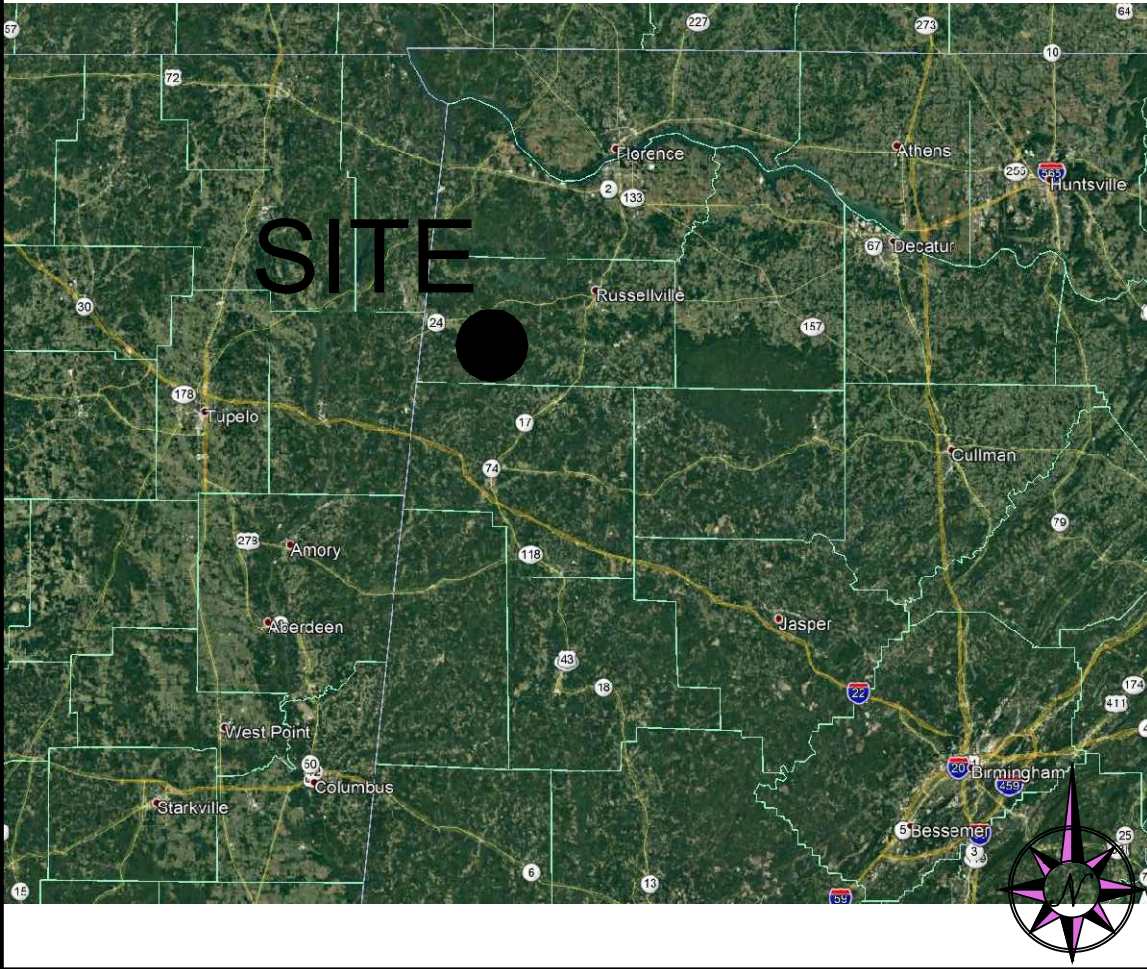


a
Science and Band Building
at
Vina High School
for the
Franklin County Board of Education
Russellville, Alabama

LOCATION MAP



CONTACTS

OWNER

Franklin County Board of Education
500 North Coffee Avenue
Russellville, Alabama 35653
Phone: (256) 332.1360

ARCHITECTURAL

Mckee and Associates
631 South Hull Street
Montgomery, Alabama 36104
Phone: (334) 834.9933

CIVIL

Professional Engineering Consultants
822 South McDonough Street
Montgomery, Alabama 36104
Phone: (334) 262.7307

STRUCTURAL

Blackburn, Daniels, O'Barr Consulting
Structural Engineers
1005 Browns Hill Road
Lowndesboro, Alabama 36752
Phone: (334) 265.0206

PLUMBING and MECHANICAL

Zgouvas, Eiring and Associates
800 South McDonough Street
Montgomery, Alabama 36104
Phone: (334) 263.4406

ELECTRICAL

Gunn and Associates
3102 Highway 14
Millbrook, AL 36054
Phone: (334) 285.1273

VICINITY MAP

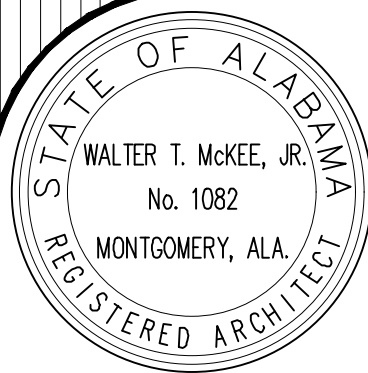


Index to Drawings

General		Architctural		Electrical	
G0.0	Title Sheet and Index to Drawings	A2.0	Floor Plan	E0.1	Electrical Legend and Notes
G0.1	Life Safety, Legends, etc.	A2.1	Reflected Ceiling Plan	E0.2	Electrical Legend and Notes
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		M2	HVAC Schedules		
		M3	HVAC Details & O.A. Calculations		



a
Science and Band Building
at
Vina High School
for the
Franklin County Board of Education
Russellville, Alabama



SHEET TITLE : Design Team,
Location & Vicinity Maps,
and
Index to Drawings

JOB NO. : 18-144

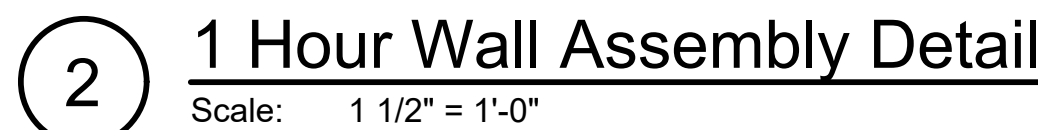
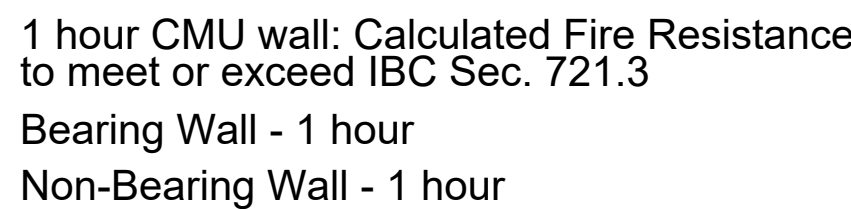
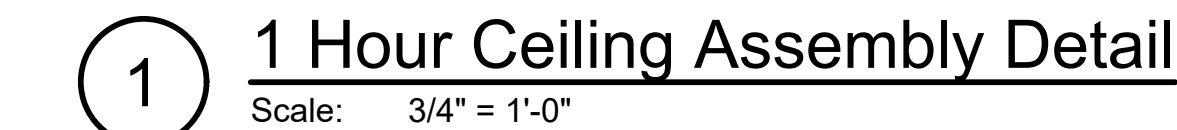
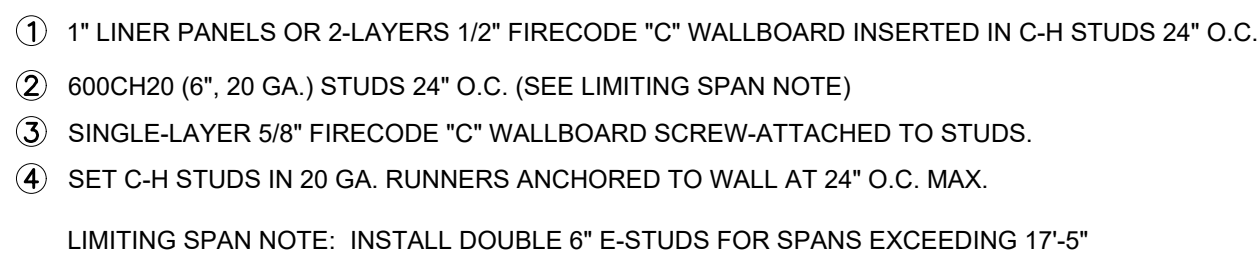
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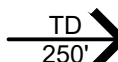
DATES : 7 September 2018

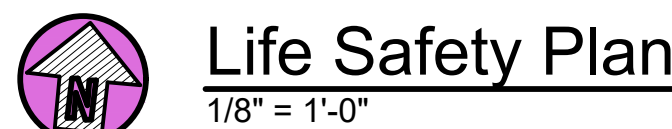
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MCKEE and ASSOCIATES
ARCHITECTURE and INTERIOR DESIGN

631 SOUTH HULL STREET MONTGOMERY, ALABAMA 36104 334.834.9933 mckeeassoc.com



CODE LEGEND	
SYMBOL	DESCRIPTION
 1	ONE HOUR FIRE RATED PARTITION NEW WALL
	PRIMARY BUILDING EXIT
	TRAVEL DISTANCE NEAREST TO EXIT
	HANDICAP ACCESSIBLE
EW-10" EWP-34"	EXIT WIDTH REQUIRED EXIT WIDTH PROVIDED
	ACTUAL OCCUPANT LOAD SERVED TOTAL EGRESS CAPACITY
	RATED DOOR ASSEMBLY



PLUMBING REQUIREMENTS USE GROUP E	
OCCUPANT LOAD TOTAL = 116 PERSONS	
TOILETS (TABLE 2902.1)	
WOMEN'S (1 PER 50 OCC.) (58 OCC.)	2R
MEN'S (1 PER 50 OCC.) (58 OCC.)	2R
LAVATORIES (TABLE 2902.1)	
WOMEN'S (1 PER 50 OCC.) (58 OCC.)	2R
MEN'S (1 PER 50 OCC.) (58 OCC.)	2R
DRINKING FOUNTAINS (TABLE 2902.1)	
(1 PER 100 OCC.) (58 OCC.)	1R
SERVICE SINK (TABLE 2902.1)	1R
PLUMBING PROVIDED TOTAL	
TOILETS (TABLE 2902.1)	
WOMEN'S 2 PROVIDED	
MEN'S 2 PROVIDED	
LAVATORIES (TABLE 2902.1)	
WOMEN'S 2 PROVIDED	
MEN'S 2 PROVIDED	
DRINKING FOUNTAINS (TABLE 2902.1)	
1 PROVIDED	
SERVICE SINK (TABLE 2902.1)	
1 PROVIDED	

NOTICE
FOR YOUR SAFETY THIS IS AN
EDUCATIONAL OCCUPANCY WITH A
MAXIMUM
OCCUPANCY LOAD OF:
116
PERSONS. THIS IS NOT AN
ASSEMBLY OCCUPANCY AND
CANNOT ALLOW SPECTATORS TO
OCCUPY THIS FACILITY.
BY ORDER OF THE CODE OFFICIAL
Keep Posted Under Penalty Of Law



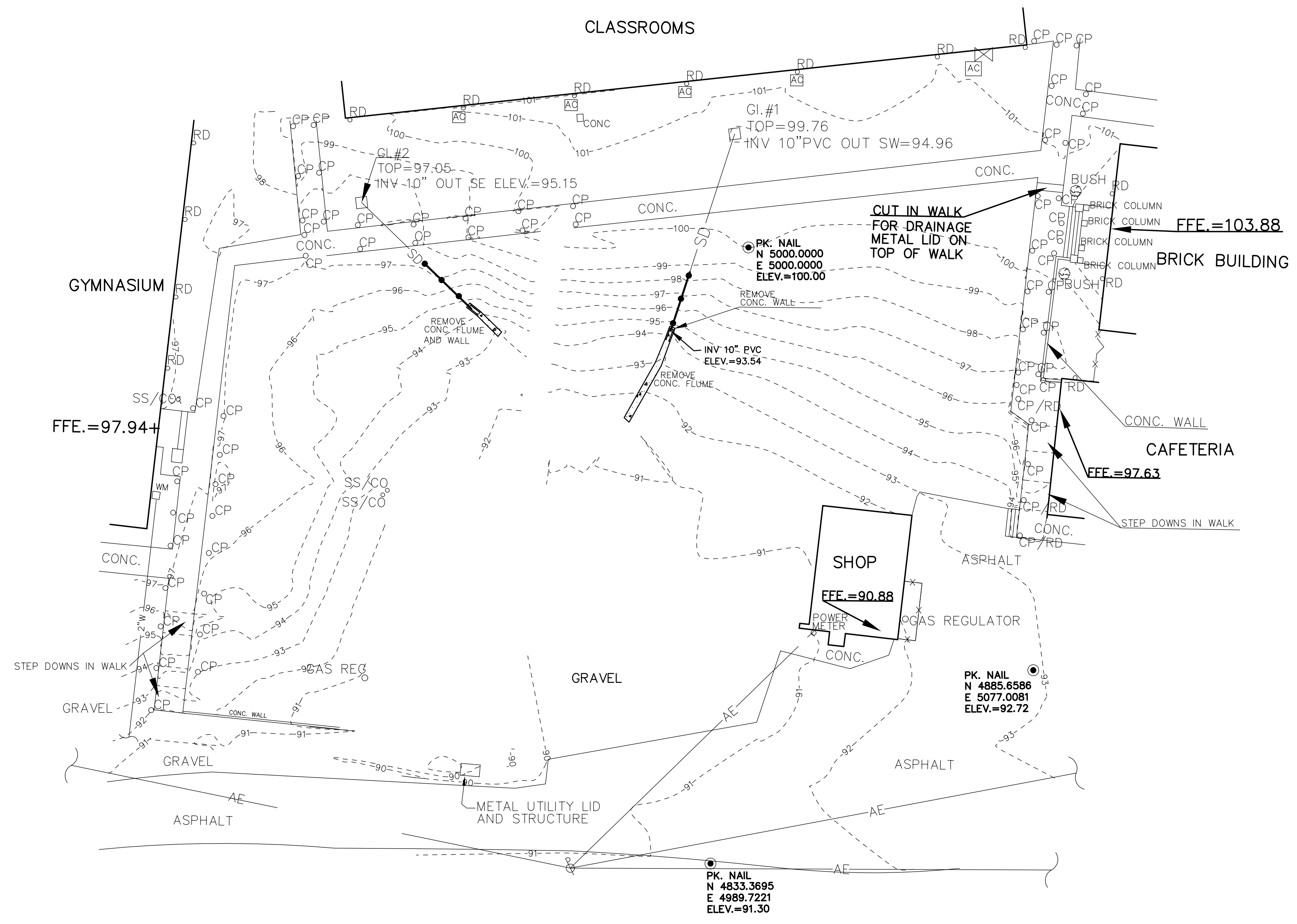
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Franklin County Board of Education

McKEE and ASSOCIATES
ARCHITECTURE and INTERIOR DESIGN

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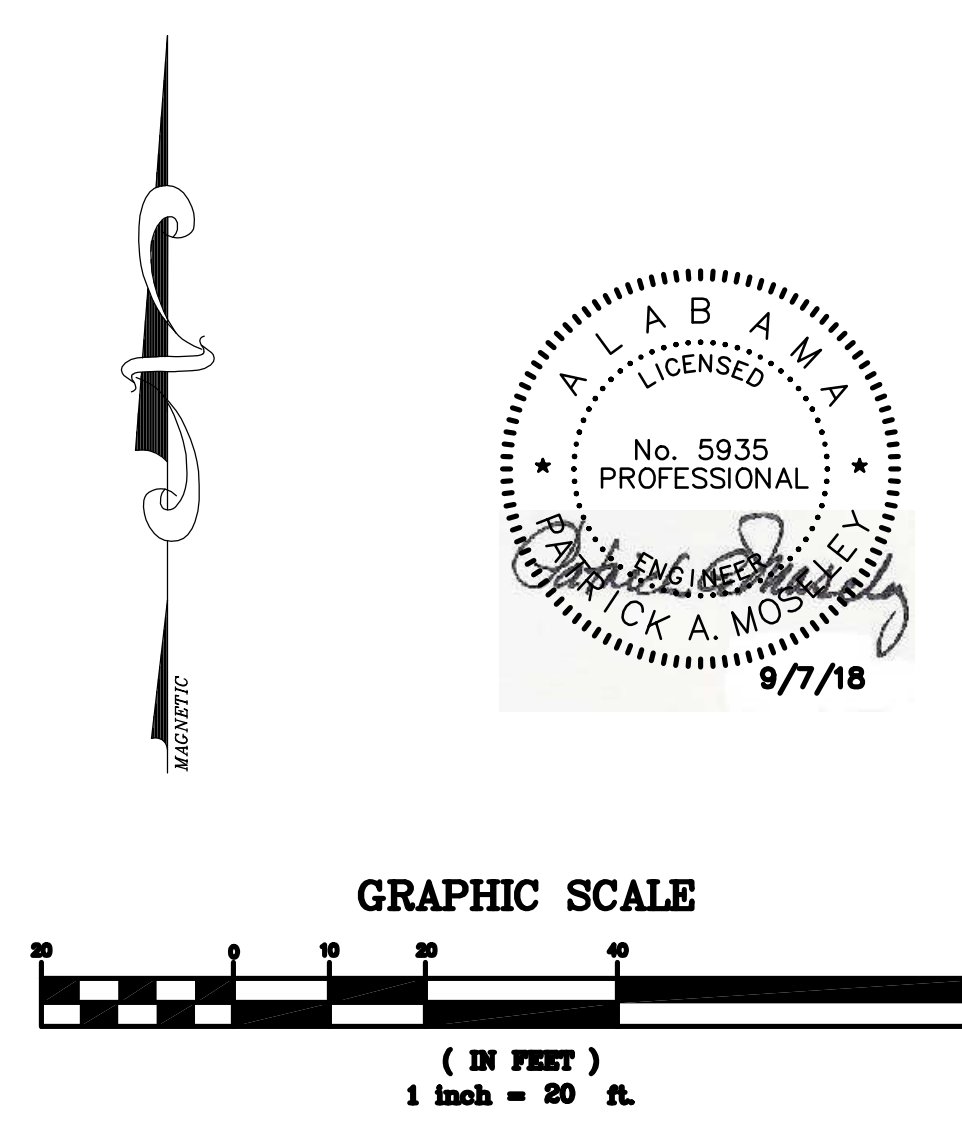
G0.1



LEGEND		
DESCRIPTION	EXISTING	TO BE REMOVED
BUILDING		
CURB		
CURB & GUTTER		
CONCRETE PAVEMENT		
ASPHALT PAVEMENT		
SANITARY SEWER MANHOLE		
SANITARY SEWER LINE		
CLEAN-OUT		
GRADE CONTOUR		
WATER METER		
WATER LINE		
GRATE INLET		
STORM DRAIN LINE		
FIRE HYDRANT		

NOTES:

1. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED ALL OF THE UNDERGROUND UTILITIES.



NOTE: HORIZONTAL AND VERTICAL CONTROL IS ASSUMED

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, LLC
822 South McDonough Street
Montgomery, Alabama 36104
Phone: (334) 262-7307
Fax: (334) 262-7309
PEC JOB # 18-037

Science and Band Building
at
Vina High School
for the
Franklin County Board of Education
Russellville, Alabama

McKee and Associates
ARCHITECTURE and INTERIOR DESIGN
631 SOUTH HULL STREET MONTGOMERY, ALABAMA 36104 334.834.9933 mckeesoc.com

SHEET TITLE : SITE DEMOLITION PLAN

JOB NO. : 18-144

DRAWN BY : CD/LB

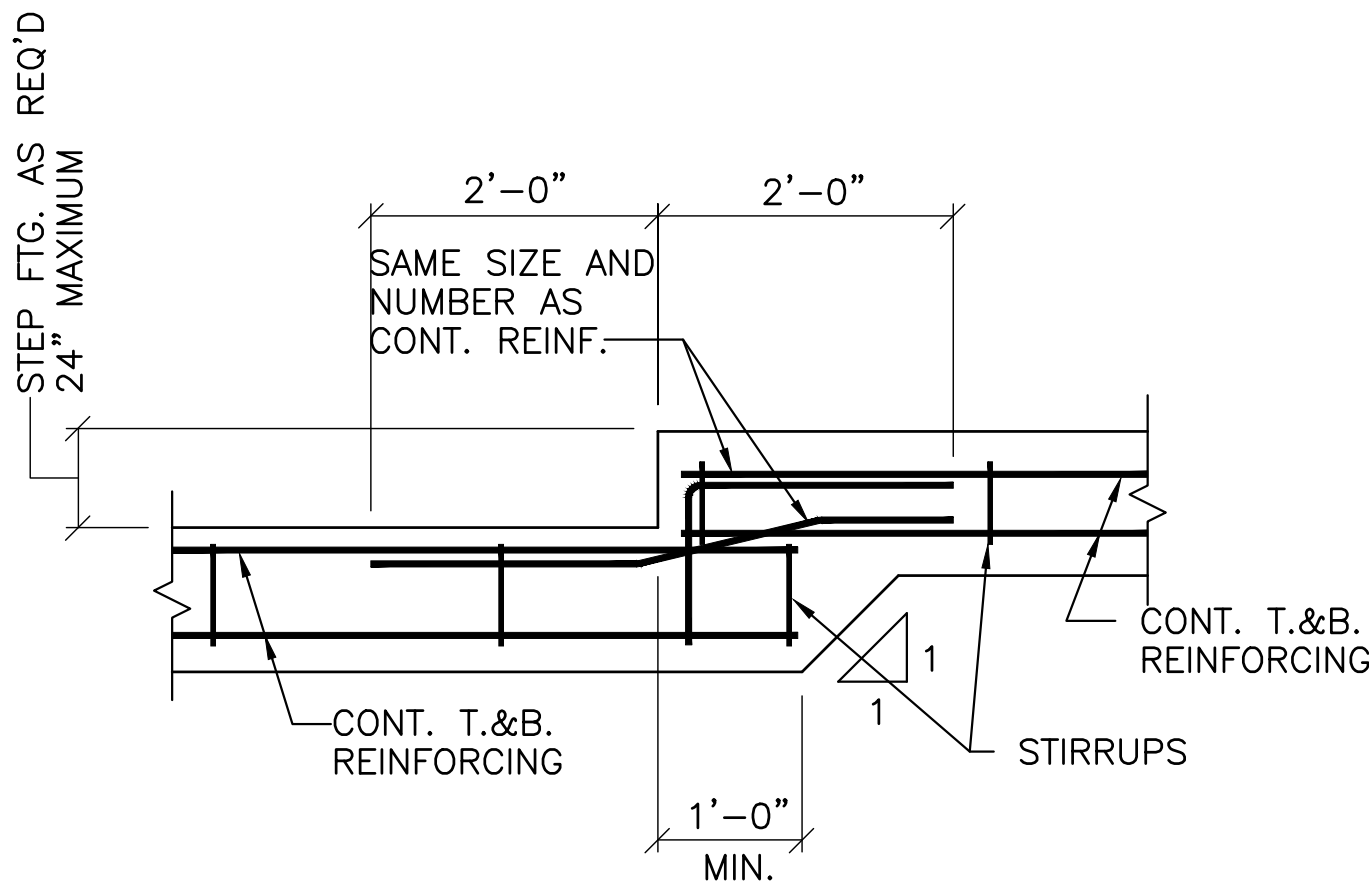
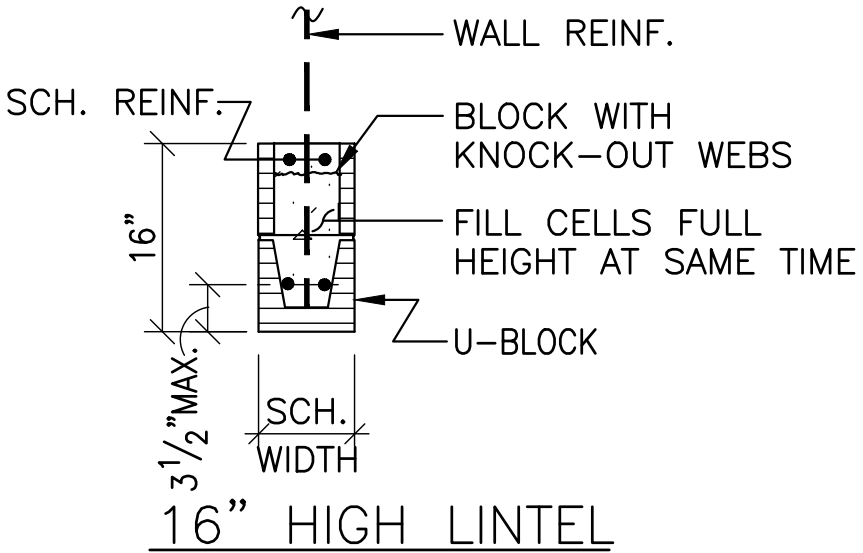
DATES : 7 SEPTEMBER 2018

SHEET NO. : **C-1**

LINTEL SCHEDULE					
MARK OR LOCATION	MAX. SPAN	TYPE	SIZE	REINFORCEMENT	REMARKS
8"CMU	3'-4"	U-BLOCK	8"x16"	#5 TOP & BOTTOM	8" HIGH LINTEL
8"CMU	6'-4"	U-BLOCK	8"x16"	2-#5 TOP & BOTTOM	16" HIGH LINTEL
BRICK	3'-4"	STEEL ANGLE	∠4x4x1¼	-----	BEAR 8" EA. END
BRICK	6'-4"	STEEL ANGLE	∠6x4x3⁄8	-----	L.L.V., BEAR 8" EA. END
BRICK	7'-8"	STEEL ANGLE	∠7x4x3⁄8	-----	LLV, BEAR 8"EA. END @ OUTER BRICK BEAR 4"EA. END @ INNER BRICK

NOTES:

- BEAR 8" HIGH U-BLOCKS 8" EACH END & 16" HIGH U-BLOCKS 16" EACH END. EXTEND HORIZ. REINF. 24" BEYOND JAMB EA. END (GROUT SOLID).
- FILL CELLS W/ CONCRETE FULL HEIGHT @ U-BLOCK BEARING, FOR ENTIRE LENGTH OF BEARING & REINF. EA. CELL W/ BAR SAME SIZE AS WALL REINFORCING. VERTICAL REINFORCING SHALL BE CONT. THRU LINTEL @ BEARING.
- PROVIDE 8" HIGH U-BLOCK BOND BEAM W/ #5 T.&B. @ ALL WINDOW SILLS. EXTEND 24" BEYOND JAMB EA. END (GROUT SOLID).



TYPICAL FOOTING STEP DETAIL

GENERAL NOTES

FOUNDATION:

- THE BEARING STRATA OF ALL FOOTINGS AND GRADE BEAMS SHALL BE INSPECTED AND APPROVED BY THE SOILS TESTING LABORATORY PRIOR TO PLACING THE REINFORCING STEEL AND CONCRETE.
- ALL FOOTINGS SHALL BEAR ON AN UNDISTURBED SOIL STRATA OR COMPACTED FILL CAPABLE OF SUSTAINING THE LOADS.
- FOOTINGS WERE DESIGNED FOR AN ASSUMED ALLOWABLE SOIL BEARING OF P = 2000 PSF.
- ELEVATIONS SHOWN ON PLAN ARE TOP OF FOOTINGS AND ARE MINIMUM DEPTH. DIFFERENT OR UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ARCHITECT AND/OR ENGINEER.
- ALL FOOTING REINFORCEMENT SHALL BE HELD SECURELY FROM THE GROUND. CONCRETE BLOCK AND BROKEN TILE SHALL NOT BE USED. CONCRETE OR CLAY BRICK MAY BE USED.
- DOWEL ALL FOOTINGS AND WALLS WHERE THEY ABUT WITH SAME STEEL AS VERTICAL.
- PROVIDE PREFORMED EXPANSION JOINT WHERE SHOWN.
- IN FOOTINGS PROVIDE CORNER BARS AT ALL EXTERIOR BUILDING CORNERS.
- BACK FILL BEHIND ALL RETAINING WALLS SHALL BE AN APPROVED GRANULAR MATERIAL.

CONCRETE:

- ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH AT 28 DAYS OF F'c = 3000 PSI AND A MAXIMUM WATER-CEMENT RATIO OF 0.53. ALL CONCRETE FOR EXTERIOR APPLICATIONS SHALL CONTAIN ENTRAINED AIR. SEE SPECS FOR ADDITIONAL INFORMATION.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 OR ASTM A1064.
- UNLESS NOTED OTHERWISE PROTECTIVE COVERING OF REINFORCEMENT SHALL BE AS FOLLOWS (SEE DETAILS) : FOOTINGS AND GRADE BEAMS 3" CLEAR BOTTOM AND SIDES, 1 1/2" CLEAR TOP. CONCRETE SLABS 3/4" CLEAR. WALLS 1 1/2" CLEAR SIDES. BEAMS 1 1/2" CLEAR TO STIRRUPS. CONCRETE COLUMNS 1 1/2" CLEAR TO TIES.
- LAP ALL CONCRETE WALL VERTICAL REINFORCING AND CONCRETE BEAM HORIZONTAL REINFORCING WITH CLASS B LAP SPLICES. LAP ALL OTHER CONTINUOUS BARS WITH CLASS A SPLICES UNLESS NOTED OTHERWISE.
- PLACING PLANS AND DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST "A.C.I. DETAILING MANUAL".
- STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS FOR THE ARCHITECT AND/OR ENGINEER'S REVIEW.
- DO NOT RUN CONDUITS, RACEWAYS, OR PIPES IN CONCRETE SLABS, BEAMS, OR COLUMNS WITHOUT SPECIFIC APPROVAL FROM BLACKBURN DANIELS O'BARR.

MASONRY:

- PROVIDE MASONRY HORIZONTAL JOINT REINFORCEMENT 16" O.C. VERTICAL IN ALL CONCRETE BLOCK WALLS. REINFORCEMENT SHALL BE FOR TOTAL WIDTH OF CAVITY WALLS.
- WHERE CONCRETE OR STEEL BEAMS BEAR ON CONCRETE BLOCK WALLS, BLOCK CELLS SHALL BE FILLED WITH CONCRETE 1'-4" WIDE TO FOUNDATION AND REINFORCED WITH A #5 EACH CELL UNLESS NOTED OR DETAILED OTHERWISE.
- CONCRETE OR GROUT FOR BLOCK FILL SHALL HAVE 3/8 INCH MAXIMUM SIZE COARSE AGGREGATE AND SUFFICIENT WATER SO THE CONCRETE WILL FLOW INTO THE BLOCK CELLS WITHOUT LEAVING VOIDS. HEIGHT OF LIFT WHEN FILLING CELLS SHALL NOT EXCEED 4'-0".
- CONCRETE OR GROUT FILL FOR C.M.U. SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF F'c = 3000 PSI. ON 16" AND DEEPER U-BLOCKS, FILL CELLS FULL HEIGHT OF LINTEL AT SAME TIME.
- ANCHOR ALL MASONRY WALLS TO STEEL COLUMNS WITH STRAP ANCHORS AT 16" O.C. VERTICALLY UNLESS SHOWN OTHERWISE.
- UNLESS INDICATED OTHERWISE PROVIDE KEYED RUBBER MASONRY CONTROL JOINTS AT A MAXIMUM SPACING OF 25'-4". JOINT SHALL BE DISCONTINUOUS AT BOND BEAM.
- PROVIDE REINFORCING BAR SUPPORTS TO CENTER VERTICAL REINFORCING IN MASONRY WALLS.
- PROVIDE 48 DIAMETER LAP SPLICE IN ALL MASONRY REINFORCING.
- PROVIDE CORNER BARS IN U-BLOCK BOND BEAMS AT CORNERS. HOOK AROUND VERTICAL REINFORCING, TYPICAL.
- ALL CMU SHALL BE PLACED IN A RUNNING BOND PATTERN.
- VERTICAL REINFORCING SHALL BE CONTINUOUS THROUGH BOND BEAMS AND LINTELS (CUT OUT OR NOTCH BOTTOM OF U-BLOCKS AS REQUIRED -- DO NOT SUBSTITUTE BLOCK WITH KNOCK-OUT WEBS WHERE STANDARD U-BLOCK IS INDICATED). FOR BOND BEAMS AT TOP OF WALL, EXTEND VERTICAL REINFORCING TO 1" CLEAR TOP OF BOND BEAM.
- DO NOT USE TYPE N MORTAR OR MASONRY CEMENT MORTAR.

STRUCTURAL STEEL:

- ALL STRUCTURAL STEEL W AND WT SHAPES SHALL CONFORM TO ASTM A992 (GRADE 50). OTHER SHAPES SHALL CONFORM TO ASTM, A36, LATEST EDITION (EXCEPT TUBE SECTIONS).
- STRUCTURAL STEEL TUBE SECTIONS SHALL CONFORM TO ASTM A500, GRADE B, Fy = 46.0 KSI.
- STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS FOR THE ARCHITECT AND/OR ENGINEER'S REVIEW.
- THE CONTRACTOR SHALL VERIFY ALL SHOP DRAWINGS DIMENSIONS WITH STRUCTURAL AND ARCHITECTURAL PLANS AND DETAILS.
- BOLTED CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS CONFORMING TO ASTM A325. USE 3/4 INCH DIAMETER MINIMUM.
- CONNECTIONS NOT SHOWN ON DRAWINGS SHALL BE DESIGNED BY THE FABRICATOR. WHERE POSSIBLE USE DOUBLE ANGLE CONNECTIONS. USE MAXIMUM NUMBER OF BOLTS FOR DEPTH OF BEAM WITH SINGLE ROW OF BOLTS.
- UNLESS SHOWN OTHERWISE PROVIDE 1/2 X 7 1/2 X 7 1/2 BEARING PLATES ON 1 INCH GROUT WITH 2-3/4" DIAMETER ANCHOR BOLTS UNDER ALL STEEL BEAMS THAT BEAR ON MASONRY WALLS.

WOOD FRAMING:

- ALL WOOD FRAMING MEMBERS SHALL BE STRESS RATED AND GRADE MARKED.
- MISC FRAMING MEMBERS SHALL BE NO.2, KILN DRIED, SOUTHERN YELLOW PINE OR APPROVED EQUAL.
- PROVIDE PREFABRICATED WOOD TRUSSES WHERE INDICATED ON PLAN.
- ALL TRUSSES SHALL BE DESIGNED AND MANUFACTURED TO MEET THE FOLLOWING WORKING LOADS AND CODES.
MINIMUM LOADS:
ROOF LIVE LOAD.....20 PSF.
ROOF DEAD LOAD.....15 PSF.
CEILING LOAD.....10 PSF.
CONNECTORS SHALL MEET THE SPECIFICATIONS OF THE TRUSS PLATE INSTITUTE AND SHALL BE SANFORD, GANG-NAIL, TEMPLIN OR EQUAL.
MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS FOR EACH TYPE TRUSS. DESIGNS SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF ALABAMA. SIZES OF MEMBERS MAY BE CHANGED AS ALLOWED OR REQUIRED BY THE GRADE OF LUMBER USED EXCEPT THAT ALL TOP CHORDS AND BOTTOM CHORDS SHALL BE 2X6 MINIMUM.
- PROVIDE CAMBER IN ALL TRUSSES.
- ANCHOR ALL TRUSSES, JOISTS, AND RAFTERS TO SUPPORTS WITH GALVANIZED FRAMING ANCHORS.
- IN ADDITION TO THE "X" BRACING SHOWN ON THE CONTRACT DRAWINGS, THE CONTRACTOR SHALL PROVIDE ALL BRACING REQUIRED BY THE TRUSS MANUFACTURER. THE DESIGN OF BRACING FOR INDIVIDUAL TRUSS MEMBERS INCLUDING CONTINUOUS BRACING SHALL BE THE RESPONSIBILITY OF THE TRUSS DESIGN ENGINEER AND HE SHALL SHOW THE SIZES OF THIS BRACING ON THE SHOP DRAWINGS INCLUDING ALL END ANCHORAGE DETAILS FOR CONTINUOUS BRACING.
- AFTER ALL FRAMING HAS BEEN ERCTED, THE CONTRACTOR SHALL PROVIDE THE ARCHITECT/ENGINEER A WRITTEN STATEMENT STATING HE HAS INSPECTED THE FRAMING AND THAT ALL BRACING SHOWN ON THE SHOP DRAWINGS HAS BEEN INSTALLED IN ACCORDANCE WITH THE SHOP DRAWINGS.
- PROVIDE VERTICAL WEB MEMBERS TO ACCOMODATE TRUSS VERTICAL X-BRACING (SEE PLAN FOR LOCATIONS).
- HURRICANE ANCHORS SHOWN ON DRAWINGS ARE MINIMUM REQUIRED. PROVIDE ADDITIONAL ANCHORS AND/OR DIFFERENT TYPES OF ANCHORS AS REQUIRED TO RESIST NET UPLIFT IN ACCORDANCE WITH TRUSS MANUFACTURER'S RECOMMENDATIONS. TRUSS MANUFACTURER SHALL INDICATE REQUIRED ANCHORAGE ON SHOP DRAWINGS.
- ALL NAILS, ANCHOR BOLTS, AND OTHER STEEL ANCHORS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT DIP GALVANIZED OR STAINLESS STEEL. PROVIDE 15# FELT SEPARATOR (OR EQUIVALENT) AS REQUIRED BETWEEN ALL PRESSURE TREATED WOOD AND OTHER METAL FRAMING. UNLESS NOTED OTHERWISE ATTACH PLYWOOD ROOF DECK WITH 16d NAILS @ 6" O.C. AT SUPPORTED EDGES AND @ 12" O.C. AT INTERMEDIATE SUPPORTS.

CODES:

ALL PARTS SHALL BE FURNISHED AND ERCTED ACCORDING TO THE APPLICABLE CODES AND SPECIFICATIONS OF THE FOLLOWING:
AMERICAN CONCRETE INSTITUTE (ACI)
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
AMERICAN WELDING SOCIETY (AWS)
OSHA STEEL ERECTION STANDARD (OSHA)
STEEL JOIST INSTITUTE (SJI)
NATIONAL LUMBER MANUFACTURER'S ASSOCIATION (NLMA)
AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)
INTERNATIONAL BUILDING CODE (IBC 2015) (ICC)

DESIGN LIVE LOADS:

ROOF.....20 PSF.
RISK CATEGORY (PER IBC 2015/ASCE 7-10).....II
WIND.....INTERNATIONAL BUILDING CODE (PER ASCE 7-10)
ULTIMATE DESIGN WIND SPEED (Vult).....115 MPH
NOMINAL DESIGN WIND SPEED (Vasd).....90 MPH
WIND EXPOSURE.....C
INTERNAL PRESSURE COEFFICIENTS.....+/-0.18
SEISMIC.....INTERNATIONAL BUILDING CODE (PER ASCE 7-10)
SEISMIC IMPORTANCE FACTOR.....Ie=1.0
MAPPED SPECTRAL ACCELERATION (SHORT-TERM),Sa=0.283g
MAPPED SPECTRAL ACCELERATION (1-SECOND)...S1=0.137g
SITE CLASS.....D
SHORT-PERIOD SPECTRAL RESPONSE ACCEL.....Sds=0.297g
1-SECOND SPECTRAL RESPONSE ACCEL.....Sd1=0.205g
SEISMIC DESIGN CATEGORY.....D
SEISMIC FORCE-RESISTING SYSTEM.....CMU SHEAR WALLS
DESIGN BASE SHEAR (ULTIMATE).....34.2k
SEISMIC RESPONSE COEFFICIENT.....Cs=0.131
RESPONSE MODIFICATION FACTOR.....R=5
ANALYSIS PROCEDURE.....ASCE 7 (SECT 12.8)
SNOW.....INTERNATIONAL BUILDING CODE
GROUND SNOW LOAD.....Pg=10 PSF

COMPONENTS AND CLADDING ULTIMATE WIND PRESSURES:

NOTE: MULTIPLY ALL VALUES SHOWN BELOW BY 0.6 TO GET ALLOWABLE DESIGN PRESSURES. SEE FIGURE 30.5-1 OF ASCE 7-10 FOR INDICATED ZONES

ROOF:TRIBUTARY AREA A = 10 SF
ZONE 1: -26.7 PSF/16.8 PSF
ZONE 2: -46.3 PSF/16.8 PSF
ZONE 3: -68.5 PSF/16.8 PSF
ROOF:TRIBUTARY AREA A = 100 SF
ZONE 1: -24.2 PSF/11.9 PSF
ZONE 2: -34.0 PSF/11.9 PSF
ZONE 3: -53.8 PSF/22.1PSF
WALL:TRIBUTARY AREA A = 10 SF
ZONE 4: -31.6 PSF/29.1 PSF
ZONE 5: -39.0 PSF/29.1 PSF
WALL:TRIBUTARY AREA A = 50 SF
ZONE 4: -28.9 PSF/26.5 PSF
ZONE 5: -33.7 PSF/26.5 PSF
WALL:TRIBUTARY AREA A = 100 SF
ZONE 4: -27.2 PSF/24.7 PSF
ZONE 5: -30.2 PSF/24.7 PSF
CORNER ZONE = 4.2 FT

SPECIAL INSPECTIONS:

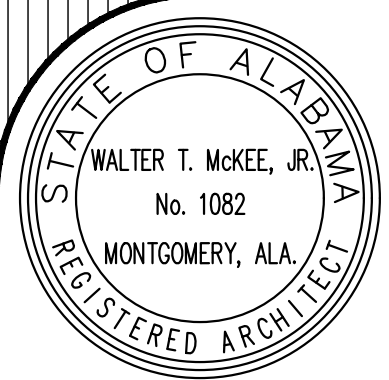
ALL SPECIAL INSPECTIONS REQUIRED BY CHAPTER 17 OF IBC SHALL BE PERFORMED BY A DESIGNATED TESTING AGENCY OR AGENCIES RESPONSIBLE FOR SPECIAL INSPECTIONS.

SEISMIC REQUIREMENTS FOR SPECIAL INSPECTIONS:

- THE FOLLOWING STRUCTURAL COMPONENTS ARE DESIGNATED AS SEISMIC SYSTEMS AND/OR PART OF THE SEISMIC-FORCE-RESISTING SYSTEM OF THE BUILDING AND ARE SUBJECT TO THE REQUIREMENTS OF SECTIONS 1705.12 AND 1705.13 OF IBC 2015 AND PROJECT SPECIFICATIONS:
PLYWOOD ROOF DIAPHRAGM AND ATTACHMENT
CMU SHEAR WALLS (INCL ANCHORAGE TO FOUNDATION)
THESE SPECIFIC COMPONENTS ARE IN ADDITION TO ALL GENERAL COMPONENTS LISTED IN SECTIONS 1705.12 AND 1705.13 OF IBC 2015 AND ARE SUBJECT TO ALL SPECIAL INSPECTIONS AND TESTING AS REQUIRED BY CHAPTER 17 OF IBC 2015, PROJECT SPECIFICATIONS, AND SCHEDULE OF SPECIAL INSPECTIONS. SPECIAL INSPECTION REPORTS SHALL BE SUBMITTED AS PER THE STATEMENT OF SPECIAL INSPECTIONS.
- OTHER ARCHITECTURAL, MECHANICAL, OR ELECTRICAL COMPONENTS AND THEIR ANCHORAGES MAY ALSO BE DESIGNATED AS SEISMIC SYSTEMS. SEE OTHER DISCIPLINE'S DRAWINGS AND SPECIFICATIONS.



Science and Band Building
at
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Franklin County Board of Education
Russellville, Alabama



SHEET TITLE : General Notes
and Schedules

JOB NO. : 18-144

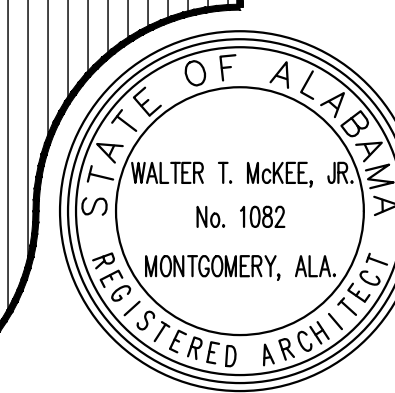
DRAWN BY : R. Stephens

DATES : 7 September 2018

SHEET NO. : S0.1

MCKEE and ASSOCIATES
ARCHITECTURE and INTERIOR DESIGN

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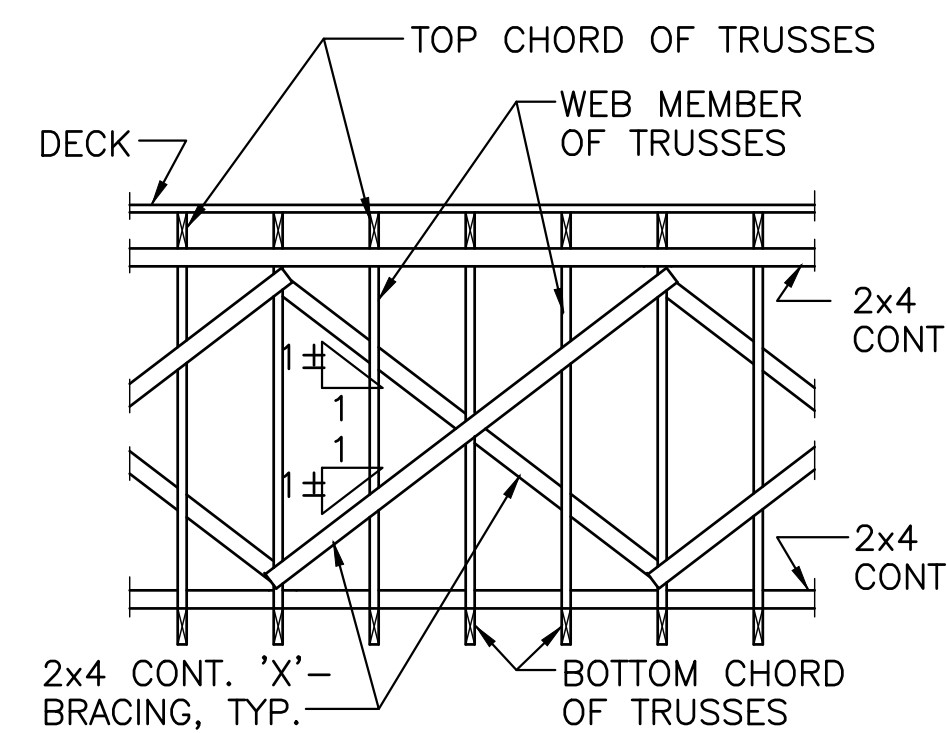
SHEET TITLE : Typical Details

JOB NO. : 18-144

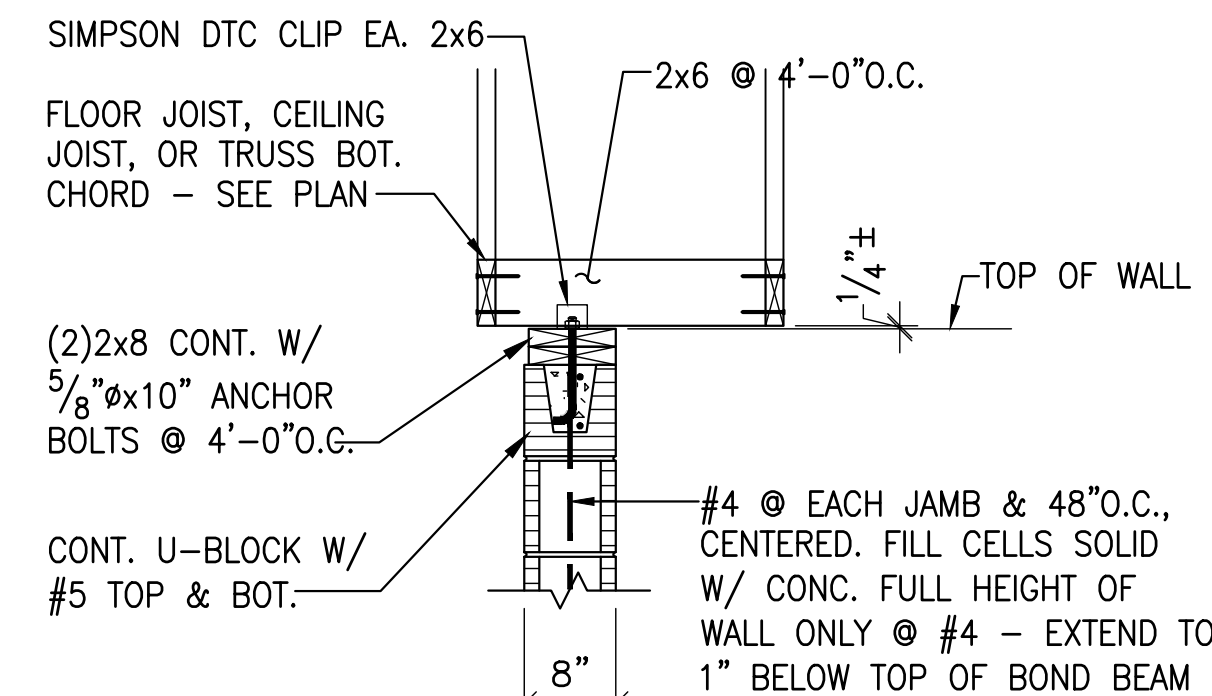
DRAWN BY : R. Stephens

DATES : 7 September 2018

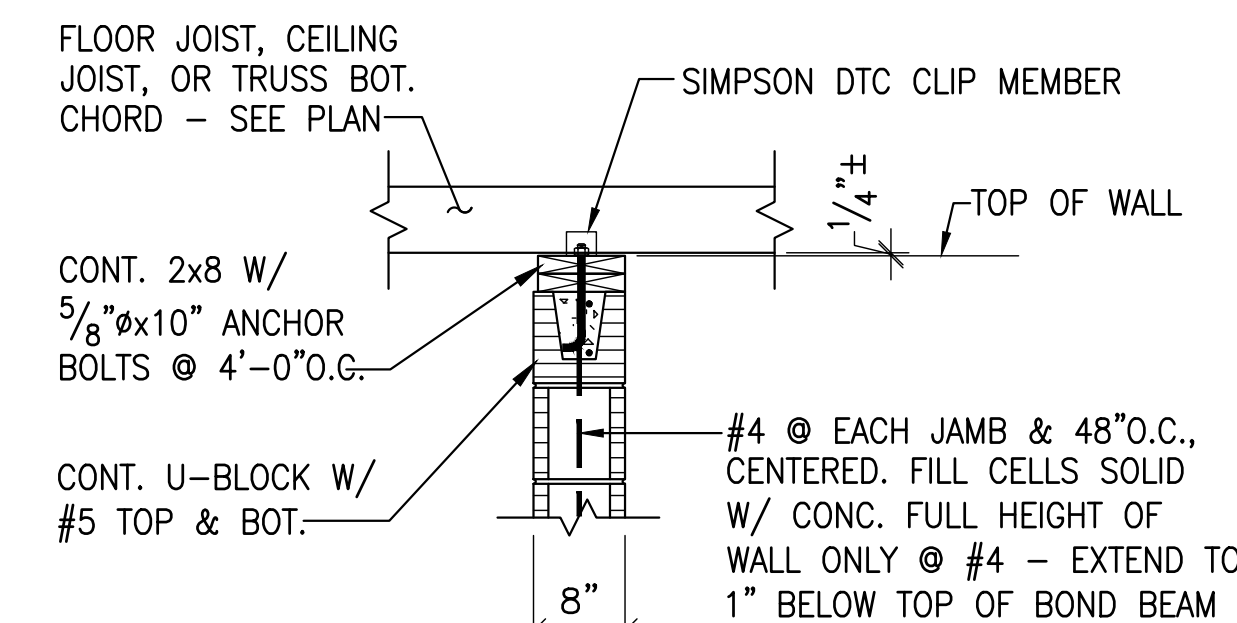
SHEET NO. : **S0.2**



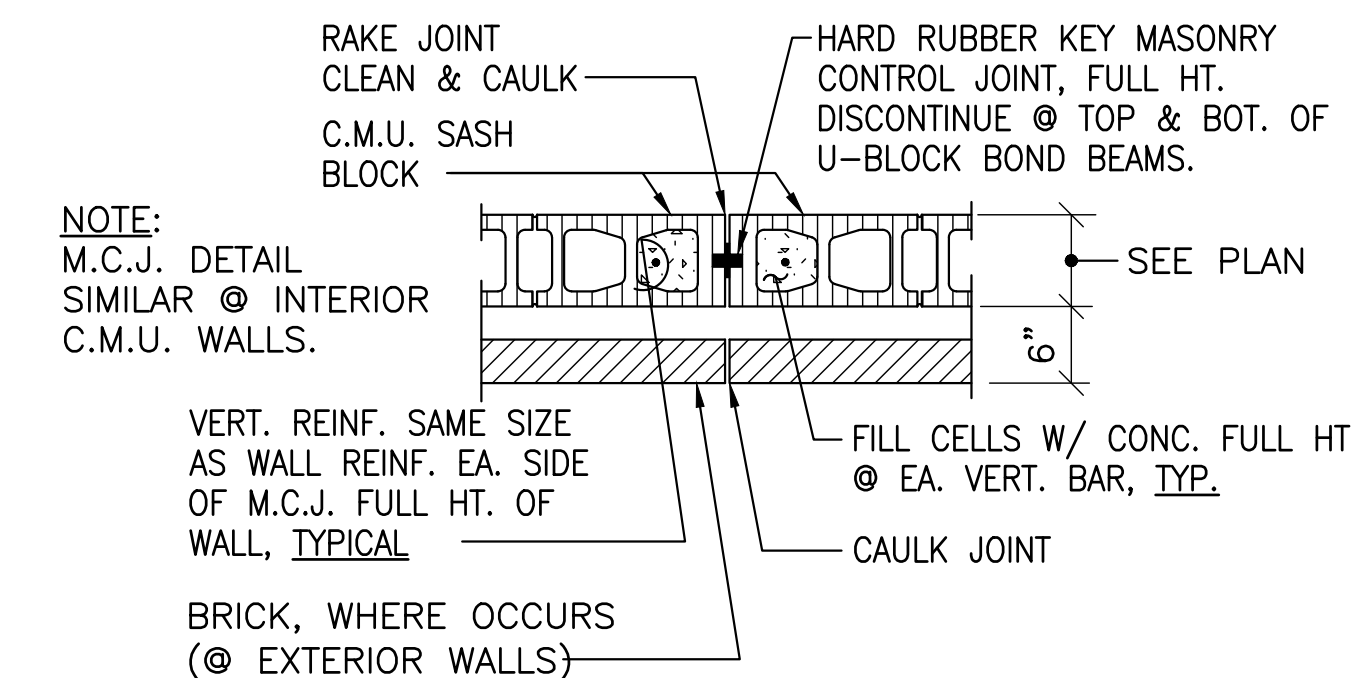
TYPICAL 'X'-BRACING DETAIL



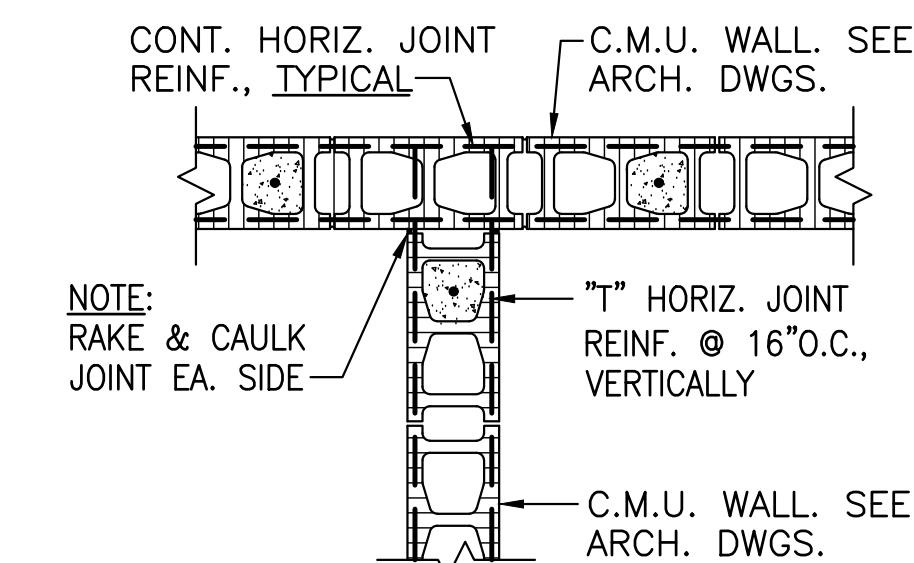
WALL PARALLEL TO JOIST OR TRUSS



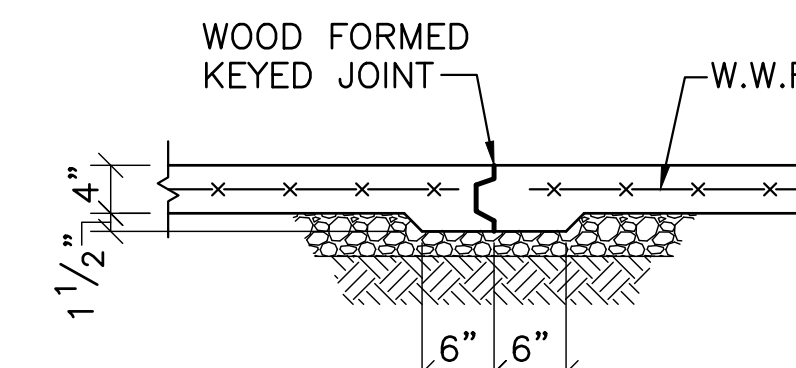
WALL PERPENDICULAR TO JOIST OR TRUSS



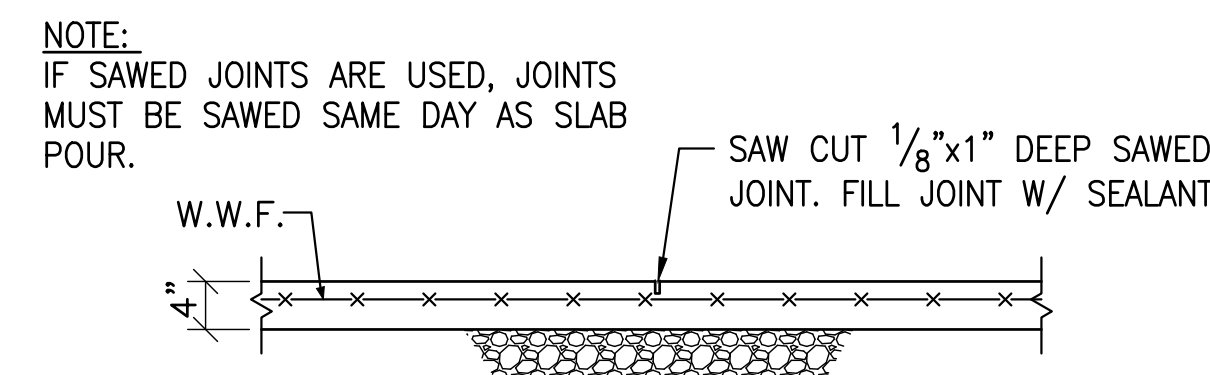
TYPICAL MASONRY CONTROL JOINT (M.C.J.)



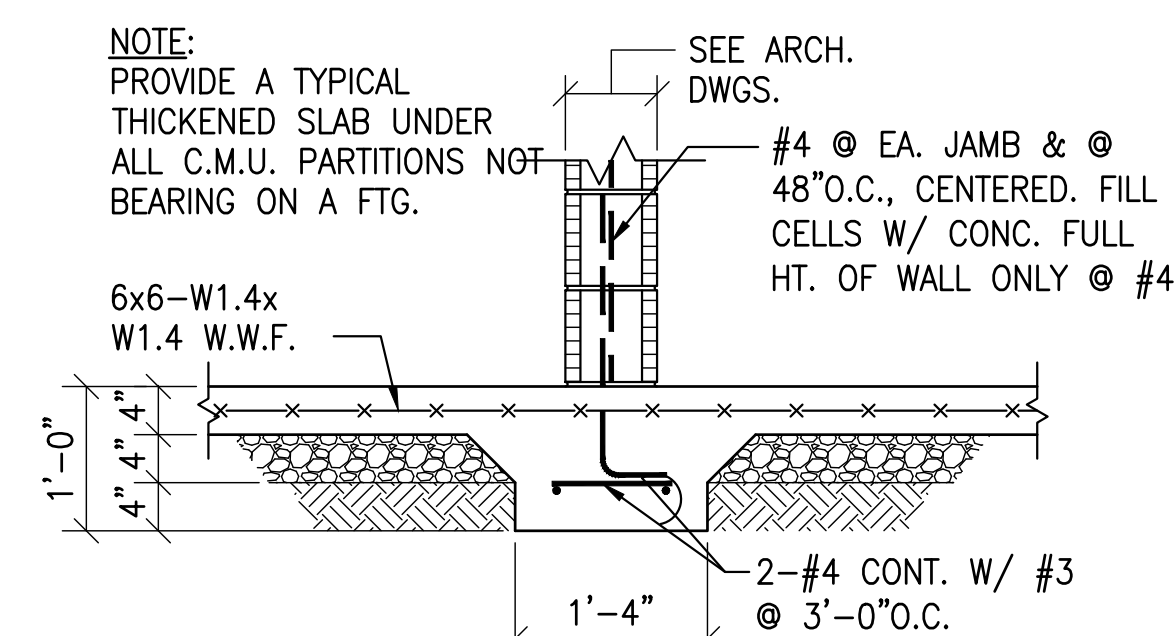
TYPICAL DETAIL AT WALL INTERSECTION



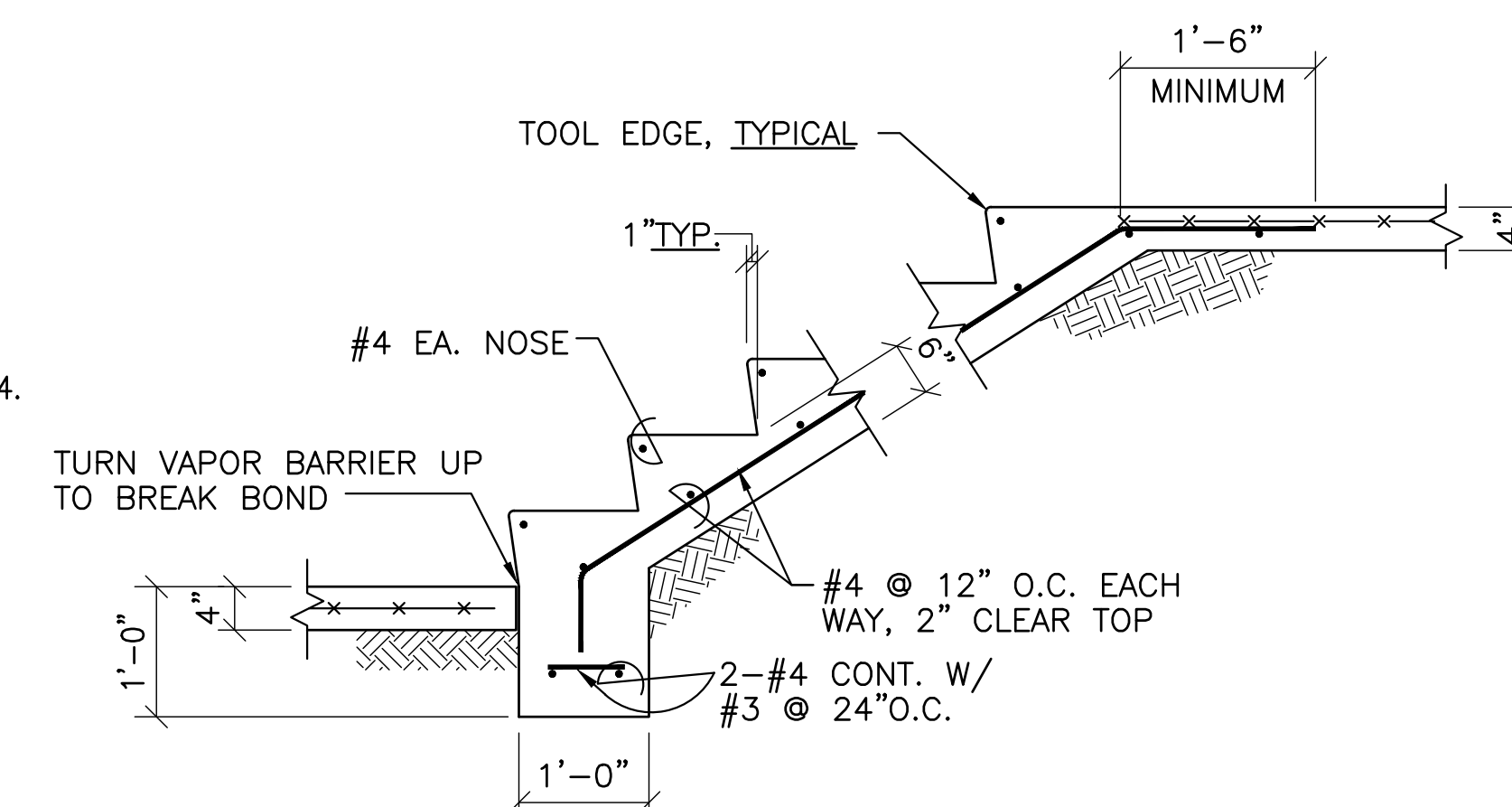
TYPICAL SLAB CONSTRUCTION JOINT DETAIL-(C.J.)



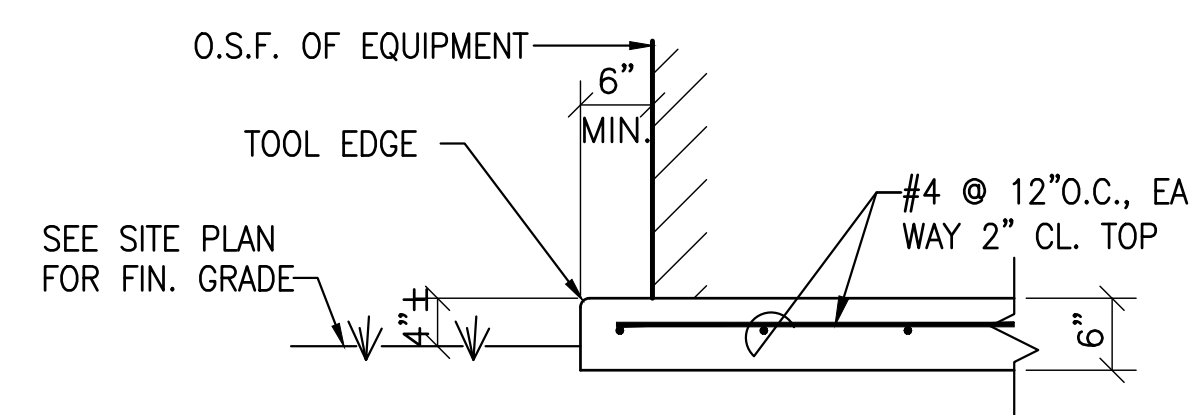
ALTERNATE SLAB CONSTRUCTION JOINT DETAIL (SAWED JOINT)



TYPICAL THICKENED SLAB DETAIL



TYPICAL CONCRETE STEPS ON GRADE DETAIL



TYPICAL MECHANICAL PAD





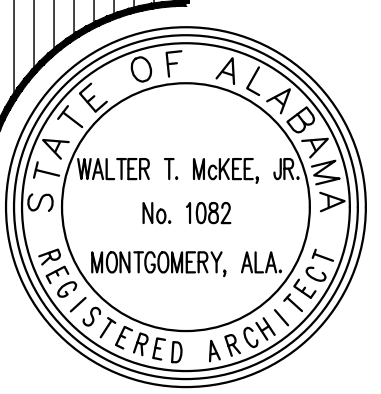
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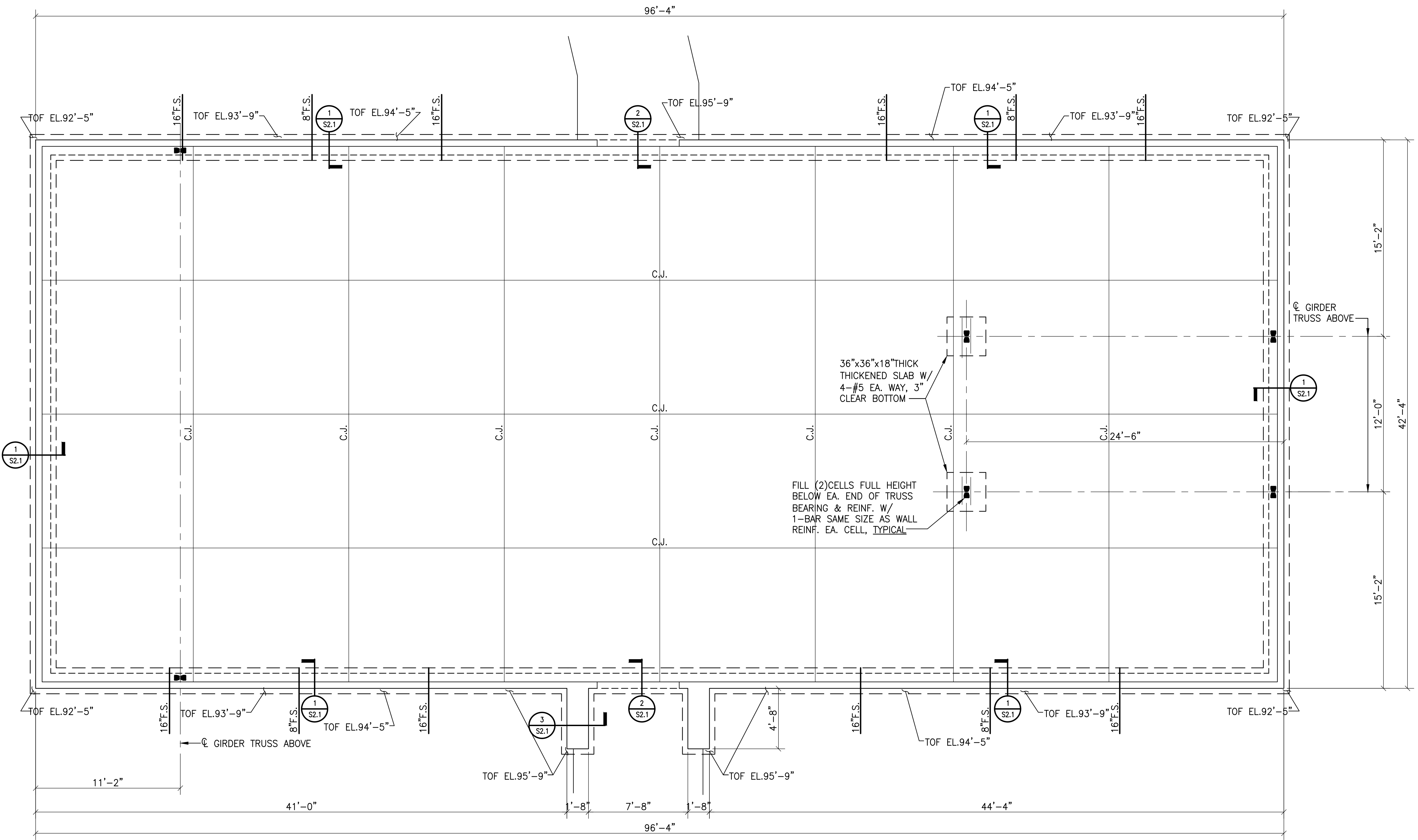
SHEET TITLE : Foundation Plan

JOB NO. : 18-144

DRAWN BY : R. Stephens

DATES : 7 September 2018

SHEET NO. : S1.1



FOUNDATION PLAN
1/4" = 1'-0"

FLOOR CONSTRUCTION
4" THICK CONCRETE SLAB W/
6x6-W1.4xW1.4 W.W.F. OVER VAPOR
BARRIER OVER 4" POROUS FILL.
FINISH FLOOR EL.= 98'-5"

NOTE:
PROVIDE A TYPICAL THICKENED SLAB
UNDER ALL C.M.U. PARTITIONS NOT
BEARING ON A FOOTING. SEE TYPICAL
DETAIL ON SHEET S0.2



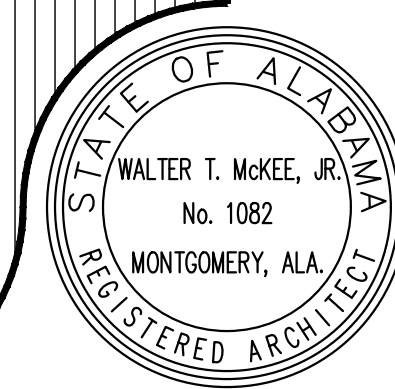
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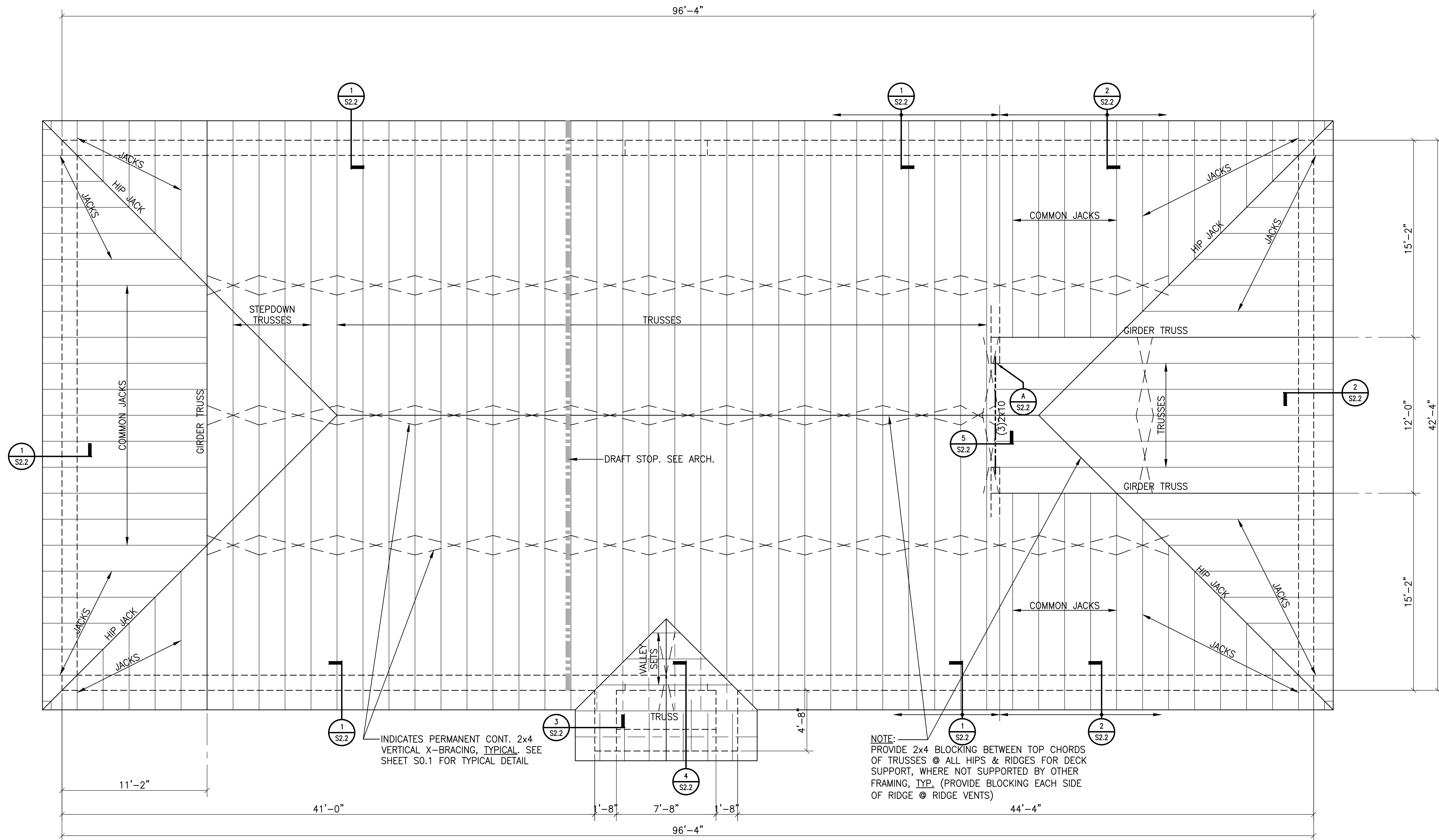
SHEET TITLE : Roof Framing Plan

JOB NO. : 18-144

DRAWN BY : R. Stephens

DATES : 7 September 2018

SHEET NO. : S1.2

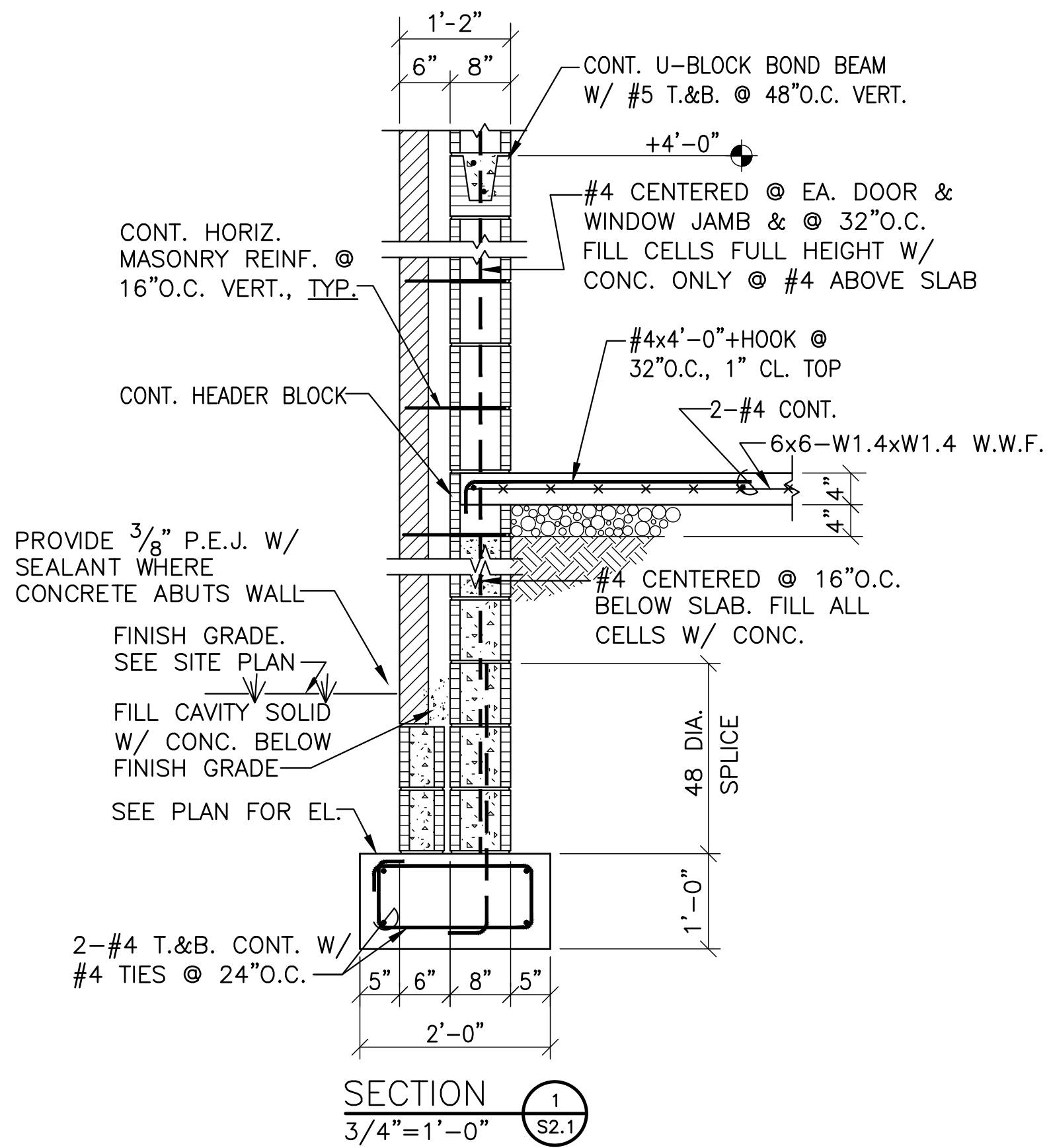


ROOF FRAMING PLAN
1/4" = 1'-0"

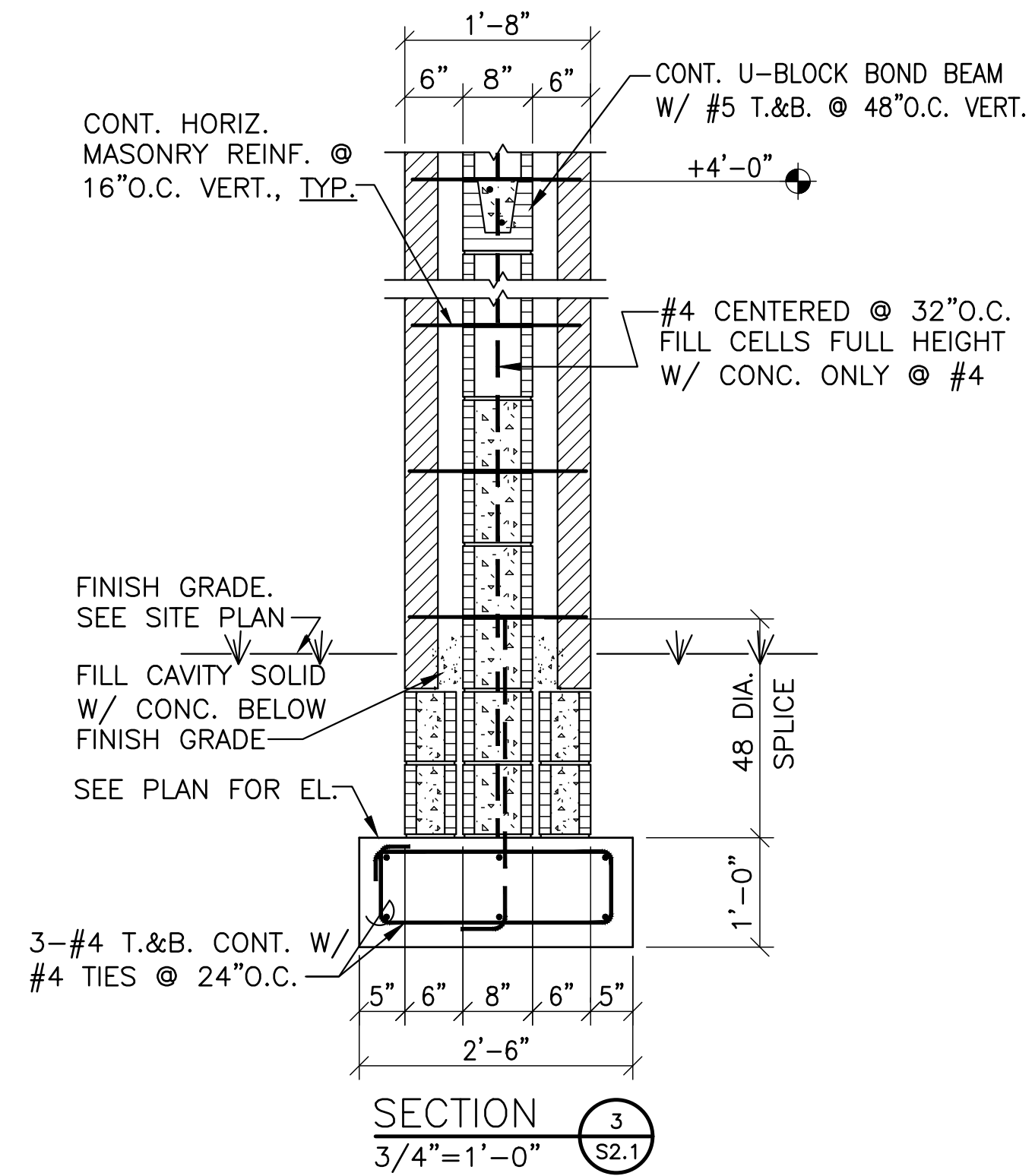
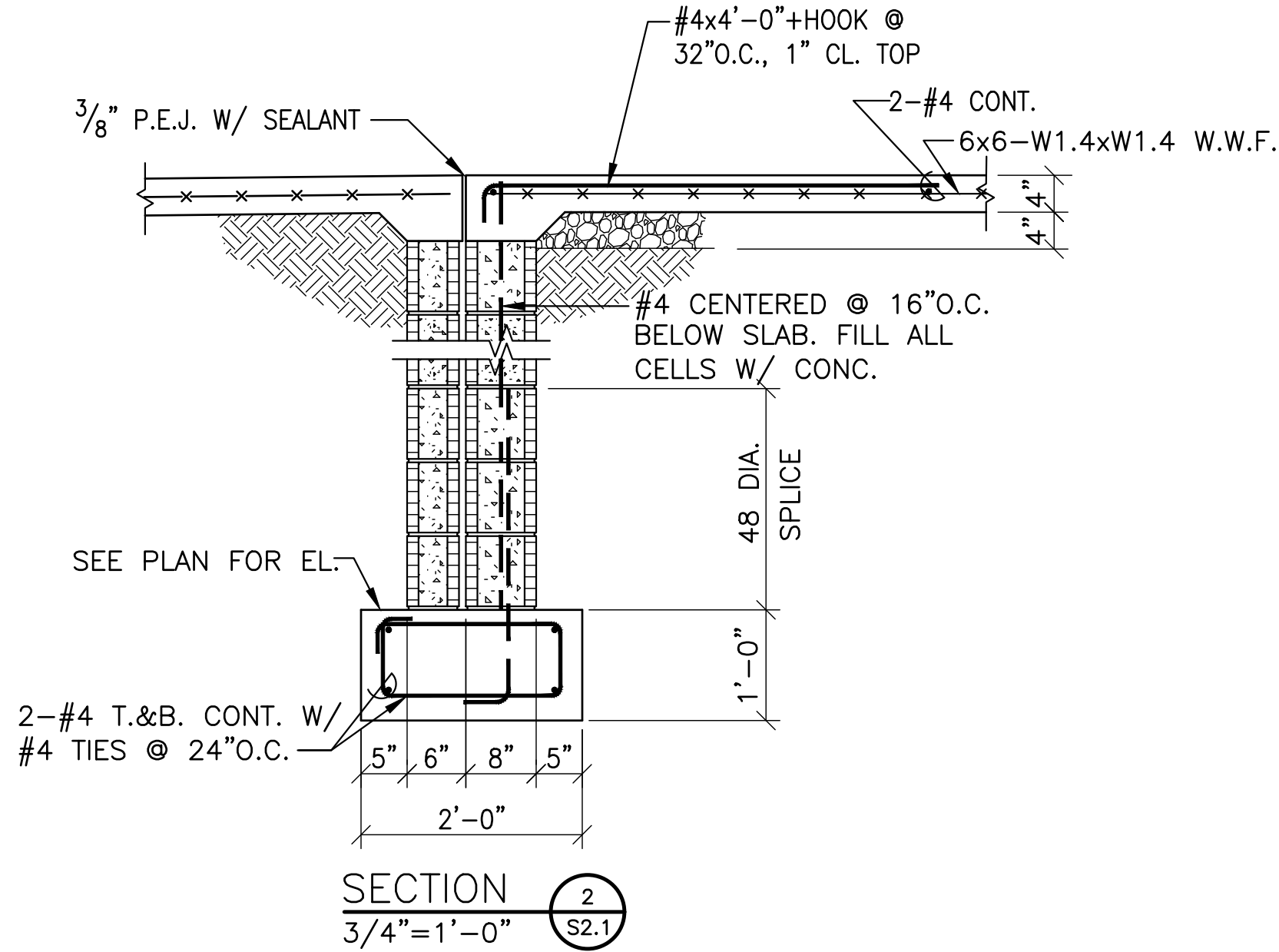
ROOF CONSTRUCTION

5/8" THICK APA RATED PLYWOOD DECK,
EXPOSURE 1, WITH PANEL IDENTIFICATION
INDEX OF 40/20 OVER PRE-ENGINEERED
PREFABRICATED WOOD TRUSSES @
24"O.C. MAXIMUM.

NOTE:
PROVIDE PLYCLIPS @ MID SPAN BETWEEN
TRUSSES & RAFTERS AT ALL JOINTS IN
ADJACENT ROOF DECK SHEETS.

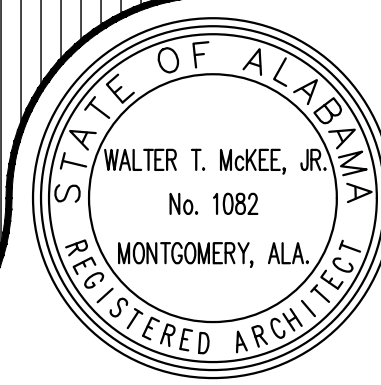


NOTE:
HOOK CONT. T.&B. BOND BEAM REINF. 180° AROUND
VERTICAL JAMB REINF. WHERE OCCURS, TYPICAL



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SHEET TITLE : Sections and Details

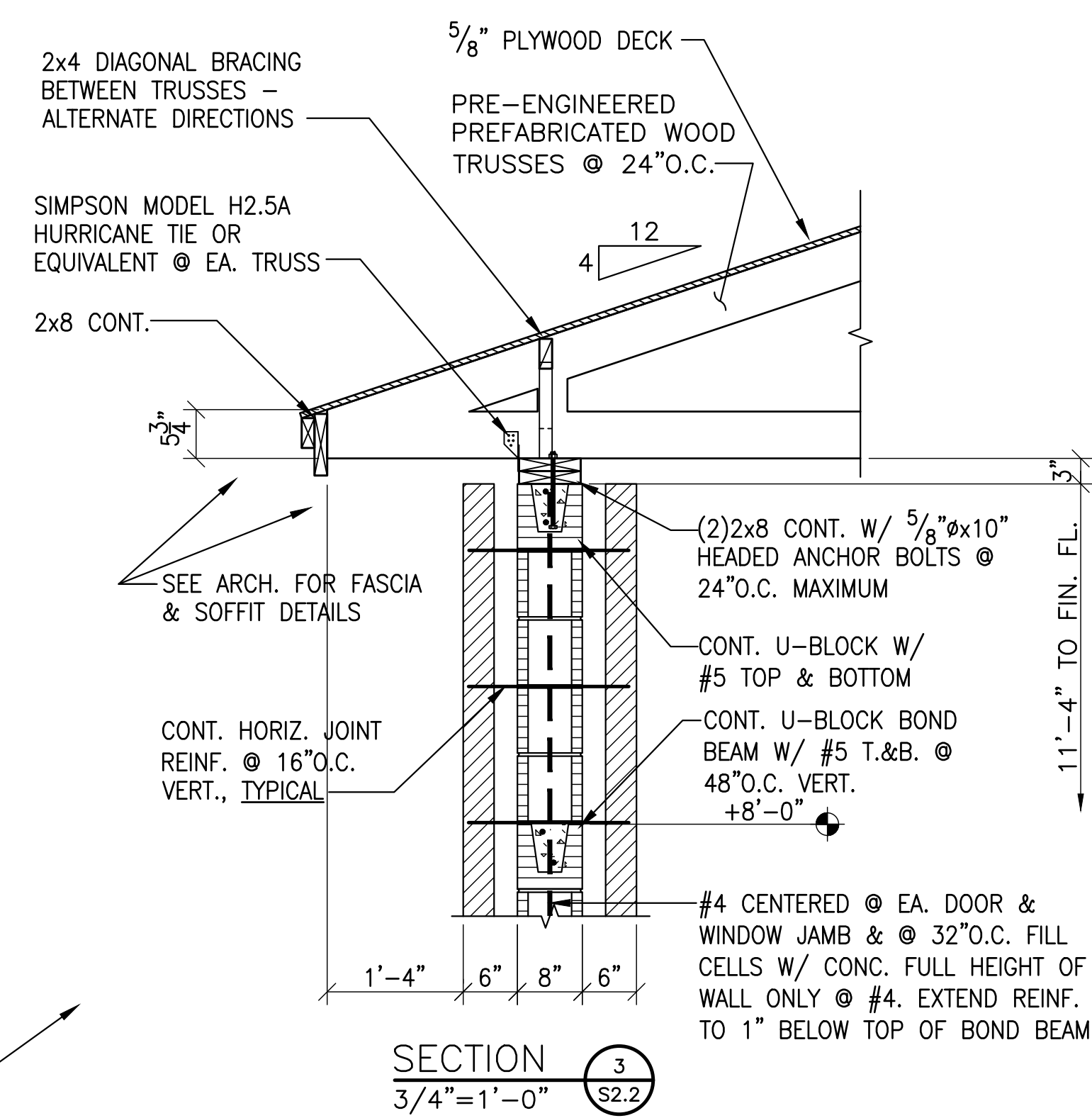
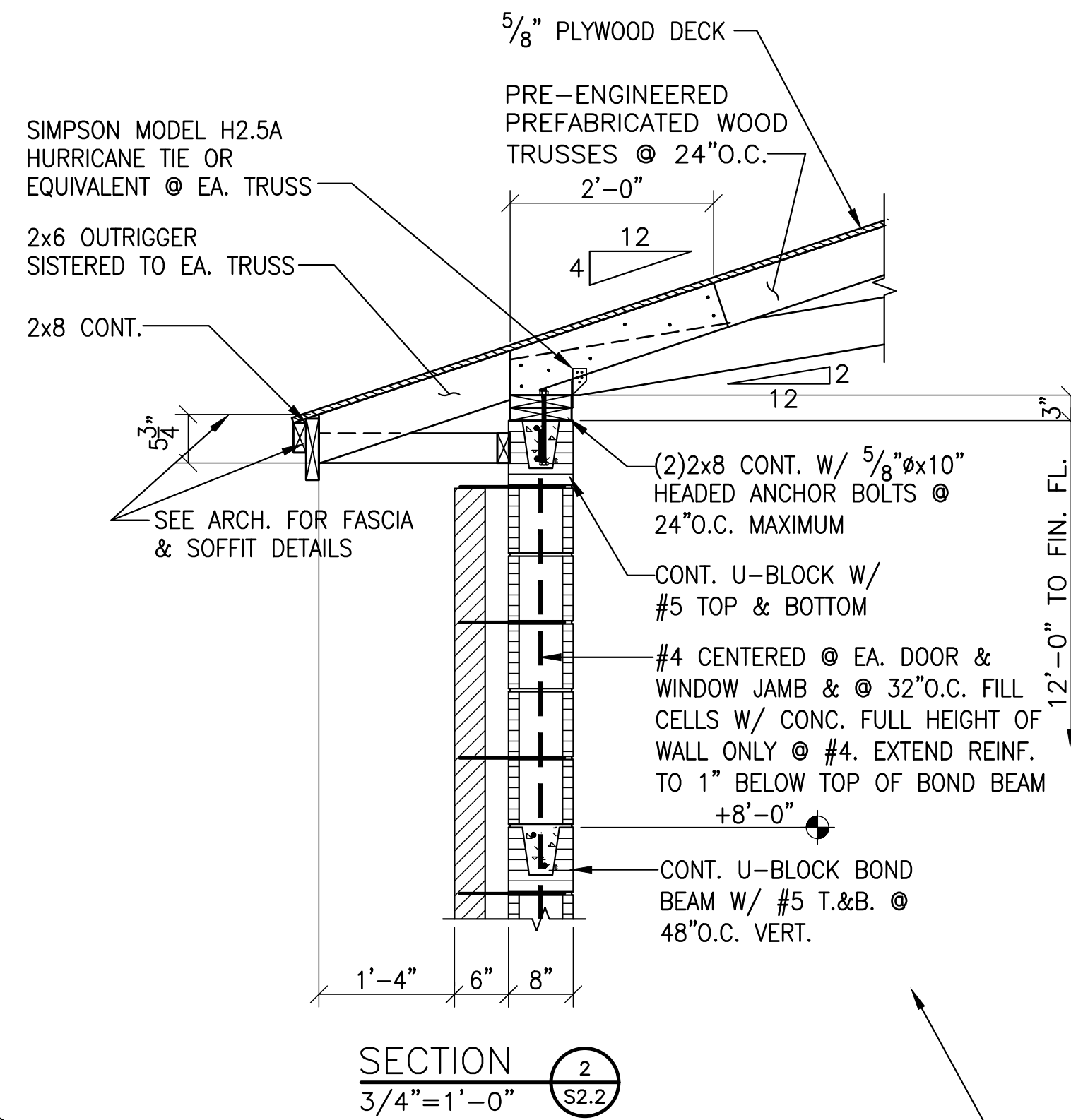
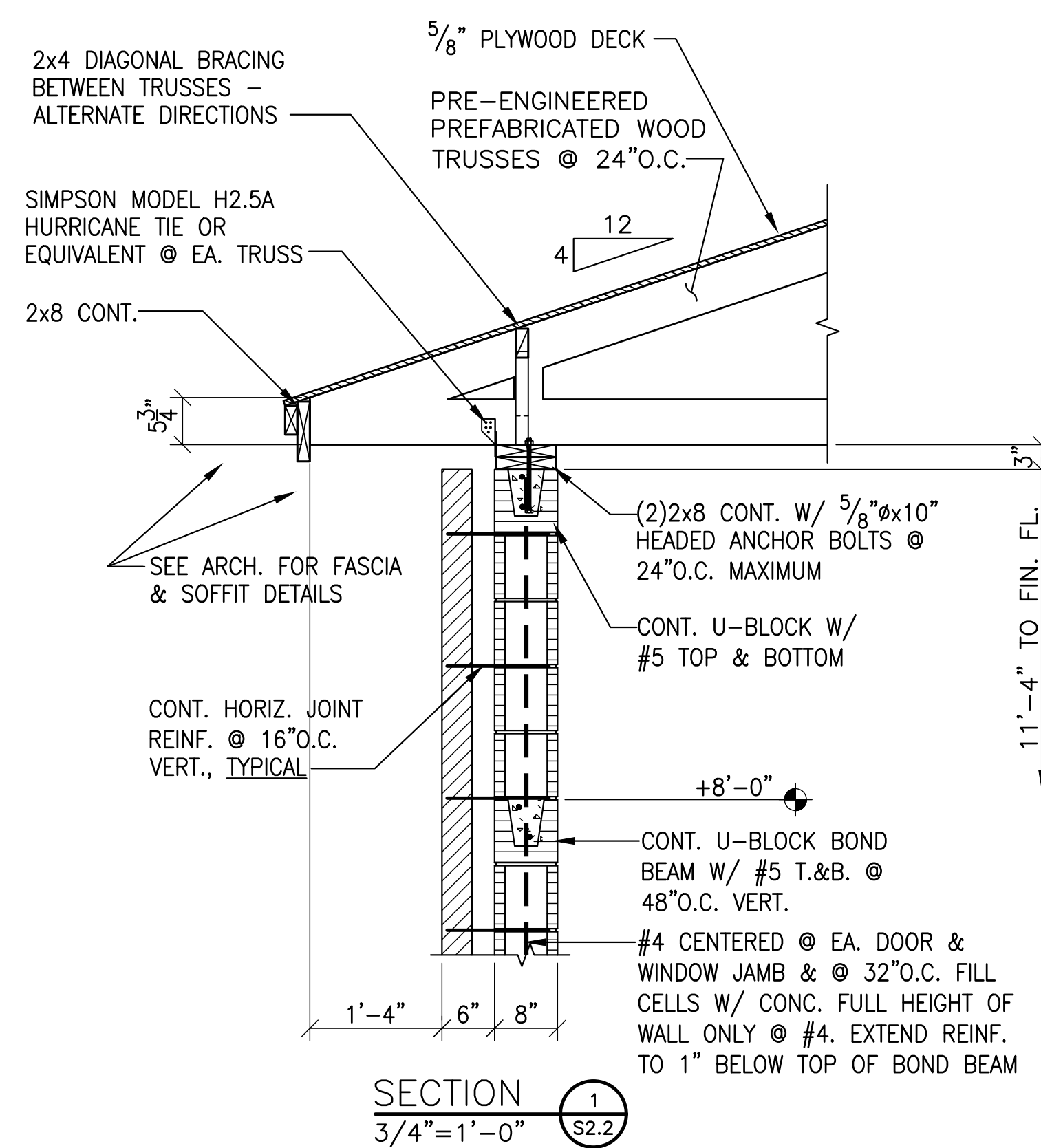
JOB NO. : 18-144

DRAWN BY : R. Stephens

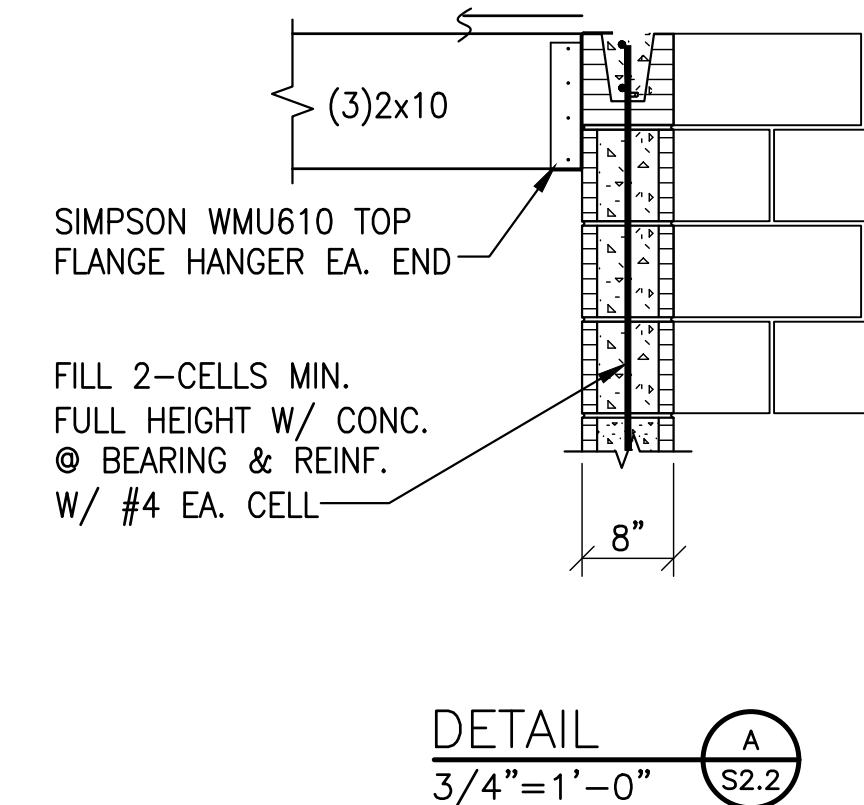
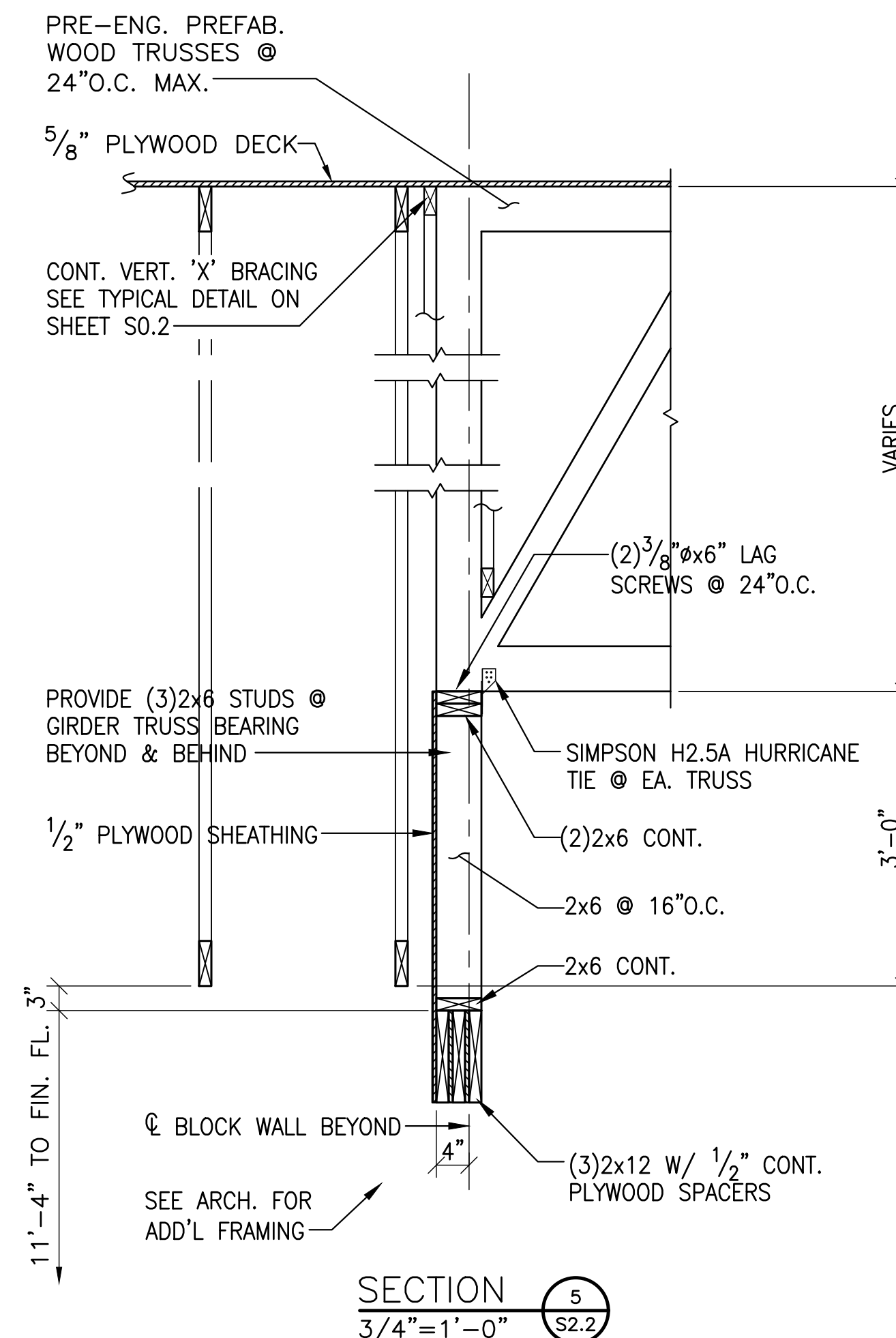
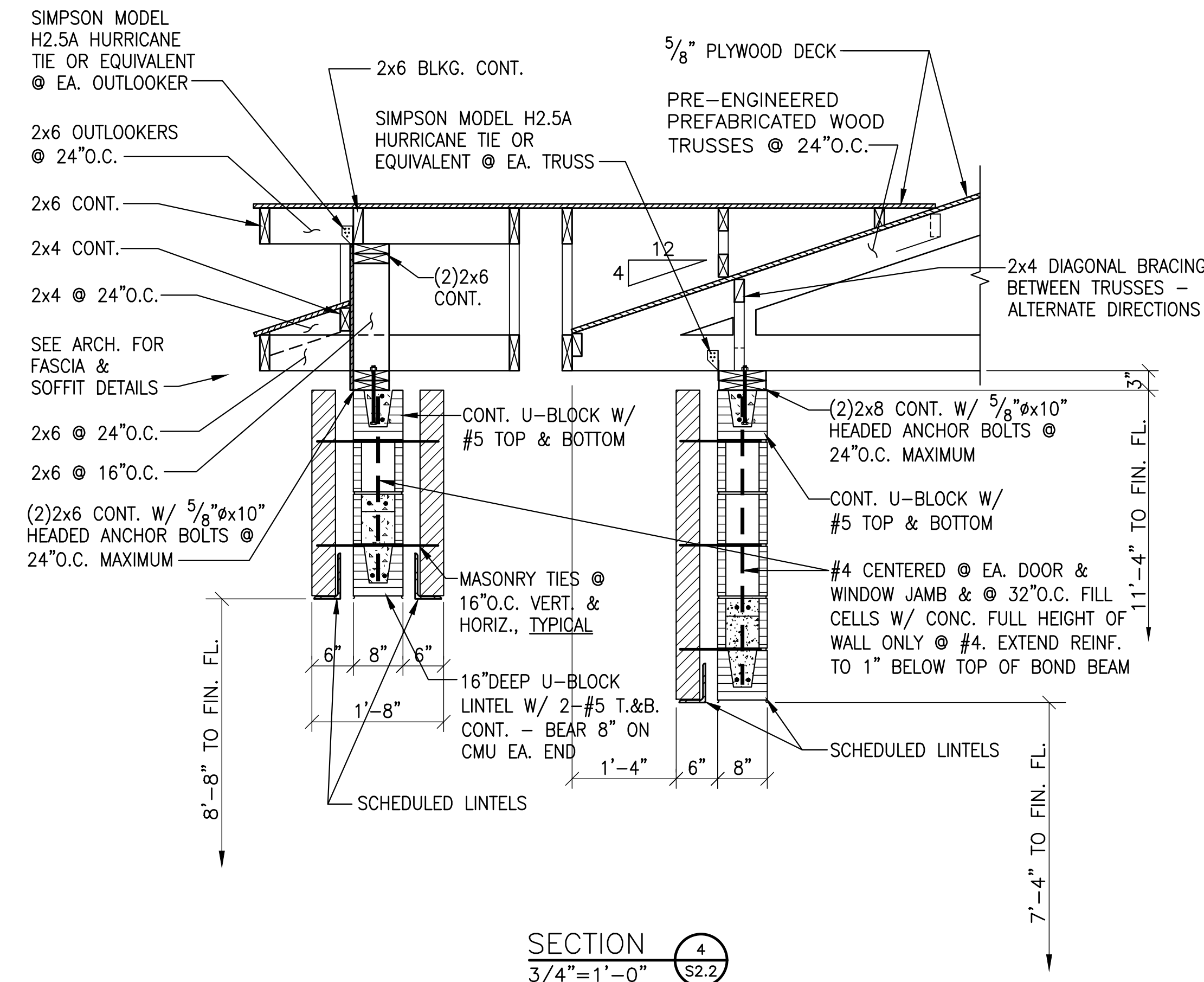
DATES : 7 September 2018



SHEET NO. : S2.1



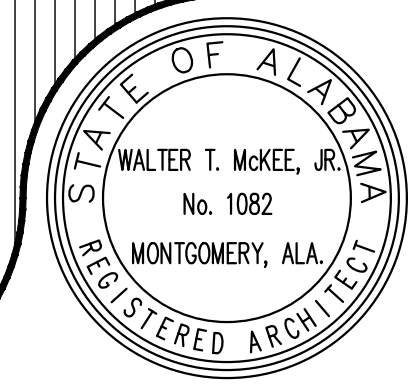
NOTE:
HOOK CONT. T.&B. BOND BEAM REINF. 180° AROUND
VERTICAL JAMB REINF. WHERE OCCURS, TYPICAL



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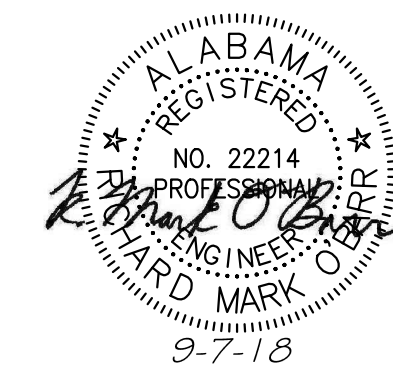
SHEET TITLE : Sections and Details

JOB NO. : 18-144

DRAWN BY : R. Stephens

DATES : 7 September 2018

SHEET NO. : S2.2



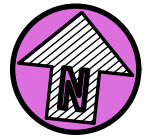
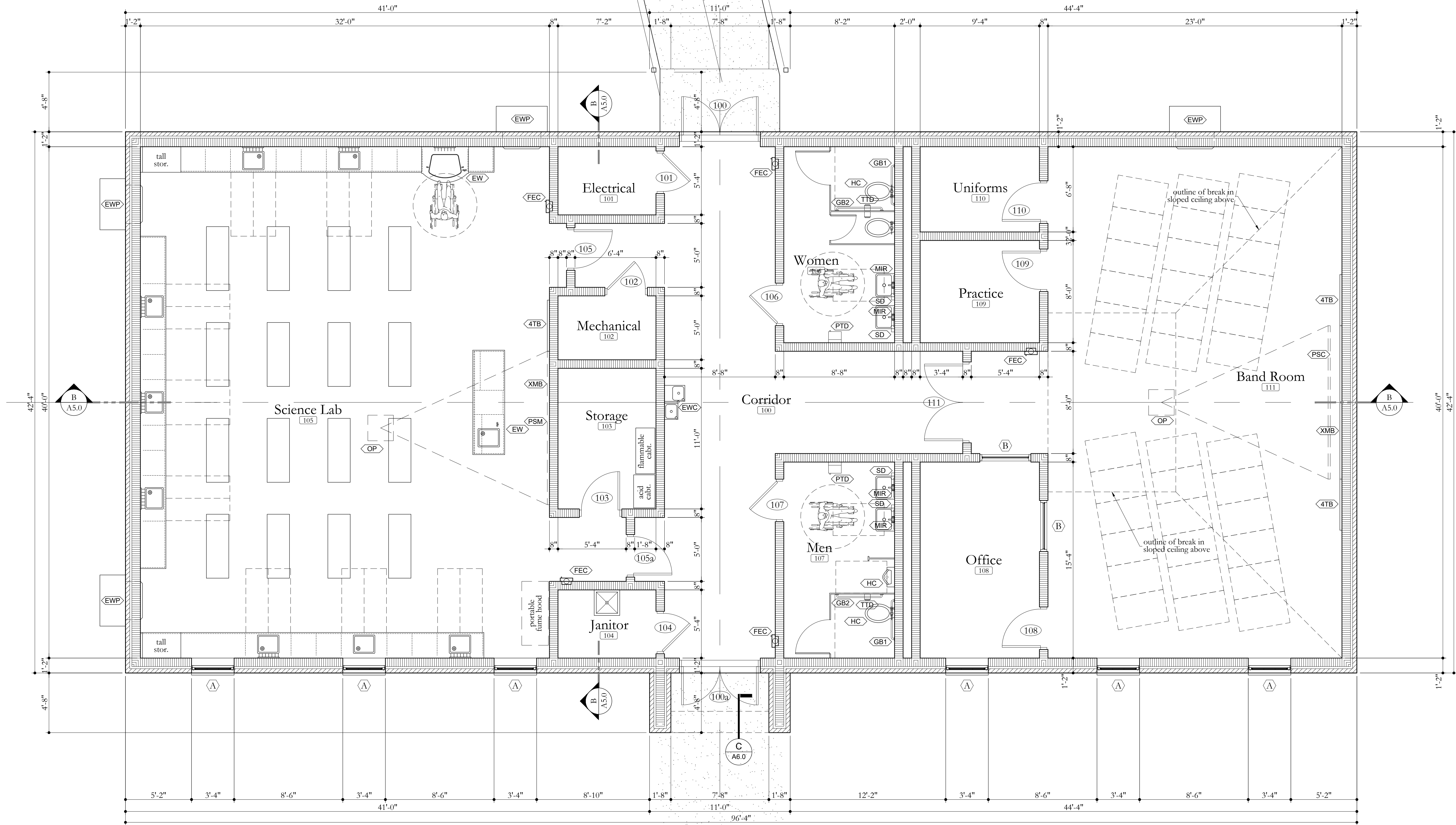
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Floor Plan Legend	
SYMBOL	DESCRIPTION
	SCHEDULED DOOR AND FRAME
	SCHEDULED WINDOW UNIT
	Scheduled Room Name and Number
	SECTION / DETAIL SYMBOL
	BUILDING SECTION SYMBOL
	Interior Elevation Symbol

	Electric Water Cooler (see detail A9.0)
	Fire Extinguisher Cabinet (see detail A9.0)
	condensing unit (see mechanical)
	CONCRETE EQUIPMENT PAD (SEE DETAIL A9.1)
	Return Air (see Mechanical)
	Eye Wash
	Metal Handrail / Guardrail - Paint
	Metal Guardrail - Paint
	Ceiling Recessed Projection Screen - Motorized
	Ceiling Recessed Projection Screen
	Ceiling Mounted Projector; provided by Owner, installed by Contractor
	Ceiling Mounted Projection Screen; provided by Owner, installed by Contractor
	12'-0" MARKER BOARD
	4'-0" TACK BOARD
	Disappearing Stair

TOILET ACCESSORIES LEGEND	
KEYNOTE	DESCRIPTION
	TOILET TISSUE DISPENSER TO BE MOUNTED 8" OC IN FRONT OF TOILET AND OUTLET OF DISPENSER MUST BE BETWEEN 15" & 48" AFF (SEE SPECS)
	PAPER TOWEL DISPENSER TO BE MOUNTED 48" OC AFF (SEE SPECS)
	SOAP DISPENSER TO BE MOUNTED WHERE HAND CONTROLS ARE 48" OC AFF (SEE SPECS)
	36" GRAB BAR MOUNTED WHERE CENTERLINE OF WALL MOUNT IS 6" OUT FROM CORNER OF WALL / TOILET PARTITION AND IS TO BE 33"-36" AFF (SEE SPECS)
	42" GRAB BAR MOUNTED WHERE CENTERLINE OF WALL MOUNT IS 12" OUT FROM CORNER OF WALL / TOILET PARTITION AND IS TO BE 33"-36" AFF (SEE SPECS)
	CORNER GRAB BAR AND IS TO BE 33"-36" AFF (SEE SPECS)
	18" X 36" MIRROR WITH SHELF TO BE MOUNTED WITH THE BOTTOM EDGE 35" AFF AND THE TOP EDGE 71" AFF (SEE SPECS)
	HANDICAPPED ACCESSIBLE TOILET / URINAL TO BE MOUNTED 17" AFF

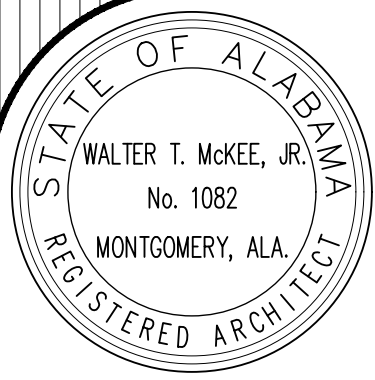


Floor Plan
1/4" = 1'-0"



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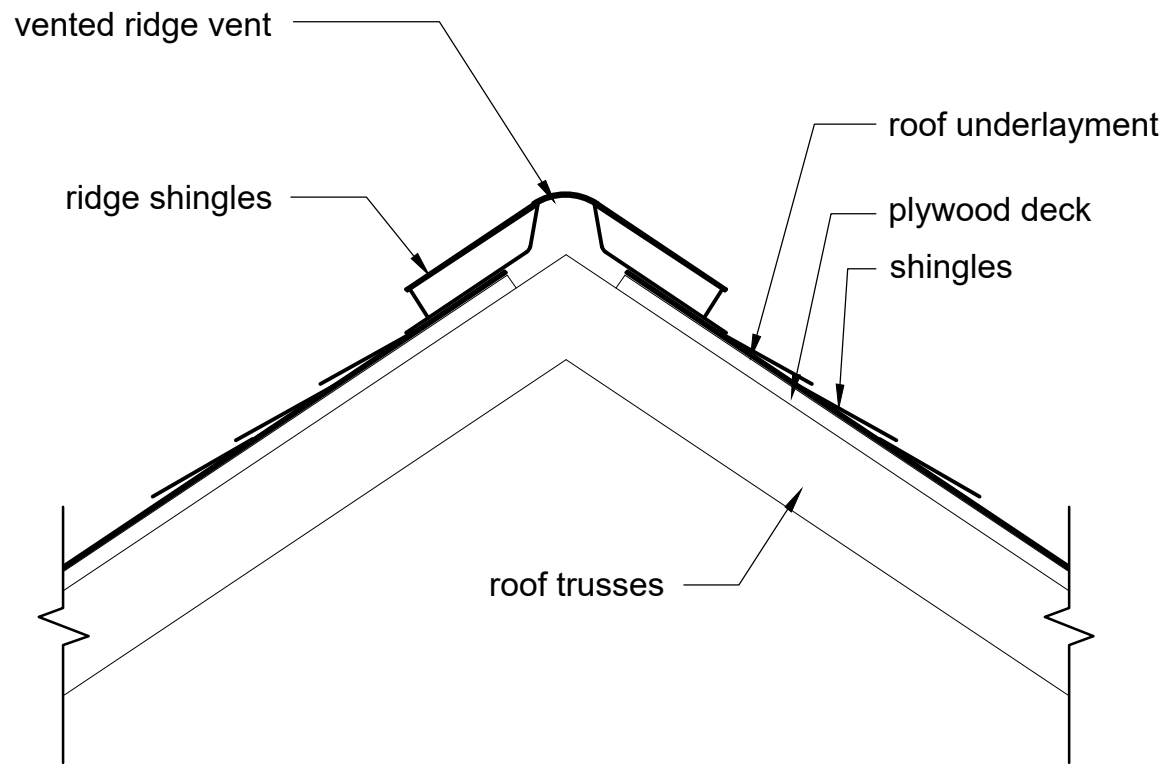
SHEET TITLE : Floor Plan

JOB NO. : 18-144

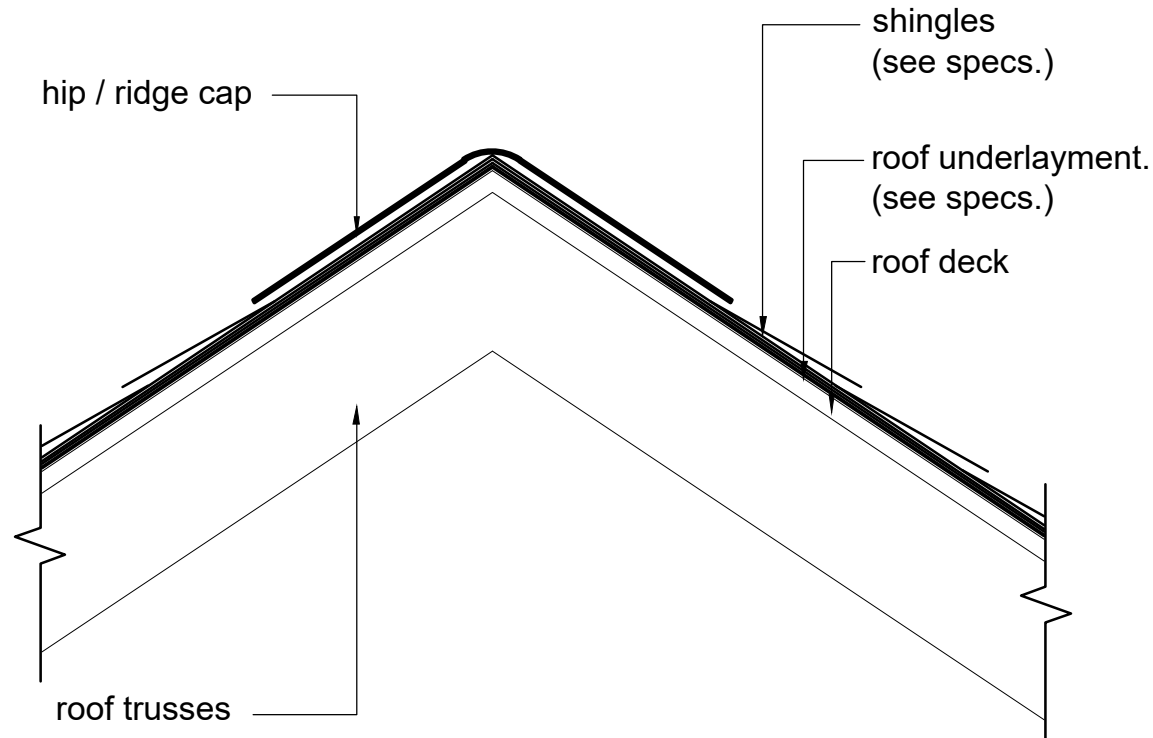
DRAWN BY :

DATES : 7 September 2018

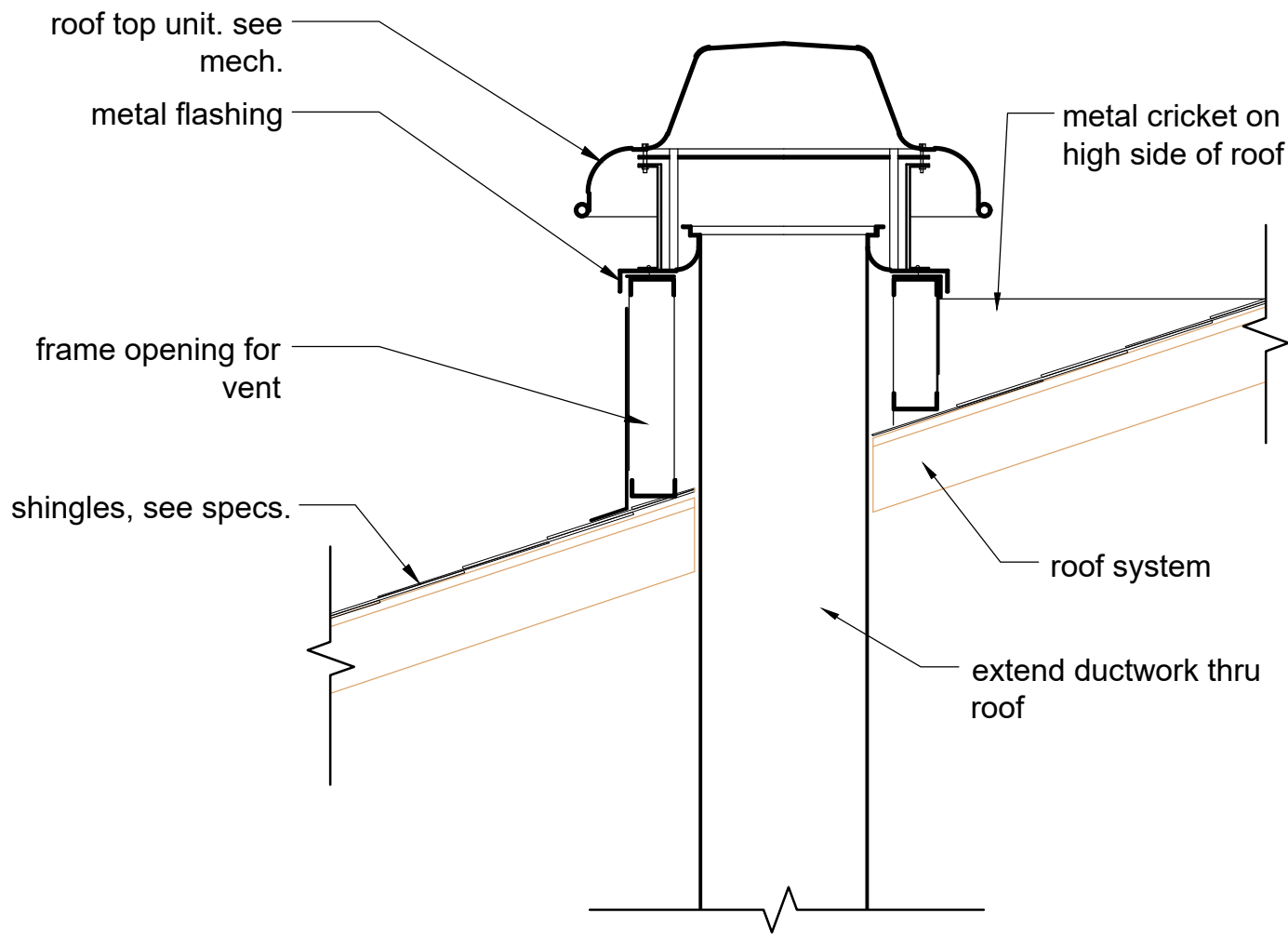
SHEET NO. : A2.0



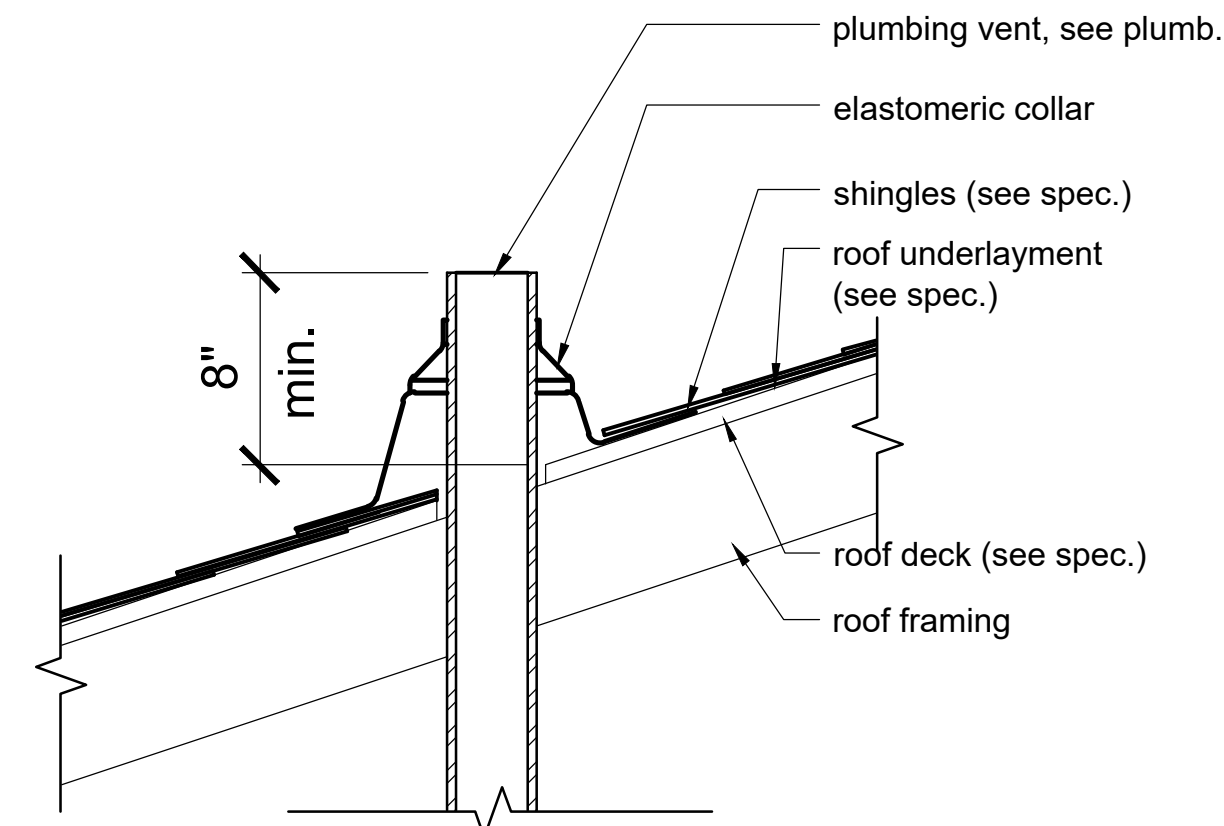
1 Ridge Vent Flashing Roof Detail
Scale: 1 1/2" = 1'-0"



2 Hip / Ridge Flashing Roof Detail
Scale: 1 1/2" = 1'-0"

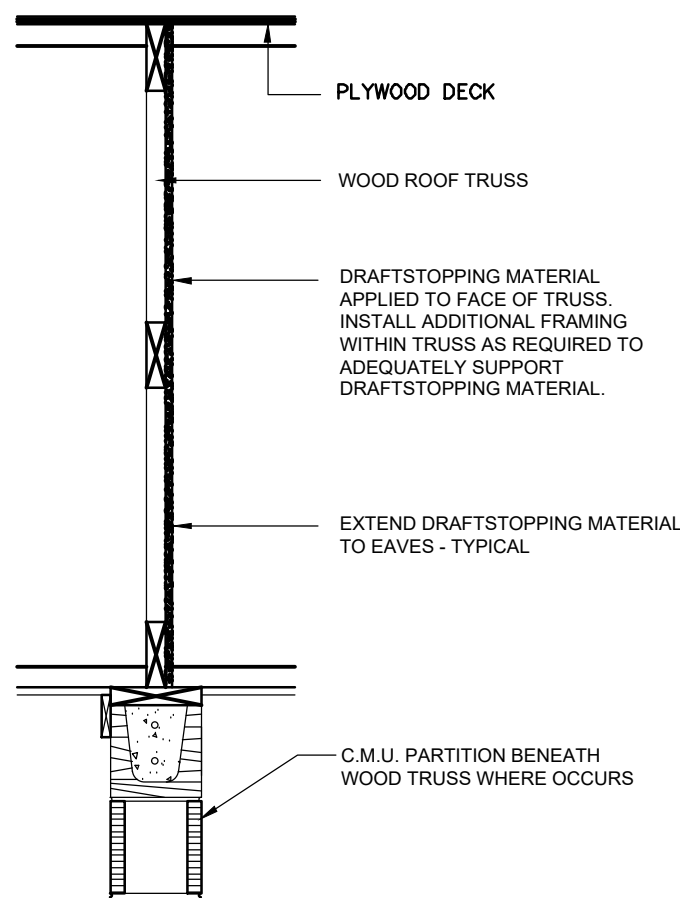


3 Exhaust Fan Flashing Roof Detail
Scale: 3/4" = 1'-0"

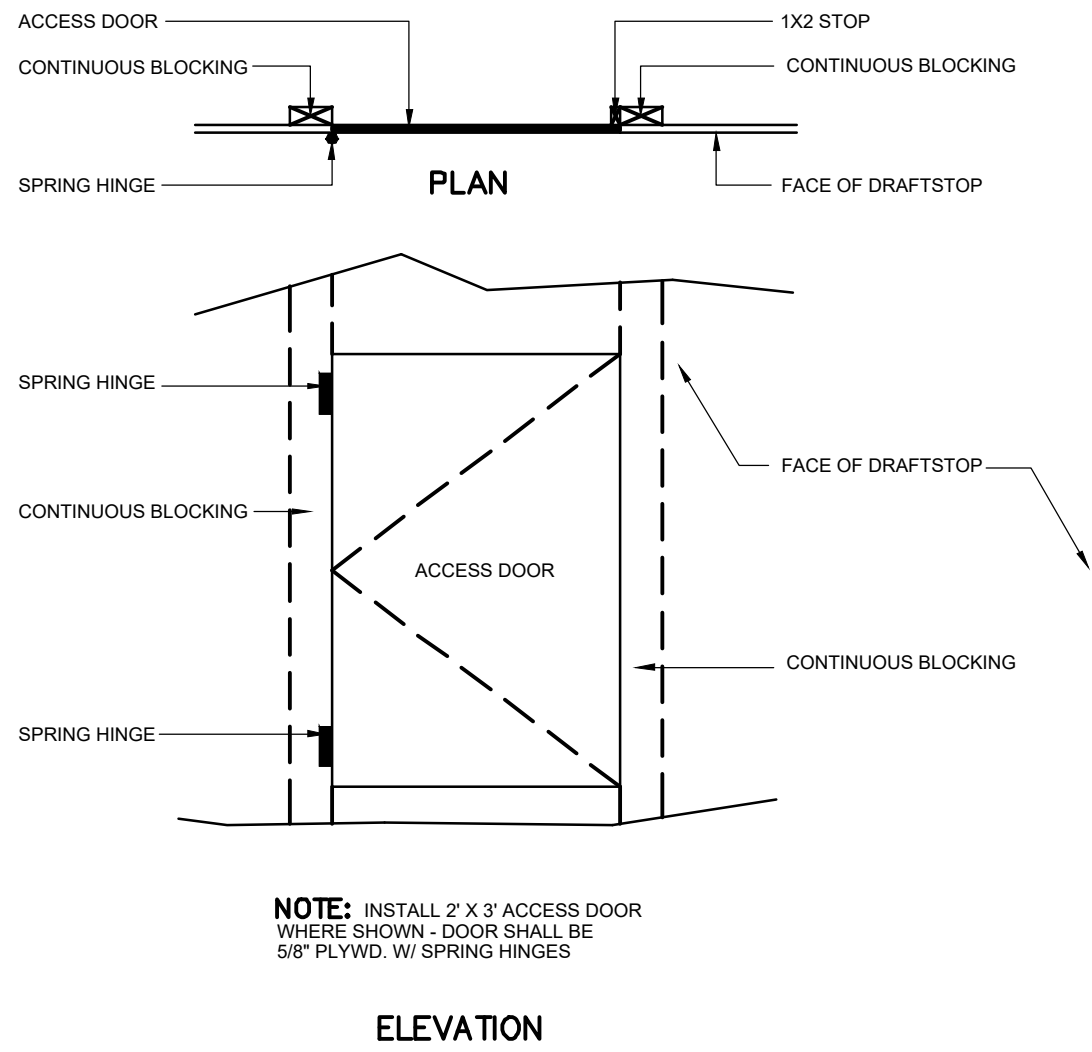


note:
seal collar to roof in accordance with
roof manufacturer's recommendations.

4 Plumbing Vent Flashing Roof Detail
Scale: 1 1/2" = 1'-0"



5 Section Draftstopping Detail
Scale: 3/4" = 1'-0"



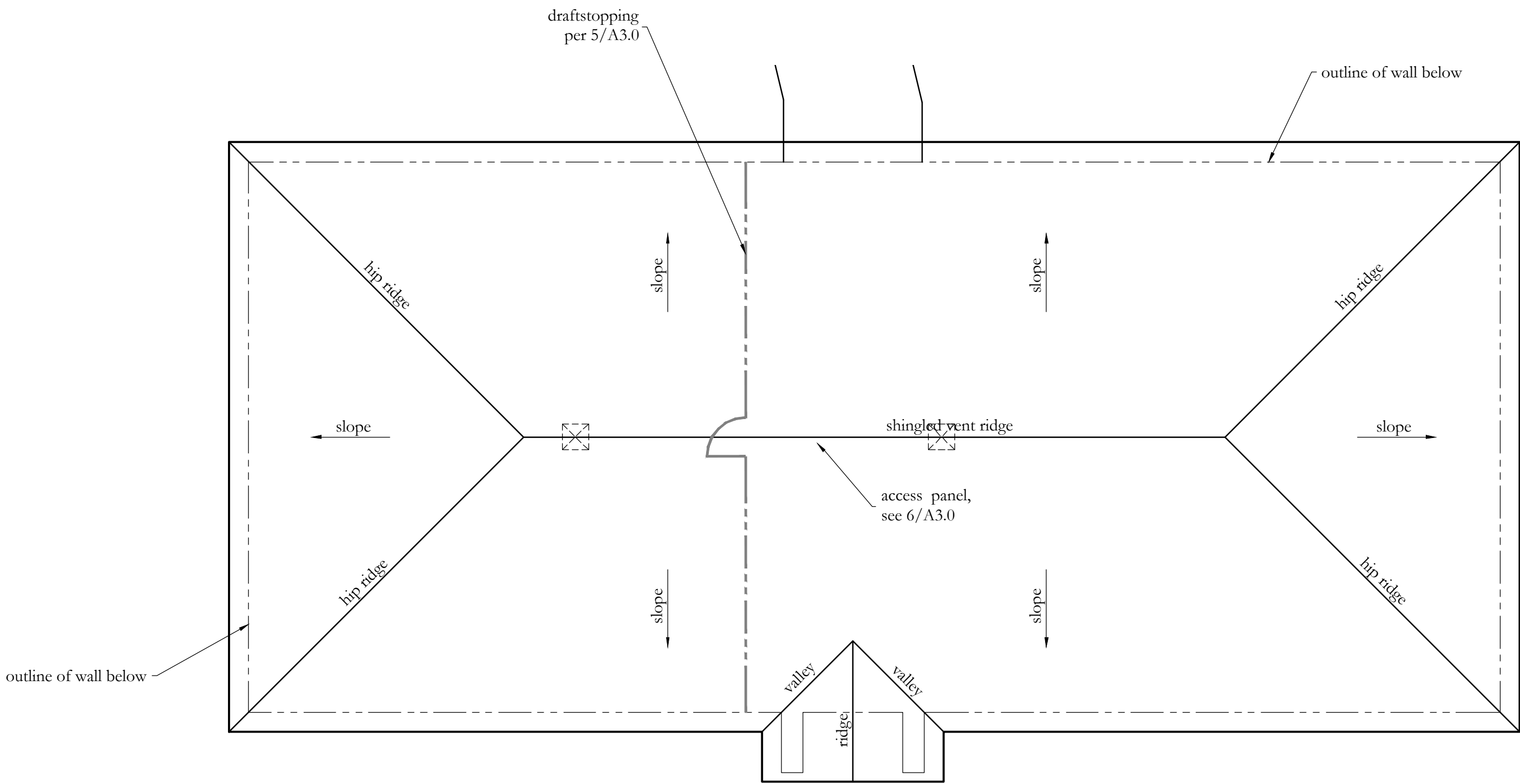
NOTE: INSTALL 2' X 3' ACCESS DOOR WHERE SHOWN - DOOR SHALL BE 5/8" PLYWD. W/ SPRING HINGES

6 Section Draftstopping Opening Detail
Scale: 3/4" = 1'-0"

Note:
situate draftstopping partitions so that no
area of attic exceeds 3,000 s.f.

ATTIC VENTILATION CHART					
ATTIC AREA	SQUARE FOOTAGE	LINEAR FOOT OF RIDGE VENT (.14 SQ FT PER FT)	LINEAR FOOT OF SOFFIT VENT (.12 SQ FT PER FT)	ADDITIONAL VENTILATION	VENTILATION REQUIRED (PER 1203.2)
		VENTILATION PROVIDED	VENTILATION PROVIDED	VENTILATION PROVIDED	TOTAL VENTILATION PROVIDED
AREA 1	XXX SQ FT	XXX LFT	XXX LFT	GRAVITY VENT	X . XX
		X . XX	X . XX	3 . 69	XX . XX

ROOF PLAN LEGEND	
SYMBOL	DESCRIPTION
	SHINGLES
	BUILT-UP ROOFING SYSTEM
	METAL ROOF PANELS
	DETAIL SYMBOL
	RIDGE FLASHING - VENTED
	RIDGE FLASHING - NON VENTED
	PREFINISHED METAL GUTTER
	PREFINISHED METAL FASCIA
	PREFINISHED METAL EAVE TRIM
	VALLEY FLASHING
	HIP RIDGE FLASHING
	EXTRUDED ALUMINUM COPING
	CAST STONE COPING
	PREFINISHED METAL GRAVEL GUARD
	ROOF DRAIN
	EMERGEGNY OVERFLOW ROOF DRAIN
	PREFINISHED METAL SCUPPER
	ROOF CURB
	PACKAGED AIR CONDITIONING UNIT (SEE MECHANICAL)
	METAL ACCES LADDER TO ROOF
	CONTINUOUS ROOF TO WALL FLASHING
	EXPANSION JOINT
	PLUMBING VENT
	EXHAUST FAN
	GAS FLUE VENT
	GRAVITY VENT
	ALUMINUM CANOPY
	SUSPENDED ALUMINUM AWNING
	PREFINISHED METAL DOWNSPOUT

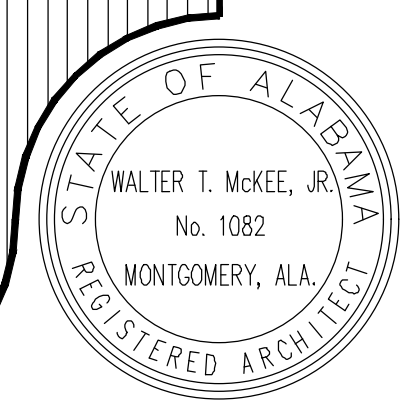


Roof Plan
Scale: 1/8" = 1'-0"



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SHEET TITLE : Roof Plan and Details
JOB NO. : 18-144
DRAWN BY :
DATES : 7 September 2018

SHEET NO. : A2.2

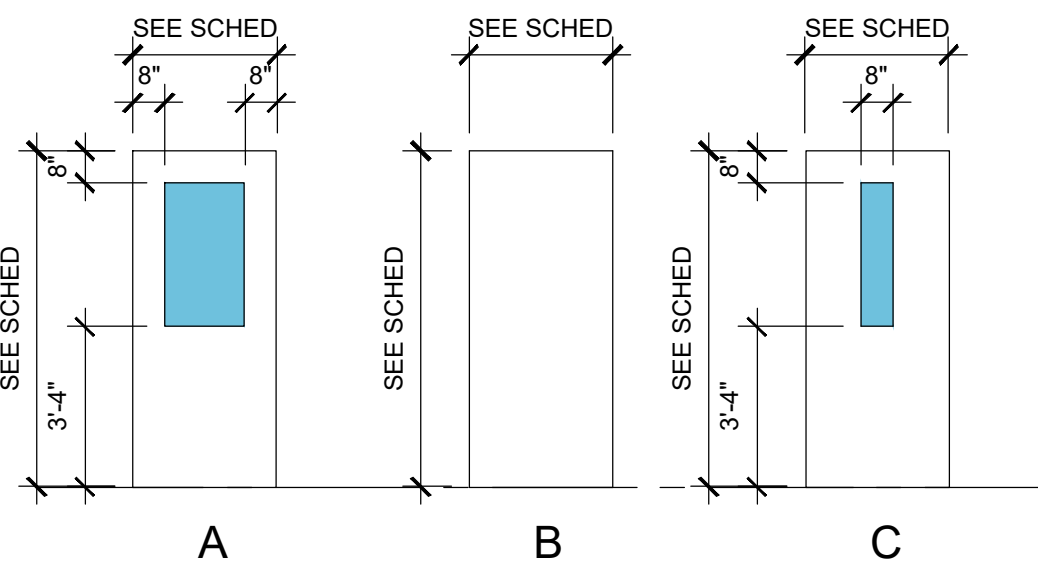
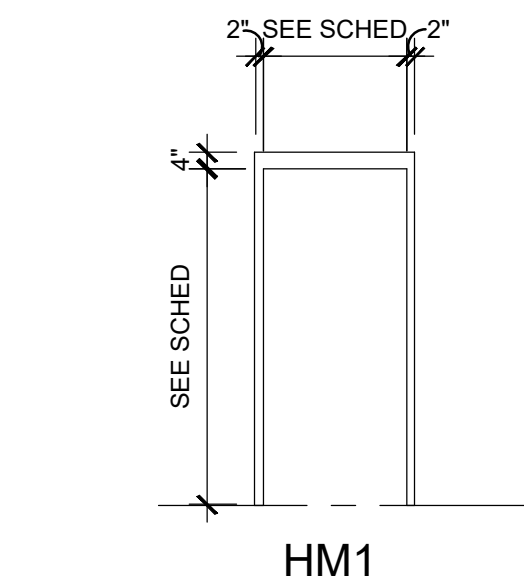
Door #	Opg. Width	Height	Thickness	# Leaves	Materials	Door Type	Door Finish	Frame Finish	Label	Details		Signage	Remarks	
										Head	Lamb			
100	6'-0"	7'-0"	1¾"	2	Hollow Metal	A	Paint	HM1	Paint	---	1/A3.1	2/A3.1		
100a	6'-0"	7'-0"	1¾"	2	Hollow Metal	A	Paint	HM1	Paint	---	1/A3.1	2/A3.1		
101	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	B	Stained	HM1	Paint	¾ HR.	6/A3.1	7/A3.1	Electrical	
102	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	B	Stained	HM1	Paint	¾ HR.	6/A3.1	7/A3.1	Mechanical	
103	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	B	Stained	HM1	Paint	---	6/A3.1	7/A3.1	Storage	
104	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	B	Stained	HM1	Paint	¾ HR.	6/A3.1	7/A3.1	Janitor	
105	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	C	Stained	HM1	Paint	¾ HR.	6/A3.1	7/A3.1	Science	
105a	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	C	Stained	HM1	Paint	¾ HR.	6/A3.1	7/A3.1	Science	
106	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	B	Stained	HM1	Paint	¾ HR.	6/A3.1	7/A3.1	Women	
107	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	B	Stained	HM1	Paint	¾ HR.	6/A3.1	7/A3.1	Men	
108	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	C	Stained	HM1	Paint	---	6/A3.1	7/A3.1	Office	
109	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	C	Stained	HM1	Paint	---	6/A3.1	7/A3.1	Practice	
110	3'-0"	7'-0"	1¾"	1	Flush Wood, Solid Core	B	Stained	HM1	Paint	---	6/A3.1	7/A3.1	Uniforms	
111	6'-0"	7'-0"	1¾"	2	Flush Wood, Solid Core	C	Stained	HM1	Paint	¾ HR.	6/A3.1	7/A3.1	Band Room	

703.4.1 HEIGHT ABOVE FINISH FLOOR OF GROUND
TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48 INCHES (1220 mm) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST TACTILE CHARACTER AND 60 INCHES (1525 mm) MAXIMUM ABOVE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER.

EXCEPTION: BRAILLE PROVIDED ON ELEVATOR CAR CONTROLS SHALL BE SEPARATED $\frac{3}{4}$ INCHES (4.8 mm) MINIMUM AND SHALL BE LOCATED EITHER DIRECTLY BELOW OR ADJACENT TO THE CORRESPONDING RAISED CHARACTERS OR SYMBOLS.

FURNISH INDIVIDUAL PLASTIC LAMINATE SIGNAGE SYSTEM WITH ROOM OR OCCUPANT'S NAME AND ROOM NUMBER. FINAL WORDING TO BE FURNISHED WHEN SHOP DRAWINGS FOR SIGNAGE SYSTEM ARE SUBMITTED. FURNISH INDIVIDUAL PLASTIC LAMINATE RESTROOM SIGNS FOR DOOR(S) AND HANDICAPED ACCESS SIGN TO BE PLACED ON WALL BESIDE RESTROOM DOOR(S) -SEE DIAGRAM.

HOURLY RATING DESIGNATIONS AND D / OR ALPHABETICAL LETTER DESIGNATIONS ARE GIVEN WHERE PROTECTED OPENINGS ARE REQUIRED IN RATED PARTITIONS. THESE DESIGNATIONS INDICATE THE MINIMUM RATED PROTECTION REQUIRED FOR THE WINDOW, CLOSING DEVICE, SILL AND ANCHORAGE. CONTRACTOR SHALL SEE THAT NO COMPONENT IS OMITTED OR SUBSTANDARD QUALITY USED SUCH THAT THE EFFECTIVENESS OF THE ENTIRE OPENING AS A FIRE OR SMOKE BARRIER MIGHT BE COMPROMISED. DOORS, FRAMES, GLASS, GLASS BLOCKS, FILLERS, ETC., IN LABORATORIES OR WARNOCK-HORNE LABELS WITH APPROPRIATE FIRE RESISTANCE RATINGS FOR THE CLASS OF OPENING SCHEDULED. SUBJECT TO DOOR MANUFACTURER'S RECOMMENDATIONS, THE FOLLOWING ARE THE FOLLOWING NOTATION: "FIRE DOOR, TO BE EQUIPPED WITH FIRE EXIT HARDWARE"

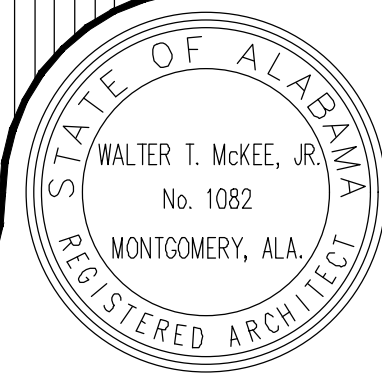
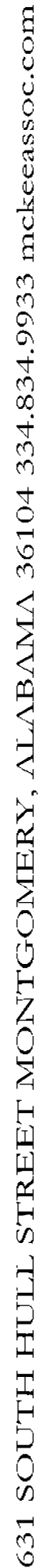


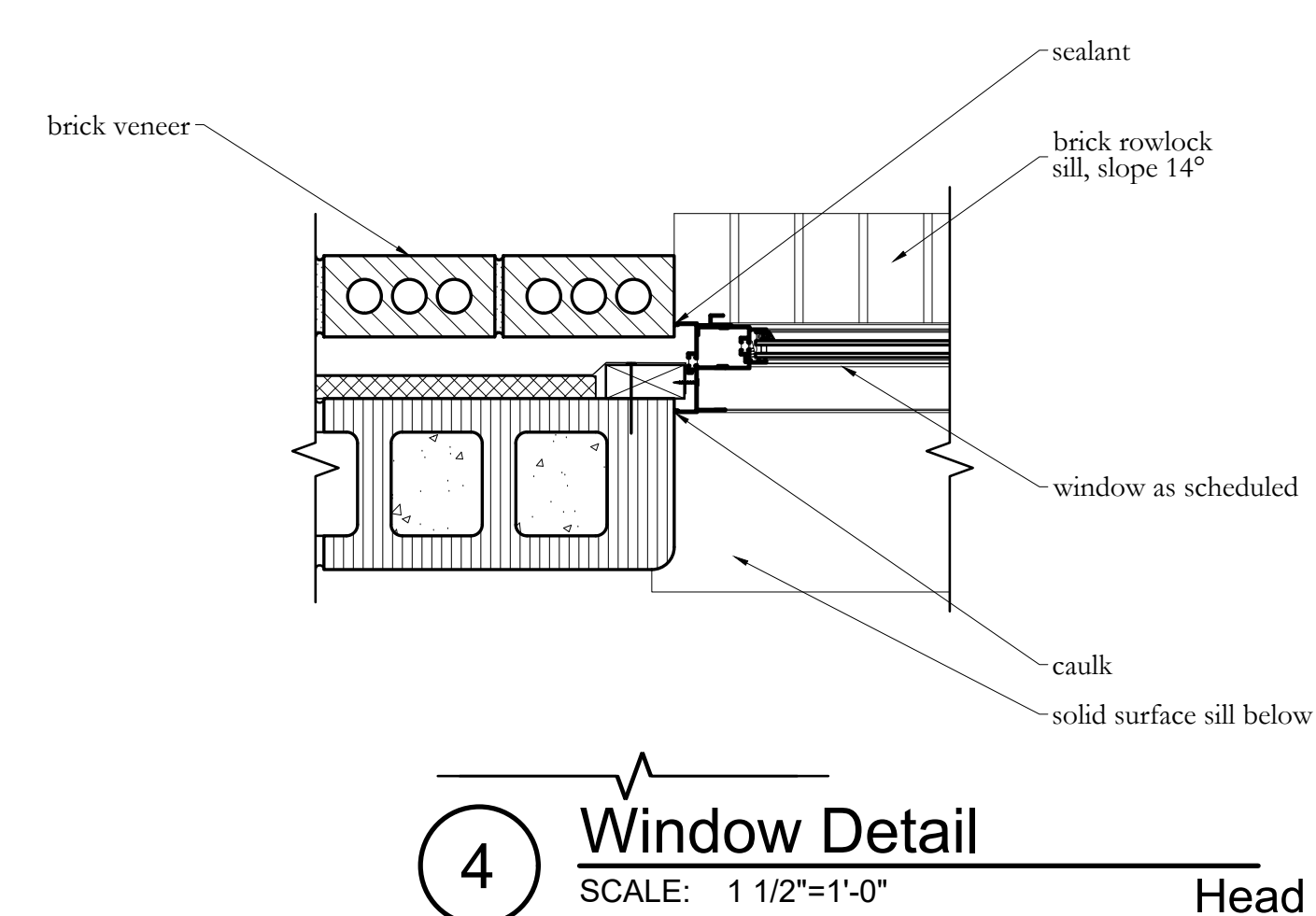
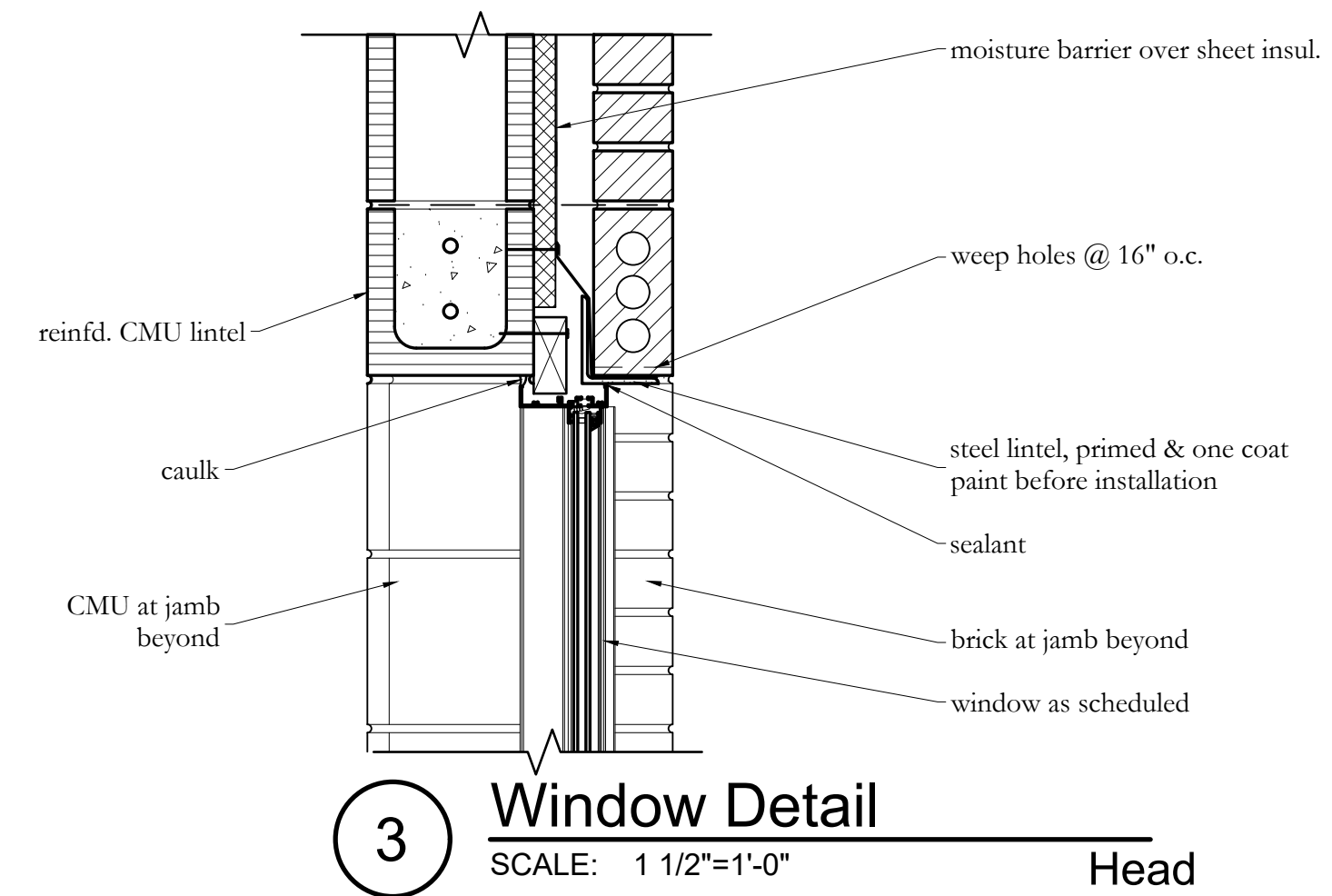
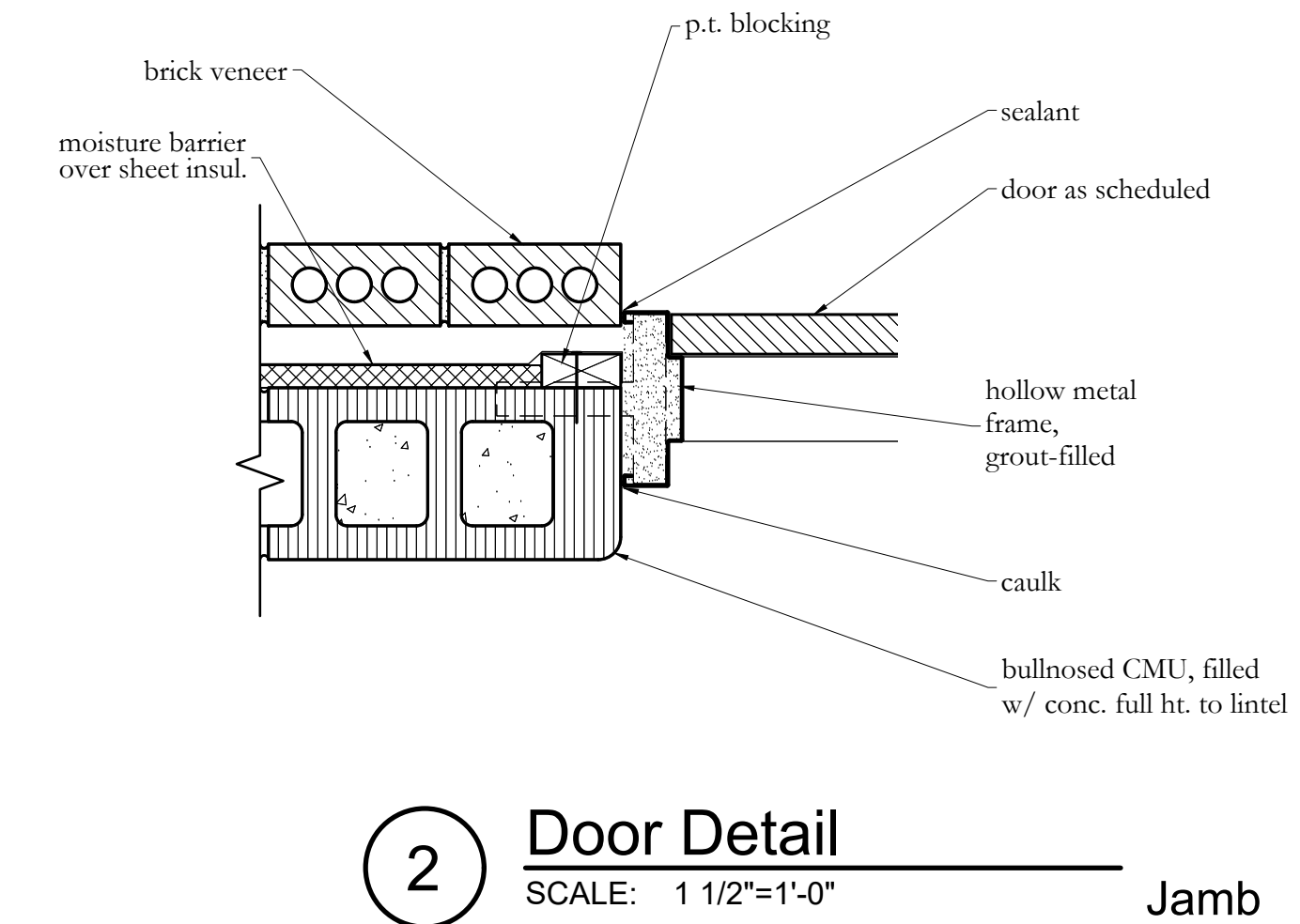
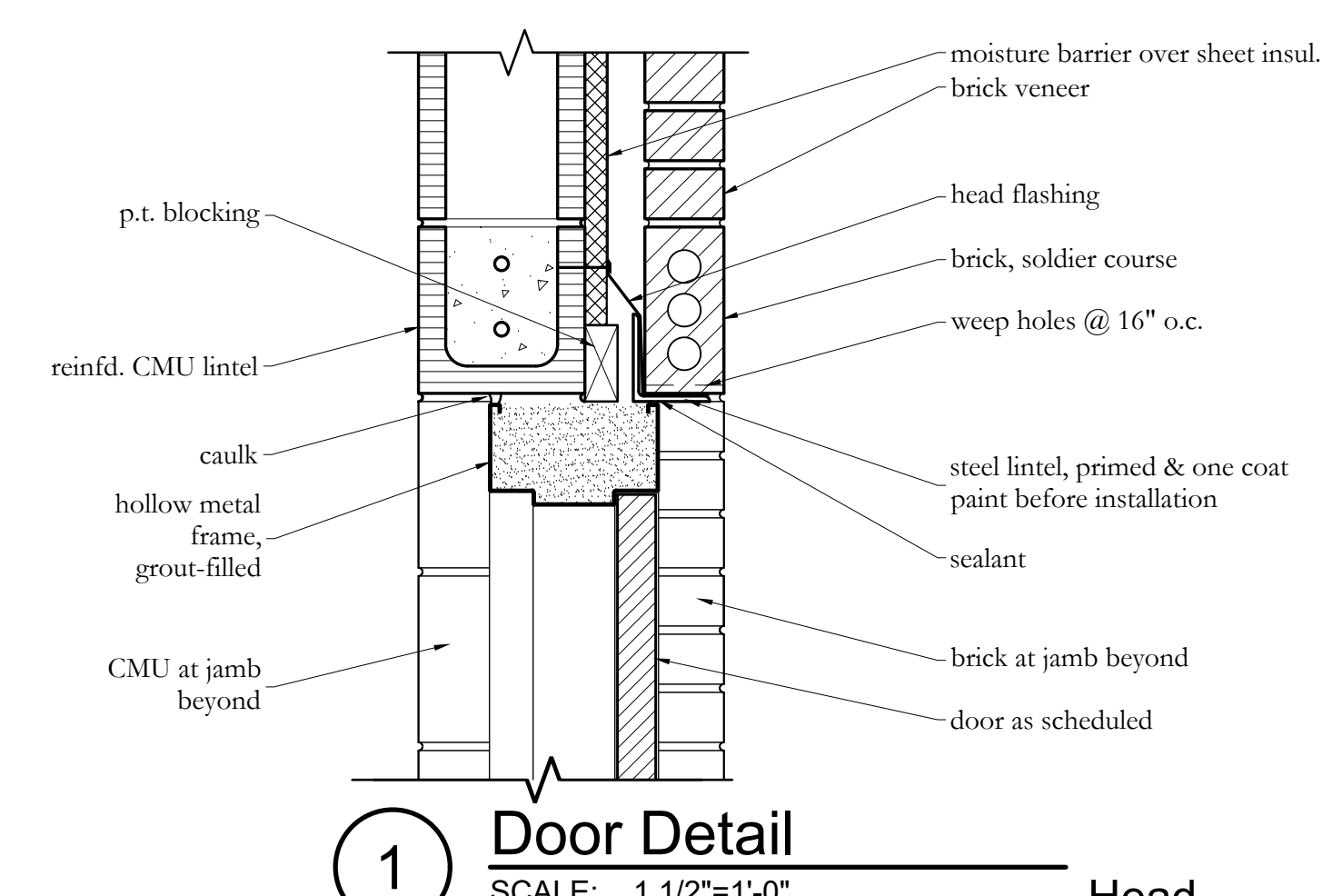
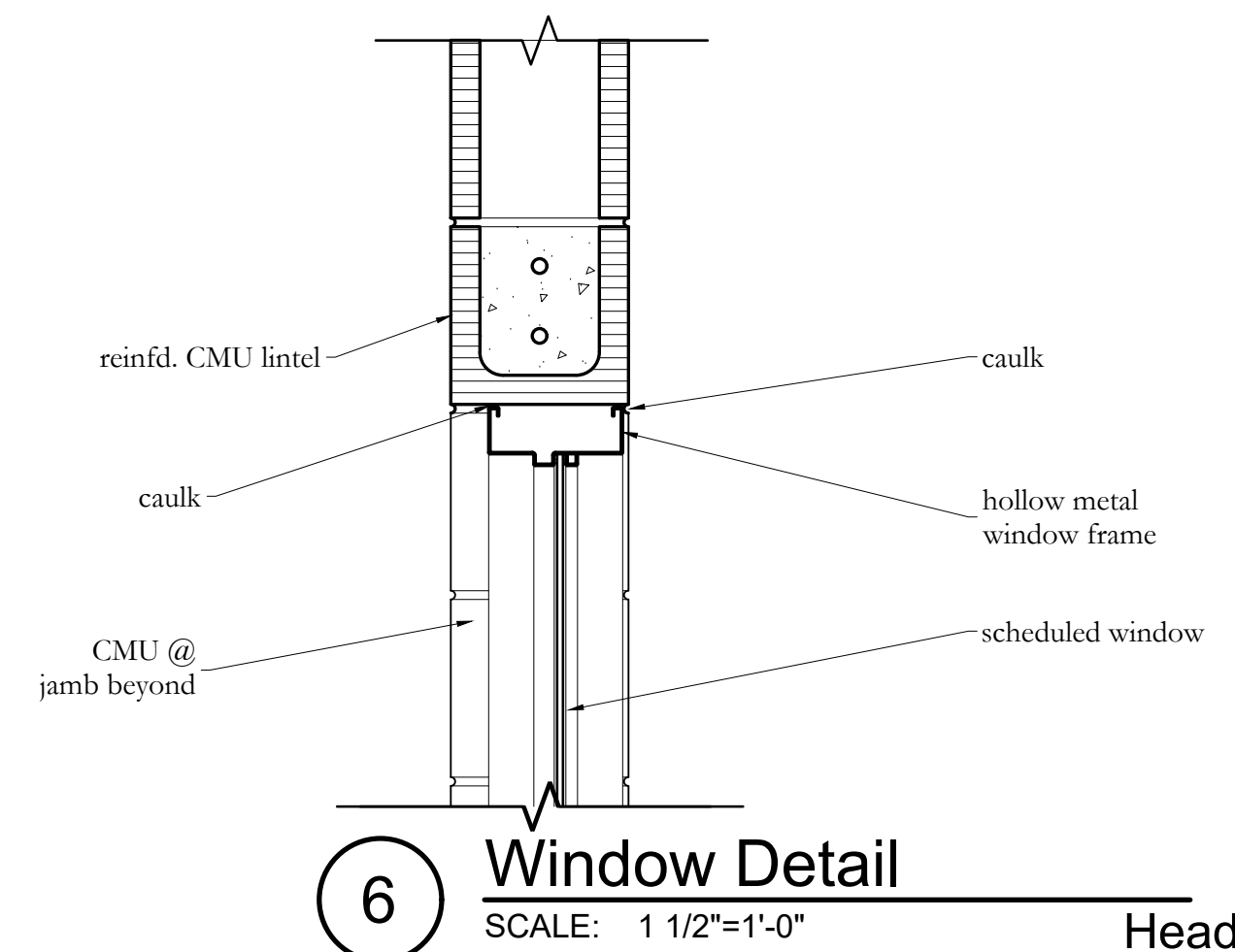
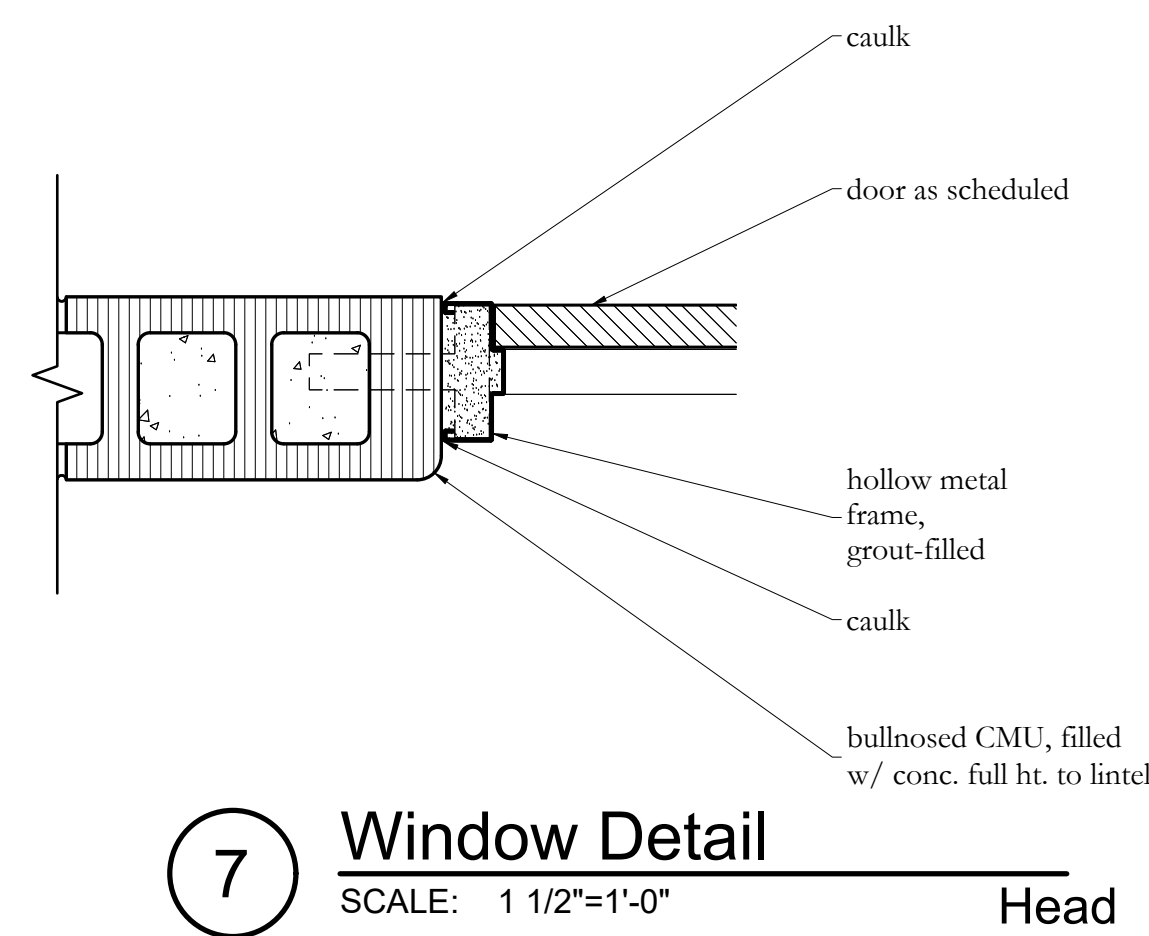
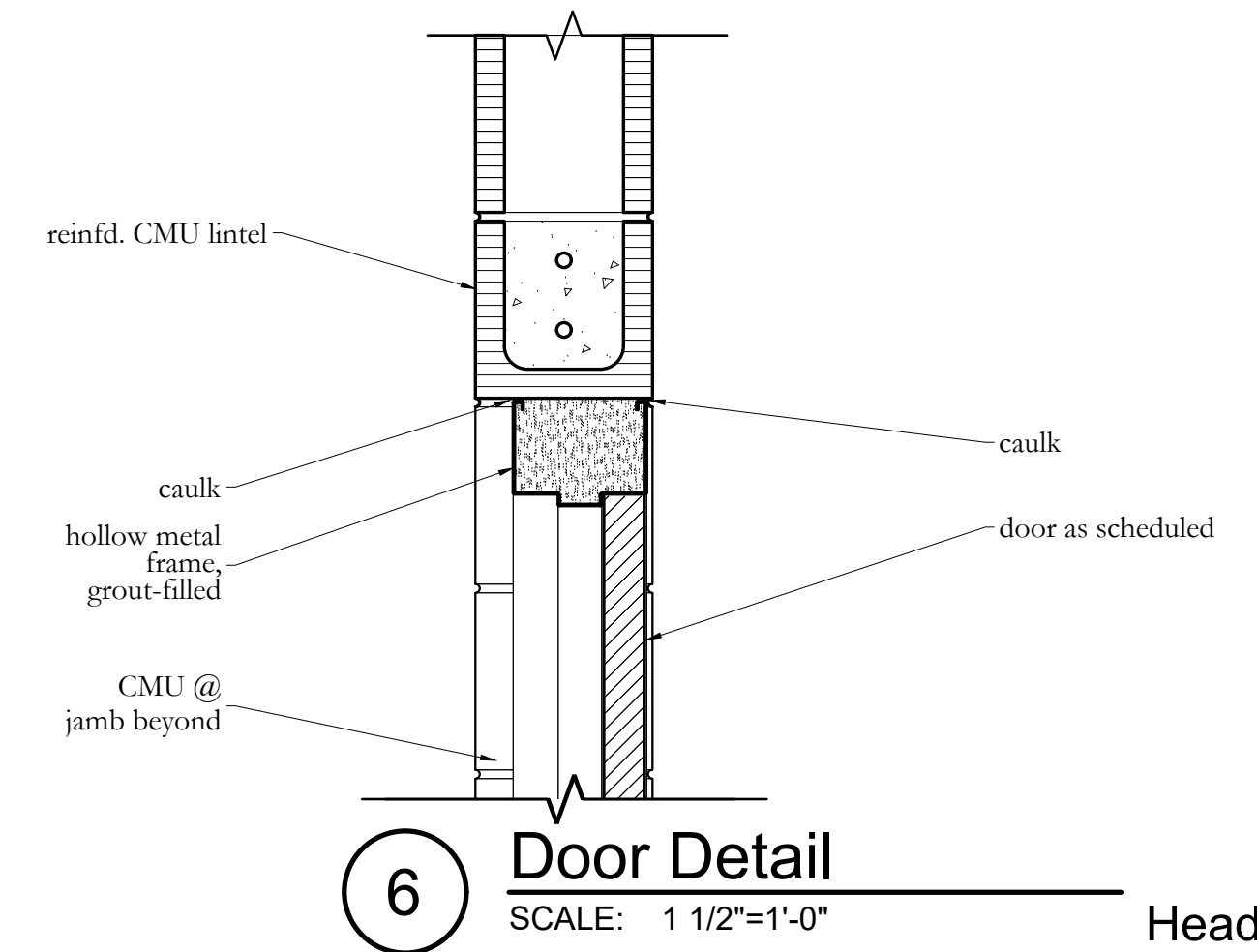
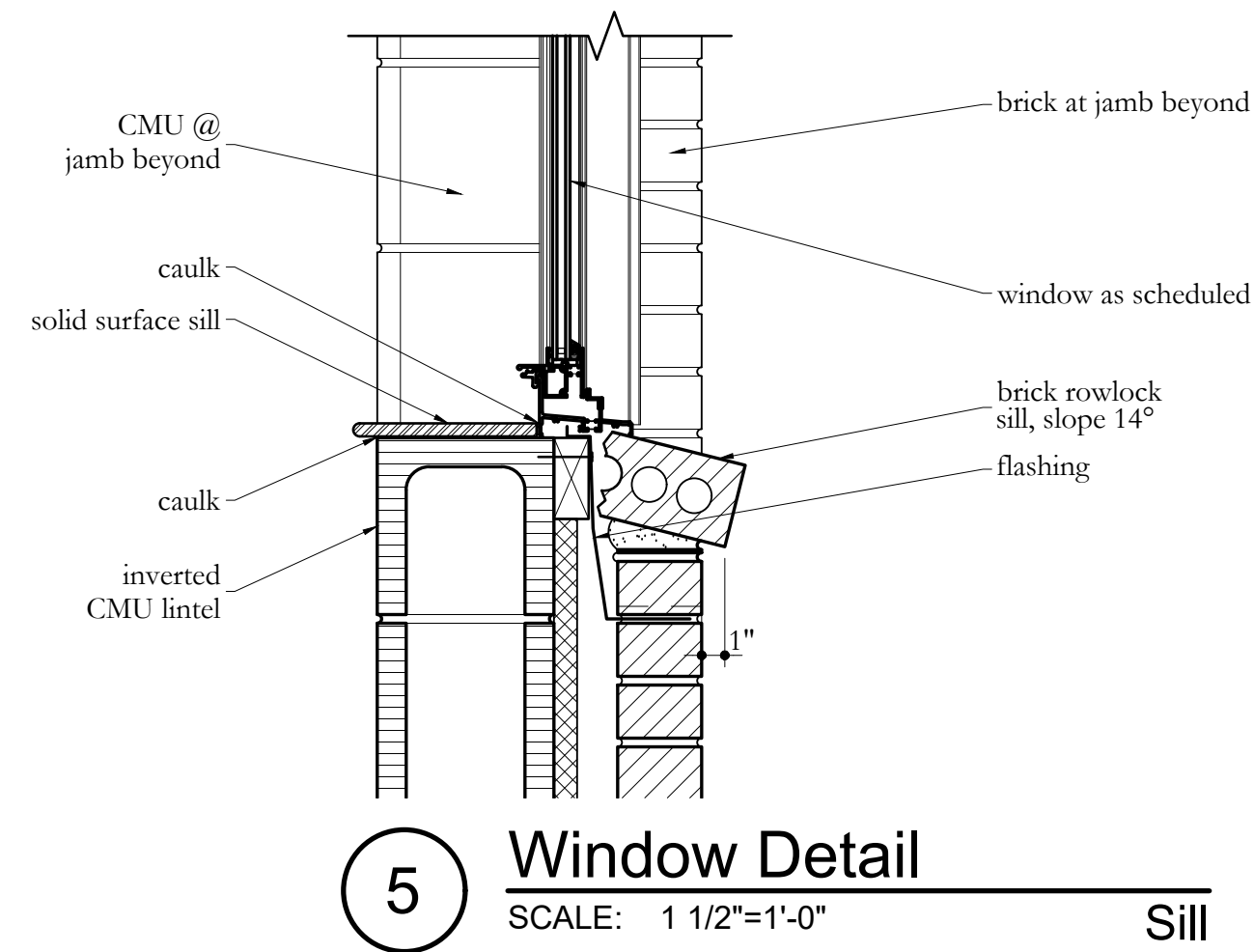
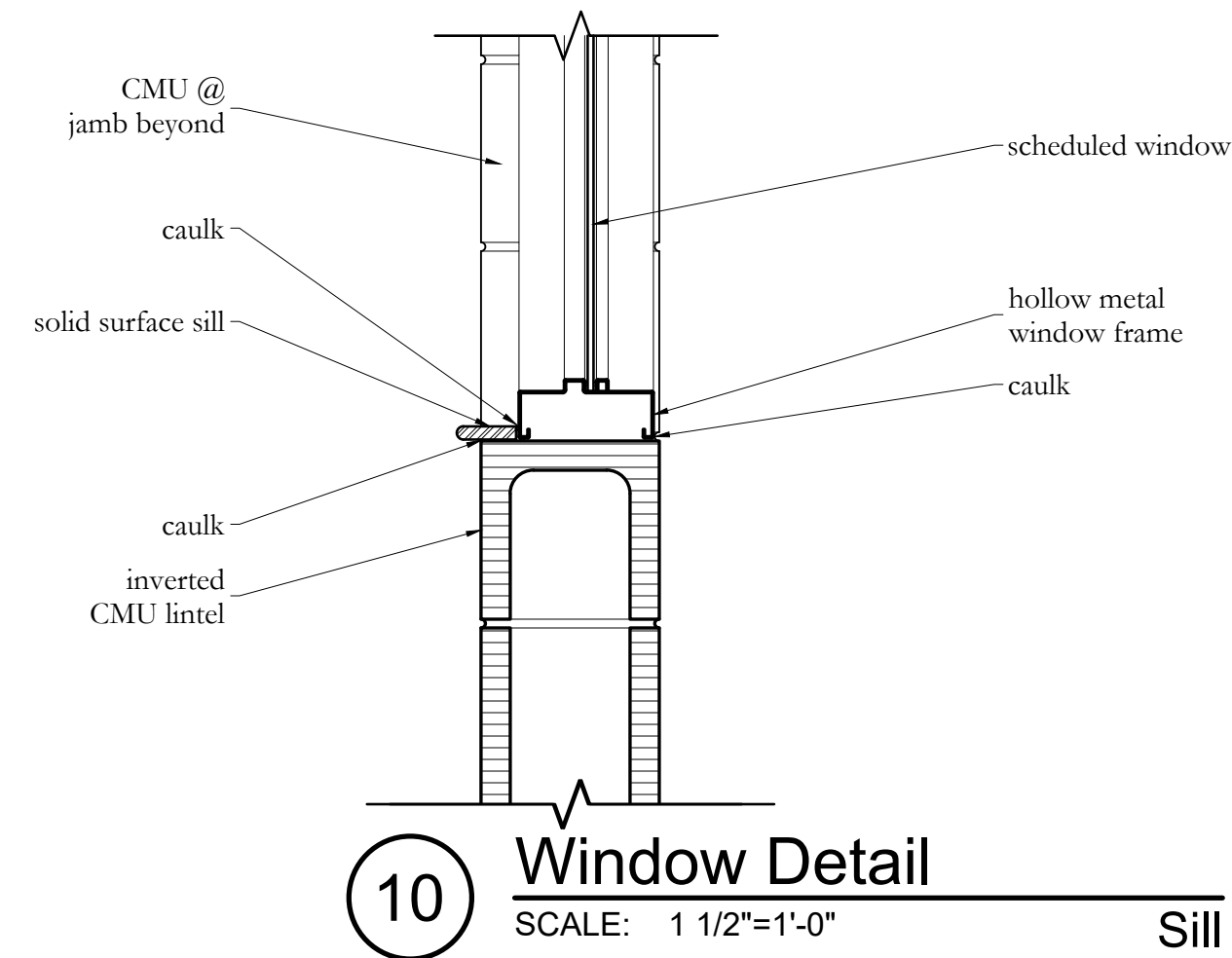
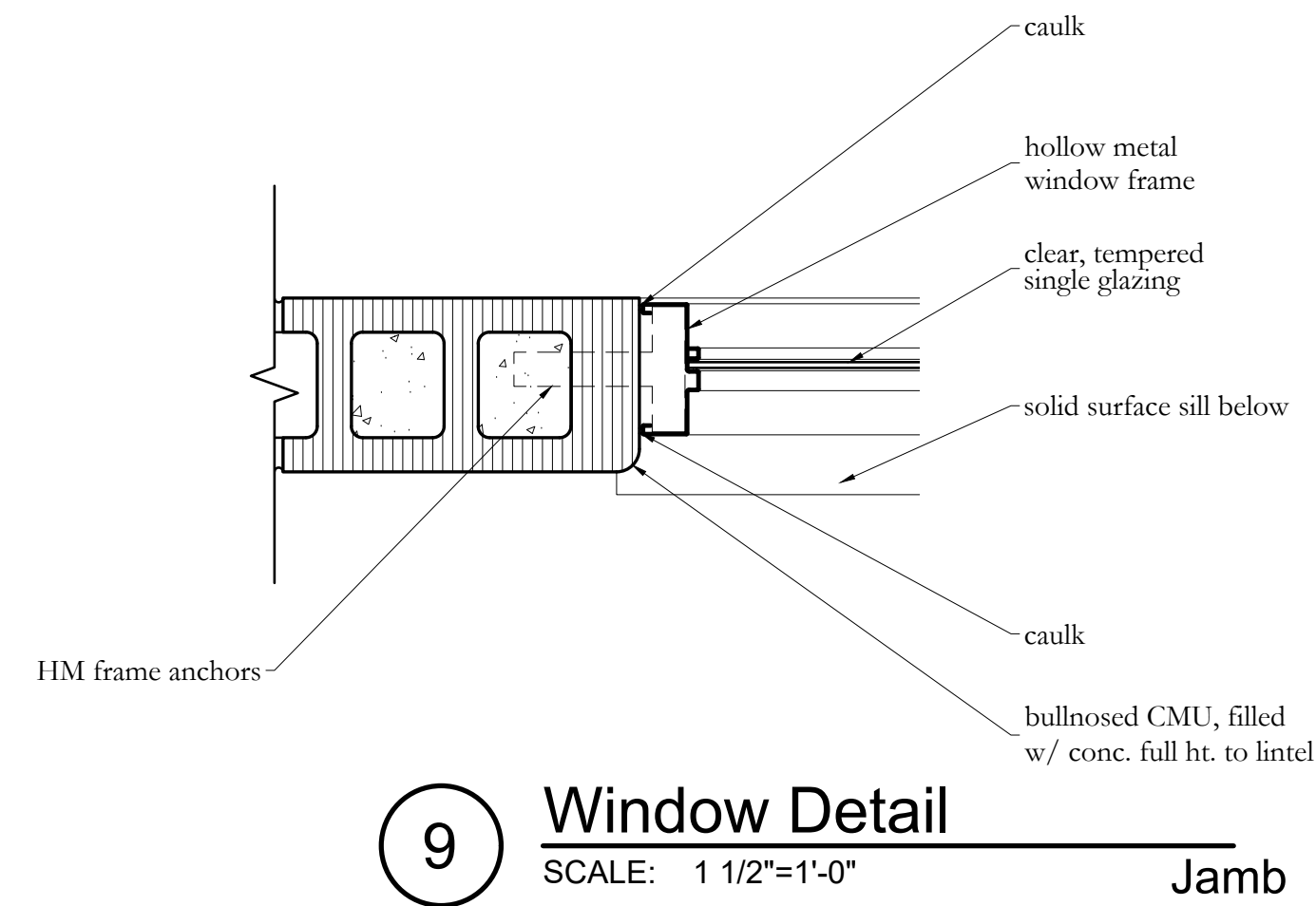
Frame Types

SC - sealed concrete VCT - vinyl composition tile C - carpet EVT - engineered vinyl tile VB - vinyl base	CMUP - concrete masonry unit - paint CMU - concrete masonry unit - no paint AWC - acoustical wall covering CT - ceramic tile PT - porcelain tile	--- - no work required GBP - gypsum board - paint GB - gypsum board - no paint MGBP - moisture resistant gypsum board - paint PWP - plywood - paint	PF - polymer flooring VB - vinyl base W - wood base									
ROOM #	ROOM NAME	FLOOR	BASE	WALLS				CEILING		WAINS.	HEIGHT	REMARKS
				NORTH	SOUTH	EAST	WEST	TYPE	HEIGHT			
100	Corridor	EVT	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
101	Electrical	SC	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
102	Mechanical	SC	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
103	Storage	EVT	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
104	Janitor	EVT	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
105	Science Lab	EVT	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
106	Women	EVT	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
107	Men	EVT	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
108	Office	C	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
109	Practice	EVT	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
110	Uniforms	EVT	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	
111	Band Room	C	VB	CMUP	CMUP	CMUP	CMUP	see Refl. Ceiling Plan	---	---	---	GBP on framing above CMU wall

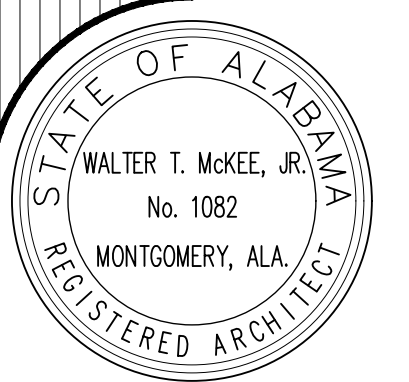
SHEET NO. :

A3.0





a
Science and Band Building
at
Vina High School
for the
Franklin County Board of Education
Russellville, Alabama



MCKEE and ASSOCIATES
ARCHITECTURE and INTERIOR DESIGN
631 SOUTH HULL STREET MONTGOMERY, ALABAMA 36104 334.834.9933 mckeeassoc.com

SHEET TITLE : Door and Window Details

JOB NO. : 18-144

DRAWN BY :

DATES : 7 September 2018

SHEET NO. : A3.1



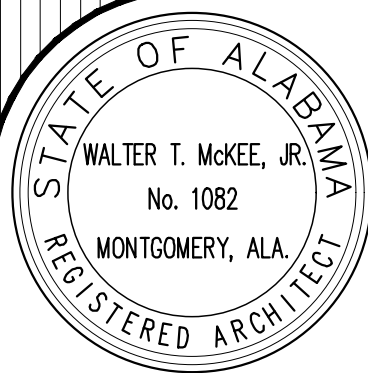
Science and Band Building

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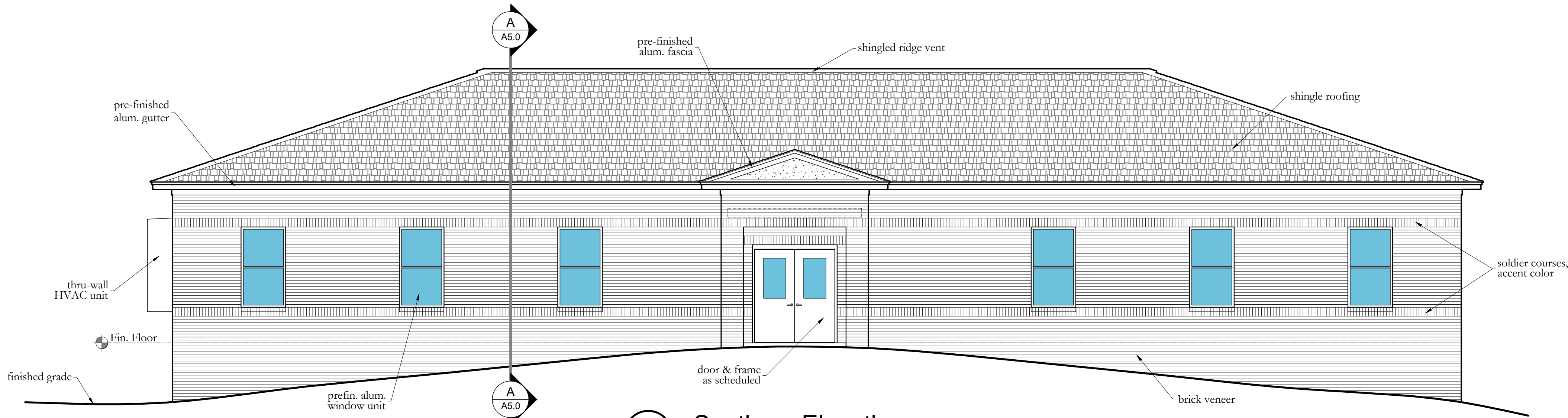
SHEET TITLE : Exterior Elevations

JOB NO. : 18-144

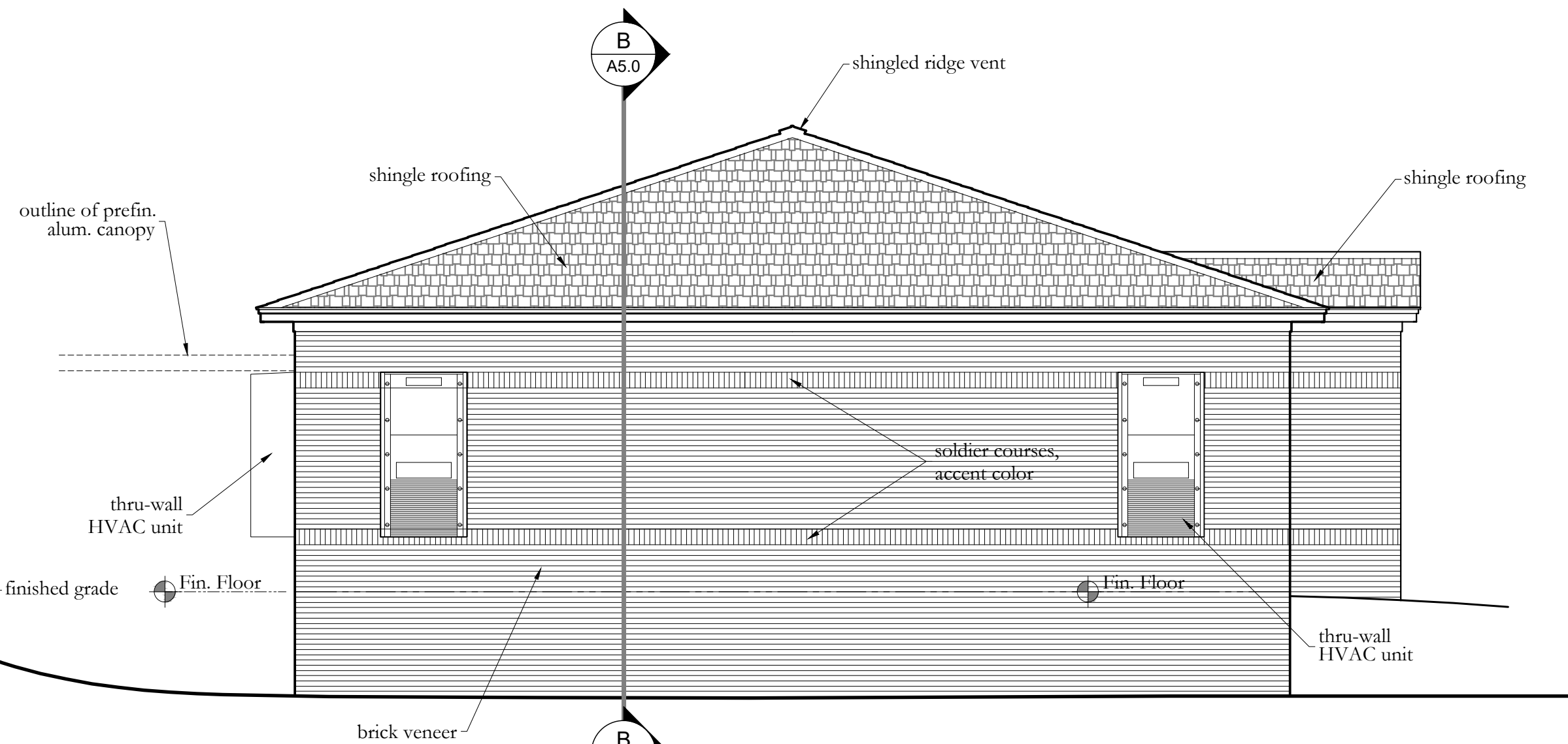
DRAWN BY :

DATES : 7 September 2018

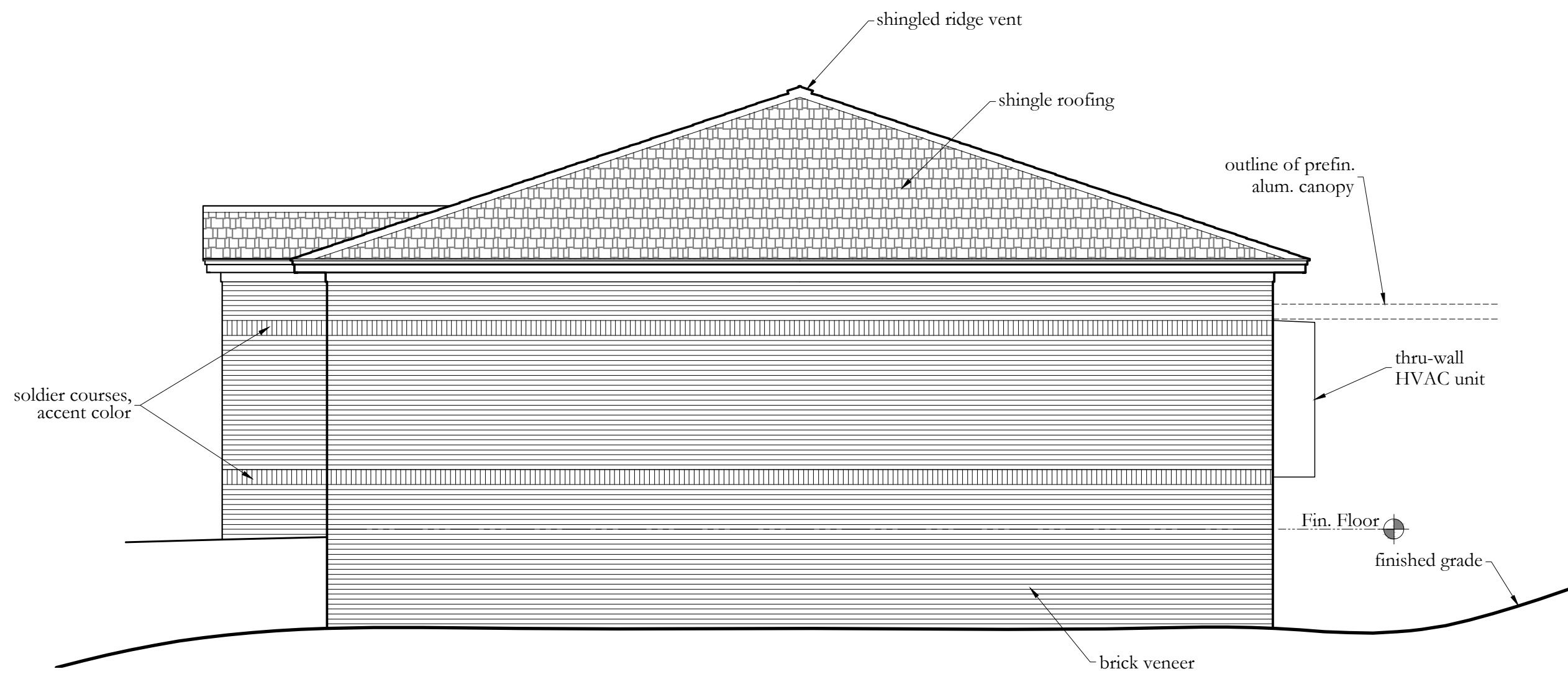
SHEET NO. : **A4.0**



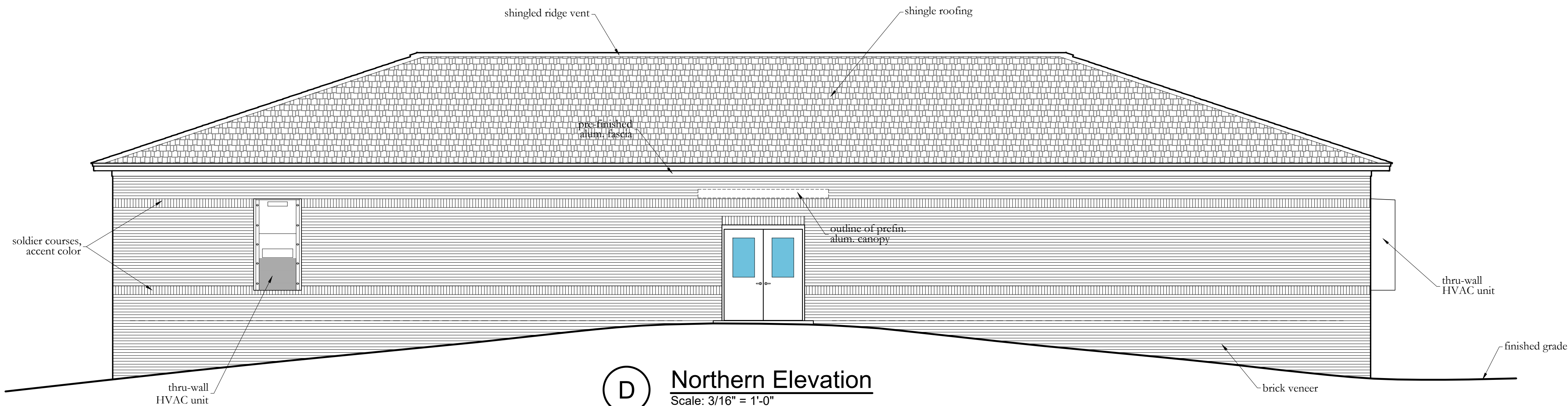
A Southern Elevation
Scale: 3/16" = 1'-0"



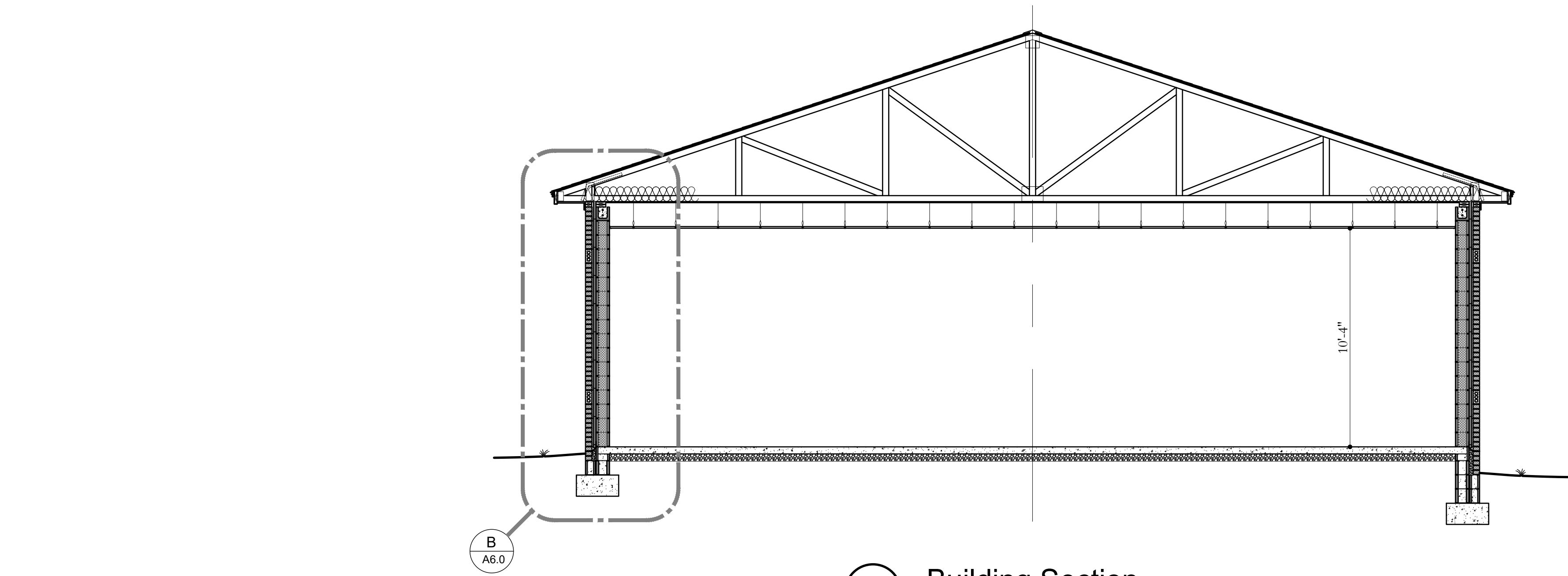
B Western Elevation
Scale: 3/16" = 1'-0"



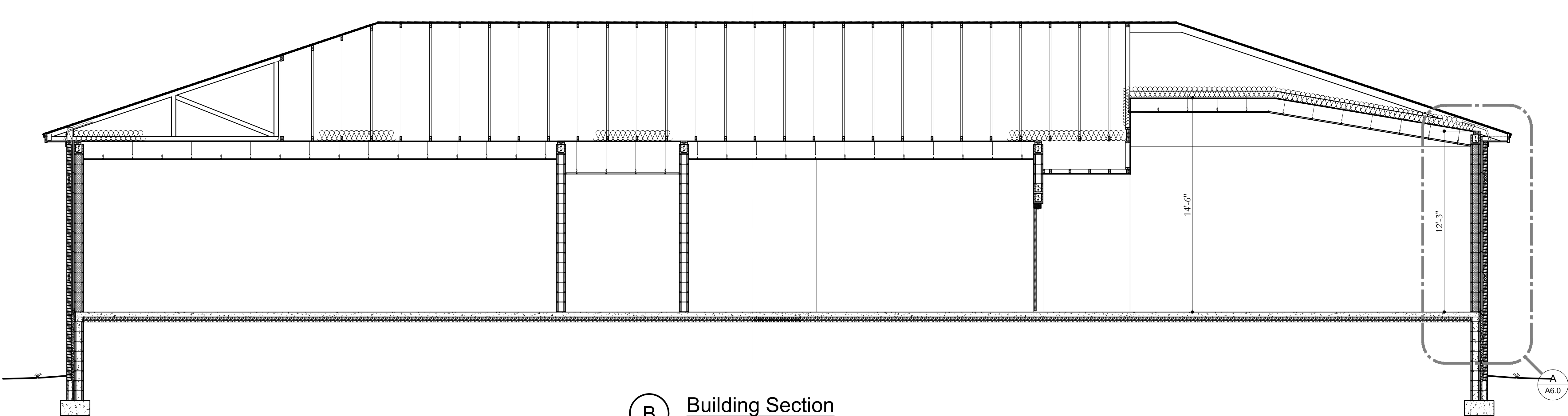
C Eastern Elevation
Scale: 3/16" = 1'-0"



D Northern Elevation
Scale: 3/16" = 1'-0"



A Building Section
Scale: 1/4" = 1'-0"



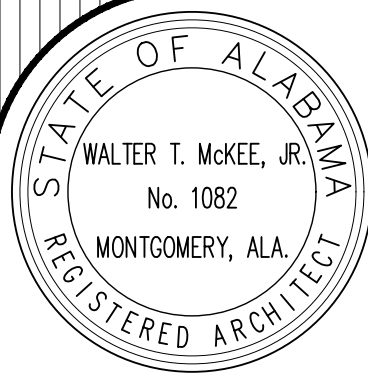
B Building Section
Scale: 1/4" = 1'-0"

BUILDING SECTION LEGEND	
SYMBOL	DESCRIPTION
<CMUP>	CONCRETE MASONRY UNIT - PAINT
<CMU>	CONCRETE MASONRY UNIT - NO PAINT
<MWP>	METAL WALL PANELS
<GBP>	GYPSUM BOARD - PAINT
<GB>	GYPSUM BOARD - NO PAINT
<IGBP>	IMPACT RESISTANT GYPSUM BOARD - PAINT
<IGB>	IMPACT RESISTANT GYPSUM BOARD - NO PAINT
<MGBP>	MOISTURE RESISTANT GYPSUM BOARD - PAINT
<MGB>	MOISTURE RESISTANT GYPSUM BOARD - NO PAINT
<GR1>	METAL GUARD RAIL - PAINT
<HR1>	METAL HAND RAIL - PAINT
<BG1>	BASKETBALL GOAL - FORWARD FOLD
<BG2>	BASKETBALL GOAL - SIDE FOLD
<BG3>	BASKETBALL GOAL - PORTABLE
<WP>	WALL PADS
<TGS>	TELESCOPIC GYMNASIUM SEATING
<MO>	MASONRY OPENING
<CO>	CASED OPENING
<AP>	ACCOUSTICAL WALL PANELS
<RAWP>	RADIATED ACCOUSTICAL WALL PANELS
<AWC>	ACCOUSTICAL WALL COVERING
<EDP>	EXPOSED DUCTWORK - PAINT
<ED>	EXPOSED DUCTWORK - NO PAINT
<ESP>	EXPOSED STRUCTURE - PAINT
<ES>	EXPOSED STRUCTURE - NO PAINT
<PLP>	PLASTIC LAMINATE PANELS
<SGS>	SPECIATLY SUSPENDED GRID SYSTEM "CLOUD"



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McKee and Associates
ARCHITECTURE and INTERIOR DESIGN
631 SOUTH HULL STREET MONTGOMERY, ALABAMA 36104 334.834.9933 mckeeassoc.com



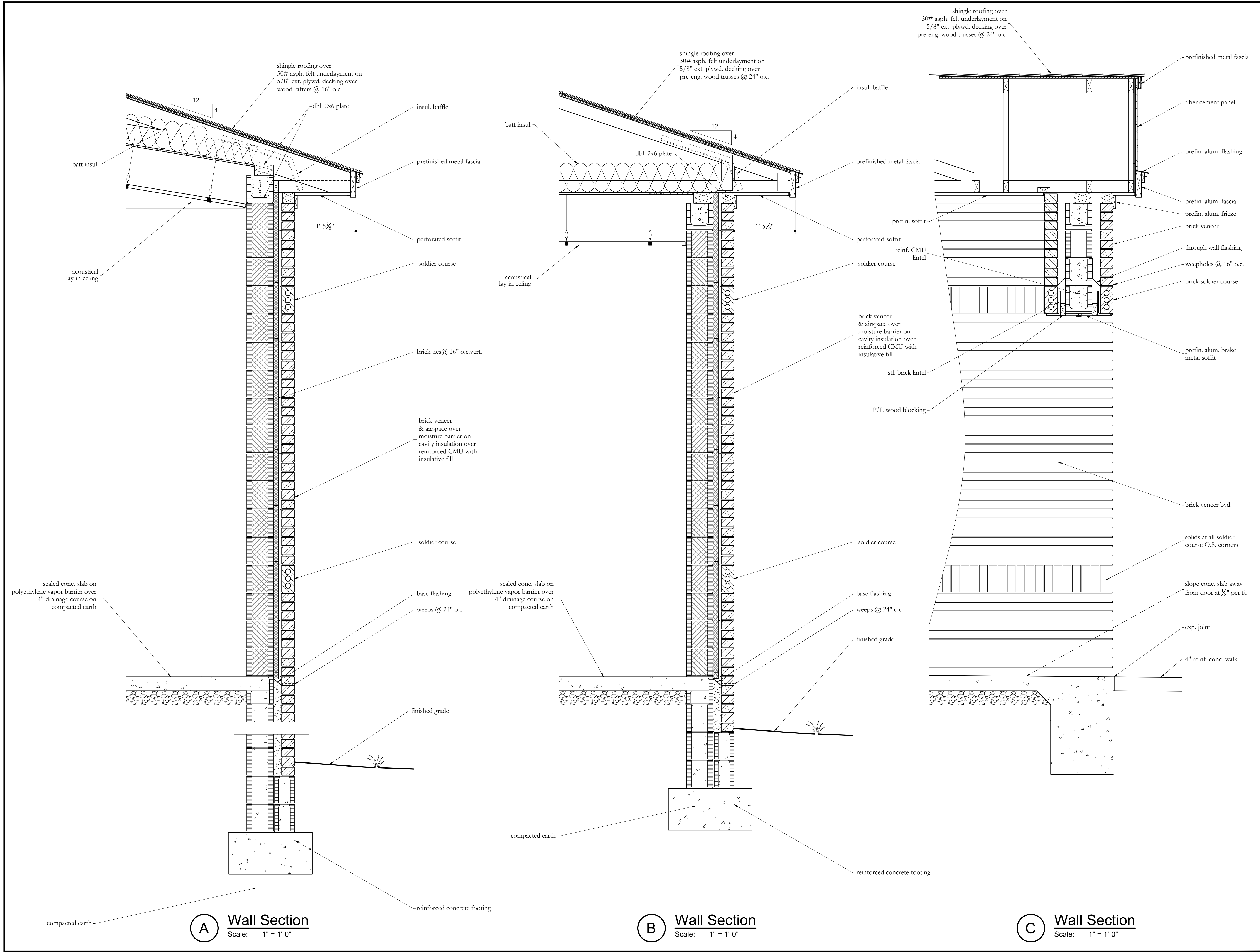
SHEET TITLE : Building Sections

JOB NO. : 18-144

DRAWN BY :

DATES : 7 September 2018

SHEET NO. : **A5.0**



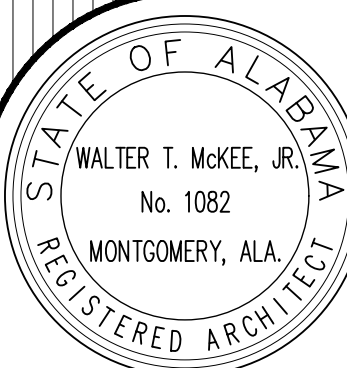


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SHEET TITLE : Wall Sections

JOB NO. : 18-144

DRAWN BY :

DATES : 7 September 2018

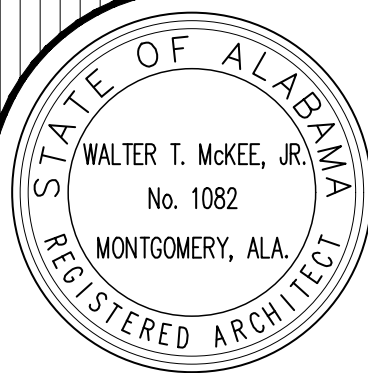
SHEET NO. : **A6.0**



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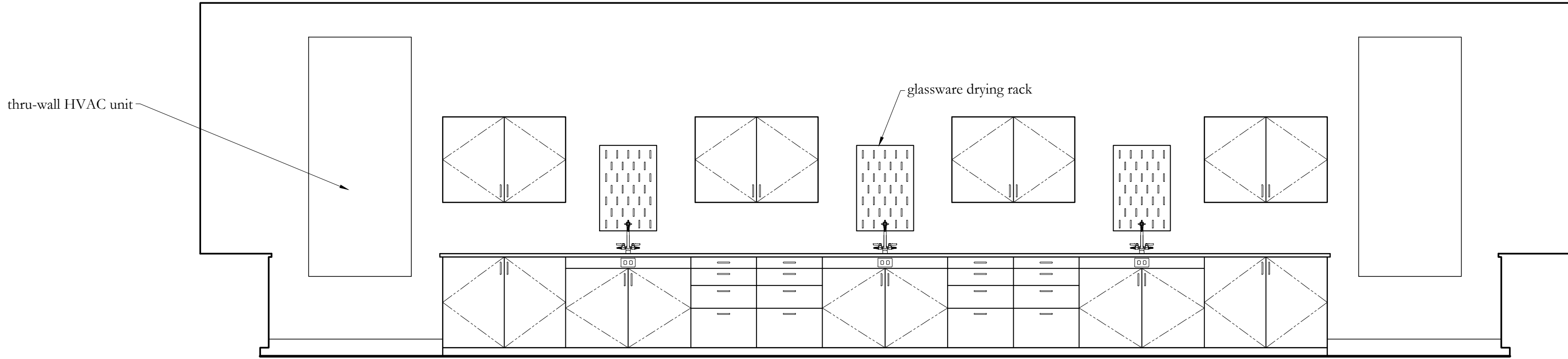
SHEET TITLE : Science Lab Casework Elevations

JOB NO. : 18-144

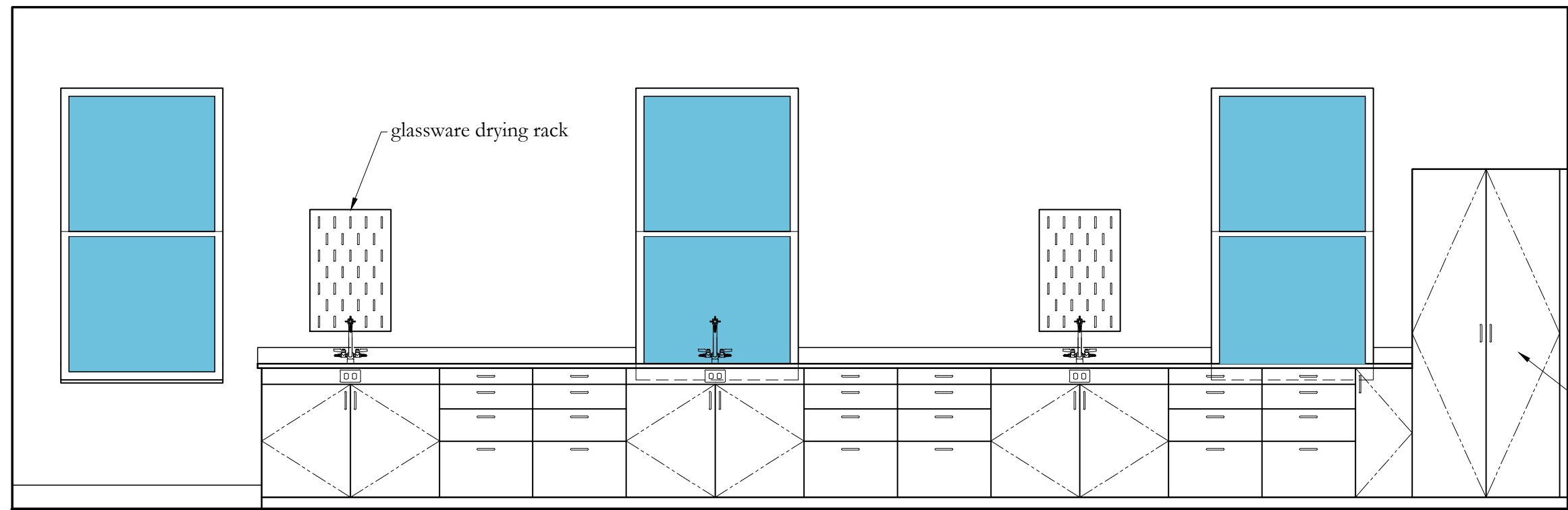
DRAWN BY :

DATES : 7 September 2018

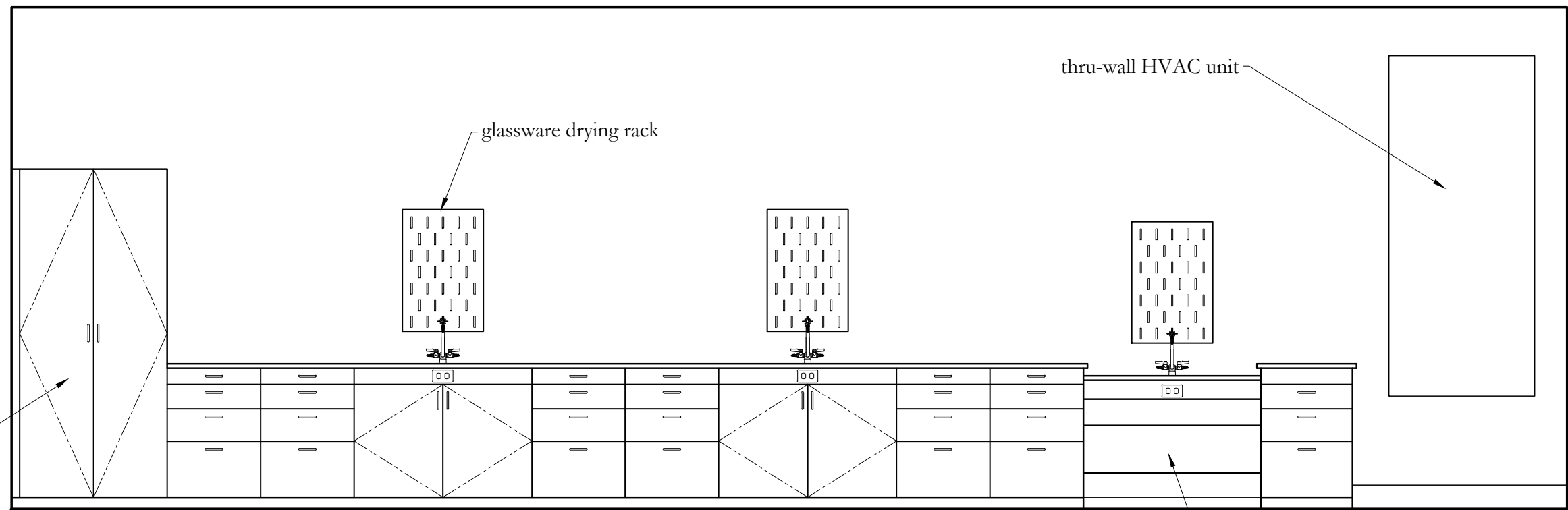
SHEET NO. : **A7.0**



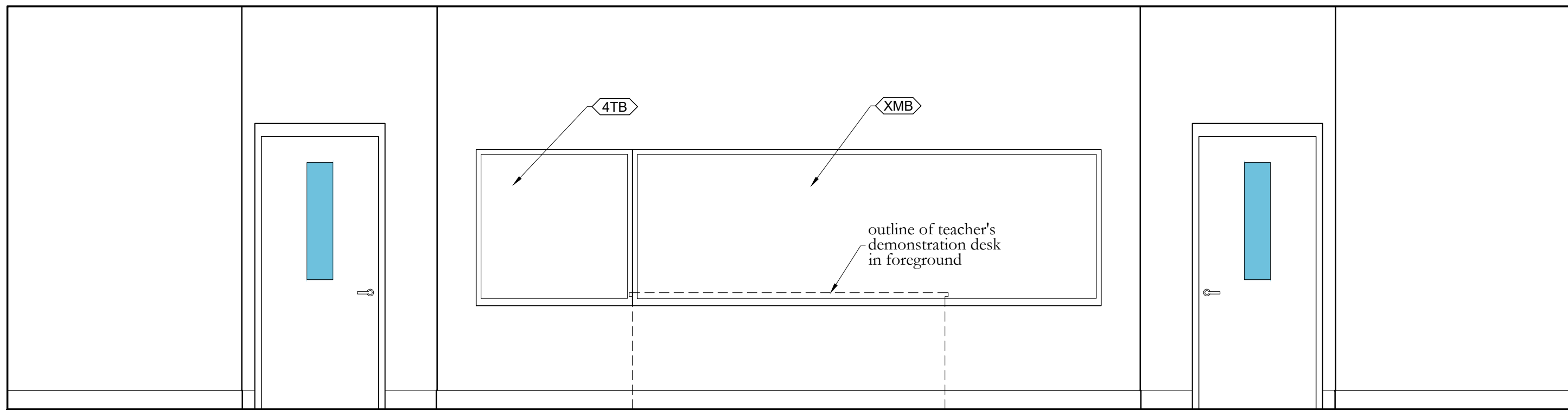
A Western Elevation
Scale: 3/8" = 1'-0"



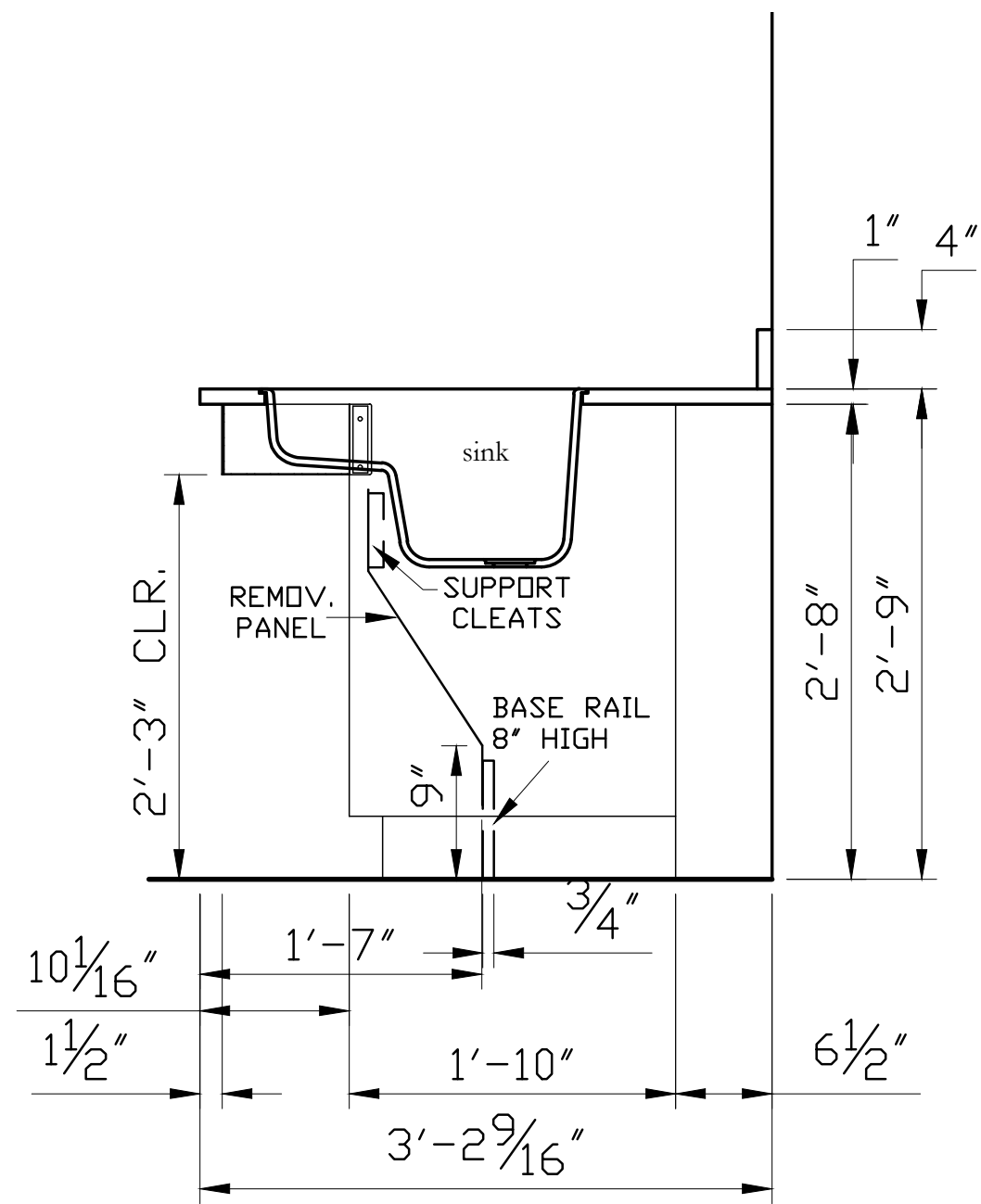
B Southern Elevation
Scale: 3/8" = 1'-0"



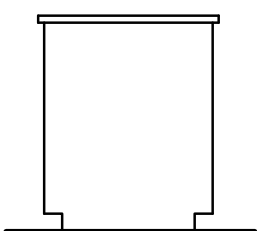
C Northern Elevation
Scale: 3/8" = 1'-0"



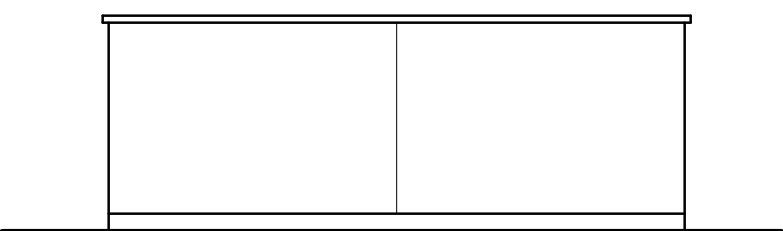
D Eastern Elevation
Scale: 3/8" = 1'-0"



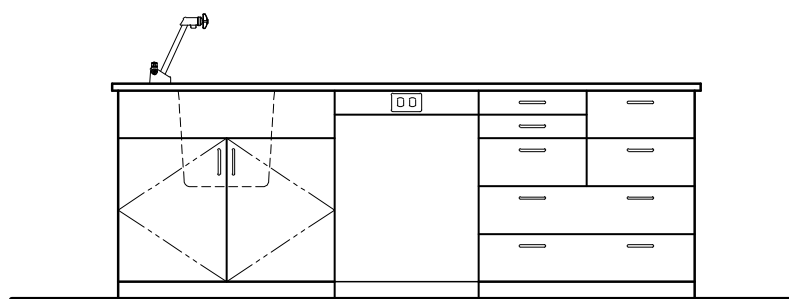
1 H.C. Sink Station
Scale: 1" = 1'-0"



E Teacher's Desk End Elev.
Scale: 3/8" = 1'-0"



F Teacher's Desk Rear Elevation
Scale: 3/8" = 1'-0"



G Teacher's Desk Front Elevation
Scale: 3/8" = 1'-0"

<EWC>	Electric Water Cooler (see detail A9.0)
<FEC>	Fire Extinguisher Cabinet (see detail A9.0)
<CU>	condensing unit (see mechanical)
<EWP>	Exterior Wall Pack (see Mechanical)
<CEP>	CONCRETE EQUIPMENT PAD (SEE DETAIL A9.1)
<RA>	Return Air (see Mechanical)
<EW>	Eye Wash
<HGR>	Metal Handrail / Guardrail - Paint
<GR>	Metal Guardrail - Paint
<PSM>	Ceiling Recessed Projection Screen - Motorized
<PS>	Ceiling Recessed Projection Screen
<OP>	Ceiling Mounted Projector; provided by Owner, installed by Contractor
<PSC>	Ceiling Mounted Projection Screen; provided by Owner, installed by Contractor
<XMB>	12'-0" MARKER BOARD
<4TB>	4'-0" TACK BOARD
<DIS>	Disappearing Stair

COMcheck Software Version 4.1.0.0
Envelope Compliance Certificate

Project Information

Energy Code: 90.1 (2013) Standard
Project Title: A Science & Band Building for Vina High School
Location: Vina, Alabama
Climate Zone: 3a
Project Type: New Construction
Vertical Glazing / Wall Area: 4%
Performance Sim. Specs: EnergyPlus 8.1.0.009 (EPW: USA_AL_Huntsville.Intl.AP-Jones.Field.723230_TMY3.epw)

Construction Site: Vina, AL 35593
Owner/Agent: Franklin County Board of Education
Russellville, AL 35653
Designer/Contractor: McKee and Associates Architects
631 South Hull Street
Montgomery, AL 36104
334 834 9933
mckee@mckeeassoc.com

Building Area	Floor Area
1-School/University : Nonresidential	4078

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor ₉₀
Floor 1: Slab-On-Grade-Unheated, [Bldg. Use 1 - School/University] (d)	277	---	---	0.730	0.730
Roof 1: Other Roof, [Bldg. Use 1 - School/University] (b)	4078	---	---	0.028	0.027
NORTH					
Exterior Wall 1 copy 1: Other Exterior Wall, Heat capacity 1.0, [Bldg. Use 1 - School/University] (b)	1105	---	---	0.061	0.089
Door 2: Other Door, Swinging, [Bldg. Use 1 - School/University]	42	---	---	0.410	0.700
EAST					
Exterior Wall 1 copy 1: Other Exterior Wall, Heat capacity 1.0, [Bldg. Use 1 - School/University] (b)	485	---	---	0.061	0.089
SOUTH					
Exterior Wall 1: Other Exterior Wall, Heat capacity 1.0, [Bldg. Use 1 - School/University] (b)	1105	---	---	0.061	0.089
Window 1: Other Window-Operable, Perf. Specs.: Product ID DH-C-70., SHGC 0.25, PF 0.20, VT 0.35, [Bldg. Use 1 - School/University] (c)	120	---	---	0.290	0.350
Door 1: Other Door, Swinging, [Bldg. Use 1 - School/University]	42	---	---	0.410	0.700
WEST					
Exterior Wall 1 copy 2: Other Exterior Wall, Heat capacity 1.0, [Bldg. Use 1 - School/University] (b)	485	---	---	0.061	0.089

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) 'Other' components require supporting documentation for proposed U-factors.
(c) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.

Project Title: A Science & Band Building for Vina High School
Data filename: Z:\2018\18-144 A Science and Band Building at Vina High School\Record Documents\Final\Vina Science and Band Comcheck.cck
Report date: 10/02/18
Page 1 of 9

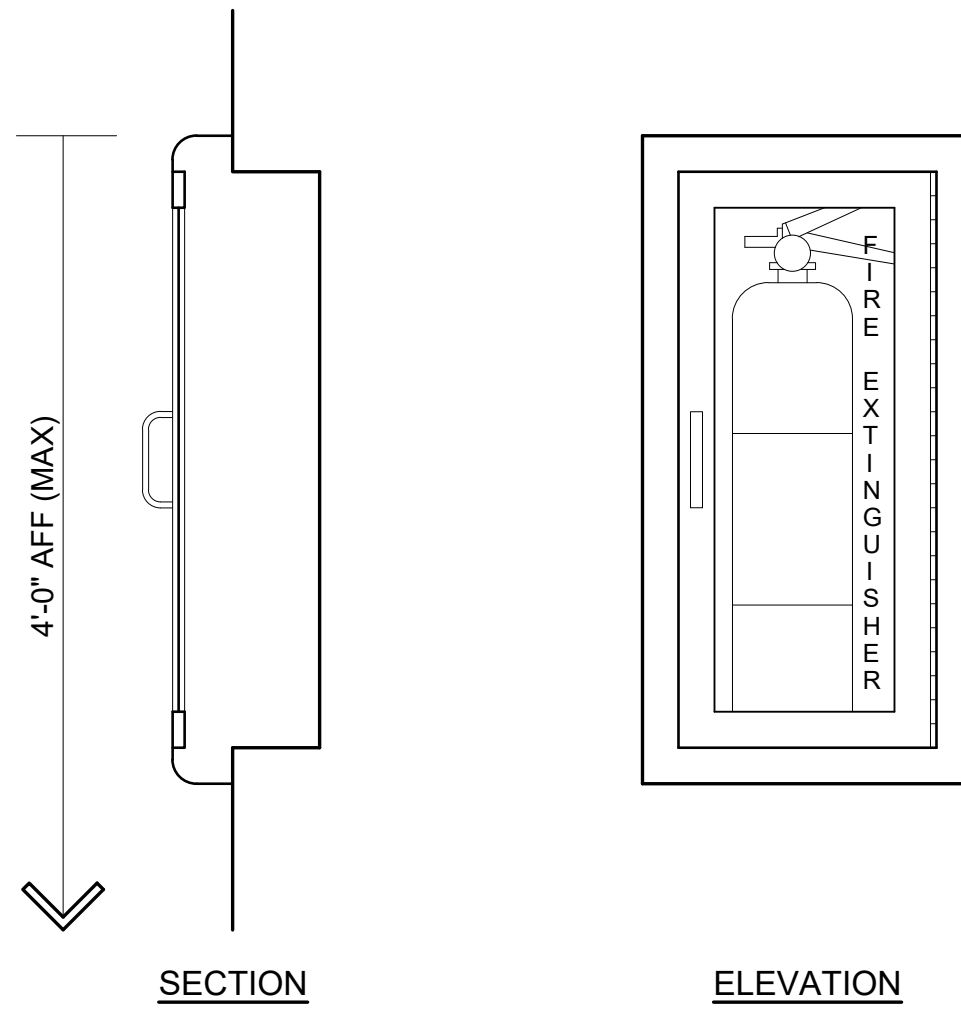
(d) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 1% better than code

Envelope Compliance Statement

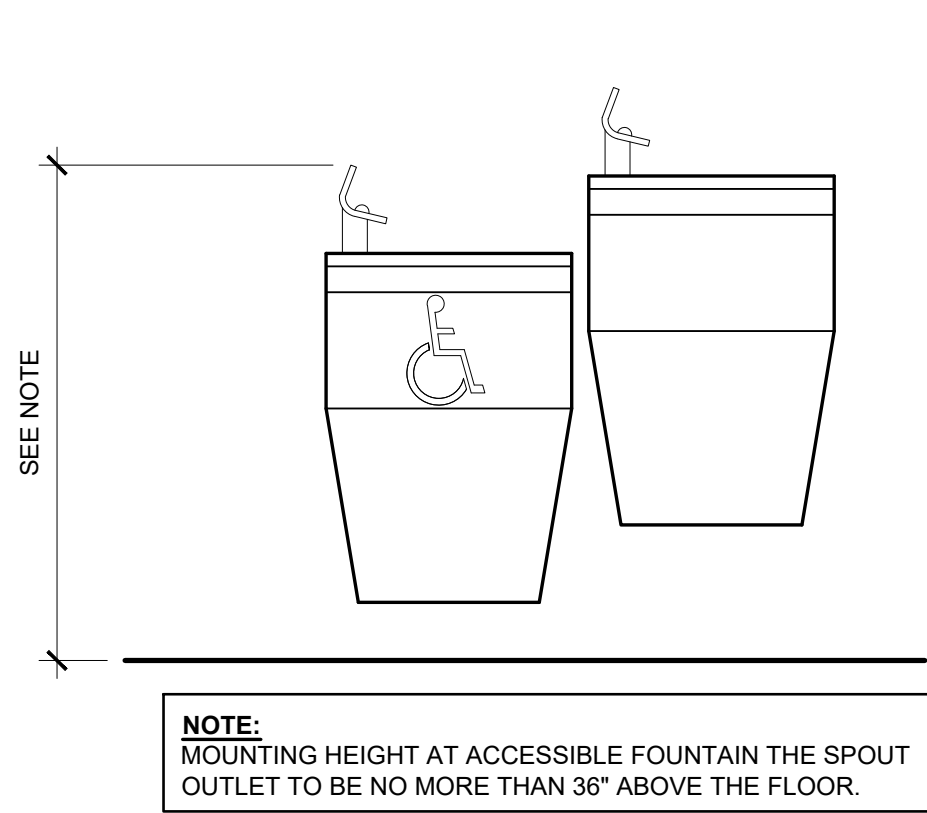
Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.0.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

WALTER T. MCKEE
ARCHITECT.
10/31/2018



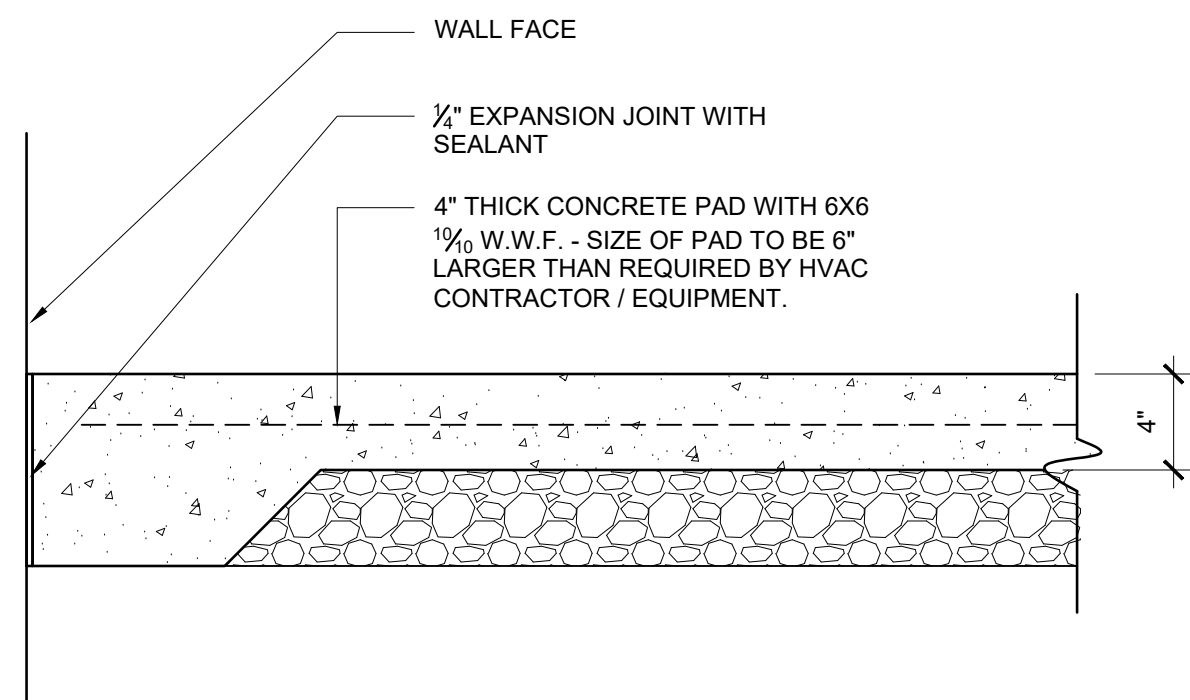
FIRE EXTINGUISHER CABINET (FEC)

SCALE: 1 1/2" - 1'-0"



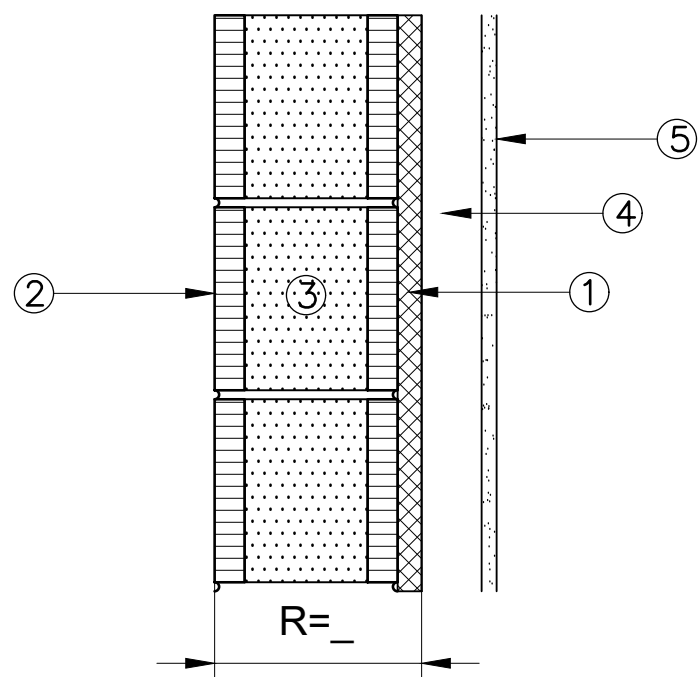
ELECTRIC WATER COOLER (EWC)

SCALE: 1 1/2" - 1'-0"



HVAC EQUIPMENT PAD (CEP)

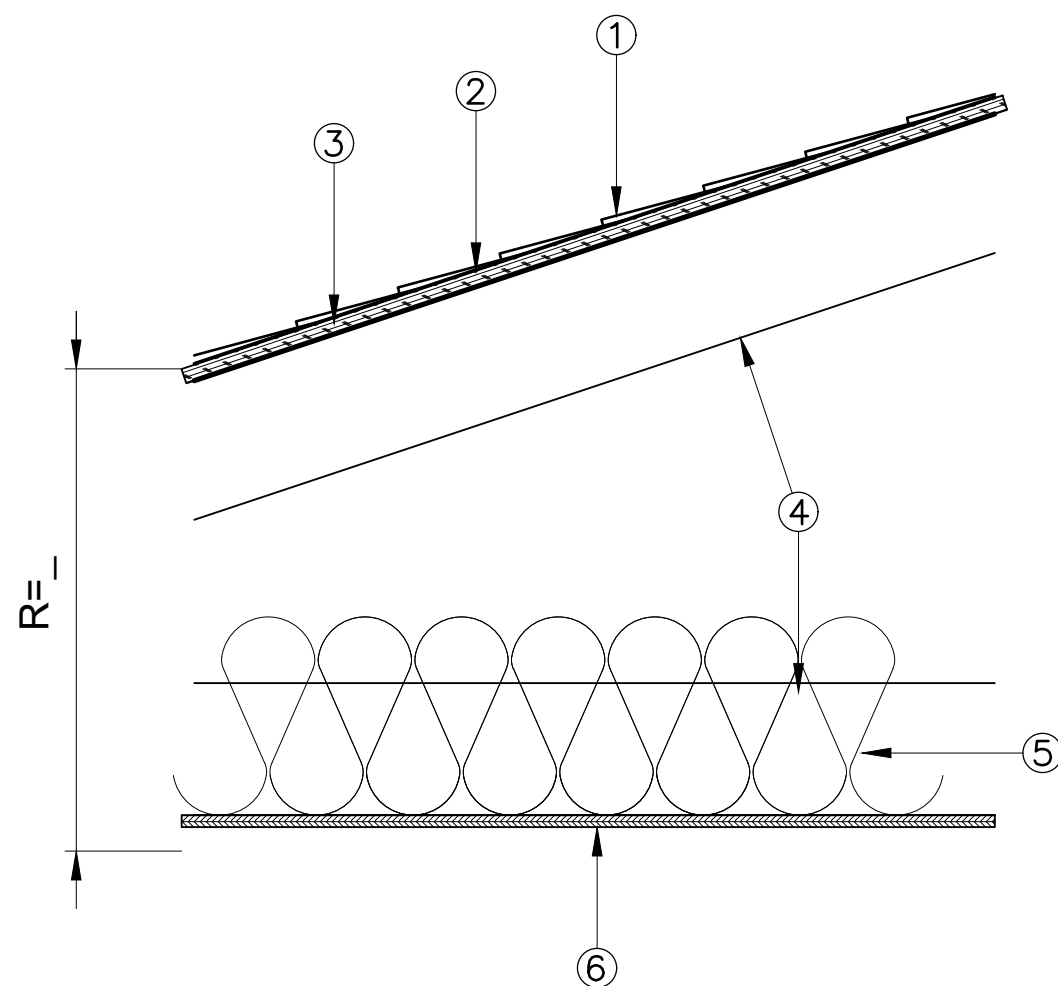
SCALE: 1 1/2" - 1'-0"



R-VALUE ENVELOPE ASSEMBLY @ WALL:

- 1 RIDGID INSULATION (1"=5.0, 2"=10.0, 3"=15.0)
R-VALUE 7.5 MIN.
SEE SPECS
- 2 8" CMU (105 DENSITY)
R-VALUE 2.31 MIN.
SEE SPECS
- 3 FOAM INSULATION IN PLACE
R-VALUE 6.69 MIN.
SEE SPECS
- 4 2 1/2" STUD FRAMING
- 5 5/8" GYPBOARD WALL FINISH
R-VALUE .45 MIN.
SEE SPECS

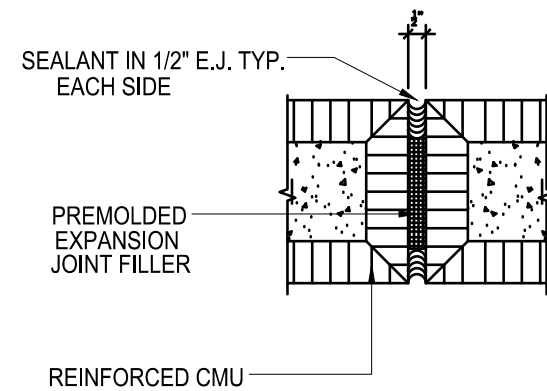
TOTAL R-VALUE ENVELOPE: 16.50
TOTAL U-VALUE ENVELOPE: 0.061



R-VALUE ENVELOPE ASSEMBLY @ ROOF:

- 1 SHINGLES
SEE SPECS
- 2 UNDERLAYMENT
SEE SPECS
- 3 PLYWOOD DECKING
R-VALUE 0.62 MIN.
SEE SPECS
- 4 WOOD TRUSS/ ROOF FRAMING
SEE STRUCTURAL
- 5 BATT INSULATION
R-VALUE 34 MIN.
SEE SPECS
- 6 1/2" PLYWOOD CEILING
R-VALUE 0.45 MIN.
SEE SPECS

TOTAL R-VALUE ENVELOPE: 35.52
TOTAL U-VALUE ENVELOPE: 0.028



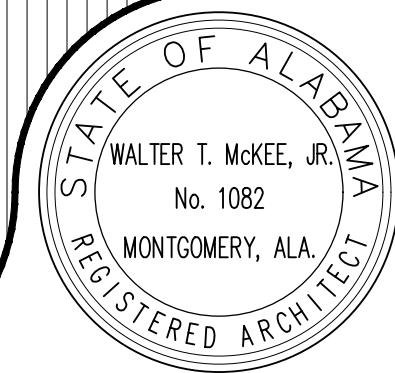
CMU CONTROL JOINT DETAIL (CCJ)

SCALE: 1 1/2" - 1'-0"

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ARCHITECTURE and INTERIOR DESIGN

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SHEET TITLE : Building Envelope
and
Miscellaneous Details

JOB NO. : 18-144

DRAWN BY :

DATES : 7 September 2018

SHEET NO. :

A9.0

Project Title: A Science & Band Building for Vina High School
Data filename: Z:\2018\18-144 A Science and Band Building at Vina High School\Record Documents\Final\Vina Science and Band Comcheck.cck
Report date: 10/02/18
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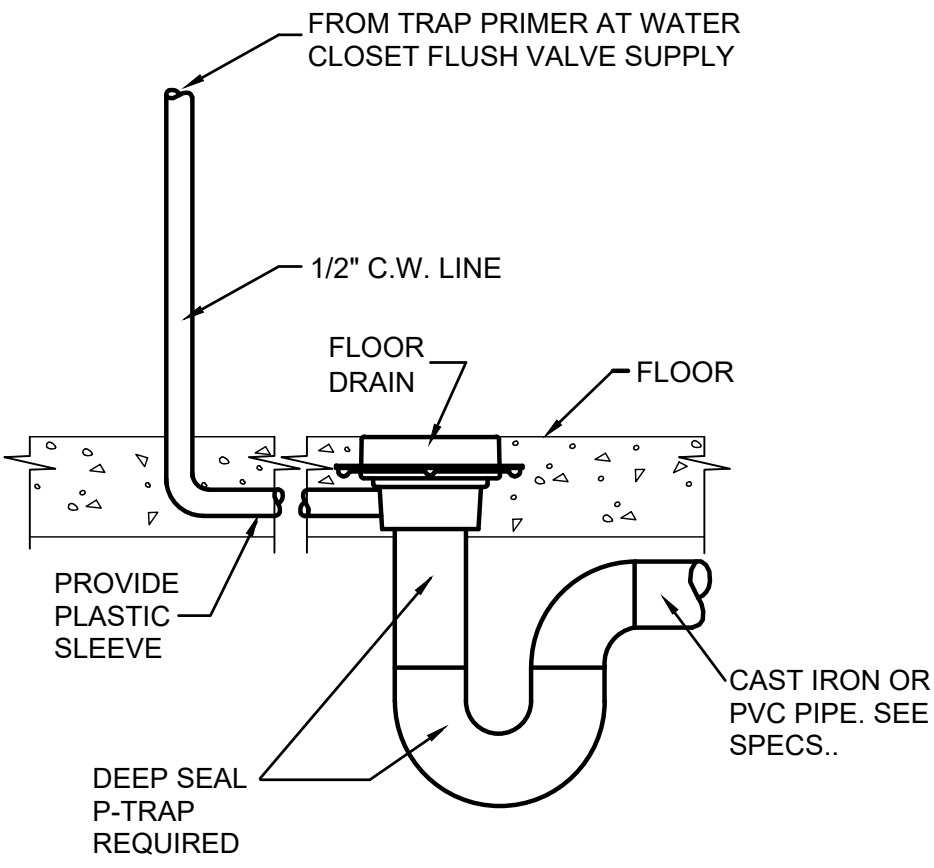
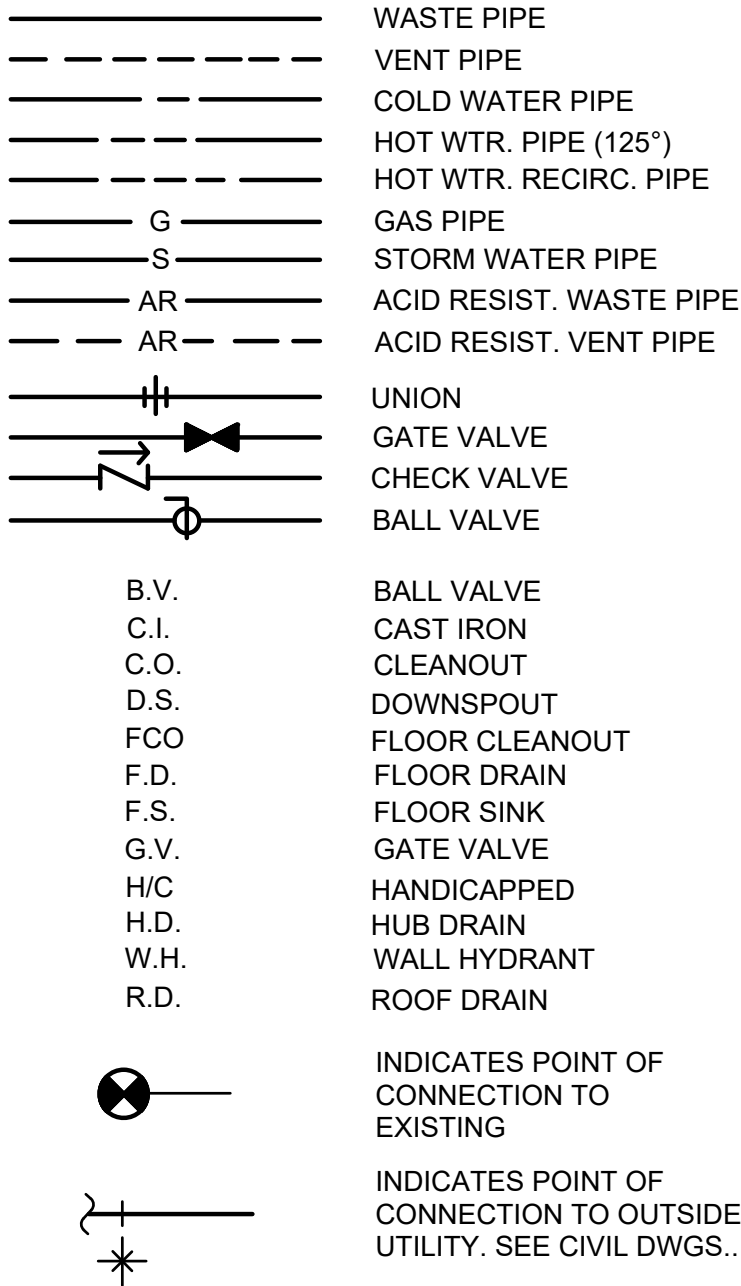
PLUMBING FIXTURE SCHEDULE					
NO.	FIXTURE	WASTE	C.W.	H.W.	REMARKS
P1	WATER CLOSET	3"	1"	—	FL. MTD. - REG.
P2	ADA WATER CLOSET	3"	1"	—	FL. MTD. - ADA
P3	ADA URINAL	2"	3/4"	—	WALL HUNG - ADA
P4	LAVATORY **	1 1/4"	1/2"	1/2"	WALL HUNG - REG.
P5	ADA LAVATORY **	1 1/4"	1/2"	1/2"	WALL HUNG - ADA
P6	MOP BASIN	3"	1/2"	1/2"	FL. MTD.
P7	SPLIT LEVEL EWC	1 1/2"	1/2"	—	WALL HUNG - HIGH/LOW
P8	SINK	1 1/2"	1/2"	1/2"	BY SCIENCE CLASSROOM FURNITURE PROVIDER

** PROVIDE A WATER TEMPERATURE LIMITING DEVICE EQUAL TO SYMMONS #5-210-CK (ASSE STD. 1070) WITH 1/2" TEMPERED WATER LINE TO FAUCET.

NOTES

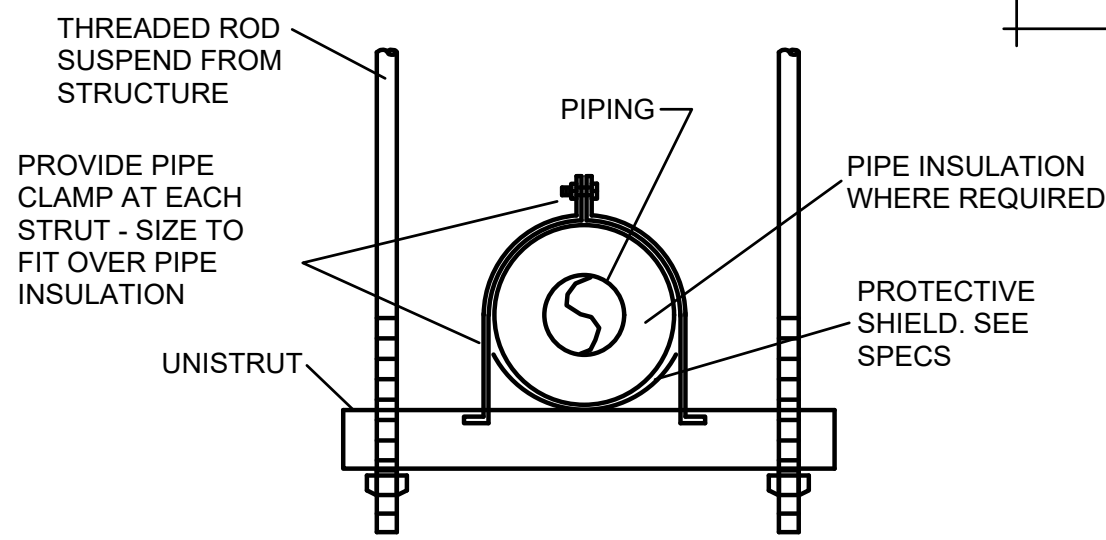
1. ROUGH WATER CLOSET AND URINAL FLUSH VALVE SO THAT THE FLUSH TUBE IS VERTICALLY STRAIGHT.
2. PROVIDE A DEEP SEAL P-TRAP FOR EACH FLOOR DRAIN AND HUB DRAIN.
3. PROVIDE A VACUUM BREAKER FOR EACH WALL HYDRANT AND HOSE BIBB.
4. RUN ALL WATER PIPING WITHIN BUILDING INSULATION ENVELOPE.
5. COORDINATE ALL PIPING RUNS WITH THE ELECTRICAL CONTRACTOR. DO NOT RUN PIPING OVER ELECTRICAL TRANSFORMERS, PANELS AND EQUIPMENT. MAINTAIN CLEARANCE AS REQUIRED BY THE NATIONAL ELECTRICAL CODE. (GENERALLY MIN. 3 FEET).
6. ALL WASTE AND VENT PIPING INSIDE RETURN AIR PLENUM SPACES SHALL BE CAST IRON PIPE AND FITTINGS AS SPECIFIED.
7. MAINTAIN MIN. OF 10 LINEAR FEET FROM PLUMBING VENTS TO HVAC FRESH AIR (OUTSIDE AIR) INTAKES.
8. H/C - HANDICAP - FIXTURES AND INSTALLATION SHALL MEET AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS.
9. FLUSH VALVE HANDLE FOR HANDICAP WATER CLOSET SHALL BE LOCATED ON WIDE SIDE OF TOILET STALL AREA TO MEET A.D.A. REQUIREMENTS.
10. ROUGH HANDICAP WATER CLOSET 18" FROM FINISHED WALL TO CENTERLINE OF WATER CLOSET. MEASURE FROM FACE OF SHORT SIDE OF STALL TO FINISHED WALL.
11. PROVIDE A READILY ACCESSIBLE CLEANOUT AT OR NEAR THE BASE OF EACH WASTE AND VENT STACK PER PLUMBING CODE AND SPECS..
12. WATER SUPPLY SYSTEM IS DESIGNED FOR STATIC PRESSURE OF 50 TO 75 PSI. GAUGE CITY WATER SUPPLY TO VERIFY THAT THE PRESSURE IS WITHIN THOSE LIMITS. PROVIDE WATER PRESSURE REDUCING VALVE, IF REQUIRED TO MEET DESIGNED WATER PRESSURE.

LEGEND



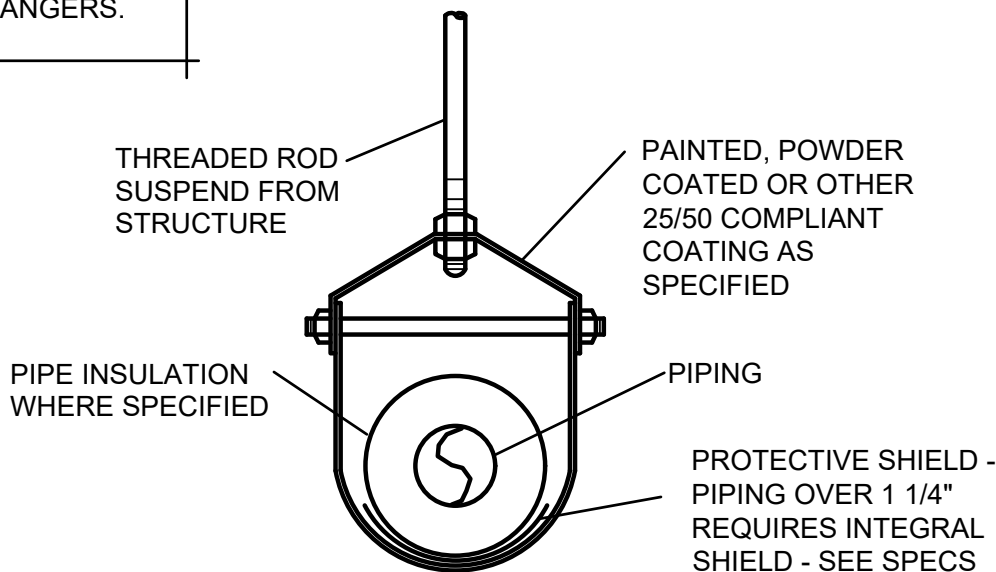
TRAP PRIMER DETAIL

NO SCALE



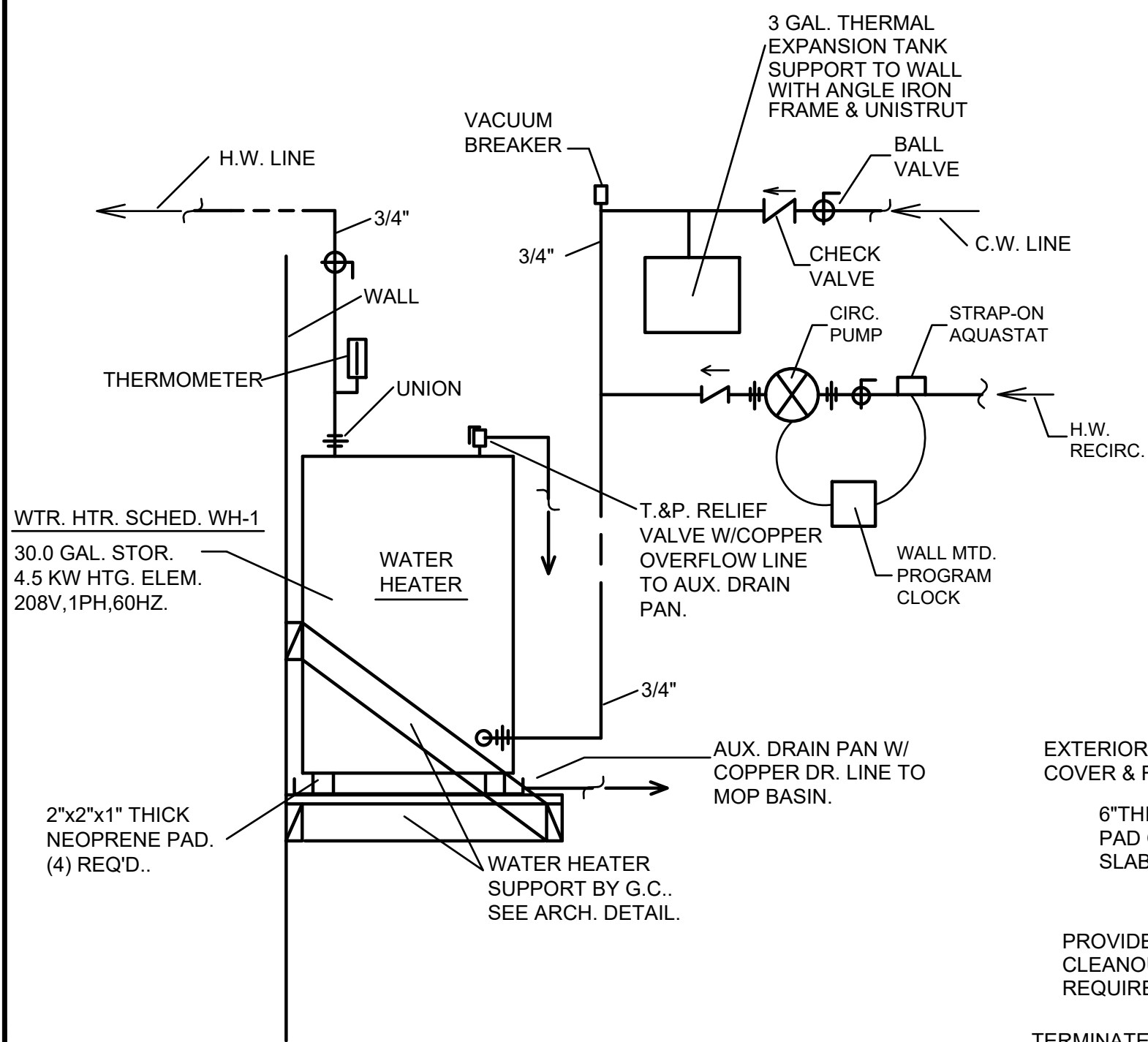
TYP. PIPE HANGER DETAIL

NO SCALE



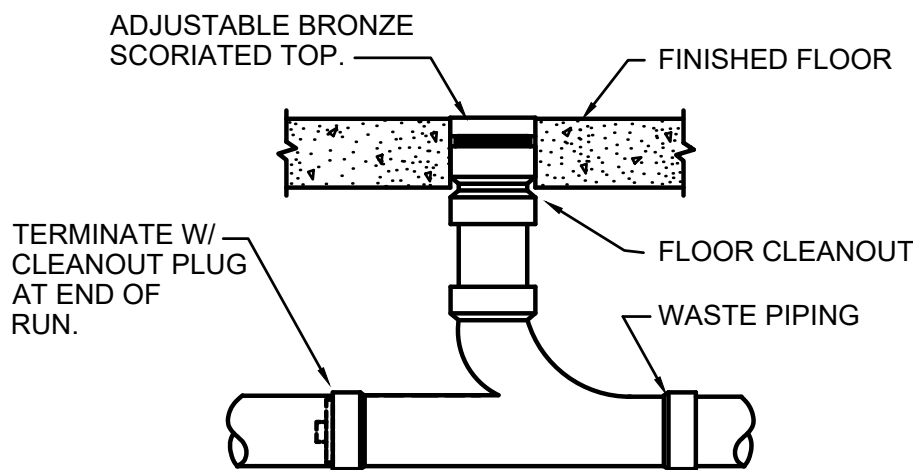
TYP. PIPE HANGER DETAIL

NO SCALE



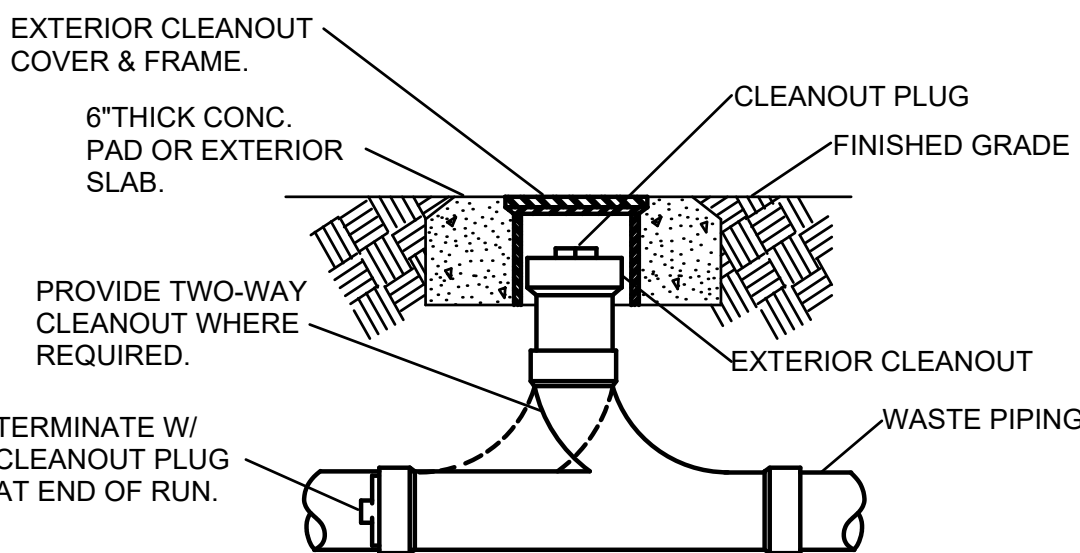
WATER HEATER DETAIL

NO SCALE



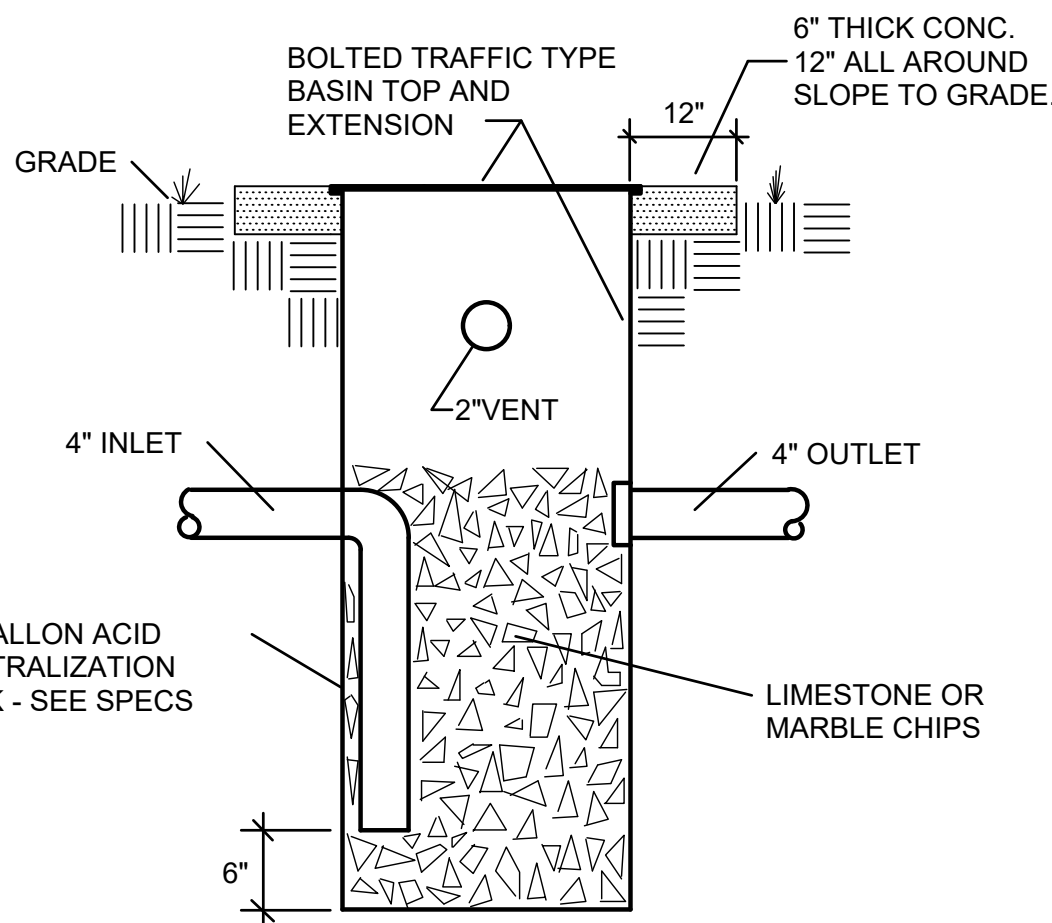
TYP. FLOOR CLEANOUT DETAIL

NO SCALE



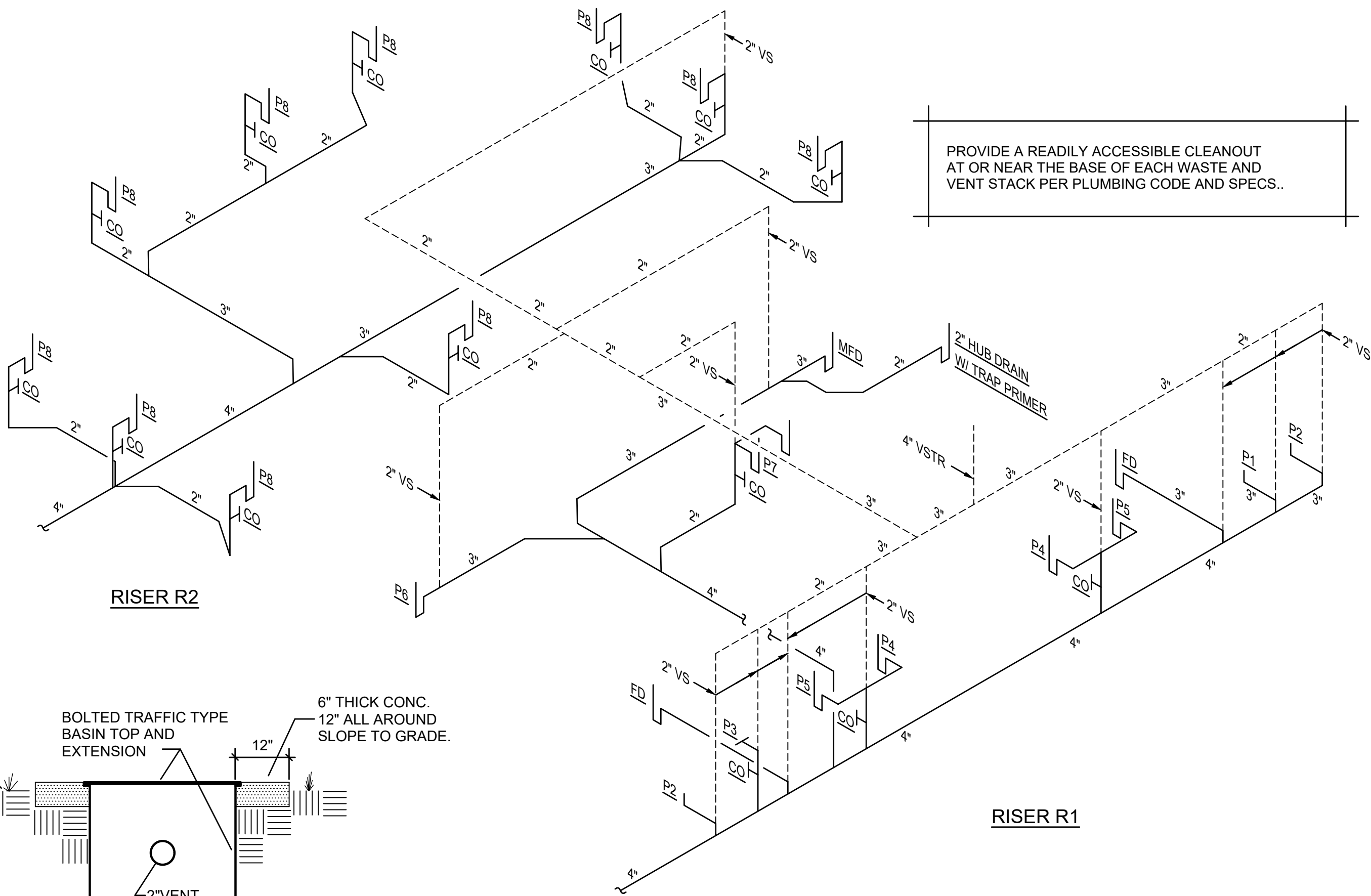
TYP. EXTERIOR CLEANOUT DETAIL

NO SCALE



ACID NEUTRALIZATION TANK DETAIL

NO SCALE

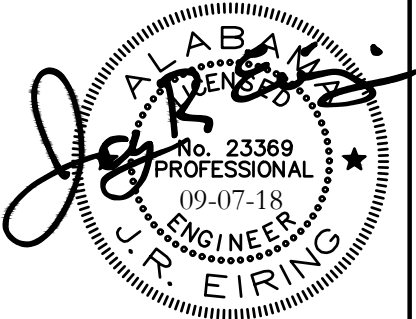


RISER R1

RISER R2

PROVIDE A READILY ACCESSIBLE CLEANOUT AT OR NEAR THE BASE OF EACH WASTE AND VENT STACK PER PLUMBING CODE AND SPECS..

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CONSULTING ENGINEERS
800 S MCDONOUGH STREET
MONTGOMERY, AL. 36104
334.263.4406
ZEA PROJECT NUMBER 18-256



SHEET TITLE : PLUMBING SCHEDULES, DETAILS AND RISERS

JOB NO. : 18-144

DRAWN BY : C. WARD

CHECKED BY : T. ZGOUVAS

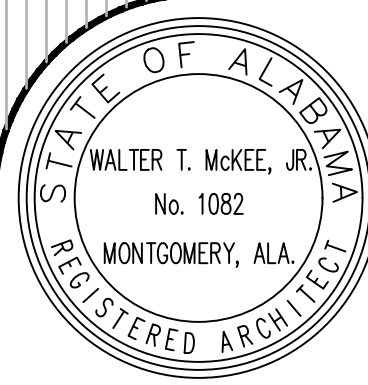
DATES : 7 September 2018

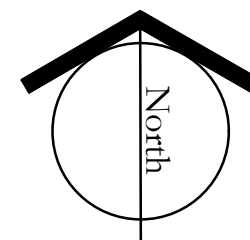
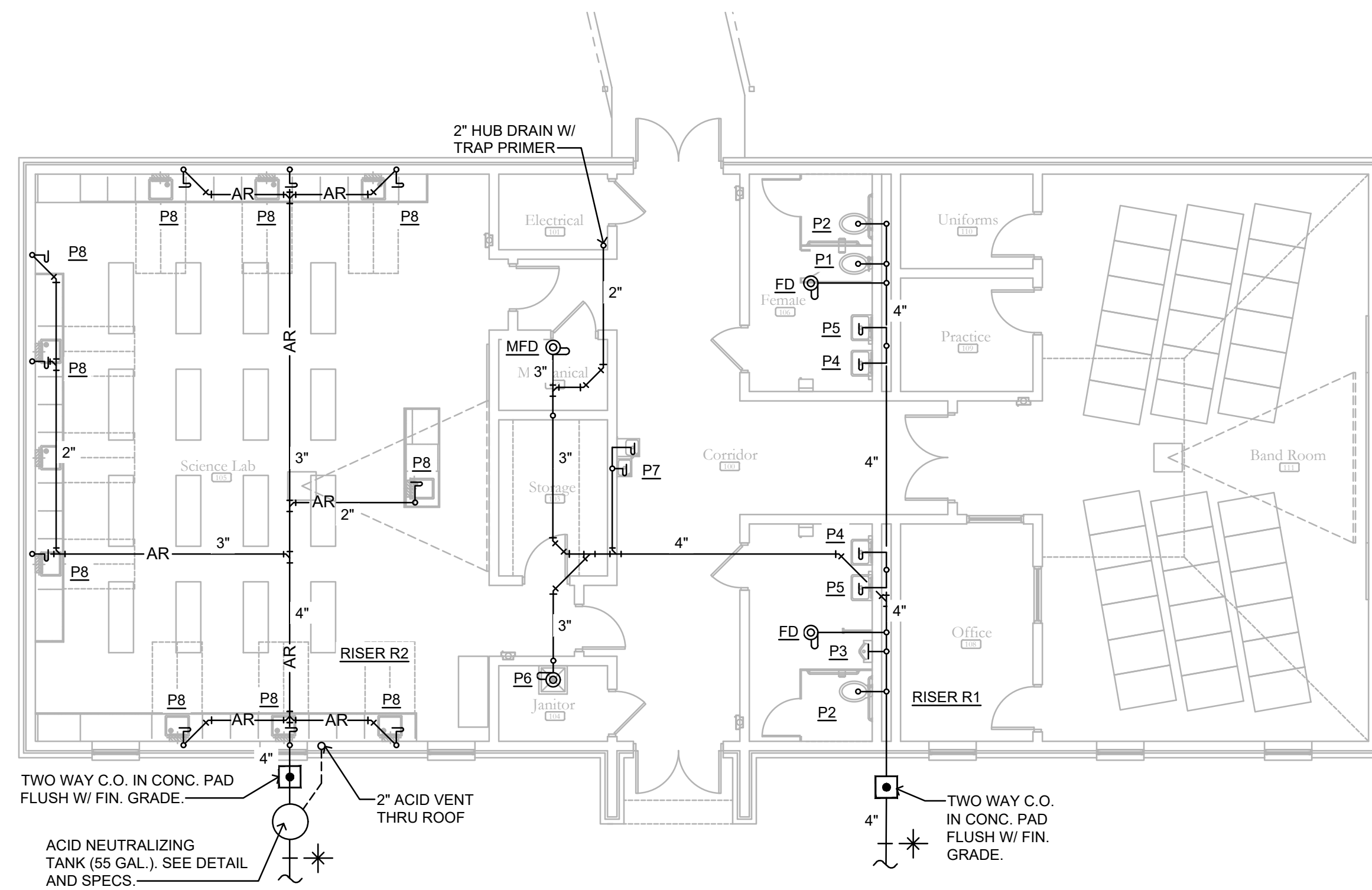
SHEET NO. : P1

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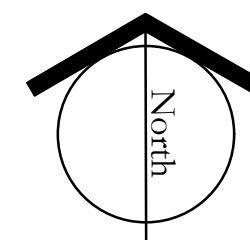
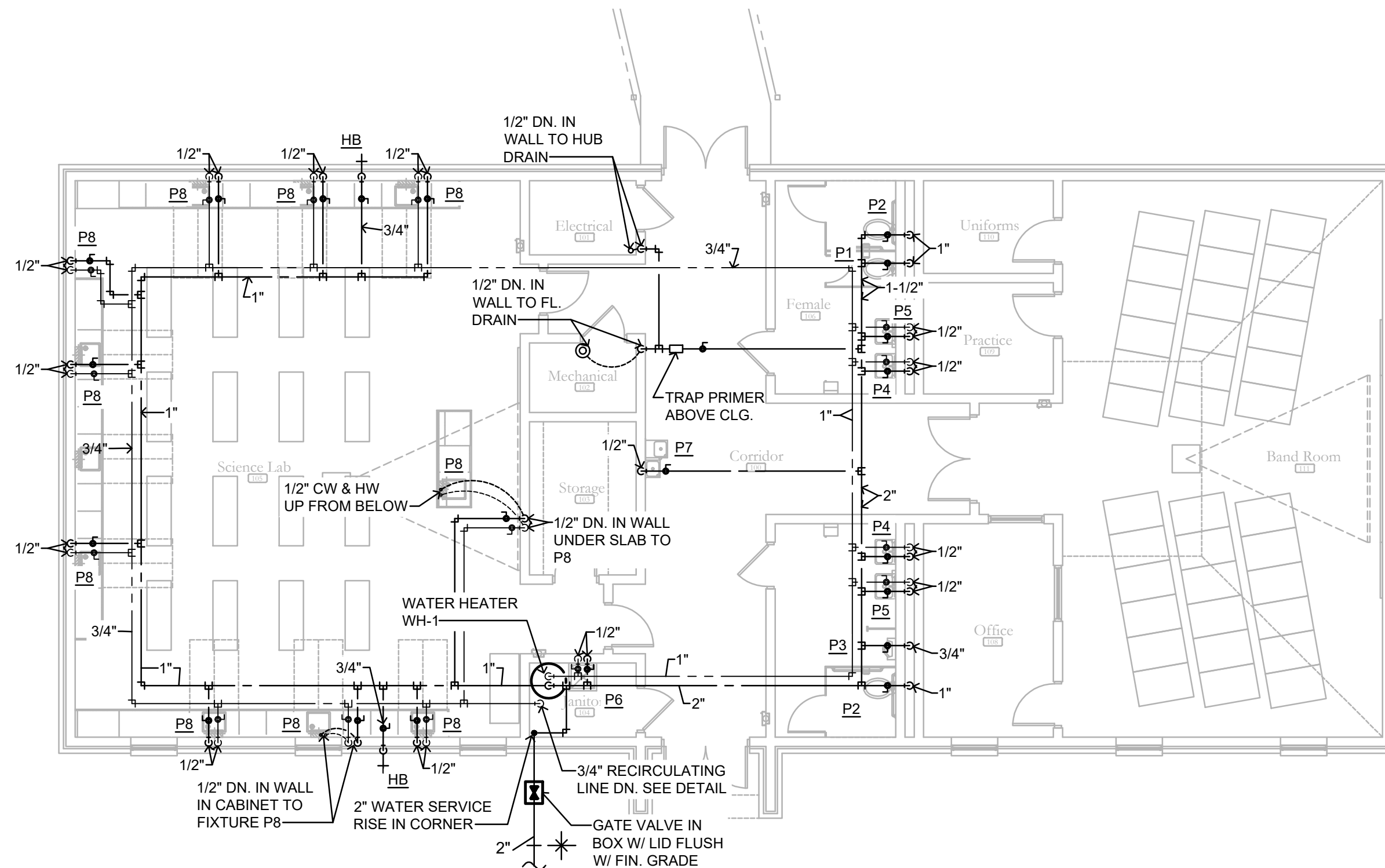
MCKEE and ASSOCIATES
ARCHITECTURE and INTERIOR DESIGN

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SHOWING WASTE PIPING
PLUMBING FLOOR PLAN
SCALE: 1/8" = 1'-0"



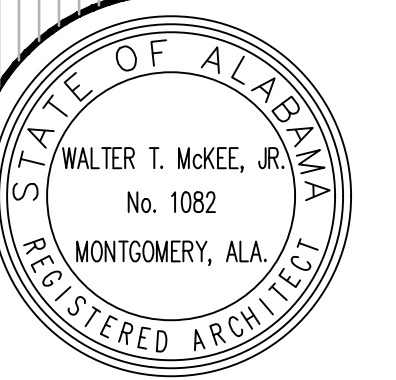
SHOWING WATER PIPING
PLUMBING FLOOR PLAN
SCALE: 1/8" = 1'-0"

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SHEET TITLE : PLUMBING PLANS

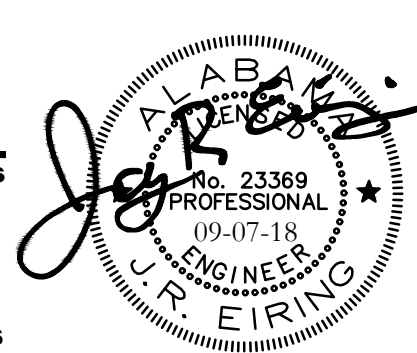
JOB NO. : 18-144

DRAWN BY : C. WARD

CHECKED BY : T. ZGOUVAS

DATES : 7 September 2018

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334.263.4406
ZEA PROJECT NUMBER 18-256

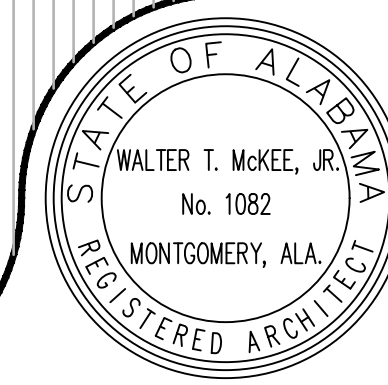


SHEET NO. : P2

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SHEET TITLE : PLUMBING PLANS
GAS PIPING

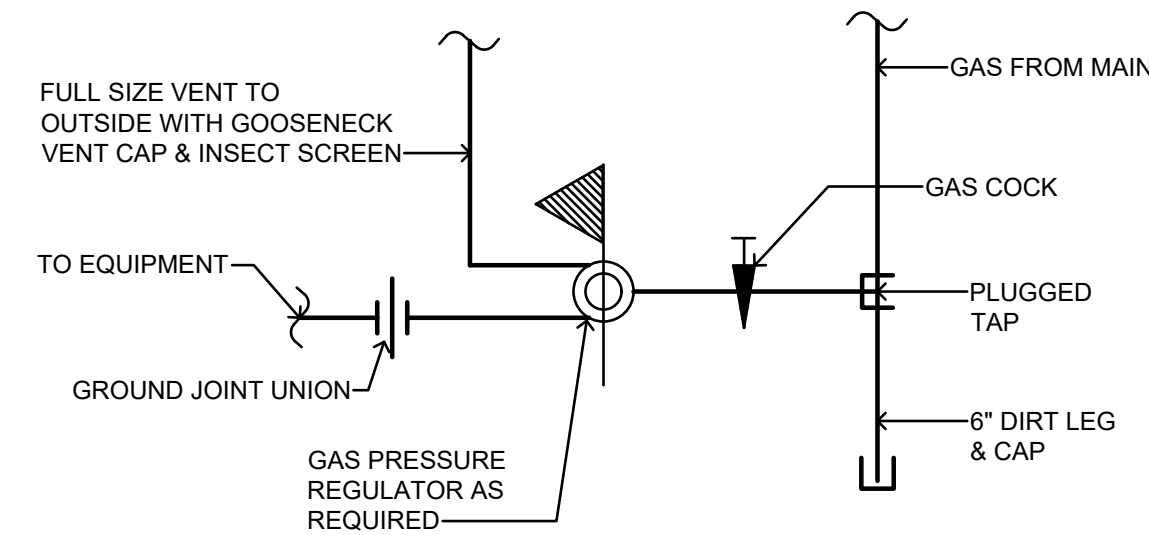
JOB NO. : 18-144

DRAWN BY : C. WARD

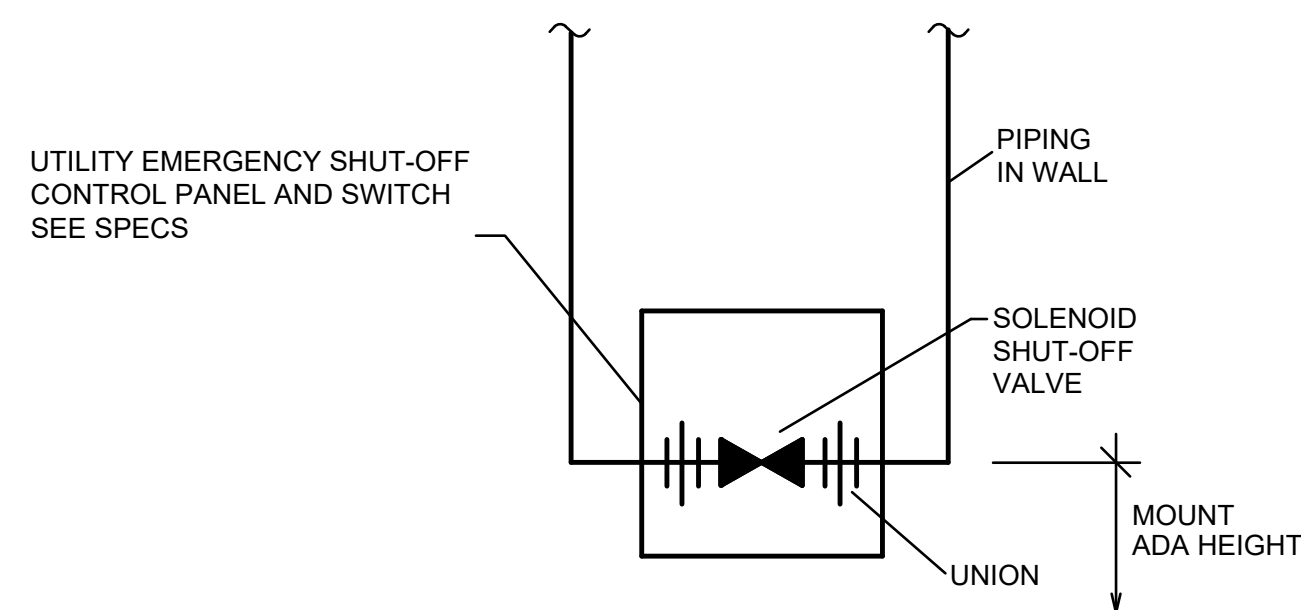
CHECKED BY : T. ZGOUVAS

DATES : 7 September 2018

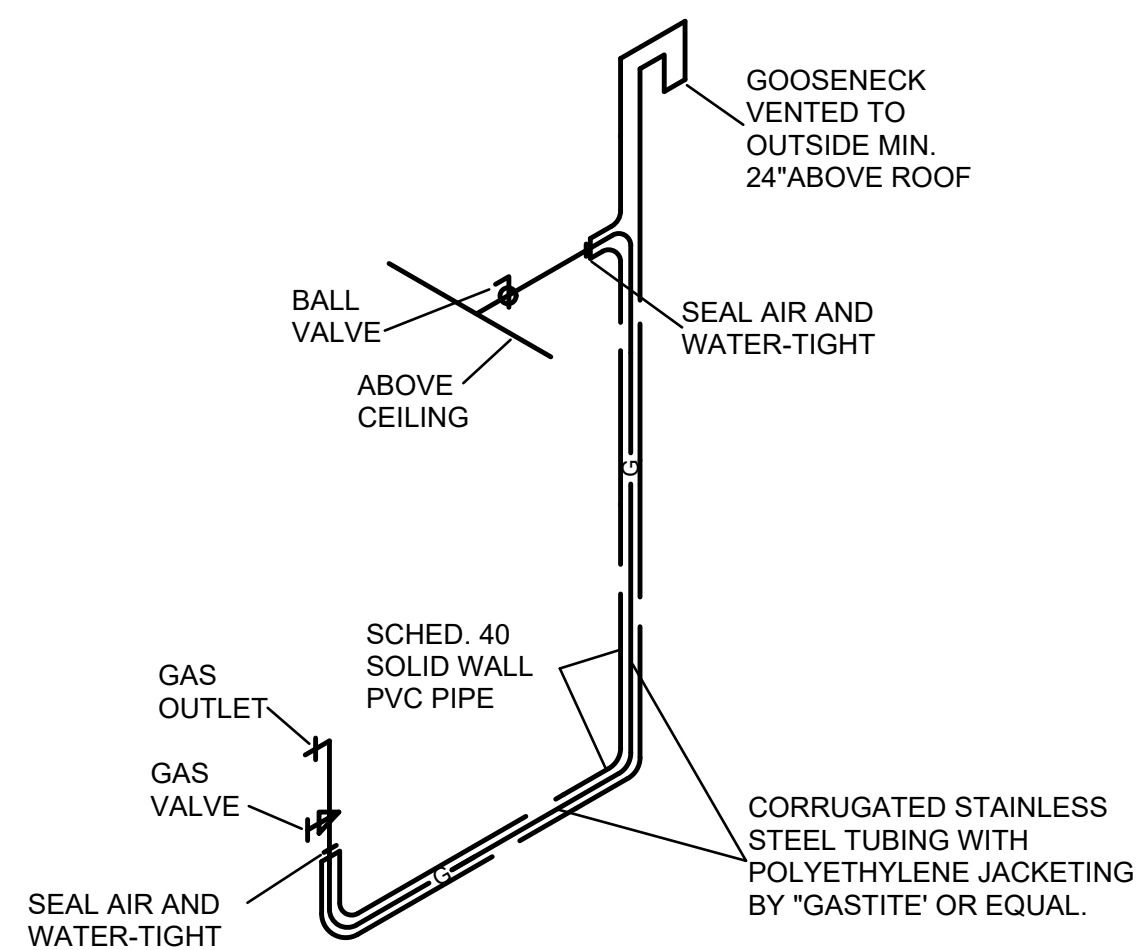
SHEET NO. : P3



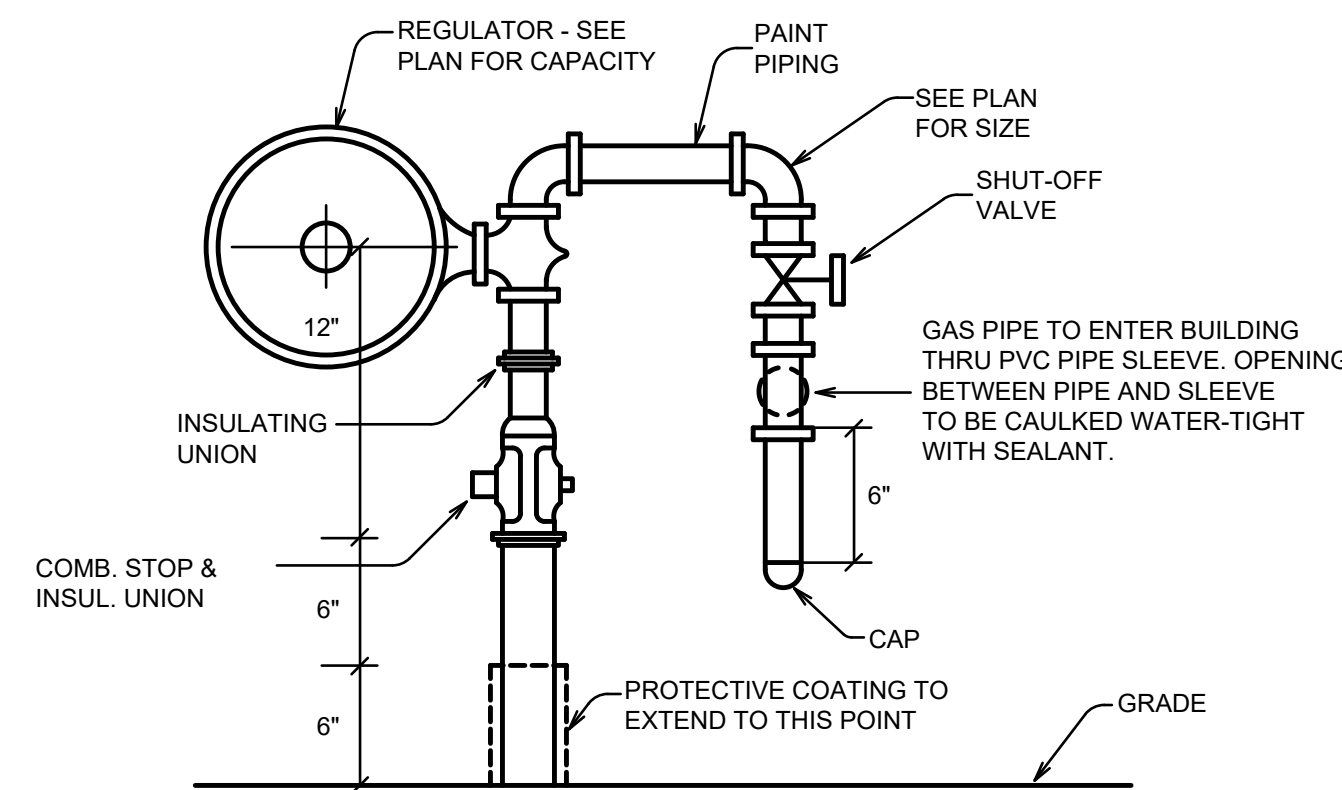
TYPICAL GAS PIPING CONN. DETAIL
NOT TO SCALE



MASTER GAS SHUT-OFF VALVE DETAIL

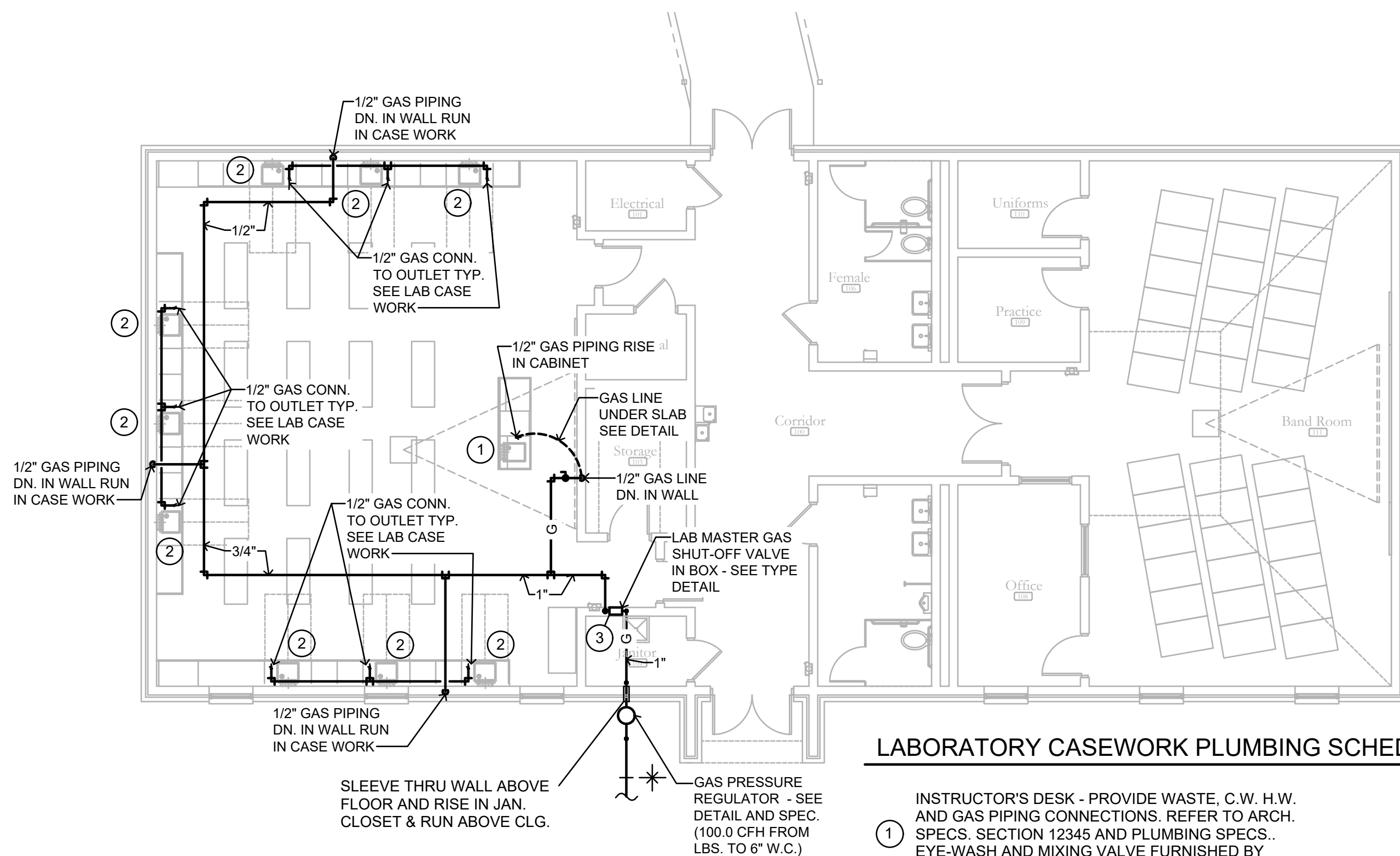


TYP. GAS PIPING BELOW FLOOR DETAIL



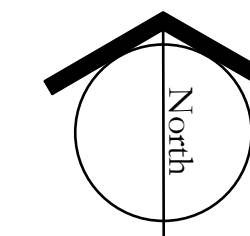
GAS PRESSURE REGULATOR DETAIL

NO SCALE
GAS PRESSURE REGULATOR BY PLUMBING CONTRACTOR.
UPSTREAM GAS PIPING BY CIVIL CONTRACTOR. SEE
CIVIL DRAWINGS.



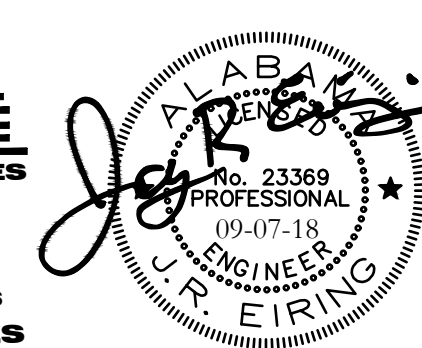
LABORATORY CASEWORK PLUMBING SCHEDULE

- 1 INSTRUCTOR'S DESK - PROVIDE WASTE, C.W. H.W. AND GAS PIPING CONNECTIONS. REFER TO ARCH. SPECS. SECTION 12345 AND PLUMBING SPECS.. EYE-WASH AND MIXING VALVE FURNISHED BY LAB SUPPLIER AND INSTALLED BY PLUMBER.
- 2 LABORATORY TABLE - PROVIDE WASTE, C.W. AND GAS PIPING CONNECTIONS. REFER TO ARCH. SPECS. SECTION 12345 AND PLUMBING SPECS..
- 3 GAS SHUT-OFF VALVE IN STAINLESS STEEL BOX. SEE DETAIL.



SHOWING GAS PIPING
PLUMBING FLOOR PLAN
SCALE: 1/8" = 1'-0"

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334.263.4406 18-256



MANUAL VOLUME DAMPER (MVD)

MOTORIZED DAMPER (MD)

SMOKE DETECTOR

DENOTES LOCATION OF VERTICAL
ACTION FIRE DAMPER

DENOTES LOCATION OF HORIZONTAL
ACTION FIRE DAMPER

CEILING DIFFUSER

RETURN AIR GRILLE/REGISTER
EXHAUST AIR GRILLE/REGISTER

CEILING DIFFUSER DESIGNATOR

RETURN AIR GRILLE/REGISTER

EXHAUST AIR GRILLE/REGISTER

DUCT W/ RECTANGULAR SIZE

RECTANGULAR SUPPLY DUCT TURNING UP

RECTANGULAR SUPPLY AIR DUCT TURNING DOWN

RECTANGULAR RETURN AIR OR EXHAUST
DUCT TURNING UP

RECTANGULAR RETURN AIR OR EXHAUST
DUCT TURNING DOWN

RECTANGULAR SUPPLY AIR DUCT
FLOOR OR ROOF PENETRATION

RECTANGULAR RETURN OR EXHAUST AIR DUCT FLOOR OR ROOF PENETRATION

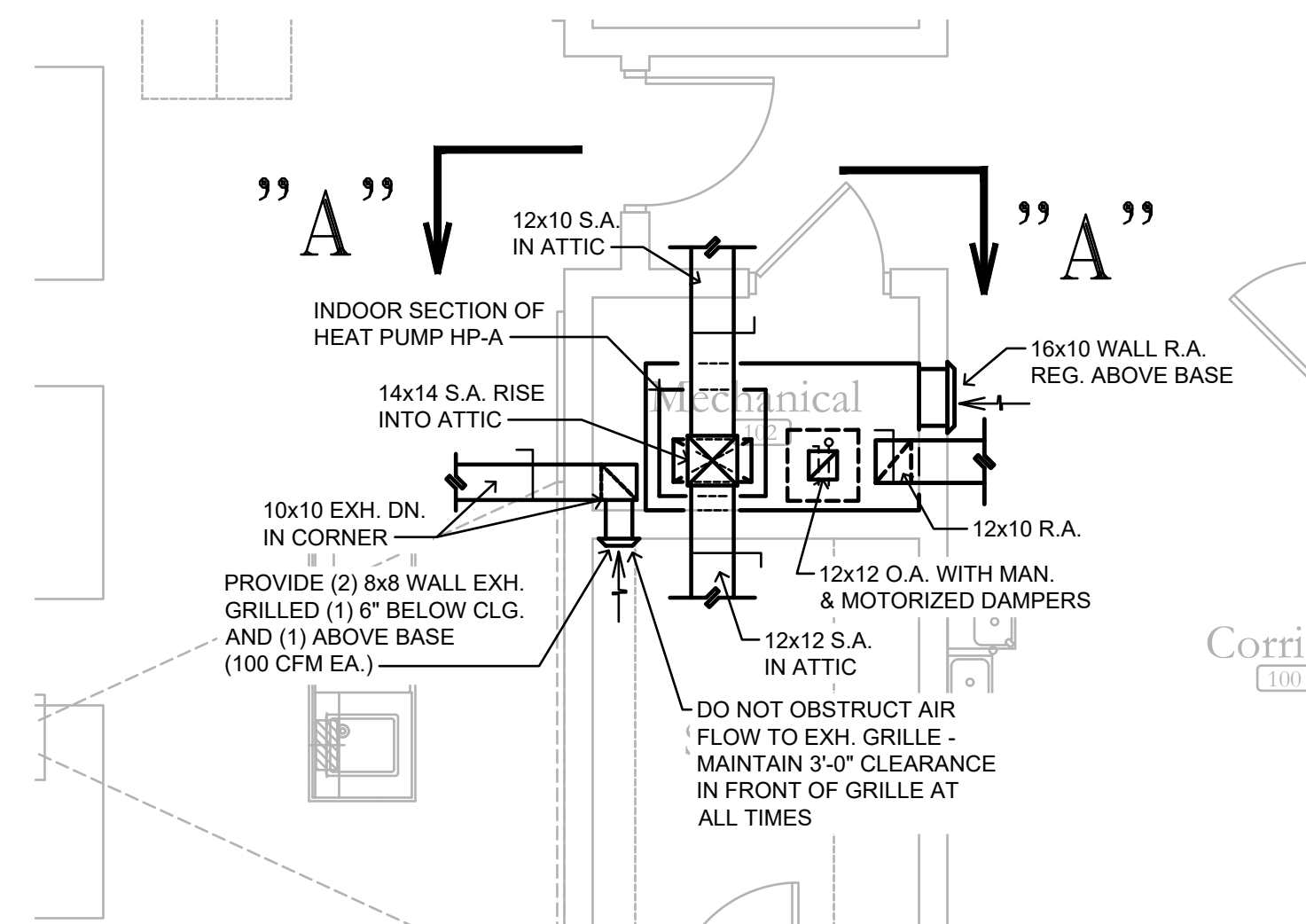
THERMOSTAT

HUMIDISTAT

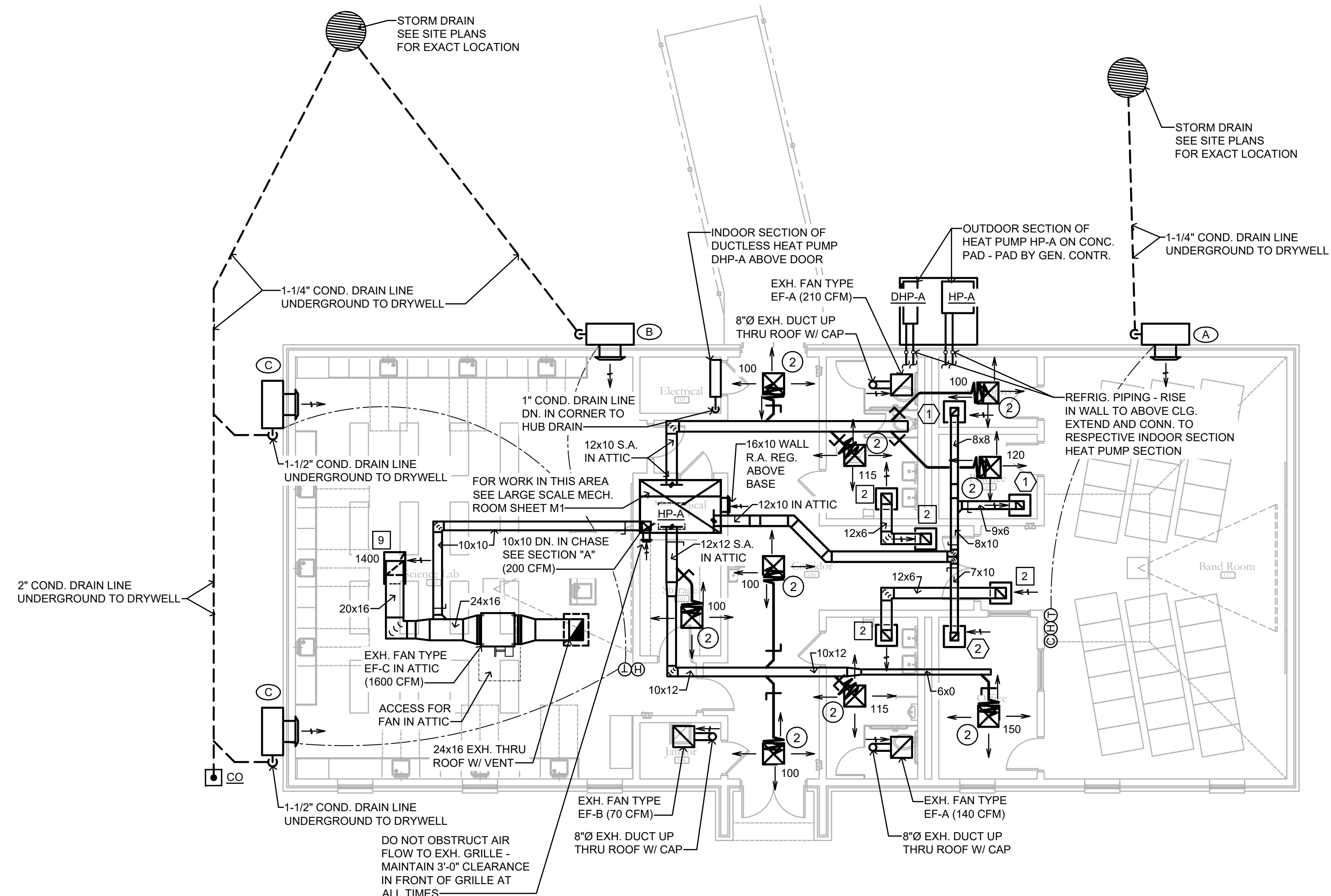
CO2 SENSOR

A.F.F.
CLG.
CONN.
F.D.
G.C.
O.A.
R.A.
S.A.

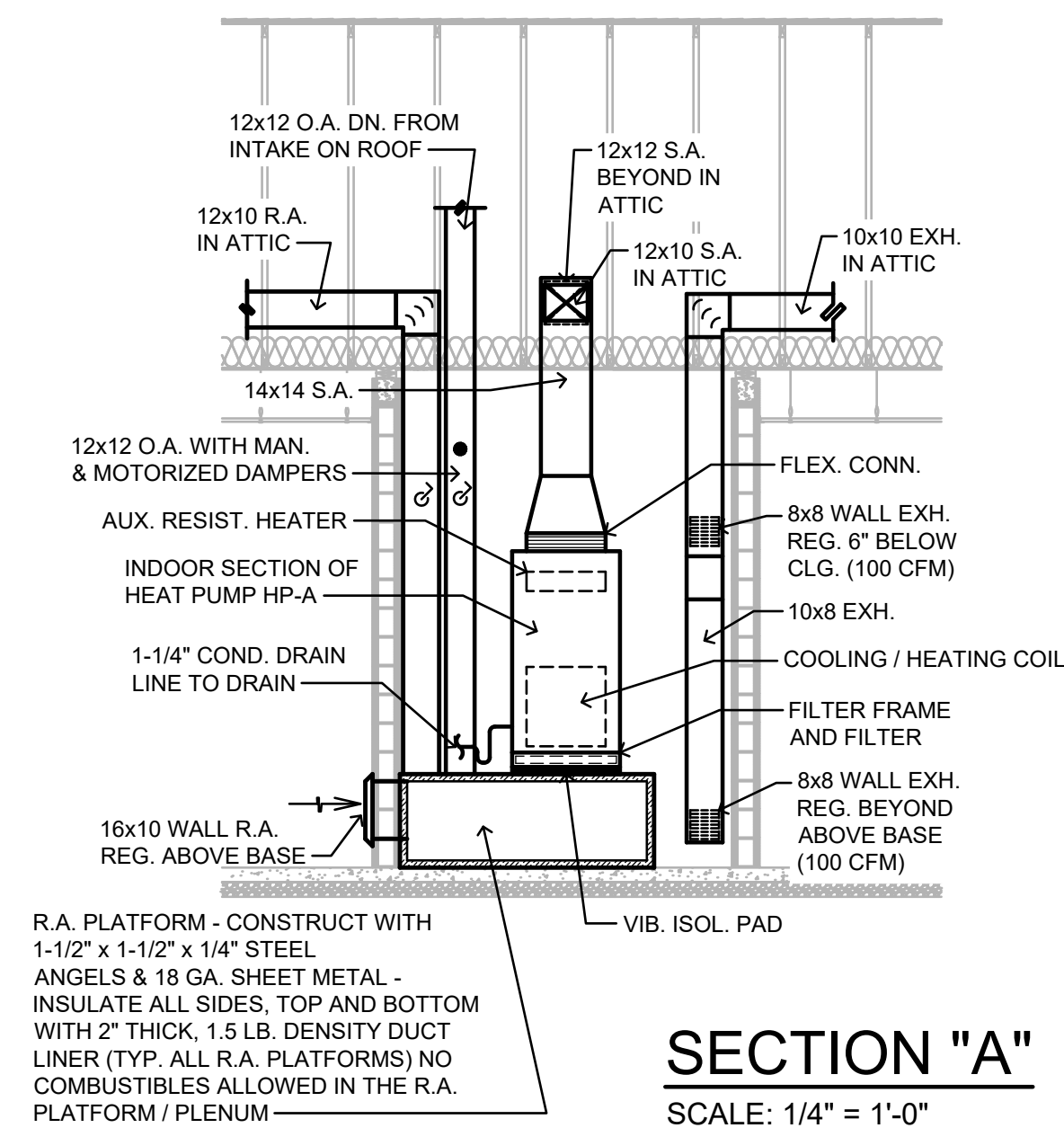
ABOVE FINISH FLOOR
CEILING OR COOLING
CONNECT OR CONNECTION
FIRE DAMPER
GENERAL CONTRACTOR
OUTSIDE AIR
RETURN AIR
SUPPLY AIR



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



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



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

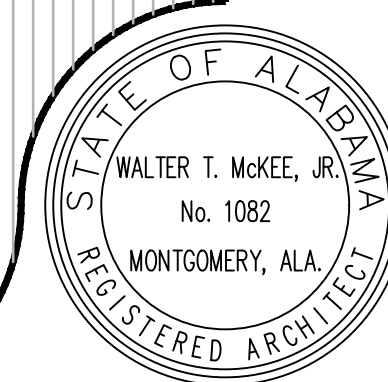
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SHEET TITLE : HVAC FLOOR PLAN,
LARGE SCALE MECH.
ROOM AND SECTIONS

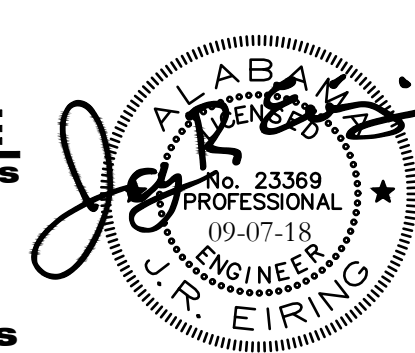
JOB NO.: 18-144

DRAWN BY : C. WARD

CHECKED BY : T. ZGOUVAS

DATES : 7 September 2018

SHEET NO.: M1



SPLIT SYSTEM HEAT PUMP UNITS SCHEDULE

UNIT NUMBER	HP-A
MINIMUM TOTAL AIR CFM	1000
MINIMUM OUTSIDE AIR SETPOINT/MAX. CO2 SETPOINT/MAX. O.A. (ECONOMIZER) CFM	210
APPROXIMATE EXTERNAL STATIC PRESSURE - IN. WATER COLUMN	.80
APPROXIMATE INDOOR FAN MOTOR HP-POWER	1/2HP - 240V., 1PH., 60HZ.
MINIMUM TOTAL COOLING CAPACITY AT A.R.I. CONDITIONS-BTU/HR	30,000
MINIMUM HEATING CAPACITY (COMPRESSOR ONLY) AT 70°F	
INDOOR TEMPERATURE AND 22°F OUTDOOR TEMPERATURE-BTU/HR	22,000
MINIMUM AUXILIARY ELECTRIC RESISTANCE HEAT - KW	8.0
NUMBER OF CONTROL STEPS	TWO
POWER	240V., 1PH., 60HZ.
APPROXIMATE COMPRESSOR MOTOR(S) F.L.A. - POWER	16.0 - 240V, 1PH., 60HZ.
APPROXIMATE OUTDOOR SECTION FAN MOTOR(S) F.L.A. - POWER	1.5 - 240V., 1PH., 60HZ.
MINIMUM ENERGY EFFICIENCY RATING AT A.R.I. CONDITIONS	14.0 SEER
MINIMUM HSPF/COP	8.2
LOW AMBIENT HEAD PRESS. CONTROL TO MIN. DEGREES F (COOLING ONLY)	45

- NOTES:
- 1.) ALL INDOOR UNITS SHALL BE FACTORY WIRED FOR SINGLE POINT POWER CONNECTIONS (FAN AND HEATER).
 - 2.) 240 VOLT, 1 PHASE POWER IS BEING PROVIDED BY ELECTRICAL TO THE INDOOR HEAT PUMP UNIT SECTIONS. UNIT MANUFACTURER SHALL PROVIDE FACTORY INSTALLED RELAYS, TRANSFORMERS, ETC., AS REQUIRED TO OPERATE EQUIPMENT AT POWER REQUIREMENTS SPECIFIED ABOVE.
 - 3.) SEER RATINGS BASED ON ARI 210/240
 - 4.) HSPF RATING BASED ON ARI 210/240

PACKAGED WALL MOUNTED HEAT PUMP UNITS SCHEDULE

UNIT TYPE	(A)	(B)	(C)
MINIMUM TOTAL AIR CFM AT .20" STATIC PRESSURE	1900	1900	1220
MINIMUM OUTSIDE AIR CFM	425	470	470
APPROXIMATE INDOOR FAN MOTOR HP-POWER	1/2HP - 240V., 1PH., 60HZ.	1/2HP - 240V., 1PH., 60HZ.	1/4HP - 240V., 1PH., 60HZ.
MINIMUM TOTAL COOLING CAPACITY AT 95° F AMBIENT AND A.R.I. CONDITIONS-BTU/HR	46,000	46,000	35,000
MINIMUM HEATING CAPACITY (COMPRESSOR ONLY) AT 70°F			
INDOOR TEMPERATURE AND 17°F OUTDOOR TEMPERATURE-BTU/HR	34,000	34,000	18,600
MINIMUM AUXILIARY ELECTRIC RESISTANCE HEAT - KW	15.0	15.0	12.0
NUMBER OF CONTROL STEPS	TWO	TWO	TWO
POWER	240V., 1PH., 60HZ.	240V., 1PH., 60HZ.	240V., 1PH., 60HZ.
APPROXIMATE COMPRESSOR MOTOR(S) F.L.A. - POWER	23.0 - 240V, 1PH., 60HZ.	23.0 - 240V, 1PH., 60HZ.	19.0 - 240V, 1PH., 60HZ.
APPROXIMATE CONDENSER SECTION FAN MOTOR(S) F.L.A. - POWER	3.8 - 240V., 1PH., 60HZ.	3.8 - 240V., 1PH., 60HZ.	2.5 - 240V., 1PH., 60HZ.
MINIMUM EFFICIENCY RATING	10.0	10.0	10.0
MINIMUM COP	3.0	3.0	3.0
LOW AMBIENT HEAD PRESS. CONTROL TO DEGREES F (COOLING ONLY)	45	45	45
MINIMUM CIRCUIT AMPACITY (MCA)	81.0	81.0	65.0
MAXIMUM FUSE SIZE (MFS) AMPS	90.0	90.0	70.0

- NOTES:
- 1.) ALL UNITS SHALL BE FACTORY WIRED FOR SINGLE POINT POWER CONNECTIONS 240V., 1PH., 60HZ. (FAN AND HEATER).
 - 2.) ALL UNITS SHALL BE PROVIDED WITH REFRIGERANT HOT GAS REHEAT COIL FOR HUMIDITY CONTROL AND AUTOMATIC RELIEF AIR ASSEMBLY - SEE SPECS.
 - 3.) EER RATINGS BASED ON ARI 390
 - 4.) COP RATINGS BASED ON ARI 210/240

CEILING DIFFUSER SCHEDULE

SYMBOL	CFM RANGE	NECK SIZE INCHES	FACE SIZE INCHES	BRANCH DUCT SIZE	MAXIMUM NC VALUE	BASIS OF DESIGN
1	10 - 95	6" ROUND	24x24	6"Ø	20	TITUS TMS
2	100 - 180	8" ROUND	24x24	8"Ø	20	TITUS TMS
3	185 - 270	10" ROUND	24x24	10"Ø	20	TITUS TMS
4	275 - 400	12" ROUND	24x24	12"Ø	20	TITUS TMS
5	405 - 530	14" ROUND	24x24	14"Ø	20	TITUS TMS
6	535 - 615	15" ROUND	24x24	15"Ø	20	TITUS TMS

NOTES

- 1.) RUNOUTS/BRANCH DUCTS SHALL BE AS SCHEDULED ABOVE UNLESS NOTED OTHERWISE ON THE PLANS
- 2.) CONTRACTOR SHALL INSULATE THE EXTERIOR (BACK SIDE OF DIFFUSER PANEL) WITH 2" THICKNESS EXTERNAL DUCT INSULATION WITH CHARACTERISTICS SPECIFIED FOR EXTERNAL DUCT INSULATION.

EXHAUST/RETURN AIR REGISTER SCHEDULE

SYMBOL	CFM RANGE		SIZE - IN. x IN.	DESCRIPTION	MAXIMUM NC RATING	BRANCH DUCT SIZE
	EXH.	R.A.				
1	1	0 - 140	9x9	CEILING EXH. OR RETURN REG.	20	9x6
2	2	141 - 240	12x12	CEILING EXH. OR RETURN REG.	20	12x7
3	3	241 - 340	14x14	CEILING EXH. OR RETURN REG.	20	14x7
4	4	341 - 460	16x16	CEILING EXH. OR RETURN REG.	20	16x9
5	5	461 - 600	18x18	CEILING EXH. OR RETURN REG.	20	18x10
6	6	601 - 760	20x20	CEILING EXH. OR RETURN REG.	20	20x12
7	7	761 - 940	24x24	CEILING EXH. OR RETURN REG.	20	24x12
8	8	941 - 1200	30x24	CEILING EXH. OR RETURN REG.	20	24x14
9	9	1201 - 1400	36x24	CEILING EXH. OR RETURN REG.	20	28x14

NOTES

- 1.) RUNOUTS/BRANCH DUCTS SHALL BE AS SCHEDULED ABOVE UNLESS NOTED OTHERWISE ON THE PLANS.
- 2.) 8 & 9 SHALL BE IN INTEGRAL 48x24 METAL CEILING PANEL AS SPECIFIED. ALL OTHERS SHALL BE IN INTEGRAL 24x14 METAL CEILING PANEL AS SPECIFIED.

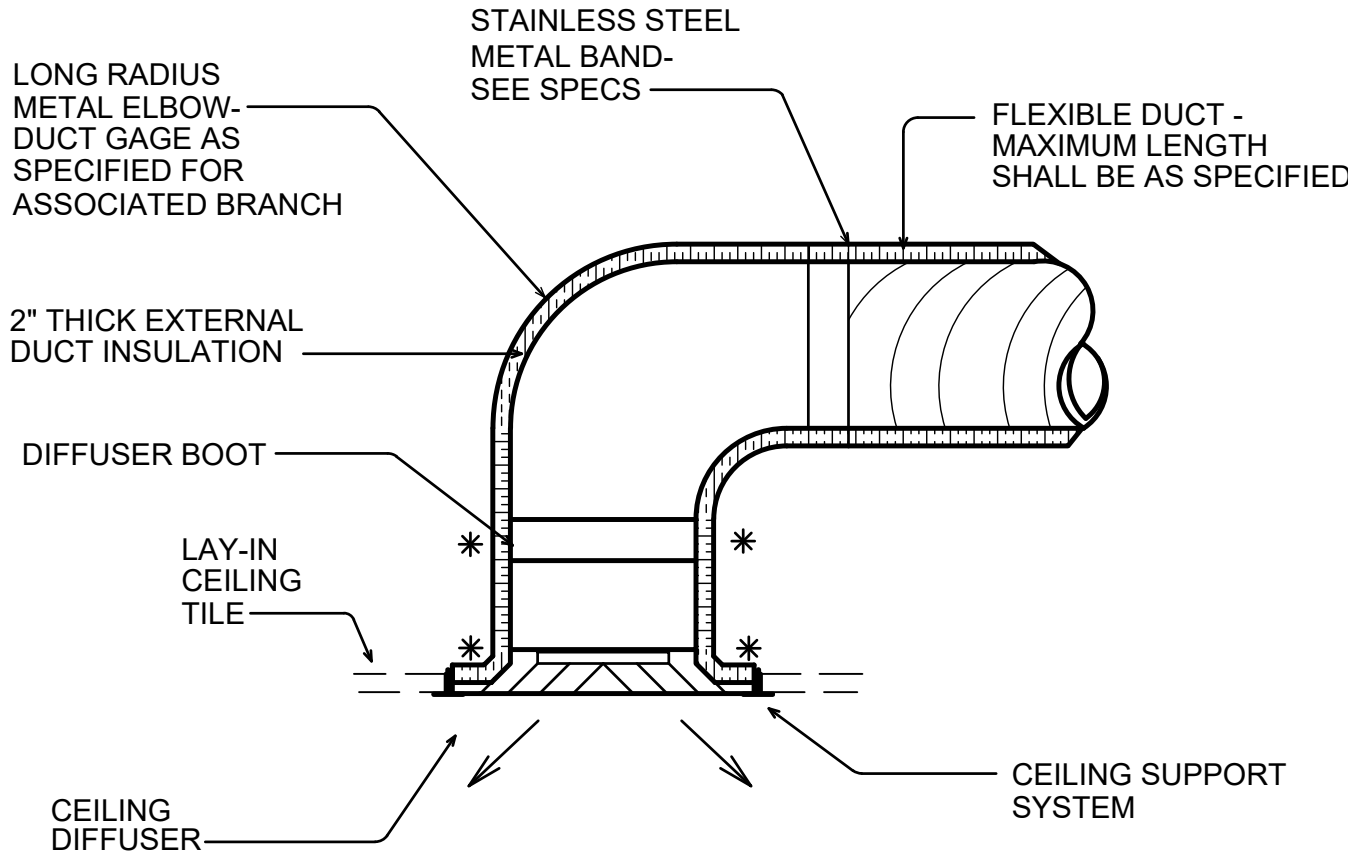
FANS SCHEDULE

FAN TYPE	FAN CFM	DESCRIPTION	MINIMUM FAN SIZE INCHES	APPROX. WALL/ ROOF OPENING -INCHES	MAXIMUM FAN SPEED RPM	APPROX. EXT. STATIC PRESS. IN. WTR. COL.	FAN MOTOR				CONTROL INTERLOCK	REMARKS
							MIN. H.P./ WATTS	POWER VOLTS	PH.	HERTZ		
EF-A	140	CEILING MOUNTED, CENTRIFUGAL, DIRECT DRIVE	8.0	N/A	1050	.25	110	120	1	60	LIGHTING CIRCUIT	
EF-B	70	CEILING MOUNTED, CENTRIFUGAL, DIRECT DRIVE	8.0	N/A	1050	.25	77	120	1	60	LIGHTING CIRCUIT	
EF-C	210	CEILING MOUNTED, CENTRIFUGAL, DIRECT DRIVE	10.0	N/A	1050	.25	150	120	1	60	WALL SWITCH	
EF-D	1600	SQUARE IN-LINE, BELT DRIVE, CENTRIFUGAL	8.0	N/A	739	.60	1/3	120	1	60	CLASSROOM LIGHTING CIRCUIT	

WALL MOUNTED DUCTLESS HEAT PUMP UNIT SCHEDULE

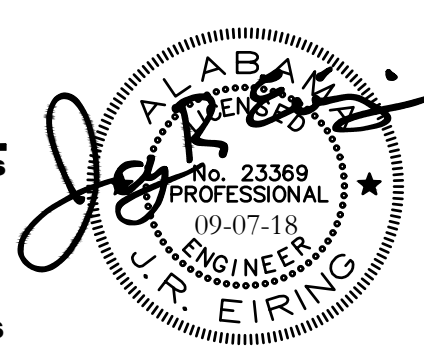
UNIT TYPE	DHP-A
MINIMUM TOTAL COOLING CAP. AT A.R.I. CONDITIONS - BTU/HR	9,000
MINIMUM HEATING CAP. (COMPRESSOR ONLY) AT 70°F INDOOR & 17°F AMBIENT - BTU/HR	10,000
MINIMUM AUX. ELECTRIC RESISTANCE HEAT - KW	N/A
INDOOR FAN CFM AT HIGH SPEED	400
OUTSIDE AIR CFM	0
INDOOR UNIT MCA - POWER	1.5 - 208V, 1 PH. , 60 HZ.
OUTDOOR UNIT MCA (COMPRESSOR AND COND. FAN) - POWER	13.0A - 208V, 1 PH., 60 HZ.
OUTDOOR UNIT MOP	20.0A - 208V., - 1PH., 60HZ.
MINIMUM HSPF AT ARI 210/240 CONDS.	8.2
MINIMUM S.E.E.R. AT ARI 210/240 CONDS	15.0

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DIFFUSER BOOT/PLENUM CONNECTION DETAIL

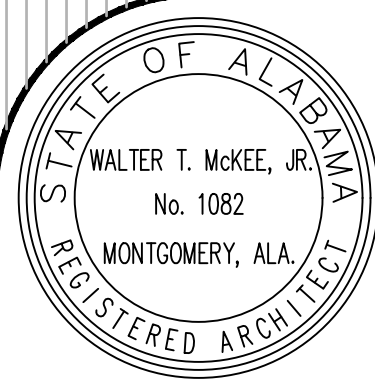
NOT TO SCALE
* DENOTES THE REQUIREMENT OF AN AIR TIGHT SEAL AT THIS LOCATION



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MCKEE and ASSOCIATES
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SHEET TITLE : HVAC SCHEDULES

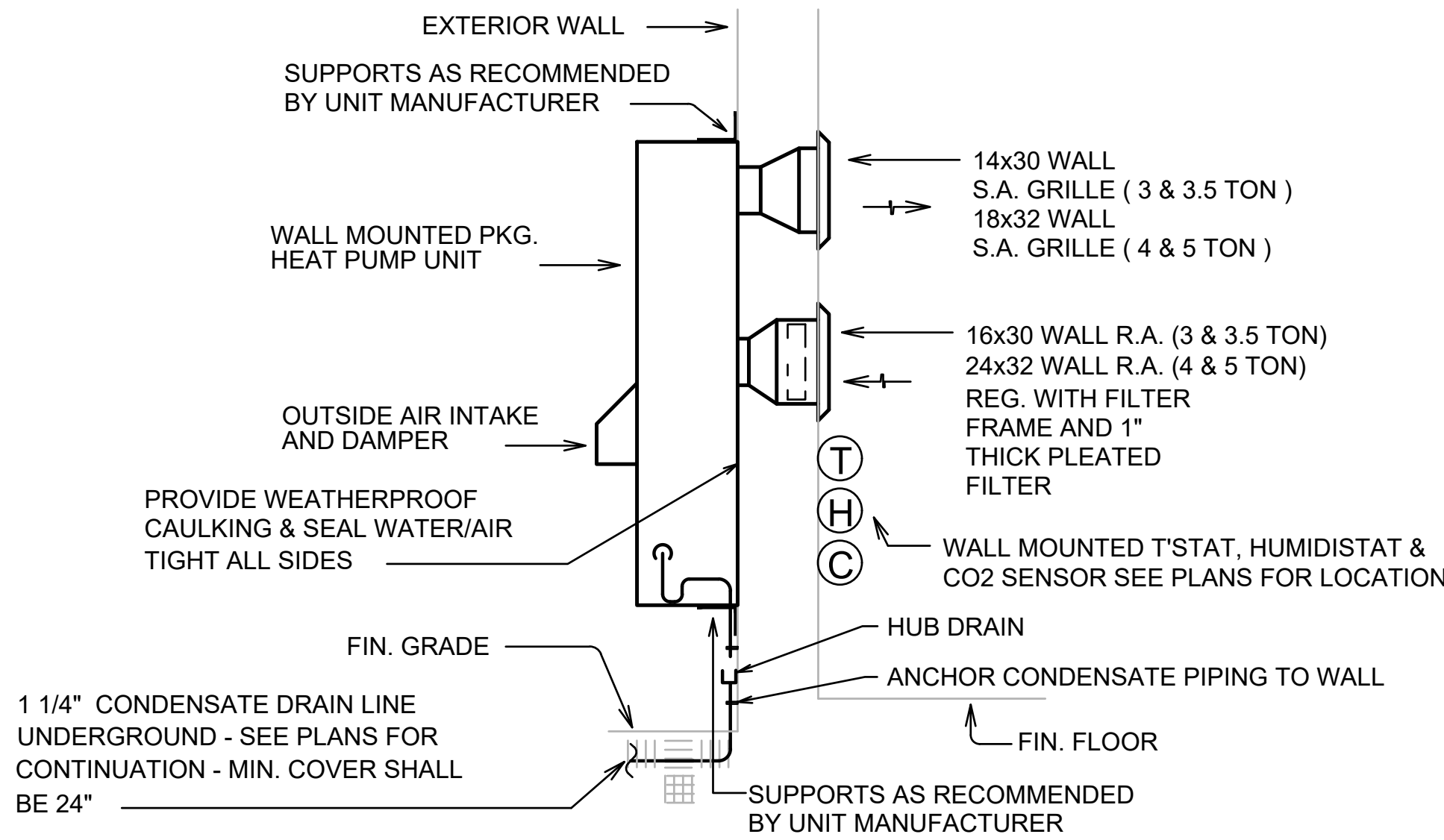
JOB NO. : 18-144

DRAWN BY : C. WARD

CHECKED BY : T. ZGOUVAS

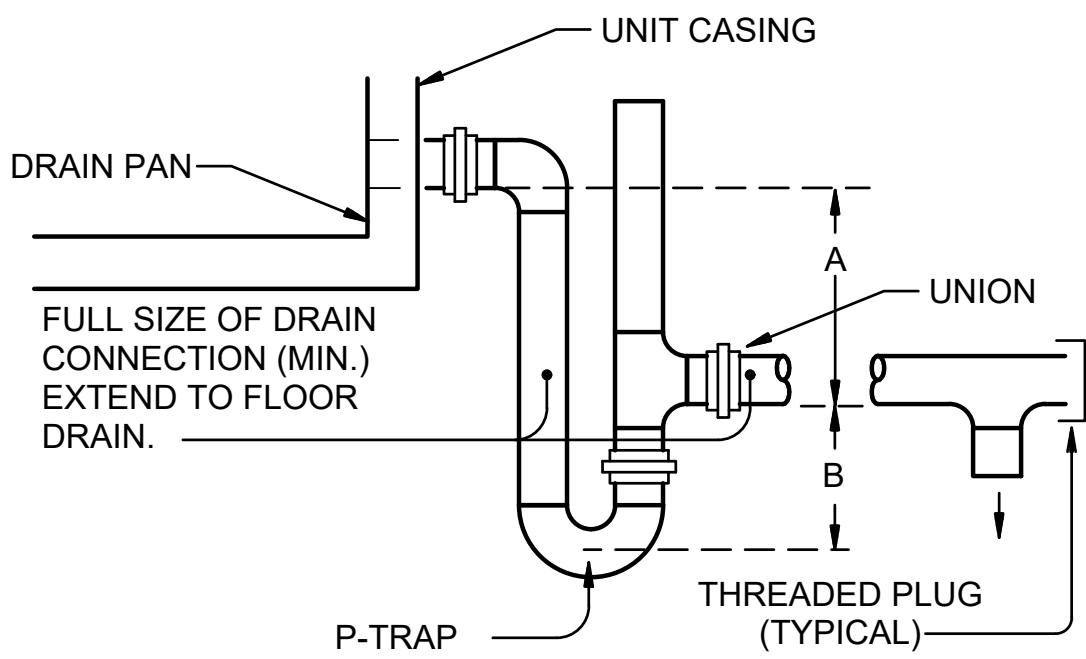
DATES : 7 September 2018

SHEET NO. : M2



WALL MOUNTED HEAT PUMP UNIT DETAIL (OUTDOOR MOUNTING)

NOT TO SCALE



UNIT TYPE	A	B
DRAW-THRU	2" PLUS "X"	"X" PLUS 1"
BLOW-THRU	1" MINIMUM	2X PLUS 1"

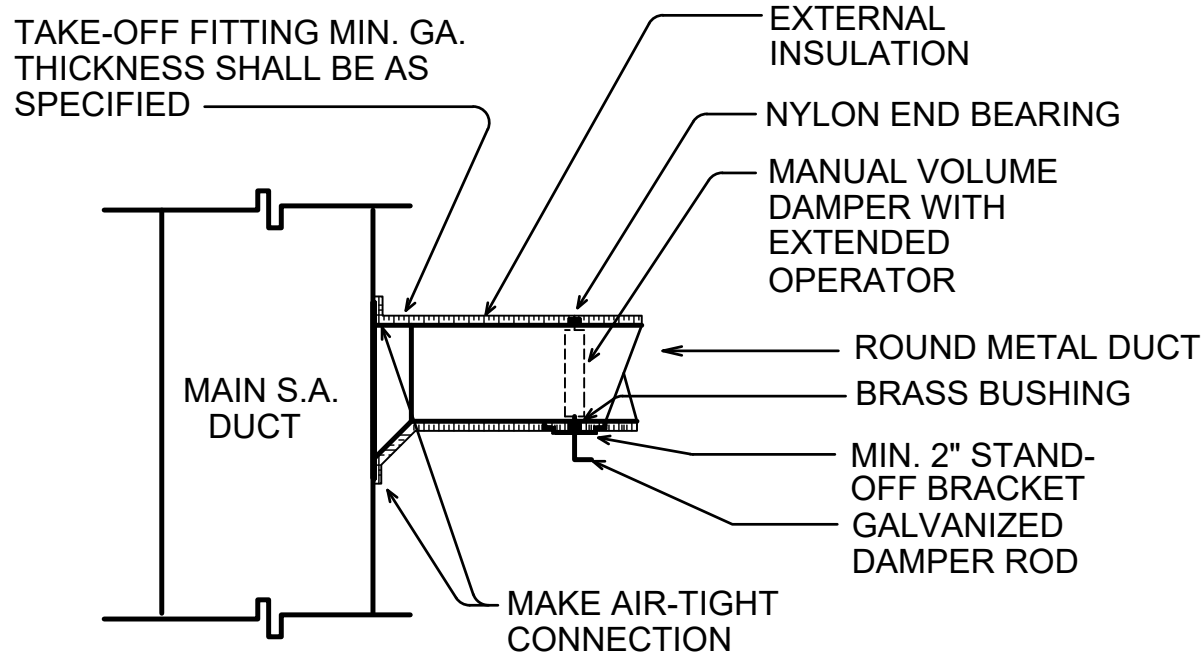
WHERE "X" = AHU STATIC PRESSURE

TYPICAL AIR HANDLING UNIT
CONDENSATE DRAIN DETAIL

NOT TO SCALE

NOTES:

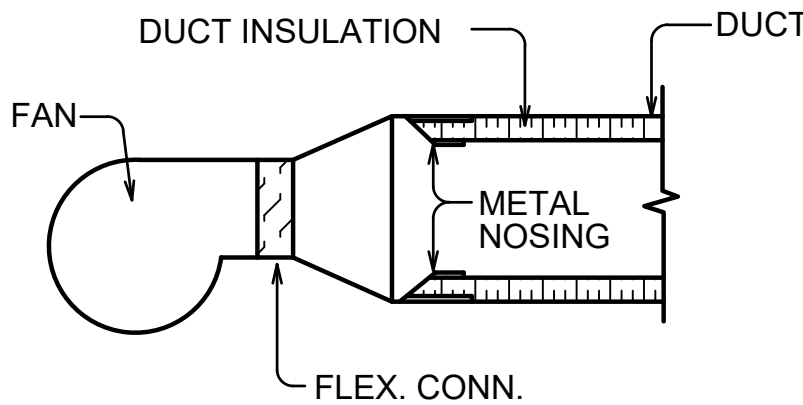
1. CONTRACTOR SHALL PROVIDE DRAIN AS REQUIRED BY THE AIR HANDLING UNIT MANUFACTURER. IN ABSENCE OF THOSE REQUIREMENTS, CONTRACTOR SHALL PROVIDED DRAIN AS DETAILED ABOVE
2. CONTRACTOR SHALL RAISE AIR HANDLING AS REQUIRED TO ALLOW FOR INSTALLATION OF THE DRAIN AS DETAILED ABOVE
3. PROVIDE AN ELECTRIC SWITCH IN THE CONDENSATE DRAIN LINE, THAT CONFORMS TO UL 508, TO SHUT DOWN THE UNIT AND ALARM TO THE BUILDING ENERGY MANAGEMENT SYSTEM OPERATOR CONSOLE (IF APPLICABLE) SHOULD THE LINE BECOME OBSTRUCTED



ROUND BRANCH DUCT TAKE-OFF DETAIL

NOT TO SCALE

RECTANGULAR RUNOUTS SAME EXCEPT WITH RECTANGULAR DUCT

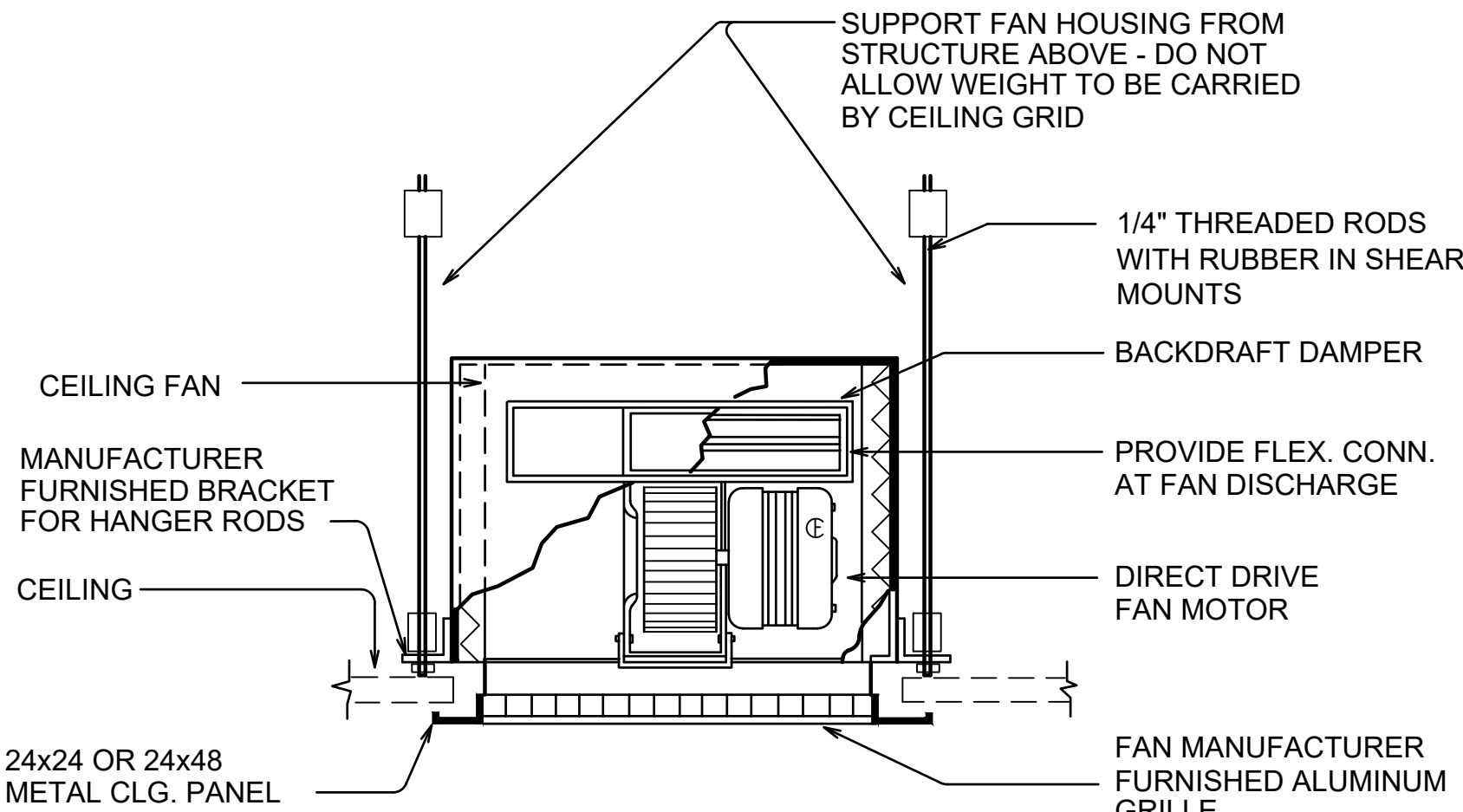


TYPICAL DUCT LINER INTERRUPTION DETAIL

NOT TO SCALE

NOTE !!

THIS DETAIL APPLIES TO FIRE DAMPER INSTALLATION, WHERE DUCTS CONNECT TO FAN SECTION, ANYWHERE BARE DUCT LINER PROTRUDES INTO THE AIRSTREAM, ANY POINT WHERE LINED DUCT IS PRECEDED BY UNLINED DUCT, BARE DUCT INSULATION EDGES ARE EXPOSED IN THE RETURN AIR PLENUM, ETC. - SEE SPECS FOR ADDITIONAL REQUIREMENTS



CEILING MOUNTED EXHAUST FAN CONN. DETAIL

NO SCALE

OUTDOOR AIR AND EXHAUST CALCULATIONS														
	Area	Peo/1000SF	# People	CFM/SF	Area CFM	CFM/Person	People CFM	Total CFM	# Fixtures	CFM/Fixt	CFM/SF	Min Exhaust	Supply Air	Zp EQ 4-5
Band Room 111	1008	35	35.28	0.06	60.48	10	360	421				0	2000	0.2105

OUTDOOR AIR AND EXHAUST CALCULATIONS														
	Area	Peo/1000SF	# People	CFM/SF	Area CFM	CFM/Person	People CFM	Total CFM	# Fixtures	CFM/Fixt	CFM/SF	Min Exhaust	Supply Air	Zp EQ 4-5
Science Classroom 105	1386	25	25	0.12	166.32	10	250	417			1	1386	1900	0.219474

OUTDOOR AIR AND EXHAUST CALCULATIONS														
HP-A	Area	Peo/1000SF	# People	CFM/SF	Area CFM	CFM/Person	People CFM	Total CFM	# Fixtures	CFM/Fixt	CFM/SF	Min Exhaust	Supply Air	Zp EQ 4-5
Corridor 100	511	0	0	0.06	30.66	0	0	31				0	300	0.103333
Storage 103	85	0	0	0.12	10.2	0	0	11				0	100	0.11
Janitor 104									1	70		70	5	0
Female 106									2	70		140	125	0
Male 107									2	70		140	125	0
Uniforms 110	62	0	0	0.12	7.44	0	0	8				0	100	0.08
Practice 109	75	5	1	0.18	13.5	5	5	19				0	100	0.19
Office 108	150	5	2	0.18	27	5	10	37				0	150	0.246667
Max "Zp"	0.246667		Zone Air Distribution Effectiveness											
"Ev"	0.9													
"Vou" Total OSA EQ 4-6	106		Cumulative O.A. =				118							
Total Building Occupancy	3													
Zone Occupancy	3		Zone Outdoor Air Flow "Ex" =				0.8							
"D" from EQ 4-7	1													
			REQUIRED OUTSIDE AIR =				147.5							
"Vot" Equation 4-8	117.7778													
TOTAL OSA	117.7778													

ZEA
ZGOUVAS, EIRING & ASSOCIATES
CONSULTING ENGINEERS
800 S McDONOUGH STREET
MONTGOMERY, AL. 36104
334.263.4406
18-256

Professional Engineer
No. 23369
09-07-18
R. EIRING

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Science and Band Building
at
Vina High School
for the
Franklin County Board of Education
Russellville, Alabama

MCKEE and ASSOCIATES
ARCHITECTURE and INTERIOR DESIGN

631 SOUTH HULL STREET MONTGOMERY, ALABAMA 36104 334.834.9933 mckeeassoc.com

STATE OF ALABAMA
REGISTERED ARCHITECT
WALTER T. MCKEE, JR.
No. 1082
MONTGOMERY, ALA.

SHEET TITLE : HVAC DETAILS
& O.A. CALCULATIONS

JOB NO. : 18-144

DRAWN BY : C. WARD

CHECKED BY : T. ZGOUVAS

DATES : 7 September 2018

SHEET NO. : M3

ELECTRICAL LEGEND

CEILING OUTLETS

- A RECESSED 2' X 4' LED FIXTURE MARK "A" CIRCUIT No. 2 TYPICAL
- A RECESSED 2' X 4' LED FIXTURE MARK "A" CIRCUIT No. 2 TYPICAL "EMERGENCY POWER"
- FS SURFACE OR PENDANT MOUNTED LED STRIP FIXTURE MARK "FS" CIRCUIT No. 2 TYPICAL
- FS SURFACE OR PENDANT MOUNTED LED STRIP FIXTURE MARK "FS" CIRCUIT No. 2 TYPICAL "EMERGENCY POWER"
- RECESSED OR SURFACE MOUNT DOWNLIGHT
- RECESSED OR SURFACE MOUNT DOWNLIGHT "EMERGENCY POWER"
- JUNCTION BOX
- EXIT LIGHT
- EXHAUST FAN
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. CEILING MOUNTED.
- CEILING MOUNTED PHOTO CELL SENSOR, SIMILAR TO WATT STOPPER LMLS-100

WALL OUTLETS

- WALL MOUNTED EXIT LIGHT
- WALL MOUNTED LIGHTING FIXTURE
- WALL MOUNTED LIGHTING FIXTURE "EMERGENCY POWER"
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, GFI, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, GFI, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE; PROVIDE WEATHERPROOF BOX FOR RECEPTACLE
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 6" ABOVE COUNTER
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, GFI, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 6" ABOVE COUNTER
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 6" ABOVE COUNTER UNLESS NOTED OTHERWISE
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, GFI, 3 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 26" AFF TO C/L FOR DRINKING FOUNTAIN
- JUNCTION BOX SIZE NOTED OR REQUIRED, WITH BLANK SCREW COVER AND FLEXIBLE CONDUIT CONNECTION
- PHOTOCELL; TORK MODEL 2101 (120V)
- SINGLE RECEPTACLE – 30 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA L6-30R. MOUNT AS DIRECTED FOR RACK UPS SYSTEM
- QUADRAPLEX RECEPTACLE – 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE
- RECEPTACLE CONTROLLED BY ROOM AUTOMATION SYSTEM. CONTROLLED RECEPTACLES SHALL BE MARKED WITH THE SYMBOL SHOWN IN NEC FIGURE 406.3 (E) AND LOCATED ON THE CONTROLLED RECEPTACLE OUTLET WHERE VISIBLE AFTER INSTALLATION.
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE
- RECEPTACLE CONTROLLED BY ROOM AUTOMATION SYSTEM. CONTROLLED RECEPTACLES SHALL BE MARKED WITH THE SYMBOL SHOWN IN NEC FIGURE 406.3 (E) AND LOCATED ON THE CONTROLLED RECEPTACLE OUTLET WHERE VISIBLE AFTER INSTALLATION.
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT ABOVE COUNTER. UNLESS NOTED OTHERWISE
- RECEPTACLE CONTROLLED BY ROOM AUTOMATION SYSTEM. CONTROLLED RECEPTACLES SHALL BE MARKED WITH THE SYMBOL SHOWN IN NEC FIGURE 406.3 (E) AND LOCATED ON THE CONTROLLED RECEPTACLE OUTLET WHERE VISIBLE AFTER INSTALLATION.
- DUPLEX RECEPTACLE – 20 AMP, 125 VOLT, GFI, 2 POLE, 3 WIRE GROUNDED TYPE, NEMA 5-20R. MOUNT ABOVE COUNTER. UNLESS NOTED OTHERWISE
- RECEPTACLE CONTROLLED BY ROOM AUTOMATION SYSTEM. CONTROLLED RECEPTACLES SHALL BE MARKED WITH THE SYMBOL SHOWN IN NEC FIGURE 406.3 (E) AND LOCATED ON THE CONTROLLED RECEPTACLE OUTLET WHERE VISIBLE AFTER INSTALLATION.

BRANCH CIRCUITING

- RUN CONCEALED UNDER FLOOR OR IN GRADE
- RUN CONCEALED IN CEILING OR WALLS
- HOMERUN TO PANEL. ANY CIRCUIT WITHOUT FURTHER IDENTIFICATION INDICATES 2 #12, 1 #12 GROUND – 3/4" C; ~~3~~ 3 #12, 1 #12 GROUND – 3/4" C; ~~4~~ 4 #12, 1 #12 GROUND – 3/4" C; ETC. AS PER NEC. LETTERS AND NUMERALS INDICATE PANEL AND CIRCUIT NUMBER.
- HOMERUN TO PANEL. ANY CIRCUIT WITHOUT FURTHER IDENTIFICATION INDICATES 2 #10, 1 #10 GROUND – 3/4" C; ~~3~~ 3 #10, 1 #10 GROUND – 3/4" C; ~~4~~ 4 #10, 1 #10 GROUND – 1" C; ETC. AS PER NEC. LETTERS AND NUMERALS INDICATE PANEL AND CIRCUIT NUMBER.
- HOMERUN TO PANEL. ANY CIRCUIT WITHOUT FURTHER IDENTIFICATION INDICATES 2 #8, 1 #10 GROUND – 1" C; ~~3~~ 3 #8, 1 #10 GROUND – 3/4" C; ~~4~~ 4 #8, 1 #10 GROUND – 1 1/4" C; ETC. AS PER NEC. LETTERS AND NUMERALS INDICATE PANEL AND CIRCUIT NUMBER.
- WHERE A NUMBER IS SHOWN NEXT TO OR ON THE CIRCUIT OR HOMERUN, THE NUMBER INDICATES CONDUCTOR SIZE OTHER THAN #12 – NUMBER #6 CONDUCTORS INDICATED. PROVIDE GROUND SIZED PER NEC TABLE 250-95 FOR MAX AMPACITY OF CONDUCTOR SIZE AS SHOWN. SIZE CONDUIT PER NEC ANNEX C.
- LIQUID-TIGHT FLEXIBLE CONDUIT CONNECTION
- SURFACE MOUNTED CONDUIT; RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES
- EMPTY CONDUIT WITH PULLWIRE RUN CONCEALED IN CEILING OR WALLS

TELEPHONE & TELEVISION SYSTEMS

- WALL OUTLET – 4-1/2" SQ X 3-1/2" DEEP BOX; MOUNT 18" AFF; FOR TYPICAL UNITS – SEE DETAIL ON SHEET E4.1
- (X) INDICATES NUMBER OF DATA RJ45 JACKS AND CAT6 CABLES BACK TO NEAREST IDF/CBB
- WALL OUTLET – 4-1/2" SQ X 3-1/2" DEEP BOX; MOUNT ABOVE COUNTER; FOR TYPICAL UNITS – SEE DETAIL ON SHEET E4.1
- (X) INDICATES NUMBER OF DATA RJ45 JACKS AND CAT6 CABLES BACK TO NEAREST IDF/CBB
- CEILING OUTLET FOR WIRELESS INTERNET – 1-RJ45 AND 1-CAT 6 CABLE BACK TO NEAREST IDF/MDF.
- HDMI OUTLET AT PROJECTOR AND TECHERS DESK LOCATION WITH HDMI CABLE CONNECTION
- WALL OUTLET – 4-1/2" SQ X 3-1/2" DEEP BOX; FOR TYPICAL UNITS – SEE COMMUNICATIONS RISER SHEET E4.1
- SB INDICATES FOR SMARTBOARD MOUNT AT HEIGHT AS NEEDED. 1-RJ45 & 1 CAT6 CABLE BACK TO NEAREST TELECOM CLOSET
- TELEPHONE BACKBOARD – 3/4" EXTERIOR GRADE PLYWOOD WITH TWO COATS OF INSULATING VARNISH, SIZE AS SHOWN

PANELS AND POWER

- PANELBOARD
- PANELBOARD FLUSH MOUNTED
- CONTROL PANEL
- FUSIBLE DISCONNECT SWITCH; XX/YY/ZZ WHERE X INDICATES AMPERAGE, Y INDICATES # OF POLES, AND Z INDICATES NEMA RATING; FURNISH AND INSTALL FUSES PER MANUFACTURER'S RECOMMENDATIONS
- MOTOR FURNISHED BY OTHERS AND CONNECTED BY ELECTRICAL CONTRACTOR; '5' INDICATES HORSE POWER RATING
- CIRCUIT BREAKER
- TRANSFORMER
- ELECTRIC METER
- GROUNDING ELECTRODE CONNECTION

MISCELLANEOUS EQUIPMENT

- WATER HEATER

FIRE ALARM SYSTEM

- FIRE ALARM SYSTEM CONTROL PANEL
- FIRE ALARM SYSTEM REMOTE ANNUNCIATOR
- FIRE ALARM SYSTEM MANUAL PULL STATION; MT 48" AFF TO C/L
- FIRE ALARM SYSTEM SIGNAL HORN/STROBE; MT 80" AFF TO C/L
- FIRE ALARM SYSTEM VOICE EVAC SPEAKER/STROBE,
- FIRE ALARM SYSTEM STROBE; MT. 80" AFF TO C/L
- FIRE ALARM SYSTEM TAMPER SWITCH
- FIRE ALARM SYSTEM FLOW SWITCH
- FIRE ALARM SYSTEM AUTOMATIC HEAT DETECTOR; 135 DEGREE/RATE OF RISE TYPE; CEILING MOUNTED
- FIRE ALARM SYSTEM AUTOMATIC SMOKE DETECTOR; CEILING MOUNTED
- FIRE ALARM SYSTEM AUTOMATIC AIR DUCT SMOKE DETECTOR MOUNTED IN MECHANICAL DUCT
- FIRE ALARM SYSTEM REMOTE TEST STATION
- FIRE ALARM SYSTEM ZONE MODULE, CONTROL TYPE
- FIRE ALARM SYSTEM ZONE MODULE, MONITOR TYPE
- FIRE ALARM SYSTEM MAGNETIC DOOR HOLDERS
- F – FIRE ALARM SYSTEM SUPERVISED CIRCUITING IN CONDUIT, RACEWAY INSTALLED CONCEALED

CLOSED CIRCUIT TELEVISION

- CLOSED CIRCUIT TELEVISION CAMERA – INTERIOR 1-RJ45 AND 1-CAT 6 CABLE BACK TO IDF
- WP CLOSED CIRCUIT TELEVISION CAMERA – EXTERIOR 1-RJ45 AND 1-CAT 6 CABLE BACK TO IDF
- CLOSED CIRCUIT TELEVISION CAMERA – NETWORK VIDEO RECORDER

INTERCOM SYSTEM

- INTERCOM SYSTEM – CLASSROOM CALL STATION
- INTERCOM SPEAKER – DROP-IN CEILING TILE SPEAKER
- INTERCOM SPEAKER – WALL MOUNTED HORN
- INTERCOM SPEAKER – WALL MOUNTED SPEAKER
- GYM INTERCOM SYSTEM – CONSOLE
- I – INTERCOM CIRCUITRY

LIGHTING CONTROLS

- CEILING MOUNTED OCCUPANCY SENSOR
- POWER PACK FOR OCCUPANCY SENSOR
- ROOM CONTROLLER – 1 ZONE DIMMING
- ROOM CONTROLLER – 2 ZONE DIMMING
- ROOM CONTROLLER – EMERGENCY LIGHTING UL924 DEVICE
- ROOM CONTROLLER – ON/OFF NO DIMMING
- WALL DIMMER – ON/OFF & 0-10V 1-ZONE DIMMING
- WALL DIMMER – ON/OFF & 0-10V 2-ZONE DIMMING
- LOW VOLTAGE SWITCH, 2-BUTTON
- LOW VOLTAGE SWITCH CONNECTED TO LIGHTING CONTROL PANEL, 2-BUTTON
- OCCUPANCY SENSOR WALL SWITCH, ULTRASONIC TECHNOLOGY, 1-BUTTON
- S01 SIMILAR TO HUBBELL LIGHT HAWK 2

*COORDINATE WITH LIGHTING CONTROL DETAILS FOR MORE REQUIREMENTS



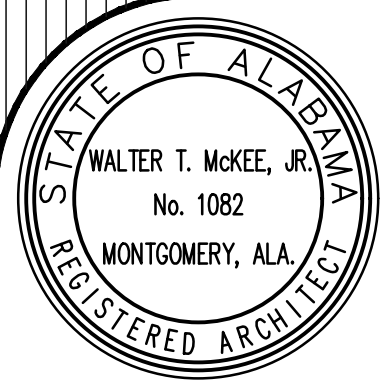
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GA#18-246



a
Science and Band Building
at
Vina High School
for the
Franklin County Board of Education
Russellville, Alabama



SHEET TITLE : ELECTRICAL LEGEND & NOTES

JOB NO. : 18-144

DRAWN BY : J. TILLERY

DATES : 18 September 2018

SHEET NO. : E0.1

MISCELLANEOUS

A	AMPERE
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISH FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
C	CONDUIT
CL	CENTER LINE
CWP	COLD WATER PIPE
EM	EMERGENCY
EMT	ELECTRIC METALLIC TUBING
GFI	GROUND FAULT INTERRUPTER
GRC	GALVANIZED RIGID METAL CONDUIT
GRO	GROUND
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MLO	MAIN LUGS ONLY
MT	MOUNT
N	NEUTRAL
NIC	NOT IN CONTRACT
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOC.
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NL	NIGHT LIGHT
NTS	NOT TO SCALE
P	POLE
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PVC	PVC (POLYVINYL CHLORIDE) CONDUIT
SLD	SINGLE LINE DIAGRAM
TBB	TELEPHONE BACKBOARD
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSORS
UL	UNDERWRITER'S LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLTAGE
W	WIRE
WP	WEATHERPROOF
#	NUMBER
3R	NEMA 3R WEATHERPROOF ENCLOSURE
4X	NEMA 4X WEATHERPROOF/CORROSION ENCLOSURE

GENERAL ELECTRICAL NOTES:

1. THE SERVICE VOLTAGE TO THE FACILITY IS 120/240 VOLT, 1 PHASE, 3 WIRE.
2. INSTALLATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, STATE AND LOCAL CODES, AND MANUFACTURER'S RECOMMENDATIONS.
3. MAINTAIN ALL CLEARANCES FOR ELECTRICAL EQUIPMENT PER THE NEC.
4. COORDINATE ROUGH-IN OF ALL ELECTRICAL DEVICES WITH ARCHITECTURAL FLOOR PLANS, ELEVATIONS AND MILLWORK SHOP DRAWINGS PRIOR TO ROUGH-IN. AVOID ALL BACKSPASHES AT COUNTERS.
5. ALL DIMENSIONS INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS IN THE FIELD, AND COORDINATING WORK WITH OTHER TRADES TO AVOID CONFLICTS.
6. VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL BEFORE ROUGH-IN OF LIGHT SWITCHES TO ENSURE PROPER SWITCH LOCATION.
7. THE LOCATION OF OUTLETS, FIXTURES, AND EQUIPMENT SHOWN ON THE DRAWINGS ARE APPROXIMATE, OFFSET AS NEEDED OR AS REQUESTED BY THE OWNER. THE OWNER SHALL HAVE THE RIGHT TO RELOCATE ANY OUTLETS OR FIXTURES BEFORE THEY ARE INSTALLED WITHOUT ANY ADDITIONAL COST.
8. COORDINATE EXACT LOCATION OF ALL ELECTRICAL FLOOR DEVICES WITH ARCHITECT PRIOR TO INSTALLATION.
9. ALL CONDUIT SIZE SHALL BE A MINIMUM 3/4" UNLESS NOTED OTHERWISE IN THE DRAWINGS OR SPECIFICATIONS.
10. ALL ELECTRICAL RACEWAYS AND CABLING SHALL BE INSTALLED CONCEALED WITHIN THE CONFINES OF THE BUILDING FOUNDATIONS EXCEPT THOSE SPECIFICALLY SERVING LOADS OR EQUIPMENT EXTERIOR OF THE BUILDING. ALL SUCH RACEWAYS SHALL BE A MINIMUM 18" INSIDE FOUNDATIONS AND POWER AND COMMUNICATIONS RACEWAYS SHALL BE SEPARATED BY A MINIMUM 18".
11. ALL CONDUITS INSTALLED UNDERFLOOR SHALL BE ROUTED UNDER STRUCTURAL CONCRETE FLOOR SLABS. CONTRACTOR SHALL NOT INSTALL CONDUITS IN CONCRETE FLOORING WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER. CONDUITS PENETRATING THRU CONCRETE FLOORS SHALL ADHERE TO THE ELECTRICAL SPECIFICATIONS AND RECOMMENDATIONS OF THE STRUCTURAL ENGINEER.
12. ALL RACEWAYS INSTALLED ON EXTERIOR OF THE BUILDING, INCLUDING CONDUIT UNDER CANOPIES, SHALL BE GRC. EMT WILL NOT BE ACCEPTED.
13. ALL RACEWAYS SHALL BE SUPPORTED PER NEC AND AT LEAST EVERY 10' AND WITHIN 3' OF EVERY JUNCTION BOX. RACEWAYS SUPPORTED ON BOTTOM OF SECONDARY CEILING SHALL BE SUPPORTED FROM THE STRUCTURE NOT FROM THE GYPBOARD CEILING.
14. ALL EMPTY WALL MOUNTED JUNCTION BOXES SHALL BE PROVIDED WITH A WALL BLANK AND ALL EMPTY RACEWAYS SHALL BE PROVIDED WITH A PULL WIRES.
15. PROVIDE ALL CONDUIT STUBS WITH A PROTECTIVE COLLAR.
16. INSURE THAT ALL PENETRATIONS OF FIRE WALLS AND DECKS ARE PROPERLY SEALED PER INTERNATIONAL BUILDING CODE 712 AND WITH AN UL APPROVED DEVICE OR FIRE CAULK. REFER TO ARCHITECTURAL PLANS FOR THE LOCATIONS OF RATED FIRE WALLS AND UL ASSEMBLY LOCATIONS AND TYPES AND BID ACCORDINGLY.
17. PROVIDE A CONDUIT EXPANSION JOINTS WITH BONDING JUMPER IN ALL CONDUITS CROSSING AN EXPANSION JOINT. REFER TO ARCHITECTURAL DRAWINGS FOR EXPANSION JOINT LOCATIONS.
18. ALL UNDERGROUND CONDUITS RUNS ENTERING THE BUILDING SHALL BE SEALED TO PREVENT THE ENTRANCE OF MOISTURE.
19. ALL FLEXIBLE CONDUITS ON THE EXTERIOR, IN WET LOCATIONS OR ANY MECHANICAL ROOM SHALL BE LIQUID TIGHT WITH SUITABLE FITTINGS.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING AROUND DEVICES, PENETRATIONS, OUTLETS, AND CONDUITS THAT PENETRATE THE WALLS ABOVE THE CEILING TO MAINTAIN SOUNDPROOFING. CONTRACTOR SHALL VERIFY THAT THE OPENINGS SIZES ARE LESS THAN 1/2" ON ALL SIDES OF THE PENETRATIONS. ALL OPENINGS IN EXCESS OF 1/2" SHALL BE CAULKED/SEALED WITH SHEET ROCK MUD. THE DRYWALL CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING PENETRATIONS IN PLACE WHEN THE SHEETROCK ARE INSTALLED. PENETRATIONS MADE AFTER THE DRYWALL CONTRACTOR HAS FINISHED IN AN AREA SHALL BE SEALED BY THE CONTRACTOR MAKING THE PENETRATION.
21. PLANNED INTERRUPTIONS OF UTILITY SERVICE TO ANY EXISTING FACILITY OR AREAS WITHIN ANY FACILITY AFFECTED BY THIS CONTRACT, SHALL BE CAREFULLY PLANNED AND COORDINATED IN ADVANCE OF THE REQUESTED INTERRUPTION. THE CONTRACTOR SHALL NOT INTERRUPT SERVICES UNTIL SPECIFIED APPROVAL HAS BEEN GRANTED. THE REQUEST SHALL INDICATE SERVICES AND AREAS TO BE AFFECTED, DATE AND TIME OF INTERRUPTION AND DURATION OF OUTAGE. REQUEST FOR INTERRUPTION OF SERVICE WILL NOT BE APPROVED UNTIL ALL EQUIPMENT AND MATERIAL REQUIRED FOR THE COMPLETION OF THAT PARTICULAR PHASE OF WORK ARE ON THE JOB SITE. CONTRACTOR IS RESPONSIBLE FOR ALL OVERTIME, HOLIDAY, AND WEEKEND PAY TO THEIR EMPLOYEES TO DO THIS WORK DURING SCHEDULED NON-NORMAL WORK HOURS.
22. ALL EMERGENCY LIGHTS AND EXIT SIGNS SHALL HAVE AN EMERGENCY BATTERY BALLAST CONNECTED AHEAD OF LOCAL SWITCHING, UNLESS EMERGENCY LIGHTING IS ON EMERGENCY CIRCUIT FROM A GENERATOR.
23. CONTRACTOR IS RESPONSIBLE FOR PROPER SENSITIVITY AND TIME DELAY SETTINGS FOR OCCUPANCY SENSORS. PROVIDE PROPER NUMBER OF POWER PACKS AND LOCATE POWER PACKS AND OCCUPANCY SENSORS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
24. ALL JUNCTION BOX COVERS ABOVE THE CEILING SHALL BE CLEARLY MARKED WITH WHICH CIRCUITS OR ELECTRICAL SYSTEM THEY CONTAIN.
25. HVAC EQUIPMENT POWER WIRING SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. CONTROL EQUIPMENT AND CONTROL WIRING SHALL BE FURNISHED UNDER DIVISION 15 UNLESS OTHERWISE NOTED. PROVIDE 3/4" CONDUITS WITH PULL WIRE BETWEEN INSIDE AND OUTSIDE UNITS, THERMOSTAT OUTLETS AND UNITS AND/OR MECHANICAL CONTROL PANEL AS APPLICABLE. THERMOSTAT OUTLETS SHALL BE 4" SQUARE OUTLETS, FLUSH MOUNTED WITH SINGLE GANG OR DOUBLE GANG PLASTER RINGS AS DIRECTED BY THE HVAC CONTRACTOR. COORDINATE EXACT LOCATION OF ALL EQUIPMENT, DEVICES, OUTLETS, ETC, WITH THE MECHANICAL DRAWINGS AND DIVISION 15 SPECIFICATIONS. COORDINATE WITH THE HVAC CONTRACTOR FOR EXACT LOCATIONS OF ALL EQUIPMENT.
26. BUILDING OWNER MUST RECEIVE RECORD DRAWINGS AND MANUALS THAT PROVIDE INSTRUCTIONS ABOUT THE OPERATION AND MAINTENANCE OF THE BUILDING'S ELECTRICAL DISTRIBUTION SYSTEM.



COMcheck Software Version 4.1.0.0
Interior Lighting Compliance Certificate

Project Information

Energy Code:

90.1 (2013) Standard

Project Title:

SCIENCE & BAND BUILDING VINA HIGH SCHOOL

Project Type:

New Construction

Construction Site:

Owner/Agent:

MCKEE & ASSOCIATES

Designer/Contractor:

JASON TILLERY
Gunn and Associates
MILLBROOK, AL

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft²)	C Allowed Watts / ft²	D Allowed Watts (B X C)
1-HIGH SCHOOL (Common Space Types Classroom/Lecture/Training)	4180	1.24	5183
			Total Allowed Watts = 5183

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-HIGH SCHOOL (Common Space Types Classroom/Lecture/Training)				
LG48: Other:	1	13	38	494
LG60: Other:	1	2	45	90
LG72: Other:	1	25	61	1525
LS2: Other:	1	3	31	93
D1: Other:	1	1	35	35
			Total Proposed Watts =	2237

Interior Lighting PASSES: Design 57% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.0.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jason Tillery - Electrical Designer

Signature

9/16/18

Date

Project Title:

SCIENCE & BAND BUILDING VINA HIGH SCHOOL

Data filename:

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Report date:

09/06/18

Page:

1 of 6



COMcheck Software Version 4.1.0.0
Exterior Lighting Compliance Certificate

Project Information

Energy Code:

90.1 (2013) Standard

Project Title:

SCIENCE & BAND BUILDING VINA HIGH SCHOOL

Project Type:

New Construction

Exterior Lighting Zone:

1 (Developed rural area)

Construction Site:

Owner/Agent:

MCKEE & ASSOCIATES

Designer/Contractor:

JASON TILLERY
Gunn and Associates
MILLBROOK, AL

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Walkway < 10 feet wide	800 ft of	0.7	Yes	560
			Total Tradable Watts (a) =	560
			Total Allowed Watts =	560
			Total Allowed Supplemental Watts (b) =	500

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Walkway < 10 feet wide (800 ft of walkway length): Tradable Wattage				
LED 2: Other:	1	6	50	300
LED 3: Other:	1	2	35	70
			Total Tradable Proposed Watts =	370

Exterior Lighting PASSES: Design 65% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.0.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jason Tillery - Electrical Designer

Signature

9/16/18

Date

Project Title:

SCIENCE & BAND BUILDING VINA HIGH SCHOOL

Data filename:

N:\2018\18-246\Correspondence\VINA HS ENERGY STUDY.cck

Report date:

09/06/18

Page:

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GA

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SHEET TITLE : ELECTRICAL LEGEND & NOTES

JOB NO. : 18-144
DRAWN BY : J. TILLERY
DATES : 18 September 2018

SHEET NO. : E0.2

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GENERAL NOTES:

1. COORDINATE WITH POWER RISER DIAGRAM SHEET E7.1 FOR FEEDER AND CONDUIT SIZES AND ALL OTHER ADDITIONAL REQUIREMENTS NOT SHOWN ON SITE PLAN.
2. ALL UNDERGROUND CONDUITS SHALL BE 36" MINIMUM BELOW GRADE. UNDERGROUND PRIMARY SHALL BE 48" MINIMUM BELOW GRADE
3. ALL ROUTING IS SHOWN DIAGRAMMATIC. VERIFY ACTUAL ROUTING AND FIELD CONDITIONS PRIOR TO BIDS.
4. LOCATIONS OF RISER POLES, AND TRANSFORMERS SHALL BE COORDINATED PRIOR TO BIDS. ADJUST FEEDER AND CONDUIT LENGTHS ACCORDINGLY. PAY ALL UTILITY COMPANY FEES. BID ACCORDINGLY.
5. VISIT SITE PRIOR TO BIDS TO VERIFY ROUTING AND LENGTHS OF CIRCUITRY ON ALL SYSTEMS PRIOR TO BIDS. ADJUST ALL LENGTHS ACCORDINGLY.
6. SEE TRENCH/BACKFILL/REPAIR DETAILS ON SHEET E1.2.

SHEET NOTES:

- ① CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR SERVICE BEING BROUGHT TO FACILITY AND PAY ALL ASSOCIATED FEES. CONTRACTOR SHALL DIRECTIONALLY BORE FROM UTILITY POLE TO A POINT BEYOND VEHICLE PARKING, AT THAT POINT TRANSITION TO SCH 40 PVC THEN TURN UP AT SERVICE ENTRANCE PANELBOARD. SEE DETAILS ON SHEET E1.2 FOR PATCH/REPAIR OF EXISTING SURFACES.
- ② PROVIDE 2" CONDUIT FROM ELECTRICAL ROOM IN NEW BUILDING TO JUNCTION BOX THEN INTO EXISTING MAIN BUILDING, RISE UP TO ABOVE CEILING TO EX: "MDF". SEE SHEET E6.2 FOR FIBER OPTIC CABLING REQUIREMENTS.
- ③ PROVIDE 2" CONDUIT FROM ELECTRICAL ROOM IN NEW BUILDING THEN ROUTE VIA JUNCTION BOX TO EXISTING MAIN BUILDING AND THEN RISE UP TO ABOVE CEILING TO EXISTING INTERCOM SYSTEM. SEE SHEET E6.2 FOR CABLING REQUIREMENTS.

UNDERGROUND UTILITY NOTES:

1. THE UNDERGROUND UTILITY PORTION OF THIS PROJECT CONSISTS OF BUT IS NOT LIMITED TO:
 - a. TRENCHING/BACKFILLING FOR DUCT LINES AND CONDUIT SYSTEMS
 - b. DUCTBANK INSTALLATIONS
 - c. LOW VOLTAGE CONDUCTOR INSTALLATION
 - d. PATCH/REPAIR ALL DAMAGED SURFACES AS A RESULT OF DUCTLINE INSTALLATIONS
2. INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL SAFETY CODE (NESC) AND THE NATIONAL ELECTRICAL CODE (NEC).
3. ALL CONDUCTIVE PARTS OF EQUIPMENT, ENCLOSURES, SUPPORTS, FRAMES, CASES, CONDUIT SYSTEMS AND SURGE ARRESTORS, CABLE SHEATHS, CABLE SHIELDS, COMMON NEUTRALS, ETC., SHALL BE GROUNDED. UNLESS NOTED OTHERWISE CONNECTIONS BELOW GRADE SHALL BE FUSION-WELDED AND ABOVE GRADE FUSION-WELDED OR BOLTED SOLDERLESS. ALL GROUND CONDUCTORS SHALL BE COPPER.
4. ALL CLEARANCES SHALL BE MAINTAINED PER NESC AND NEC. ALL PARTS, DEVICES, EQUIPMENT, ETC. WHICH REQUIRE MAINTENANCE, ADJUSTMENT, OPERATION OR EXAMINATION DURING NORMAL NETWORK OPERATION SHALL BE ARRANGED SO AS TO BE ACCESSIBLE BY THE PROVISION OF ADEQUATE WORKING SPACES, WORKING FACILITIES AND CLEARANCES. UNLESS NOTED OTHERWISE ALL CLEARANCES ARE MEASURED FROM SURFACE TO SURFACE.
5. ALL DIMENSIONS INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS IN THE FIELD.

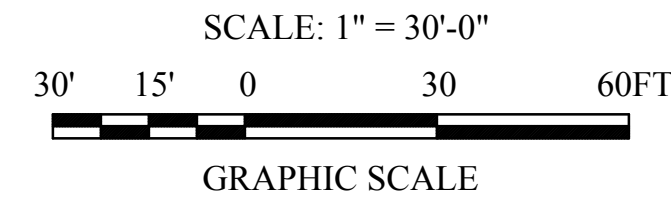
6. UNLESS OTHERWISE SHOWN OR DIRECTED DUCT LINES SHALL NOT BE LOCATED DIRECTLY UNDER STRUCTURES AND NOT DIRECTLY UNDER OR OVER OTHER SUBSURFACE STRUCTURES. WHERE DUCT LINES ARE REQUIRED TO CROSS OTHER UTILITIES SUCH AS SEWERS, WATER LINES, OTHER POWER LINES, COMMUNICATION LINES, ETC., ADEQUATE SUPPORT SHALL BE PROVIDED ON EACH SIDE OF THE CROSSING TO PREVENT TRANSFERRING ANY DIRECT LOAD ONTO THE OTHER LINE. DUCT LINES SHALL BE SO INSTALLED AS TO PREVENT HEAT TRANSFER BETWEEN ANY HEAT PRODUCING LINES AND/OR EQUIPMENT TO DUCT LINES.
 - a. ROUTING SHOWN ON DRAWINGS IS TYPICAL AND THE CONTRACTOR SHALL PROPOSE FINAL ROUTING BASED UPON ACTUAL FIELD DIMENSIONS, CONDITIONS AND EXISTING UNDERGROUND UTILITIES AND STRUCTURES.
 - b. PRIOR TO TRENCHING, THE CONTRACTOR SHALL STAKE OUT THE ENTIRE NETWORK ARRANGEMENT. ONE GRADE A WOODEN STAKE WITH RED FLAG SHALL BE DRIVEN EVERY 50'-0" AND AT EACH CHANGE OF DIRECTION. FOUR STAKES SHALL BE DRIVEN TO OUTLINE EQUIPMENT AND/OR MANHOLE LOCATIONS. ON PAVEMENTS RED PAINT SHALL BE USED TO OUTLINE THE AREAS TO BE CUT. SECURE EXISTING UNDERGROUND UTILITY INFORMATION FROM THE CONTRACTING OFFICER PRIOR TO PERFORMING ANY TRENCHING.
 - c. DEPTHS INDICATED FOR INSTALLATION ARE MINIMUM. ACTUAL DEPTHS MAY VARY DUE TO TERMINATIONS, COMPENSATIONS FOR RADIUS OF VERTICAL TRANSITIONS, EXISTING UTILITY CROSSINGS, ETC. APPROVAL SHALL BE OBTAINED FOR ANY DEPTH LESS THAN INDICATED. TRENCHES SHALL BE OVER-EXCAVATED AS NECESSARY TO ALLOW FOR PROPER TRENCH PREPARATION, DUCT BANK CONSTRUCTION, FORMING AND/OR BACKFILLING REQUIREMENTS.
 - d. ALL TRENCHING AND BACKFILL COMPACTION SHALL COMPLY WITH GEOTECHNICAL REPORT AND DIVISION 200.

SITE LEGEND

- UP--- UNDERGROUND PRIMARY
--US--- UNDERGROUND SECONDARY
--UC--- COMMUNICATIONS



① SITE PLAN - ELECTRICAL
SCALE: 1" = 30'-0"



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SHEET TITLE : SITE PLAN - ELECTRICAL

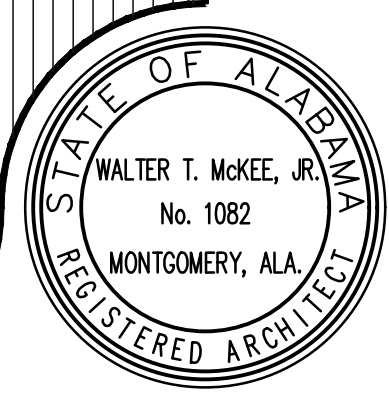
JOB NO. : 18-144
DRAWN BY : J. TILLERY
DATES : 18 September 2018

SHEET NO. : E1.1



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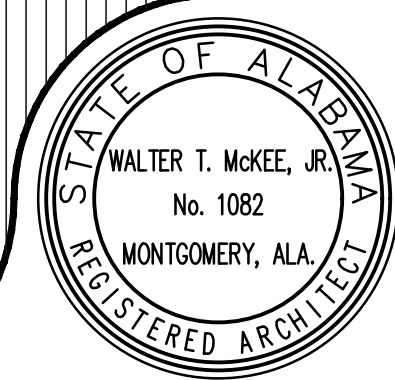
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SHEET TITLE : SITE PATCHING DETAILS

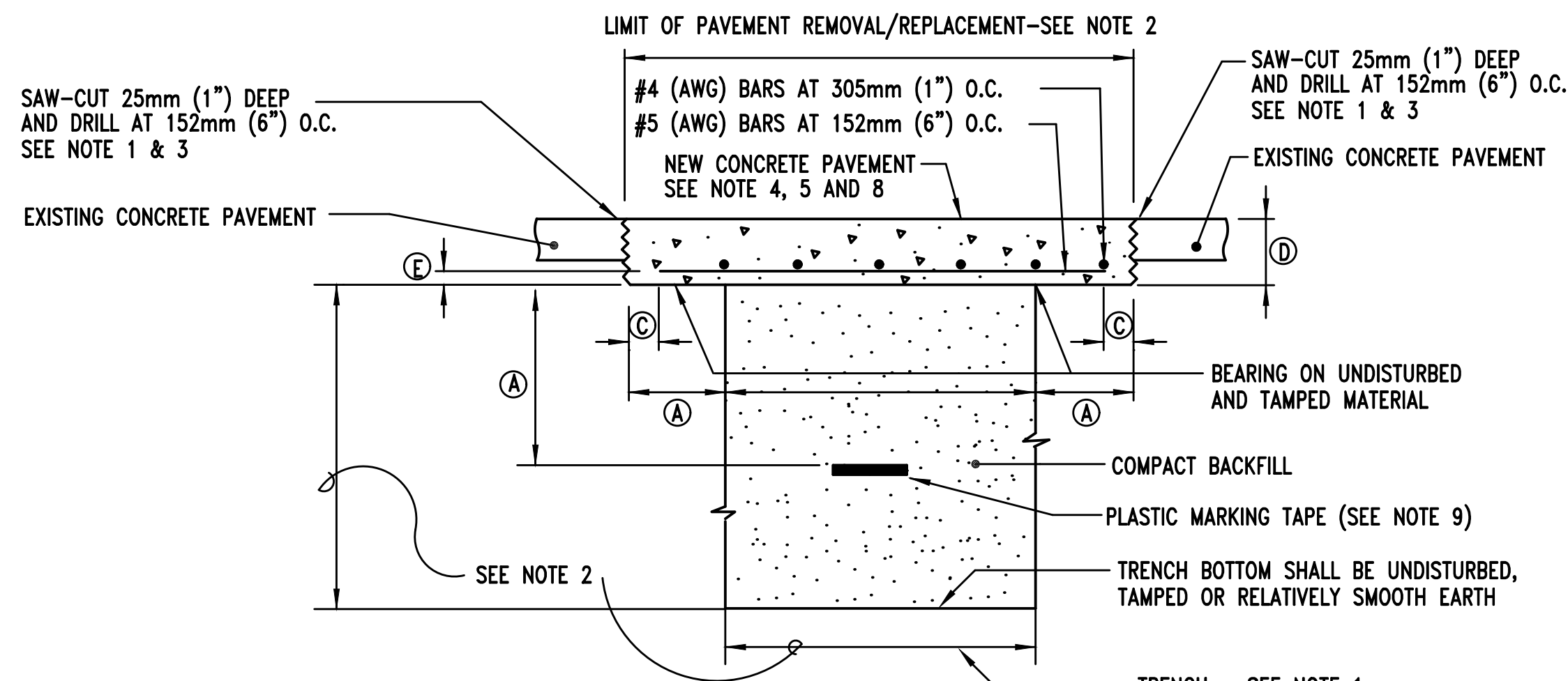
JOB NO. : 18-144
DRAWN BY : J. TILLERY
DATES : 18 September 2018

SHEET NO. : E1.2

NOTES:

1. TRENCH/CUT EXISTING SURFACES. BACKFILL/PATCH/REPAIR ALL SURFACES AS SHOWN.
2. TRENCH DEPTH AND WIDTH SHALL BE AS REQUIRED FOR THE INSTALLATION OF THE RACEWAY LINE SPECIFIED. SEE APPLICABLE RACEWAY LINE SECTION.
3. PAVEMENT REMOVAL SHALL BE COMPLETE FROM THE SITE AND EXTEND BEYOND THE TRENCH WIDTH AS INDICATED.
4. CONCRETE SHALL BE CLASS A.
5. MATCH THICKNESS OF EXISTING CONCRETE PAVEMENT 8" (20.32cm) MIN.
6. LEAVE DRILLED FACE OF EXISTING PAVEMENT IRREGULAR TO INSURE KEY TO NEW CONCRETE PAVEMENT.
7. ALL EXISTING JOINTS TO BE RE-ESTABLISHED.
8. REINFORCING BARS SHALL MEET ASTM A615, A616 OR A617, GRADE 40.
9. REINFORCING BARS SHALL BE INSTALLED THE CONTINUOUS LENGTH OF CONCRETE PAVEMENT.
10. PLASTIC MARKER TAPE SHALL BE RED AND CONTAIN FOIL BACKING OR EQUIVALENT TO ENABLE DETECTION BY A METAL DETECTOR. SEE SPECIFICATIONS.

DIMENSION BLOCK		
REF	SI	ENGLISH
A	305mm	1'-0"
B	152mm	0'-6"
C	51mm	0'-2"
D	203mm	0'-8"
E	76mm	0'-3"

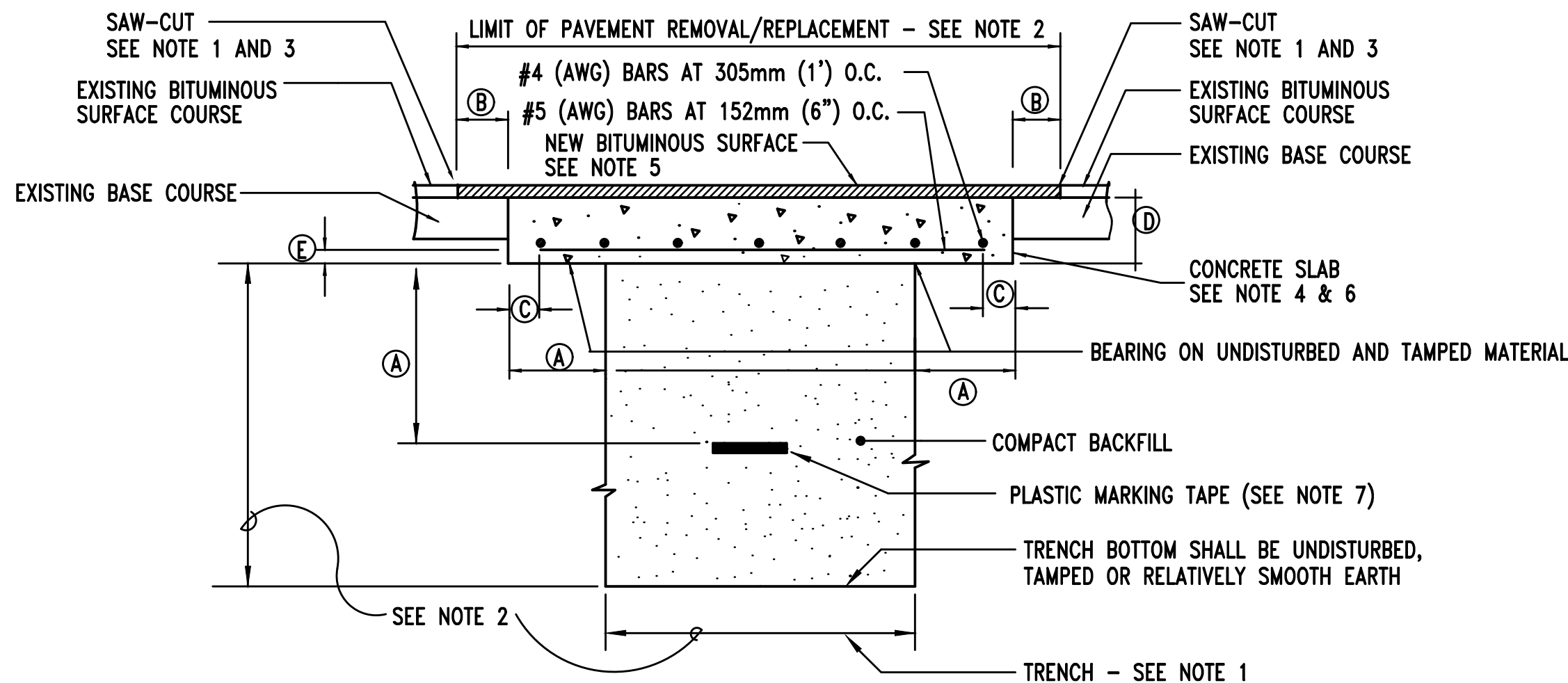


2 SECTION - TYPICAL TRENCH/BACKFILL/REPAIR RIGID PAVEMENT
E1.2 NO SCALE

NOTES:

1. TRENCH/CUT EXISTING SURFACES. BACKFILL/PATCH/REPAIR ALL SURFACES AS SHOWN.
2. TRENCH DEPTH AND WIDTH SHALL BE AS REQUIRED FOR THE INSTALLATION OF THE RACEWAY LINE SPECIFIED. SEE APPLICABLE RACEWAY LINE SECTION.
3. PAVEMENT REMOVAL SHALL BE COMPLETE FROM THE SITE AND EXTEND BEYOND THE TRENCH WIDTH AS INDICATED.
4. CONCRETE SHALL BE CLASS A.
5. MATCH THICKNESS OF EXISTING BITUMINOUS SURFACE, OR 38mm (1.5") MINIMUM, WHICHEVER IS GREATER.
6. REINFORCING BARS SHALL MEET ASTM A615, A616 OR A617, GRADE 40.
7. REINFORCING BARS SHALL BE INSTALLED THE CONTINUOUS LENGTH OF CONCRETE SLAB.
8. PLASTIC MARKER TAPE SHALL BE RED AND CONTAIN FOIL BACKING OR EQUIVALENT TO ENABLE DETECTION BY A METAL DETECTOR. SEE SPECIFICATIONS.

DIMENSION BLOCK		
REF	SI	ENGLISH
A	305mm	1'-0"
B	152mm	0'-6"
C	51mm	0'-2"
D	203mm	0'-8"
E	76mm	0'-3"

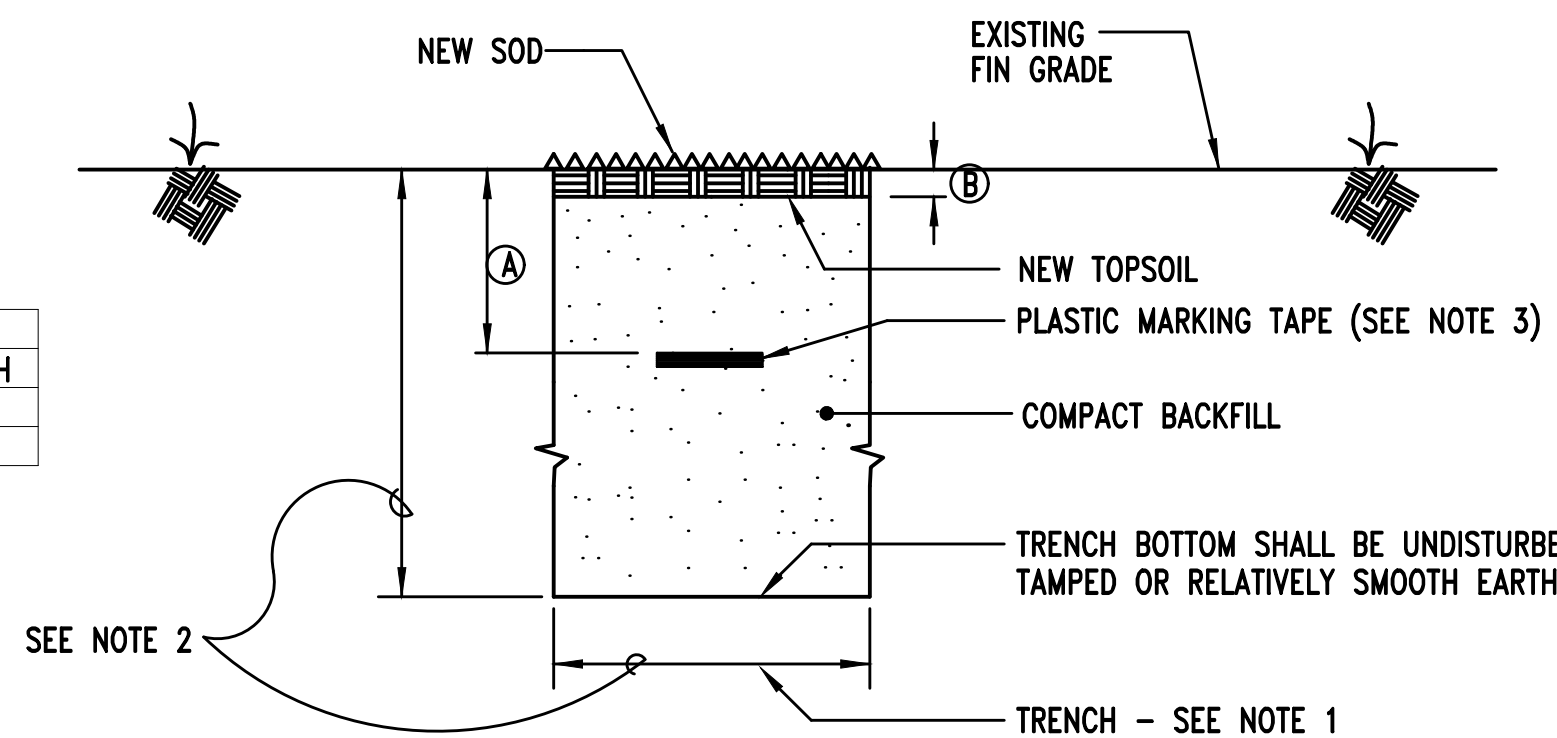


3 SECTION - TYPICAL TRENCH/BACKFILL/REPAIR FLEXIBLE PAVEMENT
E1.2 NO SCALE

NOTES:

1. TRENCH/CUT EXISTING SURFACES. BACKFILL/PATCH/REPAIR AND INSTALL NEW SOD.
2. TRENCH DEPTH AND WIDTH SHALL BE AS REQUIRED FOR THE INSTALLATION OF THE RACEWAY LINE SPECIFIED. SEE APPLICABLE RACEWAY LINE SECTION.
3. PLASTIC MARKER TAPE SHALL BE RED AND CONTAIN FOIL BACKING OR EQUIVALENT TO ENABLE DETECTION BY A METAL DETECTOR. SEE SPECIFICATIONS.

DIMENSION BLOCK		
REF	SI	ENGLISH
A	305mm	1'-0"
B	51mm	0'-2"



1 SECTION - TYPICAL TRENCH/BACKFILL/REPAIR SODDED AREAS
E1.2 NO SCALE



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SHEET NOTES:

- ① FIXTURE "WP1" WILL BE INTERNALLY WIRED TO ACCOMMODATE REQUIRED SHUT DOWN TIMES BY ASHRAE 90.1 9.4.1(E) (F).

ROOM CONTROLLER NOTES:

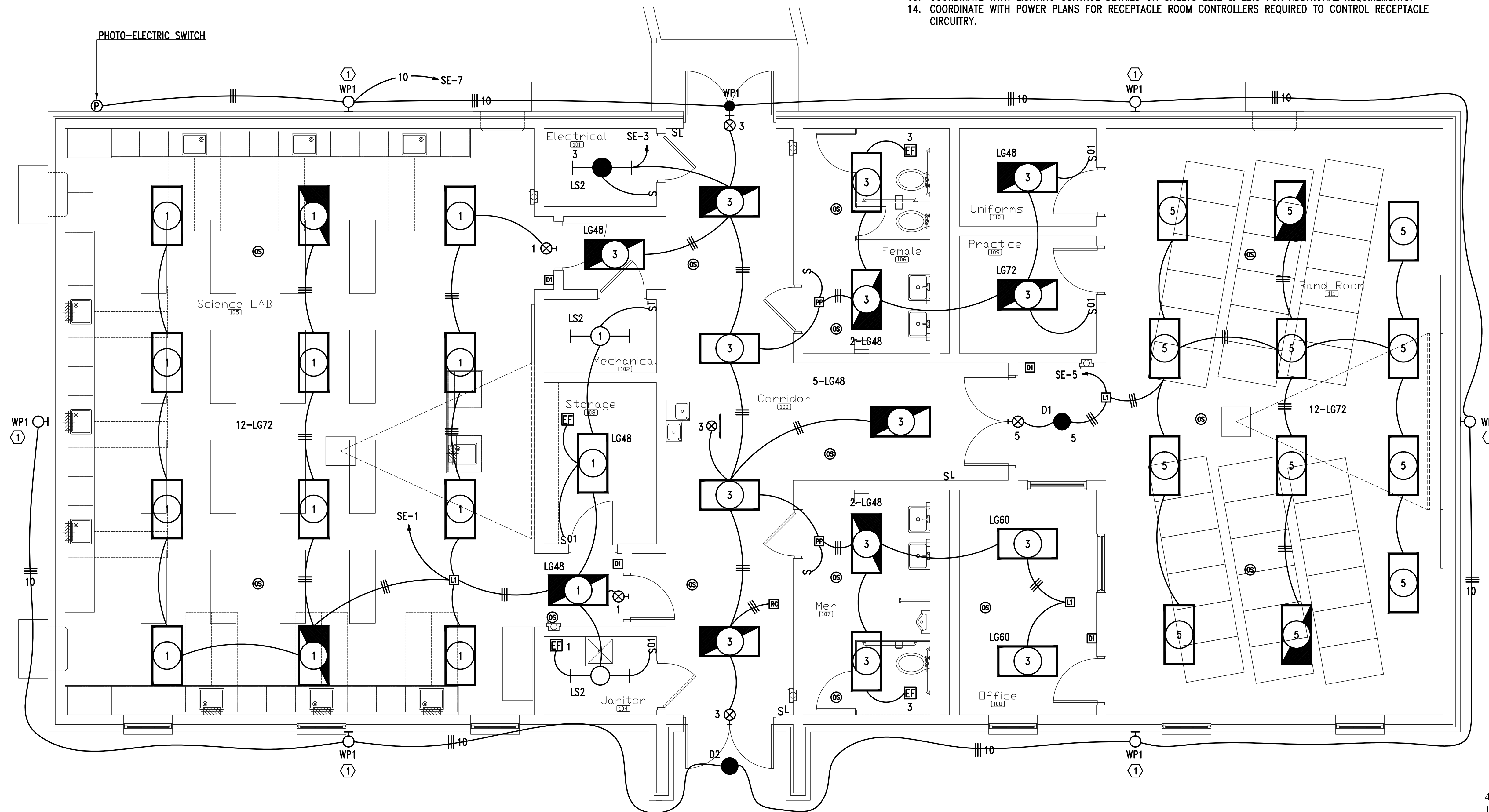
1. CONTRACTOR SHALL LOCATE ALL ROOM CONTROLLERS ABOVE DOORS IN EACH ROOM 6" ABOVE CEILING GRID. PROVIDE ACCESS PANELS WHERE LOCATED ABOVE HARD CEILINGS OR MOUNT IN UTILITY TYPE ROOMS WHENEVER POSSIBLE. ROOM CONTROLLERS SHOWN ON THIS PLAN IS DIAGRAMMATIC FOR CIRCUITRY. DO NOT USE THESE FOR ACTUAL LOCATIONS. PROVIDE A WHITE PHENOLIC LABEL WITH 1" BLACK TEXT THAT READS "RC" GLUED ON CEILING GRID UNDER POWER PACK FOR EACH LOCATION FOR FUTURE MAINTENANCE.

PHOTOCONTROL OF LIGHTING:

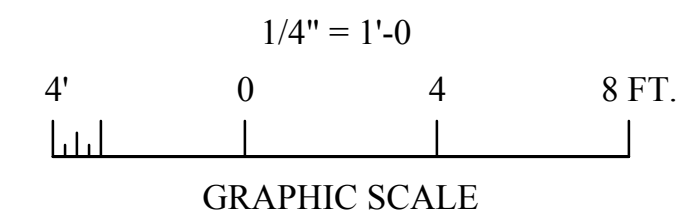
1. PHOTOCONTROL OF LIGHT FIXTURES WILL NOT BE REQUIRED FOR THE AREAS ON THIS PAGE. THE PRIMARY SIDELIGHTED AREA WILL NOT HAVE WATTAGES EXCEEDING 150W.

GENERAL NOTES:

- OCCUPANCY SENSORS SHALL BE VACANCY TYPE WITH DUAL TECHNOLOGY DETECTION AND 20-MINUTE CUTOFF TIME.
- OCCUPANCY SENSOR MANUFACTURER PROVIDER WILL BE RESPONSIBLE FOR SIZING THE OCCUPANCY SENSORS IN EACH SPACE. PROVIDE THIS SIZING TO THE ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. PROVIDE ADDITIONAL OCCUPANCY SENSORS AS REQUIRED TO FULLY COVER ALL SPACES. IF ADDITIONAL OCCUPANCY SENSORS OR ANY OTHER EQUIPMENT IS REQUIRED IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND INSTALL. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THIS WITH LIGHTING MANUFACTURER PRIOR TO BIDS AND COVER THE COST OF ALL MATERIAL AND LABOR FOR ANY ADDITIONAL OCCUPANCY SENSORS.
- ALL OCCUPANCY SENSORS LOCATIONS ARE APPROXIMATE, REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR EXACT MOUNTING AND SPACING REQUIREMENTS PRIOR TO INSTALLATION.
- ULTRASONIC CEILING MOUNTED OCCUPANCY SENSORS SHALL BE LOCATED A MINIMUM OF SIX (6) FEET FROM HVAC SUPPLY/RETURN VENTS.
- CONTRACTOR IS RESPONSIBLE FOR PROPER SENSITIVITY AND TIME DELAY SETTINGS FOR OCCUPANCY SENSORS, FOLLOWING THE MANUFACTURER'S RECOMMENDED PLACEMENT, AND FIELD VERIFICATION OF CIRCUITS WITH RESPECT TO POWER PACK PLACEMENT.
- OCCUPANCY SENSORS MOUNTED OVER DOORWAYS SHALL BE PLACED ONE (1) FOOT INSIDE THRESHOLD.
- LIGHTING CONTROL SYSTEM IS SPECIFIED AROUND THE HUBBELL AUTOMATION SYSTEM. CONTRACTOR SHALL PROVIDE ALL MATERIALS, DEVICES, WIRING, CONNECTIONS, AND PROGRAMMING NEEDED IF ANY OTHER LIGHTING CONTROL SYSTEM SUBMITS FOR APPROVAL AND IS PROVIDED.
- WATT STOPPER AND N-LIGHT ARE APPROVED EQUALS.
- CONTRACTOR SHALL GROUND ALL JUNCTION BOXES CONTAINING LOW VOLTAGE SWITCHES OR ANY OTHER TYPE LIGHTING CONTROL DEVICE WITH #12 GRD.
- SEE POWER PLANS FOR PANEL LOCATIONS.
- PROVIDE DEDICATED NEUTRALS FOR EACH MULTIWIRED HOMERUN PER NEC.
- PROVIDE LOW VOLTAGE CABLING FROM 0-10V DIMMER SWITCH TO EACH LIGHTING FIXTURE AS REQUIRED TO ACCOMPLISH 0-10V DIMMING.
- COORDINATE WITH LIGHTING CONTROL DETAILS ON SHEETS E2.2 & E2.3 FOR ADDITIONAL REQUIREMENTS.
- COORDINATE WITH POWER PLANS FOR RECEPTACLE ROOM CONTROLLERS REQUIRED TO CONTROL RECEPTACLE CIRCUITRY.



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



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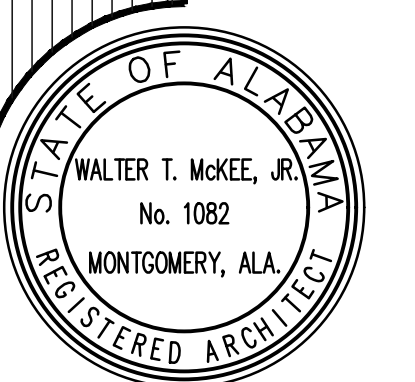
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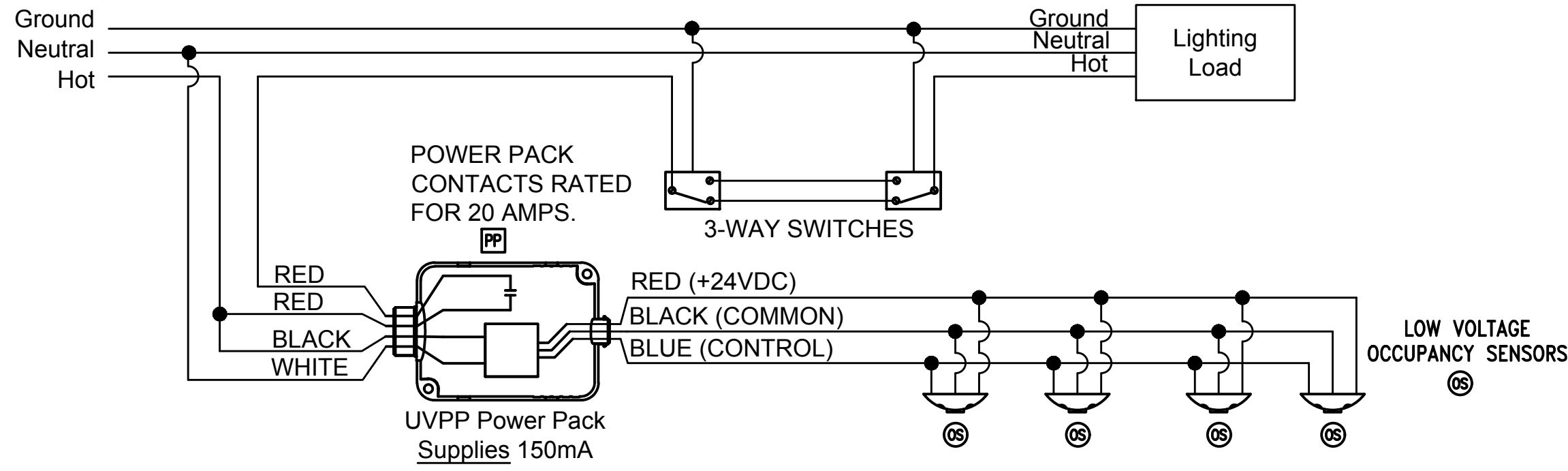
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SHEET NO. : E2.1

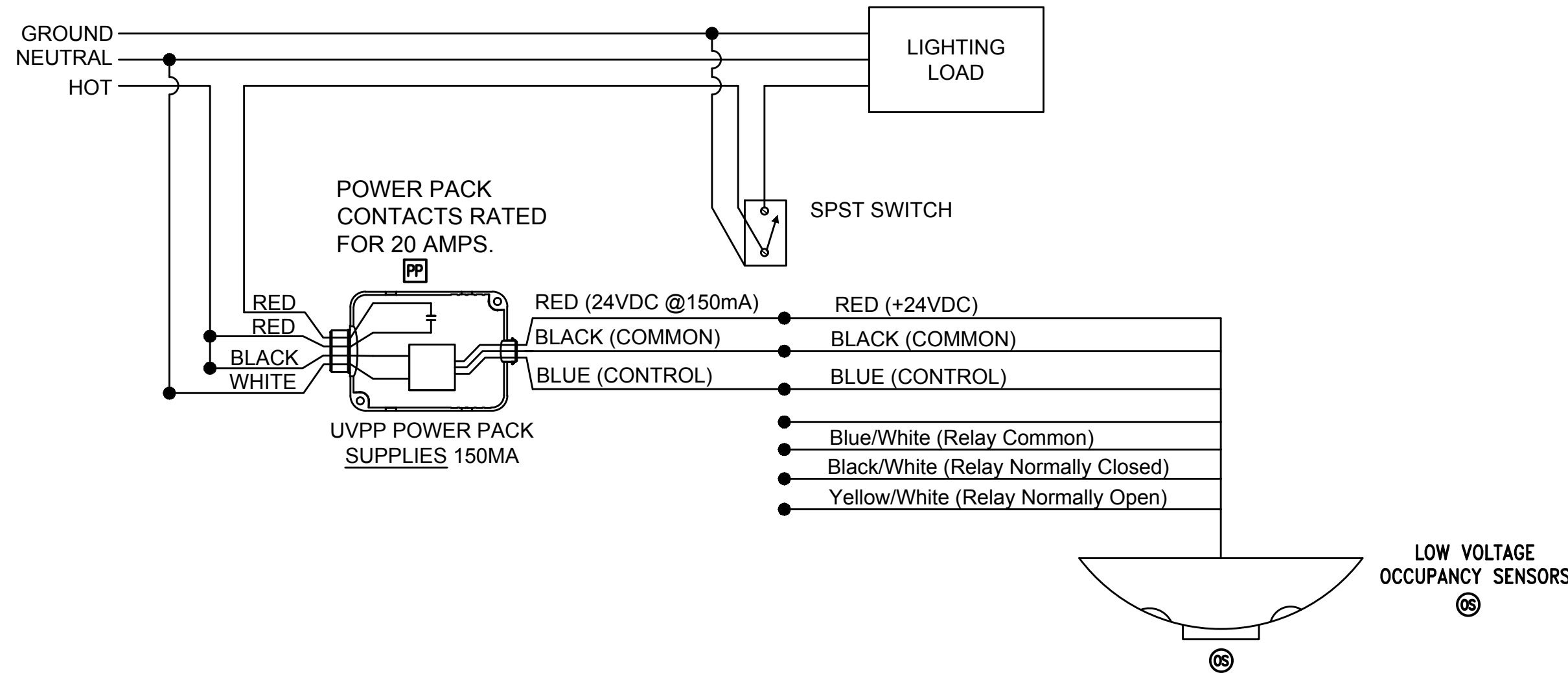
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4 TYPICAL 3-WAY SWITCHING OCCUPANCY SENSOR WIRING DIAGRAM
E2.2 NO SCALE



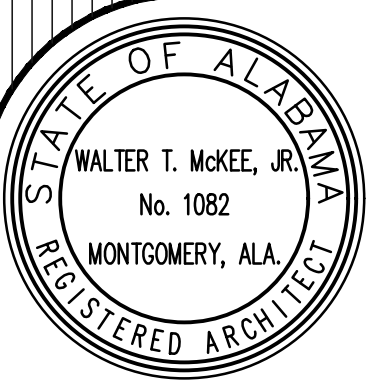
3 TYPICAL SINGLE SWITCH OCCUPANCY SENSOR WIRING DIAGRAM
E2.2 NO SCALE

OCCUPANCY SENSOR AND CONTROL NOTES:

1. OCCUPANCY SENSORS SHALL BE VACANCY TYPE WITH DUAL TECHNOLOGY DETECTION AND 20-MINUTE CUTOFF TIME.
2. OCCUPANCY SENSOR MANUFACTURER PROVIDER WILL BE RESPONSIBLE FOR SIZING THE OCCUPANCY SENSORS IN EACH SPACE. PROVIDE THIS SIZING TO THE ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. PROVIDE ADDITIONAL OCCUPANCY SENSORS AS REQUIRED TO FULLY COVER ALL SPACES. IF ADDITIONAL OCCUPANCY SENSORS OR ANY OTHER EQUIPMENT IS REQUIRED IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND INSTALL. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THIS WITH LIGHTING MANUFACTURER PRIOR TO BIDS AND COVER THE COST OF ALL MATERIAL AND LABOR FOR ANY ADDITIONAL OCCUPANCY SENSORS.
3. ALL OCCUPANCY SENSORS LOCATIONS ARE APPROXIMATE, REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR EXACT MOUNTING AND SPACING REQUIREMENTS PRIOR TO INSTALLATION.
4. ULTRASONIC CEILING MOUNTED OCCUPANCY SENSORS SHALL BE LOCATED A MINIMUM OF SIX (6) FEET FROM HVAC SUPPLY/RETURN VENTS.
5. CONTRACTOR IS RESPONSIBLE FOR PROPER SENSITIVITY AND TIME DELAY SETTINGS FOR OCCUPANCY SENSORS, FOLLOWING THE MANUFACTURER'S RECOMMENDED PLACEMENT, AND FIELD VERIFICATION OF CIRCUITS WITH RESPECT TO POWER PACK PLACEMENT.
6. OCCUPANCY SENSORS MOUNTED OVER DOORWAYS SHALL BE PLACED ONE (1) FOOT INSIDE THRESHOLD.
7. LIGHTING CONTROL SYSTEM IS SPECIFIED AROUND THE HUBBELL AUTOMATION SYSTEM. CONTRACTOR SHALL PROVIDE ALL MATERIALS, DEVICES, WIRING, CONNECTIONS, AND PROGRAMMING NEEDED IF ANY OTHER LIGHTING CONTROL SYSTEM SUBMITS FOR APPROVAL AND IS PROVIDED.
8. WATT STOPPER AND N-LIGHT ARE APPROVED EQUALS.
9. CONTRACTOR SHALL GROUND ALL JUNCTION BOXES CONTAINING LOW VOLTAGE SWITCHES OR ANY OTHER TYPE LIGHTING CONTROL DEVICE WITH #12 GRD.

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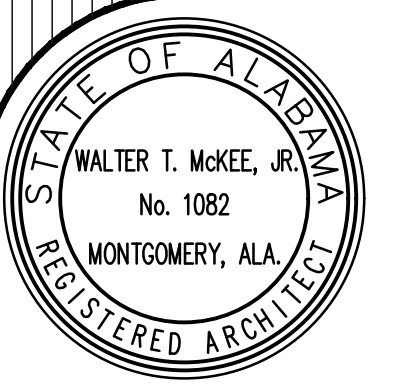
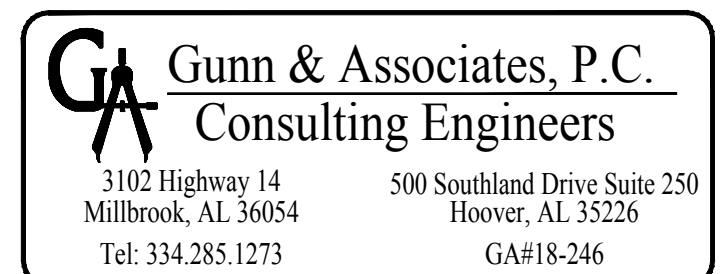
SHEET TITLE : LIGHTING CONTROLS,
DETAILS, & NOTES

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SHEET NO. : E2.2



NOTE:
WALL MOUNTED COMMUNICATIONS RACK WILL MOUNT DIRECTLY OVER RECESSED JUNCTION BOX.
TO CONCEAL ALL WIRING AND HOLES.

TYP. OF TWO 2 1/2" C. STUBBED TO
ABOVE FINISHED CEILING. PROVIDE
WITH PROTECTIVE BUSHINGS

TOP OF BOX 6" ABOVE FINISHED
FLOOR

INSTALL SUCH THAT
TOP EDGE OF BOX
IS JUST BELOW CEILING
FRAMING

DETAIL - INSTALLATION OF **CC** FOR
COMMUNICATIONS RACK

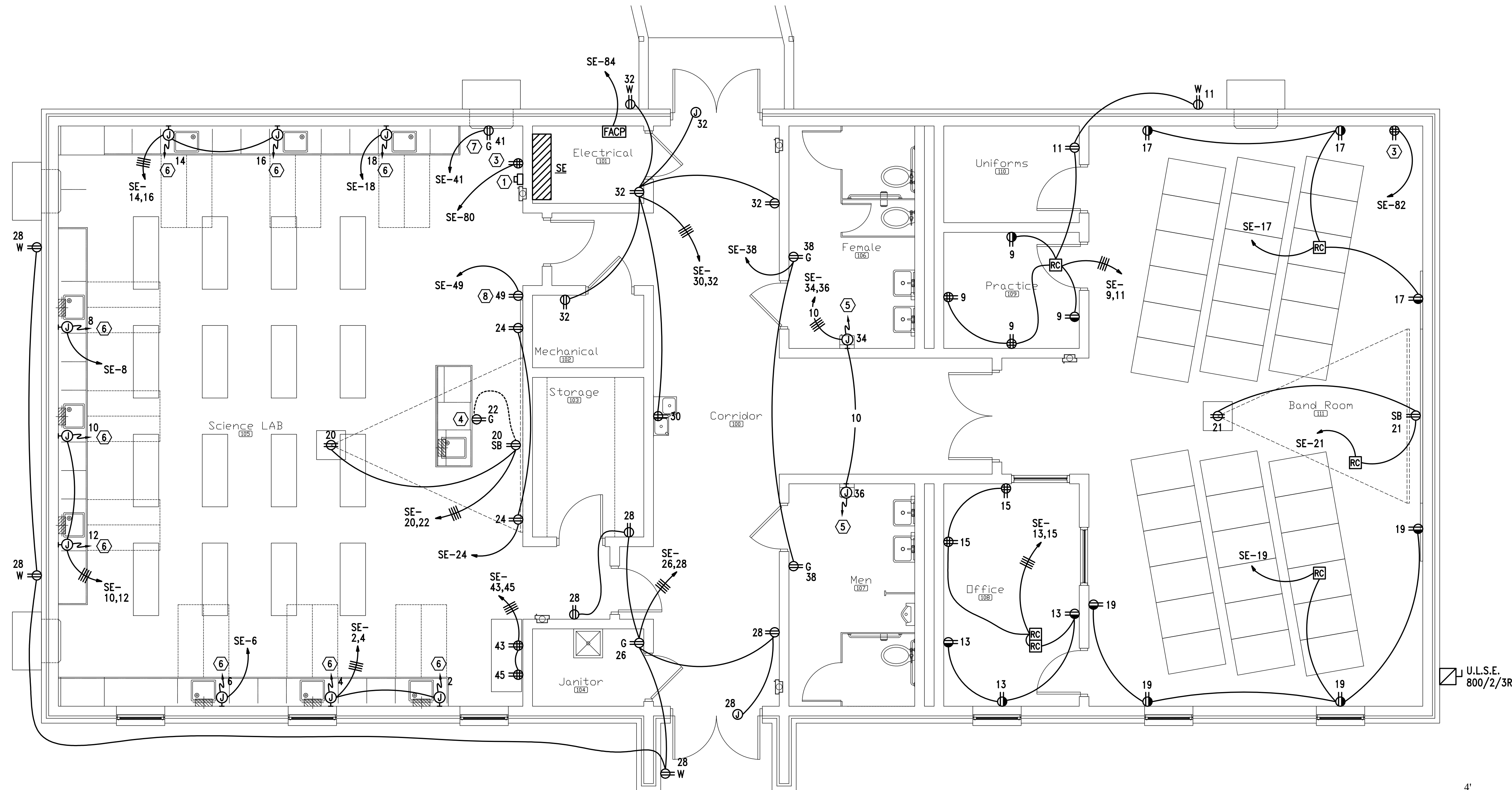
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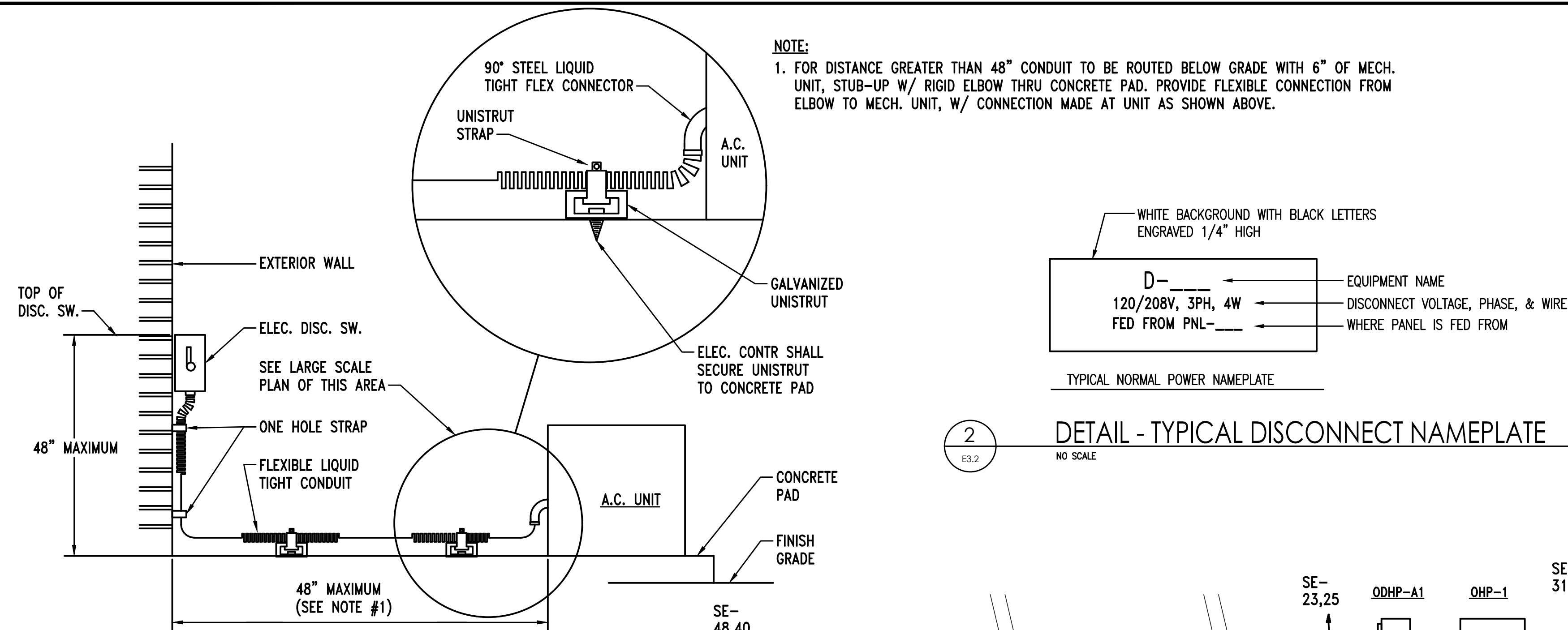
SHEET NOTES:

1. CONTRACTOR SHALL PROVIDE 12 POLE CONTACTOR IN FLUSH MOUNTED NEMA 1 ENCLOSURE. CONTACTS SHALL BE NORMALLY CLOSED AND CONTROLLED BY THE EMERGENCY PUSH BUTTON. PUSH BUTTON SHALL OPEN ALL CONTACTS TO SHUT POWER OFF TO ALL CIRCUITS IN THIS AREA.
2. POWER FOR ELECTRIC STRIKE.
3. COORDINATE THE PLACMENT OF THE RECEPTACLE WITH THE COMMUNICATIONS RACK PLACEMENT. SEE DETAIL (5) THIS SHEET.
4. COORDINATE WITH MILLWORK SHOP DRAWINGS PRIOR TO ROUGH-IN AND RUN CIRCUITRY CONCEALED IN MILLWORK FOR OUTLETS. ROUTE CIRCUITRY UNDERGROUND TO MILLWORK.
5. PROVISIONS FOR ELECTRIC HAND DRYER. MOUNT JUNCTION BOX BEHIND PAPER TOWEL DISPENSER AND WALL BLANK OFF. CIRCUIT BREAKERS FEEDING CIRCUITRY SHALL BE SWITCHED OFF AND WIRE DISCONNECTED.
6. CONTRACTOR SHALL PROVIDE POWER TO GFCI TYPE RECEPTACLES THAT ARE PROVIDED IN SCIENCE DESKS INSIDE CASE WORK (THERE SHOULD BE A GFCI RECEPTACLE ON EACH SIDE OF EACH TABLE). COORDINATE WITH MILLWORK PRIOR TO BIDS.
7. POWER FOR PORTABLE FUME HOOD. VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
8. POWER FOR GOGGLE CABINET. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.

GENERAL NOTES:

1. PROVIDE DEDICATED NEUTRALS FOR EACH MULTIWIRE HOMERUN PER NEC.
2. COORDINATE EXACT LOCATION OF ALL ELECTRICAL WITH MILLWORK PROVIDERS PRIOR TO ROUGH-IN.
3. ALL ROOM CONTROLLERS "RC" SHALL BE CONNECTED TO THE LIGHTING OCCUPANCY CONTROL SYSTEM IN THE ROOM SHOWN.





2
E3.2 NO SCALE
DETAIL - TYPICAL DISCONNECT NAMEPLATE

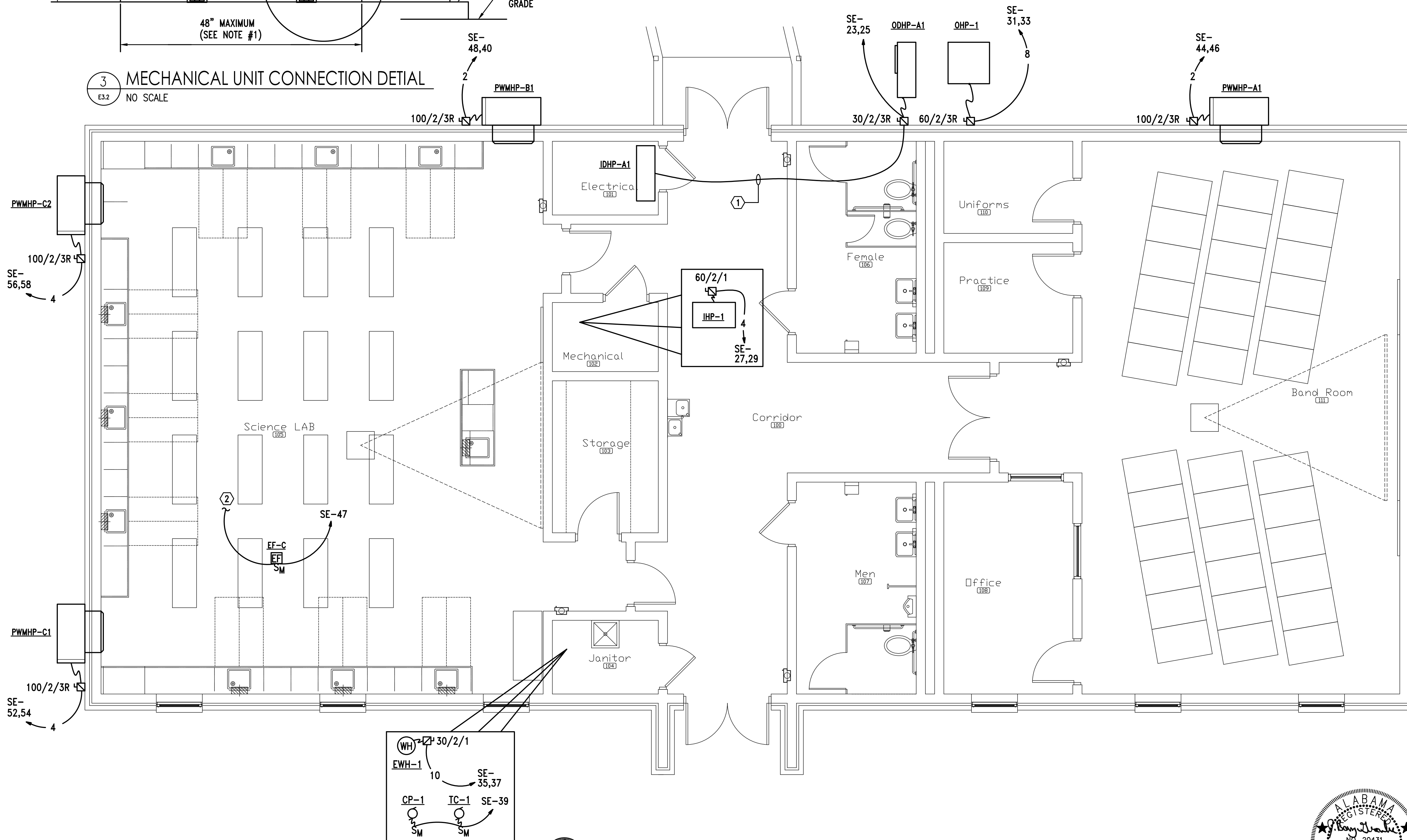
GENERAL NOTES:

- COORDINATE WITH MECHANICAL/PLUMBING DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT.
- MOUNT EXTERIOR DISCONNECTS ON EXTERIOR WALLS AT LEAST 18" FROM WINDOWS. LOCATIONS OF DISCONNECTS AND EQUIPMENT ARE SHOWN FOR DRAWING CLARITY PURPOSES ONLY.
- COORDINATE WITH MECHANICAL/PLUMBING CONTRACTORS TO INSURE OVERCURRENT PROTECTION DEVICES FOR THEIR EQUIPMENT IS SIZED PER MANUFACTURER'S RECOMMENDATIONS. ENGINEER SIZED OVERCURRENT PROTECTION ACCORDING TO MECHANICAL/PLUMBING DRAWINGS AND SPECIFICATIONS, ACTUAL EQUIPMENT SUPPLIED MAY DIFFER. ELECTRICAL CONTRACTOR SHALL WORK WITH OTHER TRADE DISCIPLINES TO INSURE ANY CHANGES WILL BE INSTALLED CORRECTLY AT THE COST OF THE PERSON MAKING THE CHANGES.
- ALL FLEXIBLE CONNECT TO HVAC UNITS SHALL BE RUN PARALLEL TO HARD SURFACE AND STRAPPED AT LEAST EVERY 2'.
- CONTRACTOR SHALL PROVIDE CONDUIT FOR MECHANICAL CONTROLS. COORDINATE EXACT LOCATIONS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- ALL DISCONNECTS TO HAVE NAMEPLATE AS SHOWN IN DETAIL (2) THIS SHEET, NO EXCEPTIONS.
- PROVIDE DEDICATED NEUTRALS FOR EACH MULTIWIRE HOMERUN PER NEC.
- SEE DETAIL (3) THIS SHEET FOR MECHANICAL UNIT CONNECTION DETAIL.

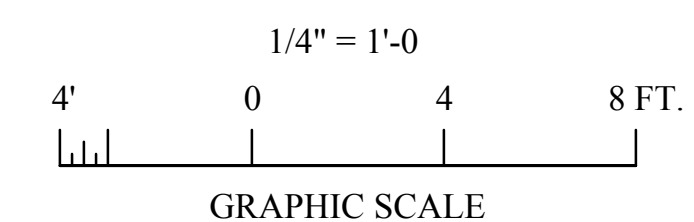
SHEET NOTE:

- INTERIOR UNIT RECEIVES POWER FROM THE EXTERIOR UNIT. PROVIDE INTERCONNECTING CIRCUITRY AS NEEDED IN CONDUIT TO CONNECT THE INTERIOR UNIT.
- INTERLOCK EXHAUST FAN WITH LIGHTING SWITCH. COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH IN.

3
E3.2 NO SCALE
MECHANICAL UNIT CONNECTION DETAIL



1
E3.2 SCALE: 1/4"=1'-0"
FLOOR PLAN - MECHANICAL POWER



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SHEET TITLE : FLOOR PLAN -
MECHANICAL POWER

JOB NO. : 18-144

DRAWN BY : J. TILLERY

DATES : 18 September 2018

SHEET NO. : E3.2

Science and Band Building

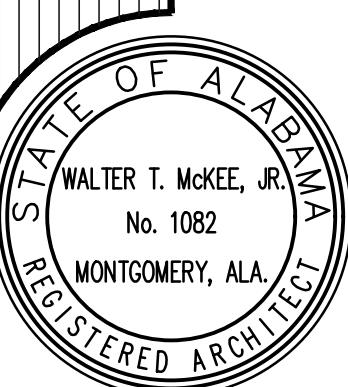
at
Vina High School

for the

Franklin County Board of Education

Russellville, Alabama

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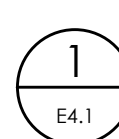
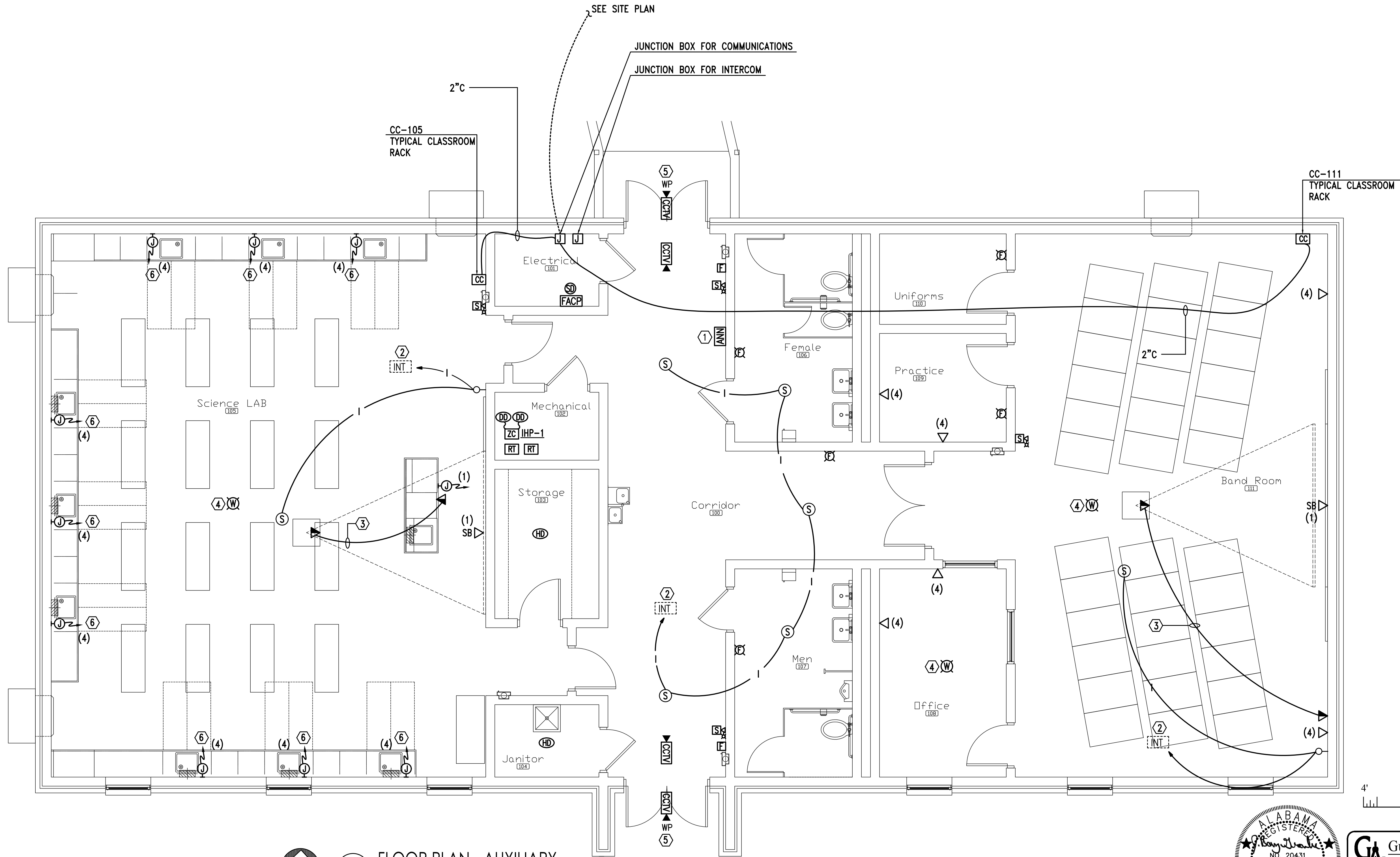


SHEET NOTES:

1. PROVIDE FLUSH MOUNTING FOR FIRE ALARM ANNUNCIATOR PANEL.
2. CONTRACTOR SHALL CONNECT NEW INTERCOM DEVICES TO EXISTING INTERCOM SYSTEM. CONTRACTOR SHALL MODIFY EXISTING INTERCOM CONSOLE SYSTEM AS REQUIRED TO ACCOMMODATE NEW INTERCOM DEVICES. PROVIDE SURGE SUPPRESION ON ALL INCOMING AND OUTGOING CABLES FROM BUILDING TO BUILDING.
3. PROVIDE ONE HDMI WALL OUTLET AT TEACHERS DESK WITH 1 1/2" CONDUIT STUBBED UP ABOVE CEILING. PROVIDE ONE HDMI OUTLET AT THE PROJECTOR LOCATION. PROVIDE HDMI CABLE TO INTERCONNECT THE TWO OUTLETS.
4. PROVIDE A WIRELESS ACCESS POINT (FRANKLIN COUNTY STANDARD WATCHGUARD AP:300) WITH CAT6 INTERCONNECTING THE WIRELESS ACCESS POINT TO THE COMMUNICATIONS RACK.
5. SECURITY CAMERA TO BE OWNER FURNISHED CONTRACTOR INSTALLED EQUIPMENT. PROVIDE CAT 6 CABLE FROM CAMERA TO NEW NVR TO BE MOUNTED IN THE IFD LOCATION. NVR TO BE OWNER PROVIDED CONTRATOR INSTALLED.
6. THERE SHOULD BE 2 DATA OUTLETS ON EACH SIDE OF TABLE (4) TOTAL AT EACH GROUP. CONTRACTOR SHALL PROVIDE 1 DROP AT EACH GROUP & TERMINATE BACK TO CC-105.

GENERAL NOTES:

1. COORDINATE WITH CORRESPONDING RISER DIAGRAMS.
2. COORDINATE AND MOUNT COMMUNICATIONS OUTLETS WITHIN 6" OF CORRESPONDING POWER RECEPTACLE.



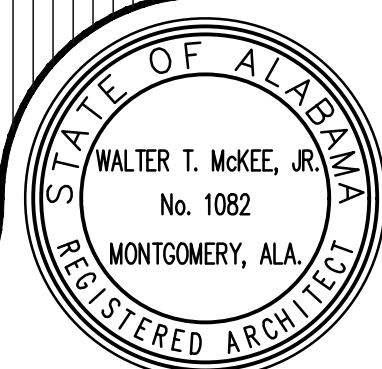
1 FLOOR PLAN - AUXILIARY
SCALE: 1/4"=1'-0"



1/4" = 1'-0"
4' 0 4 8 FT.
GRAPHIC SCALE

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SHEET TITLE : FLOOR PLAN - AUXILIARY

JOB NO. : 18-144
DRAWN BY : J. TILLERY
DATES : 18 September 2018

SHEET NO. : E4.1

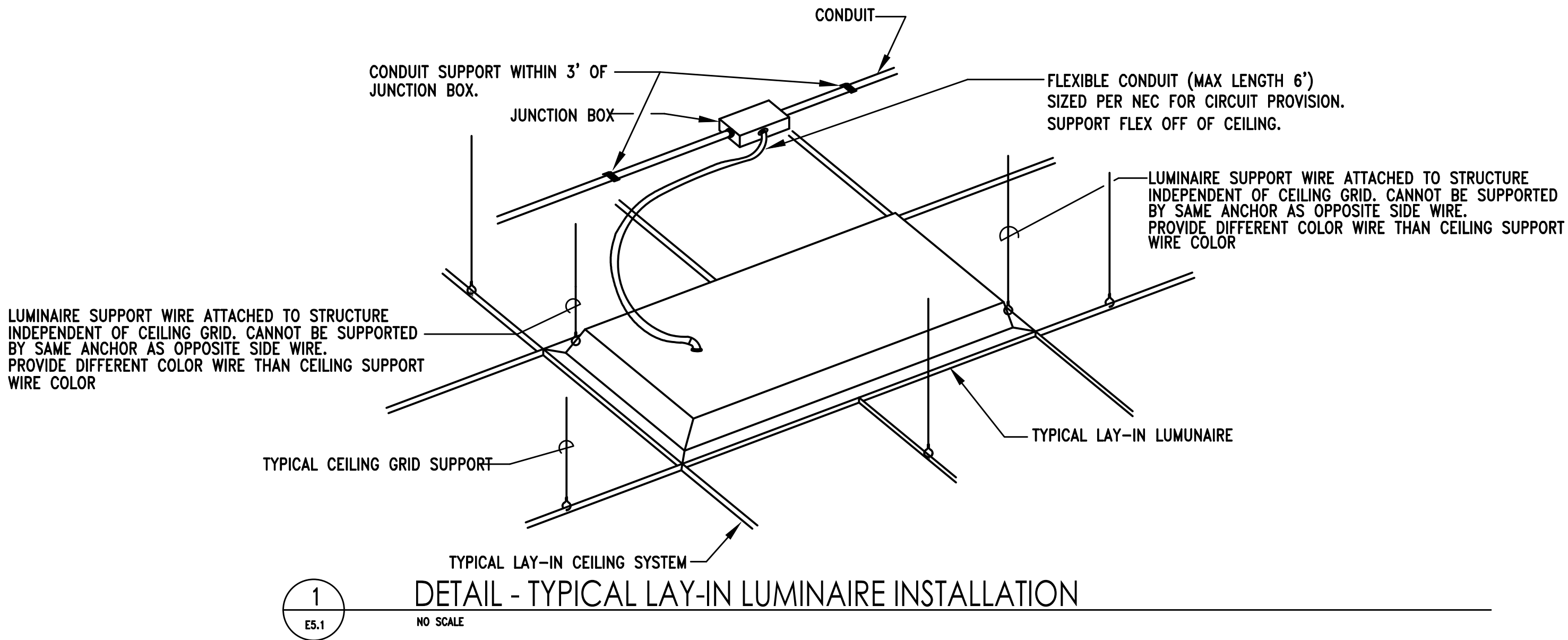


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LIGHTING FIXTURE SCHEDULE						
TYPE:	MANUFACTURER NUMBER AND EQUALS:	VOLTAGE:	MOUNTING:	LAMP TYPE:	LAMP QUANTITY:	DESCRIPTION:
D1	FOCAL POINT NO. FL6D-30LED-35K-LD1-L6-RD-DN-CD-WP OR PRIOR APPROVED EQUAL BY HUBBELL, LITHONIA OR COOPER	MVOLT	RECESSED	LED	3000 LUMEN	6 INCH 3000 LUMEN LED DOWNLIGHT 3500K TEMPETURE LAMPS AND FEATURE REMOTE PHOSPHOR TECHNOLOGY ENABLING A HIGH SYSTEM EFFICACY AND MINIMUM 80 CRI. 0-10V DIMMING
D2	FOCAL POINT NO. FL6D-30LED-40K-LD1-L6-RL-DN-CD-WP OR PRIOR APPROVED EQUAL BY HUBBELL OR COOPER	MVOLT	RECESSED	LED	3000 LUMEN	6 INCH 3000 LUMEN LED DOWNLIGHT 4000K TEMPETURE LAMPS AND FEATURE REMOTE PHOSPHOR TECHNOLOGY ENABLING A HIGH SYSTEM EFFICACY AND MINIMUM 80 CRI. WET LOCATION
LG48	HUBBELL NO. LCAT-24-35K-ML-G-ED-MVOLT OR EQUALS BY FOCAL POINT, LUMAX, OR COOPER	MVOLT	RECESSED	LED	5000 LUMEN	2'X4' 5000-LUMEN VOLUMETRIC FIXTURE.
LG60	HUBBELL NO. LCAT-24-35K-HL-G-ED-MVOLT OR PRIOR APPROVED EQUALS BY LITHONIA, FOCAL POINT, LSI, OR COOPER	MVOLT	RECESSED	LED	6000 LUMEN	2'X4' 6000-LUMEN VOLUMETRIC FIXTURE. 0-10V DIMMING CAPABLE.
LG72	HUBBELL NO. LCAT-24-35K-VL-G-ED-MVOLT OR EQUALS BY FOCAL POINT, LUMAX, OR COOPER	MVOLT	RECESSED	LED	7200 LUMEN	2'X4' 7200-LUMEN VOLUMETRIC FIXTURE. 0-10V DIMMING CAPABLE.
LS2	HUBBELL NO. LCL-4-35K-ML-E-MVOLT-CSHC OR PRIOR APPROVED EQUALS BY LITHONIA, FOCAL POINT, LSI, OR COOPER	MVOLT	SURFACE OR CHAIN HUNG	LED	5300 LUMEN	SURFACE MOUNTED 4'-0" LED STRIP. CHAIN HANG WHEN SURFACE MOUNT IS NOT POSSIBLE.
EXIT SIGN	LITHONIA NO. LQM -1W - 120Z77 - ELNSD - WIREGUARDS IN GYM OR PRIOR APPROVED EQUAL BY EMERG-LITE, MCPILBEN, OR PRESCOUTITE	MVOLT	UNIVERSAL	LED	WITH UNIT	THERMOPLASTIC LED EXIT SIGN. PROVIDE WITH NUMBER OF FACES AND DIRECTIONAL ARROWS AS SHOWN ON DRAWINGS. COORDINATE COLOR OF SIGNAGE WITH LOCAL REQUIREMENTS. PROVIDE WITH EMERGENCY BATTERY.
NOTES: 1. ARCHITECT RESERVES THE RIGHT TO SELECT ALL COLORS OR MAKE CUSTOM COLOR DURING SHOP DRAWING REVIEW. BID ACCORDINGLY. 2. COORDINATE MOUNTING OF ALL LUMINAIRES WITH ARCHITECTURAL ELEVATIONS PRIOR TO INSTALLATION 3. PROVIDE EMERGENCY BATTERY BALLAST FOR ALL EMERGENCY TYPE FIXTURES CAPABLE OF 90-MINUTES. ALL EMERGENCY LIGHTS IN SAFE AREA SHALL BE CONNECTED TO THE BATTERY INVERTER FOR 180-MINUTES OF RUN TIME. 4. FOR WARRANTY AND LONG TERM SUPPORT FOR OWNER, ALL LIGHTING FIXTURES SHALL BE PURCHASED THROUGH MANUFACTURER REPRESENTATIVES LOCATED IN THE STATE OF ALABAMA. SUBMITTALS RECEIVED THAT DO NOT COMPLY WITH THIS REQUIREMENT WILL BE REJECTED WITHOUT REVIEW. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DELAYS CAUSED BY NON COMPLIANCE WITH THIS REQUIREMENT. 5. ALL INTERIOR LIGHTS SHALL HAVE 3500K TEMPERATURE LAMPS, UNLESS NOTED OTHERWISE. 6. ALL EXTERIOR LIGHTS SHALL HAVE 4000K TEMPERATURE LAMPS. 7. LIGHTS SPECIFIED WILL BE USED AT BOTH 120V AND 277V CIRCUITS. PROVIDE UNIVERSAL TYPE VOLTAGE DRIVERS FOR ALL LIGHT FIXTURES. IF A SPECIFIC VOLTAGE IS REQUIRED, LIGHTING MANUFACTURER AND CONTRACTOR SHALL WORK TOGETHER TO PROVIDE THE REQUIRED VOLTAGES FOR EACH OF THE DIFFERENT FACILITIES. ENGINEER WILL NOT BE RESPONSIBLE FOR THIS COORDINATION DURING SUBMITTALS. WE WILL ASSUME THE VOLTAGE SUBMITTED IS CORRECT.						

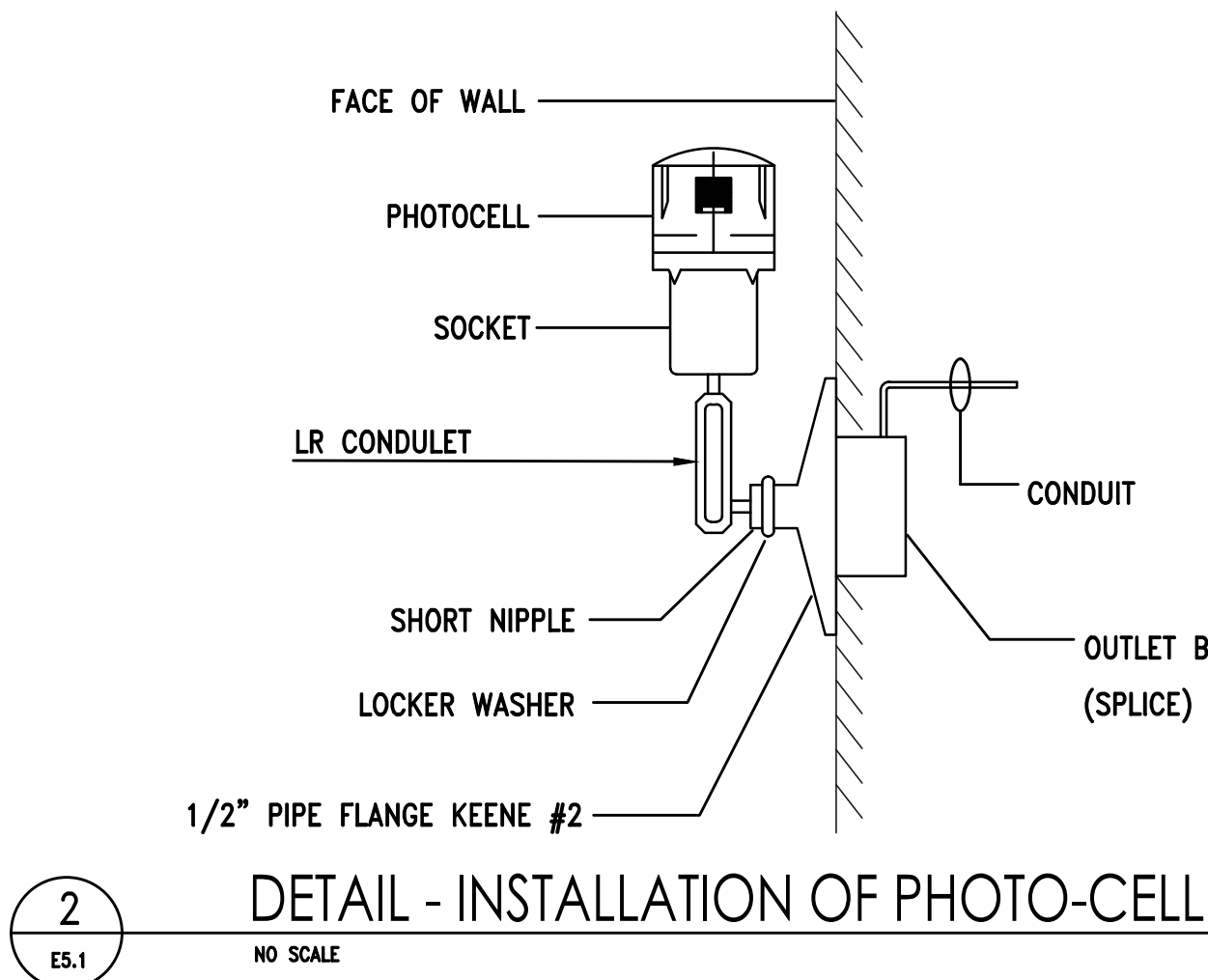
NOTES:

- ALL RECESSED LUMINAIRES SHALL BE WIRED FROM A JUNCTION BOX AS SHOWN, INCLUDING LUMINAIRES IN A CONTINUOUS ROW. NO WIRING THRU FIXTURES. NO MORE THAN TWO LUMINAIRES SHALL BE CIRCUITED TO ONE JUNCTION BOX.
- LUMINAIRE SUPPORT WIRES TO BE A MINUMUM OF #14 GAGE PRE-STRAINED GALVANIZED WIRE ATTACHED AT OPPOSITE CORNERS. LUMINAIRE SHALL BE SUPPORTED TO THE STRUCTURE INDEPENDENT OF THE CEILING GRID.
- CONDUCTORS IN FLEXIBLE CONDUIT FROM JUNCTION BOX TO LUMINAIRE SHALL CONTAIN AN INSULATED GREEN GROUND WIRE, WITH NEUTRAL AND PHASE CONDUCTORS REQUIRED FOR THE CIRCUITING AND SWITCHING REQUIREMENTS INDICATED.
- JUNCTION BOXES SHALL BE ACCESSIBLE AND LOCATED WITHIN 1'-6" ABOVE LAY-IN CEILING INSTALLATION. PROVIDE PENDANT ALL-THREAD RODS AND/OR STRUT ASSEMBLIES TO MEET THIS REQUIREMENT WHERE DROP CEILING IS MORE THAN 1'-6" FROM STRUCTURE.
- CONTRACTOR SHALL INSTALL ALL T-BAR SAFETY CLIPS TO GRID. IF FIXTURE DOES NOT COME WITH GRID SAFETY CLIPS, THEN THE CONTRACTOR SHALL PROVIDE SUPPORT WIRES ON ALL FOUR SIDES.



NOTES

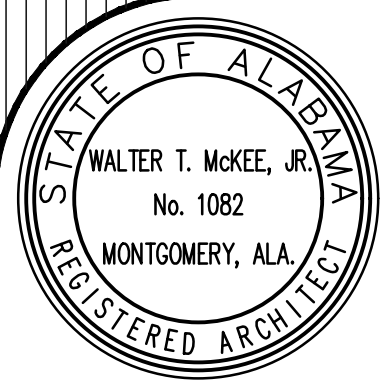
- PAINT CONDUIT NIPPLE, SOCKET AND PIPE FLANGE WITH TWO COATS OF ENAMEL.
- COMPLETE ASSEMBLY TO BE UL LISTED FOR WET LOCATIONS.
- PHOTOCELL TO BE MOUNTED FACING NORTH FREE FROM ALL SHADOWS WHICH MIGHT CAUSE PHOTOCELL TO TURN LIGHTS ON EARLY. CONTRACTOR SHALL COORDINATE PROPER MOUNTING LOCATION PRIOR TO INSTALLATION.



LUMINAIRE NOTES:

- ALL LUMINAIRES AND INSTALLATION SHALL BE IN ACCORDANCE WITH NEC, NFPA AND LOCAL CODES. ALL LUMINAIRES SHALL BE UL LISTED AND INSTALLED IN ACCORDANCE WITH THE UL LISTING.
- LUMINAIRES SHALL BE FURNISHED COMPLETE WITH THE PROPER LAMP BASE OR PIN RECEPTORS, WIRING COMPONENTS, LAMPS, SUPPORTING FRAMES AND DEVICES, ETC., FOR A COMPLETE INSTALLATION.
- ALL LUMINAIRE DEVICES, COMPONENTS, FITTINGS, SUPPORTS, ETC., SHALL BE COORDINATED TO PROVIDE A COMPLETE UL LISTED INSTALLATION.
- ALL LUMINAIRES BALLAST, DRIVERS, LAMPS, ETC SHALL BE COMPATIBLE WITH THE LIGHTING CONTROL SYSTEM OR DIMMING CONTROL SYSTEM PROVIDED.
- SECURE EACH LAY-IN LUMINAIRE AT TWO LOCATIONS TO THE CEILING GRID. PROVIDE BOLTS, SCREWS, RIVETS OR APPROVED CLIPS FOR USE WITH THE TYPE CEILING AND LUMINAIRE INSTALLED.
- ALL LUMINAIRES IN MECHANICAL AND ELECTRICAL ROOMS SHALL BE INSTALLED TO CLEAR ELECTRICAL EQUIPMENT, DUCT, PIPING, ETC., SUSPEND BELOW OBSTRUCTION WHEN CONFLICTS OCCUR.
- ALL LED LUMINARIES SHALL BE PROVIDED WITH 3500K COLOR TEMPERATURE LAMPS, UNLESS NOTED OTHERWISE.
- ARCHITECT RESERVES THE RIGHT TO SELECT ALL COLORS FOR LUMINAIRES, POLES, MOUNTING ACCESSORIES, ETC. DURING SHOP DRAWING REVIEW.
- COORDINATE LUMINAIRE MOUNTING WITH ARCHITECTURAL ELEVATIONS PRIOR TO INSTALLATION.
- PROVIDE ALL EXIT SIGNS WITH DIRECTIONAL ARROWS AS SHOWN ON DRAWINGS.
- ALL EXIT SIGNS AND LUMINAIRES DESIGNATED AS EMERGENCY SHALL BE PROVIDED WITH A MINIMUM 1100 LUMEN EMERGENCY BATTERY BALLAST CAPABLE OF 90 MINUTES OF ILLUMINATION.

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SHEET TITLE : LIGHTING SCHEDULE,
DETAILS, & NOTES

JOB NO. : 18-144
DRAWN BY : J. TILLERY
DATES : 18 September 2018



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SHEET NO. : E5.1



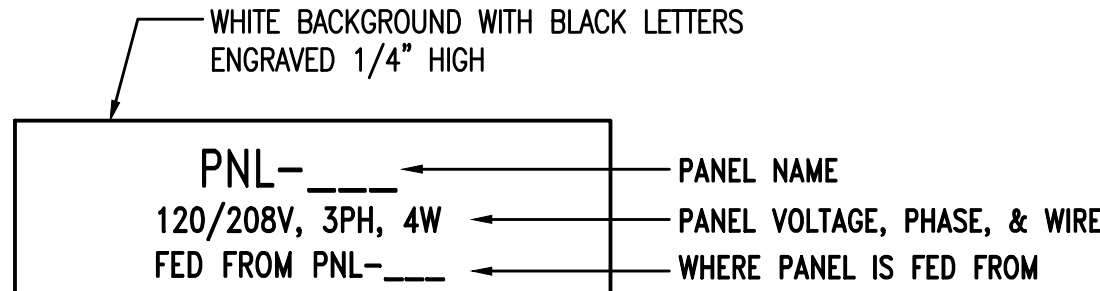
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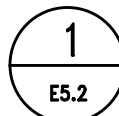
PANEL - SE												
TYPE: 800 AMP MAIN CIRCUIT BREAKER			AIC: 42,000 AMPERES			MOUNTED: SURFACE			VOLTAGE: 120/240 VOLTS, 1 PHASE, 3 WIRE			
CIRCUIT DIRECTORY	(VA) PER PHASE		AMP	POLE	CIRCUIT NUMBER		AMP	POLE	(VA) PER PHASE		CIRCUIT DIRECTORY	
	PHASE A	PHASE B							PHASE A	PHASE B		
LIGHTING	1,503		20	1	1	2	20	1	1,200		RECEPTACLE	
LIGHTING		1,353	20	1	3	4	20	1		1,200	RECEPTACLE	
LIGHTING	1,047		20	1	5	6	20	1	1,200		RECEPTACLE	
EXTERIOR LIGHTING		420	20	1	7	8	20	1		1,200	RECEPTACLE	
RECEPTACLE	1,200		20	1	9	10	20	1	1,200		RECEPTACLE	
RECEPTACLE		1,200	20	1	11	12	20	1		1,200	RECEPTACLE	
RECEPTACLE	1,200		20	1	13	14	20	1	1,200		RECEPTACLE	
RECEPTACLE		1,200	20	1	15	16	20	1		1,200	RECEPTACLE	
RECEPTACLE	1,200		20	1	17	18	20	1	1,200		RECEPTACLE	
RECEPTACLE		1,200	20	1	19	20	20	1		1,200	RECEPTACLE	
RECEPTACLE	1,200		20	1	21	22	20	1	1,200		RECEPTACLE	
ODHP-A1		1,248	20		23	24	20	1		1,200	RECEPTACLE	
	1,248			2	25	26	20	1	1,200		RECEPTACLE	
IHP-A1		4,584	60		27	28	20	1		1,200	RECEPTACLE	
	4,584			2	29	30	20	1	600		EWG	
OHP-A1		2,100	40		31	32	20	1		1,200	RECEPTACLE	
	2,100			2	33	34	20	1	1,400		HAND DRYER	
EWB-1		2,250	30		35	36	20	1		1,400	HAND DRYER	
	2,250			2	37	38	20	1			SPARE	
CP-1 & TC-1		600	20	1	39	40	20	1			SPARE	
PORTABLE FUME HOOD	900		20	1	41	42	20	1			SPARE	
RECEPTACLE		1,200	20	1	43	44	90			7,776	PWMHP-A1	
RECEPTACLE	1,200		20	1	45	46		2	7,776			
EF-C		864	20	1	47	48	90			7,776	PWMHP-B1	
GOGGLE CABINET	600		20	1	49	50		2	7,776			
BUSSED SPACE					51	52	70			6,240	PWMHP-C1	
BUSSED SPACE					53	54		2	6,240			
BUSSED SPACE					55	56	70			6,240	PWMHP-C2	
BUSSED SPACE					57	58		2	6,240			
BUSSED SPACE					59	60	20	1			SPARE	
BUSSED SPACE					61	62	20	1			SPARE	
BUSSED SPACE					63	64	20	1			SPARE	
BUSSED SPACE					65	66	20	1			SPARE	
BUSSED SPACE					67	68	20	1			SPARE	
BUSSED SPACE					69	70	20	1			SPARE	
BUSSED SPACE					71	72	20	1			SPARE	
BUSSED SPACE					73	74	20	1			SPARE	
BUSSED SPACE					75	76	20	1			SPARE	
BUSSED SPACE					77	78	20	1			SPARE	
BUSSED SPACE					79	80	20	1		900	COMM RACK	
BUSSED SPACE					81	82	20	1	900		COMM RACK	
BUSSED SPACE					83	84	20	1			FACP (NOTES 6)	
SUB TOTAL (VA)	20,232	18,219							39,332	39,932	SUB TOTAL (VA)	
TOTAL LOAD PHASE A: 59,564 (VA)												
TOTAL LOAD PHASE B: 58,151 (VA)												
TOTAL LOAD: 117,715 (VA) = 490 AMPS												
NOTES: 1. PANELBOARD TO BE BOLT-ON TYPE WITH DOOR-IN-DOOR CONSTRUCTION. 2. PROVIDE ARC FAULT LABEL PER DETAIL. 3. PROVIDE PANEL WITH NAME PLATE INDICATING AIC RATING. 4. PROVIDE NEMA 3R ENCLOSURE. 5. PANELBOARD SHALL BE RATED FOR SERVICE ENTRANCE. 6. PROVIDE LOCK HANDLE CIRCUIT BREAKER.												

PANELBOARD NOTES:

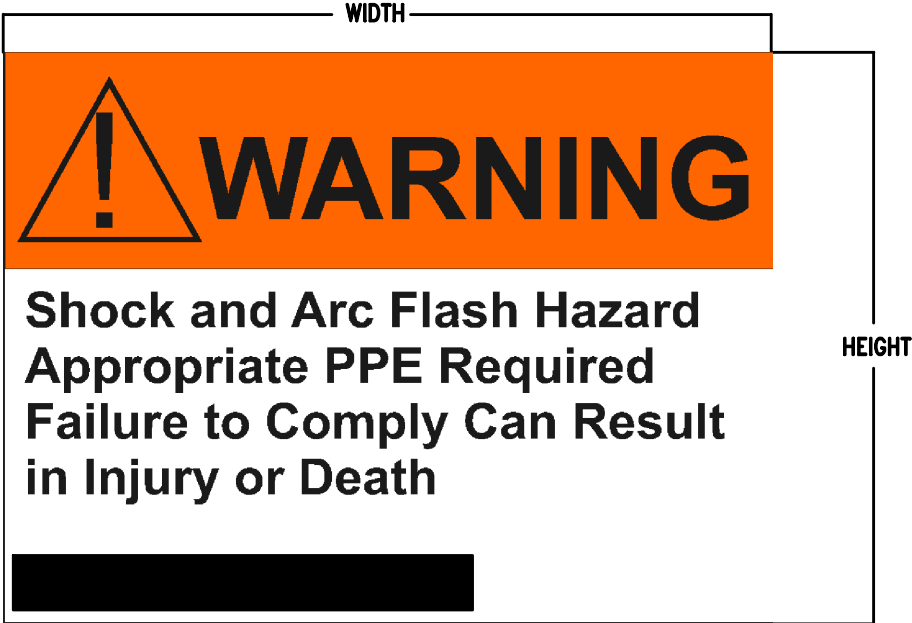
- PANELBOARDS SHALL BE INSTALLED AND ALL CLEARANCES MAINTAINED IN ACCORDANCE WITH THE NEC.
- ALL PANELBOARDS SHALL BE UL LISTED AND INSTALLED IN ACCORDANCE WITH THAT LISTING.
- PANELBOARDS SHALL BE FURNISHED COMPLETE WITH THE PROPERLY SIZED ENCLOSURE, INTERNAL HARDWARE, COMPONENTS, SUPPORTING STRUCTURES, ETC., FOR A COMPLETE INSTALLATION.
- FURNISH EACH PANELBOARD WITH A GROUND BAR BONDED TO THE PANEL ENCLOSURE.
- THE TERMINATION POINT OF THE FEEDER SERVING EACH ASSEMBLY SHALL BE AT THE NEAREST POINT OF FEEDER ENTRY INTO THE PANEL, SO AS TO MINIMIZE CONDUCTOR FILL IN THE ENCLOSURE. COORDINATE TOP/BOTTOM FEED PANELBOARD PROVISIONS WITH EACH FEEDER INSTALLATION.
- PROVIDE THE PROPER SIZE AND QUANTITY OF CONDUCTOR TERMINATION POINTS OR LUGS (MULTIPLE LUGS WHEN PARALLEL FEEDERS ARE USED) ON BUSES AND CIRCUIT BREAKERS FOR THE RESPECTIVE SIZE AND NUMBER OF CONDUCTORS INDICATED.
- ALL FLUSH-MOUNTED PANELBOARDS SHALL BE PROVIDED WITH AT LEAST SIX (6) 3/4" SPARE CONDUITS STUBBED TO ABOVE THE NEAREST ACCESSIBLE CEILING.
- PANELBOARDS SHALL BE FULLY RATED. SERIES RATED PANELBOARDS WILL NOT BE ACCEPTED.
- ALL PANELBOARDS SHALL BE CLEARLY MARKED TO COMPLY WITH NEC ARTICLE 110.16 WITH REGARD TO POTENTIAL HAZARDS OF ARC FLASH.
- ALL PANELBOARDS SHALL BE "DOOR-IN-DOOR" OR "HINGED-FRONT-TRIM" CONSTRUCTION.
- COMPLY WITH NEC ARTICLE 408.4. PROVIDE A TYPED CIRCUIT DIRECTORY THAT INDICATES WHAT EACH CIRCUIT IS SERVING. FOR LIGHTING AND RECEPTACLE CIRCUITS, INCLUDE THE ROOM NUMBER IN THE CIRCUIT DESCRIPTION ON THE DIRECTORY.
- EACH PANELBOARD SHALL HAVE A NAMEPLATE AS SHOWN IN DETAIL 1 ON THIS SHEET. ENGINEER WILL NOT PROVIDE FINAL ACCEPTANCE UNTIL THESE NAMEPLATES ARE PROVIDED.
- MANUFACTURER THAT WILL BE PROVIDING PANELBOARDS ON THIS PROJECT SHALL BE RESPONSIBLE FOR PERFORMING A SHORT CIRCUIT ANALYSIS AND TIME-CURRENT COORDINATION (TCC) STUDY, WHICH DEMONSTRATES THAT THE UPSTREAM OVERCURRENT PROTECTIVE DEVICE NEAREST TO THE FAULT LOCATION WILL OPERATE BEFORE OVERCURRENT PROTECTIVE DEVICES WHICH ARE FURTHER UPSTREAM (I.E. SELECTIVE COORDINATION). INCLUDE COORDINATION STUDY IN THE SHOP DRAWING PACKAGE FOR THE PANELBOARDS FOR REVIEW BY THE ENGINEER OF RECORD.
- CONTRACTOR SHALL PROVIDE AN ENGRAVED LABEL WITH THE MAXIMUM AVAILABLE FAULT CURRENT AT THE SERVICE ENTRANCE EQUIPMENT,



TYPICAL NORMAL POWER NAMEPLATE



DETAIL - TYPICAL PANELBOARD NAMEPLATE



NOTES:

- PROVIDE SELF-ADHESIVE VINYL LABEL TO AFFIX TO ELECTRICAL EQUIPMENT TO WARN OF ARC FLASH HAZARDS.
- THE LABEL FORMAT AND TEXT SHALL BE IN ACCORDANCE WITH THE FIGURE.
- THE LABEL SHALL BE LOCATED ON THE EQUIPMENT TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.
- THE SIZE OF THE LABEL SHALL BE:
EQUIPMENT TYPE HEIGHT WIDTH
INDOOR 4" 6"
OUTDOOR 4" 6"

ARC FLASH WARNING LABELS



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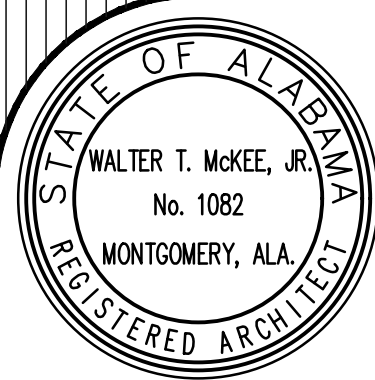
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SHEET TITLE : PANELBOARD SCHEDULE
DETAILS, & NOTES

JOB NO. : 18-144

DRAWN BY : J. TILLERY

DATES : 18 September 2018

SHEET NO. :

E5.2

FIRE ALARM SYSTEM NOTES:

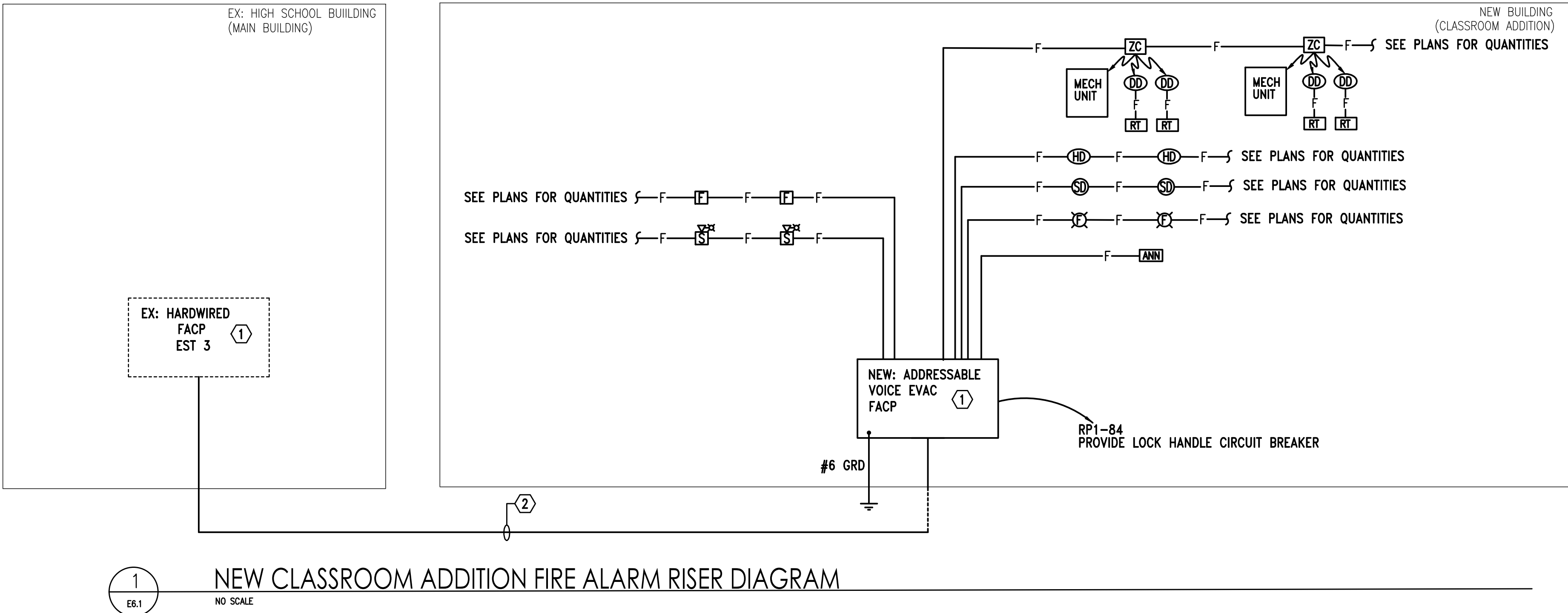
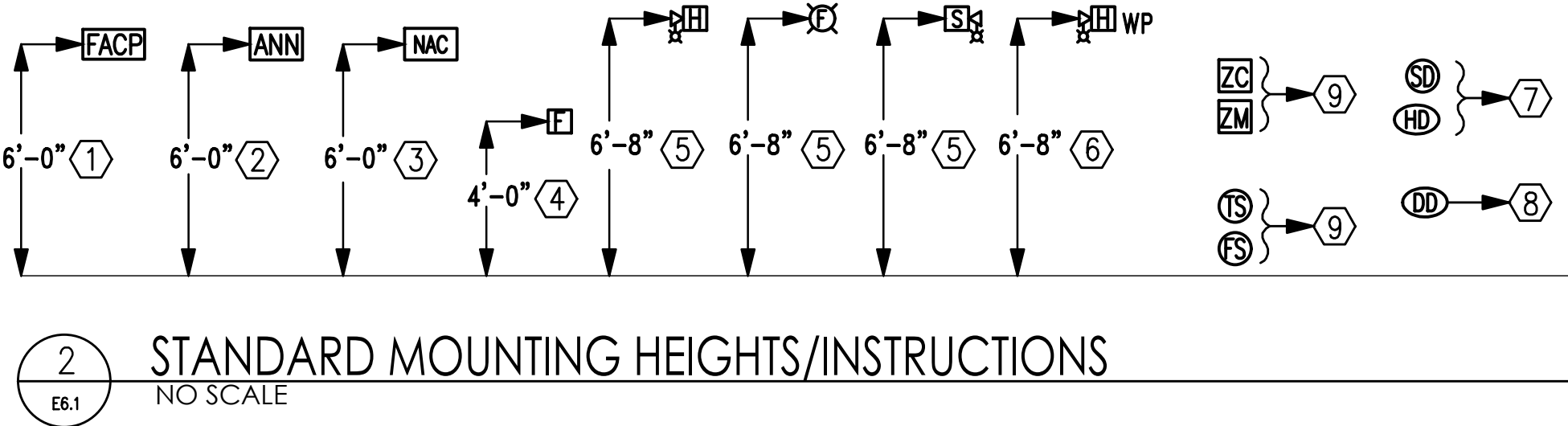
1. THE FIRE ALARM SYSTEM SHALL BE A COMPLETE SUPERVISED DETECTION AND ALARM SYSTEM. PROVIDE PRIMARY POWER CIRCUITS AND ALARM NOTIFICATION AND INITIATING CIRCUITS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
2. INSTALLATION SHALL COMPLY WITH THE ADA, NEC, NFPA, AND UL.
3. ALL SYSTEM COMPONENTS, ENCLOSURES, FRAMES, SURGE ARRESTORS, ETC., SHALL BE GROUNDED.
4. THE FIRE ALARM WIRING SYSTEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS FOR CLASS "B" SYSTEM AND AS FOLLOWS:
PRIMARY POWER – 120V AC
NOTIFICATION APPLIANCE CIRCUITS (NAC) – 24V DC
SIGNALING LINE CIRCUIT (SLC) – 24V DC
5. ALL EQUIPMENT AND DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, APPLICABLE STANDARDS AND ACCESSIBLE FOR VISUAL INSPECTION AND MAINTENANCE. WIRING DIAGRAMS SHALL BE SECURED FROM THE SYSTEM MANUFACTURER AND INSTALLED ACCORDINGLY TO MEET THE SPECIFIED TYPES.
6. A "CERTIFICATE OF COMPLETION" IN ACCORDANCE WITH NFPA 72 SHALL BE FURNISHED PRIOR TO FINAL ACCEPTANCE.
7. CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND PROVIDING ALL FIRE ALARM DEVICE QUANTITIES FROM AUXILIARY DRAWINGS. DO NOT USE THIS RISER FOR DEVICE COUNTS.
8. PROVIDE ADDITIONAL NOTIFICATION APPLIANCE CIRCUIT PANELS, AMPLIFIERS, POWER SUPPLIES, ETC. FOR FUTURE CAPACITY TO HAVE SYSTEM WORK CORRECTLY AS ONE SYSTEM.
9. PROVIDE ADDITIONAL 100% SPARE CAPACITY IN FIRE ALARM CONTROL PANEL FOR FUTURE USE.
10. PROVIDE EMERGENCY BATTERIES CAPABLE OF RUNNING THE COMPLETE FIRE ALARM SYSTEM IN ALARM MODE, PER NFPA GUIDELINES AT A MINIMUM. BATTERIES SHALL BE SIZED TO HANDLE THE FUTURE CAPACITY.
11. THE FIRE ALARM SYSTEM SHALL BE MONITORED BY AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. PROVIDE IP DIALER FOR MONITORING OF THE FIRE ALARM SYSTEM.
12. ALL WIRING TO BE IN CONDUIT SIZED IN ACCORDANCE WITH NEC WITH A MINIMUM SIZE OF 3/4". PROVIDE ALL FIRE ALARM CONDUIT WITH 3" WIDE RED STRIPE EVERY 10' FOR LENGTH OF RUN.
13. PROVIDE ALL FIRE ALARM JUNCTION BOXES WITH RED COVER, STENCIL THE LETTERS "FA" IN 2" HIGH LETTERS ON EACH BOX COVER.
14. FIRE ALARM SYSTEM PROVIDER IS RESPONSIBLE FOR PROVIDING SIGNAL LINE BOOSTERS AS REQUIRED FOR SYSTEM TO FUNCTION PROPERLY.
15. IN ADDITION TO THE DEVICES INDICATED ON THE PLANS THE CONTRACTOR SHALL PROVIDE A SMOKE DETECTOR LOCATED WITHIN 5 FEET OF EACH FIRE ALARM NOTIFICATION APPLIANCE PANEL.
16. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL 120 VOLT CIRCUITS NEEDED TO MAKE THE FIRE ALARM SYSTEM A COMPLETE FUNCTIONAL SYSTEM.
17. PROVIDE VOICE EVACUATION PER IBC SECTION 907 AND ALL SECTIONS OF THE INTERNATIONAL FIRE CODE.

FIRE ALARM SHEET NOTES:

- 1 PROVIDE CAPABILITY OF NETWORKING EXISTING & NEW FIRE ALARM PANELS TOGETHER VIA FIBER OPTIC CABLE. PROVIDE ADDITIONAL PANELS, FIBER/COPPER INTERFACE, DEVICES AND ALL MODIFICATIONS, AS REQUIRED TO NETWORK PANELS TOGETHER.
- 2 PROVIDE 2" CONDUIT AND FIBER OPTIC CONNECTION BETWEEN CENTRAL FIRE ALARM CONTROL PANEL IN MAIN BUILDING AND FIRE ALARM CONTROL PANEL IN NEW BUILDING (CLASSROOM ADDITION). PROVIDE ALL CONNECTORS, JUNCTION FIBER CABLES, TERMINATIONS, NETWORK CARDS, ETC. REQUIRED FOR FULL DUPLEX FIBER COMMUNICATIONS. SEE SHEET E1.1 FOR INTERCONNECTING BUILDING CONDUIT REQUIREMENTS.

FIRE ALARM MOUNTING HEIGHTS/INSTRUCTIONS NOTES:

- 1 MOUNT FIRE ALARM ENCLOSURE WITH THE TOP OF THE CABINET 72" ABOVE THE FINISHED FLOOR OR CENTER THE CABINET AT 63", WHICHEVER IS LOWER.
- 2 MOUNT ANNUNCIATOR WITH THE TOP OF THE PANEL 72" ABOVE THE FINISHED FLOOR OR CENTER OF THE PANEL AT 63", WHICHEVER IS LOWER. FLUSH MOUNT ANNUNCIATOR UNLESS OTHERWISE NOTED.
- 3 REMOTE POWER SUPPLIES AND AUXILIARY FIRE ALARM PANELS. LOCATE THE PANEL OR CABINET WITH THE TOP OF THE PANEL 72" ABOVE THE FINISHED FLOOR OR CENTER THE PANEL AT 63", WHICHEVER IS LOWER. DO NOT LOCATE THESE PANELS ABOVE CEILINGS OR WHERE INACCESSIBLE BY A PERSON STANDING ON THE FINISHED FLOOR OF THE SPACE.
- 4 MOUNT STATIONS SO THAT THEIR OPERATING HANDLES ARE BETWEEN 42" AND 48" ABOVE THE FINISHED FLOOR. DO NOT USE BRICK OR BLOCK COURSES AS YOUR ONLY GUIDE. CUT BRICK OR BLOCK TO ACHIEVE PROPER HANDLE HEIGHT.
- 5 ALL WALL MOUNTED AUDIO/VISUAL DEVICES SHALL BE MOUNTED SO THE ENTIRE LENS IS BETWEEN 80" AND 96" ABOVE THE FINISHED FLOOR. WHERE LOW CEILING HEIGHTS DO NOT PERMIT MOUNTING AT A MINIMUM OF 80" AFF, VISIBLE APPLIANCES SHALL BE MOUNTED WITHIN 6" OF THE CEILING. DO NOT USE BRICK OR BLOCK COURSES AS YOUR ONLY GUIDE. CUT BRICK OR BLOCK TO ACHIEVE PROPER LENS HEIGHT.
- 6 WEATHER PROOF APPLIANCES INSTALLED OUTDOORS SHALL BE UL LISTED FOR OUTDOOR USE. MOUNT SO THE ENTIRE LENS IS BETWEEN 80" AND 96" ABOVE FINISHED FLOOR. FOR WEATHERPROOF APPLIANCES MOUNTED AT FIRE DEPARTMENT CONNECTION (FDC), COORDINATE WITH LOCAL AUTHORITY HAVING JURISDICTION PRIOR TO ROUGH-IN FOR MOUNTING HEIGHT.
- 7 SMOKE AND HEAT DETECTOR HEADS SHALL NOT BE INSTALLED UNTIL AFTER CONSTRUCTION CLEAN-UP IS COMPLETED. IF DETECTOR HEADS ARE INSTALLED PRIOR TO CONSTRUCTION CLEAN-UP, PROTECTIVE COVERS MUST BE IN PLACE TO PROTECT DETECTOR HEADS FROM PARTICULATE DAMAGE. DETECTORS LOCATED ON THE WALL SHALL HAVE THE TOP OF THE DETECTOR AT LEAST 4" AND NOT MORE THAN 12" BELOW THE CEILING. INSTALL SMOKE DETECTORS NO CLOSER THAN 3 FEET FROM AIR HANDLING SUPPLY AIR DIFFUSERS OR RETURN AIR OPENINGS. LOCATE DETECTORS NO CLOSER THAN 12" FROM ANY PART OF A LIGHTING FIXTURE.
- 8 DUCT SMOKE DETECTOR HEADS SHALL NOT BE INSTALLED UNTIL AFTER CONSTRUCTION CLEAN-UP IS COMPLETED. DETECTOR HEADS INSTALLED PRIOR TO CONSTRUCTION CLEAN-UP SHALL BE REPLACED. DUCT DETECTORS ARE TO BE PROVIDED BY THE FIRE ALARM CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR.
- 9 ADDRESSABLE MODULES SHALL BE INSTALLED LESS THAN 3- FEET FROM THE DEVICE BEING CONTROLLED OR MONITORED. ORIENT THE DEVICE MOUNTING FOR BEST MAINTENANCE ACCESS. LABEL ALL ADDRESSABLE MODULES AS TO THEIR FUNCTION.



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SHEET TITLE : FIRE ALARM RISER
DIAGRAM, DETAILS, &
NOTES

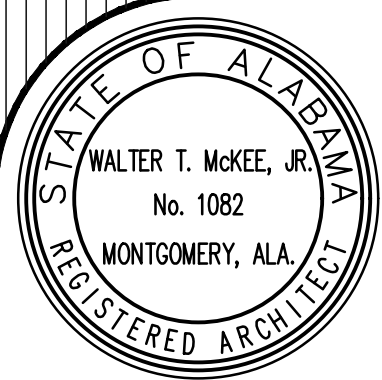
JOB NO. : 18-144
DRAWN BY : J. TILLERY
DATES : 18 September 2018

SHEET NO. : E6.1

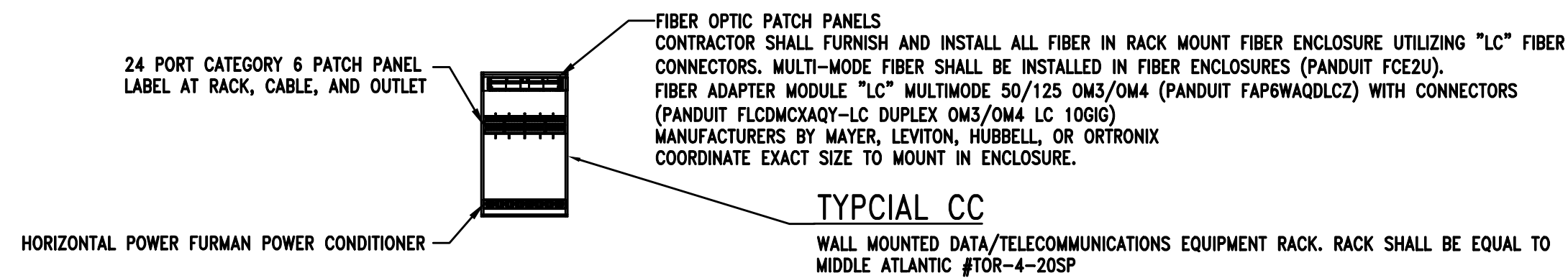
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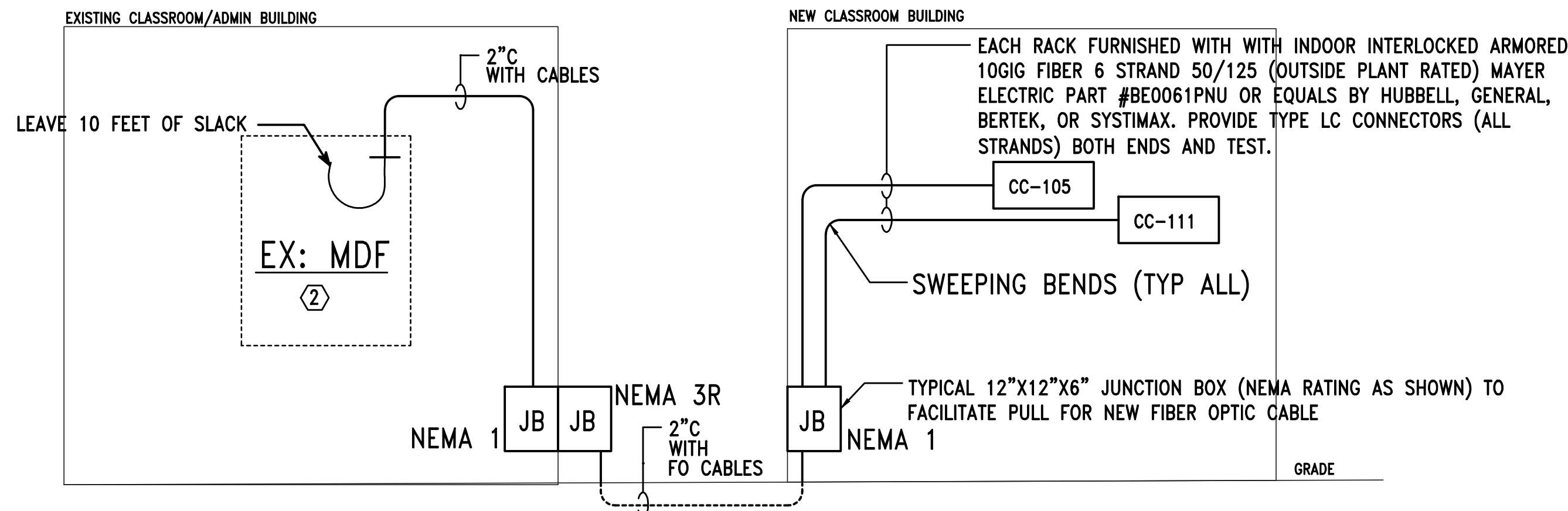
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NOTE:
CONTRACTOR SHALL PROVIDE ONE (1) CAT 6 PATCH CORD IN MDF/IDF/CBB FOR EACH HORIZONTAL COPPER CABLE INSTALLED IN CONTRACT. PROVIDE 50% OF THE PATCH CORDS AS ONE FOOT AND PROVIDE THE OTHER 50% AS THREE FOOT.



1 CC COMMUNICATIONS RACK ELEVATION - TYPICAL CLASSROOM RACK
NO SCALE



2 COMMUNICATIONS BACKBONE CABLING RISER DIAGRAM
NO SCALE

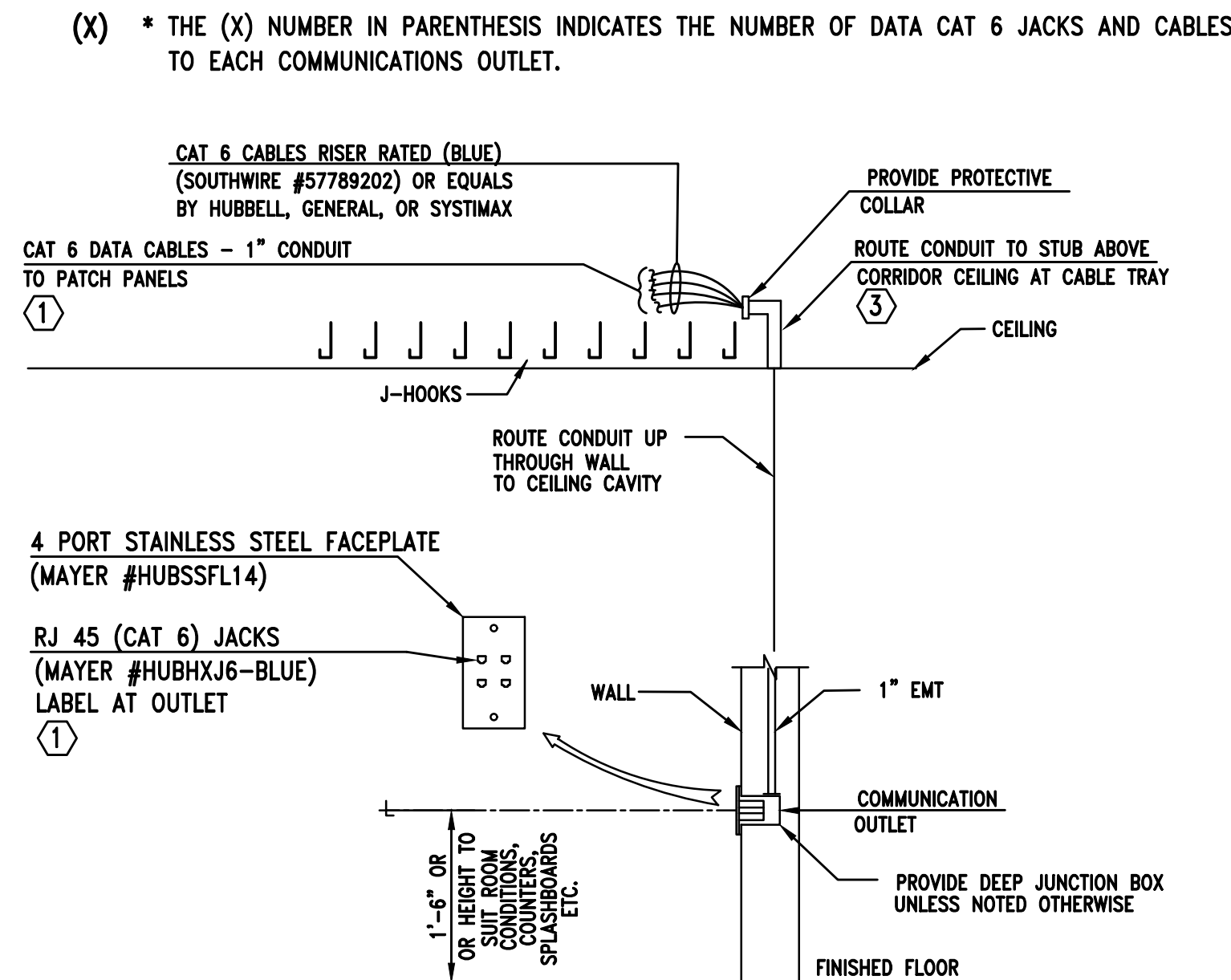
NOTE:
CONTRACTOR SHALL PROVIDE ONE (1) CAT 6 PATCH CORD IN MDF/IDF/CBB FOR EACH HORIZONTAL COPPER CABLE INSTALLED IN CONTRACT. PROVIDE 50% OF THE PATCH CORDS AS ONE FOOT AND PROVIDE THE OTHER 50% AS THREE FOOT.

SHEET NOTES:

- THE (X) NUMBER IN PARENTHESIS INDICATES THE NUMBER OF DATA CAT 6 JACKS AND CABLES TO EACH COMMUNICATIONS OUTLET.
- SECURITY CAMERA TO BE OWNER FURNISHED CONTRACTOR INSTALLED EQUIPMENT. PROVIDE CAT 6 CABLE FROM CAMERA TO NEW NVR TO BE MOUNTED IN THE IFD LOCATION. NVR TO BE OWNER PROVIDED CONTRATOR INSTALLED.
- SECURITY CAMERA TO BE OWNER FURNISHED CONTRACTOR INSTALLED EQUIPMENT. PROVIDE CAT 6 CABLE FROM CAMERA TO NEW NVR TO BE MOUNTED IN THE IFD LOCATION. NVR TO BE OWNER PROVIDED CONTRATOR INSTALLED.

DETAIL NOTES:

- CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING J-HOOKS AND SLEEVES THRU WALLS AS NEEDED TO ROUTE CABLES FROM OUTLETS BACK TO THE PATCH PANELS AS NEEDED. ALL DATA CABLING SHALL BE PROPERLY SUPPORTED ABOVE THE CEILINGS. J-HOOKS SHALL BE PROVIDED AT LEAST EVERY 4' TO SUPPORT ALL DATA CABLES ABOVE THE CEILING.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR THE INSTALLATION OF THE OWNER PROVIDED CONTRACTOR INSTALLED IT SWITCHES IN EACH MDF, IDF, AND CBB RACK.



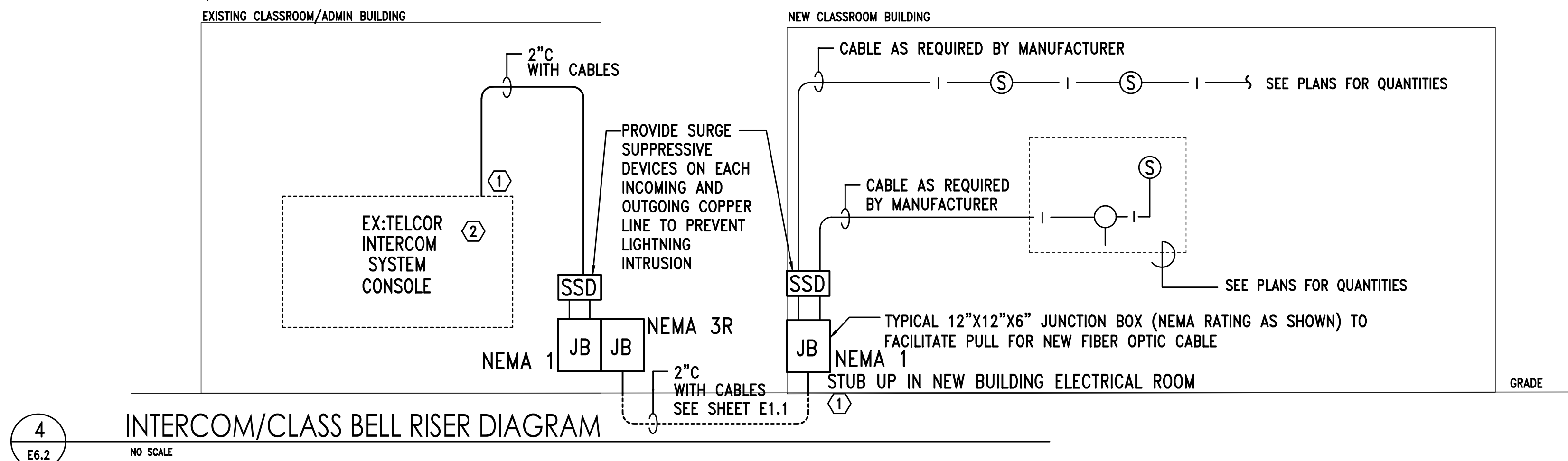
3 DETAIL - TYPICAL COMMUNICATION OUTLET
NO SCALE

INTERCOM SYSTEM NOTES:

- THE INTERCOM SYSTEM SHALL BE INSTALLED COMPLETE, WITH ALL EQUIPMENT, DEVICES, COMPONENTS, CABLE AND WIRING SYSTEMS, ETC., READY FOR OPERATION.
- INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC), INSULATED CABLE ENGINEERS ASSOCIATION (ICEA) AND THE ELECTRONIC INDUSTRIES ASSOCIATION (EIA).
- ALL SYSTEM COMPONENTS, ENCLOSURES, FRAMES, CONDUCTOR AND CABLE SHIELDS, ETC., SHALL BE GROUNDED. SYSTEM SHALL BE BONDED TO THE FACILITY GROUND ELECTRODE SYSTEM AS NOTED.
- IN GENERAL THE INTERCOM WIRING SYSTEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS FOR THE SYSTEM SPECIFIED.
- ALL WIRING TO BE IN CONDUIT SIZED IN ACCORDANCE WITH NEC WITH A MINIMUM SIZE OF 3/4". STENCIL IN 2" HIGH LETTERS ON EVERY JUNCTION BOX COVER ABOVE CEILING THE LETTERS "INT".
- ALL EQUIPMENT AND DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, APPLICABLE STANDARDS AND ACCESSIBLE FOR VISUAL INSPECTION AND MAINTENANCE. WIRING DIAGRAMS SHALL BE SECURED FROM THE SYSTEM MANUFACTURER AND INSTALLED ACCORDINGLY TO MEET THE SPECIFIED OPERATION.
- A "CERTIFICATE OF COMPLETION" FROM THE MANUFACTURER'S REPRESENTATIVE SHALL BE FURNISHED PRIOR TO FINAL ACCEPTANCE.
- INTERCOM SYSTEM PROVIDER IS RESPONSIBLE FOR PROVIDING SIGNAL LINE BOOSTERS AND AMPLIFIERS AS REQUIRED FOR SYSTEM TO FUNCTION PROPERLY.
- PROVIDE PROPERLY SIZED JUNCTION BOXES TO HOUSE DEVICES. COORDINATE WITH SHOP DRAWING PRIOR TO ROUGH-IN. INCLUDE IN BID ALL MATERIAL NECESSARY TO MOUNT AND CONNECT DEVICES PER MANUFACTURER'S RECOMMENDATIONS.

INTERCOM SHEET NOTES:

- PROVIDE SURGE SUPPRESSION ON ON ALL INCOMING AND OUTGOING CABLES WHERE THEY ENTER OR EXIT THE FACILITY. SURGE SUPPRESSION WILL BE REQUIRED FOR EACH CABLE.
- MODIFY EXISTING INTERCOM SYSTEM AS REQUIRED TO ACCOMMODATE ADDITIONAL DEVICES.

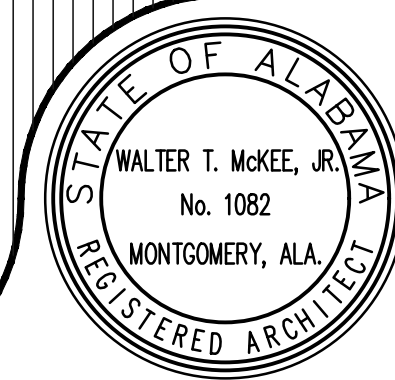


4 INTERCOM/CLASS BELL RISER DIAGRAM
NO SCALE

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SHEET TITLE : COMMUNICATIONS RISER, DETAILS, & NOTES

JOB NO. : 18-144

DRAWN BY : J. TILLERY

DATES : 18 September 2018

SHEET NO. :

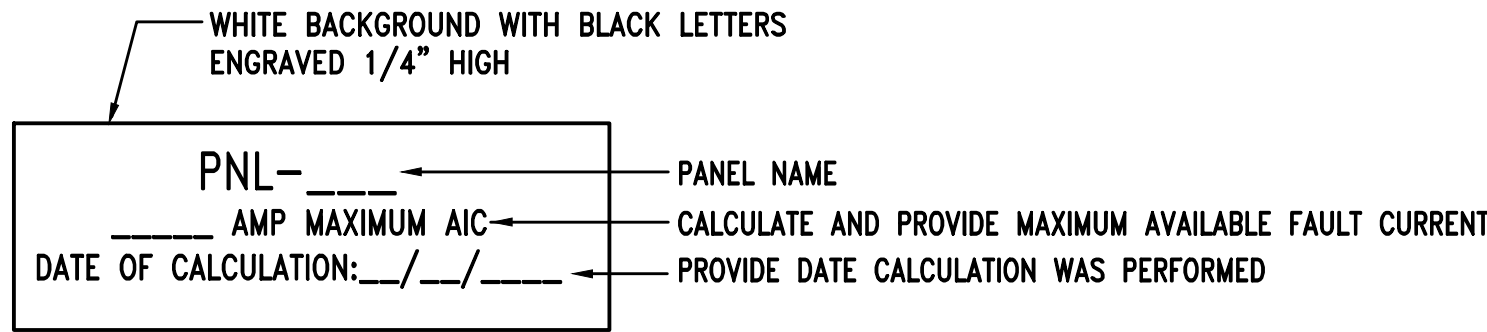
E6.2



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NOTES:

1. CONTRACTOR SHALL CALCULATE AND PROVIDE NAMEPLATE ON THE SERVICE ENTRANCE EQUIPMENT THAT INDICATES THE MAXIMUM AVAILABLE FAULT CURRENT AND THE DATE THE CALCUALTION WAS PERFORMED. SEE NAMEPLATE REQUIREMENTS BELOW.



TYPICAL SERVICE ENTRANCE FAULT CURRENT NAMEPLATE

2
E7.1

DETAIL - SERVICE ENTRANCE FAULT CURRENT NAMEPLATE

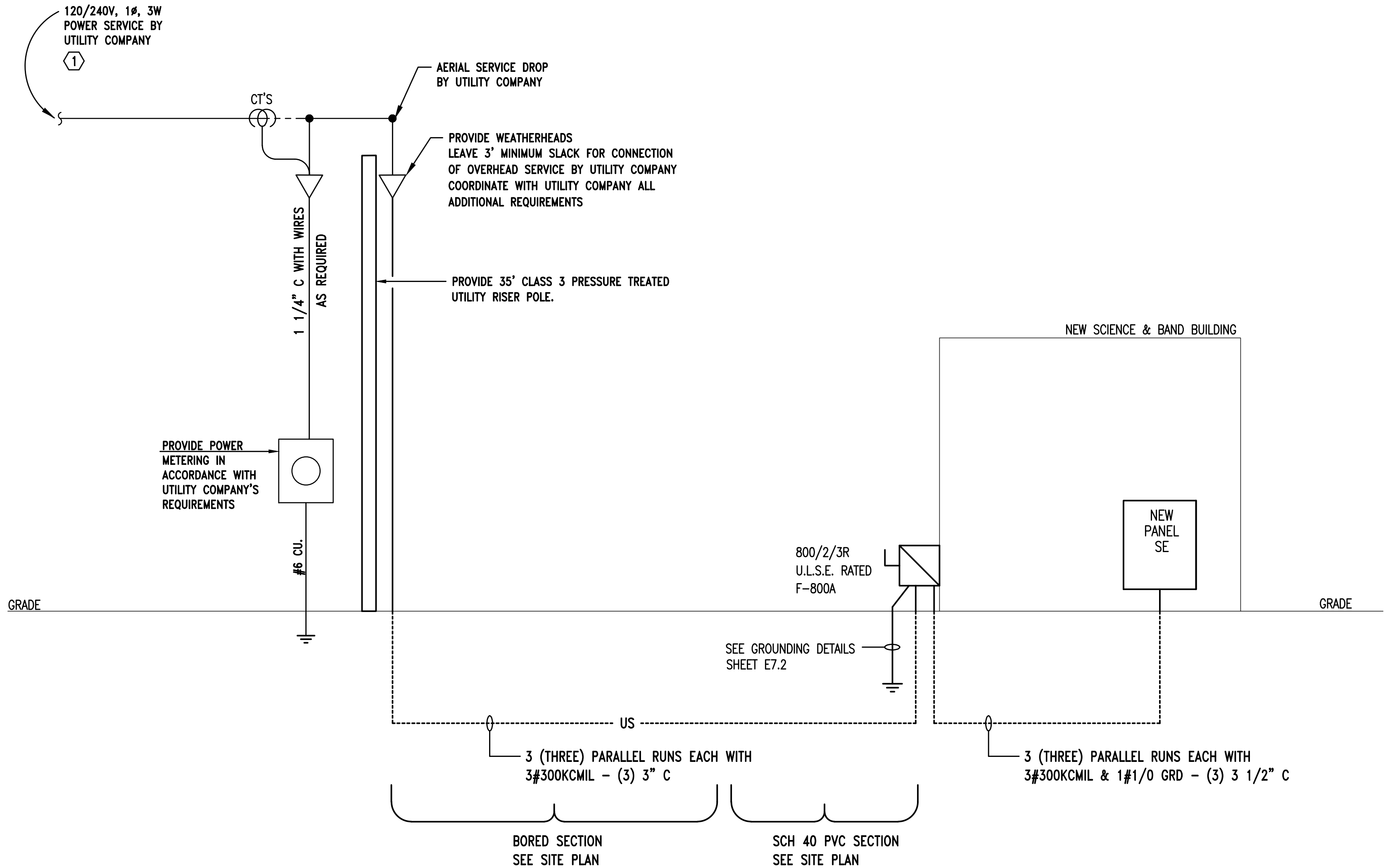
NO SCALE

SHEET NOTES:

- ① COORDINATE WITH LOCAL UTILITY COMPANY FOR OVERHEAD SECONDARY TO BE BROUGHT TO BUILDING AND PAY ALL ASSOCIATED FEES. COORDINATE PRIOR TO BIDS AND PAY ALL ASSOCIATED FEES. COORDINATE PRIOR TO BIDS AND BID ACCORDINGLY.

POWER RISER DIAGRAM NOTES:

1. INSTALLATION AND CONNECTION OF ALL DEVICES SHALL BE IN ACCORDANCE WITH NEC, MANUFACTURER'S RECOMMENDATIONS, AND STATE AND LOCAL CODES.
2. CONTRACTOR IS RESPONSIBLE FOR THE CONNECTING, INSTALLATION, AND MARKING OF ALL POWER FEEDER CONDUCTORS FOR THE PROPER PHASE SEQUENCE AND LOADING . CONTRACTOR SHALL TEST EACH FEEDER AND EQUIPMENT FEEDERS WITH A PHASE METER PRIOR TO CONNECTING LOADS.
3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND VERIFYING WITH ALL DIVISIONS THE ACTUAL NAMEPLATE DATA OF ALL EQUIPMENT AND DEVICES SUPPLIED ON THIS PROJECT PRIOR TO BID. CONTRACTOR SHALL THEN PROVIDE THE PROPERLY SIZED OVERCURRENT DEVICES (CIRCUIT BREAKERS, CONDUCTORS, DISCONNECTS, FUSES, ETC.) TO PROPERLY PROTECT THE EQUIPMENT PER THE NEC. ENGINEER'S DESIGN BASED ON DATA GIVEN TO HIM BY DESIGNERS OF OTHER DIVISIONS, ACTUAL NAMEPLATE DATA COULD DIFFER.
4. SEAL ALL CONDUITS FROM THE EXTERIOR WITH A SEALING COMPOUND, ONCE ALL CABLING HAS BEEN INSTALLED.
5. ALABAMA POWER COMPANY WILL BE FURNISHING THE OVERHEAD SECONDARY TO THE WEATHERHEADS COORDINATE WITH ALABAMA POWER ALL REQUIREMENTS SET FORTH BY THE UTILITY COMPANY AND PAY FOR ALL FEES TO GET POWER CONNECTED TO BUILDING. COORDINATE PRIOR TO BID AND BID ACCORDINGLY.
6. PROVIDE UNISTRUT SUPPORT ACROSS STRUCTURE WITH ANCHOR BOLT TO SUPPORT THE MOUNTING OF WEATHERHEADS TO THE SIDE OF THE BUILDING.

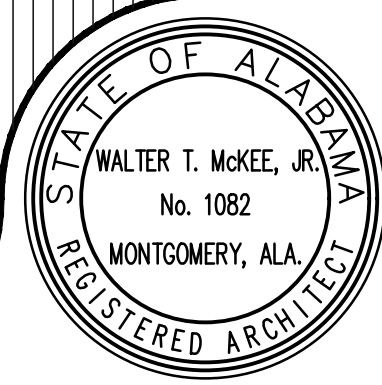


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E7.1

NEW OVERHEAD POWER RISER DIAGRAM

NO SCALE

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SHEET TITLE : POWER RISER DIAGRAM
DETAILS & NOTES

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DATES : 18 September 2018

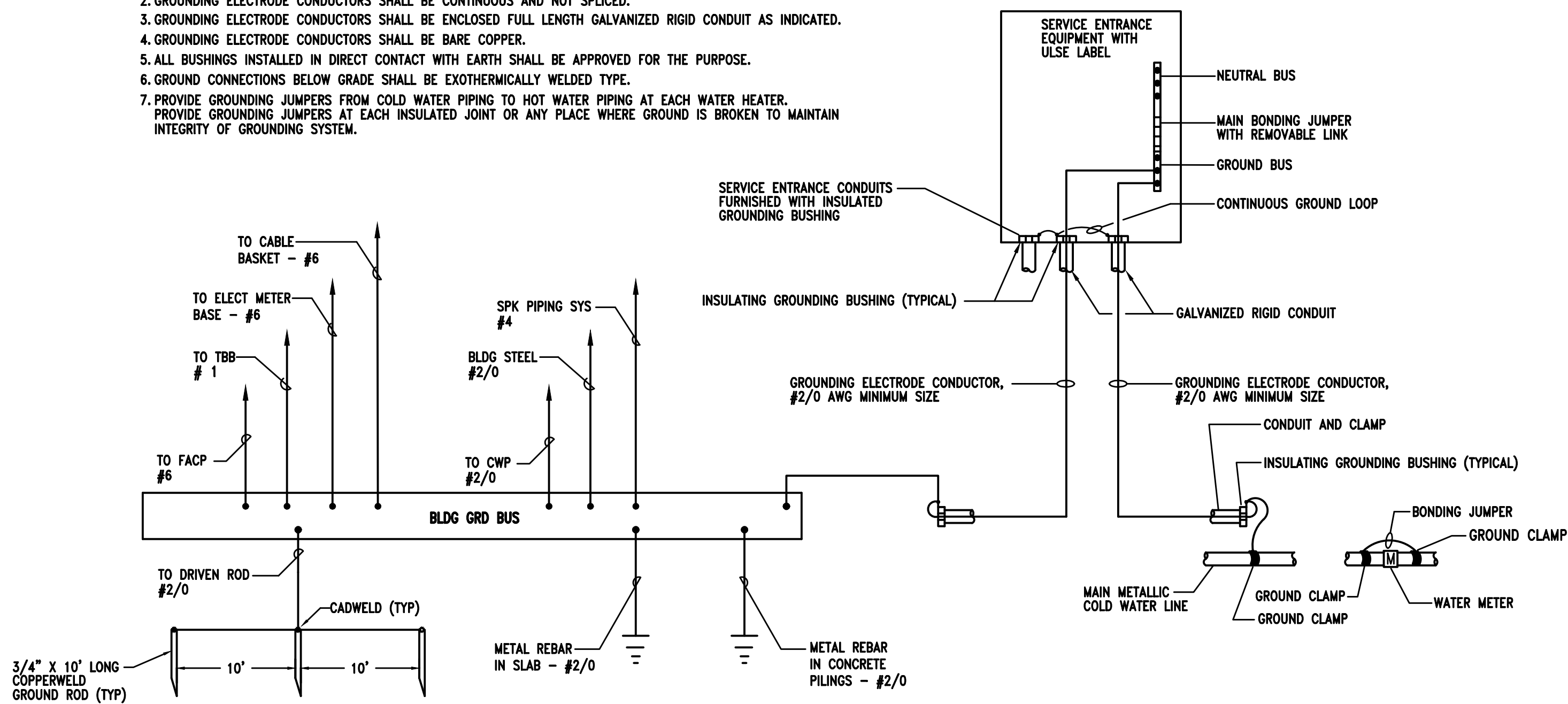


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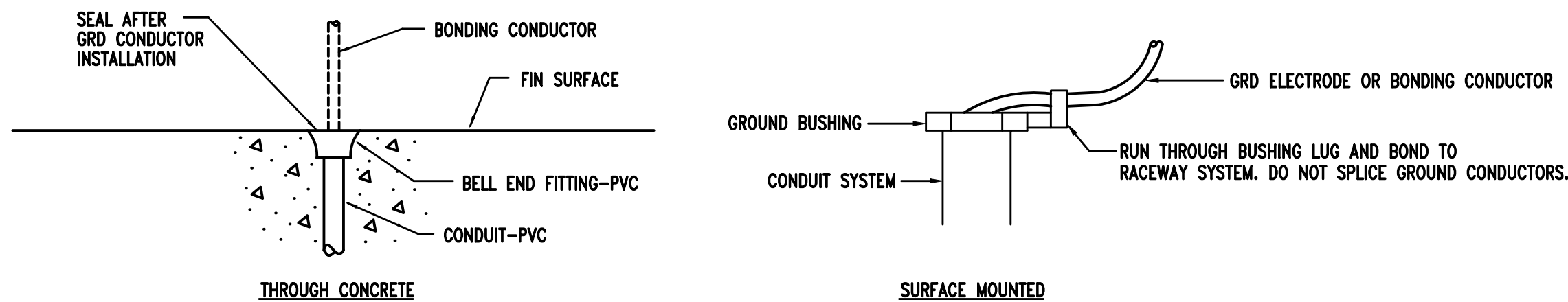
NOTES

1. GROUNDING ELECTRODE SYSTEM SHALL BE IN ACCORDANCE WITH NEC ARTICLE 250
2. GROUNDING ELECTRODE CONDUCTORS SHALL BE CONTINUOUS AND NOT SPliced.
3. GROUNDING ELECTRODE CONDUCTORS SHALL BE ENCLOSED FULL LENGTH GALVANIZED RIGID CONDUIT AS INDICATED.
4. GROUNDING ELECTRODE CONDUCTORS SHALL BE BARE COPPER.
5. ALL BUSHINGS INSTALLED IN DIRECT CONTACT WITH EARTH SHALL BE APPROVED FOR THE PURPOSE.
6. GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMICALLY WELDED TYPE.
7. PROVIDE GROUNDING JUMPERS FROM COLD WATER PIPING TO HOT WATER PIPING AT EACH WATER HEATER. PROVIDE GROUNDING JUMPERS AT EACH INSULATED JOINT OR ANY PLACE WHERE GROUND IS BROKEN TO MAINTAIN INTEGRITY OF GROUNDING SYSTEM.

1
E7.2
NO SCALE
DETAIL - SERVICE ENTRANCE GROUNDING INSTALLATION

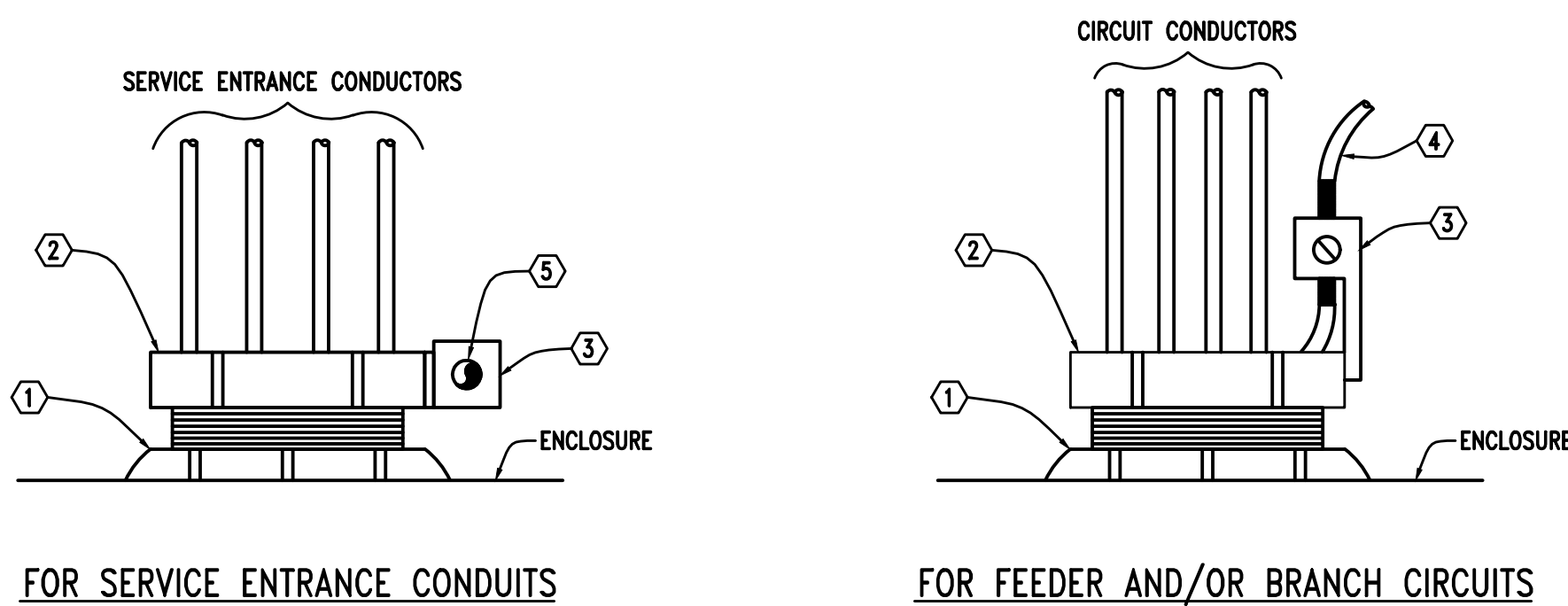
NOTES

1. ALL GROUND ELECTRODE CONDUCTORS, SYSTEM BONDING CONDUCTORS, ETC., RUN SEPARATELY SHALL BE PROTECTED BY A CONDUIT SYSTEM.
2. ALL SYSTEM GROUNDING OR BONDING CONDUCTORS SHALL GENERALLY BE ENCLOSED BY A GRC CONDUIT. PROVIDE GROUND BUSHINGS ON EACH END AND BOND CONDUCTORS TO RACEWAY SYSTEM.
3. SYSTEM BONDING CONDUCTORS THAT PENETRATE CONCRETE SLABS SHALL BE ENCLOSED BY A PVC CONDUIT. PROVIDE BELL END FITTING ON EACH END AND SEAL. THOSE TERMINATING AT A STUB-UP SHALL BE FLUSH WITH FLOOR.

2
E7.2
NO SCALE
DETAIL - TYPICAL GROUND CONDUCTOR IN CONDUIT SYSTEM

DETAIL NOTES

- ① LOCK-NUT ASSEMBLIES
- ② METAL GROUNDING BUSHING
- ③ COPPER GROUND LUG
- ④ COPPER GROUND CONDUCTOR. REMOVE INSULATION AT BUSHING. RUN THROUGH BUSHING LUG AND BOND TO RACEWAY SYSTEM. DO NOT SPLICE OR TAP.
- ⑤ CONTINUOUS COPPER GROUND CONDUCTOR FROM GROUND BUS THROUGH EACH BUSHING. DO NOT SPLICE OR TAP.

3
E7.2
NO SCALE
DETAIL - TYPICAL GROUND BUSHING INSTALLATION

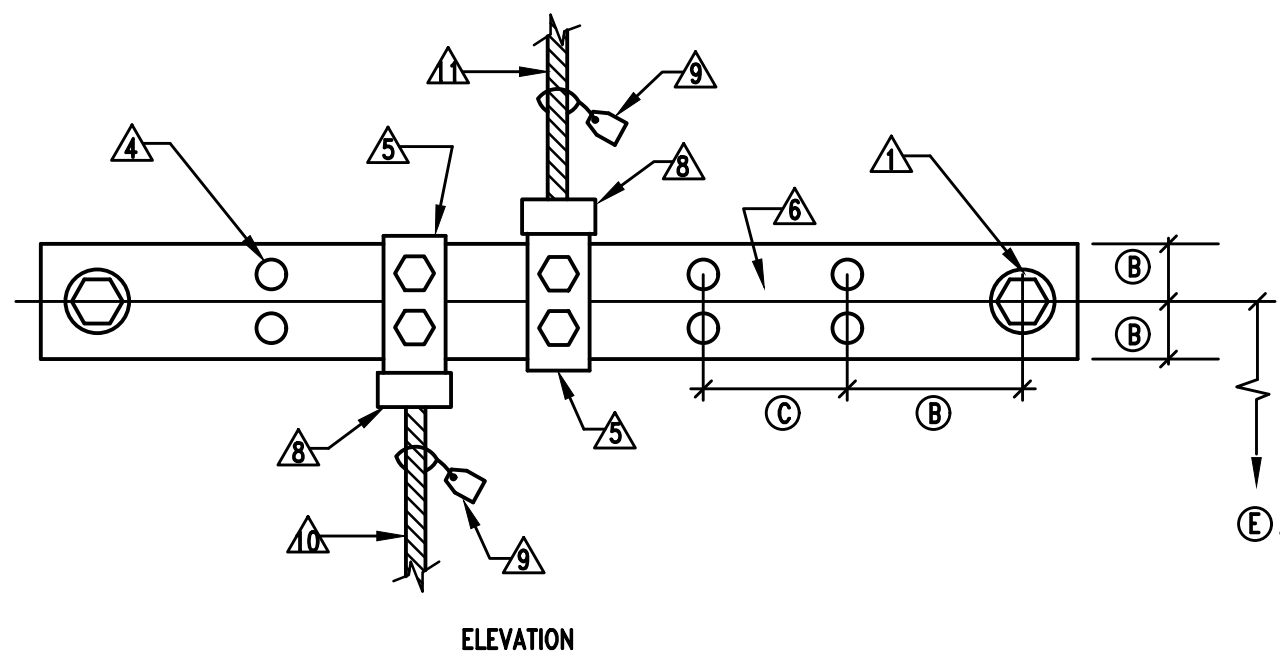
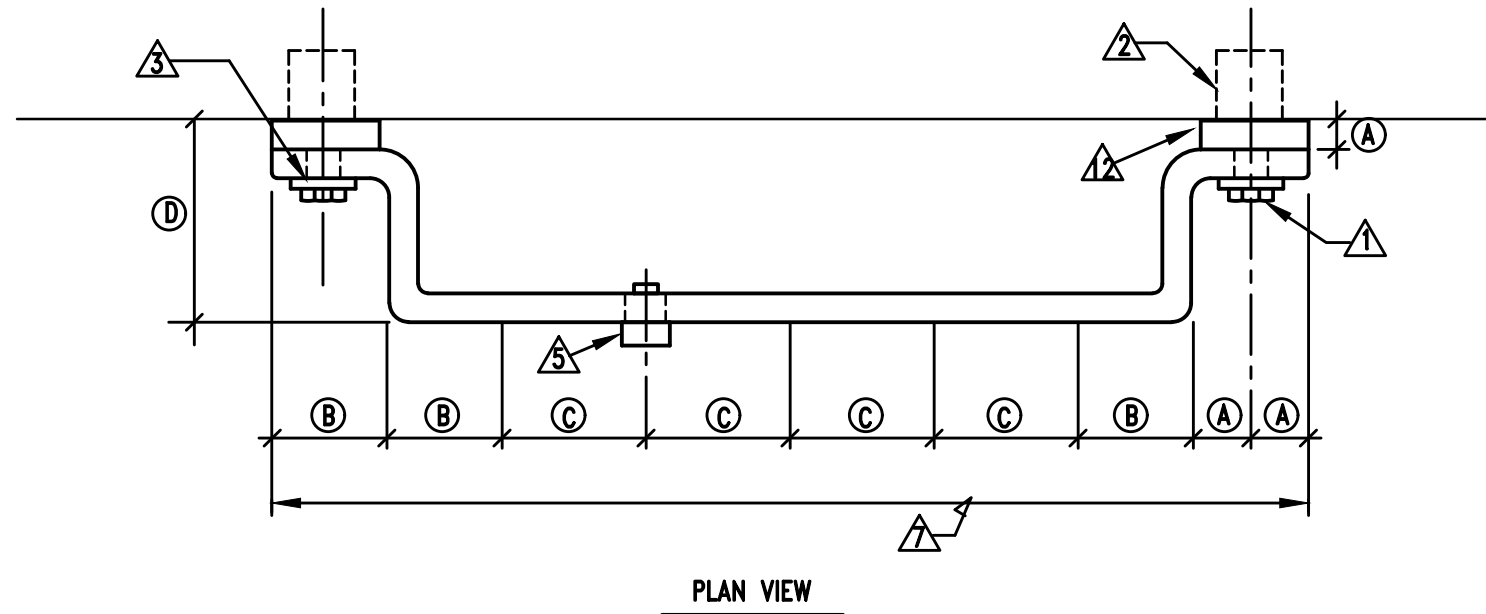
GROUNDING AND BONDING INSTALLATION NOTES

1. ALL GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH THE NEC, NESC, IEEE, ANSI AND UL STANDARDS.
2. ALL DIMENSIONING INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS IN THE FIELD.
3. THE PURPOSE OF THE GROUNDING AND BONDING SYSTEM IS TO ESTABLISH ALL EQUIPMENT ENCLOSURES, NON-CURRENT CARRYING METALLIC PORTIONS OF THE ELECTRICAL DISTRIBUTION SYSTEM, METAL PIPING, METAL BUILDING FRAME, ETC., AT A ZERO POTENTIAL RELATIVE TO THE EARTH GROUND AND PROVIDE FOR A SAFE, LOW IMPEDANCE RETURN PATH FOR GROUND-FAULT CURRENT. THIS SHALL BE ACCOMPLISHED IN THE FOLLOWING MANNER:
 - a. PROVIDE A SOLIDLY GROUND SECONDARY SYSTEM.
 - b. INTER-CONNECT ALL GROUND BUSES AND POINTS IN THE SYSTEM WITH A COPPER GRD CONDUCTOR (BUS) SYSTEM.
 - c. ALL METALLIC RACEWAYS SHALL BE UL APPROVED AND MADE-UP TIGHT AT ALL COUPLINGS AND TERMINATIONS.
 - d. ALL GROUND CONDUCTORS IN CIRCUITS SHALL BE CONTAINED WITHIN THE SAME RACEWAY AS CURRENT CARRYING CONDUCTORS.
 - e. ALL SPLICES AND TERMINATIONS SHALL BE MADE TIGHT AND AS SUCH TO PROVIDE LOW IMPEDANCE AND SHALL HAVE THE SAME SHORT-TIME CURRENT-CARRYING CAPABILITY AS THE CONDUCTOR IT IS CONNECTED TO.
 - f. ALL GRD ELECTRODES OR BONDING CONDUCTORS INSTALLED ALONE WITHIN A RACEWAY SHALL UTILIZE GRC WITH GROUNDING BUSHINGS AT EACH END. THIS GROUND CONDUCTOR SHALL LOOP THROUGH THE BUSHING LUG PRIOR TO TERMINATION.

DIMENSION BLOCK		
REF	ENGLISH	SI
A	1"	25.4mm
B	2"	50.8mm
C	2 1/2"	63.5mm
D	3"	76.2mm
E	1'-6"	4572mm

GROUND BUS NOTES

1. GROUND BUS INSTALLATION SHALL BE IN ACCORDANCE WITH THIS DETAIL AND AS INDICATED ON THE DRAWINGS.

4
E7.2
NO SCALE
DETAIL - TYPICAL GROUND BUS INSTALLATION

KEYED NOTES

- △ 1/2" (12.7mm) X 1 1/2" (38.1mm) SILICON-BRONZE MACHINE BOLT & SILICON-BRONZE WASHER
- △ 1/2" (12.7mm) EXPANSION ANCHOR
- △ 9/16" (14.2875mm) HOLE IN BAR
- △ DRILLED DOUBLE CONNECTOR HOLES
- △ FLAT, TWO-HOLE CU CABLE CONNECTOR #6 TO #2 (DOUBLE LUGS) #1 TO #4/0 (SINGLE LUGS ONLY)
- △ 4" (101.6mm) WIDE, 1/4" (6.35mm) DEEP COPPER BUS BAR.
- △ LENGTH AS REQUIRED BY NUMBER OF CONDUCTOR CONNECTIONS OR AS SPECIFICALLY INDICATED. PROVIDE INTERMEDIATE WALL SUPPORTS AS REQUIRED.
- △ TYP CU GRD CONDUCTOR CONNECTION
- △ DESCRIPTION TAG. STATE SIZE OF CONDUCTOR AND TO WHAT IT IS CONNECTED TO.
- △ TYP GRD CONNECTION FROM BELOW. SEE APPLICABLE DETAILS FOR SLAB PENETRATIONS.
- △ TYP GRD CONNECTION FROM ABOVE. SEE APPLICABLE DETAILS FOR GRC INSTALLATIONS.
- △ INSULATED NON-CONDUCTIVE SPACER

