NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

FINAL STATE SUBMITTAL
PSCA #9243 DCM #2020091

LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

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OWNER
RUSSELLVILLE CITY SCHOOLS
1945 WATERLOO RD
RUSSELLVILLE, AL 35653
CONTACT: ALAN WILSON

CIVIL ENGINEER
LBYD, INC.
880 MONTCLAIR ROAD
SUITE 600
BIRMINGHAM, ALABAMA 35213
CONTACT: CHRIS HARKINS, P.E.

M, P & FP ENGINEER
DEWBERRY ENGINEERING
2 RIVERCHASE OFFICE PLAZA
SUITE 205
HOOVER, ALABAMA 35244
CONTACTS: SCOTT CARLISLE / ADAM CONE

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CONTACT: RYAN VERNON, AIA

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STRUCTURAL DESIGN GROUP, INC.
300 CHASE PARK SOUTH
SUITE 125
HOOVER, ALABAMA 35244
CONTACT: CRAIG WINN, P.E.

ELECTRICAL ENGINEER
STEWART ENGINEERING
P.O. BOX 2233
300 EAST 7TH STREET
ANNISTON, ALABAMA 36202
CONTACT: SHAWN CRAWFORD

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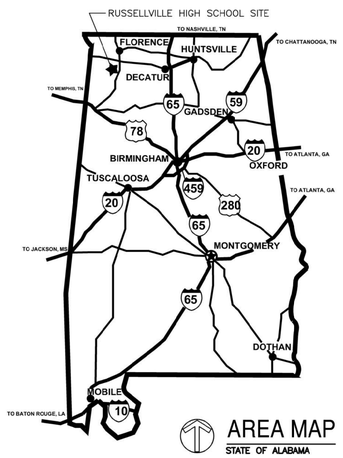
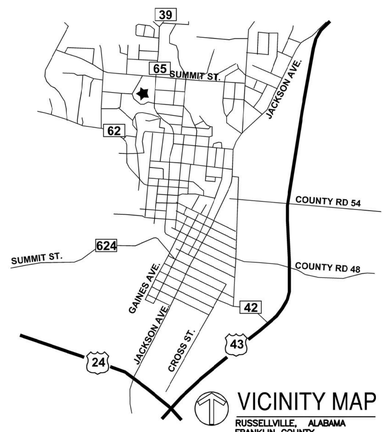


AREA MAP
STATE OF ALABAMA



VICINITY MAP
RUSSELLVILLE, ALABAMA
FRANKLIN COUNTY

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
COVER,TITLE & INDEX

PROJ. MGR.:	R. VERNON
DRAWN:	
DATE:	04/15/22
REVISIONS	
1 ADD #1	05/15/22

JOB NO. 19-90B
SHEET NO:
T0.1
1 OF 3

0 1" 2"

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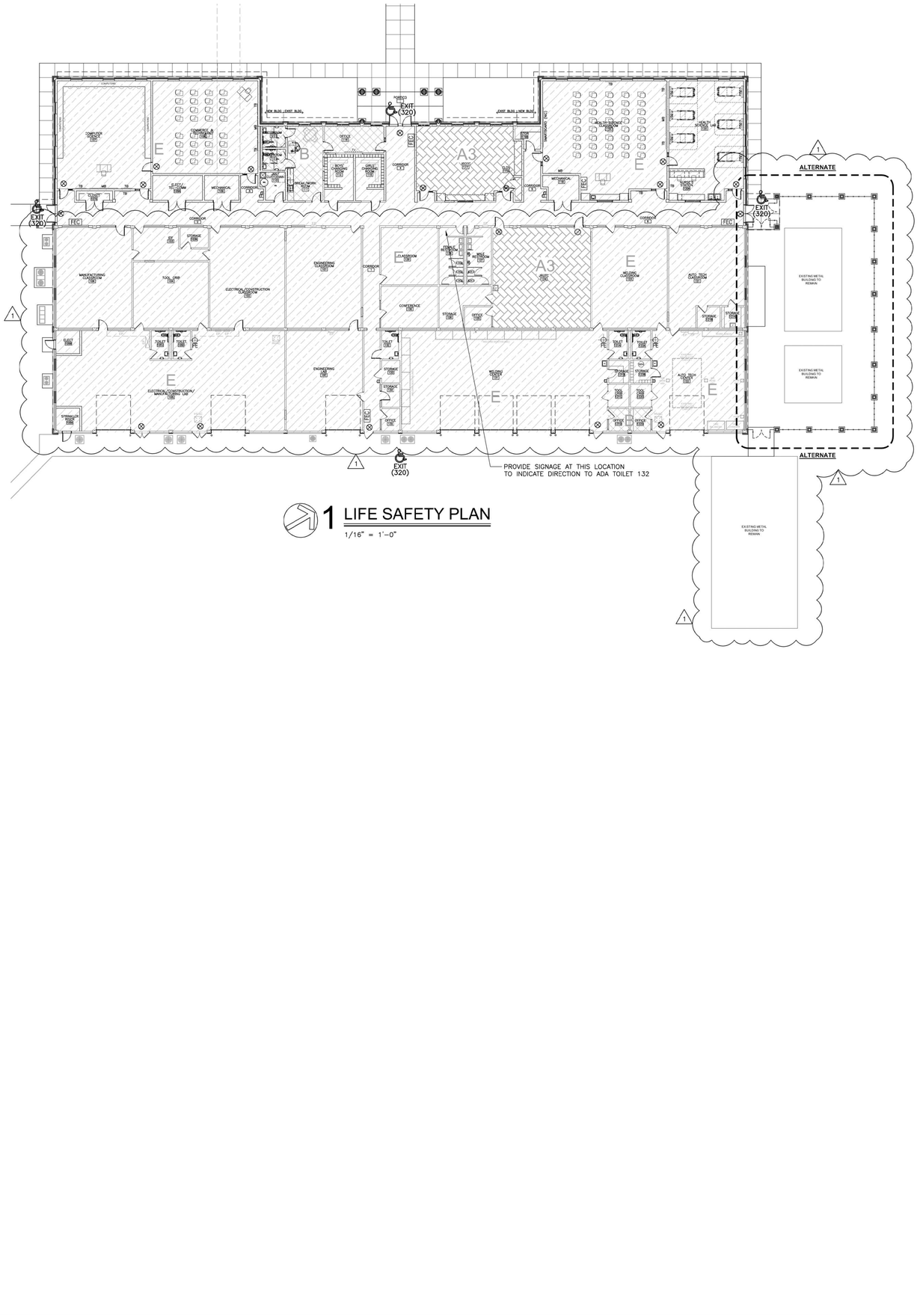

1 LIFE SAFETY PLAN

1/16" = 1'-0"

WALL RATING LEGEND

——·——·——	1 HR WALL
——··——··——	2 HR WALL
-S-S-S-S-S-S-S-S-S-S-S-S-S-	SMOKE TIGHT WALL

WALL TYPE LEGEND

- HE - HORIZONTAL EXIT
- FB - FIRE BARRIER
- FP - FIRE PARTITION
- FW - FIRE WALL
- XFB - EXISTING FIRE BARRIER
- XFP - EXISTING FIRE PARTITION
- XFW - EXISTING FIRE WALL

DOOR/WINDOW RATING LEGEND

- (20) 20 MINUTE DOOR AND FRAME
- (45) 45 MINUTE DOOR AND FRAME
- (60) 60 MINUTE DOOR AND FRAME
- (90) 90 MINUTE DOOR AND FRAME
- (180) 180 MINUTE DOOR AND FRAME
- (HO) HOLD OPEN
- (SM) SMOKE TIGHT
- (90T) 90 MINUTE TORNADO DOOR AND FRAME

LIFE SAFETY NOTES

- FEC — FIRE EXTINGUISHER AND CABINET (PROVIDE FIRE RATED CABINETS IN RATED WALLS.)
- FE — FIRE EXTINGUISHER
- FE(K) — K-TYPE FIRE EXTINGUISHER
- EXIT SIGN DIRECTION
- ACCESSIBLE EXIT (320) — EXIT CAPACITY
- EXTEND AND KEY ALL RATED WALLS TO SHAFT WALL SYSTEM, AND/OR BOTTOM OF ROOF ASSEMBLY
- STENCIL LABEL ALL RATED WALLS & DRAFT STOPS ABOVE CEILING EACH SIDE @ 20'-0" O.C. MAX.
- ALL RATED DOORS AND FRAMES TO BE LABELED WITH EMBOSSED LABELS INDICATING RATING IN MINUTES

OCCUPANCY USE LEGEND

- E — GROUP E
- B — GROUP B
- A3 — GROUP A3

2015 INTERNATIONAL BUILDING CODE RESEARCH
FULLY SPRINKLERED

OCCUPANCY CLASSIFICATION:	GROUP E		
TYPE OF CONSTRUCTION :	TYPE IIB (S1)		
EXISTING BUILDING AREA:	19,802 S.F.		
NEW ADDITION AREA:	7,694 S.F.		
TOTAL BUILDING AREA:	27,496 S.F.		
TABLE 504.4 ALLOWABLE NUMBER OF STORIES:	ALLOWABLE STORIES: 3	ACTUAL STORIES: 1	
TABLE 506.2 ALLOWABLE AREA:	AREA FACTOR: SM	58,000 S.F.	
TABLE 601 AND 602 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS:	CONSTRUCTION TYPE:	IIB	
	STRUCTURAL FRAME:	0	
	BEARING WALLS:	0	
	T. 602 EXTERIOR:	< 5'	1hr
		≥ 5'< 10'	1hr
		≥ 10'< 30'	0
		≥ 30'	0
	INTERIOR:		0
	NONBEARING WALLS:		
	T. 602 EXTERIOR:	< 5'	1hr
		≥ 5'< 10'	1hr
		≥ 10'< 30'	0
		≥ 30'	0
	INTERIOR:		0
	FLOOR CONSTRUCTION:		0
	ROOF CONSTRUCTION:		0
TABLE 1020.1 CORRIDOR FIRE-RESISTANCE RATING PARTITIONS AND OPENING PROTECTIVES	GROUP E SPRINKLERED		0

CHAPTER 29 - PLUMBING SYSTEMS

OCCUPANCY		WATERCLOSETS				LAVATORIES				DRINKING FOUNTAINS		SERVICE SINKS
USE	LOAD	RATIO	MALE	RATIO	FEMALE	RATIO	MALE	RATIO	FEMALE	RATIO	ALL	ALL
A3	156.15	1/125	.63	1/65	1.2	1/200	.39	1/200	.39	1/500	.30	1
B	8.86	1/25 FIRST 50; 1/50 REMAINDER EXCEEDING 50.	.18	1/25 FIRST 50; 1/50 REMAINDER EXCEEDING 50.	.18	1/40 FIRST 80; 1/80 EXCEED 80.	.11	1/40 FIRST 80; 1/80 EXCEED 80.	.11	1/100	.09	
E	550.7	1/50	5.51	1/50	5.51	1/50	5.51	1/50	5.51	1/100	5.51	
S1,S2	7.49	1/100	.04	1/100	.04	1/100	.04	1/100	.04	1/1000	.01	
REQUIRED TOTALS			6.36		6.93		6.05		6.05		5.91	1
PROVIDED TOTALS			7		7		7		7		6	1

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STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
LIFE SAFETY PLAN

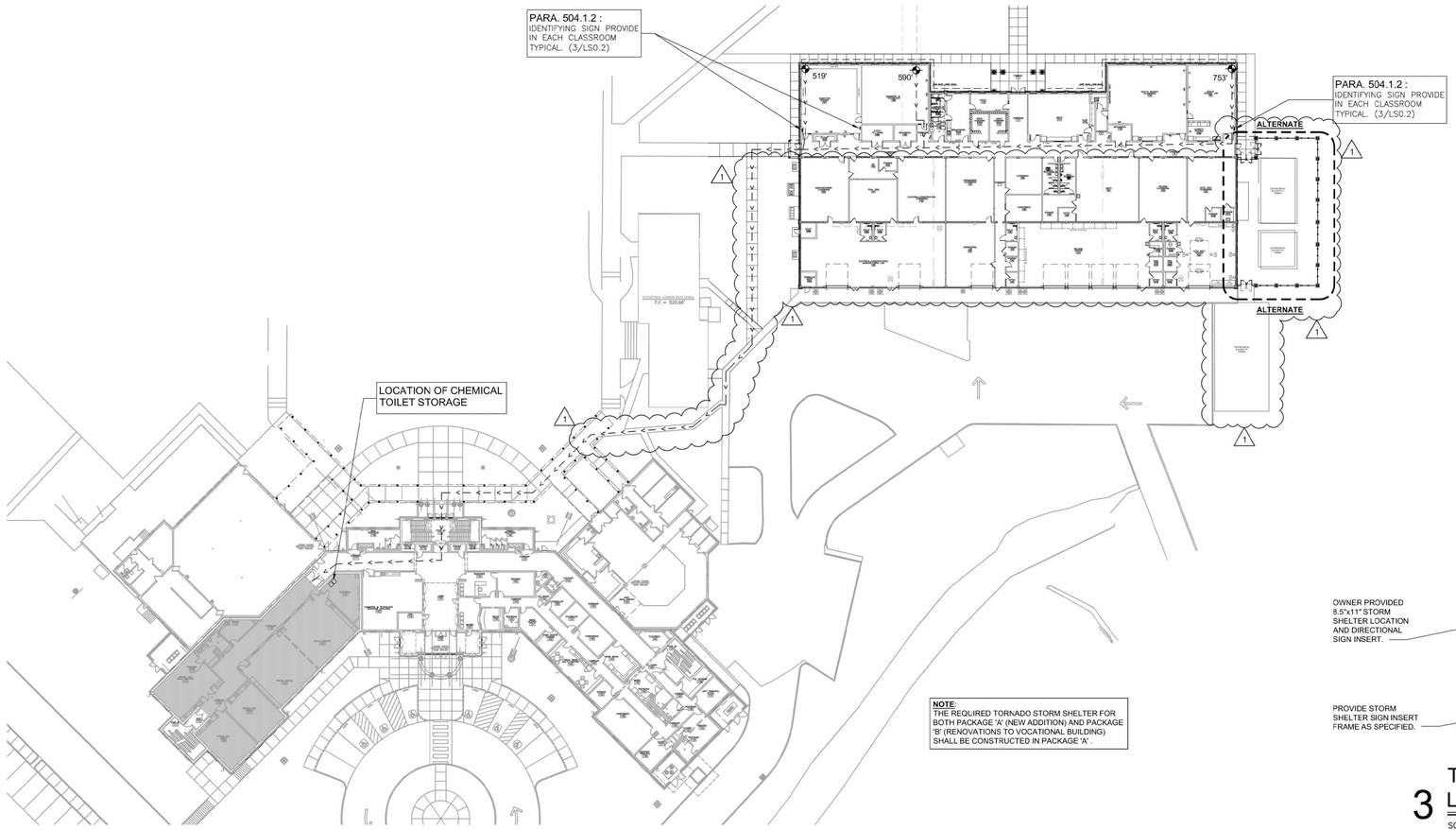
PROJ. MGR.:	R. VERNON
DRAWN:	HR
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

SHEET NO:
LS0.1

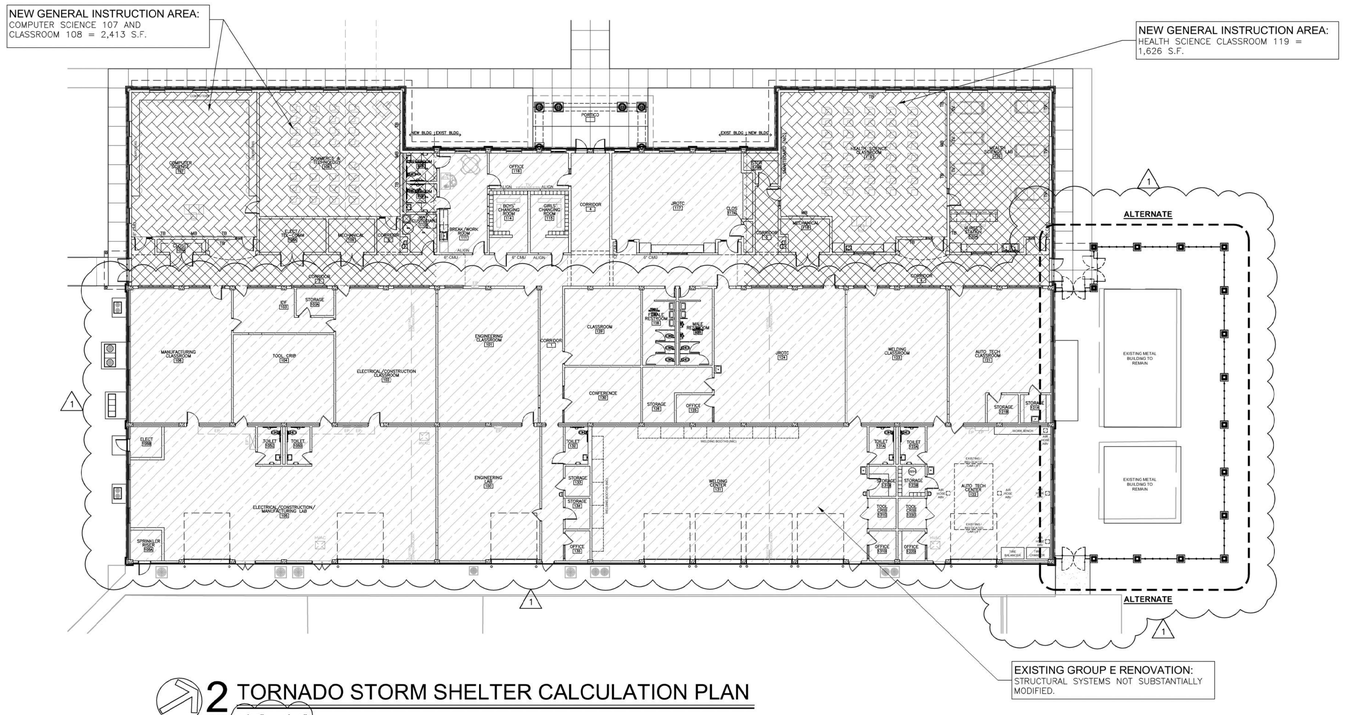
2 OF 3

0 1" 2"



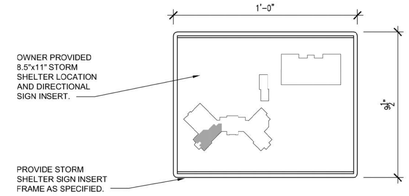
1 TORNADO STORM SHELTER ACCESS PLAN

1/32" = 1'-0"



2 TORNADO STORM SHELTER CALCULATION PLAN

1/16" = 1'-0"



3 TORNADO STORM SHELTER LOCATION SIGN FRAME

SCALE: 3" = 1'-0"

TORNADO STORM SHELTER CALCULATION
LOWER LEVEL
2014 ICC 500 (B.C. Memo Additional Guidance on Safe Requirements July 29,2010 and Department of Finance Division of Construction Management Memo Additional Guidance on Storm Shelters Required by 2015 IBC October 14, 2016)

PACKAGE 'A' NEW ADDITION SHELTER REQUIREMENTS

GROSS AREA OF CLASSROOM/INSTRUCTIONAL SPACE:	15,960 S.F.
REQUIRED OCCUPANT CAPACITY (STUDENT AND FACULTY) :	15,960 / 30 = 532 PERSONS + 10% 53.2 (54) = 586
REQUIRED USEABLE SHELTER FLOOR AREA:	586(5) = 2,930 S.F + 30 S.F. (3- WHEELCHAIR) = 2,960 S.F.

PACKAGE 'B' RENOVATION TO VOCATIONAL BUILDING SHELTER REQUIREMENTS

GROSS AREA OF NEW GENERAL INSTRUCTIONAL SPACE:	3,472 S.F.
REQUIRED OCCUPANT CAPACITY (STUDENT AND FACULTY) :	3,472 / 30 = 115.73 PERSONS + 10% 11.573 = 127.31(128)
REQUIRED USEABLE SHELTER FLOOR AREA:	128(5) = 640 S.F + 10 S.F. ('- WHEELCHAIR) = 650 S.F.

SHELTER REQUIREMENTS FOR BOTH PACKAGE 'A' AND 'B'

GROSS AREA OF CLASSROOM/INSTRUCTIONAL SPACE:	15,960 + 3,472 S.F. = 19,432 S.F.
REQUIRED OCCUPANT CAPACITY (STUDENT AND FACULTY) :	19,432 / 30 = 647.74 PERSONS + 10% 67.77 = 712.51(713)
REQUIRED USEABLE SHELTER FLOOR AREA:	713(5) = 3,565 S.F + 40 S.F. (4- WHEELCHAIR) = 3,605 S.F.
PROVIDED USEABLE SHELTER FLOOR AREA:	CORRIDOR 109 AND CORRIDOR 116 - 1,054 S.F. (100% USEABLE) CHANGING ROOM 113 CLEAR USEABLE SPACE - 49 SF ELECTRICAL 104 CLEAR USEABLE SPACE - 162 S.F. CLASSROOM SPACES - 3,764 S.F. - 35% = 2,446.6 S.F. TOTAL USEABLE PROVIDED = 3,711.6 S.F.
ACTUAL CAPACITY OF STORM SHELTER TO BE CONSTRUCTED IN PACKAGE 'A':	734 : 709(5) + 4 WHEELCHAIRS (40) = 3,710 S.F.

NOTE:
1. ALL SIGNS SHALL BE IN ACCORDANCE WITH 2010 ADA STANDARD. VERIFY EXACT PLACEMENT WITH ARCHITECT PRIOR TO INSTALLATION.

TABLE 702.2 - LOWER LEVEL

REQUIRED SANITATION FACILITIES COMMUNITY TORNADO STORM SHELTER > 50: CAPACITY OF SHELTER IS 749 PERSONS
2 TOILET FIXTURES FIRST 500 + 1 FOR EACH ADDITIONAL 500
1 PER 1000 OCCUPANTS = 1 HANDWASHING FACILITIES

REQUIRED TOILET FACILITIES	3
PROVIDED TOILET FACILITIES (2- CHEMICAL)	3
REQUIRED LAVATORIES	1
PROVIDED LAVATORIES	1
PROVIDED WATER FOUNTAINS	2

SHELTER LEGEND

LOCATION

SHELTER DIRECTION SIGN LEGEND

SYMBOL	DESCRIPTION
—	WALL MOUNTED PER ADA 703
←	CEILING MOUNTED
←→	CEILING MOUNTED DOUBLE FACE
•	MOUNTED PER ADA 703

OCCUPANCY USE LEGEND

EXISTING GROUP E RENOVATION	NEW GROUP E ADDITION AUXILIARY SUPPORT AREA.
NEW GROUP E GENERAL INSTRUCTION ADDITION	

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STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
TORNADO STORM SHELTER PLAN

PROJ. MGR.:	R. VERNON
DRAWN:	HR
DATE:	04/15/22
REVISIONS	
1 ADD #1	05/15/22

JOB NO. 19-90B

SHEET NO:
LS0.2

3 OF 3

0 1" 2"

GENERAL NOTES:

1. LBYD, INC. SHALL NOT HAVE AUTHORITY OVER THE SITE OR BUILDING CONTRACTOR'S WORK OR RESPONSIBILITIES. LBYD IS NOT RESPONSIBLE FOR SITE SAFETY PROCEDURES OR METHODS OF CONSTRUCTION.
2. ALL EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND OTHER UTILITIES MAY EXIST. CONTRACTOR MUST HAVE EXISTING UTILITIES LOCATED BY UNDERGROUND LINE LOCATORS AS WELL AS FIELD VERIFIED BY ONSITE PERSONNEL PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO LBYD IMMEDIATELY.
3. EXISTING UTILITIES TO REMAIN MAY BE LOCATED WITHIN PROPOSED DEMOLITION AREAS. CONTRACTOR SHALL USE EXTREME CAUTION WHILE WORKING IN THESE AREAS TO ENSURE NO UTILITY SERVICE INTERRUPTIONS TO FACILITIES THAT REMAIN OR TO ADJACENT PROPERTIES.
4. ALL EXISTING IMPROVEMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE REMOVED UNLESS SPECIFICALLY NOTED,"TO REMAIN".
5. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ADJACENT PROPERTIES AND IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS ON OR OFF SITE DUE TO THE CONSTRUCTION OF THIS PROJECT. ANY DAMAGE WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. CONTRACTOR SHALL VERIFY SITE BOUNDARY AND EXISTING TOPOGRAPHY. NOTIFY LBYD OF ANY DISCREPANCIES PRIOR TO SUBMITTING PRICES OR ORDERING MATERIALS
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL BENCHMARKS AND PROPERTY CORNERS. ANY REPLACEMENT WILL BE AT THE CONTRACTOR'S EXPENSE.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS REQUIRED TO CONSTRUCT THIS PROJECT AND PAY ALL PERMIT FEES. ALL PERMITS MUST BE IN-HAND PRIOR TO CONSTRUCTION.
9. BOUNDARY INFORMATION PROVIDED BY THE OWNER AND PERFORMED BY JAMES R. HITT, PLS DATED 01/14/2020.
10. TOPOGRAPHIC INFORMATION WAS PERFORMED VIA GROUND RUN FORMAT.

SITE DEMOLITION NOTES:

1. CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO ANY DEMOLITION REGARDING ITEMS TO BE SALVAGED, RECYCLED, AND REUSED. CONTRACTOR SHALL REMOVE ITEMS TO BE SALVAGED WITH EXTREME CAUTION TO PREVENT DAMAGE. CONTRACTOR SHALL TURN ALL SALVAGED ITEMS OVER TO OWNER.
2. CONTRACTOR SHALL COORDINATE WITH OWNER AND THE UTILITY PROVIDER PRIOR TO THE DISCONNECTING OR REMOVAL OF ANY UTILITY SERVICE TO THE EXISTING BUILDINGS. ALL UTILITIES TO BE REMOVED ARE TO BE CAPPED OR PLUGGED OR TERMINATED ACCORDING TO THE UTILITY OWNERS REQUIREMENTS.
3. REFER TO SITE DRAINAGE AND UTILITY PLANS FOR PROPOSED UTILITY AND DRAINAGE INSTALLATION AND REMOVAL.
4. REFER TO LAYOUT PLAN FOR ADDITIONAL INFORMATION RELATING TO PAVING, CURB, SIDEWALKS, HARDSCAPES, ETC. REMOVE EXISTING CURBS AS NEEDED TO INSTALL PROPOSED IMPROVEMENTS.
5. CONTRACTOR SHALL COORDINATE WITH OWNER AND THE UTILITY PROVIDER PRIOR TO THE DISCONNECTING OF ANY UTILITY SERVICE TO THE EXISTING BUILDINGS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, RELOCATION OR PROTECTION OF ALL ABOVE AND BELOW GROUND EXISTING IMPROVEMENTS THAT ARE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS UNLESS NOTED.
7. ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE TRANSPORTED AND DISPOSED OF AT LEAST WEEKLY IN A LEGAL AND APPROVED MANNER.
8. ALL EXISTING PAVING, CURBS, HARDSCAPE, ETC. SHALL BE SAW CUT AT THE LIMITS OF REMOVAL IN ORDER TO PROVIDE A CLEAN EDGE. EXISTING PAVING AT EDGE SHALL BE MILLED BACK A MINIMUM OF 1.5' TO ENSURE SMOOTH TRANSITION.

SITE LAYOUT NOTES:

1. ALL HANDICAP RAMPS, SIGNS, SYMBOLS, AND PAINTED ISLANDS AND ACCESS ROUTES MUST CONFORM TO THE LATEST ADA REQUIREMENTS.
2. THE MAXIMUM SLOPE IN HANDICAP PARKING AREAS SHALL NOT EXCEED 2.0% GRADE IN ANY DIRECTION. SLOPE IN THE DIRECTION OF TRAVEL IN ALL HANDICAP ACCESS ROUTES SHALL NOT EXCEED 5.0% GRADE AND 2.0% CROSS SLOPE.
3. ALL DIMENSIONS AND COORDINATES SHOWN ARE TO THE OUTSIDE FACE OF BUILDING TO THE BACK OF CURB, OR TO THE EDGE OF SURFACING UNLESS OTHERWISE NOTED. REFER TO ARCHITECTURAL PLANS FOR SPECIFIC BUILDING INFORMATION.
4. ALL STRIPING TO BE PER THE LATEST EDITION OF THE MUTCD UNLESS NOTED OTHERWISE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SITE CONSTRUCTION TRAFFIC CONTROL PLAN AND OBTAINING ANY REQUIRED APPROVALS FROM THE LOCAL JURISDICTIONAL AUTHORITY. THE SITE CONSTRUCTION TRAFFIC CONTROL PLAN SHALL TAKE INTO ACCOUNT THE ENTERING AND EXITING OF CONSTRUCTION TRAFFIC ONTO THE ROADWAY AND THE IMPACT TO THE FLOW OF TRAFFIC. THIS PLAN SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD. THIS SITE CONSTRUCTION TRAFFIC CONTROL PLAN SHALL BE IN ADDITION TO ANY TRAFFIC CONTROL PLAN PROVIDED IN THE PLAN SET FOR ROADWAY IMPROVEMENTS.
6. CONTRACTOR IS RESPONSIBLE FOR ADJUSTING ELEVATIONS OF ALL AT-GRADE STRUCTURES AND UTILITIES TO REMAIN (VALVE BOXES, MANHOLES, INLETS, VAULTS, ETC) TO MATCH PROPOSED FINISHED GRADES.

GRADING NOTES:

1. THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING COMPACTION TESTING.
2. ALL TOPSOIL SHALL BE STRIPPED WITHIN THE PROPOSED LIMITS OF GRADING AND SHALL BE STOCKPILED ON-SITE IN AN APPROVED LOCATION FOR LATER USE WITH ANY EXCESS TO BE DISPOSED OF OFF-SITE ONCE ALL LANDSCAPED AREAS HAVE BEEN BROUGHT TO FINISH GRADE UNLESS OTHERWISE NOTED ON THE PLANS.
3. SUBGRADE SHALL BE PROOF ROLLED WITH A HEAVILY LOADED DUMP TRUCK AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING FILL. ANY AREAS SHOWING SIGNS OF PUMPING, RUTTING, OR ANY UNSUITABLE (ORGANIC, SOFT, WET, LOOSE) MATERIAL FOUND IN PLACE SHALL BE UNDERCUT AND REPLACED, OR MOISTURE CONDITIONED AND COMPACTED TO THE SPECIFIED DENSITY AND MOISTURE CONTENT LISTED BELOW.
4. ALL EXPOSED SUBGRADE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 12" AND RECOMPACTED TO THE SPECIFIED DENSITY AND MOISTURE CONTENT LISTED BELOW.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE SUBGRADE AFTER IT HAS BEEN INITIALLY PREPPED DUE TO INCLEMENT WEATHER AND CONSTRUCTION TRAFFIC.
6. FILL MATERIAL SHALL HAVE THE FOLLOWING PROPERTIES: VIRTUALLY FREE OF ORGANICS, NO ROCK FRAGMENTS GREATER THAN 4" WITHIN 4' OF FINISH GRADE, LIQUID LIMIT NOT EXCEEDING 50, PLASTICITY INDEX NOT EXCEEDING 25, MINIMUM STANDARD PROCTOR (ASTM D-698) OF 100 PCF, COMPACTED 98% IN PAVED AND STRUCTURAL AREAS, 95% NON-STRUCTURAL AND LANDSCAPED AREAS, PLACED IN 8" LOOSE LIFTS, AND WITHIN ±2.0% OF OPTIMUM MOISTURE CONTENT. STRUCTURAL AREAS INCLUDE ZONES OF INFLUENCE AROUND THE BUILDING, PAVEMENT AREAS, FILL SLOPES, ETC.
7. COMPACTION TESTS SHALL BE TAKEN AT THE RECOMMENDATION OF THE ON-SITE GEOTECHNICAL ENGINEER, BUT AT A MINIMUM EVERY 2,500 SQUARE FEET OF AREA PER 8" LIFT.
8. COMPACTION WITHIN LIMITED SPACES (I.E. MANHOLES, INLETS, UTILITY TRENCHES) SHOULD BE BACKFILLED AND COMPACTED SYSTEMATICALLY, AT THE DIRECTION OF THE ON-SITE GEOTECHNICAL ENGINEER. STONE BACKFILL SHALL BE INSTALLED IN 12" LOOSE LIFTS AND COMPACTED WITH 6-8 PASSES OF A VIBRATORY COMPACTOR
9. CLEARING LIMITS SHALL BE 5' OUTSIDE OF ALL PROPOSED GRADED AREAS OR NOT BEYOND THE PROPERTY LINES WHICHEVER IS LESS.
10. NO GRADING OFF-SITE OR IN ANY ROAD RIGHT-OF-WAY WITHOUT PROPER APPROVALS AND PRIOR NOTIFICATION.
11. COORDINATE THE SEQUENCING OF ALL GRADING OPERATIONS WITH THE EROSION CONTROL PLAN.
12. THE MAXIMUM SLOPE IN HANDICAP PARKING AREAS SHALL NOT EXCEED 2.0% GRADE IN ANY DIRECTION. SLOPE IN THE DIRECTION OF TRAVEL IN ALL HANDICAP ACCESS ROUTES SHALL NOT EXCEED 5.0% GRADE AND 2.0% CROSS SLOPE.
13. ALL GRADING ADJACENT TO EXISTING OR PROPOSED BUILDINGS SHALL BE SLOPED AWAY FROM THE STRUCTURES AT A MINIMUM OF 1.0% GRADE. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM THE STRUCTURES. NOTIFY LBYD OF ANY DISCREPANCIES.
14. PROPOSED GRADES INDICATED ON THIS PLAN ARE TO FINISH GRADE. THE CONTRACTOR SHALL MAKE SUBGRADE ADJUSTMENTS FOR TOPSOIL, PAVING, BUILDING PAD, ETC.
15. FILL SLOPES SHOULD BE BENCHED INTO THE EXISTING SLOPES AND SHOULD BE COORDINATED WITH THE ONSITE GEOTECHNICAL ENGINEER FOR BENCH DETAILS (HEIGHT AND DEPTH OF BENCH INTO THE SLOPE.)
16. A GEOTECHNICAL REPORT HAS BEEN PREPARED BY TERRACON CONSULTANTS, INC. PROJECT NUMBER E1205012 DATED MARCH 20, 2020 AND IS AVAILABLE FOR INFORMATION PURPOSES. THE CONTRACTOR SHALL REVIEW THIS REPORT, VISIT THE SITE AND COMPLETE ANY ADDITIONAL EXPLORATIONS THAT IT FEELS NECESSARY IN ORDER TO PROVIDE A SATISFACTORY BID.
17. DEWATERING SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. PROTECT SUBGRADES FROM SOFTENING, UNDERMINING, WASHOUT, AND DAMAGE BY RAIN OR WATER ACCUMULATION. REROUTE SURFACE WATER RUNOFF AWAY FROM EXCAVATED AREAS. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. DO NOT USE EXCAVATED TRENCHES AS TEMPORARY DRAINAGE DITCHES. INSTALL A DEWATERING SYSTEM TO KEEP SUBGRADES DRY AND CONVEY GROUND WATER AWAY FROM EXCAVATIONS. MAINTAIN UNTIL DEWATERING IS NO LONGER REQUIRED. IF GROUNDWATER DEWATERING IS REQUIRED, CONTRACTOR IS TO OBTAIN ANY PERMITS AS MAY BE REQUIRED PRIOR TO DISCHARGE OF EFFLUENT FROM DEWATERING.
18. GRADING ADJACENT TO THE BUILDING SHALL BE COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR FOUNDATION WALLS, STEM WALLS, DRAINS, AND OTHER CONDITIONS. THE CONTRACTOR SHALL NOTIFY LBYD INC. OF ANY DISCREPANCIES.

STORM DRAINAGE NOTES:

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL STORM PIPE MATERIALS TO LBYD PRIOR TO INSTALLATION AND/OR FABRICATION.
2. ALL PROPOSED STORM INLETS (GRATES, CURB, YARD, AREA DRAINS) ARE TO BE LOCATED AT THE LOWPOINTS. GRADING SHALL BE TO DIRECT RUNOFF TO THESE INLETS. NOTIFY LBYD OF ANY DISCREPANCIES.
3. STORM DRAINAGE SYSTEMS SHALL BE CONSTRUCTED FROM DOWNSTREAM TO UPSTREAM. VERIFY ALL PIPE SLOPES, INVERTS, AND POINTS OF CONNECTION PRIOR TO CONSTRUCTION. NOTIFY LBYD OF ANY DISCREPANCIES.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED STORM PIPE GRADES AND POINTS OF CONNECTION PRIOR TO INSTALLATION. LBYD SHALL BE NOTIFIED OF ANY DEVIATIONS PRIOR TO CONSTRUCTION.
5. PROPOSED STORM PIPES 30" AND LESS SHALL BE BEDDED IN 4" OF CRUSHED AGGREGATE AND STORM PIPES 36" AND GREATER SHALL BE BEDDED IN A 6" OF CRUSHED AGGREGATE.
6. ALL RIP RAP SHALL BE CLASS 2 PER THE ALABAMA DEPT. OF TRANSPORTATION (ALDOT) STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED.
7. ALL STORM PIPES SHALL BE SMOOTH LINED HIGH DENSITY POLYETHYLENE (HDPE) OR A-2000 POLYVINYL CHLORIDE (PVC) WITH WATER-TIGHT JOINTS UNLESS OTHERWISE NOTED, INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
8. ALL STORM MANHOLES SHALL BE PRECAST CONE, RISER, AND BASE SECTIONS WITH GASKETED JOINTS MEETING ALDOT SPECIAL DRAWING # MH-621-2.
9. ALL SINGLE AND DOUBLE WING CURB INLETS SHALL BE PER ALDOT SPECIAL DRAWING # I-621-S, TYPE S3 FOR 15" TO 30" STORM PIPES.
10. ALL YARD INLETS SHALL BE APPROVED EQUAL PRECAST INLET BOXES 3-1" x 3-1" OR 4'2 x 4'-2" DEPENDING ON MAXIMUM PIPE DEFLECTIONS. YARD INLET TOP TO BE PRECAST WITH A RING AND COVER ACCESS PROVIDED THROUGH THE TOP.
11. CONTRACTOR SHALL PROVIDE CAST IRON DOWNSPOUT BOOTS, CLEANOUTS AND COLLECTOR LINES FROM ALL EXTERIOR DOWNSPOUTS TO CONNECT TO PRIMARY STORM DRAINAGE SYSTEM. COORDINATE WITH EXTERIOR ELEVATIONS, ROOF AND PLUMBING PLANS FOR DOWNSPOUT LOCATIONS. COORDINATE DOWNSPOUT MODEL NUMBER WITH THE ARCHITECT.
12. CONTRACTOR SHALL COORDINATE ROOF DRAIN COLLECTOR LINES, DOWNSPOUTS AND BOOTS WITH FOOTING ELEVATIONS ON THE STRUCTURAL PLANS PRIOR TO POURING FOOTINGS. TOP OF FOOTINGS SHALL BE A MINIMUM OF 3' BELOW GRADE AT ALL ROOF DRAIN DOWNSPOUT LOCATIONS TO ENSURE ADEQUATE COVER TO TRANSITION TO BELOW GRADE PIPING.

EROSION CONTROL NOTES:

1. SITE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, CODES, AND REGULATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A "NOTICE OF INTENT"(NOI) FROM ADEM. THE OWNER SHALL BE RESPONSIBLE FOR ALL MONITORING, INSPECTIONS, ETC. TO ENSURE THAT THE SITE IS AT ALL TIMES IN ACCORDANCE WITH ADEM RULES & REGULATIONS. DOCUMENTATION OF INSPECTIONS BY A Q.C.I. OR Q.C.P. SHALL BE MAINTAINED BY THE CONTRACTOR AND PROVIDED TO THE OWNER AT HIS/HER REQUEST. ANY AND ALL FEES, FINES, ETC., SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING THE CONSTRUCTION PROCESS AND UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT NO ADDITIONAL COST TO THE OWNER
4. EROSION CONTROL DEVICES SHOWN ON THESE PLANS ARE A MINIMUM. ADDITIONAL DEVICES SHALL BE INSTALLED AS REQUIRED TO PREVENT SILTATION, EROSION AND OTHER DEGRADATION OR POLLUTION TO THE SITE OR ADJACENT PROPERTIES, STREAMS, DITCHES, AND PUBLIC ROADWAYS.
5. EROSION CONTROL DEVICES SHALL INCLUDE, BUT NOT LIMITED, TO THE FOLLOWING DEVICES: SILT FENCING, BRUSH BERMS, SEDIMENT BASINS, DETENTION PONDS, STRAW WATTLES , CHECK DAMS, FILTER BERMS, JUTE MATTING, VEGETATIVE FILTER STRIPS, TURF REINFORCEMENT MAT, DIVERSION BERMS, ETC.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES IN GOOD OPERATING CONDITION DURING ALL LAND DISTURBING ACTIVITIES. THIS RESPONSIBILITY SHALL INCLUDE THE CLEANUP AND/OR REPAIRS TO THE DEVICES AT NO ADDITIONAL COST TO THE OWNER.
7. EROSION CONTROL DEVICES SHALL BE MONITORED AND MAINTAINED UNTIL THE SITE HAS BEEN PERMANENTLY STABILIZED AND AFTER EACH RAINFALL GREATER THAN 0.75 INCHES IN A 24 HOUR PERIOD, ANY WIND GUSTS GREATER THAN 25 MPH, AND ANY SUSTAINED WINDS GREATER THAN 20 MPH IN A 24 HOUR PERIOD.
8. AFTER ALL LAND DISTURBANCE ACTIVITIES HAVE CEASED AND AFTER ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED, THE EROSION CONTROL DEVICES SHALL BE REMOVED BY THE CONTRACTOR AND THE AREA CLEANED AND DRESSED.
9. DEWATERING OPERATIONS MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE OR POLLUTION TO ADJACENT PROPERTIES, STREAMS, DITCHES, OR PUBLIC ROADWAYS.
10. A GRAVELED ACCESS DRIVE OF SUFFICIENT SIZE SHALL BE AT EACH SITE ENTRANCE/EXIT TO PREVENT TRACKING OF DIRT AND SEDIMENT ONTO PUBLIC OR PRIVATE ROADWAYS. IF SEDIMENT REACHES THE ROADWAY, THEN IT MUST BE CLEANED AT THE END OF EACH WORKDAY.
11. ALL LAND DISTURBANCE ACTIVITIES SHALL BE CONDUCTED IN A LOGICAL SEQUENCE TO MINIMIZE THE EXPOSURE OF BARE AREAS AT ANY ONE TIME.
12. ALL DISTURBED AREAS LEFT INACTIVE FOR MORE THAN 13 DAYS SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH ALDOT SPECIFICATIONS SECTION 652 AND 656.
13. ALL PREVIOUSLY GRADED AREAS SHALL RECEIVE 4 INCHES OF TOPSOIL AND PERMANENT GRASSING UNLESS OTHERWISE INDICATED ON THE LANDSCAPE PLAN.
14. PRIOR TO SITE CLEARING, ALL PERIMETER SILT FENCING, BRUSH BERMS, ETC. AND GRAVELED ACCESS DRIVES SHALL BE INSTALLED.
15. ALL EXISTING STREAMS, DITCHES, ETC. SHALL BE PROTECTED FROM SEDIMENTS AND SILTS BY SILT FENCING, WATTLES, BRUSH BERMS, ETC.
16. WATTLES OR SILT FENCING SHALL BE INSTALLED AT ALL INLETS UPON THE COMPLETION OF EACH INLET.
17. RIP RAP SHALL BE PLACED AT EACH HEADWALL IMMEDIATELY FOLLOWING CONSTRUCTION OF EACH HEADWALL.
18. GEOTEXTILE SHALL BE PLACED ON ALL 2:1 SIDE SLOPES. GEOTEXTILE SHALL BE NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
19. GEOTEXTILE SHALL BE PLACED ON ALL 3:1 SIDE SLOPES. GEOTEXTILE SHALL BE NORTH AMERICAN GREEN S150 OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
20. GEOTEXTILE SHALL BE PLACED ON ALL DITCH BOTTOMS & 1' UP EACH SIDE. GEOTEXTILE SHALL BE NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

UTILITY NOTES:

1. THE SITE CONTRACTOR IS RESPONSIBLE FOR COMPLETING ALL UTILITY SERVICES (WATER, SEWER, GAS, ELECTRICAL, TELEPHONE, CABLE TV) FROM THE POINT THE RESPECTIVE UTILITY COMPANY COMPLETES THEIR WORK TO THE POINT OF CONNECTION AT THE BUILDING.
2. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, ETC. PLANS FOR ALL PROPOSED UTILITY POINTS OF CONNECTION AT THE BUILDING. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
3. GRAVITY SEWER SYSTEMS SHALL BE CONSTRUCTED FROM DOWNSTREAM TO UPSTREAM. VERIFY ALL PIPE SLOPES, INVERTS, AND POINTS OF CONNECTION PRIOR TO CONSTRUCTION. NOTIFY LBYD OF ANY DISCREPANCIES.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED GRAVITY SEWER PIPE GRADES AND POINTS OF CONNECTION PRIOR TO INSTALLATION. LBYD SHALL BE NOTIFIED OF ANY DEVIATIONS PRIOR TO CONSTRUCTION.
5. BACKFLOW PREVENTION AND METERING SHALL BE PROVIDED ON THE FIRE, DOMESTIC, AND IRRIGATION SERVICES IN ACCORDANCE WITH THE LOCAL UTILITY COMPANY AND FIRE DEPARTMENT'S REQUIREMENTS.
6. WATER MAINS 4 INCHES IN DIAMETER AND GREATER SHALL BE DIP(CL.350) AND WATER MAINS LESS THAN 3 INCHES IN DIAMETER SHALL BE PVC (SCHD.40) UNLESS OTHERWISE INDICATED ON THE PLANS.
7. WATER MAINS AND SERVICES SHALL BE A MINIMUM OF 10 FEET HORIZONTAL AND 2 FEET VERTICAL FROM ALL SANITARY SEWER MAINS AND LATERALS.
8. WATER MAINS AND SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE LOCAL UTILITY COMPANY'S REQUIREMENTS. ALL MAINS AND SERVICES SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER UNLESS OTHERWISE INDICATED ON PLANS.
9. ALL SANITARY SEWER MAINS AND LATERALS SHALL BE PVC (SCH.40) UNLESS OTHERWISE REQUIRED BY THE LOCAL UTILITY COMPANY.
10. ALL UNDERGROUND ELECTRICAL, TELEPHONE, AND CABLE TV SHALL BE INSTALLED IN PVC CONDUIT OR CONCRETE ENCASED DUCT BANK WITH PULL WIRE MEETING THE LOCAL UTILITY COMPANY'S REQUIREMENTS. INFORMATION SHOWN ON CIVIL DRAWINGS FOR REFERENCE ONLY. REFER TO ELECTRICAL PLANS FOR SPECIFIC INFORMATION.
11. GAS SERVICE SHALL BE PER THE LOCAL UTILITY COMPANY'S REQUIREMENTS. COORDINATE WITH MECHANICAL ENGINEER AND UTILITY COMPANY.
12. UTILITY TRENCHES SHALL BE BACKFILLED WITH COMPACTED FILL PLACED IN 6 INCH LOOSE LIFTS. FILL SHALL BE COMPACTED TO 98% STANDARD PROCTOR AND OPTIMUM MOISTURE CONTENT WITHIN ±2.0%.
13. WHEN INSTALLING UTILITIES IN EXISTING PAVED AREAS OR IN AREAS WHERE SOILS ARE CONSIDERED UNSUITABLE FOR BEDDING OR BACKFILLING, UTILITY TRENCHES SHALL BE BACKFILLED FULL DEPTH WITH CRUSHED AGGREGATE.
14. WHERE UTILITIES ARE TO BE INSTALLED IN AREAS OF EXISTING PAVING, HARDSCAPE, SIDEWALKS, ETC. CONTRACTOR SHALL SAWCUT AND REMOVE EXISTING PAVING, HARDSCAPE, SIDEWALK ETC. AND REPLACE IN LIKE KIND AND RESTRIPE AS NECESSARY. BACKFILL TRENCH FULL DEPTH WITH STONE.
15. CONTRACTOR IS RESPONSIBLE FOR ADJUSTING ELEVATIONS OF ALL AT-GRADE STRUCTURES AND UTILITIES TO REMAIN (VALVE BOXES, MANHOLES, INLETS, VAULTS, ETC) TO MATCH PROPOSED FINISHED GRADES.
16. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TAMPER SWITCHES AND ASSOCIATED CONDUIT, WIRING, ETC ON FIRE SERVICE POST INDICATOR VALVES AND VALVES IN PIT MOUNTED FIRE BACKFLOW PREVENTOR ASSEMBLIES. COORDINATE WITH FIRE PROTECTION AND ELECTRICAL PLANS.
17. PROVIDE 4" PVC SCHEDULE 40 GRAVITY DRAIN LINE FROM ALL BELOW GRADE UTILITY VAULTS TO THE NEAREST STORM DRAINAGE INLET OR DAYLIGHT AT GRADE.

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LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

NEW ADDITION AND RENOVATION FOR RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA LICENSED
No. 24443
PROFESSIONAL ENGINEER
CHRISTOPHER ALLEN HOWARD
3/21/2022

SHEET TITLE:
CIVIL NOTES

PROJ. MGR.:	CAH
DRAWN:	LBH
DATE:	3/21/2022

REVISIONS

JOB NO. 19-90B

SHEET NO:
C0.1
1 OF 6

0 1" 2"

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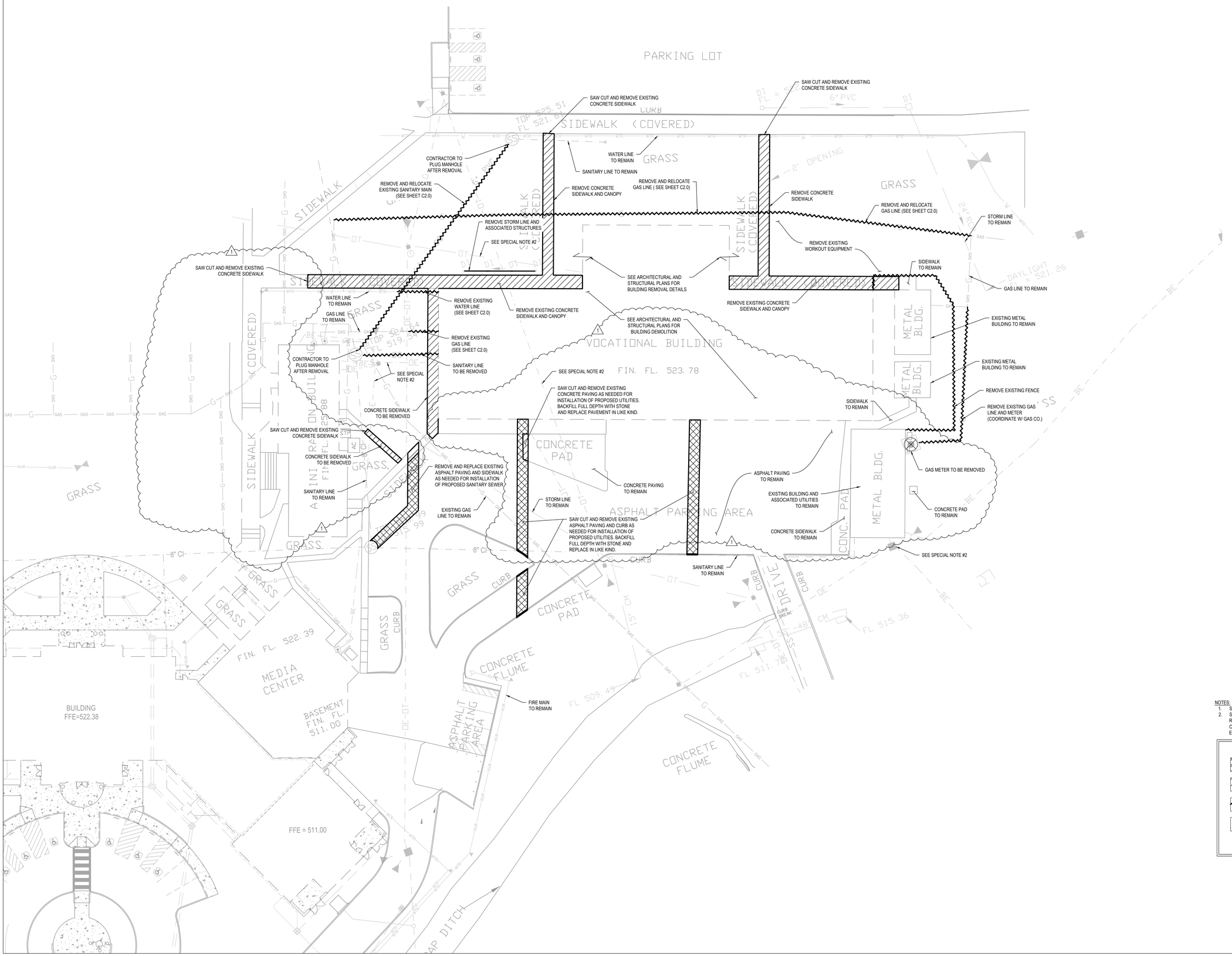

NOTES:
1. SEE SHEET C0.1 FOR ALL APPLICABLE NOTES.
2. SEE ELECTRICAL PLANS FOR REMOVAL AND RELOCATION OF EXISTING POWER AND COMMUNICATION LINES AND POLES. NO ELECTRICAL DEMOLITION SHOWN ON THIS PLAN.

DEMOLITION LEGEND

- ASPHALT TO BE REMOVED
- CONCRETE TO BE REMOVED
- ITEM TO BE REMOVED
- BUILDING TO BE REMOVED
- ITEM TO BE REMOVED

NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA LICENSED No. 24443 PROFESSIONAL ENGINEER
5/15/2022

SHEET TITLE:
SITE DEMOLITION PLAN

PROJ. MGR.:	CAH
DRAWN:	LBH
DATE:	3/21/2022
REVISIONS	
1	5/15/21–ADDENDUM #1

JOB NO. 19-90B
SHEET NO:
C1.0
2 OF 6

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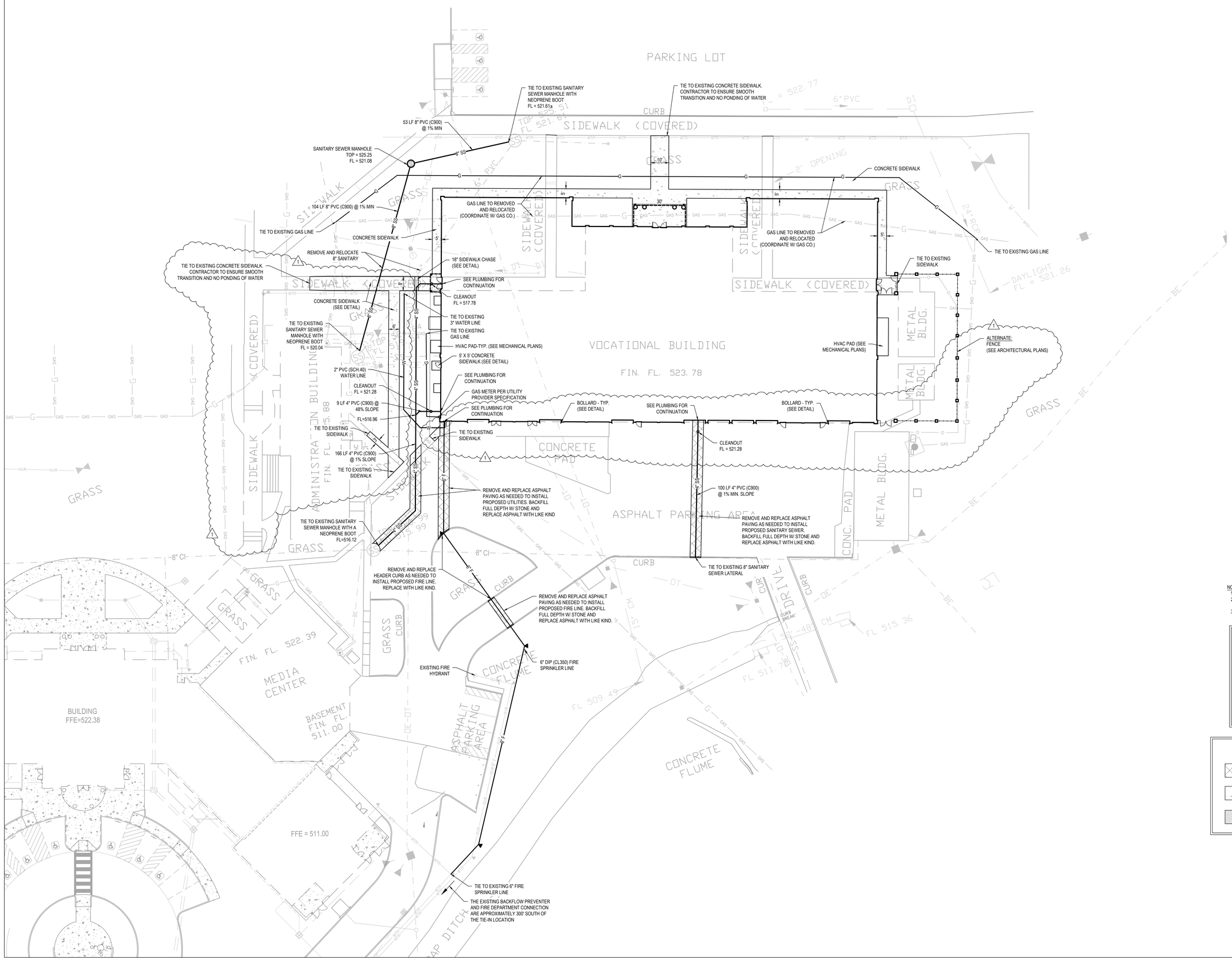

NOTES:
1. SEE SHEET C0.1 FOR ALL APPLICABLE NOTES.
2. SEE ELECTRICAL PLANS FOR ALL POWER SERVICE ROUTINGS AND SITE LIGHTING.
3. SEE PLUMBING PLANS FOR ALL UTILITY SERVICE LOCATIONS.

UTILITY LEGEND

F	FIRE SERVICE
W	DOMESTIC WATER
G	GAS
SS	SANITARY SEWER
	FIRE HYDRANT
TB	THRUST BLOCK
	SANITARY SEWER MANHOLE
CO	CLEANOUT

SITE LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVING (SEE DETAIL)
- CONCRETE SIDEWALK (SEE DETAIL)
- CONCRETE PAVING (SEE DETAIL)

N

0 10 20 30 40
SCALE: 1"=20'

ALABAMA LICENSED PROFESSIONAL ENGINEER ALLEN
No. 24443
3/25/2022

SHEET TITLE:
SITE LAYOUT AND UTILITY PLAN

PROJ. MGR.:	CAH
DRAWN:	LBH
DATE:	3/21/2022
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1	5/15/21-ADDENDUM #1

JOB NO. 19-90B

SHEET NO:
C2.0
3 OF 6

0 1" 2"

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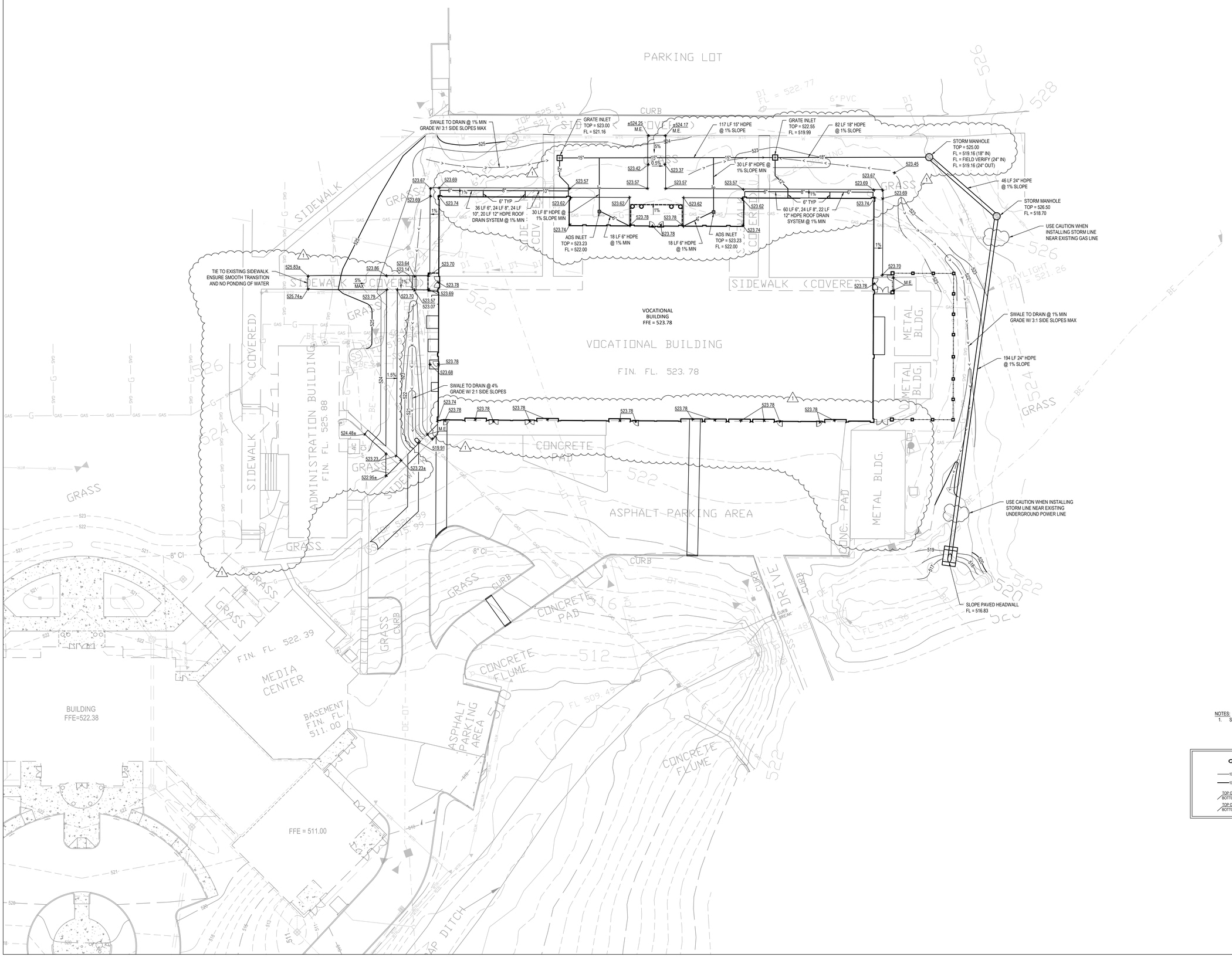

NOTES:
1. SEE SHEET C0.1 FOR ALL APPLICABLE NOTES.

GRADING LEGEND

101	MINOR CONTOUR
100	MAJOR CONTOUR
TOP OF CURB / BOTTOM OF CURB	SPOT ELEVATION
TOP OF WALL / BOTTOM OF WALL	SPOT ELEVATION

N

0 10 20 30 40
SCALE: 1"=20'

ALABAMA LICENSED PROFESSIONAL ENGINEER No. 24443 CHRISTOPHER ALLEN HOWARD
5/15/2022

SHEET TITLE:
SITE GRADING AND DRAINAGE PLAN

PROJ. MGR.:	CAH
DRAWN:	LBH
DATE:	3/21/2022
REVISIONS	
1	5/15/21–ADDENDUM #1

JOB NO. 19-90B
SHEET NO:
C3.0
4 OF 6

0 1" 2"

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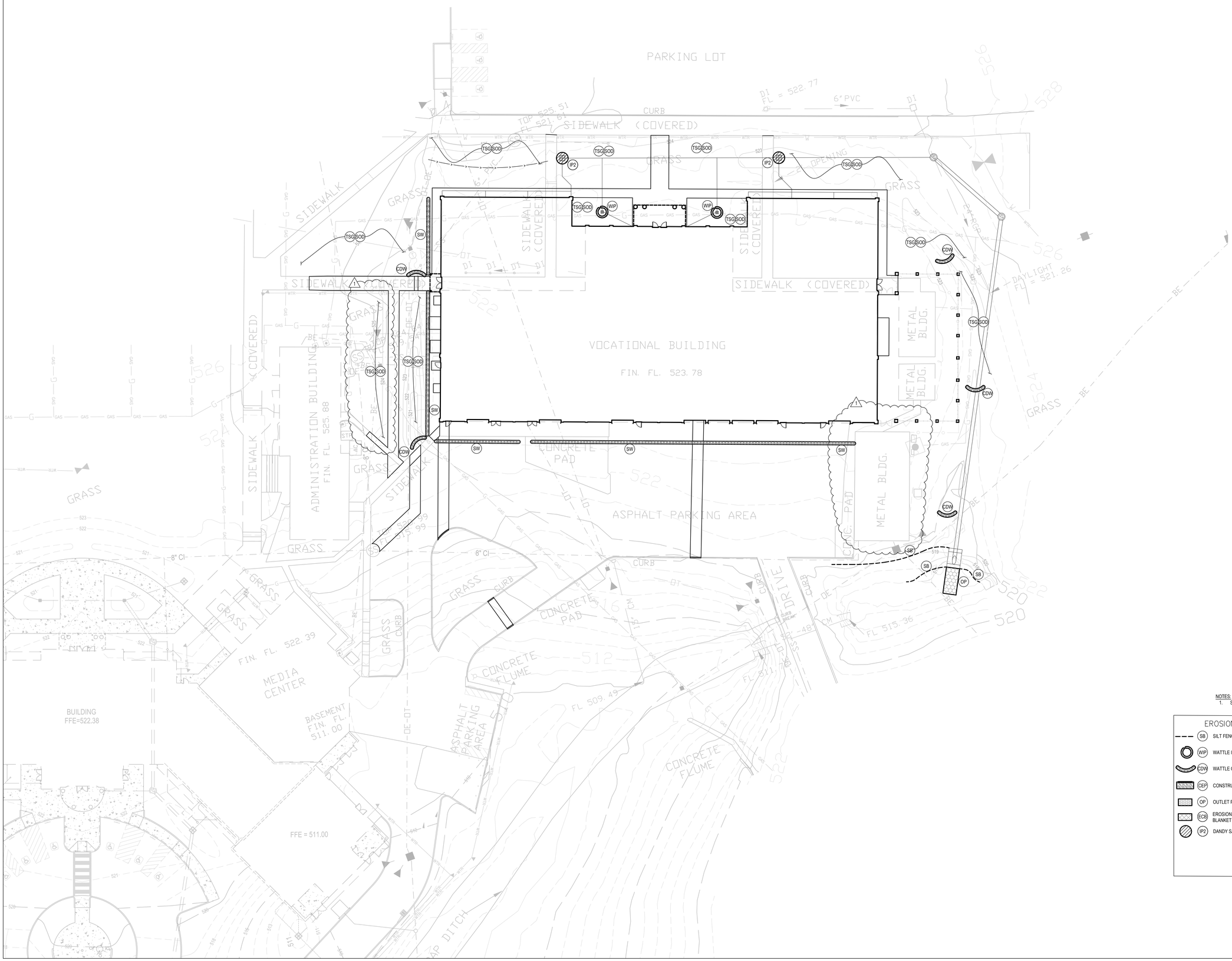


NOTES:
1. SEE SHEET C0.1 FOR ALL APPLICABLE NOTES.

EROSION CONTROL LEGEND

SB	SILT FENCING	TSG	TOPSOIL
WIP	WATTLE INLET PROTECTION	SU	SURFACE ROUGHENING
CDW	WATTLE CHECK DAM	DV	DIVERSION BERM
CEP	CONSTRUCTION EXIT PAD	PS	PERMANENT SEEDING
OP	OUTLET PROTECTION	TS	TEMPORARY SEEDING
ECB	EROSION CONTROL BLANKET	SOD	SODDING
IPZ	DANDY SACK	MU	MULCHING

N

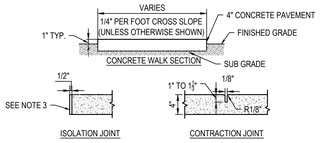
0 10 20 30 40
SCALE: 1"=20'

ALABAMA LICENSED
No. 24443
PROFESSIONAL ENGINEER
CHRISTOPHER A. HALL
5/15/2022

SHEET TITLE:
SITE EROSION CONTROL PLAN

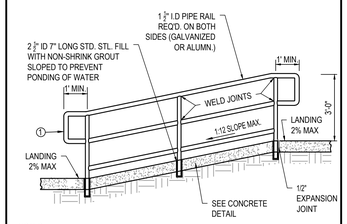
PROJ. MGR.:	CAH
DRAWN:	LBH
DATE:	3/21/2022
REVISIONS	
1	5/15/21–ADDENDUM #1

JOB NO. 19-90B
SHEET NO:
C4.0
5 OF 6
0 1" 2"



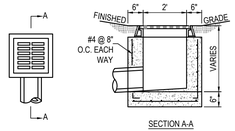
NOTES:
1. CONTRACTION (SAW CUT) JOINTS TO BE EVERY 5 TO 8 FEET WITH A MAXIMUM SPACING OF TWICE THE SLAB THICKNESS IN FEET; CUT TO A DEPTH OF 1" MINIMUM TO 1¼" MAXIMUM.
2. CUT CONTRACTION JOINTS BETWEEN 2 HOURS AND 12 HOURS OF CONCRETE PLACEMENT.
3. PLACE ISOLATION JOINTS WHEN ADJACENT TO BUILDINGS, CURBS, ETC. USE A ½" THICK PRE-MOULDED EXPANSION JOINT FILLER CONFORMING TO ASTM D1751 OR D1752 TO CREATE A BOND BREAK. INSTALL JOINT SEALER OVER JOINT FILLER.
4. CONCRETE TO BE 4000 PSI COMPRESSIVE STRENGTH UNLESS OTHERWISE NOTED.
5. PLACE SIDEWALK ON COMPACTED SUBGRADE- 98% STANDARD PROCTOR DENSITY (ASTM D698) UNLESS OTHERWISE NOTED.

TYPICAL SIDEWALK DETAIL
N.T.S.



NOTES:
1. HANDRAIL MAY RETURN TO ADJACENT WALL.

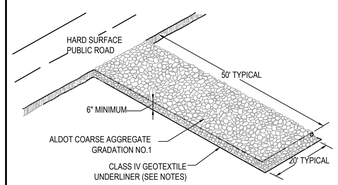
ADA RAMP WITH RAIL
N.T.S.



NOTES:
1. FOR INLETS IN LANDSCAPE AREAS, INLET FRAME AND GRATE SHALL BE NEENAH R-1879-A5G OR SIMILAR AND EQUAL.
2. IN LIEU OF CAST IN PLACE BOX, A PRECAST MANHOLE IS AN ACCEPTABLE ALTERNATE.

(*) TO ACCOMMODATE SKEWED PIPE, LARGER PIPE, SEVERAL PIPES, OR FIT OTHER CONDITIONS, IT MAY BE NECESSARY TO INCREASE ONE OR BOTH PLAN VIEW DIMENSIONS OF INLET BOX AND COVER SLAB.

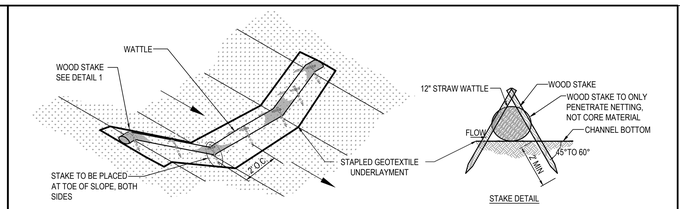
GRATE INLET IN LANDSCAPED AREAS
N.T.S.



SPECIAL NOTES :

1. A STABILIZED PAD OF CRUSHED STONE SPREAD OVER FILTER FABRIC SHALL BE LOCATED WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC STREET. THE STONE SHALL BE ALDOT GRADATION NO. 1 STONE, FILTER FABRIC SHALL BE NONWOVEN GEOTEXTILE CLASS IV OR EQUAL.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
3. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY BY STREET CLEANING (NOT FLUSHING). WHEN NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.
4. IF THE PAD SLOPE TOWARDS THE ROAD EXCEEDS 2%, A DIVERSION RIDGE 6" - 8" HIGH WITH 3:1 SIDE SLOPES MUST BE CONSTRUCTED ACROSS THE FOUNDATION APPROXIMATELY 15' AWAY FROM THE ROAD AND DRAIN INTO A SEDIMENT TRAP OR BASIN.

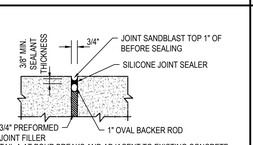
CEP **CONSTRUCTION EXIT PAD**
N.T.S.



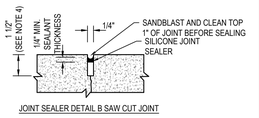
WATTLE CHECK DAMS TO BE INSTALLED WITHOUT TRENCHING AND ON TOP OF STAPLED GEOTEXTILE UNDERLAYMENT THAT EXTENDS A MINIMUM 3 FT. UP AND DOWNSTREAM FROM THE WATTLE. WATTLES MUST BE PROPERLY STAPLED WITH SOD STAPLES ON 10-INCH CENTERS ON EACH SIDE OF THE WATTLE TO PREVENT FLOTATION AND STAKED OVER THE TOP USING NON-DESTRUCTIVE TEE-PEE TYPE STAKING

WATTLE SPACING
REFER TO ALDOT SPECIAL DRAWING NO. ESC-300 FOR RECOMMENDED PLACEMENT INTERVAL BETWEEN WATTLES

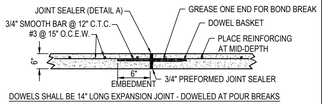
CdW **WATTLE CHECK DAM**
N.T.S.



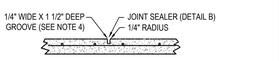
JOINT SEALER DETAIL A AT POUR BREAKS AND ADJACENT TO EXISTING CONCRETE



JOINT SEALER DETAIL B SAW CUT JOINT



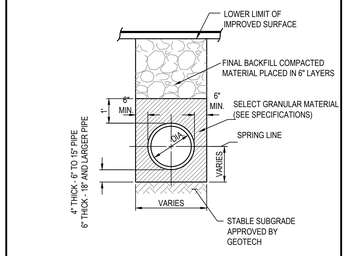
DOWELS SHALL BE 14" LONG EXPANSION JOINT - DOWELED AT POUR BREAKS



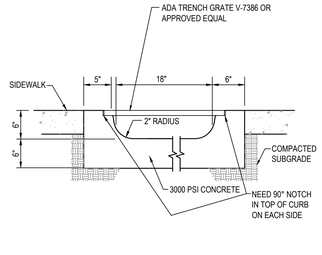
CONTROL JOINT - TYP.

NOTES:
1. CONTRACTOR SHALL INSTALL 4" OF CRUSHED AGGREGATE BASE COURSE, TYPE B (ALDOT 825) UNDER ALL CONCRETE PAVING
2. CONCRETE SHALL HAVE 4000 PSI AT 28 DAYS
3. CONTRACTOR SHALL INSTALL CONTROL JOINTS IN CONCRETE PAVING AT 12' MAX SPACING BOTH WAYS. COORDINATE WITH ARCHITECTURAL PLANS FOR SCORING PATTERN.
4. CONTROL JOINT TO BE 1/4 OF THE SLAB THICKNESS TYPICALLY.
5. EXPANSION JOINTS AT POUR BREAKS AND 100' MAX SPACING. COORDINATE WITH CONTROL JOINTS.
6. IN LIEU OF REINFORCEMENT SHOWN, CONTRACTOR MAY USE 4x4 W2.9/W2.9 WELDED WIRE FABRIC.
7. IF DRY-CUTTING OF CONTROL JOINTS IS USED, AN ABRASIVE BLADE MAY BE USED IN LIEU OF SANDBLASTING.

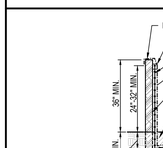
CONCRETE PAVING
N.T.S.



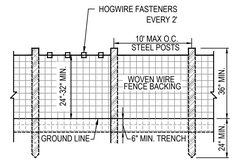
TYPICAL PIPE BEDDING AND INITIAL BACKFILL UNDER IMPROVED SURFACES
N.T.S.



SIDEWALK CHASE DETAIL
N.T.S.



SIDE VIEW



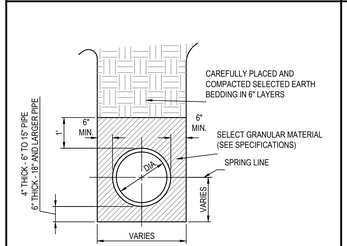
FRONT VIEW

SPECIAL NOTES:
1. SILT FENCE FABRIC SHALL BE PER TABLE SB-1 FROM THE LATEST ALABAMA EROSION CONTROL HANDBOOK.
2. USE D.O.T. APPROVED WOVEN WIRE FENCE.
3. USE 5' MIN. STEEL POSTS (1.3 LB/FT MIN.).

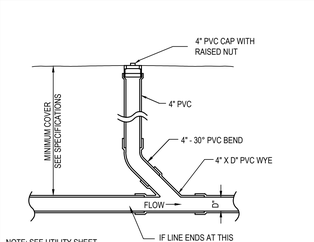
NOTES:
1. THE WOVEN WIRE FENCING SHALL BE FASTENED TO THE UPSTREAM SIDE OF POSTS BY STAPLES OF WIRE TIES.
2. GEOTEXTILE FABRIC SHALL BE SECURELY FASTENED TO THE WOVEN WIRE FENCING.

MAINTENANCE SCHEDULE:
REMOVE SEDIMENT DEPOSITS WHEN THEY REACH A DEPTH OF 15" OR 1/2 THE HEIGHT OF THE FENCE AS INSTALLED TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. SHOULD THE FABRIC OR SILT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

SB **SILT FENCE - TYPE A**
N.T.S.

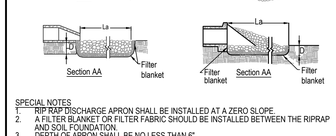


TYPICAL PIPE BEDDING AND INITIAL BACKFILL UNDER UNIMPROVED SURFACES
N.T.S.



NOTE: SEE UTILITY SHEET FOR PIPE MATERIAL SPECIFICATIONS

STANDARD CLEANOUT
N.T.S.



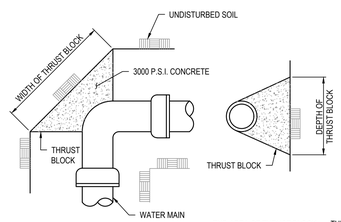
SPECIAL NOTES
1. RIP RAP DISCHARGE APRON SHALL BE INSTALLED AT A ZERO SLOPE.
2. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.
3. DEPTH OF APRON SHALL BE NO LESS THAN 6".
4. FOR DETERMINING APRON LENGTH, WIDTH, AND MEDIAN STONE SIZE, REFER TO FIGURES OP-2 AND OP-3 FROM THE LATEST ALABAMA EROSION CONTROL HANDBOOK.
5. THE GRADATION OF RIPRAP SHALL BE PER TABLES OP-2 AND OP-3 FROM THE LATEST ALABAMA EROSION CONTROL HANDBOOK.

OP **OUTLET PROTECTION**
N.T.S.

THRUST AT FITTINGS IN POUNDS*

PIPE SIZE	90° BEND	45° BEND	22.5° BEND	TEE OR PLUG
4"	2,666	1,443	735	1,885
6"	5,998	3,246	1,655	4,241
8"	10,663	5,771	2,942	7,540
10"	16,661	9,017	4,597	11,781
12"	23,992	12,984	6,619	16,965
14"	32,655	17,673	9,010	23,091
16"	42,652	23,083	11,768	30,160
18"	53,981	29,214	14,893	38,170
20"	66,643	36,067	18,387	47,124
24"	95,966	51,937	26,477	67,858

*BASED ON 150 PSI TEST PRESSURE



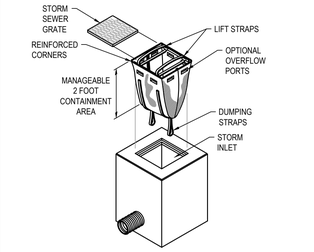
END AREA OF THRUST BLOCK (IN SQUARE FEET) = THRUST (AT FITTING) / SOIL BEARING LOAD (AT FITTING) X 1.5

SOIL BEARING LOAD

SOIL	BEARING LOAD P.S.F.
MUCK	0
SOFT CLAY	1,000
SILT	1,500
SANDY SILT	3,000
SAND	4,000
SANDY CLAY	6,000
HARD PAN	9,000

NOTE: THE WIDTH OF THE THRUST BLOCK SHALL BE 2X THE DEPTH OF THE THRUST BLOCK.

TYPICAL THRUST BLOCK
N.T.S.



IP2 **DANDY SACK**
N.T.S.

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Civil and Structural Engineers
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PROJECT NO.
102-19-189.003
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LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

NEW ADDITION AND RENOVATION FOR RUSSELLVILLE HIGH SCHOOL

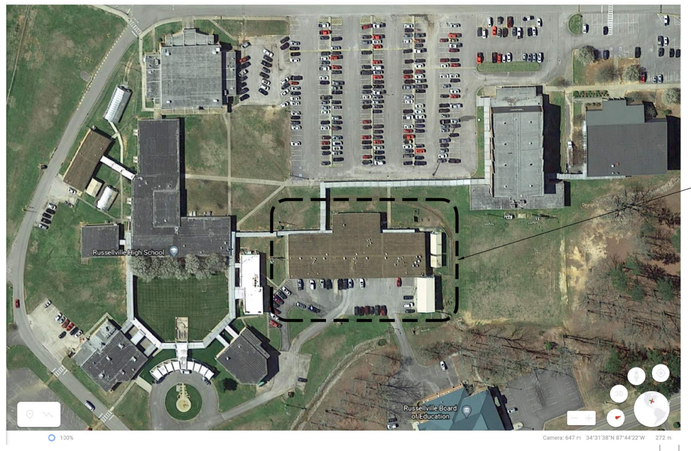
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA LICENSED No. 24443 PROFESSIONAL ENGINEER
3/21/2022

SHEET TITLE:
DETAILS

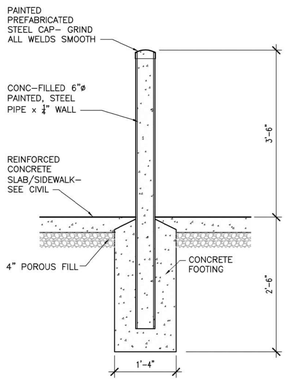
PROJ. MGR.:	CAH
DRAWN:	LBH
DATE:	3/21/2022
REVISIONS	

JOB NO. 19-90B
SHEET NO:
C5.0
6 OF 6
0 1" 2"



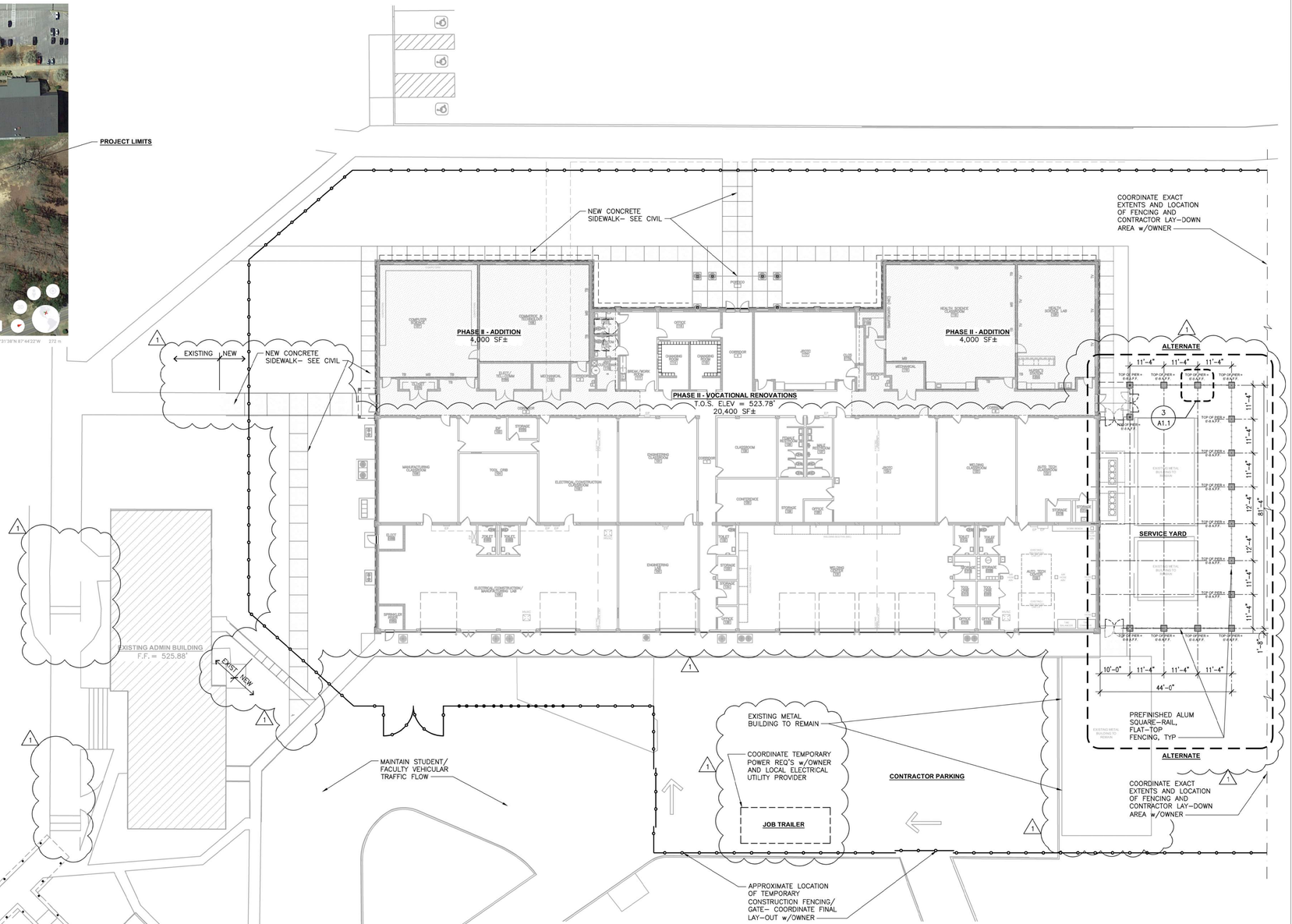
1 CAMPUS AERIAL PLAN

NOT TO SCALE



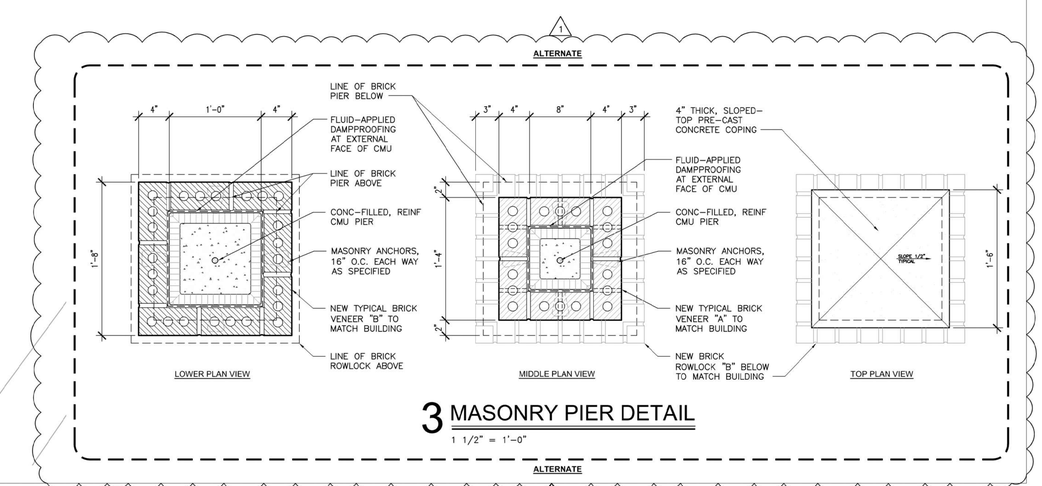
4 BOLLARD DETAIL

SCALE: 3/4" = 1'–0" TYPICAL



2 ARCHITECTURAL SITE PLAN

SCALE: 1/16" = 1'–0"



3 MASONRY PIER DETAIL

1 1/2" = 1'–0"

LATHAN ARCHITECTS
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NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

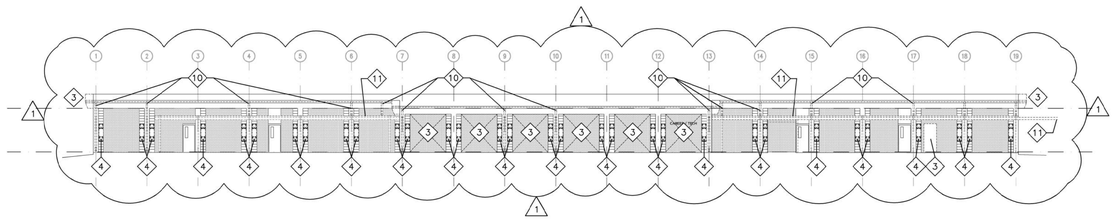
SHEET TITLE:
ARCHITECTURAL SITE PLAN

PROJ. MGR.:	R. VERNON
DRAWN:	
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

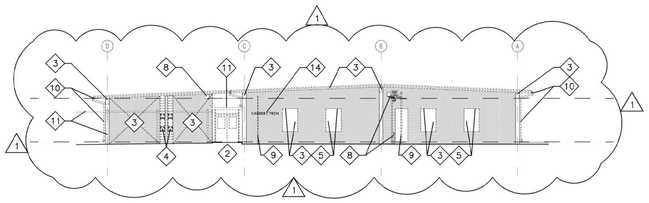
SHEET NO:
A1.1
1 OF 16

0 1" 2"



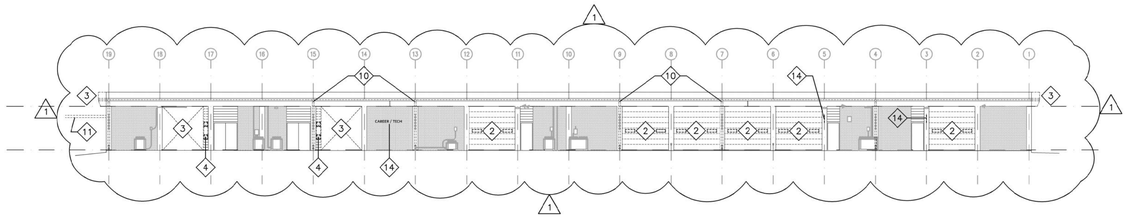
1 WEST ELEVATION - DEMO

1/16" = 1'-0"



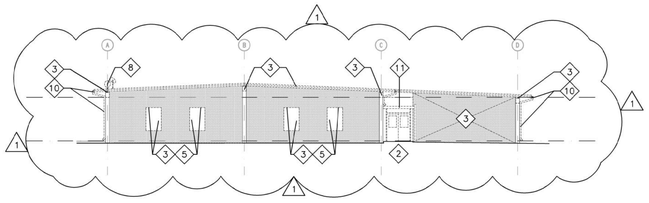
2 SOUTH ELEVATION - DEMO

1/16" = 1'-0"



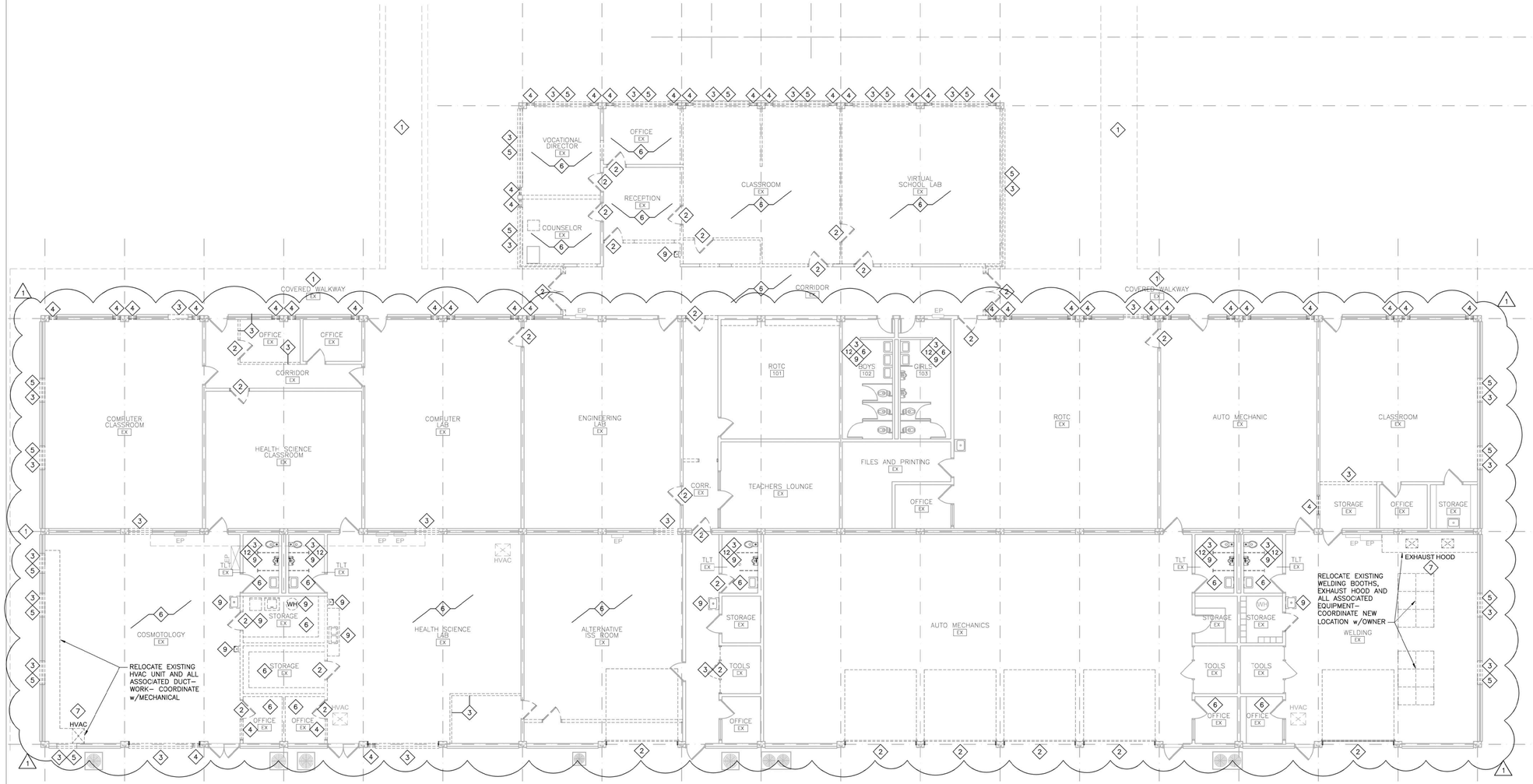
3 EAST ELEVATION - DEMO

1/16" = 1'-0"



4 NORTH ELEVATION - DEMO

1/16" = 1'-0"



5 FLOOR PLAN - DEMO

1/8" = 1'-0"

DEMOLITION LEGEND

- EXISTING PARTITION TO BE REMOVED
- EXISTING PARTITION TO REMAIN
- EXISTING DOOR AND ASSOCIATED CONSTRUCTION TO BE REMOVED
- EXISTING DOOR TO REMAIN

GENERAL DEMOLITION KEY NOTES

1. SEE CIVIL FOR EXTENTS OF DEMOLITION THIS AREA.
2. REMOVE EXISTING DOOR, FRAME AND HARDWARE AS REQUIRED TO PROVIDE NEW WORK.
3. REMOVE EXISTING WALL, PARTITION, ROOF, STRUCTURE, ETC., AS REQUIRED TO PROVIDE NEW WORK, TYPICAL.
4. REMOVE EXISTING WINDOW, FRAME, BRICK ROWLOCK AND ASSOCIATED CONSTRUCTION AS REQUIRED TO PROVIDE NEW WORK.
5. SEE STRUCTURAL – BRACE AS REQUIRED AND REMOVE EXISTING CONSTRUCTION AS REQUIRED TO PROVIDE NEW WORK.
6. REMOVE EXISTING FLOORING SYSTEM AND PREPARE THE EXISTING CONCRETE FLOOR SUBSTRATE TO RECEIVE NEW FLOORING SYSTEM AS SPECIFIED.
7. EXISTING MECHANICAL TO BE REMOVED – SEE MECHANICAL.
8. EXISTING POWER, LIGHTING, A/V TO BE REMOVED – SEE ELECTRICAL.
9. REMOVE EXISTING PLUMBING, FIXTURES AND ASSOCIATED CONSTRUCTION AS REQUIRED TO PROVIDE NEW WORK.
10. REMOVE EXISTING GUTTER AND DOWNSPOUT SYSTEM AND ASSOCIATED CONSTRUCTION AS REQUIRED TO PROVIDE NEW WORK.
11. EXISTING AWNING/CANOPY AND ASSOCIATED CONSTRUCTION TO BE REMOVED.
12. EXISTING CEILING SYSTEM AND ASSOCIATED CONSTRUCTION TO BE REMOVED AND PREPARED TO ACCEPT NEW CONSTRUCTION.
13. SELECTIVELY REMOVE EXISTING BRICK VENEER AND WALL TIES, REMOVE ALL EXCESS MORTAR DAUBS FROM EXISTING CMU. CLEAN AND PREPARE EXISTING CMU TO RECEIVE NEW FINISH AS SPECIFIED.
14. REMOVE EXISTING BUILDING SIGNAGE AND/OR LETTERING.

DEMOLITION NOTES

1. DEMOLITION SCOPE OF WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: ALL EXISTING FLOOR AND INTERIOR FINISHES; CEILING, SOFFITS AND CANOPY ASSEMBLIES; GYPSUM BOARD PARTITIONS; MASONRY WALLS; WINDOWS, DOORS AND FRAMES AS INDICATED; ALL AFFECTED MEP FIXTURES AND ACCESSORIES; ALL AFFECTED CIVIL SITE ITEMS AND UTILITIES; AND ALL OTHER ITEMS DESCRIBED BY DRAWINGS AND/OR SPECS.

   IT IS THE INTENT OF THESE DOCUMENTS FOR ALL DEMOLITION WORK TO INCLUDE, WHETHER INDICATED OR NOT, ALL CONSTRUCTION DIRECTLY ASSOCIATED WITH DEMOLITION CONSTRUCTION IN BASE BID AS REQUIRED TO ALLOW OR SUPPORT NEW CONSTRUCTION.

   DASHED LINES INDICATE GENERAL EXISTING CONSTRUCTION TO BE REMOVED. CONTACT ARCHITECT FOR DEMOLITION CLARIFICATION IF UNCLEAR ON WHICH ITEMS ARE TO BE REMOVED.
2. GENERAL CONTRACTOR SHALL PROPERLY REMOVE AND DISPOSE OF ALL ABANDONED ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL ITEMS. PROTECT ALL ITEMS TO BE RELOCATED OR DESIGNATED AS SALVAGED.
3. CONTRACTOR SHALL PROTECT EXISTING CONSTRUCTION AND SYSTEMS TO REMAIN AND CORRECT ANY DAMAGE RESULTING FROM DEMOLITION WORK. PROTECT FIRE ALARM SYSTEM AND MAINTAIN ITS OPERATION AT ALL TIMES. MAINTAIN ANY EXISTING FIRE WALL FUNCTIONALITY AT ALL TIMES.
4. COORDINATE WITH FINISH LEGEND AND SCHEDULE TO DETERMINE EXISTING SURFACES TO RECEIVE NEW FINISHES REMOVE EXISTING FINISHES AS REQUIRED AND MAKE EXISTING SURFACES READY TO RECEIVE NEW FINISHES. PATCH AND/OR REPAIR EXISTING ADJACENT CONSTRUCTION TO REMAIN.
5. DISCONNECT AND REMOVE ANY EXISTING ABANDONED FLOOR CONDUIT AND OUTLETS. PATCH AND REPAIR SLAB.
6. CONTACT AND COORDINATE w/ARCHITECT AND STRUCTURAL ENGINEER BEFORE REMOVING OR ALTERING ANY STRUCTURAL COMPONENTS.

   SEE RESPECTIVE CIVIL, STRUCTURAL, PLUMBING, HVAC AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
7. COORDINATE WITH THE OWNER BEFORE REMOVING ANY SALVAGEABLE MATERIALS AND EQUIPMENT.
8. DEMOLITION WORK SHALL NOT CHANGE THE INTEGRITY OF THE EXISTING STRUCTURE OR FIRE RATED CONSTRUCTION TO REMAIN. ANY EXISTING FIRE RATED CONSTRUCTION TO REMAIN WHICH HAS BEEN AFFECTED BY DEMOLITION WORK MUST BE CORRECTED AND MADE TO MEET THE ORIGINAL RATING.
9. COORDINATE WITH ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS TO DETERMINE LIMITS OF DEMOLITION REQUIRED FOR NEW CONSTRUCTION.

LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

NEW ADDITION AND RENOVATION FOR RUSSELLVILLE HIGH SCHOOL

PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
FLOOR PLAN AND ELEVATIONS - DEMO

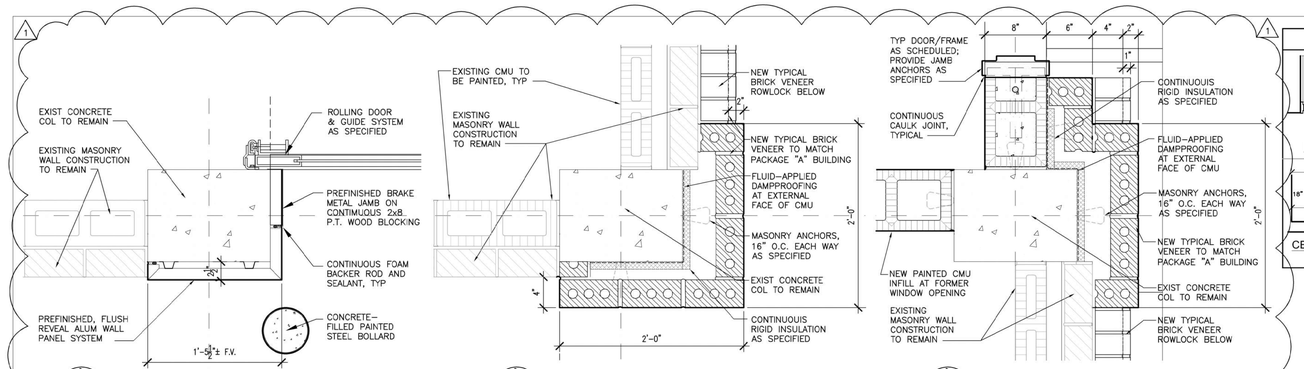
PROJ. MGR.:	R. VERNON
DRAWN:	
DATE:	04/15/22
REVISIONS	
1 ADD #1	05/15/22

JOB NO. 19-90B

SHEET NO:

A2.0

2 OF 16

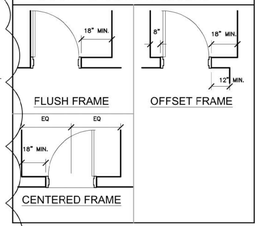


2 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

3 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

4 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

DOOR PLACEMENT LEGEND



WALL TYPE LEGEND

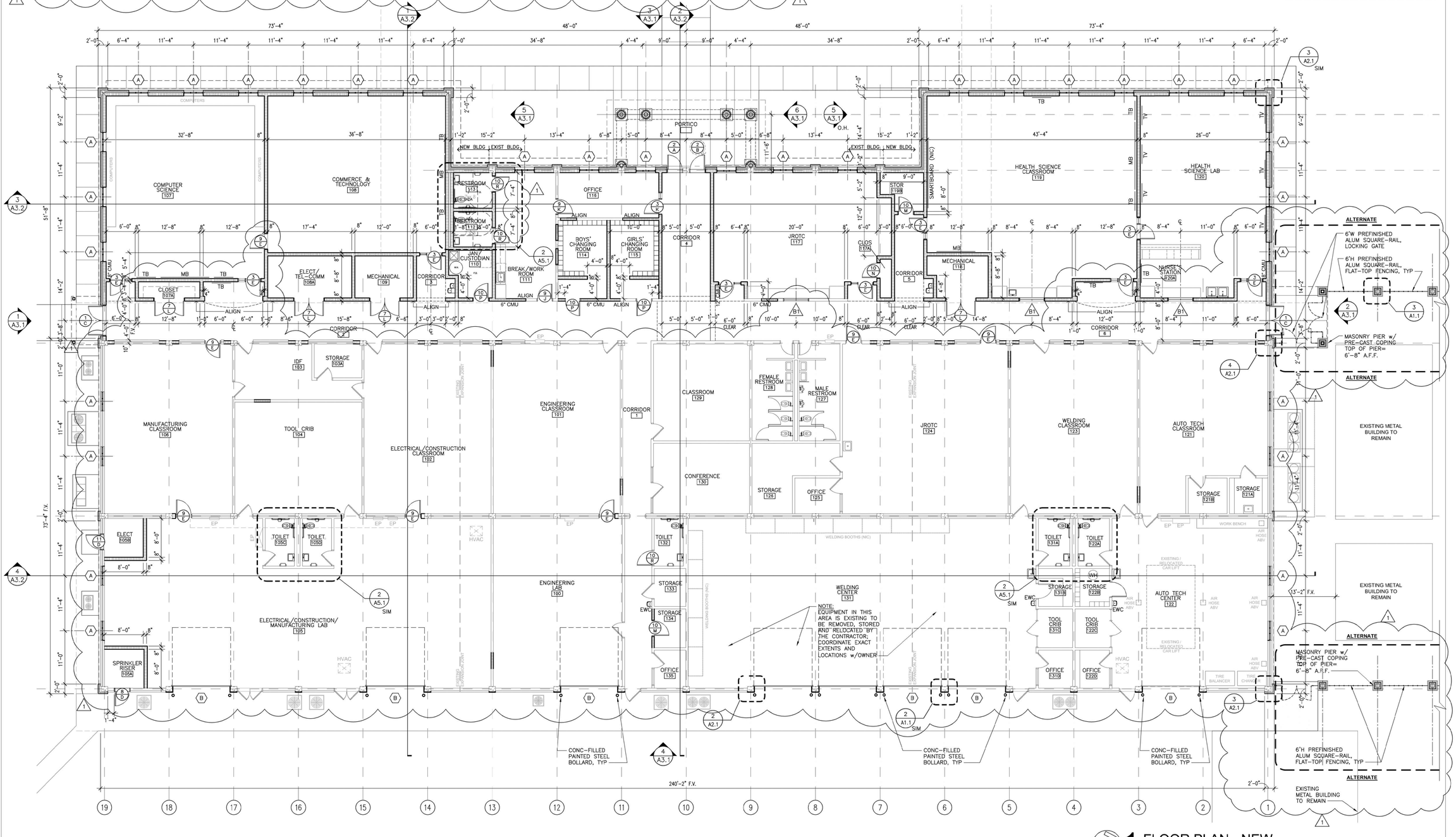
NEW EXTERIOR WALL	NEW 4" BRICK VENEER W/ AIR SPACE AND RIGID INSULATION ON 8" OR 12" REINF CMU w/ DAMPPROOFING, PROVIDE BRICK WALL TIES @ 16" O.C.
NEW CMU PARTITION	8" OR 12" CONCRETE MASONRY WALL SEE PLAN FOR WALL WIDTH CHANGES SEE LIFE SAFETY PLAN FOR FIRE RATING
1 HOUR CMU WALL	FIRE RATED 8" OR 12" CONCRETE MASONRY WALL SEE LIFE SAFETY PLAN FOR UL DESIGN
2 HOUR CMU WALL	FIRE RATED 8" OR 12" CONCRETE MASONRY WALL SEE LIFE SAFETY PLAN FOR UL DESIGN
SOUND ATTEN PARTITION	8" OR 12" CONCRETE MASONRY WALL WITH SOUND ATTENUATION
EXISTING	EXISTING TO REMAIN

GENERAL NOTES

- EXTEND AND KEY RATED WALLS TO BOTTOM OF FLOOR STRUCTURE OR ROOF DECK ABOVE. SEE LIFE SAFETY DRAWINGS FOR RATED WALL LOCATIONS.
- COORDINATE W/ ELECTRICAL AND MECHANICAL AND PROVIDE CONCRETE EQUIPMENT PAD AS REQUIRED
- SEE CIVIL DRAWINGS FOR CONTINUATION OF SIDEWALKS
- ALL PLAN DIMENSIONS ARE TO FACE OF CMU WALL UNLESS NOTED OTHERWISE
- WINDOWS ARE DIMENSIONED TO THE CENTER LINE
- SLOPE ALL SIDEWALKS AWAY FROM THE BUILDING 1/4 : 12
- SLOPE FINISH FLOOR TO FLOOR DRAINS. SEE PLUMBING FOR LOCATIONS OF FLOOR DRAINS.
- SEE ARCHITECTURAL FINISH PLANS AND SPECIFICATIONS FOR AREAS REQUIRING THICKSET OR DEPRESSED FLOORING INSTALLATION. COORDINATE WITH SUBCONTRACTOR AND DROP CONCRETE FLOOR SLAB IN SUCH AREAS AS REQUIRED; SEE SHOWER DETAIL." PROVIDE SLOPE FOR POSITIVE DRAINAGE IN AREAS WITH FLOOR DRAINAGE SYSTEM.
- SEE ELEVATIONS AND ROOF PLAN FOR DOWNSPOUT LOCATIONS
- ALL DOWNSPOUTS INTERSECTING CONCRETE PADS AND/OR WALKS SHALL BE PROVIDED WITH BOOTS AND LEADER PIPING EXTENDED AND TIED INTO STORM DRAINAGE SYSTEM
- PROVIDE BULLNOSE CMU AT ALL EXPOSED OUTSIDE CMU CORNERS, TYP

SYMBOLS LEGEND

TC DOOR TYPE / DOOR RATING / A HARDWARE SYMBOL / ACCESS CONTROL	1 A1.1 SECT. MARK / SHEET NUMBER
TC DOOR TYPE / DOOR RATING / A HARDWARE SYMBOL	A A1.1 ELEV. MARK / SHEET NUMBER
NEW DOOR AND SWING	ELEV. MARK / A5.1 SHEET NUMBER / INT. ELEVATION
FEC RECESSED FIRE EXTINGUISHER CABINET WITH EXTINGUISHER	A EXTERIOR WINDOW / GARAGE DOOR
FE SURFACE MOUNT FIRE EXTINGUISHER	A INTERIOR WINDOW
EJ EXPANSION JOINT	1 ARCHITECTURAL LOUVER
CJ CONTROL JOINT	FENCING / RAILING
F.D. FLOOR DRAIN	AREA OF CONCRETE
EWC ELECTRIC WATER COOLER	A200 ROOM NUMBER
TB 4' TACK BOARD	F PARTITION TYPE
MB 12' MARKER BOARD (OTHER SIZES INDICATED ON PLAN)	+ INTERIOR FLOOR ELEVATION
SB SMARTBOARD-N.I.C.	RD ROOF DRAIN



1 FLOOR PLAN - NEW
1/8" = 1'-0"

LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

NEW ADDITION AND RENOVATION FOR RUSSELLVILLE HIGH SCHOOL

PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
REGISTERED ARCHITECT
No. 3365
RICK N. LATHAN

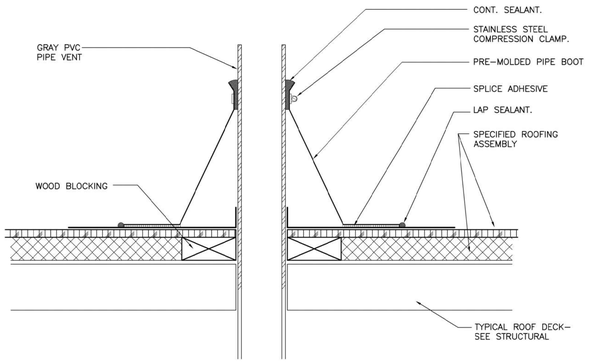
SHEET TITLE:
FLOOR PLAN - NEW

PROJ. MGR.:	R. VERNON
DRAWN:	
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

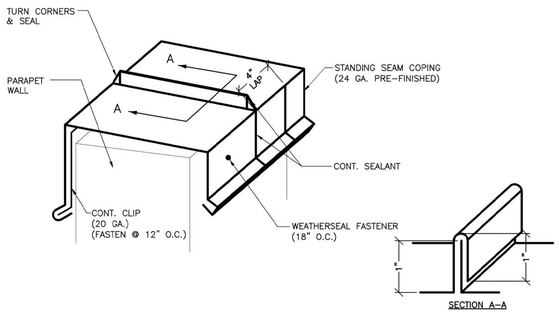
SHEET NO:
A2.1
3 OF 16





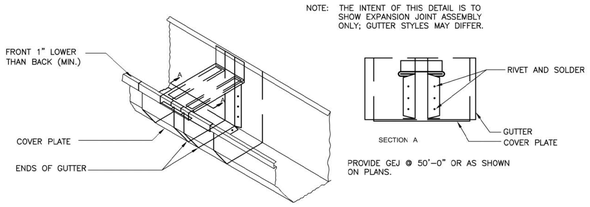
5 PLUMING VENT PENETRATION DETAIL

3" = 1'-0" TYPICAL



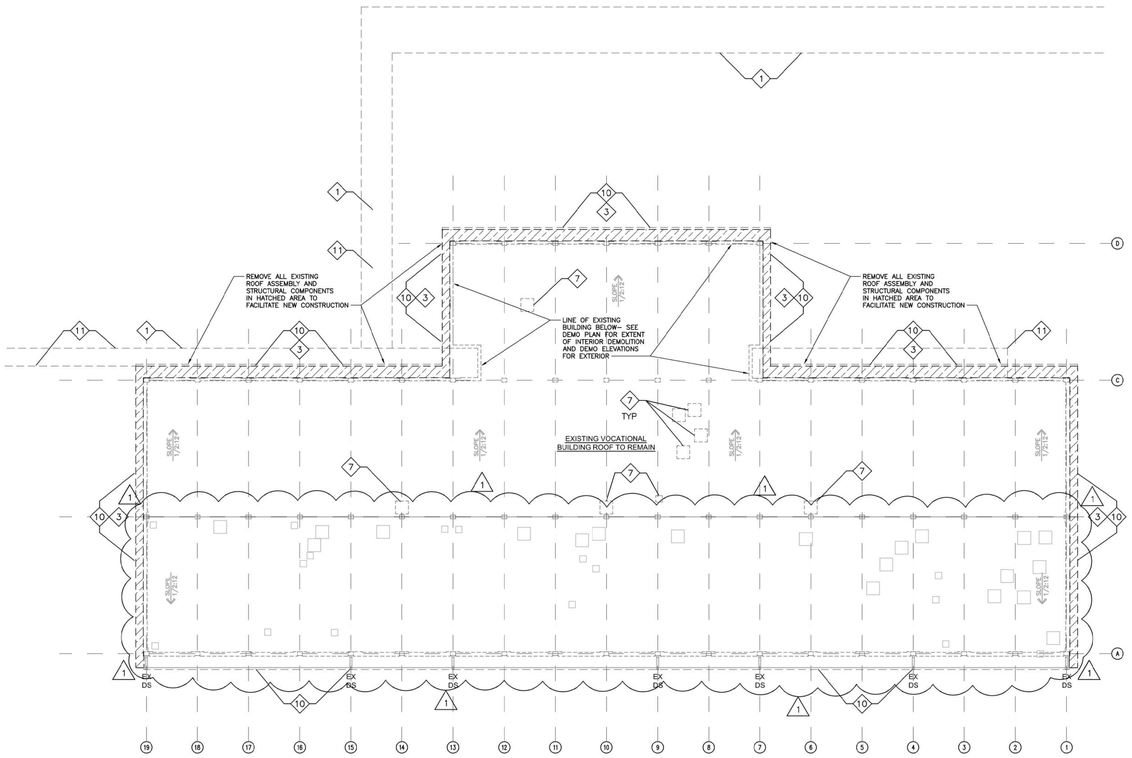
4 METAL COPING SPLICE DETAIL

3" = 1'-0" TYPICAL



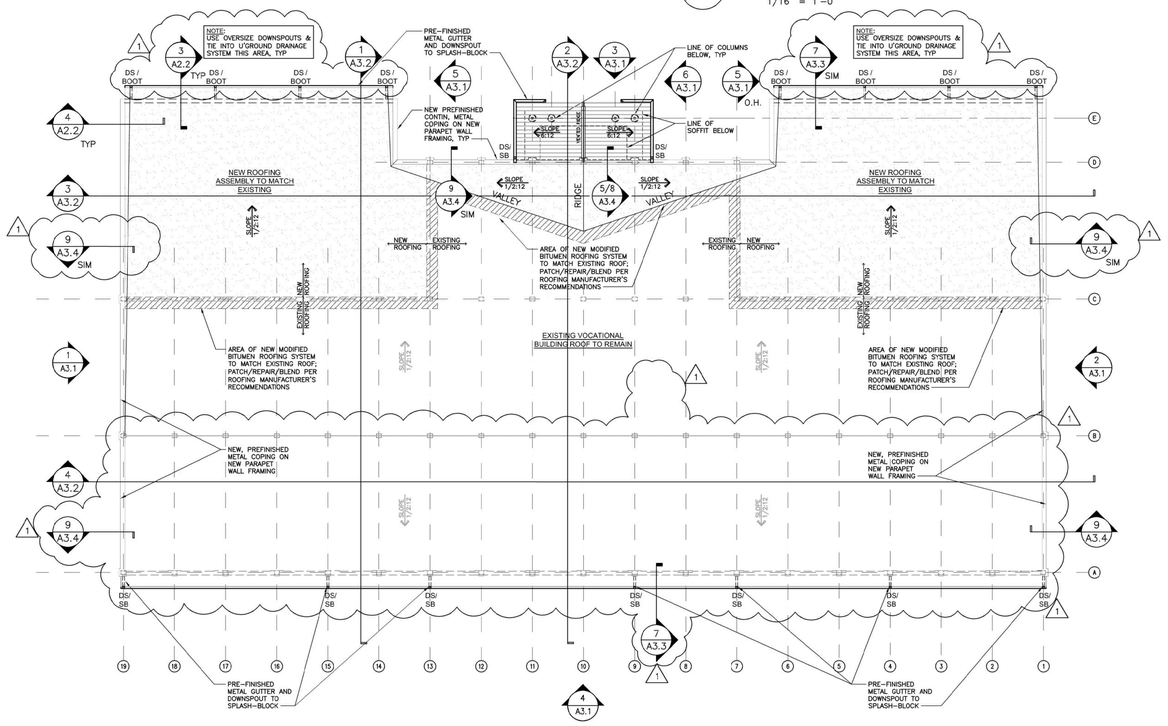
3 GUTTER EXPANSION JOINT

3" = 1'-0" TYPICAL



1 ROOF PLAN - EXIST / DEMO

1/16" = 1'-0"



2 ROOF PLAN - NEW

1/16" = 1'-0"

DEMOLITION LEGEND

	EXISTING PARTITION TO BE REMOVED
	EXISTING PARTITION TO REMAIN
	EXISTING DOOR AND ASSOCIATED CONSTRUCTION TO BE REMOVED
	EXISTING DOOR TO REMAIN

ROOF DEMOLITION KEY NOTES

1. SEE CIVIL FOR EXTENTS OF DEMOLITION THIS AREA.
2. NOT USED.
3. REMOVE EXISTING WALL, ROOF, STRUCTURE AND/OR ASSOCIATED CONSTRUCTION AS REQUIRED TO PROVIDE NEW WORK, TYPICAL.
4. NOT USED.
5. SEE STRUCTURAL – BRACE AS REQUIRED AND REMOVE EXISTING CONSTRUCTION AS REQUIRED TO PROVIDE NEW WORK.
6. NOT USED.
7. EXISTING MECHANICAL TO BE REMOVED – SEE MECHANICAL
8. NOT USED.
9. NOT USED.
10. REMOVE EXISTING GUTTER AND DOWNSPOUT SYSTEM AND ASSOCIATED CONSTRUCTION AS REQUIRED TO PROVIDE NEW WORK.
11. EXISTING AWNING/CANOPY AND ASSOCIATED CONSTRUCTION TO BE REMOVED.

DEMOLITION NOTES

1. DEMOLITION SCOPE OF WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: ALL EXISTING FLOOR AND INTERIOR FINISHES; CEILING, SOFFITS AND CANOPY ASSEMBLIES; GYPSUM BOARD PARTITIONS; MASONRY WALLS; WINDOWS, DOORS AND FRAMES AS INDICATED; ALL AFFECTED MEP FIXTURES AND ACCESSORIES; ALL AFFECTED CIVIL SITE ITEMS AND UTILITIES, AND ALL OTHER ITEMS DESCRIBED BY DRAWINGS AND/OR SPECS.

   IT IS THE INTENT OF THESE DOCUMENTS FOR ALL DEMOLITION WORK TO INCLUDE, WHETHER INDICATED OR NOT, ALL CONSTRUCTION DIRECTLY ASSOCIATED WITH DEMOLITION CONSTRUCTION IN BASE BID AS REQUIRED TO ALLOW OR SUPPORT NEW CONSTRUCTION.

   DASHED LINES INDICATE GENERAL EXISTING CONSTRUCTION TO BE REMOVED. CONTACT ARCHITECT FOR DEMOLITION CLARIFICATION IF UNCLEAR ON WHICH ITEMS ARE TO BE REMOVED.
2. GENERAL CONTRACTOR SHALL PROPERLY REMOVE AND DISPOSE OF ALL ABANDONED ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL ITEMS. PROTECT ALL ITEMS TO BE RELOCATED OR DESIGNATED AS SALVAGED.
3. CONTRACTOR SHALL PROTECT EXISTING CONSTRUCTION AND SYSTEMS TO REMAIN AND CORRECT ANY DAMAGE RESULTING FROM DEMOLITION WORK. PROTECT FIRE ALARM SYSTEM AND MAINTAIN ITS OPERATION AT ALL TIMES. MAINTAIN ANY EXISTING FIRE WALL FUNCTIONALITY AT ALL TIMES.
4. COORDINATE WITH FINISH LEGEND AND SCHEDULE TO DETERMINE EXISTING SURFACES TO RECEIVE NEW FINISHES REMOVE EXISTING FINISHES AS REQUIRED AND MAKE EXISTING SURFACES READY TO RECEIVE NEW FINISHES. PATCH AND/OR REPAIR EXISTING ADJACENT CONSTRUCTION TO REMAIN.
5. DISCONNECT AND REMOVE ANY EXISTING ABANDONED FLOOR CONDUIT AND OUTLETS. PATCH AND REPAIR SLAB.
6. CONTACT AND COORDINATE w/ARCHITECT AND STRUCTURAL ENGINEER BEFORE REMOVING OR ALTERING ANY STRUCTURAL COMPONENTS.

   SEE RESPECTIVE CIVIL, STRUCTURAL, PLUMBING, HVAC AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
7. COORDINATE WITH THE OWNER BEFORE REMOVING ANY SALVAGEABLE MATERIALS AND EQUIPMENT.
8. DEMOLITION WORK SHALL NOT CHANGE THE INTEGRITY OF THE EXISTING STRUCTURE OR FIRE RATED CONSTRUCTION TO REMAIN. ANY EXISTING FIRE RATED CONSTRUCTION TO REMAIN WHICH HAS BEEN AFFECTED BY DEMOLITION WORK MUST BE CORRECTED AND MADE TO MEET THE ORIGINAL RATING.
9. COORDINATE WITH ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS TO DETERMINE LIMITS OF DEMOLITION REQUIRED FOR NEW CONSTRUCTION.

ROOF LEGEND

- DETAIL NUMBER / SHEET NUMBER — ROOF DETAIL MARKER
- DIRECTION OF DOWNWARD SLOPE / 1/4:12 / RISE:RUN — ROOF SLOPE MARKER

DS	DOWNSPOUT
DS BOOT	DOWNSPOUT WITH BOOT
SB	SLASH BLOCK
GEJ	GUTTER EXPANSION JOINT
PV	PLUMBING VENT
EF	EXHAUST FAN
EV	EXHAUST VENT
EJ	EXPANSION JOINT
N.I.C.	NOT IN CONTRACT
OSP	OVERFLOW SPOUT

ROOF GENERAL NOTES

1. NEW DOWNSPOUTS SHOWN ON THIS SHEET ARE SHOWN AS REFERENCE ONLY. CONTRACTOR TO SEE ELEVATIONS FOR DOWNSPOUT LOCATIONS AND TO AVOID ANY CONFLICT WITH DOORS, WNDOWS, AND HEAVY TRAFFIC AREAS.
2. CONTRACTOR TO COORDINATE LOCATIONS OF ROOF PENETRATIONS WITH MECHANICAL AND/OR ARCHITECT.
3. SEE MECHANICAL, PLUMBING AND ELECTRICAL FOR ADDITIONAL ROOF WORK AND PENETRATIONS; MAKE ALL PENETRATIONS WEATHERTIGHT UNDER ROOFING SCOPE OF WORK.

ROOF LEGEND

- NEW MODIFIED BITUMEN CAP SHEET AS SPECIFIED; TIE-INTO EXISTING ROOFING PER MNFR'S RECOMMENDATIONS
- NEW MODIFIED BITUMEN ROOFING SYSTEM AS SPECIFIED ON 1 1/2" POLYISO INSULATION (1)
- PREFINISHED STANDING SEAM METAL ROOFING SYSTEM AS SPECIFIED

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1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

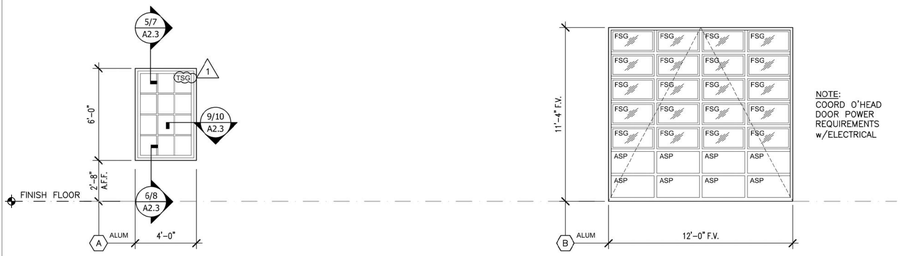
SHEET TITLE:
ROOF PLANS - DEMO & NEW AND DETAILS

PROJ. MGR.:	R. VERNON
DRAWN:	
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

SHEET NO:
A2.2
4 OF 16

0 1" 2"

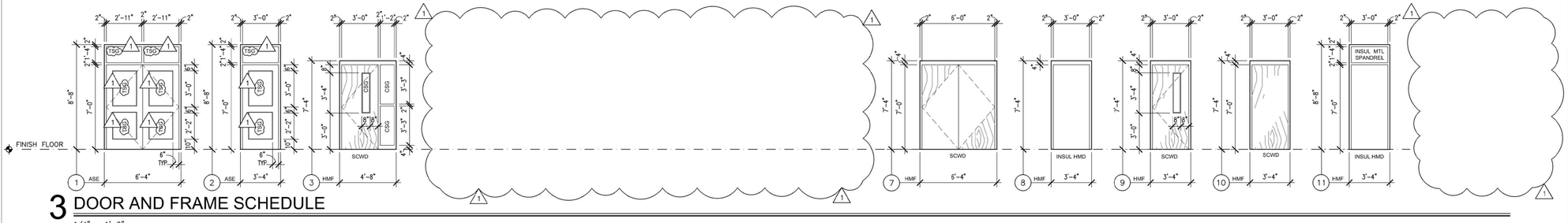


1 WINDOW SCHEDULE

1/4" = 1'-0"

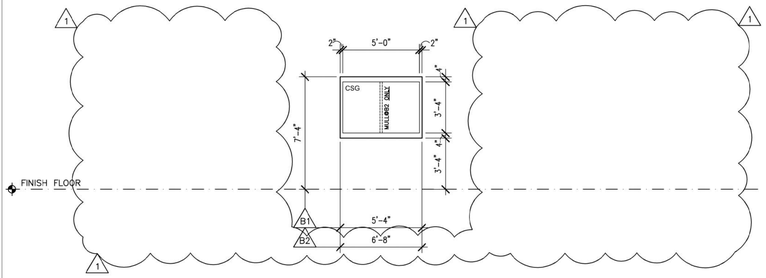
2 OVERHEAD DOOR OPENING

1/4" = 1'-0"



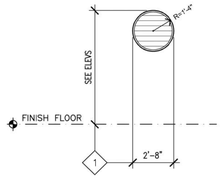
3 DOOR AND FRAME SCHEDULE

1/4" = 1'-0"



4 HOLLOW METAL WINDOW FRAME SCHEDULE

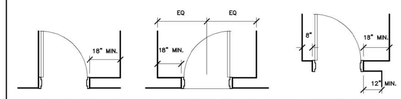
1/4" = 1'-0"



5 ARCHITECTURAL LOUVERS

1/4" = 1'-0"

DOOR PLACEMENT LEGEND



DOOR AND WINDOW LEGEND

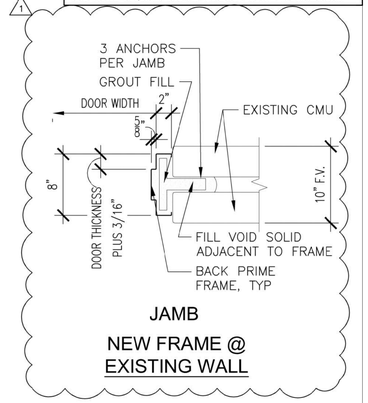
AL	PREFINISHED ALUMINUM LOUVER SYSTEM AS SPECIFIED
CSG	¼" THICK CLEAR TEMPERED SAFETY GLASS.
CFG	CLEAR FIRE RATED SAFETY GLASS AS SPECIFIED.
TSG	1" TINTED, INSULATED, LOW-E TEMPERED SAFETY GLASS AS SPECIFIED
SCWD	SOLID CORE WOOD DOOR
HMD	HOLLOW METAL DOOR
HMF	HOLLOW METAL FRAME
ASE	PREFINISHED ALUMINUM STOREFRONT ENTRANCE SYSTEM AS SPECIFIED.
ALUM	PREFINISHED ALUMINUM WINDOW SYSTEM AS SPECIFIED.
SPSG	1" SPANDREL INSULATED TEMPERED SAFETY GLASS AS SPECIFIED.
FSG	INSULATED, LOW-E FROSTED, TEMPERED SAFETY GLASS AS SPECIFIED. 1
ASP	INSULATED ALUM SPANDREL PANEL BY DOOR MNFR AS SPECIFIED.
AC	ACCESS CONTROL SYSTEM AS SPECIFIED SEE ALSO ELECT.
RI	ROUGH IN ELECTRICAL FOR FUTURE ACCESS CONTROL SYSTEM AS SPECIFIED SEE ELECT.

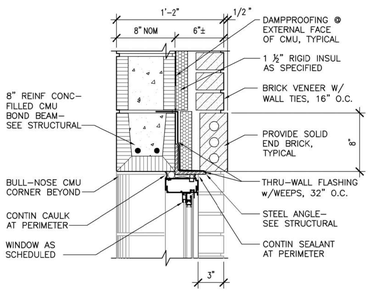
NOTES:
1. PROVIDE LOW-E GLAZING AT TSG GLAZING.
2. PROVIDE CFG WHERE GLASS IS INDICATED IN RATED DOORS

DOOR FIRE RATING LEGEND

DOOR TYPE	(2)	NO RATING
DOOR TYPE + A	(2A)	20 MINUTE RATING
DOOR TYPE + B	(2B)	45 MINUTE RATING
DOOR TYPE + C	(2C)	60 MINUTE RATING
DOOR TYPE + D	(2D)	90 MINUTE RATING
DOOR TYPE + E	(2E)	180 MINUTE RATING
DOOR TYPE + S	(2S)	SMOKE RATED
DOOR TYPE + T	(2T)	TORNADO STORM DOOR

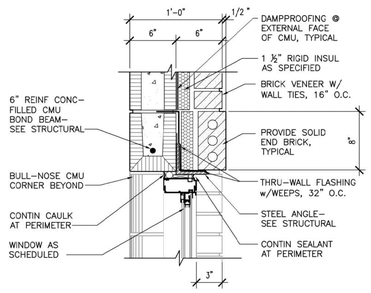
NOTE:
SEE STRUCTURAL FOR TORNADO STORM SHELTER CMU AND REINFORCING INFORMATION. DOORS AND FRAMES MUST HAVE BOTH THE FEMA 361/ICC 500 LABEL AND THE 90 MIN. FIRE LABEL AS SPECIFIED, MEET ALL TORNADO STORM SHELTER DOOR AND FRAME REQUIREMENTS AS INDICATED IN THE SPECIFICATIONS.





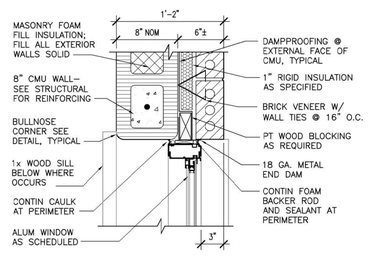
5 DETAIL @ HEAD

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



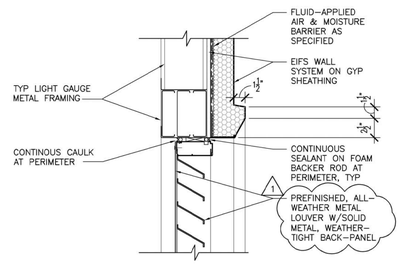
7 DETAIL @ HEAD

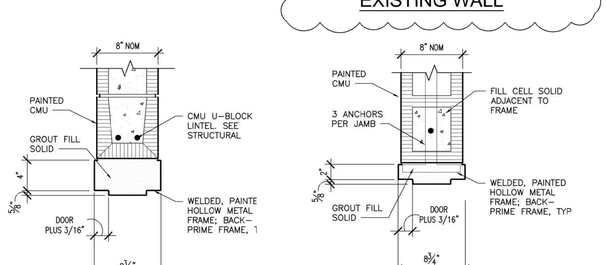
SCALE: 1 1/2" = 1'-0"



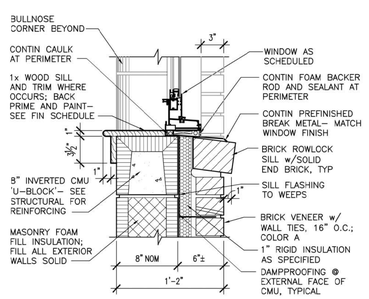
9 DETAIL @ JAMB

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



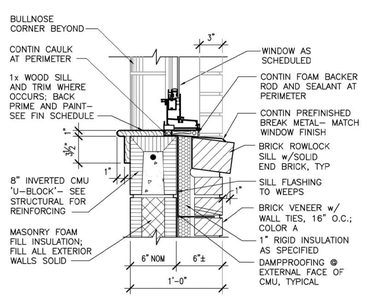


INTERIOR 8" CMU



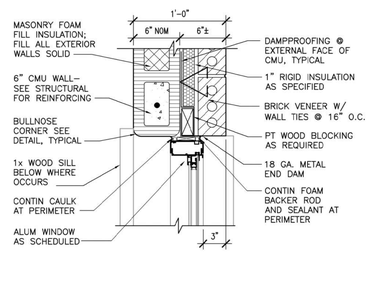
6 DETAIL @ SILL

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



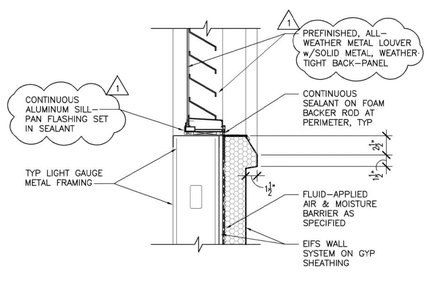
8 DETAIL @ SILL

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



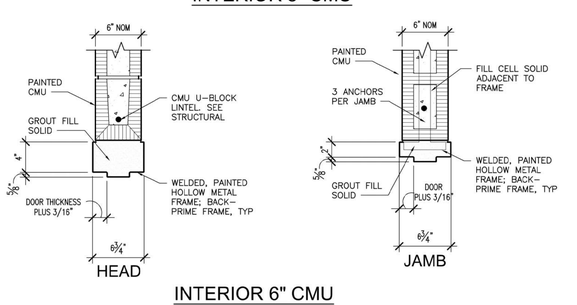
10 DETAIL @ JAMB

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



11 DETAIL @ LOUVER

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



INTERIOR 6" CMU

12 INTERIOR DOOR DETAILS

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

LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

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1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
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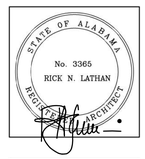


SHEET TITLE:
WINDOW AND DOOR SCHEDULES AND DETAILS

PROJ. MGR.:	R. VERNON
DRAWN:	
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

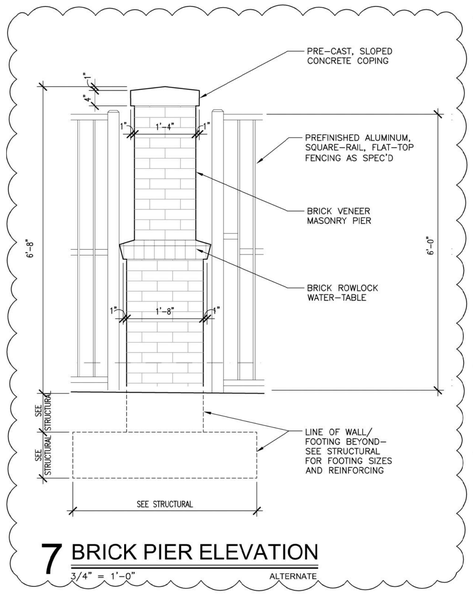
JOB NO. 19-90B

SHEET NO:

A2.3

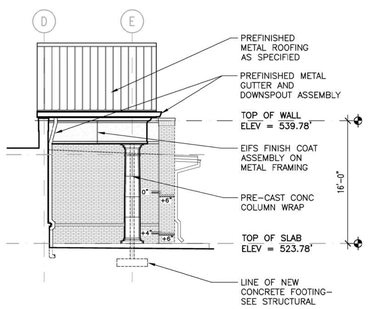
5 OF 16

0 1" 2"



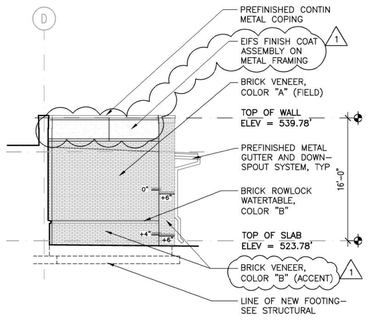
7 BRICK PIER ELEVATION

3/4" = 1'-0" ALTERNATE



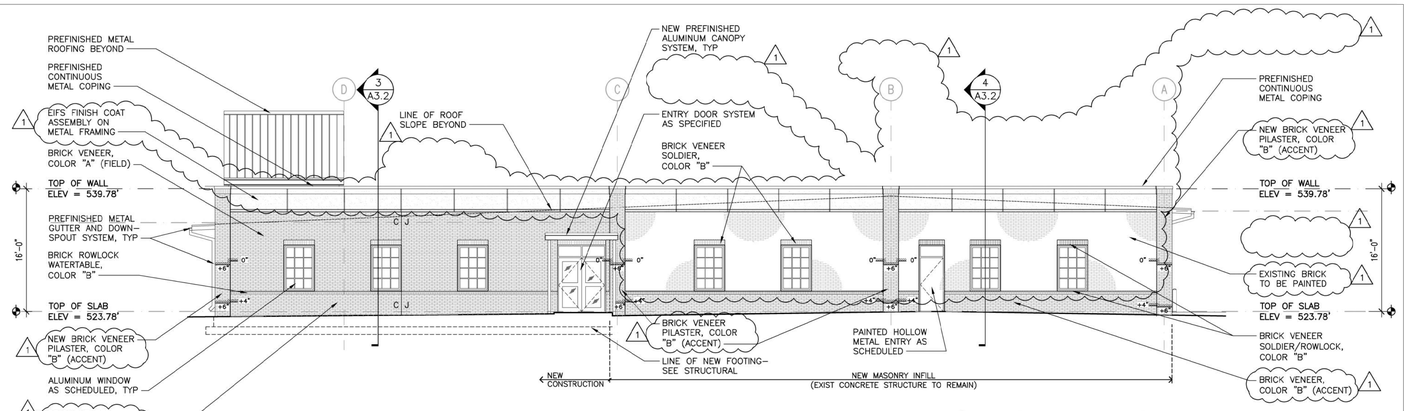
6 PARTIAL ELEVATION @ ENTRY

1/8" = 1'-0"



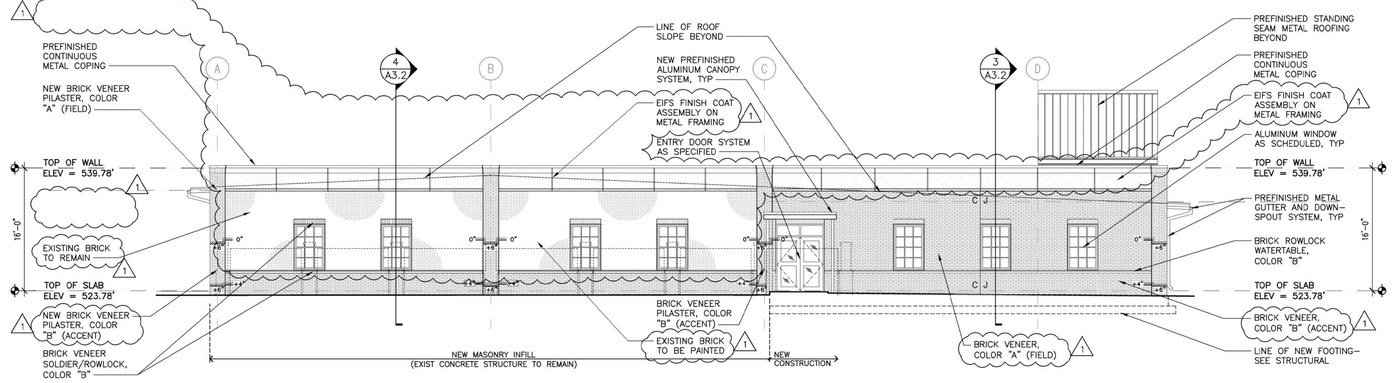
5 PARTIAL EAST ELEVATION

1/8" = 1'-0" WEST O.H.



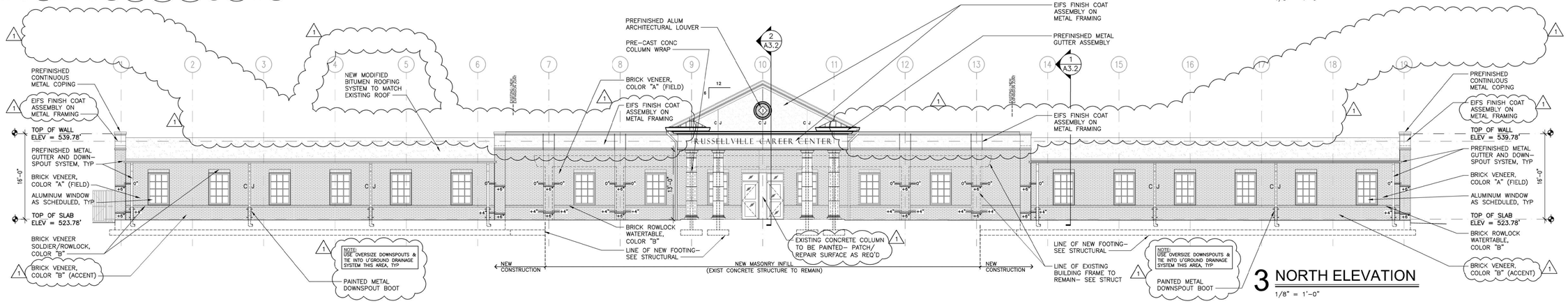
1 WEST ELEVATION

1/8" = 1'-0"



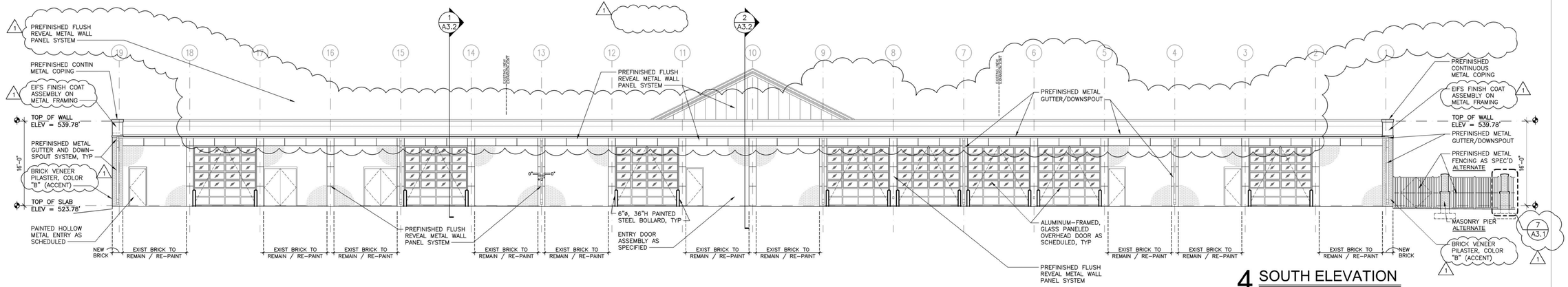
2 EAST ELEVATION

1/8" = 1'-0"



3 NORTH ELEVATION

1/8" = 1'-0"



4 SOUTH ELEVATION

1/8" = 1'-0"

LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

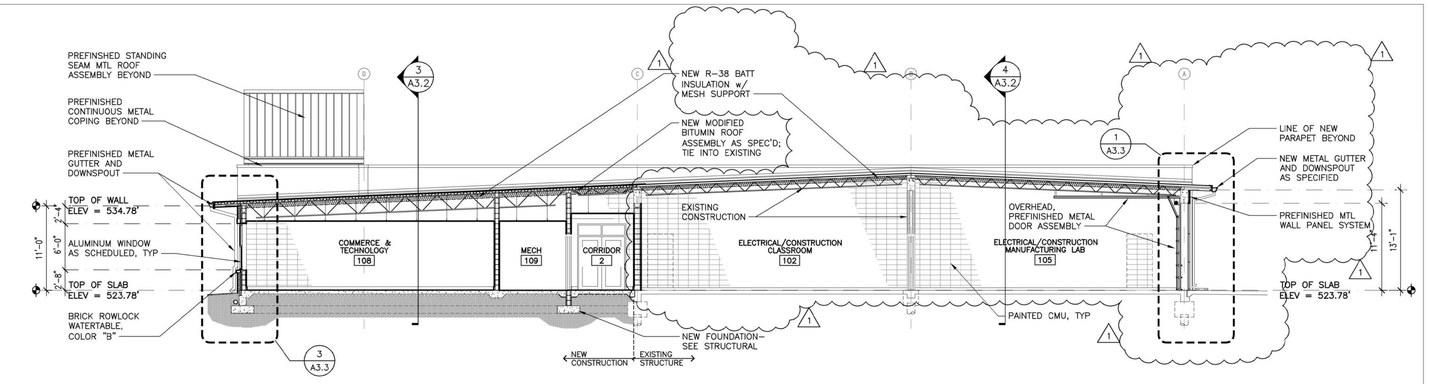
SHEET TITLE:
BUILDING ELEVATIONS

PROJ. MGR.:	R. VERNON
DRAWN:	
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

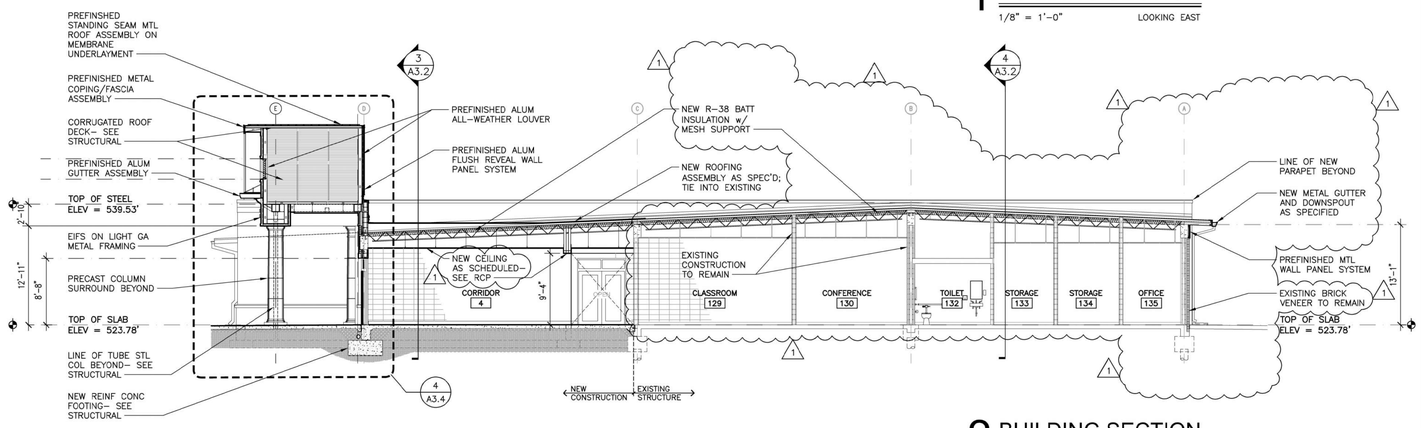
SHEET NO:
A3.1

6 OF 16



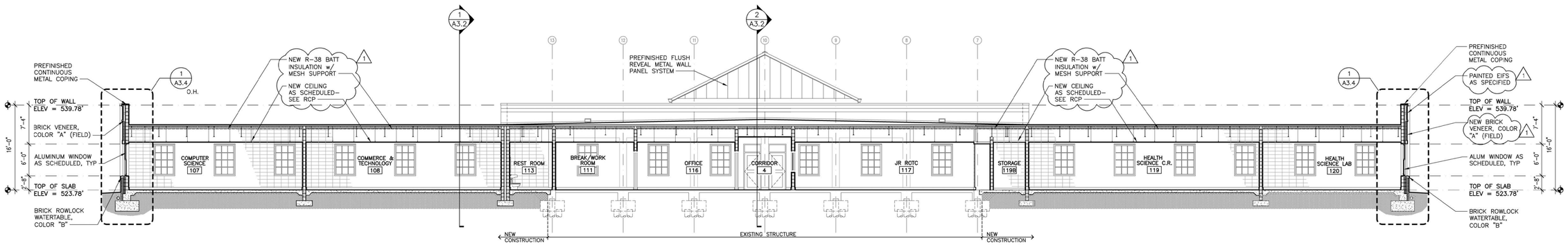
1 BUILDING SECTION

1/8" = 1'-0" LOOKING EAST



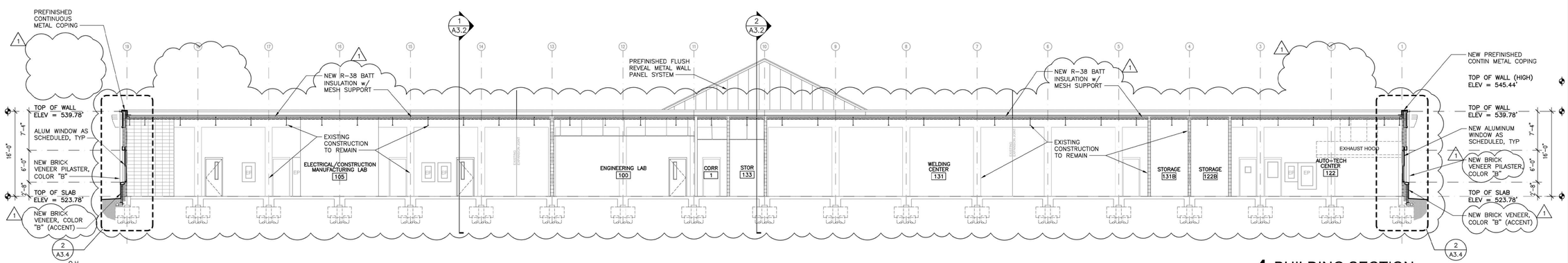
2 BUILDING SECTION

1/8" = 1'-0" LOOKING EAST



3 BUILDING SECTION

1/8" = 1'-0" LOOKING NORTH



4 BUILDING SECTION

1/8" = 1'-0" LOOKING NORTH

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NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
BUILDING SECTIONS

PROJ. MGR.:	R. VERNON
DRAWN:	
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

SHEET NO:
A3.2
7 OF 16

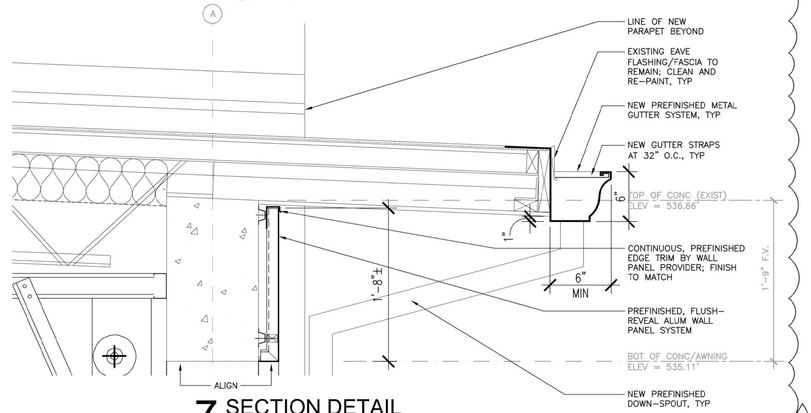
0 1" 2"

NOT USED

NOT USED

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

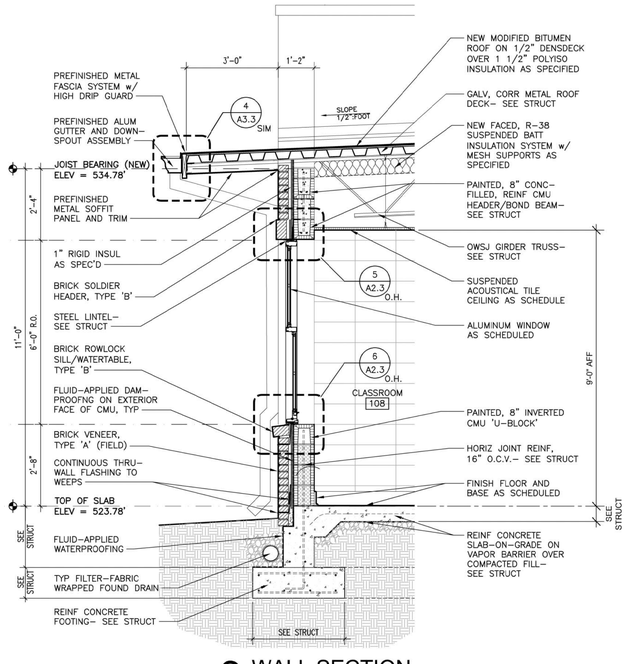
6 SECTION DETAIL
1 1/2" = 1'-0"



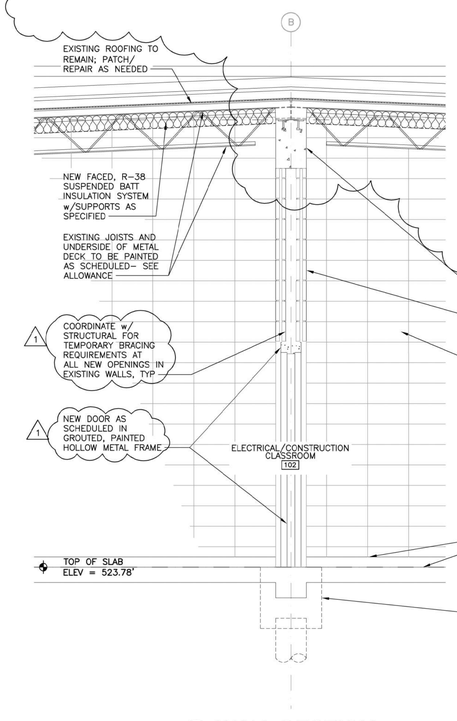
NOT USED

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

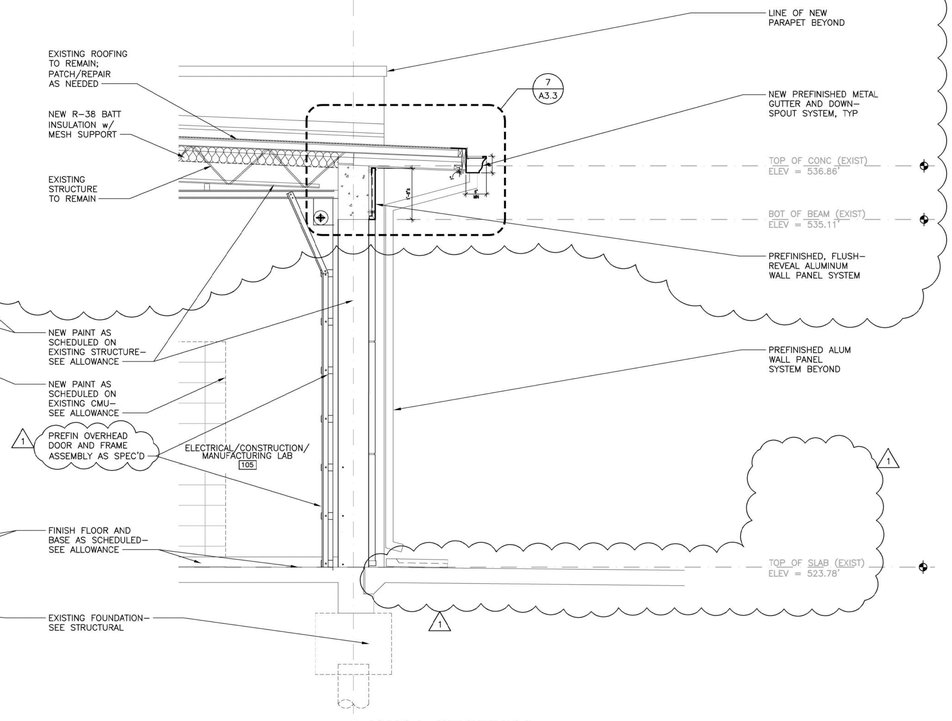
7 SECTION DETAIL
1 1/2" = 1'-0"



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



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



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

LATHAN ARCHITECTS
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NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

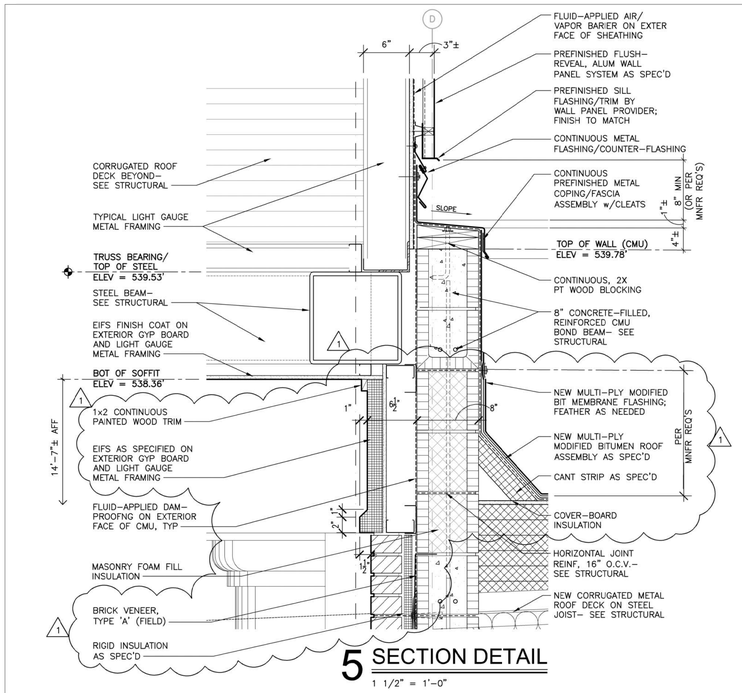
SHEET TITLE:
WALL SECTIONS

PROJ. MGR.:	R. VERNON
DRAWN:	
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

SHEET NO:
A3.3

0 1" 2"



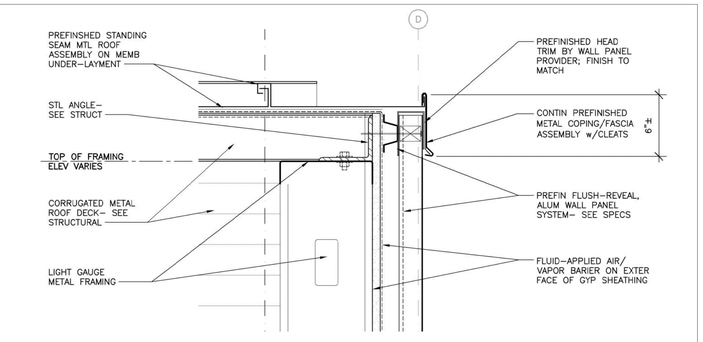
5 SECTION DETAIL
1 1/2" = 1'–0"

NOT USED

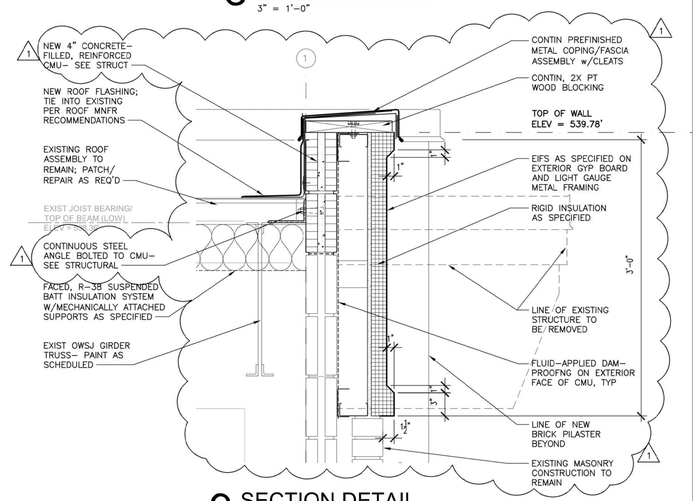
6 SECTION DETAIL
1 1/2" = 1'–0"

NOT USED

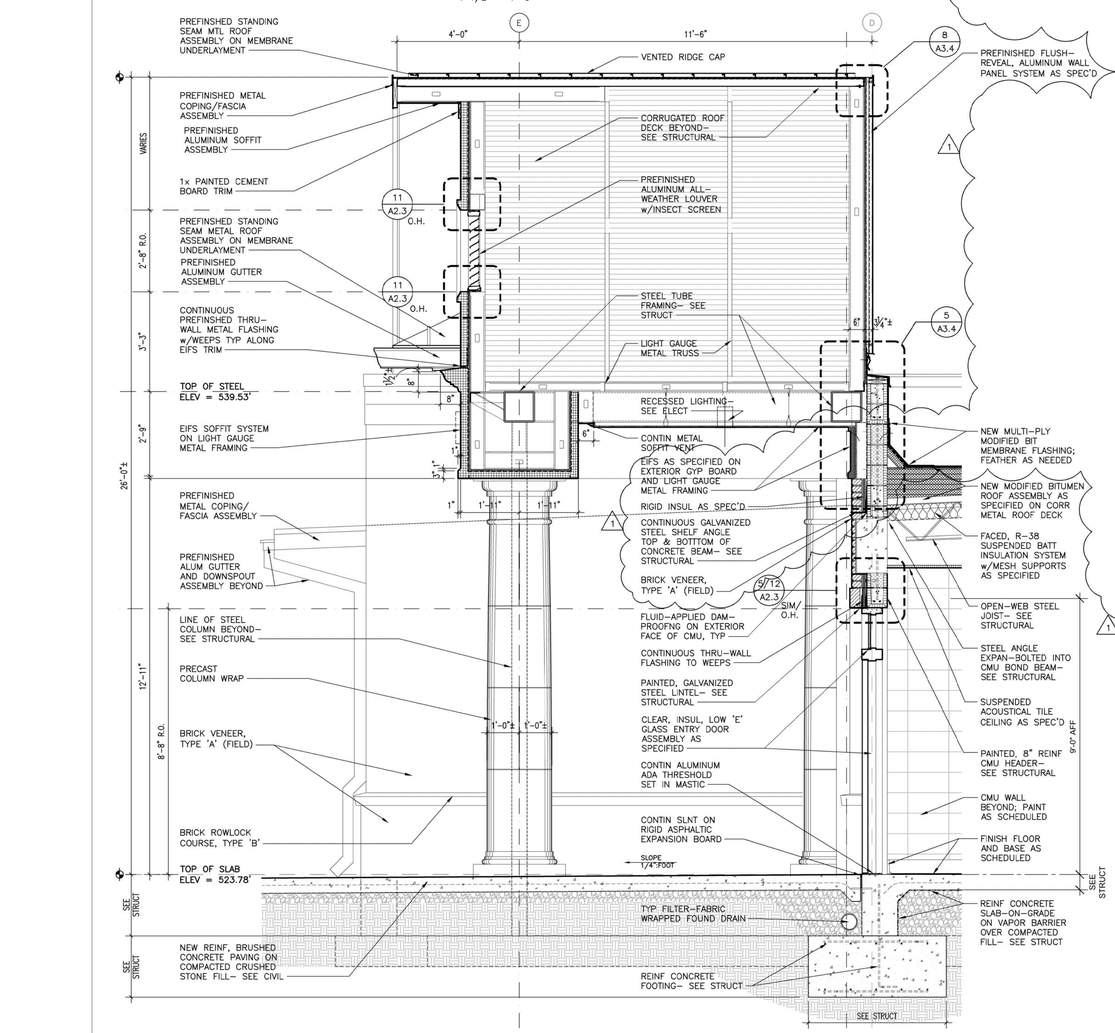
7 SECTION DETAIL
1 1/2" = 1'–0"



8 SECTION DETAIL
3" = 1'–0"



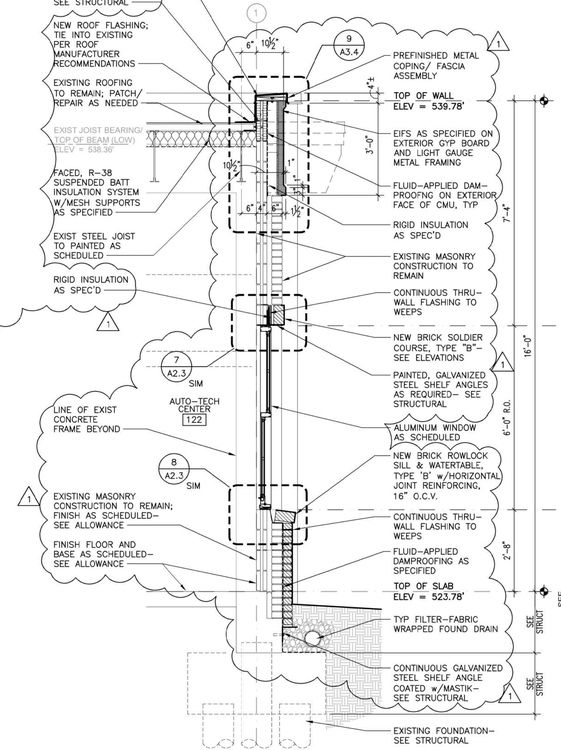
9 SECTION DETAIL
1 1/2" = 1'–0"



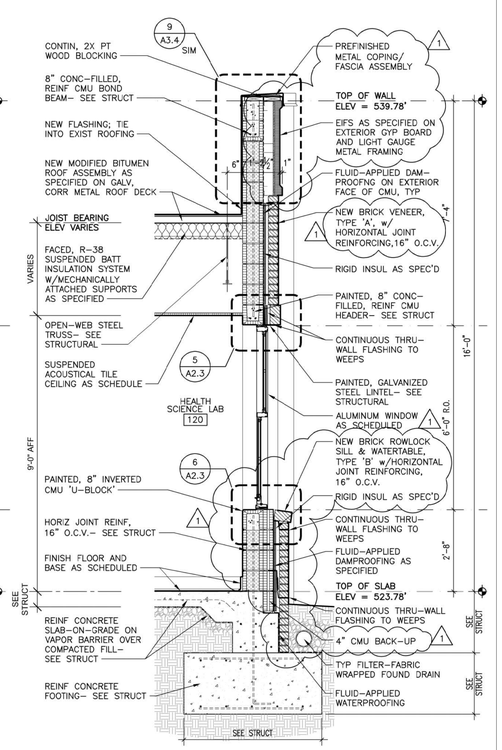
4 WALL SECTION
1/2" = 1'–0"

NOTE:
PAINT ALL EXTERIOR EXPOSED STEEL INCLUDING, BUT NOT LIMITED TO: LINTELS, PLATES, DOWNSPOUT BOOTS, RAILINGS, ETC.

3 WALL SECTION
1/2" = 1'–0"



2 WALL SECTION
1/2" = 1'–0"



1 WALL SECTION
1/2" = 1'–0"

LATHAN
ARCHITECTS
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NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

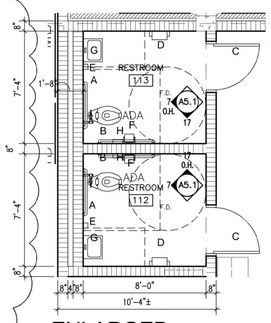
STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
WALL SECTIONS & DETAILS

PROJ. MGR.:	R. VERNON
DRAWN:	
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B
SHEET NO:
A3.4
9 OF 16
0 1" 2"

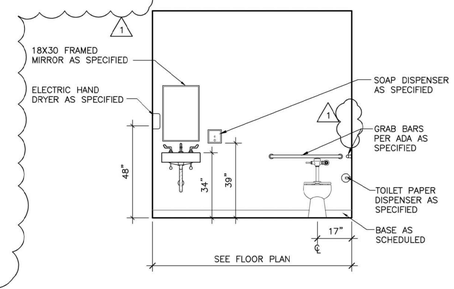
TOILET ACCESSORY LEGEND	
A	36" S.S. GRAB BAR
B	42" S.S. GRAB BAR
C	COAT HOOK
D	PAPER TOWEL DISPENSER (BY OWNER)
E	SOAP DISPENSER (BY OWNER)
F	TOILET TISSUE DISPENSER (BY OWNER)
G	FRAMED MIRROR 18" X 30"
H	FEMININE NAPKIN DISPOSAL
J	18" VERTICAL GRAB BAR
K	MOP HOLDER
L	WASTE RECEPTACLE



2 ENLARGED FLOOR PLAN @ RESTROOM 112 AND 113
SCALE: 1/4" = 1'-0"

3 NOT USED
SCALE: N/A

4 NOT USED
SCALE: N/A



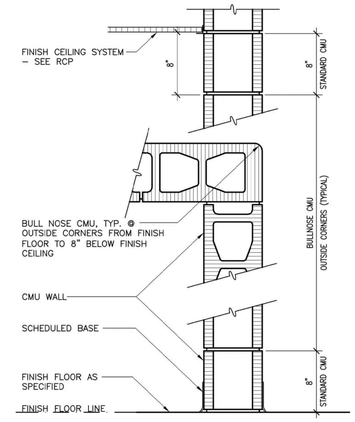
1 NOT USED
SCALE: N/A

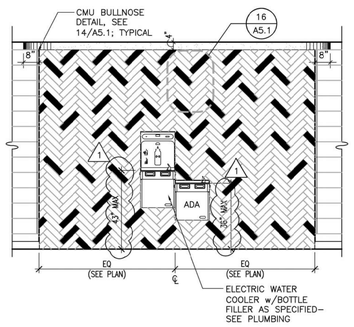
5 NOT USED
SCALE: N/A

6 NOT USED
SCALE: N/A

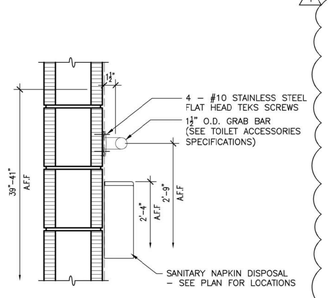
7 ELEVATION @ RESTROOM 112 AND 113
SCALE: 3/8" = 1'-0"

8 NOT USED
SCALE: N/A





9 ELEVATION @ ELECTRIC WATER COOLER
SCALE: 3/8" = 1'-0"



10 DETAIL @ GRAB BARS (W/ SANITARY NAPKIN DISPOSAL)
SCALE: 1-1/2" = 1'-0"

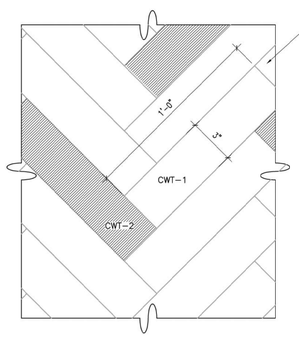
11 NOT USED
SCALE: N/A

12 NOT USED
SCALE: N/A

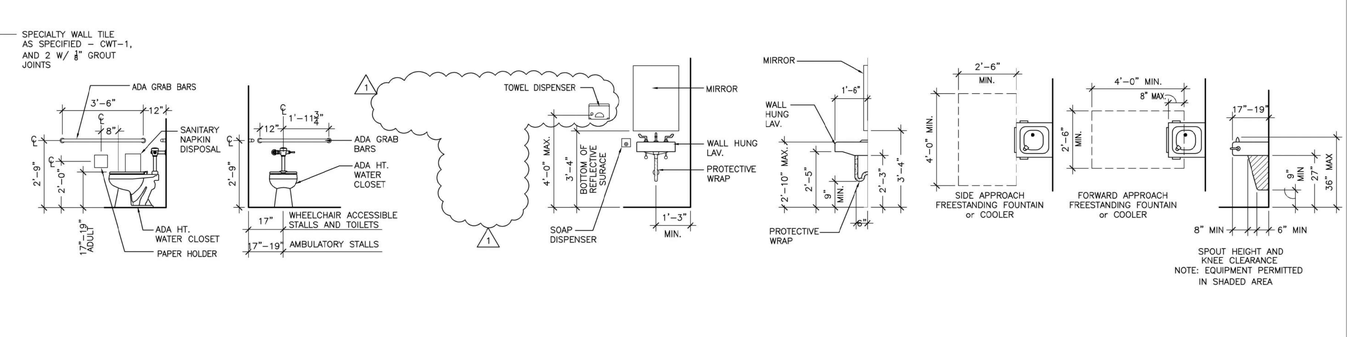
13 NOT USED
SCALE: N/A

14 DETAIL @ BULL NOSE DETAIL INSERT
SCALE: 1-1/2" = 1'-0"

15 NOT USED
SCALE: N/A



16 DETAIL @ ELECTRIC WATER COOLER
SCALE: 3" = 1'-0"



17 DETAILS @ TYPICAL ADA MOUNTING HEIGHTS
SCALE: 3/8" = 1'-0"

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NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

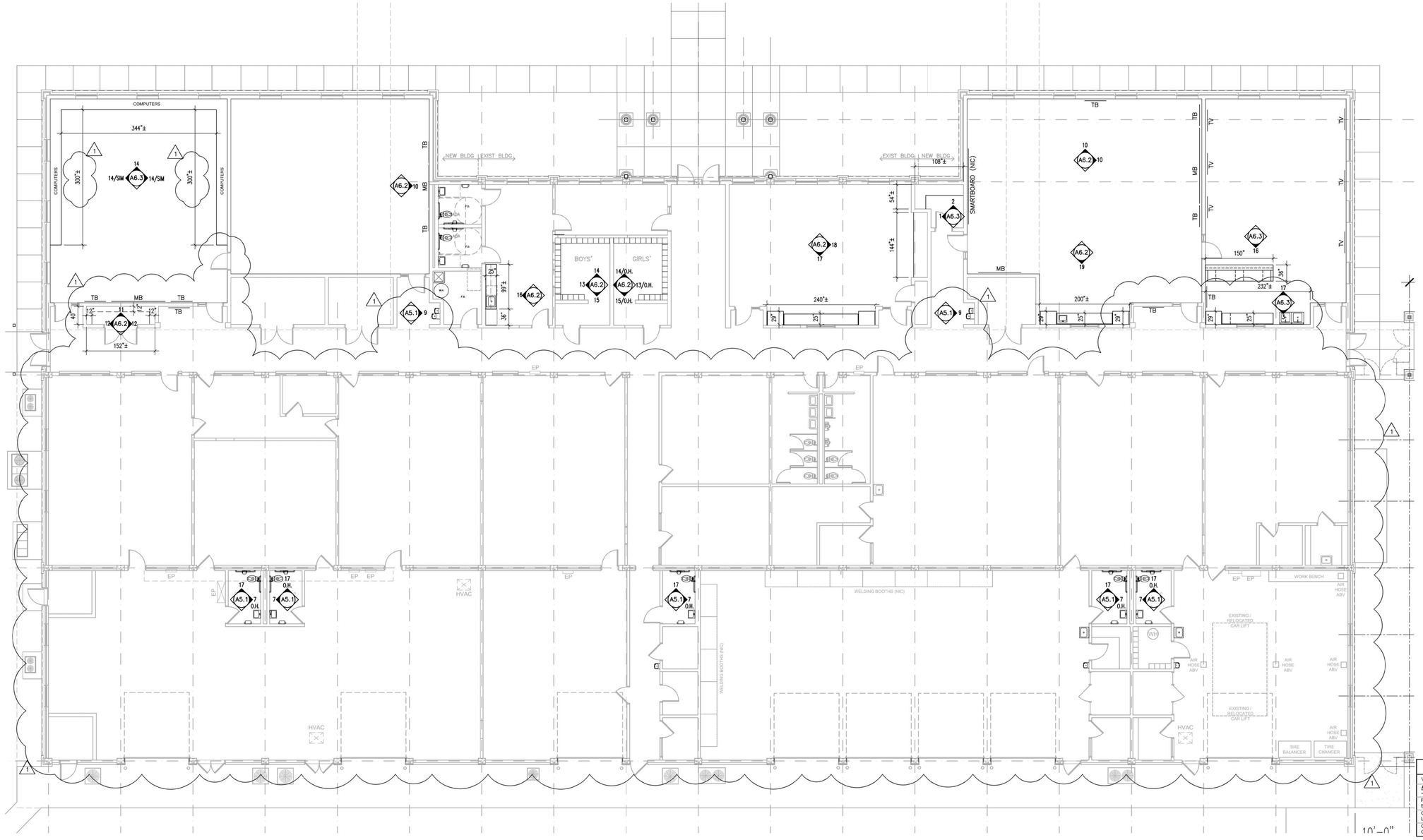
STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
ENLARGED FLOOR PLAN
TOILET ELEVATIONS
AND DETAILS

PROJ. MGR.:	R. VERNON
DRAWN:	CRB,KES,PGC
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

SHEET NO:
A5.1
10 OF 16



1 CASEWORK / MILLWORK PLAN

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

CASEWORK NOTES

VERIFY ALL DIMENSIONS IN FIELD
ALL LAMINATE CLAD CASEWORK / MILLWORK - INCLUDING RESTROOMS - ARE NOT IN CONTRACT (NIC) AND SHOWN FOR REFERENCE ONLY
FIELD VERIFY ALL CONDITIONS TO ENSURE NO CONFLICTS BETWEEN CASEWORK AND MILLWORK AND OTHER DISCIPLINES
COORDINATE FINISHES, LOCKING PREFERENCES, GROMMET LOCATIONS, ETC., WITH OWNER
COORDINATE INSTALLATION OF SCHEDULED BASE AT ALL CASEWORK AND MILLWORK WITH FLOORING CONTRACTOR

APPLIANCE NOTES

VERIFY ALL DIMENSIONS IN FIELD AND COORDINATE APPLIANCE SIZES TO ENSURE A PROPER INSTALLATION
ALL APPLIANCES ARE NOT IN CONTRACT (NIC) AND ARE TO BE PURCHASED AND INSTALLED BY THE OWNER
APPLIANCES LISTED IN THE ARCHITECTURAL SPECIFICATIONS ARE FOR REFERENCE ONLY

LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
CASEWORK PLAN

PROJ. MGR.:	R. VERNON
DRAWN:	CRB,KES
DATE:	04/15/22

REVISIONS

1	ADD #1	05/15/22

JOB NO. 19-90B

SHEET NO:
A6.1

11 OF 16

0 1" 2"

1 NOT USED
SCALE: N/A

2 NOT USED
SCALE: N/A

3 NOT USED
SCALE: N/A

4 NOT USED
SCALE: N/A

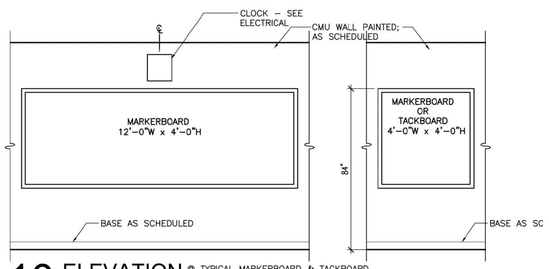
5 NOT USED
SCALE: N/A

6 NOT USED
SCALE: N/A

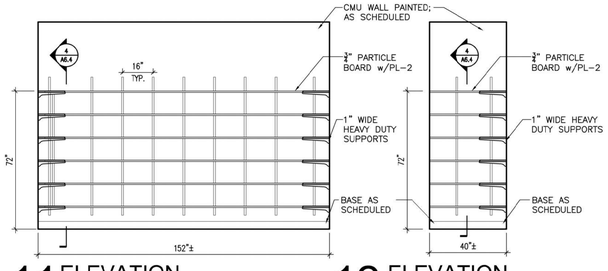
7 NOT USED
SCALE: N/A

8 NOT USED
SCALE: N/A

9 NOT USED
SCALE: N/A

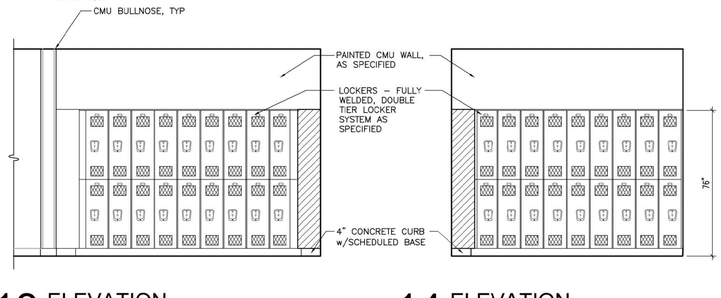


10 ELEVATION @ TYPICAL MARKERBOARD & TACKBOARD
SEE PLAN FOR LOCATION
SCALE: 3/8" = 1'–0"



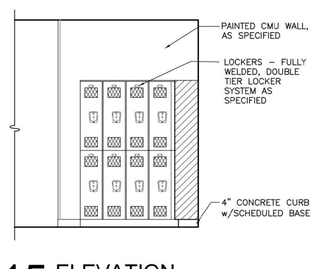
11 ELEVATION @ CLOSET 107A
SCALE: 3/8" = 1'–0"

12 ELEVATION @ CLOSET 107A
SCALE: 3/8" = 1'–0"

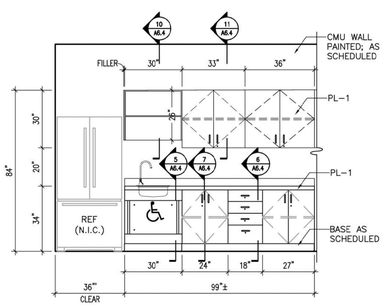


13 ELEVATION @ BOYS' CHANGING RM 114
SCALE: 3/8" = 1'–0"

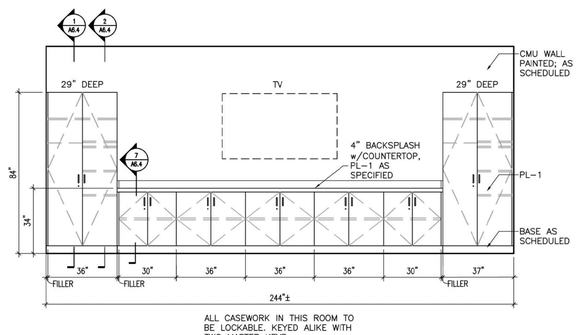
14 ELEVATION @ BOYS' CHANGING RM 114
SCALE: 3/8" = 1'–0"



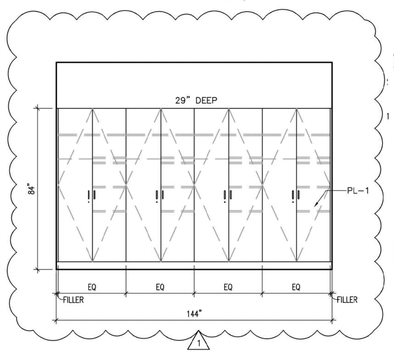
15 ELEVATION @ BOYS' CHANGING RM 114
SCALE: 3/8" = 1'–0"



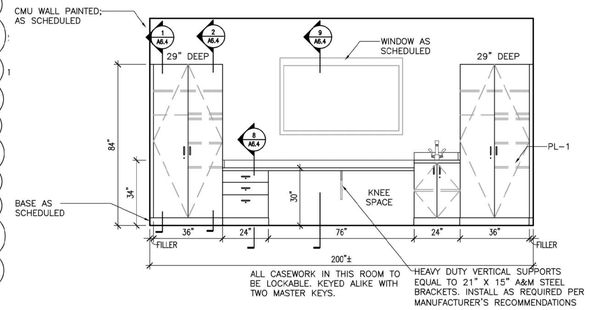
16 ELEVATION @ BREAK/WORK ROOM 111
SCALE: 3/8" = 1'–0"



17 ELEVATION @ JROTC ROOM 117
SCALE: 3/8" = 1'–0"



18 ELEVATION @ JROTC ROOM 117
SCALE: 3/8" = 1'–0"



19 ELEVATION @ HEALTH SCIENCE CLASSROOM 119
SCALE: 3/8" = 1'–0"

CASEWORK NOTES

- VERIFY ALL DIMENSIONS IN FIELD
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- FIELD VERIFY ALL CONDITIONS TO ENSURE NO CONFLICTS BETWEEN CASEWORK AND MILLWORK AND OTHER DISCIPLINES
- COORDINATE FINISHES, LOCKING PREFERENCES, GROMMET LOCATIONS, ETC., WITH OWNER
- COORDINATE INSTALLATION OF SCHEDULED BASE AT ALL CASEWORK AND MILLWORK WITH FLOORING CONTRACTOR

APPLIANCE NOTES

- VERIFY ALL DIMENSIONS IN FIELD AND COORDINATE APPLIANCE SIZES TO ENSURE A PROPER INSTALLATION
- **ALL APPLIANCES ARE NOT IN CONTRACT (NIC) AND ARE TO BE PURCHASED AND INSTALLED BY THE OWNER**
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LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

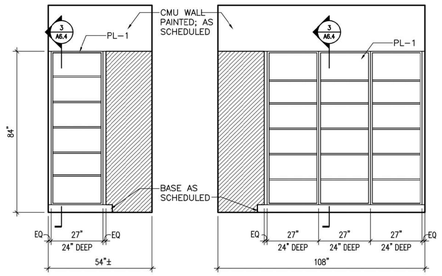
NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
CASEWORK ELEVATIONS

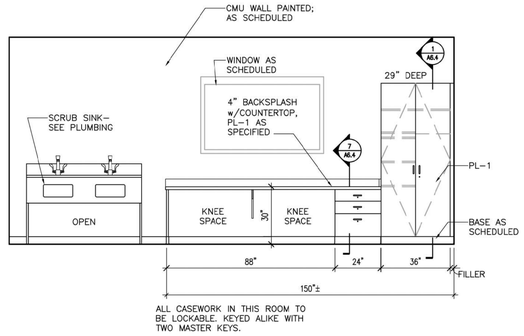
PROJ. MGR.:	R. VERNON
DRAWN:	CRB,KES
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B
SHEET NO:
A6.2
12 OF 16



1 ELEVATION @ STORAGE 119B
SCALE: 3/8" = 1'-0"

2 ELEVATION @ STORAGE 119B
SCALE: 3/8" = 1'-0"



3 ELEVATION @ HEALTH SCIENCE 120
SCALE: 3/8" = 1'-0"

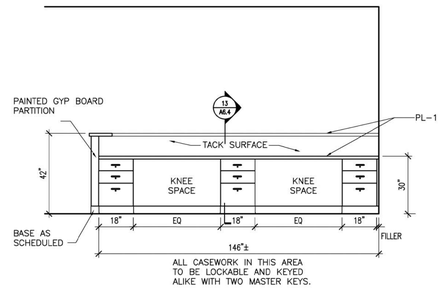
4 NOT USED
SCALE: N/A

5 NOT USED
SCALE: N/A

6 NOT USED
SCALE: N/A

7 NOT USED
SCALE: N/A

8 NOT USED
SCALE: N/A

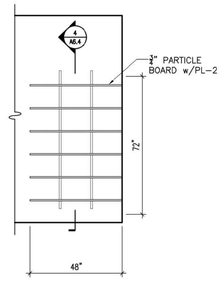


17 ELEVATION @ NURSE'S STATION 119A
SCALE: 3/8" = 1'-0"

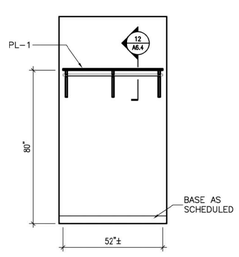
9 NOT USED
SCALE: N/A

10 NOT USED
SCALE: N/A

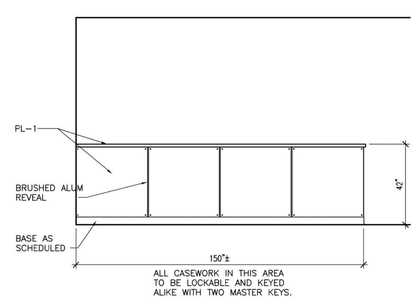
11 NOT USED
SCALE: N/A



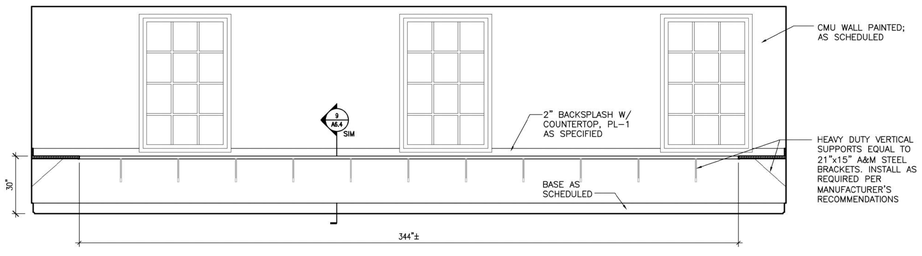
12 ELEVATION @ JANITOR'S CLOSET 124A
SCALE: 3/8" = 1'-0"



13 ELEVATION @ FEMALE RESTROOM 125
SCALE: 3/8" = 1'-0"



16 ELEVATION @ NURSE'S STATION 119A
SCALE: 3/8" = 1'-0"



14 ELEVATION @ COMPUTER SCIENCE 107
SCALE: 3/8" = 1'-0"

15 NOT USED
SCALE: N/A

CASEWORK NOTES
VERIFY ALL DIMENSIONS IN FIELD
ALL LAMINATE CLAD CASEWORK / MILLWORK - INCLUDING RESTROOMS - ARE NOT IN CONTRACT (NIC) AND SHOWN FOR REFERENCE ONLY
FIELD VERIFY ALL CONDITIONS TO ENSURE NO CONFLICTS BETWEEN CASEWORK AND MILLWORK AND OTHER DISCIPLINES
COORDINATE FINISHES, LOCKING PREFERENCES, GROMMET LOCATIONS, ETC., WITH OWNER
COORDINATE INSTALLATION OF SCHEDULED BASE AT ALL CASEWORK AND MILLWORK WITH FLOORING CONTRACTOR

APPLIANCE NOTES
VERIFY ALL DIMENSIONS IN FIELD AND COORDINATE APPLIANCE SIZES TO ENSURE A PROPER INSTALLATION
ALL APPLIANCES ARE NOT IN CONTRACT (NIC) AND ARE TO BE PURCHASED AND INSTALLED BY THE OWNER
APPLIANCES LISTED IN THE ARCHITECTURAL SPECIFICATIONS ARE FOR REFERENCE ONLY

LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

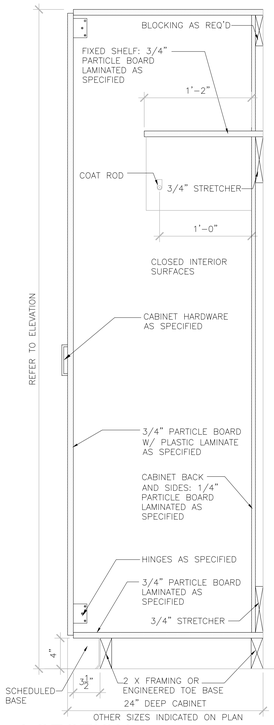
NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION



SHEET TITLE:
CASEWORK ELEVATIONS

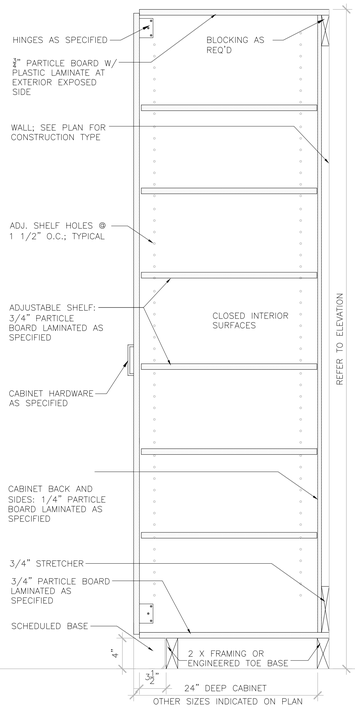
PROJ. MGR.:	R. VERNON
DRAWN:	CRB,KES
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B
SHEET NO:
A6.3
13 OF 16
0 1" 2"



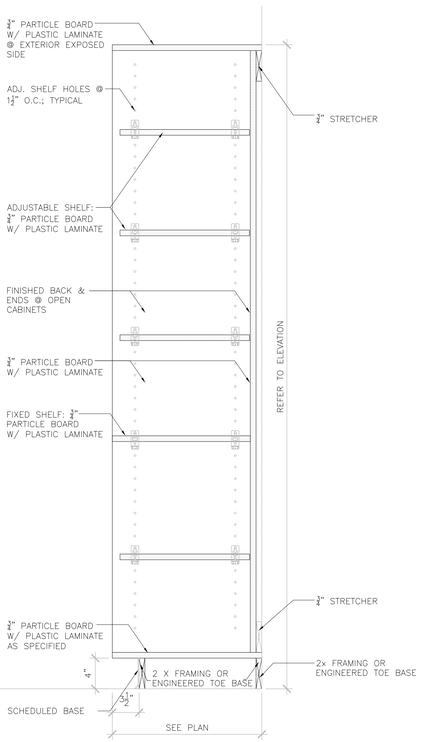
1 SECTION @ WARDROBE CABINET

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



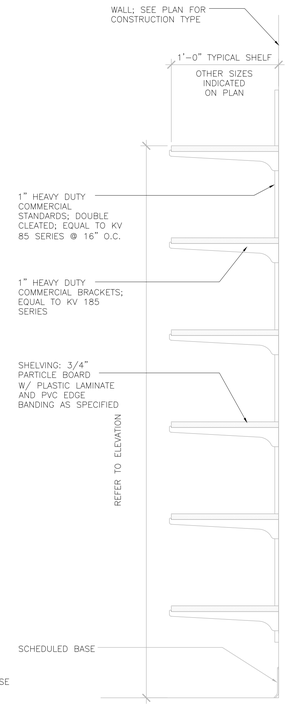
2 SECTION @ WARDROBE CABINET

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



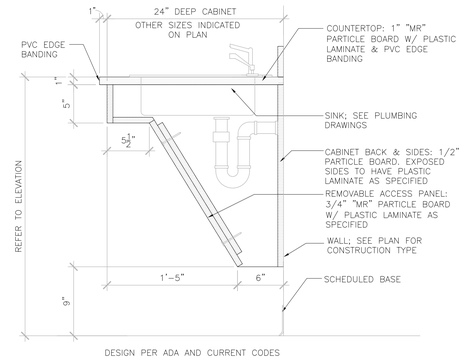
3 SECTION @ ADJUSTABLE STORAGE

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



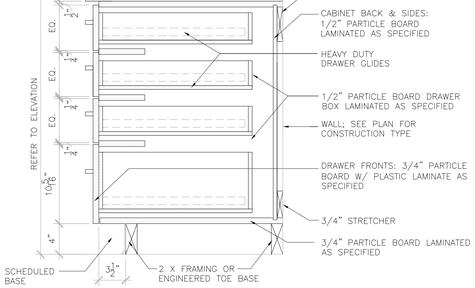
4 SECTION @ ADJUSTABLE SHELVING

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



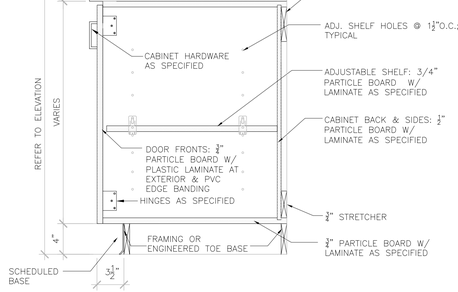
5 SECTION @ BASE SINK ADA

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



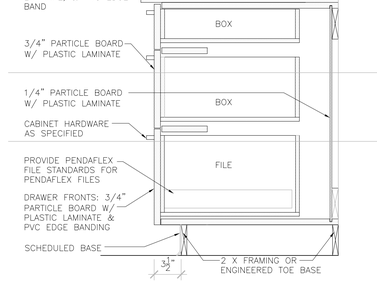
6 SECTION @ 4 DRAWER BASE

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



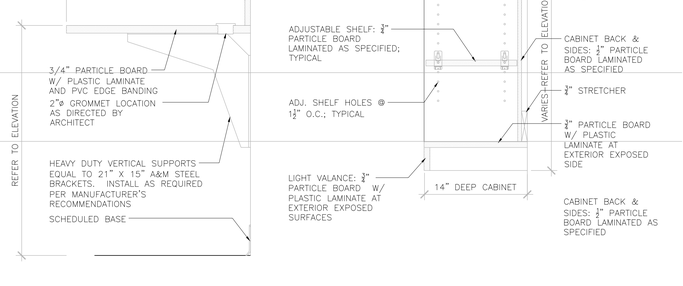
7 SECTION @ BASE CABINET

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



8 SECTION @ BOX/BOX/FILE

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

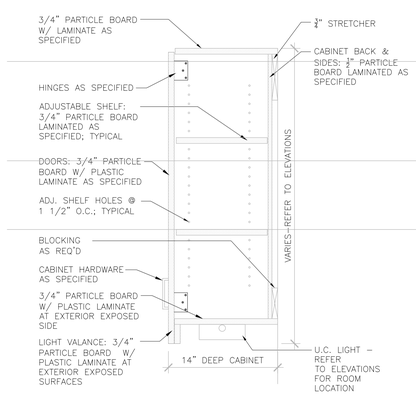


9 SECTION @ KNEE SPACE

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

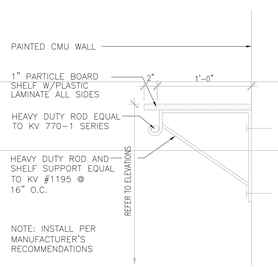
10 SECTION @ UPPER OPENED CABINET

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



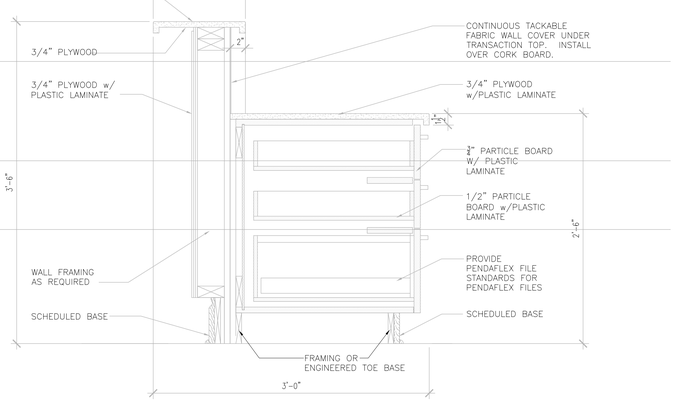
11 SECTION @ UPPER CABINET

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



12 SECTION @ SHELF WITH COAT ROD

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



13 SECTION @ NURSE'S STATION 119A

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

LATHAN ARCHITECTS

LATHAN • BRYANT • CALMA

NEW ADDITION AND RENOVATION FOR

RUSSELLVILLE HIGH SCHOOL

PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING

1865 WATERLOO ROAD, RUSSELLVILLE AL 35653

RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:

CASEWORK DETAILS

PROJ. MGR.: R. VERNON

DRAWN: CRB,KES

DATE: MARCH 21, 2022

REVISIONS

JOB NO. 19-90B

SHEET NO:

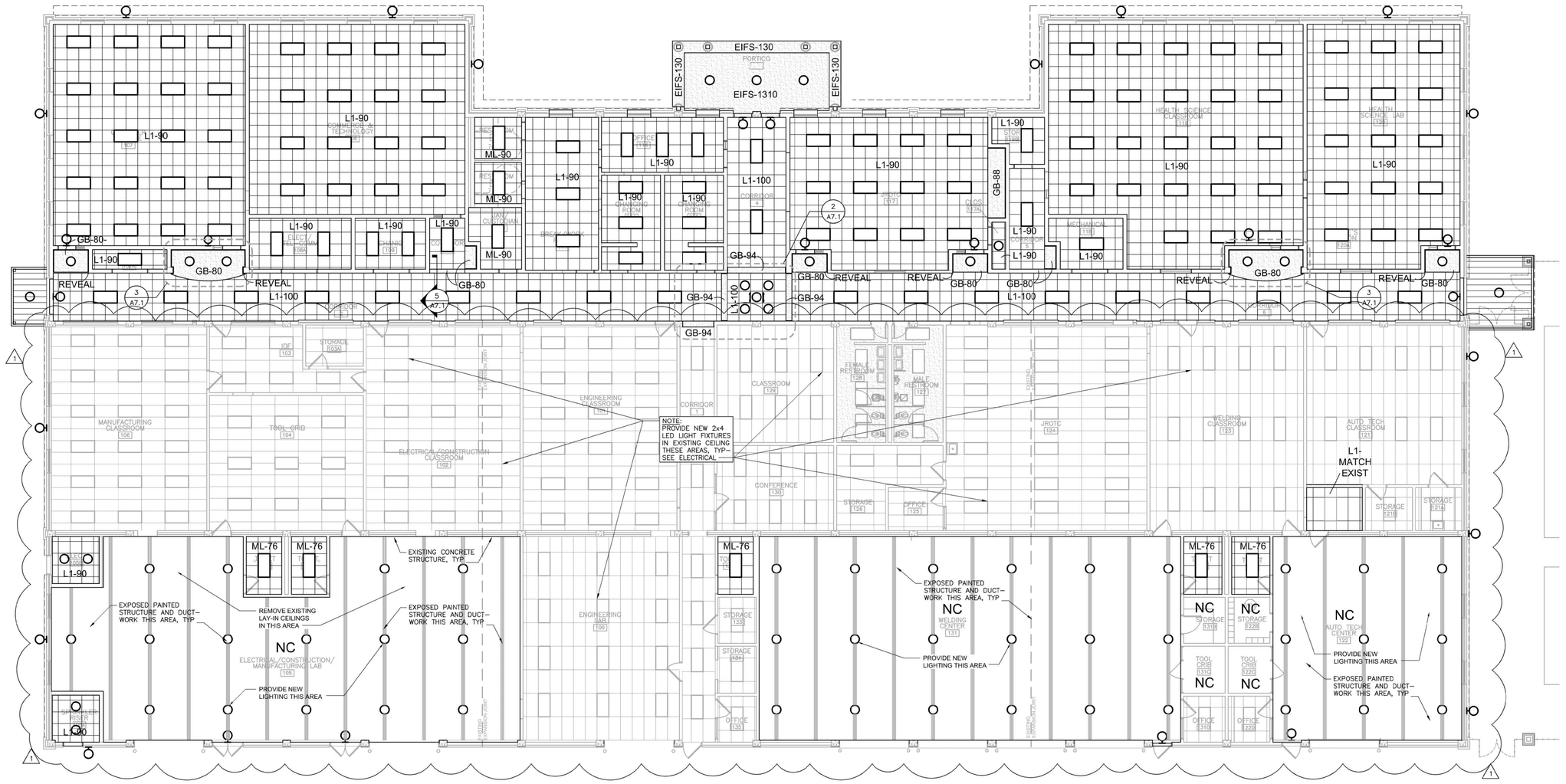
A6.4

0 1" 2"

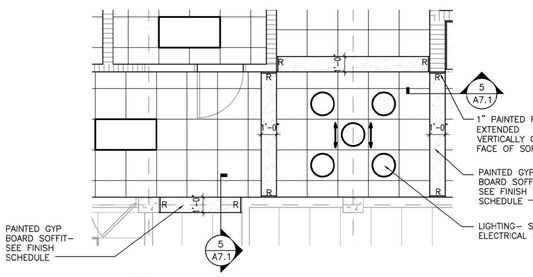
LIGHTING/ELECTRICAL NOTES
COORDINATE LIGHTING LAYOUTS WITH ELECTRICAL DRAWINGS. CONTACT ARCHITECT WITH ANY DISCREPANCIES.
PROJECTOR UNIT FURNISHED BY OWNER. COORDINATE ROUGH-IN LOCATION WITH ELECTRICAL BASED ON PROJECTOR REQUIREMENTS.

CEILING NOTES
AFF = ABOVE FINISH FLOOR
ALL CEILING HEIGHTS ARE FROM ADJACENT FINISHED FLOOR
CEILING HEIGHTS INDICATED ARE MINIMUM HEIGHTS. COORDINATE W/ PLUMBING, MECHANICAL, AND ELECTRICAL TO INSTALL CEILINGS AS HIGH AS POSSIBLE.
ALL CEILING GRIDS ARE TO BE CENTERED IN ROOM UNLESS SHOWN OR NOTED OTHERWISE
USE 2x4 LAY-IN CEILING TILES CUT TO FIT AT ALL LOCATIONS LESS THAN 12" AT PERIMETER OF ROOM. WHERE 2x4 TILES OCCUR THEY SHALL MATCH SPECIFIED TILE AS INDICATED FOR EACH ROOM.
COORDINATE W/ PLUMBING, MECHANICAL AND PLUMBING DRAWINGS AND PROVIDE FRAMING AS REQUIRED TO ACCOMMODATE MECHANICAL AND PLUMBING SYSTEMS
1" REVEAL SHALL BE REQUIRED AT ALL AREAS WHERE GYPSUM INTERSECTS CMU.
R - 1" REVEAL AT ALL GYPSUM SOFFITS; HORIZONTAL AS SHOWN, EXTEND VERTICAL - PAINTED TO MATCH SOFFIT
PROVIDE R-38 UNFACED INSUL w/MESH SUPPORT @ ACOUST CLGS
PROVIDE R-38 FACED INSUL w/MECH SUPPORT @ EXPOSED CLGS

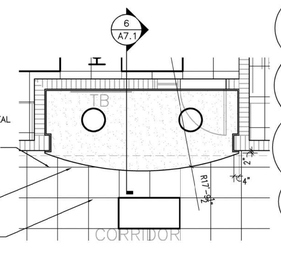
CEILING LEGEND	
FIXTURE TYPES - SEE ELECTRICAL	
CEILING TYPE	CEILING HEIGHTS
NC - NO CEILING (EXPOSED STRUCTURE TO BE PAINTED - SEE FINISH SCHEDULE)	80 = 8'-0" AFF
	85 = 8'-5" AFF
GB - GYPSUM BOARD	88 = 8'-8" AFF
MGB - MOISTURE RESISTANT GYPSUM BOARD	90 = 9'-0" AFF
L1 - 2 x 2 LAY-IN FINE FISSURED	100 = 10'-0" AFF
ML - MOISTURE RESISTANT LAY-IN	1300 = 13'-00" AFF
EIFS - EXTERIOR INSULATED FINISH SYSTEM	1310 = 13'-10" AFF
REFER TO FINISH SYMBOLS ON PLAN FOR MATERIALS AND CEILING HEIGHTS. CEILING TYPE & HEIGHT — L1-90 CEILING	



1 REFLECTED CEILING PLAN
1/8" = 1'-0"

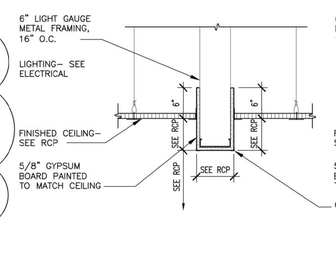


2 ENLARGED RCP
1/4" = 1'-0" AT GYP SOFFIT

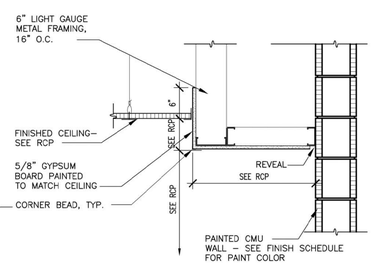


3 ENLARGED RCP
1/4" = 1'-0" AT GYP SOFFIT

4 NOT USED
SCALE = N/A



5 SOFFIT DETAIL
1" = 1'-0" LAY-IN BOTH SIDES



6 SOFFIT DETAIL
1" = 1'-0" AT CMU

7 NOT USED
SCALE = N/A

LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

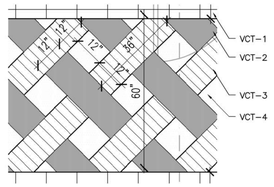
STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
REFLECTED CEILING PLAN AND DETAILS

PROJ. MGR.:	R. VERNON
DRAWN:	CRB,KES
DATE:	04/15/22
REVISIONS	
1	ADD #1 05/15/22

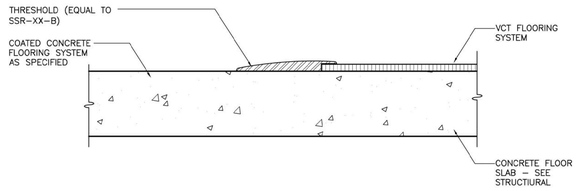
JOB NO. 19-90B

SHEET NO:
A7.1
15 OF 16



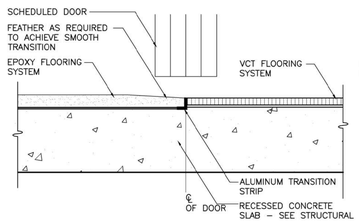
2 ENLARGED PLAN @ VCT FLOOR PATTERN

1/2" = 1'-0"



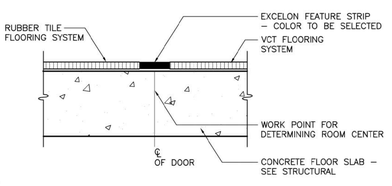
3 DETAIL @ CONCRETE TO VCT

NOT TO SCALE



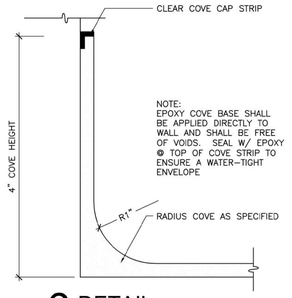
4 DETAIL @ EPOXY TO VCT

NOT TO SCALE



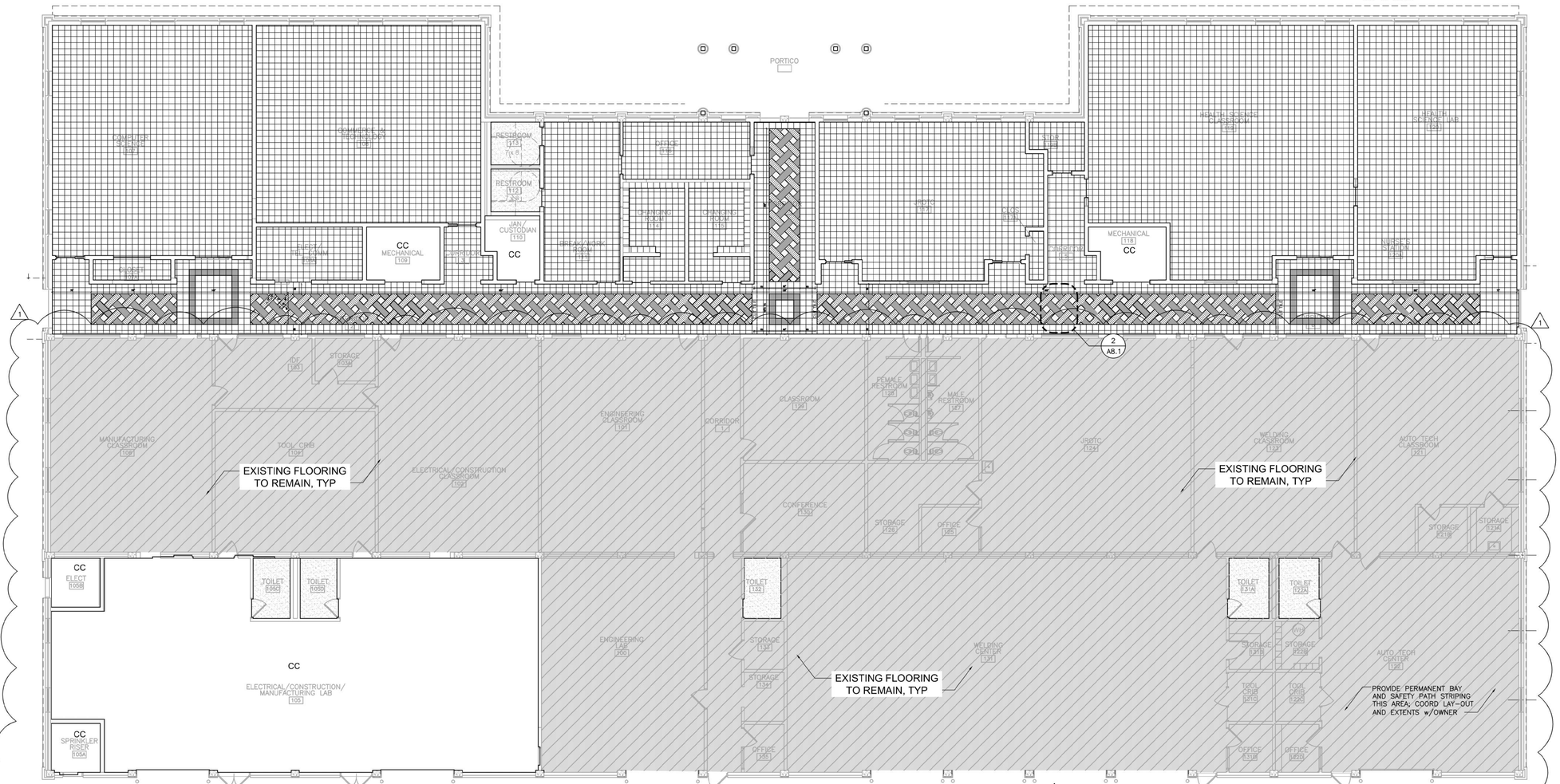
5 DETAIL @ VCT TO VCT (OR RUBBER)

NOT TO SCALE



6 DETAIL @ EPOXY BASE

NOT TO SCALE



1 FLOOR FINISH PLAN

1/8" = 1'-0"

FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS SOUTH	WALLS EAST	WALLS WEST	DOOR FRAME	CEILING/SOFFIT PAINT	NOTES
1	CORRIDOR	VCT-1/2/3/4	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2	PNT-3	EPOXY PAINT AT ALL WET AREAS
2	CORRIDOR	VCT-1/2/3/4	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2	PNT-3	EPOXY PAINT AT ALL WET AREAS
3	CORRIDOR	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2	PNT-3	EPOXY PAINT AT ALL WET AREAS
4	CORRIDOR	VCT-1/2/3/4	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2	PNT-3	EPOXY PAINT AT ALL WET AREAS
5	CORRIDOR	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2	PNT-3	EPOXY PAINT AT ALL WET AREAS
100	ENGINEERING LAB	EX	EX	EX	EX	EX	EX	EX		
101	ENGINEERING CLASSROOM	EX	EX	EX	EX	EX	EX	EX		
102	ELECT/CONSTRUCTION CLASSROOM	EX	EX	EX	EX	EX	EX	EX		
103	IDF	EX	EX	EX	EX	EX	EX	EX		
103A	STORAGE	EX	EX	EX	EX	EX	EX	EX		
104	TOOL CRIB	EX	EX	EX	EX	EX	EX	EX		
105	ELECTRICAL / CONST. / MANUF. LAB	CC	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
105A	SPRINKLER RISER	CC	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
105B	ELECTRCAL	CC	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
105C	TOILET	ERF-1	ERB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		EPOXY PAINT AT ALL WET AREAS
105D	TOILET	ERF-1	ERB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		EPOXY PAINT AT ALL WET AREAS
106	MANUFACTURING CLASSROOM	EX	EX	EX	EX	EX	EX	EX		
107	COMPUTER SCIENCE	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
107A	CLOSET	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
108	COMMERCE & TECH. CLASSROOM	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
108A	ELECT / TEL-COMM	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
109	MECHANICAL	CC	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
110	JANITOR / CUSTODIAN	CC	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
111	BREAK / WORK ROOM	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
112	RESTROOM	ERF-1	ERB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		EPOXY PAINT AT ALL WET AREAS
113	RESTROOM	ERF-1	ERB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		EPOXY PAINT AT ALL WET AREAS
114	BOYS' CHANGING ROOM	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
115	GIRLS' CHANGING ROOM	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
116	OFFICE	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
117	JROTC	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		

FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS SOUTH	WALLS EAST	WALLS WEST	DOOR FRAME	CEILING/SOFFIT PAINT	NOTES
117A	CLOSET	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
118	MECHANICAL	CC	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
119	HEALTH SCIENCE CLASSROOM	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		EPOXY PAINT AT ALL WET AREAS
119A	NURSE'S STATION	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
119B	STORAGE	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
120	HEALTH SCIENCE LAB	VCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
121	AUTO-TECH CLASSROOM	EX	EX	EX	EX	EX	EX	EX		
121A	STORAGE	EX	EX	EX	EX	EX	EX	EX		
121B	STORAGE	EX	EX	EX	EX	EX	EX	EX		
122	AUTO-TECH CENTER	EX	EX	EX	EX	EX	EX	EX		
122A	TOILET	ERF-1	ERB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		EPOXY PAINT AT ALL WET AREAS
122B	STORAGE	EX	EX	EX	EX	EX	EX	EX		
122C	TOOL CRIB	EX	EX	EX	EX	EX	EX	EX		
122D	OFFICE	CC	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
123	WELDING CLASSROOM	EX	EX	EX	EX	EX	EX	EX		
124	JROTC CLASSROOM	EX	EX	EX	EX	EX	EX	EX		
125	OFFICE	EX	EX	EX	EX	EX	EX	EX		
126	STORAGE	EX	EX	EX	EX	EX	EX	EX		
127	MALE RESTROOM	EX	EX	EX	EX	EX	EX	EX		
128	FEMALE RESTROOM	EX	EX	EX	EX	EX	EX	EX		
129	CLASSROOM	EX	EX	EX	EX	EX	EX	EX		
130	CONFERENCE	EX	EX	EX	EX	EX	EX	EX		
131	WELDING CENTER	EX	EX	EX	EX	EX	EX	EX		
131A	TOILET	ERF-1	ERB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		EPOXY PAINT AT ALL WET AREAS
131B	STORAGE	EX	EX	EX	EX	EX	EX	EX		
131C	TOOL CRIB	EX	EX	EX	EX	EX	EX	EX		
131D	OFFICE	CC	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
132	TOILET	ERF-1	ERB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		EPOXY PAINT AT ALL WET AREAS
133	STORAGE	EX	EX	EX	EX	EX	EX	EX		
134	OFFICE	EX	EX	EX	EX	EX	EX	EX		
135	OFFICE	EX	EX	EX	EX	EX	EX	EX		

BASE

ITEM	MANUFACTURER	ITEM NUMBER/NAME
RB-1	TARKETT	TBD
ERB-1	SEE SPEC	MATCH QFS-1

VINYL COMPOSITION TILE

ITEM	MANUFACTURER	ITEM NUMBER/NAME
VCT-1	ARMSTRONG	COLOR: TBD SIZE: 12X12
VCT-2	ARMSTRONG	COLOR: TBD SIZE: 12X12
VCT-3	ARMSTRONG	COLOR: TBD SIZE: 12X12
VCT-4	ARMSTRONG	COLOR: TBD SIZE: 12X12

QUARTZ FLOORING

ITEM	MANUFACTURER	ITEM NUMBER/NAME
ERF-1	SHERWIN WILLIAMS	BLEND ID: ---

COATED/STAINED CONCRETE

ITEM	MANUFACTURER	ITEM NUMBER/NAME
CC	SEE SPEC	SEE SPEC

PLASTIC LAMINATE

ITEM	MANUFACTURER	ITEM NUMBER/NAME
PL-1	WILSONART	COLOR: TBD PREMIUM LAMINATE WITH MATCHING EDGEBAND

PAINT

ITEM	MANUFACTURER	ITEM NUMBER/NAME	TYPE/LOCATION
PNT-1	SHERWIN WILLIAMS	COLOR: TBD	GENERAL WALLS
PNT-2	SHERWIN WILLIAMS	COLOR: TBD	GENERAL TRIM
PNT-3	SHERWIN WILLIAMS	COLOR: TBD	SOFFIT ACCENT COLOR
PNT-4	SHERWIN WILLIAMS	COLOR: TBD	SOFFIT ACCENT COLOR
PNT-5	SHERWIN WILLIAMS	COLOR: TBD	SOFFIT ACCENT COLOR

TACKABLE SURFACE

ITEM	MANUFACTURER	ITEM NUMBER/NAME
TS-1	KOROSEAL	COLOR: TBD COLLECTION: TACWALL

SOLID SURFACE

ITEM	MANUFACTURER	ITEM NUMBER/NAME
SS-1	CORIAN	GRADE 7: COLOR TBD

CERAMIC WALL TILE

ITEM	MANUFACTURER	ITEM NUMBER/NAME
CWT-1	CROSSVILLE	SEE SPEC: --- COLOR: ---
CWT-2	CROSSVILLE	SEE SPEC: --- COLOR: ---

FINISH PATTERN LEGEND

- VCT-1 (VINYL COMPOSITION TILE)
- VCT-2 (VINYL COMPOSITION TILE)
- VCT-3(VINYL COMPOSITION TILE)
- VCT-4 (VINYL COMPOSITION TILE)
- CC (EPOXY PAINT COATED CONCRETE F..OORING SYSTEM)
- QFS-1 (QUARTZ FLOORING)
- EXISTING FLOORING TO REMAIN

NOTE:
1. SEE DETAILS FOR TRANSITION BETWEEN FLOORING MATERIALS.
2. DRY LAY INSTALL OF THE VCT FLOOR PATTERN IS REQUIRED BEFORE FINAL INSTALLATION. THIS WILL NEED TO BE COORDINATED WITH THE ARCHITECT AND THE OWNER AND MUST BE APPROVED ON SITE BY THE ARCHITECT AND OWNER

LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

NEW ADDITION AND RENOVATION FOR RUSSELLVILLE HIGH SCHOOL

PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

STATE OF ALABAMA
No. 3365
RICK N. LATHAN
REGISTERED ARCHITECT

SHEET TITLE:
FINISH PLAN, SCHEDULE, LEGEND AND DETAILS

PROJ. MGR.:	R. VERNON
DRAWN:	CRB,KES
DATE:	04/15/22

REVISIONS

1	ADD #1	05/15/22

JOB NO. 19-90B

SHEET NO: A8.1

16 OF 16

0 1" 2"

GENERAL NOTES

1.0 DESIGN CRITERIA

1.1 CODES AND SPECIFICATIONS:

A. GENERAL BUILDING CODE:
INTERNATIONAL BUILDING CODE, 2015 EDITION.

B. CONCRETE:
BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-14)

C. STRUCTURAL PRECAST CONCRETE:
PCI DESIGN HANDBOOK, LATEST EDITION

PCI MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTIONS FOR PRECAST CONCRETE PRODUCTS, LATEST EDITION.

D. ARCHITECTURAL PRECAST CONCRETE:
MNL-122-89 ARCHITECTURAL PRECAST CONCRETE, LATEST EDITION.

PCI MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF ARCHITECTURAL PRECAST CONCRETE PRODUCTS, LATEST EDITION.

E. STRUCTURAL STEEL:
SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (ANSI/AISC 360-10)

F. STEEL DECK:
STEEL DECK INSTITUTE DESIGN MANUALS FOR COMPOSITE DECKS, NON-COMPOSITE DECKS, AND ROOF DECKS, LATEST EDITIONS.

G. MASONRY:
SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-13).
BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-13).

NATIONAL CONCRETE MASONRY ASSOCIATION'S STANDARD PRACTICES AND "SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF LOAD BEARING CONCRETE MASONRY"

H. COLD-FORMED STEEL FRAMING:
AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, AMERICAN IRON AND STEEL INSTITUTE (AISI S200-12)

1.2 DESIGN GRAVITY LOADS (PSF):

A. DEAD LOADS:
ANY CHANGES IN CONSTRUCTION MATERIALS FROM THOSE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS SHALL BE REPORTED BY THE GENERAL CONTRACTOR TO THE STRUCTURAL ENGINEER FOR VERIFICATION OF LOAD-CARRYING CAPACITY OF THE STRUCTURE.

B. FLOOR LIVE LOADS:
NON-REDUCIBLE PARTITION LIVE LOAD OF 20 PSF HAS BEEN INCLUDED PER IBC SECTION 1607.5.

LIVE LOAD REDUCTIONS AS DETERMINED BY IBC SECTION 1607.10 HAVE BEEN TAKEN WHERE PERMITTED.

FLOOR (REDUCIBLE)----------100
STORAGE----------125
MECHANICAL ROOM----------125
MECHANICAL MEZZANINE----------125
STAIRS & EXITWAYS----------100

C. ROOF LIVE LOADS:
WHERE PERMITTED ROOF LIVE LOADS ARE REDUCED FROM THE BASE VALUE SHOWN BELOW IN ACCORDANCE WITH IBC SECTION 1607.12

ROOF (ADDITIONS)----------20

D. ROOF SNOW LOADS:
GROUND SNOW LOAD (Pg)----------10.0
IMPORTANCE FACTOR (I)----------1.1
EXPOSURE FACTOR (Ce)----------1.0
THERMAL FACTOR (Ct)----------1.0

E. FOLDING PARTITIONS:
DEAD LOAD----------12 PSF
ALLOWABLE DEFLECTION OF STRUCTURAL PARTITION SUPPORT BEAM DUE TO PARTITION WEIGHT----------L/1000

WHERE "L" IS THE CLEAR SPAN OF THE SUPPORTING BEAM.

IT IS ASSUMED THAT THE BEAM MAY DEFLECT UP TO L/120 BEFORE INSTALLATION OF FOLDING PARTITION.

FOLDING PARTITION MANUFACTURER AND CONTRACTOR SHALL VERIFY THAT THESE DESIGN VALUES ARE ACCEPTABLE BEFORE FABRICATING AND INSTALLING PARTITIONS OR SUPPORTING STRUCTURAL ELEMENTS (SUCH AS BEAMS AND/OR JOISTS).

1.3 DESIGN LATERAL LOADS:

A. WIND LOADS:
ULTIMATE DESIGN WIND SPEED (3-SECOND GUST)----------120MPH
BASIC WIND SPEED (3-SECOND GUST)----------90MPH
WIND IMPORTANCE FACTOR (I)----------1.00
WIND EXPOSURE CATEGORY----------C
INTERNAL PRESSURE COEFFICIENTS---------- +/- 0.18
SEE TYPICAL DETAILS FOR COMPONENT AND CLADDING LOADS

B. SEISMIC LOADS:
OCCUPANCY CATEGORY III (GROUP E OCCUPANCIES WITH OCCUPANCY > 250)
SEISMIC IMPORTANCE FACTOR----------1.25
MAPPED SPECTRAL RESPONSE ACCELERATIONS:
SS----------0.280
S1----------0.135
SITE CLASS----------C
SPECTRAL RESPONSE COEFFICIENTS:
SDS----------0.224
SD1----------0.150
SEISMIC DESIGN CATEGORY----------C
BASIC SEISMIC-FORCE-RESISTING SYSTEM:
INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
DESIGN BASE SHEAR----------115 KIPS
SEISMIC RESPONSE COEFFICIENT, Cs----------0.1867
RESPONSE MODIFICATION FACTOR, R----------3.5
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

2.0 GENERAL CONDITIONS

2.1 THE STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE A PORTION OF THE CONSTRUCTION DOCUMENTS. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL REFERENCE AND COORDINATE WITH OTHER DISCIPLINE'S DRAWINGS. ANY DISCREPANCIES OR OMISSIONS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT AND STRUCTURAL DESIGN GROUP.

2.2 ALL REPORTS, PLANS, SPECIFICATIONS, COMPUTER FILES, FIELD DATA, NOTES, AND OTHER DOCUMENTS AND INSTRUMENTS PREPARED BY STRUCTURAL DESIGN GROUP AS INSTRUMENTS OF SERVICE SHALL REMAIN THE PROPERTY OF STRUCTURAL DESIGN GROUP. STRUCTURAL DESIGN GROUP SHALL RETAIN ALL COMMON LAW, STATUTORY, AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THERETO.

2.3 CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND SITE CONDITIONS PRIOR TO FABRICATION/CONSTRUCTION. NOTIFY STRUCTURAL ENGINEER AND ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION/CONSTRUCTION.

2.4 THE CONTRACTOR SHALL OBTAIN A COPY OF THE EXISTING BUILDING DRAWINGS TITLED "RUSSELLVILLE VOCATIONAL SCHOOL, RUSSELLVILLE, ALABAMA", PREPARED BY BARR & TUNE ARCHITECTS, DATED SEPTEMBER 18, 1967, THAT WERE USED IN THE PREPARATION OF THESE DOCUMENTS. NOTIFY STRUCTURAL ENGINEER AND ARCHITECT OF ANY DISCREPANCIES OF THE EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION/CONSTRUCTION.

2.5 WHERE SHOP DRAWINGS, CALCULATIONS, OR SUBMITTALS ARE CALLED FOR IN THE PROJECT DOCUMENTS (DRAWINGS AND SPECIFICATIONS) AND ARE NOT PROVIDED BY THE CONTRACTOR, THE CONTRACTOR ASSUMES TOTAL RESPONSIBILITY FOR THE DESIGN AND ASSOCIATED WORK.

2.6 ENGINEER'S SHOP DRAWING REVIEW IS LIMITED TO REVIEW FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT REFLECTED IN THE STRUCTURAL PORTION OF THE CONTRACT DOCUMENTS. THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE DRAWINGS, SPECIFICATIONS OR OTHER PROJECT CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED OR IMPLIED FOR THE CORRECTNESS OF DIMENSIONS OR DETAILS. THIS REVIEW DOES NOT AUTHORIZE CHANGES TO THE CONTRACT SUM UNLESS STATED IN A SEPARATE WRITTEN FORM OR CHANGE ORDER. CONTRACTOR SHALL CONFIRM AND CORRELATE ALL QUANTITIES AND DIMENSIONS, SELECT FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATE HIS WORK WITH THAT OF OTHER TRADES, AND PERFORM HIS WORK IN A SAFE AND SATISFACTORY MANNER. CONTRACTOR SHALL ALSO REFER TO THE REQUIREMENTS OF THE GENERAL AND SUPPLEMENTARY GENERAL CONDITIONS.

2.7 ALL DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS, UNLESS NOTED.

2.8 VERIFY ALL DIMENSIONS AND DETAILS SHOWN ON THESE DRAWINGS. ANY DISCREPANCIES OR OMISSIONS FOUND SHALL BE REPORTED TO THE ENGINEER AND OTHER DESIGN PROFESSIONALS AS APPROPRIATE FOR RESOLUTION PRIOR TO PROCEEDING WITH ANY RELATED WORK.

2.9 THESE DRAWINGS DO NOT INCLUDE PROVISIONS TO SATISFY JOB SITE SAFETY REQUIREMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING SAFETY DURING CONSTRUCTION AND FOR CONFORMANCE TO ALL APPLICABLE OSHA STANDARDS. JOBSITE VISITS BY ENGINEER SHALL NOT CONSTITUTE APPROVAL, AWARENESS OR LIABILITY FOR ANY HAZARDOUS CONDITIONS.

2.10 STRUCTURAL DESIGN GROUP IS NOT RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, SAFETY PROCEDURES, CONSTRUCTION SUPERVISION OR SITE SAFETY, AND DOES NOT HAVE THE AUTHORITY TO STOP WORK FOR THESE ITEMS. DRAWINGS FURTHER DO NOT PROVIDE ENGINEERING CONTROLS FOR SILICA STANDARD OR ANY OTHER SAFETY STANDARD.

2.11 THE CONTRACTOR IS SOLELY RESPONSIBLE FOR BRACING AND SHORING ALL EXCAVATIONS, DEWATERING OF EXCAVATION FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE, TEMPORARY AND EXISTING STRUCTURES, AND PARTIALLY COMPLETED PORTIONS OF THE WORK TO ASSURE THE SAFETY OF ANY PERSON COMING IN CONTACT WITH THE WORK.

2.12 THE STRUCTURAL INTEGRITY OF THE BUILDING IS DEPENDENT UPON COMPLETION ACCORDING TO THE PLANS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER OF RECORD ASSUMES NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION. THE METHOD OF CONSTRUCTION AND SEQUENCE OF OPERATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SUPPLY ANY NECESSARY BRACING, GUYS, ETC. TO PROPERLY BRACE THE STRUCTURE AGAINST WIND, DEAD AND LIVE LOADS UNTIL THE BUILDING IS COMPLETED ACCORDING TO THE PLANS AND SPECIFICATIONS. ANY QUESTIONS REGARDING TEMPORARY BRACING REQUIREMENTS SHOULD BE FORWARDED TO A STRUCTURAL ENGINEER FOR REVIEW.

2.13 MECHANICAL UNITS AND ANY OTHER EQUIPMENT SUPPORTED BY THE STRUCTURE WITH WEIGHTS IN EXCESS OF 200 LBS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

2.14 WHERE NOTED IN DRAWINGS AND SPECIFICATIONS TO INSTALL PRODUCTS PER THE MANUFACTURER'S RECOMMENDATIONS, IT SHALL BE REQUIRED THAT THE CONTRACTOR FOLLOWS THE MANUFACTURER'S RECOMMENDATIONS.

2.15 STRUCTURAL OBSERVATION IS VISUAL OBSERVATION OF THE IN PLACE STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT THE TIME OF THE OBSERVATION AND SHALL NOT BE CONSTRUED AS INSPECTION OR APPROVAL OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING TESTING AND SPECIAL INSPECTIONS PER THE REQUIREMENTS IN THE PROJECT MANUAL.

2.16 OBSERVATION BY THE ENGINEER OF RECORD'S OFFICE DOES NOT REPLACE INSPECTIONS AND TESTING BY THE TESTING AGENCY OR SPECIAL INSPECTOR.

3.0 FOUNDATIONS

3.1 GEOTECHNICAL REPORT: FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY TERRACON CONSULTANTS, INC. (MADISON, ALABAMA), TITLED "GEOTECHNICAL ENGINEERING REPORT, RUSSELLVILLE HS BUILDING ADDITIONS, RUSSELLVILLE, FRANKLIN COUNTY, AL, DATED MARCH 25, 2020, TERRACON PROJECT NO.E1205012" ALONG WITH ANY SUPPLEMENTAL CORRESPONDENCE. THE GENERAL CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND FOLLOW ALL REQUIREMENTS AND RECOMMENDATIONS. GEOTECHNICAL RECOMMENDATIONS SHALL TAKE PRECEDENCE OVER THE ITEMS THAT FOLLOW IN THIS SECTION OF THE STRUCTURAL GENERAL NOTES.

3.2 MAXIMUM ALLOWABLE BEARING PRESSURE PER GEOTECHNICAL REPORT: 2500 PSF.

NOTE: ALL FOOTING BEARING ELEVATIONS SHALL BE BEARING IN SIMILAR MATERIAL EXTEND FOOTINGS AS NECESSARY WITH LEAN CONCRETE FILL.

3.3 HELICAL EARTH ANCHORS
A. HELICAL EARTH ANCHORS SHALL BE DESIGNED FOR THE LOADS NOTED ON THE DRAWINGS.

B. HELICAL EARTH ANCHOR SUPPLIER IS TO BE RESPONSIBLE FOR THE DESIGN OF ALL HELICAL EARTH ANCHOR AND THEIR CONNECTIONS TO THE STRUCTURE.

C. HELICAL EARTH ANCHOR MANUFACTURER SUPPLIER SHALL SUBMIT TO THE STRUCTURAL AND GEOTECHNICAL ENGINEERS, FOR RECORD, CALCULATIONS TO SUBSTANTIATE THE DESIGN CAPACITY OF THE ANCHORS. CALCULATIONS SHALL BEAR THE SEAL OF A PROFESSIONAL GEOTECHNICAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.

D. HELICAL EARTH ANCHOR MANUFACTURER SHALL PROVIDE SHOP DRAWINGS INDICATING THE LAYOUT, ANTICIPATED DEPTH/LENGTH, AND ANCHORAGE DETAILS TO THE STRUCTURAL AND GEOTECHNICAL ENGINEERS FOR THEIR RECORDS.
E. SITE TESTS:
1. LOAD TEST PROCEDURES (ASTM D1143, ASTM D3689): A SITE LOAD TEST SHALL BE PREFORMED ON ONE ANCHOR, OF THE TYPE TO BE USED AT THE PILE CAPS, BY AN INDEPENDENT TESTING AGENCY ACCEPTABLE TO THE ARCHITECT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADDITIONAL ANCHORS, MATERIALS, LABOR, AND EQUIPMENT AS REQUIRED TO TEST THE ANCHOR. THE TESTED ANCHOR SHALL BE ABANDONED. TEST ANCHOR IN COMPRESSION AND TENSION. SEE SPECIFICATIONS FOR ADFDITIONAL INFORMATION.

3.4 ALL FOUNDATION BEARING SURFACES SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE TO ENSURE THEIR COMPLIANCE WITH PRESSURES NOTED. ALL FOOTING ELEVATIONS ARE ESTIMATED AND MAY BE ADJUSTED IN THE FIELD BY THE GEOTECHNICAL ENGINEER.

3.5 COMPACTED FILL WITHIN THE BUILDING AREA (AND EXTENDING 10'-0" OUTSIDE THE EXTERIOR BUILDING LINE) SHALL MEET THE REQUIREMENTS NOTED IN THE GEOTECHNICAL REPORT.

3.6 BACKFILL FOR FOUNDATION AND RETAINING WALLS SHALL BE A FREE DRAINING GRANULAR MATERIAL, SUCH AS SIZE #57 STONE. BACKFILL SHALL BE COMPACTED SUFFICIENTLY TO PREVENT SUBSIDENCE OF SURFACE ADJACENT TO WALL. THE GRANULAR MATERIAL SHALL BE PLACED IN A 45 DEGREE WEDGE EXTENDING FROM THE BASE OF THE FOOTING TO WITHIN 18" OF FINSH GRADE ON EXTERIOR AND TO UNDERSIDE OF SLAB ON INTERIOR.

3.7 GRANULAR BACKFILL SUPPORTING A FOOTING SHALL BE COMPACTED UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER OR HIS APPROVED REPRESENTATIVE. PROVIDE A 12" THICK CAP OF PROPERLY COMPACTED CRUSH AND RUN STONE BETWEEN THE FOOTING AND THE PROPERLY COMPACTED GRANULAR BACKFILL. EXTEND CRUSH AND RUN CAP TWO FEET BEYOND THE PERIMETER OF THE FOOTING OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

3.8 FOUNDATION AND RETAINING WALLS SHALL NOT BE BACKFILLED UNTIL CONCRETE HAS ATTAINED THE REQUIRED 28 DAY COMPRESSIVE STRENGTH.

3.9 DO NOT PLACE BACKFILL AGAINST FOUNDATION WALLS UNTIL UPPER BRACING FLOORS ARE IN PLACE FOR AT LEAST SEVEN DAYS AND HAVE ATTAINED 75% OF DESIGN STRENGTH.

3.10 REINFORCING STEEL IN CONTINUOUS WALL FOOTINGS SHALL EXTEND THRU SPREAD FOOTINGS AT THE SAME ELEVATION AS WALL FOOTING. STEP WALL FOOTING DOWN ON SPREAD FOOTING WHERE SPREAD FOOTING IS BELOW CONTINUOUS WALL FOOTING.

3.11 SUBGRADE AND GRANULAR FILL SUPPORTING SLABS ON GRADE SHALL BE AS RECOMMENDED BY THE GEOTECHNICAL REPORT AND COMPACTED UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER OR HIS APPROVED REPRESENTATIVE. SEE SPECIFICATIONS FOR VAPOR RETARDER BENEATH SLABS ON GRADE.

3.12 GRANULAR FILL BENEATH SLABS, UNLESS NOTED OTHERWISE, SHALL BE 4" COMPACTED #57 STONE.

3.13 VAPOR RETARDER BENEATH SLABS ON GRADE, UNLESS NOTED, SHALL MEET ASTM E 1745, CLASS A, 15 MIL MINIMUM THICKNESS WITH MANUFACTURER'S RECOMMENDED ADHESIVE OR PRESSURE-SENSITIVE TAPE AND PIPE BOOTS, SUCH AS W.R. MEADOWS INC. PRODUCT PERMINATOR 15.

3.14 NO EXCAVATION SHALL BE CLOSER THAN AT A SLOPE OF 2:1 (TWO HORIZONTAL TO ONE VERTICAL) TO A FOOTING.

4.0 CONCRETE

4.1 CONCRETING OPERATIONS SHALL COMPLY WITH ACI STANDARDS.

4.2 CONCRETE STRENGTH AND DURABILITY REQUIREMENTS -- MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS (PSI), TYPE OF CONCRETE, MAXIMUM WATER/CEMENTITIOUS RATIO, AIR CONTENT, SLUMP, AND CONCRETE USE:

STRENGTH	TYPE	MAX W/C	AIR	SLUMP	USE
3000	NORMAL WT.	0.57	----	3" TO 5"	FOOTINGS
3500	NORMAL WT.	0.50	----	3" TO 5"	SLABS ON GRADE
4000	NORMAL WT.	0.45	4-6%	3" TO 5"	UNLESS NOTED

A. CONCRETE MIX DESIGN SHALL BE WORKABLE WITH LOWEST TOTAL WATER PER CUBIC YARD USING LARGEST PRACTICAL MAXIMUM SIZE OF COURSE AGGREGATE.

4.3 REINFORCING BARS: ASTM A615 GRADE 60.

4.4 REINFORCING STEEL SHOWN IN SECTIONS AND DETAILS ARE A SCHEMATIC INDICATION THAT REINFORCING EXISTS. SEE SCHEDULES, SECTION NOTES AND GENERAL NOTES FOR ACTUAL REINFORCING REQUIRED.

4.5 REINFORCING BAR PLACING ACCESSORIES IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE. WHERE CONCRETE IS EXPOSED IN FINISHED BUILDING, PROVIDE ACCESSORIES WITH RUSTPROOF LEGS. WHERE CONCRETE IS SAND-BLASTED OR BUSH-HAMMERED, PROVIDE ACCESSORIES OF STAINLESS STEEL.

4.6 DETAIL REINFORCEMENT IN ACCORDANCE WITH ACI 315. REINFORCEMENT SHALL NOT BE WELDED UNLESS NOTED OR APPROVED BY THE ENGINEER.

4.7 ALL SPLICES SHALL BE CLASS "B" TENSION LAP SPLICE, UNLESS NOTED.

4.8 ALL REINFORCING MARKED "CONT." INDICATES REINFORCING SHALL BE "CONTINUOUS" AND SHALL BE SPLICED WITH CLASS "B" TENSION LAP SPLICE, UNLESS NOTED.

4.9 PROVIDE CORNER BARS AT ALL CORNERS OF CONTINUOUS REINFORCING IN FOOTINGS, SLABS OR WALLS. CORNER BARS SHALL BE LONG ENOUGH TO PROVIDE A CLASS "B" LAP SPLICE OF REINFORCING BARS.

4.10 CONCRETE COVERAGE OF REINFORCEMENT, UNLESS NOTED:

FOOTINGS----------2" TOP & 3" BOTTOM & SIDES
COLUMNS & PEDESTALS----------1-1/2" CLEAR OF TIES
BEAMS----------1-1/2" CLEAR OF STIRRUPS
SLAB FACES NOT EXPOSED TO WEATHER OR EARTH----------3/4"
SLAB FACES EXPOSED TO WEATHER
#5 AND LESS----------1-1/2"
#6 AND GREATER----------2"

NOTE: SLAB ON GRADE WWR OR REINFORCEMENT EACH WAY SHALL BE 2" CLEAR FROM TOP OF SLAB. SEE EARTH SUPPORTED SLABS SECTION BELOW.

4.11 COLUMN, PEDESTAL AND WALL VERTICAL REINFORCING: DOWEL TO FOUNDATION WITH HOOKED BARS OF SAME SIZE AND SPACING AS VERTICAL REINFORCING.

4.12 WELDED WIRE REINFORCEMENT (WWR): ASTM A185. MINIMUM LAP AND EMBEDMENT TO BE THE GREATER OF ONE CROSS WIRE SPACING PLUS 2 INCHES OR 6 INCHES.

4.13 EARTH SUPPORTED SLABS:

4" THICK (UNLESS NOTED), REINFORCED WITH 6X6 W2.9/W2.9 WWR FLAT SHEETS SUPPORTED 2" CLEAR OF TOP OF SLAB, UNLESS NOTED. WWR TO BE CHAIRED AT 36 INCHES EACH WAY MINIMUM. SEE FOUNDATION NOTES FOR SUBGRADE REQUIREMENTS.

PROVIDE CONTROL AND CONSTRUCTION JOINTS AT MAXIMUM OF 3-4 TIMES SLAB THICKNESS IN FEET OR AS REQUIRED TO PREVENT UNCONTROLLED CRACKING PER ACI RECOMMENDATIONS. AS AN EXAMPLE, FOR A 4" THICK SLAB, PROVIDE JOINTS SPACED 12 - 16 FEET MAXIMUM. PANELS TO BE RECTANGULAR WITH LONG SIDE NOT TO EXCEED 1-1/2x SHORT SIDE. CUTTING SHOULD BE STARTED AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT AGGREGATE FROM BEING DISLODGE. CONTRACTOR SUBMIT PLAN SHOWING LOCATION OF CONSTRUCTION AND CONTROL JOINTS.

FLOOR DESIGN AND CONSTRUCTION BASIS IS ACI 302 AND 360, AND IT IS UNREALISTIC TO EXPECT CRACK-FREE OR CURL-FREE FLOORS. IT IS NORMAL TO EXPECT SOME AMOUNT OF CRACKING AND CURLING IN THE SLAB ON GRADE, AND SUCH OCCURRENCE DOES NOT NECESSARILY REFLECT ADVERSELY ON EITHER THE ADEQUENCY OF THE FLOOR DESIGN OR THE QUALITY OF ITS CONSTRUCTION.

EARTH SUPPORTED SLABS SHALL BE MOIST CURED FOR A MINIMUM OF SEVEN DAYS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. CURING COMPOUNDS, UNLESS NOTED, SHALL BE A MINIMUM OF CLEAR, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND MEETING ASTM C 309, TYPE 1, CLASS B, SELF-DISSIPATING, CERTIFIED BY CURING COMPOUND MANUFACTURER TO NOT INTERFERE WITH BONDING OF FLOOR COVERING.

WHERE CONTROL JOINTS TERMINATE INTO NON-PARALLEL CONTROL JOINTS, PROVIDE 2#4 X 6'-0" BARS MID DEPTH OF SLAB PERPENDICULAR TO TERMINAL CONTROL JOINT.

PROVIDE 2#4 X 6'-0" BARS MID DEPTH OF SLAB AT REENTRANT CORNERS.

WHERE CONTROL JOINTS TERMINATE AT EMBEDDED STEEL ELEMENTS (SUCH AS EDGE REINFORCEMENT AT LOADING DOCKS), PROVIDE JOINT IN STEEL ELEMENT.

4.14 WALL AND SLAB OPENINGS AND SLEEVES SMALLER THAN 12" (IN LARGER DIMENSION) ARE NOT SHOWN ON PLANS. CONTRACTOR SHALL SUBMIT ALL OPENINGS (SIZE AND LOCATIONS) AS A SINGLE COORDINATED SLEEVE PLAN FOR REVIEW AND APPROVAL.

4.15 CAST IN PLACE ALL SLEEVES AND INSERTS.

4.16 NO CONDUIT OR PIPE SHALL BE CAST IN THE SLAB ON GRADE WITHOUT THE WRITTEN APPROVAL OF STRUCTURAL DESIGN GROUP.

5.0 ARCHITECTURAL AND STRUCTURAL PRECAST CONCRETE

5.1 REFER TO ARCHITECT'S DRAWINGS AND SPECIFICATIONS FOR DIMENSIONAL, FINISHING, AND OTHER REQUIREMENTS OF ARCHITECTURAL PRECAST.

5.2 PRECAST MANUFACTURER IS TO BE RESPONSIBLE FOR THE DESIGN OF ALL PRECAST MEMBERS AND THEIR CONNECTIONS TO THE STRUCTURE. CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.

5.3 ANY CONNECTIONS SHOWN ON CONTRACT DRAWINGS ARE SHOWN FOR GENERAL ARRANGEMENT ONLY. THE CONTRACTOR SHALL COORDINATE ALL PRECAST CONNECTIONS AND EMBEDDED ITEMS WITH THE PRECAST MANUFACTURER.

A. CONNECTIONS OF THE PRECAST TO THE STRUCTURE SHALL NOT RESTRAIN THE STRUCTURE'S 1" DOWNWARD MOVEMENT AT ALL BEAMS AND 1" UPWARD MOVEMENT AT ROOF BEAMS.

5.4 ERECTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY BRACING UNTIL ALL CONNECTIONS HAVE BEEN MADE AND TOPPING HAS BEEN CAST.

5.5 PRECAST MANUFACTURER SHALL PROVIDE STABILIZING ANGLES, AS REQUIRED, IN ALL PRECAST WORK.

5.6 ALL EXPOSED STEEL CONNECTIONS AND SUPPORT ANGLES, PLATES, BARS, AND BOLTS IN CONJUNCTION WITH ALL PRECAST CONCRETE SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION AND FIELD TOUCHED UP WITH ZINC RICH PAINT.

5.7 ADJUSTMENT AND POSSIBLY RESETTING OF PRECAST MAY BE REQUIRED TO ALIGN PRECAST DUE TO SUPPORT DEFLECTION AND/OR ROTATION.

5.8 SUPPORTING BEAMS AND STRUCTURE WILL DEFLECT AND/OR ROTATE. PRECAST MANUFACTURER AND ERECTOR SHALL COORDINATE CONNECTION/ERECTION SEQUENCE TO ACCOUNT FOR THIS MOVEMENT AND MAKE FINAL ADJUSTMENTS TO ALIGN AND PLUMB PRECAST. THIS MAY REQUIRE ADJUSTING CONNECTIONS OR RECONNECTING.

6.0 STRUCTURAL STEEL

6.1 FABRICATE AND ERECT ALL STRUCTURAL STEEL IN ACCORDANCE WITH AISC "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".

6.2 THE STEEL FRAME IS "NON-SELF-SUPPORTING". ADEQUATE TEMPORARY SUPPORT MUST BE PROVIDED BY THE CONTRACTOR UNTIL REQUIRED CONNECTIONS OR ELEMENTS ARE IN PLACE.

6.3 STRUCTURAL STEEL: ASTM A992 FOR WIDE FLANGE BEAMS AND COLUMNS; ASTM A36 FOR S, M, AND HP SHAPES AND CHANNELS; ASTM A36 FOR STIFFENER PLATES, BASE PLATES, COLUMN CAP PLATES, BEAM CONNECTION PLATES, AND STEEL ANGLES.

6.4 HOLLOW STRUCTURAL SECTIONS (HSS): ASTM A500, GRADE B.

6.5 STRUCTURAL STEEL PIPE: ASTM A53, GRADE B.

6.6 WELDED CONNECTIONS: E70XX ELECTRODES, MINIMUM SIZE FILLET WELD 3/16". WELDING QUALIFICATION, PROCEDURES AND PERSONNEL SHALL BE CERTIFIED ACCORDING TO AWS D1.1, THE STRUCTURAL WELDING CODE - STEEL.

6.7 THREADED AND PLAIN STEEL RODS: ASTM A36.

6.8 HIGH STRENGTH THREADED RODS: ASTM A193 B7.

6.9 ANCHOR RODS: ASTM F1554 GRADE 36 ANCHOR AND HEAVY HEX NUT, UNLESS OTHERWISE INDICATED. IF ANCHOR ROD ASSEMBLIES ARE NOT ENCASED IN MINIMUM OF 3" OF CONCRETE, ANCHOR ROD ASSEMBLIES ARE TO BE HOT DIP GALVANIZED.

6.10 HEADED STUDS: TYPE B SHEAR STUD CONNECTORS MADE FROM ASTM A108, GRADE 1015 OR 1020, COLD-FINISHED CARBON, AND COMPLYING WITH AWS D1.1.

6.11 CONNECTIONS:

A. BEARING TYPE A325-N IN ACCORDANCE WITH RCSC (LRFD OR ASD VERSION) "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". BOLTS THROUGH 4" WIDE BEAM FLANGES SHALL BE 5/8" DIAMETER. OTHER BOLTS SHALL BE 3/4" DIAMETER.

B. USE SLIP-CRITICAL CONNECTIONS WHERE NOTED. USE SNUG TIGHT BEARING CONNECTIONS FOR ALL OTHER BOLTED CONNECTIONS.

C. BOLTS SHOWN IN SECTIONS AND DETAILS ARE A SCHEMATIC INDICATION THAT BOLTS MAY BE USED. ACTUAL NUMBER, UNLESS SPECIFIED, TO BE IN ACCORDANCE WITH AISC.

D. ALL STRUCTURAL STEEL CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE DESIGNED TO RESIST FORCES INDICATED, BY THE CONTRACTOR.

1. WHERE BEAM REACTIONS ARE SHOWN ON THE DRAWINGS, THE CONNECTIONS SHALL DEVELOP THE REACTIONS SHOWN. WHERE CONNECTIONS ARE SUBJECT TO ECCENTRICITY, SUCH ECCENTRICITY SHALL BE TAKEN INTO ACCOUNT WHEN DESIGNING AND DETAILING THE CONNECTION.
2. WHERE BEAM REACTIONS OR DESIGN FORCES ARE NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL CONTACT STRUCTURAL DESIGN GROUP FOR DIRECTION.

E. DESIGN CALCULATIONS FOR THE CONNECTIONS DESIGNED BY THE CONTRACTOR SHALL BE SUBMITTED FOR THE FILES OF THE ARCHITECT AND ENGINEER. CALCULATIONS SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. SHOP DRAWINGS CONTAINING CONNECTIONS FOR WHICH CALCULATIONS HAVE NOT BEEN RECEIVED WILL BE RETURNED UNCHECKED AS AN INCOMPLETE SUBMITTAL.

F. WHERE MOMENT CONNECTIONS (MC) ARE SHOWN ON THE DRAWINGS, AND NOT SPECIFICALLY DETAILED, THE CONNECTIONS SHALL BE DESIGNED TO SUPPORT A MOMENT EQUAL TO 100% OF THE MAXIMUM LIMITING BUCKLING MOMENT, M_r, AS PUBLISHED IN THE AISC MANUAL OF STEEL CONSTRUCTION FOR GIVEN SHAPE, SPAN, AND GRADE OF STEEL, UNLESS NOTED OTHERWISE. DESIGN SHALL INCLUDE FLANGE CONNECTION TO COLUMN/BEAM, AND DOUBLERS PLATES AND/OR STIFFENERS WHERE REQUIRED.

6.12 ALL STRUCTURAL STEEL, INCLUDING EXPOSED BOLTS, NUTS, WASHERS OR ANCHOR RODS, EXPOSED TO WEATHER IN THE FINAL CONFIGURATION OF THE STRUCTURE SHALL BE HOT-DIP GALVANIZED, UNLESS NOTED, PER ASTM A 123/A 123M. VENT HOLES SHALL BE FILLED AND GROUND SMOOTH AFTER GALVANIZING. DAMAGE TO GALVANIZING SHALL BE PAINTED WITH GALVANIZING REPAIR PAINT, SSPC-PAINT 20. SEE 05120 SPECIFICATION FOR PAINT REQUIREMENTS FOR STEEL THAT IS GALVANIZED AND PAINTED.

6.13 ALL STEEL EXPOSED TO WEATHER, INCLUDING STEEL LINTELS FOR MASONRY OPENINGS, EXCEPT WHERE FABRICATED OF APPROVED CORROSION-RESISTANT STEEL OR OF STEEL HAVING A CORROSION RESISTANT OR OTHER APPROVED COATING, SHALL BE PROTECTED AGAINST CORROSION WITH AN APPROVED COAT OF PAINT, ENAMEL, OR OTHER APPROVED PROTECTION.

6.14 STEEL STAIRS AND ASSOCIATED EMB

GENERAL NOTES CONTINUED

8.8 NO CONDUIT OR PIPE SHALL BE CAST IN THE SLAB ON GRADE OR SLAB ON METAL DECK WITHOUT THE WRITTEN APPROVAL OF STRUCTURAL DESIGN GROUP. CONDUIT SHALL NOT BE PLACED IN SLABS REQUIRING A FIRE RESISTANCE RATING OR UL RATING.

8.9 COLD-FORMED STEEL FRAMING, SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS, PIPING, AND/OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL ROOF DECK.

8.10 NAILABLE SUBSTRATE SHALL BE FASTENED TO STEEL ROOF DECK WITH #8 ROUND HEAD, ZINC PLATED SELF-TAPPING SCREWS AT 12" O.C. EACH WAY. AT CORNER ZONES, ATTACH SCREWS AT 6" O.C. - SEE TYPICAL DETAILS FOR CORNER ZONES.

9.0 MASONRY

9.1 MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530.1-13 SPECIFICATION.

9.2 ALL MASONRY MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE RECOMMENDATIONS OF BRICK INSTITUTE OF AMERICA (BIA) AND NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA) AND MINIMUM REQUIREMENTS ESTABLISHED BY THE LOCAL BUILDING CODE.

9.3 MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNIT ($f'm$) SHALL BE 2000 PSI AT 28 DAYS.

9.4 NET COMPRESSIVE STRENGTH FOR EACH CMU UNIT SHALL MEET OR EXCEED 2000 PSI AT 28 DAYS. FOR TYPE N MORTAR, NET COMPRESSIVE STRENGTH FOR BLOCK SHALL BE GREATER THAN 2650 PSI.

9.5 ALL MASONRY SHALL BE NORMAL WEIGHT IN ACCORDANCE WITH ASTM C90.

9.6 GROUT COMPRESSIVE STRENGTH SHALL BE 2500 PSI AT 28 DAYS. GROUT SHALL ADDITIONALLY COMPLY WITH TABLE 7 OF ACI 530.1/ASCE 6/TMS 602 FOR DIMENSIONS OF GROUT SPACES AND POUR HEIGHTS. COURSE GROUT SHALL BE USED WHERE POSSIBLE.

9.7 MORTAR SHALL BE TYPE S OR M. TYPE N MORTAR ALLOWED ONLY IF THE CMU NET COMPRESSIVE STRENGTH IS GREATER THAN 2650 PSI.

9.8 ALL MASONRY SHALL BE STACK BOND, UNLESS NOTED.

9.9 ALL BLOCK CELLS AND CAVITIES BELOW GRADE SHALL BE FILLED WITH CONCRETE OR GROUT.

9.10 MASONRY REINFORCING LAP SPLICE LENGTHS PER SCHEDULE. SEE MASONRY LAP SPLICE LENGTHS TYPICAL DETAIL.

9.11 THE CONTRACTOR SHALL PROVIDE DETAILED SHOP DRAWINGS OF THE CMU REINFORCEMENT.

A. SHOP DRAWINGS SHALL INCLUDE AN ELEVATION VIEW OF EACH REINFORCED WALL WITH ALL VERTICAL AND HORIZONTAL REINFORCING AS WELL AS WALL OPENINGS/PENETRATIONS SHOWN. REINFORCING SHOP DRAWINGS NOT CONTAINING THESE ELEVATION DRAWINGS WILL BE RETURNED AS AN INCOMPLETE SUBMITTAL.

9.12 MODIFY CMU BLOCKS AS REQUIRED TO INSTALL REINFORCING AS NOTED / SHOWN.

9.13 CONTROL JOINTS IN CMU WALLS SHALL BE DISCONTINUOUS AT MASONRY BOND BEAMS. BOND BEAM REINFORCING SHALL EXTEND CONTINUOUS WITH 48 BAR DIAMETER LAPS AND CORNER BARS. SEE TYPICAL DETAILS FOR ADDITIONAL INFORMATION.

9.14 WHEN REINFORCING IS SPECIFIED, PROVIDE AT EACH SIDE OF CONTROL JOINTS, OPENINGS AND WALL ENDS.

9.15 EXTEND REBAR AT WALL OPENINGS A MINIMUM OF 2'-0" PAST THE OPENING AT ALL CORNERS, UNLESS NOTED. AT WINDOWS, PROVIDE A MINIMUM OF 2#4 BARS AT THE SILL OF THE WINDOWS.

9.16 AT CMU PARTITIONS OVER 8'-0" TALL, SUPPORTED BY SLAB ON GRADE, PROVIDE THICKENED SLAB PER TYPICAL DETAILS.

9.17 PROVIDE WALL TOP SUPPORT AT 8'-0" OC FOR ALL INTERIOR NON-LOAD BEARING CMU WALLS WHERE CONTINUOUS WALL SPAN BETWEEN PERPENDICULAR BRACING WALLS EXCEEDS 20'-0".

9.18 GROUT SHALL COMPLY WITH TABLE 7 OF ACI 530.1/ASCE 6/TMS 602 FOR DIMENSIONS OF GROUT SPACES AND POUR HEIGHTS.

9.19 PROVIDE HORIZONTAL JOINT REINFORCING IN REINFORCED MASONRY WALLS AS DIRECTED BY THE ARCHITECT. AT WALL CORNERS AND INTERSECTIONS, PROVIDE PREFABRICATED T AND L SHAPES, FIELD BENDING IS NOT PREWITTED. MINIMUM OF LADDER TYPE ZINC COATED CONFORMING TO ASTM A82 HOHMANN & BARNARD 220 LADDER-MESH OR EQUIVALENT AT EVERY OTHER BLOCK COURSE ABOVE FOOTING. REINFORCEMENT SHOULD CONSIST OF TWO OR MORE LONGITUDINAL WIRES, NO. 9 GAUGE OR LARGER, WELDED WITH NO. 9 GAUGE OR LARGER CROSS WIRES. LAP SPLICE HORIZONTAL JOINT REINFORCING A MINIMUM OF 12".

9.20 PROVIDE DOVETAIL ANCHORS AT 16" O/C, UNLESS NOTED OTHERWISE, WHERE MASONRY WALLS ABUT CONCRETE SURFACES.

9.21 PROVIDE GROUT FILLED LINTEL BLOCK AT TOP OF ALL CMU WALLS REINFORCED WITH 2#4 BARS CONTINUOUS, UNLESS NOTED.

9.22 WHERE MASONRY WALLS SUPPORT EARTH ON BOTH SIDES, BACKFILL EACH SIDE SIMULTANEOUSLY.

9.23 WHERE TOP OF FOOTING SUPPORTING MASONRY WALLS IS MORE THAN 2'-8" BELOW FINISH FLOOR, PROVIDE #6@16, UP TO THE FINISH FLOOR ELEVATION, IN ADDITION TO SPECIFIED REINFORCEMENT.

9.24 CONDUITS, REFRIGERANT PIPING (WITH ANY REQUIRED INSULATION INCLUDED), CONDENSATE DRAIN LINES, ETC. UP TO 2" IN OUTSIDE DIAMETER MAY EXTEND CONT THRU MASONRY WALLS & BOND BEAMS. COORDINATE WITH MECHANICAL, ELECTRICAL, PLUMBING, ETC. DRAWINGS FOR SIZE AND LOCATION. DO NOT INTERRUPT CONTINUOUS REINFORCING STEEL IN PLACEMENT OF CONDUITS, PIPING, DRAIN LINES, ETC.

9.25 THE MASONRY WALLS ARE "NON-SELF-SUPPORTING". ADEQUATE TEMPORARY SUPPORT MUST BE PROVIDED BY THE CONTRACTOR UNTIL REQUIRED CONNECTIONS OR ELEMENTS ARE IN PLACE. BRACING SHALL BE PER THE FOLLOWING, AND CONTRACTOR SHALL PROVIDE ADDED REINFORCING AND GROUT IF REQUIRED BY THE BRACING.

A. THE "2012 STANDARD PRACTICE FOR BRACING MASONRY WALLS UNDER CONSTRUCTION".
B. THE "MASONRY WALL BRACING HANDBOOK" AS PUBLISHED BY THE MASONRY CONTRACTORS ASSOCIATION OF AMERICA (MCAA) SHOULD BE USED IN CONJUNCTION WITH THE "STANDARD PRACTICE".

9.26 PROVIDE 2 COURSES OF GROUT FILLED OPEN BOTTOM BOND BEAM BLOCKS REINFORCED WITH 2#5 BARS CONTINUOUS AT ALL STEEL STAIR ATTACHMENT LOCATIONS, UNLESS NOTED OTHERWISE. CONTRACTOR COORDINATE EXACT LOCATIONS WITH STEEL STAIR DESIGNER.

10.0 COLD-FORMED STEEL FRAMING

10.1 STRUCTURAL PROPERTIES OF STUDS AND JOISTS SHALL BE COMPUTED IN ACCORDANCE WITH AISI "SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".

10.2 GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL COLD-FORMED STEEL FRAMING. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR FRAMING LAYOUT, SIZES, SPACING, AND SECTIONS. THE GAGE OF THE STUDS, IF SHOWN, SHALL NOT BE REVISED UNLESS IT IS REQUIRED TO BE INCREASED AS DIRECTED BY THE COLD-FORMED STEEL DESIGN ENGINEER. COLD-FORMED STEEL FRAMING SHOP DRAWINGS AND DESIGN CALCULATIONS SHALL BE SUBMITTED FOR FILES OF THE STRUCTURAL ENGINEER. CALCULATIONS SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. THE CONTRACTOR SHALL INCLUDE THE COST OF SHOP DRAWINGS AND CALCULATIONS, INCLUDING ENGINEERING FEES, IN THE BASE BID OF THE CONTRACT.

10.3 DEFLECTION LIMITS FOR MEMBERS:

		DL L/240	LL L/240	TL L/180
A.	SOFFITS:			
B.	WALL SUPPORTING BRICK:	HORIZONTAL DEFLECTION OF L/600		
C.	WALL SUPPORTING STUCCO:	HORIZONTAL DEFLECTION OF L/360		
D.	WALL SUPPORTING EIFS:	HORIZONTAL DEFLECTION OF L/240		
E.	WALL PARTITIONS:	HORIZONTAL DEFLECTION OF L/180		

10.4 COLD-FORMED STEEL FRAMING MEMBERS SHALL NOT BE SUPPORTED BY THE STEEL ROOF DECK.

10.5 COLD-FORMED STEEL FRAMING MEMBERS ABUTTING STRUCTURE SHALL HAVE VERTICAL SLIP TRACKS TO ACCOMMODATE UP TO 1-1/2" VERTICAL MOVEMENT UP OR DOWN.

10.6 PROVIDE WALL BRACING, CONNECTION DETAILS, WINDOW/DOOR HEADERS, ETC AS RECOMMENDED BY THE STUD MANUFACTURER FOR COLD-FORMED STEEL FRAMING MEMBERS.

10.7 TRACK SHALL BE SCREWED TO STUD WITH 2#8 TEK SCREWS EACH FLANGE, OR AS REQUIRED BY DESIGN.

10.8 PROVIDE SHOP DRAWINGS SHOWING PLANS, ELEVATIONS AND CONNECTION DETAILS AT ALL COLD-FORMED STEEL LOAD-BEARING STUD WALLS.

10.9 ALL CONNECTIONS OF THE COLD-FORMED STEEL FRAMING MEMBERS TO THE STRUCTURE SHALL BE FULLY DETAILED ON THE COLD-FORMED STEEL FRAMING SHOP DRAWINGS. ANY SPECIAL LOADING IMPOSED ON THE STRUCTURE SHALL BE CLEARLY INDICATED ON THE SHOP DRAWINGS.

11.0 PRE-MANUFACTURED COLD-FORMED STEEL TRUSSES

11.1 STRUCTURAL PROPERTIES OF FRAMING SHALL BE COMPUTED IN ACCORDANCE WITH AISI "NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING".

11.2 GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL COLD FORMED STEEL TRUSSES AND RAFTERS, ALSO SEE SPECIFICATION 05400.

11.3 IN ADDITION TO PROVIDING THE COLD-FORMED STEEL TRUSS SYSTEM CALLED FOR IN THESE DOCUMENTS THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:

A. DESIGN OF THE TRUSS SYSTEM AND RAFTER SYSTEM, COLLECTIVELY THE 'TRUSSES'.

B. ENGINEERING PROVIDED BY MANUFACTURER SHALL BE A COMPLETE PACKAGE SIMILAR TO THE "WORKS" PACKAGE PROVIDED BY AEGIS METAL FRAMING OR EQUAL.

C. DESIGN OF ALL TRUSS COMPONENTS, TEMPORARY AND PERMANENT BRACING, TRUSS TO TRUSS CONNECTIONS, AND TRUSS TO STRUCTURE CONNECTIONS.

D. WHERE TRUSSES ARE SUPPORTED BY CONCRETE, AND THE TRUSS TO STRUCTURE CONNECTION DESIGNED BY THE CONTRACTOR CALLS FOR EMBED STEEL PLATES, SUCH PLATES SHALL ALSO BE DESIGNED BY THE CONTRACTOR. THE DESIGN SHALL MEET THE PROVISIONS OF ACI 318-14.

E. DIMENSIONED TRUSS FRAMING PLAN.

F. TRUSS ERECTION PLAN.

G. PLAN SHOWING LAYOUT AND DETAILS OF ANY TEMPORARY AND PERMANENT BRACING REQUIRED.

H. DETAILED AND DIMENSIONED PLAN SHOWING THE LOCATION AND TYPE OF EMBEDS OR CONNECTION MATERIAL REQUIRED TO ANCHOR THE TRUSSES TO THE STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS REQUIRED TO ANCHOR THE TRUSS TO THE STRUCTURE.

I. CALCULATIONS FOR THE ABOVE SHALL BE SUBMITTED FOR THE FILES OF THE ARCHITECT AND ENGINEER. CALCULATIONS SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. THE ENGINEER SHALL HAVE PERSONALLY SUPERVISED THE DESIGN AND PREPARATIONS OF THE CALCULATIONS. SHOP DRAWINGS CONTAINING CONNECTIONS FOR WHICH THESE CALCULATIONS HAVE NOT BEEN RECEIVED WILL BE RETURNED UNCHECKED AS AN INCOMPLETE SUBMITTAL.

11.4 TRUSS MANUFACTURER SHALL DESIGN FOR THE FOLLOWING SUPERIMPOSED LOADS:

A. TOP CHORD DEAD LOAD ----------10 PSF
B. BOTTOM CHORD DEAD LOAD ----------10 PSF
C. TOP CHORD LIVE LOAD ----------20 PSF

11.5 DEFLECTION LIMITS FOR MEMBERS:

		DL L/240	LL L/360	TL L/180
A.	SOFFITS:			
B.	ROOF:			
C.	END WALL GABLE SUPPORTING BRICK:	HORIZONTAL DEFLECTION OF L/600		
D.	END WALL GABLE SUPPORTING STUCCO:	HORIZONTAL DEFLECTION OF L/360		
E.	END WALL GABLE SUPPORTING EIFS:	HORIZONTAL DEFLECTION OF L/240		

11.6 DESIGN TRUSSES TO RESIST THE WIND UPLIFT LOADING FROM THE COMPONENT AND CLADDING WIND LOAD TABLE PROVIDED IN THE TYPICAL DETAILS.

11.7 IN ADDITION TO THE ABOVE LOADS, TRUSSES SHALL BE DESIGNED FOR CONCENTRATED LOADS HUNG FROM OR SUPPORTED ON TRUSSES. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR LOADING INFORMATION AND LOCATION. LOADING AS REQUIRED BY OTHER SUBCONTRACTORS, SUCH AS FIRE PROTECTION, SHALL BE COORDINATED BY THE GENERAL CONTRACTOR.

11.8 ALL TEMPORARY AND PERMANENT BRACING MEMBERS AND CONNECTIONS REQUIRED FOR TRUSSES SHALL BE DETAILED ON THE TRUSS MANUFACTURER'S ERECTION PLANS. BRACING MEMBERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

11.9 TEMPORARY BRACING SHALL NOT IMPOSE ANY FORCE ON THE SUPPORTING STRUCTURE. PERMANENT BRACING FORCES SHALL BE TRANSFERRED TO THE ROOF DIAPHRAGM BY THE BRACING DESIGN PROVIDED BY THE TRUSS MANUFACTURER.

11.10 WELDED CONNECTIONS: E60XX ELECTRODES, MINIMUM SIZE FILLET WELD 1/8". WELDING QUALIFICATION, PROCEDURES, AND PERSONNEL SHALL BE CERTIFIED ACCORDING TO AWS D1.3, THE STRUCTURAL WELDING CODE - SHEET STEEL.

12.0 POST-INSTALLED ANCHORS AND REINFORCING

12.1 POST-INSTALLED ANCHORS AND/OR REINFORCING SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS AND/OR REINFORCING IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS AND/OR REINFORCING.

12.2 THE BELOW PRODUCTS ARE THE DESIGN BASIS FOR THIS PROJECT. PRODUCT DIAMETER AND EMBEDMENT SHALL BE SHOWN IN THE DETAILS.

12.3 FOR ANCHORING INTO CONCRETE:

A. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. PRE-APPROVED PRODUCTS INCLUDE:

1. SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713 & IAPMO-UES ER-493)
2. SIMPSON STRONG-TIE "STRONG-BOLT 2" (ICC-ES ESR-3037)
3. SIMPSON STRONG-TIE "TITEN-HD ROD HANGER" (ICC-ES ESR-2713)
4. SIMPSON STRONG-TIE "TITEN TURBO" (IAPMO-UES ER-712) - FOR UNCRACKED CONCRETE ONLY
5. HILTI KWIK HUS-EZ (KH-EZ), KH-EZ CRC, KH-EZ SS316, KH-EZ C, KH-EZ E, KH-EZ-I, AND KH-EZ P SCREW ANCHOR SAFE SET SYSTEM WITH HOLLOW DRILL BIT AND VACUUM (ICC ESR-3027)
6. HILTI KWIK BOLT-TZ2 EXPANSION ANCHOR SAFE SET SYSTEM WITH HOLLOW DRILL BIT AND VACUUM AND SI-AT-A22 TOOL WITH ADAPTIVE TORQUE FOR APPLICABLE SIZES (ICC ESR-4266)
7. HILTI KWIK BOLT 1 EXPANSION ANCHOR SAFE SET SYSTEM WITH HOLLOW DRILL BIT AND VACUUM AND SI-AT-A22 TOOL WITH ADAPTIVE TORQUE FOR APPLICABLE SIZES (ICC ESR-678)
8. HILTI HDA UNDERCUT ANCHORS (ICC ESR 1546)
9. HILTI HSL-4 EXPANSION ANCHORS (ICC ESR 4386)
10. DEWALT SCREW-BOLT+ (ICC-ES ESR-3889)
11. DEWALT POWER-STUD+ SD2 (ICC-ES ESR-2502)
12. DEWALT POWER-STUD SD1 (ICC-ES ESR-2818)
13. DEWALT HANGERMATE+ (ICC-ES ESR-3889)
14. DEWALT CCU+ UNDERCUT (ICC-ES ESR-4810)
15. DEWALT POWER-BOLT+ (ICC-ES ESR-3260)

B. MECHANICAL ANCHORS FOR USE IN THE UNDER SIDE OF NORMAL WEIGHT HOLLOW CORE AND POST TENSION SLAB WHERE EMBEDMENT DEPTH MUST NOT EXCEED ¾". PRE-APPROVED PRODUCTS INCLUDE:

1. DEWALT MINI-UNDERCUT+ (ICC-ES ESR-3912)
2. HILTI HDP-P TZ DROP-IN ANCHOR (ICC ESR-4236)

C. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE DRILL BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS, SUCH AS HORIZONTAL TO UPWARD INCLINED ORIENTATION UNDER SUSTAINED TENSION LOADING, SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.9.2.4. PRE-APPROVED PRODUCTS INCLUDE:

1. SIMPSON STRONG-TIE "SET-3G" (ICC-ES ESR-4057)
2. SIMPSON STRONG-TIE "AT-XP" (IAPMO-UES ER-263)
3. SIMPSON STRONG-TIE "SET-XP" (ICC-ES ESR-2508)
4. HILTI HIT-HY 200 V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM WITH CONTINUOUSLY DEFORMED REBAR (ICC ESR-4868)
5. HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM WITH CONTINUOUSLY DEFORMED REBAR (ICC ESR-3814)
6. DEWALT PURE110+ FOR WARM WEATHER/SLOW CURE (ICC-ES ESR-3298); FOR ANCHORS AND REBAR: WHEN DEWALT DUSTX+ EXTRACTION SYSTEM IS USED, TRADITIONAL HOLE CLEANING METHODS USING STEEL BRUSHES AND COMPRESSED DRY AIR MAY BE COMPLETELY OMITTED PER ICC-ES ESR-3298
7. DEWALT AC200+ FOR COLD WEATHER/RAPID CURE (ICC-ES ESR-4027); FOR ANCHORS AND REBAR: WHEN DEWALT DUSTX+ EXTRACTION SYSTEM IS USED, TRADITIONAL HOLE CLEANING METHODS USING STEEL BRUSHES AND COMPRESSED DRY AIR MAY BE COMPLETELY OMITTED PER ICC-ES ESR-4027

D. POWER-ACTUATED FASTENERS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC70. PRE-APPROVED PRODUCTS INCLUDE:

1. SIMPSON STRONG-TIE "GAS ACTUATED PINS" (ICC-ES ESR-2811)
2. SIMPSON STRONG-TIE "POWDER ACTUATED PINS" (ICC-ES ESR-2138)
3. HILTI "UNIVERSAL KNURLED SHANK FASTENERS" X-U (ICC ESR-2269)
4. DEWALT "POWER DRIVEN FASTENERS", POWDER ACTUATED (ICC-ES-ESR 2024)
5. DEWALT TRAK-IT C5, GAS ACTUATED (ICC-ES-ESR 3275)

12.4 FOR ANCHORING INTO MASONRY:

A. SOLID-GROUTED CONCRETE MASONRY

1. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC01 OR ICC-ES AC106. PRE-APPROVED PRODUCTS INCLUDE:

a. SIMPSON STRONG-TIE "TITEN-HD" & "STAINLESS STEEL TITEN HD" (ICC-ES ESR-1056)
b. SIMPSON STRONG-TIE "STRONG-BOLT 2" (IAPMO-UES ER-240)
c. SIMPSON STRONG-TIE "WEDGE-ALL" (ICC-ES ESR-1396)
d. SIMPSON STRONG-TIE "TITEN TURBO" (IAMPO-UES ER-716)
e. HILTI KH-EZ, KH-EZ CRC, KH-EZ SS316, KH-EZ C, AND KH-EZ P SCREW ANCHORS (ICC ESR-3056)
f. HILTI KWIK BOLT-1 EXPANSION ANCHOR (ICC ER-677)
g. HILTI KWIK BOLT-TZ2 EXPANSION ANCHOR (ICC ESR-4561)
h. DEWALT "SCREW-BOLT+" (ICC-ES ESR 4042)
i. DEWALT "POWER-STUD+ SD1" (ICC-ES ESR 2966)

2. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC58. PRE-APPROVED PRODUCTS INCLUDE:

a. SIMPSON STRONG-TIE "AT-XP" (IAPMO-UES ER-281)
b. SIMPSON STRONG-TIE "SET-XP" (IAPMO-UES ER-265)
c. HILTI HIT-HY 270 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM (ICC ESR-4143); STEEL ANCHOR ELEMENT SHALL BE HILTI-HAS CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
d. HILTI HIT-HY 200 V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM (ICC ESR-4878)
e. DEWALT AC100+ GOLD (ICC-ES ESR-3200)

3. POWER-ACTUATED FASTENERS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC70. PRE-APPROVED PRODUCTS INCLUDE:

a. SIMPSON STRONG-TIE "GAS ACTUATED PINS" (ICC-ES ESR-2811)
b. SIMPSON STRONG-TIE "POWDER ACTUATED PINS" (ICC-ES ESR-2138)
c. HILTI "UNIVERSAL KNURLED SHANK FASTENERS" X-U (ICC ESR-2269)
d. DEWALT TRAK-IT C5, GAS ACTUATED (ICC-ES-ESR 3275)

B. HOLLOW CONCRETE MASONRY

1. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC106. PRE-APPROVED PRODUCTS INCLUDE:

a. SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-1056)
b. SIMPSON STRONG-TIE "TITEN TURBO" (IAPMO-UES ER-716)

2. ADHESIVE FOR REBAR AND ANCHORS WITH SCREEN TUBES SHALL HAVE BEEN TESTED FOR USE IN ACCORDANCE WITH ICC-ES AC58. THE APPROPRIATE SCREEN TUBE SHALL BE USED AS RECOMMENDED BY THE ADHESIVE MANUFACTURER. PRE-APPROVED PRODUCTS INCLUDE:

a. SIMPSON STRONG-TIE "SET-XP" (IAPMO-UES ER-265)
b. HILTI HIT-HY 270 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM (ICC ESR-4143); STEEL ANCHOR ELEMENT SHALL BE HILTI-HAS CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR. THE APPROPRIATE SIZE SCREEN TUBE SHALL BE USED PER ADHESIVE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
c. DEWALT AC100+ GOLD (ICC-ES ESR-3200)

3. POWER-ACTUATED FASTENERS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC70. PRE-APPROVED PRODUCTS INCLUDE:

a. SIMPSON STRONG-TIE "GAS ACTUATED PINS" (ICC-ES ESR-2811)
b. SIMPSON STRONG-TIE "POWDER ACTUATED PINS" (ICC-ES ESR-2138)
c. HILTI "DRYWALL TRACK FASTENERS" X-DW (ICC ESR-1663)

C. UNREINFORCED BRICK MASONRY (URM): ADHESIVE FOR REBAR AND ANCHORS WITH SCREEN TUBES SHALL HAVE BEEN TESTED FOR USE IN ACCORDANCE WITH ICC-ES AC58. THE APPROPRIATE SCREEN TUBE SHALL BE USED AS RECOMMENDED BY THE ADHESIVE MANUFACTURER. PRE-APPROVED PRODUCTS INCLUDE:

1. SIMPSON STRONG-TIE "ET-HP" (ICC-ES ESR-3638)
2. HILTI HIT-HY 270 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM (ICC ESR-4143); STEEL ANCHOR ELEMENT SHALL BE HILTI-HAS CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR. THE APPROPRIATE SIZE SCREEN TUBE SHALL BE USED PER ADHESIVE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
3. DEWALT "AC100+ GOLD" (ICC-ES ESR-4105)

12.5 FOR FASTENING INTO STEEL: POWER-ACTUATED FASTENERS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC70. PRE-APPROVED PRODUCTS INCLUDE:

A. SIMPSON STRONG-TIE "GAS ACTUATED PINS" (ICC-ES ESR-2811)
B. SIMPSON STRONG-TIE "POWDER ACTUATED PINS" (ICC-ES ESR-2138)
C. HILTI FASTENERS IN LIEU OF #12 TEK SCREWS:

1. HILTI S-MD 12-24X1-5/8 HWH5 SCREWS FOR STUDS, JOISTS AND BEAMS 16 GA ≤ TF ≤ 1/4"
2. HILTI X-HSN 24 PINS FOR JOISTS AND BEAM 1/8" ≤ TF ≤ 3/8"
3. HILTI X-ENP 19 L15 PINS FOR BEAMS TF ≥ 1/4".

D. DEWALT "POWER DRIVEN FASTENERS", POWDER ACTUATED (ICC-ES-ESR 2024)
E. DEWALT TRAK-IT C5, GAS ACTUATED (ICC-ES-ESR 3275)

12.6 REFER TO THE PROJECT BUILDING CODE AND/OR EVALUATION REPORT FOR SPECIAL INSPECTIONS AND PROOF LOAD REQUIREMENTS.

12.7 SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE LISTED MAY BE SUBMITTED BY THE CONTRACTOR TO THE EOR FOR REVIEW NO LESS THAN TWO WEEKS PRIOR TO BID. SUBSTITUTIONS WILL ONLY BE CONSIDERED FOR PRODUCTS HAVING A RESEARCH REPORT RECOGNIZING THE PRODUCT FOR THE APPROPRIATE APPLICATION UNDER THE PROJECT BUILDING CODE. SUBSTITUTION REQUESTS SHALL INCLUDE CALCULATIONS PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATE THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE EQUIVALENT. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.

12.8 INSTALL ANCHORS PER THE MANUFACTURER PRINTED INSTRUCTIONS (MPII), OR AS INCLUDED IN THE ANCHOR PACKAGING.

12.9 THERE IS TO BE NO GAP BETWEEN CONNECTED PARTS UNLESS SHIMS ARE PROVIDED. ANCHORS TO SECURE CONNECTED PARTS TOGETHER TO SNUG.

12.10 OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE MANUFACTURER'S INSTRUCTIONS AND INSTALLER MUST BE ACI CERTIFIED.

12.11 THE CONTRACTOR SHALL ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

12.12 THE CONTRACTOR SHALL COORDINATE WITH THE OWNERS SPECIAL INSPECTION AGENCY FOR CONTINUOUS SPECIAL INSPECTION OF ADHESIVE ANCHORS AND PERIODIC INSPECTION OF MECHANICAL ANCHORS, SEE SPECIAL INSPECTION SCHEDULE FOR ADDITIONAL INFORMATION.

12.13 ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

12.14 EXISTING REINFORCING BARS AND/OR CONDUIT IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS AND/OR REINFORCING TO AVOID CONFLICTS WITH EXISTING REBAR AND/OR CONDUIT. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY GPR, X-RAY, HILTI PS 1000 X-SCAN, CHIPPING, OR OTHER MEANS.

13.0 PREFABRICATED CANOPY

13.1 PROTECTIVE COVER WALKWAYS AND PREFABRICATED CANOPIES SHALL BE CONSIDERED A DEFERRED SUBMITTAL TO THE BUILDING INSPECTION AGENCY.

13.2 PROTECTIVE COVER WALKWAYS AND PREFABRICATED CANOPIES SHALL BE FULLY ENGINEERED BY THE CANOPY MANUFACTURER AND CONTRACTOR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE THE PROJECT IS LOCATED.

13.3 CALCULATIONS SHALL ACCOMPANY THE SHOP DRAWINGS AND SHALL INCLUDE DESIGN FOR ALL MEMBERS OF THE CANOPY, INCLUDING FOOTINGS AND ATTACHMENT TO STRUCTURE.

13.4 PROTECTIVE COVER WALKWAY AND PREFABRICATED CANOPY SHOP DRAWINGS SHALL BE SUBMITTED TO INCLUDE A FULL DESCRIPTION OF ALL CANOPY MEMBERS, INCLUDING COLUMNS, BEAMS, FOOTINGS, FACIA, ETC. SHOP DRAWINGS SHALL BEAR THE SEAL OF THE PROFESSIONAL ENGINEER.

SDG
STRUCTURAL DESIGN GROUP
300 Chase Park South, Suite 125
Hoover, AL 35244
tel 205-824-2200
fax 205-824-5280
Job Number 20-107

LATHAN
ARCHITECTS
LATHAN • BRYANT • CALMA

NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA REGISTERED No. 22596 PROFESSIONAL ENGINEER CRAIG WINN
H. Craig Winn, P.E.

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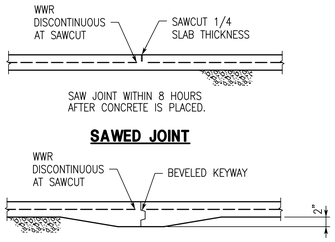
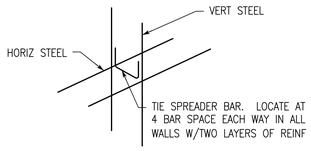
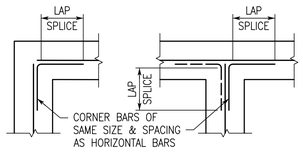


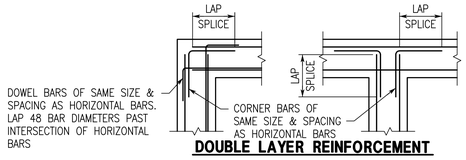
SLAB CONTROL JOINT DETAILS
TYPICAL
JOINT TYPE IS OPTIONAL



WALL STEEL TIE-SPREADER DETAIL
TYPICAL

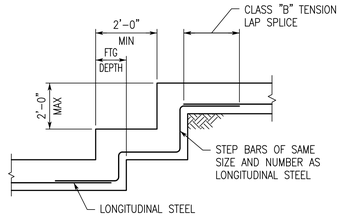


SINGLE LAYER REINFORCEMENT

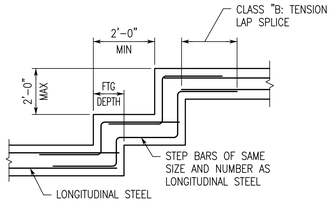


DOUBLE LAYER REINFORCEMENT
NOTE: ALL LAP SPLICES CLASS "B" TENSION

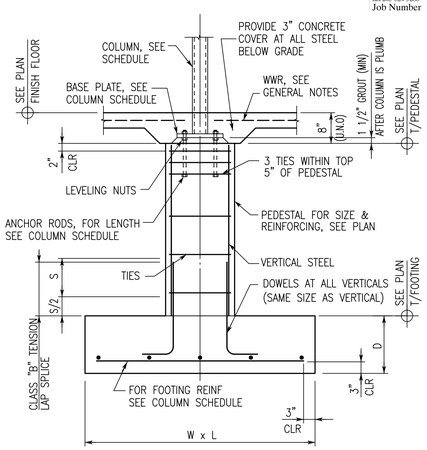
FOOTING, SLAB OR WALL CORNER REINFORCING DETAIL
TYPICAL



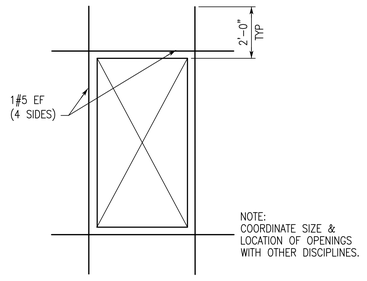
FOOTING STEP DETAIL
TYPICAL



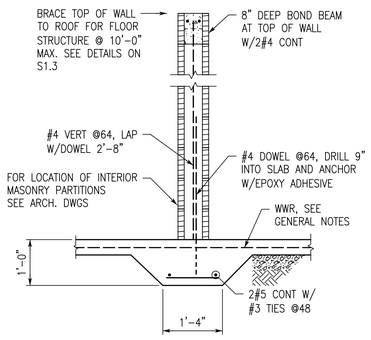
FOOTING STEP DETAIL
TYPICAL



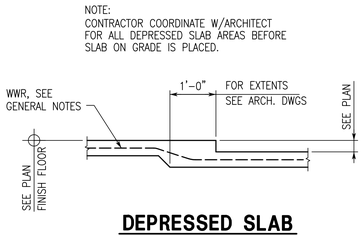
COLUMN BASE, PEDESTAL AND FOOTING DETAIL
TYPICAL



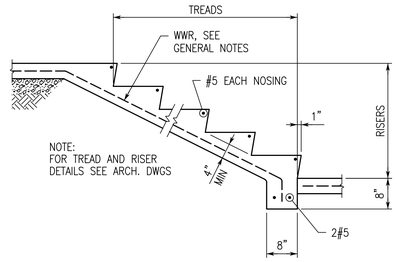
WALL OPENING REINFORCMENT DETAIL
TYPICAL



INTERIOR PARTITION WALL ON THICKENED SLAB ON GRADE DETAIL
TYPICAL



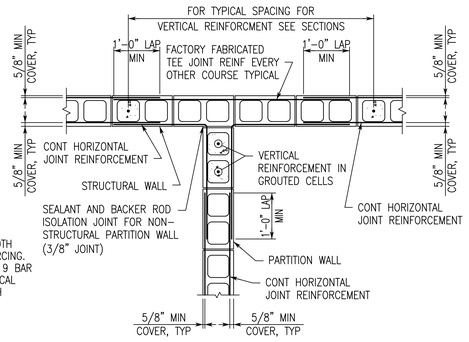
DEPRESSED SLAB ON GRADE DETAIL
TYPICAL



STAIR ON GRADE DETAIL
TYPICAL

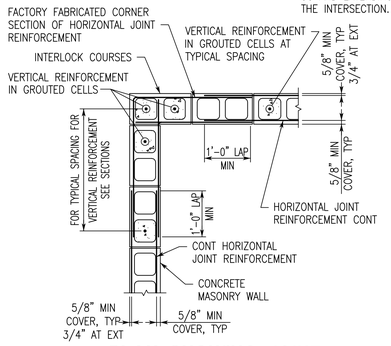
MASONRY REINFORCING LAP SPLICE LENGTHS		
BAR SIZE (#)	CENTERED (IN.)	EDGE (IN.)
3	18.0	18.0
4	24.0	29.0
5	30.0	45.0
6	43.0	54.0
7	60.0	63.0
8	72.0	72.0
9	82.0	82.0

NOTES:
1. LAP SPLICE LENGTHS APPLY TO BOTH HORIZONTAL AND VERTICAL REINFORCING.
2. REINFORCEMENT LARGER THAN NO. 9 BAR SHALL BE SPLICED USING MECHANICAL CONNECTIONS IN ACCORDANCE WITH ACI 530 & ACI 530.1.

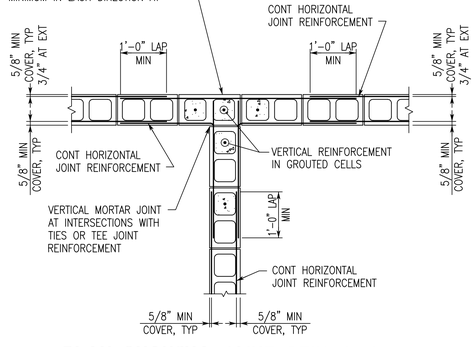


PARTITION WALLS ABUTTING STRUCTURAL WALLS
TYPICAL

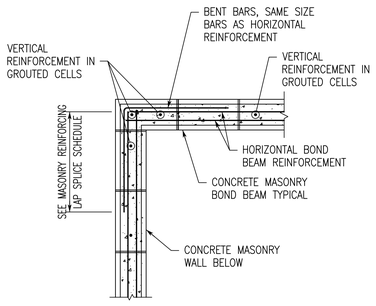
ANCHOR WALLS BY:
1. INTERSECTING 50% OF UNITS OVERLAPPING WITH ALTERNATE UNITS BEARING 3" MINIMUM ON THE UNIT BELOW.
2. GALV PL 1/4x1 1/2x2'-4" TIE @ 4'-0" OC WITH ENDS BENT 2", ALTERNATING ENDS UP AND DOWN.
3. FACTORY FABRICATED TEE JOINT REINFORCING SPACED 8" OC AND EXTENDING 30" MINIMUM IN EACH DIRECTION AT THE INTERSECTION.



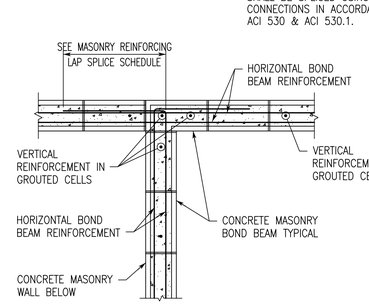
PLAN SHOWING JOINT REINFORCEMENT AT WALL CORNER
TYPICAL



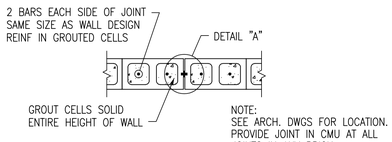
PLAN SHOWING JOINT REINFORCING AT STRUCTURAL WALL INTERSECTION
TYPICAL



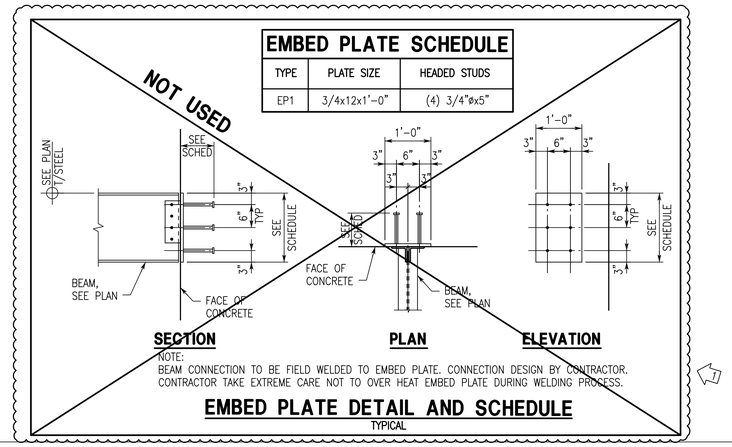
PLAN SHOWING BOND BEAM REINFORCEMENT AT WALL CORNER
TYPICAL



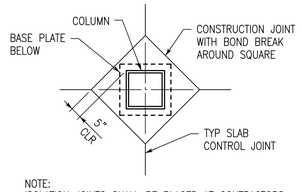
PLAN SHOWING BOND BEAM AT STRUCTURAL WALL INTERSECTION
TYPICAL



PLAN MASONRY CONTROL JOINT
3/4"=1'-0"



EMBED PLATE DETAIL AND SCHEDULE
TYPICAL



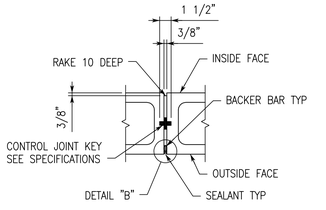
ISOLATION JOINT DETAIL
TYPICAL

COLUMN SCHEDULE					
COLUMN DESIGNATION		C1	C2	C3	C4
COLUMN	SIZE	HSS 6x6x3/8 NOT USED	HSS 8x8x5/8	HSS 8x8x5/8 NOT USED	HSS 10x10x5/8
	BASE PLATE	3/4x18x18	3/4x18x18	SEE SECTION	SEE SECTION
	ANCHOR RODS	(4) 3/4"ø W/ 9" EMBEDMENT	(4) 3/4"ø W/ 12" EMBEDMENT	SEE SECTION	SEE SECTION
	NOTES	1	1	1	1

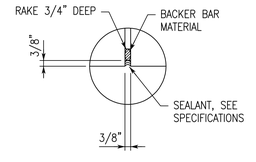
NOTES:
1. PROVIDE 3" CONCRETE COVER AT ALL STEEL BELOW GRADE.

FOOTING SCHEDULE			
FOOTING DESIGNATION		F3.5	F5.0
FOOTING	SIZE (LxW)	3'-6"x3'-6"	5'-0"x5'-0"
	DEPTH (D)	1'-0"	2'-6"
	REINF EW (BOT)	4#5	6#6
	NOTES	1	1,2

NOTES:
1. PROVIDE SCHEDULED REINFORCEMENT ON TOP AND BOTTOM OF FOOTING.
2. PROVIDE STANDARD HOOK AT EACH END OF REINFORCING BAR.



DETAIL "A" MASONRY CONTROL JOINT
1 1/2"=1'-0"



DETAIL "B" MASONRY CONTROL JOINT
3"=1'-0"

ALABAMA
REGISTERED
No. 22596
PROFESSIONAL
ENGINEER
CRAIG WITT
H. Craig Witt, P.E.
4-8-2022

SHEET TITLE:
TYPICAL DETAILS

PROJ. MGR.:	HCW
DRAWN:	ABS
DATE:	04/15/22
REVISIONS	
1	5-13-2022

JOB NO. 19-90B
SHEET NO:
S1.2
3 OF 12

SDG
STRUCTURAL DESIGN GROUP
300 Chase Park South, Suite 125
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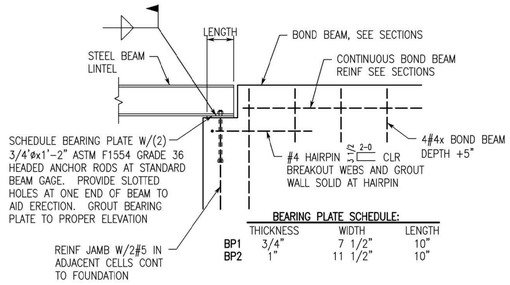
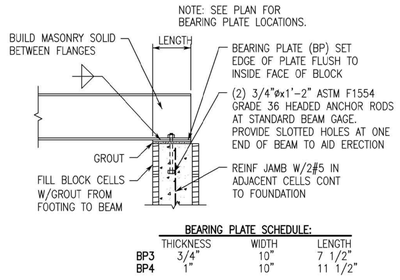
fax 205-824-5280
Job Number 20-107



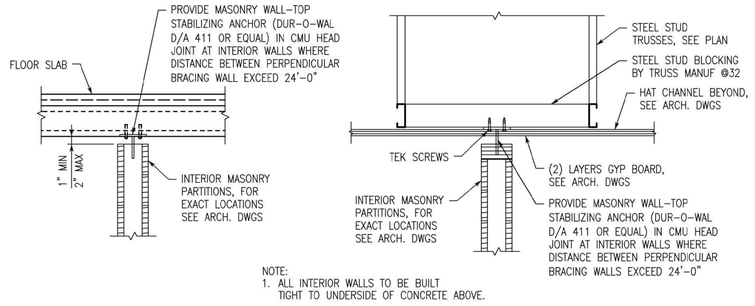
BEAM BEARING DETAIL IN LINE WITH CMU WALL
TYPICAL

NOTE:
AT 24" LONG BEARING PLATES, PROVIDE (3) HEADED ANCHOR RODS. (1) PER CELL AND ALTERNATE EITHER SIDE ON STEEL BEAM WEB.



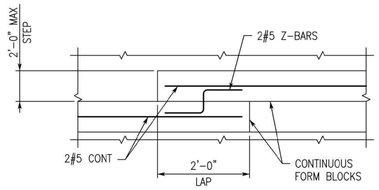
BEAM BEARING DETAIL
TYPICAL

NOTE:
AT 24" LONG BEARING PLATES, PROVIDE (3) HEADED ANCHOR RODS. (1) PER CELL AND ALTERNATE EITHER SIDE ON STEEL BEAM WEB.

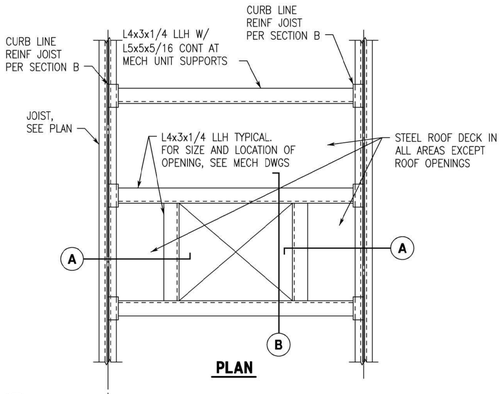


NOTE:
1. ALL INTERIOR WALLS TO BE BUILT TIGHT TO UNDERSIDE OF CONCRETE ABOVE.

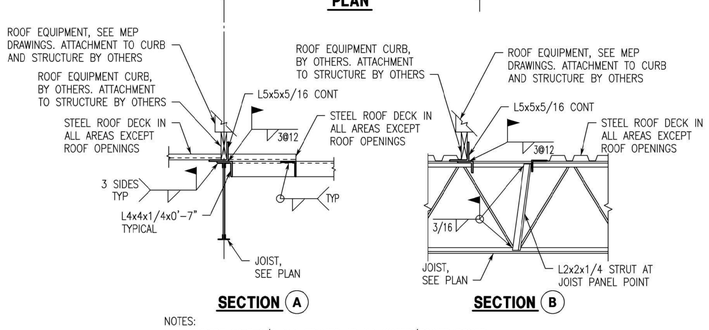
INTERIOR MASONRY WALL BRACING DETAILS
TYPICAL



MASONRY BOND BEAM STEP DETAIL
TYPICAL



PLAN

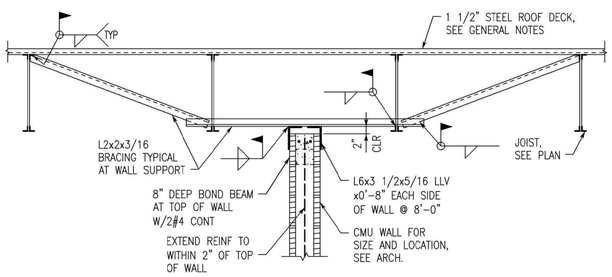


SECTION (A)

SECTION (B)

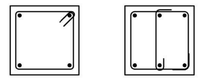
NOTES:
1. PROVIDE L4x3x1/4 LLH FRAMES AT ALL WATER/POWER BOXES.
2. AT ROOF DRAINS SUPPORT, PROVIDE L2x2x1/4 AT JOIST TOP CHORD.
3. CONTRACTOR COORDINATE ROOF EQUIPMENT FRAMES WITH EQUIPMENT MANUFACTURER. DETAIL IS SCHEMATIC DEPICTION AND OTHER CONFIGURATIONS MAY BE REQUIRED.
4. FASTEN STEEL ROOF DECK TO ALL ANGLES PER DECK FASTENING REQUIREMENT.

ROOF EQUIPMENT FRAME DETAIL
TYPICAL AT ALL OPENINGS IN ROOF LARGER THAN 8"



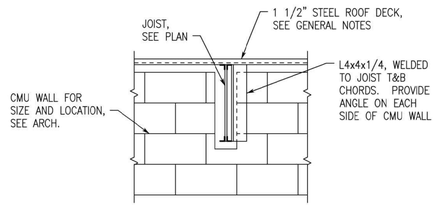
CMU WALL SUPPORT DETAIL (WALL BETWEEN PARALLEL JOISTS)
INTERIOR MASONRY WALL BRACING DETAILS

PROVIDE WALL SUPPORT EACH SIDE OF WALL @ 8'-0". PROVIDE WALL SUPPORT WHERE CONTINUOUS WALL SPAN BETWEEN PERPENDICULAR WALL EXCEEDS 20'-0", UNLESS NOTED.



NOTE: ALTERNATE POSITION OF TIE HOOKS IN PLACING SUCCESSIVE SETS OF TIES

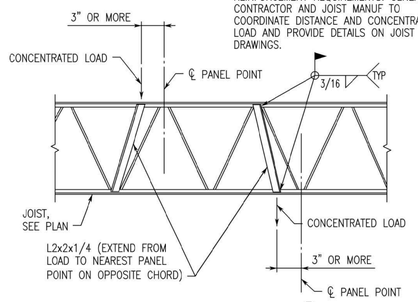
COLUMN TIE DETAILS
TYPICAL

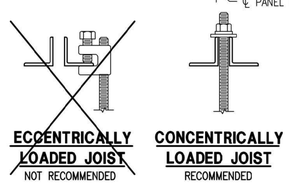


CMU WALL SUPPORT DETAIL (WALL PERPENDICULAR TO JOIST)
INTERIOR MASONRY WALL BRACING DETAILS

PROVIDE WALL SUPPORTS AT EVERY JOIST WHERE CONTINUOUS WALL SPAN BETWEEN PERPENDICULAR WALLS EXCEEDS 20'-0", UNLESS NOTED.

NOTE:
JOIST MANUF TO VERIFY 3" DIMENSION AND MAX CONCENTRATED LOAD FOR T&B CHORD REINFORCEMENT REQUIREMENTS. GENERAL CONTRACTOR AND JOIST MANUF TO COORDINATE DISTANCE AND CONCENTRATED LOAD AND PROVIDE DETAILS ON JOIST SHOP DRAWINGS.





JOIST REINFORCEMENT DETAIL
TYPICAL

LOAD BEARING STACK BOND MASONRY LINTEL SCHEDULE

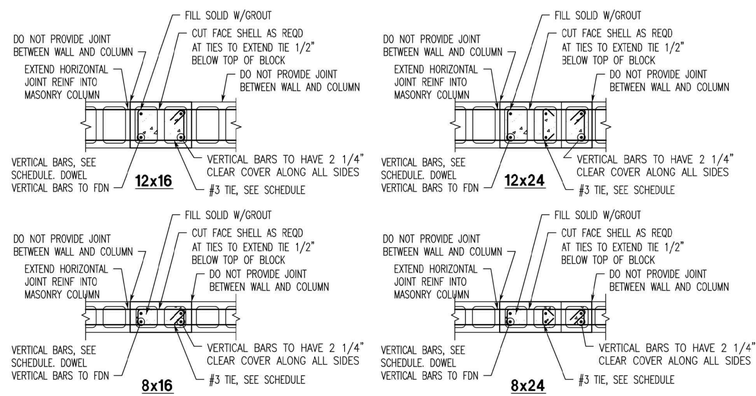
MAXIMUM OPENING WIDTH	LINTEL DIMENSIONS AND REINFORCING		
	DEPTH	8" WALL	12" WALL
4'-0"	24	2#5 BOT & 2#5 TOP	2#5 BOT & 2#5 TOP
6'-0"	32	2#5 BOT & 2#5 TOP	2#5 BOT & 2#5 TOP
8'-0"	32	2#6 BOT & 2#6 TOP	2#6 BOT & 2#6 TOP
10'-0"	32	2#6 BOT & 2#6 TOP	2#6 BOT & 2#6 TOP

1. PROVIDE 24" MINIMUM BEARING FOR ALL LINTELS. FILL CELLS SOLID AT EACH SIDE OF OPENING AND REINFORCE WITH 1#5 BAR CONTINUOUS. (JAMB BARS OF SAME SIZE AS VERTICAL WALL REINFORCING BARS.)
2. SHORE LINTEL UNTIL MORTAR AND GROUT HAVE SET AND CURED.
3. PROVIDE 8" DEEP BOND BEAM REINFORCED WITH 2#5 CONT AT BOTTOM OF ALL OPENINGS. EXTEND 24" PAST OPENING ON EACH SIDE OF OPENING.

NON-LOAD BEARING STACK BOND MASONRY LINTEL SCHEDULE

MAXIMUM OPENING WIDTH	LINTEL DIMENSIONS AND REINFORCING				
	DEPTH	8" WALL		12" WALL	
		REINFORCING	MAX HEIGHT OF WALL ABOVE LINTEL	REINFORCING	MAX HEIGHT OF WALL ABOVE LINTEL
2'-0"	8	1#4 BOT	20'-0"	1#4 BOT	22'-0"
4'-0"	8	1#4 BOT	10'-0"	2#4 BOT	9'-4"
6'-0"	8	1#5 BOT & 1#4 TOP	4'-0"	2#5 BOT & 2#4 TOP	4'-8"
8'-0"	16	1#6 BOT & 1#5 TOP	15'-4"	2#5 BOT & 2#4 TOP	16'-0"
10'-0"	16	1#7 BOT & 1#5 TOP	10'-0"	2#6 BOT & 2#4 TOP	12'-0"
12'-0"	16	1#8 BOT & 1#5 TOP	7'-4"	2#7 BOT & 2#5 TOP	10'-8"

1. DO NOT USE THIS SCHEDULE IF WALL IS LOAD BEARING SUPPORTING ANYTHING OTHER THAN WALL WEIGHT ONLY. IF WALL IS LOAD BEARING USE THE LOAD BEARING STACK BOND MASONRY LINTEL SCHEDULE.
2. PROVIDE 2'-0" MINIMUM BEARING FOR ALL LINTELS. FILL CELLS SOLID AT EACH SIDE OF OPENING AND REINFORCE WITH 1#5 BAR CONTINUOUS.
3. WHERE MAXIMUM HEIGHT OF WALL ABOVE LINTEL IS EXCEEDED, PROVIDE ADDITIONAL LINTELS EQUALLY SPACED ABOVE TO LIMIT WALL HEIGHTS ABOVE LINTEL TO THAT SHOWN IN THE TABLE ABOVE.
4. SHORE LINTEL UNTIL MORTAR AND GROUT HAVE SET AND CURED.
5. PROVIDE 8" DEEP BOND BEAM REINFORCED WITH 2#4 CONT AT BOTTOM OF ALL OPENINGS. EXTEND 2'-0" PAST OPENING ON EACH SIDE OF OPENING.



MASONRY COLUMN (MC)
TYPICAL

VENEER LINTEL SCHEDULE

MAXIMUM OPENING WIDTH	STEEL FOR EACH 4" OF WALL THICKNESS
2'-0"	L6x6x3/8
4'-0"	L6x6x3/8
6'-0"	L6x6x3/8
8'-0"	L6x6x3/8
LARGER	NOTE 3

1. PROVIDE 8" MINIMUM BEARING FOR ALL LINTELS.
2. ALL EXPOSED LINTEL ANGLES TO BE HOT DIP GALVANIZED.
3. ANCHOR L6x6x3/8 ANGLE TO WALL WITH 3/4"ø HILTI KWIK HUS-EZ SCREW ANCHORS (6 1/4" EFFECTIVE EMBEDMENT) @24 ON CENTER.
4. CONTRACTOR TO COORDINATE DIMENSION OF OUTSTANDING LEG WITH MINIMUM BRICK SUPPORT REQUIREMENT(S) AND WITH DETAILS INDICATED ON ARCH. DWGS.

MASONRY COLUMN SCHEDULE (MC)

COLUMN DESIGNATION		MC1	MC2	MC3	
COLUMN	SIZE	8x16	8x24	8x32	
	VERTICALS	4#5	6#5	8#5	
	TIES	#3@8	#3@8	#3@8	
	NOTES	1,2,3,4,6	1,2,3,4	1,2,3,4,5	

NOTES:
1. SEE COLUMN TIE DETAIL ON THIS SHEET.
2. DOWEL VERTICAL STEEL INTO FOOTING THE THICKNESS OF THE FOOTING MINUS 3" WITH STANDARD HOOK. LAP DOWELS WITH VERTICALS 72 BAR DIA.
3. EXTEND VERTICALS FULL HEIGHT OF WALL UNLESS NOTED.
4. PROVIDE FIRST TIE ABOVE FOOTING AT 4" AND FIRST TIE BELOW SLAB/TRUSS/ROOF BEARING AT 4" AND SPACE REMAINING TIES AT SPECIFIED SPACING.
5. AT SIMILAR CONDITION, PROVIDE 8x28 NOMINAL SIZE MASONRY COLUMN WITH THE SAME REINFORCING AS 8x32 MC3. ADJUST TIE SIZE BASED ON REDUCED MASONRY COLUMN SIZE.
6. AT SIMILAR CONDITION, PROVIDE 8x12 NOMINAL SIZE MASONRY COLUMN WITH THE SAME REINFORCING AS 8x16 MC1. ADJUST TIE SIZE BASED ON REDUCED MASONRY COLUMN SIZE.

LATHAN ARCHITECTS
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NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA REGISTERED No. 22696 PROFESSIONAL ENGINEER CRAIG WINN
H. Craig Winn, P.E.
4-15-2022

SHEET TITLE:
TYPICAL DETAILS

PROJ. MGR.:	HCW
DRAWN:	ABS
DATE: MARCH 21, 2022	
REVISIONS	

JOB NO. 19-90B

SHEET NO:
S1.3
4 OF 12

SDG
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Job Number 20-107

LATHAN
ARCHITECTS
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NEW ADDITION AND RENOVATION FOR
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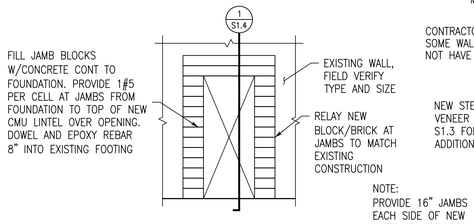
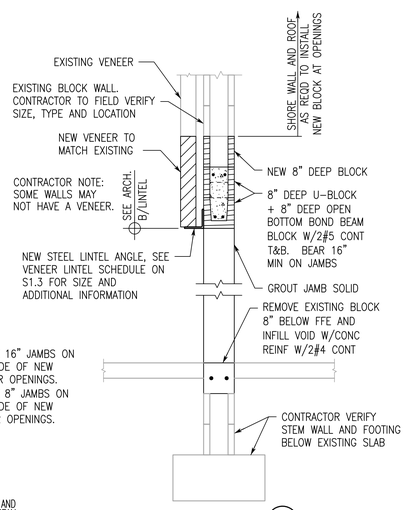


NOTE:
PROVIDE 16" JAMBS ON EACH SIDE OF NEW EXTERIOR OPENINGS. PROVIDE 8" JAMBS ON EACH SIDE OF NEW INTERIOR OPENINGS.

ELEVATION AT NEW OPENING IN EXISTING WALL
1/4"=1'-0"



SECTION 1/S1.4
3/4"=1'-0"

TENSION LAP SPLICE LENGTHS

BAR SIZE	f_c= 3000 PSI				f_c= 4000 PSI			
	TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
	A	B	A	B	A	B	A	B
#3	22"	28"	17"	22"	19"	24"	15"	19"
#4	29"	37"	22"	29"	25"	32"	19"	25"
#5	36"	47"	28"	36"	31"	40"	24"	31"
#6	43"	56"	33"	43"	37"	48"	29"	37"
#7	63"	81"	48"	63"	54"	70"	42"	54"
#8	72"	93"	55"	72"	62"	80"	48"	62"
#9	81"	105"	62"	81"	70"	91"	54"	70"
#10	91"	118"	70"	91"	79"	102"	61"	79"
#11	101"	131"	78"	101"	87"	113"	67"	87"

TOP BARS ARE HORIZONTAL REINFORCEMENT WITH MORE THAN 12" OF CONCRETE CAST BELOW THE REINFORCEMENT.

PIPING WEIGHTS

PIPE DIAMETER	PIPE WT PER/FOOT (PLF)	FLUID WT PER/FOOT (PLF)	INSULATION & HANGERS (PLF)	TOTAL WT PER/FOOT (PLF)
4"	10.80	6.10	2.00	18.90
6"	19.00	13.80	3.00	35.80
8"	28.60	23.90	4.00	56.50
10"	40.50	37.50	4.00	82.00
12"	49.60	54.00	5.00	108.60
14"	54.60	65.70	5.00	125.30
16"	62.60	87.10	5.00	154.70

NOTES:
1. FROM ANVIL INTERNATIONAL PIPE FITTERS HANDBOOK.
2. ALL PIPES ASSUMED TO BE SCHEDULE 40.
3. FLUID WEIGHT INCLUDES ALLOWANCE FOR GLYCOL CONCENTRATION.
4. PIPING SUPPORT AND THRUST BRACING REQUIREMENTS SHALL BE COORDINATED BY THE GENERAL CONTRACTOR WITH THE STEEL/JOIST FABRICATOR. SEE MECHANICAL/PLUMBING DRAWINGS FOR PIPING SUPPORT AND THRUST BRACING REQUIREMENTS.
5. FOR PIPE SIZES NOT LISTED, CONTACT STRUCTURAL ENGINEER.

COMPONENTS AND CLADDING WIND LOADS FOR WALLS (PSF)

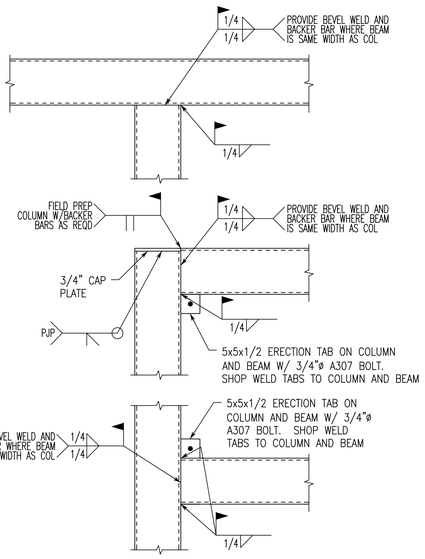
H = 20'-10"	EFFECTIVE WIND AREA (FT2)	120 MPH ULTIMATE DESIGN WIND SPEED	
INT. ZONE	10	33.7	-36.5
	20	32.1	-35.0
	50	30.1	-33.0
	100	28.6	-31.5
	200	27.1	-30.0
	500	25.1	-28.0
EDGE ZONE	10	33.7	-45.1
	20	32.1	-42.1
	50	30.1	-38.0
	100	28.6	-35.0
	200	27.1	-32.0
	500	25.1	-28.0

NOTES:
1. WIDTH OF EDGE STRIP, a = 8'-4".
2. VALUES SHOWN ABOVE HAVE BEEN ADJUSTED FOR BUILDING HEIGHT AND EXPOSURE ACCORDING TO ASCE7-10 STANDARD TABLE 30.3-1 AND IMPORTANCE FACTOR.
3. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE BUILDING SURFACES.
4. EFFECTIVE WIND AREA IS THE SPAN LENGTH MULTIPLIED BY AN EFFECTIVE WIDTH THAT NEED NOT BE LESS THAN ONE-THIRD THE SPAN LENGTH.
5. WIND PRESSURES IN THESE TABLES SHALL BE MULTIPLIED BY 0.6 TO OBTAIN NOMINAL WIND PRESSURES.

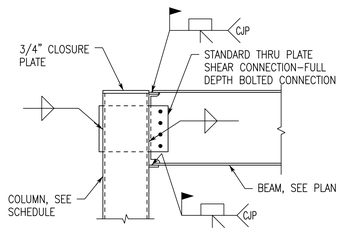
COMPONENTS AND CLADDING WIND LOADS FOR ROOF (PSF)

H = 20'-10" 1/2:12 Roof Slope	EFFECTIVE WIND AREA (FT2)	120 MPH ULTIMATE DESIGN WIND SPEED	
INT. ZONE	10	16.0	-33.7
	20	16.0	-32.8
	50	16.0	-31.7
	100	16.0	-30.8
	200	16.0	-30.8
	500	16.0	-30.8
EDGE ZONE	10	16.0	-56.5
	20	16.0	-50.5
	50	16.0	-42.5
	100	16.0	-36.5
	200	16.0	-36.5
	500	16.0	-36.5
CORNER ZONE	10	16.0	-85.0
	20	16.0	-70.4
	50	16.0	-51.1
	100	16.0	-36.5
	200	16.0	-36.5
	500	16.0	-36.5

NOTES:
1. WIDTH OF EDGE STRIP, a = 8'-4".
2. VALUES SHOWN ABOVE HAVE BEEN ADJUSTED FOR BUILDING HEIGHT AND EXPOSURE ACCORDING TO ASCE7-10 STANDARD TABLE 30.3-1 AND IMPORTANCE FACTOR.
3. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE BUILDING SURFACES.
4. EFFECTIVE WIND AREA IS THE SPAN LENGTH MULTIPLIED BY AN EFFECTIVE WIDTH THAT NEED NOT BE LESS THAN ONE-THIRD THE SPAN LENGTH.
5. CONSIDER 5 PSF MINIMUM DEAD LOAD FOR UPLIFT CALCULATIONS FOR ROOF JOISTS AND 2 PSF MINIMUM DEAD LOAD FOR UPLIFT CALCULATIONS FOR ROOF DECK.
6. WIND PRESSURES IN THESE TABLES SHALL BE MULTIPLIED BY 0.6 TO OBTAIN NOMINAL WIND PRESSURES.



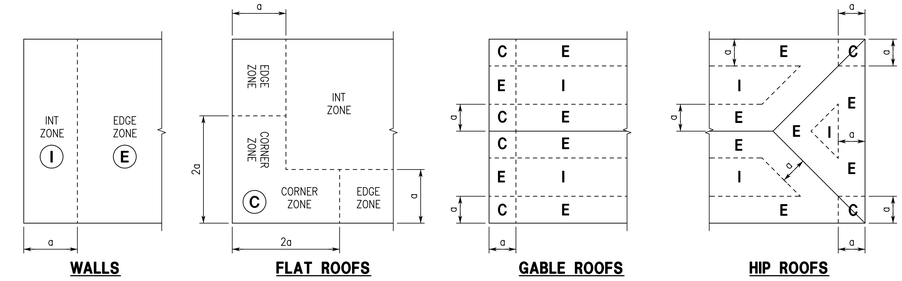
HSS MOMENT CONNECTION
3/4"=1'-0"



MOMENT CONNECTION DETAIL
TYPICAL

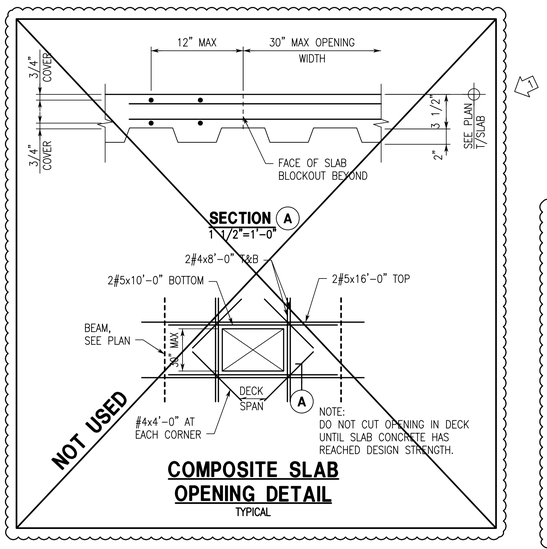
NOTE:
CONNECTION PLATES MINIMUM 3/8" THICK.

BEAM TO COLUMN CONNECTION DETAIL
TYPICAL

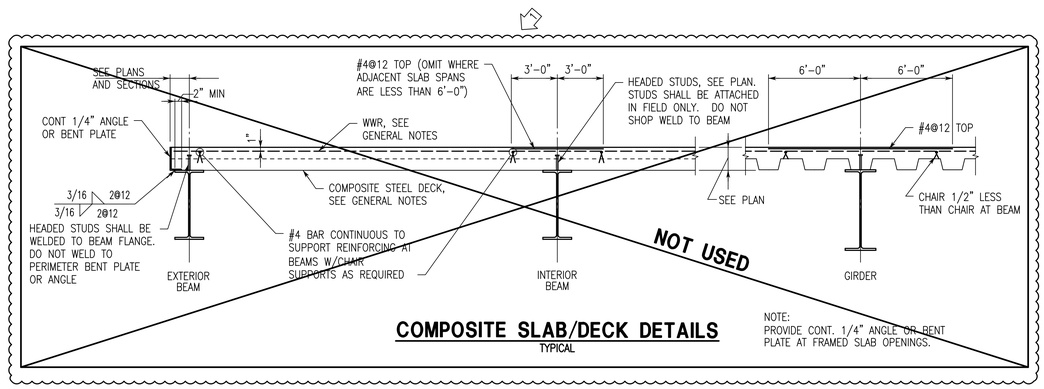


WALLS | FLAT ROOFS | GABLE ROOFS | HIP ROOFS

WALL AND ROOF WIND PRESSURE ZONE DIAGRAMS
TYPICAL



COMPOSITE SLAB OPENING DETAIL
TYPICAL



COMPOSITE SLAB/DECK DETAILS
TYPICAL

NOTE:
PROVIDE CONT. 1/4" ANGLE OR BENT PLATE AT FRAMED SLAB OPENINGS.

ALABAMA REGISTERED No. 22596 PROFESSIONAL ENGINEER CRAIG WINN
H. Craig Winn, P.E.
4-15-2022

SHEET TITLE:
TYPICAL DETAILS

PROJ. MGR.:	HCW
DRAWN:	ABS
DATE:	04/15/22
REVISIONS	
1	5-13-2022

JOB NO. 19-90B
SHEET NO:
S1.4
5 OF 12
0 1" 2"

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ARCHITECTS
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NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
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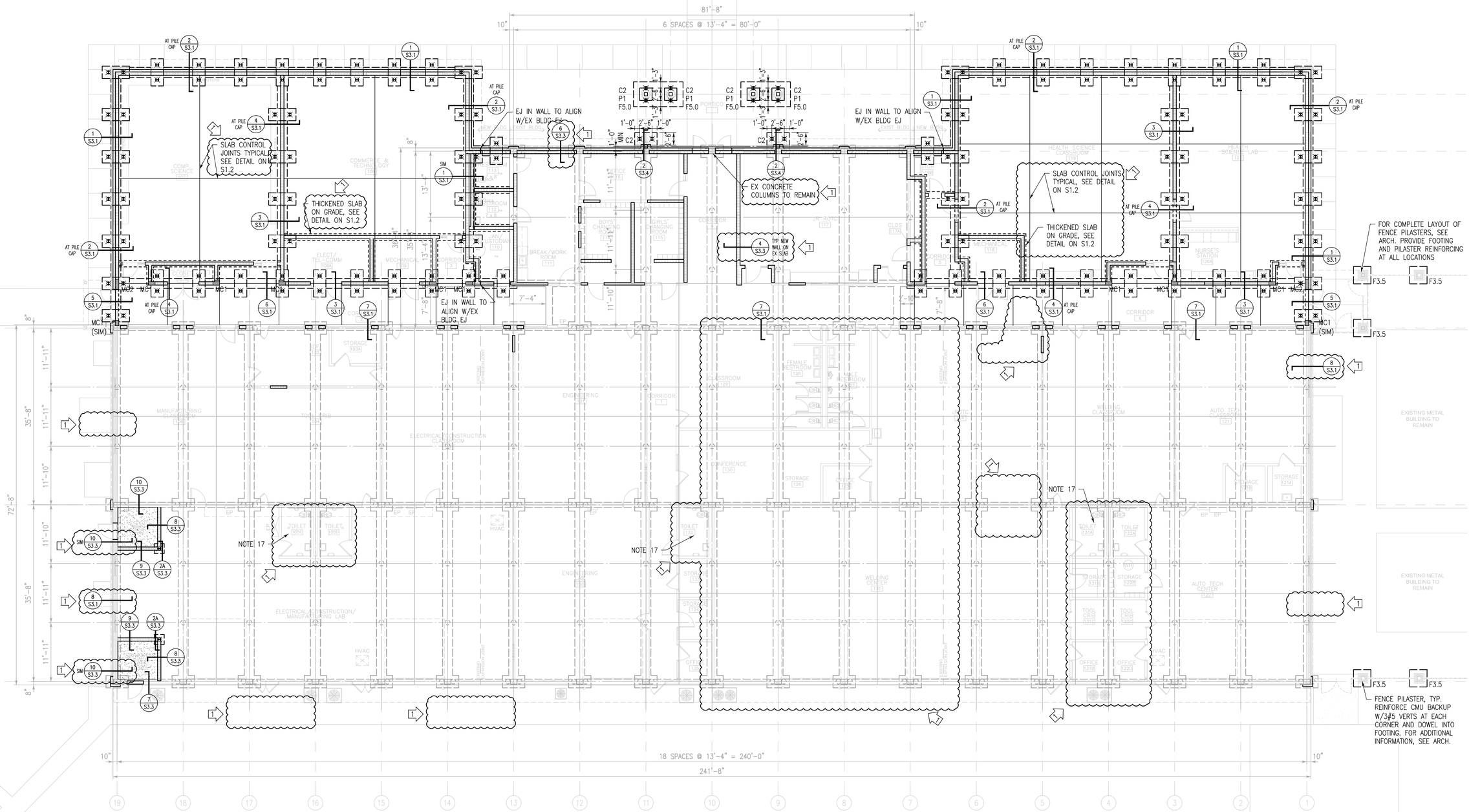

PROJECT NORTH

FOUNDATION PLAN
1/8"=1'-0"

1. FINISH FLOOR (TOP OF SLAB) ELEVATION 523.78', UNLESS NOTED.
2. TOP OF GRADE BEAM ELEVATION -1'-4", UNLESS NOTED.
   TOP OF FOOTING ELEVATION -2'-0", UNLESS NOTED.
3. SLAB ON GRADE CONSTRUCTION:
   NEW SLAB - SEE GENERAL NOTES AND TYPICAL DETAILS.
   EXISTING SLAB - WHERE REQUIRED, REPLACE/PATCH 6" THICK STRUCTURAL SLAB. MINIMIZE DAMAGING AND CUTTING OF SLAB REINFORCING. SPLICE IN NEW REINFORCING AS REQUIRED. PROVIDE WWR. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTES AND TYPICAL DETAILS.
4. FOR SLAB RECESS AND RAMP LOCATIONS, SEE ARCHITECTURAL DRAWINGS.
5. GENERAL CONTRACTOR SHALL COORDINATE TILE JOINT LOCATIONS WITH CONTROL JOINTS.
6. GENERAL CONTRACTOR COORDINATE ALL PIPING, ETC. TO PASS BENEATH GRADE BEAMS AND ABOVE FOOTINGS. STEP FOOTINGS AS REQUIRED, SEE FOOTING STEP DETAIL ON S1.2.
7. GRADE BEAM/FOOTING WIDTHS INDICATED ON PLAN MAY OR MAY NOT BE TO SCALE. COORDINATE WITH SECTION CUTS FOR GRADE BEAM/FOOTING WIDTHS AND ADDITIONAL INFORMATION.
8. "MC" INDICATES MASONRY COLUMN. SEE SHEET S1.3 FOR ADDITIONAL INFORMATION.
9. CONTRACTOR NOTE: MODIFY BLOCK AS REQUIRED TO INSTALL REINFORCING AS NOTED/SHOWN.
10. C# INDICATES STEEL COLUMN. SEE SCHEDULE AND COLUMN BASE AND FOOTING DETAIL ON S1.2.
11. F# INDICATES CONCRETE SPREAD FOOTING. SEE SCHEDULE AND COLUMN BASE AND FOOTING DETAIL ON S1.2.
12. "P1" INDICATES CONCRETE PEDESTAL FOR PRECAST SUPPORT. CONTRACTOR TO COORDINATE DIAMETER OF PEDESTAL WITH DIAMETER OF PRECAST AT BASE. TOP OF PEDESTAL TO BE SET AT 1" BELOW BOTTOM OF PRECAST. SET PRECAST WITH SHIMS AND GROUT AND AT THE DIRECTION OF THE PRECAST MANUFACTURER. REINFORCE PEDESTAL WITH #5 DOWELS AT 12" O.C. MAXIMUM AROUND PERIMETER OF PEDESTAL. PROVIDE #4 CIRCULAR TIES AT 6" O.C.
13. FOR PAVEMENT AND HARDSCAPE INFORMATION, SEE ARCHITECTURAL DRAWINGS AND CIVIL DRAWINGS.
14. FOR LOAD BEARING AND NON-LOAD BEARING CMU WALL PLAN DIMENSIONS, SEE ARCHITECTURAL DRAWINGS.
15. EXISTING CMU WALL AND ROOF FRAMING IS TO BE SHORED AS REQUIRED TO INSTALL NEW OPENINGS. GC IS TO SUBMIT FOR REVIEW SHORING ENGINEERING CALCULATIONS AND SHOP DRAWINGS (SEALED AND SIGNED). CALCULATIONS AND SHOP DRAWINGS SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
16. INFILL EXISTING OPENINGS AS REQUIRED. GROUT JAMBS SOLID. FOR ADDITIONAL INFORMATION, SEE ARCHITECTURAL DRAWINGS.
17. EXISTING TOILET TO REMAIN.
18. NOT USED.
19. ⊠ INDICATES HELICAL ANCHORS, SEE PLAN FOR LAYOUT. FOR ADDITIONAL INFORMATION, SEE SECTIONS AND SPECIFICATIONS. MINIMUM ALLOWABLE HELICAL ANCHOR CAPACITY IS TO BE 65 KIPS IN COMPRESSION AND 10 KIPS IN TENSION. EACH HELICAL ANCHOR IS TO BE DESIGNED FOR A 2 KIP SHEAR LOAD (APPLIED AT THE TOP OF THE HELICAL ANCHOR). NOTIFY DESIGN TEAM IF EXISTING CONDITIONS VARY FROM THOSE DEPICTED ON CONTRACT DRAWINGS. FOR BASE BID PURPOSES, DESIGN LENGTH OF EACH HELICAL ANCHOR SHALL BE 60 FT. CONTRACTOR SHALL ADJUST PRICING ACCORDING TO UNIT PRICES IN SPECIFICATIONS BASED ON ACTUAL INSTALLED LENGTHS.
20. ▨ HATCHED/SHADED AREA ON THE PLAN INDICATES EXTENT OF EXISTING STRUCTURAL SLAB ON GRADE TO BE REMOVED AND REPLACED. CONTRACTOR IS TO MINIMIZE THE AMOUNT OF EXISTING SLAB THAT IS REMOVED AS MUCH AS POSSIBLE.
21. ✱ INDICATES HELICAL ANCHORS WITH POST-INSTALLED PLATE BRACKETS, SEE PLAN FOR LAYOUT. FOR ADDITIONAL INFORMATION, SEE SECTIONS AND SPECIFICATIONS. MINIMUM ALLOWABLE HELICAL ANCHOR CAPACITY IS TO BE 15 KIPS IN COMPRESSION AND 5 KIPS IN TENSION. EACH HELICAL ANCHOR IS TO BE DESIGNED FOR A 1 KIP SHEAR LOAD (APPLIED AT THE TOP OF THE HELICAL ANCHOR). NOTIFY DESIGN TEAM IF EXISTING CONDITIONS VARY FROM THOSE DEPICTED ON CONTRACT DRAWINGS. FOR BASE BID PURPOSES, DESIGN LENGTH OF EACH HELICAL ANCHOR SHALL BE 60 FT. CONTRACTOR SHALL ADJUST PRICING ACCORDING TO UNIT PRICES IN SPECIFICATIONS BASED ON ACTUAL INSTALLED LENGTHS.

ALABAMA REGISTERED No. 22596 PROFESSIONAL ENGINEER CRAIG W. WINN
H. Craig Winn, P.E.
4-15-2022

SHEET TITLE:
FOUNDATION PLAN

PROJ. MGR.:	HCW
DRAWN:	ABS
DATE:	04/15/22
REVISIONS	
1 5-13-2022	

JOB NO. 19-90B

SHEET NO:
S2.1
6 OF 12

0 1" 2"

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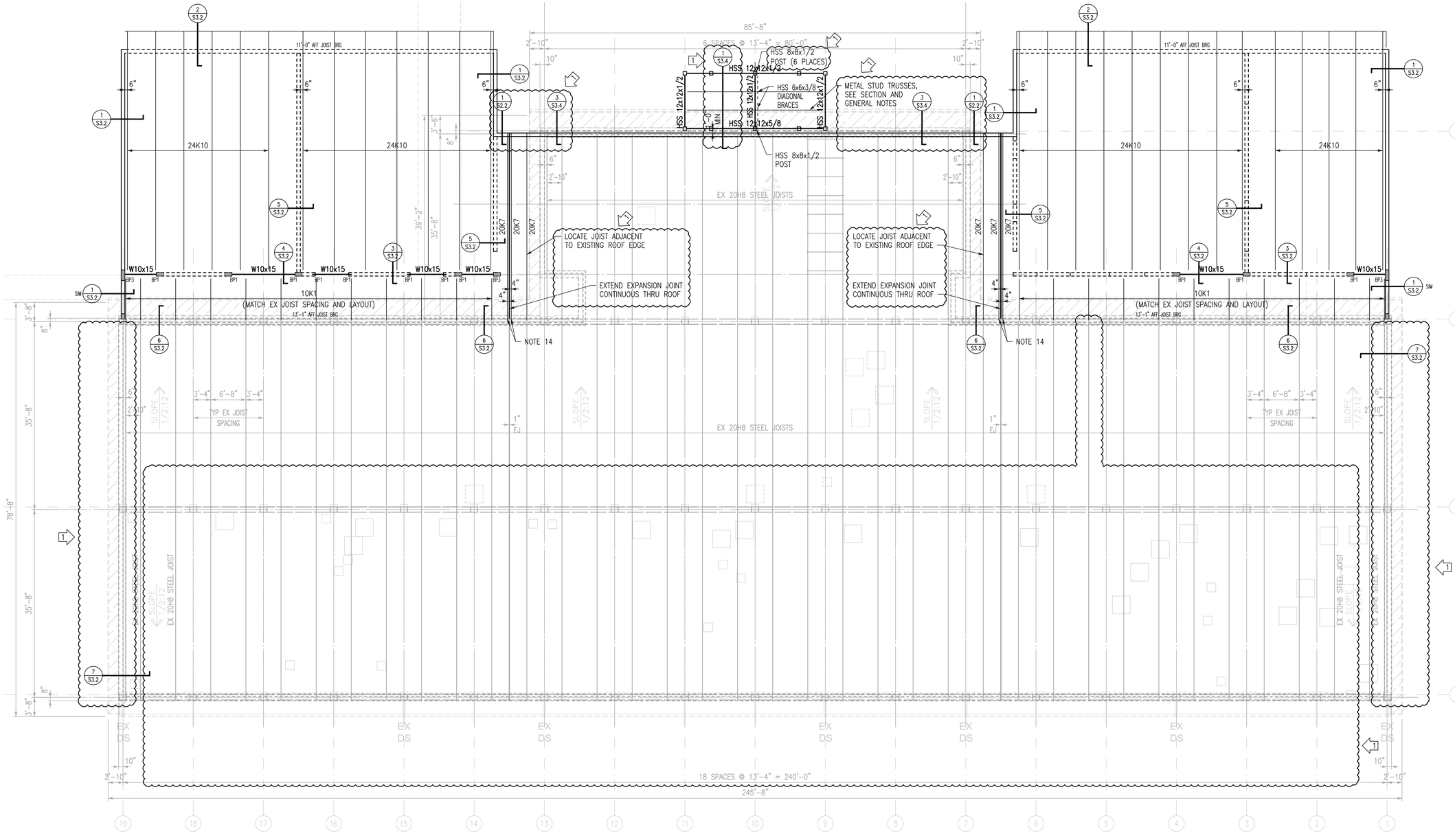
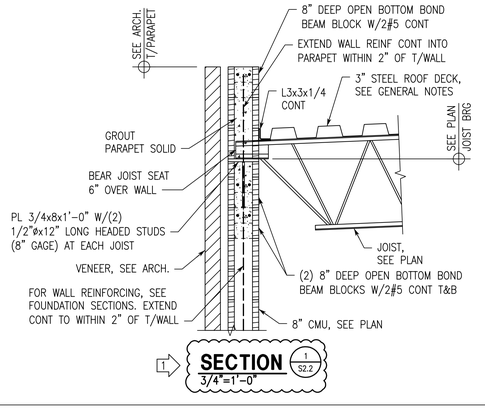
Job Number 20-107





SECTION
1/S2.2
3/4"=1'-0"

PROJECT NORTH

ROOF FRAMING PLAN
1/8"=1'-0"

1. TOP OF STEEL (JOIST BEARING) ELEVATION ABOVE FINISH FLOOR, SEE PLAN AND/OR SECTIONS.
2. ROOF SYSTEMS:
   NEW ADDITIONS: 3" STEEL ROOF DECK, 20 GAGE, ON STEEL JOISTS AT 6'-0" MAXIMUM ON CENTER, SEE GENERAL NOTES. ANCHOR METAL DECK TO JOISTS WITH 5/8"ø PUDDLE WELDS IN 36/7 PATTERN WITH 6#10 SIDELAP SCREWS BETWEEN JOISTS.
3. TOP OF STEEL IS EITHER LEVEL OR SLOPING UNIFORMLY BETWEEN NOTED ELEVATIONS.
4. SPACE STEEL JOISTS EQUALLY BETWEEN FACE OF WALLS, UNLESS NOTED.
5. EQUIPMENT LOCATIONS AND WEIGHTS SHOWN ARE APPROXIMATE. THE GENERAL CONTRACTOR SHALL COORDINATE AND VERIFY THE SIZE, WEIGHT AND LOCATION OF ALL MECHANICAL UNITS WITH THE JOIST MANUFACTURER. DO NOT SCALE FROM THIS DRAWING. PROVIDE ROOF EQUIPMENT FRAME AT ALL MECHANICAL UNITS. SEE DETAIL ON S1.4.
6. HANGER LOCATIONS FOR PIPING LARGER THAN 3 INCHES IN DIAMETER MUST BE COORDINATED BY GENERAL CONTRACTOR WITH THE JOIST MANUFACTURER. FOR PIPING WEIGHTS, SEE TYPICAL DETAILS ON 1.4.
7. AT JOISTS DESIGNATED "SP", JOIST MANUFACTURER SHALL DESIGN JOISTS FOR 25 PSF DEAD LOAD AND 20 PSF LIVE LOAD PLUS ANY ADDITIONAL LOADS SHOWN ON PLANS, NOTED IN PLAN NOTES, AND/OR SHOWN/NOTED IN SECTIONS. LIMIT DEAD LOAD DEFLECTION OF JOISTS TO 0.75".
8. PROVIDE MASONRY AND VENEER LINTELS AT ALL OPENINGS, SEE SCHEDULE ON S1.2.
9. "BP" INDICATES BEAM BEARING PLATE, SEE TYPICAL DETAIL ON SHEET S1.3.
10. AT NEW ADDITIONS, PROVIDE 4 1/2" JOIST SEAT DEPTHS, TYPICAL.
11. EXISTING CMU WALL AND ROOF FRAMING IS TO BE SHORED AS REQUIRED TO INSTALL NEW OPENINGS. GC IS TO SUBMIT FOR REVIEW SHORING ENGINEERING CALCULATIONS AND SHOP DRAWINGS (SEALED AND SIGNED). CALCULATIONS AND SHOP DRAWINGS SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
12. NOT USED.
13. METAL STUD SOFFIT FRAMING SHALL BE DESIGNED BY CONTRACTOR TO HANG FROM ROOF STRUCTURE. CONTRACTOR SHALL ENGAGE METAL STUD ENGINEER AND PROVIDE CALCULATIONS AND SHOW DRAWINGS FOR SOFFIT DESIGN. DESIGN SOFFIT FOR DEAD WEIGHT PLUS ANY SUSPENDED EQUIPMENT AND A 5 PSF HORIZONTAL LOAD OVER SURFACE. JOIST MANUFACTURER TO DESIGN JOIST IN THIS AREA FOR MINIMUM 250 PLF DEAD WEIGHT FROM SOFFIT.
14. AT CONTINUATION OF EXPANSION JOINT (EJ), SUPPORT CLIP ANGLES WILL BE REQUIRED TO SUPPORT AND CONNECT THE NEW STEEL JOISTS TO THE EXISTING STRUCTURE. PROVIDE L6x6x3/8x0'-10" LONG CLIP ANGLE WITH (2) 3/4"ø x8" LONG SCREW ANCHORS AT 6" GAGE. INSTALL 3/8" STIFFENER CENTERED UNDER JOIST BEARING LOCATION.
15. CONTRACTOR IS TO SEQUENCE CONSTRUCTION AND PRE-STAGE MATERIALS AS REQUIRED FOR WORK WITHIN EXISTING STRUCTURE.
16. BEAM REACTIONS ARE INDICATED AT ENDS OF BEAMS AS "Xk" WHERE "X" IS THE MAGNITUDE OF THE WORKING "ASD" LOAD SHEAR REACTIONS IN KIPS.

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NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

LATHAN ARCHITECTS REGISTERED No. 22596 PROFESSIONAL CRAIG W. LATHAN
H. Craig Wilson, P.E.
4-5-2022

SHEET TITLE:
ROOF FRAMING PLAN

PROJ. MGR.:	HCW
DRAWN:	ABS
DATE:	04/15/22
REVISIONS	
1	5-13-2022

JOB NO. 19-90B
SHEET NO:
S2.2
7 OF 12
0 1" 2"

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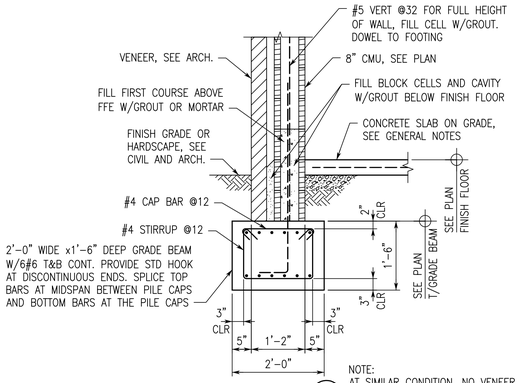
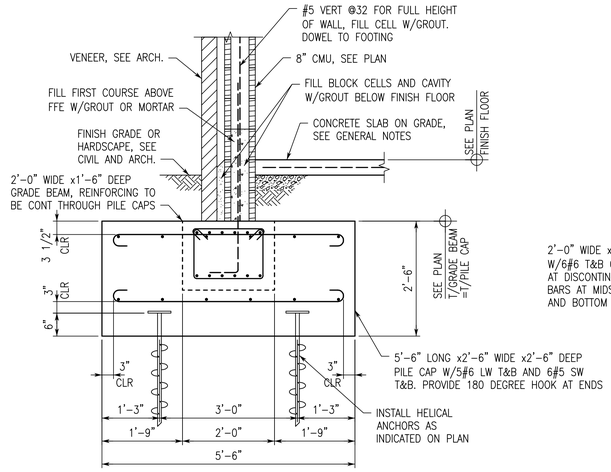


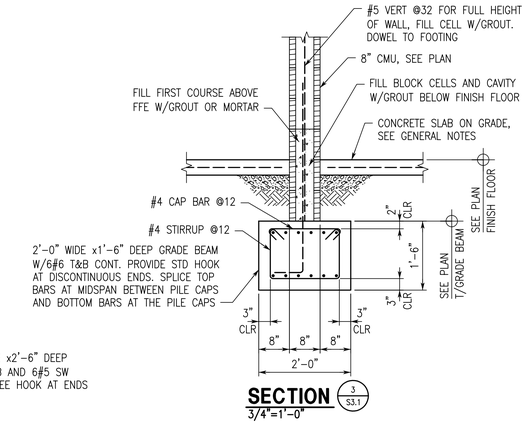
SECTION 1/S3.1 — 3/4"=1'-0"

NOTE:
AT SIMILAR CONDITION, NO VENEER IS PRESENT AND CONCRETE SLAB ON GRADE IS PRESENT ON BOTH SIDES OF THE CMU WALL.

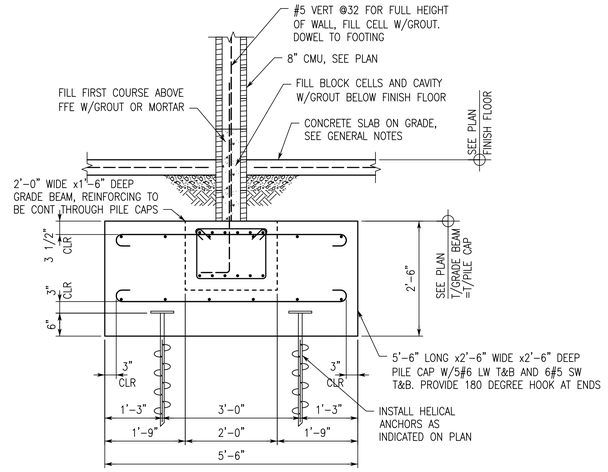


SECTION 2/S3.1 — 3/4"=1'-0"

NOTE:
AT SIMILAR CONDITION, NO VENEER IS PRESENT AND CONCRETE SLAB ON GRADE IS PRESENT ON BOTH SIDES OF THE CMU WALL.



SECTION 3/S3.1 — 3/4"=1'-0"



SECTION 4/S3.1 — 3/4"=1'-0"

SECTION 5/S3.1 — 3/4"=1'-0"

SECTION 6/S3.1 — 3/4"=1'-0"

SECTION 7/S3.1 — 3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.

SECTION 8/S3.1 — 3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.

SECTION 9/S3.1 — 3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.

SECTION 10/S3.1 — 3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.
AT SIMILAR CONDITION, EXISTING DOUBLE 4" CMU WYTHE WALL IS PRESENT IN LIEU OF NEW 12" CMU WALL.

SECTION 11/S3.1 — 3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.

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NEW ADDITION AND RENOVATION FOR RUSSELLVILLE HIGH SCHOOL
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ALABAMA REGISTERED No. 22596 PROFESSIONAL ENGINEER CRAIG W. WINN
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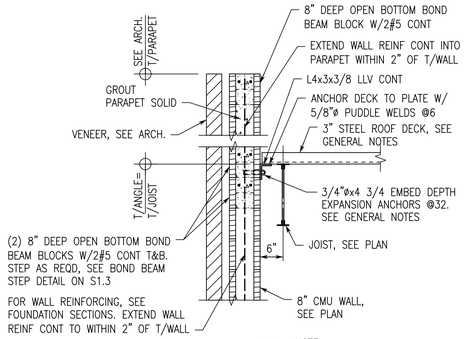
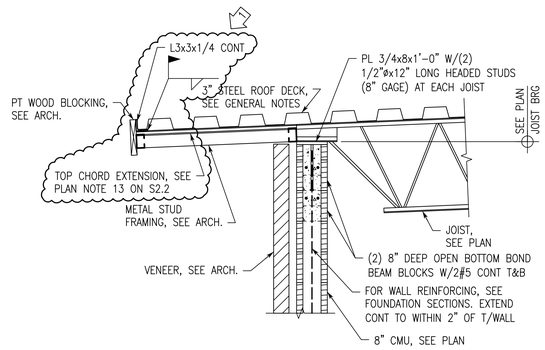
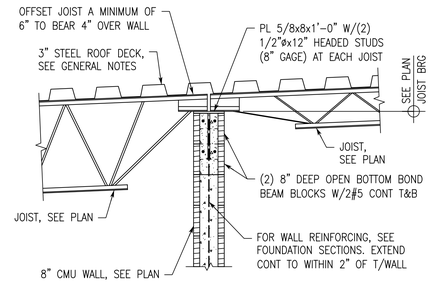


SECTION 1 S3.2
3/4"=1'-0"

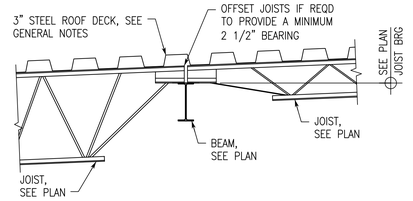
NOTE:
AT SIMILAR CONDITION, 1ST STEEL JOIST IS TO ALIGN W/1ST EX STEEL JOIST LOCATION. L4x3 MAY NEED TO BE FLIPPED AND INSTALLED W/THE LONG LEG UPWARDS.



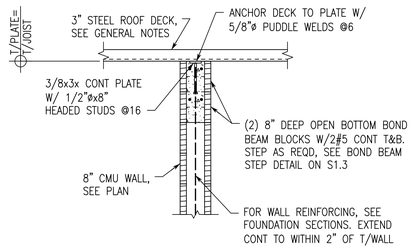
SECTION 2 S3.2
3/4"=1'-0"



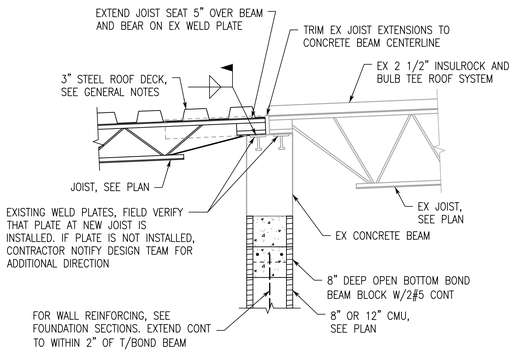
SECTION 3 S3.2
3/4"=1'-0"



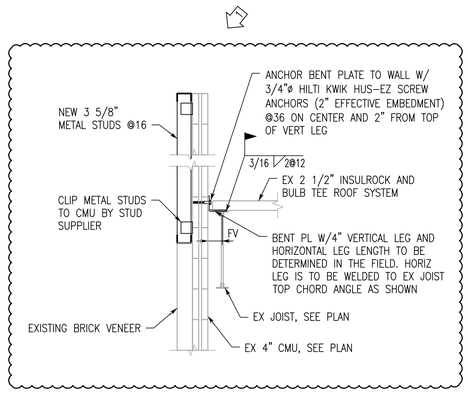
SECTION 4 S3.2
3/4"=1'-0"



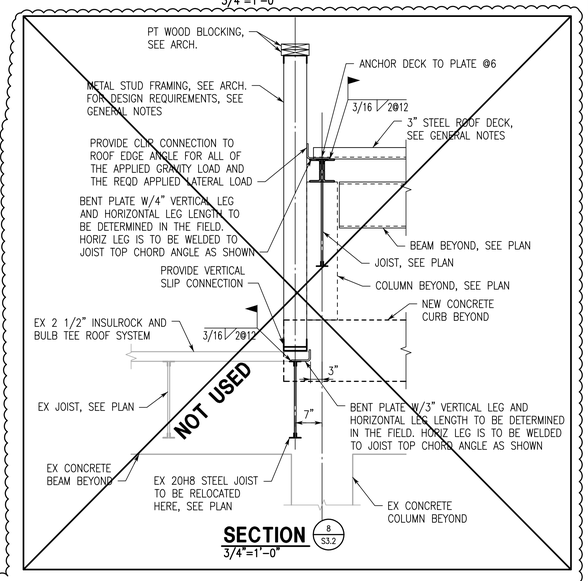
SECTION 5 S3.2
3/4"=1'-0"



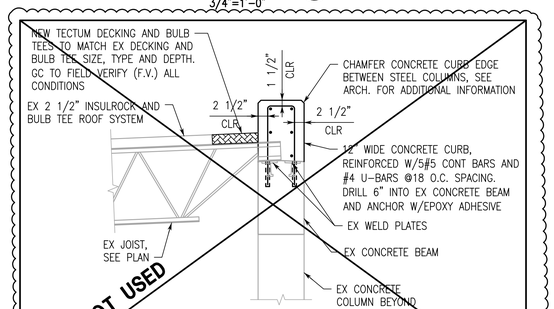
SECTION 6 S3.2
3/4"=1'-0"



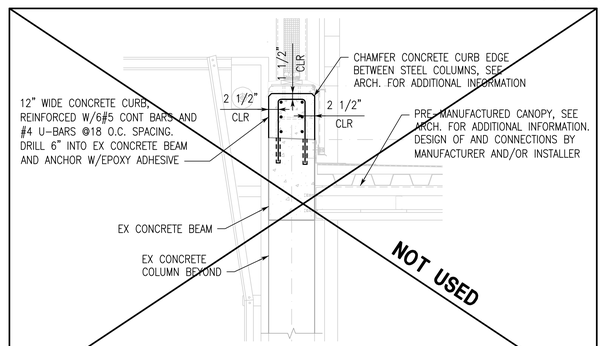
SECTION 7 S3.2
3/4"=1'-0"



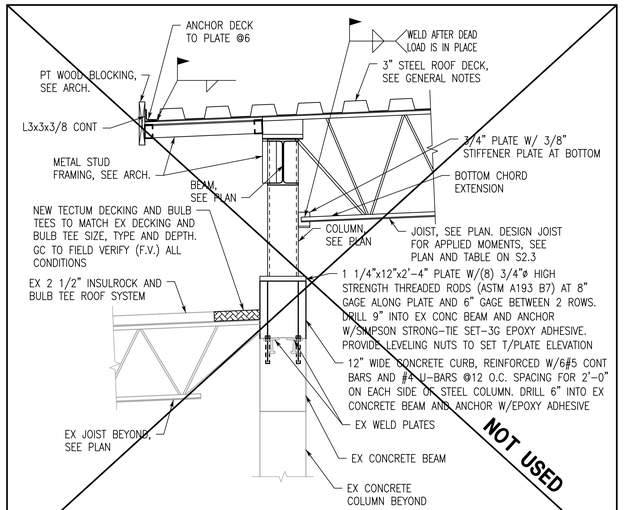
SECTION 8 S3.2
3/4"=1'-0"



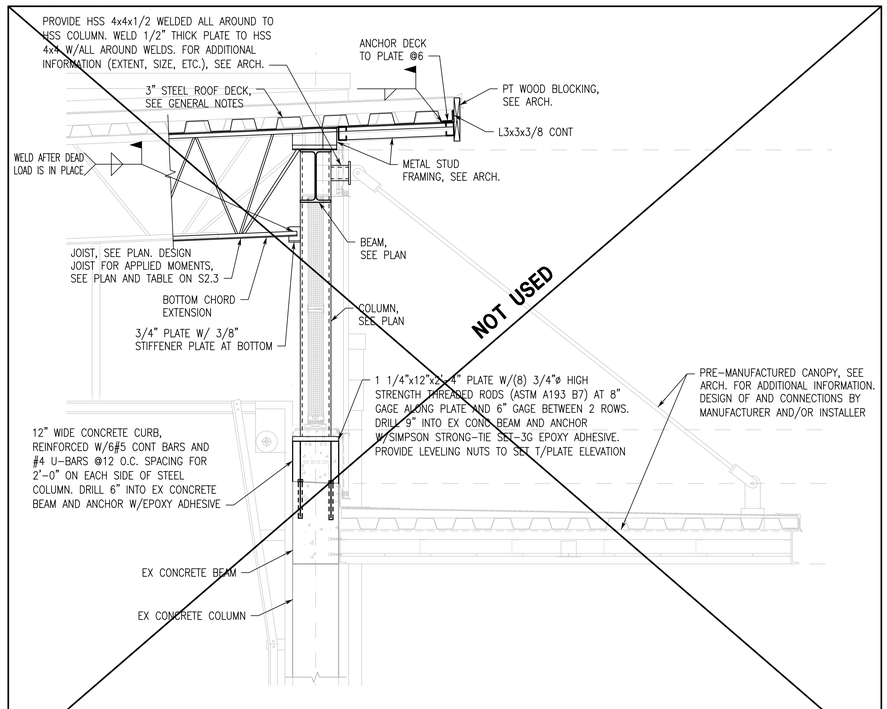
SECTION 9 S3.2
3/4"=1'-0"



SECTION 10 S3.2
3/4"=1'-0"



SECTION 11 S3.2
3/4"=1'-0"



SECTION 12 S3.2
3/4"=1'-0"

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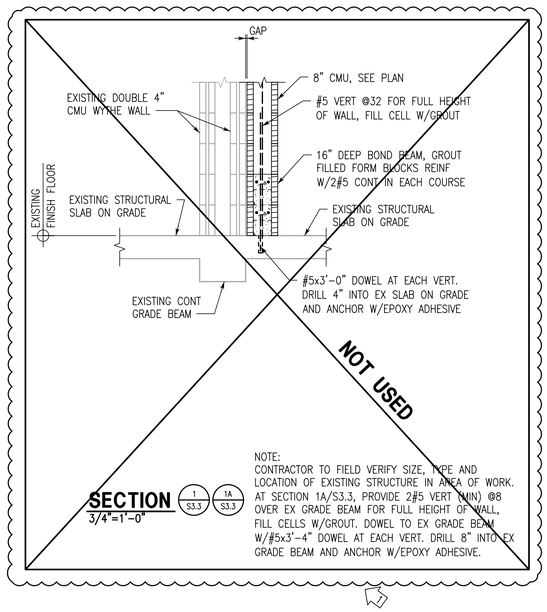
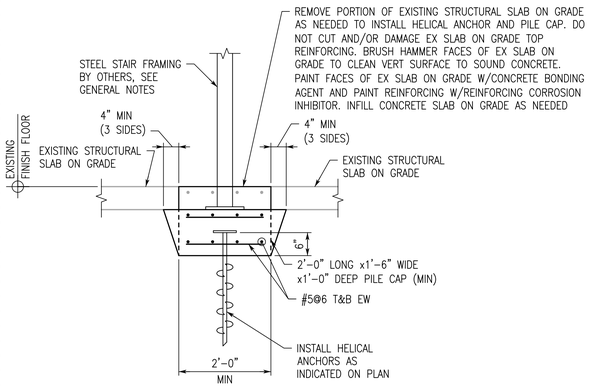


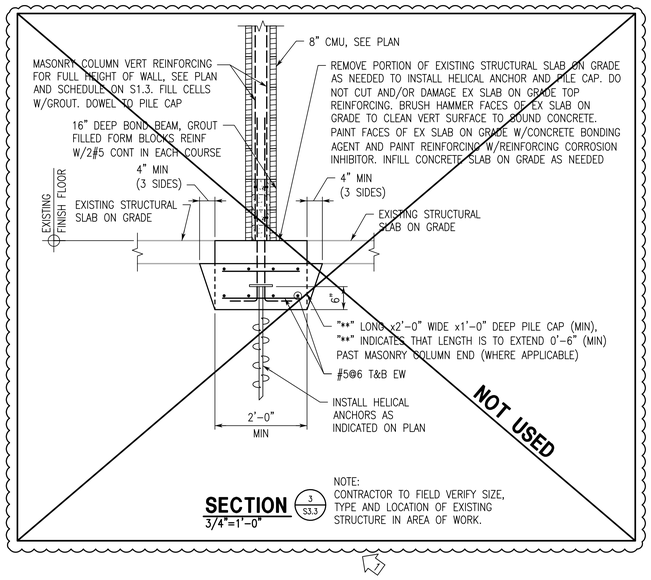
SECTION 1/S3.3 1A/S3.3
3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.
AT SECTION 1A/S3.3, PROVIDE 2#5 VERT (MIN) @8 OVER EX GRADE BEAM FOR FULL HEIGHT OF WALL, FILL CELLS W/GROUT. DOWEL TO EX GRADE BEAM W/#5x3'-4" DOWEL AT EACH VERT. DRILL 8" INTO EX GRADE BEAM AND ANCHOR W/EPOXY ADHESIVE.



SECTION 2/S3.3 2A/S3.3
3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.
AT SIMILAR CONDITION, STEEL STAIR FRAMING IS NOT PRESENT.
AT SECTION 2A/S3.3, PROVIDE 3#5 VERT (MIN) @8 INTO PILE CAP FOR FULL HEIGHT OF WALL, FILL CELLS W/GROUT. DOWEL TO PILE CAP. STEEL STAIR FRAMING IS NOT PRESENT.



SECTION 3/S3.3
3/4"=1'-0"

NOTE:
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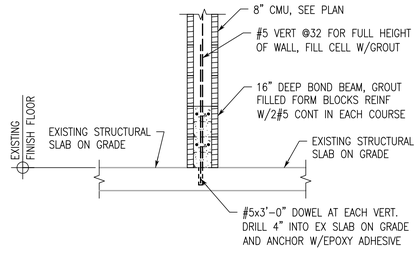
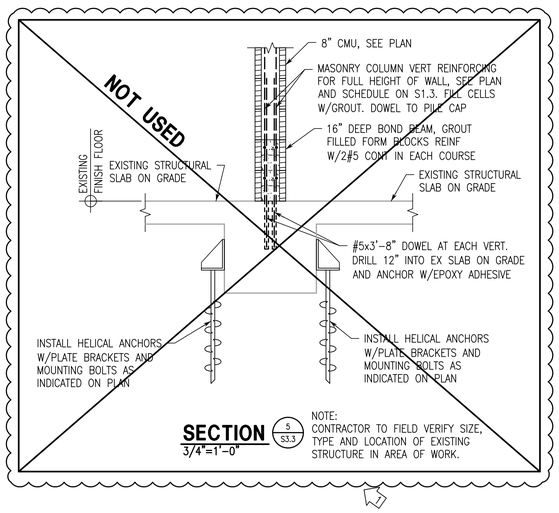


SECTION 4/S3.3 4A/S3.3
3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.
AT SECTION 4A/S3.3, PROVIDE #5 VERT @32 OVER EX GRADE BEAM FOR FULL HEIGHT OF WALL, FILL CELLS W/GROUT. DOWEL TO EX GRADE BEAM W/#5x3'-4" DOWEL AT EACH VERT. DRILL 8" INTO EX GRADE BEAM AND ANCHOR W/EPOXY ADHESIVE.



SECTION 5/S3.3
3/4"=1'-0"

NOTE:
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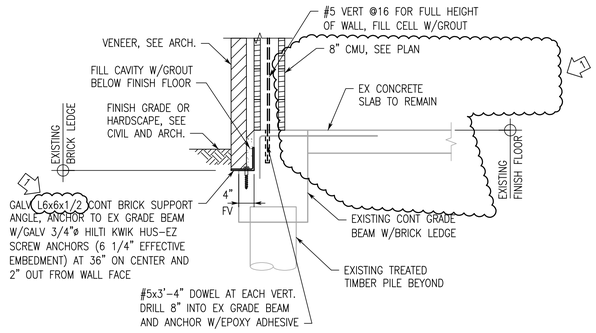
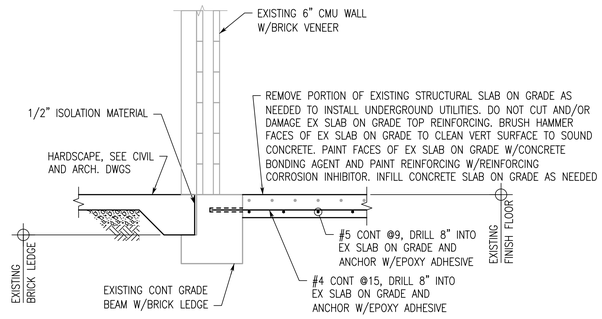


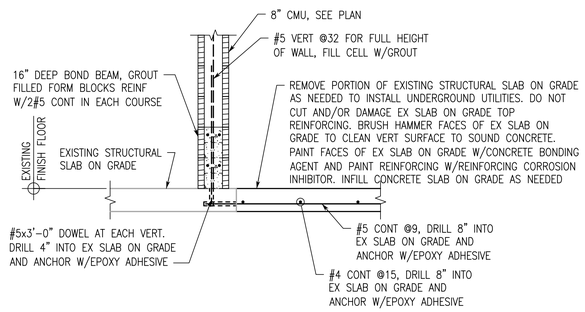
SECTION 6/S3.3
3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.



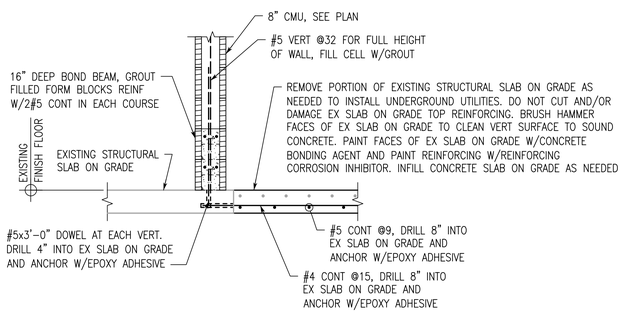
SECTION 7/S3.3
3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.



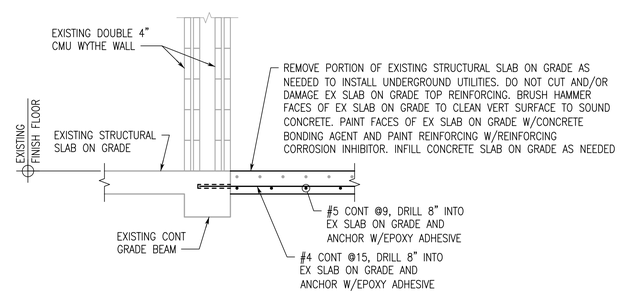
SECTION 8/S3.3
3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.



SECTION 9/S3.3
3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.



SECTION 10/S3.3
3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK.

LATHAN ARCHITECTS
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NEW ADDITION AND RENOVATION FOR RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

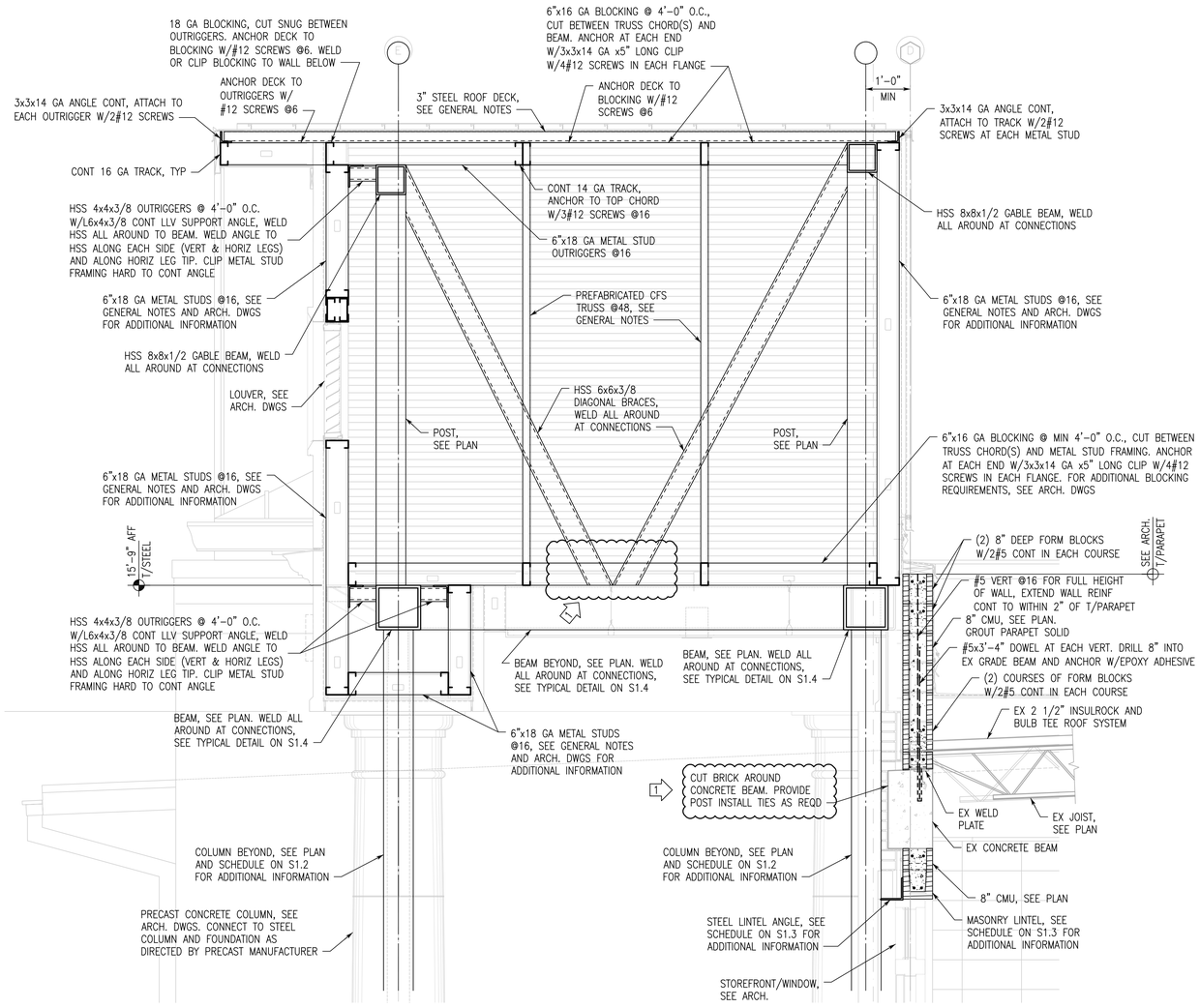
ALABAMA REGISTERED No. 22596 PROFESSIONAL ENGINEER CRAIG WINN
H. Craig Winn P.E.
4-15-2022

SHEET TITLE:
SECTIONS AND DETAILS

PROJ. MGR.:	HCW
DRAWN:	ABS
DATE:	04/15/22
REVISIONS	
5-13-2022	

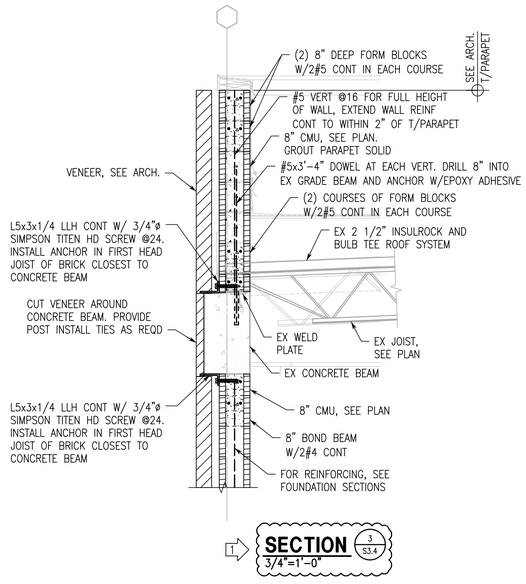
JOB NO. 19-90B
SHEET NO:
S3.3
11 OF 12
0 1" 2"

SDG
STRUCTURAL DESIGN GROUP
300 Chase Park South, Suite 125
Hoover, AL 35244
tel 205-824-5300
fax 205-824-5280
Job Number 20-107

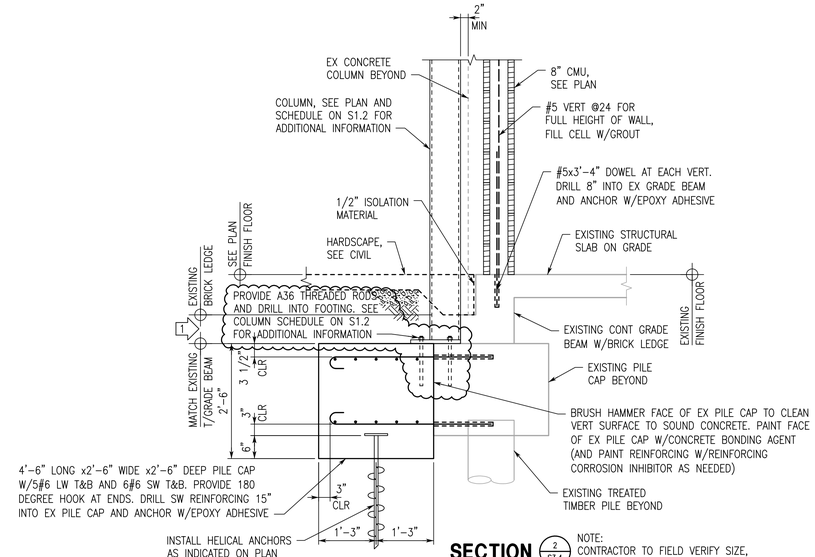


SECTION 1/S3.4
3/4"=1'-0"

NOTE:
FOR CLARITY, BRICK VENEER HAS NOT BEEN SHOWN IN SECTION. VENEER IS PRESENT, SEE ARCH.



SECTION 3/S3.4
3/4"=1'-0"



SECTION 2/S3.4
3/4"=1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY SIZE, TYPE AND LOCATION OF EXISTING STRUCTURE IN AREA OF WORK. FOR CLARITY, BRICK VENEER HAS NOT BEEN SHOWN IN SECTION. VENEER IS PRESENT, SEE ARCH.

LATHAN
ARCHITECTS
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NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
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ALABAMA REGISTERED No. 22596 PROFESSIONAL ENGINEER CRAIG WINN
H. Craig Winn P.E.
4-15-2022

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DATE:	04/15/22
REVISIONS	
1	5-13-2022

JOB NO. 19-90B
SHEET NO:
S3.4
12 OF 12
0 1" 2"

FIRE PROTECTION GENERAL NOTES

1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BID. CONTRACTOR SHALL VERIFY EXACT SIZE, LOCATION, ELEVATION OF EXISTING STRUCTURE, CEILINGS, MECHANICAL, AND ELECTRICAL PRIOR TO INSTALLING ANY NEW PIPE.
2. CONTRACTOR SHALL COORDINATE ALL PIPE ROUTING TO AVOID CONFLICTS WITH ALL STRUCTURAL, ELECTRICAL, AND MECHANICAL FEATURES OF THE BUILDING.
3. ALL HORIZONTAL PIPING IS RUN ABOVE THE CEILING OR IN JOIST SPACE. ALL PIPING SHALL DRAIN DOWN AS REQUIRED BY NFPA 13. PIPING TO BE INSTALLED TO CONCEAL AS MUCH AS POSSIBLE.
4. INSTALL ALL FIRE PROTECTION MATERIALS IN AREAS WITH EXPOSED CEILINGS IN A NEAT FIRST CLASS MANNER. ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH INDUSTRY BEST PRACTICES. PIPING SHALL BE INSTALLED PARALLEL AND/OR PERPENDICULAR TO BUILDING STRUCTURE UNLESS INDICATED OTHERWISE.
5. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING PROJECT ENGINEERS FOR INSPECTION AND TESTING. PROVIDE A MINIMUM OF A WEEK.
6. CONTRACTOR TO REFER TO ARCHITECTURAL DRAWINGS FOR NEW WORK AREAS, CEILING HEIGHTS, SECTIONS, AND RATED WALLS.
7. CONTRACTOR RESPONSIBLE FOR COORDINATION OF PIPING WEIGHT AND LOCATION PRIOR TO INSTALLATION OF ANY PIPE.
8. PIPING LAYOUT AND SIZING SHOWN ON PLANS IS DIAGRAMMATIC AND SHOWN FOR SPACE REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR LAYOUT SHOP DRAWINGS, CALCULATIONS, SUBMITTAL DATA, TESTING, OWNER TRAINING AND CERTIFYING SYSTEM MEETS NFPA 13 AND CONTRACT DOCUMENTS.
9. CONTRACTOR SHALL OBTAIN APPROVAL FROM ARCHITECT PRIOR TO INSTALLING ANY SPRINKLER HEADS DIFFERENT FROM THE SPECIFIED SPRINKLERS HEADS.
10. CONTRACTOR SHALL OBTAIN APPROVAL OF "SPRINKLER HEAD TYPE" FROM ARCHITECT PRIOR TO INSTALLING ANY SPRINKLER HEADS.
11. CONTRACTOR SHALL PAINT ALL EXPOSED PIPING TO MATCH STRUCTURE. COORDINATE EXACT COLOR WITH ARCHITECT.

FIRE PROTECTION SHOP DRAWINGS AND SUBMITTALS

1. PROVIDE A NFPA 13 COMPLIANT SYSTEM TO PROVIDE COVERAGE TO NEW WORK AREA. CONTRACTOR RESPONSIBLE TO PROVIDE DETAILED SHOP DRAWINGS AND CALCULATIONS COMPLETE.
2. SHOP DRAWINGS SHALL INCLUDE:
   A. A REFLECTED CEILING PLAN INDICATING LOCATION OF SPRINKLER HEADS, LIGHTS, CEILING DEVICES, GRILLES, AUDIO VISUAL, AND ANY DEVICES ATTACHED TO LIFT OUT CEILINGS. ALL SPRINKLER HEADS IN LAY-IN CEILINGS TO BE CENTERED IN TILES. COORDINATE EXACT LOCATION OF SPRINKLER HEADS IN HARD CEILINGS WITH ARCHITECT AND ENGINEER.
   B. PREPARE A WORKING PIPE SHOP DRAWING BASED ON HYDRAULIC CALCULATIONS. THE PIPING DRAWINGS SHALL INDICATE THE ELEVATION OF THE PIPE, THE CONFIGURATION OF THE PIPING AND HANGERS, SIZE OF THE PIPE AND COORDINATION OF PIPING WITH OTHER DISCIPLINES, STRUCTURE AND DUCTWORK.
   C. HYDRAULIC CALCULATIONS ARE TO BE PREPARED USING A FLOW TEST WITHIN 90 DAYS.
   D. THE CONTRACTOR IS RESPONSIBLE FOR INCORPORATING LOCAL AUTHORITY HAVING JURISDICTION COMMENTS FOR COMPLIANCE.
   E. ALL ADDITIONAL MATERIALS TO BE INDICATED ON SHOP DRAWINGS.
   F. ALL LOW-POINT DRAIN DOWN LOCATION AND PENETRATIONS OF BUILDING STRUCTURE TO BE INDICATED ON SHOP DRAWINGS.
3. CONTRACTOR SHALL BE LICENSED IN THE STATE IN WHICH THE WORK IS PREFORMED. THE CONTRACTOR SHALL BE A NICET LEVEL III OR LEVEL IV OR SPECIAL HAZARD SUPPRESSION SYSTEMS. THE NICET LEVEL III DESIGNER SHALL BE AN EMPLOYEE OF FIRE PROTECTION CONTRACTOR.
4. ALL ELECTRICAL FIRE ALARM REQUIREMENTS TO BE COORDINATED WITH THE ELECTRICAL THE FLOW AND TAMPER SWITCHES TO BE PROVIDED UNDER FIRE PROTECTION CONTRACT. CONDUIT, ALARM WIRING AND PROGRAMMING THE RESPONSIBILITY OF THE FIRE ALARM CONTRACT AND SHALL BE COORDINATED WITH ELECTRICAL. NICET LEVEL III DESIGNER SHALL INSPECT PROJECT.
5. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITHIN 45 DAYS PRIOR TO THE START OF THE SPRINKLER SYSTEM INSTALLATION.
6. HYDRAULIC CALCULATIONS AND SPRINKLER SHOP DRAWINGS SHALL BE PREPARED UNDER THE SUPERVISION OF AN ENGINEER LICENSED IN THE STATE AND BEAR HIS OR HER SEAL WITH SIGNATURE AND DATE.
7. MAXIMUM DESIGN VELOCITY SHALL BE 30 FEET PER SECOND.

FIRE PROTECTION HYDRAULIC DEMANDS

1. SPRINKLER PROTECTION
   A. ALL OFFICES, TEACHER WORKROOMS, LOBBIES, VESTIBULES, CLASSROOMS, TOILETS, COMMON AREAS, CORRIDORS: LIGHT HAZARD 0.10 GPM OVER HYDRAULICALLY MOST REMOTE 1500 SQ. FT.
   B. MECHANICAL EQUIPMENT ROOMS, TRANSFORMER ROOMS, GENERAL PURPOSE STORAGE LESS THAN 100 SQ. FT.; ORDINARY HAZARD, GROUP 2, 0.20 GPM OVER HYDRAULICALLY MOST REMOTE 2000 SQ. FT.
   C. GENERAL STORAGE, STORAGE HEIGHT LIMIT LESS THAN 12FT, LIMITED COMBUSTIBLES LESS THAN 25 GALLONS: ORDINARY GROUP 1 PER NFPA 13, 0.15 GPM PER 1500 SQ. FT.
2. HYDRAULIC CALCULATION SHALL BE CALCULATED WITH 10% SAFETY FACTOR OF SUPPLY CURVE.
3. FLOW DATA TO BE RESPONSIBILITY OF CONTRACTOR.

FIRE PROTECTION FLOW DATA

HYDRANT NUMBER: UNKNOWN
STATIC PRESSURE: 132 PSI
RESIDUAL PRESSURE: 80 PSI

OUTLET COEFFICIENT: UNKNOWN
OUTLET SIZE: UNKNOWN
HYDRANT FLOW: 1410 GPM

AVAILABLE GPM@ 20 PSI: 3036 GPM

DATE OF TEST: UNKNOWN
LOCATION: GOLDEN TIGER DRIVE, RUSSELLVILLE, AL.

CONTRACTOR RESPONSIBLE FOR WATER FLOW TEST

FIRE PROTECTION LEGEND

FIRE MAIN (F)	F F
FIRE DRAIN LINE	FD FD
BALL VALVE	
OS&Y VALVE (WITH TAMPER SWITCH)	TS — COORDINATE WITH ELECTRICAL FIRE ALARM SIGNAL TO BUILDING ALARM PANEL
FLOW SWITCH	FS — COORDINATE WITH ELECTRICAL FIRE ALARM SIGNAL TO BUILDING ALARM PANEL
	PIPE DOWN
	PIPE UP
GPM	GALLONS PER MINUTE
PSI	POUNDS PER SQUARE INCH
(S)C	CONCEALED PENDENT SPRINKLER HEAD (COVER SHALL BE FACTORY PAINTED W/ COLOR APPROVED BY ARCHITECT)
(S)U	UPRIGHT SPRINKLER HEAD
S	SIDEWALL SPRINKLER HEAD

ARCHITECT TO SELECT COLORS ON ALL SPRINKLER HEADS

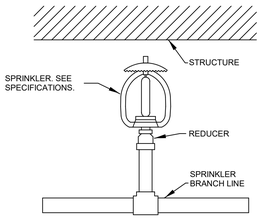
FIRE PROTECTION DESIGN ANALYSIS

REFER TO ARCHITECTURAL PLANS FOR COMPLIANCE NFPA 101
TYPE OF CONSTRUCTION: REFER TO ARCHITECTURAL

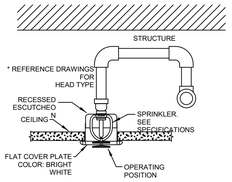
OCCUPANCY: REFERENCE ARCHITECTURAL LIFE SAFETY PLAN

FIRE DESIGN CODES /STANDARDS

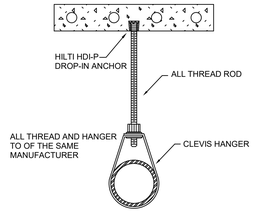
APPLICABLE CODES AND STANDARDS:
INTERNATIONAL BUILDING CODE (IBC)
INTERNATIONAL FIRE CODE (IFC)
INTERNATIONAL PLUMBING CODE (IPC)
NATIONAL ELECTRIC CODE (NEC)
NATIONAL FIRE ALARM CODE NFPA 72
NATIONAL ENERGY CODE
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 13,24,101



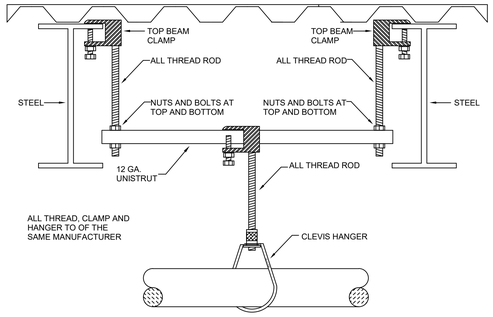
QUICK RESPONSE UPRIGHT SPRINKLER
NO SCALE



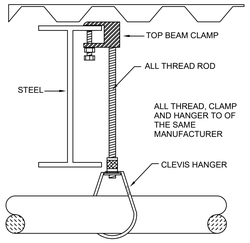
QUICK RESPONSE CONCEALED SPRINKLER
NO SCALE



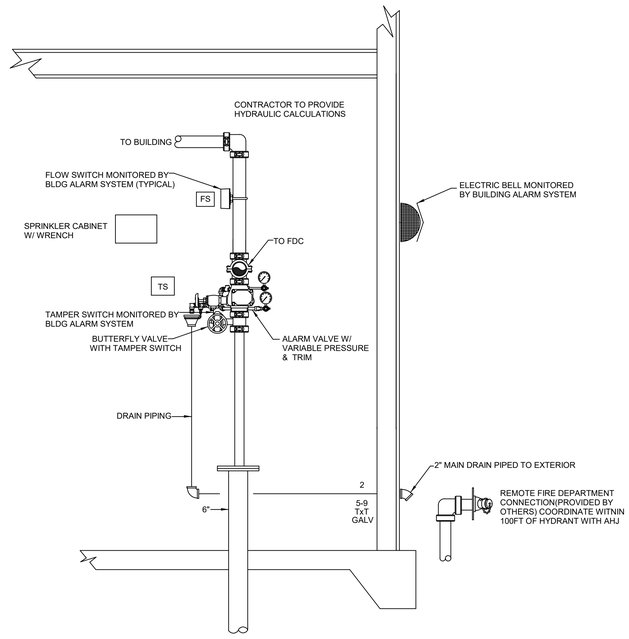
DROP-IN DETAIL
NO SCALE



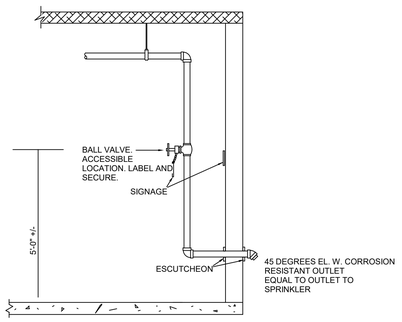
TRAPEZE HANGER DETAIL - UNISTRUT
NO SCALE



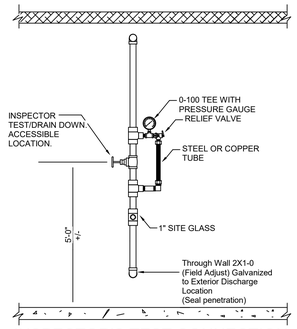
TOP BEAM CLAMP DETAIL
NO SCALE



FIRE SERVICE ENTRY - BUILDING
NO SCALE



LOW POINT DRAIN DOWN DETAIL (EXTERIOR)
NO SCALE



INSPECTOR'S TEST CONNECTION
NO SCALE

EDMONDS Engineering
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Project Number :
BHM20215

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LATHAN · BRYANT · CALMA

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PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
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RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA LICENSED
No. 27475
PROFESSIONAL
5/15/2022
ENGINEER
CHRISTOPHER L. ROBINSON

SHEET TITLE:
FIRE PROTECTION - SCHEDULES, LEGENDS, NOTES, & DETAILS

PROJ. MGR.:	SMC
DRAWN:	ALV
DATE:	05/15/22
REVISIONS	
1	ADDENDUM #1

JOB NO. 19-90B
SHEET NO:
FP0.1
1 OF 2

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(205) 988-2069
www.edmondsengineering.com

Project Number :
BHM20215

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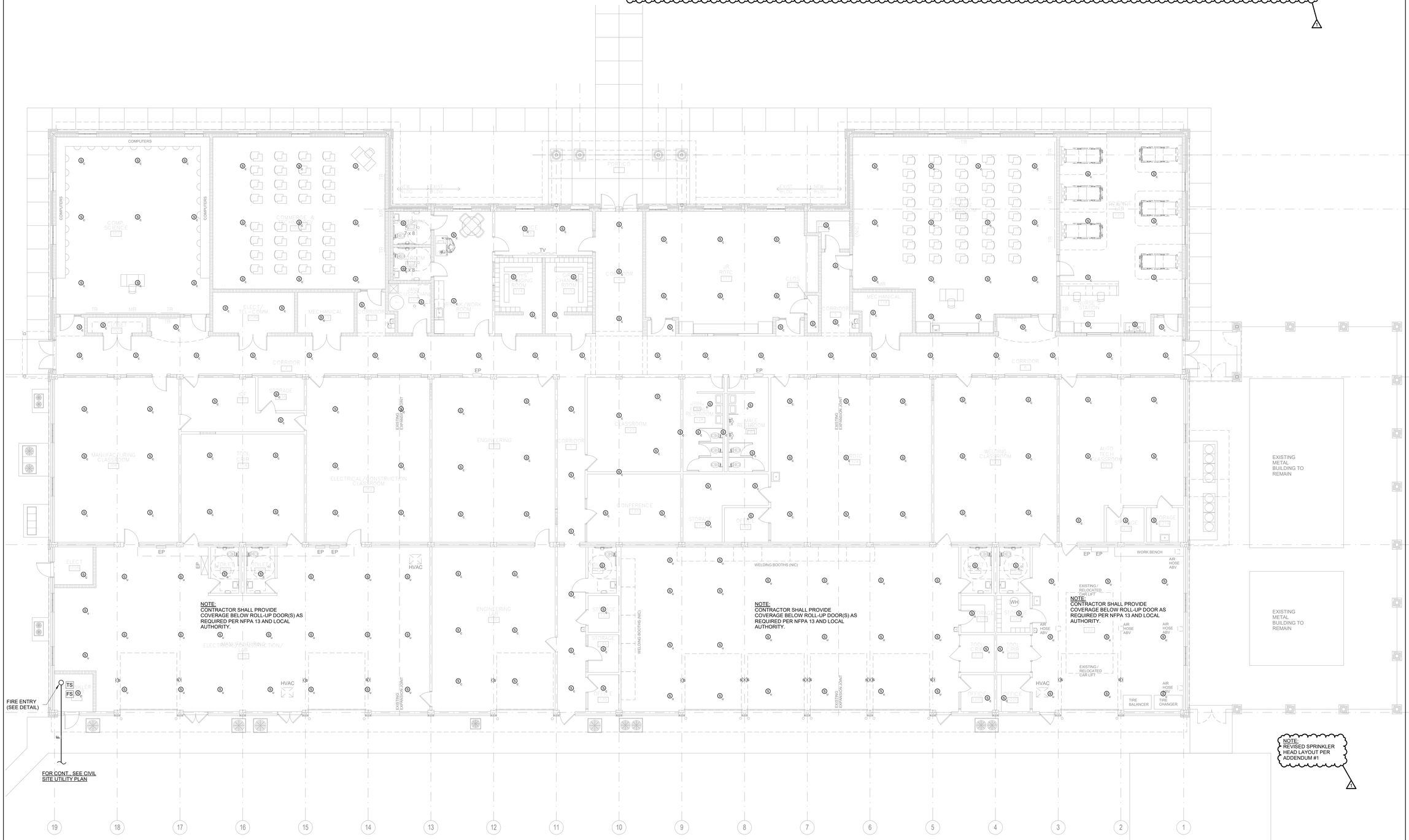


1 FIRE PROTECTION - NEW CONSTRUCTION FLOOR PLAN
1/8" = 1'-0"



SHEET TITLE:
FIRE PROTECTION - NEW CONSTRUCTION FLOOR PLAN

PROJ. MGR.:	SMC
DRAWN:	ALV
DATE:	05/15/22

REVISIONS

1	ADDENDUM #1

JOB NO. 19-90B

SHEET NO:

FP1.1

2 OF 2

GENERAL NOTES

1. LOCATIONS OF UTILITIES SHOWN ON PLANS ARE APPROXIMATE. VERIFY WITH LOCAL UTILITY PRIOR TO BIDDING.
2. CONTRACTOR SHALL VERIFY EXACT LOCATION, SIZE, AND ELEVATION OF ALL EXISTING SERVICES PRIOR TO INSTALLING ANY NEW PIPE.
3. ALL OUTSIDE CLEANOUTS SHALL BE BROUGHT TO GRADE AND EMBEDDED IN 18"X18"X6" THICK CONCRETE PAD. (J.R. SMITH 4258 OR EQUAL.)
4. WHEREVER DISSIMILAR METALS ARE CONNECTED ON WATER LINES, A DIELECTRIC UNION SHALL BE USED.
5. ALL HORIZONTAL WATER AND VENT PIPING SHALL BE RUN ABOVE CEILING ON PLAN WHERE SHOWN UNLESS OTHERWISE NOTED.
6. ALL HORIZONTAL SANITARY PIPING IS RUN BELOW FLOOR ON PLAN WHERE SHOWN UNLESS OTHERWISE NOTED.
7. ALL WATER PIPING BELOW SLAB ON GRADE SHALL BE BENT UP AT ENDS SO THAT NO JOINTS OCCUR BELOW FLOOR.
8. COORDINATE ALL PIPE ROUTING TO AVOID CONFLICTS WITH STRUCTURAL, MECHANICAL, AND ELECTRICAL FEATURES OF BUILDING.
9. ALL WALL HYDRANTS AND HOSE BIBBS SHALL BE MOUNTED 24" ABOVE FINISH GRADE OF FINISH FLOOR UNLESS OTHERWISE NOTED.
10. ALL WATER PIPING INSTALLED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF THE EXTERIOR WALL INSULATION.
11. NO VENT THRU ROOF IS TO BE LOCATED WITHIN 10 FEET OF ANY BUILDING AIR INTAKES, PER CODE. COORDINATE WITH MECHANICAL AND GENERAL CONTRACTORS.
12. DOMESTIC WATER PIPING AND FIRE PROTECTION PIPING LOCATED ABOVE THE CEILING, SHALL BE INSTALLED BELOW CEILING INSULATION.
13. CONTRACTOR SHALL COORDINATE FLOOR DRAIN LOCATIONS WITH MECHANICAL EQUIPMENT PRIOR TO INSTALLATION.
14. CONTRACTOR SHALL PROVIDE SHOCK ARRESTORS ON ALL BRANCH LINES.
15. CONTRACTOR SHALL COORDINATE ALL SINKS WITH CASEWORK PRIOR TO ORDERING SINKS.
16. DOMESTIC WATER PIPING SHALL NOT BE INSTALLED IN EXTERIOR WALLS.
17. PROVIDE DISINFECTION OF WATER PIPING SYSTEM WITH CHLORINE SOLUTION AS PER CODE.
18. INSTALLATION OF BACKFLOW PREVENTER SHALL COMPLY WITH CURRENT INTERNATIONAL BUILDING CODE AND CURRENT INTERNATIONAL PLUMBING CODE.
19. ALL OVERHEAD WATER PIPING TO BE RUN BELOW INSULATION AT BOTTOM OF TRUSSES FOR FREEZE PROTECTION.
20. ALL FLOOR DRAINS AND INDIRECT DRAINS TO HAVE INSULATED DEEP SEAL P-TRAPS WITH TRAP SEAL PROTECTION AS APPROVED BY LOCAL AUTHORITY.
21. ALL WALL HYDRANTS TO BE FREEZE PROOF AND TO HAVE VACUUM BREAKERS.
22. INSULATION ON ALL PIPING SHALL MEET SMOKE/ FLAME RATING OF 25 & 50.
23. THE LOCATION OF LAVATORIES AND WATER CLOSETS RELATIVE TO THE FINISHED WALL IS CRITICAL. REFER TO ARCHITECTURAL AND THE SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL WATER CLOSETS TO BE 18" FROM FINISH WALL TO CENTER OF WATER CLOSET.
24. WATER HAMMER ARRESTORS ARE REQUIRED TO PROTECT WATER PIPING SYSTEMS WHERE QUICK-CLOSING VALVES ARE UTILIZED. WATER HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010.
25. THESE DRAWINGS NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT A COMPLETE PLUMBING SYSTEM BE PROVIDED WITH ALL NECESSARY EQUIPMENT, APPURTENANCES AND CONTROLS, COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL PARAMETERS GIVEN IN THESE DOCUMENTS SHALL BE STRICTLY CONFORMED WITH ANY ITEMS AND LABOR REQUIRED FOR A COMPLETE PLUMBING SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND THESE CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT INCURRING ANY ADDITIONAL COST TO THE PROJECT, CAREFULLY REVIEW ALL CONTRACT DOCUMENTS AND THE DESIGN OF OTHER TRADES BEFORE PREPARING SHOP DRAWINGS.
26. COORDINATE PLUMBING PIPING WITH STRUCTURAL, PLUMBING, HVAC, AND ELECTRICAL. MAKE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER TRADES WITHOUT ANY ADDITIONAL COST TO THE PROJECT.
27. COORDINATE ALL PLUMBING IN SLAB WITH BUILDING FOOTINGS.
28. NO PIPING TO BE RUN ABOVE ELECTRICAL PANELS. MAINTAIN ALL REQUIRED CLEARANCES.
29. CONTRACTOR SHALL VISIT JOB SITE AND VERIFY EXISTING CONDITIONS BEFORE SUBMITTING A PRICE, ORDERING MATERIALS OR PERFORMING ANY WORK. NOTIFY THE ARCHITECT OF ANY DEVIATION FROM PLUMBING PLAN.
30. MAINTAIN A MAXIMUM OF 55 PSIG WATER PRESSURE AT PLUMBING FIXTURES, CONSISTENT WITH ADEQUATE FLOW RATES.
31. VENTS THRU ROOF MUST BE LOCATED A MINIMUM OF 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE.
32. SUPPORT PIPE AS REQUIRED BY THE CURRENT INTERNATIONAL PLUMBING CODE.
33. ALL FOOTINGS AT PLUMBING CHASE WALLS SHALL BE MIN 24" BELOW FINISHED GRADE TO COORDINATE WITH WASTE PIPING IN SLAB.
34. FIRESTOP ALL RATED WALL AND FLOOR PENETRATIONS. SEE ARCHITECTURAL DRAWINGS FOR RATED WALL AND FLOOR LOCATIONS.
35. OFFSET ALL VTR'S TO BACKSIDE OF ROOF RIDGE.
36. DO NOT BEGIN WORK UNTIL ELEVATION OF FINAL CONNECTION POINT IS VERIFIED AND GRADING OF ENTIRE SYSTEM CAN BE DETERMINED (EVEN IF FINAL CONNECTION IS SPECIFIED UNDER ANOTHER SECTION).

PLUMBING LEGEND

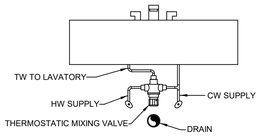
	DOMESTIC COLD WATER		BALANCE VALVE	WH	WALL HYDRANT
	DOMESTIC HOT WATER SUPPLY		BALL VALVE	ABV	ABOVE
			CHECK VALVE	AFF	ABOVE FINISHED FLOOR
	DOMESTIC HOT WATER RETURN			AH	AIR HANDLING FLOOR
				BFP	BACKFLOW PREVENTER
HB	HOSE BIBB	PRV	PRESSURE RELIEF VALVE	BFF	BELOW FINISHED FLOOR
R#	RISER NUMBER			CW	COLD WATER
MFD	MECHANICAL FLOOR DRAIN	P-#	PLUMBING FIXTURE	DN	DOWN
	SOIL, WASTE OR SANITARY SEWER		CAP ON END OF PIPE	EWH	ELECTRIC WATER HEATER
	VENT	CO	CLEANOUT	GPH	GALLONS PER HOUR
		WS	WASTE STACK	GPM	GALLONS PER MINUTE
	PIPE TURNING DOWN	FD	FLOOR DRAIN	HW	HOT WATER
	PIPE TURNING UP	FS-#	FLOOR SINK	TYP	TYPICAL
	TEE DOWN	HWR	HOT WATER RETURN		
	TEE UP	VS	VENT STACK		
	UNION	VSTR	VENT THROUGH ROOF		

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	WASTE	CW	HW	REMARKS
FD	FLOOR DRAIN	3"	-	-	J.R. SMITH #2010 WITH 6" ROUND NICKEL BRONZE GRATE. PROVIDE WITH J.R. SMITH TRAP INSERT.
MFD	MECHANICAL FLOOR DRAIN	4"	-	-	J.R. SMITH #2242 WITH SEDIMENT BUCKET. PROVIDE WITH J.R. SMITH TRAP INSERT.
P-1	WATER CLOSET - ADA COMPLIANT	4"	1"	-	FLOOR MOUNTED - KOHLER K-96057-SS-0 COMPLETE SLOAN #111 SFSM-1.6 HARD-WIRED SENSOR FLUSH VALVE WITH YJ BRACKET AND CHURCH "DURA GUARD" MODEL # 2155 SSC SEAT. CONTRACTOR SHALL PROVIDE TRANSFORMER FOR ELECTRICAL CONNECTION.
P-2	WATER COOLER - ADA COMPLIANT	1 1/2"	1/2"	-	ELKAY # EZSTL8SC BI-LEVEL WATER COOLER. COMPLETE WITH STAINLESS STEEL CABINET AND WATERWAYS THAT ARE MANUFACTURED OF 100% LEAD FREE MATERIAL, J.R. SMITH #834 FIXTURE SUPPORT EBC TA150 P-TRAP AND EBC LA10 STOP WITH SUPPLY. FULLY INSULATE P-TRAP WITH EBC IK INSULATOR. INSTALL WITH LOWER SPOUT OUTLET MAXIMUM 36" AFF. MUST MEET A.D.A. INSTALL WITH BOTTLE FILLER. INSTALL COMPLETE. PROVIDE WITH ELKAY MODEL #LKAPREZL CANE APRON AS REQUIRED.
P-3	LAVATORY - ADA COMPLIANT	1 1/4"	1/2"	1/2"	WALL HUNG - KOHLER K-2032 (20" X 18") COMPLETE, SYMMONS S-20-0 FAUCET, K7715 OUTLET WITH TAILPIECE, J.R. SMITH #700-M31-Z FIXTURE SUPPORT, MCGUIRE #165 SUPPLIES WITH STOPS AND MCGUIRE #8872 P-TRAP. INSULATE P-TRAP, STOPS AND SUPPLIES WITH "PRO-WRAP" BY MCGUIRE. MOUNT WITH RIM MAXIMUM 34" AFF. PROVIDE LAWLER 570 THERMOSTATIC MIXING VALVE MOUNTED BELOW LAVATORY. RUN 100° F WATER TO FAUCET. MUST MEET A.D.A. GUIDELINES.
P-4	MOP SINK	3"	1/2"	1/2"	STERN WILLIAMS #SBC-1700 (24" X 24") COMPLETE, T-35 HOSE WITH WALL HOOK, STAINLESS STEEL BACKSPLASH AND CHICAGO FAUCET #897 FAUCET.
P-5	SINK	1 1/4"	1/2"	1/2"	ELKAY LRAD-2219 DRAIN OFFSET TO BACK, LK-35 STRAINER, CHICAGO FAUCET #786-FC RIGID FAUCET, MCGUIRE #1912 P-TRAP AND #165 STOPS WITH SUPPLIES.
P-6	SCRUB STATION	1 1/2"	1/2"	1/2"	PROVIDED BY OTHERS. INSTALLED COMPLETE THIS SECTION. PROVIDE MCGUIRE - STOPS W/ SUPPLIES. MCGUIRE #1912 P-TRAP. COMPLETE WITH CONTINUOS WASTE.
P-7	REF. ICE MAKER BOX	-	1/2"	-	FURNISHED AND INSTALLED UNDER ANOTHER SECTION. PROVIDE IN WALL BEHIND REFRIGERATOR A GUY GRAY MODEL "B" 16 GAUGE ALL METAL BOX LESS DRAIN AND SUPPLIES. PROVIDE IN BOX A 1/2" BALL VALVE WITH 10 FEET OF 1/4" SOFT COPPER COILED IN BOX FOR CONNECTION TO REFRIGERATOR ICE MAKER.
P-8	DISHWASHER	1 1/2"	-	1/2"	FURNISHED AND INSTALLED UNDER ANOTHER SECTION, ROUGH AND CONNECT COMPLETE. PROVIDE BALL VALVE STOP ON SUPPLY WITH SHOCK ARRESTOR PDI SIZE "A" ON HOT WATER PIPING. PIPE WASTE DISCHARGE THRU WASTE AIR GAP MOUNTED IN SPARE DRILLING IN SINK LEDGE.
P-9	WALL HYDRANT	-	3/4"	-	J.R. SMITH #5509-QT, WITH INTEGRAL BACKFLOW PREVENTER, LATCHING COVER, FREEZE-PROOF AND OF PROPER LENGTH FOR WALL IN WHICH INSTALLED, ALL BRONZE BOX. VALVE SEAT MUST BE ON BUILDING SIDE OF EXTERIOR WALL INSULATION. INSTALL WITH CENTER LINE 24" ABOVE FINISH GRADE. PROVIDE OWNER WITH ONE (1) LOOSE KEY FOR EACH WALL HYDRANT.
P-10	WATER COOLER - ADA COMPLIANT	1 1/2"	1/2"	-	ELKAY EZS8, STAINLESS STEEL CABINET, WITH WATERWAYS MANUFACTURED OF 100% LEAD FREE MATERIAL, J.R. SMITH #830 FIXTURE SUPPORT, BALL VALVE STOP WITH SUPPLY, SAFETY-GARD BUBBLER. MCGUIRE #8872 P-TRAP. FULLY INSULATE P-TRAP. MOUNT WITH SPOUT OUTLET 36" ABOVE FINISH FLOOR. PROVIDE COLOR CHART FOR ARCHITECT COLOR SELECTION.

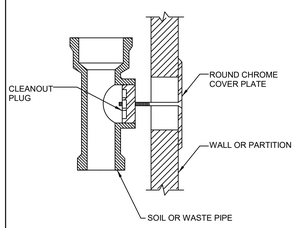
WATER HEATER SCHEDULE

MARK	FIXTURE	ELEC INFO.	REMARKS
1			
CP-1	CIRCULATION PUMP	115V; 1/12 HP	ARMSTRONG COMPASS. PROVIDE WITH HONEYWELL AQUASTAT RATED FOR 100°F-160°F AND TIMER.
ET-1	EXPANSION TANK	-	AMTROL THERM - X-TROL #ST-5 EXPANSION TANK, PRE-CHARGED, WELDED STEEL CONSTRUCTION. ISOLATION BETWEEN WATER AND AIR SHALL BE BY A BUTYL DIAPHRAM.
WH-1	WATER HEATER	208V, 3 PHASE, 4.5 KW	LOCHINVAR EJK020KS, 20 GALLON STORAGE, 18 GALLON RECOVERY AT 100°F RISE. NEW P&T RELIEF VALVE. SET OUTLET TEMPERATURE AT 130°F. INSTALL AS DETAILED ON DRAWINGS. VERIFY VOLTAGE WITH ELECTRICAL SECTION.



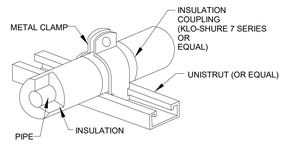
DETAIL OF TMV BELOW LAVATORY

NO SCALE



WALL CLEANOUT

NO SCALE

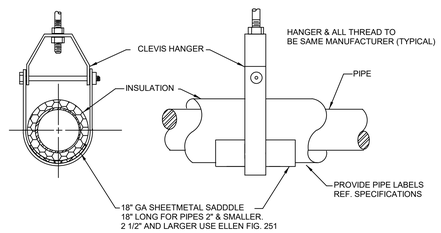


NOTES:

1. APPLICATION: FOR STRUT MOUNTED, 4 INCH AND SMALLER, COFFEE PIPE WITH FOAMED PLASTIC (ARMAFLEX) OR FIBERGLASS INSULATION.
2. ALLOWED FOR HORIZONTAL OR VERTICAL INSTALLATION.
3. FOR COLD PIPE APPLICATION, APPLY ADHESIVE TO END OF FOAMED PLASTIC INSULATION PRIOR TO INSERTING INTO COUPLING.

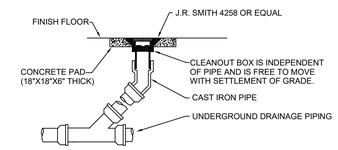
STRUT-MOUNTED PIPING SUPPORT INSULATION COUPLING DETAIL

NO SCALE



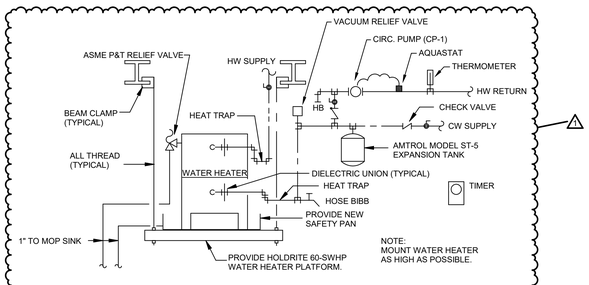
SUSPENDED PIPE SUPPORT

NO SCALE



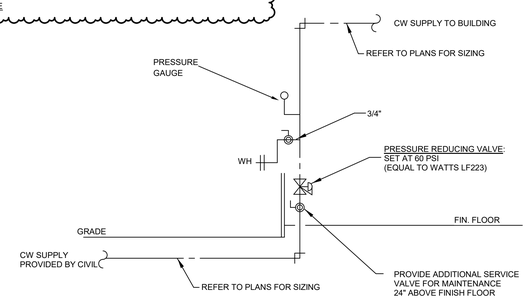
DETAIL OF CLEANOUT TO GRADE

NO SCALE



DETAIL OF PIPING AT WATER HEATER

NO SCALE



DETAIL OF WATER ENTRY

NO SCALE

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LATHAN ARCHITECTS
LATHAN · BRYANT · CALMA

NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION



SHEET TITLE:
PLUMBING - SCHEDULES, LEGENDS, NOTES, & DETAILS

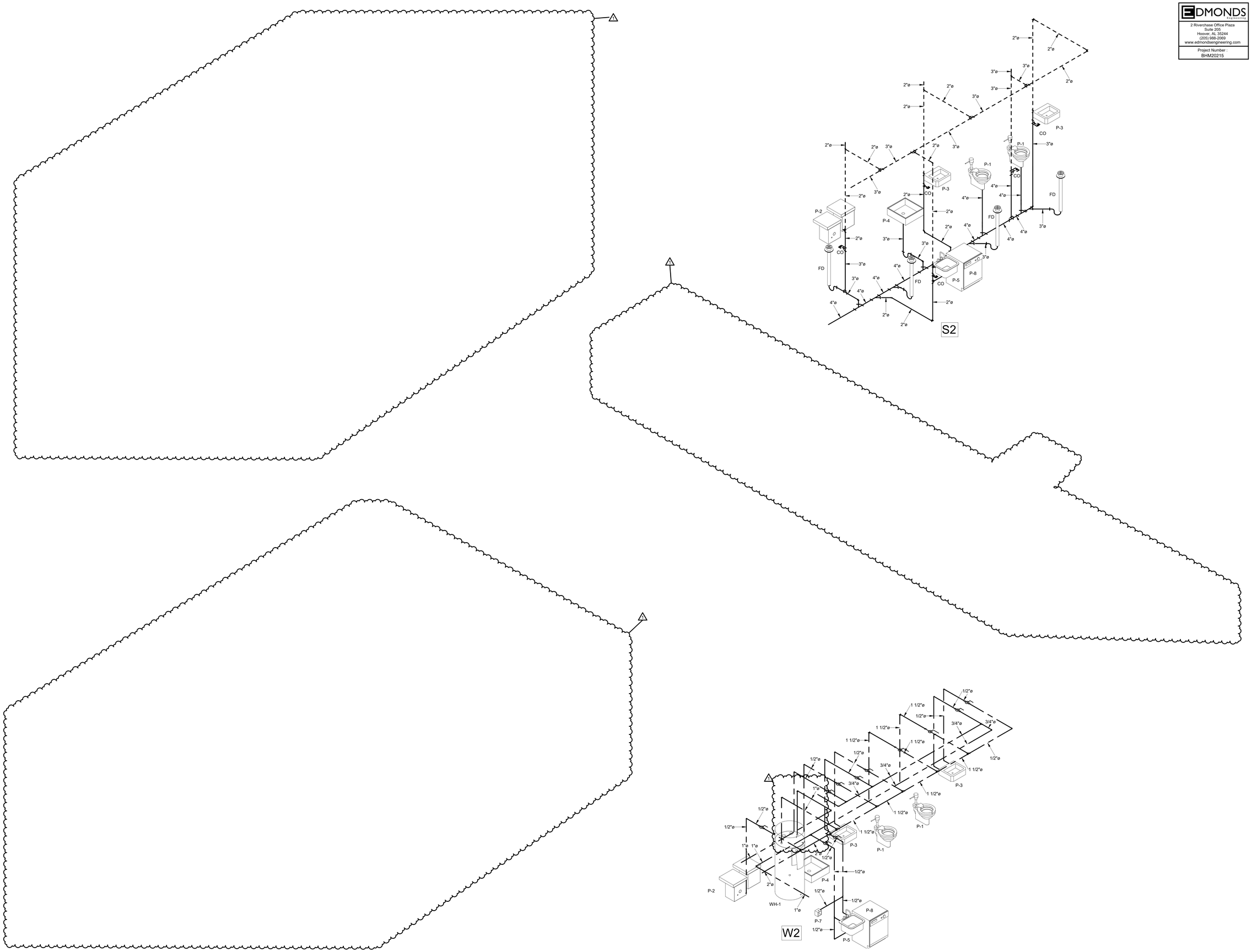
PROJ. MGR.:	SMC
DRAWN:	ALV
DATE:	05/15/22
REVISIONS	
1	ADDENDUM #1

JOB NO. 19-90B

SHEET NO:

P0.1

1 OF 5



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RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA LICENSED No. 27475 PROFESSIONAL 5/15/2022 ENGINEER CHRISTOPHER L. ROBINSON

SHEET TITLE:
PLUMBING - RISERS

PROJ. MGR.:	SMC
DRAWN:	ALV
DATE:	05/15/22
REVISIONS	
1	ADDENDUM #1

JOB NO. 19-90B
SHEET NO:
P0.2
2 OF 5

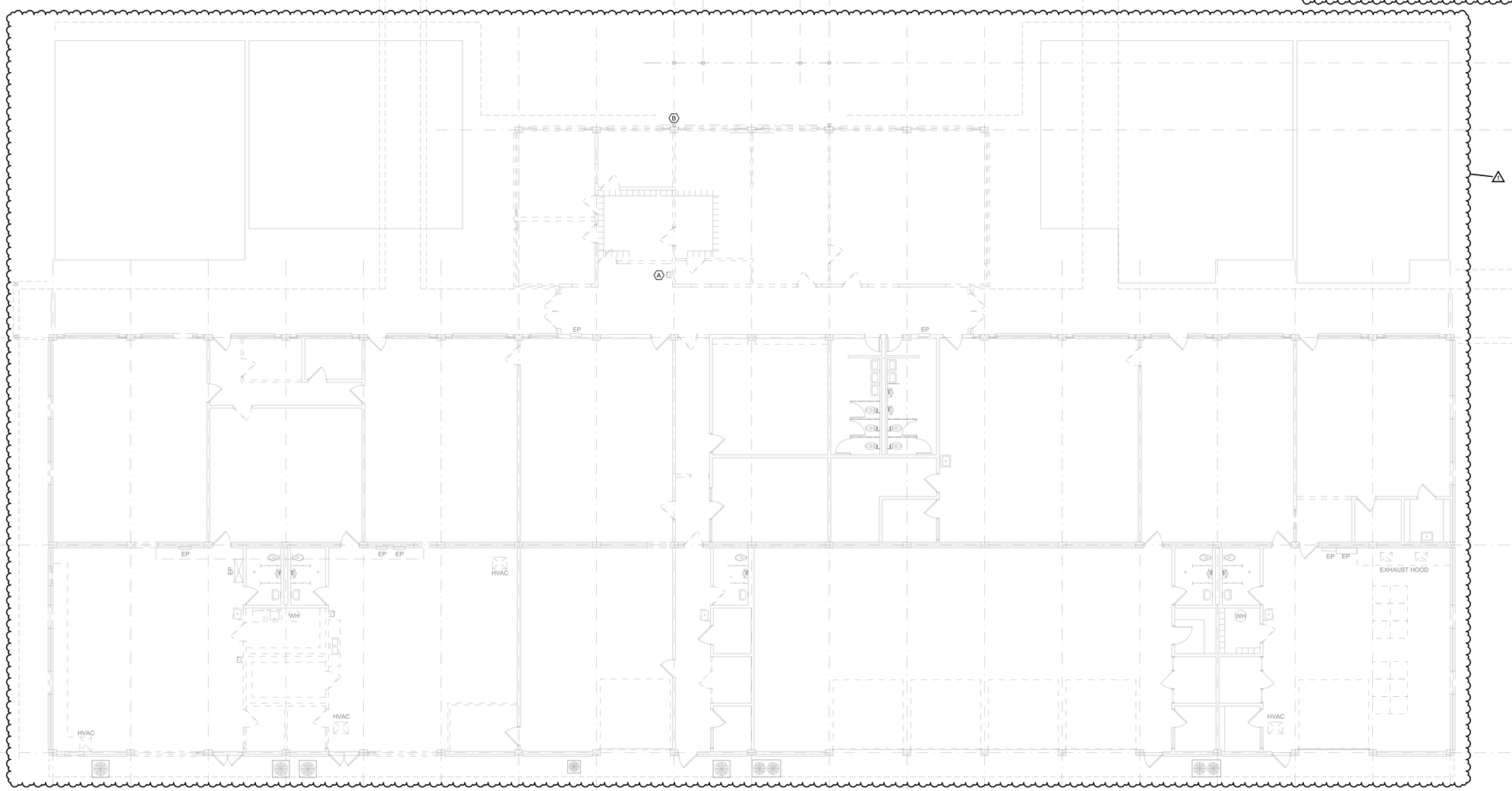
DEMOLITION GENERAL NOTES

1. CONTRACTOR SHALL REMOVE ALL FIXTURES IN AREAS WHERE NOTED.
2. WHERE FIXTURES ARE SHOWN TO BE REMOVED, CONTRACTOR SHALL REMOVE FIXTURE AND ALL ASSOCIATED WASTE, VENT, WATER OR GAS PIPING BACK TO MAINS IN WALLS, ABOVE CEILING OR BELOW FLOOR AND CAP IN ACCORDANCE WITH LOCAL CODES.
3. ALL REMOVED FIXTURES SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE DELIVERED TO THE OWNERS WAREHOUSE BY THIS CONTRACTOR.
4. IF THE OWNER DECIDES NOT TO RETAIN FIXTURES OR EQUIPMENT REMOVED. THE FIXTURES SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
5. ONCE DEMOLITION IS COMPLETE, ALL PIPING THAT IS NOT IN USE OR THAT IS NOT TO BE USED UNDER THE RENOVATION PORTION SHOULD HAVE BEEN REMOVED.

DEMOLITION LEGEND

(A) EXISTING WATER COOLER TO REMOVED.

(B) EXISTING WALL HYDRANT TO BE REMOVED.



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

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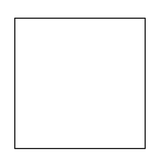

SHEET TITLE:
PLUMBING - DEMOLITION FLOOR PLAN

PROJ. MGR.:	SMC
DRAWN:	ALV
DATE:	05/15/22

REVISIONS

1	ADDENDUM #1

JOB NO. 19-90B

SHEET NO:

P1.1

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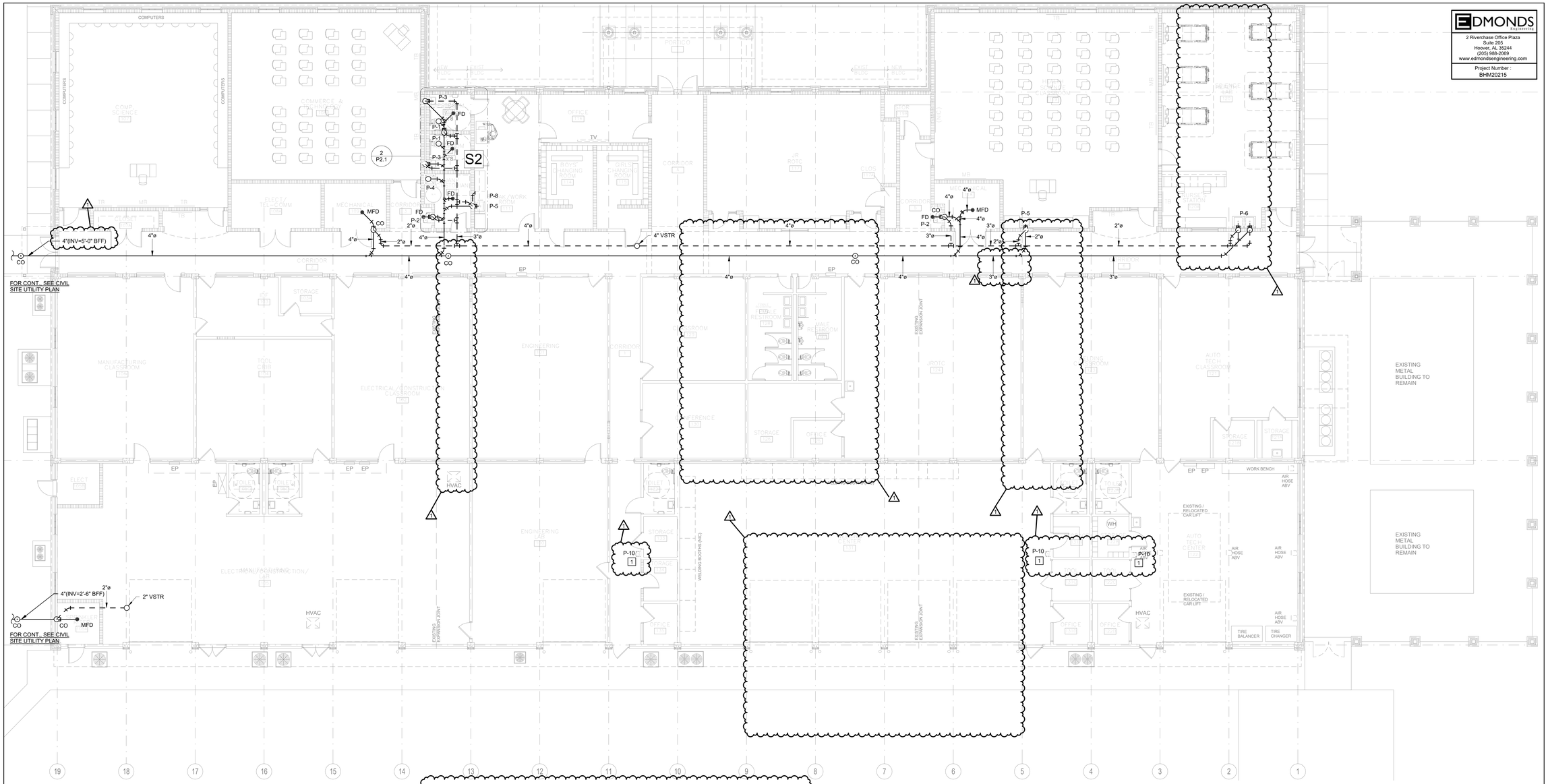
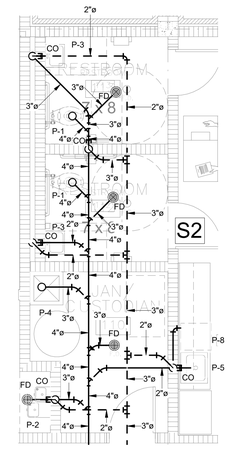


1 NON PRESSURE - NEW CONSTRUCTION FLOOR PLAN
1/8" = 1'-0"

NON PRESSURE KEY NOTES

1 CONNECT TO EX WASTE AND VENT IN WALL.



2 NON PRESSURE - ENLARGED CUSTODIAN PLAN
1/4" = 1'-0"

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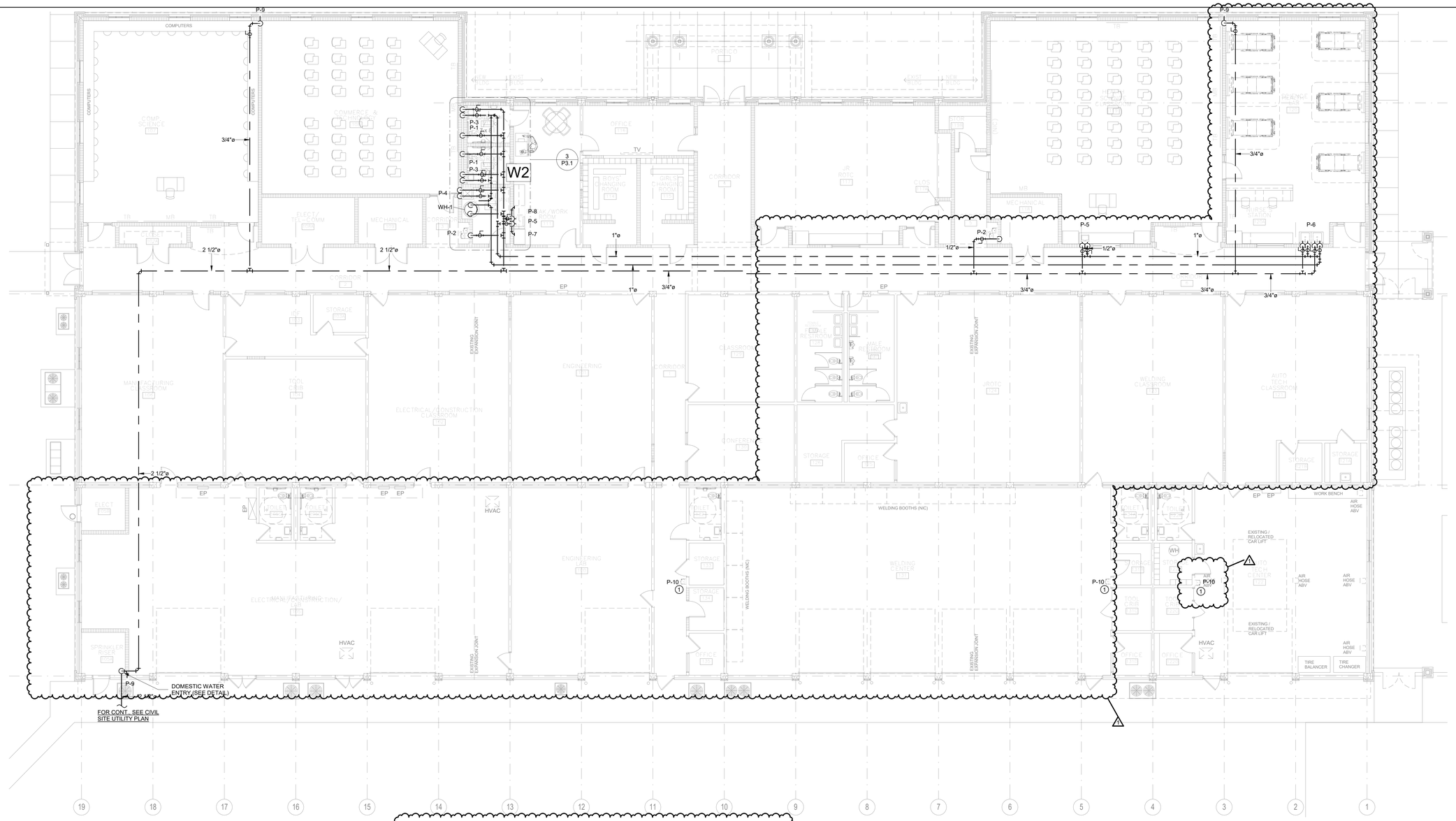
RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA LICENSED No. 27475 PROFESSIONAL 5/15/2022 ENGINEER CHRISTOPHER L. ROBINSON

SHEET TITLE:
NON PRESSURE - NEW CONSTRUCTION FLOOR PLAN

PROJ. MGR.:	SMC
DRAWN:	ALV
DATE:	05/15/22
REVISIONS	
1	ADDENDUM #1

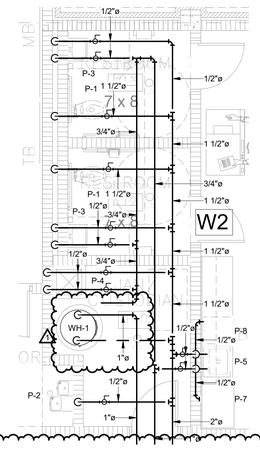
JOB NO. 19-90B
SHEET NO:
P2.1
4 OF 5



1 PRESSURE - NEW CONSTRUCTION FLOOR PLAN

1/8" = 1'-0"

PRESSURE KEY NOTES
1 CONNECT TO EXISTING CW IN WALL.



3 PRESSURE - ENLARGED CUSTODIAN PLAN

1/4" = 1'-0"

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ALABAMA LICENSED
No. 27475 PROFESSIONAL
5/15/2022
ENGINEER
CHRISTOPHER L. ROBINSON

SHEET TITLE:
PRESSURE - NEW CONSTRUCTION FLOOR PLAN

PROJ. MGR.:	SMC
DRAWN:	ALV
DATE:	05/15/22

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1	ADDENDUM #1

JOB NO. 19-90B
SHEET NO:
P3.1
5 OF 5

DUCTWORK LEGEND

(CFM) S	SUPPLY DIFFUSER
(CFM) R	RETURN GRILLE
(CFM) E	EXHAUST GRILLE
(CFM) T	TRANSFER AIR GRILLE
(CFM) SR	SIDEWALL REGISTER
ø	ROUND DUCT SYMBOL
W X H	RECTANGULAR DUCT (WIDTH X HEIGHT)
	EXISTING DUCTWORK, PIPING, OR EQUIPMENT TO REMAIN.
	EXISTING DUCTWORK, PIPING, OR EQUIPMENT TO BE REMOVED.
	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
	FLAT OVAL TURNING UP.
	FLAT OVAL TURNING DOWN.
	ROUND DUCT TURNING DOWN
	ROUND DUCT TURNING UP
	MAXIMUM 5' FLEXIBLE DUCT ALL BRANCH DUCTS
	RECTANGULAR 90° ELBOW WITH TURNING VANES FOR SUPPLY.
	RISE OR DROP IN DUCT
	RECTANGULAR BRANCH OFF OF RECTANGULAR DUCT WITH MANUAL DAMPER
	CONICAL SPIN-IN WITH MANUAL DAMPER
MD	MANUAL DAMPER
FD	FIRE DAMPER (PROVIDE ACCESS DOOR)
AD	AUTOMATIC DAMPER
SFD	COMBINATION SMOKE/FIRE DAMPER (PROVIDE ACCESS DOOR)
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
C	CO2 MONITOR
	CONNECT TO EXISTING, FIELD VERIFY EXACT SIZE AND LOCATION.

HVAC ABBREVIATIONS

A	AMPS
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AMB.	AMBIENT
ARCH.	ARCHITCTURAL
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BTUH	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
DB	DRY BULB
DN.	DOWN
°F	DEGREES FAHERNHEIT
ΔP	CHANGE IN PRESSURE
ΔT	CHANGE IN TEMPERATURE
DIA.	DIAMETER
EA	EXHAUST AIR
ENT.	ENTERING
EAT	ENTERING AIR TEMPERATURE
EMG	EXPANDED METAL GRILLE
EWT	EXTERNAL WATER TEMPERATURE
E.S.P.	EXTERNAL STATIC PRESSURE
EX.	EXISTING
EXT.	EXTERNAL
FPM	FEET PER MINUTE
FT.	FEET
F.V.	FACE VELOCITY
GAL.	GALLONS
GPM	GALLONS PER MINUTE
H	HEIGHT
HP	HORSEPOWER
IN.	INCHES
I.D.	INSIDE DIAMETER
KW	1000 WATTS
L	LENGTH
LBS.	POUNDS
LRA	LOCKED ROTOR AMPS
LVG.	LEAVING
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAX.	MAXIMUM
MAT	MIXED AIR TEMPERATURE
MBH	1000 BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MIN.	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
NPLV	NON-STAND PART LOAD VALUE
OSA	OUTSIDE AIR
O.D.	OUTSIDE DIAMETER
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ATMOSPHERIC
PSIG	PSI GAUGE
RA	RETURN AIR
RAT	RETURN AIR TEMPERATURE
RH	RELATIVE HUMIDITY
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
T.S.P.	TOTAL STATIC PRESSURE
TD	TRANSFER DUCT
TOD	TOP OF DUCT
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLUME
V/Ø/Hz	VOLTS/PHASE/HERTZ
W.G.	WATER GAGE
W	WIDTH
WB	WET BULB

HVAC CONTROLS LEGEND

T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
C	CO2 MONITOR
CP	120V HVAC CONTROLS POWER
TS	AVERAGING TEMPERATURE SENSOR
H	DUCT MOUNTED HUMIDITY SENSOR
AO	ANALOG OUTPUT
AI	ANALOG INPUT
DO	DIGITAL OUTPUT
DI	DIGITAL INPUT
SD	DUCT MOUNTED SMOKE DETECTOR. SMOKE DETECTOR FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR, INSTALLED IN DUCT BY MECHANICAL CONTRACTOR.
HOA	HAND-OFF-AUTO MAGNETIC STARTER
SP	DUCT STATIC PRESSURE SENSOR
DP	DIFFERENTIAL PRESSURE SENSOR
	INTERLOCK WITH FIRE ALARM SYSTEM
M	FAN/PUMP MOTOR
VFD	VARIABLE FREQUENCY DRIVE
CT	CURRENT TRANSDUCER
	DIRECTION OF FLOW
H-O-A	HAND-OFF-AUTO SWITCH
AFM	AIR FLOW MONITOR. (PROVIDE ACCESS DOOR AT EACH AIR FLOW MONITOR.)

PIPING LEGEND

D	DRAIN PIPING
	PIPE TURNING UP.
	PIPE TURNING DOWN.
	BRANCH OFF TOP OF MAIN.
	BRANCH OFF BOTTOM OF MAIN.
	BRANCH OFF SIDE OF MAIN.
	ECCENTRIC REDUCER
	UNION
	SLOPE DOWN IN DIRECTION OF ARROW.

HVAC GENERAL NOTES

1. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND SUBJECT TO REQUIREMENTS OF ARCHITECTURAL DRAWINGS AND CONDITIONS EXISTING IN THE FIELD. MECHANICAL DRAWINGS INDICATE GENERALLY THE LOCATION OF COMPONENTS AND ARE NOT INTENDED TO SHOW ALL FITTINGS OR ALL DETAILS OF THE WORK TO BE PERFORMED.

2. FOLLOW THE DRAWINGS CLOSELY, COORDINATE DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. DO NOT SCALE MECHANICAL DRAWINGS FOR LOCATIONS OF SYSTEM COMPONENTS.

3. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.

4. MAKE NO CHANGES WITHOUT THE ARCHITECT'S WRITTEN PERMISSION. IN CASE OF DOUBT, OBTAIN ARCHITECT'S DECISION BEFORE PROCEEDING WITH WORK. FAILURE TO FOLLOW THIS INSTRUCTION SHALL MAKE THE CONTRACTOR LIABLE FOR DAMAGE TO OTHER WORK AND RESPONSIBLE FOR REMOVING AND REPAIRING DEFECTIVE OR MISLOCATED WORK IN PROPER MANNER.

5. DO NOT SCALE DRAWINGS TO LOCATE DIFFUSERS AND EQUIPMENT. COORDINATE WITH NEW AND EXISTING LIGHTING, ELECTRICAL CONDUIT, AND ALL EXISTING FIELD CONDITIONS.

6. PRIOR TO PREPARING SUBMITTALS, VERIFY ALL EQUIPMENT VOLTAGES WITH ELECTRICAL DRAWINGS AND ELECTRICAL CONTRACTOR AND REPORT ANY INCONSISTENCIES TO THE ARCHITECT PRIOR TO ORDERING EQUIPMENT. ANY FAILURE TO DO SO WILL MAKE THE MECHANICAL CONTRACTOR RESPONSIBLE FOR ANY EQUIPMENT ORDERED WITH THE INCORRECT VOLTAGE.

7. PROTECT MECHANICAL EQUIPMENT FROM DAMAGE DURING CONSTRUCTION. WHEN INSTALLATION IS COMPLETE, CLEAN EQUIPMENT AS REQUIRED AND PROVIDE ALL NEW FILTERS.

8. INSTALL ALL EQUIPMENT TO PROVIDE NORMAL SERVICE ACCESS TO ALL COMPONENTS. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS CONFLICT WITH CONTRACT DOCUMENTS, OBTAIN ARCHITECT'S DECISION BEFORE PROCEEDING.

9. FURNISH ACCESS DOORS FOR VALVES, FIRE DAMPERS, DAMPERS, CONTROLS, AIR VENTS, TRAP CLEAN OUTS, AND OTHER ITEMS LOCATED ABOVE NON-LIFTOUT CEILINGS OR BEHIND PARTITIONS OR WALLS. PROVIDE FIRE DAMPERS IN DUCTWORK, GRILLES, AND REGISTERS WITH FIRE RATING EQUAL TO RATING OF WALL OR CEILING. ALL FIRE DAMPERS MAY OR MAY NOT BE SHOWN ON MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL FIRE RATED WALL AND CEILING LOCATIONS AND RATINGS WITH ARCHITECTURAL DRAWINGS.

10. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES AND STANDARDS (SEE SPECIFICATIONS).

11. MECHANICAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR EXACT QUANTITY AND LOCATIONS OF 120 V CONTROLS POWER TO NECESSARY CONTROL PANELS.

12. MECHANICAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR EXACT QUANTITY AND LOCATIONS OF 120 V CONTROL POWER FOR VAV TERMINAL UNIT CONTROLS, AUTOMATIC CONTROL VALVES, AND AUTOMATIC DAMPER ACTUATORS.

13. PROVIDE ALL NECESSARY RELAYS, SWITCHES, SENSORS, LOW VOLTAGE CONTROL WIRING, ACTUATORS, ETC. FOR A COMPLETE AND FUNCTIONAL BAS CONTROLS SYSTEM.

14. COORDINATE EXACT LOCATION OF ALL WALL MOUNTED DEVICES (THERMOSTATS, HUMIDITY SENSORS, ETC.) WITH ARCHITECT PRIOR TO ROUGH IN. ALL WALL MOUNTED DEVICES SHALL BE INSTALLED 48"A.F.F. TO THE TOP OF THE DEVICE.

15. COORDINATE EXACT LOCATION ON WALL OF ALL WALL MOUNTED SUPPLY AND RETURN GRILLES/REGISTERS WITH ARCHITECT. WALL MOUNTED SUPPLY AND RETURN GRILLES/REGISTERS SHALL BE PAINTED BY OTHERS.

16. COORDINATE ALL DUCT DETECTORS, LOW VOLTAGE WIRING TO ASSOCIATED PROGRAMMING WITH FIRE ALARM CONTRATOR TO PROVIDE A FULLY FUNCTIONING SYSTEM. VERIFY PROPER OPERATION OF ALL EXISTING DUST SMOKE DETECTORS. REPLACE AS REQUIRED. UPON SENSING SMOKE THE DUCT DETECTOR SHALL SHUT DOWN THE RESPECTIVE UNIT.

AIR DEVICE LEGEND

MARK	EXAMPLE	DESCRIPTION	SIZE	BASIS OF DESIGN
"S"	200S / CFM	PLAQUE FACE CEILING DIFFUSER WITH ROUND NECK. ALL CEILING DIFFUSERS TO HAVE A 24X24 CEILING PANEL (EXCEPT WHERE SHOWN AS 12X12). ALL CEILING DIFFUSERS TO HAVE ROUND NECKS.	CFM SHOWN ON PLANS. NECK & RUN-OUT SIZED PER THE FOLLOWING: CFM / NECK SIZE / RUN-OUT SIZE 0 - 100 / 6" / 6" 101 - 200 / 8" / 8" 201 - 300 / 10" / 10" 301 - 500 / 12" / 12" 501 - 750 / 15" / 15" 751 - 1000 / 18" / 18"	TITUS OMNI
1				
"R", "E", "T"	200R / CFM R24 / SQUARE NECK SIZE	CEILING MOUNTED RETURN (R), EXHAUST (E), OR TRANSFER (T) EGGCRATE GRILLE. ALL GRILLES IN A LAY-IN CEILING TO HAVE A 24X24 CEILING PANEL.	CFM SHOWN ON PLANS. NECK SIZED PER THE FOLLOWING: CFM / NECK SIZE 0 - 100 / 6x6 101 - 200 / 8x8 201 - 350 / 10x10 351 - 500 / 12x12 501 - 750 / 14x14 751 - 950 / 16x16 951 - 1200 / 18x18 1201 - 1500 / 20x20 1501 - 2000 / 24x24	TITUS 50F
SR	SR12X6 / 200 / CFM / W x H	SIDEWALL SUPPLY REGISTER.	SIZE (WxH) IN INCHES & CFM SHOWN.	TITUS 272FL
WRG / WTG	WRG12X6 / 200 / CFM / W x H	WALL RETURN GRILLE / WALL TRANSFER GRILLE.	SIZE (WxH) IN INCHES & CFM SHOWN.	TITUS 350FL

NOTES:

1. SEE SPECIFICATIONS FOR FINISH AND CONSTRUCTION MATERIAL FOR EACH AIR DEVICE.
2. COORDINATE WITH ARCHITECT'S CEILING PLAN FOR LAY-IN OR SURFACE MOUNTING OF CEILING MOUNTED AIR DEVICES.
3. COORDINATE LOCATIONS OF CEILING MOUNTED AIR DEVICES WITH LIGHT FIXTURES, SPRINKLER HEADS, AND OTHER CEILING MOUNTED DEVICES. DO NOT SCALE MECHANICAL DRAWINGS FOR LOCATIONS.

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ALABAMA LICENSED No. 27475 PROFESSIONAL ENGINEER CHRISTOPHER L ROBINSON
5/15/2022

SHEET TITLE:
HVAC - LEGENDS & NOTES

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HEAT PUMP CONTROLLERS

NOTES:
1. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE BALL VALVES AND CAP ANY PIPING CONNECTION NOT USED.
3. PROVIDE BALL VALVES WITH SCHRADER VALVE IN EACH PIPE CONNECTION TO THE CONTROLLER ON THE INLET AND OUTLET.
4. PROVIDE DISCONNECT SWITCH FOR EACH MCU.

MARK	ELECTRICAL					NUMBER OF CONNECTIONS	WEIGHT (LBS)	BASIS OF DESIGN	
	V	PH	HZ	M.C.A.	MOCP			MANUFACTURER	MODEL
MCU-1	208 V	1	60	0.83	15	8	140	Mitsubishi Electric	TCMBM0108
MCU-2	208 V	1	60	0.83	15	8	110	Mitsubishi Electric	TCMBM0108

OUTDOOR HEAT PUMP SCHEDULE - VRF (HEAT RECOVERY)

TYPE:
1. OUTDOOR HEAT PUMP, VRF, HEAT RECOVERY

NOTES:
1. UNIT TO BE PROVIDED WITH HAIL GUARDS.
2. SYSTEM SHALL BE PROVIDED WITH A CONTROLLER WITH BACNET SERVER FUNCTIONALITY FOR INTEGRATION INTO BAS.
3. MANUFACTURER MUST BE CERTIFIED, LISTED, AND LABELED PER AHRI 1230.
4. SYSTEM RATING BASED ON DESIGN AMBIENT CONDITIONS FOR HEATING AND COOLING
5. CONDENSING UNITS MUST HAVE AUTO CHANGEOVER FUCTIONS.
6. CONDENSING UNITS MUST HAVE FULLY MODULATING INVERTER COMPRESSORS.
7. SUBMITTED PERFORMANCE DATA MUST BE FULLY DERATED FOR ALL COMPONENTS AND ACCESSORIES, INCLUDING, BUT NOT LIMITED TO, LINE LENGTH, VERTICAL SEPERATION, CONNECTION RATIO, AND DESIGN.
8. REFRIGERANT CIRCUIT ACCESS PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING TYPE TAMPER RESISTANT CAPS.
9. PROVIDE SEPERATE POWER CONNECTION WITH DISCONNECT SWITCH AT EACH OUTDOOR UNIT SECTION. (DISCONNECT PROVIDED BY ELEC.)
10. ALL REFRIGERANT PIPING JOINTS TO BE BRAZED AND LEAK TESTED.

MARK	TYPE	COOLING CAPACITY	HEATING CAPACITY	ELECTRICAL					EFFICIENCY			BASIS OF DESIGN
				VOLTAGE	PH	HZ	MCA	MOCP	IEER	EER	HSPF	
OHP-1	1	158 MBH	182 MBH	208 V	3	60	61 A	100 A	23.55	10.8	3.55	Mitsubishi Electric
OHP-2	1	156 MBH	182 MBH	208 V	3	60	61 A	100 A	23.55	10.8	3.55	Mitsubishi Electric

INDOOR HEAT PUMP - VARIABLE REFRIGERANT - OHP-1

TYPE:
1. INDOOR, 4 WAY CASSETE
2. INDOOR, MINI 4 WAY CASSETE
3. INDOOR, MID STATIC HORIZONTAL DUCTED AIR HANDLER
4. HORIZONTAL, MULTIPOSITION AIR HANDLER

NOTES:
1. AIRFLOW RATED AT HIGH FAN SPEED.
2. HEATING CAPACITY RATED AT 47°F.
3. INDOOR, DUCTED UNIT - FAN STATIC PRESSURE SHALL BE: 0.5" E.S.P.

ACCESSORIES:
1. 3-POLE DISCONNECT SWITCH.
2. HARD WIRED UNIT CONTROLLER.
3. FULL PORT BALL VALVES & SCHRADER VALVES WITH FLARED CONNECTIONS.
4. WASHABLE AIR FILTER (PROVIDE (1) EXTRA FILTER PER AC UNIT).
5. PROVIDE FILTER RACK WITH MERV13 FILTER FOR ALL DUCTED AIR HANDLERS (TYPE 3).

MARK	TYPE	AIRFLOW	NOMINAL TONNAGE	CONNECTED TO:		COOLING CAPACITY			HEATING CAPACITY		DIMENSIONS (WxLxH)	ELECTRICAL					REFRIGERANT PIPING (LIQUID - GAS)	BASIS OF DESIGN
				OUTDOOR UNIT	CHANGE - OVER DEVICE	TOTAL (MBtu/h)	SENSIBLE (MBtu/h)	E.A.T.	TOTAL (MBtu/h)	E.A.T.		VOLTAGE	PH	HZ	MCA	MOCP		
IHP-1-1	1	812	2	OHP-1	MCU-1	21.0	16.2	75°F	24.2	70°F	33" x 33" x 12"	208 V	1	60	0.54	15	3/8" - 5/8"	MITSUBISHI
IHP-1-2	1	812	2	OHP-1	MCU-1	21.0	16.2	75°F	24.2	70°F	33" x 33" x 12"	208 V	1	60	0.54	15	3/8" - 5/8"	MITSUBISHI
IHP-1-3	1	812	2	OHP-1	MCU-1	21.0	16.2	75°F	24.2	70°F	33" x 33" x 12"	208 V	1	60	0.54	15	3/8" - 5/8"	MITSUBISHI
IHP-1-4	1	812	2	OHP-1	MCU-1	21.0	16.2	75°F	24.2	70°F	33" x 33" x 12"	208 V	1	60	0.54	15	3/8" - 5/8"	MITSUBISHI
IHP-1-5	3	670	2.5	OHP-1	MCU-1	26.3	20.8	75°F	30.5	70°F	55" x 29" x 10"	208 V	1	60	2.88	15	3/8" - 5/8"	MITSUBISHI
IHP-1-6	1	812	2.5	OHP-1	MCU-2	27.7	21.0	75°F	33.0	70°F	33" x 33" x 12"	208 V	1	60	0.57	15	3/8" - 5/8"	MITSUBISHI
IHP-1-7	1	812	1	OHP-1	MCU-2	27.7	21.0	75°F	33.0	70°F	23" x 23" x 10"	208 V	1	60	0.57	15	3/8" - 5/8"	MITSUBISHI
IHP-1-8	1	812	1	OHP-1	MCU-2	27.7	21.0	75°F	33.0	70°F	23" x 23" x 10"	208 V	1	60	0.57	15	3/8" - 5/8"	MITSUBISHI

INDOOR HEAT PUMP - VARIABLE REFRIGERANT - OHP-2

TYPE:
1. INDOOR, 4 WAY CASSETE
2. INDOOR, MINI 4 WAY CASSETE
3. INDOOR, MID STATIC HORIZONTAL DUCTED AIR HANDLER
4. HORIZONTAL, MULTIPOSITION AIR HANDLER

NOTES:
1. AIRFLOW RATED AT HIGH FAN SPEED.
2. HEATING CAPACITY RATED AT 47°F.
3. INDOOR, DUCTED UNIT - FAN STATIC PRESSURE SHALL BE: 0.5" E.S.P.

ACCESSORIES:
1. 3-POLE DISCONNECT SWITCH.
2. HARD WIRED UNIT CONTROLLER.
3. FULL PORT BALL VALVES & SCHRADER VALVES WITH FLARED CONNECTIONS.
4. WASHABLE AIR FILTER (PROVIDE (1) EXTRA FILTER PER AC UNIT).
5. PROVIDE FILTER RACK WITH MERV13 FILTER FOR ALL DUCTED AIR HANDLERS (TYPE 3).

MARK	TYPE	AIRFLOW	NOMINAL TONNAGE	CONNECTED TO:		COOLING CAPACITY			HEATING CAPACITY		DIMENSIONS (WxLxH)	ELECTRICAL					REFRIGERANT PIPING (LIQUID - GAS)	BASIS OF DESIGN
				OUTDOOR UNIT	CHANGE - OVER DEVICE	TOTAL (MBtu/h)	SENSIBLE (MBtu/h)	E.A.T.	TOTAL (MBtu/h)	E.A.T.		VOLTAGE	PH	HZ	MCA	MOCP		
IHP-2-1	3	1250	3	OHP-2	MCU-2	30.9	27	75°F	38.8	70°F	55' x 29" x 10"	208 V	1	60	4.25	15	3/8" - 5/8"	MITSUBISHI
IHP-2-2	3	1400	4	OHP-2	MCU-2	41.2	31.9	75°F	52.4	70°F	55' x 29" x 10"	208 V	1	60	4.38	15	3/8" - 5/8"	MITSUBISHI
IHP-2-3	3	800	2	OHP-2	MCU-2	21.9	16.6	75°F	26.2	70°F	43" x 29" x 10"	208 V	1	60	2.73	15	3/8" - 5/8"	MITSUBISHI
IHP-2-4	1	812	2.5	OHP-2	MCU-2	27.7	21.0	75°F	33.0	70°F	33" x 33" x 12"	208 V	1	60	0.54	15	3/8" - 5/8"	MITSUBISHI

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INDOOR AIR HANDLING UNIT SCHEDULE - 100% OSA

AIR HANDLER UNIT TYPE:

1. SPLIT SYSTEM 100% OSA. VERTICAL INDOOR AIR HANDLER WITH DX COIL, ELECTRIC HEAT, SUPPLY FAN, & MATCHING OUTDOOR UNIT.

ACCESSORIES:

1. TWO CIRCUITS. CIRCUIT ONE FOR FAN, CIRCUIT TWO FOR HEATER. (1)
2. FILTER RACK WITH 2" THICK - 30% EFF. FILTERS.
3. INTERNALLY ISOLATED SUPPLY FAN - DIRECT DRIVE
4. DX COOLING COIL - MATCHED TO OUTDOOR HEAT PUMP.
5. ELECTRIC HEAT.
6. MODULATING HOT GAS REHEAT

NOTES:

1. COOLING CAPACITY IS NET CAPACITY @ 95°F AMBIENT.
2. UL LISTED. AHRI CERTIFIED.
3. SEE PLANS FOR AIRFLOW CONFIGURATION.

MARK	TYPE	SUPPLY FAN			MAX OUTSIDE AIR	DX COOLING COIL CAPACITY				ELECTRICAL					ELECTRIC HEATER					ACCESSORIES	BASIS OF DESIGN
		AIRFLOW (CFM)	E.S.P. (in-wg)	MOTOR (HP)		TOTAL (MBH)	SENSIBLE (MBH)	EAT (DB/WB)	NOMINAL TONS	VOLTAGE	PH	HZ	MCA	MOCP	KW	STAGES	VOLT	PH	Hz		
DOAS-1	1	1000	1.00"	1.0	1,000 CFM	85.6	45.4	95°F / 78°F	6	208 V	3	60	5.75 A	15 A	18	SCR	208 V	3	60	1,2,3,4,5,6	TRANE BCVD036
DOAS-2	1	700	1.00"	1.0	700 CFM	61.25	31.9	95°F / 78°F	6	208 V	3	60	5.75 A	15 A	13	SCR	208 V	3	60	1,2,3,4,5,6	TRANE BCVD036

(1)

CONDENSING UNIT SCHEDULE

TYPE: AIR COOLED CONDENSING UNIT.

NOTES:

1. CAPACITY TO BALANCE RESPECTIVE INDOOR AC UNIT.
2. CAPACITY BASED ON 95°F AMBIENT.
3. UL LISTED, AHRI CERTIFIED, ASHRAE 90.1-2013 COMPLIANT.
4. REFRIGERANT CIRCUIT ACCESS PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING-TYPE TAMPER-RESISTANT CAPS. ANY ACCESS DEVICE REQUIRED SHALL BE LEFT ON SITE WITH THE OWNER AT PROJECT CLOSE OUT.

ACCESSORIES:

1. PHASE PROTECTION.
2. MICROPROCESSOR CONTROLS.
3. ISOLATION VALVES.
4. LIQUID LINE REFRIGERANT FILTER DRIER.
5. ANTI SHORT CYCLE TIMER.
6. LOW AMBIENT CONTROL DOWN TO 0°F.
7. HAIL / VANDAL GUARDS.
8. THERMAL EXPANSION VALVE.
9. HOT GAS BYPASS WITH RAWAL DEVICE AT CONDENSING UNIT.

MARK	NOMINAL CAPACITY	ELECTRICAL					BASIS OF DESIGN
		Voltage	PH	HZ	MCA	MOCP	
CU-1	6	208 V	3	60 Hz	27 A	45 A	Trane TTA
CU-2	6	208 V	3	60 Hz	27 A	45 A	Trane TTA

(1)

FAN SCHEDULE

FAN TYPE:

1. CEILING MOUNTED EXHAUST FAN
2. ROOF MOUNTED CENTRIFUGAL EXHAUST FAN - BELT DRIVE
3. ROOF MOUNTED CENTRIFUGAL EXHAUST FAN - DIRECT DRIVE

FAN ACCESSORIES:

1. BACKDRAFT DAMPER.
2. DISCONNECT SWITCH.
3. ALUMINUM CEILING GRILLE.
4. 5A-120V FAN SPEED CONTROLLER.
5. INTERLOCK WITH LIGHT SWITCH.
6. INTERLOCK WITH SWITCH.
7. INSULATED ROOF CURB.
8. BIRDSCREEN.
9. BAS SHALL CONTROL FAN.
10. INTERLOCK WITH T'STAT.

MARK	FAN TYPE	AIRFLOW	E.S.P. (in-wg)	WHEEL SIZE	RPM	MOTOR (HP / W)	ELECTRICAL			ACCESSORIES	WEIGHT (LB)	BASIS OF DESIGN	
							V	PH	HZ			MANUFACTURER	MODEL
CEF-1	1	70	0.33	N/A	795	32 W	120 V	1	60	1,2,3,4,5	12	Loren Cook Company	GC
CEF-2	1	70	0.33	N/A	795	32 W	120 V	1	60	1,2,3,4,5	12	Loren Cook Company	GC
CEF-3	1	90	0.33	N/A	1075	36.6 W	120 V	1	60	1,2,3,4,5	12	Loren Cook Company	GC
CEF-4	1	50	0.33	N/A	900	26.5 W	120 V	1	60	1,2,3,4,5	12	Loren Cook Company	GC
CEF-5	1	50	0.33	N/A	900	26.5 W	120 V	1	60	1,2,3,4,5	12	Loren Cook Company	GC
CEF-6	1	150	0.75	N/A	1100	77.1 W	120 V	1	60	1,2,3,4,10	12	Loren Cook Company	GC
EF-1	3	310	0.33	9"	1550	1/8 HP	120 V	1	60	1,2,7,8,9	30	Loren Cook Company	ACRU-D
EF-2	3	280	0.33	9"	1550	1/8 HP	120 V	1	60	1,2,7,8,9	30	Loren Cook Company	ACRU-D

(1)

(1)

INDOOR HEAT PUMP (MINI SPLIT SYSTEM) SCHEDULE

TYPE:

1. INDOOR, WALL MOUNT

NOTES:

1. AIRFLOW RATED AT HIGH FAN SPEED.
2. POWER FOR INDOOR UNIT IS FED FROM OUTDOOR UNIT.
3. COOLING CAPACITY RATED AT 95°F.
4. HEATING CAPACITY RATED AT 47°F.

ACCESSORIES:

1. 3-POLE DISCONNECT SWITCH.
2. HARD WIRED UNIT CONTROLLER.
3. FULL PORT BALL VALVES & SCHRADER VALVES WITH FLARED CONNECTIONS.
4. CONDENSATE PUMP (120/1/60) - 1 GPH @ 33 FT. HD.

MARK	TYPE	AIRFLOW	COOLING CAPACITY	HEATING CAPACITY	DIMENSIONS (WxLxH)	ELECTRICAL				ACCESSORIES	BASIS OF DESIGN MITSUBISHI
						V	PH	HZ	MCA		
AC-1	1	700	24,000 BTUH	28,000 BTUH	46" X 12" X 15"	208	1	60	1	1,2,3,4	TPKA
AC-2	1	700	24,000 BTUH	28,000 BTUH	46" X 12" X 15"	208	1	60	1	1,2,3,4	TPKA

WALL HEATER SCHEDULE

HEATER TYPE:

1. ELECTRIC WALL HEATER.
2. BASIS OF DESIGN: MARKEL 3450

ACCESSORIES:

1. SURFACE MOUNTING.
2. UNIT MOUNTED THERMOSTAT.
3. CONCEALED ON/OFF SWITCH.
4. HIGH LIMIT CONTROLS.
5. BUILT-IN CIRCUIT BREAKER.

MARK	SIZE	ELECTRICAL			ACCESSORIES
		V	PH	HZ	
EWH-1	3KW	208	1	60	1,2,3,4,5

OUTDOOR HEAT PUMP (MINI SPLIT SYSTEM) SCHEDULE

TYPE:

1. OUTDOOR HEAT PUMP

NOTES:

1. CAPACITY TO BALANCE INDOOR AC UNIT.
2. COOLING CAPACITY RATED AT 95°F.
3. HEATING CAPACITY RATED AT 47°F.
4. REFRIGERANT CIRCUIT ACCESS PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING TYPE TAMPER-RESISTANT CAPS. ANY ACCESS DEVICE REQUIRED SHALL BE LEFT ON SITE WITH THE OWNER AT PROJECT CLOSE OUT.

ACCESSORIES:

1. PHASE PROTECTION.
2. MICROPROCESSOR CONTROLS.
3. ISOLATION VALVES.
4. LIQUID LINE REFRIGERANT FILTER DRIER.
5. ANTI SHORT CYCLE TIMER.
6. LOW AMBIENT CONTROL DOWN TO 0°F
7. HAIL / VANDAL GUARDS.
8. THERMAL EXPANSION VALVE.

MARK	TYPE	COOLING CAPACITY	HEATING CAPACITY	ELECTRICAL					EFFICIENCY		BASIS OF DESIGN
				VOLTAGE	PH	HZ	MCA	MOCP	SEER	HSPF	
HP-1	1	24,000 BTUH	28,000 BTUH	208	1	60	17 A	27 A	19.5	10.6	Mitsubishi Electric
HP-2	1	24,000 BTUH	28,000 BTUH	208	1	60	17 A	27 A	19.5	10.6	Mitsubishi Electric

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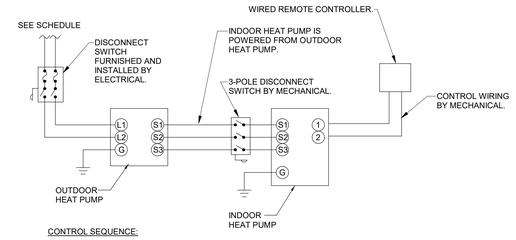
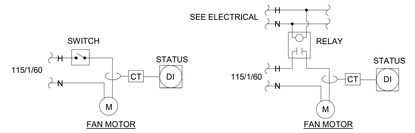


CONTROL SEQUENCE:

THE AC UNIT SHALL BE CONTROLLED BY A WIRED WALL MOUNTED REMOTE CONTROLLER. THE CONTROLLER SHALL CYCLE ON COMPRESSOR(S) TO MAINTAIN COOLING SETPOINT (74°F - ADJUSTABLE) AND HEATING SETPOINT (70°F - ADJUSTABLE).

DUCTLESS SPLIT SYSTEM CONTROLS

NO SCALE

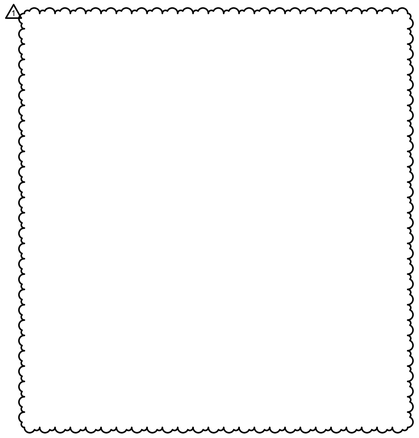


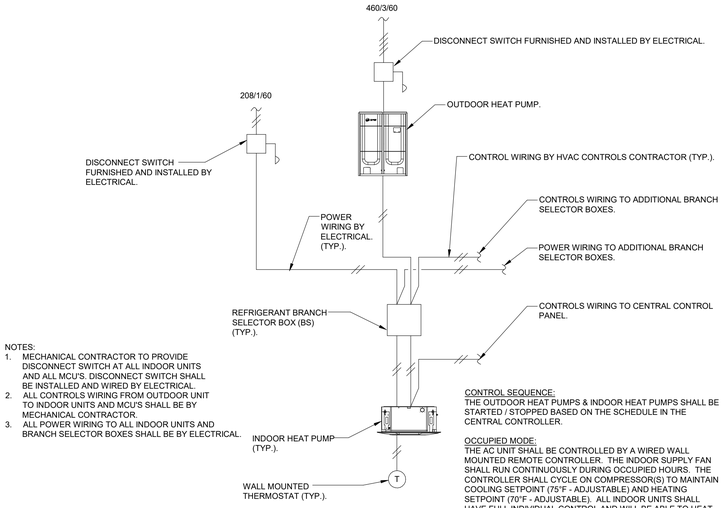
EXHAUST FAN CONTROLLED BY SWITCH. EXHAUST FAN CONTROLLED BY LIGHTING CIRCUIT.

THE BAS SHALL MONITOR FAN STATUS VIA A CURRENT TRANSDUCER.

EXHAUST FAN CONTROLS

NO SCALE





NOTES:
1. MECHANICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH AT ALL INDOOR UNITS AND ALL MCUS. DISCONNECT SWITCH SHALL BE INSTALLED AND WIRED BY ELECTRICAL.
2. ALL CONTROLS WIRING FROM OUTDOOR UNIT TO INDOOR UNITS AND MCU'S SHALL BE BY MECHANICAL CONTRACTOR.
3. ALL POWER WIRING TO ALL INDOOR UNITS AND BRANCH SELECTOR BOXES SHALL BE BY ELECTRICAL.

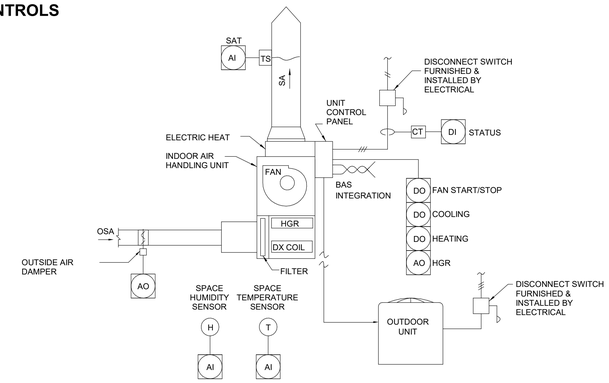
CONTROL SEQUENCE:
THE OUTDOOR HEAT PUMPS & INDOOR HEAT PUMPS SHALL BE STARTED / STOPPED BASED ON THE SCHEDULE IN THE CENTRAL CONTROLLER.

OCCUPIED MODE:
THE AC UNIT SHALL BE CONTROLLED BY A WIRED WALL MOUNTED REMOTE CONTROLLER. THE INDOOR SUPPLY FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS. THE CONTROLLER SHALL CYCLE ON COMPRESSOR(S) TO MAINTAIN COOLING SETPOINT (75°F - ADJUSTABLE) AND HEATING SETPOINT (70°F - ADJUSTABLE). ALL INDOOR UNITS SHALL HAVE FULL INDIVIDUAL CONTROL AND WILL BE ABLE TO HEAT OR COOL INDEPENDENT OF WHAT MODE THE OTHER CONNECTED INDOOR UNITS ARE OPERATING IN.

UNOCCUPIED MODE:
THE CONTROLLER SHALL CYCLE ON THE SUPPLY FAN AND COMPRESSOR(S) TO MAINTAIN THE UNOCCUPIED SPACE SETPOINT (60°F HEATING / 80°F COOLING - ADJUSTABLE).

TYPICAL VARIABLE REFRIGERANT SYSTEM CONTROLS DIAGRAM

NO SCALE



DOAS CONTROL SEQUENCE:

NOTE: ALL POINTS SHOWN IN THE AC UNIT DIAGRAM SHALL BE VIEWABLE AND CHANGEABLE IN THE BAS.

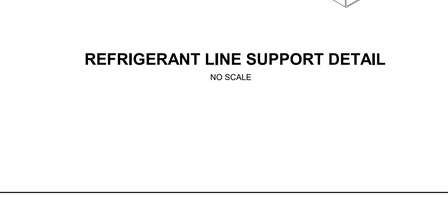
OCCUPIED MODE, NORMAL OPERATION:
THE ERU COMPRESSORS SHALL BE STAGED ON TO MAINTAIN A CONSTANT 55°F DISCHARGER AIR TEMPERATURE DOWNSTREAM OF THE DX COIL (ADJUSTABLE THROUGH BAS). THE HOTGAS REHEAT COIL WILL BE CONTROLLED TO MAINTAIN A DISCHARGE AIR TEMPERATURE OF 72°F. IF THE HOTGAS REHEAT COIL CAN NOT MAINTAIN 72°F, THEN THE ELECTRIC STRIP HEAT SHALL BE STAGED ON BY THE SCR CONTROLLER TO MAINTAIN 72°F DISCHARGE AIR TEMPERATURE (LEAVING THE UNIT).

DEHUMIDIFICATION CYCLE:
THE BAS SHALL DETERMINE THE NEED FOR DEHUMIDIFICATION BY SAMPLING SPACE TEMPERATURE AND HUMIDITY. IF SPACE TEMPERATURE IS 72°F AND SPACE RELATIVE HUMIDITY IS GREATER THAN 60% (ADJUSTABLE THROUGH BAS) THE UNIT SHALL GO INTO A DEHUMIDIFICATION CYCLE. THE CONDENSING UNIT SHALL STAGE ON 100% AND THE HOT GAS REHEAT COIL AND ELECTRIC STRIP HEAT SHALL MAINTAIN A DISCHARGE AIR TEMPERATURE OF 72°F (ADJUSTABLE). UPON THE HUMIDITY FALLING BACK BELOW SETPOINT THE UNIT SHALL RETURN TO NORMAL OPERATION.

UNOCCUPIED DEHUMIDIFICATION CYCLE:
DURING UNOCCUPIED HOURS, THE UNIT SHALL BE OFF THE OUTSIDE AIR DAMPER SHALL BE CLOSED. IF THE SPACE TEMPERATURE IS HIGHER THAN 75°F AND RELATIVE HUMIDITY IS SENSED TO BE HIGHER THAN 60% (ADJ) DURING UNOCCUPIED HOURS, THE UNIT SHALL ENERGIZE INTO THE UNOCCUPIED DEHUMIDIFICATION CYCLE. THIS DEHUMIDIFICATION CYCLE IS THE SAME AS INDICATED ABOVE. THE UNIT SHALL OPERATE UNTIL THE HUMIDITY FALLS BACK BELOW SETPOINT. WHEN THE HUMIDITY FALLS BELOW SETPOINT, THE SUPPLY FAN SHALL HAVE A MINIMUM RUN TIME OF 15 MINUTES AND SHALL NOT BE ALLOWED TO RESTART UNITL 10 MINUTES AFTER IT SHUTS DOWN.

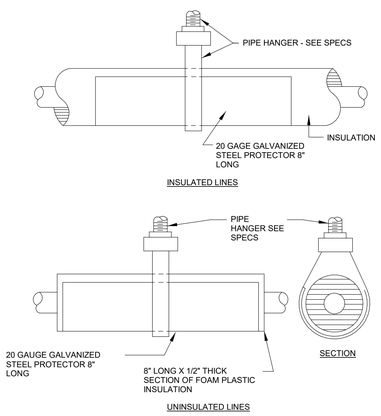
DOAS CONTROLS

NO SCALE



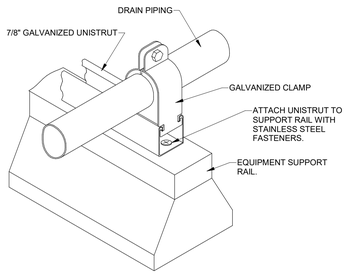
REFRIGERANT LINE SUPPORT DETAIL

NO SCALE



REFRIGERANT PIPING HANGER DETAIL

NO SCALE



PIPING SUPPORT DETAIL

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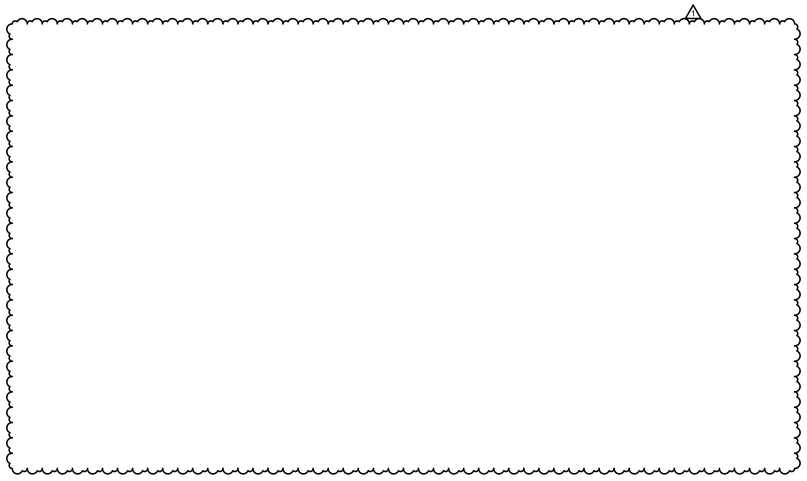

ALABAMA
CHRISTOPHER L ROBINSON
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PROFESSIONAL
ENGINEER
5/15/2022

SHEET TITLE:
HVAC - CONTROLS & DETAILS

PROJ. MGR.:	CLR
DRAWN:	CAV
DATE:	05/15/22

REVISIONS
1 ADDENDUM #1

JOB NO. 19-90B

SHEET NO:
M0.4

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2 Riverchase Office Plaza
Suite 205
Hoover, AL 35244
(205) 988-2069
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Project Number :
BHM20215

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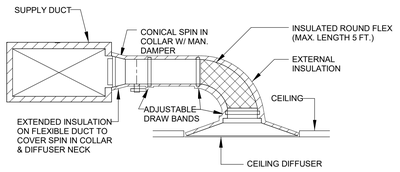
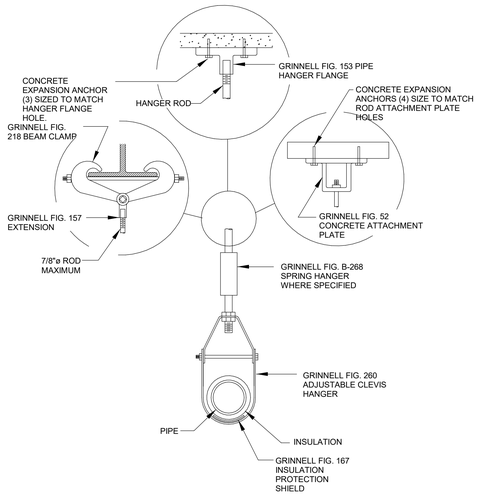
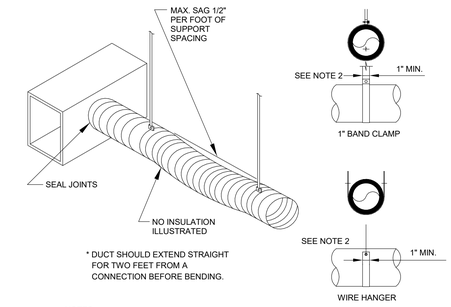


NOTE:
1. WHEREVER THE SUPPLY DUCT HEIGHT IS INSUFFICIENT TO CONNECT THE SPIN-IN, THE SPIN-IN MAY BE CONNECTED TO THE TOP OR BOTTOM OF THE DUCT. IF THE BRANCH DUCT MUST BE CONNECTED TO THE SIDE OF THE MAIN DUCT, USE A RECTANGULAR BRANCH DUCT CONNECTION OF EQUAL AIR VELOCITY AND TRANSITION TO ROUND DUCT. REFER TO SPECIFICATION FOR MAXIMUM TURNS IN FLEX DUCT.
2. PROVIDE EXTERNAL INSULATION ON ALL ROUND BRANCH DUCTWORK.SEE SPECS FOR THICKNESS AND EXTENT.
3. PROVIDE EXTERNAL INSULATION ON BACK SIDE OF CEILING DIFFUSERS. THICKNESS TO MATCH BRANCH DUCT INSULATION THICKNESS.

CEILING DIFFUSER INSTALLATION DETAIL
NO SCALE

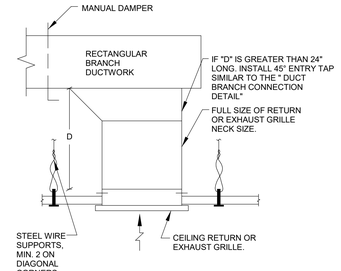


CLEVIS HANGER DETAIL
NO SCALE



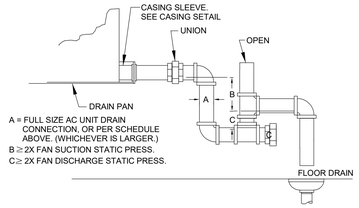
NOTES:
1. SUPPORT SYSTEM MUST NOT DAMAGE DUCT OR CAUSE OUT OF ROUND SHAPE.
2. DUCTS ARE FLEXIBLE WITH EXTERNAL INSULATION AND VAPOR BARRIER JACKETING.
3. MIN. CENTER LINE BEND LINE RADIUS IS ONE DIA. (OR INSIDE RADIUS OF D/2).
4. FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 5 LINEAR FEET.

FLEXIBLE DUCT SUPPORT DETAIL
NO SCALE



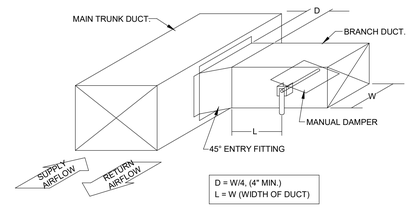
CEILING RETURN/EXHAUST BRANCH CONNECTION DETAIL
NO SCALE

MINIMUM CONDENSATE PIPE SIZE	
AC TONS	MIN. DRAIN SIZE
0 TO 20	1"
21 TO 40	1-1/4"
41 TO 60	1-1/2"
61 TO 100	2"
101 TO 250	3"
251 & LARGER	4"



A = FULL SIZE AC UNIT DRAIN CONNECTION, OR PER SCHEDULE ABOVE. (WHICHEVER IS LARGER.)
B ≥ 2X FAN SUCTION STATIC PRESS.
C ≥ 2X FAN DISCHARGE STATIC PRESS.

AC UNIT DRAIN TRAP DETAIL
NO SCALE



DUCT BRANCH CONNECTION
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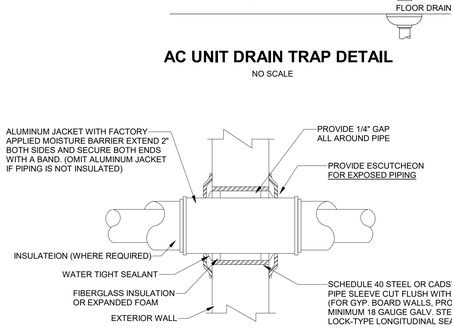
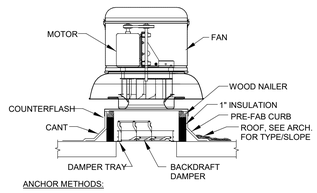


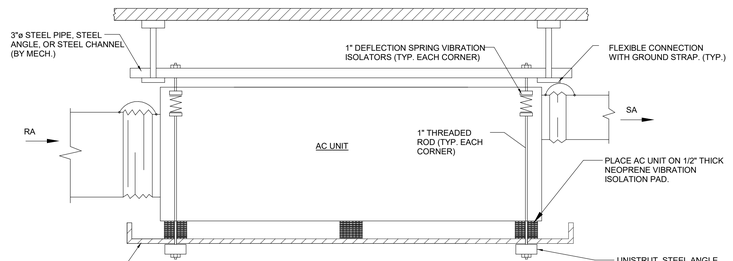
CEILING EXHAUST FAN DETAIL
NO SCALE

PIPE PENETRATION DETAIL
NO SCALE



ANCHOR METHODS:
1. FOR STEEL STRUCTURES: ANCHOR CURB TO ROOF STRUCTURE WITH 1/4"-14 SELF DRILLING SCREWS. MINIMUM OF 1/2" OF THREADS SHALL BE SHOWING ON THE UNDERSIDE OF THE STRUCTURE. PROVIDE MINIMUM (4) FASTENERS PER SIDE, (TOTAL OF 16), EQUALLY SPACED ON EACH SIDE.
2. FOR CONCRETE STRUCTURES: ANCHOR CURB TO ROOF STRUCTURE WITH 3/8" HILTI EXPANSION ANCHORS, MINIMUM 2-1/2" ENGAGEMENT. PROVIDE MINIMUM (2) ANCHORS PER SIDE, (TOTAL OF 8), EQUALLY SPACED ON EACH SIDE.
3. ANCHOR HOOD TO CURB WITH A MINIMUM OF (4) 1/4"-14 SELF DRILLING SCREWS ON EACH SIDE OF THE HOOD (TOTAL OF 16 FASTENERS). ONE FASTENER SHALL BE INSTALLED 3" FROM EACH END ON THE SIDE OF THE HOOD AND THE OTHER TWO SHALL BE EQUALLY SPACED ALONG THE SIDE.

CENTRIFUGAL ROOF FAN INSTALLATION DETAIL
NO SCALE



AUXILLARY DRAIN PAN
1. AUX. DRAIN PAN SHALL BE 3" LARGER (ALL 4 SIDES) THAN AC UNIT AND SHALL BE 3" DEEP. TOP EDGE SHALL BE HEMMED. FABRICATE FROM 18 GA. GALVANIZED STEEL, SEAL WATERTIGHT.
2. PROVIDE FLOAT SWITCH IN AUX. DRAIN PAN, WIRED TO SHUT DOWN AC UNIT.

NOTES
1. ROUTE CONDENSATE DRAIN LINE TO NEAREST HUB DRAIN BOX. SEE PIPING PLAN & SEE PLUMBING.
2. PROVIDE MINIMUM OF 36" CLEARANCE ON CONTROL PANEL SIDE OF UNIT TO ACCESS FILTERS, MOTOR, COILS, ETC.

AC UNIT SUSPENDED FROM STRUCTURE
NO SCALE

LICENSED
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04/15/2022
ENGINEER
CHRISTOPHER L ROBISON

SHEET TITLE:
HVAC - DETAILS

PROJ. MGR.:	CLR
DRAWN:	CAV
DATE:	MARCH 21, 2022
REVISIONS	

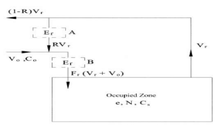
JOB NO. 19-90B

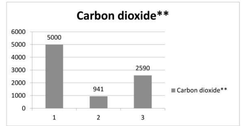
SHEET NO:
M0.5
5 OF 11
–

IAQP OSA CALCULATION

Zone Tag	Facility Type	Zone Use	Zone Floor Area (square ft) Az	Zone Max Occupancy Pz	Table 6.1 OA per Occupant Rp	Table 6.1 cfm/ft2 Ra	Pz * Rp Pz * Rp	Az * Ra Az * Ra	Table 6.2 Ventilation Effectiveness Ez	Outdoor Air to Zone (CFM) with Ez correction (Vbz/Ez)
107 COMP SCIENCE	Educational Facilities	Classrooms (AGE 9 +)	1,230.0	28.0	10.0	0.12	280	148	0.8	535
										OA required per VRP

Zone Height (feet)	9.0
Desired Outside Air (Vo) IAQP	140
Supply Air (Vs)	1,624
Return Air (Vr)	1624
Recirc. Flow Factor (R)	1.00
Ventilation Effectiveness (Ez)	0.8
Level of Physical Activity	**Sedentary**
Filter Location	B
HVAC Flow Type	Constant
Outdoor Air Flow Type	Constant





***OSHA, NIOSH & WHO most conservative values used
http://www.cdc.gov/niosh/npg/npgsyn-a.html
1 = ASHRAE & NIOSH C02 Limit
2 = C02 Level at Ventilation Rate OA Flow Rate
3 = C02 Level at IAQ Procedure OA Flow Rate
**Carbon dioxide has been provided for reference only for gathering demand control ventilation (DCV) setpoints. The National Research Council was commissioned by the US Navy to prove C02 is not a contaminant of concern when using air purification to control the other contaminants of concern, as found on submarines.

Indoor Contaminants Generated By People & From Outdoors	Maximum Threshold Value (PPM)	Steady State Using the VRP* (Prescribed OA) Plasma Off	Steady State Using the IAQ Method (Reduced OA) Plasma On	Is Steady State Level Acceptable at Reduced OA Levels?	Contaminant Generation Rate (PPM)	Filtration Effectiveness	Cognizant Authority***
Acetaldehyde	100.0	0.01111	0.00083	Yes	0.00032	50%	OSHA
Acetone	250.0	0.00155	0.00025	Yes	0.00433	50%	NIOSH
Ammonia	25.00	0.01103	0.00535	Yes	0.14210	50%	NIOSH
Benzene	1.0000	0.00251	0.00019	Yes	0.00015	50%	OSHA
2- Butanone (MEK)	200.0	0.00016	0.00004	Yes	0.00088	50%	NIOSH
Carbon dioxide**	5000	941	2590	Yes	292	0%	NIOSH
Chloroform	2.0000	0.00011	0.00001	Yes	0.00003	50%	NIOSH
Dioxane	100.0	0.00000	0.00000	Yes	0.00000	50%	OSHA
Hydrogen Sulfide	10.0	0.00000	0.00000	Yes	0.00000	50%	NIOSH
Methane	NA	1.68094	1.68094	Yes	0.00000	0%	NA
Methanol	200.0	0.00000	0.00000	Yes	0.00000	0%	NIOSH
Methylene Chloride	25.0	0.00074	0.00008	Yes	0.00080	50%	OSHA
Propane	1000.0	0.00998	0.00998	Yes	0.00000	0%	NIOSH
Tetrachloroethane	5.0000	0.00000	0.00000	Yes	0.00000	50%	OSHA
Tetrachloroethylene	100.0000	0.00037	0.00003	Yes	0.00001	50%	OSHA
Toluene	100.0000	0.00532	0.00040	Yes	0.00021	50%	NIOSH
1,1,1 - Trichloroethane	350.0000	0.00076	0.00007	Yes	0.00038	50%	NIOSH
Xylene	100.0000	0.00230	0.00017	Yes	0.00000	50%	OSHA

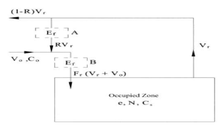
Building materials and furnishings assumed to have no VOCs and off-gassing is complete

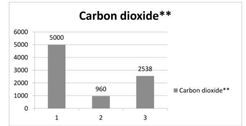
Is IAQ acceptable at reduced outside air levels?	Yes

IAQP OSA CALCULATION

Zone Tag	Facility Type	Zone Use	Zone Floor Area (square ft) Az	Zone Max Occupancy Pz	Table 6.1 OA per Occupant Rp	Table 6.1 cfm/ft2 Ra	Pz * Rp Pz * Rp	Az * Ra Az * Ra	Table 6.2 Ventilation Effectiveness Ez	Outdoor Air to Zone (CFM) with Ez correction (Vbz/Ez)
119 HEALTH SCIENCE CLASSROOM	Educational Facilities	Classrooms (AGE 9 +)	1,627.0	41.0	10.0	0.12	410	195	0.8	757
										OA required per VRP

Zone Height (feet)	9.0
Desired Outside Air (Vo) IAQP	210
Supply Air (Vs)	1,350
Return Air (Vr)	1350
Recirc. Flow Factor (R)	1.00
Ventilation Effectiveness (Ez)	0.8
Level of Physical Activity	**Sedentary**
Filter Location	B
HVAC Flow Type	Constant
Outdoor Air Flow Type	Constant





***OSHA, NIOSH & WHO most conservative values used
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Acetone	250.0	0.00156	0.00040	Yes	0.00433	50%	NIOSH
Ammonia	25.00	0.01135	0.00843	Yes	0.14210	50%	NIOSH
Benzene	1.0000	0.00251	0.00031	Yes	0.00015	50%	OSHA
2- Butanone (MEK)	200.0	0.00016	0.00006	Yes	0.00088	50%	NIOSH
Carbon dioxide**	5000	960	2538	Yes	292	0%	NIOSH
Chloroform	2.0000	0.00011	0.00001	Yes	0.00003	50%	NIOSH
Dioxane	100.0	0.00000	0.00000	Yes	0.00000	50%	OSHA
Hydrogen Sulfide	10.0	0.00000	0.00000	Yes	0.00000	50%	NIOSH
Methane	NA	1.68094	1.68094	Yes	0.00000	0%	NA
Methanol	200.0	0.00000	0.00000	Yes	0.00000	0%	NIOSH
Methylene Chloride	25.0	0.00075	0.00013	Yes	0.00080	50%	OSHA
Propane	1000.0	0.00998	0.00998	Yes	0.00000	0%	NIOSH
Tetrachloroethane	5.0000	0.00000	0.00000	Yes	0.00000	50%	OSHA
Tetrachloroethylene	100.0000	0.00037	0.00004	Yes	0.00001	50%	OSHA
Toluene	100.0000	0.00532	0.00064	Yes	0.00021	50%	NIOSH
1,1,1 - Trichloroethane	350.0000	0.00076	0.00011	Yes	0.00038	50%	NIOSH
Xylene	100.0000	0.00230	0.00027	Yes	0.00000	50%	OSHA

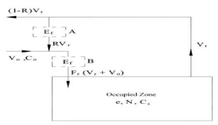
Building materials and furnishings assumed to have no VOCs and off-gassing is complete

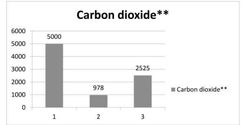
Is IAQ acceptable at reduced outside air levels?	Yes

IAQP OSA CALCULATION

Zone Tag	Facility Type	Zone Use	Zone Floor Area (square ft) Az	Zone Max Occupancy Pz	Table 6.1 OA per Occupant Rp	Table 6.1 cfm/ft2 Ra	Pz * Rp Pz * Rp	Az * Ra Az * Ra	Table 6.2 Ventilation Effectiveness Ez	Outdoor Air to Zone (CFM) with Ez correction (Vbz/Ez)
108 CLASSROOM	Educational Facilities	Classrooms (AGE 9 +)	1,185.0	33.0	10.0	0.12	330	142	0.8	590
										OA required per VRP

Zone Height (feet)	9.0
Desired Outside Air (Vo) IAQP	170
Supply Air (Vs)	1,624
Return Air (Vr)	1624
Recirc. Flow Factor (R)	1.00
Ventilation Effectiveness (Ez)	0.8
Level of Physical Activity	**Sedentary**
Filter Location	B
HVAC Flow Type	Constant
Outdoor Air Flow Type	Constant





***OSHA, NIOSH & WHO most conservative values used
http://www.cdc.gov/niosh/npg/npgsyn-a.html
1 = ASHRAE & NIOSH C02 Limit
2 = C02 Level at Ventilation Rate OA Flow Rate
3 = C02 Level at IAQ Procedure OA Flow Rate
**Carbon dioxide has been provided for reference only for gathering demand control ventilation (DCV) setpoints. The National Research Council was commissioned by the US Navy to prove C02 is not a contaminant of concern when using air purification to control the other contaminants of concern, as found on submarines.

Indoor Contaminants Generated By People & From Outdoors	Maximum Threshold Value (PPM)	Steady State Using the VRP* (Prescribed OA) Plasma Off	Steady State Using the IAQ Method (Reduced OA) Plasma On	Is Steady State Level Acceptable at Reduced OA Levels?	Contaminant Generation Rate (PPM)	Filtration Effectiveness	Cognizant Authority***
Acetaldehyde	100.0	0.01111	0.00097	Yes	0.00032	50%	OSHA
Acetone	250.0	0.00157	0.00029	Yes	0.00433	50%	NIOSH
Ammonia	25.00	0.01166	0.00612	Yes	0.14210	50%	NIOSH
Benzene	1.0000	0.00251	0.00022	Yes	0.00015	50%	OSHA
2- Butanone (MEK)	200.0	0.00016	0.00005	Yes	0.00088	50%	NIOSH
Carbon dioxide**	5000	978	2525	Yes	292	0%	NIOSH
Chloroform	2.0000	0.00011	0.00001	Yes	0.00003	50%	NIOSH
Dioxane	100.0	0.00000	0.00000	Yes	0.00000	50%	OSHA
Hydrogen Sulfide	10.0	0.00000	0.00000	Yes	0.00000	50%	NIOSH
Methane	NA	1.68094	1.68094	Yes	0.00000	0%	NA
Methanol	200.0	0.00000	0.00000	Yes	0.00000	0%	NIOSH
Methylene Chloride	25.0	0.00075	0.00009	Yes	0.00080	50%	OSHA
Propane	1000.0	0.00998	0.00998	Yes	0.00000	0%	NIOSH
Tetrachloroethane	5.0000	0.00000	0.00000	Yes	0.00000	50%	OSHA
Tetrachloroethylene	100.0000	0.00037	0.00003	Yes	0.00001	50%	OSHA
Toluene	100.0000	0.00532	0.00047	Yes	0.00021	50%	NIOSH
1,1,1 - Trichloroethane	350.0000	0.00076	0.00008	Yes	0.00038	50%	NIOSH
Xylene	100.0000	0.00230	0.00020	Yes	0.00000	50%	OSHA

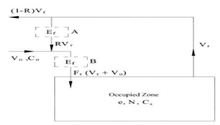
Building materials and furnishings assumed to have no VOCs and off-gassing is complete

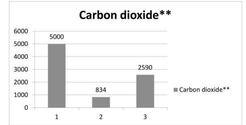
Is IAQ acceptable at reduced outside air levels?	Yes

IAQP OSA CALCULATION

Zone Tag	Facility Type	Zone Use	Zone Floor Area (square ft) Az	Zone Max Occupancy Pz	Table 6.1 OA per Occupant Rp	Table 6.1 cfm/ft2 Ra	Pz * Rp Pz * Rp	Az * Ra Az * Ra	Table 6.2 Ventilation Effectiveness Ez	Outdoor Air to Zone (CFM) with Ez correction (Vbz/Ez)
120 HEALTH SCIENCE LAB	Educational Facilities	Classrooms (AGE 9 +)	1,056.0	14.0	10.0	0.12	140	127	0.8	333
										OA required per VRP

Zone Height (feet)	9.0
Desired Outside Air (Vo) IAQP	70
Supply Air (Vs)	1,250
Return Air (Vr)	1250
Recirc. Flow Factor (R)	1.00
Ventilation Effectiveness (Ez)	0.8
Level of Physical Activity	**Sedentary**
Filter Location	B
HVAC Flow Type	Constant
Outdoor Air Flow Type	Constant





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**Carbon dioxide has been provided for reference only for gathering demand control ventilation (DCV) setpoints. The National Research Council was commissioned by the US Navy to prove C02 is not a contaminant of concern when using air purification to control the other contaminants of concern, as found on submarines.

Indoor Contaminants Generated By People & From Outdoors	Maximum Threshold Value (PPM)	Steady State Using the VRP* (Prescribed OA) Plasma Off	Steady State Using the IAQ Method (Reduced OA) Plasma On	Is Steady State Level Acceptable at Reduced OA Levels?	Contaminant Generation Rate (PPM)	Filtration Effectiveness	Cognizant Authority***
Acetaldehyde	100.0	0.01111	0.00057	Yes	0.00032	50%	OSHA
Acetone	250.0	0.00149	0.00017	Yes	0.00433	50%	NIOSH
Ammonia	25.00	0.00918	0.00366	Yes	0.14210	50%	NIOSH
Benzene	1.0000	0.00251	0.00013	Yes	0.00015	50%	OSHA
2- Butanone (MEK)	200.0	0.00015	0.00003	Yes	0.00088	50%	NIOSH
Carbon dioxide**	5000	834	2590	Yes	292	0%	NIOSH
Chloroform	2.0000	0.00011	0.00001	Yes	0.00003	50%	NIOSH
Dioxane	100.0	0.00000	0.00000	Yes	0.00000	50%	OSHA
Hydrogen Sulfide	10.0	0.00000	0.00000	Yes	0.00000	50%	NIOSH
Methane	NA	1.68094	1.68094	Yes	0.00000	0%	NA
Methanol	200.0	0.00000	0.00000	Yes	0.00000	0%	NIOSH
Methylene Chloride	25.0	0.00073	0.00008	Yes	0.00080	50%	OSHA
Propane	1000.0	0.00998	0.00998	Yes	0.00000	0%	NIOSH
Tetrachloroethane	5.0000	0.00000	0.00000	Yes	0.00000	50%	OSHA
Tetrachloroethylene	100.0000	0.00037	0.00002	Yes	0.00001	50%	OSHA
Toluene	100.0000	0.00532	0.00027	Yes	0.00021	50%	NIOSH
1,1,1 - Trichloroethane	350.0000	0.00075	0.00005	Yes	0.00038	50%	NIOSH
Xylene	100.0000	0.00230	0.00012	Yes	0.00000	50%	OSHA

Building materials and furnishings assumed to have no VOCs and off-gassing is complete

Is IAQ acceptable at reduced outside air levels?	Yes

ASHRAE 15 VOLUME PER SPACE CALCULATIONS

ROOM NUMBER	ROOM NAME	AREA (sq. ft.)	VOLUME (cu. ft.)	CONNECTED OUTDOOR UNIT	CONNECTED INDOOR UNIT	TOTAL REFRIGERANT CHARGE (lb)	MIN. REQUIRED ROOM VOLUME (cu.ft.)	NOTES
107	COMP. SCIENCE	1230	11,070	OHP-1	IHP-1-1	115.6	4,446	1
107	COMP. SCIENCE	1230	11,070	OHP-1	IHP-1-2	115.6	4,446	1
108	CLASSROOM	1185	10,665	OHP-1	IHP-1-3	115.6	4,446	1
108	CLASSROOM	1185	10,665	OHP-1	IHP-1-4	115.6	4,446	1
2 & 3	CORRIDOR	1193	10,737	OHP-1	IHP-1-5	115.6	4,446	1
110	JAN/CUSTODIAN	85	765	OHP-1	IHP-1-5	115.6	4,446	2
111	BREAK/WORK ROOM	158	1,422	OHP-1	IHP-1-6	115.6	4,446	2
112	RESTROOM	56	504	OHP-1	IHP-1-6	115.6	4,446	3
113	RESTROOM	56	504	OHP-1	IHP-1-6	115.6	4,446	3
116	OFFICE	189	1,701	OHP-1	IHP-1-6	115.6	4,446	2
4	CORRIDOR	265	2,385	OHP-1	IHP-1-6	115.6	4,446	2
114	BOYS CHANGING ROOM	158	1,422	OHP-1	IHP-1-7	115.6	4,446	3
115	GIRLS CHANGING ROOM	158	1,422	OHP-1	IHP-1-8	115.6	4,446	3

1. COMPLIES WITH ASHRAE 15 NO FURTHER ACTION REQUIRED.
2. MULTIPLE ROOMS DUCTED TOGETHER, SERVED BY ONE COMMON UNIT.
3. ROOM IS FULLY EXHAUSTED.

ASHRAE 15 VOLUME PER SPACE CALCULATIONS

ROOM NUMBER	ROOM NAME	AREA (sq. ft.)	VOLUME (cu. ft.)	CONNECTED OUTDOOR UNIT	CONNECTED INDOOR UNIT	TOTAL REFRIGERANT CHARGE (lb)	MIN. REQUIRED ROOM VOLUME (cu.ft.)	NOTES
5 & 6	CORRIDOR	1285	11,565	OHP-2	IHP-2-3	85.8	3,300	1
117	JR ROTC	863	7,767	OHP-2	IHP-2-4	85.8	3,300	1
119	HEALTH SCIENCE CLASSROOM	1627	14,643	OHP-2	IHP-2-2	85.8	3,300	1
119B	STORAGE	61	549	OHP-2	IHP-2-2	85.8	3,300	2
120	HEALTH SCIENCE LAB	1056	9,504	OHP-2	IHP-2-1	85.8	3,300	1

1. COMPLIES WITH ASHRAE 15 NO FURTHER ACTION REQUIRED.
2. MULTIPLE ROOMS DUCTED TOGETHER, SERVED BY ONE COMMON UNIT.
3. ROOM IS FULLY EXHAUSTED.

OSA CALCULATIONS / EXHAUST AIR CALCULATIONS

Room	Room Type	Rp cfm / P	Pz People	Ra cfm/ft²	Az ft²	Vbz cfm	Ez	Voz cfm	IAQP cfm	# OF FIXTURES	# OF SHOWERS	EXHAUST RATE CFM/FT²	EXHAUST RATE CFM / FIXTURE	EXHAUST RATE CFM/ SHOWER	REQUIRED EXHAUST CFM	PROVIDED EXHAUST CFM
107 COMP SCIENCE	Classrooms (ages 9 plus)	10	28	0.12	1,230	428	0.80	535	140	0	0	N/A	N/A	N/A	0	140
108 COMMERCE & TECHNOLOGY	Classrooms (ages 9 plus)	10	33	0.12	1,185	472	0.80	590	170	0	0	N/A	N/A	N/A	0	170
110 JANITOR/CUSTODIAN	Janitor	0	0	0.00	85	0		0	0	0	0	1	N/A	N/A	85	90
111 BREAK/WORK ROOM	Break rooms	5	4	0.06	322	39	0.80	49	140	0	0	N/A	N/A	N/A	0	0
112 RESTROOM	Toilet	0	0	0.00	0	0		0	0	1	0	N/A	70	N/A	70	70
113 RESTROOM	Toilet	0	0	0.00	0	0		0	0	1	0	N/A	70	N/A	70	70
114 BOYS CHANGING ROOM	Locker room	0	0	0.00	158	0		0	0	0	0	0.25	N/A	N/A	40	50
115 GIRLS CHANGING ROOM	Locker room	0	0	0.00	158	0		0	0	0	0	0.25	N/A	N/A	40	50
116 OFFICE	Office Space	5	1	0.06	189	16	0.80	20	20	0	0	N/A	N/A	N/A	0	0
COORIDOR 2,3, 4	Corridors	0	0	0.06	1,473	88	0.80	110	430	0	0	N/A	N/A	N/A	0	0
			Total Required by DOAS-1:					1,305								
			Total Provided by DOAS-1 USING IAQP:						900							

OSA CALCULATIONS / EXHAUST AIR CALCULATIONS

Room	Room Type	Rp cfm / P	Pz People	Ra cfm/ft²	Az ft²	Vbz cfm	Ez	Voz cfm	IAQP cfm	# OF FIXTURES	# OF SHOWERS	EXHAUST RATE CFM/FT²	EXHAUST RATE CFM / FIXTURE	EXHAUST RATE CFM/ SHOWER	REQUIRED EXHAUST CFM	PROVIDED EXHAUST CFM
117 JR ROTC	Classrooms (ages 9 plus)	10	30	0.12	863	404	0.80	504	150	0	0	N/A	N/A	N/A	0	50
119 HEALTH SCIENCE CLASSROOM	Classrooms (ages 9 plus)	10	41	0.12	1,627	605	0.80	757	210	0	0	N/A	N/A	N/A	0	210
119B STORAGE	Storage Rooms	0	0	0.12	61	7	0.80	9	0	0	0	N/A	N/A	N/A	0	0
120 HEALTH SCIENCE LAB	Classrooms (ages 9 plus)	10	14	0.12	1,056	267	0.80	333	70	0	0	N/A	N/A	N/A	0	70
CORRIDOR 5,6	Corridors	0	0	0.06	1,167	70	0.80	88	270	0	0	N/A	N/A	N/A	0	0
			Total Required by DOAS-2:					1,691								
			Total Provided by DOAS-2 USING IAQP:						700							

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Project Number :
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LATHAN ARCHITECTS
LATHAN · BRYANT · CALMA

NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA
CHRISTOPHER L. TOBISON
NO. 27475
PROFESSIONAL
ENGINEER
5/15/2022

SHEET TITLE:
HVAC - OSA CALCS

PROJ. MGR.:	CLR
DRAWN:	CAV
DATE:	05/15/22

REVISIONS
1 ADDENDUM #1

JOB NO. 19-90B
SHEET NO:
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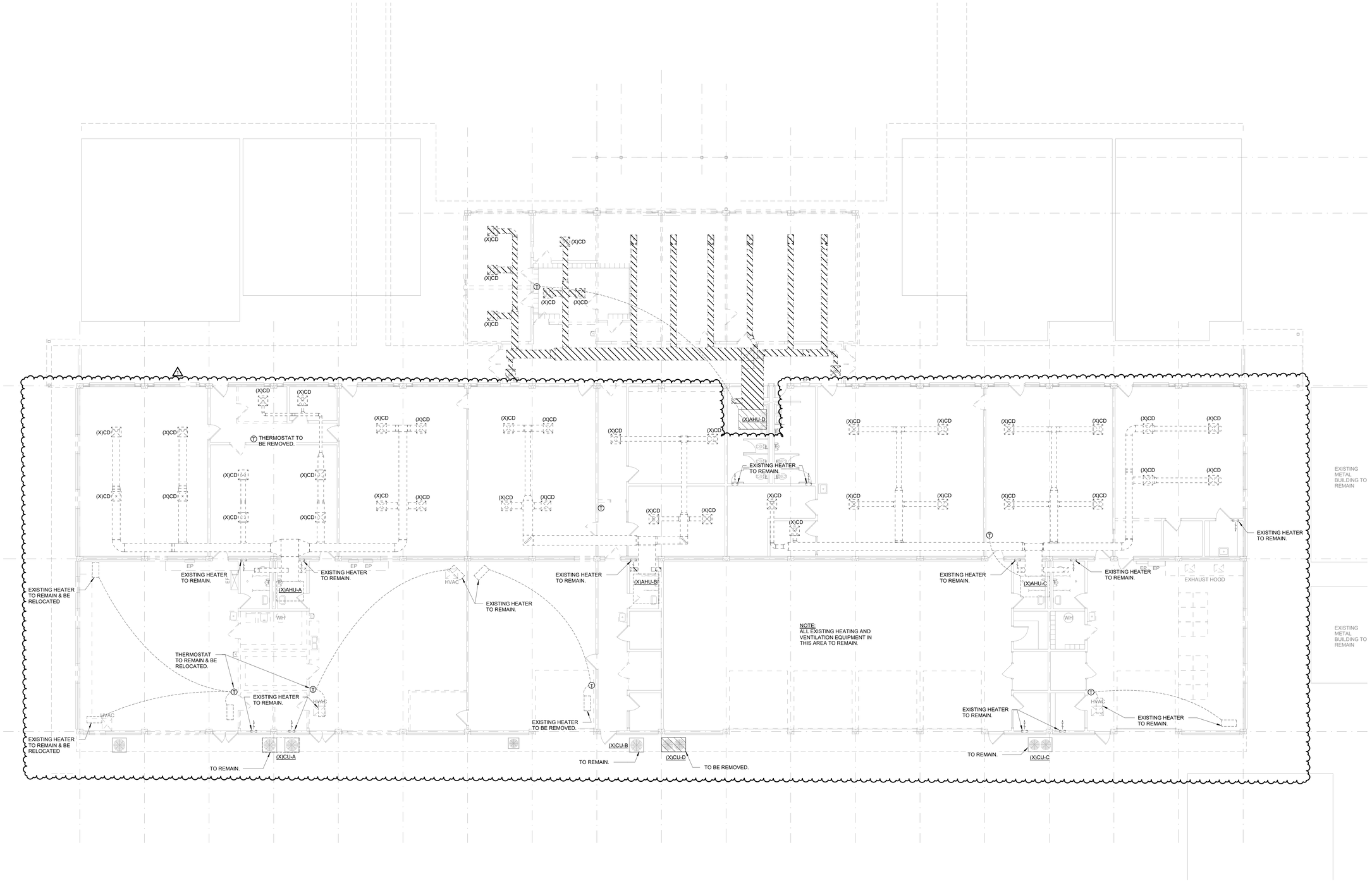

1 MECHANICAL - DEMOLITION FLOOR PLAN
1/8" = 1'-0"

1

GENERAL DEMOLITION NOTES:
ALL EXISTING HVAC DUCTWORK AND EQUIPMENT SHOWN SHADED, AND ASSOCIATED PIPING AND CONTROLS, TO BE REMOVED.

ALABAMA
CHRISTOPHER L. ROBISON
NO. 32475
PROFESSIONAL
ENGINEER
5/15/2022

SHEET TITLE:
HVAC - DEMOLITION FLOOR PLAN

PROJ. MGR.:	CLR
DRAWN:	CAV
DATE:	05/15/22

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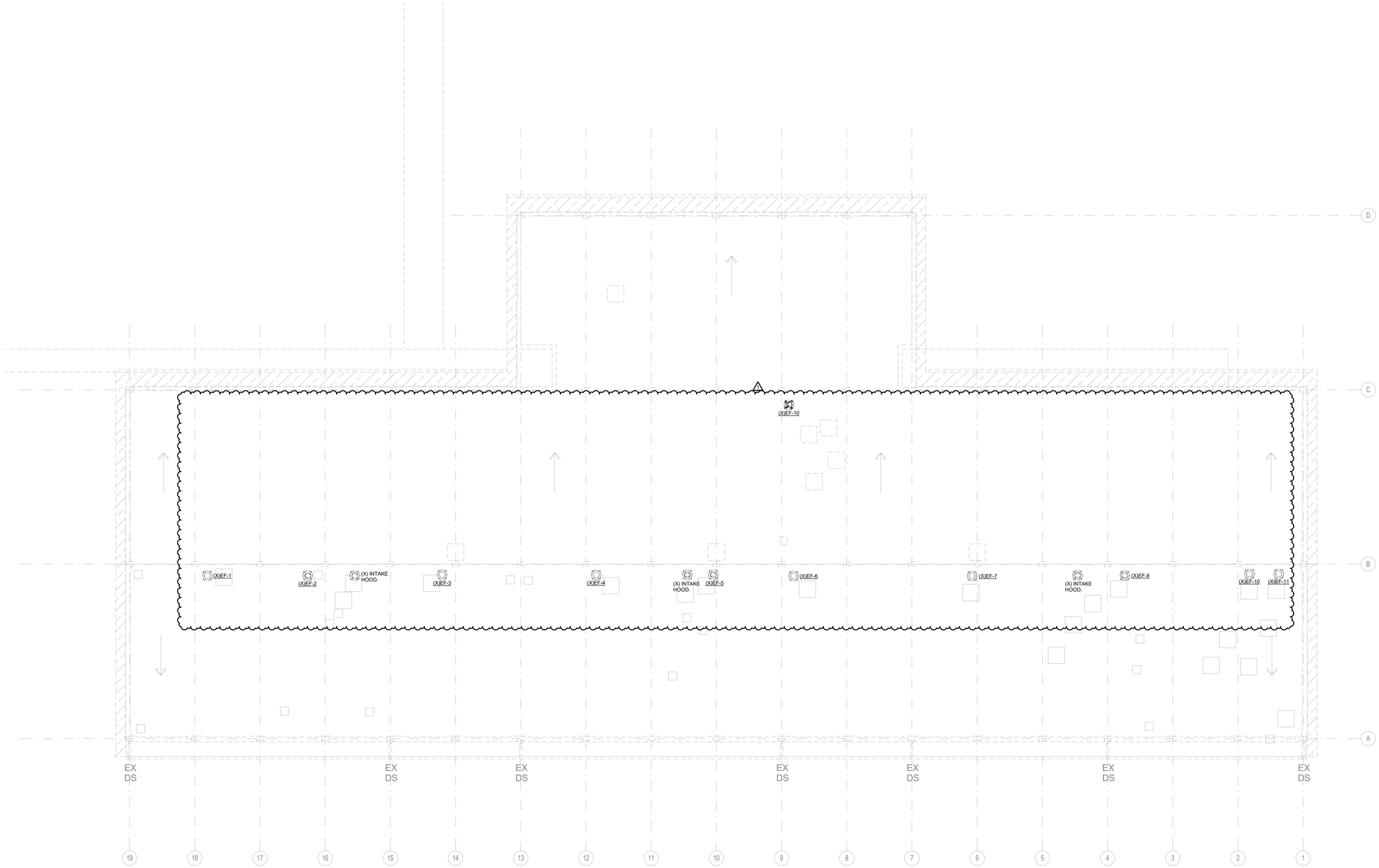

1 MECHANICAL - DEMOLITION ROOF PLAN
1/8" = 1'-0"

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ALABAMA
CHRISTOPHER L. ROBISON
NO. 22476
PROFESSIONAL
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5/15/2022

SHEET TITLE:
HVAC - DEMOLITION ROOF PLAN

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DRAWN:	CAV
DATE:	05/15/22

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1 ADDENDUM #1

JOB NO. 19-90B
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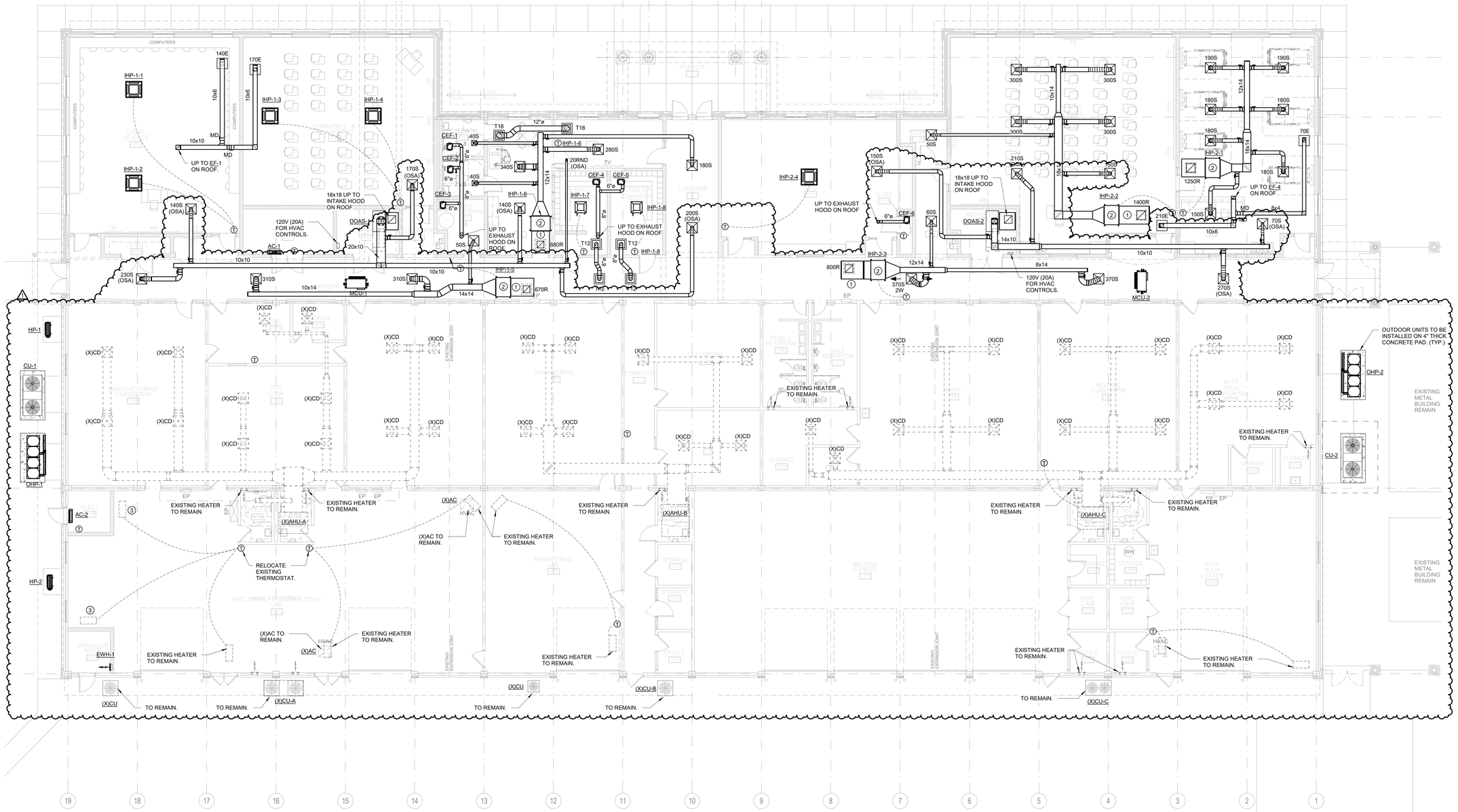
M1.2
8 OF 11

KEYED NOTES:

1. FULL SIZE OF AC UNIT OPENING BY LENGTH SHOWN SHEETMETAL PLENUM WITH 1" LINER. PROVIDE FLEX CONNECTION WITH GROUNDING STRAP AT UNIT CONNECTION.
2. SUSPEND FROM STRUCTURE WITH SPRING VIBRATION ISOLATORS. PROVIDE AUX. DRAIN PAN (SEE DETAIL).
3. EXISTING HEATER TO BE RELOCATED TO THE AREA SHOWN ON THIS PLAN. COORDINATE WITH ARCHITECTURAL, LIGHTING, AND EXISTING CONDITIONS. EXTEND VENT AS REQUIRED.



1 HVAC - NEW CONSTRUCTION FLOOR PLAN

1/8" = 1'-0"

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ALABAMA
No. 27475
PROFESSIONAL
ENGINEER
CHRISTOPHER L ROBISON
5/15/2022

SHEET TITLE:
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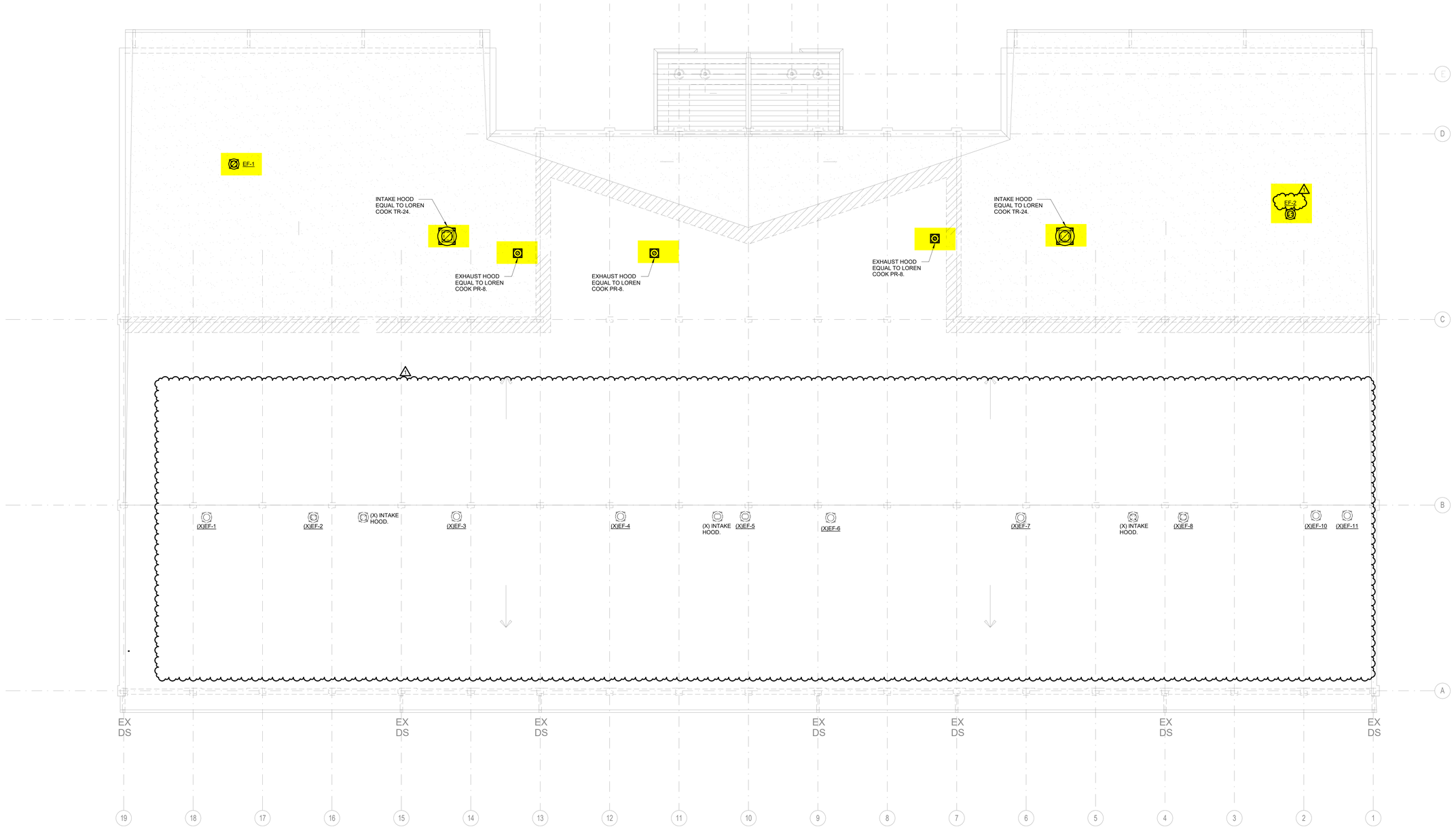

1 MECHANICAL - NEW CONSTUCTION ROOF PLAN
1/8" = 1'-0"

ALABAMA No. 27475 PROFESSIONAL ENGINEER CHRISTOPHER L ROBISON
5/15/2022

SHEET TITLE:
HVAC - NEW CONSTUCTION ROOF PLAN

PROJ. MGR.:	CLR
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REVISIONS
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JOB NO. 19-90B
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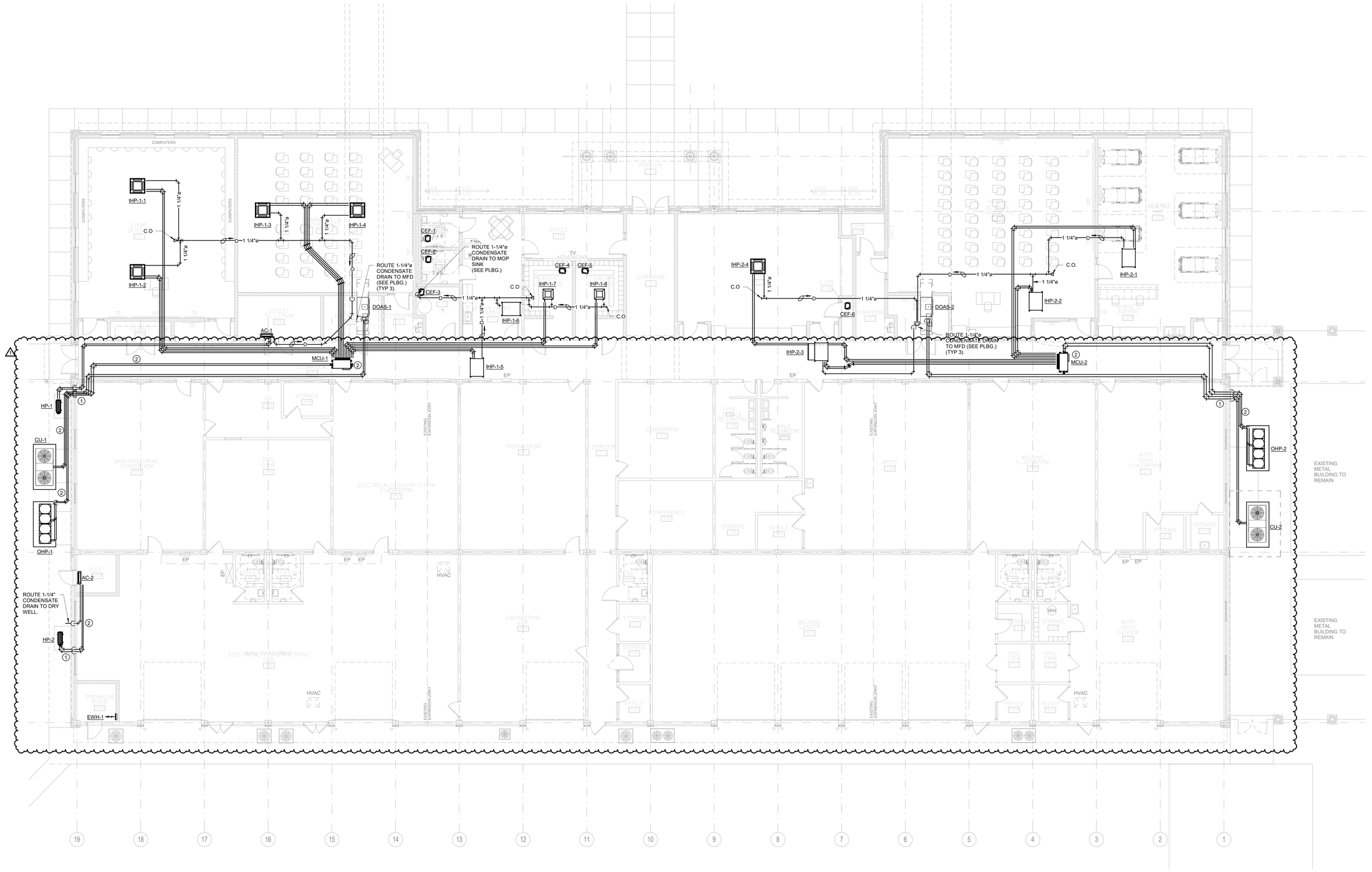

1 PIPING - NEW CONSTRUCTION FLOOR PLAN
1/8" = 1'-0"

KEYED NOTES

1. PROVIDE MULTIPLE 1-1/2" SCH40 STEEL SLEEVES THRU THE EXTERIOR WALL. REFRIGERANT PIPING SHALL BE ROUTED THRU THE EXTERIOR WALL AND DOWN THE FACE OF THE EXTERIOR WALL TO THE OUTDOOR HEAT PUMPS. COVER THE REFRIGERANT PIPING WITH AN ALUMINUM RECTANGULAR COVER THAT SHALL BE PAINTED TO MATCH THE EXTERIOR WALL COLOR.
2. REFRIGERANT PIPING TO BE SIZED AND ROUTE PER MANUFACTURER'S RECOMMENDATIONS.

ALABAMA
REG. 27475
PROFESSIONAL
ENGINEER
CHRISTOPHER L. ROBISON
5/15/2022

SHEET TITLE:
PIPING - NEW CONSTRUCTION FLOOR PLAN

PROJ. MGR.:	CLR
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DATE:	05/15/22

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1 ADDENDUM #1

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M3.1
11 OF 11

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER	CATALOG NO.	LAMPS NO.	LAMPS WATTS	LAMPS TYPE	MOUNTING HEIGHT	TYPE MOUNTING	RECESS DEPTH	REMARKS
A	METALUX	24CGT5535C	FURNISHED WITH FIXTURE			CEILING	RECESSED	2-1/8"	
A (EM)	METALUX	24CGT5535C-EL14W	FURNISHED WITH FIXTURE			CEILING	RECESSED	2-1/8"	SEE NOTE 1
B	METALUX	24CGT4535C	FURNISHED WITH FIXTURE			CEILING	RECESSED	2-1/8"	
B (EM)	METALUX	24CGT4535C-EL14W	FURNISHED WITH FIXTURE			CEILING	RECESSED	2-1/8"	SEE NOTE 1
C	PATHWAY LIGHTING	6VLFL2X-3000-35K-DA-6VLEDMD-SCLPF	FURNISHED WITH FIXTURE			CEILING	RECESSED	6"	
C (EM)	PATHWAY LIGHTING	6VLFL2X-3000-35K-DA-6VLEDMD-SCLPF-EM	FURNISHED WITH FIXTURE			CEILING	RECESSED	6"	SEE NOTE 1
D	METALUX	4SNLED-LD4-4600SL-LW-UNV-L840-CD1	FURNISHED WITH FIXTURE			CEILING	SURFACE		
D (EM)	METALUX	4SNLED-LD4-4600SL-LW-UNV-EL14-L835-CD1	FURNISHED WITH FIXTURE			CEILING	SURFACE		SEE NOTE 1
F	PATHWAY LIGHTING	6VLFL2X-3000-35K-DA-6VLEDFOL-SCLPF	FURNISHED WITH FIXTURE			CEILING	RECESSED	6"	
F (EM)	PATHWAY LIGHTING	6VLFL2X-3000-35K-DA-6VLEDFOL-SCLPF-EM	FURNISHED WITH FIXTURE			CEILING	RECESSED	6"	SEE NOTE 1
G	MCGRAW-EDISON	ISW-SA1-E-U-T4W-XX	FURNISHED WITH FIXTURE			+9'	BRACKET		VERIFY COLOR WITH ARCHITECT
G (EM)	MCGRAW-EDISON	ISW-SA1-E-U-T4W-XX-CBP	FURNISHED WITH FIXTURE			+9'	BRACKET		VERIFY COLOR WITH ARCHITECT SEE NOTE 1
H (EM)	MCGRAW-EDISON	TT-D2-740-U-MO-BZ-F-TR-IBP	FURNISHED WITH FIXTURE			CEILING	SURFACE		SEE NOTE 1
K	MCGRAW-EDISON	TT-D2-740-U-MO-BZ-F-TR	FURNISHED WITH FIXTURE			+10'	PENDANT		
K (EM)	MCGRAW-EDISON	TT-D2-740-U-MO-BZ-F-TR-IBP	FURNISHED WITH FIXTURE			+10'	PENDANT		SEE NOTE 1
X	SURE-LITES	EUX7-R-UNV	FURNISHED WITH FIXTURE			℄ ABOVE DOOR	BRACKET		

NOTES:
1. FEED ALL "EM" FIXTURES WITH SWITCHED AND UNSWITCHED HOT LEGS. UNSWITCHED HOT LEG IS USED FOR VOLTAGE SENSING.
2. VERIFY ALL FIXTURE COLORS WITH ARCHITECT PRIOR TO SUBMITTALS.
3. EQUAL FIXTURES BY LITHONIA, LUMAX, AND COLUMBIA WILL BE CONSIDERED APPROVED EQUALS.

GENERAL NOTES

1. SERVICE TO PROJECT IS 120/208 VOLTS, 3 PHASE, 4 WIRE.
2. VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING IN SWITCHES.
3. VERIFY EXACT LOCATION OF ALL MOTORS AND EQUIPMENT BEFORE ROUGHING IN.
4. CONTRACTOR TO VERIFY LOCATION OF ALL OUTLETS PRIOR TO INSTALLATION.
5. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF COUNTERTOPS AND BACKSPLASHES ON ARCHITECTURAL DETAILS AND/OR CASEWORK SHOP DRAWINGS AND ADJUST SPECIFIED MOUNTING HEIGHT OF WALL OUTLETS AS REQUIRED TO AVOID CONFLICTS.
6. CONTRACTOR WILL CHECK ALL LIGHTING FIXTURES FOR EXACT TYPE MOUNTING AND SPACE REQUIRED BEFORE ROUGHING IN.
7. FURNISH AND INSTALL PLASTER FRAMES FOR ALL RECESSED FIXTURES AS REQUIRED.
8. SUPPORT OF ALL LIGHTING FIXTURES TO BE THE RESPONSIBILITY OF THIS CONTRACTOR. FIXTURES TO BE SUPPORTED INDEPENDENT OF CEILING FROM STRUCTURAL MEMBERS OF THE BUILDING.
9. ELECTRICAL CONTRACTOR MUST CHECK THE CORRESPONDING MECHANICAL SHEETS AND BE RESPONSIBLE FOR INCLUDING PROPER SERVICE AND CONNECTIONS TO ALL MECHANICAL ITEMS SHOWN THEREON REGARDLESS OF ITS BEING OR NOT BEING SHOWN ON ELECTRICAL SHEETS.
10. ALL CONDUIT CONCEALED UNLESS SPECIFICALLY SHOWN EXPOSED.
11. COORDINATE SERVICES WITH POWER AND COMMUNICATIONS COMPANIES. REMOVE OR RELOCATE ALL POWER AND COMMUNICATIONS CIRCUITS ABOVE OR BELOW GRADE THAT WOULD OBSTRUCT THE CONSTRUCTION OF THE PROJECT OR CONFLICT IN ANY MANNER WITH COMPLETION OF THE PROJECT OR ANY CODE PERTAINING THERETO. IF UTILITY COMPANY REQUIREMENTS ARE AT VARIANCE WITH THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACT PRICE SHALL INCLUDE THE ADDITIONAL COST.
12. IT IS INTENDED THAT SPECIFICATIONS AND PLANS SHALL INCLUDE EVERYTHING REQUIRED AND NECESSARY FOR PROPER AND COMPLETE INSTALLATION OF THE COMPLETE SYSTEMS SHOWN EVEN THOUGH EVERY ITEM MAY NOT BE PARTICULARLY MENTIONED IN DETAIL. THE CONTRACTOR SHALL DELIVER TO OTHER TRADES ANY EQUIPMENT THAT MUST BE INSTALLED DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS AND COORDINATION OF THE PHYSICAL SIZE OF ALL EQUIPMENT WITH THE ARCHITECTURAL REQUIREMENTS OF THE SPACES INTO WHICH THE EQUIPMENT WILL BE INSTALLED.
13. THIS CONTRACTOR SHALL INSTALL EQUIPMENT GROUNDS THROUGHOUT THIS PROJECT, USING GREEN INSULATED GROUND WIRE. USE OF CONDUIT AS THE ONLY GROUND CONDUCTOR WILL NOT BE ALLOWED. (SIZE GROUND WIRES PER N.E.C.)
14. REMOVE ALL EXISTING PANELBOARDS, DISCONNECTS, FIXTURES, RECEPTACLES, AUXILIARY SYSTEM DEVICES, CONDUIT, CONDUCTORS, ETC. BEING RENDERED OBSOLETE BY THIS PROJECT.
15. WHERE EXISTING REMAINING CIRCUITS ARE BEING INTERRUPTED DUE TO STRUCTURAL AND/OR DESIGN CHANGES, THIS CONTRACTOR WILL EXTEND EXISTING CIRCUITS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO REMAINING ACTIVE DEVICES.

COLOR CODE FOR JUNCTION BOXES

NOTE:
PAINT ALL JUNCTION BOXES AND COVERS WITH COLORS AS SHOWN BELOW. PAINTING COVERS ONLY IS NOT ACCEPTABLE.

FUNCTION:	COLOR:
LIGHTING	BLUE
POWER	GREEN
FIRE ALARM	RED
MISC. AUXILIARIES (SOUND, ETC.)	BROWN

FIRE ALARM SYSTEM NOTES

1. PROVIDE FIRE ALARM COMPLETION DOCUMENTS AT THE STATE FINAL INSPECTION. THIS ITEM WILL BE REQUIRED BY STATE BUILDING INSPECTOR AT THE TIME OF FINAL INSPECTION (OLD CERTIFICATION FORM).
2. ADDITIONS AND ALTERATIONS TO THE FIRE ALARM SYSTEM REQUIRE TESTING, A RECORD OF COMPLETION, AND RECERTIFICATION. ALL FIRE ALARM WORK SHALL BE PERFORMED BY QUALIFIED PERSONNEL AS DEFINED IN NFPA-72 (2013) 10.4.2, 10.5.2, AND 10.18.1.
3. ALL WORK SHALL BE PERFORMED BY A CERTIFIED FIRE ALARM CONTRACTOR - SEE SPECS.

ELECTRICAL SYMBOLS

A-1	CEILING OUTLET - FIXTURE "A", CIRCUIT 1, SWITCH a.
	CEILING OUTLET - FLUORESCENT FIXTURE.
	CEILING OUTLET - FLUORESCENT INDUSTRIAL OR STRIP TYPE.
	WALL OUTLET - INCANDESCENT BRACKET TYPE.
	WALL OUTLET - FLUORESCENT BRACKET TYPE.
	WALL OUTLET - DUPLEX OUTLET, 20A, 125V, GROUNDED, PASS & SEYMOUR PT5362A-GRY WITH PT6STR PLUG TAIL CONNECTOR.
	WALL OUTLET - DUPLEX OUTLET, 20A, 125V, GROUNDED, PASS & SEYMOUR PT5362A-GRY WITH PT6STR PLUG TAIL CONNECTOR - MOUNT AT 6" ABOVE COUNTER.
GFCI	WALL OUTLET - DUPLEX OUTLET, 20A, 125V, GROUNDED, PASS & SEYMOUR PT2095-GRY WITH PT6STR PLUG TAIL CONNECTOR.
WP GFCI	WALL OUTLET - DUPLEX OUTLET, 20A, 125V, GROUNDED, WEATHERPROOF, PASS & SEYMOUR PT2095-GRY WITH PT6STR PLUG TAIL CONNECTOR. INSTALL #WIUC10-CAGV WEATHERPROOF COVER.
	WALL OUTLET - SINGLE OUTLET, 50A, 250V, 3W, BY HUBBELL OR APPROVED EQUAL.
	WALL OUTLET - SINGLE OUTLET, 30A, 250V, 3W, BY HUBBELL OR APPROVED EQUAL.
•	FLOOR OUTLET - CONDUIT STUB UP.
J	CEILING OUTLET - JUNCTION BOX.
	WALL OUTLET - JUNCTION BOX WITH FLEXIBLE CONNECTION TO EQUIPMENT.
$	SWITCH OUTLET - AC TYPE, SINGLE POLE, 20A, 120/277V, HUBBELL #1221 - GREY.("N" DENOTES NARROW)
$D	SWITCH OUTLET - FLUORESCENT DIMMER - LUTRON NOVA-T SERIES #NTF-103P.
$2	SWITCH OUTLET - AC TYPE, TWO POLE, 20A, 120/277V, HUBBELL #1222 - GREY.
$3	SWITCH OUTLET - AC TYPE, THREE WAY, 20A, 120/277V, HUBBELL #1223 - GREY.
$4	SWITCH OUTLET - AC TYPE, FOUR WAY, 20A, 120/277V, HUBBELL #1224 - GREY.
$M	SWITCH MANUAL MOTOR STARTER, SINGLE POLE WITH OVERLOAD PROTECTION.
$P	SWITCH OUTLET - AC TYPE, SINGLE POLE, 20A, 120/277V, HUBBELL #1221LC.
	LIGHTING PANEL - SEE SPECIFICATIONS AND SCHEDULE.
	POWER PANELS - SEE SPECIFICATIONS AND SCHEDULE.
	BRANCH CIRCUIT CONCEALED IN WALL OR CEILING.
	BRANCH CIRCUIT CONCEALED IN FLOOR OR GROUND.
	HOMERUN TO PANELBOARD - ANY CIRCUIT WITHOUT FURTHER DESIGNATION 2 # 12 & 1 # 12(G) - 1/2" CONDUIT. 3 # 12 & 1 # 12(G) - 3/4" CONDUIT. 4 # 12 & 1 # 12(G) - 3/4" CONDUIT.
E	EMPTY CONDUIT - 3/4".
	BRANCH CIRCUIT EXPOSED.
◦	CONDUIT RUN DOWN WALLS, CONCEALED
•	CONDUIT RUN UP WALLS, CONCEALED
	MOTOR SHOWN 5hp (TYPICAL) OR 40 AMPS (TYPICAL).
	EXHAUST FAN MOTOR - FRACTIONAL HORSEPOWER.
	MAGNETIC MOTOR STARTER.
	NON-FUSED DISCONNECT SWITCH. (RT - RAINTIGHT).
	FUSED DISCONNECT SWITCH.
A.F.F.	ABOVE FINISHED FLOOR.
VER.	VERIFY LOCATION.
N.E.C.	NATIONAL ELECTRICAL CODE.
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
WP	WEATHER PROOF
	FIRE ALARM - SMOKE DETECTOR - SEE SPEC.
D	FIRE ALARM - DUCT DETECTOR - SEE SPEC.
H	FIRE ALARM - HEAT DETECTOR - SEE SPEC.
	FIRE ALARM - MANUAL PULL STATION - SEE SPEC.
	FIRE ALARM - STROBE LIGHT - SEE SPEC.
S	FIRE ALARM - SPEAKER STROBE - SEE SPEC.
FACP	FIRE ALARM CONTROL PANEL - SEE SPEC
S.S.C.	SOUND SYSTEM CONSOLE - SEE SPEC
S	SOUND SYSTEM - CEILING MOUNTED SPEAKER - SEE SPEC.
	SOUND SYSTEM - CALL-IN SWITCH - SEE SPEC.
IC	SOUND SYSTEM - INTERCOM HAND SET PHONE - SEE SPEC.
	COMPUTER OUTLET - 3/4" CONDUIT WITH CABLING-SEE SPEC.
	COMPUTER OUTLET - 3/4" CONDUIT WITH CABLING-MOUNT 6" ABOVE COUNTER-SEE SPEC.
CAMERA CEILING	CAMERA LOCATION - CONTRACTOR SHALL SUPPLY AND INSTALL 1 CAT 6 CABLE CONNECTED TO IDF RACK FOR FUTURE CAMERA (IN 3/4" CONDUIT WHEN NOT ABOVE CEILING).
M	CEILING MOUNTED MOTION DETECTOR - COOPER #OMC-P-1200-R
RC	ROOM CONTROLLER - COOPER #RC3D-PL - MOUNT ABOVE LAY-IN CEILING - SEE SHEET E3.1 FOR DETAIL
$OR	LIGHTING CONTROL PANEL OVERRIDE SWITCH - DIGITA 5-1B
$WS	WALL STATION - EATON WAVELINX #W1L-G WITH STAINLESS WALL PLATE
$MS	WALL SWITCH WITH BUILT IN MOTION SENSOR - COOPER #OSW-P-0451-W WITH WALL PLATE
M	MOTION SENSOR WIRING - LOW VOLTAGE WIRING (#14 THHN AS REQUIRED)
D	ROOM CONTROLLER LIGHTING/RECEPTACLE DATA WIRING - CAT 6 CABLING AS REQUIRED
	FLOOR BOX - COMBINATION EMPTY / DATA / POWER OUTLET. PROVIDE WITH TWO DUPLEX OUTLETS AND EMPTY COMPARTMENTS FOR DATA AND POWER (WIREMOLD EFB10S BOX WITH EFB10SM COMPARTMENTS EFB10-B, EFB10-OP, EFB10-DEC PLATES AS REQUIRED AND EFB10S-DIVIDERS AS REQUIRED AND EFB610BTBZ COVER).
RC	CEILING OUTLET - DUPLEX OUTLET, 20A, 125V, GROUNDED, HUBBELL WITH RETRACTABLE CORD EQUAL TO HBL25124Y.

COLOR CODE FOR ELECTRICAL WIRING

1. 120/208 V, 60Hz, 3 PHASE, 4 WIRE SYSTEM
   PHASE A-BLACK
   B-RED
   C-BLUE
   N-WHITE
2. GROUND-GREEN

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Project Number:
2086

LATHAN ARCHITECTS
LATHAN • BRYANT • CALMA

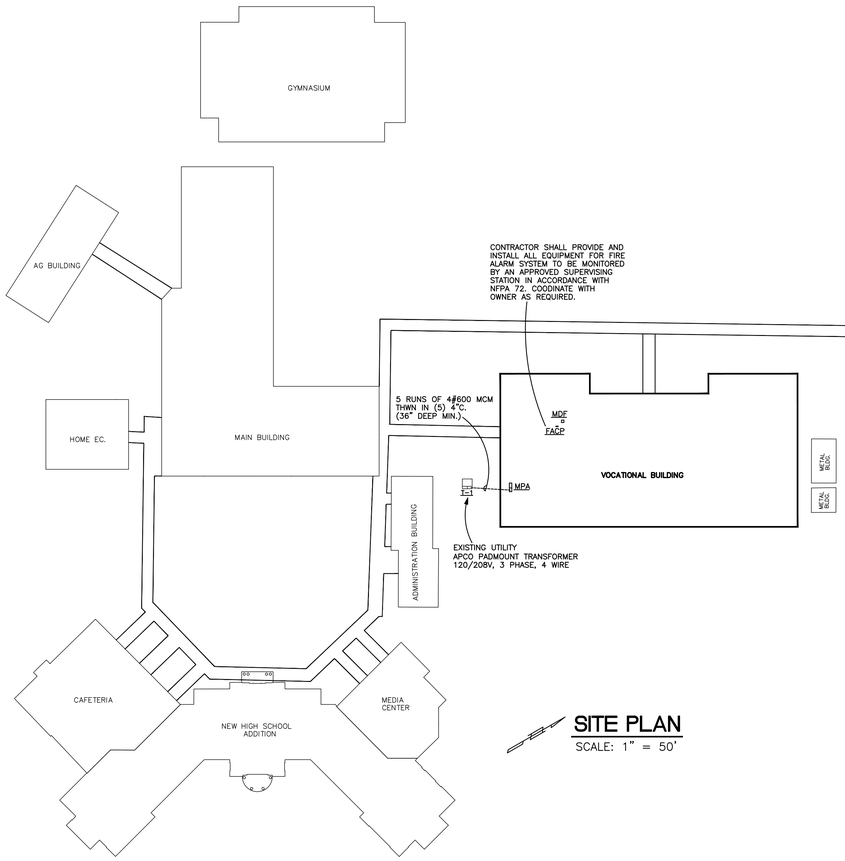
NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA LICENSED PROFESSIONAL ENGINEER JUNKIN
5-13-22

SHEET TITLE:
SCHEDULES, SYMBOLS, AND NOTES

PROJ. MGR.:	LANCE JUNKIN
DRAWN:	SEC
DATE:	APRIL 15, 2022
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B
SHEET NO:
E1.1
1 OF 5



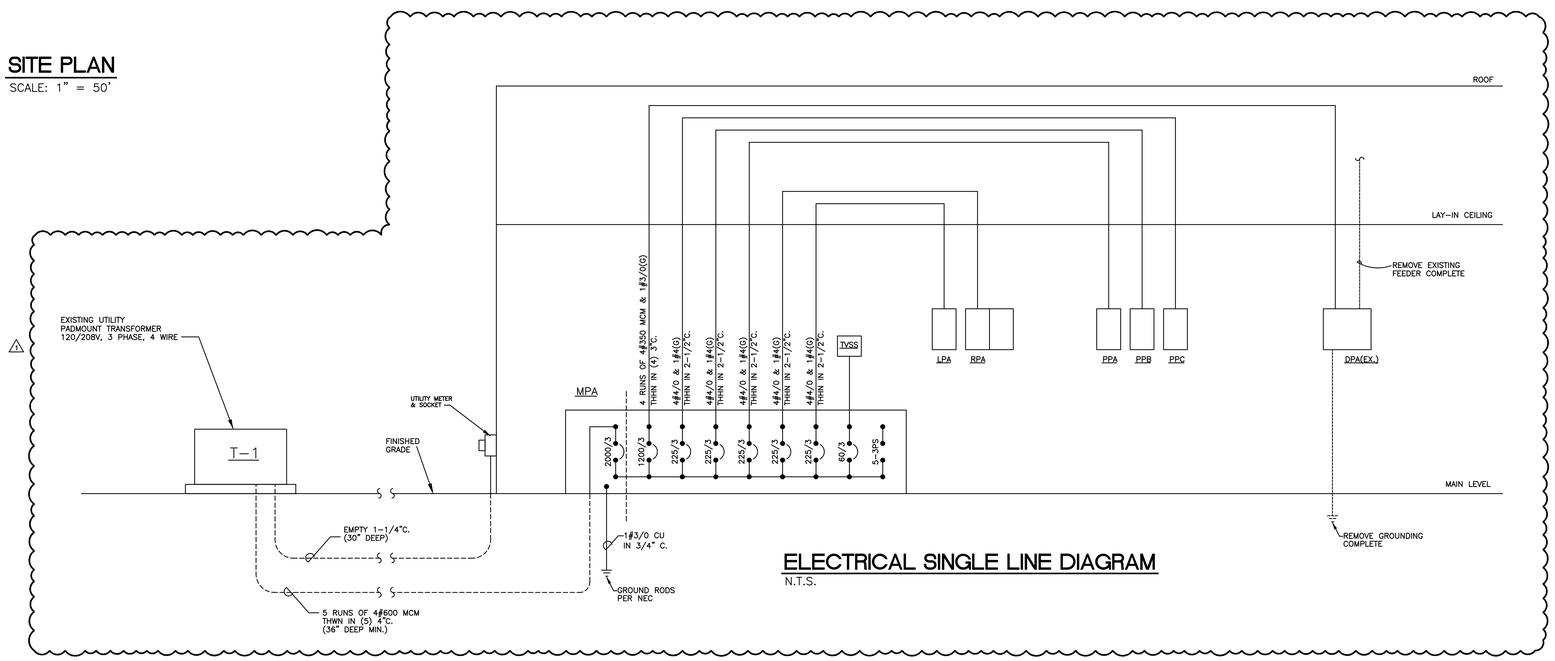
SITE PLAN
SCALE: 1" = 50'

PANELBOARD SCHEDULE

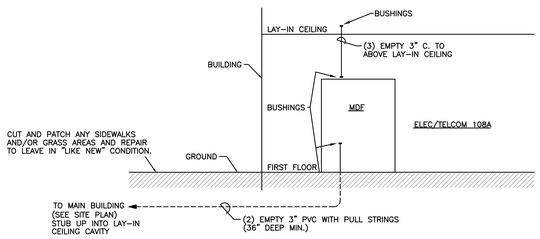
MARK	TYPE	MAINS			BRANCHES					LUG LOCATION	TYPE MOUNTING	AREA PANEL LOCATED	AVAILABLE FAULT CURRENT	REMARKS
		TYPE	AMPS	SERVICE	1 POLE	2 POLE	3 POLE	SPARES	SPACES					
MPA	SWITCH BOARD	MAIN BREAKER	2000	120/208V 3ø, 4W	SEE SINGLE LINE DIAGRAM					BOTTOM	SURFACE	ELEC 105B	36,000	SEE NOTES 1, 2, 3, 4, 5, & 6
LPA	NQOD	LUGS	225	120/208V 3ø, 4W	26-20			6-20/1	10-1PS	TOP	SURFACE	ELEC 108A	10,000	SEE NOTES 1, 2, & 6
RPA	NQOD	LUGS	225	120/208V 3ø, 4W	55-20			12-20/1	17-1PS	TOP	SURFACE	ELEC 108A	10,000	SEE NOTES 1, 2, & 6 DOUBLE PANELBOARD
PPA	NQOD	LUGS	225	120/208V 3ø, 4W	9-20	3-20	2-20 1-50 2-70	6-20/1	6-1PS	TOP	SURFACE	ELEC 108A	10,000	SEE NOTES 1, 2, & 6
PPB	NQOD	LUGS	225	120/208V 3ø, 4W		2-30	2-100	6-20/1	14-1PS	TOP	SURFACE	EXTERIOR	27,000	SEE NOTES 1, 2, & 6 NEMA 3R PANELBOARD
PPC	NQOD	LUGS	225	120/208V 3ø, 4W			2-100	6-20/1	18-1PS	TOP	SURFACE	EXTERIOR	10,000	SEE NOTES 1, 2, & 6 NEMA 3R PANELBOARD

NOTES:
1. ALL SWITCHBOARDS AND PANELBOARDS SHALL BE CAPABLE OF WITHSTANDING AND INTERRUPTING THE AVAILABLE FAULT CURRENTS AS LISTED ABOVE.
2. ALL SWITCHBOARDS AND PANELBOARDS SHALL HAVE MICARTA LABELS SHOWING SWITCHBOARD/PANELBOARD DESIGNATION, AND OPERATING VOLTAGE. SWITCHBOARDS AND I-LINE PANELBOARDS SHALL ALSO HAVE MICARTA LABELS AT EACH BREAKER.
3. SHALL BE RATED FOR SERVICE ENTRANCE EQUIPMENT.
4. SHALL BE EQUIPPED WITH BUILT-IN SURGE PROTECTION, CAPABLE OF WITHSTANDING A TRANSIENT SURGE OF 160,000 AMPS. (PROVIDE BREAKER AS REQUIRED FOR THIS PURPOSE IN MPA).
5. MPA SHALL HAVE GROUND FAULT PROTECTION.
6. NO SERIES RATING WILL BE ALLOWED ON ANY PANELBOARDS.

PANELBOARD NOTES:
1. MANUFACTURER OF SWITCHBOARDS AND/OR PANELBOARDS SHALL PERFORM FAULT CURRENT CALCULATIONS, COORDINATION STUDY, AND ARC FLASH HAZARD ANALYSIS, AND LABEL ALL SWITCHBOARDS AND/OR PANELBOARDS, IN ACCORDANCE WITH NFPA 70E-2009 (ARTICLE 130) AND NFPA 70-2008 (ARTICLE 110.16).
2. CONTRACTOR SHALL FIELD MARK ELECTRICAL SERVICE EQUIPMENT WITH A CONSPICUOUS AND PERMANENT LABEL THAT INDICATES THE AVAILABLE FAULT CURRENT PER NEC 110.24.
3. CONTRACTOR SHALL FIELD MARK ELECTRICAL PANELS WITH A CONSPICUOUS AND PERMANENT LABEL THAT INDICATES WHERE PANELS ARE FED FROM PER NEC 408.4(B).



ELECTRICAL SINGLE LINE DIAGRAM
N.T.S.



TELCO/MDF RISER DIAGRAM
N.T.S.

UTILITY NOTES

1. CONTRACTOR SHALL COORDINATE CLOSELY WITH RUSSELLVILLE UTILITIES AND SHALL PROVIDE AND INSTALL ANY AND ALL LABOR AND OR MATERIAL, AS REQUIRED BY UTILITY, REGARDLESS OF ITS BEING OR NOT BEING SHOWN ON ELECTRICAL DRAWINGS.
2. ANY AND ALL COSTS ASSOCIATED WITH PROVIDING THIS LABOR AND/OR MATERIAL SHALL BE INCLUDED IN BID PRICE.
3. CONTRACTOR SHALL OBTAIN ALL DIRECT CHARGES FROM RUSSELLVILLE UTILITIES, AND INCLUDE THESE CHARGES IN BID PRICE. CONTRACTOR IS RESPONSIBLE FOR CONTACTING UTILITY DURING THE BID PROCESS.

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Project Number: 2086

LATHAN ARCHITECTS
LATHAN ▪ BRYANT ▪ CALMA

NEW ADDITION AND RENOVATION FOR
RUSSELLVILLE HIGH SCHOOL
PACKAGE B - RENOVATIONS TO VOCATIONAL BUILDING
1865 WATERLOO ROAD, RUSSELLVILLE AL 35653
RUSSELLVILLE CITY BOARD OF EDUCATION

ALABAMA LICENSED PROFESSIONAL ENGINEER J. LANCE JUNKIN 14817 5-13-22

SHEET TITLE:
SITE PLAN AND SINGLE LINE DIAGRAM

PROJ. MGR.:	LANCE JUNKIN
DRAWN:	SEC
DATE:	APRIL 15, 2022
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B
SHEET NO:
E2.1
2 OF 5

RELAY PANEL LCP-N			
R	PANEL	CIRCUIT	PROGRAM MODE
1	LPA	7	NORMAL DAY TO DAY
2	LPA	8	NORMAL DAY TO DAY
3	LPA	13	NORMAL DAY TO DAY
4	LPA	14	NORMAL DAY TO DAY
5	LPA	20	EXTERIOR – DUSK TO DAWN
6	LPA	21	EXTERIOR – DUSK TO MIDNI.
7	LPA	22	EXTERIOR – DUSK TO DAWN
8	LPA	23	EXTERIOR – DUSK TO MIDN.
9	LPA	24	NORMAL DAY TO DAY
10	LPA	26	NORMAL DAY TO DAY
11			
12			
13			
14			
15			
16			

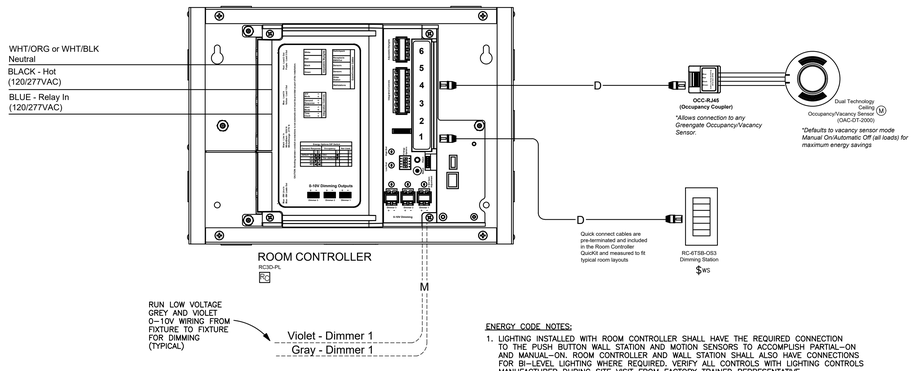
COOPER GREENGATE RELAY CABINET (NETWORKABLE) CONTROLKEEPER 16 (CKT16) WITH 16 RELAYS

SITE VISIT NOTE:
CONTRACTOR SHALL INCLUDE IN BID PRICE A TOTAL OF (3) SITE VISITS FROM FACTORY TRAINED REPRESENTATIVE FOR LIGHTING CONTROL SYSTEM INSTALLATION, PROGRAMMING, AND TRAINING.

FLOOR PLAN - LIGHTING

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

NOTES:
1. ALL WIRING SHOWN FEEDING EXTERIOR FIXTURES SHALL BE #10 THHN.

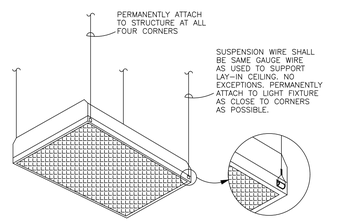


ROOM CONTROLLER

WIRING DIAGRAM – WITH RECEPTACLE CONTROLLER

NOT TO SCALE

ENERGY CODE NOTES:
1. LIGHTING INSTALLED WITH ROOM CONTROLLER SHALL HAVE THE REQUIRED CONNECTION TO THE PUSH BUTTON WALL STATION AND MOTION SENSORS TO ACCOMPLISH PARTIAL-ON AND MANUAL-ON. ROOM CONTROLLER AND WALL STATION SHALL ALSO HAVE CONNECTIONS FOR BI-LEVEL LIGHTING WHERE REQUIRED. VERIFY ALL CONTROLS WITH LIGHTING CONTROLS MANUFACTURER DURING SITE VISIT FROM FACTORY TRAINED REPRESENTATIVE.
2. THE ROOM CONTROLLER SHALL ALSO CONNECT TO A RECEPTACLE CONTROLLER WHERE SHOWN ON PLANS PROVIDING AUTOMATIC SHUT OFF OF CERTAIN RECEPTACLES AS REQUIRED. SEE POWER SHEET FOR RECEPTACLE LOCATIONS. RECEPTACLES SHOWN TO BE CONTROLLED SHALL BE MARKED AS REQUIRED PER NEC.
3. DATA CABLING AND MOTION SENSOR LOW VOLTAGE CABLING SHALL BE INSTALLED IN CONDUIT AT ANY LOCATION WHERE CABLING WOULD BE EXPOSED WITH NO CEILING. DATA CABLING AND MOTION SENSOR LOW VOLTAGE CABLING SHOWN IN AREAS WITH CEILINGS CAN BE INSTALLED EXPOSED IN CEILING CAVITY, SECURED IN J-HOOKS ABOVE LAY-IN CEILING TILES.



DETAIL - LIGHT FIXTURE SUPPORT

N.T.S.

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RUSSELLVILLE CITY BOARD OF EDUCATION

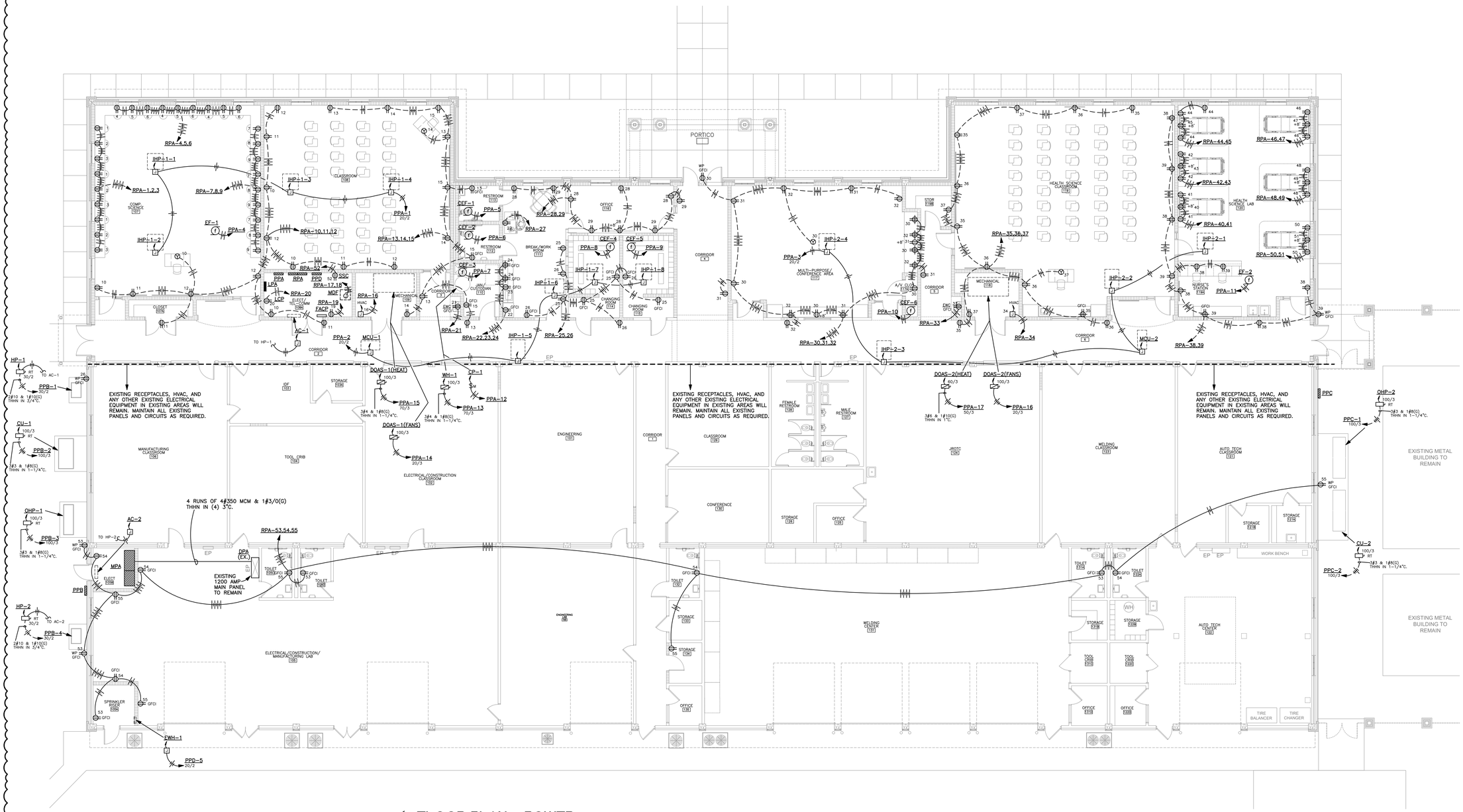
ALABAMA REGISTERED PROFESSIONAL ENGINEER J. LANCE JUNKIN 5-17-22

SHEET TITLE:
FLOOR PLAN – LIGHTING

PROJ. MGR.:	LANCE JUNKIN
DRAWN:	SEC
DATE:	APRIL 15, 2022
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

SHEET NO:
E3.1
3 OF 5



FLOOR PLAN - POWER

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

NOTES:

1. COORDINATE ALL OUTLETS AT COUNTER AREAS CLOSELY WITH ARCHITECTURAL CASEWORK DRAWINGS. PLACE OUTLETS BELOW COUNTERS, AT STANDARD MOUNTING HEIGHT, WHEN KNEE SPACE PERMITS ACCESS (COORDINATE INSTALLATION OF HOLES WITH RUBBER GROMMETS IN THOSE CASES).
2. COORDINATE INSTALLATION OF OUTLETS CLOSELY WITH FURNITURE SUPPLIER.
3. ALL BRANCH CIRCUIT HOME RUNS THAT EXCEED 100' IN LENGTH SHALL BE #10 THHN.

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ALABAMA
LICENSED
PROFESSIONAL
ENGINEER
J. LANCE JUNKIN
5-13-22

SHEET TITLE:
FLOOR PLAN - POWER

PROJ. MGR.:	LANCE JUNKIN
DRAWN:	SEC
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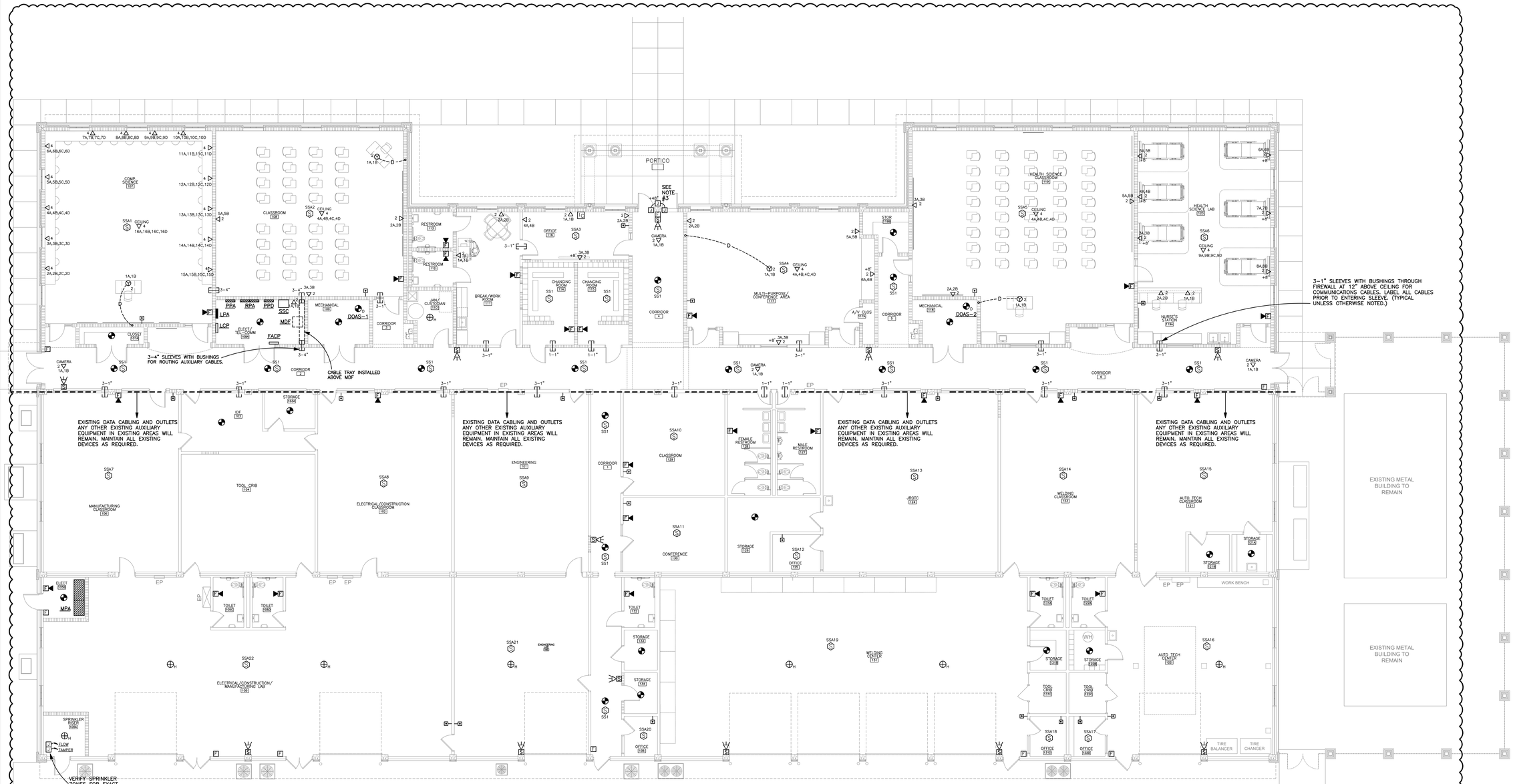
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

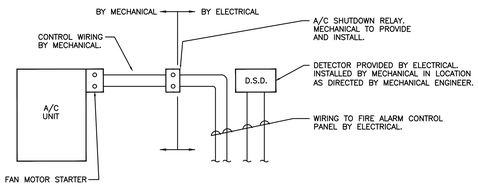
SHEET NO:
E4.1
4 OF 5



FLOOR PLAN - AUXILIARIES

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

NOTES:
1. ALL COMPUTER OUTLETS SHOWN ON THIS PLAN ARE SERVED FROM MDF.
2. COORDINATE FINAL LOCATIONS OF ALL CEILING SPEAKERS, SMOKE DETECTORS, CAMERAS, ETC., TO AVOID CONFLICT WITH LIGHT FIXTURES AND MECHANICAL DIFFUSERS. PLACE THESE DEVICES AS CLOSE AS POSSIBLE TO LOCATION SHOWN ON THESE DRAWINGS. COORDINATE WITH FIRE ALARM SYSTEM MANUFACTURER WITH REGARD TO APPROPRIATE "MINIMUM" DISTANCE FROM DIFFUSERS.
3. AT THESE DOOR LOCATIONS, CONTRACTOR SHALL INSTALL EMPTY JUNCTION BOX WITH 3/4" EMPTY CONDUIT WITH PULL STRING TO ABOVE LAY-IN CEILING FOR FUTURE CARD ACCESS SYSTEM. COORDINATE CLOSELY WITH ARCHITECT FOR DOOR HARDWARE CONFIGURATION.



DETAIL - DUCT SMOKE DETECTOR CONNECTION

N.T.S.

OUTLET NUMBER:	ROOM NUMBER:
2A	107
IDF NUMBER:	PATCH PANEL/PORT #:
MDF	1 / 1

DETAIL - DATA CABLE LABEL

N.T.S.

NOTES:
1. LABEL ALL CABLES EVERY 50' AND AT EACH END.
2. EXACT LABEL METHOD SHALL BE COORDINATED WITH, AND APPROVED BY, ENGINEER PRIOR TO PURCHASE AND INSTALLATION.
3. IF ONLY ONE (1) OUTLET IN A ROOM, LABEL OUTLET AS 1A.
4. ROOM NUMBERS ON LABELS SHALL CORRESPOND TO FINAL ROOM NUMBERS IN FIELD (NOT NECESSARILY SAME AS ON CONSTRUCTION DRAWINGS).

AUXILIARY CIRCUIT LEGEND

SS1 (S)	SPEAKER – FED FROM COMMON ZONE SS1
2A	DATA OUTLET 2A (1 CAT. 6 CABLE PULLED TO JUNCTION BOX AND TERMINATED, LEAVE 12" SLACK ON EACH CABLE)
SSA22 (S)	SPEAKER – FED FROM INDIVIDUAL ZONE SSA22

STEWART ENGINEERING
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2086

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ALABAMA LICENSED PROFESSIONAL ENGINEER J. LANCE JUNKIN 5-17-22

SHEET TITLE:
FLOOR PLAN – AUXILIARIES

PROJ. MGR.:	LANCE JUNKIN
DRAWN:	SEC
DATE:	APRIL 15, 2022
REVISIONS	
1	ADD #1 05/15/22

JOB NO. 19-90B

SHEET NO:
E5.1
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