

LOCKER ROOM ADDITIONS & RENOVATIONS

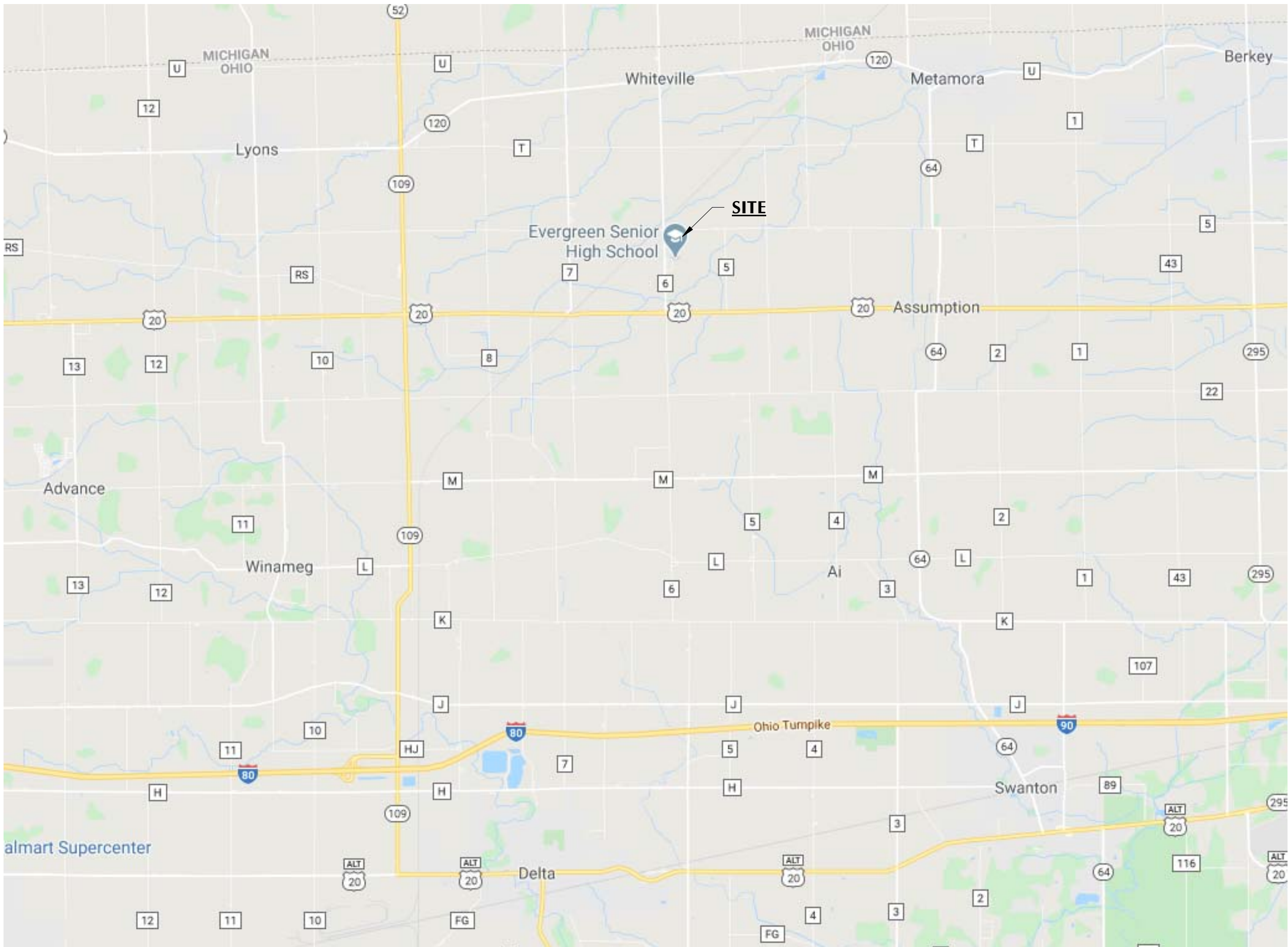
EVERGREEN HIGH SCHOOL

14544 COUNTY ROAD 6, METAMORA, OH 43540

SCHOOL DISTRICT
EVERGREEN LOCAL SCHOOL DISTRICT
14544 COUNTY ROAD 6
METAMORA, OHIO 43540

ARCHITECT
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701 1/2 WEST FIRST STREET
DEFIANCE, OHIO 43512

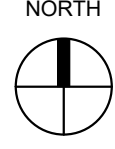
CONSULTING ENGINEER (HVAC, ELECTRICAL, COMMUNICATIONS)
JDRM ENGINEERING, INC.
5604 N. MAIN STREET SUITE 200
SYLVANIA, OHIO 43560



LOCATION MAP



AREA MAP



LIST OF DRAWINGS		
Sheet Sequence	Sheet Number	Sheet Name
1	G-001	COVER SHEET
2	G-100	LIFE SAFETY PLAN AND ROOM SCHEDULES
3	C-101	SITE DEVELOPMENT PLAN
4	C-102	SITE DEMOLITION AND UTILITY PLANS
5	SP101	FOUNDATION PLAN
6	SL111	LINTEL FRAMING PLAN
7	SR121	ROOF FRAMING PLAN
8	S-501	FOUNDATION AND FRAMING DETAILS
9	AD101	DEMOLITION PLAN
10	AE101	FIRST FLOOR PLAN
11	AE111	TOP MASONRY WALL PLAN
12	AE121	ROOF PLAN AND ROOF DETAILS
13	AE201	EXTERIOR ELEVATIONS
14	AE301	BUILDING SECTIONS
15	AE302	BUILDING SECTIONS
16	AE601	DOOR SCHEDULE
17	AF111	REFLECTED CEILING PLAN
18	AF201	INTERIOR ELEVATIONS, ROOM FINISH SCHEDULE, COLOR SCHEDULE
19	AF401	ENLARGED GIRL'S LOCKER ROOM PLANS AND ELEVATIONS
20	AF402	ENLARGED BOY'S LOCKER ROOM PLANS AND ELEVATIONS
21	FP110	FIRE PROTECTION PLAN
22	P-101	FOUNDATION PLUMBING PLAN
23	P-111	PLUMBING SUPPLY PLAN
24	P-401	ENLARGED PLUMBING PLANS AND PLUMBING DETAILS
25	P-900	SANITARY PIPING DEMOLITION ISOMETRIC
26	P-901	SANITARY DRAIN, VENT AND STORM PIPING ISOMETRIC
27	P-911	SUPPLY ISOMETRICS
28	MD101	HVAC AND PIPING DEMOLITION
29	MH101	HVAC PLAN
30	MP101	HVAC PIPING PLAN
31	M-301	HVAC SCHEDULES AND DETAILS
32	M-701	HVAC SPECIFICATIONS
33	E-001	LEGEND, LUMINAIRE SCHEDULE AND DETAILS
34	ED101	POWER DEMOLITION
35	ED102	LIGHTING DEMOLITION
36	EP100	POWER PLAN
37	EP101	ENLARGED POWER PLAN
38	EP601	RISER DIAGRAM, SCHEDULES
39	EP701	ELECTRICAL SPECIFICATIONS
40	EP702	ELECTRICAL SPECIFICATIONS
41	EL101	LIGHTING PLAN
42	EC001	COMMUNICATIONS LEGEND, SCHEDULES
43	EC101	COMMUNICATIONS PLAN
44	EC501	COMMUNICATIONS DETAILS
45	EC502	COMMUNICATIONS DETAILS
46	EC701	COMMUNICATIONS SPECIFICATIONS

KRAG A. BEILHARZ, LICENSE #9482
EXPIRATION DATE 12/31/2021

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PLOT SCALE
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LOCKER ROOM ADDITIONS & RENOVATIONS
14544 COUNTY ROAD 6, METAMORA, OH 43540

COVER SHEET

PROJECT: B7-4569

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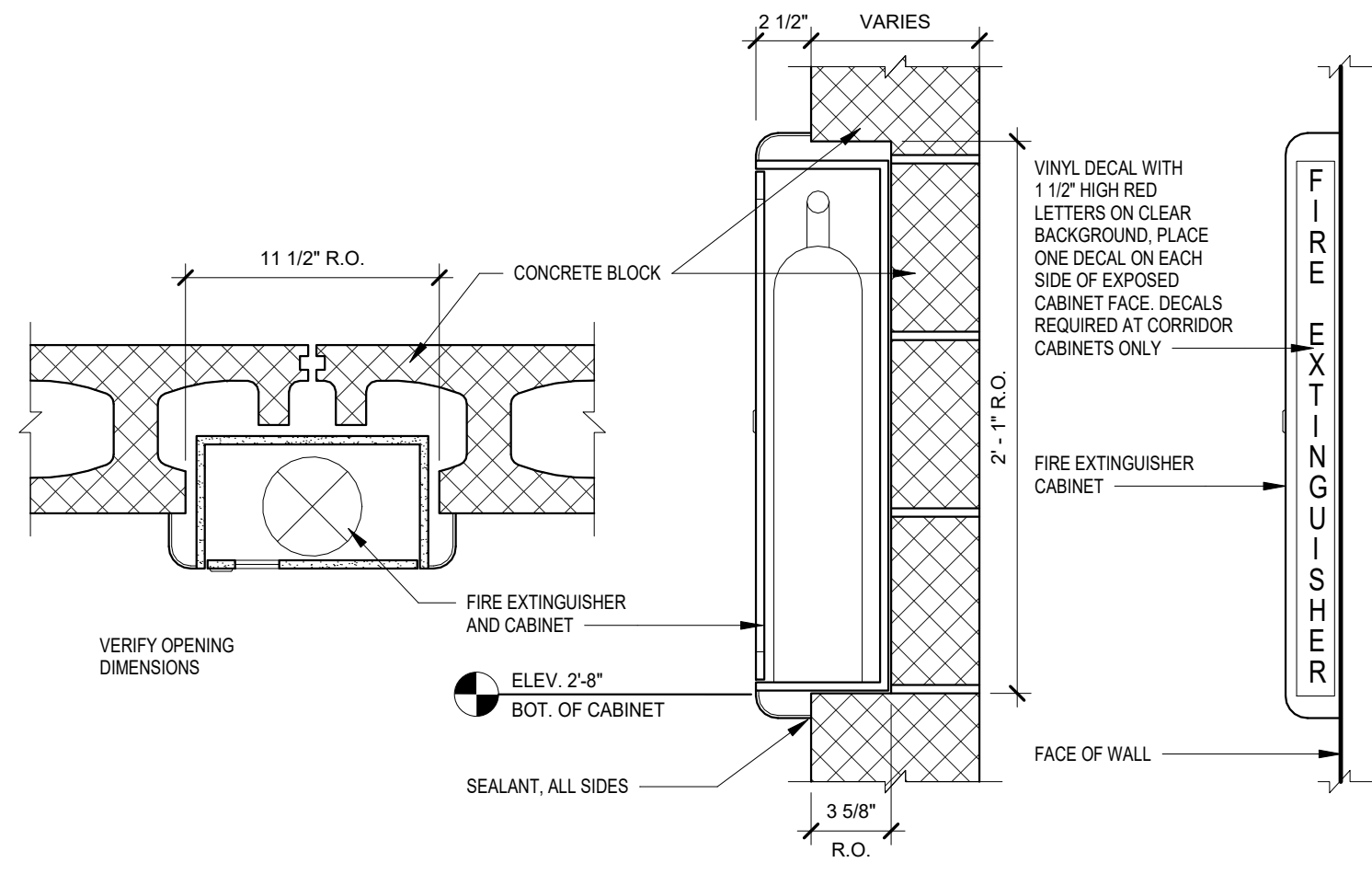
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G-001

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2 FIRE EXTINGUISHER CABINET
G-100/ SCALE: 1 1/2" = 1'-0"

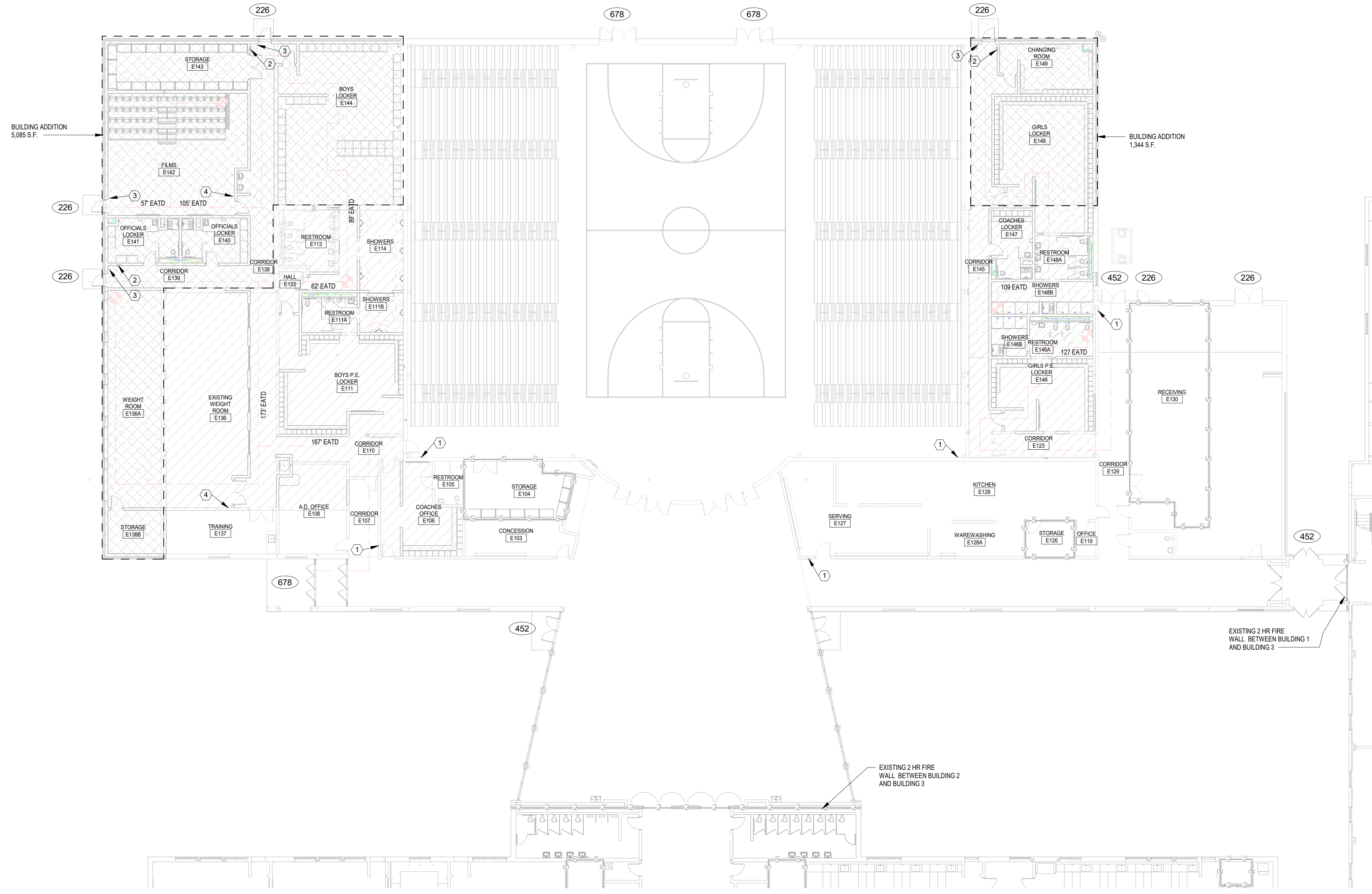
BUILDING 3 ROOM SCHEDULE						
ROOM NUMBER	ROOM NAME	ROOM AREA	SF/Occu.	Egress	Design	NOTES
E103	CONCESSION	236 SF	200 SF	1	4	
E104	STORAGE	352 SF	300 SF	1		
E105	RESTROOM	76 SF				
E106	COACHES OFFICE	396 SF	100 SF	3	3	
E107	CORRIDOR	148 SF				
E108	A.D. OFFICE	376 SF	100 SF	3	1	
E110	CORRIDOR	219 SF				
E111	BOYS P.E. LOCKER	791 SF	50 SF	15	25	
E111A	RESTROOM	122 SF				
E111B	SHOWERS	111 SF				
E113	RESTROOM	186 SF				
E114	SHOWERS	224 SF				
E119	OFFICE	44 SF	100 SF	0	1	
E123	CORRIDOR	156 SF				
E125	RESTROOM	65 SF				
E126	STORAGE	102 SF	300 SF	0		
E127	SERVING	565 SF	200 SF	2	4	
E128	KITCHEN	879 SF	200 SF	4	6	
E128A	WAREWASHING	206 SF	200 SF	1	2	
E129	CORRIDOR	490 SF				
E130	RECEIVING	1005 SF	300 SF	3	0	
E131	STORAGE	72 SF	300 SF	0		
E133	HALL	68 SF				
E136A	WEIGHT ROOM	1894 SF	50 SF	37	35	
E136B	STORAGE	154 SF	300 SF	0		
E137	TRAINING	306 SF	100 SF	3	3	
E138	CORRIDOR	820 SF				
E139	CORRIDOR	202 SF				
E140	OFFICIALS LOCKER	176 SF	50 SF	3	2	
E141	OFFICIALS LOCKER	185 SF	50 SF	3	2	
E142	FILMS	1049 SF	20 SF	52	52	
E143	STORAGE	413 SF	300 SF	1		
E144	BOYS LOCKER	1222 SF	50 SF	24	45	
E144A	HALL	122 SF				
E145	CORRIDOR	610 SF				
E146	GIRLS P.E. LOCKER	442 SF	50 SF	8	25	
E146A	RESTROOM	140 SF				
E146B	SHOWERS	88 SF				
E147	COACHES LOCKER	165 SF	50 SF	3	2	
E148	GIRLS LOCKER	767 SF	50 SF	15	25	
E148A	RESTROOM	147 SF				
E148B	SHOWERS	206 SF				
E149	CHANGING ROOM	263 SF	50 SF	5	10	
E150	GYMNASIUM	15057 SF				
		31316 SF		187	247	

BUILDING CODE REQUIREMENTS			
Applicable Codes			
Building Code	2017 OBC	2015 IBC	
Accessibility Code	ICC A117.1	2010 ADA	
Energy Code	ASHRAE 90.1 - 2010		
Plumbing Code	2017 OPC	2015 IPC	
Mechanical Code	2017 OMC	2015 IMC	
Electrical Code	2017 NEC		
Fire Code	2017 OFC	2009 IFC	
Fuel Gas Code	2015 IFGC		
BUILDING 3			
Use Groups, Nonseparated	A-3, A-4, E		
Construction Type	II-B		
Allowable Building Height, Building 3			
Feet Above Grade Plane	55		
Number of Stories	2		
Building Height			
Feet Above Grade Plane	17		
Number of Stories	1		
Allowable Area			
Allowable Area Factor	38,000 SF		
(S1, as allowed by OBC 3403.1.2.2.d)			
Fireproof Increase	5,330 SF		
Allowable Area	43,330 SF		
Building Area			
Existing, Unaltered	29,971 SF		
Existing, Altered	6,876 SF		
North Addition	5,085 SF		
South Addition	1,344 SF		
Total Floor Area	43,276 SF		
Fire Protection			
Existing building is sprinklered, <u>except</u> Gymnasium			
Additions will be fully sprinklered			

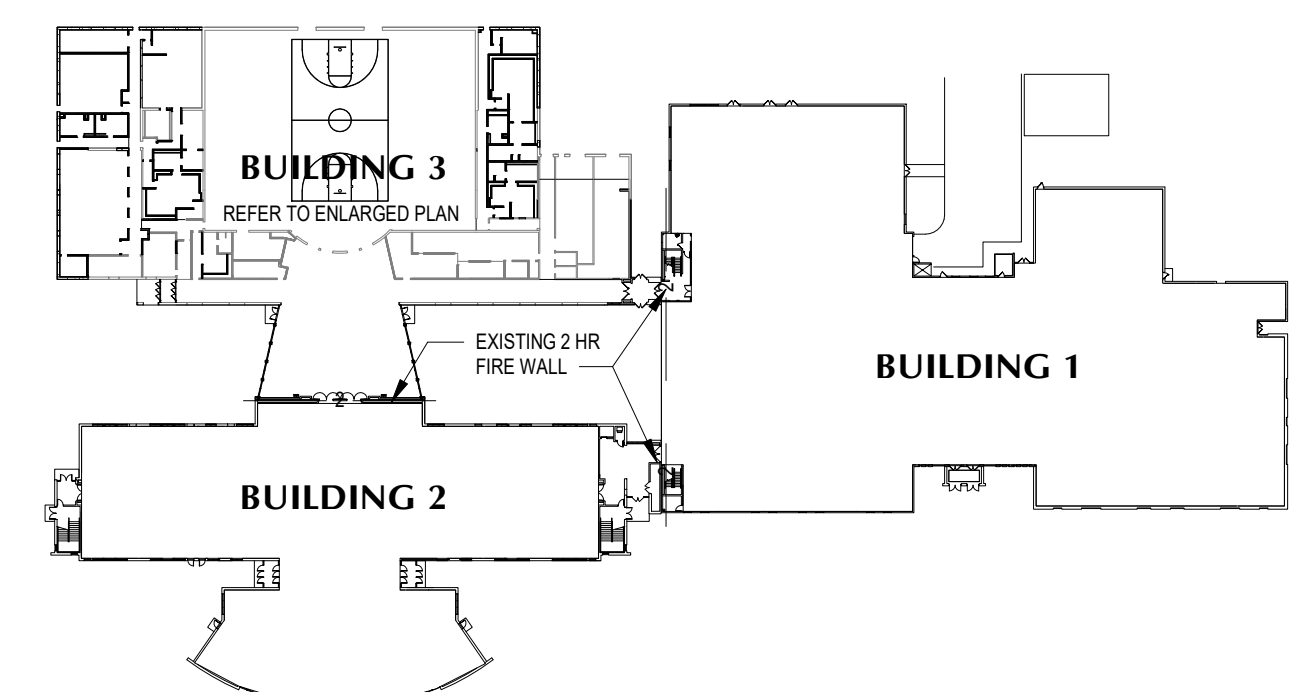
LEGEND	
XXX	NOMINAL EXIT CAPACITY OF EACH DOOR OR PAIR OF DOORS
SMOKE PARTITION	EXISTING SMOKE PARTITION, SEAL ALL PENETRATIONS
2 HR ASSEMBLY	EXISTING TWO HOUR RATED FIRE WALL, FIRESTOP ALL PENETRATIONS
AREA OF BUILDING ADDITION	
AREA OF BUILDING ALTERATIONS	

KEYNOTE LEGEND	
1	EXISTING FIRE EXTINGUISHER
2	FIRE EXTINGUISHER IN SEMI-RECESSED CABINET, SEE DETAIL 202-100
3	EXIT DESIGNATION, TYPE E SIGN, SEE SIGNAGE TYPES ON SHEET A601.
4	EVACUATION PLAN, TYPE G SIGN, SEE SIGN TYPES ON SHEET A601.

PROJECT NARRATIVE	
1.	THIS FACILITY IS AN EXISTING E (EDUCATIONAL); NO CHANGE OF USE IS PROPOSED.
2.	EXISTING BUILDING IS DIVIDED INTO 3 BUILDINGS BY EXISTING 2-HOUR FIRE WALLS.
3.	ALL PORTIONS OF THE EXISTING BUILDING CONTAIN AN AUTOMATIC SPRINKLER SYSTEM EXCEPT THE GYMNASIUM.
4.	THE PROPOSED ADDITIONS WILL BE FULLY SPRINKLERED.
5.	ALL AREAS OF THE EXISTING AND NEW BUILDING CONTAIN A FIRE ALARM SYSTEM.
6.	FIRESTOP ALL NEW PENETRATIONS IN EXISTING RATED ASSEMBLIES.
7.	SCOPE OF IMPROVEMENT INCLUDES: A. 5085 S.F. ADDITION TO BOYS LOCKER AREA. B. 4888 S.F. ALTERATION TO BOYS LOCKER AREA. C. 1344 S.F. ADDITION TO GIRLS LOCKER AREA. D. 2088 S.F. ALTERATION TO GIRLS LOCKER AREA. E. LIMITED REPLACEMENT OF EXISTING ROOF TOP UNITS.



1 FIRST FLOOR LIFE SAFETY PLAN
G-100/ SCALE: 1/16" = 1'-0"



KEY PLAN
1" = 100'-0"

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EXPIRATION DATE 12/31/2021

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1"=20'
0 10' 20' 30'

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EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS
14544 COUNTY ROAD 6, METAMORA, OH 43540

LIFE SAFETY PLAN
AND ROOM
SCHEDULES

PROJECT: B7-4569

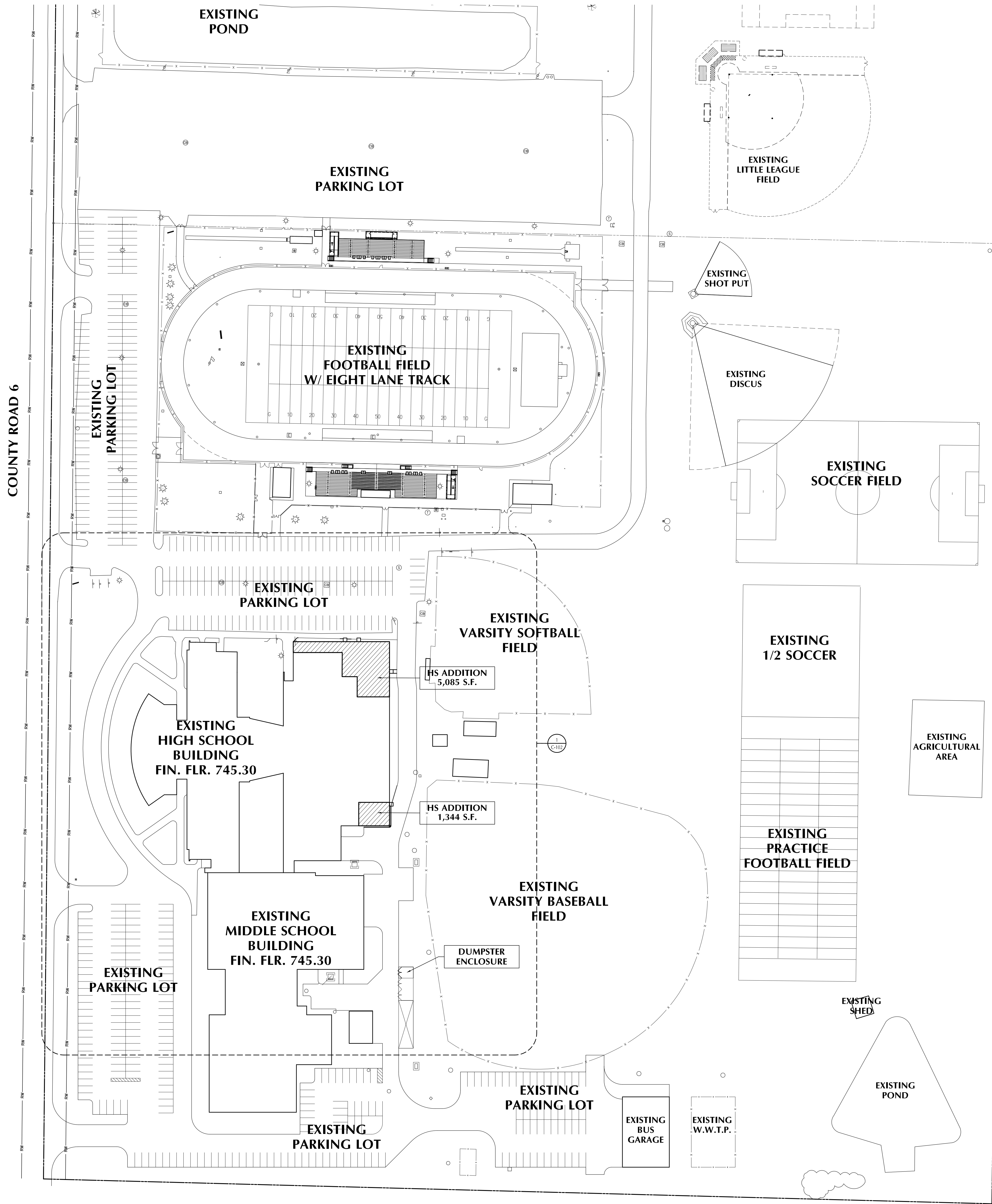
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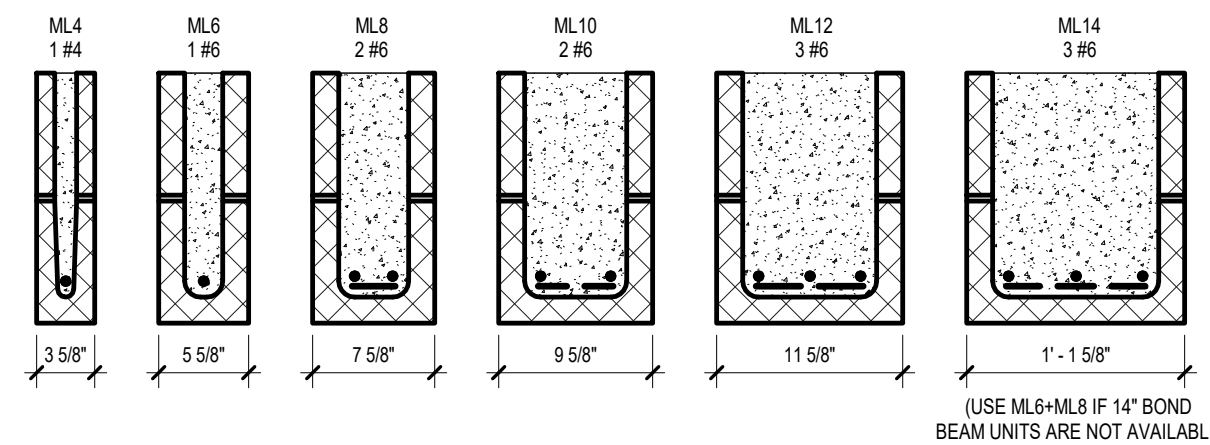
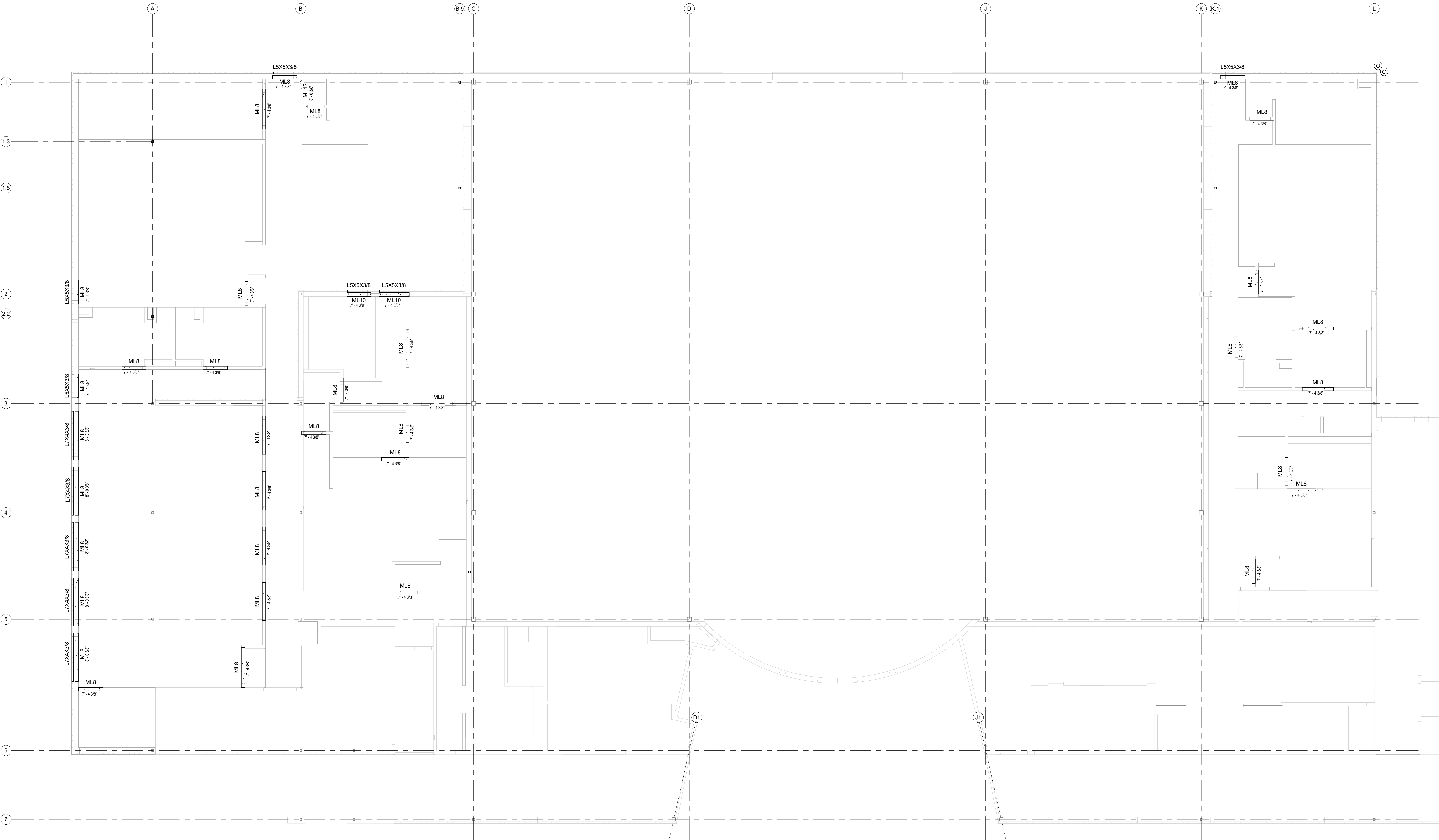
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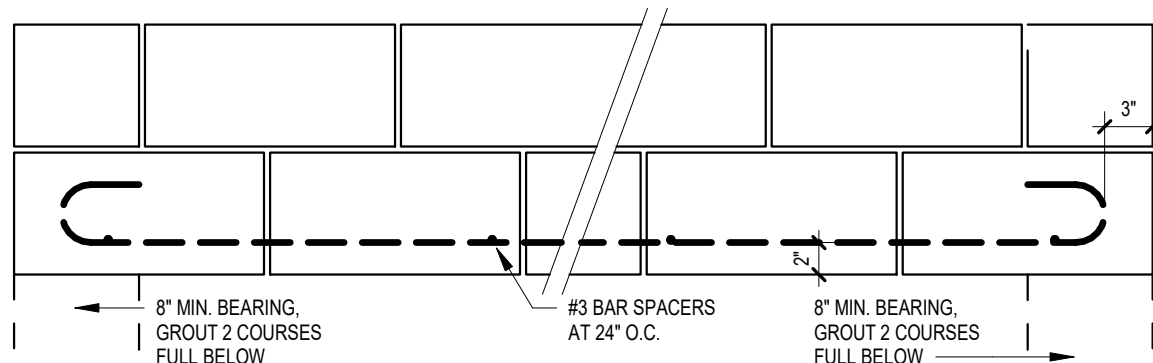


1 SITE DEVELOPMENT PLAN
C-101 SCALE: 1"=60'





- GENERAL LINTEL NOTES**
1. PROVIDE LINTELS FOR HVAC OPENINGS LARGER THAN 16" IN WIDTH. SEE HVAC DRAWINGS F OR DUCT AND PIPING LAYOUTS. COORDINATE OPENING SIZES AND LOCATIONS WITH HVAC CONTRACTOR.
 2. ELEVATIONS SHOWN ARE TO THE BOTTOM OF THE LINTEL/LINTEL PLATE.



- MASONRY LINTEL NOTES**
1. GROUT ALL MASONRY UNITS SOLID.
 2. ALL REINFORCING BARS SHALL BE HOOKED AT THE ENDS.
 3. LINTELS SHALL BEAR ON SOLID CMU OR BEAR ON 2 FILLED CORES, U.N.O.
 4. BOND PATTERN OF LINTEL SHALL MATCH ADJACENT WALL.
 5. BOTTOM OF LINTEL SHALL BE SOLID MASONRY UNITS (LINTEL BLOCK REQUIRED).

2 MASONRY LINTEL DETAILS
SCALE: 1" = 1'-0"

COLUMN SCHEDULE							
MARK	SIZE	GRID	BASE PLATE		TOP PLATE		NOTES
			SIZE	BOT. ELEV.	SIZE	TOP ELEV.	
C-1	HSS5X5X5/16	A-1.3	12x12x1	-0' - 6"	12x8x3/4"	13' - 2 1/8"	
C-2	HSS5X5X5/16	A-2.2(-0' - 6 7/32")	12x12x1	-0' - 6"	12x8x3/4"	12' - 7 7/8"	
C-3	HSS5X5X5/16	B-9-1	12x12x1	-0' - 6"	12x8x3/4"	13' - 6 15/16"	
C-4	HSS5X5X5/16	B-9-1.5	12x12x1	-0' - 6"	12x8x3/4"	13' - 1 7/8"	
C-5	HSS5X5X1/4	K-1-1	12x12x1	-0' - 6"	12x8x3/4"	11' - 10 5/8"	
C-6	HSS5X5X1/4	K-1-1.5	12x12x1	-0' - 6"	12x8x3/4"	12' - 3 11/16"	

KEYNOTE LEGEND

- 1 1/2x5/16" x 8" LONG BRIDGING ANCHOR (BAC) AT MASONRY WALL. INSTALL WITH EXPANSION BOLTS. FIELD WELD TO HORIZONTAL (H.B.) AND DIAGONAL (D.B.) BRIDGING.
- 2 ROOF DRAIN SUPPORT FRAME. COORDINATE SIZE AND CONFIGURATION WITH ROOF DRAIN SUPPLIER. SEE DETAILS 20 & 21, SHEET S-501.
- 3 HVAC EQUIPMENT FRAME. VERIFY LOCATION, OPENING SIZE, AND UNIT WEIGHT WITH HVAC CONTRACTOR PRIOR TO SUBMISSION OF JOIST SHOP DRAWINGS. SEE DETAILS 20 & 21, SHEET S-501.
- 4 REINFORCE EXISTING BEAM. SEE DETAIL 25, SHEET S-501.

GENERAL FRAMING NOTES

1. INSTALL HORIZONTAL AND DIAGONAL STEEL JOIST BRIDGING AS SHOWN ON THE FRAMING PLANS. TOP AND BOTTOM CHORDS CONTINUOUS AND SECURED TO MASONRY WALL W/BEARING ANCHORS. BRIDGING SIZE SHALL BE IN ACCORDANCE WITH SJI STANDARDS.
2. VERIFY EQUIPMENT OPENING SIZES WITH HVAC CONTRACTOR.
3. AT EACH K-SERIES STEEL JOIST MASONRY BEARING, PROVIDE A 4"x8"x3/8" STEEL BEARING PLATE WITH TWO NELSON STUD ANCHORS GROUTED IN BLOCK CORES. (U.N.O.)
4. EXTEND THE ENDS OF STEEL JOISTS OVER STEEL BEARING PLATES AND BEAMS AS SPECIFIED BY THE STEEL JOIST INSTITUTE. AND PROVIDE POSITIVE ATTACHMENT THERETO WITH TWO 1" LONG WELDS, OR EQUAL BOLTED CONNECTION.
5. WALLS SHOWN ON FRAMING PLAN SHALL EXTEND TO BOTTOM OF ROOF DECK UNLESS SPECIFICALLY NOTED.
6. AT INSTANCES WHERE THE EDGE OF THE METAL DECK IS NOT PERPENDICULAR TO THE STEEL JOIST, PROVIDE 1/2x5/16" ANGLE MATERIAL AT DECK EDGES FOR SUPPORT.
7. JOISTS ARE SIZED FOR DEAD AND LIVE LOADS AS SHOWN ON THE DESIGN CRITERIA. LOADS FROM MECHANICAL EQUIPMENT/PPING ARE NOT INCLUDED. SEE FRAMING PLANS FOR LOCATIONS OF EQUIPMENT. JOIST MANUFACTURER SHALL MAKE ALL NECESSARY DESIGN ADJUSTMENTS, INCLUDING ADJOINING JOIST (WITHOUT INCREASING MEMBER DEPTH) TO CARRY THESE ADDITIONAL LOADS.
8. JOIST ARE TO BE SIZED FOR A NET UPLIFT OF 25 PSF.
9. IN ADDITION TO ALL SCHEDULED STEEL MEMBERS, THE STRUCTURAL STEEL SUPPLIER SHALL FURNISH FIVE (5) 5x5x3/8" STEEL ANGLES IN 20' LENGTHS TO BE USED AS NEEDED FOR MISCELLANEOUS OPENINGS.
10. UNLESS NOTED OTHERWISE, ALL ROOF DECK SHALL BE 1/2" TYPE WR, 20 GAUGE.



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PLOT SCALE
1/8"=1'-0"
0 4' 8' 12'

ISSUE DATE

#	Date	Description
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ROOF FRAMING
PLAN

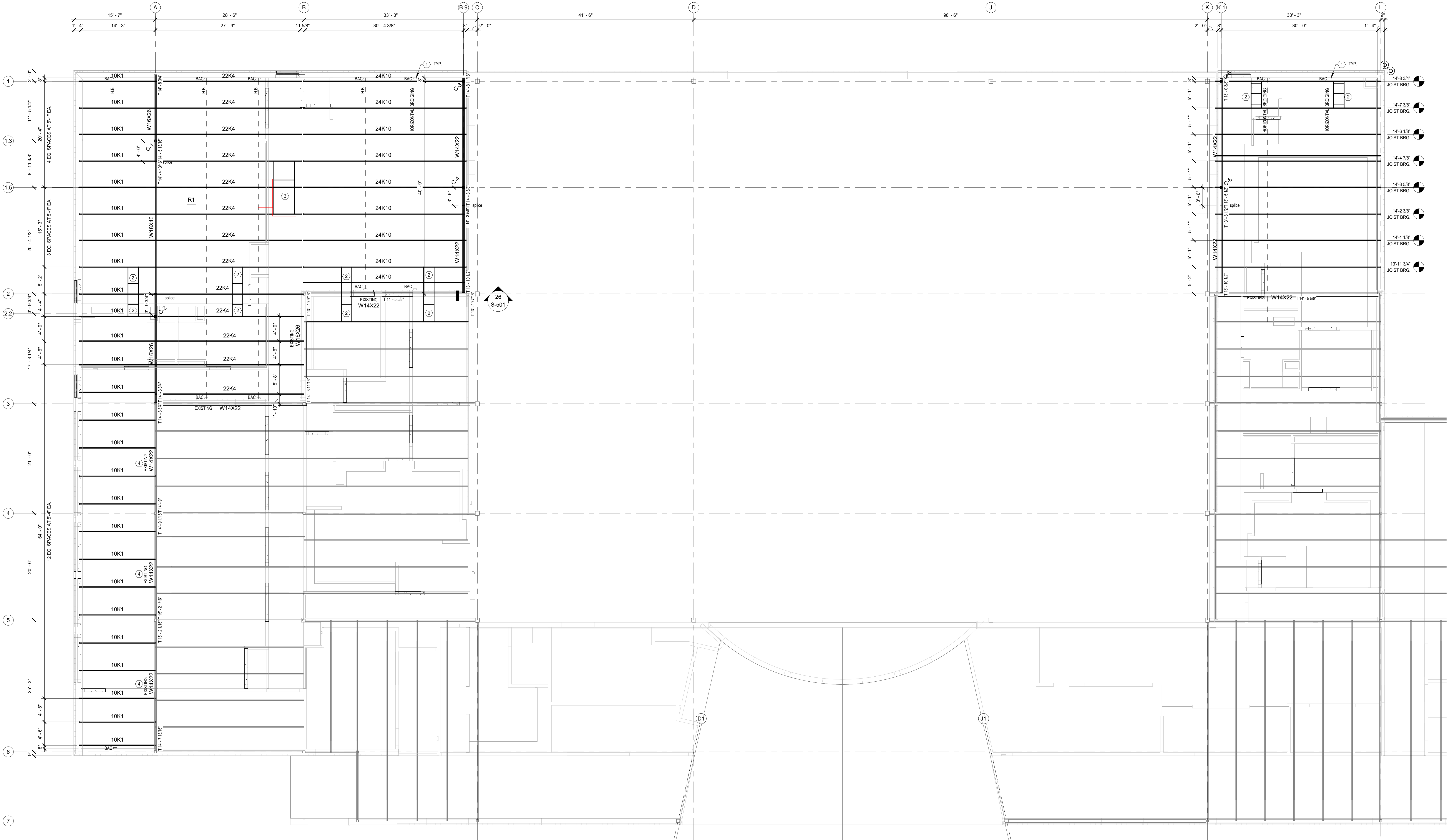
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SHEET

SR121



1 ROOF FRAMING PLAN
SR121 SCALE: 1/8" = 1'-0"

D1	REMOVE WALL, OR PORTION OF WALL AS INDICATED DOWN TO EXISTING FOUNDATION. PATCH ADJACENT WALL AND FLOOR AS NECESSARY FOR NEW FINISHES. REFER TO EXISTING DRAWINGS FOR FINISHES, MATERIALS AND STRUCTURAL FOR NEW LEVELS
D2	REMOVE FLOORING, TRANSITION STRIPS, WALL BASE AND ADHESIVES IN THIS AREA FOR NEW WORK. PEEP AS NECESSARY FOR NEW WORK
D3	REMOVE INTERIOR SIGN, PATCH WALL
D4	REMOVE DOOR, FRAME AND HARDWARE. INFILL OPENING WITH MASONRY TO MATCH EXISTING. TOOTH-IN NEW MASONRY WITH EXISTING
D5	REMOVE DOOR, FRAME AND HARDWARE
D6	REMOVE ALUMINUM WINDOW SYSTEM
D7	REMOVE CEMENTIC ASR SLAB FOUNDATION AT DOOR
D8	REMOVE WALL T.E. WHERE WALL IS BEING REMOVED, EXISTING TO REMAIN PATCH AS NECESSARY
D9	REMOVE SCUPPER BOX AND DOWN PIPE AS REQUIRED FOR NEW WORK
D10	REMOVE TOILET ROOM ACCESSORIES, INCLUDING BUT NOT LIMITED TO: PARTITIONS, GRAB BARS, TOILET PAPER DISPENSERS, TOILET TOWEL DISPENSERS, TOILET PAPER DISPENSERS, SANITARY DISPOSALS, TOWEL HOOKS/EARS, ETC.
D11	REMOVE ALL SHOWER ACCESSORIES AND PATCH WALL
D12	REMOVE METAL LOCKER, LOCKER BASE AND LOCKER BENCHES. TURN OVER TO OWNER.
D13	REMOVE PORTION OF EXISTING FLOOR SLAB AND REINFORCE FOR INSTALLATION OF NEW PLUMBING LINES. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL DETAILS. REFER ALSO TO EXISTING DRAWINGS FOR CONCRETE SLAB REPLACEMENT, AND SHEET #2701 FOR FLOOR FINISH INFORMATION.
D14	REMOVE SUSPENDED CEILING SYSTEM, DIFFUSERS AND ELECTRICAL DEVICES. REFER TO HVAC AND ELECTRICAL DRAWINGS FOR POSSIBLE ADJUSTMENTS.
D15	REMOVE PORTION OF SUSPENDED CEILING SYSTEM AS REQUIRED FOR NEW WORK. REFER TO HVAC AND ELECTRICAL DRAWINGS FOR POSSIBLE ADJUSTMENTS.
D16	REMOVE VENEER PLASTER CEILING, DIFFUSERS AND ELECTRICAL DEVICES. REFER TO HVAC AND ELECTRICAL DRAWINGS.
D17	REMOVE PORTION OF VENEER PLASTER CEILING SYSTEM AS REQUIRED FOR NEW WORK. REFER TO HVAC AND ELECTRICAL DRAWINGS FOR POSSIBLE ADJUSTMENTS.

- COORDINATE ALL DEMOLITION ACTIVITIES WITH PHASE OF WORK TO BE COMPLETED. MULTIPLE DEMOLITION PHASES MAY BE REQUIRED BY PROCESS OF CONSTRUCTION. COORDINATE WITH CONTRACTOR.
- VISIT THE SITE TO INSPECT EXISTING CONDITIONS. REPORT MAJOR DISCREPANCIES INDICATED IN SCOPE OF WORK AND ACTUAL FIELD CONDITIONS TO ARCHITECT/ENGINEER PRIOR TO BEGINNING WORK. ACTUAL SCOPE AND DEMOLITION SHALL BE BASED ON FIELD VISIT.
- EACH TRADE (GENERAL, HVAC, ELECTRICAL, PLUMBING) SHALL BE RESPONSIBLE FOR DEMOLITION OF THEIR OWN WORK. REPAIR/RESTORATION OF SURFACES TO REMAIN SHALL BE THE RESPONSIBILITY OF EACH TRADE. EACH TRADE SHALL BE RESPONSIBLE FOR THE CONTRACTOR REQUIRED TO SITE DRAWINGS FOR AN ADDITIONAL DEMOLITION WORK.
- WHERE DEMOLITION CAUSES DAMAGE TO EXISTING SURFACES OR COMPONENTS WHICH ARE TO REMAIN, CONTRACTOR PERFORMING DEMOLITION SHALL REPAIR DAMAGE AND PATCH REPAIRS TO MATCH EXISTING FINISHES.
- REMOVE DEMOLITION REFUSE IMMEDIATELY FROM SITE AND DISPOSE AT A PROPER WASTE DISPOSAL FACILITY.
- PROVIDE RUBBISH CHUTES, CONTAINERS, AND SIDEWALK PROTECTION FOR THE REMOVAL OF DEBRIS FROM THE PROJECT SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR THE AVAILABILITY OF THE CONTRACTOR AND ITS TO BE OPERATED WITH REGARD TO THE PROTECTION AND SAFETY OF THE PUBLIC, AS WELL AS TO THE ONGOING OPERATION OF THE FACILITY.
- ITEMS FOR DEMOLITION ARE NOTED ON THE DRAWINGS AND ARE TYPICALLY SHOWN AS EXISTING. CONTRACTORS, DESIGNERS, AND ARCHITECTS SHALL BE RESPONSIBLE FOR THE REQUIRED TO PROVIDE STRUCTURAL MEMBERS AS SHOWN ON THE FINISH DRAWINGS.
- NO CUTTING OF EXISTING STRUCTURAL MEMBERS WILL BE PERMITTED UNLESS SPECIFICALLY SHOWN, APPROVAL OF STRUCTURAL ENGINEER BEING OBTAINED BEFORE THE PLANS TO BE CUT.
- STRUCTURAL DEMOLITION, REMOVAL AND PATCHING OF WALLS, DOOR OPENINGS AND RELATED WORK, EXISTING STRUCTURE AS REQUIRED UNTIL NEW WORK IS IN PLACE BY THE CONTRACTOR.
- EXISTING HVAC/ELECTRICAL/PLUMBING LINES NOT USED ARE TO BE CAPPED BOWND FINISH SURFACES.
- IF THE PROCESS OF DEMOLITION UNCOVERS CONDITIONS THAT WILL RESULT IN DEVIATIONS FROM THE NEW WORK, CONTACT ARCHITECT FOR INSTRUCTIONS BEFORE PROCEEDING.
- OWNER WILL RETAIN RIGHTS OF OWNERSHIP FOR ALL SALVAGEABLE MATERIALS AND/OR EQUIPMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND AVAILABILITY OF THE CONTRACTOR FROM THE RESPONSIBILITY OF REMOVING MATERIALS AND/OR EQUIPMENT AS REQUIRED FOR THE PROJECT. CONTRACTOR COORDINATE LOCATION OF SALVAGED MATERIAL, STORAGE DIRECTED WITH OWNER.
- WHENEVER EXISTING EQUIPMENT, PIPING, DUCTS, ETC. ARE REQUIRED TO BE REMOVED, SUCH REMOVAL SHALL INCLUDE ALL HANGERS, WANCHES, FOUNDATIONS, ETC. AFTER REMOVAL OF FLOORS, WALLS, AND CEILING IS TO MATCH EXISTING FINISHES.
- PROVIDE DUMPSTERS (FOR THE DURATION OF THE CONSTRUCTION PERIOD, ALL TRAILS ARE RESPONSIBLE FOR GENERAL CLEAN-UP AT THE END OF EACH DAY AND SHALL NOT DISTURB IN ANY WAY THE OPERATION OF THE FACILITY.
- PROTECT EXISTING CARPET, FURNISHES, CEILING AND FURNISHINGS IN ROOMS TO BE REMOVED. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND AVAILABILITY OF TEMPORARY PARTITIONS/BARRIERS DURING CONSTRUCTION.
- EXISTING BUILDING INFORMATION IS OBTAINED FROM EXISTING DRAWINGS AND LIMITED FIELD SURVEY. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND AVAILABILITY OF TEMPORARY PARTITIONS/BARRIERS DURING CONSTRUCTION.
- AREAS SCHEDULED TO RECEIVE NEW FLOORING SHALL HAVE EXISTING FINISH FLOORING, INCLDING MASTICS, ADHESIVES, SEALER, PART, THEN SET, ETC. COMPLETELY REMOVED PRIOR TO THE INSTALLATION OF NEW FLOORING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING FLOORING AND THE INSTALLATION OF NEW FLOORING IN ACCORDANCE WITH THE FLOORING MANUFACTURER'S WRITTEN RECOMMENDATIONS/WARRANTY.
- AREAS SCHEDULED TO RECEIVE NEW CEILING SHALL HAVE EXISTING CEILING COMPLETELY REMOVED PRIOR TO THE INSTALLATION OF NEW CEILING.
- IN AREAS WHERE NEW CEILING ARE INDICATED, REMOVE EXISTING CEILING SYSTEM, SEE ROOM FINISH SCHEDULE ON SHEET APPLICABLE FOR NEW CEILING LOCATION.
- IN LOCKER ROOMS: EXISTING WALL OR CEILING MOUNTED EQUIPMENT, ACCESSORIES AND/OR DEVICES NOT SPECIFICALLY SHOWN TO BE DEMOLD SHALL BE TEMPORARY REMOVED FOR PROTECTION OF THE NEW WORK.

[illegible]

EQUIPMENT SCHEDULE						
MARK	DESCRIPTION	SPEC SECTION	SIZE			NOTES
			W	D	H	
Q1	MARKER BOARD	10 1100	72"		48"	
Q2A	WIRE SHELVING	11 4100	36"	24"	74"	
Q2B	WIRE SHELVING	11 4100	42"	24"	74"	
Q3A	METAL LOCKER, 1-TIER	10 5113	15"	15"	60"	B, D
Q3B	METAL LOCKER, 2-TIER	10 5113	15"	15"	60"	B, D
Q3C	METAL LOCKER, 2-TIER	10 5113	15"	15"	72"	B, C, D
Q3D	METAL LOCKER, 2-TIER	10 5113	18"	18"	60"	B, D
Q3E	METAL LOCKER, COLLEGIATE STYLE	10 5113	24"	24"	72"	
Q3F	METAL LOCKER, COLLEGIATE STYLE	10 5113	33"	24"	72"	
Q4A	LOCKER BENCH	10 5113	5'-0"	10"	1'-7"	
Q4B	LOCKER BENCH	10 5113	6'-0"	10"	1'-7"	
Q5	FOLDING SEAT STYLE BLEACHERS - 32" ROW SPACING	12 6613				

NOTES LEGEND

A SEE INTERIOR ELEVATIONS FOR LOCATIONS AND MOUNTING HEIGHTS

B SLOPED TOP

C METAL ZIGZAG BY LOCKER SUPPLIER

D 5% OF LOCKERS IN EACH ROOM SHALL BE ACCESSIBLE. VERIFY LOCATIONS.

GENERAL FLOOR PLAN NOTES

- DIMENSIONS ARE TO FACE OF STUD. COLUMN CENTERLINE, OR FACE OF MASONRY.
- USE BULLNOSE CMU AT OUTSIDE CORNERS OF INTERIOR MASONRY WALLS.
- FURNISH AND INSTALL ROOM SIGNAGE. SEE SIGN DETAILS ON SHEET AE601.
- SEE SHEET AE111 FOR NON-LOAD BEARING MASONRY PARTITION WALL HEIGHTS AND S-TYPE WALLS THAT EXTEND FROM TOP OF NON-LOAD BEARING MASONRY WALLS TO ROOF DECK, MAINTAINING ACoustical RATINGS OF MASONRY WALL BELOW.
- SEE THE LIFE SAFETY PLAN FOR FIRE EXTINGUISHER LOCATIONS AND DETAL 210-100.
- SEE THE LIFE SAFETY PLAN AND DOOR SCHEDULE FOR INTERIOR SIGN LOCATIONS.
- PANT TUB, TRIM, EXPOSED CONDUITS AND SURFACE OF ALL POWER PANELS. SEE ELECTRICAL DRAWINGS FOR LOCATIONS.
- SEE LIFE SAFETY PLAN FOR LOCATIONS OF RATED WALLS.
- AT LOCATIONS WHERE NEW MASONRY IS USED TO EXTEND AN EXISTING WALL, TOOTH-IN NEW MASONRY TO MATCH EXISTING.
- AT LOCATIONS WHERE OPENINGS ARE CREATED IN EXISTING MASONRY WALLS, OR WHERE THE ENDS OF EXISTING MASONRY IS EXPOSED, TOOTH-IN NEW MASONRY TO MATCH EXISTING.
- USE LEVELING COMPOUND AS RECOMMENDED BY THE MANUFACTURER AT LOCATIONS WHERE NEW FLOORING ABUTS EXISTING.

SYMBOL LEGEND

ROOM ROOM DESIGNATION
XXX- ROOM NUMBER
150 SF
(MYPN) DOOR NUMBER. SEE SHEET AE601

(WH) FRAME DESIGNATION. SEE SHEET AE601

(X) WINDOW OR STOREFRONT DESIGNATION. SEE SHEET AE601

(Z) KEYNOTE DESIGNATION. SEE THIS SHEET FOR LEGEND

(A) REVISION NUMBER

(AW) TOILET ACCESSORY. SCHEDULED ON SHEET AF401

(Q#) EQUIPMENT. SCHEDULED ON SHEET AE101

MATERIAL LEGEND

CONCRETE BLOCK

BRICK VENEER

MTL. STUD. WALL, 98" GYP. BOARD

NEW CONCRETE SLAB

- GENERAL EQUIPMENT NOTES**
- ITEMS NOT TAGGED OR OTHERWISE INDICATED ELSEWHERE ON DRAWINGS ARE EXISTING OR FURNISHED AND INSTALLED BY OWNER
- KEYNOTE LEGEND**
- AIR SLAB. SEE STRUCTURAL DRAWINGS.
 - 4" CONCRETE SIDEWALK. SEE SITE DRAWINGS FOR CONTINUATION AND ADDITIONAL LOCATIONS.
 - FLOOR TRANSITION STRIP. REFER TO SPECIFICATIONS FOR TYPES

STATE OF OHIO
KRAIG A. BEILHARZ, LICENSE #9482
EXPIRATION DATE 12/31/2021

BEILHARZ ARCHITECTS INCORPORATED

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

0 4' 8' 12'

ISSUE DATE

#	Date	DESCRIPTION
1	04.21.20	FOR BIDS

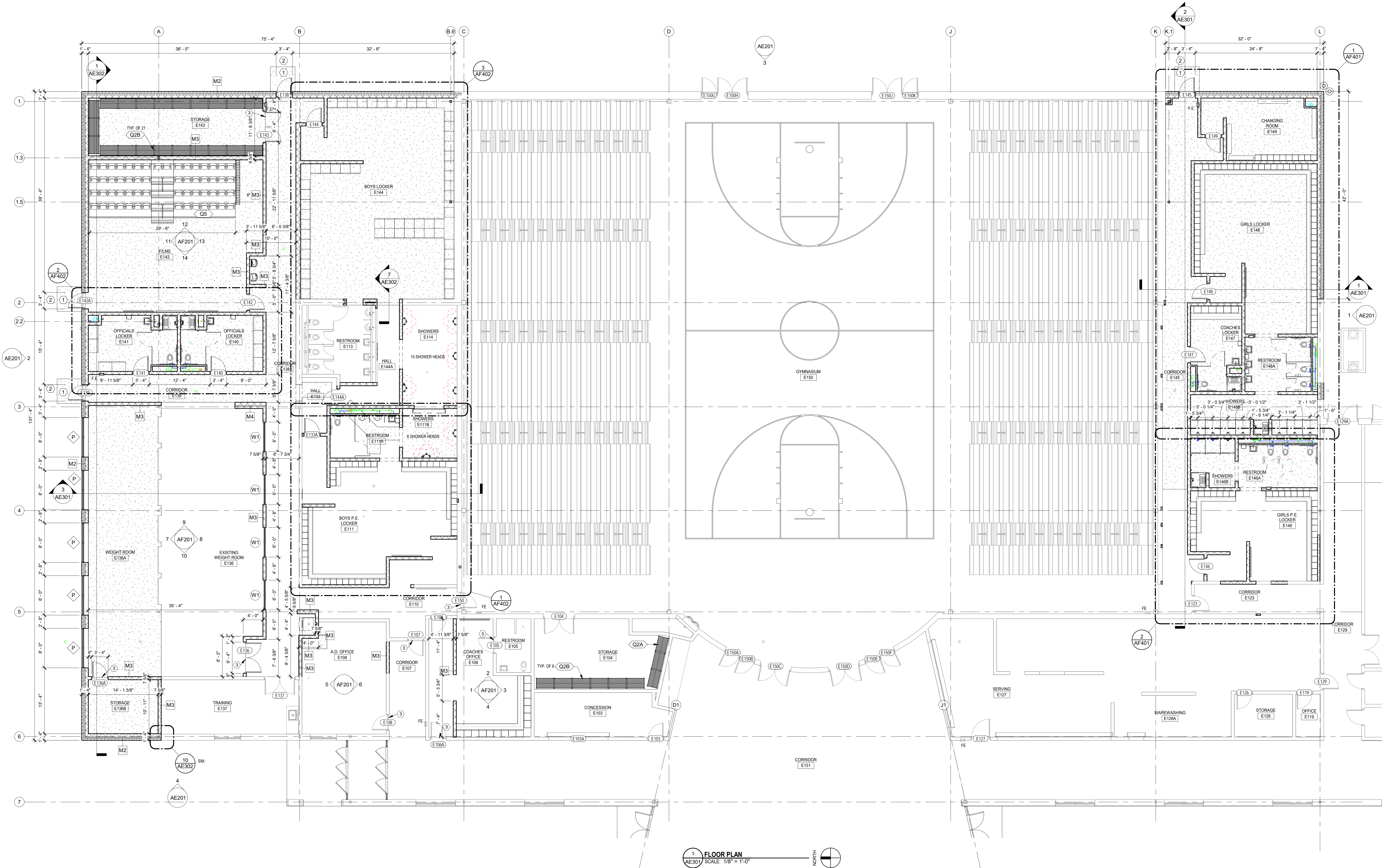
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EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS

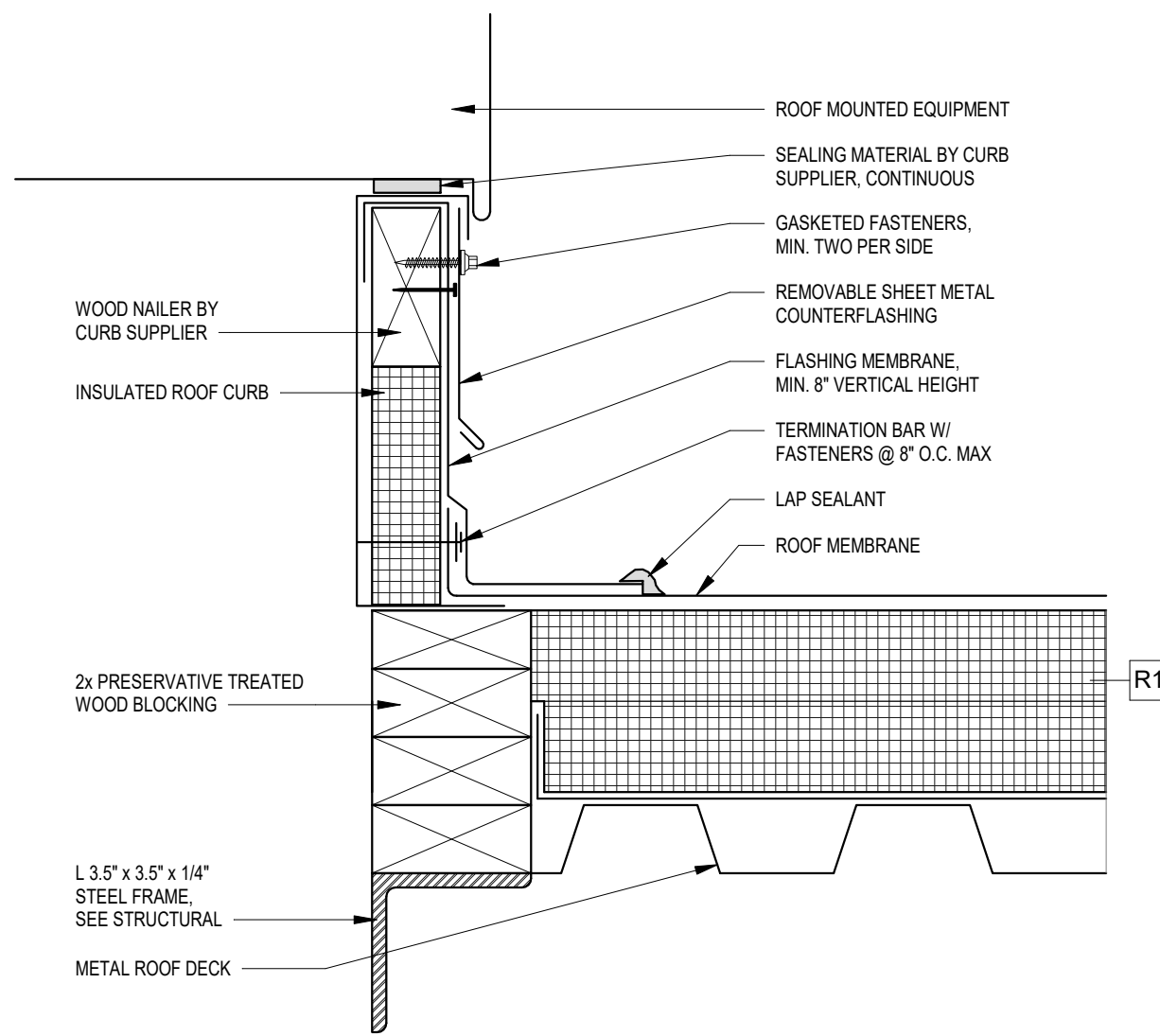
14544 COUNTY ROAD 6, METAMORA, OH 43540

PROJECT: B7-4569
DRAWN BY: KEP
CHECKED BY: KAB
SHEET
AE101

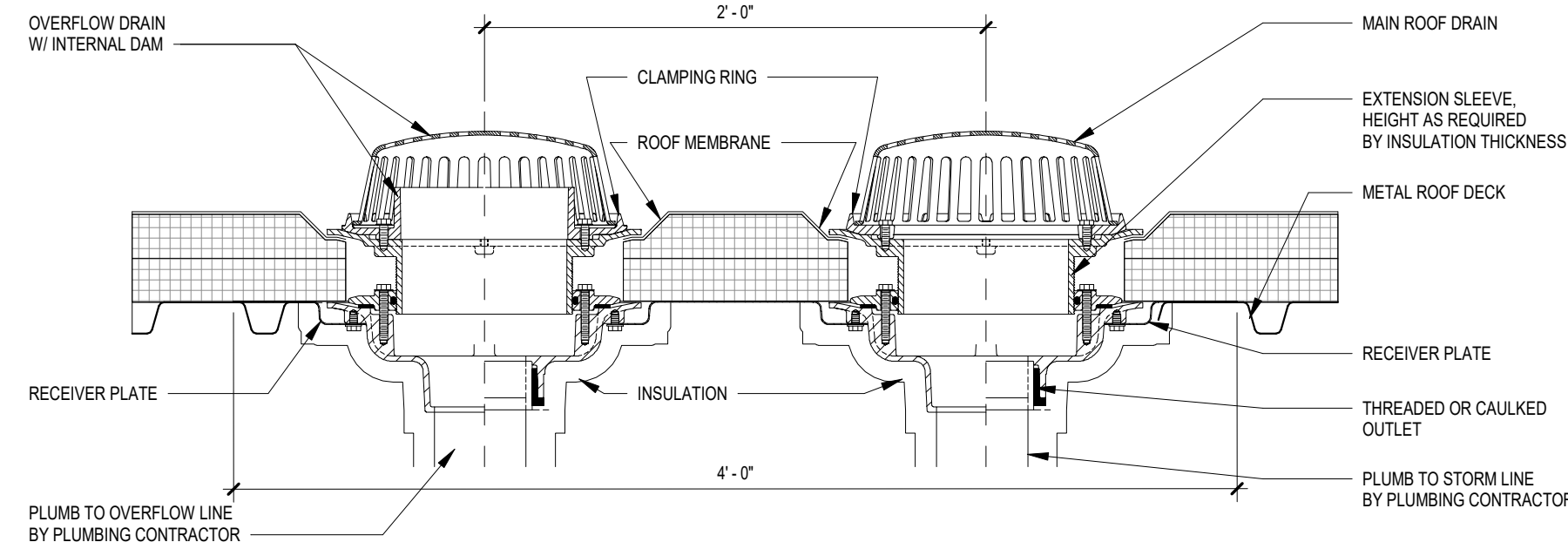
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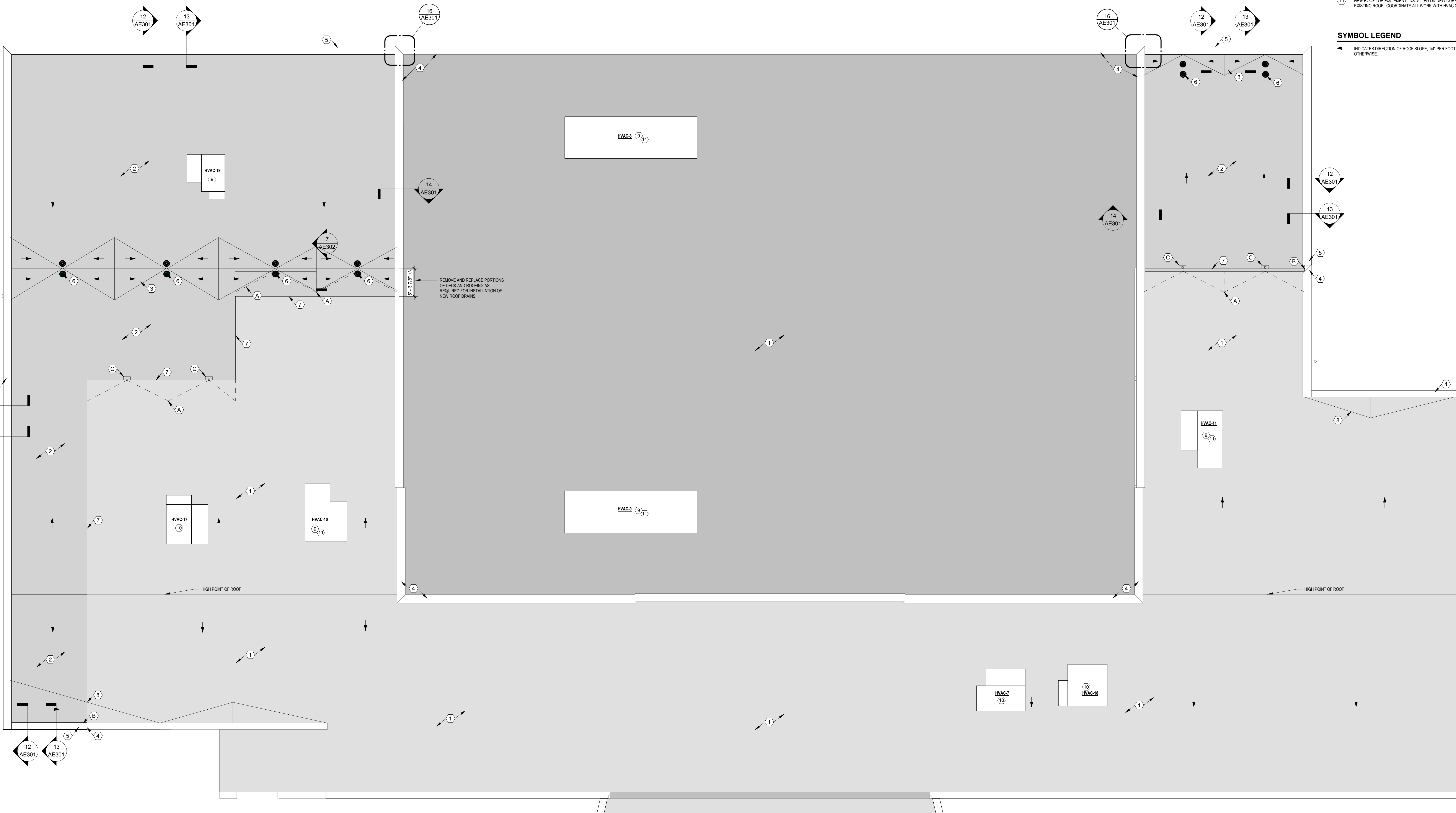
1 FLOOR PLAN
AE301 SCALE: 1/8" = 1'-0"



3 EQUIPMENT CURB DETAIL
AE121 SCALE: 1" = 1'-0"



2 ROOF DRAIN AND OVERFLOW COMBO DETAIL
AE121 SCALE: 1 1/2" = 1'-0"



1 ROOF PLAN
AE121 SCALE: 1/8" = 1'-0"

GENERAL ROOFING NOTES

- CURBS FOR ROOF TOP EQUIPMENT INSTALLED ON MEMBRANE ROOF SHALL BE FURNISHED AND SET BY INSTALLER OF EQUIPMENT. ALL CURBS TO BE INSULATED AND FLASHED BY THE ROOFING INSTALLER. COORDINATE WITH EQUIPMENT SUPPLIER.
- FLASHINGS, TERMINATIONS, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND DETAILS.
- HVAC EQUIPMENT SHALL BE LOCATED FROM THE ROOF FRAMING PLAN AND AS VERIFIED BY THE INSTALLER. UNIT LOCATIONS SHOWN ON THE ROOF PLAN ARE APPROXIMATE LOCATIONS ONLY.
- WHERE DRAINAGE DIRECTION IS INDICATED BY ARROWS WITHOUT SLOPE NOTATION, USE TAPERED INSULATION TO ACHIEVE MINIMUM SURFACE SLOPE OF 1/4" PER FOOT.
- ROOF SLOPES ARE APPROXIMATE AND ROUNDED TO THE NEAREST 1/8". SEE ROOF FRAMING PLAN FOR ACTUAL, JOIST BEARING ELEVATIONS.
- PROVIDE TAPERED CRICKETS AT HIGH SIDE OF ALL ROOF MOUNTED EQUIPMENT.

ROOF PLAN DEMOLITION KEYNOTE LEGEND

- (A) REMOVE TAPERED INSULATION CRICKETS AS SHOWN FOR NEW WORK.
(B) REMOVE PORTION OF EXISTING PREFINISHED METAL COPING CAP AS REQUIRED FOR INSTALLATION OF NEW, FLASH WEATHER-TIGHT
(C) REMOVE SCUPPER BOX AND DOWNPIPE.

ROOF PLAN KEYNOTE LEGEND

- (1) EXISTING ROOF SYSTEM, VERIFY NEW ROOF SYSTEM COMPATIBILITY. OVERLAP MINIMUM 5'-0".
(2) SINGLE PLY MEMBRANE ROOF ASSEMBLY TYPE R1, SEE SHEET AE111.
(3) TAPERED ROOF INSULATION, SLOPE AS INDICATED.
(4) EXISTING PREFINISHED METAL COPING CAP.
(5) PREFINISHED METAL COPING CAP, PROFILE TO MATCH EXISTING, SEE SECTIONS FOR ADDITIONAL INFO.
(6) COMBINATION ROOF DRAIN AND OVERFLOW DRAIN, SEE DETAIL 2/AE121.
(7) 5" MIN. LAP AND SEAL FLASHING PER MEMBRANE MANUFACTURER SPECIFICATIONS.
(8) EXISTING INSULATION CRICKET TO REMAIN, NEW TAPERED INSULATION SHALL MATCH EXISTING PROFILE.
(9) CURBS MOUNTED HVAC EQUIPMENT, SEE HVAC DRAWINGS AND DETAIL 3/AE121. PROVIDE 36" WIDE ROOF WALKWAY MATERIAL ON ALL SIDES OF EQUIPMENT.
(10) NEW ROOF TOP EQUIPMENT, INSTALLED ON EXISTING CURB. NO WORK REQUIRED.
(11) NEW ROOF TOP EQUIPMENT, INSTALLED ON NEW CURB. FLASH NEW CURB INTO EXISTING ROOF. COORDINATE ALL WORK WITH HVAC CONTRACTOR.

SYMBOL LEGEND

- ← INDICATES DIRECTION OF ROOF SLOPE, 1/4" PER FOOT MINIMUM UNLESS NOTED OTHERWISE.



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PLOT SCALE
1/16" = 1'-0"
0 8' 16' 24'

ISSUE DATE

#	Date	DESCRIPTION
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1 04.21.20 FOR BIDS

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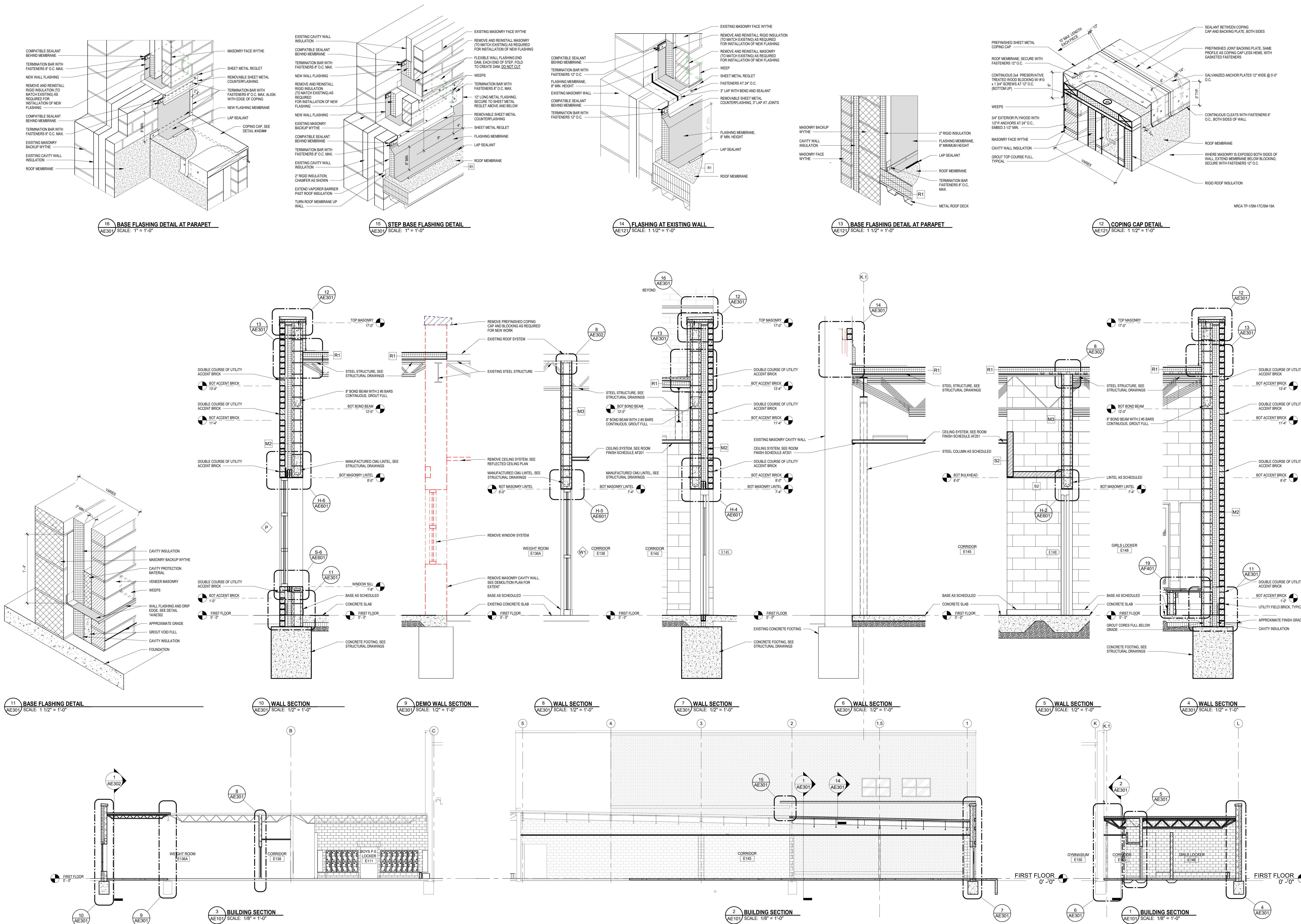
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SHEET

AE121

12 OF 46

EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS
14544 COUNTY ROAD 6, METAMORA, OH 43540

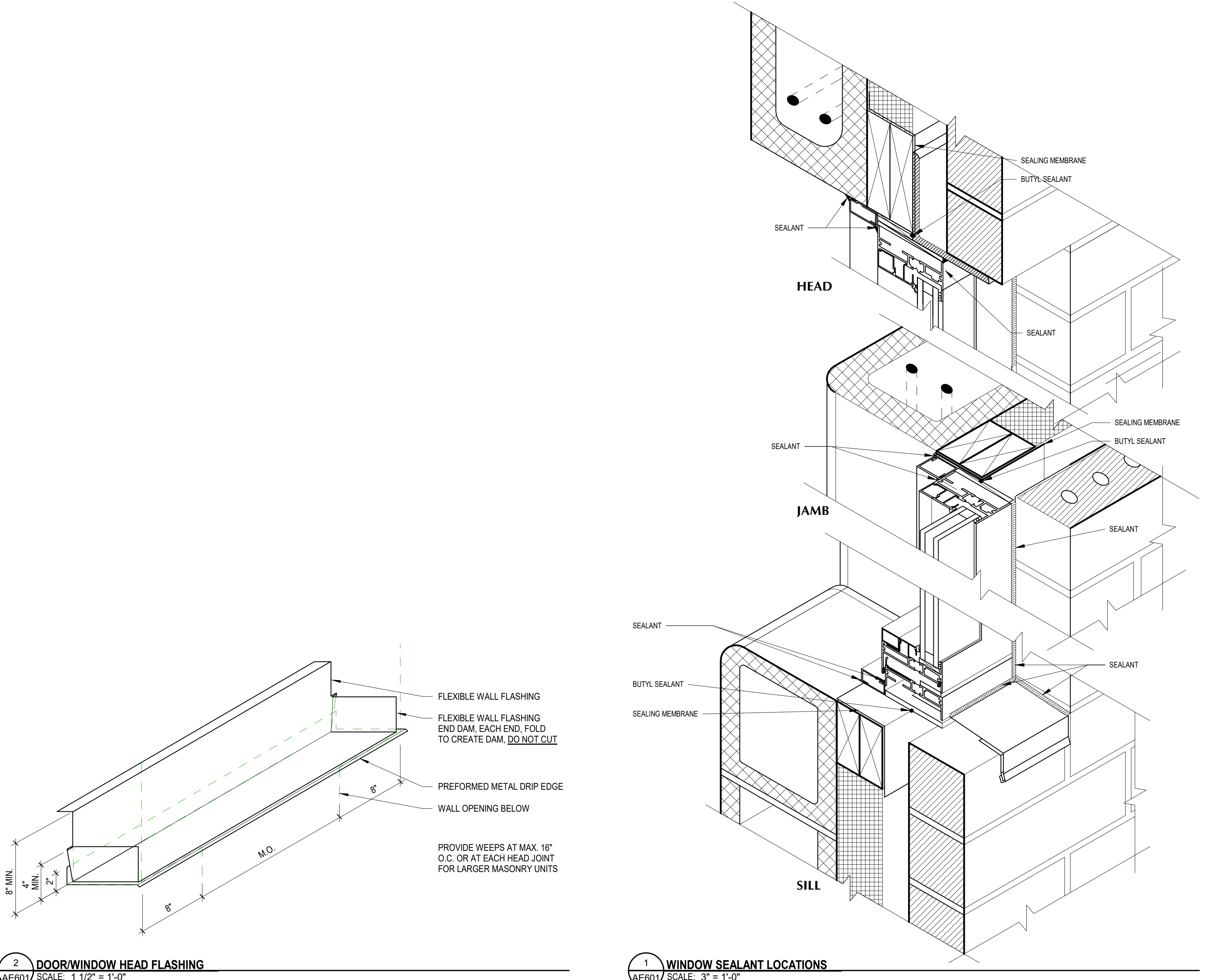


DOOR SCHEDULE														
MARK	SIZE		DOOR		GLAZING	FRAME			HDW	SIGN		NOTE		
	#	W	H	MAT		TYPE	W	H		TYPE	TEXT			
E114		6'-0"	7'-4"	AL	F				AL	H-3	J-3	10		
E133A		3'-0"	7'-0"	WD	A	-	0'-8"	2'-9"	HM	H-1	J-1	4	C	BOYS P.E. LOCKER
E136	PR	3'-0"	7'-0"	WD	D	A	0'-8"	2'-9"	HM	H-1	J-1	5	C	WEIGHT ROOM
E136A		3'-0"	7'-0"	WD	A	-	0'-8"	2'-9"	HM	H-1	J-1	7	C	STORAGE
E138		3'-0"	7'-0"	HMT	E	B	0'-8"	2'-9"	HMT	H-4	J-4	1	E	EXIT
E139		3'-0"	7'-0"	HMT	E	B	0'-8"	2'-9"	HMT	H-4	J-4	1	E	EXIT
E140		3'-0"	7'-0"	WD	A	-			HM	H-1	J-1	9	B	OFFICIALS LOCKER
E141		3'-0"	7'-0"	WD	A	-			HM	H-1	J-1	9	B	OFFICIALS LOCKER
E142		3'-0"	7'-0"	WD	B	A	0'-8"	2'-9"	HM	H-1	J-1	2	C	FILMS
E142A		3'-0"	7'-0"	HMT	E	B	0'-8"	2'-9"	HMT	H-4	J-4	1	E	EXIT
E143	PR	3'-0"	7'-0"	WD	C	-			HM	H-1	J-1	8	C	STORAGE
E144		3'-0"	7'-0"	WD	A	-			HM	H-1	J-1	2	C	BOYS LOCKER
E144A		3'-0"	7'-0"	WD	A	-			HM	H-1	J-1/J-1a	3	C	BOYS LOCKER
E145		3'-0"	7'-0"	HMT	E	B	0'-8"	2'-9"	HMT	H-4	J-4	1	E	EXIT
E146		3'-0"	7'-0"	WD	A	-			HM	H-1	J-1	6	C	GIRLS LOCKER
E147		3'-0"	7'-0"	WD	A	-			HM	H-2	J-2	9	A	COACHES LOCKER
E148		3'-0"	7'-0"	WD	A	-			HM	H-1	J-1	2	C	GIRLS LOCKER
E149		3'-0"	7'-0"	WD	A	-			HM	H-1	J-1	6	C	GIRLS LOCKER

DOOR SCHEDULE LEGEND		
MATERIAL LEGEND	GLAZING TYPE LEGEND	NOTES LEGEND
HM HOLLOW METAL	A 1/4" TEMPERED GLASS	1. 4" FRAME HEAD
HMT HOLLOW METAL, THERMAL INSULATED	B 1" INSULATED TEMPERED GLASS	
WD SOLID CORE WOOD		
AL ALUMINUM		

GENERAL OPENING NOTES

- TYPICAL WOOD AND H.M. DOOR THICKNESS 1-3/4" U.N.O.
- H.M. DOOR FRAMES SHALL HAVE 4" HEAD U.N.O.
- REFER TO SHEET AE601 FOR HEAD (H) AND JAMB (J) DETAILS
- REFER TO SHEET AE601 FOR SIGNAGE TYPES AND ADDITIONAL SIGNS
- REFER TO SECTION R 7101 FOR HARDWARE SETS
- DOORS WITH NUMBERS AND NOT IN SCHEDULE ARE EXISTING TO REMAIN

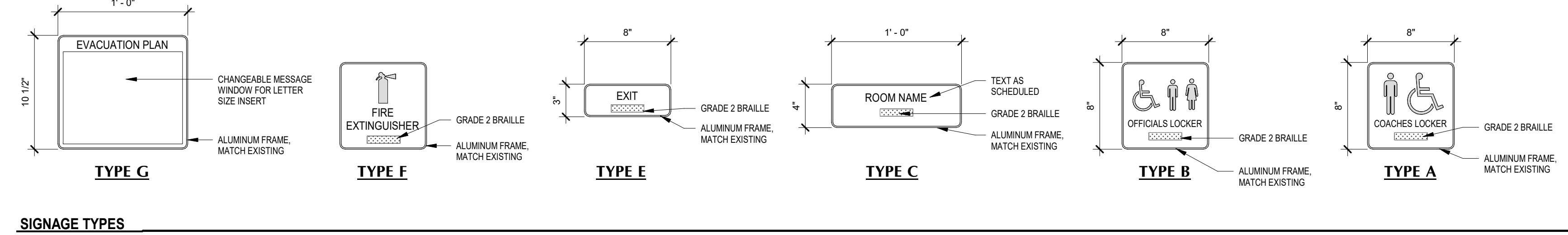


2 DOOR/WINDOW HEAD FLASHING
AE601 SCALE: 1 1/2" = 1'-0"

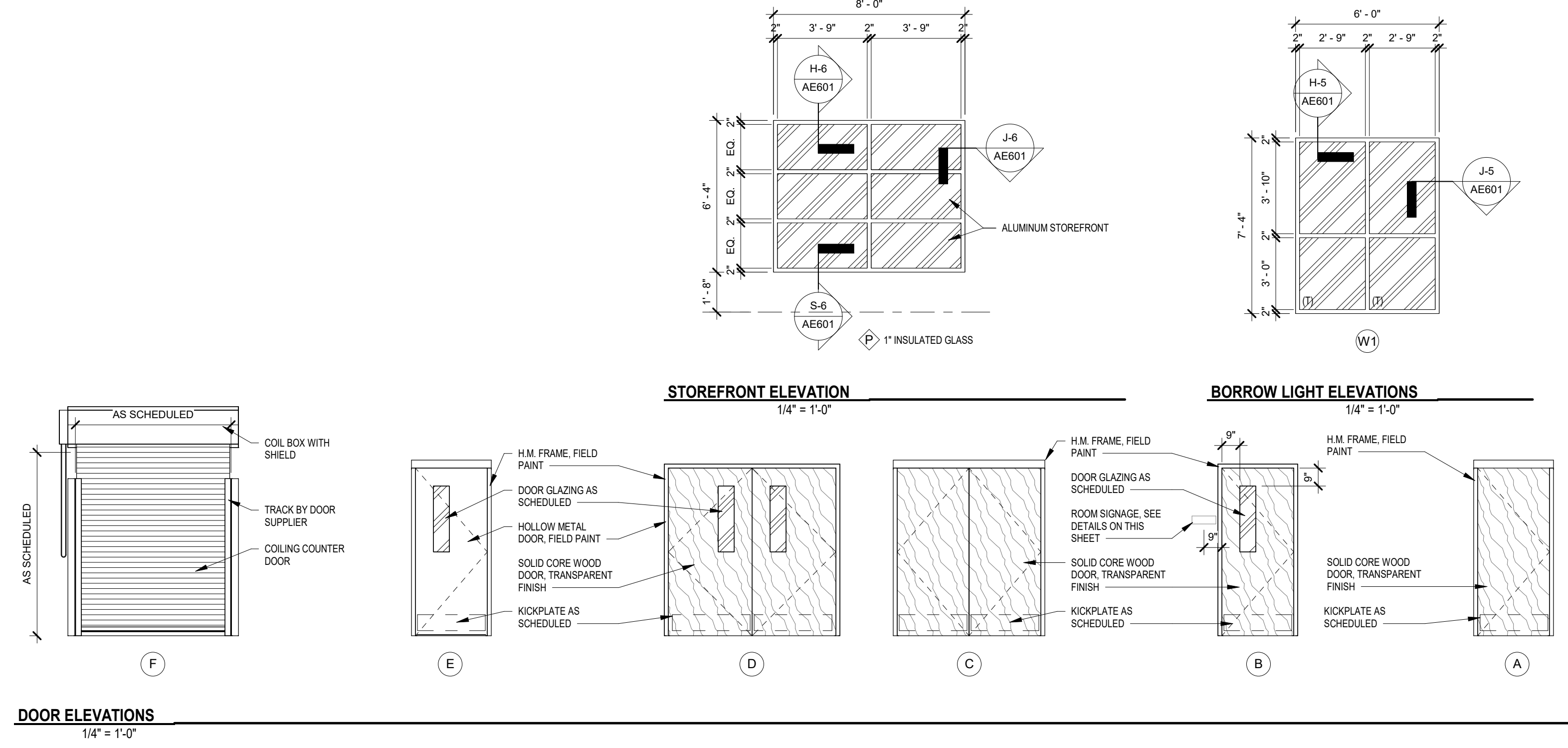
1 WINDOW SEALANT LOCATIONS
AE601 SCALE: 3" = 1'-0"

SIGNAGE GENERAL NOTE

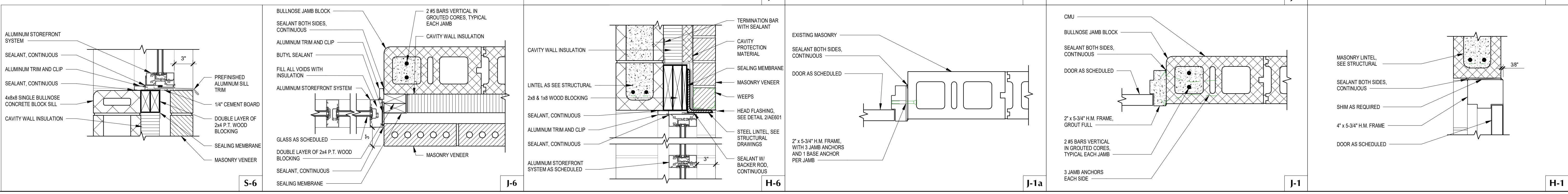
INTERIOR SIGNS ARE SCHEMATIC. ACTUAL SIGNS ARE TO MATCH EXISTING COLORS, SIZES, AND MATERIALS. FIELD VERIFY EXISTING PRIOR TO BIDDING. EXISTING SIGN FRAMES ARE ALUMINUM.



SIGNAGE TYPES
1 1/2" = 1'-0"

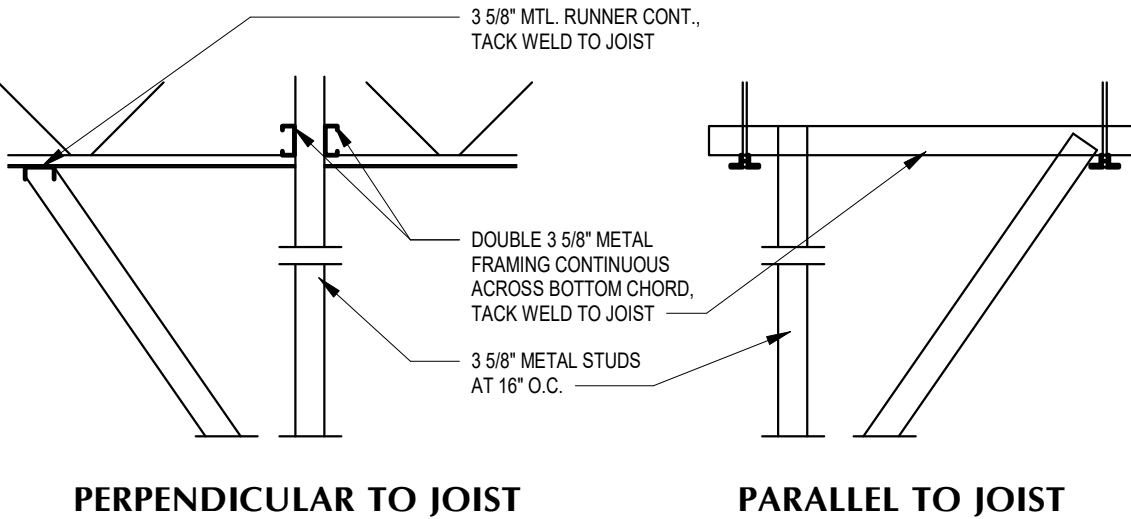
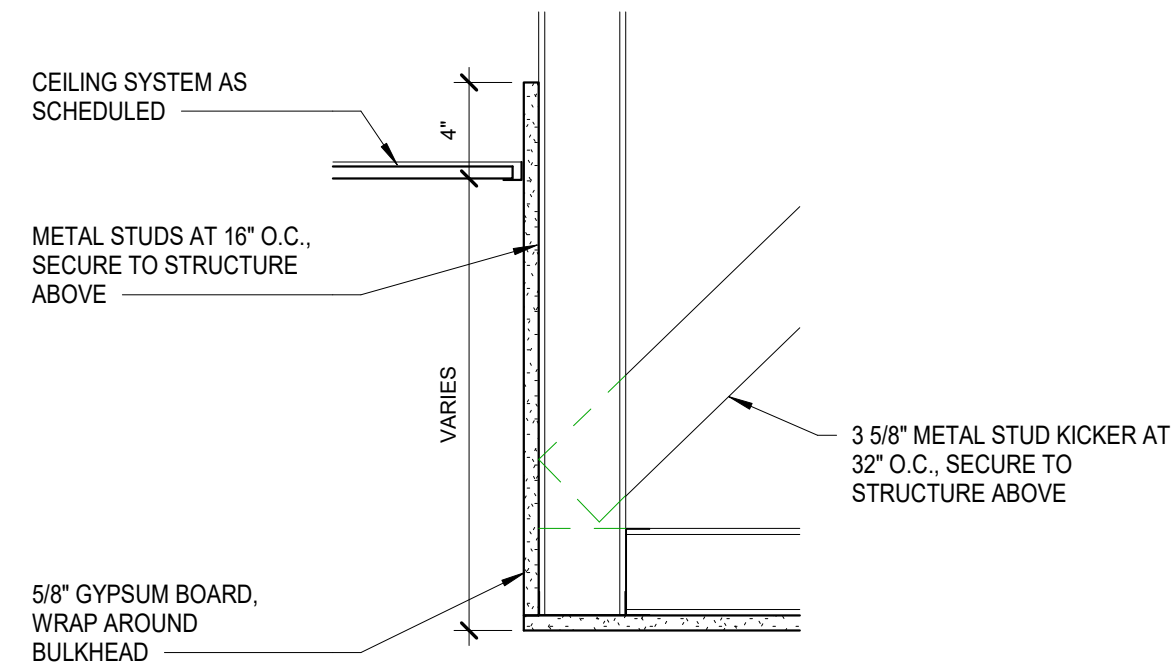
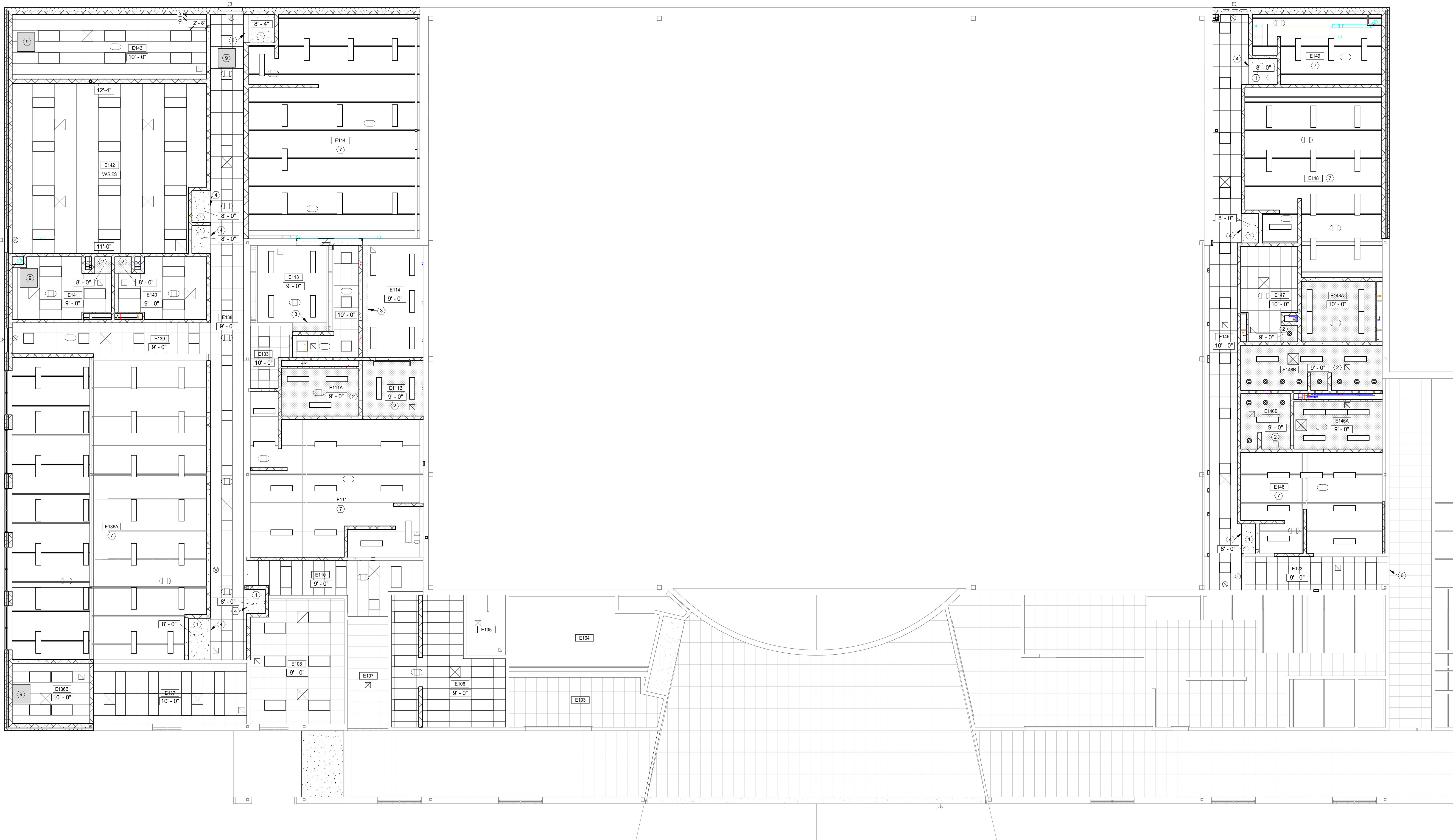


DOOR ELEVATIONS
1/4" = 1'-0"



GENERAL OPENING NOTES

(T) DENOTES TEMPERED GLASS.



- KEYNOTE LEGEND** (CEILING PLANS)
- 1 GYPSUM BOARD CEILING SYSTEM OVER METAL FRAMING.
 - 2 CEMENT BOARD CEILING SYSTEM WITH VENEER PLASTER OVER METAL FRAMING.
 - 3 PATCH EXISTING CEMENT BOARD CEILING SYSTEM TO MATCH EXISTING.
 - 4 GYPSUM BOARD BULKHEAD. PAINT: SEE DETAIL 3AF111.
 - 5 NOT USED.
 - 6 EXISTING BULKHEAD. PATCH AS REQUIRED AFTER DEMOLITION OF CEILING.
 - 7 EXPOSED STRUCTURE. PAINT.
 - 8 MASONRY LINTEL. SEE STRUCTURAL. FOR HEIGHT.
 - 9 CABINET UNIT HEATER MOUNTED IN CEILING. SEE HVAC DRAWINGS.

- GENERAL CEILING NOTES**
- REFER TO ROOM FINISH SCHEDULE ON SHEET AF201 FOR CEILING MATERIALS, FINISHES AND HEIGHTS.
 - PAINT GYPSUM BOARD CEILINGS, BULKHEADS AND EXPOSED STRUCTURE AS SCHEDULED.
 - COORDINATE LOCATIONS OF CEILING MOUNTED LIGHT FIXTURES, HVAC DIFFUSERS AND GRILLES, SPRINKLER HEADS, AND CEILING MOUNTED FIXTURES AND EQUIPMENT BETWEEN TRADES. REFER TO FLOOR PLANS, HVAC DRAWINGS AND ELECTRICAL DRAWINGS.
 - PROVIDE BRACING AT ALL BULKHEADS. SEE DETAILS THIS SHEET.

- CEILING PLAN LEGEND**
- SUSPENDED CEILING GRID SYSTEM
 - GYP. BOARD CEILING
 - CEMENT BOARD W/ VENEER PLASTER
 - SURFACE MOUNTED SUSPENDED LIGHT FIXTURE. SEE ELECTRICAL
 - RECESSED DOWNLIGHT. SEE ELECTRICAL
 - 2x4 RECESSED LIGHT FIXTURE. SEE ELECTRICAL
 - 2x2 RECESSED LIGHT FIXTURE. SEE ELECTRICAL
 - WALL MOUNTED LIGHT FIXTURE. SEE ELECTRICAL
 - EMERGENCY EXIT SIGN. SEE ELECTRICAL
 - OCCUPANCY SENSOR. SEE ELECTRICAL

STATE OF OHIO
KRAIG A. BEILHARZ
9482
REGISTERED ARCHITECT

KRAIG A. BEILHARZ, LICENSE #9482
EXPIRATION DATE 12/31/2021

BA
BEILHARZ
ARCHITECTS
INCORPORATED

PLOT SCALE
1/8"=1'-0"
0 4' 8' 12'

ISSUE DATE
Date DESCRIPTION
1 04.21.20 FOR BIDS

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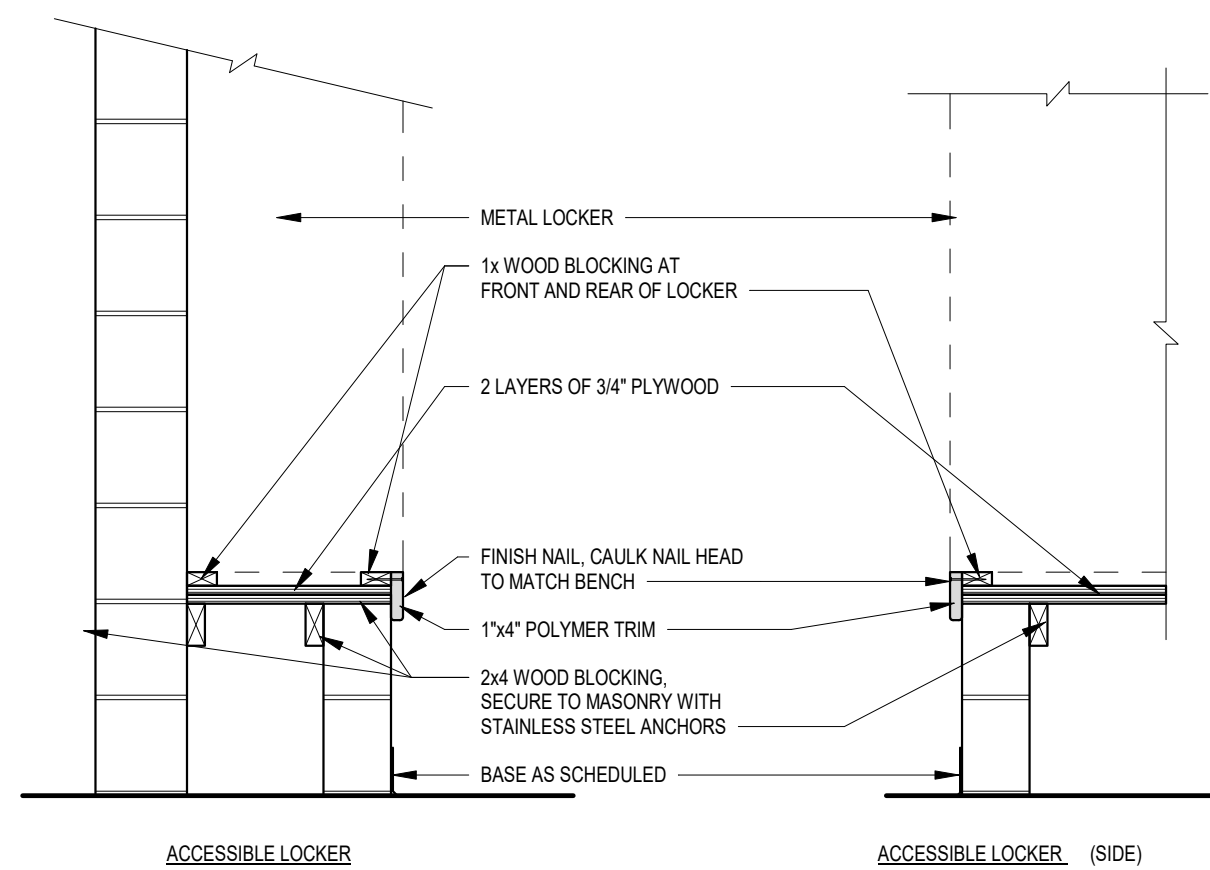
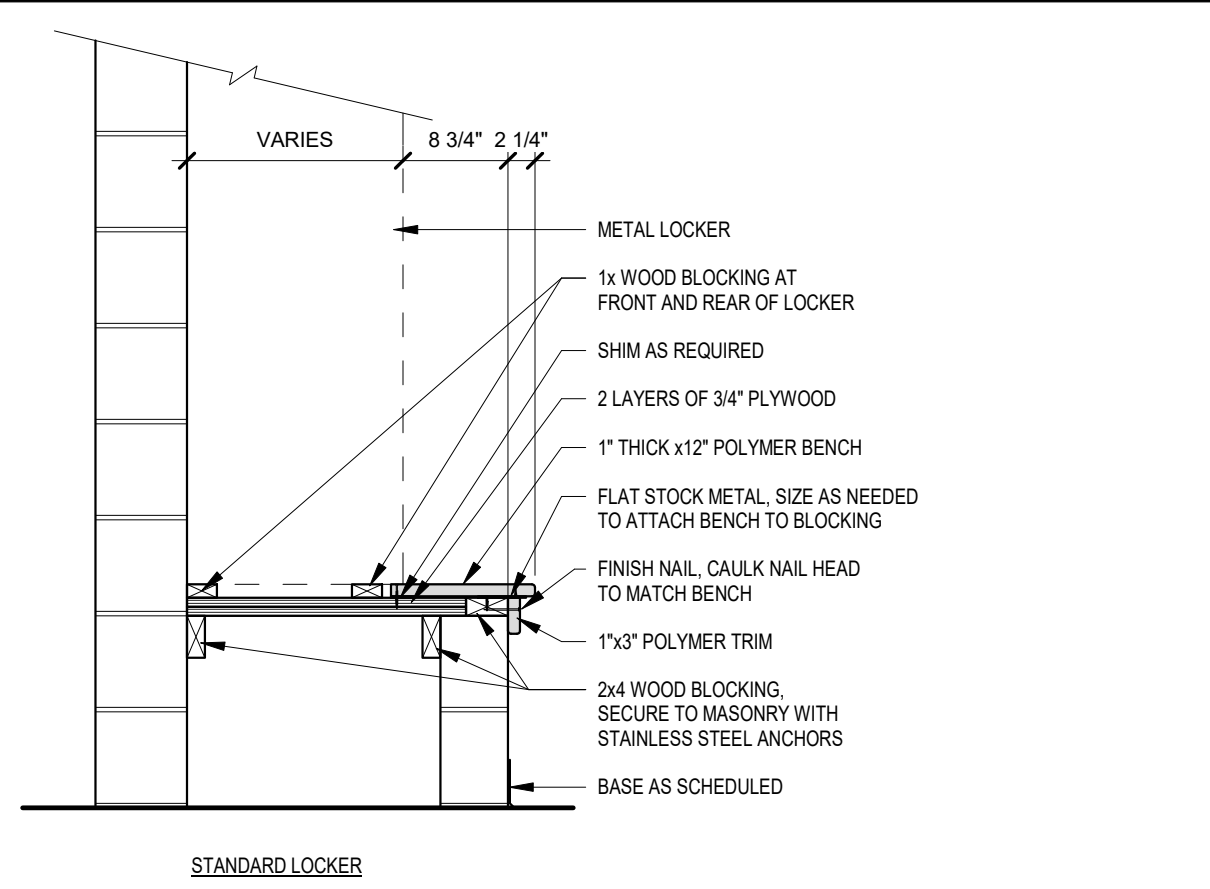
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DRAWN BY: KEP
CHECKED BY: KAB
SHEET
AF111

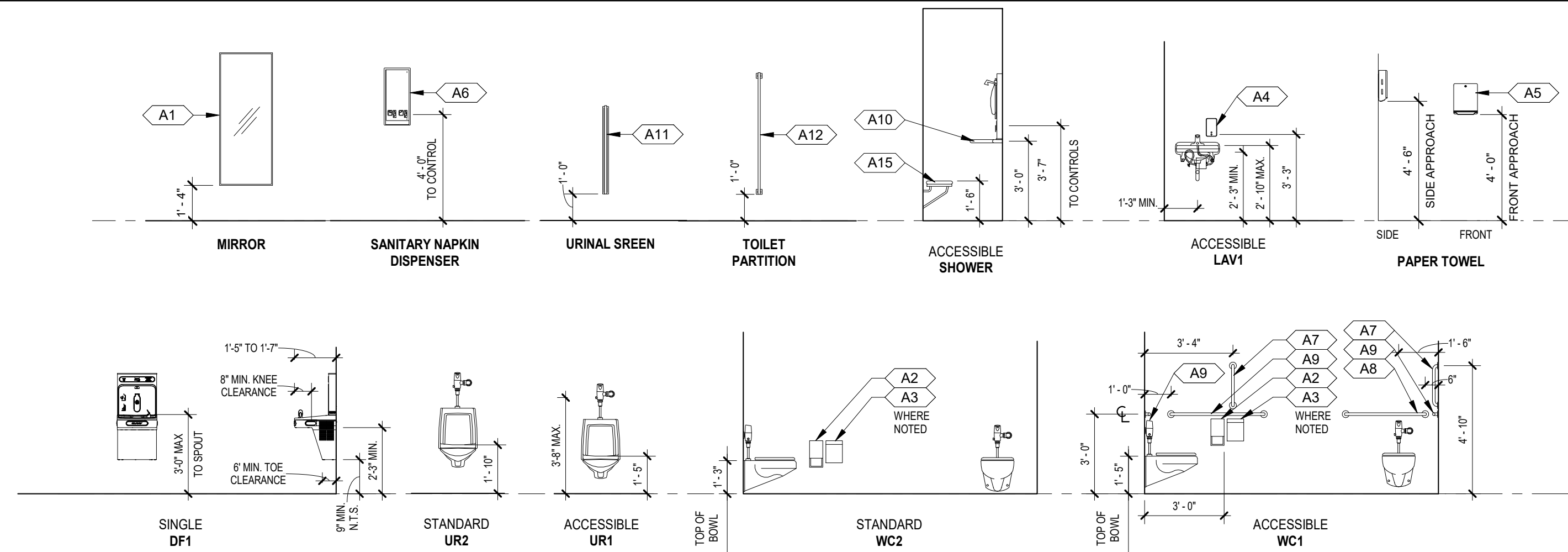
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1 REFLECTED CEILING PLAN
AE301 SCALE: 1/8" = 1'-0"

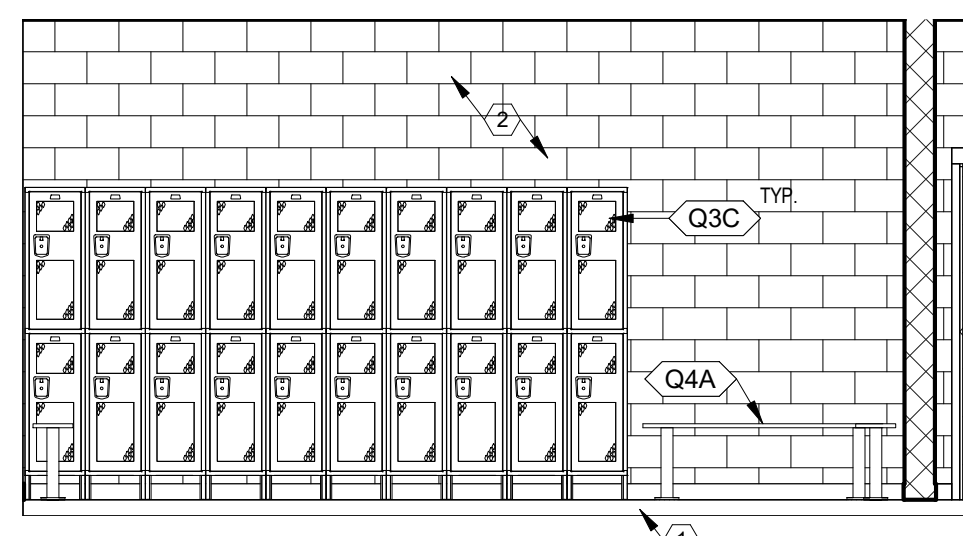
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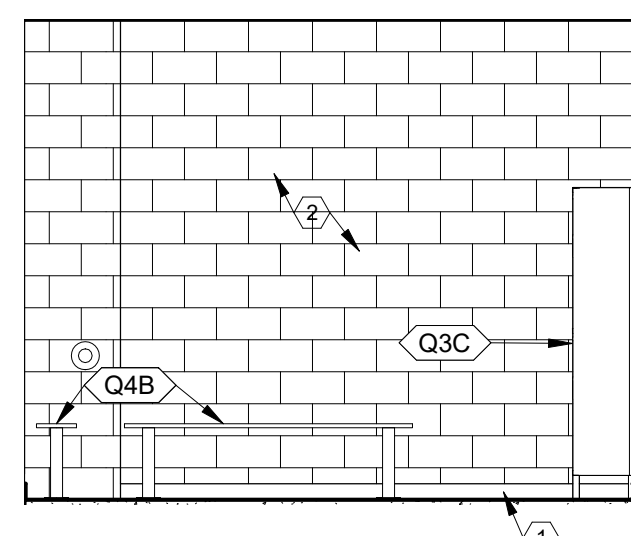
19 LOCKER BASE DETAILS
AF401 SCALE: 3/4\"/>



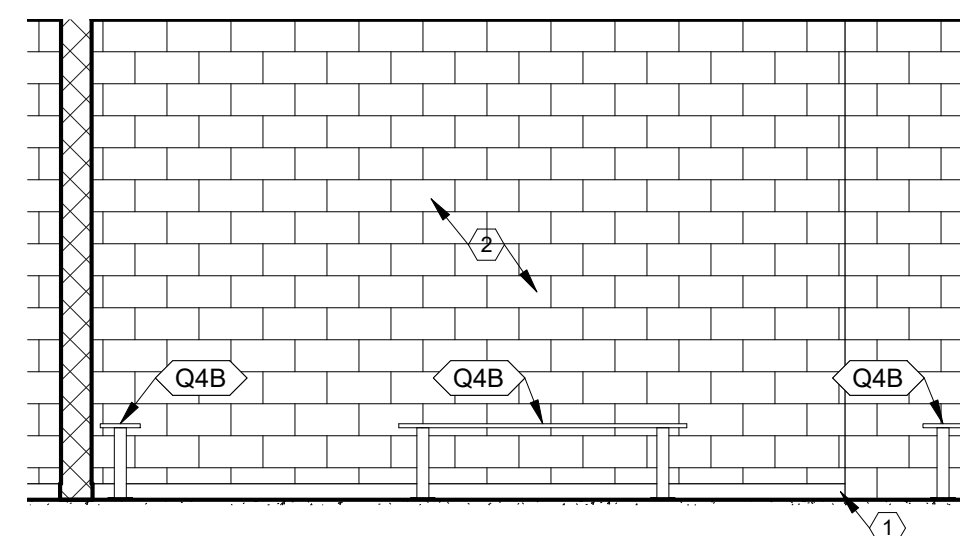
20 FIXTURE & ACCESSORY MOUNTING HEIGHTS
AF401 SCALE: 1/4\"/>



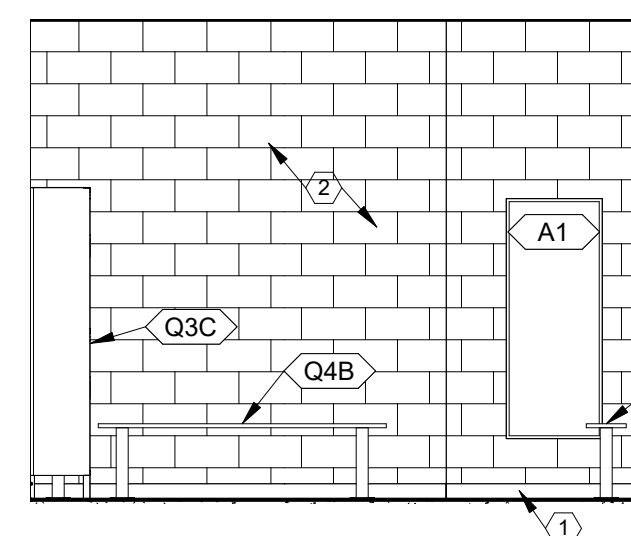
18 CHANGING ROOM E149
AF401 SCALE: 1/4\"/>



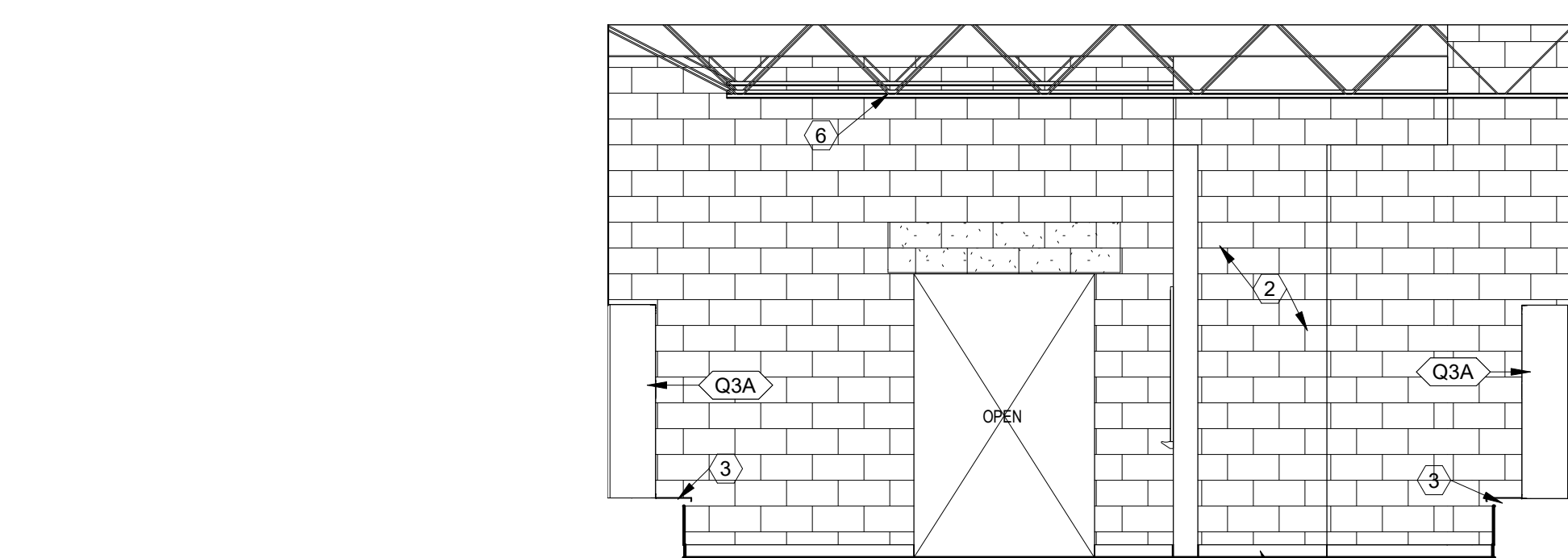
17 CHANGING ROOM E149
AF401 SCALE: 1/4\"/>



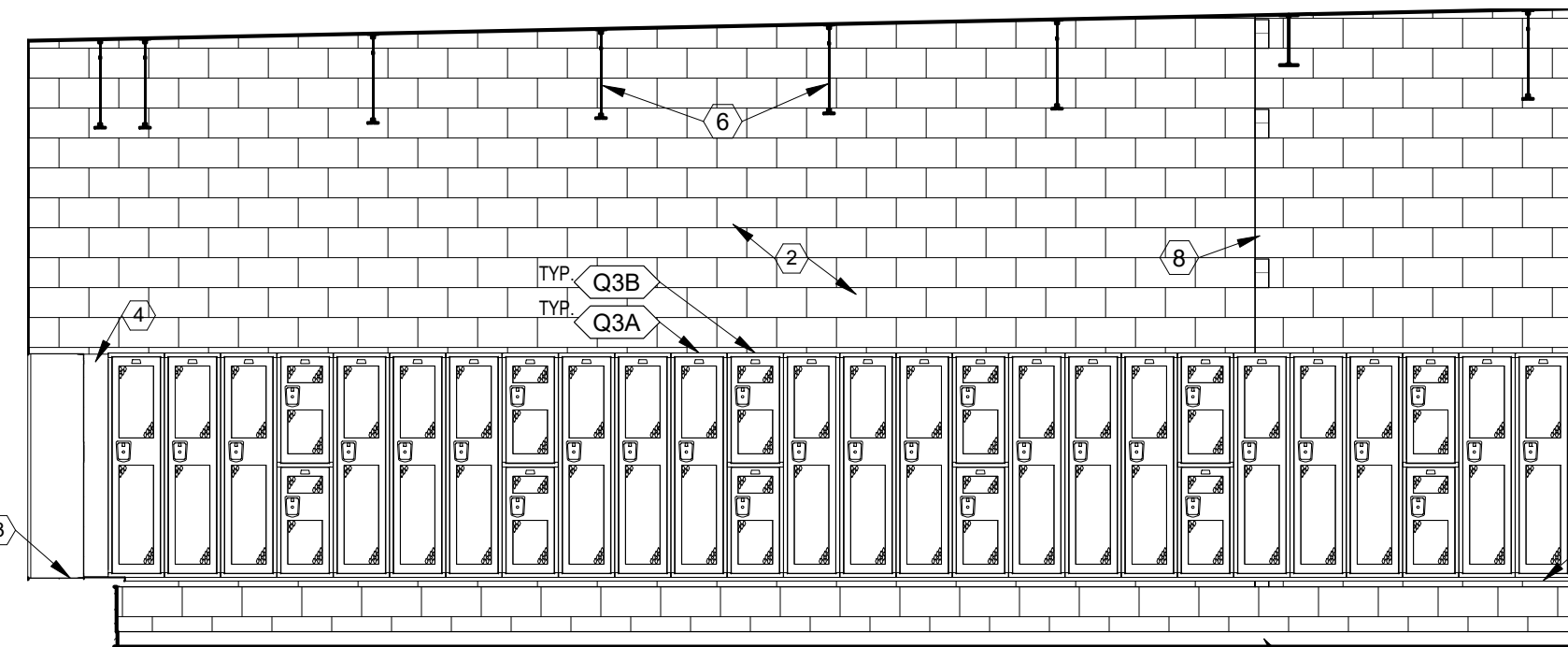
16 CHANGING ROOM E149
AF401 SCALE: 1/4\"/>



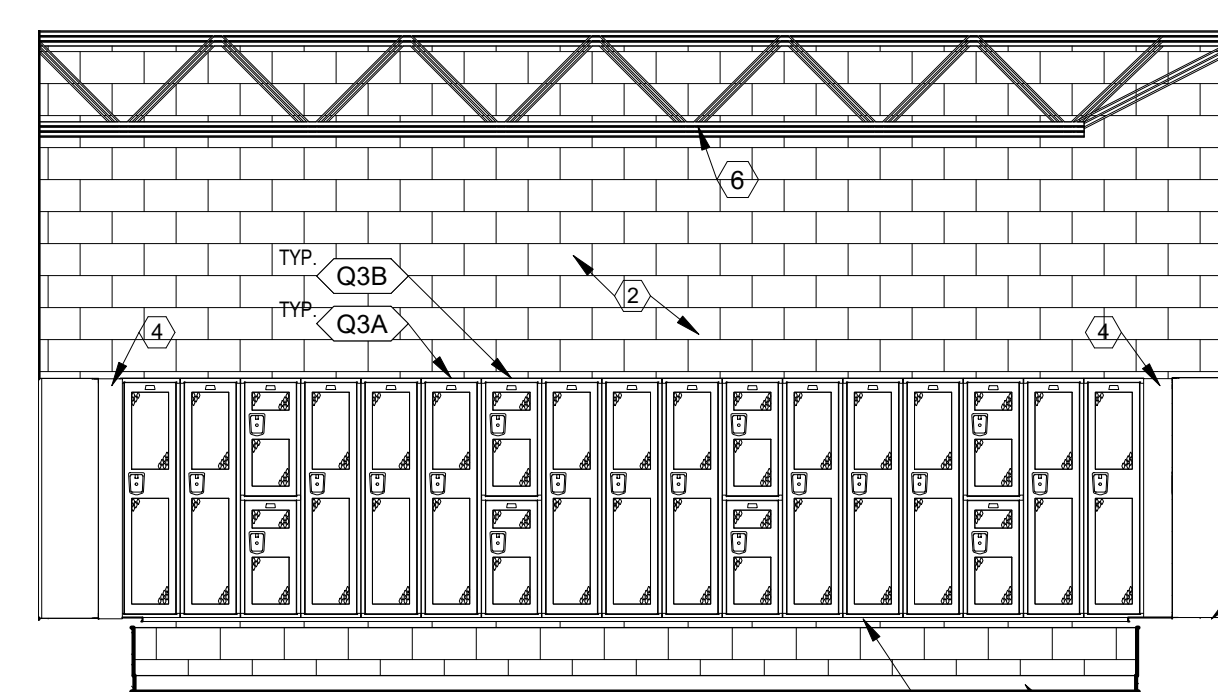
15 CHANGING ROOM E149
AF401 SCALE: 1/4\"/>



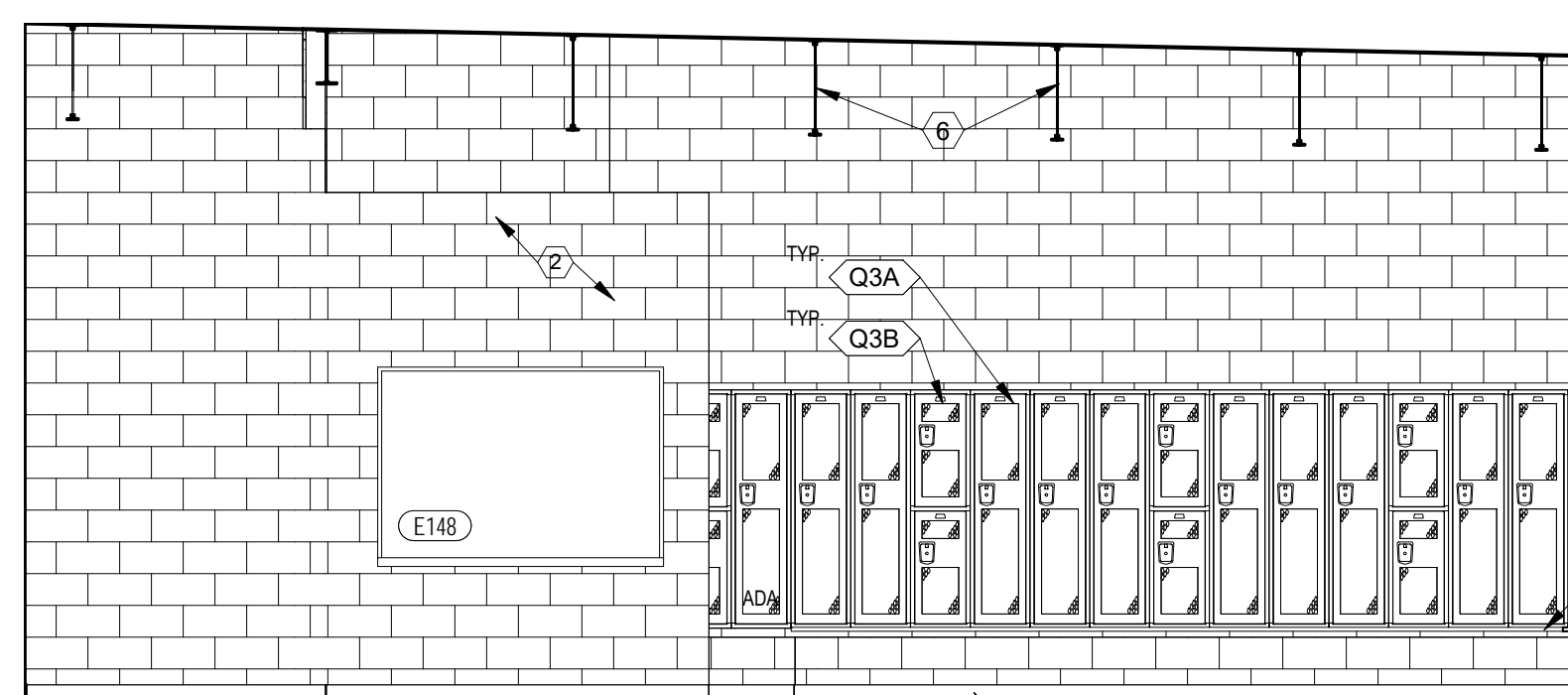
14 GIRLS LOCKER E148
AF401 SCALE: 1/4\"/>



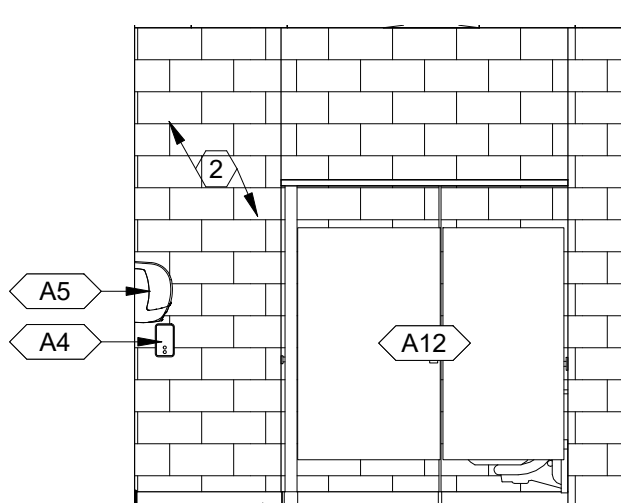
13 GIRLS LOCKER E148
AF401 SCALE: 1/4\"/>



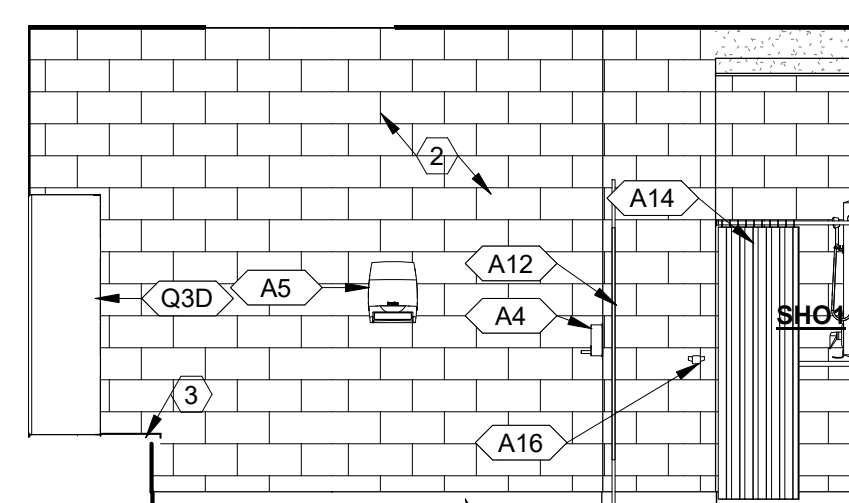
12 GIRLS LOCKER E148
AF401 SCALE: 1/4\"/>



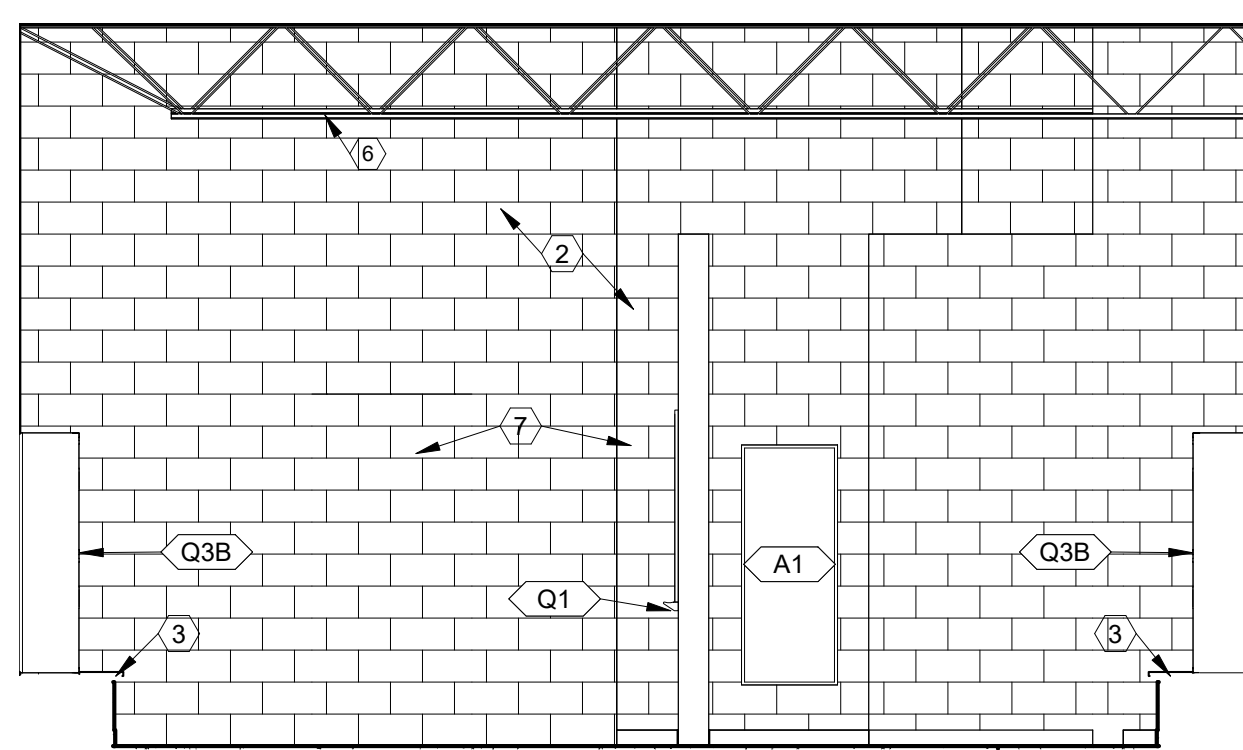
11 GIRLS LOCKER E148
AF401 SCALE: 1/4\"/>



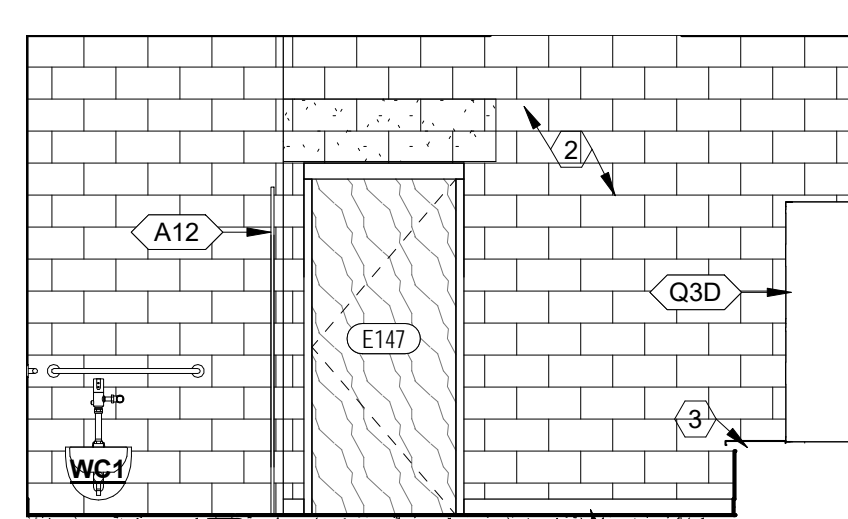
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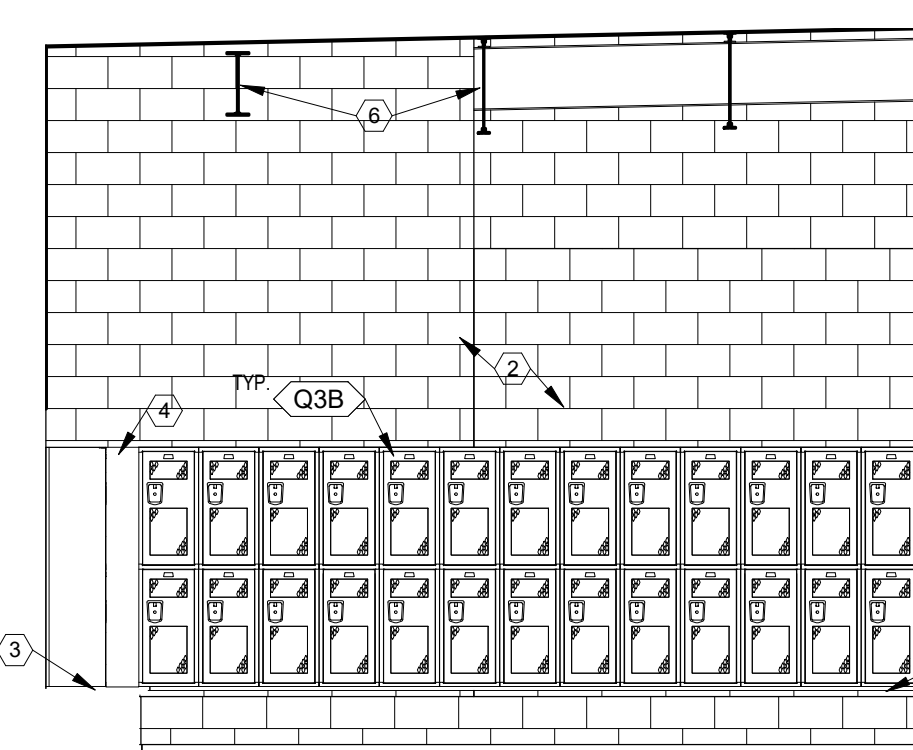
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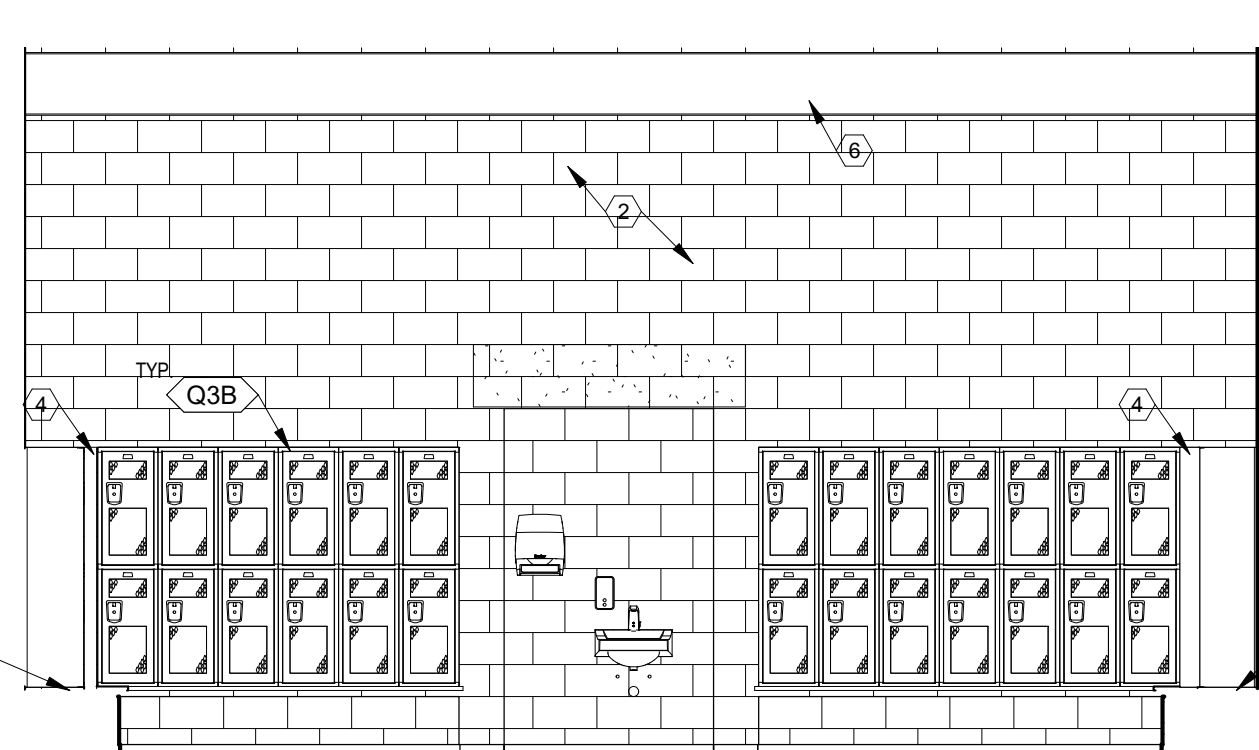
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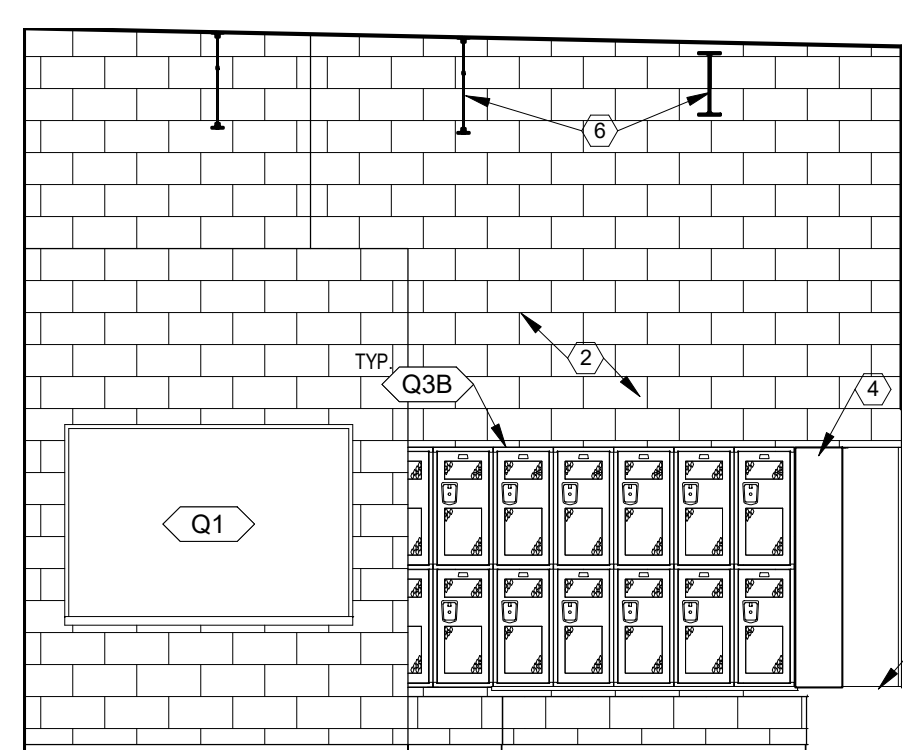
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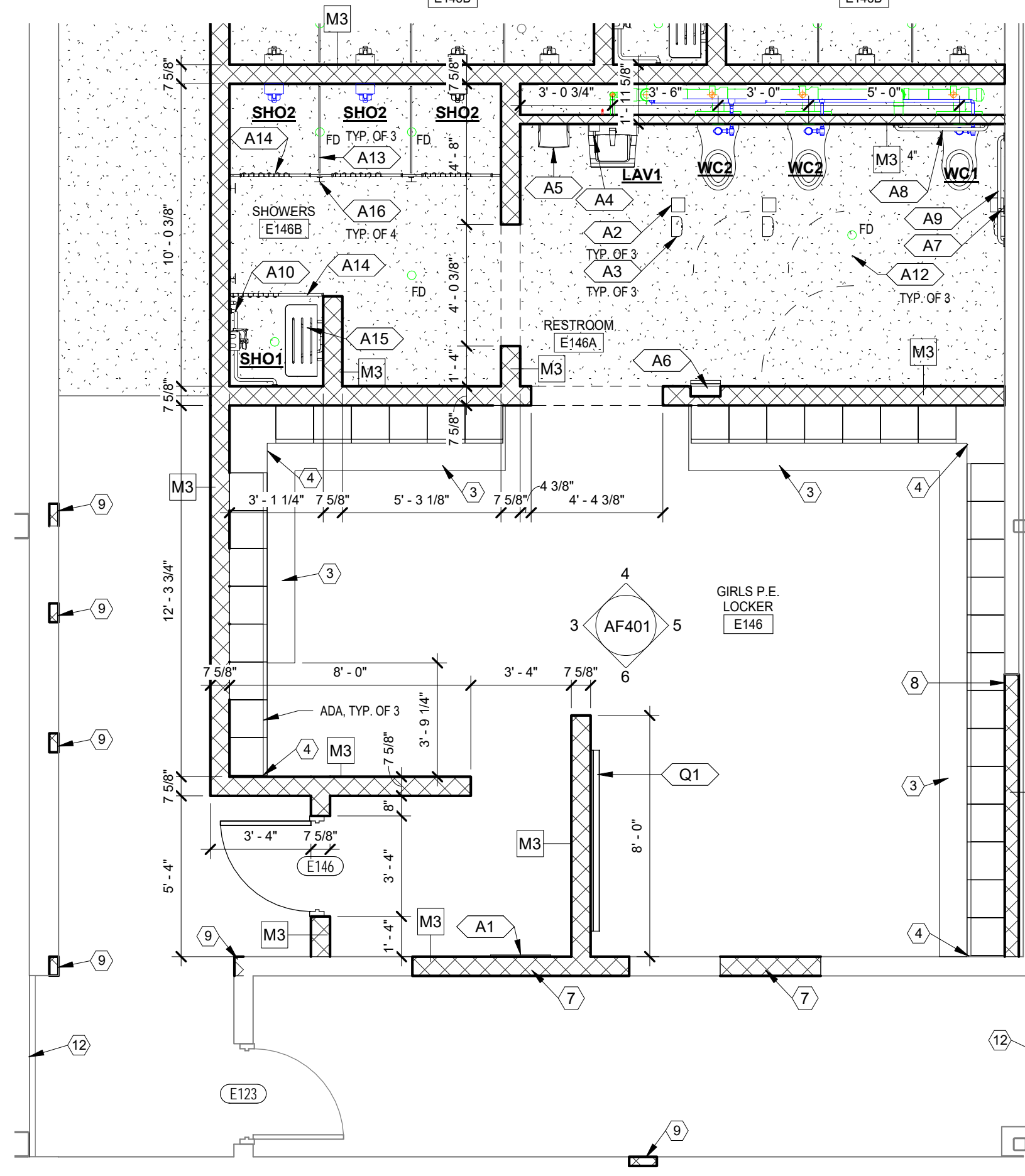
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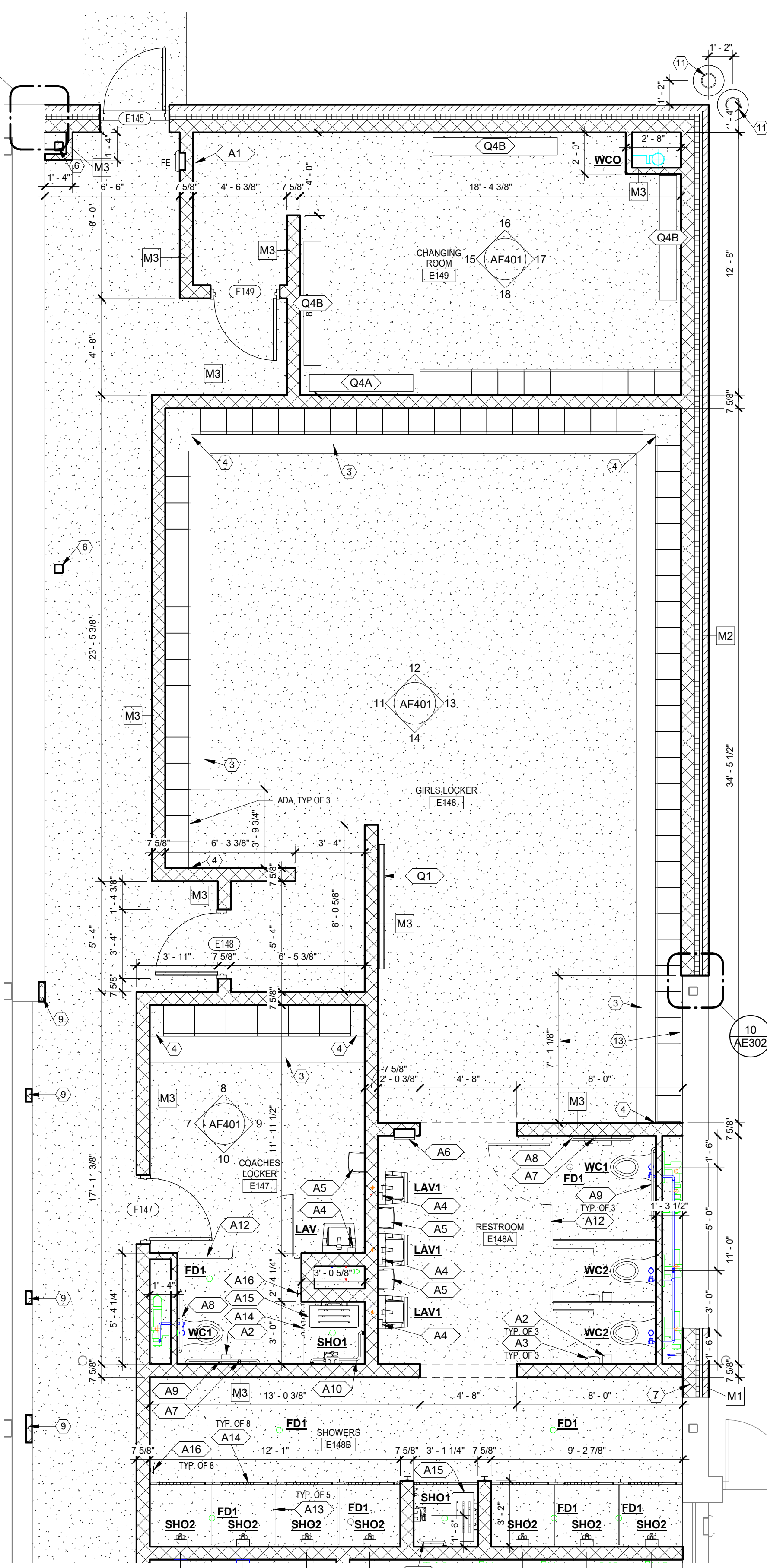
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AF401 SCALE: 1/4\"/>



3 GIRLS LOCKER E146
AF401 SCALE: 1/4\"/>



2 ENLARGED LOCKER ROOMS
AF401 SCALE: 1/4\"/>



1 ENLARGED LOCKER ROOMS
AF401 SCALE: 1/4\"/>

ACCESSORY SCHEDULE						
MARK	DESCRIPTION	W	D	H	MOUNTING HEIGHT	NOTES
A1	MIRROR	24"		60"	16"	A
A2	TOILET PAPER HOLDER				34" (TOP)	A,B
A3	SANITARY NAPKIN DISPOSAL				31" (TOP)	A
A4	SOAP DISPENSER				3' 3" A.F.F.	B
A5	PAPER TOWEL DISPENSER				48"	B
A6	SANITARY NAPKIN/TAMPON DISPENSER					C
A7	GRAB BAR 18"	18"			40" A.F.F.	
A8	GRAB BAR 36"	36"			36" A.F.F.	
A9	GRAB BAR 42"	42"			36" A.F.F.	
A10	GRAB BAR, SHOWER	30"	18"		36"	
A11	URINAL SCREEN					
A12	TOILET PARTITION					
A13	SHOWER STALL, PARTITION					
A14	SHOWER CURTAIN AND ROD					
A15	SHOWER SEAT				18"	
A16	TOWEL HOOK				48"	
A17	TOWEL HOOK STRIP				48"	

NOTES LEGEND
 A SURFACE MOUNTED
 B INSTALL PRODUCT FURNISHED BY OWNER
 C SEMI-RECESSED, COORDINATE MASONRY OPENING

GENERAL NOTES
 1. SEE FURNITURE AND ACCESSORY MOUNTING HEIGHT DETAILS.
 2. VERIFY ALL QUANTITIES AND PRODUCT INFORMATION.

KEYNOTE LEGEND	
1	BASE AS SCHEDULED
2	STANDARD OIL PAINT AS SCHEDULED
3	LOCKER BENCH, SEE DETAIL 18A401
4	METAL LOCKER FILLER PANEL
5	INTERIOR SIGN TYPE C, SEE SHEET AE601
6	STEEL STRUCTURE, PAINT AS SCHEDULED
7	INFILL OPENING AS NECESSARY, MATCH EXISTING MATERIALS AND FINISHES, PATCH WALL FINISHES AS NECESSARY
8	TOOTH-IN MASONRY TO MATCH EXISTING ADJACENT AND INFILL OPENING AS NECESSARY FOR NEW WORK
9	PATCH AND REPAIR WALL WHERE DAMAGE WAS CAUSED BY DEMOLITION
10	BULLNOSE BLOCK, TOOTH IN AND GROUT END CORE FULL FOR UNTEL BEARING
11	GUARD POST, SEE DETAIL 5C-102
12	FLOOR TRANSITION STRIP, REFER TO SPECIFICATIONS FOR TYPES
13	INSTALL CONTRASTIVE BLOCKING A TOP OF SLOPED LOCKER TOP, WRAP BLOCKING WITH METAL TO MATCH LOCKER COLOR

LEGEND	
CONCRETE BLOCK	
BRICK VENEER	
FE	FIRE EXTINGUISHER, SEE SHEET G-100
FD	FLOOR DRAIN, REFER TO PLUMBING DRAWINGS
DF	DRINKING FOUNTAIN, REFER TO PLUMBING
CO	CLEANOUT, REFER TO PLUMBING DRAWINGS



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PLOT SCALE
1/4"=1'-0"
0 2' 4' 6'

ISSUE DATE	
#	DESCRIPTION
1	04.21.20 FOR BIDS

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EVERGREEN HIGH SCHOOL LOCKER ROOM ADDITIONS & RENOVATIONS

ENLARGED GIRL'S LOCKER ROOM PLANS AND ELEVATIONS

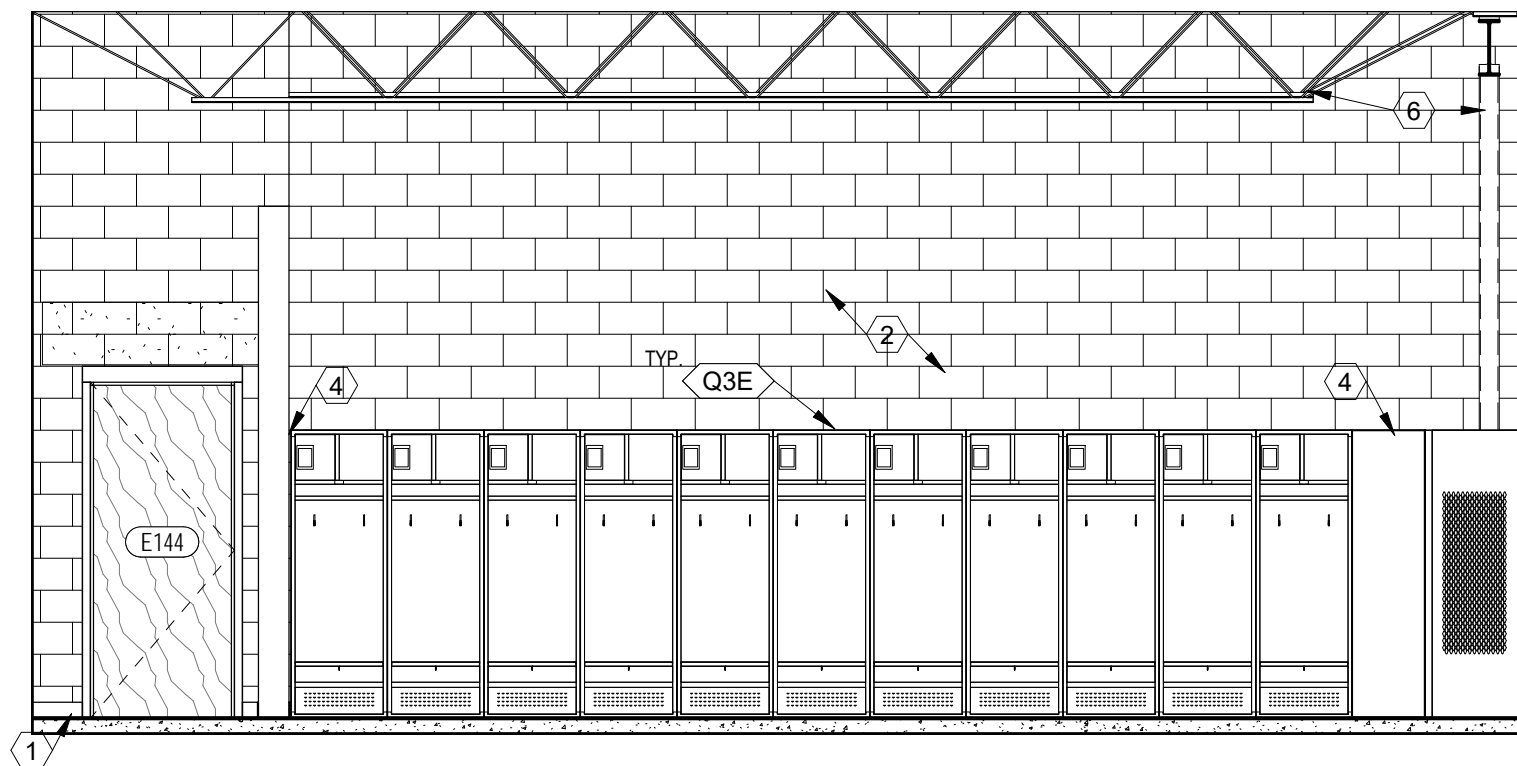
PROJECT: B7-4569

DRAWN BY: KEP

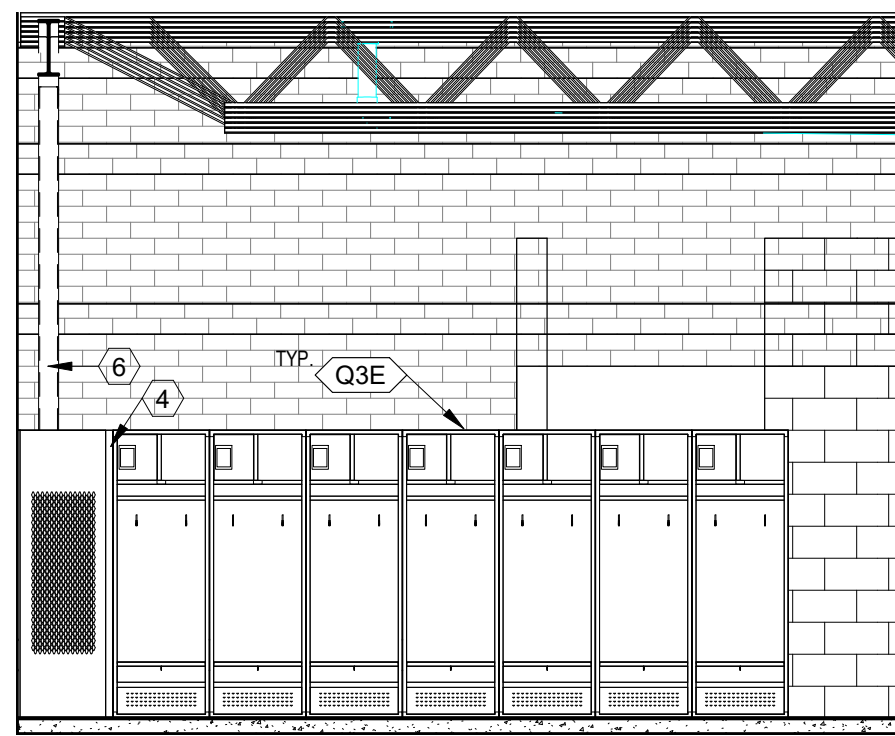
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SHEET

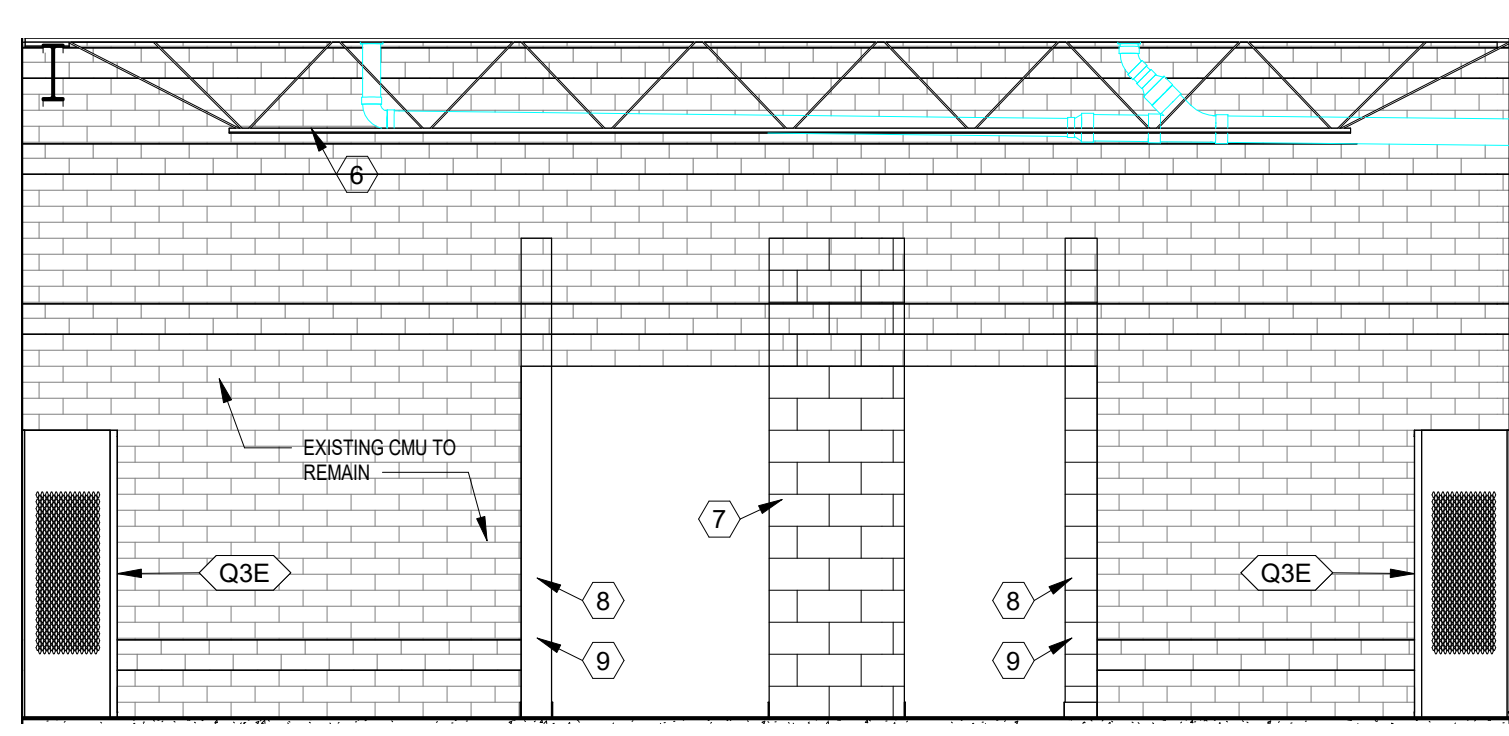
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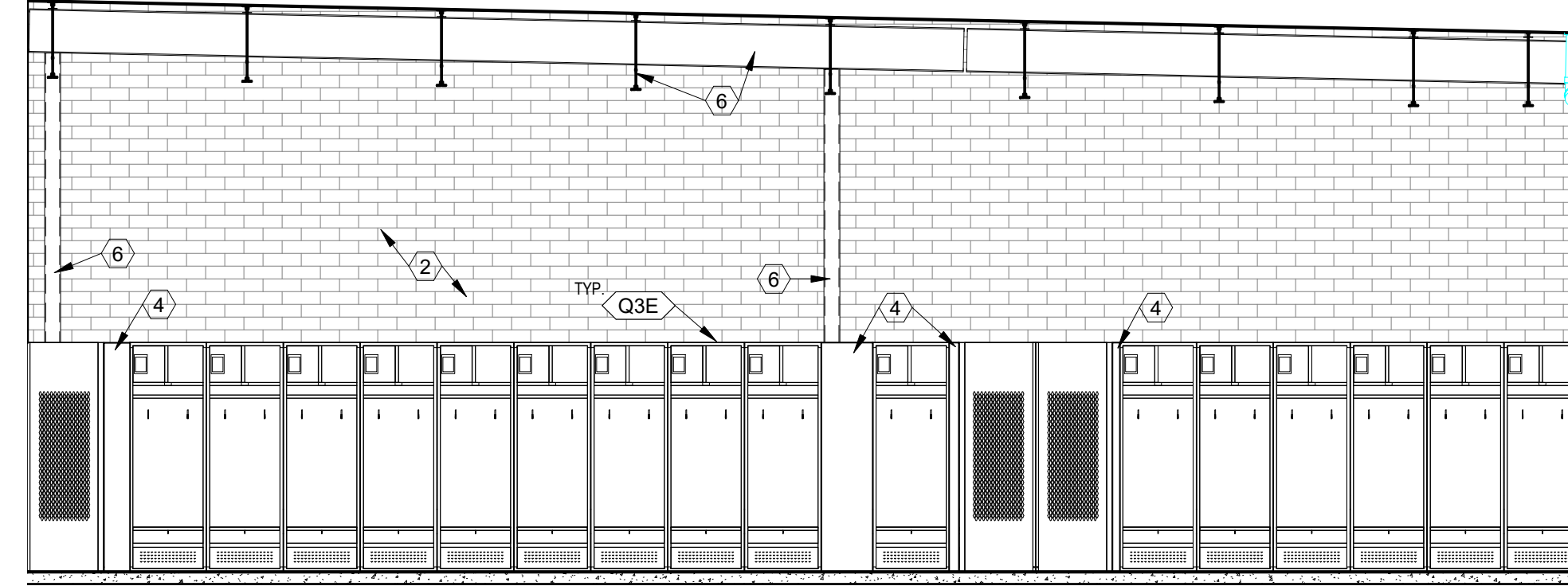
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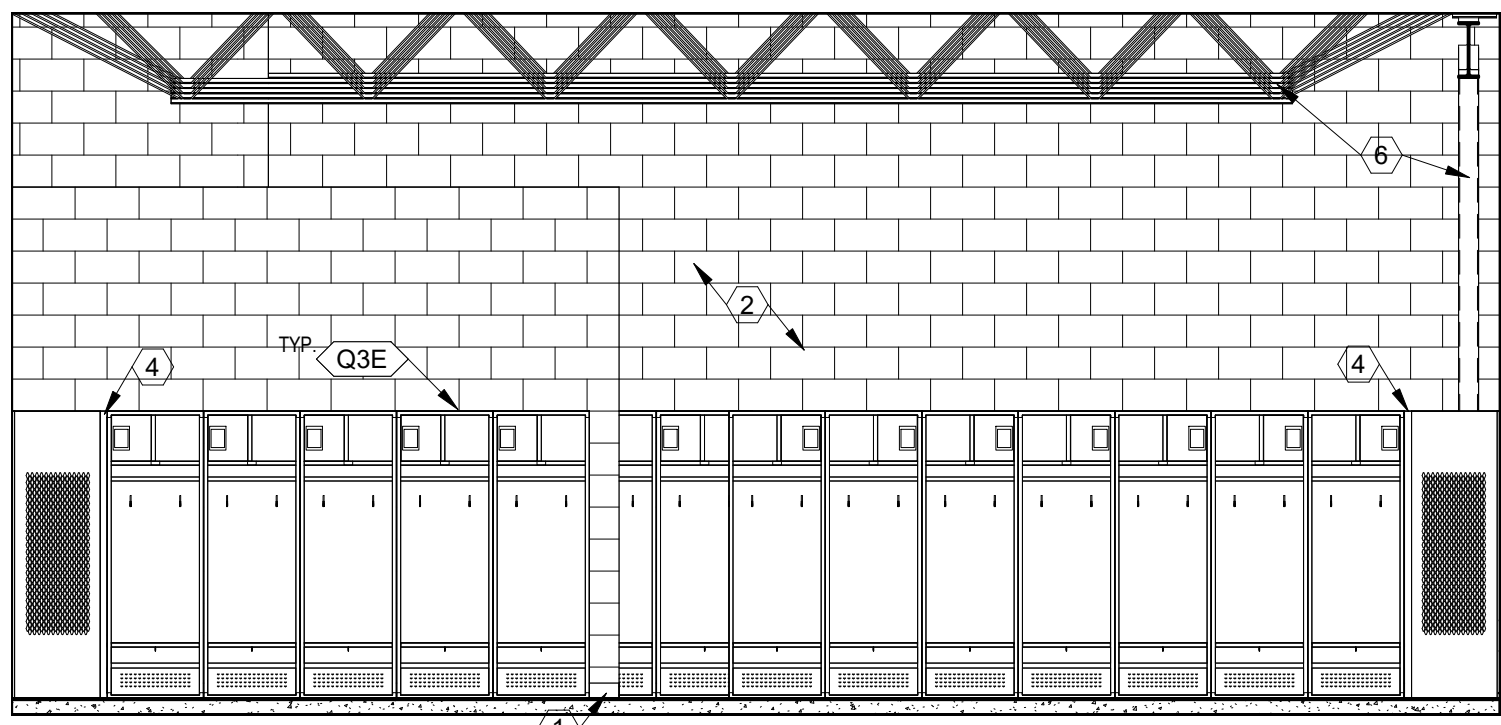
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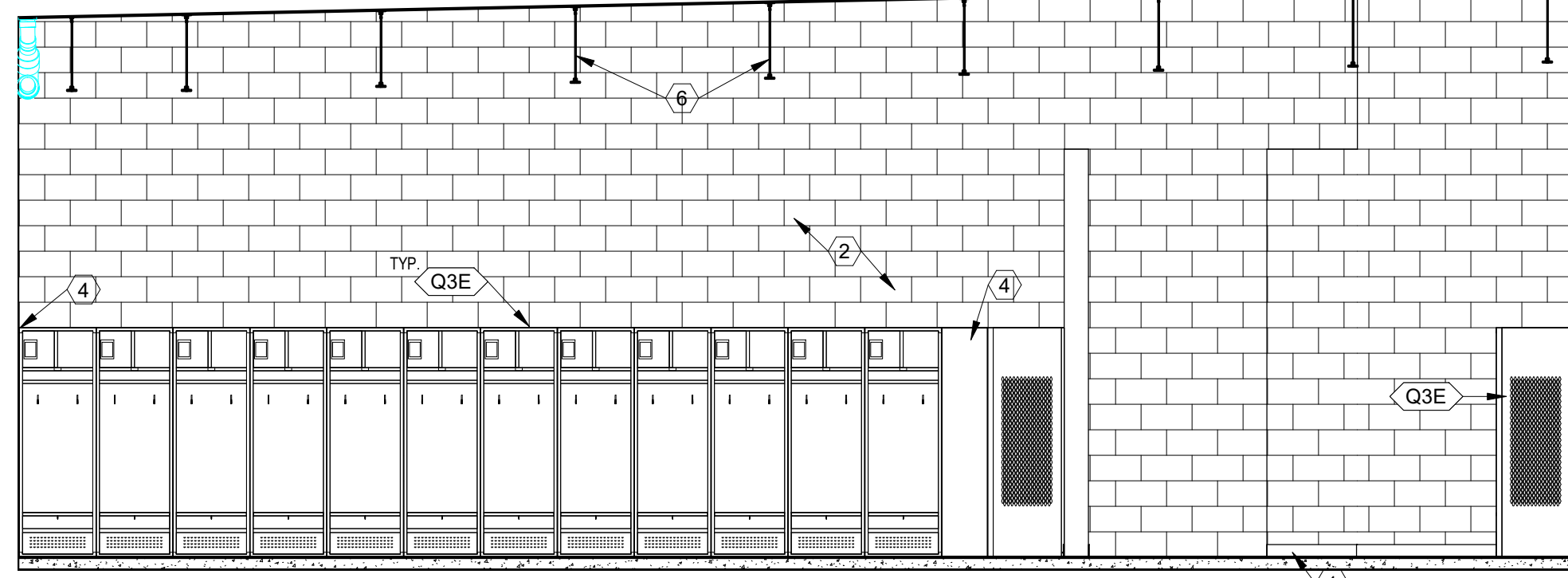
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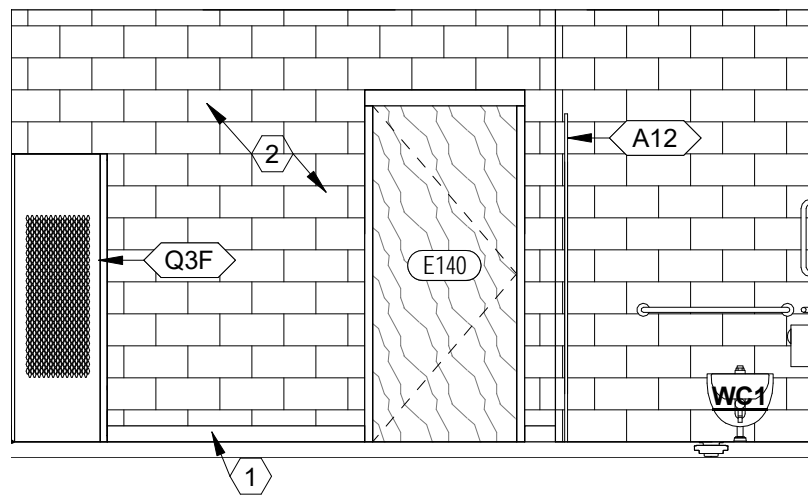
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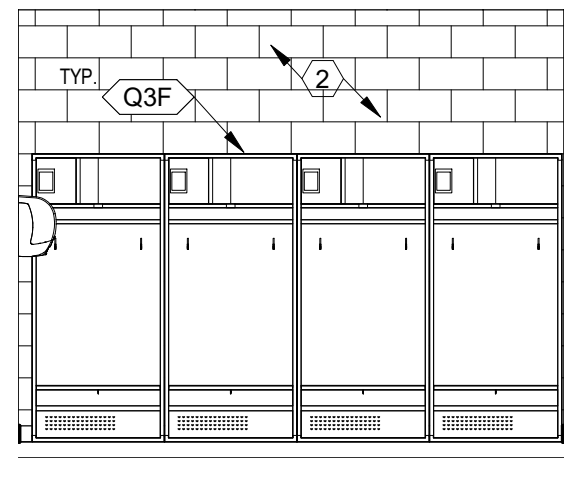
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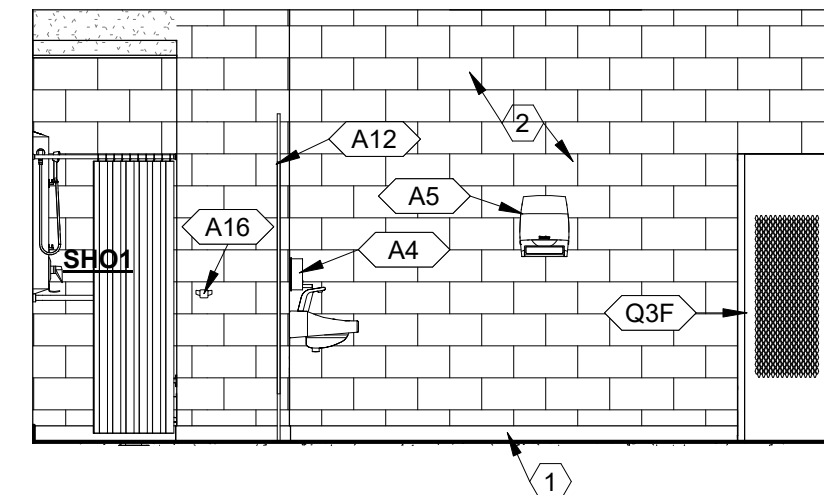
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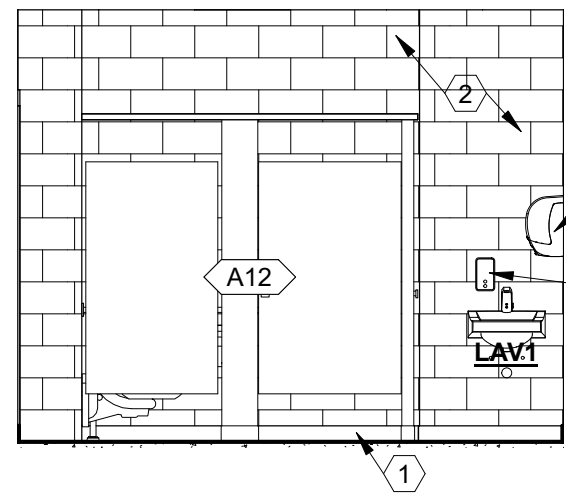
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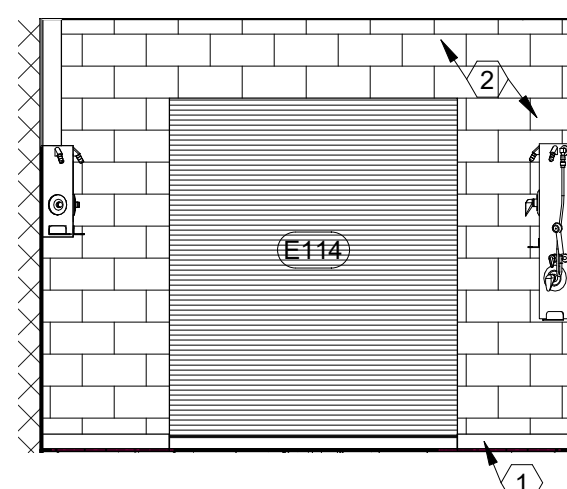
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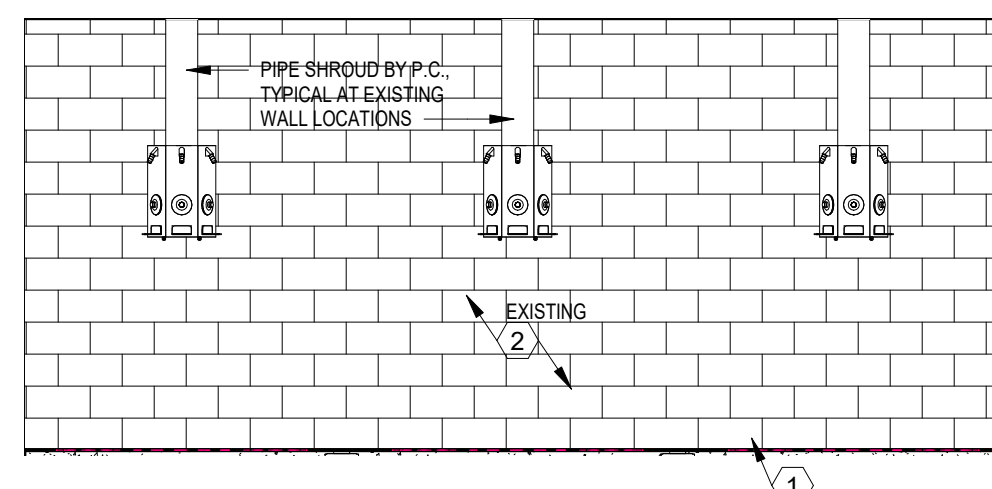
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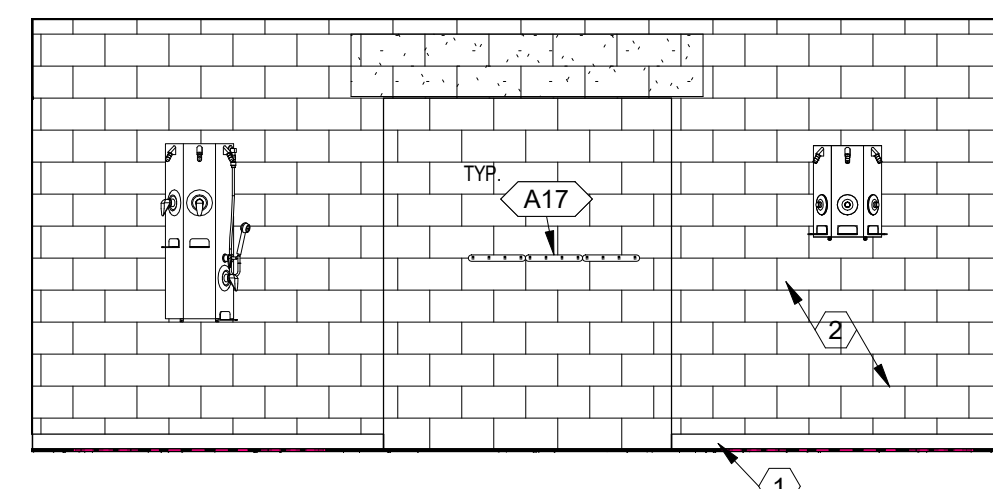
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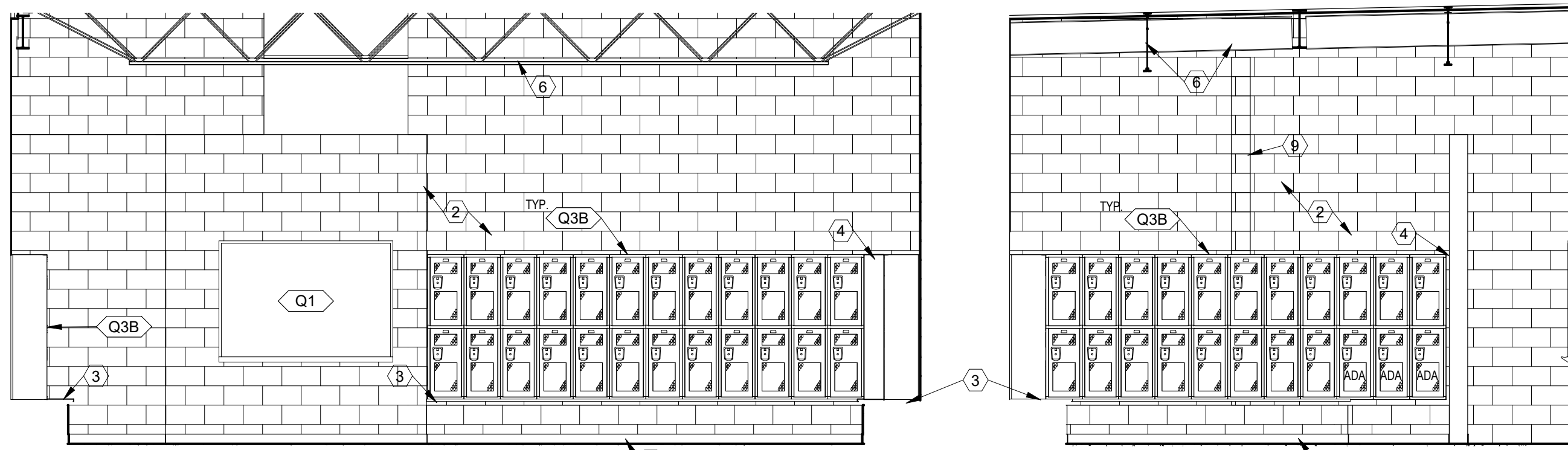
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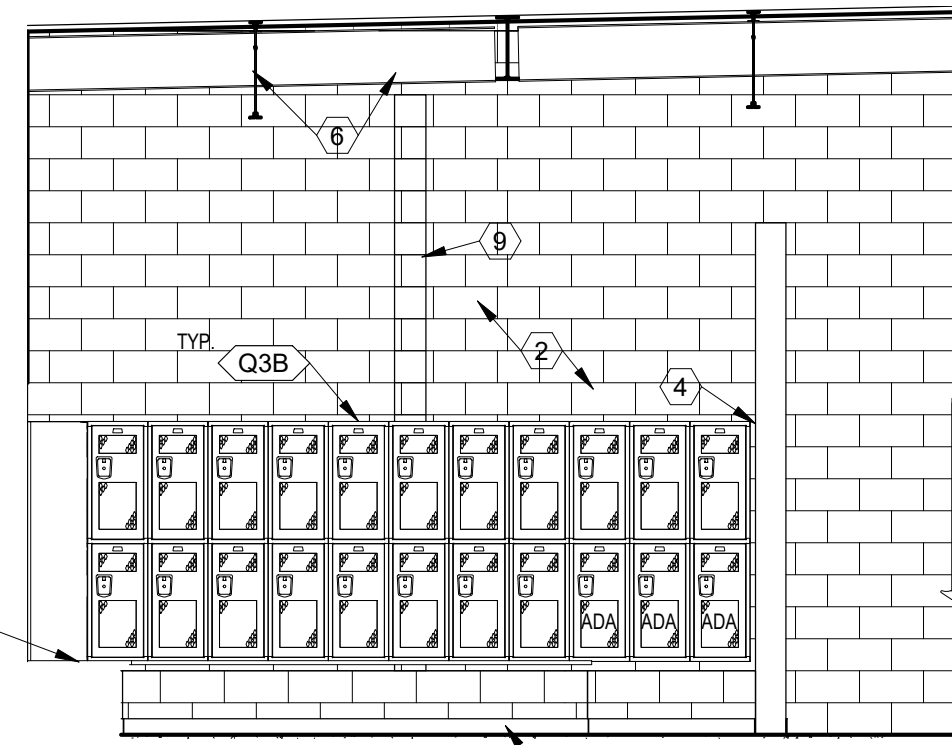
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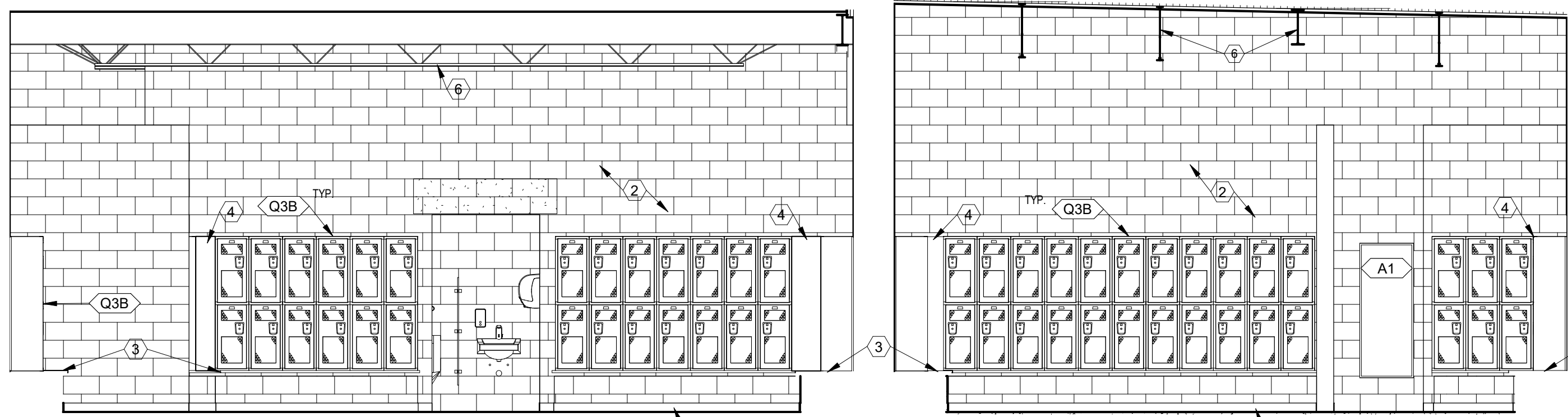
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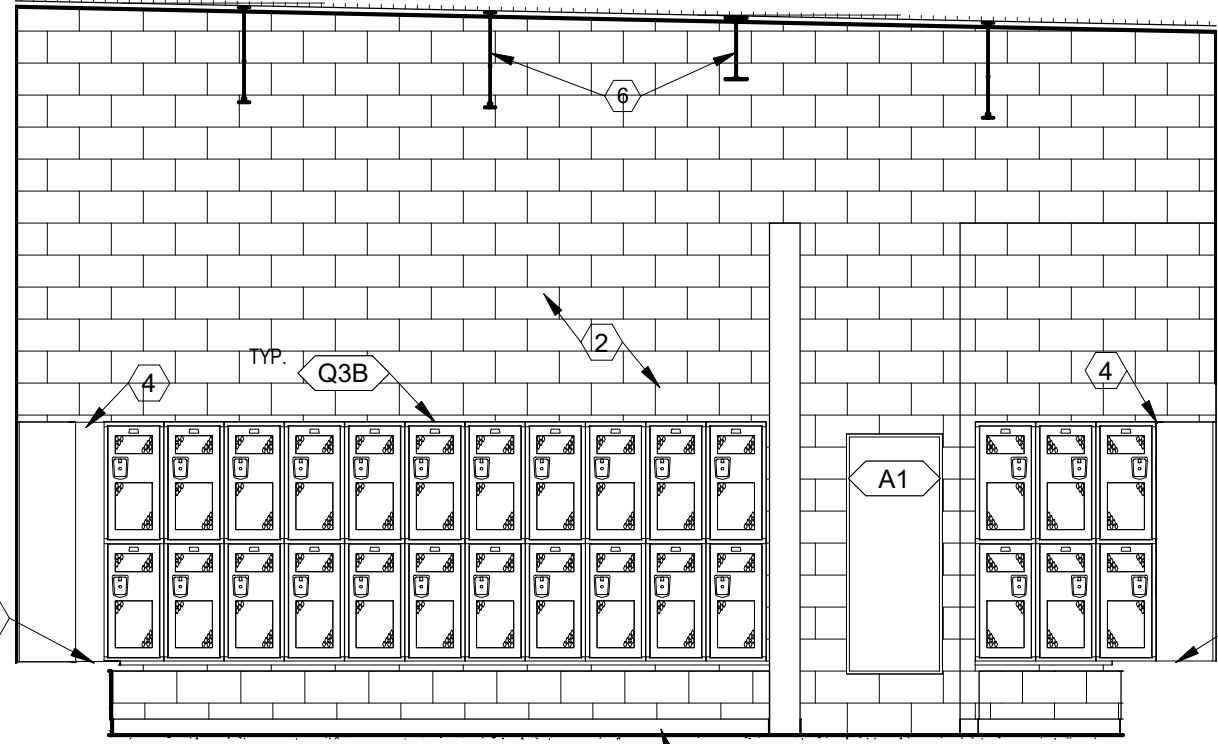
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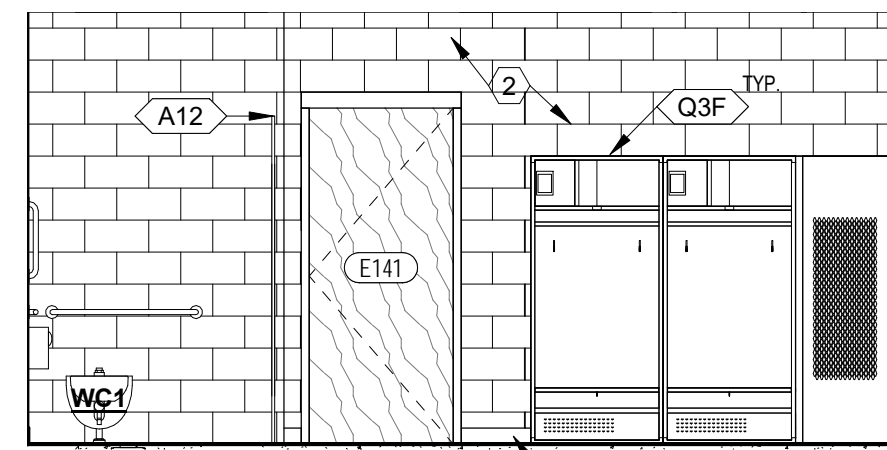
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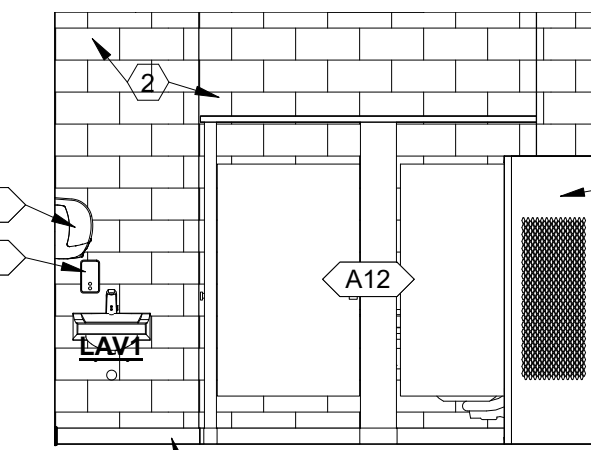
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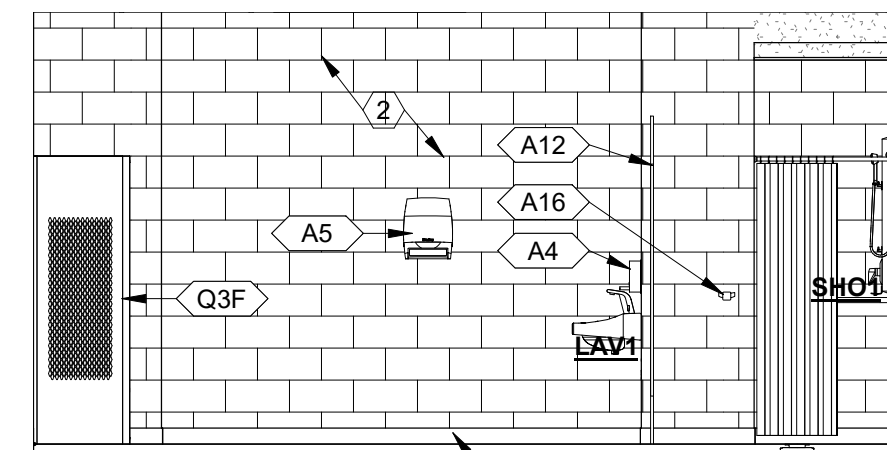
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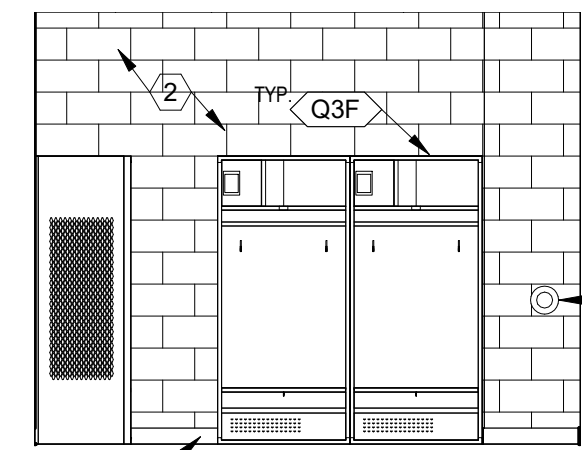
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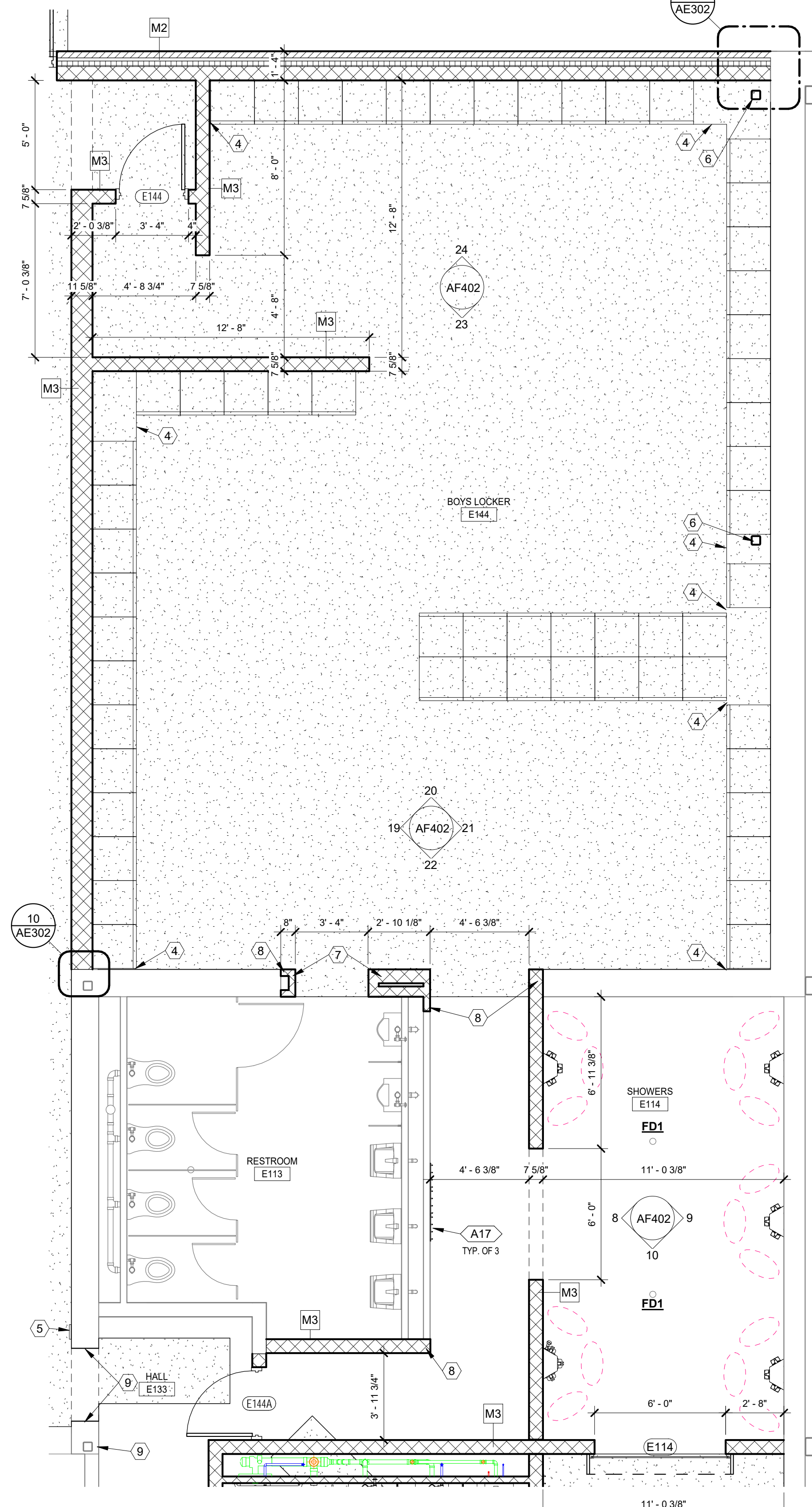
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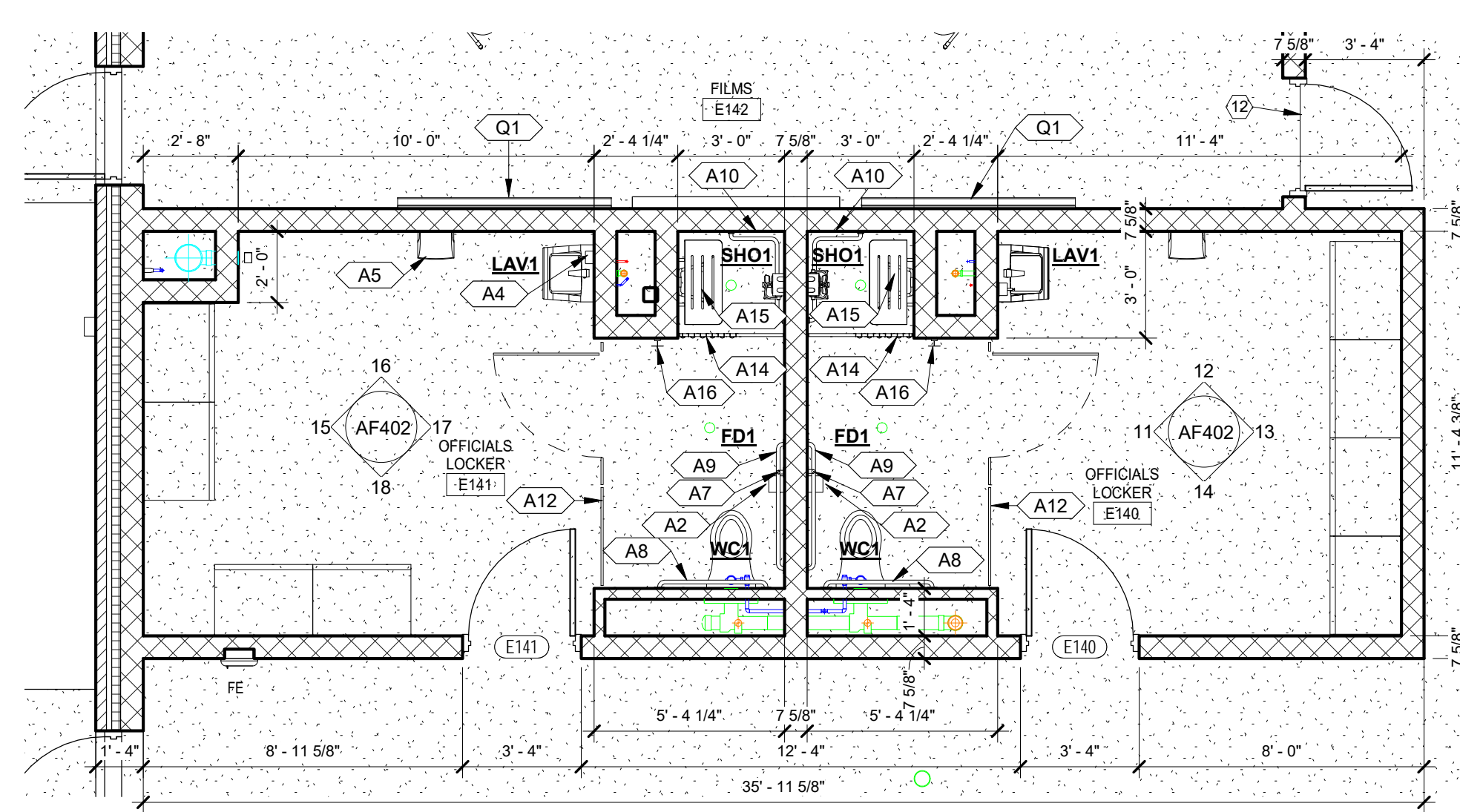
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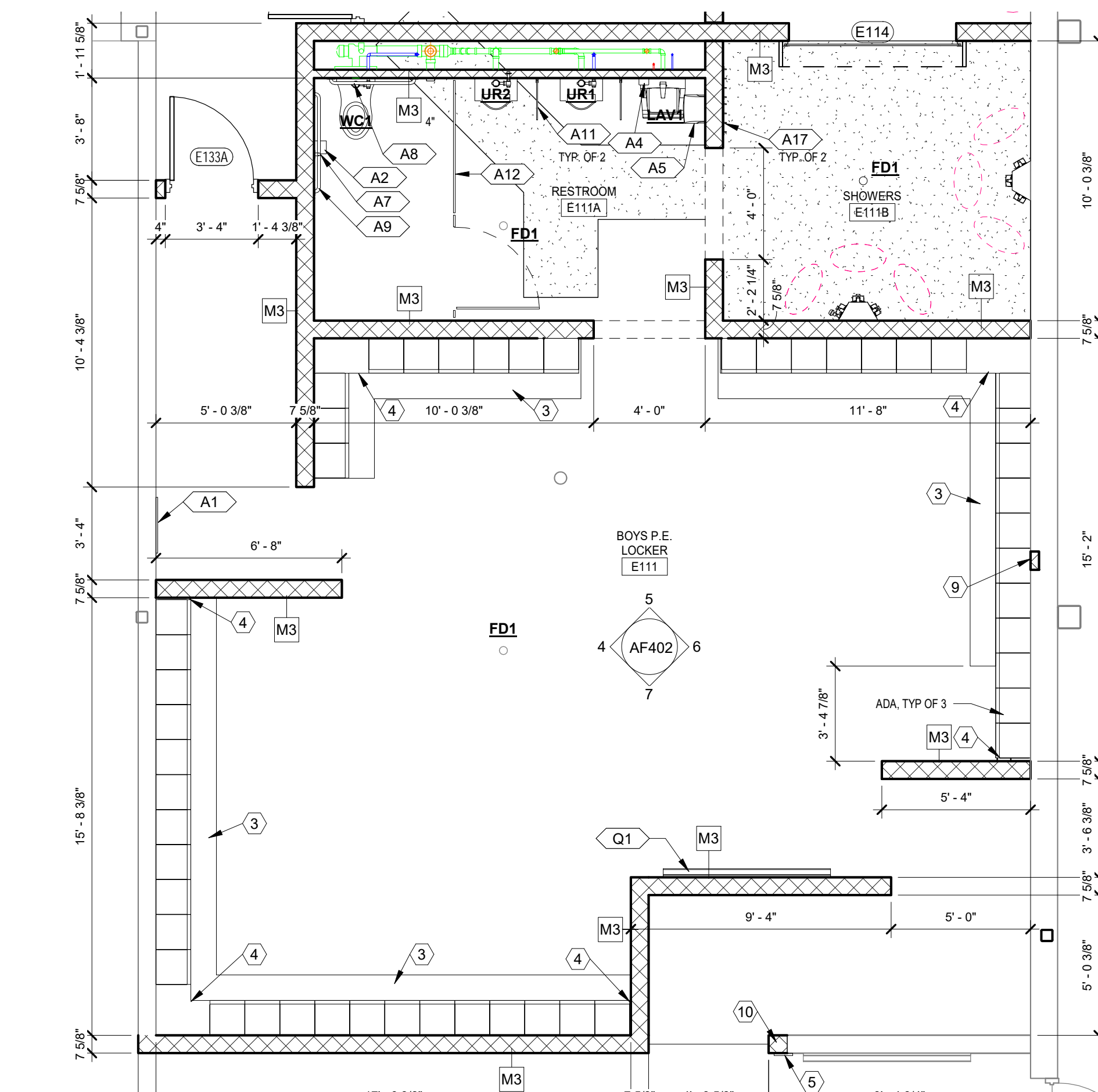
15 OFFICIALS LOCKER E141
AF402 SCALE: 1/4" = 1'-0"



3 ENLARGED LOCKER ROOMS
AE101 SCALE: 1/4" = 1'-0"



2 ENLARGED LOCKER ROOMS
AE101 SCALE: 1/4" = 1'-0"



1 ENLARGED LOCKER ROOMS
AE101 SCALE: 1/4" = 1'-0"

KEYNOTE LEGEND

- 1 BASE AS SCHEDULED
- 2 STANDARD CMU, PAINT AS SCHEDULED
- 3 LOCKER BENCH, SEE DETAIL 19AF401
- 4 METAL LOCKER FILLER PANEL
- 5 INTERIOR SIGN TYPE C, SEE SHEET AE601
- 6 STEEL STRUCTURE, PAINT AS SCHEDULED
- 7 INFILL OPENING AS NECESSARY, MATCH EXISTING MATERIALS AND FINISHES, PATCH WALL FINISHES AS NECESSARY
- 8 TOOTH-IN MASONRY TO MATCH EXISTING ADJACENT AND INFILL OPENING AS NECESSARY FOR NEW WORK
- 9 PATCH AND REPAIR WALL WHERE DAMAGE WAS CAUSED BY DEMOLITION
- 10 BULLNOSE BLOCK, TOOTH-IN AND GROUT END CORE FULL FOR UNTEL BEARING
- 11 GUARD POST, SEE DETAIL VC-102
- 12 FLOOR TRANSITION STRIP, REFER TO SPECIFICATIONS FOR TYPES
- 13 INSTALL CONTINUOUS BLOCKING A TOP OF SLOPED LOCKER TOP, WRAP BLOCKING WITH METAL TO MATCH LOCKER COLOR



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PLOT SCALE
1/4"=1'-0"
0 2' 4' 6'

ISSUE DATE
Date DESCRIPTION
1 04.21.20 FOR BIDS

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EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS
14544 COUNTY ROAD 6, METAMORA, OH 43540

ENLARGED BOY'S
LOCKER ROOM
PLANS AND
ELEVATIONS

PROJECT: B7-4569

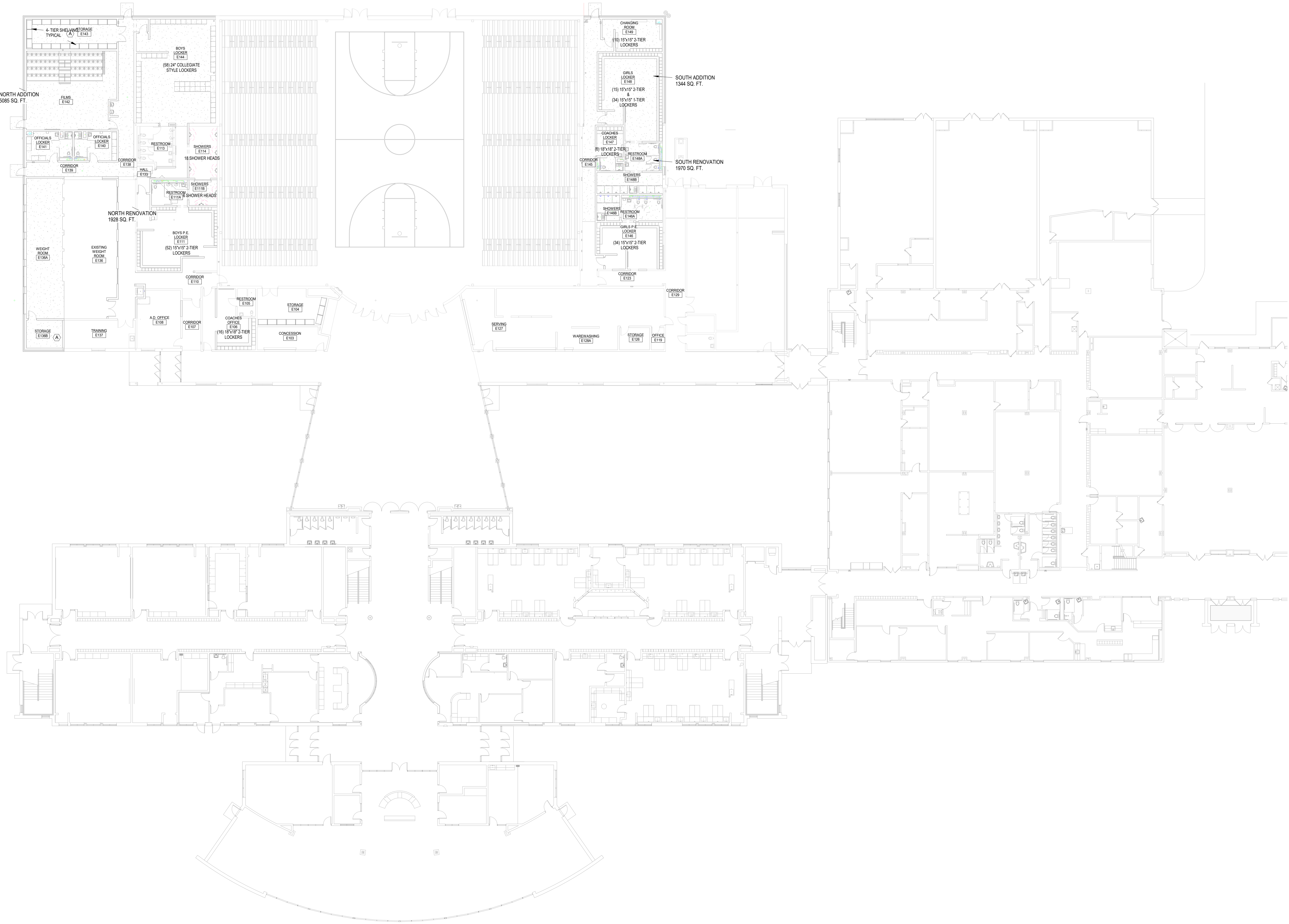
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AF402

20 OF 46



KEYNOTE LEGEND

- (A) SYSTEM SERVING THE INDICATED AREA SHALL BE HYDRAULICALLY CALCULATED BASED ON THE FOLLOWING CRITERIA: ORDINARY HAZARD GROUP 1 OCCUPANCY WITH A DENSITY OF 0.15 GPM PER SQUARE FOOT OVER THE MOST REMOTE 1500 SQUARE FOOT AREA. ALLOW 250 GPM FOR FIRE HOSE DEMAND. MAXIMUM SPRINKLER SPACING 150 SQUARE FEET.

GENERAL FIRE PROTECTION NOTES

1. PROVIDE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS FOR USE IN OBTAINING REQUIRED APPROVALS. FOR COORDINATION WITH OTHER TRADES, AND FOR FABRICATION AND INSTALLATION OF MATERIALS AND EQUIPMENT.
2. EXCEPT WHERE NOTED OTHERWISE, THE SYSTEM SHALL BE HYDRAULICALLY CALCULATED BASED ON THE FOLLOWING CRITERIA: LIGHT HAZARD OCCUPANCY WITH A DENSITY OF 0.10 GPM PER SQUARE FOOT OVER THE MOST REMOTE 1500 SQUARE FOOT AREA. ALLOW 100 GPM FOR FIRE HOSE DEMAND. MAXIMUM SPRINKLER SPACING 225 SQUARE FEET.
3. ALL OCCUPANCIES SHALL BE CONFIRMED WITH THE OWNER'S INSURANCE COMPANY.
4. PROVIDE AN INSPECTORS TEST CONNECTION PER NFPA 13 AT THE MOST REMOTE POINT OF THE SYSTEM.
5. THE FIRE PROTECTION PLAN SHOWN IS A SCHEMATIC DIAGRAM ONLY. THE FINAL RISER AND SYSTEM DESIGN COVERAGES AND DENSITIES AND CALCULATIONS SHALL BE BY A LICENSED FIRE PROTECTION CONTRACTOR.
6. THE ENTIRE FIRE PROTECTION SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13.
7. EXTENDING FIRE PROTECTION PIPING FROM EXISTING BUILDING INTO NEW SPACES. VERIFY EXISTING LAYOUT AND CAPACITY.



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PLOT SCALE
1/16"=1'-0"
0 8' 16' 24'

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EVERGREEN HIGH SCHOOL LOCKER ROOM ADDITIONS & RENOVATIONS

14544 COUNTY ROAD 6, METAMORA, OH 43540

FIRE PROTECTION PLAN

PROJECT: B7-4569

DRAWN BY: KEP

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FP110

21 OF 46



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KEYNOTE LEGEND		GENERAL PLUMBING NOTES		LEGEND	
1	IN LIEU OF TRAP REMOVAL CONNECTION, PROVIDE A BARRIER-TYPE TRAP SEAL PROTECTION DEVICE.	1	FIELD VERIFY EXACT LOCATIONS OF NEW MATERIALS AND COORDINATE WITH OTHER TRADES PRIOR TO FABRICATING OR INSTALLING WORK.	SANITARY WASTE	
2	CONNECT NEW SANITARY INTO EXISTING SYSTEM. VERIFY SIZE AND INVERT IN THE FIELD.	2	PROVIDE INDIVIDUAL, SHUTOFF VALVES AT HW AND CW SUPPLY LINES FOR FIXTURES. PROVIDE BALL VALVES ON BRANCH LINES TO PROVIDE TWO OR MORE TURNS. LOCATE VALVES IN AREAS ABOVE REMOVABLE CEILING, OR PROVIDE ACCESS PANELS AS NON-REMOVABLE CEILING. IN ORDER TO PROVIDE EASY ACCESSIBILITY, COORDINATE WITH REFLECTED CEILING PLAN.	COLD WATER	
3	CONNECT NEW SUPPLY PIPING INTO EXISTING SYSTEM. VERIFY SIZE IN THE FIELD.	3	PROVIDE AND INSTALL VACUUM BREAKERS AND ANTI-SIPHON DEVICES AT FIXTURES WHERE REQUIRED BY APPLICABLE CODES.	HOT WATER RETURN	
4	INSTALL SUPPLY HEADER IN PLUMBING CHASE FOR FIXTURES. PROVIDE SHUTOFF VALVE FOR SUPPLY LINE ABOVE CEILING.	4	INSTALL WATER HAMMER ARRESTORS AT LOCATIONS WHERE QUICK CLOSING VALVES ARE USED. ARRESTORS MUST BE ACCESSIBLE FOR REPAIR OR REPLACEMENT.	NATURAL GAS	
5	COMBINATION ROOF MAN/OVERFLOW DRAIN. SEE DETAIL, ROOF PLAN OVERFLOW DRAIN TO HAVE INTERNAL 2" DIA. SEE DETAIL, 13P-401.	5	COORDINATE FAUCET AND DRAIN REQUIREMENTS FOR SINKS AND LAVATORIES. PROVIDE SINK OUT-UT TEMPLATES FOR COUNTERTOP LOCATIONS.	STORM	
6	OVERFLOW DRAIN OR NOZZLE FROM STORM LEADER. SEAL TO MASONRY WITH SEALANT. SEE DETAIL, 13P-401.	6	SEE SHEET A410 FOR FIXTURE MOUNTING HEIGHTS.	VENT	
7	EXTEND GAS PIPING TO NEW ROOF TOP PLAN FROM NEAREST LOCATION OF ADEQUATE CAPACITY. VERIFY REQUIRED LOAD AND PRESSURE REQUIREMENTS WITH HVAC CONTRACTOR, AND VERIFY CURRENT PIPING LOCATIONS IN THE FIELD.	7	VERIFY INVERT SHOWN ON DRAWINGS PRIOR TO INSTALLING UNDERSLAB PIPING. COORDINATE INVERTS WITH SITE DRAWINGS. ADJUST AS NECESSARY.	SHUT-OFF VALVE	
8	STORM PIPING DROP.	8	COORDINATE VENT TRUB ROOF LOCATIONS WITH ROOF MOUNTED HVAC EQUIPMENT. MAINTAIN REQUIRED DISTANCES FROM OUTDOOR AIR INTAKES.	CHECK VALVE	
			PLUMBING VENTS EXTENDED THROUGH ROOF SHALL HAVE CAP AND INSECT SCREEN. REFER TO ROOF PLAN AND PLUMBING ISOMETRICS FOR VENT LOCATIONS.	BALANCING VALVE	
			VENT AND BRANCH VENT PIPES SHALL BE GRADED AND CONNECTED TO DRAIN BACK TO THE DRAINAGE PIPE BY GRAVITY.	UNION	
			COORDINATE WORK FOR HVAC EQUIPMENT CONDENSATE LINE RUNS TO FLOOR DRAINS AND FLOOR DRAIN LOCATIONS WITH HVAC DRAWINGS.	FD	
			U.N.O. SET FLOOR DRAINS AT 1/2" BELOW CONCRETE SLAB. COORDINATE WITH CONCRETE WORK.	CO	
			COORDINATE FLOOR DRAIN HEIGHT REQUIREMENTS WITH FLOOR FINISHES. REFER TO ROOM/FINISH SCHEDULE AND FLOORING PLANS.	WCO	
			VERIFY GAS LINE SIZES BASED ON EQUIPMENT LOAD AND PRESSURE REQUIREMENTS AND LOCATION DISTANCES FROM POINT OF DELIVERY. REVISE PIPE SIZES AS REQUIRED TO MAINTAIN PROPER FLOW AND PRESSURE. ARCHITECT MUST APPROVE ALL SIZE CHANGES TO GAS PIPING. SUBMIT SIZE REVISIONS FOR APPROVAL.	GCO	
			NATURAL GAS PIPING INSTALLED IN CONCEALED SPACES AND IN RETURN AIR PLUMBING MUST HAVE WELDED JOINTS AND FITTINGS. NO VALVES SHALL BE INSTALLED IN CONCEALED SPACES AND/OR PLUMBING	N.V.	
			IN COMPLIANCE WITH UPC 704.3, HORIZONTAL BRANCHES SHALL CONNECT TO THE BASES OF STACKS AT A POINT (LOA) NOT LESS THAN 10 TIMES THE DIAMETER OF THE DRAINAGE STACK.	N.C.	

KRAIG A. BELTHAUS, LICENSE #9482
EXPIRATION DATE 12/31/2021

BA

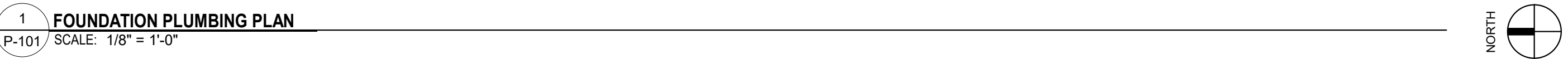
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PLOT SCALE
1/8" = 1'-0"

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80.3 62.11

ISSUE DATE	
#	DESCRIPTION
1	04.08.20 REVIEW SET
2	04.21.20 FOR BIDS





1 PLUMBING SUPPLY PLAN
P-111 SCALE: 1/8" = 1'-0"

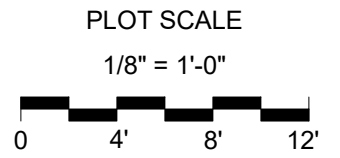


KEYNOTE LEGEND

- 1 IN LIEU OF TRAP PRIMER CONNECTION, PROVIDE A BARRIER-TYPE TRAP SEAL PROTECTION DEVICE.
- 2 CONNECT NEW SANITARY INTO EXISTING SYSTEM, VERIFY SIZE AND INVERT IN THE FIELD.
- 3 CONNECT NEW SUPPLY PIPING INTO EXISTING SYSTEM, VERIFY SIZE IN THE FIELD.
- 4 INSTALL SUPPLY HEADER IN PLUMBING CHASE FOR FIXTURES, PROVIDE SHUT-OFF VALVE FOR SUPPLY LINE ABOVE CEILING.
- 5 COMBINATION ROOF MAN/VERFLOW DRAINS, SEE DETAIL, ROOF PLAN, OVERFLOW DRAIN TO HAVE INTERNAL 2" DAM, SEE DETAIL, 13P-401.
- 6 OVERFLOW DRAIN OR NOZZLE FROM STORM LEADER, SEAL TO MASONRY WITH SEALANT, SEE DETAIL 13P-401.
- 7 EXTEND GAS PIPING TO NEW ROOF TOP UNIT FROM NEAREST LOCATION OF ADEQUATE CAPACITY, VERIFY REQUIRED LOAD AND PRESSURE REQUIREMENTS WITH HVAC CONTRACTOR, AND VERIFY CURRENT PIPING LOCATIONS IN THE FIELD.
- 8 STORM PIPING DROP.



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1 04.08.20 REVIEW SET

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EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS
14544 COUNTY ROAD 6, METAMORA, OH 43540

PLUMBING SUPPLY
PLAN

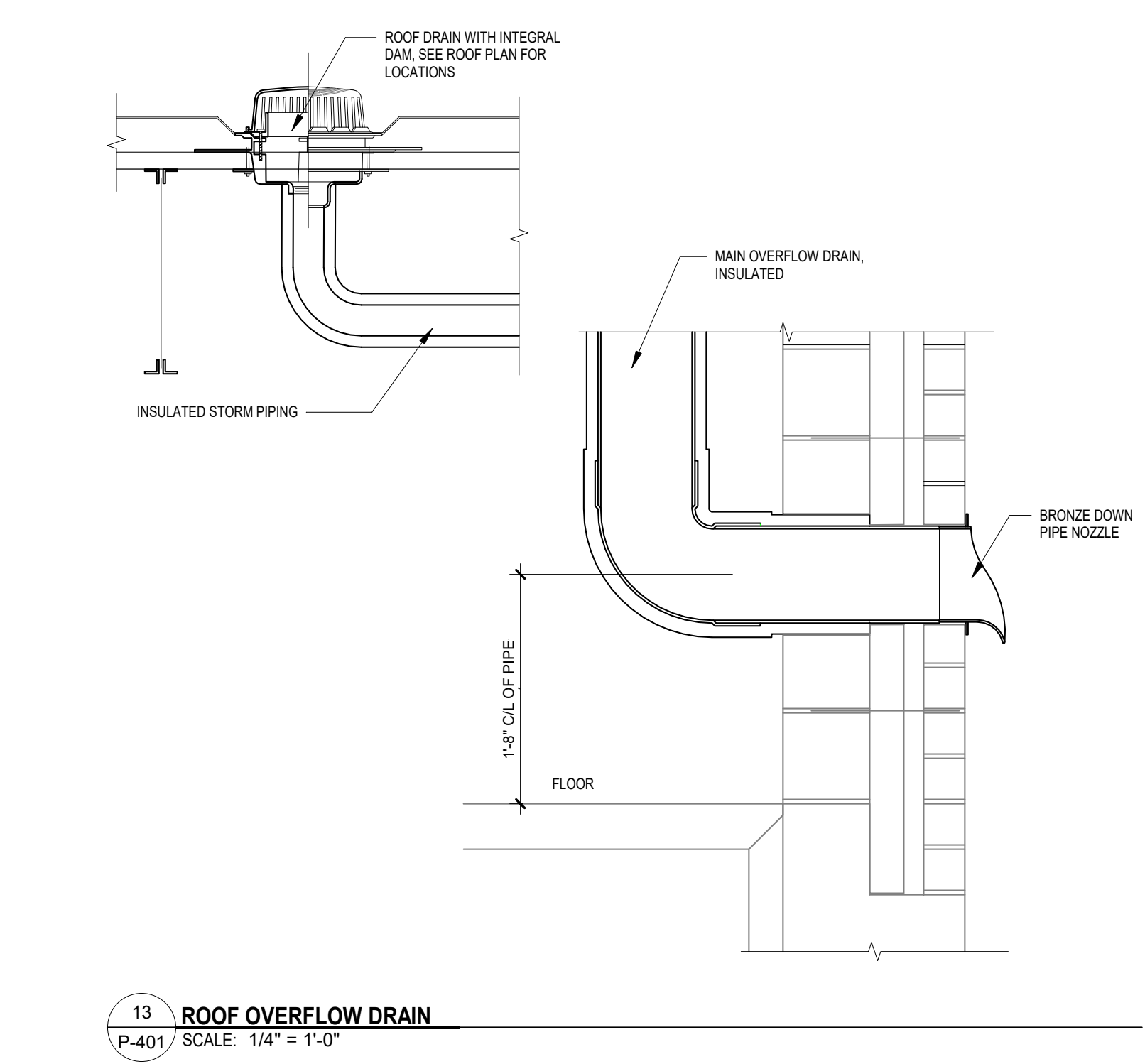
PROJECT: B7-4569

DRAWN BY: KEP

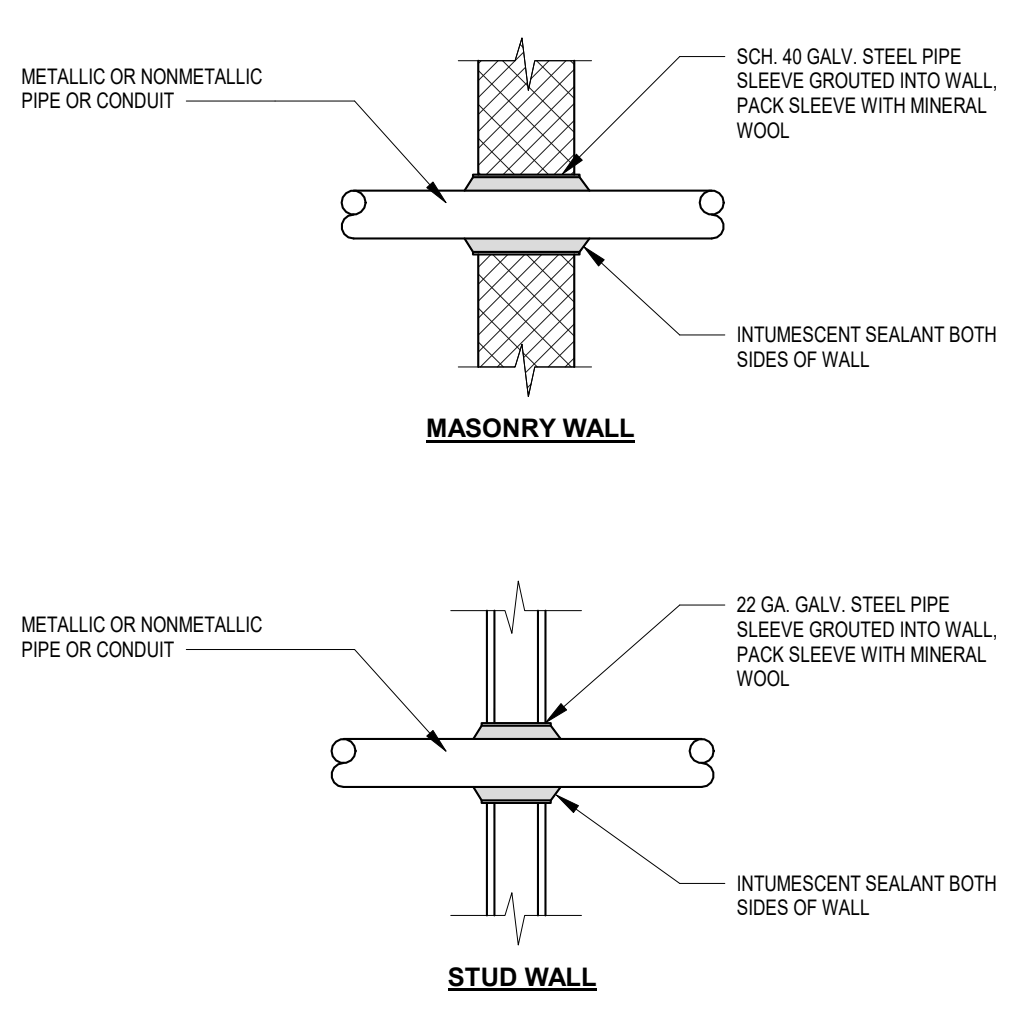
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SHEET

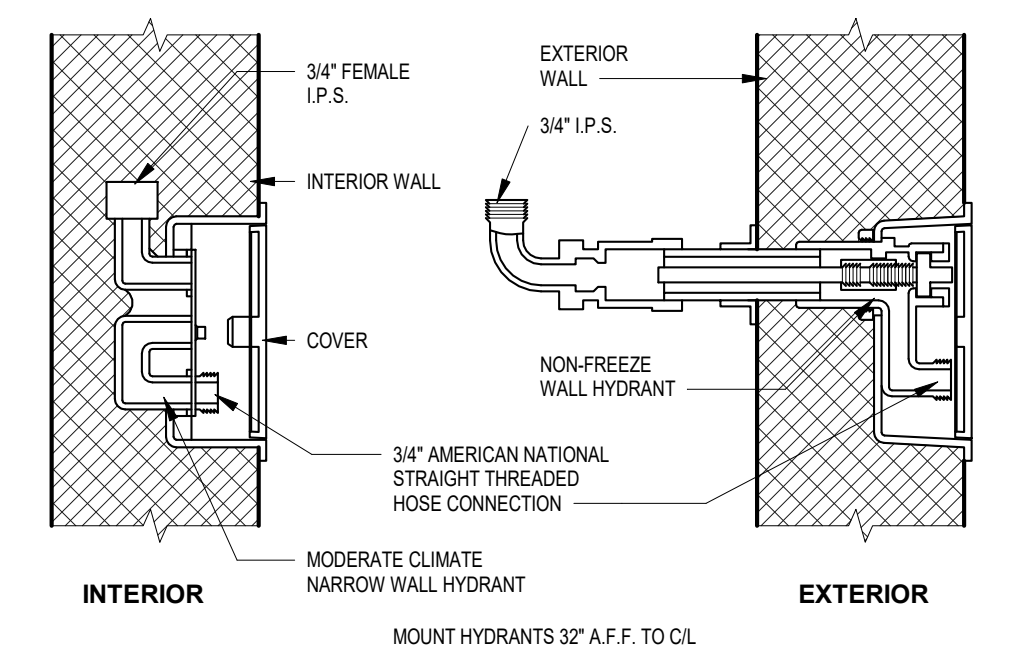
P-111



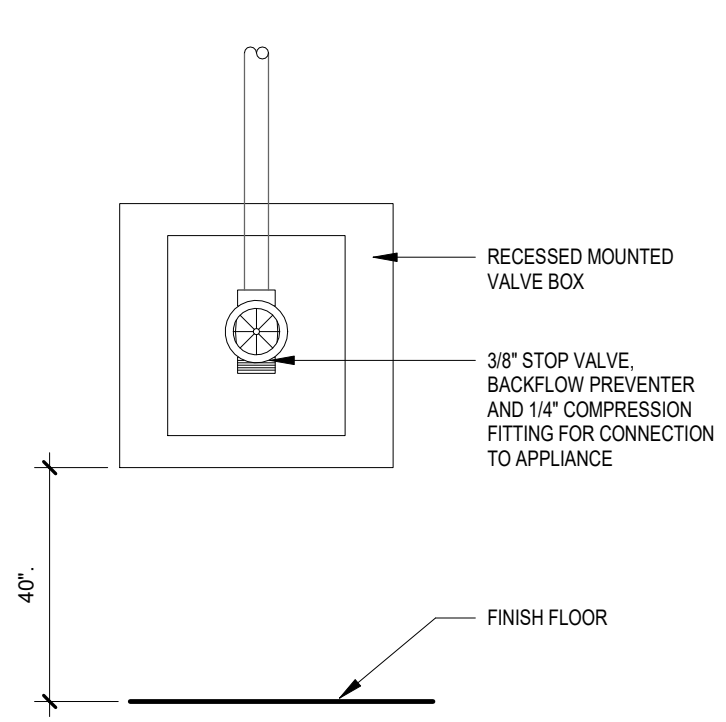
13 ROOF OVERFLOW DRAIN
P-401 / SCALE: 1/4" = 1'-0"



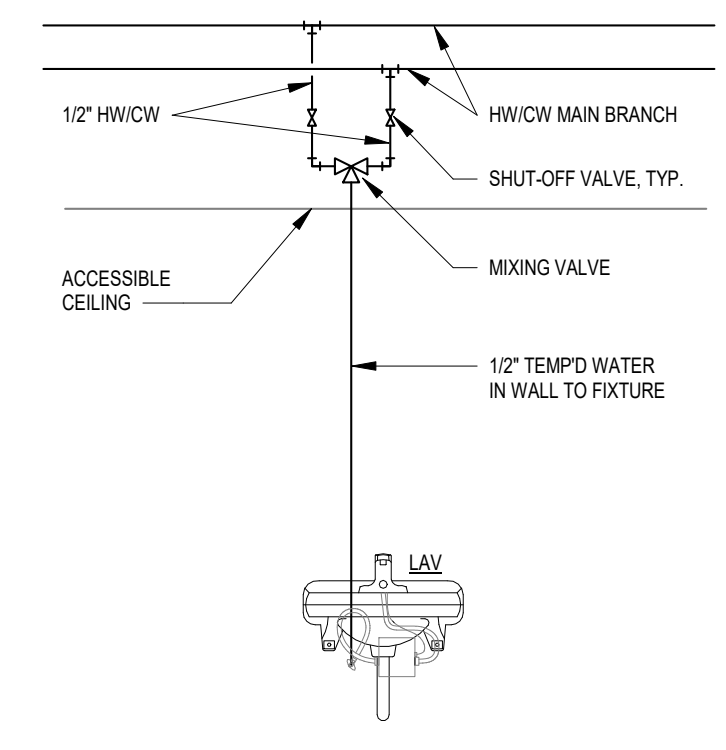
12 THROUGH-WALL PENETRATION FIRESTOP
P-401 / SCALE: 1/4" = 1'-0"



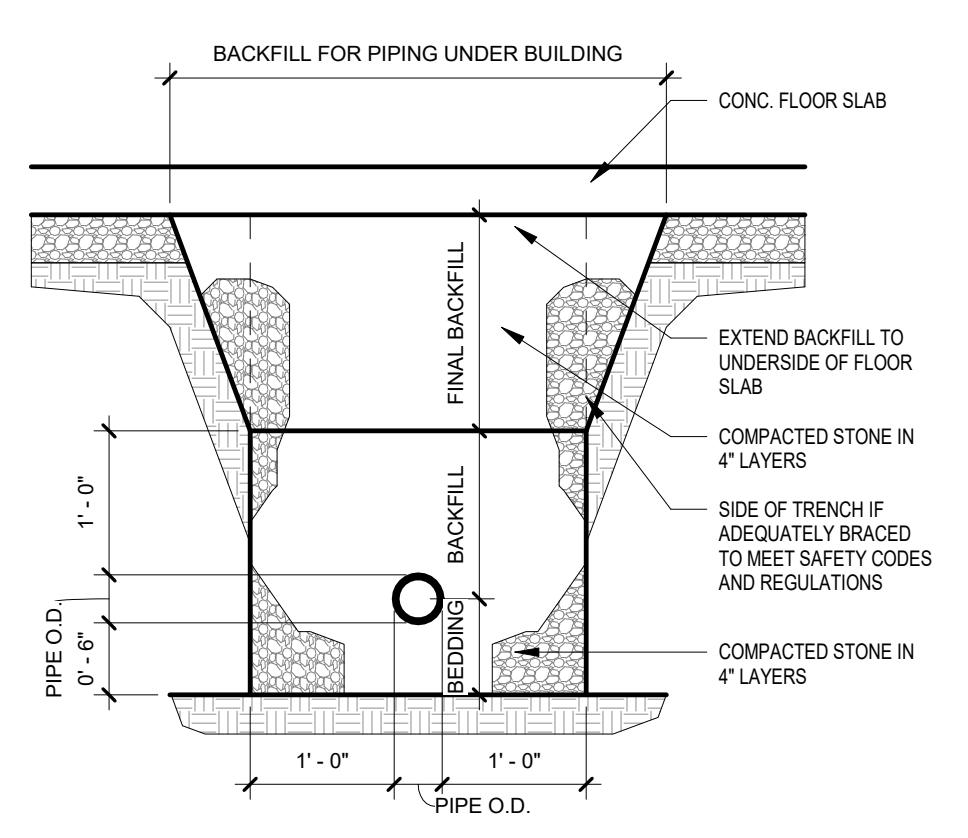
11 WALL HYDRANT DETAIL
P-401 / SCALE: 1/4" = 1'-0"



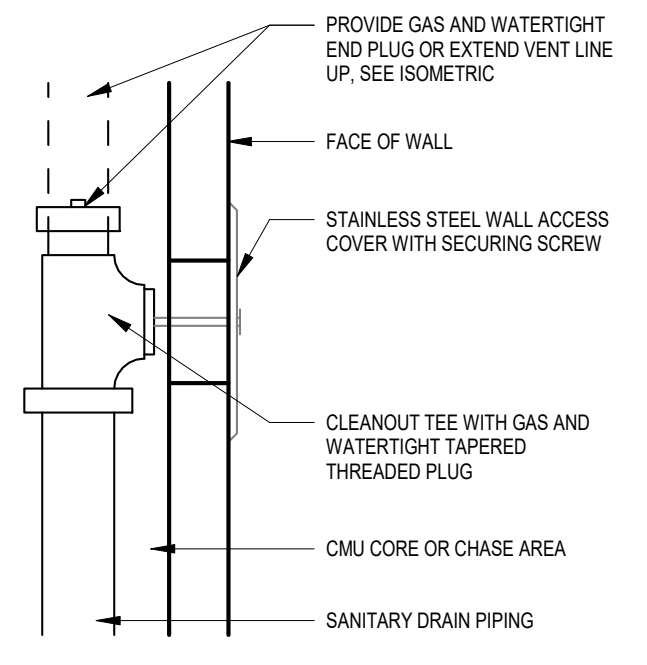
10 ICE MAKER VALVE BOX
P-401 / SCALE: 3/4" = 1'-0"



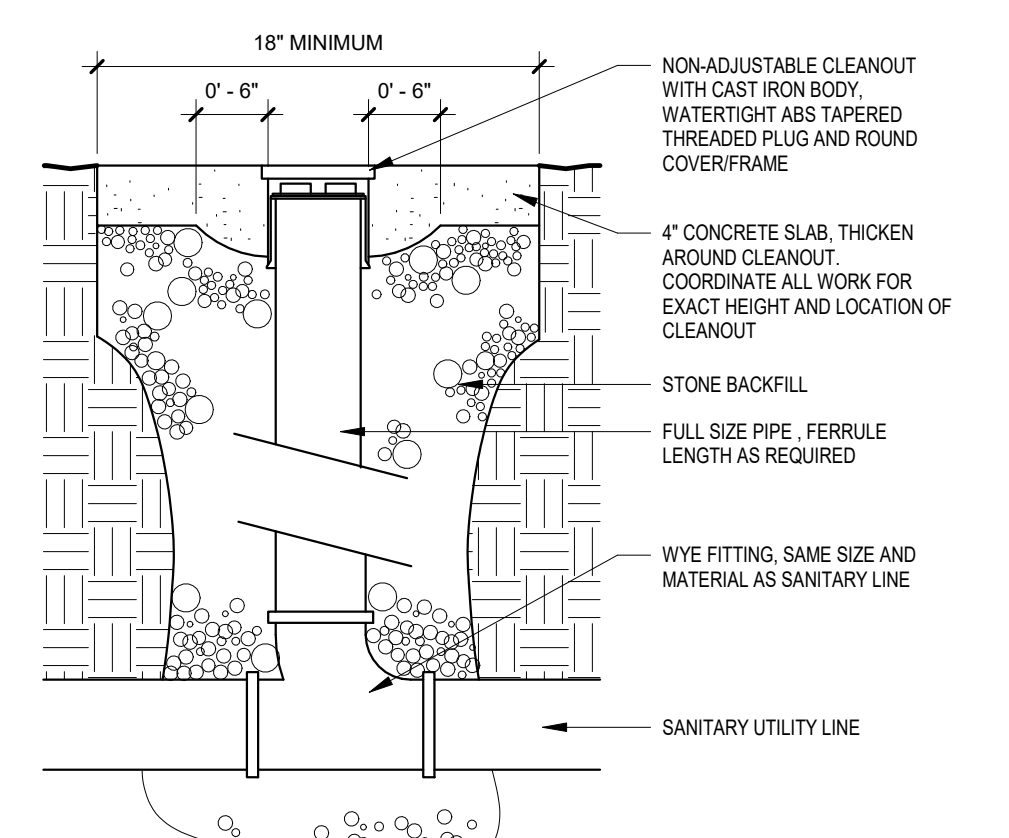
9 LAVATORY PIPING SCHEMATIC
P-401 / SCALE: 1/4" = 1'-0"



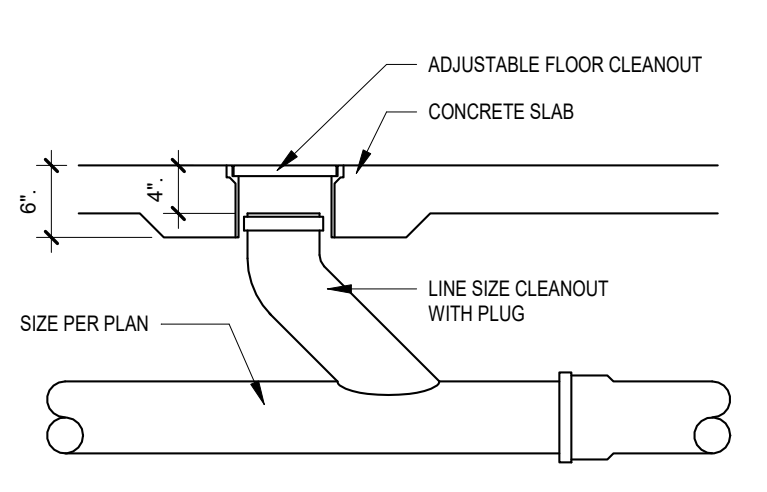
8 PIPE BEDDING AND BACKFILL
P-401 / SCALE: 3/4" = 1'-0"



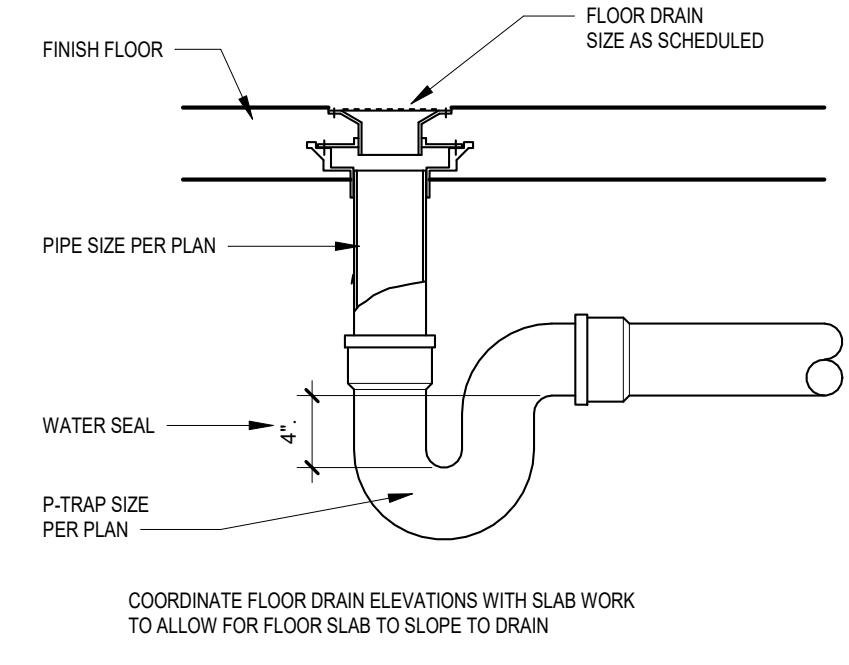
7 WALL CLEANOUT DETAIL
P-401 / SCALE: 1/4" = 1'-0"



6 GRADE CLEANOUT (GCO) DETAIL
P-401 / SCALE: 3/4" = 1'-0"

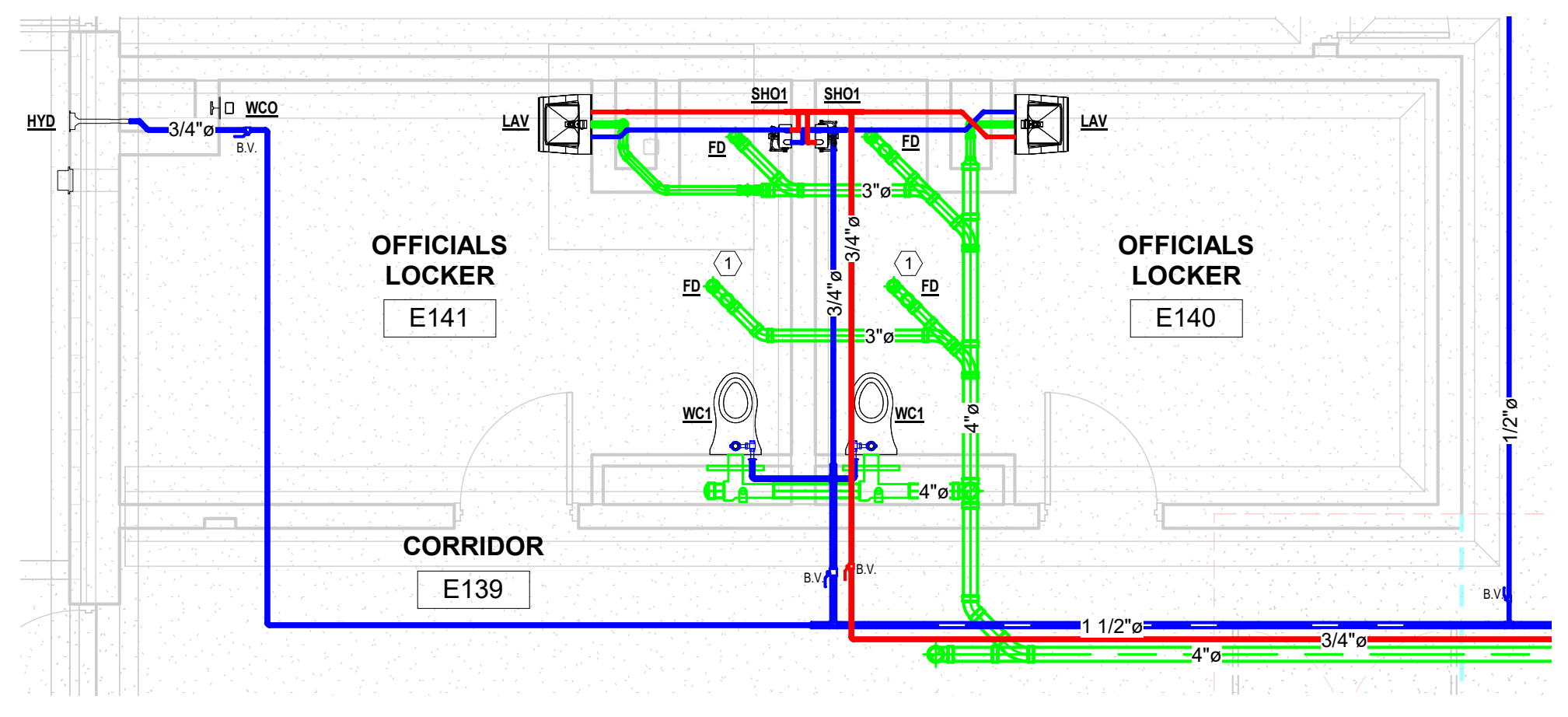


5 FLOOR CLEANOUT DETAIL
P-401 / SCALE: 1/4" = 1'-0"

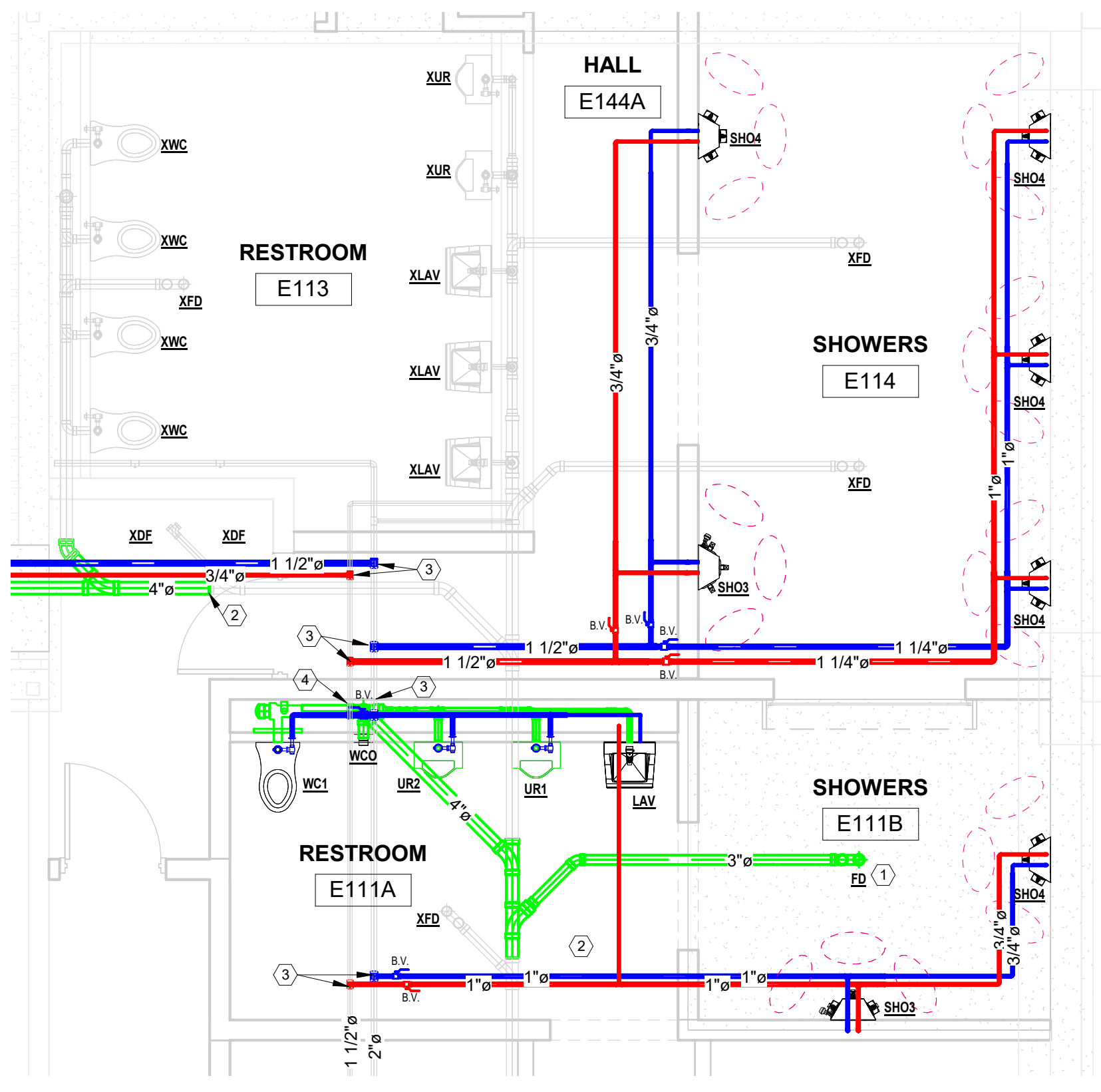


4 FLOOR DRAIN DETAIL
P-401 / SCALE: 1/4" = 1'-0"

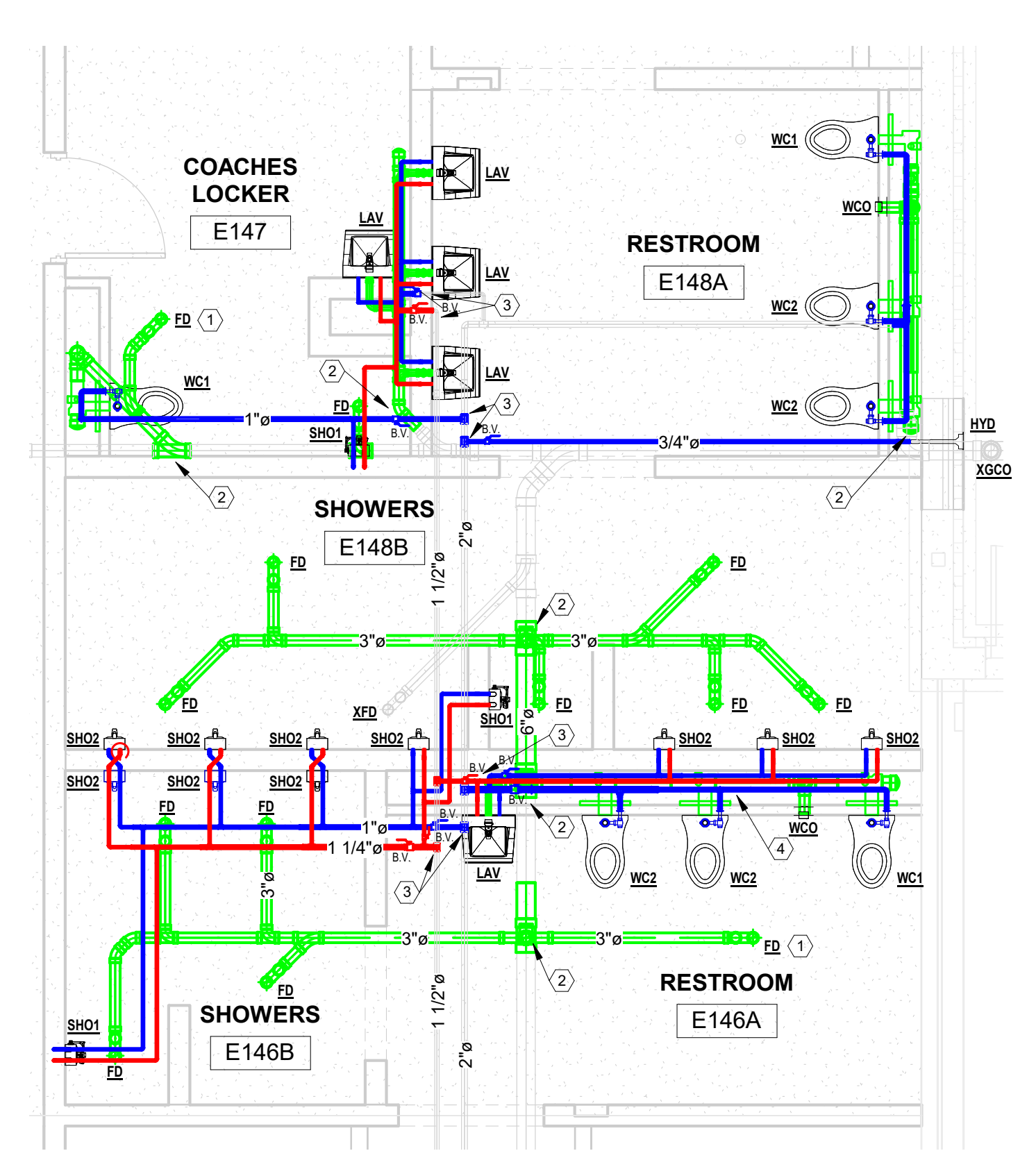
- KEYNOTE LEGEND**
- IN LIEU OF TRAP PRIMER CONNECTION, PROVIDE A BARRIER-TYPE TRAP SEAL PROTECTION DEVICE.
 - CONNECT NEW SANITARY INTO EXISTING SYSTEM, VERIFY SIZE AND INVERT IN THE FIELD.
 - CONNECT NEW SUPPLY PIPING INTO EXISTING SYSTEM, VERIFY SIZE IN THE FIELD.
 - INSTALL SUPPLY HEADER IN PLUMBING CHASE FOR FIXTURES, PROVIDE SHUT-OFF VALVE FOR SUPPLY LINE ABOVE CEILING.
 - COMBINATION ROOF MANOVERFLOW DRAINS, SEE DETAIL 13P-401.
 - OVERFLOW DRAIN GO NOZZLE FROM STORM LEADER, SEAL TO MASONRY WITH SEALANT, SEE DETAIL 13P-401.
 - EXTEND GAS PIPING TO NEW ROOF TOP UNIT FROM NEAREST LOCATION OF ADEQUATE CAPACITY, VERIFY REQUIRED CGW AND PRESSURE REQUIREMENTS WITH HVAC CONTRACTOR, AND VERIFY CURRENT PIPING LOCATIONS IN THE FIELD.
 - STORM PIPING DROP.



3 ENLARGED OFFICIAL'S LOCKER ROOMS
P-111 / SCALE: 1/4" = 1'-0"



2 ENLARGED BOY'S TOILET/SHOWER ROOMS
P-111 / SCALE: 1/4" = 1'-0"



1 ENLARGED GIRL'S TOILET/SHOWER ROOMS
P-111 / SCALE: 1/4" = 1'-0"

STATE OF OHIO
KRAIG A. BEILHARZ
9482
REGISTERED ARCHITECT

KRAIG A. BEILHARZ, LICENSE #9482
EXPIRATION DATE 12/31/2021

BA
BEILHARZ
ARCHITECTS
INCORPORATED

PLOT SCALE
1/4"=1'-0"
0 2' 4' 6'

ISSUE DATE

#	Date	DESCRIPTION
1	04.08.20	REVIEW SET
2	04.21.20	FOR BIDS

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EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS

14544 COUNTY ROAD 6, METAMORA, OH 43540

ENLARGED
PLUMBING PLANS
AND PLUMBING
DETAILS

PROJECT: B7-4569
DRAWN BY: KEP
CHECKED BY: KAB
SHEET
P-401

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KRAIG A. BEILHARZ, LICENSE #9482
EXPIRATION DATE 12/31/2021

PLOT SCALE



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SANITARY PIPING DEMOLITION ISOMETRIC

PROJECT: B7-4569

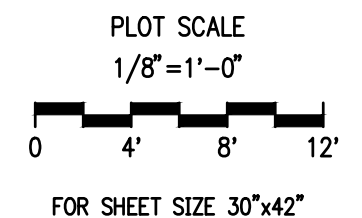
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SHEET

P-900

PLAN NOTES:
A. BALANCE EXISTING DIFFUSER/GRILLE TO CFM SHOWN.
B. CONNECT TO EXISTING DUCTWORK IN THIS APPROXIMATE LOCATION.



FOR SHEET SIZE 30"x42"

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14544 COUNTY ROAD 6, METAMORA, OH 43540

FIRST FLOOR PLAN -
HVAC

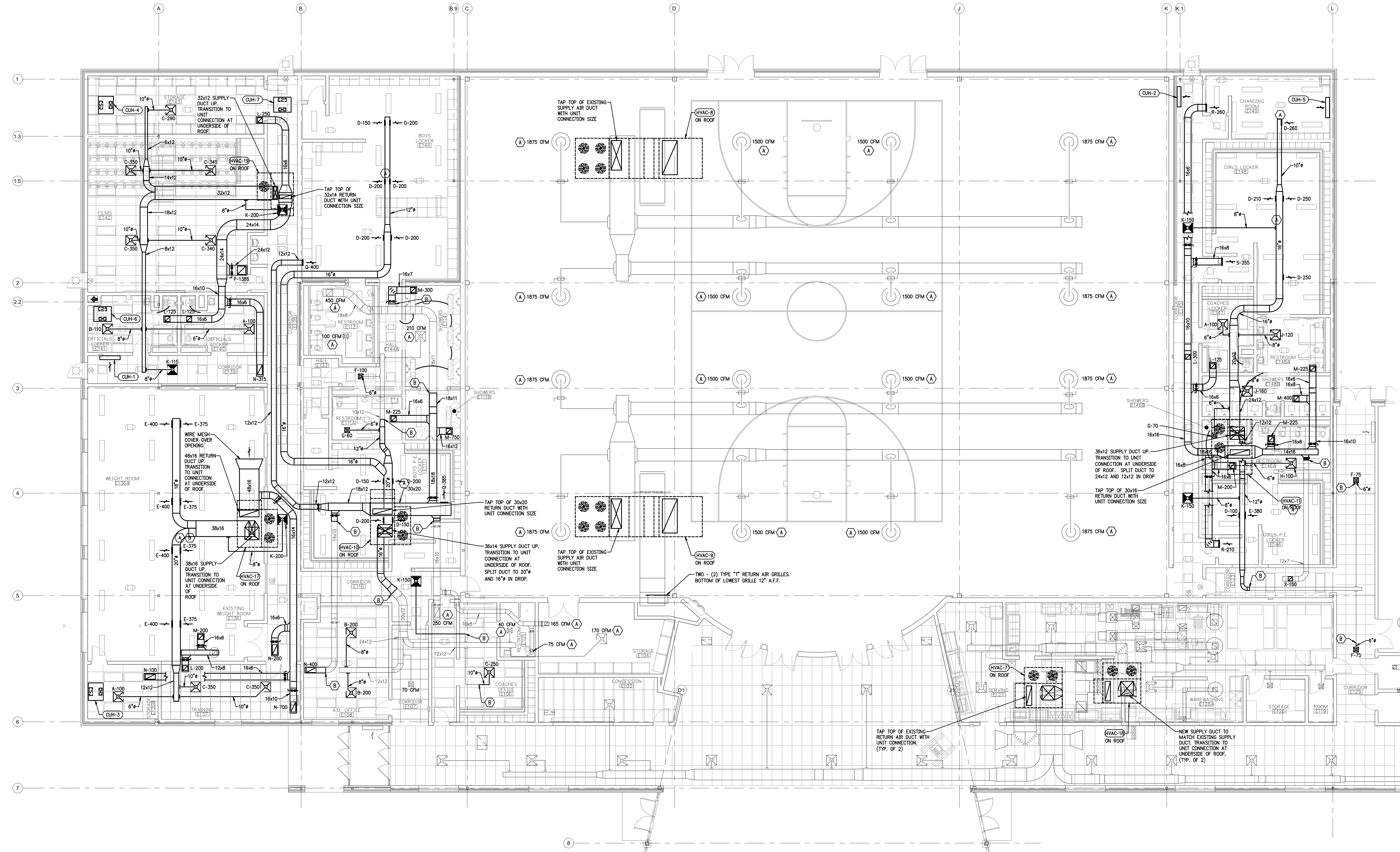
PROJECT: B7-4569

DRAWN BY: BRR

CHECKED BY: JDS

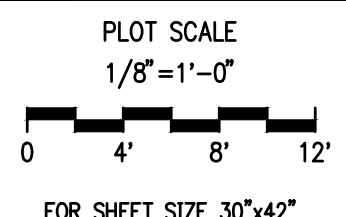
SHEET

MH101



FIRST FLOOR PLAN - HVAC
SCALE: 1/8"=1'-0"

- PLAN NOTES:
- A. CONNECT TO EXISTING PIPING IN THIS APPROXIMATE LOCATION.
 - B. REMOVE PADS AND CROSS-MEMBERS AS REQUIRED TO INSTALL PIPING ABOVE EXISTING CEILING. CEILING IS NOT BEING REPLACED. CEILING REPAIR IS RESPONSIBILITY OF HVAC CONTRACTOR.



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FIRST FLOOR PLAN -
HVAC PIPING

PROJECT: B7-4569

DRAWN BY: BRR

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MP101

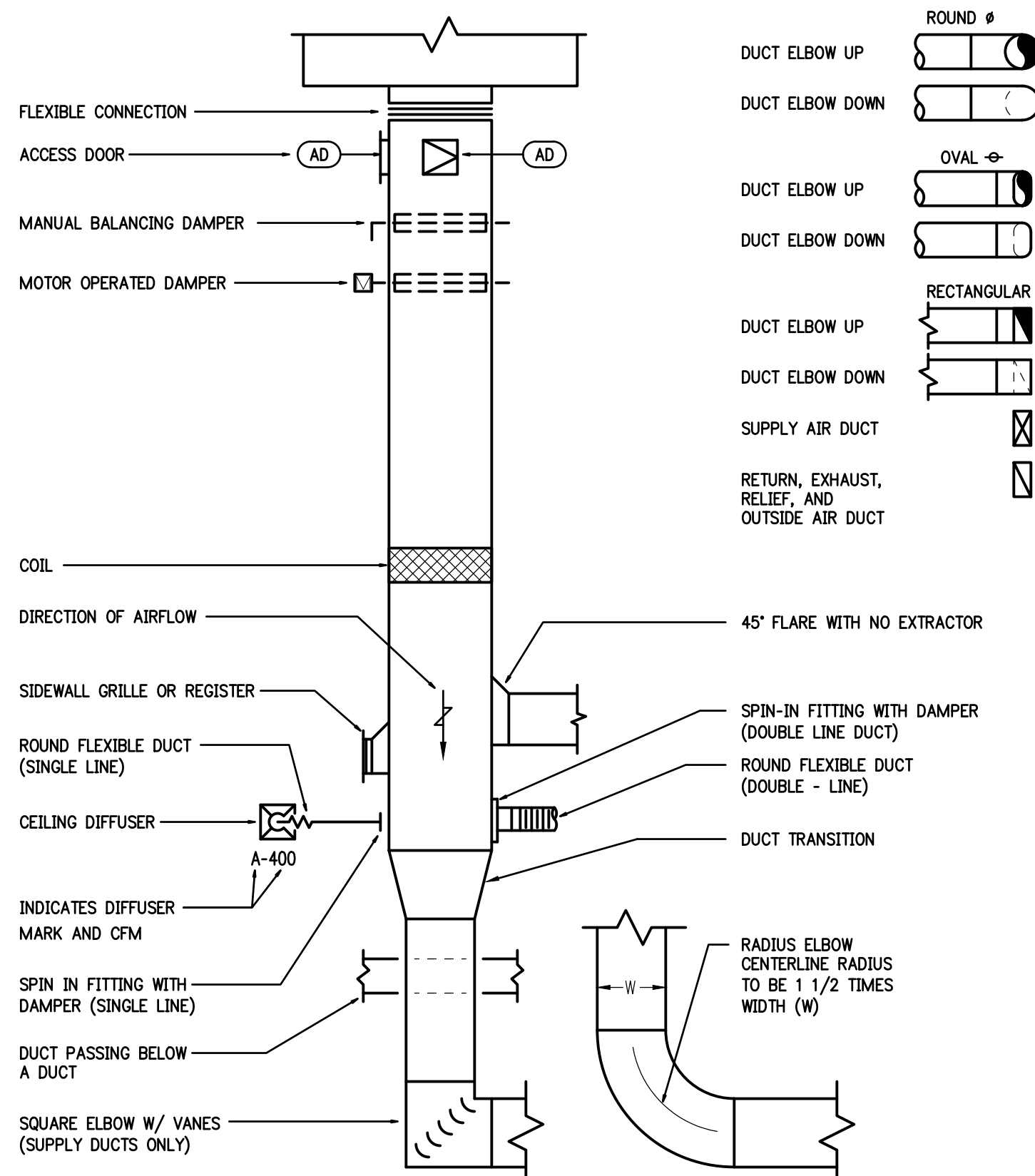
FIRST FLOOR PLAN - HVAC PIPING
SCALE: 1/8"=1'-0"



PIPING LEGEND

SHUT-OFF VALVE	
BALL VALVE	
BUTTERFLY VALVE	
ANGLE VALVE	
GLOBE VALVE	
CHECK VALVE	
FLOW CONTROL VALVE	
BALANCING VALVE	
PRESSURE REDUCING VALVE	
PLUGGED DRAIN VALVE	
DRAIN VALVE W/HOSE CONNECTION	
2-WAY CONTROL VALVE	
3-WAY CONTROL VALVE	
PRESSURE RELIEF VALVE	
NEEDLE VALVE	
FLOW INDICATOR	
STRAINER	
DUPLEX STRAINER	
FLEXIBLE CONNECTION	
THERMOMETER 0-100° F OR 30°-240° F	
PRESSURE GAUGE (WATER)	
AUTOMATIC AIR VENT	
MANUAL AIR VENT	
CONCENTRIC REDUCER	
ECCENTRIC REDUCER	
CAPPED PIPE	
FLANGES	
UNION	
BREAK IN PIPE	
DIRECTION OF FLOW IN PIPE	
PIPE DROP	
PIPE RISE	
TAKE-OFF TOP OF PIPE	
TAKE-OFF BOTTOM OF PIPE	
CIRCUIT SETTER	
SUCTION DIFFUSER	
STEAM TRAP	
WELL IN PIPING	
ANCHOR	
GUIDE	
VALVE FLOW COEFFICIENT	
NEW WORK	
EXISTING ITEMS	
EXISTING ITEMS TO BE REMOVED	
NORMALLY OPEN	NO
NORMALLY CLOSED	NC
COMMON	C
HEATING WATER SUPPLY	HWS
HEATING WATER RETURN	HWR
REDUCED PRESSURE BACKFLOW PREVENTER	BFP
THERMOSTAT	
HUMIDISTAT	

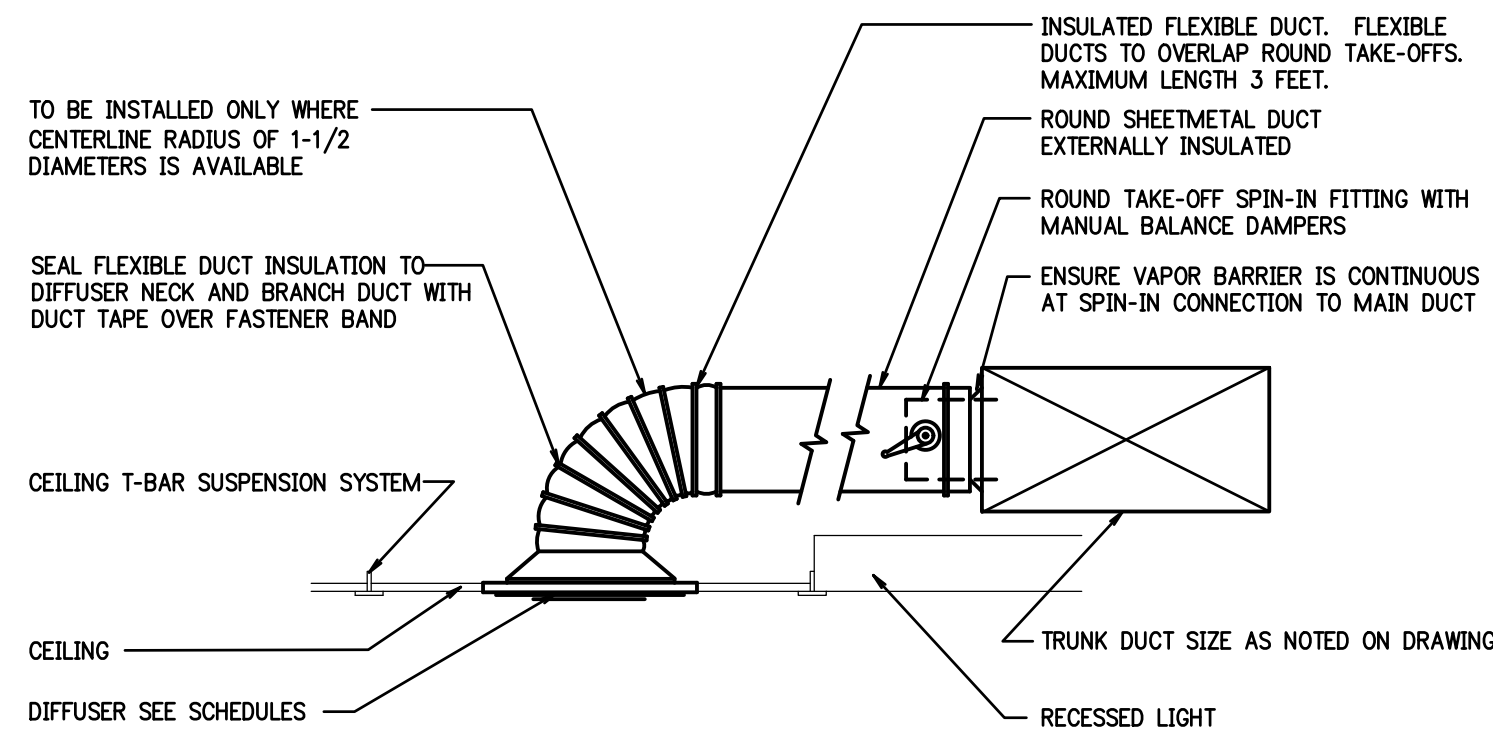
HVAC LEGEND



DUCTWORK NOTES:

- ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED PER THE LATEST SMACNA STANDARDS.
- ALL TRANSVERSE AND LONGITUDINAL SEAMS ARE TO BE SEALED WITH A DUCT SEALER MATERIAL. SEE SPECIFICATION FOR TYPE.
- ALL DUCTWORK SHALL BE FABRICATED, AT A MINIMUM, PER THE FOLLOWING PRESSURE REQUIREMENTS AS LISTED IN THE LATEST SMACNA HVAC DUCT CONSTRUCTION STANDARDS:

PRESSURE RATING	DUCTWORK
2" POSITIVE OR NEGATIVE	1. GENERAL EXHAUST AIR DUCTS.
	2. SUPPLY AIR DUCTWORK IN CONSTANT AIR VOLUME SYSTEMS WITHOUT TERMINAL UNITS.
	3. RETURN AIR DUCTS.
- DIMENSIONS OF DUCTWORK AT 2" POSITIVE OR NEGATIVE PRESSURE, SPECIFIED TO BE INTERNALLY LINED, ARE AIR FLOW DIMENSIONS AND DO NOT INCLUDE AN ALLOWANCE FOR INSULATION THICKNESS.

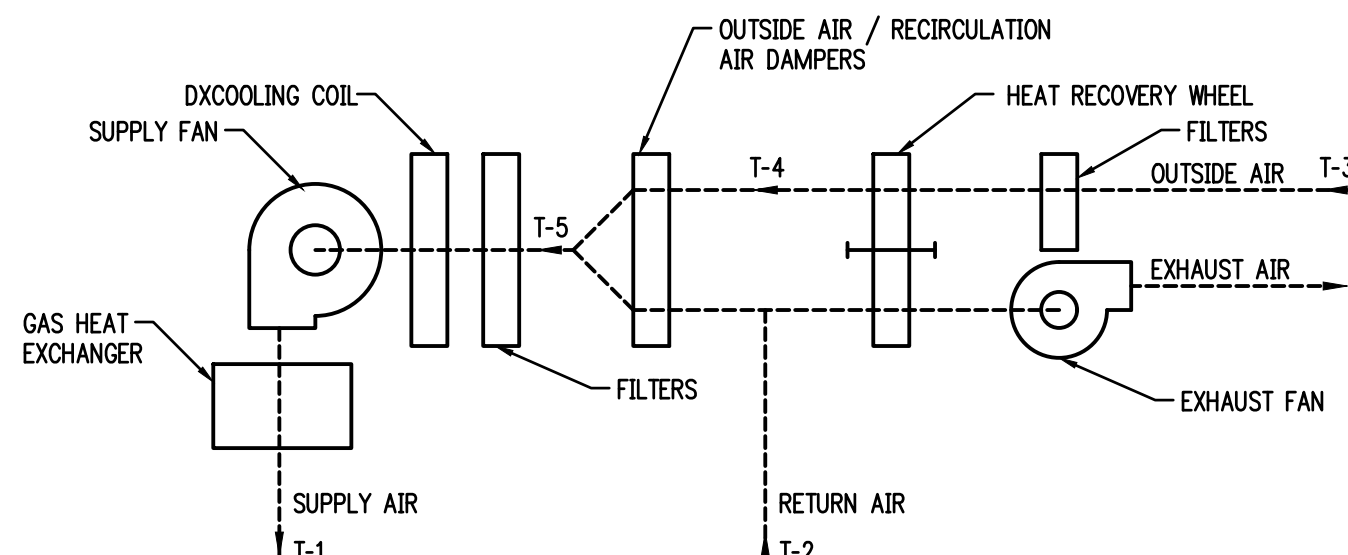


DUCT TO DIFFUSER CONNECTION DETAIL

SCALE: NONE

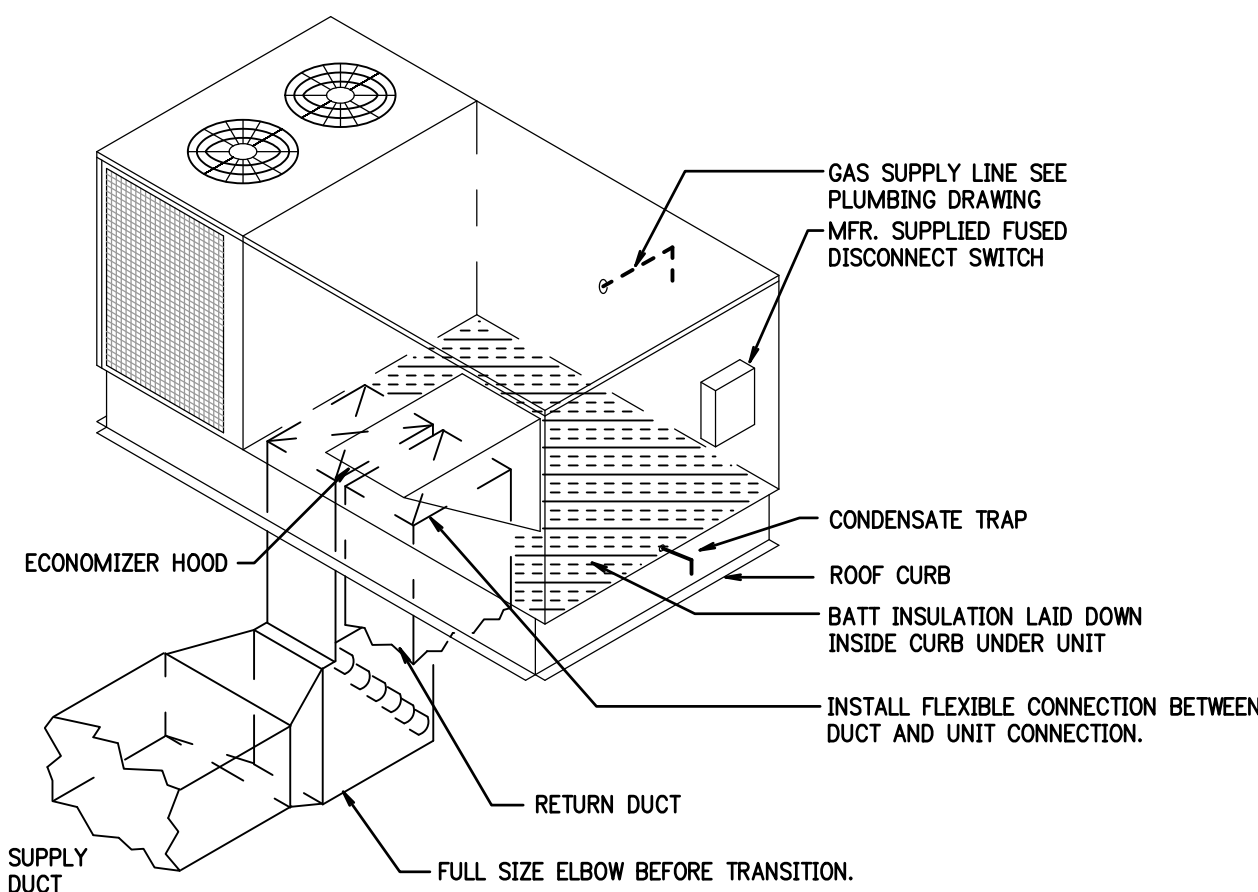
PACKAGED ENERGY RECOVERY UNITS																															
SCHEDULE BASED ON DAIKIN																															
MARK	CFM	SUPPLY				RECIRC CFM	OUTSIDE AIR CFM	EXHAUST				WINTER TEMPERATURES				SUMMER TEMPERATURES				HEATING				COOLING				MODEL	POWER	NOTES	
		EXT. S.P.	HP	UNIT MAX. V. FPM	UNIT MAX. V. FPM			CFM	EXT. S.P.	HP	UNIT MAX. V. FPM	SUPPLY T DB T-1	O.A. T DB T-3	O.A. EXCHANGER T DB T-4	RECIRC/EXH T DB T-2	SUPPLY T DB/MB T-1	O.A. T DB/MB T-3	O.A. EXCHANGER T DB/MB T-4	RECIRC/EXH T DB/MB T-2	EAT T DB T-5	SOURCE	INPUT MBH	OUTPUT MBH	STAGES	EAT T DB/MB T-5	GROSS TOTAL MBH	GROSS SENSIBLE MBH				AMBIENT T
HVAC-8	13,500	3/4"	(4) at 6	1,100	3,300	10,200	10,200	1/2"	(2) at 5	1,100	96	-3.0	43.9	75.0	58.7/56.8	95.0/75.0	81.3/67.4	75.0/62.0	51.5	NAT. GAS	1200.0	931.0	20-1 MOD.	79.8/66.3	430.2	345.9	95	4	DPSA035	460/3/60	
HVAC-9	13,500	3/4"	(4) at 6	1,100	3,300	10,200	10,200	1/2"	(2) at 5	1,100	96	-3.0	43.9	75.0	58.7/56.8	95.0/75.0	81.3/67.4	75.0/62.0	51.5	NAT. GAS	1200.0	931.0	20-1 MOD.	79.8/66.3	430.2	345.9	95	4	DPSA035	460/3/60	
HVAC-10	3,400	3/4"	3	1,100	0	3,400	3,400	3/4"	4	1,100	100	-3.0	54.2	75.0	51.3/50.5	95.0/75.0	79.6/65.8	75.0/62.0	46.6	NAT. GAS	300.0	240.0	5-1 MOD.	79.6/65.8	122.9	95.6	95	MOD.	DPS010A	460/3/60	
HVAC-11	2,450	3/4"	2.3	1,100	0	2,450	2,450	3/4"	2.3	1,100	110	-3.0	48.9	75.0	54.6/53.7	95.0/75.0	78.9/65.5	75.0/62.0	48.9	NAT. GAS	200.0	160.0	10-1 MOD.	78.9/65.5	90.2	68.6	95	MOD.	DPS007A	460/3/60	
HVAC-19	2,200	3/4"	2.3	1,100	1,270	930	930	3/4"	2.3	1,100	110	-3.0	53.1	75.0	51.7/50.8	95.0/75.0	80.2/66.2	75.0/62.0	61.1	NAT. GAS	120.0	96.0	5-1 MOD.	77.2/63.8	59.5	53.5	95	MOD.	DPS005A	460/3/60	

- NOTES:
- HVAC-8, 9, 10 & 11 - EXISTING CURBS TO BE REPLACED, CUTTING/PATCHING OF THE ROOF ASSEMBLY (INCLUDING DECKING), ADDITIONAL AND/OR RECONFIGURATION OF SUPPORT FRAMES BY MECHANICAL CONTRACTOR; ECM MOTORS; 2" MERV 8 & 4" MERV 14 FILTERS



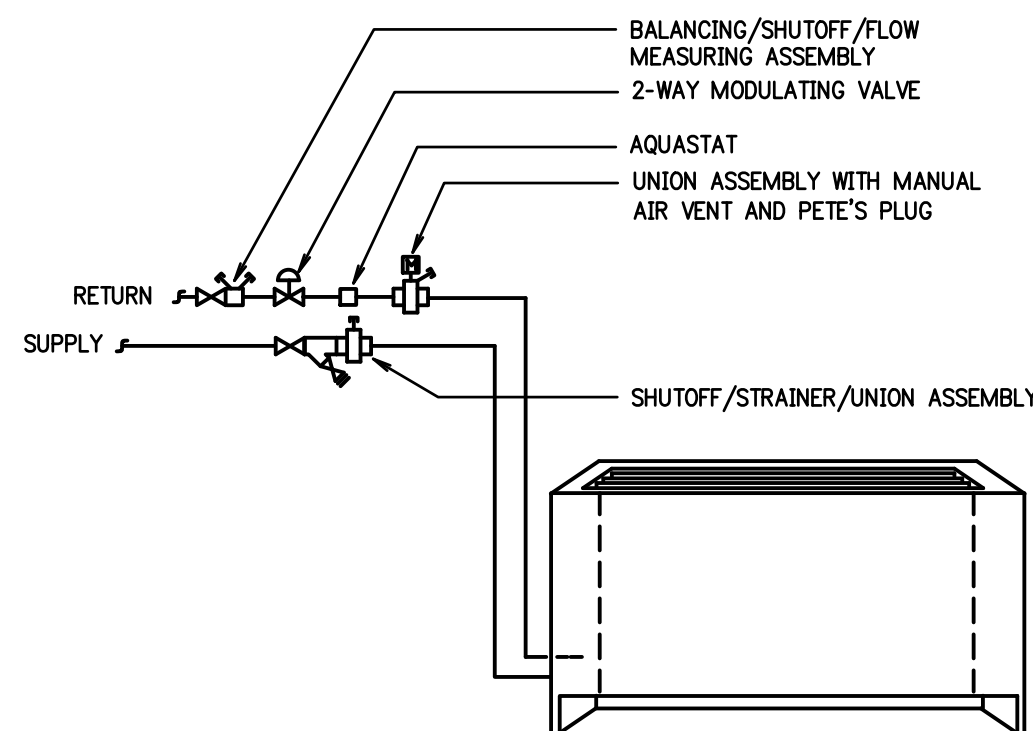
PACKAGED ENERGY RECOVERY UNIT DIAGRAM

SCALE: NONE



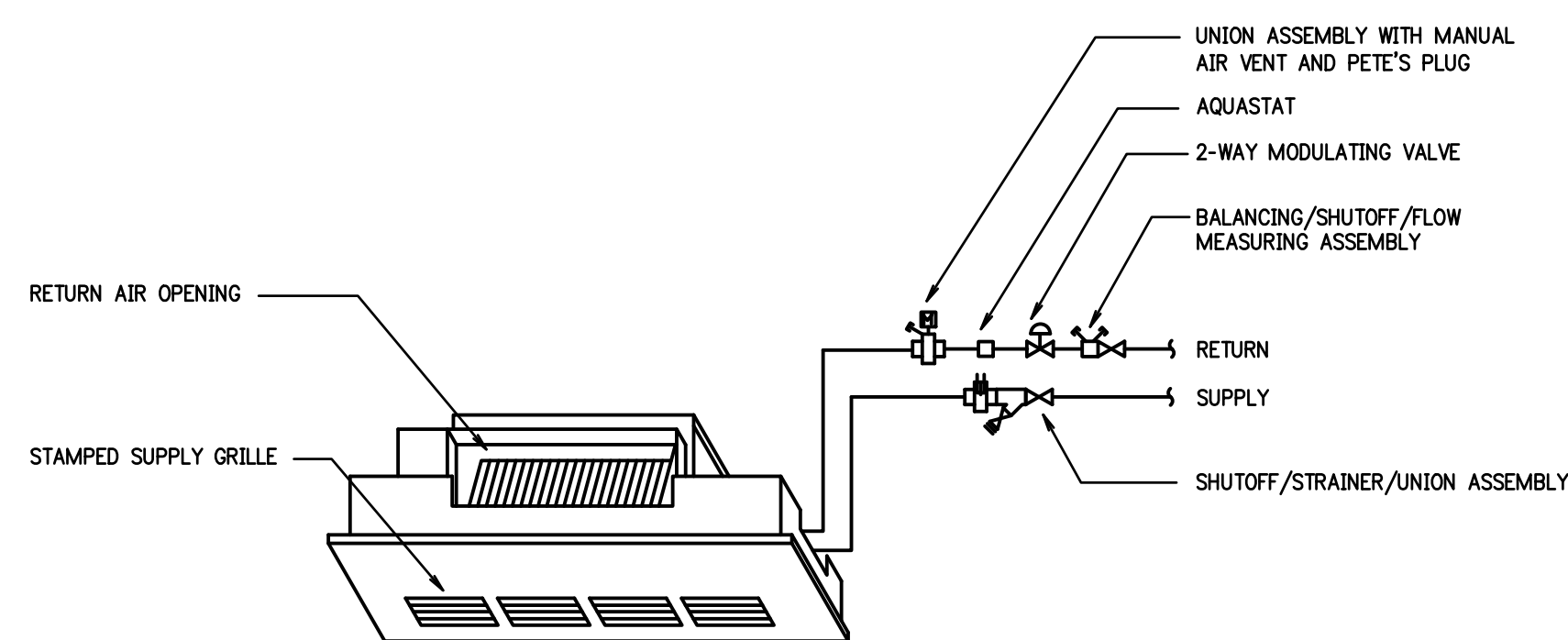
PACKAGED ROOFTOP UNIT DETAIL

SCALE: NONE



CABINET UNIT HEATER PIPING DIAGRAM

SCALE: NONE



RECESSED CABINET UNIT HEATER PIPING DIAGRAM

SCALE: NONE

ROOFTOP UNITS																			
SCHEDULE BASED ON DAIKIN																			
MARK	MODEL	BLOWER			MIN. CFM	COOLING					HEATING					FILTRATION EFFICIENCY	POWER	NOTES	
		CFM	ESP IN WC	HP		EAT DBT	EAT WBT	LAT DBT	LAT WBT	AMB AIR/F	SOURCE	STAGES	EAT T	LAT T	MBH INPUT				
HVAC-7	DPS010A	4,300	0.75	4	850	78.0	64.8	57.1	55.9	95	NAT.GAS	10-1 MOD.	55.6	106.9	300	30%	460/3/60		
HVAC-17	DPS012A	4,100	0.75	4	930	79.5	65.8	55.1	54.3	95	NAT.GAS	5-1 MOD.	53.4	107.4	300	30%	460/3/60		
HVAC-18	DPS010A	4,000	0.75	4	1,200	79.5	65.8	56.3	55.2	95	NAT.GAS	5-1 MOD.	48.1	85.0	200	30%	460/3/60		

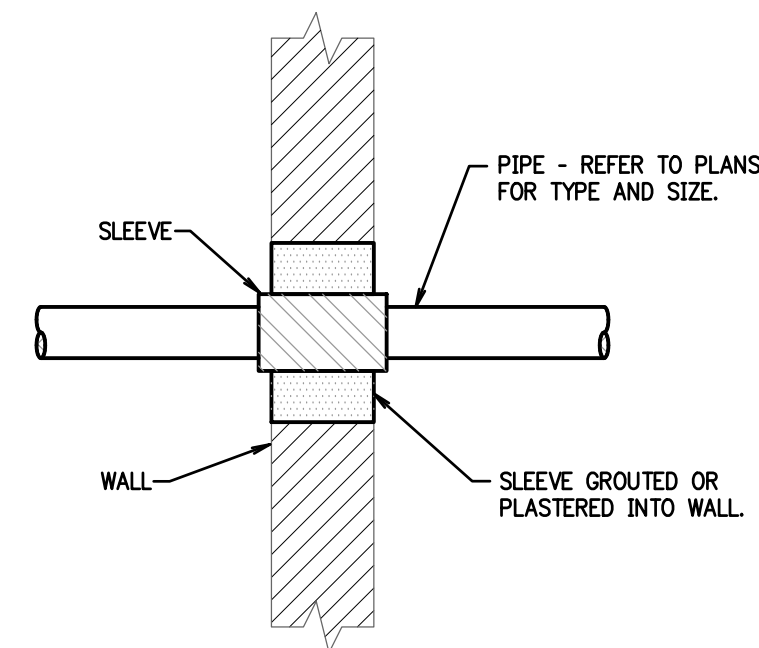
- NOTES:
- HVAC-7, 17 & 18 - PROVIDE WITH CURB ADAPTER; ECM MOTOR; 2" MERV 8 & 4" MERV 14 FILTERS

CABINET UNIT HEATERS														
SCHEDULE BASED ON DAIKIN														
MARK	TYPE	MBH	EWT F	GPM	MAX. PD FT. HD.	EAT F	LAT F	FAN			MODEL	POWER	DISCONNECT SWITCH PROVIDED	NOTES
								CFM	RPM	HP				
CUH-1	VERTICAL CABINET SLOPE TOP	23.3	180	1.55	3.2	65	118	277	1,080	0.15	FHVS-103A	120/1/60	YES	NOTE 1, 2
CUH-2	VERTICAL CABINET SLOPE TOP	23.3	180	1.55	3.2	65	118	277	1,080	0.15	FHVS-103A	120/1/60	YES	NOTE 1, 2
CUH-3	HORIZONTAL RECESSED	22.2	180	1.6	0.38	65	128	318	1,080	0.05	FHHR202	120/1/60	YES	NOTE 1
CUH-4	HORIZONTAL RECESSED	22.2	180	1.6	0.38	65	128	318	1,080	0.05	FHHR202	120/1/60	YES	NOTE 3
CUH-5	HORIZONTAL RECESSED	22.2	180	1.6	0.38	65	128	318	1,080	0.05	FHHR202	120/1/60	YES	NOTE 3
CUH-6	HORIZONTAL RECESSED	22.2	180	1.6	0.38	65	128	318	1,080	0.05	FHHR202	120/1/60	YES	NOTE 1
CUH-7	HORIZONTAL RECESSED	22.2	180	1.6	0.38	65	128	318	1,080	0.05	FHHR202	120/1/60	YES	NOTE 1

- NOTES:
- UNIT SHALL HAVE A 2-WAY CONTROL VALVE.
 - UNIT MOUNTED THERMOSTAT.
 - UNIT SHALL HAVE A 3-WAY CONTROL VALVE.

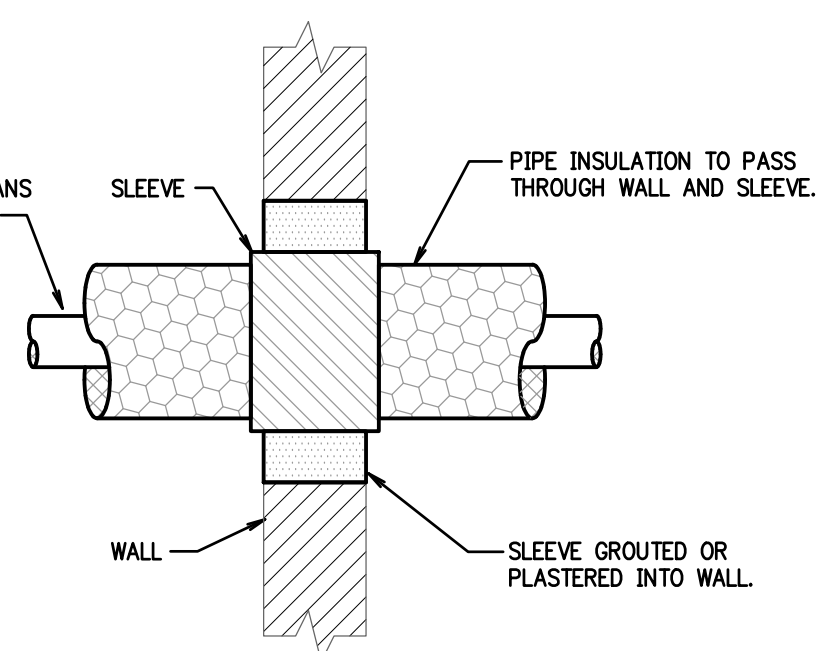
GRILLES REGISTERS AND DIFFUSERS							
SCHEDULE BASED ON PRICE							
MARK	USAGE	STYLE	MODEL	SIZE	DESCRIPTION OF BLOW	DAMPER	NOTES
A	SUPPLY	LAY-IN	ASPD	24x24 - 6"ø	4-WAY	N	
B	SUPPLY	LAY-IN	ASPD	24x24 - 8"ø	4-WAY	N	
C	SUPPLY	LAY-IN	ASPD	24x24 - 10"ø	4-WAY	N	
D	SUPPLY	DUCT	SDGE	12x6	DOUBLE DEFLECTION	Y	PC12 FINISH COAT
E	SUPPLY	DUCT	SDGE	16x8	DOUBLE DEFLECTION	Y	PC12 FINISH COAT
F	SUPPLY	LAY-IN	ASPD	12x12 - 6"ø	4-WAY	N	
G	SUPPLY	SURFACE	ASPD	12x12 - 6"ø	4-WAY	Y	
H	SUPPLY	SURFACE	ASPD	24x24 - 6"ø	4-WAY	Y	
J	SUPPLY	SURFACE	ASPD	24x24 - 8"ø	4-WAY	Y	
K	SUPPLY	LAY-IN	ASPD	24x24 - 8"ø	2-WAY	N	
L	RETURN/EXHAUST	LAY-IN	80	12x12	---	N	
M	RETURN/EXHAUST	SURFACE	80	12x12	---	Y	
N	RETURN/EXHAUST	LAY-IN	80	24x12	---	N	
P	RETURN/EXHAUST	LAY-IN	80	20x20	---	N	
Q	RETURN/EXHAUST	SURFACE	635	14x14	---	N	PC12 FINISH COAT
R	RETURN/EXHAUST	SURFACE	635	18x8	---	N	PC12 FINISH COAT
S	RETURN/EXHAUST	SURFACE	635	18x10	---	N	PC12 FINISH COAT
T	RETURN/EXHAUST	SURFACE	96	48x36	---	N	HEAVY DUTY

- NOTES:
- SUPPLY, RETURN, AND EXHAUST GRILLES INSTALLED IN DRYWALL CEILING SHALL HAVE DAMPER IN NECK.
 - BRANCH DUCT TO DIFFUSER OR GRILLE SHALL BE SAME SIZE AS NECK.
 - DIFFUSERS AND GRILLES SHALL BE SELECTED WITH A MAXIMUM NC = 25



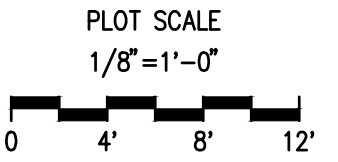
PIPE THRU WALL

SCALE: NONE



INSULATED PIPE THRU WALL

SCALE: NONE



FOR SHEET SIZE 30"x42"

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EVERGREEN HIGH SCHOOL LOCKER ROOM ADDITIONS & RENOVATIONS

14544 COUNTY ROAD 6, METAMORA, OH 43540

HVAC SCHEDULES AND DETAILS

PROJECT: B7-4569

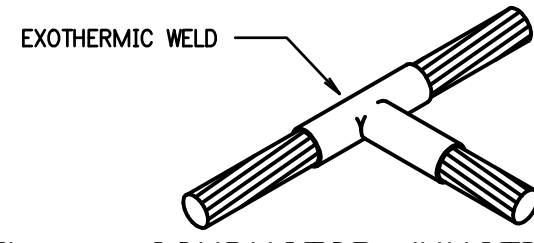
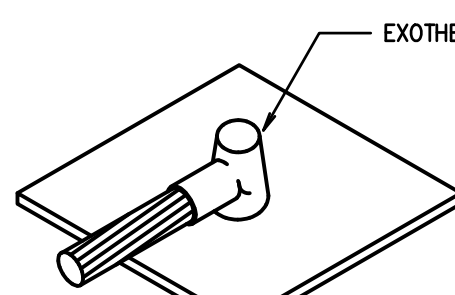
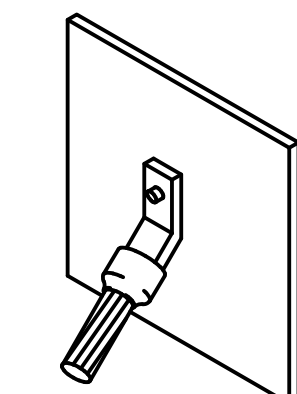
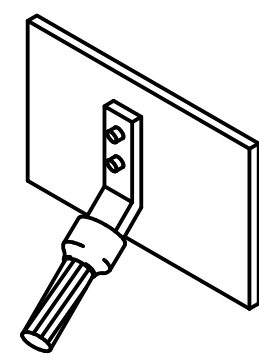
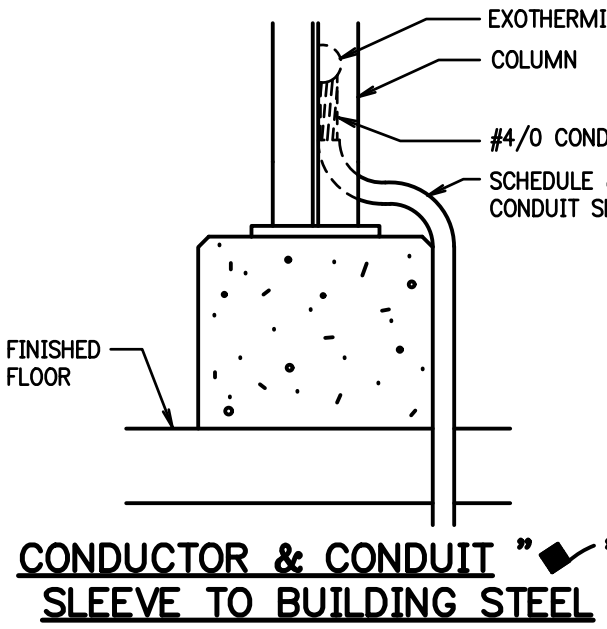
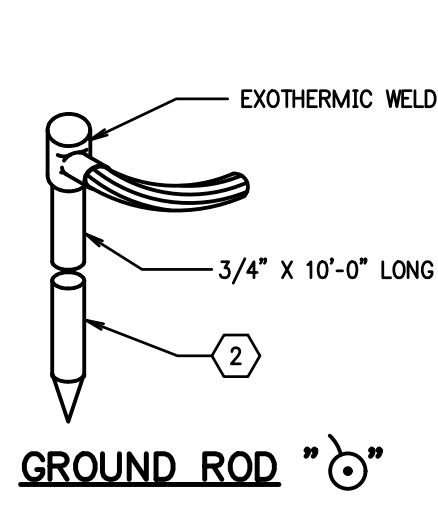
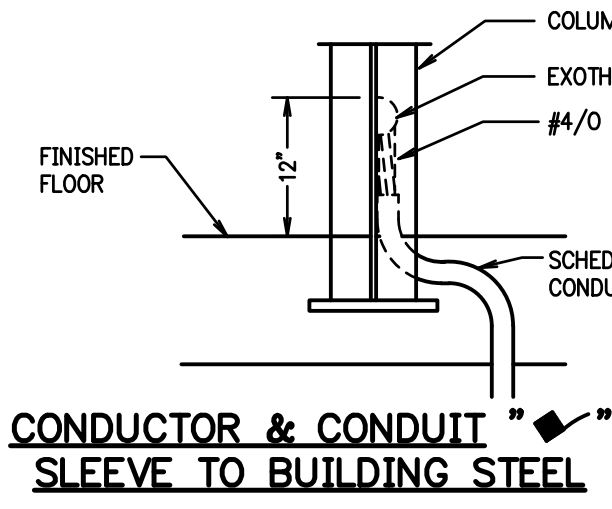
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CHECKED BY: JDS

SHEET

M-301

WIRE SIZING TABLE		
FOR 120V-20A BRANCH CIRCUITS ONLY, UNLESS OTHERWISE NOTED		
IF DISTANCE A+B IN FEET IS: (SEE DIAGRAM AT RIGHT)	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY.	
0' to 100'	#12 (MIN.)	1ST ON CIRCUIT
100' to 175'	#10	LAST ON CIRCUIT
175' to 300'	#8	
300' to 450'	#6 (MAX.)	
FOR 277V-20A BRANCH CIRCUITS ONLY, UNLESS OTHERWISE NOTED		
IF DISTANCE A+B IN FEET IS: (SEE DIAGRAM AT RIGHT)	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY.	
0' to 250'	#12 (MIN.)	1ST ON CIRCUIT
250' to 400'	#10	LAST ON CIRCUIT
400' to 700'	#8	
700' to 1000'	#6 (MAX.)	
THESE TABLES ARE BASED ON AN EVENLY DISTRIBUTED LOAD ALLOWING A 3% VOLTAGE DROP AT LAST OUTLET; APPLY ACCORDINGLY.		

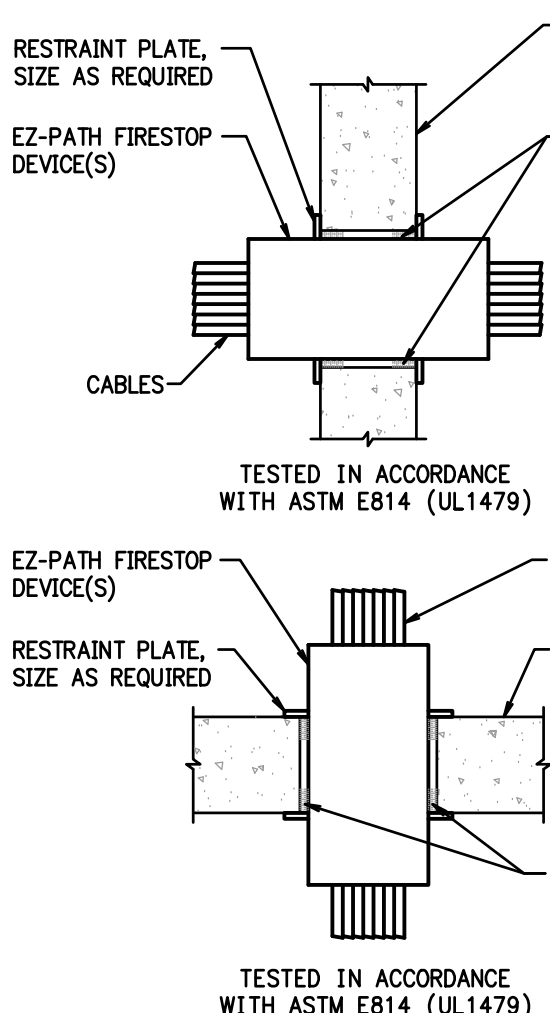
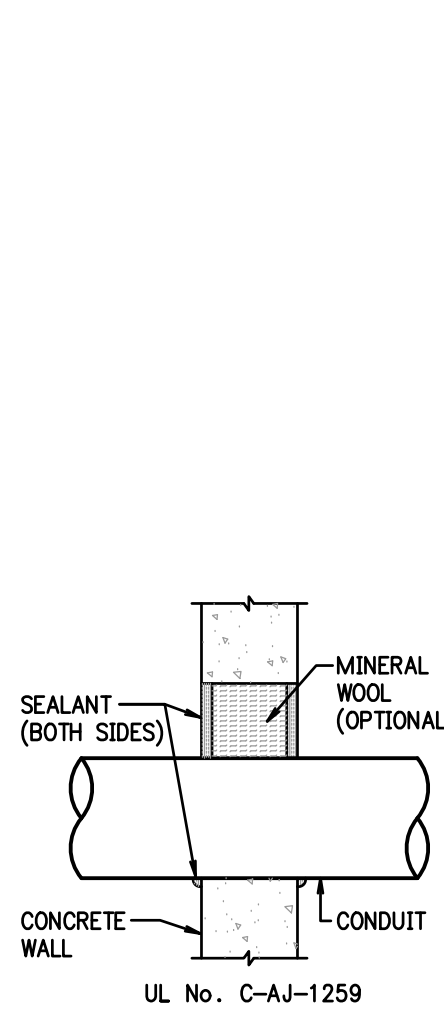


GROUNDING NOTES:

- GROUNDING CONDUCTOR SHALL BE LAID SLACK A MINIMUM OF 18" BELOW FINISHED GRADE (30" BELOW FINISHED GRADE WHERE GROUNDING RING EXISTS).
- GROUND RODS SHALL BE LOCATED A MINIMUM OF 10'-0" AWAY FROM BUILDING. GROUND CONDUCTOR FROM BUILDING THROUGH FOUNDATION SHALL BE INSTALLED IN SCHEDULE 80 PVC CONDUIT.
- GROUND RESISTANCE SHALL BE 3 OHMS MAXIMUM. ADDITIONAL RODS OR ROD EXTENSIONS SHALL BE DRIVEN TO OBTAIN THIS VALUE BY TEST.
- ALL GROUND CONDUCTORS SHALL BE A #4/0-7 STRAND SOFT, BARE COPPER CONDUCTOR MINIMUM, UNLESS NOTED OTHERWISE IN THESE DRAWINGS OR SPECIFICATIONS

GROUNDING DETAILS

SCALE: NONE



CONCRETE/MASONRY FLOOR & WALLS

NOTES:

- CABLE AND CONDUIT PENETRATION DETAILS ARE BASED ON A UL LISTED 2 HOUR FIRE RATED ASSEMBLY (MINIMUM) UTILIZING STI FIRESTOP PRODUCTS. MANUFACTURER'S SHALL BE STI, HILTI, 3M OR APPROVED EQUAL. REFER TO MANUFACTURER'S SPECIFICATIONS AND INSTALLATION DETAILS FOR EXACT INSTALLATION METHODS.
- PACKING AND SEALANT DEPTHS SHALL BE PER MANUFACTURER'S SPECIFICATIONS FOR UL ASSEMBLY RATING COMPLIANCE.
- ALL FIRE STOP LOCATIONS SHALL BE LABELED AT POINT OF PENETRATION LABEL SHALL IDENTIFY FIRE STOPPING MATERIAL, U.L. LISTING NUMBER AND HOUR RATING OF WALL/FLOOR.

CONDUIT/CABLE PENETRATIONS THROUGH RATED ASSEMBLIES

SCALE: NONE

LEGEND

	WALL SWITCHES: SINGLE POLE, DOUBLE POLE, 3-WAY, 4-WAY
	DUPLEX RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE, 2-GANG, 4-OPENING
	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER PROTECTION
	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FOR ELECTRIC WATER COOLER, CORD AND PLUG SHALL NOT BE VISIBLE FROM GENERAL VIEW
	COMMUNICATION OUTLET, 4-11/16" SQ. 2-1/8" DEEP BOX WITH SINGLE GANG PLASTER RING, 1-1/4" C STUBBED UP ABOVE ACCESSIBLE CEILING
	COMMUNICATION OUTLET, 4-11/16" SQ. 2-1/8" DEEP BOX WITH DOUBLE GANG PLASTER RING, (2)1-1/4" C STUBBED UP ABOVE ACCESSIBLE CEILING
	JUNCTION BOX, BLANK COVER
	CONDUIT CONCEALED IN WALL OR ABOVE CEILING, EXPOSED IN UNFINISHED AREAS
	CONDUIT CONCEALED UNDER FLOOR
	HOME RUN TO PANEL; GROUND, PHASE 'A', 'B', 'C' AND NEUTRAL
	CONDUIT TURNED UP, CONDUIT TURNED DOWN
	RECEPTACLE PANEL; 120/208V-3PH-4W
	LIGHTING PANEL; 277/480V-3PH-4W
	MOTOR, HORSEPOWER AS NOTED
	EXISTING DEVICE LOCATION, REMOVE FIRE ALARM DEVICE. ELECTRICAL BACKBOX AND WIRING TO REMAIN AS PART OF FIRE ALARM TROUGH IN, NEW DEVICES TO BE INSTALLED AS PART OF A SEPARATE BID PACKAGE
	FURNISHED BY OWNER, INSTALLED AND/OR WIRED BY ELECTRICAL CONTRACTOR
	LOCATE AS DIRECTED
	MOUNTING HEIGHT, FLOOR TO BOTTOM OF ITEM
	ITEM TO BE WEATHERPROOF
	EXISTING ITEM TO BE RELOCATED
	HEAVY DUTY SAFETY SWITCH, SIZE AS NOTED, FUSED AS NOTED, NEMA 1
	HEAVY DUTY SAFETY SWITCH, SIZE AS NOTED, FUSED AS NOTED, NEMA 3
	12" DIAMETER WALL MOUNTED ANALOG CLOCK
	12" DIAMETER WALL MOUNTED DUAL FACE CLOCK
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR
	FIRE ALARM STROBE, WALL MOUNTED, CANDELA (CD) AS SHOWN ON DRAWINGS
	FIRE ALARM STROBE, CEILING MOUNTED, CANDELA (CD) AS SHOWN ON DRAWINGS
	FIRE ALARM SPEAKER ONLY, CEILING MOUNTED
	FIRE ALARM SPEAKER ONLY, WALL MOUNTED, SPEAKER TAP SETTING (W) AS SHOWN ON DRAWINGS
	FIRE ALARM SPEAKER AND STROBE, WALL MOUNTED, CANDELA (CD) AS SHOWN ON DRAWINGS, SPEAKER TAP SETTING (W) AS SHOWN ON DRAWINGS
	FIRE ALARM CEILING SPEAKER, SPEAKER TAP SETTING (W) AS SHOWN ON DRAWINGS
	FIRE ALARM PULL STATION
	CEILING SMOKE DETECTOR
	CARBON MONOXIDE DUCT DETECTOR
	DUCT SMOKE DETECTOR WITH EXTRA SET OF N.O. CONTACTS
	DOOR HOLDER
	FIRE ALARM MONITOR MODULE
	FIRE ALARM CONTROL MODULE
	FIRE ALARM REMOTE TEST STATION
	EXISTING ITEM TO REMAIN UNLESS OTHERWISE NOTED
	EXISTING ITEM TO BE REMOVED
	ULTRASONIC OCCUPANCY SENSOR, CEILING MOUNTED, 1100 SQ. FT. 360° COVERAGE WITH POWER PACK (24VDC-150mA) AND AUXILIARY RELAY AS REQUIRED; WATT STOPPER WT-1100-SERIES OR ENGINEER APPROVED EQUAL
	ULTRASONIC OCCUPANCY SENSOR, WALL MOUNTED, 1100 SQ. FT. 360° COVERAGE WITH POWER PACK (24VDC-150mA) AND AUXILIARY RELAY AS REQUIRED; WATT STOPPER WT-1100-SERIES OR ENGINEER APPROVED EQUAL
	OUTLET TO BE DUPLEX OR MATCHING RECEPTACLE IF EQUIPMENT IS FURNISHED WITH CORD AND PLUG, OR JUNCTION BOX AND/OR SAFETY SWITCH WITH SEALTITE CONNECTION IF EQUIPMENT IS TO BE WIRED DIRECT. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO VERIFY THE REQUIRED OUTLET AND TO WIRE ALL EQUIPMENT COMPLETE.
	DOOR POWER SUPPLY, 120V
	CONTROL PANEL (STARTERS, ETC.)
	SURGE PROTECTION DEVICE, RECEPTACLE PANEL TYPE; SEE INSTALLATION DETAIL ON THIS SHEET
	LIGHTING SPACE CONTROLLER; FOUR OR MORE 0-10V DIMMING POWER PACKS, LOCATED ABOVE AN ACCESSIBLE CEILING SEE DETAIL THIS SHEET
	DAYLIGHT SENSOR WITH INTEGRATED VACANCY SENSOR

LEGEND NOTES:

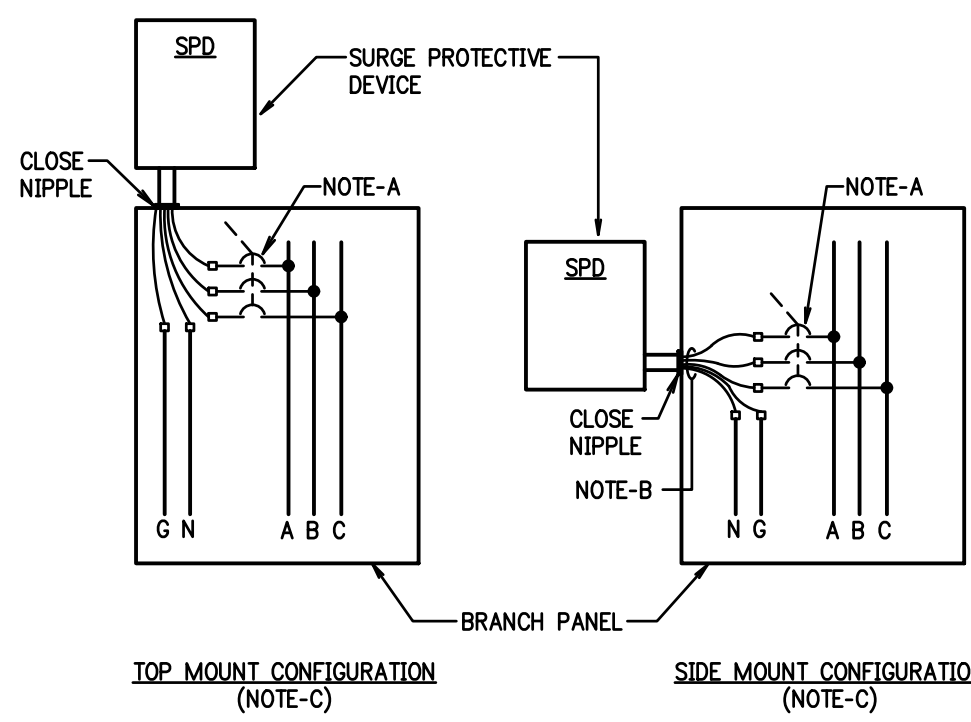
- A. IN THIS BID PACKAGE, FIRE ALARM DEVICES SHOWN ARE FOR ROUGH-IN ONLY. ALL FIRE ALARM DEVICES SHALL BE BY OTHERS IN A SEPARATE BID PACKAGE.

NOTES:

- CIRCUIT BREAKER FEEDING THE SURGE PROTECTIVE DEVICE SHALL BE INSTALLED DIRECTLY ACROSS FROM THE CONDUIT NIPPLE CONNECTING THE PANEL AND SURGE PROTECTIVE DEVICE. CIRCUIT BREAKERS SHALL BE LOCATED WITHIN PANEL AS REQUIRED TO ACCOMMODATE THIS INSTALLATION.
- PHASE NEUTRAL AND GROUND CONDUCTORS SHALL BE INSTALLED WITH THE SHORTEST LENGTH POSSIBLE WITH THE NEUTRAL, AND GROUND CONNECTION BEING MADE IN CLOSE PROXIMITY TO THE FEEDER CIRCUIT BREAKER. THE CONDUCTORS SHALL BE INSTALLED TWISTED TOGETHER.
- BOTH SIDE AND TOP MOUNTING OF THE SURGE PROTECTIVE DEVICE ARE ACCEPTABLE. CONTRACTOR SHALL FIELD VERIFY BEST LOCATION WITH PANEL LAYOUT.

SURGE PROTECTIVE DEVICE INSTALLATION DETAIL

SCALE: NONE

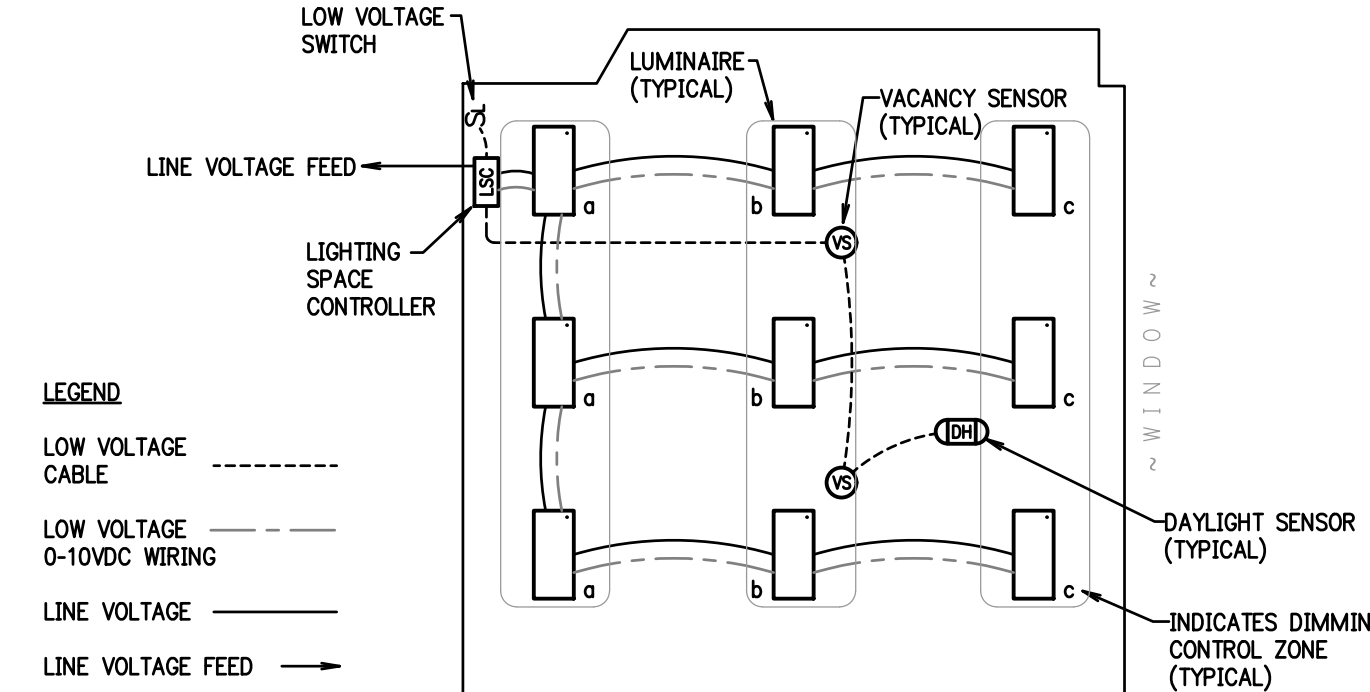


LUMINAIRE SCHEDULE

	LED - EXIT LIGHT, DIFFUSE, WALL MOUNTED, ALUMINUM HOUSING, STENCIL FACE, ARROWS AS SHOWN, COLOR SELECTED BY ARCHITECT, SHADING INDICATES FACE, 277V	DUAL-LITE LC8RO-XC-MOD LITHONIA LESIR-120/277-MOD MCPHILBEN 55L1-12/27-R ATLITE LA2-60R1-277-MOD EXTRONIX 402-LB-00-MOD PRESCOLITE XD-1-R-AC-0-MOD
	LED - EXIT LIGHT, DIFFUSE, CEILING MOUNTED, ALUMINUM HOUSING, STENCIL FACE, ARROWS AS SHOWN, COLOR SELECTED BY ARCHITECT, SHADING INDICATES FACE, 277V	DUAL-LITE LC8RO-MOD LITHONIA LESIR-120/277-MOD MCPHILBEN 55L1-12/27-R ATLITE LA2-60R1-277-MOD EXTRONIX 402-LB-00-MOD PRESCOLITE XD-1-R-AC-0-MOD
	LED - EXIT LIGHT, DIFFUSE, CEILING MOUNTED, ALUMINUM HOUSING, STENCIL FACE, ARROWS AS SHOWN, COLOR SELECTED BY ARCHITECT, SHADING INDICATES FACE, 277V	DUAL-LITE LC8RO-MOD LITHONIA LESIR-120/277-MOD MCPHILBEN 55L2-12/27-R ATLITE LA2-60R2C-277-MOD EXTRONIX 403-LB-00-MOD PRESCOLITE XD-2-R-AC-0-MOD
	FIXTURE TO CONTAIN INTEGRAL EMERGENCY DRIVER, 1-1/2 HOUR OPERATION, 277V	
	LED - 40W, 4,000 LUMENS, 4,000K COLOR TEMPERATURE, 24" X 48" X 2.4" LAY-IN LUMINAIRE, ALUMINUM FRAME, SATIN WHITE LENS, 80 CRI, 0-10V DIMMING, 120-277V	LITHONIA EPANL-24-4000LM-80CRI-40K-MIN10-ZT-MVOLT METALUX 24FSL25C13 COLUMBIA CFP24-4315 DAY-BRITE 2FG-G-3BL-830-4-UNV-DIM
	LED - 32W, 3,300 LUMENS, 4,000K COLOR TEMPERATURE, 24" X 48" X 2.4" LAY-IN LUMINAIRE, ALUMINUM FRAME, SATIN WHITE LENS, 80 CRI, 0-10V DIMMING, 120-277V	LITHONIA EPANL-22-3400LM-80CRI-40K-MIN10-ZT-MVOLT METALUX 22FSL25C13 COLUMBIA CFP22-4315 DAY-BRITE 2FG-G-3BL-830-2-UNV-DIM/SUS KIT
	LED - 1-45W, 5,000 LUMENS, 4,000K COLOR TEMPERATURE, 48" X 8" X 4" D SURFACE-MOUNT LUMINAIRE, ALUMINUM HOUSING, MATTE WHITE FINISH, CLEAR POLYCARBONATE LENS, 1-CIRCUIT, FLAT END CAPS, TAMPER-RESISTANT HARDWARE, 120-277V	KENALL MLHAB-48-F-MW-CP-1-45L40K-DCC-1-DV OR APPROVED EQUAL
	LED - 38W, 3,800 LUMENS, 4,000K COLOR TEMPERATURE, 12" X 24" X 2.4" LAY-IN LUMINAIRE, ALUMINUM FRAME, SATIN WHITE LENS, 80 CRI, 0-10V DIMMING, SURFACE MOUNT KIT, 120-277V	LITHONIA EPANL-14-3400LM-80CRI-40K-MIN10-ZT-MVOLT 1X4MKSH METALUX 14FSL25C13/FPXSURF14 COLUMBIA CFP14-4315/CFPSM-14 DAY-BRITE 1FG-G-3OL-830-4-UNV-DIM/FSK14
	LED - 31W, 1000 LUMENS, 4000° K COLOR TEMPERATURE, 6.5" DIA. CEILING CUT-OUT, 8" DIA WHITE POLYCARBONATE TRIM, WITH CLEAR POLYCARBONATE LENS, RUSTPROOF, GASKETED, 12" SQ. X 5" H., WET AND DAMP UL RATING, SHOWER DOWNLIGHT, 277V	HALO H750ICAT ML5612840 691WB GOTHAM EVO 41/10 RDR MYOLT GIRLIN LRR-05010-277-32-4IK PRESCOLITE LF4LEDG4 4LFLEDG4 40K IP65
	LED - 40W, 4,000 LUMENS, 4,000K COLOR TEMPERATURE, 24" X 48" X 2.4" LAY-IN LUMINAIRE, ALUMINUM FRAME, SATIN WHITE LENS, 80 CRI, 0-10V DIMMING, 120-277V	LITHONIA EPANL-24-4000LM-80CRI-40K-MIN10-ZT-MVOLT 2X4PANLACG METALUX 24FSL25C13/FPXSURF14 COLUMBIA CFP24-4315/CFPSM-14 DAY-BRITE 2FG-G-3BL-830-4-UNV-DIM/SUS KIT
	LED - 35W, 4,500 NOMINAL LUMENS, 4000° K, COLOR TEMPERATURE, 9TH. X 11.5TH. X 7D., TYPE III, DISTRIBUTION, BRONZE FINISH, DIE-CAST ALUMINUM HOUSING, FULLY GASKETED, ACRYLIC LENS, 120/277V	LITHONIA WEDGE2LED-P4-P35W-40K-80CRI-MVOLT LIGMAN UVK-30041-37W-13-W40-06-120/277V GARCOO 101L-160-700-NM-Q1-3-UNV-D0-F1-DDY HUBBELL TRP2-24L-30-4K8-3-UNV-D8
	LED - 23.8W, 3,800 LUMENS, 4,000K COLOR TEMPERATURE, 17" X 48" X 10.6" SURFACE-MOUNT LUMINAIRE, FIBERGLASS HOUSING, WHITE FINISH, 80 CRI, 4,000K COLOR TEMP, 0-10V DIMMING, WET LOCATION, VAPOR-TIGHT, LOW-PROFILE, CLEAR ACRYLIC LENS, 120-277V	LITHONIA FEM-148-3000LM-LFACL-MD-MVOLT-G210-40K-80CRI OR APPROVED EQUAL
	LED - 32W, 3000 LUMENS, 4000° K COLOR TEMPERATURE, DOWNLIGHT, 4" DIA. X 13" X 11" X 7" D., CLEAR ALZAK REFLECTOR, MATTE DIFFUSE FINISH, 0-10V DIMMING DRIVER, 120/277V	HALO PD410ED030 H.E. WILLIAMS 4DR-TL SERIES LITHONIA LDH4 40 30 LOG AR LD MVOLT ATLANTIC COM4-SYL30 PRESCOLITE LC4SL PHILIPS LIGHTOLIER LAR SERIES

ELECTRICAL GENERAL NOTES:

- IT IS STRONGLY RECOMMENDED THAT ALL BIDDERS VISIT AND EXAMINE THE SITE. NO ADDITIONAL COMPENSATION WILL BE AWARDED FOR ANY DEVIATIONS OR DISCREPANCIES TO THESE PLANS. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS UNDER WHICH WORK MUST BE PERFORMED AND CHECK ALL PRESENT ELEVATIONS. THE CONTRACTOR SHALL REPORT ANY MAJOR DISCREPANCIES TO THE ARCHITECT. FAILURE TO DO SO SHALL BE DEEMED AS ACCEPTANCE OF EXISTING CONDITIONS.
- ANY OTHER RELOCATIONS, ALTERATIONS AND/OR EXTENSIONS OF ELECTRICAL ITEMS DUE TO REMODELING (THOUGH NOT SPECIFICALLY SHOWN) SHALL BE INCLUDED TO PROVIDE A COMPLETE AND WORKING INSTALLATION.
- THE DRAWINGS INDICATE MAJOR ITEMS TO BE REMOVED SUCH AS PANELS, COMMUNICATIONS SYSTEM TERMINAL BOXES, MAJOR FEEDERS, ETC. THE DRAWINGS DO NOT DETAIL REMOVALS FOR MINOR DEVICES, LIGHTING FIXTURES, BRANCH CIRCUITS, ETC., UNLESS SPECIFICALLY INDICATED FOR REUSE ELSEWHERE. IT IS INTENDED THAT ALL ITEMS NOT SHOWN TO BE REUSED ON THE NEW FLOOR PLANS BE REMOVED BACK TO SOURCE AND CONTINUITY OF CIRCUITRY TO ADJACENT AREAS BE PROVIDED FOR.
- ALL REMOVED ITEMS SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS DIRECTED OTHERWISE BY THE OWNER. TIME AS TO MINIMIZE DISRUPTION. THE CONTRACTOR SHALL SCHEDULE FULL WORK CREWS FOR AS LONG AS REQUIRED TO MINIMIZE THE SHUTDOWN PERIOD.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING FOR INSTALLATION OF ALL ELECTRICAL WORK. ALL CONDUIT SHALL BE RUN CONCEALED IN WALLS AND CEILINGS, WIREMOLD OR EXPOSED CONDUITS ARE NOT ACCEPTABLE UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. ELECTRICAL CONTRACTOR TO PROVIDE ACCESS PANELS IN WALLS AND CEILINGS AS REQUIRED. MATCH ALL EXISTING CONDITIONS.
- OPENINGS AROUND CONDUITS OR IN SLEEVES FOR CONDUITS PENETRATING FIRE-RATED FLOOR SLABS, WALLS, PARTITIONS, CEILINGS OR SMOKE PARTITIONS, SHALL BE SEALED AT BOTH SIDES OF THE PENETRATION. INSULATION SHALL NOT EXTEND THROUGH SLEEVES. PACK OPENINGS WITH CALCIUM SILICATE BLOCK, DOW CORNING 3-6545 RTV SILICON FORM, 3M CPES CAULK, OR JOG PUTTY FIRE BARRIER SYSTEM, OR MATERIAL HAVING THE SAME FIRE-RATING AS THE FLOOR OR WALL PENETRATED. FIBERGLASS IS NOT ACCEPTABLE.
- ELECTRICAL CONTRACTOR TO PROVIDE AN INSTALLATION SCHEDULE DETAILING MAJOR DATES OF INSTALLATION FOR ITEMS SUCH AS TRANSFORMERS, MAIN DISTRIBUTION PANELS, SHUT DOWN TIMES, SERVICE SWITCHOVER, ETC. THE SCHEDULE SHALL BE APPROVED BY THE OWNER PRIOR TO ANY SHUT DOWN TIMES.
- IN AREAS TO BE REMODELED, REMOVE ALL EXISTING LIGHTS, SWITCHES, JUNCTION BOXES, EXPOSED WIRING, MISCELLANEOUS EQUIPMENT, ETC., WHICH ARE TO BE ABANDONED OR ARE NOT UNUSED OR OTHERWISE NOT SERVICEABLE. ALL EXPOSED CONDUIT AND WIRE SHALL BE REMOVED BACK TO THE POINT OF SERVICE TIE-IN AND PLUGGED OR CAPPED AS REQUIRED. ALL ITEMS REMOVED AND NOT REUSED SHALL REMAIN THE PROPERTY OF THE OWNER OR DISPOSED OF AS DIRECTED.
- PROVIDE FOR THE CONTINUITY OF EXISTING CIRCUITS WHICH MAY PASS THROUGH RENOVATED AREAS AND ARE DISTURBED BY THE DEMOLITION.
- ALL EXTERIOR TRENCHING SHALL BE BACKFILLED AND COMPACTED WITH GRANULAR FILL, GRADED WITH A MINIMUM OF 6" OF TOP SOIL AND SEEDED TO MATCH EXISTING.



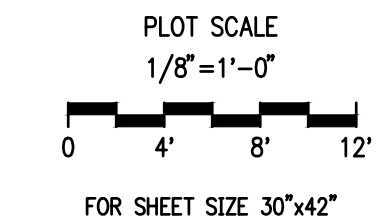
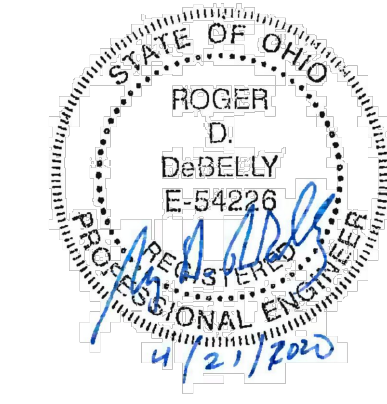
- (2) DAYLIGHT DIMMING ZONES - b, c
(1) SWITCH CONTROL ZONE - a and (b, c)

LIGHTING SPACE CONTROL NOTES:

- VACANCY LIGHTING CONTROL WITH MORE THAN ONE (1) DIMMING ZONE. LUMINAIRES, OCCUPANCY SENSOR, DAYLIGHT SENSOR AND DIMMER SHALL BE WIRED TO THE LIGHTING SPACE CONTROLLER FOR LIGHTING CONTROL. LIGHTING SHALL TURN 'OFF' 30 MINUTES AFTER OCCUPANT LEAVES SPACE WITH MANUAL 'ON' LIGHTING CONTROL.
- LIGHTING SPACE CONTROLLER SHALL BE MOUNTED ABOVE ACCESSIBLE CEILING, ADJACENT TO THE DOOR.

LIGHTING SPACE CONTROLLER WITH DAYLIGHT HARVESTING WIRING DIAGRAM

SCALE: NONE



ISSUE DATE

1 04.21.20 ISSUED FOR BIDS

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EVERGREEN HIGH SCHOOL LOCKER ROOM ADDITIONS & RENOVATIONS

LEGEND, LUMINAIRE
SCHEDULE &
DETAILS

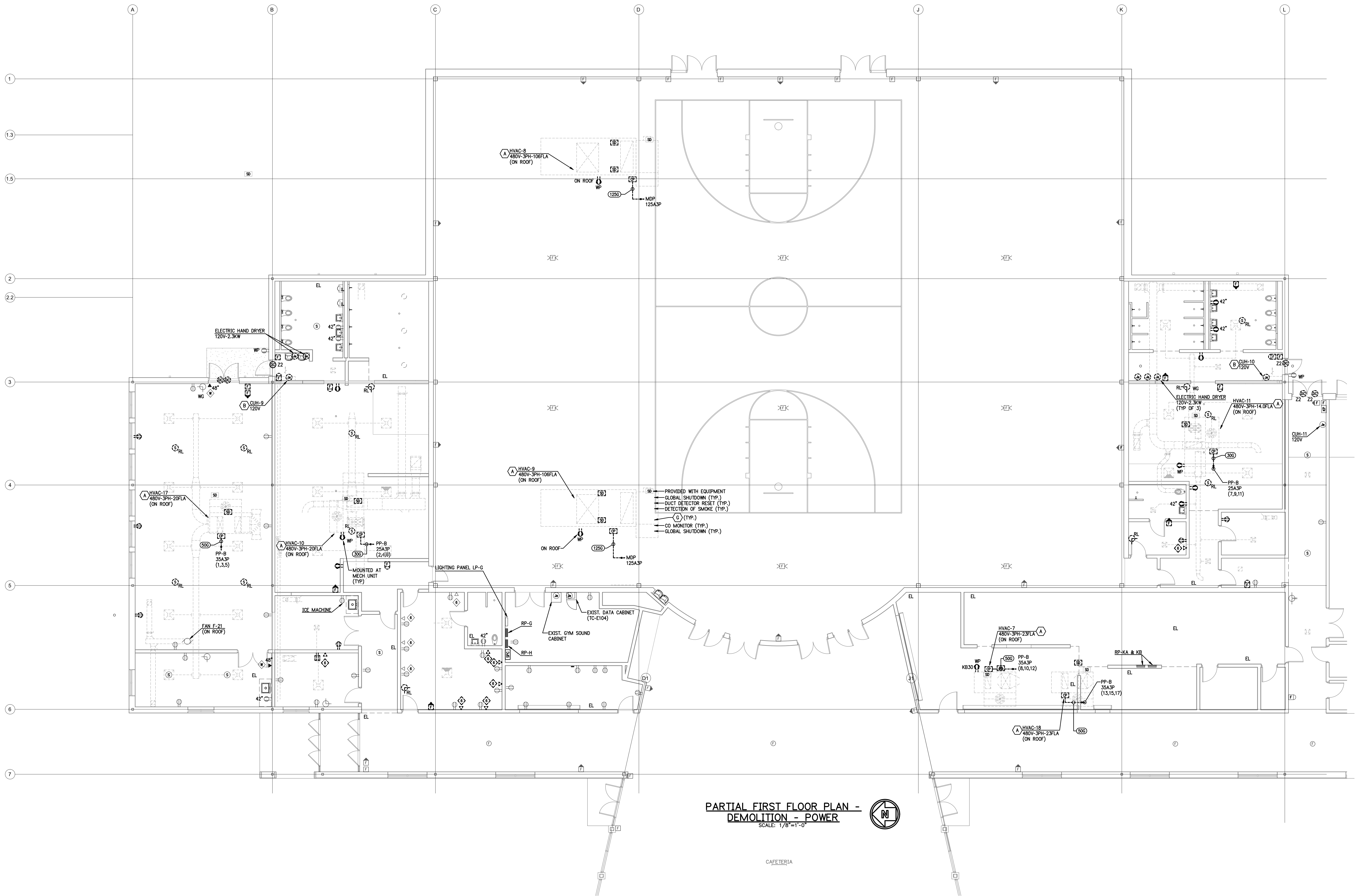
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DRAWN BY: CAG/RKB

CHECKED BY: DTK

SHEET

E-001

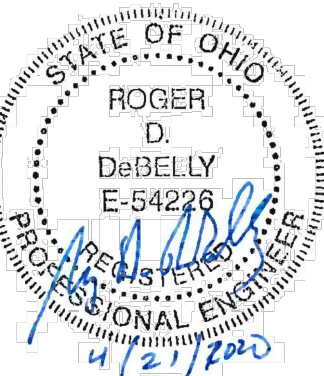


PARTIAL FIRST FLOOR PLAN -
DEMOLITION - POWER
SCALE: 1/8"=1'-0"



PLAN NOTES:

- A. REMOVE EXISTING DISCONNECTS, CONTROL PANELS, FEEDERS, ETC. BACK TO SOURCE. DEMO EXISTING 120V RECEPTACLE FEED BACK TO NEAREST JUNCTION POINT, PREPARE FOR EXTENSION TO NEW RTU RECEPTABLES, SEE SHEET EPI01.
- B. DISCONNECT EXISTING CUH AND PREPARE FOR EXTENSION TO NEW LOCATION. SEE SHEET EPI01.



PLOT SCALE
1/8"=1'-0"
0 4 8 12'
FOR SHEET SIZE 30"x42"

ISSUE DATE
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EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS
14544 COUNTY ROAD 6, METAMORA, OH 43540

PARTIAL FIRST FLOOR
PLAN - DEMOLITION -
POWER

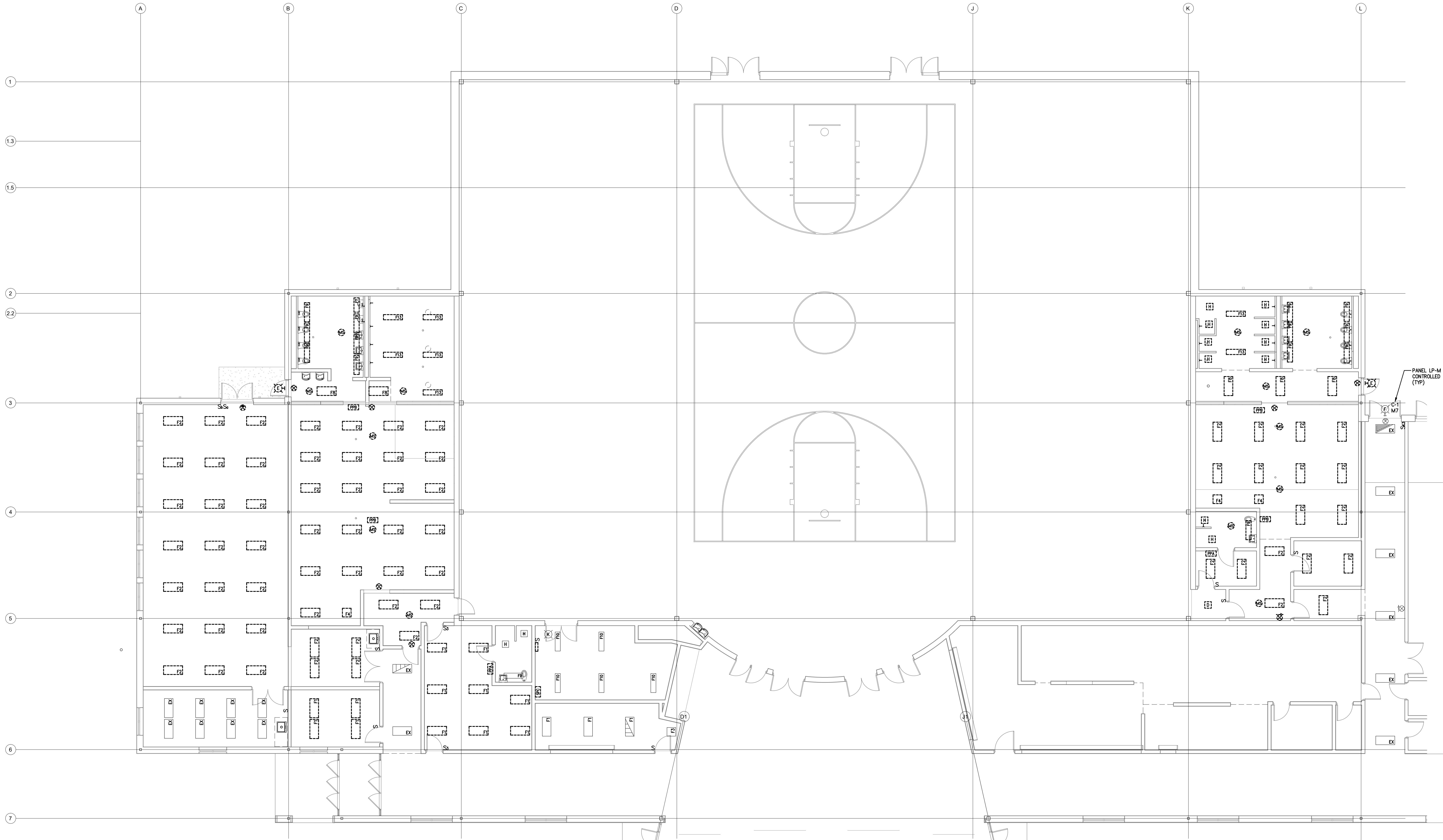
PROJECT: B7-4569

DRAWN BY: CAG/RKB

CHECKED BY: DTK

SHEET

ED101



- PLAN NOTES:
- A. EXISTING BRANCH CIRCUITS SHALL BE DEMO'D BACK TO NEAREST JUNCTION POINT, PREPARE FOR EXTENSION TO NEW LUMINAIRES, SEE SHEET EL101.
 - B. EXISTING SWITCH DEVICES SHALL BE REMOVED COMPLETELY.

PARTIAL FIRST FLOOR PLAN -
DEMOLITION - LIGHTING
SCALE: 1/8"=1'-0"



PLOT SCALE
1/8"=1'-0"
0 4 8 12'

FOR SHEET SIZE 30"x42"

ISSUE DATE

1 04.21.20 ISSUED FOR BIDS

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EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS
14544 COUNTY ROAD 6, METAMORA, OH 43540

PARTIAL FIRST FLOOR
PLAN - DEMOLITION -
LIGHTING

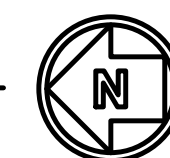
PROJECT: B7-4569

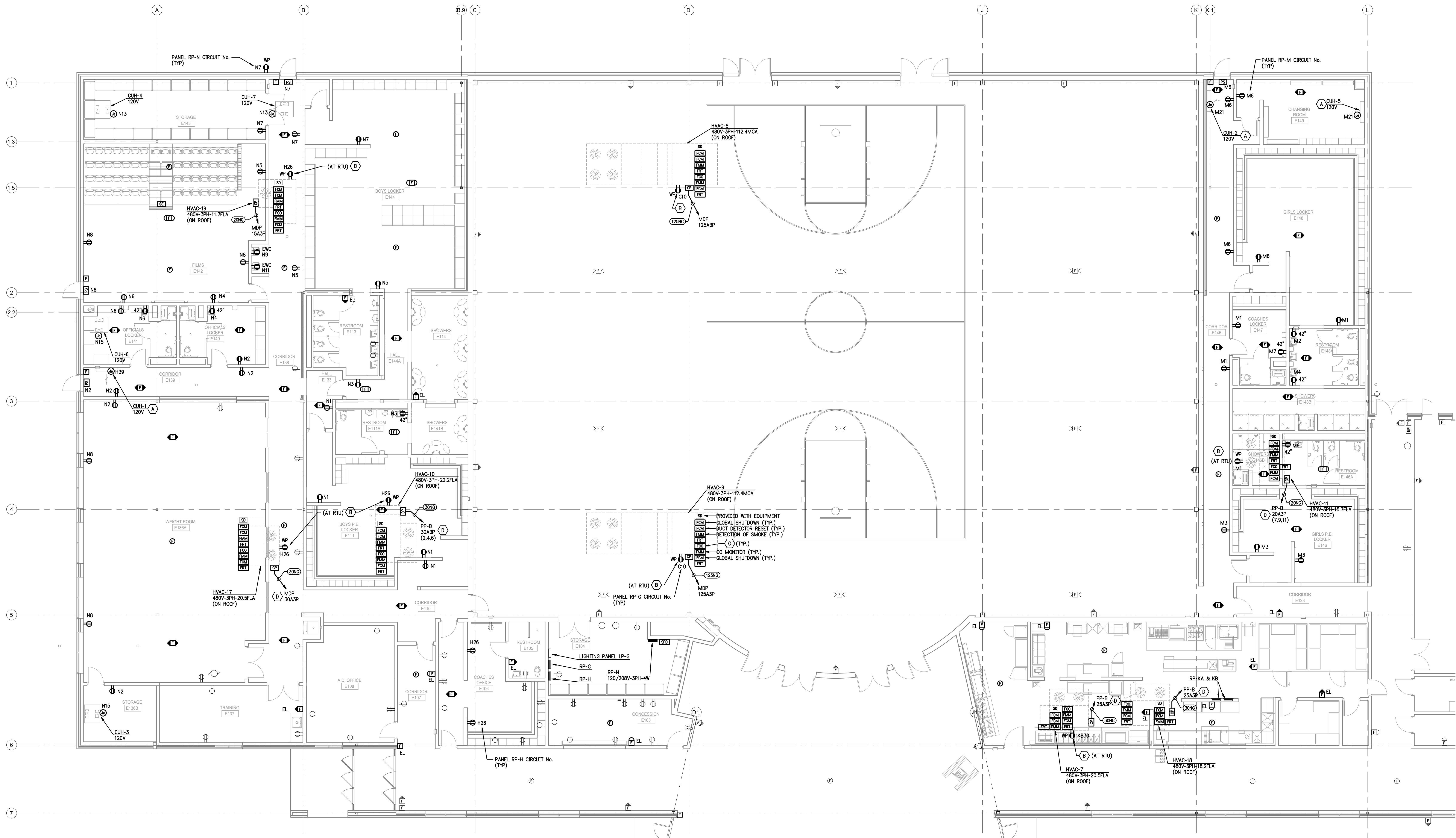
DRAWN BY: CAG

CHECKED BY: DTK

SHEET

ED102

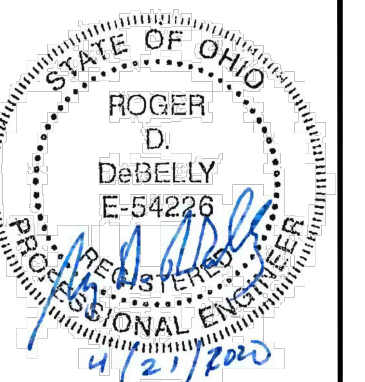




PARTIAL FIRST FLOOR PLAN - POWER
SCALE: 1/8"=1'-0"

PLAN NOTES:

- EXTEND EXISTING FEEDERS TO NEW CUH LOCATION.
- EXTEND EXISTING 120V FEEDER FOR NEW RECEPTACLE AT RTU, MATCH EXISTING.
- RESERVED
- CHANGE BREAKER AS SHOWN, MATCH EXISTING TYPE, SEE SHEET EP601.
- RESERVED
- FIRE ALARM SHOWN IS FOR ROUGH-IN ONLY. ALL FIRE ALARM DEVICES SHALL BE BY OTHERS IN A SEPARATE BID PACKAGE.
- TO PROPERLY LOCATE AND INSTALL THE CARBON MONOXIDE DUCT DETECTOR CONSIDER THE FOLLOWING CRITERIA:
 - UNIFORM NON-TURBULENT (LAMINAR) AIRFLOW BETWEEN 100 TO 4000 FT/MIN.
 - THE PRESSURE DIFFERENTIAL BETWEEN THE SAMPLING AND EXHAUST TUBES MUST BE BETWEEN 0.01 AND 1.2 INCHES OF WATER.
 - ON SUPPLY SIDE DUCT THE DETECTOR MUST BE INSTALLED AFTER THE HEAT EXCHANGER AND BEFORE ANY DUCT BRANCHES.
 - THE DETECTOR CAN BE MOUNTED AFTER FRESH AIR INTAKES ON THE RETURN DUCT TO MONITOR POSSIBLE CO CONTAMINATION FROM OUTSIDE SOURCES.
 - THE DETECTOR MUST BE INSTALLED IN AN AREA THAT IS ACCESSIBLE FOR FUTURE TESTING AND MAINTENANCE.



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

FOR SHEET SIZE 30"x42"

ISSUE DATE

1 04.21.20 ISSUED FOR BIDS

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PARTIAL FIRST FLOOR
PLAN - POWER

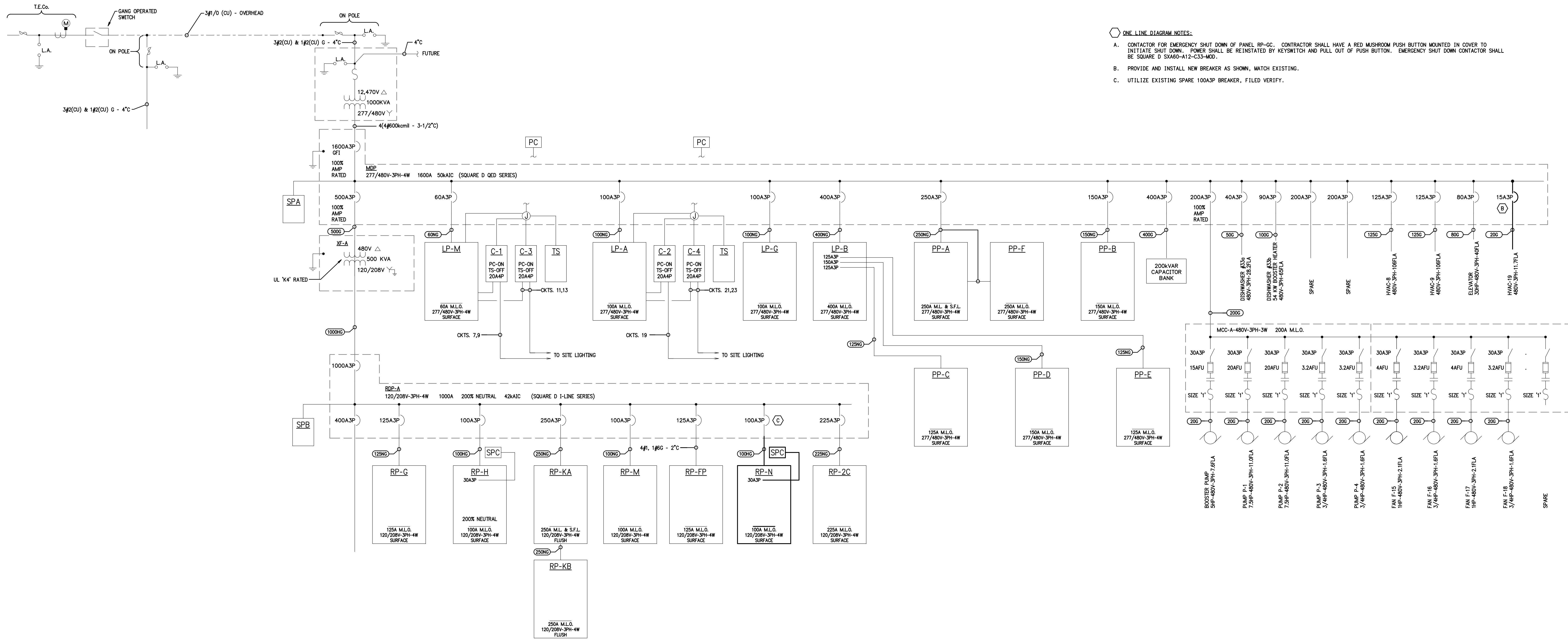
PROJECT: B7-4569

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SHEET

EP101



ONE LINE DIAGRAM
N.T.S.

RP-H (EXISTING)											
100A M.L.O. VOLTAGE: 120/208V-3PH-4W											
NOTES	LOAD DESCRIPTION	LOAD	BRK AMP	PH	BRK AMP	LOAD	LOAD DESCRIPTION	LOAD	BRK AMP	PH	NOTES
REC - B112		720	20	1	2	500	REC - B112				
REC - B112		720	20	3	4	20	REC - B112, E102				
REC - B112		500	20	5	6	20	REC - B112 TROPHY CASE				
DATA RACK		1,000	20	7	8	20	1,000 BATTING CAGE				
SPARE		20	9	10	20	1,000	BATTING CAGE				
DATA RACK		500	20	11	12	20	180 REC - E103				
REC - E102		180	20	13	14	20	180 REC - E103				
REC - E102		180	20	15	16	20	180 REC - E103				
REC - E102		180	20	17	18	20	180 REC - E103				
REC - E102		180	20	19	20	20	180 REC - E105				
REC - E108		360	20	21	22	20	360 REC - E108				
REC - E108		360	20	23	24	20	360 REC - E108				
REC - E108		540	20	25	26	20					
REC - E107, 108, 101		540	20	27	28	20	180 REC - E113				
REC - E108		360	20	29	30	20	180 REC - E113				
		20	31	32	20						
ALT E-3		540	20	33	34	20	540 REC - WEIGHT ROOM				
CUH-1		500	20	37	38	30	REC - TRAINER'S ROOM				
FAN F-21		20	39	40	-		SPD				
		500	20	41	42	3P					
TOTAL CONNECTED LOAD:		14,880 W				41 AMPS					2020-04-21

RP-N											
100A M.L.O. VOLTAGE: 120/208V-3PH-4W											
NOTES	LOAD DESCRIPTION	LOAD	BRK AMP	PH	BRK AMP	LOAD	LOAD DESCRIPTION	LOAD	BRK AMP	PH	NOTES
REC - E111, E133		720	20	1	2	900	REC - E139, E140				
REC - E111A, E144A		540	20	3	4	20	720 REC - E140, E142				
REC - E144, E138		540	20	5	6	20	720 REC - E141, E142				
REC - E144, E143		720	20	7	8	20	540 REC - E142				
REC - E133, E143		500	20	9	10	20					
REC - E133, E143		500	20	11	12	20					
CUH-4, CUH-7		500	20	13	14	20	SPARE				
CUH-3, CUH-6		500	20	15	16	20	SPARE				
		500	20	17	18	20	SPARE				
		20	19	20	20						
SPARE		20	21	22	20						
SPARE		20	23	24	20						
		20	25	26	20						
		20	27	28	20						
		20	29	30	20						
		20	31	32	20						
		20	33	34	20						
		20	35	36	20						
		20	37	38	30						
		20	39	40	-						
		20	41	42	3P						
TOTAL CONNECTED LOAD:		7,400 W				21 AMPS					2020-04-21

RP-M (EXISTING)											
100A M.L.O. VOLTAGE: 120/208V-3PH-4W											
NOTES	LOAD DESCRIPTION	LOAD	BRK AMP	PH	BRK AMP	LOAD	LOAD DESCRIPTION	LOAD	BRK AMP	PH	NOTES
REC -		540	20	1	2	20	500 REC -				
REC -		540	20	3	4	20	500 REC -				
REC -		540	20	5	6	20	360 REC - E118, 119				
		20	7	8	20	720 REC - E130					
REC -		500	20	9	10	20	180 REC - TOILET				
REC - E139, 130		720	20	11	12	20	540 REC - E133				
REC - E132		540	20	13	14	20	1,000 DRYER				
REC - E132		720	20	15	16	20	1,000 WASHER				
OVERHEAD DOOR E130		1,000	20	17	18	20	2,080 DRYER				
REC - HVAC 11		180	20	19	20	2P	2,080				
CUH-2, CUH-5		800	20	21	22	20	SPARE				
CUH-11		500	20	23	24	20	SPARE				
W-1, 2		900	20	25	26	20	1,000 WATER HEATER				
FAN F-6		700	20	27	28	20	1,200 BLR-7				
FAN F-7		500	20	29	30	20	1,200 BLR-2				
FAN F-8		700	20	31	32	20	500 HEAT TRACE				
SPARE		700	20	33	34	2P	500				
SPARE		20	35	36	20	500	HEAT TRACE				
SPARE		20	37	38	3P	500					
SPARE		20	39	40							
SPARE		20	41	42							
TOTAL CONNECTED LOAD:		23,940 W				66 AMPS					2020-04-21

PP-B (EXISTING)											
150A M.L.O. VOLTAGE: 277/480V-3PH-4W											
WIRE	LOAD DESCRIPTION	LOAD	BRK AMP	PH	BRK AMP	LOAD	LOAD DESCRIPTION	LOAD	BRK AMP	PH	WIRE
A	HVAC-17	5,542	30	1	2	30	6,149	HVAC-10			A
		5,542	-	3	B	4	-	6,149			
		5,542	3P	5	C	6	3P	6,149			
A	HVAC-11	4,344	20	7	A	8	20	5,672			A
		4,344	-	9	B	10	-	5,672			
		4,344	3P	11	C	12	3P	5,672			
A	HVAC-18	5,053	25	13	A	14	20	SPARE			
		5,053	-	15	B	16	20	SPARE			
		5,053	3P	17	C	18					
		20	19	A	20						
		20	21	B	22						
		20	23	C	24						
		20	25								
		20	27								
		20	29								
		20	31								
		20	33								
		20	35								
		20	37								
		20	39								
		20	41								
TOTAL CONNECTED LOAD:		80,280 W				97 AMPS					2020-04-21

PANEL SCHEDULE NOTES:
A. REPLACE EXISTING CIRCUIT BREAKER WITH NEW AS SHOWN, MATCH EXISTING TYPE.

FEEDER SCHEDULE							
MARK	3 PHASE - 3 WIRE	MARK	3 PHASE - 3 WIRE WITH GROUND	MARK	3 PHASE - 4 WIRE WITH GROUND	MARK	3 PHASE - 4 WIRE (2000K) WITH GROUND
200	3/12 - 1/2" C	200	3/12, 1/120 - 1/2" C	200	4/12, 1/120 - 1/2" C		
200	3/10 - 1/2" C	200	3/10, 1/100 - 1/2" C	200	4/10, 1/100 - 3/4" C		
200	3/8 - 3/4" C	200	3/8, 1/100 - 1" C	200	4/8, 1/100 - 1" C		
200	3/8 - 1" C	200	3/8, 1/100 - 1" C	200	4/8, 1/100 - 1 1/4" C	2000K	3/8, 1/110 & 1/100 - 1 1/4" C
200	3/4 - 1" C	200	3/4, 1/80 - 1" C	200	4/4, 1/80 - 1 1/4" C	2000K	3/4, 1/82 1/2" & 1/80 - 1 1/2" C
200	3/2 - 1" C	200	3/2, 1/80 - 1 1/4" C	200	4/2, 1/80 - 1 1/4" C	2000K	3/2, 1/83" & 1/80 - 1 1/4" C
200	3/1 - 1 1/4" C	200	3/1, 1/80 - 1 1/4" C	200	4/1, 1/80 - 1 1/2" C	2000K	3/1, 1/82 5/8" & 1/80 - 1 1/2" C
1100	3/1/0, 1/80 - 1 1/2" C	1100	3/1/0, 1/80 - 1 1/2" C	1100	4/1/0, 1/80 - 1 1/2" C	1100	3/1/0, 1/350 5/8" & 1/80 - 2" C
1120	3/2/0, 1/80 - 1 1/2" C	1120	3/2/0, 1/80 - 1 1/2" C	1120	4/2/0, 1/80 - 2" C	1120	3/2/0, 3/282" & 1/80 - 2 1/2" C
2000	3/3/0, 1/80 - 2" C	2000	3/3/0, 1/80 - 2" C	2000	4/3/0, 1/80 - 2" C	2000	3/3/0, 2/83" & 1/80 - 2 1/2" C
2000	3/4/0, 1/80 - 2 1/2" C	2000	3/4/0, 1/80 - 2 1/2" C	2000	4/4/0, 1/80 - 2 1/2" C	2000	3/4/0, 2/84" & 1/80 - 3" C
2000	3/5/0, 1/80 - 2" C	2000	3/5/0, 1/80 - 2 1/2" C	2000	4/5/0, 1/80 - 2 1/2" C	2000	3/5/0, 2/85 1/8" & 1/80 - 3" C
2000	3/6/0, 1/80 - 2 1/2" C	2000	3/6/0, 1/80 - 2 1/2" C	2000	4/6/0, 1/80 - 3" C	2000	3/6/0, 2/86 1/4" & 1/80 - 3 1/2" C
2000	3/7/0, 1/80 - 2" C	2000	3/7/0, 1/80 - 2 1/2" C	2000	4/7/0, 1/80 - 3 1/2" C	2000	3/7/0, 2/87 1/2" & 1/80 - 3 1/2" C
2000	3/8/0, 1/80 - 2 1/2" C	2000	3/8/0, 1/80 - 2 1/2" C	2000	4/8/0, 1/80 - 3 1/2" C	2000	3/8/0, 2/88 1/4" & 1/80 - 3 1/2" C
2000	3/9/0, 1/80 - 2" C	2000	3/9/0, 1/80 - 2 1/2" C	2000	4/9/0, 1/80 - 3" C	2000	3/9/0, 2/89 1/2" & 1/80 - 3" C
2000	3/10/0, 1/80 - 2 1/2" C	2000	3/10/0, 1/80 - 2 1/2" C	2000	4/10/0, 1/80 - 3" C	2000	3/10/0, 2/90 1/4" & 1/80 - 3" C
2000	3/11/0, 1/80 - 2" C	2000	3/11/0, 1/80 - 2 1/2" C	2000	4/11/0, 1/80 - 3" C	2000	3/11/0, 2/91 1/4" & 1/80 - 3" C
2000	3/12/0, 1/80 - 2 1/2" C	2000	3/12/0, 1/80 - 2 1/2" C	2000	4/12/0, 1/80 - 3" C	2000	3/12/0, 2/92 1/4" & 1/80 - 3" C
2000	3/13/0, 1/80 - 2" C	2000	3/13/0, 1/80 - 2 1/2" C	2000	4/13/0, 1/80 - 3" C	2000	3/13/0, 2/93 1/4" & 1/80 - 3" C
2000	3/14/0, 1/80 - 2 1/2" C	2000	3/14/0, 1/80 - 2 1/2" C	2000	4/14/0, 1/80 - 3" C	2000	3/14/0, 2/94 1/4" & 1/80 - 3" C
2000	3/15/0, 1/80 - 2" C	2000	3/15/0, 1/80 - 2 1/2" C	2000	4/15/0, 1/80 - 3" C	2000	3/15/0, 2/95 1/4" & 1/80 - 3" C
2000	3/16/0, 1/80 - 2 1/2" C	2000	3/16/0, 1/80 - 2 1/2" C	2000	4/16/0, 1/80 - 3" C	2000	3/16/0, 2/96 1/4" & 1/80 - 3" C
2000	3/17/0, 1/80 - 2" C	2000	3/17/0, 1/80 - 2 1/2" C	2000	4/17/0, 1/80 - 3" C	2000	3/17/0, 2/97 1/4" & 1/80 - 3" C
2000	3/18/0, 1/80 - 2 1/2" C	2000	3/18/0, 1/80 - 2 1/2" C	2000	4/18/0, 1/80 - 3" C	2000	3/18/0, 2/98 1/4" & 1/80 - 3" C
2000	3/19/0, 1/80 - 2" C	2000	3/19/0, 1/80 - 2 1/2" C	2000	4/19/0, 1/80 - 3" C	2000	3/19/0, 2/99 1/4" & 1/80 - 3" C
2000	3/20/0, 1/80 - 2 1/2" C	2000	3/20/0, 1/80 - 2 1/2" C	2000	4/20/0, 1/80 - 3" C	2000	3/20/0, 2/100 1/4" & 1/80 - 3" C
2000	3/21/0, 1/80 - 2" C	2000	3/21/0, 1/80 - 2 1/2" C	2000	4/21/0, 1/80 - 3" C	2000	3/21/0, 2/101 1/4" & 1/80 - 3" C
2000	3/22/0, 1/80 - 2 1/2" C	2000	3/22/0, 1/80 - 2 1/2" C	2000	4/22/0, 1/80 - 3" C	2000	3/22/0, 2/102 1/4" & 1/80 - 3" C
2000	3/23/0, 1/80 - 2" C	2000	3/23/0, 1/80 - 2 1/2" C	2000	4/23/0, 1/80 - 3" C	2000	3/23/0, 2/103 1/4" & 1/80 - 3" C
2000	3/24/0, 1/80 - 2 1/2" C	2000	3/24/0, 1/80 - 2 1/2" C	2000	4/24/0, 1/80 - 3" C	2000	3/24/0, 2/104 1/4" & 1/80 - 3" C
2000	3/25/0, 1/80 - 2" C	2000	3/25/0, 1/80 - 2 1/2" C	2000	4/25/0, 1/80 - 3" C	2000	3/25/0, 2/105 1/4" & 1/80 - 3" C
2000	3/26/0, 1/80 - 2 1/2" C	2000	3/26/0, 1/80 - 2 1/2" C	2000	4/26/0, 1/80 - 3" C	2000	3/26/0, 2/106 1/4" & 1/80 - 3" C
2000	3/27/0, 1/80 - 2" C	2000	3/27/0, 1/80 - 2 1/2" C	2000	4/27/0, 1/80 - 3" C	2000	3/27/0, 2/107 1/4" & 1/80 - 3" C
2000	3/28/0, 1/80 - 2 1/2" C	2000	3/28/0, 1/80 - 2 1/2" C	2000	4/28/0, 1/80 - 3" C	2000	3/28/0, 2/108 1/4" & 1/80 - 3" C
2000	3/29/0, 1/80 - 2" C	2000	3/29/0, 1/80 - 2 1/2" C	2000	4/29/0, 1/80 - 3" C	2000	3/29/0, 2/109 1/4" & 1/80 - 3" C
2000	3/30/0, 1/80 - 2 1/2" C	2000	3/30/0, 1/80 - 2 1/2" C	2000	4/30/0, 1/80 - 3" C	2000	3/30/0, 2/110 1/4" & 1/80 - 3" C
2000	3/31/0, 1/80 - 2" C	2000	3/31/0, 1/80 - 2 1/2" C	2000	4/31/0, 1/80 - 3" C	2000	3/31/0, 2/111 1/4" & 1/80 - 3" C
2000	3/32/0, 1/80 - 2 1/2" C	2000	3/32/0, 1/80 - 2 1/2" C	2000	4/32/0, 1/80 - 3" C	2000	3/32/0, 2/112 1/4" & 1/80 - 3" C
2000	3/33/0, 1/80 - 2" C	2000	3/33/0, 1/80 - 2 1/2" C	2000	4/33/0, 1/80 - 3" C	2000	3/33/0, 2/113 1/4" & 1/80 - 3" C
2000	3/34/0, 1/80 - 2 1/2" C	2000	3/34/0, 1/80 - 2 1/2" C	2000	4/34/0, 1/80 - 3" C	2000	3/34/0, 2/114 1/4" & 1/80 - 3" C
2000	3/35/0, 1/80 - 2" C	2000	3/35/0, 1/80 - 2 1/2" C	2000	4/35/0, 1/80 - 3" C	2000	3/35/0, 2/115 1/4" & 1/80 - 3" C
2000	3/36/0, 1/80 - 2 1/2" C	2000	3/36/0, 1/80 - 2 1/2" C	2000	4/36/0, 1/80 - 3" C	2000	3/36/0, 2/116 1/4" & 1/80 - 3" C
2000	3/37/0, 1/80 - 2" C	2000	3/37/0, 1/80 - 2 1/2" C	2000	4/37/0, 1/80 - 3" C	2000	3/37/0, 2/117 1/4" & 1/80 - 3" C
2000	3/38/0, 1/80 - 2 1/2" C	2000	3/38/0, 1/80 - 2 1/2" C	2000	4/38/0, 1/80 - 3" C	2000	3/38/0, 2/118 1/4" & 1/80 - 3" C
2000	3/39/0, 1/80 - 2" C	2000	3/39/0, 1/80 - 2 1/2" C	2000	4/39/0, 1/80 - 3" C	2000	3/39/0, 2/119 1/4" & 1/80 - 3" C
2000	3/40/0, 1/80 - 2 1/2" C	2000	3/40/0, 1/80 - 2 1/2" C	2000	4/40/0, 1/80 - 3" C	2000	3/40/0, 2/120 1/4" & 1/80 - 3" C
2000	3/41/0, 1/80 - 2" C	2000	3/41/0, 1/80 - 2 1/2" C	2000	4/41/0, 1/80 - 3" C	2000	3/41/0, 2/121 1/4" & 1/80 - 3" C
2000	3/42/0, 1/80 - 2 1/2" C	2000	3/42/0, 1/80 - 2 1/2" C	2000	4/42/0, 1/80 - 3" C	2000	3/42/0, 2/122 1/4" & 1/80 - 3" C
2000	3/43/0, 1/80 - 2" C	2000	3/43/0, 1/80 - 2 1/2" C	2000	4/43/0, 1/80 - 3" C	2000	3/43/0, 2/123 1/4" & 1/80 - 3" C
2000	3/44/0, 1/80 - 2 1/2" C	2000	3/44/0, 1/80 - 2 1/2" C	2000	4/44/0, 1/80 - 3" C	2000	3/44/0, 2/124 1/4" & 1/80 - 3" C
2000	3/45/0, 1/80 - 2" C	2000	3/45/0, 1/80 - 2 1/2" C	2000	4/45/0, 1/80 - 3" C	2000	3/45/0, 2/125 1/4" & 1/80 - 3" C
2000	3/46/0, 1/80 - 2 1/2" C	2000	3/46/0, 1/80 - 2 1/2" C	2000	4/46/0, 1/80 - 3" C	2000	3/46/0, 2/126 1/4" & 1/80 - 3" C
2000	3/47/0, 1/80 - 2" C	2000	3/47/0, 1/80 - 2 1/2" C	2000	4/47/0, 1/80 - 3" C	2000	3/47/0, 2/127 1/4" & 1/80 - 3" C
2000	3/48/0, 1/80 - 2 1/2" C	2000	3/48/0, 1/80 - 2 1/2" C	2000	4/48/0, 1/80 - 3" C	2000	3/48/0, 2/128 1/4" & 1/80 - 3" C
2000	3/49/0, 1/80 - 2" C	2000	3/49/0, 1/80 - 2 1/2" C	2000	4/49/0, 1/80 - 3" C	2000	3/49/0, 2/129 1/4" & 1/80 - 3" C
2000	3/50/0, 1/80 - 2 1/2" C	2000	3/50/0, 1/80 - 2 1/2" C	2000	4/50/0, 1/80 - 3" C	2000	3/50/0, 2/130 1/4" & 1/80 - 3" C
2000	3/51/0, 1/80 - 2" C	2000	3/51/0, 1/80 - 2 1/2" C	2000	4/51/0, 1/80 - 3" C	2000	3/51/0, 2/131 1/4" & 1/80 - 3" C
2000	3/52/0, 1/80 - 2 1/2" C	2000	3/52/0, 1/80 - 2 1/2" C	2000	4/52/0, 1/80 - 3" C	2000	3/52/0, 2/132 1/4" & 1/80 - 3" C
2000	3/53/0, 1/80 - 2" C	2000	3/53/0, 1/80 - 2 1/2" C	2000	4/53/0, 1/80 - 3" C	2000	3/53/0, 2/133 1/4" & 1/80 - 3" C
2000	3/54/0, 1/80 - 2 1/2" C	2000	3/54/0, 1/80 - 2 1/2" C	2000	4/54/0, 1/80 - 3" C	2000	3/54/0, 2/134 1/4" & 1/80 - 3" C
2000	3/55/0, 1/80 - 2" C	2000	3/55/0, 1/80 - 2 1/2" C	2000	4/55/0, 1/80 - 3" C	2000	3/55/0, 2/135 1/4" & 1/80 - 3" C
2000	3/56/0, 1/80 - 2 1/2" C	2000	3/56/0, 1/80 - 2 1/2" C	2000	4/56/0, 1/80 - 3" C	2000	3/56/0, 2/136 1/4" & 1/80 - 3" C
2000	3/57/0, 1/80 - 2" C	2000	3/57/0, 1/80 - 2 1/2" C	2000	4/57/0, 1/80 - 3" C	2000	3/57/0, 2/137 1/4" & 1/80 - 3" C
2000	3/58/0, 1/80 - 2 1/2" C	2000	3/58/0, 1/80 - 2 1/2" C	2000	4/58/0, 1/80 - 3" C	2000	3/58/0, 2/138 1/4" & 1/80 - 3" C
2000	3/59/0, 1/80 - 2" C	2000	3/59/0, 1/80 - 2 1/2" C	2000	4/59/0, 1/80 - 3" C	2000	3/59/0, 2/139 1/4" & 1/80 - 3" C
2000	3/60/0, 1/80 - 2 1/2" C	2000	3/60/0, 1/80 - 2 1/2" C	2000	4/60/0, 1/80 - 3" C	2000	3/60/0, 2/140 1/4" & 1/80 - 3" C
2000	3/61/0, 1/80 - 2" C	2000	3/61/0, 1/80 - 2 1/2" C	2000	4/61/0, 1/80 - 3" C	2000	3/61/0, 2/141 1/4" & 1/80 - 3" C
2000	3/62/0, 1/80 - 2 1/2" C	2000	3/62/0, 1/80 - 2 1/2" C	2000	4/62/0, 1/80 - 3" C	2000	3/62/0, 2/142 1/4" & 1/80 - 3" C
2000	3/63/0, 1/80 - 2" C	2000	3/63/0, 1/80 - 2 1/2" C	2000	4/63/0, 1/80 - 3" C	2000	3/63/0, 2/143 1/4" & 1/80 - 3" C
2000	3/64/0, 1/80 - 2 1/2" C	2000	3/64/0, 1/80 - 2 1/2" C	2000	4/64/0, 1/80 - 3" C	2000	3/64/0, 2/144 1/4" & 1/80 - 3" C
2000	3/65/0, 1/80 - 2" C	2000	3/65/0, 1/80 - 2 1/2" C	2000	4/65/0, 1/80 - 3" C	2000	3/65/0, 2/145 1/4" & 1/80 - 3" C
2000	3/66/0, 1/80 - 2 1/2" C	2000	3/66/0, 1/80 - 2 1/2" C	2000	4/66/0, 1/80 - 3" C	2000	3/66/0, 2/146 1/4" & 1/80 - 3" C
2000	3/67/0, 1/80 - 2" C	2000	3/67/0, 1/80 - 2 1/2" C	2000	4/67/0, 1/80 - 3" C	2000	3/67/0, 2/147 1/4" & 1/80 - 3" C
2000	3/68/0, 1/80 - 2 1/2" C	2000	3/68/0, 1/80 - 2 1/2" C	2000	4/68/0, 1/80 - 3" C	2000	3/68/0, 2/148 1/4" & 1/80 - 3" C
2000	3/69/0, 1/80 - 2" C	2000	3/69/0, 1/80 - 2 1/2" C	2000	4/69/0, 1/80 - 3" C	2000	3/69/0, 2/149 1/4" & 1/80 - 3" C
2000	3/70/0, 1/80 - 2 1/2" C	2000	3/70/0, 1/80 - 2 1/2" C	2000	4/70/0, 1/80 - 3" C	2000	3/70/0, 2/150 1/4" & 1/80 - 3" C
2000	3/71/0, 1/80 - 2" C	2000	3/71/0, 1/80 - 2 1/2" C	2000	4/71/0, 1/80 - 3" C	2000	3/71/0, 2/151 1/4" & 1/80 - 3" C
2000	3/72/0, 1/80 - 2 1/2" C	2000	3/72/0, 1/80 - 2 1/2" C	2000	4/72/0, 1/80 - 3" C	2000	3/72/0, 2/152 1/4" & 1/80 - 3" C
2000	3/73/0, 1/80 - 2" C	2000	3/73/0, 1/80 - 2 1/2" C	2000	4/73/0, 1/80 - 3" C	2000	3/73/0, 2/153 1/4" & 1/80 - 3" C
2000	3/74/0, 1/80 - 2 1/2" C	2000	3/74/0, 1/80 - 2 1/2" C	2000	4/74/0, 1/80 - 3" C	2000	3/74/0, 2/154 1/4" & 1/80 - 3" C
2000	3/75/0, 1/80 - 2" C	2000	3/75/0, 1/80 - 2 1/2" C	2000	4/75/0, 1/80 - 3" C	2000	3/75/0, 2/155 1/4" & 1/80 - 3" C
2000	3/76/0, 1/80 - 2 1/2" C	2000	3/76/0, 1/80 - 2 1/2" C	2000	4/76/0, 1/80 - 3" C	2000	3/76/0, 2/156 1/4" & 1/80 - 3" C
2000	3/77/0, 1/80 - 2" C	2000	3/77/0, 1/80 - 2 1/2" C	2000	4/77/0, 1/80 - 3" C	2000	3/77/0, 2/157 1/4" & 1/80 - 3" C
2000	3/78/0, 1/80 - 2 1/2" C	2000	3/78/0, 1/80 - 2 1/2" C	2000	4/78/0,		

OUTLINE ELECTRICAL SPECIFICATIONS

SECTION 26.0500 - ELECTRICAL GENERAL PROVISIONS

A. DESCRIPTION OF WORK:

THIS DIVISION SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR ALL ELECTRICAL WORK, CONSISTING OF COMPLETE WIRING FOR LIGHTING, POWER AND OTHER SYSTEMS AS SHOWN.

THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL LUMINAIRES AND EQUIPMENT TO MAKE A COMPLETE AND WORKING SYSTEM AS INDICATED ON ASSOCIATED ELECTRICAL PLANS AND THESE SPECIFICATIONS. THIS WILL INCLUDE ALL WIRING REQUIREMENTS FROM THE SERVICE ENTRANCE TO AND INCLUDING FINAL OUTLETS, LUMINAIRES, ETC. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY CONDUIT, WIRING DEVICES AND EQUIPMENT AND CONTROLS FURNISHED UNDER OTHER DIVISIONS OF THIS CONTRACT.

THIS CONTRACTOR SHALL CAREFULLY READ THE GENERAL AND SPECIAL CONDITIONS ATTACHED HERETO, WHICH, WITH THE FOLLOWING SPECIFICATIONS AND COMPLETE WORKING DRAWINGS, DETAILS AND ADDENDA, GOVERN ALL WORK UNDER THIS HEADING.

THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO INSTALL AND MAINTAIN ALL WORK HEREIN DESCRIBED. THIS SHALL INCLUDE ALL EXCAVATION, BACKFILL, TAMPING, CONCRETE, BASES, CONCRETE WORK, SUPPORTS BRACES, STEEL, INSERTS, ANCHORS, CHAINS, SLEEVES, HOLES, ETC. REQUIRED TO ACCOMPLISH ALL PHASES OF THE ELECTRICAL CONTRACT, WITHOUT RELYING UPON OTHER TRADES OR INFERRING ANYTHING THAT IS MENTIONED IN OTHER DIVISIONS OF THIS SPECIFICATIONS, UNLESS IT IS SPECIFICALLY STATED IN THE ELECTRICAL SPECIFICATIONS OR NOTED ON THE DRAWINGS THAT IT IS TO BE FURNISHED OR PROVIDED BY ANOTHER TRADE.

SITE VISITATION: EXAMINATION OF THE SITE SHALL BE MADE BY THIS CONTRACTOR, WHO SHALL COMPARE IT WITH THE DRAWINGS AND SPECIFICATIONS AND SHALL SATISFY HIMSELF AS TO ALL THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. CONTRACTOR SHALL ASCERTAIN AND CHECK THE LOCATION OF ANY EXISTING STRUCTURES OR EQUIPMENT WHICH MAY AFFECT THIS WORK.

B. DRAWINGS:

THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY TO THEM. WHAT IS CALLED FOR BY ONE SHALL BE CONSIDERED AS THOUGH CALLED FOR BY BOTH, UNLESS SPECIFICALLY STATED OR SHOWN OTHERWISE.

THE WIRING LAYOUT IS SCHEMATIC AND THE EXACT LOCATIONS SHALL BE DETERMINED BY STRUCTURAL AND OTHER CONDITIONS. THIS SHALL NOT BE CONSTRUED TO MEAN THAT THE DESIGN OF THE SYSTEM MAY BE CHANGED. IT REFERS ONLY TO THE EXACT LOCATIONS OF CONDUITS AND EQUIPMENT TO FIT INTO THE BUILDING AS CONSTRUCTED AND THE COORDINATION OF CONDUIT AND OTHER EQUIPMENT WITH PIPING AND EQUIPMENT INCLUDED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS.

THE EXACT LOCATION OF CONDUITS AND EQUIPMENT NOT LOCATED BY DIMENSIONS ON THE DRAWINGS SHALL BE DETERMINED IN THE FIELD CONSIDERING INTERFERENCES AND APPEARANCE. MINOR CHANGES IN THE LOCATION OF EQUIPMENT FROM THAT SHOWN ON THE DRAWINGS SHALL NOT CONSTITUTE A REASON FOR EXTRA CHARGES.

THE DRAWINGS ILLUSTRATE THE WORK SPECIFIED AND ARE INTENDED TO AGREE IN EVERY RESPECT WITH ONE ANOTHER AND WITH THESE SPECIFICATIONS. ALL DISCREPANCIES THAT APPEAR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER/ARCHITECT FOR CORRECTION. NO OMISSION FROM ANY DRAWINGS SHALL RELEASE THE CONTRACTOR FROM FURNISHING EQUIPMENT OR MATERIALS CALLED FOR BY THE SPECIFICATIONS OR OTHER DRAWINGS.

C. EXISTING INSTALLATIONS:

THE DRAWINGS INDICATE MAJOR ITEMS TO BE REMOVED SUCH AS PANELS, COMMUNICATION SYSTEM TERMINAL BOXES, OR MAJOR FEEDER, ETC. THE DRAWINGS DO NOT DETAIL REMOVALS OF MINOR DEVICES, LIGHTING LUMINAIRES, BRANCH CIRCUITS, ETC. UNLESS SPECIFICALLY INDICATED FOR REUSE OR REMOVAL.

ALL REMOVED SALVAGEABLE MATERIAL, AS DETERMINED BY THE OWNER, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STOCKPOILED ON THE SITE AS DIRECTED.

ALL CONDUIT, WIRING, SWITCHES, ELECTRICAL EQUIPMENT, PANELS, ETC., NO LONGER REMAINING IN SERVICE SHALL BE REMOVED. EXISTING CONDUITS MAY BE REUSED WHERE PRACTICABLE. NO WIRING, CONDUCTORS, CONDUIT OR EQUIPMENT REMOVED FROM THE PRESENT INSTALLATION SHALL BE REUSED WITHOUT THE EXPRESS CONSENT OF THE OWNER.

ALL NEW RACEWAYS SHALL BE RUN CONCEALED WHEREVER POSSIBLE. SURFACE METAL RACEWAY, WIREMOLD OR OPIN, MAY BE USED COMPLETE WITH APPROVED ACCESSORIES ONLY WHERE NECESSARY IN THE JUDGMENT OF THE OWNER.

ALL ABANDONED CONDUIT SHALL BE REMOVED WHERE EXPOSED AND SHALL BE PROPERLY CUT OFF WHERE CONCEALED. ALL WIRING SHALL BE REMOVED WHERE NO LONGER IN SERVICE AND EXISTING LIGHTING LUMINAIRES NO LONGER REMAINING IN SERVICE SHALL BE REMOVED BY THE ELECTRICAL CONTRACTOR AND STORED ON THE SITE AS DIRECTED.

ELECTRICAL CONTRACTOR SHALL RESPOURT AS REQUIRED BY CODE ANY EXISTING RACEWAY, CABLE TRAYS, JUNCTION BOXES, ETC. REQUIRING SUPPLEMENTAL SUPPORT AS THE RESULT OF DEMOLITION OF EXISTING WALLS, CEILINGS, SUPPORTS, ETC. BEING REMOVED AS PART OF THIS PROJECT.

D. COORDINATION WITH WORK OF OTHER TRADES:

THIS CONTRACTOR SHALL EXAMINE WORK OF OTHER TRADES WHICH COMES IN CONTACT WITH OR IS COVERED BY HIS. HE SHALL, IN NO CASE, ATTACH TO, COVER UP, OR FINISH AGAIN BY HIS RESPECTIVE WORK. THIS CONTRACTOR SHALL CONSULT ALL DRAWINGS AND DETAILS, BOTH ARCHITECTURAL AND MECHANICAL.

E. BASIC MATERIALS:

ALL MATERIALS SHALL BE OF BEST QUALITY, NEW AND APPROVED BY UNDERWRITERS LABORATORIES, INC. WHERE SUCH APPROVAL IS APPLICABLE. MATERIALS SPECIFIED BY MANUFACTURER'S CATALOG NUMBER SHALL BE AS SPECIFIED UNLESS "OR EQUAL" SUBSTITUTIONS ARE AUTHORIZED BY THE ENGINEER/ARCHITECT.

APPROVAL OF REQUESTS FOR SUBSTITUTION OF PRODUCTS OR PROCESSES OTHER THAN THOSE SPECIFIED WILL BE CONTINGENT UPON SUBMISSION OF PROOF, SATISFACTORY TO THE ENGINEER/ARCHITECT AND OWNER, THAT:

- THE CONTRACTOR WILL PROVIDE THE SAME WARRANTY FOR THE SUBSTITUTION THAT HE WOULD FOR THE PRODUCT SPECIFIED.

- ALL REQUESTS FOR SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER/ARCHITECT NO LATER THAN 14 DAYS BEFORE PURCHASING OR INSTALLING PRODUCTS.

F. QUALITY ASSURANCE CODES, STANDARDS, PERMITS AND SYMBOLS:

TESTS: DEMONSTRATE BY TESTS, AT THE REQUEST OF THE ENGINEER/ARCHITECT AND OWNER, THE COMPLIANCE OF THE INSTALLATION WITH THESE SPECIFICATIONS, THE DRAWINGS, THE NATIONAL ELECTRICAL CODE, AND THE ACCEPTED STANDARDS OF GOOD WORKMANSHIP. THESE TESTS SHALL INCLUDE OPERATIONS OF LIGHTS AND EQUIPMENT, CONTINUITY OF THE CONDUIT SYSTEM, GROUNDING RESISTANCE AND INSULATION RESISTANCE MEASUREMENTS ON NOT MORE THAN TEN REPRESENTATIVE CIRCUITS AND ANY OTHER CIRCUITS FOR WHICH A JUSTIFIABLE REASON EXISTS FOR SUCH TESTS. ALL LABOR AND TESTING EQUIPMENT FOR THE PERFORMANCE OF THESE TESTS SHALL BE FURNISHED BY THIS CONTRACTOR.

PERMITS: THIS CONTRACTOR SHALL PAY FOR ALL PERMITS, LICENSES, INSPECTIONS AND FEES REQUIRED FOR THE EXECUTION OF HIS WORK. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR COMPLIANCE WITH APPLICABLE CODES REGARDLESS OF THE METHOD(S) SHOWN OR SPECIFIED.

G. SUBMITTALS:

SHOP DRAWINGS: SUBMIT EIGHT COPIES OF DETAILED SHOP DRAWINGS OF ALL ITEMS OF EQUIPMENT INSTALLED UNDER THIS CONTRACT FOR APPROVAL. BEFORE FURNISHING OF THE EQUIPMENT OR ITS INCORPORATION INTO THE WORK, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER/ARCHITECT, OWNER, BIDDER, CONTRACTOR, OR MANUFACTURER SUBJECT TO ANY WRITING ON THE OWNER OR ENGINEER FOR ACCEPTANCE OR REJECTION. FINAL APPROVAL OF ALL EQUIPMENT AND MATERIALS SHALL BE MADE ONLY AFTER FINAL TEST AND ACCEPTANCE OF THE PROJECT.

IF QUANTITIES APPEAR ON THE DRAWINGS, THEY WILL BE MARKED OUT BY THE ENGINEER/ARCHITECT WILL NOT APPROVE QUANTITIES. THIS IS THE CONTRACTOR'S RESPONSIBILITY.

IF STANDARD CATALOG SHEETS CONTAINING NUMBERS, SUCH AS LUMINAIRE TYPES, ARE SUBMITTED WITHOUT BEING MARKED FOR IDENTIFICATION, THEY WILL BE RETURNED FOR RESUBMISSION.

SHOP DRAWINGS OF DISTRIBUTION SWITCHBOARDS OR PANELBOARDS AND MOTOR CONTROL CENTERS SHALL INCLUDE FULL FRONT ELEVATION INDICATING ALL FUSIBLE SWITCHES, BREAKERS, STARTERS, ETC. DIMENSIONED SPACE FOR FUTURE BRANCH SWITCHES, BREAKERS AND/OR STARTERS SHALL BE INCLUDED ON THE ELEVATION.

RECORD DRAWINGS: THE CONTRACTOR SHALL KEEP IN THE FIELD, AND OPEN TO INSPECTION, AN ACCURATE, CURRENT, PROGRESSIVE RECORD OF THE ACTUAL INSTALLATION OF THE ELECTRICAL SYSTEM. ON COMPLETION OF THE WORK, THE CONTRACTOR SHALL DELIVER MARKED PRINTS SHOWING THE ACTUAL ROUTING OF THE CONDUITS AND DUCTS, LOCATIONS AND ELEVATION OF OUTLETS, CIRCUIT NUMBERS OF ALL LIGHTING AND POWER CIRCUITS, INSTALLATION DETAILS OF LIGHTING LUMINAIRES, POWER PANELS, ETC.

H. PRODUCTS:

PRODUCTS, ELECTRICAL WORK:

IT IS TO BE EMPHASIZED THAT THE CONTRACTOR'S BASE BID SHALL BE BASED ON EQUIPMENT MARKED IN THE SPECIFICATIONS. SUBSTITUTION OF EQUIPMENT SHALL BE MADE ONLY BY THE BIDDER, CONTRACTOR, OR MANUFACTURER SUBJECT TO ANY WRITING ON THE OWNER OR ENGINEER FOR ACCEPTANCE OR REJECTION. FINAL APPROVAL OF ALL EQUIPMENT AND MATERIALS SHALL BE MADE ONLY AFTER FINAL TEST AND ACCEPTANCE OF THE PROJECT.

I. EXECUTION:

GENERAL:

PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, OSHA, STATE AND LOCAL CODES WHICH APPLY.

AT NO TIME SHALL ELECTRICAL WORK BE WITHOUT THE IMMEDIATE ON-THE-JOB SUPERVISION OF A JOURNEYPERMAN ELECTRICIAN.

BALANCE LOAD ON FEEDERS AND MAIN SWITCH TO WITHIN 10% UNDER MAXIMUM LOAD CONDITIONS.

THIS CONTRACTOR SHALL AT ALL TIMES KEEP HIMSELF FULLY INFORMED OF THE PROGRESS OF THE GENERAL CONSTRUCTION AND SHALL INSTALL ALL OF HIS WORK THAT IS CONCEALED AND BUILT INTO THE BUILDING IN PLACE IN SUFFICIENT TIME TO INSURE PROPER LOCATION WITHOUT DELAYS IN THE WORK OF THE OTHER TRADES. THE ELECTRICAL CONTRACTOR SHALL WORK DURING THE PROGRESS OF THE BUILDING-IN TO PREVENT MISALIGNMENTS OR DAMAGE TO THE ELECTRICAL WORK.

UPON COMPLETION OF WORK, THE ENTIRE INSTALLATION WILL BE INSPECTED AND TESTED TO SEE THAT THE REQUIREMENTS OF THESE SPECIFICATIONS HAVE BEEN FULLY COMPLIED WITH BEFORE THE FINAL PAYMENT WILL BE APPROVED.

PENETRATION OF METAL ROOF DECK IS NOT PERMITTED FOR HANGERS, CLAMPS, FASTENERS, ETC.

IN AREAS WITHOUT SUSPENDED CEILINGS, LUMINAIRES AND ELECTRICAL PRODUCTS LOCATED BETWEEN STRUCTURAL MEMBERS SHALL BE SUPPORTED BY AN APPROVED SYSTEM, SUCH AS

UNISUPPORT AND ALL ADDITIONAL SUPPLEMENTARY SUPPORT AS MAY BE REQUIRED. SUPPORTS COMPOSED OF CHANNEL IRON, CONDUIT, WIRE OR OTHER NON-APPROVED MATERIAL SHALL NOT BE ACCEPTABLE.

EXPOSED CONDUIT INSTALLED AFTER ROOM HAS BEEN PAINTED SHALL BE PAINTED TO MATCH ROOM FINISH BY THIS CONTRACTOR.

NO CONDUITS, CABLES, BOXES, DEVICES, ETC., SHALL BE ATTACHED TO WIRES THAT SUPPORT CEILING SUSPENSION SYSTEM.

LUMINAIRES, SPEAKERS, SMOKE DETECTORS, CLOCKS, ETC., ATTACHED TO OR SUSPENDED FROM GRID CEILINGS SHALL BE SUPPORTED FROM THE MAIN F-BARS, NOT THE INTERMEDIATE F-BARS.

OPENINGS AROUND CONDUITS OR IN SLEEVES FOR CONDUITS PENETRATING FIRE-RATED FLOOR OR WALLS, PARTITIONS, CEILINGS, SMOKE OR EXHAUST SYSTEMS, SHALL BE SEALED AT BOTH SIDES OF THE PENETRATION. INSULATION SHALL NOT EXTEND THROUGH SLEEVES. PACK OPENINGS WITH CALCIUM SILICATE BLOCK, DOW CORNING 3-8540, RTV GELCO FILLER, OPEN CO CAULK, OR 303 PUTTY FIRE BARRIER SYSTEM, OR MATERIAL, HAVING THE SAME FIRE RATING AS THE FLOOR OR WALL PENETRATED. FIBERGLASS IS NOT ACCEPTABLE.

ALL RECESSED LUMINAIRES SHALL BE SECURELY FASTENED AT EACH CORNER TO THE CEILING FRAMING MEMBERS BY MECHANICAL MEANS SUCH AS SCREWS OR RIVETS. SURFACE MOUNTED FLUORESCENT LUMINAIRES SHALL BE SECURELY FASTENED AT EACH END TO THE CEILING FRAMING MEMBERS BY MECHANICAL MEANS SUCH AS SCREWS OR RIVETS.

THE CONTRACTOR SHALL USE ALL CARE POSSIBLE TO AVOID SOILING THE FLOORS AND WALLS. NO CUTTING, THREADING, OR BENDING OF CONDUIT WILL BE PERMITTED IN BUILDING AREAS WHERE FINISHED FLOORS ARE INSTALLED. THE FLOORS ARE COVERED OR PROTECTED. IF FLOORS ARE DAMAGED, THEY SHALL BE REFRESHED TO THE SATISFACTION OF THE ENGINEER/ARCHITECT.

NAMEPLATES: PROVIDE NAMEPLATES ON ALL EQUIPMENT OF THE TYPE LISTED IN THE FOLLOWING SCHEDULES:

- PANELBOARDS
- SWITCHBOARDS
- MOTOR STARTERS
- SAFETY SWITCHES
- BUS PLUG-IN UNITS
- CONTROL PANELS
- CONTROL DEVICES
- TELEPHONE CABINETS
- EMERGENCY SYSTEM EQUIPMENT
- TRANSFORMERS
- CURRENT TRANSFORMERS (CT) CABINET (NAMEPLATE SHALL READ "CT CABINET AND METER ARE NOT A DISCONNECTING MEANS")

NAMEPLATES SHALL BE LAMINATED PHENOLIC WITH A WHITE SURFACE AND BLACK CORE. USE 1/4" THICK MATERIAL FOR PLATES UP TO 2" X 4". FOR LARGER SIZES USE 1/8" THICK MATERIAL.

LETTERING SHALL BE CONDENSED GOTHIC. THE SPACE BETWEEN LINES SHALL BE EQUAL TO THE WIDTH OF THE LETTERS. USE 1/4" MINIMUM HEIGHT LETTERS WHICH OCCUPY FOUR TO THE INCH. INCREASE LETTER SIZE TO 3/4" ON THE LARGEST PLATES.

WARRANTY: THIS CONTRACTOR SHALL WARRANTY HIS ENTIRE ELECTRICAL INSTALLATION AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER THE DATE OF ACCEPTANCE BY THE OWNER, ORDINARY WEAR AND TEAR EXCEPTED, OR SUCH LONGER PERIOD AS SPECIFIED IN THE CONTRACT DOCUMENTS. UPON WRITTEN NOTICE FROM THE OWNER, THIS CONTRACTOR SHALL REMEDY ALL SUCH DEFECTS AT HIS OWN EXPENSE AND AT A TIME CONVENIENT TO THE ELECTRIC WORK.

TEMPORARY LIGHTING AND POWER:

THIS CONTRACTOR SHALL PROVIDE TEMPORARY GENERAL LIGHTING AND POWER IN ACCORDANCE WITH OSHA STANDARDS. TEMPORARY ELECTRICAL POWER SHALL CONSIST OF A MINIMUM OF ONE DUPLEX DUPLEX RECEPTACLE WITH GROUND FAULT PROTECTION, INSTALLED IN THE ELECTRICAL ROOM ON EACH FLOOR. 120 VOLT RECEPTABLES WITH GROUND FAULT PROTECTION SHALL BE INSTALLED SO THAT NO SUBCONTRACTOR WILL BE REQUIRED TO USE EXTENSION CORDS IN EXCESS OF 75' MAX. PROVIDE AND MAINTAIN A MINIMUM OF 1/2" WATT PER SQUARE FOOT FOR POWER AND A MINIMUM OF 20 FOOTCANDELS FOR LIGHTING. SPECIAL TEMPORARY WIRING FOR LIGHTING, INCLUDING ALL ADDITIONAL LIGHTING FOR SPECIAL FINISHES, AND ELECTRICAL POWER REQUIREMENTS OVER THOSE SPECIFIED, SHALL BE THE RESPONSIBILITY OF THE INDIVIDUAL CONTRACTOR.

IF SUITABLE POWER IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TEMPORARY POWER FROM THE LOCAL UTILITY INCLUDING ALL POLES, TRANSFORMERS, METERS, ETC., AND INCLUDING ALL POWER COMPANY INSTALLATION CHARGES.

IF THE COST OF POWER IS TO BE BORNE BY THE CONTRACTORS, IT SHALL BE DONE ON A PERCENTAGE BASIS ACCORDING TO CONTRACT AWARD AND DIVIDED AMONG ALL PROJECT CONTRACTORS.

THE CONTRACTOR SHALL REMOVE ALL TEMPORARY WIRING AT CLOSE OF CONTRACT, INCLUDING ALL WIRING, PANELS, ETC., INSTALLED UNDER PREVIOUS CONTRACTS.

CHECK AND TIGHTEN ALL PLATES, COVERS, DOORS, AND TRIMS USED IN CONJUNCTION WITH ELECTRICAL EQUIPMENT. ALL OUTLET OPENINGS NOT RECEIVING A DEVICE SHALL BE PROVIDED WITH A BLANK PLATE. THERE SHALL BE NO "OPEN" BOXES.

UPON COMPLETION OF THE WORK, THIS CONTRACTOR SHALL REMOVE ALL DEBRIS, TOOLS, MACHINES, ETC., PERTAINING TO THIS WORK AND SHALL LEAVE THE AREA BROOM CLEAN. THE WORK, INCLUDING LUMINAIRES, SHALL BE THOROUGHLY CLEANED AND READY FOR USE BY THE RESPECTIVE WORK. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CLEAN AND SAFE CONDITIONS IN THE AREA OF HIS WORK.

DUE TO ARC FLASH HAZARDS, ANY WORK REQUIRED ON ELECTRICAL EQUIPMENT THAT IS ENERGIZED SHALL BE WITH WRITTEN PERMISSION FROM THE OWNER. THE ELECTRICAL CONTRACTOR SHALL REQUIRE EMPLOYEES TO WEAR THE PROPER PERSONAL PROTECTION (PPE) EQUIPMENT REQUIRED IN NFPA-70E, 130.7(C)(9).

SECTION 26.0505 - ELECTRICAL GENERAL PROVISIONS

A. DESCRIPTION OF WORK:

EXTENT OF ELECTRICAL RELATED WORK REQUIRED BY THIS SECTION IS INDICATED ON DRAWINGS AND/OR SPECIFIED IN OTHER DIVISIONS OR SECTIONS.

TYPES OF ELECTRICAL RELATED WORK SPECIFIED IN THIS SECTION INCLUDE THE FOLLOWING:

- ACCESS TO ELECTRICAL WORK
- HAZARDOUS CLASSIFIED AREAS
- CUTTING AND PATCHING FOR ELECTRICAL WORK
- EXCAVATING FOR ELECTRICAL WORK
- CONCRETE FOR ELECTRICAL WORK

B. EXECUTION:

CUTTING AND PATCHING: AVOID CUTTING INTO WORK BY OTHERS BY USING SLEEVES, INSERTS, CHAINS. THE CONTRACTOR IN HIS WORK MUST BE NECESSARY TO USE ANY OF THESE METHODS SHALL BUILD SAME INTO HIS WORK, BUT THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECT SIZE AND LOCATIONS OF SAME AND SHALL FURNISH ALL SLEEVES AND INSERTS. ALL SLEEVES AND INSERTS SHALL BE FURNISHED IN AMPLE TIME SO AS NOT TO CAUSE DELAY OF OTHER TRADES.

NO CUTTING SHALL BE DONE WHICH WILL IN ANY WAY REDUCE THE STRUCTURAL STRENGTH OF THE BUILDING. SHOULD SUCH CUTTING BE FOUND NECESSARY, THE ENGINEER/ARCHITECT MUST FIRST BE FULLY INFORMED OF AND CONSENT TO THE PROPOSED OPERATION. CUTTING AND PATCHING OF EXISTING WALLS, FLOORS, CEILINGS, ROOF, ETC. FOR NEW CONDUITS, CABLES, ETC., SHALL BE ACCOMPLISHED BY THE CONTRACTOR. THE CONTRACTOR IS NOTED OTHERWISE: THIS SHALL INCLUDE THE INSTALLATION OF UNITS, FRAMING, ETC. WHERE CONDUITS, RACEWAYS, EQUIPMENT, ETC. HAVE BEEN REMOVED BY THE ELECTRICAL CONTRACTOR UNDER OTHER DIVISIONS OF THIS CONTRACT. THE CONTRACTOR SHALL FURNISH GENERAL TRADES CONTRACTOR TO PERFORM ALL REQUIRED CUTTING AND PATCHING. WHERE EXISTING ROOF MUST BE CUT AND PATCHED, THE ELECTRICAL CONTRACTOR SHALL HIRE A ROOFING CONTRACTOR CERTIFIED TO MAKE REPAIRS AND MAINTAIN THE ROOF WARRANTY OR BOND.

EXCAVATION, BACKFILL AND CONCRETE WORK: ALL EXCAVATION AND BACKFILL REQUIRED FOR THE EXECUTION OF THE ELECTRICAL WORK SHALL BE INCLUDED IN THE ELECTRICAL CONTRACT.

SECTION 26.0519 - CONDUCTORS

BACKFILL MATERIAL SHALL BE GRANULAR OR APPROVED EXCAVATED MATERIAL. BACKFILL REQUIREMENTS FOR CONDUCTORS, ETC. SHALL BE AS SPECIFIED IN THE ELECTRICAL CONTRACT.

SECTION OF THESE SPECIFICATIONS.

ALL CONCRETE WORK FOR ELECTRICAL EQUIPMENT PADS, BASES, ETC. SHALL BE INCLUDED IN THE ELECTRICAL CONTRACT.

SECTION 26.0519 - CONDUCTORS

A. MATERIAL:

MINIMUM SIZE WIRE FOR LIGHTING AND POWER FEEDERS AND BRANCH CIRCUITS (20 AMPERE) SHALL BE NO. 12 AND COPPER. MINIMUM SIZE WIRE FOR CIRCUIT BREAKERS SHALL BE NO. 14 AWG COPPER. ALL WIRE SHALL BE STRANDED.

ALL CONDUCTORS FOR FEEDERS 100A (NO. 2 CU / NO. 1 AL) AND LARGER SHALL BE TYPE XHHW-2 COPPER, 600 VOLT, UNLESS OTHERWISE NOTED ON THE DRAWINGS. CONDUCTORS SHALL BE INSULATED WITH VIRGIN CROSS-LINKED POLYETHYLENE INSULATION. ALL CONDUCTORS FOR FEEDERS SMALLER THAN 100A (NO. 2 CU / NO. 1 AL) SHALL BE TYPE THHN/THWN COPPER OR ALUMINUM (PER N.E.C.), 600 VOLT, UNLESS OTHERWISE NOTED ON THE DRAWINGS. THE CONDUCTORS SHALL BE INSULATED WITH VIRGIN PVC COMPOUND AND SHALL HAVE AN OVERALL EXTRUDED NYLON JACKET, NYLON "50M" OR "DT" COATING WILL NOT BE ACCEPTABLE.

A GREEN GROUND WIRE, SIZED ACCORDING TO THE NEC TABLE 250-122, SHALL BE INSTALLED IN ALL FLEXIBLE CONDUIT AND KEPT ISOLATED FROM THE WHITE NEUTRAL WIRE.

ALL WIRE AND/OR CABLE SHALL BE DELIVERED TO THE JOB SITE IN FULL FACTORY LENGTHS OF 500'-0" MINIMUM. LONGER REELS MAY BE USED WHERE CONDITIONS DICTATE.

B. EXECUTION:

APPROVED MANUFACTURERS ARE AETNA, AMERICAN INSULATED, ENCORE, SUPERIOR ESSEX, PRYSMAN, AND SOUTHWIRE.

C. JOINTS:

JOINTS AND SPLICES SHALL BE MADE ONLY AT ACCESSIBLE BOXES.

JOINTS IN NO. 8 AND SMALLER WIRE SHALL BE MADE WITH MINNESOTA WINDING AND MANUFACTURING COMPANY'S PREINSULATED "SCOTCHLOKS". JOINTS NO. 6 AND LARGER WIRE SHALL BE MADE BY PRESSURE TIE MECHANICAL CONNECTIONS, INSULATED WITH THREE ELEC-TRO-SEAL HALF-THICKNESS. THE OTHER TRADES SHALL BE RESPONSIBLE FOR FORMING SOLDERLESS SCOTCHLOK PRESSURE TIE LUGS AND CONNECTORS.

JOINTS IN NO. 8 TO NO. 2/0 WIRE IN DAMP LOCATIONS, EXTERIOR JUNCTION BOXES AND POLE BASES SHALL BE MADE WITH WATER RESISTANT SETSCREW, GEL FILLED CONNECTIONS, RAYOVEX ESE THAT THE REQUIREMENTS OF THESE SPECIFICATIONS HAVE BEEN FULLY COMPLIED WITH BEFORE THE FINAL PAYMENT WILL BE APPROVED.

EXTERIOR JUNCTION BOXES AND POLE BASES SHALL BE MADE WITH GEL FILLED WIRE NUTS, IDEAL TWISTER DB PLUS OR BUCHANAN ITS TWIST & SEAL WATER RESISTANT CONNECTORS.

GENERAL:

COLOR CODING OF MULTI-WIRE BRANCH CIRCUIT FOR LIGHTING AND OUTLETS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. THE GROUNDING NEUTRAL SHALL BE

IDENTIFIED WHITE FOR 120 VOLT CIRCUITS AND GRAY FOR 277 VOLT CIRCUITS THROUGHOUT, WITHOUT EXCEPTION, BEGINNING AT THE SERVICE ENTRANCE EQUIPMENT. THE IDENTIFIED NEUTRAL SHALL BE INSULATED THROUGHOUT AND GROUNDING ONLY AT THE SERVICE ENTRANCE EQUIPMENT (NOT INDIVIDUAL PANELS).

THE GREEN GROUND WIRE SHALL BE INSTALLED AND KEPT ISOLATED FROM THE WHITE NEUTRAL WIRE.

BRANCH CIRCUITS AND CONTROL CIRCUITS SHALL BE CONNECTED AS NUMBERED ON THE DRAWINGS OR AS TO MATCH SOME NUMBERED OR CODED SYSTEM. TEST AND PERMANENTLY TAG BY CIRCUIT NUMBER EACH CONTROL WIRE AND CIRCUIT WIRE, EXCEPT NEUTRALS. IN ORDER BEFORE CONDUIT IS LAYED OUT, THE CONTRACTOR SHALL IDENTIFY ALL WIRE BY THE SCOTCHCODE EPOXY FILM TAPES. EACH 120 VOLT OR 277 VOLT BRANCH CIRCUITS SHALL BE IDENTIFIED WITH A DEDICATED NEUTRAL WIRE FROM THE CIRCUIT SOURCE TO THE LOAD CONDUIT. UNLESS SPECIFICALLY INDICATED OTHERWISE ON THE DRAWINGS.

SECTION 26.0523 - LOW VOLTAGE OPEN WIRING

A. DESCRIPTION OF WORK:

THE EXTENT OF LOW VOLTAGE OPEN WIRING IS INDICATED ON THE DRAWINGS, SCHEDULES AND CONTRACT DOCUMENTS.

TYPES OF LOW VOLTAGE OPEN WIRING SPECIFIED IN THIS SECTION APPLY TO THE FOLLOWING:

- BUILDING MANAGEMENT SYSTEMS
- FIRE ALARM SYSTEMS (ONLY WHEN ALLOWED BY SECTION 28.4620 OR 28.4621 - FIRE ALARM SYSTEM)
- HVAC/TEMPERATURE CONTROL WIRING
- SOUND SYSTEMS

B. PRODUCTS:

CABLES:

ALL CABLES SHALL BE IN ACCORDANCE WITH THE APPLICABLE SYSTEM MANUFACTURER'S SPECIFICATIONS.

PLENUM RATED CABLES SHALL BE USED IN PLENUM RATED CEILING SPACES.

FACTORY "SHORTS" SCRAP OR WAREHOUSE AND PRIOR JOB "CLEAN-OUTS" (LEFTOVERS) WILL NOT BE ACCEPTABLE.

THE OUTER JACKET OF THE CABLE SHALL BE PRINTED WITH THE MANUFACTURER'S IDENTIFICATION AND REQUIRED UL MARKINGS.

C. EXECUTION:

INSTALLATION:

CABLES AND WIRING ROUTED ABOVE AN ACCESSIBLE CEILING MAY BE RUN AS "OPEN WIRING", UNLESS OTHERWISE NOTED.

CABLES ROUTED ABOVE NON-ACCESSIBLE CEILING AREAS OR IN OPEN AREAS SUBJECT TO ABUSE, SHALL BE ROUTED IN CONDUIT OR OTHER SUITABLE RACEWAY SUBJECT TO THE ENGINEER'S APPROVAL.

CABLES AND WIRING ROUTED THROUGH OPEN CEILING/COMMERCIAL/ INDUSTRIAL SPACES SHALL BE ROUTED IN CONDUITS, ENCLOSED WIREWAY OR CABLE TRAY, UNLESS OTHERWISE NOTED.

WHENEVER POSSIBLE, PRIMARY CABLE ROUTING PATHS SHALL FOLLOW THE LOGICAL STRUCTURE OF THE BUILDING. ALL CABLE SERVING AN AREA SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE, FOLLOWING CORRIDORS AND HALLWAYS. DIAGONAL RUNS ARE NOT ACCEPTABLE.

WHERE A WALL MUST BE BREACHED, THE CABLE SHALL PASS THROUGH PRE-ESTABLISHED CONDUIT SIZED TO ACCEPT THE CABLE. THE CABLE SHALL BE PROTECTED FROM MECHANICAL DAMAGE BY THE USE OF CONDUIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CLEAN AND SAFE CONDITIONS IN THE AREA OF HIS WORK.

CORRIDOR CROSSLERS SHALL BE KEPT TO A MINIMUM.

FOR THE PURPOSE OF THIS SPECIFICATION, ALL ABOVE CEILING SPACE IS TO BE CONSIDERED "RETURN AIR PLENUM" SPACE, UNLESS NOTED OTHERWISE ON DRAWINGS.

ALL NON-PLENUM RATED CABLES MUST BE ROUTED IN CONDUITS THROUGH RETURN AIR PLENUM SPACES.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY "NON-PLENUM" RATING REQUIREMENTS.

BOXES FOR FLUSH INSTALLATION OF DEVICES SHALL BE 4" SQUARE, DEPTH AS REQUIRED BY CODE FOR THE NUMBER OF CONDUCTORS, COMPLETE WITH 1-1/2" OR 2" RECTANGULAR PLATES, UNLESS OTHERWISE NOTED. FLUSH BOXES SHALL BE INSTALLED FLUSH IN FINISHED SECTIONS OF BUILDING. FLUSH BOXES SHALL BE SET BACK IN WALL NOT MORE THAN 1/8". WHERE CONDUITS LARGER THAN 3/4" ARE USED, FOUR 1-1/16" BOXES WITH 1" PLASTER KINGS, RACK 839 SHALL BE INSTALLED.

LOW VOLTAGE OPEN WIRING SHALL BE THREADED TYPE THREE-PIECE COUPLERS (ERIKSON). THREADED OR SETSCREW COUPLINGS OR CONNECTORS SHALL NOT BE USED.

THINWALL COUPLINGS AND CONNECTORS SHALL BE STEEL SETSCREW TYPE ONLY.

LOW VOLTAGE OPEN WIRE CABLES SHALL NOT BE LAY IN THE JOIST OR ON DUCTWORK, PIPING AND PLUMBING SYSTEMS OR ON TOP OF THE LAY-IN CEILING TILE.

CABLES SHALL NOT BE SUPPORTED FROM DUCTWORK, PIPING, PLUMBING SYSTEMS, CEILING TILE AND LIGHTING FIXTURE SUSPENSION WIRES OR BUILDING STRUCTURE.

DIE-CAST FITTINGS SHALL NOT BE USED.

LOW VOLTAGE OPEN WIRING SHALL NOT BE RUN IN OR THROUGH DATA/TELECOMMUNICATION OR OTHER CABLE RACEWAYS, CONDUITS, CABLE TRAYS, SLEEVES, ETC.

THE CONTRACTOR SHALL PROVIDE A DEDICATED RACEWAY SYSTEM FOR HIS SYSTEM INSTALLATION UNLESS OTHERWISE NOTED.

ALL LOW VOLTAGE WIRING EXPOSED BELOW THE BOTTOM OF THE JOIST LINE SHALL BE ENCLOSED IN CONDUIT OR OTHER APPROVED RACEWAY.

MAXIMUM ALLOWABLE SPACING BETWEEN CABLE/WIRING SUPPORTS SHALL BE 48".

PLENUM RATED CABLE TIES AND CABLE SUPPORTS SHALL BE UTILIZED IN ALL PLENUM RATED SPACES IS NOT ACCEPTABLE AS A CABLE TIE. CABLE TIES ARE NOT ACCEPTABLE AS A CABLE SUPPORT.

ALL CABLES SHALL BE FREE OF TENSION AT BOTH ENDS AS WELL AS OVER THE LENGTH OF THE RUN.

OUTLET HEIGHTS GIVEN BELOW OR AS SHOWN ON THE DRAWINGS ARE TO THE CENTERLINE OF OUTLET BOX. IN UNFINISHED MASONRY WALLS, ADJUST HEIGHT TO TOP OR BOTTOM LOCATION OF OUTLET BOX. IN FINISHED MASONRY WALLS, ADJUST HEIGHT TO TOP OR BOTTOM LOCATION OF OUTLET BOX. IN FINISHED MASONRY WALLS, ADJUST HEIGHT TO TOP OR BOTTOM LOCATION OF OUTLET BOX. NEVER EXCEED 48" TO THE CENTERLINE AND OUTLET HEIGHT SHALL NEVER BE LOWER THAN 16" TO THE BOTTOM OF THE BOX. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, DIMENSIONS TO FLOOR SHALL BE AS FOLLOWS:

(THESE MOUNTING HEIGHTS COMPLY WITH ADA644.2-7.3)

WHERE DUPLEX RECEPTABLES ARE PROTECTED BY GFCI RECEPTABLES OR CIRCUIT BREAKER, PLATES SHALL BE ENGRAVED "GFCI PROTECTED", MATCHING STAINLESS OR GALVANIZED STEEL PER SPECIFICATIONS.

WHERE DUPLEX RECEPTABLES ARE AUTOMATICALLY CONTROLLED OR THAT INCORPORATE FEATURES THAT REMOVE POWER FROM THE OUTLET FOR THE PURPOSE OF ENERGY MANAGEMENT OR BUILDING AUTOMATION, DEVICE FACEPLATE SHALL BE MARKED WITH SYMBOL DEFINED IN NEC 406.3(E).

WHERE DUPLEX RECEPTABLES ARE AUTOMATICALLY CONTROLLED OR THAT INCORPORATE FEATURES THAT REMOVE POWER FROM THE OUTLET FOR THE PURPOSE OF ENERGY MANAGEMENT OR BUILDING AUTOMATION, DEVICE FACEPLATE SHALL BE MARKED WITH SYMBOL DEFINED IN NEC 406.3(E).

CONVENIENCE OUTLETS: 1-4" TO CENTERLINE

CONVENIENCE OUTLETS: 6" TO BOTTOM OF BOX ABOVE COUNTERTOP WORK SURFACE

MOTOR CONTROL STATIONS: 48" TO CENTERLINE

FOR OUTLET HEIGHTS OF WALL BRACKET AND OF AUXILIARY SYSTEMS AND SPECIAL OUTLETS: REFER TO THE RESPECTIVE PARAGRAPHS AND TO THE DRAWINGS

HORN/SERVICE LIGHT: 80" TO BOTTOM OF BOX OR 6" BELOW CEILING TO TOP OF BOX (WHICHEVER IS LOWER)

PULL STATIONS: 48" TO CENTERLINE

DATA/TELE OUTLETS: 1-6" TO CENTERLINE OF BOX

WALL TELEPHONES (NORMAL & HANDICAP): SEE SECTION 27.0528 - COMMUNICATIONS RACEWAY SYSTEMS OF THESE SPECIFICATIONS

TELEVISION OUTLET: SEE DRAWINGS, 18" TO CENTERLINE UNLESS NOTED OTHERWISE

HANDICAP AUTO LOCK OPERATOR PUSHBUTTONS: AS DIRECTED BY MANUFACTURER

SECTION 26.2417 - PANELBOARDS

A. DESCRIPTION OF WORK:

EXTENT OF ELECTRICAL GROUNDING WORK IS INDICATED BY DRAWINGS AND SCHEDULES.

REQUIREMENTS OF THIS SECTION APPLY TO ELECTRICAL GROUNDING WORK SPECIFIED IN N.E.C. ARTICLE 250.

INSTALL A GREEN BONDING Jumper BETWEEN THE OUTLET BOX AND THE RECEPTACLE GROUNDING TERMINAL ON ALL FLUSH MOUNTED RECEPTABLES.

AN INSULATED GROUND WIRE SHALL BE INSTALLED IN ALL FEEDER, BRANCH CIRCUIT AND TRANSFER BUS. THE GROUND WIRE SHALL BE SIZED IN ACCORDANCE WITH N.E.C. ARTICLE 250, TABLE

Mode L-G:
63 Ring Wave: 425
C3 Combined Wave: 900
6KV-36A UL VPR: 700

Mode N-G:
63 Ring Wave: 375
C3 Combined Wave: 900
6KV-36A UL VPR: 700

Mode L-L:
63 Ring Wave: 450
C3 Combined Wave: 1300
6KV-36A UL VPR: 1300

THE SPD SHALL BE CAPABLE OF PROTECTING AGAINST A SINGLE PULSE SURGE CURRENT OF 50000A ON ALL MODES (L-N, L-G, N-G, L-L). THE SPD SHALL BE CAPABLE OF PROTECTING AGAINST REPETITIVE SURGE CURRENT OF 3,500 IMPULSES ON ALL MODES (L-N, L-G, N-G, L-L). THE REPETITIVE SURGE CURRENT TEST SHALL BE CONDUCTED ACCORDING TO ANSI/IEEE C82.41 AND C82.45 STANDARDS.

THE SPD SHALL BE RATED AS A UL-1449 3RD EDITION TYPE 2 DEVICE WITH A NOMINAL DISCHARGE (IN) RATING OF 20 KA MINIMUM.

THE SPD SHALL BE AS MANUFACTURED BY CURRENT TECHNOLOGY TQ200 SERIES, GENERAL ELECTRIC TTS-1065 SERIES, IEA INTERNATIONAL, SPID, SQUARE D EMAX2 SERIES OR ENGINEER APPROVED EQUAL BY LIEBERT OR Eaton.

C. EXECUTION:

INSTALLATION:

AWG COPPER CONDUCTORS. THE SPD SHALL BE CLOSE NIPPLED TO THE DISTRIBUTION PANEL AND TERMINATE ON THE NEAREST BREAKER AT PANEL ENTRY POINT.

THE RECEPTACLE PANEL SPD SHALL BE WIRED IN PARALLEL WITH THE RECEPTACLE PANEL. THE SPD SHALL BE FED BY A 60A/3P CIRCUIT BREAKER MOUNTED IN THE RECEPTACLE PANEL. THE SPD SHALL BE CONNECTED TO THE RECEPTACLE PANEL USING #8 AWG COPPER CONDUCTORS. THE SPD SHALL BE CLOSE NIPPLED TO THE RECEPTACLE PANEL AND TERMINATE ON THE NEAREST BREAKER AT PANEL ENTRY POINT.

SPD FEED CONDUCTORS SHALL BE KEPT AS SHORT AS POSSIBLE. THE CONTRACTOR SHALL TWIST THE FEED CONDUCTORS TOGETHER TO REDUCE CONDUCTOR IMPEDANCE.

SPD CONDUCTOR LUGS SHALL BE TORQUED TO THE VALUES RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

TESTING:

PRIOR TO TURNOVER TO THE OWNER, SURGE PROTECTIVE DEVICES SHALL BE TESTED FOR OPERATION BY THE CONTRACTOR.

TRAINING:

THE CONTRACTOR SHALL INCLUDE A TRAINING COURSE FOR THE OWNER'S PERSONNEL ON THE OPERATION AND MAINTENANCE OF THE SURGE PROTECTIVE DEVICES.

THE TRAINING COURSE SHALL BE TAUGHT BY A MANUFACTURER'S REPRESENTATIVE AT THE OWNER'S LOCATION.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TRAINING MATERIALS. THE OWNER IS RESPONSIBLE FOR PROVIDING THE TRAINING ROOM FACILITIES AT THE OWNER'S LOCATION.

SECTION 26.5100 - LUMINAIRES

A. DESCRIPTION OF WORK:

THE CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT LUMINAIRES AS SHOWN ON THE DRAWINGS. LUMINAIRES ARE INDICATED ON THE DRAWINGS WITH A TYPE IDENTIFYING LETTER, I.E., A, B, C, ETC. A LUMINAIRE SCHEDULE ON THE DRAWINGS IDENTIFIES THE LUMINAIRE IN ACCORDANCE WITH THE IDENTIFYING LETTERS.

SUBMITTALS:

PRODUCT DATA: SUBMIT MANUFACTURER'S DATA ON BUILDING LUMINAIRES. SUBMIT LUMINAIRE DATA IN BOOKLET FORM AND INCLUDE THE FOLLOWING ITEMS:

- SEPARATE SHEET FOR EACH LUMINAIRE
- BOOKLET SHALL BE ASSEMBLED IN LUMINARY "TYPE" ALPHABETICAL ORDER
- LUMINAIRE CATALOG NUMBER AND ALL ACCESSORIES CLEARLY INDICATED ON EACH SHEET
- FLUORESCENT AND HID LUMINAIRES SHALL INCLUDE BALLAST DATA SHEET CLEARLY INDICATING MANUFACTURER AND MODEL NUMBER OF BALLAST
- EACH LUMINAIRE SHALL INCLUDE LAMP DATA SHEET CLEARLY INDICATING LAMP MANUFACTURER AND MODEL NUMBER.

SUBMITTALS NOT INCLUDING ALL LISTED ITEMS SHALL BE DISAPPROVED.

WARRANTY:

CONTRACTOR SHALL WARRANTY ALL INSTALLATION AND PRODUCT FREE FROM MECHANICAL AND ELECTRICAL DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION. ALL WARRANTY LABOR SERVICE SHALL BE INCLUDED IN THIS WARRANTY.

DELIVERY, STORAGE AND HANDLING:

STORE POLES ON DECAY-RESISTANT-TREATED SKIDS AT LEAST 12 INCHES (300 MM) ABOVE GRADE AND VEGETATION. SUPPORT POLES TO PREVENT DISTORTION AND ARRANGE TO PROVIDE FREE AIR CIRCULATION.

HANDLE WOOD POLES SO THEY WILL NOT BE DAMAGED. DO NOT USE POINTED TOOLS THAT CAN INDENT POLE SURFACE MORE THAN 1/4 INCH (6 MM) DEEP. DO NOT APPLY TOOLS TO SECTION OF POLE TO BE INSTALLED BELOW GROUND LINE.

RETAIN FACTORY-APPLIED POLE WRAPPINGS ON FIBERGLASS AND LAMINATED WOOD POLES UNTIL RIGHT BEFORE POLE INSTALLATION. HANDLE POLES WITH WEB FABRIC STRAPS.

RETAIN FACTORY-APPLIED POLE WRAPPINGS ON METAL POLES UNTIL RIGHT BEFORE POLE INSTALLATION. HANDLE POLES WITH WEB FABRIC STRAPS.

EXTRA MATERIALS:

EXIT SIGNS: FURNISH 10% EXTRA (MINIMUM OF 2) EXIT SIGNS, INCLUDING UP TO 50 FEET OF CONDUIT AND WIRING FOR EACH SIGN.

EXTRA MATERIALS SHALL BE MATERIALS MATCHING IDENTICALLY INSTALLED PRODUCTS AND SHALL BE FURNISHED IN PACKAGING THAT IDENTIFIES AND PROTECTS THE PRODUCT FOR STORAGE.

B. PRODUCTS:

LUMINAIRES:

SURFACE MOUNTED LUMINAIRES WITH LABELS, STOCKERS, EMBLEMS THAT ARE VISIBLE AFTER LUMINAIRE IS INSTALLED SHALL HAVE ALL VISIBLE LABELS EXCEPT "UL" LABEL REMOVED.

SURFACE MOUNTED LUMINAIRES IN FINISHED AREAS SHALL CONTAIN NO VISIBLE KNOCKOUTS.

ALL NON-METALLIC LOUVERS MUST MEET STATE AND LOCAL REGULATIONS REGARDING FLAME SPREAD AND SMOKE DENSITY GENERATION.

EXPOSED FASTENERS SHALL BE FLUSH WITH ADJACENT SURFACE WITH MATCHING FINISH. MOUNTING HARDWARE SHALL BE CONCEALED WHERE FEASIBLE.

ALL DOORS SHALL HAVE MITERED CORNERS WITH WHITE FINISH UNLESS OTHERWISE NOTED.

LUMINAIRES SHALL COMPLY WITH UL-1598 AND BE LISTED AND LABELED FOR INSTALLATION IN WET LOCATIONS BY AN NRTL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

METAL PARTS: FREE OF BURRS AND SHARP CORNERS AND EDGES.

SHEET METAL COMPONENTS: CORROSION-RESISTANT ALUMINUM, UNLESS OTHERWISE INDICATED. FORM AND SUPPORT TO PREVENT WARPING AND SAGGING.

HOUSINGS: RIGIDLY FORMED, WEATHER- AND LIGHT-TIGHT ENCLOSURES THAT WILL NOT WARP, SAG OR DEFORM IN USE. PROVIDE FILTER/BREATHERS FOR ENCLOSED LUMINAIRES.

DOORS, FRAMES AND OTHER INTERNAL ACCESS: SMOOTH OPERATING, FREE OF LIGHT LEAKAGE UNDER OPERATING CONDITIONS, AND DESIGNED TO PERMIT RELAMPING WITHOUT USE OF TOOLS. DESIGNED TO PREVENT DOORS, FRAMES, LENSES, DIFFUSERS AND OTHER COMPONENTS FROM FALLING ACCIDENTALLY DURING RELAMPING AND WHEN SECURED IN OPERATING POSITION. DOORS SHALL BE REMOVABLE FOR CLEANING OR REPLACING LENSES. DESIGNED TO DISCONNECT BALLAST WHEN DOOR OPENS.

EXPOSED HARDWARE MATERIAL ON EXTERIOR LUMINAIRES: STAINLESS STEEL

PLASTIC PARTS: HIGH RESISTANCE TO YELLOWING AND OTHER CHANGES DUE TO AGING, EXPOSURE TO HEAT, AND UV RADIATION.

LENSES AND REFRACTORS GASKETS: USE HEAT- AND AGING RESISTANT GASKETS TO SEAL AND CUSHION LENSES AND REFRACTORS IN LUMINAIRE DOORS.

FACTORY-APPLIED FINISH FOR STEEL LUMINAIRES: COMPLY WITH NAIMM's "METAL FINISHES MANUAL FOR ARCHITECTURAL AND METAL PRODUCTS" FOR RECOMMENDATIONS FOR APPLYING AND DESIGNATING FINISHES.

C. EXECUTION:

INSTALLATION:

PROVIDE STRUCTURAL SUPPORT FOR RECESSED LUMINAIRES AS REQUIRED BY CODE AND/OR LOCAL AUTHORITY HAVING JURISDICTION.

CONTRACTOR SHALL INSTALL EXTRA EXIT SIGNS AS DIRECTED. EXTRA SIGNS NOT INSTALLED SHALL BE TURNED OVER TO THE OWNER.

LUMINAIRES THAT ARE ADJAMBLE SHALL BE ADJUSTED AS DIRECTED.

EXTERIOR LUMINAIRES SHALL HAVE IN-LINE FUSES INSTALLED IN POLE AT HANDHOLE IN ADDITION TO INTERNAL PROTECTION.

LUMINAIRES SHALL BE INSTALLED PERPENDICULAR AND PARALLEL TO WALLS AND CEILING. LUMINAIRES SHALL BE SET LEVEL AND FLUMB.

CLEANING:

REMOVE DIRT, DEBRIS AND BUGS FROM ENCLOSURES.

CLEAN PHOTOMETRIC CONTROL SURFACES AS RECOMMENDED BY MANUFACTURER.

FOR DIMMED FLUORESCENT LUMINAIRES, THE CONTRACTOR SHALL BURN IN THE FLUORESCENT LAMPS AT FULL INTENSITY FOR A PERIOD OF 100 HOURS PRIOR TO OPERATING DIMMING FUNCTION OF THE DIMMING BALLAST.

CORROSION PREVENTION:

ALUMINUM: DO NOT USE IN CONTACT WITH EARTH OR CONCRETE. WHEN IN DIRECT CONTACT WITH A DISSIMILAR METAL, PROTECT ALUMINUM BY INSULATING FITTINGS OR TREATMENT.

STEEL CONDUITS: IN CONCRETE FOUNDATIONS, WRAP CONDUIT WITH 0.010-INCH THICK, PIPE-WRAPPING PLASTIC TAPE APPLIED WITH A 50 PERCENT OVERLAP.

FIELD QUALITY CONTROL:

EMERGENCY LIGHTING UNITS SHALL BE TESTED FOR ILLUMINATION AND NORMAL POWER/BATTERY POWER TRANSFER.

LUMINAIRES AND LAMPS SHALL BE TESTED FOR NORMAL OPERATION AND ILLUMINATION.

INSPECT EACH INSTALLED LUMINAIRE FOR DAMAGE. REPLACE DAMAGED LUMINAIRES AND COMPONENTS.

LUMINAIRES SHALL BE TESTED FOR NORMAL OPERATION AND ILLUMINATION.

ILLUMINATION OBSERVATIONS: VERIFY NORMAL OPERATION OF LIGHTING UNITS AFTER INSTALLING LUMINAIRES AND ENERGIZING CIRCUITS WITH NORMAL POWER SOURCE.

- VERIFY OPERATION OF PHOTOELECTRIC CONTROLS.

PREPARE A WRITTEN REPORT OF TESTS, INSPECTIONS, OBSERVATIONS AND VERIFICATIONS INDICATING AND INTERPRETING RESULTS. IF ADJUSTMENTS ARE MADE TO LIGHTING SYSTEM, RETEST TO DEMONSTRATE COMPLIANCE WITH STANDARDS.

SECTION 27.0528 - COMMUNICATIONS RACEWAY SYSTEMS

A. DESCRIPTION OF WORK:

PROVIDE A COMPLETE STRUCTURED RACEWAY SYSTEM INCLUDING ALL BOXES, BACKBOARDS, OUTLET BOXES, CONDUIT, CABLE TRAYS, SADDLES, FITTINGS, SLEEVES, ETC., FOR THE COMMUNICATIONS SYSTEM AS SHOWN ON THE DRAWINGS, SPECIFIED OR REQUIRED.

B. QUALITY ASSURANCE:

THE INSTALLATION OF THE COMMUNICATIONS RACEWAY SYSTEMS SHALL COMPLY WITH ALL APPLICABLE NEC, NEMA, BICSI AND ANSI STANDARDS AND MEET OR EXCEED THE LATEST TIA-568 STANDARDS FOR COMMUNICATIONS PATHWAYS AND SPACES FOR COMMERCIAL BUILDINGS.

THE INSTALLATION OF THE COMMUNICATIONS RACEWAY SYSTEMS SHALL BE PERFORMED UNDER THE DIRECTION AND SUPERVISION OF THE CONTRACTOR'S DESIGNATED CERTIFIED INSTALLER/TECHNICIAN.

C. PRODUCTS AND EQUIPMENT:

BACKBOARDS:

PROVIDE IN THE AREAS OR ROOMS AS INDICATED ON THE DETAILED ENGINEERING DRAWINGS AND DOCUMENTS, FOR MOUNTING ELECTRICAL, ELECTRONIC, DATA AND TELECOMMUNICATION EQUIPMENT. A/C GRADE PLUGGED-IN-T-A-PAL PLYWOOD SHEETS 4'0" X 9'6" X 3/4"THK IN SIZE, PAINTED WITH TWO (2) COATINGS OF FIRE RETARDANT PAINT; FLAME CONTROL, 20-20 OR ENGINEER APPROVED EQUAL. (UNLESS NOTED OTHERWISE, PLYWOOD SHEETS SHALL BE INSTALLED FLUSH ON THE FINISHED DRYWALL, BLOCK OR CONCRETE WALL, SECURELY ANCHORED TO THE BUILDING STRUCTURE, AND EXTENDING 4" OR LESS FROM THE FLOOR OR CURB UP THE WALL. 6-0" OR, ALL COMMUNICATION CABLE CONDUITS SHALL STUB OUT EITHER THE BACKBOARDS OR ONTO CABLE TRAYS AND LADDER SYSTEMS.

OUTLETS AND PLATES:

EACH TELEPHONE OR COMMUNICATIONS OUTLET SHALL BE A 4-11/16" SQUARE 2-1/8" DEEP BOX WITH 1-1/4" RAISED SINGLE-GANG OR DOUBLE-GANG PLASTER RING AS REQUIRED AND ONE 1-1/4" CONDUIT (UNLESS NOTED OTHERWISE) STUBBED OUT ABOVE THE ACCESSIBLE CEILING INTO THE JOIST AREA, OR STUBBED OUT BELOW THE FLOOR INTO THE JOIST AREA BELOW AS INDICATED ON THE DRAWINGS. CONDUIT SHALL TURN TOWARDS THE MAIN CABLE ROUTING PATH OR CABLE TRAY AND HAVE AN INSULATED BUSHING INSTALLED.

CONDUIT HOME RUNS, EXTENDED TO THE CABLE TRAY AND/OR OTHERWISE EXTENDED BEYOND THE TURN OUT, SHALL HAVE A GROUNDING BUSHING INSTALLED AND BE BONDED TO THE COMMUNICATIONS GROUNDING SYSTEM.

COMMUNICATIONS OUTLET MOUNTING HEIGHT SHALL BE ADA COMPLIANT, 18" TO CENTERLINE ABOVE FINISHED FLOOR (A.F.F.) UNLESS NOTED OTHERWISE (CONTRACTOR TO VERIFY). EACH OUTLET SHALL BE PROVIDED WITH A MATCHING BLANK COVER PLATE UNLESS NOTED OTHERWISE. OUTLET FACEPLATES SHALL BE AS NOTED ON THE DRAWINGS.

EACH WALL PHONE OR EMERGENCY PHONE OUTLET SHALL BE A SINGLE GANG 2-1/8"W X 4"H X 2-1/8"D, DEEP BOX WITH REINFORCED SUPPORT. 1" CONDUIT STUBBED OUT ABOVE ACCESSIBLE CEILING WITH A TYPE ADA STAINLESS STEEL PLATE OR AS REQUIRED TO MATCH THE PHONE. MOUNTING HEIGHT OF THE PHONE SHALL BE 48" TO TOP OF THE PHONE FROM GRADE. CONTRACTOR TO VERIFY OUTLET BOX HEIGHT REQUIREMENT.

CABLE TRAYS:

CABLE TRAYS SHALL BE AS INDICATED ON THE ENGINEERING DRAWINGS AND SIZED AS SHOWN. CABLE TRAYS SHALL BE CENTER-HUNG, FACILITATING LOADING FROM BOTH SIDES.

CABLE LADDER:

CABLE LADDER SHALL BE SAUNDERS "SB" OR ENGINEER APPROVED EQUAL BY NEWTON, HOMACD, CHATSWORTH PRODUCTS OR OTHERS, AS INDICATED ON THE DRAWINGS. THE LADDER SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS, UTILIZING MANUFACTURER'S ACCESSORIES AND COMPONENTS.

CONDUITS:

CONDUITS SHALL BE INSTALLED PER SECTION 26.0533 - RACEWAYS OF THIS SPECIFICATION EXCEPT AS NOTED. THE SIZES OF CONDUITS SHALL BE AS SHOWN ON THE DRAWINGS, MINIMUM SIZE IS 1-1/4". ALL CONDUITS SHALL BE REAMED AND FURNISHED WITH INSULATION AND/OR GROUNDED BUSHINGS AS REQUIRED. FLEXIBLE STEEL CONDUIT SHALL NOT BE UTILIZED FOR COMMUNICATIONS RACEWAY SYSTEMS WITHOUT SPECIFIC WRITTEN APPROVAL OF THE ENGINEER FOR THE APPLICATION.

SURFACE-MOUNTED RACEWAYS:

METALLIC AND/OR NON-METALLIC SURFACE MOUNTED RACEWAYS SHALL BE AS INDICATED ON THE ENGINEERING DRAWINGS, SIZED AS SHOWN AND SHALL INCLUDE ALL END CAPS, BRACKETS, CONNECTORS, FITTING AND ACCESSORIES REQUIRED TO PROVIDE A COMPLETE INSTALLATION.

METALLIC RACEWAYS SHALL BE UL LISTED AS A GROUNDED RACEWAY SYSTEM AND SHALL BE INSTALLED PER THE MANUFACTURER'S DIRECTIONS TO MAINTAIN THE UL LISTING. PROVIDE BONDING JUMPERS AS REQUIRED.

SURFACE-MOUNTED RACEWAY SHALL BE DIVIDED, PROVIDING SEPARATE ISOLATED COMPARTMENTS AS INDICATED FOR POWER, COMMUNICATIONS, ETC.

GENERALLY, THE TOP SECTION IS TO BE UTILIZED FOR POWER DISTRIBUTION, THE BOTTOM SECTION UTILIZED FOR COMMUNICATIONS, AND IF SPECIFIED, THE MIDDLE SECTION FOR SECURITY, FIBER OPTICS OR CATV CABLE, ETC. AS INDICATED.

DUPLEX RECEPTACLE FACEPLATES OR DEVICE BRACKETS SHALL BE PROVIDED UTILIZING A 106 DUPLEX MOUNTING FRAME FOR COMMUNICATIONS OUTLET AS REQUIRED WHEN LOCATED IN FLOOR BOXES, POWER POLES, RACEWAYS, ETC.

UNLESS NOTED OTHERWISE, SURFACE-MOUNTED RACEWAY SHALL BE FED UTILIZING A MINIMUM 1-1/4"X4" AND RECESSED 4-11/16" SQUARE X 2-1/8" DEEP BOX WITH 1-1/4" RAISED SINGLE-GANG PLASTER RING FOR COMMUNICATIONS.

SURFACE-MOUNTED RACEWAYS SHALL BE FIRMLY ANCHORED TO THE WALL STUDS OR CONCRETE/BLOCK STRUCTURE. APPROPRIATE SCREWS SHALL BE UTILIZED IN STUDS. APPROPRIATE SCREWS AND METAL ANCHORS OR ENGINEER APPROVED METALLIC ANCHORING SYSTEMS SHALL BE UTILIZED IN CONCRETE/BLOCK STRUCTURE. PLASTIC ANCHORS OF ANY TYPE ARE NOT ACCEPTABLE.

NON-METALLIC RACEWAYS SHALL BE PROVIDED WITH DOUBLE-SIDED SELF-ADHESIVE TAPE BACKING TO AID IN THE POSITIONING OF THE RACEWAY PRIOR TO SLOW-FASTENING AND ANCHORING. SHALL ALL RACEWAYS SHALL BE SLOW-FASTENED FOR PERMANENT ATTACHMENT. NON-METALLIC RACEWAY SHALL NOT BE USED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.

D. EXECUTION:

CABLE TRAYS:

THE CONTRACTOR SHALL PROVIDE ADDITIONAL CABLE RACKS, CABLE TRAY, CHANNELS AND LADDERS PER SPECIFICATION AS REQUIRED TO FACILITATE THE DATA/COMMUNICATION CABLEING INSTALLATION. THE MINIMUM REQUIRED INSTALLATION IS INDICATED ON THE DRAWINGS.

CABLE TRAYS AND CHANNELS SHALL BE SUPPORTED FROM BUILDING STRUCTURE ABOVE ON 12-0" CENTERS MAXIMUM OR LESS AS REQUIRED PER MANUFACTURER'S INSTRUCTIONS.

MINIMUM BEND RADIUS FOR CABLE TRAY OR CHANNEL SHALL BE 12" ON CENTERLINE. CABLE TRAYS SHALL BE SUPPORTED FROM BUILDING STRUCTURE PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS. SIZE AND SUPPORT RACEWAYS FOR 100% FUTURE GROWTH AND EXPANSION. PROVIDE ALL END CAPS, TUBE CAPS, MOUNTING SPACERS, COUPLINGS, HANGERS, BRACKETS, DROP-OUTS, CONNECTORS, SUPPORTS, BRACES, ETC. AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL INSTALLATION.

CONDUIT:

CONDUITS SHALL BE SIZED AS PER TIA-568 OR AS NOTED ON THE DRAWINGS, WHICHEVER IS MORE STRINGENT. WHERE SECTIONS OF CONDUIT RUNS ARE LONGER THAN 100'-0", OR HAVE MORE THAN 180° OF BENDS, OR HAVE A REVERSE (GREATER THAN 90) BEND, PULL BOXES SHALL BE PROVIDED AND INSTALLED. BENDS IN CONDUITS LARGER THAN 2" SHALL BE LONG-SWEEP BENDS. UNLESS OTHERWISE NOTED, IN NO INSTANCE SHALL THE INSIDE RADIUS OF BENDS BE LESS THAN:

- SIX TIMES THE SIDE DIAMETER FOR CONDUITS UP TO AND INCLUDING 2";
- TEN TIMES THE SIDE DIAMETER FOR CONDUITS OVER 2".

CONDUITS ENTERING TELEPHONE AND DATA CLOSETS SHALL TERMINATE AS CLOSE AS POSSIBLE TO THE WALL THROUGH WHICH THE CONDUITS ENTER, UNLESS NOTED OTHERWISE. IN-FLOOR CONDUITS SHALL TERMINATE 4" A.F.F. OR CURB UNLESS NOTED OTHERWISE. ALL CONDUITS SHALL BE LEFT CLEAN, DRY AND FREE OF DEBRIS OR OTHER OBSTRUCTIONS, WITH INSULATED GROUNDING BUSHING INSTALLED.

MISCELLANEOUS:

PROVIDE AND INSTALL A MINIMUM OF TWO DUPLEX RECEPTABLES RATED 20 AMP 110 VOLT ON A DEDICATED CIRCUIT, ON THE TELEPHONE BACKBOARD, TO BE LOCATED AS DIRECTED, 22" M.H. UNLESS NOTED OTHERWISE. FULL AREA OF THE BACKBOARD SHALL BE KEPT FREE OF ALL PIPES OR CONDUITS WITH A MINIMUM OF 36" DEPTH OF MAINTENANCE AREA IN FRONT.

PROVIDE A 1/8" NYLON OR POLYPROPYLENE PULL STRING IN ALL CONDUITS.

WHERE INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL SUBMIT FOR ENGINEER REVIEW AND ACCEPTANCE, DRAWINGS INDICATING CABLE TRAY, CONDUIT OR OTHER RACEWAY ROUTING, SIZE, CABLE FILL, ETC. AS REQUIRED TO VERIFY THAT THE INSTALLATION WILL MEET ALL ASPECTS OF THE SPECIFICATION.

SECTION 27.1300 - COMMUNICATIONS CABLE SYSTEMS

A. GENERAL:

ALL WORK SHALL CONFORM TO THE LATEST EDITION OF N.E.C., NATIONAL, STATE AND LOCAL CODES WHICH APPLY.

ALL ABANDONED COMMUNICATIONS CABLEING SHALL BE REMOVED AS PER NEC 770.25, 800.25, 820.25.

ALL WORK SHALL CONFORM TO THE LATEST EDITION OF TIA-568, 569, 606, 607, THE BICSI TELECOMMUNICATIONS DISTRIBUTION METHODS MANUAL (TDM), NEMA-250, IEEE, ANSI, ISO, NATIONAL, STATE AND LOCAL STANDARDS FOR COMMERCIAL BUILDING WIRING FOR VOICE AND DATA COMMUNICATIONS AS APPLICABLE.

ALL MATERIAL AND EQUIPMENT SHALL CONFORM TO ALL U.L. AND NEMA STANDARDS WHICH APPLY. ALL COMPONENTS AND MATERIALS SHALL BE UL LISTED WHERE APPLICABLE. ALL COMPONENTS AND MATERIALS SHALL BE UL VERIFIED AS MEETING THE TIA PERFORMANCE CATEGORY SPECIFICATIONS INDICATED.

THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST AS REQUIRED, ALL RACEWAY, CABLE, EQUIPMENT RACKS, PATCH PANELS, CABLE SUPPORTS, CONNECTORS, FACEPLATES, CROSSLINKS, OUTLET BOXES, POWER STRIPS, CABLE TRAYS, RACK EQUIPMENTS, ACCESSORIES, ETC. AS INDICATED TO PROVIDE A COMPLETE AND FUNCTIONING INSTALLATION.

THE CONTRACTOR SHALL BID THE PROJECT AS SPECIFIED AND SHOWN ON THE DRAWINGS AND DOCUMENTS. THE INSTALLATION SHALL BE UNDER THE SUPERVISION OF A CERTIFIABLY TRAINED INSTALLER/TECHNICIAN WITH A MINIMUM OF FIVE (5) YEARS OF FIELD EXPERIENCE. ALL CRAFTSMEN ON THE PROJECT SHALL HAVE RECEIVED CERTIFIABLE TRAINING AND RELATED HANDS-ON EXPERIENCE. ACCEPTABLE CERTIFIABLE TRAINING SHALL BE AS BY BICSI, NAWC OR ENGINEER APPROVED EQUAL. THE CONTRACTOR SHALL HAVE A ROAD STATED AS A PERMANENT FULL-TIME EMPLOYEE. THE CONTRACTOR'S PROJECT FOREMAN SHALL BE A BICSI ITS INSTALLER LEVEL 2, OR GREATER.

CONTRACTOR SHALL WARRANTY HIS ENTIRE INSTALLATION AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF TWO (2) YEARS.

CONTRACTOR SHALL MAINTAIN AND SUPPORT THE EQUIPMENT MANUFACTURER'S WARRANTIES FOR ALL EQUIPMENT FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER THIS CONTRACT FOR THE LIFE OF THE EQUIPMENT MANUFACTURER'S WARRANTIES, AND/OR AS OTHERWISE NOTED IN THE DETAILED ENGINEERING DOCUMENTS.

SLEEVES THROUGH WALLS SHALL BE STEEL CONDUIT WITH BUSHINGS, SIZED AS NOTED.

CONDUITS THROUGH WALLS SHALL BE INSTALLED BY THE CONTRACTOR UNDER THIS CONTRACT.

CONTRACTOR SHALL TAKE CARE DURING INSTALLATION TO ASSURE THAT CABLES ARE INSTALLED FREE FROM ALL KINKS, SHARP BENDS, PINCHES, CRUSHES, GOUGES, CUTS OR ANY OTHER PHYSICAL DAMAGE WHICH MAY CAUSE ANY PHYSICAL OR ELECTRICAL CHARACTERISTIC ALTERATIONS TO THE COMMUNICATION, DATA OR OPTICAL FIBER CABLES.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE PHYSICAL AND ELECTRICAL INTEGRITY OF THE CABLE BEING INSTALLED AND SHALL REPLACE ANY AND ALL CABLES FOUND DEFECTIVE FOR ANY REASON.

ALL CABLES SHALL BE OF A SINGLE CONTINUOUS RUN, WITH NO SPLICES, IN-LINE CONNECTORS, ETC.

ALL CABLE RUNS, CONDUITS, TRAYS AND OTHER RACEWAYS SHALL BE ROUTED PARALLEL TO OR PERPENDICULAR TO THE BUILDING STRUCTURE; NO DIAGONAL RUNS WILL BE PERMITTED.

THE CONTRACTOR SHALL PROVIDE COMMUNICATIONS SPACES, PATHWAYS, RACEWAYS, ETC. AS PER TIA-569 AND AS INDICATED TO PROVIDE A COMPLETE AND FUNCTIONAL INSTALLATION.

VERIFY WITH THE ARCHITECT OR THE LOCAL BUILDING AUTHORITY, THE FIRE-RATING REQUIREMENTS OF ANY WALL OR FLOOR TO BE BREACHED BY A CONDUIT, CABLE, RACEWAY OR OTHER PENETRATION AS PER ASTM E-119 (NFPA-25) AND UL-653 STANDARDS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ALL EXISTING NON-COMPLIANT CONDITIONS FOR REMEDIATION. THE PRESENCE OF EXISTING NON-COMPLIANT CONDITIONS WILL NOT EXEMPT THE CONTRACTOR FROM MEETING THE INSTALLATION FIRE-RATING REQUIREMENTS.

PROVIDE THROUGH-PENETRATION FIRESTOPPS AS PER ASTM E-814 AND UL-1478. FIRESTOP SYSTEMS SHALL HAVE BEEN TESTED BY U.L. AND MEET THE RATING CRITERIA, AS PUBLISHED IN THE U.L. FIRE RESISTANCE DIRECTORY. REFERENCED TO TIA-569 AND THE TDM FOR GENERAL GUIDELINES AND OVERVIEW OF FIRESTOP TECHNOLOGY AND METHODS. CONSULT INDIVIDUAL MANUFACTURER'S INSTRUCTIONS FOR SPECIFIC APPLICATION DETAILS.

ALL COMMUNICATION CABLEING THAT PENETRATES RATED WALLS/ STRUCTURES SHALL BE IN STI E2-PATH SERIES 22 OR 33 AS REQUIRED FOR 40% FILL WITH 50% GROWTH AVAILABLE.

OPENINGS AROUND CABLE TRAYS, CABLE CHANNELS, CONDUITS OR IN SLEEVES PENETRATING FIRE-RATED FLOOR SLABS, WALLS, PARTITIONS, CEILING OR CONCRETE PARTITIONS, SHALL BE SEALED AT BOTH ENDS OF PRE-PARTITION CACK OPENINGS WITH CALCIUM SILICATE BLOCKS, 3M BRAND FIRE BARRIER CAULK CP25 AND PUTTY 303, 3M BRAND SERIES 7902/7904 SYSTEMS FOR FLOOR AND WALLS, NELSON FLAME SEAL SYSTEM, OR AN AUTHORITY HAVING JURISDICTION ACCEPTED MATERIAL HAVING THE SAME FIRE-RATING AS THE FLOOR OR WALL PENETRATED. FIBERGLASS IS NOT ACCEPTABLE.

ALL COMMUNICATIONS RACEWAYS AND EQUIPMENT SHALL BE BONDED TOGETHER AND TO THE COMMUNICATIONS GROUNDING SYSTEM PROVIDED. THE COMMUNICATIONS GROUNDING SYSTEM IS TO BE BONDED TO THE BUILDING GROUNDING SYSTEM PER THE N.E.C. AND TIA-607 STANDARDS AND AS INDICATED ON THE ENGINEERING DOCUMENTS.

GROUNDING SYSTEM TERMINATIONS SHALL BE BY MEANS OF IRREVERSIBLE COMPRESSION-TYPE CONNECTORS, EXOTHERMIC WELDING, AND BRONZE BOLT, STAR WASHERS AND NUT CONNECTED TO THE BUILDING GROUNDING EQUIVALENT. SETSCREW-TYPE AND/OR BOX LUG TYPE TERMINATIONS ARE NOT ACCEPTABLE.

CONTRACTOR SHALL SUBMIT EIGHT (8) COPIES OF CUT SHEETS AND SHOP DRAWINGS FOR ALL ITEMS OF MATERIALS AND EQUIPMENT TO BE FURNISHED AND INSTALLED FOR APPROVAL BY THE ENGINEER PRIOR TO PURCHASE, MANUFACTURE OR INSTALLATION. CONTRACTOR SHALL INCLUDE SUBMITTALS FOR ALL TEST EQUIPMENT, PROCEDURES, AND SAMPLE TEST REPORTS.

THE COMPLETED CABLEING INSTALLATION SHALL BE FULLY TESTED AND VERIFIED IN ACCORDANCE WITH TIA-568-C.0, C1, C2, C3, LEVEL II, AND ACCURACY STANDARDS FOR BASIC LINK PERFORMANCE, AND THE LATEST ACCEPTABLE INDUSTRY STANDARDS.

THE CONTRACTOR SHALL PREPARE COMPLETE CABLE TEST REPORTS FOR ALL INSTALLED CABLES FOR REVIEW AND ACCEPTANCE BY THE ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE CABLEING SYSTEM. TEST REPORTS MUST BE IN A SEARCHABLE/SORTABLE DIGITAL FORMAT WHICH INCLUDES THE TEST MANUFACTURER'S REPORT VIEWING SOFTWARE.

SECTION 28.4621 - FIRE ALARM - ADDRESSABLE

A. GENERAL:

PROVIDE ROUGH-IN ONLY FOR ADDRESSABLE FIRE ALARM SYSTEM BY OTHERS AND LEFT IN FIRST-CLASS CONDITION. ALL EQUIPMENT HEREIN SPECIFIED MANUFACTURED BY EDWARDS OR ENGINEER EQUAL BY SIMPLEX OR NOTIFIER AND SHALL BE THE ENTIRE INSTALLATION SHALL CONFORM TO THE NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS ARTICLE 72, N.E.C. AND LOCAL AUTHORITIES HAVING JURISDICTION.

B. EXECUTION:

THE CONTRACTOR SHALL FURNISH AND INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS ALL WIRING, CONDUIT, AND OUTLET BOXES FOR A COMPLETE SYSTEM AS DESCRIBED HEREIN AND AS SHOWN ON THE DRAWINGS.

THE SYSTEM WIRING AND INSTALLATION SHALL BE IN COMPLIANCE WITH APPLICABLE CODES, PROJECT DRAWINGS AND AS REQUIRED BY THE MANUFACTURER. ALL WIRING SHALL BE COLOR CODED, TAGGED AND CHECKED TO ASSURE THAT IT IS FREE FROM SHORTS AND GROUND.

THE CONTRACTOR SHALL PROVIDE ADDITIONAL CABLE RACKS, CABLE TRAY, CHANNELS AND LADDERS PER SPECIFICATION AS REQUIRED TO FACILITATE THE DATA/COMMUNICATION CABLEING INSTALLATION. THE MINIMUM REQUIRED INSTALLATION IS INDICATED ON THE DRAWINGS.

CABLE TRAYS AND CHANNELS SHALL BE SUPPORTED FROM BUILDING STRUCTURE ABOVE ON 12-0" CENTERS MAXIMUM OR LESS AS REQUIRED PER MANUFACTURER'S INSTRUCTIONS.

MINIMUM BEND RADIUS FOR CABLE TRAY OR CHANNEL SHALL BE 12" ON CENTERLINE. CABLE TRAYS SHALL BE SUPPORTED FROM BUILDING STRUCTURE PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS. SIZE AND SUPPORT RACEWAYS FOR 100% FUTURE GROWTH AND EXPANSION. PROVIDE ALL END CAPS, TUBE CAPS, MOUNTING SPACERS, COUPLINGS, HANGERS, BRACKETS, DROP-OUTS, CONNECTORS, SUPPORTS, BRACES, ETC. AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL INSTALLATION.

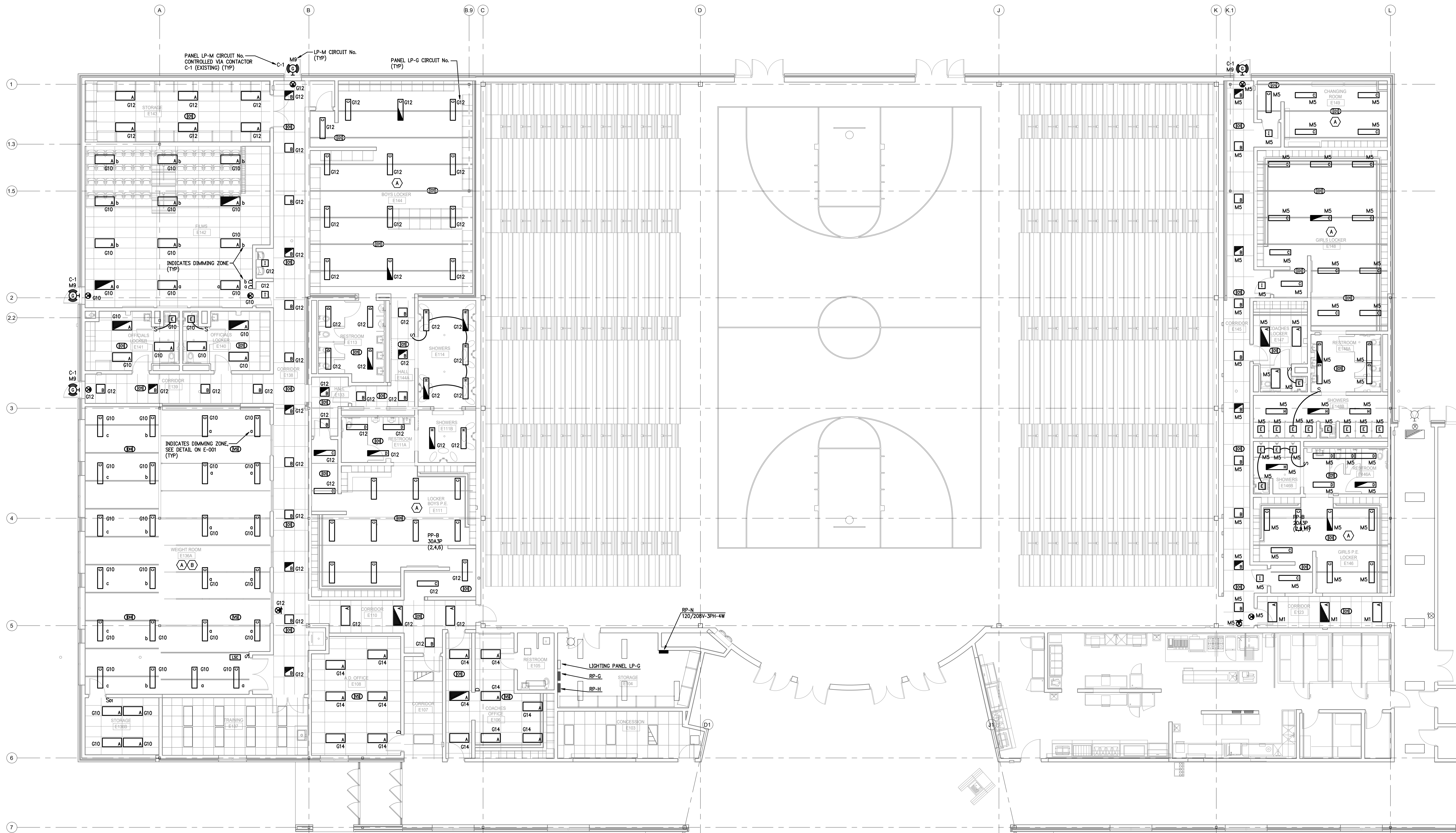
CONDUITS SHALL BE SIZED AS PER TIA-568 OR AS NOTED ON THE DRAWINGS, WHICHEVER IS MORE STRINGENT. WHERE SECTIONS OF CONDUIT RUNS ARE LONGER THAN 100'-0", OR HAVE MORE THAN 180° OF BENDS, OR HAVE A REVERSE (GREATER THAN 90) BEND, PULL BOXES SHALL BE PROVIDED AND INSTALLED. BENDS IN CONDUITS LARGER THAN 2" SHALL BE LONG-SWEEP BENDS. UNLESS OTHERWISE NOTED, IN NO INSTANCE SHALL THE INSIDE RADIUS OF BENDS BE LESS THAN:

- SIX TIMES THE SIDE DIAMETER FOR CONDUITS UP TO AND INCLUDING 2";
- TEN TIMES THE SIDE DIAMETER FOR CONDUITS OVER 2".

CONDUITS ENTERING TELEPHONE AND DATA CLOSETS SHALL TERMINATE AS CLOSE AS POSSIBLE TO THE WALL THROUGH WHICH THE CONDUITS ENTER, UNLESS NOTED OTHERWISE. IN-FLOOR CONDUITS SHALL TERMINATE 4" A.F.F. OR CURB UNLESS NOTED OTHERWISE. ALL CONDUITS SHALL BE LEFT CLEAN, DRY AND FREE OF DEBRIS OR OTHER OBSTRUCTIONS, WITH INSULATED GROUNDING BUSHING INSTALLED.

CONDUITS SHALL BE SIZED AS PER TIA-568 OR AS NOTED ON THE DRAWINGS, WHICHEVER IS MORE STRINGENT. WHERE SECTIONS OF CONDUIT RUNS ARE LONGER THAN 100'-0", OR HAVE MORE THAN 180° OF BENDS, OR HAVE A REVERSE (GREATER THAN 90) BEND, PULL BOXES SHALL BE PROVIDED AND INSTALLED. BENDS IN CONDUITS LARGER THAN 2" SHALL BE LONG-SWEEP BENDS. UNLESS OTHERWISE NOTED, IN NO INSTANCE SHALL THE INSIDE RADIUS OF BENDS BE LESS THAN:

- SIX TIMES THE SIDE DIAMETER FOR CONDUITS UP TO AND INCLUDING 2";
- TEN TIMES THE SIDE DIAMETER FOR CONDUITS



PARTIAL FIRST FLOOR PLAN -
LIGHTING
SCALE: 1/8"=1'-0"



PLAN NOTES:

- A. CONTRACTOR MAY SURFACE-MOUNT LUMINAIRES DIRECTLY TO JOISTS, OR SPAN JOISTS WITH UNISTRUT WHERE APPLICABLE.
- B. LUMINAIRES, CEILING MOUNTED OCCUPANCY SENSORS, CEILING MOUNTED DAYLIGHT SENSOR AND WALL MOUNTED SWITCH SHALL BE WIRED THROUGH THE LIGHTING CONTROL POWER PACK FOR AUTOMATIC LIGHTING CONTROL. LUMINAIRES SHALL TURN OFF 20 MINUTES AFTER OCCUPANTS LEAVE SPACE. THERE SHALL BE TWO (2) DIMMING ZONES. THE WALL MOUNTED SWITCH SHALL CONTROL ALL THREE (3) ZONES: Z1, Z2 AND Z3. THE DAYLIGHT HARVESTING SENSOR SHALL HAVE PRIORITY CONTROL OF ZONE B, AND C. THE DAYLIGHT HARVESTING SENSOR SHALL HAVE A MINIMUM SETTING OF 50 FC FOR THE SPACE, BEFORE DIMMING SHALL BE ACTIVATING ON THE DIMMING ZONES Z1, AND Z2. SEE DETAILS ON SHEET E-001.



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PLOT SCALE
1/8"=1'-0"
0 4 8 12'
FOR SHEET SIZE 30"x42"

ISSUE DATE
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EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS
14544 COUNTY ROAD 6, METAMORA, OH 43540

PARTIAL FIRST FLOOR
PLAN - LIGHTING

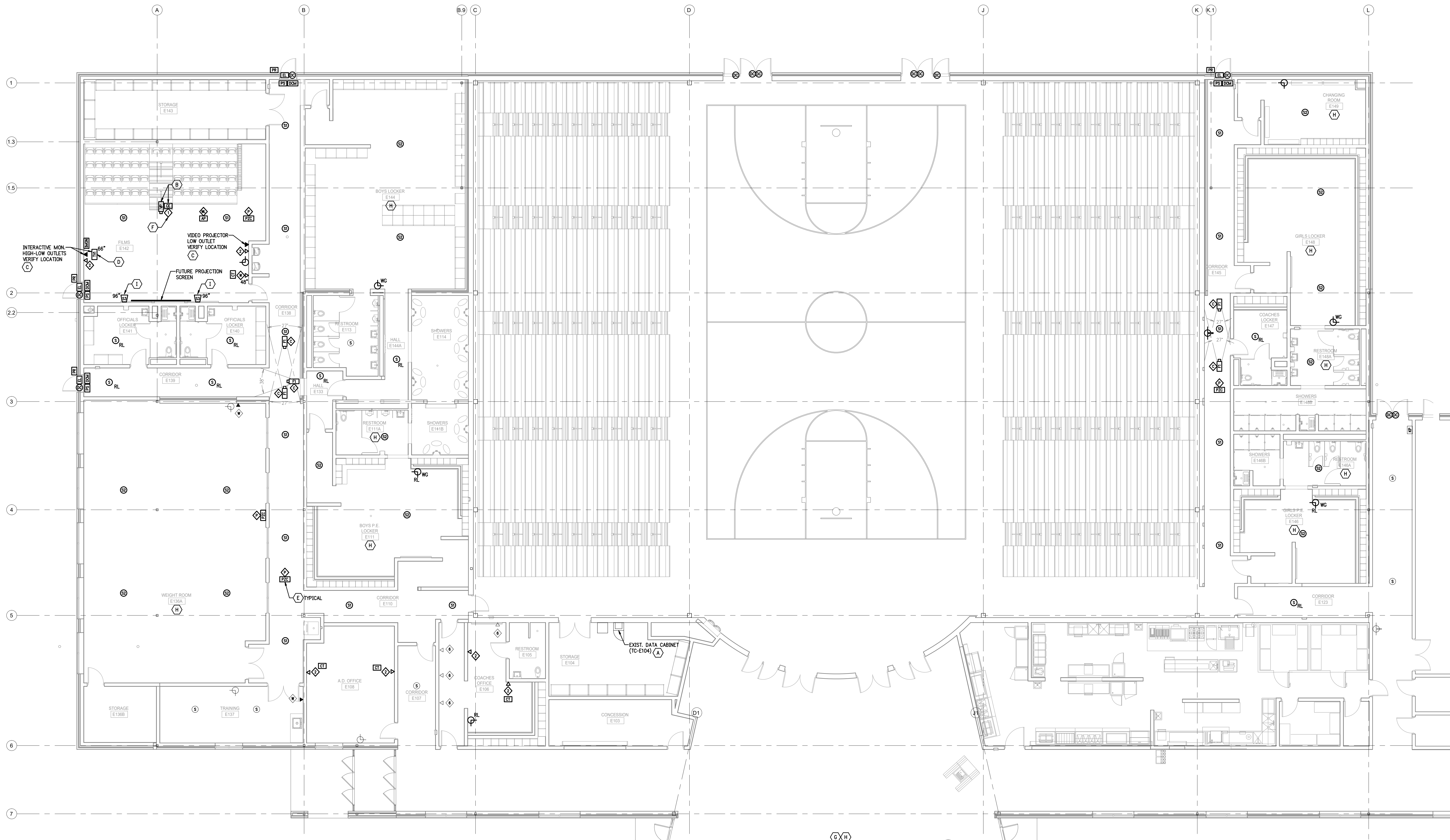
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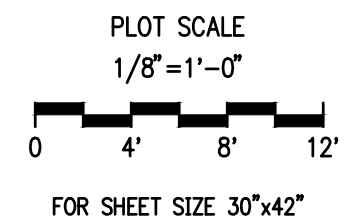
SHEET

EL101



PARTIAL FIRST FLOOR PLAN -
COMMUNICATIONS
SCALE: 1/8"=1'-0"

- COMMUNICATIONS PLAN NOTES:
- HOME-RUN NEW COMMUNICATIONS CABLING TO EXISTING TELECOM CABINET INDICATED (VERIFY LOCATION). PROVIDE ADDITIONAL CAT-6 PATCH PANELS (LEVITON 80588-CAB) WITH REAR CABLE MANAGEMENT SUPPORT BARS. QUANTITY AS REQUIRED FOR TERMINATION OF NEW COMMUNICATIONS CABLES. COORDINATE INSTALLATION OF NEW PATCH PANELS WITH THE OWNER AND EXISTING EQUIPMENT.
 - COORDINATE INSTALLATION LOCATION OF VIDEO PROJECTOR WITH OWNER FURNISHED PROJECTOR AND SCREEN PRIOR TO ROUGH-IN FOR APPROPRIATE THROW DISTANCE BASED ON SCREEN SIZE.
 - VERIFY INSTALLATION LOCATION OF AUDIOVISUAL OUTLETS WITH THE OWNER PRIOR TO ROUGH-IN.
 - COORDINATE INSTALLATION OF RECESSED TV BACKBOX WITH THE OWNER PRIOR TO ROUGH-IN. MOUNT BACKBOX BEHIND PROPOSED FUTURE MONITOR LOCATION. COORDINATE WITH MONITOR AND MOUNT BY OWNER.
 - COORDINATE LOCATION & QUANTITY OF PAGING ZONE CONTROLLERS WITH SYSTEM VENDOR PRIOR TO ROUGH-IN.
 - INSTALL COMMUNICATIONS JACK IN CEILING ENCLOSURE. PROVIDE ACTIVATION PLATES/FACEPLATE AS REQUIRED.
 - PROVIDE CONDUIT SLEEVE PATHWAYS INTO ALL ROOMS AS REQUIRED FOR ALL COMMUNICATIONS/TECHNOLOGY/SECURITY, ETC. SYSTEMS.
 - ALL WIRING IN EXPOSED CEILING AREAS SHALL BE IN CONDUIT. ROUTE CONDUITS TO AN ACCESSIBLE CEILING OR TO SOLID BOTTOM CABLE TRAY. PROVIDE PULL STRINGS FOR ALL CONDUITS.
 - COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH OWNER PRIOR TO ROUGH-IN.



FOR SHEET SIZE 30"x42"

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EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS
14544 COUNTY ROAD 6, METAMORA, OH 43540

PARTIAL FIRST
FLOOR PLAN -
COMMUNICATIONS

PROJECT: B7-4569

DRAWN BY: TAR/CAG

CHECKED BY: SCW

SHEET

EC101



- A. PROGRAMMING AND PAGING ZONING SHALL BE COORDINATED WITH OWNER. SYSTEM SHOWN IS AN EXTENSION OF THE BUILDINGS EXISTING RAULAND TELECENTER U.
- B. COORDINATE IP ADDRESSING AND VLAN CONFIGURATION OF ALL DEVICES WITH OWNER'S IT DEPARTMENT.
- C. TERMINATE INTERMEDIATE PAGING CABLE AT PATCH PANEL(S) IN THE LOCAL TELECOM ROOM (VERIFY LOCATION OF PAGING EQUIPMENT). PROVIDE CAT-6 PATCH CORDS AS REQUIRED AND CONNECT CABLE FROM PATCH PANEL TO EXISTING PAGING SYSTEM FIVE SWITCH.
- D. PROVIDE PAGING ZONE CONTROLLERS AND ASSOCIATED CABLE(S) AS REQUIRED FOR ALL ZONES.
- E. PROVIDE PAGING LOCAL INSTALLATION LOCAL CABLE(S) WITH THE MANUFACTURER'S FINAL ZONES AS DIRECTED BY THE OWNER. LOCATIONS AND QUANTITIES SHOWN ON THE FLOOR PLAN ARE APPROXIMATE.
- F. ALL WORK TO EXTEND THE EXISTING PAGING SYSTEM SHALL BE PERFORMED BY THE CURRENT SERVICING VENDOR. TROUBLESHOOT SOUND EQUIPMENT (CONTACT FRED LAMMERS (419) 666-0670).



- A. QUANTITY OF CIRCUITS, DEVICES ON CIRCUITS AND WIRE LENGTH/VOLTAGE DROP SHALL BE PER MANUFACTURER'S RECOMMENDATIONS AND PROVIDED AS PART OF THE SHOP DRAWING SUBMITTAL.
- B. WIRE NEW SECONDARY SYSTEM CLOCKS TO EXISTING SYSTEM AS REQUIRED. PROVIDE ALL ADDITIONAL HARDWARE REQUIRED.



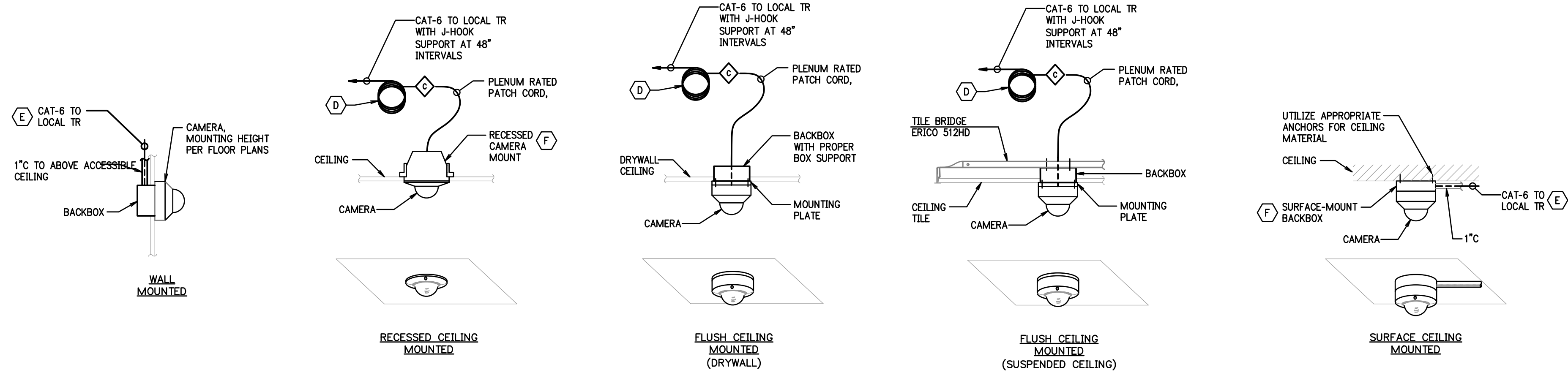
- A. DOUBLE-GANG ELECTRICAL BOX, WITH WIRING AND MOLEX CONNECTOR TO CLOCK.
MOUNTING HEIGHT TO BOTTOM OF BOX AS INDICATED ON DRAWINGS.



- A. SINGLE-GANG ELECTRICAL BOX, WITH WIRING AND MOLEX CONNECTOR TO CLOCK.
- B. MOUNTING HEIGHT TO BOTTOM OF CLOCK AS INDICATED ON DRAWINGS.
- C. MOUNTING METHOD AND ELECTRICAL BACKBOX LOCATION SHOWN FOR SAPLING BRAND CLOCKS.



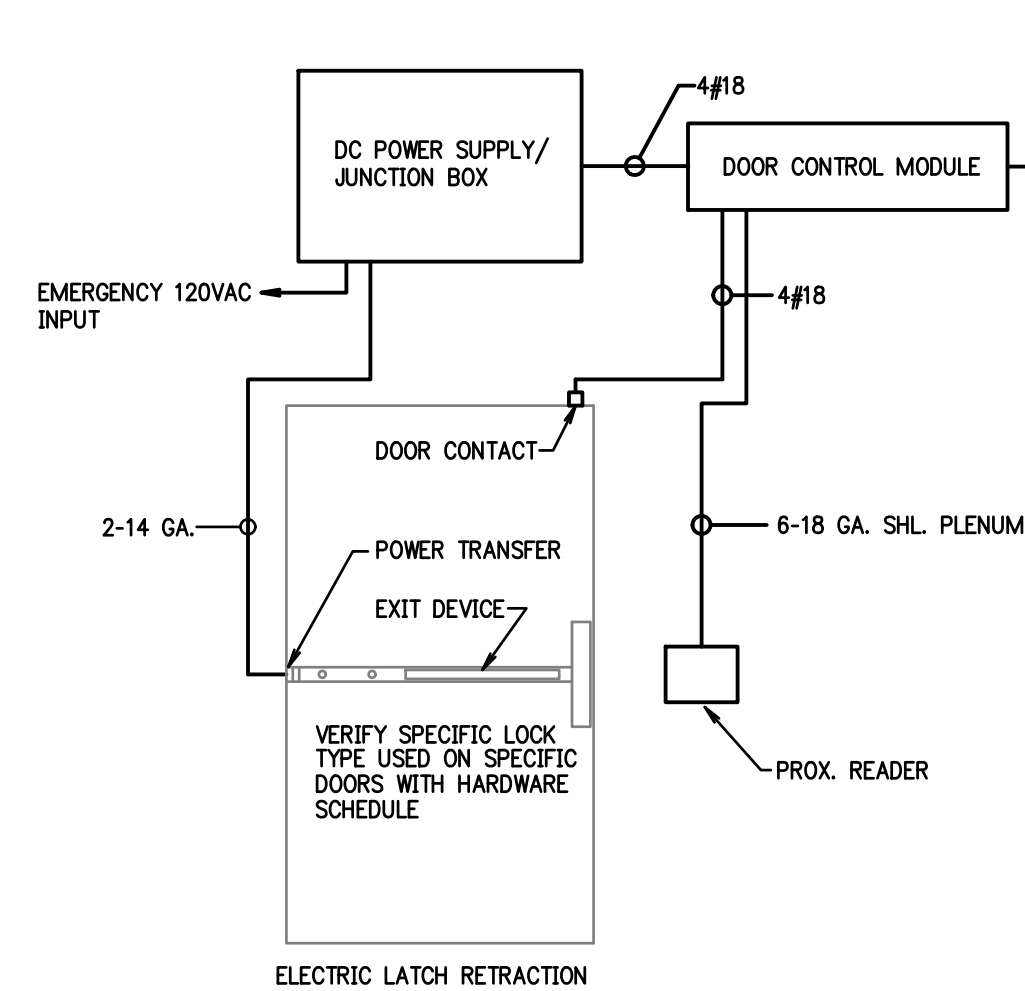
6. PROVIDE CABLE MANAGEMENT EXTENSION COLUMN WITH EIGHTEEN RING OR FIXED LENGTH TUBE MOUNT, FACTORY BLACK FINISH AS REQUIRED. LENGTH WILL VARY DUE TO M.H. OR DISPLAY SURFACE, SCREEN, COORDINATING IN FIELD. MODIFY LENGTH OF MOUNT AS REQUIRED TO PROPERLY ALIGN VIDEO PROJECTOR TO PROJECTOR SCREEN.
7. ADAPTER MOUNTING HARDWARE PLATE: CHIEF RPA-U SERIES. VERIFY COMPATIBILITY WITH SPECIFIED PROJECTOR MOUNTING PLATE.
8. REMOVABLE EQUIPMENT MOUNTING PLATE, MOUNT HDMI RECEIVER TO PLATE AS REQUIRED.
9. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO MOUNTING. PREMIER OB-8AVSTORS.
10. VERIFY EXACT LOCATION OF PROJECTOR WITH GENERAL CONTRACTOR, OWNER, REFLECTED CEILING PLAN, AND MANUFACTURER RECOMMENDATIONS. PROVIDE MOCK-UP INSTALLATION FOR APPROVAL BY ENGINEER AND OWNER. SEE NOTE-4.
11. VERIFY IMAGE REQUIREMENTS WITH THE OWNER. IMAGE SHALL FILL SCREEN TO EXTENTS AT PROJECTORS NATIVE ASPECT RATIO. VERIFY THOROUGH DISTANCE AND TILT ANGLE WITH MANUFACTURERS REQUIREMENTS
12. VERTICAL DISTANCE BETWEEN LENS CENTER AND TOP OF IMAGE SHALL BE PER MANUFACTURERS REQUIREMENTS
13. VERTICAL DISTANCE BETWEEN LENS CENTER AND SCREEN CENTER SHALL BE PER MANUFACTURERS REQUIREMENTS.
14. THOROUGH DISTANCE WILL HAVE A RANGE FOR GIVEN IMAGE SIZE PER MANUFACTURER RECOMMENDATIONS & DESIRED IMAGE SIZE. CONTRACTORS TO COORDINATE WITH OWNER PROVIDED WITH OWNER INFORMED OF ALL SCREEN INFORMATION INCLUDING SCREENING CONDITIONS, ETC. FOR OPTIMAL SET BACK. MINOR ADJUSTMENTS MAY BE MADE WITHIN MANUFACTURER RECOMMENDED THOROUGH DISTANCE RANGES AND LENS ADJUSTMENT OPTIONS FOR FIELD CONDITIONS.
15. TO AVOID PREMATURE LAMP FAILURE, DO NOT TILT THE FRONT OF THE PROJECTOR UP OR DOWN BY MORE THAN THE MANUFACTURER'S RECOMMENDATIONS.
16. CEILING BOX IS LIMITED TO LOAD CAPACITY. VERIFY TOTAL WEIGHT OF PROJECTOR, MOUNT, AND CABLE SOLIDLY SUPPORTED. EXCEEDED THEN PIPE SHALL BE TAKEN TO STRUCTURE AND MOUNTING METHOD REVISED AS REQUIRED.



TYPICAL INTERIOR CAMERA MOUNTING DETAILS
SCALE: NONE

INTERIOR CAMERA DETAIL NOTES:

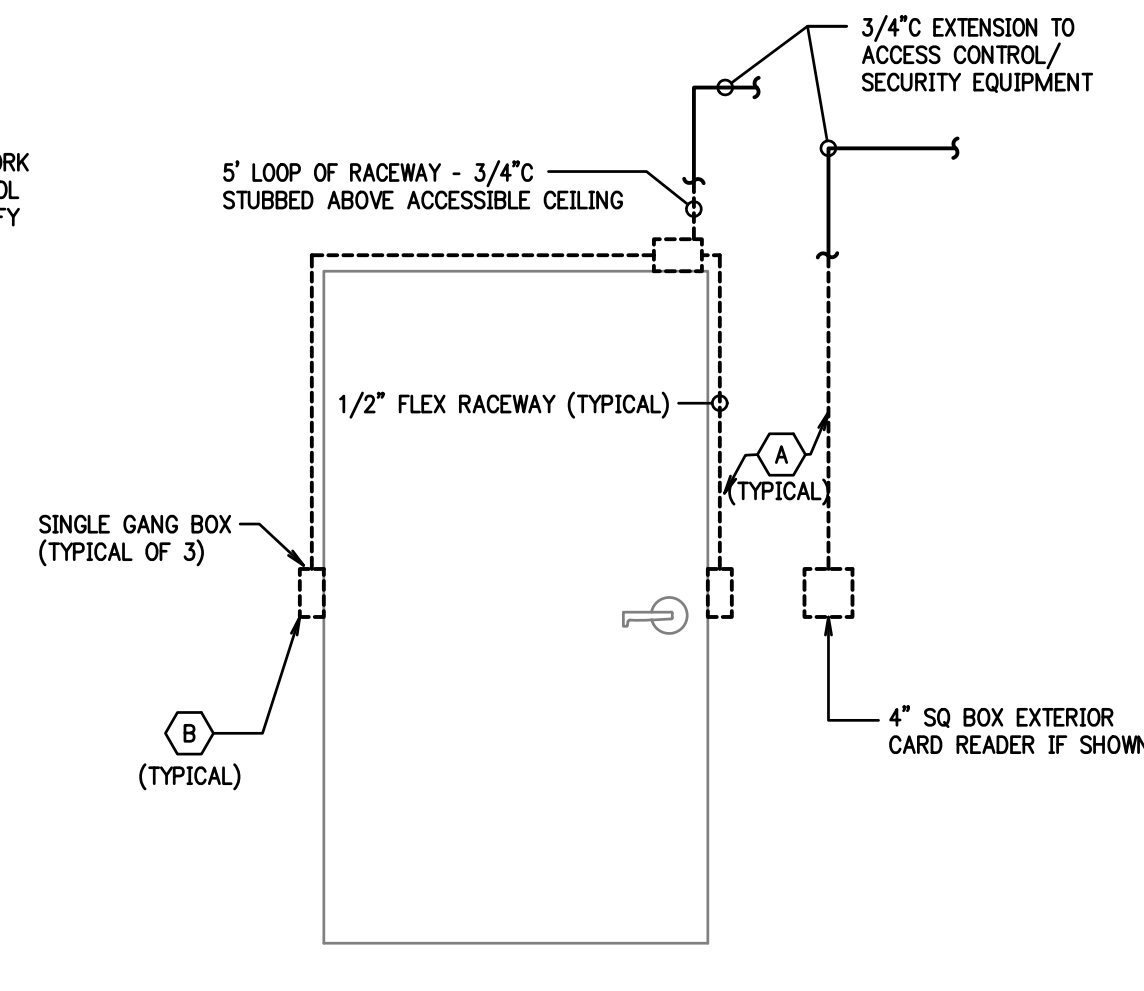
- CONTRACTOR RESPONSIBLE FOR ALL CAMERA BACKBOXES, CAMERA MOUNTS, PATHWAYS AND WIRING.
- COORDINATE LOCATIONS WITH LIGHTING, HVAC, ETC. FOR AN UNOBSTRUCTED FIELD OF VIEW.
- ALL INTERIOR CAMERAS SHALL BE CEILING-MOUNTED U.N.O.
- PROVIDE 20' CABLE SLACK COILED ABOVE CAMERA LOCATION. COIL CABLE AS PER SPECIFICATIONS.
- IN LIEU OF COMMUNICATIONS OUTLET, PROVIDE FIELD TERMINABLE PLUG FOR CAMERA CONNECTION. HAND-CRIMPED MALE PLUGS WILL NOT BE ACCEPTED.
- TYPICALLY PROVIDED AS AN ACCESSORY BY CAMERA MANUFACTURER. COORDINATE WITH SURVEILLANCE CAMERA MANUFACTURER FOR CAMERA MODEL IN USE.



NOTES:

- DETAIL SHOWS TYPICAL WIRING AND DEVICE CONNECTIONS. SEE PLAN DRAWING AND HARDWARE SPECIFICATION FOR SPECIFIC DOOR REQUIREMENTS, QUANTITY AND LOCATION OF DEVICES AND SEQUENCE OF OPERATIONS. VERIFY ALL WIRE SIZES, QUANTITIES, CONNECTIONS, AND ALLOWABLE WIRING DISTANCES WITH SPECIFIC DOOR HARDWARE AND MANUFACTURER REQUIREMENTS. COORDINATE REQUIREMENTS WITH THE EXISTING ACCESS CONTROL SECURITY SYSTEM AND THE ACCESS CONTROL SYSTEM MANUFACTURER.

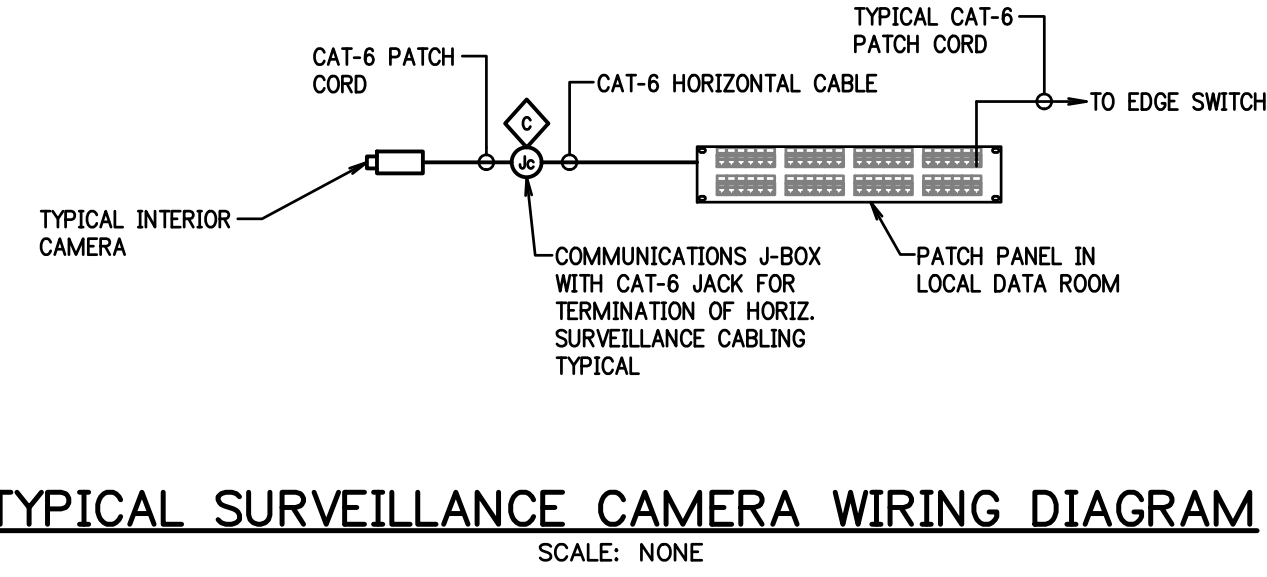
TYPICAL SECURITY DOOR WIRING DIAGRAM
SCALE: NONE



NOTES:

- ALL PATHWAYS SHALL BE CLEAR WITH NO SHARP EDGES.
- BOXES SHALL BE WELDED TO DOOR FRAMES.

TYPICAL SINGLE SECURITY DOOR ROUGH-IN DETAIL
SCALE: NONE

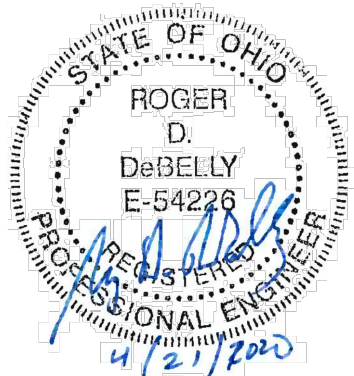


GENERAL SURVEILLANCE SYSTEM NOTES:

- THE VIDEO SURVEILLANCE SECURITY SYSTEM SHALL BE COMPLETE, READY FOR OPERATION AND SHALL INCLUDE ALL CONDUIT, BOXES, WIRING, TESTING, PROGRAMMING AND AUXILIARY MATERIAL REQUIRED TO FULFILL THE ABOVE OBJECTIVE WHETHER OR NOT SPECIFICALLY ENUMERATED HEREIN OR ON THE DRAWINGS.
- PROVIDE ELECTRONIC SHOP DRAWINGS FOR THE SURVEILLANCE SYSTEM INCLUDING THE FOLLOWING ITEMS:
 - FUNCTIONAL DESCRIPTION OF THE SPECIFIED SYSTEM.
 - DETAILED ONE-LINE SCHEMATIC WIRING DIAGRAMS OF THE SYSTEM AND THE INTERCONNECTION WIRING.
 - LAYOUT DRAWINGS SHOWING ACCURATELY SCALED COMPONENTS AND SPATIAL RELATIONSHIP TO ASSOCIATED EQUIPMENT. INCLUDE RACK ELEVATION WITH ALL EQUIPMENT LABELED.
 - DESCRIPTION OF PROPOSED TRAINING SESSION.
 - DETAILED LIST OF EACH PIECE OF EQUIPMENT WITH MODEL NUMBERS FOR EACH SYSTEM COMPONENT.
 - MANUFACTURER'S SPECIFICATION SHEETS ON EACH ITEM OF EQUIPMENT.
 - CONFIRMATION THAT THE MANUFACTURER'S REPRESENTATIVE WILL PROVIDE JOB SITE SUPERVISION DURING THE INSTALLATION OF THE SYSTEM, PERFORM THE FINAL TESTING OF THE SYSTEM AND INSTRUCT/PERFORM TRAINING OF THE OPERATING PERSONNEL ON THE OPERATION OF THE SYSTEM.
- PROVIDE RECORD DRAWINGS AND OPERATIONS & MAINTENANCE MANUAL CONTAINING THE SYSTEM BLOCK DIAGRAM, BASIC SYSTEM OPERATION OUTLINE, EQUIPMENT OWNER'S MANUALS, TEST REPORTS, EQUIPMENT SERVICE AND REPAIR MANUALS, SYSTEM LAYOUT, DATE OF INSTALLATION, AND CONTACT PERSON AND PHONE NUMBER. PROVIDE LAMINATED COPY OF VIRTUAL CAMERA NUMBERING AND DESCRIPTION LIST.
- LABEL ALL CABLES IN THE EQUIPMENT RACK AT OR NEAR ALL CONNECTORS TO INDICATE WHAT DEVICE THEY ARE CONNECTED TO.
- AIM, FOCUS AND POSITION CAMERAS AS DIRECTED BY THE OWNER. FIELD VERIFY CAMERA LENSING FOR EXACT VIEW DESIRED WITH THE OWNER. LENSING SHOWN ON THE DRAWINGS SHALL BE THE STARTING POINT AND ADJUSTED UP OR DOWN IN THE FIELD AS REQUIRED.
- SET UP AND PROGRAM VIDEO ANALYTICS WINDOWS FOR MOTION RECORDING AND ALARMS AS DETERMINED BY THE OWNER.
- INTEGRATE THE SYSTEM WITH THE ACCESS CONTROL AND SECURITY SYSTEMS AS INDICATED. UPON CARD READER USE AT ENTRANCES, CAMERA AT EXTERIOR AND INTERIOR VICINITY SHALL COMMENCE RECORDING.
- ACTIVATE TAMPERING ALARMS ON ALL CAMERAS.
- TREAT ACRYLIC DOMES AND WINDOWS AFTER INSTALLATION WITH APPROVED PLASTIC CLEANER AND POLISH.
- PROVIDE AND CONFIGURE PC VIEWER SOFTWARE FOR REMOTE VIEWING, CONTROL, AND IMAGE DOWNLOADING AS DIRECTED BY THE OWNER SECURITY DEPARTMENT. DOWNLOADED IMAGES SHALL BE "WATERMARKED". LOAD SOFTWARE ON PC(S) AS DIRECTED BY THE OWNER SECURITY DEPARTMENT.
- CONFIGURE USER LOGINS AS DIRECTED BY THE OWNER FOR REMOTE VIEWING OF CAMERAS VIA THE LAN AND WAN.
- COORDINATE IP ADDRESSING OF CAMERAS WITH THE OWNER.
- INTEGRATE CAMERAS WITH THE SITES EXISTING SURVEILLANCE SYSTEM AS REQUIRED. PROVIDE ALL CAMERA LICENSING AND SYSTEM PROGRAMMING. COORDINATE RECORDING PARAMETERS WITH THE OWNER. PROVIDE SUFFICIENT ADDITIONAL NETWORK VIDEO RECORDING STORAGE UNITS/HARD DISKS AS REQUIRED TO MAINTAIN CURRENT LENGTH OF TIME VIDEO IS STORED WITH THE ADDITIONAL CAMERAS INSTALLED DURING THIS PROJECT. COORDINATE ADDITIONAL STORAGE REQUIREMENTS WITH THE OWNER.
- CONFIGURE SD CARDS FOR BACKUP STORAGE IF NETWORK CONNECTION IS UNAVAILABLE.
- COORDINATE CAMERA MOUNTING LOCATIONS WITH LIGHTING, HVAC, ETC. FOR UNOBSTRUCTED FIELDS OF VIEW.
- ALL WORK TO EXTEND THE EXISTING SURVEILLANCE SYSTEM SHALL BE BY THE EXISTING SYSTEM VENDOR HABITEC SECURITY (CONTACT BOB SEYMOUR, 419-351-8196).

GENERAL ACCESS CONTROL NOTES:

- COORDINATE INSTALLATION OF ALL ACCESS CONTROL EQUIPMENT WITH THE OWNER SECURITY DEPARTMENT.
- SYSTEM SHALL BE CONFIGURED, PROGRAMMED, AND FULLY OPERATIONAL AT TIME OF TURN OVER TO THE OWNER. PROVIDE ALL PROGRAMMING AND SOFTWARE LICENSING REQUIRED FOR THE ACCESS CONTROL SYSTEM.
- COORDINATE DOOR OPERATION REQUIREMENTS WITH APPROVED DOOR HARDWARE SPECIFICATIONS, THE ARCHITECT, AND THE OWNER.
- DOOR WIRING DETAILS INDICATE TYPICAL DEVICE WIRING AND CONNECTIONS. VERIFY ALL WIRE SIZES, CONNECTIONS, QUANTITIES, AND ALLOWABLE WIRING DISTANCES WITH SPECIFIC DOOR HARDWARE AND MANUFACTURER REQUIREMENTS. COORDINATE REQUIREMENTS WITH THE ACCESS CONTROL SYSTEM MANUFACTURER.
- CALCULATE AND COORDINATE WITH MANUFACTURERS REQUIREMENTS FOR DOORS WITH REMOTE POWER SUPPLIES AND DOOR CONTROL MODULES.
- SUBMIT A DETAILED WIRING DIAGRAM FOR THE ACCESS CONTROL SYSTEM, INCLUDING DOOR HARDWARE POINT TO POINT DIAGRAM, INDICATE WIRE SIZE, TYPE, AND NUMBER OF WIRES. INDICATE MAXIMUM LENGTH TO DEVICES FROM CONTROL UNITS.
- ALL WORK TO EXTEND THE EXISTING ACCESS CONTROL SYSTEM SHALL BE BY THE EXISTING SYSTEM VENDOR HABITEC SECURITY (CONTACT BOB SEYMOUR, 419-351-8196).



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

FOR SHEET SIZE 30"x42"

ISSUE DATE

1 04.21.20 ISSUED FOR BIDS

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**EVERGREEN HIGH SCHOOL
LOCKER ROOM ADDITIONS & RENOVATIONS**
14544 COUNTY ROAD 6, METAMORA, OH 43540

DETAILS

PROJECT: B7-4569

DRAWN BY: TAR

CHECKED BY: SCW

SHEET

EC502

