

ADDENDUM NUMBER: TWO

PROJECT: New Field House – Northern Nash High School
4230 Green Hills Road
Rocky Mount, North Carolina 27804

PROJECT NO: 21038

DATE: May 17, 2023

OWNER: Nash County Public Schools
903 Eastern Ave
Nashville, North Carolina 27856

ARCHITECT: Oakley Collier Architects, P.A.
109 Candlewood Road
Rocky Mount, North Carolina 27804
(252) 937-2500

PREVIOUSLY ISSUED: Addendum One

TO ALL CONTRACTORS:

This Addendum is hereby made a part of the Contract Documents to the same extent as if originally included therein. This Addendum must be acknowledged on the Form of Proposal and shall be placed with the Contract Documents.

Drawings and Project Manual dated April 24, 2023, for this project are hereby modified, corrected, or supplemented as follows:

Substitution Requests

Subject to requirements of plans and specifications, the following manufacturers are approved to bid:

Section	Section Title	Manufacturer / Product
10 51 13	Metal Lockers	Lockers Manufacturing / Knock Down and Open Front

Specifications

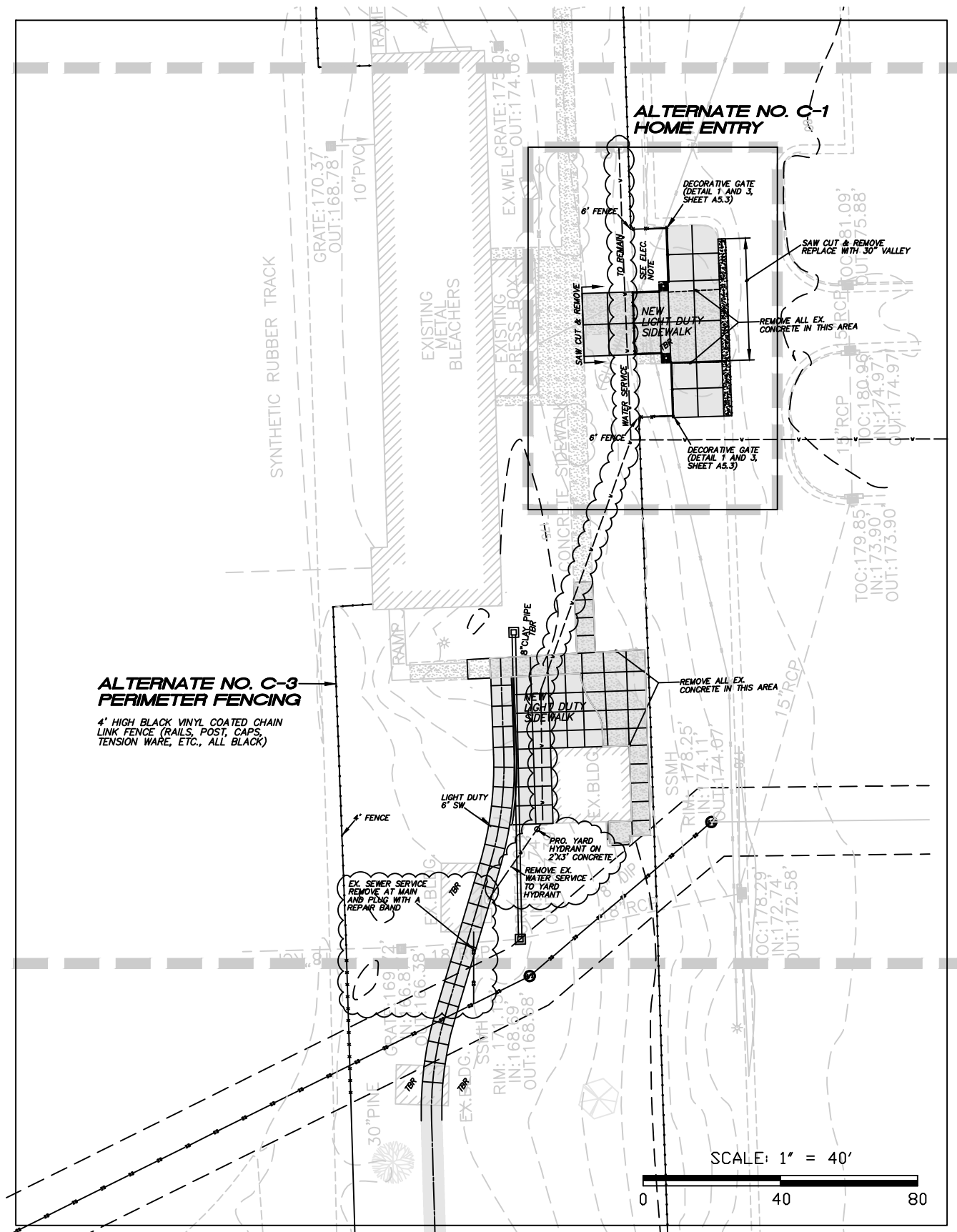
Item 1 Clarification **Section 04 20 00 – Unit Masonry**
2.01.B.1.b.1 – Color: Canary Islands JCL-3532.
Oldcastle Polished – Color: 4307.

Item 2 Clarification **Section 26 20 10 – Fire Alarm System**
This is a Standalone, Addressable Fire Alarm System with standard horn/strobe devices and is NOT a Voice Notification system. A printer in the FACP is not required.

Drawings

- Item 1 Clarification** **BD-1 (Reference Sheet – CE-04)**
Remove existing water and sanitary sewer as indicated on this sketch for existing buildings being demolished and noted TBR on civil plan set.
- Item 2 Change** **Sheet P0.1**
Remove the existing sheet in its entirety and replace it with the attached sheet - Changed fuel type from propane to natural gas in the GWH Schedule.
- Item 3 Change** **Sheet M0.1**
Remove the existing sheet in its entirety and replace it with the attached sheet – Revised general note #19, changed fuel type from propane to natural gas in Gas Pack Schedule, changed fuel type from propane to natural gas in the Unit Heater Schedule.
- Item 4 Change** **Sheet M1.1**
Remove the existing sheet in its entirety and replace it with the attached sheet – Removed propane regulator and added natural gas meter location and notes, added note for Contractor to provide secondary regulators for all gas fired equipment.
- Item 5 Change** **Sheet FA1.1**
Remove the existing sheet in its entirety and replace it with the attached sheet – Added (7) carbon monoxide detectors.

End of Addendum



PLUMBING GENERAL NOTES:

1. THE ENTIRE PLUMBING SYSTEM SHALL BE IN ACCORDANCE WITH N.C. PLUMBING CODE AND LOCAL PLUMBING INSPECTOR.
2. ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING WITH EXISTING CONDITIONS AND SHALL PROVIDE ANY NECESSARY OFFSETS, TEES, REROUTING, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.
3. THE PLUMBING CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING FIXTURES & EQUIPMENT WITH OTHER PRIME CONTRACTORS PRIOR TO INSTALLATION TO AVOID CONFLICTS. CONTACT ARCHITECT IF ALTERNATE INSTALLATION METHOD IS REQUIRED.
4. THE LOCATIONS OF KNOWN EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE METHOD & HAVE NOT BEEN VERIFIED; CONTRACTOR SHALL DETERMINE EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK & IS RESPONSIBLE FOR ANY DAMAGE INCURRED BY FAILURE TO DO SO. CALL UTILITY LOCATOR SERVICE 48 HOURS BEFORE EXCAVATION (1-800-632-4949). ALSO CONTACT SCHOOL MAINTINANCE DEPARTMENT AND USE PRIVATE UTILITY LOCATOR SERVICE AS NEED TO IDENTIFY ALL EXISTING UNDERGROUND UTILITIES.
5. THESE PLANS ARE DIAGRAMMATIC. DO NOT SCALE THESE DRAWINGS. REFER TO LARGEST SCALE ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSETS, TEES, ELBOWS, ETC. FOR A COMPLETE WORKING PLUMBING SYSTEM.
6. THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, INSPECTIONS, TAPS, ETC. (COST SHALL BE PASSED THROUGH TO OWNER).
7. CONTRACTOR SHALL COORDINATE ANY PLUMBING SYSTEM REQUIRING SHUTDOWN WITH THE OWNER 48 HOURS IN ADVANCE.
8. HVAC DUCTWORK HAS RIGHT-OF-WAY OVER PLUMBING PIPES; COORDINATE AS REQUIRED. NO PIPING SHALL BE INSTALLED OVER ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, ETC., PER NEC ARTICLE 110.
9. ALL SUPPLY, DRAIN, AND VENT PIPING SHALL BE CONCEALED (EXCEPT AT FIXTURES) UNLESS OTHERWISE NOTED. ALL PIPE CONTAINING LIQUIDS INSIDE BUILDING ARE TO BE LOCATED WITHIN THE "INSULATION ENVELOPE".
10. ALL DOMESTIC WATER PIPING SHOWN IS ABOVE, BETWEEN FLOOR JOIST/WITHIN WALLS, AND IN CRAWL SPACES UNLESS OTHERWISE NOTED.
12. ALL DOMESTIC WATER PIPING SHALL BE TYPE L COPPER ABOVE GRADE, TYPE K BELOW WITH NO JOINTS UNDER SLAB. INSULATE HOT AND COLD WATER PIPING AS SPECIFIED. PRESSURE TEST SYSTEM AT 100 PSIG FOR 24 HOURS OR 150 PSIG FOR 4 HOURS. COPPER TUBING BELOW GRADE SHALL BE UTILIZED AS THE ELECTRICAL SYSTEM GROUNDING ELECTRODE.
13. ALL WATER PIPING SHALL BE INSULATED WITH CLOSED CELL (ARMAFLEX) TYPE INSULATION WITH THE FLAME DENSITY RATING NOT EXCEEDING 25 & THE SMOKE DENSITY RATING NOT EXCEEDING 50. THICKNESS FOR COLD WATER PIPING SHALL BE 1/2" THICK. THICKNESS FOR HOT WATER & RETURN PIPING SHALL BE 1" THICK. INSTALL SADLES AS REQUIRED IN ALL LOCATIONS TO PREVENT COMPRESSION OF INSULATION.
14. ALL BRANCH LINES SHALL HAVE SHUT-OFF VALVES. ALL DOMESTIC WATER BALL VALVES SHALL BE BRASS BODY, FULL PORT, CHROME PLATED BALL. TEFLON SEATS 150 # WSP, FOR SIZES 1/2" THRU 2". PROVIDE VALVE HANDLE EXTENSIONS AS REQUIRED FOR INSULATION.
15. ALL SANITARY SEWER PIPING SHOWN IS BELOW SLAB/WITHIN WALLS UNLESS NOTED OTHERWISE. ALL SANITARY VENT PIPING SHOWN IS ABOVE CEILING/WITHIN WALLS UNLESS NOTED OTHERWISE.
16. ALL WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC-DWV CONFORMING TO ASTM D 2665. ALL JOINTS SHALL BE SOLVENT WELDED TYPE CONFORMING TO ASTM D 2665/2949/3034, ASTM F 891, CSA B182.2, CSA CAN/CSA-B182.4
17. VENT LINES SHALL SLOPE UP TO VTR.
18. ALL PIPING SYSTEMS SHALL BE SUPPORTED AS REQUIRED BY NC PLUMBING CODE AND MANUFACTURERS RECOMMENDATIONS.
19. ALL PIPING PENETRATIONS THRU NEW AND EXISTING WALLS SHALL BE SEALED TO EQUAL RATING OF THE NEW/EXISTING WALL.
20. PROVIDE CHROME-PLATED ESCUTCHEON PLATES WHERE PIPES PASS THROUGH FINISHED WALLS, CEILINGS, OR FLOORS.
21. ALL PLUMBING SYSTEMS SHALL BE TESTED AS REQUIRED PER N.C. PLUMBING CODE.
22. THE PLUMBING CONTRACTOR SHALL COORDINATE ALL UNDER SLAB PIPING WITH ALL STRUCTURAL FOUNDATIONS, P.C. SHALL COORDINATE ALL UNDER SLAB PLUMBING WITH ELEVATION INVERTS WITH THE SITE UTILITY INVERTS.
23. ALL EXPOSED WATER SUPPLY AND WASTE LINES UNDER OPEN SINKS/LAVATORIES SHALL HAVE PROTECTIVE DEVICES INSTALLED TO MEET LATEST NCSBC AND ADA REQUIREMENTS.
24. THE ENTIRE PLUMBING SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH NC PLUMBING CODE.
25. ROOF DECKING SHALL NOT BE PENETRATED TO SUPPORT WASTE LINES, VENT LINES, AND WATER SUPPLY LINES.
26. WATER HEATERS SHALL COMPLY WITH N.C ENERGY CODE SECTION 504 OF THE NC BUILDING CODE.
27. WATER CLOSETS SHALL BE MOUNTED ON CAST IRON FLANGES.
28. CLEANOUTS & FLOOR DRAIN STRAINERS SHALL BE INSTALLED FLUSH WITH FINISH FLOOR ELEVATION. FLOOR DRAINS SHALL BE INSTALLED TO PROVIDE PROPER DRAINAGE OF SPACE.
29. ALL FLOOR DRAINS, HUB DRAINS, AND FLOOR SINKS SHALL HAVE TRAP PRIMERS OR HOSE BIBS, INSTALLED AS SPECIFIED IN THE N.C. PLUMBING CODE SECTION 412.6.
30. P.C. SHALL VERIFY AND SET THE MAXIMUM OUTLET TEMPERATURES AT ALL NON-COMMERCIAL KITCHEN EQUIPMENT INCLUDING HAND SINKS LOCATED IN THE KITCHEN TO NOT EXCEED 120°F BY INSTALLATION OF POINT OF USE ANTI-SCALD MIXING VALVES IF NECESSARY.
31. ALL ACCESS COVERS INCLUDING BUT NOT LIMITED TO IN-GRADE CLEANOUTS, MANHOLES, AND WATER METER BOXES SHALL BE FLUSH WITH FINISHED GRADE UNLESS OTHERWISE SPECIFIED
32. ALL VERTICAL WASTE STACKS SERVING MULTI-STORY BUILDINGS OR DWELLINGS SHALL BE CONSTRUCTED OF CAST IRON PIPE CONFORMING TO ASTM A 74, ASTM A 888, CISPI 301. JOIN CAST IRON WASTE STACKS TO HORIZONTAL PVC WASTE PIPING USING APPROPRIATE FITTINGS MEETING CORRESPONDING ASTM STANDARDS.
33. P.C. SHALL PROTECT ALL PLUMBING PIPE AS IT COMES UP THROUGH CONCRETE PER SECTION 305.1 OF THE N.C. PLUMBING CODE.
34. ALL PLUMBING CONSTRUCTION PENETRATING FIRE-RATED SURFACES AND NON-RATED PARTITIONS SHALL BE SEALED PER FIRE STOPPING DETAIL ON SHEET FP-001 OR THE LATEST EDITION OF THE UL FIRE RESISTANCE DIRECTORY, VOLUME 2.
35. "PROVIDE" IS DEFINED AS FURNISH AND INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.
36. PLUMBING CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL EXTERNAL DISCONNECTS THAT ARE REQUIRED FOR EQUIPMENT PROVIDED UNDER THIS CONTRACT. PLUMBING CONTRACTOR SHALL FURNISH ALL REQUIRED FUSES FOR ALL FUSED DISCONNECT SWITCHES. COORDINATE DISCONNECT AND FUSE INSTALLATION WITH ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING DISCONNECT SWITCHES AND FUSES. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL LINE SIDE WIRING AND CONDUIT TO EXTERNALLY OR INTERNALLY MOUNTED DISCONNECTS AND SHALL PROVIDE AND INSTALL LOAD SIDE WIRING AND CONDUIT FROM EXTERNALLY MOUNTED DISCONNECT SWITCHES TO PLUMBING EQUIPMENT. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL ELECTRICAL CONNECTIONS TO PLUMBING EQUIPMENT. SEE "PLUMBING EQUIPMENT ELECTRICAL CONNECTION DETAIL".
37. PLUMBING CONTRACTOR SHALL PROVIDE MARKING TAPE AND TRACER WIRE FOR ALL NONE METALLIC PIPING BELOW GRADE. TAPE SHALL BE AT LEAST 3" WIDE AND SHALL BE LABELED FOR THE SPECIFIC TYPE PIPE. TAPE SHALL BE 24" BELOW GRADE. TRACER WIRE SHALL BE INSTALLED ON NON-METALLIC SEWER PIPE AND SHALL MEET REQUIREMENTS OF SECTION 306.2.4. TRACE WIRE SHALL BE MINIMUM 14 AWG AND RATED FOR DIRECT BURIAL.

FIXTURE CONNECTION SCHEDULE

ABBR	FIXTURE	WASTE	VENT	C.W.	H.W.	REMARKS
WC	WATER CLOSET	4"	2"	1"	-	FLUSH VALVE, FLOOR MOUNT
URN	URINAL	2"	2"	1"	-	MOUNT RIM ⌀ 20" AFF, 14" FOR H/C
LAV	WALL HUNG LAVATORY	2"	1 1/2"	1/2"	1/2"	STUDENT TOILETS
KS	2-COMP. STAINLESS STEEL SINK	2"	1 1/2"	1/2"	1/2"	FREE STANDING
DF	DRINKING FOUNTAIN	2"	1 1/2"	3/8"	-	SEE ARCH'T DWGS FOR MOUNTING HTS.
MS	MOP SINK RECEPTOR	2"	1 1/2"	1/2"	1/2"	SEE ARCH'T DWGS FOR DETAILS
SH	BUILT-IN SHOWER	2"	1 1/2"	1/2"	1/2"	SEE ARCH'T DWGS FOR DETAILS
WH	WASHING MACHINE BOX	2"	1 1/2"	1/2"	1/2"	VERIFY MOUNTING HT WITH MFR
HB	HOSE BIBB	-	-	3/4"	-	PROVIDE VACUUM BREAKER
AFH	ANTI-FREEZE HYDRANT	-	-	3/4"	-	PROVIDE VACUUM BREAKER
GENERAL NOTES: (1) NOT ALL FIXTURES WILL BE USED ON THIS PROJECT.						

GWH SCHEDULE

TAG	SERVICE	CAP	BTU'S	TEMP	RCVY	MFR / MODEL no.	PUMP	GAS TYPE	NOTES
GWH-1	FIELD HOUSE	-	199,000	110	660	RINNAI No. CU199e	RP-1	NATURAL GAS	1,2
GWH-2	FIELD HOUSE	-	199,000	110	660	RINNAI No. CU199e	RP-1	NATURAL GAS	1,2
GWH-3	FIELD HOUSE	-	199,000	110	660	RINNAI No. CU199e	RP-1	NATURAL GAS	1,2
GWH-4	FIELD HOUSE	-	199,000	110	660	RINNAI No. CU199e	RP-1	NATURAL GAS	1,2
GWH-5	FIELD HOUSE	-	199,000	140	660	RINNAI No. CU199e	RP-2	NATURAL GAS	1,2
NOTES: 1) STATE INDUSTRIES OR LOCHNIVAR MEETING OR EXCEEDING SPECIFICATIONS ARE ACCEPTABLE SUBSTITUTES 2) T&P VALVE PROVIDED SEPARATELY BY PLUMBING CONTRACTOR.									
ABBREVIATIONS: CAP = STORAGE CAPACITY (gal) TEMP = HW OUTPUT TEMPERATURE (deg F) RCVY = RECOVERY ⌀ 100 deg F RISE (gph)									

PUMP SCHEDULE

TAG	SERVICE	GPM	HEAD	WATTS	RPM	ELECT	FLA	CONTROL	MFR/MODEL	NOTES
RP-1	EWI REF. TO SCHEDULE	5	3.5	39	2800	115V/1PH	0.39	EMS	BELL & GOSSETT NBF-8S/LW	1-2
RP-2	EWI REF. TO SCHEDULE	5	3.5	39	2800	115V/1PH	0.39	EMS	BELL & GOSSETT NBF-8S/LW	1-2
NOTES: (1) ALL PUMPS SPECIFIED ARE BELL & GOSSETT. EQUAL BY TACO (2) PROVIDE FOR EWI AS REQUIRED BY SCHEDULE										
ABBREVIATIONS: HEAD= FRICTION LOSS (ft) FLA = PUMP MOTOR FULL LOAD AMPS GPM = FLOW RATE										

PLUMBING FIXTURES - STADIUM

OCCUPANT LOAD - NCSBC 1004.4											
FIXED BLEACHER SEATING - 1 PERSON/18" = 2,240											
FIXTURES CALCULATIONS - 50% MALE (1,120) / 50% FEMALE (1,120) PER NCSPC 403.1.1											
FIXTURES REQUIRED - NCSPC TABLE 403.1											
STADIUM - HOME	WATER CLOSETS		LAVATORIES		URINALS 403.8.5.3		DRINKING FOUNTAINS 410		SERVICE SINKS		
	MALE FEMALE		MALE FEMALE				REGULAR ACCESSIBLE				
	REQUIRED	3	12	5	6	6	2	2	-		
	PROVIDED	3	12	5	8	6	2	2	-		
OCCUPANT LOAD - NCSBC 1004.4											
FIXED BLEACHER SEATING - 1 PERSON/18" = 1,725											
FIXTURES CALCULATIONS - 50% MALE (863) / 50% FEMALE (863) PER NCSPC 403.1.1											
FIXTURES REQUIRED - NCSPC TABLE 403.1											
STADIUM - VISITOR	WATER CLOSETS		LAVATORIES		URINALS 403.8.5.3		DRINKING FOUNTAINS 410		SERVICE SINKS		
	MALE FEMALE		MALE FEMALE				REGULAR ACCESSIBLE				
	REQUIRED	2	9	4	5	5	1	1	-		
	PROVIDED	2	9	4	5	5	1	1	-		
OFFICIALS	WATER CLOSETS		LAVATORIES		URINALS 403.8.5.3		DRINKING FOUNTAINS 410		SHOWERS		
	MALE FEMALE		MALE FEMALE				REGULAR ACCESSIBLE		MALE FEMALE		
	REQUIRED	0	0	0	0	0	N/A	N/A	0	0	
	PROVIDED	2	0	2	0	0	0	N/A	N/A	2	0
NOTE: FEMALE OFFICIAL WILL USE PRIVATE STAFF TOILET.											

PLUMBING FIXTURES - LOCKER

OCCUPANT LOAD - NCSBC 1004.1											
1,040/50 = 21											
FIXTURES REQUIRED - NCSPC TABLE 403.1											
LOCKER - MALE	WATER CLOSETS		LAVATORIES		URINALS 403.8.5.3		SHOWERS		DRINKING FOUNTAINS 410		SERVICE SINKS
	MALE	FEMALE	MALE	FEMALE			MALE	FEMALE	REGULAR	ACCESSIBLE	
	REQUIRED	1	N/A	1	N/A	0	0	N/A	N/A	N/A	0
	PROVIDED	2	N/A	3	N/A	2	2	N/A	N/A	N/A	0
OCCUPANT LOAD - NCSBC 1004.4											
1,040/50 = 21											
FIXTURES REQUIRED - NCSPC TABLE 403.1											
LOCKER - FEMALE	WATER CLOSETS		LAVATORIES		URINALS 403.8.5.3		SHOWERS		DRINKING FOUNTAINS 410		SERVICE SINKS
	MALE	FEMALE	MALE	FEMALE			MALE	FEMALE	REGULAR	ACCESSIBLE	
	REQUIRED	N/A	1	N/A	1	N/A	N/A	0	N/A	N/A	0
	PROVIDED	N/A	4	N/A	3	N/A	N/A	2	N/A	N/A	1
STAFF	WATER CLOSETS		LAVATORIES		URINALS 403.8.5.3		SHOWERS		DRINKING FOUNTAINS 410		SERVICE SINKS
	MALE	FEMALE	MALE	FEMALE			MALE	FEMALE	REGULAR	ACCESSIBLE	
	REQUIRED	1	1	1	1	0	0	0	N/A	N/A	0
	PROVIDED	1	1	1	1	0	1	1	N/A	N/A	0

FIXTURE UNIT REQUIREMENTS

POTABLE WATER SUPPLY	154.3 GPM USE 3" SERVICE
WASTE	326.0 FU USE 6" SERVICE

ES Project No. ES21078

ENGINEERING
S O U R C E of NC, P.A.
102-A2 Regency Blvd. Greenville, NC 27834
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GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions
Description Date
ADDN #1 05/16/23

Date 4-24-23
Project No. 21038
Drawn By ARC
Sheet No. P0.1
Checked By DWP
Sheet Title
PLUMBING NOTES & SCHEDULES

NEW FACILITY FOR
FIELD HOUSE
NORTHERN NASH HIGH SCHOOL
4230 GREEN HILLS ROAD
ROCKY MOUNT, NORTH CAROLINA


OAKLEY
COLLIER
OCA ARCHITECTS

107 Carlewood Road, Rocky Mount, NC 27854 (773) 233-9720
1111 Holmes Street, Suite 107, Kinston, NC 27854 (773) 653-7070

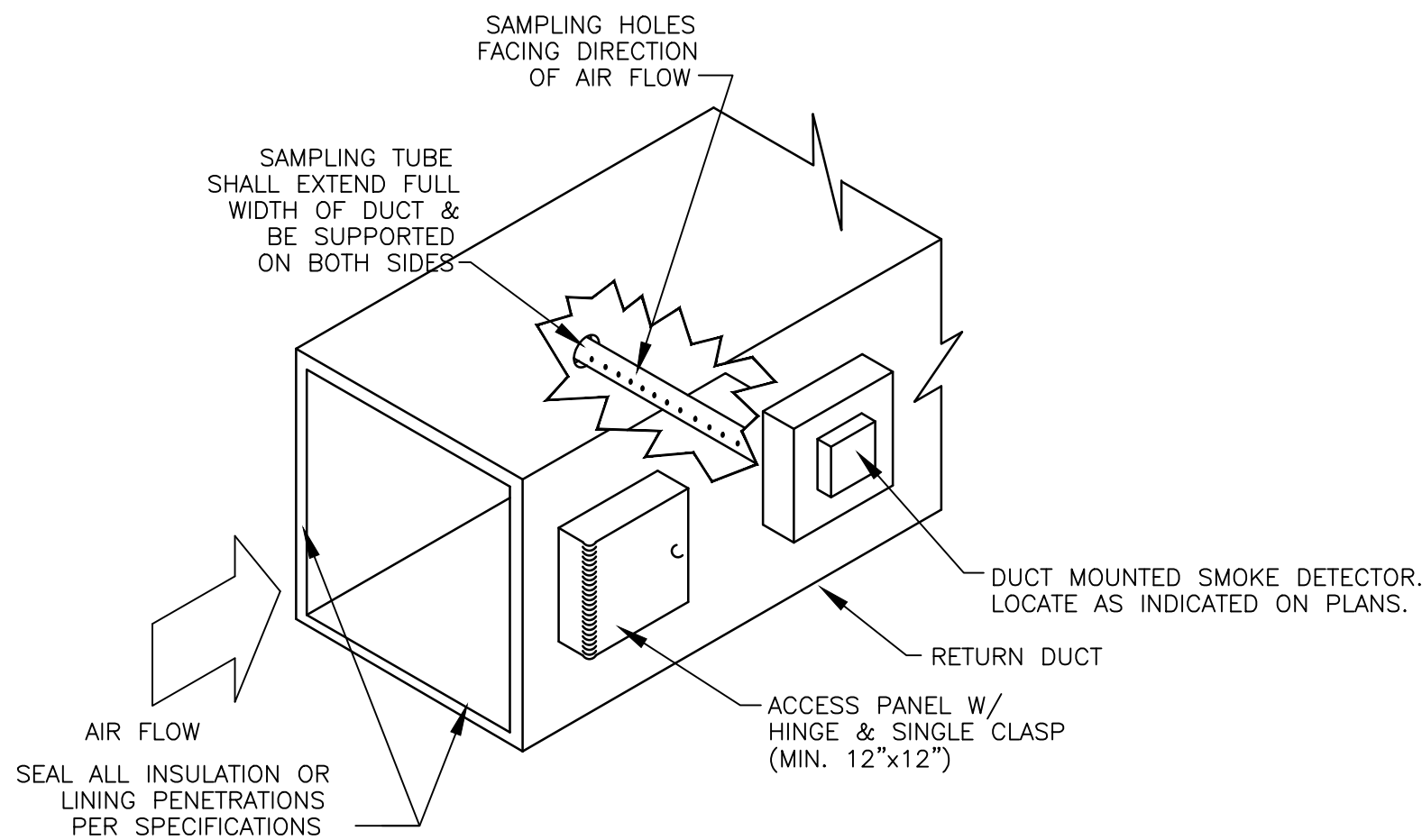
THIS DRAWING IS THE PROPERTY OF ENGINEERING SOURCE OF NC, P.A. THIS DRAWING IS NOT TO BE COPIED IN WHOLE OR IN PART. THIS DRAWING OR THE INFORMATION HEREON IS NOT TO BE USED ON ANY OTHER PROJECT AND MUST BE RETURNED TO ENGINEERING SOURCE OF NC, P.A. UPON REQUEST. DO NOT SCALE THESE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.

MECHANICAL GENERAL NOTES:

- ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE NC BUILDING CODE & CONTR. SHALL NOTIFY ENGINEER IN WRITING REGARDING ANY CODE DISCREPANCIES FOUND ON PLANS. CONTR. IS RESPONSIBLE FOR PERMITS, INSPECTIONS AND FEES.
- SYSTEMS INDICATED ON PLANS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR SHALL PROVIDE NECESSARY HANGERS, FASTENERS ETC. TO PROVIDE A COMPLETE AND WORKING SYSTEM.
- CONTRACTOR SHALL SEAL ALL DUCTWORK WITH A PAINT ON MASTIC. ALL WALL PENETRATIONS SHALL BE SEALED AIR TIGHT.
- CONTRACTOR SHALL FIELD MEASURE ACTUAL INSTALLED CONDITIONS AND COORDINATE DUCT SIZES PRIOR TO FABRICATION OR INSTALLATION OF EQUIP. & DUCTWORK.
- CONTRACTOR SHALL COORDINATE ALL DUCTWORK, DIFFUSER AND GRILLE LOCATION WITH OTHER CEILING MOUNTED DEVICES SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLAN.
- CONTRACTOR SHALL INSTALL BALANCING DAMPERS IN EACH BRANCH DUCT TO PROVIDE PROPER AIRFLOW TO EACH ZONE.
- LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 4'-0" A.F.F. (CENTER OF BOX FOR GYP BRD, TOP OF BOX FOR MASONRY) IN LOCATION INDICATED ON PLANS.
- ALL DUCT DIMENSIONS ARE INSIDE CLEAR DIMENSIONS.
- CONTRACTOR SHALL COORDINATE ALL ROOF AND FLOOR PENETRATION LOCATIONS AND SIZES.
- FABRICATE AND INSTALL ALL DUCT WORK PER SMACNA 1.5" W.C. PRESSURE. ALL ELBOWS SHALL HAVE 1.5R CENTERLINE. ALL DUCT UNDER SLAB SHALL BE FIBERGLASS.
- ALL FLEXIBLE ROUND DUCT SHALL BE PRE-INSULATED DOUBLE WALLED WITH SPIRAL METAL RIB, AND SHALL HAVE MIN. RESISTANCE VALUE OF R-6. MAXIMUM LENGTH SHALL BE 10'-0" UNLESS SHOWN SPECIFICALLY OTHERWISE IN PLAN. SECURE ENDS WITH NYLON BANDS AND TAPE.
- ALL SUPPLY AND RETURN DUCT SHALL BE INSULATED WITH A MINIMUM OF 2-3/16" 3/4 LB. OR 2" OF 1.0 LB. DENSITY FIBERGLASS WRAP. INSULATED DOUBLE WALLED SPIRAL DUCT SHALL HAVE A MINIMUM INSULATION THICKNESS OF 2" OF 1.5 LB. DENSITY. PIPING INSULATION (REFRIGERANT OR WATER) SHALL BE A MINIMUM OF 1-1/2" THICK OR PER LATEST NC ENERGY CODE, WHICHEVER IS GREATER.
- MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALUMINUM JACKET PROTECTIVE COVERING FOR ALL REFRIGERANT PIPE INSULATION INSTALLED ON THE BUILDING EXTERIOR.
- PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AND RETURN CONNECTIONS TO HVAC UNITS.
- PROVIDE AUXILIARY CONDENSATE DRAIN PAN FOR ALL AIR HANDLING UNITS, FAN COIL UNITS, FURNACE WITH COOLING COIL, ETC. CONTRACTOR SHALL PROVIDE AND INSTALL WATER LEVEL FLOAT SWITCH IN AUXILIARY DRAIN PAN. FLOAT SWITCH SHALL SHUT DOWN INDOOR AND ASSOCIATED OUTDOOR UNIT WHEN ACTIVATED. DRAIN PAN OUTLET SHALL BE PIPED TO BUILDING EXTERIOR.
- CONDENSATE PIPE SHALL BE SCHEDULE 40 PVC OR HARD DRAWN COPPER. INSTALL WITH PROPER SLOPE AND NO SAGS. COPPER PIPE SHALL BE INSULATED WITH 1/2" THICK CLOSED CELL INSULATION. SCHEDULE 40 PVC PIPE SHALL BE INSULATED WITH 1/2" THICK CLOSED CELL INSULATION.
- ALL DUCTWORK AND PIPING SHALL BE CONCEALED ABOVE CEILINGS, TRUSSES AND SOFFITS EXCEPT IN MECHANICAL ROOMS, UTILITY PLATFORMS, AREAS WITH EXPOSED STRUCTURE (NO CEILINGS), AND WHERE NOTED OTHERWISE.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL CONTROL WIRING & CONNECTIONS TO HIS EQUIPMENT. COORD. FEEDER AND FUSE SIZES FOR SPECIFIC EQUIPMENT PROVIDED WITH ELECTRICIAN. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL WORK AND EQUIPMENT REQUIRED TO PROVIDE FEEDERS FOR EQUIPMENT THAT EXCEEDS THE AMP RATINGS LISTED IN THE SCHEDULE.
- ALL GAS PIPE AS SHOWN (INTERIOR OR EXTERIOR) SHALL BE SCHEDULE 40 BLACK STEEL PAINTED OSHA YELLOW OR YELLOW FLEXIBLE STAINLESS STEEL. ALL GAS PIPING SHALL BE LABELED WITH THE TYPE OF GAS AND THE SUPPLY PRESSURE. CONTRACTOR SHALL INSTALL GAS PIPE PER INSTALLATION STANDARD MSS SP-58. M.C. SHALL PROVIDE MAPA PRODUCTS PIPE SUPPORTS WITH E-6000 ADHESIVE. CONTRACTOR IS RESPONSIBLE FOR ALL GAS PIPING FROM GAS COMPANY METER, GAS COMPANY REGULATOR, OR REMOTE GAS TANK TO ALL SECOND STAGE REGULATORS AND ALL GAS FIRED EQUIPMENT.
- MECHANICAL CONTRACTOR MAY USE ROUND DUCT OF EQUIV. AREA IN LIEU OF RECTANGULAR. COORD. ROUND DUCT SIZES W/ ENGR. USE INSULATED DOUBLE WALLED SPIRAL DUCT WITH PAINT GRIP FINISH WHERE DUCT IS TO BE EXPOSED.
- MECHANICAL CONTRACTOR SHALL PROVIDE ENGR. WITH AN AIR BALANCE REPORT INDICATING INITIAL AND FINAL READINGS AT EACH DIFFUSER AND TOTAL CFM PER UNIT, INCLUDE IN DOCUMENTS PROVIDED TO OWNER AT JOB CLOSEOUT.
- MECHANICAL CONTRACTOR SHALL LABEL ALL EQUIPMENT WITH ENGRAVED PLASTIC LAMINATE, SCREWED TO PIECE OF EQUIPMENT.
- CONVENTIONAL FURNACES SHALL HAVE TYPE B VENTS, CONDENSING TYPE SHALL HAVE PVC VENTS.
- MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL CO & NO SENSOR FOR ALL GAS FIRED EQUIPMENT.
- UNIT CONTROLLER OR PROGRAMMABLE THERMOSTAT SHALL HAVE 7 DAY PROGRAMING, TIMED OVER-RIDE AND THE ABILITY TO RUN FANS IN OCCUP. MODE & CYCLE FANS IN UN-OCCUP. MODE.
- MECHANICAL CONTRACTOR SHALL CHANGE UNIT FILTERS AFTER EACH TWO WEEKS OF RUN TIME, AND SHALL LEAVE ONE CHANGE OF FILTERS FOR OWNER TO USE FOR NEXT FILTER CHANGE.
- MECHANICAL CONTRACTOR SHALL NOT ALLOW DUCTWORK TO CONTACT LAY-IN LIGHT FIXTURES. ROUTE ACCORDINGLY.
- MECHANICAL CONTRACTOR SHALL INSTALL DUCT MOUNTED SMOKE DETECTORS WHERE INDICATED ON PLANS. COORDINATE WITH E.C. IF DUCT DETECTOR IS PROVIDED AS PART OF BUILDING FIRE ALARM SYSTEM. IF NOT, PROVIDE DETECTOR & ASSOCIATED HORN/STROBE ALARM (HONEYWELL RTS2-AOS MULTI-SIGNALING) AS REQUIRED BY N.C. MECHANICAL CODE SECTION 606.4.1. M.C. IS RESPONSIBLE FOR DUCT ACCESS DOORS UNDER ALL CIRCUMSTANCES.

GAS PACK SCHEDULE																	
MARK	O.A.	SUPPLY FAN					MODEL NO.		COOLING			HEATING			REMARKS		
		CFM	EXT SP.	MOTOR HP	VOLT/PH	MCA	MOCP	MANUF./MODEL	NOMINAL TON	NOMINAL SHC(MBTU)	EER	FUEL	MAX MBH INPUT	MIN MBH OUTPUT		STAGES OF HEAT	AFUE
GP-1	300	1,600	0.75	1.0	208/1	32.0	50	TRANE/4YCC4048A1	48.0	33.6	11.5	NATURAL GAS	90.0	72.9	2	81%	1,2,3,4,5
GP-2	175	800	0.75	1/2	208/1	19.5	30	TRANE/4YCC4048A1	24.0	16.8	12.0	NATURAL GAS	60.0	48.6	2	81%	1,2,3,4,5

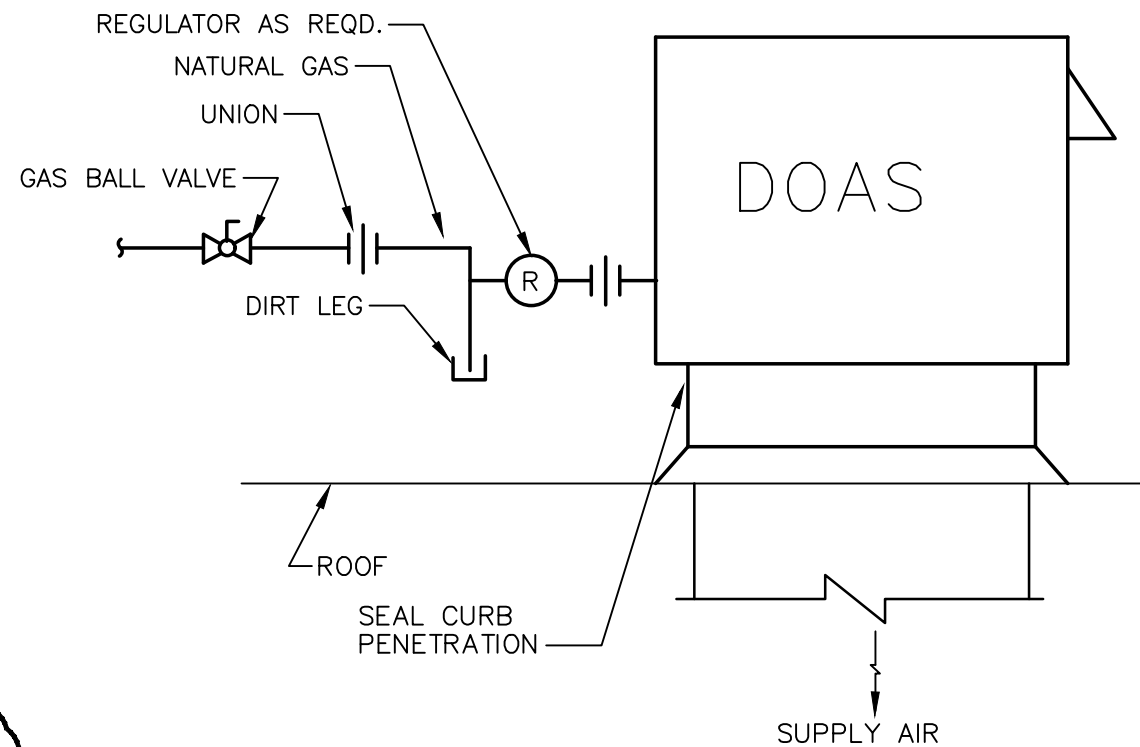
- PROVIDE WITH COIL GUARD OPTION & "LOW-AMBIENT" KIT.
- ANY WIRING SHALL BE DONE BY A LICENSED ELECTRICAL SUB-CONTRACTOR.
- PROVIDE WITH CONTROL TRANS. AS REQUIRED.
- PROVIDE WITH PROG. TSTAT WITH 2 HOUR OVER-RIDE.
- M.C. SHALL PROVIDE MOTORIZED DAMPER ON OUTSIDE AIR DUCT. DAMPER CONTROLLED BY PROGRAMMABLE CONTROL SYSTEM. (C403.2.4.3 NCEC 2018).
- PROVIDE UNIT WITH POWERED CONVENIENCE OUTLET (120V).
- SPECIFICATIONS BASED UPON "TRANE", EQUALS BY "CARRIER" AND "ICP" ARE ACCEPTABLE.



DUCT MOUNTED SMOKE DETECTOR DETAIL

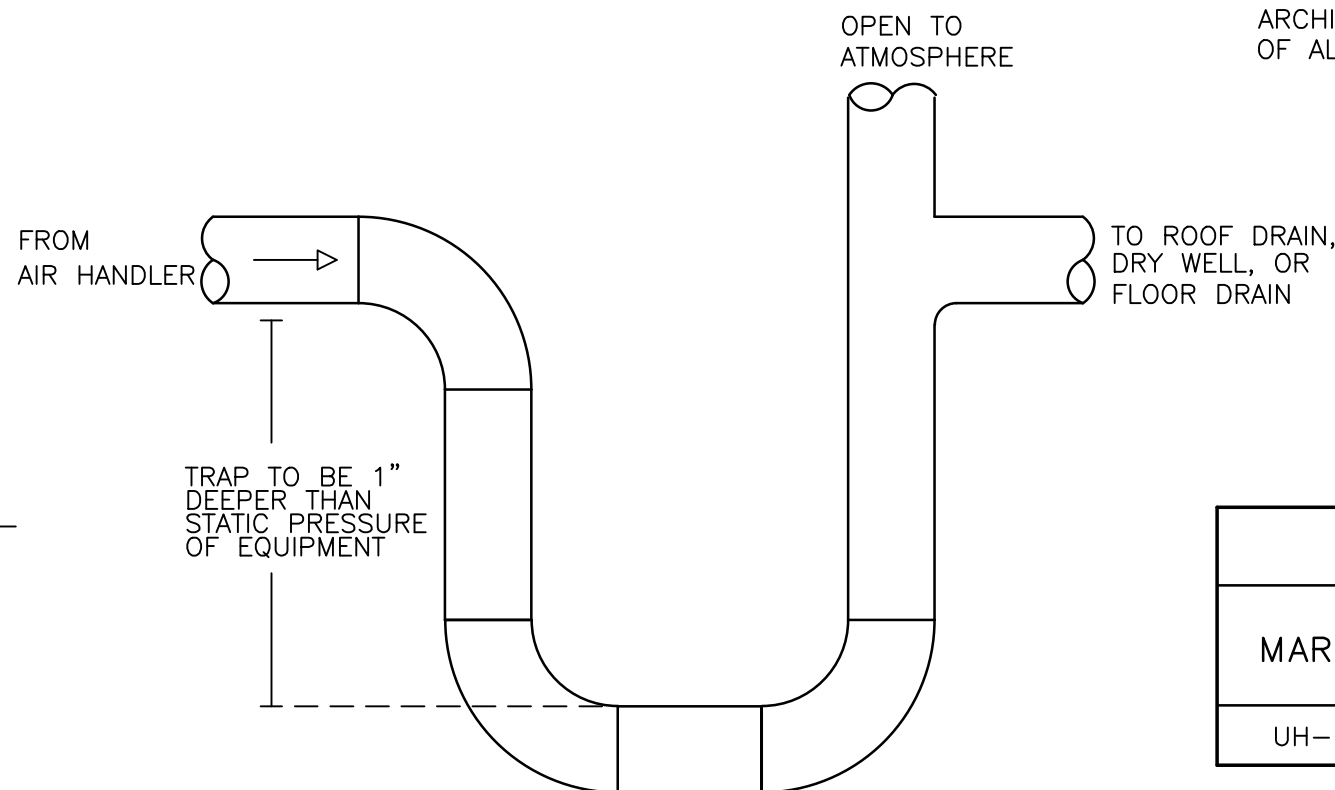
SCALE: N.T.S.

* PROVIDE COPPER TUBING TO VENT REGULATOR AS REQUIRED



DOAS MOUNTING DETAIL

SCALE: NTS



CONDENSATE TRAP DETAIL

SCALE: NTS

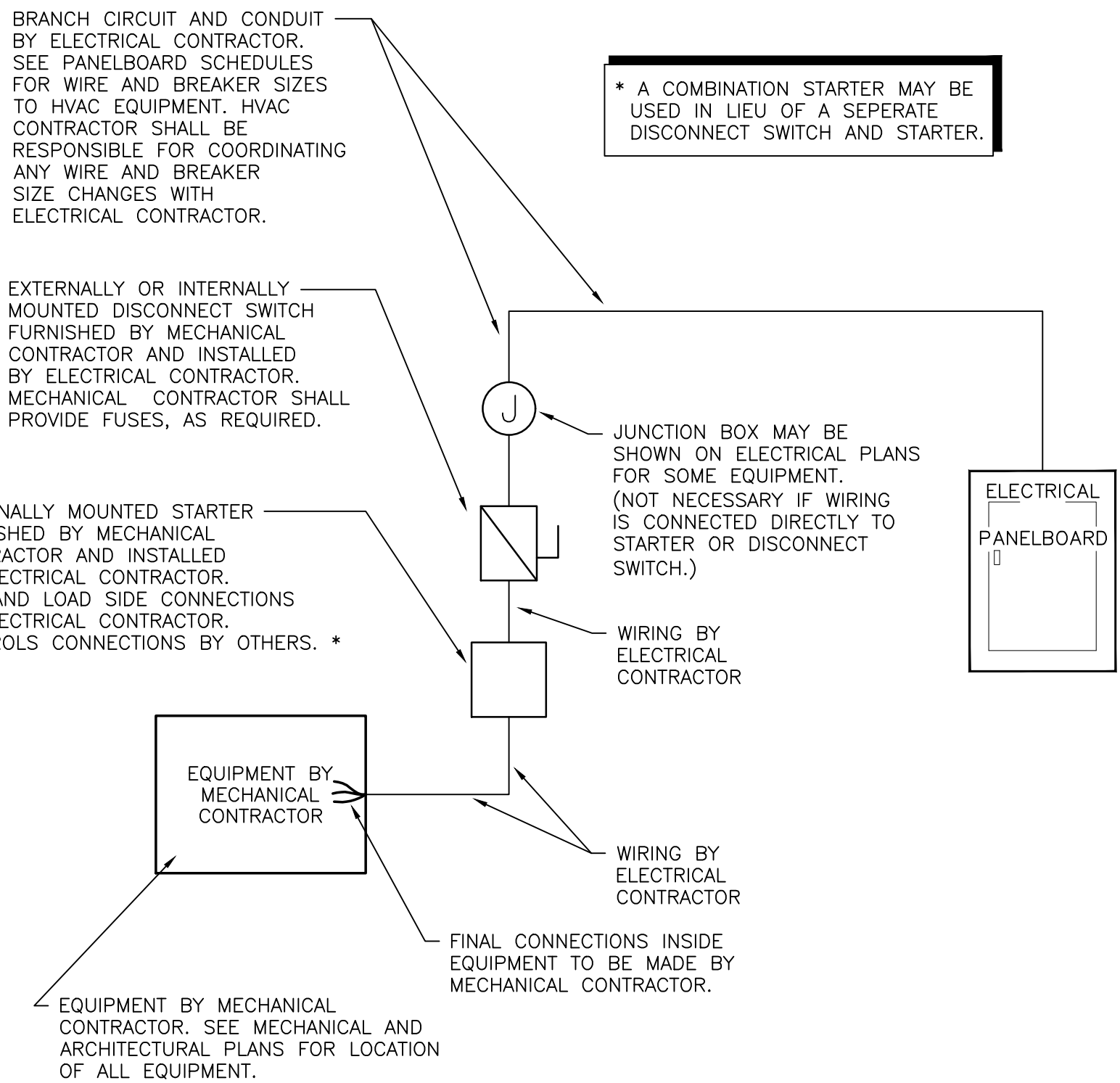
FAN SCHEDULE										
SYMBOL	AREA SERVED	MANUF./MODEL	SERVICE	TYPE ASSEMBLY	CFM	SP (IN. W.G.)	DRIVE TYPE	WATTS	VOLT/PH	REMARKS
EF-A	LAUNDRY	GREENHECK/SP-A110	EXHAUST	CABINET	100	.125	DIRECT	49	120/1	1,2,3
EF-B	TOILET	GREENHECK/SP-A190	EXHAUST	CABINET	150	.125	DIRECT	113	120/1	1,2,3
EF-C	CONCESSION/TEAM	GREENHECK/SP-A290	EXHAUST	CABINET	300	.125	DIRECT	80.7	120/1	1,2,3
EF-D	TOILET	GREENHECK/SP-A510	EXHAUST	CABINET	550	.125	DIRECT	224	120/1	1,2,4
EF-E	TOILET	GREENHECK/SP-A710	EXHAUST	CABINET	650	.125	DIRECT	285	120/1	1,2,3
EF-F	LOCKER ROOM	GREENHECK/SP-A1050	EXHAUST	CABINET	1000	.125	DIRECT	420	120/1	1,2,3

- BACKDRAFT DAMPER.
- UNIT MOUNTED DISCONNECT SWITCH.
- ROUTE EXHAUST DUCT TO EXTERIOR WALL, PROVIDE WITH WALL CAP.
- PROVIDE WITH BACKDRAFT DAMPER, FAN GUARD AND DISCHARGE HOOD.
- EQUALS BY CARNES, PENN, ILG AND BROAN ARE ACCEPTABLE.

DOAS UNIT SCHEDULE												
MARK	FAN					TOTAL COOLING CAPACITY	SENSIBLE COOLING CAPACITY	ENTERING AIR TEMP. DB/WB	HEATING INPUT BTUH	HEATING OUTPUT BTUH	MCA	MOCP
	CFM	O.A. MAX.	E.S.P.	H.P.	POWER							
DOAS-1	2,400	100%	1.0"	3.0	480/3	186.0 MBH	98.6 MBH	93.0/76.0	245,838	196,670	30.2	35
DOAS-2	2,400	100%	1.0"	3.0	480/3	186.0 MBH	98.6 MBH	93.0/76.0	245,838	196,670	30.2	35
DOAS-3	2,000	100%	1.0"	3.0	480/3	154.0 MBH	83.7 MBH	93.0/76.0	204,864	163,891	29.7	30
DOAS-4	1,800	100%	1.0"	2.0	480/3	144.0 MBH	79.9 MBH	93.0/76.0	184,378	147,502	27.7	30

NOTES:

- PROVIDE WITH MODULATING GAS HEAT, HOT GAS REHEAT, AND ROOF CURB AS REQUIRED.
- SPECIFICATIONS BASED UPON "PARAGON", EQUALS BY "TRANE", "AON", AND "GREENHECK" ARE ACCEPTABLE.



MECHANICAL EQUIPMENT ELECTRICAL CONNECTION DETAIL

SCALE: N.T.S.

UNIT HEATER SCHEDULE							
MARK	INPUT	OUTPUT	FUEL	MOTOR HP	AMP DRAW	ENTERING CFM	OUTLET VELOCITY (FPM)
UH-1	75 MBH	60 MBH	NATURAL GAS	1/30	2.3	1130	664

- MOUNT AT 8'-6" MAX. AFF. PROVIDE MOUNTING BRACKET AS REQUIRED.

GAS SIZING CALCULATIONS

EQUIPMENT LIST	MBH	QUANTITY	TOTAL MBH
GP-1	80	1	80
GP-2	60	1	60
DOAS-1,2	246	2	492
DOAS-3	205	1	205
DOAS-4	185	1	185
IWH	199	5	995
UH-1	75	1	75

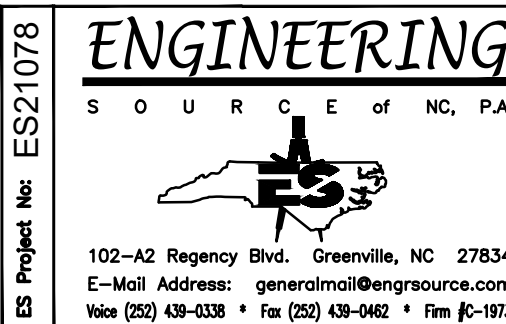
TOTAL CONNECTED = 2,092

LENGTH OF GAS LINE = 150 FT.

GAS PRESSURE = 2 PSI

SIZE OF GAS SERVICE REQUIRED = 1.25

NOTE: ENGINEER SHALL BE NOTIFIED PRIOR TO INSTALLATION OF GAS PIPE IF ANY ONE OF THE ABOVE CALCULATIONS DIFFER FROM THE ACTUAL INSTALLATION REQUIREMENTS. ENGINEER SHALL HAVE OPPORTUNITY TO REVIEW ACTUAL INSTALLATION CONDITIONS AND RE-SIZE GAS SERVICE IF REQUIRED.



NEW FACILITY FOR

FIELD HOUSE

NORTHERN NASH HIGH SCHOOL

4230 GREEN HILLS ROAD

ROCKY MOUNT, NORTH CAROLINA

OAKLEY
COLLIER
OCA ARCHITECTS

107 Cambridge Road, Rocky Mount, NC 27854 (773) 937-2500
1111 Holmes Street, Suite 109, Raleigh, NC 27604 (919) 857-7000

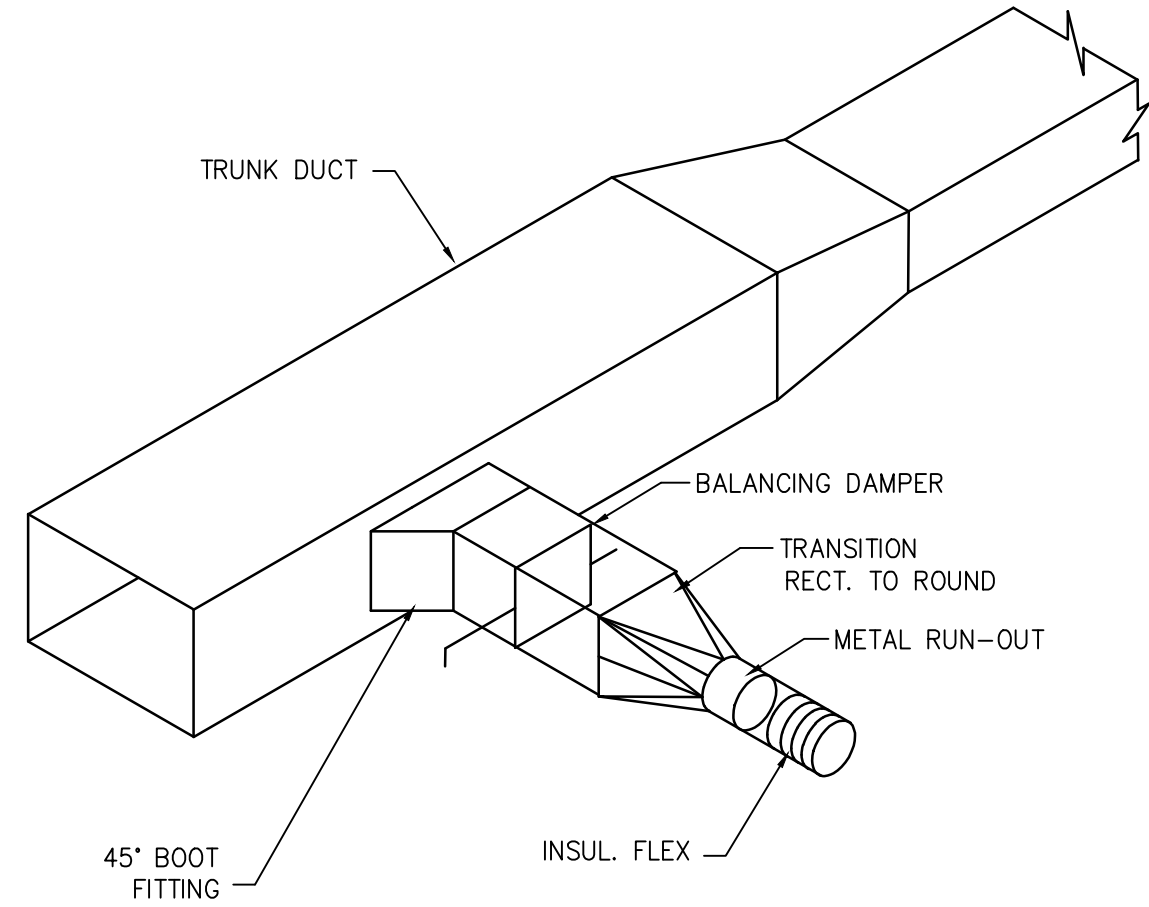
GENERAL NOTE:
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Revisions
Description Date
ADDN #1 05/16/23

Date 4-24-23 Project No. 21038
Drawn By DEW Sheet No. M0.1
Checked By DWP
Sheet Title
MECHANICAL NOTES, SCHEDULES, & DETAILS

NCBC VENTILATION CALCULATIONS							
OCCUPANCY TYPE	SQ. FT.	O.A. PER SQ. FT.	# OF OCCUPANTS	O.A. PER PERSON	EXHAUST PER SQ. FT.	TOTAL O.A. CFM	TOTAL EXHAUST
OFFICE SPACE	1,237	0.06	7	5	5	110	
CAFE/FAST FOOD	198	0.18	20	7.5	7.5	186	
LOCKER/DRESSING ROOM	3,606	—	—	—	.25		902
TOTAL REQUIRED FOR BUILDING						296	902
TOTAL PROVIDED FOR BUILDING						475	1300

**VENTILATION IS SET TO PROVIDE BUILDING WITH POSITIVE PRESSURE.



LOW PRESSURE BRANCH CONNECTION

SCALE: NTS

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE:

PREScriptive ☒ ENERGY COST BUDGET ☐

CLIMATE ZONE: IBC - 4A

THERMAL ZONE

WINTER DRY BULB: 18.8°F
SUMMER DRY BULB: 91.7°F

INTERIOR DESIGN CONDITIONS

WINTER DRY BULB: 70°F
SUMMER DRY BULB: 75°F
RELATIVE HUMIDITY: 50%

BUILDING HEATING LOAD: 519.4 MBH

BUILDING COOLING LOAD: 742.0 MBH

MECHANICAL SPACE CONDITIONING SYSTEM

UNITARY
DESCRIPTION OF UNIT: ROOF TOP GAS PACK
HEATING EFFICIENCY: 81% AFUE
COOLING EFFICIENCY: 12.0 EER
HEAT OUTPUT OF UNIT: SEE SCHEDULE
COOLING OUTPUT OF UNIT: SEE SCHEDULE

BOILER
TOTAL BOILER OUTPUT: (If oversized, state reason)
CHILLER
TOTAL CHILLER OUTPUT: (If oversized, state reason)

LIST EQUIPMENT EFFICIENCIES

EQUIPMENT SCHEDULES WITH MOTORS (Not used for mechanical systems)

MOTOR HORSEPOWER:
NUMBER OF PHASES:
MINIMUM EFFICIENCY:
MOTOR TYPE:
OF POLES:

DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the 2018 North Carolina energy conservation code.

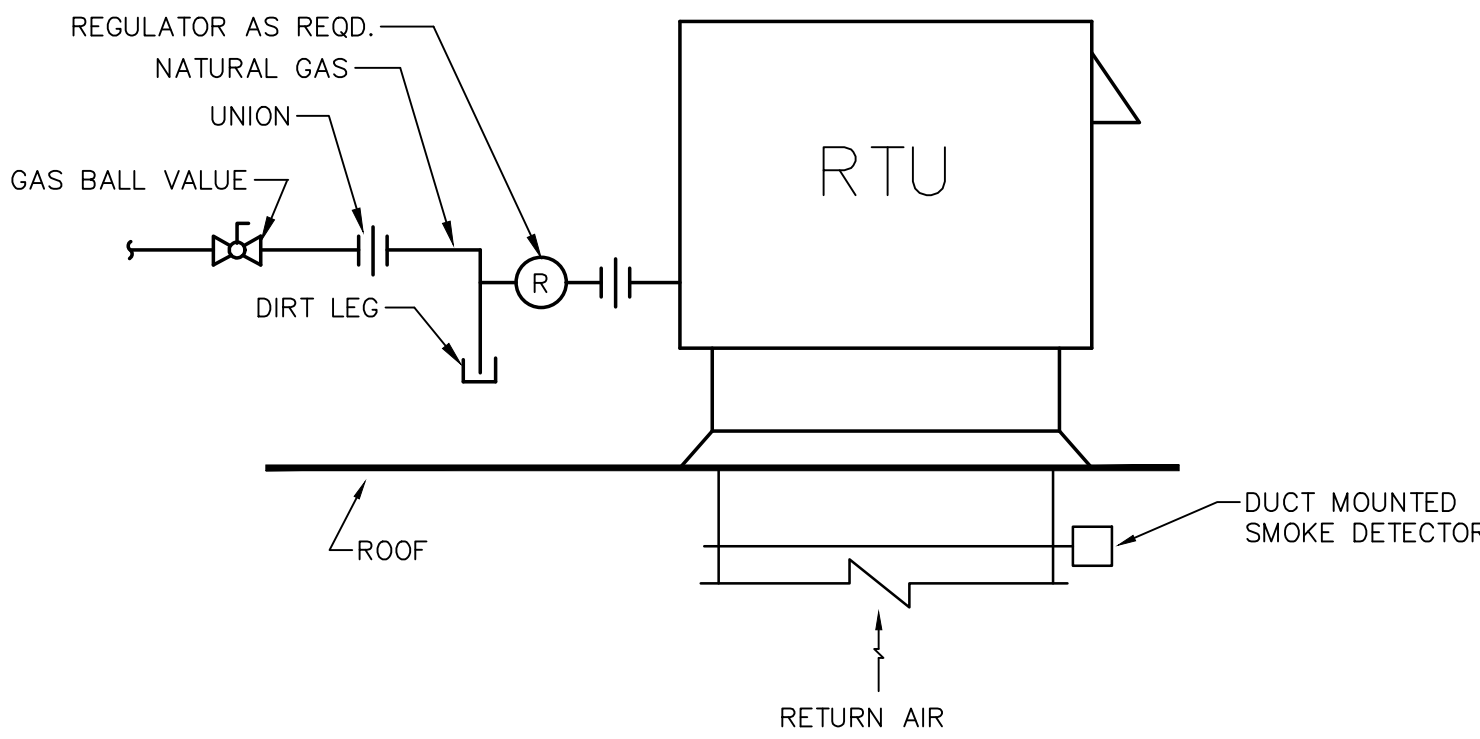
SIGNED: D. Wilson POU, P.E.

NAME: D. WILSON POU, P.E.

TITLE: PRESIDENT

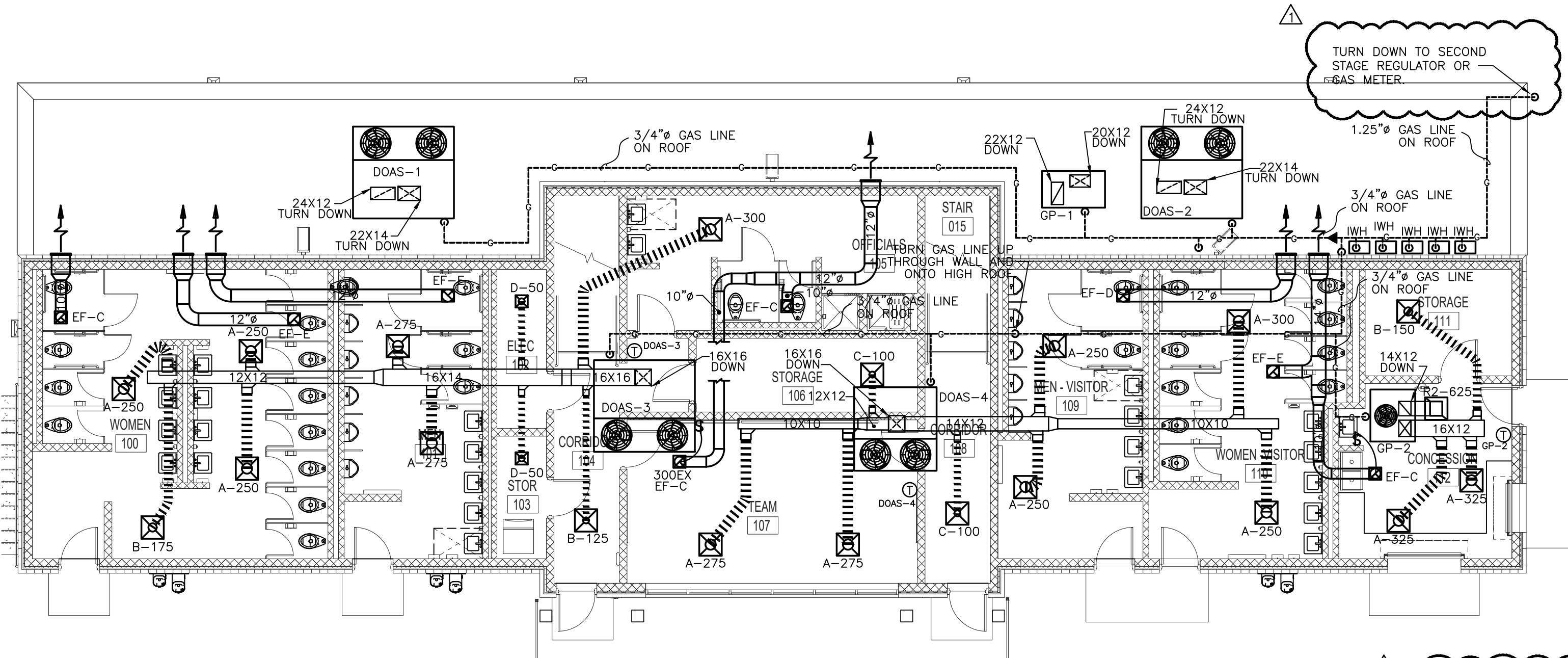
AIR DISTRIBUTION						
MARK	MAX. CFM	FRAME	NECK SIZE	MODEL	MANUF.	REMARKS
A	400	GYP.	10"ø	SMD	PRICE	1,2,3,5,7,8
B	200	GYP.	8"ø	SMD	PRICE	1,2,3,5,7,8
C	100	GYP.	6"ø	SMD	PRICE	1,2,3,5,7,8
D	100	GYP.	12X12 6"ø	SMD	PRICE	2,3,5,7,8
F	200	DUCT	12x5	SDGAL	PRICE	2,3
S	400	DUCT	6x24	AHCD1D	PRICE	2,3
R1	550	GYP.	12x12	80	PRICE	1,2,4,5,6,8
R2	1400	GYP.	22x22	80	PRICE	1,2,4,5,6,8

1. ALL T-BAR GRILLES SHALL HAVE 24"x24" FACE.
2. NC SHALL NOT EXCEED NC 25.
3. MAX. SP SUPPLY - 0.10" W.G.
4. MAX. SP RETURN - 0.05" W.G.
5. ALL RUN-OUTS AND FLEX TO BE EQUAL TO NECK SIZE FOR GRILLE.
6. PAINT INSIDE PANI FLAT BLACK.
7. CONTRACTOR SHALL INSULATE BACK OF SUPPLY GRILLE PAN.
8. PROVIDE ALL GYP. BOARD GRILLES WITH OPPOSED BLADE DAMPER.*



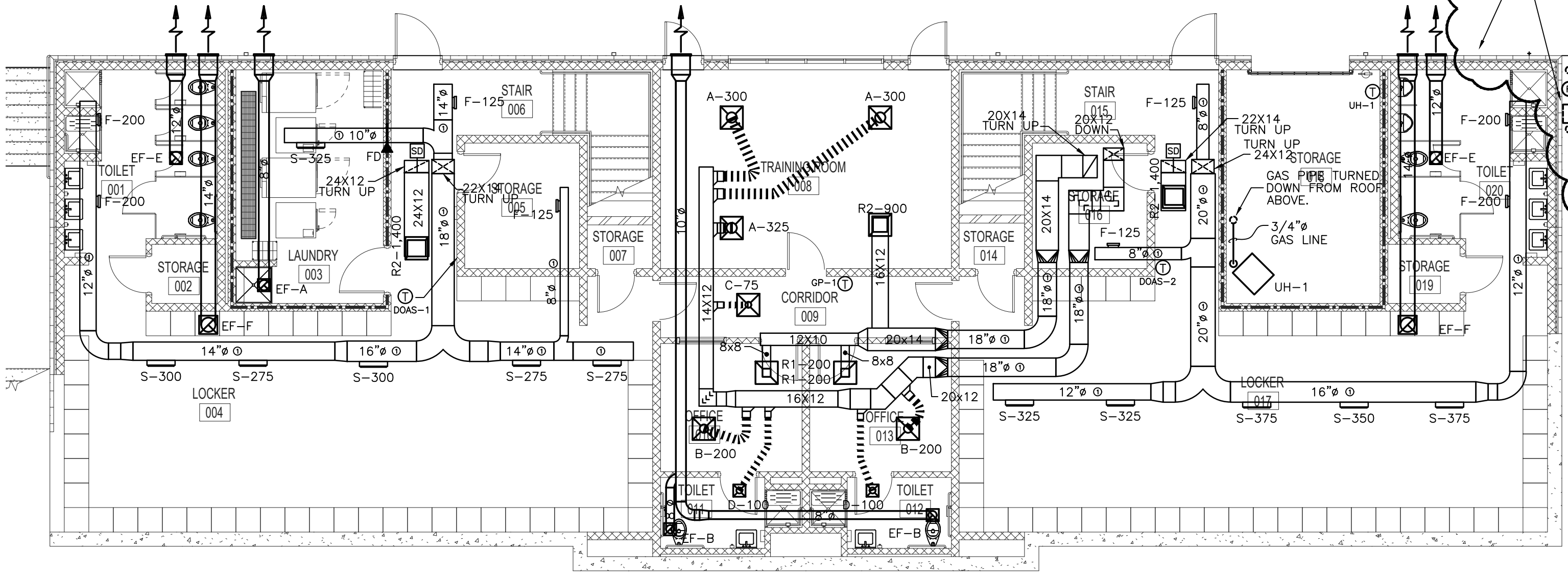
RTU MOUNTING DETAIL

SCALE: NTS



FIRST FLOOR MECHANICAL PLAN

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



GROUND FLOOR MECHANICAL PLAN

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

LOCKER RM.

* UNOCC. OPERATION

- * SUPPLY AIR = 2400 CFM
- * RETURN AIR = 1400 CFM
- * OUTSIDE AIR = 1000 CFM
- * EXHAUST AIR = 1400 CFM

* OCC. OPERATION

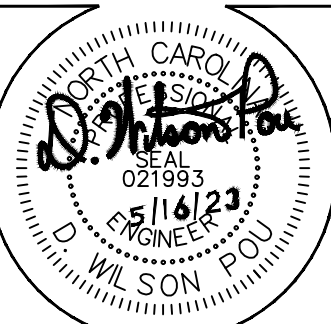
- * SUPPLY AIR = 2400 CFM
- * RETURN AIR = 800 CFM
- * OUTSIDE AIR = 1600 CFM
- * EXHAUST AIR = 1600 CFM

NOTE: MECHANICAL CONTRACTOR SHALL PROVIDE SECOND STAGE REGULATORS AS REQUIRED FOR ALL GAS FIRED EQUIPMENT. COORDINATE REQUIREMENTS WITH ALL GAS FIRED EQUIPMENT.

MECHANICAL LEGEND

- | | |
|---------------|--|
| G.C. | GEN. CONTR. |
| E.C. | ELEC. CONTR. |
| P.C. | PLUMB. CONTR. |
| AF | ABOVE FINISH FLOOR |
| AFG | ABOVE FINISH GRADE |
| 18x16 | WRAPPED RIGID DUCT |
| 18x16 | INSULATED FLEXIBLE DUCT |
| ☒ | SUPPLY DIFFUSER |
| ☒ | RETURN AIR GRILLE |
| ☒ | CEILING EXHAUST GRILLE OR FAN |
| Ⓟ | THERMOSTAT & UNIT SERVED. |
| Ⓟ | HUMIDISTAT & UNIT SERVED. |
| A-400 | DIFFUSER TYPE-CFM |
| MANUAL DAMPER | |
| SD | DUCT MOUNTED SMOKE DETECTOR |
| SD | CEILING MOUNTED SMOKE DETECTOR |
| ☐ | FIRE ALARM HORN/STROBE (SEE GENERAL NOTES) |
| + | CONN. TO EXIST. |
| --- | GAS PIPING |
| FD | SPRING LOADED FIRE DAMPER |
| Ⓢ | CO2 SENSOR (800 PPM) & UNIT SERVED. |
| Ⓢ | TWIST TIMER SWITCH |
| M | 120V MOTORIZED DAMPER |
| CO | CO & NO SENSOR & UNIT SERVED. |
| CON | CONSPEC CON50-CON02 |

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SOURCE OF NC, P.A.
102-A2, Regency Blvd., Greenville, NC 27834
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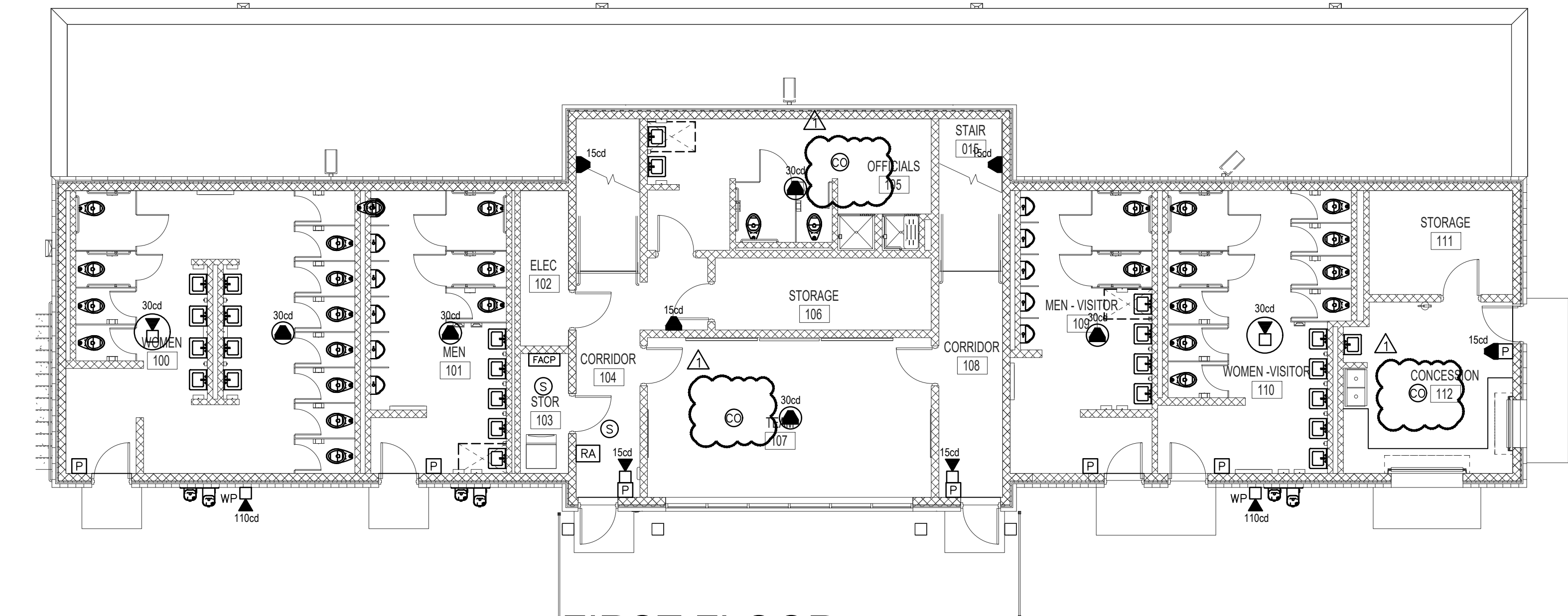
NEW FACILITY FOR

FIELD HOUSE
NORTHERN NASH HIGH SCHOOL
4230 GREEN HILLS ROAD
ROCKY MOUNT, NORTH CAROLINA

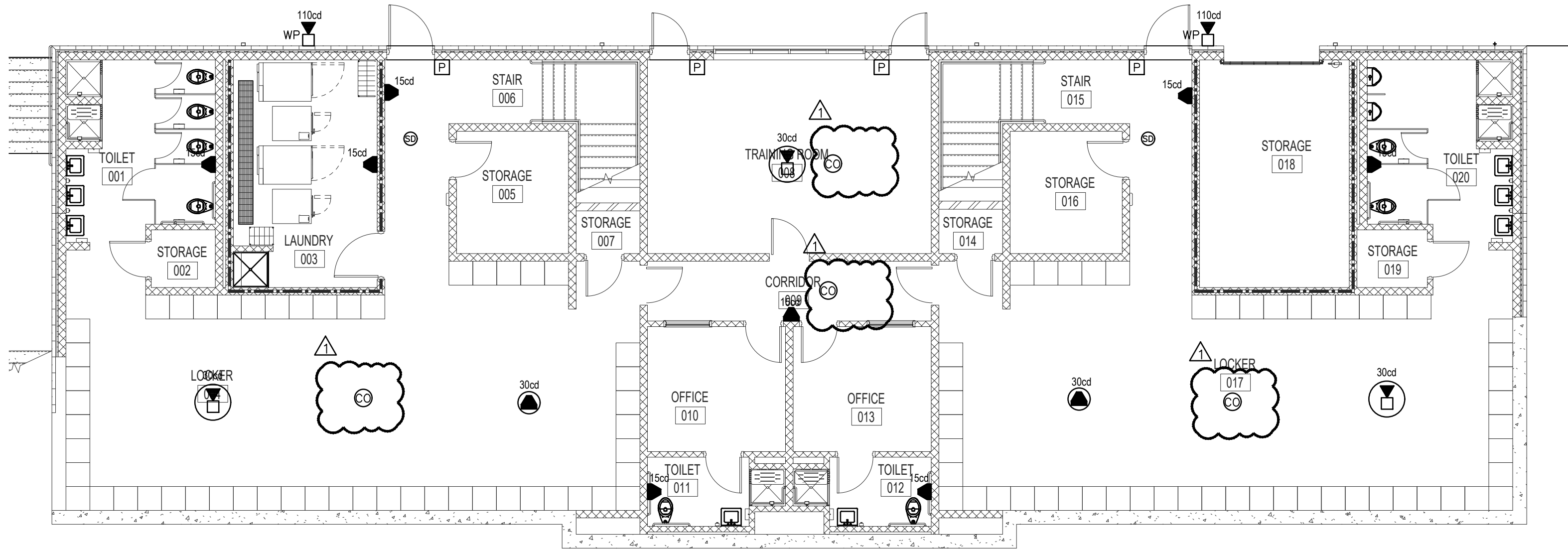
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Revisions
Description Date
ADDEN #1 05/16/23

Date 4-24-23	Project No. 21038
Drawn By DEW	Sheet No. M1.1
Checked By DWP	Sheet Title MECHANICAL PLAN



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



GROUND FLOOR
FIRE ALARM PLAN
SCALE: 1/8" = 1'-0"

ES Project No. ES21078

ENGINEERING
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D. WILSON
ENGINEER
021993
5/16/23

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	Description	Date
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4-24-23	21038	
Drawn By	Sheet No.	
GS	FA1.1	
Checked By		
DWP		
Sheet Title		
FIRE ALARM PLAN		

NEW FACILITY FOR
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4230 GREEN HILLS ROAD
ROCKY MOUNT, NORTH CAROLINA

OAKLEY
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OCA ARCHITECTS
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