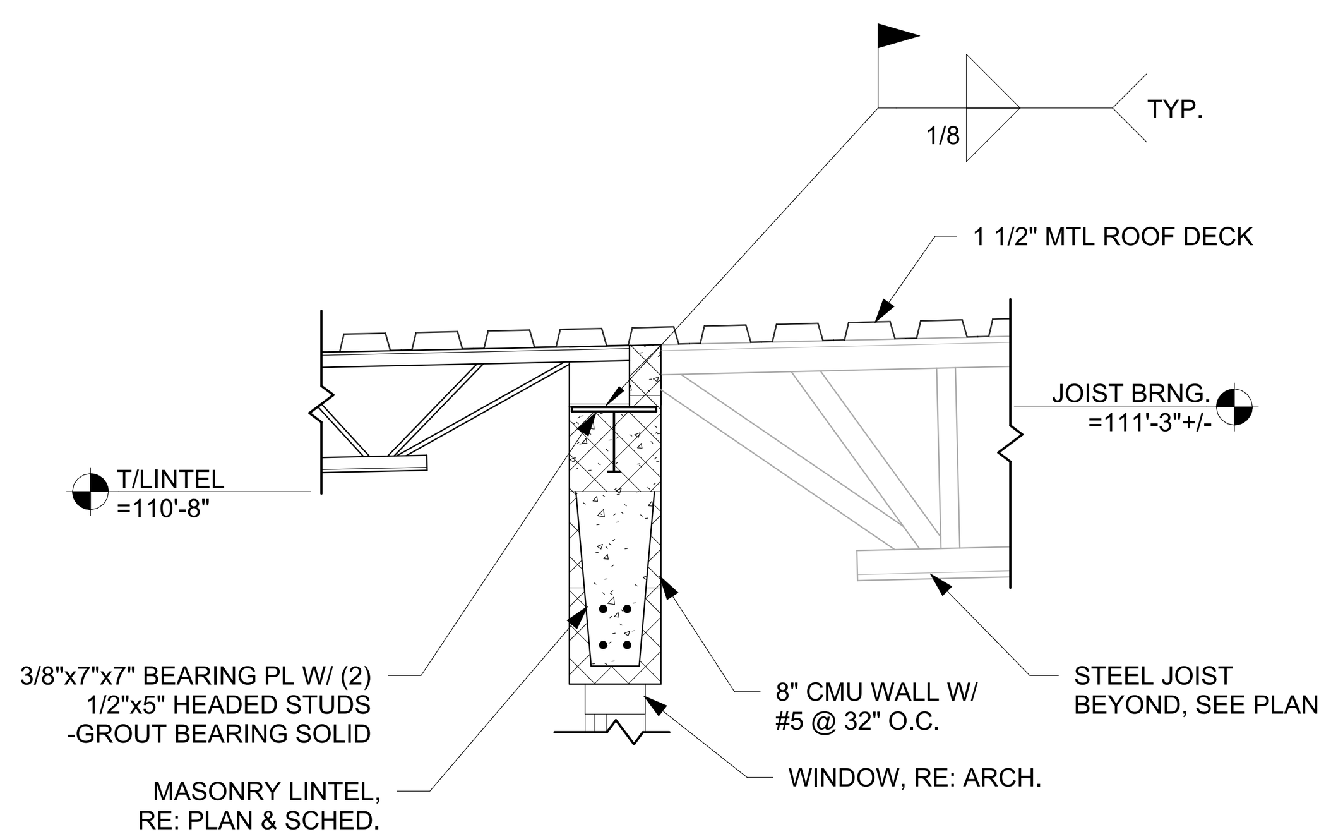
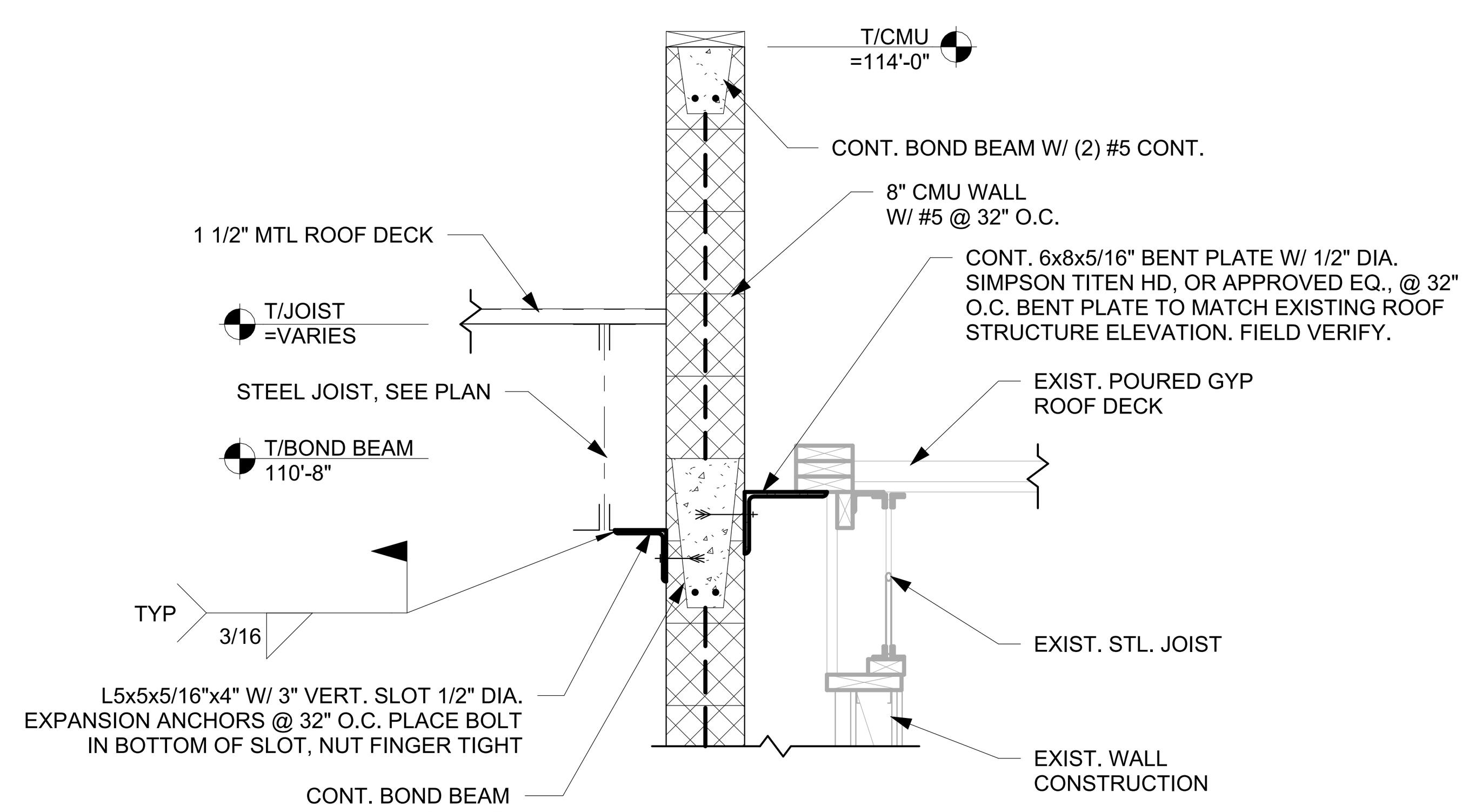


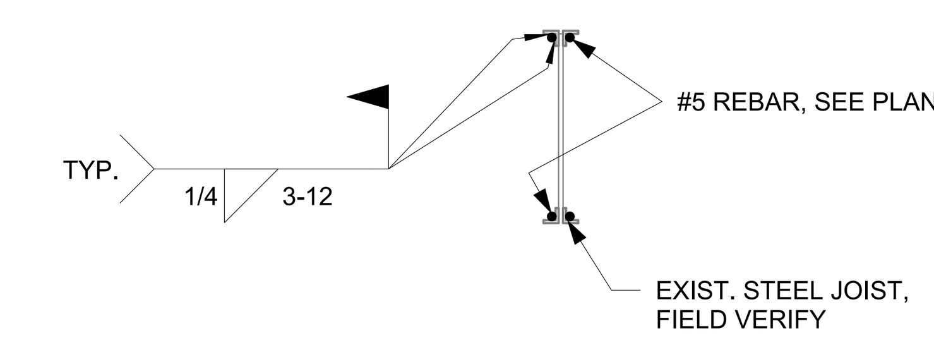
DETAIL 3 S2.0
3/4" = 1'-0"



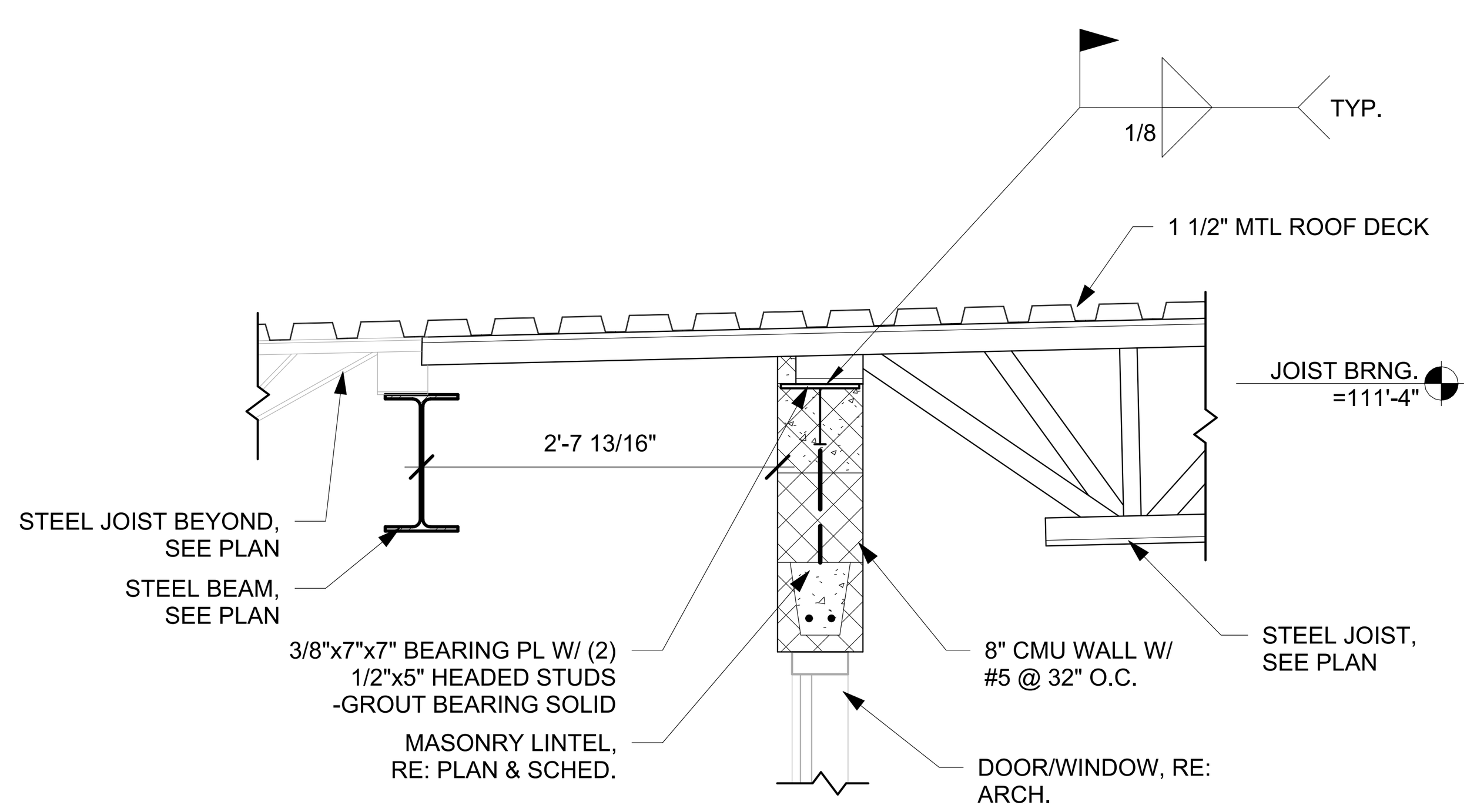
DETAIL 4 S2.0
3/4" = 1'-0"



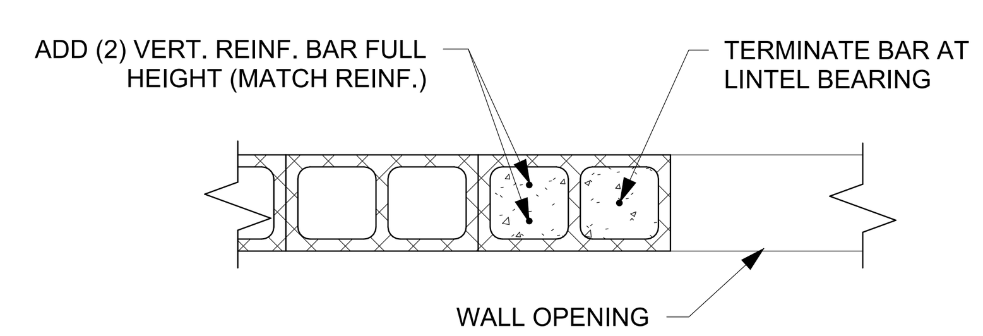
DETAIL 5 S2.0
3/4" = 1'-0"



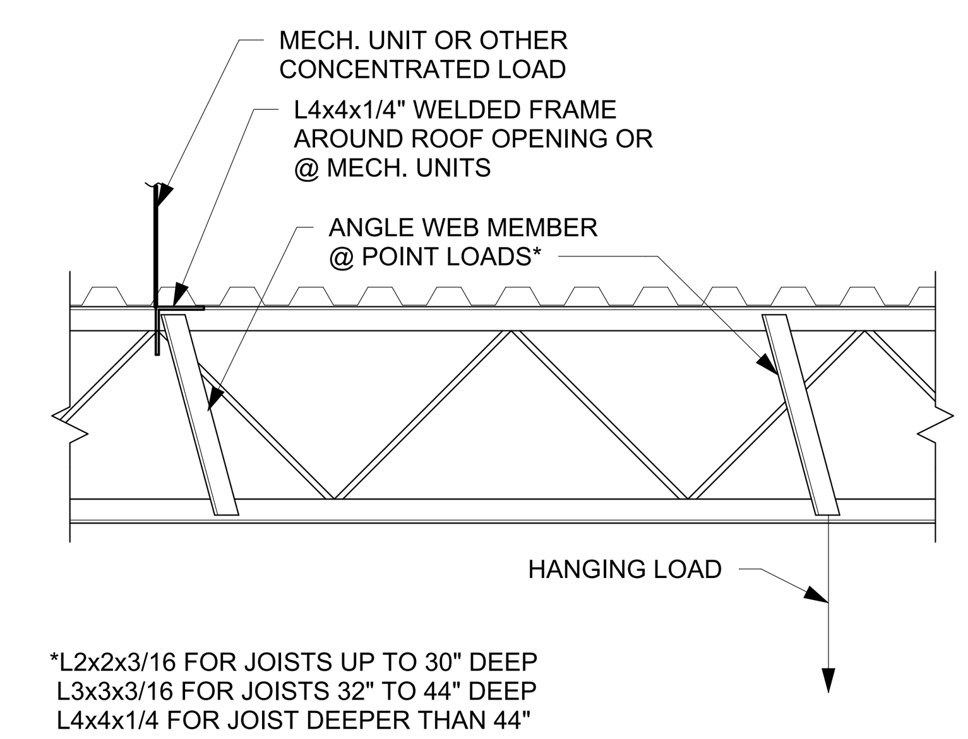
DETAIL 6 S2.0
3/4" = 1'-0"



DETAIL 7 S2.0
3/4" = 1'-0"

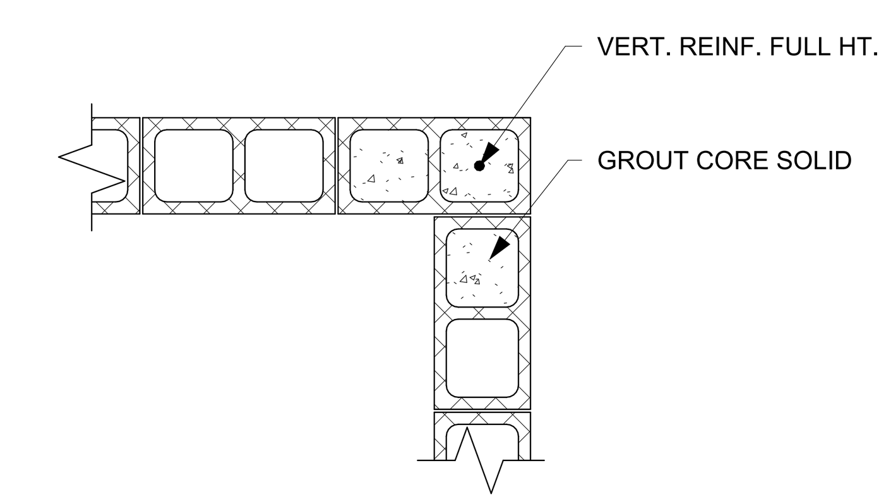


TYP. CMU WALL OPENING REINF.
3/4" = 1'-0"



*L2x2x3/16 FOR JOISTS UP TO 30" DEEP
L3x3x3/16 FOR JOISTS 32" TO 44" DEEP
L4x4x1/4 FOR JOIST DEEPER THAN 44"

TYPICAL JOIST REINFORCING
3/4" = 1'-0"



TYPICAL WALL CORNER REINF.
3/4" = 1'-0"

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NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12/20/24

	BY
DESIGN	Designer
DRAWN	Author
CHECKED	Checker
APPROVED	Approver

FRAMING DETAILS

S4.0

CODE SUMMARY

CODES			
	2015 MICHIGAN BUILDING CODE		FIRE MARSHALL RULES
	STATE OF MICHIGAN BARRIER FREE ACCESS DESIGN RULES (2009 ICC/ANSI A117.1)		MICHIGAN DEPARTMENT OF LABOR CONSTRUCTION CODE COMMISION GENERAL RULES
	NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)		2021 MICHIGAN MECHANICAL CODE
	2021 MICHIGAN PLUMBING CODE		MICHIGAN UNIFORM ENERGY CODE
	NATIONAL ELECTRICAL SAFETY CODE		2023 MICHIGAN ELECTRICAL CODE
CODES FIRE RESISTIVE ANALYSIS			
	CLASSIFICATIONS:		CONSTRUCTION PROTECTION:
1	STORIES	0	INTERIOR NON-BEARING PARTITIONS
E	OCCUPANCY TYPE	0	STRUCTRAL FRAME
IIB	CONSTRUCTION TYPE	0	EXTERIOR NON-BEARING WALLS
NO	SPRINKLER SYSTEM	0	ROOF
YES	FIRE PROTECTION: PORTABLE FIRE EXTINGUISHERES PER SECTION 906.		
YES	FIRE PROTECTION: FIRE ALARM AND DETECTION SYSTEM PER SECTION 907 (EXISTING FIRE PROTECTION SYSTEM WILL BE EXTENDED INTO AREA OF ADDITON)		

TOTAL ADDED SF: 5,826 (SEPARATION VIA 2HR PARTITION)

BFS - PHASING NOTE

PHASE 1: EXISTING BUILDING SCOPE OF WORK HATCHED (INCLUDING OCCUPANCY OF ROOM B113)

PHASE 2: CLASSROOM ADDITION E100, E101, E102, E103, E104 AND STORAGE E101A

SYMBOL LEGEND

Room name
101

200 net / 20 = 10 occ — OCCUPANT LOAD CALCULATION

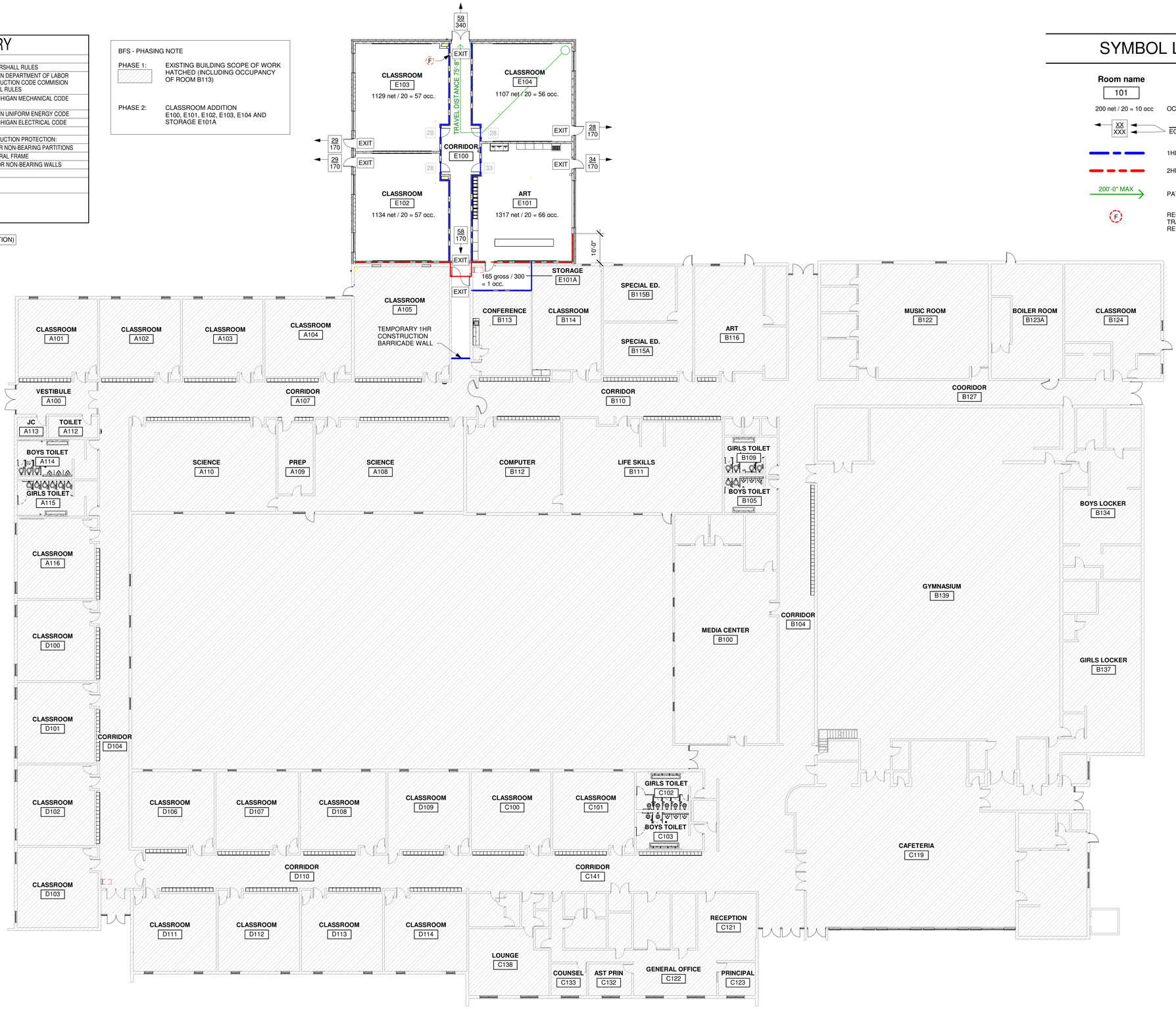
XX / XXX — EGRESS OCCUPANT LOAD / EGRESS OCCUPANT CAPACITY

1HR RATED PARTITION

2HR RATED PARTITION

200'-0" MAX — PATH OF TRAVEL

F — RECESSED FIRE EXTINGUISHER CABINET, TRAVEL DISTANCE NOT TO EXCEED 75FT. REFER TO MOUNTING DETAIL 1/A9.0.



N

LIFE SAFETY PLAN

1/16" = 1'-0"

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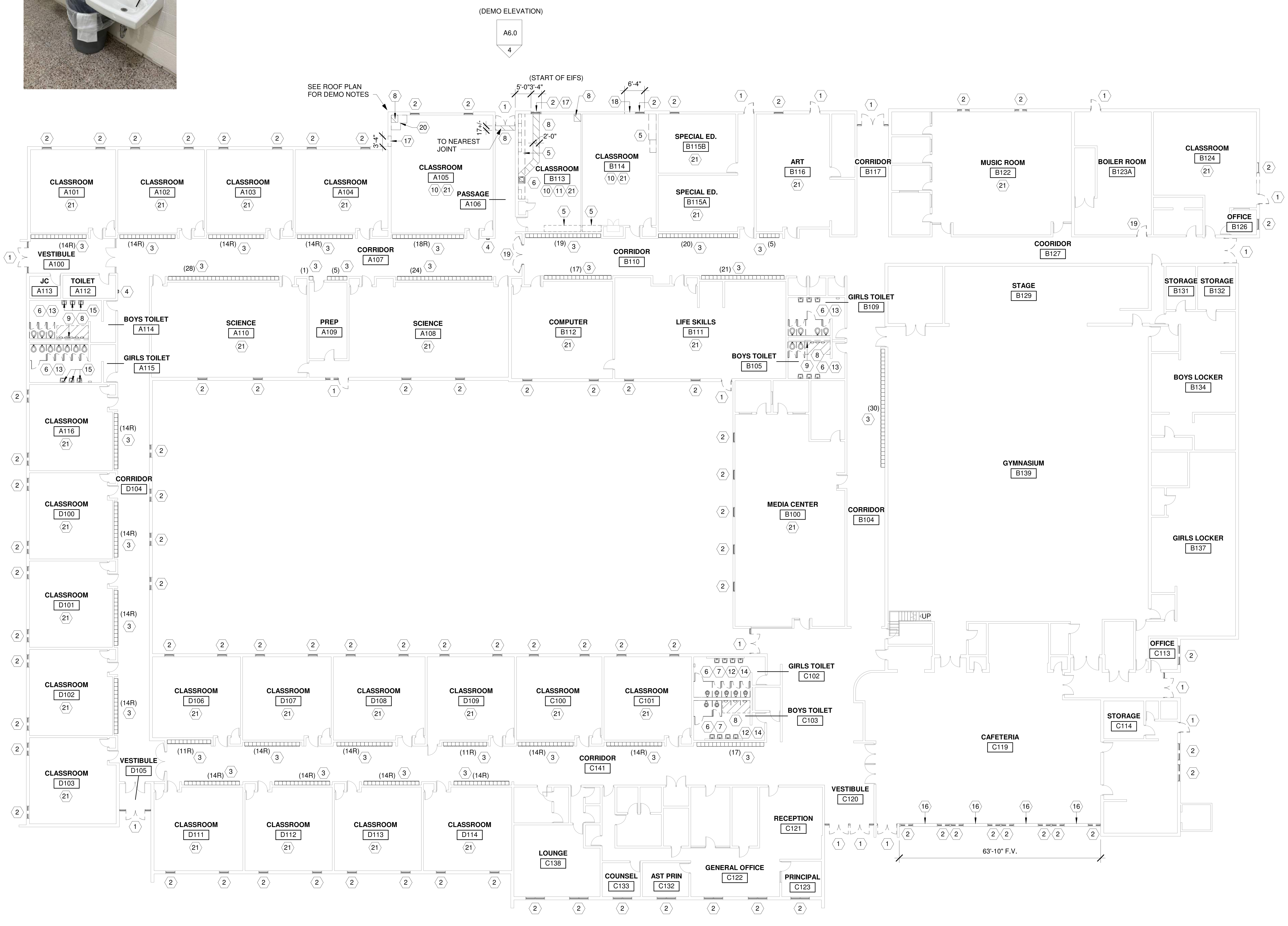
BY	
-	DESIGN
-	DRAWN
-	CHECKED
-	APPROVED

COMPOSITE & LIFE SAFETY PLAN

A0.1


(DEMO ELEVATION)
A6.0
4
SEE ROOF PLAN
FOR DEMO NOTES
(START OF EIFS)
TO NEAREST
JOINT
CLASSROOM A101
CLASSROOM A102
CLASSROOM A103
CLASSROOM A104
CLASSROOM A105
PASSAGE A106
CLASSROOM B113
CLASSROOM B114
SPECIAL ED. B115B
SPECIAL ED. B115A
ART B116
CORRIDOR B117
MUSIC ROOM B122
BOILER ROOM B123A
CLASSROOM B124
OFFICE B126
COORIDOR B127
VESTIBULE A100
JC A113
TOILET A112
BOYS TOILET A114
GIRLS TOILET A115
CORRIDOR A107
SCIENCE A110
PREP A109
SCIENCE A108
CORRIDOR B110
COMPUTER B112
LIFE SKILLS B111
GIRLS TOILET B109
BOYS TOILET B105
STAGE B129
STORAGE B131
STORAGE B132
BOYS LOCKER B134
GYMNASIUM B139
GIRLS LOCKER B137
CLASSROOM A116
CORRIDOR D104
CLASSROOM D100
CLASSROOM D101
CLASSROOM D102
CLASSROOM D103
VESTIBULE D105
MEDIA CENTER B100
CORRIDOR B104
CLASSROOM D106
CLASSROOM D107
CLASSROOM D108
CLASSROOM D109
CLASSROOM C100
CLASSROOM C101
GIRLS TOILET C102
BOYS TOILET C103
CORRIDOR C141
OFFICE C113
STORAGE C114
CAFETERIA C119
VESTIBULE C120
CLASSROOM D111
CLASSROOM D112
CLASSROOM D113
CLASSROOM D114
LOUNGE C138
COUNSEL C133
AST PRIN C132
GENERAL OFFICE C122
RECEPTION C121
PRINCIPAL C123
UP
63'-10" F.V.

DEMOLITION FLOOR PLAN

1/16" = 1'-0"

KEYNOTES

1 REMOVE EXISTING DOOR AND FRAME IN ITS ENTIRETY. REMOVE ALL ASSOCIATED FASTENERS AND ACCESSORIES. REMOVE AND SALVAGE GLASS GUARD FOR REINSTALLATION.
2 REMOVE EXISTING WINDOW UNIT IN ITS ENTIRETY. REMOVE ALL ASSOCIATED FASTENERS AND ACCESSORIES.
3 REMOVE EXISTING 15" WIDE x 15" DEEP METAL LOCKERS. REMOVE ALL ASSOCIATED FASTENERS, TRIM AND ACCESSORIES. EXISTING BASE TO REMAIN. (NUMBER) REFERS TO NUMBER OF LOCKERS. CONFIRM ALL COUNTS IN FIELD.
4 REMOVE EXISTING DRINKING FOUNTAIN, REFER TO PLUMBING PLANS.
5 REMOVE EXISTING CASEWORK. REMOVE ALL ADHESIVES, FASTENERS AND ACCESSORIES.
6 REMOVE EXISTING PLUMBING FIXTURES AND ANY ASSOCIATED PIPING. COORDINATE WITH NEW WORK PLUMBING LOCATIONS. REFER TO PLUMBING.
7 REMOVE TOILET PARTITIONS IN ITS ENTIRETY. REMOVE ALL ASSOCIATED FASTENERS AND ACCESSORIES. REMOVE EXISTING TOILET ROOM ACCESSORIES (GRAB BARS, TISSUE DISPENSERS, MIRRORS, ETC.)
8 TRENCH AS REQUIRED TO ACCOMMODATE NEW PLUMBING LAYOUT.
9 REMOVE PORTION OF MASONRY WALL AS SHOWN. REFER TO NEW WORK PLAN FOR EXTENTS.
10 REMOVE EXISTING FLOORING AND BASE (ABATEMENT BY OWNER). REMOVE ALL ASSOCIATED ADHESIVES. REPAIR AND CLEAN EXISTING FLOOR SLAB IN PREPARATION OF NEW FLOOR FINISH.
11 REMOVE ACOUSTICAL CEILING TILE AND METAL GRID SYSTEM. REMOVE ALL FASTENERS AND ACCESSORIES.
12 REMOVE EXISTING ACOUSTICAL CEILING TILE ONLY. EXISTING METAL GRID TO REMAIN. REFER TO MECHANICAL AND ELECTRICAL FOR NEW WORK EXTENTS. OTHER CEILING MOUNTED OBJECTS TO REMAIN.
13 REMOVE AND SALVAGE EXISTING TOILET PARTITIONS FOR REINSTALLATION. REMOVE EXISTING TOILET ROOM ACCESSORIES (GRAB BARS, TISSUE DISPENSERS, MIRRORS, ETC.)
14 REMOVE EXISTING TILE BASE ONLY.
15 CUT AND CAP PROTRUDING ELEMENT ABOVE SINKS IN PREPARATION OF NEW WALL TILE FINISH. SEE PHOTO THIS SHEET.
16 REMOVE EXISTING EFIS WALL CONSTRUCTION. EXISTING COLUMNS AND BRICK/BLOCK BASE TO REMAIN.
17 REMOVE PORTION OF MASONRY WALL AND LINTEL FOR NEW DOOR OPENING.
18 REMOVE PORTION OF EXISTING EIFS METAL STUD WALL CONSTRUCTION. EXISTING BRICK/BLOCK BASE TO REMAIN. REFER TO DEMO EXTERIOR ELEVATIONS FOR EXTENTS.
19 REMOVE EXISTING DOORS, FRAME AND HARDWARE.
20 REMOVE EXISTING CASEWORK AS REQUIRED FOR STORM PIPE WORK. REFER TO PLUMBING DRAWINGS.
21 REMOVE EXISTING WHITEBOARDS, TACKBOARDS AND CHALKBOARDS. REMOVE MASTIC, ADHESIVES AND FASTENERS FROM WALL. CONTRACTOR RESPONSIBLE TO FIELD VERIFY SCOPE OF EACH ROOM.

DEMOLITION LEGEND

DEMOLISH CEILING IN ENTIRETY TO EXPOSE DECK, CEILING TYPES VARY, V.I.F. OWNER TO CONSULT WITH ABATEMENT CONTRACTOR AS REQUIRED.

PARTITION TO BE DEMOLISHED

PARTITION TO REMAIN

Room name

101 — ROOM NUMBER

150 SF — ROOM AREA, IF APPLICABLE (APPROXIMATE)

— KEYNOTE, REFER TO SCHEDULE, THIS SHEET
NOTE: KEYNOTE LOCATED WITH ROOM NAME INDICATES TYPICAL NOTE FOR ENTIRETY OF ROOM

GENERAL NOTES

1. EXISTING CONDITIONS SHOWN ON THESE DRAWINGS HAVE BEEN OBTAINED FROM EXISTING DRAWINGS AND FIELD INSPECTIONS. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY THE EXISTING CONDITIONS REGARDING DEMOLITION AND NEW WORK BEFORE SUBMITTING A BID FOR THIS PROJECT. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO OWNER OR OWNERS REPRESENTATIVE.
2. HALF-TONE LINES INDICATE EXISTING CONDITIONS. DASHED LINES INDICATE DEMOLITION WORK. BOLD LINES INDICATE NEW WORK. REFER TO KEYNOTES FOR DESCRIPTION.
3. ANY EXISTING CONDITIONS TO REMAIN THAT ARE DISTURBED ARE TO BE PATCHED/REPAIRED TO MATCH ADJACENT CONDITIONS.
4. WORK SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES, LAWS, AND REGULATIONS.
5. REFER ALSO TO ELECTRICAL, MECHANICAL, STRUCTURAL, AND CIVIL DRAWINGS AS APPLICABLE FOR ADDITIONAL SCOPE OF WORK.
6. INTERIOR/EXTERIOR DIMENSIONS ARE FROM FACE OF GYPSUM BOARD/C.M.U.
7. ROOM NUMBERING SYSTEM USED IN THIS CONSTRUCTION DOCUMENT IS FOR ARCHITECTURAL PURPOSES. VERIFY ACTUAL ROOM NUMBERING/ LAYOUT AS REQUIRED.
8. PROVIDING AND INSTALLING THE REPLACEMENT OF ANY NEW FINISHES, DOOR ASSEMBLIES, ETC., SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE EXISTING AND PREPARATION FOR NEW WORK IN ANY LOCATION WHERE APPLICABLE. REFERENCE NEW WORK PLANS FOR FULL SCOPE OF WORK.
9. CHECK EXISTING METAL DOOR FRAMES TO REMAIN AND REINFORCE/ANCHOR AS REQUIRED.
10. ALL LOOSE FURNITURE TO BE REMOVED AND REINSTALLED BY OWNER.

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BRIGHTON OFFICE:
8571 W. GRAND RIVER AVE., SUITE 600
BRIGHTON, MI 48816
PHONE: (810)229-2701 FAX: (810)229-6767

ARCHITECTURE
ENGINEERING
CONSULTING
IDI
INTEGRATED DESIGNS, INC.

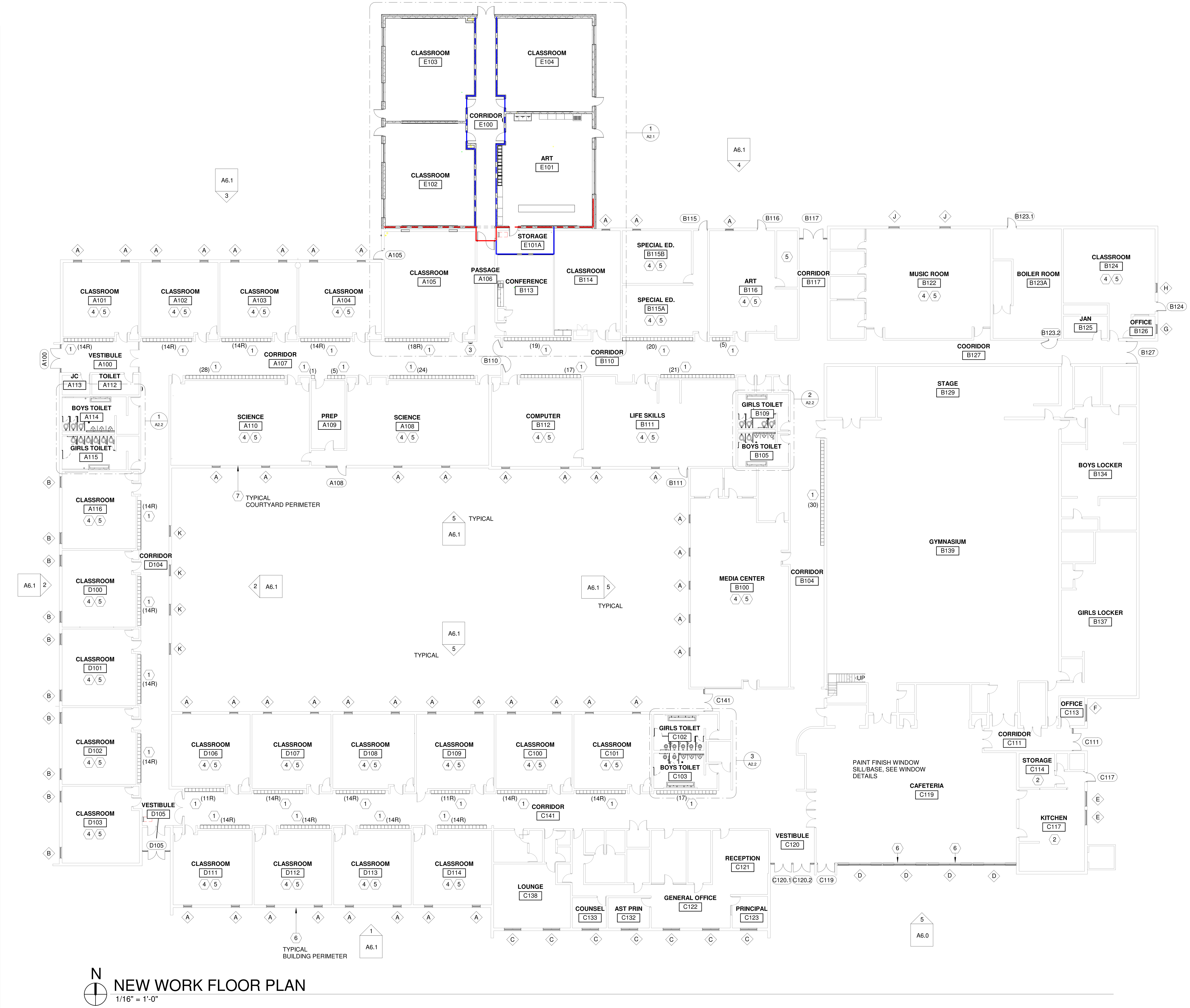
BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12/20/24

	BY
DESIGN	-
DRAWN	-
CHECKED	-
APPROVED	-

DEMOLITION PLAN

A1.0



NEW WORK FLOOR PLAN

1/16" = 1'-0"

KEYNOTES

1 INSTALL NEW 15"x15"x6'-0" SINGLE TIER METAL LOCKERS ON EXISTING BASE. (NUMBER) REFERS TO NUMBER OF LOCKERS. CONFIRM ALL COUNTS AND SIZES IN FIELD.

2 COORDINATE WITH LIGHTING MODIFICATIONS WORK TO PATCH/REPAIR AND PAINT FINISH EXISTING GWB CEILING AS REQUIRED.

3 BOTTLE FILLER, REFER TO PLUMBING AND ELECTRICAL. INSTALL STAINLESS STEEL PANEL, BRUSHED FINISH, OVER DISTURBED WALL AREA.

4 INSTALL NEW WHITEBOARDS / TACKBOARDS. 1:1 REPLACEMENT. ANY EXISTING CHALKBOARDS TO BE REPLACED WITH WHITEBOARDS. CONTRACTOR RESPONSIBLE TO FIELD VERIFY SCOPE OF EACH ROOM.

5 PATCH/REPAIR AND PAINT FINISH ALL WALL SURFACES, SOFFITS, DOOR FRAMES (BOTH SIDES) AND WINDOW SILLS. COLOR AS SCHEDULED.

6 PAINT FINISH WINDOW SILL / BASE, REFER TO WINDOW DETAILS.

6 PREPARE SURFACE AND INSTALL STOCREATIVE BRICK PRODUCT AS SPECIFIED. TYPICAL FOR ALL EXISTING EIFS AT BUILDING PERIMETER.

7 CLEAN, PREP, REPAIR AS NECESSARY, AND PAINT EXISTING EXTERIOR EIFS FACADE. REFER TO ELEVATIONS.

SYMBOL LEGEND

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- 101 — ROOM NUMBER
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- 101 NEW DOOR — DOOR TAG, REFER TO SCHEDULE (SHEET A7.0)
- 0' - 4" TO DOOR OPENING - TYP (UON)
- 1t — INTERIOR PARTITION TAG, REFER TO LEGEND (SHEET A7.1), UNMARKED WALLS = 8A TYPICAL
- 1HR RATED PARTITION
- 2HR RATED PARTITION
- 1 Ref / A101 — ELEVATION TAG / SHEET NUMBER
- 1 / A102 — SECTION TAG
- 1 / A101 — DETAIL NUMBER / SHEET NUMBER

GENERAL NOTES

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2. HALF-TONE LINES INDICATE EXISTING CONDITIONS. DASHED LINES INDICATE DEMOLITION WORK. BOLD LINES INDICATE NEW WORK. REFER TO KEYNOTES FOR DESCRIPTION.
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4. WORK SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES, LAWS, AND REGULATIONS.
5. REFER ALSO TO ELECTRICAL, MECHANICAL, STRUCTURAL, AND CIVIL DRAWINGS AS APPLICABLE FOR ADDITIONAL SCOPE OF WORK.
6. REFER TO WALL TYPES FOR WALL CONSTRUCTION, MATERIALS, HEIGHTS, ETC.
7. INTERIOR/EXTERIOR DIMENSIONS ARE FROM FACE OF GYPSUM BOARD/C.M.U.
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10. ALL NEW WORK SHALL MEET BARRIER FREE REQUIREMENTS (I.E. GRAB BARS, DOOR HARDWARE, CASEWORK HEIGHTS, ETC.)

ARCHITECTURE ENGINEERING CONSULTING
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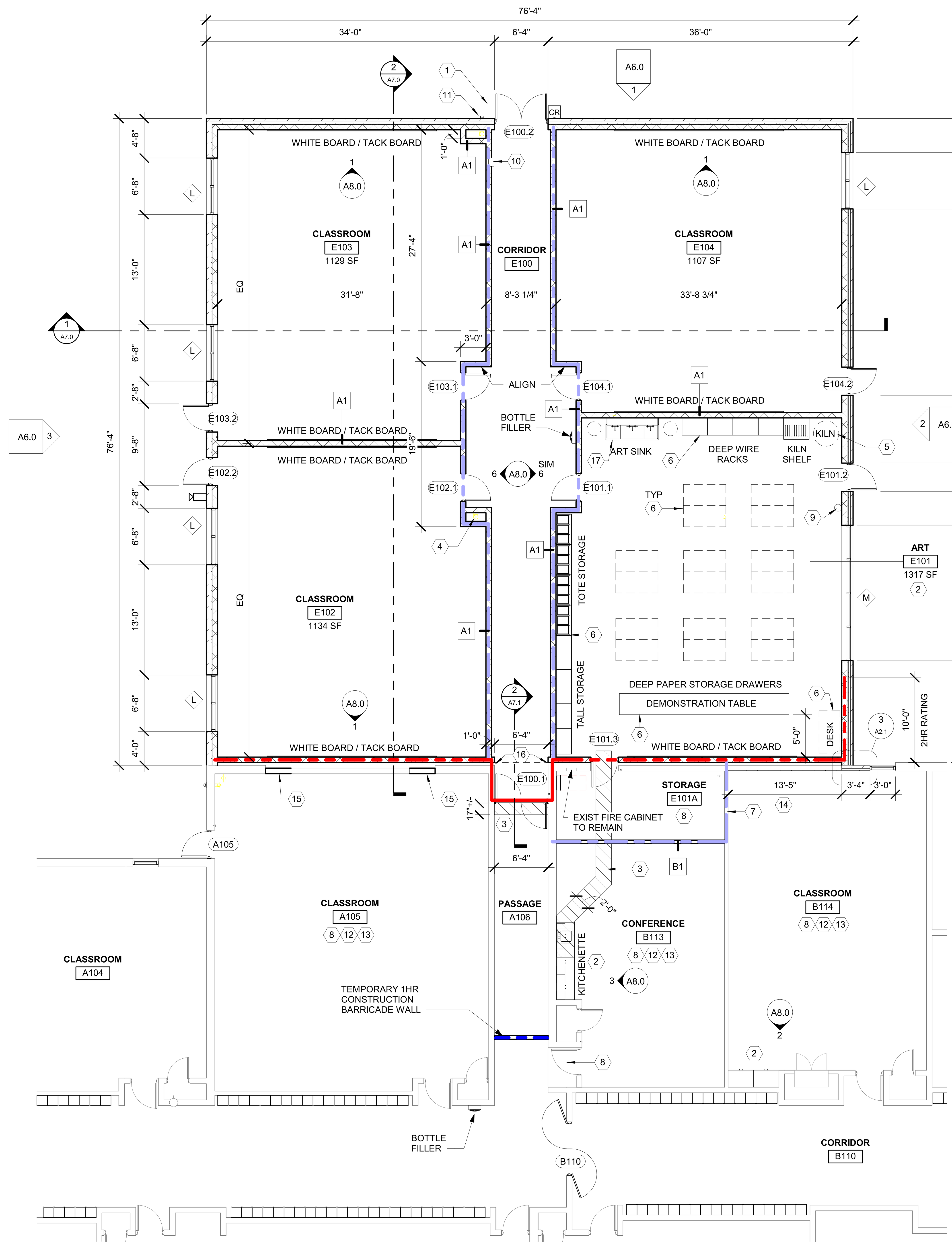
BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

BY	NO.	REVISIONS	DATE
-	0	FOR CONSTRUCTION	12/20/24

DESIGN - DRAWN - CHECKED - APPROVED -

NEW WORK FLOOR PLAN

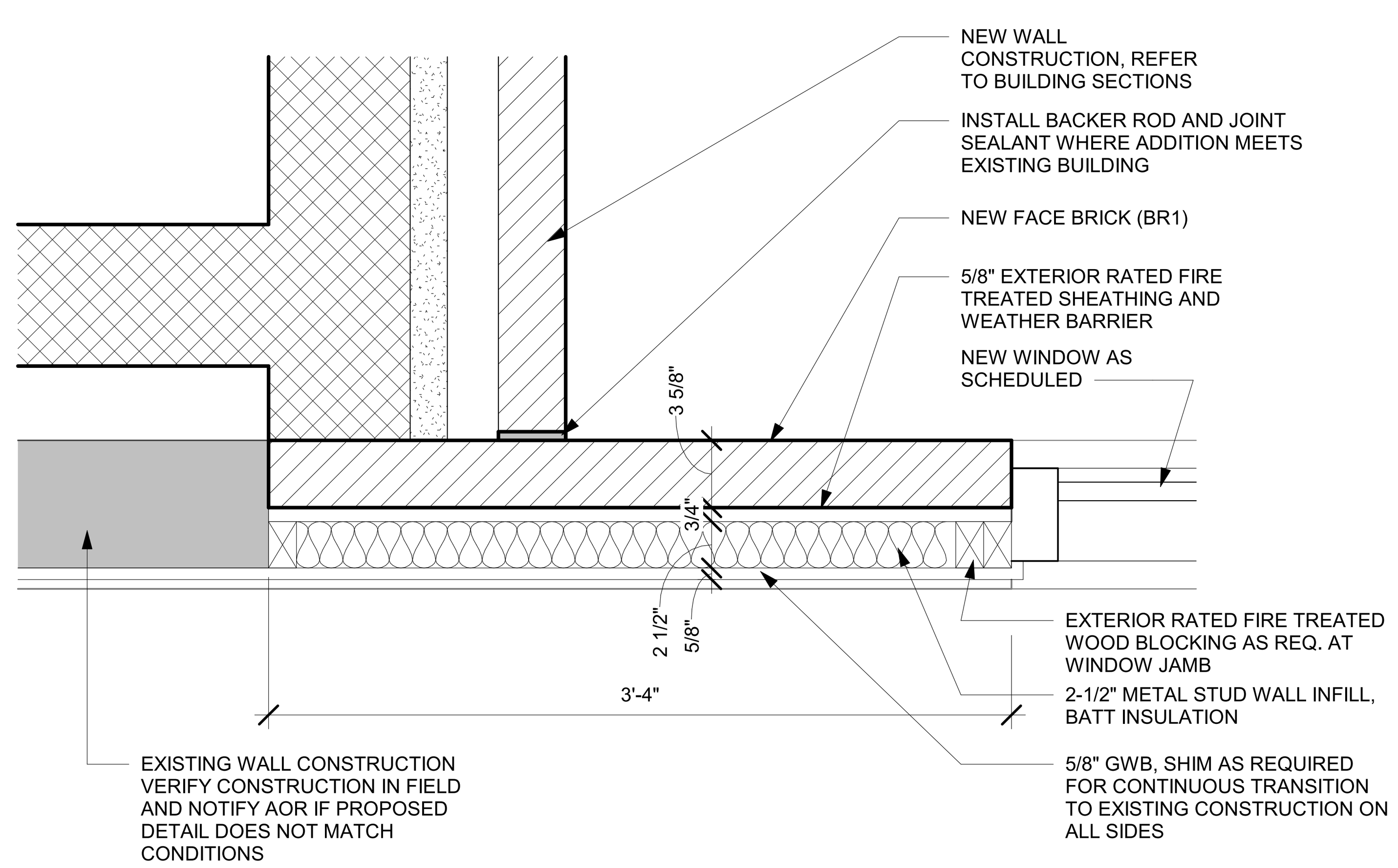
A2.0



N

ENLARGED ADDITION PLAN

1/8" = 1'-0"



3 PLAN DETAIL

1 1/2" = 1'-0"

KEYNOTES

1. CARD READER AT BUILDING ENTRANCE. REFER TO ELECTRICAL AND DOOR HARDWARE SPECIFICATIONS. COORDINATE WITH OWNER SECURITY VENDOR.
2. INSTALL NEW CASEWORK, REFER TO ELEVATIONS.
3. HATCHED AREA INDICATES APPROXIMATE AREA OF INFILL OF CONCRETE FLOOR SLAB WHERE FLOOR TRENCHING OCCURRED. PATCH WORK TO BE FLUSH WITH ADJACENT SLAB. COORDINATE EXTENTS WITH PLUMBING.
4. ROOF DRAIN, REFER TO PLUMBING.
5. KILN PROVIDED BY OWNER. INSTALLED BY CONTRACTOR. REFER TO MECHANICAL AND ELECTRICAL.
6. FURNITURE AND ART ROOM CASEWORK, BY OWNER.
6. FURNITURE, BY OWNER.
7. EXISTING METAL STUD DIVIDER WALL, REMOVE DRYWALL AND INSTALL TYPE 'X' GWB ON EACH SIDE OF WALL AS REQUIRED FOR 1 HR RATING.
8. INSTALL NEW LVT FLOORING AND BASE, REFER TO FINISH SCHEDULE.
9. WALL MOUNTED FIRE EXTINGUISHER WITH BRACKET AS SPECIFIED.
10. SEMI RECESSED FIRE EXTINGUISHER CABINET WITH FIRE EXTINGUISHER AS SPECIFIED.
11. PAINT FINISH ALL EXPOSED PVC DRAIN CONNECTION PIPING.
12. INSTALL NEW WHITEBOARDS / TACKBOARDS. 1:1 REPLACEMENT. ANY EXISTING CHALKBOARDS TO BE REPLACED WITH WHITEBOARDS. CONTRACTOR RESPONSIBLE TO FIELD VERIFY SCOPE OF EACH ROOM.
13. PATCH/REPAIR AND PAINT FINISH ALL WALL SURFACES, SOFFITS, DOOR FRAMES (BOTH SIDES) AND WINDOW SILLS. COLOR AS SCHEDULED.
14. INSTALL NEW GWB WALL FINISH. PATCH/PAINT IN COORDINATION WITH NEW WORK.
15. INFILL WALL OPENING, INSTALL GWB AND PATCH/REPAIR WALL TO MATCH ADJACENT SURFACES.
16. FIRE RATED WALL EXPANSION JOINT W/ BRUSHED ALUMINUM COVER AS SPECIFIED
17. ART ROOM SINK SURROUND AND FIXTURE TO BE PROVIDED BY CASEWORK CONTRACTOR. BASIS OF DESIGN IS "DIVERSIFIED WOODCRAFTS ART SINK - MODEL 3010M-ADA". COORDINATE WITH PLUMBING DRAWINGS.

SYMBOL LEGEND

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- NEW DOOR 101 — DOOR TAG. REFER TO SCHEDULE (SHEET A7.0)
- 0' - 4" TO DOOR OPENING - TYP (UON)
- 1t — INTERIOR PARTITION TAG. REFER TO LEGEND (SHEET A7.1). UNMARKED WALLS = 8A TYPICAL
- 1HR RATED PARTITION
- 2HR RATED PARTITION
- 1 Ref / A101 — ELEVATION TAG; SHEET NUMBER
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GENERAL NOTES

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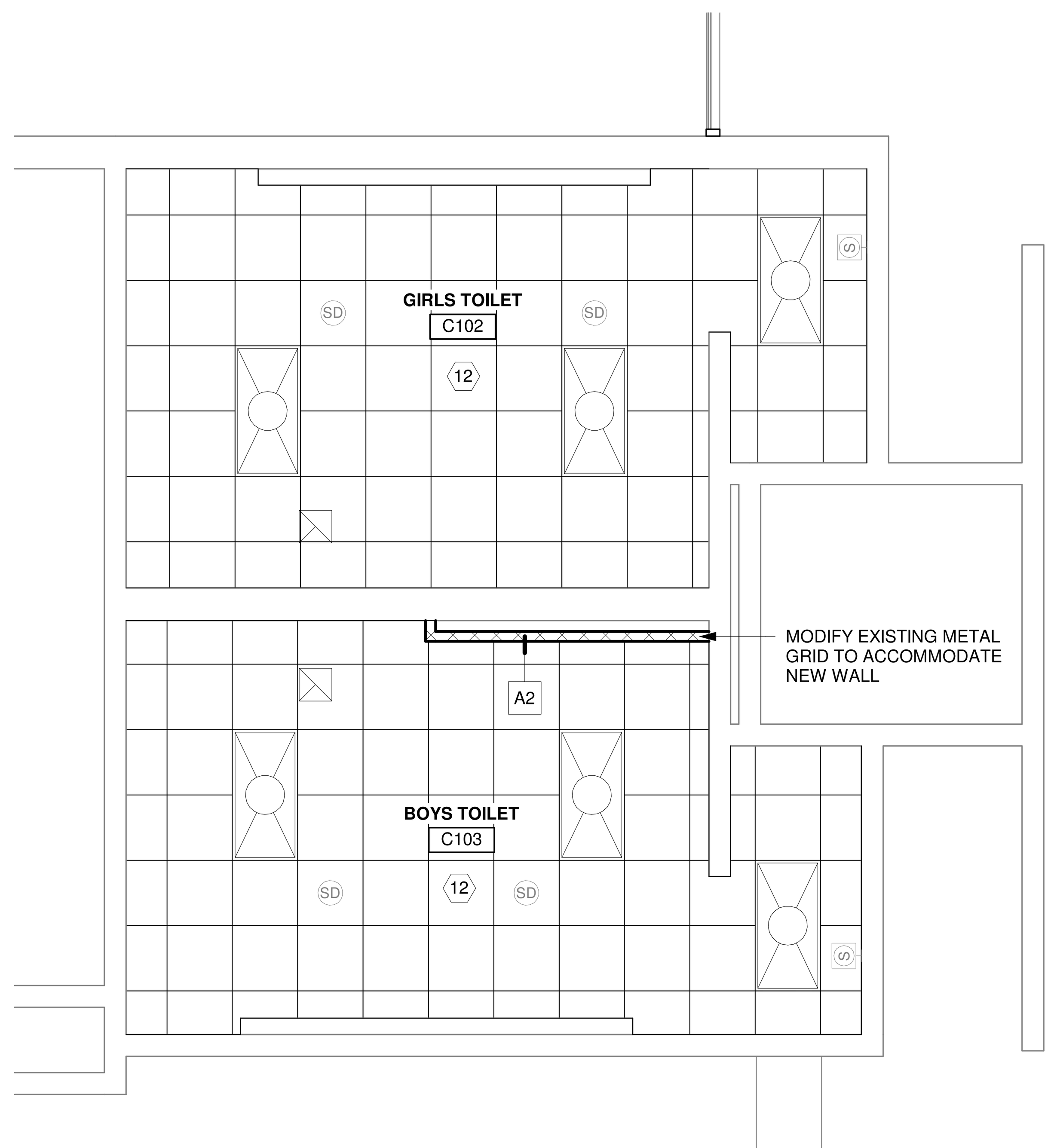
NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12/20/24

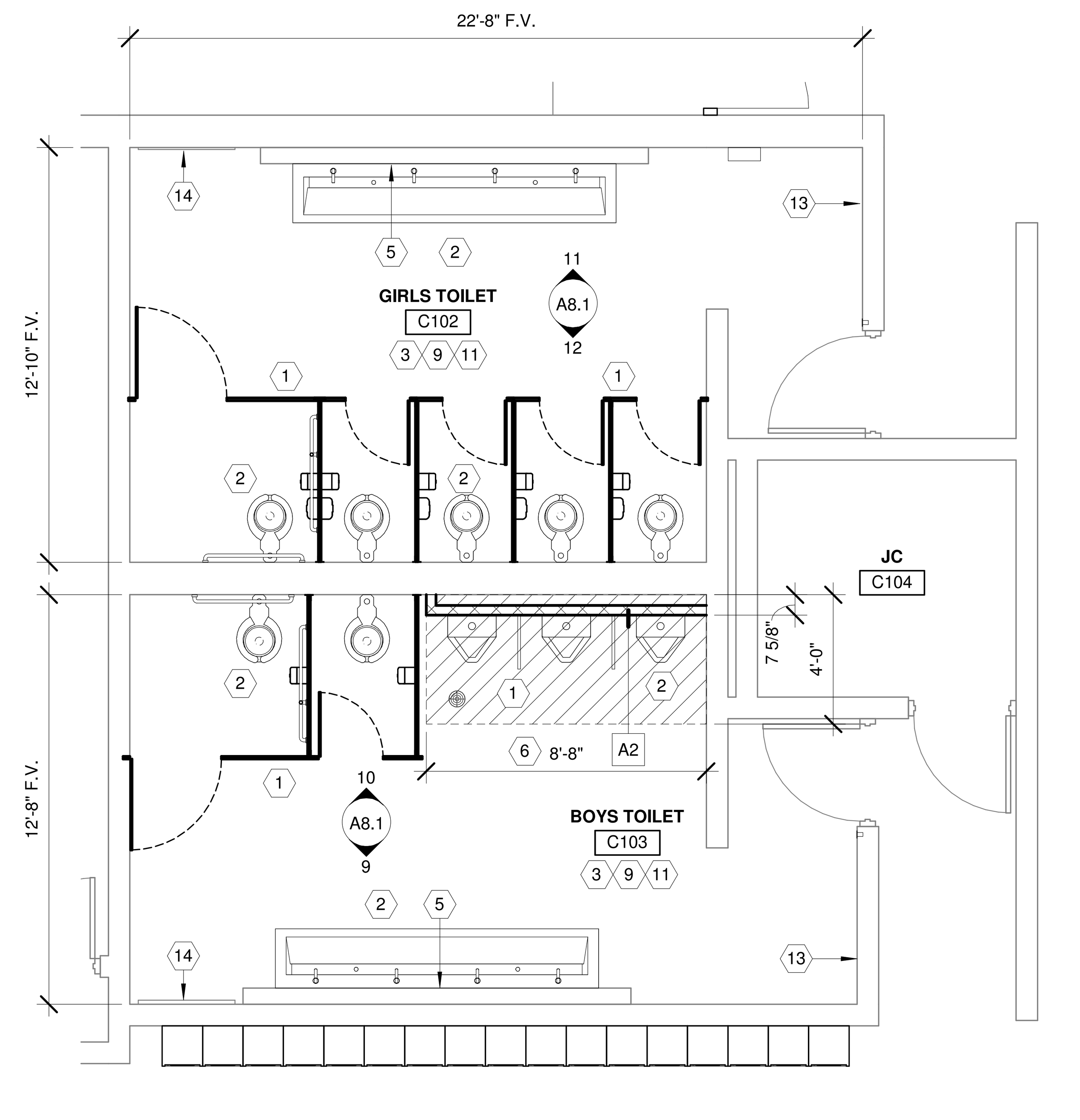
	BY
DESIGN	-
DRAWN	-
CHECKED	-
APPROVED	-

CLASSROOM ADDITION PLAN

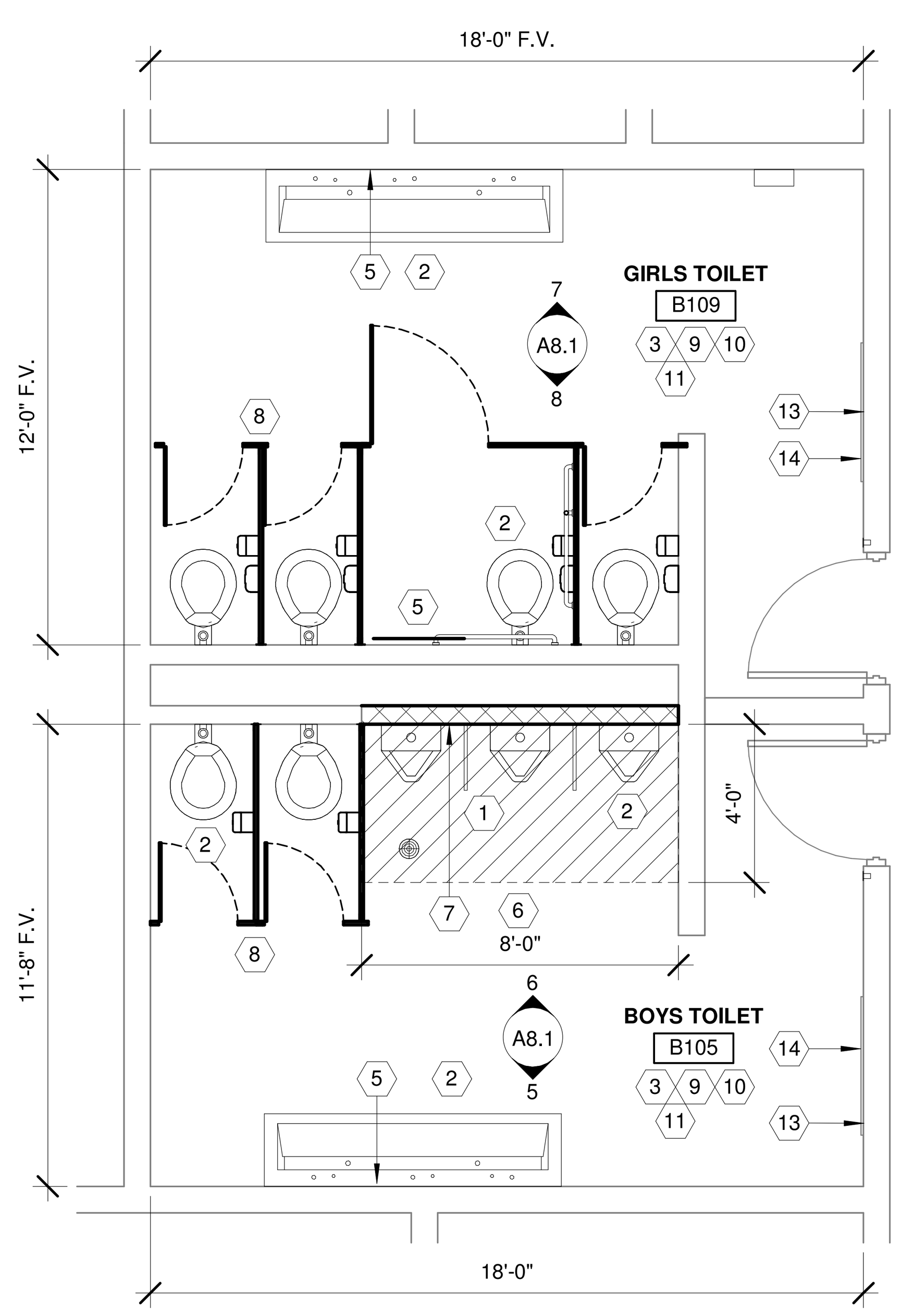
A2.1



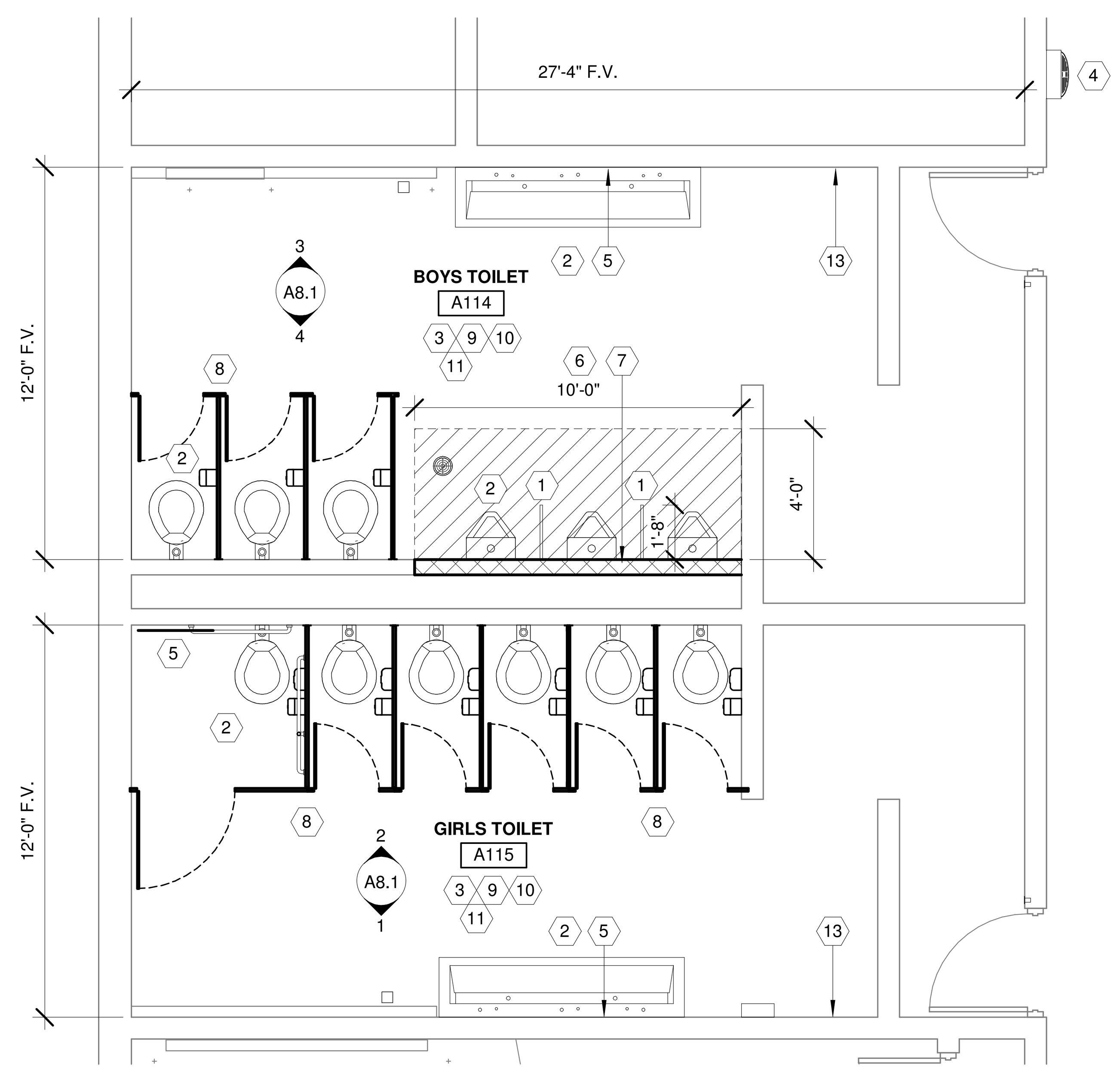
4 RESTOOMS AREA C - CEILING PLAN
1/4" = 1'-0"



3 RESTROOMS AREA C
1/4" = 1'-0"



2 RESTROOMS AREA B
1/4" = 1'-0"



1 RESTROOM AREA A
1/4" = 1'-0"

KEYNOTES

1. NEW TOILET / URINAL PARTITIONS AS SPECIFIED.
2. PLUMBING FIXTURES AS SPECIFIED. REFER TO ADA MOUNTING DETAILS FOR PLACEMENT REQUIREMENTS, REFER TO PLUMBING.
3. TOILET ROOM ACCESSORIES AS SPECIFIED. REFER TO ADA MOUNTING HEIGHTS FOR PLACEMENT REQUIREMENTS.
4. BOTTLE FILLER, REFER TO PLUMBING AND ELECTRICAL. INSTALL STAINLESS STEEL PANEL, BRUSHED FINISH, OVER DISTURBED WALL AREA.
5. PATCH AND REPAIR EXISTING CMU WALL WHERE PLUMBING FIXTURES WERE REMOVED.
6. HATCHED AREA INDICATES INFILL OF CONCRETE FLOOR SLAB WHERE FLOOR TRENCHING/FLOOR MOUNTED URINALS OCCURED. PATCH WORK TO BE FLUSH WITH ADJACENT SLAB AND SLOPE TO NEW DRAIN.
7. TOOTH IN NEW CMU AS REQUIRED TO ACCOMMODATE NEW PLUMBING/URINAL LAYOUT. VERIFY EXISTING WALL THICKNESS AND MATCH EXISTING BLOCK COURSING.
8. REINSTALL EXISTING TOILET PARTITIONS. EXISTING PLUMBING LOCATIONS TO REMAIN, FIELD VERIFY DIMENSIONS.
9. EPOXY FLOORING WITH INTEGRAL COVE BASE AS SPECIFIED.
10. PREP AND PREPARE EXISTING GYPSUM CEILING FOR NEW PAINT FINISH.
11. INSTALL NEW WALL TILE, REFER TO ELEVATIONS AND FINISH SCHEDULE.
12. INSTALL NEW 2X2 CEILING TILE IN EXISTING METAL GRID SYSTEM AS SPECIFIED.
13. PATCH AND REPAIR CMU WALL WHERE SPEAKER WAS REMOVED. REFER TO ELEVATION.
14. REMOVE AND REINSTALL MECHANICAL UNIT COVER TO PAINT PT1.

SYMBOL LEGEND

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0' - 4" TO DOOR OPENING - TYP (UON)
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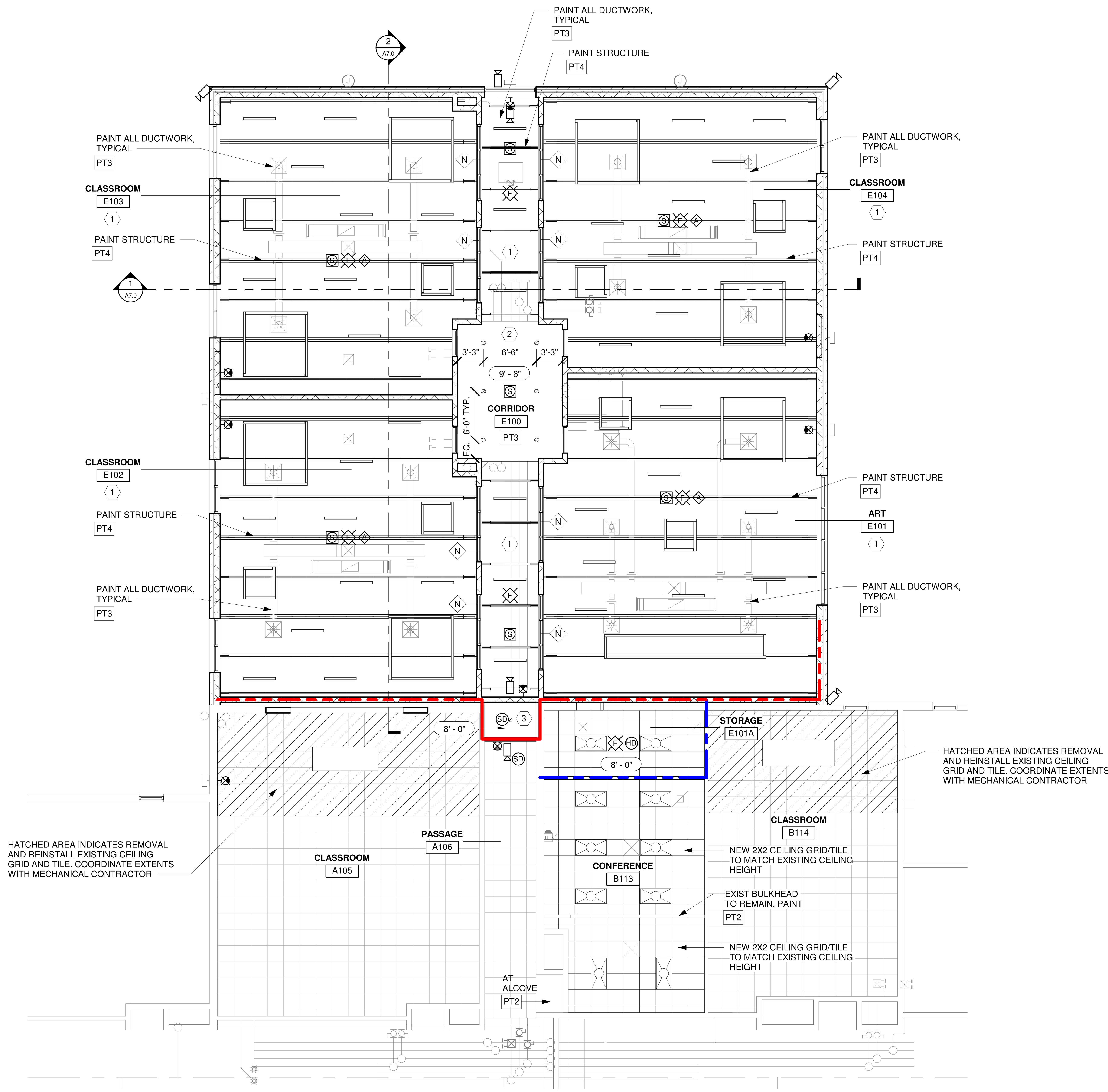
	BY
DESIGN	-
DRAWN	-
CHECKED	-
APPROVED	-

ENLARGED RESTROOM PLANS

A2.2



N

NEW WORK CEILING PLAN

1/8" = 1'-0"

KEYNOTES

1 ABSORPTIVE FINISH 1-1/2" K13 ON METAL DECK.
2 GWB BULKHEAD, PAINT FINISH AS SCHEDULED.
3 GWB BULKHEAD, UL FIRE RATED 2-HR CEILING.

SYMBOL LEGEND

- 2'x2' LAY-IN ACOUSTICAL CEILING.
- GYPSUM BOARD CEILING/SOFFIT.
- VENTED ALUMINUM SOFFIT.
- MECHANICAL DIFFUSER.
- LIGHT FIXTURE.
- CEILING MOUNTED EXIT LIGHT.
- RECESSED CAN LIGHT.
- 10'-0" CEILING HEIGHT.

GENERAL NOTES

1. EXISTING CONDITIONS SHOWN ON THESE DRAWINGS HAVE BEEN OBTAINED FROM EXISTING DRAWINGS AND FIELD INSPECTIONS. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY THE EXISTING CONDITIONS REGARDING DEMOLITION AND NEW WORK BEFORE SUBMITTING A BID FOR THIS PROJECT. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO OWNER OR OWNERS REPRESENTATIVE.
2. HALF-TONE LINES INDICATE EXISTING CONDITIONS. DASHED LINES INDICATE DEMOLITION WORK. BOLD LINES INDICATE NEW WORK. REFER TO KEYNOTES FOR DESCRIPTION.
3. ANY EXISTING CONDITIONS TO REMAIN THAT ARE DISTURBED ARE TO BE PATCHED/REPAIRED TO MATCH ADJACENT CONDITIONS.
4. WORK SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES, LAWS, AND REGULATIONS.
5. REFER ALSO TO ELECTRICAL, MECHANICAL, STRUCTURAL, AND CIVIL DRAWINGS AS APPLICABLE FOR ADDITIONAL SCOPE OF WORK.
6. ROOM NUMBERING SYSTEM USED IN THIS CONSTRUCTION DOCUMENT IS FOR ARCHITECTURAL PURPOSES. VERIFY ACTUAL ROOM NUMBERING/ LAYOUT AS REQUIRED.
7. PROVIDING AND INSTALLING THE REPLACEMENT OF ANY NEW FINISHES, DOOR ASSEMBLIES, ETC., SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE EXISTING AND PREPARATION FOR NEW WORK IN ANY LOCATION WHERE APPLICABLE. REFERENCE NEW WORK PLANS FOR FULL SCOPE OF WORK.
8. COORDINATE NEW CEILING WORK AS REQUIRED FOR NEW MECHANICAL AND ELECTRICAL LIGHTING WORK IN EXISTING BUILDING.
9. RE: MECHANICAL AND ELECTRICAL DWGS.
10. CENTER ACOUSTICAL TILE/METAL CEILING GRID SYSTEM WITHIN EACH ROOM, UNLESS NOTED OTHERWISE.
11. VERIFY CEILING HEIGHTS IN EXISTING BUILDING AND MATCH EXISTING CEILING HEIGHT AT NEW CEILING WORK OR AS DIRECTED ON PLANS.

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INTEGRATED DESIGNS, INC.

BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

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APPROVED	-

REFLECTED CEILING PLAN

A3.0

DOOR SCHEDULE

DOOR NUMBER	FRAME MATERIAL	FRAME TYPE	DOOR MATERIAL	DOOR TYPE	DOOR FIRE RATING	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	HARDWARE SET	DETAIL REFERENCE HEAD	DETAIL REFERENCE JAMB	DETAIL REFERENCE THRESHOLD	DETAIL REFERENCE SIGN TYPE	REMARKS
A100	AL	K	FRP	2		7' - 0"	7' - 0"	01					2
A105	AL	B	FRP	2		3' - 0"	6' - 8"	03	1/A7.3	1/A7.3		B	2
A108	AL	L	FRP	2		3' - 0"	6' - 8"	09					2
B110	HM	A	HM	1	90 MIN	6' - 0"	7' - 0"	12					1,2
B111	AL	B	FRP	2		3' - 0"	6' - 8"	09					2
B115	AL	B	FRP	2		3' - 0"	6' - 8"	03					2
B116	AL	B	FRP	2		3' - 0"	6' - 8"	03					2
B117	AL	J	FRP	2		7' - 0"	7' - 0"	01					2
B123.1	AL	B	FRP	1		3' - 0"	6' - 8"	08					2
B123.2	HM	B	HM	1	90 MIN	3' - 0"	6' - 8"						1,2
B124	AL	B	FRP	2		3' - 0"	6' - 8"	03					2
B127	AL	G	FRP	2		7' - 8"	8' - 0"	02					2
C111	AL	F	FRP	2		6' - 0"	7' - 0"	02					2
C117	AL	B	FRP	1		3' - 0"	6' - 8"	07					2
C119	AL	E	FRP	3		6' - 0"	7' - 0"	02					2
C120.1	AL	D1	FRP	3		6' - 0"	7' - 0"	06					2
C120.2	AL	D2	FRP	3		6' - 0"	7' - 0"	04					2
C141	AL	M	FRP	2		6' - 0"	7' - 0"	05					2
D105	AL	H	FRP	2		6' - 0"	7' - 0"	01					2
E100.1	HM	B	HM	1	90 MIN	6' - 0"	7' - 0"	12	4/A7.3			B	1
E100.2	AL	N	FRP	2		6' - 0"	7' - 2"	01	2/A7.3 SIM	2/A7.3 SIM	2/A7.3 SIM	C	
E101.1	HM	C	WD	2	20 MIN	3' - 0"	7' - 0"	10	14/A7.2 SIM	3/A7.3		A	
E101.2	AL	B	FRP	1		3' - 0"	7' - 2"	03	2/A7.3	2/A7.3	2/A7.3	B	
E101.3	HM	A	WD	1	90 MIN	3' - 0"	7' - 0"	11	5/A7.3	5/A7.3		A (ON DOOR)	
E102.1	HM	C	WD	2	20 MIN	3' - 0"	7' - 0"	10	14/A7.2 SIM	3/A7.3		A	
E102.2	AL	B	FRP	1		3' - 0"	7' - 2"	03	2/A7.3	2/A7.3	2/A7.3	B	
E103.1	HM	C	WD	2	20 MIN	3' - 0"	7' - 0"	10	14/A7.2 SIM	3/A7.3		A	
E103.2	AL	B	FRP	1		3' - 0"	7' - 2"	03	2/A7.3	2/A7.3	2/A7.3	B	
E104.1	HM	C	WD	2	20 MIN	3' - 0"	7' - 0"	10	14/A7.2 SIM	3/A7.3		A	
E104.2	AL	B	FRP	1		3' - 0"	7' - 2"	03	2/A7.3	2/A7.3	2/A7.3	B	

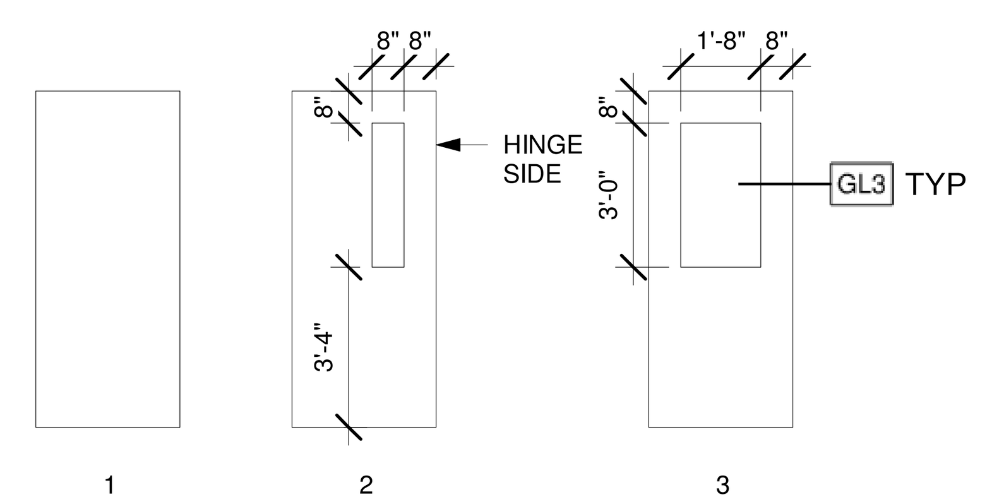
REMARKS TO DOOR SCHEDULE

1. PAINT FINISH NEW HOLLOW METAL DOOR FRAME / DOOR (BOTH SIDES) PT3.
2. **FIELD VERIFY ALL EXISTING DOOR/FRAME OPENINGS BEING REPLACED.**

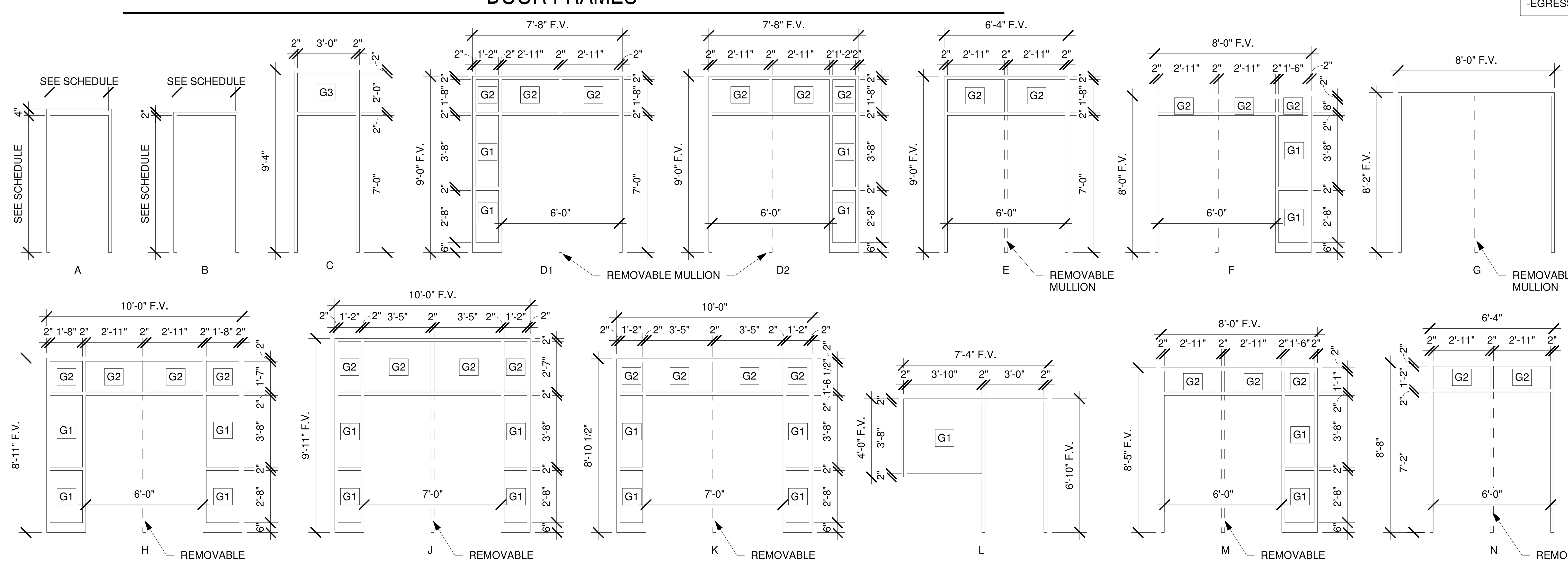
GENERAL NOTES TO DOOR SCHEDULE

1. DOOR NUMBER: SEE FLOOR PLAN(S) FOR LOCATION OF DOORS.
2. FRAME: SEE CODE TO "DOOR/WINDOW SCHEDULE" FOR DEFINITION OF DESIGNATIONS IN MATERIAL COLUMN. SEE "DOOR FRAMES" FOR DESCRIPTION OF DESIGNATIONS IN FRAME TYPE COLUMN.
3. DOOR: SEE CODE TO "DOOR/WINDOW SCHEDULE" FOR DEFINITION OF DESIGNATIONS IN MATERIAL COLUMN. SEE "DOOR TYPES" FOR DESCRIPTION OF DESIGNATIONS IN DOOR TYPE COLUMN.
4. FIRE RATING: LABELING INDICATED IS PER NFPA 80. LABELS SHALL BE APPROVED AND PERMANENTLY AFFIXED.
5. SIZE: SIZE IS GIVEN AS WIDTH x HEIGHT.
6. HARDWARE SET: SEE HARDWARE SPECIFICATIONS FOR DESCRIPTIONS.
7. ALL INTERIOR AND EXTERIOR WINDOWS WITHIN 24" TO THE VERTICAL EDGE OF AN INTERIOR OR EXTERIOR DOOR MUST CONTAIN TEMPERED SAFETY GLASS.

DOOR TYPES



DOOR FRAMES



CODE TO DOOR & WINDOW SCHEDULE

AL ALUMINUM
HM HOLLOW METAL (PAINT FINISH)
WD WOOD VENEER FINISH
FRP FIBER REINFORCED PLASTIC

GL1 CLEAR, INSULATED TEMPERED GLAZING
GL2 CLEAR, INSULATED GLAZING
GL3 CLEAR, INTERIOR GLAZING, 45 MIN FR RATING

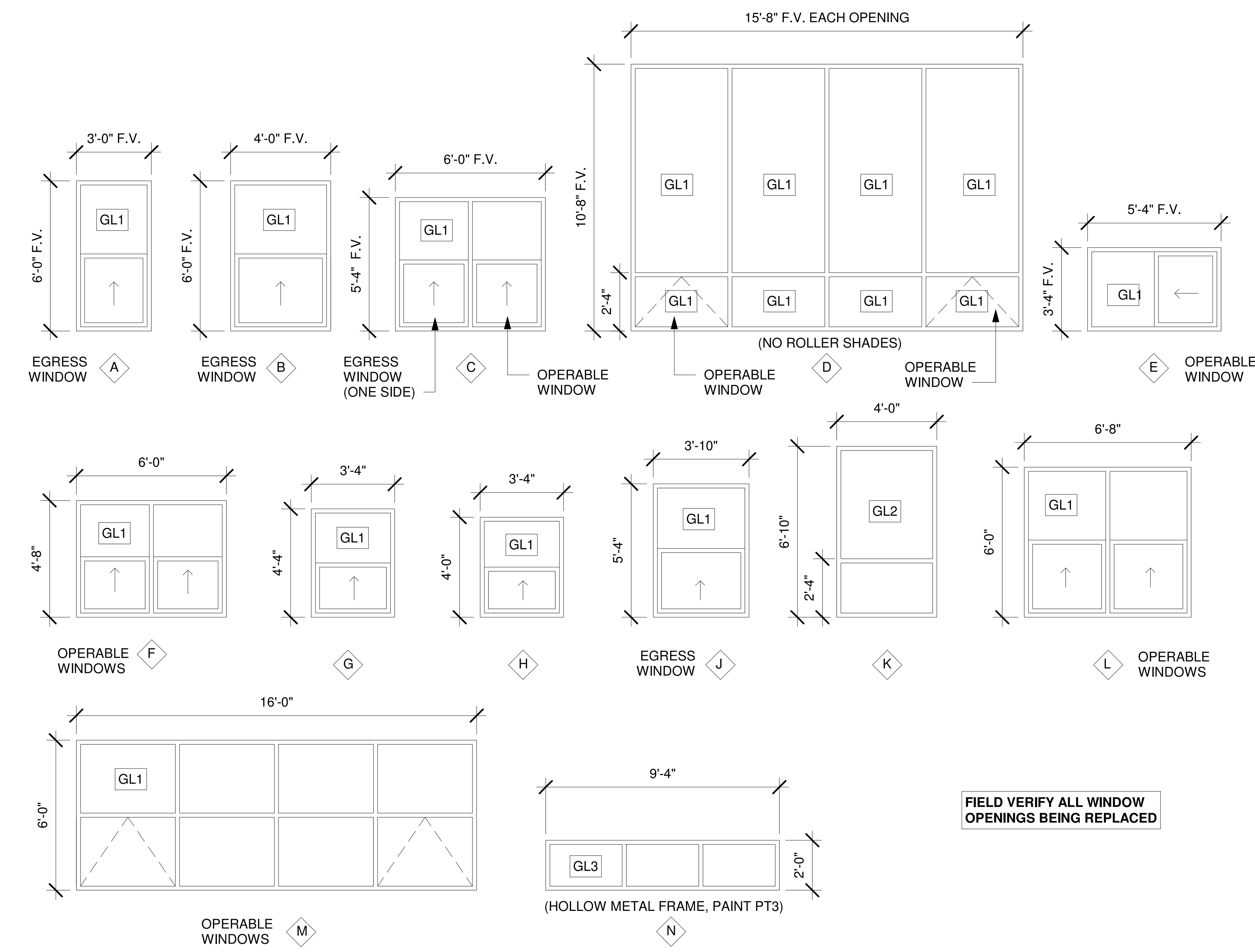
GENERAL NOTES TO WDW. SCHEDULE

1. WINDOW DESIGNATION: SEE FLOOR PLAN(S) FOR LOCATION OF WINDOWS.
2. FRAME: SEE CODE TO "DOOR/WINDOW SCHEDULE" FOR DEFINITION OF DESIGNATIONS IN MATERIAL COLUMN. SEE "WINDOW TYPES" FOR DESCRIPTION OF DESIGNATIONS IN FRAME TYPE COLUMN.
3. WINDOW: SEE CODE TO "DOOR/WINDOW SCHEDULE" FOR DEFINITION OF DESIGNATIONS IN GLAZING COLUMN.
4. SIZE: SIZE IS GIVEN AS WIDTH x HEIGHT OF ROUGH OPENING. ALL SIZES MUST BE VERIFIED IN FIELD.
5. ALL INTERIOR AND EXTERIOR WINDOWS WITHIN 24" TO THE VERTICAL EDGE OF AN INTERIOR OR EXTERIOR DOOR OR OPERABLE WINDOW MUST CONTAIN TEMPERED SAFETY GLASS.
6. ARROWS INDICATE OPERABLE WINDOW. EGRESS WINDOWS LOCATIONS ARE MARKED ON WINDOW LEGEND. INSTALL SCREENS AT OPERABLE WINDOWS. DO NOT INSTALL SCREENS AT EGRESS WINDOWS.

WINDOW SCHEDULE

WINDOW TYPE	MATERIAL	WIDTH	HEIGHT	HEAD	JAMB	SILL	REMARKS
A	AL	3' - 0"	6' - 0"	4/A7.2	2 & 3/A7.2	1/A7.2	
B	AL	4' - 0"	6' - 0"	5/A7.2	2/A7.2	1/A7.2	
C	AL	6' - 0"	5' - 4"	4/A7.2	2/A7.2	1/A7.2	
D	AL	15' - 8"	10' - 8"	8/A7.2	7/A7.2	6/A7.2	
E	AL	5' - 4"	3' - 4"	9/A7.2	11/A7.2	12/A7.2	
F	AL	6' - 0"	4' - 8"	5/A7.2 SIM	2/A7.2	1/A7.2	
G	AL	3' - 4"	4' - 4"	9/A7.2	11/A7.2	10/A7.2	
H	AL	3' - 4"	4' - 0"	9/A7.2	11/A7.2	10/A7.2	
J	AL	3' - 10"	5' - 4"	9/A7.2	11/A7.2	10/A7.2	
K	AL	4' - 0"	6' - 10"	5/A7.2 SIM	11/A7.2	10/A7.2	
L	AL	6' - 8"	6' - 0"	13/A7.2	13/A7.2	13/A7.2	
M	AL	16' - 0"	6' - 0"	13/A7.2	13/A7.2	13/A7.2	
N	HM	9' - 4"	2' - 0"	14/A7.2	14/A7.2	14/A7.2	

WINDOW TYPES



ADDITIONAL NOTES:
-INCLUDE ROLLER SHADES AT ALL NEW EXTERIOR WINDOWS (NO ROLLER SHADES AT TYPE D)
-INCLUDE IMPACT RESISTANT SECURITY FILM AT EXTERIOR PERIMETER WINDOWS AND DOOR GLAZING (NOT REQUIRED ON COURTYARD WINDOWS)
-EGRESS WINDOWS REQUIRE 5.7 SF OF CLEAR OPENING. CONFIRM ALL CLEARANCES PRIOR TO FABRICATION.

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WINDOW, DOOR & ROOM FINISH SCHEDULES

A4.0

ROOM FINISH SCHEDULE

ROOM		CEILING			WALLS					
NUMBER	NAME	TYPE	FLOOR	BASE	TYPICAL	NORTH	EAST	SOUTH	WEST	REMARKS
A101	CLASSROOM				PT1					1
A102	CLASSROOM				PT1					1
A103	CLASSROOM				PT1					1
A104	CLASSROOM				PT1					1
A105	CLASSROOM		LVT1	RB1	PT1					1
A106	PASSAGE				PT1/PT3					2
A108	SCIENCE				PT1					1
A110	SCIENCE				PT1					1
A114	BOYS TOILET	PT2	EP1	EP1	T1/T3					ACCENT TILE AT SINK, SEE ELEVATIONS
A115	GIRLS TOILET	PT2	EP1	EP1	T1/T3					ACCENT TILE AT SINK, SEE ELEVATIONS
A116	CLASSROOM				PT1					1
B105	BOYS TOILET	PT2	EP1	EP1	T1/T3					ACCENT TILE AT SINK, SEE ELEVATIONS
B109	GIRLS TOILET	PT2	EP1	EP1	T1/T3					ACCENT TILE AT SINK, SEE ELEVATIONS
B111	LIFE SKILLS				PT1					1
B112	COMPUTER				PT1					1
B113	CONFERENCE	ACT1	LVT1	RB1	PT1					1
B114	CLASSROOM		LVT1	RB1	PT1					1
B115A	SPECIAL ED.				PT1					1
B115B	SPECIAL ED.				PT1					1
B116	ART				PT1					1
B122	MUSIC ROOM				PT1					1
B124	CLASSROOM				PT1					1
C100	CLASSROOM				PT1					1
C101	CLASSROOM				PT1					1
C102	GIRLS TOILET	ACT2	EP1	EP1	T1/T3					ACCENT TILE AT SINK, SEE ELEVATIONS
C103	BOYS TOILET	ACT2	EP1	EP1	T1/T3					ACCENT TILE AT SINK, SEE ELEVATIONS
D100	CLASSROOM				PT1					1
D101	CLASSROOM				PT1					1
D102	CLASSROOM				PT1					1
D103	CLASSROOM				PT1					1
D106	CLASSROOM				PT1					1
D107	CLASSROOM				PT1					1
D108	CLASSROOM				PT1					1
D109	CLASSROOM				PT1					1
D111	CLASSROOM				PT1					1
D112	CLASSROOM				PT1					1
D113	CLASSROOM				PT1					1
D114	CLASSROOM				PT1					1
E100	CORRIDOR	K13	CC1	RB1	PT1/PT3					2
E101	ART	K13	CC1	RB1	PT1			PT3		
E101A	STORAGE	ACT1	LVT1	RB1	PT1					
E102	CLASSROOM	K13	CC1	RB1	PT1	PT3				
E103	CLASSROOM	K13	CC1	RB1	PT1			PT3		
E104	CLASSROOM	K13	CC1	RB1	PT1			PT3		

GENERAL NOTES TO FIN. SCHEDULE

1. ROOM: SEE FLOOR PLAN(S) FOR LOCATION OF ROOM NUMBERS AND NAMES.
2. CEILING TYPE, FLOOR, AND BASE: SEE "CODE TO ROOM FINISH SCHEDULE" FOR DEFINITION OF DESIGNATIONS.
3. WALLS: SEE "CODE TO ROOM FINISH SCHEDULE" FOR DEFINITION OF DESIGNATIONS IN TYPICAL, NORTH, SOUTH, EAST, AND WEST COLUMNS.
4. WALL FINISH IN TYPICAL COLUMN APPLIES TO ALL ROOM WALLS.

REMARKS TO FINISH SCHEDULE

1. ROOM TO HAVE ACCENT WALL PT3, COORDINATE WITH OWNER FOR WALL LOCATION.
2. SEE FINISH PLAN AND ELEVATION / SECTION PAINTING CORRIDOR (BOTH SIDES) KEEPING SAME PATTERN.

CODE TO ROOM FINISH SCHEDULE

--EXTERIOR FINISHES--

MP1 METAL PANEL - CUSTOM COLOR, MATCH BANGOR BLUE

STO1 STO BRICK,

--CEILING FINISHES--

ACT1 2x2 LAY IN ACOUSTIC BOARD, SQUARE EDGE, IN PREFINISHED METAL 15/16" T GRID

ACT2 2X2 LAY IN VINYL FACED WASHABLE TILE, SQUARE EDGE

K13 SPRAY ON ACOUSTICAL INSULATION AS SPECIFIED. DO NOT PAINT.

--CONCRETE FINISHES--

CC1 POLISHED CONCRETE

--RESILIENT PRODUCTS--

RB1 4" RESILIENT BASE - COVED, TARKETT TH2 BLUE INTENSITY

LVT1 GERFLOR - SAGA 2, GENTLEMAN GREY 0088

--TILE FINISH--

T1 AMERICAN OLEAN - COLOR STORY - ICE WHITE 0025
T2 AMERICAN OLEAN - COLOR STORY - NAVY 0117
T3 AMERICAN OLEAN - COLOR STORY - STORM GRAY 0040

--PAINT FINISH--

PT1 PAINT - MAIN FIELD COLOR - SCHOOL STD COLOR: ARIZONA WHITE
PT2 PAINT - CEILING FLAT LATEX - SCHOOL STD COLOR: ARIZONA WHITE
PT3 PAINT - ACCENT COLOR - SCHOOL STD COLOR: BANGOR BLUE
PT4 PAINT - ACCENT COLOR - SCHOOL STD COLOR: BANGOR GREY
PT5 PAINT - OAK CREEK SW7718

--PLASTIC LAMINATE--

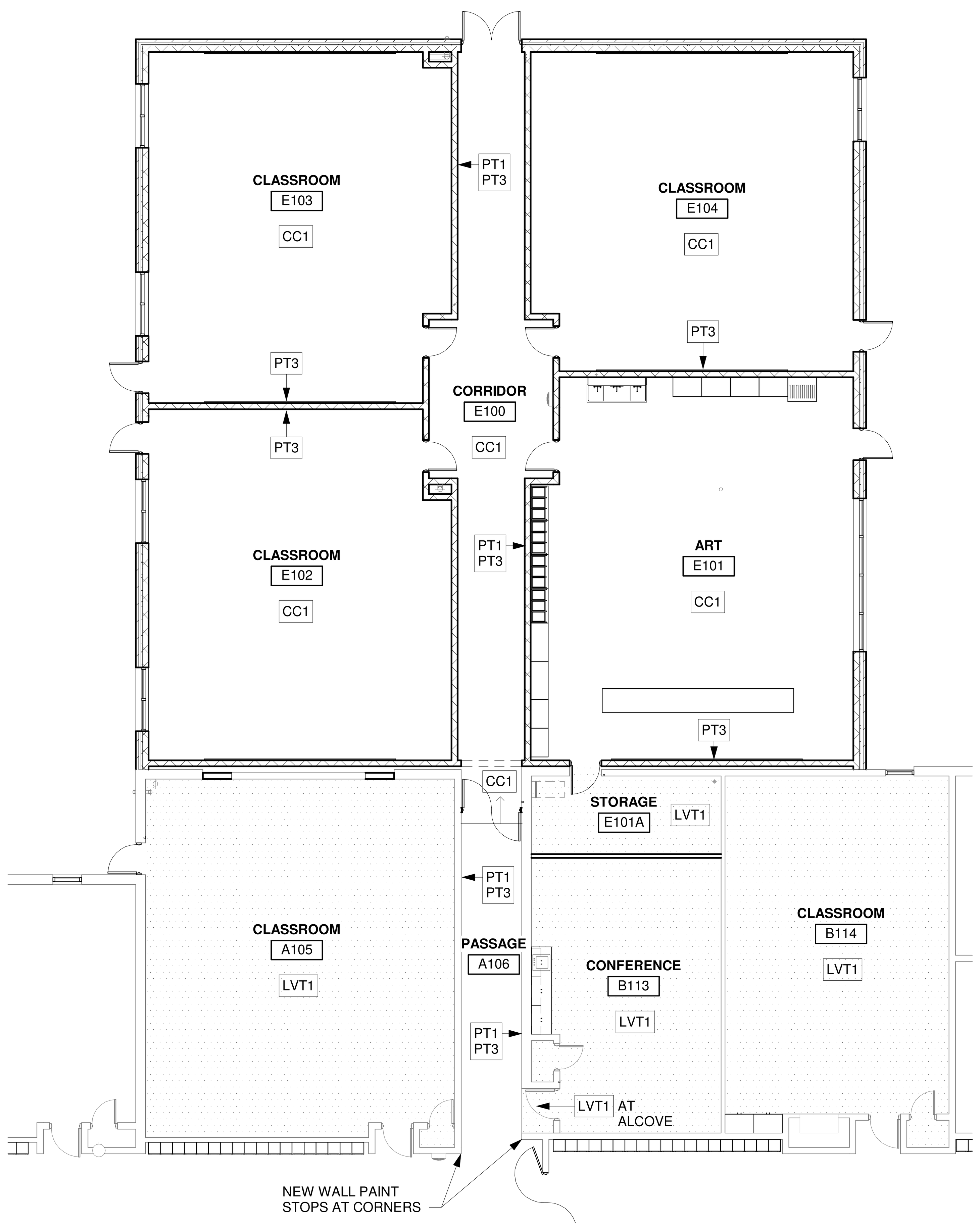
PL1 WILSONART - MANITOBA MAPLE, TEXTURED GLOSS FINISH 7911-07

--SOLID SURFACE--

SS1 WILSONART SOLID SURFACE - 9204CE MORNING ICE

--RESINOUS FLOORING--

EP1 1/4" RESUFLOR DECO FLAKE BC, COLOR: TBD



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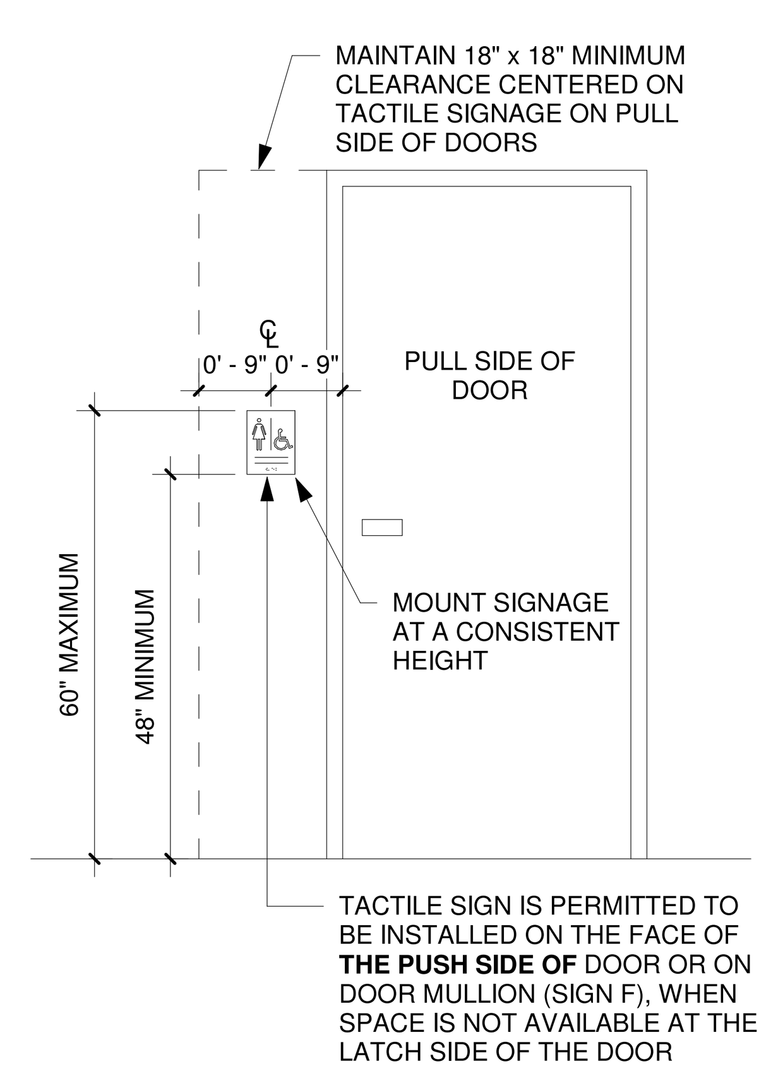
FLOOR FINISH PLAN

3/32" = 1'-0"

INTERIOR SIGNAGE MOUNTING HEIGHTS

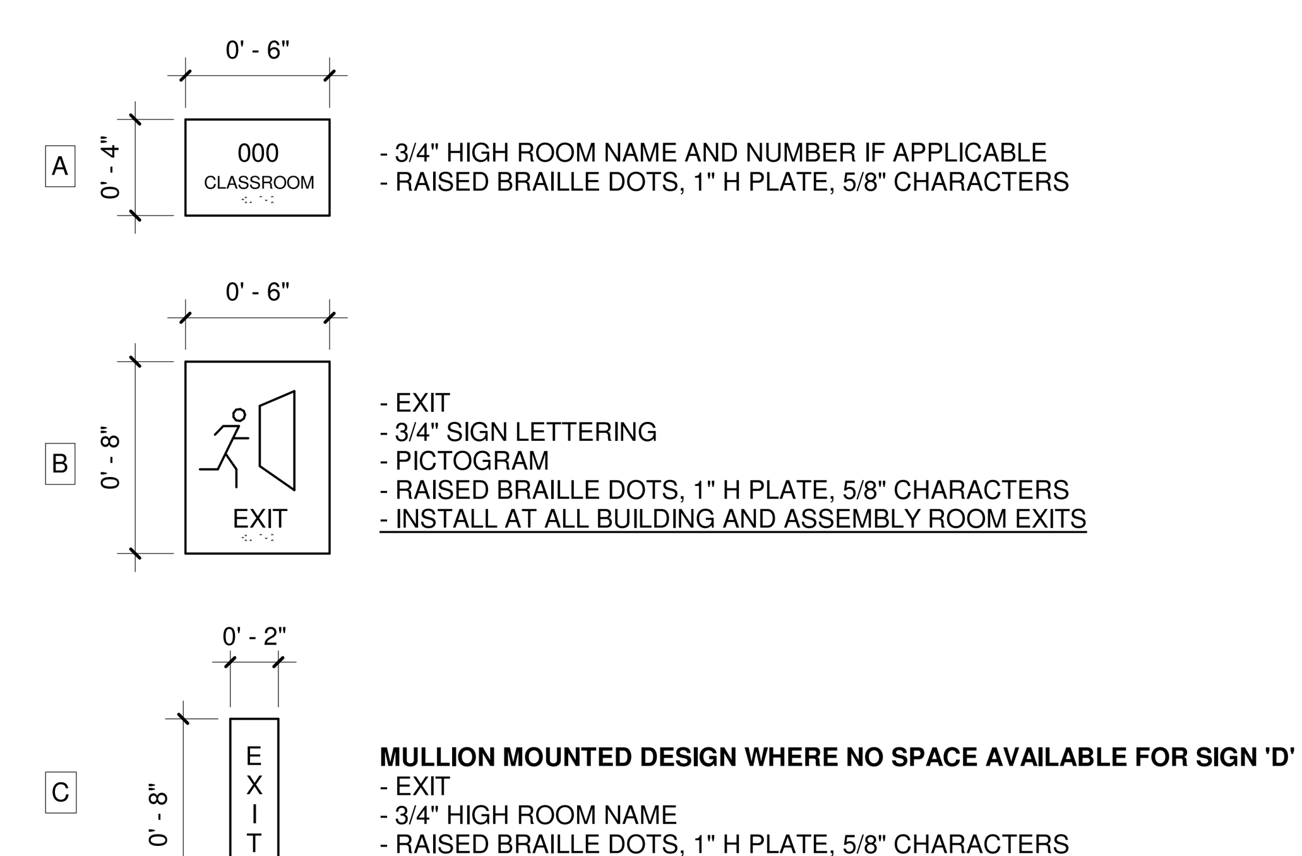
1/2" = 1'-0"



INTERIOR SIGNAGE LEGEND

1 1/2" = 1'-0"

REFER TO DOOR SCHEDULE



GENERAL NOTES

1. SIGNAGE TEXT AND ROOM TO BE COORDINATED
2. FINAL COLOR TBD

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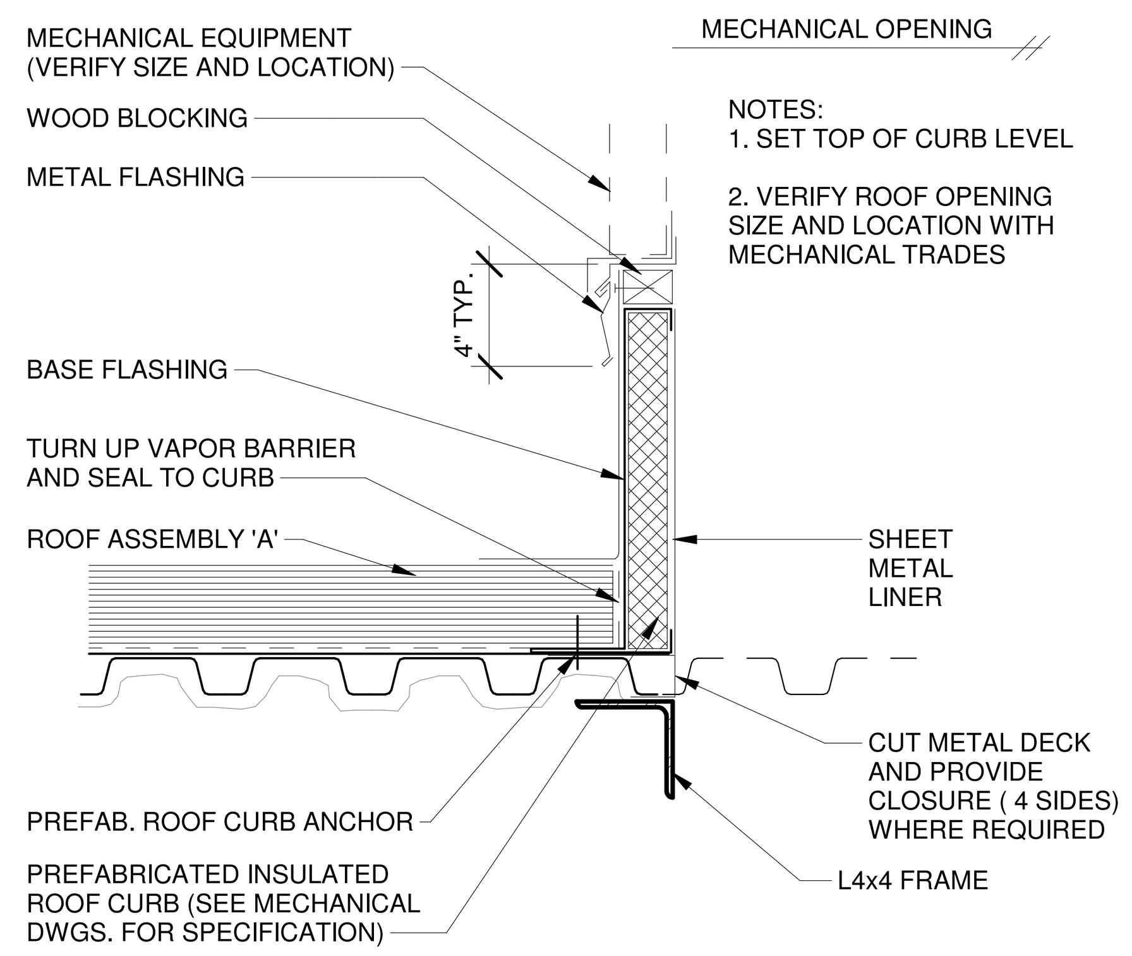
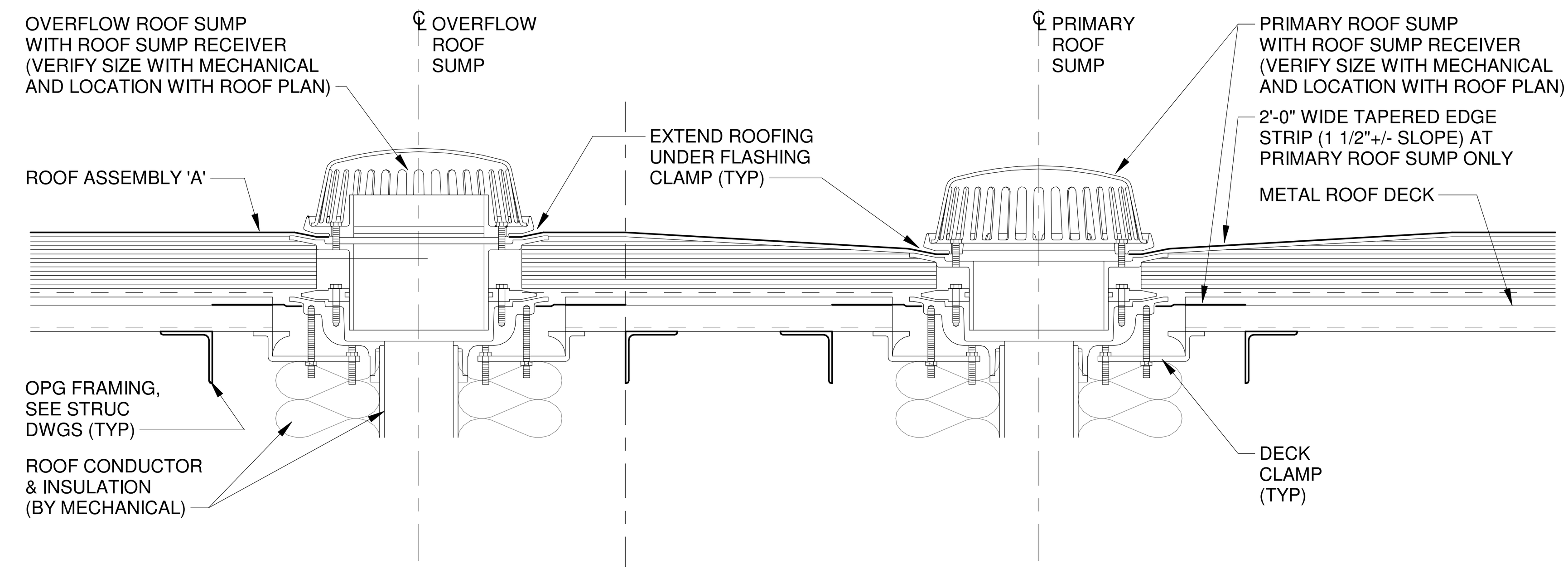
ROOM FINISH SCHEDULE

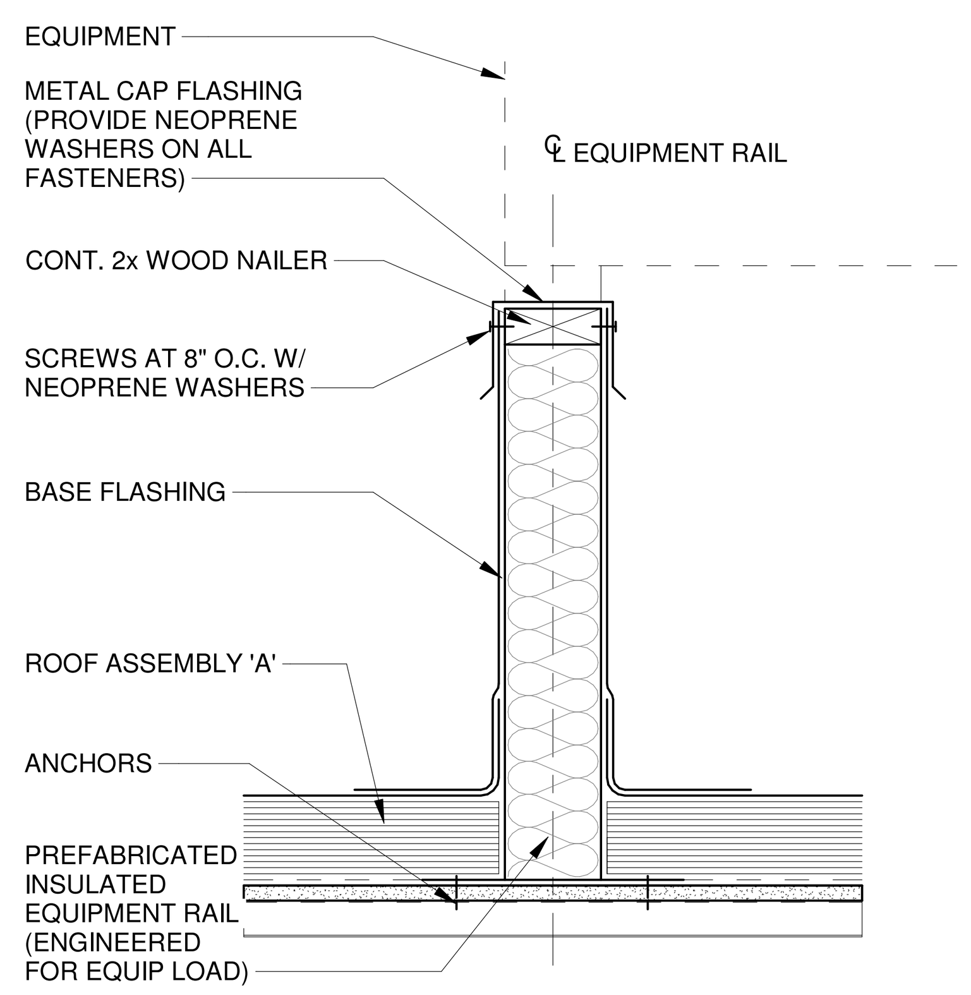
A4.1



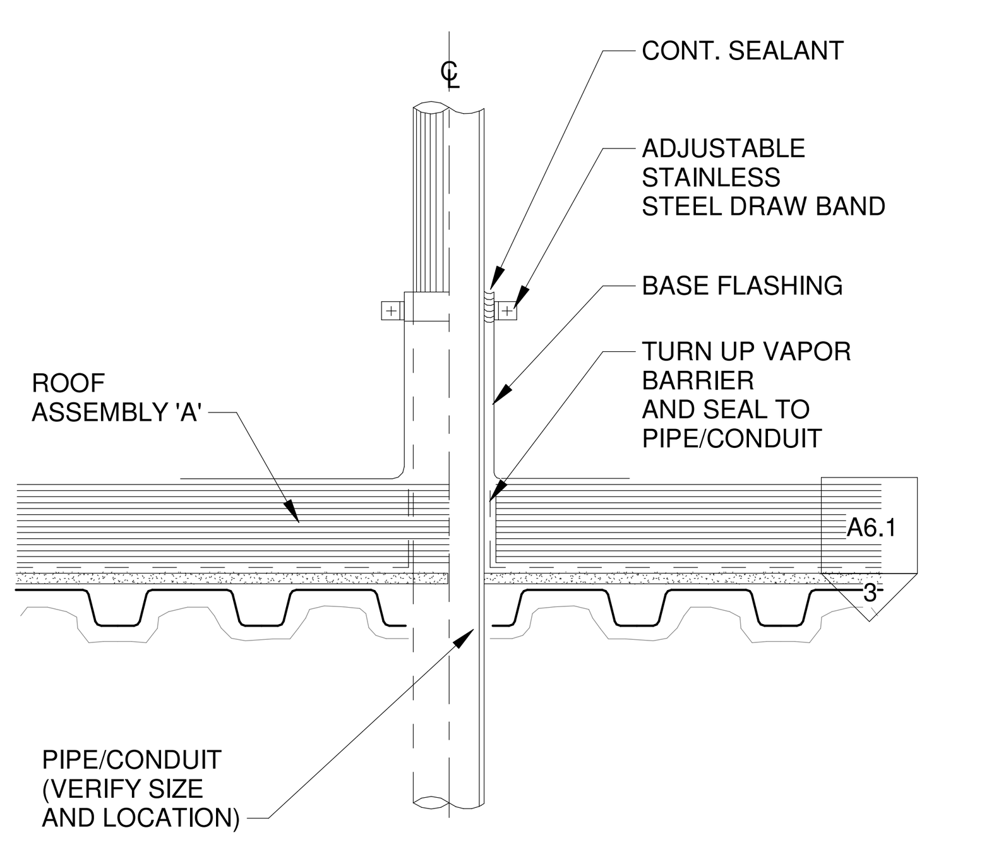
5 PRE-FAB ROOF CURB (SINGLE-PLY ROOFING)
1 1/2" = 1'-0"



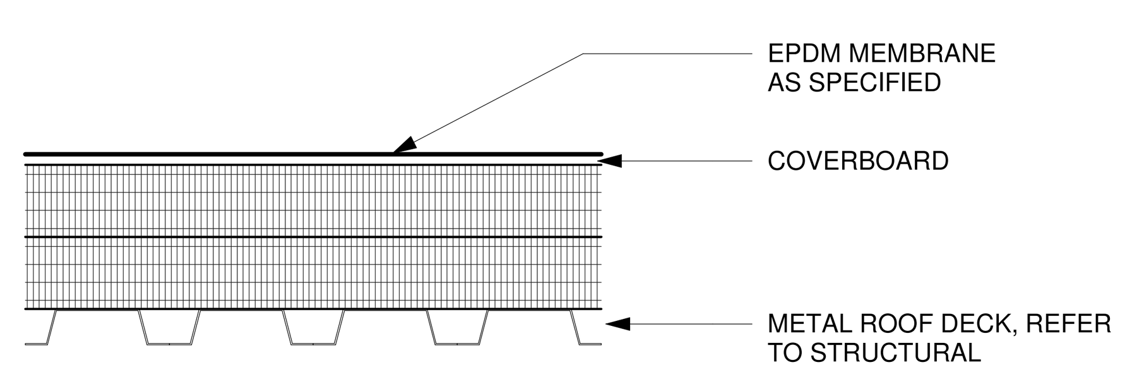
6 PRIMARY AND OVERFLOW ROOF SUMP ROOF ASSEMBLY 'A'
1 1/2" = 1'-0"



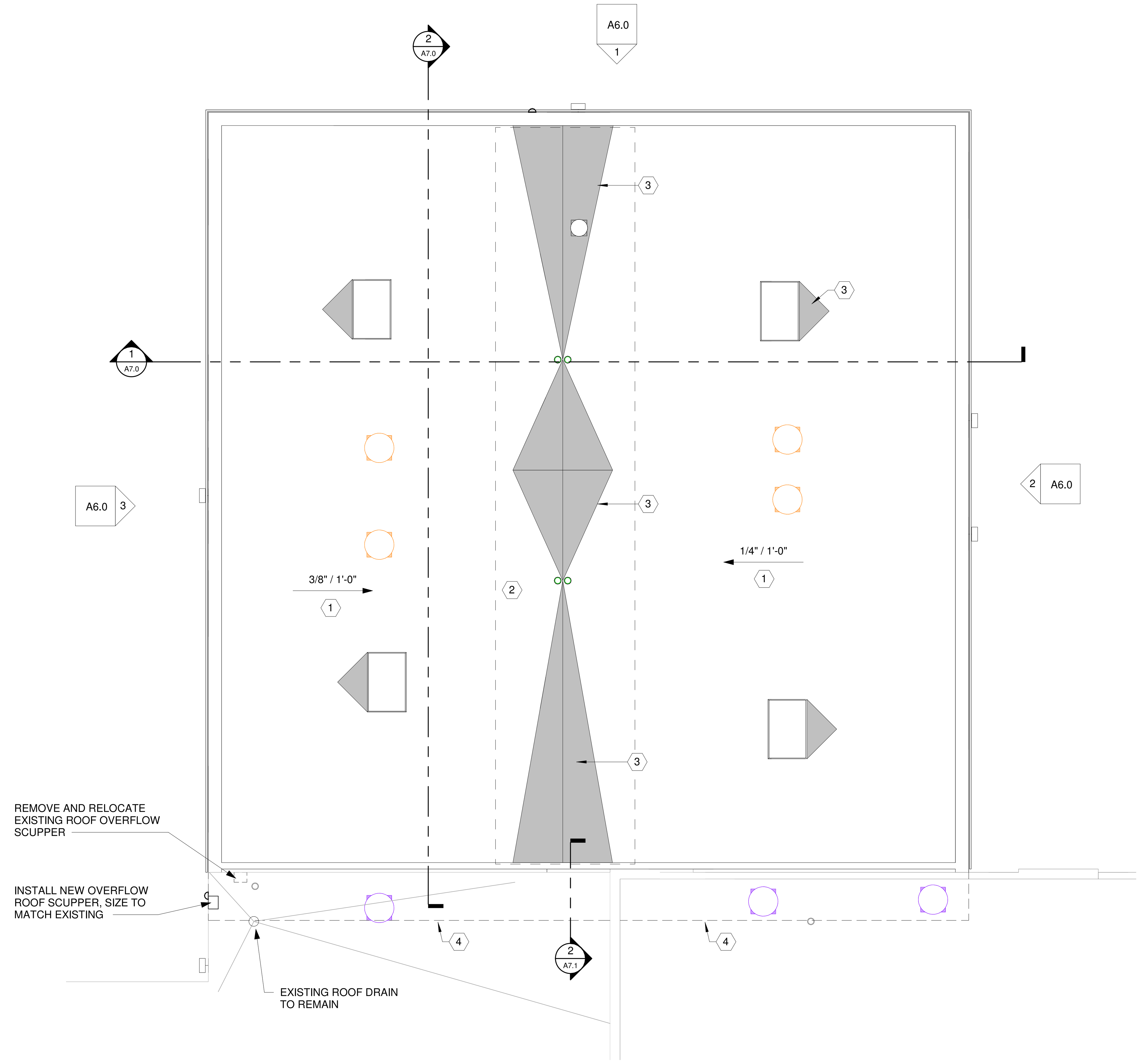
4 EQUIPMENT RAIL (SINGLE-PLY ROOFING)
1 1/2" = 1'-0"



3 PIPE AND CONDUIT FLASHING (SINGLE-PLY ROOFING)
1 1/2" = 1'-0"



2 ROOF ASSEMBLY 'A' (TYPICAL)
1 1/2" = 1'-0"



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NEW WORK ROOF PLAN
1/8" = 1'-0"

KEYNOTES

1 SINGLE PLY EPDM ROOF SYSTEM AS SPECIFIED. PROVIDE TAPERED INSULATION AS REQUIRED TO DRAIN.
2 ROOF DRAIN AND OVERFLOW. TAPER TO DRAIN.
3 TAPERED INSULATION SADDLES AS REQUIRED FOR DRAINAGE. COORDINATE WITH STRUCTURAL SLOPE.
4 NEW EPDM ROOFING MEMBRANE TO LAP OVER AND TRANSITION TO EXISTING ROOF. MAINTAIN EXISTING ROOF SLOPE.

GENERAL NOTES

1. EXISTING CONDITIONS SHOWN ON THESE DRAWINGS HAVE BEEN OBTAINED FROM EXISTING DRAWINGS AND FIELD INSPECTIONS. CONTRACTOR SHALL VERIFY EXACT LOCATIONS. REPORT DISCREPANCIES TO OWNER OR OWNERS REPRESENTATIVE BEFORE DISTURBING INSTALLATIONS.
2. HALF-TONE LINES INDICATE EXISTING CONDITIONS. DASHED LINES INDICATE DEMOLITION. BOLD LINES INDICATE NEW WORK. REFER TO KEYNOTES FOR DESCRIPTION.
3. ANY EXISTING CONDITIONS THAT ARE DISTURBED BY THE INSTALLATION OF NEW WORK ARE TO BE PATCHED/REPAIRED TO MATCH ADJACENT CONDITIONS.
4. LINES INDICATING HIGH POINTS, CANTS, ETC. ARE FOR GENERAL LAYOUT ONLY. ALL ROOFS SHALL PITCH TO ROOF DRAINS.
5. ALL MECHANICAL ITEMS AND ARE SHOWN FOR GENERAL LAYOUT ONLY. FIELD VERIFY MECHANICAL DRAWINGS TO VERIFY EXACT SIZE AND LOCATION AND ANY ADDITIONAL SCOPE OF WORK NOT SHOWN ON THIS DRAWING.
6. PROVIDE MANUFACTURER'S STANDARD ROOF TERMINATION WHEN DETAIL IS NOT AVAILABLE IN THIS PLAN SET. ALL TERMINATIONS TO COMPLY WITH MANUFACTURER'S RECOMMENDATIONS.
7. WORK SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS AND REGULATIONS.

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INTEGRATED DESIGNS, INC.

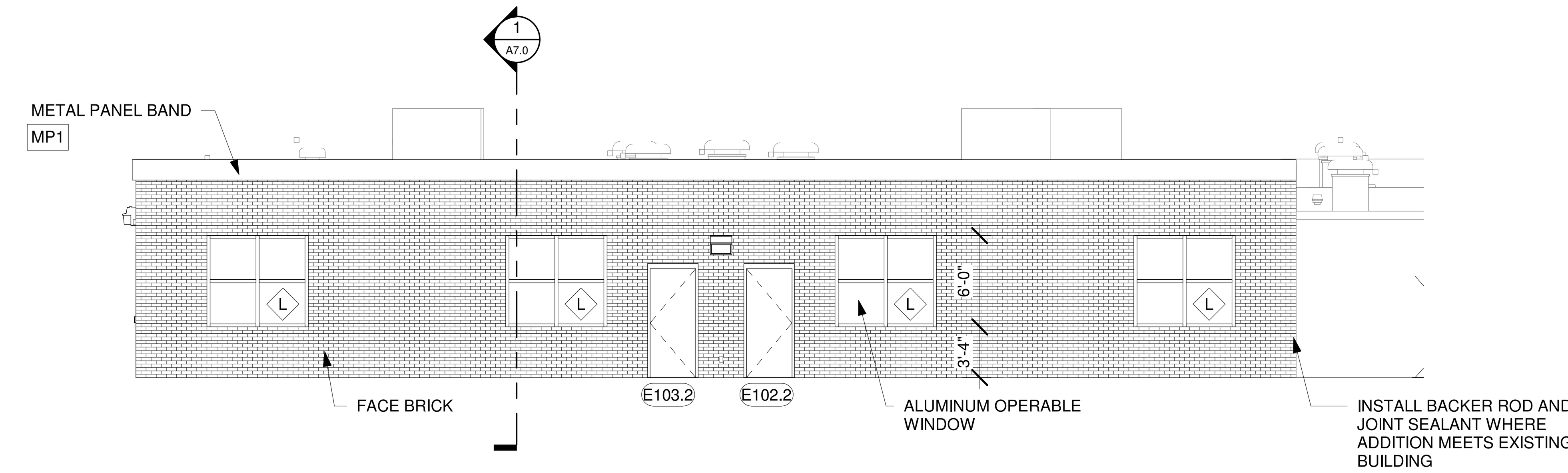
BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12/20/24

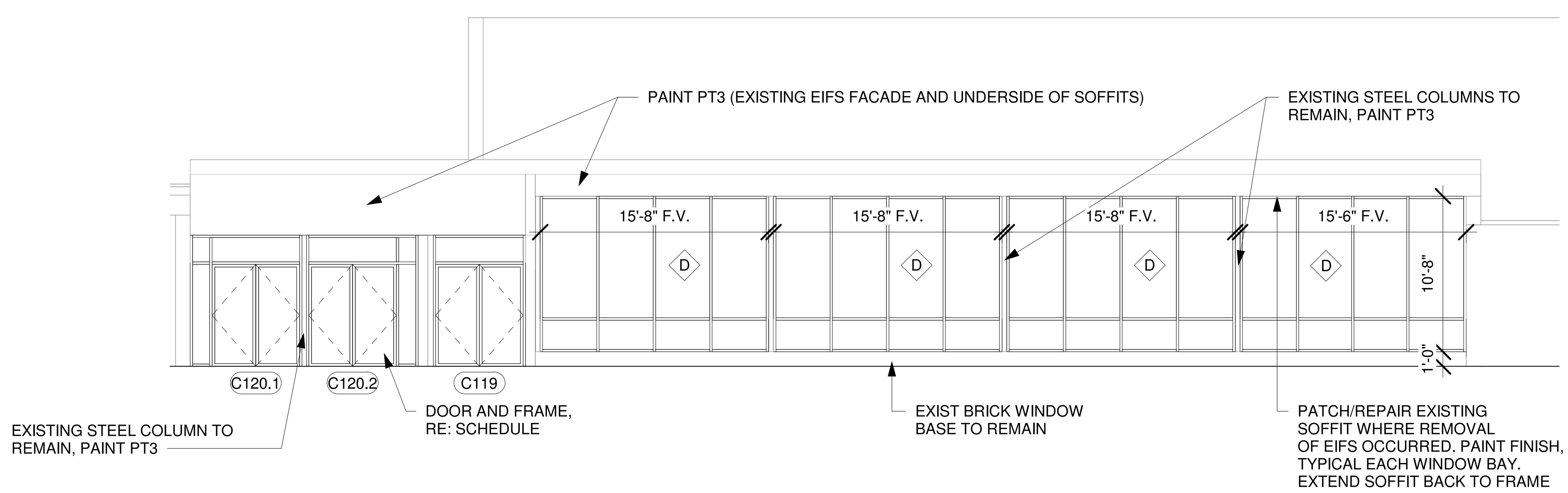
	BY
DESIGN	-
DRAWN	-
CHECKED	-
APPROVED	-

ROOF PLAN

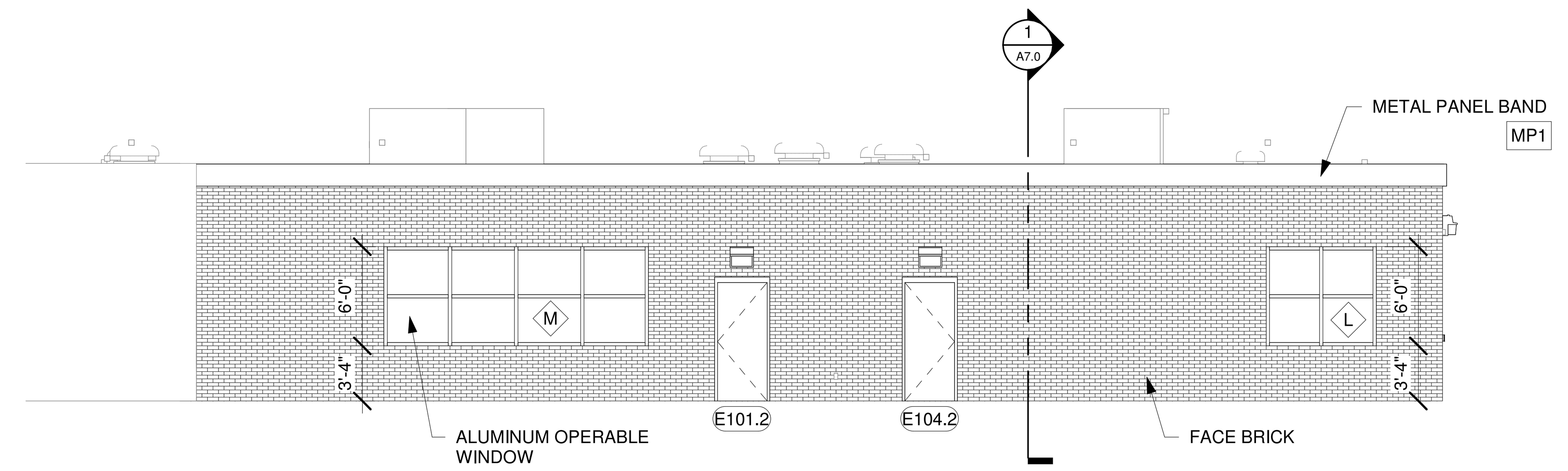
A5.0



3 WEST EXTERIOR ELEVATION - ADDITION
1/8" = 1'-0"



5 SOUTH EXTERIOR ELEVATION CAFETERIA
1/8" = 1'-0"



2 EAST EXTERIOR ELEVATION - ADDITION
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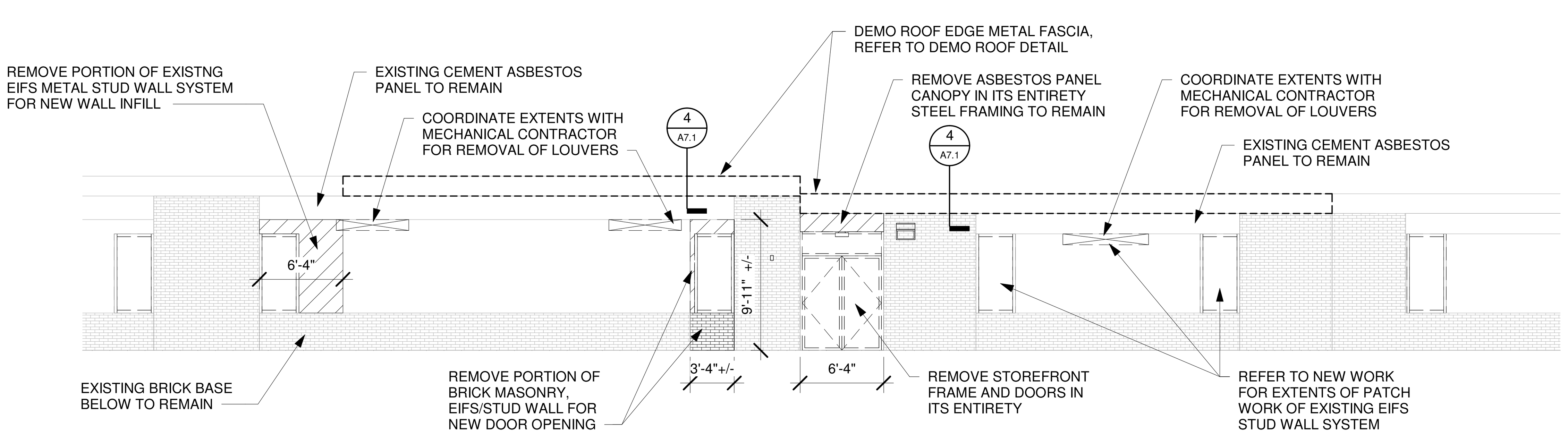
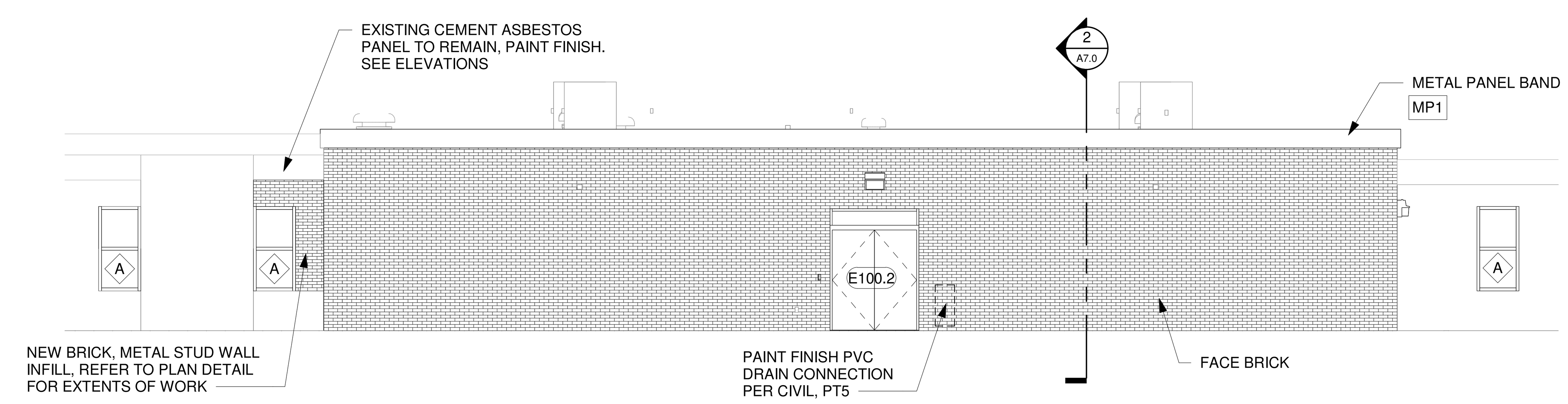


4 NORTH EXTERIOR ELEVATION DEMO
1/8" = 1'-0"



1 NORTH EXTERIOR ELEVATION - ADDITION
1/8" = 1'-0"

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IDI INTEGRATED DESIGNS, INC.

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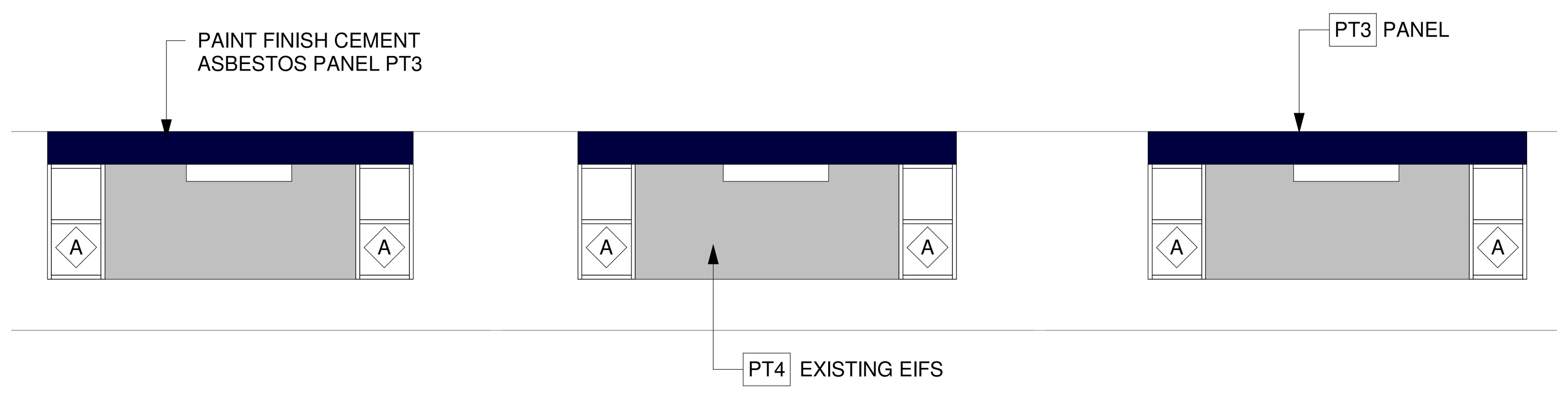
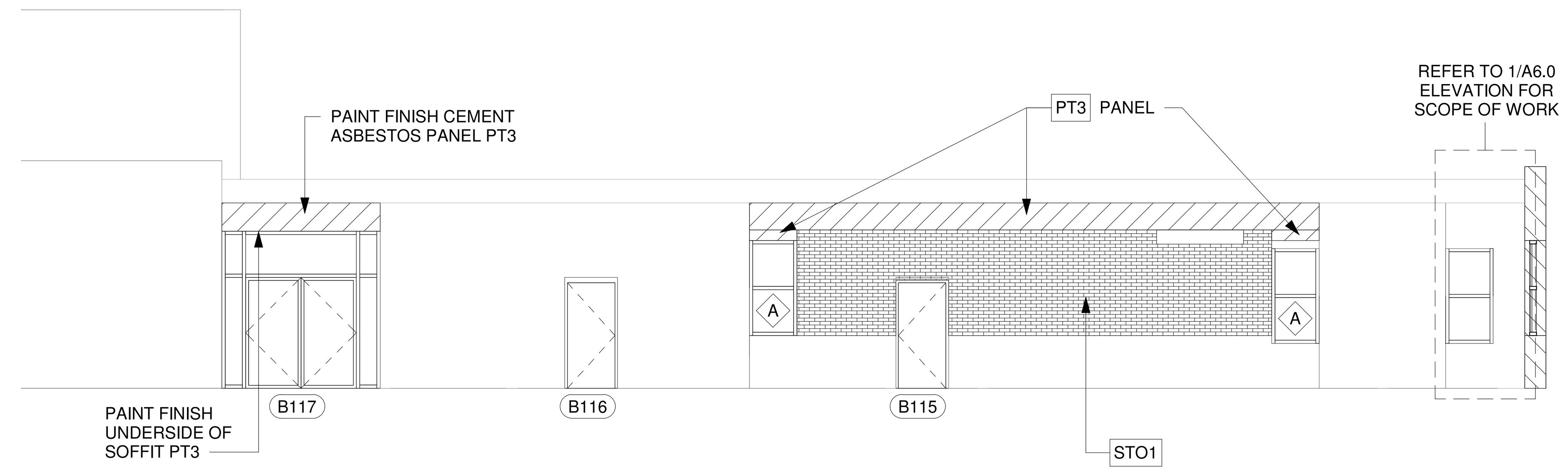
EXTERIOR ELEVATIONS

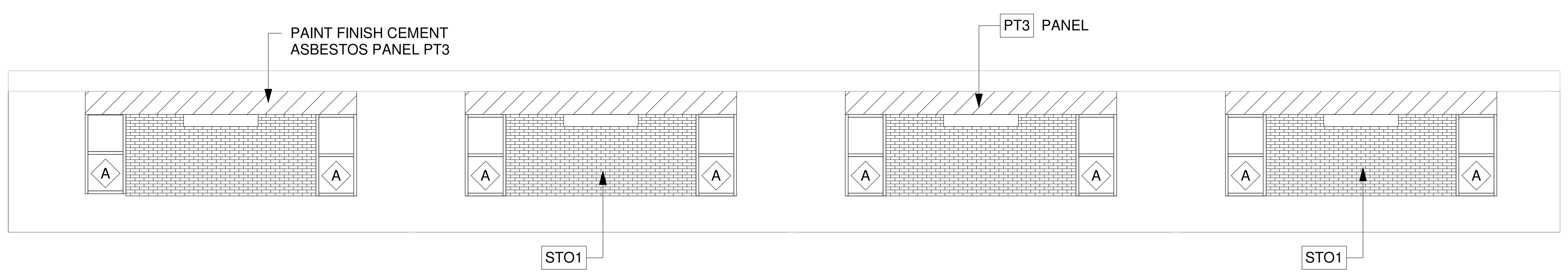
A6.0



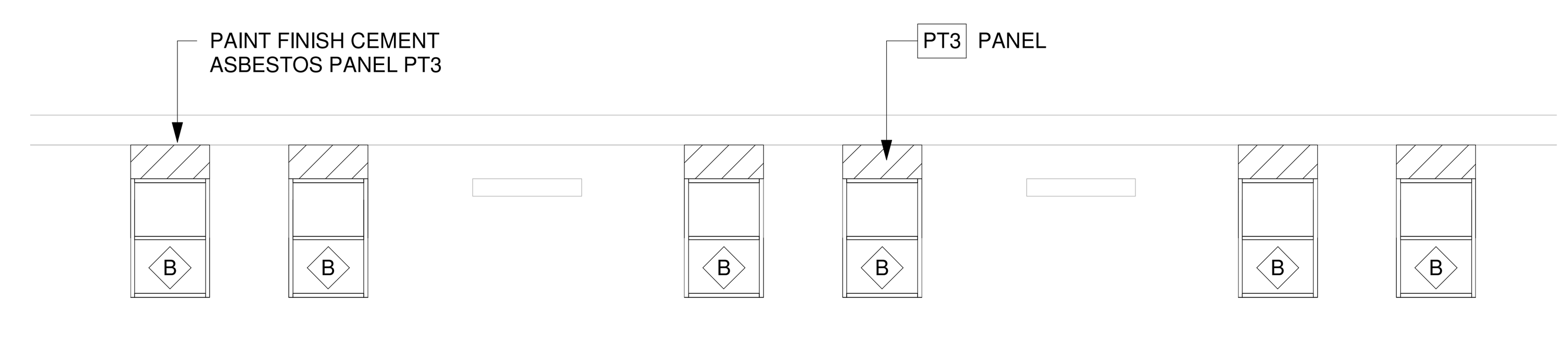
5 COURTYARD ELEVATION (TYP)
1/8" = 1'-0"



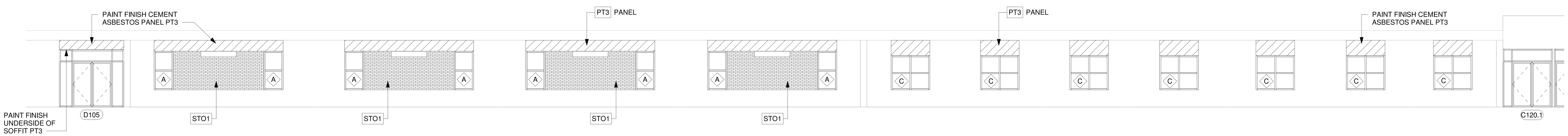
4 NORTH EXTERIOR ELEVATION (CONT.)
1/8" = 1'-0"



3 NORTH EXTERIOR ELEVATION
1/8" = 1'-0"



2 WEST EXTERIOR ELEVATION TYP
1/8" = 1'-0"



1 SOUTH EXTERIOR ELEVATION
1/8" = 1'-0"

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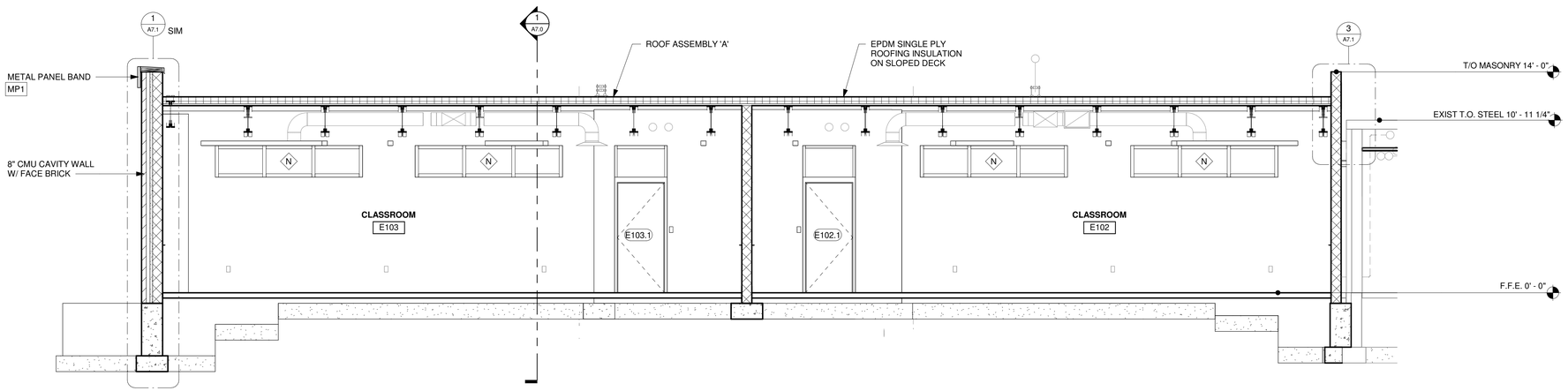
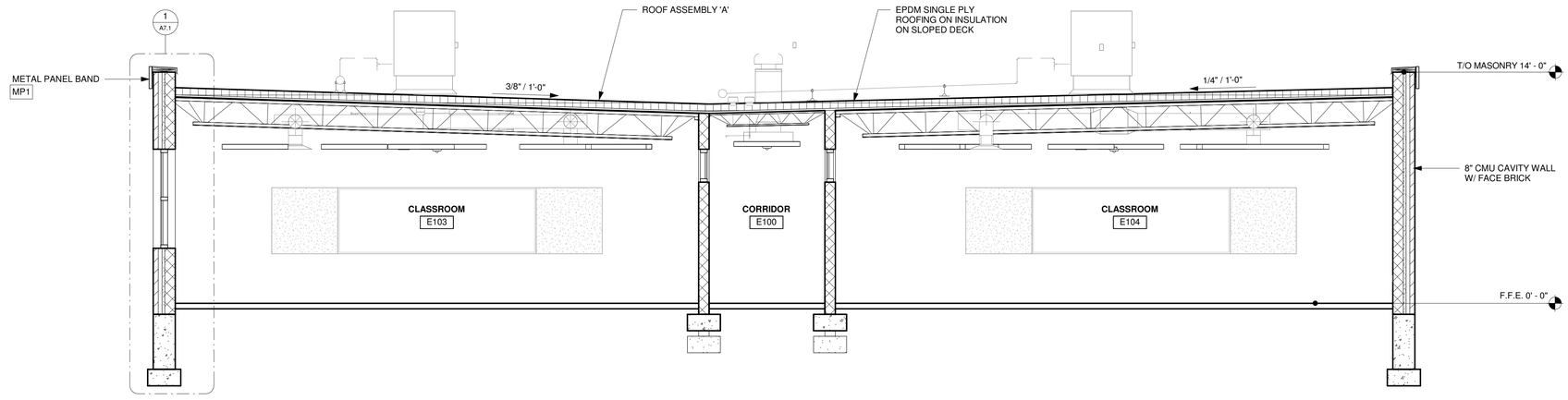
EXTERIOR ELEVATIONS

A6.1



2 BUILDING SECTION 2

1/4" = 1'-0"



1 BUILDING SECTION

1/4" = 1'-0"

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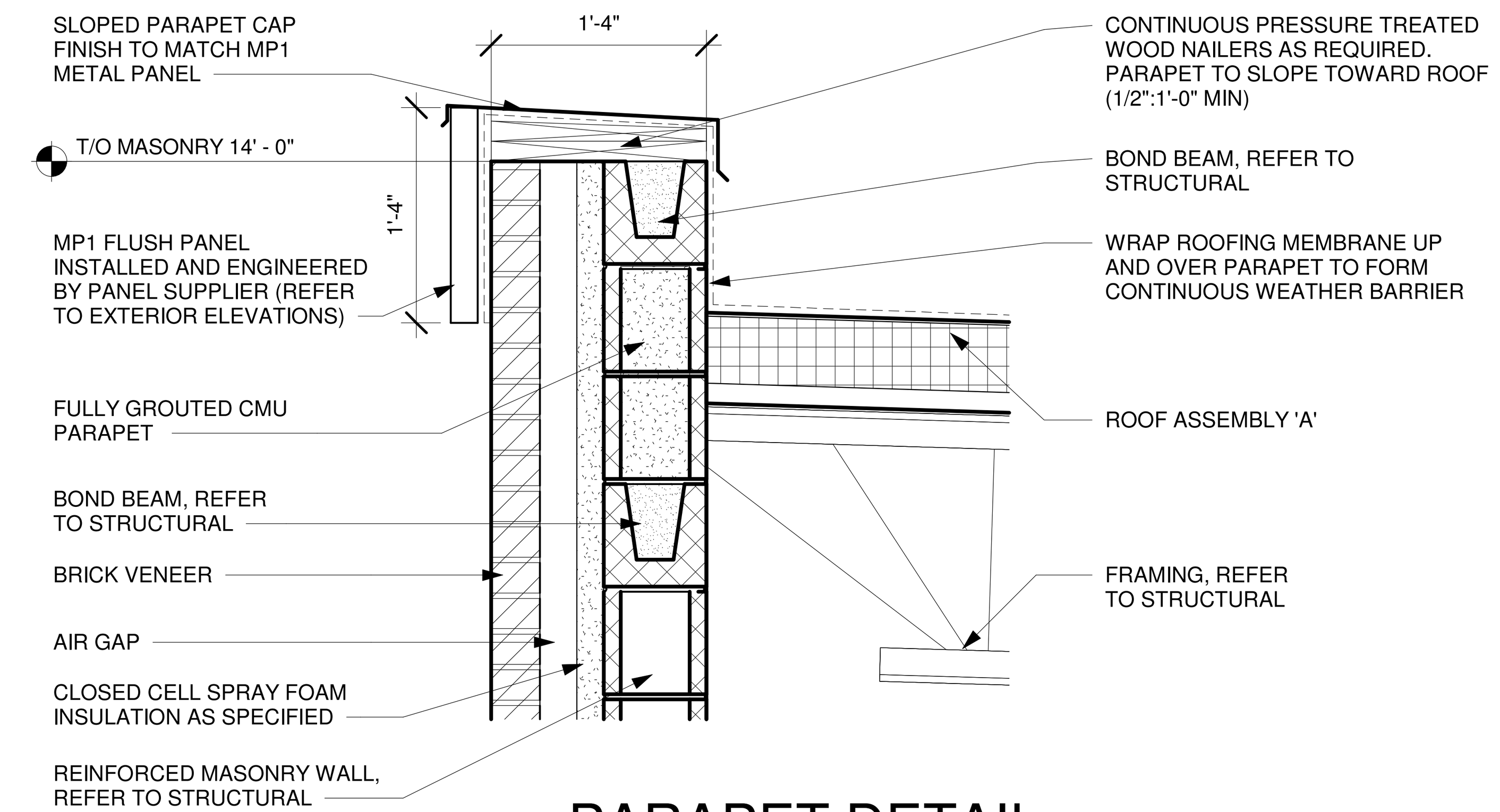
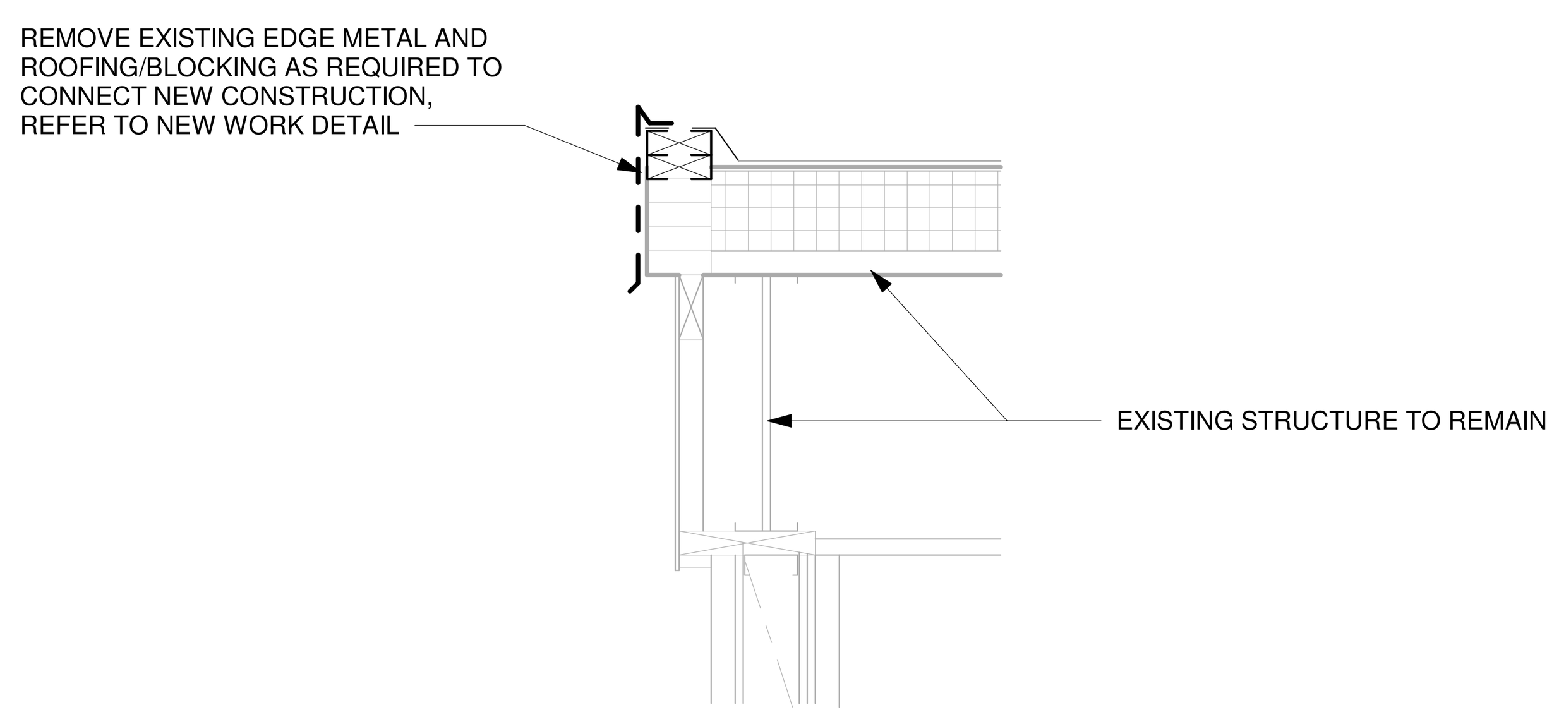
BUILDING SECTIONS

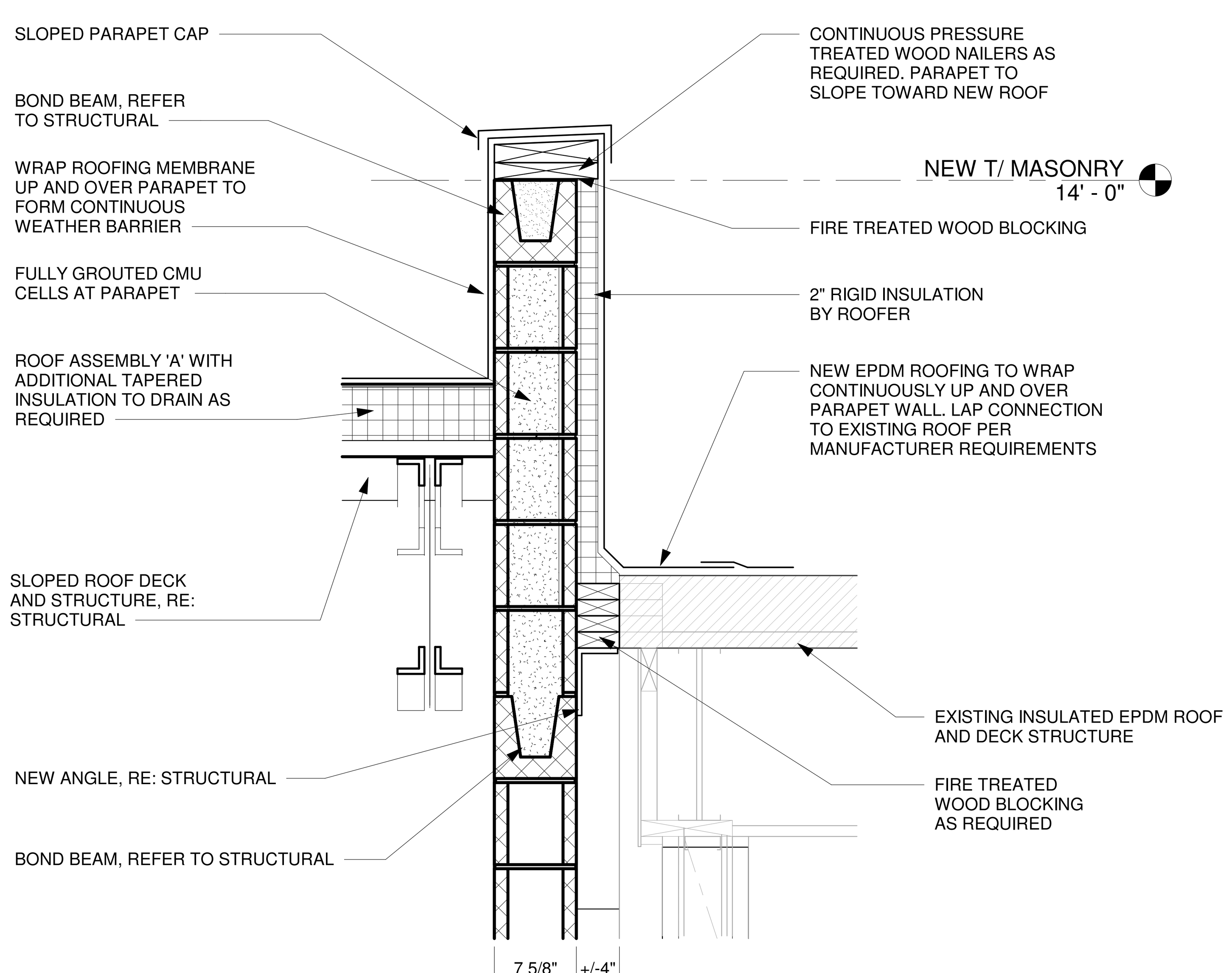
A7.0



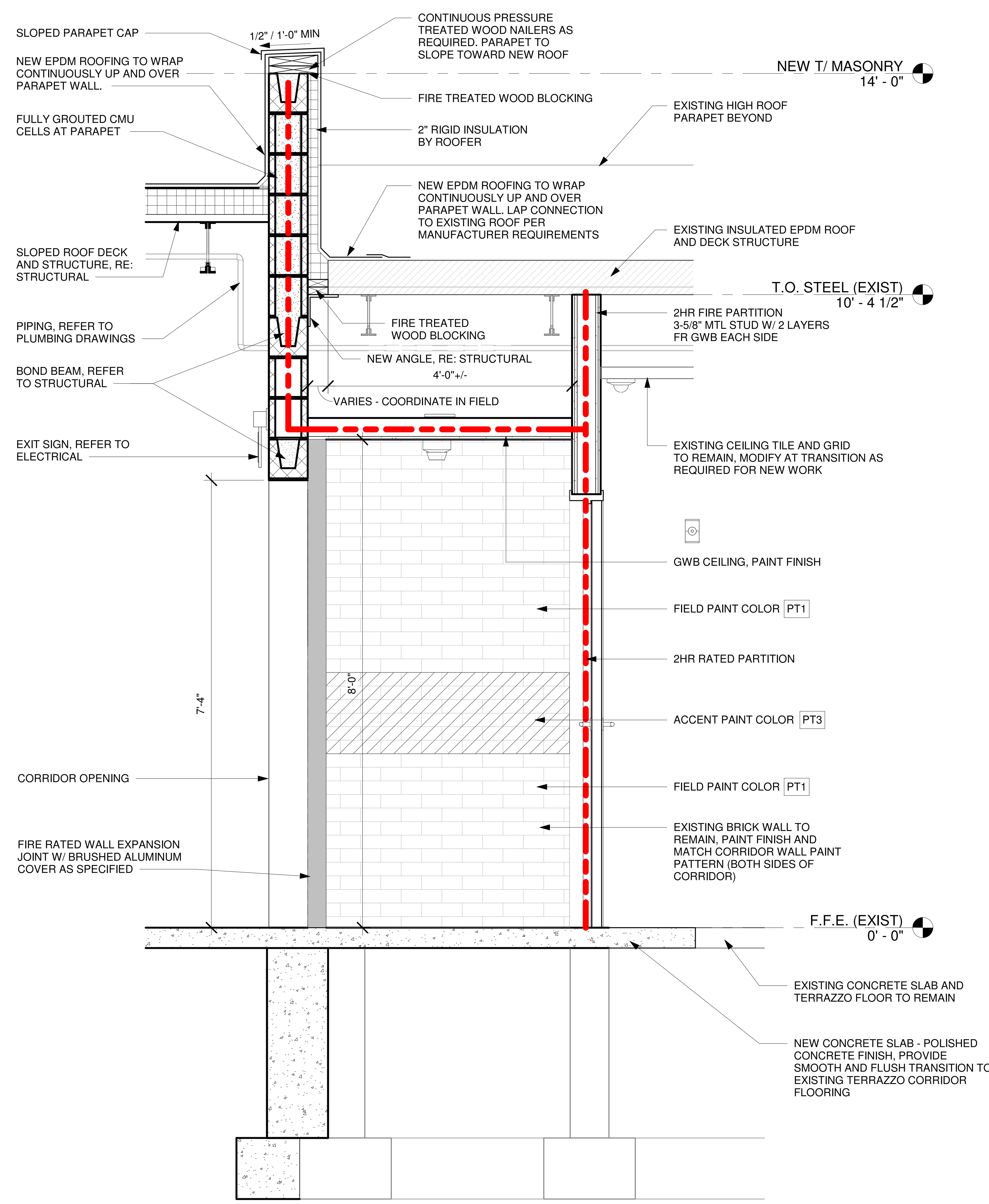
6 PARAPET DETAIL
1" = 1'-0"



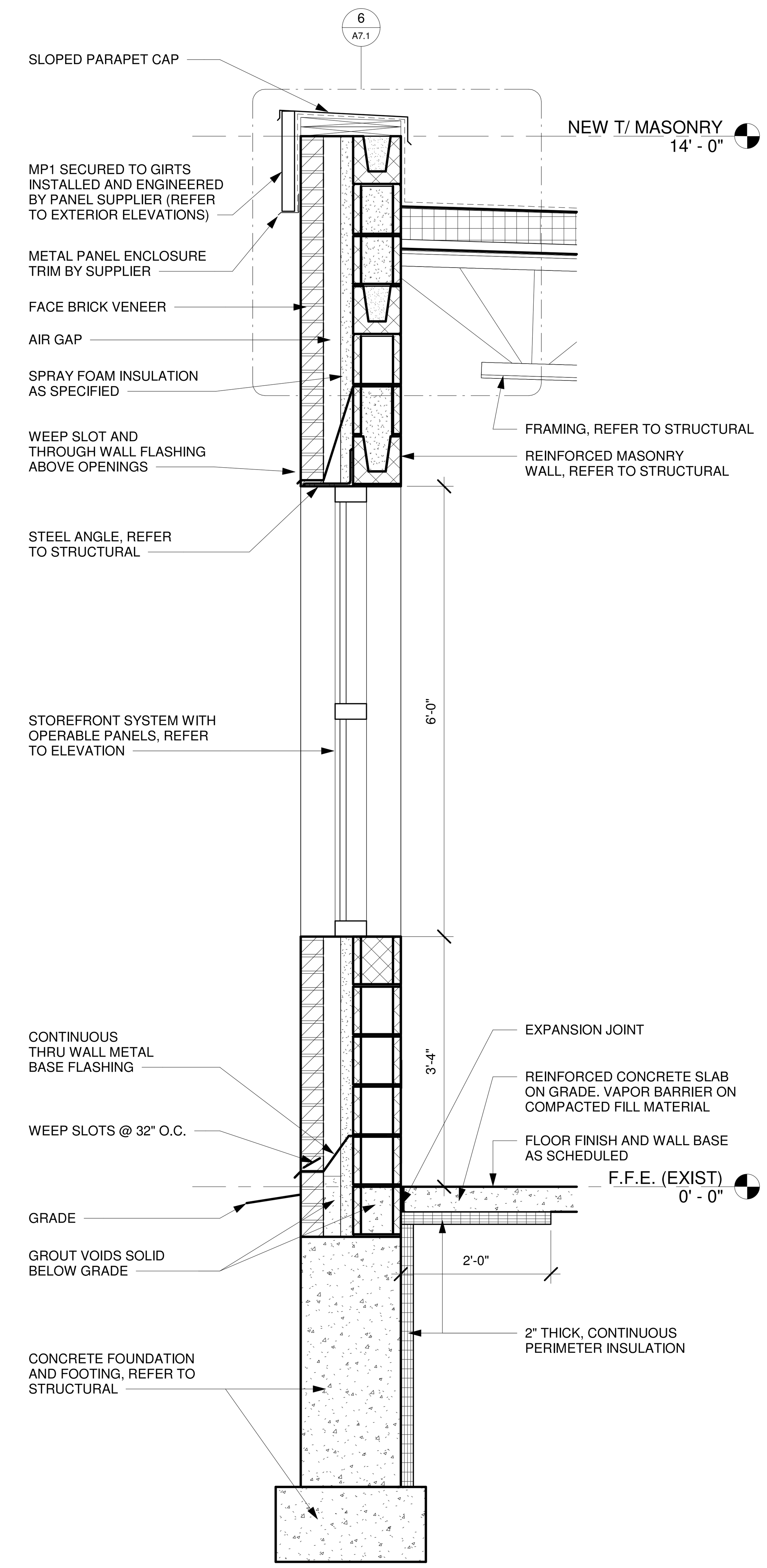
4 TYPICAL EDGE DEMOLITION DETAIL
1" = 1'-0"



3 ROOF DETAIL
1" = 1'-0"



2 WALL SECTION
3/4" = 1'-0"



1 WALL SECTION
3/4" = 1'-0"

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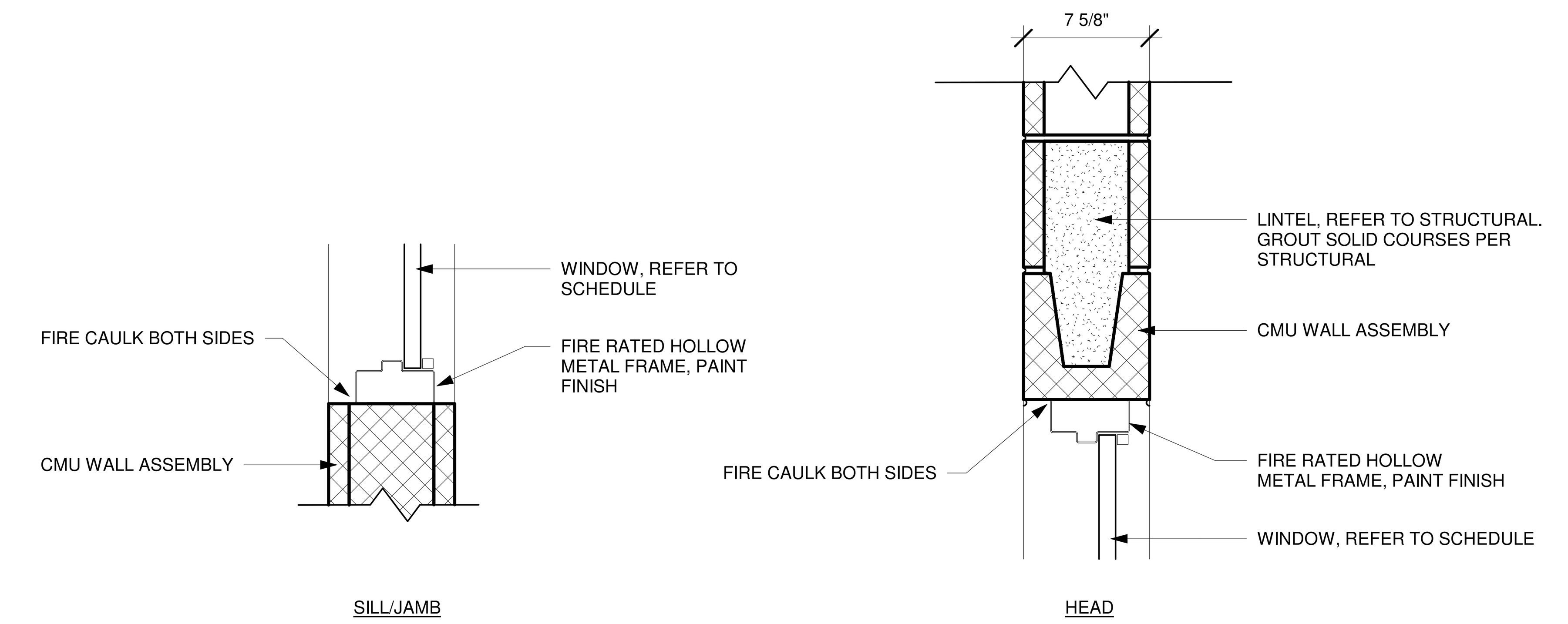
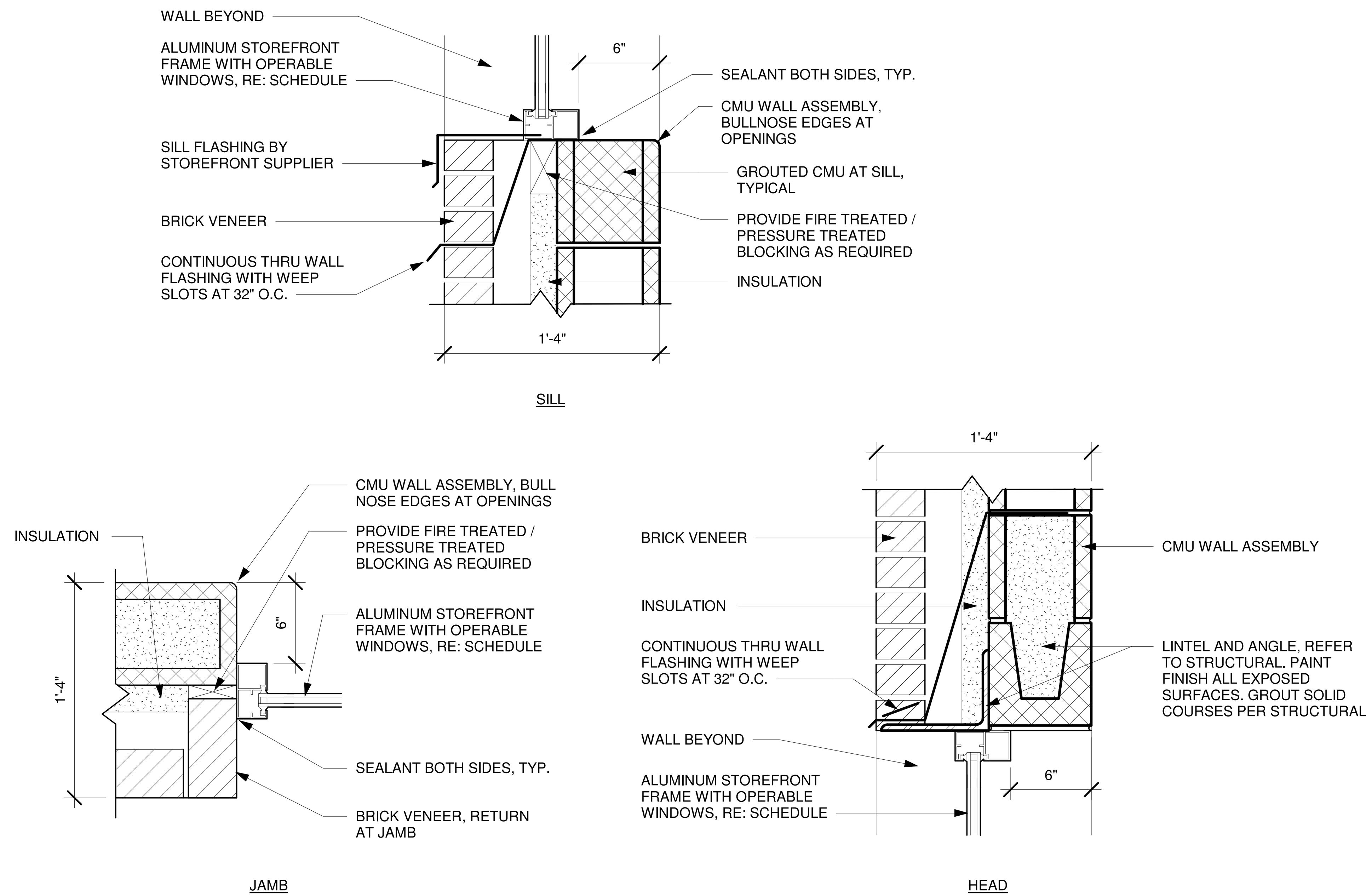
WALL SECTIONS

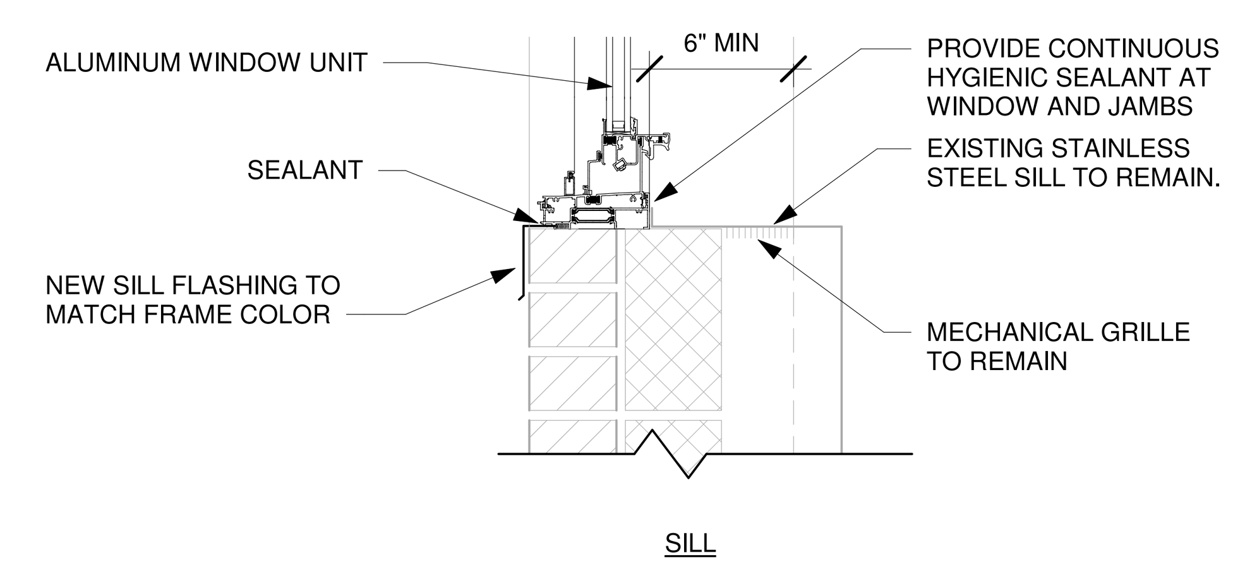
A7.1



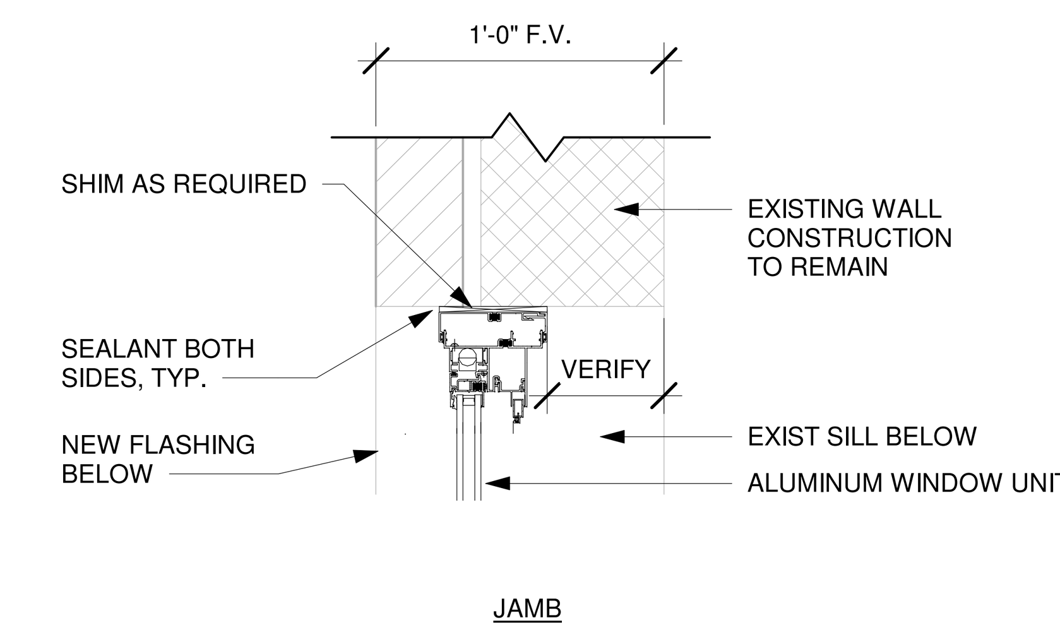
14 WINDOW DETAIL
1 1/2" = 1'-0"



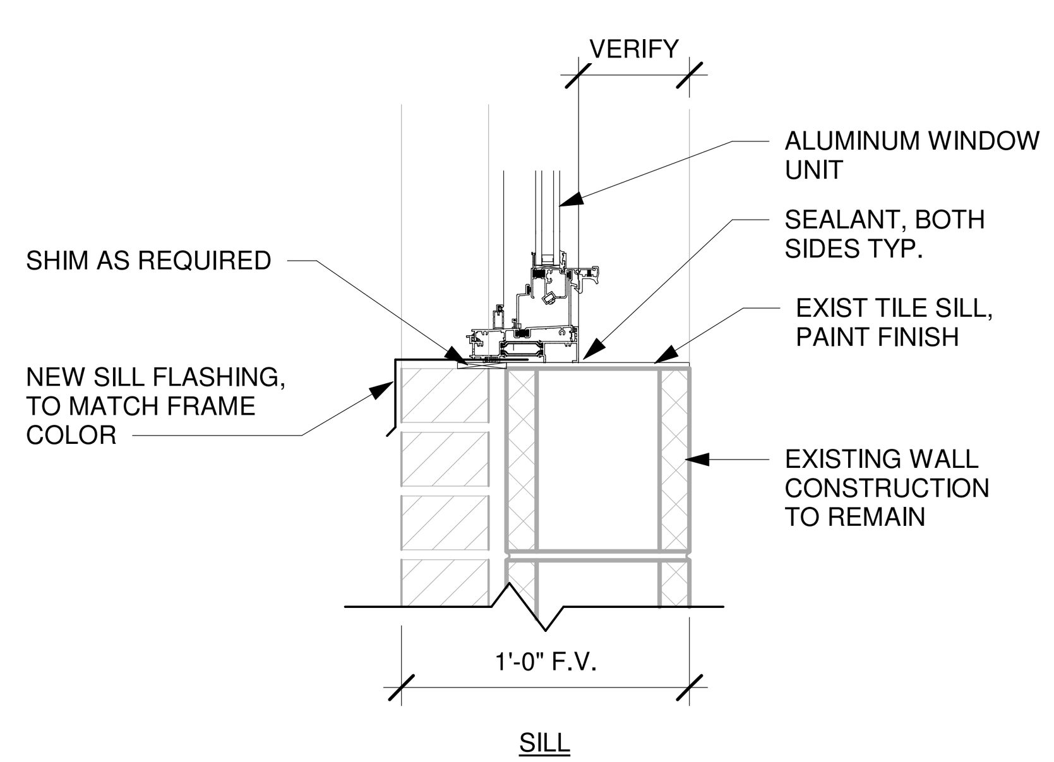
13 WINDOW DETAIL
1 1/2" = 1'-0"



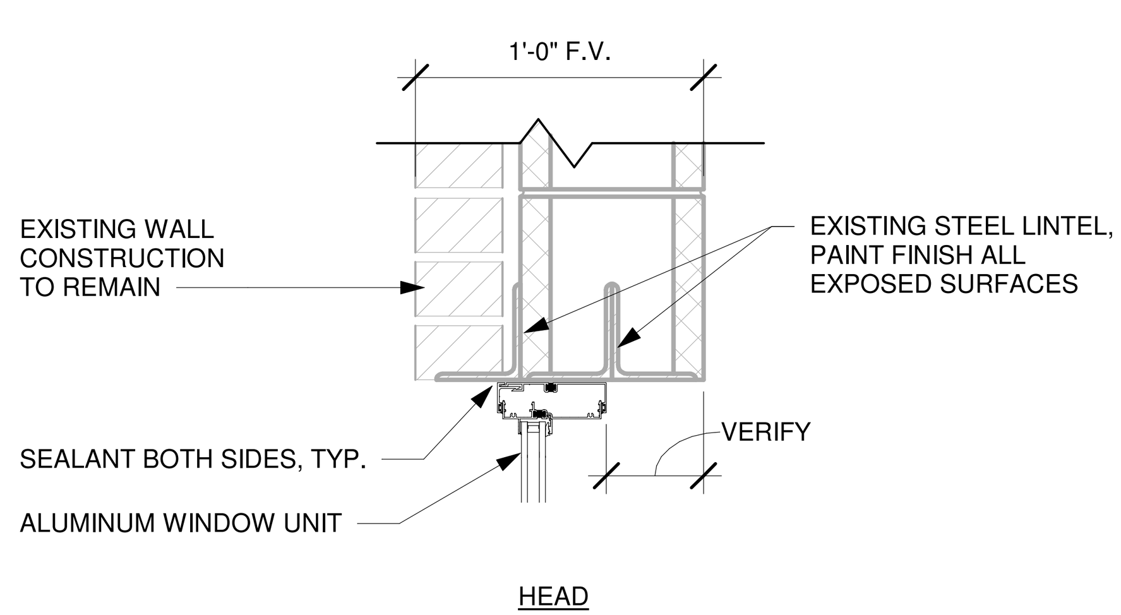
12 WINDOW DETAIL
1 1/2" = 1'-0"



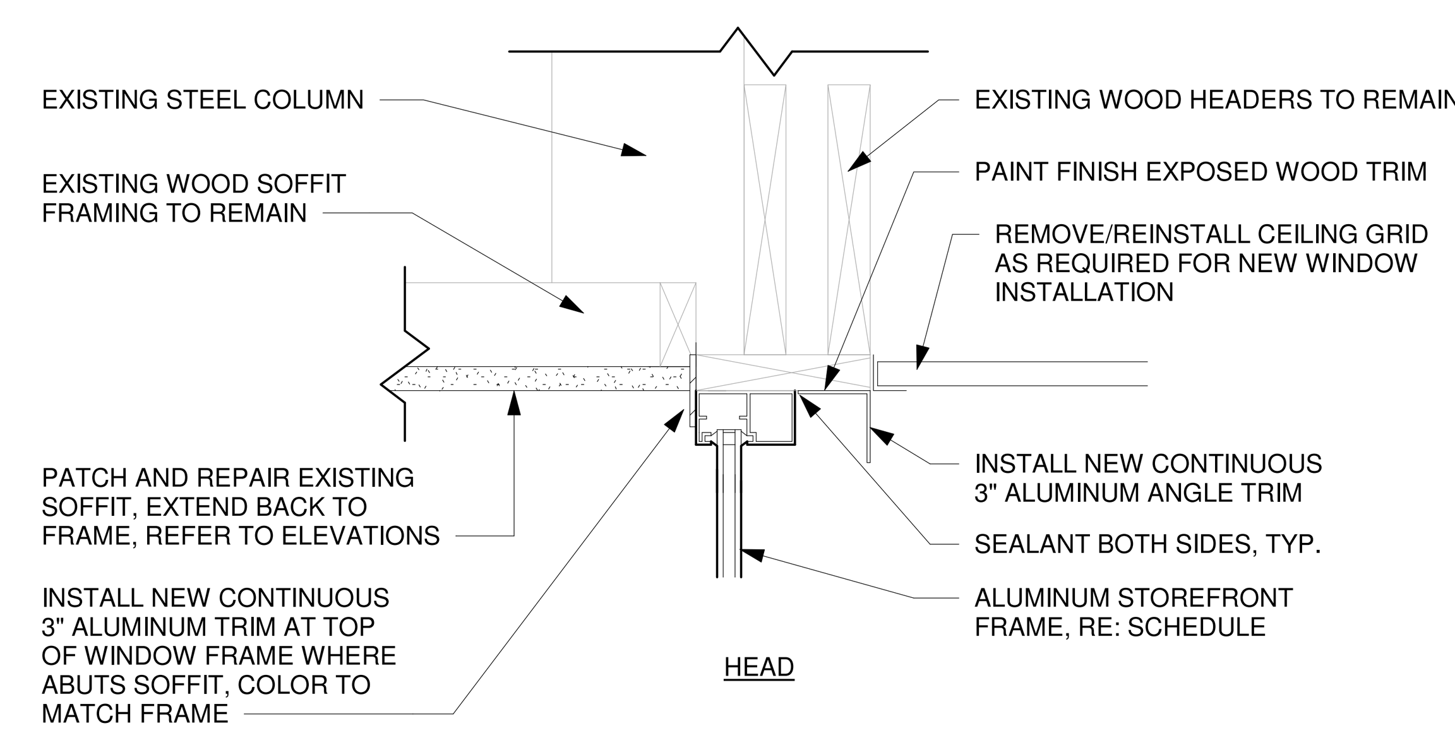
11 WINDOW DETAIL
1 1/2" = 1'-0"



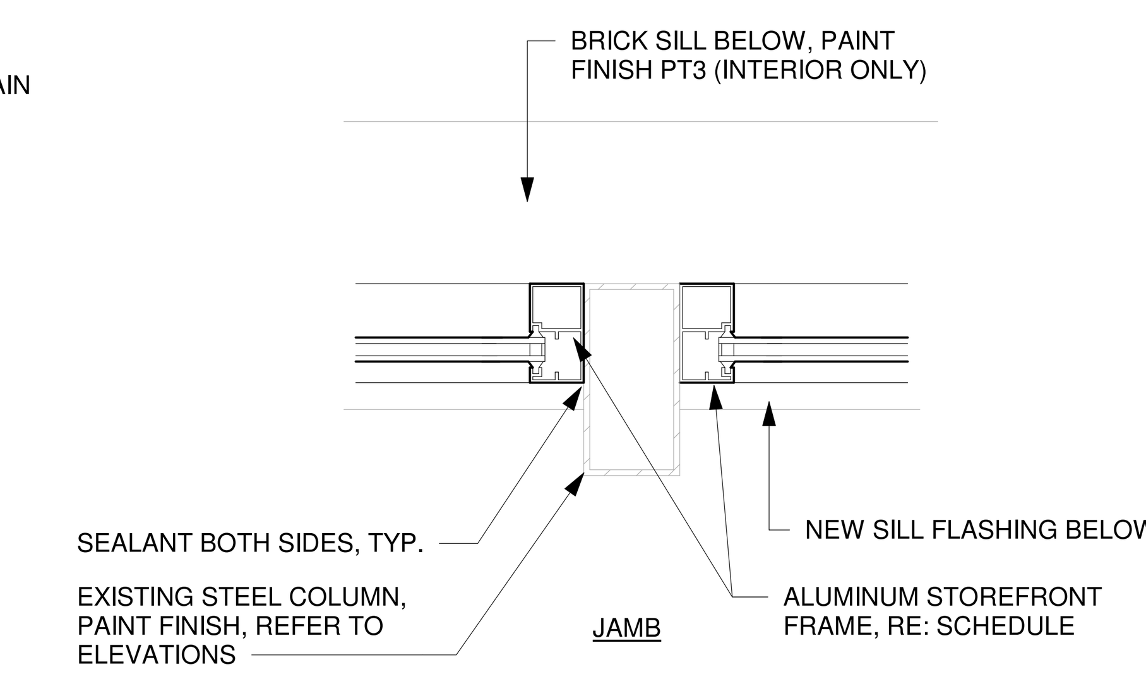
10 WINDOW DETAIL
1 1/2" = 1'-0"



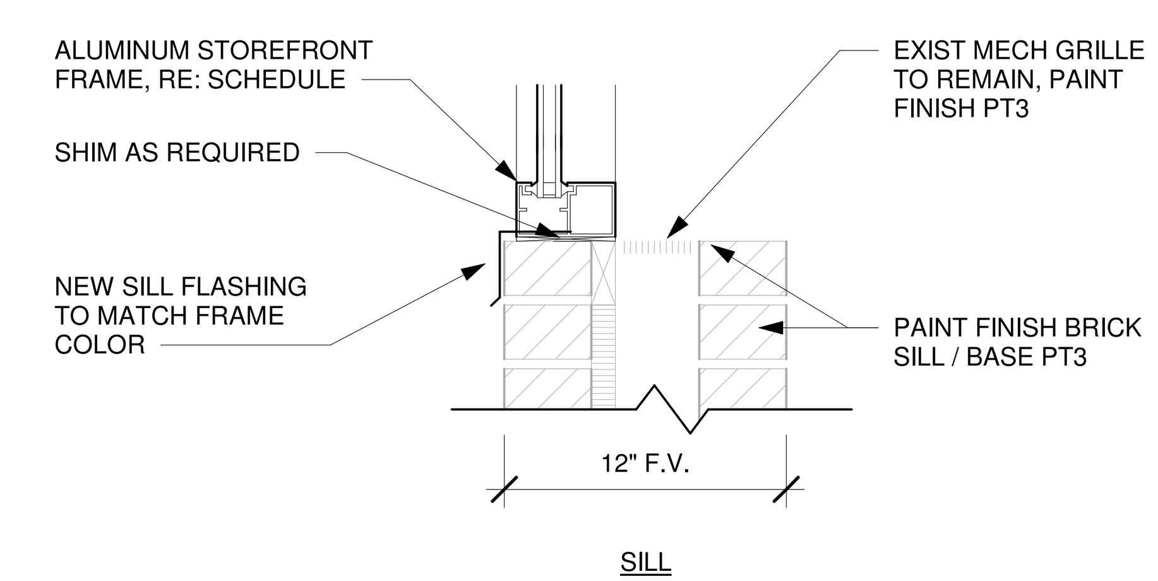
9 WINDOW DETAIL
1 1/2" = 1'-0"



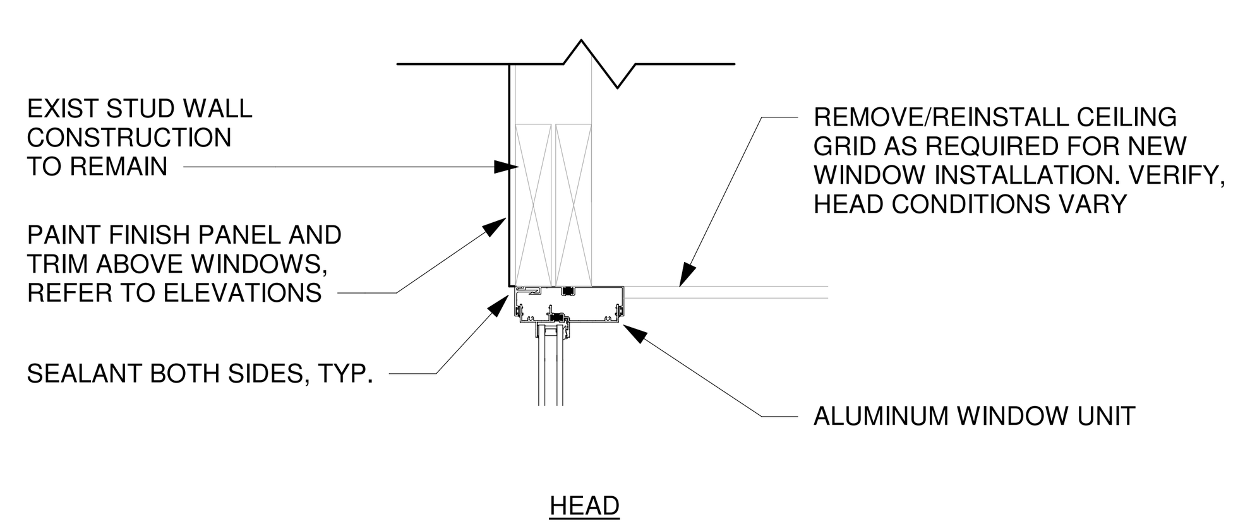
8 WINDOW DETAIL
1 1/2" = 1'-0"



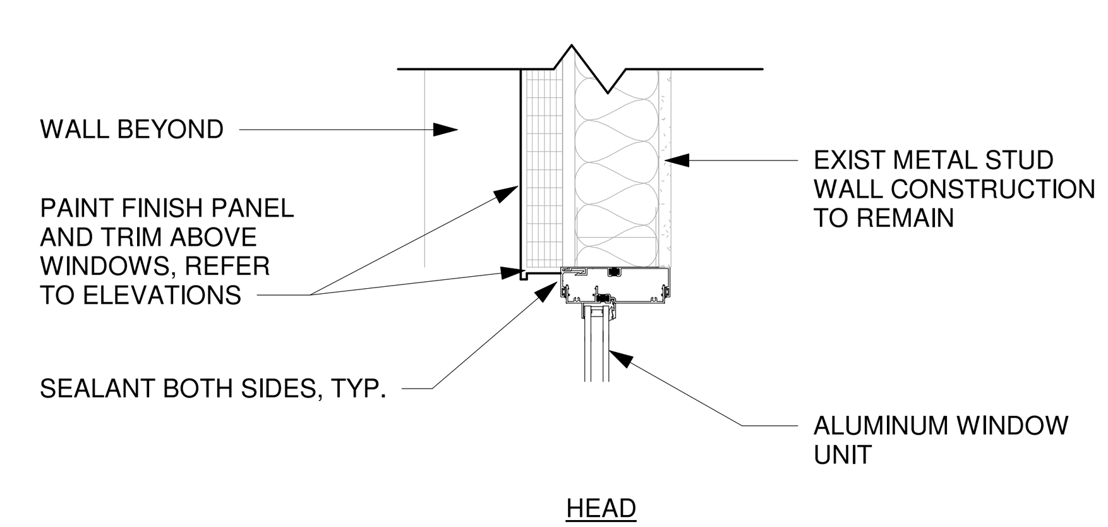
7 WINDOW DETAIL
1 1/2" = 1'-0"



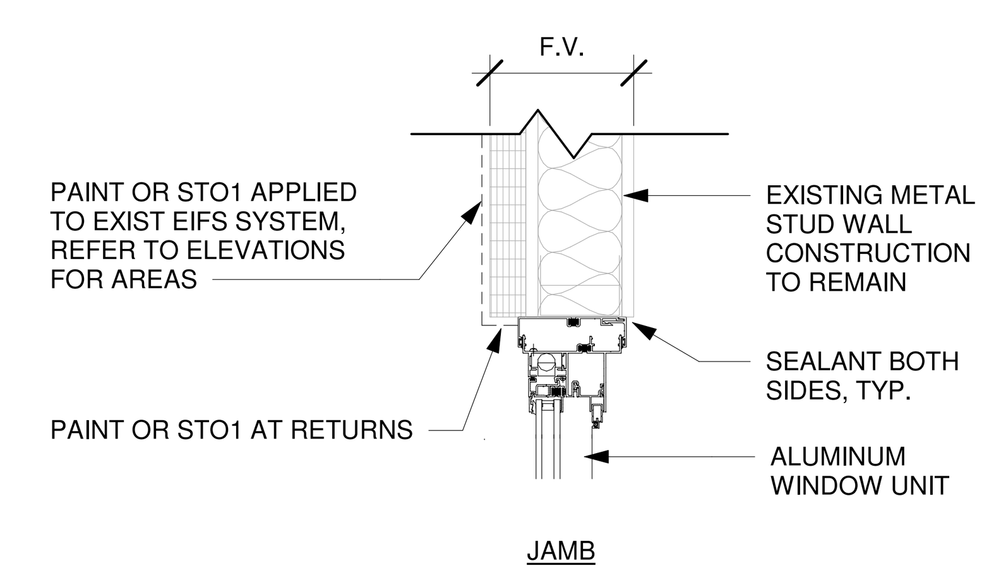
6 WINDOW DETAIL
1 1/2" = 1'-0"



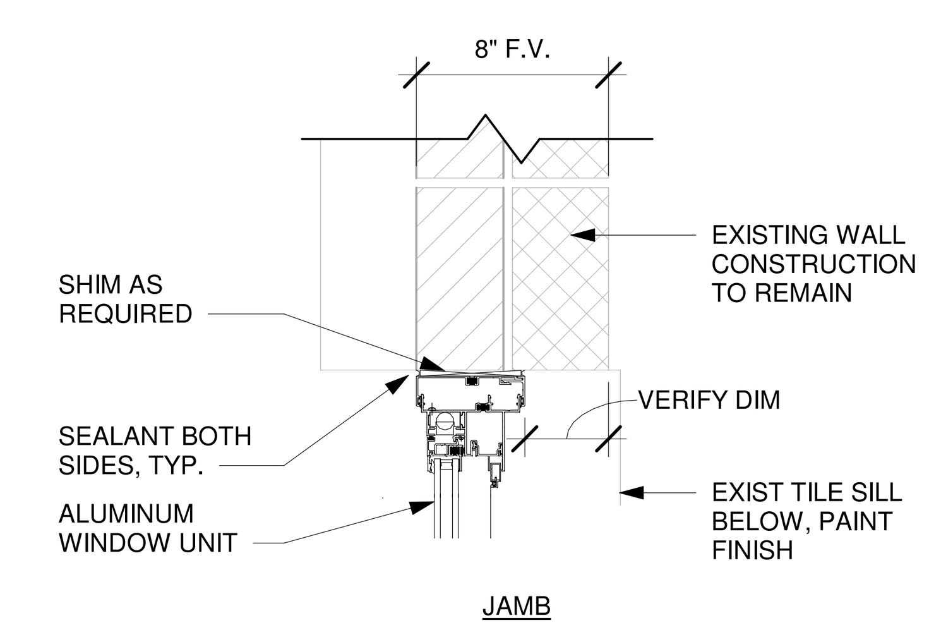
5 WINDOW DETAIL
1 1/2" = 1'-0"



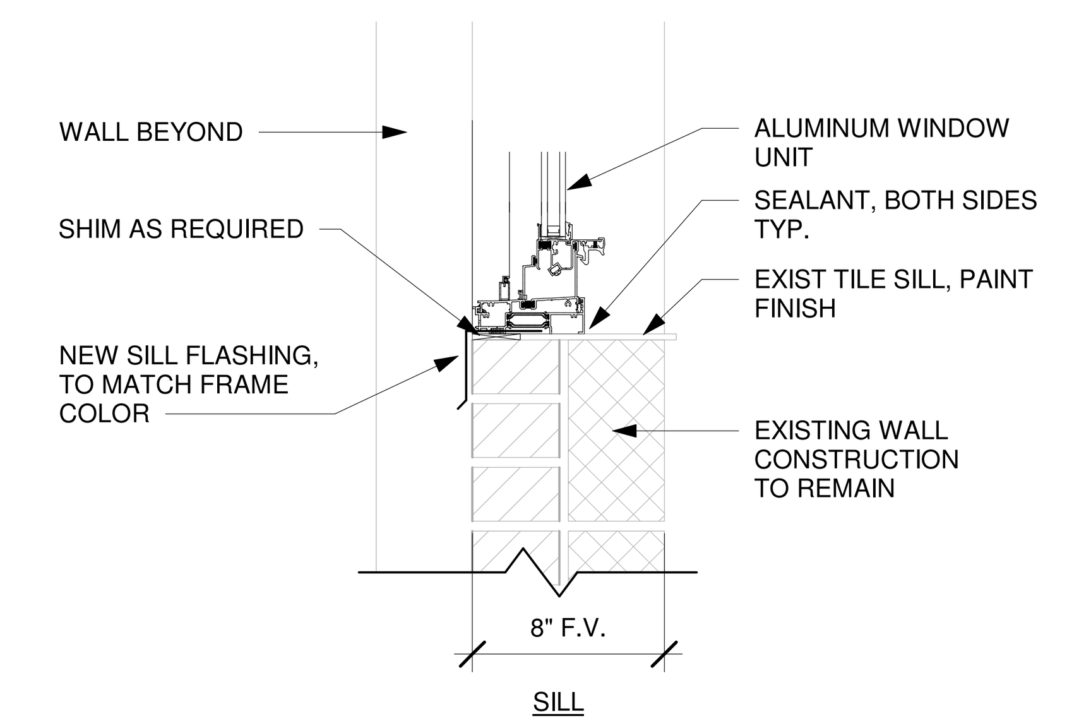
4 WINDOW DETAIL
1 1/2" = 1'-0"



3 WINDOW DETAIL
1 1/2" = 1'-0"



2 WINDOW DETAIL
1 1/2" = 1'-0"



1 WINDOW DETAIL
1 1/2" = 1'-0"

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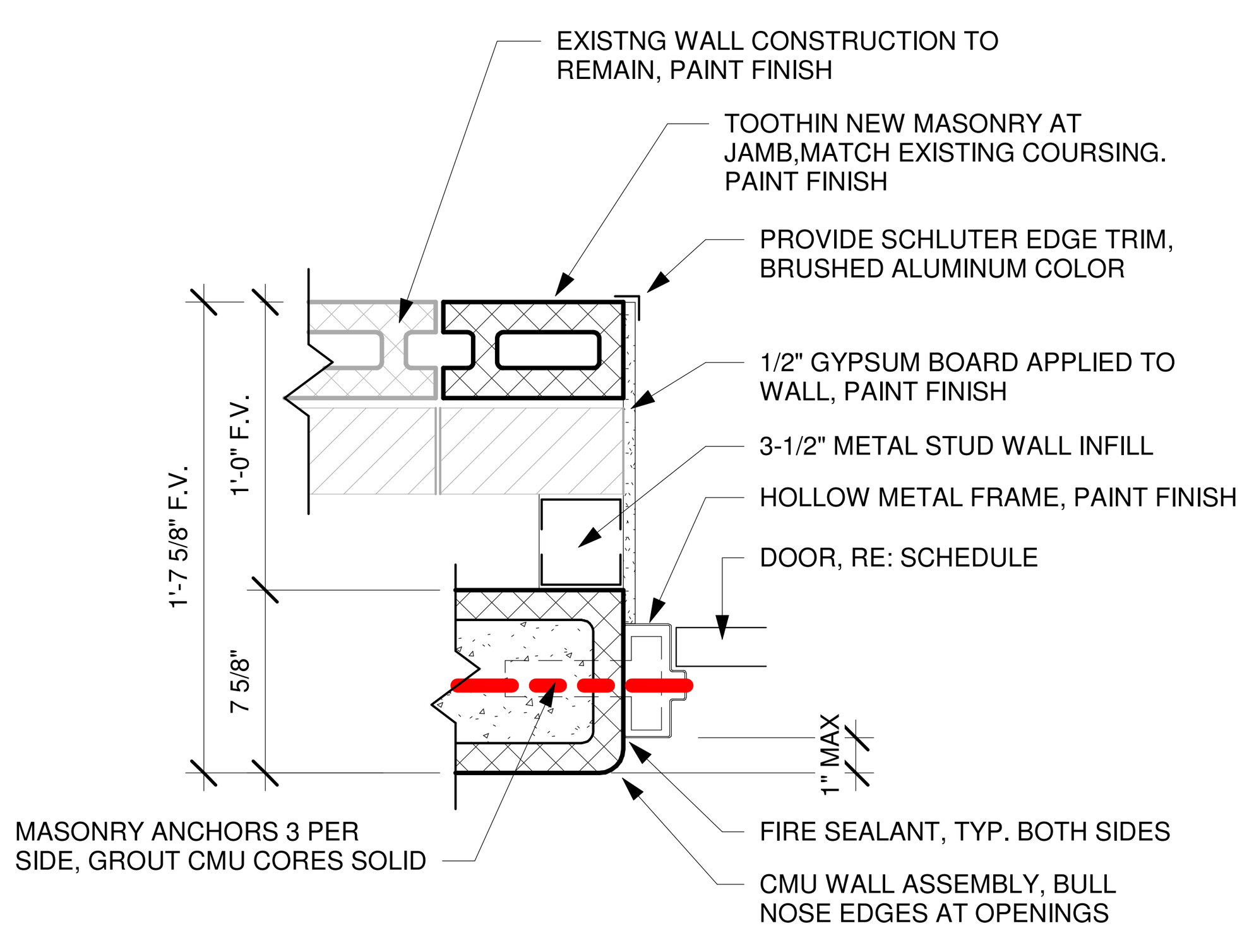
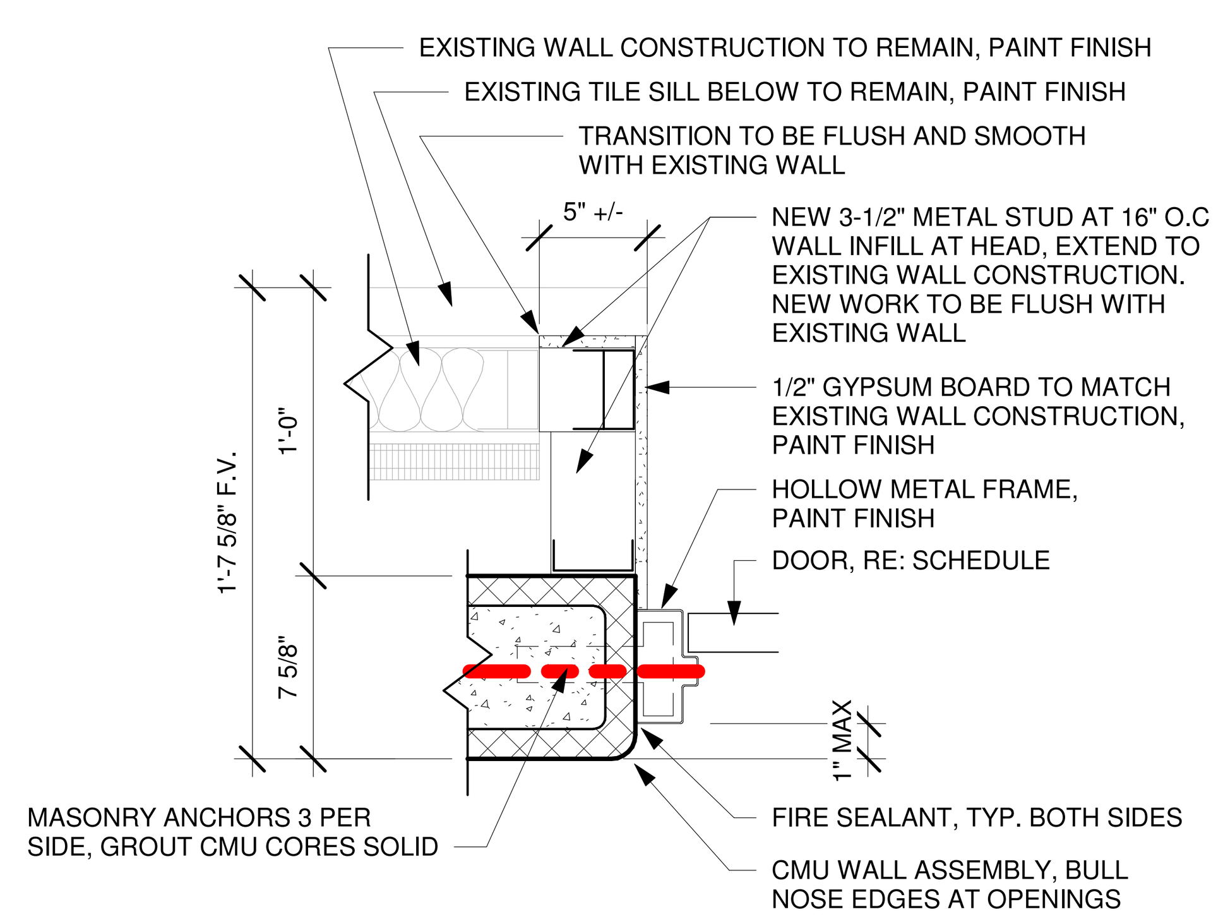
WALL OPENING DETAILS

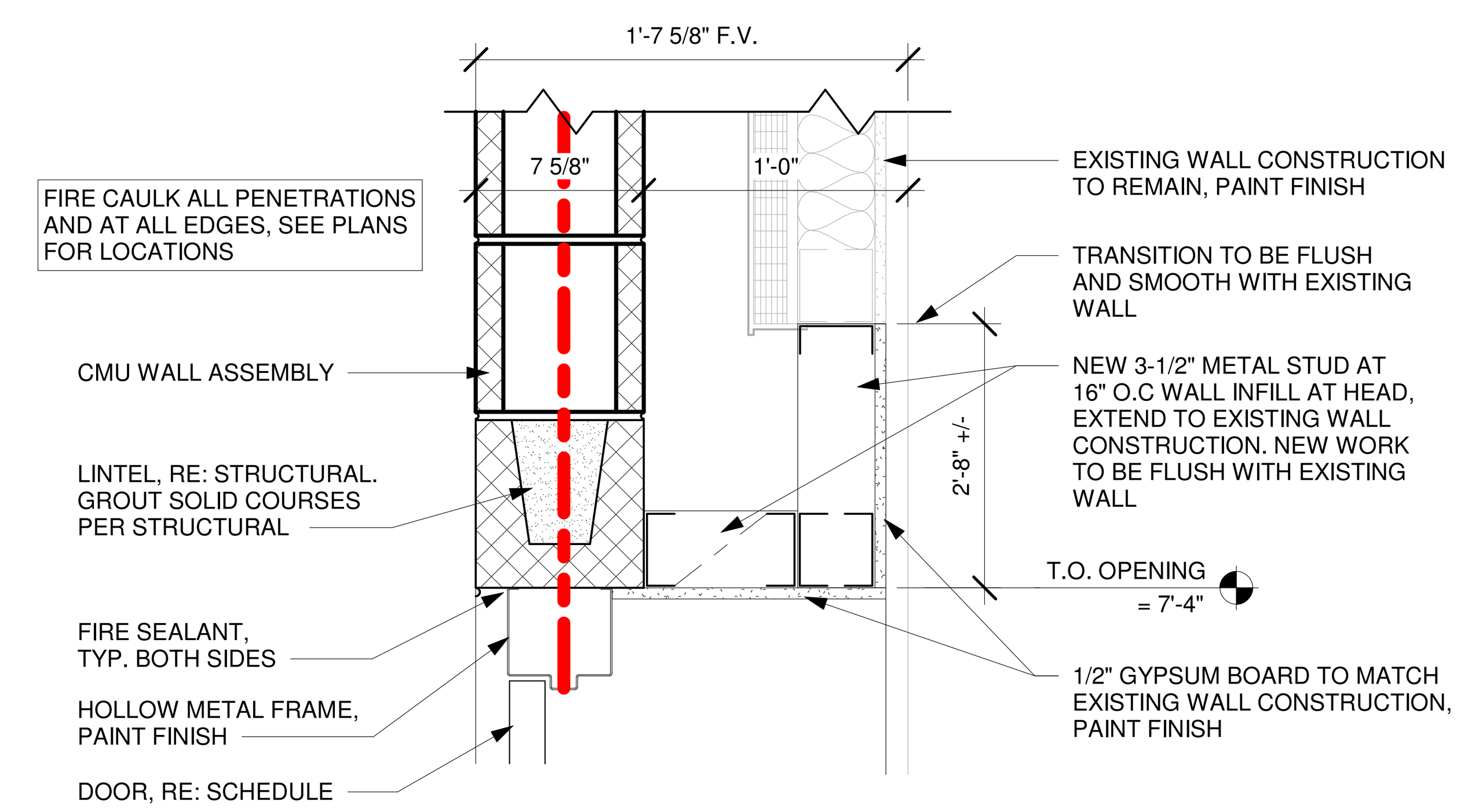
A7.2



JAMB @ LOW WALL

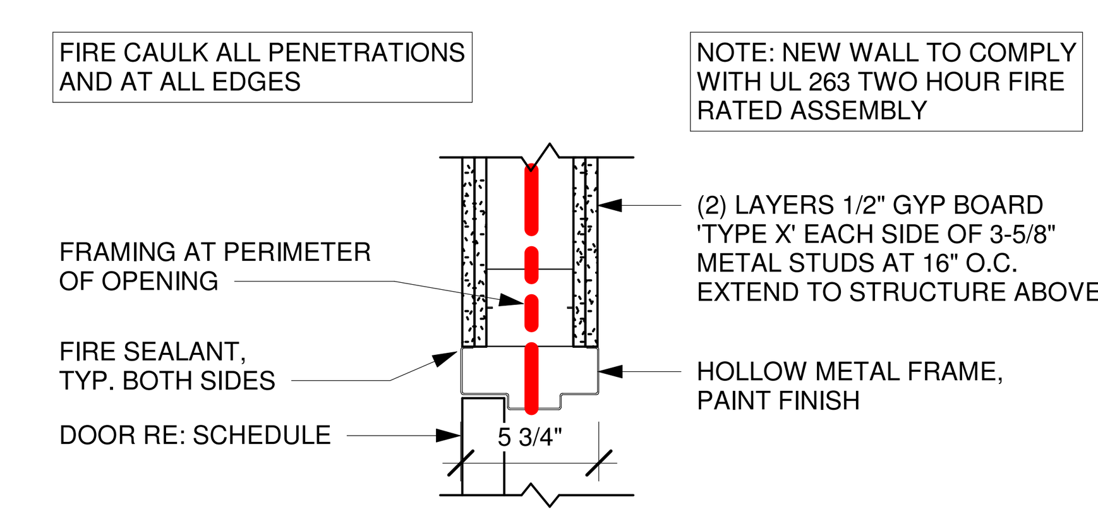


JAMB @ HIGH WALL



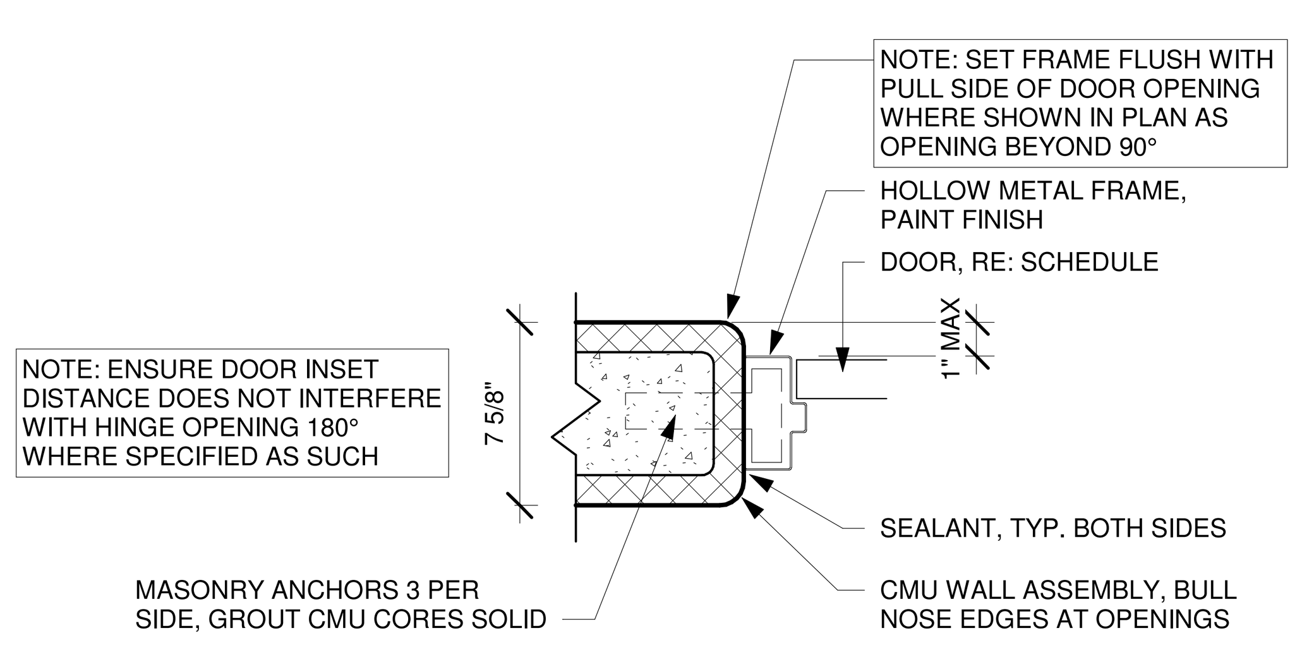
HEAD

5 DOOR DETAILS
1 1/2" = 1'-0"



HEAD

4 DOOR DETAILS
1 1/2" = 1'-0"



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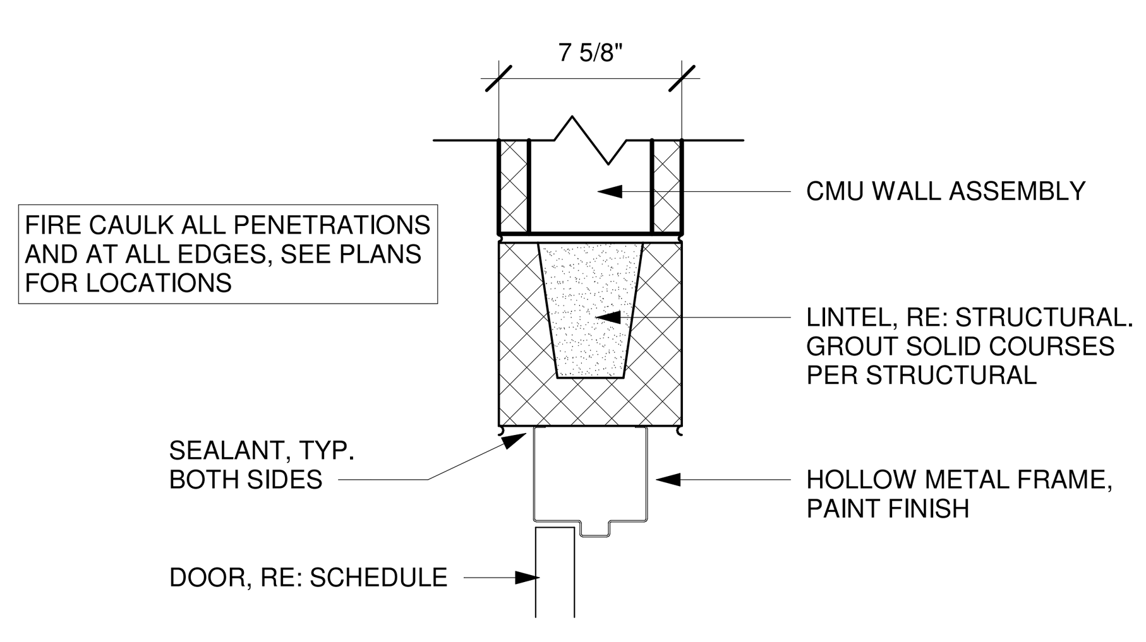
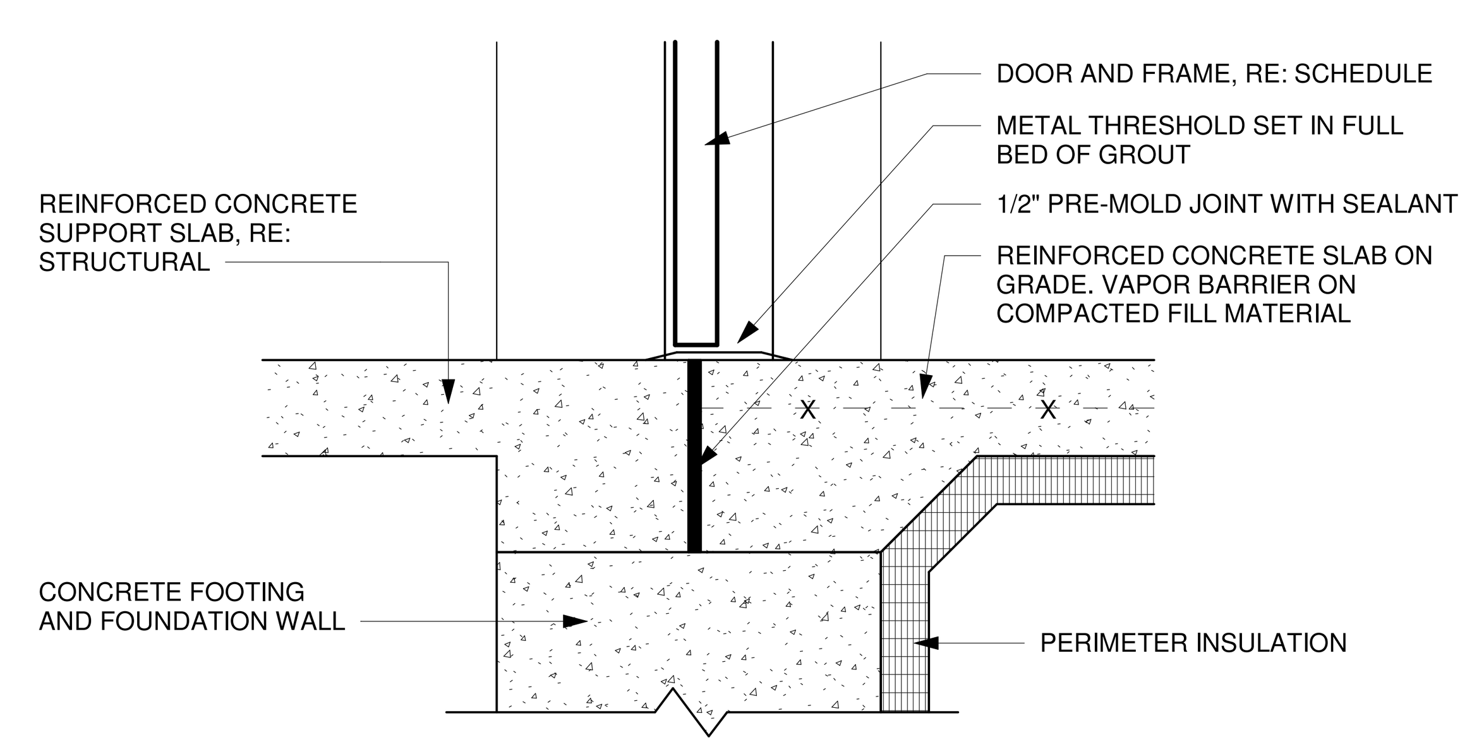
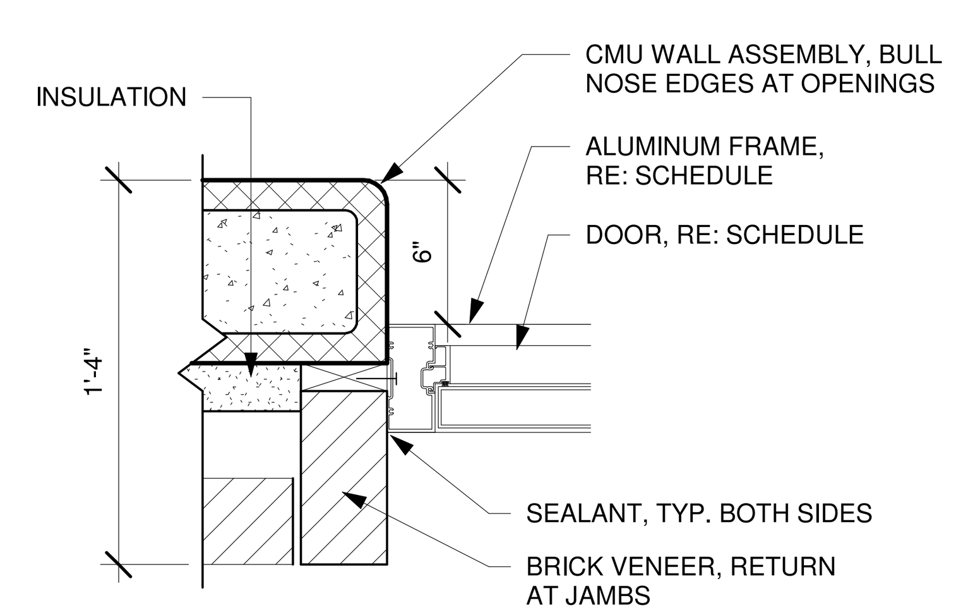


HEAD

3 DOOR DETAILS
1 1/2" = 1'-0"



THRESHOLD



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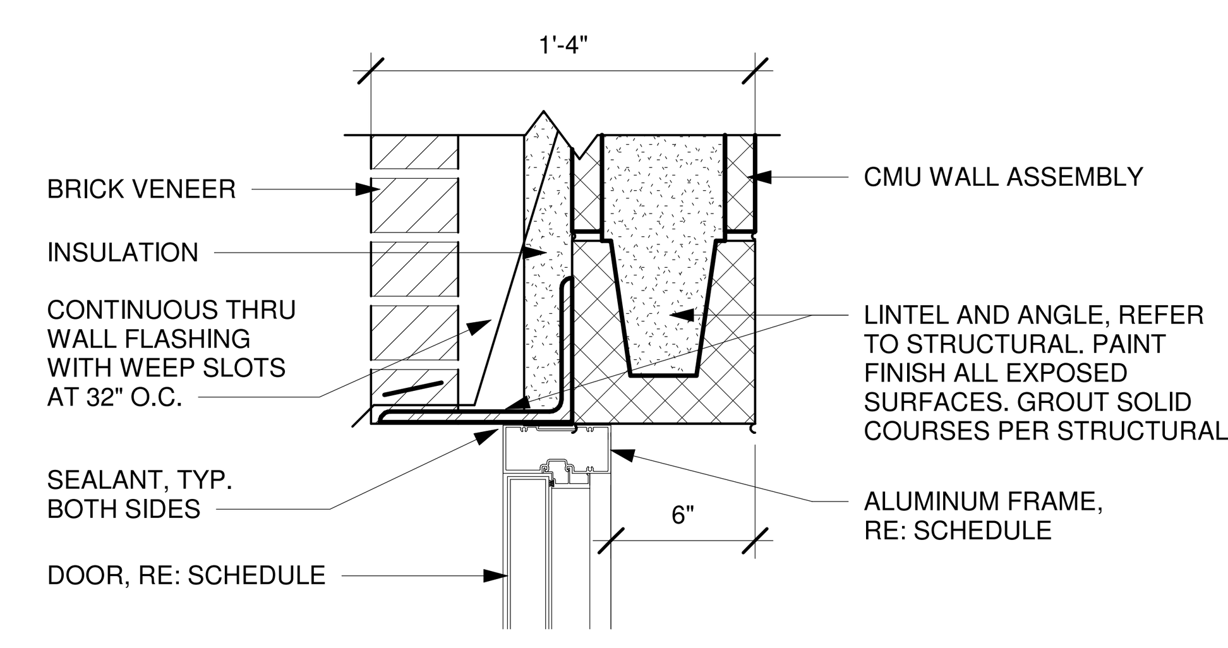
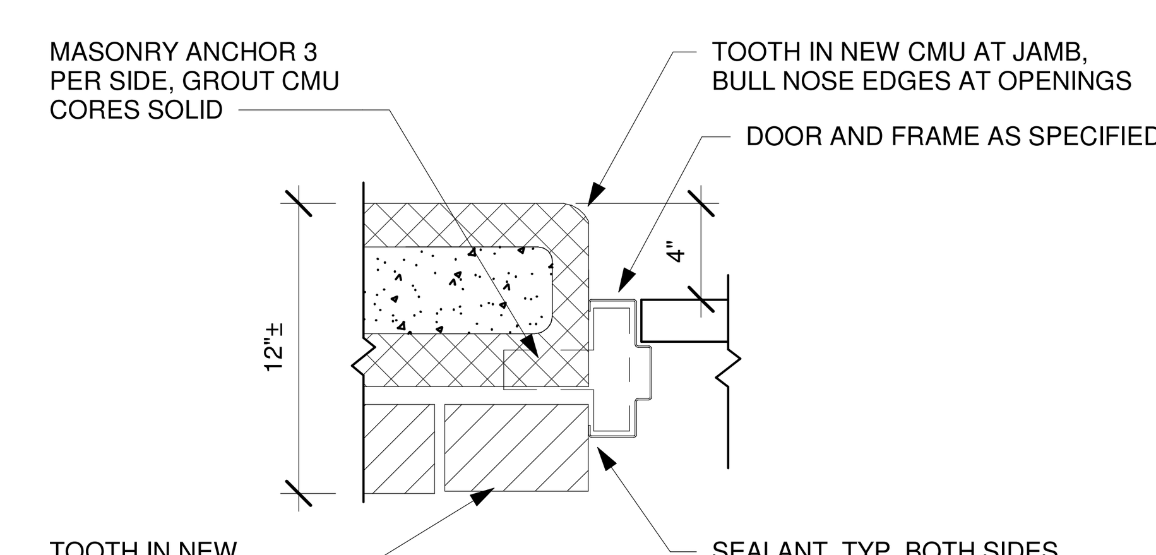


HEAD

2 DOOR DETAILS
1 1/2" = 1'-0"



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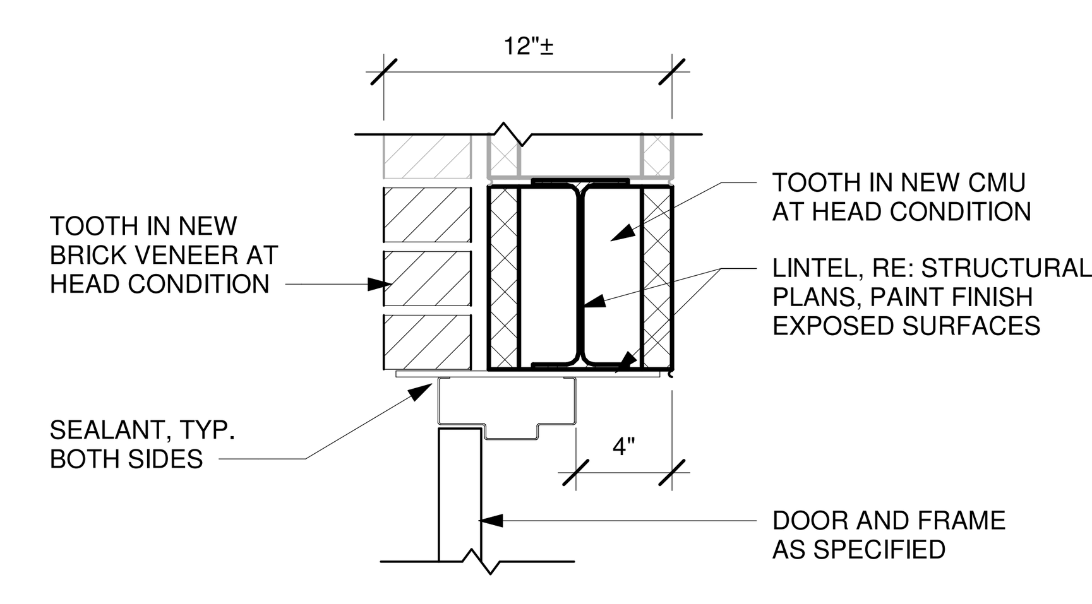

HEAD

1 DOOR DETAILS
1 1/2" = 1'-0"

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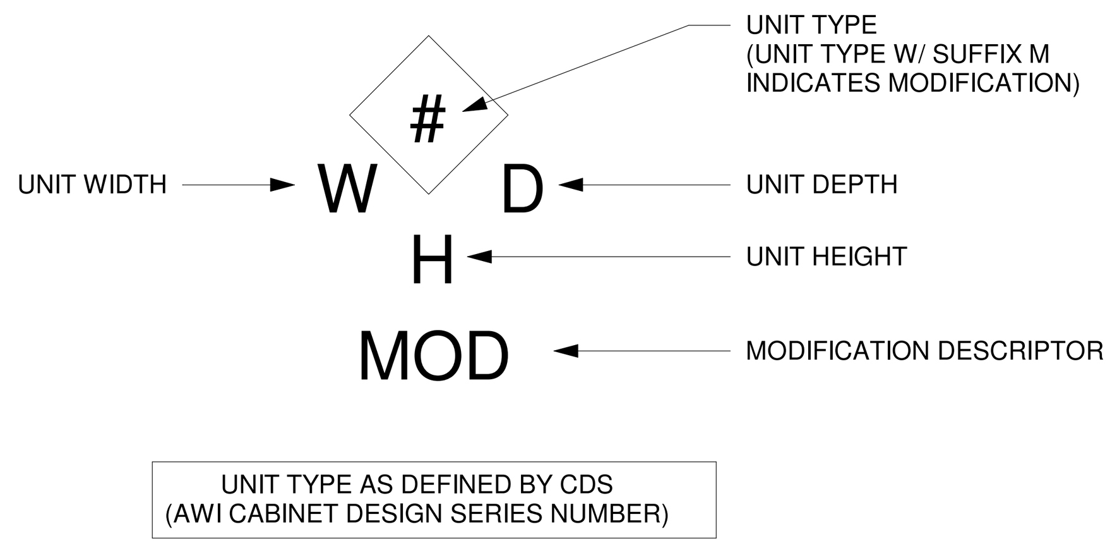
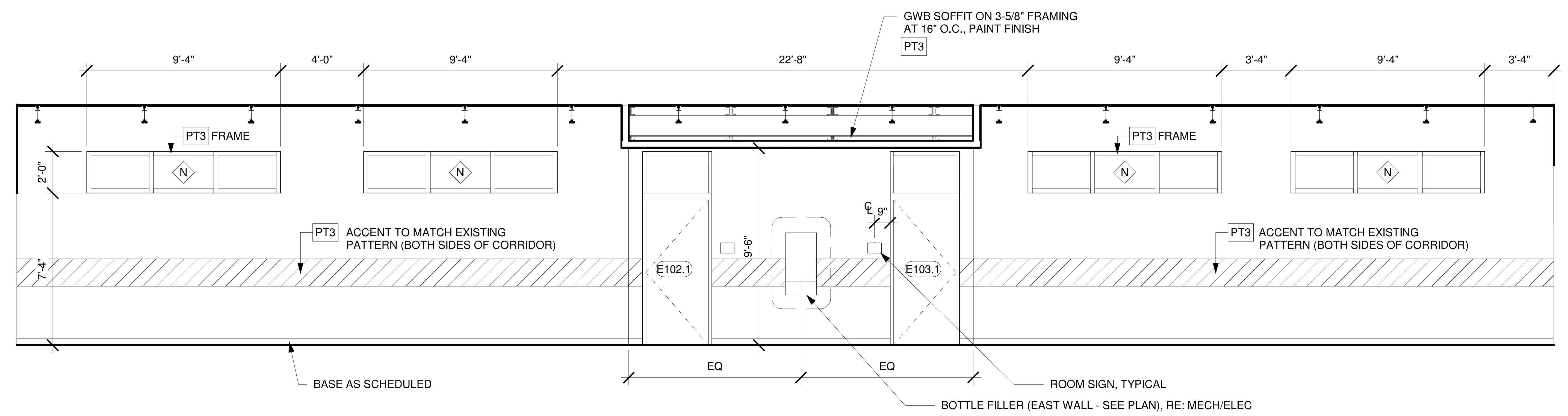
WALL OPENING DETAILS

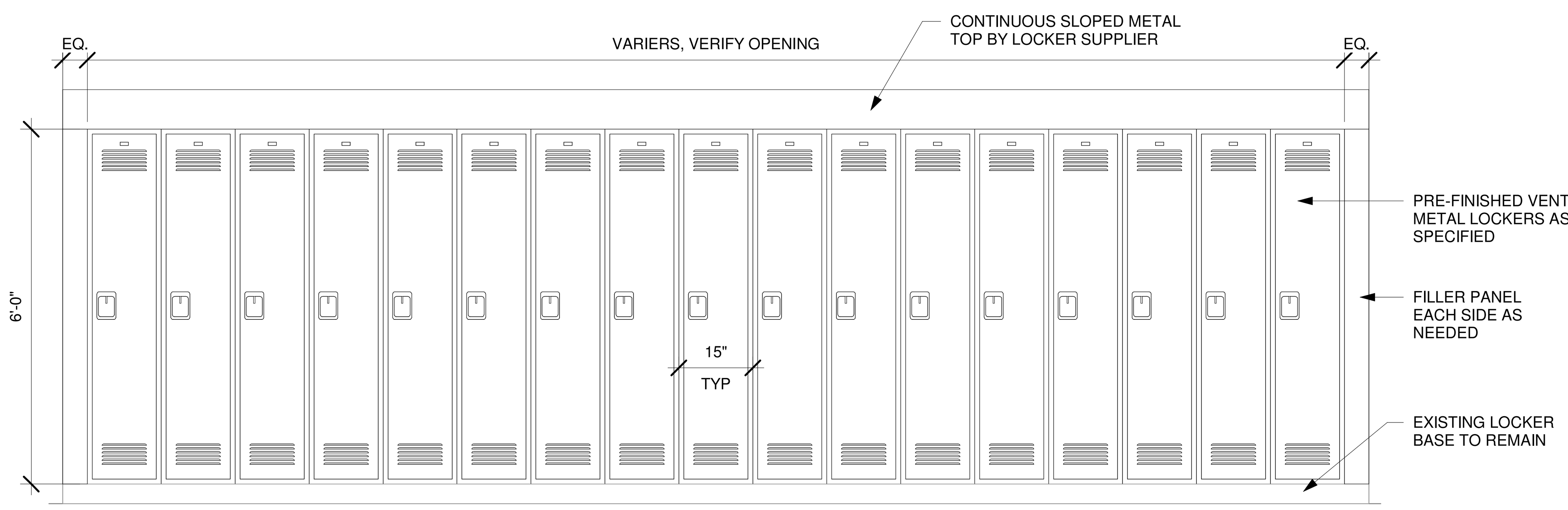
A7.3



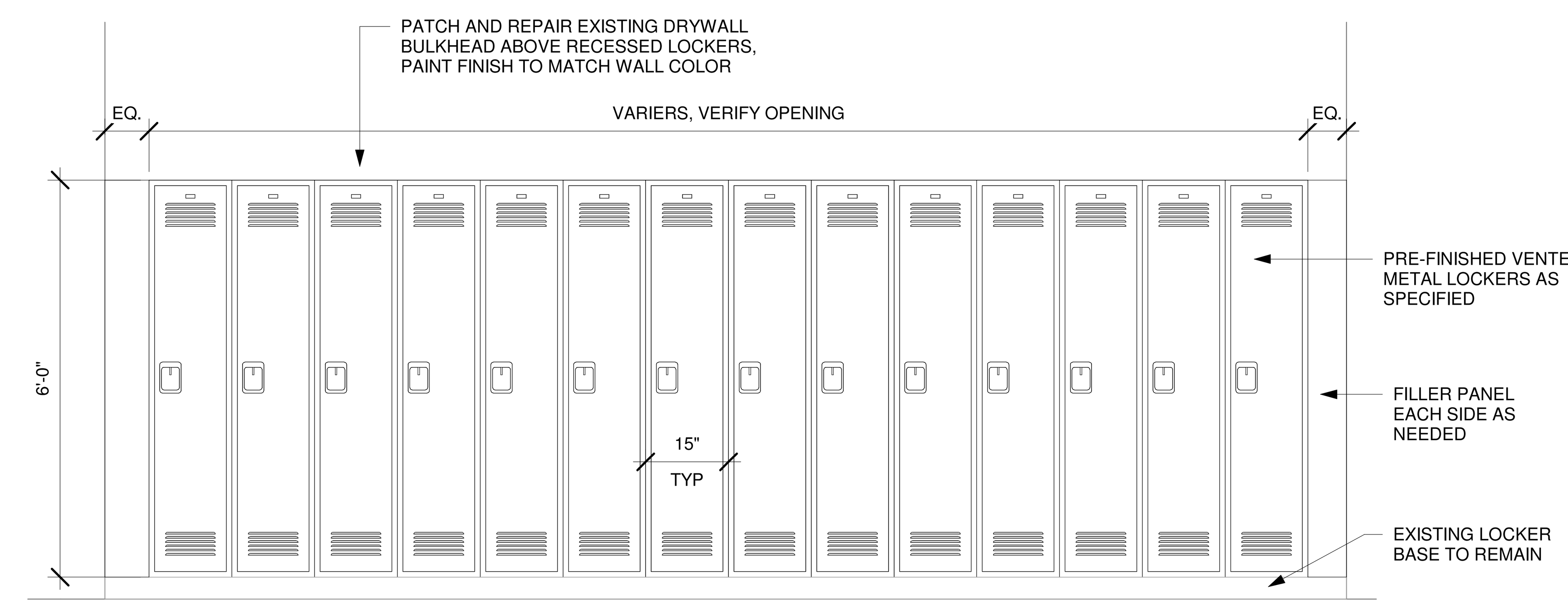
CASEWORK SYMBOL LEGEND
1/4" = 1'-0"



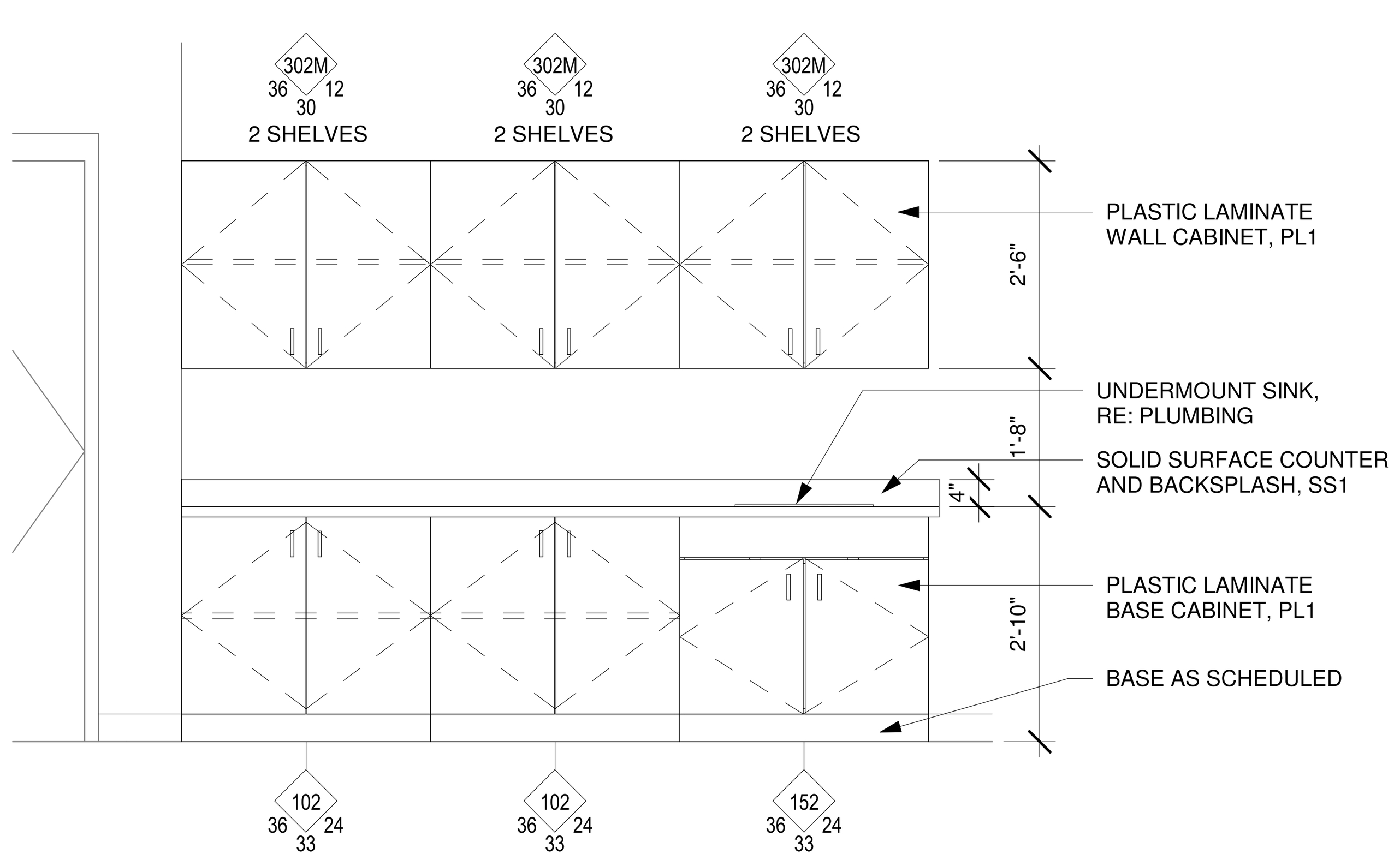
6 CORRIDOR ELEVATION
1/4" = 1'-0"



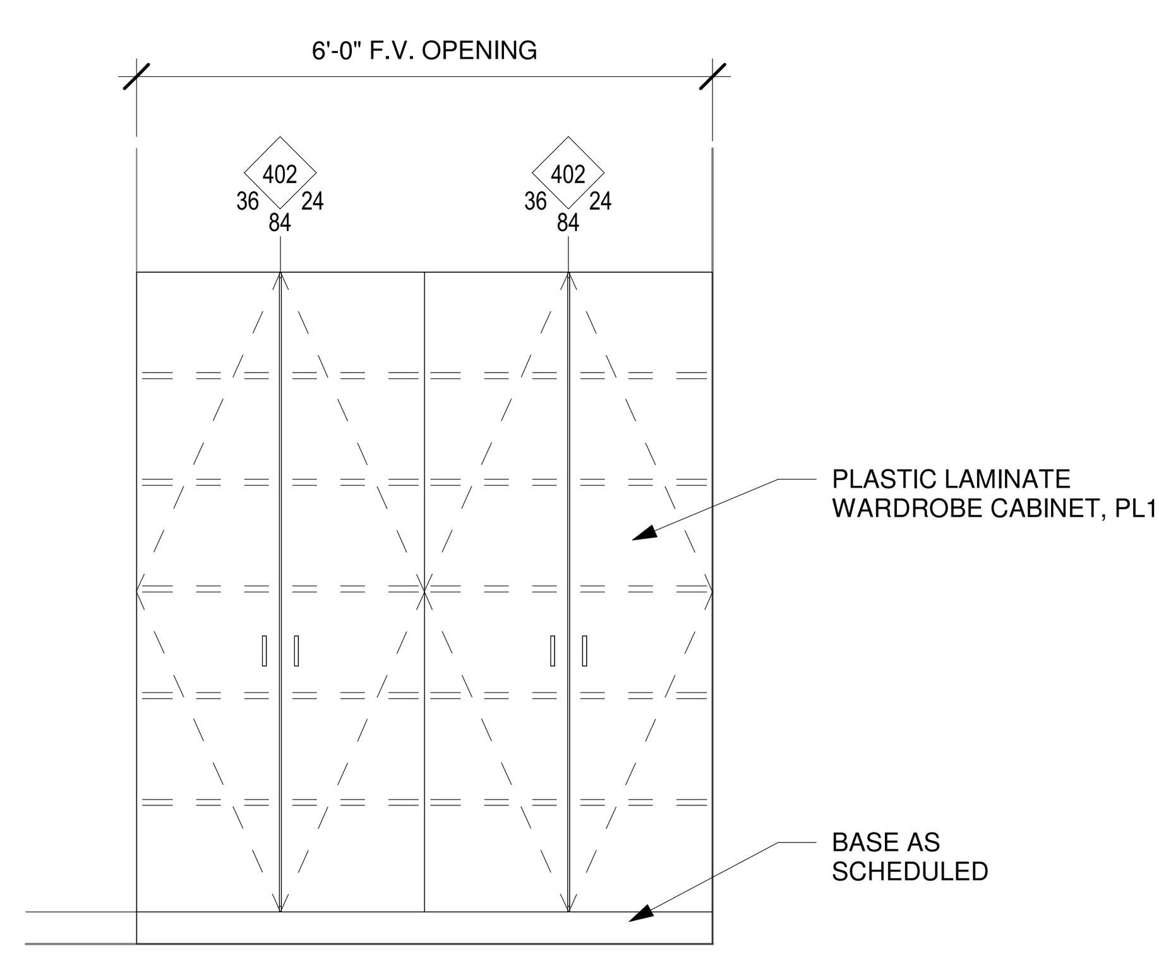
5 LOCKER ELEVATION (TYPICAL)
1/2" = 1'-0"



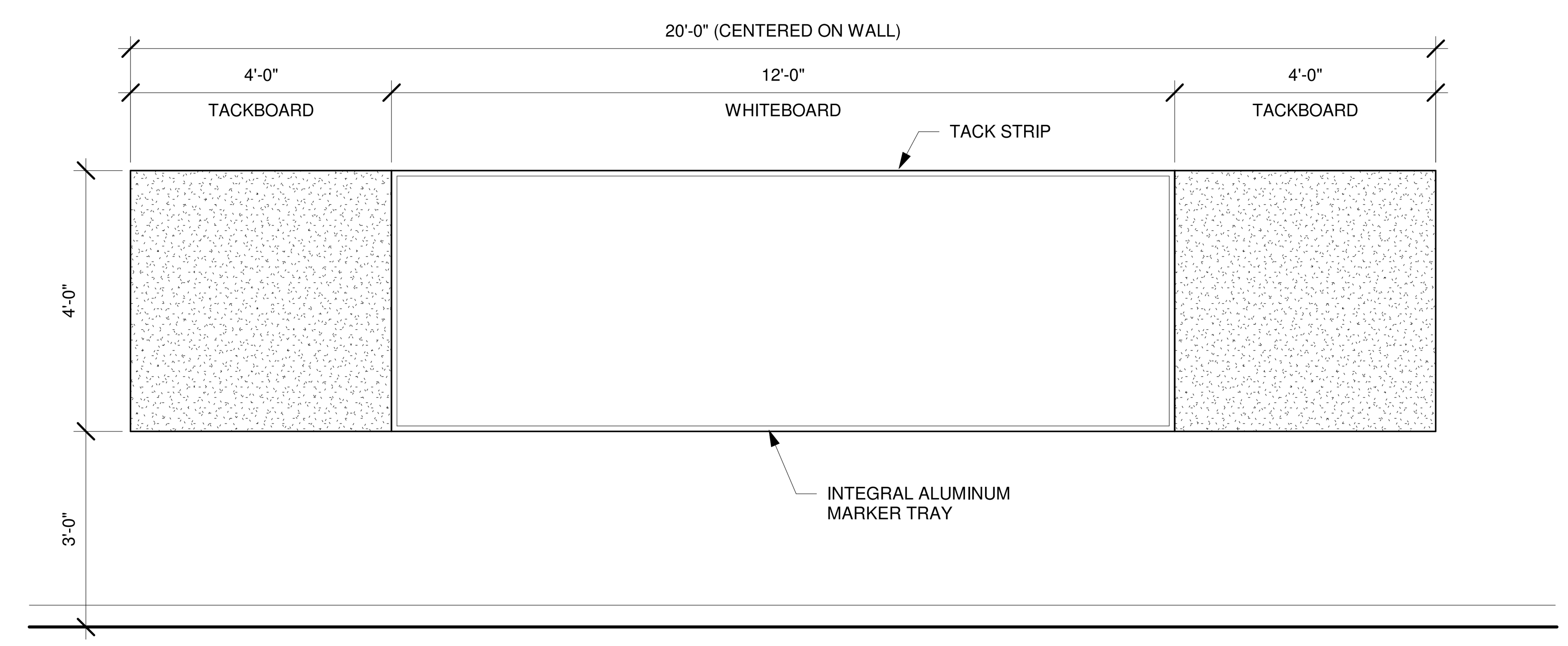
4 RECESSED LOCKER ELEVATION (TYPICAL)
1/2" = 1'-0"



3 CONFERENCE B113 ELEVATION
1/2" = 1'-0"



2 CLASSROOM B114 ELEVATION
1/2" = 1'-0"



1 ADDITION CLASSROOM ELEVATION
1/2" = 1'-0"

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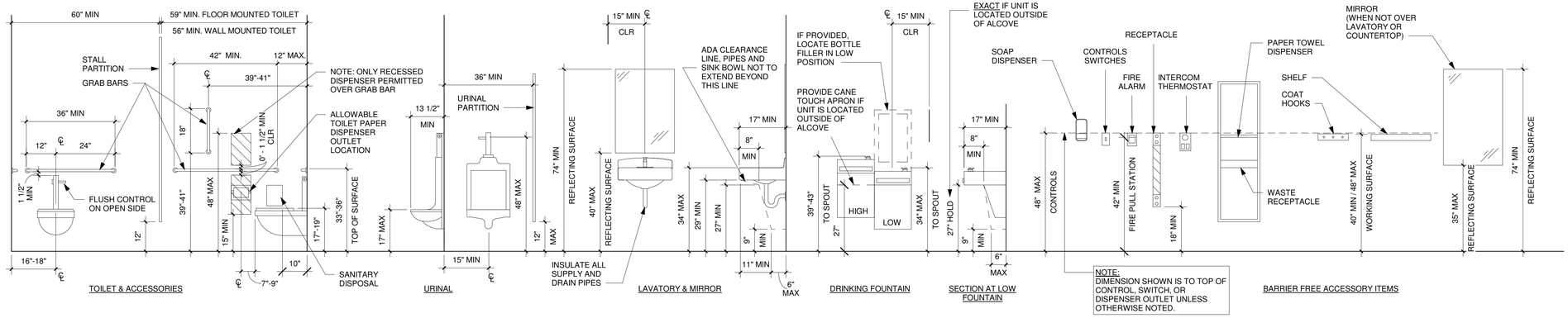
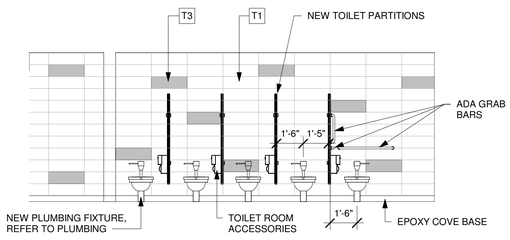
INTERIOR ELEVATIONS

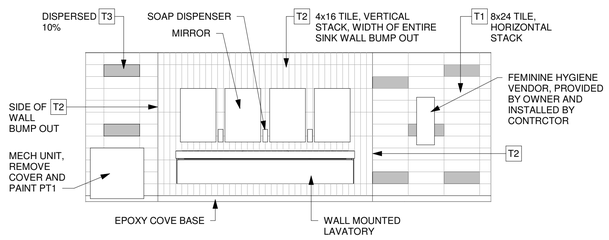
A8.0



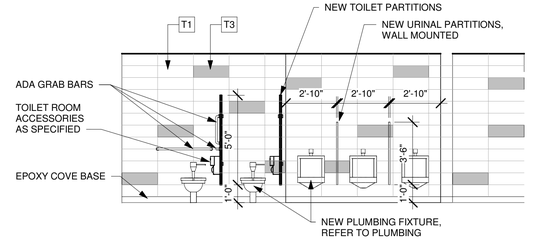
ACCESSIBLE MOUNTING HEIGHTS



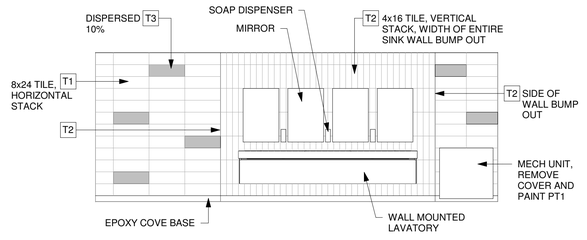
12 GIRLS ELEVATION - C102
1/4" = 1'-0"



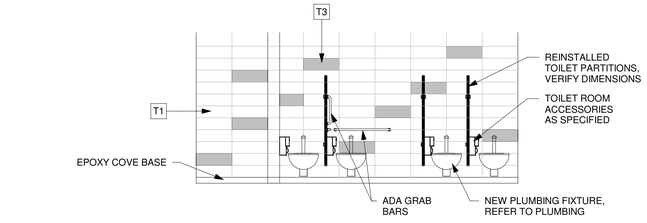
11 GIRLS ELEVATION - C102
1/4" = 1'-0"



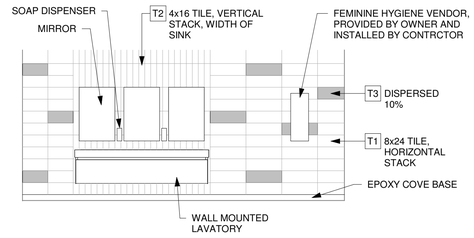
10 BOYS ELEVATION - C103
1/4" = 1'-0"



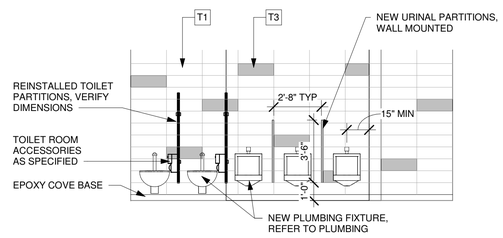
9 BOYS ELEVATION - C103
1/4" = 1'-0"



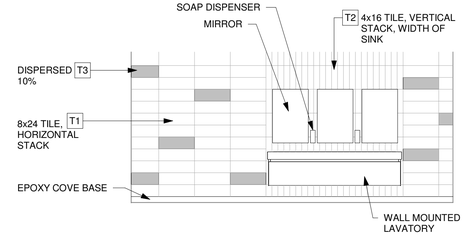
8 GIRLS ELEVATION - B109
1/4" = 1'-0"



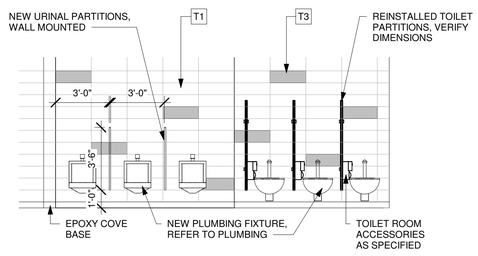
7 GIRLS ELEVATION - B109
1/4" = 1'-0"



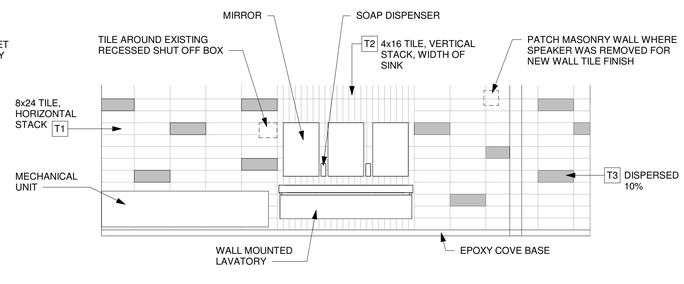
6 BOYS ELEVATION - B105
1/4" = 1'-0"



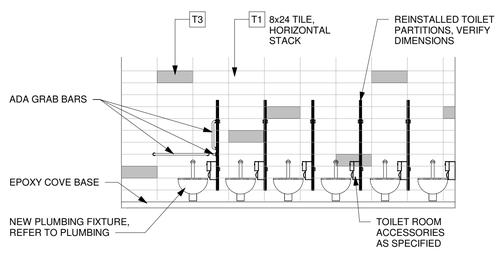
5 BOYS ELEVATION - B105
1/4" = 1'-0"



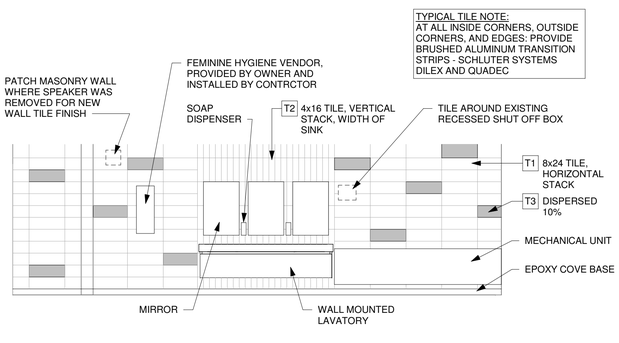
4 BOYS ELEVATION - A114
1/4" = 1'-0"



3 BOYS ELEVATION - A114
1/4" = 1'-0"



2 GIRLS ELEVATION - A115
1/4" = 1'-0"



1 GIRLS ELEVATION - A115
1/4" = 1'-0"

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BRIGHTON, MI 48116
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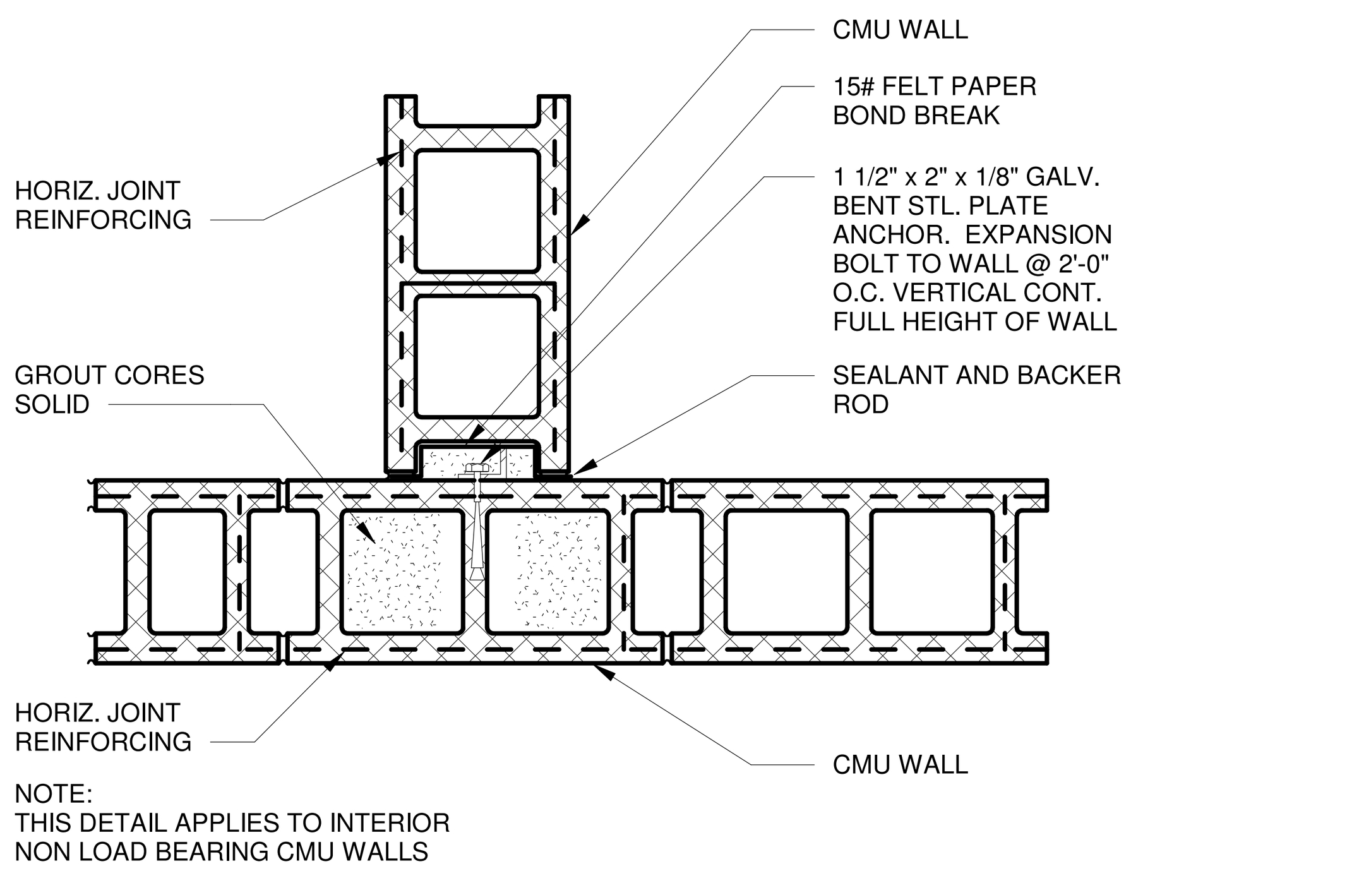
BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE	BY
0	FOR CONSTRUCTION	12/20/24	-

DESIGN
DRAWN
CHECKED
APPROVED

INTERIOR ELEVATIONS

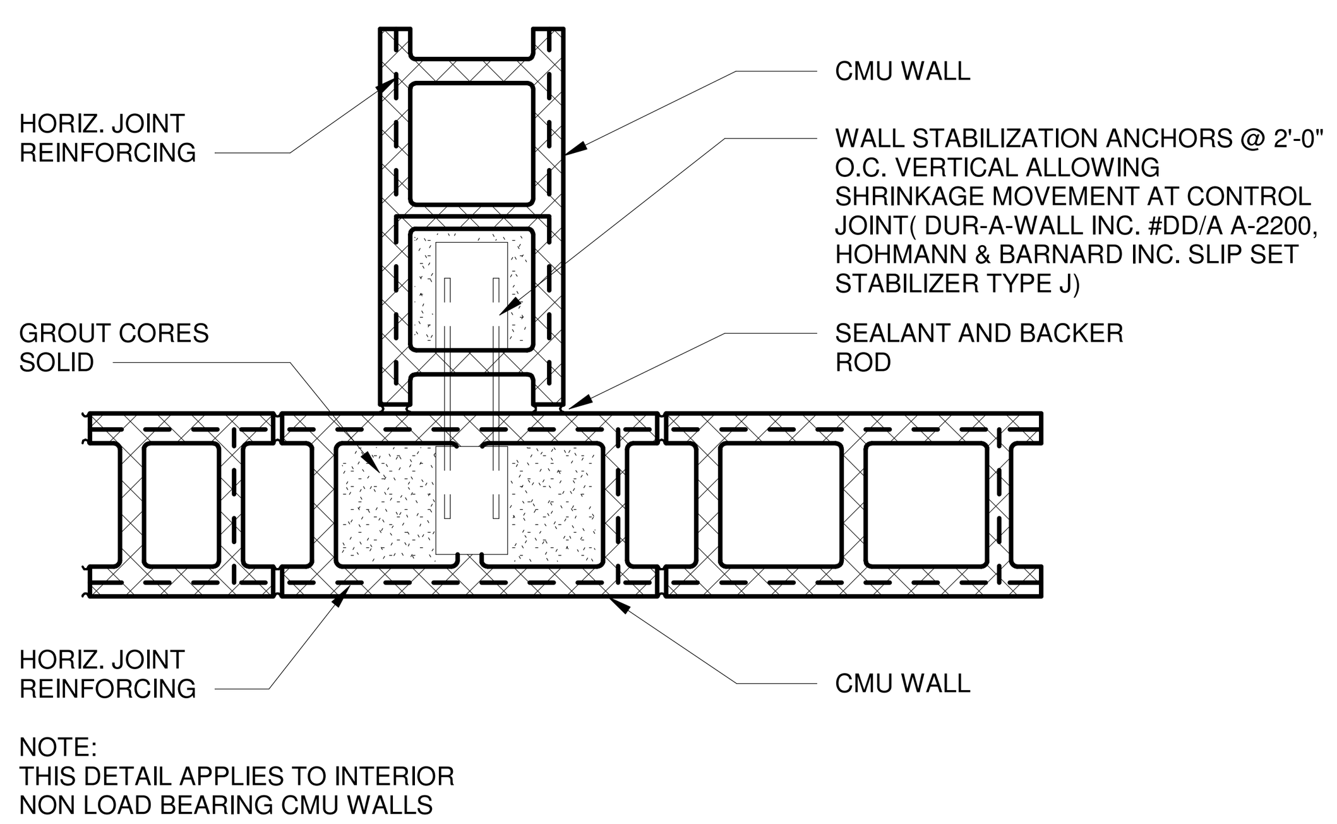
A8.1



NOTE:
THIS DETAIL APPLIES TO INTERIOR
NON LOAD BEARING CMU WALLS

INTERIOR CMU WALL CONTROL JOINT @ PERPENDICULAR WALLS

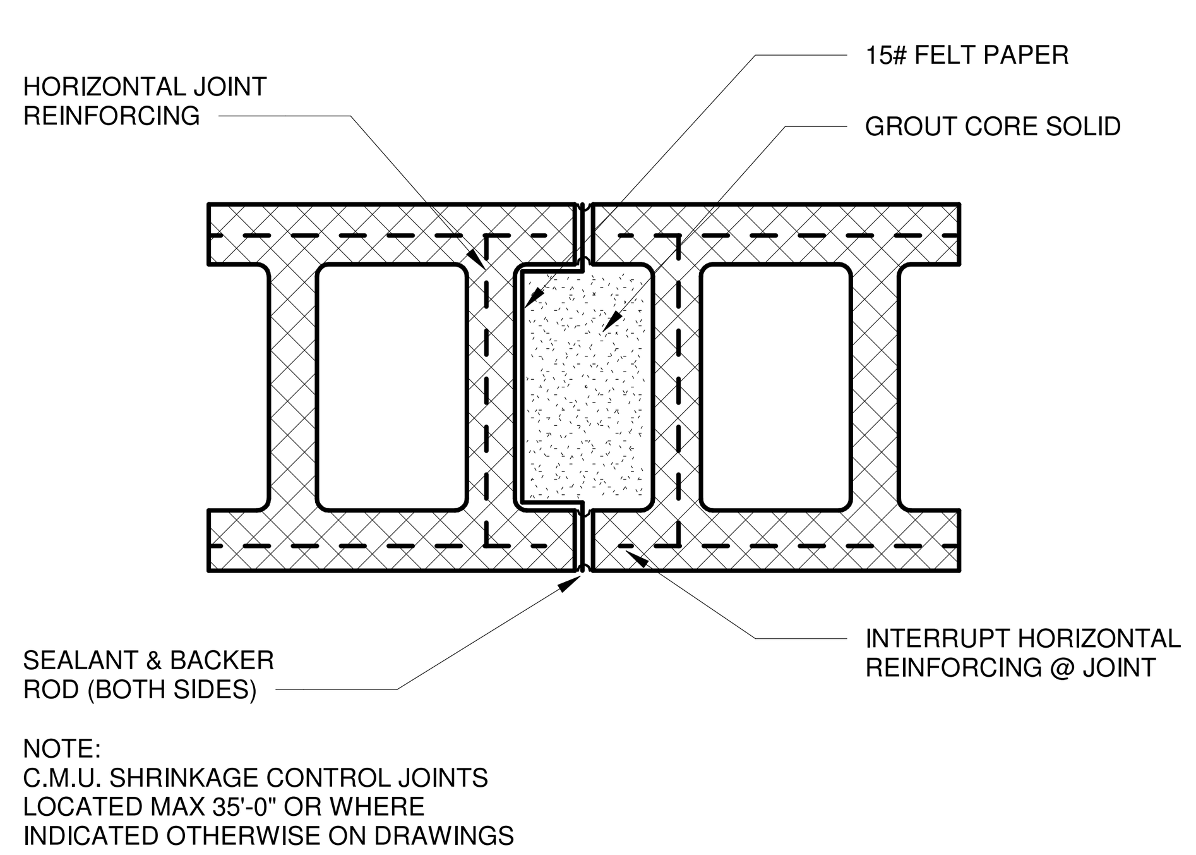
1 1/2" = 1'-0"



NOTE:
THIS DETAIL APPLIES TO INTERIOR
NON LOAD BEARING CMU WALLS

INTERIOR CMU WALL CONTROL JOINT @ PERPENDICULAR WALLS

1 1/2" = 1'-0"



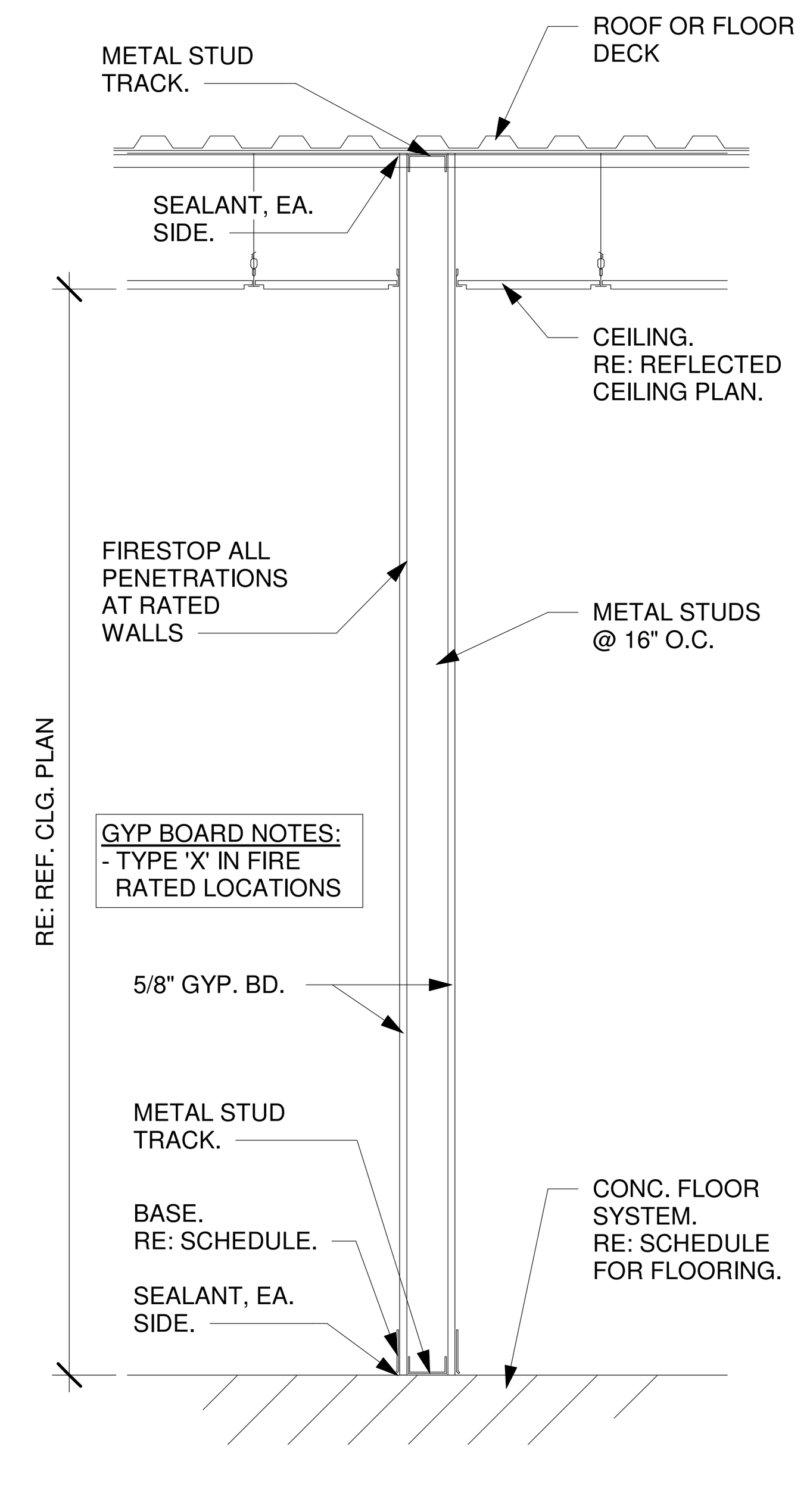
NOTE:
C.M.U. SHRINKAGE CONTROL JOINTS
LOCATED MAX 35'-0" OR WHERE
INDICATED OTHERWISE ON DRAWINGS

INTERIOR CMU WALL CONTROL JOINT

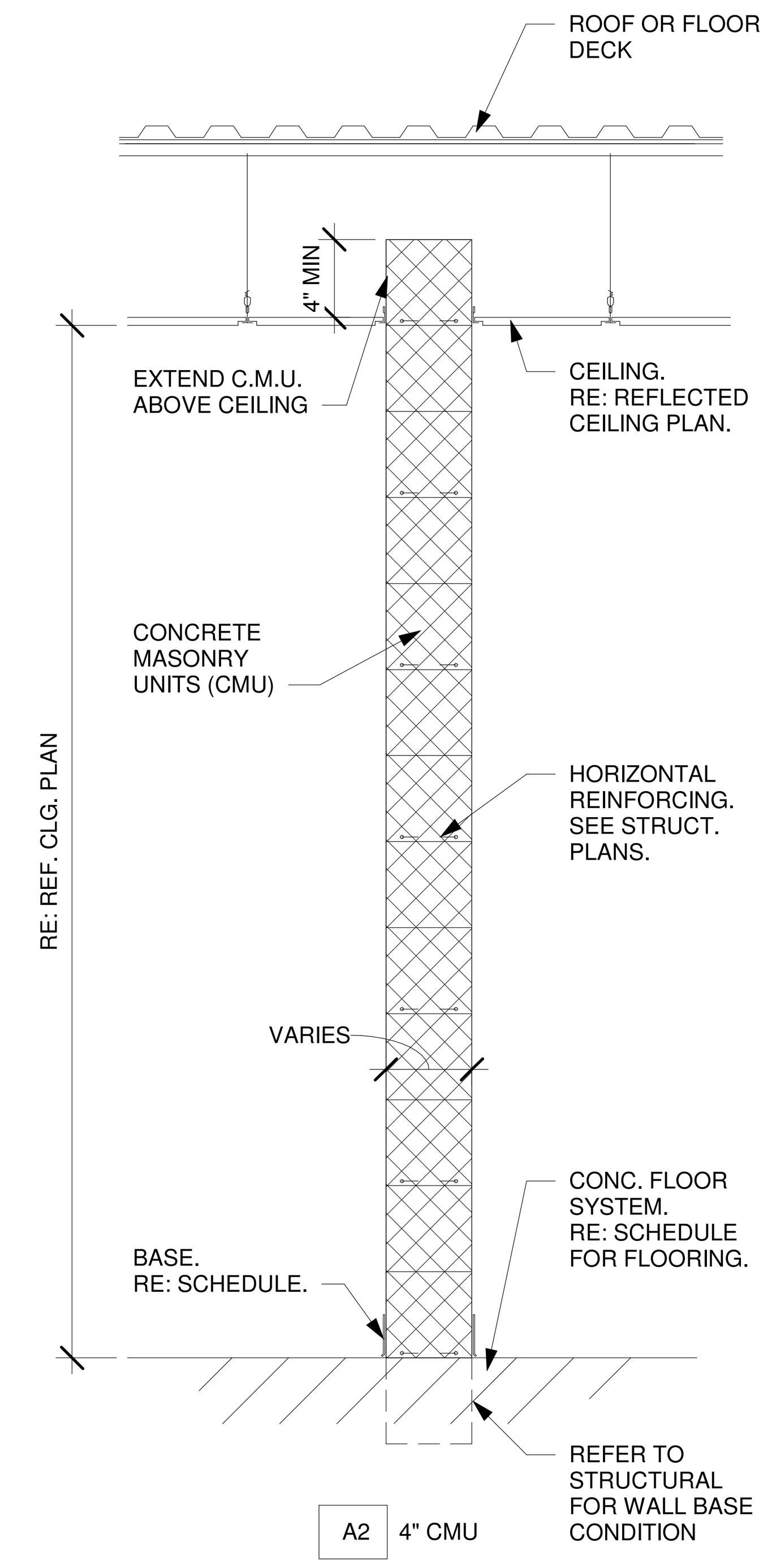
3" = 1'-0"

PARTITION LEGEND

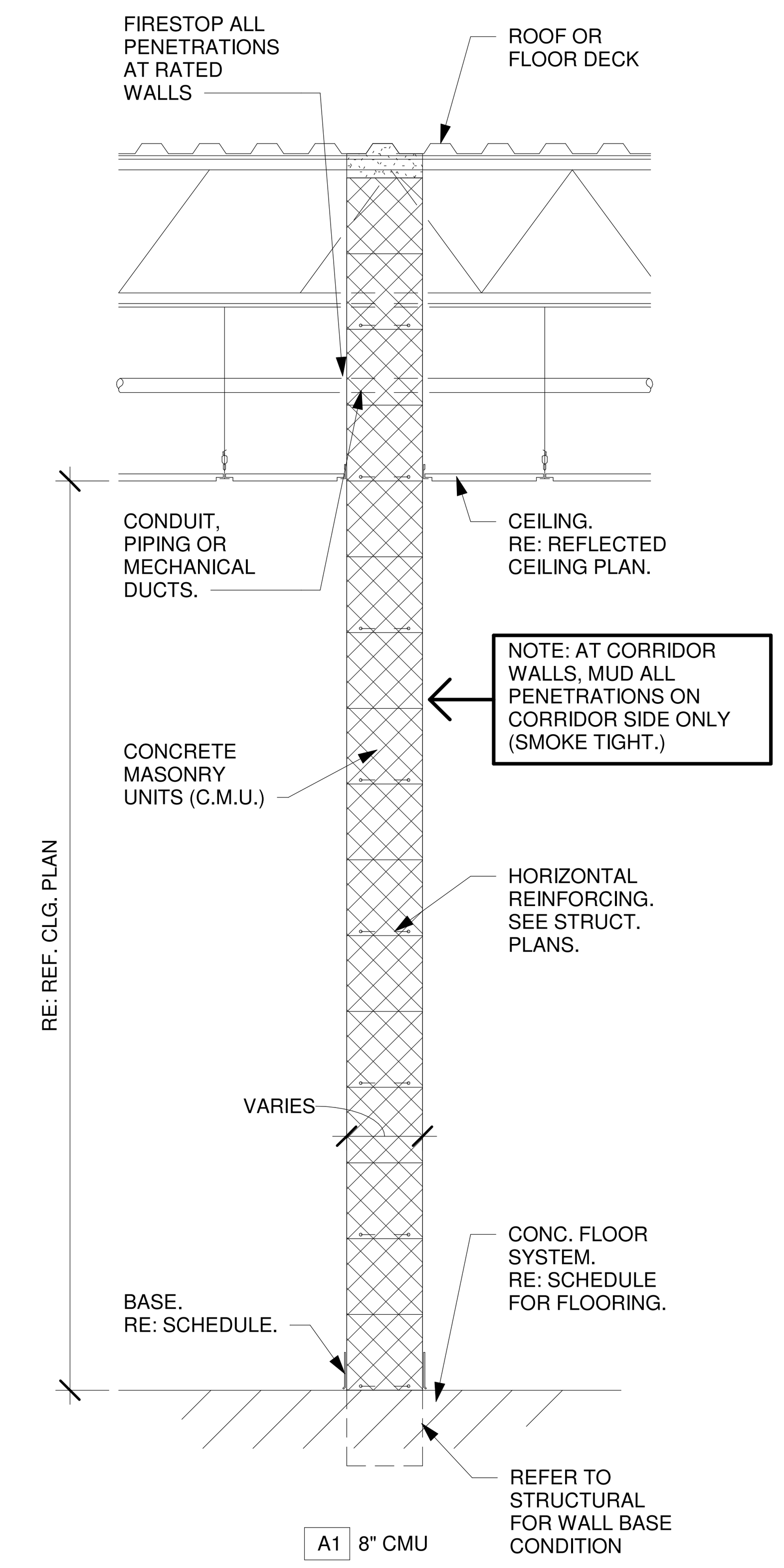
A1	8" CMU BLOCK TO U/S OF DECK
A2	4" CMU BLOCK TO MIN 4" ABOVE CLG
B1	3-5/8" METAL STUD TO U/S OF DECK



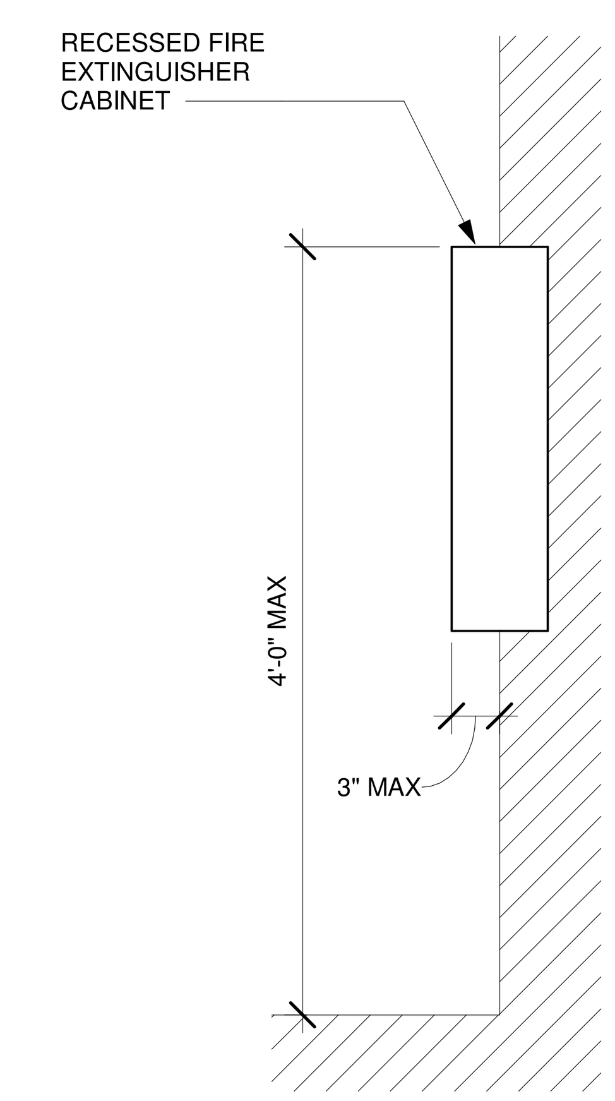
B1 3 5/8" METAL STUD



A2 4" CMU



A1 8" CMU



1 FIRE EXTINGUISHER DETAIL

1" = 1'-0"

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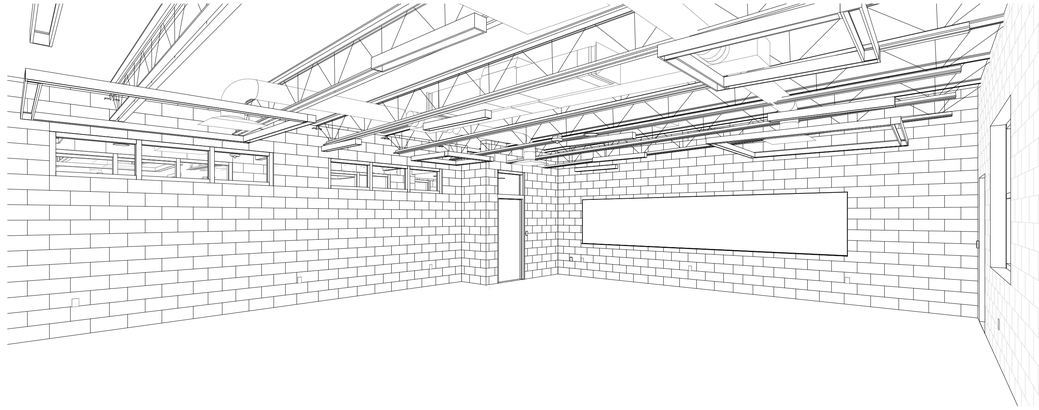
BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12/20/24

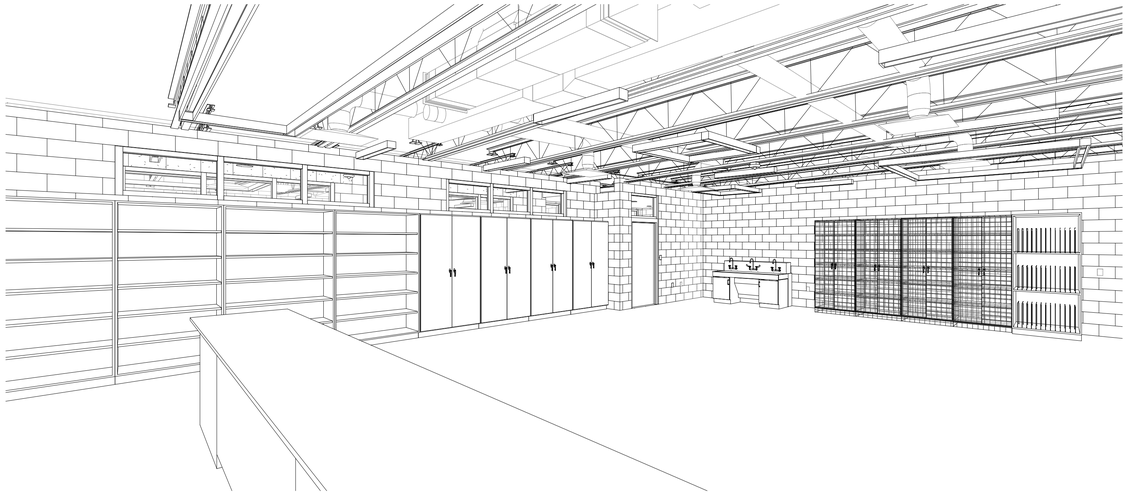
	BY
DESIGN	-
DRAWN	-
CHECKED	-
APPROVED	-

DETAILS

A9.0

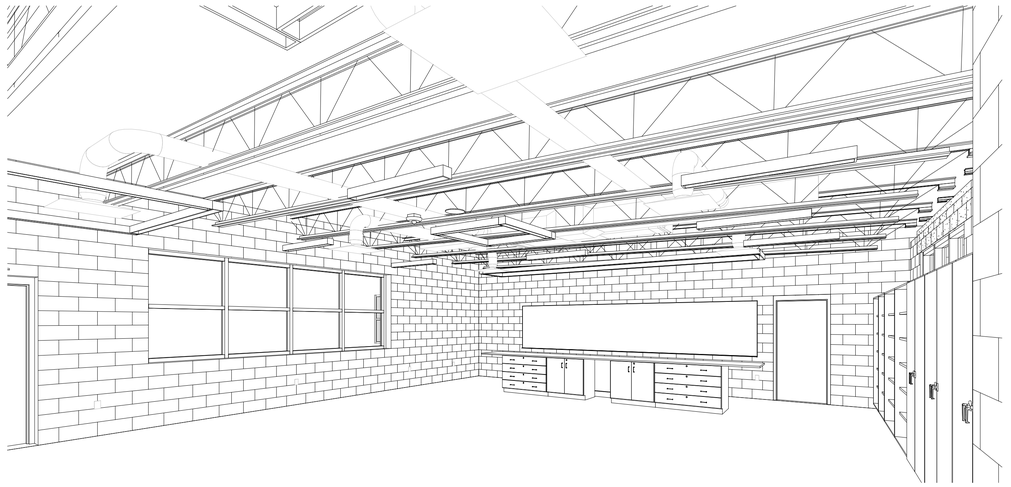


CLASSROOM VIEW



ART ROOM - BACK VIEW

FOR REFERENCE ONLY



ART ROOM - FRONT VIEW

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BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3A - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12/20/24

	BY
DESIGN	-
DRAWN	-
CHECKED	-
APPROVED	-

REFERENCE INTERIOR VIEWS

A10.0

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AAV	AUTOMATIC AIR VENT / AIR ADMITTANCE VALVE
AD	ACCESS DOOR
AE	AIR EXTRACTOR
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
ASR	AUTOMATIC SPRINKLER RISER
BD	BACKDRAFT DAMPER
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
BWV	BACKWATER VALVE
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CIRC	CIRCULATING
CLG	COOLING
CO	CLEANOUT
CONT	CONTINUATION / CONTINUED
CONV	CONVECTOR
CUH	CABINET UNIT HEATER
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE
DEG	DEGREE
DDC	DIRECT DIGITAL CONTROL
DN	DOWN
DTC	DRAIN TILE CONNECTION
DWH	DOMESTIC WATER HEATER
(E)	EXISTING
EA / EX	EXHAUST AIR
EA	ENTERING AIR
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EM	ENERGY MANAGEMENT
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING WET BULB
EWH	ELECTRIC WATER HEATER
°F	DEGREES FAHRENHEIT
F	FIRE
FA	FREE AREA (LOUVER) / FACE AREA (COIL)
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FFD	FUNNEL FLOOR DRAIN
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FEET
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HD	HUB DRAIN
HP	HORSEPOWER
HR	HOUR
HTG	HEATING
HYD	HYDRANT
HZ	HERTZ
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCHES

ABBREVIATIONS CONT.

ABBREVIATION	DESCRIPTION
INV	INVERT
ISP	INTERNAL STATIC PRESSURE
IW	INDIRECT WASTE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS / HR	POUNDS PER HOUR
LDB	LEAVING DRY BULB TEMPERATURE
LRA	LOCKED ROTOR AMPS
LWB	LEAVING WET BULB TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	1,000 BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINUMUM
MISC	MISCELLANEOUS
MOD	MOTOR OPERATED DAMPER (AUTOMATIC)
MOP	MAXIMUM OVER-CURRENT PROTECTION
N.C.	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
ORS	OVERFLOW ROOF SUMP
OS&Y	OUTSIDE SCREW AND YOKE
PD	PRESSURE DROP (FEET OF WATER)
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQUARE INCH - ABSOLUTE
PSIG	POUNDS PER SQUARE INCH - GAUGE
PT	PRESSURE / TEMPERATURE PORT
RA	RETURN AIR
RD	ROOF DRAIN
REL. A	RELIEF AIR
REQ	REQUIRE
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
SA	SUPPLY AIR
SH	SHOWER
SP	STATIC PRESSURE
SQFT / SF	SQUARE FOOT / SQUARE FEET
SS	SERVICE SINK
T	TEMPERATURE
T&P	TEMPERATURE AND PRESSURE
TS	TOTAL STATIC
TYP	TYPICAL
U	URINAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
VD	VOLUME DAMPER (MANUALLY ADJUSTABLE)
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THRU ROOF
W	WASTE
W&V	WASTE & VENT
WB	WET BULB TEMPERATURE
WC	WATER CLOSET
WG	WATER GAUGE
WH	WATER HEATER

MECHANICAL SYMBOLS

SYMBOL	DESCRIPTION
	RECTANGULAR TAKE-OFF
	ROUND TAKE-OFF
	RECTANGULAR ELBOW (WITH TURNING VANES)
	RECTANGULAR RADIUS ELBOW
	ROUND RADIUS ELBOW
	RECTANGULAR ELBOW UP
	ROUND ELBOW UP
	RECTANGULAR ELBOW DOWN
	ROUND ELBOW DOWN
	CONCENTRIC TRANSITION
	ECCENTRIC TRANSITION
R	INCLINED RISE IN DIRECTION OF AIRFLOW
D	INCLINED DROP IN DIRECTION OF AIRFLOW
	FLEXIBLE CONNECTION
	FLEXIBLE DUCT CONNECTION
	SUPPLY DIFFUSER
	LINEAR SLOT DIFFUSER
	RETURN DIFFUSER
	EXHAUST DIFFUSER
	TRANSFER GRILLE
	SUPPLY DUCT CROSS SECTION
	RETURN DUCT CROSS SECTION
	FIRE DAMPER
	SMOKE DAMPER
	COMBINATION FIRE / SMOKE DAMPER
	VOLUME DAMPER (MANUALLY ADJUSTABLE)
M	MOTORIZED DAMPER
SD	SMOKE DETECTOR
CO	CARBON DIOXIDE SENSOR
T	THERMOSTAT OR TEMPERATURE SENSOR
H	HUMIDISTAT OR HUMIDITY SENSOR
S	SENSOR
	RETURN OR EXHAUST / SUPPLY AIR FLOW
DG	DOOR GRILLE
UC 1"	UNDERCUT DOOR 1"

PIPING SYMBOLS

SYMBOL	DESCRIPTION
	PIPE ELBOW UP
	PIPE ELBOW DOWN
	PIPE TEE TOWN
	DIRECTION OF FLOW
	UNION
	STRAINER
	REDUCER
	EXPANSION JOIN
	FLEXIBLE CONNECTION
	PIPE ANCHOR
	PIPE GUIDE
	PIPE CAP OR PLUG
	GATE VALVE
	PUMP
	GLOBE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	ANGLE VALVE
	CHECK VALVE
	PLUG VALVE
	OUTSIDE SCREW AND YOKE VALVE (OS&Y)
	THERMOMETER
	PRESSURE REGULATING VALVE
	SOLENOID VALVE
	CONTROL VALVE (2-WAY / 3-WAY)
	CENTRIFUGAL FAN
	FLOOR DRAIN
	FLOOR DRAIN
	ROOF SUMP / DRAIN
FCO	FLOOR CLEAN OUT
CO	CLEAN OUT (IN LINE)
WCO	WALL CLEAN OUT
M	WATER METER ASSEMBLY
	HOSE BIBB / WALL HYDRANT
	SPRINKLER HEAD (PENDANT)
	SPRINKLER HEAD (UPRIGHT)
	SPRINKLER HEAD (SIDE WALL)
IN./FT.	SLOPE
FS	FLOW SWITCH
	SIAMESE CONNECTION (YARD)
	SIAMESE CONNECTION (WALL MOUNTED)
	COMBINATION FLOW MEASURING AND BALANCING DEVICE
	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	HOSE END VALVE
	SAFETY RELIEF VALVE
	PRESSURE GAUGE
	BALANCING COCK
	STRAINER W/ BLOW OFF VALVE

DRAWING NOTATION

SYMBOL	DESCRIPTION
0	KEY NOTE
RTU-1	EQUIPMENT DESIGNATION AND NUMBER
A NECK SIZE CFM	AIR TERMINAL TAG
	EXISTING DEVICES OR EQUIPMENT
	NEW OR MODIFIED DEVICES OR EQUIPMENT
0	REVISIONS
	POINT OF NEW CONNECTION TO EXISTING
	SUPPLY DIFFUSER, DARKENED AREAS SIGNIFY BLANKED OFF SECTIONS
NAME 000	ROOM NAME AND NUMBER
0 M0.0	SECTION CUT (NUMBER OF SECTION - TOP / CORRESPONDING VIEW - BOTTOM)
0 M0.0	DETAIL (NUMBER OF DETAIL - TOP / CORRESPONDING VIEW - BOTTOM)
0 A0.0	ENLARGED VIEW (NUMBER OF VIEW - TOP / CORRESPONDING VIEW - BOTTOM)

APPLICABLE CODES AND REGULATIONS

YEAR	CODE
2018	MICHIGAN PLUMBING CODE
2015	MICHIGAN MECHANICAL CODE
2009	MICHIGAN UNIFORM ENERGY CODE
2015	INTERNATIONAL FIRE CODE
2015	INTERNATIONAL FUEL GAS CODE
2009	NFPA 90A
2014	NFPA 96
2013	NFPA 13, NFPA 14, NFPA 20

PIPING LEGEND

SYMBOL	DESCRIPTION
AW	ACID WASTE
CHWR OR CR	CHILLED OR CONDENSER WATER RETURN
CHWS OR CS	CHILLED OR CONDENSER WATER RETURN
CA	COMPRESSED AIR
D	CONDENSATE / EQUIPMENT DRAIN
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RECIRC.
DT	DRAIN TILE
F	FIRE PROTECTION
HHWR OR HPR	HEATING HOT WATER OR HEAT PUMP RETURN
HHWS OR HPS	HEATING HOT WATER OR HEAT PUMP SUPPLY
HGB	HOT GAS BYPASS
MA	MEDICAL AIR
G	NATURAL GAS
N	NATURAL GAS
O	OXYGEN GAS
LP	PROPANE
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
SAN	SANITARY WASTE
SAN	SANITARY WASTE UNDERGROUND
STEAM	STEAM
COND	STEAM CONDENSATE
ST	STORM SEWER
ST	STORM SEWER UNDERGROUND
T	TEMPERED WATER
VAC	VACUUM
V	VENT

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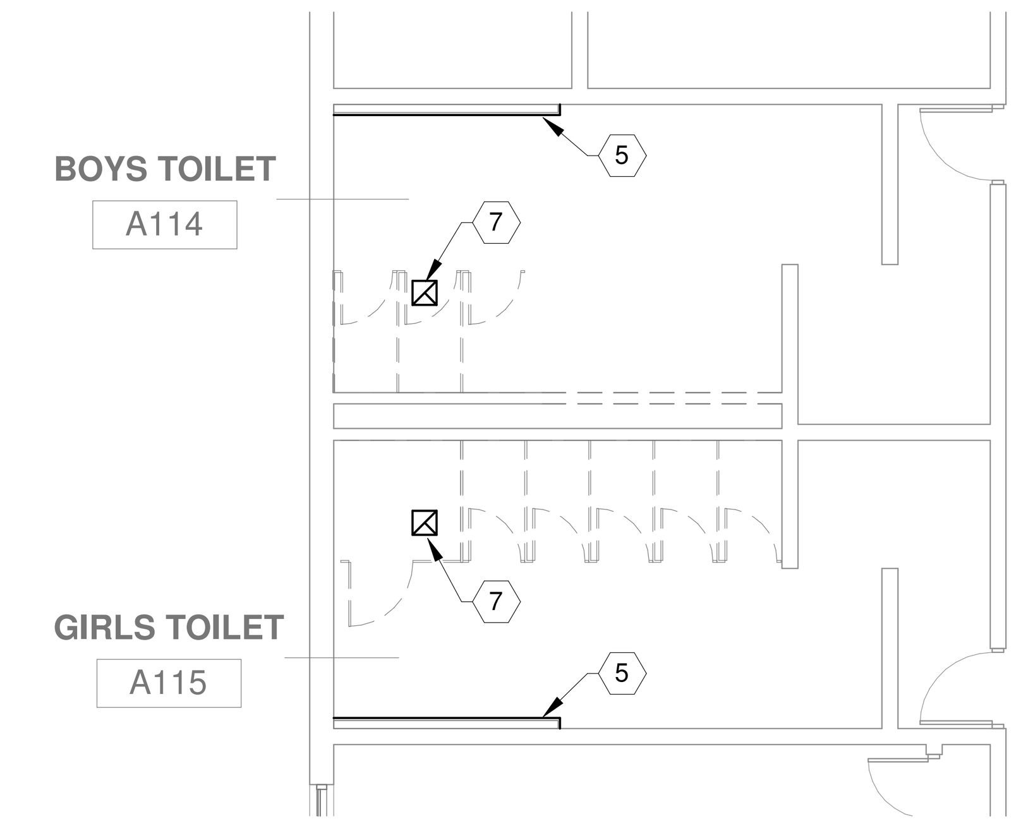
BANGOR TOWNSHIP SSCHOOL DISTRICT
PHASE 3 - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
A	SCHEMATIC DESIGN	09.30.24
B	OWNER REVIEW	12.09.24
0	FOR CONSTRUCTION	12.20.24

	BY	DATE:
DESIGN	CRP	09.18.24
DRAWN	CRP	09.18.24
CHECKED	SLB	
APPROVED	SLB	

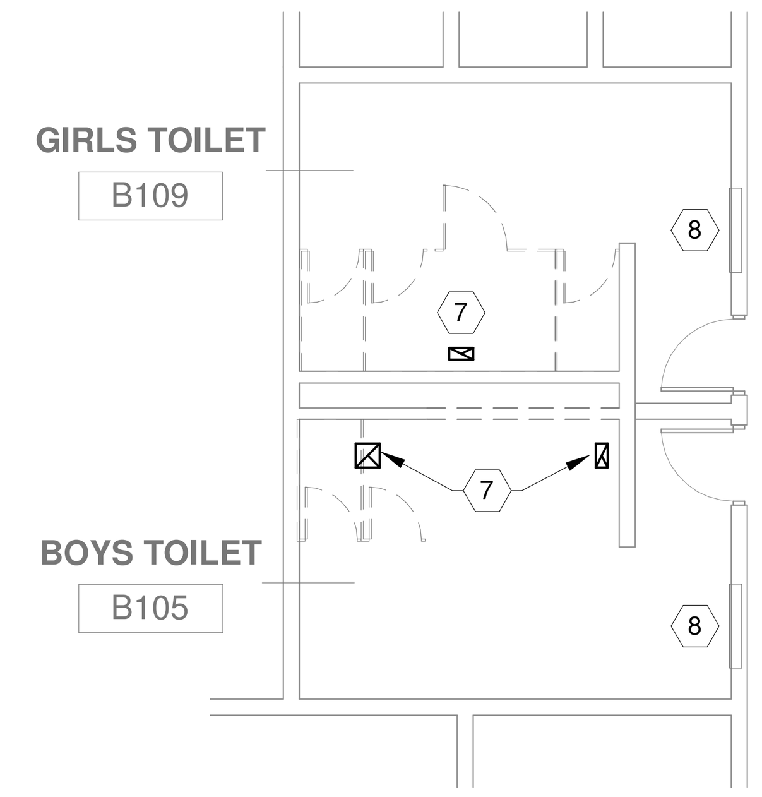
MECHANICAL SYMBOLS & LEGEND

M0.0



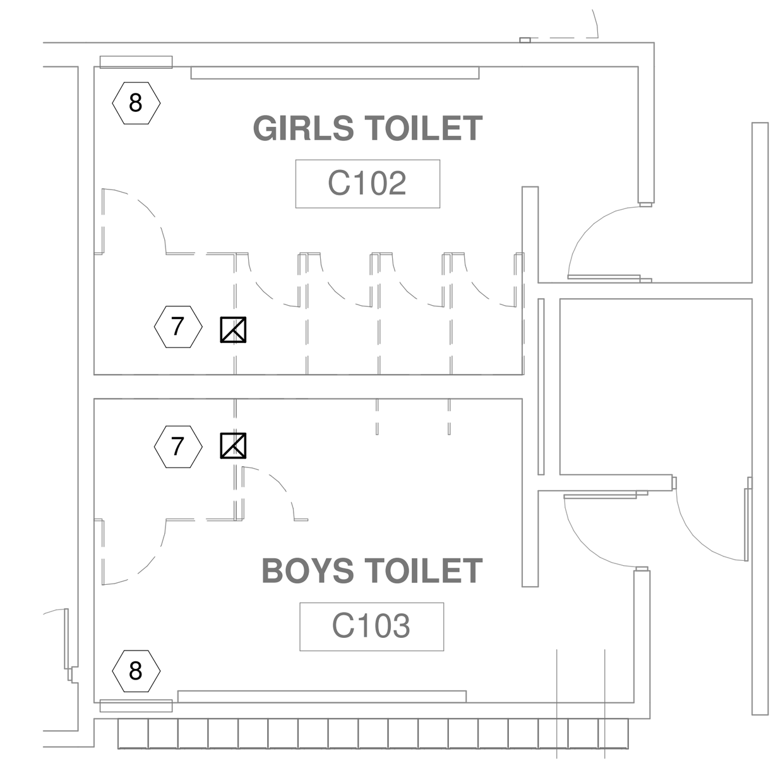
MECHANICAL
DEMOLITION PLAN
AREA 'A' RESTROOM

2 1/8" = 1'-0"



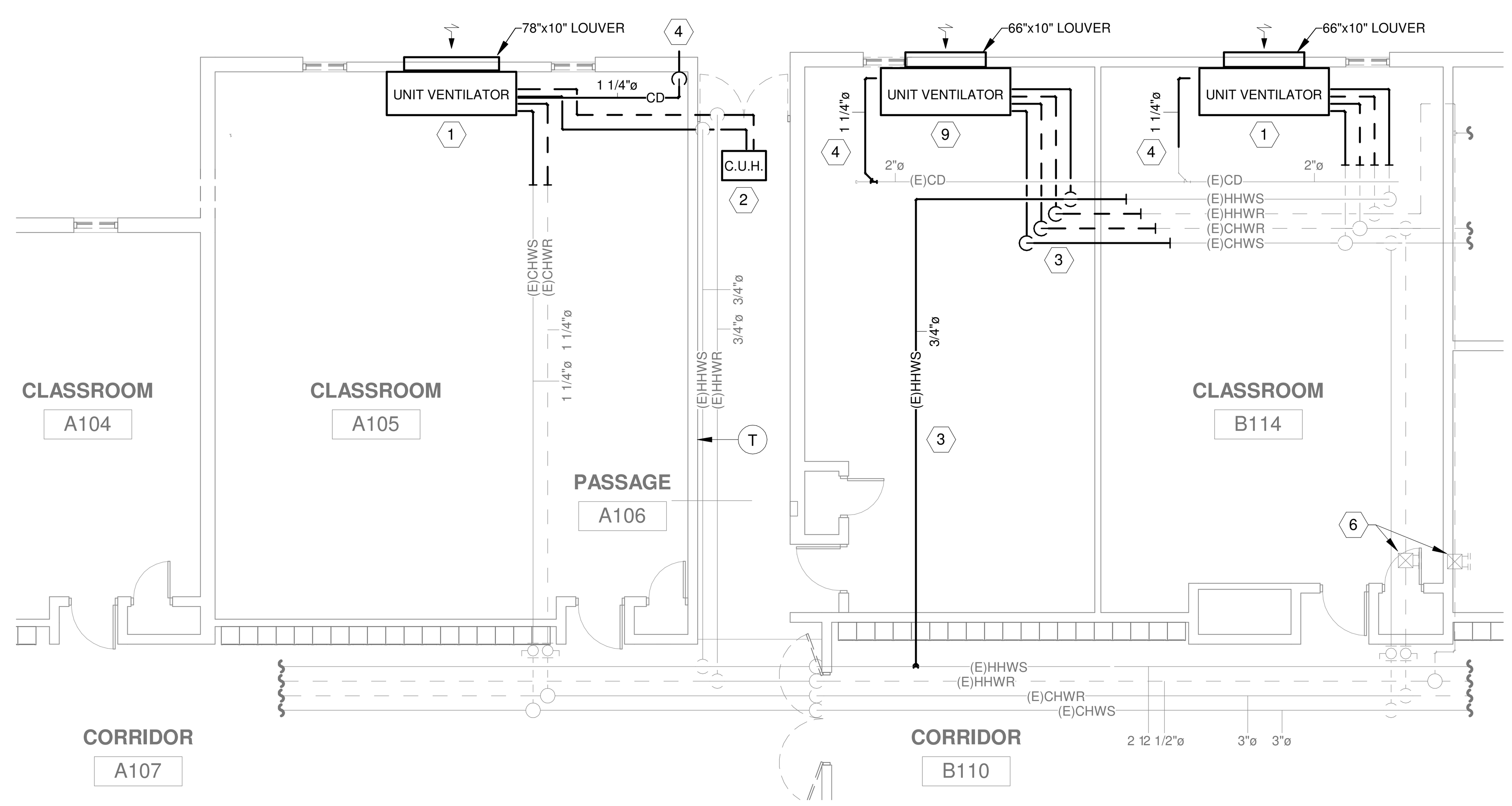
MECHANICAL
DEMOLITION PLAN
AREA 'B' RESTROOM

3 1/8" = 1'-0"



MECHANICAL
DEMOLITION PLAN
AREA 'C' RESTROOM

4 1/8" = 1'-0"



MECHANICAL DEMOLITION PLAN

1 1/8" = 1'-0"

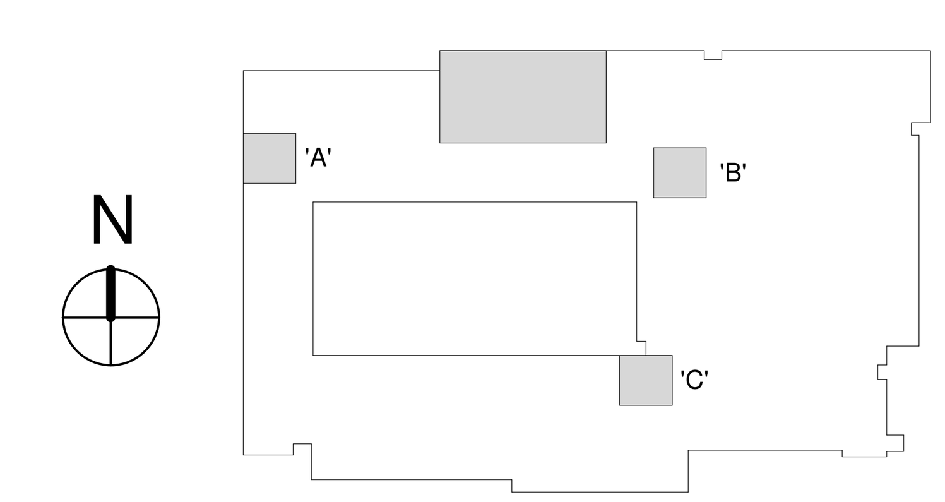
KEYNOTES

1. REMOVE UNIT VENTILATORS AND SALVAGE FOR REINSTALLATION/RELOCATION.
   - A. PRIOR TO REMOVAL NOTE HEATING HOT WATER AND CHILLED WATER COIL FLOWS (GPM).
   - B. REMOVE OUTSIDE AIR DUCT AND OUTSIDE AIR LOUVER. WALL PATCHING BY ARCHITECTURAL TRADES.
   - C. REMOVE HEATING HOT WATER AND CHILLED WATER PIPING BACK TO POINT SHOWN. PREPARE FOR NEW CONNECTIONS.
   - D. DISCONNECT CONTROL WIRING AND PREPARE FOR NEW CONNECTIONS.
2. REMOVE CABINET UNIT HEATER.
   - A. REMOVE HEATING HOT WATER PIPING BACK TO POINT SHOWN.
   - B. DISCONNECT CONTROL WIRING.
   - C. REMOVE THERMOSTAT.
3. REMOVE HYDRONIC PIPING BACK TO POINT SHOWN.
4. REMOVE SECTION OF CONDENSATE DRAIN PIPE.
5. REPLACE FINED TUBE CONVECTOR PIPE ENCLOSURE.
6. CHECK BALANCING VALVE SETTING/RECORD EXISTING FLOW.
7. REPLACE EXHAUST GRILLE.
8. HEATER COVER TO BE PAINTED BY OTHERS.
9. REMOVE UNIT VENTILATOR COMPLETE. REMOVE ASSOCIATED CONDENSATE PIPE BACK TO MAIN AND CAP. REMOVE CHILLED AND HOT WATER PIPING. REMOVE OUTSIDE AIR DUCTWORK AND LOUVER AND PATCH WALL.

GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK.
2. MECHANICAL DEMOLITION WORK REQUIRED TO COMPLETE THE INSTALLATION OF NEW SYSTEMS SHALL BE PERFORMED AS PART OF THE PROJECT BASE BID.
3. INFORMATION SHOWN REFLECTS AVAILABLE RECORDS, ON-SITE OBSERVATIONS, AND INFORMATION PRESENTED BY OWNER.
4. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID AND VERIFY LOCATIONS OF EXISTING EQUIPMENT, PIPING, AND SYSTEM COMPONENTS TO FAMILIARIZE THEMSELVES WITH THE SCOPE OF WORK.
5. PRIOR TO DEMOLITION THE CONTRACTOR SHALL NOTE DIFFERENCES IN FIELD CONDITIONS AND WHAT IS SHOWN ON THE CONTRACT DOCUMENTS AND NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
6. PATCH AND REPAIR ALL EXISTING SURFACES TO REMAIN THAT MAY BE DAMAGED BY THE PERFORMANCE OF THE DEMOLITION WORK.
7. PROTECT PIPING, DUCTWORK, CONDUIT, ETC. FROM THE ENTRANCE OF FOREIGN MATERIALS.
8. VERIFY AND PROTECT ANY EQUIPMENT, PIPING, COMPONENTS, CONTROLS TO REMAIN OR BE REUSED PRIOR TO DEMOLITION. ANY SUCH ITEMS THAT ARE DAMAGED DURING DEMOLITION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED OR REPLACED AT NO ADITIONAL COST TO THE CONTRACT.
9. OWNER SHALL HAVE THE FIRST RIGHT OF REFUSAL OF ANY EQUIPMENT NOTED TO BE REMOVED.
10. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF THE GRID CEILING SYSTEM AS REQUIRED FOR THE EXTENT OF DEMOLITION AND NEW WORK. PROVIDE NEW CEILINGS TO MATCH EXISTING AS REQUIRED FOR DAMAGED CEILINGS.
11. UNLESS OTHERWISE NOTED, ALL WORK DENOTED WITH BOLD (DARK) LINES REPRESENT WORK TO BE PERFORMED. ALL WORK DENOTED WITH LIGHT (SCREENED) LINES REPRESENT EXISTING TO REMAIN AND BE MAINTAINED.

KEYPLAN



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BANGOR TOWNSHIP SSCHOOL DISTRICT
PHASE 3 - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

	BY	DATE:
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DRAWN	CRP	09.18.24
CHECKED	SLB	
APPROVED	SLB	

NO.	REVISIONS	DATE
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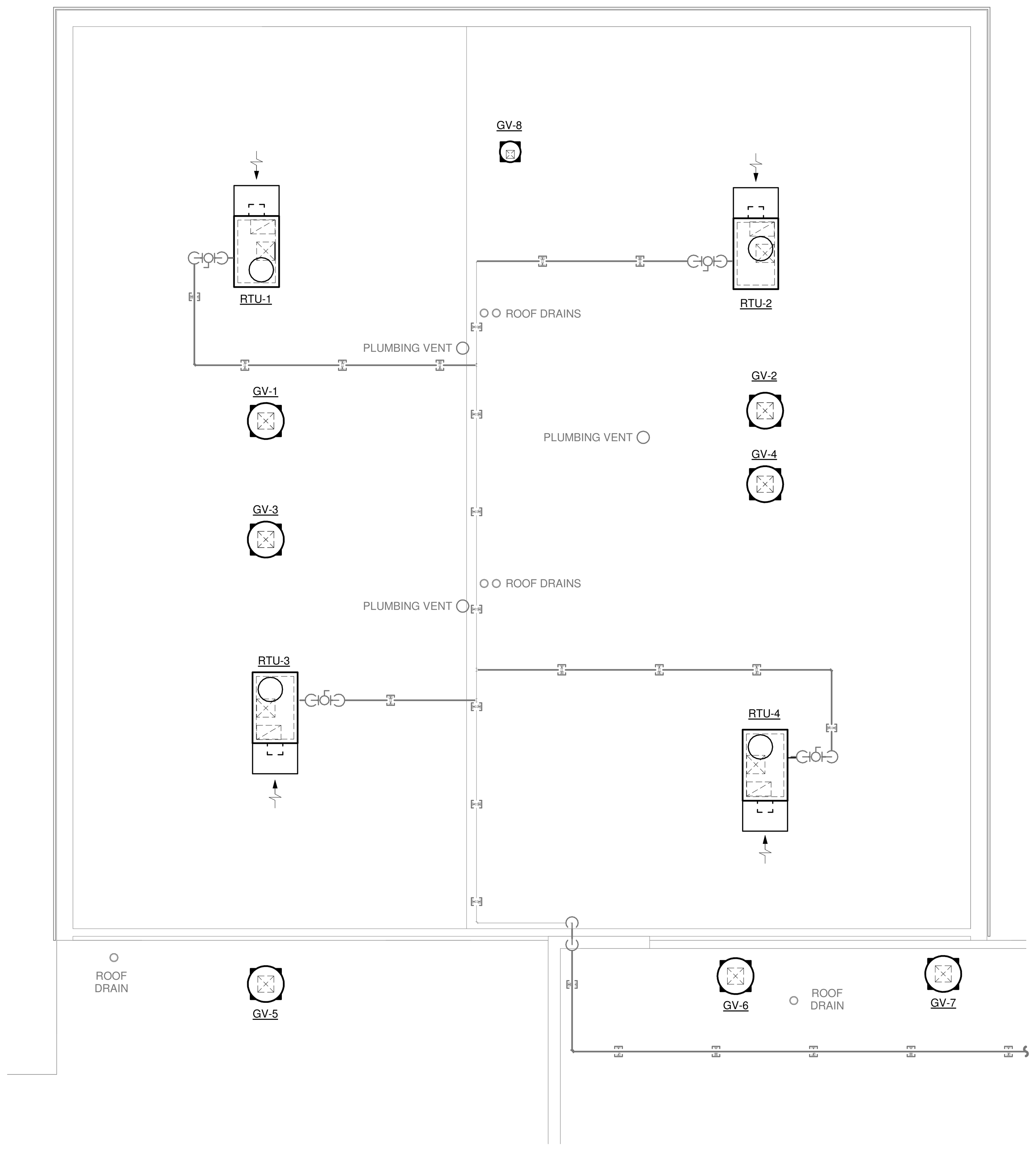
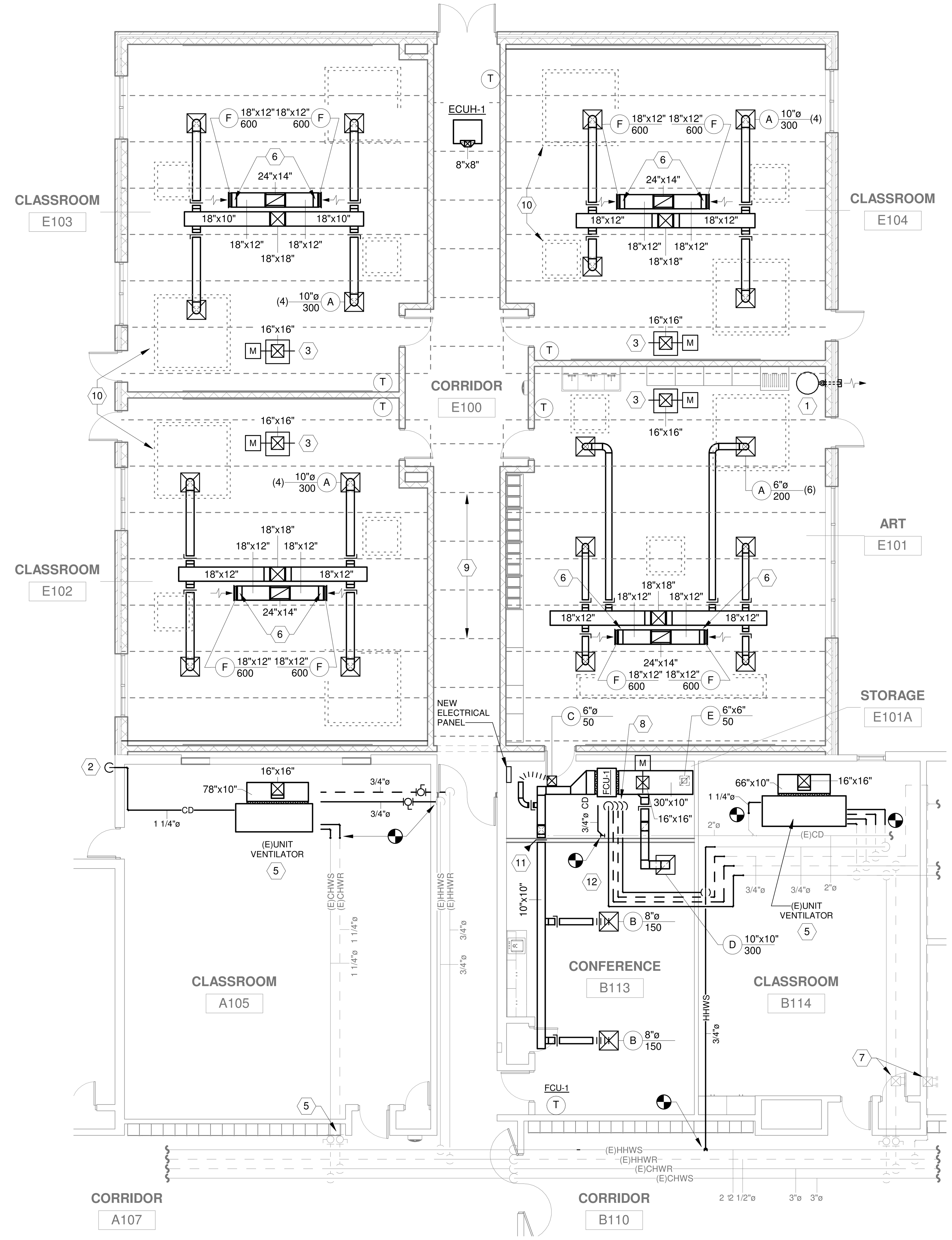
0	FOR CONSTRUCTION	12.20.24

MECHANICAL DEMOLITION PLAN

M1.0



2 MECHANICAL NEW WORK PLAN - ADDITION ROOF
1/8" = 1'-0"



1 MECHANICAL NEW WORK PLAN - ADDITION
1/8" = 1'-0"

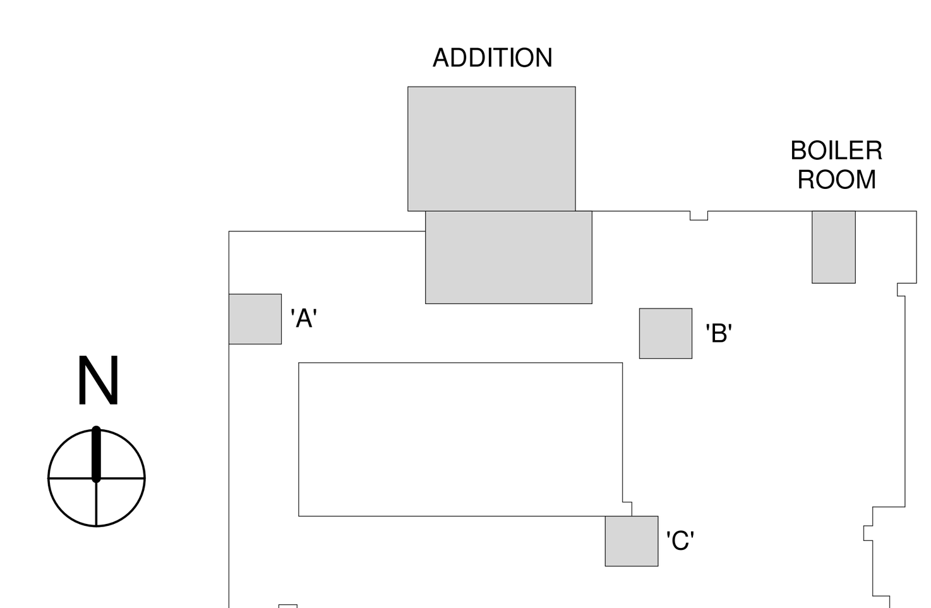
KEYNOTES

1. EXISTING KILN FURNISHED BY OWNER.
   A. FURNISH AND INSTALL "ENVIROVENT 2" OR EQUIVALENT DOWNDRAFT VENT, CONSITING OF PLENUM CUP, CUP STAND WITH SPRING, HOSE CLAMPS, 3" DIAMETER FLEX TUBE, BLOWER WITH MOTOR, 115 V CORDSET WITH SWITCH, DISCHARGE TUBE AND RAINHOOD. REFER TO DETAIL FOR ADDITIONAL INFORMATION.
2. INSTALL CONDENSATE DRAIN PIPE DOWN INTERNAL CORNER OF WALL. COORDINATE WITH STORM PIPING. INSTALL WITH WHITE PVC JACKET. TERMINATE PIPE THROUGH WITH 45 DEGREE COPPER ELBOW DOWN. EXTEND A MINIMUM OF 1-1/2" PAST EXTERIOR WALL.
3. INTERLOCK MOTORIZED RELIEF AIR DAMPER WITH ROOFTOP UNIT OPERATION. INSTALL GALVANIZED STEEL DRAIN PAN BENEATH ROOF OPENING. REFER TO "RELIEF HOOD INSTALLATION DETAIL" #/M3.0 FOR ADDITIONAL INFORMATION.
4. 3-HR. COMBINATION FIRE/SMOKE DAMPER. GREENHECK "FSD-331" OR EQUIVALENT.
5. INSTALL SALVAGED UNIT VENTILATOR. RESET BALANCING VALVES TO PRE-RECORDED FLOWS.
6. RETURN AIR SILENCER, PRICE "RAS". REFER TO DETAIL FOR ADDITIONAL INFORMATION (TYP).
7. RESET BALANCING VALVES TO PREVIOUSLY RECORDED FLOWS.
8. REFER TO COIL PIPING DIAGRAM ON SHEET M3.0 FOR ADDITIONAL INFORMATION.
9. STRUCTURAL STEEL SHOWN FOR COORDINATION PURPOSES (TYP). FINAL DUCT BRANCH LOCATION MAY VARY DUE TO SUPPLIED STEEL JOIST WEBBING. FINAL DIFFUSER LOCATION MAY VARY DUE TO SIMILAR CONDITIONS.
10. LIGHT FIXTURES SHOWN FOR COORDINATION PURPOSES (TYP). FINAL DIFFUSER LOCATION MAY VARY DUE TO EXACT LIGHTING LOCATIONS.
11. 1-1/2 HR FIRE DAMPER.
12. 3/4" CHWS/R, 1/2" HHWS/R.

GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. PROVIDE MECHANICAL SYSTEMS COMPLETE PER SPECIFICATIONS, SMACNA STANDARDS, AND PER APPLICABLE CODES.
2. MECHANICAL CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE WORK OF ALL OTHER TRADES. VERIFY ALL CLEARANCES PRIOR TO THE FABRICATION OF ANY WORK.
3. DUCTWORK/PIPING SHALL NOT BE LOCATED OVER ELECTRICAL EQUIPMENT/PANELS. PROVIDE REQUIRED CLEARANCE IN FRONT OF OR ABOVE ELECTRICAL EQUIPMENT. DUCTWORK/PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE.
4. THE CONTRACTOR SHALL PROVIDE SUPPLEMENTAL STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL MECHANICAL SYSTEMS.
5. COORDINATE FLOOR, WALL, ROOF PENETRATIONS, LOUVER SIZES, PAD LOCATIONS, ETC. WITH ARCHITECTURAL TRADES.
6. ALL THERMOSTATS OR TEMPERATURE SENSORS SHALL BE PROVIDED WITH INSULATED BASES.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF GRILLES, REGISTERS, AND DIFFUSERS.
8. PIPING SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
9. PIPING RUN-OUTS TO UNIT HEATERS, CABINET UNIT HEATERS AND FINNED TUBE ARE THE LARGER OF 3/4" NPS OR THE EQUIPMENT CONNECTION SIZE WHERE NO PIPE IS INDICATED.
10. PROVIDE CODE REQUIRED CLEARANCE/ACCESS DOORS FOR DAMPERS, VALVES, AND CLEANOUTS LOCATED IN WALLS OR ABOVE HARD CEILINGS. COORDINATE LOCATIONS WITH ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR CEILING TYPES.
11. FOR EQUIPMENT VALVING, COMPONENT, AND PIPING ARRANGEMENT REFER TO PIPING DIAGRAMS AND DETAILS.
12. BRANCH DUCTWORK TO GRILLES, REGISTERS, AND DIFFUSERS SHALL BE THE SAME SIZE AS THE GRILLE, REGISTER, OR DIFFUSER NECK SIZE WHERE NO DUCT SIZE IS INDICATED ON PLAN.
13. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL BE 5'-0".
14. OPENINGS THROUGH ROOF DECK SHALL BE COORDINATED WITH FRAMING PLANS. GENERAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND PROVIDE FOR OPENINGS AND FRAMES/REINFORCING AS FOLLOWS:
   - OPENINGS UP TO 18"x18"-PROVIDE L2x2x3/16 ANGLES PERPENDICULAR TO DECK FLUTES, ON BOTH SIDES OF OPENING. EXTEND ANGLES A MINIMUM OF 2 FLUTES BEYOND EDGE OF OPENING. FASTEN ANGLES TO EACH FLUTE WITH # 10 TEK SCREWS.
   - OPENINGS LARGER THAN 18"x18"-PROVIDE A WELDED L4x4x1/4 FRAME SUPPORTED BY STEEL JOISTS OR BEAMS AS SHOWN ON STRUCTURAL PLANS.
15. PRIME & PAINT ALL EXPOSED DUCTWORK. COORDINATE COLOR WITH G.C./ARCHITECT.
16. FIRE STOP INSULATION FOR ALL COPPER, IRON, AND STEEL PIPE WHERE PASSING THROUGH FIRE WALLS SHALL BE CERAMIC FIRE BLANKET, 6 LB. DENSITY. REFER TO ARCHITECTURAL PLANS FOR FIRE RATING OF WALLS.

KEYPLAN



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BANGOR TOWNSHIP SSCHOOL DISTRICT
PHASE 3 - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

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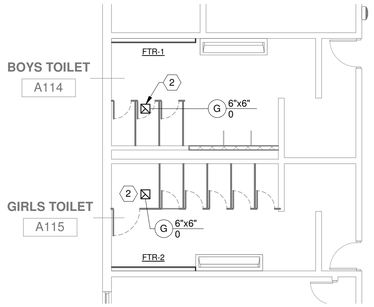
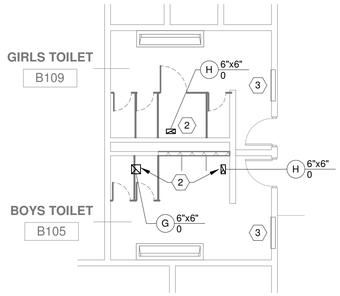
MECHANICAL NEW WORK PLANS

M2.0



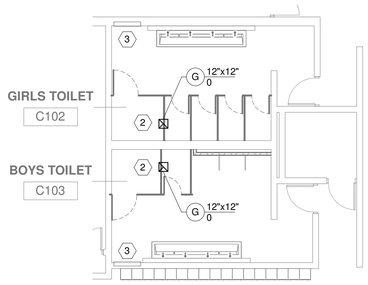
MECHANICAL
NEW WORK PLAN
AREA 'A' RESTROOM

1 1/8" = 1'-0"



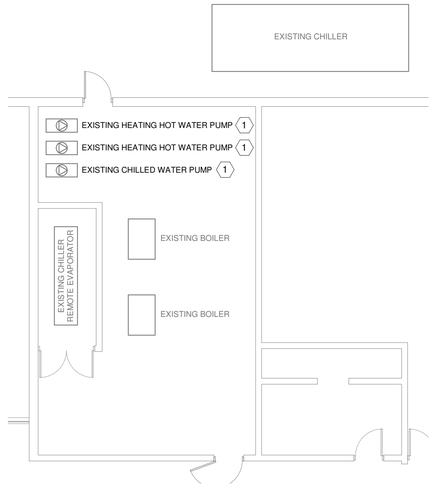
MECHANICAL
NEW WORK PLAN
AREA 'B' RESTROOM

2 1/8" = 1'-0"



MECHANICAL
NEW WORK PLAN
AREA 'C' RESTROOM

3 1/8" = 1'-0"



MECHANICAL NEW WORK PLAN
BOILER ROOM

4 1/8" = 1'-0"

KEYNOTES

1. REBALANCE HEATING HOT WATER AND CHILLED WATER SYSTEM BASE MOUNTED PUMPS AS NEEDED FOR UNIT VENTILATOR RELOCATIONS.
2. REPLACE EXHAUST GRILLE. FIELD VERIFY EXISTING DUCT SIZE.
3. HEATER COVER TO BE PAINTED BY OTHERS.

GENERAL NOTES

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6. ALL THERMOSTATS OR TEMPERATURE SENSORS SHALL BE PROVIDED WITH INSULATED BASES.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF GRILLES, REGISTERS, AND DIFFUSERS.
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10. PROVIDE CODE REQUIRED CLEARANCE/ACCESS DOORS FOR DAMPERS, VALVES, AND CLEANOUTS LOCATED IN WALLS OR ABOVE HARD CEILINGS. COORDINATE LOCATIONS WITH ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR CEILING TYPES.
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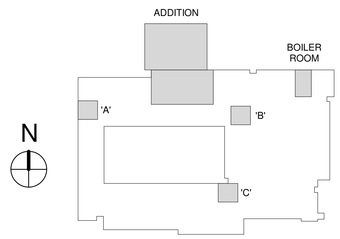
    - OPENINGS LARGER THAN 18"x18"-PROVIDE A WELDED L4x4x1/4 FRAME SUPPORTED BY STEEL JOISTS OR BEAMS AS SHOWN ON STRUCTURAL PLANS.
15. PRIME & PAINT ALL EXPOSED DUCTWORK. COORDINATE COLOR WITH G.C./ARCHITECT.
16. INSTALL NEW CARBON MONOXIDE SENSOR WITH AUDIBLE ALARM IN ANY ROOM WITH A GAS-FIRED APPLIANCE.

KEYPLAN



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BANGOR TOWNSHIP SSCHOOL DISTRICT
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PROJECT NO. 22-011

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0	FOR CONSTRUCTION	12.20.24

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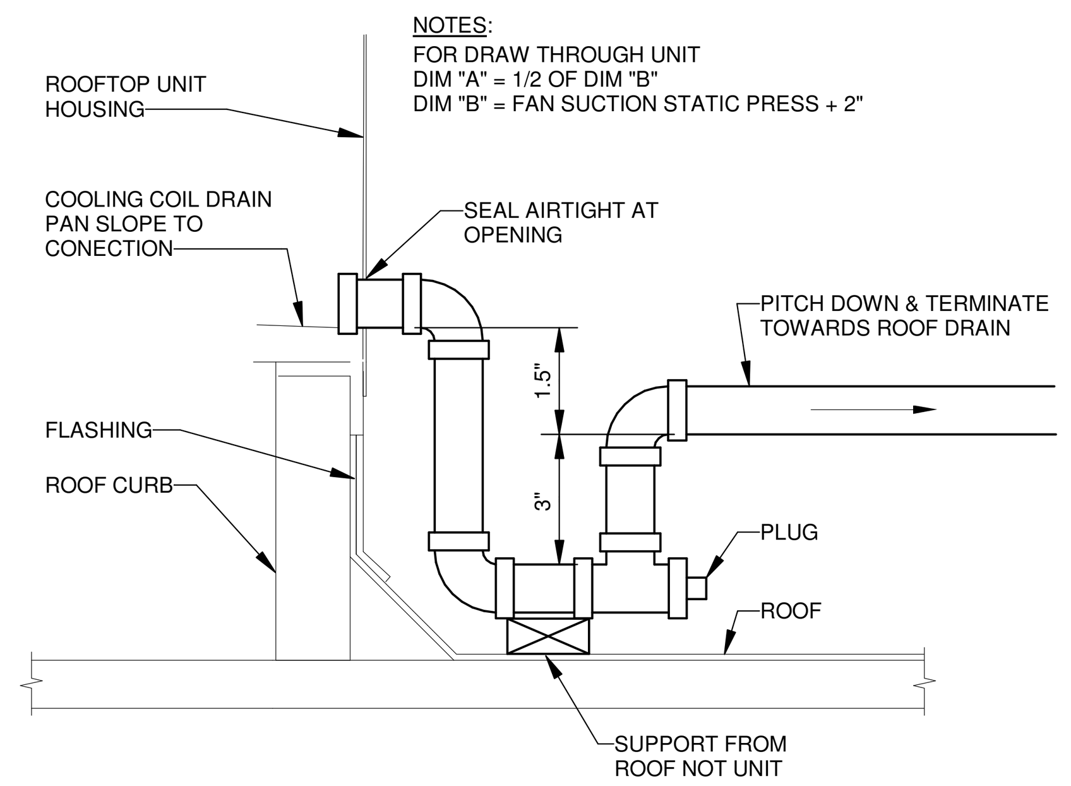
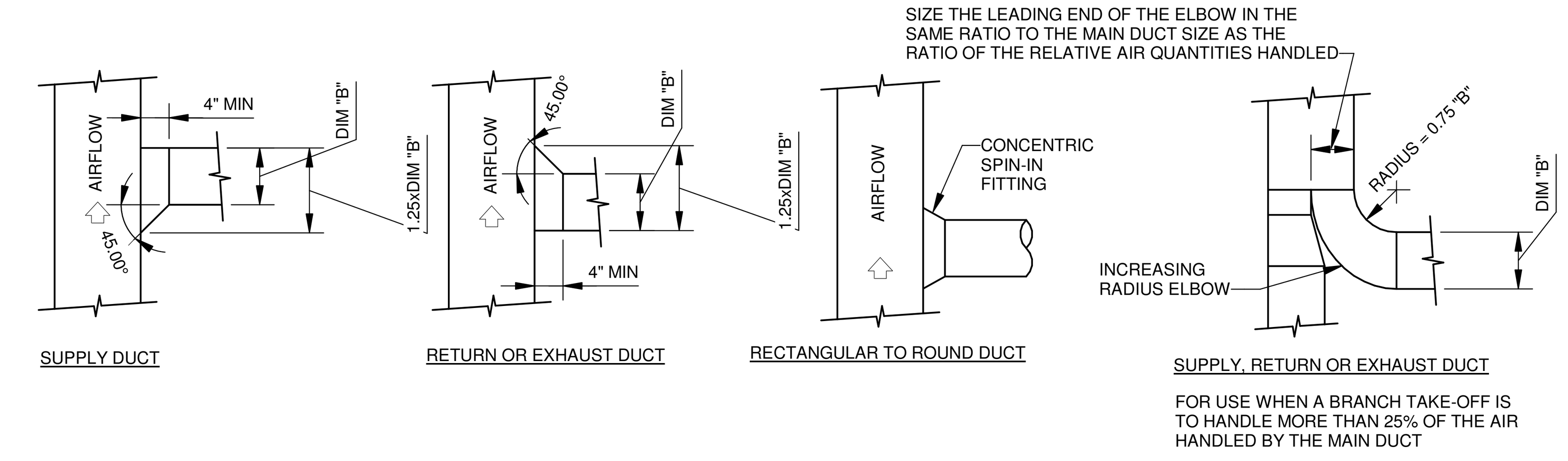
MECHANICAL NEW WORK PLANS

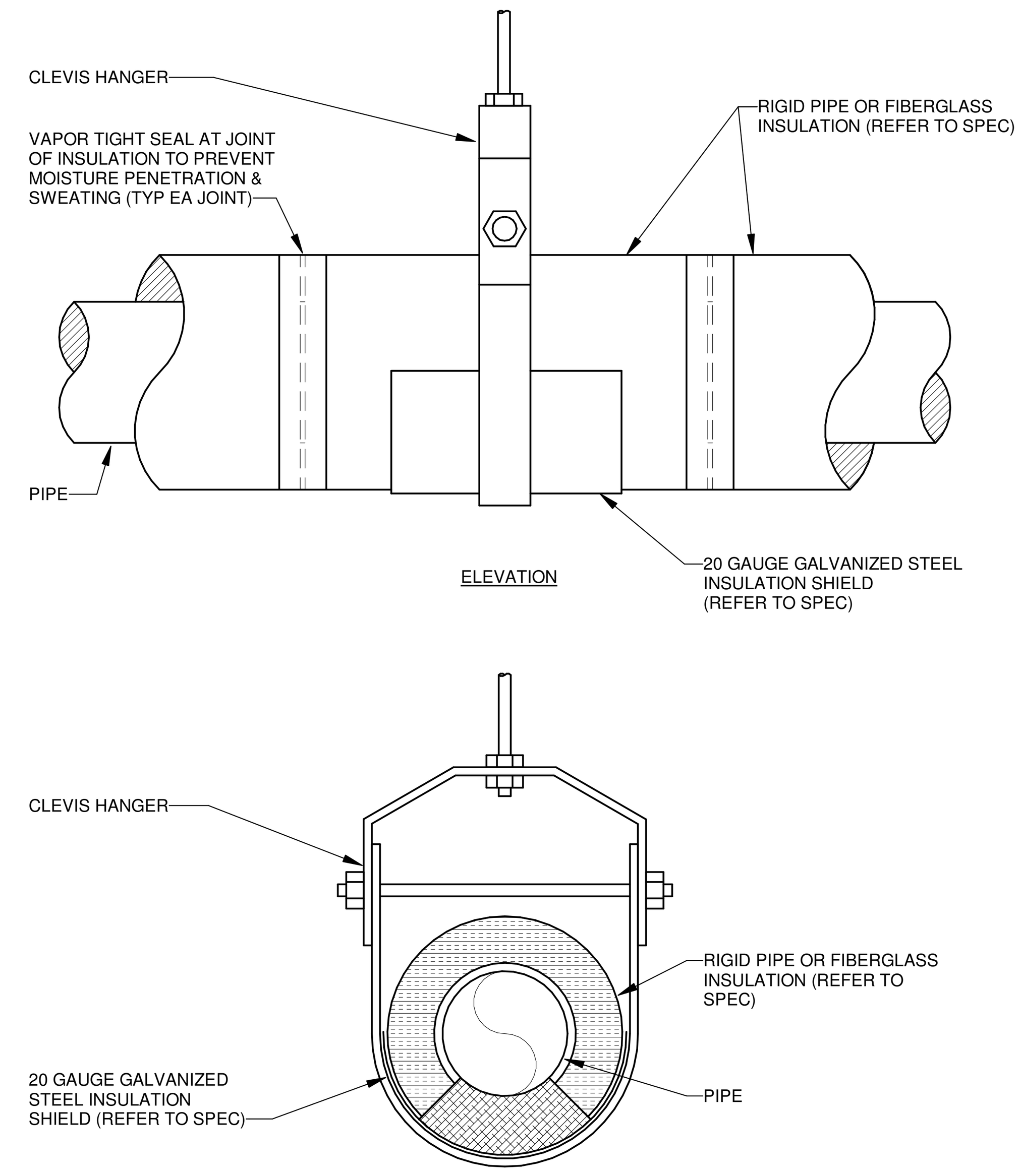
M2.1



6 RTU DRAIN PAN TRAP DETAIL
N.T.S.



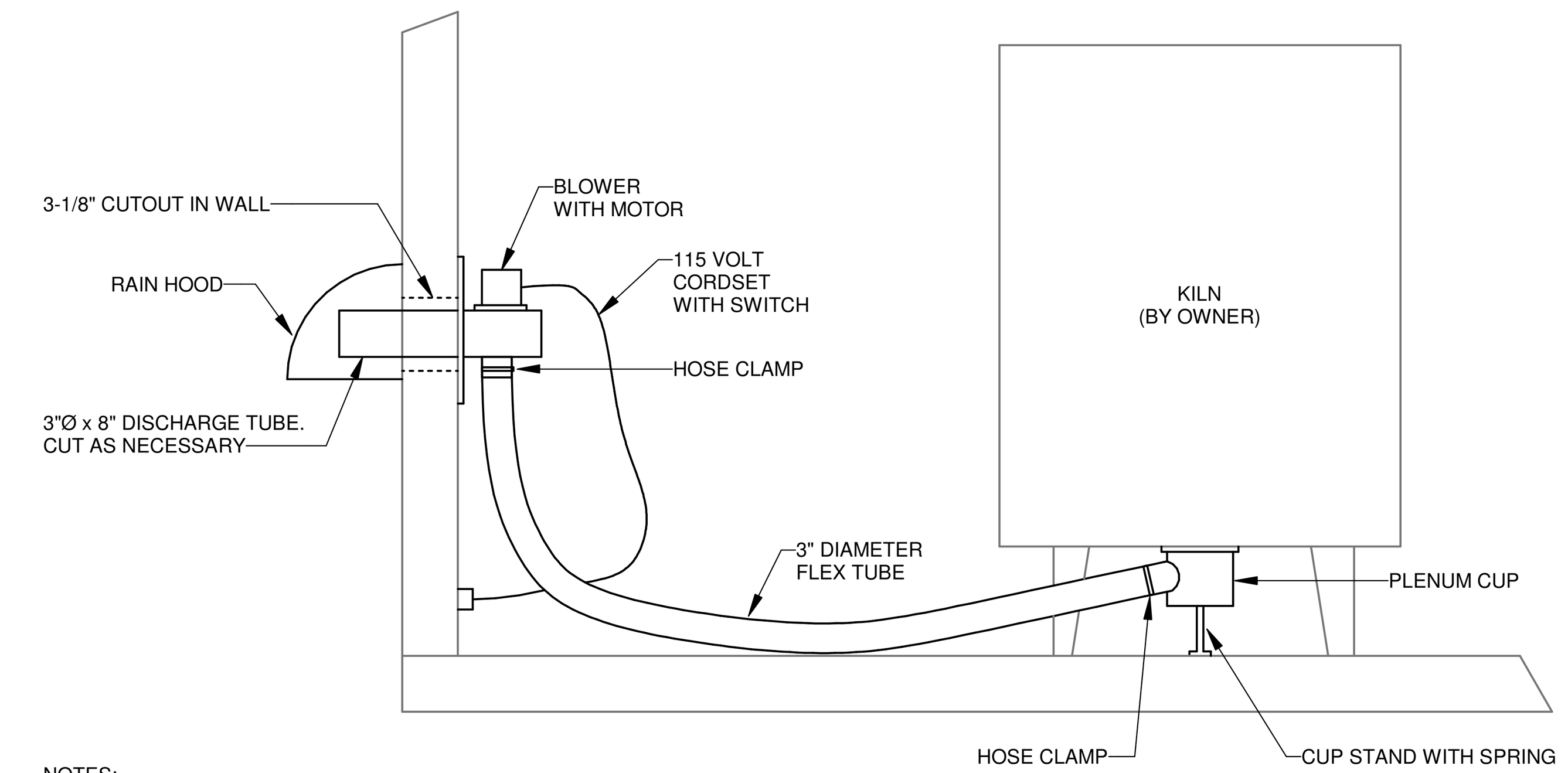
9 RECTANGULAR DUCT BRANCH TAKE-OFF DETAILS
N.T.S.



NOTES:

1. PRE-INSULATED PIPE SUPPORTS SHALL BE USED TO ALLOW PROPER ALIGNMENT OF PIPING DURING INSTALLATION. PRE-INSULATED HANGERS SHALL BE PIPE SHIELDS INCORPORATED OR APPROVED EQUAL, REFER TO SPECIFICATIONS.
2. MULTIPLE PIPE RUNS MAY BE SUPPORTED ON TRAPEZE HANGERS. TRAPEZE SHALL BE UNISTRUT P-100.

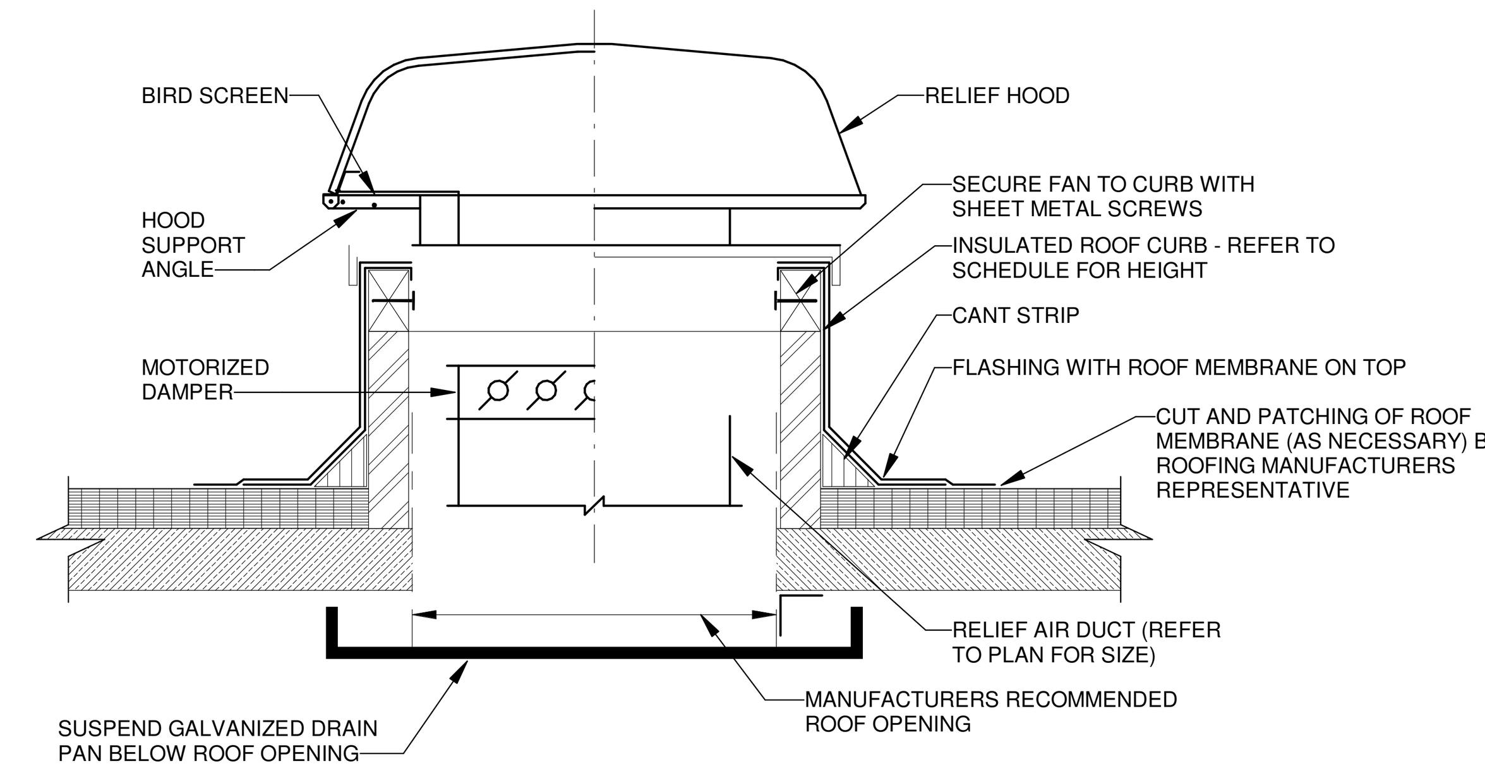
5 INSULATED PIPE HANGER DETAIL
N.T.S.



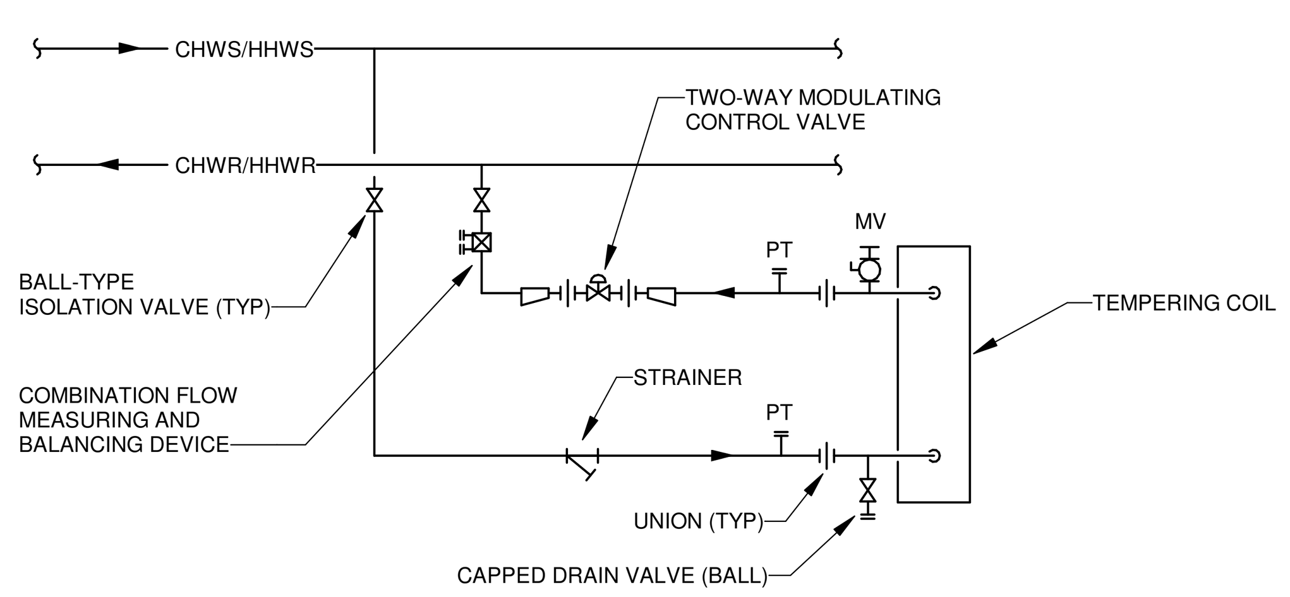
NOTES:

1. EXISTING KILN FURNISHED BY OWNER.
2. FURNISH AND INSTALL "ENVIROVENT 2" OR EQUIVALENT DOWNDRAFT VENT, CONSITING OF PLENUM CUP, CUP STAND WITH SPRING, HOSE CLAMPS, 3" DIAMETER FLEX TUBE, BLOWER WITH MOTOR, 115 V CORDSET WITH SWITCH, DISCHARGE TUBE AND RAINHOOD. REFER TO DETAIL FOR ADDITIONAL INFORMATION.

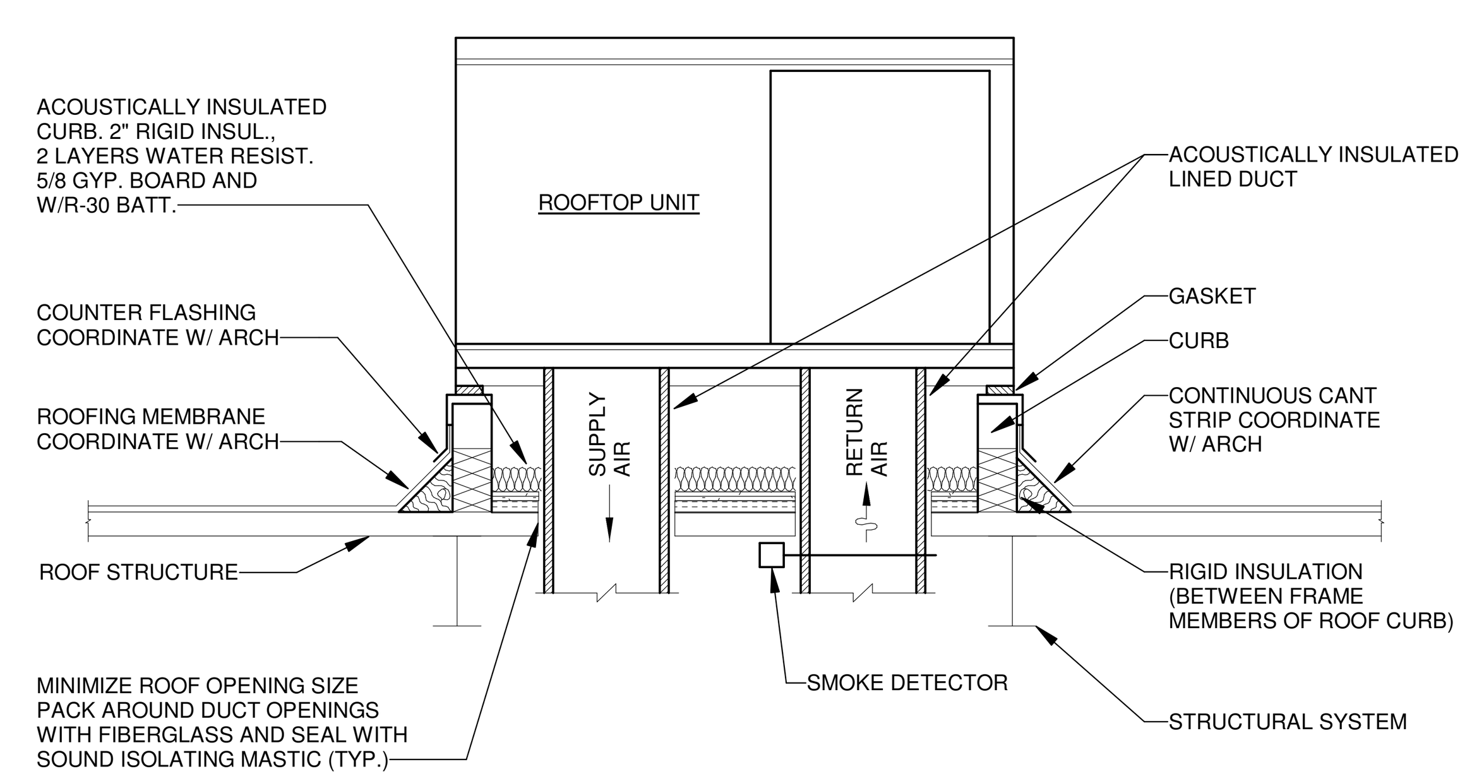
3 KILN DOWNDRAFT VENT DETAIL
N.T.S.



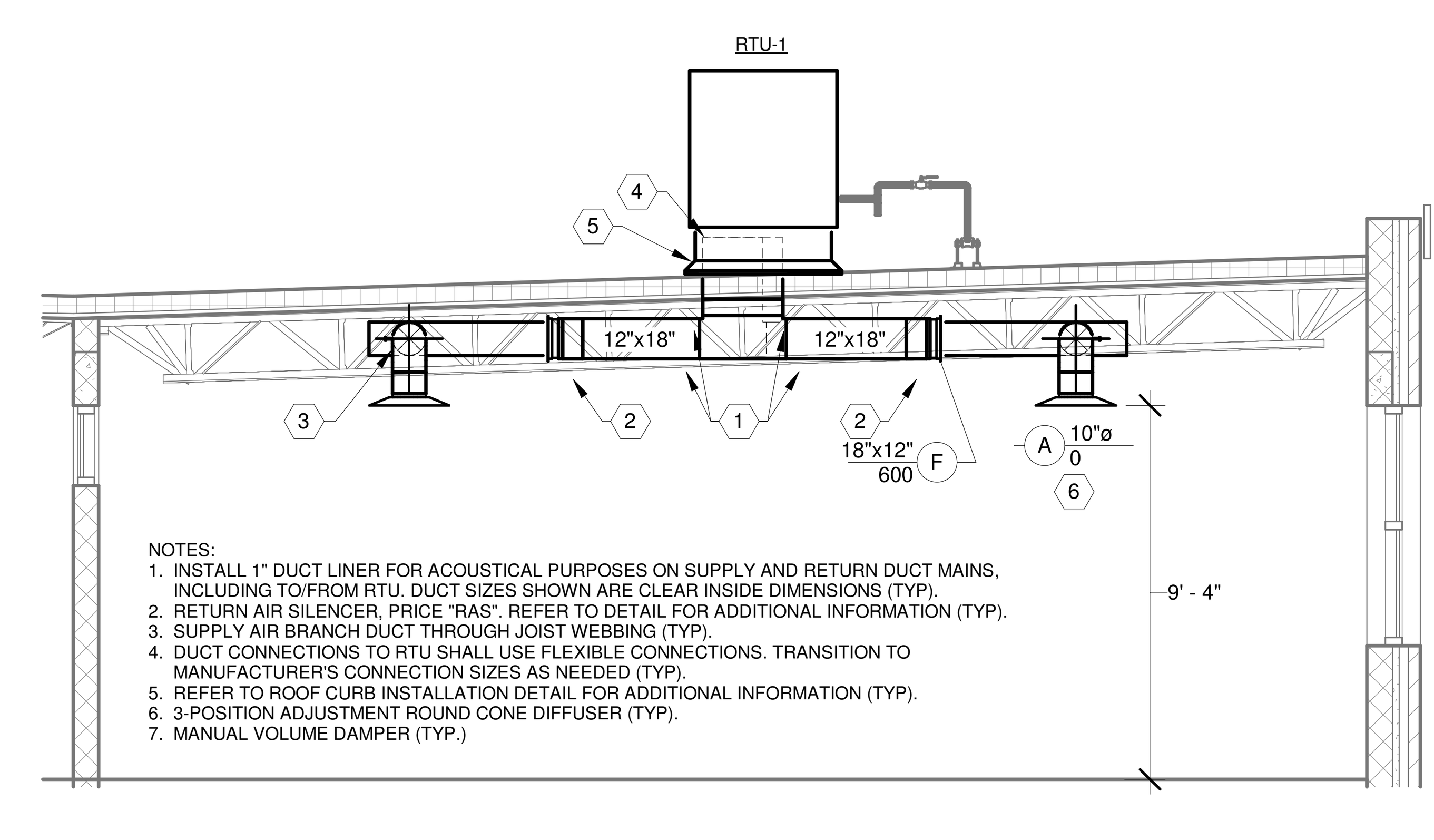
2 RELIEF HOOD INSTALLATION DETAIL
N.T.S.



7 COIL PIPING DIAGRAM (2-WAY VALVE)
N.T.S.



4 RTU CURB MOUNTING DETAIL
N.T.S.



NOTES:

1. INSTALL 1" DUCT LINER FOR ACOUSTICAL PURPOSES ON SUPPLY AND RETURN DUCT MAINS, INCLUDING TO/FROM RTU. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS (TYP).
2. RETURN AIR SILENCER, PRICE "RAS". REFER TO DETAIL FOR ADDITIONAL INFORMATION (TYP).
3. SUPPLY AIR BRANCH DUCT THROUGH JOIST WEBBING (TYP).
4. DUCT CONNECTIONS TO RTU SHALL USE FLEXIBLE CONNECTIONS. TRANSITION TO MANUFACTURER'S CONNECTION SIZES AS NEEDED (TYP).
5. REFER TO ROOF CURB INSTALLATION DETAIL FOR ADDITIONAL INFORMATION (TYP).
6. 3-POSITION ADJUSTMENT ROUND CONE DIFFUSER (TYP).
7. MANUAL VOLUME DAMPER (TYP.)

1 CLASSROOM SECTION (TYP)
N.T.S.

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MECHANICAL DETAILS

M3.0

PACKAGED COMMERCIAL ROOFTOP UNIT SCHEDULE - (DX - GAS)

UNIT ID	SERVICE	TOTAL SUPPLY (CFM)	MINIMUM OA (CFM)	SUPPLY FAN: ESP (IN WG)	SUPPLY FAN: FAN TYPE	SUPPLY FAN: DRIVE TYPE	SUPPLY FAN: HP	DX COOLING COIL: TOTAL CAPACITY (MBH)	DX COOLING COIL: SENSIBLE CAPACITY (MBH)	AIR: EDB (°F)	AIR: EWB (°F)	AIR: LDB (°F)	AIR: LWB (°F)	EFFICIENCY (EER)	REFRIGERANT TYPE
RTU-1	E103	1200	457	0.50	SINGLE ZONE VAV, BC PLENUM	DIRECT	3.0	35.5	27.4	80	67	58.8	57.4	14.3	R454B
RTU-2	E104	1200	453	0.50	SINGLE ZONE VAV, BC PLENUM	DIRECT	3.0	35.5	27.4	80	67	58.8	57.4	14.3	R454B
RTU-3	E102	1200	457	0.50	SINGLE ZONE VAV, BC PLENUM	DIRECT	3.0	35.5	27.4	80	67	58.8	57.4	14.3	R454B
RTU-4	E101	1200	507	0.50	SINGLE ZONE VAV, BC PLENUM	DIRECT	3.0	35.5	27.4	80	67	58.8	57.4	14.3	R454B

UNIT ID	NATURAL GAS HEATING SECTION: INPUT (MBH)	OUTPUT (MBH)	GAS PRESS. MIN.-MAX. (IN WG)	STAGES OR MODULATION TURNDOWN	BURNER TYPE	EAT (°F)	LAT (°F)	POWER EXHAUST OR BAROMETRIC RELIEF	FILTER TYPE	ELECTRICAL: MOP	MCA	VOLTS	PHASE	DISCONNECT: FURN. BY	INST. BY	TYPE	MIN. CURB HEIGHT (IN)	UNIT WEIGHT (LBS)	MANUFACTURER / MODEL NO.
RTU-1	120	97.2	4.5-14	2-STAGE	INDIRECT	41.5	116.5	BAROMETRIC RELIEF	2" MERV 8	30	23.0	208	3	MANUF.	MANUF.	NON-FUSED SWITCH	14	1104	TRANE YZK036
RTU-2	120	97.2	4.5-14	2-STAGE	INDIRECT	41.5	116.5	BAROMETRIC RELIEF	2" MERV 8	30	23.0	208	3	MANUF.	MANUF.	NON-FUSED SWITCH	14	1104	TRANE YZK036
RTU-3	120	97.2	4.5-14	2-STAGE	INDIRECT	41.5	116.5	BAROMETRIC RELIEF	2" MERV 8	30	23.0	208	3	MANUF.	MANUF.	NON-FUSED SWITCH	14	1104	TRANE YZK036
RTU-4	120	97.2	4.5-14	2-STAGE	INDIRECT	41.5	116.5	BAROMETRIC RELIEF	2" MERV 8	30	23.0	208	3	MANUF.	MANUF.	NON-FUSED SWITCH	14	1104	TRANE YZK036

NOTES:
1. LOW LEAK ECONOMIZER (O-100% OUTDOOR AIR SUPPLY, FULL MODULATION DAMPERS) WITH HOOD.
2. VARIABLE SPEED COMPRESSOR WITH VARIABLE FREQUENCY DRIVE.
3. FACTORY FURNISHED REFRIGERANT LEAK DETECTION SYSTEM.
4. CONDENSER COIL HAIL GUARDS.
5. EVAPORATOR COIL FREEZE STAT.
6. DOWNFLOW SUPPLY AND RETURN.
7. FACTORY FURNISHED KNOCK-DOWN, FIELD ASSEMBLED ROOF CURB.
8. DEMAND CONTROL VENTILATION (DCV).
9. BACNET COMPATIBLE CONTROLLER.

FAN COIL UNIT SCHEDULE

UNIT ID	NOMINAL AIRFLOW (CFM)	ESP (IN WG)	COOLING COIL: TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	AIR: EDB (°F)	AIR: EWB (°F)	AIR: LDB (°F)	AIR: LWB (°F)	WATER: FLOW (GPM)	WATER: EWT (°F)	WATER: LWT (°F)	WATER: MAX. WPD (FT HD)
FCU-1	350	0.50	8.5	7.3	77.4	65	58.2	57	1.3	45	58	3.00

UNIT ID	HEATING COIL: MIN. TOTAL CAPACITY (MBH)	AIR: EAT (°F)	AIR: LAT (°F)	WATER: FLOW (GPM)	WATER: EWT (°F)	WATER: LWT (°F)	WATER: MAX. WPD (FT HD)	UNIT DIMENSIONS: LENGTH (IN)	DEPTH (IN)	HEIGHT (IN)	FILTER TYPE	ELECTRICAL: MOCP	MCA	VOLTS	PHASE	DISCONNECT: FURN. BY	INST. BY	TYPE	MANUFACTURER / MODEL NO.
FCU-1	16.0	47.5	89.7	0.8	180	140	2.00	27.19	27.81	10.06	1" THROWAWAY	15	2.75	115	1	MANUF.	MANUF.	NON-FUSED SWITCH	TRANE FCCB040

NOTES:
1. BACNET COMPATIBLE CONTROLLER.
2. CONTROL VALVES SHALL BE SELECTED FOR A PRESSURE DROP EQAUL TO TWO TIMES THE PRESSURE DROP OF THE ASSOCIATED HEAT TRANSFER DEVICE.
3. PRESSURE DROP OF THE SELECTED VALVE SHALL NOT EXCEED A MAXIMUM OF 15 FEET OF HEAD OR A MINIMUM OF 2.3 FEET OF HEAD.

CABINET UNIT HEATER (ELECTRIC) SCHEDULE

UNIT ID	MBH	kW	CFM	ELECTRICAL: VOLTS	ELECTRICAL: PHASE	ELECTRICAL: AMPS	PHYSICAL SIZE (IN): LENGTH / DEPTH	PHYSICAL SIZE (IN): HEIGHT	PHYSICAL SIZE (IN): WIDTH	MOUNTING	MANUFACTURER / MODEL NO.
ECUH-1	7.8	2.3	200	208	3	6.3	35.81	10.38	29.88	CEILING RECESSED	TRANE FFE

NOTES:
1. FACTORY MOUNTED STARTER AND DISCONNECT.
2. BOTTOM/FACE STAMPED LOUVER INLET AND OUTLET. FRESH AIR TOP.
3. FACTORY FURNISHED LOW VOLTAGE WALL MOUNTED THERMOSTAT.

GRAVITY VENTILATOR SCHEDULE

UNIT ID	FLOW	SYSTEM SERVED	AIRFLOW (CFM)	THROAT SIZE (IN)	THROAT VELOCITY (FPM)	STATIC PRESSURE DROP (IN WG)	HOOD SIZE: WIDTH (IN)	HOOD SIZE: LENGTH (IN)	HOOD SIZE: HEIGHT (IN)	HOOD SIZE: CURB CAP WIDTH (IN)	HOOD SIZE: CURB CAP LENGTH (IN)	ROOF OPENING WIDTH (IN)	ROOF OPENING LENGTH (IN)	CURB HEIGHT (IN)	HOOD CONSTRUCTION	MANUFACTURER / MODEL NO.
GV-1	RELIEF	RTU-1	500	12	610	0.05	29.0	29.0	22.0	22	22	14.5	14.5	24	ALUMINUM	GREENHECK GRSR-12
GV-2	RELIEF	RTU-2	500	12	610	0.05	29.0	29.0	22.0	22	22	14.5	14.5	24	ALUMINUM	GREENHECK GRSR-12
GV-3	RELIEF	RTU-3	500	12	610	0.05	29.0	29.0	22.0	22	22	14.5	14.5	24	ALUMINUM	GREENHECK GRSR-12
GV-4	RELIEF	RTU-4	500	12	610	0.05	29.0	29.0	22.0	22	22	14.5	14.5	24	ALUMINUM	GREENHECK GRSR-12
GV-5	INTAKE	EXISTING UNIT VENTILATOR	375	12	460	0.04	29.0	29.0	22.0	22	22	14.5	14.5	24	ALUMINUM	GREENHECK GRSI-12
GV-6	INTAKE	FCU-1	110	8	110	0.00	20.5	20.5	19.3	19	19	10.5	10.5	24	ALUMINUM	GREENHECK GRSI-8
GV-7	INTAKE	EXISTING UNIT VENTILATOR	375	12	460	0.04	29.0	29.0	22.0	22	22	14.5	14.5	24	ALUMINUM	GREENHECK GRSI-12
GV-8	INTAKE	ECUH-1	40	8	108	0.00	20.5	20.5	19.3	19	19	10.5	10.5	24	ALUMINUM	GREENHECK GRSI-8

GRILLE, REGISTER AND DIFFUSER SCHEDULE

UNIT ID	FLOW	FACE SIZE	NECK SIZE	MOUNTING	FINISH	MATERIAL	TYPE	MODEL NO.	REMARKS
A	SUPPLY	24"x24"	SEE PLANS	DUCT	GALVANIZED FOR PAINTING BY TRADES	STEEL	SQUARE CONE	SCDA	FULLY ADJUSTABLE, 3-CONE
B	SUPPLY	24"x24"	SEE PLANS	NOTE 2	WHITE	STEEL	SQUARE CONE	SCDA	FULLY ADJUSTABLE, 3-CONE
C	SUPPLY	12"x12"	SEE PLANS	NOTE 2	WHITE	STEEL	SQUARE CONE	SCDA	FULLY ADJUSTABLE, 3-CONE, WITH PANEL MOUNT
D	RETURN	24"x24"	SEE PLANS	NOTE 2	WHITE	STEEL	PERFORATED	PDDR	
E	RETURN	12"x12"	SEE PLANS	NOTE 2	WHITE	STEEL	PERFORATED	PDDR	
F	RETURN	18"x12"	SEE PLANS	DUCT	GALVANIZED FOR PAINTING BY TRADES	STEEL	LOUVERED	530	45° DEFLECTION, 1/2" BLADE SPACING, BLADES PARALLEL TO LONG DIMENSION, ANGLED UPWARDS . FURNISH WITH TYPE "ED" BORDER/FRAME. FRAME "HEMS" THE RAW EDGE OF DUCT FOR CLEAN GRILLE MOUNT.
G	EXHAUST	12"x12"	SEE PLANS	NOTE 2	WHITE	STEEL	EGG CRATE	80	
H	EXHAUST	12"x6"	SEE PLANS	NOTE 2	WHITE	STEEL	EGG CRATE	80	

NOTES:
1. MODEL NUMBERS ARE PRICE UNLESS OTHERWISE NOTED.
2. REFER TO ARCHITECTURAL CEILING PLAN AND COORDINATE FRAME TYPE ACCORDINGLY.

OUTSIDE AIR VENTILATION SCHEDULE

ROOM	OCCUPANCY CLASSIFICATION	SF	OCCUPANTS	OUTSIDE AIR FLOWRATE: CFM/ PERSON	OUTSIDE AIR FLOWRATE: CFM/SF	OA REQUIRED (CFM)
E100	CORRIDOR	618	-	-	.06	38
E101	ART CLASSROOM	1317	27	10	0.18	507
E101A	STORAGE	162	-	-	0.12	20
E102	CLASSROOM (AGE 9 PLUS)	1140	32	10	0.12	457
E103	CLASSROOM (AGE 9 PLUS)	1140	32	10	0.12	457
E104	CLASSROOM (AGE 9 PLUS)	1108	32	10	0.12	453

FINNED TUBE RADIANT (HOT WATER) SCHEDULE

UNIT ID	ENCLOSURE: TYPE	ENCLOSURE: HEIGHT (IN)	ENCLOSURE: DEPTH (IN)	ENCLOSURE: LENGTH (IN)	MANUFACTURER / MODEL NO.
FTR-1	SECURITY, PERFORATED, SLOPED TOP	24	5.375	108*	ZEHNDER RITTLING ENCLOSURE S-SP5
FTR-2	SECURITY, PERFORATED, SLOPED TOP	24	5.375	108*	ZEHNDER RITTLING ENCLOSURE S-SP5

NOTES:
* FIELD MEASURE FOR EXACT DIMENSIONS.
1. PROVIDE WITH ACCESS PANEL SECTION WITH ACCESS DOOR AND ALLEN KEY LOCK FOR SECTIONS WITH VALVES

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BANGOR TOWNSHIP SSCHOOL DISTRICT
PHASE 3 - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

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0	FOR CONSTRUCTION	12.20.24

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DRAWN	CRP	09.18.24
CHECKED	SLB	
APPROVED	SLB	

MECHANICAL SCHEDULES

M4.0

BAS INPUT/OUTPUT SUMMARY FORM

PROJECT:
BANGOR TOWNSHIP SCHOOLS
CHRISTA MCAULIFFE MIDDLE SCHOOL

SYSTEM DESCRIPTION:
ROOFTOP UNITS (RTU-1, RTU-2, RTU-3, RTU-4)

		HARDWARE POINTS																							APPLICATION SOFTWARE											
		INPUTS													OUTPUTS																						
		DIGITAL						ANALOG							DIGITAL						ANALOG																
SYM.	POINT DESCRIPTION	AUX CONTACT/DPS	CURRENT SWITCH	FLOW SWITCH	STATUS	3RD PARTY INTEGRATION		PRESSURE	TEMPERATURE	HUMIDITY	CO2 LEVEL	POSITION	CURRENT	DIFF PRESSURE	START/STOP	HI/LOW	OPEN/CLOSE	OFF/AUTO			DAMPER POSITION	VALVE POSITION	CONTROL	VSD/VANE DAMPER		PROPORTIONAL P	P + INTEGRAL PI	P + I + DERIVITIVE PID	ENHANCED PID	ADAPTIVE CONTROL	SETPOINT DISP & ADJ	HIGH/LOW ALARM	FLOATING ALARM	ABNORMAL ALARM	RUNTIME TOTALS	TOTALIZATION	NOTES
RTU-1 RTU-2 RTU-3 RTU-4	SUPPLY FAN S/S														X																						
	SUPPLY FAN STATUS				X																													X			
	OUTSIDE AIR DAMPER																				X																
	EXHAUST/RELIEF AIR DAMPER																				X																
	COOLING COIL INITIATE														X																						
	HEATING STAGE 1																	X																			
	HEATING STAGE 2								X									X																			
	CARBON DIOXIDE										X																							X			
	DISCHARGE AIR TEMPERATURE								X																									X			
	SPACE TEMPERATURE								X																						X			X			
	LOW LIMIT/FREEZE STAT								X																									X			INTERLOCKED TO SUPPLY FAN
	MIXED AIR TEMPERATURE								X																												
	FILTER DIFFERENTIAL PRESSURE													X																							
	BAS INTERFACE					X																															VERIFY BACNET/IP
	SMOKE DETECTOR				X																													X			FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. INTERLOCKED TO SUPPLY FAN MOTOR STARTER BY TEMPERATURE CONTROLS CONTRACTOR.
ECUH-1	FAN S/S														X																						
	SPACE TEMPERATURE								X																												
	HEATING ENABLE																	X																			

SEQUENCE OF OPERATION:

A. THERMOSTAT SET-POINT ADJUSTMENT LIMITATION

1. THE BUILDING AUTOMATION SYSTEM (BAS) SHALL INCLUDE THE ABILITY TO LIMIT THE RANGE OCCUPANTS CAN ADJUST SET-POINTS FROM ANY OF THE THERMOSTATS.

B. ROOFTOP UNIT, RTU-1

1. WITH THE SUPPLY FAN'S HAND/OFF/AUTO SWITCH IN THE "AUTO" POSITION, THE SUPPLY FAN SHALL BE AUTOMATICALLY STARTED AND STOPPED WITH THE DDC SYSTEM OCCUPANCY SCHEDULE. THE UNIT SHALL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM SHALL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD.
2. OCCUPIED MODE: WHEN THE DDC SYSTEM ENERGIZES THE SUPPLY FAN IT SHALL RUN CONTINUOUSLY. THE RETURN, RELIEF AND OUTSIDE AIR DAMPERS WILL MODULATE TO MAINTAIN MINIMUM OUTSIDE AIRFLOW AS DETERMINED BY THE OUTSIDE AIR DAMPER'S MINIMUM POSITION.
3. THE SUPPLY FAN WILL PROVE FLOW TO THE DDC SYSTEM WITH ITS CURRENT SENSING SWITCH. IF THE FAN FAILS, THE SYSTEM WILL BE DE-ENERGIZED AND AN ALARM WILL BE SENT TO THE DDC SYSTEM.
4. THE DISCHARGE AIR TEMPERATURE SENSOR SHALL MODULATE THE DX STAGES OF COOLING, MIXED AIR DAMPERS, AND THE STAGED HEATING COIL TO MAINTAIN THE DISCHARGE AIR TEMPERATURE.
5. ECONOMIZER MODE: WHEN THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE, DDC SHALL MODULATE THE MIXED AIR DAMPERS AND DX STAGES OF COOLING TO MAINTAIN THE DISCHARGE AIR TEMPERATURE WHILE MAINTAINING THE MINIMUM OUTSIDE AIRFLOW. WHEN THE OUTSIDE AIR TEMPERATURE IS GREATER THAN THE RETURN AIR TEMPERATURE, DDC SHALL MODULATE THE MIXED AIR DAMPERS TO MAINTAIN THE MINIMUM OUTSIDE AIRFLOW.
6. UNOCCUPIED MODE: IF THE SPACE TEMPERATURE SENSORS DROPS BELOW 60°F, THE SUPPLY FAN SHALL BE ENERGIZED, THE OUTSIDE AND RELIEF DAMPERS SHALL REMAIN CLOSED, THE RETURN DAMPER SHALL BE FULLY OPENED AND THE HEATING COIL CONTROL VALVE SHALL OPEN. AFTER ALL OF THE SPACES HAVE REACHED 63°F (ADJ), THE UNIT SHALL BE DE-ENERGIZED.
7. WHEN THE SUPPLY FAN IS DE-ENERGIZED, THE OUTSIDE AND RELIEF DAMPERS SHALL BE CLOSED. THE RETURN AIR DAMPER SHALL BE OPEN.
8. THE SUPPLY FAN SHALL BE STARTED IF THE MANUAL OVERRIDE COMMAND IS EXECUTED AT THE CENTRAL BMS WORKSTATION. THE FAN SHALL RUN UNTIL PLACED BACK IN AUTOMATIC MODE FROM THE CONTROLLER OR CENTRAL WORKSTATION.
9. AN ALARM SHALL SOUND THE DISCHARGE AIR TEMPERATURE RISES ABOVE OR FALLS BELOW THE DISCHARGE AIR TEMPERATURE COOLING HIGH OR COOLING LOW LIMITS FOR A DURATION OF 1 MINUTE.

C. ELECTRIC CABINET UNIT HEATER, ECUH-1

1. THROUGH THE UNIT'S REMOTE THERMOSTAT THE ELECTRIC HEATER SHALL BE ENABLED UPON A CALL FOR HEATING TO MAINTAIN THE DESIRED AREA TEMPERATURE WHEN OUTSIDE AIR TEMPERATURE IS LESS THAN 60°F (ADJ.). AIRFLOW SHALL BE PROVEN BY A FLOW SWITCH PRIOR TO ENERGIZING HEATING COIL. WHEN THE AREA TEMPERATURE SETPOINT IS SATISFIED, THE ELECTRIC HEATER SHALL CYCLE OFF.

D. FAN COIL UNIT, FCU-1

1. WITH THE SUPPLY FAN'S HAND/OFF/AUTO SWITCH IN THE "AUTO" POSITION, THE SUPPLY FAN SHALL BE AUTOMATICALLY STARTED AND STOPPED WITH THE DDC SYSTEM OCCUPANCY SCHEDULE. THE UNIT SHALL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM SHALL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD.
2. OCCUPIED MODE: WHEN THE DDC SYSTEM ENERGIZES THE SUPPLY FAN IT SHALL RUN CONTINUOUSLY. THE RETURN, RELIEF AND OUTSIDE AIR DAMPERS WILL MODULATE TO MAINTAIN MINIMUM OUTSIDE AIRFLOW AS DETERMINED BY THE OUTSIDE AIR DAMPER'S MINIMUM POSITION.
3. THE SUPPLY FAN WILL PROVE FLOW TO THE DDC SYSTEM WITH ITS CURRENT SENSING SWITCH. IF THE FAN FAILS, THE SYSTEM WILL BE DE-ENERGIZED AND AN ALARM WILL BE SENT TO THE DDC SYSTEM.
4. THE DISCHARGE AIR TEMPERATURE SENSOR SHALL MODULATE THE COOLING COIL CONTROL VALVE, MIXED AIR DAMPERS, AND THE HEATING COIL CONTROL VALVE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE.
5. ECONOMIZER MODE: WHEN THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE, DDC SHALL MODULATE THE MIXED AIR DAMPERS AND COOLING COIL CONTROL VALVE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE WHILE MAINTAINING THE MINIMUM OUTSIDE AIRFLOW. WHEN THE OUTSIDE AIR TEMPERATURE IS GREATER THAN THE RETURN AIR TEMPERATURE, DDC SHALL MODULATE THE MIXED AIR DAMPERS TO MAINTAIN THE MINIMUM OUTSIDE AIRFLOW.
6. UNOCCUPIED MODE: IF THE SPACE TEMPERATURE SENSORS DROPS BELOW 60°F, THE SUPPLY FAN SHALL BE ENERGIZED, THE OUTSIDE AND RELIEF DAMPERS SHALL REMAIN CLOSED, THE RETURN DAMPER SHALL BE FULLY OPENED AND THE HEATING COIL CONTROL VALVE SHALL OPEN. AFTER ALL OF THE SPACES HAVE REACHED 63°F (ADJ), THE UNIT SHALL BE DE-ENERGIZED.
7. WHEN THE SUPPLY FAN IS DE-ENERGIZED, THE OUTSIDE AND RELIEF DAMPERS SHALL BE CLOSED. THE RETURN AIR DAMPER SHALL BE OPEN.
8. THE SUPPLY FAN SHALL BE STARTED IF THE MANUAL OVERRIDE COMMAND IS EXECUTED AT THE CENTRAL BMS WORKSTATION. THE FAN SHALL RUN UNTIL PLACED BACK IN AUTOMATIC MODE FROM THE CONTROLLER OR CENTRAL WORKSTATION.
9. AN ALARM SHALL SOUND THE DISCHARGE AIR TEMPERATURE RISES ABOVE OR FALLS BELOW THE DISCHARGE AIR TEMPERATURE COOLING HIGH OR COOLING LOW LIMITS FOR A DURATION OF 1 MINUTE.

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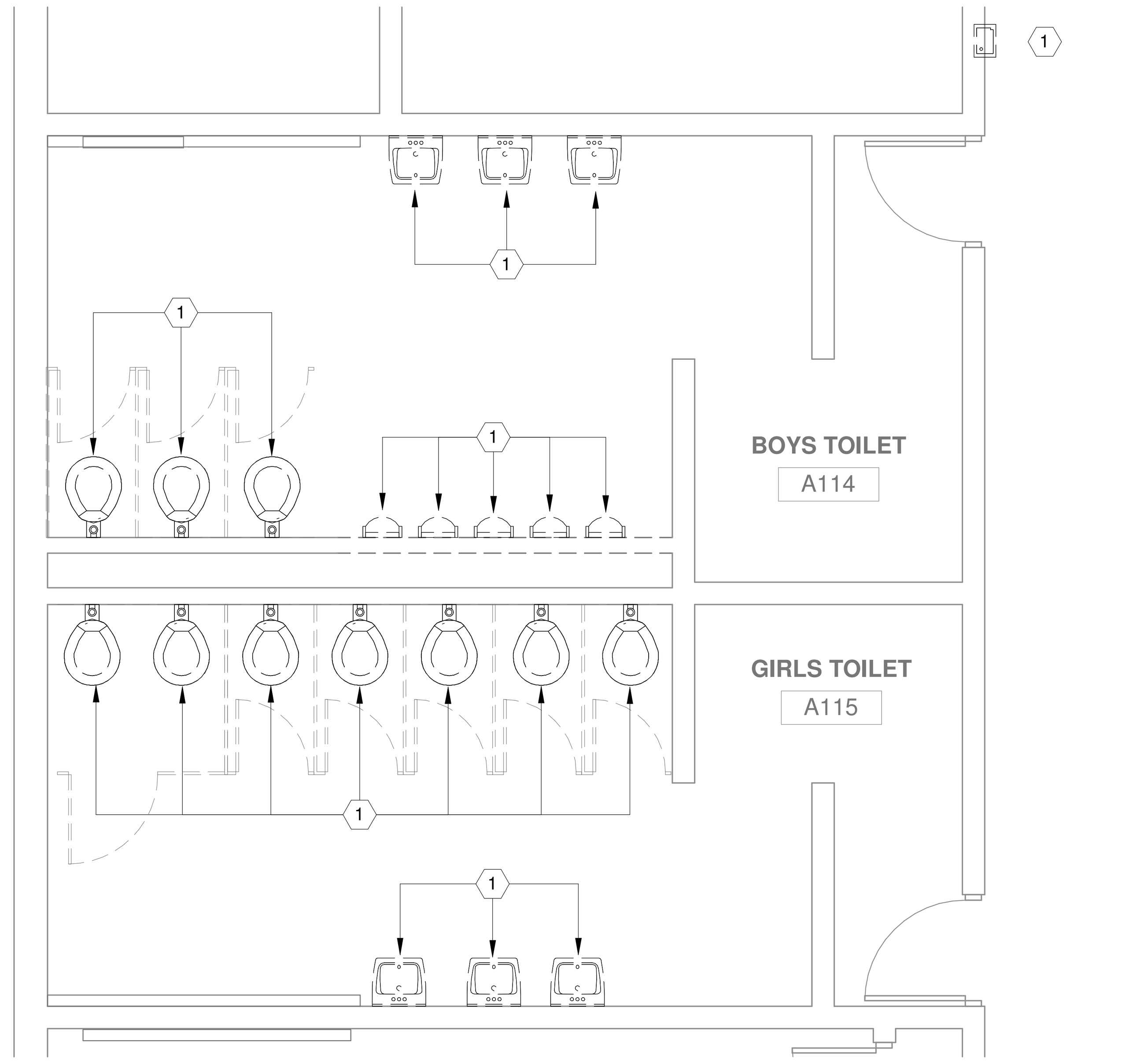
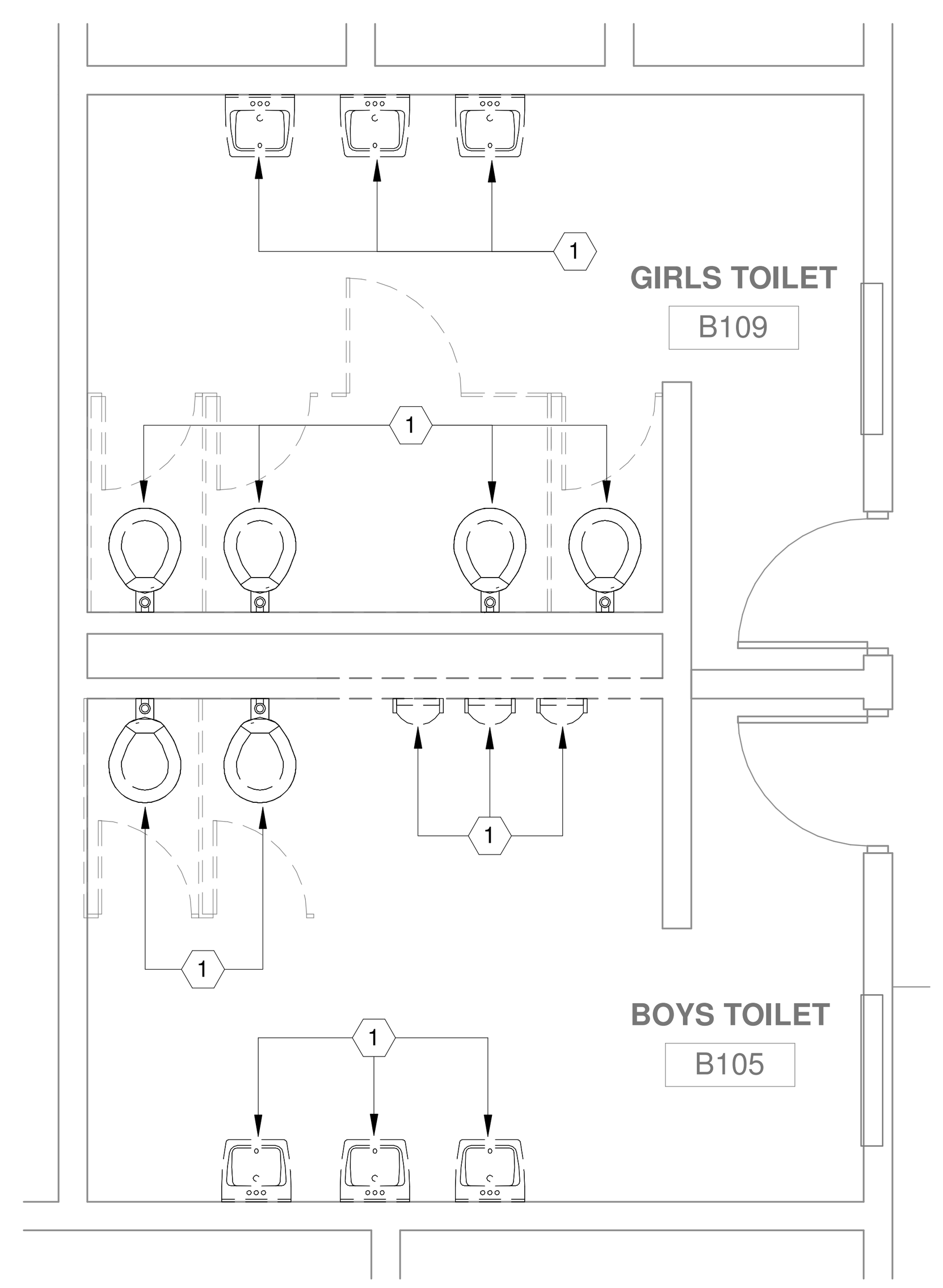
TEMPERATURE CONTROLS

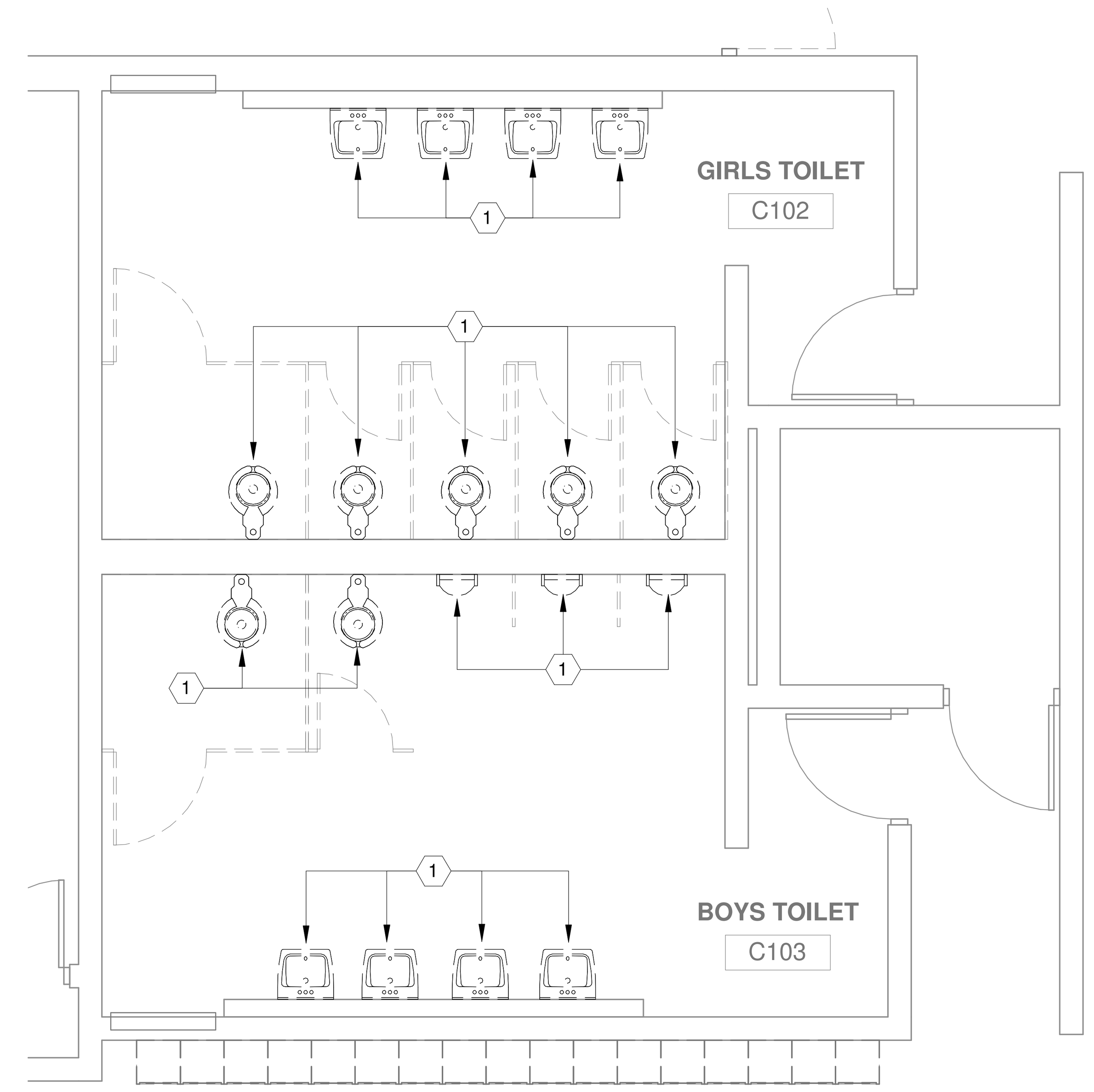
M5.0



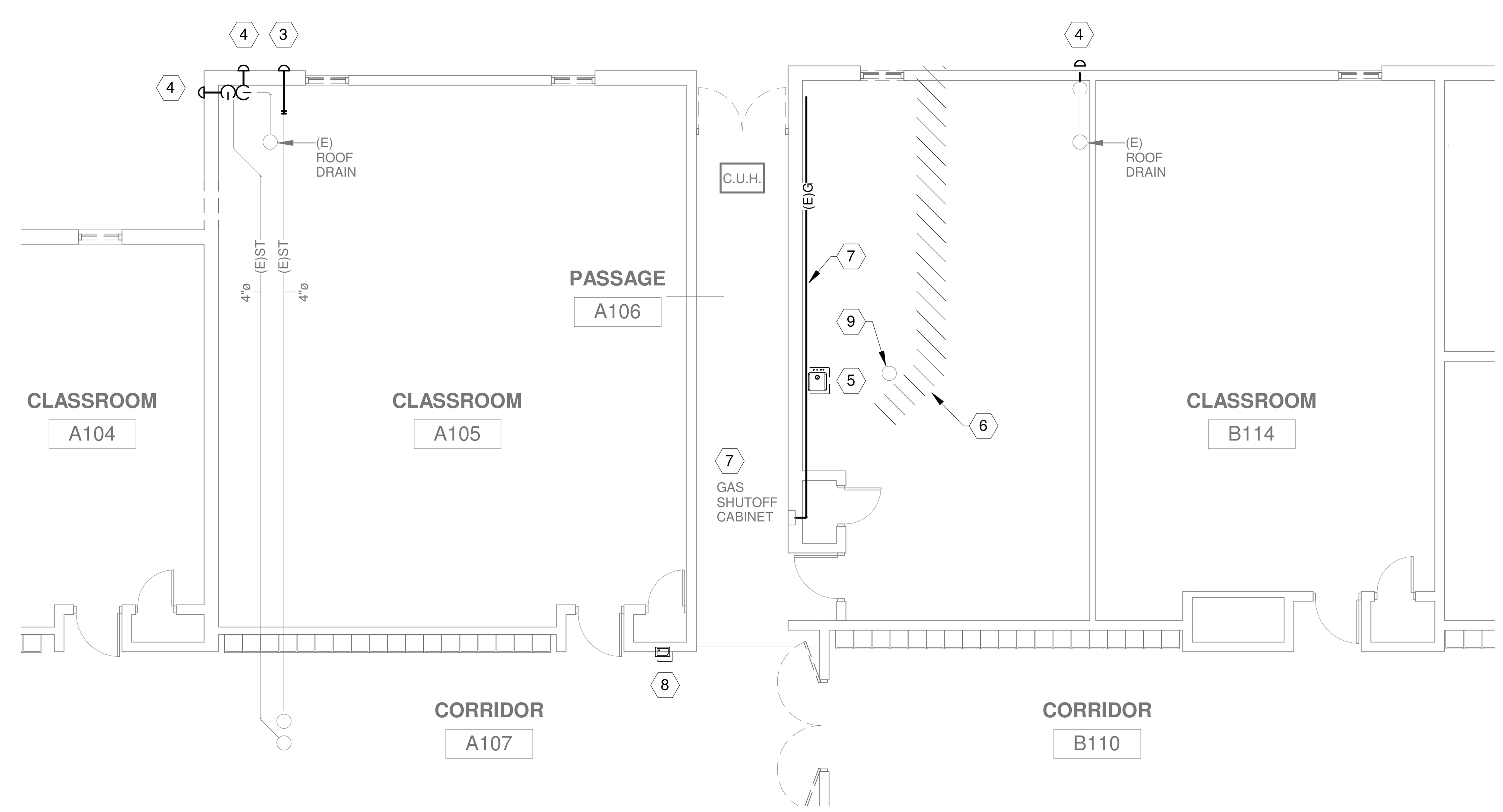
② PLUMBING DEMOLITION PLAN - AREA 'A' RESTROOM
1/4" = 1'-0"



③ PLUMBING DEMOLITION PLAN AREA 'B' RESTROOM
1/4" = 1'-0"



④ PLUMBING DEMOLITION PLAN - AREA 'C' RESTROOM
1/4" = 1'-0"



① PLUMBING DEMOLITION PLAN
1/8" = 1'-0"

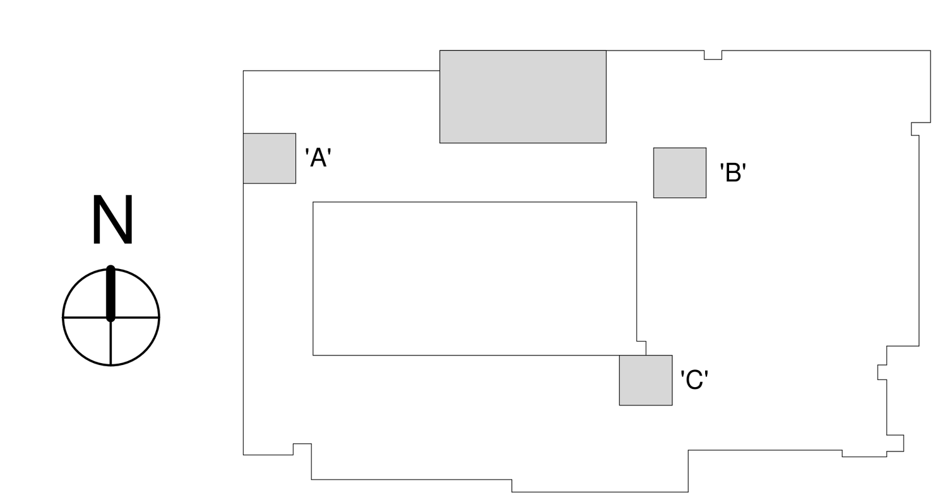
KEYNOTES

1. REPLACE PLUMBING FIXTURE.
2. REMOVE PLUMBING FIXTURE. REMOVE PIPING BACK TO SOURCE AND CAP. COORDINATE EXTENT OF REMOVAL AND PATCHING OF WALL/FLOOR MATERIALS WITH GENERAL TRADES.
3. REMOVE STORM DRAIN OVERFLOW COVER HIGH ON WALL AND SECTION OF PIPE AS SHOWN. PATCH WALL.
4. REMOVE STORM DRAIN COVER LOW ON WALL AND HORIZONTAL SECTION OF PIPE THROUGH WALL, INCLUDING ELBOW. PATCH WALL.
5. REMOVE SINK. REMOVE ASSOCIATED PLUMBING PIPING BACK TO FLOOR AND PREPARE FOR NEW CONNECTIONS.
6. FIELD VERIFICATION OF EXISTING UNDERGROUND SANITARY LINE REQUIRED FOR TIE-IN TO ADDITION. COORDINATE SAWCUTTING AND PATCHING OF FLOOR SLAB WITH ARCHITECTURAL TRADES.
7. REMOVE ALL GAS PIPE, INCLUDING VALVES, AND FITTINGS, BACK TO MAIN SHUTOFF CABINET. REMOVE MAIN SHUTOFF VALVE AND CAP.
8. REPLACE DRINKING FOUNTAIN.
9. REPLACE FLOOR CLEANOUT COVER.

GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK.
2. PLUMBING DEMOLITION WORK REQUIRED TO COMPLETE THE INSTALLATION OF NEW SYSTEMS SHALL BE PERFORMED AS PART OF THE PROJECT BASE BID.
3. INFORMATION SHOWN REFLECTS AVAILABLE RECORDS, ON-SITE OBSERVATIONS, AND INFORMATION PRESENTED BY OWNER.
4. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID AND VERIFY LOCATIONS OF EXISTING EQUIPMENT, PIPING, AND SYSTEM COMPONENTS TO FAMILIARIZE THEMSELVES WITH THE SCOPE OF WORK.
5. PRIOR TO DEMOLITION THE CONTRACTOR SHALL NOTE DIFFERENCES IN FIELD CONDITIONS AND WHAT IS SHOWN ON THE CONTRACT DOCUMENTS AND NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
6. PATCH AND REPAIR ALL EXISTING SURFACES TO REMAIN THAT MAY BE DAMAGED BY THE PERFORMANCE OF THE DEMOLITION WORK.
7. PROTECT PIPING, DUCTWORK, CONDUIT, ETC. FROM THE ENTRANCE OF FOREIGN MATERIALS.
8. VERIFY AND PROTECT ANY EQUIPMENT, PIPING, COMPONENTS, CONTROLS TO REMAIN OR BE REUSED PRIOR TO DEMOLITION. ANY SUCH ITEMS THAT ARE DAMAGED DURING DEMOLITION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED OR REPLACED AT NO ADITIONAL COST TO THE CONTRACT.
9. OWNER SHALL HAVE THE FIRST RIGHT OF REFUSAL OF ANY EQUIPMENT NOTED TO BE REMOVED.
10. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF THE GRID CEILING SYSTEM AS REQUIRED FOR THE EXTENT OF DEMOLITION AND NEW WORK. PROVIDE NEW CEILINGS TO MATCH EXISTING AS REQUIRED FOR DAMAGED CEILINGS.
11. UNLESS OTHERWISE NOTED, ALL WORK DENOTED WITH BOLD (DARK) LINES REPRESENT WORK TO BE PERFORMED. ALL WORK DENOTED WITH LIGHT (SCREENED) LINES REPRESENT EXISTING TO REMAIN AND BE MAINTAINED.

KEYPLAN



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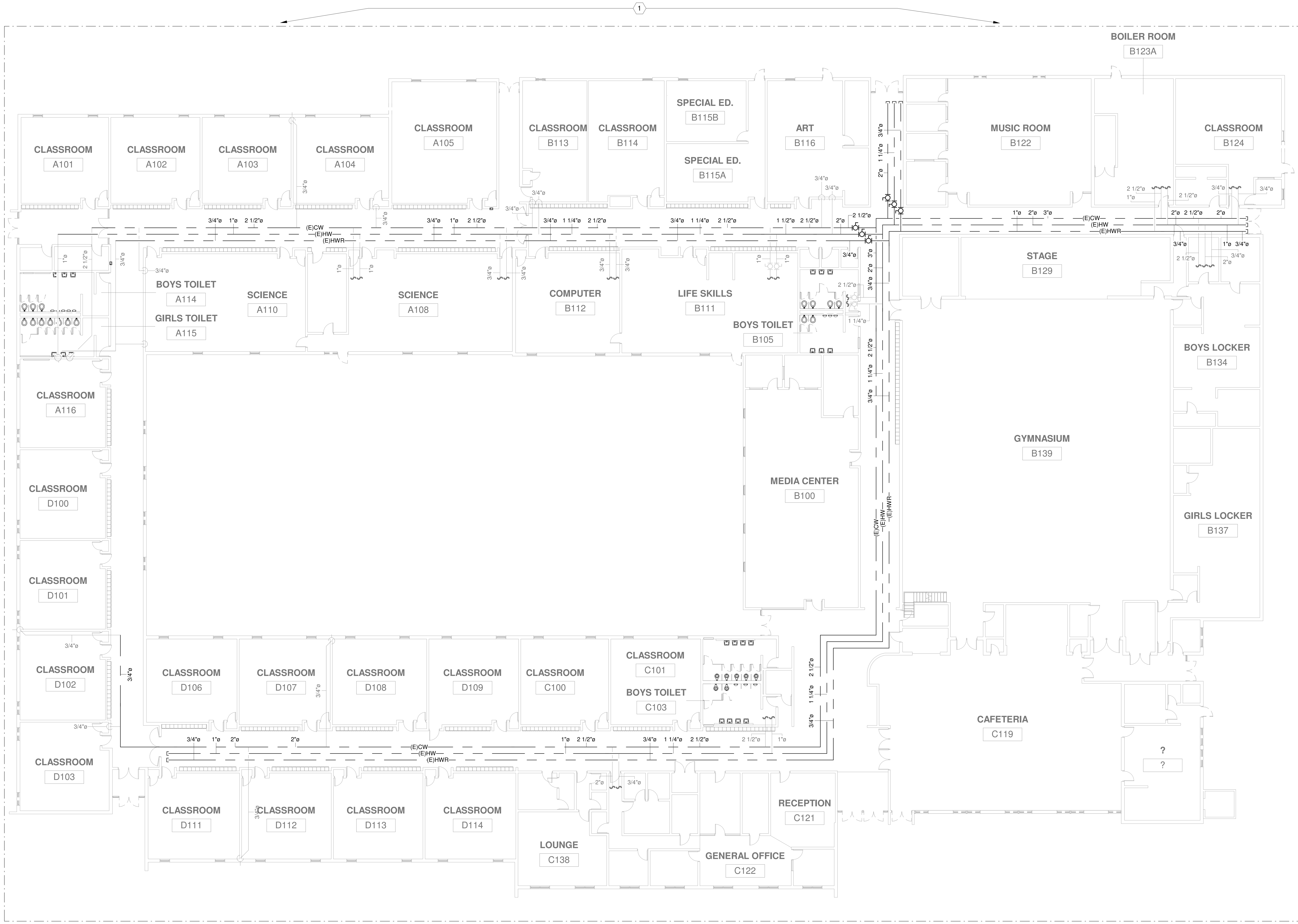
PLUMBING DEMOLITION PLANS

P1.0



PLUMBING DEMOLITION PLAN OVERALL

1/16" = 1'-0"

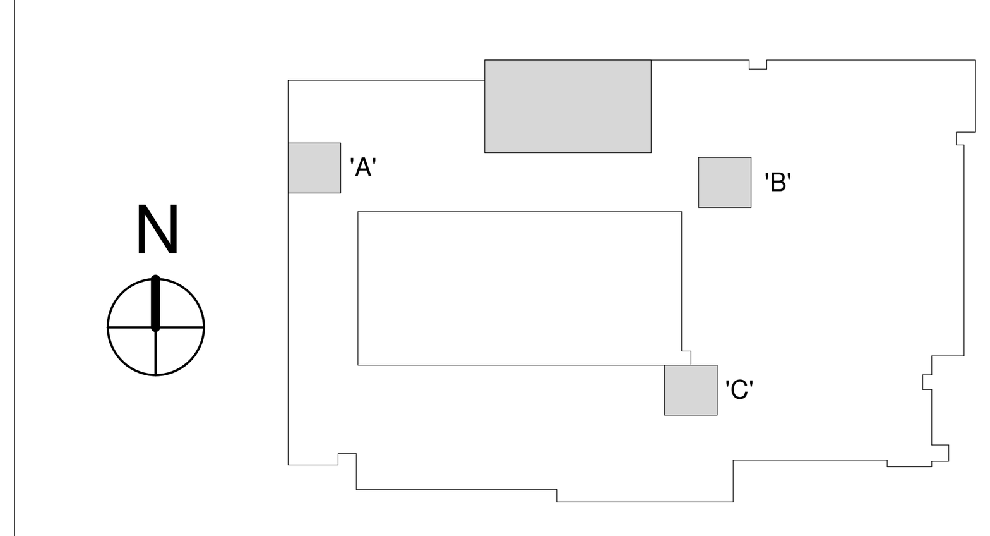
KEYNOTES

1. ALTERNATE #3 - REPLACE DOMESTIC COLD WATER, HOT WATER, AND HOT WATER RECIRCULATION PIPES AS SHOWN IN BOLD BELOW. INCLUDE THE REPLACEMENT OF SHUTOFF VALVES WHERE SHOWN AND THOSE NOT SHOWN WHERE CONNECTED NEAR MAINS. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF THE GRID CEILING SYSTEM AS REQUIRED FOR THE EXTENT OF DEMOLITION AND NEW WORK. PROVIDE NEW CEILINGS TO MATCH EXISTING AS REQUIRED FOR DAMAGED CEILINGS. PIPING SHOWN REFLECTS EXISTING DOCUMENTATION. FIELD VERIFICATION OF PIPING SYSTEMS SHALL BE REQUIRED.

GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK.
2. PLUMBING DEMOLITION WORK REQUIRED TO COMPLETE THE INSTALLATION OF NEW SYSTEMS SHALL BE PERFORMED AS PART OF THE PROJECT BASE BID.
3. INFORMATION SHOWN REFLECTS AVAILABLE RECORDS, ON-SITE OBSERVATIONS, AND INFORMATION PRESENTED BY OWNER.
4. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID AND VERIFY LOCATIONS OF EXISTING EQUIPMENT, PIPING, AND SYSTEM COMPONENTS TO FAMILIARIZE THEMSELVES WITH THE SCOPE OF WORK.
5. PRIOR TO DEMOLITION THE CONTRACTOR SHALL NOTE DIFFERENCES IN FIELD CONDITIONS AND WHAT IS SHOWN ON THE CONTRACT DOCUMENTS AND NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
6. PATCH AND REPAIR ALL EXISTING SURFACES TO REMAIN THAT MAY BE DAMAGED BY THE PERFORMANCE OF THE DEMOLITION WORK.
7. PROTECT PIPING, DUCTWORK, CONDUIT, ETC. FROM THE ENTRANCE OF FOREIGN MATERIALS.
8. VERIFY AND PROTECT ANY EQUIPMENT, PIPING, COMPONENTS, CONTROLS TO REMAIN OR BE REUSED PRIOR TO DEMOLITION. ANY SUCH ITEMS THAT ARE DAMAGED DURING DEMOLITION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED OR REPLACED AT NO ADITIONAL COST TO THE CONTRACT.
9. OWNER SHALL HAVE THE FIRST RIGHT OF REFUSAL OF ANY EQUIPMENT NOTED TO BE REMOVED.
10. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF THE GRID CEILING SYSTEM AS REQUIRED FOR THE EXTENT OF DEMOLITION AND NEW WORK. PROVIDE NEW CEILINGS TO MATCH EXISTING AS REQUIRED FOR DAMAGED CEILINGS.
11. UNLESS OTHERWISE NOTED, ALL WORK DENOTED WITH BOLD (DARK) LINES REPRESENT WORK TO BE PERFORMED. ALL WORK DENOTED WITH LIGHT (SCREENED) LINES REPRESENT EXISTING TO REMAIN AND BE MAINTAINED.

KEYPLAN



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BANGOR TOWNSHIP SSCHOOL DISTRICT
PHASE 3 - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
B	OWNER REVIEW	12.09.24
0	FOR CONSTRUCTION	12.20.24

	BY	DATE:
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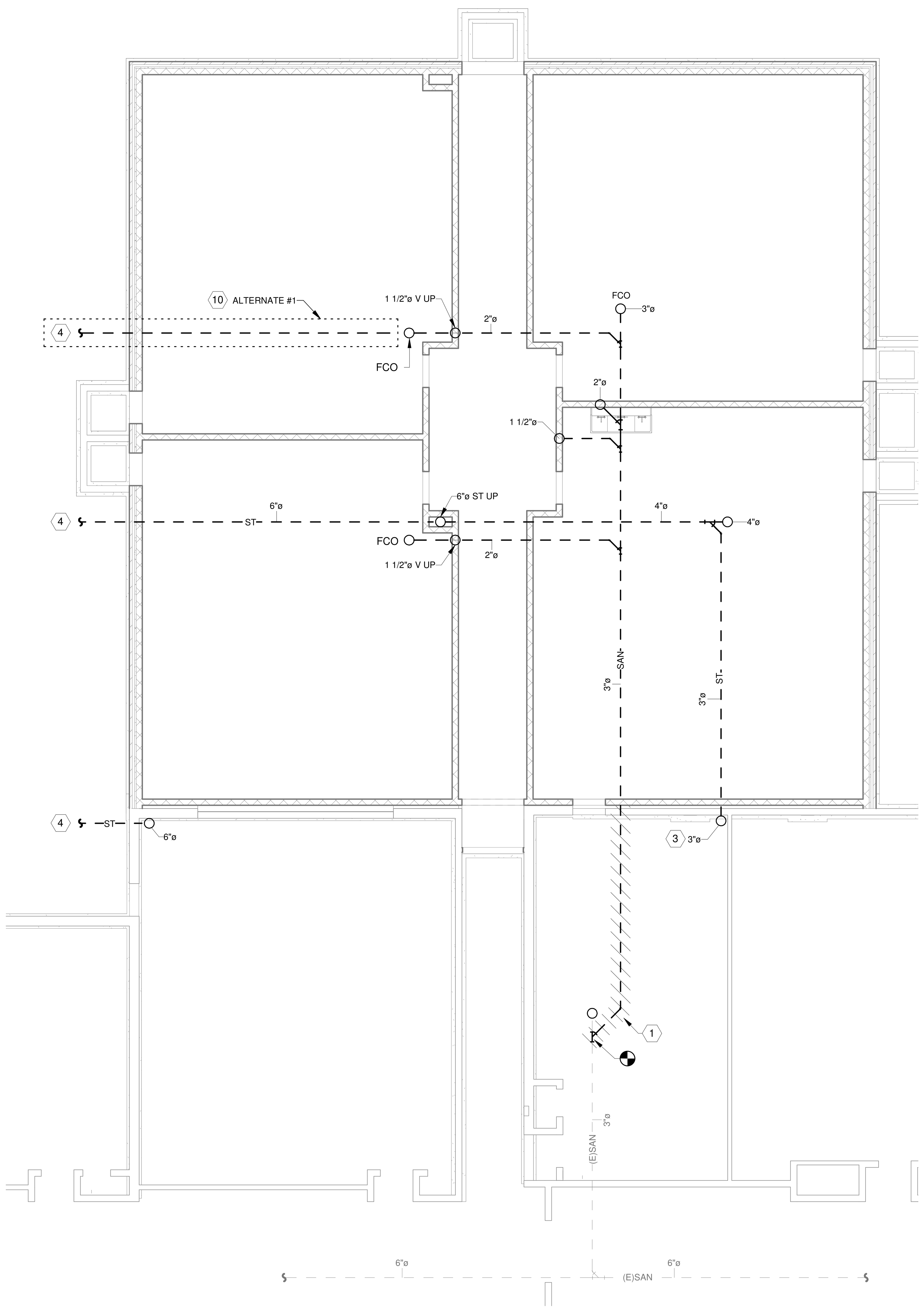
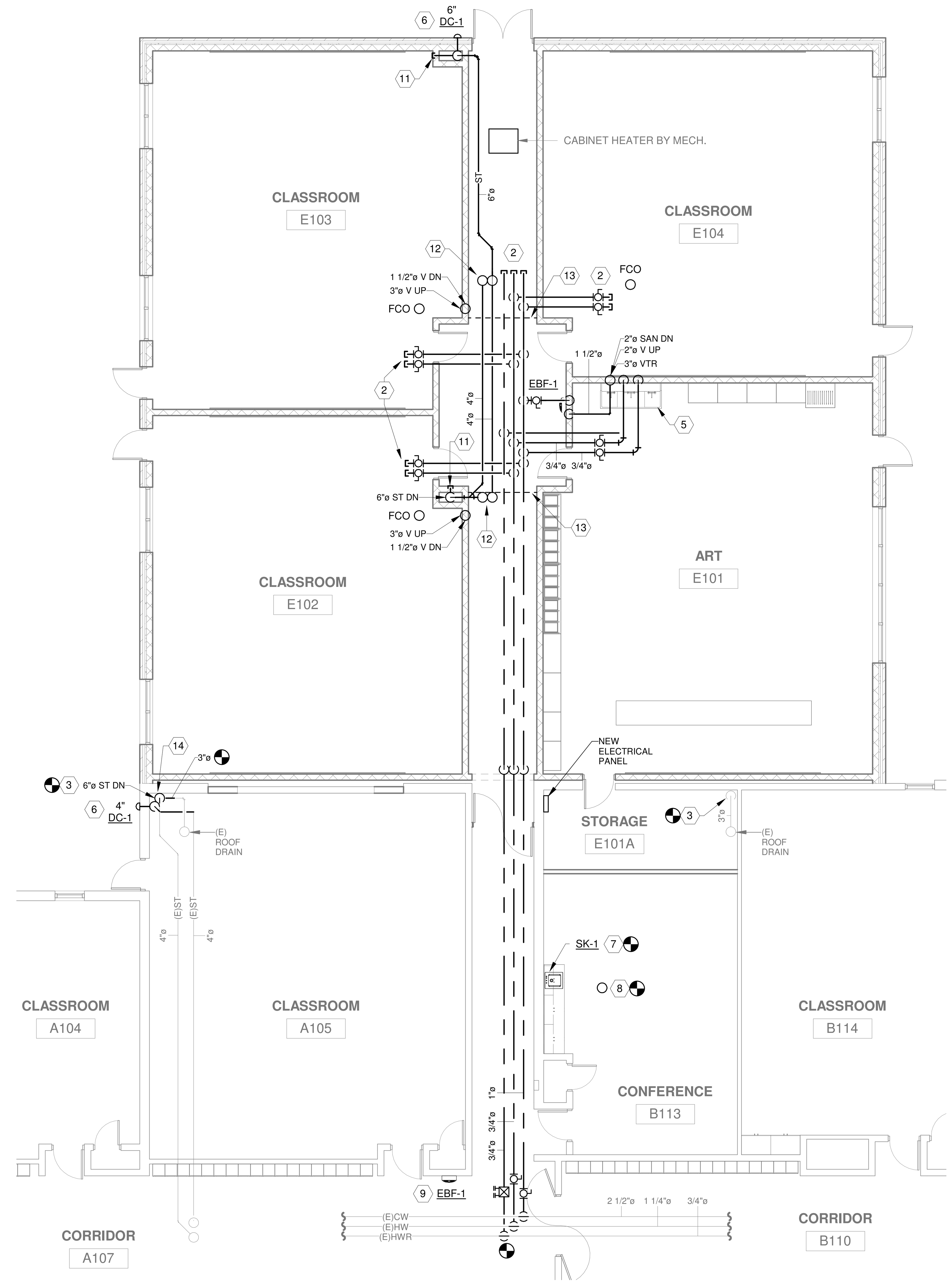
DRAWN	CRP	
CHECKED	SLB	
APPROVED	SLB	

PLUMBING DEMOLITION PLAN

P1.1



2 PLUMBING NEW WORK PLAN - ADDITION BELOW GROUND
1/8" = 1'-0"



1 PLUMBING NEW WORK PLAN - ADDITION ABOVE GROUND
1/8" = 1'-0"

KEYNOTES

1. FIELD VERIFICATION OF EXISTING UNDERGROUND SANITARY LINE REQUIRED FOR TIE-IN TO ADDITION. COORDINATE SAWCUTTING AND PATCHING OF FLOOR SLAB WITH ARCHITECTURAL TRADES.
2. 1" COLD WATER, 3/4" HOT WATER, 3/4" HOT WATER RETURN VALVED AND CAPPED FOR FUTURE CONNECTION.
3. CONTINUE STORM DRAIN PIPE BELOW GRADE. TURN HORIZONTALLY AT AN INVERSE ELEVATION SUITABLE TO TIE INTO STORM DRAIN PIPING DOWNSTREAM. COORDINATE WITH CIVIL FOR PIPING OVER 5' OUTSIDE OF BUILDING. CORE AND SLEEVE FOUNDATION WALL FOR PIPE PENETRATION AND PROVIDE SLEEVE SEAL SYSTEM FOR WATER TIGHT PENETRATION AS NEEDED.
4. COORDINATE CONTINUATION WITH CIVIL.
5. SINK BY OTHERS.
6. INSTALL DOWNSPOUT COVER 18" ABOVE FINISHED FLOOR. REUSE EXISTING WALL PENETRATION WHERE FEASIBLE.
7. EXTEND 1/2" CW, 1/2" HW, AND 1-1/2" SAN PIPING FROM EXISTING AT FLOOR TO SERVE NEW SINK. COORDINATE PIPING WITH NEW MILLWORK AND MODIFY AS NEEDED.
8. INSTALL NEW FLOOR CLEANOUT COVER. FIELD-VERIFY EXISTING PIPE SIZE.
9. MODIFY EXISTING IN-WALL PLUMBING PIPNG AS NEEDED FOR NEW BOTTLE FILLER. COORDINATE WALL PATCHING WITH ARCHITECTURAL TRADES.
10. IF ALTERNATE SANITARY PIPE ROUTING IS ACCEPTED, REVERSE WYE CONNECTIONS AND ELIMINATE CONNECTION TO EXISTING PIPE INSIDE BUILDING.
11. INSTALL CLEANOUT AT BASE OF STACK.
12. 4" STORM PIPE UP TO ROOF DRAINS. REFER TO ROOF PLAN SHEET P2.1.
13. INSTALL ACCESS PANELS AS REQUIRED IN HARD LID CEILING.
14. WRAP EXPOSED, INSULATED STORM PIPE IN WHITE PVC JACKET.

GENERAL NOTES

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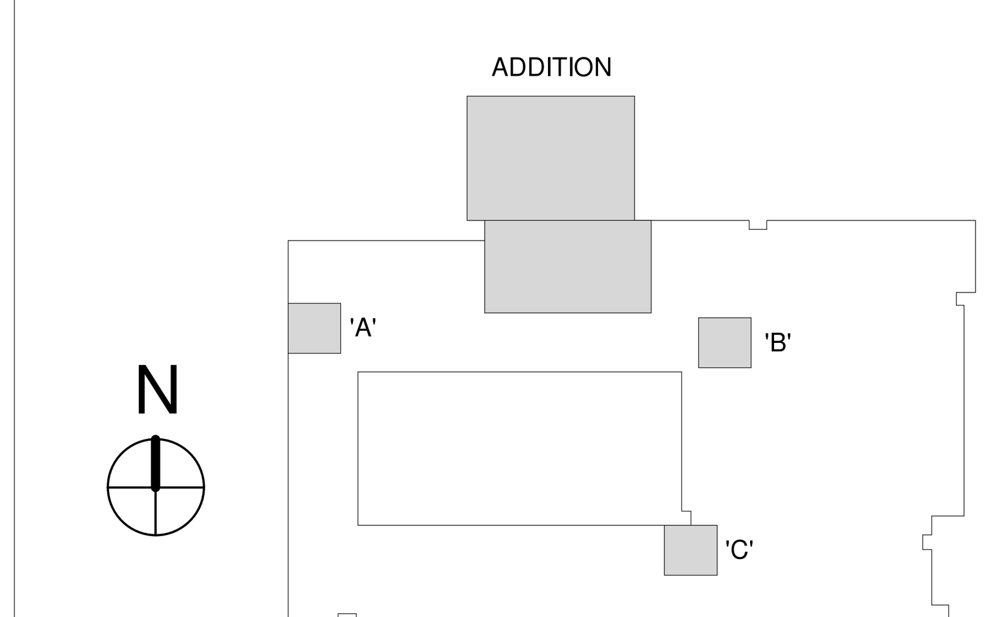
2. PLUMBING CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE WORK OF ALL OTHER TRADES.
3. VERIFY ALL CLEARANCES PRIOR TO THE FABRICATION OF ANY WORK.
4. PIPING SHALL NOT BE LOCATED OVER ELECTRICAL EQUIPMENT/PANELS. PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT. PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE.
5. THE CONTRACTOR SHALL PROVIDE SUPPLEMENTAL STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL PLUMBING SYSTEMS.
6. PIPING SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
7. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS OF AND EXACT LOCATIONS OF FIXTURES (STANDARD AND BARRIER FREE), SINKS, ETC. REFER TO PLUMBING FIXTURE SCHEDULES FOR CONNECTION SIZES, ACCESSORIES, AND ADDITIONAL INFORMATION.
8. VENT PIPE THROUGH ROOF SHALL BE LOCATED A MINIMUM 10'-0" FROM ANY FRESH AIR INTAKE LOCATION AND A MINIMUM OF 18" CLEAR FROM THE INSIDE FACE OF A PARAPET.
9. PROVIDE ACCESS DOORS FOR CLEANOUTS OR VALVES LOCATED ABOVE HARD CEILINGS. COORDINATE CEILING TYPES WITH ARCHITECT.
10. PROVIDE CODE REQUIRED CLEARANCE/ACCESS DOORS FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING SYSTEMS.
11. COORDINATE LOCATIONS AND SIZES OF ALL FLOOR OR WALL PENETRATIONS AND SLEEVES WITH STRUCTURAL AND ARCHITECTURAL.
12. COORDINATE PAINTING OF SYSTEMS IN EXPOSED CEILINGS WITH ARCHITECT.

KEYPLAN



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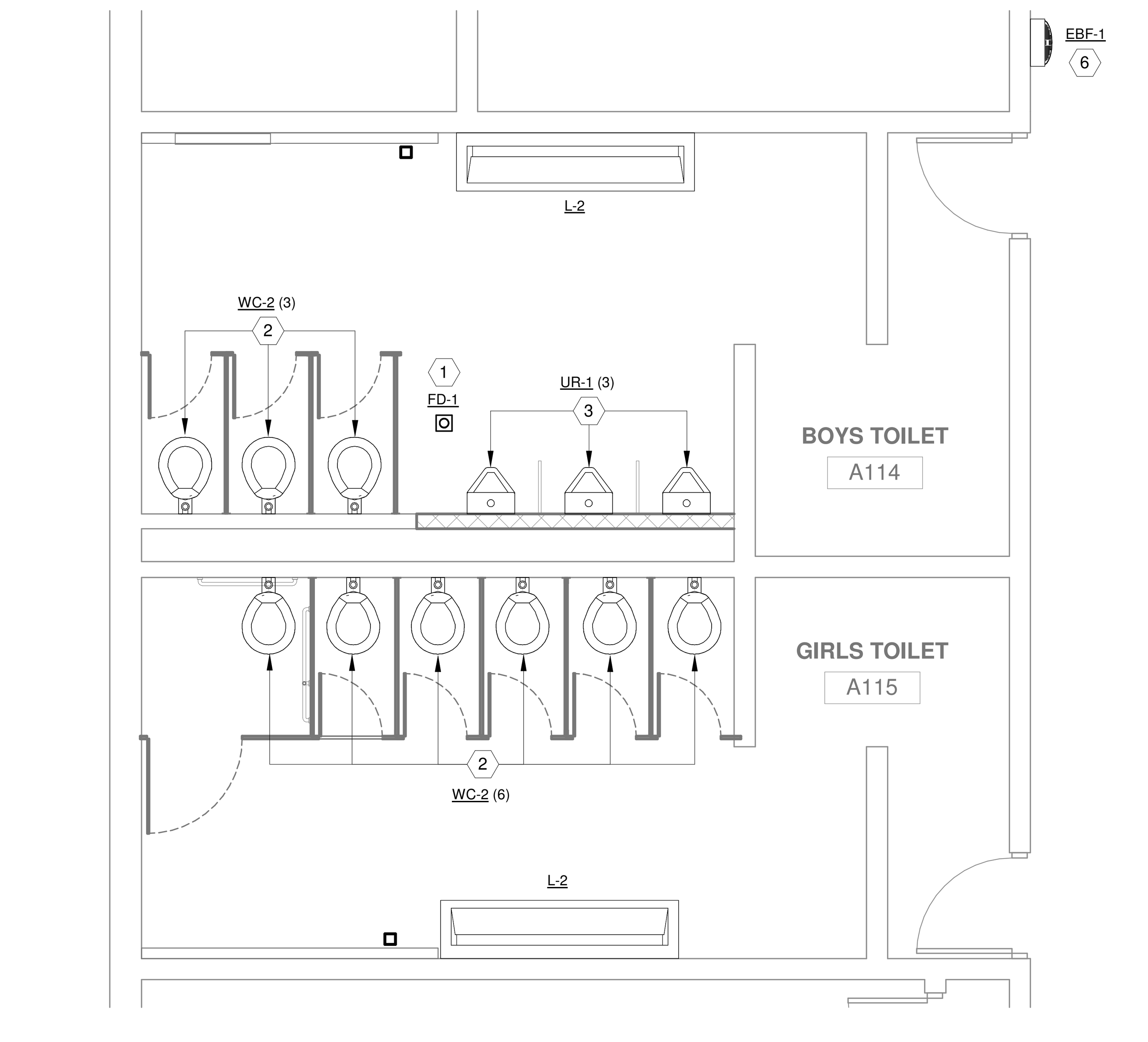
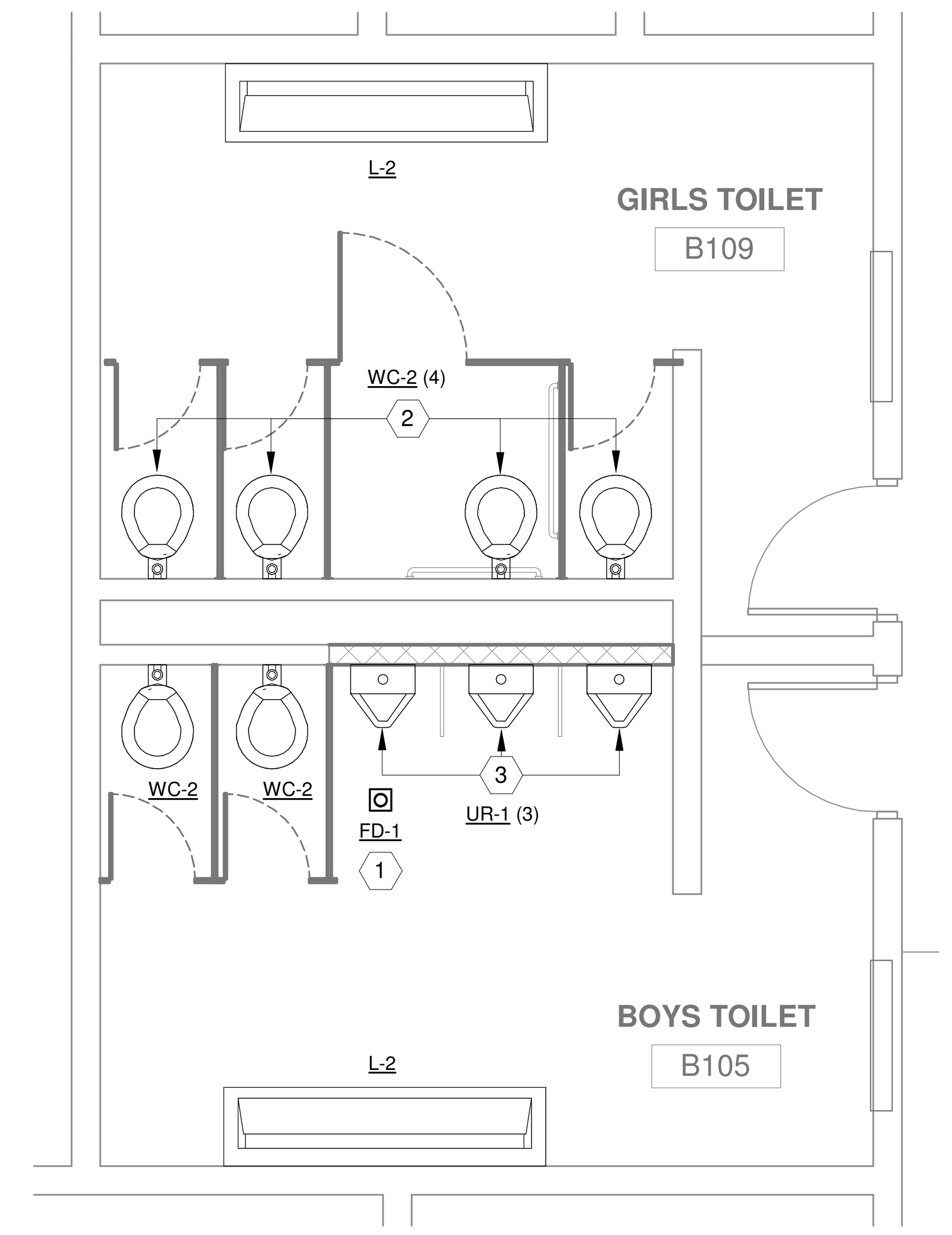
PLUMBING NEW WORK PLANS

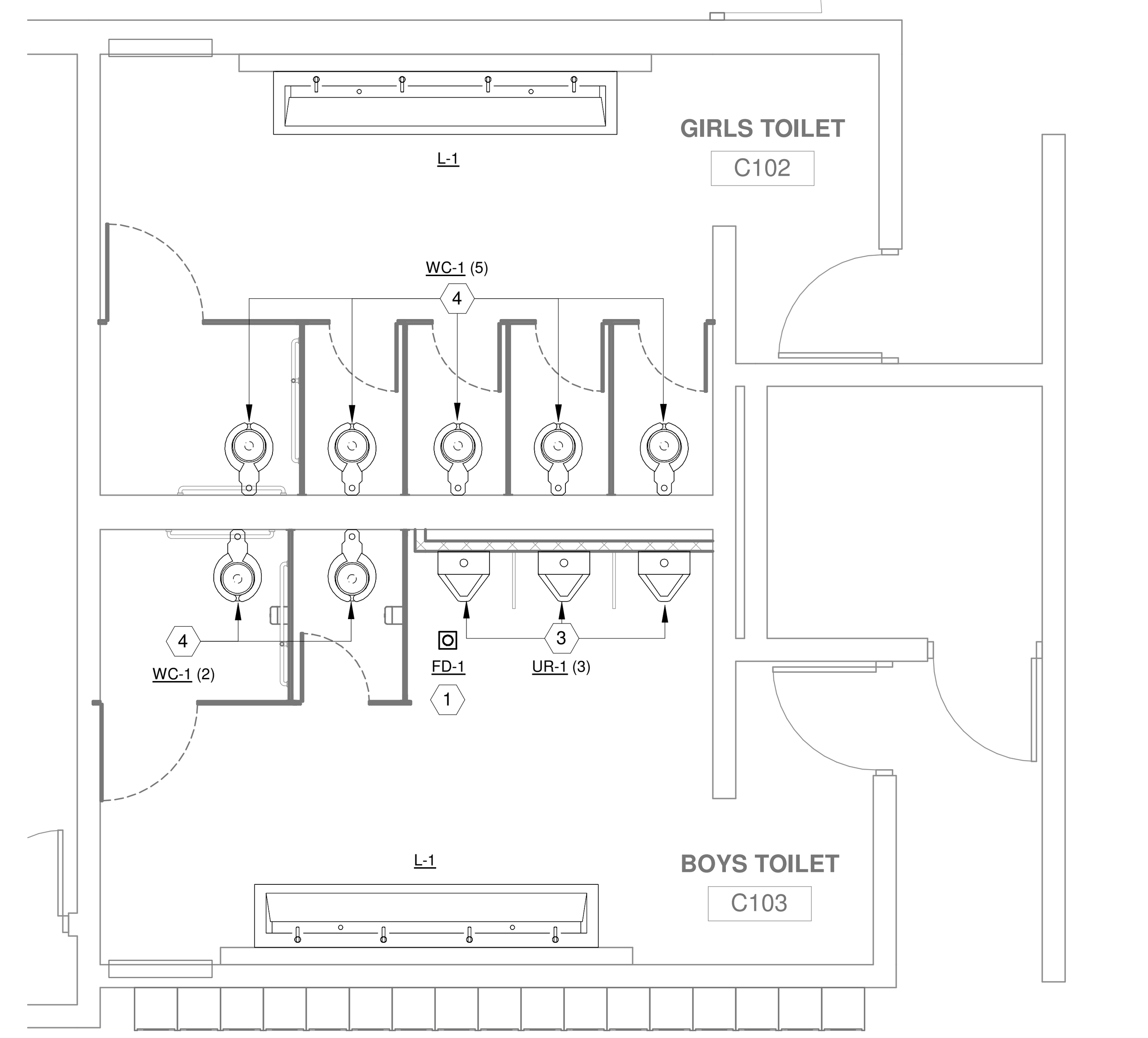
P2.0



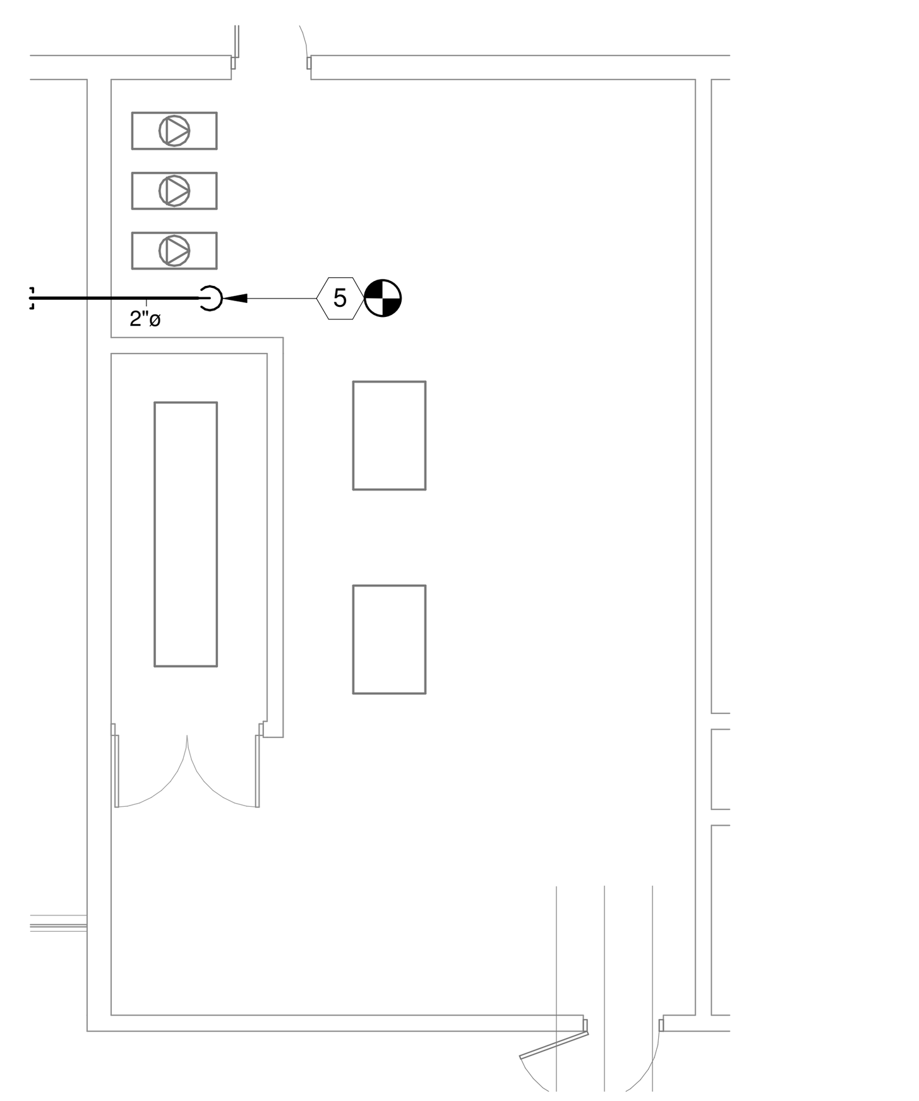
2 PLUMBING NEW WORK PLAN - AREA 'A' RESTROOM
1/4" = 1'-0"



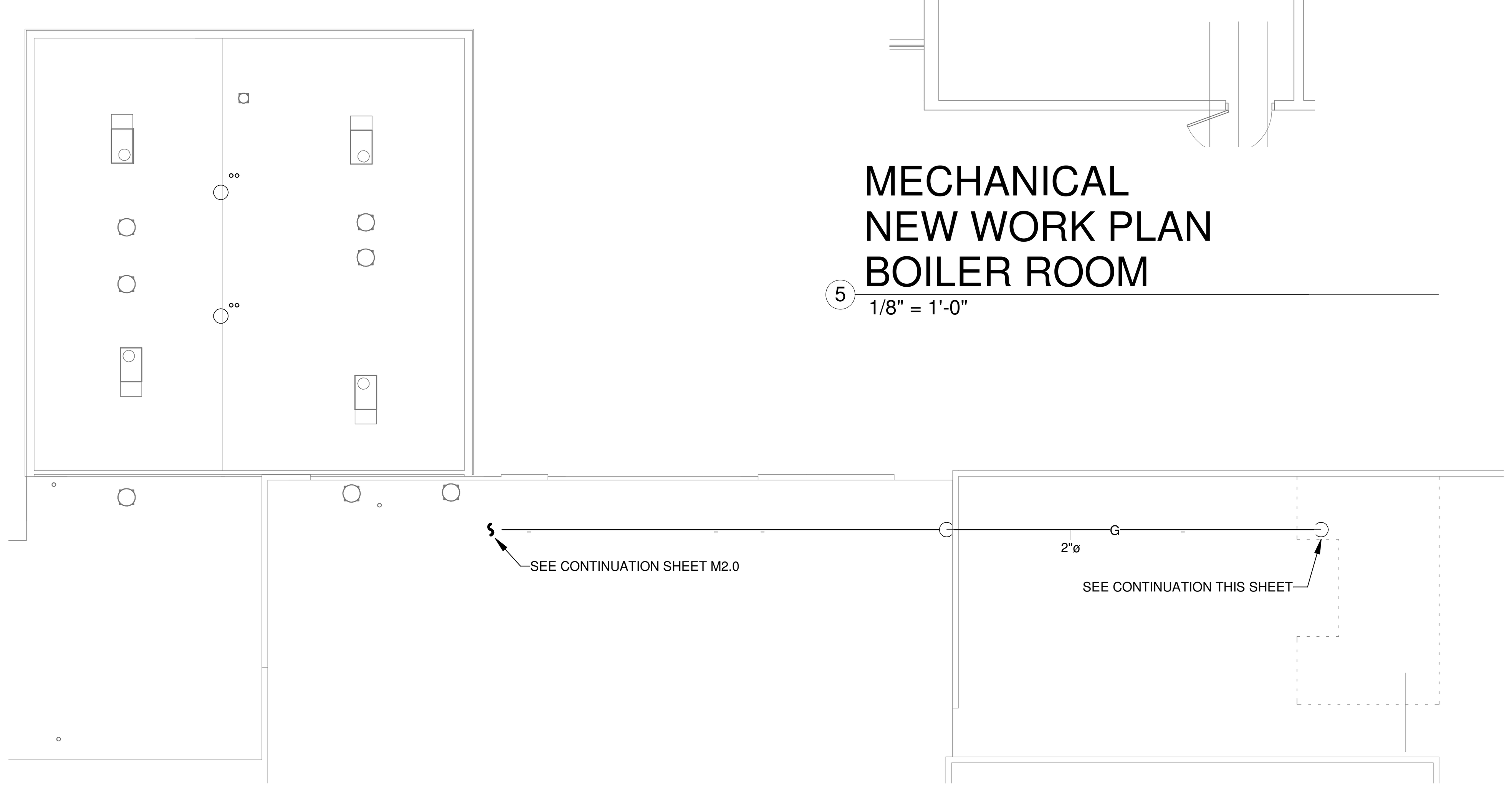
3 PLUMBING NEW WORK PLAN
AREA 'B' RESTROOM
1/4" = 1'-0"



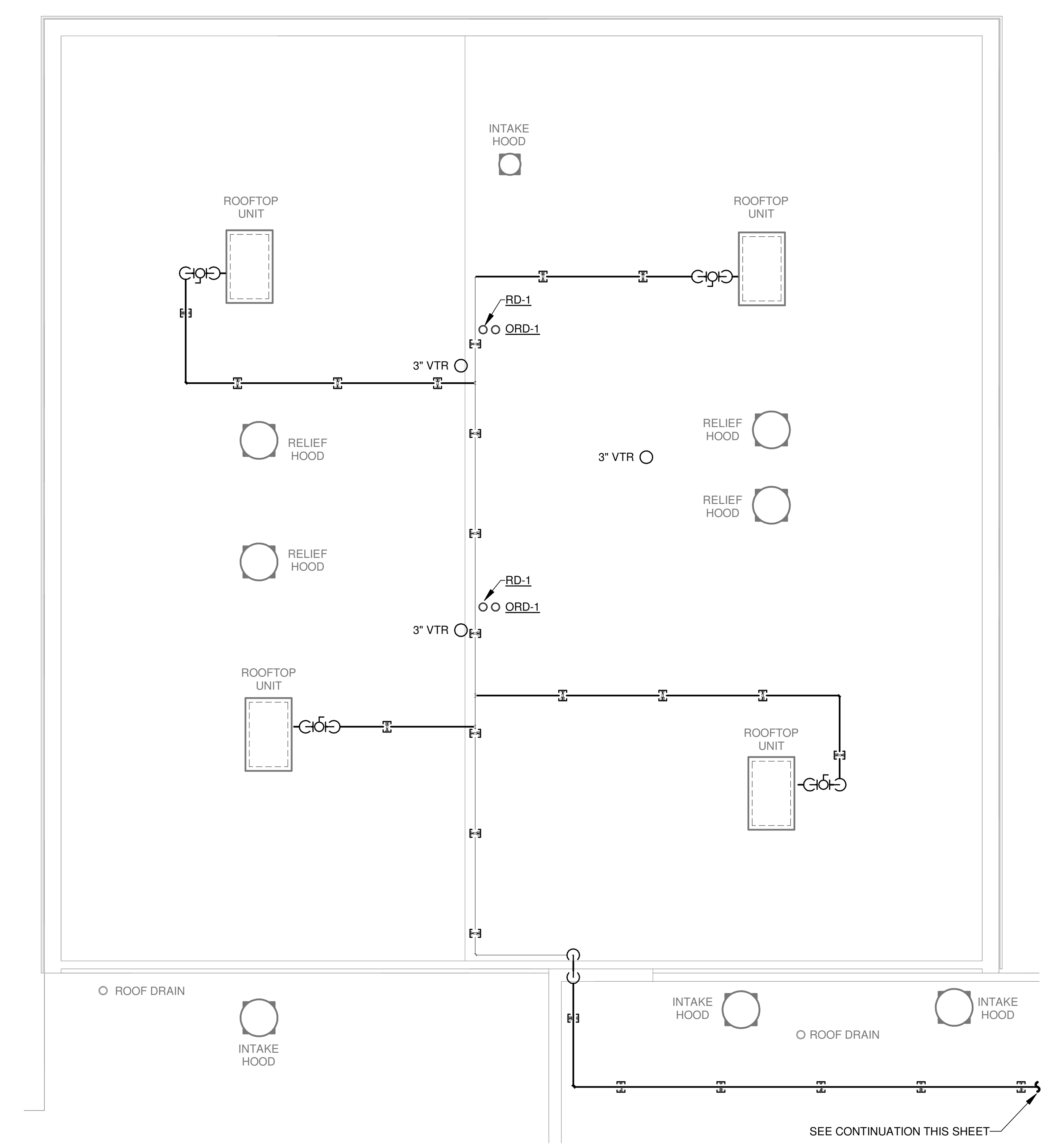
4 PLUMBING NEW WORK PLAN - AREA 'C' RESTROOM
1/4" = 1'-0"



MECHANICAL
NEW WORK PLAN
BOILER ROOM
5 1/8" = 1'-0"



6 PLUMBING NEW WORK COMPOSITE ROOF PLAN
1" = 20'-0"



1 PLUMBING NEW WORK PLAN - ADDITION ROOF
1/8" = 1'-0"

KEYNOTES

1. FLOOR DRAIN LOCATION SHALL BE COORDINATED WITH AREA OF FLOOR FLAB REWORK SHOWN ON ARCHITECTURAL PLANS. SET FLOOR DRAIN ELEVATION TO ACCOUNT FOR APPROPRIATE FLOOR SLOPE TO DRAIN.
2. INSTALL NEW WALL-MOUNTED WATER CLOSET IN SAME LOCATION AS EXISTING. REUSE EXISTING WALL HANGER AND PIPING CONNECTIONS. INSTALL ADA FLUSH VALVES ON APPROACH SIDE OF WATER CLOSET.
3. INSTALL NEW WALL-MOUNTED URINAL IN LOCATION SHOWN. PROVIDE NEW WALL CARRIER. REUSE EXISTING PIPING CONNECTIONS AND EXTEND AS REQUIRED. INSTALL ADA FLUSH VALVES ON APPROACH SIDE OF URINAL.
4. INSTALL NEW FLOOR-MOUNTED WATER CLOSET IN SAME LOCATION AS EXISTING. INSTALL NEW FLOOR FLANGE AS NEEDED. REUSE EXISTING PIPING CONNECTIONS. INSTALL ADA FLUSH VALVES ON APPROACH SIDE OF WATER CLOSET.
5. CONNECT NEW GAS PIPE TO EXISTING MAIN IN BOILER ROOM.
6. MODIFY EXISTING IN-WALL PLUMBING PIPNG AS NEEDED FOR NEW BOTTLE FILLER. COORDINATE WALL PATCHING WITH ARCHITECTURAL TRADES.

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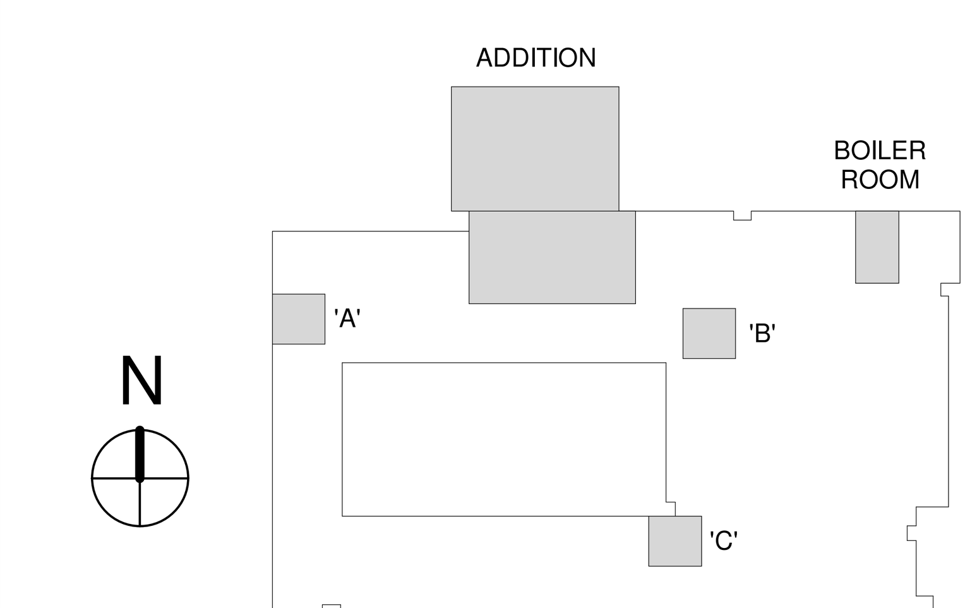
KEYPLAN



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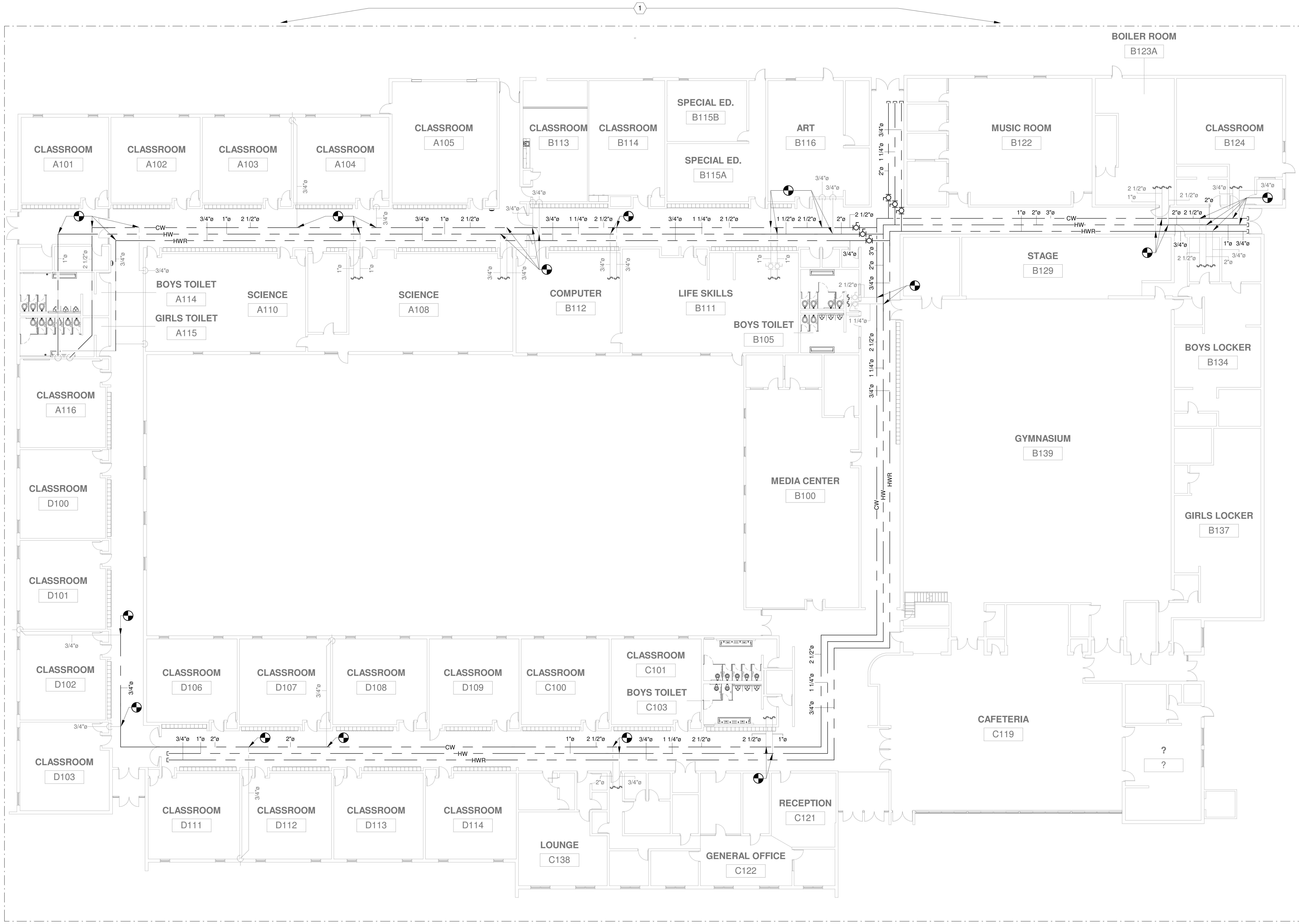
PLUMBING NEW WORK PLANS

P2.1



1 PLUMBING NEW WORK PLAN OVERALL
1/16" = 1'-0"

KEYNOTES

1. ALTERNATE #3 - REPLACE DOMESTIC COLD WATER, HOT WATER, AND HOT WATER RECIRCULATION PIPES AS SHOWN IN BOLD BELOW. INCLUDE THE REPLACEMENT OF SHUTOFF VALVES WHERE SHOWN. ADD SHUTOFF VALVES JUST OFF PIPING MAINS (ACCESSIBLE WITHIN HALLWAY) IF THEY DO NOT EXIST DOWNSTREAM OF BRANCH PIPING. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF THE GRID CEILING SYSTEM AS REQUIRED FOR THE EXTENT OF DEMOLITION AND NEW WORK. PROVIDE NEW CEILINGS TO MATCH EXISTING AS REQUIRED FOR DAMAGED CEILINGS. PIPING SHOWN REFLECTS EXISTING DOCUMENTATION. FIELD VERIFICATION OF PIPING SYSTEMS SHALL BE REQUIRED.

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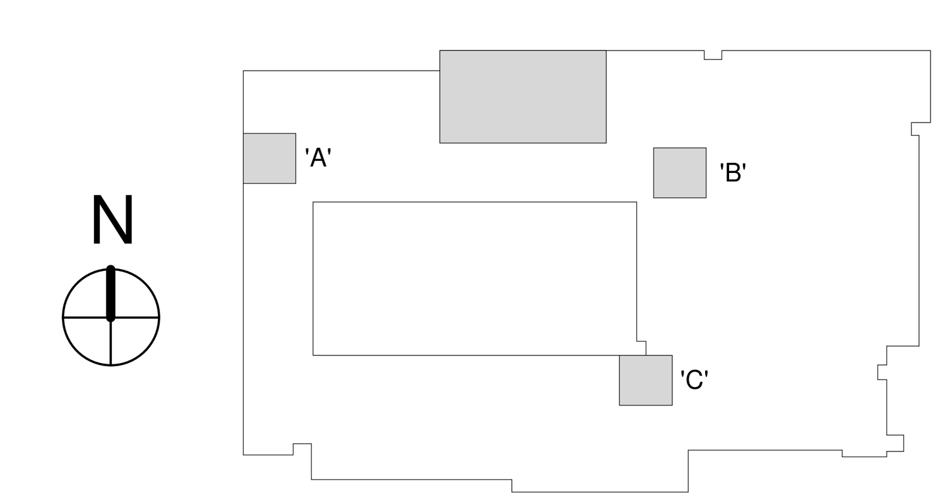

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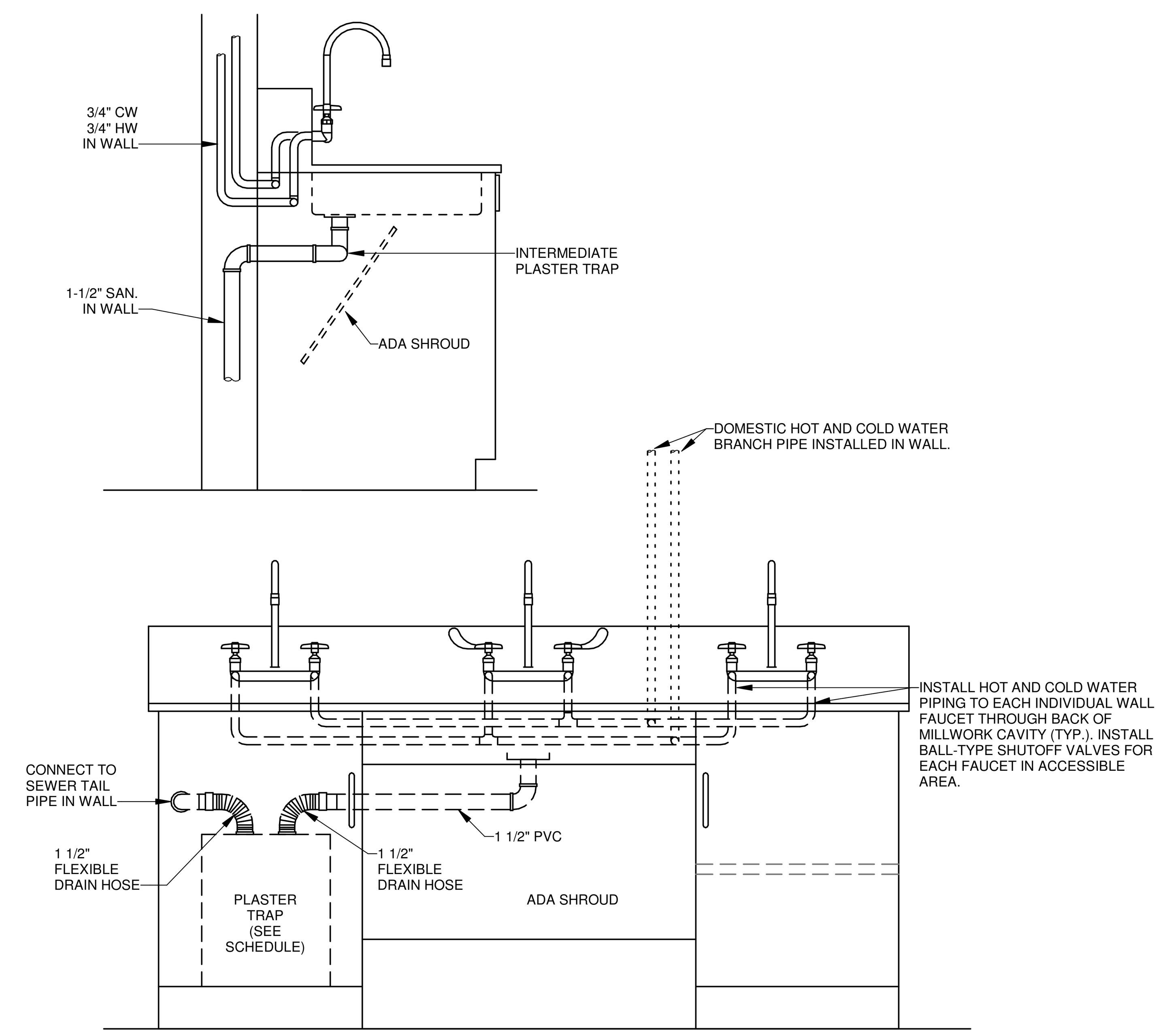
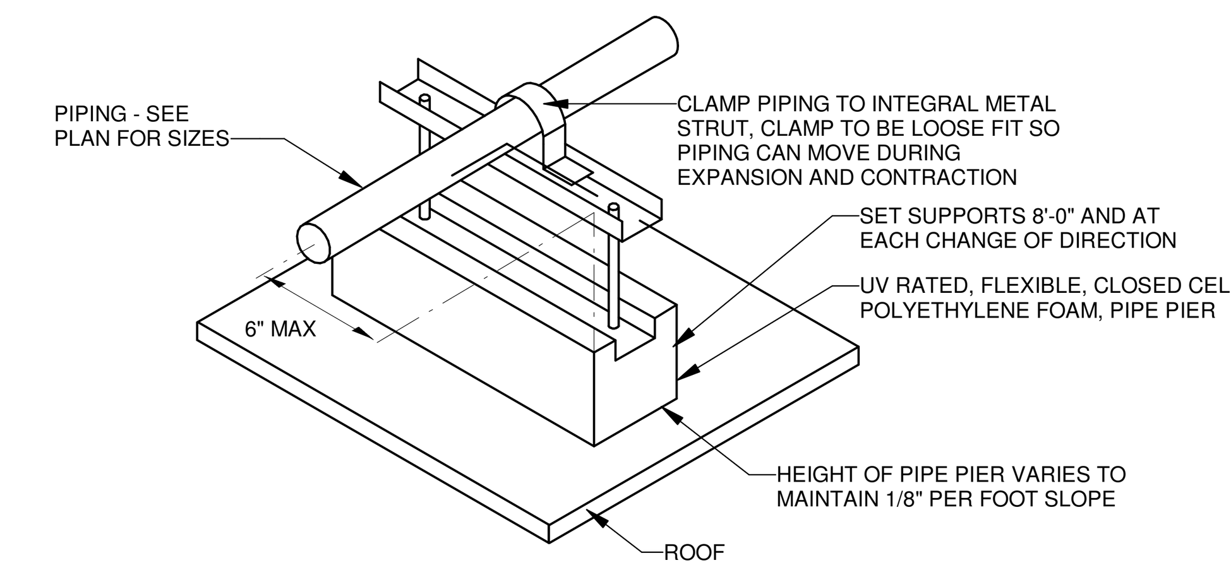
PLUMBING NEW WORK PLAN

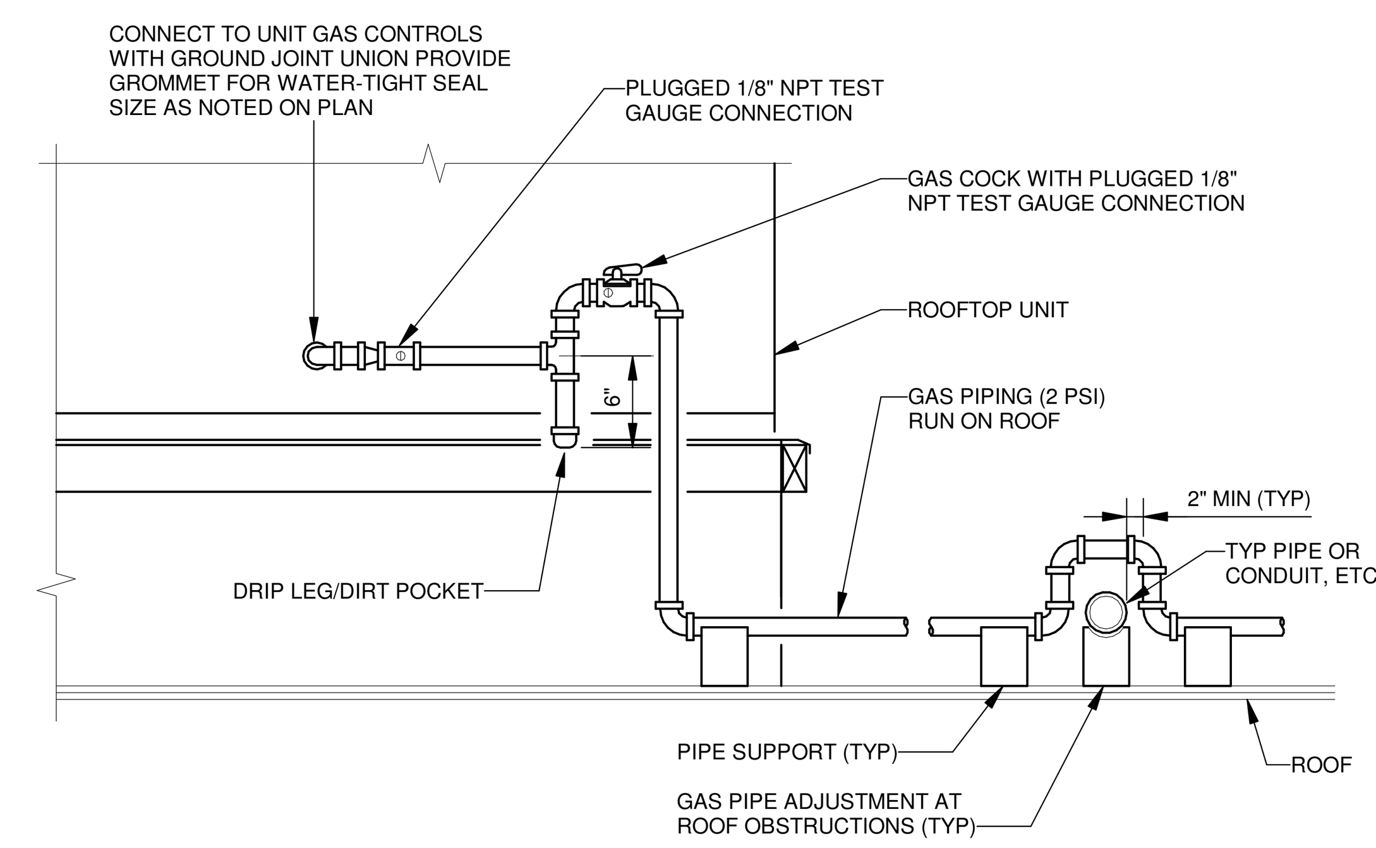
P2.2



3 ART ROOM SINK DETAIL
N.T.S.



2 GAS PIPING SUPPORT ROOF DETAIL
N.T.S.



1 RTU GAS PIPING CONNECTION DETAIL
N.T.S.

NATURAL GAS REQ'S

UNIT ID	EQUIPMENT TYPE	CAPACITY (CFH)	REQUIRED OPERATING PRESSURE (IN. WC.)
EXIST.	BOILER	1,000	7-14
EXIST.	BOILER	1,000	7-14
EXIST.	DRYER	95	7-14
EXIST.	WATER HEATER	250	4.5-14
EXIST.	WATER HEATER	250	4.5-14
EXIST.	RTU	200	4.5-14
EXIST.	RTU	200	4.5-14
EXIST.	RTU	200	4.5-14
EXIST.	RTU	80	4.5-14
EXIST.	RTU	100	4.5-14
EXIST.	RTU	80	4.5-14
EXIST.	RTU	120	4.5-14
EXIST.	LAB TURRETS	XXX	XXX
EXIST.	KITCHEN EQUIPMENT	XXX	XXX
RTU-1	ROOFTOP UNIT	120	4.5-14
RTU-2	ROOFTOP UNIT	120	4.5-14
RTU-3	ROOFTOP UNIT	120	4.5-14
RTU-4	ROOFTOP UNIT	120	4.5-14
		TOTAL	

NOTES:
1. BANGOR TOWNSHIP SCHOOLS HAS AN EXISTING ACCOUNT WITH CONSUMERS ENERGY.

PLUMBING FIXTURE SCHEDULE

UNIT ID	BARRIER FREE	ITEM	PIPE CONNECTION SIZES				MANUFACTURER/ MODEL NO.	REMARKS
			WASTE	VENT	CW	HW		
DC-1	-	DOWNSPOUT COVER	SEE PLANS	-	-	-	JAY R SMITH: 1775	STAINLESS STEEL WITH HINGED, PERFORATED COVER, SLEEVES OVER PIPE.
EBF-1	Y	ELECTRIC BOTTLE FILLER (WALL MOUNTED)	1 1/4"	-	1/2"	-	ELKAY: LZ8WSSSMC	SINGLE STATION, REFRIGERATED SURFACE MOUNT BOTTLE FILLING STATION, FILTERED, 8 GPH, ELECTRONIC SENSOR ACTIVATION, 115V, 15 WATTS, 5 AMP, ADA. NSF 42/53 COMPLIANT
FD-1	-	FLOOR DRAIN	SEE PLANS	-	-	-	JAY R SMITH: 2005	CAST IRON BODY WITH FLASHING COLLAR AND ADJUSTABLE STRAINER HEAD, SEEPAGE AND ANCHOR FLANGE, ROUND 6" STAINLESS STEEL STRAINER. FURNISH WITH TRAP SEAL "TS-1"
L-1	Y	LAVATORY MULTI-STATION (WALL MOUNTED)	1 1/2"	1 1/2"	1/2"	1/2"	SLOAN ELGR-84000	4-STATION WALL-MOUNTED, NON-POROUR, SOLID-SURFACE MOLDED BASIN, XX" LONG x XX"WIDE x X" DEEP, CUSTOM COLOR BY ARCHITECT. FURNISH WITH: 1. FAUCET (PER STATION): DELTA 86T1153, MANUAL METERING FAUCET WITH ADA COMPLIANT TIP ACTION LEVER HANDLES, 0.5 GPM, CHROME PLATED. 2 HOLES ON 4" CENTER. 2. ASSE 1070 COMPLIANT MIXING VALVE (PER STATION). 3. FULL LENGTH STAINLESS STEEL ADA COMPLIANT BELOW COUNTER ENCLOSURE.
L-2	Y	LAVATORY MULTI-STATION (WALL MOUNTED)	1 1/2"	1 1/2"	1/2"	1/2"	SLOAN ELGR-83000	3-STATION WALL-MOUNTED, NON-POROUR, SOLID-SURFACE MOLDED BASIN, XX" LONG x XX"WIDE x X" DEEP, CUSTOM COLOR BY ARCHITECT. FURNISH WITH: 1. FAUCET (PER STATION): DELTA 86T1153, MANUAL METERING FAUCET WITH ADA COMPLIANT TIP ACTION LEVER HANDLES, 0.5 GPM, CHROME PLATED. 2 HOLES ON 4" CENTER. 2. ASSE 1070 COMPLIANT MIXING VALVE (PER STATION). 3. FULL LENGTH STAINLESS STEEL ADA COMPLIANT BELOW COUNTER ENCLOSURE.
ORD-1	-	OVERFLOW ROOF DRAIN	SEE PLANS	-	-	-	JAY R SMITH: 1080	CAST IRON BODY WITH COMBINED FLASHING CLAMP AND GRAVEL STOP, LOW PROFILE POLYETHYLENE DOME, UNDERDECK CLAMP, AND 2" TALL CAST IRON WATER DAM.
PT-1	-	PLASTER TRAP	SEE PLANS	-	-	-	BUFFALO MODEL - TRAP-EZE	2 GALLON PLASTER TRAP.
RD-1	-	ROOF DRAIN	SEE PLANS	-	-	-	JAY R SMITH: 1010	CAST IRON BODY WITH COMBINED FLASHING CLAMP AND GRAVEL STOP, LOW PROFILE POLYETHYLENE DOME, UNDERDECK CLAMP, AND 2" TALL CAST IRON WATER DAM.
SK-1	-	SINK (UNDERMOUNT)	1 1/2"	1 1/2"	1/2"	1/2"	ELKAY: MODEL - ELUH1814PD	STAINLESS STEEL, SINGLE BOWL, 20 1/2" x 16 1/2" x 7 7/8" OVERALL, 18" x 14" x 7 7/8" BOWL, WITH DRAIN. FAUCET: CHICAGO 786-GN8AE36ABCP, 8" RIGID/SWING GOOSENECK SPOUT, PRESSURE COMPENSATING LAMINAR FLOW NON-AERATING OUTLET 1.5 GPM, 4" WRISTBLADE HANDLES, 8" FIXED CENTERS, POLISHED CHROME
TS-1	-	TRAP SEAL	SEE PLANS	-	-	-	SURESEAL	IN-LINE FLOOR DRAIN TRAP SEAL, PREASSEMBLED, ABS PLASTIC HOUSING, NEOPRENE RUBBER DIAPHRAGM WITH 2" SOFT RUBBER GASKETS, ASSE 1072.
UR-1	Y	URINAL (WALL MOUNTED)	2"	1 1/2"	3/4"	-	SLOAN SU-1009	VITREOUS CHINA, WASHDOWN FLUSHING ACTION, 3/4" TOP SPUD INLET FLUSH VALVE: SLOAN ROYAL 180, 1.0 GPF, MANUAL, CHROME PLATED
WC-1	Y	WATER CLOSET (FLOOR-MOUNTED)	4"	-	1"	-	SLOAN ST-2029	VITREOUS CHINA, ELONGATED BOWL, SIPHON JET FLUSHING ACTION, 1 1/2" TOP SPUD INLET SEAT: BEMIS 1955CT/1955SSCT, OPEN FRONT, ELONGATED, WHITE FLUSH VALVE: SLOAN ROYAL 110, 1.6 GPF, MANUAL, CHROME PLATED
WC-2	Y	WATER CLOSET (WALL-MOUNTED)	4"	-	1"		SLOAN ST-2459	VITREOUS CHINA, ELONGATED BOWL, SIPHON JET FLUSHING ACTION, 1 1/2" TOP SPUD INLET SEAT: BEMIS 1955CT/1955SSCT, OPEN FRONT, ELONGATED, WHITE FLUSH VALVE: SLOAN ROYAL 110, 1.6 GPF, MANUAL, CHROME PLATED

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BANGOR TOWNSHIP SSCHOOL DISTRICT
PHASE 3 - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
A	SCHEMATIC DESIGN	09.30.24
B	OWNER REVIEW	12.09.24
0	FOR CONSTRUCTION	12.20.24

	BY	DATE:
DESIGN	CRP	09.18.24
DRAWN	CRP	09.18.24
CHECKED	SLB	
APPROVED	SLB	

PLUMBING DETAILS & SCHEDULES

ELECTRICAL SYMBOL LIST

NOTE: SOME SYMBOLS SHOWN MAY NOT APPLY TO THIS PROJECT

- 2'x2' RECESSED LIGHTING FIXTURE
- 2'x4' RECESSED LIGHTING FIXTURE
- 2'x2' SURFACE MOUNTED LIGHTING FIXTURE
- 2'x4' SURFACE MOUNTED LIGHTING FIXTURE
- PENDANT DECORATIVE LIGHTING FIXTURE
- PENDANT LINEAR LIGHTING FIXTURE
- HIGH-BAY LIGHTING FIXTURE
- WALL MOUNTED LIGHTING FIXTURE
- WALL SCONCE
- POLE MOUNTED LIGHTING FIXTURE
- LIGHTED EXIT SIGN WITH DIRECTIONAL ARROWS
SHADED AREA INDICATES FACE
- LIGHTED EXIT SIGN - WALL MOUNTED
- EMERGENCY LIGHTING UNIT
- W X — WALL STATION
X - WALL STATION TYPE
- $ — SINGLE POLE TOGGLE SWITCH
- $3 — 3-WAY TOGGLE SWITCH
- $4 — 4-WAY TOGGLE SWITCH
- $D — DIMMER SWITCH
- $K — KEY OPERATED SWITCH
- C — AREA CONTROLLER
- R — REMOTE RELAY SWITCH
- TC — TIME CLOCK
- S — OCCUPANCY SENSOR
- P — PHOTOCELL

- DUPLEX RECEPTACLE
- ABOVE COUNTER DUPLEX RECEPTACLE
- QUAD RECEPTACLE
- ABOVE COUNTER QUAD RECEPTACLE
- SPECIALTY RECEPTACLE
- CEILING MOUNTED DUPLEX RECEPTACLE
- HARD WIRED POWER CONNECTION
- FLOORBOX / POKE-THROUGH
- J — JUNCTION BOX
- POWER POLE
- RACEWAY
- CORD REEL
- $M — MOTORIZED SWITCH
- PUSH BUTTON
- X — DATA OUTLET
'X' INDICATES PORT COUNT
- X — ABOVE COUNTER DATA OUTLET
'X' INDICATES PORT COUNT
- X — CEILING MOUNTED DATA OUTLET
'X' INDICATES PORT COUNT
- A — WIRELESS ACCESS POINT

- XA/XP/XV — NON-FUSED DISCONNECT SWITCH
XA - AMP RATING / XP - POLES QUANTITY / XV - VOLTAGE RATING
- XA/XP/XV/XAF — FUSED DISCONNECT SWITCH
XA - AMP RATING / XP - POLES QUANTITY / XV - VOLTAGE RATING
/ XAF - FUSE RATING
- XX — STARTER SWITCH
- BRANCH CIRCUIT BREAKER PANEL
- DISTRIBUTION PANEL
- T — TRANSFORMER
- ATS — AUTOMATIC TRANSFER SWITCH
- BELL DEVICE
- S — WALL MOUNTED SPEAKER
- S — CEILING MOUNTED SPEAKER
- WALL MOUNTED SINGLE FACE CLOCK
- CEILING MOUNTED SINGLE FACE CLOCK
- WALL MOUNTED DOUBLE FACE CLOCK
- CEILING MOUNTED DOUBLE FACE CLOCK
- I — INTERCOM
- B — DOOR RELEASE BUZZER
- DL — DOOR LOCK
- K — KEY PAD
- CR — CARD READER
- PS — DOOR POSITION SWITCH
- SECURITY CAMERA

- F — FIRE ALARM MANUAL PULL STATION
- SD — SMOKE DETECTOR
- DD — DUCT MOUNTED SMOKE DETECTOR
- CO — CARBON MONOXIDE DETECTOR
- HD — HEAT DETECTOR
- TS — TAMPER SWITCH
- FS — FLOW SWITCH
- DH — MAGNETIC DOOR HOLD OPEN
- XXcd — WALL MOUNTED AUDIO FIRE ALARM DEVICE
XXcd - CANDELA RATING
- F XXcd — CEILING MOUNTED AUDIO FIRE ALARM DEVICE
XXcd - CANDELA RATING
- XXcd — WALL MOUNTED VISUAL FIRE ALARM DEVICE
XXcd - CANDELA RATING
- XXcd — CELING MOUNTED VISUAL FIRE ALARM DEVICE
XXcd - CANDELA RATING
- XXcd — WALL MOUNTED COMBO VISUAL & AUDIO FIRE ALARM DEVICE
XXcd - CANDELA RATING
- XXcd — CEILING MOUNTED COMBO VISUAL & AUDIO FIRE ALARM DEVICE
XXcd - CANDELA RATING
- FIRE ALARM CONTROL PANEL

GENERAL NOTES

TYPICAL

1. UNLESS NOTED OTHERWISE, ALL LIGHTING, DEVICES, EQUIPMENT, CIRCUITRY, ETC. DENOTED WITH BOLD (DARK) LINES REPRESENT WORK TO BE PERFORMED. ALL LIGHTING, DEVICES, EQUIPMENT, CIRCUITRY, ETC. DENOTED WITH LIGHT (SCREENED) LINES REPRESENT EXISTING TO REMAIN AND BE MAINTAINED.
2. EXISTING CONDITIONS SHOWN ON THESE DRAWINGS HAVE BEEN OBTAINED FROM EXISTING DRAWINGS AND FIELD INSPECTIONS. CONTRACTOR SHALL VERIFY EXACT LOCATIONS. REPORT DISCREPANCIES TO ARCHITECT/ENGINEER BEFORE DEMOLITION.
3. VERIFY WITH CONSTRUCTION ADMINISTRATION ELECTRICAL CONTRACTOR'S RESPONSIBLITY FOR PATCHING, PREPPING AND PAINTING EXISTING WALL SURFACES TO MATCH EXISTING WHERE DEVICES AND EQUIPMENT ARE REMOVED.
4. ALL NEW FEEDER AND BRANCH CIRCUIT CONDUIT AND WIRING SHALL BE RUN CONCEALED WITHIN EXISTING WALL CAVITIES OR ABOVE CEILINGS. EXPOSED RACEWAY ACCEPTABLE ONLY WHERE APPROVED BY OWNER, CONSTRUCTION MANAGER AND ENGINEER IN WHICH CASES WIREMOLD 700 (WHITE), OR EQUAL, SURFACE MOUNTED RACEWAY IS ACCEPTABLE. CONTRACTORS SHALL FIELD VERIFY EXISTING CONSTRUCTION CONDITIONS PRIOR TO BIDDING.
5. REFER TO SHEET E0.0 FOR ELECTRICAL SYMBOL LEGEND.

POWER

1. ALL NEW RECEPTACLE DEVICES SHALL BE TAMPER RESISTANT (TR) TYPE.
2. NOTIFY ARCHITECT/ENGINEER OF ANY IN FIELD OBSTRUCTIONS THAT INTERFERE WITH LOCATIONS OF NEW RECEPTACLES AND COORDINATE WORK AS REQUIRED.

LIGHTING

1. LIGHTING ALTERATIONS SHALL COMPLY WITH ASHRAE STANDARD 90.1 2013, SECTION 9.1.2 OR ADDENDUM E OF THE 2015 SUPPLEMENT TO THIS STANDARD.
2. ALL NEW FIXTURES SHOWN HAVE INTEGRAL MOTION AND DAYLIGHT HARVESTING SENSORS INSTALLED BY FACTORY. FIXTURES AND WALL STATIONS SHALL BE PROGRAMMED TO COMPLY WITH ASHRAE STANDARD 90.1 2013, SECTION 9.4. WALL STATIONS AND FIXTURES SHALL BE PROGRAMMED TO PROVIDE THE FOLLOWING CONTROL AS REQUIRED; LOCAL MANUAL CONTROL, AUTOMATIC CONTROL, BI LEVEL CONTROL AND DAYLIGHT RESPONSIVE CONTROL.
3. NOTIFY ARCHITECT/ENGINEER OF IN FIELD OBSTRCUTIONS THAT INTERFERE WITH DESIGNED LIGHT FIXTURE LAYOUT AND COORDINATE WORK AS REQUIRED.
4. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONED LIGHT FIXTURE LOCATIONS.
5. REFER TO SHEET E3.0 FOR LIGHTING FIXTURE SCHEDULE.

FIRE ALARM

1. ALL NEW FIRE ALARM DEVICES ON THESE DRAWINGS TO MATCH EXISTING SIMPLEX FIRE ALARM SYSTEM. PROVIDE ALL NECESSARY WIRING, DEVICES, PROGRAMMING, ETC. FOR A COMPLETE AND OPERABLE SYSTEM.
2. A DIFFERED SUBMITTAL FOR FIRE ALARM SYSTEM SHALL BE SENT TO BCC FOR REVIEW ONCE BIDS FOR PROJECT HAVE BEEN RECEIVED AND CONTRACT(S) AWARDED. THE INSTALLING CONTRACTOR SHALL PROVIDE SHOP DRAWINGS DESGN MINIMUM AUDIBILITY LEVEL FOR OCCUPANT NOTIFICATION, BATTERY AND VOLTAGE DROP CALCULATIONS AND OTHER ITEMS SPECIFIC TO THE SYSTEM BEING INSTALLED ON THIS PROJECT.

PUBLIC ADDRESS SYSTEM

1. ALL NEW SPEAKERS ON THESE DRAWINGS TO MATCH EXISTING VALCOM PUBLIC ADDRESS SYSTEM. PROVIDE ALL NECESSARY WIRING, DEVICES, PROGRAMMING, ETC. FOR A COMPLETE AND OPERABLE SYSTEM.

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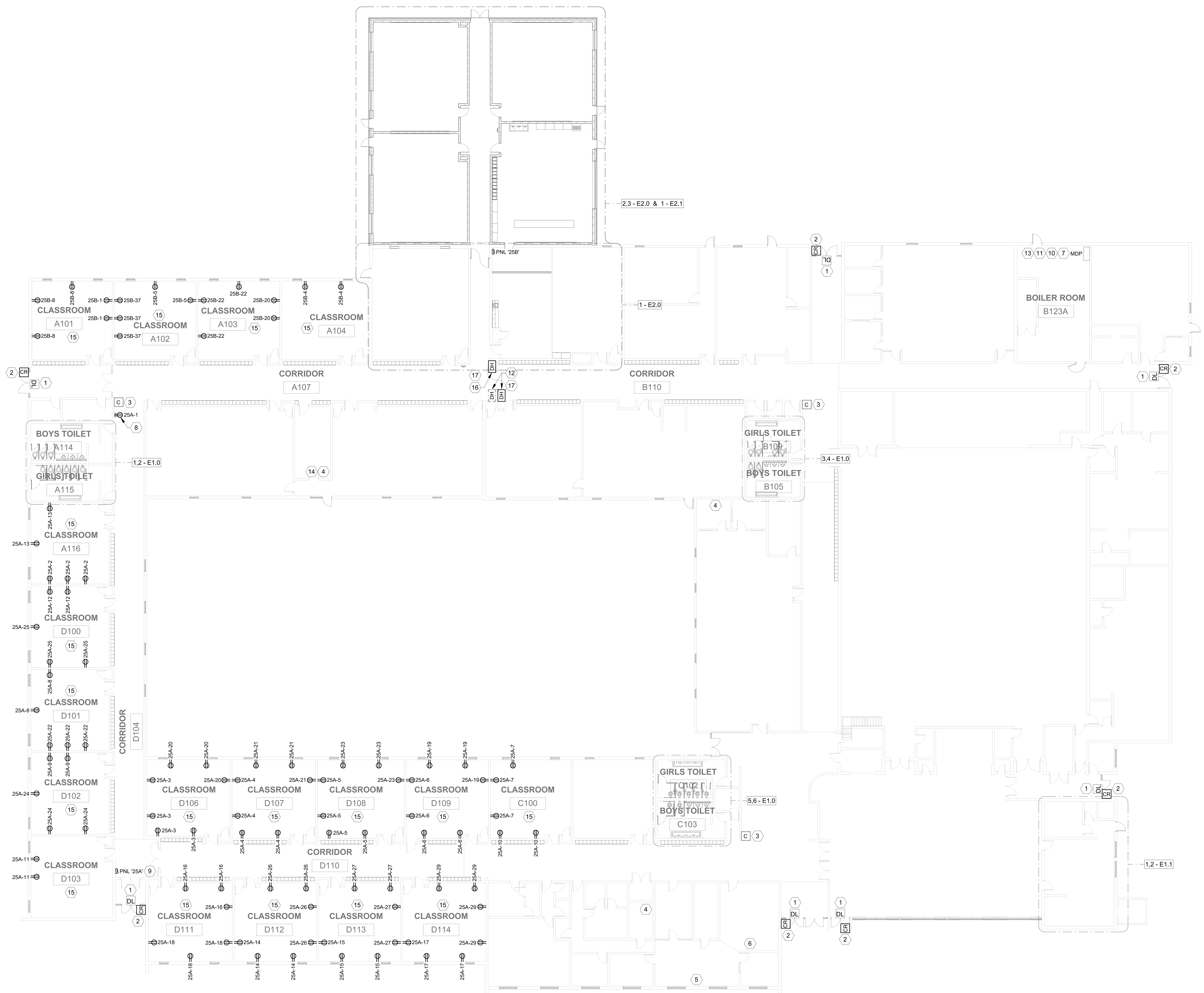
PHASE 3 - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12.20.24

	BY	DATE:
DESIGN	SNS	12.16.24
DRAWN	SNS	12.09.24
CHECKED	AJM	12.16.24
APPROVED	AJM	12.09.24

ELECTRICAL SYMBOL LEGEND

E0.0



1 ELECTRICAL COMPOSITE PLAN
1/16" = 1'-0"

KEYNOTES

1. CONNECT DOOR STRIKE PROVIDED BY DOOR HARDWARE SUPPLIER TO EXISTING BUILDING ACCESS CONTROL SYSTEM. PROVIDE ALL REQUIRED WIRING, DEVICES, PROGRAMMING, ETC. FOR A COMPLETE AND OPERABLE SYSTEM.
2. NEW CARD READER TO BE PROVIDED BY OWNER THROUGH HONOR SECURITY, INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE OUTDOOR RATED, SINGLE GANG, DEEP BOX, AT 44" A.F.F. WITH 3/4" CONDUIT STUB TO JUNCTION BOX ABOVE CORRIDOR CEILING SPACE. PROVIDE 1-CATEGORY 6 CABLE FROM JUNCTION BOX TO NETWORK TERMINATION RACK, SEE KEYNOTE 4/E0.1.
3. PROVIDE COOPER LIGHTING SOLUTIONS WAVELINX PRO #WAC2-120 OR EQUAL WIRELESS AREA CONTROLLER. RUN CAT 6 LINE CABLE BACK TO NETWORK RACK.
4. EXISTING NETWORK RACK TO REMIAN.
5. EXISTING PUBLIC ADDRESS SYSTEM HEADEND TO REMAIN.
6. EXISTING SIMPLEX TYPE 4010 FIRE ALARM CONROL PANEL (FACP) TO REMAIN. PROVIDE NEW PANEL TO TO SUPPORT ALL NEW VOICE ANNUNCIATION STLE FIRE ALARM DEVICES IN ADDITON AREA AS REQUIRED. TIE NEW PANEL INTO EXISTING FIRE ALARM PANEL/SYSTEM.
7. EXISTING SQUARE D TYPE 2 MAIN DISTRIBUTION PANEL 'MDP' TO REMIAN.
8. PROVIDE GFI PROTECTION FOR RECEPTACLE SERVING 'EFB' AT BREAKER.
9. PROVIDE STEEL COVER TO CONCEAL EXPOSED CONDUIT FEEDING OUT OF NEW PANEL.
10. PROVIDE NEW 100A/3P CIRCUIT BREAKER IN 'MDP' TO PROTECT AND FEED NEW PANEL '25A'.
11. PROVIDE NEW 225A/3P CIRCUIT BREAKER IN 'MDP' TO PROTECT AND FEED NEW PANEL '25B'.
12. REMOVE EXISTING DOOR HOLD OPEN IN CORRIDOR A107. INSTALL NEW DOOR HOLD OPEN IN CORRIDOR B110. EXTEND EXISTING WIRING AS REQUIRED FOR A FULLY FUNCTION SYSTEM. NEW DOOR HOLD OPEN PROVIDED BY DOOR MANUFACTURER, INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE ALL NECESSARY BOXES, DEVICES, HARDWARE, PROGRAMMING, TESTING, ETC FOR A COMPLETE AND PROPER INSTALLATION.
13. PROVIDE NEW 200A/3P CIRCUIT BREAKER IN 'MDP' FOR SURGE PROTECTION OF THE MAIN DISTRIBUTION PANEL. PROVIDE SURGE PROTECTION DEVICE PER SPECS.
14. ALL NETWORK CABLING SERVING NEW ADDITION SHALL BE RUN TO THIS LOCATION.
15. PROVIDE WIREMOLD 700 (WHITE), OR EQUAL, SURFACE MOUNTED RACEWAY TO SUPPLY NEW RECEPTACLES IN THIS ROOM AS REQUIRED.
16. REMOVE AND REPLACE EXISTING DOOR HOLD OPEN WITH NEW DOOR HOLD OPEN. NEW DOOR HOLD OPEN PROVIDED BY DOOR MANUFACTURER, INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE ALL NECESSARY BOXES, DEVICES, HARDWARE, PROGRAMMING, TESTING, ETC FOR A COMPLETE AND PROPER INSTALLATION.
17. FIELD VERIFY EXISTING SMOKE DETECTOR IN OR NEAR THIS AREA. IF NO DETECTOR PRESENT, PROVIDE NEW SMOKE DETECTOR TO MATCH EXISTING SIMPLEX FIRE ALARM SYSTEM IN BUILDING. PROVIDE ALL NECESSARY BOXES, DEVICES, HARDWARE, PROGRAMMING, TESTING, ETC FOR A COMPLETE AND PROPER INSTALLATION.

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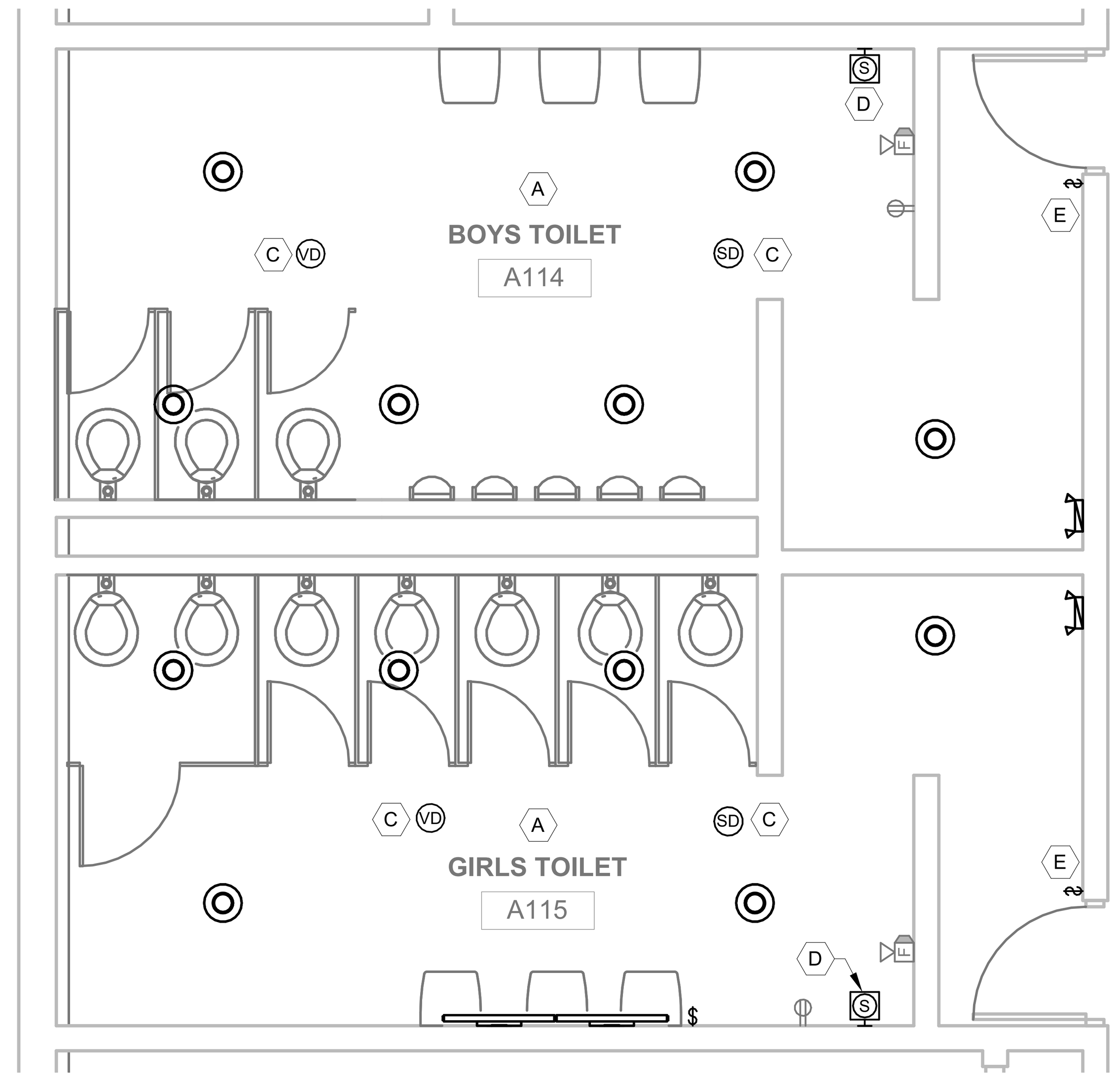
PROJECT NO. 22-011

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12.20.24

	BY	DATE:
DESIGN	SNS	12.16.24
DRAWN	SNS	12.09.24
CHECKED	AJM	12.16.24
APPROVED	AJM	12.09.24

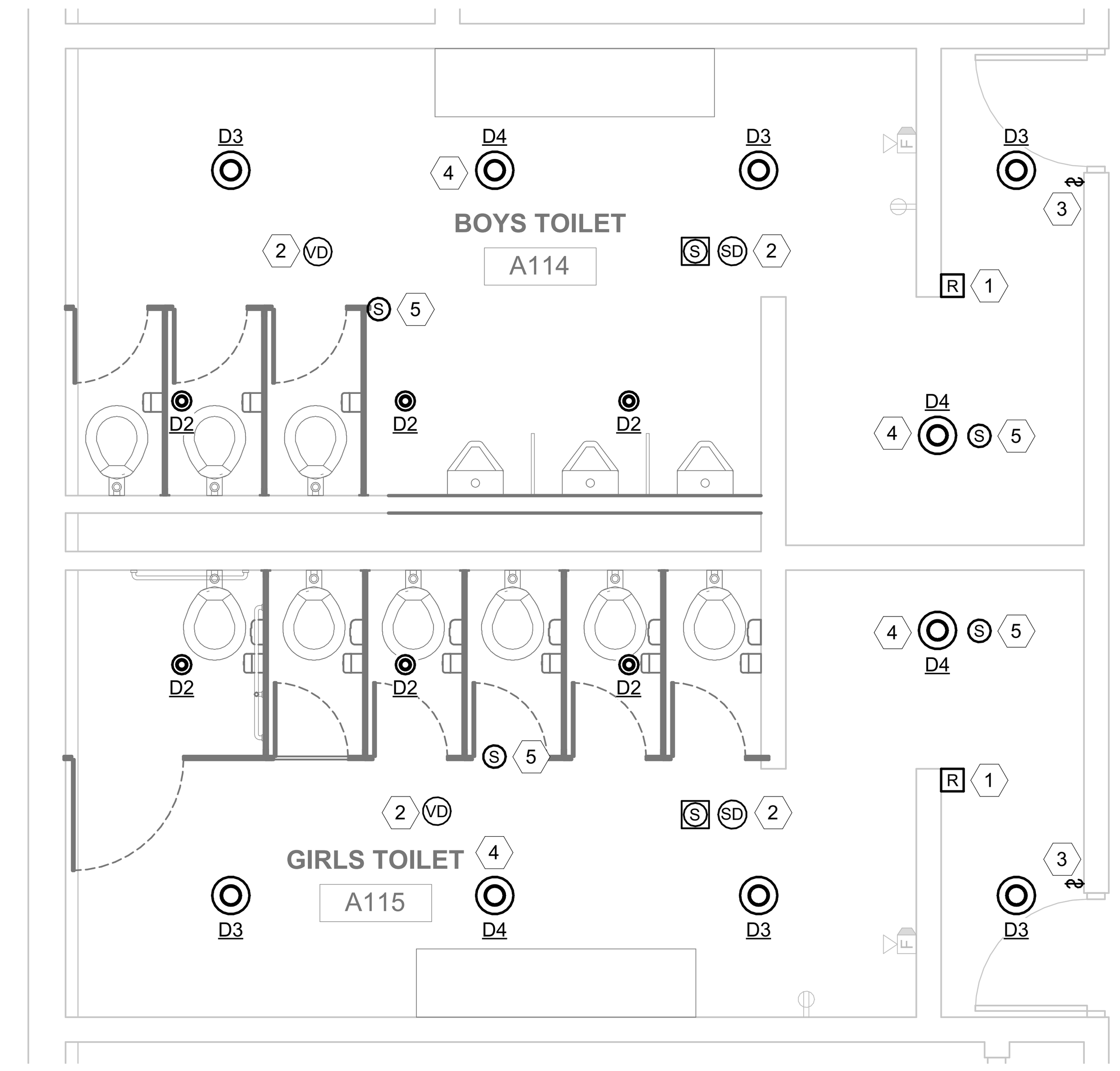
ELECTRICAL COMPOSITE PLAN

E0.1



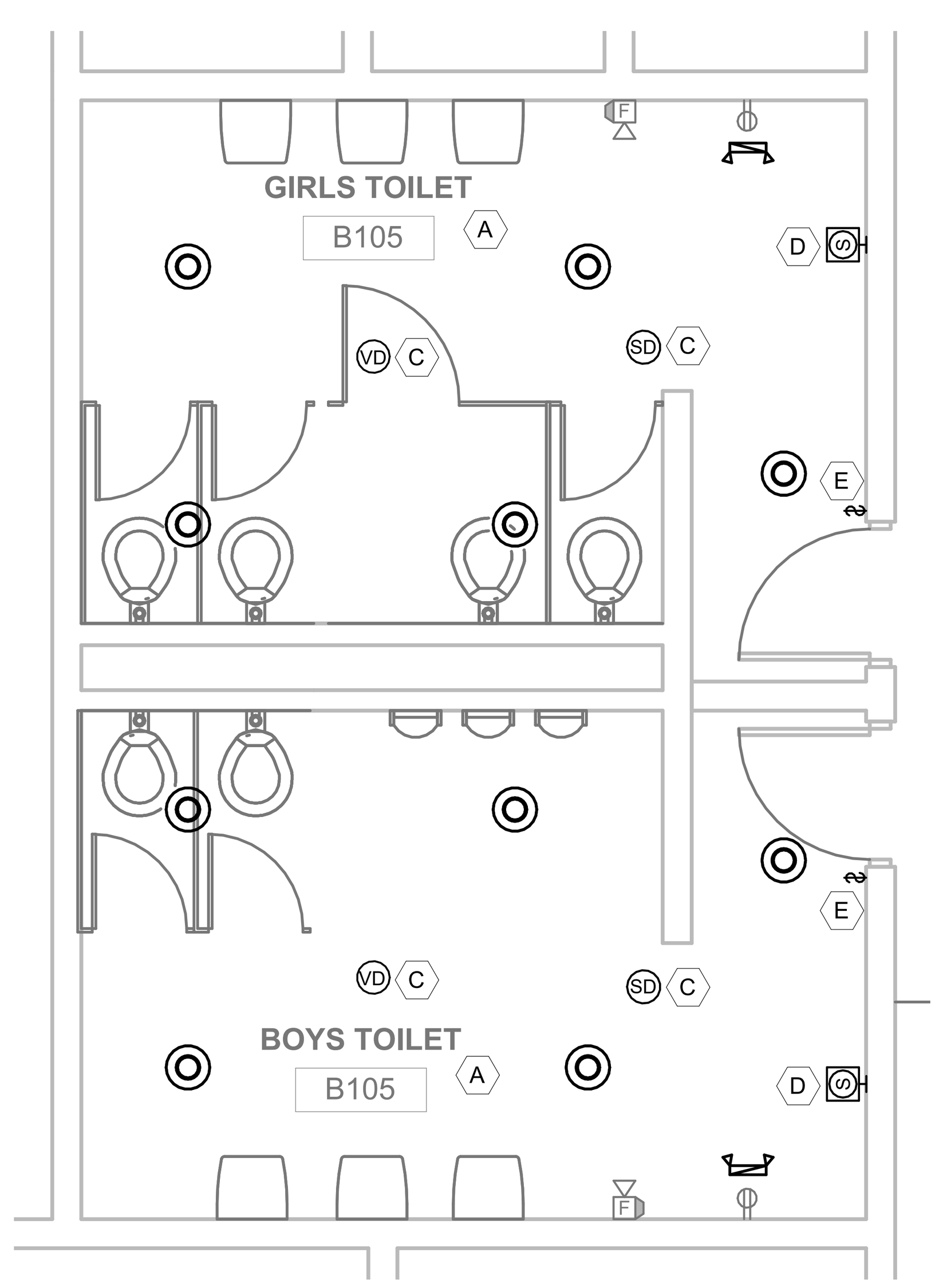
ELECTRICAL DEMO PLAN - AREA 'A' RESTROOMS

1 1/4" = 1'-0"



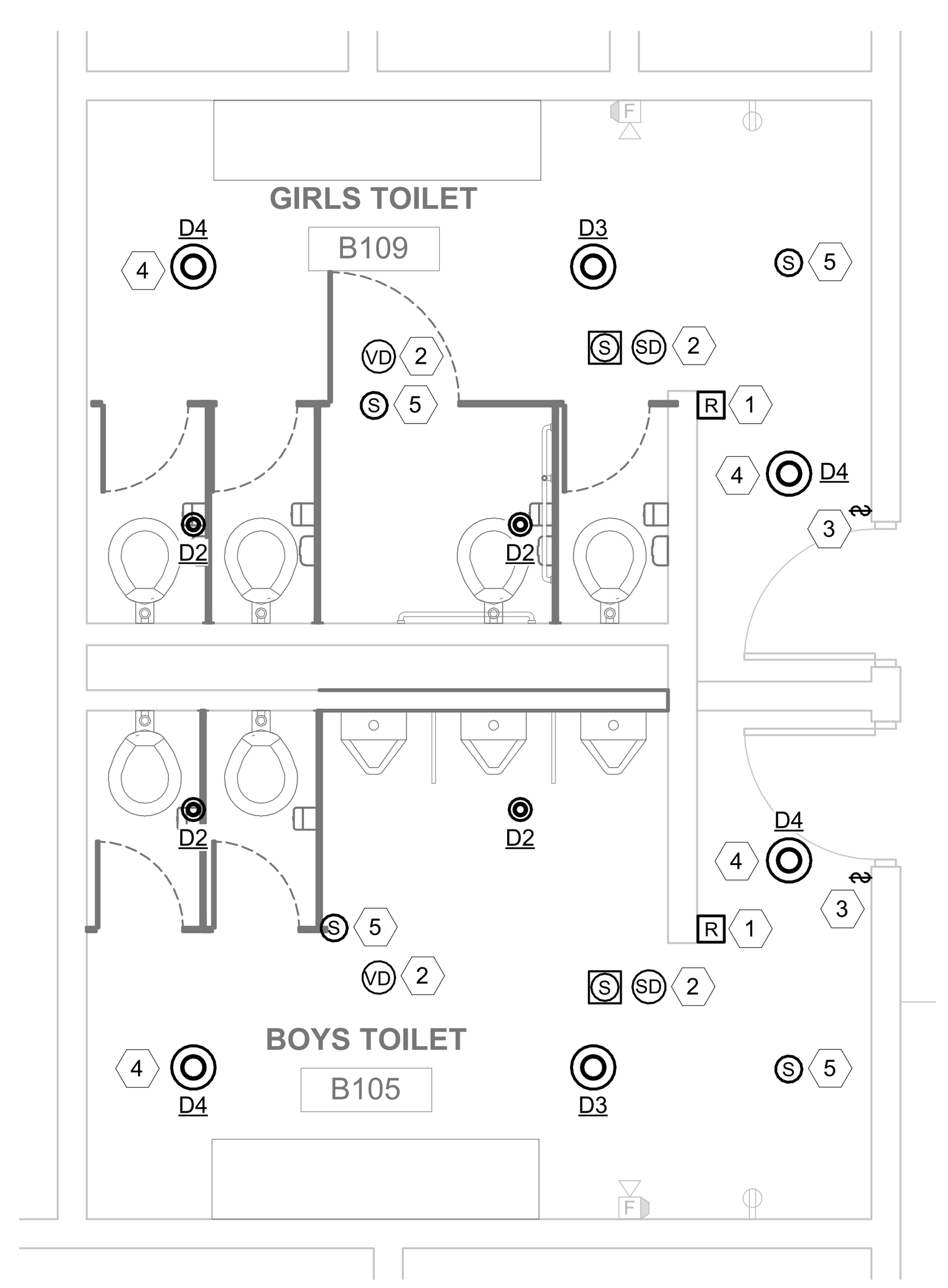
ELECTRICAL NEW WORK PLAN - AREA 'A' RESTROOMS

2 1/4" = 1'-0"



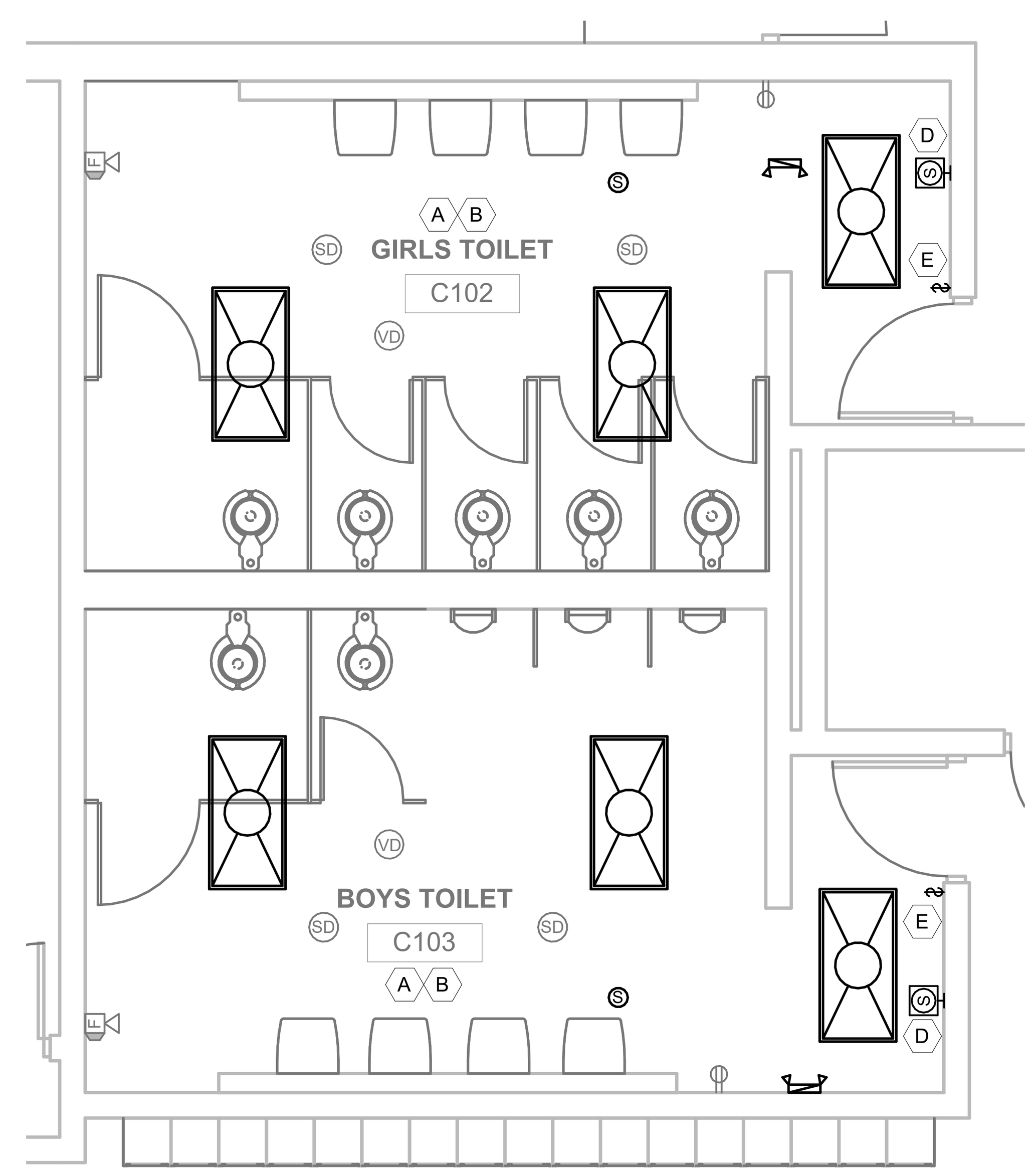
ELECTRICAL DEMO PLAN - AREA 'B' RESTROOMS

3 1/4" = 1'-0"



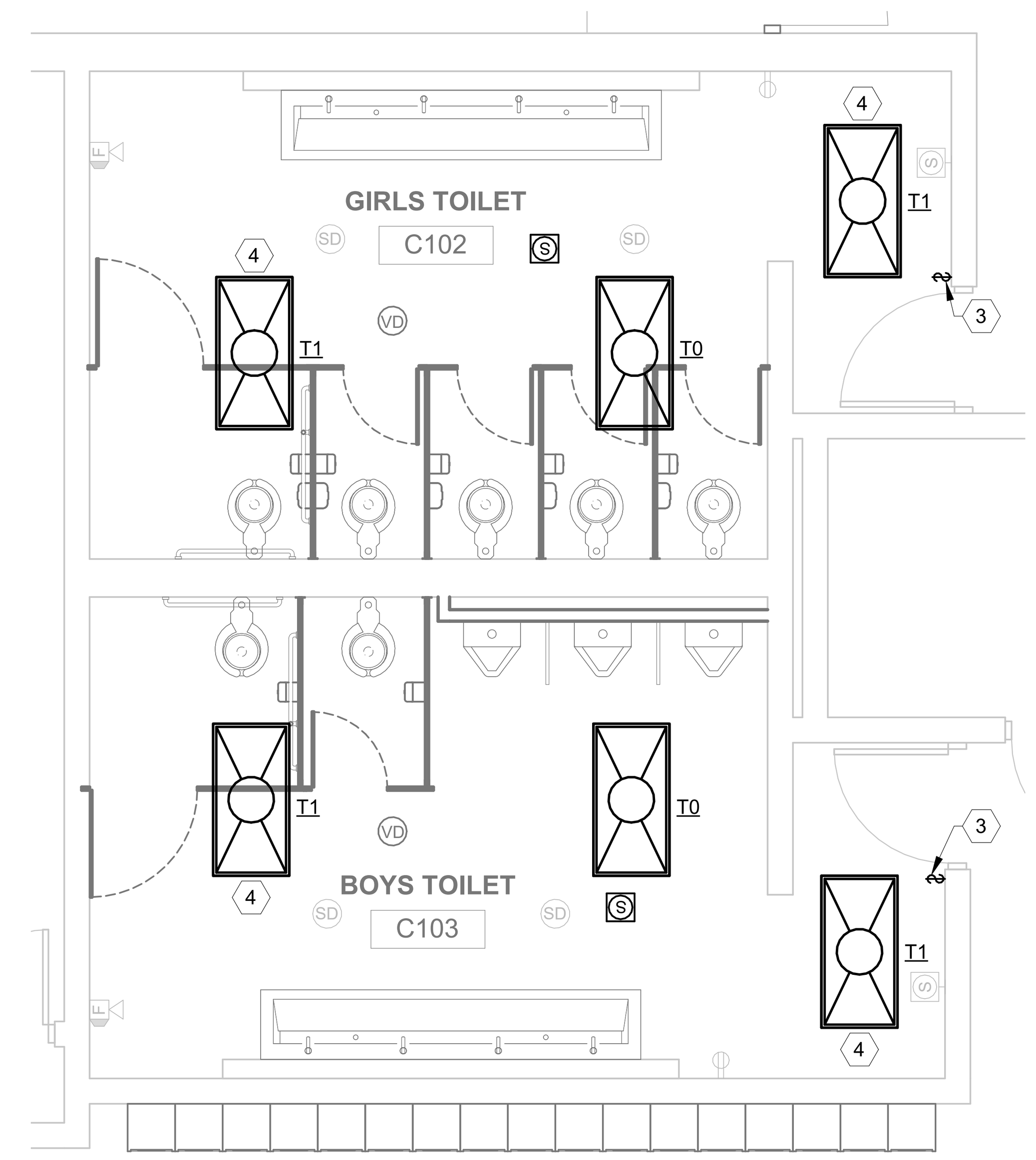
ELECTRICAL NEW WORK PLAN - AREA 'B' RESTROOMS

4 1/4" = 1'-0"



ELECTRICAL DEMO PLAN - AREA 'C' RESTROOMS

5 1/4" = 1'-0"



ELECTRICAL NEW WORK PLAN - AREA 'C' RESTROOMS

6 1/4" = 1'-0"

DEMOLITION KEYNOTES

A. REMOVE EXISTING LIGHTING FIXTURES, SWITCHES AND OCCUPANCY SENSORS IN THIS ROOM/AREA. EXTEND/RECONFIGURE EXISTING BRANCH CIRCUIT WIRING TO FEED AND CONTROL NEW LIGHTING FIXTURES. SEE NEW WORK PLAN FOR NEW FIXTURE LOCATIONS.

B. MODIFY CEILING GRID TO ACCOMMODATE NEW WORK. COORDINATE WORK WITH ARCHITECTURAL TRADES.

C. CEILING TO BE REPAINTED BY ARCHITECTURAL TRADES. TEMPORARILY REMOVE EXISTING FIRE ALARM DEVICE AND PREP FOR CEILING WORK. COORDINATE REINSTALLATION WITH CONSTRUCTION MANAGER AND ARCHITECTURAL TRADES.

D. REMOVE EXISTING SPEAKER COMPLETE. REMOVE EXISTING WIRING BACK TO SOURCE, WHERE ACCESSIBLE.

E. WALLS TO BE TILED BY ARCHITECTURAL TRADES. TEMPORARILY REMOVE EXISTING LIFE SAFETY DEVICE ALERT BOX AND REINSTALL PRIOR TO TILING WORK AS REQUIRED. COORDINATE WORK WITH ARCHITECTURAL TRADES.

NEW WORK KEYNOTES

1. PROVIDE WAVELINX PRO RSP-P-010-347 OR EQUAL RELAY SWITCHPACK. RELAY TO CONTROL ALL LIGHT FIXTURES IN THIS ROOM, PROVIDE REQUIRED CONTROL WIRING.

2. REINSTALLED FIRE ALARM DEVICE. EXTEND EXISTING WIRING AS REQUIRED.

3. PROVIDE COOPER LIGHTING SOLUTIONS WAVELINX PRO #W1L-W OR EQUAL WALL STATION.

4. LIGHT FIXTURE TO BE PROVIDED WITH INTEGRAL EMERGENCY BACK-UP BATTERY. FIXTURE TO BE CONTROLLED BY WALL STATION AND AUTOMATICALLY TURN 'ON' IN THE EVENT OF NORMAL POWER FAILURE.

5. PROVIDE WAVELINX PRO CWPD-1500 OR EQUAL CEILING SENSOR. SENSOR TO CONTROL ALL LIGHT FIXTURES IN THIS ROOM, PROVIDE REQUIRED CONTROL WIRING.

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BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3 - MIDDLE SCHOOL ADDITION & RENOVATIONS
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NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12.20.24

	BY	DATE:
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DRAWN	SNS	12.09.24
CHECKED	AJM	12.16.24
APPROVED	AJM	12.09.24

ELECTRICAL RENOVATION PLANS - RESTROOMS

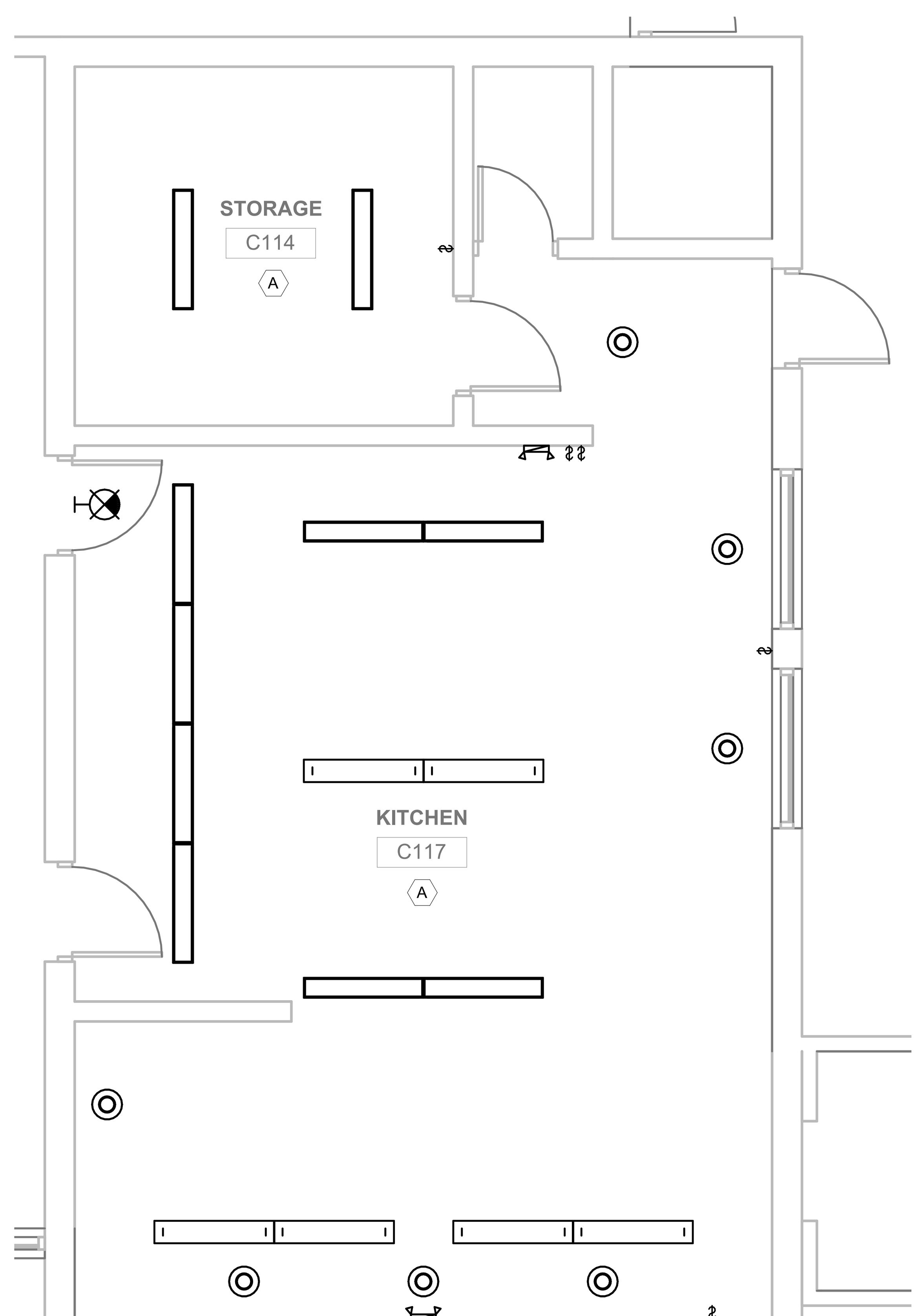
E1.0

DEMOLITION KEYNOTES

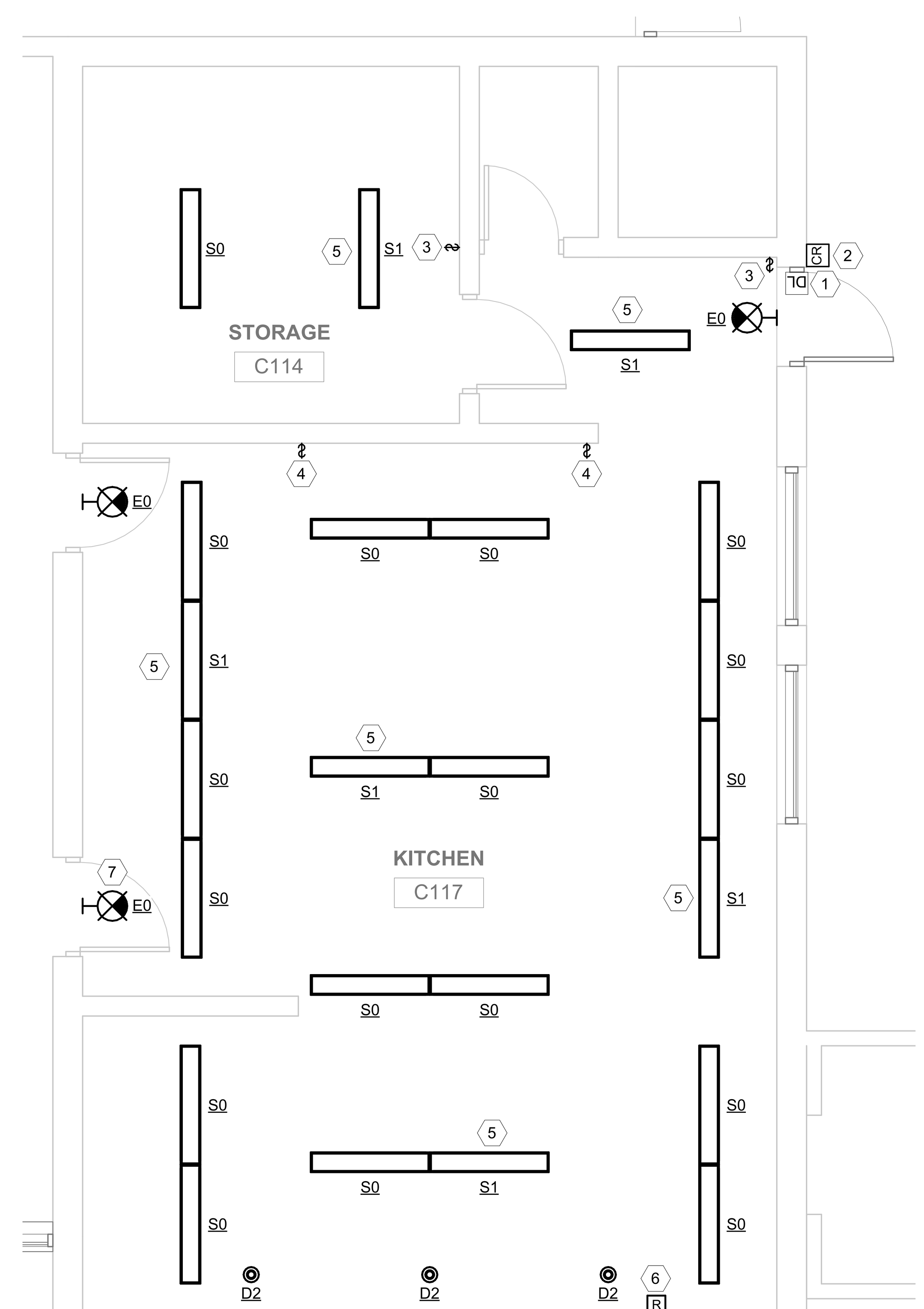
A. REMOVE EXISTING LIGHTING FIXTURES, SWITCHES AND OCCUPANCY SENSORS IN THIS ROOM/AREA. EXTEND/RECONFIGURE EXISTING BRANCH CIRCUIT WIRING TO FEED AND CONTROL NEW LIGHTING FIXTURES. SEE NEW WORK PLAN FOR NEW FIXTURE LOCATIONS.

NEW WORK KEYNOTES

1. CONNECT DOOR STRIKE PROVIDED BY DOOR HARDWARE SUPPLIER TO EXISTING BUILDING ACCESS CONTROL SYSTEM. PROVIDE ALL REQUIRED WIRING, DEVICES, PROGRAMMING, ETC. FOR A COMPLETE AND OPERABLE SYSTEM.
2. NEW CARD READER TO BE PROVIDED BY OWNER THROUGH HONOR SECURITY, INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE OUTDOOR RATED, SINGLE GANG, DEEP BOX, AT 44" A.F.F. WITH 3/4" CONDUIT STUB TO JUNCTION BOX ABOVE CORRIDOR CEILING SPACE. PROVIDE 1-CATEGORY 6 CABLE FROM JUNCTION BOX TO NETWORK TERMINATION RACK, SEE KEYNOTE 4/E0.1.
3. PROVIDE COOPER LIGHTING SOLUTIONS WAVELINX PRO #W1L-W OR EQUAL WALL STATION.
4. PROVIDE COOPER LIGHTING SOLUTIONS WAVELINX PRO #W2L-RL-W OR EQUAL WALL STATION.
5. LIGHT FIXTURE TO BE PROVIDED WITH INTEGRAL EMERGENCY BACK-UP BATTERY. FIXTURE TO BE CONTROLLED BY WALL STATION AND AUTOMATICALLY TURN 'ON' IN THE EVENT OF NORMAL POWER FAILURE.
6. PROVIDE WAVELINX PRO RSP-P-010-347 OR EQUAL RELAY SWITCHPACK. RELAY TO CONTROL ALL DOWNLIGHTS IN THIS ROOM, PROVIDE REQUIRED CONTROL WIRING.
7. PROVIDE POWER TO NEW EXIT FIXTURE FROM EXISTING ROOM LIGHTING CIRCUIT, AHEAD OF ANY SWITCH LEG.



1 ELECTRICAL DEMO PLAN - KITCHEN
1/4" = 1'-0"



2 ELECTRICAL NEW WORK PLAN - KITCHEN
1/4" = 1'-0"

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ELECTRICAL RENOVATION PLANS - KITCHEN

E1.1

DEMOLITION KEYNOTES

A. REMOVE EXISTING LIGHTING FIXTURES, SWITCHES AND OCCUPANCY SENSORS IN THIS ROOM/AREA. EXTEND/RECONFIGURE EXISTING BRANCH CIRCUIT WIRING TO FEED AND CONTROL NEW LIGHTING FIXTURES. SEE NEW WORK PLAN FOR NEW FIXTURE LOCATIONS.

B. EXISTING UNIT VENTILATOR TO BE REMOVED AND RELOCATED BY MECHANICAL TRADES. DISCONNECT UNIT FROM POWER. EXTEND EXISTING BRANCH CIRCUITRY AND CONDUIT TO NEW LOCATION. SEE NEW WORK PLAN FOR NEW LOCATION.

C. REMOVE AND RELOCATE EXISTING EXIT SIGN. EXTEND EXISTING BRANCH CITRCUITRY TO NEW LOCATION AS REQUIRED. SEE NEW WORK PLAN FOR NEW LOCATION.

D. EXITING UNIT VENTILATOR/CABINET UNIT HEATER TO BE REMOVED BY MECHANICAL TRADES. DISCONNECT UNIT FROM POWER COMPLETE. REMOVE EXISTING BRANCH CIRCUITRY BACK TO SOURCE, WHERE ACCESSIBLE.

E. REMOVE EXISTING RECEPTACLE COMPLETE. REMOVE BRANCH CIRCUITRY AND CONDUIT BACK TO SOURCE, WHERE ACCESSIBLE.

F. REMOVE EXISTING FIRE ALARM PULL STATION COMPLETE AND TURN OVER TO OWNER. REMOVE EXISTING WIRING BACK TO SOURCE, WHERE ACCESSIBLE.

G. REMOVE EXISTING LIGHT FIXTURE COMPLETE. REMOVE EXISTING BRANCH CIRCUITRY BACK TO SOURCE WERE ACCESSIBLE.

H. REMOVE EXISTING LIGHT BELL AND TURN OVER TO OWNER. REMOVE EXISTING WIRING BACK TO SOURCE, WHERE ACCESSIBLE.

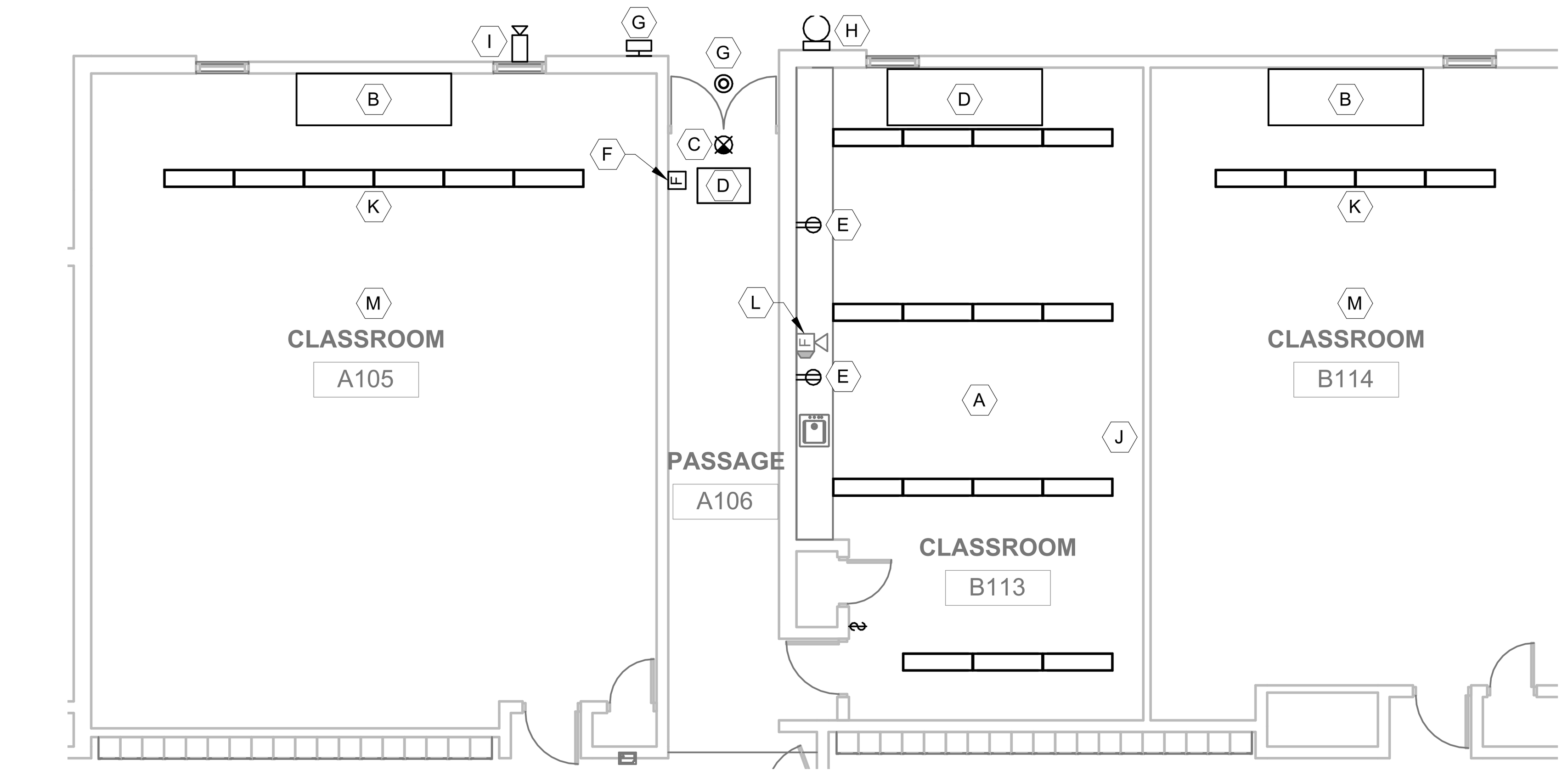
I. REMOVE EXISTING SECUIRTY CAMERA AND TURN OVER TO OWNER. REMOVE EXISTING WIRING/CABLING BACK TO SOURCE, WHERE ACCESSIBLE.

J. REMOVE EXISTING SHORT-THROW PROJECTOR AND TURN OVER TO OWNER.

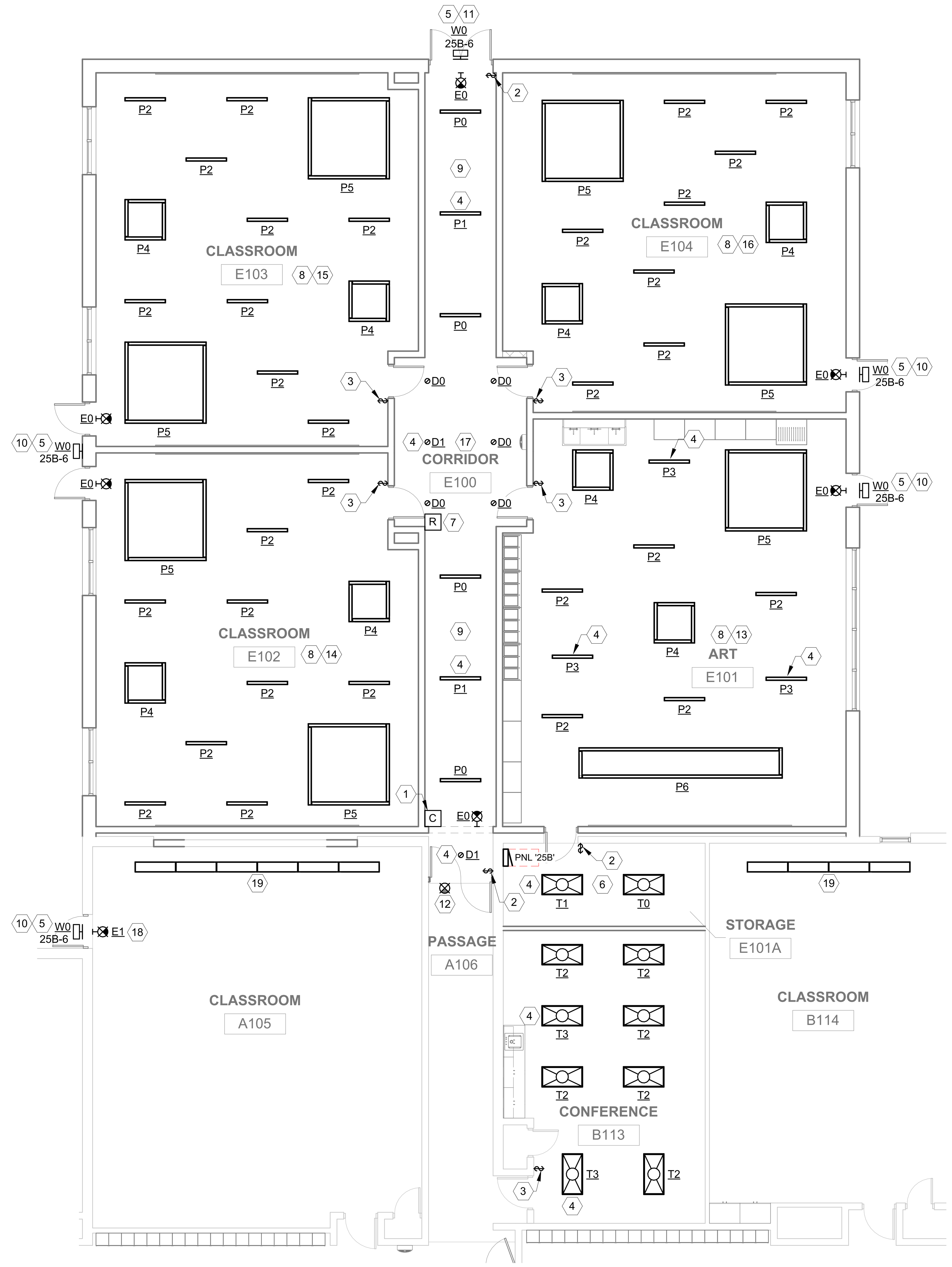
K. REMOVE AND RELOCATED EXISTING ROW OF LIGHT FIXTURES IN THIS ROOM BEING EFFECTED BY UNIT VENTILATOR RELOCATION AS REQUIRED. EXTEND EXISTING BRANCH CIRUCITRY AND CONTROL WIRING AS REQUIRED. SEE NEW WORK PLAN FOR NEW LOCATION.

L. EXISTING FIRE ALARM DEVICE TO REMIAN.

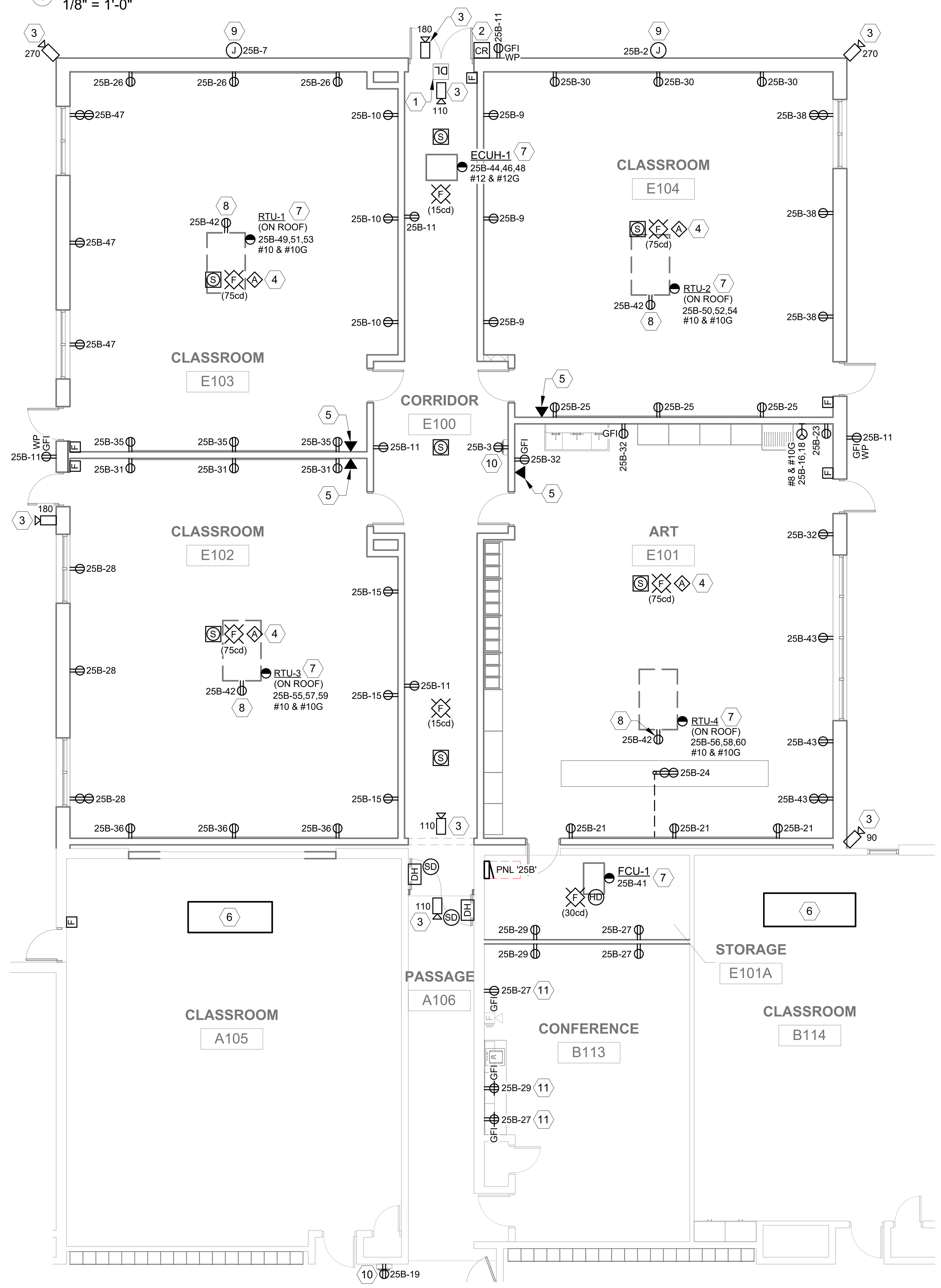
M. ARCHITECTURAL TRADES TO REMOVE PORTION OF CEILING FOR UNIT VENTILATOR RELOCATION. TEMPORARILY SUSPEND AND REINSTALL LIGHT FIXTURES IN AREA OF REWORK AS REQUIRED. COORDINATE WORK WITH ARCHITECTURAL TRADES.



1 ELECTRICAL DEMO PLAN - ADDITION AREA
1/8" = 1'-0"



2 ELECTRICAL NEW WORK LIGHTING PLAN - ADDITION AREA
1/8" = 1'-0"



3 ELECTRICAL NEW WORK POWER PLAN - ADDITION AREA
1/8" = 1'-0"

LIGHTING KEYNOTES

1. PROVIDE COOPER LIGHTING SOLUTIONS WAVELINX PRO #WAC2-120 OR EQUAL WIRELESS AREA CONTROLLER. RUN CAT 6 LINE CABLE BACK TO NETWORK RACK.

2. PROVIDE COOPER LIGHTING SOLUTIONS WAVELINX PRO #W1L-W OR EQUAL WALL STATION.

3. PROVIDE COOPER LIGHTING SOLUTIONS WAVELINX PRO #W4S-RL-W OR EQUAL WALL STATION.

4. LIGHT FIXTURE TO BE PROVIDED WITH INTEGRAL EMERGENCY BACK-UP BATTERY. FIXTURE TO BE CONTROLLED BY WALL STATION AND AUTOMATICALLY TURN 'ON' IN THE EVENT OF NORMAL POWER FAILURE.

5. LIGHT FIXTURE TO BE PROVIDED WITH INTEGRAL EMERGENCY BACK-UP BATTERY. FIXTURE TO BE CONTROLLED BY INTEGRAL PHOTOCELL SENSOR AND AUTOMATICALLY TURN 'ON' IN THE EVENT OF NORMAL POWER FAILURE.

6. DISABLE AUTOMATIC CONTROLS OF FIXTURES IN THIS ROOM.

7. PROVIDE WAVELINX PRO RSP-P-010-347 OR EQUAL RELAY SWITCHPACK. RELAY TO CONTROL ALL DOWNLIGHTS IN CORRIDOR E100, PROVIDE REQUIRED CONTROL WIRING.

8. MOUNT PENDANT FIXTURES IN THIS ROOM AT 9'-4" A.F.F. TO BOTTOM OF FIXTURE.

9. MOUNT PENDANT FIXTURES IN THIS ROOM AT 9'-8" A.F.F. TO BOTTOM OF FIXTURE.

10. MOUNT FIXTURE AT 9'-4" ABOVE GROUND TO TOP OF FIXTURE.

11. MOUNT FIXTURE AT 10'-0" ABOVE GROUND TO BOTTOM OF FIXTURE.

12. RELOCATED EXIT SIGN.

13. FEED ALL LIGHT FIXTURES IN THIS ROOM TO CIRCUIT '25B-14'.

14. FEED ALL LIGHT FIXTURES IN THIS ROOM TO CIRCUIT '25B-13'.

15. FEED ALL LIGHT FIXTURES IN THIS ROOM TO CIRCUIT '25B-17'.

16. FEED ALL LIGHT FIXTURES IN THIS ROOM TO CIRCUIT '25B-12'.

17. FEED ALL LIGHT FIXTURES IN THIS ROOM TO CIRCUIT '25B-6'.

18. PROVIDE POWER TO NEW EXIT FIXTURE FROM EXISTING ROOM LIGHTING CIRCUIT, AHEAD OF ANY SWITCH LEG.

19. RELOCATED ROW OF LIGHT FIXTURES.

POWER KEYNOTES

1. CONNECT DOOR STRIKE PROVIDED BY DOOR HARDWARE SUPPLIER TO EXISTING BUILDING ACCESS CONTROL SYSTEM. PROVIDE ALL REQUIRED WIRING, DEVICES, PROGRAMMING, ETC. FOR A COMPLETE AND OPERABLE SYSTEM.

2. NEW CARD READER TO BE PROVIDED BY OWNER THROUGH HONOR SECURITY, INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE OUTDOOR RATED, SINGLE GANG, DEEP BOX, AT 44" A.F.F. WITH 3/4" CONDUIT STUB TO JUNCTION BOX ABOVE CORRIDOR CEILING SPACE. PROVIDE 1-CATEGORY 6 CABLE FROM JUNCTION BOX TO NETWORK TERMINATION RACK, SEE KEYNOTE 4/E0.1.

3. NEW IP SECURITY CAMERA TO BE PROVIDED BY OWNER THROUGH HONOR SECURITY, INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE 1-CATEGORY 6 CABLE FROM LOCATION TO NETWORK TERMINATION RACK. TERMINATE BOTH ENDS PER SPECIFICATIONS.

4. WIRELESS ACCESS POINT ANTENNA LOCATION. ANTENNAE PROVIDED AND INSTALLED BY OWNER. PROVIDE 1-CATEGORY 6 CABLE FROM OUTLET LOCATION TO NETWORK TERMINATION RACK. TERMINATE BOTH ENDS PER SPECIFICATIONS. PROVIDE 10' SLACK CABLE AT LOCATION COILED NEATLY ABOVE ACCESSIBLE CEILING SPACE.

5. PROVIDE SINGLE GANG, DEEP BOX, WITH 3/4" CONDUIT STUB TO CORRIDOR SPACE, PROVIDE PLASTIC BUSHINGS ON CONDUIT ENDS. PROVIDE 2-CATEGORY 6 (DATA) AND 1-CATEGORY 6 (VOICE) CABLES FROM OUTLET TO NETWORK TERMINATION RACK. TERMINATE BOTH ENDS PER SPECIFICATIONS.

6. RELOCATED UNIT VENTILATOR.

7. PROVIDE HARDWIRE CONNECTION INDICATED TO MECHANICAL UNIT'S MANUFACTURER PROVIDED INTEGRAL DISCONNECT SWITCH.

8. PROVIDE WEATHERPROOF, GFCI RECEPTACLE ON OR NEAR ROOFTOP UNIT. PROVIDE BRANCH CIRCUITRY INDICATED AS REQUIRED TO FEED RECEPTACLE.

9. PROVIDE 2-GANG JUNCTION BOX WITH BRANCH CIRCUITRY INDICATED TO FEED FUTURE ELECTRONIC DISPLAY. MOUNT AT 10'-0" TO BOTTOM OF BOX. PROVIDE (1) CATEGORY-6 CABLE FROM BOX LOCATION TO NETWORK RACK. TERMINATE BOTH ENDS PER SPECIFICATIONS. PROVIDE 10'-0" SLACK CABLE AT LOCATION COILED NEATLY INSIDE BUILDING BENEATH STRUCTURE. PROVIDE BLANK COVERPLATE.

10. PROVIDE GFI PROTECTION FOR RECEPTACLE SERVING 'EFB' AT BREAKER.

11. PROVIDE WIREMOLD 700 (WHITE), OR EQUAL, SURFACE MOUNTED RACEWAY TO SUPPLY NEW RECEPTACLE.

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ARCHITECTURE
ENGINEERING
CONSULTING
INTEGRATED DESIGNS, INC.

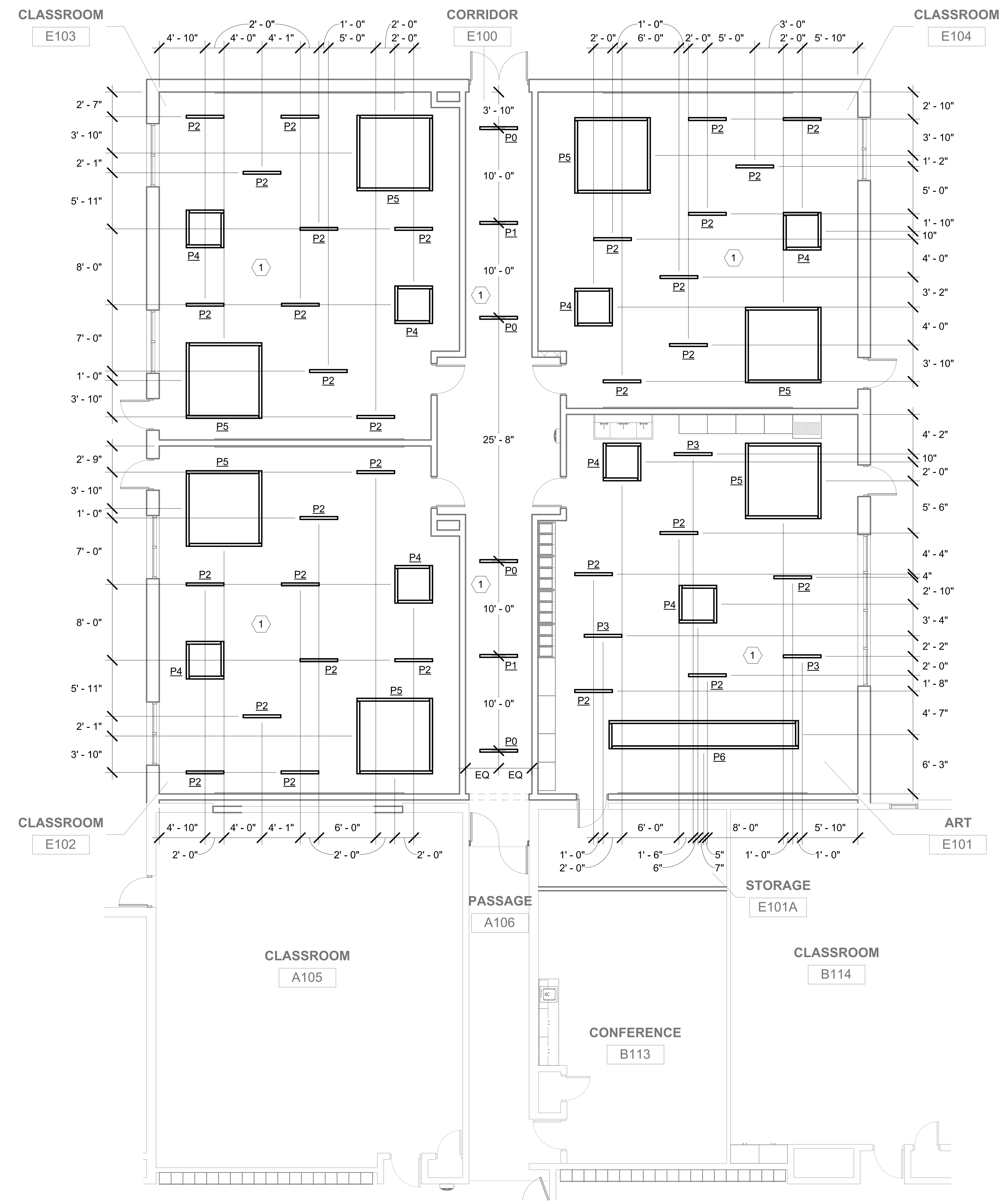
BANGOR TOWNSHIP SCHOOL DISTRICT
PHASE 3 - MIDDLE SCHOOL ADDITION & RENOVATIONS
3281 KIESEL RD, BAY CITY, MI 48706
PROJECT NO. 22-011

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	12.20.24

	BY	DATE:
DESIGN	SNS	12.16.24
DRAWN	SNS	12.09.24
CHECKED	AJM	12.16.24
APPROVED	AJM	12.09.24

ELECTRICAL ADDITION
AREA PLANS

E2.0



1 ELECTRICAL NEW WORK LIGHTING PLAN - ADDITION AREA DIMENSIONS
1/8" = 1'-0"

KEYNOTES

1. ALL DIMENSIONS IN THIS ROOM ARE TAKEN TO THE CENTER OF FIXTURE.

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ELECTRICAL ADDITION
AREA PLANS

E2.1

Branch Panel: 25A

Location: CORRIDOR D104 | **Volts:** 120/208 Wye | **Mains Type:** CU
Supply From: MDP | **Phases:** 3 | **Mains Rating:** 100 A
Mounting: SURFACE | **Wires:** 4 | **MCB Type:** MLO
Enclosure: NEMA 1 | **A.I.C.:** 22 KAIC | **MCB Rating:** N/A

Notes:
PROVIDE NEW PANEL PER SPECS.

CKT	Circuit Description	Trip A	Poles	A kVA		B kVA		C kVA		Poles	Trip A	Circuit Description	CKT
1	EBF-1 +	20	1	0.18	0.54					1	20	RCPT - CLASSROOM A116	2
3	RCPT - CLASSROOM D106	20	1			0.72	0.72			1	20	RCPT - CLASSROOM D107	4
5	RCPT - CLASSROOM D108	20	1					0.72	0.72	1	20	RCPT - CLASSROOM D109	6
7	RCPT - CLASSROOM C100	20	1	0.54	0.36					1	20	RCPT - CLASSROOM D101	8
9	RCPT - CLASSROOM D102	20	1			0.36	0.36			1	20	RCPT - CLASSROOM C100	10
11	RCPT - CLASSROOM D103	20	1					0.36	0.36	1	20	RCPT - CLASSROOM D100	12
13	RCPT - CLASSROOM A116	20	1	0.36	0.54					1	20	RCPT - CLASSROOM D112	14
15	RCPT - CLASSROOM D113	20	1			0.54	0.54			1	20	RCPT - CLASSROOM D111	16
17	RCPT - CLASSROOM D114	20	1					0.54	0.54	1	20	RCPT - CLASSROOM D111	18
19	RCPT - CLASSROOM D109	20	1	0.54	0.54					1	20	RCPT - CLASSROOM D106	20
21	RCPT - CLASSROOM D107	20	1			0.54	0.54			1	20	RCPT - CLASSROOM D101	22
23	RCPT - CLASSROOM D108	20	1					0.54	0.54	1	20	RCPT - CLASSROOM D102	24
25	RCPT - CLASSROOM D100	20	1	0.54	0.72					1	20	RCPT - CLASSROOM D112	26
27	RCPT - CLASSROOM D113	20	1			0.72	0.00			1	20	SPARE	28
29	RCPT - CLASSROOM D114	20	1					0.72	0.00	1	20	SPARE	30
31	SPARE	20	1	0.00	0.00					1	20	SPARE	32
33	SPACE	--	1			--	--			1	--	SPACE	34
35	SPACE	--	1					--	--	1	--	SPACE	36
37	SPACE	--	1	--	0.00					3	30	SURGE PROTECTION DEVICE *	38
39	SPACE	--	1			--	0.00			--	--	--	40
41	SPACE	--	1					--	0.00	--	--	--	42
		Total Load:		4860 VA		5040 VA		5040 VA					
		Total Amps:		41 A		42 A		42 A					

Legend:
+ PROVIDE GFCI PROTECTED BRANCH CIRCUIT BREAKER.
* PROVIDE SURGE PROTECTION DEVICE CIRCUITED TO BREAKER PER SPECIFICATIONS.

Panel Totals	
Total Conn. Load:	14940 VA
Total Conn.:	42 A

Branch Panel: 25B

Location: STORAGE E101A | **Volts:** 120/208 Wye | **Mains Type:** CU
Supply From: MDP | **Phases:** 3 | **Mains Rating:** 225 A
Mounting: SURFACE | **Wires:** 4 | **MCB Type:** MLO
Enclosure: NEMA 1 | **A.I.C.:** 22 KAIC | **MCB Rating:** N/A

Notes:
PROVIDE NEW PANEL PER SPECS.

CKT	Circuit Description	Trip A	Poles	A		B		C		Poles	Trip A	Circuit Description	CKT
1	RCPT - CLASSROOM A101	20	1	0.36	0.50					1	20	FUTURE ELECTRONIC DISPLAY	2
3	EBF-1 +	20	1			0.18	0.36			1	20	RCPT - CLASSROOM A104	4
5	RCPT - CLASSROOM A102	20	1					0.36	0.67	1	20	LTG - CORRIDOR E100, EXTERIOR	6
7	FUTURE ELECTRONIC DISPLAY	20	1	0.50	0.54					1	20	RCPT - CLASSROOM A101	8
9	RCPT - CLASSROOM E104	20	1			0.54	0.54			1	20	RCPT - CLASSROOM E103	10
11	RCPT - CORRIDOR E100, EXTERIOR	20	1					1.08	1.24	1	20	LTG - CLASSROOM E104	12
13	LTG - CLASSROOM E102	20	1	1.28	1.38					1	20	LTG - CLASSROOM E101	14
15	RCPT - CLASSROOM E102	20	1			0.54	4.90			2	50	KILN - CLASSROOM E101	16
17	LTG - CLASSROOM E103	20	1					1.28	0.00	--	--	--	18
19	EBF-1 +	20	1	0.18	0.36					1	20	RCPT - CLASSROOM A103	20
21	RCPT - ART E101	20	1			0.54	0.54			1	20	RCPT - CLASSROOM A103	22
23	RCPT -KILN DOWNDRAFT FAN ART...	20	1					0.18	0.36	1	20	RCPT - CLASSROOM E101	24
25	RCPT - CLASSROOM E104	20	1	0.54	0.54					1	20	RCPT - CLASSROOM E103	26
27	RCPT - CONF B113, STOR E101A	20	1			0.72	0.72			1	20	RCPT - CLASSROOM E102	28
29	RCPT - CONF B113, STOR E101A	20	1					0.54	0.54	1	20	RCPT - CLASSROOM E104	30
31	RCPT - CLASSROOM E102	20	1	0.54	0.54					1	20	RCPT - ART E101	32
33	SPARE	20	1			0.00	0.00			1	20	SPARE	34
35	RCPT - CLASSROOM E103	20	1					0.54	0.54	1	20	RCPT - CLASSROOM E102	36
37	RCPT - CLASSROOM A102	20	1	0.54	0.72					1	20	RCPT - CLASSROOM E104	38
39	SPARE	20	1			0.00	0.00			1	20	SPARE	40
41	FCU-1	15	1					0.33	0.72	1	20	RCPT - ROOFTOP	42
43	RCPT - ART E101	20	1	0.72	0.77					3	20	ECUH-1	44
45	SPARE	20	1			0.00	0.77			--	--	--	46
47	RCPT - CLASSROOM E103	20	1					0.72	0.77	--	--	--	48
49	RTU-1	30	3	1.59	1.59					3	30	RTU-2	50
51	--	--	--			1.59	1.59			--	--	--	52
53	--	--	--					1.59	1.59	--	--	--	54
55	RTU-3	30	3	1.59	1.59					3	30	RTU-4	56
57	--	--	--			1.59	1.59			--	--	--	58
59	--	--	--					1.59	1.59	--	--	--	60
61	SPACE	--	1	--	--					1	--	SPACE	62
63	SPACE	--	1			--	--			1	--	SPACE	64
65	SPACE	--	1					--	--	1	--	SPACE	66
67	SPACE	--	1	--	0.00					3	30	SURGE PROTECTION DEVICE *	68
69	SPACE	--	1			--	0.00			--	--	--	70
71	SPACE	--	1					--	0.00	--	--	--	72
		Total Load:		16274 VA		16725 VA		16128 VA					
		Total Amps:		136 A		140 A		134 A					

Legend:
+ PROVIDE GFCI PROTECTED BRANCH CIRCUIT BREAKER.
* PROVIDE SURGE PROTECTION DEVICE CIRCUITED TO BREAKER PER SPECIFICATIONS.

Panel Totals	
Total Conn. Load:	49110 VA
Total Conn.:	136 A

LIGHTING FIXTURE SCHEDULE

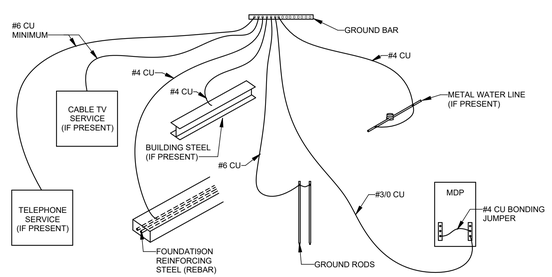
TYPE	DESCRIPTION	LAMP TYPE	MANUFACTURER	MODEL NUMBER	VOLT	WATTS	NOTES
D0	RECESSED DOWNLIGHT	LED	HALO	HC6-20-D010 HM6-0525-840 61-WD-BB-BF	UNV	21 VA	
D1	RECESSED DOWNLIGHT (EM)	LED	HALO	HC6-20-D010-REM14 HM6-0525-840 61-WD-BB-BF	UNV	21 VA	1
D2	6" SURFACE DOWNLIGHT	LED	HALO	SMD6R-12-9S-WH-E	UNV	15 VA	5
D3	12" SURFACE DOWNLIGHT	LED	HALO	SMD12R-20-9S-WH-E	UNV	26 VA	5
D4	12" SURFACE DOWNLIGHT	LED	HALO	SMD12R-20-9S-WH-E-EM	UNV	26 VA	1,5
E0	EXIT SIGN	LED	SURE-LITES	APX7RG	UNV	1 VA	1,3
E1	EXIT SIGN (EM)	LED	SURE-LITES	APCH7RG	UNV	3 VA	1,3
P0	4' LINEAR PENDANT	LED	AXIS	TB4DLED-1200-80-40-SO-4-BLK-UNV-DP-1-CA(48")-WC(WaveLinxPro)	UNV	39 VA	
P1	4' LINEAR PENDANT (EM)	LED	AXIS	TB4DLED-1200-80-40-SO-4-BLK-UNV-DP-1-B(120)-CA(48")-WC(WaveLinxPro)	UNV	39 VA	1
P2	4' LINEAR PENDANT	LED	AXIS	TB4DLED-1200-80-40-SO-4-BLK-UNV-DP-1-CA(48")-WC(WaveLinxPro)	UNV	39 VA	
P3	4' LINEAR PENDANT (EM)	LED	AXIS	TB4DLED-1200-80-40-SO-4-BLK-UNV-DP-1-B(120)-CA(48")-WC(WaveLinxPro)	UNV	39 VA	1
P4	4' SQUARE PENDANT	LED	AXIS	TB4DLEDPAT-S(4')-1200-80-40-SO-EX-BLK-UNV-DP-1-CA(48")-WC(WaveLinxPro)	UNV	155 VA	
P5	8' SQUARE PENDANT	LED	AXIS	TB4DLEDPAT-S(8')-1200-80-40-SO-EX-BLK-UNV-DP-1-CA(48")-WC(WaveLinxPro)	UNV	310 VA	
P6	RECTANGULAR PENDANT	LED	AXIS	TB4DLEDPAT-R(20'X3')-1200-80-40-SO-EX-BLK-UNV-DP-1-CA(48")-WC(WaveLinxPro)	UNV	446 VA	
S0	SURFACE LINEAR	LED	METALUX	4SNX-63SL-LW-UNV-L840-CD-1-WPS-U	UNV	44 VA	
S1	SURFACE LINEAR (EM)	LED	METALUX	4SNX-63SL-LW-UNV-L840-CD-1-EL14W-WPS-U	UNV	44 VA	1
T0	2X4 LAY-IN	LED	METALUX	24CZ2-55-UNV-L840-CD1-WPS-U	UNV	41 VA	
T1	2X4 LAY-IN (EM)	LED	METALUX	24CZ2-55-UNV-EL14W-L840-CD1-WPS-U	UNV	41 VA	1
T2	2X4 LAY-IN	LED	METALUX	24SR-LD2-48-C-UNV-L840-CD1-WPS-U	UNV	38 VA	
T3	2X4 LAY-IN (EM)	LED	METALUX	24SR-LD2-48-C-UNV-EL14W-L840-CD1-WPS-U	UNV	38 VA	1
W0	AREA LIGHT (EM) (WL)	LED	LUMARK	XTOR6B-PC1-CBP	120 V	58 VA	2,4

NOTES TO LIGHTING FIXTURE SCHEDULE:
(EM) - EMERGENCY, (WL) - WET LOCATION LISTED
1. FIXTURE TO BE PROVIDED WITH INTEGRAL EMERGENCY BACK UP BATTERY.
2. FIXTURE TO BE PROVIDED WITH INTEGRAL COLD WEATHER EMERGENCY BACK UP BATTERY.
3. SELECT RED COLOR IN FIELD.
4. FIXTURE TO BE PROVIDED WITH AND CONTROLLED BY INTEGRAL PHOTOCELL.
5. SELECT 4000K CCT IN FIELD.

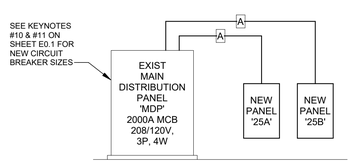
'MDP' LOAD CALCS	
EXISTING LOAD	267.80 KVA
ADDED LOAD	63.99 KVA
TOTAL LOAD	331.79 KVA
TOTAL CAPACITY OF SERVICE REMAINING	20.24 %

NOTE:
PROVIDE GROUNDING PER NATIONAL ELECTRICAL CODE (NEC) ARTICLE 250, #4 CU MINIMUM GROUNDING ELECTRODE CONDUCTOR SIZE. CONNECT TO BUILDING ADDITION FOUNDATION REINFORCING STEEL AND WATER SERVICE AND RUN BACK TO EXISTING MDP IN BOILER ROOM.

	FEEDER SCHEDULE	
A	2 1/2"C - 4 #250 KCMIL THHN & 1 #2 GND (CU) [NEW]	3"C - 4 #500 KCMIL THHN & 1 #1/0 GND (AL) [NEW]



GROUNDING/BONDING DETAIL
N.T.S.



PARTIAL ELECTRICAL RISER DIAGRAM
N.T.S.

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ELECTRICAL RISER AND SCHEDULES

E3.0