# JOHNSTON COUNTY PUBLIC SCHOOLS FOUR OAKS ELEMENTARY SCHOOL

**BID SET** 

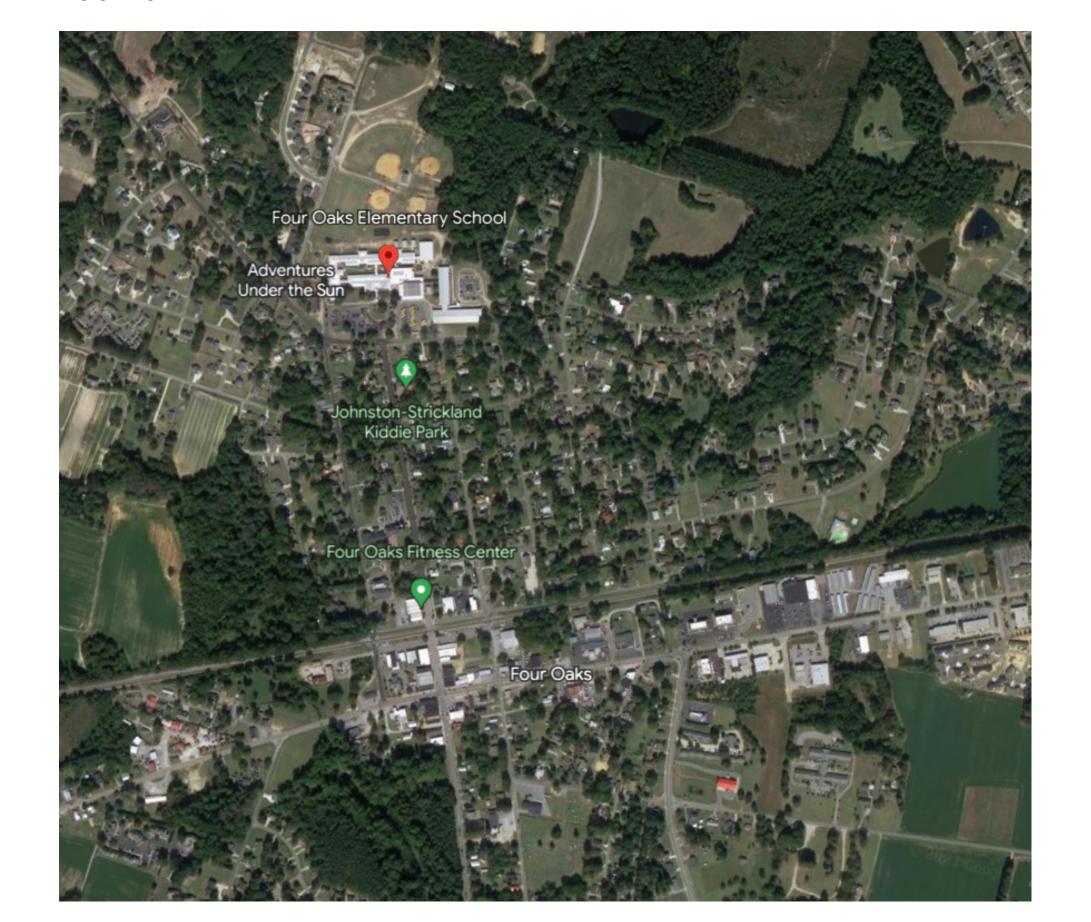
180 W HATCHER STREET FOUR OAKS, NC 27524



## GENERAL PATTERNS KEY

OLINLIALI ATTLINING INLI							
	EARTH		BRICK				
	GYPSUM BOARD		STEEL				
	GRAVEL TYPE 1 (ENGINEERED FILL)		GROUT				
4 4 4	PRECAST CONCRETE		ROUGH WOOD BLOCKING				
	CRUSHED STONE		ROUGH WOOD BLOCKING, NON-CONTINUOUS				
	CONCRETE MASONRY UNIT (CMU)		WOOD, FINISHED WOODWORK				
	METAL STUD PARTITION		PLYWOOD (LARGE SCALE)				
	rigid insulation		1 HR RATING				
	BATT OR LOOSE INSULATION		2 HR RATING				
	CAVITY DRAINAGE MAT		SMOKE RATING				
	ALUMINUM		EXISTING BUILDING MATERIALS				
	STANDING SEAM ROOF		TERRAZZO				
<b>△</b> ,	CONCRETE, POURED						
			·				

## LOCATION MAP



## PROJECT ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	DET,DTL	DETAIL
AP	ACCESS PANEL	DIA	DIAMETER
ACOUS	ACOUSTICAL	DIM	DIMENSION
ACT	ACOUSTICAL CEILING TILE	DISP	DISPENSER
AWP	ACOUSTICAL WALL PANEL	DSP	DISPOSAL
ADJ	ADJACENT	DO	DITTO, REPEAT, SAME
A/C	AIR CONDITIONING	DR	DOOR
ALT	ALTERNATE	DBL	DOUBLE
ALUM	ALUMINUM	DN	DOWN
AB	ANCHOR BOLT	DS	DOWNSPOUT
ANOD	ANODIZED	DT	DRAIN TILE
APPROX	APPROXIMATE	DWR	DRAWER
ARCH	ARCHITECT, ARCHITECTURAL	DWG	DRAWING
AD	AREA DRAIN	DF	DRINKING FOUNTAIN
ACM	ASBESTOS CONTAINING MATERIAL	EA	EACH
@	AT	EF	EACH FACE
AUTO	AUTOMATIC	EW	EACH WAY
BP	BEARING PLATE	E	EAST
ВМ	BENCH MARK	ELEC	ELECTRICAL
BITUM	BITUMINOUS	ELEV	ELEVATION
BLK	BLOCK	EL	ELEVATOR
BLKG	BLOCKING	EMER	EMERGENCY
BD	BOARD	ENCL	ENCLOSURE
BOT	ВОТТОМ	ENTR	ENTRANCE
BRK	BRICK	EQ	EQUAL
BLDG	BUILDING	EQUIP	EQUIPMENT
BN	BULLNOSE	EST	ESTIMATE(D)
CAB	CABINET	EXHST	EXHAUST
Cl	CAST IRON	EXIST	EXISTING
СВ	CATCH BASIN OR CHALK BOARD	EXP	EXPANSION
CLG	CEILING	EJ	EXPANSION JOINT
CLG HT	CEILING HEIGHT	FAB	FABRICATE
CL	CENTER LINE	FT	FEET
CER	CERAMIC	FIG	FIGURE
CIRC	CIRCUMFERENCE	FIN	FINISH
СО	CLEAN OUT	FF	FINISH FLOOR
CLR	CLEAR	FEC	FIRE EXTINGUISHER CABINET
COL	COLUMN	FH	FIRE HOSE
CONC	CONCRETE	FL,FLR	FLOOR
СМИ	CONCRETE MASONRY UNIT	FD	FLOOR DRAIN
CONST	CONSTRUCTION	FTG	FOOTING
CJT	CONSTRUCTION JOINT	FND	FOUNDATION
CONT	CONTINUOUS	FS	FULL SIZE
CONTR	CONTRACTOR	FUT	FUTURE
CJ	CONTROL JOINT	GALV	GALVANIZED
DP	DAMP PROOFING	G	GAS
DEMO	DEMOLISH	GA	GAUGE
DEPT	DEPARTMENT	GEN	GENERAL

C	OLINLIKAL CONTRACTOR	141/21	MAILKIALS
L	GLASS, GLAZING	MAX	MAXIMUM
В	GRAB BAR	MECH	MECHANICAL
R	GRADE, GRADING	MET	METAL
SF	GROSS SQUARE FOOT	MTL	METAL
YP	GYPSUM	М	METER
YP BD	GYPSUM BD	MEZZ	MEZZANINE
WB	GYPSUM WALL BOARD	MIN	MINIMUM
OWR	HARDWARE	MISC	MISCELLANEOUS
OWD	HARDWOOD	MR	MOISTURE RESISTANT
VAC	HEATING, VENTILATING & AIR CONDITIONING	MTD NAT	MOUNTED NATURAL
Γ, HGT	HEIGHT		
EX	HEXAGONAL	NRC	NOISE REDUCTION COEFFIC
	HIGHWAY	NOM	NOMINAL
M	HOLLOW METAL	N	NORTH
ORZ	HORIZONTAL	NIC	NOT IN CONTRACT
	HOSE BIBB	NTS	NOT TO SCALE
о W	HOT WATER	NO, #	NUMBER
? ?		OC	ON CENTER
ζ	HOUR	OPNG	OPENING
CI	INCH	OD	OUTSIDE DIAMETER
CL	INCLUDING	OH	OVERHEAD
CLU	INSIDE DIAMETER	PT	PAINT(ED)
SUL	INSULATION	PR	PAIR
TEDA	INTERIOR	PTR	PAPER TOWEL RECEPTOR
TERM	INTERMEDIATE	PKG	PARKING
V	INVERT	PART BD	PARTICLE BOARD
AN	JANITOR	PART	PARTITION
	JANITOR SINK	PVMT	PAVEMENT
	JOINT	PL	PLATE
T	KITCHEN	PLBG	PLUMBING
SL	LABEL	PLYWD	PLYWOOD
\B	LABORATORY	PVC	POLYVINYL CHLORIDE
AM	LAMINATE(D)	PC CONC	PRECAST CONCRETE
٩V	LAVATORY	PRE FAB	PREFABRICATED
'R	LAYER	PT	PRESSURE TREATED
)R	LEADER	PL	PROPERTY LINE
1	LEFT HAND	QTY	QUANTITY
3	LIBRARY	RAD	RADIUS
	LIGHT	RECP	RECEPTACLE
٧	LIGHT WEIGHT	RE:	REFER TO
ACH	MACHINE	REF	REFERENCE
Н	MAN HOLE	REFR	REFRIGERATOR
HC	MAN HOLE COVER	REINF	REINFORCED(ING)
FR	MANUFACTURE	REQ'D	REQUIRED
FRR	MANUFACTURER	REV	REVISED
AS	MASONRY	RH	RIGHT HAND
0	MASONRY OPENING	R	RISER

GENERAL CONTRACTOR

RM	ROOM
RO	ROUGH OPENING
SAN	SANITARY
SCHED	SCHEDULE
SEC	SECOND
SECT	SECTION
SIM	SIMILAR
SSM	SOLID SURFACE MATERIAL
STC	SOUND TRANSMISSION COEFFICIENT
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STOR	STORAGE
SGFT	STRUCTURAL GLAZED FACING TILE
ST STL	STRUCTURAL STEEL
STRUCT	STRUCTURE, STRUCTURAL
SUSP	SUSPENDED
SAT	SUSPENDED ACOUSTICAL TILE
TEL	TELEPHONE
TEMP	TEMPERATURE
THK	THICKNESS
TPD	TOILET PAPER DISPENSER
TOS	TOP OF SLAB/STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
U	URINAL
VEN	VENEER
VIF	VERIFY IN FIELD
VEST	VESTIBULE
VOL	VOLUME
WC	WATER CLOSET
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
W	WEST
WIND	WINDOW
W/	WITH
W/O	WITHOUT
WD	WOOD
YD	YARD

SCHED	SCHEDULE
SEC	SECOND
SECT	SECTION
SIM	SIMILAR
SSM	SOLID SURFACE MATERIAL
STC	SOUND TRANSMISSION COEFFICIENT
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VEST	VESTIBULE
VOL	VOLUME
WC	WATER CLOSET
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
W	WEST
WIND	WINDOW
\\//	WITH

TEAM MEMBERS

## ARCHITECT/ENGINEERS

T. 919.833.6064 CPLteam.com

DRAWING LIST

APPENDIX B - BUILDING CODE SUMMARY

OVERALL DEMOLITION FLOOR PLAN DEMOLITION PLAN AREA 1A DEMOLITION PLAN AREA 1B AND 1 DEMOLITION PLAN AREA 1D AND 1 DEMOLITION PLAN AREA 1F AND 10

OVERALL LIFE SAFETY PLAN

DEMOLITION PLAN AREA 1H

DEMOLITION PLAN AREA 3A AND 3E DEMOLITION PLAN AREA 4A AND 4B

BUILDING ELEVATIONS & SITE DETAILS OVERALL REFLECTED CEILING PLAN REFLECTED CEILING PLAN AREA 1A REFLECTED CEILING PLAN AREA 1B AND 10 REFLECTED CEILING PLAN AREA 1D AND 1E REFLECTED CEILING PLAN AREA 1F AND 1G

REFLECTED CEILING PLAN AREA 1H REFLECTED CEILING PLAN AREA 2

REFLECTED CEILING PLAN AREA 3A AND 3B REFLECTED CEILING PLAN AREA 4A AND 4B

HVAC SYMBOLS LEGEND AND CONTRACTOR NOTES GROUND FLOOR HVAC DEMOLITION PLAN - AREA 1A GROUND FLOOR HVAC DEMOLITION PLAN - AREA 1B AND 10

GROUND FLOOR HVAC DEMOLITION PLAN - AREA 1H GROUND FLOOR HVAC DEMOLITION PLAN - AREA 2

GROUND FLOOR HVAC DUCTWORK PLAN - AREA 1A GROUND FLOOR HVAC DUCTWORK PLAN - AREA 1B AND 1C

GROUND FLOOR HVAC DUCTWORK PLAN - AREA 1H GROUND FLOOR HVAC DUCTWORK PLAN - AREA 3A AND 3B GROUND FLOOR HVAC DUCTWORK PLAN - AREA 4A AND 4B

ROOF HVAC DUCTWORK AND PIPING PLAN - AREA 1B ROOF HVAC DUCTWORK AND PIPING PLAN - AREA 1D GROUND FLOOR HVAC PIPING PLAN - AREA 1A

GROUND FLOOR HVAC PIPING PLAN - AREA 1D AND 1E GROUND FLOOR HVAC PIPING PLAN - AREA 1F AND 1G

GROUND FLOOR HVAC PIPING PLAN - AREA 3A AND 3B

GROUND FLOOR HVAC PIPING PLAN - AREA 4A AND 4B MEZZANINE HVAC PIPING PLAN - AREA 4A AND 4B

GROUND FLOOR HVAC CONTROLS EQUIPMENT LOCATION PLAN - AREA 4A

MEZZANINE HVAC CONTROLS EQUIPMENT LOCATION PLAN - AREA 4A AND 4B

ENLARGED MECHANICAL ROOM HVAC DEMOLITION PLAN - AREA 1A AND 1B

ENLARGED BOILER ROOM DEMOLITION AND NEW WORK PLAN - AREA 1A

ENLARGED MECHANICAL ROOM NEW WORK PLAN - AREA 1D, 1G AND 1H

ENLARGED MECHANICAL ROOM NEW WORK PLAN - AREA 1A

ENLARGED MECHANICAL ROOM NEW WORK PLAN - AREA 1B

ENLARGED MECHANCIAL ROOM HVAC DEMOLITION PLAN - AREA 1D, 1G AND 1H

MEZZANINE HVAC CONTROLS EQUIPMENT LOCATION PLAN - AREA 2

GROUND FLOOR HVAC PIPING PLAN - AREA 1H

GROUND FLOOR HVAC PIPING PLAN - AREA 2

HVAC HEATING HOT WATER PIPING SCHEMATIC

HVAC CHILLER WATER PIPING SCHEMATIC

HVAC CONTROLS SCHEMATIC

HVAC CONTROLS SCHEMATIC

HVAC CONTROLS SCHEMATIC HVAC CONTROLS SCHEMATIC

HVAC DETAILS

HVAC DETAILS

HVAC SCHEDULES

HVAC SCHEDULES

**UTILITY SCHEDULES & DETAILS** 

PARTIAL ONE-LINE DIAGRAM

E201.1DE

ENLARGED PARTIAL PLAN - UTILITIES - DEMOLITION

GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 1A

GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 1B & 1C

GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 1D & 1E

GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 1H

GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 4B MEZZANINE ELECTRICAL DEMOLITION PLAN - AREA 4A & 4B

GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 1D & 1E

GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 1F & 1G

GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 3A & 3B

GROUND FLOOR AND MEZZANINE LIGHTING PLAN - AREA 2

GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 1H GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 2

GROUND FLOOR LIGHTING PLAN - AREA 1A GROUND FLOOR LIGHTING PLAN - AREA 1B & 1C

GROUND FLOOR LIGHTING PLAN - AREA 1D & 1E

GROUND FLOOR LIGHTING PLAN - AREA 1F & 1G

GROUND FLOOR LIGHTING PLAN - AREA 3A & 3B

GROUND FLOOR LIGHTING PLAN - AREA 4A & 4B

ELECTRICAL EQUIPMENT AND LUMINAIRE SCHEDULES

GROUND FLOOR LIGHTING PLAN - AREA 1H

MEZZANINE LIGHTING PLAN - AREA 4A & 4B

ELECTRICAL DETAILS

ELECTRICAL PANEL SCHEDULES

ELECTRICAL PANEL SCHEDULES

**ELCTRICAL PANEL SCHEDULES** 

GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 1F & 1G

GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 3A & 3B

GROUND FLOOR ELECTRICAL POWER AND SYSTEMS PLAN - AREA 1A

GROUND FLOOR ELECTRICAL POWER AND SYSTEMS PLAN - AREA 1B & 1C

GROUND FLOOR AND MEZZANINE ELECTRICAL DEMOLITION PLAN - AREA 2

ENLARGED PARTIAL PLAN - UTILITIES - NEW WORK

ELECTRICAL SYMBOLS LEGEND AND NOTES

GROUND FLOOR HVAC DUCTWORK PLAN - AREA 1D AND 1E

GROUND FLOOR HVAC DUCTWORK PLAN - AREA 1F AND 1G

ROOF HVAC DEMOLITION PLAN - AREA 1A

ROOF HVAC DEMOLITION PLAN - AREA 1B

ROOF HVAC DEMOLITION PLAN - AREA 1D

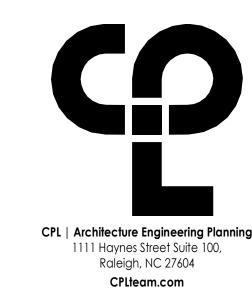
GROUND FLOOR HVAC DEMOLITION PLAN - AREA 1D AND 1E GROUND FLOOR HVAC DEMOLITION PLAN - AREA 1F AND 1G

GROUND FLOOR HVAC DEMOLITION PLAN - AREA 4A AND 4B

DEMOLITION PLAN AREA 2

OVERALL FLOOR PLAN





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R23.00325.00 **JOHNSTON COUNTY PUBLIC** 

**FOUR OAKS ELEMENTARY** SCHOOL

180 W HATCHER STREET FOUR OAKS, NC 27524

**SCHOOLS** 

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS





SHEET INFORMATION 02/17/2025 1/4" = 1'-0" Project Status **BID SET** 

Drawing Title COVER

#### 2018 APPENDIX B **BUILDING CODE SUMMARY** FOR ALL COMMERCIAL PROJECTS

	t: FOUR OAKS	FOUR OAKS ELEMENTARY SCHOOL 180 W HATCHER STREET									
Address: Proposed Use: Owner / Authori Owned By: Code Enforcem	FOUR OAKS zed Agent:	S, NC 27524 <u>Brooks A</u>	■ City/C	OHNSTON CPS County	□ Pri		4-2021 Email:	_brooksmoore@johnston.  □ State ■ State	k12.nc.us		
CONTACT:											
<b>DESIGNER</b> Architectural Civil	FIRM CPL		NAME CHRIS (	COLBY	LICENSE NC# 153		<b>PHONE</b> 802.293.1029	EMAIL CCOLBY@CPLTEAM.COM	И		
Electrical Fire Alarm	CPL -		MICHA	EL RANIERI	NC #020 -	0216	336.232.5725	MRANIERI@CPLTEAM.CO	М		
Plumbing Mechanical Fire Protection Structural	<u>-</u> <u>CPL</u> -		 MICHA 	EL PENA	NC #052 	2834	336.232.5709	MPENA@CPLTFAM.COM			
Retaining Walls Other	<u>-</u> CPL		- GRAHA	AM BOYD	 NC#_136	512	919.645.9016	- GBOYD@CPLTEAM.COM			
2018 NC EX	ISTING BUI	[	□ Phased		rocedures ar nell/Core - <u>Co</u> ad	ontact the l	nents ocal inspection jur ocedures and requ pair	□ Chapter 14			
	ISTING BUII	LDING CO	□ Phased	additional p Construction - Sh  Prescripti  Level I  Historic Pi	rocedures ar nell/Core - <u>Co</u> ad ve	ontact the I ditional pro Re Lev	nents ocal inspection jur ocedures and requ pair vel II	<u>rements</u>			
C		LDING CO ED: 1987	□ Phased	additional p Construction - Sh  Prescripti Level I Historic Pi  CURREN	rocedures ar nell/Core - <u>Co</u> <u>ad</u> ve roperty	ontact the I ditional pro	nents ocal inspection jur ocedures and requ pair vel II  Ch. 3)  EDUC	rements  Chapter 14  Level III  Change of Use			
C	ONSTRUCTI ENOVATED:	E 1604.5)	□ Phased	additional p Construction - Sh  Prescripti Level I Historic Pr  CURREN PROPO	rocedures ar nell/Core - <u>Cc</u> ad ve roperty	Dintact the I ditional pro  Re Lev  ANCY: (C)  JPANCY:	nents ocal inspection jur ocedures and requ pair vel II  Ch. 3)  EDUC	rements  ☐ Chapter 14 ☐ Level III ☐ Change of Use  ATION (GROUP E)			
C( RE RISK CATEG	ONSTRUCTI ENOVATED: ORY: (TABLE	ED: 1987 : E 1604.5) C	□ Phased  DE:  Current:	additional p Construction - Sh  Prescripti Level I Historic Pr  CURREN PROPO	rocedures an nell/Core - Cc ad ad ve roperty  NT OCCUP  SED OCCU	Dintact the I ditional pro  Re Lev  ANCY: (C)  JPANCY:	nents ocal inspection jur ocedures and requ pair vel II  Ch. 3)  EDUC	rements  ☐ Chapter 14 ☐ Level III ☐ Change of Use  ATION (GROUP E)			
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RERISK CATEGORISM CONSTRUCTION Type (check all that construction type) (check all that	ONSTRUCTION ON TRUCTION ON TRUCTION ON TRUCTION ON THE PROPERTY OF THE PROPERT	ED: 1987 : E 1604.5) C P1	□ Phased  DE:  Current: roposed:  □ II-A ■ II-B ■ No	additional p Construction - Sh  Prescriptii Level I Historic Pr  CURREN PROPO  I III-A III-B NFPA 13	rocedures ar hell/Core - Cc ad  ve  roperty  NT OCCUP  SED OCCU	ANCY: (C JPANCY: IV IV V-A V-B	nents ocal inspection jur ocedures and requ pair vel II Ch. 3) EDUC (Ch. 3) EDUC	rements  ☐ Chapter 14 ☐ Level III ☐ Change of Use  ATION (GROUP E)			
RERISK CATEGORISM CATE	ONSTRUCTION ON TRUCTION ON TRUCTION ON TRUCTION ON THE PROPERTY OF THE PROPERT	ED: 1987 : E 1604.5) C Pi : I-A □ I-B □ Partial	□ Phased  DE:  Current: roposed:  □ II-A ■ II-B ■ No Clo	additional p Construction - Sh  Prescriptii Level I Historic Pr  CURREN PROPO  I III-A III-B NFPA 13	rocedures ar nell/Core - Cc ad ad ve roperty  NT OCCUP SED OCCU	ANCY: (C) JPANCY: IV IV V-A V-B PA 13R Wet	nents ocal inspection jur ocedures and requ pair vel II  Ch. 3) EDUC  (Ch. 3) EDUC  □ NFPA 13D  □ Dry	rements  ☐ Chapter 14 ☐ Level III ☐ Change of Use  ATION (GROUP E)			
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GROSS BUILDING AREA TABLE							
FLOOR	EXISTING TO REMAIN (SQ FT)	NEW (SQ FT)	RENOVATION (SQ FT)	SUB TOTAL			
	0 SF	0 SF	0 SF	0 SF			
FIRST FLOOR	138066 SF	0 SF	52063 SF	138228 SF			
TOTALS	138066 SF	0 SF	52063 SF	138066 SF			

				ALLOV	NABLE AI	REA		
Primary Occupancy C	-	-						
Assembly Business	□ A-1 □	□ A-2	□ A-3	□ A-4	□ A-5			
Educational								
Factory	□ F-1 Mc	oderate	☐ F-2 Lov	٧				
Hazardous	☐ H-1 De	etonate	☐ H-2 De	flagrate	☐ H-3 C	ombust	☐ H-4 Health	☐ H-5 HPM
Institutional	□ I-1		□ 1	□ 2				
	□ I-2		□ 1	□ 2				
	□ I-3		□ 1	$\square$ 2	□ 3	□ 4	□ 5	
	□ I-4							
Mercantile								
Residential	□ R-1	□ R-2	□ R-3	☐ R-4				
Storage	□ S-1 Mo			□ S-2 Lo		□ High-		
111:1:1 0 14: 11		g Garage	☐ Open	☐ Enclo	sed	☐ Repo	air Garage	
Utility & Miscell Accessory Occupancy	aneous [							
Incidental Hear (Table	5001.							
Special Uses (Chapter	4 - List Code	Sections): _						
Special Uses (Chapter Special Provisions: (Ch	· 4 - List Code : napter 5 - List (	Sections): _ Code Sectio	ns):					
Special Uses (Chapter Special Provisions: (Ch Mixed Occupancy:	· 4 - List Code : napter 5 - List ( □ Yes	Sections): _ Code Sectio ■ No	ns):	paration:			Exception	
Special Uses (Chapter Special Provisions: (Ch	· 4 - List Code : napter 5 - List ( □ Yes	Sections): _ Code Sectio ■ No The requ	ns):Se	paration: construction	on for the b	 uilding shal	Exception	
Special Uses (Chapter Special Provisions: (Ch Mixed Occupancy:	· 4 - List Code : napter 5 - List ( □ Yes	Sections): _ Code Sectio Mo The requapplying	ns):Se ired type of the height	paration: construction	on for the b	uilding shal	Exception	n:
Special Uses (Chapter Special Provisions: (Ch Mixed Occupancy:	· 4 - List Code : napter 5 - List ( □ Yes	Sections): _ Code Sectio No The requ applying occupar	ns):Se ired type of the height	paration: construction and area li entire builc	on for the b mitations fo	uilding shal r each of t	Exceptior Il be determined by he applicable	n:
Special Uses (Chapter Special Provisions: (Ch Mixed Occupancy:	· 4 - List Code : napter 5 - List ( ☐ Yes d Use (508.3) -	Sections):Code Section  No The requapplying occupates so determined.	ns): Se ired type of the height ncies to the mined, shall ow for area o	paration: construction and area li entire build apply to the	on for the b mitations fo ling. the mo ne entire bu	uilding shal or each of t ost restrictiv ilding, tory, the ar	Exception If be determined by the applicable the etype of construction the applicable the etype of the occupancy the applicable the excupancy that the excupa	n: n, y shall
Special Provisions: (Ch Mixed Occupancy:  ☐ Non-Separated	· 4 - List Code : napter 5 - List ( ☐ Yes d Use (508.3) -	Sections):Code Section  No The requapplying occupan so determ  See belobe such	ns):  See ired type of the height noies to the mined, shall ow for area of that the sun	paration: construction and area li entire build apply to the calculation	on for the b mitations fo ling. the mo ne entire bu s for each s ios of the ac	uilding shal or each of t ost restrictiv ilding, tory, the ar	Exception If be determined by the applicable the etype of construction the applicable the etype of the occupancy area of each use divisions.	n: n, y shall
Special Uses (Chapter Special Provisions: (Ch Mixed Occupancy: ☐ Non-Separated	· 4 - List Code : napter 5 - List ( ☐ Yes d Use (508.3) -	Sections):Code Section  No The requapplying occupan so determ  See belobe such	ns): Se ired type of the height ncies to the mined, shall ow for area o	paration: construction and area li entire build apply to the calculation	on for the b mitations fo ling. the mo ne entire bu s for each s ios of the ac	uilding shal or each of t ost restrictiv ilding, tory, the ar	Exception If be determined by the applicable the etype of construction the applicable the etype of the occupancy area of each use divisions.	n: n, y shall

FIRST			AREA	INCREASE <sup>1,5</sup>	STORY OR UNLIMITED <sup>2,3</sup>
	FIRST FLOOR	23750 SF	14500 SF	ANGE 10875 SF	23750 SF
c. Ratio	Il Building Perimeter o (F/P) = 1 Minimum width of publicent of frontage increase	56 ~~ [ <u>F</u>		5 ] x <u>W</u> / 30 =	(%)
<sup>2</sup> Unlimited area an	plicable under condition	$I_f = 100[ 290 \text{ ft}]$	/ <u>290 ft</u> - 0.25	5] x <u>30 ft</u> / 30 = <u>75</u>	(%)

	ALLOWABLE H	EIGHT	
	USTING - NO	CHANGE	CODE REFERENCE
Building Height in Feet (Table 504.3)2	55 ft	16 ft	504.3
Building Height in Stories (Table 504.4) <sup>2</sup>	3	1	504.4

**PLUMBING FIXTURE REQUIREMENTS** FIRE PROTECTION REQUIREMENTS DESIGN# FOR DESIGN # FOR BUILDING ELEMENT SEPARATION AND FOR RATED RATED JOINTS PROVIDED DISTANCE (FEET) SHEET # ASSEMBLY PENETRATION Structural Frame, including RESTROOMS columns, girders, trusses SPECIAL APPROVALS Nonbearing Walls and Special approval: (Location Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below) Interior walls and partitions Floor Construction Including supporting beams and joists Floor Ceiling Assembly Columns Supporting Floors ENERGY REQUIREMENTS: Roof Construction The following data shall be considered minimum and any special attribute required to meet the North Carolina Energy Conservation Code shall Including supporting also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, beams and joists state the annual energy cost for the standard reference design vs annual energy cost for the proposed design. Roof Ceiling Assembly Columns Supporting Roofs **Existing building envelope complies with code:**No

Yes (The remainder of this section is not applicable) Shaft Enclosures - Exit Shaft Enclosures - Other ☐ Yes (Provide code or statutory reference): <u>-</u> Corridor Separation Occupancy/Fire Barrier Separation Party/Fire Wall Separation Method of Compliances ☐ Performance ☐ Prescriptive Smoke Barrier Separation ASHRAE 90.1 Performance Prescriptive Smoke Partition Tenant/Dwelling Unit/ (If "Other" specify source here) Sleeping Unit Separation Incidental Use Separation \*Indicate section number permitting reduction THERMAL ENVELOPE: (Prescriptive method only) PERCENTAGE OF WALL OPENING CALCULATIONS Roof/ceiling Assembly (each assembly) FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES

DEGREE OF OPENING CHANGE

EXISTING -9NO CHANGE Description of assembly: **ACTUAL SHOWN** U-Value of total assembly: ON PLANS (%) R-Value of insulation: Skylights in each assembly: U-Value of skylight: Total square footage of skylights in each assembly: LIFE SAFETY SYSTEM REQUIREMENTS EXIT SIGNS:

Fire Alarm:

Smoke Detection Systems:

Carbon Monoxide Detection:

Tes

No

Yes

EXISTING

Partial Exterior Walls (each assembly) Description of assembly: U-Value of total assembly: R-Value of insulation: Openings (windows or doors with glazing U-Value of total assembly: Solar heat gain coefficient. Projection factor: Door R-Values: LIFE SAFETY PLAN REQUIREMENTS Walls below grade (each assembly) Description of assembly:/ Life Safety Plan Sheet #: U-Value of total assembly: R-Value of insulation: Fire and/or smoke rated wall locations (Chapter 7) Assumed and real property line locations (if not on the site plan) Exterior wall opening area with respect to distance to assumed property lines (705.8) Floors over unconditioned space (each assembly) Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.2) Description of assembly: Occupant loads for each area U-Value of total assembly Exit access travel distance (1017) R-Value of insulation: Common path of travel distance (Tables 100&2.1 & 1006.3.2(1)) Dead end lengths (1020.4) Clear exit widths for each exit door Description of assembly: Late based on egress width (1005.3) Maximum calculated occupant load capacity each exit door car Actual occupant load for each exit door R-Value of insulation: Actual occupant load for each exit door

A separate schematic plan indicating where fire rated floc and supporting construction for a fire barrier/fire partitic arrier.

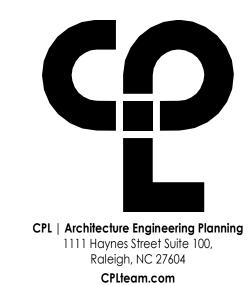
Location of doors with panic hardware (1010.1.10)

Location of doors with delayed egress locks or Location of doors with electromagnetic e (1010.1.9.9)

Location of doors equipped with hold-open coes Horizontal/vertical requirement: 2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMINGE'ROJECTS—

EXISTING --NO CHANGE'ROJECTS— Location of emergency escape windows (1030) ☐ The square footage of each fire area (202) ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5) STRUCTURAL DESIGN
NO STRUCTURAL WORK ON THIS PROJECT ☐ Note any code exceptions or table notes that may have been utilized regarding the items above Section/Table/Note 2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS. MECHANICAL SUMMARY
SEE MECHANICAL SHEETS FOR CODE SUMMARY **ACCESSIBLE DWELLING UNITS** 2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS ACCESSIBLE UNITS PROVIDED ACCESSIBLE PARKING ELECTRICAL DESIGN
SEE ELECTRICAL SHEETS FOR CODE SUMMARY TOTAL # OF PARKING SPACE TOTAL # LOT OR PARKING ACCESSIBLE PROVIDED

THE SCOPE OF THIS PROJECT IS THE REPLACEMENT OF HVAC UNITS IN KIND -NO CHANGE TO USE, OCCUPANCY, EGRESS, OR LIFE SAFETY REQUIREMENTS





Project Number R23.00325.00 JOHNSTON COUNTY PUBLIC SCHOOLS

SCHOOL

FOUR OAKS ELEMENTARY

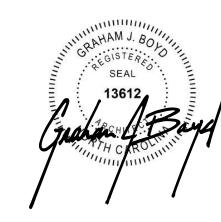
Project Name

180 W HATCHER STREET FOUR OAKS, NC 27524

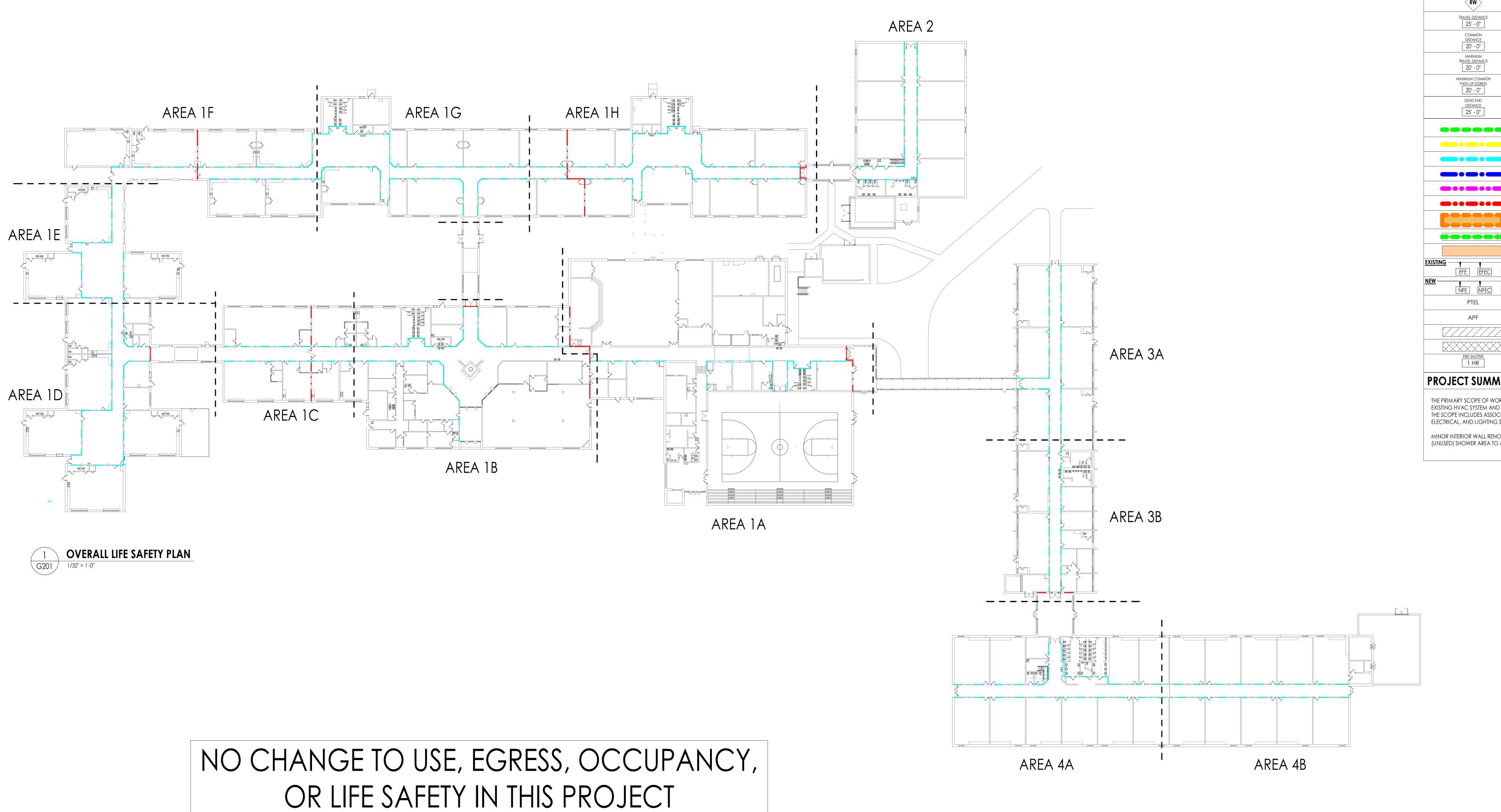
PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS





## NO CHANGE TO USE, EGRESS, OCCUPANCY OR LIFE SAFETY REQUIREMENTS IN THIS PROJECT



AE	ACCESSIBLE BUILDING ENTRANCE
EXIT	EXIT
0.0	EXIT UNITS
<b>€</b> AD	EXIT ACCESS DOOR
<u> </u>	EXIT DISCHARGE
HE	HORIZONTAL EXIT
	EXIT SIGN
ROOM NAME  101 2000 SF 100 SE 100 OCC	ROOM NAME ROOM NUMBER ROOM AREA OCCUPANT LOAD FACTOR OCCUPANT LOAD
STAIR 60" 44"	PROVIDED WIDTH REQUIRED WIDTH ANTICIPATED LOAD
DOOR 36" 20"	CLEAR WIDTH REQUIRED WIDTH ANTICIPATED LOAD
AoR	AREA OF REFUGE
RW	RESCUE WINDOW
TRAVEL DISTANCE 25' - 0"	TRAVEL DISTANCE TO EXIT
COMMON DISTANCE 20' - 0"	COMMON PATH OF EGRESS DISTANCE
MAXIMUM TRAVEL DISTANCE 20' - 0"	MAXIMUM TRAVEL DISTANCE TO EXIT
MAXIMUM COMMON PATH OF EGRESS 20' - 0"	MAXIMUM COMMON PATH OF EGRESS
DEAD END DISTANCE 25' - 0"	DEAD END DISTANCE
	NON-RATED SMOKE TIGHT BARRIER
	1 HOUR FIRE RATED & SMOKE BARRIER
	1 HOUR RATED FIRE PARTITION
	1 HOUR RATED FIRE BARRIER
	2 HOUR RATED FIRE BARRIER
	2 HOUR RATED BUILDING SEPARATION
	SUITES
	STOREFRONT IN SMOKE PARTITION
	EXIT ACCESS CORRIDOR
XISTING -	

LIFE SAFETY SYMBOL LEGEND

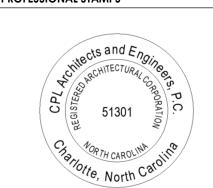
## PROJECT SUMMARY

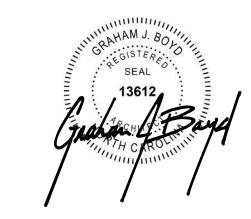
ELECTRICAL, AND LIGHTING SYSTEMS.

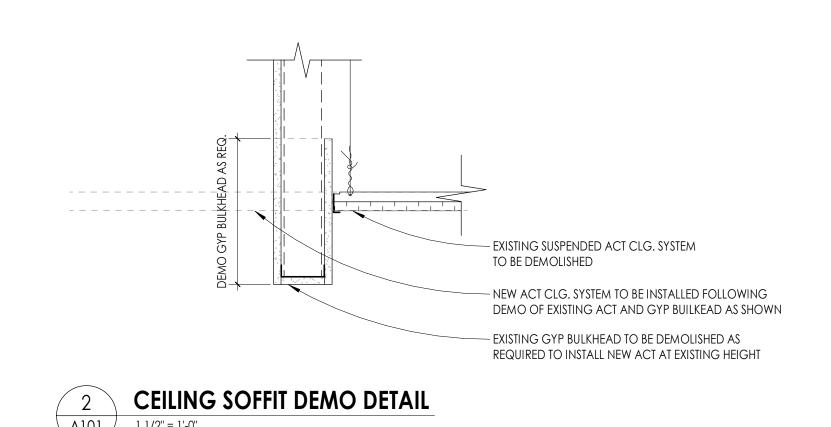
1 HR RATED FLOOR ASSEMBLY - UL-D902

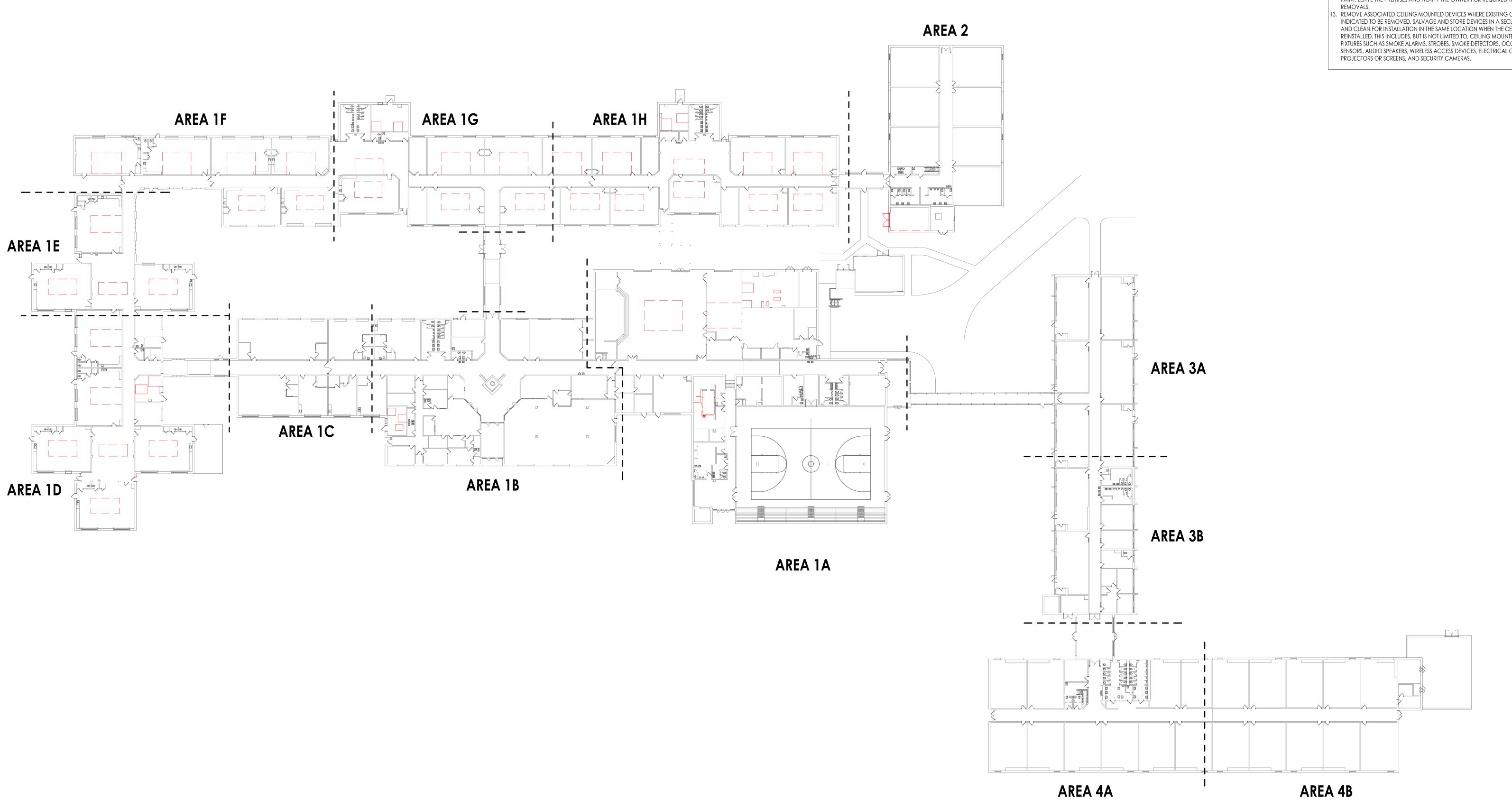
PROFESSIONAL STAMPS

Project Address 180 W HATCHER STREET FOUR OAKS, NC 27524



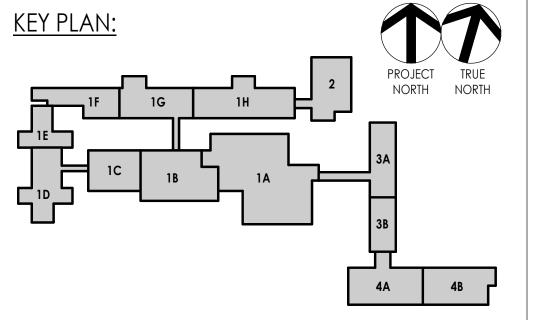






OVERALL DEMOLITION FLOOR PLAN

1/32" = 1'-0"



## **DEMOLITION GENERAL NOTES**

ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF MATERIALS TO BE REMOVED. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS & DIMENSIONS PRIOR TO COMMENCEMENT OF ALL DEMOLITION WORK. REFER TO THE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR

DEMOLITION OF EXISTING UTILITIES AND SERVICES. REMAINING SUBSTRATES SHALL BE LEFT IN A CONDITION ACCEPTABLE TO RECEIVE NEW WORK. WHERE NEW FINISHES ARE SCHEDULED AT EXISTING CONDITIONS, REMOVE

EXISTING FINISHES DOWN TO SUBSTRATE AMD PREPARE SURFACE FOR NEW FINISH. THE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING FINISHES AND EQUIPMENT NOT REMOVED UNDER THE SCOPE OF WORK. ANY DAMAGE WILL BE REPAIRED TO THE OWNER/ARCHITECT'S SATISFACTION. WATER, POWER, COMMUNICATION, FIRE PROTECTION & GAS UTILITY SERVICES SHUT

DOWNS SHALL NOT EFFECT PORTIONS OF BUILDING(S) TO REMAIN IN USE. CONTRACTOR TO REROUTE OR PROVIDE TEMPORARY POWER, COMMUNICATION, FIRE PROTECTION AND GAS. COORDINATE SHUT DOWNS WITH OWNER. REMOVE AND REPLACE EXISTING CEILINGS, UNLESS OTHERWISE NOTED ON THE DRAWINGS, FOR PERFORMING DEMOLITION OF ALL WORK INDICATED ON THE CONSTRUCTION DRAWINGS. THE EXISTING CEILING SHALL BE REMOVED AND REPLACED IN A MANNER TO AVOID DAMAGE TO THE WALL SYSTEM. NOTIFY ARCHITECT AND OWNER OF EXISTING DUCTWORK, PIPE AND CONDUIT PENETRATIONS EXPOSED AFTER DEMOLITION THAT ARE NOT FIRESTOPPED THROUGH EXISTING WALLS IDENTIFIED AS FIRE AND/OR SMOKE RATED ON LIFE SAFETY PLANS. EXISTING NON-COMPLIANT PENETRATIONS ARE TO BE FIRESTOPPED.

WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE LEFT BROOM CLEANED AT END OF EACH DAY. ALL ITEMS SHOWN WITH A DASHED LINE ARE TO BE REMOVED AND DISPOSED OF

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13. REMOVE ASSOCIATED CEILING MOUNTED DEVICES WHERE EXISTING CEILING IS INDICATED TO BE REMOVED. SALVAGE AND STORE DEVICES IN A SECURE LOCATION AND CLEAN FOR INSTALLATION IN THE SAME LOCATION WHEN THE CEILING IS REINSTALLED. THIS INCLUDES, BUT IS NOT LIMITED TO, CEILING MOUNTED DEVICES AND FIXTURES SUCH AS SMOKE ALARMS, STROBES, SMOKE DETECTORS, OCCUPANCY SENSORS, AUDIO SPEAKERS, WIRELESS ACCESS DEVICES, ELECTRICAL OUTLETS, CEILING

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PROJECT INFORMATION Project Number

R23.00325.00 JOHNSTON COUNTY PUBLIC **SCHOOLS** 

Project Name FOUR OAKS ELEMENTARY SCHOOL

180 W HATCHER STREET FOUR OAKS, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

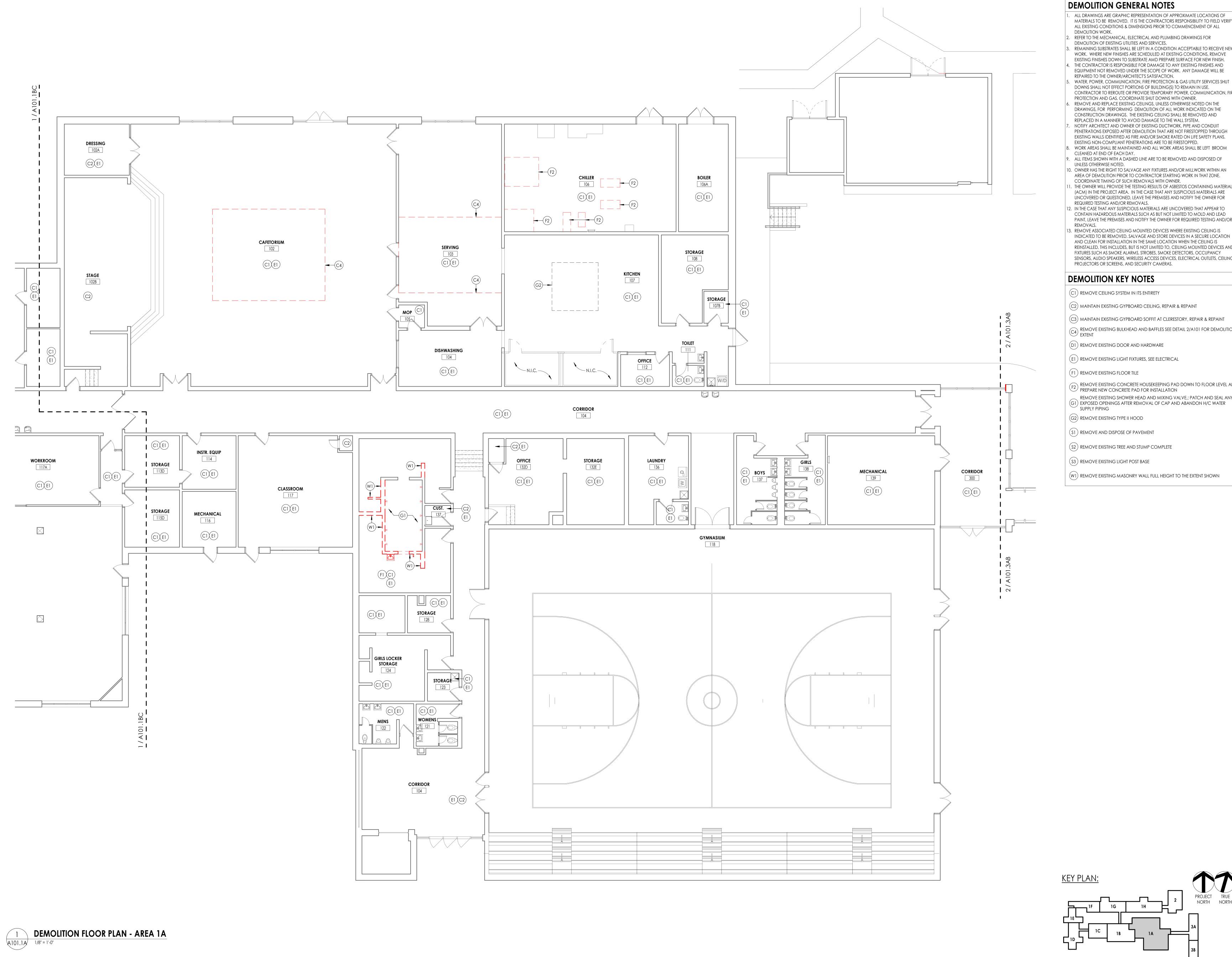
PROFESSIONAL STAMPS





lssued 02/17/2025 As indicated

OVERALL DEMOLITION FLOOR PLAN



- ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF MATERIALS TO BE REMOVED. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS & DIMENSIONS PRIOR TO COMMENCEMENT OF ALL DEMOLITION WORK.
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- INDICATED TO BE REMOVED. SALVAGE AND STORE DEVICES IN A SECURE LOCATION AND CLEAN FOR INSTALLATION IN THE SAME LOCATION WHEN THE CEILING IS REINSTALLED. THIS INCLUDES, BUT IS NOT LIMITED TO, CEILING MOUNTED DEVICES AND FIXTURES SUCH AS SMOKE ALARMS, STROBES, SMOKE DETECTORS, OCCUPANCY SENSORS, AUDIO SPEAKERS, WIRELESS ACCESS DEVICES, ELECTRICAL OUTLETS, CEILING PROJECTORS OR SCREENS, AND SECURITY CAMERAS.

## **DEMOLITION KEY NOTES**

- (C1) REMOVE CEILING SYSTEM IN ITS ENTIRETY
- (C2) MAINTAIN EXISTING GYPBOARD CEILING, REPAIR & REPAINT
- (C3) MAINTAIN EXISTING GYPBOARD SOFFIT AT CLERESTORY, REPAIR & REPAINT
- REMOVE EXISTING BULKHEAD AND BAFFLES SEE DETAIL 2/A101 FOR DEMOLITION
- (D1) REMOVE EXISTING DOOR AND HARDWARE
- (E1) REMOVE EXISTING LIGHT FIXTURES, SEE ELECTRICAL
- (F1) REMOVE EXISTING FLOOR TILE
- REMOVE EXISTING CONCRETE HOUSEKEEPING PAD DOWN TO FLOOR LEVEL AND PREPARE NEW CONCRETE PAD FOR INSTALLATION REMOVE EXISTING SHOWER HEAD AND MIXING VALVE,; PATCH AND SEAL ANY
- (G1) EXPOSED OPENINGS AFTER REMOVAL OF CAP AND ABANDON H/C WATER G2) REMOVE EXISTING TYPE II HOOD
- (S1) REMOVE AND DISPOSE OF PAVEMENT
- (S2) REMOVE EXISTING TREE AND STUMP COMPLETE
- (S3) REMOVE EXISTING LIGHT POST BASE

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

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Raleigh, NC 27604

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PROJECT INFORMATION

JOHNSTON COUNTY PUBLIC

FOUR OAKS ELEMENTARY

Project Number

R23.00325.00

SCHOOLS

Project Name

SCHOOL

180 W HATCHER STREET

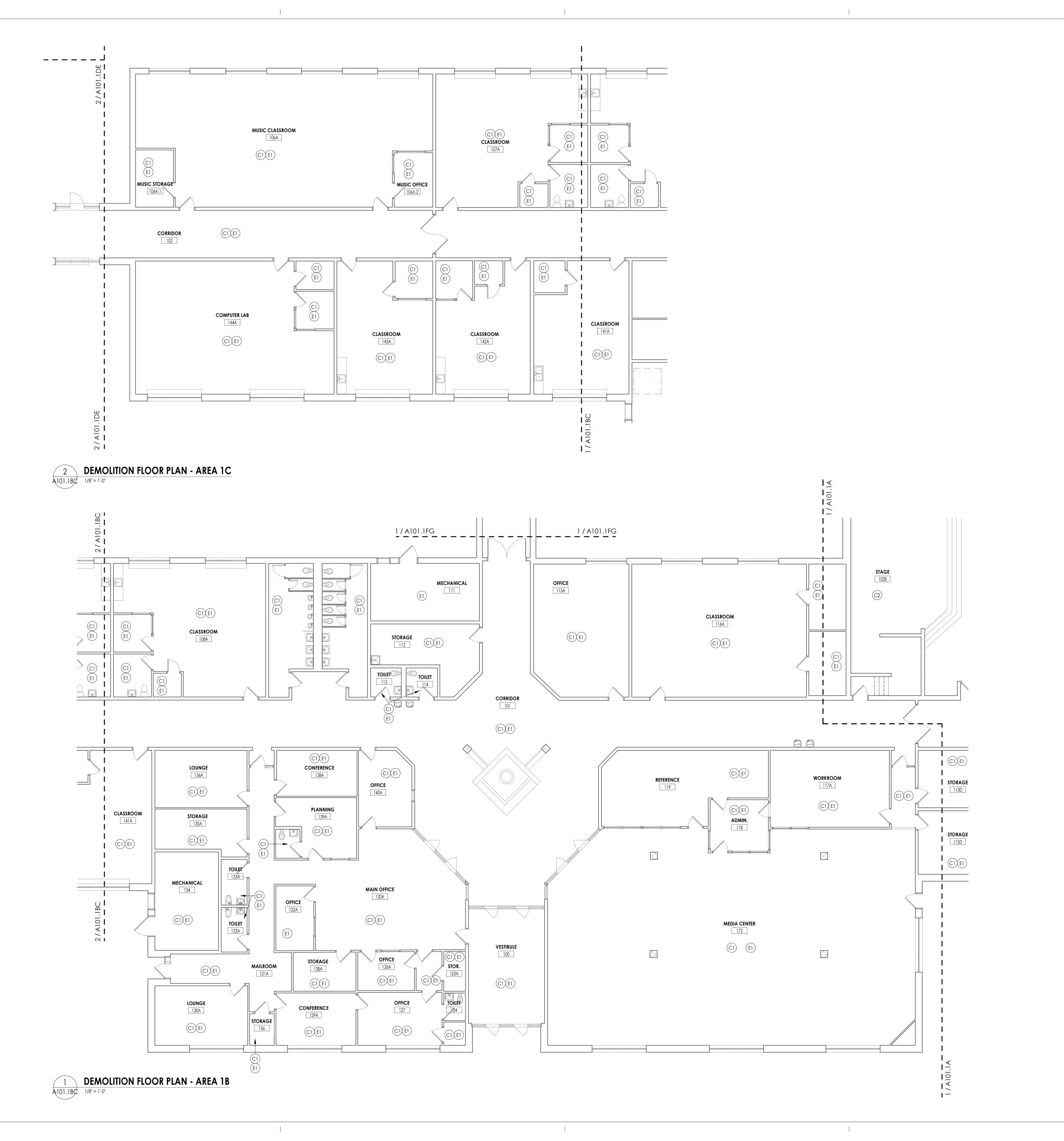
FOUR OAKS, NC 27524

PROFESSIONAL STAMPS





SHEET INFORMATION lssued 02/17/2025 Scale As indicated DEMOLITION PLAN AREA 1A



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  WATER, POWER, COMMUNICATION, FIRE PROTECTION & GAS UTILITY SERVICES SHUT DOWNS SHALL NOT EFFECT PORTIONS OF BUILDING(S) TO REMAIN IN USE.

  CONTRACTOR TO REROUTE OR PROVIDE TEMPORARY POWER, COMMUNICATION, FIRE
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  S. REMOVE AND REPLACE EXISTING CEILINGS, UNLESS OTHERWISE NOTED ON THE DRAWINGS, FOR PERFORMING DEMOLITION OF ALL WORK INDICATED ON THE CONSTRUCTION DRAWINGS. THE EXISTING CEILING SHALL BE REMOVED AND REPLACED IN A MANNER TO AVOID DAMAGE TO THE WALL SYSTEM.

  7. NOTIFY ARCHITECT AND OWNER OF EXISTING DUCTWORK, PIPE AND CONDUIT PENETRATIONS EXPOSED AFTER DEMOLITION THAT ARE NOT FIRESTOPPED THROUGH EXISTING WALLS IDENTIFIED AS FIRE AND/OR SMOKE RATED ON LIFE SAFETY PLANS.
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### **DEMOLITION KEY NOTES**

- (C1) REMOVE CEILING SYSTEM IN ITS ENTIRETY
- (C2) MAINTAIN EXISTING GYPBOARD CEILING, REPAIR & REPAINT
- C3) MAINTAIN EXISTING GYPBOARD SOFFIT AT CLERESTORY, REPAIR & REPAINT
- REMOVE EXISTING BULKHEAD AND BAFFLES SEE DETAIL 2/A101 FOR DEMOLITION EXTENT
- (D1) REMOVE EXISTING DOOR AND HARDWARE
- (E1) REMOVE EXISTING LIGHT FIXTURES, SEE ELECTRICAL
- (F1) REMOVE EXISTING FLOOR TILE
- REMOVE EXISTING CONCRETE HOUSEKEEPING PAD DOWN TO FLOOR LEVEL AND PREPARE NEW CONCRETE PAD FOR INSTALLATION
- REMOVE EXISTING SHOWER HEAD AND MIXING VALVE,; PATCH AND SEAL ANY EXPOSED OPENINGS AFTER REMOVAL OF CAP AND ABANDON H/C WATER SUPPLY PIPING
- G2) REMOVE EXISTING TYPE II HOOD
- (S1) REMOVE AND DISPOSE OF PAVEMENT

KEY PLAN:

- (S2) REMOVE EXISTING TREE AND STUMP COMPLETE
- (S3) REMOVE EXISTING LIGHT POST BASE
- (WI) REMOVE EXISTING MASONRY WALL FULL HEIGHT TO THE EXTENT SHOWN

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Raleigh, NC 27604



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PROJECT INFORMATION
Project Number

R23.00325.00 Client Name

JOHNSTON COUNTY PUBLIC SCHOOLS
Project Name
FOUR OAKS ELEMENTARY

Project Address 180 W HATCHER STREET

SCHOOL

FOUR OAKS, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

v Date Description

PROFESSIONAL STAMPS





SHEET INFORMATION

Issued Scale
02/17/2025 As indicated

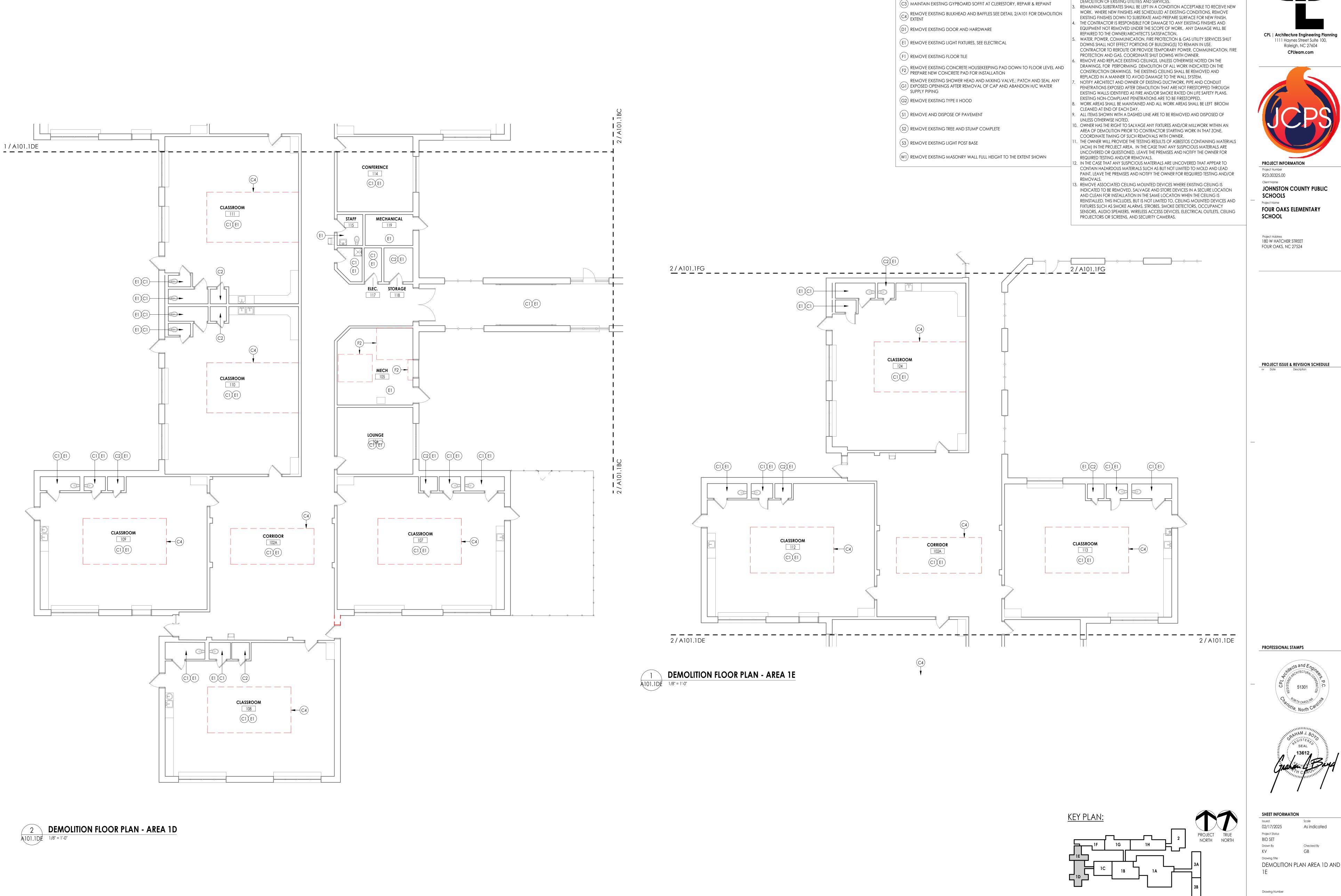
Project Status
BID SET
Drawn By Checked By
KV GB

Drawing Title

DEMOLITION PLAN AREA 1B AND

Drawing Number

A101.1BC



DEMOLITION OF EXISTING UTILITIES AND SERVICES.

DEMOLITION WORK.

ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF

REFER TO THE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR

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**DEMOLITION KEY NOTES** 

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PROJECT INFORMATION Project Number

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JOHNSTON COUNTY PUBLIC SCHOOLS Project Name

FOUR OAKS, NC 27524

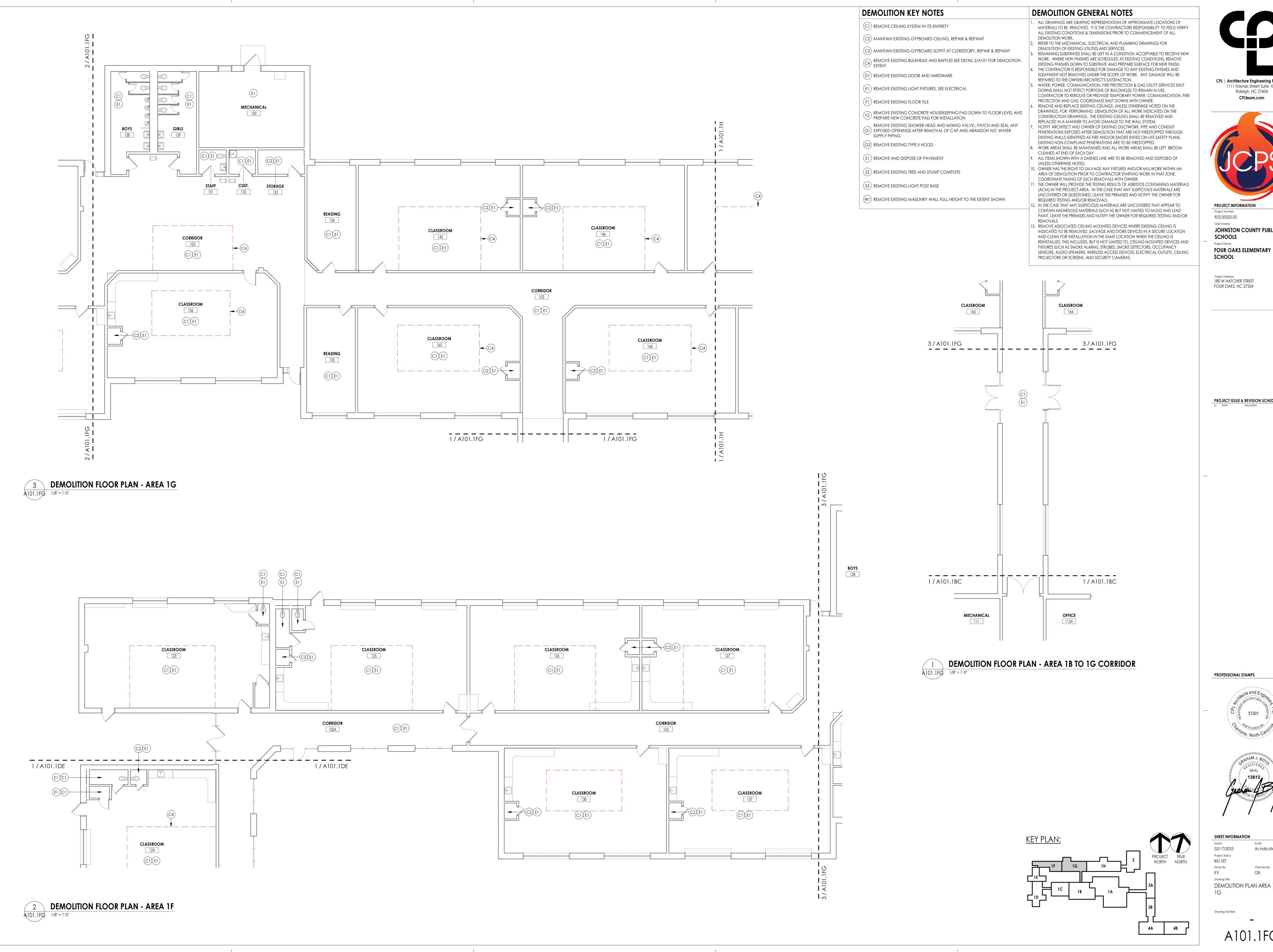
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DEMOLITION PLAN AREA 1D AND



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PROJECT INFORMATION Project Number

R23.00325.00

JOHNSTON COUNTY PUBLIC

180 W HATCHER STREET FOUR OAKS, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS





SHEET INFORMATION

lssued 02/17/2025 As indicated

DEMOLITION PLAN AREA 1F AND



- 1. ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF MATERIALS TO BE REMOVED. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS & DIMENSIONS PRIOR TO COMMENCEMENT OF ALL DEMOLITION WORK.
- REFER TO THE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR DEMOLITION OF EXISTING UTILITIES AND SERVICES.
   REMAINING SUBSTRATES SHALL BE LEFT IN A CONDITION ACCEPTABLE TO RECEIVE NEW WORK. WHERE NEW FINISHES ARE SCHEDULED AT EXISTING CONDITIONS, REMOVE EXISTING FINISHES DOWN TO SUBSTRATE AMD PREPARE SURFACE FOR NEW FINISH.
- THE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING FINISHES AND EQUIPMENT NOT REMOVED UNDER THE SCOPE OF WORK. ANY DAMAGE WILL BE REPAIRED TO THE OWNER/ARCHITECT'S SATISFACTION.
   WATER, POWER, COMMUNICATION, FIRE PROTECTION & GAS UTILITY SERVICES SHUT DOWNS SHALL NOT EFFECT PORTIONS OF BUILDING(S) TO REMAIN IN USE. CONTRACTOR TO REROUTE OR PROVIDE TEMPORARY POWER, COMMUNICATION, FIRE PROTECTION AND GAS. COORDINATE SHUT DOWNS WITH OWNER.
   REMOVE AND REPLACE EXISTING CEILINGS, UNLESS OTHERWISE NOTED ON THE
- DRAWINGS, FOR PERFORMING DEMOLITION OF ALL WORK INDICATED ON THE CONSTRUCTION DRAWINGS. THE EXISTING CEILING SHALL BE REMOVED AND REPLACED IN A MANNER TO AVOID DAMAGE TO THE WALL SYSTEM.

  7. NOTIFY ARCHITECT AND OWNER OF EXISTING DUCTWORK, PIPE AND CONDUIT PENETRATIONS EXPOSED AFTER DEMOLITION THAT ARE NOT FIRESTOPPED THROUGH EXISTING WALLS IDENTIFIED AS FIRE AND/OR SMOKE RATED ON LIFE SAFETY PLANS.

  EXISTING NON-COMPLIANT PENETRATIONS ARE TO BE FIRESTOPPED.
- EXISTING WALLS IDENTIFIED AS FIRE AND/OR SMOKE RATED ON LIFE SAFETY PLANS.
  EXISTING NON-COMPLIANT PENETRATIONS ARE TO BE FIRESTOPPED.

  WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE LEFT BROOM CLEANED AT END OF EACH DAY.

  ALL ITEMS SHOWN WITH A DASHED LINE ARE TO BE REMOVED AND DISPOSED OF
- UNLESS OTHERWISE NOTED.

  10. OWNER HAS THE RIGHT TO SALVAGE ANY FIXTURES AND/OR MILLWORK WITHIN AN AREA OF DEMOLITION PRIOR TO CONTRACTOR STARTING WORK IN THAT ZONE. COORDINATE TIMING OF SUCH REMOVALS WITH OWNER.

  11. THE OWNER WILL PROVIDE THE TESTING RESULTS OF ASBESTOS CONTAINING MATERIALS (ACM) IN THE PROJECT AREA. IN THE CASE THAT ANY SUSPICIOUS MATERIALS ARE UNCOVERED OR QUESTIONED, LEAVE THE PREMISES AND NOTIFY THE OWNER FOR
- REQUIRED TESTING AND/OR REMOVALS.

  12. IN THE CASE THAT ANY SUSPICIOUS MATERIALS ARE UNCOVERED THAT APPEAR TO CONTAIN HAZARDOUS MATERIALS SUCH AS BUT NOT LIMITED TO MOLD AND LEAD PAINT, LEAVE THE PREMISES AND NOTIFY THE OWNER FOR REQUIRED TESTING AND/OR REMOVALS.

  13. REMOVE ASSOCIATED CEILING MOUNTED DEVICES WHERE EXISTING CEILING IS
- REMOVALS.

  13. REMOVE ASSOCIATED CEILING MOUNTED DEVICES WHERE EXISTING CEILING IS

  INDICATED TO BE REMOVED. SALVAGE AND STORE DEVICES IN A SECURE LOCATION

  AND CLEAN FOR INSTALLATION IN THE SAME LOCATION WHEN THE CEILING IS

  REINSTALLED. THIS INCLUDES, BUT IS NOT LIMITED TO, CEILING MOUNTED DEVICES AND

  FIXTURES SUCH AS SMOKE ALARMS, STROBES, SMOKE DETECTORS, OCCUPANCY

  SENSORS, AUDIO SPEAKERS, WIRELESS ACCESS DEVICES, ELECTRICAL OUTLETS, CEILING

  PROJECTORS OR SCREENS, AND SECURITY CAMERAS.

## **DEMOLITION KEY NOTES**

- (C1) REMOVE CEILING SYSTEM IN ITS ENTIRETY
- (C2) MAINTAIN EXISTING GYPBOARD CEILING, REPAIR & REPAINT
- (C3) MAINTAIN EXISTING GYPBOARD SOFFIT AT CLERESTORY, REPAIR & REPAINT
- REMOVE EXISTING BULKHEAD AND BAFFLES SEE DETAIL 2/A101 FOR DEMOLITION EXTENT
- (D1) REMOVE EXISTING DOOR AND HARDWARE
- (E1) REMOVE EXISTING LIGHT FIXTURES, SEE ELECTRICAL
- (F1) REMOVE EXISTING FLOOR TILE
- REMOVE EXISTING CONCRETE HOUSEKEEPING PAD DOWN TO FLOOR LEVEL AND PREPARE NEW CONCRETE PAD FOR INSTALLATION
- REMOVE EXISTING SHOWER HEAD AND MIXING VALVE,; PATCH AND SEAL ANY EXPOSED OPENINGS AFTER REMOVAL OF CAP AND ABANDON H/C WATER SUPPLY PIPING
- G2) REMOVE EXISTING TYPE II HOOD
- (S1) REMOVE AND DISPOSE OF PAVEMENT
- (S2) REMOVE EXISTING TREE AND STUMP COMPLETE
- (S3) REMOVE EXISTING LIGHT POST BASE
- (W1) REMOVE EXISTING MASONRY WALL FULL HEIGHT TO THE EXTENT SHOWN

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PROJECT INFORMATION
Project Number

R23.00325.00

JOHNSTON COUNTY PUBLIC SCHOOLS
Project Name

FOUR OAKS ELEMENTARY SCHOOL

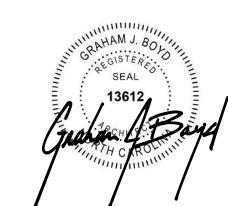
Project Address 180 W HATCHER STREET FOUR OAKS, NC 27524

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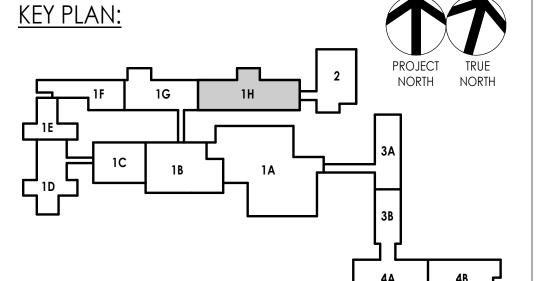
Project Status
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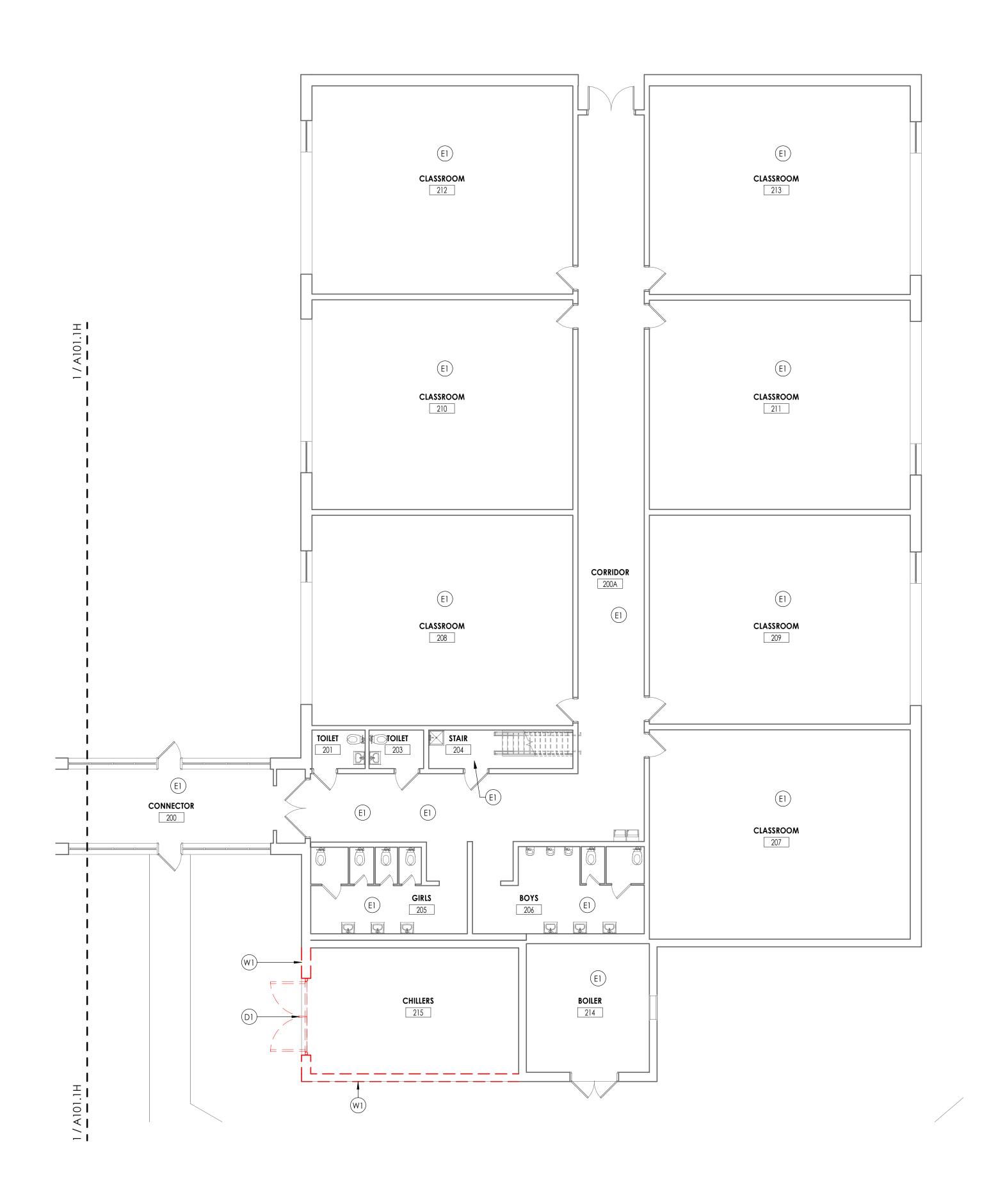
Drawing Title

DEMOLITION PLAN AREA 1 H

Drawing Number

A101.1H







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   DESCRIPTION OF THE MECHANICAL ELECTRICAL AND RUMANING PRANTINGS FOR
- REFER TO THE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR
  DEMOLITION OF EXISTING UTILITIES AND SERVICES.
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- CONTRACTOR TO REROUTE OR PROVIDE TEMPORARY POWER, COMMUNICATION, FIRE PROTECTION AND GAS. COORDINATE SHUT DOWNS WITH OWNER.

  S. REMOVE AND REPLACE EXISTING CEILINGS, UNLESS OTHERWISE NOTED ON THE DRAWINGS, FOR PERFORMING DEMOLITION OF ALL WORK INDICATED ON THE CONSTRUCTION DRAWINGS. THE EXISTING CEILING SHALL BE REMOVED AND REPLACED IN A MANNER TO AVOID DAMAGE TO THE WALL SYSTEM.

  7. NOTIFY ARCHITECT AND OWNER OF EXISTING DUCTWORK, PIPE AND CONDUIT PENETRATIONS EXPOSED AFTER DEMOLITION THAT ARE NOT FIRESTOPPED THROUGH EXISTING WALLS IDENTIFIED AS FIRE AND/OR SMOKE RATED ON LIFE SAFETY PLANS.
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- 13. REMOVE ASSOCIATED CEILING MOUNTED DEVICES WHERE EXISTING CEILING IS INDICATED TO BE REMOVED. SALVAGE AND STORE DEVICES IN A SECURE LOCATION AND CLEAN FOR INSTALLATION IN THE SAME LOCATION WHEN THE CEILING IS REINSTALLED. THIS INCLUDES, BUT IS NOT LIMITED TO, CEILING MOUNTED DEVICES AND FIXTURES SUCH AS SMOKE ALARMS, STROBES, SMOKE DETECTORS, OCCUPANCY SENSORS, AUDIO SPEAKERS, WIRELESS ACCESS DEVICES, ELECTRICAL OUTLETS, CEILING PROJECTORS OR SCREENS, AND SECURITY CAMERAS.

## **DEMOLITION KEY NOTES**

- (C1) REMOVE CEILING SYSTEM IN ITS ENTIRETY
- (C2) MAINTAIN EXISTING GYPBOARD CEILING, REPAIR & REPAINT
- C3) MAINTAIN EXISTING GYPBOARD SOFFIT AT CLERESTORY, REPAIR & REPAINT
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- (WI) REMOVE EXISTING MASONRY WALL FULL HEIGHT TO THE EXTENT SHOWN

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R23.00325.00
Client Name

JOHNSTON COUNTY PUBLIC SCHOOLS
Project Name
FOUR OAKS ELEMENTARY

Project Address 180 W HATCHER STREET

FOUR OAKS, NC 27524

SCHOOL

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS





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02/17/2025 As indicated

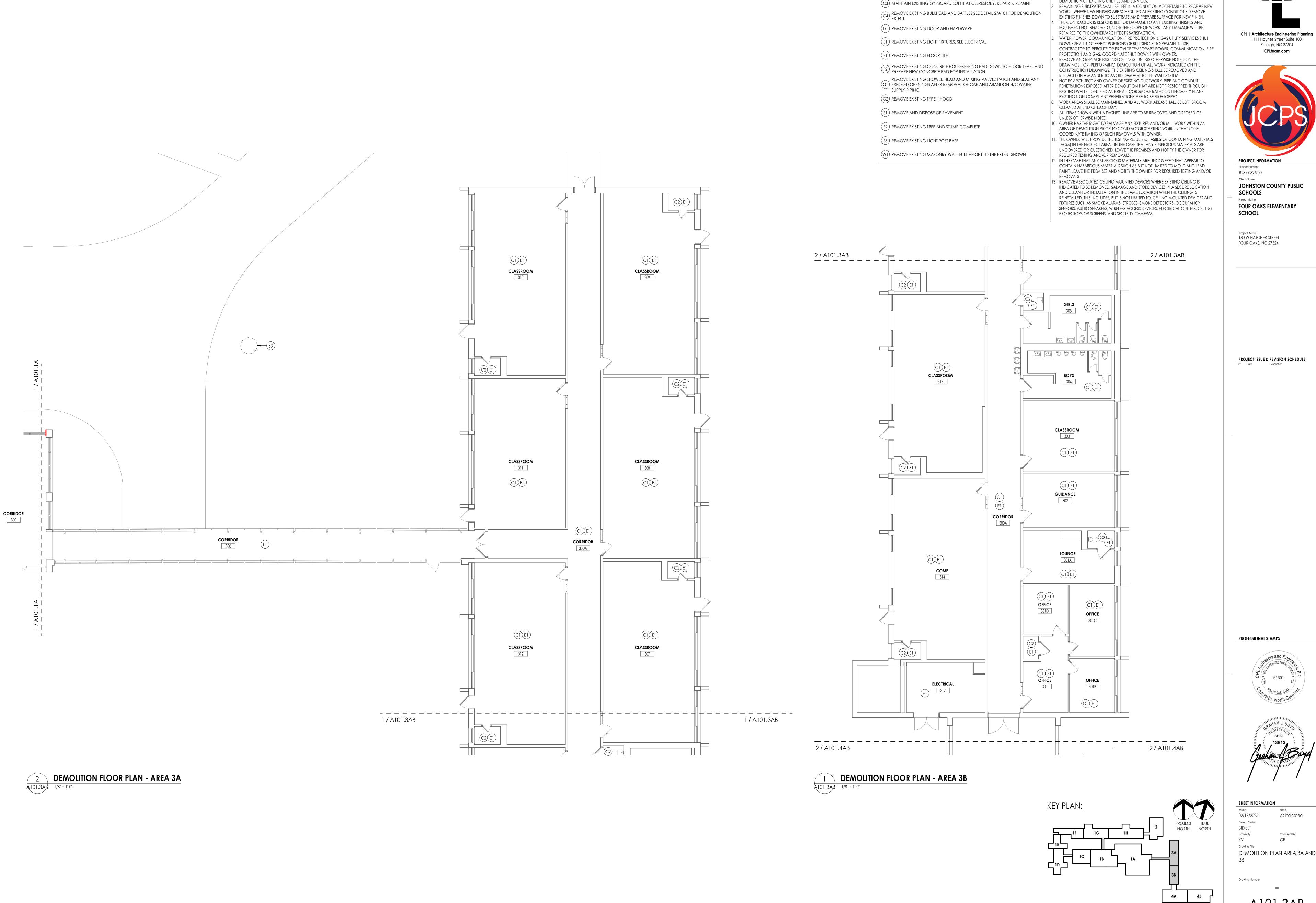
Project Status
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KV GB

Drawing Title

DEMOLITION PLAN AREA 2

**—** 

A101.2



(C1) REMOVE CEILING SYSTEM IN ITS ENTIRETY

**DEMOLITION KEY NOTES** 

- (C2) MAINTAIN EXISTING GYPBOARD CEILING, REPAIR & REPAINT

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- REFER TO THE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR DEMOLITION OF EXISTING UTILITIES AND SERVICES.



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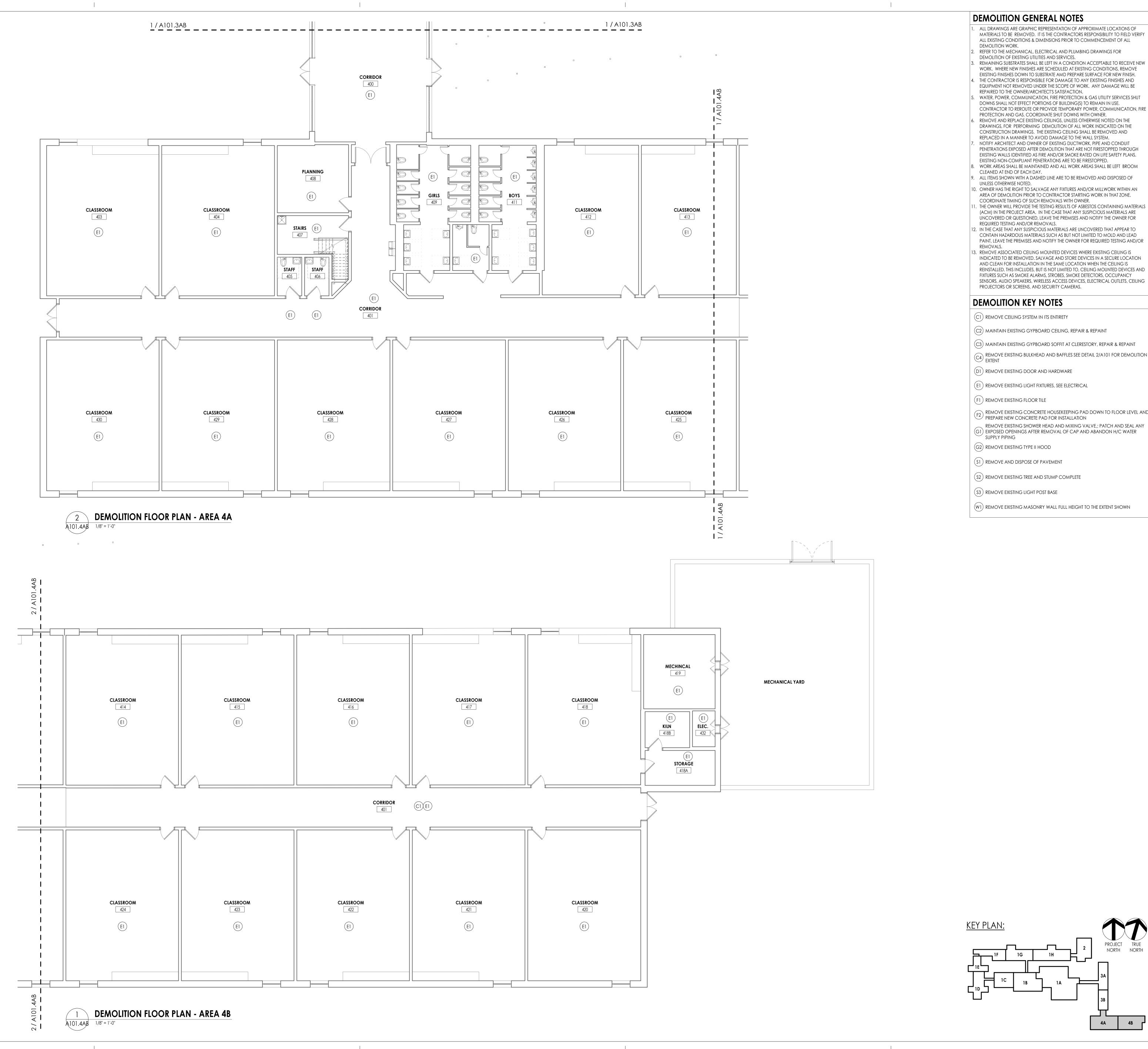


Issued 02/17/2025 Scale As indicated

DEMOLITION PLAN AREA 3A AND

Drawing Number

A101.3AB



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DOWNS SHALL NOT EFFECT PORTIONS OF BUILDING(S) TO REMAIN IN USE. CONTRACTOR TO REROUTE OR PROVIDE TEMPORARY POWER, COMMUNICATION, FIRE PROTECTION AND GAS. COORDINATE SHUT DOWNS WITH OWNER. REMOVE AND REPLACE EXISTING CEILINGS, UNLESS OTHERWISE NOTED ON THE DRAWINGS, FOR PERFORMING DEMOLITION OF ALL WORK INDICATED ON THE CONSTRUCTION DRAWINGS. THE EXISTING CEILING SHALL BE REMOVED AND REPLACED IN A MANNER TO AVOID DAMAGE TO THE WALL SYSTEM. NOTIFY ARCHITECT AND OWNER OF EXISTING DUCTWORK, PIPE AND CONDUIT PENETRATIONS EXPOSED AFTER DEMOLITION THAT ARE NOT FIRESTOPPED THROUGH EXISTING WALLS IDENTIFIED AS FIRE AND/OR SMOKE RATED ON LIFE SAFETY PLANS.

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### **DEMOLITION KEY NOTES**

(C1) REMOVE CEILING SYSTEM IN ITS ENTIRETY

(C2) MAINTAIN EXISTING GYPBOARD CEILING, REPAIR & REPAINT

(C3) MAINTAIN EXISTING GYPBOARD SOFFIT AT CLERESTORY, REPAIR & REPAINT

REMOVE EXISTING BULKHEAD AND BAFFLES SEE DETAIL 2/A101 FOR DEMOLITION EXTENT

(D1) REMOVE EXISTING DOOR AND HARDWARE

(E1) REMOVE EXISTING LIGHT FIXTURES, SEE ELECTRICAL

(F1) REMOVE EXISTING FLOOR TILE

REMOVE EXISTING CONCRETE HOUSEKEEPING PAD DOWN TO FLOOR LEVEL AND PREPARE NEW CONCRETE PAD FOR INSTALLATION

(G1) exposed openings after removal of Cap and abandon H/C water

G2) REMOVE EXISTING TYPE II HOOD

(\$1) REMOVE AND DISPOSE OF PAVEMENT

(S2) REMOVE EXISTING TREE AND STUMP COMPLETE

(S3) REMOVE EXISTING LIGHT POST BASE

(W1) REMOVE EXISTING MASONRY WALL FULL HEIGHT TO THE EXTENT SHOWN

PROFESSIONAL STAMPS

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PROJECT INFORMATION

JOHNSTON COUNTY PUBLIC

FOUR OAKS ELEMENTARY

PROJECT ISSUE & REVISION SCHEDULE

# Date Description

Project Number

R23.00325.00

SCHOOLS

Project Name

SCHOOL

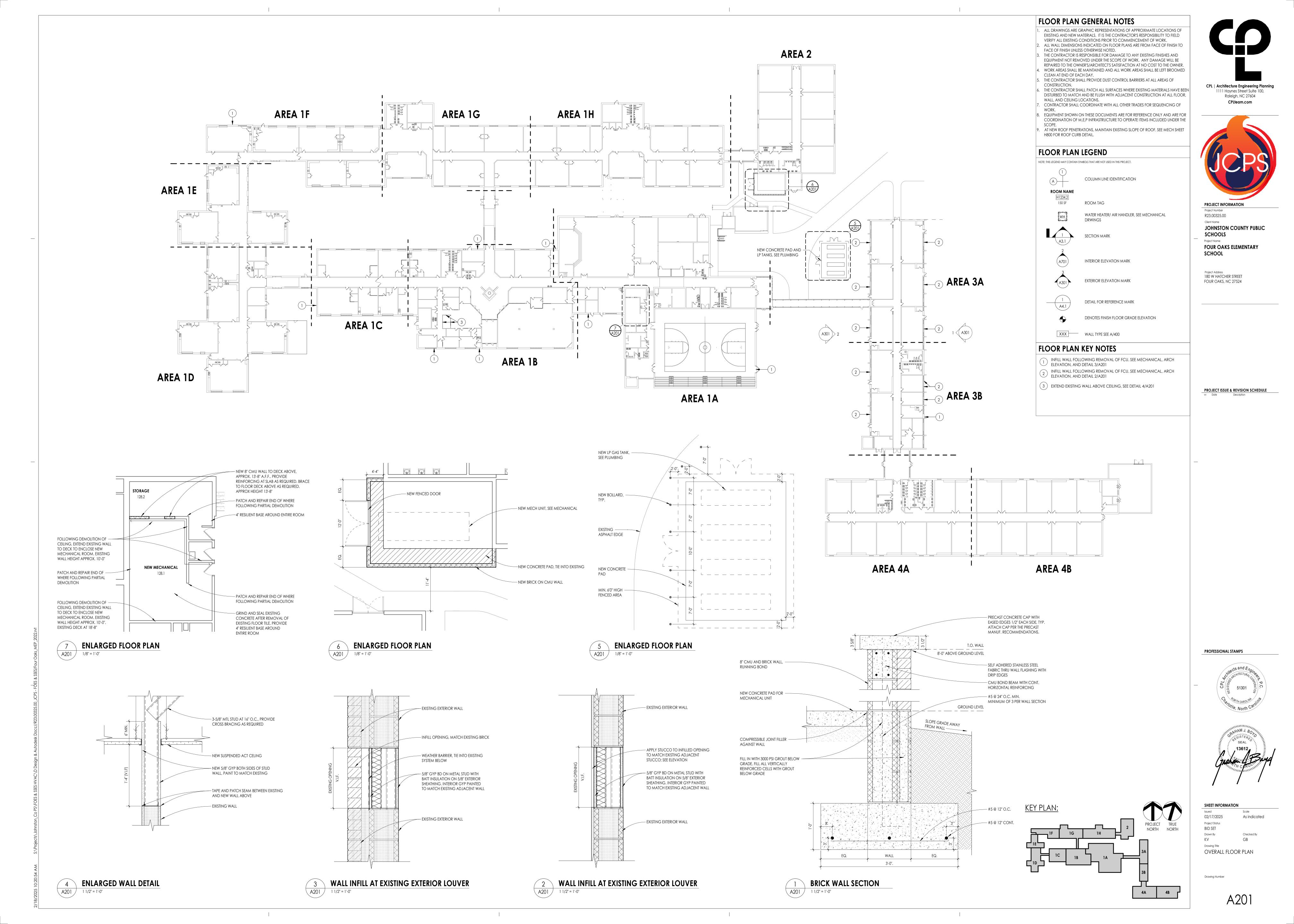
180 W HATCHER STREET

FOUR OAKS, NC 27524

SHEET INFORMATION lssued 02/17/2025

As indicated Project Status **BID SET** 

Drawing Title DEMOLITION PLAN AREA 4A AND



## **ROOF PLAN GENERAL NOTES**

- ALL DRAWINGS ARE GRAPHIC REPRESENTATIONS OF APPROXIMATE LOCATIONS OF MATERIALS. FIELD VERIFY ALL CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK.
   REFER TO ALL DRAWINGS IN THE SET FOR LOCATIONS OF ALL ROOF PENETRATIONS. PROVIDE FRAMING AS REQUIRED.
- 3. PAINT ALL ROOF FASTENERS EXPOSED TO VIEW AT UNDERSIDE OF DECK TO MATCH.

  4. WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE BROOM CLEAN
- AT THE END OF EACH DAY.

  5. ALL WOOD BLOCKING USED SHALL BE PRESSURE TREATED.
- 6. INSTALL ALL ROOF DRAINS AND CUTTING THE HOLES IN THE DECK FOR ANY DRAINS AND PROVIDING STRUCTURAL SUPPORTS.
  7. NO WEEP HOLES SHALL BE COVERED OR PLUGGED AS A RESULT OF THE ROOFING WORK, UNLESS OTHERWISE DIRECTED.
- 8. MAINTAIN WATER TIGHTNESS AND PROVIDE PROTECTION AT ANY/ALL OPENINGS IN THE ROOF LEFT AT THE END OF EACH DAY.
  9. PROVIDE CRICKETS FOR WATER DIVERSION AT ALL CURBS, RAILS, ETC. WHICH RUN
- PERPENDICULAR TO THE SLOPE OF THE INSULATION/SLOPED STRUCTURE.

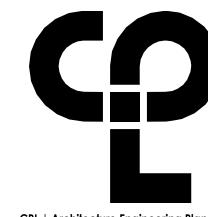
  10. ALL ROOF TOP UNITS SHALL BE MOUNTED ON 16" MIN. INSULATED METAL CURBS.
  PROVIDE TAPERED INSULATION CRICKETS AS REQUIRED TO SHED WATER. WOOD
  BLOCKING SHALL BE PROVIDED SO CURBS ARE 8" ABOVE FINISHED ROOF SURFACE.
- 11. ALL SADDLES AND CRICKETS ARE TO HAVE A MIN. 1/4" PER FOOT SLOPE AS INDICATED.
  PROVIDE CRICKETS FOR DIVERSION OF WATER AT ALL CURBS, RAILS, ETC. WHICH RUN
  PERPENDICULAR TO SLOPE OF INSULATION.
  12. AT ALL MECHANICAL EQUIPMENT, PROVIDE SLOPED INSULATION AS REQUIRED TO
- DRAIN ROOF WATER AWAY FROM HIGH SIDE OF CURBS.

  13. ALL CURBS FOR MECHANICAL EQUIPMENT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR. ASSOCIATED

## **ROOF KEYNOTES**

ROOF/FLASHING BY GENERAL CONTRACTOR.

1 PROVIDE BLACK OUT FILM ON EXTERIOR SIDE OF EXISITNG CLERESTORY



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FOUR OAKS ELEMENTARY

w Date Description

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SHEET INFORMATION

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BID SET

Drawn By

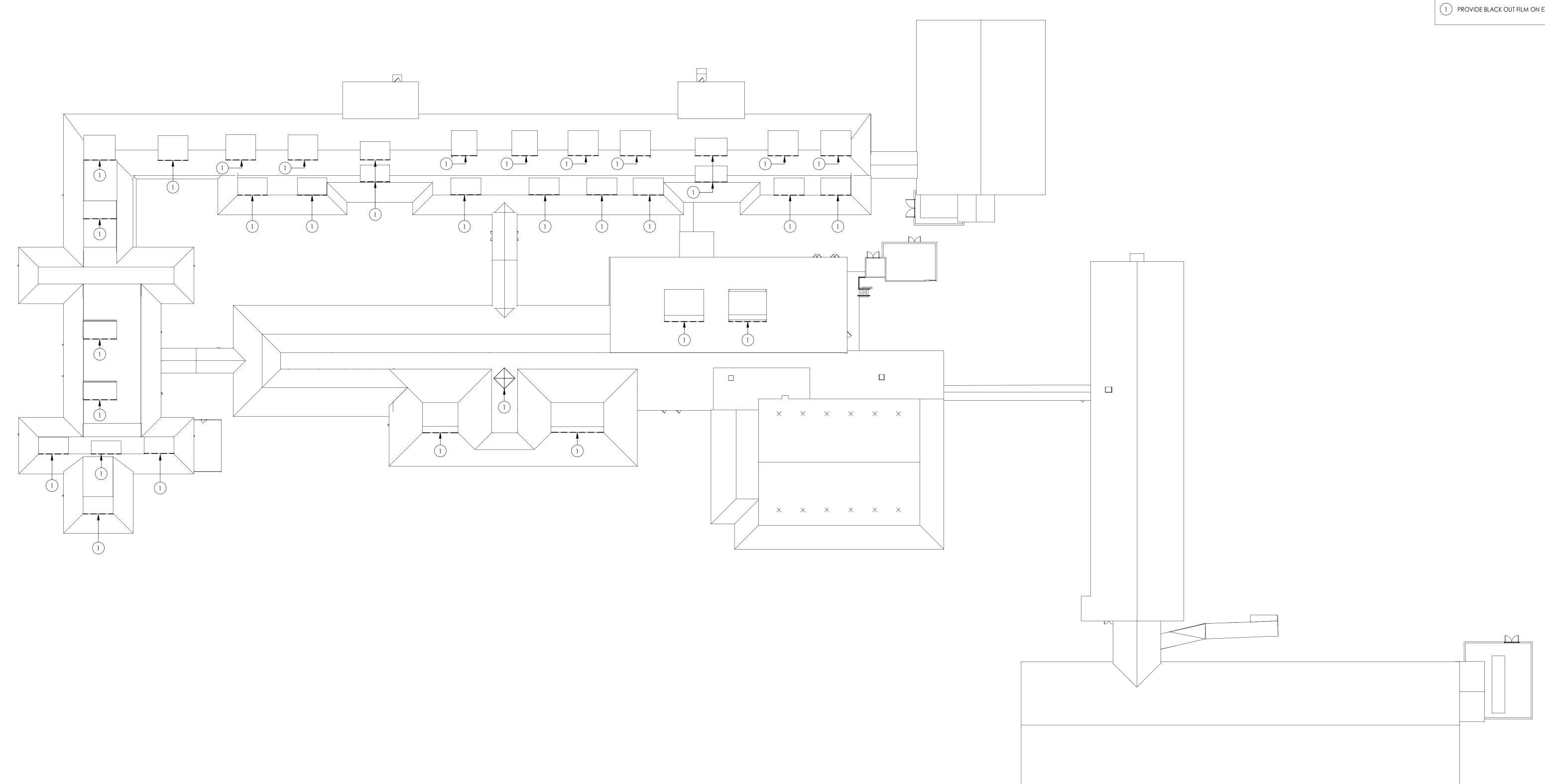
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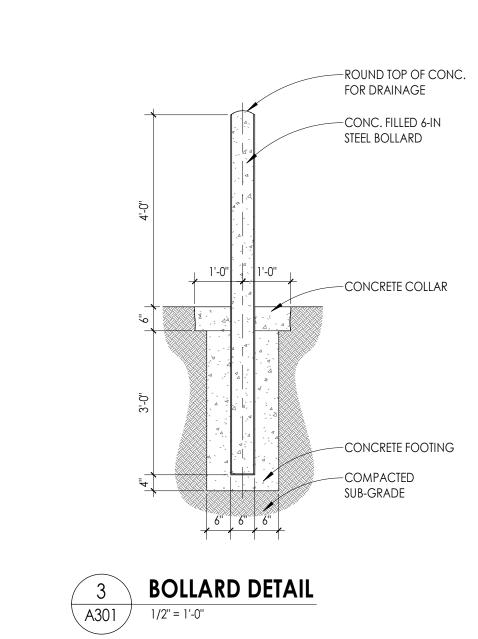
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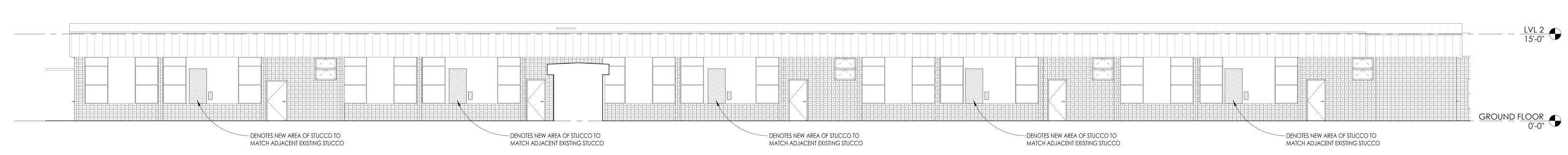
ROOF PLAN

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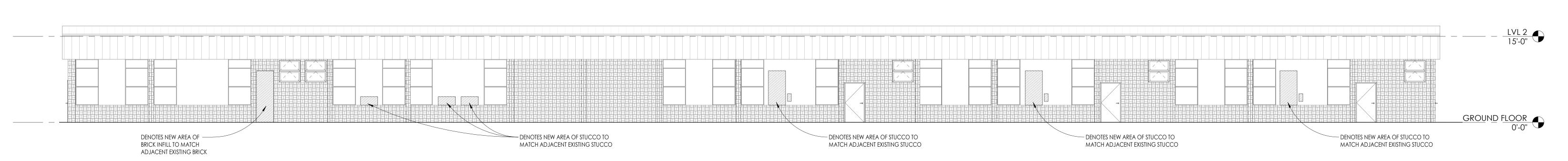
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1 ENLARGED BUILDING ELEVATION

1/8" = 1'-0"

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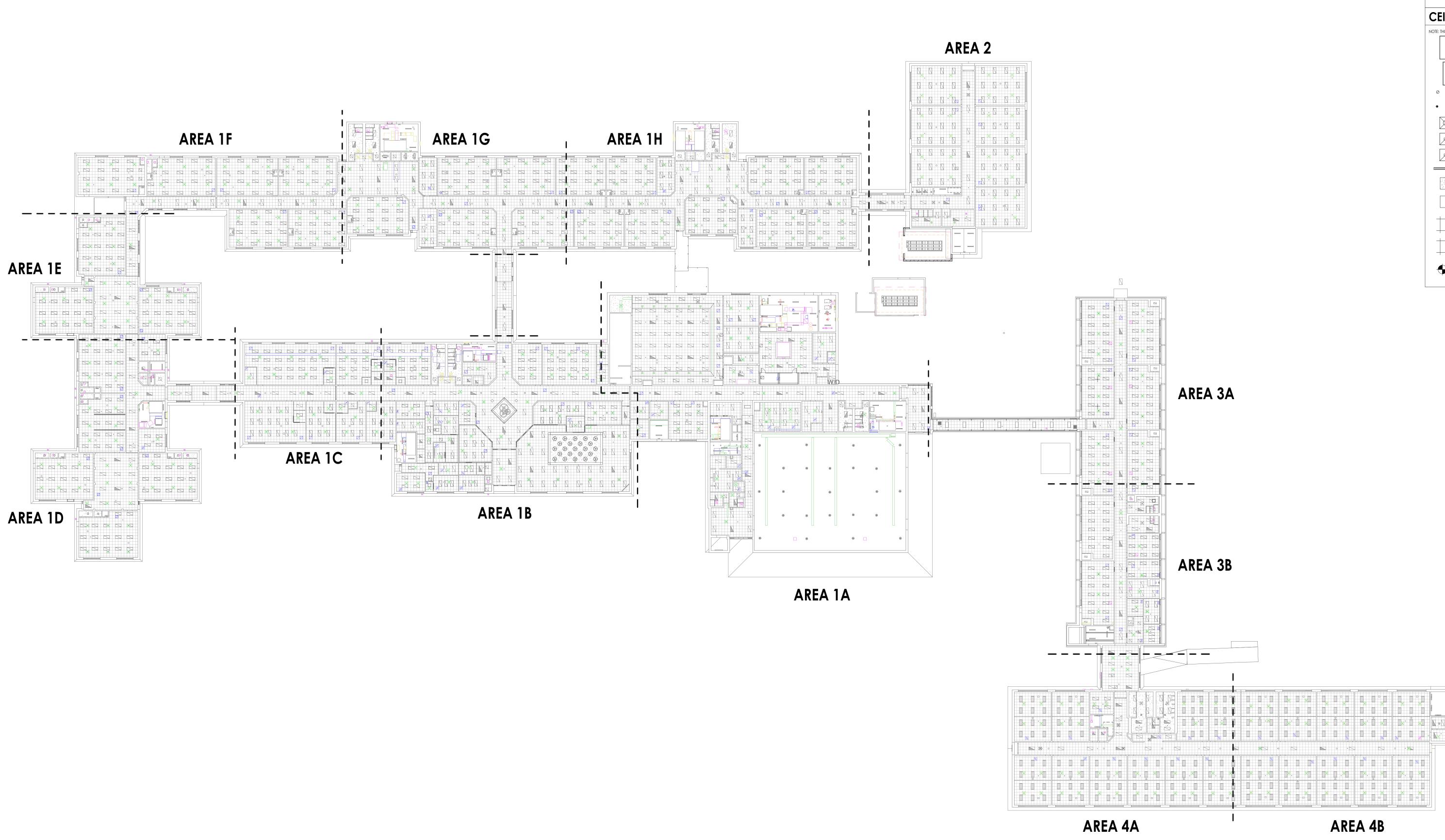
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Drawing Title
BUILDING ELEVATIONS & SITE
DETAILS

Drawing Number

4301



OVERALL REFLECTED CEILING PLAN

## GENERAL CEILING NOTES

- 1. ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF NEW MATERIALS FOR CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIFE D. VERIEY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK
- FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK.

  2. REFER TO **A201** FOR FLOOR PLAN.

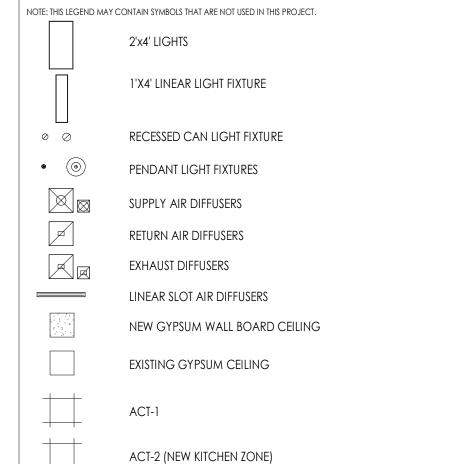
  3. FOR ANY DISCREPANCY BETWEEN THE REFLECTED CEILING PLAN AND THE FLOOR
- PLAN: THE REFLECTED CEILING PLAN SHALL TAKE PRECEDENCE. ANY DISCREPANCY SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.
- 4. PROVIDE UL RATED FIRE STOP ASSEMBLY FOR MECHANICAL, ELECTRICAL AND PLUMBING ITEMS, INCLUDING BUT NOT LIMITED TO DUCTWORK, PIPING, AND
- CONDUIT PENETRATIONS THROUGH FLOORS AND WALLS.

  5. COORDINATE CEILING INSTALLATIONS WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
- REFER TO "H" SERIES DRAWINGS FOR DIFFUSERS AND GRILLE LOCATIONS.
   REFER TO "E" SERIES DRAWINGS FOR LIGHTING TYPES AND CONTROLS.
   REFER TO "P" SERIES DRAWINGS FOR PLUMBING RELATED SCOPE OF WORK.
- WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE LEFT BROOM CLEAN AT THE END OF EACH DAY.
   CENTER CEILING GRID (EACH WAY) IN ROOMS SCHEDULED TO RECEIVE ACOUSTICAL CEILING SYSTEMS UNLESS OTHERWISE NOTED.
- VERIFY WITH ARCHITECT THE INSTALLATION OF ANY CEILING TILES LESS THAN 4" IN WIDTH.
   PROVIDE MOISTURE RESISTANT GYP. BD. AT TOILET ROOM, JANITOR'S CLOSET AND
- OTHER WET LOCATION CEILING ASSEMBLIES.

  13. ALL GYP. BD. CEILINGS AND SOFFITS SHALL BE PRIMED AND PAINTED ON ALL
- FACES AND UNDERSIDE SURFACE.

  14. WHERE APPLICABLE ALL FIXTURES AND DEVICES SHALL BE CENTERED ON A CEILING
- 15. INSTALL CONTROL JOINTS IN GYP. CEILINGS PER ASTM C 840.
  16. IN THE ROOMS THAT CONTIAN AN EXISTING CLERESTORY SPACE, PROVIDE 3-1/2" BATT INSULAITON ABOVE NEW CEILING

## CEILING SYMBOL LEGEND



CEILING TYPE AND CEILING HEIGHT ABOVE

FINISHED FLOOR

KEY PLAN:





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Drawing Title
OVERALL REFLECTED CEILING
PLAN

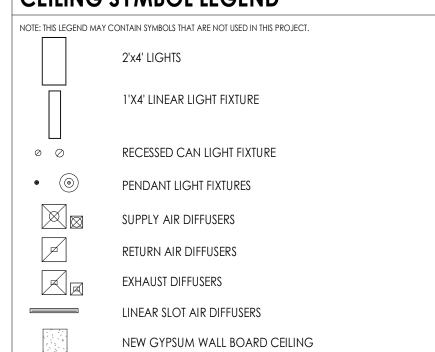
-A601



## GENERAL CEILING NOTES

- 1. ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF NEW MATERIALS FOR CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO
- FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK. 2. REFER TO **A201** FOR FLOOR PLAN.
- 3. FOR ANY DISCREPANCY BETWEEN THE REFLECTED CEILING PLAN AND THE FLOOR PLAN: THE REFLECTED CEILING PLAN SHALL TAKE PRECEDENCE. ANY DISCREPANCY SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.
- 4. PROVIDE UL RATED FIRE STOP ASSEMBLY FOR MECHANICAL, ELECTRICAL AND PLUMBING ITEMS, INCLUDING BUT NOT LIMITED TO DUCTWORK, PIPING, AND
- CONDUIT PENETRATIONS THROUGH FLOORS AND WALLS. 5. COORDINATE CEILING INSTALLATIONS WITH MECHANICAL, ELECTRICAL AND
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- REFER TO "E" SERIES DRAWINGS FOR LIGHTING TYPES AND CONTROLS. . REFER TO "P" SERIES DRAWINGS FOR PLUMBING RELATED SCOPE OF WORK. 9. WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE LEFT BROOM
- CLEAN AT THE END OF EACH DAY. 10. CENTER CEILING GRID (EACH WAY) IN ROOMS SCHEDULED TO RECEIVE ACOUSTICAL CEILING SYSTEMS UNLESS OTHERWISE NOTED.
- 11. VERIFY WITH ARCHITECT THE INSTALLATION OF ANY CEILING TILES LESS THAN 4" IN 12. PROVIDE MOISTURE RESISTANT GYP. BD. AT TOILET ROOM, JANITOR'S CLOSET AND
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- 15. INSTALL CONTROL JOINTS IN GYP. CEILINGS PER ASTM C 840.
- 16. IN THE ROOMS THAT CONTIAN AN EXISTING CLERESTORY SPACE, PROVIDE 3-1/2" BATT INSULAITON ABOVE NEW CEILING

## CEILING SYMBOL LEGEND



EXISTING GYPSUM CEILING

ACT-2 (NEW KITCHEN ZONE)

CEILING TYPE AND CEILING HEIGHT ABOVE FINISHED FLOOR

## **CEILING KEYNOTES**

- 1 NEW ACT CEILING
- 2 REPAIR EXISTING GYP SOFFIT AS REQUIRED, NEW PAINT
- (3) NEW GYPSUM BOARD CEILING
- 4) NEW LIGHT FIXTURE, SEE ELECTRICAL

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PROJECT INFORMATION Project Number

R23.00325.00

JOHNSTON COUNTY PUBLIC **SCHOOLS** 

Project Name FOUR OAKS ELEMENTARY SCHOOL

180 W HATCHER STREET FOUR OAKS, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS





SHEET INFORMATION lssued 02/17/2025 As indicated



## GENERAL CEILING NOTES

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  16. IN THE ROOMS THAT CONTIAN AN EXISTING CLERESTORY SPACE, PROVIDE 3-1/2" BATT INSULAITON ABOVE NEW CEILING

## CEILING SYMBOL LEGEND

NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

2'X4' LIGHTS

1'X4' LINEAR LIGHT FIXTURE

RECESSED CAN LIGHT FIXTURE

PENDANT LIGHT FIXTURES

SUPPLY AIR DIFFUSERS

RETURN AIR DIFFUSERS

0 0

EXHAUST DIFFUSERS

LINEAR SLOT AIR DIFFUSERS

NEW GYPSUM WALL BOARD CEILING
EXISTING GYPSUM CEILING

CEILING TYPE AND CEILING HEIGHT ABOVE

ACT-2 (NEW KITCHEN ZONE)

9'-0" FINISHED FLOOR

1 NEW ACT CEILING

KEY PLAN:

1) NEW ACT CEILING

**CEILING KEYNOTES** 

- 2 REPAIR EXISTING GYP SOFFIT AS REQUIRED, NEW PAINT
- 3 NEW GYPSUM BOARD CEILING
- 4 NEW LIGHT FIXTURE, SEE ELECTRICAL



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PROJECT INFORMATION

JOHNSTON COUNTY PUBLIC

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

FOUR OAKS ELEMENTARY

Project Number R23.00325.00

**SCHOOLS** 

Project Name

SCHOOL

180 W HATCHER STREET

FOUR OAKS, NC 27524



SHEET INFORMATION

Issued Scale
02/17/2025 As indicated

Project Status
BID SET
Drawn By Checked By
KV GB

Drawing Title

REFLECTED CEILING PLAN AREA
1B AND 1C

A601.1BC



**CEILING KEYNOTES** 

1 NEW ACT CEILING

CEILING SYMBOL LEGEND

2'x4' LIGHTS

NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

GENERAL CEILING NOTES

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FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK.

NEW MATERIALS FOR CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO

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PROJECT INFORMATION Project Number R23.00325.00

JOHNSTON COUNTY PUBLIC **SCHOOLS** FOUR OAKS ELEMENTARY

FOUR OAKS, NC 27524

PROFESSIONAL STAMPS





SHEET INFORMATION lssued 02/17/2025 As indicated REFLECTED CEILING PLAN AREA 1D AND 1E



GENERAL CEILING NOTES 1. ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF

NEW MATERIALS FOR CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK. 2. REFER TO **A201** FOR FLOOR PLAN.

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PLAN: THE REFLECTED CEILING PLAN SHALL TAKE PRECEDENCE. ANY DISCREPANCY SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT. 4. PROVIDE UL RATED FIRE STOP ASSEMBLY FOR MECHANICAL, ELECTRICAL AND

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15. INSTALL CONTROL JOINTS IN GYP. CEILINGS PER ASTM C 840. 16. IN THE ROOMS THAT CONTIAN AN EXISTING CLERESTORY SPACE, PROVIDE 3-1/2"

2/A601.1FG

\_\_<del>\_\_</del> 9'-4" EXIST. ACT

1 / A601.1BC

CORRIDOR

KEY PLAN:

BATT INSULAITON ABOVE NEW CEILING

PROJECT INFORMATION

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1111 Haynes Street Suite 100,

Raleigh, NC 27604

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Project Number R23.00325.00

JOHNSTON COUNTY PUBLIC **SCHOOLS** Project Name

FOUR OAKS ELEMENTARY SCHOOL

180 W HATCHER STREET FOUR OAKS, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS





Issued 02/17/2025 Scale As indicated Project Status BID SET REFLECTED CEILING PLAN AREA 1F AND 1G

Drawing Number

A601.1FG



REFLECTED CEILING PLAN - AREA 1H

## GENERAL CEILING NOTES

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- FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK.

  2. REFER TO **A201** FOR FLOOR PLAN.

  3. FOR ANY DISCREPANCY RETWEEN THE REFLECTED CELLING PLAN AND THE FLO
- 3. FOR ANY DISCREPANCY BETWEEN THE REFLECTED CEILING PLAN AND THE FLOOR PLAN: THE REFLECTED CEILING PLAN SHALL TAKE PRECEDENCE. ANY DISCREPANCY

  Output

  Description: The reflected ceiling plan shall take precedence. The reflected ceiling plan shall take precedence. The reflected ceiling plan shall take precedence.

  The reflected ceiling plan shall take precedence. The reflected ceiling plan shall take precedence. The reflected ceiling plan and the floor plan shall take precedence. The reflected ceiling plan shall take precedence and the reflected ceiling plan shall take precedence. The reflected ceiling plan shall take precedence and the reflected ceiling plan shall take plan shall take
- SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.

  4. PROVIDE UL RATED FIRE STOP ASSEMBLY FOR MECHANICAL, ELECTRICAL AND PLUMBING ITEMS, INCLUDING BUT NOT LIMITED TO DUCTWORK, PIPING, AND
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  16. IN THE ROOMS THAT CONTIAN AN EXISTING CLERESTORY SPACE, PROVIDE 3-1/
- 16. IN THE ROOMS THAT CONTIAN AN EXISTING CLERESTORY SPACE, PROVIDE 3-1/2"
  BATT INSULAITON ABOVE NEW CEILING

## CEILING SYMBOL LEGEND

NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

2'X4' LIGHTS

1'X4' LINEAR LIGHT FIXTURE

RECESSED CAN LIGHT FIXTURE
PENDANT LIGHT FIXTURES

SUPPLY AIR DIFFUSERS

RETURN AIR DIFFUSERS

EXHAUST DIFFUSERS

LINEAR SLOT AIR DIFFUSERS

NEW GYPSUM WALL BOARD CEILING

EXISTING GYPSUM CEILING

AC

0 0

ACT-2 (NEW KITCHEN ZONE)

CEILING TYPE AND CEILING HEIGHT ABOVE FINISHED FLOOR

## **CEILING KEYNOTES**

- 1 NEW ACT CEILING
- 2 REPAIR EXISTING GYP SOFFIT AS REQUIRED, NEW PAINT
- 3 NEW GYPSUM BOARD CEILING
- 4 NEW LIGHT FIXTURE, SEE ELECTRICAL

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PROJECT INFORMATION
Project Number

R23.00325.00
Client Name
JOHNSTON COUNTY PUBLIC

SCHOOLS
Project Name
FOUR OAKS ELEMENTARY
SCHOOL

180 W HATCHER STREET FOUR OAKS, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS



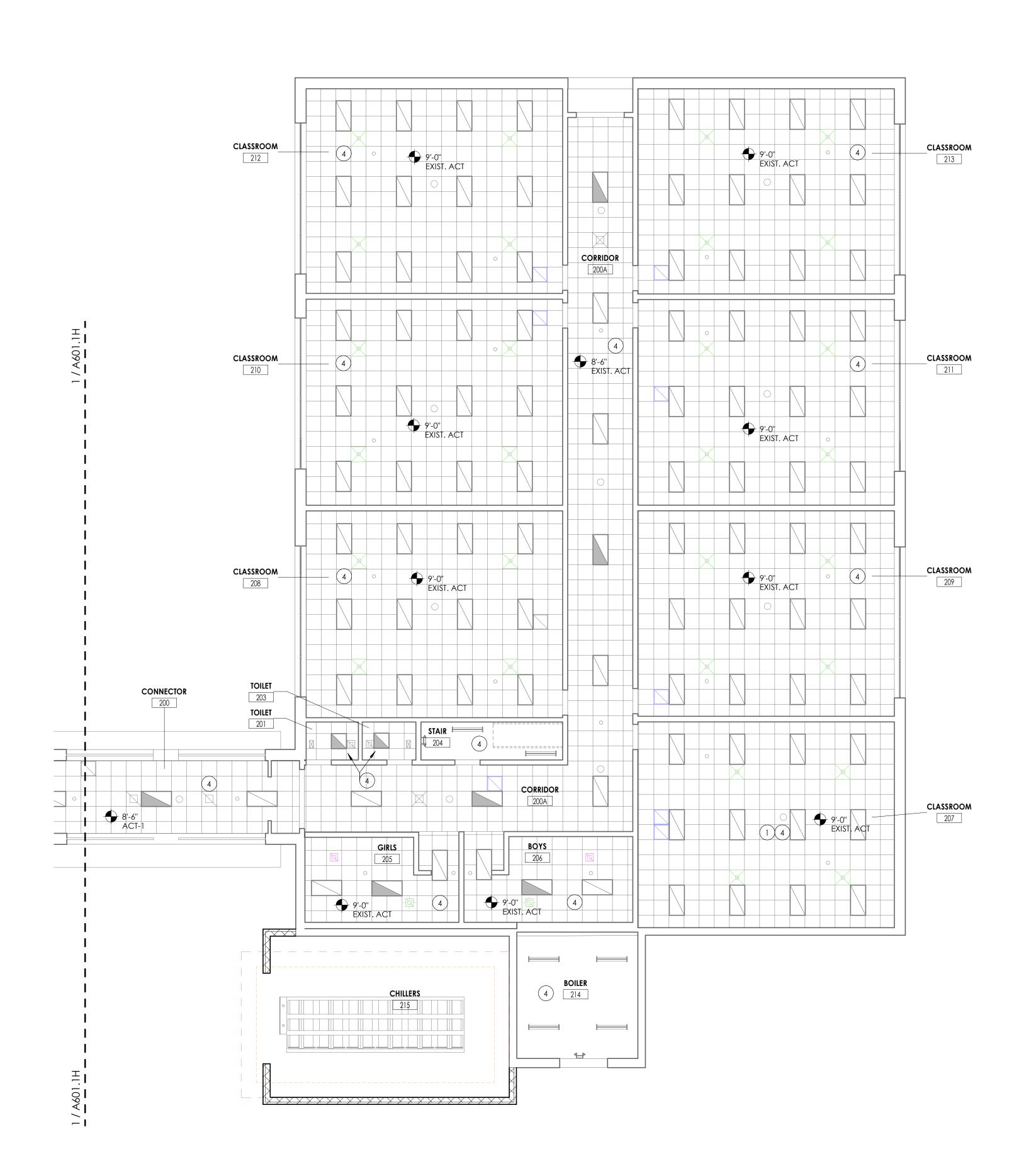


SHEET INFORMATION

Issued Scale
02/17/2025 As indicated
Project Status
BID SET
Drawn By Checked By
KV GB

Drawing Number

A601.1H



# REFLECTED CEILING PLAN - AREA 2 A601.2 1/8" = 1'-0"

## GENERAL CEILING NOTES

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- 16. IN THE ROOMS THAT CONTIAN AN EXISTING CLERESTORY SPACE, PROVIDE 3-1/2" BATT INSULAITON ABOVE NEW CEILING

15. INSTALL CONTROL JOINTS IN GYP. CEILINGS PER ASTM C 840.

## CEILING SYMBOL LEGEND

NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

2'x4' LIGHTS

1'X4' LINEAR LIGHT FIXTURE

Ø RECESSED CAN LIGHT FIXTURE ® PENDANT LIGHT FIXTURES

SUPPLY AIR DIFFUSERS

RETURN AIR DIFFUSERS

EXHAUST DIFFUSERS

EXHAUST DIFFUSERS

LINEAR SLOT AIR DIFFUSERS

NEW GYPSUM WALL BOARD CEILING

EXISTING GYPSUM CEILING

ACT-1

ACT-2 (NEW KITCHEN ZONE)

ACT-1 CEILING TYPE AND CEILING HEIGHT ABOVE FINISHED FLOOR

## CEILING KEYNOTES

1 NEW ACT CEILING

KEY PLAN:

- 2 REPAIR EXISTING GYP SOFFIT AS REQUIRED, NEW PAINT
- 3 NEW GYPSUM BOARD CEILING
- 4 NEW LIGHT FIXTURE, SEE ELECTRICAL

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PROJECT INFORMATION

Project Number

R23.00325.00
Client Name

JOHNSTON COUNTY PUBLIC
SCHOOLS

Project Name
FOUR OAKS ELEMENTARY
SCHOOL

Project Address 180 W HATCHER STREET FOUR OAKS, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

v Date Description

PROFESSIONAL STAMPS





Issued Scale
02/17/2025 As indicated
Project Status
BID SET
Drawn By Checked By

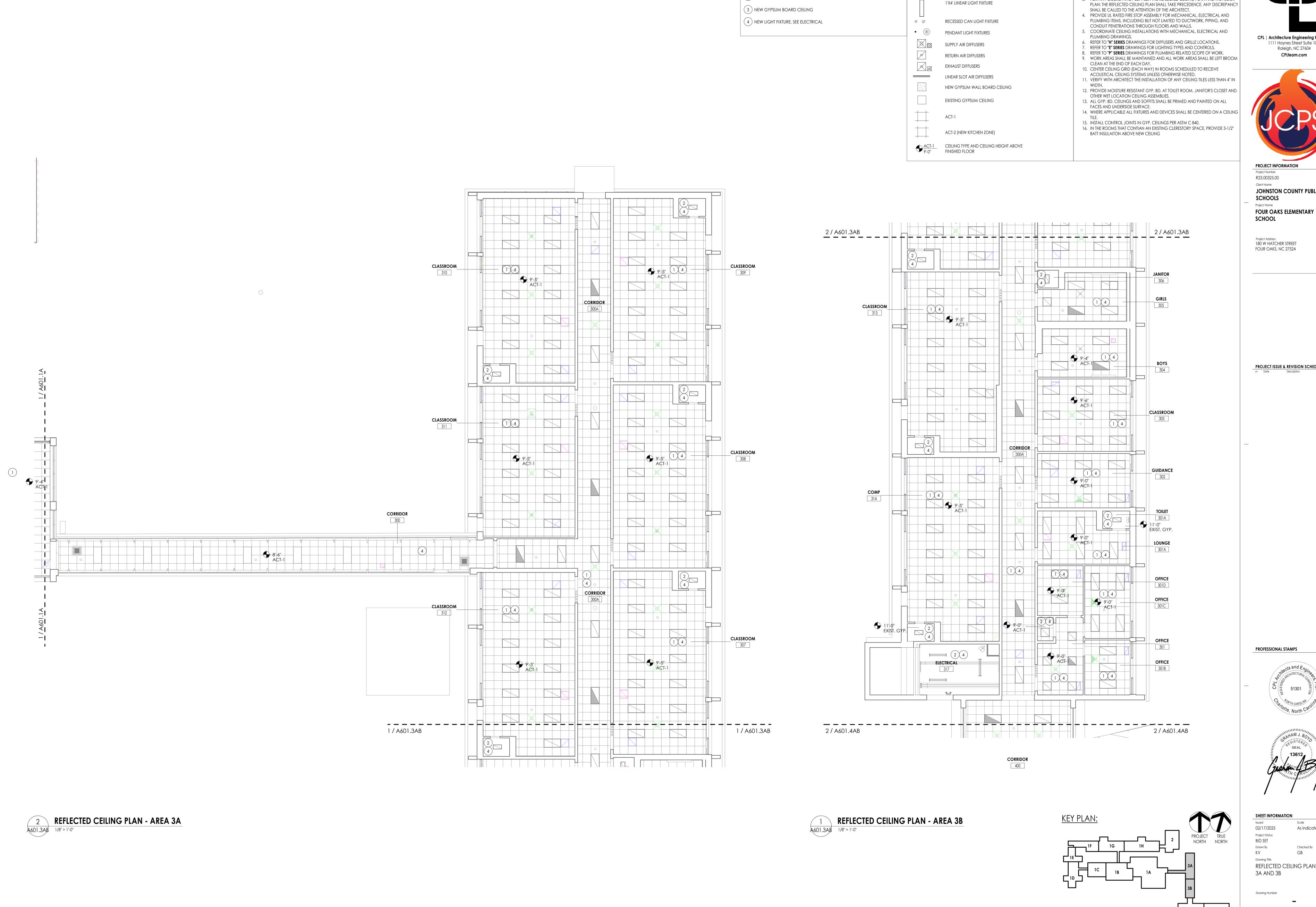
KV GB

Drawing Title

REFLECTED CEILING PLAN AREA 2

ving Number

A601.2



**CEILING KEYNOTES** 

(2) REPAIR EXISTING GYP SOFFIT AS REQUIRED, NEW PAINT

1 NEW ACT CEILING

CEILING SYMBOL LEGEND

2'x4' LIGHTS

NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

GENERAL CEILING NOTES

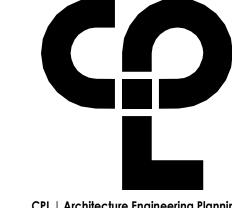
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NEW MATERIALS FOR CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO



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PROJECT INFORMATION Project Number R23.00325.00

JOHNSTON COUNTY PUBLIC **SCHOOLS** Project Name

180 W HATCHER STREET

FOUR OAKS, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

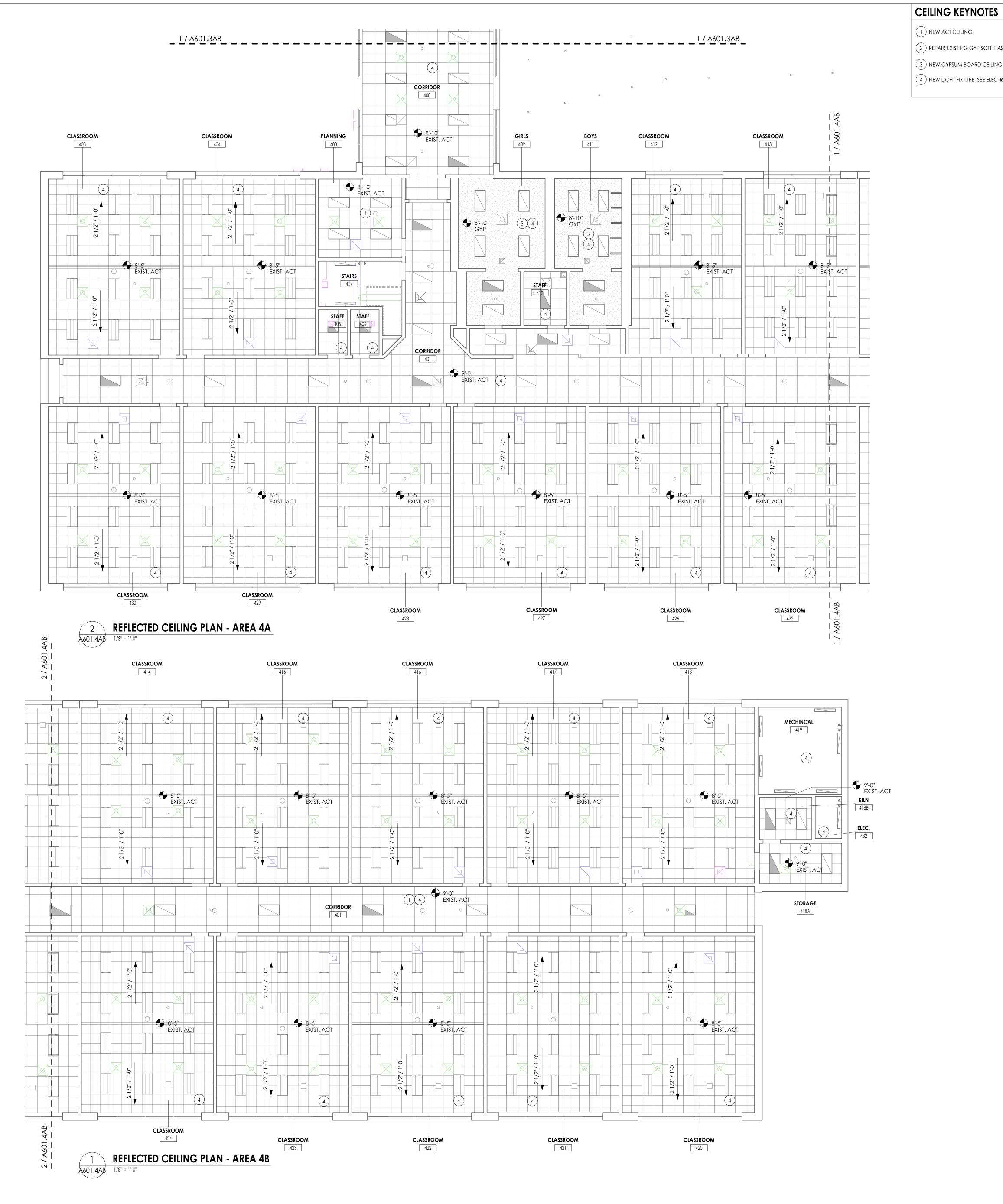
w Date Description

PROFESSIONAL STAMPS





SHEET INFORMATION lssued 02/17/2025 As indicated Project Status BID SET REFLECTED CEILING PLAN AREA 3A AND 3B



## CEILING SYMBOL LEGEND

(2) REPAIR EXISTING GYP SOFFIT AS REQUIRED, NEW PAINT

(3) NEW GYPSUM BOARD CEILING 4 NEW LIGHT FIXTURE, SEE ELECTRICAL 2'x4' LIGHTS 1'X4' LINEAR LIGHT FIXTURE

0 0 RECESSED CAN LIGHT FIXTURE PENDANT LIGHT FIXTURES

NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

SUPPLY AIR DIFFUSERS RETURN AIR DIFFUSERS EXHAUST DIFFUSERS

LINEAR SLOT AIR DIFFUSERS NEW GYPSUM WALL BOARD CEILING

EXISTING GYPSUM CEILING

ACT-1 CEILING TYPE AND CEILING HEIGHT ABOVE FINISHED FLOOR

ACT-2 (NEW KITCHEN ZONE)

## GENERAL CEILING NOTES

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PROJECT INFORMATION Project Number R23.00325.00

JOHNSTON COUNTY PUBLIC

SCHOOL

**SCHOOLS** Project Name FOUR OAKS ELEMENTARY

180 W HATCHER STREET FOUR OAKS, NC 27524

PROJECT ISSUE & REVISION SCHEDULE
w Date Description

PROFESSIONAL STAMPS





Issued 02/17/2025 Scale As indicated Project Status **BID SET** Drawing Title REFLECTED CEILING PLAN AREA 4A AND 4B

KEY PLAN:

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL		DESCRIPTION	SYMBOL	$\overline{}$
	CONNECTION - TOP	20X10	DUCT SECTION - SUPPLY	E P	ELECTRIC/PNEUMATIC SWITCH OR RELAY	STANDOL		DESCRIPTION	AAD	+
	CONNECTION - BOTTOM	20X10	DUCT SECTION - RETURN	PE	PNEUMATIC/ELECTRIC SWITCH OR RELAY	24X12 12X10	Supply / Return /	1-1/2 TIMES BRANCH SIZE	ACC	+
		20X10		CT	CURRENT TRANSDUCER	- VD	EXHAUST AIR TAKEOFFS	12X10	AFF	$\dagger$
	DIRECTION OF FLOW		DUCT SECTION - EXHAUST						AHU	
	REDUCER	A" Ø	DUCT SECTION - ROUND DUCT IN INCHES	)	OPEN/CLOSED	24X12		1-1/2 TIMES BRANCH SIZE	BD	I
	CAP OR PLUG	20/10	DUCT SECTION - FLAT OVAL DUCT IN INCHES	\$\s\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	START/STOP		Supply / Return / Exhaust air	8Ø 7	СА	Ļ
	ELBOW DOWN	<u> </u>	ACOUSTIC THERMAL LINING	E <sub>D</sub>	ENABLE/DISABLE	\ \vdots	TAKEOFFS	VD VD	CD	$\perp$
	ELBOW UP		FLEXIBLE DUCTWORK	T	TEMPERATURE SENSOR (DUCT OR PIPE MOUNTED)	14"Ø		P)	CFM	$\perp$
<u> </u>	TEE OUTLET - UP		FLEXIBLE CONNECTION	H	HUMIDITY SENSOR (DUCT MOUNTED)	14 %	SUPPLY AIR	CONICAL TEE	CHWR	+
<del></del>	TEE OUTLET - DOWN			F	FLOW TRANSMITTER	VD VD	TAKEOFFS	\(\frac{10\in\theta}{\sqrt{D}}\)	CHWS CR	$\vdash$
	UNION		FIRE DAMPER	P	PRESSURE TRANSMITTER	<u></u>		N N	CS	+
	GATE VALVE	•		₩P	DIFFERENTIAL PRESSURE TRANSMITTER	14"Ø	SUPPLY AIR	LATERAL	(E)	+
	BALL VALVE		SMOKE DAMPER	(I/P)	ELECTRIC/PNEUMATIC TRANSDUCER	\ \frac{1}{\sqrt{D}}	TAKEOFFS	AD 10.\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	EA	
	BALANCING VALVE	<u> </u>		I E	ELECTRIC/ELECTRONIC TRANSDUCER	<u></u>		<b>b</b>	EC	
	STRAINER			₹ <u></u>	DUCT SMOKE DETECTOR	24X12 — 6X12 — 12X10		24X12	EF	L
No.	STRAINER WITH BLOW-DOWN		COMBINATION FIRE AND SMOKE DAMPER	T	SPACE THERMOSTAT	18X12	Supply air Takeoffs	18X12 • 12X10 6X12	ERHC	_
	BUTTERFLY VALVE			Ţ	SPACE TEMPERATURE SENSOR	20X12		20X12	ETR	+
	GLOBE VALVE	L <sub>VD</sub>	VOLUME DAMPER	<b>△</b> <sub>CO2</sub>	SPACE CARBON DIOXIDE SENSOR	24X12	SUPPLY/RETURN		EUH F&T	$\vdash$
	CHECK VALVE		DAMPER CONTROL, PARALLEL BLADE	CH4	SPACE NATURAL GAS SENSOR		EXHAUST AIR TAKEOFFS W/	24X12	FCU	+
	TRIPLE DUTY VALVE		DAMPER CONTROL, OPPOSED BLADE	Nox	NITROGEN OXIDES SENSOR	\ \vartriangle \v	REGISTER/GRILLE/ DIFFUSER	VD	FPM	+
	GAS COCK, PLUG VALVE			lacktriangleco	SPACE CARBON MONOXIDE SENSOR	<u> </u>		Thun	GC	
- U/C	UNDERCUT DOOR 1"		AUTOMATIC AIR DAMPER	VG	SPACE SENSOR WITH GUARD		SUPPLY/RETURN EXHAUST AIR		HHWR	
С Дм		AAD		H	SPACE HUMIDISTAT		END OF MAIN BRANCH TAKEOFFS		HHWS	I
	AIR VENT - MANUAL			FS	WATER FLOW SENSOR	<u></u>		T VD	HP	_
	AIR VENT - AUTOMATIC	BDD	BACK DRAFT DAMPER	PA	PNEUMATIC ACTUATOR	ŬvD	SUPPLY/RETURN	VD	HPS	$\vdash$
	FLANGE		DI ACT CATE	EA	ELECTRIC ACTUATOR	hvp.	EXHAUST AIR END OF MAIN	K.	LPC	$\vdash$
	CONTROL/SOLENOIND VALVE, ELECTRIC 2-WAY	BG	BLAST GATE	VSD VFD	VARIABLE SPEED / FREQUENCY DRIVE	JVD	BRANCH TAKEOFFS	VD '	LPS MC	+
	CONTROL VALVE, ELECTRIC 3-WAY			C/ C	COOLING COIL	$\sim$		rT	MPC	$\vdash$
Ž.	CONTROL VALVE, PNEUMATIC 2-WAY	12X10 12X10	AIR DUCT	H	HEATING COIL		LONG RADIUS 90° ELBOW	W R	MPS	$\vdash$
	CONTROL VALVE, PNEUMATIC 3-WAY	12/10	(FIRST FIGURE IS DUCT WIDTH/TOP, SECOND FIGURE IS DUCT DEPTH)	G/	GAS FURNACE		R/W=1.5		NC NC	+
	DELIEF (CAFETY MAINE	10X20 —7	SECOND FIGURE IS DOCT DET TITI	H	HUMIDIFIER	-			NO	$\vdash$
T	RELIEF / SAFETY VALVE		FLAT OVAL	A	ALARM		LONG RADIUS 45° ELBOW	W R	NTS	
	PRESSURE REDUCING VALVE	The state of the s	TURNING VANES	S	STATUS		R/W=1.5		OA	
Pv	VACUUM BREAKER		EXISTING WORK TO BE REMOVED (HATCHED)	FS	FLOW SWITCH	-			PC	$\perp$
	FLEXIBLE PIPE CONNECTOR	<b>—</b>	POINT OF CONNECTION	ΔΡ	DIFFERENTIAL STATIC PRESSURE SWITCH	$\rightarrow$	90° ELBOW	TT	RA	-
	EXPANSION COMPENSATOR W/ GUIDES		POINT OF DISCONNECTION	R	RELAY		WITH TURNING VANES	7	RHC	$\vdash$
	EXPANSION JOINT		AIR FLOW SENSOR	$\bigcirc$	PRESSURE GAUGE	_			RLL	$\vdash$
X	PIPE ANCHOR		FILTER	FZ	FREEZE-STAT	18X16 — 18X8	90 VERTICAL	18X8—	RTU	+
<del>=</del>	PIPE GUIDE		TIELEN		DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM)		SPLIT OFF (PLAN VIEW)	\$ 18X16 18X8 \$	RV	$\vdash$
П	THERMOSTATIC TRAP		TRANSITION SQUARE TO ROUND	DO	DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM)	18X8	, ,		SA	
FT		<del>-</del>		AO AO	· · · · · · · · · · · · · · · · · · ·	20X10 20X10	DUCT TURNING	20X10	SHWR	
	FLOAT & THERMOSTATIC TRAP		HUMIDIFIER DISPERSION TUBE	<u> </u>	ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM)	20X10	UP OR DOWN	200/10	SHWS	L
ВТ	BUCKET TRAP	RISE		AI	ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM)				SSI	$\perp$
TD	THERMODYNAMIC TRAP		RISE IN DUCT		ELECTRICAL INTERFACE	-			O22	_
	IIILKWODINAWIC IKAI			ES		-			TC	+
	THERMOMETER		DROP IN DUCT		EMERGANCY STOP PUSH BUTTON	-			UH	$\vdash$
	WELL	D	201125 22 22 22 21	SF	SPEED FEED BACK	-			UV	+
	PRESSURE GAUGE		SQUARE OR RECTANGULAR CEILING DIFFUSER (4 WAY)  CEILING DIFFUSER WITH SECTORIZING BAFFLE(S)	<i>&gt;&gt;</i>	TRAVERSE AVERAGING SENSOR	-			V	+
			(1 WAY, 2 WAY,3 WAY)	•	PROBE SENSOR	-			WWHP	L
	STEAM PRESSURE GAUGE	<u> </u>	ROUND CEILING DIFFUSER		FREEZE STAT SENSOR	J				
<u> </u>	WITH 1/4" NEEDLE VALVE		SQUARE OR RECTANGULAR CEILING RETURN GRILLE							
	PDFFCUIPE O LUGE		EXHAUST GRILLE							
<del>\</del>	PRESSURE GAUGE WITH 1/4" NEEDLE VALVE		SUPPLY REGISTER, RETURN OR EXHAUST GRILLE							
			FAN							
XX	PIPING		AIR FLOW  X = DIFFUSER OR GRILL TYPE							
	PUMP	XX	XX = AIR FLOW VALUE (CFM)							
		X	X = DIFFUSER OR GRILL TYPE XX = CONNECTION SIZE							

XX = CONNECTION SIZE
XXX = AIR FLOW VALUE (CFM)

X = DIFFUSER OR GRILL TYPE XXX = AIR FLOW VALUE (CFM) XXX = CONNECTION SIZE

XXXX = FACE SIZE OR LAY-IN GRID SIZE

## **MECHANICAL GENERAL NOTES**

DESCRIPTION

AUTOMATIC AIR DAMPER

ABOVE FINISHED FLOOR

AIR HANDLING UNIT

BACKDRAFT DAMPER

CUBIC FEET PER MINUTE

CHILLED WATER RETURN

CHILLED WATER SUPPLY

CONDENSER WATER RETURN

CONDENSER WATER SUPPLY

ELECTRICAL CONTRACTOR

ELECTRIC REHEAT COIL

EXISTING TO REMAIN

ELECTRIC UNIT HEATER

FAN-COIL UNIT

FEET PER MINUTE

HEAT PUMP

GENERAL CONTRACTOR

HIGH PRESSURE STEAM

LOW PRESSURE STEAM

HEATING HOT WATER RETURN

HEATING HOT WATER SUPPLY

LOW PRESSURE CONDENSATE

MECHANICAL CONTRACTOR

MEDIUM PRESSURE STEAM

PLUMBING CONTRACTOR

HOT WATER REHEAT COIL

REFRIGERANT LIQUID PIPE

REFRIGERANT SUCTION PIPE

SECONDARY HEATING HOT WATER RETURN

SECONDARY HEATING HOT WATER SUPPLY

TEMPERATURE CONTROLS CONTRACTOR

SPLIT SYSTEM INDOOR SECTION (EVAPORATOR SECTION)

SPLIT SYSTEM OUTDOOR SECTION (CONDENSING UNIT)

NORMALLY OPEN

NOT TO SCALE

OUTSIDE AIR

RETURN AIR

**ROOFTOP UNIT** 

**ROOF VENT** 

SUPPLY AIR

UNIT HEATER

VENT

UNIT VENTILATOR

WATER-TO-WATER HEAT PUMP

MEDIUM PRESSURE CONDENSATE

FLOAT AND THERMOSTATIC TRAP

EXISTING

EXHAUST AIR

EXHAUST FAN

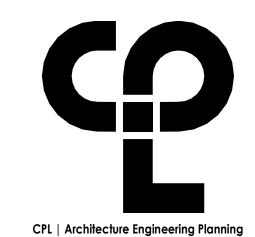
COMPRESSED AIR

AIR-COOLED CONDENSING UNIT

COOLING COIL CONDENSATE DRAIN

- MAINTAIN CLEARANCE OF A MINIMUM OF 6" BETWEEN DUCTWORK, PIPING, EQUIPMENT, ETC. AND ALL RATED WALL ASSEMBLIES TO ALLOW FOR INSPECTIONS OF RATED WALLS.
- 2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS WITHIN THE BUILDING PRIOR TO COMMENCEMENT OF ALL DEMOLITION AND NEW WORK.
- 3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE AND REPLACE EXISTING CEILINGS, UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS, FOR PERFORMING DEMOLITION OR NEW WORK WITHIN THE BUILDING. THE EXISTING CEILINGS SHALL BE REMOVED IN A MANNER TO AVOID DAMAGE TO THE CEILING SYSTEMS. STORAGE OF CEILING SYSTEM COMPONENTS FOR REINSTALLATION IS THE RESPONSIBILITY OF THE CONTRACTOR. THE STORAGE OF ALL MATERIAL SHALL BE IN AREAS OR LOCATIONS APPROVED BY THE OWNER. THE OWNER WILL NOT COMPENSATE FOR ANY DAMAGED OR LOST MATERIAL WHILE IN STORAGE. AFTER COMPLETION OF ALL DEMOLITION OR NEW WORK, THE CONTRACTOR SHALL REINSTALL THE CEILING SYSTEMS TO MATCH THE ORIGINAL INSTALLATION.
- 4. DEMOLITION DRAWINGS SHOW MAJOR EQUIPMENT, PIPING, AND DUCTWORK REMOVALS. THE INTENT IS NOT TO IDENTIFY ALL MISCELLANEOUS PIPING, PIPING ACCESSORIES, DUCTWORK, DUCTWORK ACCESSORIES, SUPPORTS, CONTROLS, CONTROL ACCESSORIES, CONTROL WIRING, CONDUIT, AND PNEUMATIC CONTROL TUBING TO BE DISCONNECTED AND REMOVED, BUT IS THE REQUIREMENT UNDER THIS CONTRACT. NO EQUIPMENT, PIPING, OR DUCTWORK SHALL BE ABANDONED IN PLACE, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- BEFORE DISCONNECTING, REMOVING, OR SERVICING ANY AIR CONDITIONING EQUIPMENT OR SYSTEMS CONTAINING REFRIGERANTS, THE EQUIPMENT OR SYSTEMS SHALL BE EVACUATED OF ALL REFRIGERANT PER THE LATEST ADOPTED RULES AND REGULATIONS BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA). THE CONTRACTOR OR TECHNICIAN PERFORMING THE WORK SHALL BE CERTIFIED BY AN EPA APPROVED CERTIFYING AGENCY OR ORGANIZATION.
- 6. ALL DUCTWORK, PIPING, AND CONDUIT PENETRATIONS THROUGH RATED VERTICAL AND HORIZONTAL ASSEMBLIES SHALL BE PROVIDED WITH FIRE/SMOKE STOPPINGS PER SPECIFICATION. REFER TO CODE ANALYSIS DRAWING FOR ALL RATED LOCATIONS.
- 7. UNLESS SHOWN ON THE ARCHITECTURAL DRAWINGS, IT IS THE RESPONSIBILITY OF THIS CONTRACT TO PATCH AND FINISH ALL EXISTING DUCTWORK OR PIPE PENETRATIONS THROUGH FLOORS, ROOFS, INTERIOR WALLS, AND EXTERIOR WALLS AFTER DEMOLITION WORK. IN ADDITION, ALL NEW PENETRATIONS SHALL BE PROVIDED FOR INSTALLATION OF MECHANICAL SYSTEMS INCLUDING, BUT NOT LIMITED TO, EQUIPMENT, CURBING, DUCTWORK, PIPING, CONTROLS, ETC. PATCHING AND FINISHING SHALL MATCH EXISTING CONSTRUCTION INCLUDING FIRE RATINGS. PROVIDE LINTELS PER LINTEL SCHEDULE.
- 8. IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL AIR VENTS AND DRAINS IN THE PIPING SYSTEMS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AIR VENTS AT ALL SYSTEM HIGH POINTS AND AT AREAS WITHIN THE PIPING SYSTEMS THAT COULD ACCUMULATE OR TRAP AIR WHICH WOULD PREVENT PROPER VENTING OR OPERATION OF THE SYSTEMS. DRAINS SHALL BE PROVIDED AT ALL LOW POINTS WITHIN THE PIPING SYSTEM TO FACILITATE COMPLETE DRAINING OF THE SYSTEM.
- 9. UNLESS NOTED OTHERWISE IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO MODIFY AND PATCH ROOFING AND ROOF DECKS AS NECESSARY TO INSTALL NEW EQUIPMENT SUPPORTS, PIPING PORTALS, CURBS AND RAILS. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO PATCH ROOFING AND DECKS WHEN DEMOLISHING ROOF MOUNTED EQUIPMENT. COORDINATE WITH THE OWNER AND EXISTING ROOFING MANUFACTURERS TO MAINTAIN THE WARRANTIES ON ALL ROOFS. ALL ROOFING WORK TO BE PERFORMED BY CERTIFIED ROOFING CONTRACTOR. IT IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE STRUCTURAL FRAMING ASSOCIATED WITH THE WORK IN THIS CONTRACT. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF AND DECK TYPES AND FRAMING DETAILS. PROVIDE STRUCTURAL FRAMING FOR EQUIPMENT AND ROOF OPENINGS. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
- 10. INSTALLATION OF ALL MECHANICAL EQUIPMENT RAILS AND CURBS SHALL CONFORM TO THE WIND RESTRAINT REQUIREMENTS APPLICABLE BUILDING CODE AND THIS PROJECT.
- 11. ALL MECHANICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH 2018 NORTH CAROLINA BUILDING, MECHANICAL, PLUMBING, FUEL GAS, AND ENERGY CONSERVATION CODES.

MECHANICAL DESIGN CRITERIA TEMPERATURE DESIGN		
CONDITION	CRITERIA	COMMENTS
SUMMER (COOLING): OUTSIDE AIR DESIGN	95.0°F DB, 75.9°F WB	DERIVED FROM ASHRAE 90.1 FOR JOHNSTON COUNTY AP, NC, USA
WINTER (HEATING): OUTSIDE AIR DESIGN	19.3°F DB, 6.0°F WB	DERIVED FROM ASHRAE 90.1 FOR JOHNSTON COUNTY AP, NC, USA
INDOOR DESIGN:	70°F - 75°F	



(CPS)

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Raleigh, NC 27604

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PROJECT INFORMATION

Project Number
R23.00325
Client Name
JOHNSTON COUNTY PUBLIC

SCHOOL DISTRICT
Project Name
FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

vv Date Description

PROFESSIONAL STAMPS

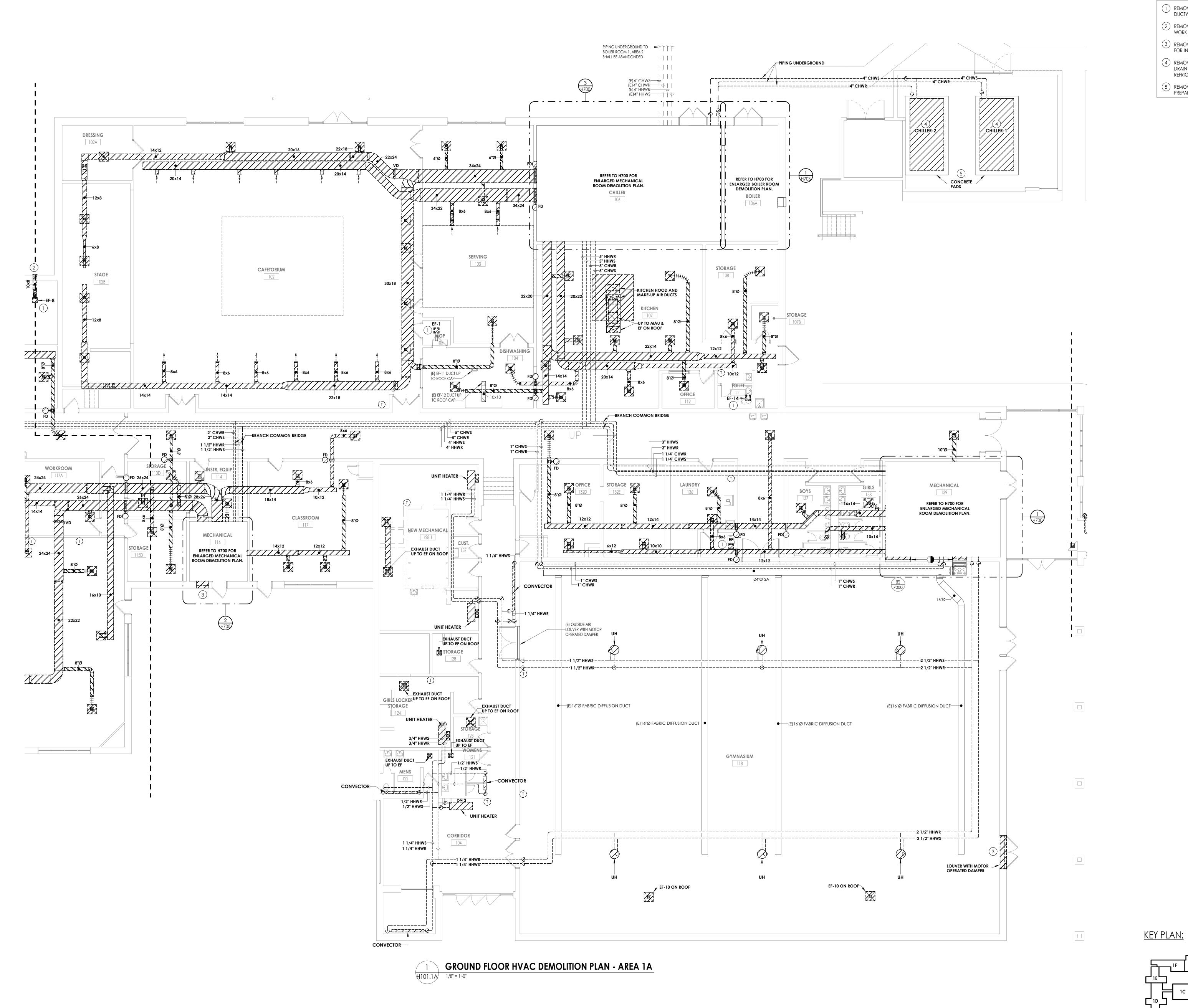


SHEET INFORMATION

Issued Scale
02/17/2025 NOT TO SCALE
Project Status
BID SET
Drawn By Checked By
KAB RM

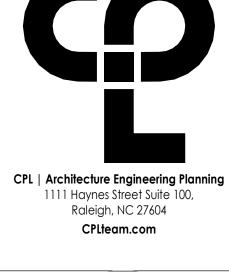
Drawing Title
HVAC SYMBOLS LEGEND AND
CONTRACTOR NOTES

HOOO



- 1 REMOVE CEILING EXHAUST FAN AND DISCONNECT ALL ASSOCIATED DUCTWORK AND CONTROLS. PREPARE FOR NEW WORK IN THIS AREA.
- REMOVE EXISTING LOUVER AND PLENUM. PREPARE WALL OPENING FOR NEW WORK IN THIS AREA.
- (3) REMOVE EXISTING LOUVER AND PLENUM. COORDINATE WITH ARCH DRAWINGS FOR INFILL DETAIL AND MATERIALS.
- REMOVE EXISTING CHILLER, SUPPORTS, CONTROLS, AND PIPING. ISOLATE AND DRAIN SYSTEM IN AREA OF WORK. PREPARE FOR NEW WORK IN THIS AREA.
- DRAIN SYSTEM IN AREA OF WORK, PREPARE FOR NEW WORK IN THIS AREA.

  REFRIGERANT FROM CHILLERS RECOVERED AND RETURNED TO THE OWNER.
- REMOVE EXISTING 17'-1 1/2" X 9'-4 1/2" CONCRETE HOUSEKEEPING PADS AND PREPARE FOR NEW CONCRETE PAD INSTALLATION.





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PROJECT ISSUE & REVISION SCHEDULE
w Date Description

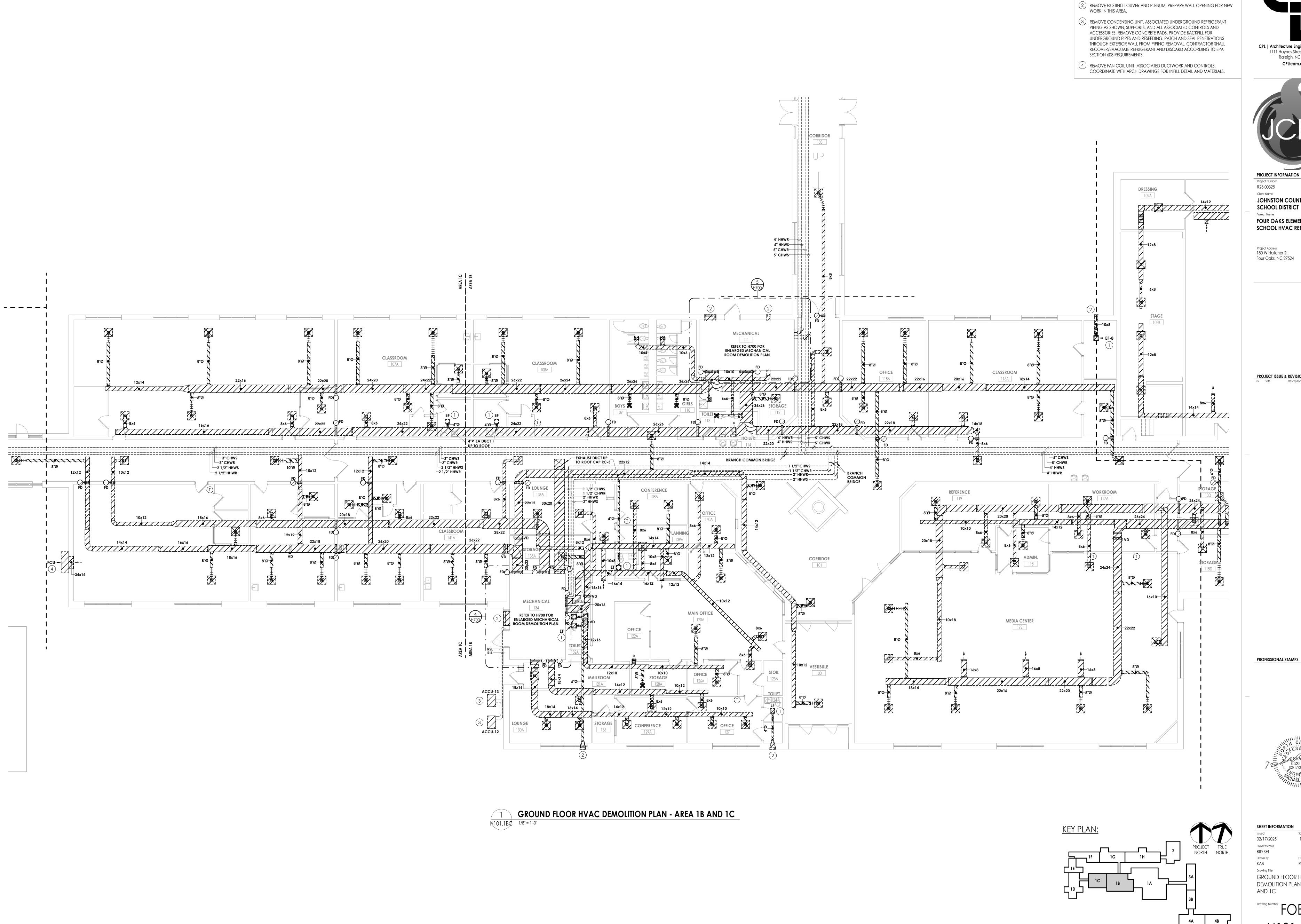
PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale
02/17/2025 1/8" = 1'-0"
Project Status
BID SET
Drawn By Checked By
KAB RM
Drawing Title
GROUND FLOOR HVAC
DEMOLITION PLAN - AREA 1A

FOES
H101.1A



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KEY NOTES:

1) REMOVE CEILING EXHAUST FAN AND DISCONNECT ALL ASSOCIATED DUCTWORK AND CONTROLS. PREPARE FOR NEW WORK IN THIS AREA.

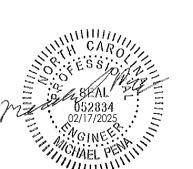
PROJECT INFORMATION Project Number

JOHNSTON COUNTY PUBLIC

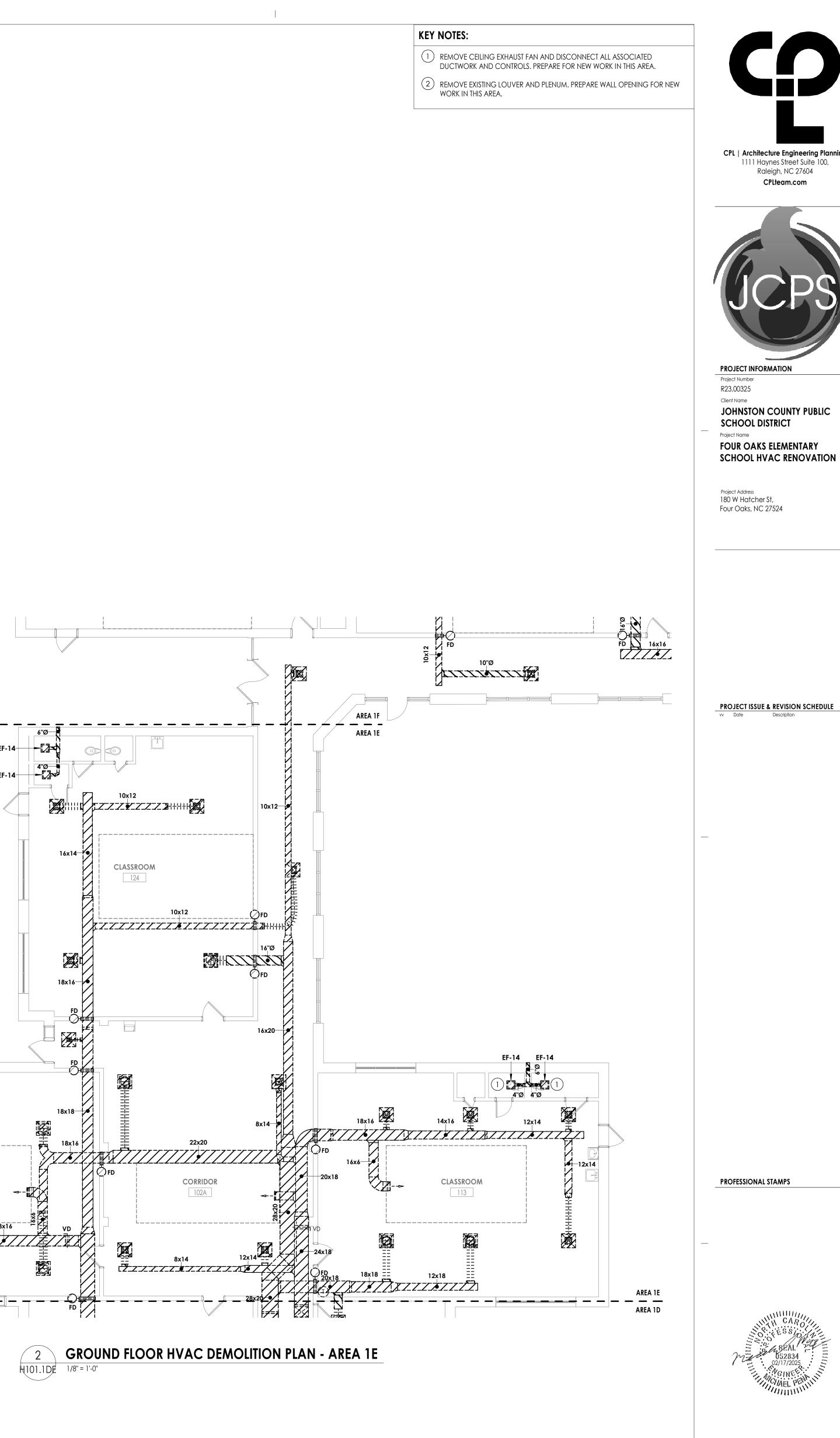
FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROFESSIONAL STAMPS

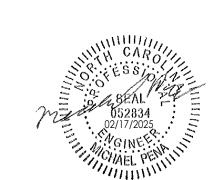


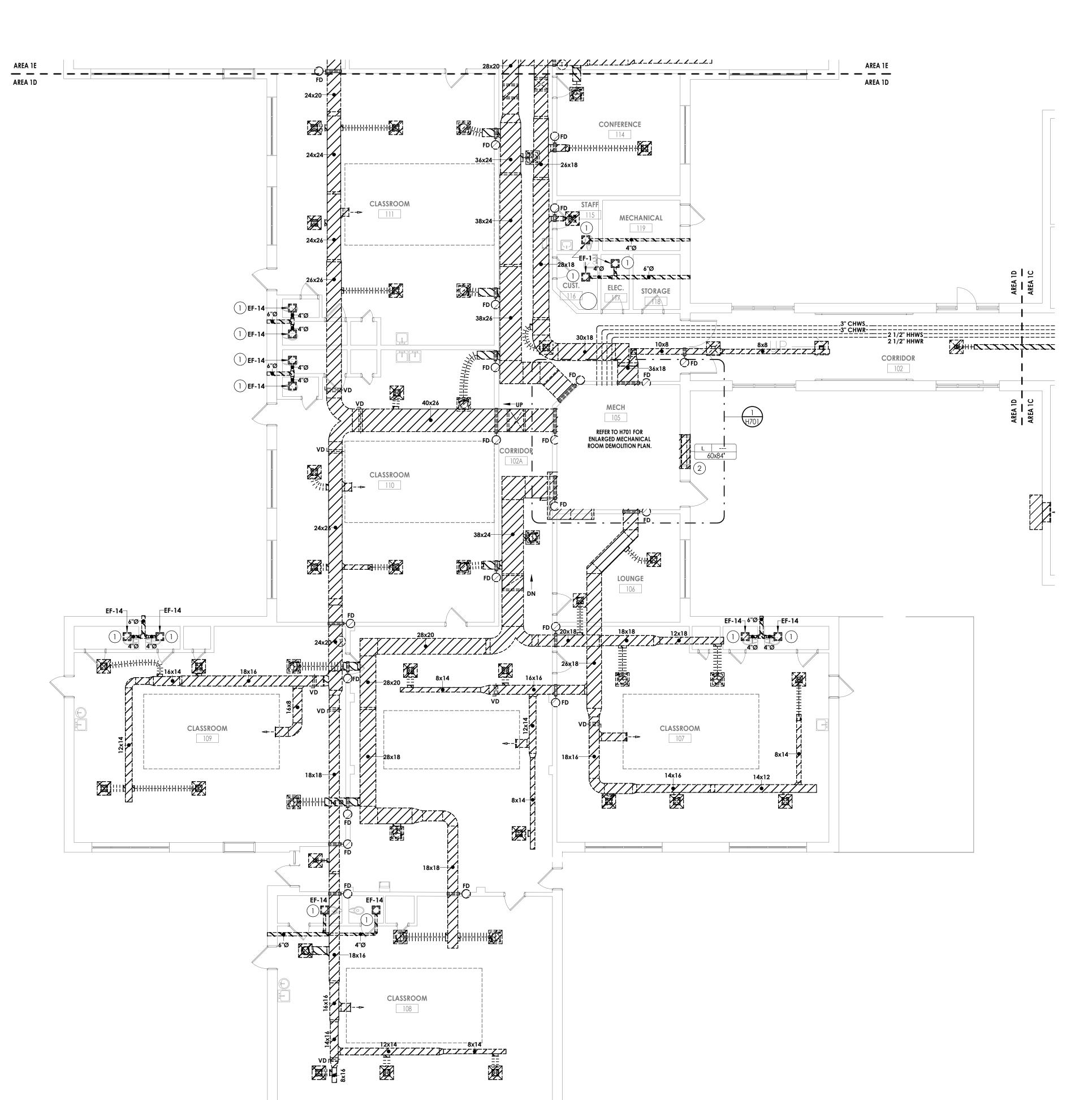
SHEET INFORMATION lssued 02/17/2025 Scale 1/8" = 1'-0" Project Status BID SET GROUND FLOOR HVAC DEMOLITION PLAN - AREA 1B AND 1C



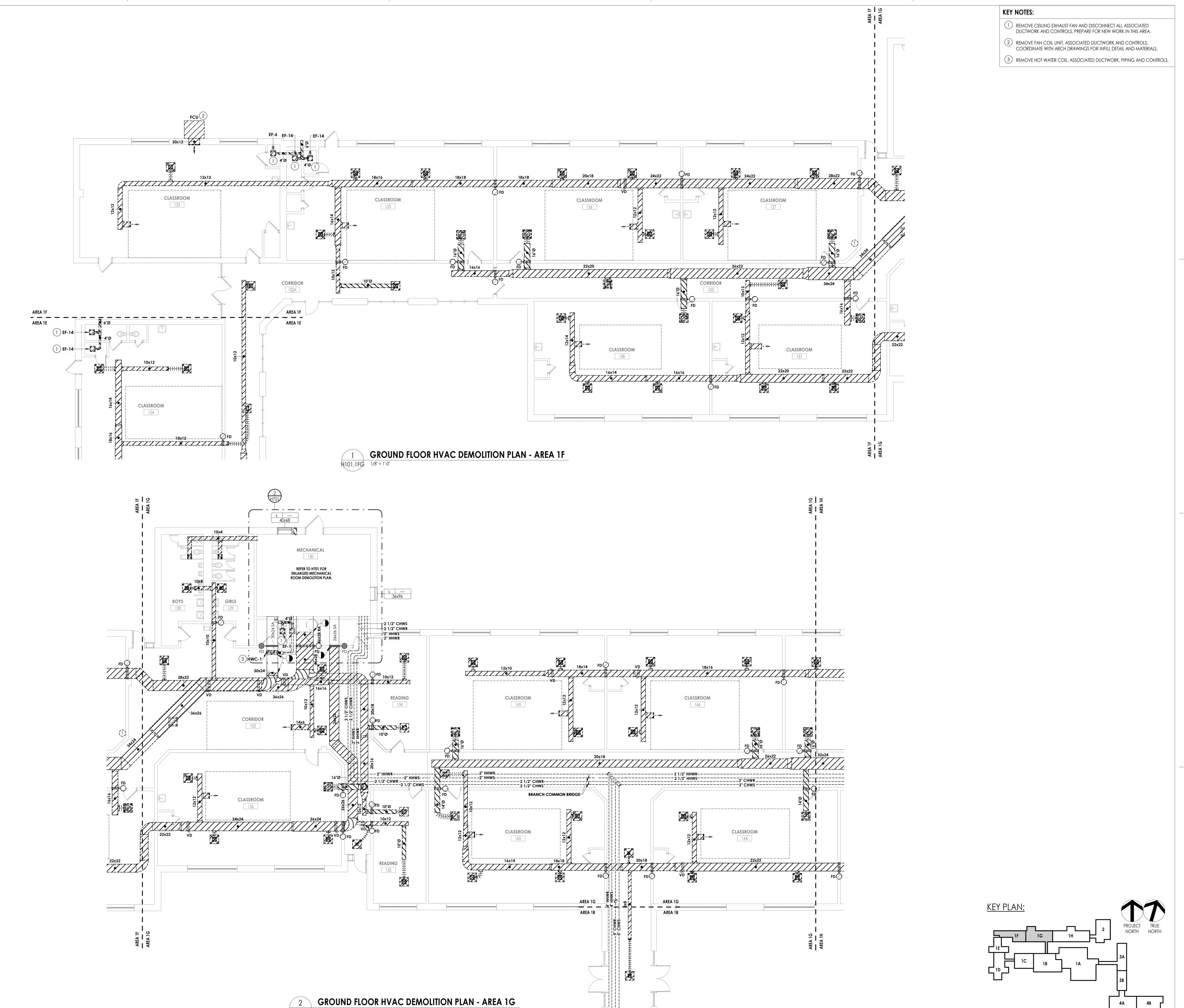


JOHNSTON COUNTY PUBLIC FOUR OAKS ELEMENTARY





GROUND FLOOR HVAC DEMOLITION PLAN - AREA 1D
H101.1DE 1/8" = 1'-0"



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PROJECT INFORMATION

Project Number
R23.00325
Client Name
JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

SCHOOL HVAC RENOVATION

FOUR OAKS ELEMENTARY

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
Drawn By Checked By
KAB RM

Drawing Title

GROUND FLOOR HVAC
DEMOLITION PLAN - AREA 1F
AND 1G

Drawing Number

FOES

H101.1FG

- 1 REMOVE CEILING EXHAUST FAN AND DISCONNECT ALL ASSOCIATED DUCTWORK AND CONTROLS. PREPARE FOR NEW WORK IN THIS AREA.
- 2 REMOVE HOT WATER COIL, ASSOCIATED DUCTWORK, PIPING AND CONTROLS.

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SCHOOL DISTRICT
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FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS

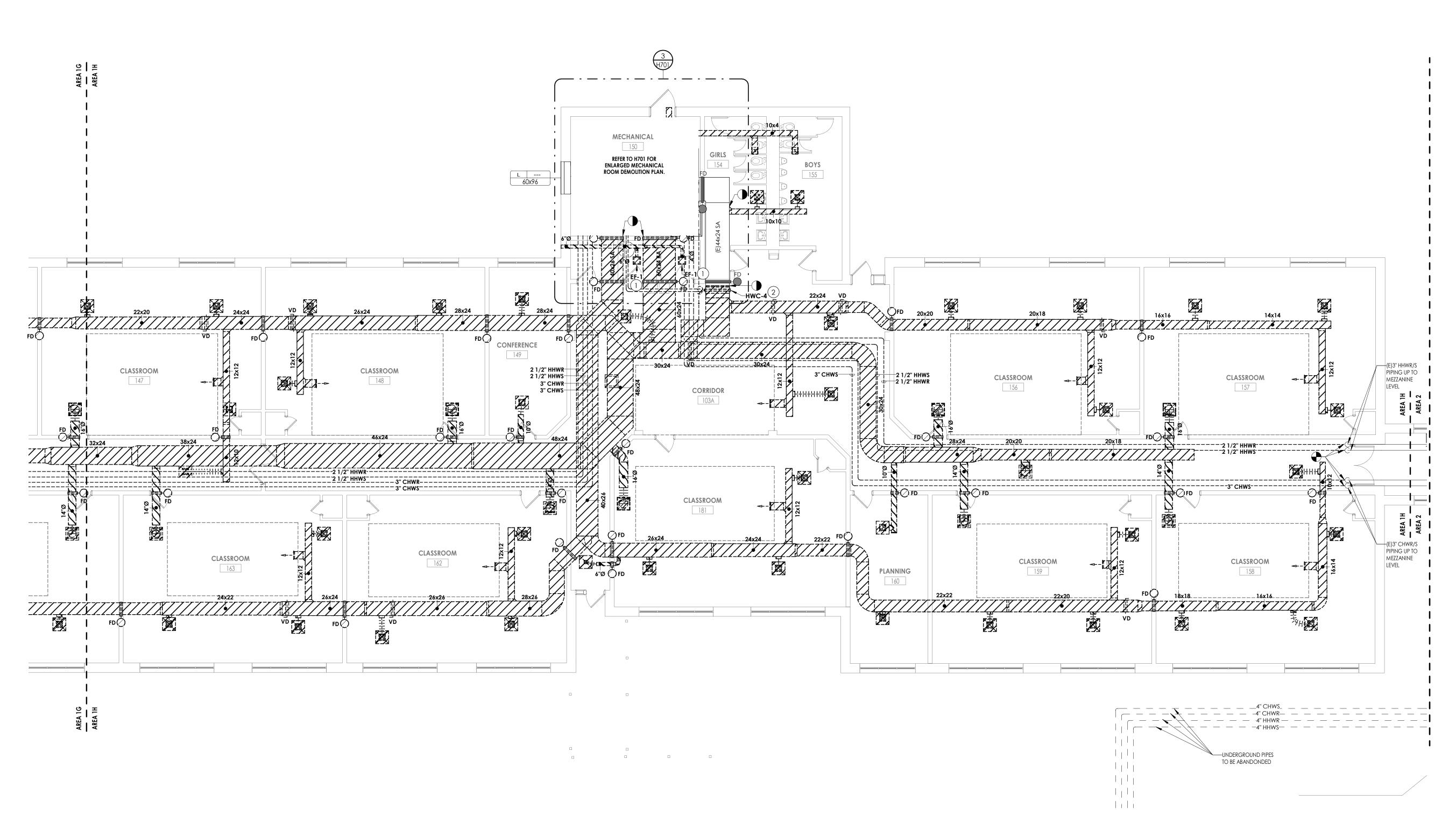


SHEET INFORMATION

Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
Drawn By Checked By
KAB RM
Drawing Title
GROUND FLOOR HVAC
DEMOLITION PLAN - AREA 1H

FOES
H101.1H



GROUND FLOOR HVAC DEMOLITION PLAN - AREA 1H

- REMOVE EXISTING CHILLER, SUPPORTS, CONTROLS, AND PIPING. ISOLATE AND DRAIN SYSTEM IN AREA OF WORK. CAP PIPING AS SHOWN AND ABANDON UNDERGROUND PIPING.
- 2 REMOVE BOILER AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS. CAP PIPING AS SHOWN AND ABANDON UNDERGROUND PIPING.



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JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT
Project Name

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

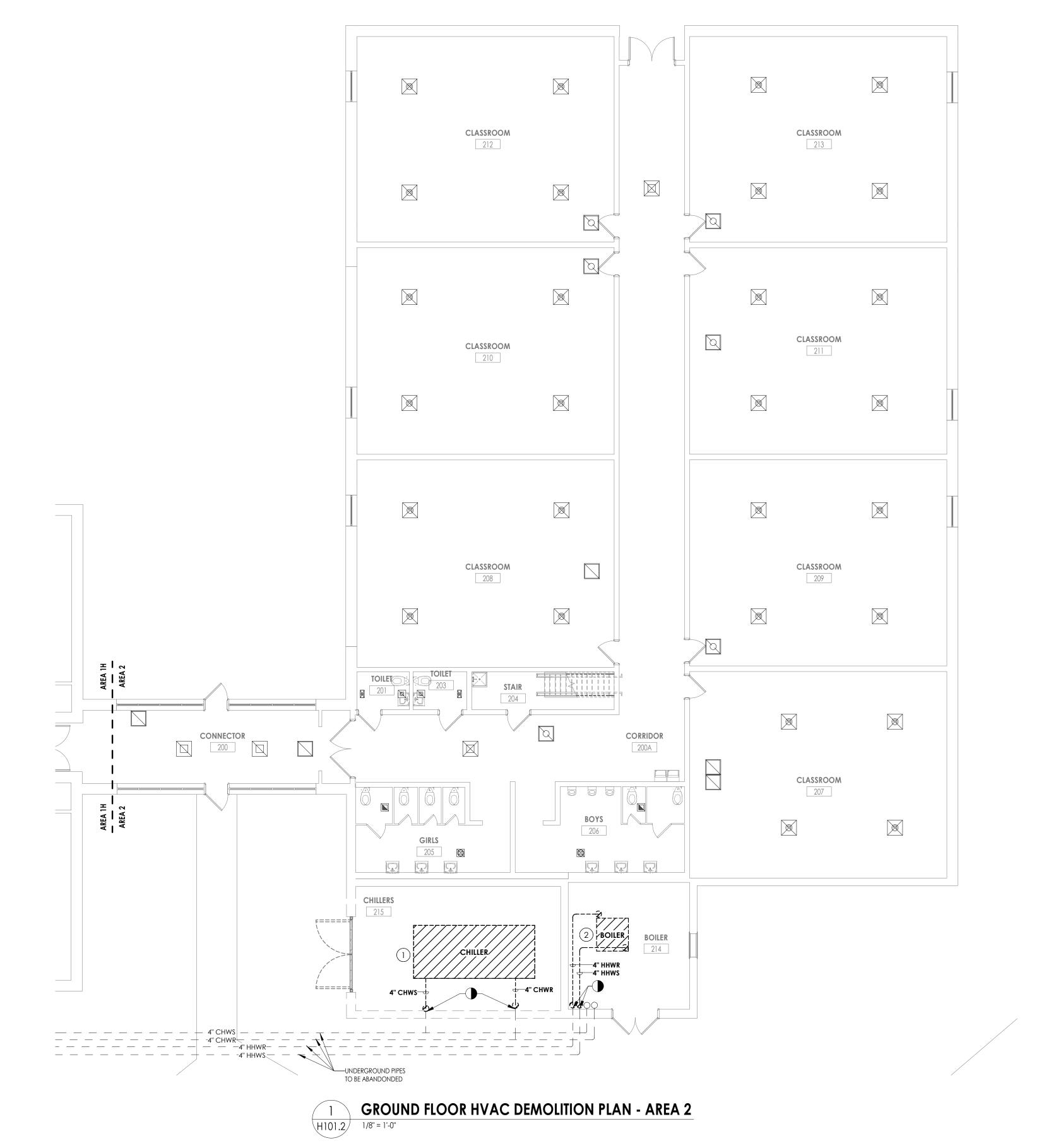
v Date Description

PROFESSIONAL STAMPS





FOES
H1012



- 1) REMOVE FAN COIL UNIT, ASSOCIATED DUCTWORK AND CONTROLS. COORDINATE WITH ARCH DRAWINGS FOR INFILL DETAIL AND MATERIALS.
- (2) REMOVE PTAC UNIT, ASSOCIATED DUCTWORK AND CONTROLS. COORDINATE WITH ARCH DRAWINGS FOR INFILL DETAIL AND MATERIALS.
- 3 REMOVE SSI UNIT, ASSOCIATED PIPING AND CONTROLS. PREPARE FOR NEW WORK IN THIS AREA.
- 4 REMOVE CONDENSING UNIT, ASSOCIATED REFRIGERANT PIPING AS SHOWN, SUPPORTS, AND ALL ASSOCIATED CONTROLS AND ACCESSORIES. REMOVE CONCRETE PADS. PATCH AND SEAL PENETRATIONS THROUGH EXTERIOR WALL FROM PIPING REMOVAL. CONTRACTOR SHALL RECOVER/EVACUATE REFRIGERANT AND DISCARD ACCORDING TO EPA SECTION 608 REQUIREMENTS.



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PROJECT INFORMATION Project Number R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

Project Name FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

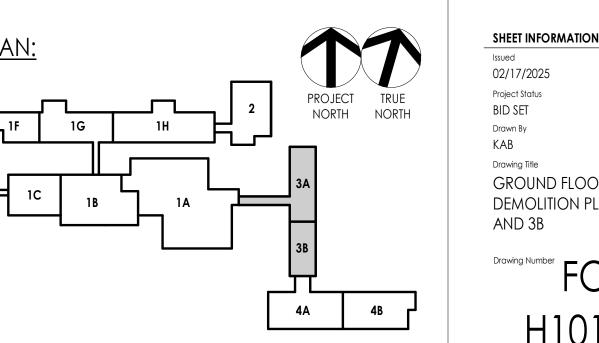
PROJECT ISSUE & REVISION SCHEDULE

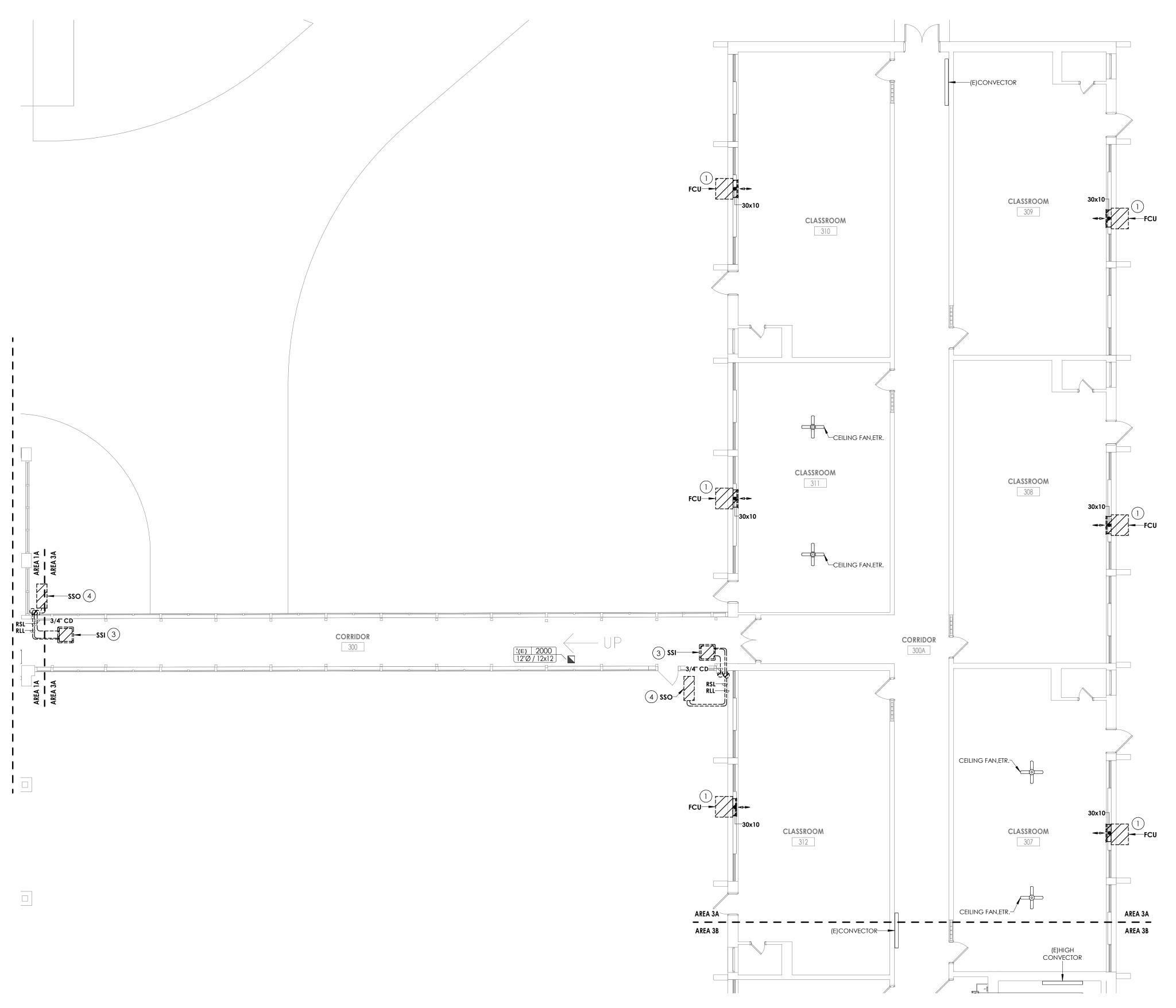
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PROFESSIONAL STAMPS

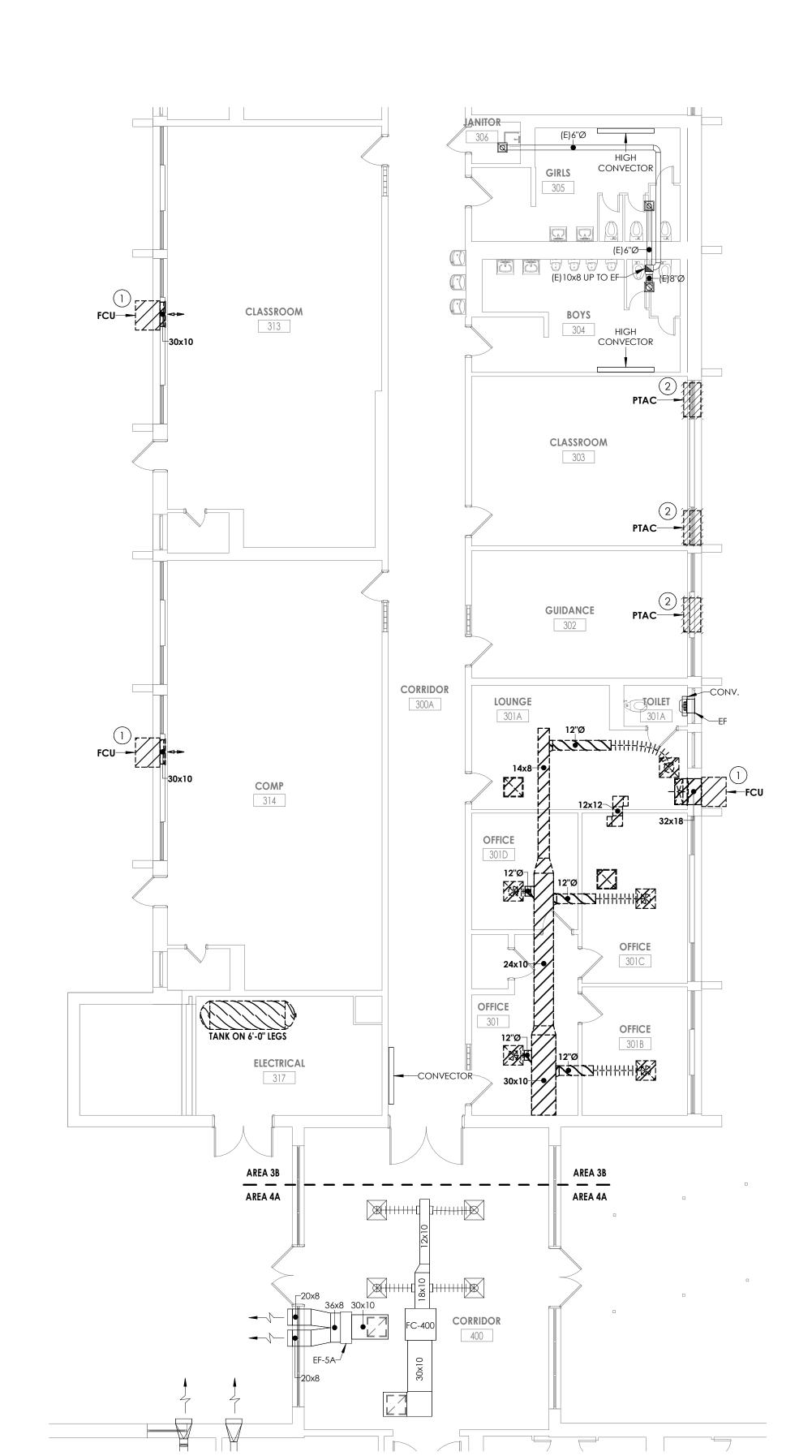












2 GROUND FLOOR HVAC DEMOLITION PLAN - AREA 3B





1) REMOVE EXISTING CHILLER, SUPPORTS, CONTROLS, AND PIPING. ISOLATE AND DRAIN SYSTEM IN AREA OF WORK. CAP PIPING AS SHOWN AND ABANDON UNDERGROUND PIPING. REMOVE CONCRETE PADS DOWN TO FLOOR LEVEL. REFRIGERANT FROM CHILLERS RECOVERED AND RETURNED TO THE OWNER

2 REMOVE BOILER AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS. REMOVE CONCRETE PADS DOWN TO FLOOR LEVEL.

REMOVE PUMP AND ALL ASSOCIATED PIPING AS SHOWN. REMOVE CONCRETE PADS DOWN TO FLOOR LEVEL.

4 REMOVE EXPANSION TANK AND ALL ASSOCIATED PIPING AS SHOWN. REMOVE CONCRETE PADS DOWN TO FLOOR LEVEL.

(5) REMOVE AIR SEPERATOR AND ALL ASSOCIATED PIPING AS SHOWN.



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PROJECT INFORMATION Project Number R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

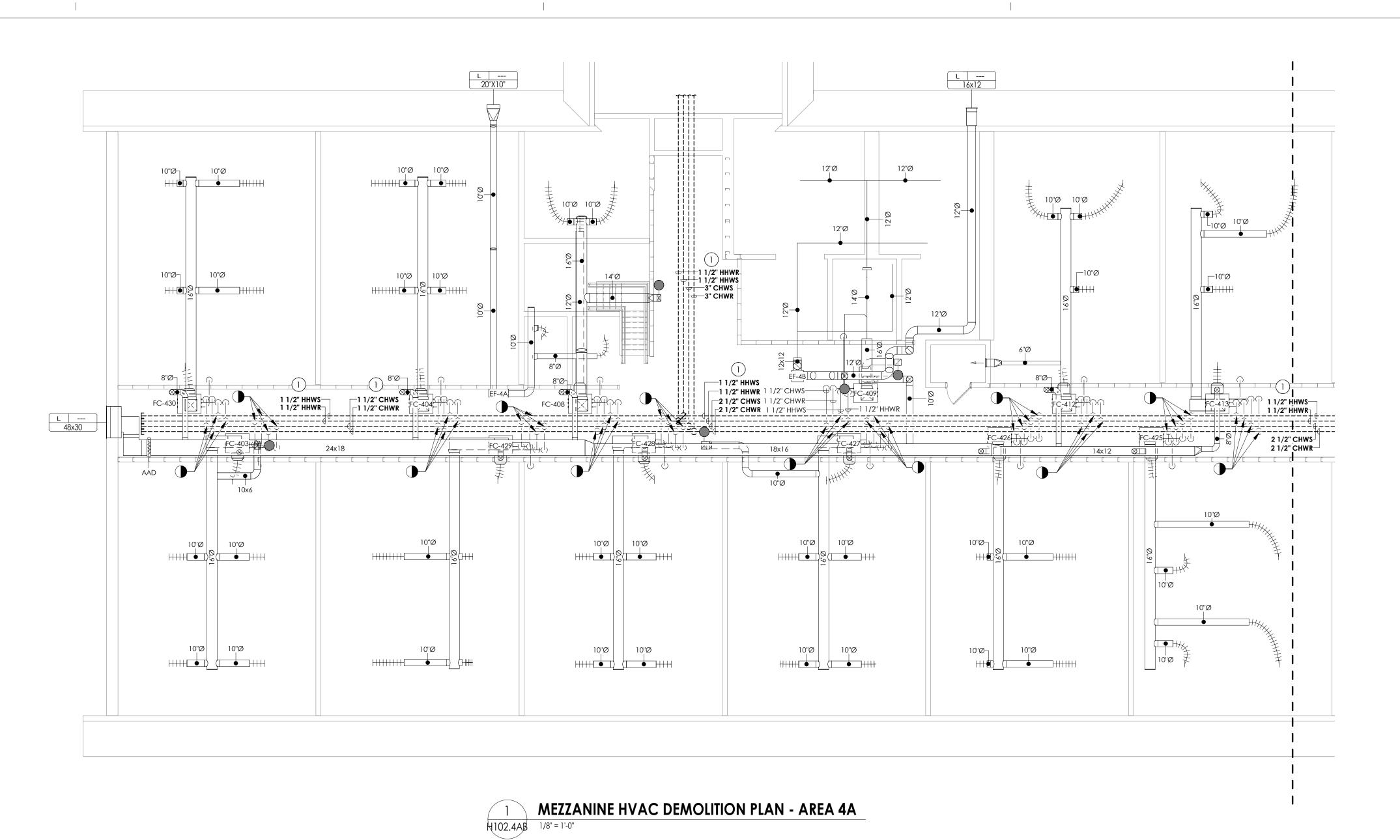
180 W Hatcher St, Four Oaks, NC 27524

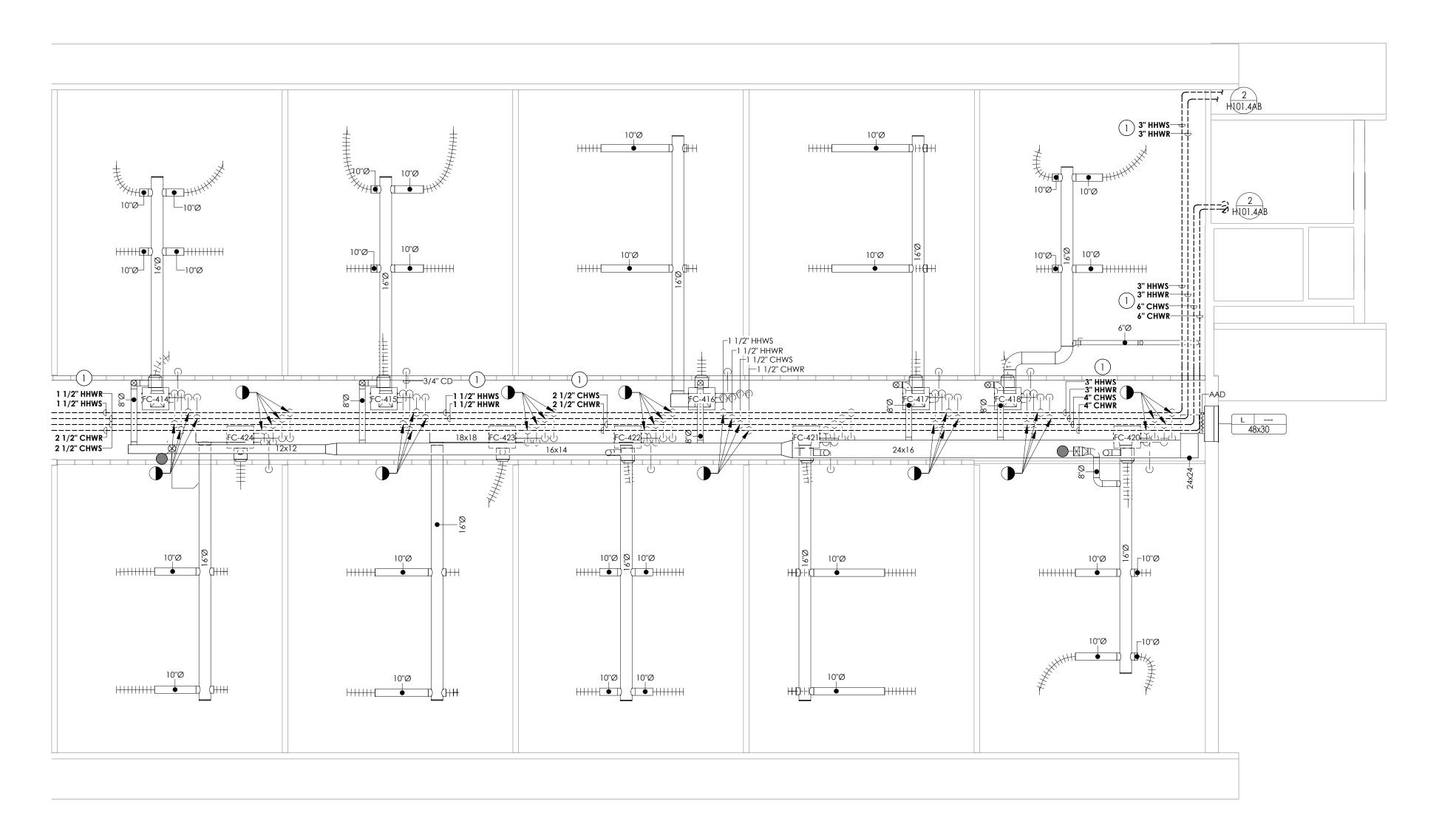
PROFESSIONAL STAMPS



Issued 02/17/2025 Scale 1/8" = 1'-0" Project Status BID SET Drawn By Drawing Title GROUND FLOOR HVAC DEMOLITION PLAN - AREA 4A AND 4B

H101.4AB





MEZZANINE HVAC DEMOLITION PLAN - AREA 4B

1/8" = 1'-0"

KEY NOTES:

1 REMOVE PIPING MAINS AS INDICATED.





PROJECT INFORMATION
Project Number
R23.00325
Client Name

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT Project Name

SCHOOL HVAC RENOVATION

FOUR OAKS ELEMENTARY

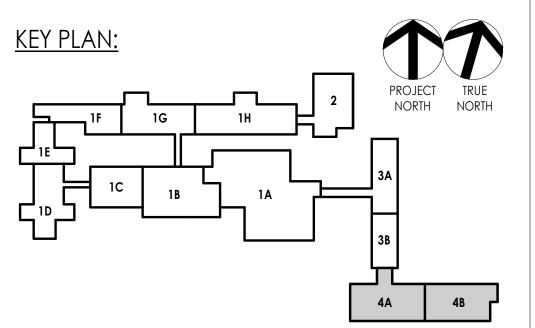
Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS





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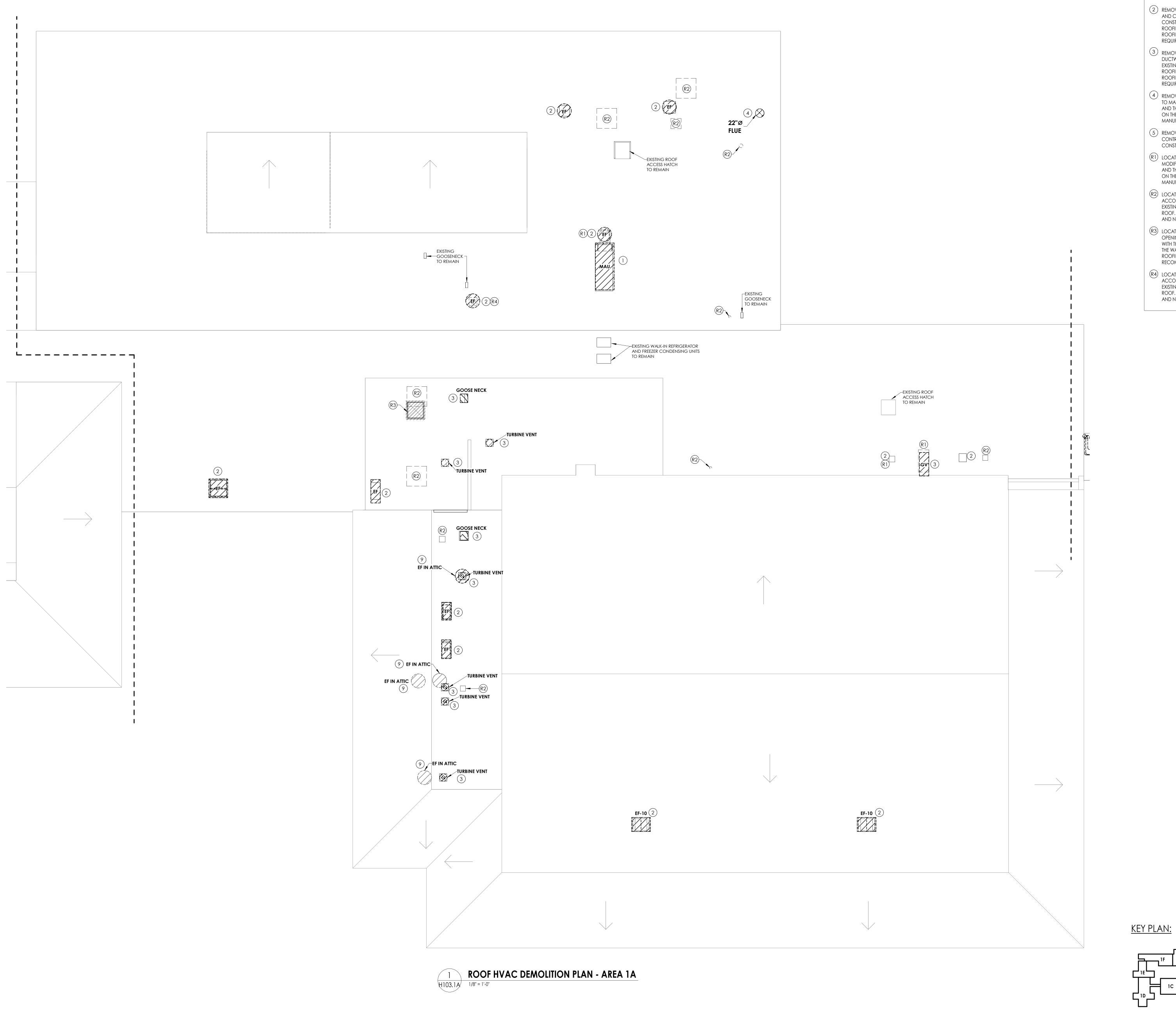
Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
Drawn By Checked By
KAB RM

Drawing Title

MEZZANINE HVAC DEMOLITION
PLAN - AREA 4A AND 4B

FOES
H102.4AB



- REMOVE MAKE-UP AIR UNIT AND CURB. REMOVE ALL ASSOCIATED DUCTWORK, PIPING, AND CONTROLS. PREPARE ROOF AND DECK FOR NEW EQUIPMENT.
- (2) REMOVE EXHAUST FAN AND CURB. REMOVE ALL ASSOCIATED DUCTWORK AND CONTROLS. PATCH ROOF AND DECK TO MATCH THE EXISTING CONSTRUCTION. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.
- REMOVE GRAVITY VENTILATOR AND CURB. REMOVE ALL ASSOCIATED DUCTWORK AND CONTROLS. PATCH ROOF AND DECK TO MATCH THE EXISTING CONSTRUCTION. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.
- 4 REMOVE FLUE AND ALL ASSOCIATED DUCTWORK. PATCH ROOF AND DECK TO MATCH THE EXISTING CONSTRUCTION. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.
- 5 REMOVE EXHAUST FAN IN ATTIC. REMOVE ALL ASSOCIATED DUCTWORK AND CONTROLS. PATCH ATTIC FLOOR AND DECK TO MATCH THE EXISTING CONSTRUCTION.
- R1 LOCATION WHERE EXISTING OPENINGS TO BE MAINTAINED, ENLARGED, OR MODIFIED TO ACCOMONDATE NEW WORK. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.
- R2 LOCATION WHERE NEW ROOF OPENINGS NEED TO BE CUT TO ACCOMONDATE NEW WORK. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.
- R3 LOCATION WHERE EXISTING SKYLIGHT IS TO BE REMOVED AND NEW ROOF OPENINGS NEED TO BE CUT TO ACCOMONDATE NEW WORK. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.
- (R4) LOCATION WHERE EXISTING OPENINGS TO BE MAINTAINED TO ACCOMONDATE NEW WORK. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.

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PROJECT INFORMATION

Project Number

R23.00325
Client Name

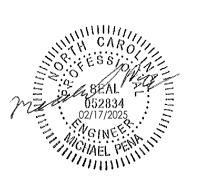
JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE
w Date Description

PROFESSIONAL STAMPS



SHEET INFORMATION

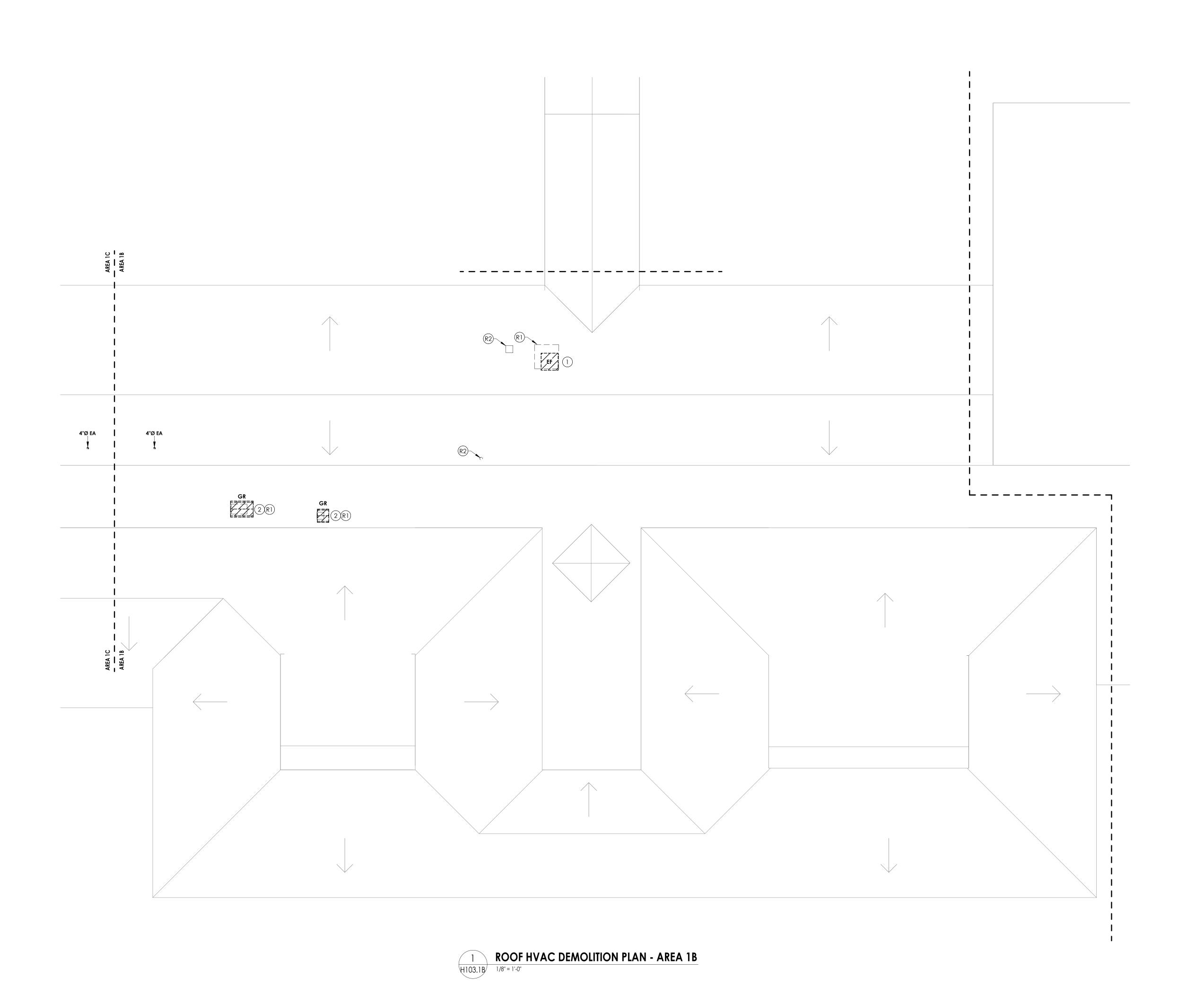
Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
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ACS RM

Drawing Title

ROOF HVAC DEMOLITION PLAN AREA 1A

FOES
H103.1A



- REMOVE EXHAUST FAN AND CURB. REMOVE ALL ASSOCIATED DUCTWORK AND CONTROLS. PATCH ROOF AND DECK TO MATCH THE EXISTING CONSTRUCTION. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.
- REMOVE GRAVITY VENTILATOR AND CURB. REMOVE ALL ASSOCIATED DUCTWORK AND CONTROLS. PATCH ROOF AND DECK TO MATCH THE EXISTING CONSTRUCTION. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.
- (R1) LOCATION WHERE EXISTING OPENINGS TO BE MAINTAINED, ENLARGED, OR MODIFIED TO ACCOMONDATE NEW WORK. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.
- R2 LOCATION WHERE NEW ROOF OPENINGS NEED TO BE CUT TO ACCOMONDATE NEW WORK. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.

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JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

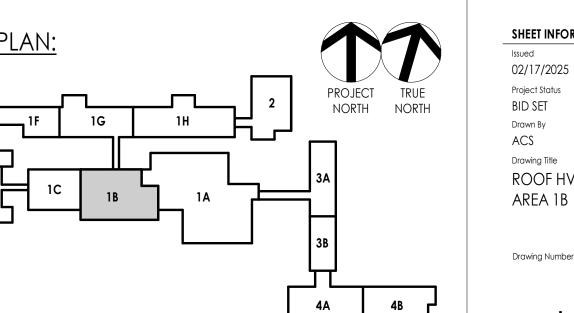
Project Name
FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS





SHEET INFORMATION

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02/17/2025 1/8" = 1'-0"

Project Status
BID SET
Drawn By Checked By
ACS RM

Drawing Title

ROOF HVAC DEMOLITION PLAN
AREA 1B

FOES H103.1B

KEY NOTES:

KEY PLAN:

- REMOVE GRAVITY VENTILATOR AND CURB. REMOVE ALL ASSOCIATED DUCTWORK AND CONTROLS. PATCH ROOF AND DECK TO MATCH THE EXISTING CONSTRUCTION. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.
- LOCATION WHERE EXISTING OPENINGS TO BE MAINTAINED, ENLARGED, OR MODIFIED TO ACCOMONDATE NEW WORK. COORDINATE WITH THE OWNER AND THE EXISTING ROOFING MANUFACTURER TO MAINTAIN THE WARRANTY ON THE ROOF. ALL ROOFING WORK SHALL BE PER THE ROOFING MANUFACTURER'S AND NRCA REQUIREMENTS AND RECOMMENDATIONS.

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JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT
Project Name

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

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PROFESSIONAL STAMPS



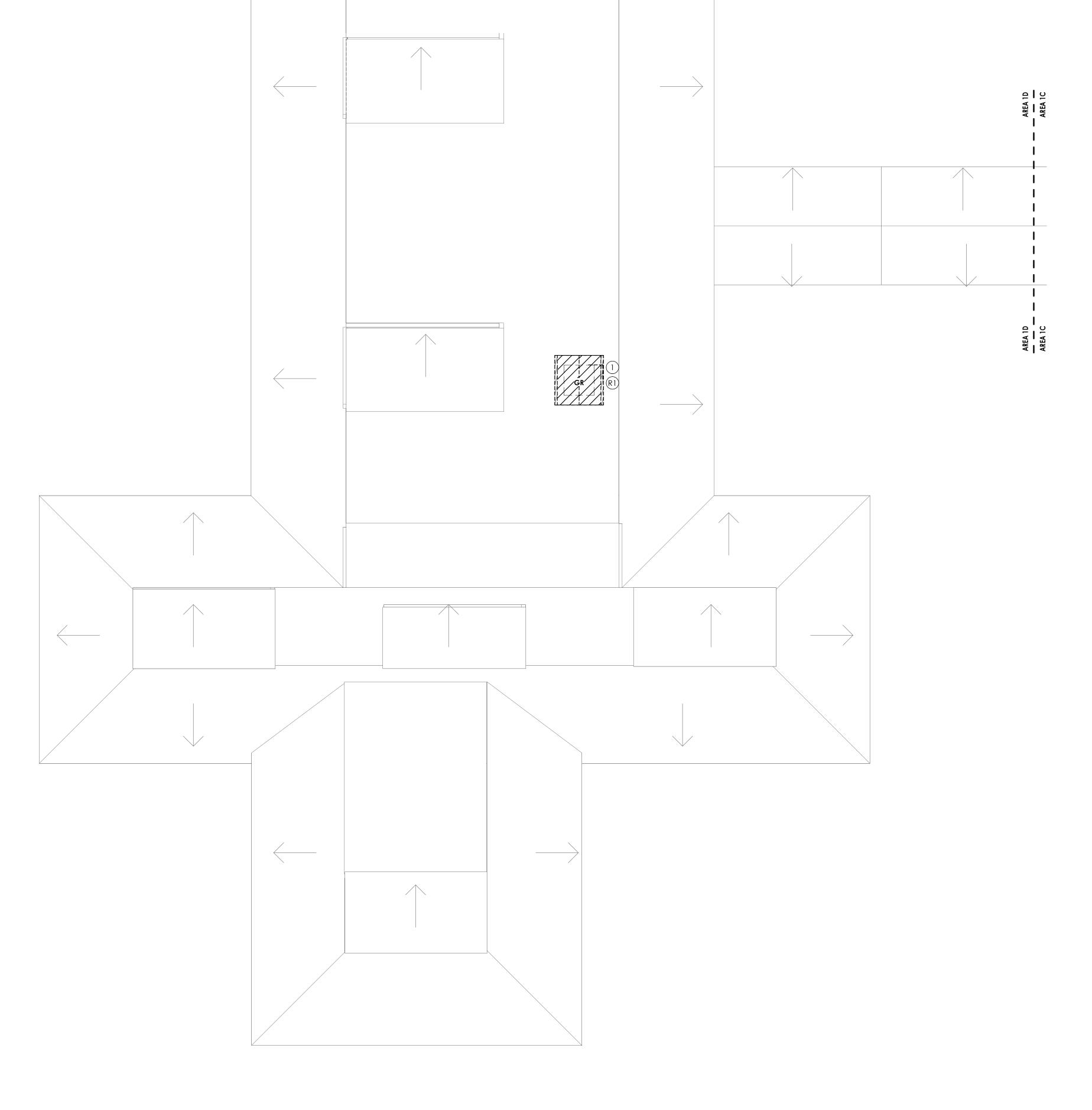
SHEET INFORMATION

Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
Drawn By Checked By
ACS RM
Drawing Title

ROOF HVAC DEMOLITION PLAN AREA 1D

FOES
H103.1D



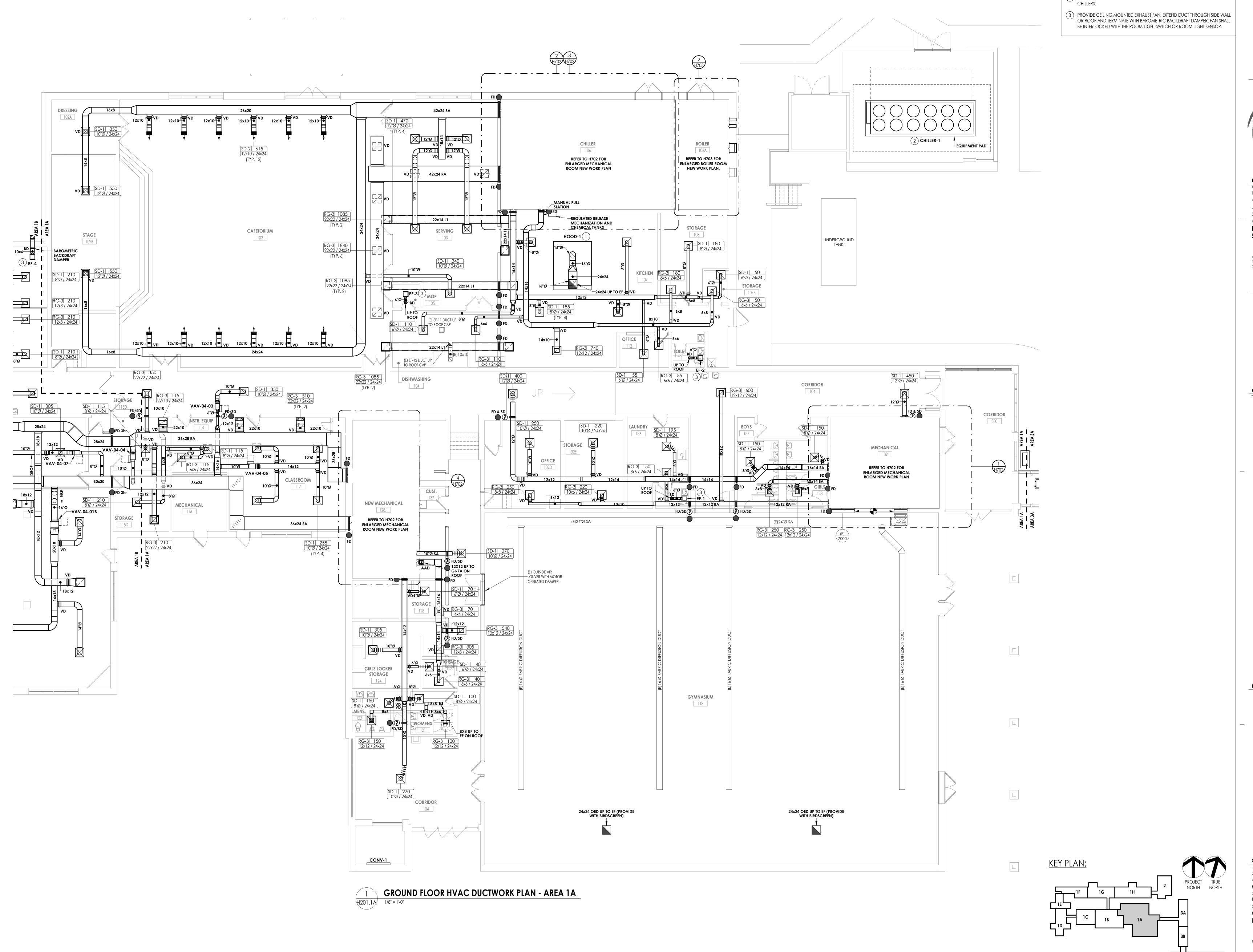
AREA 1E

AREA 1D

ROOF HVAC DEMOLITION PLAN - AREA 1D

1/8" = 1'-0"

AREA 1D



1) PROVIDE ANSUL FIRE SUPPRESSION SYSTEM.

KEY NOTES

2) PROVIDE NEW REINFORCED CONCRETE HOUSEKEEPING PADS FOR NEW

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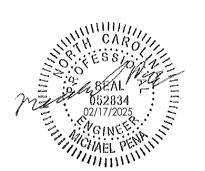
JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

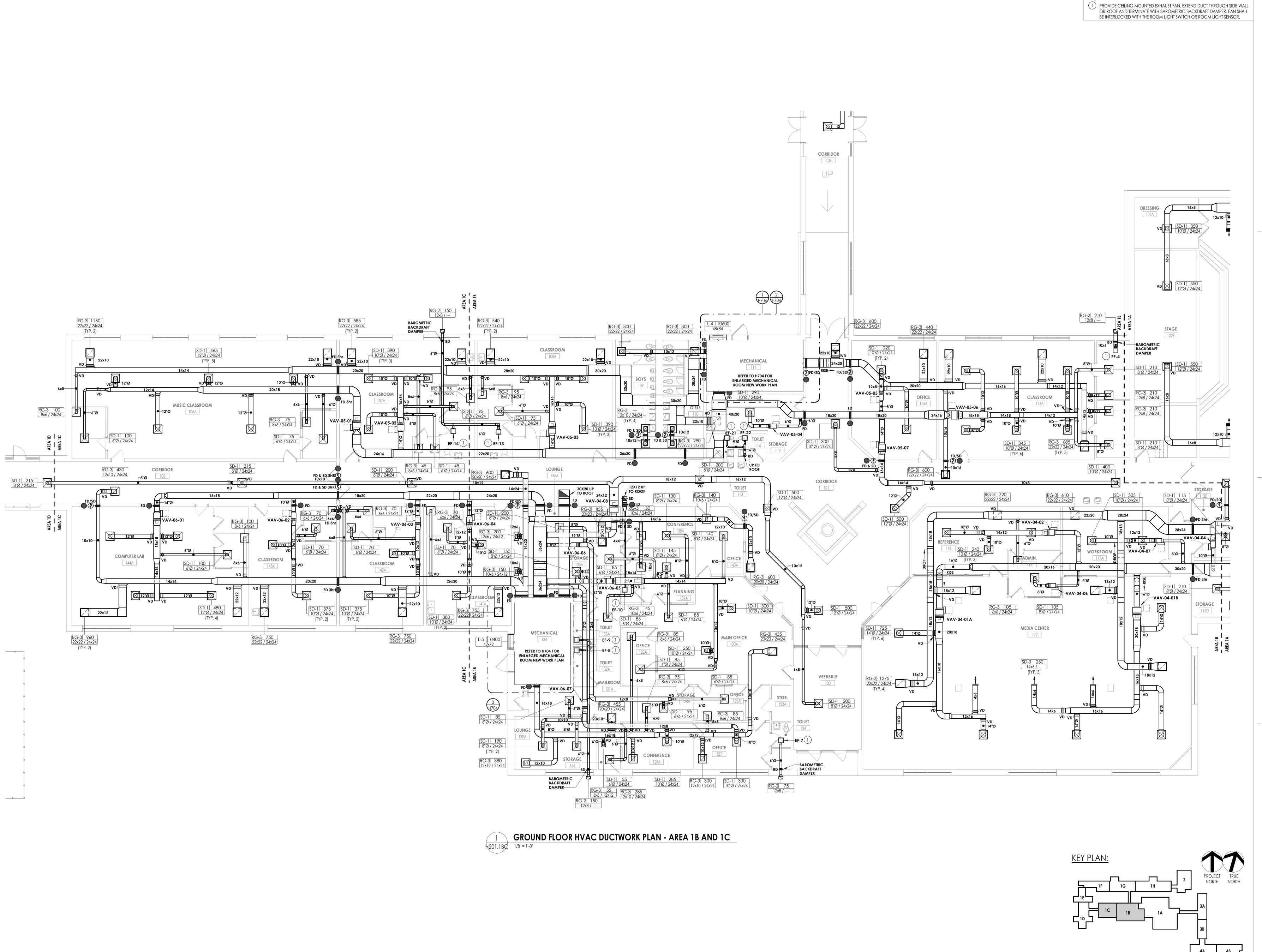
PROJECT ISSUE & REVISION SCHEDULE
w Date Description

PROFESSIONAL STAMPS



SHEET INFORMATION lssued 02/17/2025 Scale 1/8" = 1'-0" Project Status BID SET GROUND FLOOR HVAC DUCTWORK PLAN - AREA 1A

H201.1A



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KEY NOTES



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SCHOOL DISTRICT
Project Name
FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St,

Four Oaks, NC 27524

w Date Description

PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale

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Project Status

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Drawn By Checked By

KAB RM

Drawing Title

GROUND FLOOR HVAC

DUCTWORK PLAN - AREA 1B AND
1C

H201.1BC



1 PROVIDE CEILING MOUNTED EXHAUST FAN. EXTEND DUCT THROUGH SIDE WALL OR ROOF AND TERMINATE WITH BAROMETRIC BACKDRAFT DAMPER. FAN SHALL BE INTERLOCKED WITH THE ROOM LIGHT SWITCH OR ROOM LIGHT SENSOR.





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JOHNSTON COUNTY PUBLIC

SCHOOL DISTRICT
Project Name
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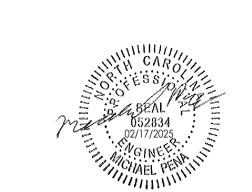
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

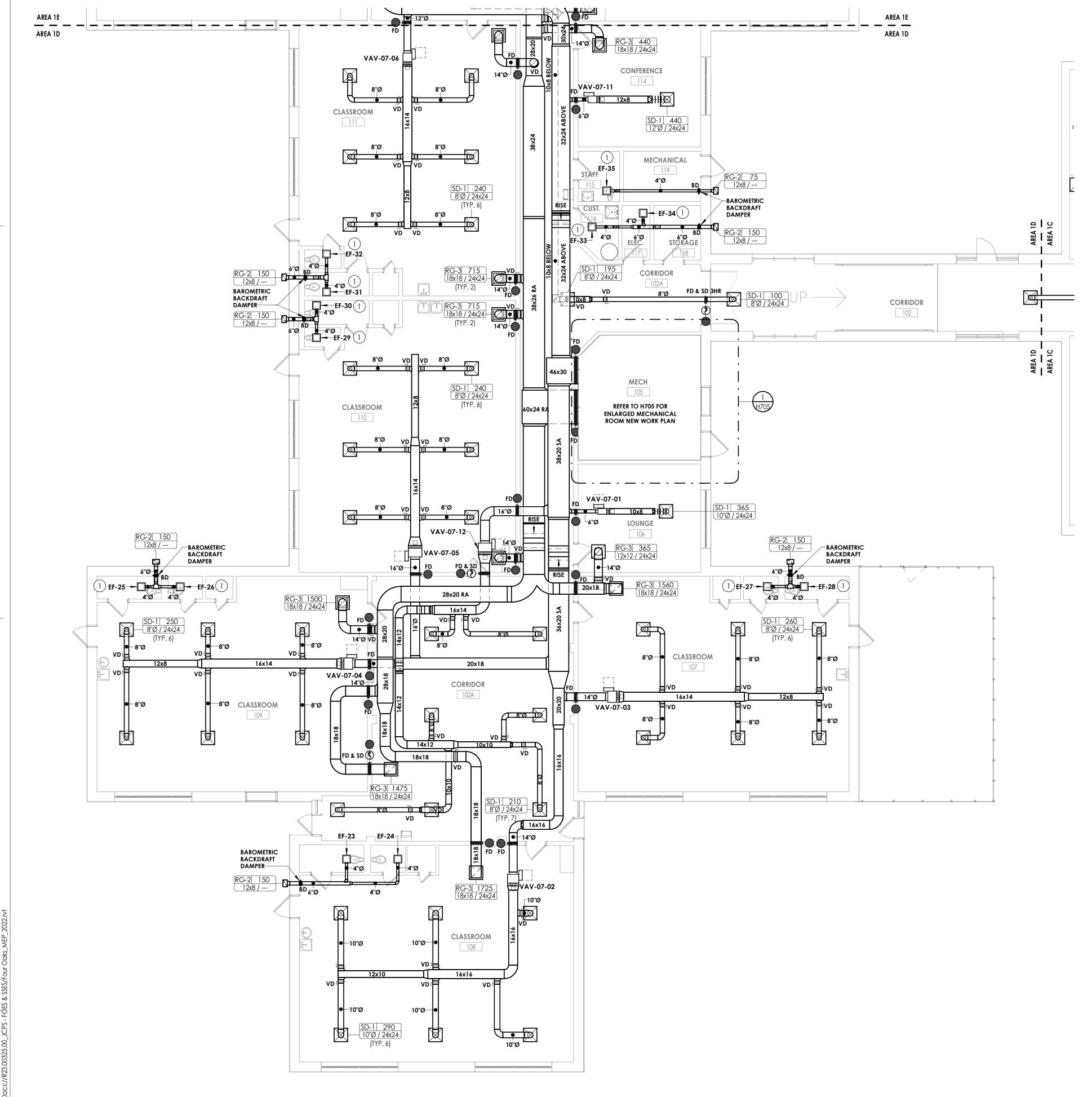
PROJECT ISSUE & REVISION SCHEDULE

w Date Description

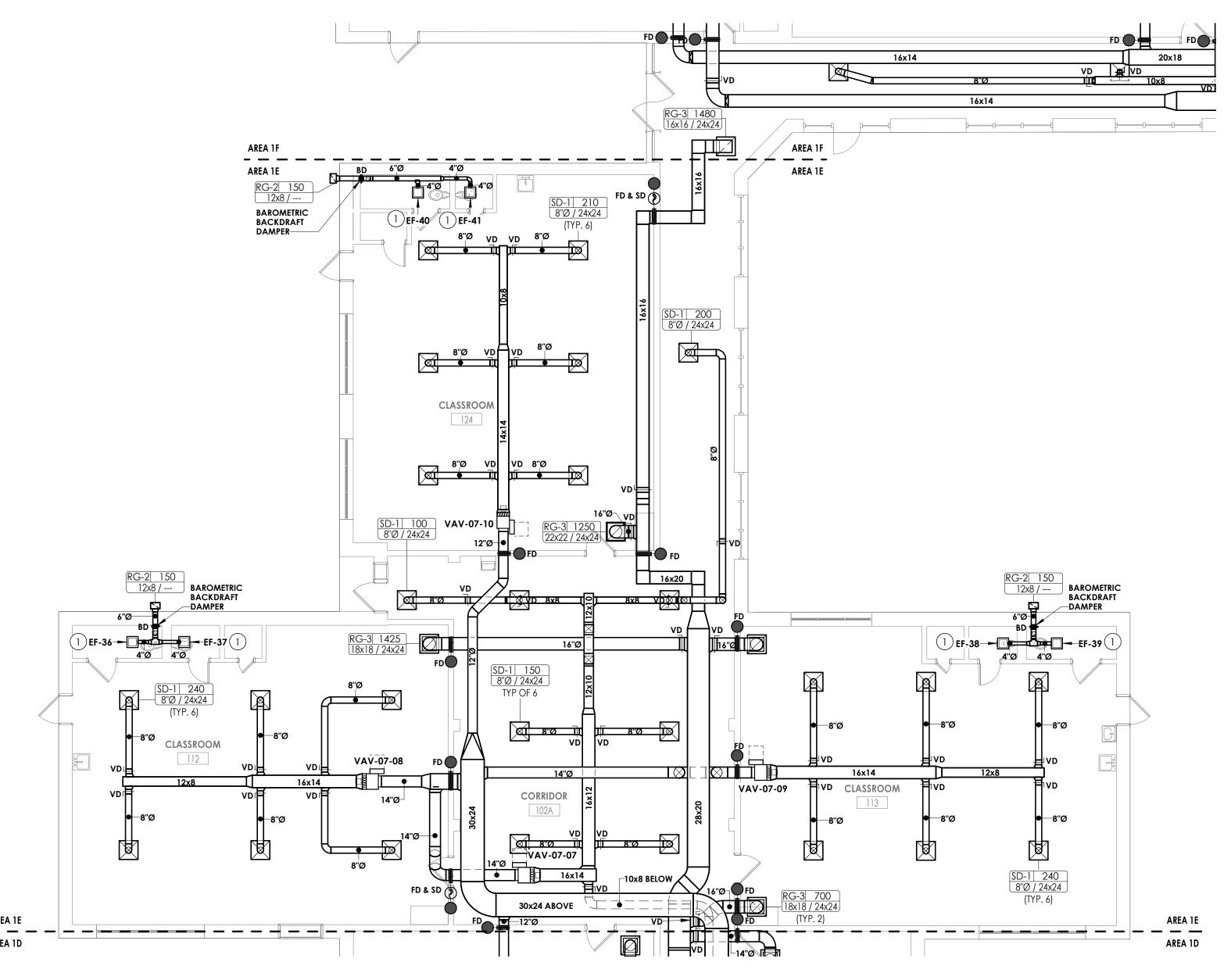
PROFESSIONAL STAMPS



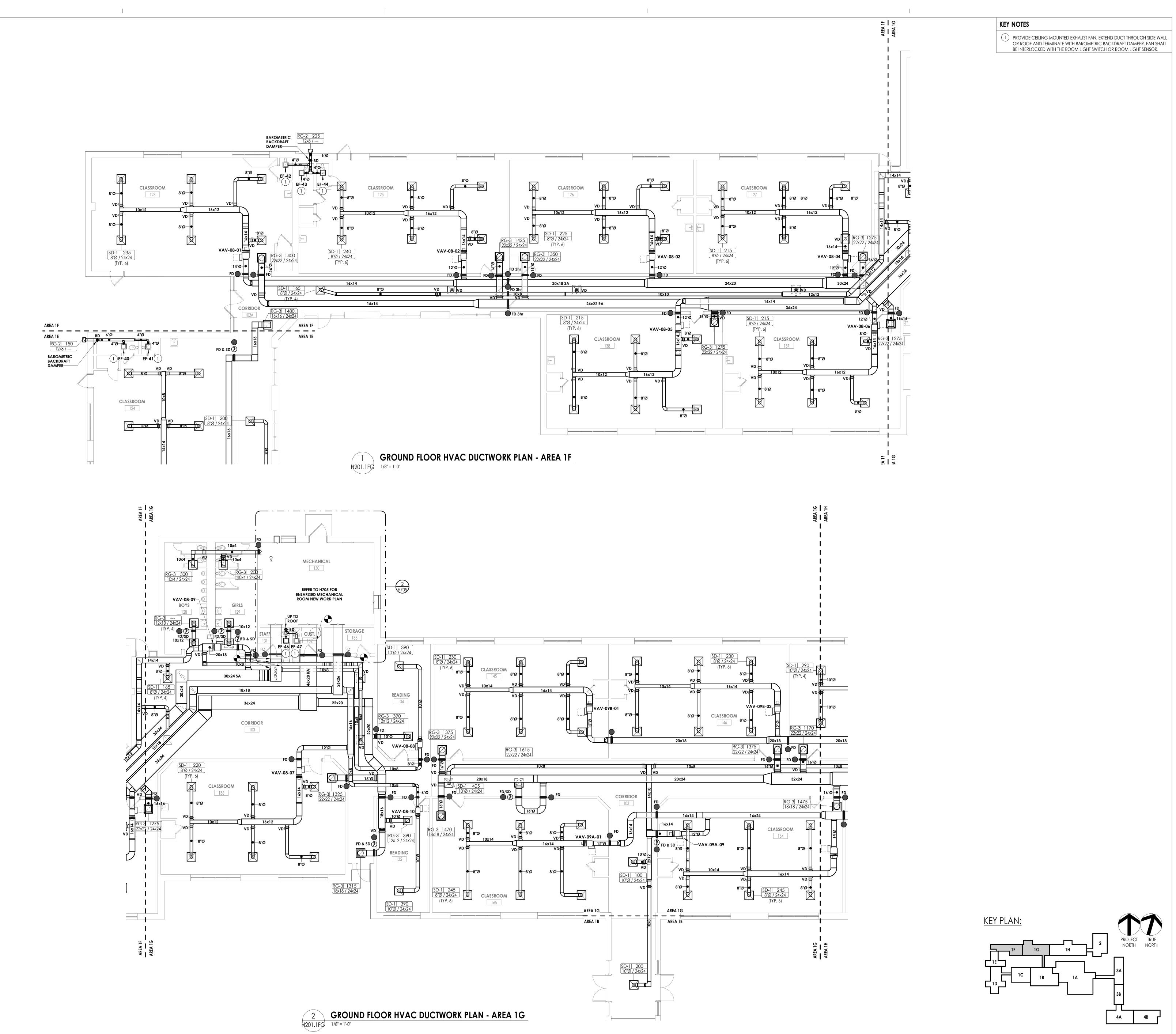








2 GROUND FLOOR HVAC DUCTWORK PLAN - AREA 1E



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Project Address 180 W Hatcher St, Four Oaks, NC 27524

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w Date Description

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Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
Drawn By Checked By
KAB RM

Drawing Title
GROUND FLOOR HVAC
DUCTWORK PLAN - AREA 1F AND
1G

FOES H201.1FG

PROVIDE CEILING MOUNTED EXHAUST FAN. EXTEND DUCT THROUGH SIDE WALL OR ROOF AND TERMINATE WITH BAROMETRIC BACKDRAFT DAMPER. FAN SHALL BE INTERLOCKED WITH THE ROOM LIGHT SWITCH OR ROOM LIGHT SENSOR.





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FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

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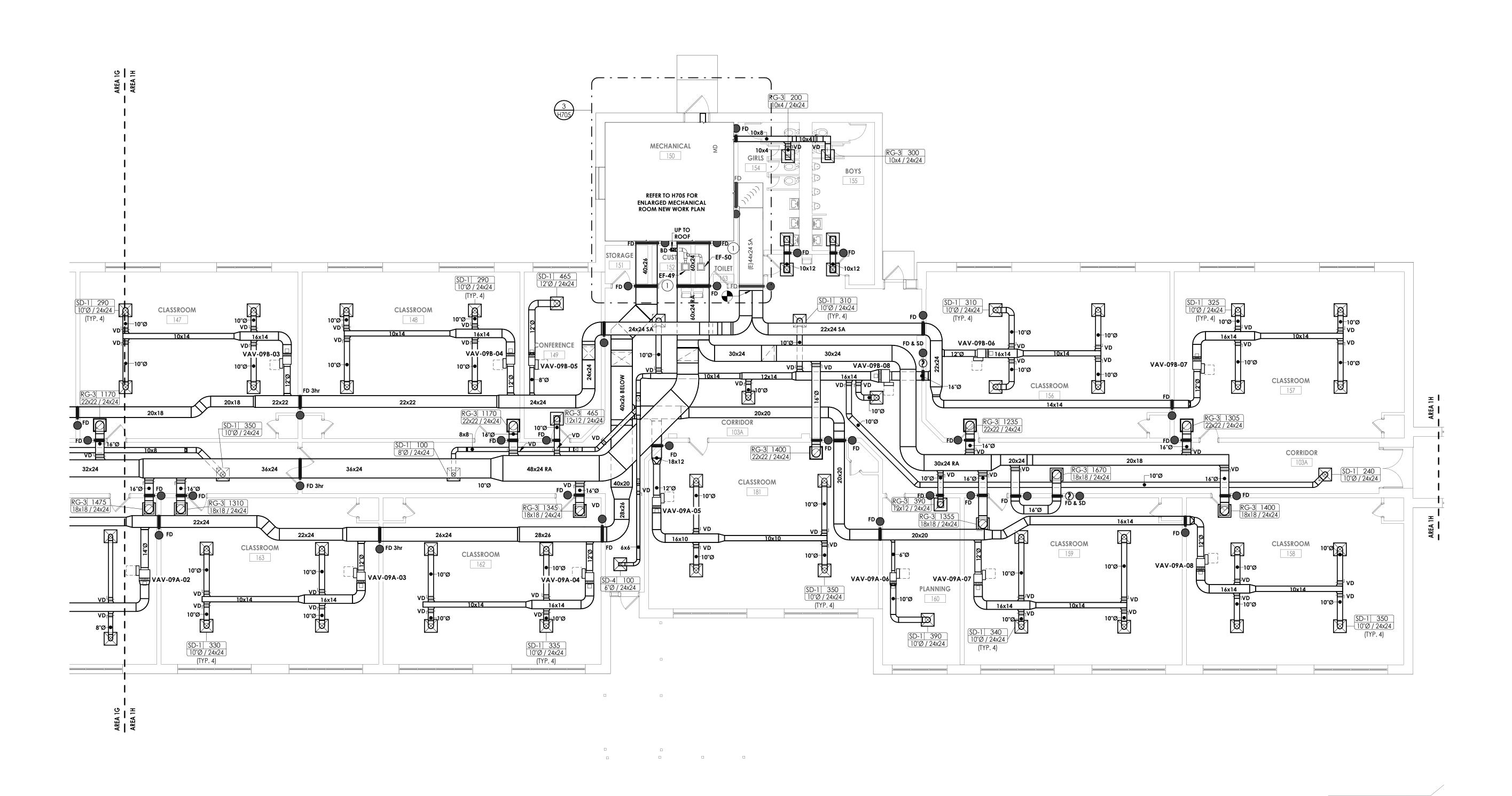
PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale
02/17/2025 1/8" = 1'-0"
Project Status
BID SET
Drawn By Checked By
KAB RM
Drawing Title
GROUND FLOOR HVAC
DUCTWORK PLAN - AREA 1H

FOES
H201.1H



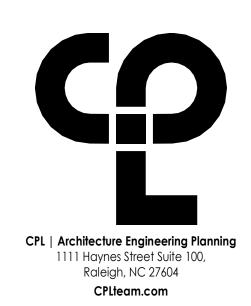
GROUND FLOOR HVAC DUCTWORK PLAN - AREA 1H

H201.1H

1/8" = 1'-0"



- PROVIDE INLINE EXHAUST FAN WITH ASSOCIATED DUCTWORK AND CONTROLS. EXTEND DUCT THROUGH WINDOW SPANDREL PANEL WITH LOUVER AND TERMINATE WITH BAROMETRIC BACKDRAFT DAMPER.
- 2 PROVIDE NEW FAN COIL UNIT WITH ASSOCIATED DUCTWORK, PIPING, AND





PROJECT INFORMATION

Project Number
R23.00325
Client Name

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT Project Name FOUR OAKS ELEMENTARY

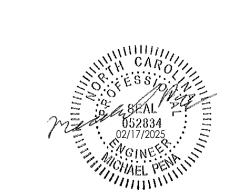
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

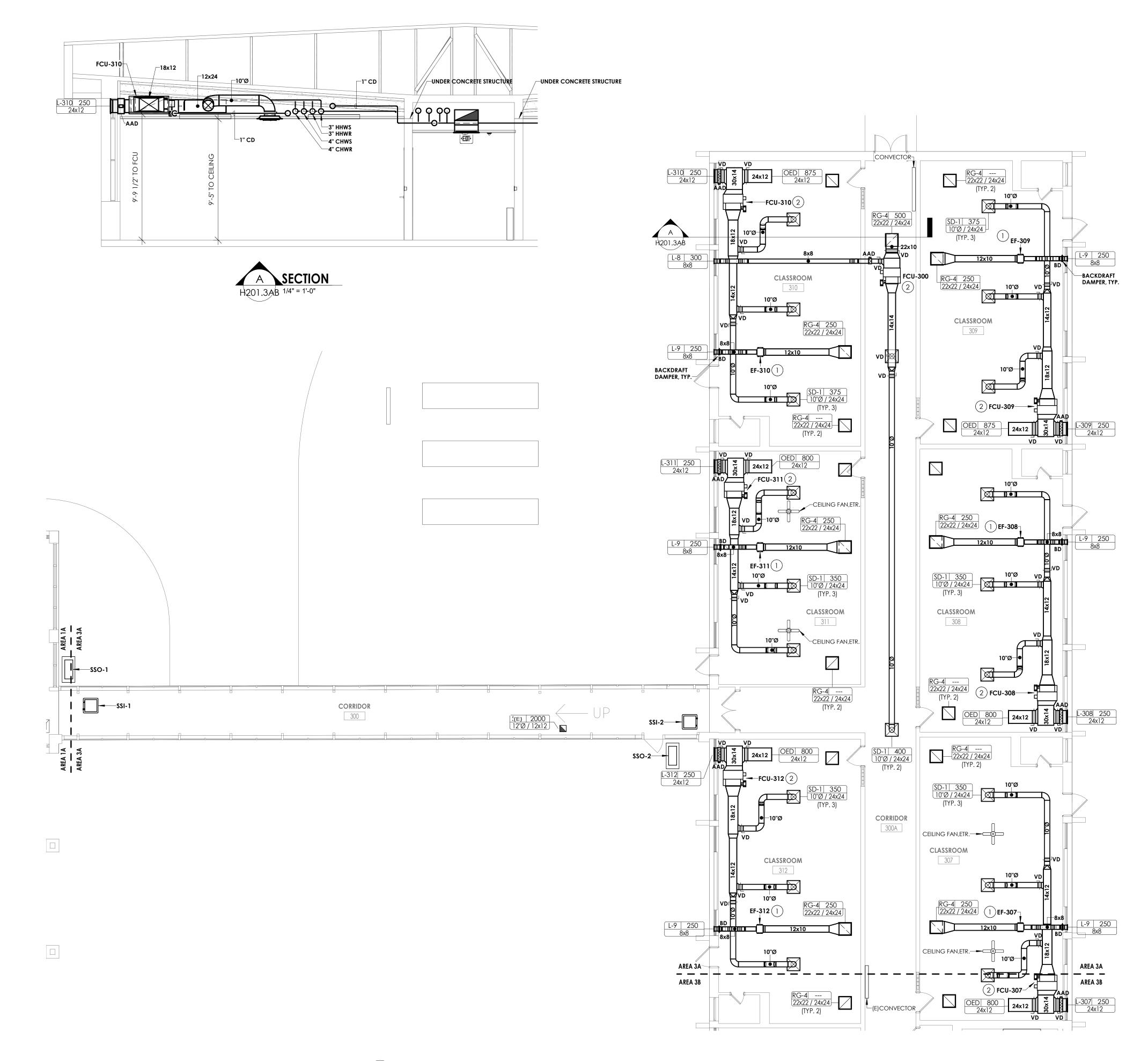
PROFESSIONAL STAMPS



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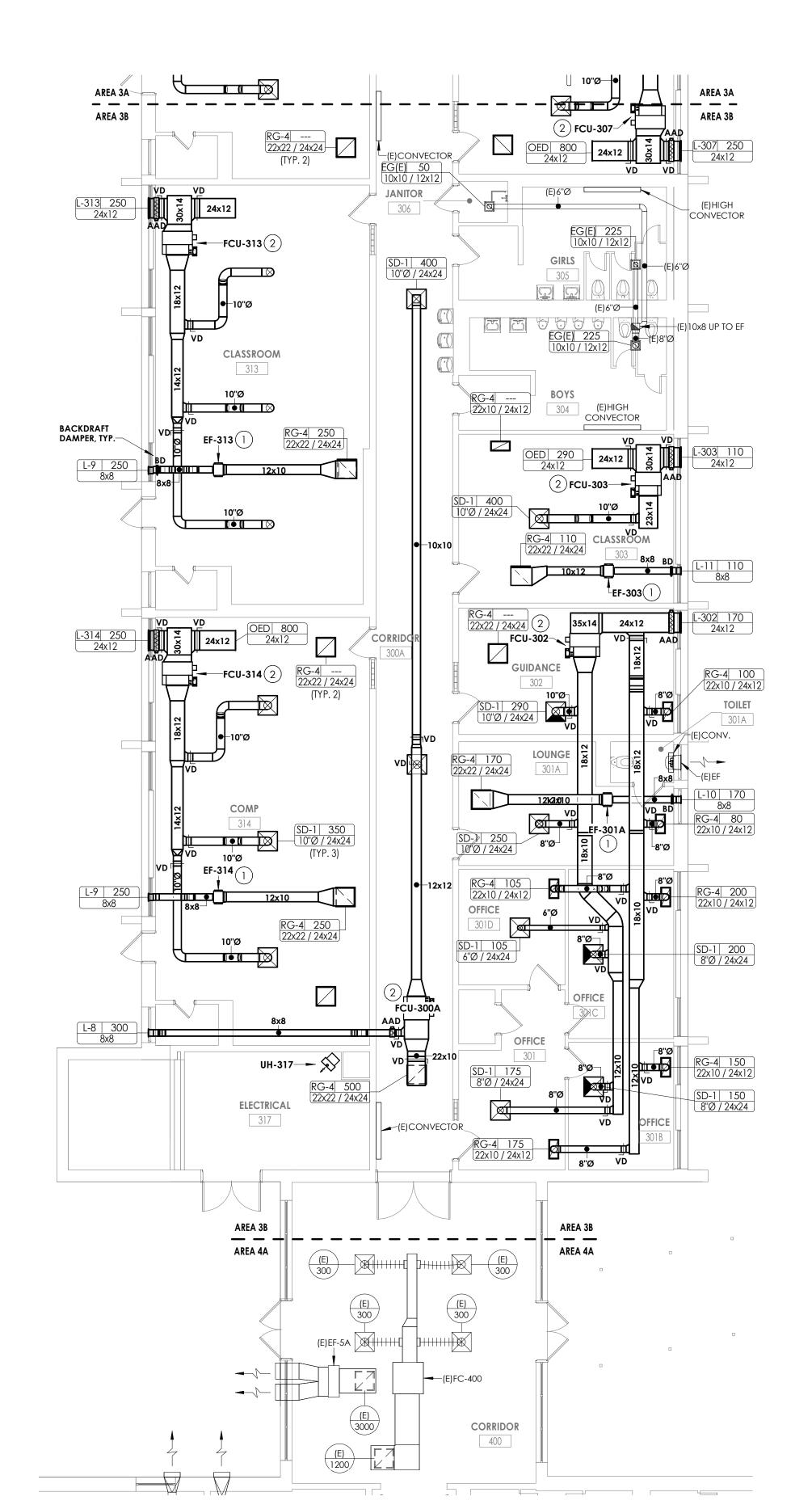
Issued Scale
02/17/2025 As indicated
Project Status
BID SET
Drawn By Checked By
KAB RM
Drawing Title
GROUND FLOOR HVAC
DUCTWORK PLAN - AREA 3A
AND 3B

Drawing Number

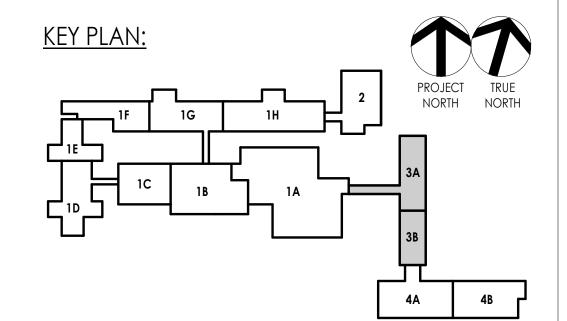


GROUND FLOOR HVAC DUCTWORK PLAN - AREA 3A

H201.3AB 1/8" = 1'-0"



2 GROUND FLOOR HVAC DUCTWORK PLAN - AREA 3B
1/8" = 1'-0"





GROUND FLOOR HVAC DUCTWORK PLAN - AREA 4B

1/8" = 1'-0"

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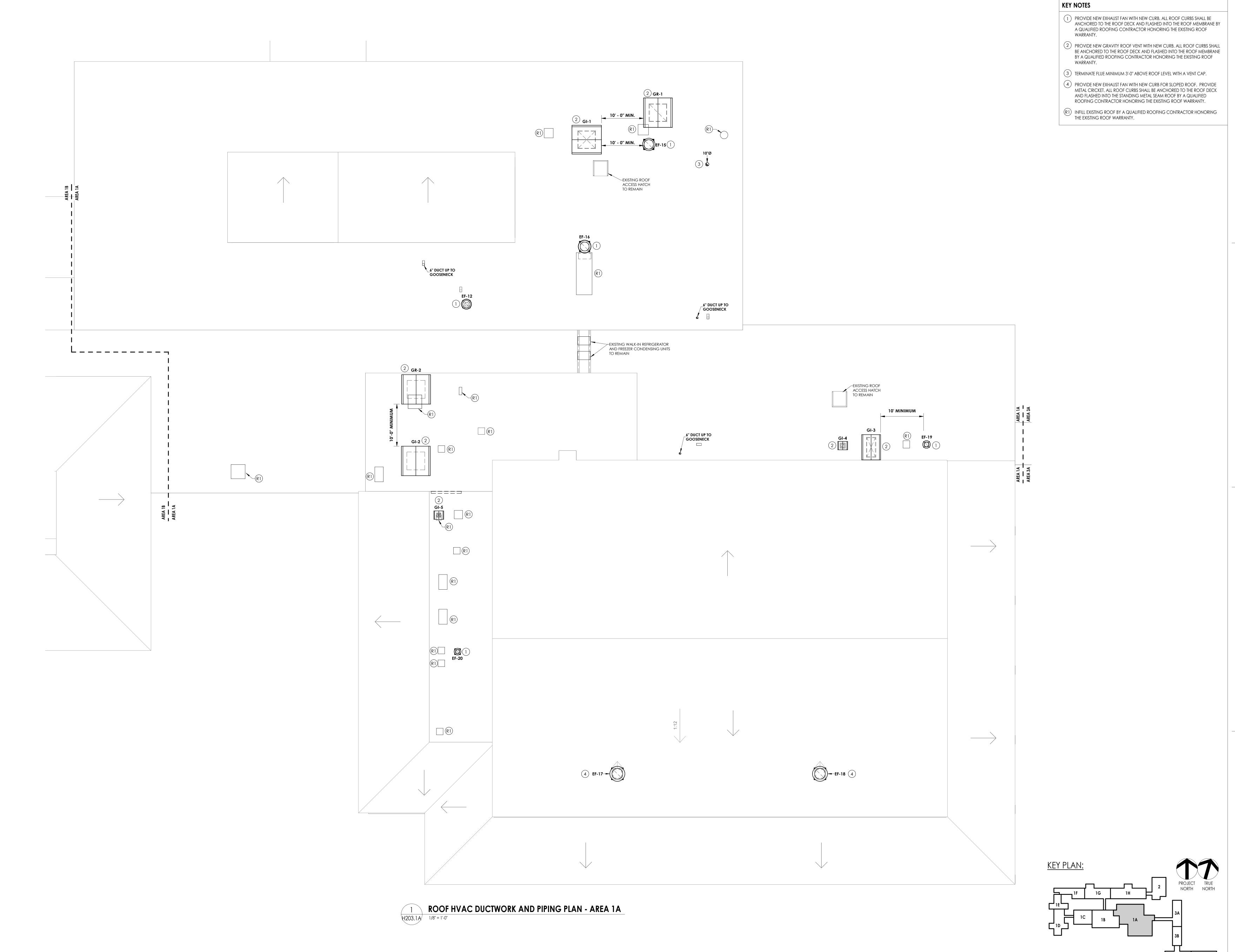
PROJECT INFORMATION Project Number R23.00325 JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

Project Address 180 W Hatcher St, Four Oaks, NC 27524

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Issued 02/17/2025 Scale 1/8" = 1'-0" Project Status BID SET Drawn By Drawing Title
GROUND FLOOR HVAC
DUCTWORK PLAN - AREA 4A AND 4B H201.4AB



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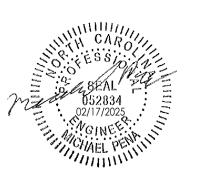
Project Number R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT
Project Name

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale

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Project Status

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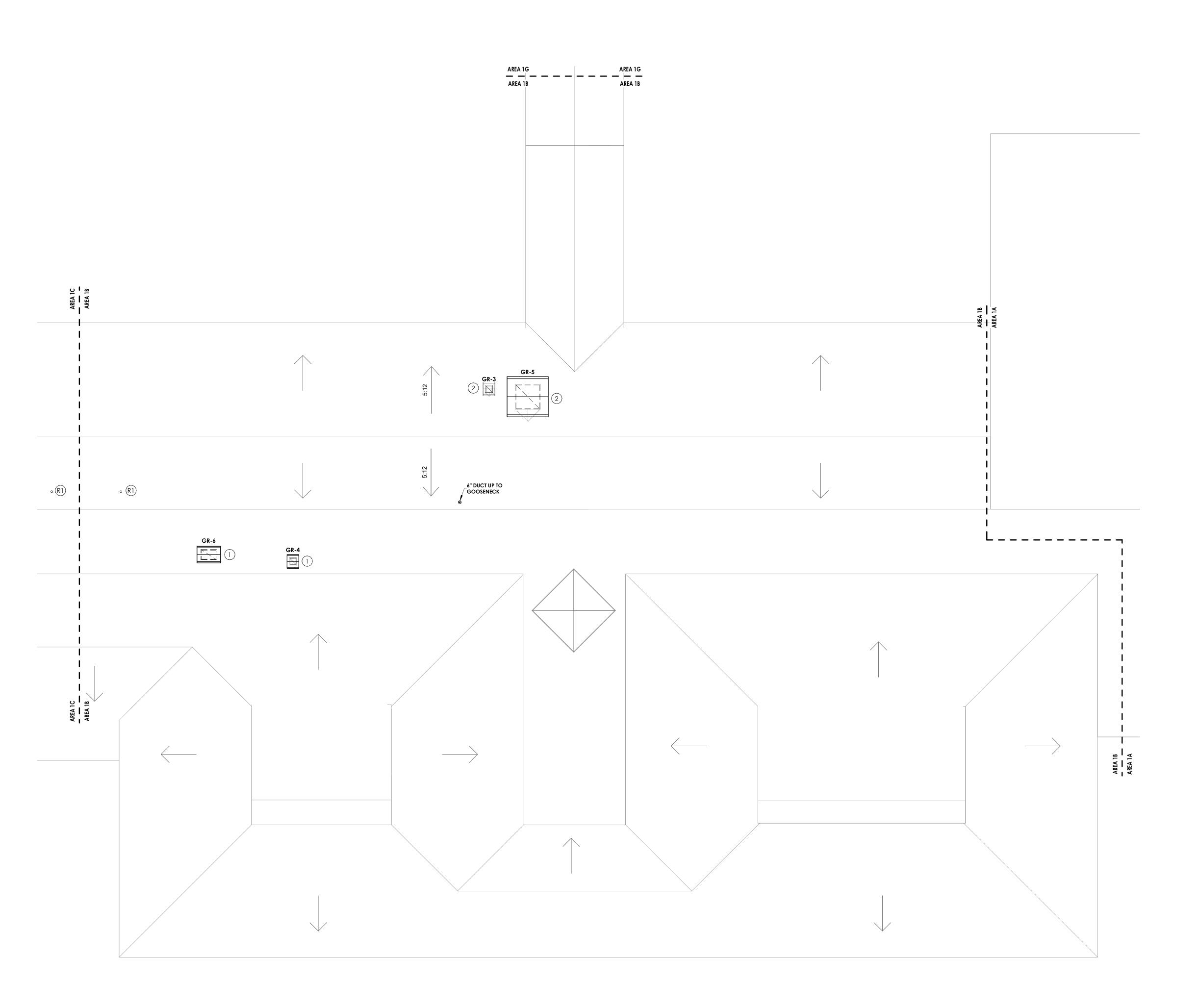
KAB RM

Drawing Title

ROOF HVAC DUCTWORK AND

PIPING PLAN - AREA 1A

FOES
H203 1 A



ROOF HVAC DUCTWORK AND PIPING PLAN - AREA 1B

1/8" = 1'-0"

# KEY NOTES

- PROVIDE NEW GRAVITY ROOF VENT WITH NEW CURB. ALL ROOF CURBS SHALL BE ANCHORED TO THE ROOF DECK AND FLASHED INTO THE ROOF MEMBRANE BY A QUALIFIED ROOFING CONTRACTOR HONORING THE EXISTING ROOF WARRANTY.
- PROVIDE NEW GRAVITY ROOF VENT WITH NEW CURB FOR SLOPED ROOF.
  PROVIDE METAL CRICKET. ALL ROOF CURBS SHALL BE ANCHORED TO THE ROOF
  DECK AND FLASHED INTO THE STANDING METAL SEAM ROOF BY A QUALIFIED
  ROOFING CONTRACTOR HONORING THE EXISTING ROOF WARRANTY.
- R1) INFILL EXISTING ROOF BY A QUALIFIED ROOFING CONTRACTOR HONORING THE EXISTING ROOF WARRANTY.

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PROJECT INFORMATION
Project Number
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JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT
Project Name
FOUR OAKS ELEMENTARY

SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale
02/17/2025 1/8" = 1'-0"

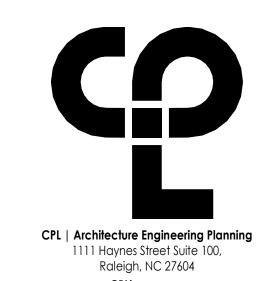
Project Status
BID SET
Drawn By Checked By
KAB RM

Drawing Title
ROOF HVAC DUCTWORK AND
PIPING PLAN - AREA 1B

FOES H203.1B

KEY NOTES

PROVIDE NEW GRAVITY ROOF VENT WITH NEW CURB. ALL ROOF CURBS SHALL BE ANCHORED TO THE ROOF DECK AND FLASHED INTO THE ROOF MEMBRANE BY A QUALIFIED ROOFING CONTRACTOR HONORING THE EXISTING ROOF WARRANTY.





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PROJECT INFORMATION

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JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

SCHOOL HVAC RENOVATION

FOUR OAKS ELEMENTARY

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

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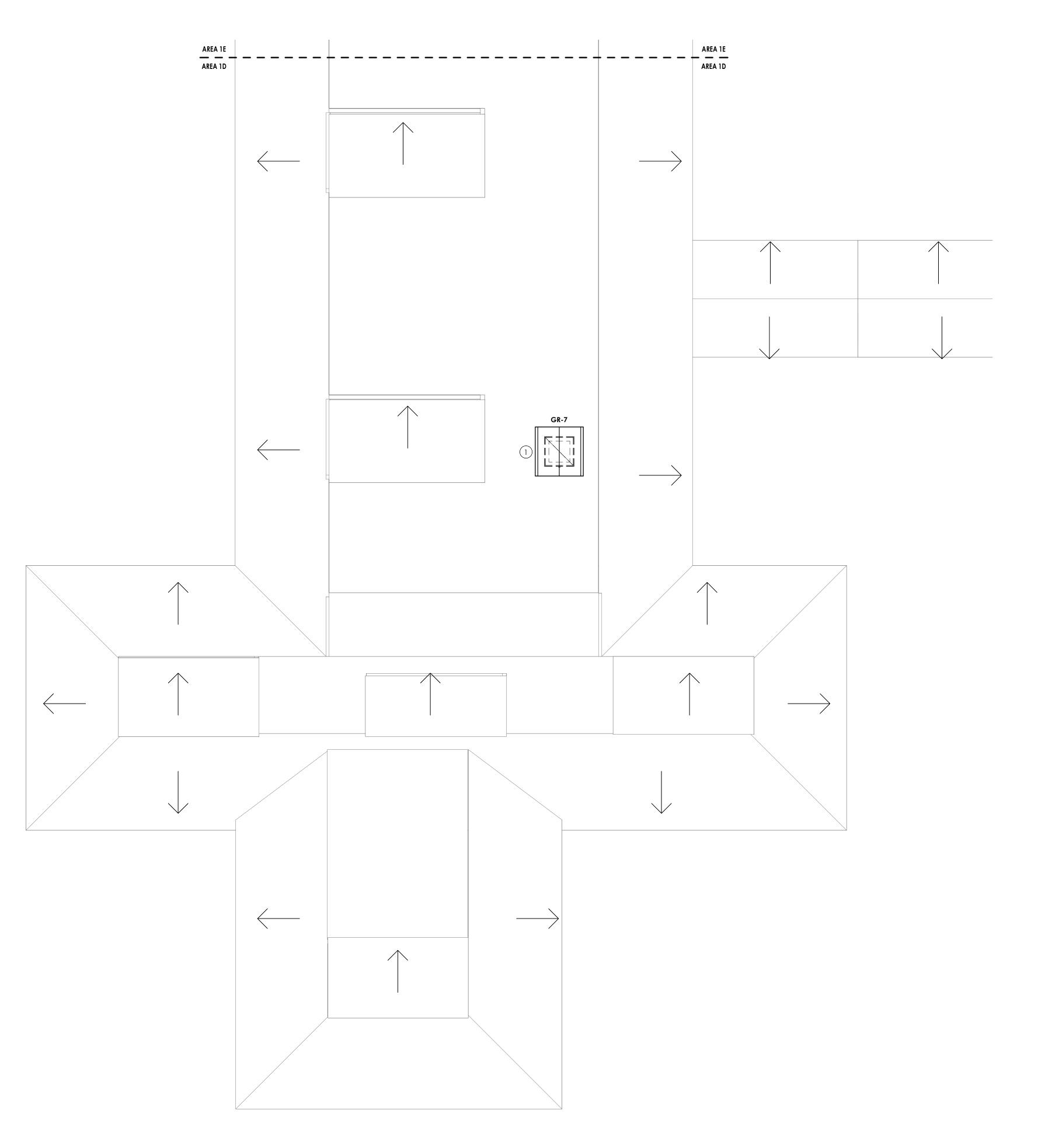
SHEET INFORMATION

Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
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KAB RM
Drawing Title

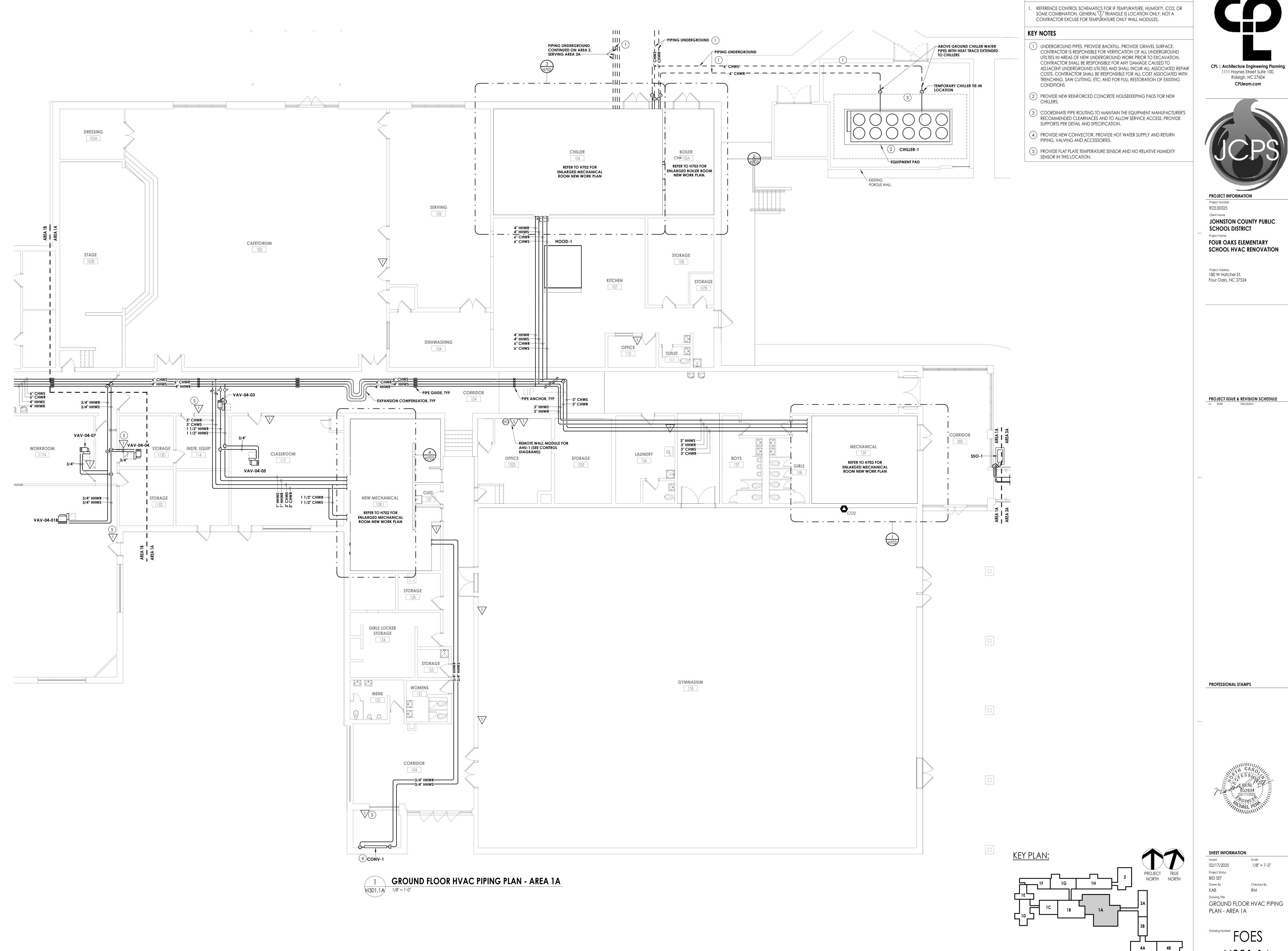
ROOF HVAC DUCTWORK AND
PIPING PLAN - AREA 1D

FOES H203.1D



ROOF HVAC DUCTWORK AND PIPING PLAN - AREA 1D

1/8" = 1'-0"



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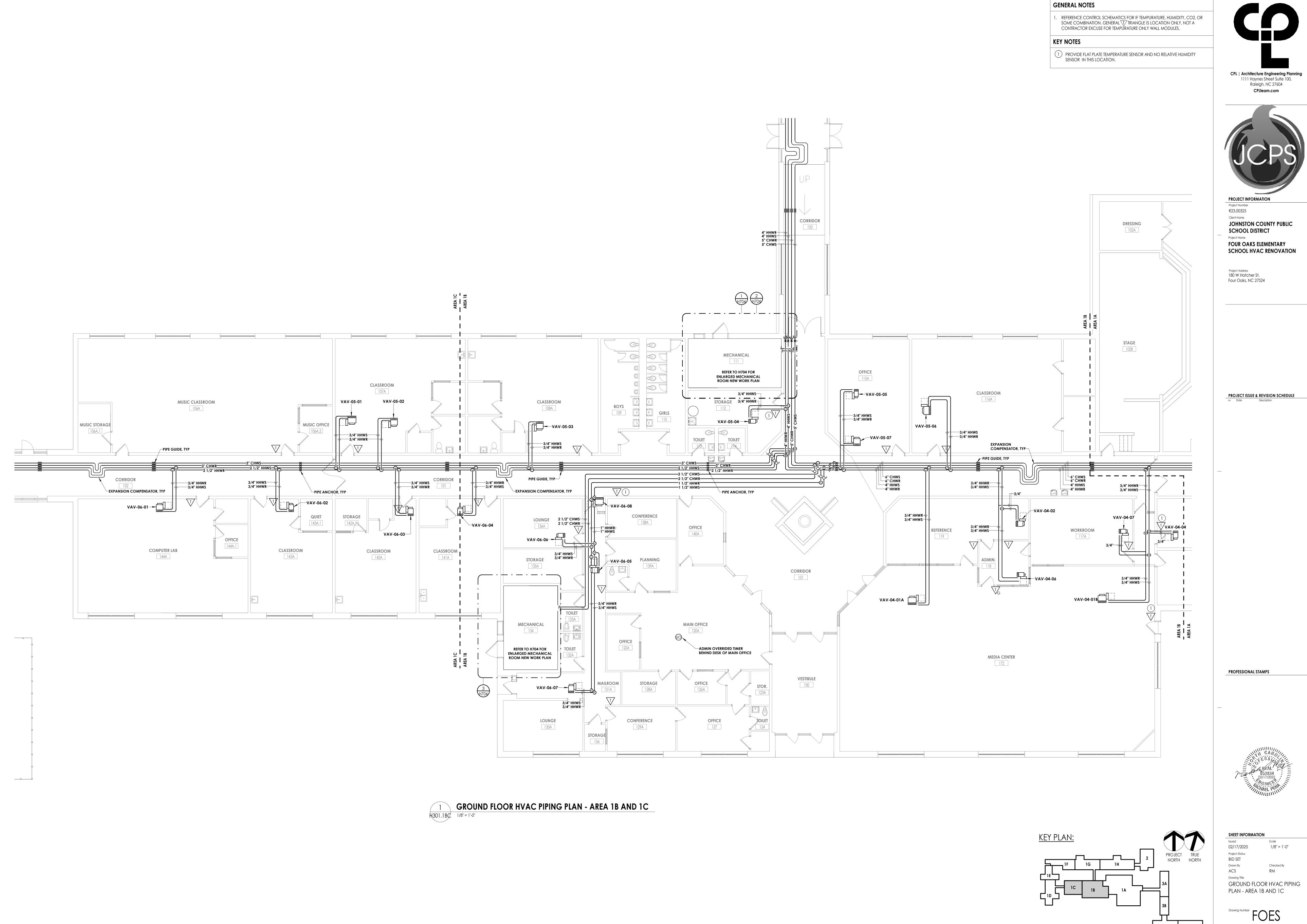
PROJECT INFORMATION Project Number R23.00325

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GROUND FLOOR HVAC PIPING PLAN - AREA 1A



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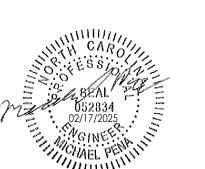


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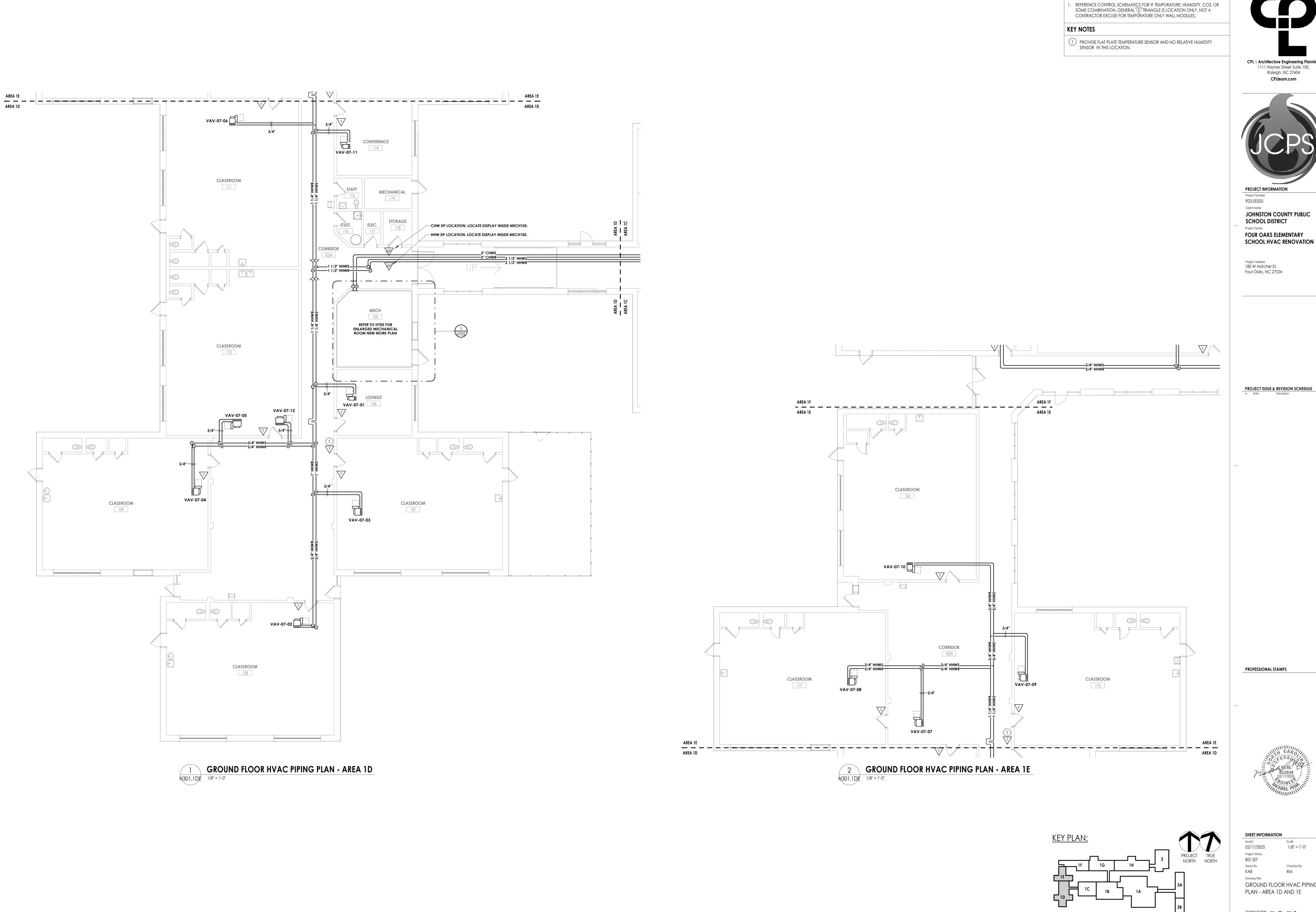
JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

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GENERAL NOTES



PROJECT INFORMATION Project Number R23.00325 JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

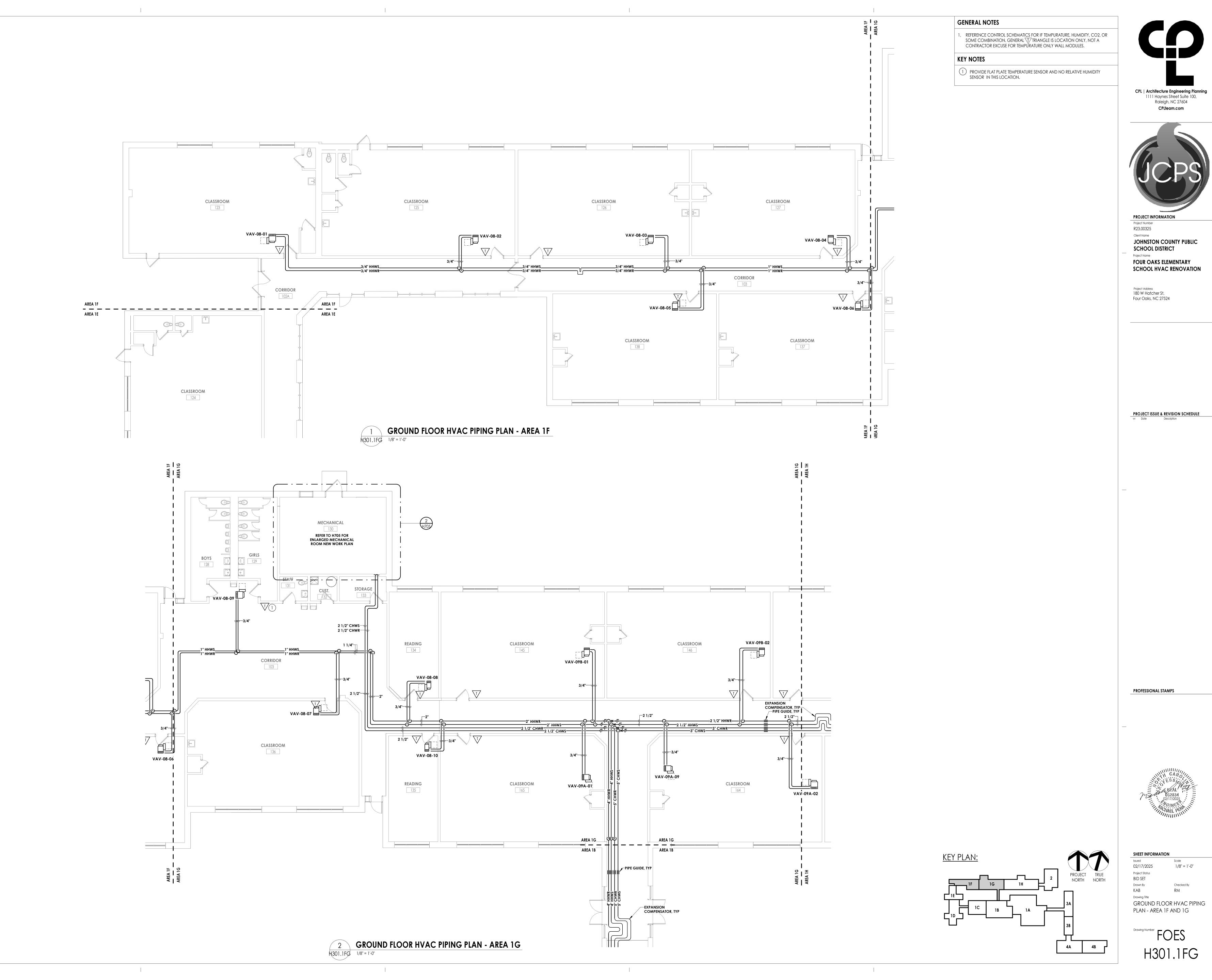
Project Address 180 W Hatcher St,

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS

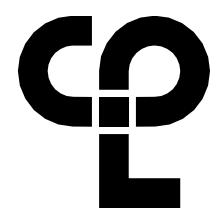




1. REFERENCE CONTROL SCHEMATICS FOR IF TEMPURATURE, HUMIDITY, CO2, OR SOME COMBINATION. GENERAL \(\frac{1}{2}\) TRIANGLE IS LOCATION ONLY, NOT A CONTRACTOR EXCUSE FOR TEMPURATURE ONLY WALL MODULES.

#### **KEY NOTES**

1 PROVIDE FLAT PLATE TEMPERATURE SENSOR AND NO RELATIVE HUMIDITY SENSOR IN THIS LOCATION.



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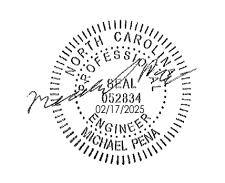
FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

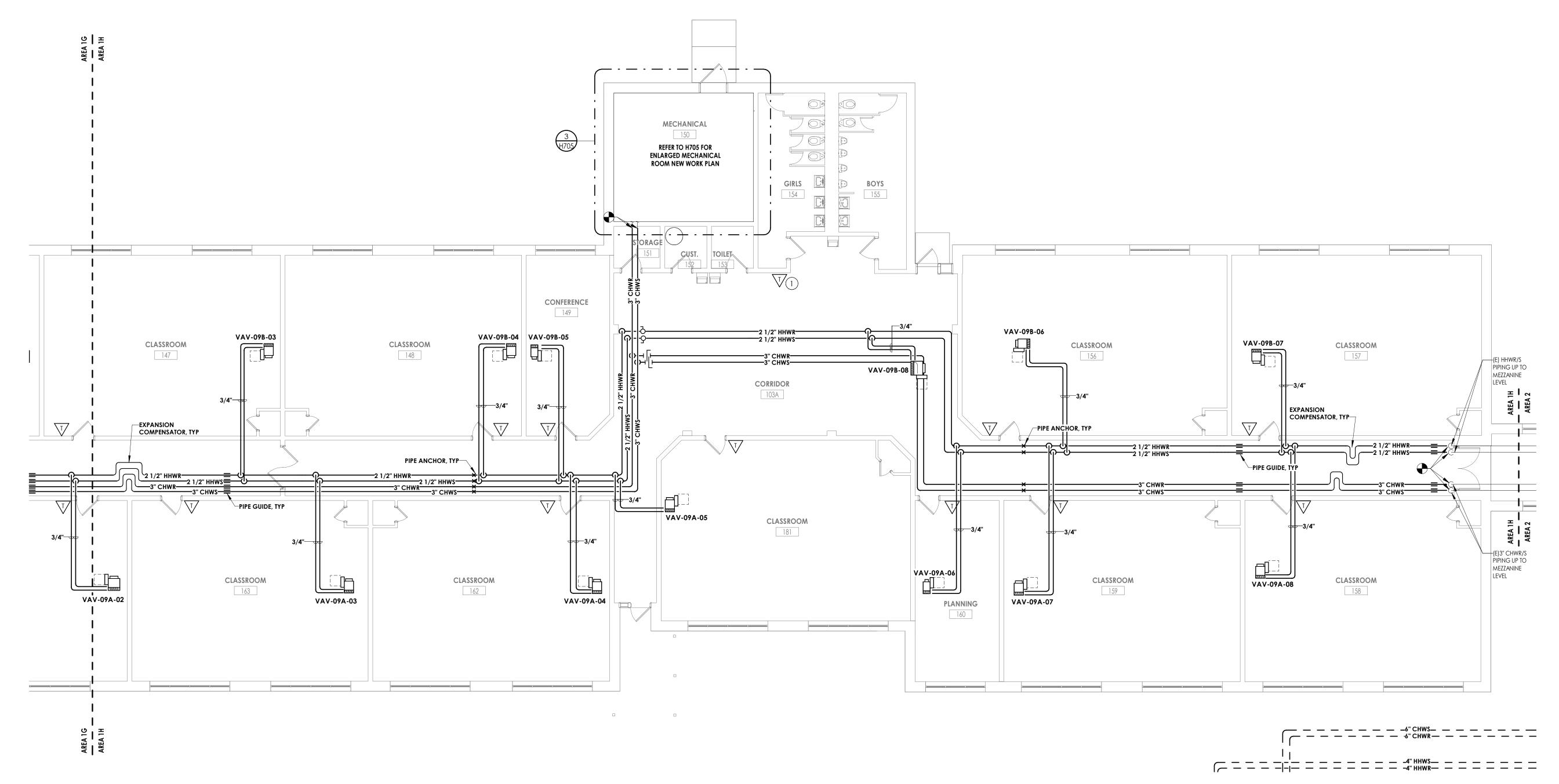
v Date Description

PROFESSIONAL STAMPS





FOES
H301 1H



GROUND FLOOR HVAC PIPING PLAN - AREA 1H

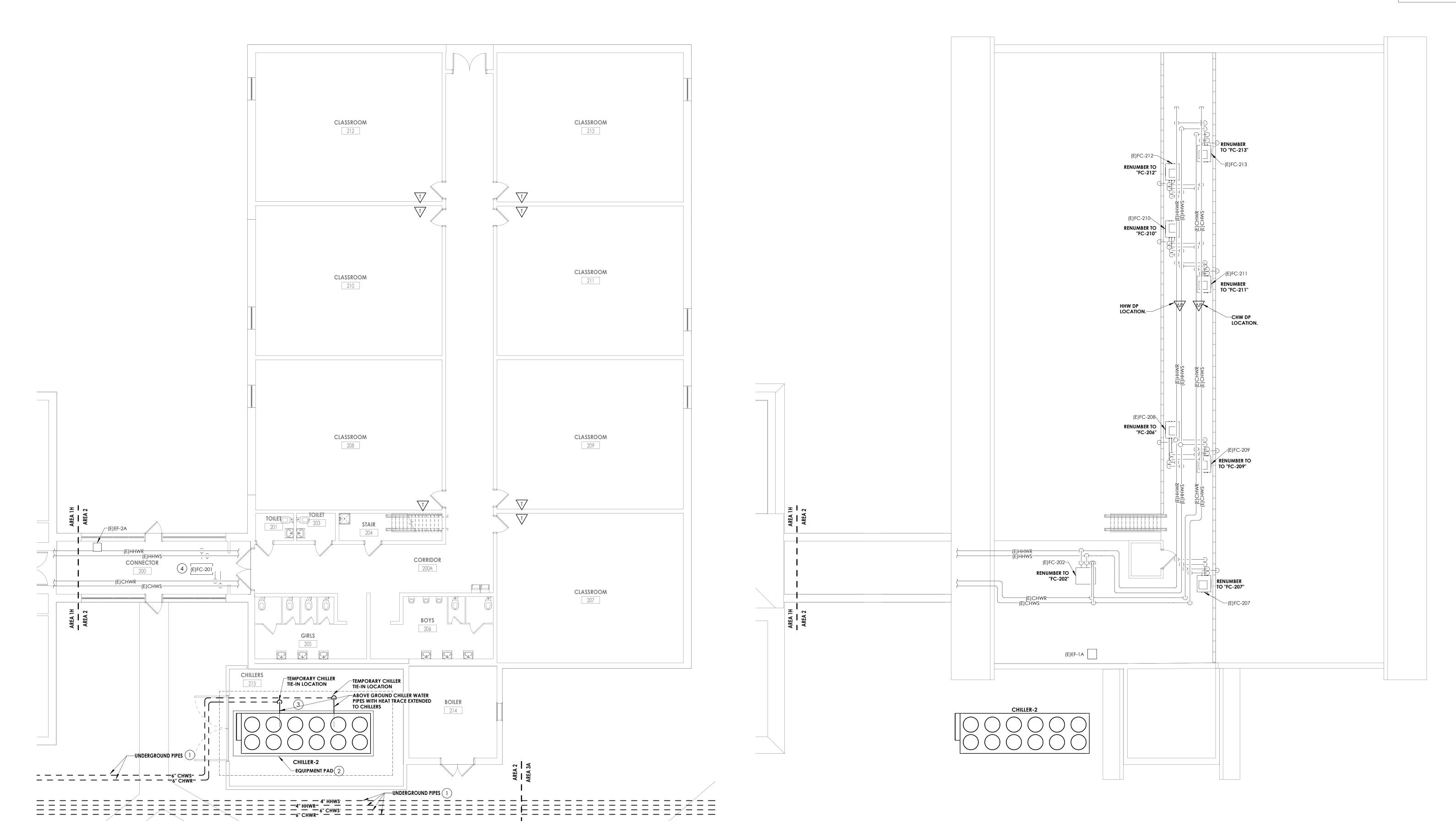
H301.1H

1/8" = 1'-0"

1. REFERENCE CONTROL SCHEMATICS FOR IF TEMPURATURE, HUMIDITY, CO2, OR SOME COMBINATION. GENERAL TT TRIANGLE IS LOCATION ONLY, NOT A CONTRACTOR EXCUSE FOR TEMPURATURE ONLY WALL MODULES.

# **KEY NOTES**

- UNDERGROUND PIPES. PROVIDE BACKFILL. PROVIDE GRAVEL SURFACE.
  CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL UNDERGROUND
  UTILITIES IN AREAS OF NEW UNDERGROUND WORK PRIOR TO EXCAVATION.
  CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO
  ADJACENT UNDERGROUND UTILITIES AND SHALL INCUR ALL ASSOCIATED REPAIR
  COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH
  TRENCHING, SAW CUTTING, ETC. AND FOR FULL RESTORATION OF EXISTING
  CONDITIONS.
- 2 PROVIDE NEW REINFORCED CONCRETE HOUSEKEEPING PADS FOR NEW
- 3 COORDINATE PIPE ROUTING TO MAINTAIN THE EQUIPMENT MANUFACTURER'S RECOMMENDED CLEARNACES AND TO ALLOW SERVICE ACCESS. PROVIDE SUPPORTS PER DETAIL AND SPECIFICATION.
- FCU TO BE CONTROLLED BASE ON THE RETURN AIR TEMPERATURE AND RETURN AIR HUMIDITY.

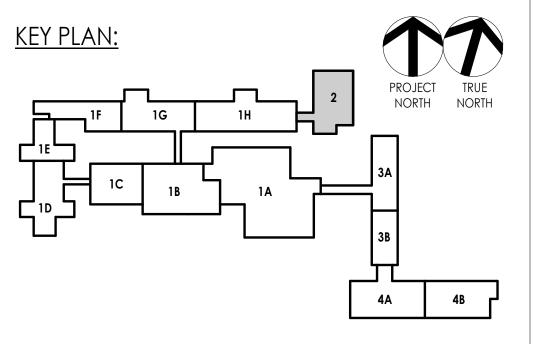


GROUND FLOOR HVAC PIPING PLAN - AREA 2

1/8" = 1'-0"

2 MEZZANINE HVAC PIPING PLAN - AREA 2

H301.2 1/8" = 1'-0"



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1111 Haynes Street Suite 100,
Raleigh, NC 27604
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(CPS)

PROJECT INFORMATION
Project Number
R23.00325

Client Name

JOHNSTON COUNTY PUBLIC

SCHOOL DISTRICT

Project Name

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE
vv Date Description

PROFESSIONAL STAMPS



SHEET INFORMATION

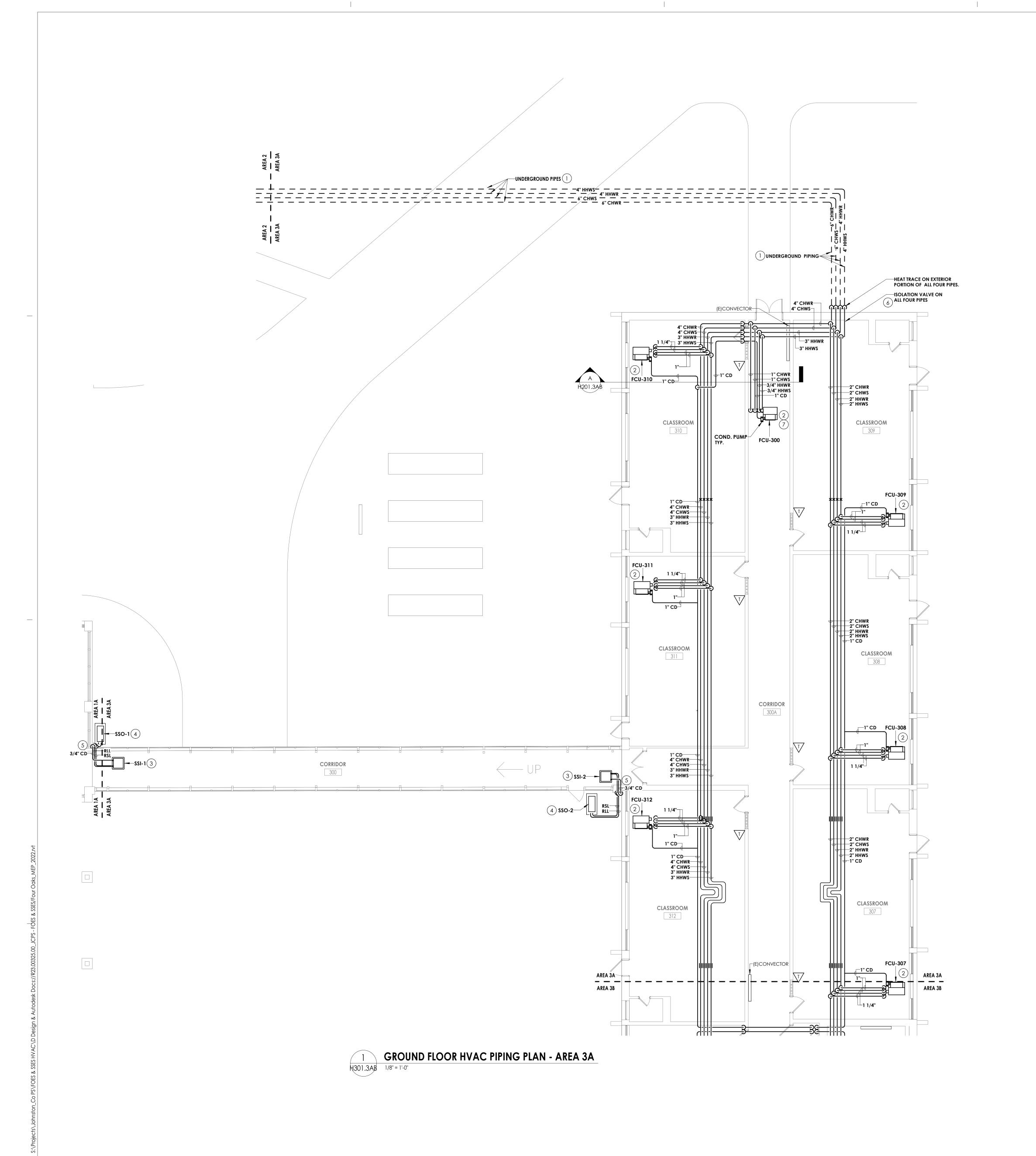
Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
Drawn By Checked By
KAB RM

Drawing Title

GROUND FLOOR HVAC PIPING
PLAN - AREA 2

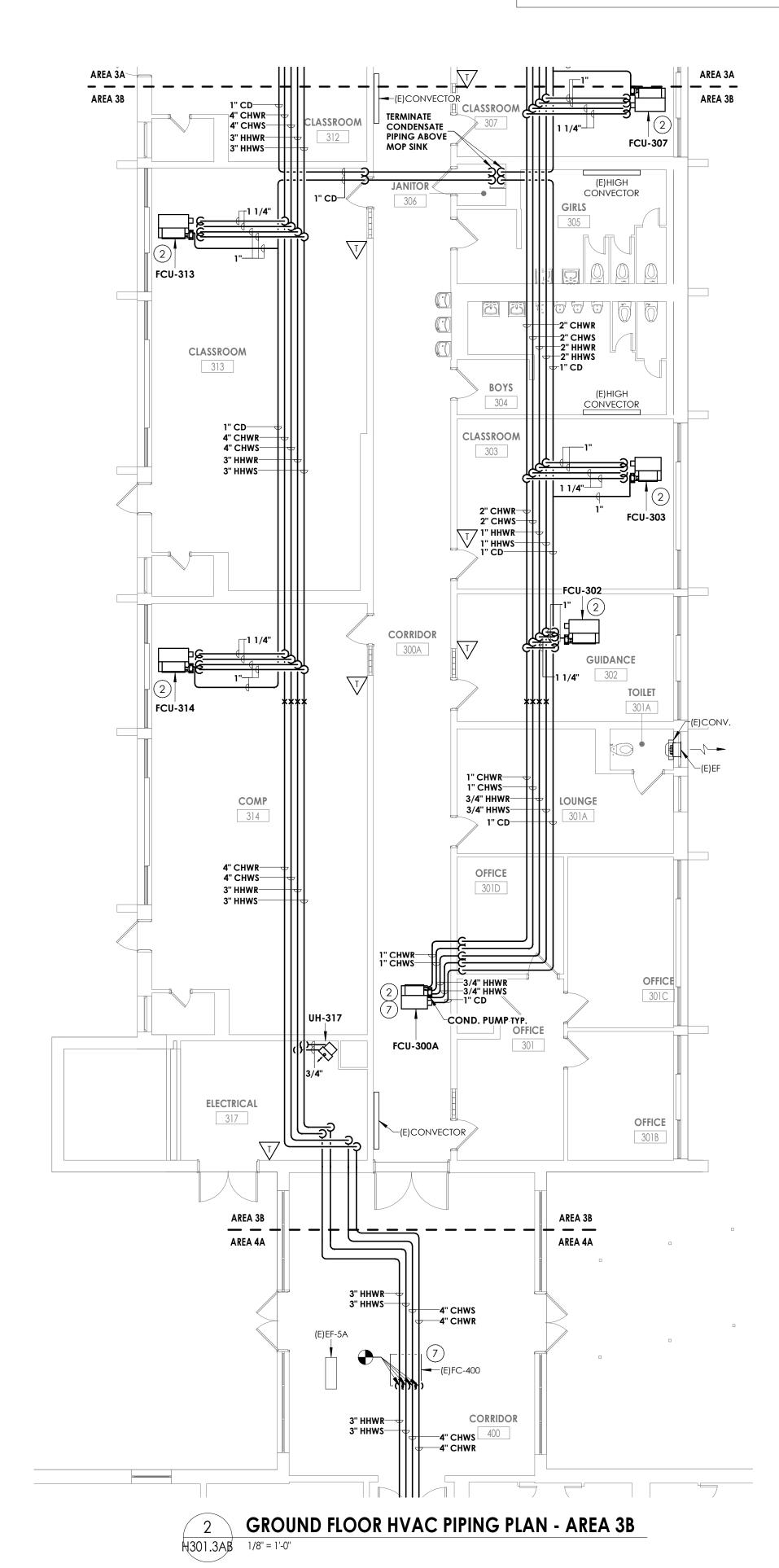
FOES
H3012



1. REFERENCE CONTROL SCHEMATICS FOR IF TEMPURATURE, HUMIDITY, CO2, OR SOME COMBINATION. GENERAL TRIANGLE IS LOCATION ONLY, NOT A CONTRACTOR EXCUSE FOR TEMPURATURE ONLY WALL MODULES.

#### **KEY NOTES**

- UNDERGROUND PIPES. PROVIDE BACKFILL. PROVIDE GRAVEL SURFACE.
  CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL UNDERGROUND
  UTILITIES IN AREAS OF NEW UNDERGROUND WORK PRIOR TO EXCAVATION.
  CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO
  ADJACENT UNDERGROUND UTILITIES AND SHALL INCUR ALL ASSOCIATED
  REPAIR COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST
  ASSOCIATED WITH TRENCHING, SAW CUTTING, ETC. AND FOR FULL
  RESTORATION OF EXISTING CONDITIONS
  - PROVIDE NEW FAN COIL UNIT WITH ASSOCIATED DUCTWORK, PIPING, AND CONTROLS.
  - 3 PROVIDE NEW 4-WAY SPLIT SYSTEM CASSETTE WITH ASSOCIATED PIPING AND CONTROLS.
  - PROVIDE REMOTE CONDENSING UNIT AND EQUIPMENT PAD ON GROUND. PROVIDE REFRIGERANT LINES AND ACCESSORIES PER MANUFACTURER'S RECOMMENDATIONS. REFRIGERANT PIPING INDICATED ON DRAWING IS SHOWN TO INDICATE SUGGESTED PATH AND MAY NOT REPRESENT ACTUAL PIPING CONFIGURATION. SIZING AND CIRCUITING IS THE RESPONSIBILITY OF THE CONTRACTOR.
  - (5) TERMINATE 3/4" CONDENSATE DRAIN PIPE 12-INCHES ABOVE GRADE WITH INSECT SCREEN.
  - 6 PROVIDE ISOLATION VALVES INSIDE BUILDING TO ALLOW ISOLATION OF UNDERGROUND PIPING.
  - 7 FCU TO BE CONTROLLED BASE ON THE RETURN AIR TEMPERATURE AND RETURN AIR HUMIDITY



KEY PLAN:

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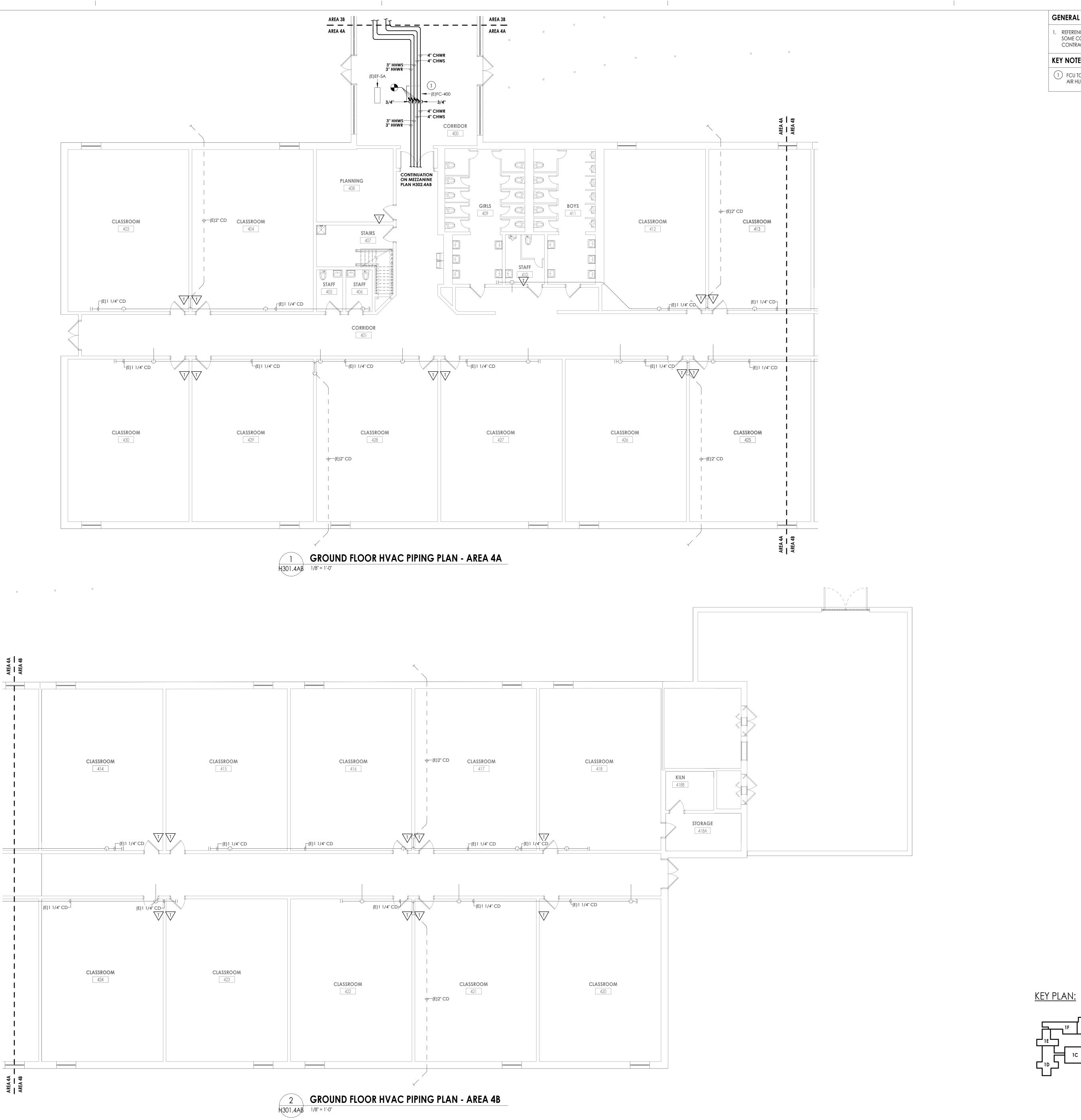
Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
Drawn By Checked By
KAB RM

Drawing Title

GROUND FLOOR HVAC PIPING
PLAN - AREA 3A AND 3B

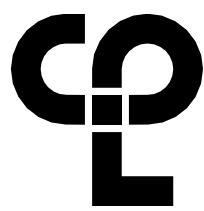
FOES
H301.3AB



. REFERENCE CONTROL SCHEMATICS FOR IF TEMPURATURE, HUMIDITY, CO2, OR SOME COMBINATION. GENERAL TT TRIANGLE IS LOCATION ONLY, NOT A CONTRACTOR EXCUSE FOR TEMPURATURE ONLY WALL MODULES.

# KEY NOTES

1) FCU TO BE CONTROLLED BASE ON THE RETURN AIR TEMPERATURE AND RETURN AIR HUMIDITY



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PROJECT INFORMATION Project Number R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

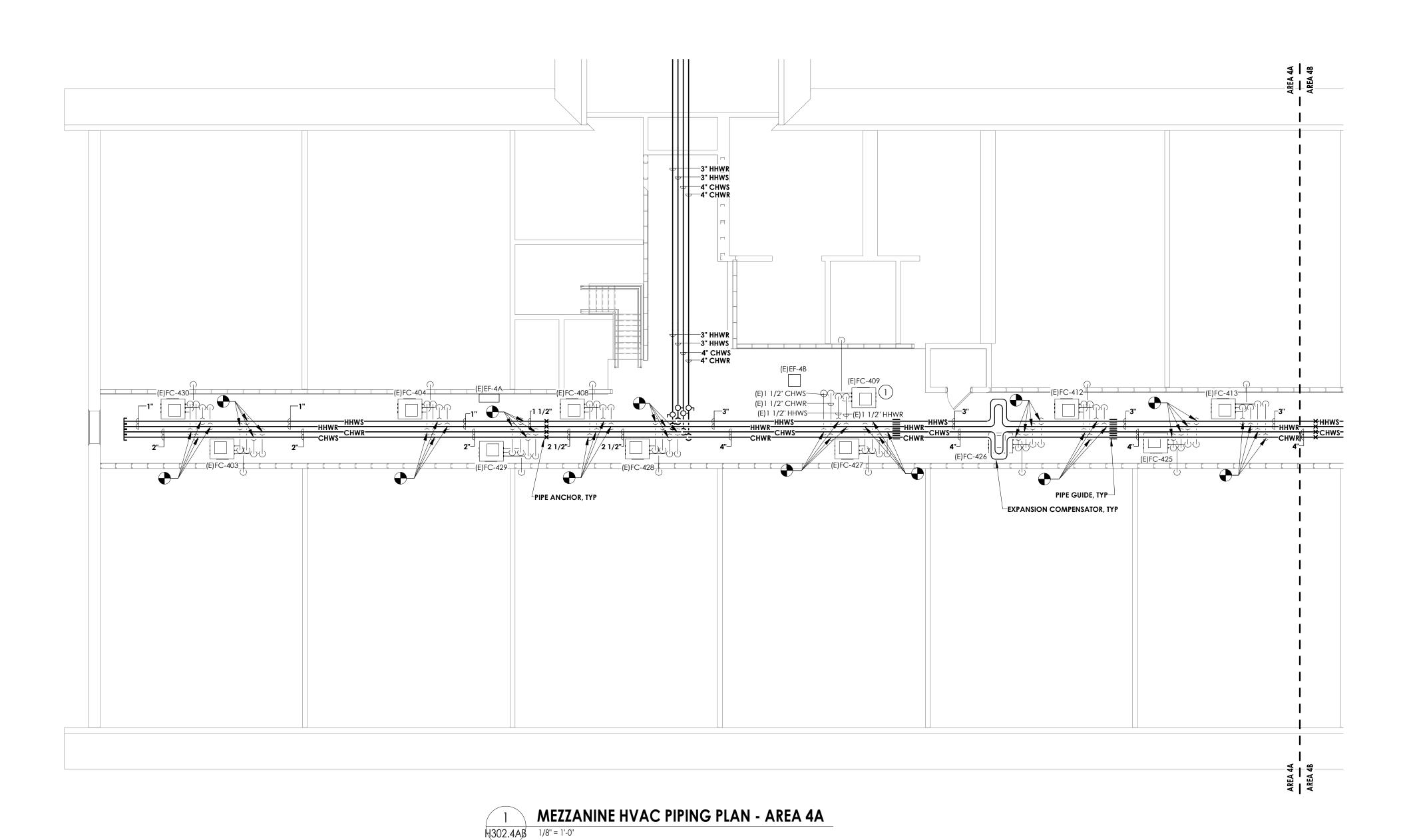
Project Address 180 W Hatcher St,

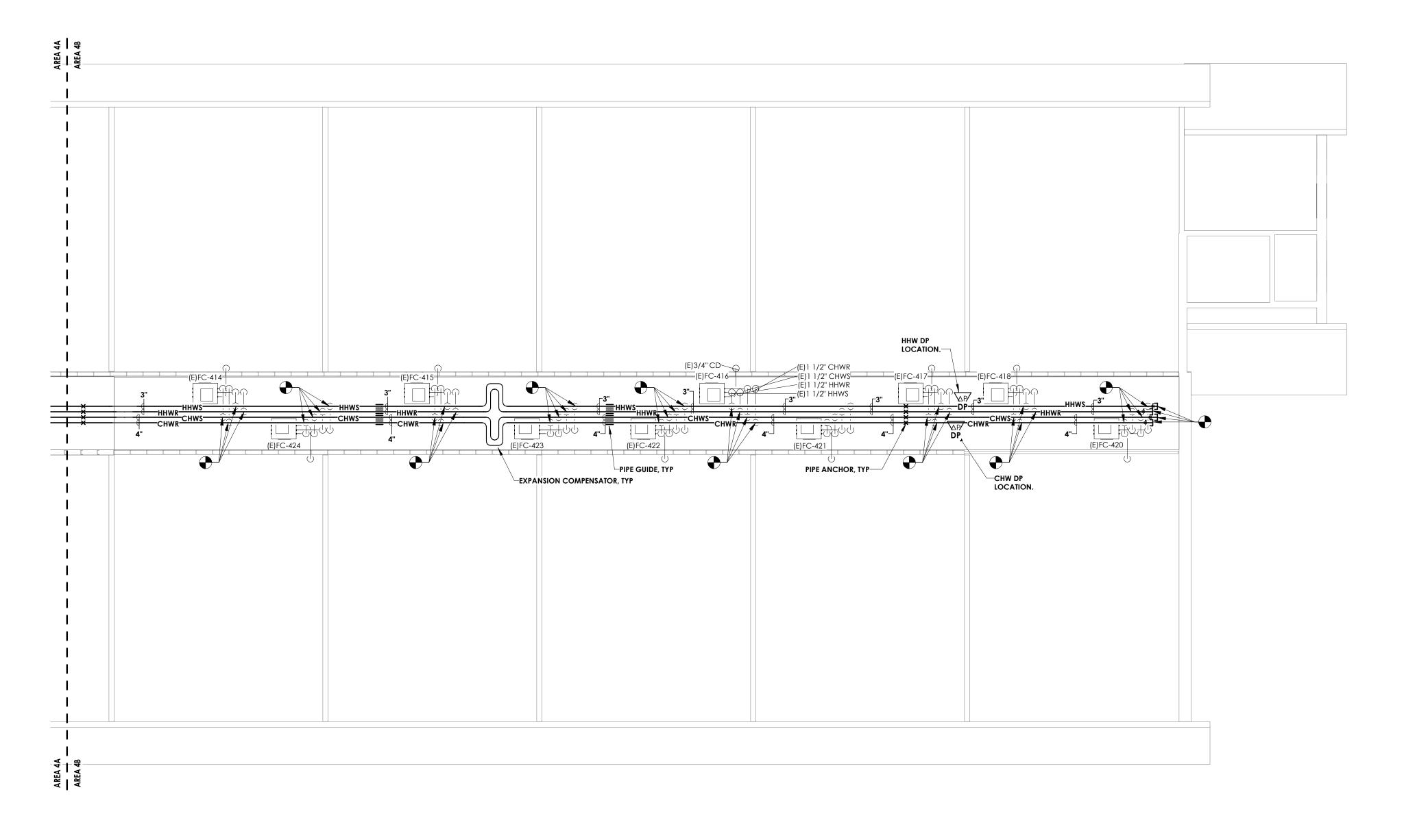
Four Oaks, NC 27524

PROFESSIONAL STAMPS



Issued 02/17/2025 Scale 1/8" = 1'-0" Project Status BID SET Drawing Title
GROUND FLOOR HVAC PIPING
PLAN - AREA 4A AND 4B





# 2 MEZZANINE HVAC PIPING PLAN - AREA 4B 1/8" = 1'-0"

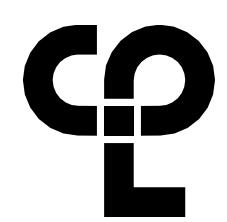
# GENERAL NOTES

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# KEY NOTES

KEY PLAN:

FCU TO BE CONTROLLED BASE ON THE RETURN AIR TEMPERATURE AND RETURN AIR HUMIDITY



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PROJECT INFORMATION
Project Number
R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT
Project Name

SCHOOL HVAC RENOVATION

FOUR OAKS ELEMENTARY

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS



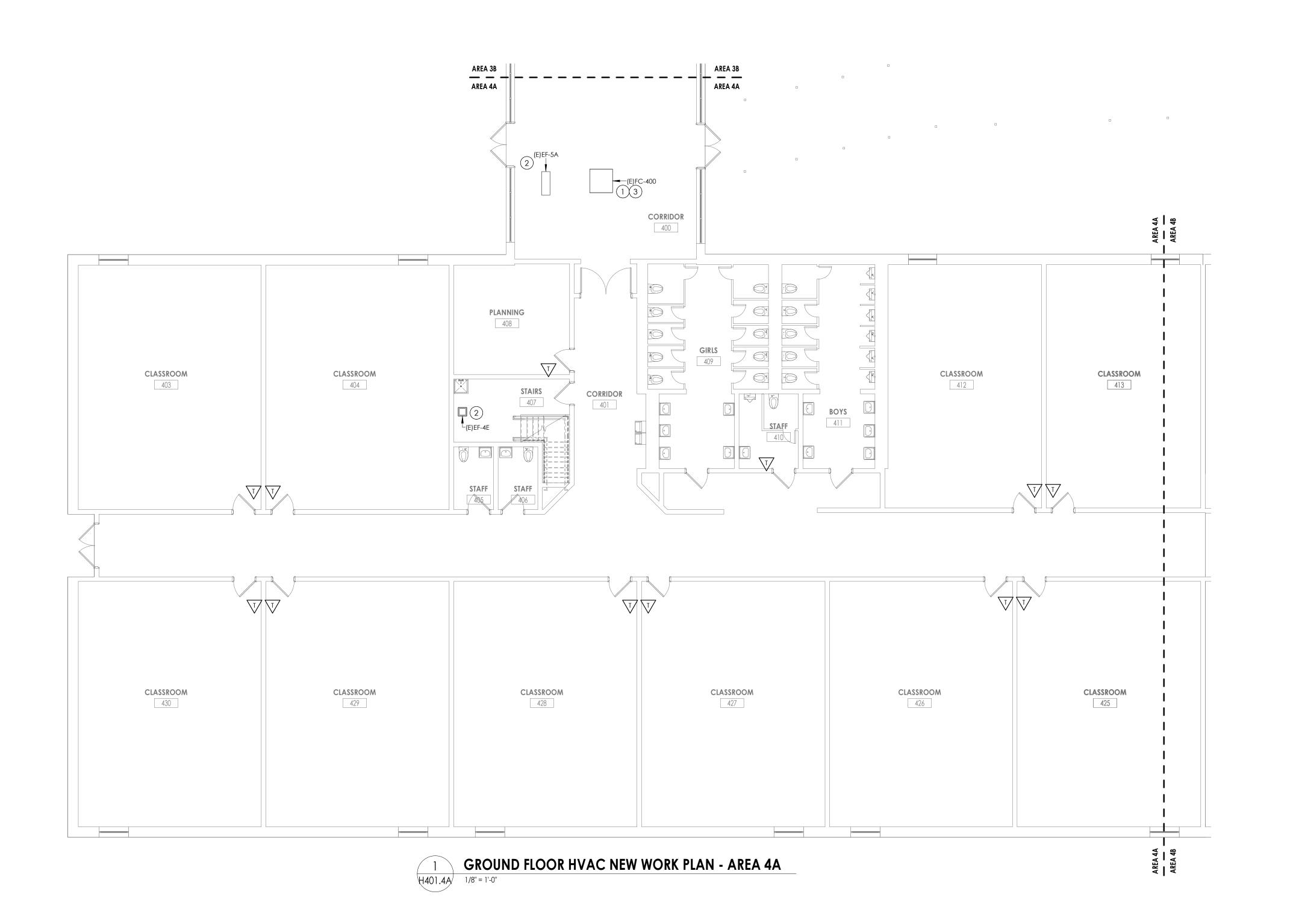
SHEET INFORMATION

Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
Drawn By Checked By
KAB RM
Drawing Title

MEZZANINE HVAC PIPING PLAN AREA 4A AND 4B

FOES H302.4AB



1. REFERENCE CONTROL SCHEMATICS FOR IF TEMPURATURE, HUMIDITY, CO2, OR SOME COMBINATION. GENERAL TRIANGLE IS LOCATION ONLY, NOT A CONTRACTOR EXCUSE FOR TEMPURATURE ONLY WALL MODULES.

#### HVAC CONTROLS UPGRADE NOTES

ON CONTRACTOR REQUIREMENTS.

- 1. THE H400 SERIES DRAWINGS INDICATE THE LOCATION OF THE HVAC EQUIPMENT THAT IS REQUIRED TO BE INCLUDED IN THE SCOPE OF WORK FOR THE UPGRADE OF THE DIRECT DIGITAL CONTROL BUILDING MANAGEMENT SYSTEM (BMS).
- 2. REFER TO H500 SERIES CONTROL SCHEMATICS DRAWINGS, SECTION 230913
  "INSTRUMENTATION AND CONTROL DEVICES FOR HVAC", SECTION 230923
  "DIRECT-DIGITAL CONTROL SYSTEM FOR HVAC", AND SECTION 230993
  "SEQUENCE OF OPERATION FOR HVAC CONTROLS" FOR FURTHER INFORMATION
- 3. EQUIPMENT INDICATED ON THIS DRAWING IS CURRENTLY CONTROLLED BY THE EXISTING BMS. THE CONTRACTOR IS RESPONSIBLE TO INVENTORY AND DOCUMENT ALL CONTROL POINTS CURRENTLY INTEGRATED IN THE EXISTING SYSTEM FOR EACH PIECE OF EQUIPMENT SHOWN ON THIS DRAWING AND DETERMINE AND DOCUMENT IT'S SEQUENCE OF OPERATION PRIOR TO ANY NEW WORK BEING COMMENCED.
- WORK BEING COMMENCED.

  4. UPON SUCCESSFUL COMPLETION OF CONTROL POINT INVENTORY AND SEQUENCE OF OPERATION DETERMINATION, CONTRACTOR SHALL REMOVE CONTROL EQUIPMENT AS NECESSARY TO FACILITATE THE INTEGRATION OF THE EQUIPMENT INTO THE NEW BMS.
- 5. EXISTING CONTROL COMPONENTS (EQUIPMENT, DEVICES, PERIPHERAL COMPONENTS, ETC.) THAT ARE COMPATIBLE WITH THE NEW SYSTEM MAY BE RE-USED. A COMPONENT IS DEEMED COMPATIBLE IF IT DOES NOT REQUIRE A CONVERSION DEVICE (TRANSDUCER, HARDWARE OR SOFTWARE TRANSLATORS, ETC.) TO WORK IN THE NEW BMS.
- 6. EXISTING COMPONENTS THAT ARE RE-USED SHALL BE INVENTORIED AND DOCUMENTED.
- 7. THE REMOVAL OF ANY EXISTING COMPONENT (NOT TO BE RE-USED) SHALL INCLUDE THE REMOVAL OF ALL ASSOCIATED WIRING, CONDUIT AND SUPPORT ATTACHMENTS. WHERE EXISTING-TO-REMAIN FINISHES ARE DAMAGED AS A RESULT OF THE REMOVAL OF ANY EXISTING CONTROL EQUIPMENT OR WHERE THE REMOVAL EXPOSES A PREVIOUSLY DAMAGED FINISH, THE CONTRACTOR SHALL REPAIR THE FINISH TO MATCH EXISTING.

8. ALL NEW HVAC EQUIPMENT SHALL BE INTEGRATED INTO THE NEW DDC SYSTEM.

#### KEY NOTES

- a. REMOVE EXISTING WALL TEMPERATURE SENSOR ASSOCIATED WITH FAN COIL UNIT.
- REMOVE EXISTING CONTROLS INSTALLED WITHIN EACH FAN COIL UNIT AS NECESSARY FOR NEW SYSTEM INTEGRATION. REFER TO HVAC CONTROLS UPGRADE NOTES FOR FURTHER DETAILS.
- C. PROVIDE WALL TEMPERATURE SENSOR, UNIT MOUNTED SENSORS AND REQUIRED CONTROL DEVICES PER DETAIL ON H500 SERIES DRAWINGS. PROVIDE CONTROLLER AND COMPLETELY INTEGRATE FAN COIL UNIT INTO NEW BMS.
- a. REMOVE EXISTING WALL TEMPERATURE SENSOR ASSOCIATED WITH EACH EXHAUST FAN SYSTEM.
   b. REMOVE EXISTING CONTROLS INSTALLED WITHIN EACH EXHAUST FAN AS NECESSARY FOR NEW SYSTEM INTEGRATION. REFER TO HVAC CONTROLS
- UPGRADE NOTES FOR FURTHER DETAILS.

  c. PROVIDE REQUIRED CONTROL DEVICES PER DETAIL ON H500 SERIES DRAWINGS. PROVIDE CONTROLLER AND COMPLETELY INTEGRATE EACH EXHAUST FAN INTO NEW BMS.
- FCU TO BE CONTROLLED BASE ON THE RETURN AIR TEMPERATURE AND RETURN AIR HUMIDITY

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PROJECT INFORMATION
Project Number

Project Number R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

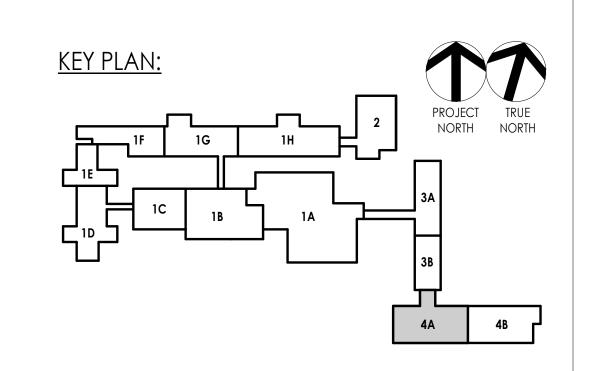
PROJECT ISSUE & REVISION SCHEDULE

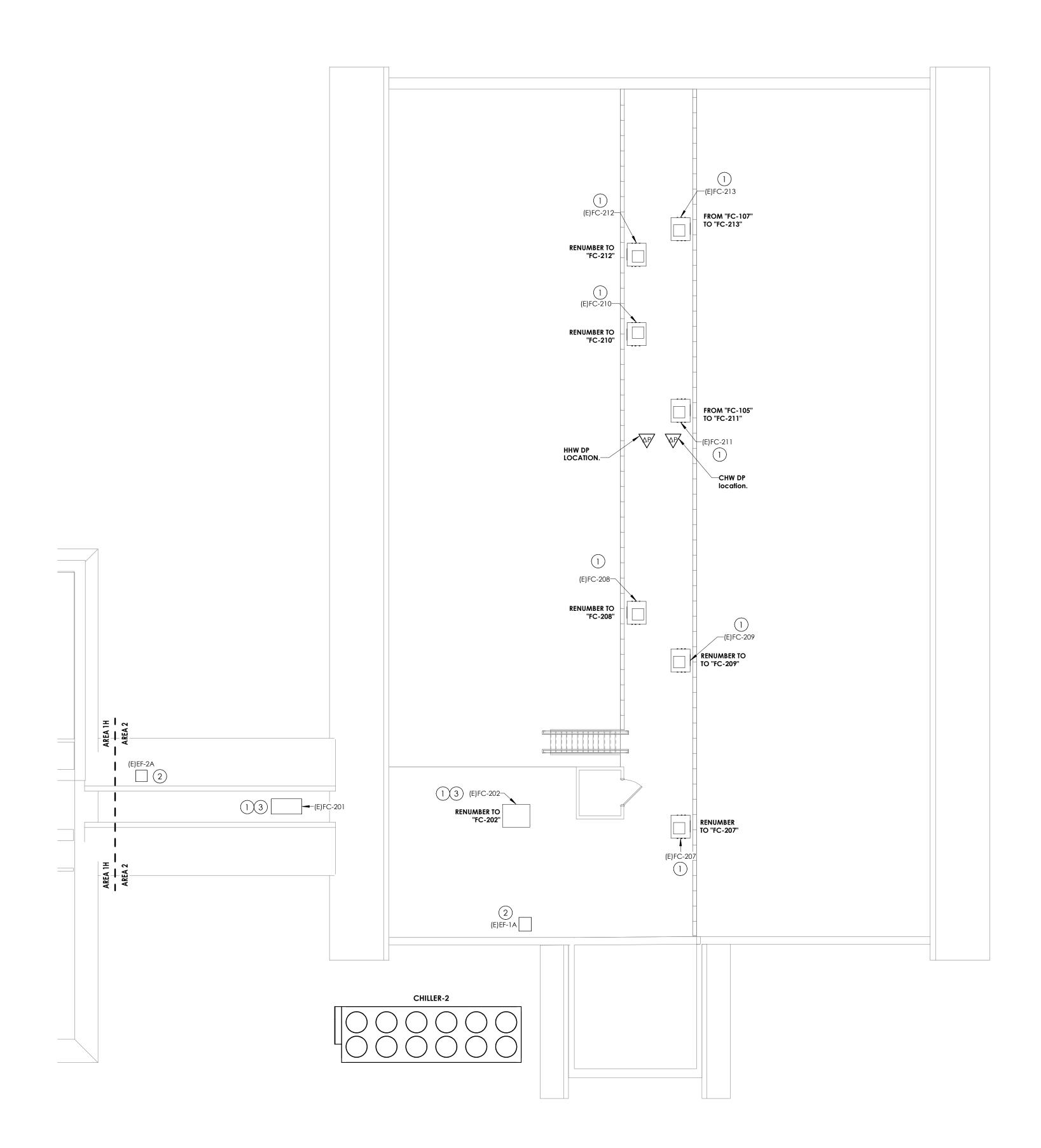
w Date Description

PROFESSIONAL STAMPS



LOCATION PLAN - AREA 4A





1 MEZZANINE HVAC CONTROLS PLAN - AREA 2

1/8" = 1'-0"

#### HVAC CONTROLS UPGRADE NOTES

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- 4. UPON SUCCESSFUL COMPLETION OF CONTROL POINT INVENTORY AND SEQUENCE OF OPERATION DETERMINATION, CONTRACTOR SHALL REMOVE CONTROL EQUIPMENT AS NECESSARY TO FACILITATE THE INTEGRATION OF THE EQUIPMENT INTO THE NEW BMS.
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- 8. ALL NEW HVAC EQUIPMENT SHALL BE INTEGRATED INTO THE NEW DDC SYSTEM.

#### KEY NOTES

- a. REMOVE EXISTING WALL TEMPERATURE SENSOR ASSOCIATED WITH FAN COIL UNIT.
- b. REMOVE EXISTING CONTROLS INSTALLED WITHIN EACH FAN COIL UNIT AS NECESSARY FOR NEW SYSTEM INTEGRATION. REFER TO HVAC CONTROLS UPGRADE NOTES FOR FURTHER DETAILS.
- C. UPDATE ALL ASSOCIATED LABELING ON EQUIPMENT, ELECTRICAL, ETC
   d. PROVIDE WALL TEMPERATURE SENSOR, UNIT MOUNTED SENSORS AND REQUIRED CONTROL DEVICES PER DETAIL ON H500 SERIES DRAWINGS. PROVIDE CONTROLLER AND COMPLETELY INTEGRATE FAN COIL UNIT INTO NEW BMS.
- 2 a. REMOVE EXISTING WALL TEMPERATURE SENSOR ASSOCIATED WITH EACH EXHAUST FAN SYSTEM.
- b. REMOVE EXISTING CONTROLS INSTALLED WITHIN EACH EXHAUST FAN AS NECESSARY FOR NEW SYSTEM INTEGRATION. REFER TO HVAC CONTROLS UPGRADE NOTES FOR FURTHER DETAILS.
   c. PROVIDE REQUIRED CONTROL DEVICES PER DETAIL ON H500 SERIES
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- 3 FCU TO BE CONTROLLED BASE ON THE RETURN AIR TEMPERATURE AND RETURN AIR HUMIDITY

PROJECT INFORMATION

SCHOOL DISTRICT

180 W Hatcher St,

Four Oaks, NC 27524

JOHNSTON COUNTY PUBLIC

FOUR OAKS ELEMENTARY

SCHOOL HVAC RENOVATION

Project Number

R23.00325

Project Name

CPL | Architecture Engineering Planning

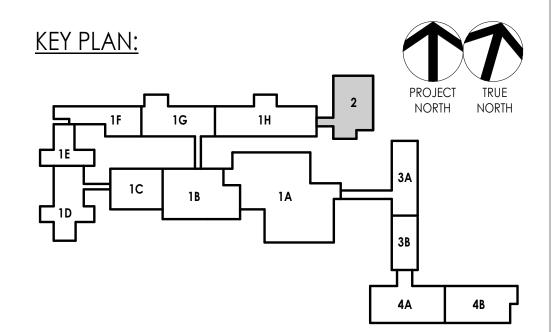
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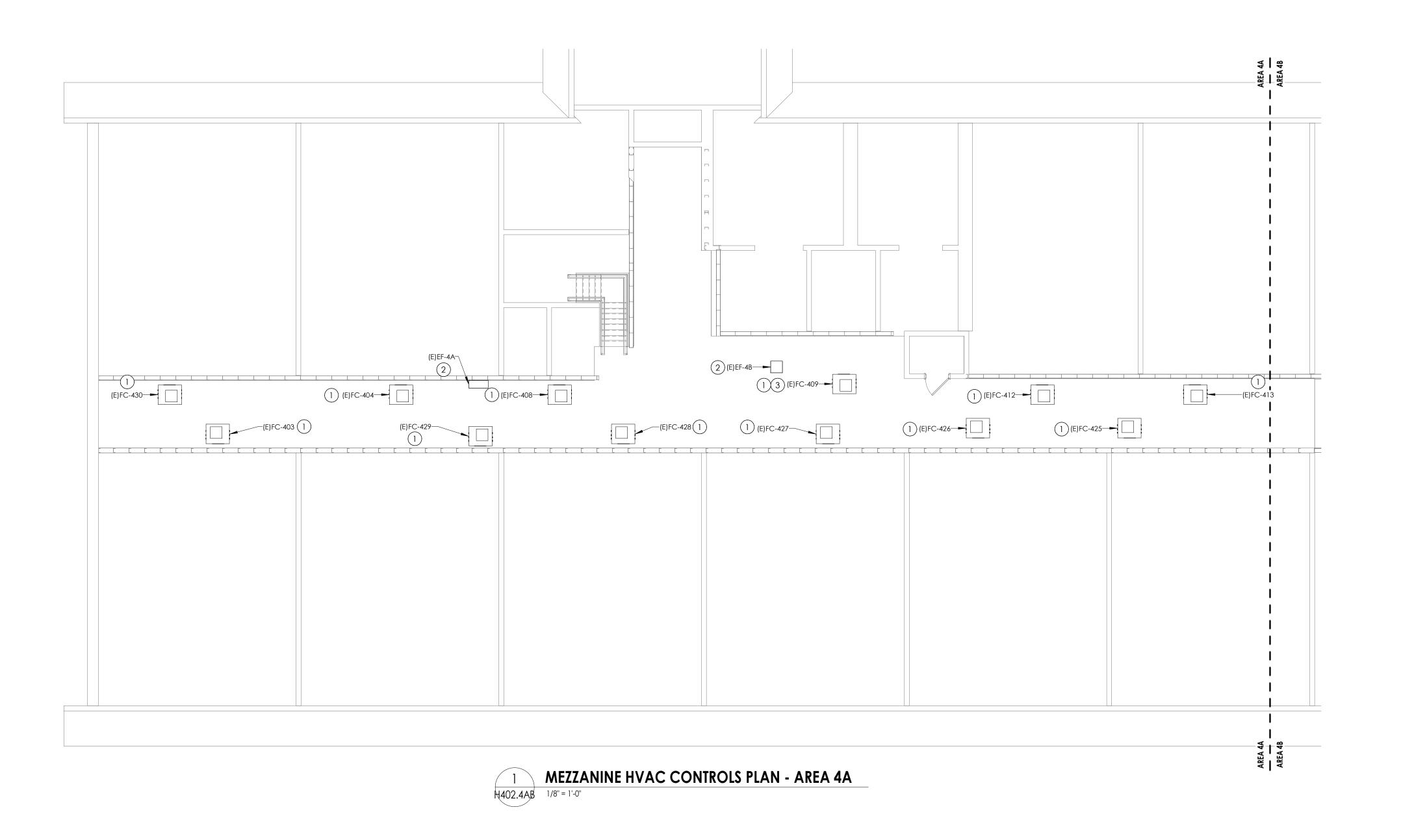
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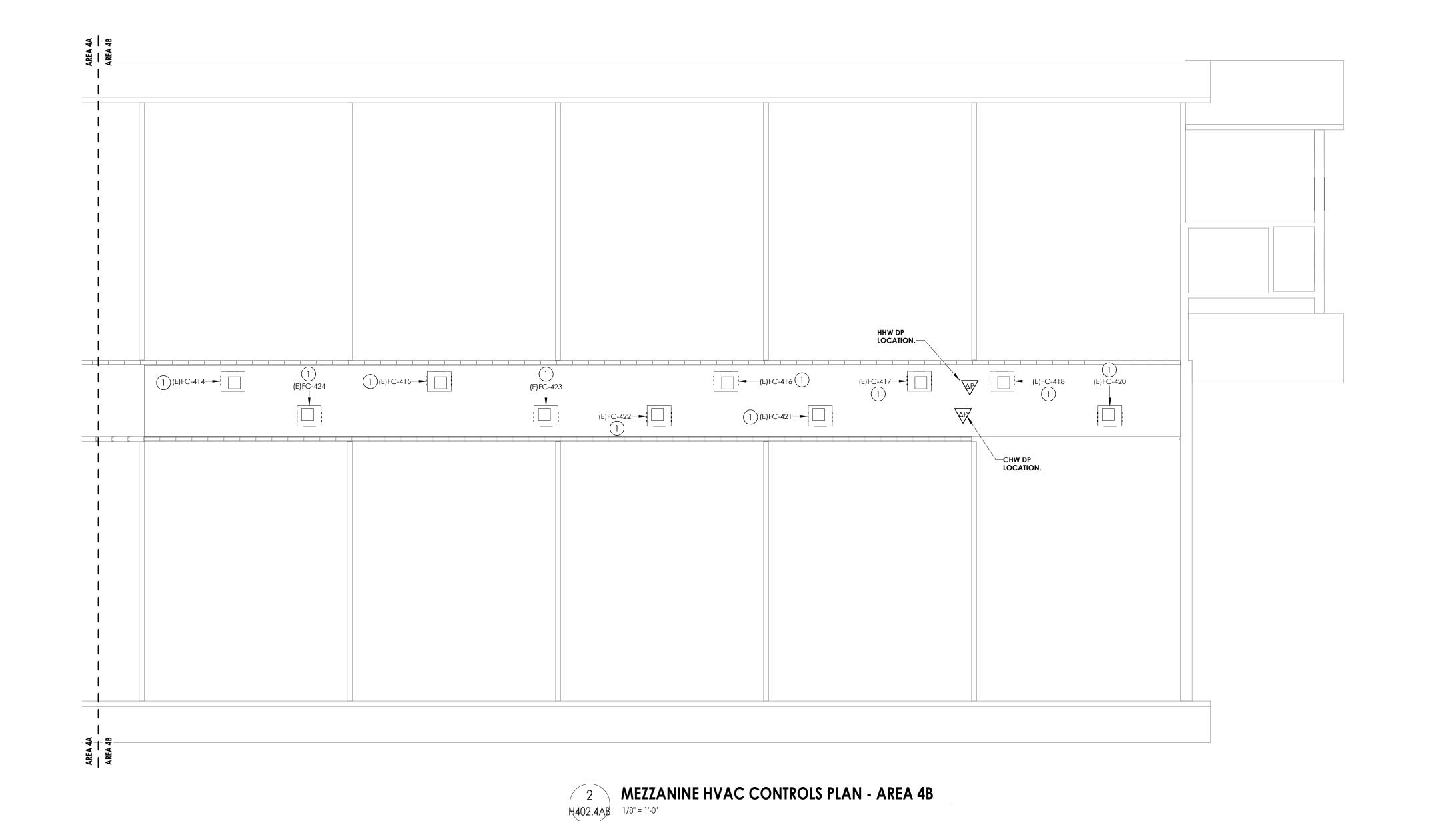
PROFESSIONAL STAMPS











HVAC CONTROLS UPGRADE NOTES

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#### KEY NOTES

- a. REMOVE EXISTING WALL TEMPERATURE SENSOR ASSOCIATED WITH FAN
- COIL UNIT.B. REMOVE EXISTING CONTROLS INSTALLED WITHIN EACH FAN COIL UNIT AS NECESSARY FOR NEW SYSTEM INTEGRATION. REFER TO HVAC CONTROLS
- UPGRADE NOTES FOR FURTHER DETAILS.

  c. PROVIDE WALL TEMPERATURE SENSOR, UNIT MOUNTED SENSORS AND REQUIRED CONTROL DEVICES PER DETAIL ON H500 SERIES DRAWINGS. PROVIDE CONTROLLER AND COMPLETELY INTEGRATE FAN COIL UNIT INTO NEW BMS.
- (2) a. REMOVE EXISTING WALL TEMPERATURE SENSOR ASSOCIATED WITH EACH EXHAUST FAN SYSTEM.
   b. REMOVE EXISTING CONTROLS INSTALLED WITHIN EACH EXHAUST FAN AS
- NECESSARY FOR NEW SYSTEM INTEGRATION. REFER TO HVAC CONTROLS UPGRADE NOTES FOR FURTHER DETAILS.

  c. PROVIDE REQUIRED CONTROL DEVICES PER DETAIL ON H500 SERIES DRAWINGS. PROVIDE CONTROLLER AND COMPLETELY INTEGRATE EACH EXHAUST FAN INTO NEW BMS.
- (3) FCU TO BE CONTROLLED BASE ON THE RETURN AIR TEMPERATURE AND RETURN AIR HUMIDITY

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SCHOOL HVAC RENOVATION

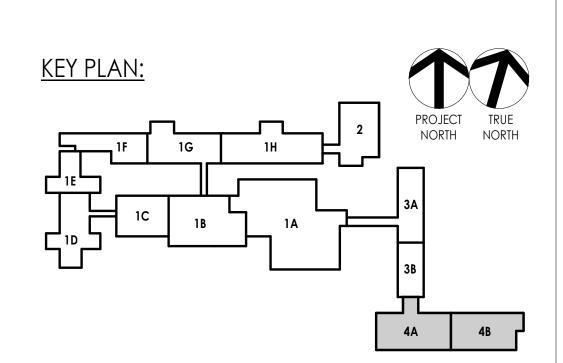
Project Address 180 W Hatcher St,

Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE
w Date Description

PROFESSIONAL STAMPS







AREA 4A AND 4B

FOES

**BACNET CONNECTION (WITH BUILDING** MANAGEMENT SYSTEM) **ANALOG OUTPUT (FROM BUILDING** MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) **CONTROL/SOLENOID VALVE, ELECTRIC 2-WAY CONTROL VALVE, ELECTRIC 3-WAY CURRENT TRANSDUCER DIFFERENTIAL PRESSURE TRANSMITTER** FREEZE-STAT **FLOW TRANSMITTER TEMPERATURE SENSOR** RELAY CONTACTS **PUMP, INLINE OR BASE MOUNTED** 

SYMBOL DESCRIPTION

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JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

**FOUR OAKS ELEMENTARY** SCHOOL HVAC RENOVATION

180 W Hatcher St,

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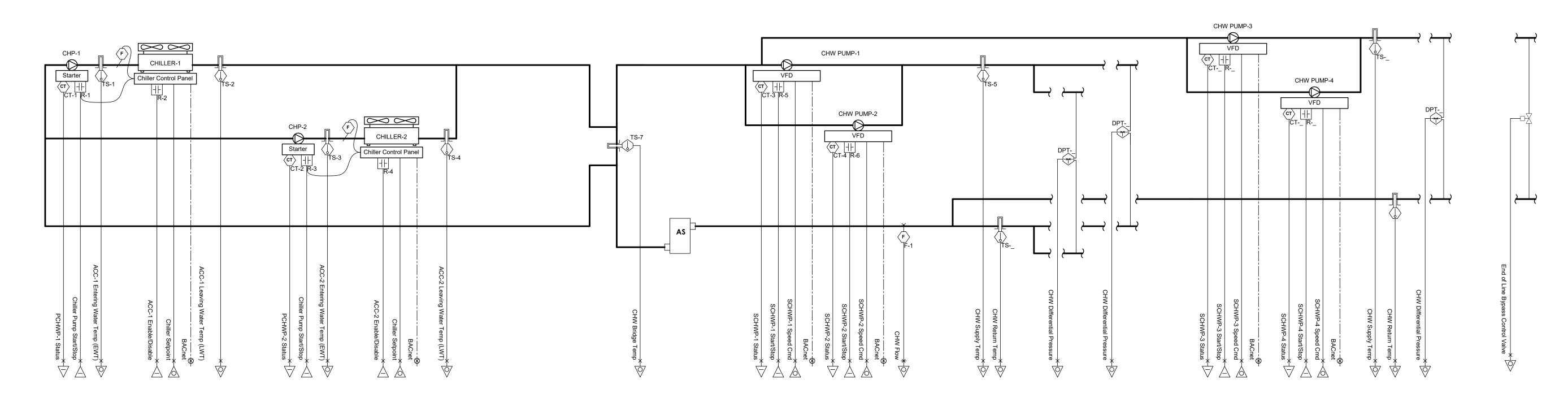
PROFESSIONAL STAMPS

SHEET INFORMATION 02/17/2025 NOT TO SCALE Project Status **BID SET** Drawn By KAB

Drawing Title HVAC CONTROLS SCHEMATIC

**HEATING HOT WATER CONTROL SCHEMATIC** 

CHILLED WATER CONTROLS SCHEMATIC



# Sequence of Operation: COOLING PLANT SYSTEMS

1. The cooling plant control system shall monitor and control the system's chiller(s), pump(s), and control valves as shown on the cooling plant flow diagram, in the cooling plant points list and as detailed in the

2. The cooling plant system consists of air-cooled chiller(s) with its piping configuration arranged as a primary / secondary loop supplying chilled water to the facility. 3. The manifolded chilled water distribution pumps are configured as lead / lag control.

B. Cooling Plant System Enable/Disable: 1. The cooling plant system shall be enabled/disabled by the cooling plant controller as requested by the Building Automation System (BAS) operator interface panel or the BAS time of day schedule. The cooling plant control system will start and stop the chilled water pumps and chillers based upon system

2. When the cooling plant system is enabled the system shall enable the lead secondary chilled water pump to start based on a call for cooling from the BAS. When flow status for the pump is proven, the system shall report running status to the BAS. When the cooling plant system is enabled the system shall send an enable signal to the lead chiller. Upon receiving the enable signal the chiller shall send a chilled water pump request signal to the control system to enable the chilled water pumping sequence.

4. When the cooling plant system is enabled, the system shall respond to a chilled water pump request from the chiller to enable the associated dedicated primary chilled water pump to start. As additional chillers provide requests, additional primary chilled water pump(s) shall start. 5. The cooling plant is disabled when all chillers are disabled and there is not an active chilled water pump request. When the plant is disabled, the chilled water pumps shall be commanded off and the

1. Chillers will operate in a lead/lag sequence, so that the last chiller enabled is the first to be disabled. The cooling plant system shall initiate the start of the next chiller in the sequence whenever adding the next chiller in the sequence will result in lower total power, (as determined by chiller characteristics, plant load, and operating conditions) and have been satisfied for 20 minutes (adj.) or whenever the chilled water load, as determined by the system supply water temperature, is not met for 20 minutes (adj.). The system shall initiate the shutdown of the next chiller in the sequence whenever excess chilled water capacity exists, as determined a real time load calculation, AND the shutdown of the next chiller

operating conditions) have been satisfied for 20 minutes (adj.). Chiller lead/lag sequence order will be based on a round robin logic. (Round robin logic example: 1-2-3, then 2-3-1, then 3-1-2, then 1-2-3,

in the sequence will result in lower total power, (as determined by chiller characteristics, plant load, and

2. The chiller sequence order can be rotated on a schedule. Chiller rotations will be programmed to occur at one of the following operator-defined intervals

 NEVER: Chillers will always have the same sequence number. • DAY OF WEEK: Chillers will rotate on a user-specified day and time once per week. FIXED NUMBER OF DAYS: Chillers will rotate after the number of days specified has elapsed. • RUN HOURS: Chillers rotate to attempt to even out the amount of time each chiller runs. When any chiller reaches the user-defined run hours setpoint (which is measured only from the last rotation).

run hours into a higher-use position in the sequence. ROTATIONAL INPUT: Chillers will rotate when the specified reference commands them to rotate. 3. From the BAS operator interface, an operator shall be able to manually change the lead/lag sequence or request any chiller to be unavailable which would remove it from the rotation sequence.

the system controller can re-sequence the chillers, if necessary, to put the chiller with the least total

1. Chiller isolation valves shall prevent the flow of fluid through non-operating chillers. When the system receives a chiller water pump request from a chiller, the chiller isolation valve will be controlled to 100% open. Chiller isolation valve stroke time shall be (60-120) seconds (adj.) to reduce operating chiller flow transients. When the valve is confirmed to be 100% open the system will start the respective chilled water pump. If the chiller's isolation valve is not confirmed open after (valve stroke time plus 60 sec) 180 seconds (adj.), the system shall annunciate a chiller isolation valve failure alarm to the BAS operator

interface. Primary Chilled Water Pump Commands:

chiller isolation valves shall be closed.

1. When the chilled water system is enabled, the system shall start a chilled water pump through a contact closure of the pumps motor starter enable contacts. The system shall detect primary chilled water pump run status by a current switch. When an additional chiller is requested to stage on, its dedicated chilled water pump will be be commanded on.

# F. Primary Chilled Water Pump Failure:

1. If the pump start/stop relay is enabled and the pump's running status is off for more than 30 seconds (adj.), the system shall annunciate a chilled water pump failure alarm to the BAS. Once the error has been corrected, the operator shall be able to clear the alarm failure from the BAS operator interface or by manually overriding the pump on.

G. Secondary Chilled Water Pump Commands:

1. The system shall start a secondary chilled water pump through a contact closure of the pump's variable speed drive run-enable contacts. The system shall detect secondary chilled water pump run status by a variable speed drive current switch. 2. The secondary chilled water pump(s) lead/lag sequence shall be rotated on a weekly schedule. The

rotation sequence shall be based on calculated run time with the pump having the least run time designated as lead, the pump with the next lowest run time will be the second in the sequence (or lag pump) and so on. From the BAS operator interface, an operator shall be able to manually change the lead/lag sequence or request any pump to be unavailable which would remove it from the rotation

3. If the chilled water system differential pressure falls 0.5 psig (adj.) below setpoint and the lead pump is at 100% (adj.) for more than 5 minutes (adj.), the next pump in the sequence shall start. If the pump speed control output is below 65% (adj.) for more than 5 minutes (adj.), the last operating pump in the sequence shall be disabled.

H. Secondary Chilled Water Pump Speed: 1. The system shall monitor the secondary chilled water system differential pressure sensor. When the pump variable speed drive is enabled, the system shall control the analog speed signal that is sent to the variable speed drives of operating pumps to maintain a chilled water system differential pressure setpoint of 15 psig (adj.). Secondary Chilled Water Pump Failure:

1. If the lead start/stop relay is enabled and the pump's running status is off for more than 30 seconds (adj.), the system shall annunciate a secondary chilled water pump failure alarm to the BAS and start the lag pump. When a secondary chilled water pump failure exists, lead/lag/standby automation shall be disabled and the currently running pump becomes the lead pump. Once the problem has been corrected, the operator shall be able to clear the alarm failure from the BAS operator interface. This

shall re-enable the lead/lag/standby sequence. . Optimized Distribution Pump Differential Pressure Control:

1. The system shall monitor the chilled water system differential pressure sensor. The system shall control the chilled water pump(s) variable speed drive to maintain the chilled water system differential pressure to its setpoint. The BAS shall monitor the position of all chilled water control valves served by the cooling plant. At chilled water system startup, the chilled water system pressure setpoint will be set to the system design value of XX psi (adj). In all cases the distribution pump(s) differential pressure setpoint shall be bound between a minimum of 30 psi (adj) and a maximum of the system design value. The setpoint control shall be based on ASHKAE Guideline 36 "Trim and Respond Logic": At a trequency

criteria shown below: A. The air handler unit (AHU) other other equipment served by the cooling plant has been running in a Cooling Mode for 15 minutes (adj). B. If an AHU's (or other equipment) chilled water valve is greater than 95%, send 1 request until the

of once every 10 minutes (adj), the control system shall calculate requests for cooling based on the

chilled water valve is less than 70%. C. If an AHU's (or other equipment) chilled water valve is serving a critical load (i.e data center), send 2 requests (adj) if an AHU's chilled water valve is greater than 95%, send 1 request when the chilled water valve is between 80% and 95%. Send zero requests when the chilled water valve is D. Else if the chilled water valve is less than 95%, send 0 requests.

A. The BAS shall default to ignoring the first 2 requests (adj). (Note: At startup set Ignore value to at least 40% of the number of AHUs served). 3. When (Requests greater than Ignores) the system shall respond by adjusting the chilled water pump differential pressure setpoint upward by ((Requests – Ignores) \* (3) psi) (adj), but no larger than 10 psi (adj). When requests are equal to, or less than Ignores, the setpoint shall be reset downward by 2 psi

# SECONDARY CHW PUMPS - LEAD LAG (SCHWP)

Occupancy status

a. Secondary CHW pump(s) shall run when CHW plant is enabled. Determine pump(s) status through a current sensor. If a pump(s) fails to start as commanded, generate an alarm.

a. Provide a graphical display for the pumps, with a schematic of the unit and the following 1. Pump on/off

# Sequence of Operation: HEATING PLANT SYSTEM

1. The heating plant system controller provides stand-alone control or control from an optional higher level Building Automation System (BAS).

2. The heating plant system consists of hot water boiler(s) with its piping configuration arranged as a primary / secondary loop supplying hot water to the facility.

3. The heating system includes flow metering capabilities for the building supply loop. 4. The manifolded hot water distribution pumps are configured as lead / lag control. The factory boiler system controller shall provide stand-alone control or BAS workstation control of the supply heating water temperature setpoint (adj.).

B. Heating System Enable/Disable: 1. The heating system shall be enabled by the factory boiler system controller when the outside air temperature falls below 60.0 deg (adj.). The heating plant is disabled when all boilers are disabled and there is not an active hot water distribution pump request. When the plant is disabled the hot water

C. Hot Water Reset: 1. The hot water supply temperature setpoint shall be linearly reset from 120.0 deg. F (adj.) to 180.0 deg. F (adj.) as the outside air temperature falls from 60.0 deg. F (adj.) to 0.0 deg. F (adj.)

D. Boiler Control: 1. The boiler lead/lag sequence shall be based on a weekly schedule. From the system controller or a BAS workstation, an operator shall be able to manually change the lead/lag sequence.

2. If the hot water distribution system supply temperature falls more than 25.0 deg. F (adj.) below setpoint for a period longer than 15 minutes (adj.), or if an active boiler signals a failure alarm, the system controller shall enable the lag boiler. In addition, the system controller shall signal an alarm. When a boiler failure exists, lead/lag automation shall be disabled and the currently running boiler shall become the lead boiler. Once the problem is corrected, the operator shall be able to clear the alarm failure from the system controller or BAS workstation. This shall re-enable the lead/lag sequence.

3. Once the lead boiler is enabled, the add sequence of additional boilers shall be disabled for a period of 30 minutes (adj.). Additional boilers are added if the hot water distribution system supply temperature falls 5.0 deg. F (adj.) below the hot water setpoint for a period of 10 minutes (adj.) or more. 4. The last boiler enabled shall be disabled when the hot water temperature rises 5.0 deg. F (adj.) above the hot water setpoint for a period of 10 minutes (adj.) or more. Additional boilers shall be disabled following the same subtraction sequence if the hot water temperature remains 5.0 deg. F (adj.) above

the hot water setpoint for a period of 10 minutes (adj.) or more.

a. The flow meter shall be used for reference flow of the hot water through the system. F. Boiler Circulation Pump Start/Stop: a. The system shall start a boiler circulation pump through a contact closure of the pump's motor starter

b. Boiler Circulation Pump Failure: c. If the boiler circulation pump relay is enabled and the current switch status is off for more than 30 seconds (adj.), the system shall annunciate a boiler circulation water pump failure alarm to the BAS and disable the associated boiler. When a pump failure exists, lead/lag automation of the boilers and associated pumps shall be disabled and the currently running pump and associated boiler becomes

the lead. Once the problem has been corrected, the operator shall be able to clear the alarm failure from the BAS controller or BAS workstation. This action shall re-enable the lead/lag sequence. G. Hot Water Distribution Pump Start/Stop: a. The system shall start a hot water pump through a contact closure of the pump's variable frequency

drive (variable speed drive) run-enable contacts. H. Hot Water Distribution Pump Status: a. The system shall detect hot water pump run status by a variable speed drive current switch.

I. Hot Water Distribution Pump Lead/Lag: a. The hot water pump lead/lag sequence shall be based on a weekly schedule. From the BAS controller or a BAS workstation, an operator shall be able to manually change the lead/lag sequence.

K. Hot Water Distribution Pump Speed:

a. If the lead start/stop relay is enabled and the current switch status is off for more than 30 seconds (adj.), the system shall annunciate a hot water pump failure alarm to the BAS workstation and start the lag pump. When a pump failure exists, lead/lag automation shall be disabled and the currently running pump becomes the lead pump. Once the problem has been corrected, the operator shall be able to clear the alarm failure from the BAS controller or BAS workstation. This action shall re-enable the lead/lag sequence.

a. The system shall monitor the hot water system differential pressure sensor. When the pump variable speed drive is enabled, the system shall control the analog speed signal sent to the pump variable speed drive to maintain a hot water differential pressure setpoint of 5.0 psid (adj.).

a. The BAS shall continually monitor the hot water control valve position of all AHU's in the hot water

b. At hot water system startup, the hot water pressure setpoint is 100% of the maximum pressure setpoint. When all hot water valves are less than 85% open, the hot water differential pressure setpoint shall be lowered by 0.1 psig (adj.) of the current hot water differential pressure setpoint. This occurs every 5 minutes until at least one valve is more than 85% open, or if the setpoint is equal to the minimum hot water differential pressure setpoint, or if the pump variable speed drive's are at a minimum speed setting (22 Hz).

c. When any hot water valve is more than 95% open, the hot water pressure setpoint shall increases by 0.1 psig (adi.) of the current hot water differential setpoint. This occurs every 5 minutes until no valve is more than 95% open, or if the hot water differential pressure setpoint has risen to the system's maximum setting, or if the pump variable speed drive's are at the maximum setting (60 Hz).

a. When the outdoor air temperature falls below 35.0 deg. F (adj.), the hot water distribution pump shall operate continuously to provide hot water circulation to all associated hot water coils. If the hot water supply temperature falls below 130.0 deg. F (adj.) during unoccupied periods, the boiler sequence shall be enabled to safeguard against low water temperature and boiler condensation. b. In the event that a hydronic airside type equipment initiates a low limit alarm, the heating system shall enable, if disabled, and provide heating medium circulation to the equipment.

N. Carbon Monoxide Detector: a. The carbon monoxide detector shall monitor the boiler room for high levels of CO. If the CO level rises above 50 ppm (adj), then an alarm shall be signaled to the heating system controller or BAS

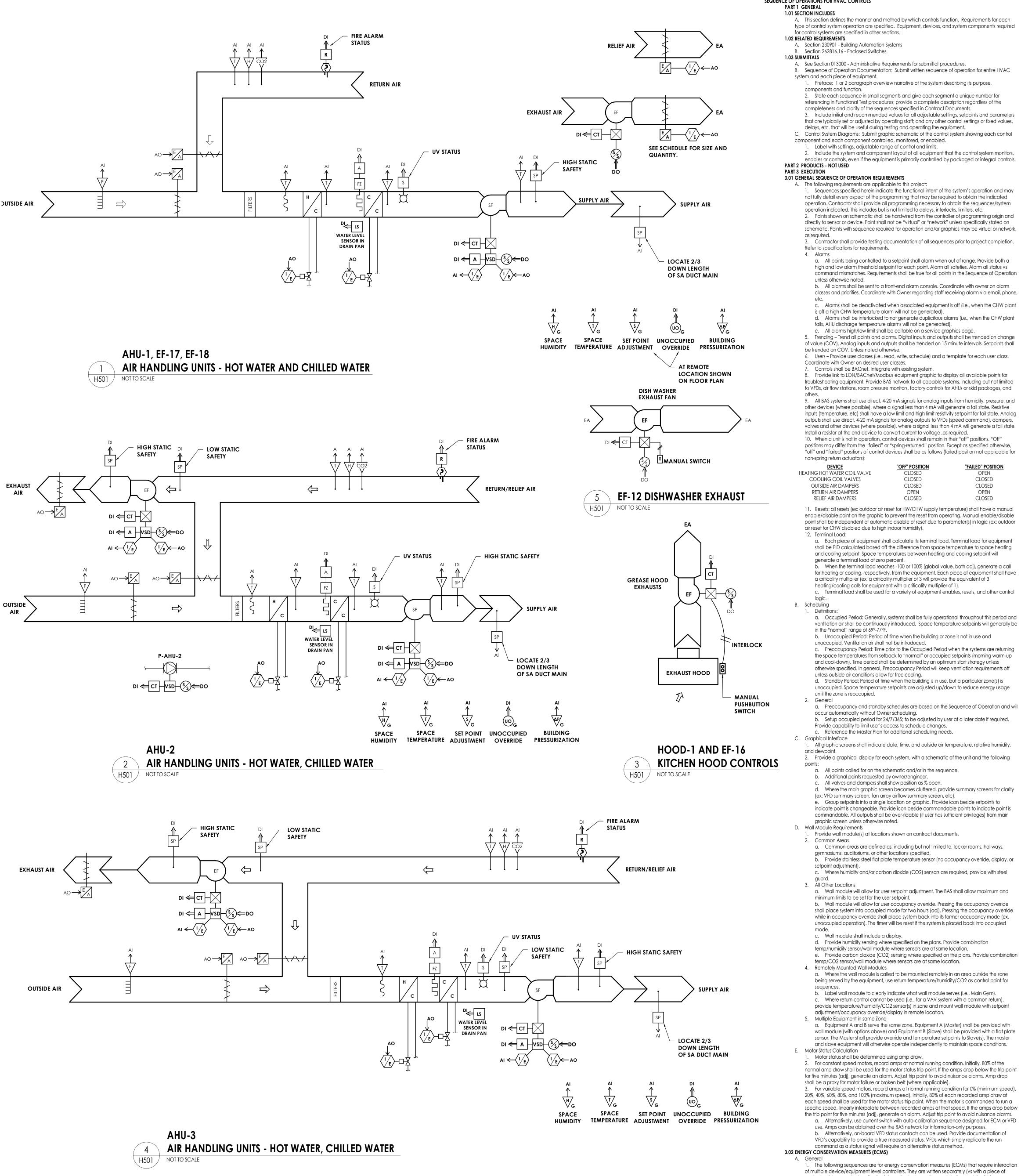
O. Boiler Emergency Shutdown Switch: a. If the Boiler Emergency Shutdown Switch has been activated, the boilers are to shut down immediately and an alarm shall be signaled to the heating system controller or BAS workstation

a. Secondary HHW pump(s) shall run when HHW plant is enabled. Determine pump(s) status through a current sensor. If a pump(s) fails to start as commanded, generate an alarm.

Graphical Interface a. Provide a graphical display for the pumps, with a schematic of the unit and the following

2. SECONDARY HHW PUMPS - LEAD LAG (SHHWP) General

 Pump on/off 2. Occupancy status



**SEQUENCE OF OPERATIONS FOR HVAC CONTROLS** 

1.01 SECTION INCLUDES A. This section defines the manner and method by which controls function. Requirements for each type of control system operation are specified. Equipment, devices, and system components required for control systems are specified in other sections.

A. Section 230901 - Building Automation Systems B. Section 262816.16 - Enclosed Switches.

A. See Section 013000 - Administrative Requirements for submittal procedures. B. Sequence of Operation Documentation: Submit written sequence of operation for entire HVAC system and each piece of equipment. 1. Preface: 1 or 2 paragraph overview narrative of the system describing its purpose,

2. State each sequence in small segments and give each segment a unique number for referencing in Functional Test procedures; provide a complete description regardless of the completeness and clarity of the sequences specified in Contract Documents. 3. Include initial and recommended values for all adjustable settings, setpoints and parameters that are typically set or adjusted by operating staff; and any other control settings or fixed values, delays, etc. that will be useful during testing and operating the equipment. C. Control System Diagrams: Submit graphic schematic of the control system showing each control component and each component controlled, monitored, or enabled.

1. Label with settings, adjustable range of control and limits. 2. Include the system and component layout of all equipment that the control system monitors, enables or controls, even if the equipment is primarily controlled by packaged or integral controls.

3.01 GENERAL SEQUENCE OF OPERATION REQUIREMENTS

A. The following requirements are applicable to this project: 1. Sequences specified herein indicate the functional intent of the system's operation and may not fully detail every aspect of the programming that may be required to obtain the indicated operation. Contractor shall provide all programming necessary to obtain the sequences/system operation indicated. This includes but is not limited to delays, interlocks, limiters, etc. 2. Points shown on schematic shall be hardwired from the controller of programming origin and

schematic. Points with sequence required for operation and/or graphics may be virtual or network, 3. Contractor shall provide testing documentation of all sequences prior to project completion. Refer to specifications for requirements.

Alarms a. All points being controlled to a setpoint shall alarm when out of range. Provide both a high and low alarm threshold setpoint for each point. Alarm all safeties. Alarm all status vs command mismatches. Requirements shall be true for all points in the Sequence of Operation unless otherwise noted.

b. All alarms shall be sent to a front-end alarm console. Coordinate with owner on alarm classes and priorities. Coordinate with Owner regarding staff receiving alarm via email, phone, c. Alarms shall be deactivated when associated equipment is off (i.e., when the CHW plant

is off a high CHW temperature alarm will not be generated). d. Alarms shall be interlocked to not generate duplicitous alarms (i.e., when the CHW plant fails, AHU discharge temperature alarms will not be generated). e. All alarms high/low limit shall be editable on a service graphics page.

5. Trending – Trend all points and alarms. Digital inputs and outputs shall be trended on change of value (COV). Analog inputs and outputs shall be trended on 15 minute intervals. Setpoints shall be trended on COV. Unless noted otherwise. 6. Users – Provide user classes (i.e., read, write, schedule) and a template for each user class. Coordinate with Owner on desired user classes. 7. Controls shall be BACnet. Integrate with existing system.

8. Provide link to LON/BACnet/Modbus equipment graphic to display all available points for troubleshooting equipment. Provide BAS network to all capable systems, including but not limited to VFDs, air flow stations, room pressure monitors, factory controls for AHUs or skid packages, and

9. All BAS systems shall use direct, 4-20 mA signals for analog inputs from humidity, pressure, and other devices (where possible), where a signal less than 4 mA will generate a fail state. Resistive inputs (temperature, etc) shall have a low limit and high limit resistivity setpoint for fail state. Analog outputs shall use direct, 4-20 mA signals for analog outputs to VFDs (speed command), dampers, valves and other devices (where possible), where a signal less than 4 mA will generate a fail state. Install a resistor at the end device to convert current to voltage, as required. 10. When a unit is not in operation, control devices shall remain in their "off" positions. "Off" positions may differ from the "failed" or "spring-returned" position. Except as specified otherwise, "off" and "failed" positions of control devices shall be as follows (failed position not applicable for non-spring return actuators):

<u>DEVICE</u>	"OFF" POSITION	"FAILED" POSITION
HEATING HOT WATER COIL VALVE	CLOSED	OPEN
COOLING COIL VALVES	CLOSED	CLOSED
OUTSIDE AIR DAMPERS	CLOSED	CLOSED
RETURN AIR DAMPERS	OPEN	OPEN
RELIEF AIR DAMPERS	CLOSED	CLOSED

11. Resets: all resets (ex: outdoor air reset for HW/CHW supply temperature) shall have a manual enable/disable point on the graphic to prevent the reset from operating. Manual enable/disable point shall be independent of automatic disable of reset due to parameter(s) in logic (ex: outdoor air reset for CHW disabled due to high indoor humidity).

a. Each piece of equipment shall calculate its terminal load. Terminal load for equipment shall be PID calculated based off the difference from space temperature to space heating and cooling setpoint. Space temperatures between heating and cooling setpoint will generate a terminal load of zero percent. b. When the terminal load reaches -100 or 100% (global value, both adj), generate a call for heating or cooling, respectively, from the equipment. Each piece of equipment shall have

a criticality multiplier (ex: a criticality multiplier of 3 will provide the equivalent of 3 heating/cooling calls for equipment with a criticality multiplier of 1). c. Terminal load shall be used for a variety of equipment enables, resets, and other control

B. Scheduling

a. Occupied Period: Generally, systems shall be fully operational throughout this period and ventilation air shall be continuously introduced. Space temperature setpoints will generally be in the "normal" range of 69°-77°F. b. Unoccupied Period: Period of time when the building or zone is not in use and

c. Preoccupancy Period: Time prior to the Occupied Period when the systems are returning the space temperatures from setback to "normal" or occupied setpoints (morning warm-up and cool-down). Time period shall be determined by an optimum start strategy unless otherwise specified. In general, Preoccupancy Period will keep ventilation requirements off unless outside air conditions allow for free cooling. d. Standby Period: Period of time when the building is in use, but a particular zone(s) is unoccupied. Space temperature setpoints are adjusted up/down to reduce energy usage

until the zone is reoccupied. a. Preoccupancy and standby schedules are based on the Sequence of Operation and will occur automatically without Owner scheduling.

b. Setup occupied period for 24/7/365; to be adjusted by user at a later date if required. Provide capability to limit user's access to schedule changes. c. Reference the Master Plan for additional scheduling needs. C. Graphical Interface 1. All graphic screens shall indicate date, time, and outside air temperature, relative humidity,

and dewpoint. 2. Provide a graphical display for each system, with a schematic of the unit and the following

a. All points called for on the schematic and/or in the sequence. b. Additional points requested by owner/engineer.

c. All valves and dampers shall show position as % open.

d. Where the main graphic screen becomes cluttered, provide summary screens for clarity (ex: VFD summary screen, fan array airflow summary screen, etc). e. Group setpoints into a single location on graphic. Provide icon beside setpoints to

indicate point is changeable. Provide icon beside commandable points to indicate point is commandable. All outputs shall be over-ridable (if user has sufficient privileges) from main graphic screen unless otherwise noted. D. Wall Module Requirements

1. Provide wall module(s) at locations shown on contract documents. 2. Common Areas

a. Common areas are defined as, including but not limited to, locker rooms, hallways, gymnasiums, auditoriums, or other locations specified. b. Provide stainless-steel flat plate temperature sensor (no occupancy override, display, or setpoint adjustment).

c. Where humidity and/or carbon dioxide (CO2) sensors are required, provide with steel 3. All Other Locations

a. Wall module will allow for user setpoint adjustment. The BAS shall allow maximum and minimum limits to be set for the user setpoint. b. Wall module will allow for user occupancy override. Pressing the occupancy override shall place system into occupied mode for two hours (adj). Pressing the occupancy override while in occupancy override shall place system back into its former occupancy mode (ex, unoccupied operation). The timer will be reset if the system is placed back into occupied

c. Wall module shall include a display. d. Provide humidity sensing where specified on the plans. Provide combination

temp/humidity sensor/wall module where sensors are at same location. e. Provide carbon dioxide (CO2) sensing where specified on the plans. Provide combination temp/CO2 sensor/wall module where sensors are at same location.

a. Where the wall module is called to be mounted remotely in an area outside the zone being served by the equipment, use return temperature/humidity/CO2 as control point for b. Label wall module to clearly indicate what wall module serves (i.e., Main Gym).

 Where return control cannot be used (i.e., for a VAV system with a common return). provide temperature/humidity/CO2 sensor(s) in zone and mount wall module with setpoint adjustment/occupancy override/display in remote location. 5. Multiple Equipment in same Zone

wall module (with options above) and Equipment B (Slave) shall be provided with a flat plate sensor. The Master shall provide override and temperature setpoints to Slave(s). The master and slave equipment will otherwise operate independently to maintain space conditions. E. Motor Status Calculation 1. Motor status shall be determined using amp draw.

2. For constant speed motors, record amps at normal running condition. Initially, 80% of the normal amp draw shall be used for the motor status trip point. If the amps drop below the trip point for five minutes (adj), generate an alarm. Adjust trip point to avoid nuisance alarms. Amp drop shall be a proxy for motor failure or broken belt (where applicable). 3. For variable speed motors, record amps at normal running condition for 0% (minimum speed), 20%, 40%, 60%, 80%, and 100% (maximum speed). Initially, 80% of each recorded amp draw at

a. Alternatively, use current switch with auto-calibration sequence designed for ECM or VFD use. Amps can be obtained over the BAS network for information-only purposes. b. Alternatively, on-board VFD status contacts can be used. Provide documentation of VFD's capability to provide a true measured status. VFDs which simply replicate the run command as a status signal will require an alternative status method.

3.02 ENERGY CONSERVATION MEASURES (ECMS) 1. The following sequences are for energy conservation measures (ECMs) that require interaction of multiple device/equipment level controllers. They are written separately (vs with a piece of equipment) to properly describe the interaction between those controllers and the BAS

requirements. ECMs that are equipment specific (for example, discharge air temperature resets),

are with that particular piece of equipment.

Alarm Lockout: each ECM can be locked out if one (or more) alarms occur due to ECM logic. Provide a disable button for each ECM sequence to prevent ECM operation. 4. Provide a priority array for impacted equipment for each ECM. Each piece of equipment shall have an importance multiplier for its associated alarm.

a. An importance multiplier of zero negates the equipment's alarm impact on the ECM b. An importance multiplier of one or greater increases the equipment's alarm impact on the ECM logic. For example, consider a ECM where there are two or more reheat valves

required to reset the differential pressure. A reheat valve with an importance multiplier of one would not be sufficient to cause a reset. However, a reheat valve with an importance multiplier of two would be sufficient to cause a reset, even though it is a single reheat valve.

 A. Device Controllers 1. Each device controller's health shall be monitored by the associated Building Controller and

down, etc) and the last time of successful communication with controller.

displayed on its associated graphic. Provide the controller status (okay, up, down, etc) and the last time of successful communication with controller. B. Building Controllers

1. Each building controller's health shall be monitored by the associated Supervisor and displayed on the main screen for the Owner's campus. Provide the controller status (okay, up,

. Twisted-Pair Networks 1. Trend network(s) busy percentage on a 30 minute interval.

3.04 CONSTANT VOLUME AIR HANDLING UNIT (AHU-1, AHU-2, AHU-3) A. System Description

> air dampers, return air dampers, exhaust air dampers HW and CHW coils. Space relief is accomplished through the relief/exhaust fan.

1. The AHUs consist of constant volume supply fans, constant volume relief/exhaust fans, outside

1. Safety Devices: Safeties shall be in operation at all times (Fan/VFD in auto, hand, override,

a. Freeze Protection If mixed air temperature falls below 39°F (adj), generate an alarm. 2. When mixed air temperature is below 35°F (adj), stop fans, open cooling coil valve, and return all other valves and dampers to failed positions. Generate an alarm. Safety shall be programmed and require manual reset (via graphic), BAS shall

enable HW plant and enable CHW pumps for water circulation. Freezestat: When the freezestat senses temperature below 35°F, stop fans, open cooling coil valve, and return all other valves and dampers to failed positions. Generate an alarm. Safety shall be hardwired and require manual reset. BAS shall enable HW plant and enable CHW pumps for water circulation. A freezestat trip shall override valve commands for all other safeties (i.e., during simultaneous safety trips, the freezestat valve

operation shall take precedent). Fire Alarm Shutdown: When the fire alarm is active, stop fans and return valves and dampers to off positions. Generate an alarm. Safety shall be hardwired and require manual reset (via fire alarm system control panel).

3. After all safeties have cleared, allow AHU operation. a. Supply and Relief Fan The supply and relief fan shall run continuously. Determine fan status through a current sensor. If a fan fails to start as commanded, generate an alarm. Where a VFD is used with the fan, hard code the speed in the VFD, to be determined by

TAB. There shall be no speed command to the VFD from the BAS. Adjustment shall take place in the VFD only. 1. Note to TAB contractor: provide fixed speed setpoint to BAS Contractor for programming in VFD. 3. The relief fan speed shall be offset from the supply fan speed, to be determined by TAB

(see building pressurization table for initial setpoint). 1. Note to TAB contractor: This value is approximate and based on the amount of exhaust in the space. The real offset shall be found during Final TAB. The offset shall be increased/decreased until a measured building pressure of 0.02" to 0.05 in wg is achieved at exterior doors or common corridors for each area served by the AHU. b. Outside, Return, and Relief Dampers

 General 1. The outside, return, and relief dampers shall have a minimum ventilation, economizer, and demand control ventilation (DCV) mode. Display the active mode

2. The outside and return dampers shall be modulated using a single PID with an output of 0-100%. The outside air damper shall be modulated from 0-100% on a PID signal of 0-50%, then the return air damper shall be modulated from 100%-0% on a PID signal of 50-100%. 3. The relief damper shall be modulated 0-100% on a PID signal of (initially) 50-100%

(non-adj), to be determined by TAB. a. Note to TAB contractor: The relief damper shall be balanced to ensure that it does not become a second outdoor air intake. During normal building operation with exhaust fans running, as the return damper begins to close, measure the pressure in the relief plenum. If the pressure goes positive, record the return damper position at which the relief damper should begin to open. With the return damper fully closed, open the relief damper until a measured building pressure of 0.02 to 0.05 in wg is achieved at exterior doors or common corridors for each area served by the AHU.

When the tan is not running, dampers shall be in off position

not use actuator end-stops for balancing.

Minimum Ventilation Operation 1. When the fan is running, the outside and return dampers are indexed to the minimum outside air position, to be determined by TAB. a. Note to TAB contractor: Each damper min OA position shall be determined individually to maintain the design OA flow (see AHU schedule). Open the outside air damper fully before closing the return air damper. Record position and provide to BAS Contractor for balance point in programming (non-adj). Do

The relief damper shall be modulated as described in General. Kitchen Make-up Ventilation Operation (AHU-3). When the kitchen hood exhaust fan is running, the outside and return dampers are indexed to the make-up outside air position, to be determined by TAB. a. Note to TAB contractor: Each damper min OA position shall be determined individually to maintain the design OA flow (see AHU schedule and fan schedule). Open the outside air damper fully before closing the return air damper. Record position and provide to BAS Contractor for balance point in

programming (non-adj). Do not use actuator end-stops for balancing. 2. The relief damper shall be modulated as described in General. 4. Integrated Economizer Operation (OA Temperature/Humidity Enable) Provide a manual enable/disable override point for economizer operation. 2. When the fan is running, the outside air temperature falls below 75°F (adj), and the

outside air enthalpy falls below 28 BTU/lb (adj), modulate the outside and return air dampers to maintain the space temperature at the cooling setpoint (72°F adj). 3. When the outside air temperature falls below 35°F, disable economizer mode. 4. If the economizer cannot maintain the space temperature at the cooling setpoint, enable mechanical cooling to help maintain setpoint.

5. The relief damper shall be modulated as described in General. Heating (HW)/Cooling Coil (CHW)

1. When the fan is running, the cooling valve shall open/close to maintain the space at the cooling setpoint (72°F, adj). Control cooling valve off PID and open/close valve fully when PID rises above/falls below threshold with hysteresis. 2. When the fan is running, the heating valve shall open/close to maintain the space at the heating setpoint (68°F, adj). Control heating valve off PID and open/close valve fully when PID rises above/falls below threshold with hysteresis.

3. Provide a minimum 2°F (non-adj) deadband between cooling and heating setpoints. d. Dehumidification 1. If the relative humidity in the space rises above 65% (adj), turn on fan, open the cooling coil valve to 100%, and modulate the reheat/valve to maintain the space at the heating setpoint. The unit shall return to normal operation when the space relative humidity falls

below 55% (adi). 2. If space humidity remains above 65% (adj) for 15 minutes (adj), generate an alarm. Unoccupied Mode Operation a. Unit shall operate as described above, except:

Fan shall be off, and valves and dampers shall be in off positions.

Increase cooling setpoint to 78°F (unoccupied cooling setpoint, adj) and decrease heating setpoint to 62°F (unoccupied heating setpoint, adj). 3. If the occupancy override is pressed, or the space temperature rises above the unoccupied cooling setpoint, or falls below the unoccupied heating setpoint, place the

unit into preoccupancy mode. The unit shall control to the occupied setpoints. 4. The unit shall return to unoccupied operation when occupied setpoints are reached, the minimum runtime of 30 minutes (adj) has been met, and the occupancy override expires. 2. Preoccupancy Mode Operation

a. Unit shall enter preoccupancy period prior to occupied period in accordance with optimum start/stop strategy. b. Unit shall operate as described above, except:

1. Dampers shall be in off position. Minimum outside air shall not be introduced. 3. Graphical Interface a. Provide a graphical display for the AHU, with a schematic of the unit and the following points. System on/off

Occupancy status Freeze protection mixed air temperature alarm and alarm setpoint Freezestat, static pressure high or low limit, float switch(es), and fire alarms Supply fan status, on/off/alarm

Return fan status, on/off/alarm Outside, return, and relief air damper commands Minimum Ventilation, Economizer, or Demand Control Ventilation mode Mixed air temperature, economizer setpoints and enable/disable point HW/CHW coil valve commands

CHW valve PID open/close/modulate setpoints Dehumidification mode enable/disable limits Space temperature and heating/cooling setpoints 14. Space temperature setpoint max and min limits

Space override status Space humidity, alarm, and alarm setpoint (where applicable) Space CO2 level, alarm, and alarm setpoint (where applicable)

b. Provide a tabular graphical display for the following points: 1. Associated exhaust fan(s) status, on/off/alarm, speed command, speed feedback, fault 2. Associated common outside air isolation damper open/closed SECONDARY CHW PUMPS (SCHWP)

 General a. Secondary CHW pump(s) shall run when CHW plant is enabled. Determine pump(s) status through a current sensor. If a pump(s) fails to start as commanded, generate an alarm. 2. Graphical Interface a. Provide a graphical display for the pumps, with a schematic of the unit and the following

a. Provide a graphical display for the pumps, with a schematic of the unit and the following

Pump on/off Occupancy status

SECONDARY HW PUMPS (SHHWP) General a. Secondary HW pump(s) shall run when HW plant is enabled. Determine pump(s) status through a current sensor. If a pump(s) fails to start as commanded, generate an alarm. Graphical Interface

#### Occupancy status MONITOR-ONLY (NO CONTROL) SEQUENCES

following points:

1. Outside air temperature and humidity

Pump on/off

1. Outside Air Temperature and Humidity a. Operation

points.

1. Provide combination outside air temperature and humidity combination sensor on north wall of building. Locate away from any building corners or vortices. Locate away from sources which will impact readings (sun, exhaust, wind, etc).

Economizer operation for all equipment shall be based off the local outside air sensor. Networked weather shall be displayed on the main graphics page for the building. When outside air temperature and/or humidity is displayed on a graphic, indicate which sensor the reading is coming from (local, networked, etc). b. Graphical Interface

1. Provide a graphical display for the outside air temperature and humidity sensor, with the

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PROJECT INFORMATION Project Number R23.00325

JOHNSTON COUNTY PUBLIC

SCHOOL DISTRICT FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

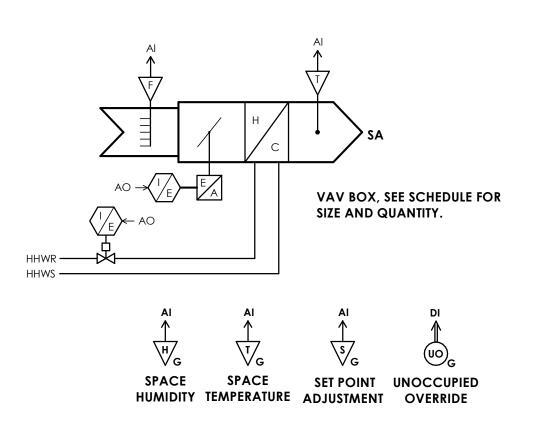
PROFESSIONAL STAMPS



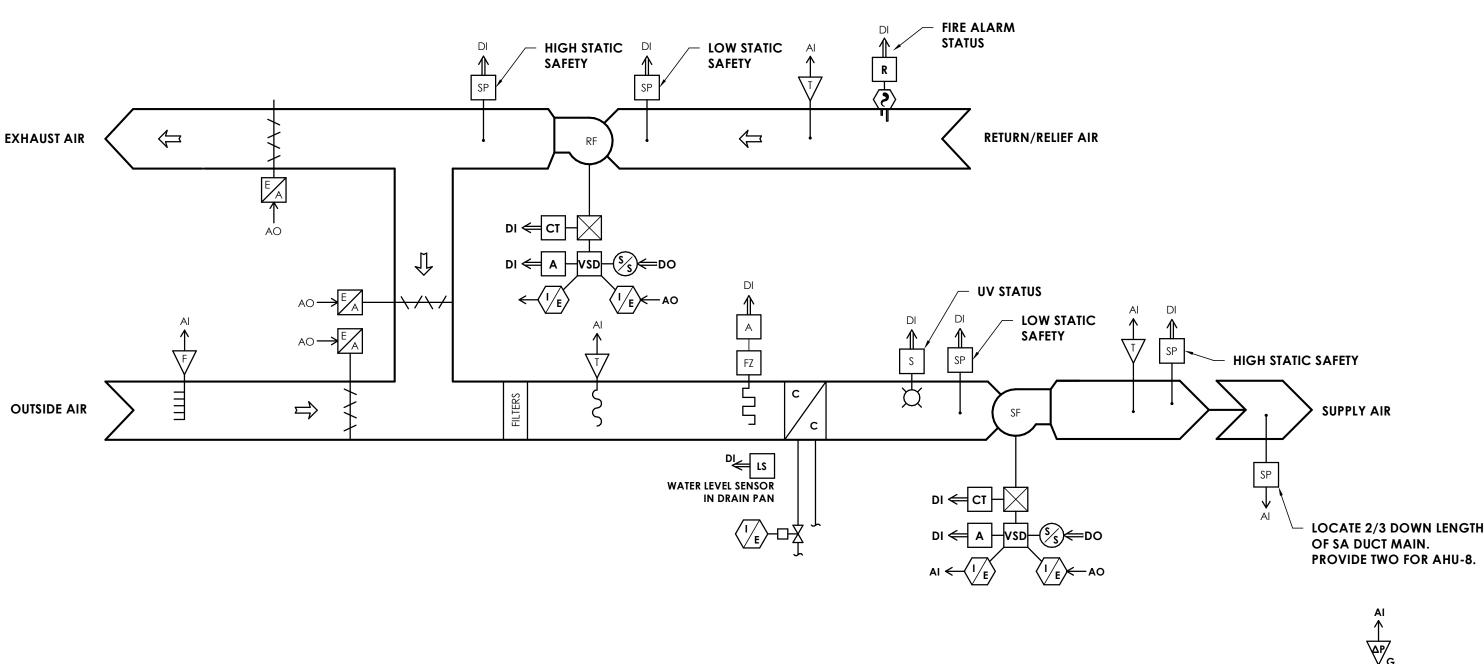
SHEET INFORMATION

02/17/2025 NOT TO SCALE Project Status **BID SET** Drawn By KAB

Drawing Title HVAC CONTROLS SCHEMATIC

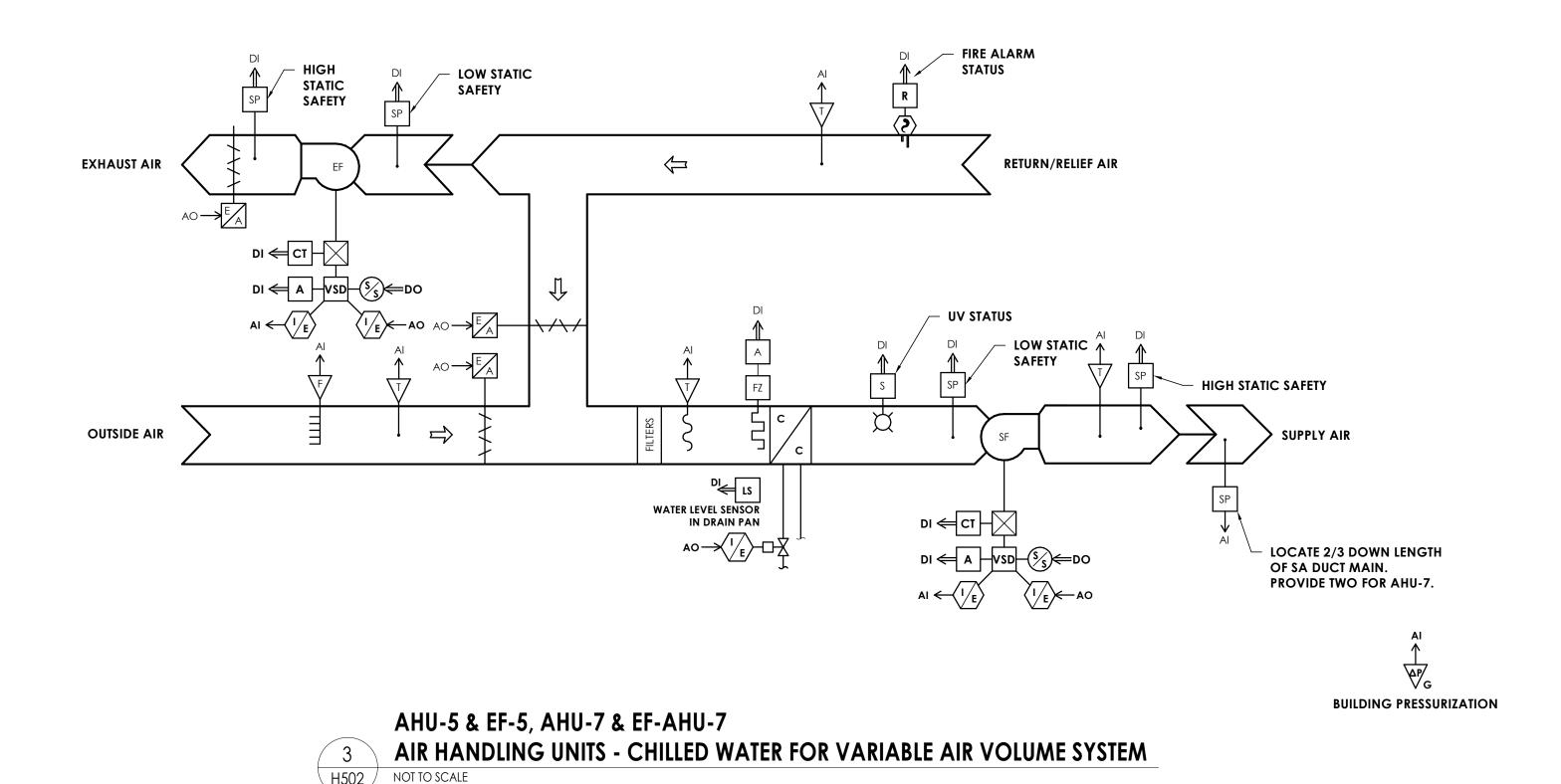


VARIABLE AIR VOLUME TERMINAL UNIT



**BUILDING PRESSURIZATION** 

**AHU-4, AHU-6, AHU-8, AHU-9A, AHU-9B** AIR HANDLING UNITS - CHILLED WATER FOR VARIABLE AIR VOLUME SYSTEM



Sequence of Operation: AHU-4, AHU-6, AHU-8, AHU-9A, AHU-9B 1. Building Automation System Interface:

a. The Building Automation System (BAS) shall send the controller Occupied Bypass, Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. The BAS shall also send the discharge air temperature setpoint and the duct static pressure setpoint. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

a. During occupied periods, the supply fan shall run continuously and the mixed air dampers shall open to maintain minimum ventilation requirements.

b. The chilled water valve shall control to maintain the active discharge air temperature setpoint. If economizing is enabled, the outdoor air or mixed air dampers shall modulate to maintain the discharge air temperature setpoint and the relief air damper shall track the mixed air dampers. The discharge air temperature setpoint shall be dynamically reset based on the deviation of actual space temperature from the active space temperature setpoint. If the discharge air temperature sensor fails, the chilled water valve shall close and an alarm shall annunciate at the BAS.

Unoccupied: a. When the space temperature is above the unoccupied cooling setpoint of 85.0 deg. F (adj.) the supply fan shall start, the outside air damper shall open if economizing is enabled and remain closed if economizing is disabled and the chilled water valve shall open. When the space temperature falls below the unoccupied cooling setpoint of 85.0 deg. F (adj.) minus the unoccupied differential of 4.0 deg. F (adj.) the supply fan

shall stop, the chilled water valve shall close and the outside air damper shall close. Optimal Start:

a. The BAS shall monitor the scheduled occupied time, occupied space setpoints and space temperature to calculate when the optimal start occurs.

Optimal Stop: a. The BAS shall monitor the scheduled unoccupied time, occupied setpoints and space temperature to calculate when the optimal stop occurs. When the optimal stop mode is active the unit controller shall maintain the space temperature to the space temperature offset setpoint. Outside air damper shall remain enabled to provide minimum ventilation.

Occupied Bypass: a. The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensor. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adi.).

Heat/Cool Mode: a. When the space temperature rises above the occupied cooling setpoint the mode shall transition to cooling. When the space temperature falls below the occupied heating setpoint the mode shall transition to heating. When the space temperature is above the occupied cooling setpoint or below the occupied heating setpoint the mode shall remain in its last state. If the space temperature sensor fails the mode shall remain in its last state and an alarm shall annunciate at the BAS. If the local and communicated setpoints fail the controller shall disable the supply fan and an alarm shall annunciate at the BAS.

8. Morning Warm-Up Mode: a. During optimal start, if the average space temperature is below the occupied heating setpoint a morning warm-up mode shall be activated. When morning warm-up is initiated the unit shall enable the heating and fan(s). The outside air damper shall remain closed. When the space temperature reaches the occupied heating setpoint (adj.), the unit shall transition to the occupied mode.

9. Daytime Warm-Up Control: a. During Occupied periods, when the space temperature is below the Daytime Warm-up Initiate setpoint, a daytime warm-up sequence shall be activated. The outside air damper shall modulate to maintain minimum ventilation requirements, and the heating shall enable to maintain the discharge air temperature heating setpoint. Daytime Warm-up shall terminate when the average space temperature reaches the Occupied heating setpoint.

10. Pre-Cool Mode: a. During optimal start, if the average space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated. When pre-cool is initiated the unit shall enable the fan and cooling or economizer. The outside air damper shall remain closed, unless economizing. When the space temperature reaches occupied cooling setpoint (adj.), the unit shall transition to the occupied mode.

a. ENABLE: Outside air (OA) temperature shall be compared with space temperature. The economizer shall enable when OA temperature is less than space temperature - 2.0 deg. F. The economizer shall disable when OA temperature is greater than space temperature.

b. OPERATION: When economizing is enabled and the unit is operating in the cooling mode, the economizer damper shall be modulated between its minimum position and 100% to maintain the space temperature setpoint. The economizer damper shall modulate toward minimum position in the event the mixed air temperature falls below the low temperature limit setting.

12. Demand Control Ventilation: a. Using a space CO2 input (local sensor or network communicated value), the controller shall monitor and compare the measured space CO2 to the space CO2 concentration setpoint (adj.). When the measured space CO2 concentration reaches the setpoint (adj.), the outside air damper shall modulate open incrementally until the space CO2 level is satisfied or the outside air damper reaches the full open position. If the measured CO2 concentration falls, the outside air damper shall modulate toward normal economizer operation. If the mixed air temperature drops below the mixed air low limit setpoint the CO2 sensor input is overridden and the outside air damper will be modulated closed to maintain the mixed air temperature low limit setpoint. When the mixed air temperature rises above the mixed air low limit setpoint, CO2 operation is

13. Discharge Air Temperature Reset Control: a. The discharge air temperature setpoint shall be reset to the optimal setpoint communicated by the BAS. The Space Temperature BAS and the Space Temperature Setpoint BAS shall be communicated to the unit controller by the BAS. The discharge air temperature setpoint shall be reset based upon the deviation of the Space Temperature BAS from the Space Temperature Setpoint BAS. If the discharge air temperature drops below the minimum limit, a low temperature alarm shall annunciate, and the unit shall shut down. If the

discharge air temperature rises above the maximum limit, a high temperature alarm shall annunciate. a. The supply fan shall be off in the unoccupied mode. The supply fan shall be on if the control is heating or cooling in the unoccupied mode. When the controller is in the occupied mode, the supply fan shall operate continuously and its speed shall be modulated to maintain the duct static pressure setpoint. The duct static pressure setpoint shall be sent by the BAS and is reset between the minimum and maximum static pressure limits to maintain the critical zone VAV air damper in a position between 65% and 75% open.

b. If the supply fan fails to prove status for 30 seconds (adj.), the fan shall be commanded off, the outside air damper shall close, all heating shall be disabled, and an alarm shall annunciate at the BAS. A manual reset shall be required to restart the fan. A hardwired, high static pressure cut-off switch shall be electrically interlocked with the variable speed drive. If the high static pressure cut-off switch is tripped the fan shall be commanded off, the outside air damper shall close, cooling shall be disabled, and an alarm shall annunciate at the BAS. A manual reset of the high static pressure cut-off switch shall be required to restart

15. Building Pressure Control (Relief Air): a. When the supply fan is running and the measured space static pressure is greater than the space static setpoint of 0.08 In. W.C. (adj.), the relief fan shall be enabled. When enabled, the relief fan shall modulate between minimum speed (default of 25%) and maximum speed (100%) to maintain the space static setpoint, but limited to not exceed the supply fan speed. When the space pressure falls below setpoint by 0.03 inches of W.C. and the relief fan speed is at or below minimum speed, the fan shall be disabled. Upon space static pressure sensor failure, the relief fan shall be enabled based on outdoor air damper position greater than relief fan Outdoor Air Damper Enable Setpoint BAS of 25% (adj.). The relief fan speed shall track the outdoor air damper position, but not to exceed the supply fan speed. If the relief fan fails to prove status

for 30 seconds (adj.), the fan shall be commanded off and an alarm shall annunciate at the BAS. a. The initial damper opening rate shall be limited to 2% per minute (adj.) until the damper has reached its minimum ventilation position. The outside air damper shall modulate to a position less than the minimum damper position if the mixed air temperature drops below 50.0 deg. F (adj.). If the mixed air temperature sensor fails an alarm shall annunciate at the BAS and the outside air damper shall return to the minimum

17. Freeze Protection: a. A hardwired, low limit temperature switch shall be electrically interlocked with the variable speed drive. If the low limit temperature switch is tripped 38.0 deg. F (adj.), the fan shall be commanded off and the outside air damper shall close. All valves shall be commanded open to 100% (adjust per climate). An alarm

shall annunciate at the BAS and manual reset of the low limit temperature switch shall be required to restart 18. Condensate Overflow Monitoring: a. If the condensate level reaches the trip point, a condensate overflow diagnostic shall annunciate at the

BAS. To prevent the condensate drain pan from overflowing and causing water damage to the building the fan shall be disabled and the chilled water valve shall close. 19. Filter Status: a. A differential pressure switch shall monitor the differential pressure across the filter(s) when the fan is running.

If the switch closes during normal operation a dirty filter alarm shall annunciate at the BAS. 20. Smoke Detector Shutdown: a. The unit shall shut down in response to a signal from the smoke detector indicating the presence of smoke. The smoke detector shall be interlocked to the unit through the dry contacts of the smoke detector. A manual reset of the smoke detector shall be required to restart the unit.

Sequence of Operation: AHU-5, AHU-7 1. Building Automation System Interface:

calculate when the optimal start occurs.

a. The Building Automation System (BAS) shall send the controller Occupied Bypass, Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. The BAS shall also send the discharge air temperature setpoint and the duct static pressure setpoint. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

a. During occupied periods, the supply fan shall run continuously and the mixed air dampers shall open to maintain minimum ventilation requirements.

b. The chilled water valve shall control to maintain the active discharge air temperature setpoint. If economizing is enabled, the outdoor air or mixed air dampers shall modulate to maintain the discharge air temperature setpoint and the relief air damper shall track the mixed air dampers. The discharge air temperature setpoint shall be dynamically reset based on the deviation of actual space temperature from the active space temperature setpoint. If the discharge air temperature sensor fails, the chilled water valve shall close and an alarm shall annunciate at the BAS.

Unoccupied: a. When the space temperature is above the unoccupied cooling setpoint of 85.0 deg. F (adj.) the supply fan shall start, the outside air damper shall open if economizing is enabled and remain closed if economizing is disabled and the chilled water valve shall open. When the space temperature falls below the unoccupied cooling setpoint of 85.0 deg. F (adj.) minus the unoccupied differential of 4.0 deg. F (adj.) the supply fan shall stop, the chilled water valve shall close and the outside air damper shall close.

a. The BAS shall monitor the scheduled occupied time, occupied space setpoints and space temperature to

a. The BAS shall monitor the scheduled unoccupied time, occupied setpoints and space temperature to calculate when the optimal stop occurs. When the optimal stop mode is active the unit controller shall maintain the space temperature to the space temperature offset setpoint. Outside air damper shall remain enabled to provide minimum ventilation.

Occupied Bypass: a. The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensor. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adi.) Heat/Cool Mode:

a. When the space temperature rises above the occupied cooling setpoint the mode shall transition to cooling. When the space temperature falls below the occupied heating setpoint the mode shall transition to heating. When the space temperature is above the occupied cooling setpoint or below the occupied heating setpoint the mode shall remain in its last state. If the space temperature sensor fails the mode shall remain in its last state and an alarm shall annunciate at the BAS. If the local and communicated setpoints fail the controller shall disable the supply fan and an alarm shall annunciate at the BAS. Morning Warm-Up Mode:

a. During optimal start, if the average space temperature is below the occupied heating setpoint a morning warm-up mode shall be activated. When morning warm-up is initiated the unit shall enable the heating and fan(s). The outside air damper shall remain closed. When the space temperature reaches the occupied heating setpoint (adj.), the unit shall transition to the occupied mode.

Daytime Warm-Up Control: a. During Occupied periods, when the space temperature is below the Daytime Warm-up Initiate setpoint, a daytime warm-up sequence shall be activated. The outside air damper shall modulate to maintain minimum ventilation requirements, and the heating shall enable to maintain the discharge air temperature heating setpoint. Daytime Warm-up shall terminate when the average space temperature reaches the Occupied heating setpoint.

10. Pre-Cool Mode: a. During optimal start, if the average space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated. When pre-cool is initiated the unit shall enable the fan and cooling or economizer. The outside air damper shall remain closed, unless economizing. When the space temperature reaches occupied cooling setpoint (adj.), the unit shall transition to the occupied mode.

11. Economizer Mode: a. ENABLE: Outside air (OA) temperature shall be compared with space temperature. The economizer shall enable when OA temperature is less than space temperature - 2.0 deg. F. The economizer shall disable when OA temperature is greater than space temperature. b. OPERATION: When economizing is enabled and the unit is operating in the cooling mode, the economizer damper shall be modulated between its minimum position and 100% to maintain the space temperature setpoint. The economizer damper shall modulate toward minimum position in the event the mixed air

temperature falls below the low temperature limit setting. Demand Control Ventilation: a. Using a space CO2 input (local sensor or network communicated value), the controller shall monitor and compare the measured space CO2 to the space CO2 concentration setpoint (adj.). When the measured space CO2 concentration reaches the setpoint (adj.), the outside air damper shall modulate open incrementally until the space CO2 level is satisfied or the outside air damper reaches the full open position. If the measured CO2 concentration falls, the outside air damper shall modulate toward normal economizer operation. If the mixed air temperature drops below the mixed air low limit setpoint the CO2 sensor input is overridden and the outside air damper will be modulated closed to maintain the mixed air temperature low limit setpoint. When the mixed air temperature rises above the mixed air low limit setpoint, CO2 operation is

3. Discharge Air Temperature Reset Control: a. The discharge air temperature setpoint shall be reset to the optimal setpoint communicated by the BAS. The Space Temperature BAS and the Space Temperature Setpoint BAS shall be communicated to the unit controller by the BAS. The discharge air temperature setpoint shall be reset based upon the deviation of the Space Temperature BAS from the Space Temperature Setpoint BAS. If the discharge air temperature drops below the minimum limit, a low temperature alarm shall annunciate, and the unit shall shut down. If the

discharge air temperature rises above the maximum limit, a high temperature alarm shall annunciate. a. The supply fan shall be off in the unoccupied mode. The supply fan shall be on if the control is heating or cooling in the unoccupied mode. When the controller is in the occupied mode, the supply fan shall operate continuously and its speed shall be modulated to maintain the duct static pressure setpoint. The duct static pressure setpoint shall be sent by the BAS and is reset between the minimum and maximum static pressure limits to maintain the critical zone VAV air damper in a position between 65% and 75% open. b. If the supply fan fails to prove status for 30 seconds (adj.), the fan shall be commanded off, the outside air damper shall close, all heating shall be disabled, and an alarm shall annunciate at the BAS. A manual reset shall be required to restart the fan. A hardwired, high static pressure cut-off switch shall be electrically interlocked with the variable speed drive. If the high static pressure cut-off switch is tripped the fan shall be commanded off, the outside air damper shall close, cooling shall be disabled, and an alarm shall annunciate at the BAS. A manual reset of the high static pressure cut-off switch shall be required to restart

15. Building Pressure Control (Relief Air):

a. When the supply fan is running and the measured space static pressure is greater than the space static setpoint of 0.08 In. W.C. (adj.), the relief fan shall be enabled. When enabled, the relief fan shall modulate between minimum speed (default of 25%) and maximum speed (100%) to maintain the space static setpoint, but limited to not exceed the supply fan speed. When the space pressure falls below setpoint by 0.03 inches of W.C. and the relief fan speed is at or below minimum speed, the fan shall be disabled. Upon space static pressure sensor failure, the relief fan shall be enabled based on outdoor air damper position greater than relief fan Outdoor Air Damper Enable Setpoint BAS of 25% (adj.). The relief fan speed shall track the outdoor air damper position, but not to exceed the supply fan speed. If the relief fan fails to prove status for 30 seconds (adj.), the fan shall be commanded off and an alarm shall annunciate at the BAS.

a. The initial damper opening rate shall be limited to 2% per minute (adj.) until the damper has reached its minimum ventilation position. The outside air damper shall modulate to a position less than the minimum damper position if the mixed air temperature drops below 50.0 deg. F (adj.). If the mixed air temperature

sensor fails an alarm shall annunciate at the BAS and the outside air damper shall return to the minimum 17. Freeze Protection: a. A hardwired, low limit temperature switch shall be electrically interlocked with the variable speed drive. If

the low limit temperature switch is tripped 38.0 deg. F (adj.), the fan shall be commanded off and the outside air damper shall close. All valves shall be commanded open to 100% (adjust per climate). An alarm shall annunciate at the BAS and manual reset of the low limit temperature switch shall be required to restart

18. Condensate Overflow Monitorina:

a. If the condensate level reaches the trip point, a condensate overflow diagnostic shall annunciate at the BAS. To prevent the condensate drain pan from overflowing and causing water damage to the building the fan shall be disabled and the chilled water valve shall close. 19. Filter Status:

a. A differential pressure switch shall monitor the differential pressure across the filter(s) when the fan is running. If the switch closes during normal operation a dirty filter alarm shall annunciate at the BAS. 20. Smoke Detector Shutdown:

**a.** The unit shall shut down in response to a signal from the smoke detector indicating the presence of smoke. The smoke detector shall be interlocked to the unit through the dry contacts of the smoke detector. A manual reset of the smoke detector shall be required to restart the unit.

Sequence of Operation: VAV TERMINAL UNIT Building Automation System Interface:

6. Heat/Cool Setpoint:

a. The Building Automation System (BAS) shall send the controller Occupied, and Unoccupied commands. The BAS may also send a Heat/Cool mode, priority shutdown commands, space temperature and/or space temperature setpoint. If communication is lost with the BAS, the controller shall operate using its local setpoints.

a. Normal operating mode for occupied spaces or daytime operation. When the unit is in the occupied mode the VAV shall maintain the space temperature at the active occupied heating or cooling setpoint. Applicable ventilation and airflow setpoints shall be enforced. The occupied mode shall be the default mode of the VAV.

a. Normal operating mode for unoccupied spaces or nighttime operation. When the unit is in unoccupied mode the VAV controller shall maintain the space temperature at the stored unoccupied heating or cooling setpoint

regardless of the presence of a hardwired or communicated setpoint. When the space temperature exceeds the active unoccupied setpoint the VAV shall modulate fully closed. a. Mode used to temporarily place the unit into the occupied operation. Tenants shall be able to override the unoccupied mode from the space sensor. The override shall last for a maximum of 4 hours (adj.). The tenants shall be able to cancel the override from the space sensor at any time. During the override the unit shall operate in occupied mode.

a. The Heat/Cool mode shall be set by a communicated value or automatically by the VAV. In standalone or auto mode the VAV shall compare the primary air temperature with the configured auto changeover setpoint to determine if the air is "hot"" or ""cold"". Heating mode implies the primary air temperature is hot. Cooling mode implies the primary air temperature is cold."

setpoint nor communicated setpoint is present. If both a local setpoint and communicated setpoint exist, the VAV shall use the communicated value. a. When the unit is in cooling mode, the VAV controller shall maintain the space temperature at the active cooling setpoint by modulating the airflow between the active cooling minimum airflow setpoint to the maximum cooling

airflow setpoint. The VAV shall use the measured space temperature and the active cooling setpoint to determine the requested cooling capacity of the unit. The outputs will be controlled based on the unit configuration and the requested cooling capacity. When in the Occupied Mode, the controller shall use the measured space temperature and the active cooling setpoint to determine the requested cooling capacity of the unit. The outputs shall be controlled based on the unit configuration and the requested cooling capacity.

a. When the unit is in heating mode, the VAV controller shall maintain the space temperature at the active heating setpoint by modulating the airflow between the active heating minimum airflow setpoint to the maximum heating airflow setpoint. The VAV controller shall use the measured space temperature and the active heating setpoint to determine the requested heating capacity of the unit. The outputs will be controlled based on the unit configuration and the requested heating capacity.

a. Reheat will only be allowed when the primary air temperature is 5.0 deg. F below the configured reheat enable setpoint of 70.0 deg. F (adj.). The reheat shall be enabled when the space temperature drops below the active heating setpoint and the minimum airflow requirements are met. During reheat the VAV shall operate at its minimum heating airflow setpoint and energize the heat as follows:

a. If the space temperature is below the heating setpoint the hot water reheat valve shall control as required to maintain the active heating setpoint. 11. Demand Control Ventilation:

a. When the unit is in unoccupied mode, the ventilation airflow setpoint will be zero.

b. CO2 SENSOR: When the unit is in occupied mode, the ventilation airflow setpoint will be continuously calculated using the measured CO2 concentration in the space. c. The current ventilation airflow setpoint shall be communicated to the BAS for control of the system outdoor-air intake.

a. If there is a fault with the operation of the zone sensor an alarm shall be annunciated at the BAS. Space sensor failure shall cause the VAV to drive the damper to minimum air flow if the VAV is in the occupied mode, or drive it closed if the VAV is in the unoccupied mode.

13. Space Humidity Monitoring: **a.** The VAV Box will monitor the space humidity. **CPL** | Architecture Engineering Planning 1111 Haynes Street Suite 100, Raleigh, NC 27604 CPLteam.com



PROJECT INFORMATION Project Number

R23.00325

JOHNSTON COUNTY PUBLIC

SCHOOL DISTRICT FOUR OAKS ELEMENTARY

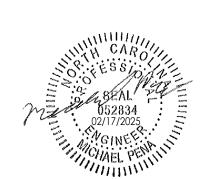
SCHOOL HVAC RENOVATION

180 W Hatcher St,

Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS

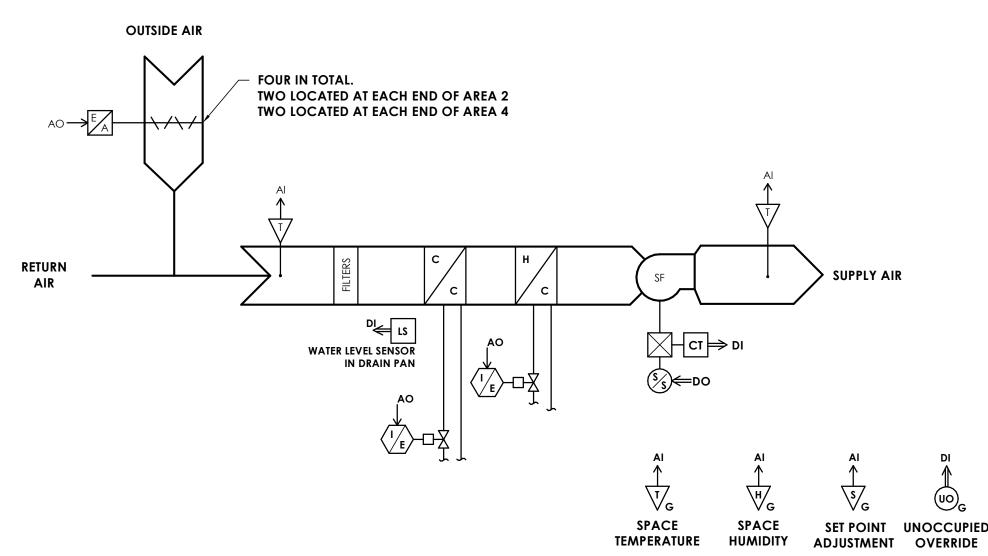


SHEET INFORMATION

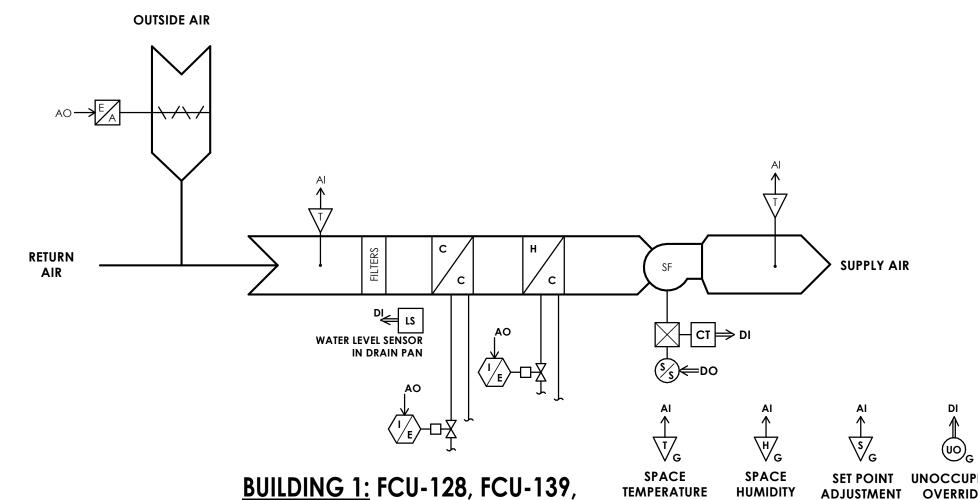
02/17/2025 NOT TO SCALE Project Status **BID SET** Drawn By KAB

Drawing Title HVAC CONTROLS SCHEMATIC

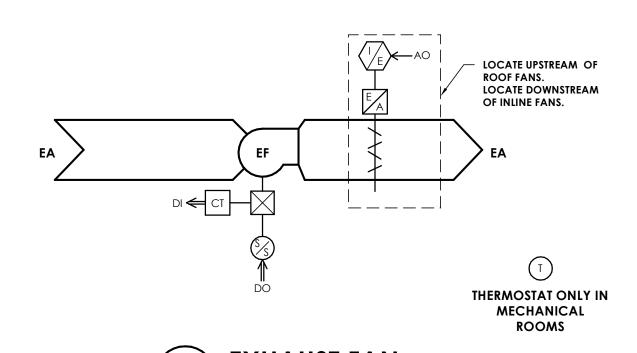
BUILDING 2: FC-201, FC-202, FC-207, FC-208, FC-209, FC-210, FC-211 FC-212, FC-213 FAN COIL UNITS - CHILLED WATER, HOT WATER REHEAT - 2-WAY CONTROL VALVES

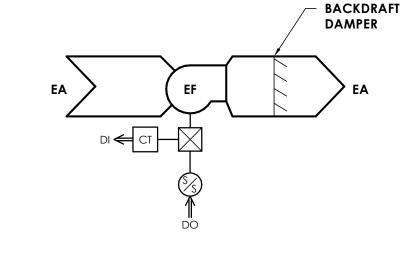


BUILDING 4: FC-403, FC-404, FC-408, FC-409, FC-412, FC-413, FC-414, FC-415, FC-416, FC-417, FC-418, FC-420, FC-421, FC-422, FC-423, FC-424, FC-425, FC-426, FC-427, FC-428, FC-429, FC-430, FC-500 FAN COIL UNITS - CHILLED WATER, HOT WATER REHEAT - 2-WAY CONTROL VALVES

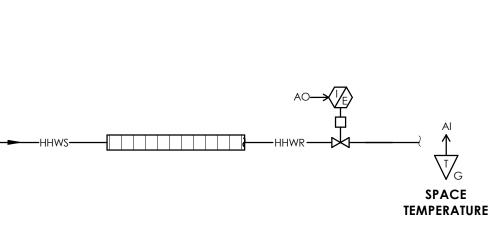


BUILDING 3: FCU-300, FCU-300A, FCU-302, FCU-303, FCU-307, FCU-308, FCU-309, FCU-310, FCU-311, FCU-312, FCU-313, FCU-314, FAN COIL UNITS - CHILLED WATER, HOT WATER REHEAT - 2-WAY CONTROL VALVES NOT TO SCALE











#### Sequence of Operation: FCU-128, FCU-139, FCU-300 through FCU-314, FC-201, FC-202, FC-207 through FC-213, 0 - General Exhaust Fans, Constant Volume, BAS Controlled

FC-403, FC-404, FC-408, FC-409, FC-412, through FC-430, FC-500

maintain the active space temperature setpoint.

a. The Building Automation System (BAS) shall send the controller Occupied Bypass, Morning Warm-up/Pre-

a. During occupied periods, the supply fan shall run continuously and the outdoor air damper shall open to

a. When the space temperature is below the unoccupied heating setpoint of 60.0 deg. F (adj.) the supply fan

temperature rises above the unoccupied heating setpoint of 60.0 deg. F (adj.) plus the unoccupied

outside air damper shall remain closed and the chilled water valve shall open. When the space

temperature falls below the unoccupied cooling setpoint of 85.0 deg. F (adj.) minus the Unoccupied

a. The BAS shall monitor the scheduled occupied time, occupied space setpoints and space temperature to

a. During optimal start, if the space temperature is below the occupied heating setpoint a morning warm-up

mode shall be activated. When morning warm-up is initiated the unit shall enable the heating and supply

fan. The outside air damper shall remain closed. When the space temperature reaches the occupied

a. During optimal start, if the space temperature is above the occupied cooling setpoint, pre-cool mode shall

a. The BAS shall monitor the scheduled unoccupied time, occupied setpoints and space temperature to

calculate when the optimal stop occurs. When the optimal stop mode is active the unit controller shall

a. The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensor. When an

mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied

a. Cascade zone control shall be used in the occupied, occupied bypass, and occupied standby modes. It

maintains zone temperature by controlling the discharge air temperature to control the zone temperature

while minimizing the fan speed. The space temperature shall be maintained between the occupied cooling

setpoint of 74.0 deg. F (adj.) and the occupied heating setpoint of 71.0 deg. F (adj.). The unit shall transition

to the cooling mode when the space temperature rises one degree above the occupied cooling setpoint

of 74.0 deg. F (adj.). The unit shall transition to the heating mode when the space temperature drops one

temperature cooling setpoint. Dehumidification mode shall terminate when the space relative humidity falls

below the relative humidity setpoint minus the relative humidity offset. If the space relative humidity sensor

occupied mode, the supply fan shall start and run continuously. The supply fan status shall be monitored by

BAS. To prevent the condensate drain pan from overflowing and causing water damage to the building the

limit temperature switch is tripped 38.0 deg. F (adj.), the supply fan shall be commanded off, water valves

a differential pressure switch. If the supply fan fails the fan shall be commanded off and an alarm shall

a. If the space relative humidity is greater than the humidity setpoint, the chilled water valve shall modulate to

maintain space relative humidity and the hot water valve shall modulate to maintain the space

fails the dehumidification sequence shall be terminated and an alarm shall annunciate at the BAS.

a. The supply fan shall cycle on demand during the unoccupied mode. When the controller transitions to the

a. If the condensate level reaches the trip point, a condensate overflow diagnostic shall annunciate at the

a. A hardwired, low limit temperature switch shall be electrically interlocked with the safety circuit. If the low

b. The controller shall automatically attempt to restart the unit after 30 minutes. If the unit restarts successfully

shall open to 100%, outside air damper shall close, and an alarm shall annunciate at the BAS.

maintain the space temperature to the space temperature offset setpoint. Outside air damper shall remain

occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy

be activated. When pre-cool is initiated the unit shall enable the fan and cooling. The outside air damper shall remain closed. When the space temperature reaches occupied cooling setpoint (adj.), the unit shall

the BAS the controller shall operate using default modes and setpoints

heating setpoint (adj.), the unit shall transition to the occupied mode.

degree below the occupied heating setpoint of 71.0 deg. F (adj.).

annunciate at the BAS. A manual reset shall be required to restart the fan.

within a 24 hour period the unit shall be locked out until manually reset.

fan shall be disabled and the chilled water valve shall close.

Cool, Occupied/Unoccupied and Heat/Cool modes. If a BAS is not present, or communication is lost with

maintain minimum ventilation requirements. The chilled water valve and the hot water valve shall control to

shall start, the outside air damper shall remain closed and the hot water valve shall open. When the space

differential of 4.0 deg. F (adj.) the supply fan shall stop and the hot water valve shall close. When the space

differential of 4.0 dea. F (adi.) the supply fan shall stop, the chilled water valve shall close and the outside air

temperature is above the unoccupied cooling setpoint of 85.0 deg. F (adj.) the supply fan shall start, the

1. Building Automation System Interface:

damper shall remain closed.

transition to the occupied mode.

enabled to provide minimum ventilation.

calculate when the optimal start occurs.

3. Unoccupied:

Optimal Start:

Optimal Stop:

setpoints (adj.).

10. Occupied Humidity Control:

11. Supply Fan Operation:

13. Freeze Protection:

12. Condensate Overflow Monitoring:

Space Temperature Control:

- A. Safety Devices: Safeties shall be in operation at all times (Fan/VFD in auto, hand, override, etc). Provide safeties for specific exhaust fans as indicated. 1. Static Pressure Low Limit: When the low static pressure sensor exceeds -2.0 in wa, stop fan. Generate an alarm. Safety shall be hardwired and require manual reset.
- 1. For exhaust fans interlocked with AHU operation: start/stop exhaust fan with associated air handling unit. See schedule for exhaust fans and their associated air handling unit. 2. For exhaust fans that run continuously: start exhaust fan and run continuously, regardless of occupancy
- or air handler status. 3. For exhaust fans controlled by temperature: provide a temperature sensor at location on floorplans. On a rise in space temperature, start the exhaust fan. On a fall in space temperature, stop the exhaust fan. Provide a minimum run time appropriate for the exhaust fan horsepower to prevent short cycling.
- C. Determine fan status through a current sensor. If an exhaust fan fails to start as commanded or stops running when commanded, generate an alarm. D. For exhaust fans with motorized backdraft dampers: provide logic, either hardwired or software, to ensure
- damper is open prior to starting the exhaust fan. If damper does not open, generate an alarm. E. For exhaust fans with VFDs: VFD is for balancing only. Provide hardwired start/stop command and status to VFD. Determine fan status through a current sensor. Hardcode speed (as determined by TAB, non-adj) into VFD. Provide BAS network to VFD for points as described below or in schematic.
- F. Where a temperature controlled exhaust fan serves a space with a heating source (unit heater, etc), use the same temperature sensor for both pieces of equipment, and provide deadband for setpoints to prevent simultaneous heating and cooling. 0.2. Graphical Interface
- A. Provide a tabular graphical display for all Exhaust Fans, with the following points: Exhaust fan service and location (ex: wing A general, bathroom 203, etc) Exhaust fan status, on/off/alarm, speed command, speed feedback, fault and fault text Associated AHU/equipment

# 1 - General Exhaust Fans, Constant Volume, Line Voltage Thermostat

- A. Reference floorplans for exhaust fans controlled by line voltage thermostat. Exhaust fans shall operate independently from the BAS. Low voltage (24VAC) thermostats are not allowed. B. Provide a line voltage thermostat at location on floorplans. On a rise in space temperature, start the exhaust fan. On a fall in space temperature, stop the exhaust fan. C. For exhaust fans with motorized backdraft dampers: provide hardwired logic to ensure damper is open prior
- to starting the exhaust fan. D. Where an exhaust fan serves a space with a heating source (unit heater, etc), use a dual-setpoint line voltage thermostat or two separate thermostats mounted at the same location. Clearly label heating and cooling thermostat to prevent confusion. Where possible, set thermostat setpoint end stops to prevent possibility of simultaneous heating and cooling. Note: not applicable for factory or unit-mounted thermostats.
- 1.2. Graphical Interface A. Where line voltage exhaust fans are used in conjunction with BAS controlled exhaust fans, include line voltage thermostat exhaust fans on the tabular graphical display.

#### 2 - General Exhaust Fans, Constant Volume, BAS Monitoring Only

- 2.1. Operation A. Fans shall be hardwired to run 24/7. BAS shall not start/stop exhaust fan. B. Determine fan status through a current sensor. If an exhaust fan fails, generate alarm.
- 2.2. Graphical Interface A. Provide a tabular graphical display for all Exhaust Fans, with the following points: Exhaust fan service (general, bathroom, specific room(s), etc) Exhaust fan location Exhaust fan status and alarm

#### 4 - Unit Heaters, Line Voltage Thermostat (Electric, HW or Steam)

- A. Reference floorplans for unit heaters controlled by line voltage thermostat. Unit heaters shall operate independently from the BAS. Low voltage (24VAC) thermostats are not allowed. B. Provide a line voltage thermostat at location on floorplans. On a fall in space temperature, start the unit heater. On a rise in space temperature, stop the unit heater.
- C. Unit heater fan shall cycle with the unit; fan shall not run continuously. D. For HW and steam unit heaters: provide line-size two position valve. Valve shall cycle open/closed with the unit. Use the same output to cycle the fan and open/close the valve.
- E. Where a unit heater serves a space with a cooling source (exhaust fan, etc), use a dual-setpoint line voltage thermostat or two separate thermostats mounted at the same location. Clearly label heating and cooling thermostat to prevent confusion. Where possible, set thermostat setpoint end stops to prevent possibility of simultaneous heating and cooling. Note: not applicable for factory or unit-mounted thermostats. with no low temperature condition, the diagnostic is cleared. If a second low temperature condition occurs

#### 0 - Outside Air Temperature and Humidity

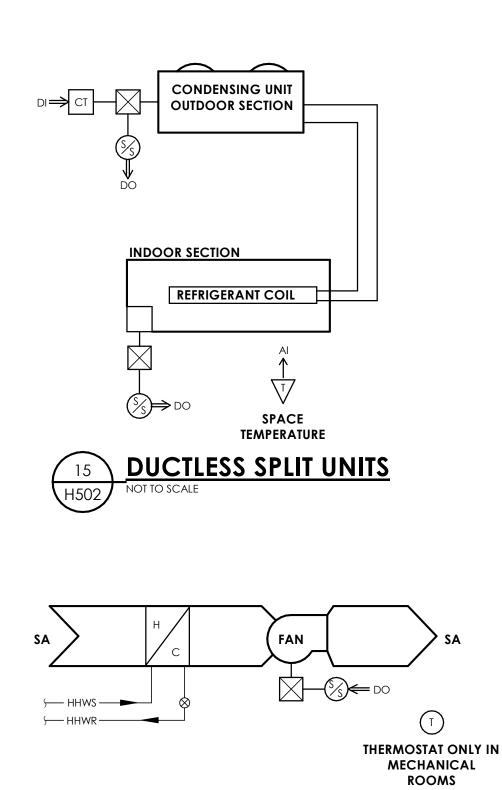
- 0.1. Operation A. Provide combination outside air temperature and humidity combination sensor on north wall of building. Locate away from any building corners or vortices. Locate away from sources which will impact readings (sun,
- exhaust, wind, etc). B. Economizer operation for all equipment shall be based off the local outside air sensor.
- . Networked weather shall be displayed on the main graphics page for the building. D. When outside air temperature and/or humidity is displayed on a graphic, indicate which sensor the reading is coming from (local, networked, etc).
- 0.2. Graphical Interface A. Provide a graphical display for the outside air temperature and humidity sensor, with the following points: Outside air temperature and humidity
- 1 Fire Alarm Control Panel, BAS Monitoring Only A. Fire alarm control panel will operate independently from the BAS.
- B. Monitor fire alarm control panel auxiliary contacts. When alarm contact closes, generate alarm. 1.2. Graphical Interface
- A. Provide a graphical display for the fire alarm control panel, with the following points:

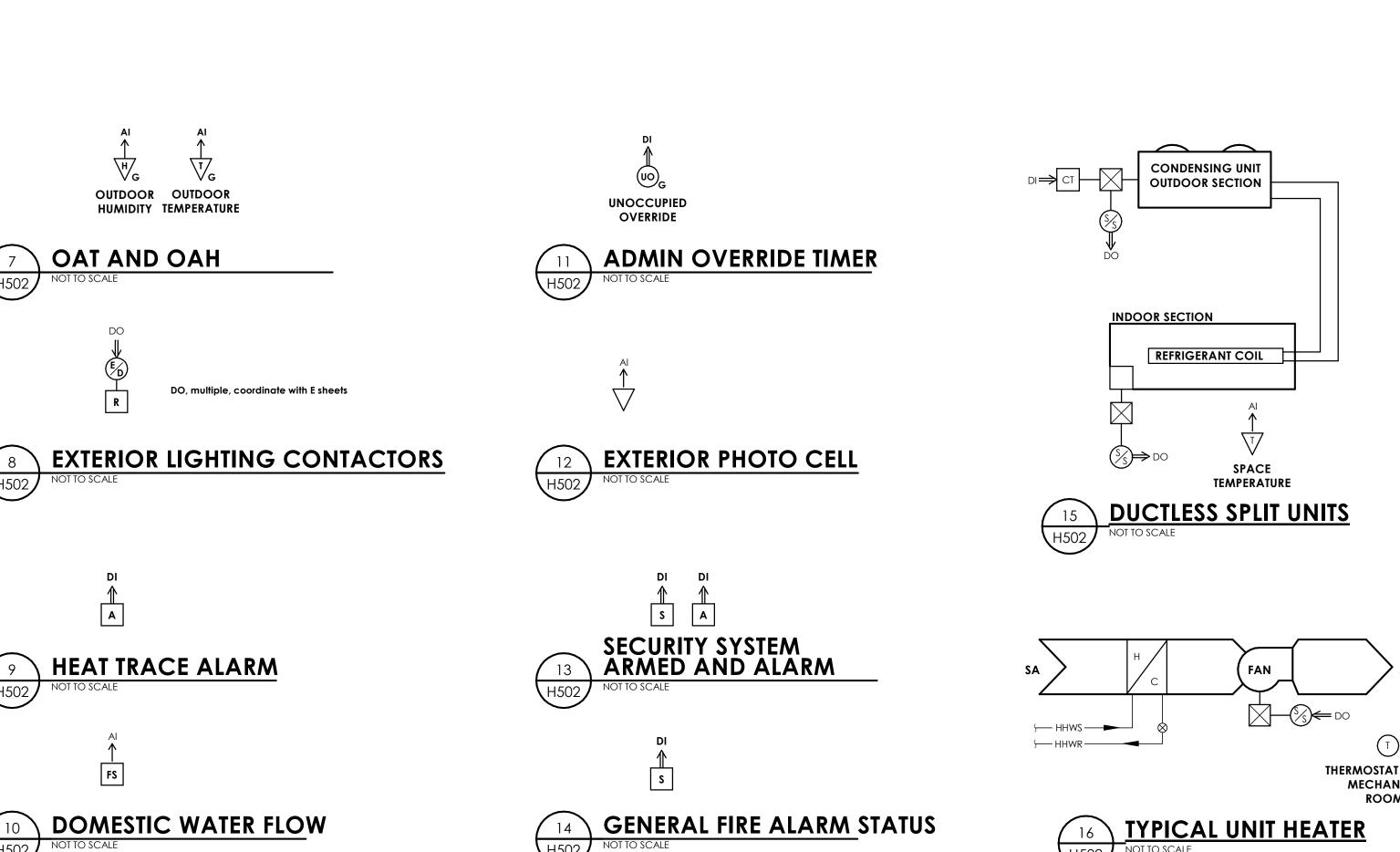
#### Fire alarm control panel alarm 2 - Heat Trace Control Panel, BAS Monitoring Only

- 2.1. Operation A. Heat trace control panel will operate independently from the BAS. B. Monitor heat trace control panel auxiliary contacts. When alarm contact closes, generate alarm.
- A. Provide a graphical display for each heat trace control panel(s), with the following points: Heat trace control panel alarm

# 3 - Domestic Cold Water, BAS Monitoring Only

- A. Provide flow meter on the main feed for domestic cold water (DCW) monitoring. B. Accumulate DCW consumption (in gallons) and provide means to reset accumulation back to zero.
- When the DCW demand exceeds 500 gpm (adj), generate an alarm. D. Unoccupied Leak Detection: When the building is unoccupied and the DCW demand exceeds 5 gpm (adj), generate an alarm. Alarm shall be the "Emergency" alarm class and dispatched according.
- A. Provide the following trends for DCW monitoring, in addition to the standard requirements: Timestamp for each occurrence where DCW demand exceeds threshold
- Timestamp for each occurrence of Unoccupied Leak Detection
- 3.3 Graphical Interface A. Provide a graphical display for DCW monitoring, with the following points: Current DCW demand (in gpm), alarm, and alarm threshold
- DCW usage since last reset (in gallons), reset button, and time of last reset 4 - Common Outside Air Damper
- 4.1. Operation A. Safety Devices: Safeties shall be in operation at all times. Freeze Protection
- a. If any equipment served by the common OA damper shuts down on freeze protection, close common OA damper. b. Fan coil units with common outdoor air ductwork do not have physical freeze protection devices. Programmed freeze protection will be implemented. When OA temperature falls below 20°F (adj), close
- common OA damper and generate an alarm. 2. Fire Alarm Shutdown: When the fire alarm is active, return damper to off position. Generate an alarm. Safety shall be networked and require manual reset (reset through fire alarm system).
- 1. Monitor fan statuses of equipment served by the common OA damper.
- 2. Minimum Ventilation Operation a. When all equipment fans are not running, the common OA damper shall be closed. b. When any equipment's fan is running, the common OA damper shall be indexed to the minimum outside air position, to be determined by TAB.
- A) Note to TAB contractor: The position of common OA damper shall be determined to maintain the total design OA flow for all equipment (see AHU schedule). Close equipment OA/RA motorized and/or balance dampers prior to closing the common OA damper for balancing. Record position and provide to BAS Contractor for balance point in programming (non-adj). Do not use actuator end-stops for balancing.
- 4.2. Unoccupied and Preoccupancy Modes Operation A. Damper shall be in off position. Minimum outside air shall not be introduced.
- 4.3. Graphical Interface A. Provide a graphical display for the common OA damper on all graphics of associated equipment, with a schematic of the unit and the following points.
- Damper position 5 - Occupancy Override Timer Switch
- A. Provide a spring-wound timer switch (0-2 hr) in the principal's office. When active, the administrative zone for the school will go into occupied mode.
- A. Provide a graphical display for the occupancy override timer switch, with the following points:





PROJECT INFORMATION Project Number R23.00325 JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION 180 W Hatcher St, Four Oaks, NC 27524 PROJECT ISSUE & REVISION SCHEDULE PROFESSIONAL STAMPS

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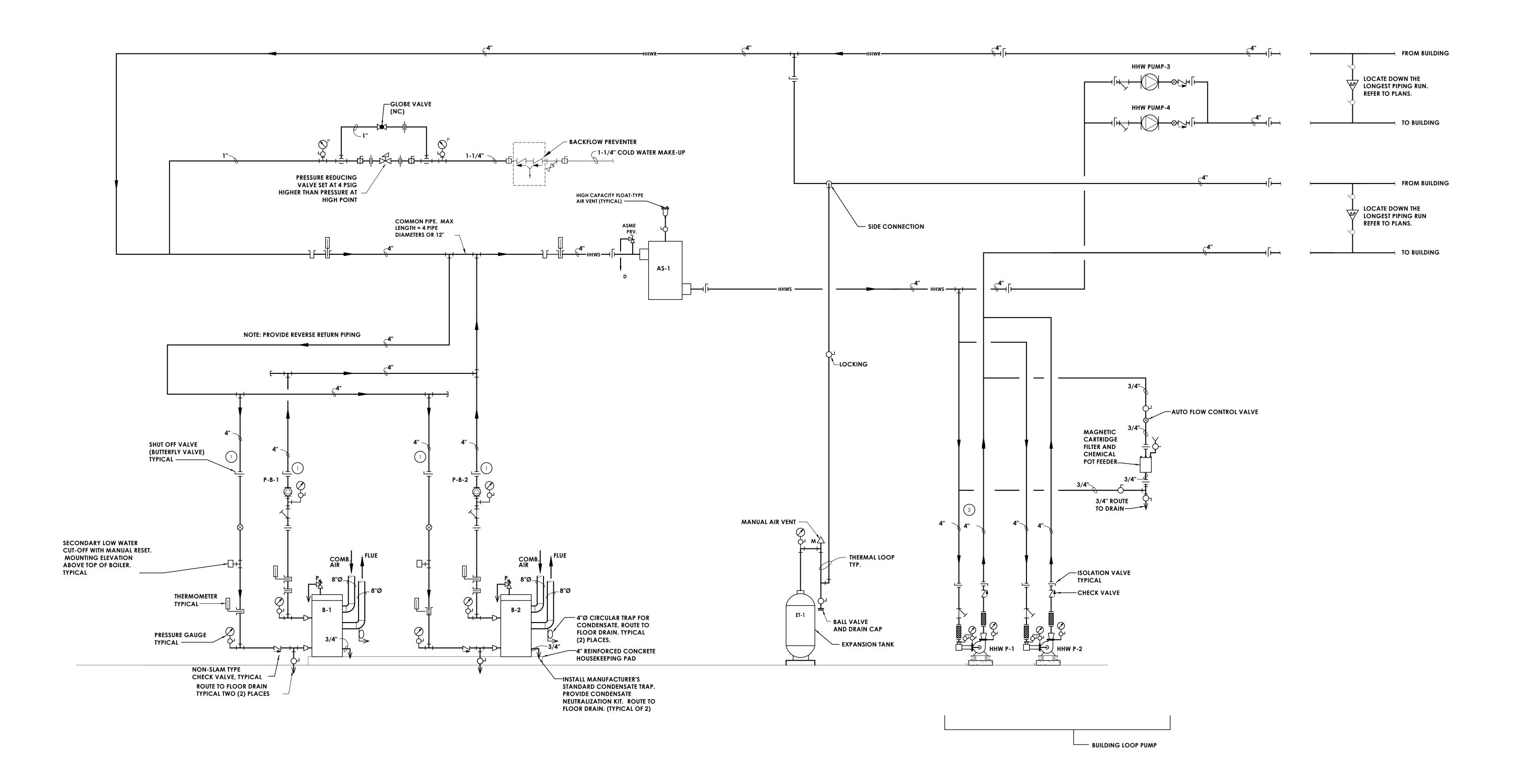
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SHEET INFORMATION 02/17/2025 NOT TO SCALE Project Status BID SET Drawn By KAB Drawing Title HVAC CONTROLS SCHEMATIC

H503

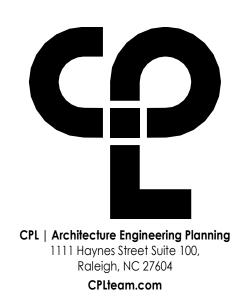
# KEY NOTES:

- INSTALL SHUT-OFF VALVE NO MORE THAN 6'-0" ABOVE BOILER ROOM FLOOR.
- 2 PROVIDE CHEMICAL POT FILTER FEEDER. COORDINATE INSTALLATION LOCATION IN FIELD.



1 BOILER PIPING SCHEMATIC

H600 NOT TO SCALE





PROJECT INFORMATION
Project Number

R23.00325
Client Name
JOHNSTON COUNTY PUBLIC

SCHOOL DISTRICT
Project Name

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

vv Date Description

PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale
02/17/2025 NOT TO SCALE
Project Status
BID SET

Drawn By Checked By
KAB RM
Drawing Title
HVAC HEATING HOT WATE

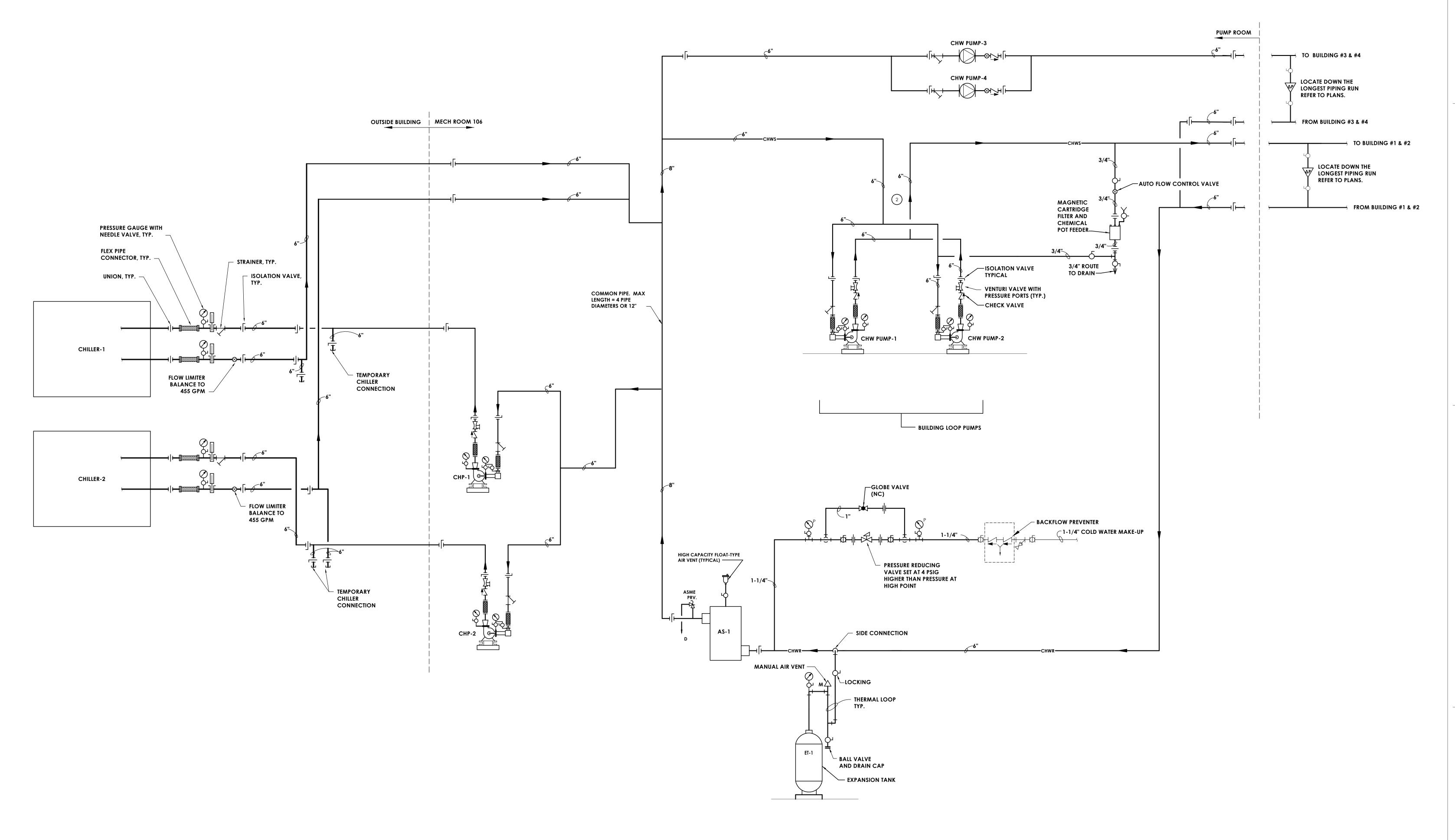
HVAC HEATING HOT WATER PIPING SCHEMATIC

FOES H600

**KEY NOTES:** 

INSTALL SHUT-OFF VALVE NO MORE THAN 6'-0" ABOVE BOILER ROOM FLOOR.

2 PROVIDE CHEMICAL POT FILTER FEEDER. COORDINATE INSTALLATION LOCATION IN FIELD.





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PROJECT INFORMATION
Project Number
R23.00325
Client Name

Client Name

JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

Project Name

FOUR OAKS ELEMENTARY

SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St,

Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

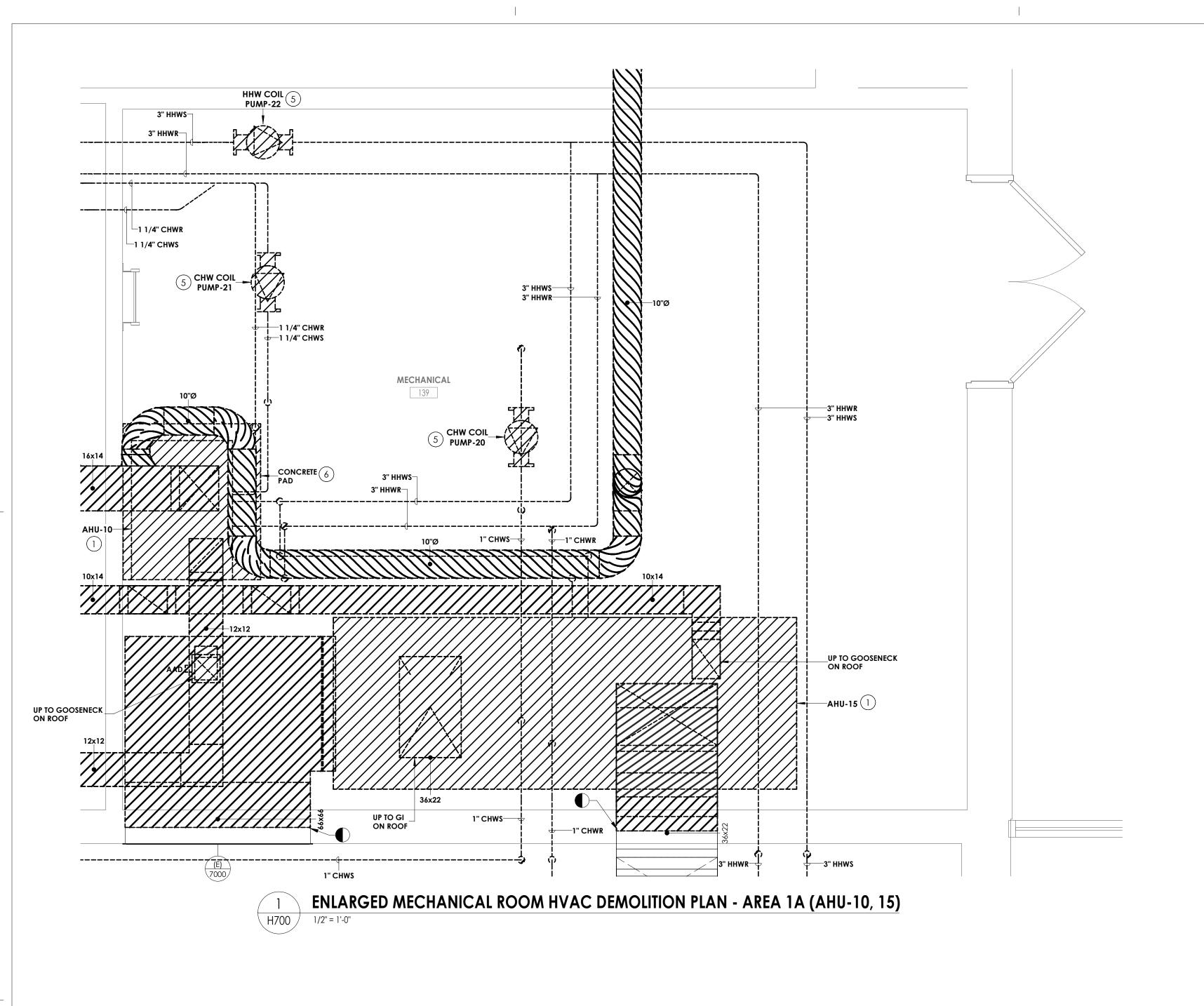
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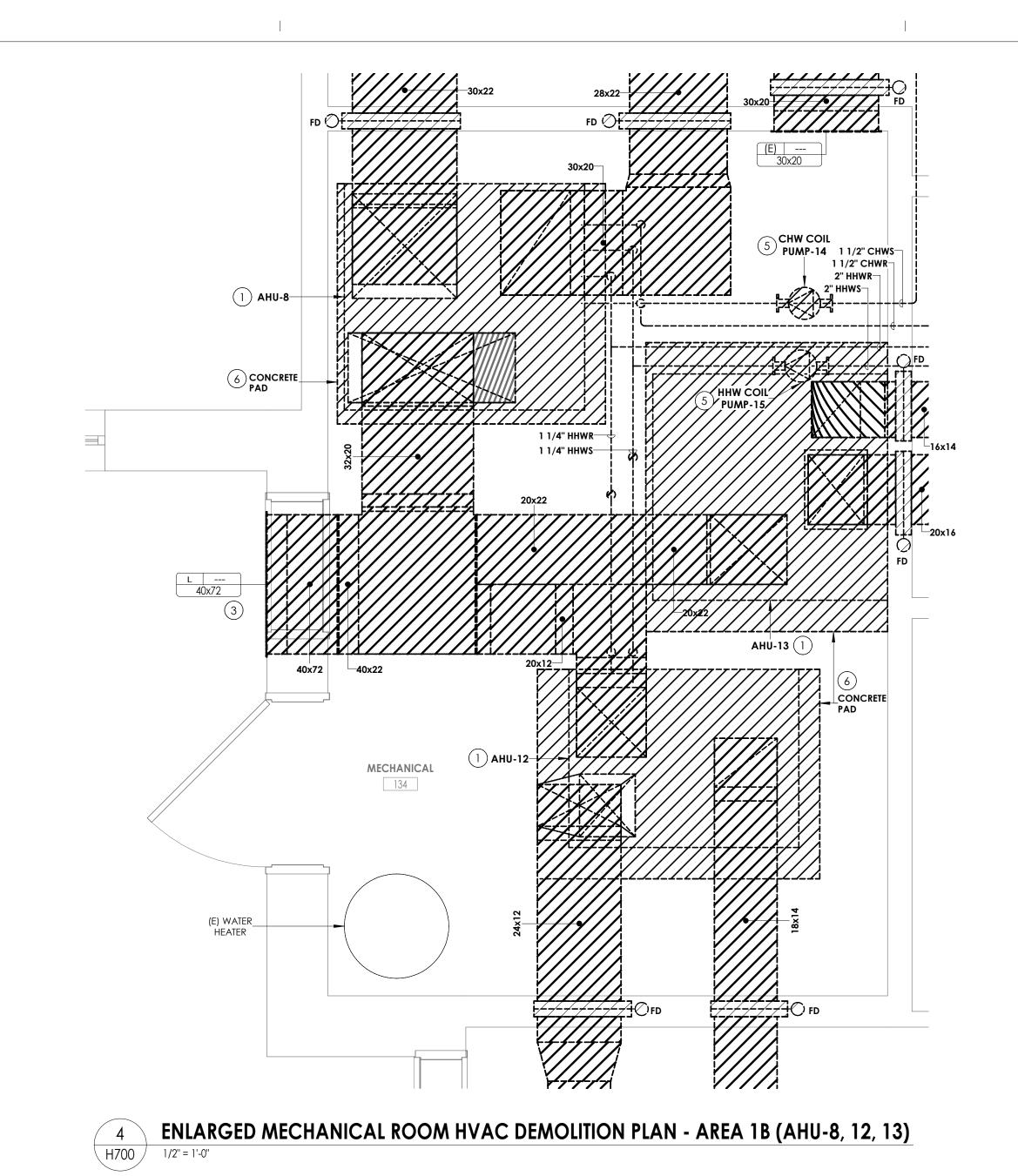


Issued Scale
02/17/2025 NOT TO SCALE
Project Status
BID SET
Drawn By Checked By
KAB RM
Drawing Title
HVAC CHILLER WATER PIPING

SCHEMATIC

FOES
H601





 $|5|_{CHP-1}$ 

(E)ELECTRIC WATER HEATER

EF-13 ON ROOF 2

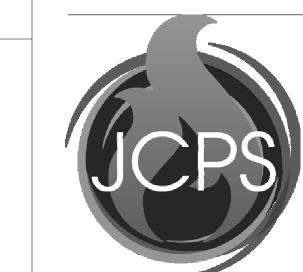
SEPARATOR (CHW)

3 **ENLAR**(1700 1/4" = 1'-0"

ENLARGED MECHANICAL ROOM HVAC DEMOLITION PLAN - AREA 1A (AHU-11, 14)

KEY NOTES:

- REMOVE AIR HANDLING UNIT AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS. PREPARE FOR NEW WORK IN THIS AREA.
- 2 REMOVE EXHAUST FAN AND ALL ASSOCIATED DUCTWORK AND CONTROLS. PREPARE FOR NEW WORK IN THIS AREA.
- (3) REMOVE LOUVER AND PLENUM. PREPARE WALL OPENING FOR NEW WORK IN
- REMOVE FLOOR MOUNTED PUMP AND ALL ASSOCIATED PIPING AS SHOWN.
  REMOVE EXISTING CONCRETE PADS DOWN TO FLOOR LEVEL AND PREPARE
- (5) REMOVE INLINE PUMP AND ALL ASSOCIATED PIPING AS SHOWN. PREPARE AREA FOR NEW WORK.
- (6) REMOVE EXISTING CONCRETE HOUSEKEEPING PAD DOWN TO FLOOR LEVEL AND PREPARE FOR NEW CONCRETE PAD INSTALLATION.



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PROJECT INFORMATION R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Four Oaks, NC 27524

180 W Hatcher St,

PROJECT ISSUE & REVISION SCHEDULE

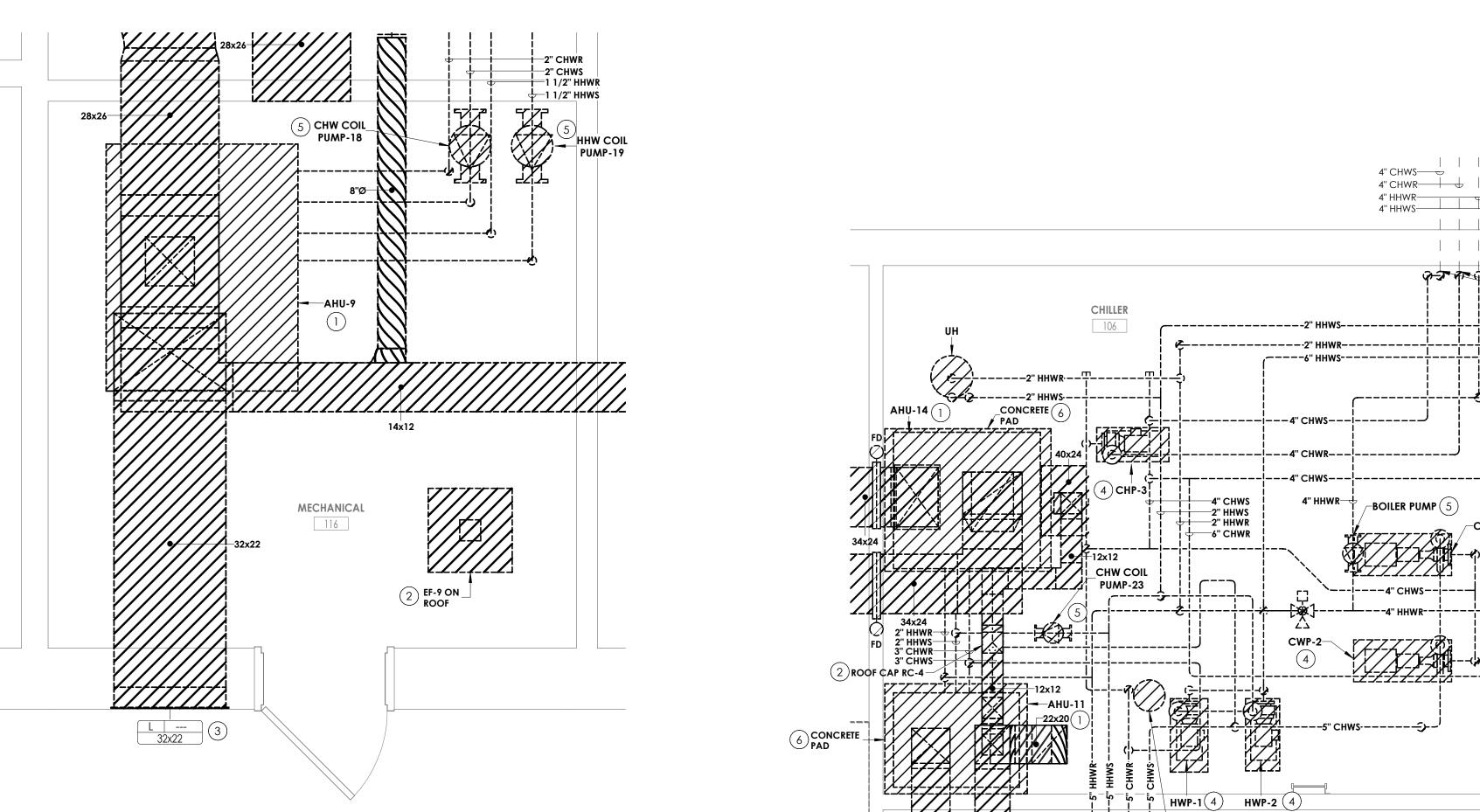
w Date Description

2" HHWR— 2 1/2" CHWS— PROFESSIONAL STAMPS MECHANICAL 2 EF-7 ON ROOF

5 ENLARGED MECHANICAL ROOM HVAC DEMOLITION PLAN - AREA 1B (AHU-7)

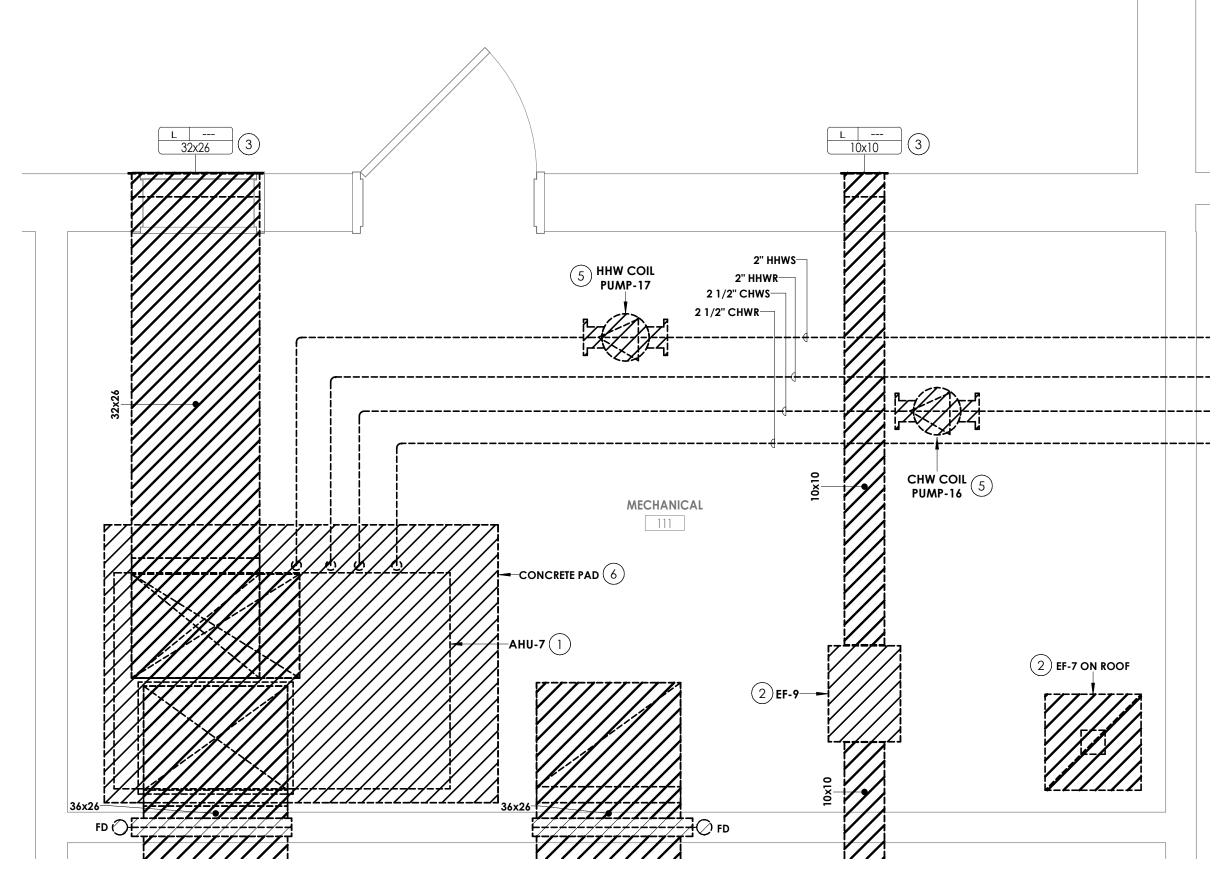
1/2" = 1'-0" SHEET INFORMATION KEY PLAN: As indicated ENLARGED MECHANICAL ROOM 1A AND 1B

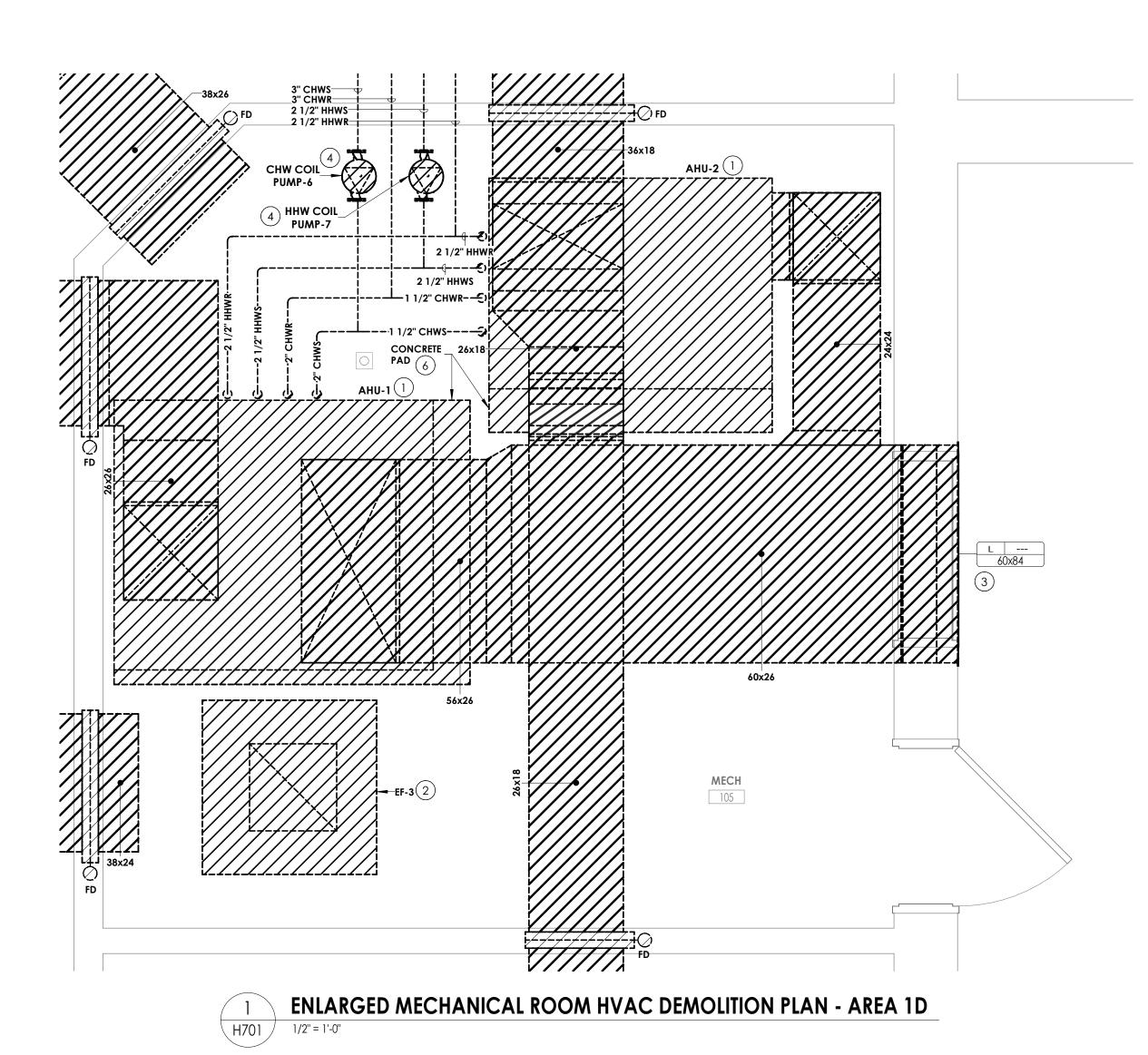
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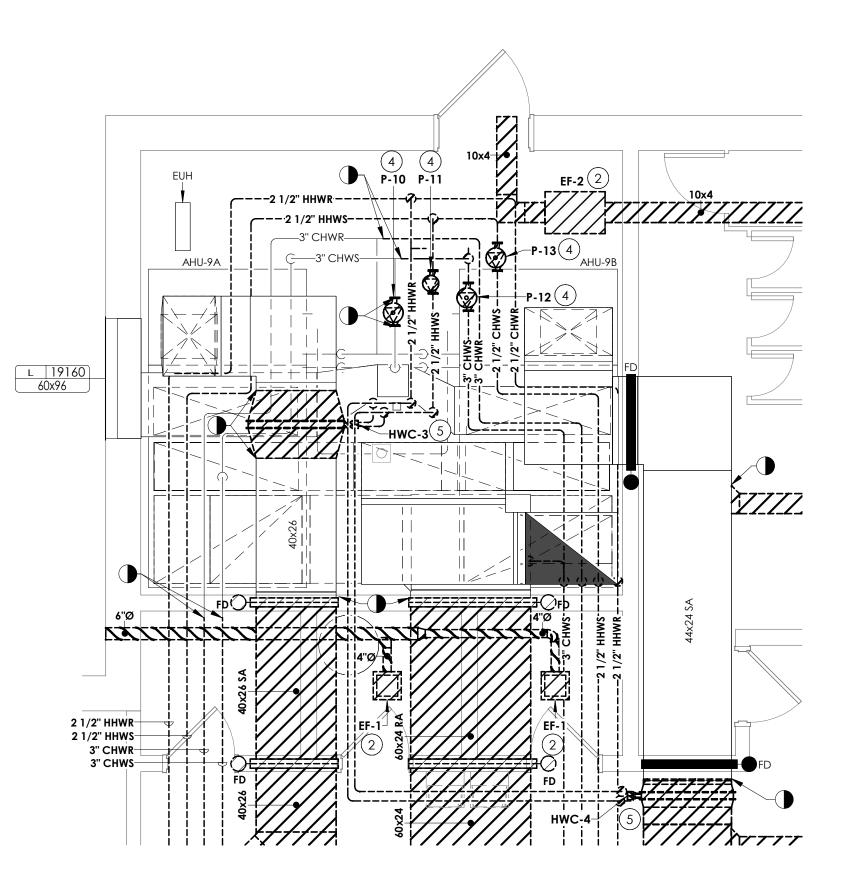


2 ENLARGED MECHANICAL ROOM HVAC DEMOLITION PLAN - AREA 1A (AHU-9)

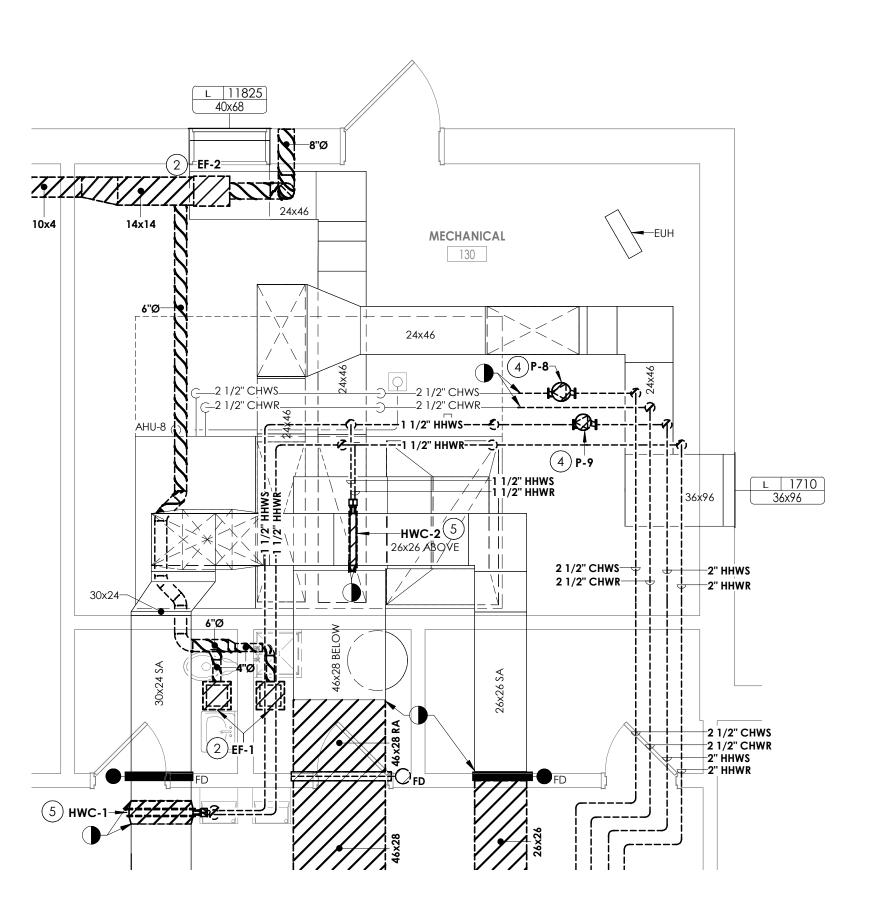
1/2" = 1'-0"







3 ENLARGED MECHANICAL ROOM HVAC DEMOLITION PLAN - AREA 1H
1/4" = 1'-0"



ENLARGED MECHANICAL ROOM HVAC DEMOLITION PLAN - AREA 1G

### KEY NOTES:

- 1 REMOVE AIR HANDLING UNIT AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS. PREPARE FOR NEW WORK IN THIS AREA.
- 2) REMOVE EXHAUST FAN AND ALL ASSOCIATED DUCTWORK AND CONTROLS. PREPARE FOR NEW WORK IN THIS AREA.
- (3) REMOVE LOUVER AND PLENUM. PREPARE WALL OPENING FOR NEW WORK IN
- 4 REMOVE INLINE PUMP AND ALL ASSOCIATED PIPING AS SHOWN. PREPARE AREA FOR NEW WORK.
- 5 REMOVE DUCTED HOT WATER COIL AND ALL ASSOCIATED PIPING AS SHOWN. PREPARE FOR NEW WORK IN THIS AREA. COORDINATE WITH OTHER TRADES.
- 6 REMOVE EXISTING CONCRETE HOUSEKEEPING PAD DOWN TO FLOOR LEVEL AND PREPARE FOR NEW CONCRETE PAD INSTALLATION.



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PROJECT INFORMATION Project Number

R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St,

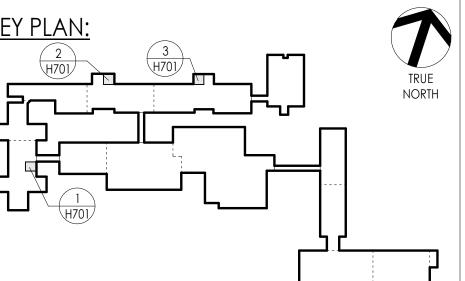
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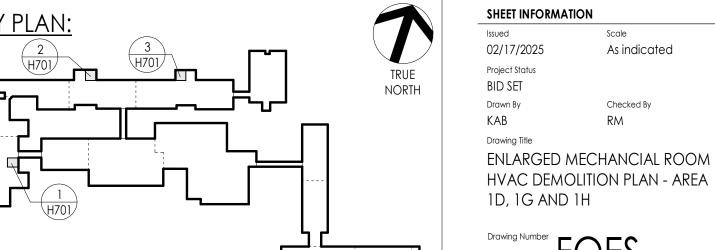
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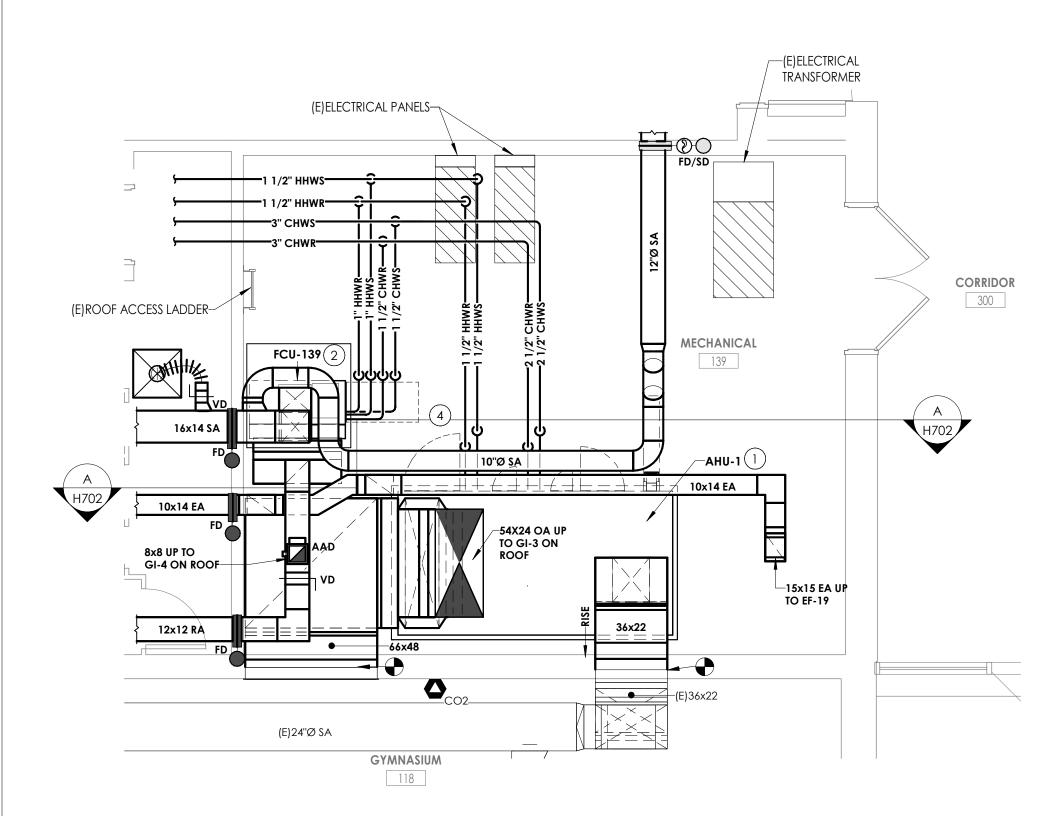


As indicated

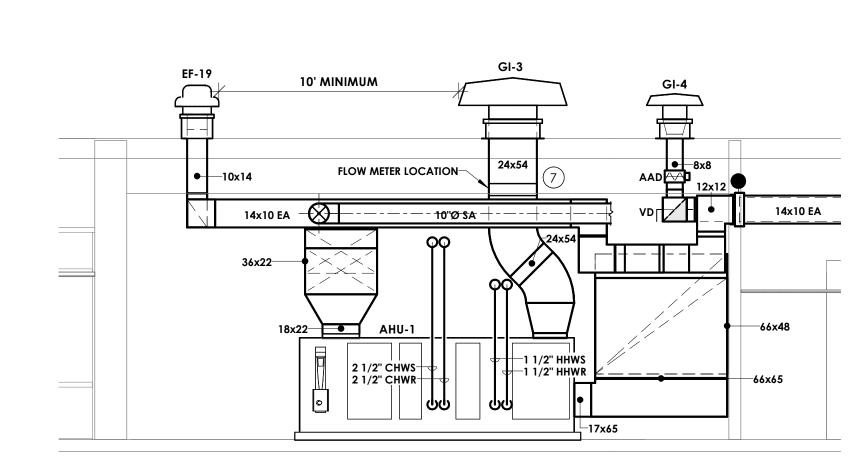
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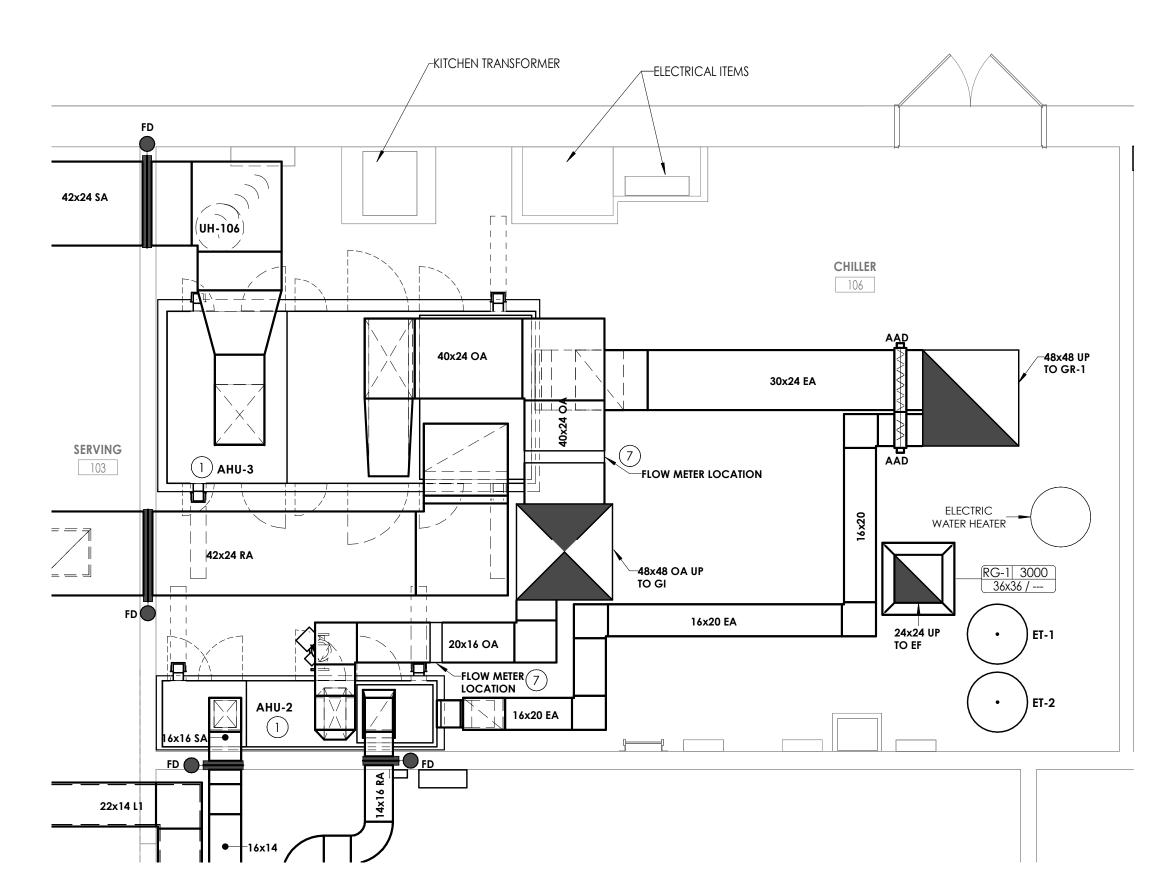






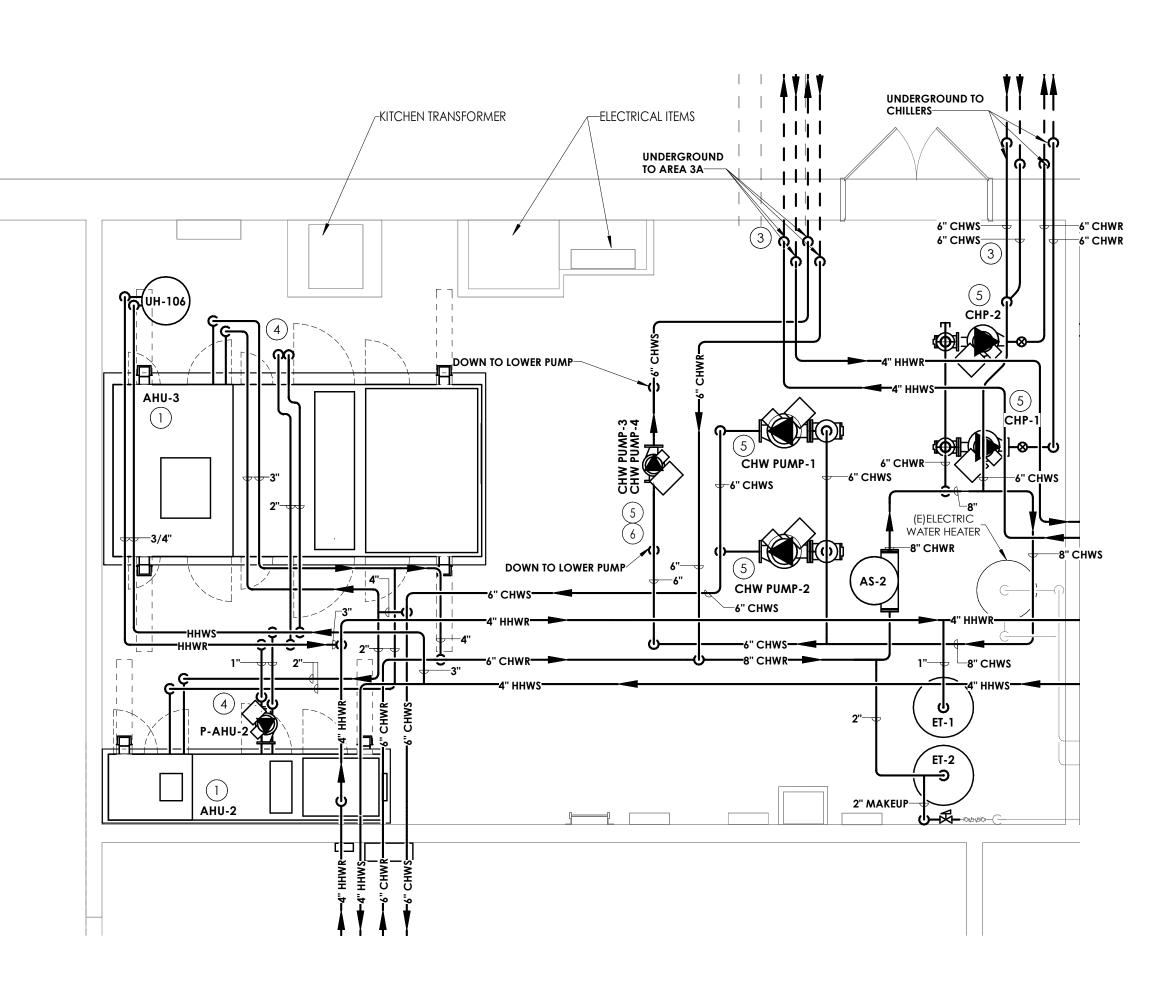
A AHU-1 DUCTWORK AND PIPING SECTION

1/4" = 1'-0"



2 ENLARGED MECHANICAL ROOM DUCTWORK PLAN - AREA 1A (AHU-2 & AHU-3)

1/4" = 1'-0"

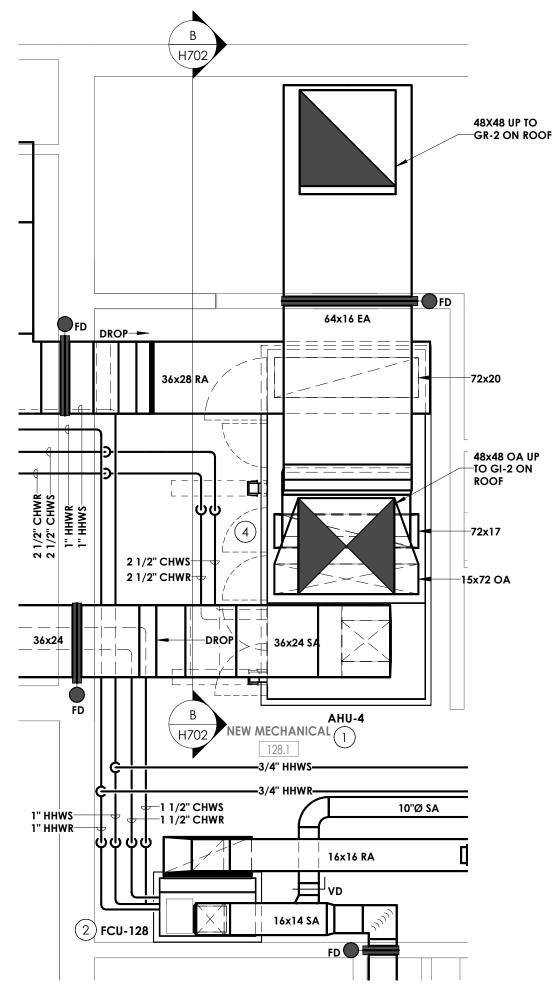


3 ENLARGED MECHANICAL ROOM PIPING PLAN - AREA 1A (AHU 2 & AHU-3)

1/4" = 1'-0"

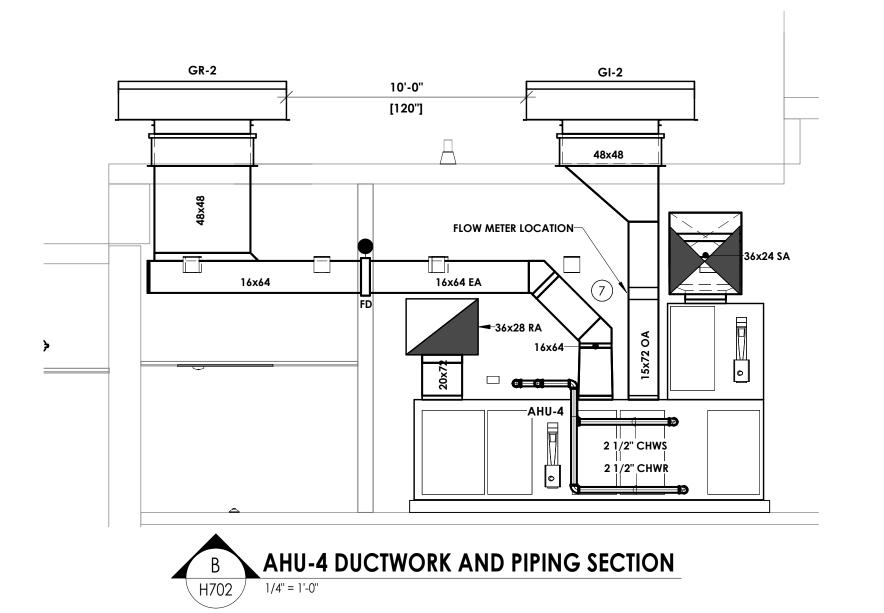
# KEY NOTES

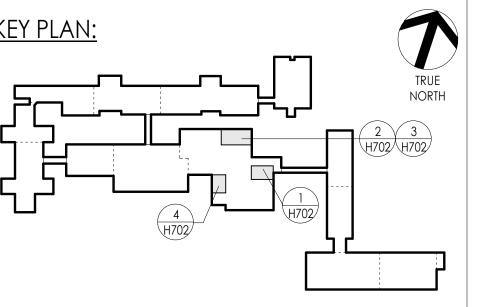
- INSTALL NEW AIR HANDLING UNIT. CONTRACTOR SHALL RECIEVE, STORE AND INSTALL AIR HANDLING UNIT ACCORDING TO CONTRACT DOCUMENTS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE NEW CONCRETE EQUIPMENT PAD. REFER TO DETAILS AND SCHEMATICS. COORDINATE AND INTEGRATE WITH BMS CONTROLS. CONTRACTOR SHALL EXECUTE AND DOCUMENT MANUFACTURER'S SUGGESTED START UP AND TESTING. CONNECT DUCTWORK, PIPING AND CONTROLS AS SHOWN AND PREPARE FOR COMMISSIONING.
- (2) INSTALL NEW FAN COIL UNIT. CONTRACTOR SHALL RECIEVE, STORE AND INSTALL FAN COIL UNIT ACCORDING TO CONTRACT DOCUMENTS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE NEW CONCRETE EQUIPMENT PAD. REFER TO DETAILS AND SCHEMATICS. COORDINATE AND INTEGRATE WITH BMS CONTROLS. CONTRACTOR SHALL EXECUTE AND DOCUMENT MANUFACTURER'S SUGGESTED START UP AND TESTING. CONNECT DUCTWORK, PIPING AND CONTROLS AS SHOWN AND PREPARE FOR COMMISSIONING.
- 3 PROVIDE ISOLATION VALVES INSIDE BUILDING TO ALLOW ISOLATION OF UNDERGROUND PIPING.
- 4 PROVIDE CLEARENCE FOR AHU MAINTENANCE (DOOR SWINGS).
- PROVIDE NEW PUMP AND CONNECT ALL ASSOCIATED PIPING AND CONTROLS
  AS SHOWN
- TWO INLINE PUMPS ARE LOCATED ABOVE ONE-ANOTHER. REFER TO SCHEMATICS.
- OUTSIDE AIR DUCTWORK INSTALLATION SHALL ACCOMMODATE THE REQUIREMENTS OF THE AIRFLOW METERS PROVIDED. FLOW METER LOCATIONS ARE SUGGESTED AS SHOWN, FIELD COORDINATE FINAL LOCATION AND SIZE PRIOR TO DUCTWORK INSTALLATION.



ENLARGED MECHANICAL ROOM NEW WORK PLAN - AREA 1A (AHU-4)

1/4" = 1'-0"





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Project Number
R23.00325

R23.00325
Client Name

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT Project Name FOUR OAKS ELEMENTARY

SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St,

Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

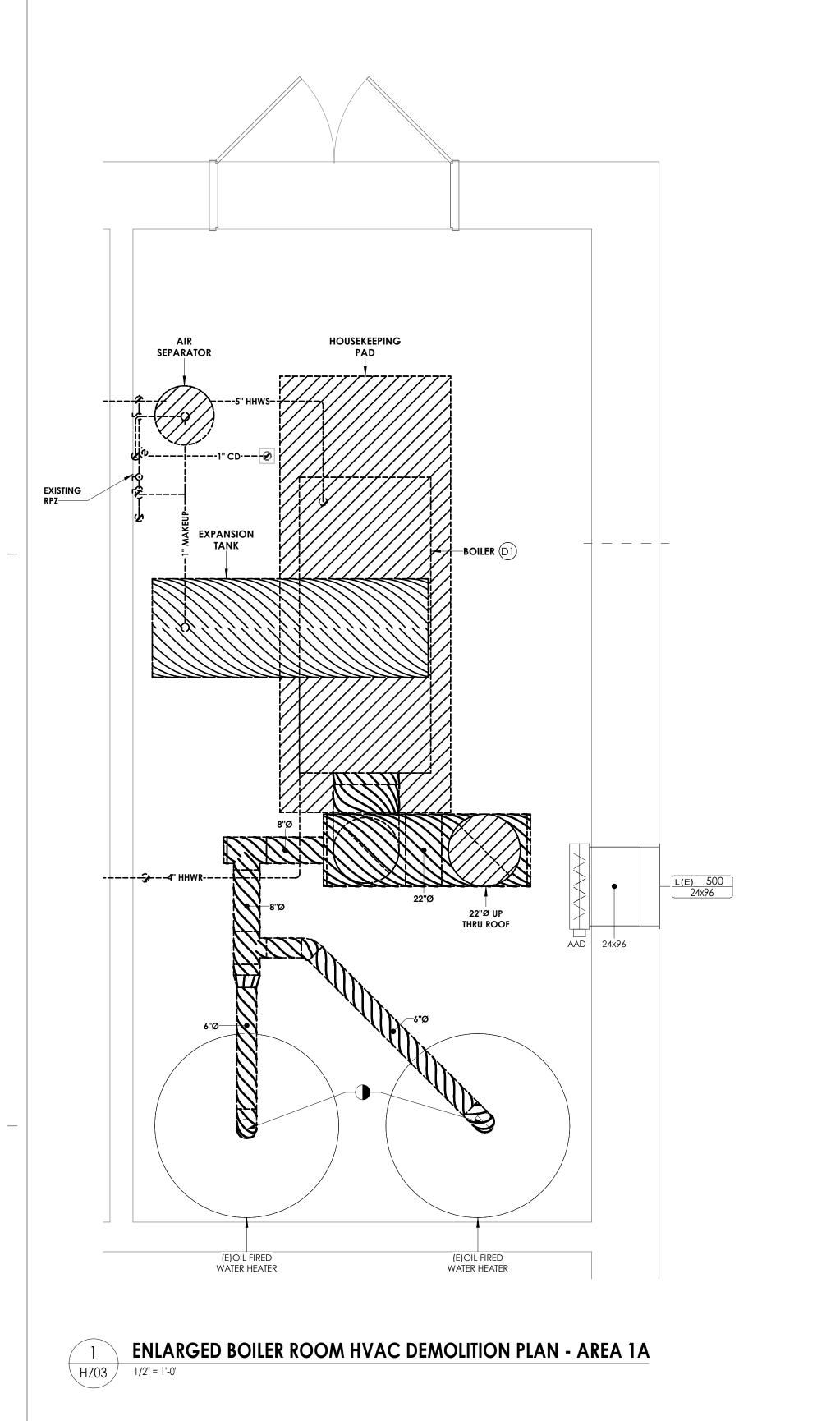
PROFESSIONAL STAMPS

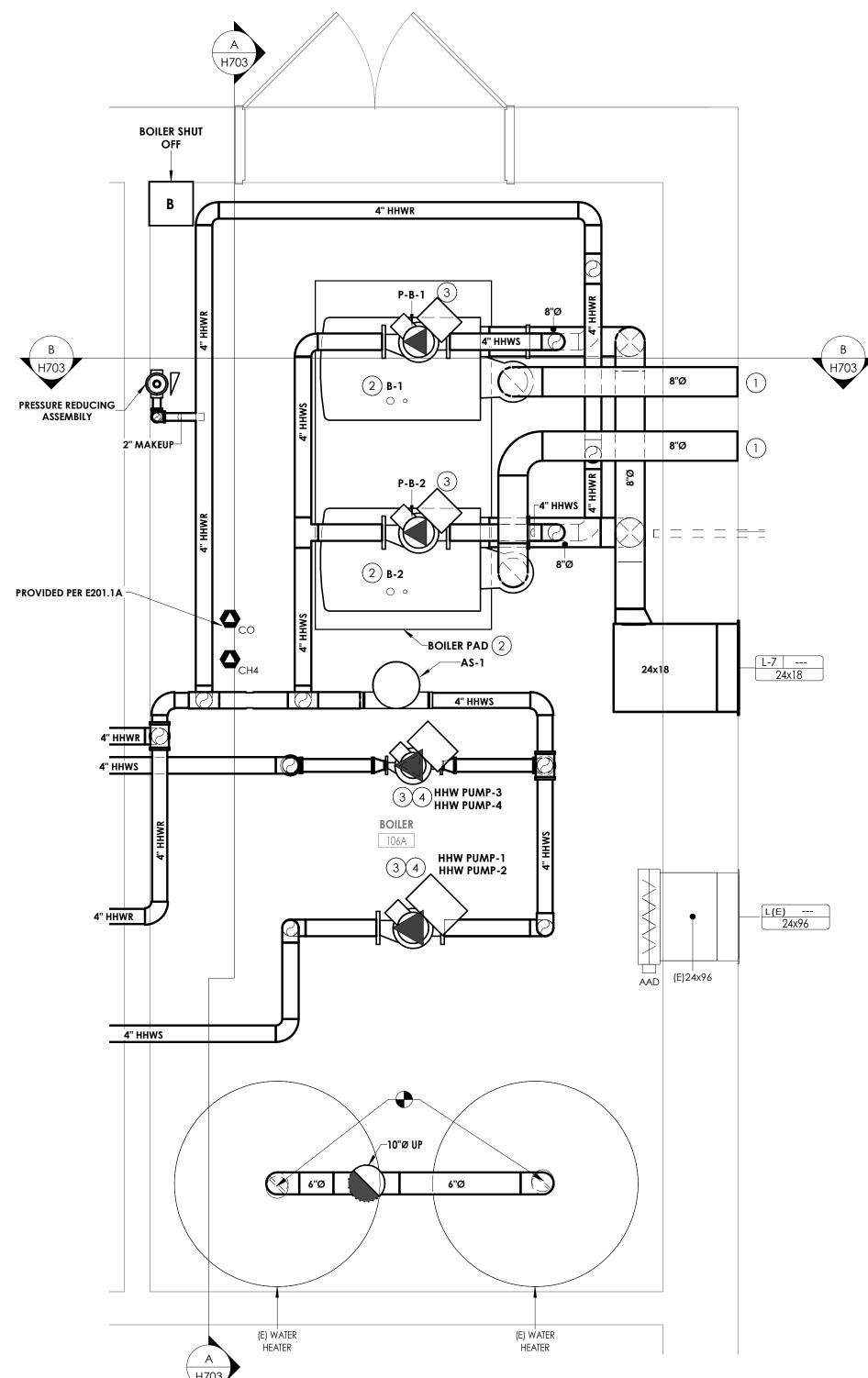


SHEET INFORMATION

Issued Scale
02/17/2025 As indicated
Project Status
BID SET
Drawn By Checked By
KAB RM
Drawing Title
ENLARGED MECHANICAL ROC

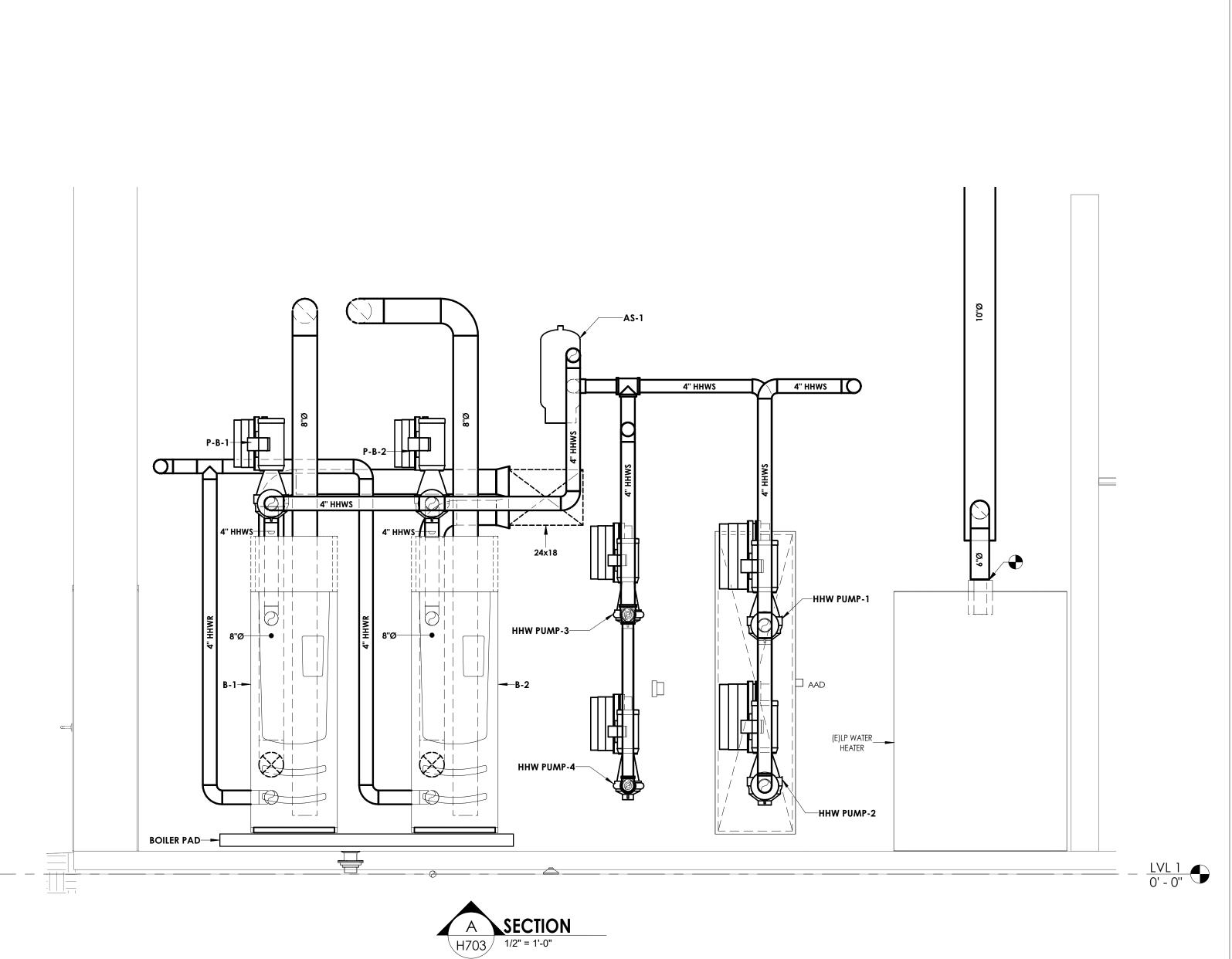
FOES H702

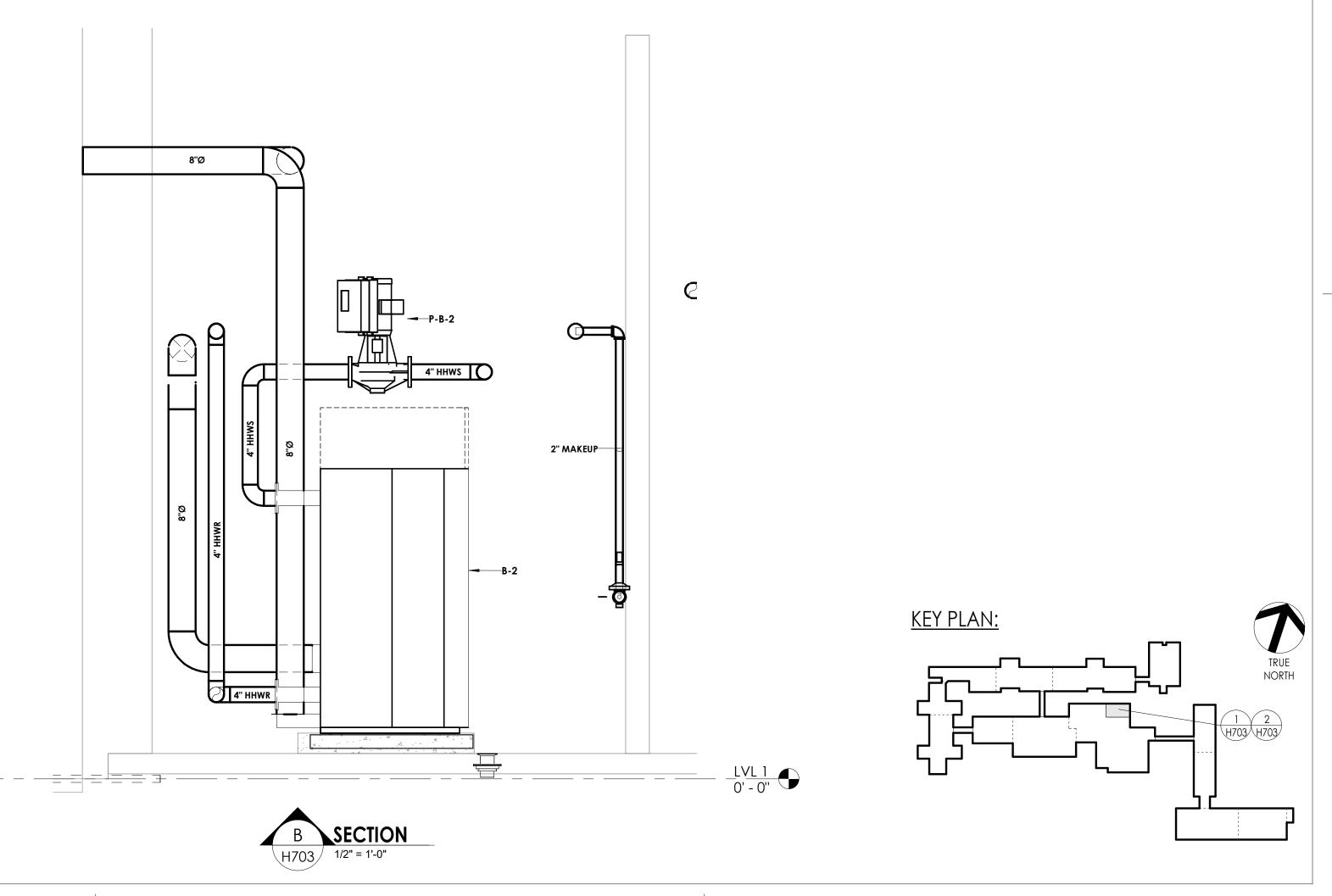




2 ENLARGED BOILER ROOM HVAC NEW WORK PLAN - AREA 1A

1/2" = 1'-0"





KEY NOTES

REMOVE BOILER AND ALL ASSOCIATED PIPING, DUCTWORK AND CONTROLS AS SHOWN. REMOVE CONCRETE PADS DOWN TO FLOOR LEVEL AND PREPARE AREA FOR NEW WORK.

1 TERMINATE FLUE ON EXTERIOR WALL WITH A VENT CAP, MINIMUM 3' 0" IN ELEVATION ABOVE COMBUSTION AIR INTAKE.

2 PROVIDE NEW BOILER ALL CONNECT ALL ASSOCIATED DUCTWORK, PIPING, AND CONTROLS AS SHOWN. PROVIDE NEW BOILER EQUIPMENT PAD.

3 PROVIDE NEW PUMP AND CONNECT ALL ASSOCIATED PIPING AND CONTROLS AS SHOWN.

TWO INLINE PUMPS ARE LOCATED ABOVE ONE-ANOTHER. REFER TO SCHEMATICS.

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PROJECT INFORMATION Project Number

R23.00325 JOHNSTON COUNTY PUBLIC

SCHOOL DISTRICT FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St,

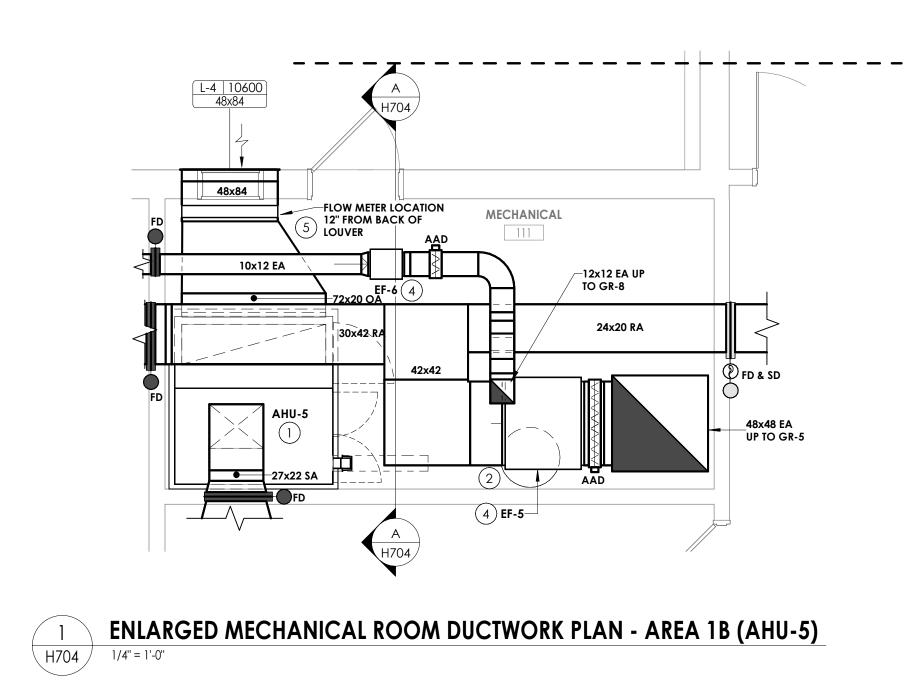
Four Oaks, NC 27524

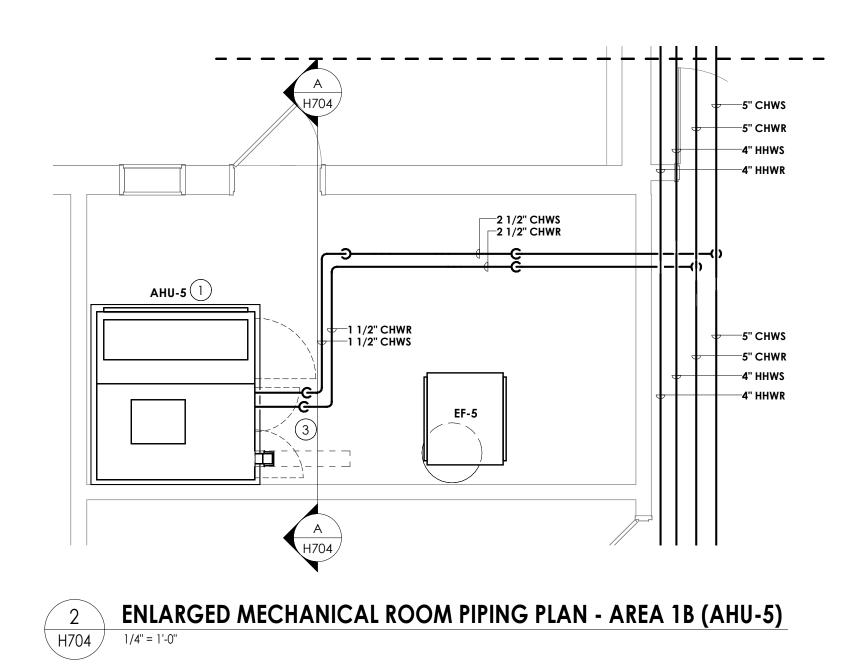
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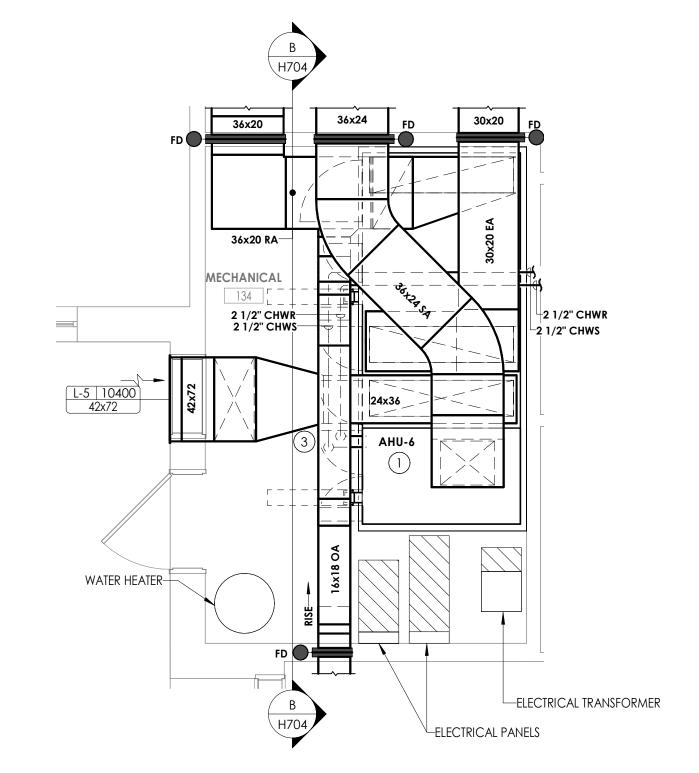


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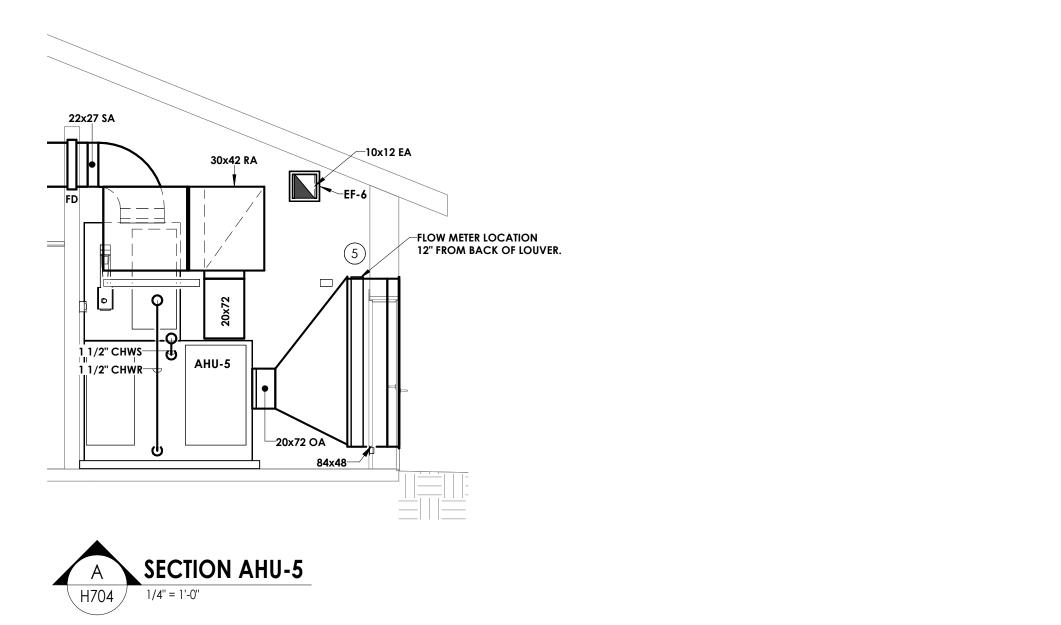
PLAN - AREA 1A

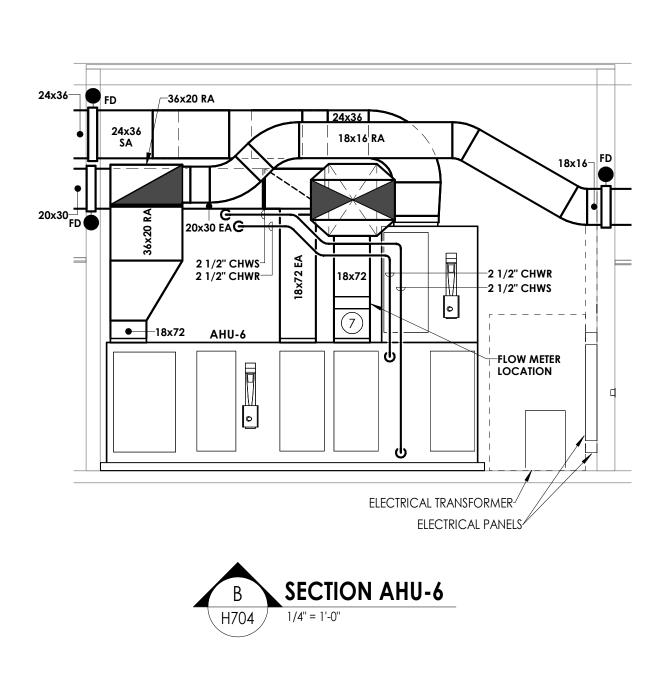














- INSTALL NEW AIR HANDLING UNIT. CONTRACTOR SHALL RECIEVE, STORE AND INSTALL AIR HANDLING UNIT ACCORDING TO CONTRACT DOCUMENTS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE NEW CONCRETE EQUIPMENT PAD. REFER TO DETAILS AND SCHEMATICS. COORDINATE AND INTEGRATE WITH BMS CONTROLS. CONTRACTOR SHALL EXECUTE AND DOCUMENT MANUFACTURER'S SUGGESTED START UP AND TESTING. CONNECT DUCTWORK, PIPING AND CONTROLS AS SHOWN AND PREPARE FOR COMMISSIONING.
- 2 ADJUST DOMESTIC PIPING DROP TO EXISTING WATER HEATER.
- 3 PROVIDE CLEARENCE FOR AHU MAINTENANCE (DOOR SWINGS).
- PROVIDE NEW INLINE FAN AND ALL ASSOCIATED DUCTWORK AND CONTROLS AS SHOWN.
- OUTSIDE AIR DUCTWORK INSTALLATION SHALL ACCOMMODATE THE REQUIREMENTS OF THE AIRFLOW METERS PROVIDED. FLOW METER LOCATIONS ARE SUGGESTED AS SHOWN, FIELD COORDINATE FINAL LOCATION AND SIZE PRIOR TO DUCTWORK INSTALLATION.





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JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

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PROJECT ISSUE & REVISION SCHEDULE

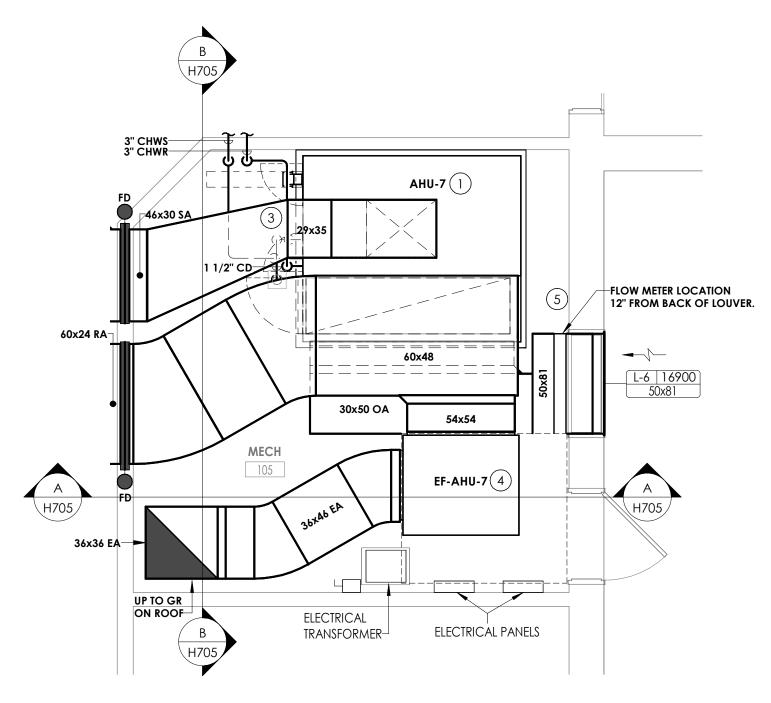
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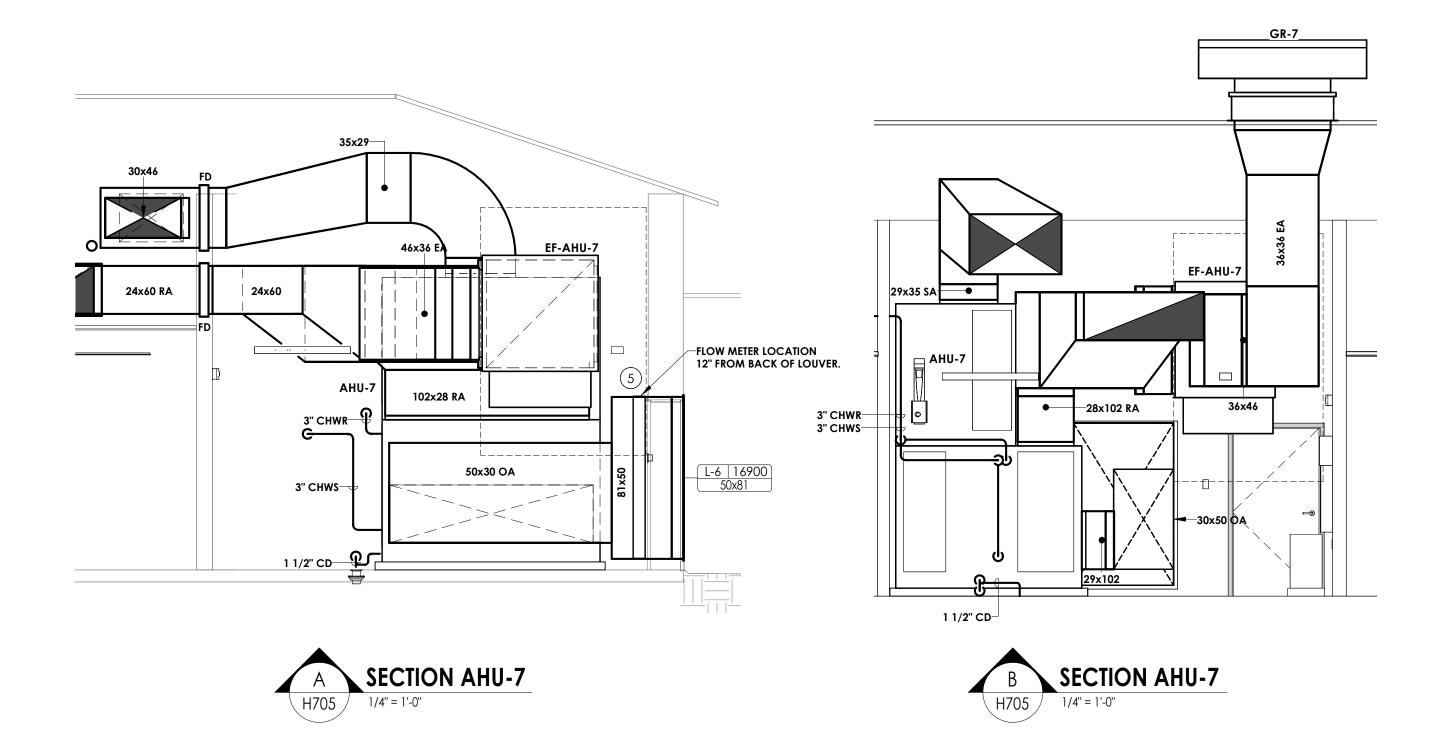
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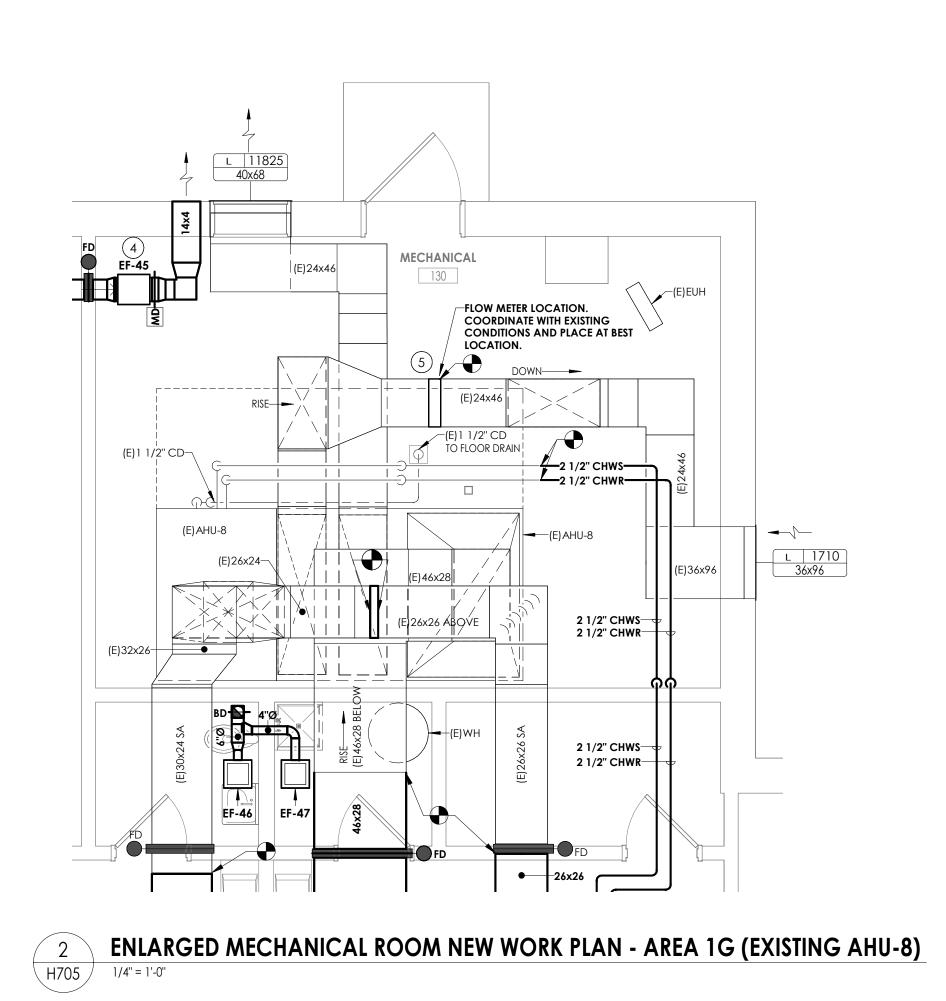
Issued Scale
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Project Status
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Drawing Title
ENLARGED MECHANIC
NEW WORK PLAN - AR

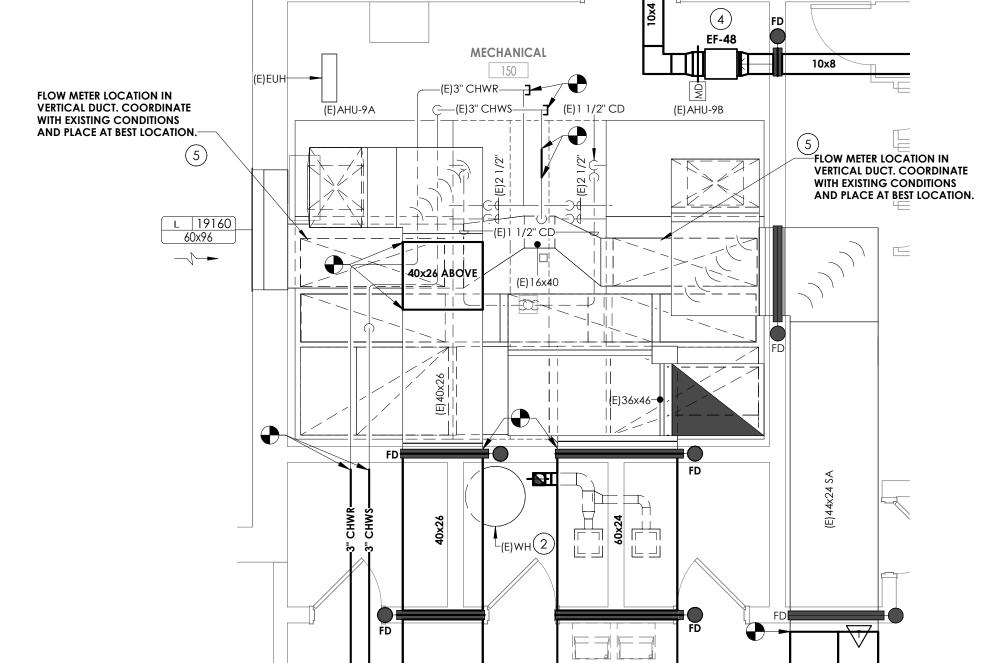
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ENLARGED MECHANICAL ROOM NEW WORK PLAN - AREA 1D (AHU-7) H705 1/4" = 1'-0"





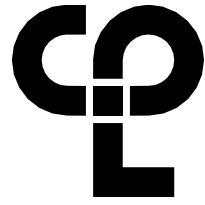


3 ENLARGED MECHANICAL ROOM NEW WORK PLAN - AREA 1H (EXISTING AHU-9A & 9B)

1/4" = 1'-0"

# KEY NOTES

- 1) INSTALL NEW AIR HANDLING UNIT. CONTRACTOR SHALL RECIEVE, STORE AND INSTALL AIR HANDLING UNIT ACCORDING TO CONTRACT DOCUMENTS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE NEW CONCRETE EQUIPMENT PAD. REFER TO DETAILS AND SCHEMATICS. COORDINATE AND INTEGRATE WITH BMS CONTROLS. CONTRACTOR SHALL EXECUTE AND DOCUMENT MANUFACTURER'S SUGGESTED START UP AND TESTING. CONNECT DUCTWORK, PIPING AND CONTROLS AS SHOWN AND PREPARE FOR COMMISSIONING.
- 2) ADJUST DOMESTIC PIPING DROP TO EXISTING WATER HEATER.
- 3 PROVIDE CLEARENCE FOR AHU MAINTENANCE (DOOR SWINGS).
- 4) PROVIDE NEW INLINE FAN AND ALL ASSOCIATED DUCTWORK AND CONTROLS AS SHOWN.
- (5) OUTSIDE AIR DUCTWORK INSTALLATION SHALL ACCOMMODATE THE REQUIREMENTS OF THE AIRFLOW METERS PROVIDED. FLOW METER LOCATIONS are suggested as shown, field coordinate final location and size PRIOR TO DUCTWORK INSTALLATION.



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PROJECT INFORMATION Project Number

R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

Project Name FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

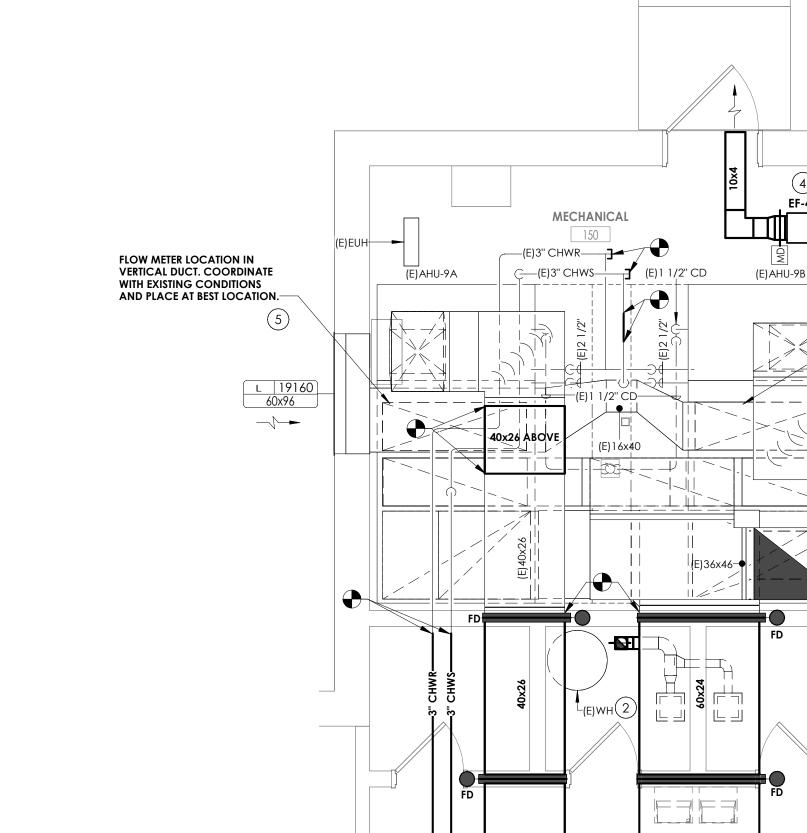
PROFESSIONAL STAMPS

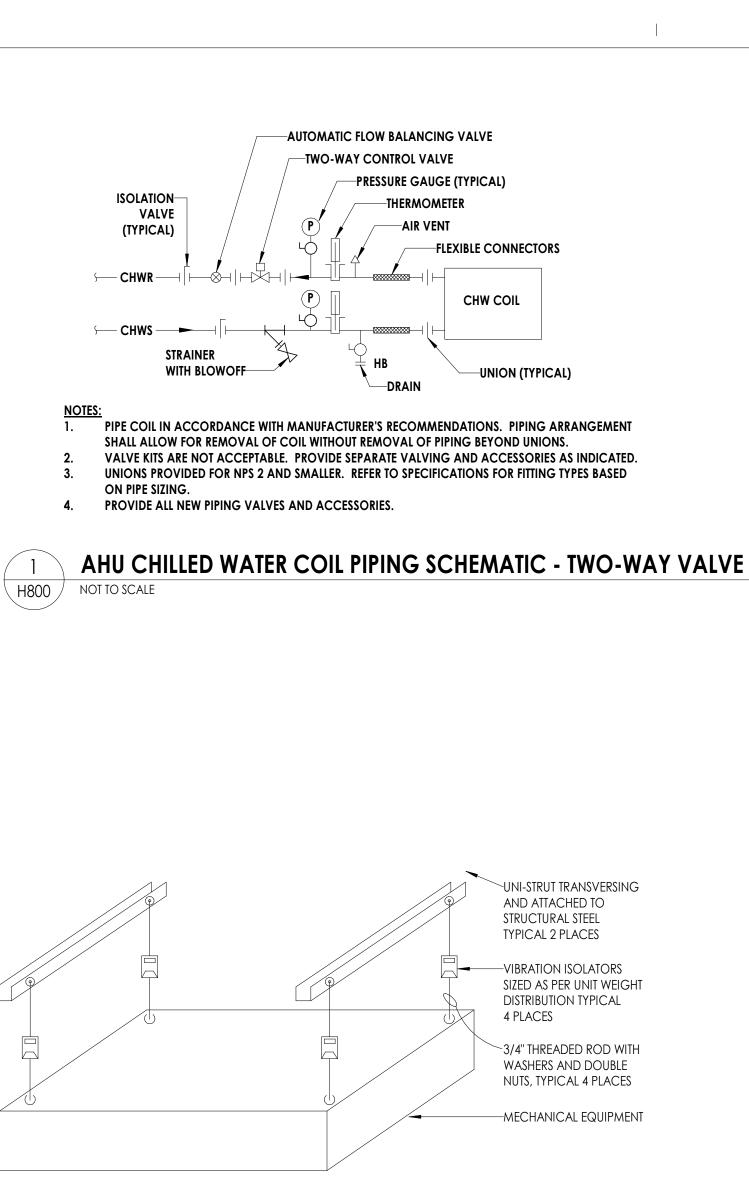


SHEET INFORMATION 02/17/2025 As indicated Project Status **BID SET** Drawn By

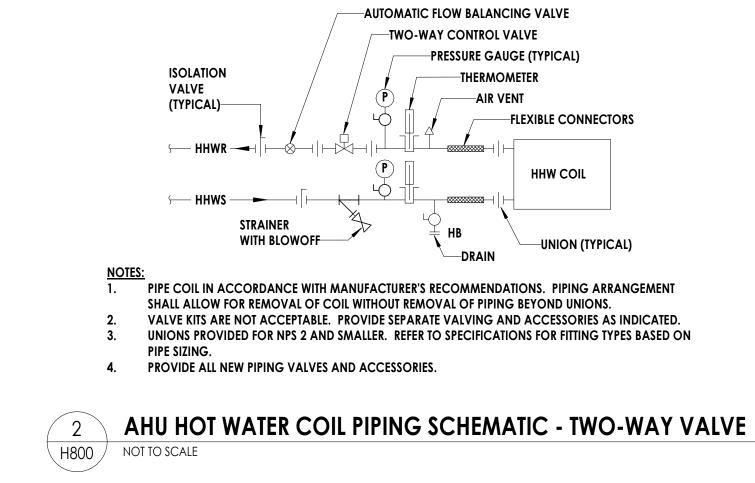
> Drawing Title ENLARGED MECHANICAL ROOM NEW WORK PLAN - AREA 1D, 1G AND 1H

H705





INDOOR UNIT SUPPORT INSTALLATION DETAIL



MANUAL DAMPER

DIFFUSER NECK)

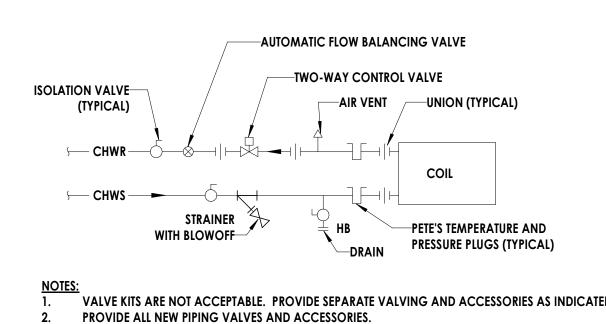
(7 FT MINIMUM FROM

FLEX DUCT (MAX.

LENGTH 3'-0")—

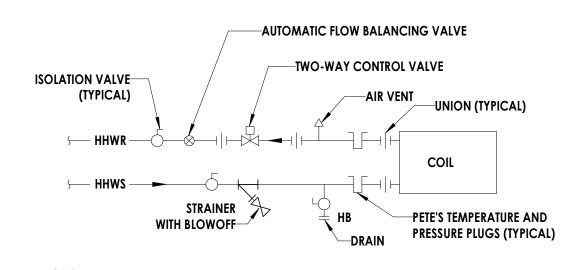
GALVANIZED DUCT W/

RIGID ELBOW-



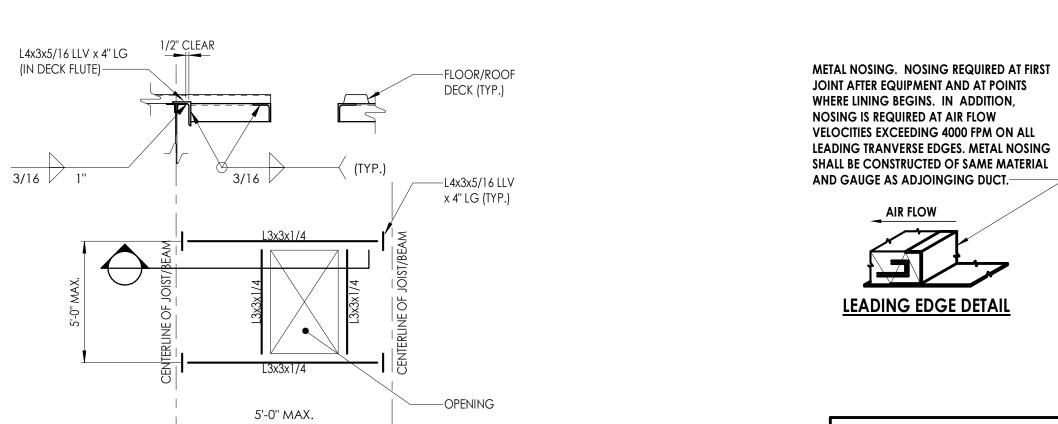
VALVE KITS ARE NOT ACCEPTABLE. PROVIDE SEPARATE VALVING AND ACCESSORIES AS INDICATED.



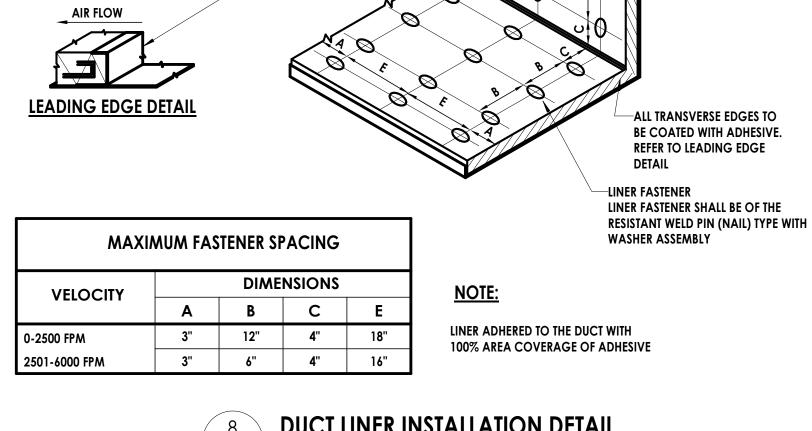


VALVE KITS ARE NOT ACCEPTABLE. PROVIDE SEPARATE VALVING AND ACCESSORIES AS INDICATED. PROVIDE ALL NEW PIPING VALVES AND ACCESSORIES.

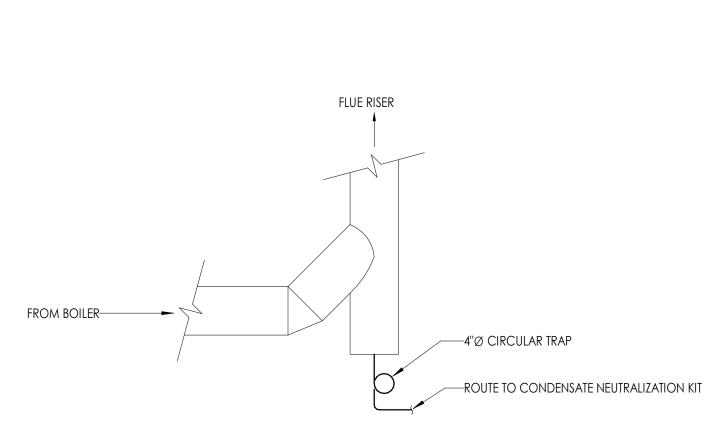




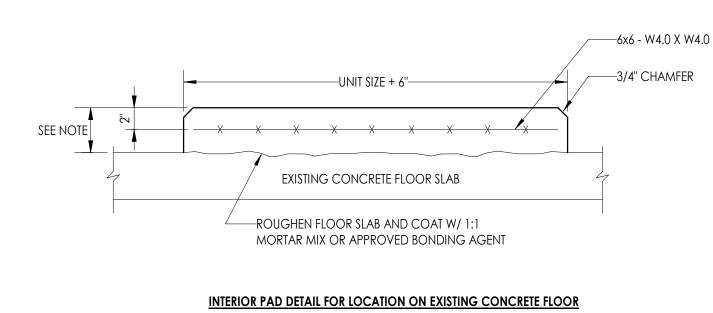








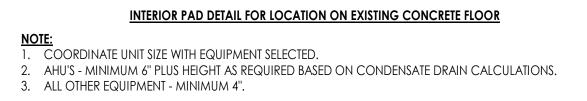




PROVIDE TRANSITION TO

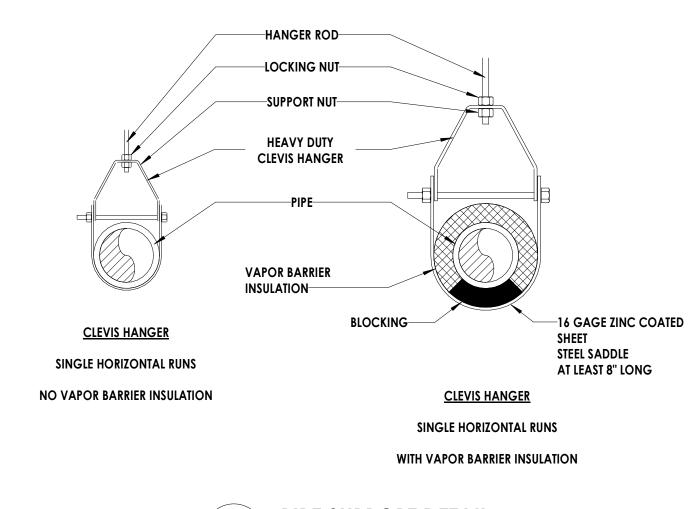
**DIFFUSER DETAIL** 

SQUARE NECK DIFFUSERS AS



H800 NOT TO SCALE

**EQUIPMENT HOUSEKEEPING PAD DETAIL** 



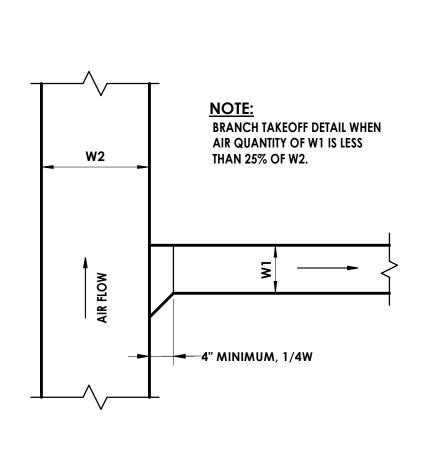
ROOF OR FLOOR OPENING SUPPORT DETAIL

3/4" = 1'-0"

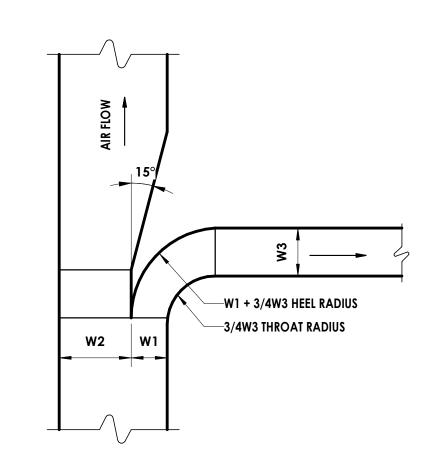
**DETAIL NOTES:** 

ON THE PLANS.



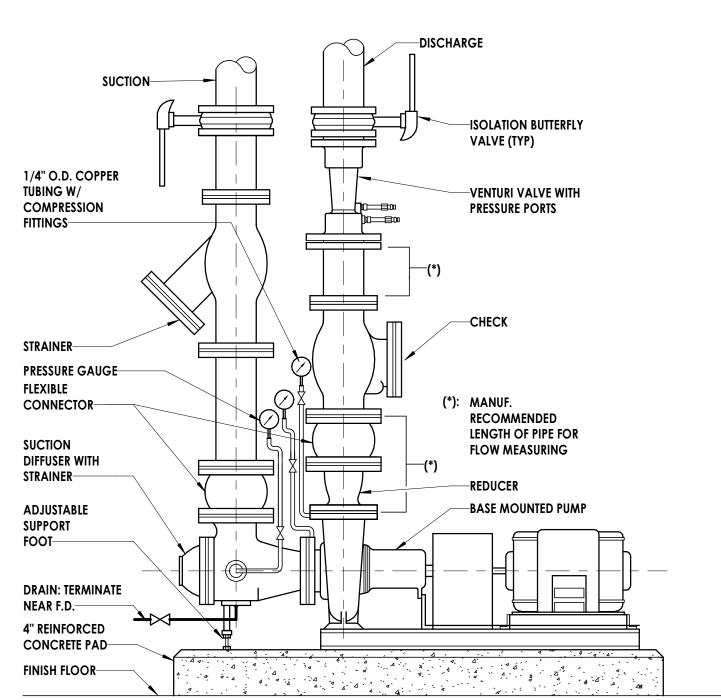




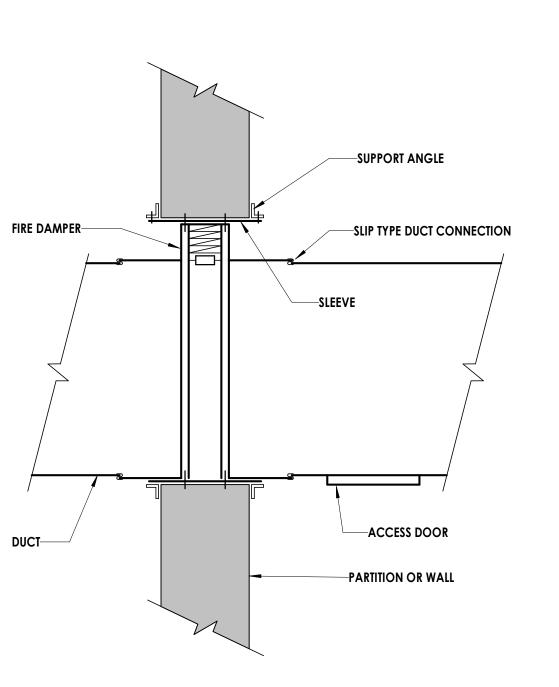


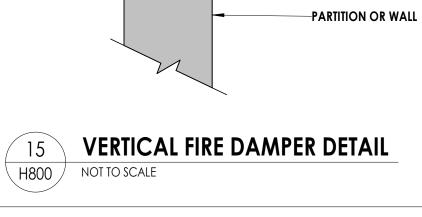
LAPPED AND BUTTED CORNER

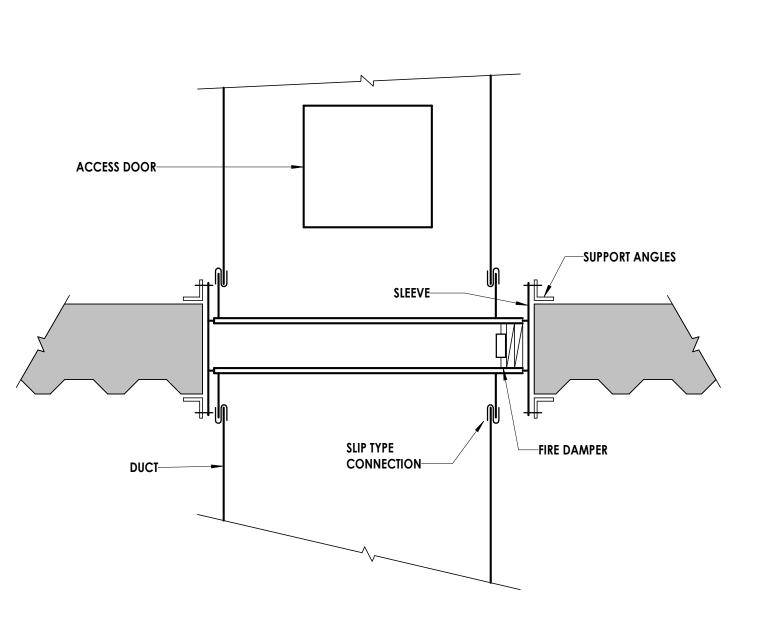




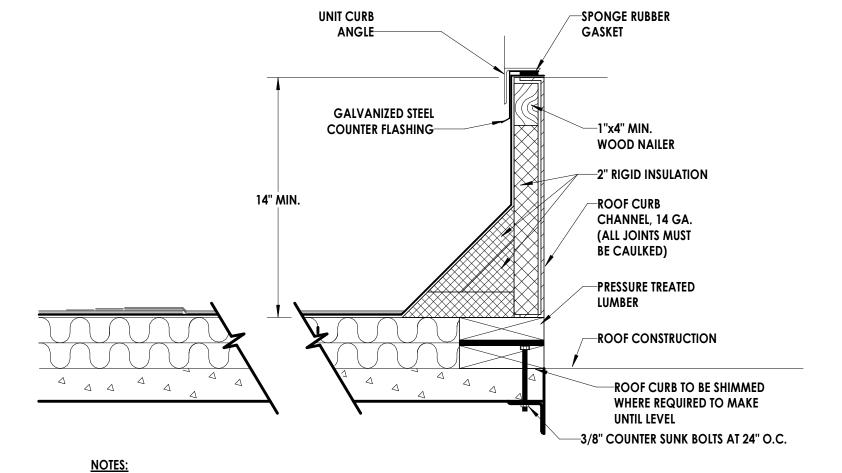












ALL ROOF TOP HVAC EXHAUST FANS REQUIRED TO HAVE CURB AND CURB INTERIOR AS SHOWN UNLESS OTHERWISE NOTED.

- INSTALL ROOFING PER NRCA RECOMMENDATIONS. COORDINATE WITH OWNER AND EXISTING ROOFING MANUFACTURER TO MAINTAIN WARRANTY. REMOVE EXISTING ROOFING AND ROOF INSULATION DOWN TO EXISTING ROOF DECK AS NECESSARY FOR INSTALLATION OF HVAC EQUIPMENT CURB. CUT OPENING IN EXISTING ROOF DECK AND PROVIDE STRUCTURAL SUPPORT FOR MECHANICAL EQUIPMENT AND OPENING EDGE. SECURE EQUIPMENT TO RAIL WITH CADMIUM PLATED HARDWARE.
- INSTALLATION OF ALL ROOF MUNTED MECHANICAL COMPONENTS SHALL CONFORM TO NYS BUILDING CODE SECTION 1604.9 AND THEWIND RESTRAINT REQUIREMENTS OF THIS PROJECT. 6. CRICKET ROOFING AWAY FROM CURBS.

17 EXHAUST FAN AND GRAVITY VENTILATOR ROOF CURB DETAIL - EXISTING ROOFS

PROFESSIONAL STAMPS

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Raleigh, NC 27604

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PROJECT INFORMATION

SCHOOL DISTRICT

JOHNSTON COUNTY PUBLIC

SCHOOL HVAC RENOVATION

PROJECT ISSUE & REVISION SCHEDULE

FOUR OAKS ELEMENTARY

Project Number

R23.00325

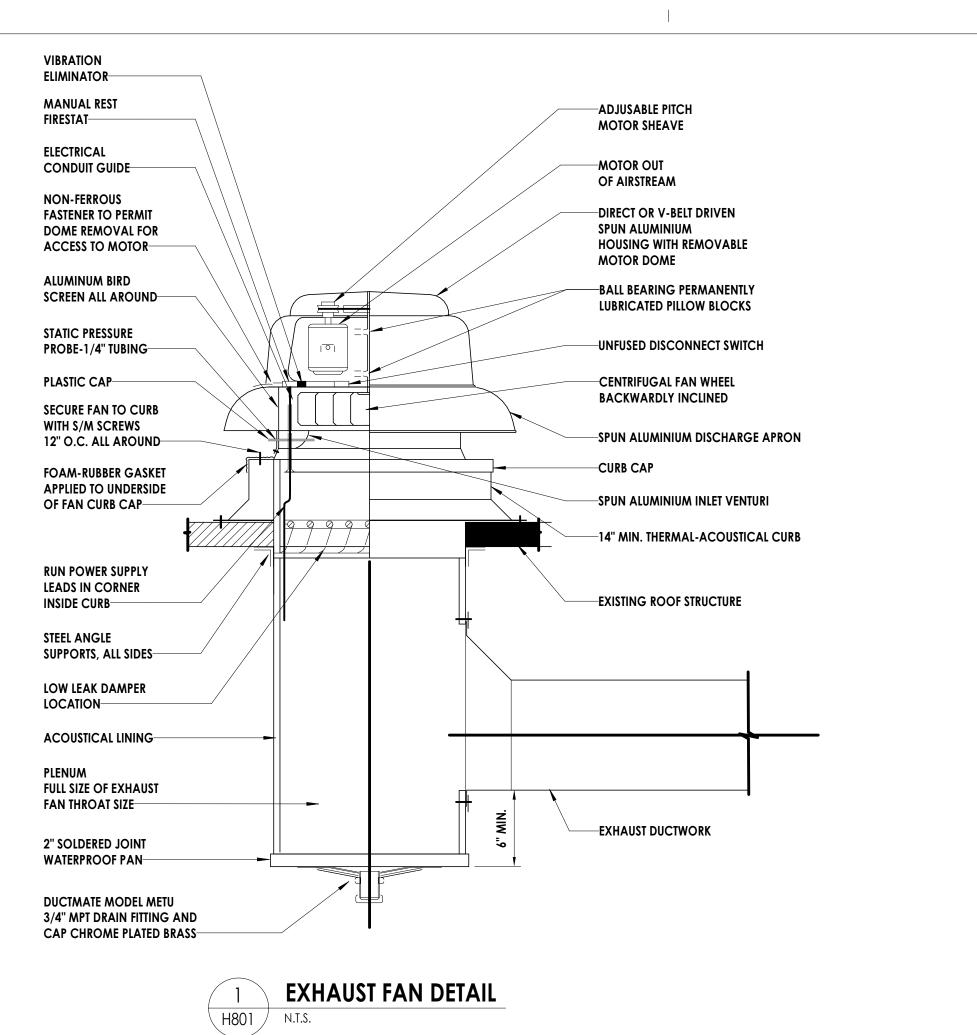
Project Name

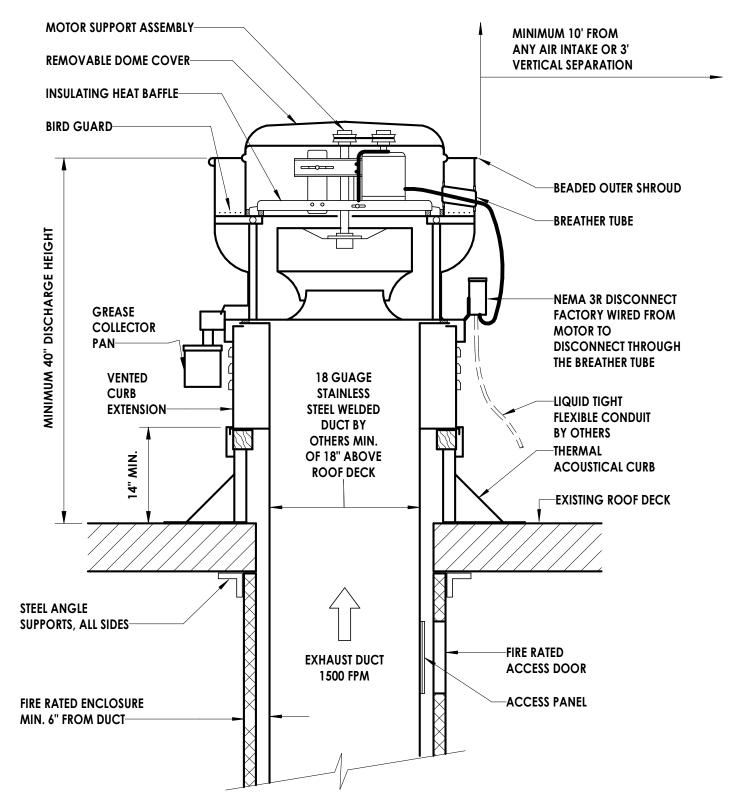
Project Address

180 W Hatcher St, Four Oaks, NC 27524

SHEET INFORMATION 02/17/2025 As indicated Project Status **BID SET** Drawn By Checked By KAB Drawing Title **HVAC DETAILS** 

Drawing Number FOES



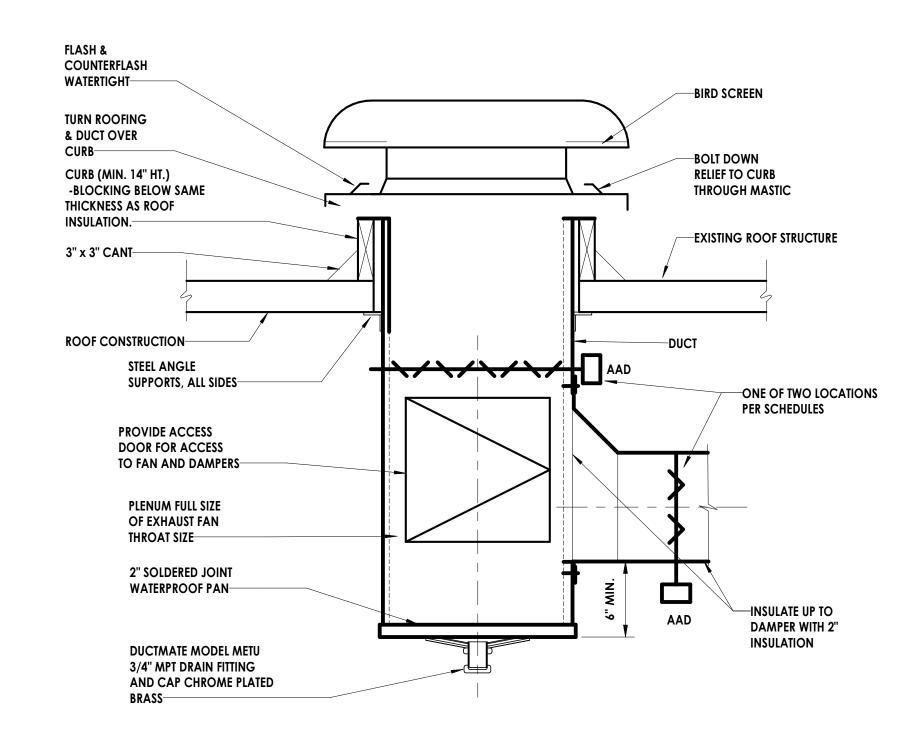


NOTES: PROVIDE HINGE AND SAFETY CABLE FOR ACCESS TO WHEEL AND DUCTWORK. COMPLY WITH NFPA 96, FAN LISTED UNDER WL STD 762 (400°). PROVIDE FIRESTAT FAN TO BE SPARK RESISTANT CONSTRUCTION, AWCA "C".

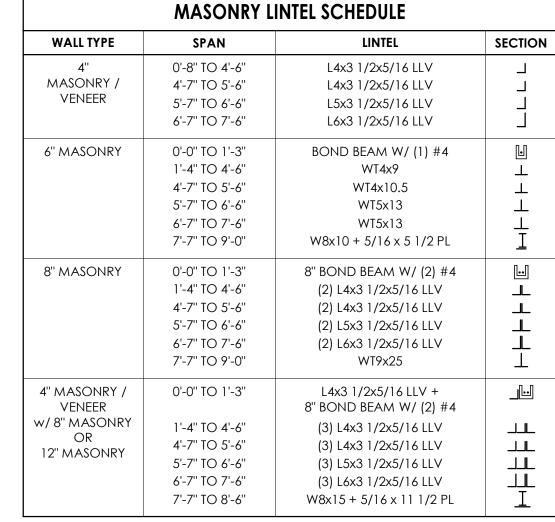
**UP-BLAST EXHAUST FAN DETAIL - GREASE DUCT** 

**EQUIPMENT PLUS 12-INCHES** \_#3 @ 12" O.C. E.W. @ -2" 3/4" CHAMFER (TYP.) -6" OF COMPACTED STONE BASE 4,000 PSI CONCRETE AT 28-DAYS. MAX. SWMP OF 3-1/2" +/-1". MAX. W/C RATION OF 0.45.

# REINFORCED CONCRETE EQUIPMENT PAD H801



**ROOF INTAKE GRAVITY RELIEF DETAIL** 



**SCHEDULE NOTES:** 

1. PROVIDE LINTELS OVER ALL MASONRY OPENINGS AS SCHEDULED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

- 2. MINIMUM BEARING FOR ALL LINTELS SHALL BE 8" EACH END. 3. GROUT SOLID AREA 16" W x 24" H BELOW BEARING UNLESS NOTED OTHERWISE ON
- 4. COORDINATE MASONRY OPENING SIZES AND LOCATIONS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS.
- 5. CONTRACTOR SHALL PROVIDE AN ADDITIONAL 50 FEET OF L5x3-1/2x5/16 ANGLE. 6. FOR MASONRY OPENING SPANS GREATER THAN 6'-0", BOLT ASSEMBLIES TOGETHER AT 1/3 POINTS.

MASONRY LINTEL SCHEDULE

7. FOR ALL W AND WT SHAPE LINTELS, PROVIDE A 1/2x5x7 BEARING PLATE WITH (2) 1/2" DIAMETER x 6" LONG HEADED STUDS, EACH END. 8. STEEL LINTELS EXPOSED TO THE EXTERIOR SHALL BE GALVANIZED UNLESS NOTED

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PROJECT INFORMATION

SCHOOL DISTRICT

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SCHOOL HVAC RENOVATION

FOUR OAKS ELEMENTARY

Project Number

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180 W Hatcher St,

Four Oaks, NC 27524

202-STD DX W/O PUMPS SHOWN BELOW

TOP- DO NOT RESTRICT. SIDES AND END- 6' FROM SOLID SURFACE. FOR COIL NON-HEADER SIDE- 8' REQUIRED FOR COIL SERVICE AREA. IF MULTIPLE UNITS ARE INSTALLED AT THE SAME SITE, A MINIMUM SEPERATION OF 10FT (3M) BETWEEN THE SIDES OF THE MACHINES IS REQUIRED TO MAINTAIN PROPER AIRFLOW. 2. FACTORY WIRING IS IN ACCORDANCE WITH UL 60335-2-40 STANDARDS. FIELD MODIFICATIONS OR ADDITIONS MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES. 3. WIRING FOR MAIN FIELD SUPPLY MUST BE RATED 75°C MINIMUM. USE COPPER FOR ALL UNITS. TEMPERATURE RELIEF DEVICES ARE LOCATED ON FILTER/DRIERS, SUCTION MANIFOLDS, AND LIQUID LINES. THESE DEVICES HAVE 3/8" SAE FLARE CONNECTION. DO NOT

1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:

CAP OR OTHERWISE OBSTRUCT TEMPERATURE RELIEF DEVICES. 5. PRESSURE RELIEF DEVICES ARE LOCATED ON THE LIQUID LINES (IF EQUIPPED) AND SUCTION LINES (IF EQUIPPED). THE DEVICES ON THE LIQUID LINES HAVE 3/8" SAE FLARE CONNECTION. THE DEVICES ON THE SUCTION LINES HAVE 1/4" SAE FLARE CONNECTION. DO NOT CAP OR OTHERWISE OBSTRUCT PRESSURE RELIEF DEVICES. 6. DIMENSIONS SHOWN ARE IN MM, DIMENSIONS IN [ ] ARE IN INCHES. 7. CONTROL BOX SIZE WILL CHANGE BASED ON TONNAGE, VOLTAGE, AND OPTIONS SELECTED.

8. Locate the unit so that the condenser airflow is unrestricted both above and on the sides of the unit. A. Airflow and service clearances are 6 ft (1.8 m) around the unit. B. Acceptable clearance on the evaporator connection side or end opposite the

control box unit can be reduced to 3 ft (1 m) without sacrificing performance as long as the remaining three sides are unrestricted. C. Acceptable clearance on the side with a control box can be reduced to 4 ft (1.3 m), due to NEC regulations, without sacrificing performance as long as the remaining three sides are unrestricted. D. Provide ample room for servicing and removing evaporator. See Fig. 6-43 for

manufacturer's recommendations when local codes call for greater E. If multiple units are installed at the same site, a separation of 10 ft (3 m) between the sides of the machines is required to maintain proper airflow and minimize the chances of condenser air recirculation.

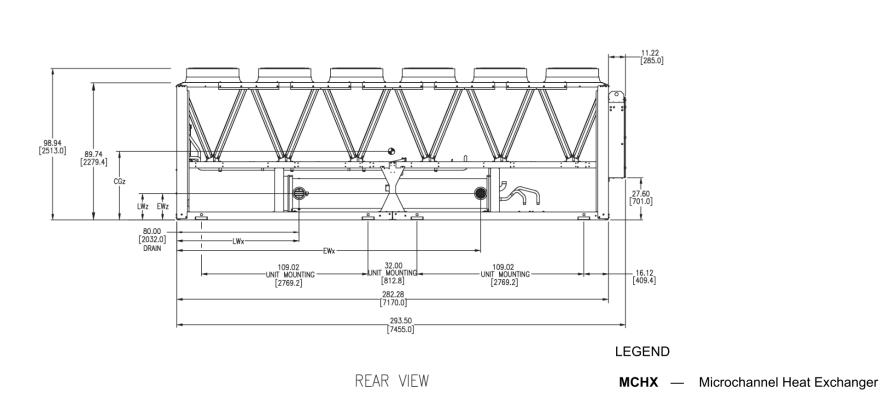
DETAIL A AT (10) PLCS MOUNTING PLATE required clearances. Local codes for clearances take precedence over the SEE ELECTRICAL DETAIL-

			CENTE	R OF G	RAVITY	ENTERI	NG WATE	R (EW)	LEAVIN	IG WATER	R (LW)	ENTERIN	G DESUPI	ERHEATER	LEAVING	DESUPE	RHEATER
UNI	т	COILS	l N	M [INCH	1]	N	M [INCH	]	l N	M [INCH	1]	WATER (	(EDW) MN	[INCH]	WATER	(LDW) MN	[INCH]
0141	.	COILS	CGx	CGy	CGz	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
				,		±.25	±.25	±.25	±.25	±.25	±.25	±.25	±.25	±.25	±.25	±.25	±.25
202-9	CTD.	CUAL	145.3 [3689]	38.7 [984]	39.1 [994]	198.7	30.0	17.2 [438]	80.0 [2032]	30.0 [762]	17.2 [438]	3.9 [98]	30.2 [766]	40.7	3.9 [99]	30.2	61.1 [1552]
202-	מופ	MCHX	145.7 [3702]	38.1 [967]	36.0 [914]	[5046]	[762]	[438]	[2032]	[762]	[438]	[98]	[766]	[1033]	[99]	[766]	[1552]

SYMBOL DENOTES CG CGy 44.54 7.62 [193.6]

EDWy DRAIN DRAIN DRAIN \_\_\_\_LDWy───<del>-</del> 84.92 — [2157.0] MOUNTING HOLES WIDTH

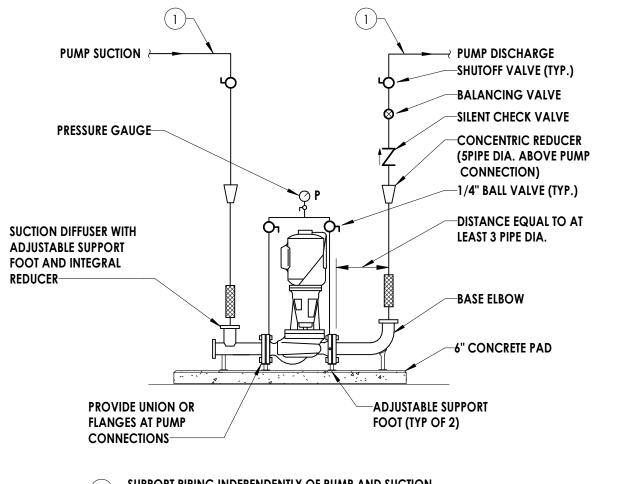
NON-CONTROL PANEL END VIEW



PLAN VIEW

Fig. 35 — 30RC 202 Std DX (Direct Expansion) No Pump

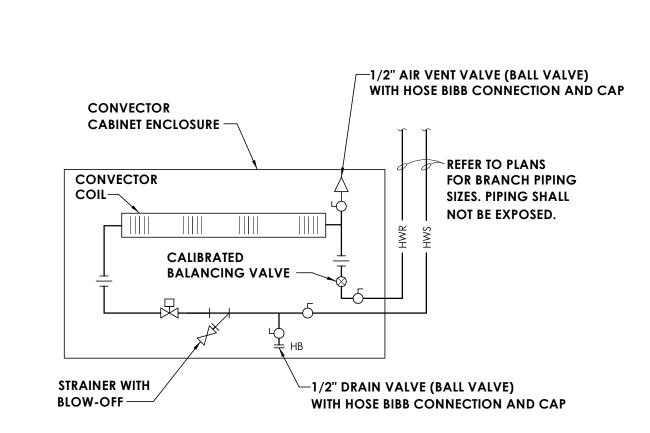
CHILLER DIMENSION DRAWING NOT TO SCALE



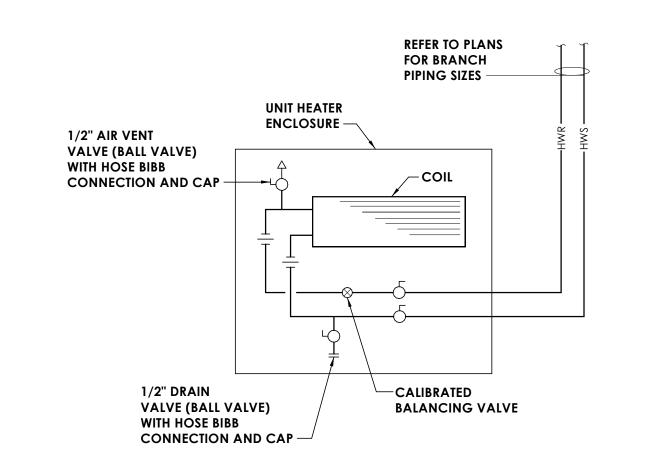
SUPPORT PIPING INDEPENDENTLY OF PUMP AND SUCTION

GENERIC SYMBOLS USED TO SHOW VALVE LOCATION(S) REFER TO SPECIFICATION FOR EXACT VALVE TYPE.













PROFESSIONAL STAMPS

SHEET INFORMATION 02/17/2025 As indicated Project Status **BID SET** Drawn By Checked By KAB Drawing Title **HVAC DETAILS** 

> Drawing Number H801

TAG	MANUFACTURER	MODEL	APPLICATION	MATERIAL	TYPE	FINISH	NOTES
OED	-		•	-	OPEN ENDED DUCT	-	-
RG-1	TITUS	50F	SURFACE MOUNT	ALUMINUM	EGGCRATE RETURN GRILLE	WHITE ENAMEL	3
RG-2	TITUS	301FL	SURFACE MOUNT	ALUMINUM	EXTERIOR SOFFIT RA/EA	BY ARCH.	1,2,3
RG-3	TITUS	50F	LAY-IN	ALUMINUM	EGGCRATE RETURN GRILLE	WHITE ENAMEL	1,3
RG-4	TITUS	350RL	LAY-IN	STEEL	LOUVERED GRILLE	WHITE ENAMEL	1,3
SD-1	TITUS	TMS	LAY-IN	STEEL	3-CONE DIFFUSER	WHITE ENAMEL	3
SD-2	TITUS	300FL	LAY-IN	ALUMINUM	LOUVERED DOUBLE DEFLECTION GRILLE	WHITE ENAMEL	1,3
SD-3	TITUS	300FL	SURFACE MOUNT	ALUMINUM	LOUVERED DOUBLE DEFLECTION GRILLE	WHITE ENAMEL	1,3
SD-4	TITUS	TDC	LAY-IN	STEEL	LOUVERED FACE DIFFUSER	WHITE ENAMEL	1,3

				UN	IT HEATER	RSCHED	ULE (F	IYDRON	NIC)							
					NOMINAL	AIR FLOW	FLOW	P.D	HEATING	EWT	LWT		E	ELECTR	ICAL	
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	CAPACITY (MBH)	(CFM)	GPM	(FT.WG.)	CAPACITY (MBH)	(°F)	(°F)	٧	PH	HZ	MOTOR RATING (HP)	NOTES
UH-106	106 - CHILLER	HEATER	MODINE	V-78	42.6	1155	2.5	0.1	26.7	140	100	120	1	60	1/15	1,2,3
UH-317	317 - ELECTRICAL	HEATER	MODINE	HSB/HC-24	12.6	230	0.7	0.1	7.6	140	100	120	1	60	1/25	1,2,3
2. PROV	IDE FACTORY MOI IDE WITH THERMOS OR BY ARCHITECT.		) WIRED DISCONN	NECT.												

				AIN JLI	ARATOR SCHED	OLL				
						FLOW	PRESSURE DROP			
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	INLET/OUTLET SIZE	(GPM)	(FTWG)	FLUID	HEIGHT (IN.)	DIAMETER (IN.)
AS-1	106A - BOILER ROOM	HEATING HOT WATER	TACO	ACT04-125	4"/4"	260	1.99	WATER	32.0	16.0
AS-2	106 - CHILLER	CHILLED WATER	TACO	ACT08-125	8"/8"	1100	1.98	WATER	52.0	24.0

_																			
									ı	HOOD INFOR	MATION								
		11000				MAY COOKING							EXHAUST PLENUM				11000	HOOD CONF	IGURATION
	TAG	hood Number	MANUFACTURER	MODEL	LENGTH	MAX COOKING TEMP	HOOD	APPLIANCE	DESIGN	TOTAL EXHAUST		RISER	1		RISER	2	HOOD CONSTRUCTION	END TO END	ROW
		TTOMBER				TENT	TYPE	DUTY	CFM/FT	AIR FLOW	DIAMETER	AIR FLOW	STATIC PRESSURE	DIAMETER	AIR FLOW	STATIC PRESSURE	CONOIRCONOIR	LIND TO LIND	KOW
	HOOD-1	1	CAPTIVEAIRE	10530 NDI	10' - 0"	650 °F	I	HEAVY	420	4200	16"	2100	0.750 in-wg	16"	2100	0.750 in-wg	430 SS 100%	ALONE	ALONE

						CONVECTO	OR SCHEDULI	E (HYDRONIC	C)						
TA	.G	LOCATION	SERVICE	MANUFACTURER	MODEL	STYLE	HEIGHT (IN.)	LENGTH (IN.)	DEPTH (IN.)	FLOW (GPM)	WPD (FT.WG.)	BTUH	EWT (°F)	LWT (°F)	NOTES
CON	IV-1	104 - CORRIDOR	HEATER	MODINE	SF-06-64-18	FULLY EXPOSED FLOOR, SLOPED TOP	18	64	6	1.02	2.0	9,965	160.0	120.0	1,2,3,4
NOTES:															
1.		DE ALL NECESSAR	Y ACCESSORIE	S INCLUDING END TRI	M, END ENC	LOSURE, CORNER PIECES AND AC	CCESS DOOR AT	VALVE LOCATIO	N.						
2.	COORE	DINATE PIPING CO	DNNECTION LC	CATIONS IN THE FIELD	D										
3.	PROVID	DE CUSTOM COLO	OR SELECTED B	Y ARCHITECT.											
4.	MOUNT	TED HEIGHT ABOV	'E FINISHED FLO	OOR IS 9'-0".											

								CONI	DENSING I	BOILER SCHED	ULE												
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	FUEL		l .	l .		EFFICIENCY 80°F	GAS PR		MAX. WATER		°F) LWT (°F	) FLUE SIZE		1	ELE	ECTRICA	L		NOTES
17.0	200/11011	JERVICE	WWWINOFACTORER	MODEL	TOLL	(MBH)	(MBH)	(MBH)	RANGE	TO 180°F	MIN.	MAX.	FLOW (GPM)	FLOW (GPM)	1) [ [ ]	T LOL SIZE	V	PH	HZ	MCA	FLA	MOCP	NOTES
B-1	BOILER ROOM	HHW	AERCO	BMK2000	PROPANE	2000	1710-1920	1920	87%-98%	94.60%	4"WC	14"WC	350	25 12	160	8"Ø	120	1	60	-	16	-	1,2,3,4,5,6
B-2	BOILER ROOM	HHW	AERCO	BMK2000	PROPANE	2000	1710-1920	1920	87%-98%	94.60%	4"WC	14"WC	350	25 12	160	8"Ø	120	1	60	-	16	-	1,2,3,4,5,6
2. FURNIS 3. PROVIE	DE THE MANUFAC' H DISCONNECT. DE ON CONCRETE IRNDOWN.		MENDED CONDENS GPAD.	ATE NEUTRALIZ	ATION KIT.																		

								Α	IR HANDL	ING U	NIT SCH	HEDULE	(HHW/C	HW,	PART	1/2) (	(FURN	NISHED BY O	WNER)											
										SUF	PLY FAN														EXHAUS	ST FAN				
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	ARRANGEMENT	AIR	ECD	TOTAL S.P.	NUMBER OF		MOTOR				ELECT	[RICAL		STANDARD MIN.	MAKE-UP	MAX. DCV OA	AIRFLOW	ESP	NUMBER OF	:	MOTOR			ŀ	ELECTRIC	CAL
170	LOCATION	JERVICE	MANOTACTORER	MODEL	ARRANOLIVILINI	FLOW (CFM)	(IN H20)		MOTORS	BHP	HP	TYPE	DRIVE	٧	PH	HZ	FLA	OA (CFM)	MIN OA (CFM)	(CFM)	(CFM)	(IN.WG.)	MOTORS	BHP	HP	TYPE	DRIVE	V	PH	HZ FLA
AHU-1	MECH 8	GYM	CARRIER	39MN 14W	HHW/CHW	7000	2	3.75	1	8.4	10	AIRFOIL	DIRECT	460	3	60	12	2843	-	3445	-	-	-	-	-	-	-	-	-	
AHU-2	CHILLER 106	KITCHEN	CARRIER	39MN 03W	HHW/CHW	1134	1.5	2.31	1	1.2	1.5	AIRFOIL	DIRECT	460	3	60	2	1134	-	-	1134	1.5	1	0.80	1	AIRFOIL	DIRECT	460	3	60 1.6
AHU-3	CHILLER 106	CAFE	CARRIER	39MN 25W	HHW/CHW	11050	2	2.92	1	9.9	10	AIRFOIL	DIRECT	460	3	60	12.5	1173	4200+1200	5115	11050	1.6	1	6.9	7.5	AIRFOIL	DIRECT	460	3	60 9.7

			ŀ	HOT W	ATER HEATIN	G COIL							CHILLED W	'ATER COOLI	NG C	OIL					FILTERS				
TAG	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	CAPACITY (MBH)	FLUID TYPE	GPM	WPD (FT.WG)	EA EDB (°F)	EWB (°F)	LA LDB (°F)	LVA/D	TOTAL CAPACITY	SENSIBLE CAPACITY (MBH)	EWT (°F)	LWT (°F)	FLUID TYPE	GPM	WPD (FT. WG)	VELOCITY (FPM)	EFFICIENCY	PRE	FINAL	WEIGHT (LBS)	NOT
AHU-1	43.4	98.3	140	100	438.7	WATER	22.3	2.7	84.2	69.5	53.8	53.6	333.0	223.7	45.0	55.0	WATER	66.4	10.4	488	MERV 13	8A	13A	4,244	1,2,3,
AHU-2	19	89.9	140	100	100.6	WATER	5.1	0.2	93.0	76.0	52.5	52.5	83.6	47.5	45.0	55.0	WATER	16.7	5.8	327	MERV 13	8A	13A	2,005	1,2,3,
AHU-3	42	97.3	140	100	699.5	WATER	35.5	4.8	80.0	67.0	53.9	53.6	436.0	306.3	45.0	55.0	WATER	86.9	11.8	452.7	MERV 13	8A	13A	5,473	1,2,3,

EQUIPMENT IN THIS SCHEDULE IS TO BE FURNISHED BY THE OWNER AND INSTALLED IN THIS CONTRACT. REFER TO APPENDIX 1 - OWNER PROVIDED SUPPLEMENTAL INFORMATION FOR MANUFACTURER'S EQUIPMENT INFORMATION AND COORDINATE WITH OWNER'S REPRESENTATIVE FOR AN ADDITIONAL PRODUCT INFORMATION REQUIRED FOR INSTALLATION, TESTING AND STARTUP.

PROVIDE FACTORY MOUNTED AND WIRED DISCONNECT.

DUCT CONNECTION ARRANGEMENT PER PLAN AND SECTION VIEW DRAWINGS.
PROVIDE WITH NEW EQUIPMENT PAD.
CONTRACTOR IS RESPONSIBLE FOR VFDS ON SUPPLY AND EXHAUST FAN.

CONTRACTOR IS RESPONSIBLE FOR VFD ON SUPPLY AND EXHAUST FAN.

FACTORY MOUNTED AND WIRED DISCONNECT.

COORDINATE CONTROLS INTEGRATION WITH BUILDING MANAGEMENT SYSTEM.

PROVIDE BOILER SAFETY SHUT-DOWN SWITCH.

							All	R HANDL	ING UNIT	SCHEE	OULE (C	HW PA	RT 1/2)	(FURI	NISHE	D BY	OWN	IER)											
										SUP	PLY FAN							CTANDARD AND						RETURI	N FAN	-	-		
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	ARRANGEMENT	AIR FLOW	ESP	TOTAL S.P.	NUMBER OF	DLID	MOTOR	TVDE	DRIVE		ELECT	RICAL		STANDARD MIN OA (CFM)	OA (CFM)	AIR FLOW	ESP	NUMBER OF	DLID	MOTOR	TYPE	רטווער		ELECTRIC/	٩L
						(CFM)	(IN H20)	(IN H2O)	MOTORS	BHP	HP	ITPE	DRIVE	٧	PH	HZ	FLA	OA (CIM)	OA (CINI)	(CFM)	(IN H20)	MOTORS	BHP	HP	ITPE	DRIVE	V	PH ŀ	IZ FLA
AHU-4	MECH	MEDIA	CARRIER	39MN 17W	CHW	8800	2	3.76	1	10.3	15	AIRFOIL	DIRECT	460	3	60	17.7	730	1786	8800	1.63	1	6.5	7.5	AIRFOIL	DIRECT	460	3 6	30 9.7
AHU-5	MECH	ART & MUSIC	CARRIER	39MN 17W	CHW	8996	2	3.59	1	10.3	15	AIRFOIL	DIRECT	460	3	60	17.7	600	1534	-	-	-	-	-	-	-	-	-	
AHU-6	MECH 134	TECH CLRMS & MAIN OFFICE	CARRIER	39MN 21W	CHW	9167	2	3.36	1	8.3	10	AIRFOIL	DIRECT	460	3	60	12.5	710	1390	9167	1.59	1	5.2	7.5	AIRFOIL	DIRECT	460	3 (	9.7
AHU-7	MECH	KINDER CLRM	CARRIER	39MN 36W	CHW	16900	2	3.19	1	17.4	20	AIRFOIL	DIRECT	460	3	60	24.0	500	2330	-	-	-	-	-	-	-	-		

				AIR	HAN	DLING U	NIT SCHE	DUL	E (CI	HW PA	ART 2	/2) (FUF	RNISHED	<b>BY OWNI</b>	ER)			
						CHILLED W	ATER COOL	ING C	OIL					FILTERS				1
T .	٨G	E.	ΑT	L	ΑT	TOTAL	SENSIBLE		LVA/T	רוווח		WDD	VELOCITY				WEIGHT	NOTES
1/	NG.	EDB	EWB	LDB	LWB	CAPACITY	CAPACITY	EWT	LWT	FLUID TYPE	GPM	WPD	VELOCITY	EFFICIENCY	PRE	FINAL	(LBS)	INOTES
		(°F)	(°F)	(°F)	(°F)	(MBH)	(MBH)	(°F)	(°F)	ITPE		(FT. WG)	(FPM)					
AH	U-4	78.5	65.6	52.9	52.5	331.5	239.9	45.0	55.0	WATER	66.1	11.7	520	MERV 13	8A	13A	4,390	1,2,3,4,
AH	U-5	76.7	64.6	54.0	53.6	286.2	217.7	45.0	55.0	WATER	57.1	7.4	531	MERV 13	8A	13A	2,747	1,2,3,4,
AH	U-6	80.0	67.0	51.0	51.0	421.7	281.9	45.0	55.0	WATER	84.1	12.4	427	MERV 13	8A	13A	4,875	1,2,3,4,5
AH	U-7	77.3	64.5	54.5	53.8	521.5	411.2	45.0	55.0	WATER	104.0	5.6	460	MERV 13	8A	13A	7,748	1,2,3,4,
NOTES:	•																	
1.	_	VENT II	N THIS S	CHED	JI F IS 1	O BE FURNI	SHED BY TH	F OWI	NFR A	ND INST	ALLED	IN THIS CO	ONTRACT. R	REFER TO APP	FNDIX	( 1 - OV	VNFR PRO	VIDED
''				_				-						VITH OWNER'			_	
					-	_	IRED FOR IN											
2.	PROVII	DE WIT	H FACT	ORY N	MOUNT	ED AND WII	RED DISCOI	NNEC.	Γ.									
3.	DUCT (	CONNE	ECTION	I ARRA	NGEM	IENT PER PL	an and seg	CTION	VIEW	DRAWI	NGS.							
4.	PROVII																	
I _																		

												FA	N CC	OIL UNIT	SCHE	DULE (	(FURNIS	HED BY (	WNE	R)																			
									FAN								CHILLED W	VATER COOL	ING COI	IL						HOT W	ATER RE-HE	ATING CO	)IL			FIL	.TER		ELEC	CTRICAL			
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	ARRANGEMENTS	AIR FLOW (CFM)	ESP (IN.WG.)	NUMBER OF MOTORS	MOTOR HP	TYPE	DRIVE	MINIMUM OA (CFM)	EDB (°F)	EAT EWB (°F)	LA LDB (°F)	T LWB (°F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EWT (°F)	LWT (°F)	FLUID TYPE	GPM	WPD (FT.WG)	EAT (°F)	_AT (°F) E	ewt L	WT CAPA °F) (ME		LUID		WPD (.WG)	ELOCITY	EFFICIENCY	V F	PH HZ	MCA F	-LA MOC	CP (LBS	
FCU-128	MECH 128.1	STORAGE	CARRIER	42DVA20	VERT. FLOOR	1760	1.0	1	1	FORWARD CURVE	DIRECT	510	80.0	66.6	55.0	54.5	67.6	47.3	45	55	WATER	13.5	7.7	53	97 1	140	100 78	.6 W	ATER	4	1.9	-	MERV 8A	208	3 60	4.63	3.7 15	5 350	1,3
FCU-139	MECH 139	STORAGE	CARRIER	42DVA20	VERT. FLOOR	1815	1.0	1	1	FORWARD CURVE	DIRECT	659	80.0	66.6	55.0	54.5	67.6	47.3	45	55	WATER	13.5	7.7	53	97 1	140	100 78	.6 W	ATER	4	1.9	-	MERV 8A	208 3	3 60	4.63	3.7 15	350	1,3
FCU-300	CORRIDOR 300A	CORRIDOR - 300A	CARRIER	42DCA08	HORIZ. CEILING	800	0.37	1	1/2	FORWARD CURVE	DIRECT	300	81.8	72.8	63.6	62.0	32.1	16.7	45	55	WATER	6.4	19.1	19.7	77.2 1	140	100 24	.9 W	ATER	1.3	2.3	-	MERV 8A	208 1	1 60	3.00	2.4 15	<i>i</i> 115	1,2,3
FCU-300A	CORRIDOR 300A	CORRIDOR - 300A	CARRIER	42DCA08	HORIZ. CEILING	800	0.37	1	1/2	FORWARD CURVE	DIRECT	300	81.8	72.8	63.6	62.0	32.1	16.7	45	55	WATER	6.4	19.1	19.7	77.2 1	140	100 24	.9 W	ATER	1.3	2.3	-	MERV 8A	208 1	1 60	3.00	2.4 15	, 115	1,2,3
FCU-302	GUIDANCE 302	OFFICE 301/302	CARRIER	42DCA12	HORIZ. CEILING	1240	0.30	1	1/2	FORWARD CURVE	DIRECT	170	78.5	68.0	62.2	60.0	35.1	23.8	45	55	WATER	7.0	9.6	51.5	84.9 1	140	100 34	.1 W	ATER	1.7	4.7	-	MERV 8A	208 1	1 60	4.16	3.7 15	, 190	1,2,3
FCU-303	CLRM 303	CLRM 303	CARRIER	42DCA06	HORIZ. CEILING	400	0.25	1	1/2	FORWARD CURVE	DIRECT	110	80.6	68.5	62.0	59.7	14.3	10.2	45	55	WATER	2.8	4.7	54.8	81.8 1	140	100 14	.7 W	ATER	0.7	0.9	-	MERV 8A	208 1	1 60	2.63	2.1 15	, 190	1,2,3
FCU-307	CLRM 307	<b>CLRM 307</b>	CARRIER	42DCA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	6.2	81.4 1	140	100 36	.7 W	ATER	1.9	5.3	-	MERV 8A	208 1	1 60	4.16	4.1 15	, 190	1,2,3
FCU-308	CLRM 308	<b>CLRM 308</b>	CARRIER	42DCA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	6.2	81.4 1	140	100 36	.7 W	ATER	1.9	5.3	-	MERV 8A	208 1	1 60	4.16	4.1 15	5 190	1,2,3
FCU-309	CLRM 309	CLRM 309	CARRIER	42DCA12	HORIZ. CEILING	1125	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	6.2	81.4 1	140	100 36	.7 W	ATER	1.9	5.3	-	MERV 8A	208 1	1 60	4.16	4.1 15	190	1,2,3
FCU-310	CLRM 310	CLRM 310	CARRIER	42DCA12	HORIZ. CEILING	1125	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	6.2	81.4 1	140	100 36	.7 W	ATER	1.9	5.3	-	MERV 8A	208 1	1 60	4.16	4.1 15	190	1,2,3
FCU-311	CLRM 311	CLRM 311	CARRIER	42DCA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	56.2	81.4 1	140	100 36	.7 W	ATER	1.9	5.3	-	MERV 8A	208 1	1 60	4.16	4.1 15	5 190	1,2,3
FCU-312	CLRM 312	CLRM 312	CARRIER	42DCA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	6.2	81.4 1	140	100 36	.7 W	ATER	1.9	5.3	-	MERV 8A	208 1	1 60	4.16	4.1 15	190	1,2,3
FCU-313	CLRM 313	CLRM 313	CARRIER	42DCA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	6.2	81.4 1	140	100 36	.7 W	ATER	1.9	5.3	-	MERV 8A	208 1	1 60	4.16	4.1 15	5 190	1,2,3
FCU-314	CLRM 314	CLRM 314	CARRIER	42DCA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	6.2	81.4 1	140	100 36	.7 W	ATER	1.9	5.3	-	MERV 8A	208 1	1 60	4.16	4.1 15	5 190	1,2,3

PROVIDE WITH LOW PROFILE CONDENSATE PUMP.
EQUIPMENT IN THIS SCHEDULE IS TO BE FURNISHED BY THE OWNER AND INSTALLED IN THIS CONTRACT. REFER TO APPENDIX 1 - OWNER PROVIDED SUPPLEMENTAL INFORMATION AND COORDINATE WITH OWNER'S REPRESENTATIVE FOR AN ADDITIONAL PRODUCT INFORMATION REQUIRED FOR INSTALLATION, TESTING AND STARTUP.

					PUMP	SCHEDU	LE									
TAG	LOCATION	CEDVICE	AAANII IEA CTUDED	MODEL	TYPE	FLUID	FLOW	HEAD		МОТО	R	Е	LECTRICA	٩L	EFFICIENCY	NOTES
IAG	LOCATION	SERVICE	MANUFACTURER	MODEL	IIIFE	LLUID	(GPM)	(FT.WG.)	RPM	HP	STARTER	V	PH	HZ	EFFICIENCI	NO1E3
CHP-1	106 - CHILLER	CHILLER-1	TACO	SKS4009D	INLINE	WATER	455	50	1760	15	VFD	460	3	60 Hz	81%	1 - 7
CHP-2	106 - CHILLER	CHILLER-2	TACO	SKS4009D	INLINE	WATER	455	50	1760	15	VFD	460	3	60 Hz	81%	1 - 7
CHW PUMP-1	106 - CHILLER	AREA 1 & 2 CHW	TACO	SKS6011D	INLINE	WATER	830	80	1760	16.7	VFD	460	3	60 Hz	81%	1 - 7
CHW PUMP-2	106 - CHILLER	AREA 1 & 2 CHW	TACO	SKS6011D	INLINE	WATER	830	80	1760	16.7	VFD	460	3	60 Hz	81%	1 - 7
CHW PUMP-3	106 - CHILLER	AREA 3 & 4 CHW	TACO	SKS3006D	INLINE	WATER	270	70	3500	7.5	VFD	460	3	60 Hz	75%	1 - 7
CHW PUMP-4	106 - CHILLER	AREA 3 & 4 CHW	TACO	SKS3006D	INLINE	WATER	270	70	3500	7.5	VFD	460	3	60 Hz	75%	1 - 7
HHW PUMP-1	106 - CHILLER	AREA 1 & 2 HHW	TACO	SKS3006D	INLINE	WATER	190	80	3500	7.5	VFD	460	3	60 Hz	76%	1 - 7
HHW PUMP-2	106 - CHILLER	AREA 1 & 2 HHW	TACO	SKS3006D	INLINE	WATER	190	80	3500	7.5	VFD	460	3	60 Hz	76%	1 - 7
HHW PUMP-3	106 - CHILLER	AREA 3 & 4 HHW	TACO	SKS2006D	INLINE	WATER	70	35	1760	1.5	VFD	460	3	60 Hz	72%	1 - 7
HHW PUMP-4	106 - CHILLER	AREA 3 & 4 HHW	TACO	SKS2006D	INLINE	WATER	70	35	1760	1.5	VFD	460	3	60 Hz	72%	1 - 7
P-AHU-2	106 - CHILLER	AHU-2 HHW COIL	TACO	V15L	INLINE	WATER	5	10	3700	270W	ECM	120	1	60 Hz		1 - 7
P-B-1	106A - BOILER	BOILER 1	TACO	SKS3006D	INLINE	WATER	100	20	1760	1.5	DISC.	208	3	60 Hz	77%	1 - 7
P-B-2	106A - BOILER	BOILER 2	TACO	SKS3006D	INLINE	WATER	100	20	1760	1.5	DISC.	208	3	60 Hz	77%	1 - 7
NOTES.														•		

1. FURNISH DISCONNECT.

- MOTOR SHALL BE PROVIDED WITH AEGIS RINGS AS STANDARD CASING/VOLUTE SEAL CAVITY SHALL BE DRILLED AND TAPPED FOR EXTERNAL SEAL FLUSH LINES AND TAPPED FOR GAUGES. PROVIDE INSIDE SEAL AS STANDARD.
- ALL PUMP MOUNTED DRIVES SHALL HAVE VIBRATION ISOLATION PROTECTION AS REQUIRED BY DRIVE MANUFACTURER.
  THE CONTROL PLATFORM SHALL INCLUDE A SUBROUTINE EQUAL TO THE TACO SELF SENSING SERIES WITH PROBALANCE.
  PUMPS SHALL UTILIZE NFC IDENTIFICATION TECHNOLOGY TO PROVIDE ALL PUMP INFORMATION KNOWLEDGE BASES.

						FI OW	ECD				EL	ECTRIC <i>A</i>	٩L				MEICHT	
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	TYPE	FLOW (CFM)	ESP (IN.WG.)	DRIVE	ВНР	MOTOR HP	MOTOR RPM	VFD	V	PH	HZ	SONES	WEIGHT (LBS)	NO
EF-1	TOILET ROOM	LAUNDRY TOILET 135D	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	1
EF-2 EF-3	TOILET ROOM  MOP ROOM	JAN. 105D	GREENHECK GREENHECK	SP-A90WL SP-A90WL	CEILING CEILING	75 75	0.25 0.25	DIRECT	0.01	-	900	NO NO	120 V 120 V	1	60 Hz	1	12 12	1
EF-4	KILN ROOM	KILN 116C	GREENHECK	SP-A200	CEILING	210	0.35	DIRECT	0.03	-	900	NO	120 V	1	60 Hz	2	24	1
EF-5	111 - MECH.	AHU-05	GREENHECK	BSQ-300	INLINE	10600	1.50	BELT	5.3	7.5	909	YES	460 V	3	60 Hz	22	-	1
EF-6	111 - MECH.	TOILETS 109 &110	GREENHECK	CSP-A710	INLINE	600	0.25	DIRECT	0.16	-	1,080	NO	120 V	1	60 Hz	3.2	36	1
EF-7	TOILET ROOM	PRINCIPAL TLT 127A	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	1
EF-8	TOILET ROOM	MAIN OFFICE TLT 132A	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	1
EF-9 EF-10	TOILET ROOM TOILET ROOM	MAIN OFFICE TLT 133A NURSE TOILET 139A	GREENHECK GREENHECK	SP-A90WL SP-A90WL	CEILING CEILING	75 75	0.25 0.25	DIRECT	0.01	-	900	NO NO	120 V 120 V	1	60 Hz	1	12 12	1
EF-10	ROOF	DISHWASHER HOOD	GREENHECK	CUBE-140	UPBLAST	1200	0.25	BELT	0.01	1/4	997	NO	120 V	1	60 Hz	8.3	67	1,
EF-13	TOILET ROOM	CLRM TLT 108A	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	1
EF-14	TOILET ROOM	ISS TOILET 107A	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	1
EF-15	ROOF	MECH/PUMP ROOM	GREENHECK	GB-180	DOWNBLAST	3000	0.25	BELT	0.43	1/2	849	NO	120 V	1	60 Hz	9.7	92	1,
EF-16	ROOF	KITCHEN HOOD	GREENHECK	CUBE-200	UPBLAST	4000	0.50	BELT	0.90	1	887	NO	208 V	3	60 Hz	14.1	113	1
EF-17	GYM ROOF	GYM	GREENHECK	GB-220	DOWNBLAST	3500	0.25	BELT	0.37	1/2	537	NO	208 V	3	60 Hz	9	114	1,
EF-18	GYM ROOF	GYM	GREENHECK	GB-220	DOWNBLAST	3500	0.25	BELT	0.37	1/2	537	NO	208 V	3	60 Hz	9	114	1
EF-19	ROOF	MECH ROOM 139	GREENHECK	G-095-VG	DOWNBLAST	500	0.25	DIRECT	0.05	1/6	1,155	NO	120 V	1	60 Hz	5.2 4.1	29	1,2
EF-20 EF-21	ROOF TOILET ROOM	TOILETS 121 & 122 TLT 113	GREENHECK GREENHECK	G-070-VG SP-A90WL	DOWNBLAST CEILING	250 75	0.25 0.25	DIRECT	0.02	1/15	1,481 900	NO NO	120 V 120 V	1	60 Hz	1	12	1
EF-22	TOILET ROOM	TLT 114	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	,
EF-23	TOILET ROOM	CLRM TOILET 108	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-24	TOILET ROOM	CLRM TOILET 108	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-25	TOILET ROOM	CLRM TOILET 109	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-26	TOILET ROOM	CLRM TOILET 109	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-27	TOILET ROOM	CLRM TOILET 107	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-28 EF-29	TOILET ROOM	CLRM TOILET 107	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-30	TOILET ROOM TOILET ROOM	CLRM TOILET 110 CLRM TOILET 110	GREENHECK GREENHECK	SP-A90WL SP-A90WL	CEILING CEILING	75 75	0.25 0.25	DIRECT	0.01	-	900	NO NO	120 V 120 V	1	60 Hz	1	12 12	
EF-31	TOILET ROOM	CLRM TOILET 111	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-32	TOILET ROOM	CLRM TOILET 111	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-33	JANITOR'S CLOSET	JAN CLST 116	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-34	ELECTRICAL ROOM	ELEC RM 117	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	1
EF-35	STAFF TOILET ROOM	STAFF TOILET 115	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-36	TOILET ROOM	CLRM TOILET 112	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-37 EF-38	TOILET ROOM TOILET ROOM	CLRM TOILET 112 CLRM TOILET 113	GREENHECK GREENHECK	SP-A90WL SP-A90WL	CEILING CEILING	75 75	0.25 0.25	DIRECT	0.01	-	900	NO NO	120 V 120 V	1	60 Hz	1	12 12	
EF-39	TOILET ROOM	CLRM TOILET 113	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-40	TOILET ROOM	CLRM TOILET 124	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-41	TOILET ROOM	CLRM TOILET 124	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-42	TOILET ROOM	CLRM TOILET 123	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-43	TOILET ROOM	CLRM TOILET 125	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-44	TOILET ROOM	CLRM TOILET 125	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-45 EF-46	130 - MECHANICAL	TOILETS 128 & 129	GREENHECK	CSP-A710	INLINE	600	0.25	DIRECT	0.16	-	1,080	NO	120 V	1	60 Hz	3.2	36	-
EF-47	TOILET ROOM TOILET ROOM	STAFF TOILET 131  JAN CLST 132	GREENHECK GREENHECK	SP-A90WL SP-A90WL	CEILING CEILING	75 75	0.25 0.25	DIRECT	0.01	-	900	NO NO	120 V 120 V	1	60 Hz	1	12 12	-
EF-48	150 - MECHANICAL	TOILETS - 154 & 154	GREENHECK	CSP-A710	INLINE	600	0.25	DIRECT	0.16	-	1,080	NO	120 V	1	60 Hz	3.2	36	
EF-49	JANITOR'S CLOSET	JAN CLST 152	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
EF-50	TOILET ROOM	TOILET 153	GREENHECK	SP-A90WL	CEILING	75	0.25	DIRECT	0.01	-	900	NO	120 V	1	60 Hz	1	12	
F-301A	OFFICES	LOUNGE 301A	GREENHECK	CSP-A390-VG	INLINE	170	0.25	DIRECT	0.03	20 W	920	NO	120 V	1	60 Hz	0.7	24	
F-303	CLASSROOM	CLASSROOM 303	GREENHECK	CSP-A390-VG	INLINE	110	0.25	DIRECT	0.03	22 W	1,071	NO	120 V	1	60 Hz	8.0	24	
EF-307	CLASSROOM	CLASSROOM 307	GREENHECK	CSP-A390-VG	INLINE	250	0.25	DIRECT	0.05	36 W	1,044	NO	120 V	1	60 Hz	0.7	24	
F-308	CLASSROOM	CLASSROOM 308	GREENHECK	CSP-A390-VG	INLINE	250	0.25	DIRECT	0.05	36 W	1,044	NO	120 V	1	60 Hz	0.7	24	-
:F-309 :F-310	CLASSROOM CLASSROOM	CLASSROOM 309 CLASSROOM 310	GREENHECK GREENHECK	CSP-A390-VG CSP-A390-VG	INLINE	250 250	0.25 0.25	DIRECT	0.05 0.05	36 W	1,044	NO NO	120 V 120 V	1	60 Hz	0.7	24	
EF-311	CLASSROOM	CLASSROOM 311	GREENHECK	CSP-A390-VG	INLINE	250	0.25	DIRECT	0.05	36 W	1,044	NO	120 V	1	60 Hz	0.7	24	+
EF-312	CLASSROOM	CLASSROOM 312	GREENHECK	CSP-A390-VG	INLINE	250	0.25	DIRECT	0.05	36 W	1,044	NO	120 V	1	60 Hz	0.7	24	
EF-313	CLASSROOM	CLASSROOM 313	GREENHECK	CSP-A390-VG	INLINE	250	0.25	DIRECT	0.05	36 W	1,044	NO	120 V	1	60 Hz	0.7	24	
EF-314	CLASSROOM	CLASSROOM 314	GREENHECK	CSP-A390-VG	INLINE	250	0.25	DIRECT	0.05	36 W	1,044	NO	120 V	1	60 Hz	0.7	24	
F-AHU-7	105 - MECHANICAL	AHU-7	GREENHECK	BSQ-360	INLINE	16900	1.50	BELT	8.3	10	-	YES	460 V	3	60 Hz	26	830	
ES:		ED AND WIRED DISCON			NOTES:												ht sensof	_

GENERAL NOTES

EQUIPMENT WARRANTY.

. WHERE EQUIPMENT IS NOTED TO BE FURNISHED BY THE OWNER, THE CONTRACTOR SHALL RECEIVE (UNLOAD FROM TRUCK AND STORE) AND INSTALL THE LISTED EQUIPMENT. COORDINATE SCHEDULE, RECEIVING LOGISTICS AND STARTUP WITH

THE OWNER AND EQUIPMENT MANUFACTURER'S REPRESENTATIVE. THE CONTRACTOR SHALL PROVIDE ALL CONTROLS AND ACCESSORIES TO MAKE A COMPLETE AND OPERABLE SYSTEM. THE CONTRACTOR SHALL RECEIVE, INSPECT, INSTALL OWNER PURCHASED EQUIPMENT AND SHALL BE RESPONSIBLE FOR COMPLYING WITH THE MANUFACTURER'S REQUIREMENTS TO MAINTAIN THE

				GRAVITY	<b>VENTI</b>	LATOR	SCHEDULE								
					THR	OAT	THROAT AREA		HOOD	)	HOOD AREA	AIR FLOW	MIN.	S.P.	
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	Н	W	(SQ.FT.)	L	W	Н	(SQ.FT.)	(CFM)	OA/EA	(IN.W.G.)	1
GI-1	AREA 1A ROOF	AHU-2 & AHU-3	LOREN COOK	GI-48X48	48"	48"	16.0	84"	82"	26"	31.83	8200	2300	0.04	
GI-2	AREA 1A ROOF	AHU-04	LOREN COOK	GI-48X48	48"	48"	16.0	84"	82"	26"	31.83	8800	1790	0.01	
GI-3	AREA 1A ROOF	AHU-1	LOREN COOK	GI-24X54	24"	54"	8.5	72"	54"	18"	24.5	7000	2843	0.04	
GI-4	AREA 1A ROOF	FCU-1	LOREN COOK	GI-12X12	12"	12"	1.00	24"	28"	11"	3.67	1220	1220	0.01	
GI-5	AREA 1A ROOF	FCU-2	LOREN COOK	GI-12X12	12"	12"	1.00	24"	28"	11"	3.67	1760	510	0.01	
GR-1	AREA 1A ROOF	AHU-2 & AHU-3	LOREN COOK	GR-48X48	48"	48"	16.0	72"	64"	20"	16.0	8200	2300	0.02	
GR-2	AREA 1A ROOF	AHU-04	LOREN COOK	GR-48X48	48"	48"	16.0	72"	64"	20"	16.0	8800	1786	0.01	
GR-3	AREA 1BC ROOF	TOILET 109, 110	LOREN COOK	GR-12X12	12"	12"	1.00	24"	28"	11"	3.67	600	600	0.08	
GR-4	AREA 1BC ROOF	NURSE TOILET 139A	LOREN COOK	GR-12X12	12"	12"	1.00	24"	28"	11"	3.67	75	75	0.01	
GR-5	AREA 1BC ROOF	AHU-05A & B	LOREN COOK	GR-48X48	48"	48"	16.0	72"	64"	20"	16.0	10600	1535	0.06	
GR-6	AREA 1BC ROOF	AHU-06	LOREN COOK	GR-30X18	30"	18"	3.75	48"	33.75"	16.69"	7.5	10400	1390	0.02	
GR-7	AREA 1DE ROOF	MECH RM AHU-7	LOREN COOK	GR-48X48	48"	48"	16.0	72"	64"	20"	16.0	16900	700	0.06	

NOTES:

1. PROVIDE MANUFACTURER'S 14-INCH INSULATED AND WIND RATED ROOF CURB.

2. PROVIDE BIRD SCREEN.

3. PROVIDE BAROMETRIC BACKDRAFT DAMPER.

					ACCEPTANCE	TOTAL VOLUME	DIMENSIONS		WEIGHT	
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	GALLONS	(GALS)	(IN.)	TYPE	(LBS)	N
ET-1	RM 106	HHW	TACO	CA140-125	30	37	40"DIAX20"	BLADDER	195	
ET-2	RM 106	CHW	TACO	CA215-125	40	57	58"DIAX20"	BLADDER	290	

					DIME	2140121	FDFF A DF A	FI 0)4/	
TAG	SERVICE	MANUFACTURER	MODEL	TYPE		ISIONS	FREE AREA	FLOW	NOTE
.,	0202	THE REPORT OF TH		=	WIDTH (IN.)	HEIGHT (IN.)	(SQ.FT.)	(CFM)	
L-4	AHU-5 OA	GREENHECK	EDD-601	STATIONARY INTAKE	48	84	15.2	10600	1,2
L-5	AHU-6 OA	GREENHECK	EDD-601	STATIONARY INTAKE	42	72	10.92	10400	1,2
L-6	AHU-7 OA	GREENHECK	EDD-601	STATIONARY INTAKE	50	81	14.3	16900	1,2
L-7	BOILER ROOM	GREENHECK	EDD-401	STATIONARY	24	18	1.16	500	1,2
L-8	CORR.	GREENHECK	ESJ-202	STATIONARY INTAKE	8	8	0.1	300	1,2,3
L-9	<varies></varies>	GREENHECK	ESJ-202	<varies></varies>	8	8	0.1	250	1,2,3
L-10	CLRM RELIEF	GREENHECK	ESJ-202	STATIONARY RELIEF	8	8	0.1	170	1,2,3
L-11	CLRM RELIEF	GREENHECK	ESJ-202	STATIONARY RELIEF	8	8	0.1	110	1,2,3
L-302	OFFICE 301/302	GREENHECK	ESJ-202	STATIONARY INTAKE	24	12	0.5	170	1,2,3
L-303	CLRM 303	GREENHECK	ESJ-202	STATIONARY INTAKE	24	12	0.5	110	1,2,3
L-307	CLRM	GREENHECK	ESJ-202	STATIONARY INTAKE	24	12	0.5	250	1,2,3
L-308	CLRM	GREENHECK	ESJ-202	STATIONARY INTAKE	24	12	0.5	250	1,2,3
L-309	CLRM	GREENHECK	ESJ-202	STATIONARY INTAKE	24	12	0.5	250	1,2,3
L-310	CLRM	GREENHECK	ESJ-202	STATIONARY INTAKE	24	12	0.5	250	1,2,3
L-311	CLRM	GREENHECK	ESJ-202	STATIONARY INTAKE	24	12	0.5	250	1,2,3
L-312	CLRM	GREENHECK	ESJ-202	STATIONARY INTAKE	24	12	0.5	250	1,2,3
L-313	CLRM	GREENHECK	ESJ-202	STATIONARY INTAKE	24	12	0.5	250	1,2,3
IOTES:314	CLRM	GREENHECK	ESJ-202	STATIONARY INTAKE	24	12	0.5	250	1,2,3

PROVIDE BIRD SCREEN.
PROVIDE CUSTOM KYNAR COATING. COLOR BY ARCHITECT.
MOUNTED IN WINDOW SPANDREL PANEL.

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Raleigh, NC 27604

CPLteam.com



PROJECT INFORMATION
Project Number
R23.00325

Client Name

JOHNSTON COUNTY PUBLIC

SCHOOL DISTRICT

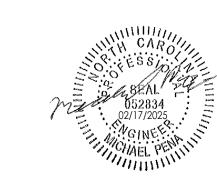
Project Name

SCHOOL HVAC RENOVATION

FOUR OAKS ELEMENTARY

180 W Hatcher St, Four Oaks, NC 27524

PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale
02/17/2025

Project Status
BID SET
Drawn By Checked By

Project Status
BID SET
Drawn By Checked By
KAB RM
Drawing Title
HVAC SCHEDULES

FOES H900

					SINGLI	E DUCT V	ARIABLE A	AIR VOL	UME TE	ERMIN	AL UNIT (	HYDRC	NIC H	EAT)											
						INLET SIZE	OUTLET SIZE	MAX.	MIN.	S-	ATIC PRESSU	RE	NC	DISE				НО	T WATER	HEATIN	IG COIL				
TAG	LOCATION	AREA SERVED	SYSTEM	MANUFACTURER	MODEL	(IN.)	(IN.)	(CFM)	(CFM)	INLET	OUTLET	MIN.	NC RAD.	NC DISC.	CFM	МВН	EAT (°F)	LAT (°F)	GPM	EWT (°F)	LWT (°F)	WPD (FT.WG.)	FLUID	ROWS	NOTES
VAV-04-01A	172 - MEDIA CENTER	172 - MEDIA CENTER	AHU-04	TITUS	DESV 40	24x16	38x18	2425	1970	1	0.25	0.17	31	24	1970	60.4	58.9	90	3.26	140	98.6	1.91	WATER	2	1
VAV-04-01B	172 - MEDIA CENTER	172 - MEDIA CENTER	AHU-04	TITUS	DESV 40	24x16	38x18	2675	1975	1	0.25	0.2	31	24	1975	63.6	58.9	90	3.27	140	98.6	1.91	WATER	2	1
VAV-04-02	119 - REFERENCE CLRM	119 - REFERENCE CLRM	AHU-04	TITUS	DESV 12	12	16x15	720	295	1	0.25	0.06	18	22	295	9.9	58.9	90	0.53	140	101.5	0.11	WATER	2	1
VAV-04-03 VAV-04-04	104 - CORRIDOR 113D - STORAGE	104 - CORRIDOR 113D - STORAGE	AHU-04 AHU-04	TITUS	DESV 06 DESV 10	06 10	12x8 14x12.5	350 440	210 320	1	0.25 0.25	0.26 0.05	21	23 22	460 215	8.4 7.2	58.9 58.9	90 90	1.36 0.7	140 140	116.3	0.34	WATER	2 2	1
VAV-04-05	117 - CLRM	117 - CLRM	AHU-04	TITUS	DESV 10	10	14x12.5	1020	555	1	0.25	0.31	23	27	405	15.7	58.9	90	0.72	140	100.2	0.18	WATER	2	1
VAV-04-06	118 - ADMIN OFFICE	118 - ADMIN OFFICE	AHU-04	TITUS	DESV 04	04	12x8	105	45	1	0.25	0.03	15	27	45	2.3	58.9	90	0.98	140	132.4	0.69	WATER	1	1
VAV-04-07	117A - WORKROOM	117A - WORKROOM	AHU-04	TITUS	DESV 08	08	20x17.5	610	480	1	0.25	0.26	20	27	480	16.2	58.9	90	1.07	140	109.1	0.29	WATER	2	1
VAV-05-01	107A - CLRM	106A - MUSIC CLRM	AHU-05	TITUS	DESV 40	24x16	38x18	2500	2500	1	0.25	0.16	30	24	2500	76.0	62	90	4.52	140	102.1	3.4	WATER	2	1
VAV-05-02 VAV-05-03	107A - CLRM 108A - CLRM	107A - CLRM 108A - CLRM	AHU-05 AHU-05	TITUS	DESV 14 DESV 14	14	20x17.5 20x17.5	1315 1365	1315 1365	1	0.25 0.25	0.17 0.18	18 18	19 19	1315 1365	40.0 41.5	62	90 90	2.66	140 140	106.1	2.85 3.14	WATER	2 2	1
VAV-05-04	112 - STORAGE	112 - STORAGE	AHU-05	TITUS	DESV 06	06	12x8	290	290	1	0.25	0.19	18	25	290	9.2	62	90	0.59	140	105.8	0.08	WATER	2	1
VAV-05-05	115A - OFFICE	115A - OFFICE	AHU-05	TITUS	DESV 08	08	12x10	440	440	1	0.25	0.15	18	25	440	13.4	62	90	1.2	140	114.7	0.27	WATER	2	1
VAV-05-06	116A - ART CLRM	116A - ART CLRM	AHU-05	TITUS	DESV 40	24x16	38x18	2490	2490	1	0.25	0.16	30	24	2490	75.7	62	90	4.49	140	102	3.36	WATER	2	1
VAV-05-07	115A - OFFICE	101 - CORRIDOR	AHU-05	TITUS	DESV 14	14	20x17.5	1200	1200	1	0.25	0.14	18	19	1200	36.5	62	90	2.31	140	104.4	2.22	WATER	2	
VAV-06-01	144A - COMP LAB	144A - COMP LAB	AHU-06	TITUS	DESV 14	14	20x17.5	2020	1125	1	0.25	0.33	22	20	1125	33.5	62.6	90	2.11	140	103.3	1.89	WATER	2	1
VAV-06-02	143A - CLRM	143A - CLRM	AHU-06	TITUS	DESV 10	10	14x12.5	820	290	1	0.25	0.12	23	25	335	9.8	62.6	90	0.55	140	97.7	0.12	WATER	2	1
VAV-06-03 VAV-06-04	142A - CLRM 141A - CLRM	142A - CLRM 141A - CLRM	AHU-06 AHU-06	TITUS	DESV 12 DESV 12	12 12	16x15	820 830	260 290	1	0.25 0.25	0.07	19 19	23 23	335 375	10.4 11.0	62.6 62.6	90 90	0.55 0.62	140 140	97.7 98.7	0.12 0.15	WATER	2 2	<u>1</u>
VAV-06-05	121A - MAIL ROOM	121A - MAIL ROOM	AHU-06	TITUS	DESV 12	12	16x15	1215	610	1	0.25	0.05	20	24	610	20.2	62.6	90	1.07	140	100.7	0.13	WATER	2	1
VAV-06-06	136A - LOUNGE	136A - LOUNGE	AHU-06	TITUS	DESV 08	08	12x10	530	530	1	0.25	0.20	19	27	530	15.8	62.6	90	1.27	140	111.4	0.39	WATER	2	1
VAV-06-07	121A - MAIL ROOM	121A - MAIL ROOM	AHU-06	TITUS	DESV 12	12	16x15	1105	1105	1	0.25	0.22	20	24	615	20.2	62.6	90	1.11	140	101.1	0.49	WATER	2	1
VAV-06-08	101 - CORRDIOR	101 & 102 - CORRIDOR	AHU-06	TITUS	DESV 16	16	24x18	2030	1825	1	0.25	0.24	16	18	1825	54.3	62.6	90	3.89	140	107.9	2.14	WATER	2	1
VAV-07-01	106 - LOUNGE	106 - LOUNGE	AHU-07	TITUS	DESV 06	06	12x8	365	110	1	0.25	0.28	21	23	265	8.9	62.4	90	0.51	140	104.3	0.06	WATER	2	1
VAV-07-02 VAV-07-03	108 - CLRM 107 - CLRM	108 - CLRM 107 - CLRM	AHU-07 AHU-07	TITUS	DESV 14 DESV 14	14	20x17.5 20x17.5	1725 1560	520 470	1	0.25 0.25	0.26	20	20 19	1470 1050	44.1 31.5	62.4 62.4	90	3.18	140 140	108.4	3.91 1.58	WATER	2 2	1
VAV-07-04	109 - CLRM	109 - CLRM	AHU-07	TITUS	DESV 14	14	20x17.5	1500	450	1	0.25	0.20	20	19	1090	32.7	62.4	90	2.01	140	102.9	1.75	WATER	2	1
VAV-07-05	110 - CLRM	110 - CLRM	AHU-07	TITUS	DESV 12	12	16x15	1425	430	1	0.25	0.32	22	25	750	22.5	62.4	90	1.42	140	103.7	0.75	WATER	2	1
VAV-07-06	111 - CLRM	111 - CLRM	AHU-07	TITUS	DESV 12	12	16x15	1425	430	1	0.25	0.32	22	25	750	22.5	62.4	90	1.42	140	103.7	0.75	WATER	2	1
VAV-07-07 VAV-07-08	102A - CORRIDOR 112 - CLRM	102A - CORRDIOR 112 - CLRM	AHU-07 AHU-07	TITUS	DESV 14 DESV 14	14	20x17.5 20x17.5	1495 1425	450 430	1	0.25 0.25	0.20 0.19	20 19	19 19	1495 1065	45.5 31.9	62.4	90 90	2.85 1.94	140	104.1 102.4	1.23	WATER	2 2	1
VAV-07-09	113 - CLRM	113 - CLRM	AHU-07	TITUS	DESV 14	14	20x17.5	1400	420	1	0.25	0.18	19	19	1065	31.9	62.4	90	1.94	140	102.4	1.63	WATER	2	1
VAV-07-10	124 - CLRM	124 - CLRM	AHU-07	TITUS	DESV 12	12	16x15	1250	375	1	0.25	0.26	20	24	705	21.2	62.4	90	1.29	140	102.6	0.64	WATER	2	1
VAV-07-11	114 - CONFERENCE	114 - CONFERENCE	AHU-07	TITUS	DESV 06	06	12x8	440	135	1	0.25	0.39	23	24	290	9.2	62.4	90	0.59	140	105.8	0.08	WATER	2	1
VAV-07-12	102A - CORRIDOR	102A - CORRDIOR	AHU-07	TITUS	DESV 16	16	24x18	1770	535	I	0.25	0.19	15	17	1770	53.1	62.4	90	3.71	140	107.3	1.97	WATER	2	
VAV-08-01	123 - CLRM	123 - CLRM	AHU-08	TITUS	DESV 14	14	20x17.5	1425	430	1	0.25	0.19	19	19	1245	37.3	62	90	2.44	140	105.1	2.45	WATER	2	1
VAV-08-02 VAV-08-03	125 - CLRM 126 - CLRM	125 - CLRM 126 - CLRM	AHU-08 AHU-08	TITUS	DESV 12 DESV 12	12 12	16x15	1425 1350	430 405	1	0.25 0.25	0.32 0.29	22	25 25	750 755	22.5 22.6	62	90 90	1.42	140 140	103.7	0.75 0.77	WATER	2 2	1
VAV-08-04	127 - CLRM	127 - CLRM	AHU-08	TITUS	DESV 12	12	16x15	1275	385	1	0.25	0.27	20	24	735	22.0	62	90	1.38	140	103.7	0.72	WATER	2	1
VAV-08-05	138 -CLRM	138 - CLRM	AHU-08	TITUS	DESV 12	12	16x15	1275	385	1	0.25	0.27	20	24	945	28.3	62	90	2.02	140	108	1.4	WATER	2	1
VAV-08-06	137 - CLRM	137 - CLRM	AHU-08	TITUS	DESV 12	12	16x15	1275	385	1	0.25	0.14	23	25	385	11.5	62	90	0.6	140	95.7	0.17	WATER	2	1
VAV-08-07 VAV-08-08	136 - CLRM 134 - READING	136 - CLRM 134 - READING	AHU-08 AHU-08	TITUS	DESV 12 DESV 08	12 08	16x15 12x10	1325 390	400 120	1	0.25 0.25	0.29 0.07	22 18	25 25	800 180	24.0 5.4	62	90 90	1.56 0.29	140 140	104.8 96.5	0.89	WATER	2 2	<u>1</u>
VAV-08-09	103 - CORRIDOR	103 - CORRIDOR	AHU-08	TITUS	DESV 14	14	20x17.5	1320	400	1	0.25	0.07	20	19	465	13.9	62	90	0.75	140	97.4	0.02	WATER	2	1
VAV-08-10	135 - READNG	135 - READING	AHU-08	TITUS	DESV 06	06	12x8	360	110	1	0.25	0.27	21	23	275	9.0	62	90	0.55	140	105.2	0.07	WATER	2	1
VAV-09A-01	165 - CLRM	165 - CLRM	AHU-09A	TITUS	DESV 12	12	16x15	1460	440	1	0.25	0.33	23	25	875	25.3	63.4	90	1.79	140	106.5	1.13	WATER	2	1
VAV-09A-02	164 - CLRM	164 - CLRM	AHU-09A	TITUS	DESV 14	14	20x17.5	1480	445	1	0.25	0.20	20	19	880	28.5	63.4	90	1.5	140	99.7	1.03	WATER	2	1
VAV-09A-03	163 - CLRM	163 - CLRM	AHU-09A	TITUS	DESV 12	12	16x15	1160	350	1	0.25	0.23	20	24	850	24.6	63.4	90	1.72	140	106	1.05	WATER	2	1
VAV-09A-04	162 - CLRM 181 - CCC	162 - CLRM 181 - CCC	AHU-09A AHU-09A	TITUS	DESV 12 DESV 12	12 12	16x15	1160	350	1	0.25	0.23	20	24 27	970 420	28.0 12.5	63.4	90 90	2.11	140	108.5	0.2	WATER	2 2	1
VAV-09A-05 VAV-09A-06	160 - PLANNING	160 - PLANNING	AHU-09A	TITUS	DESV 12	06	10x13	1400 390	420 120	1	0.25 0.25	0.16	24	24	295	9.2	63.4	90	0.66	140	96.2 106.2	0.08	WATER	2	1
VAV-09A-07	159 - CLRM	159 - CLRM	AHU-09A	TITUS	DESV 12	12	16x15	1360	410	1	0.25	0.30	22	25	780	22.5	63.4	90	1.5	140	104.3	0.83	WATER	2	1
VAV-09A-08	158 - CLRM	158 - CLRM	AHU-09A	TITUS	DESV 12	12	16x15	1400	420	1	0.25	0.31	22	25	1035	29.9	63.4	90	2.37	140	110	1.85	WATER	2	1
VAV-09A-09	103 - CORRIDOR	103 - CORRIDOR	AHU-09A	TITUS	DESV 12	12	16x15	1055	320	1	0.25	0.20	19	24	1055	30.5	63.4	90	2.44	140	110.4	1.95	WATER	2	1
VAV-09B-01	145 - CLRM	145 - CLRM	AHU-09B	TITUS	DESV 12	12	16x15	1380	415	1	0.25	0.30	22	25	850	25.2	62.7	90	1.72	140	106	1.05	WATER	2	1
VAV-09B-02 VAV-09B-03	146 - CLRM 147 - CLRM	146 - CLRM 147 - CLRM	AHU-09B AHU-09B	TITUS	DESV 12 DESV 12	12 12	16x15	1380 1160	415 350	1	0.25	0.30	22	25 24	850 635	25.2 20.4	62.7	90 90	1.72	140	106	1.05 0.5	WATER	2 2	1
VAV-09B-03 VAV-09B-04	147 - CLRM 148 - CLRM	147 - CLRM 148 - CLRM	AHU-09B	TITUS	DESV 12	12	16x15	1340	405	1	0.25	0.23	22	25	635	20.4	62.7	90	1.12	140	101.2	0.5	WATER	2	1
VAV-09B-05	149 - CONFERENCE	149 - CONFERENCE	AHU-09B	TITUS	DESV 08	08	12x10	465	140	1	0.25	0.09	19	27	190	5.5	62.7	90	0.33	140	99.7	0.2	WATER	2	1
VAV-09B-06	156 - CLRM	156 - CLRM	AHU-09B	TITUS	DESV 12	12	16x15	1240	375	1	0.25	0.26	20	24	690	21.0	62.7	90	1.25		102.3	0.61	WATER	2	1
VAV-09B-07 VAV-09B-08	157 - CLRM 103A - CORRIDOR	157 - CLRM 103A - CORRIDOR	AHU-09B AHU-09B	TITUS	DESV 12 DESV 16	12 16	16x15 24x18	1300 1680	390 510	1	0.25 0.25	0.28 0.18	20 15	24 17	915 1690	27.1 50.7	62.7 62.7	90 90	1.92 3.45	140 140	107.3 106.4	1.28 1.73	WATER	2 2	1
* A * -U7D-U0	100A - COKKIDOK	100A - COKKIDOK	AIIU-U7D	11103	PF34 10	10	44X I O	1000	310	1	U.Z3	U.10	1 13	17	1070	JU./	04./	70	J.43	140	100.4	I./S	WAICK	4	<u> </u>

								СН	ILLER SCH	EDULE (A	IR CO	OLED)														
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	NOMINAL TON	CAPACITY (MBH)	NUMBER OF COMPRESSORS		COMPRESSOR TYPE	STAGES	GPM	FLUID	EWT (°F)	LWT (°F)	WPD (FT.WG.)	FOUL FACTOR	REFRI TYPE	GERANT CHARGE	V	ELEC PH	CTRICAL HZ		МОСР	EER (KW/TON)	NPLV.IP (BTU/W-HR)	NOTES
CHILLER-1	AT GRADE	CHILLED WATER	CARRIER	30RC-202	202	2274	6	2	SCROLL	6	453	WATER	52	42	13.2	0.000100	R-32	348 LB	460	3	60	424	450	1.221	16.81	1-9
CHILLER-2	AT GRADE	CHILLED WATER	CARRIER	30RC-202	202	2274	6	2	SCROLL	6	453	WATER	52	42	13.2	0.000100	R-32	348 LB	460	3	60	424	450	1.221	16.81	1-9
NOTES:					•					•																

# NOTES: 1. FREEZE PROTECTION.

SUCTION LINE INSULATION. FACTORY MOUNTED AND WIRED DISCONNECT.
SINGLE POINT POWER CONNECTION.

BACNET COMMUNICATIONS.

GREENSPEED HIGH-EFFICIENCY VARIABLE CONDENSER FANS.
AL FIN/CU TUBE.
LOW SOUND OPTION.
HAIL GUARDS.

						SPLIT SY:	STEM AIR CO	NDITION SCHED	ULE									
TAG (INDOOR/OUTDOOR)	INDOOR LOCATION	SERVICE	MANUFACTURER	INDOOR MODEL	OUTDOOR MODEL	INDOOR UNIT CONFIGURATION	INDOOR AIR FLOW (CFM)	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTU/HR)	REF. TYPE	SEER	СОР	ELECT V F	RICAL - C PH HZ	OUTDOOR MCA		WEIGHT LBS. (INDOOR/OUTDOOR)	NOTES
SSI-1 / SSO-1	300 - CORRIDOR	HEATING & COOLING	CARRIER	RAV-SM422UTP-UL	RAV-SP422AT2P-UL	4-WAY CEILING CASSETTE	1250/870/650	42,000	47,000	R454B	22.1	12.0	208	1 60	32	40	65.1 / 233.7	1,2,3,4,5
SSI-2 / SSO-2	300 - CORRIDOR	HEATING & COOLING	CARRIER	RAV-SM422UTP-UL	RAV-SP422AT2P-UL	4-WAY CEILING CASSETTE	1250/870/650	42,000	47,000	R454B	22.1	12.0	208	1 60	32	40	65.1 / 233.7	1,2,3,4,5

PROVIDE WITH ADVANCED WIRED CONTROLLER.
PROVIDE WITH TEMPERATURE SENSOR.

PROVIDE WITH EIGHT ERATURE SENSOR.

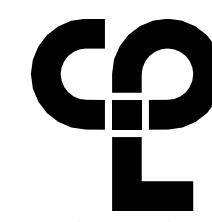
PROVIDE WITH DISCONNECT SWITCH.

SIZE REFRIGERANT PIPING AND SPECIALTIES PER MANUFACTURER'S RECOMMENDATIONS.

INDOOR UNIT POWER THROUGH OUTDOOR UNIT.

GENERAL NOTES

1. WHERE EQUIPMENT IS NOTED TO BE FURNISHED BY THE OWNER, THE CONTRACTOR SHALL RECEIVE (UNLOAD FROM TRUCK AND STORE) AND INSTALL THE LISTED EQUIPMENT. COORDINATE SCHEDULE, RECEIVING LOGISTICS AND STARTUP WITH THE OWNER AND EQUIPMENT MANUFACTURER'S REPRESENTATIVE. THE CONTRACTOR SHALL PROVIDE ALL CONTROLS AND ACCESSORIES TO MAKE A COMPLETE AND OPERABLE SYSTEM. THE CONTRACTOR SHALL RECEIVE, INSPECT, INSTALL OWNER PURCHASED EQUIPMENT AND SHALL BE RESPONSIBLE FOR COMPLYING WITH THE MANUFACTURER'S REQUIREMENTS TO MAINTAIN THE EQUIPMENT WARRANTY.



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PROJECT INFORMATION Project Number

R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT Project Name

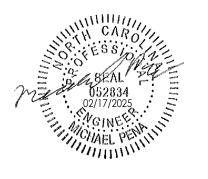
FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

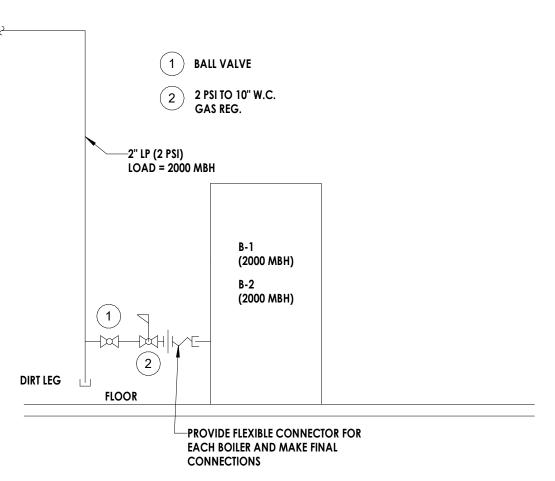
PROFESSIONAL STAMPS



SHEET INFORMATION

02/17/2025 Project Status BID SET Drawn By
KAB

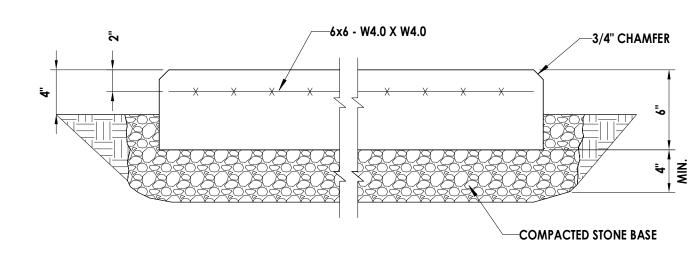
Drawing Title
HVAC SCHEDULES



1	GAS PIPING TO BOILER
P000	NO SCALE

	1 BALL VALVE	
	2 PSI TO 10" W.C. GAS REG.	
	1" LP (2 PSI)	
	PROVIDE LP EXISTING GAS WATER HEATER 600 MBH EA.	
DIRT LEG	FLOOR FLOOR	

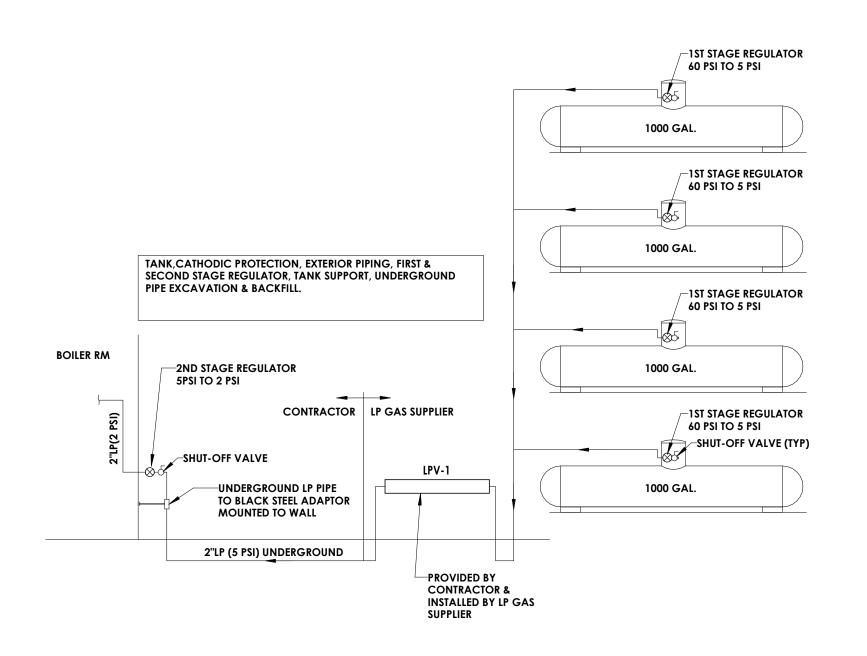




# **EQUIPMENT CONCRETE PAD DETAIL FOR LOCATION ON GRADE**

NOTE: 1. COORDINATE SIZE WITH L.P. TANK & EQUIPMENT VENDOR. 2. COORDINATE EQUIPMENT SIZE PAD WITH EQUIPMENT & PROVIDE EXTENSION OF PAD A MIN. OF 12" BEYOND PERIMETER ON ALL SIDES.

# CONCRETE EQUIPMENT PAD DETAIL



		PIPING MATERIA	AL SCHEDULE	
SERVICE	SIZE	PIPE MATERIAL	FITTING MATERIAL	JOINTS
PROPANE GAS - ABOVE GROUND	ALL	SCHEDULE 80, ASTM A53, BLACK STEEL PIPE, THREADED AND COUPLED	150 PSI BLACK MALLEABLE IRON, THREADED	ASME B1.20.1 THREADED, PIPE-JOINT COMPOUND SHALL BE COMPATIBLE FOR L SERVICE
PROPANE GAS - BELOW GROUND	ALL	(PE) POLYETHYLENE PIPING, ASTM D 2513, SDR 11, WITH TRACER WIRE	PE FITTINGS PER ASTM D 2683 SOCKET FUSION TYPE WITH DIMENSIONS MATCHING PE PIPE	SOCKET FUSION TYPE PER ASTM D 2683
BELOW GROUND TO ABOVE GROUND TRANSITION FITTING	ALL	POLYETHYLENE PIPE TO SCH. 40 BLACK STEEL	FACTORY FABRICATED FITTINGS WITH PE PIPE COMPLYING WITH ASTM D 2513, SDR 11; AND STEEL PIPE COMPLYING WITH ASTM A 53 /A 53 M BLACK STEEL SCH. 40	THREADED END CONNECTORS
PROPANE GAS - EQUIPMENT CONNECTION	ALL	PROVIDE FLEXIBLE STAINLESS STEEL BELLOWS WITH WOVEN, FLEXIBLE, BRONZE, WIRE- REINFORCED PROTECTIVE JACKET	THREADED END CONNECTIONS TO MATCH EQUIPMENT CONNECTED AND SHALL BE CAPABLE OF 3/4" MISALIGNMENT. 36 INCH MAXIMUM LENGTH, APPROVED FOR LP GAS SERVICE	THREADED END CONNECTORS, MAXIMUM INLET PRESSURE = 2 PSI MAX.
PROPANE GAS - PRESSURE REGULATOR	ALL	CAST IRON BODY AND DIAPHRAGM WITH ALUMINUM ORIFICE, ANZI Z21.80	NITRILE RUBBER SEAT DISC, ATMOSPHERIC VENT WITH STAINLESS STEEL SCREEN, THREADED END CONNECTORS	THREADED END CONNECTORS, MAXIMUM INLET PRESSURE = 5 PSI MAX.
PROPANE GAS - SHUTOFF VALVE	ALL	CAST IRON LUBRICATED PLUG VALVES WITH THREADED ENDS, MSS SP-78,	CAST IRON BODY COMPLYING WITH ASTM A 126 CLASS B, BRONZE PLUG, THERMOPLASTIC COATED SEAT, LISTED & LABELED NRTL	THREADED END CONNECTORS, PRESSURE CLASS = 125 PSI
PROPANE GAS - STAGE 1 PRV	ALL	CAST IRON BODY AND DIAPHRAGM WITH ALUMINUM ORIFICE, ANZI Z21.80	NITRILE RUBBER SEAT DISC, ATMOSPHERIC VENT WITH STAINLESS STEEL SCREEN, THREADED END CONNECTORS	THREADED END CONNECTORS, MAXIMUM INLET PRESSURE = 100 PSI MAX.
PROPANE GAS - STAGE 2 PRV	ALL	CAST IRON BODY AND DIAPHRAGM WITH ALUMINUM ORIFICE, ANZI Z21.80	NITRILE RUBBER SEAT DISC, ATMOSPHERIC VENT WITH STAINLESS STEEL SCREEN, THREADED END CONNECTORS	THREADED END CONNECTORS, MAXIMUM INLET PRESSURE = 5 PSI MAX.

			LP GAS EQUIF	PMENT SCHEDI	JLE 		
EQUIP I.D.	EQUIPMENT DESCRIPTION	CAPACITY	MANUFACTURER	MODEL	POWER REQ.	NOTES	IN COMPLIANCE WITH
LP-1	PROPANE TANK - ABOVE GROUND	1,000 GAL.	N/A	N/A	N/A	PROVIDED & INSTALLED BY FERREL GAS CO.	
LP-2	PROPANE TANK - ABOVE GROUND	1,000 GAL.	N/A	N/A	N/A	PROVIDED & INSTALLED BY FERREL GAS CO.	
LP-3	PROPANE TANK - ABOVE GROUND	1,000 GAL.	N/A	N/A	N/A	PROVIDED & INSTALLED BY FERREL GAS CO.	
LP-4	PROPANE TANK - ABOVE GROUND	1,000 GAL.	N/A	N/A	N/A	PROVIDED & INSTALLED BY FERREL GAS CO.	
LPV-1	ELECTRIC LPG VAPORIZER	75 GPH	ALGAS-SDI	Z150	480 V - 3 PH	PROVIDED BY CONTRACTOR & INSTALLED BY FERREL GAS CO.	ANSI/ASME Y 14.5 - 2009

PLUMBING / PIPIN	<u>ig legend</u>
	L.P. GAS PIPING (LP)
<del></del>	TEE OUTLET - UP
<del></del>	TEE OUTLET - DOWN
	CONNECTION - BOTTOM
·	CONNECTION - TOP

**ELBOW - TURNED UP** 

		LP GAS E	QUIPMENT SCHEDU	LE		
SYM.	EQUIPMENT	LOCATION	PROVIDED & INSTALLED BY	LP INPUT	GAS PRES. @ UNIT	GAS PIPE & PRV PROVIDED & INSTALLED BY:
B-1	BOILER	BOILER ROOM (50%)	MECHANICAL	2,000,000	4" - 14" W.C.	PLUMBING
B-2	BOILER	BOILER ROOM (50%)	MECHANICAL	2,000,000	4" - 14" W.C.	PLUMBING
WH-1	(E) WATER HEATER	BOILER ROOM (50%)	LP GAS CONVERSION KIT	600,000	4" - 14" W.C.	PLUMBING
WH-2	(E) WATER HEATER	BOILER ROOM (50%)	LP GAS CONVERSION KIT	600,000	4" - 14" W.C.	PLUMBING
			TOTAL LP INPUT	5,200,000		
			TOTAL LP @ 50%	2,600,000		

COORDINATE LP GAS PIPING TO LP TANKS WITH LOCAL LP GAS PROVIDER LP GAS PIPE SIZING BASED ON TABLE 402.4(1) LESS TAN 2 PSI TOTAL LENGTH OF PIPE RUN USED = 50.0'

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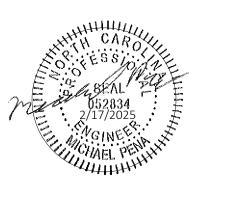
PROJECT INFORMATION Project Number R23.00325 JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT Project Name FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

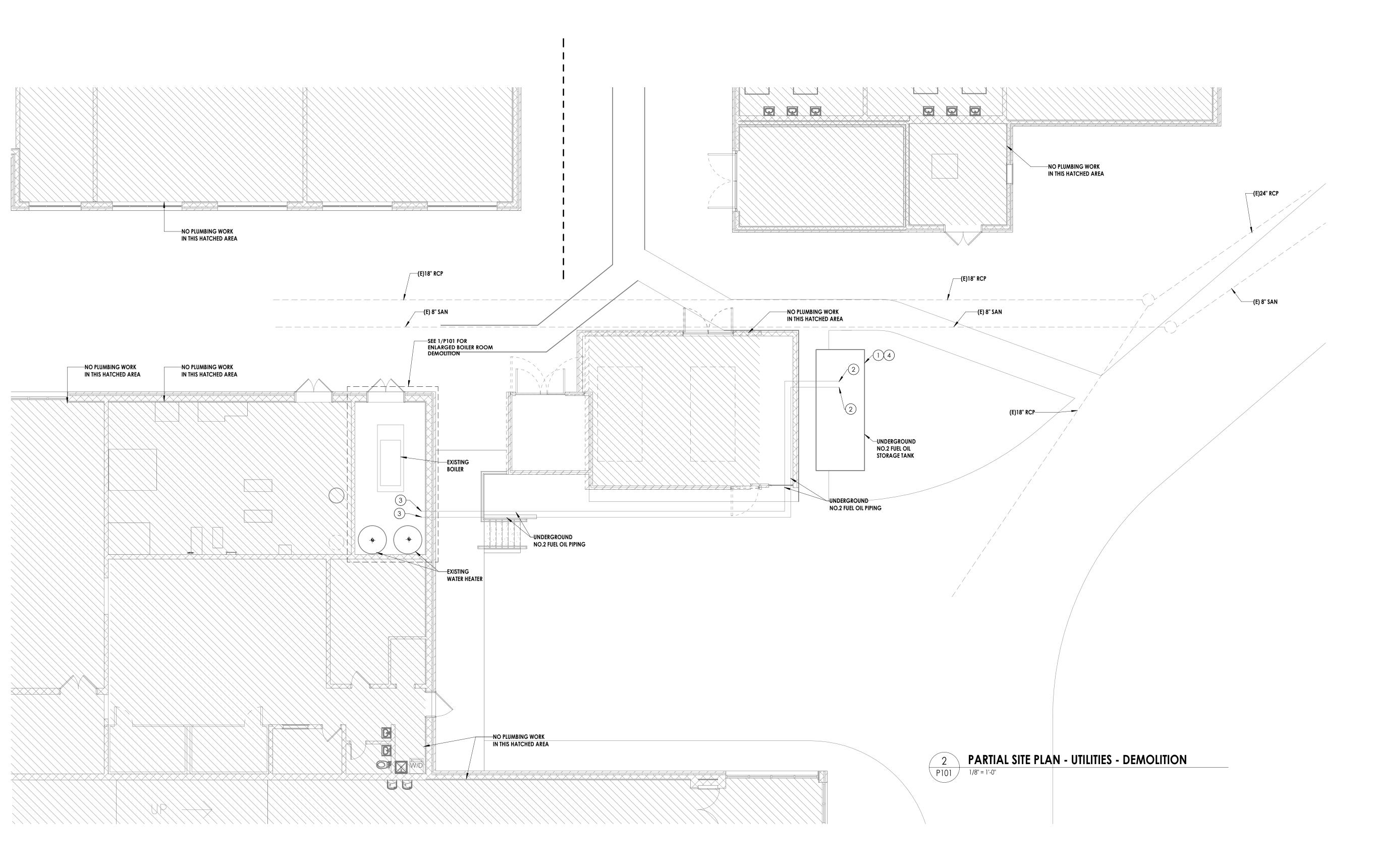
PROFESSIONAL STAMPS



SHEET INFORMATION 02/17/2025 AS INDICATED Project Status BID SET Checked By MJP Drawn By RLA Drawing Title
UTILITY SCHEDULES & DETAILS

Drawing Number

4 LP GAS TANK LAYOUT
P000 12" = 1'-0"



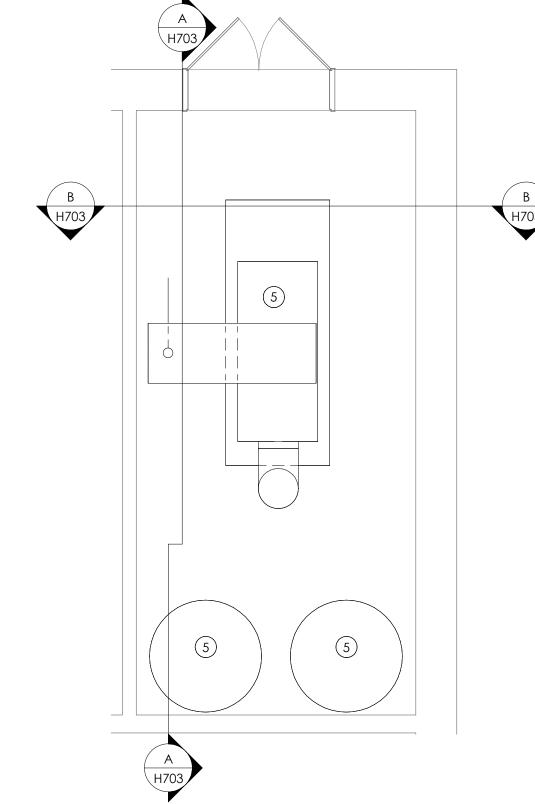
- A. ALL WORK SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL (EPA)
  GUIDELINES & REGULATIONS FOR ABANDON UNDERGROUND TANKS IN PLACE.
- B. TANKS ABANDONED IN PLACE SHALL COMPLY WITH THE REQUIREMENTS OF 2018 NC FIRE CODE SECTION 5704.2.13, NFPA 31 SECTION 7.12 & 7.13, NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WASTE MONUMENT DATED MAY 17, 2021, & API RP 1604 CLOSURE OF UNDERGROUND PETROLEUM STORAGE TANKS.

#### KEY NOTES

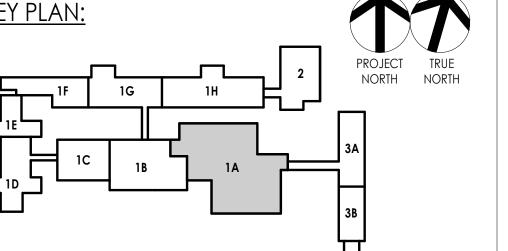
- 1 ABANDON-IN-PLACE EXISTING 10,000 GALLON UNDERGROUND TANK & ALL ASSOCIATED ACCESSORIES INCLUDING ALL ELECTRICAL AND MONITORING CABLE. REFER TO NOTE 4.
- 2 ABANDON-N-PLACE EXISTING UNDERGROUND FUEL OIL PIPING IN PLACE & CAP BELOW GRADE AT THE STORAGE TANK LOCATION. REFER TO NOTE 4.
- 3 ABANDON-IN-PLACE EXISTING UNDERGROUND FUEL OIL PIPING IN PLACE & CAP ABOVE SLAB IN THE MECHANICAL ROOM. REFER TO NOTE 4.
- 4) TANK ABANDONED-IN-PLACE SHALL BE AS FOLLOWS:
  - FLAMMABLE AND COMBUSTIBLE LIQUIDS SHALL BE REMOVED FROM THE TANK AND CONNECTING PIPING.
  - THE SUCTION, INLET, GAUGE, VAPOR RETURN AND VAPOR LINES SHALL BE DISCONNECTED.
  - REMOVE ANY MONITORING & ELECTRICAL SOURCES, CABLE, & DEVICES RELATED TO THE UNDERGROUND STORAGE TANK
  - THE TANK SHALL BE FILLED COMPLETELY WITH AN APPROVED INERT SOLID MATERIAL.
  - REMAINING UNDERGROUND PIPING SHALL BE CAPPED OR PLUGGED.
- A RECORD OF TANK SIZE, LOCATION AND DATE OF ABANDONMENT SHALL BE RETAINED.
- ALL EXTERIOR ABOVE-GRADE FILL PIPING SHALL BE PERMANENTLY REMOVED.

  ALL MATERIALS, ELECTRICAL, MONITORING, & PIPING REMOVED SHALL BE
- TEMOVE ALL EXISTING FUEL PIPING AND ACCESSORIES TO THE EXISTING BOILERS WHICH WILL BE REMOVED & EXISTING WATER HEATERS TO REMAIN. CAP ANY UNDERGROUND PIPING. REFER TO NOTE 4.

LEGALLY DISPOSED OF OFF-SITE.



1 ENLARGED - BOILER ROOM PLAN - DEMOLITION
1/4" = 1'-0"



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(CPS)

PROJECT INFORMATION

Project Number R23.00325

Client Name

JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

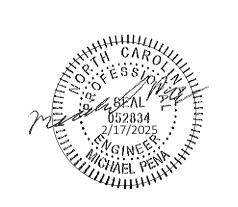
FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

t Address N Hatcher St.

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

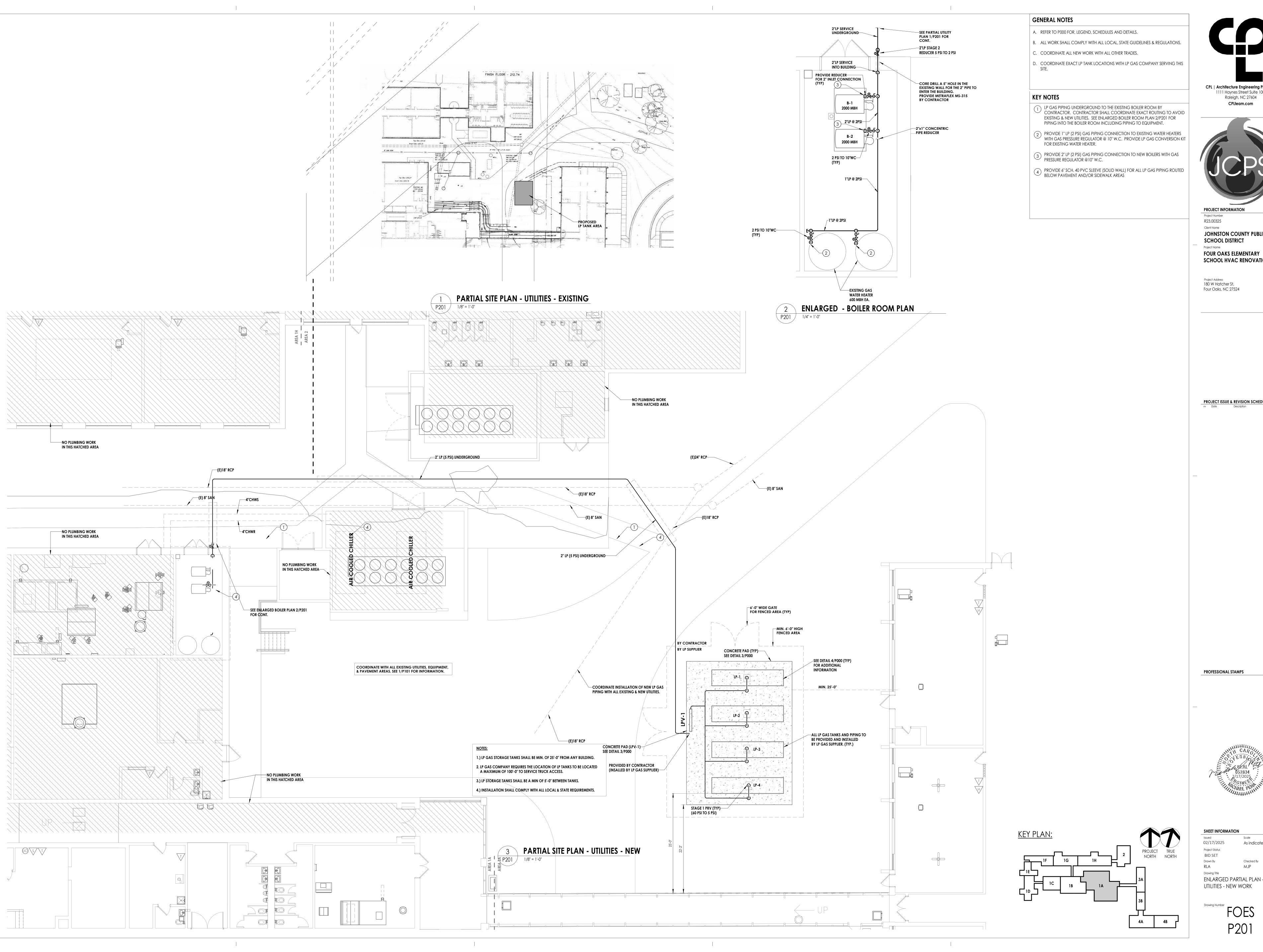
PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale
02/17/2025 As indicated
Project Status
BID SET
Drawn By Checked By
RLA MJP
Drawing Title
ENLARGED PARTIAL PLAN -

FOES
P101



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PROJECT INFORMATION

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

SCHOOL HVAC RENOVATION



As indicated

ENLARGED PARTIAL PLAN -UTILITIES - NEW WORK

P201

# **PANEL LEGEND:**

EXISTING ELECTRICAL PANEL NEW ELECTRICAL PANEL AUTOMATIC TRANSFER SWITCH ELECTRICAL SYSTEMS PANEL SACP SECURITY ALARM CONTROL PANEL FACP FIRE ALARM CONTROL PANEL

TRANSFORMER

MUSHROOM HEAD PUSH BUTTON (EMERGENCY STOP)

EMERGENCY BREAK GLASS STATION

# **SINGLE LINE DIAGRAM LEGEND:**

FAAP FIRE ALARM ANNUNCIATOR PANEL

PA PUBLIC ADDRESS CONTROL PANEL

EARTH GROUND TRANSFORMER - KVA, PRIMARY AND SECONDARY VVV KVA VOLTAGE INDICATED. CONNECTIONS, K-RATING, 208/120:480V AND SHIELD SPECIFIED ON ONE-LINE DIAGRAM CURRENT TRANSFORMER DISCONNECT/LOADBREAK SWITCH CIRCUIT BREAKER AUTOMATIC TRANSFER SWITCH (NORMAL POSITION SHOWN) ENCLOSED CIRCUIT BREAKER FUSED DISCONNECT SWITCH PANELBOARD-

RATINGS AS SPECIFIED ON ONE-LINE

DIAGRAM AND ON PANELBOARD SCHEDULE

# **LIGHT FIXTURE LEGEND:**

LIGHTING FIXTURE (SEE LIGHTING FIXTURE SCHEDULE FOR LETTER DESIGNATION AND DESCRIPTION OF FIXTURES) EMERGENCY AND/OR NIGHT LIGHT LIGHTING FIXTURE EXIT LIGHTING FIXTURE UNIVERSAL MOUNT, SINGLE/DOUBLE FACE (WHERE USED, ARROW INDICATES CHEVRON DIRECTION) BATTERY POWERED EMERGENCY LIGHT EMERGENCY LIGHT REMOTE HEAD TRACK LIGHTING  $\bigcirc$ S OCCUPANCY SENSOR - CEILING MOUNTED OCCUPANCY SENSOR - WALL MOUNTED OCCUPANCY SENSOR - CORNER MOUNTED VS VACANCY SENSOR - WALL MOUNTED VACANCY SENSOR - WALL MOUNTED VSC VACANCY SENSOR - CORNER MOUNTED LIGHTING CONTACTOR PHOTOCELL

**COMMUNICATIONS LEGEND:** TELEPHONE DROP DATA DROP COMBINATION TELEPHONE/DATA DROP WIRELESS ACCESS POINT WIRELESS ACCESS POINT - CEILING MOUNTED DATA RACK COAX CABLE DROP CEILING MOUNT LCD PROJECTOR SPEAKER (PUBLIC ADDRESS) (NONE) CEILING MOUNTED W WALL MOUNTED SPEAKER (LOCAL SOUND SYSTEM)

# **SECURITY LEGEND:**

SPEAKER HORN

©
VIDEO CAMERA PASSIVE INFRARED MOTION DETECTOR

# **FIRE/LIFE SAFETY LEGEND:**

FIRE ALARM PULL STATION FIRE ALARM BELL FIRE ALARM HORN FIRE ALARM HORN AND STROBE COMBINATION FIRE ALARM HORN AND STROBE COMBINATION, WEATHER PROOF FIRE ALARM SPEAKER FIRE ALARM SPEAKER - CEILING MOUNTED FIRE ALARM SPEAKER AND STROBE COMBINATION FIRE ALARM STROBE FIRE ALARM STROBE - CEILING MOUNTED SMOKE DETECTOR SMOKE DETECTOR WITH WIRE GUARD CARBON MONOXIDE DETECTOR WITH AUDIBLE ALARM NATURAL GAS SENSOR HEAT DETECTOR

S INDICATES INSTALLATION IN SUPPLY AIR

R INDICATES INSTALLATION IN RETURN AIR

REMOTE TEST STATION FOR DUCT DETECTOR

FIRE SUPRESSION ANSUL SYSTEM CONNECTION

SD/FD SMOKE DAMPER AND FIRE DAMPER

SMOKE DAMPER RELAY CONNECTION

FIRE ALARM SHUT DOWN RELAY

SD SMOKE DAMPER

NOTE:

SYMBOLS SHOWN ON THIS ELECTRICAL SYMBOLS LIST

ARE FOR REFERENCE PURPOSES ONLY. ALL OF THESE SYMBOLS MAY NOT BE USED FOR THIS PROJECT.

CONTROL MODULE, ADDRESSABLE

DUCT DETECTOR

EF-1 120V 1Ø Fed From EP2-10

#720

A1, A2

A3, A4

TYPICAL DATA OUTLET

**FACEPLATE** 

PROVIDE LABEL INDICATING MDF/IDF

SELF-ADHESIVE LABEL WITH IDF

CIRCUIT NUMBER, BLACK TEXT ON

ROOM NUMBER-

CLEAR LABEL (TYP)-

Panelboard

208Y/120V 3Ø 4W

Fed From Panel MDP

Typical Fan

Disconnect / Starter / VFD

Mech Equipment Disconnects & VFD's 208V 3Ø Fed From Sub-Feed

GENERAL ELECTRICAL NOTES:

**BUILDING:** 

EXTRA COST TO THE OWNER.

SCOPE OF THE WORK.

MOUNT HORN/LIGHT

OR LIGHT SO THAT

BOTTOM OF LENS IS

80" A.F.F. UNLESS

OTHERWISE NOTED+

1'-6"

DEVICE EXCEPT EXIT SIGNS.

ARCHITECTURAL ELEVATIONS.

**GROUNDING:** 

1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRIC CODE (NFPA 70) AND THE NORTH

3. ALL CONDUIT AND WIRING TO BE CONCEALED IN WALLS, FLOOR, OR ABOVE CEILINGS UNLESS OTHERWISE NOTED OR APPROVED BY THE

ARCHITECT/ENGINEER. ALL DEVICE OUTLET BOXES SHALL BE RECESSED UNLESS OTHERWISE NOTED OR APPROVED BY THE ARCHITECT/ENGINEER.

5. CONDUIT RUNS SHOWN ARE SCHEMATICAL AND DO NOT INDICATE THE NECESSARY FITTINGS AND JUNCTION BOXES THAT ARE INCLUDED IN THE

6. ALL METAL RACEWAYS, INCLUDING CONDUIT, WIRE TROUGHS, WIREMOLD, ETC., SHALL BE GROUNDED. ALL CONNECTIONS IN METAL RACEWAYS

SHALL BE COMPLETED IN SUCH A MANNER AS TO MAINTAIN A CONTINUOUS PATH TO GROUND THROUGHOUT THE ENTIRE LENGTH OF THE RACEWAY.

TYPICAL DEVICE MOUNTING HEIGHTS DETAIL

1. ALL MOUNTING HEIGHTS SHALL BE MEASURED FROM FINISHED FLOOR TO CENTERLINE OF

2. DEVICES SHALL BE INSTALLED ON A COMMON VERTICAL CENTERLINE WHEREVER POSSIBLE.

3. ALL DEVICES SHALL BE INSTALLED AT MOUNTING HEIGHTS AS INDICATED ON THIS DETAIL UNLESS OTHERWISE NOTED.

4. A "C" ADJACENT TO DEVICE INDICATES MOUNTING ABOVE COUNTER BACKSPLASH, COORDINATE WITH

-PROVIDE PENDANT WHERE HUNG

CEILING OR STRUCTURE EXCEEDS

FIRE ALARM AUDIO/VISUAL DEVICES

8'-6"AFF.

—EXIT SIGN

□ WALL TELEPHONES

-RECEPTACLES

-FIRE ALARM PULL STATION

FINISHED FLOOR

WHERE APPROVED OR NOTED, SURFACE METAL RACEWAY AND DEVICE BOXES SHALL BE USED IN-LIEU OF CONDUIT AND CONCEALED BOXES AT NO

2. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND COORDINATE WITH EXISTING EQUIPMENT PRIOR TO BIDDING.

4. ALL CONDUIT ROUTES SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL FIELD VERIFY FINAL ROUTE.

7. UNLESS NOTED OTHERWISE ON THE DRAWINGS OR ON THE EQUIPMENT WIRING SCHEDULE, EACH BRANCH

CIRCUIT SHALL BE THREE (3) #12 AWG THHN/THWN (1 HOT, 1 NEUTRAL & 1 EQUIPMENT GROUND) IN 3/4" EMT CONDUIT. PROTECT EACH CIRCUIT WITH A 20 AMPERE, 1-POLE OVERCURRENT DEVICE UNLESS OTHERWISE

NOTED. PROVIDE #10 AWG FOR 120V BRANCH CIRCUITS LONGER THAN 100 FEET. COMBINED NEUTRALS ARE NOT PERMITTED.

Breaker in MDP

Control Panel (Fire Alarm, BMS, Security, ETC.)

120V 1Ø Fed From MDP-25

**EQUIPMENT LABELING NOTES** A. PROVIDE ENGRAVED LAMINATED NAMEPLATE FOR EACH PIECE OF ELECTRICAL EQUIPMENT. LABEL TAPE IS NOT ACCEPTABLE.

B. COORDINATE SUPPLY SOURCE (PANEL/CIRCUIT WHERE FED FROM) WITH ACTUAL CIRCUITS USED.

C. ON EACH UNIT OF EQUIPMENT, INSTALL UNIQUE DESIGNATION LABEL THAT IS CONSISTENT WITH WIRING DIAGRAMS AND SCHEDULES.

PROVIDE LABEL AS SHOWN FOR EACH EQUIPMENT TYPE. INFORMATION SHALL INCLUDE NAME OF EQUIPMENT, VOLTAGE/PHASE, AND SUPPLY SOURCE.

LABEL EQUIPMENT WITH SELF-ADHESIVE, ENGRAVED, LAMINATED ACRYLIC OR MELAMINE LABEL. UNLESS OTHERWISE INDICATED, EQUIPMENT NAME SHALL BE 1-INCH-HIGH LETTERS, AND ADDITIONAL TEXT SHALL BE 1/2-INCH-HIGH LETTERS. LABEL SIZE SHALL ACCOMMODATE TEXT REQUIRED FOR EACH PARTICULAR PIECE OF EQUIPMENT.

F. LABEL THE FOLLOWING ITEMS: PANELBOARDS

 ENCLOSURES AND ELECTRICAL CABINETS DISCONNECT SWITCHES ENCLOSED CIRCUIT BREAKERS STARTERS VARIABLE FREQUENCY DRIVES

 CONTROL PANELS G. NAMEPLATE COLOR CODE: EQUIPMENT: BLACK WITH WHITE TEXT FIRE ALARM SYSTEM: RED WITH WHITE TEXT

TYPICAL EQUIPMENT NAMEPLATE DETAIL E000 NOT TO SCALE

> —SELF-ADHESIVE LABEL WITH PANEL & CIRCUIT NUMBER, BLACK TEXT ON CLEAR LABEL (TYP)-----

> > EP1-5

TYPICAL RECEPTACLE

**FACEPLATE** 

SERVED BY THIS CONTROL EP1-2 MAIN ROOM LIGHTS

TYPICAL LIGHTING CONTROL

(SWITCH, DIMMER,

<u>FACEPLATE</u>

OCCUPANCY SENSOR)

A. PROVIDE LABEL FOR ALL WIRING DEVICES, INCLUDING BUT NOT LIMITED TO:

 RECEPTACLES LIGHT SWITCHES

OF THE COVER.

FOR MULTIPLE LIGHTING CONTROLS IN SAME

ROOM, PROVIDE LABEL INDICATING LIGHTS

 WALL DIMMERS WALL OCCUPANCY SENSORS

FAN SPEED CONTROLS

 EMERGENCY STOP BUTTONS (SHUNT-TRIP CIRCUIT) MANUAL MOTOR STARTERS

REMOTE CONTROL SWITCHES

 CONTROL DEVICES TELEPHONE & DATA DEVICES

B. LABEL SHALL BE EMBOSSED ADHESIVE TAPE, WITH 1/4-INCH BLACK-FILLED LETTERS ON CLEAR BACKGROUND. C. FOR MULTIPLE LIGHTING CONTROLS IN SAME ROOM, ALSO

PROVIDE LABEL INDICATING LIGHTS SERVED BY EACH CONTROL. D. FOR MANUAL MOTOR STARTERS AND SWITCHES USED TO CONTROL MOTORS OR EQUIPMENT OTHER THAN LIGHTS, ALSO PROVIDE LABEL INDICATING EQUIPMENT SERVED BY

THE CONTROL. WHEN LABELING OUTDOOR DEVICES, LABEL SHALL BE INSTALLED ON THE FACEPLATE INSIDE THE WEATHERPROOF DEVICE COVER, NOT ON THE OUTSIDE CPL | Architecture Engineering Planning 1111 Haynes Street Suite 100, Raleigh, NC 27604 CPLteam.com



PROJECT INFORMATION Project Number R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

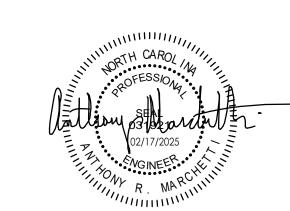
FOUR OAKS ELEMENTARY

SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS



SHEET INFORMATION 02/17/2025 As indicated Project Status

**BID SET** Drawn By Checked By JAE ARM Drawing Title ELECTRICAL SYMBOLS LEGEND

FOES

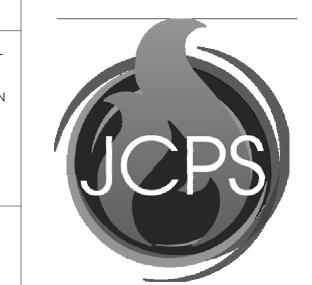
AND NOTES

TYPICAL WIRING DEVICE LABELING DETAIL NOT TO SCALE

- A. EXISTING EQUIPMENT AND FEEDERS AS NOTED ARE TAKEN FROM EXISTING FACILITY DOCUMENTATION AND/OR NON-INVASIVE FIELD OBSERVATION. FIELD VERIFY EXACT CONFIGURATION, RATINGS, AND SIZES.
- B. ALL EQUIPMENT, AND ASSOCIATED FEEDERS ARE EXISTING, UNLESS NOTED OTHERWISE. EXISTING ITEMS SHALL REMAIN AS IS UNLESS NOTED OTHERWISE.
- C. ALL NEW ELECTRICAL EQUIPMENT AND EXISTING EQUIPMENT AFFECTED BY THIS PROJECT SHALL BE LABELED IN ACCORDANCE WITH NEC 110.16. LABEL SHALL BE BRADY CAT. NO. 94913 OR EQUAL. SIGNAGE SHALL STATE THE FOLLOWING:
- WARNINGARC FLASH HAZARD
- ARC FLASH HAZARD
   APPROPRIATE PPE REQUIRED
   FAILURE TO COMPLY CAN RESULT IN DEATH OR INJURY

# • REFER TO NFPA 70E KEY NOTES

- DISCONNECT PANEL AND REMOVE FEEDER BACK TO SOURCE. EXISTING PANEL SHALL REMAIN AND BE REFED FROM NEW SOURCE.
- DISCONNECT EXISTING CHILLER AND REMOVE FEEDER BACK TO SOURCE. TURN CIRCUIT BREAKER TO OFF POSITION AND LABEL AS SPARE.
- (3) REMOVE EXISTING SPARE CIRCUIT BREAKER.
- PROVIDE NEW BREAKER, SIZE AS INDICATED IN EXISTING PANEL IN AVAILABLE SPACE. TYPE, VOLTAGE RATING, AND AIC RATING TO MATCH EXISTING.



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PROJECT INFORMATION

Project Number

R23.00325
Client Name
JOHNSTON COUNTY PUBLIC

180 W Hatcher St, Four Oaks, NC 27524

SCHOOL DISTRICT
Project Name

FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS

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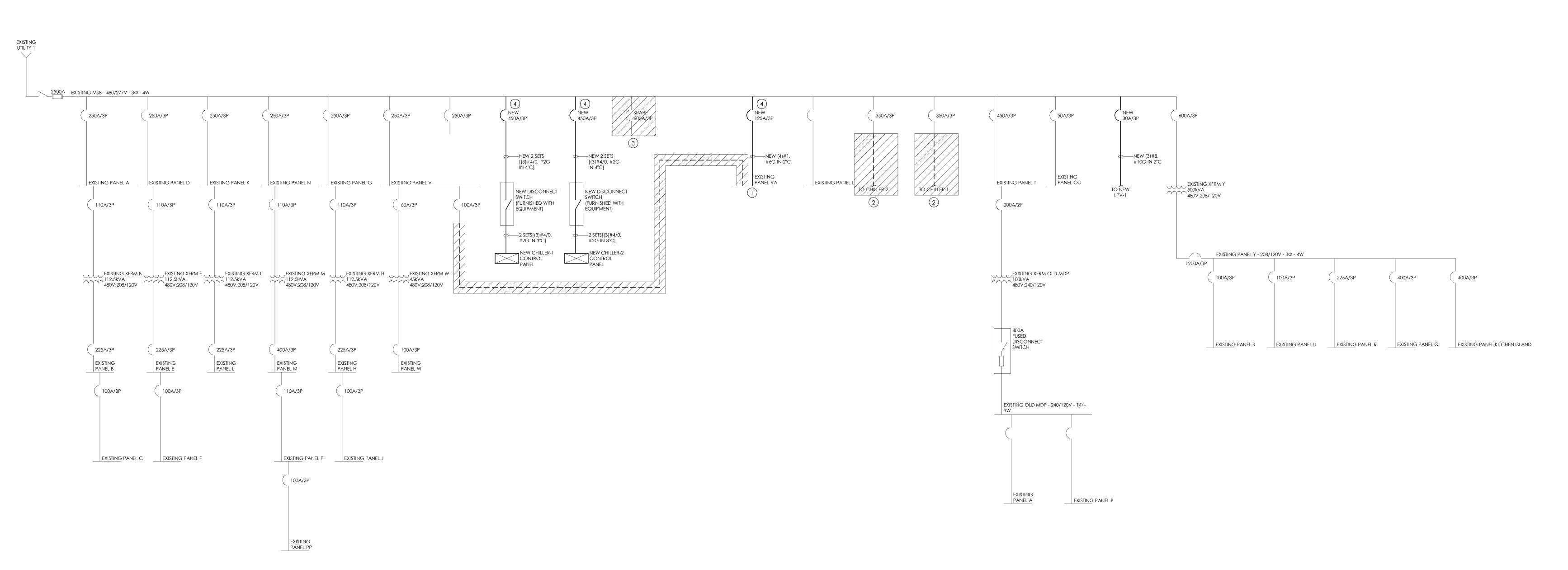
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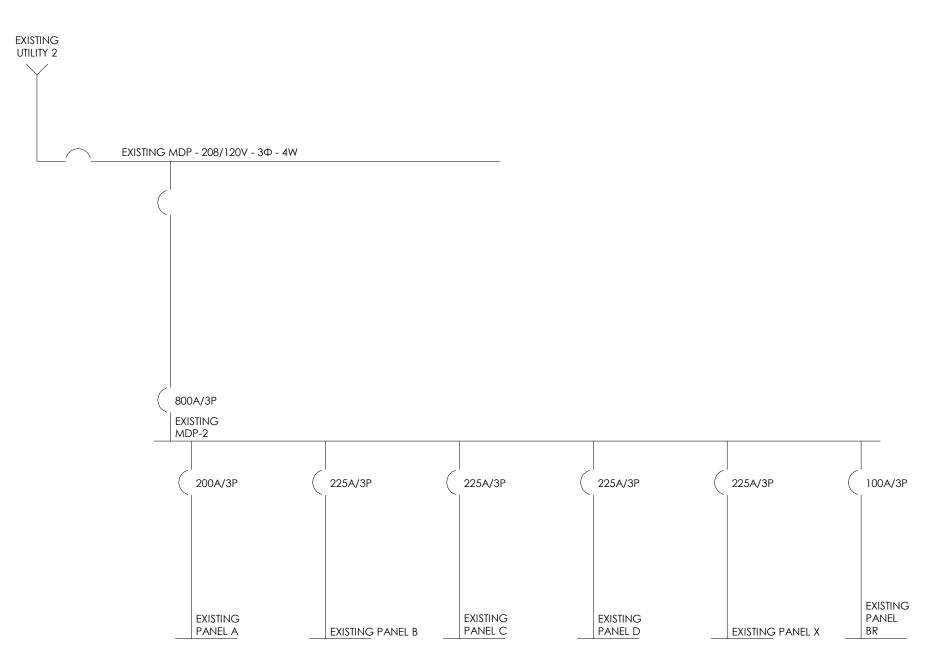
Issued Scale
02/17/2025 As indicated
Project Status
BID SET
Drawn By Checked By

Drawing Title
PARTIAL ONE-LINE DIAGRAM

E001

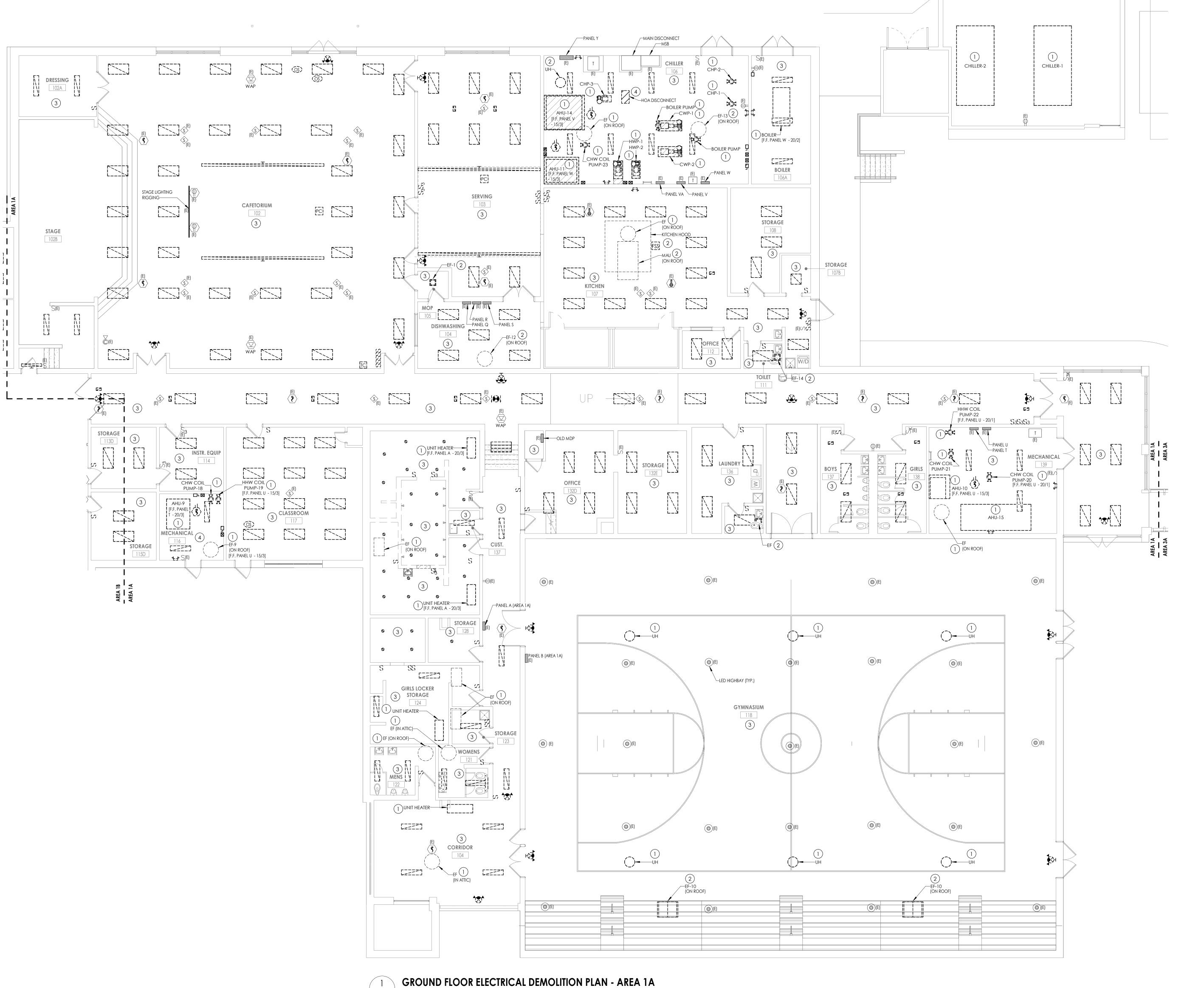
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PARTIAL ONE-LINE DIAGRAM

NOT TO SCALE



- A. ALL ITEMS SHOWN ARE TO BE REMOVED UNLESS LABELED AS (E) EXISTING.
  REMOVAL OF DEVICE INCLUDES ITS ASSOCIATED CABLING/BRANCH CIRCUIT
  WIRING, AND RACEWAY.
- B. ANY EXISTING DEVICE TO REMAIN, LABELED AS (E) SHALL REMAIN IN PLACE AS WELL AS ITS' ASSOCIATED CIRCUITING AND CONDUIT, UNLESS OTHERWISE NOTED.
- C. THE CONTRACTOR SHALL REMOVE THE EXISTING ELECTRIC IN AREAS OF NEW RENOVATIONS TO ACCOMMODATE NEW CONSTRUCTION. REROUTING OF EXISTING MAY BE REQUIRED AT NEW OPENINGS IN EXISTING CONSTRUCTION OR INTERFERENCE WITH OTHER NEW WORK AS NOTED IN THE FOLLOWING NOTES.
- D. DRAWINGS INDICATE SPECIFIC ITEMS TO BE REMOVED AND/OR RELOCATED IN ORDER TO INDICATE GENERAL SCOPE. ADDITIONAL ITEMS NOT INDICATED, BUT NECESSARY FOR PROJECT RENOVATIONS, SHALL BE REMOVED, RELOCATED AND/OR REROUTED. THE CONTRACTOR SHALL ASSUME WITHIN THE BASE BID A NOMINAL AMOUNT OF BRANCH CIRCUITS, FIXTURES, DEVICES, AND SYSTEMS WIRING WITHIN WALLS OR OPENINGS BEING REMOVED OR RELOCATED AS REQUIRED TO ACCOMMODATE THE NEW CONSTRUCTION.
- E. WHERE DEVICES, FIXTURES, ETC. ARE INDICATED TO BE REMOVED, THEY AND THEIR RELATED WIRING/CONDUIT SHALL BE REMOVED BACK TO THE SOURCE PANELBOARD UNLESS OTHERWISE NOTED. ON CIRCUITS WHERE OTHER DEVICES, FIXTURES, ETC. ARE FOUND THAT MUST REMAIN, MAINTAIN CIRCUIT CONTINUITY BY PROVIDING ADDITIONAL WIRING, TO FEED THROUGH TO THESE REMAINING ITEMS. RELOCATE ANY CIRCUITS THAT REMAIN, TO AVOID CONFLICT WITH NEW CONSTRUCTION AS REQUIRED. PROPERLY TERMINATE ALL WIRING.
- COORDINATE DEMOLITION OF EQUIPMENT, DEVICES, ETC. WITH OTHER DISCIPLINES AS APPLICABLE. REFER TO ARCHITECTURAL DEMOLITION DRAWINGS AND NOTES FOR COORDINATION.
- G. DRAWINGS ARE GRAPHICAL REPRESENTATIONS OF APPROXIMATE EQUIPMENT AND DEVICE LOCATIONS. CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE EXACT EXTENT OF ELECTRICAL WORK REQUIRED TO COMPLETE THE PROJECT. EXISTING CONDITIONS ARE TAKEN FROM FIELD OBSERVATION AND EXISTING BUILDING DOCUMENTS. OTHER ELECTRICAL ITEMS MAY EXIST FOR WHICH THE CONTRACTOR IS RESPONSIBLE.
- H. CONTRACTOR SHALL PROPERLY DISPOSE OF ALL ITEMS, EQUIPMENT, PANELS, LIGHT FIXTURES, ETC. BEING REMOVED AS PART OF THIS PROJECT. THE OWNER SHALL HAVE THE RIGHT OF RETAINING ANY ITEMS BEING REMOVED.
- I. CONTRACTOR SHALL PROVIDE NEW COVERPLATES ON ALL BOXES OF UNUSED AND/OR REMOVED FLUSH MOUNT DEVICES UPON COMPLETION OF PROJECT.
- J. FIREPROOFING AND/OR FIRE STOP MATERIALS REMOVED FROM FIRE RATED WALLS AND CEILINGS AS A RESULT OF DEMOLITION SHALL BE RE-INSTALLED USING AN APPROVED METHOD AS DESCRIBED IN ASSOCIATED PROJECT SPECIFICATIONS.
- K. CONTRACTOR SHALL PROTECT ALL SMOKE DETECTORS FROM DUST, DEBRIS, AND DAMAGE DURING CONSTRUCTION IN ACCORDANCE WITH NFPA 72.
   L. EXISTING HVAC EQUIPMENT PANELBOARD AND CIRCUIT BREAKER INFORMATION IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING BUILDING DOCUTMENTS AND

IS SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL FIELD VERIFY

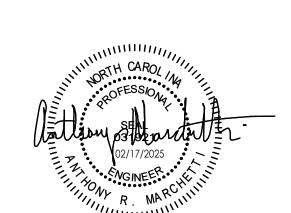
- M. EXISTING LOW VOLTAGE SYSTEM DEVICES, AND POWER DEVICES ON CEILINGS INDICATED WITH "(E)" AND NOT INDICATED AS BEING DEMOLISHED (DASHED, HATCHED, OR OTHERWISE NOTED) ARE SHOWN FOR REFERENCE PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEMPORARILY SUSPEND AND PROTECT OR REMOVE AND REINSTALL ALL EXISTING TO REMAIN CEILING DEVICES AS REQUIRED FOR DEMOLITION AND NEW WORK PHASES.
- N. CONTRACTOR SHALL PROTECT ALL EXISTING TO REMAIN DEVICES DURING CONSTRUCTION. DAMAGED EXISTING TO REMAIN DEVICES SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

#### KEY NOTES

EXISTING CIRCUIITING.

- DISCONNECT EXISTING MECHANICAL EQUIPMENT. REMOVE CIRCUITING BACK TO SOURCE PANEL.
- DISCONNECT EXISTING MECHANICAL EQUIPMENT. EXISTING CIRCUITING SHALL REMAIN TO SERVE NEW UNIT.
- 3 REMOVE EXISTING LIGHT FIXTURE(S) AND LIGHTING CONTROL DEVICE(S) IN THIS AREA UNLESS INDICATED WITH "(E)". EXISTING LIGHTING BRANCH CIRCUITING SHALL REMAIN TO SERVE NEW FIXTURE(S) AND CONTROL(S).
- (4) REMOVE ABANDONED HOA DISCONNECT SWITCH. CUT CONDUIT(S) AT SLAB, CAP, AND SEAL WATER-TIGHT.

PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale
02/17/2025 AS NOTED
Project Status
BID SET

Drawn By

JAE

Drawing Title

GROUND FLOOR ELECTRIC

FOES E101.1A

PROJECT TRUE NORTH NORTH

KEY PLAN:

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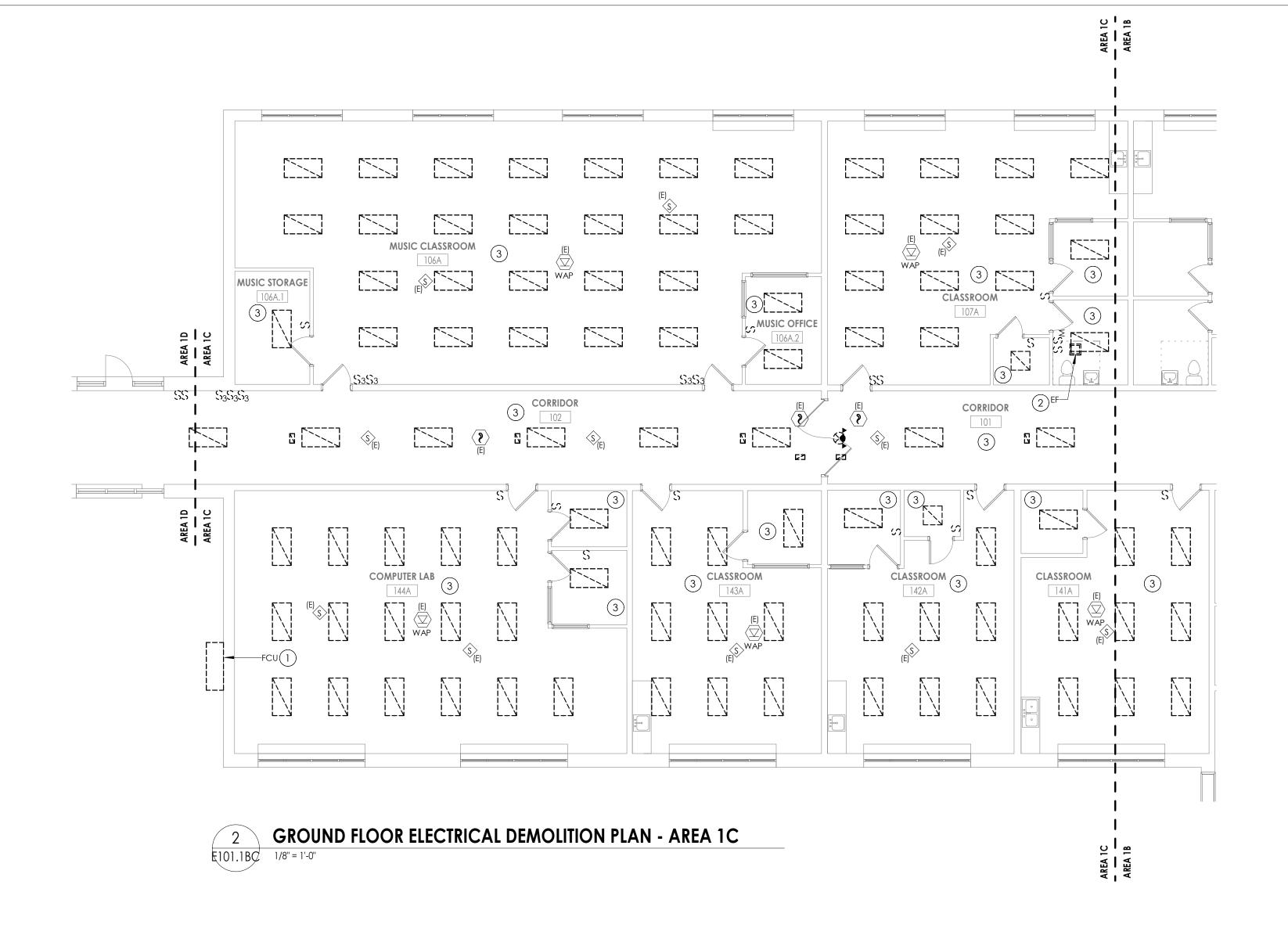
PROJECT INFORMATION

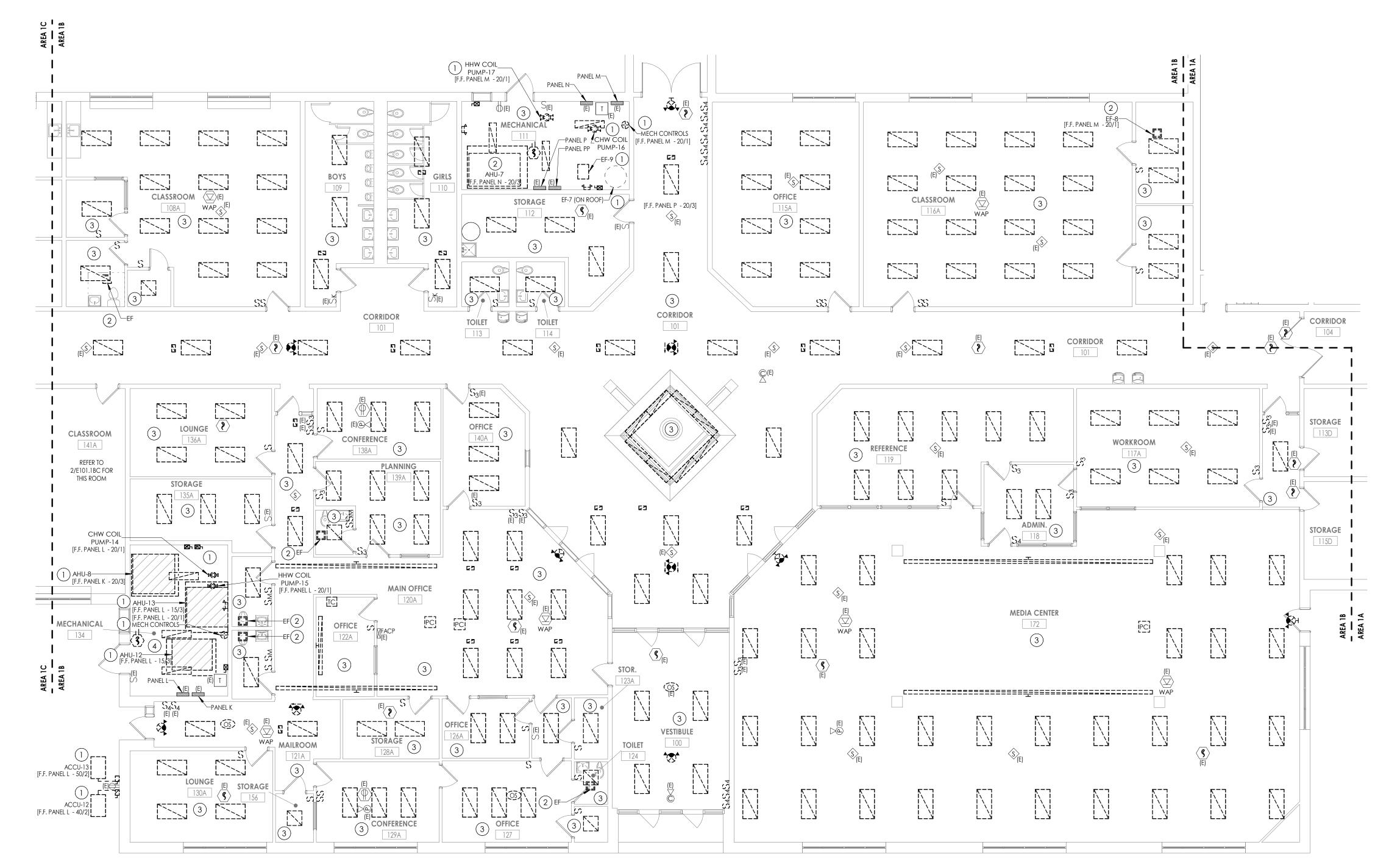
Project Number
R23.00325
Cient Name
JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT
Project Name
FOUR OAKS ELEMENTARY
SCHOOL HYAC RENOVATION

Project Address
180 W Hatcher St,
Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

vv Date Description





GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 1B

### GENERAL NOTES

- A. ALL ITEMS SHOWN ARE TO BE REMOVED UNLESS LABELED AS (E) EXISTING. REMOVAL OF DEVICE INCLUDES ITS ASSOCIATED CABLING/BRANCH CIRCUIT WIRING, AND RACEWAY.
- B. ANY EXISTING DEVICE TO REMAIN, LABELED AS (E) SHALL REMAIN IN PLACE AS WELL AS ITS' ASSOCIATED CIRCUITING AND CONDUIT, UNLESS OTHERWISE NOTED.
- C. THE CONTRACTOR SHALL REMOVE THE EXISTING ELECTRIC IN AREAS OF NEW RENOVATIONS TO ACCOMMODATE NEW CONSTRUCTION. REROUTING OF EXISTING MAY BE REQUIRED AT NEW OPENINGS IN EXISTING CONSTRUCTION OR INTERFERENCE WITH OTHER NEW WORK AS NOTED IN THE FOLLOWING NOTES.
- D. DRAWINGS INDICATE SPECIFIC ITEMS TO BE REMOVED AND/OR RELOCATED IN ORDER TO INDICATE GENERAL SCOPE. ADDITIONAL ITEMS NOT INDICATED, BUT NECESSARY FOR PROJECT RENOVATIONS, SHALL BE REMOVED, RELOCATED AND/OR REROUTED. THE CONTRACTOR SHALL ASSUME WITHIN THE BASE BID A NOMINAL AMOUNT OF BRANCH CIRCUITS, FIXTURES, DEVICES, AND SYSTEMS WIRING WITHIN WALLS OR OPENINGS BEING REMOVED OR RELOCATED AS REQUIRED TO ACCOMMODATE THE NEW CONSTRUCTION.
- WHERE DEVICES, FIXTURES, ETC. ARE INDICATED TO BE REMOVED, THEY AND THEIR RELATED WIRING/CONDUIT SHALL BE REMOVED BACK TO THE SOURCE PANELBOARD UNLESS OTHERWISE NOTED. ON CIRCUITS WHERE OTHER DEVICES, FIXTURES, ETC. ARE FOUND THAT MUST REMAIN, MAINTAIN CIRCUIT CONTINUITY BY PROVIDING ADDITIONAL WIRING, TO FEED THROUGH TO THESE REMAINING ITEMS. RELOCATE ANY CIRCUITS THAT REMAIN, TO AVOID CONFLICT WITH NEW CONSTRUCTION AS REQUIRED. PROPERLY TERMINATE ALL WIRING.
- COORDINATE DEMOLITION OF EQUIPMENT, DEVICES, ETC. WITH OTHER DISCIPLINES AS APPLICABLE. REFER TO ARCHITECTURAL DEMOLITION DRAWINGS AND NOTES FOR COORDINATION.
- G. DRAWINGS ARE GRAPHICAL REPRESENTATIONS OF APPROXIMATE EQUIPMENT AND DEVICE LOCATIONS. CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE EXACT EXTENT OF ELECTRICAL WORK REQUIRED TO COMPLETE THE PROJECT. EXISTING CONDITIONS ARE TAKEN FROM FIELD OBSERVATION AND EXISTING BUILDING DOCUMENTS. OTHER ELECTRICAL ITEMS MAY EXIST FOR WHICH THE CONTRACTOR IS RESPONSIBLE.
- H. CONTRACTOR SHALL PROPERLY DISPOSE OF ALL ITEMS, EQUIPMENT, PANELS, LIGHT FIXTURES, ETC. BEING REMOVED AS PART OF THIS PROJECT. THE OWNER SHALL HAVE THE RIGHT OF RETAINING ANY ITEMS BEING REMOVED.
- . CONTRACTOR SHALL PROVIDE NEW COVERPLATES ON ALL BOXES OF UNUSED AND/OR REMOVED FLUSH MOUNT DEVICES UPON COMPLETION OF PROJECT.
- FIREPROOFING AND/OR FIRE STOP MATERIALS REMOVED FROM FIRE RATED WALLS AND CEILINGS AS A RESULT OF DEMOLITION SHALL BE RE-INSTALLED USING AN APPROVED METHOD AS DESCRIBED IN ASSOCIATED PROJECT SPECIFICATIONS.
- K. CONTRACTOR SHALL PROTECT ALL SMOKE DETECTORS FROM DUST, DEBRIS, AND DAMAGE DURING CONSTRUCTION IN ACCORDANCE WITH NFPA 72.
   L. EXISTING HVAC EQUIPMENT PANELBOARD AND CIRCUIT BREAKER INFORMATION IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING BUILDING DOCUTMENTS AND IS SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUITING.
- M. EXISTING LOW VOLTAGE SYSTEM DEVICES, AND POWER DEVICES ON CEILINGS INDICATED WITH "(E)" AND NOT INDICATED AS BEING DEMOLISHED (DASHED, HATCHED, OR OTHERWISE NOTED) ARE SHOWN FOR REFERENCE PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEMPORARILY SUSPEND AND PROTECT OR REMOVE AND REINSTALL ALL EXISTING TO REMAIN CEILING DEVICES AS REQUIRED FOR DEMOLITION AND NEW WORK PHASES.
- N. CONTRACTOR SHALL PROTECT ALL EXISTING TO REMAIN DEVICES DURING CONSTRUCTION. DAMAGED EXISTING TO REMAIN DEVICES SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

# KEY NOTES

KEY PLAN:

- 1) DISCONNECT EXISTING MECHANICAL EQUIPMENT. REMOVE CIRCUITING BACK TO SOURCE PANEL.
- DISCONNECT EXISTING MECHANICAL EQUIPMENT. EXISTING CIRCUITING SHALL REMAIN TO SERVE NEW UNIT.
- (3) REMOVE EXISTING LIGHT FIXTURE(S) AND LIGHTING CONTROL DEVICE(S) IN THIS AREA UNLESS INDICATED WITH "(E)". EXISTING LIGHTING BRANCH CIRCUITING SHALL REMAIN TO SERVE NEW FIXTURE(S) AND CONTROL(S).

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PROJECT INFORMATION
Project Number

R23.00325
Client Name

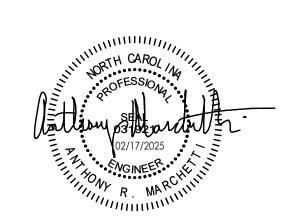
JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS



1/8" = 1'-0"

SHEET INFORMATION

Issued
02/17/2025
Project Status
BID SET

Drawn By

JAE

ARM

Drawing Title

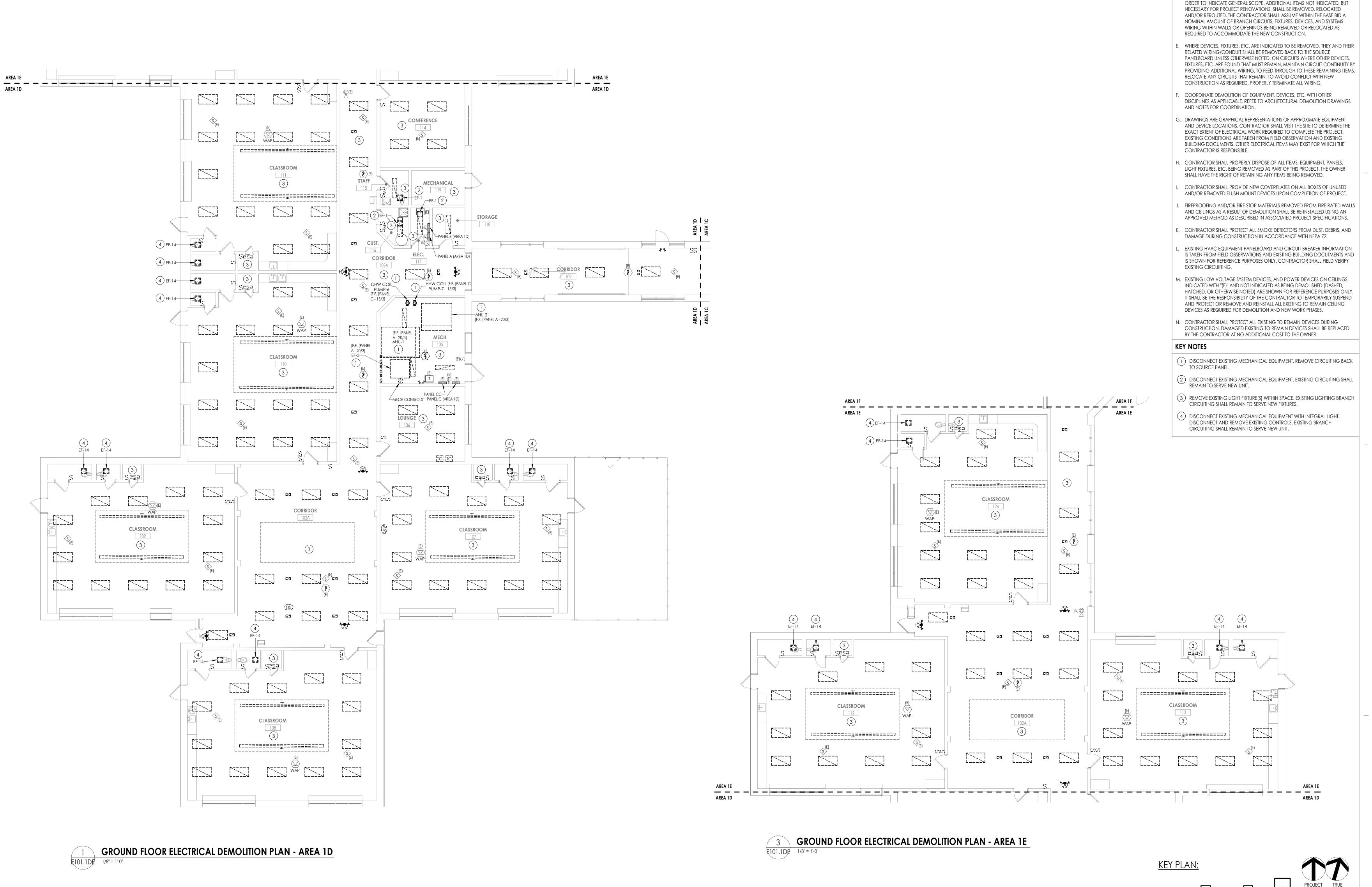
GROUND FLOOR ELECTRICAL

DEMOLITION PLAN - AREA 1B &

1C

Drawing Number FOES

FOES E101.1BC



WIRING, AND RACEWAY.

A. ALL ITEMS SHOWN ARE TO BE REMOVED UNLESS LABELED AS (E) EXISTING. REMOVAL OF DEVICE INCLUDES ITS ASSOCIATED CABLING/BRANCH CIRCUIT

B. ANY EXISTING DEVICE TO REMAIN, LABELED AS (E) SHALL REMAIN IN PLACE AS WELL AS ITS' ASSOCIATED CIRCUITING AND CONDUIT, UNLESS OTHERWISE NOTED.

C. THE CONTRACTOR SHALL REMOVE THE EXISTING ELECTRIC IN AREAS OF NEW RENOVATIONS TO ACCOMMODATE NEW CONSTRUCTION. REROUTING OF EXISTING MAY BE REQUIRED AT NEW OPENINGS IN EXISTING CONSTRUCTION OR INTERFERENCE WITH OTHER NEW WORK AS NOTED IN THE FOLLOWING NOTES.

. DRAWINGS INDICATE SPECIFIC ITEMS TO BE REMOVED AND/OR RELOCATED IN

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PROJECT INFORMATION
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R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

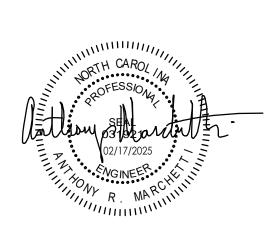
Project Address 180 W Hatcher St,

Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

vv Date Description

PROFESSIONAL STAMPS



SHEET INFORMATION

Issued Scale

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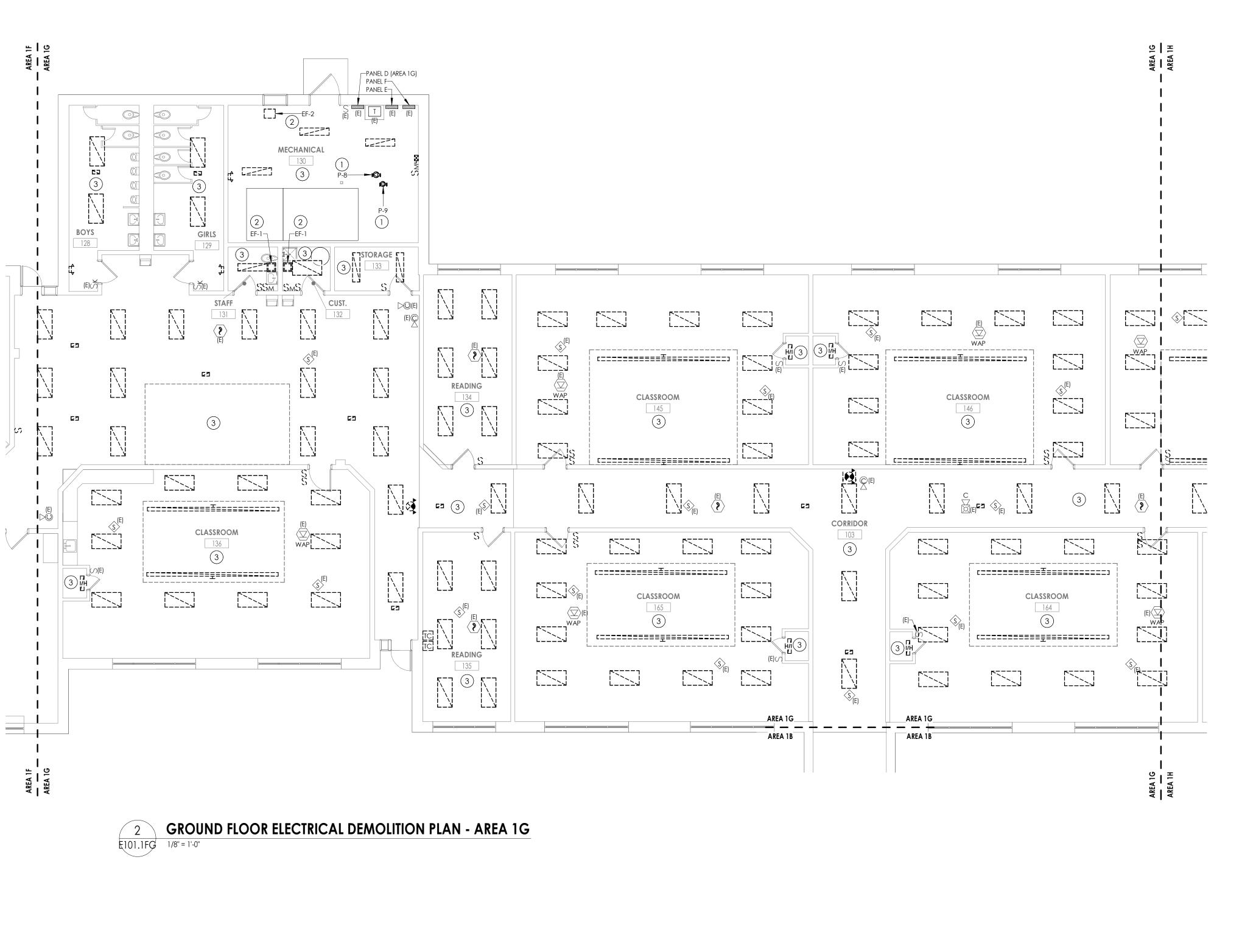
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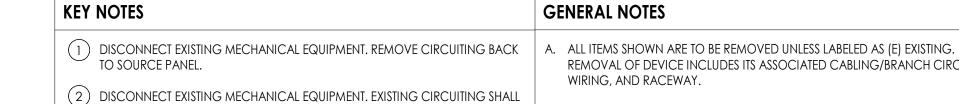
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GROUND FLOOR ELECTRICAL

DEMOLITION PLAN - AREA 1D 8

FOES
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- REMAIN TO SERVE NEW UNIT.
- (3) REMOVE EXISTING LIGHT FIXTURE(S) AND LIGHTING CONTROL DEVICE(S) IN THIS AREA UNLESS INDICATED WITH "(E)". EXISTING LIGHTING BRANCH CIRCUITING SHALL REMAIN TO SERVE NEW FIXTURE(S) AND CONTROL(S).
- (4) DISCONNECT EXISTING MECHANICAL EQUIPMENT WITH INTEGRAL LIGHT. DISCONNECT AND REMOVE EXISTING CONTROLS. EXISTING BRANCH CIRCUITING SHALL REMAIN TO SERVE NEW UNIT.
- REMOVAL OF DEVICE INCLUDES ITS ASSOCIATED CABLING/BRANCH CIRCUIT WIRING, AND RACEWAY.
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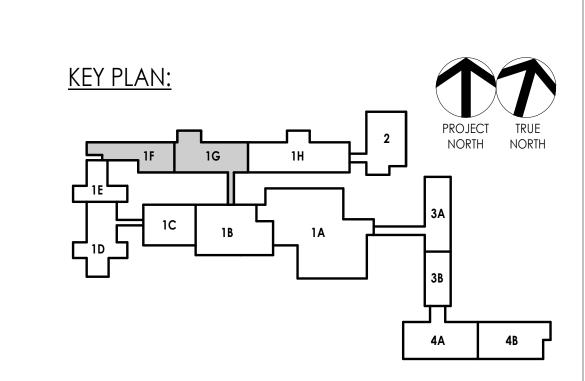
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DEVICES AS REQUIRED FOR DEMOLITION AND NEW WORK PHASES.

CLASSROOM CLASSROOM



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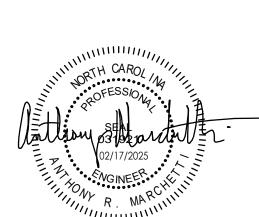
> PROJECT INFORMATION R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROFESSIONAL STAMPS

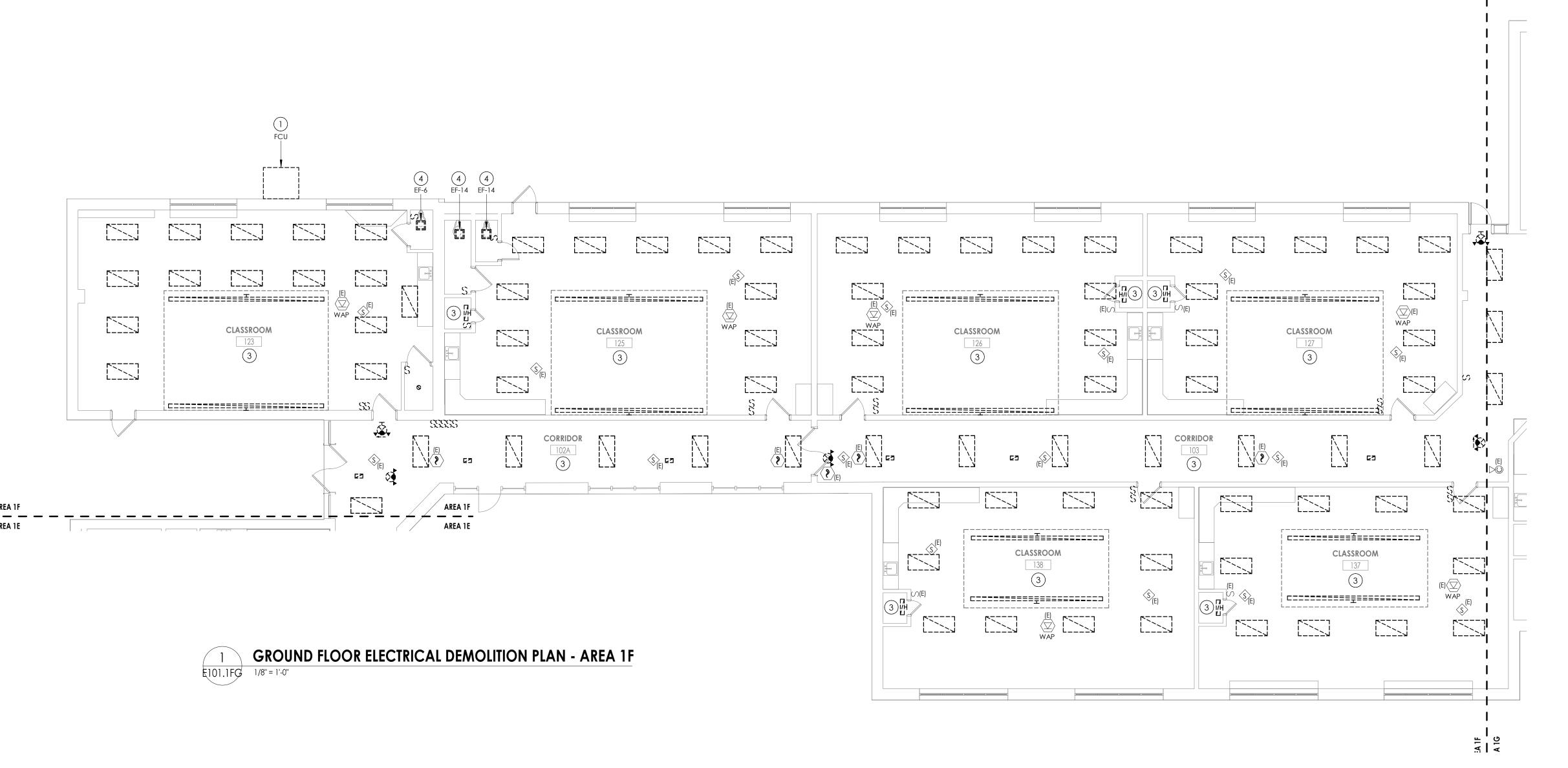


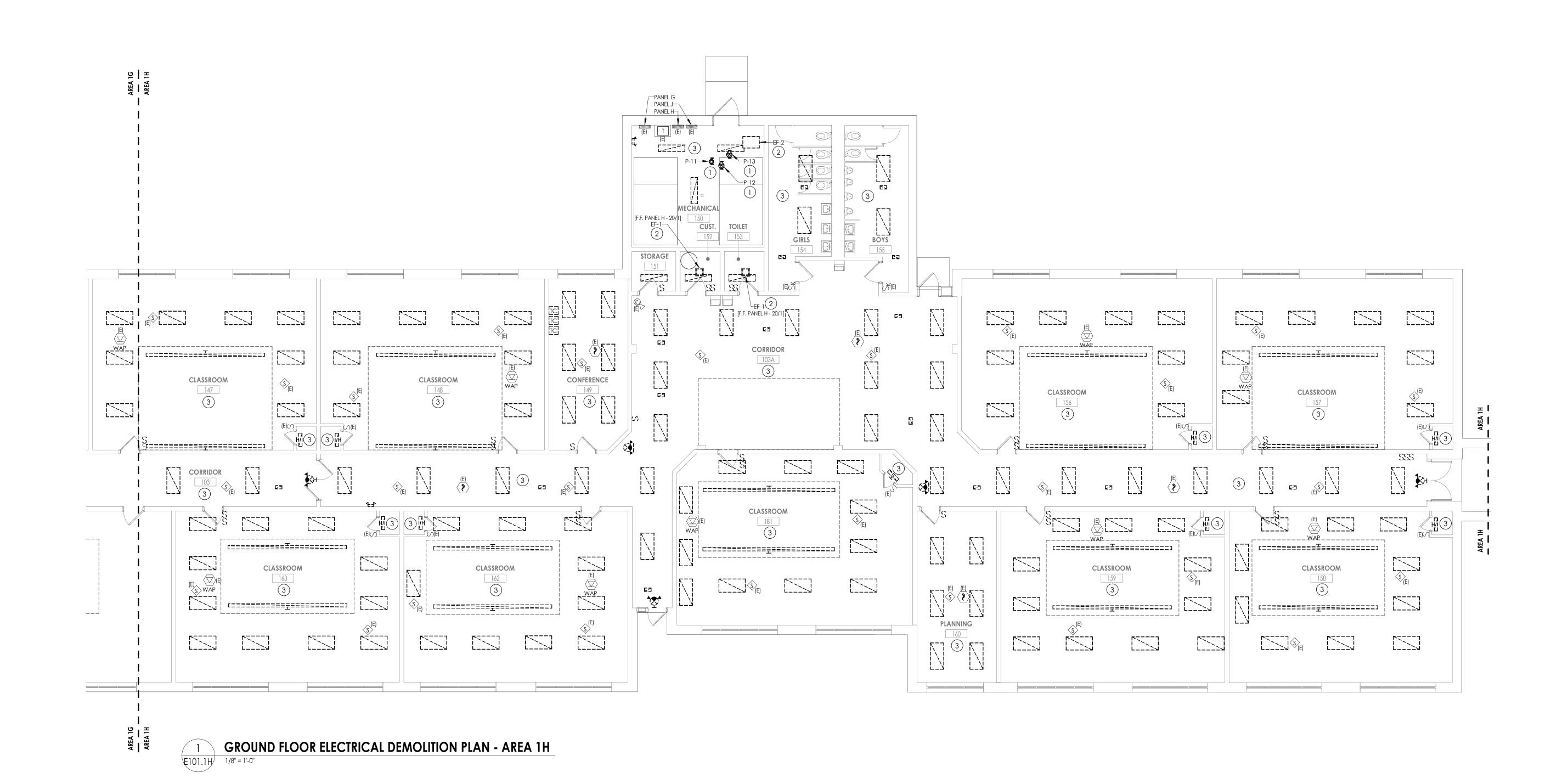
SHEET INFORMATION lssued 02/17/2025 1/8" = 1'-0"

**BID SET** 

GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 1F 8

FOES





- A. ALL ITEMS SHOWN ARE TO BE REMOVED UNLESS LABELED AS (E) EXISTING.
  REMOVAL OF DEVICE INCLUDES ITS ASSOCIATED CABLING/BRANCH CIRCUIT WIRING, AND RACEWAY.
- B. ANY EXISTING DEVICE TO REMAIN, LABELED AS (E) SHALL REMAIN IN PLACE AS WELL AS ITS' ASSOCIATED CIRCUITING AND CONDUIT, UNLESS OTHERWISE NOTED.
- C. THE CONTRACTOR SHALL REMOVE THE EXISTING ELECTRIC IN AREAS OF NEW RENOVATIONS TO ACCOMMODATE NEW CONSTRUCTION. REROUTING OF EXISTING MAY BE REQUIRED AT NEW OPENINGS IN EXISTING CONSTRUCTION OR INTERFERENCE WITH OTHER NEW WORK AS NOTED IN THE FOLLOWING NOTES.
- D. DRAWINGS INDICATE SPECIFIC ITEMS TO BE REMOVED AND/OR RELOCATED IN ORDER TO INDICATE GENERAL SCOPE. ADDITIONAL ITEMS NOT INDICATED, BUT NECESSARY FOR PROJECT RENOVATIONS, SHALL BE REMOVED, RELOCATED AND/OR REROUTED. THE CONTRACTOR SHALL ASSUME WITHIN THE BASE BID A NOMINAL AMOUNT OF BRANCH CIRCUITS, FIXTURES, DEVICES, AND SYSTEMS WIRING WITHIN WALLS OR OPENINGS BEING REMOVED OR RELOCATED AS REQUIRED TO ACCOMMODATE THE NEW CONSTRUCTION.
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- COORDINATE DEMOLITION OF EQUIPMENT, DEVICES, ETC. WITH OTHER DISCIPLINES AS APPLICABLE. REFER TO ARCHITECTURAL DEMOLITION DRAWINGS AND NOTES FOR COORDINATION.
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- H. CONTRACTOR SHALL PROPERLY DISPOSE OF ALL ITEMS, EQUIPMENT, PANELS, LIGHT FIXTURES, ETC. BEING REMOVED AS PART OF THIS PROJECT. THE OWNER SHALL HAVE THE RIGHT OF RETAINING ANY ITEMS BEING REMOVED.
- I. CONTRACTOR SHALL PROVIDE NEW COVERPLATES ON ALL BOXES OF UNUSED AND/OR REMOVED FLUSH MOUNT DEVICES UPON COMPLETION OF PROJECT.
- J. FIREPROOFING AND/OR FIRE STOP MATERIALS REMOVED FROM FIRE RATED WALLS AND CEILINGS AS A RESULT OF DEMOLITION SHALL BE RE-INSTALLED USING AN APPROVED METHOD AS DESCRIBED IN ASSOCIATED PROJECT SPECIFICATIONS.
- K. CONTRACTOR SHALL PROTECT ALL SMOKE DETECTORS FROM DUST, DEBRIS, AND DAMAGE DURING CONSTRUCTION IN ACCORDANCE WITH NFPA 72.
  L. EXISTING HVAC EQUIPMENT PANELBOARD AND CIRCUIT BREAKER INFORMATION IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING BUILDING DOCUTMENTS AND IS SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUITING.
- M. EXISTING LOW VOLTAGE SYSTEM DEVICES, AND POWER DEVICES ON CEILINGS INDICATED WITH "(E)" AND NOT INDICATED AS BEING DEMOLISHED (DASHED, HATCHED, OR OTHERWISE NOTED) ARE SHOWN FOR REFERENCE PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEMPORARILY SUSPEND AND PROTECT OR REMOVE AND REINSTALL ALL EXISTING TO REMAIN CEILING DEVICES AS REQUIRED FOR DEMOLITION AND NEW WORK PHASES.
- N. CONTRACTOR SHALL PROTECT ALL EXISTING TO REMAIN DEVICES DURING CONSTRUCTION. DAMAGED EXISTING TO REMAIN DEVICES SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

#### KEY NOTES

- DISCONNECT EXISTING MECHANICAL EQUIPMENT. REMOVE CIRCUITING BACK TO SOURCE PANEL.
- DISCONNECT EXISTING MECHANICAL EQUIPMENT. EXISTING CIRCUITING SHALL REMAIN TO SERVE NEW UNIT.
- REMOVE EXISTING LIGHT FIXTURE(S) AND LIGHTING CONTROL DEVICE(S) IN THIS AREA UNLESS INDICATED WITH "(E)". EXISTING LIGHTING BRANCH CIRCUITING SHALL REMAIN TO SERVE NEW FIXTURE(S) AND CONTROL(S).

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PROJECT INFORMATION
Project Number
R23.00325

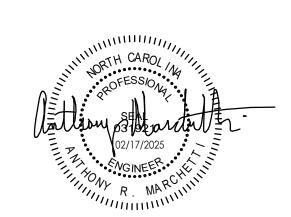
JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

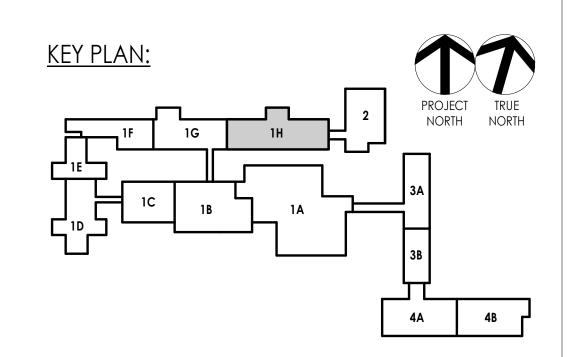
FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS





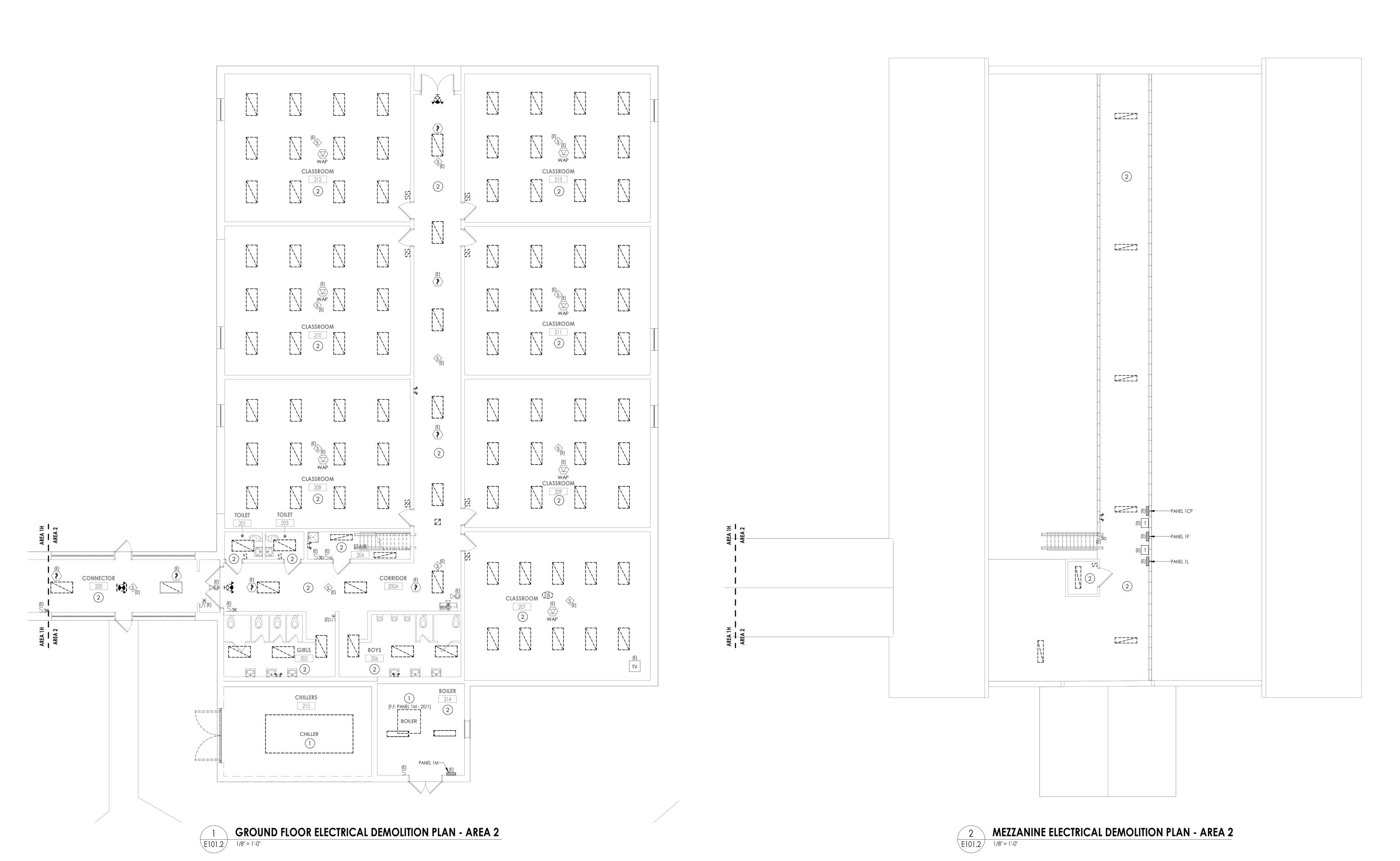
JAE ARM

Drawing Title

GROUND FLOOR ELECTRICA

DEMOLITION PLAN - AREA 1

FOES
E101.1H



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- K. CONTRACTOR SHALL PROTECT ALL SMOKE DETECTORS FROM DUST, DEBRIS, AND DAMAGE DURING CONSTRUCTION IN ACCORDANCE WITH NFPA 72. EXISTING HVAC EQUIPMENT PANELBOARD AND CIRCUIT BREAKER INFORMATION IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING BUILDING DOCUTMENTS AND IS SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUIITING.
- M. EXISTING LOW VOLTAGE SYSTEM DEVICES, AND POWER DEVICES ON CEILINGS INDICATED WITH "(E)" AND NOT INDICATED AS BEING DEMOLISHED (DASHED, HATCHED, OR OTHERWISE NOTED) ARE SHOWN FOR REFERENCE PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEMPORARILY SUSPEND AND PROTECT OR REMOVE AND REINSTALL ALL EXISTING TO REMAIN CEILING DEVICES AS REQUIRED FOR DEMOLITION AND NEW WORK PHASES.
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# **KEY NOTES**

- DISCONNECT EXISTING MECHANICAL EQUIPMENT. REMOVE CIRCUITING BACK TO SOURCE PANEL.
- REMOVE EXISTING LIGHT FIXTURE(S) AND LIGHTING CONTROL DEVICE(S) IN THIS AREA UNLESS INDICATED WITH "(È)". EXISTING LIGHTING BRANCH CIRCUÍTING SHALL REMAIN TO SERVE NEW FIXTURE(S) AND CONTROL(S).

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PROJECT INFORMATION Project Number R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

Project Name FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

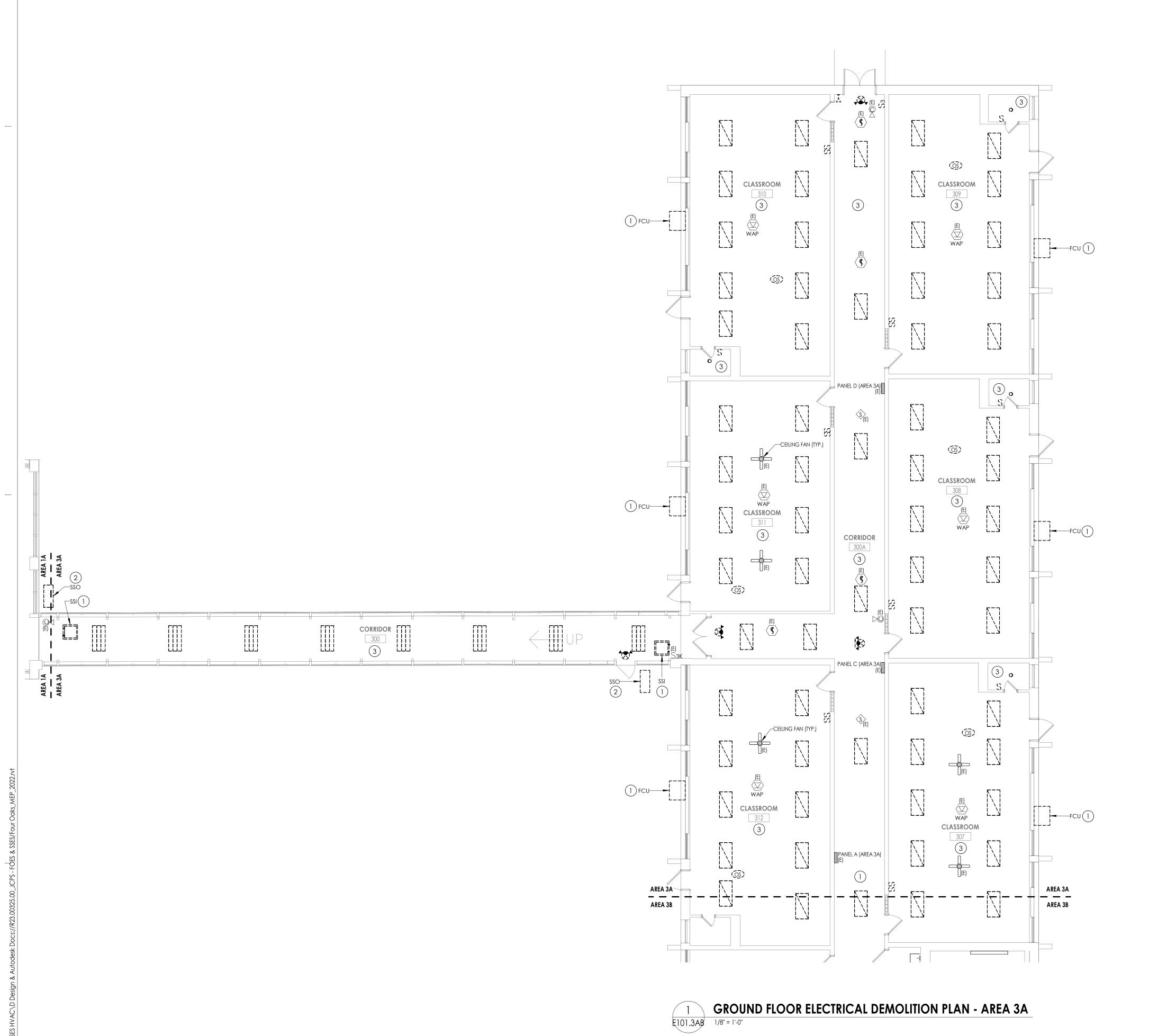
180 W Hatcher St, Four Oaks, NC 27524

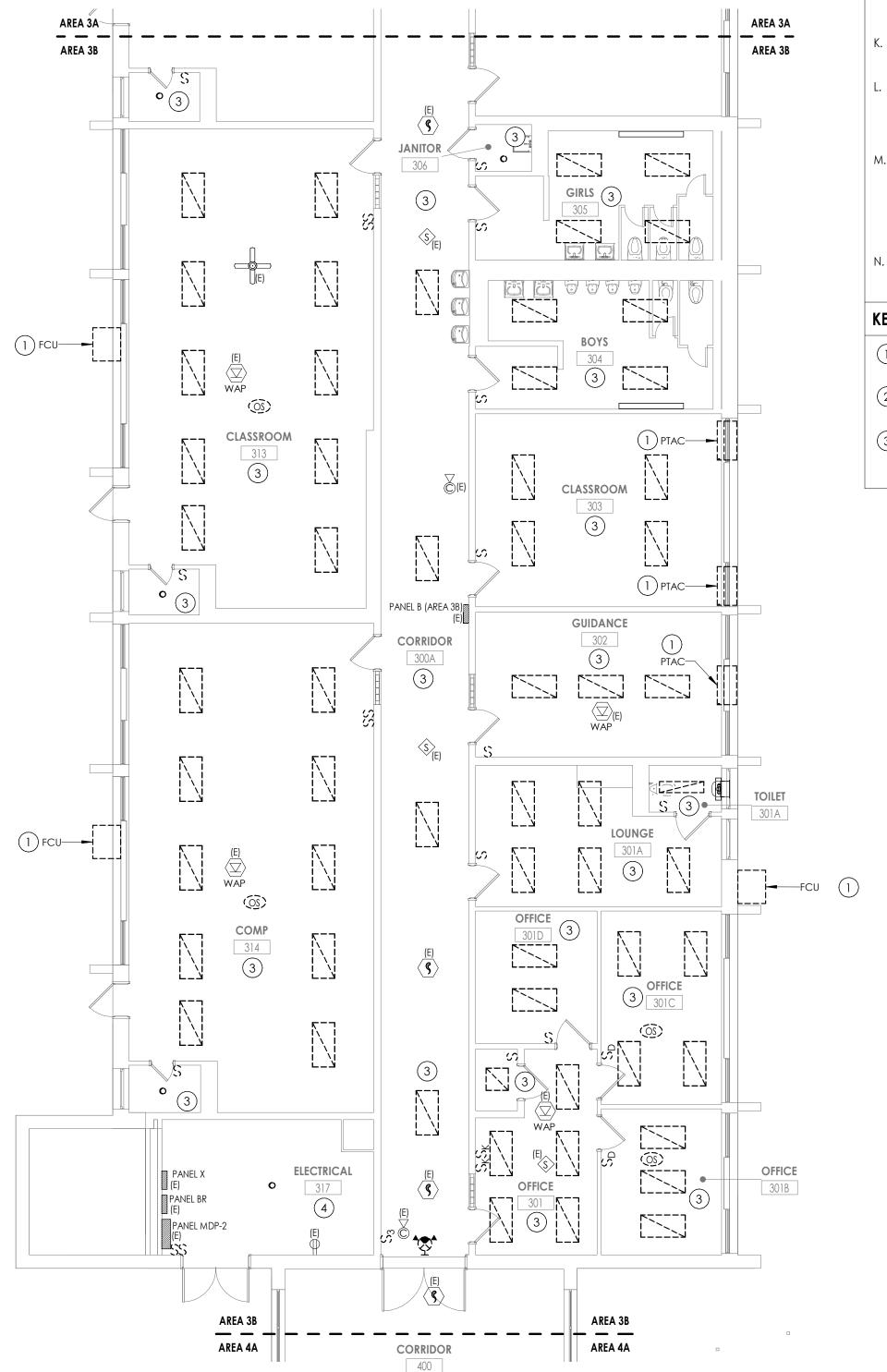
PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS



DEMOLITION PLAN - AREA 2





A. ALL ITEMS SHOWN ARE TO BE REMOVED UNLESS LABELED AS (E) EXISTING. REMOVAL OF DEVICE INCLUDES ITS ASSOCIATED CABLING/BRANCH CIRCUIT WIRING, AND RACEWAY.

**GENERAL NOTES** 

- B. ANY EXISTING DEVICE TO REMAIN, LABELED AS (E) SHALL REMAIN IN PLACE AS WELL AS ITS' ASSOCIATED CIRCUITING AND CONDUIT, UNLESS OTHERWISE NOTED.
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PROJECT INFORMATION

R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE
vv Date Description

PROFESSIONAL STAMPS



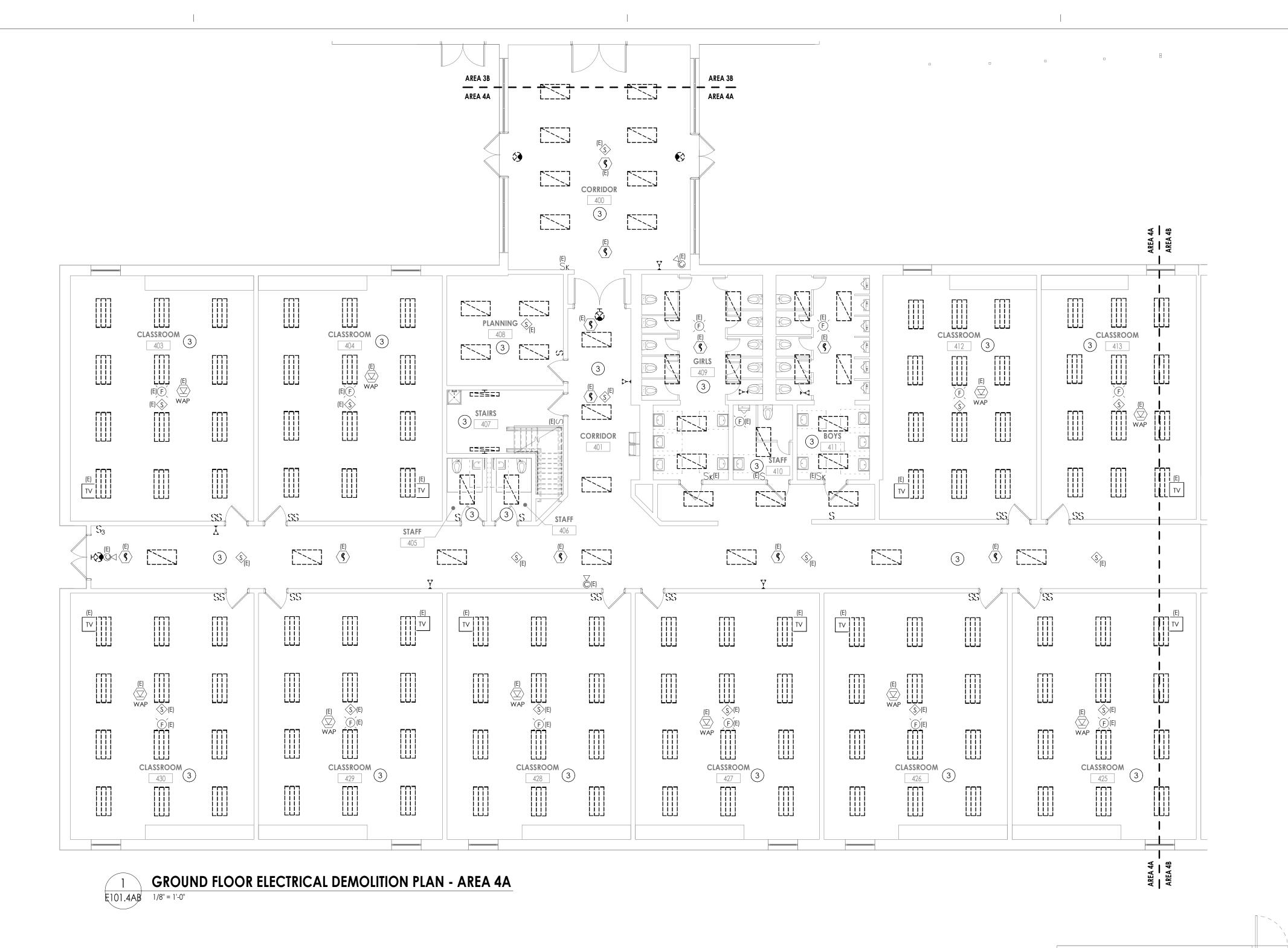
Issued 02/17/2025 Scale
AS NOTED Project Status BID SET

> GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 3A &

FOES E101.3AB

2 GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 3B
E101.3AB 1/8" = 1'-0"

KEY PLAN:





GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 4B

#### **GENERAL NOTES**

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### **KEY NOTES**

KEY PLAN:

- DISCONNECT EXISTING MECHANICAL EQUIPMENT. REMOVE CIRCUITING BACK TO SOURCE PANEL.
- (2) DISCONNECT EXISTING CHILLER AND ASSOCIATED CONTROLS, HEAT TRACE, AND PUMP. REMOVE CHILLER CIRCUITING BACK TO UTILITY SERVICE, REMOVE ALL OTHER CIRCUITING BACK TO SOURCE PANEL.
- REMOVE EXISTING LIGHT FIXTURE(S) AND LIGHTING CONTROL DEVICE(S) IN THIS AREA UNLESS INDICATED WITH "(E)". EXISTING LIGHTING BRANCH CIRCUITING SHALL REMAIN TO SERVE NEW FIXTURE(S) AND CONTROL(S).

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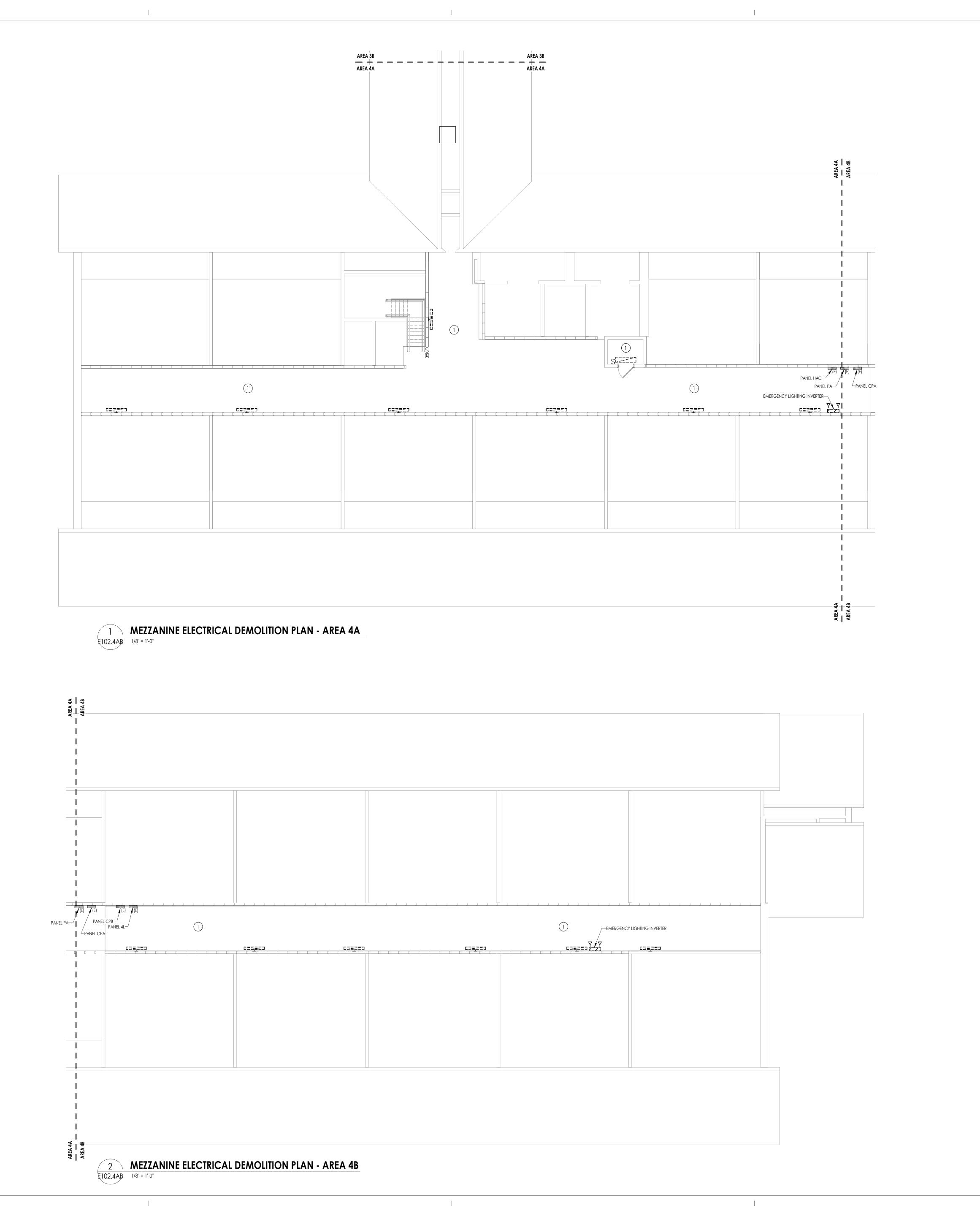


SHEET INFORMATION lssued 02/17/2025 1/8" = 1'-0" Project Status

**BID SET** 

GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 4B

E101.4AB



- A. ALL ITEMS SHOWN ARE TO BE REMOVED UNLESS LABELED AS (E) EXISTING. REMOVAL OF DEVICE INCLUDES ITS ASSOCIATED CABLING/BRANCH CIRCUIT WIRING, AND RACEWAY.
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- K. CONTRACTOR SHALL PROTECT ALL SMOKE DETECTORS FROM DUST, DEBRIS, AND DAMAGE DURING CONSTRUCTION IN ACCORDANCE WITH NFPA 72.

  L. EXISTING HVAC EQUIPMENT PANELBOARD AND CIRCUIT BREAKER INFORMATION IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING BUILDING DOCUTMENTS AND IS SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL FIELD VERIFY
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#### KEY NOTES

EXISTING CIRCUIITING.

REMOVE EXISTING LIGHT FIXTURE(S) AND LIGHTING CONTROL DEVICE(S) IN THIS AREA UNLESS INDICATED WITH "(E)". EXISTING LIGHTING BRANCH CIRCUITING SHALL REMAIN TO SERVE NEW FIXTURE(S) AND CONTROL(S).

PROFESSIONAL STAMPS

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PROJECT INFORMATION

SCHOOL DISTRICT

180 W Hatcher St, Four Oaks, NC 27524

JOHNSTON COUNTY PUBLIC

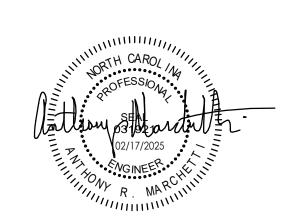
FOUR OAKS ELEMENTARY

SCHOOL HVAC RENOVATION

PROJECT ISSUE & REVISION SCHEDULE

Project Number

R23.00325



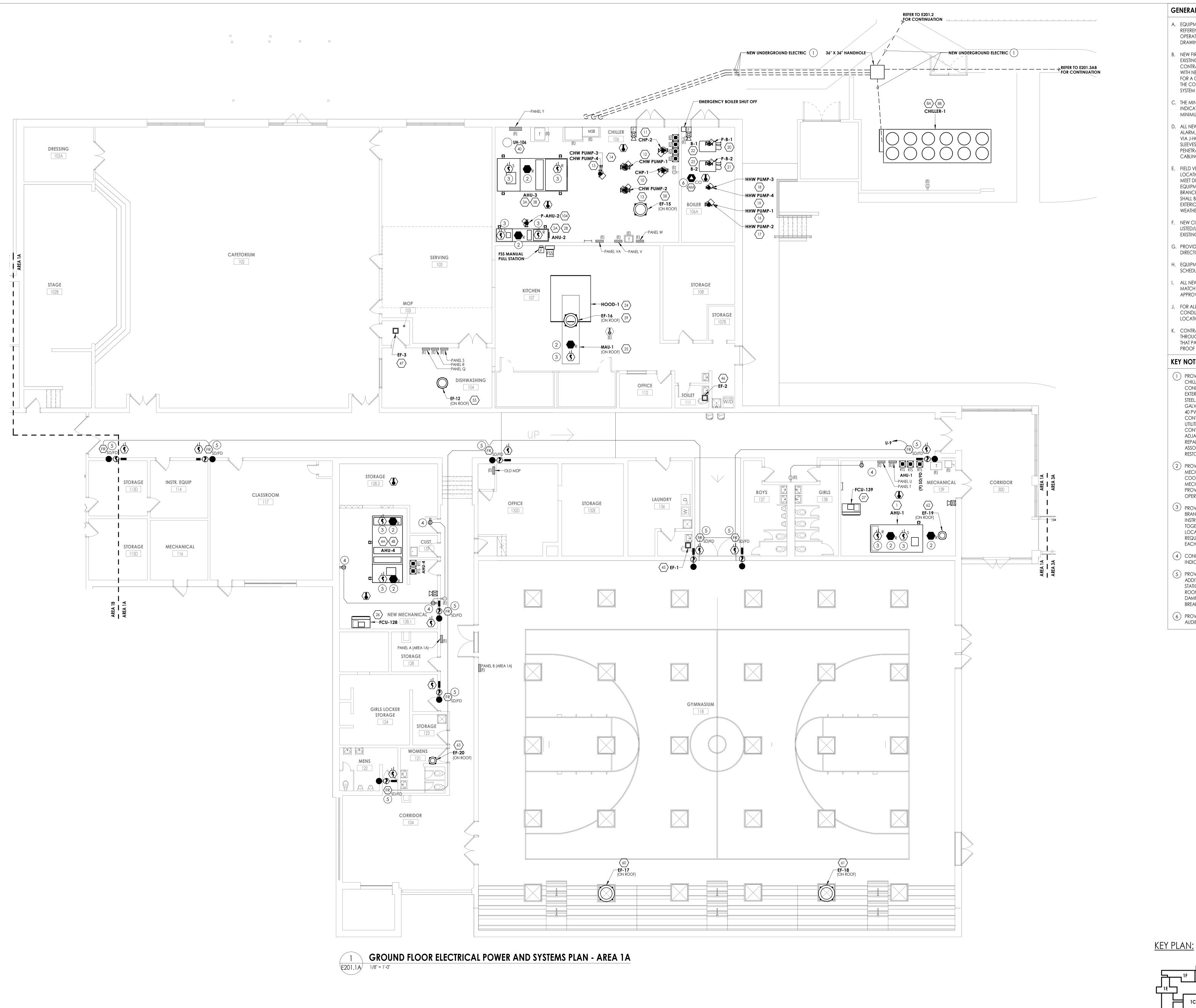
SHEET INFORMATION

Issued Scale
02/17/2025 AS NOTED

Project Status
BID SET
Drawn By Checked By
JAE ARM
Drawing Title

MEZZANINE ELECTRICAL
DEMOLITION PLANT AREA 44A

FOES E102.4AB



- A. EQUIPMENT AND DEVICES LABELED AS "(E)" ARE EXISTING AND ARE SHOWN FOR REFERENCE ONLY. ALL OF THESE EQUIPMENT AND DEVICES SHALL REMAIN OPERATIONAL FOLLOWING CONSTRUCTION. REFER TO E100 SERIES DEMOLITION DRAWINGS FOR EXISTING TO REMAIN CEILING DEVICES.
- S. NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH AND CONNECTED TO EXISTING FIRE ALARM SYSTEM. EXISTING FIRE ALARM SYSTEM IS SIMPLEX 4100U. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL AND LABOR COSTS ASSOCIATED WITH NEW FIRE ALARM DEVICES SHOWN, ASSOCIATED CABLING, TESTING, ETC. FOR A COMPLETE OPERATIONAL FIRE ALARM SYSTEM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL WORK ASSOCIATED WITH FIRE ALARM SYSTEM AND FINAL PROGRAMMING OF SYSTEM WITH FIRE ALARM VENDOR.
- . THE MINIMUM CANDELA RATING OF FIRE ALARM VISUAL NOTIFICATION DEVICES IS INDICATED ADJACENT TO DEVICE. IF CANDELA RATING IS NOT INDICATED, MINIMUM ALLOWABLE SETTING IS 15 CANDELA.
- D. ALL NEW LOW VOLTAGE SYSTEMS CABLING SUCH AS PUBLIC ADDRESS, FIRE ALARM, TEL-COM, ETC. SHALL BE INSTALLED AS OPEN-AIR SYSTEMS AND SUPPORTED VIA J-HOOKS AND BRIDAL RINGS AT INTERVALS NOT EXCEEDING 5'-0". CONDUIT SLEEVES WITH PLASTIC END BUSHINGS SHALL BE USED FOR ALL WALL PENETRATIONS. IN INACCESSIBLE LOCATIONS AND AREAS OPEN TO STRUCTURE CABLING SHALL BE INSTALLED IN CONDUIT. ALL CABLING SHALL BE PLENUM RATED.
- FIELD VERIFY EXISTING RECEPTACLE WITHIN 25' OF FINAL HVAC EQUIPMENT LOCATIONS IN ACCORDANCE WITH NEC 210.63. WHERE RECEPTACLES DO NOT MEET DISTANCE REQUIREMENT, PROVIDE NEW RECEPTACLE WITHIN 25' OF HVAC EQUIPMENT AND CIRCUIT TO NEAREST AVAILABLE CONVENIENCE RECEPTACLE BRANCH CIRCUIT IN AREA. INTERIOR RECEPTACLES IN STUDENT OCCUPIED SPACES SHALL BE TAMPER RESISTANT, RECEPTACLES IN MECHANICAL SPACES WITH EXTERIOR DOORS SHALL BE GFCI, AND EXTERIOR RECEPTACLES SHALL BE GFCI, WEATHER-RESISTANT, WITH WEATHERPROOF IN-USE COVERS.
- NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANELBOARDS SHALL BE U.L. LISTED/LABELED FOR USE IN, AND HAVE MATCHING INTERRUPTING RATING OF, EXISTING PANELBOARD.
- G. PROVIDE PANELBOARDS USED DURING PROJECT WITH UPDATED TYPED DIRECTORIES INDICATING LOAD AND LOCATION.
- H. EQUIPMENT DESIGNATED WITH A NUMBER INSIDE OF A HEXAGON ( $\langle \# \rangle$ ) ARE SCHEDULED ON DRAWING E900.
- ALL NEW EXPOSED INTERIOR AND EXTERIOR RACEWAY SHALL BE PAINTED TO MATCH EXISTING CEILING AND/OR WALL FINISH. CONTRACTOR SHALL USE APPROVED DISTRICT PAINT COLOR/TYPE OR APPROVED EQUIVALENT.
- FOR ALL VERTICAL AND HORIZONTAL RUNS ALONG INACCESSIBLE BLOCK, CONDUIT SHALL TRANSITION TO SINGLE OR DUAL STEEL WIREMOLD IN EXPOSED LOCATIONS.
- K. CONTRACTOR IS RESPONSIBLE FOR SEALING ALL CONDUIT PENETRATIONS THROUGH INTERIOR WALLS, EXTERIOR WALLS, DOOR FRAMES, ETC. ANY CONDUIT THAT PASSES THROUGH FIRE/SMOKE BARRIER SHALL BE PROVIDED WITH FIRE PROOF SEALS.

#### KEY NOTES

- PROVIDE UNDERGROUND CONDUITS REQUIRED FROM LPV-1, CHILLER-1, AND CHILLER-2 TO BUILDING, SIZE PER EQUIPMENT WIRING SCHEDULE. ELBOW CONDUITS THROUGH EXISTING EXTERIOR WALL AND SEAL WATER-TIGHT. EXTERIOR ABOVE GRADE EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL. UNDERGROUND CONDUIT ELBOWS AND SWEEPS SHALL BE RIGID GALVANIZED STEEL, ALL OTHER UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT. CONDUIT ROUTE SHOWN IS FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL UNDERGROUND UTILITIES IN AREAS OF NEW UNDERGROUND WORK PRIOR TO EXCAVATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO ADJACENT UNDERGROUND UTILITIES AND SHALL INCUR ALL ASSOCIATED REPAIR COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH TRENCHING, SAW CUTTING, ETC. AND FOR FULL RESTORATION OF EXISTING CONDITIONS.
- (2) PROVIDE ADDRESSABLE FAN SHUTDOWN RELAY(S) TO SHUTDOWN ASSOCIATED MECHANICAL EQUIPMENT FAN(S) UPON ACTIVATION OF FIRE ALARM SYSTEM. COORDINATE REQUIREMENTS AND SHUTDOWN SEQUENCING WITH MECHANICAL CONTRACTOR IN FIELD PRIOR TO FINAL COMMISSIONING. PROVIDE QUANTITY AND PROGRAMMING REQUIRED FOR INTENDED OPERATION.
- PROVIDE DUCT DETECTOR IN SUPPLY AND RETURN DUCT(S) PRIOR TO BRANCHING OF DUCTWORK AND PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE ASSOCIATED REMOTE TEST STATIONS GROUPED TOGETHER WITHIN MECHANICAL SPACE AT 54" ABOVE FINISHED FLOOR. LOCATIONS SHOWN ON PLAN FOR REFERENCE ONLY, PROVIDE QUANTITY REQUIRED FOR INTENDED OPERATION. PROVIDE (1) REMOTE TEST STATION FOR EACH DUCT DETECTOR.
- (4) CONNECT NEW RECEPTACLE TO EXISTING RECEPTACLE BRANCH CIRCUIT INDICATED. WIRE WITH (2)#12, #12G IN 3/4" CONDUIT.
- PROVIDE SMOKE DAMPER RELAY, REFER TO DETAIL ON DRAWING E800 FOR ADDITIONAL REQUIREMENTS INCLUDING DUCT DETECTOR AND REMOTE TEST STATION. REMOTE TEST STATION(S) SHALL BE LOCATED WITHIN MECHANICAL ROOM SPACE ADJACENT TO AHU REMOTE TEST STATIONS. CIRCUIT SMOKE DAMPER ACTUATOR TO PANEL INDICATED AT NEXT AVAILABLE SPARE 20A/1P
- PROVIDE CARBON MONOXIDE DETECTOR WITH ADDRESSABLE RELAY AND AUDIBLE ALARM WITH DISTINCT SIGNAL IN ACCORDANCE WITH NFPA 72.

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PROJECT INFORMATION Project Number

R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

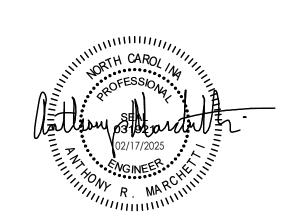
FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St,

Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS

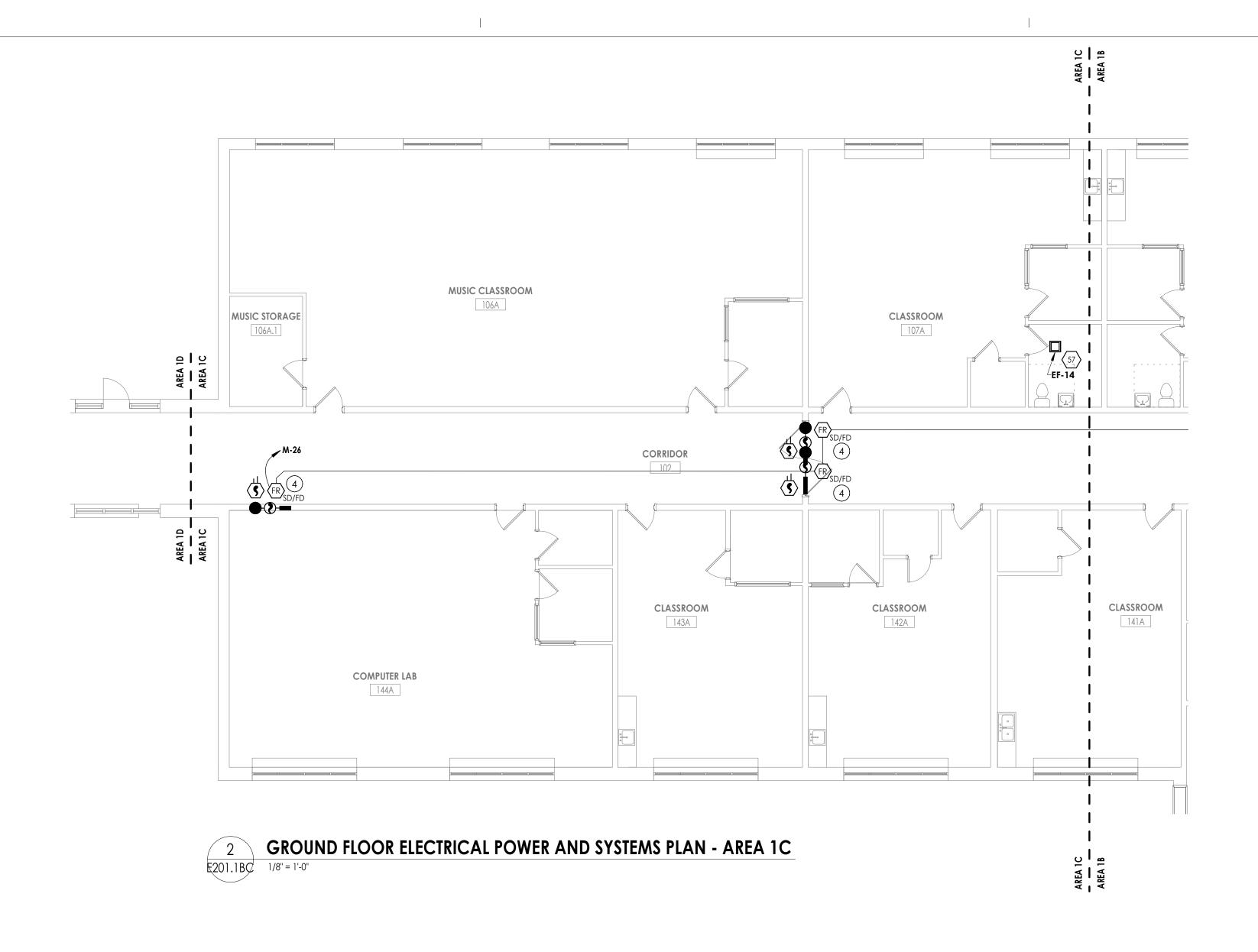


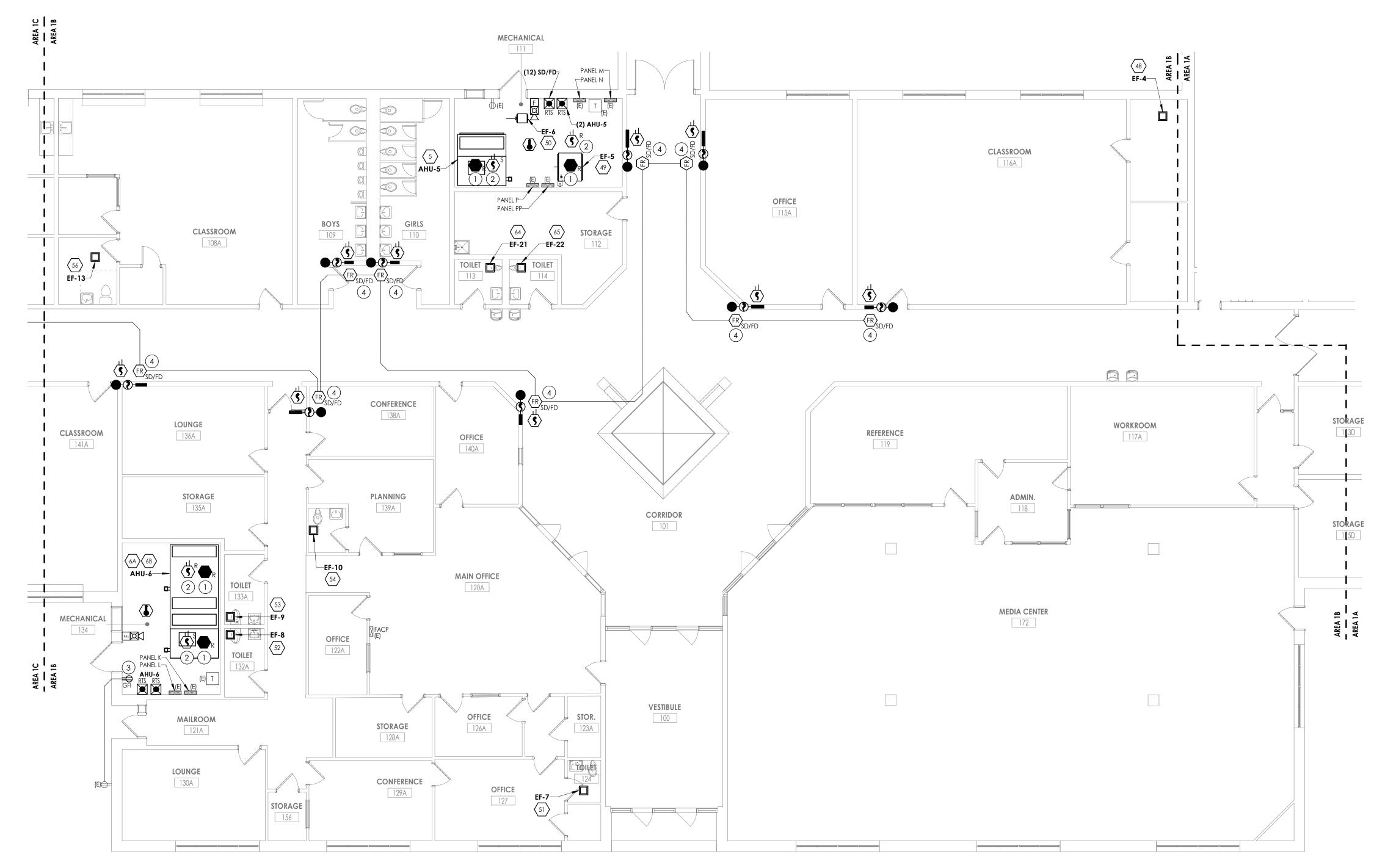
SHEET INFORMATION

lssued 02/17/2025 **AS NOTED** Project Status **BID SET** Drawn By

GROUND FLOOR ELECTRICAL POWER AND SYSTEMS PLAN AREA 1A

E201.1A





GROUND FLOOR ELECTRICAL POWER AND SYSTEMS PLAN - AREA 1B

#### GENERAL NOTES

- A. EQUIPMENT AND DEVICES LABELED AS "(E)" ARE EXISTING AND ARE SHOWN FOR REFERENCE ONLY. ALL OF THESE EQUIPMENT AND DEVICES SHALL REMAIN OPERATIONAL FOLLOWING CONSTRUCTION. REFER TO E100 SERIES DEMOLITION DRAWINGS FOR EXISTING TO REMAIN CEILING DEVICES.
- 8. NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH AND CONNECTED TO EXISTING FIRE ALARM SYSTEM. EXISTING FIRE ALARM SYSTEM IS SIMPLEX 4100U. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL AND LABOR COSTS ASSOCIATED WITH NEW FIRE ALARM DEVICES SHOWN, ASSOCIATED CABLING, TESTING, ETC. FOR A COMPLETE OPERATIONAL FIRE ALARM SYSTEM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL WORK ASSOCIATED WITH FIRE ALARM SYSTEM AND FINAL PROGRAMMING OF SYSTEM WITH FIRE ALARM VENDOR.
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#### **KEY NOTES**

KEY PLAN:

- PROVIDE ADDRESSABLE FAN SHUTDOWN RELAY(S) TO SHUTDOWN ASSOCIATED MECHANICAL EQUIPMENT FAN(S) UPON ACTIVATION OF FIRE ALARM SYSTEM. COORDINATE REQUIREMENTS AND SHUTDOWN SEQUENCING WITH MECHANICAL CONTRACTOR IN FIELD PRIOR TO FINAL COMMISSIONING. PROVIDE QUANTITY AND PROGRAMMING REQUIRED FOR INTENDED OPERATION.
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PROJECT INFORMATION Project Number

SCHOOL DISTRICT

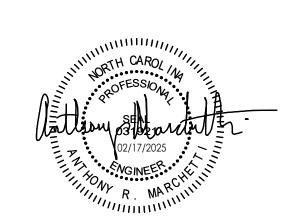
R23.00325 JOHNSTON COUNTY PUBLIC

Project Name FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS



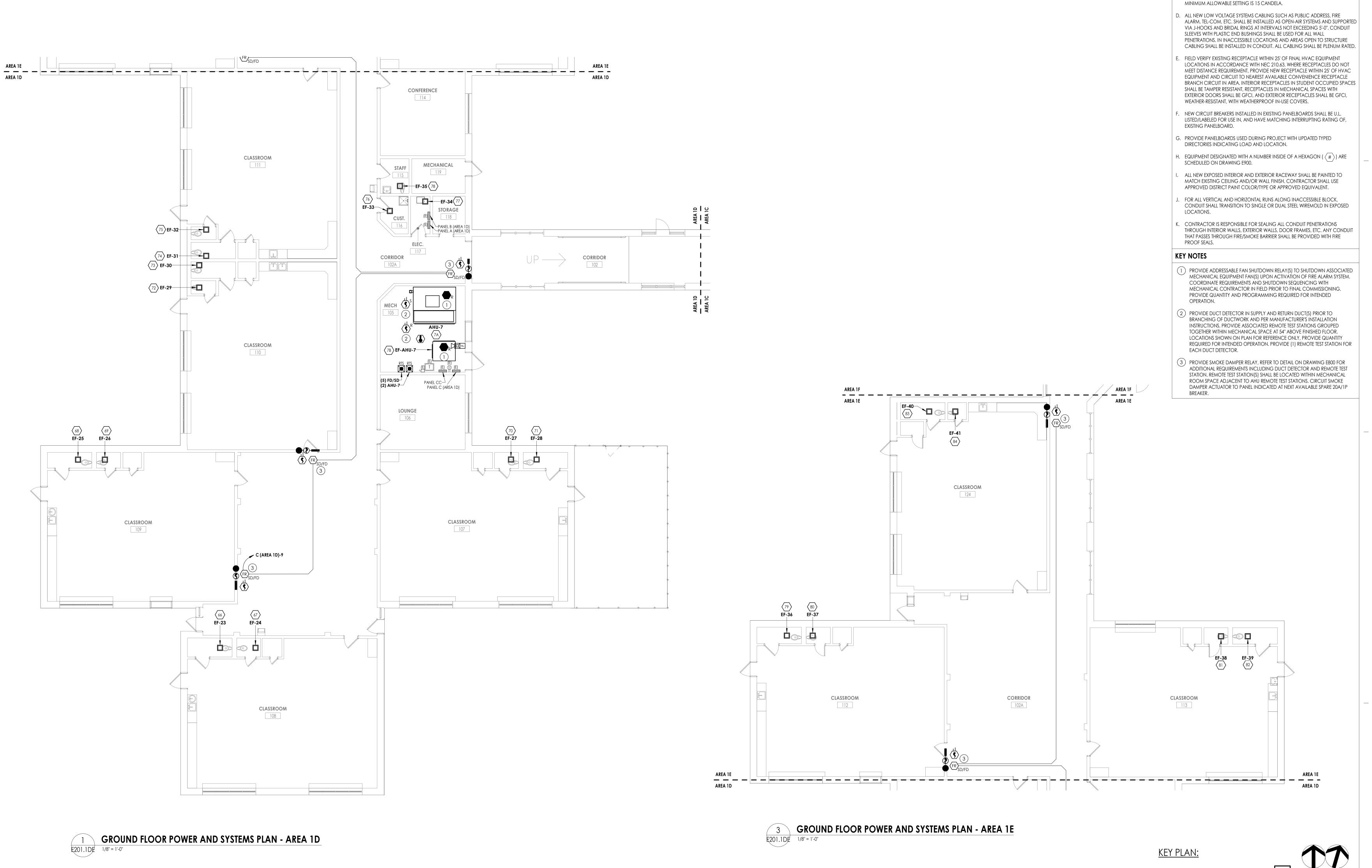
SHEET INFORMATION

Issued 02/17/2025

1/8" = 1'-0" Project Status **BID SET** 

GROUND FLOOR ELECTRICAL AREA 1B & 1C

E201.1BC



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DRAWINGS FOR EXISTING TO REMAIN CEILING DEVICES.

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Raleigh, NC 27604
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PROJECT INFORMATION
Project Number

R23.00325
Client Name

Client Name

JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

Project Name

SCHOOL HVAC RENOVATION

FOUR OAKS ELEMENTARY

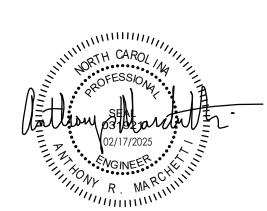
Project Address 180 W Hatcher St,

Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS



1/8" = 1'-0"

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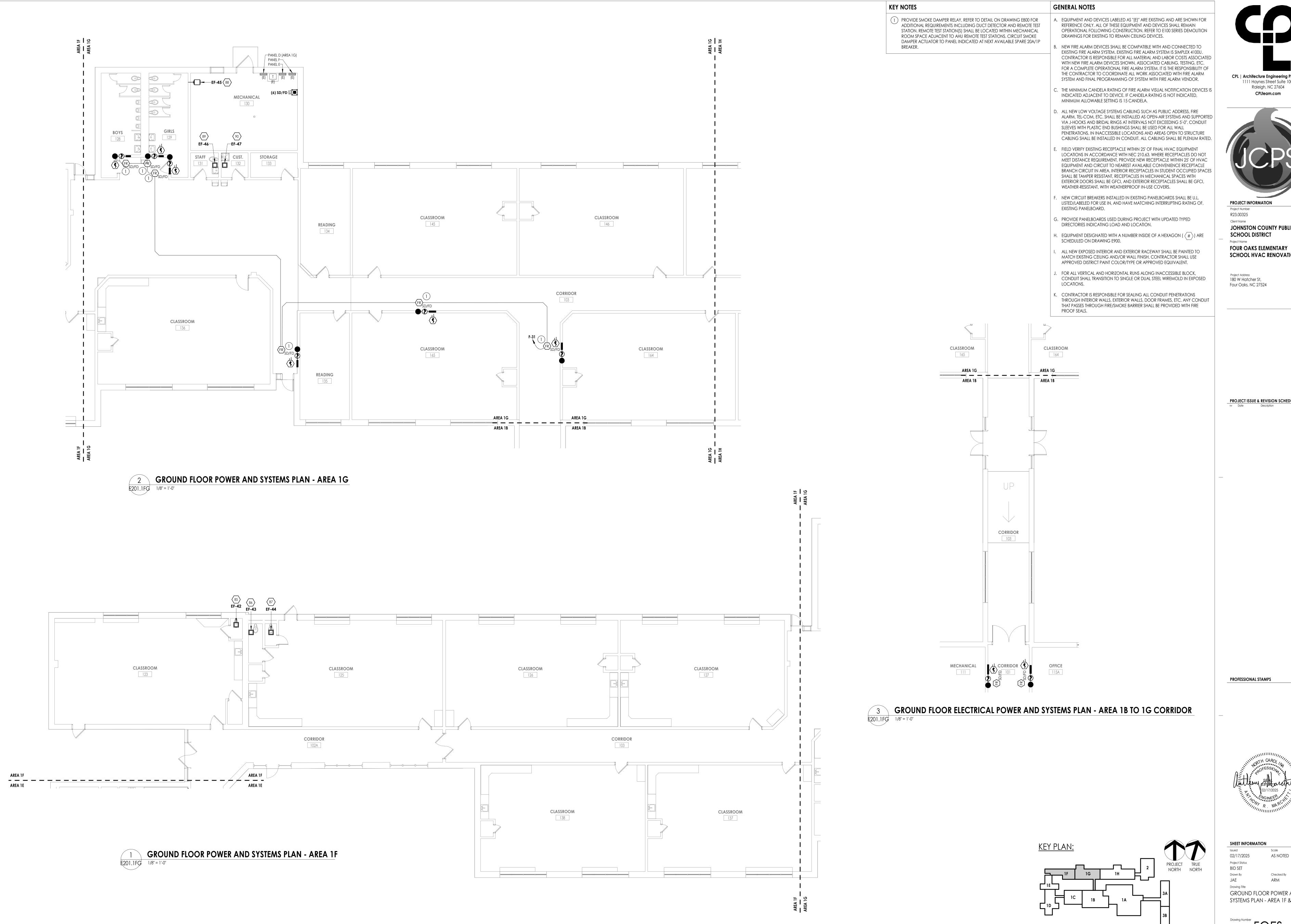
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GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 1D & 1E

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E201.1DE



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PROJECT INFORMATION Project Number

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

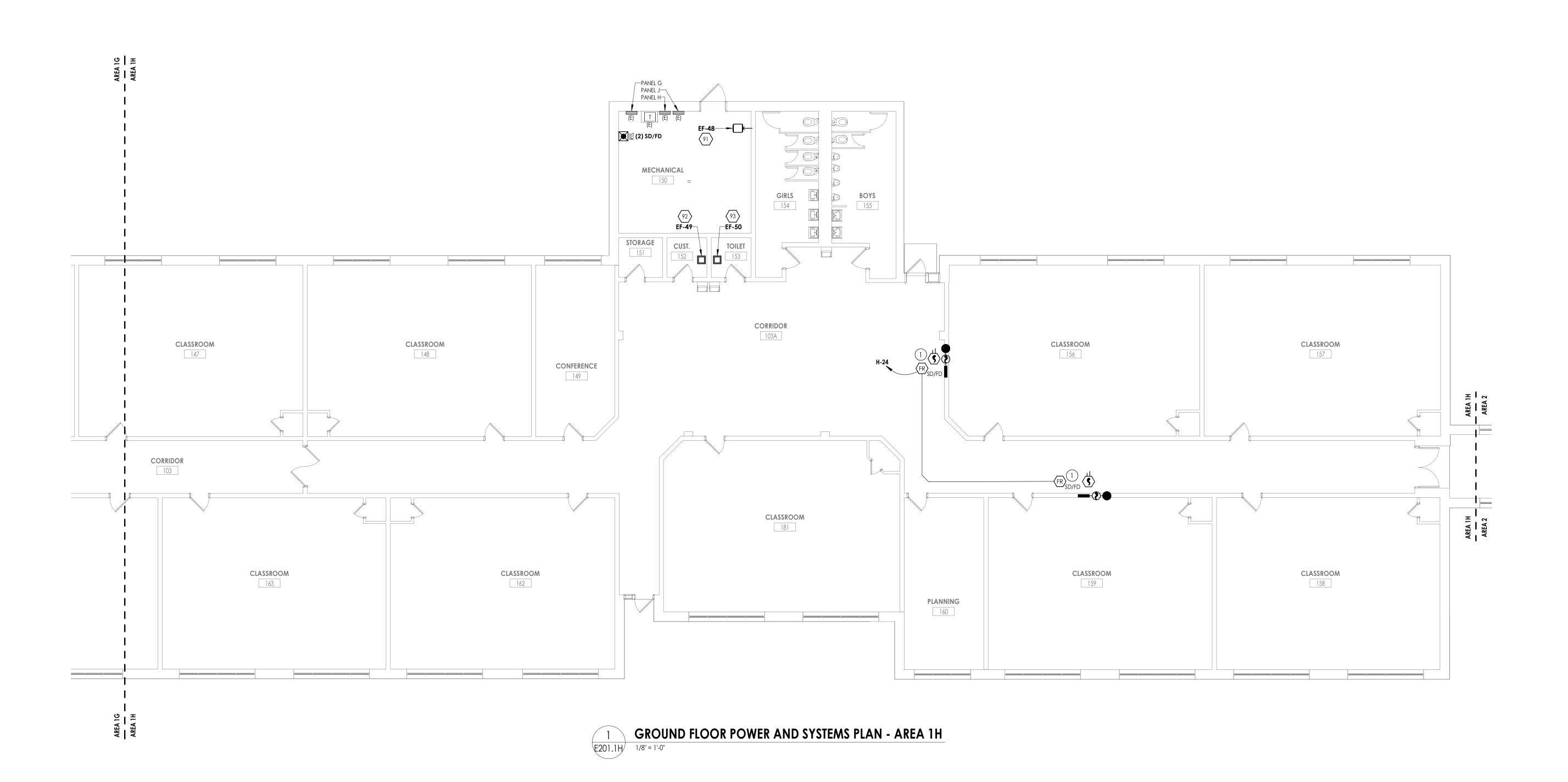
PROFESSIONAL STAMPS



SHEET INFORMATION

lssued 02/17/2025 AS NOTED Project Status

GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 1F & 1G



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#### KEY NOTES

LOCATIONS.

PROVIDE SMOKE DAMPER RELAY, REFER TO DETAIL ON DRAWING E800 FOR ADDITIONAL REQUIREMENTS INCLUDING DUCT DETECTOR AND REMOTE TEST STATION. REMOTE TEST STATION(S) SHALL BE LOCATED WITHIN MECHANICAL ROOM SPACE ADJACENT TO AHU REMOTE TEST STATIONS. CIRCUIT SMOKE DAMPER ACTUATOR TO PANEL INDICATED AT NEXT AVAILABLE SPARE 20A/1P BREAKER.

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PROJECT INFORMATION

Project Number

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JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

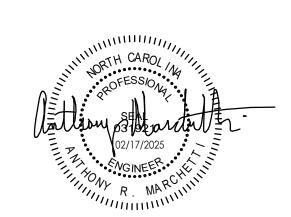
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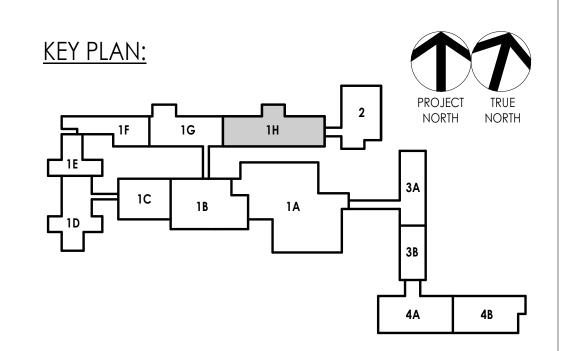
Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS



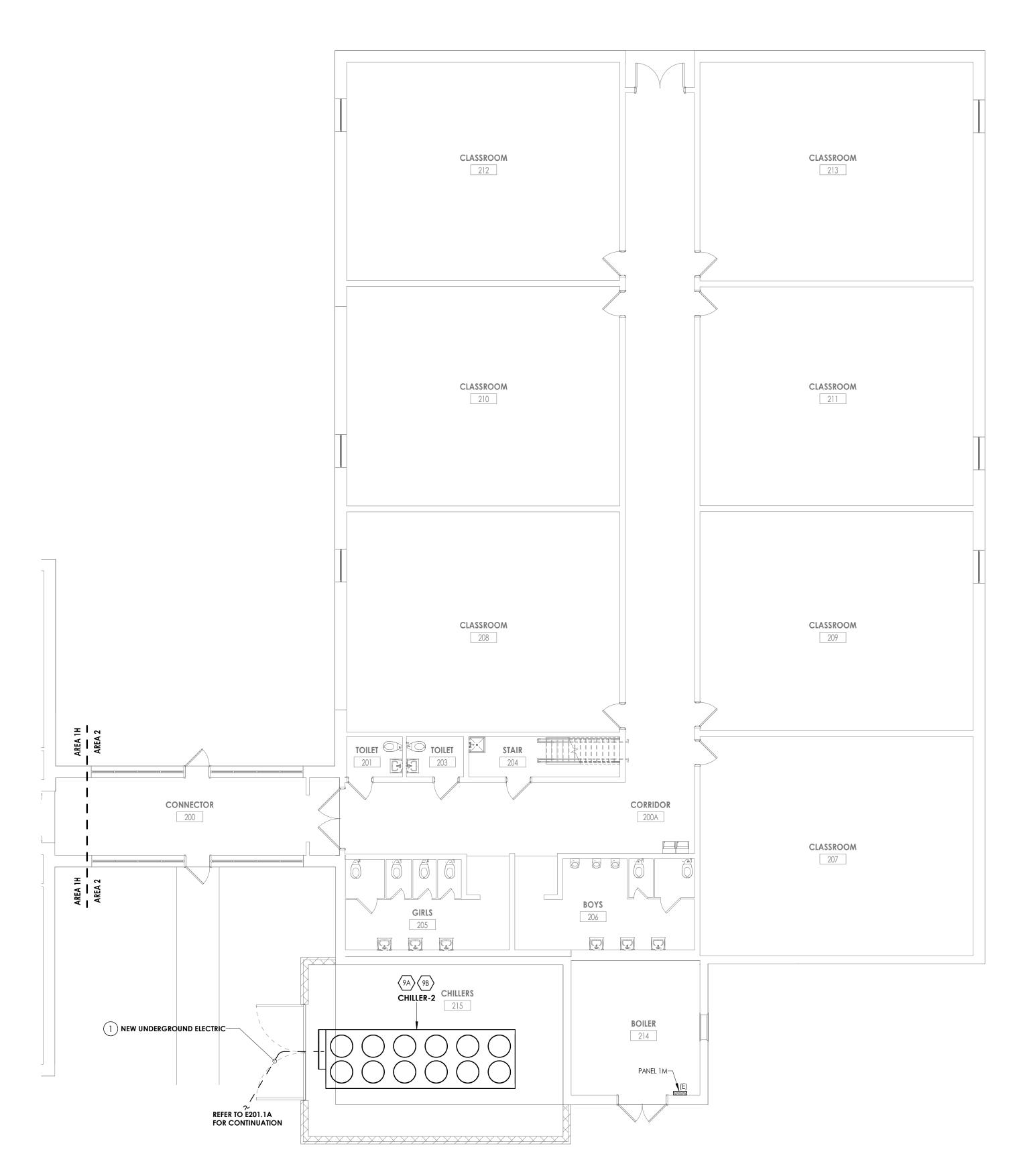


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Project Status
BID SET
Drawn By Checked By
IAF ARM

GROUND FLOOR POWER ANI SYSTEMS PLAN - AREA 1H

> FOES F201.1H



GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 2

1/8" = 1'-0"

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Raleigh, NC 27604

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Project Number

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Client Name

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

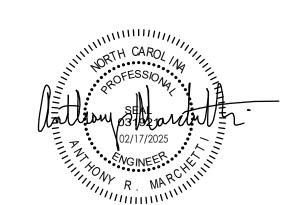
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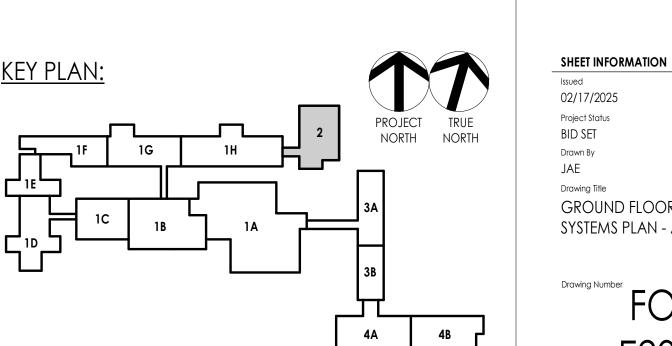
Project Address 180 W Hatcher St,

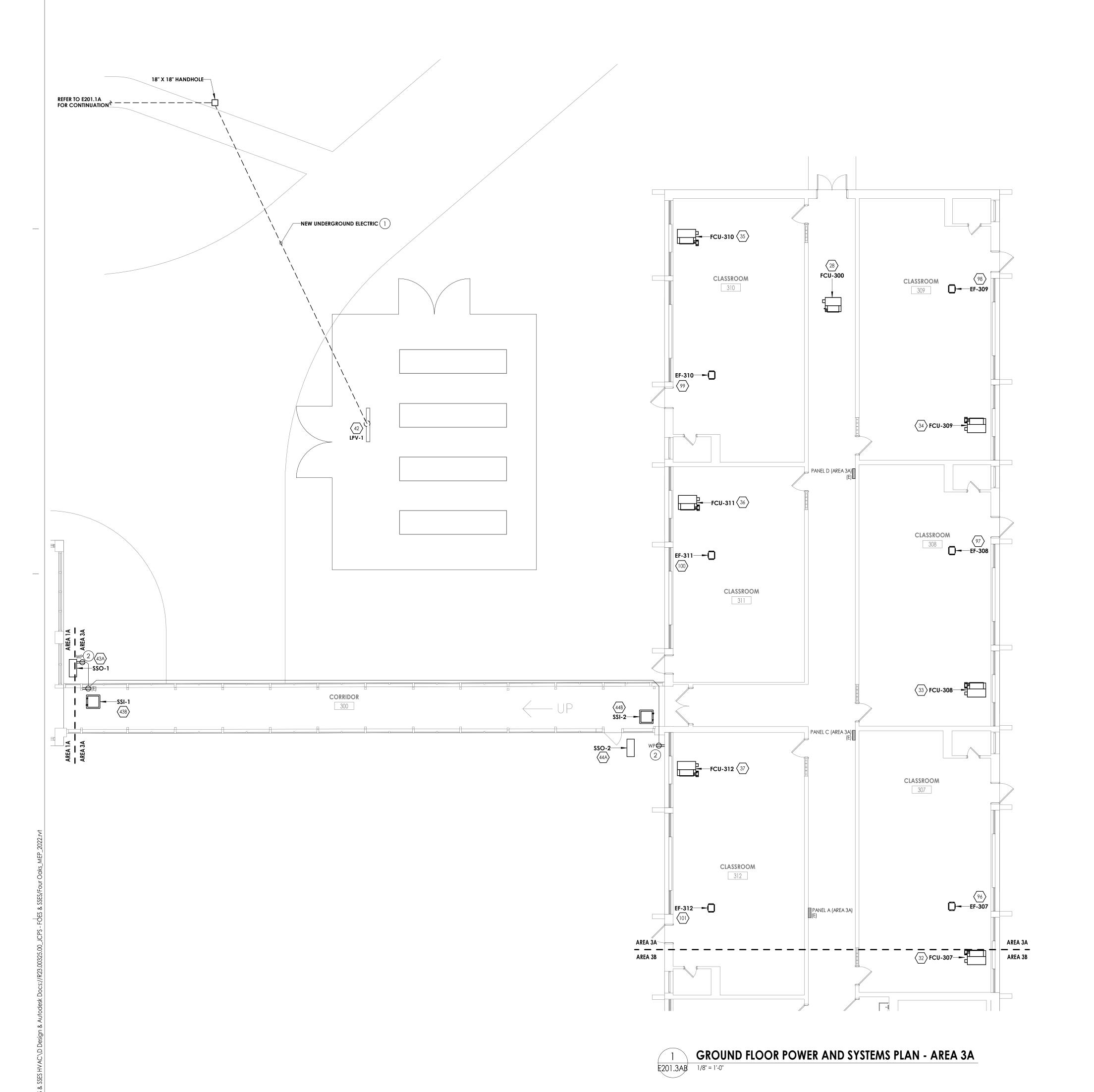
Four Oaks, NC 27524

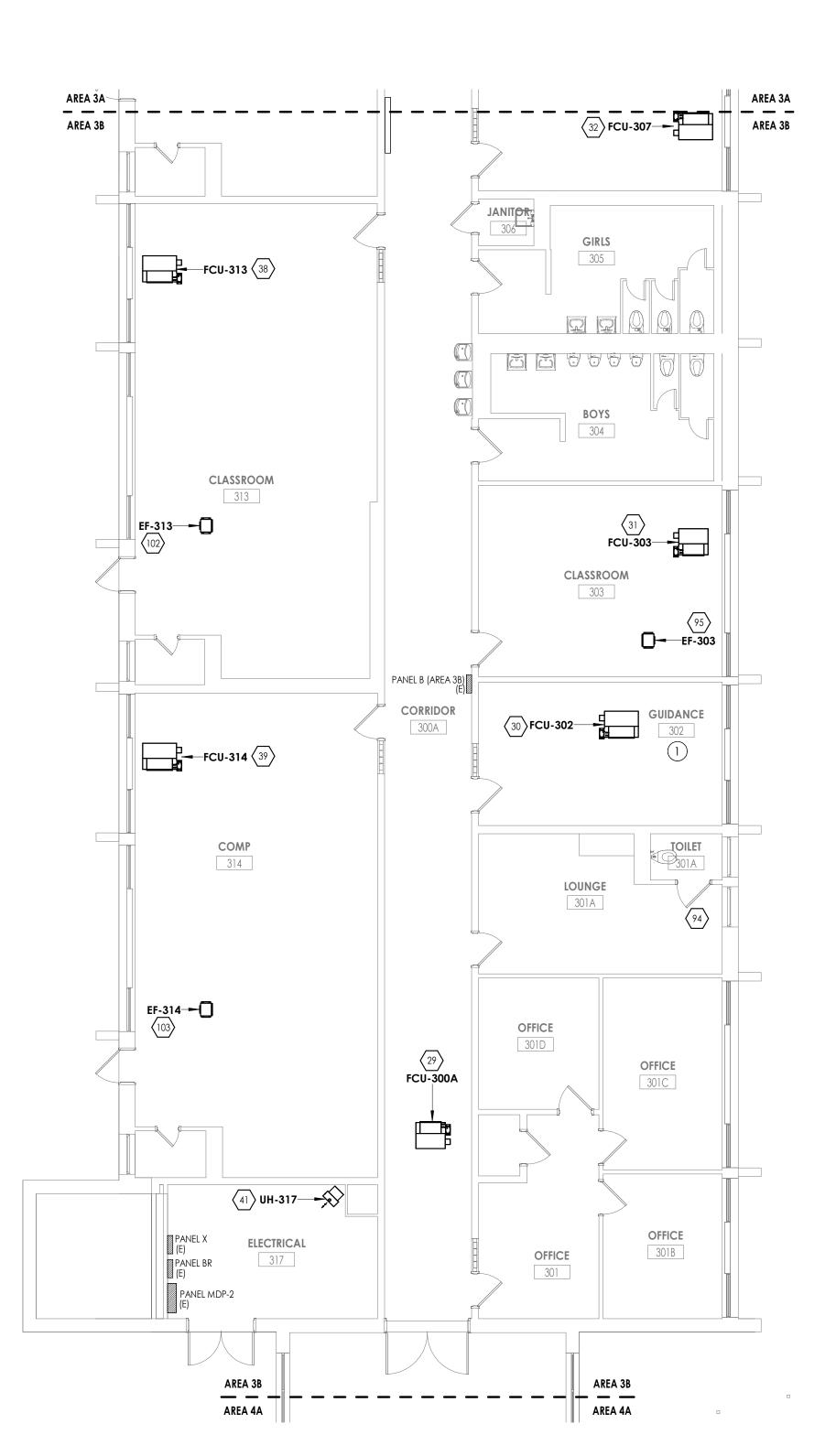
PROJECT ISSUE & REVISION SCHEDULE
w Date Description

PROFESSIONAL STAMPS









2 GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 3B
E201.3AB 1/8" = 1'-0"

#### GENERAL NOTES

- A. EQUIPMENT AND DEVICES LABELED AS "(E)" ARE EXISTING AND ARE SHOWN FOR REFERENCE ONLY. ALL OF THESE EQUIPMENT AND DEVICES SHALL REMAIN OPERATIONAL FOLLOWING CONSTRUCTION. REFER TO E100 SERIES DEMOLITION DRAWINGS FOR EXISTING TO REMAIN CEILING DEVICES.
- B. NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH AND CONNECTED TO EXISTING FIRE ALARM SYSTEM. EXISTING FIRE ALARM SYSTEM IS SIMPLEX 4100U. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL AND LABOR COSTS ASSOCIATED WITH NEW FIRE ALARM DEVICES SHOWN, ASSOCIATED CABLING, TESTING, ETC. FOR A COMPLETE OPERATIONAL FIRE ALARM SYSTEM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL WORK ASSOCIATED WITH FIRE ALARM SYSTEM AND FINAL PROGRAMMING OF SYSTEM WITH FIRE ALARM VENDOR.
- C. THE MINIMUM CANDELA RATING OF FIRE ALARM VISUAL NOTIFICATION DEVICES IS INDICATED ADJACENT TO DEVICE. IF CANDELA RATING IS NOT INDICATED, MINIMUM ALLOWABLE SETTING IS 15 CANDELA.
- D. ALL NEW LOW VOLTAGE SYSTEMS CABLING SUCH AS PUBLIC ADDRESS, FIRE ALARM, TEL-COM, ETC. SHALL BE INSTALLED AS OPEN-AIR SYSTEMS AND SUPPORTED VIA J-HOOKS AND BRIDAL RINGS AT INTERVALS NOT EXCEEDING 5'-0". CONDUIT SLEEVES WITH PLASTIC END BUSHINGS SHALL BE USED FOR ALL WALL PENETRATIONS. IN INACCESSIBLE LOCATIONS AND AREAS OPEN TO STRUCTURE CABLING SHALL BE INSTALLED IN CONDUIT. ALL CABLING SHALL BE PLENUM RATED.
- E. FIELD VERIFY EXISTING RECEPTACLE WITHIN 25' OF FINAL HVAC EQUIPMENT LOCATIONS IN ACCORDANCE WITH NEC 210.63. WHERE RECEPTACLES DO NOT MEET DISTANCE REQUIREMENT, PROVIDE NEW RECEPTACLE WITHIN 25' OF HVAC EQUIPMENT AND CIRCUIT TO NEAREST AVAILABLE CONVENIENCE RECEPTACLE BRANCH CIRCUIT IN AREA. INTERIOR RECEPTACLES IN STUDENT OCCUPIED SPACES SHALL BE TAMPER RESISTANT, RECEPTACLES IN MECHANICAL SPACES WITH EXTERIOR DOORS SHALL BE GFCI, AND EXTERIOR RECEPTACLES SHALL BE GFCI, WEATHER-RESISTANT, WITH WEATHERPROOF IN-USE COVERS.
- NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANELBOARDS SHALL BE U.L. LISTED/LABELED FOR USE IN, AND HAVE MATCHING INTERRUPTING RATING OF, EXISTING PANELBOARD.
- G. PROVIDE PANELBOARDS USED DURING PROJECT WITH UPDATED TYPED DIRECTORIES INDICATING LOAD AND LOCATION.
- H. EQUIPMENT DESIGNATED WITH A NUMBER INSIDE OF A HEXAGON ( #) ARE SCHEDULED ON DRAWING E900.
- ALL NEW EXPOSED INTERIOR AND EXTERIOR RACEWAY SHALL BE PAINTED TO MATCH EXISTING CEILING AND/OR WALL FINISH. CONTRACTOR SHALL USE
- APPROVED DISTRICT PAINT COLOR/TYPE OR APPROVED EQUIVALENT.

  FOR ALL VERTICAL AND HORIZONTAL RUNS ALONG INACCESSIBLE BLOCK,

CONDUIT SHALL TRANSITION TO SINGLE OR DUAL STEEL WIREMOLD IN EXPOSED

LOCATIONS.

CONTRACTOR IS RESPONSIBLE FOR SEALING ALL CONDUIT PENETRATIONS
THROUGH INTERIOR WALLS, EXTERIOR WALLS, DOOR FRAMES, ETC. ANY CONDUIT
THAT PASSES THROUGH FIRE/SMOKE BARRIER SHALL BE PROVIDED WITH FIRE

#### KEY NOTES

PROOF SEALS.

- PROVIDE UNDERGROUND CONDUITS REQUIRED FROM LPV-1 TO BUILDING, SIZE PER EQUIPMENT WIRING SCHEDULE. ELBOW CONDUITS THROUGH EXISTING EXTERIOR WALL AND SEAL WATER-TIGHT. EXTERIOR ABOVE GRADE EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL. UNDERGROUND CONDUIT ELBOWS AND SWEEPS SHALL BE RIGID GALVANIZED STEEL, ALL OTHER UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT. CONDUIT ROUTE SHOWN IS FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL UNDERGROUND UTILITIES IN AREAS OF NEW UNDERGROUND WORK PRIOR TO EXCAVATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO ADJACENT UNDERGROUND UTILITIES AND SHALL INCUR ALL ASSOCIATED REPAIR COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH TRENCHING, SAW CUTTING, ETC. AND FOR FULL RESTORATION OF EXISTING CONDITIONS.
- 2 CONNECT NEW RECEPTACLE TO EXISTING RECEPTACLE BRANCH CIRCUIT INDICATED. WIRE WITH (2)#12, #12G IN 3/4" CONDUIT.

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PROJECT INFORMATION

Project Number

R23.00325 Client Name

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St,

Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS



SHEET INFORMATION
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02/17/2025

Issued Scale
02/17/2025 AS NOTED
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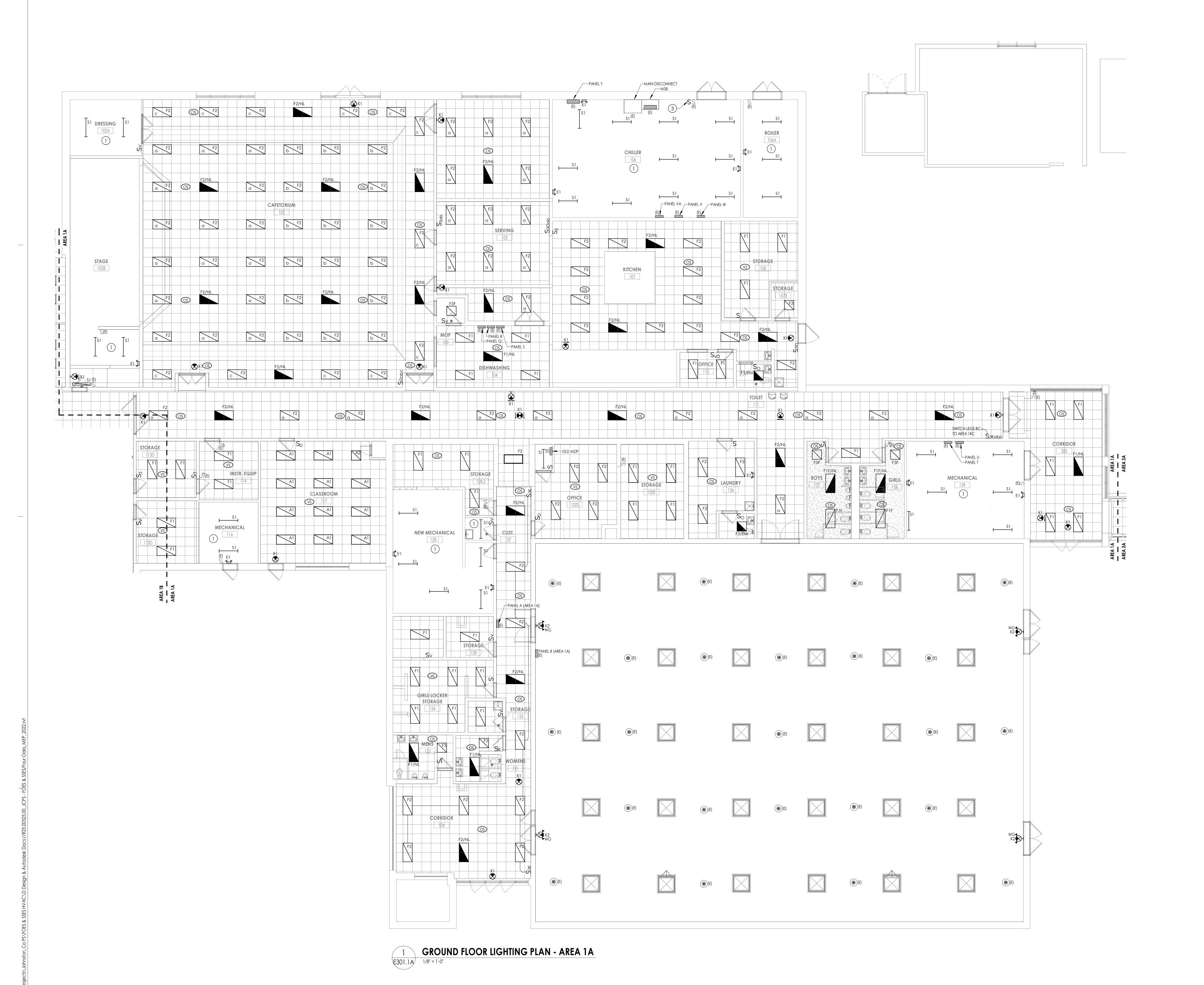
Drawing Title
GROUND FLOOR POWER AND
SYSTEMS PLAN - AREA 3A & 3B

FOES E201.3AB

KEY PLAN:

PROJECT TRUE
NORTH NORTH

1C 1B 1A 3B



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- 2 PROVIDE SINGLE POLE TOGGLE SWITCH FOR LP GAS YARD LIGHTING. REFER TO DRAWING E301.3AB FOR ADDITIONAL INFORMATION.

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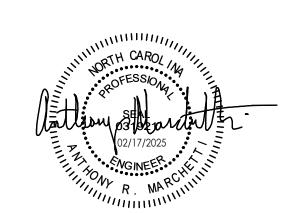
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JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROFESSIONAL STAMPS

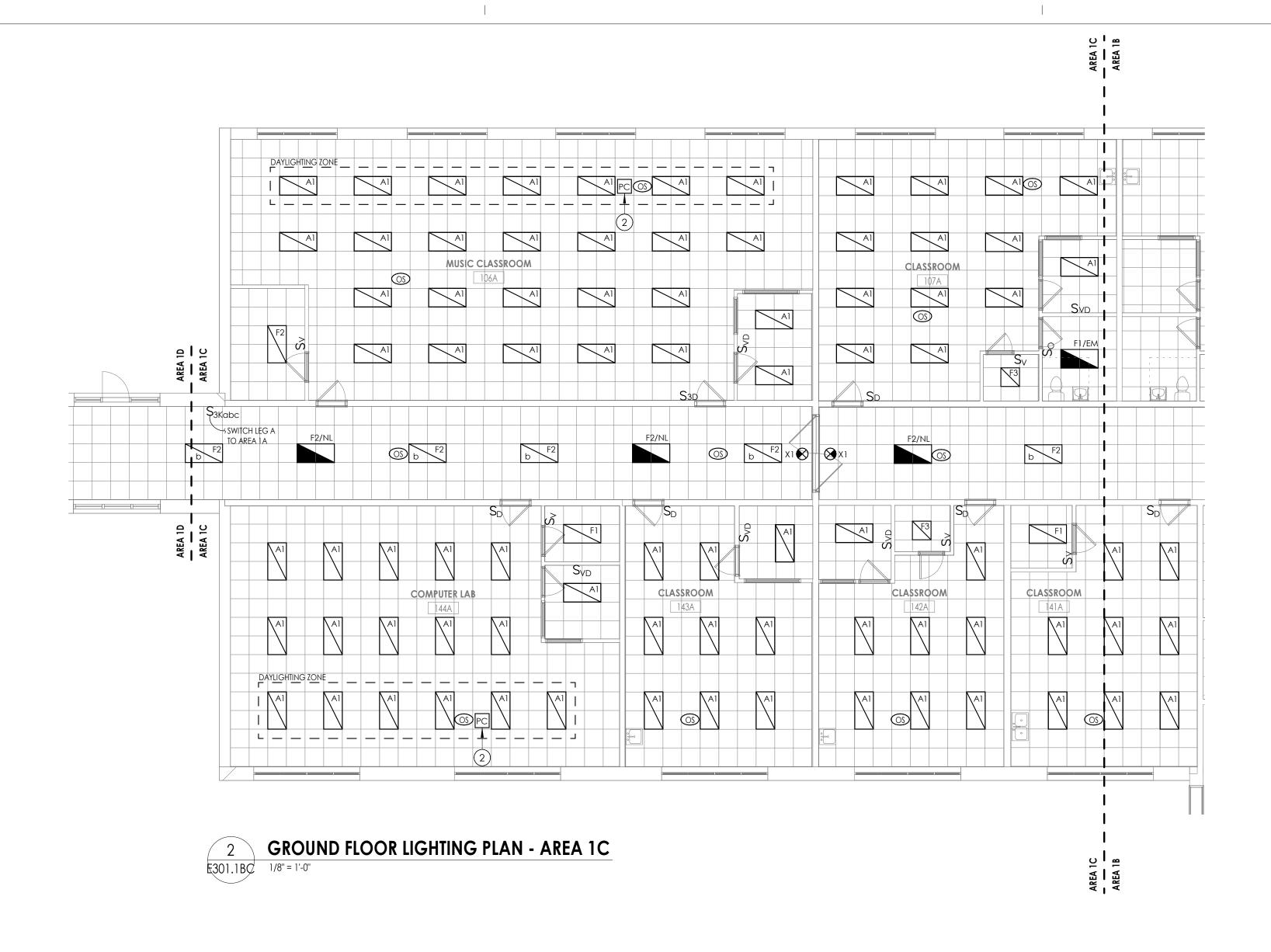


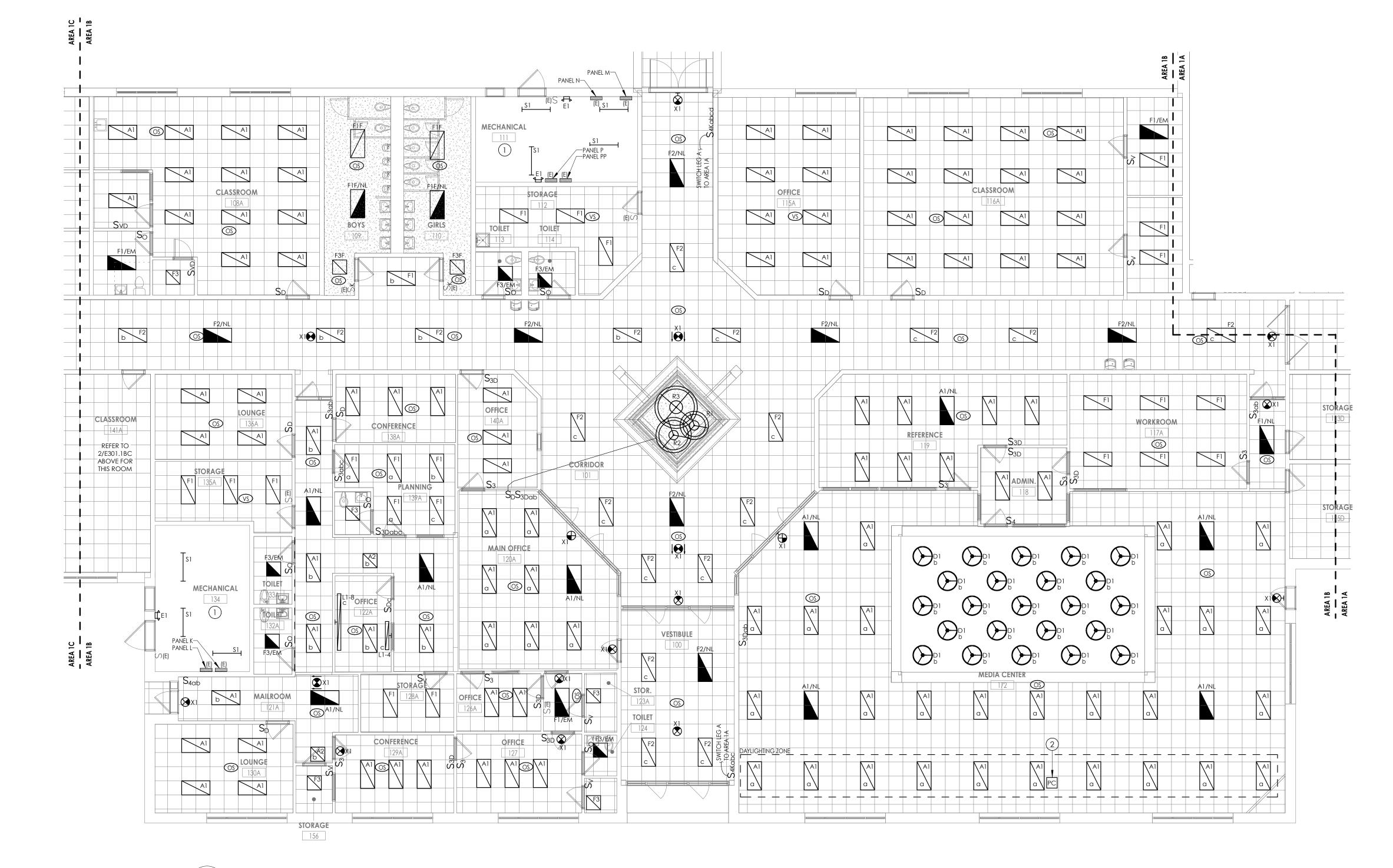
SHEET INFORMATION

Issued Scale
02/17/2025 AS NOTED

Project Status
BID SET
Drawn By Checked By
JAE ARM
Drawing Title
GROUND FLOOR LIGHTING PLAN
- AREA 1A

FOES E301.1A





# 1 GROUND FLOOR LIGHTING PLAN - AREA 1B E301.1BC 1/8" = 1'-0"

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### KEY NOTES

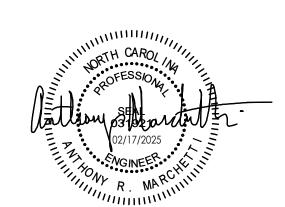
- HANG TYPE "S1" FIXTURES WITHIN SPACE AT APPROXIMATELY 10'-0" ABOVE FINISHED FLOOR. FIELD LOCATE AROUND AND BELOW DUCTWORK, PIPING, ETC. FOR BEST ILLUMINATION OF SPACE.
- PROVIDE INTERIOR DAYLIGHTING SENSOR TO CONTROL LIGHT FIXTURES IN DAYLIGHTING ZONE SHOWN. FIXTURES SHALL BE PROGRAMMED TO DIM BASED UPON AVAILABLE NATURAL LIGHT. PROVIDE ROOM LIGHTING CONTROLS, QUANTITY AS REQUIRED TO ACCOMMODATE SWITCHING AND SENSORS INDICATED WITHIN SPACE.
- SEQUENCE OF OPERATIONS:

SPACE.

- LIGHTING SWITCHED ON MANUALLY TO LAST USER LEVEL.
  ON/OFF AND DIMMING OF EACH LIGHTING ZONE VIA WALL SWITCH.
- LIGHTING IN DAYLIGHTING ZONE AUTOMATICALLY DIMS ACCORDING TO DAYLIGHT CONTRIBUTION.
   ALL LIGHTING ZONES TURN OFF AUTOMATICALLY AFTER OCCUPANTS LEAVE
- \_\_\_\_

w Date Description

PROFESSIONAL STAMPS



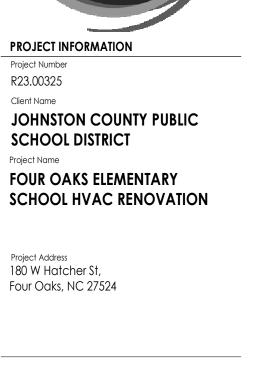
- AREA 1B & 1C

Prawing Number FOES
E301.1BC

KEY PLAN:

PROJECT TRUE
NORTH NORTH

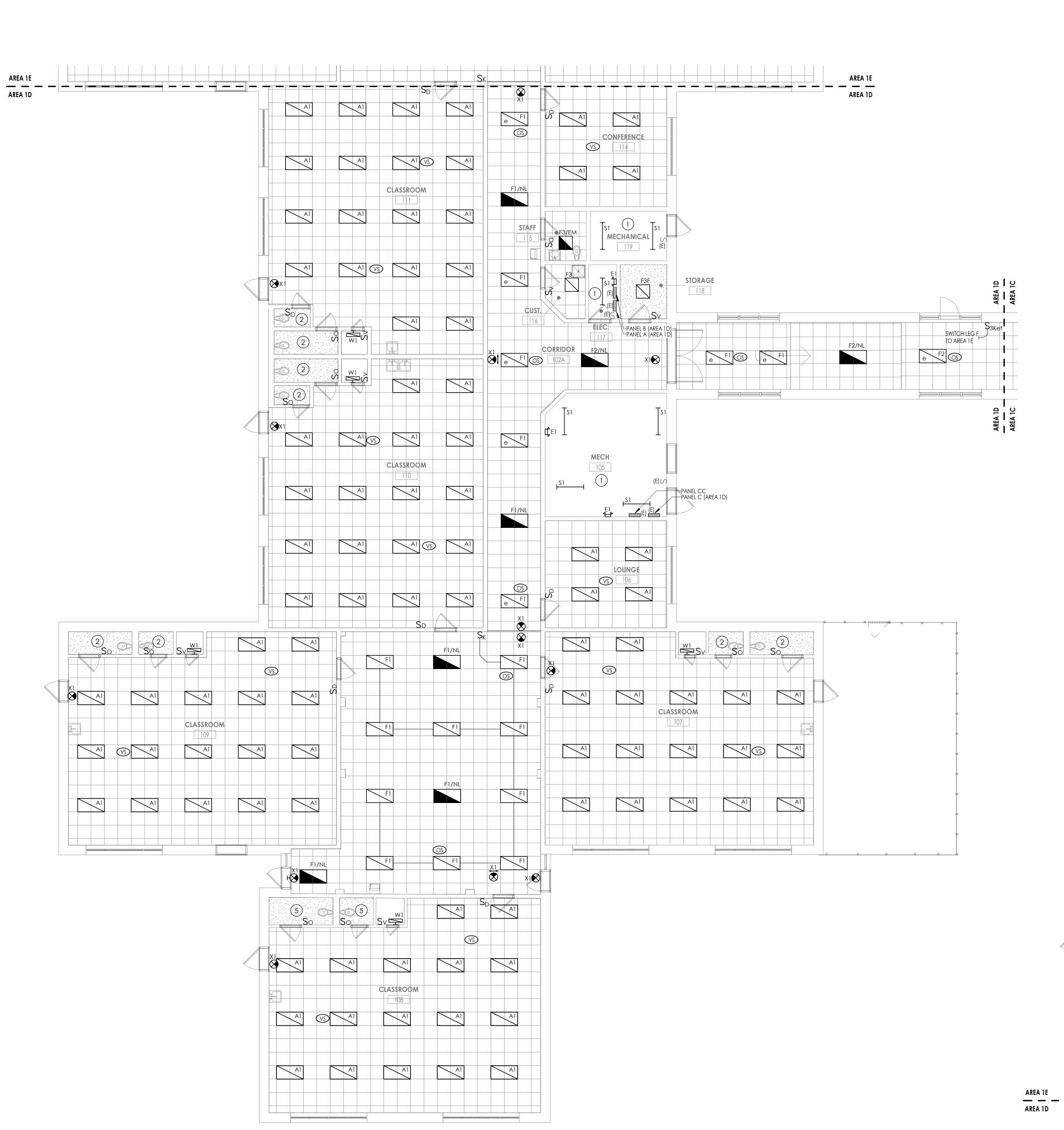
1C 1B 1A 3A
3B



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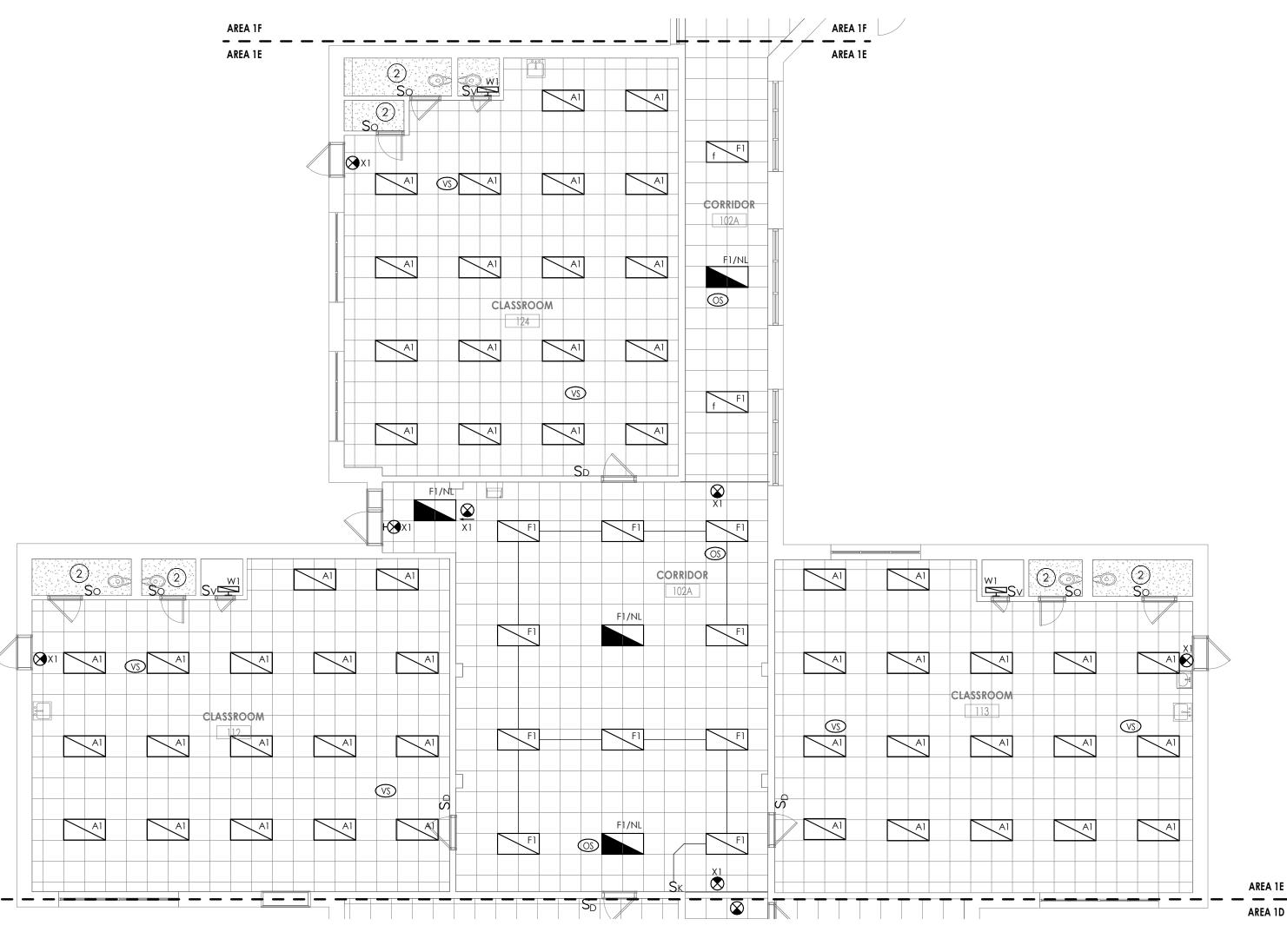
GROUND FLOOR LIGHTING PLAN - AREA 1D



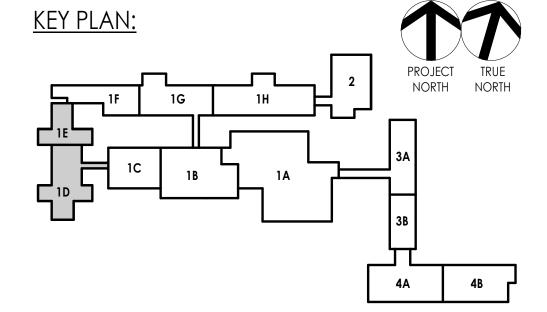
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- SWITCH SHALL CONTROL COMBINATION EXHAUST FAN AND LIGHT WITHIN SPACE. REWORK AND EXTEND EXISTING CIRCUITING AS REQUIRED, REFER TO E200 SERIES DRAWINGS FOR ADDITIONAL INFORMATION.



GROUND FLOOR LIGHTING PLAN - AREA 1E



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PROJECT INFORMATION
Project Number
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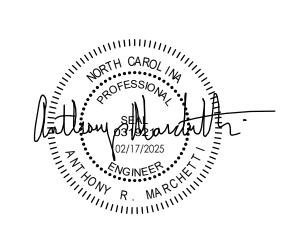
JOHNSTON COUNTY PUBLIC
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FOUR OAKS ELEMENTARY
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Project Address 180 W Hatcher St, Four Oaks, NC 27524

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PROFESSIONAL STAN



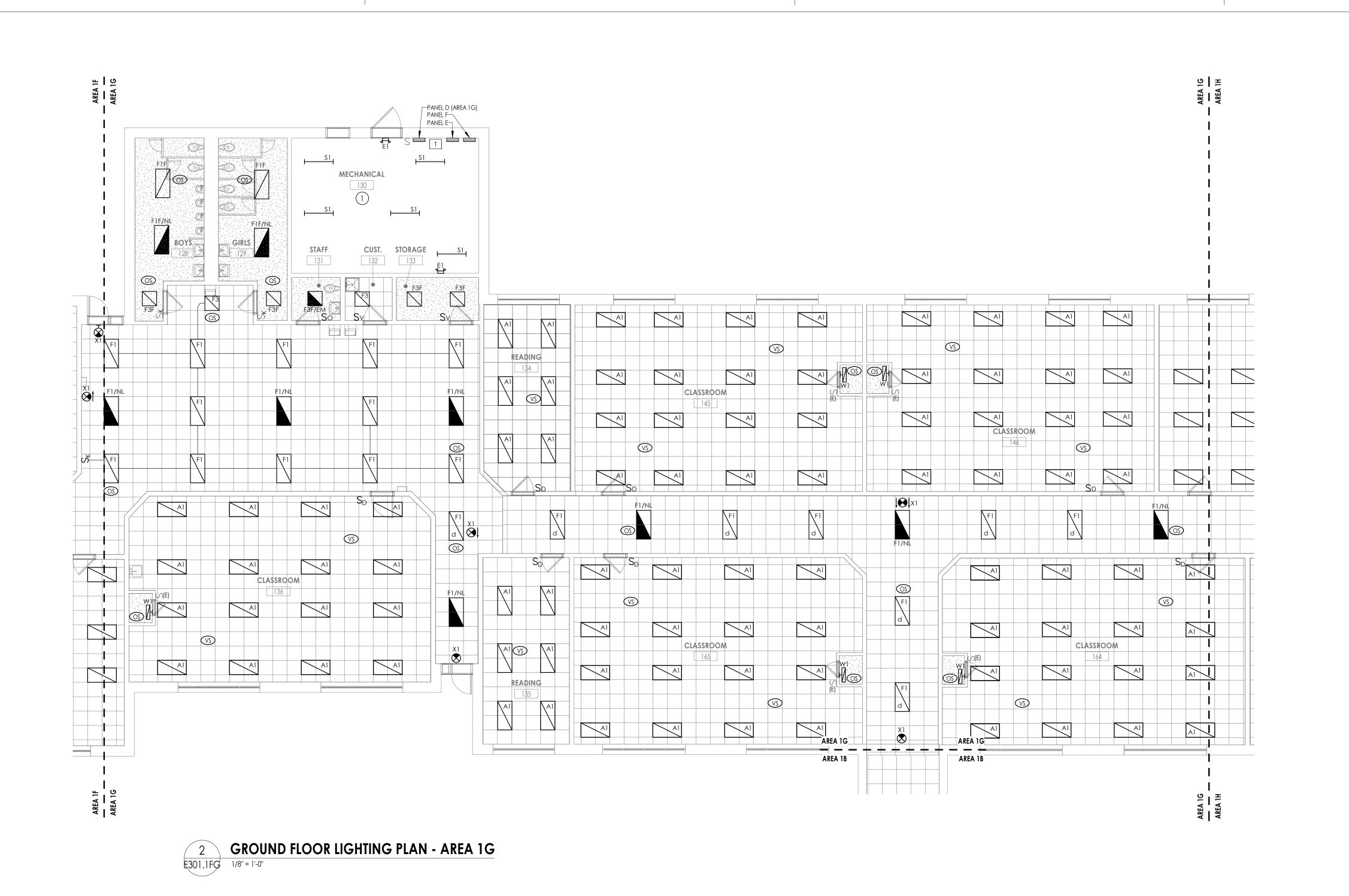
SHEET INFORMATION

Issued Scale
02/17/2025 1/8" = 1'-0"

Project Status
BID SET
Drawn By Checked By
JAE ARM
Drawing Title
GROUND FLOOR LIGHTING PLAN

- AREA 1D & 1E

FOES
E301.1DE



GROUND FLOOR LIGHTING PLAN - AREA 1F

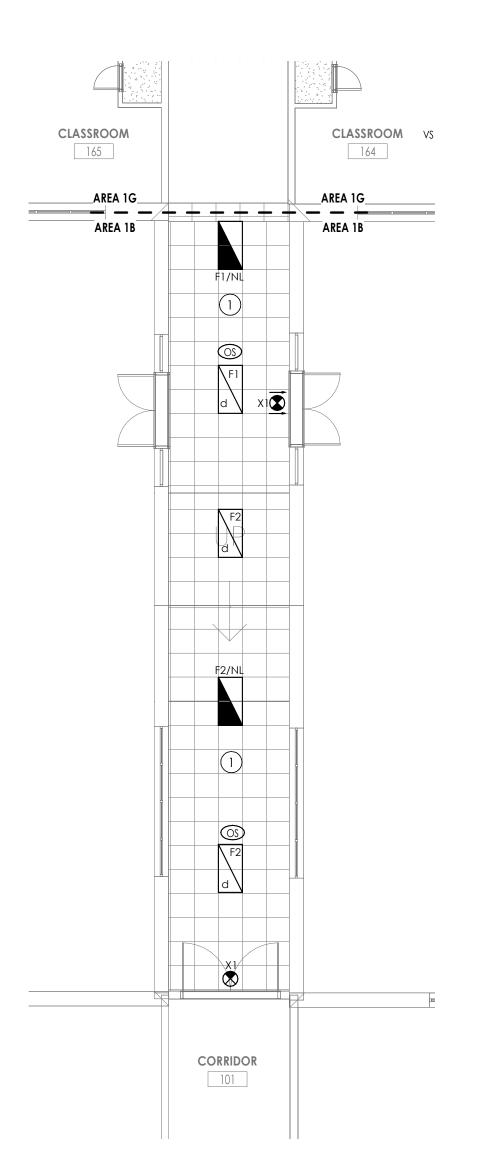
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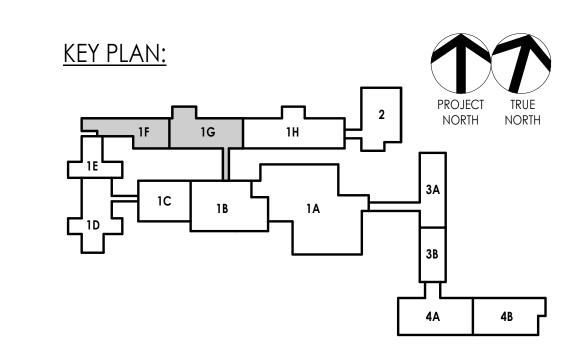
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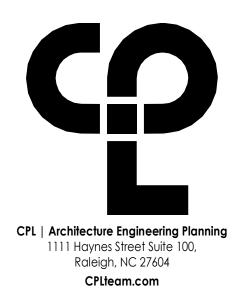
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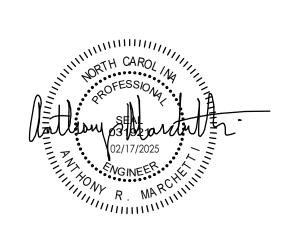
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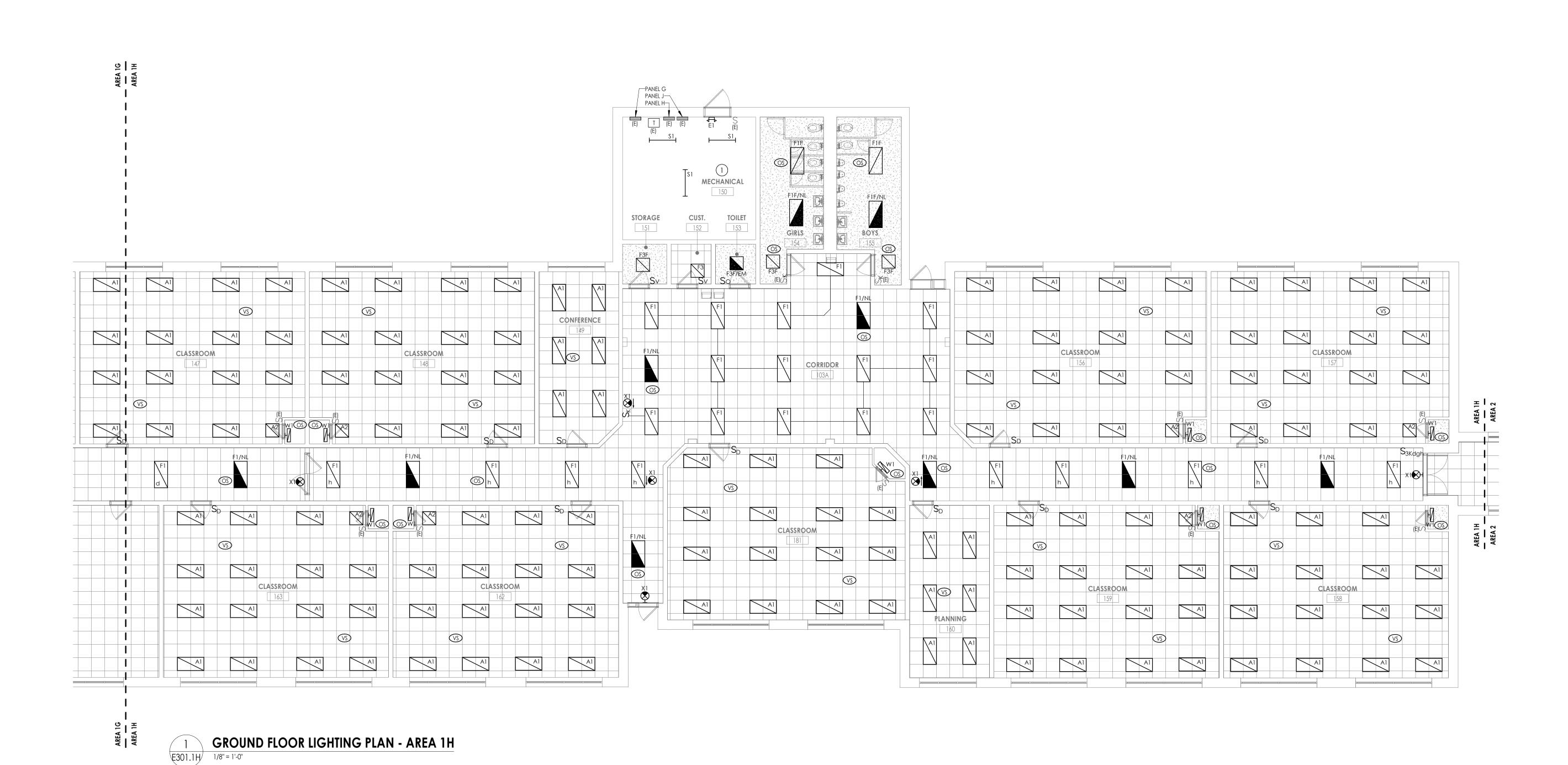
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Project Status
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GROUND FLOOR LIGHTING PLAN

- AREA 1F & 1G

FOES
E301.1FG



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- K. NEW WALL MOUNTED FIXTURES REPLACING EXISTING WALL MOUNTED FIXTURES SHALL BE MOUNTED AT SAME HEIGHT AS DEMOLISHED FIXTURES IN SAME LOCATION, UNLESS NOTED OTHERWISE.
- L. NEW SUSPENDED FIXTURES REPLACING EXISTING SUSPENDED FIXTURES SHALL BE MOUNTED AT SAME HEIGHT AS DEMOLISHED FIXTURE, UNLESS NOTED OTHERWISE.

## KEY NOTES

HANG TYPE "\$1" FIXTURES WITHIN SPACE AT APPROXIMATELY 10'-0" ABOVE FINISHED FLOOR. FIELD LOCATE AROUND AND BELOW DUCTWORK, PIPING, ETC. FOR BEST ILLUMINATION OF SPACE.

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PROJECT INFORMATION
Project Number
R23.00325

Client Name

JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

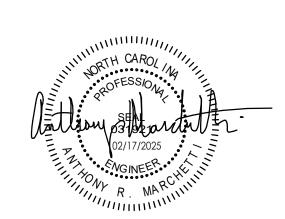
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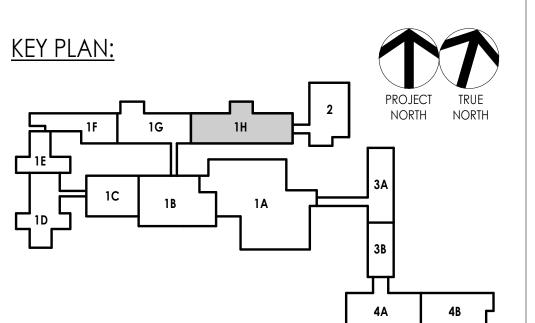
FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE
w Date Description

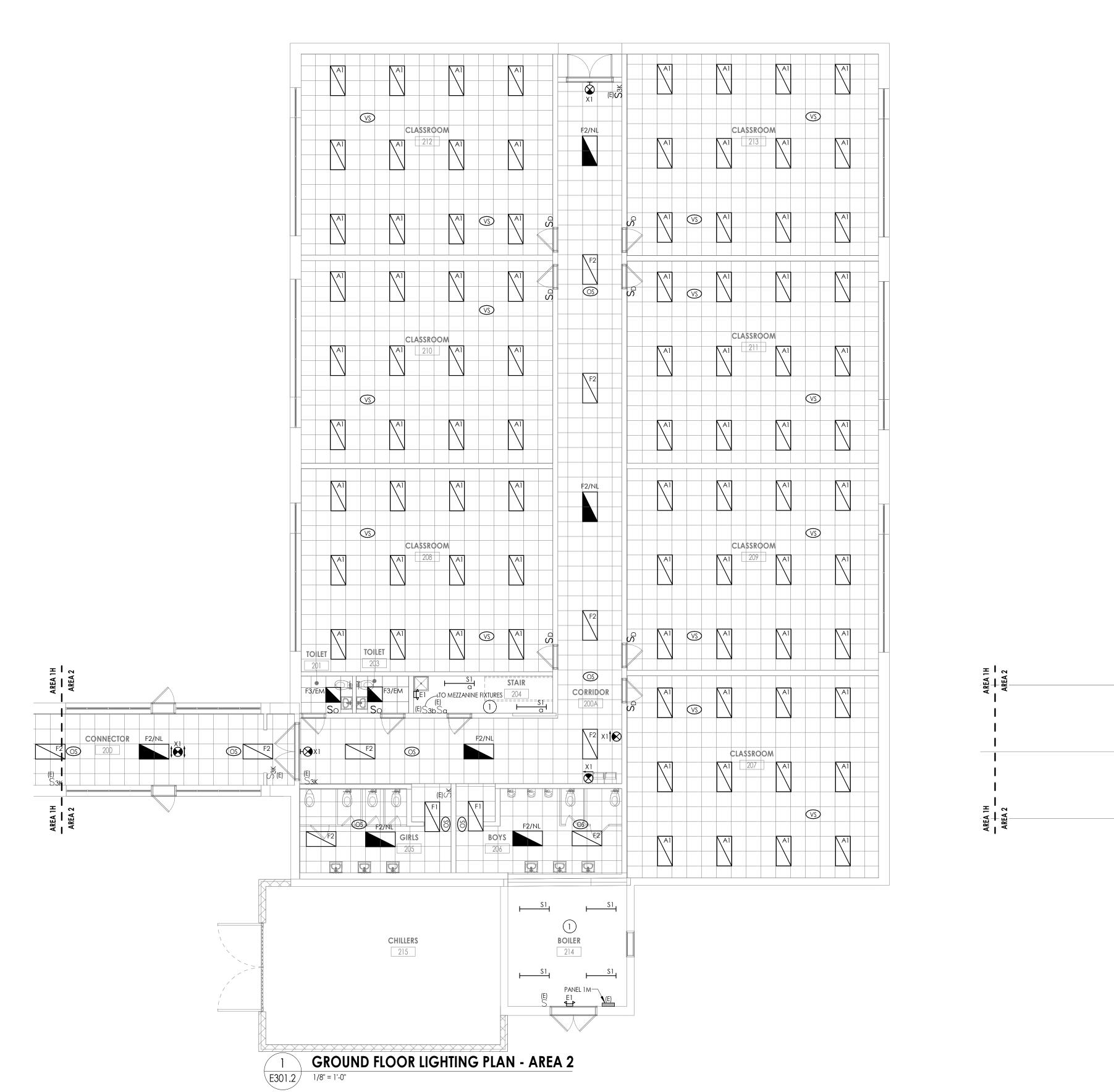
PROFESSIONAL STAMPS

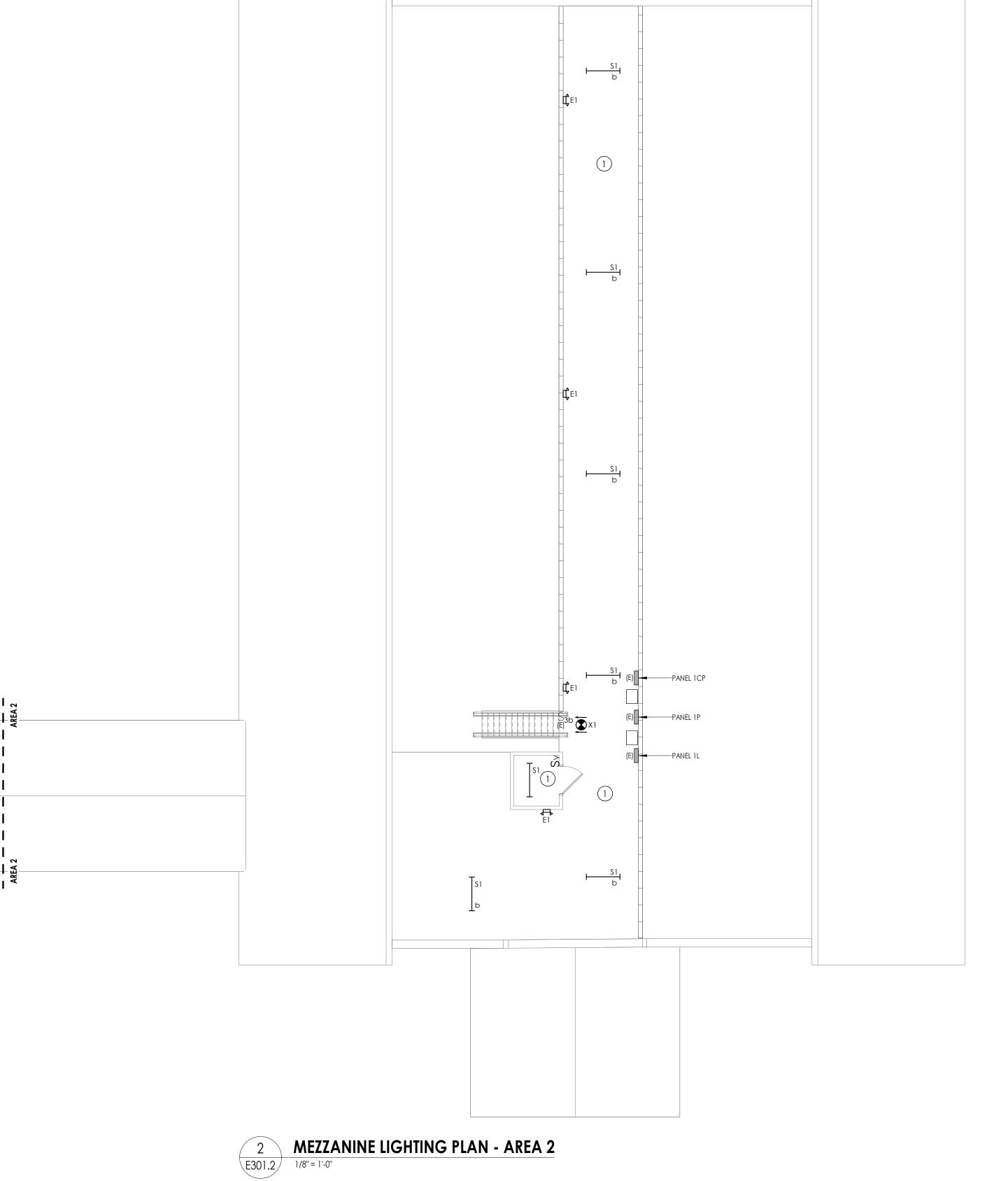






FOES E301.1H





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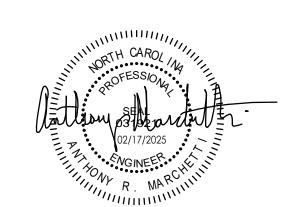
PROJECT INFORMATION Project Number R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

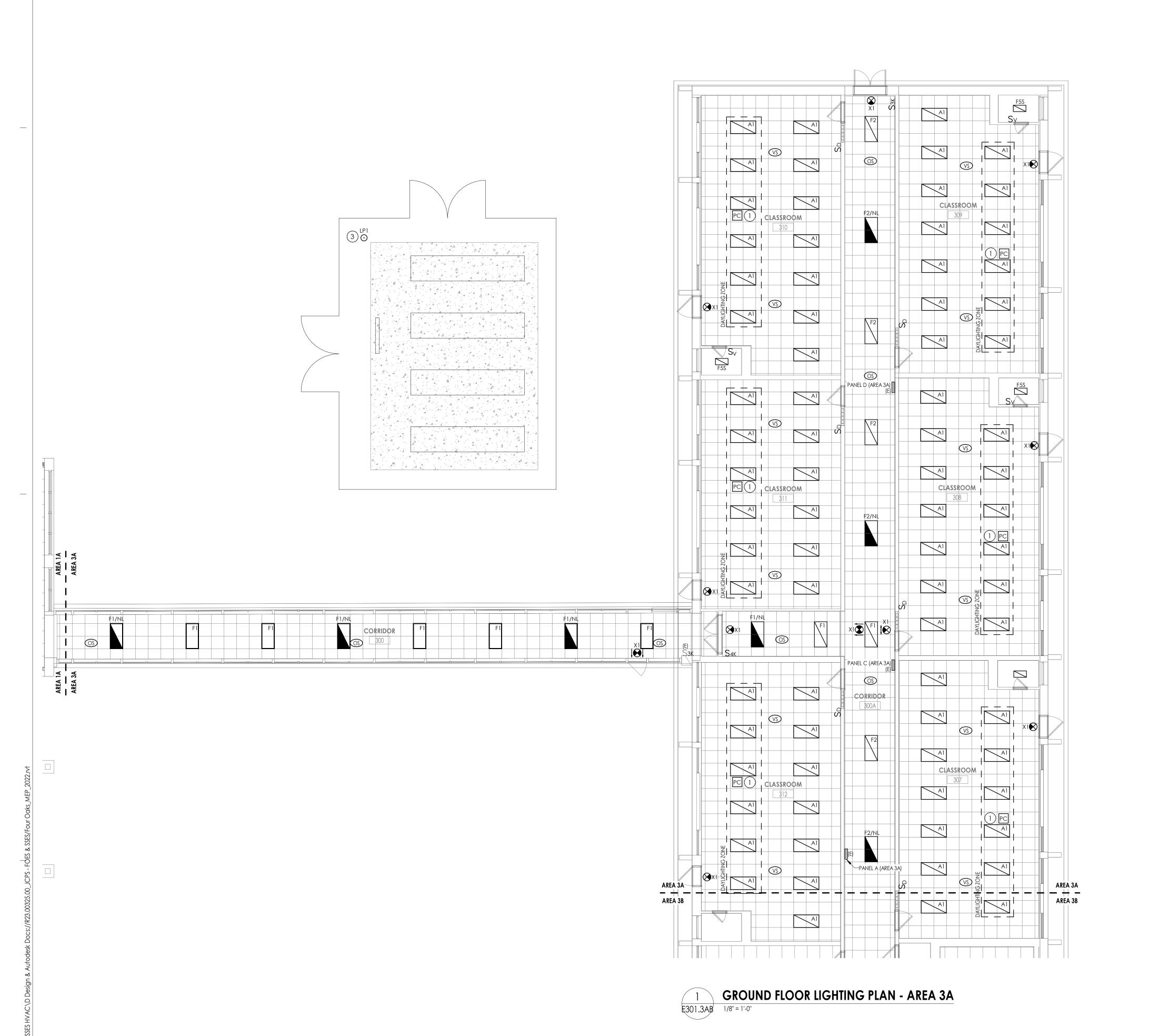
FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

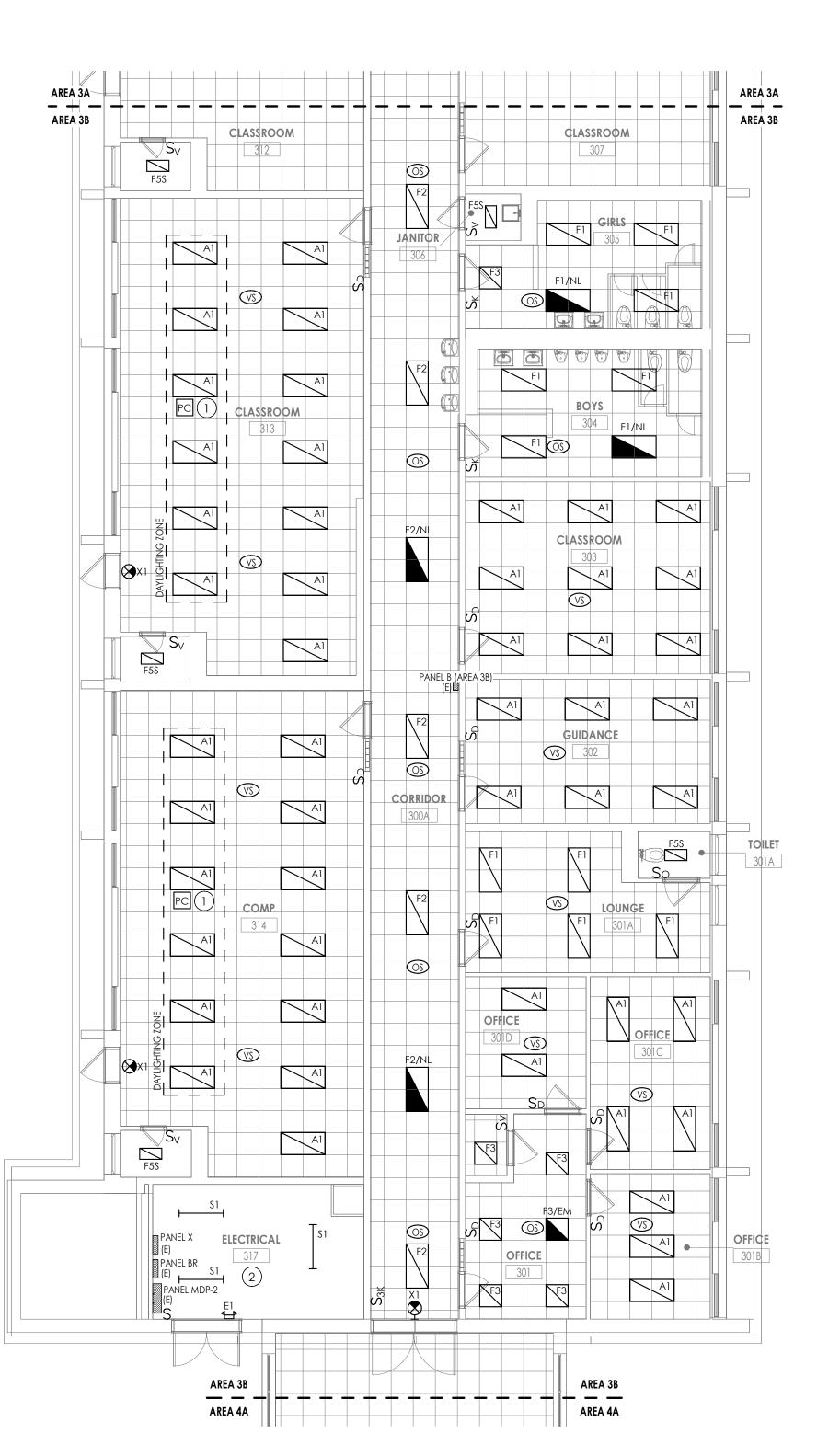
180 W Hatcher St, Four Oaks, NC 27524

PROFESSIONAL STAMPS

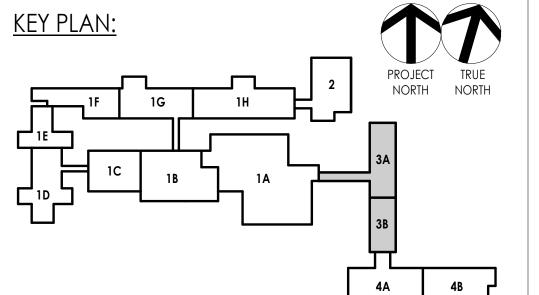


AREA 2





2 GROUND FLOOR LIGHTING PLAN - AREA 3B
E301.3AB 1/8" = 1'-0"



#### GENERAL NOTES

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#### KEY NOTES

- PROVIDE INTERIOR DAYLIGHTING SENSOR TO CONTROL LIGHT FIXTURES IN DAYLIGHTING ZONE SHOWN. FIXTURES SHALL BE PROGRAMMED TO DIM BASED UPON AVAILABLE NATURAL LIGHT. PROVIDE ROOM LIGHTING CONTROLS, QUANTITY AS REQUIRED TO ACCOMMODATE SWITCHING AND SENSORS INDICATED WITHIN SPACE.
- SEQUENCE OF OPERATIONS:

   LIGHTING SWITCHED ON MANU
- LIGHTING SWITCHED ON MANUALLY TO LAST USER LEVEL.
  ON/OFF AND DIMMING OF EACH LIGHTING ZONE VIA WALL SWITCH.
- LIGHTING IN DAYLIGHTING ZONE AUTOMATICALLY DIMS ACCORDING TO DAYLIGHT CONTRIBUTION.
   ALL LIGHTING ZONES TURN OFF AUTOMATICALLY AFTER OCCUPANTS LEAVE
- HANG TYPE "S1" FIXTURES WITHIN SPACE AT APPROXIMATELY 10'-0" ABOVE FINISHED FLOOR. FIELD LOCATE AROUND AND BELOW DUCTWORK, PIPING, ETC. FOR BEST ILLUMINATION OF SPACE.
- PROVIDE LIGHT POLE SWITH CONCRETE BASE, REFER TO DETAIL ON DRAWING E800. COORDINATE EXACT LOCATION OF SITE LIGHTING WITHIN LP GAS YARD WITH OWNER AND LP GAS SUPPLIER PRIOR TO INSTALLATION. CIRCUIT TO PANEL W IN CHILLER ROOM AT NEXT AVAILABLE SPARE 20A/1P CIRCUIT BREAKER WITH (2)#10, #10G IN 1" CONDUIT. ROUTE CONDUIT UNDERGROUND ADJACENT TO LPV-1 CONDUIT, REFER TO E200 SERIES DRAWINGS FOR ADDITIONAL INFORMATION. PROVIDE WITH SINGLE POLE TOGGLE SWITCH IN CHILLER ROOM.

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JCPS)

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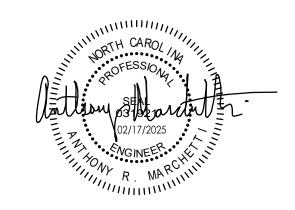
JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

w Date Description

PROFESSIONAL STAMPS

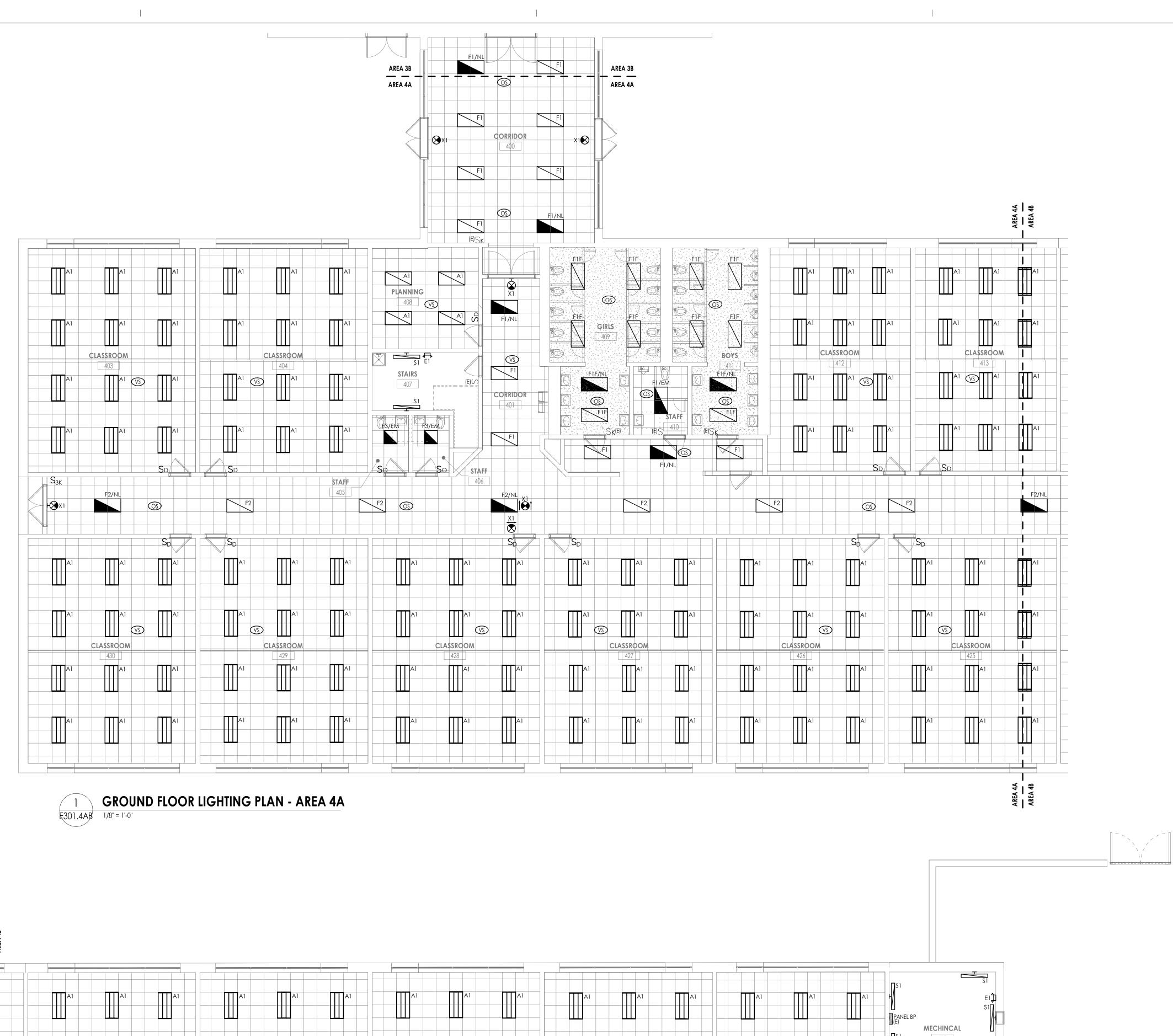


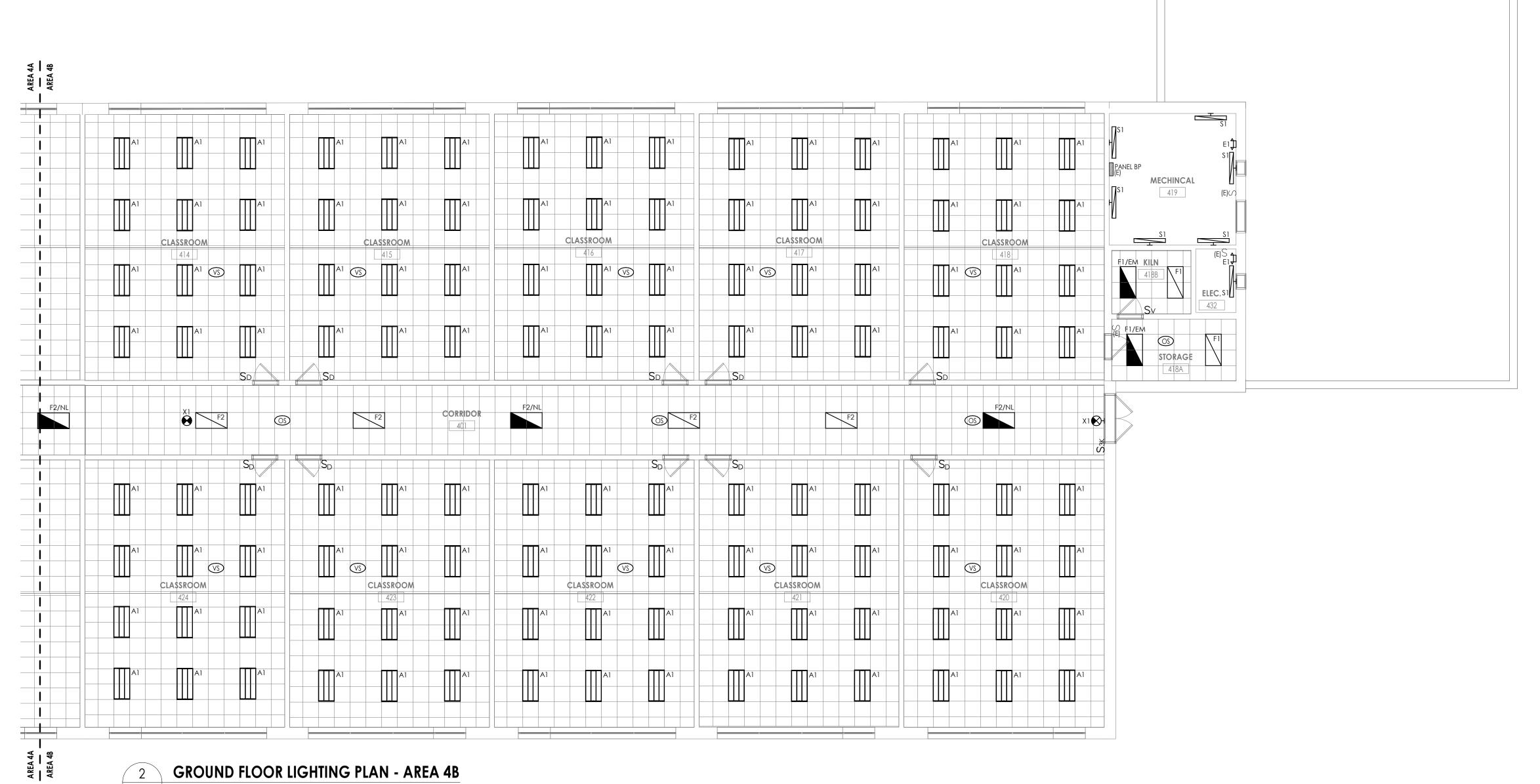
SHEET INFORMATION

Issued Scale
02/17/2025 AS NOTED
Project Status
BID SET
Drawn By Checked By
JAE ARM

GROUND FLOOR LIGHTING PLAN
- AREA 3A & 3B

FOES E301.3AB





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PROJECT INFORMATION
Project Number

R23.00325
Client Name
JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE
vv Date Description

PROFESSIONAL STAMPS



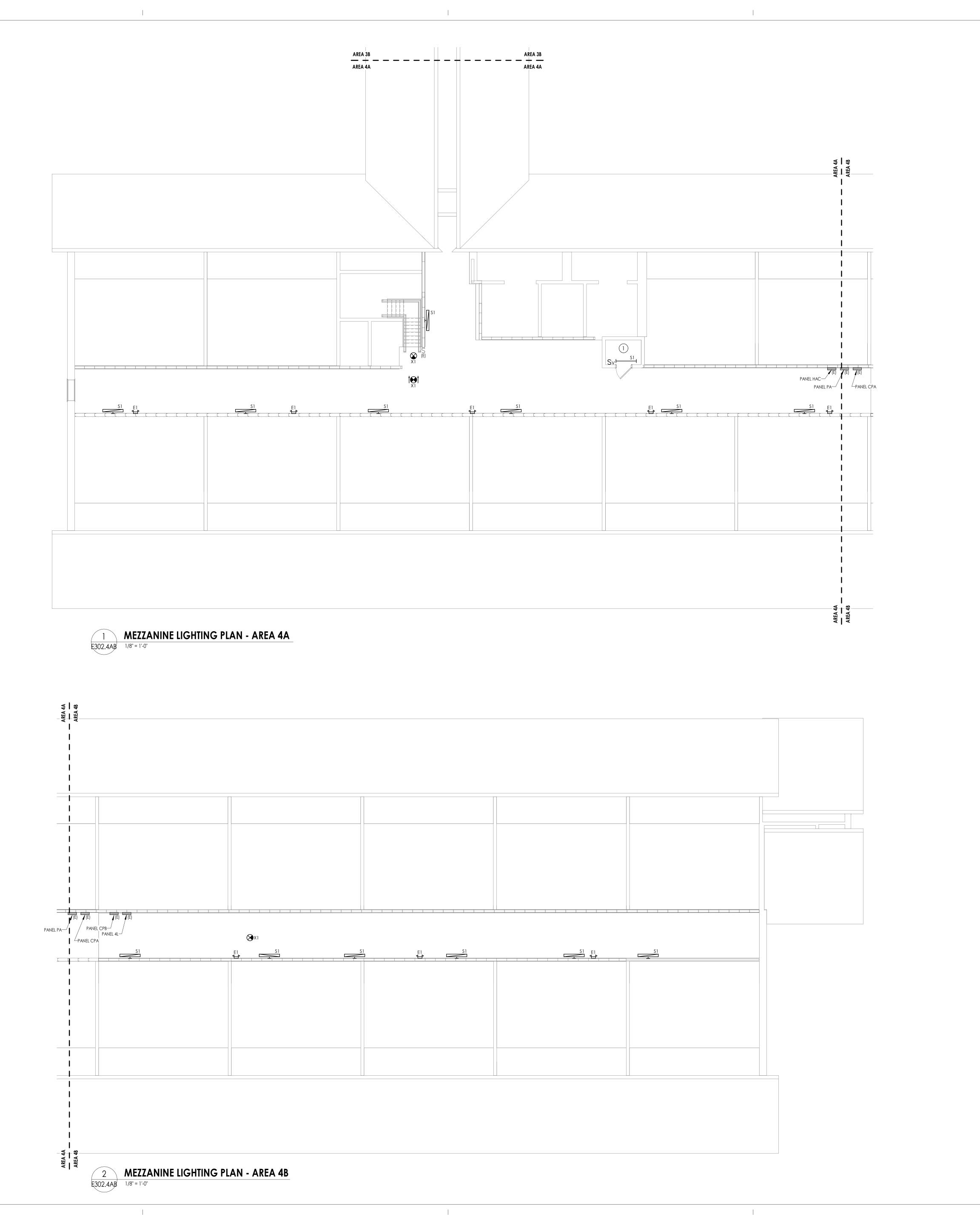
SHEET INFORMATION

Issued Scale
02/17/2025 1/8" = 1'-0"
Project Status
BID SET
Drawing Title
GROUND FLOOR LIGHTING PLAN
- AREA 4A & 4B

Drawing Number
FORS

KEY PLAN:

FOES E301.4AB



- A. EQUIPMENT, FIXTURES, AND DEVICES LABELED AS "(E)" ARE EXISTING AND ARE SHOWN FOR REFERENCE ONLY. ALL OF THESE EQUIPMENT, FIXTURES, AND DEVICES SHALL REMAIN OPERATIONAL FOLLOWING CONSTRUCTION.
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PROJECT INFORMATION
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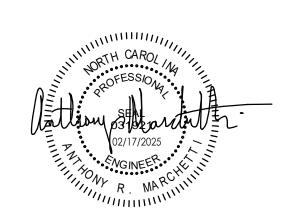
JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT

FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS



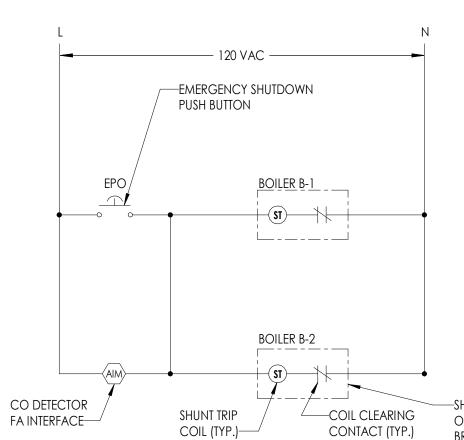
SHEET INFORMATION

Issued Scale
02/17/2025 AS NOTED

PROJECT TRUE
NORTH NORTH

Project Status
BID SET
Drawn By Checked By
JAE ARM
Drawing Title
MEZZANINE LIGHTING PLAN
AREA 4A & 4B

FOES
E302.4AB



### **DETAIL NOTES:**

- 1. WIRE EMERGENCY SHUTDOWN BUTTON (EPO) TO ACTIVATE SHUNT TRIP OF THE BOILER AND GAS SHUTOFF VALVE CIRCUIT BREAKERS IN PANEL WHEN EPO BUTTON IS PUSHED.
- 2. PROVIDE EACH BREAKER WITH A PADLOCK ATTACHMENT. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
- 3. EPO SHALL BE PUSHBUTTON OPERATOR STATION, MAINTAINED (PUSH-PULL) LABELED "PULL-TO-RESET" 40 MM RED MUSHROOM-HEAD PUSHBUTTON, YELLOW SURFACE MOUNT NEMA 4X ENCLOSURE, 120VAC, 20A CONTACT RATING, NORMALLY OPEN CONTACTS, HUB FOR 3/4" CONDUIT, CLEAR HINGED COVER, WITH FACTORY LEGEND "EMERGENCY - BOILER SHUTDOWN", KELE ST120 SERIES OR EQUAL BY SIEMENS, ABB, PILLA, SQUARE D.
- 4. ALL WIRING SHALL BE #12 IN 3/4" CONDUIT MINIMUM.
- —SHUNT TRIP MECHANISM OF BRANCH CIRCUIT BREAKER (TYP.)

FA DATA OUT

——H 120VAC POWER, REFER TO

DAMPERS WITH MECHANICAL SHOP DRAWINGS.

NEAREST MECHANICAL SPACE.

**SMOKE DAMPER CONTROL DETAIL** 

DAMPERS WITH NO AIR INLETS OR OUTLETS BETWEEN DAMPER AND DETECTOR.

## **BOILER SHUT DOWN DETAIL** E800 NOT TO SCALE

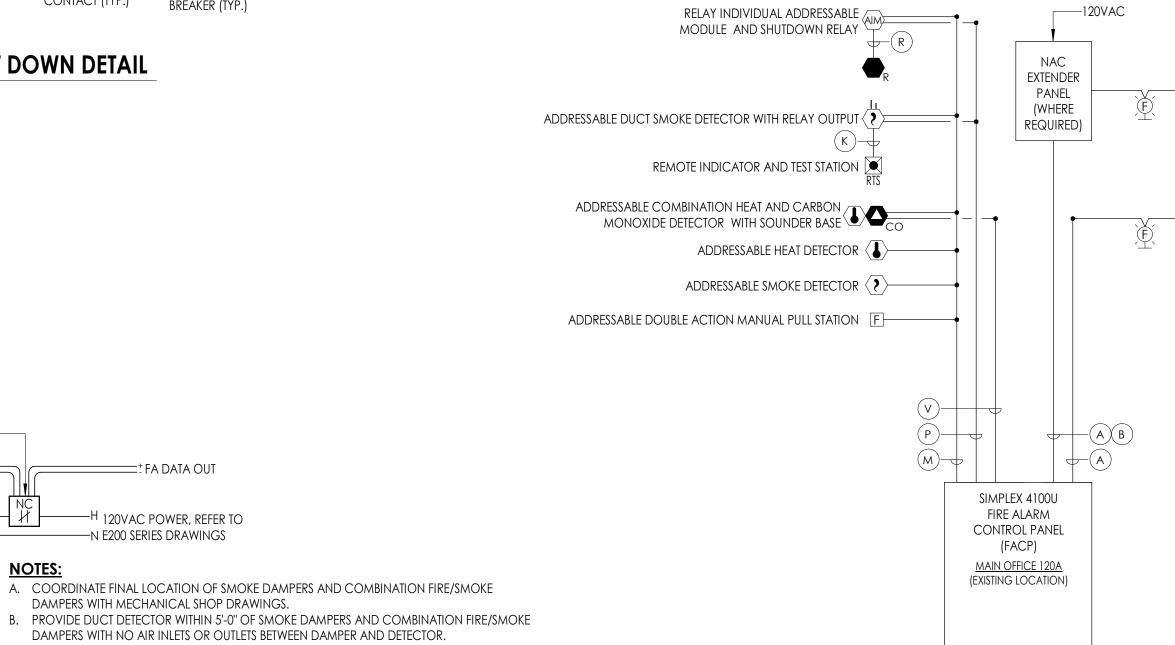
INTELLIGENT FIRE ALARM RELAY MODULE IN SINGLE GANG BOX-

FA DATA IN +

SMOKE DAMPER

ELECTRIC DAMPER OPERATOR—

E800 NOT TO SCALE



# FIRE ALARM RISER DIAGRAM NOTES:

- A. THIS RISER REPRESENTS A TYPICAL SYSTEM AND IS NOT INTENDED FOR INSTALLATION. SYSTEM SUPPLIER SHALL PROVIDE INSTALLATION DRAWINGS AND WIRING DIAGRAMS. EXACT SYSTEM REQUIREMENTS SHALL BE COORDINATED WITH SYSTEM SUPPLIER.
- B. THIS DIAGRAM IS NOT INTENDED TO SHOW EXACT QUANTITIES OF DEVICES AND NOT ALL DEVICE TYPES SHOWN IN THIS DIAGRAM MAY BE USED ON THIS PARTICULAR PROJECT. REFER TO PLAN FOR EXACT DEVICE QUANTITY AND TYPES. SYSTEM SUPPLIER TO VERIFY FINAL QUANTITIES.
- C. REMOVE, RETAIN, AND REINSTALL EXISTING FIRE ALARM DEVICES PER PLANS. ALL FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH AND CONNECTED TO THE EXISTING FIRE ALARM SYSTEM AND MATCH EXISTING DEVICES PROVIDE ALL WIRING, RACEWAY, ACCESSORIES, FTC. REQUIRED

	TO FULL <b>FIRE ALARM WIRT</b>	NG SCHEDOUE SYS	Stem. Field ve
TYPE	FUNCTION	CONSTRUCTION	GAUGE
A D.	ADLE RESTABLISHED AND ACTION ACTION OF THE NATIONAL FIRE	CGARDANCE WITH THE L ALARM AND SIGNALING	AIESI ADOPTI CODE (NFPA
В	RONDO DE		
K E.	REMOTE TEST SWITCH/LED WIRE 120VAC NEW NOTIFICATION	(2)2 COND. SOLID NA APPLIANCE CIRCUIT (	#14 AWG <del>NAC) EXTEND</del>

PANELBOARD WITH AVAILABLE SPACE, PROVIDE NEW 20/A/1P CIRCUI

PBRYARER. CIRCUIT BREAKER SHALP BERNED ARD PABELED FIRM AWAM

CIRCUIT" IN ACCORDANCE WITH NEC 760, PROVIDE CIRCUIT BREAKE LOCK ON DEVICE WHERE PANEL IS ACCESSIBLE BY NON-QUALIFIED VERSONNELAPROXIDESMOKE DEJECTOR WITHIN 5' OF NAGIBANES PROVIDE WITH SURGE PROJECTIVE DEVICE. \*\*NOTE: ALL CABLES TO BE PLENUM RATED FIRE ALARM CABLES.

GAUGE INDICATED IS MINIMUM ALLOWABLE.

A. LOCATE HANDHOLES IN NON-TRAFFIC GRASS

AREAS WHERE POSSIBLE. HANDHOLES IN GRASS

HANDHOLES IN TRAFFIC AREAS (DRIVEWAYS,

B. SIZE OF HANDHOLE INDICATED ON DRAWINGS. PROVIDE DEPTH REQUIRED FOR CONDUITS.

C. CORDINATE DEPTH OF HANDHOLES WITH FIELD

D. PROVIDE LOGO INDICATING TYPE OF LOAD

WITHIN HANDHOLE (POWER, LIGHTING,

CONDITIONS. FILL AND COMPACT SOIL AROUND HANDHOLE TO GRADE LEVEL. COVER SHALL BE

AASHTO HS-20-44 RATING.

FLUSH WITH FINISHED GRADE.

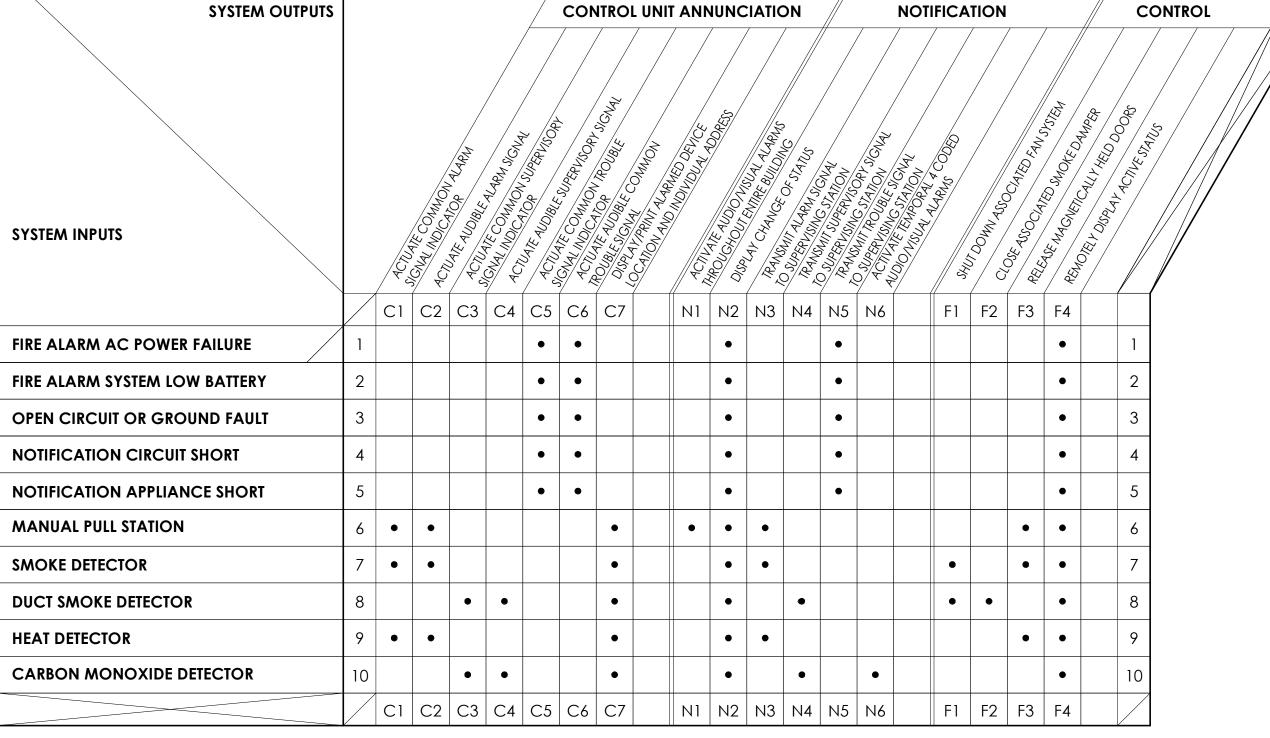
COMMUNICATION, ETC.)

PARKING AREAS, ETC.) SHALL BE A MINIMUM OF

AREAS SHALL BE A MINUMUM OF TIER 15 RATING.



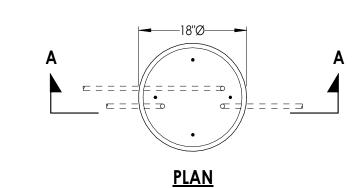


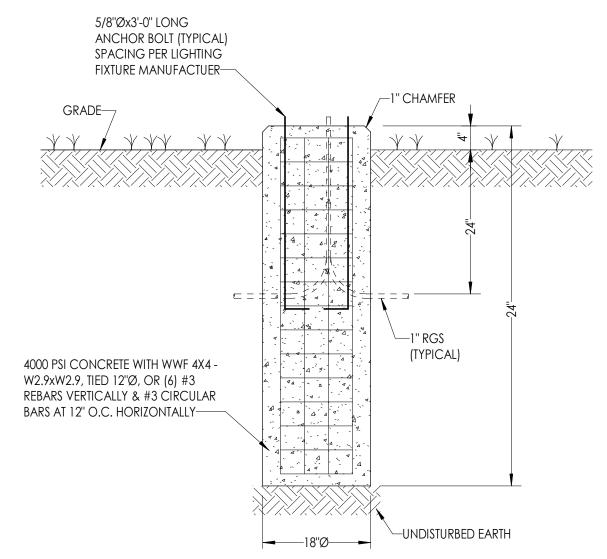


FIRE ALARM SYSTEM OPERATION MATRIX

A. EXISTING FIRE ALARM SYSTEM PROGRAMMING SHALL REMAIN. WHERE EXISTING PROGRAMMING DIFFERS FROM MATRIX, EXISTING PROGRAMMING SHALL TAKE PRECEDENCE.

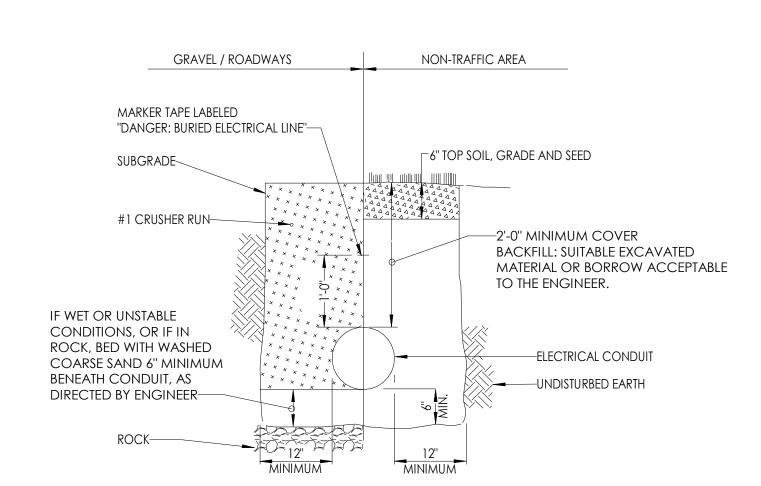
FIRE ALARM SYSTEM OPERATION MATRIX E800 NOT TO SCALE





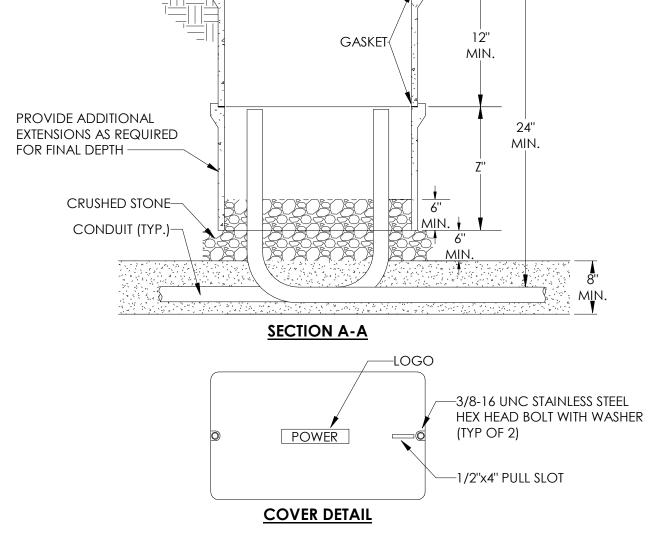
LIGHT POLE BASE DETAIL

**SECTION A-A** 



- 1) ALL MATERIAL PLACED IN GRAVEL/ROADWAY AREAS SHALL BE COMPACTED IN MAXIMUM 6" LIFTS.
- 2) THIS TRENCH DETAIL SHALL INCLUDE THE REQUIREMENTS COMMON TO MORE THAN ONE SECTION OF DIVISION OF THE SPECIFICATIONS.

# 1 TYPICAL TRENCH DETAIL FOR CONDUIT



**PLAN VIEW** 

—BOX AND COVER FLUSH

—GRADE

WITH GRADE

TYPICAL HANDHOLE DETAIL

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PROJECT INFORMATION Project Number R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT Project Name

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St,

Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS



SHEET INFORMATION 02/17/2025 As indicated Project Status **BID SET** Drawn By Drawing Title

ELECTRICAL DETAILS

E800

							CHEDULE				
1	MARK AHU-1 SUPPLY	LOCATION  MECHANICAL 139	VOLTS 480 V		<b>HP</b>	<b>FLA</b>	WIRING/CONDUIT (3)#10, #10G IN 1"C	30/3	PANEL T	<b>CCT</b> 27,29,31	REMARKS 2
2A	AHU-2 SUPPLY	CHILLER 106	480 V	3	1.5	3 A	(3)#12, #12G IN 3/4"C	15/3	V	25,27,29	4
2B 3A	AHU-2 EXHAUST AHU-3 SUPPLY	CHILLER 106 CHILLER 106	480 V 480 V	3	10	2.1 A 14 A	(3)#12, #12G IN 3/4"C (3)#10, #10G IN 1"C	15/3 30/3	V	25,27,29 1,3,5	2
3B 4A	AHU-3 EXHAUST AHU-4 SUPPLY	CHILLER 106 NEW MECHANICAL 128.1	480 V 480 V	3	7.5	11 A 21 A	(3)#12, #12G IN 3/4"C (3)#8, #10G IN 1"C	20/3 40/3	V	7,9,11 26,28,30	4 2
4B	AHU-4 RETURN	NEW MECHANICAL 128.1	480 V	3	7.5	11 A	(3)#12, #12G IN 3/4"C	20/3	T	13,15,17	2
5 6A	AHU-5 SUPPLY AHU-6 SUPPLY	MECHANICAL 111 MECHANICAL 134	480 V 480 V	3		21 A 14 A	(3)#8, #10G IN 1"C (3)#10, #10G IN 1"C	40/3 30/3	N K	1,3,5 33,35,37	2 2
6B 7A	AHU-6 RETURN	MECHANICAL 134 MECH 105	480 V 480 V		7.5 20	11 A	(3)#12, #12G IN 3/4"C	20/3	K (ADEA 1D)	1,3,5	4 2
7A 7B	AHU-7 SUPPLY EF-AHU-7	MECH 105	480 V 480 V	3		27 A 14 A	(3)#8, #10G IN 1"C (3)#10, #10G IN 1"C	50/3 30/3	A (AREA 1D) A (AREA 1D)	1,3,5 7,9,11	2
8A 8B	CHILLER-1 CHILLER-1 HEAT TRACE	CHILLER YARD CHILLER YARD	480 V 120 V	3		332 A 10 A	2 SETS [(3)#4/0, #2G IN 3"C] (2)#12, #12G IN 3/4"C	450/3 20/1	MSB W	25,27,29 17	2,7
9A	CHILLER-2	CHILLER YARD	480 V	3		332 A	2 SETS [(3)#4/0, #2G IN 3"C]	450/3	MSB	26,28,30	2,7
9B 10	CHILLER-2 HEAT TRACE  CHP-1	CHILLER YARD CHILLER 106	120 V 480 V	3	15	10 A 21 A	(2)#12, #12G IN 3/4"C (3)#8, #10G IN 1"C	20/1 40/3	1M V	5 14,16,18	2
11 12	CHP-2 CHW PUMP-1	CHILLER 106 CHILLER 106	480 V 480 V	3	15 16.7	21 A 21 A	(3)#8,#10G IN 1"C (3)#8,#10G IN 1"C	40/3 40/3	V VA	2,4,6 10,12,14	2 2
13	CHW PUMP-2	CHILLER 106	480 V	3	16.7	21 A	(3)#8, #10G IN 1"C	40/3	VA	16,18,20	2
14 15	CHW PUMP-3 CHW PUMP-4	CHILLER 106 CHILLER 106	480 V 480 V	_	7.5 7.5	11 A 11 A	(3)#12, #12G IN 3/4"C (3)#12, #12G IN 3/4"C	20/3	VA VA	9,11,13	2 2
16	HHW PUMP-1	BOILER 106A	480 V 480 V	_	7.5 7.5	11 A	(3)#12, #12G IN 3/4"C	20/3	VA	21,23,25	2 2
17 18	HHW PUMP-2 HHW PUMP-3	BOILER 106A BOILER 106A	480 V	3	1.5	11 A 3 A	(3)#12, #12G IN 3/4"C (3)#12, #12G IN 3/4"C	20/3 15/3	VA V	22,24,26 28,30,32	4
19 20	HHW PUMP-4 P-B-1	BOILER 106A BOILER 106A	480 V 208 V	3	1.5	3 A 3.7 A	(3)#12, #12G IN 3/4"C (3)#12, #12G IN 3/4"C	15/3 15/3	V W	28,30,32 2,4,6	2
21	P-B-2	BOILER 106A	208 V	3	1	3.7 A	(3)#12, #12G IN 3/4"C	15/3	W	2,4,6	2
22 23	B-1 B-2	BOILER 106A BOILER 106A	120 V 120 V	1		16 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1	W	13 37	2,7
24	HOOD-1	KITCHEN 107	120 V	1	1.5	6.9 A	(2)#12, #12G IN 3/4"C	20/1	R	24	1,5
25 26	MAU-1 FCU-128	ROOF (ABOVE KITCHEN 107) MECHANICAL 128	208 V 208 V	3	1.5	6 A 3.7 A	(3)#12, #12G IN 3/4"C (3)#12, #12G IN 3/4"C	15/3 15/3	R U	7,9,11 2,4,6	2,3
27 28	FCU-139 FCU-300	MECHANICAL 139 CORRIDOR 300	208 V 208 V	3		3.7 A 2.4 A	(3)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/3 15/2	U D (AREA 3A)	1,3,5 19,21	2 2,10
29	FCU-300A	CORRIDOR 300A	208 V	1		2.4 A	(2)#12, #12G IN 3/4"C	15/2	B (AREA 3B)	27,29	2,10
30 31	FCU-302 FCU-303	CORRIDOR 302 CORRIDOR 303	208 V 208 V	1		3.7 A 2.1 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/2 15/2	B (AREA 3B) B (AREA 3B)	31,33 31,33	2,10 2,10
32	FCU-307	CORRIDOR 307	208 V	1		4.1 A	(2)#12, #12G IN 3/4"C	15/2	C (AREA 3A)	25,27	2,10
33 34	FCU-308 FCU-309	CORRIDOR 308  CORRIDOR 309	208 V 208 V	1		4.1 A 4.1 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/2 15/2	D (AREA 3A) D (AREA 3A)	31,33	2,10
35	FCU-310	CORRIDOR 310	208 V	1		4.1 A	(2)#12, #12G IN 3/4"C	15/2	D (AREA 3A)	35,37	2,10
36 37	FCU-311 FCU-312	CORRIDOR 311 CORRIDOR 312	208 V 208 V	1		4.1 A 4.1 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/2 15/2	D (AREA 3A) C (AREA 3A)	35,37 29,31	2,10
38 39	FCU-313 FCU-314	CLASSROOM 313 CLASSROOM 314	208 V 208 V	1		4.1 A 4.1 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/2 15/2	B (AREA 3B) B (AREA 3B)	35,37 35,37	2,10 2,10
40	UH-106	CHILLER 106	120 V	1	1/15	1 A	(2)#12, #12G IN 3/4°C	20/1	W (AREA 3B)	9	1
41 42	UH-317 LPV-1	ELECTRICAL 317  LP TANK YARD	120 V 480 V	3	1/25	1 A 22 A	(2)#12, #12G IN 3/4"C (3)#8, #10G IN 2"C	20/1 30/3	X MSB	17 56,58,60	2 2,6
43A	SSO-1	CORRIDOR 300 EXTERIOR	208 V	1		27 A	(2)#8, #10G IN 1"C	40/2	U	31,33	1
43B 44A	SSI-1 SSO-2	CORRIDOR 300  CORRIDOR 300 EXTERIOR	208 V 208 V	1		0 A 27 A	(2)#12, #12G IN 3/4"C (2)#8, #10G IN 1"C	40/2 40/2	U	39,41	9,10
44B	SSI-2	CORRIDOR 300	208 V	1		0 A	(2)#12, #12G IN 3/4"C	40/2			9,10
45 46	EF-1 EF-2	LAUNDRY 136 TOILET TOILET 111	120 V 120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1	U	7	1
47 48	EF-3 EF-4	MOP 105 CLASSOOM 116A KILN	120 V 120 V	1		0.2 A 0.5 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/1 15/1	R M	30	2,3
49	EF-5	MECHANICAL	480 V	3	1-1/2	3 A	(3)#12, #12G IN 3/4"C	15/3	N	7,9,11	2
50 51	EF-6 EF-7	MECHANICAL 111 TOILET 124	120 V 120 V	1		4.9 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/1 15/1	P M	20 41	2,3
52	EF-8	TOILET 132A	120 V	1		0.2 A	(2)#12, #12G IN 3/4"C	20/1	Р	26	1
53 54	EF-9 EF-10	TOILET 133A PLANNING 139A TOILET	120 V 120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1	P P	26 26	1
55 56	EF-12 EF-13	ROOF (ABOVE DISHWASHING 104) CLASSROOM 108A TOILET	120 V 120 V	1	1/4	5.8 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/1 20/1	R P	2 28	2,3
57	EF-14	CLASSROOM 107A TOILET	120 V	1		0.2 A	(2)#12, #12G IN 3/4"C	20/1	P	28	1
58 59	EF-15 EF-16	CHILLER 106  ROOF (ABOVE KITCHEN 107)	120 V 208 V	3	1/2	9.8 A 4.6 A	(2)#12, #12G IN 3/4"C (3)#12, #12G IN 3/4"C	20/1 15/3	W R	7 13,15,17	1
60	EF-17	ROOF (ABOVE GYM 118)	208 V	3	1/2	2.4 A	(3)#12, #12G IN 3/4"C	15/3	U	8,10,12	3,4
61	EF-18 EF-19	ROOF (ABOVE GYM 118)  ROOF (ABOVE MECHANICAL 139)	208 V 120 V	_	1/2	2.4 A 4.4 A	(3)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/3 15/1	U	8,10,12 11	3,4 2,3
63	EF-20 EF-21	ROOF (ABOVE WOMENS 121) TOILET 113	120 V 120 V	1	1/15	1.3 A 0.2 A	(2)#12, #12G IN 3/4"C	15/1	A (AREA 1A)	20 39	2,3
64 65	EF-22	TOILET 114	120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1 20/1	M	39	4
66 67	EF-23 EF-24	CLASSROOM 108 TOILET ROOM CLASSROOM 108 TOILET ROOM	120 V 120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1	C (AREA 1D)	16 16	1,8
68	EF-25	CLASSROOM 109 TOILET ROOM	120 V	1		0.2 A	(2)#12, #12G IN 3/4"C	20/1	C (AREA 1D)	14	1,8
69 70	EF-26 EF-27	CLASSROOM 109 TOILET ROOM CLASSROOM 107 TOILET ROOM	120 V 120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1	C (AREA 1D)	14 12	1,8
71	EF-28	CLASSROOM 107 TOILET ROOM	120 V	1		0.2 A	(2)#12, #12G IN 3/4"C	20/1	C (AREA 1D)	12	1,8
72 73	EF-29 EF-30	CLASSROOM 110 TOILET ROOM CLASSROOM 110 TOILET ROOM	120 V 120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1	C (AREA 1D)	10 10	1,8
74 75	EF-31 EF-32	CLASSROOM 111 TOILET ROOM CLASSROOM 111 TOILET ROOM	120 V 120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1 20/1	C (AREA 1D) C (AREA 1D)	8	1,8
76	EF-33	CUST 116	120 V	1		0.2 A	(2)#12, #12G IN 3/4"C	20/1	C (AREA 1D)	18	1
77 78	EF-34 EF-35	ELEC 117 STAFF 115	120 V 120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1	C (AREA 1D)	18 18	1
79	EF-36	CLASSROOM 112 TOILET ROOM	120 V	1		0.2 A	(2)#12, #12G IN 3/4"C	20/1	C (AREA 1D)	20	1,8
80 81	EF-37 EF-38	CLASSROOM 112 TOILET ROOM CLASSROOM 113 TOILET ROOM	120 V 120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1	C (AREA 1D)	20 22	1,8
82 83	EF-39 EF-40	CLASSROOM 113 TOILET ROOM	120 V 120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C	20/1	C (AREA 1D)	22 13	1,8
84	EF-40 EF-41	CLASSROOM 124 TOILET ROOM CLASSROOM 124 TOILET ROOM	120 V	1		0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1 20/1	B (AREA 1D) B (AREA 1D)	13	1,8
85 86	EF-42 EF-43	CLASSROOM 123 TOILET ROOM CLASSROOM 125 TOILET ROOM	120 V 120 V	1		0.2 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1	B (AREA 1D) B (AREA 1D)	15 15	1,8
87	EF-44	CLASSROOM 125 TOILET ROOM	120 V	1		0.2 A	(2)#12, #12G IN 3/4"C	20/1	B (AREA 1D)	15	1,8
88 89	EF-45 EF-46	MECHANICAL 130 STAFF 131	120 V 120 V	1		4.9 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/1 20/1	F F	24 35	2
90	EF-47	CUST 132	120 V	1		0.2 A	(2)#12, #12G IN 3/4"C	20/1	F	35	1
91 92	EF-48 EF-49	MECHANICAL 150 CUST 152	120 V 120 V	1		4.9 A 0.2 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	15/1 20/1	H H	28 30	2
93	EF-50	TOILET 153	120 V	1		0.2 A	(2)#12, #12G IN 3/4"C	20/1	Н	30	1
94 95	EF-301A EF-303	LOUNGE 301A CLASSROOM 303	120 V 120 V	1		1.3 A 1.3 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1	B (AREA 3B) B (AREA 3B)	23 23	2 2
96 97	EF-307 EF-308	CLASSROOM 307 CLASSROOM 308	120 V 120 V	1		1.3 A 1.3 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1 20/1	C (AREA 3A) D (AREA 3A)	2 13	4 4
98	EF-309	CLASSROOM 309	120 V	1		1.3 A	(2)#12, #12G IN 3/4"C	20/1	D (AREA 3A)	13	4
99 100	EF-310 EF-311	CLASSROOM 310 CLASSROOM 311	120 V 120 V	1		1.3 A 1.3 A	(2)#12, #12G IN 3/4"C (2)#12, #12G IN 3/4"C	20/1 20/1	D (AREA 3A) D (AREA 3A)	15 15	4
101	EF-312	CLASSROOM 312	120 V	1		1.3 A	(2)#12, #12G IN 3/4"C	20/1	C (AREA 3A)	2	4
102	EF-313	CLASSROOM 313	120 V	1		1.3 A	(2)#12, #12G IN 3/4"C	20/1	B (AREA 3B)	25	2
103	EF-314	CLASSROOM 314	120 V	1		1.3 A	(2)#12, #12G IN 3/4"C	20/1	B (AREA 3B)	25	2

- A. CIRCUIT BREAKER SPACE NUMBERING IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING BUILDING DOCUMENTS AND IS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY EXISTING
- CIRCUITS BEING RE-USED FOR NEW EQUIPMENT AND AVAILABLE SPACES IN PANELBOARDS. B. NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANELBOARDS SHALL BE U.L. LISTED/LABELED FOR USE IN, AND HAVE MATCHING INTERRUPTING RATING OF, EXISTING PANELBOARD.
- C. VFDS, STARTER DEVICES, DISCONNECTS, ETC. ASSOCIATED WITH EQUIPMENT SHALL BE FURNISHED BY DIVISION 22/23 CONTRACTOR. DIVISION 26 CONTRACTOR IS RESPONSIBLE FOR THE MOUNTING AND LINE/LOAD SIDE CONNECTIONS OF VFDS, STARTER DEVICES, DISCONNECTS, ETC. ASSOCIATED WITH EQUIPMENT. DIVISION 26 CONTRACTOR IS RESPONSIBLE FOR ALL FINAL CONNECTIONS TO EQUIPMENT.
- D. PRIOR TO PURCHASE AND INSTALLATION OF CIRCUIT BREAKERS AND WIRING ASSOCIATED WITH EQUIPMENT, DIVISION 26 CONTRACTOR SHALL COORDINATE FINAL EQUIPMENT REQUIREMENTS WITH DIVISION 22/23 CONTRACTOR.

1. RE-USE EXISTING CIRCUIT BREAKER AND WIRING THAT FED PREVIOUS EQUIPMENT SERVING SPACE. REWORK AND EXTEND CIRCUITING AS REQUIRED WITH WIRING INDICATED.

RECEPTACLE CIRCUIT. IF LOCATED ABOVE FINISHED CEILING, HARDWIRE UNIT TO NEAREST AVAILABLE RECEPTACLE CIRCUIT AND PROVIDE WITH LOCAL DISCONNECT SWITCH.

- 2. PROVIDE NEW CIRCUIT BREAKER IN AVAILABLE SPACE OF EXISTING PANELBOARD. 3. RE-USE EXISTING WIRING THAT FED PREVIOUS EQUIPMENT SERVING SPACE. REWORK AND EXTEND CIRCUITING AS REQUIRED WITH WIRING INDICATED.
- 4. CIRCUIT TO SPARE CIRCUIT BREAKER IN PANELBOARD. 5. CONNECT LIGHTING AND CONTROLS TO EXISTING CIRCUITING LEFT FROM DEMOLITION. PROVIDE REQUIRED INTERCONNECTIONS BETWEEN EXISTING SHUNT TRIP CONTACTS IN KITCHEN PANEL LOCATED BELOW HOOD AND NEW FIRE SUPPRESSION SYSTEM.
- 6. COORDINATE FINAL LPG VAPORIZER SIZE WITH LP GAS SUPPLIER PRIOR TO ROUGH-IN.
- 7. PROVIDE SHUNT TRIP CIRCUIT BREAKER AND EMERGENCY POWER OFF PUSH BUTTON, REFER TO DETAIL ON E800.EXHAUST FAN SHALL CONTAIN INTEGRAL LIGHT. WIRE EXHAUST FAN AND LIGHT TO ASSOCIATED ROOM SWITCHING, REFER TO E300 SERIES DRAWINGS FOR SWITCHING.
- 8. INDOOR UNIT IS FED FROM OUTDOOR UNIT.
- 9. COORDINATE CONDENSATE PUMP REQUIREMENTS IN FIELD WITH FINAL LOCATION. IF LOCATED BELOW FINISHED CEILING PROVIDE RECEPTACLE ADJACENT TO PUMP AND CONNECT TO NEAREST CONVENIENCE

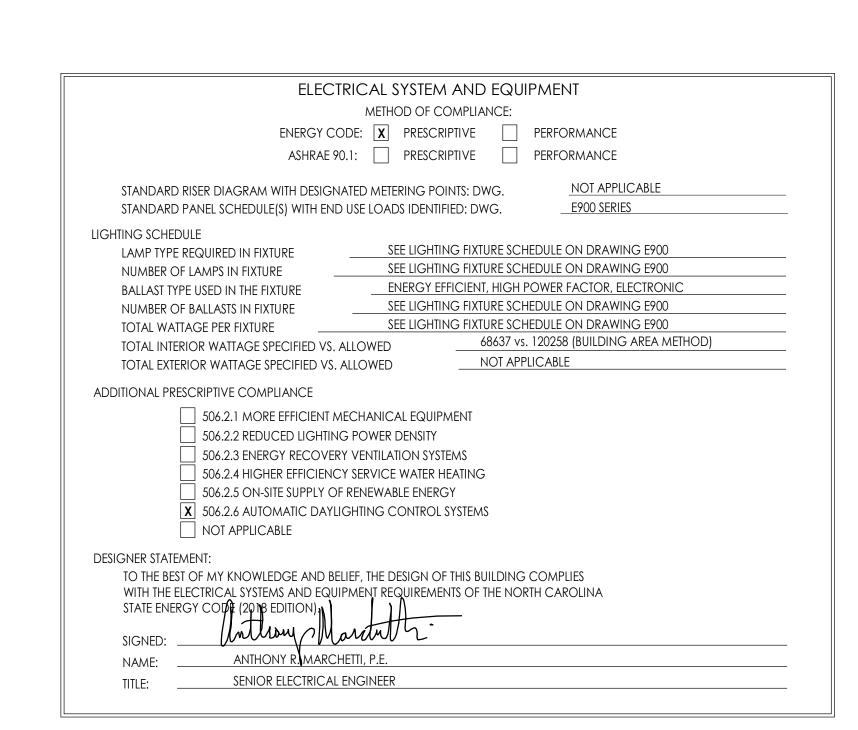
**DESCRIPTION** MANUFACTURER MODEL CCT LUMENS VOLTAGE LOAD REMARKS 2'X4' LED RECESSED ARCHITECTURAL TROFFER WITH 0-10V DIMMING 4000K 4200 DAY-BRITE CFI 2FGXG42B840-4-RS-UNV-DIM 120-277V A1/NL 2'X4' LED RECESSED ARCHITECTURAL TROFFER WITH 0-10V DIMMING, AND EMERGENCY BATTERY PACK DAY-BRITE CFI 2FGXG42B840-4-RS-UNV-DIM-BSL10LST 120-277V 4000K 4200 30 VA 2'X2' LED RECESSED ARCHITECTURAL TROFFER WITH 0-10V DIMMING DAY-BRITE CFI 2FGXG45840-2-RS-UNV-DIM 4000K 4500 120-277V 34 VA LIGHTART 0 VA 8 LED SURFACE MOUNT EMERGENCY LIGHTING UNIT CHLORIDE 120-277V 7 VA F1 2'X4' LED RECESSED LED FLAT PANEL WITH 0-10V DIMMING DAY-BRITE CFI 2FPZ42B840-4-DS-UNV-DIM 4000K 4200 120-277V 40 VA F1/EM 2'X4' LED RECESSED LED FLAT PANEL WITH 0-10V DIMMING. AND EMERGENCY BATTERY PACK DAY-BRITE CFI 2FPZ42B840-4-DS-UNV-DIM-BSL10LST 4000K 4200 120-277V 40 VA 2'X4' LED RECESSED LED FLAT PANEL WITH 0-10V DIMMING. AND EMERGENCY BATTERY PACK DAY-BRITE CFI 2FPZ42B840-4-DS-UNV-DIM-BSL10LST 4000K 4200 120-277V 40 VA 4000K 4200 2'X4' LED RECESSED LED FLAT PANEL WITH FLANGE KIT AND 0-10V DIMMING DAY-BRITE CFI 2FPZ54L840-4-DS-UNV-DIM FMA24 120-277V 40 VA F1F/NL 2'X4' LED RECESSED LED FLAT PANEL WITH FLANGE KIT AND EMERGENCY BATTERY PACK DAY-BRITE CFI 2FPZ54L840-4-DS-UNV-DIM-BSL10LST FMA24 4000K 4200 120-277V 40 VA 2'X4' LED RECESSED LED FLAT PANEL WITH 0-10V DIMMING DAY-BRITE CFI 2FPZ54L840-4-DS-UNV-DIM 4000K 5400 120-277V 42 VA F2/NL 2'X4' LED RECESSED LED FLAT PANEL WITH EMERGENCY BATTERY PACK DAY-BRITE CFI 2FPZ54L840-4-DS-UNV-DIM-BSL10LST 4000K 5400 120-277V 42 VA F3 2'X2' LED RECESSED LED FLAT PANEL WITH 0-10V DIMMING 120-277V DAY-BRITE CFI 2FPZ38B840-2-DS-UNV-DIM 33 VA F3/EM 2'X2' LED RECESSED LED FLAT PANEL WITH EMERGENCY BATTERY PACK DAY-BRITE CFI 2FPZ38B840-2-DS-UNV-DIM-BSL10LST 4000K 3800 120-277V 33 VA F3F 2'X2' LED RECESSED LED FLAT PANEL WITH FLANGE KIT AND 0-10V DIMMING DAY-BRITE CFI 2FPZ38B840-2-DS-UNV-DIM FMA22 120-277V 4000K 3800 33 VA 3 F3F/EM 2'X2' LED RECESSED LED FLAT PANEL WITH FLANGE KIT, 0-10V DIMMING, AND EMERGENCY BATTERY PACK DAY-BRITE CFI 2FPZ38B840-2-DS-UNV-DIM-BSL10LST FMA22 4000K 3800 120-277V 33 VA 1, 1'X2' LED RECESSED LED FLAT PANEL WITH SURFACE KIT LEDP-12-WH XTLR-12-WH-FKT 4000K 3150 120-277V 30 VA 3 L1-4 8' LED WALL MOUNTED LINEAR FIXTURE WITH 0-10V DIMMING 4000K 2800 DAY-O-LITE PRFL-14-D-SI-40-HO-4-WM-W-DIM10 120-277V 36 VA 4 4000K 5600 120-277V 8' LED WALL MOUNTED LINEAR FIXTURE WITH 0-10V DIMMING DAY-O-LITE PRFL-14-D-SI-40-HO-8-WM-W-DIM10 72 VA 4 LED POST TOP LIGHT, BLACK FINISH, TYPE 5 DISTRIBUITION, INTEGRAL PIR MOTION DETECTOR AND PHOTOCEL | PPT-P-A03-740-T5M-T3-120-0-10V-BL50L2-TLRPC-BK | 4000K | 5000 GARDCO 30 VA SPI LIGHTING 0 VA 8 SPI LIGHTING 0 VA 8 SPI LIGHTING 0 VA 8 4' LED STRIP LIGHT WITH FROSTED ACRYLIC LENS AND MATTE WHITE FINISH DAY-BRITE CFI FSW470L840-UNV 4000K 6414 52 VA 2 DAY-O-LITE IRSL-DI-WOA-40-HO-2-WM-W-DIM10 120-277V 16 VA 2' LED WALL MOUNTED LINEAR FIXTURE LED UNIVERSAL MOUNT EXIT SIGN WITH RED LETTERING AND WHITE HOUSING CHLORIDE CLXNRW 120-277V 7 VA 1,5 CHLORIDE CLCNRW 120-277V 7 VA 1,5,6 LED UNIVERSAL MOUNT EXIT SIGN WITH RED LETTERING, AND EMERGENCY LIGHTING UNIT

LUMINAIRE SCHEDULE

- A. UNLESS NOTED OTHERWISE, ALL FIXTURES SHALL BE SPECIFIED AS 80 CRI AND 4000K CCT.
- B. COORDINATE FINAL MOUNTING HEIGHTS OF PENDANT FIXTURES WITH ARCHITECT/ENGINEER PRIOR TO ROUGH-IN.
- C. SPECIFIED LIGHTING FIXTURES HAVE BEEN DESIGNED AROUND SPECIFIC PHOTOMETRIC CALCULATIONS, LIGHTING CONTROLS, CEILING LAYOUTS, AESTHETICS, ETC. D. IF IN ANY CASE, SUBSTITUTE FIXTURE SELECTIONS REQUIRE MODIFICATIONS TO LIGHTING CONTROLS, CEILING LAYOUT, CEILING TYPE, SOFFITS, MILLWORK, ETC. IT IS THE CONTRACTOR'S
- RESPONSIBILITY TO INCUR ALL COSTS, BOTH LABOR AND MATERIAL, AS REQUIRED TO ACCOMMODATE THESE MODIFICATIONS.
- E. IF ANY SUBSTITUTE MANUFACTURERS ARE USED, IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE FOLLOWING:
- A SAMPLE SUBSTITUTE FIXTURE AND ALL PHOTOMETRIC CALCULATIONS (5) DAYS PRIOR TO BID. • ALL PHOTOMETRIC CALCULATIONS THAT ARE EQUAL TO OR GREATER THAN SPECIFIED FIXTURES IN PERFORMANCE AND DESIGN AND MEET OR EXCEED MAXIMUM/MINIMUM RATIONS.
- FIXTURES THAT ARE COMPATIBLE WITH LIGHTING CONTROLS AND CEILING TYPE.

#### **REMARKS**:

- 1. PROVIDE FIXTURE WITH 90 MINUTE EMERGENCY BATTERY.
- . PROVIDE AIRCRAFT CABLE HANGING KIT WHERE REQUIRED. HEIGHT ABOVE FINISHED FLOOR (AFF) INDICATED ON E300 SERIES LIGHTING DRAWINGS.
- 3. PROVIDE FIXTURE WITH FLANGE OR SURFACE KIT AS INDICATED. 4. CONTRACTOR SHALL VERIFY REQUIRED LENGTH IN FIELD PRIOR TO ORDERING. PROVIDE FIXTURE IN CONTINUOUS ROW WITH SECTIONS NO LONGER THAN 6' IN LENGTH.
- 5. REFER TO E300 SERIES LIGHTING DRAWINGS FOR CHEVRON DIRECTIONS, NUMBER OF FACES, AND MOUNTING. 6. PROVIDE FIXTURE WITH WIRE GAURD.
- 7. PROVIDE FIXTURE WITH CONCRETE POLE BASE, 4" x 10' HIGH STEEL POLE WITH MIN. 0.120" WALL THICKNESS, ANCHOR BOLTS, BOLT COVER, AND FINISH TO MATCH FIXTURE. FIXTURE SHALL
- DIM TO 50% WHEN NO OCCUPANCY IS DETECTED FOR 15 MINUTES.
- 8. FIXTURE TO BE DETERMINED.





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PROJECT INFORMATION R23.00325

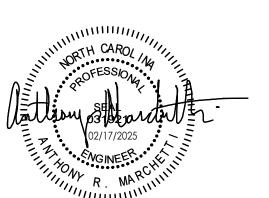
JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS



SHEET INFORMATION

02/17/2025 As indicated Project Status **BID SET** 

Drawn By

JAE Drawing Title ELECTRICAL EQUIPMENT AND LUMINAIRE SCHEDULES

Checked By

			VOLTAGE:	480/277	3 PH 4W			AIC RATING:	EXISTING	REMARKS:		
	PANEL	VA	FEEDER AMP:	125	MAINS:	125	MLO	MOUNTING:		COLLABE DAIE		
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1	SQUARE D NF		
BKR	NOTE	LOAD DE	SCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/1	Е	KITCHEN CAFETI	ERIA EM. LTG	1200	1	Α	2	1200	LTG. RM. D103	3, D104	Е	20/1
20/1	Е	LTG. RM. 107		3000	3	В	4	2500	LTG. RM. D102	2	Е	20/1
20/1	E	OUTDOOR LTG.	VIA TIMECLOCK	1400	5	С	6	2500	LTG. RM. D102	2	E	20/1
20/1	Е	MECH ROOM E	M. LTG	1600	7	A	8	1200	SKY LTG. D102	2, D103	Е	20/1
20/3	N	CHW PUMP-3		3047	9	В	10	5817	CHW PUMP-1		N	40/3
$\downarrow$	$\rightarrow$	<b></b>		3047	11	С	12	5817	<b>1</b>		<b>1</b>	$\downarrow$
$\downarrow$	<u></u>	<b>\</b>		3047	13	Α	14	5817	<b>1</b>		<b>1</b>	1
20/3	N	CHW PUMP-4		0	15	В	16	0	CHW PUMP-2		N	40/3
$\downarrow$	$\rightarrow$	<b>1</b>		0	17	С	18	0	<b>1</b>		<del>                                      </del>	<b>T</b>
$\downarrow$	$\downarrow$	<b>1</b>		0	19	A	20	0	<b>1</b>		<b>1</b>	$\downarrow$
20/3	N	HHW PUMP-1		3047	21	В	22	0	HHW PUMP-2		N	20/3
$\downarrow$	$\rightarrow$	<b></b>		3047	23	С	24	0	<b>1</b>		<b>1</b>	$\downarrow$
$\downarrow$	<del></del>	<b>\</b>		3047	25	A	26	0	<b>1</b>		<b>1</b>	1
-	Ē	SPACE		0	27	В	28	0	SPACE		Ē	-
-	Е	SPACE		0	29	С	30	0	SPACE		Е	-
		Connected	Load Per Phase	PH A:	17111	PH B:	17411	PH C:	15811			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Con	nected VA	14600	17451	18282	0	0	0	0		50333	60.5	
Dem	and Factor	r 1.25	1.00	1.00	NEC	0.00	1.00	1.00				
D	emand VA	18250	17451	18282	0	0	0	0		53983	64.9	

			VOLTAGE:	480/277	3 PH 4W				AIC RATING:	EXISTING	REMARKS:		
	<b>PANEL</b>	T	FEEDER AMP:	400	MAINS:	400		MLO	MOUNTING:				
		(Existing)	LUGS:			FEED:			ENCLOSURE:	NEMA 1	WESTINGHOUSE PRL	2	
BKR	NOTE		ESCRIPTION	VA	CKT	PHASI	E	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
15/3	R	SPARE		0	1	Α		2	0	SPARE		Е	20/1
$\downarrow$	$\downarrow$	<b>\</b>		0	3	В		4	0	SPARE		Е	20/1
1	$\downarrow$	<b>1</b>		0	5	1	С	6	2880	LIGHTS D132,	D134, D137	Е	20/1
15/3	R	SPARE		0	7	Α		8	1000	EMERGENCY	LIGHTS	Е	20/1
<u> </u>	$\downarrow$	$\downarrow$		0	9	В		10	2880	LIGHTS D113 -	· D117	Е	20/1
Ţ	$\downarrow$	<b> </b>		0	11	1	С	12	2000	OUTDOOR PC	DLE LIGHTS	Е	20/1
20/3	N	AHU-4 RETURN		3047	13	Α		14	0	SPARE		Е	20/1
$\downarrow$	$\downarrow$	$\downarrow$		3047	15	В		16	0	SPARE		Е	20/1
<b>1</b>	$\downarrow$	$\downarrow$		3047	17	1	С	18	0	SPARE		Е	20/1
20/3	E	CIRCULATING F	PUMP	3878	19	Α		20	0	SPARE		Е	20/1
$\downarrow$	$\downarrow$	<b> </b>		3878	21	В		22	0	SPARE		Е	20/1
$\downarrow$	$\downarrow$	$\downarrow$		3878	23	1	С	24	0	SPARE		Е	-
20/1	E	SPARE		0	25	Α		26	5817	AHU-4 SUPPLY	1	N	40/3
30/3	N	AHU-1 SUPPLY		3878	27	В		28	5817	$\downarrow$		<b>+</b>	<b>1</b>
$\downarrow$	$\downarrow$	$\downarrow$		3878	29	1	С	30	5817	$\downarrow$		<b>1</b>	<b>1</b>
$\downarrow$	$\downarrow$	<b> </b>		3878	31	Α		32	0	SPACE		Е	-
-	Е	SPACE		3047	33	В		34	0	SPACE		Е	-
-	Е	SPACE		3047	35	1	С	36	0	SPACE		Е	-
-	Е	SPACE		3047	37	Α		38	0	SPACE		Е	-
-	Е	SPACE		0	39	В		40	0	SPACE		E	-
-	Е	SPACE		0	41		С	42	0	SPACE		Е	-
000.10	CLID	EXISTING MDP T	RANSFORMER, RM	0		Α			0			CLID	
200/2	SUB	133		0		В			0			SUB	
		Connected	d Load Per Phase	PH A:	20667	PH B:	:	22547	PH C:	24547			
		Lighting	HVAC	Motors	Recept.	Refrig	)	Kitchen	Misc		Total VA	Amps	
Con	nected VA		59001	0	0	0	-	0	0		67761	81.5	
Dem	and Facto	r 1.25	1.00	1.00	NEC	0.00		1.00	1.00				
D	emand V	10950	59001	0	0	0		0	0		69951	84.1	

			VOLTAGE:	480/277	3 PH 4W			AIC RATING:	EXISTING	REMARKS:		
	<b>PANEL</b>	N	FEEDER AMP:	225	MAINS:	225	МСВ	MOUNTING:				
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1	WESTINGHOUSE PRL2		
BKR	NOTE	LOAD DI	ESCRIPTION	VA	CKT	PHASE	СКТ	VA	LOAD	DESCRIPTION	NOTE	BKR
40/3	N	AHU-5 SUPPLY		0	1	Α	2	0	SPACE		Е	-
$\downarrow$	$\downarrow$	<b> </b>		0	3	В	4	0	SPACE		Е	-
$\downarrow$	$\downarrow$	<b>\</b>		0	5	С	6	0	SPACE		Е	-
15/3	N	EF-5		831	7	A	8	2000	LIGHTS A107,	A108	Е	20/1
$\downarrow$	$\downarrow$	<b>\</b>		831	9	В	10	2000	LIGHTS A107,	A108	Е	20/1
$\downarrow$	$\downarrow$	<b>\</b>		831	11	С	12	2000	LIGHTS A116,	A, B	Е	20/1
20/1	Е	CORRIDOR LIG	HTS	2000	13	Α	14	2000	LIGHTS A115,	A111 - A114	Е	20/1
20/1	Е	CORRIDOR LIG	HTS	2000	15	В	16	2000	LIGHTS A108 -	A110	Е	20/1
20/1	Е	CORRIDOR LIG	HTS	2000	17	С	18	2000	OUTSIDE LIGH	TS VIA TIME CLOCK	Е	20/1
20/1	Е	EMERGENCY LI	GHTS	1200	19	Α	20	0	SPARE		Е	20/1
20/1	Е	SPARE		0	21	В	22	0	SPARE		Е	20/1
20/1	Е	SPARE		0	23	С	24	0	SPARE		Е	20/1
20/1	Е	SPARE		0	25	Α	26	0	SPARE		Е	20/1
20/1	Е	SPARE		0	27	В	28	0	SPARE		Е	20/1
20/1	Е	SPARE		0	29	С	30	0	SPARE		Е	20/1
20/1	Е	SPARE		0	31	Α	32	0	SPACE		Е	-
20/1	Е	SPARE		0	33	В	34	0	SPACE		Е	-
-	Е	SPACE		0	35	С	36	0	SPACE		Е	-
-	Е	SPACE		0	37	A	38	0	SPACE		Е	-
-	Е	SPACE		0	39	В	40	0	SPACE		Е	-
-	Е	SPACE		0	41	С	42	0	SPACE		Е	-
		5		22065		Α		0				
110/3	SUB	PANEL M 150kVA TRANSF	ODMED	20310		В		0			SUB	
		1508 77 117 (1951	OKWIEK	20094		С		0				
•		Connected	Load Per Phase	PH A:	30096	PH B:	27141	PH C:	26925			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Con	nected VA		10357	225	41540	0	0	12840		84162	101.2	
Dem	and Factor		1.00	1.00	NEC	0.00	1.00	1.00				
	emand VA		10357	225	25770	0	0	12840		73192	88.0	

			VOLTAGE:	208/120	3 PH 4W				AIC RATING:	EXISTING	REMARKS:		
	<b>PANEL</b>	Υ	FEEDER AMP:	1200	MAINS:	1200	^	MCB	MOUNTING:		T	_	
		(Existing)	LUGS:		'	FEED:			ENCLOSURE:	NEMA 1	WESTINGHOUSE PRL	I	
BKR	NOTE	LOAD D	ESCRIPTION	VA	CKT	PHASE	•	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
100/3	Е	PANEL S		8736	1	Α		2	7460	PANEL U		E	100/3
$\downarrow$	<b></b>	$\downarrow$		5160	3	В		4	11305	<b>1</b>		<b>1</b>	<b>T</b>
$\downarrow$	<b></b>	$\downarrow$		6996	5		С	6	12276	<b>1</b>		<b>1</b>	<b>T</b>
-	Е	SPACE		0	7	Α		8	0	SPARE		Е	200/3
$\downarrow$	$\downarrow$	$\downarrow$		0	9	В		10	0	<b>1</b>		<b>1</b>	$\downarrow$
$\downarrow$	$\downarrow$	$\downarrow$		0	11		С	12	0	<b>\</b>		<b>+</b>	$\downarrow$
200/3	Е	SPARE		0	13	Α		14	22976	PANEL R		Е	225/3
$\downarrow$	<b></b>	$\downarrow$		0	15	В		16	18732	<b>1</b>		<b>1</b>	<b>T</b>
$\downarrow$	<b></b>	$\downarrow$		0	17		С	18	18096	<b>1</b>		<b>1</b>	<b>1</b>
-	Е	SPACE		0	19	Α		20	0	SPACE		Е	-
$\downarrow$	<b></b>	$\downarrow$		0	21	В		22	0	$\downarrow$		<b>1</b>	<b>1</b>
$\downarrow$	<b>↓</b>	$\downarrow$		0	23		С	24	0	$\downarrow$		<b>1</b>	→
400/3	Е	PANEL Q		26936	25	Α		26	0	SPACE		Е	-
$\downarrow$	<b></b>	$\downarrow$		24880	27	В		28	0	$\downarrow$		<b>1</b>	<b>1</b>
$\downarrow$	$\downarrow$	$\downarrow$		25452	29		С	30	0	$\downarrow$		<b>1</b>	<b>1</b>
600/3	Е	KITCHEN ISLAN	D PANEL	54000	31	Α		32	0	-		-	-
$\downarrow$	<b>↓</b>	$\downarrow$		54000	33	В		34	0	-		-	-
$\downarrow$	$\downarrow$	$\downarrow$		54000	35		С	36	0	-		-	-
		Connecte	d Load Per Phase	PH A:	120108	PH B:		114077	PH C:	116820			
		Lighting	HVAC	Motors	Recept.	Refrig		Kitchen	Misc		Total VA	Amps	
Con	nected VA	1000	21372	225	20940	0		304488	2980		351005	974.3	
Dem	and Facto	r 1.25	1.00	1.00	NEC	0.00		0.65	1.00				
D	emand VA	1250	21372	225	15470	0		197917	2980		239214	664.0	

			VOLTAGE:	208/120	3 PH 4W	1		AIC RATING:	EXISTING	REMARKS:		
	<b>PANEL</b>	W	FEEDER AMP:	100	MAINS:	100	MCB	MOUNTING:		WESTING LIGHSE DDI	1	
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1	WESTINGHOUSE PRL	1	
BKR	NOTE	LOAD DE	SCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKI
15/3	R	SPARE		0	1	Α	2	888	BOILER PUMP	S P-B-1, P-B-2	R	15/
$\downarrow$	<b>\</b>	$\downarrow$		0	3	В	4	888	$\downarrow$		<b>1</b>	<b>1</b>
$\downarrow$	<b>\</b>	$\downarrow$		0	5		6	888	$\downarrow$		<b>1</b>	<b>1</b>
20/1	R	EF-15 (CHILLER 1	06)	1536	7	Α	8	500	BOILER CONT	ROLS	E	20/
20/1	R	UNIT HEATER UH-	-1	120	9	В	10	1440	WATER HEATE	R MOTOR	Е	20/
20/1	Е	PUMP 23		864	11		12	1440	WATER HEATE	R MOTOR	Е	20/
20/2	N	BOILER B-1		1920	13	Α	14	200	LCS #8		E	20/
$\downarrow$	<b>\</b>	SHUNT TRIP		0	15	В	16	180	OUTSIDE REC		Е	20/
20/1	R	CHILLER HEAT TR	ACE	1200	17		18	0	SPARE		E	20/
20/1	Е	REC D106, D106	A	540	19	Α	20	1000	TRACK LTS STA	AGE	E	20/
20/1	Е	DMS		500	21	В	22	1000	TRACK LTS STA	AGE	Е	20/
20/1	R	LP GAS YARD LIC	GHTING	0	23		24	1000	TRACK LTS STA	AGE	Е	20/
20/1	Е	CONTROLS		200	25	Α	26	200	TANK GUARD		E	20/
20/1	Е	CONTROLS 2ND	CHEMICAL PUMP	200	27	В	28	0	SPACE		E	-
30/3	Е	SURGE PROTECT	OR	0	29		30	200	PURE PAK		Е	20/
$\downarrow$	<b></b>	$\downarrow$		0	31	Α	32	4200	WALK-IN CO	OLER	E	50/3
$\downarrow$	<b>\</b>	$\downarrow$		0	33	В	34	4200	$\downarrow$		<b>1</b>	<b>1</b>
15/1	N	P-AHU-2		0	35		36	4200	$\downarrow$		<b>1</b>	$\downarrow$
20/2	N	BOILER B-2		1920	37	Α	38	0	SPARE		E	30/:
$\downarrow$	<b>\</b>	SHUNT TRIP		0	39	В	40	0	$\downarrow$		<b>1</b>	<b>1</b>
-	Е	SPACE		864	41		42	864	SPACE		Е	-
		Connected	Load Per Phase	PH A:	13104	PH B:	8528	PH C:	11520			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	•
Con	nected VA	3000	14608	0	1080	864	12600	1000		33152	92.0	
Dem	and Facto	<b>r</b> 1.25	1.00	1.00	NEC	0.00	1.00	1.00				
D	emand VA	3750	14608	0	1080	0	12600	1000		33038	91.7	

			VOLTAGE:	208/120	3 PH 4W			AIC RATING:	EXISTING	REMARKS:		
	PANEL	U	FEEDER AMP:	100	MAINS:	100	MLO	MOUNTING:		WESTING HOUSE DDI	1	
		(Existing)	LUGS:		•	FEED:		ENCLOSURE:	NEMA 1	WESTINGHOUSE PRL	I	
BKR	NOTE	LOAD DE	SCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
15/3	N	FCU-139		444	1	Α	2	444	FCU-128		N	15/3
$\downarrow$	<b>1</b>	$\downarrow$		444	3	В	4	444	$\downarrow$		<b>\</b>	<b>1</b>
$\downarrow$	<b>\</b>	$\downarrow$		444	5	С	6	444	$\downarrow$		<b>\</b>	<b>\</b>
20/1	R	EF-1 & EF-2 (TLT	& LAUNDRY)	48	7	Α	8	552	EF-17 & EF-18	(GYM ROOF)	R	15/3
20/1	R	SMOKE DAMPER	RS	225	9	В	10	552	$\downarrow$		<b>\</b>	<b>\</b>
15/1	N	EF-19 (MECH 13	39 ROOF)	528	11	С	12	552	$\downarrow$		<b>\</b>	<b>1</b>
20/1	Е	MECHANICAL C	CONTROLS D139	500	13	Α	14	540	RECEPTS. D117	7	Е	20/1
20/1	E	MECHANICAL C	CONTROLS D116	500	15	В	16	540	RECEPTS. D117	7	E	20/1
20/1	Е	EWC D136		900	17	С	18	540	RECEPTS. D117	7	Е	20/1
20/1	Е	RECEPTS. D101,	D102	720	19	A	20	720	RECEPTS. D113	3, D114	Е	20/1
20/1	Е	RECEPTS. D102		360	21	В	22	720	RECEPTS. D115	5, D115	Е	20/1
20/1	Е	RECEPTS. D136,	D139	540	23	С	24	360	RECEPTS. D116	5	Е	20/1
20/1	Е	RECEPTS. D132,	D134, D135	900	25	Α	26	500	BAS		Е	20/1
40/2	E	AC WINDOW #	1	1560	27	В	28	540	RECEPTS. CON	NNECTOR HALL	Е	20/1
$\downarrow$	<b>1</b>	<b>\</b>		1560	29	С	30	540	RECEPTS. STAC	GE .	Е	20/1
40/2	R	SSO-1/SSI-1		832	31	Α	32	540	RECEPTS. D102	2	Е	20/1
$\downarrow$	<b>1</b>	↓		832	33	В	34	540	RECEPTS. D102	2	Е	20/1
40/2	Е	EXHAUST FAN		0	35	С	36	540	RECEPTS. D102	2 DINNER ROOM	Е	20/1
$\downarrow$	<u> </u>	↓		0	37	Α	38	360	IG RECEPTS. D	117	Е	20/1
40/2	R	SSO-2/SSI-2		832	39	В	40	360	IG RECEPTS. D	112	Е	20/1
$\downarrow$	<b>\</b>	$\downarrow$		832	41	С	42	1000	LIGHTS NEW C	ORRIDOR	Е	20/1
		Connected	Load Per Phase	PH A:	7460	PH B:	11305	PH C:	12276			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Cor	nected VA	1000	16336	225	12480	0	0	1000		31041	86.2	
Dem	and Factor	r 1.25	1.00	1.00	NEC	0.00	1.00	1.00				
	emand VA	1250	16336	225	11240	0	0	1000		30051	83.4	

		•	VOLTAGE:	208/120	3 PH 4W	,			AIC RATING:	EXISTING	REMARKS:		
	PANEL	M	FEEDER AMP:	400	MAINS:	400		MCB	MOUNTING:		WESTINION OF BRIDE		
		(Existing)	LUGS:			FEED:	-		ENCLOSURE:	NEMA 1	WESTINGHOUSE PRL1		
BKR	NOTE	LOAD DE	SCRIPTION	VA	CKT	PHAS	Е	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
-	Е	SPACE		0	1	Α		2	0	SPACE		Е	-
-	Е	SPACE		0	3	В		4	0	SPACE		Е	-
-	Е	SPACE		0	5		С	6	0	SPACE		Е	-
20/1	Е	RECEPTS. A142		540	7	Α		8	540	RECEPTS. A14	1	Е	20/1
20/1	Е	RECEPTS. A142		540	9	В		10	720	RECEPTS. A14	1	Е	20/1
20/1	Е	RECEPTS. A142A	A, A142B	720	11		С	12	540	RECEPTS. A14	1	Е	20/1
20/1	Е	RECEPTS. A135,	A139, A139A	1080	13	Α		14	540	RECEPTS. A13	2, A133, A134, A137	Е	20/1
20/1	Е	RECEPTS. A136		900	15	В		16	180	RECEPTS. A12	2A	Е	20/1
20/1	Е	RECEPTS. A138		900	17	1	С	18	180	RECEPTS. A12	2A	Е	20/1
20/1	Е	RECEPTS. A130		900	19	Α	Ī	20	900	RECEPTS. A12	2, A128	Е	20/1
20/1	Е	RECEPTS. A130		360	21	В	Ī	22	720	RECEPTS. A12	1, A123	Е	20/1
20/1	E	RECEPTS. A129,	A130	360	23	1	С	24	720	RECEPTS. A14	0	Е	20/1
20/1	E.	RECEPTS. A124,	A126	740	25	Α	Ī	26	225	SMOKE DAME	PER	R	20/1
20/1	E	RECEPTS. A126		540	27	В	Ī	28	0	SPARE		R	20/1
20/1	E	RECEPTS. A126		540	29		С	30	60	EF-4 (KILN RO	OM)	N	15/1
25/3	Е	KILN		2400	31	Α		32	1750	WH #4		Е	30/2
$\downarrow$	<b>↓</b>	<b>\</b>		2400	33	В		34	1750	$\downarrow$		$\downarrow$	<b>1</b>
$\downarrow$	<b>\</b>	<b>1</b>		2400	35		С	36	0	SPARE		R	20/1
20/1	Е	TELEPHONE EQU	JIPMENT	360	37	Α		38	0	SPARE		Е	20/1
20/1	R	EF-21 & EF-22 (T	OILET 113 & 114)	48	39	В	Ī	40	0	SPARE		Е	20/1
15/1	N	EF-7 (TOILET 124	1)	24	41		С	42	0	SPARE		Е	20/1
				12090		Α			0				
110/3	SUB	PANEL P		12152		В	Ī		0			SUB	
				13650		1	С		0				
		Connected	Load Per Phase	PH A:	22065	PH B:	:	20310	PH C:	20094			
		Lighting	HVAC	Motors	Recept.	Refriç	9	Kitchen	Misc		Total VA	Amps	
Cor	nected VA		7864	225	41540	0	-	0	12840		62469	173.4	
Dem	and Factor	1.25	1.00	1.00	NEC	0.00		1.00	1.00				
D	emand VA		7864	225	25770	0		0	12840		46699	129.6	

,			VOLTAGE:	480/277	3 PH 4W				AIC RATING:	<b>EXISTING</b>	REMARKS:		
	PANEL	V	FEEDER AMP:	225	MAINS:	225		MLO	MOUNTING:				
		(Existing)	LUGS:			FEED:			ENCLOSURE:	NEMA 1	WESTINGHOUSE PRLS	3	
BKR	NOTE	LOAD DE	SCRIPTION	VA	CKT	PHASE	E	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
30/3	N	AHU-3 SUPPLY		3878	1	Α		2	5817	CHP-2		N	40/3
$\downarrow$	$\downarrow$	$\downarrow$		3878	3	В		4	5817	<b> </b>		<b>\</b>	<b>1</b>
$\downarrow$	$\downarrow$	$\downarrow$		3878	5		C	6	5817	<b>↓</b>		<b>\</b>	<b>1</b>
20/3	R	AHU-3 EXHAUST	•	3047	7	Α		8	0	PUMP #3		Е	30/3
$\downarrow$	$\downarrow$	<b>\</b>		3047	9	В		10	0	<b>1</b>		<u> </u>	$\top$
$\downarrow$	$\downarrow$	<b>\</b>		3047	11		С	12	0	<b> </b>		<u> </u>	<b>T</b>
80/3	R	SPARE		0	13	Α		14	5817	CHP-1		N	40/3
$\downarrow$	$\downarrow$	<b>1</b>		0	15	В		16	5817	↓		<b>1</b>	$\top$
$\downarrow$	$\downarrow$	<b>1</b>		0	17		С	18	5817	<b>1</b>		<b>↓</b>	<b>T</b>
100/3	Е	WATER HEATER		18000	19	Α		20	0	SPARE		Е	100/3
$\downarrow$	$\downarrow$	<b>1</b>		18000	21	В		22	0	↓		<b>↓</b>	$\top$
$\downarrow$	<u> </u>	<b></b>		18000	23		С	24	0	<b> </b>		1	
15/3	R	AHU-2 SUPPLY &	EXHAUST	1413	25	Α		26	0	SPARE		E	20/1
$\downarrow$	$\downarrow$	<b>\</b>		1413	27	В		28	831	HHW PUMP-3	& HHW PUMP-4	R	15/3
$\downarrow$	<u> </u>	<b>\</b>		1413	29		С	30	831	<b>1</b>		<b>↓</b>	$\downarrow$
20/3	R	SPARE		0	31	Α		32	831	<b>1</b>		<b>1</b>	1
$\downarrow$	$\downarrow$	<b>\</b>		0	33	В		34	0	SPARE		E	20/1
J	J	<b>\</b>		0	35		С	36	13104	PANEL W TRA	NSFORMER	Е	60/3
15/3	Ė	PUMP P-3		0	37	Α		38	8528	<b>1</b>		<b>1</b>	<b>T</b>
$\downarrow$	$\downarrow$	<b></b>		0	39	В		40	11520	<b>1</b>		1	$\top$
<b></b>	<u></u>	$\downarrow$		0	41		С	42	0	SPACE		E	_
		Connected	Load Per Phase	PH A:	47331	PH B:		50323	PH C:	51907			
		Lighting	HVAC	Motors	Recept.	Refrig	)	Kitchen	Misc	:	Total VA	Amps	-
Con	nected VA		93622	37395	1080	864	-	12600	1000		149561	179.9	
Demo	and Factor	r 1.25	1.00	1.00	NEC	0.00		1.00	1.00				
D	emand VA		93622	37395	1080	0		12600	1000		149447	179.8	

			VOLTAGE:	208/120	3 PH 4W				AIC RATING:	EXISTING	REMARKS:		
	PANEL	R	FEEDER AMP:	225	MAINS:	225		MLO	MOUNTING:		WESTING HOUSE DDI	1	
		(Existing)	LUGS:		-	FEED:			ENCLOSURE:	NEMA 1	WESTINGHOUSE PRL	I	
BKR	NOTE	LOAD DE	SCRIPTION	VA	CKT	PHASE	:	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
35/3	Е	SINK HEATER		3000	1	Α		2	696	EF-12 (DISHWA	ASH ROOF)	N	15/1
$\downarrow$	<b>↓</b>	$\downarrow$		3000	3	В		4	24	EF-3 (MOP 10	5)	N	15/1
$\downarrow$	<b>↓</b>	$\downarrow$		3000	5		C	6	1476	REFRIGERATO	R	Е	20/1
15/3	N	MAU-1		720	7	Α		8	1200	PROOFER HEA	TER	E	20/1
$\downarrow$	<b>↓</b>	$\downarrow$		720	9	В		10	1176	MIXER		E	20/1
$\downarrow$	<b>\</b>	$\downarrow$		720	11		С	12	0	UNKNOWN		Е	20/1
15/3	R	EF-16 (KITCHEN	107 ROOF)	552	13	Α		14	2760	VERTICAL CUT	TER/MIXER	Е	40/3
$\downarrow$	<b>↓</b>	$\downarrow$		552	15	В		16	2760	<b>\</b>		<b>1</b>	<b>1</b>
$\downarrow$	↓	$\downarrow$		552	17		С	18	2760	<b> </b>		<b>1</b>	<b>1</b>
20/1	Е	RECEPTS. D107		900	19	Α		20	864	SLICER		Е	20/1
20/1	Е	RECEPTS. D107		720	21	В		22	1200	PROOFER HEA	TER CABINET	Е	20/1
20/1	Е	RECEPTS. D107		540	23		C	24	828	HOOD-1		R	20/1
40/2	Е	SERVING LINE #2	)	3120	25	Α		26	500	FLY FAN		Е	20/1
$\downarrow$	<b></b>	<b>1</b>		3120	27	В		28	900	MILK CABINET	- LINE 2	Е	20/1
40/2	Е	SERVING LINE #1		3120	29		C	30	540	RECEPT. SERVI	CING LINE	Е	20/1
$\downarrow$	<b>\</b>	$\downarrow$		3120	31	Α		32	984	MILK CABINET	- LINE 1	Е	20/1
35/3	Е	OVEN		3360	33	В		34	1200	DISHWASHER		Е	15/3
$\downarrow$	<b>\</b>	<b>1</b>		3360	35		С	36	1200	<b> </b>		<b>1</b>	$\downarrow$
$\downarrow$	<b>\</b>	$\downarrow$		3360	37	Α		38	1200	<b> </b>		<b>1</b>	<b>T</b>
20/1	Е	SPACE		0	39	В		40	0	SPACE		Е	_
-	Е	SPACE		0	41		С	42	0	SPACE		E	-
		Connected	Load Per Phase	PH A:	22976	PH B:		18732	PH C:	18096			
		Lighting	HVAC	Motors	Recept.	Refrig		Kitchen	Misc		Total VA	Amps	
Con	nected VA	• •	5036	0	2700	0		52068	0		59804	166.0	
Dem	and Facto	<b>r</b> 1.25	1.00	1.00	NEC	0.00		0.65	1.00				
D	emand VA	<b>\</b> 0	5036	0	2700	0		33844	0		41580	115.4	

			VOLTAGE:	240/120	1 PH 3W	1			AIC RATING:	<b>EXISTING</b>	REMARKS:		
	<b>PANEL</b>	A (AREA 1A)	FEEDER AMP:	225	MAINS:	225	N	<b>NLO</b>	MOUNTING:		GE PANEL		
		(Existing)	LUGS:		<u>'</u>	FEED:	-		ENCLOSURE:	NEMA 1	CORR. 104		
BKR	NOTE	LOAD DESC	RIPTION	VA	CKT	PHASE		CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/1	E	LIGHTS		1200	1	Α		2	0	SPARE		R	20/
20/1	Е	LIGHTS		1200	3		В	4	1200	LIGHTS - 113,	115	E	20/
20/1	Е	LIGHTS - 112		1200	5	Α		6	1200	LOBBY LIGHTS	S	Е	20/
20/1	Е	LIGHTS - 103-110		1200	7		В	8	1200	LOBBY LIGHTS	S	Е	20/
20/1	E	CORRIDOR LIGHTS		1200	9	Α		10	1200	OUTSIDE LIGH	ITS	Е	20/
20/1	Е	LIGHTS		1200	11		В	12	720	RECEPTACLES	S	Е	20/
20/1	E	RECEPTACLES		720	13	Α		14	720	RECEPTACLES	S	E	20/
20/1	E	RECEPTACLES		720	15		В	16	720	CONCESSION	N RECEPTACLES	E	20/
20/1	R	SPARE		0	17	Α		18	0	SPARE		Е	20/
20/1	R	SPARE		0	19		В	20	156	EF-20 (WOME	NS 121)	N	15/
20/1	Е	SPARE		0	21	Α		22	0	SPARE		R	20/
20/1	Е	CIRCULATOR PUMI	P	912	23		В	24	0	SPACE		Е	-
20/1	E	COND. PUMP		912	25	Α		26	0	SPACE		E	-
20/1	E	POPCORN MACHI	NE	800	27		В	28	1000	STOKER		Е	20/
20/1	Е	POPCORN MACHI	NE	800	29	Α		30	0	SPACE		Е	-
		Connected Lo	oad Per Phase	PH A:	9152	PH B:		11028					
		Lighting	HVAC	Motors	Recept.	Refrig		Kitchen	Misc		Total VA	Amps	
Co	nnected V	<b>A</b> 8640	9940	0	0	0		0	1600		20180	84.1	
Den	nand Facto	r 1.25	1.00	1.00	NEC	0.00		1.00	1.00				
	Demand VA	10800	9940	Ο	Ο	Ω		0	1,600		22340	93.1	

**PANEL SCHEDULE NOTES:** A. EXISTING CIRCUITING INFORMATION SHOWN IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING BUILDING DOCUMENTS. FIELD VERIFY CIRCUITS ON EXISTING PANEL AND ADJUST CIRCUITING AS REQUIRED TO MEET DESIGN INTENT OF DRAWINGS. TURN SPARE BREAKERS TO OFF POSITION AND LABEL AS "SPARE".

B. RE-USE EXISTING CIRCUIT BREAKERS WHERE POSSIBLE. NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANEL SHALL BE U.L. LISTED/LABELED FOR USE IN, AND HAVE MATCHING INTERRUPTING RATING OF, EXISTING PANEL.

C. PROVIDE NEW TYPEWRITTEN PANEL DIRECTORY TO REFLECT EXISTING AND NEW LOADS UPON COMPLETION OF WORK DESCRIBED IN THESE DRAWINGS INDICATING LOAD SERVED. A HANDWRITTEN PANEL DIRECTORY OR CROSS-OUT OR WHITE-OUT OF EXISTING PANEL DIRECTORY IS NOT ACCEPTABLE.

E EXISTING CIRCUIT BREAKER TO REMAIN **FA** PROVIDE RED HANDLE **GFI** PROVIDE GFCI CIRCUIT BREAKER **AFI** PROVIDE AFCI CIRCUIT BREAKER

N PROVIDE NEW CIRCUIT BREAKER

LO PROVIDE HANDLE LOCK FOR CIRCUIT BREAKER

R RE-USE EXISTING CIRCUIT BREAKER FOR NEW LOAD OR DESCRIPTION INDICATED

FOES

CPL | Architecture Engineering Planning

1111 Haynes Street Suite 100, Raleigh, NC 27604 CPLteam.com



PROJECT INFORMATION Project Number R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT Project Name

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

PROFESSIONAL STAMPS



SHEET INFORMATION

02/17/2025 1/8" = 1'-0" Project Status BID SET Drawn By Checked By JAE

Drawing Title ELECTRICAL PANEL SCHEDULES

			VOLTAGE:	208/120	3 PH 4W			AIC RATING:	EXISTING	REMARKS:		
	PANEL	P	FEEDER AMP:	225	MAINS:	225	MLO	MOUNTING:		WESTING HOUSE DDI 1		
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1	WESTINGHOUSE PRL1		
BKR	NOTE	LOAD DES	SCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/1	Е	RECEPTS. A101, A	4111, A114	1080	1	Α	2	720	RECEPTS. A10	7, A, B, C	Е	20/1
20/1	Е	EWC-A101		360	3	В	4	924	RECEPTS. A10	7, EF-1	R	20/1
20/1	Е	RECEPTS. A101		540	5	С	6	360	RECEPTS. A10-	4	Е	20/1
20/1	Е	RECEPTS. A115		720	7	Α	8	540	RECEPTS. A10	8	Е	20/1
20/1	Е	RECEPTS. A115		1080	9	В	10	720	RECEPTS. A10	8	Е	20/1
20/1	Е	RECEPTS. A102		360	11	C	12	1080	RECEPTS. A108,	A, B, COMMODE MTR	Е	20/1
20/1	Е	RECEPTS. A116, A	4116B	540	13	Α	14	540	RECEPTS. A11	7	Е	20/1
20/1	Е	RECEPTS. A116		540	15	В	16	720	RECEPTS. A11	7	Е	20/1
20/1	Е	RECEPTS. A116		720	17	C	18	900	RECEPTS. A11	7	Е	20/1
20/1	Е	RECEPTS. A118, A	4119	900	19	Α	20	588	EF-6 (MECH R	M. 111)	N	15/1
20/1	Е	RECEPTS. A119		540	21	В	22	0	SPACE		N	-
20/1	E	RECEPTS. A118, A	4120	540	23	C	24	0	SPACE		N	-
20/1	Е	RECEPTS. A101, A	4120	720	25	Α	26	72	EF-8, EF-9,&EF	-10 (132, 133, 139	R	20/1
20/1	E	MEDIA CORNER	SMART BOARD	900	27	В	28	48	EF-13 & EF-14	(107A & 108A TLTS)	R	20/1
20/1	E	SPARE		0	29	С	30	180	EWC		Е	20/1
20/1	Е	EXISTING LOAD		0	31	Α	32	180	EWC		Е	20/1
20/1	Е	MEDIA HEADEND	)	360	33	В	34	540	RECEPTS. A120	0	Е	20/1
20/1	Е	TV RETRIEVAL		360	35	С	36	540	RECEPTS. A120	0	Е	20/1
-	Е	SPACE		0	37	Α	38	5490	PANEL PP		Е	100/3
-	E	SPACE		0	39	В	40	5420	↓		$\downarrow$	$\downarrow$
-	Е	SPACE		0	41	С	42	8070	<b>1</b>		$\downarrow$	<b>1</b>
		Connected	Load Per Phase	PH A:	12090	PH B:	12152	PH C:	13650			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Con	nected VA	. 0	4232	0	28380	0	0	5280		37892	105.2	
Dem	and Factor	r 1.25	1.00	1.00	NEC	0.00	1.00	1.00				
D	emand VA	0	4232	0	19190	0	0	5280		28702	79.7	

			VOLTAGE:	480/277	3 PH 4W				AIC RATING:	EXISTING	REMARKS:		
	<b>PANEL</b>	A (AREA 1D)	FEEDER AMP:	225	MAINS:	22	5	MLO	MOUNTING:		WESTINGHOUSE PRL2		
		(Existing)	LUGS:			FEED:			ENCLOSURE:	NEMA 1	ELEC RM. 117		
BKR	NOTE	LOAD DESC	RIPTION	VA	CKT	PHA	SE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
50/3	N	AHU-7 SUPPLY		7479	1	Α		2	0	SPARE		R	20/3
$\downarrow$	$\downarrow$	<b>\</b>		7479	3	В		4	0	<b>1</b>		$\downarrow$	1
$\downarrow$	<b></b>	<b>\</b>		7479	5	1	С	6	0	<b>1</b>		<u> </u>	1
30/3	N	EF-AHU-7		3878	7	Α		8	2500	OUTSIDE LIGH	HTS VIA TIMECLOCK	Ē	20/1
$\downarrow$	<b>\</b>	<b> </b>		3878	9	В		10	2500	LIGHTS C113		Е	20/1
$\downarrow$	<b></b>	<b>\</b>		3878	11	1	С	12	2500	LIGHTS C112		Е	20/1
20/1	Ē	LIGHTS C114, C119	, C105, C106	2500	13	Α		14	2500	CORRIDOR L	IGHTS	Е	20/1
20/1	Е	LIGHTS C107		2500	15	В		16	2500	CORRIDOR L	IGHTS	Е	20/1
20/1	Е	LIGHTS C108		2500	17	1	С	18	2500	EMERGENCY	LIGHTS	Е	20/1
20/1	Е	LIGHTS C111		2500	19	Α		20	0	SPARE		Е	20/1
20/1	Е	LIGHTS C110		2500	21	В		22	0	SPARE		Е	20/1
20/1	Е	LIGHTS C109		2500	23	1	С	24	0	SPARE		Е	20/1
20/1	Е	LIGHTS C124		2500	25	Α		26	0	SPARE		Е	20/1
20/1	Е	LIGHTS C125		2500	27	В		28	0	SPARE		Е	20/1
20/1	Е	SPARE		0	29	1	С	30	0	SPARE		Е	20/1
20/1	Е	SPARE		0	31	Α		32	0	SPARE		Е	20/1
20/1	Е	SPARE		0	33	В		34	0	SPACE		Е	-
20/1	Е	SPARE		0	35		С	36	0	SPACE		Е	-
20/1	Е	SPARE		0	37	Α		38	0	SPACE		Е	-
20/1	Е	SPARE		0	39	В		40	0	SPACE		Е	-
-	Е	SPACE		0	41	1	С	42	0	SPACE		Е	-
				14752		Α			0				
110/3	SUB	PANEL B TRANSFOR	RMER	14626		В			0			SUB	
				11880			С		0				
		Connected Lo	ad Per Phase	PH A:	38609	PHI	<b>B</b> :	38483	PH C:	33237			
		Lighting	HVAC	Motors	Recept.	Refr	ig	Kitchen	Misc		Total VA	Amps	-
Con	nected VA	35000	38609	0	23940	0	-	11780	1000		110329	132.7	
Dem	and Facto	r 1.25	1.00	1.00	NEC	0.0	0	1.00	1.00				
D	emand VA	43750	38609	0	16970	0		11780	1000		112109	134.9	

			VOLTAGE:	208/120	3 PH 4W			AIC RATING:	22K	REMARKS:		
	PANEL	F	FEEDER AMP:	100	MAINS:	100	MLO	MOUNTING:	Surface	WESTINGHOUSE PRL	1	
		(Existing)	LUGS:		1	FEED:		ENCLOSURE:	NEMA 1	1		
BKR	NOTE	LOAD DES	CRIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/1	E	RECEPTACLES C1	136	720	1	Α	2	180	RECEPTACLES	C131	E	20/1
20/1	Е	RECEPTACLES C1	136	720	3	В	4	360	EWC		E	20/1
20/1	Е	RECEPTACLES C1	136	540	5	C	6	360	RECEPTACLES	C121, C123	E	20/1
20/1	Е	RECEPTACLES C1	135	360	7	Α	8	0	SPACE		E	-
20/1	Е	RECEPTACLES C1	135	360	9	В	10	0	SPACE		E	-
20/1	Е	RECEPTACLES C1	134	360	11	C	12	540	RECEPTACLES	C137	E	20/1
20/1	Е	RECEPTACLES C1	133	540	13	Α	14	540	RECEPTACLES	C137	E	20/1
20/1	E	HOTWATER #2		540	15	В	16	360	RECEPTACLES	C137	E	20/1
20/1	Е	RECEPTACLES C1	138	540	17	C	18	540	RECEPTACLES	C127	E	20/1
20/1	Е	RECEPTACLES C1	126	540	19	Α	20	540	RECEPTACLES	C127	E	20/1
20/1	Е	RECEPTACLES C1	126	540	21	В	22	360	RECEPTACLES	C127	E	20/1
20/1	Е	RECEPTACLES C1	126	540	23	C	24	588	EF-45 (MECH	130)	N	15/1
20/1	E	RECEPTACLES C1	134	360	25	Α	26	0	SPARE		R	20/3
20/1	Е	RECEPTACLES C1	30, C131, C132	360	27	В	28	0	<b> </b>		<b>1</b>	$\downarrow$
20/1	Е	RECEPTACLES C1	30, C131, C132	360	29	C	30	0	<b>1</b>		<b>1</b>	$\downarrow$
20/1	R	SMOKE DAMPER		125	31	Α	32	0	SPARE		E	20/1
20/1	R	SPARE		0	33	В	34	0	SPARE		E	20/1
20/1	R	EF-46 & EF-47 (R/	MS 131 &132)	48	35	C	36	0	SPARE		E	20/1
20/1	Е	CLOSET LIGHTS		50	37	Α	38	0	SPARE		E	20/1
20/1	Е	RECEPTACLES CL	.38	180	39	В	40	0	SPARE		E	20/1
-	Е	SPACE		0	41	C	42	0	SPACE		E	-
		Connected	Load Per Phase	PH A:	3955	PH B	: 3780	PH C:	4416			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc	:	Total VA	Amps	•
Cor	nected VA	50	761	180	11160	0	0	0		12151	33.7	
Dem	and Factor	1.25	1.00	1.00	NEC	0.00	1.00	1.00				
D	emand VA	63	761	180	10580	0	0	0		11584	32.2	

			VOLTAGE:	480/277	3 PH 4W			AIC RATING:	EXISTING	REMARKS:		
	PANEL	K	FEEDER AMP:	225	MAINS:	225	MLO	MOUNTING:				
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1	WESTINGHOUSE PRL2		
BKR	NOTE	LOAD DE	SCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/3	R	AHU-6 RETURN		3047	1	Α	2	2500	LIGHTS A135,	A139, A141	Е	20/1
$\downarrow$	$\downarrow$	<b>\</b>		3047	3	В	4	2500	LIGHTS A141A	A, A142, A143	Е	20/1
$\downarrow$	$\downarrow$	<b>\</b>		3047	5		<b>C</b> 6	2500	LIGHTS A141,	A144A, A144B	Е	20/1
20/1	Е	PARKING LOT LI	GHTS - RIGHT SIDE	3000	7	Α	8	2500	LIGHTS A121,	A122, A131, A137	Е	20/1
20/1	Е	PARKING LOT LI	GHTS - BUS	3000	9	В	10	2500	LIGHTS A127,	A129, A130	Е	20/1
20/1	Е	PARKING LOT LI	GHTS - OFFICE	3000	11		<b>C</b> 12	2500	LIGHTS A117,	A118, A119	Е	20/1
20/1	Е	SPARE		0	13	Α	14	2500	LIGHTS SKYLIC	GHTS MEDIA	Е	20/1
20/1	Е	SPARE		0	15	В	16	2500	LIGHTS MEDIA	4	E	20/1
20/1	Е	SPARE		0	17		<b>C</b> 18	2500	LIGHTS MEDIA	4	Е	20/1
20/1	Е	SPARE		0	19	Α	20	2500	LIGHTS SKYLIC	GHTS	Е	20/1
20/1	Е	SPARE		0	21	В	22	2500	LIGHTS A134,	A138, A140	E	20/1
20/1	Е	SPARE		0	23		<b>C</b> 24	0	SPARE		Е	20/1
20/1	Е	SPARE		0	25	Α	26	0	SPARE		Е	20/1
20/1	Е	SPARE		0	27	В	28	0	SPARE		Е	20/1
20/1	Е	SPARE		0	29		<b>C</b> 30	0	SPARE		Е	20/1
20/1	Е	SPARE		0	31	Α	32	0	SPARE		Е	20/1
30/3	N	AHU-6 SUPPLY		3878	33	В	34	0	SPACE		Е	-
$\downarrow$	$\downarrow$	$\downarrow$		3878	35		<b>C</b> 36	0	SPACE		Е	-
$\downarrow$	$\downarrow$	$\downarrow$		3878	37	Α	38	0	SPACE		Е	-
-	Е	SPACE		0	39	В	40	0	SPACE		Е	-
-	Е	SPACE		0	41		<b>C</b> 42	0	SPACE		Е	-
				6972		Α		0				
100/3	SUB	PANEL L TRANSF	ORMER	8702		В		0			SUB	
				9362			С	0				
		Connected	Load Per Phase	PH A:	26897	PH B:	28627	PH C:	26787			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Con	nected VA	36500	28271	0	16820	0	0	720		82311	99.0	
Dem	and Factor	r 1.25	1.00	1.00	NEC	0.00	1.00	1.00				
D	emand VA	45625	28271	0	13410	0	0	720		88026	105.9	

			VOLTAGE:	208/120	3 PH 4W			AIC RATING:	EXISTING	REMARKS:		
	<b>PANEL</b>	B (AREA 1D)	FEEDER AMP:	225	MAINS:	225	МСВ	MOUNTING:		WESTINGHOUSE PRI	L2	
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1	ELEC RM. 117		
BKR	NOTE	LOAD DESC	RIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/1	Е	RECEPTACLES C103,	SINK HOT WATER	720	1	Α	2	360	WATER COOL	_ER	Е	20/1
20/1	Е	RECEPTACLES C10	8	900	3	В	4	0	EXISTING LOA	√D	Е	60/2
20/1	Е	RECEPTACLES C10	8	720	5	С	6	0	<b> </b>		<del></del>	<b>1</b>
20/1	Е	RECEPTACLES C10	6, C107	720	7	Α	8	1750	HOT WATER H	IEATER	Е	30/2
20/1	Е	RECEPTACLES C10	7	1080	9	В	10	1750	<b>1</b>		<del> </del>	<b>1</b>
20/1	Е	RECEPTACLES C10	7	900	11	С	12	360	WATER COOL	_ER	Е	20/1
20/1	R	EF-40 & EF-41 (CLA	SSROOM 124)	48	13	Α	14	360	RECEPTACLES	C115, C116	Е	20/1
20/1	R	EF-42, EF-43, EF-44	(RMS 125, 126)	72	15	В	16	540	RECEPTACLES	S C119	Е	20/1
20/1	Е	RECEPTACLES C11	9, 120	360	17	С	18	360	RECEPTACLES	S C114	Е	20/1
20/1	Е	RECEPTACLES C11	3	720	19	Α	20	540	RECEPTACLES	S C114	Е	20/1
20/1	Е	RECEPTACLES C11	3	900	21	В	22	540	RECEPTACLES	S C125	Е	20/1
20/1	Е	RECEPTACLES C11	3	720	23	С	24	720	RECEPTACLES	S C125	Е	20/1
20/1	Е	RECEPTACLES C11	2	720	25	Α	26	360	RECEPTACLES	S C125	Е	20/1
20/1	Е	RECEPTACLES C11	2	720	27	В	28	720	RECEPTACLES	S C124	E	20/1
20/1	Е	RECEPTACLES C11	2	720	29	С	30	720	RECEPTACLES	S C124	E	20/1
20/1	Е	RECEPTACLES C11	0, C111	360	31	Α	32	540	RECEPTACLES	S C124	Е	20/1
20/1	Е	RECEPTACLES C11	1	900	33	В	34	500	LCS #1		E	20/1
20/1	Е	RECEPTACLES C11	1	1080	35	С	36	500	LCS #2		Е	20/1
20/1	Е	RECEPTACLES C11	0, C111	900	37	Α	38	6654	PANEL C		Е	100/
20/1	Е	RECEPTACLES C11	0, C111	900	39	В	40	5104	<b> </b>			<b>1</b>
20/1	Е	WATER COOLER		360	41	С	42	4360	$\downarrow$			$\downarrow$
		Connected Lo	oad Per Phase	PH A:	14752	PH B:	14626	PH C:	11880			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Cor	nected VA	0	4538	0	23940	0	11780	1000		41258	114.5	
Dem	and Factor	1.25	1.00	1.00	NEC	0.00	1.00	1.00				
D	emand VA	. 0	4538	0	16970	0	11780	1000		34288	95.2	

			VOLTAGE:	208/120	3 PH 4W		,	AIC RATING:	22K	REMARKS:		
	<b>PANEL</b>	Н	FEEDER AMP:	225	MAINS:	225	MCB	MOUNTING:	Surface	WESTINGHOUSE PRL1		
		(Existing)	LUGS:			FEED:	,	ENCLOSURE:	NEMA 1			
BKR	NOTE	LOAD DE	SCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/1	Е	RECEPTACLES C	158	540	1	Α	2	1750	WH #3		Е	30/2
20/1	Е	RECEPTACLES C	158	540	3	В	4	1750	↓		$\downarrow$	<b>T</b>
20/1	Е	RECEPTACLES C	159	720	5	c	6	720	RECEPTACLES	C156	Е	20/1
20/1	Е	RECEPTACLES C	159	720	7	Α	8	720	RECEPTACLES	C161	Е	20/1
20/1	Е	RECEPTACLES C	C143, C160	720	9	В	10	540	RECEPTACLES	C149, C144	Е	20/1
20/1	Е	RECEPTACLES C	160	360	11	<u> </u>	12	360	EWC C144		Е	20/1
20/1	Е	RECEPTACLES C	157	720	13	Α	14	540	RECEPTACLES	C144, C152, C153	Е	20/1
20/1	Е	RECEPTACLES C	157	720	15	В	16	540	RECEPTACLES	C150, C151	Е	20/1
20/1	Е	RECEPTACLES C	156	720	17	c	18	720	RECEPTACLES	C162	Е	20/1
20/1	Е	RECEPTACLES C	C141, C149	720	19	Α	20	900	RECEPTACLES	C162	Е	20/1
20/1	Е	RECEPTACLES C	148	720	21	В	22	720	RECEPTACLES	C161	Е	20/1
20/1	Е	RECEPTACLES C	148	900	23	C	24	50	SMOKE DAMP	ERS	R	20/1
20/3	Е	PUMP P-10		828	25	Α	26	500	MECHANICAL	. CONTROLS	Е	20/1
$\downarrow$	<b>1</b>	$\downarrow$		828	27	В	28	588	EF-48 (MECH	150)	N	15/1
$\downarrow$	<b>1</b>	$\downarrow$		828	29	c	30	48	EF-49 & EF-50	(CUST 152, TLT 153)	R	20/1
20/1	Е	EWC		360	31	Α	32	0	SPACE		Е	_
20/2	Е	HEAT PUMP CO	MP ROOM	1200	33	В	34	0	MODULULAR (	CLASS ROOM #2	Е	100/2
$\downarrow$	<b>1</b>	$\downarrow$		1200	35	c	36	0	SPARE		Е	-
100/2	Е	MODULAR CLAS	SS ROOM #1	0	37	Α	38	2030	PANEL J		Е	100/3
$\downarrow$	<b>1</b>	$\downarrow$		0	39	В	40	2880	<b>1</b>		$\downarrow$	<b>T</b>
-	Е	SPACE		0	41	c	42	2700	$\downarrow$		$\downarrow$	$\downarrow$
		Connected	Load Per Phase	PH A:	10328	PH B	: 11746	PH C:	9326			
	:	Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Con	nected VA		7086	2484	21780	0	0	0		31400	87.2	
Dem	and Facto	r 1.25	1.00	1.00	NEC	0.00	1.00	1.00				
D	emand VA	<b>A</b> 63	7086	2484	15890	0	0	0		25523	70.8	

			VOLTAGE:	208/120	3 PH 4W			AIC RATING:	EXISTING	REMARKS:		
	<b>PANEL</b>	L	FEEDER AMP:	225	MAINS:	225	МСВ	MOUNTING:		WESTIN IOUGH BRIEF	,	
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1	WESTINGHOUSE PRL	I	
BKR	NOTE	LOAD DI	SCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/3	Е	EF #6		1272	1	Α	2	0	SPARE		R	15/3
$\downarrow$	$\downarrow$	<b>\</b>		1272	3	В	4	0	<b>1</b>		<b>1</b>	<b>1</b>
$\downarrow$	$\downarrow$	$\downarrow$		1272	5	(	<b>C</b> 6	0	<b>↓</b>		<b>\</b>	<b>1</b>
20/1	R	SPARE		0	7	Α	8	0	SPARE		R	15/3
20/1	R	SPARE		0	9	В	10	0	<b>1</b>		$\downarrow$	<b></b>
20/1	R	SPARE		0	11		C 12	0	<b>1</b>		$\downarrow$	$\downarrow$
20/1	Е	REC LOUNGE		540	13	Α	14	540	RECEPTS. A10	06, A106B	Е	20/1
30/2	Е	WH #5		1750	15	В	16	540	RECEPTS. A10	06, A106A	Е	20/1
$\downarrow$	$\downarrow$	<b>\</b>		1750	17	] (	C 18	720	RECEPTS. A10	)6	Е	20/1
20/1	Е	RECEPTS. A144		720	19	Α	20	1080	RECEPTS. A14	13, A143A	Е	20/1
20/1	Е	RECEPTS. A144		900	21	В	22	720	RECEPTS. A14	13	Е	20/1
20/1	Е	RECEPTS. A144,	A144B	900	23	] (	C 24	360	RECEPTS A10	5	Е	20/1
40/2	R	SPARE		0	25	Α	26	540	MECHANICA	L RECEPT.	Е	20/1
$\downarrow$	$\downarrow$	<b>↓</b>		0	27	В	28	180	REC LOUNGE		Е	20/1
50/2	R	SPARE		0	29		<b>C</b> 30	720	INTERCOM R.	ACK	Е	20/1
$\downarrow$	$\downarrow$	$\downarrow$		0	31	Α	32	720	RECEPTS. A14	14	Е	20/1
20/1	Е	RECEPTS. A122/	4	360	33	В	34	720	RECEPTS. A14	14	Е	20/1
20/1	Е	RECEPTS.		360	35		<b>C</b> 36	1200	COPIER		Е	20/1
20/1	Е	RECEPTS.		360	37	Α	38	1200	COPIER		Е	20/1
20/1	Е	EWC		180	39	В	40	2080	COPIER		Е	30/2
20/1	Е	SPARE		0	41		<b>C</b> 42	2080	<b>↓</b>		<b>1</b>	<u> </u>
		Connected	l Load Per Phase	PH A:	6972	PH B:	8702	PH C:	9362			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Con	nected VA		7496	0	16820	0	0	720		25036	69.5	
Dem	and Facto	r 1.25	1.00	1.00	NEC	0.00	1.00	1.00				
D	emand VA	0	7496	0	13410	0	0	720		21626	60.0	

			VOLTAGE:	208/120	3 PH 4W				AIC RATING:	EXISTING	REMARKS:		
	<b>PANEL</b>	C (AREA 1D)	FEEDER AMP:	100	MAINS:	100	٨	ΛLO	MOUNTING:		WESTINGHOUSE PRL2		
		(Existing)	LUGS:		-1	FEED:			ENCLOSURE:	NEMA 1	MECH RM. 105		
BKR	NOTE	LOAD DESC	RIPTION	VA	CKT	PHASE	E	CKT	VA	LOAD	DESCRIPTION	NOTE	BKI
20/1	Е	RECEPTACLES C109	)	720	1	Α		2	0	SPARE		R	15/
20/1	Е	WATER HEATER		360	3	В		4	0	<b></b>		$\downarrow$	$\downarrow$
20/1	Е	RECEPTACLES C109	)	1440	5		С	6	0	<b>1</b>		$\downarrow$	<b>1</b>
20/1	Е	RECEPTACLES C105	5	540	7	Α		8	48	EF-31 & EF-32	(CLASSROOM 111)	R	20/
20/1	R	SMOKE DAMPERS		150	9	В		10	48	EF- 29 & EF-3	0 (CLASSROOM 110)	R	20/
20/1	E	RECEPTACLES C104	1	360	11		С	12	48	EF-27 & EF-28	3 (CLASSROOM 107)	R	20,
20/1	Е	RECEPTACLES C103	3	360	13	Α		14	48	EF-25 & EF-26	S (CLASSROOM 109)	R	20/
20/1	E	REFR. C106		1000	15	В		16	48	EF-23 & EF-24	(CLASSROOM 108)	R	20,
20/1	Е	RANGE HOOD C10	6	1440	17		С	18	72	EF-33, EF-34	& EF-35 (115-117)	R	20,
50/2	E	SPARE		0	19	Α		20	48	EF-36 & EF-37	7 (CLASSROOM 112)	R	20,
$\downarrow$	<u> </u>	$\downarrow$		0	21	В		22	48	EF-38 & EF-39	(CLASSROOM 113)	R	20/
20/1	E	REFR. C114		1000	23		С	24	0	SPARE		E	20/
20/1	Е	RANGE HOOD C11	4	1440	25	Α		26	0	SPARE		Е	20/
20/1	Е	SPARE		0	27	В		28	0	SPARE		Е	20,
20/1	E	SPARE		0	29		С	30	0	SPARE		E	20,
50/2	Е	OVEN C114		3450	31	Α		32	0	SPARE		Е	20,
$\downarrow$	<u> </u>	<b>\</b>		3450	33	В		34	0	SPARE		Е	20,
20/1	Е	SPARE		0	35		С	36	0	SPARE		Е	20,
20/1	Е	SPARE		0	37	Α		38	0	SPARE		Е	20,
20/1	Е	SPARE		0	39	В		40	0	SPARE		Е	20,
20/1	Е	SPARE		0	41		С	42	0	SPARE		Е	20,
		Connected Lo	ad Per Phase	PH A:	6654	PH B:		5104	PH C:	4360			
		Lighting	HVAC	Motors	Recept.	Refrig		Kitchen	Misc		Total VA	Amps	•
Cor	nected V	<b>A</b> 0	558	0	3780	0		11780	0		16118	44.7	
Dem	and Facto	r 1.25	1.00	1.00	NEC	0.00		0.80	1.00				
D	emand V	<b>A</b> 0	558	0	3780	0		9424	0		13762	38.2	

			VOLTAGE:	208/120	3 PH 4W			AIC RATING:	10k	REMARKS:		
	PANEL	1M	FEEDER AMP:	100	MAINS:	100	MCB	MOUNTING:	Surface	SQUARE D		
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1	AREA 2 BOILER RM 2	14	
BKR	NOTE	LOAD DES	CRIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/1	R	SPARE		0	1	Α	2	0	EXISTING LO	AD	E	20/1
20/1	E	RECEPTS. BOILER	ROOM	180	3	В	4	0	SPARE		E	20/1
20/1	R	HEAT TRACE		1200	5	С	6	0	SPARE		Е	20/1
20/1	Е	SPARE		0	7	Α	8	0	SPARE		Е	20/1
20/1	Е	SPARE		0	9	В	10	0	SPARE		Е	20/1
20/1	E	SPARE		0	11	С	12	0	SPARE		Е	20/
xxx/3	Е	EXISTING LOAD		0	13	Α	14	0	SPARE		Е	20/
$\downarrow$	<b>1</b>	<b> </b>		0	15	В	16	0	SPARE		Е	20/
$\downarrow$	<b>1</b>	<b>\</b>		0	17	С	18	0	SPARE		Е	20/
_	E	SPACE		0	19	Α	20	0	SPACE		Е	-
-	Е	SPACE		0	21	В	22	0	SPACE		Е	-
-	Е	SPACE		0	23	С	24	0	SPACE		Е	-
		Connected L	oad Per Phase	PH A:	0	PH B:	180	PH C:	1200			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc	-	Total VA	Amps	-
Con	nected VA	0	1200	0	180	0	0	0		1380	3.8	
Dem	and Factor	r 1.25	1.00	1.00	NEC	1.00	1.00	1.00				
D	emand VA	0	1200	0	180	0	0	0		1380	3.8	

# PANEL SCHEDULE NOTES:

- A. EXISTING CIRCUITING INFORMATION SHOWN IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING BUILDING DOCUMENTS. FIELD VERIFY CIRCUITS ON EXISTING PANEL AND ADJUST CIRCUITING AS REQUIRED TO MEET DESIGN INTENT OF DRAWINGS. TURN SPARE BREAKERS TO OFF POSITION AND LABEL AS "SPARE".
- B. RE-USE EXISTING CIRCUIT BREAKERS WHERE POSSIBLE. NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANEL SHALL BE U.L. LISTED/LABELED FOR USE IN, AND HAVE MATCHING INTERRUPTING RATING OF, EXISTING PANEL.
- C. PROVIDE NEW TYPEWRITTEN PANEL DIRECTORY TO REFLECT EXISTING AND NEW LOADS UPON COMPLETION OF WORK DESCRIBED IN THESE DRAWINGS INDICATING LOAD SERVED. A HANDWRITTEN PANEL DIRECTORY OR CROSS-OUT OR WHITE-OUT OF EXISTING PANEL DIRECTORY IS NOT ACCEPTABLE.
- E EXISTING CIRCUIT BREAKER TO REMAIN
  FA PROVIDE RED HANDLE
  GFI PROVIDE GFCI CIRCUIT BREAKER

LOAD OR DESCRIPTION INDICATED

AFI PROVIDE AFCI CIRCUIT BREAKER

LO PROVIDE HANDLE LOCK FOR CIRCUIT BREAKER

N PROVIDE NEW CIRCUIT BREAKER

R RE-USE EXISTING CIRCUIT BREAKER FOR NEW



(CPS)

CPLteam.com

PROJECT INFORMATION
Project Number
R23.00325

JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

SCHOOL HVAC RENOVATION

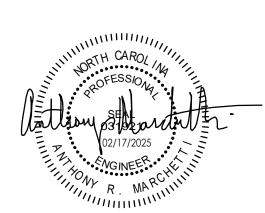
FOUR OAKS ELEMENTARY

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

w Date Description

PROFESSIONAL STAMPS



SHEFT INFORMATION

Drawn By Checked By

JAE ARM

Drawing Title

Drawing Title
ELECTRICAL PANEL SCHEDULES

FOES E902

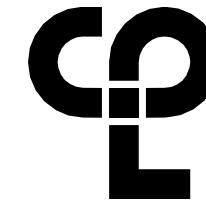
			VOLTAGE:	208/120	3 PH 4W				AIC RATING:	EXISTING	REMARKS:		
	PANEL	MDP-2	FEEDER AMP:	800	MAINS:	800	)	MCB	MOUNTING:				
		(Existing)	LUGS:			FEED:			ENCLOSURE:	NEMA 1	SQUARE D I-LINE		
BKR	NOTE	LOAD D	ESCRIPTION	VA	CKT	PHAS	SE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
100/2	Е	PANEL BR		8200	1	Α		2	13440	PANEL A (ARE	EA 3A)	E	200/3
$\downarrow$	$\downarrow$	$\downarrow$		8420	3	В		4	10500	<b>1</b>		<b>1</b>	<b>1</b>
225/3	Е	PANEL C (AREA	4 3A)	2964	5		С	6	10380	$\downarrow$		<b>1</b>	<b>1</b>
$\downarrow$	$\downarrow$	$\downarrow$		2226	7	Α		8	3787	PANEL D (ARE	EA 3A)	Е	225/3
$\downarrow$	$\downarrow$	$\downarrow$		1326	9	В		10	4991	<b>1</b>		<b>1</b>	$\downarrow$
225/3	Е	PANEL B (AREA	(3B)	6255	11		С	12	4069	<b>1</b>		<b>1</b>	<b>T</b>
$\downarrow$	$\downarrow$	$\downarrow$		5523	13	Α		14	14940	PANEL X		Е	225/3
$\downarrow$	$\downarrow$	$\downarrow$		3952	15	В		16	12920	<b>1</b>		<b>1</b>	$\downarrow$
150/2	Ē	EXISTING LOAD	)	0	17	1	С	18	0	<b>1</b>		<b>1</b>	1
$\downarrow$	$\downarrow$	$\downarrow$		0	19	Α		20	0	EXISTING LOA	√D	Е	100/3
100/2	Е	CLASSROOM T	RAILER	6960	21	В		22	0	<b>1</b>		<b>1</b>	$\downarrow$
$\downarrow$	$\downarrow$	$\downarrow$		6960	23		С	24	0	<b>1</b>		<b>1</b>	$\downarrow$
-	Е	SPACE		6960	25	Α		26	0	SPACE		Е	-
-	Е	SPACE		0	27	В		28	0	SPACE		Е	-
-	Е	SPACE		0	29	1	С	30	0	SPACE		Е	-
-	Е	SPACE		5817	31	Α		32	3878	SPACE		Е	-
-	Е	SPACE		5817	33	В		34	3878	SPACE		Е	-
-	Е	SPACE		5817	35		С	36	3878	SPACE		Е	-
-	Е	SPACE		3047	37	Α		38	0	SPACE		Е	-
-	Е	SPACE		3047	39	В		40	0	SPACE		Е	-
-	Е	SPACE		3047	41		С	42	0	SPACE		Е	-
		Connected	d Load Per Phase	PH A:	67818	PH B	3:	61810	PH C:	43370			
		Lighting	HVAC	Motors	Recept.	Refri	g	Kitchen	Misc		Total VA	Amps	
Con	nected VA	38200	91938	0	31960	0		2400	8500		172998	480.2	
Demo	and Facto	<b>r</b> 1.25	1.00	1.00	NEC	0.00	)	1.00	1.00				
De	emand V <i>A</i>		91938	0	20980	0		2400	8500		171568	476.2	

			VOLTAGE:	208/120	3 PH 4W			AIC RATING:	22K	REMARKS:		
	<b>PANEL</b>	D (AREA 3A)	FEEDER AMP:	225	MAINS:	225	MLO	MOUNTING:	Surface	WESTINGHOUSE PRL1	1	
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1	CORR. 300		
BKR	NOTE	LOAD DESC	RIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/1	Е	SPARE		0	1	Α	2	0	SPARE		Е	20/1
20/1	Е	SPARE		0	3	В	4	0	SPARE		E	20/
20/1	Е	SPARE		0	5	С	6	0	SPARE		Е	20/1
20/1	Е	RECEPTACLES RM 1	08	720	7	Α	8	0	SPARE		Е	20/1
20/1	Е	RECEPTACLES RM 310	SMART BOARD	1080	9	В	10	0	SPARE		Е	20/1
20/1	Е	RECEPTACLES RM 3	09	720	11	С	12	0	SPARE		Е	20/
20/1	R	EF-308, EF-309		312	13	Α	14	800	RADIATION -	HALLWAY	E	20/1
20/1	R	EF-310, EF-311		312	15	В	16	2496	WELL HEATER		E	30/2
20/1	Е	SPARE		0	17	С	18	2496	$\downarrow$		<b>1</b>	<b>1</b>
15/2	N	FCU-300		250	19	Α	20	0	SPARE		Е	20/
$\downarrow$	<b>1</b>	<b>\</b>		250	21	В	22	0	SPARE		E	70/2
70/2	Е	SPARE		0	23	С	24	0	$\downarrow$		<u> </u>	<b>1</b>
$\downarrow$	<b>1</b>	<b>1</b>		0	25	A	26	0	SPACE		E	-
70/2	E	SPARE		0	27	В	28	0	SPACE		Е	-
$\downarrow$	<b>\</b>	↓		0	29	С	30	0	SPACE		Е	-
15/2	N	FCU-308, FCU-309		853	31	A	32	0	SPACE		Е	-
$\downarrow$	<b>1</b>	<b>\</b>		853	33	В	34	0	SPACE		Е	-
15/2	N	FCU-310, FCU-311		853	35	С	36	0	SPACE		Е	-
$\downarrow$	<b>1</b>	<b>1</b>		853	37	A	38	0	SPACE		Е	-
-	Е	SPACE		0	39	В	40	0	SPACE		Е	-
-	Е	SPACE		0	41	С	42	0	SPACE		Е	-
		Connected Lo	ad Per Phase	PH A:	3787	PH B:	4991	PH C:	4069			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Cor	nected VA	. 0	9527	0	2520	0	0	800		12847	35.7	
Dem	and Factor	r 1.25	1.00	1.00	NEC	0.00	1.00	1.00				
0	emand VA	. 0	9527	0	2520	0	0	800		12847	35.7	

			VOLTAGE:	208/120	3 PH 4W			AIC RATING:	22K	REMARKS:		
	<b>PANEL</b>	B (AREA 3B)	FEEDER AMP:	225	MAINS:	225 MLO		MOUNTING:	Surface	SQUARE D NQOD		
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1	CORR. 300		
BKR	NOTE	LOAD DESC	RIPTION	VA	СКТ	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
xxx/1	Е	SPARE		0	1	Α	2	1250	LOUNGE W/	Н	Е	xxx/1
xxx/1	Е	SPARE		0	3	В	4	1250	HWH ROOM	112	E	xxx/1
xxx/1	Е	SPARE		0	5	С	6	500	FIRE ALARM	PANEL	E	XXX/
xxx/1	Е	RECEPTACLES - RM	1. 105	720	7	Α	8	0	SPARE		Е	xxx/1
xxx/1	Е	RECEPTACLES - RM	1. 115	720	9	В	10	0	SPARE		Е	xxx/1
xxx/1	Е	ENERGY MANAGE	MENT	500	11	С	12	720	ROOM 314 (	COMPUTER REC	Е	xxx/1
xxx/1	E RADIATION UN		TEACH. TOILET	800	13	Α	14	0	EXISTING LOAD		Е	xxx/2
20/2	Е	RADIATION UNIT - I	MEN'S RM (114)	900	15	В	16	0	<b>1</b>		<b>1</b>	$\downarrow$
$\downarrow$	$\downarrow$	<b>\</b>		900	17	С	18	0	SPARE		Ē	xxx/3
20/2	Ē	RADIATION UNIT - WO	DMEN'S RM (113)	900	19	Α	20	0	$\downarrow$		<b>1</b>	1
$\downarrow$	<b>1</b>	<b>\</b>		900	21	В	22	0	<b>1</b>		1	1
20/1	N	EF-301A, EF-303		312	23	C	24	0	SPACE		E	-
20/1	N	EF-313, EF-314		312	25	Α	26	0	SPACE		Е	-
15/2	N	FCU-300A		250	27	В	28	0	SPARE		Е	70/2
$\downarrow$	<b>\</b>	<b>\</b>		250	29	С	30	0	<b>1</b>		<b>↓</b>	$\downarrow$
15/2	N	FCU-302, FCU-303		603	31	Α	32	0	SPARE		E	-
$\downarrow$	$\downarrow$	<b>\</b>		603	33	В	34	0	SPARE		R	20/2
15/2	N	FCU-313, FCU-314		770	35	С	36	0	$\downarrow$		<b>↓</b>	<b>1</b>
$\downarrow$	<b>\</b>	<b>\</b>		770	37	Α	38	900	RADIATION	- HALLWAY	E	30/2
-	É	SPACE		0	39	В	40	900	$\downarrow$		<b> </b>	<b>1</b>
-	Е	SPACE		0	41	С	42	0	SPACE		Е	-
		Connected Lo	oad Per Phase	PH A:	6255	PH B:	5523	PH C:	3952			
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Connected VA		<b>A</b> 0	8169	0	2160	0	0	5400		15729	43.7	
Dem	and Facto	r 1.25	1.00	1.00	NEC	0.00	1.00	1.00				
D	emand V	<b>A</b> 0	8169	0	2160	0	0	5400		15729	43.7	

			VOLTAGE:	208/120	1 PH 3W			AIC RATING:	22K	REMARKS:		
	PANEL	X	FEEDER AMP:	225	MAINS:	225 MLO		MOUNTING:		WESTINGHOUSE PRL	1	
		(Existing)	LUGS:			FEED:		ENCLOSURE:	NEMA 1			
BKR	NOTE	LOAD DES	CRIPTION	VA	CKT	PHASE	CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/1	Е	LIGHTS 5-116		1200	1	Α	2	1200	LIGHTS 5-118,	5-119	Е	20/1
20/1	Е	LIGHTS 5-116		1200	3	В	4	1200	LIGHTS 5-115		Е	20/1
20/1	Е	LIGHTS 5-113, 5-1	14	1200	5	Α	6	1000	EMERGENCY I	LIGHTS	E	20/1
20/1	Е	EXHAUST FAN - BA	athrooms	500	7	В	8	1200	LIGHTS 5-120,	5-122	Е	20/1
20/1	Е	TELEPHONE CKT.		500	9	Α	10	900	RECEPTS. 5-11	5, 5-116	Е	20/1
20/1	Е	RECEPTS. 5-118, 5	5-119	720	11	В	12	540	RECEPTS. 5-11	7	Е	20/1
20/1	Е	WEC		360	13	Α	14	900	RECEPTS. 5-12	0, 5-122	Е	20/1
20/1	Е	EWC		360	15	В	16	540	RECEPTS. 5-10	4	Е	20/1
20/1	N	UH-317 (ELEC 31	7)	120	17	Α	18	540	RECEPTS. 5-10	4	Е	20/1
-	Е	SPACE		0	19	В	20	360	RECEPTS. 5-10	4	Е	20/1
20/1	Е	RECEPTS. LAB CA	SEWORK 5-105	720	21	Α	22	540	RECEPTS. 5-10	4	Е	20/1
20/1	Е	RECEPTS. 5-104		540	23	В	24	5760	AC UNIT 5-117	,	Е	60/2
-	Е	SPACE		0	25	Α	26	5760	<b>1</b>		<b>1</b>	<b>1</b>
-	Е	SPACE		0	27	В	28	0	SPACE		Е	20/1
-	Е	SPACE		0	29	Α	30	0	SPACE		Е	20/1
-	Е	SPACE		0	31	В	32	0	SPACE		Е	20/1
-	Е	SPACE		0	33	Α	34	0	SPACE		Е	-
-	Е	SPACE		0	35	В	36	0	SPACE		Е	-
-	Е	SPACE		0	37	Α	38	0	SPACE		Е	-
-	Е	SPACE		0	39	В	40	0	SPACE		Е	-
-	Е	SPACE		0	41	Α	42	0	SPACE		Е	-
		Connected	Load Per Phase	PH A:	14940	PH B:	12920					
		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc		Total VA	Amps	
Con	nected VA		120	0	19540	0	0	0		27860	133.9	
Dem	and Facto	r 1.25	1.00	1.00	NEC	0.00	1.00	1.00				
D	emand VA	<b>A</b> 10250	120	0	14770	0	0	0		25140	120.9	

			VOLTAGE:	208/120	3 PH 4W				AIC RATING:	22K	REMARKS:		
	<b>PANEL</b>	C (AREA 3A)	FEEDER AMP:	225	MAINS:	225 MLO FEED:		LO	MOUNTING: ENCLOSURE:	Surface	SQUARE D NQOD		
		(Existing)	LUGS:							NEMA 1	CORR. 300		
BKR	NOTE	LOAD DESC	RIPTION	VA	CKT	PHASE		CKT	VA	LOAD	DESCRIPTION	NOTE	BKR
20/1	Е	SPARE		0	1	Α		2	312	EF-307 & EF-	312	R	20/
20/1	Е	SPARE		0	3	В		4	0	SPARE		E	20/
20/1	Е	SPARE		0	5		c 🗀	6	0	SPARE		E	20/
20/1	Е	SMART BOARD RM	312	900	7	A		8	0	SPARE		Е	20/
20/1	Е	RECEPTACLES RM 1	07	900	9	В		10	0	SPARE		Е	20/
20/1	Е	RECEPTACLES RM 3	307	900	11		С	12	0	SPARE		E	20/
20/1	Е	SPARE		0	13	Α		14	900	RADIATION	UNIT - HALLWAY	E	20/2
20/1	Е	SPARE		0	15	В		16	900	<b>1</b>		<u> </u>	$\perp$
70/2	Е	SPARE		0	17		С	18	0	SPARE		Ē	20/
$\downarrow$	<b>1</b>	$\downarrow$		0	19	Α		20	0	SPARE		E	70/2
70/2	E	SPARE		0	21	В		22	0	<b>1</b>		<b>1</b>	1
<u> </u>	J	↓		0	23		С	24	0	SPARE		E	70/2
15/2	Ň	FCU-307		426	25	Α		26	0	<b>1</b>		1	1
1	J	$\downarrow$		426	27	В		28	0	SPACE		Ě	-
15/2	N	FCU-312		426	29		c	30	0	SPACE		Е	-
1	J	$\downarrow$		426	31	Α		32	0	SPACE		Е	-
<u> </u>	Ě	SPACE		0	33	В		34	0	SPACE		Е	-
-	Е	SPACE		0	35		c	36	0	SPACE		Е	_
-	Е	SPACE		0	37	Α		38	0	SPACE		Е	_
-	Е	SPACE		0	39	В		40	0	SPACE		Е	-
-	Е	SPACE		0	41		c	42	0	SPACE		Е	_
		Connected Lo	ad Per Phase	PH A:	2964	PH	B:	2226	PH C:	1326			
	:	Lighting	HVAC	Motors	Recept.	Refrig	K	(itchen	Misc		Total VA	Amps	
Con	nected VA	• •	2016	0	2700	0		0	1800		6516	18.1	
	and Facto		1.00	1.00	NEC	0.00		1.00	1.00				
	emand VA		2016	0	2700	0		0	1800		6516	18.1	



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PROJECT INFORMATION

Project Number

R23.00325

Client Name

JOHNSTON COUNTY PUBLIC

SCHOOL DISTRICT

FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address 180 W Hatcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE
vv Date Description

PROFESSIONAL STAMPS



SHEET INFORMATION

JAE ARM

Drawing Title

ELCTRICAL PANEL SCHEDULES

FOES E903

PANEL SCHEDULE NOTES:

A. EXISTING CIRCUITING INFORMATION SHOWN IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING BUILDING DOCUMENTS. FIELD VERIFY CIRCUITS ON EXISTING PANEL AND ADJUST CIRCUITING AS REQUIRED TO MEET DESIGN INTENT OF DRAWINGS. TURN SPARE BREAKERS TO OFF POSITION AND LABEL AS "SPARE".

B. RE-USE EXISTING CIRCUIT BREAKERS WHERE POSSIBLE. NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANEL SHALL BE U.L. LISTED/LABELED FOR USE IN, AND HAVE MATCHING INTERRUPTING RATING OF, EXISTING PANEL.

C. PROVIDE NEW TYPEWRITTEN PANEL DIRECTORY TO REFLECT EXISTING AND NEW LOADS UPON COMPLETION OF WORK DESCRIBED IN THESE DRAWINGS INDICATING LOAD SERVED. A HANDWRITTEN PANEL DIRECTORY OR CROSS-OUT OR WHITE-OUT OF EXISTING PANEL DIRECTORY IS NOT ACCEPTABLE.

E EXISTING CIRCUIT BREAKER TO REMAIN

FA PROVIDE RED HANDLE

GFI PROVIDE GFCI CIRCUIT BREAKER

AFI PROVIDE AFCI CIRCUIT BREAKER

LO PROVIDE HANDLE LOCK FOR CIRCUIT BREAKER

N PROVIDE NEW CIRCUIT BREAKER
R RE-USE EXISTING CIRCUIT BREAKER FOR NEW

LOAD OR DESCRIPTION INDICATED