

ADDENDUM 01 ISSUED 1-21-2021

This Addendum is hereby made a part of the Contract Documents on the subject work as though originally included therein. The following clarifications, amendments, additions, deletions and/or modifications to the Specifications and Drawings change the original documents only in the manner and the extent stated.

PART I - PERTAINING TO THE DRAWINGS

IA. CVR -COVER

1. Delete this sheet in its entirety and add the attached Sheet CVR – COVER, revised 1-21-2021.

IB. G001 GENERAL INFO/MECHANICAL ROOM ADDITION PLAN

1. Delete this sheet in its entirety and add the attached Sheet G001 - GENERAL INFO/MECHANICAL ROOM ADDITION PLAN, revised 1-21-2021.

IC. A100A – AREA A REFLECTED CEILING DEMO PLAN

1. Delete this sheet in its entirety and add the attached Sheet A100A - AREA A REFLECTED CEILING DEMO PLAN, revised 1-21-2021.

ID. A100B – AREA B REFLECTED CEILING DEMO PLAN

1. Delete this sheet in its entirety and add the attached Sheet A100B - AREA B REFLECTED CEILING DEMO PLAN, revised 1-21-2021.

IE. A201B – AREA B REFLECTED CEILING PLAN

1. Delete this sheet in its entirety and add the attached Sheet A201B - AREA B REFLECTED CEILING PLAN, revised 1-21-2021.

IF. A210A – AREA A ROOF PLAN

1. Delete this sheet in its entirety and add the attached Sheet A210A - AREA A ROOF PLAN, revised 1-21-2021.

IG. H100A - HVAC DEMOLITION PLAN – AREA A

1. Delete this sheet in its entirety and add the attached Sheet H100A – HVAC DEMOLITION PLAN – AREA A, revised 1-21-2021.

IH. H100B - HVAC DEMOLITION PLAN – AREA B,

1. Delete this sheet in its entirety and add the attached Sheet H100B - HVAC DEMOLITION PLAN – AREA B, revised 1-21-2021.

II. H200A – HVAC NEW WORK PLAN – AREA A

1. Delete this sheet in its entirety and add the attached Sheet H200A – HVAC NEW WORK PLAN – AREA A, revised 1-21-2021.

IJ. H700- ENLARGED MECHANICAL ROOM PLANS

1. Delete this sheet in its entirety and add the attached Sheet H700 - ENLARGED MECHANICAL ROOM PLANS, revised 1-21-2021.

- IK. H800 - HVAC DETAILS
 - 1. Delete this sheet in its entirety and add the attached Sheet H800 - HVAC DETAILS, revised 1-21-2021.
- IL. H801 - HVAC DETAILS CONTINUED
 - 1. Delete this sheet in its entirety and add the attached Sheet H800, HVAC DETAILS CONTINUED, revised 1-21-2021.
- IM. H900 - HVAC SCHEDULES
 - 1. Delete this sheet in its entirety and add the attached Sheet H900 - HVAC SCHEDULES, revised 1-21-2021.
- IN. H901 - HVAC SCHEDULES CONTINUED
 - 1. Delete this sheet in its entirety and add the attached Sheet H901 - HVAC SCHEDULES CONTINUED, revised 1-21-2021.
- IO. P000 - PLUMBING LEGEND, GENERAL NOTES AND SCHEDULE
 - 1. Delete this sheet in its entirety and add the attached Sheet P000 - PLUMBING LEGEND, GENERAL NOTES AND SCHEDULE, revised 1-21-2021.
- IP. P200A – PLUMBING NEW WORK PLAN – AREA A
 - 1. Delete this sheet in its entirety and add the attached Sheet P200A - PLUMBING NEW WORK PLAN – AREA A, revised 1-21-2021
- IQ. E200A – ELECTRICAL PLAN
 - 1. Delete this sheet in its entirety and add the attached Sheet E200A – ELECTRICAL PLAN, revised 1-21-2021.
- IR. E202 – ELECTRICAL PLAN – AREA A MECHANICAL ROOM
 - 1. Delete this sheet in its entirety and add the attached Sheet E202 – ELECTRICAL PLAN – AREA A MECHANICAL ROOM, revised 1-21-2021.
- IS. E901 – ELECTRICAL SCHEDULES
 - 1. Delete this sheet in its entirety and add the attached Sheet E901 – ELECTRICAL SCHEDULES, revised 1-21-2021.

PART II - PERTAINING TO PROJECT MANUAL

- IIA. 00 0010 - Table of Contents
 - 1. Added revision date to Section 00 3100– Bid Proposal Form of 1-21-2021.
 - 2. Added revision date to Section 01 7390 – Cutting and Patching of 1-21-2021.
 - 3. Added revision date to Section 02 4119 – Selective Demolition of 1-21-2021.
 - 4. Added revision date to Section 28 3111 – Addressable Fire Alarm Systems of 1-21-2021.
 - 5. Delete Section 28 3112
- IIB. Section 00 3100 – BID PROPOSAL FORM
 - 1. Delete this section in its entirety and replace with the attached Section 00 3100 – BID PROPOSAL FORM, 4 pages, which adds Item #9 with a revision date of 1-21-2021.

IIC. Section 01 739 – CUTTING AND PATCHING

1. Delete this section in its entirety and replace with the attached Section 01 739 – CUTTING AND PATCHING, 16 pages, which adds 1.5A.2 with a revision date of 1-21-2021.

IID. Section 02 4119 – SELECTIVE DEMOLITION

1. Delete this section in its entirety and replace with the attached Section 02 4119.3.6 – SELECTIVE DEMOLITION, 8 pages, which adds 3.6.L with a revision date of 1-21-2021.

IIE Section 28 3111 ADDRESSABLE FIRE ALARM SYSTEMS

1. Delete this section in its entirety and replace with the attached Section 28 3111 - ADDRESSABLE FIRE ALARM SYSTEMS, 14 pages which revised the acceptable manufacturers listed in 28 3111.2.1.A with a revision date of 1-21-2021.

IIF. Section 28 3112 – ZONED FIRE ALARM SYSTEMS

1. Delete this section in its entirety.

PART III – PRETAINING TO THE BIDDING DOCUMENTS

IIIA. Meeting Minutes and the Sign In sheet received at the Pre-Bid Meeting, titled “Meeting Minutes” and “Sign In Sheet” dated January 13, 2021, consisting of 2 and 3 sheets respectively, are attached for general information.

The three dates available to visit the site and review the existing conditions, especially the 1.) Mechanical Room Addition; 2.) the furniture fixtures and equipment that the contractor will be required to label, move and then put back into place where ever the ceiling is to be replaced; and 3.) the work required above the ceilings for the installation of the new 36 WSHP’s in the 100, 200 and 300 Halls are as follows:

Wednesday, January 20th

Tuesday, January 26th

Wednesday, February 3rd

You must visit between 9:00 – 12:00. Please bring your own ladder and wear a mask. Call the school office the day before visiting the school. The front office phone number is 770-578-2700.

IIIB. QUESTION RECEIVED AFTER THE PRE-BID MEETING

QUESTION #1: Has the Mechanical Room Addition already been constructed?

ANSWER: Yes, the walls, roof, structure and doors are existing. What remains to be completed, as indicated, is the under-ground plumbing; #57 stone, material and labor; vapor barrier installation labor; and the concrete slab with reinforcement.

QUESTION #2: Is it possible to substitute the AISC erector certification if the erector has the required welding certificates and can show prior experience?

ANSWER: Yes, AND any/all special inspections that were not necessary with an AISC certified erector will be required. Also, the prior experience examples should have work similar to the project as much as possible.

QUESTION #3: Can Fire-lite (Honeywell) be accepted as an approved equal for the Fire Alarm System?

ANSWER: Yes, please see: IIE Section 28 3111 ADDRESSABLE FIRE ALARM SYSTEMS above.

REMINDERS:

BID DUE DATE: February 4, 2021

TIME: 3:00 PM ET

Submit your bid via email to address in Section 00 020 Invitation for Bid.

Virtual Bid Opening, at the link in Section 00 020 Invitation for Bid.

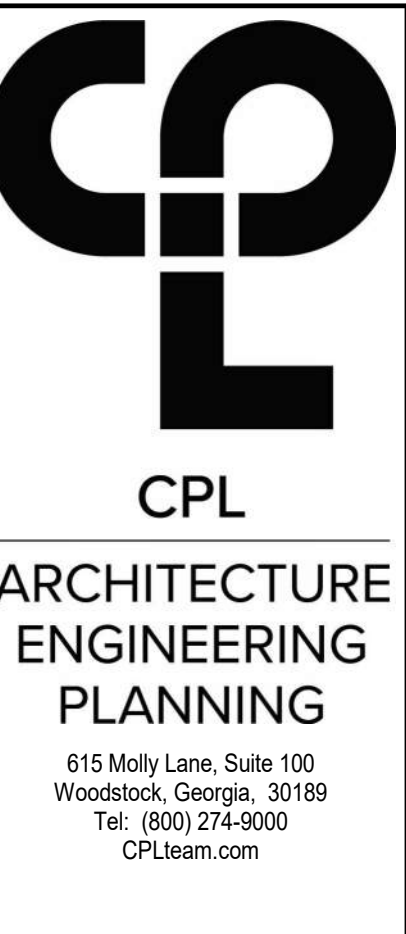
QUESTIONS AND PRE-QUALIFICATION DEADLINE DATE: January 25, 2021

TIME: 3:00 PM ET

END OF ADDENDUM 01

ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)

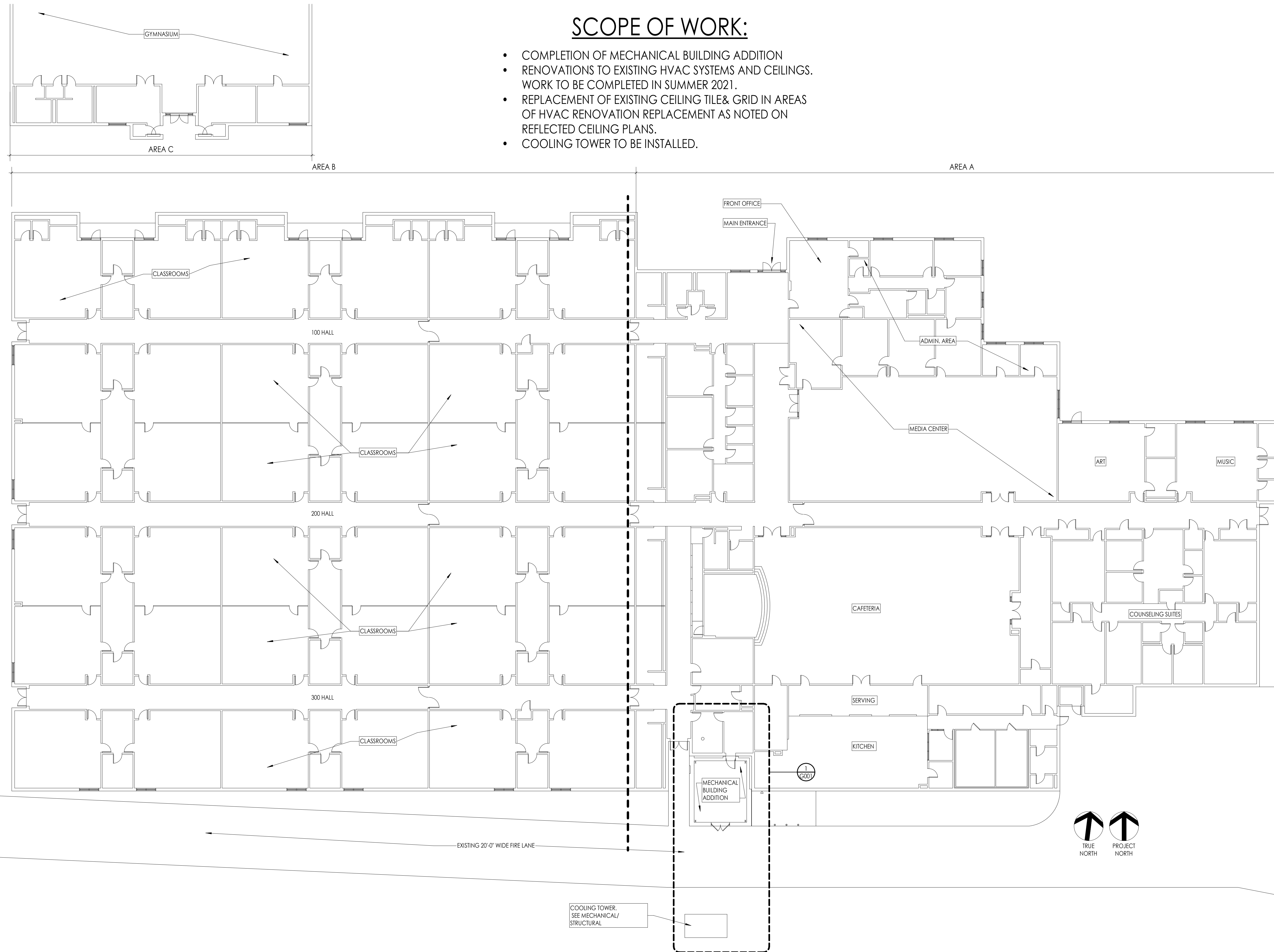
HVAC MODIFICATIONS 2021



3055 EBENEZER ROAD NE
MARIETTA, GA 30066
BID SET SUBMITTAL - 12/15/2020

SCOPE OF WORK:

- COMPLETION OF MECHANICAL BUILDING ADDITION
- RENOVATIONS TO EXISTING HVAC SYSTEMS AND CEILINGS. WORK TO BE COMPLETED IN SUMMER 2021.
- REPLACEMENT OF EXISTING CEILING TILE & GRID IN AREAS OF HVAC RENOVATION REPLACEMENT AS NOTED ON REFLECTED CEILING PLANS.
- COOLING TOWER TO BE INSTALLED.



DRAWING LIST			
SHEET NAME	Current Revision	Current Revision Date	
GENERAL COVER	1	1/21/2021	
G001 GENERAL INFO/MECHANICAL ROOM ADDITION PLAN SHEET	1	1/21/2021	
Structural			
S201A HVAC EQUIPMENT SUPPORT PLAN - AREA A			
S201B HVAC EQUIPMENT SUPPORT PLAN - AREA B			
S300 STRUCTURAL NOTES AND DETAILS			
ARCHITECTURAL			
A100A AREA A REFLECTED CEILING DEMO PLAN	1	1/21/2021	
A100B AREA B REFLECTED CEILING DEMO PLAN	1	1/21/2021	
A201A AREA A REFLECTED CEILING PLAN			
A201B AREA B REFLECTED CEILING PLAN			
A210A AREA A ROOF PLAN	1	1/21/2021	
A210B AREA B ROOF PLAN	1	1/21/2021	
HVAC			
H000 HVAC LEGEND, SYMBOLS AND GENERAL NOTES			
H001 ENERGY CODE COMPLIANCE			
H100A HVAC DEMOLITION PLAN - AREA A	1	01/21/2021	
H100B HVAC DEMOLITION PLAN - AREA B	1	01/21/2021	
H200A HVAC NEW WORK PLAN - AREA A	1	01/21/2021	
H200B HVAC NEW WORK PLAN - AREA B			
H300A HVAC PIPING NEW WORK PLAN - AREA A			
H300B HVAC PIPING NEW WORK PLAN - AREA B			
H500 HVAC CONTROL SCHEMATICS			
H501 HVAC CONTROL SCHEMATICS			
H600 HVAC PIPING SCHEMATICS			
H700 ENLARGED MECHANICAL ROOM PLANS	1	01/21/2021	
H800 HVAC DETAILS	1	01/21/2021	
H801 HVAC DETAILS CONTINUED	1	01/21/2021	
H802 KITCHEN HOOD DETAILS			
H900 HVAC SCHEDULES	1	01/21/2021	
H901 HVAC SCHEDULES CONTINUED	1	01/21/2021	
PLUMBING			
P000 PLUMBING LEGEND, GENERAL NOTES AND SCHEDULE	1	01/21/2021	
P100A PLUMBING DEMOLITION PLAN - AREA A			
P100B PLUMBING DEMOLITION PLAN - AREA B			
P100C PLUMBING DEMOLITION PLAN - AREA C			
P200A PLUMBING NEW WORK PLAN - AREA A	1	01/21/2021	
P200B PLUMBING NEW WORK PLAN - AREA B			
ELECTRICAL			
E000 ELECTRICAL LEGEND AND NOTES			
E100A ELECTRICAL DEMOLITION PLAN - AREA A			
E100B ELECTRICAL DEMOLITION PLAN - AREA B			
E100C ELECTRICAL DEMOLITION PLAN - AREA C			
E200A ELECTRICAL PLAN - AREA A	1	01/21/2021	
E200B ELECTRICAL PLAN - AREA B			
E200C ELECTRICAL POWER PLAN - AREA A KITCHEN			
E202 ELECTRICAL PLAN - AREA A MECHANICAL ROOM	1	01/21/2021	
E400A ELECTRICAL FIRE ALARM PLAN - AREA A			
E400B ELECTRICAL FIRE ALARM PLAN - AREA B			
E400C ELECTRICAL FIRE ALARM PLAN - AREA C			
E900 ELECTRICAL SCHEDULES			
E901 ELECTRICAL SCHEDULES	1	01/21/2021	

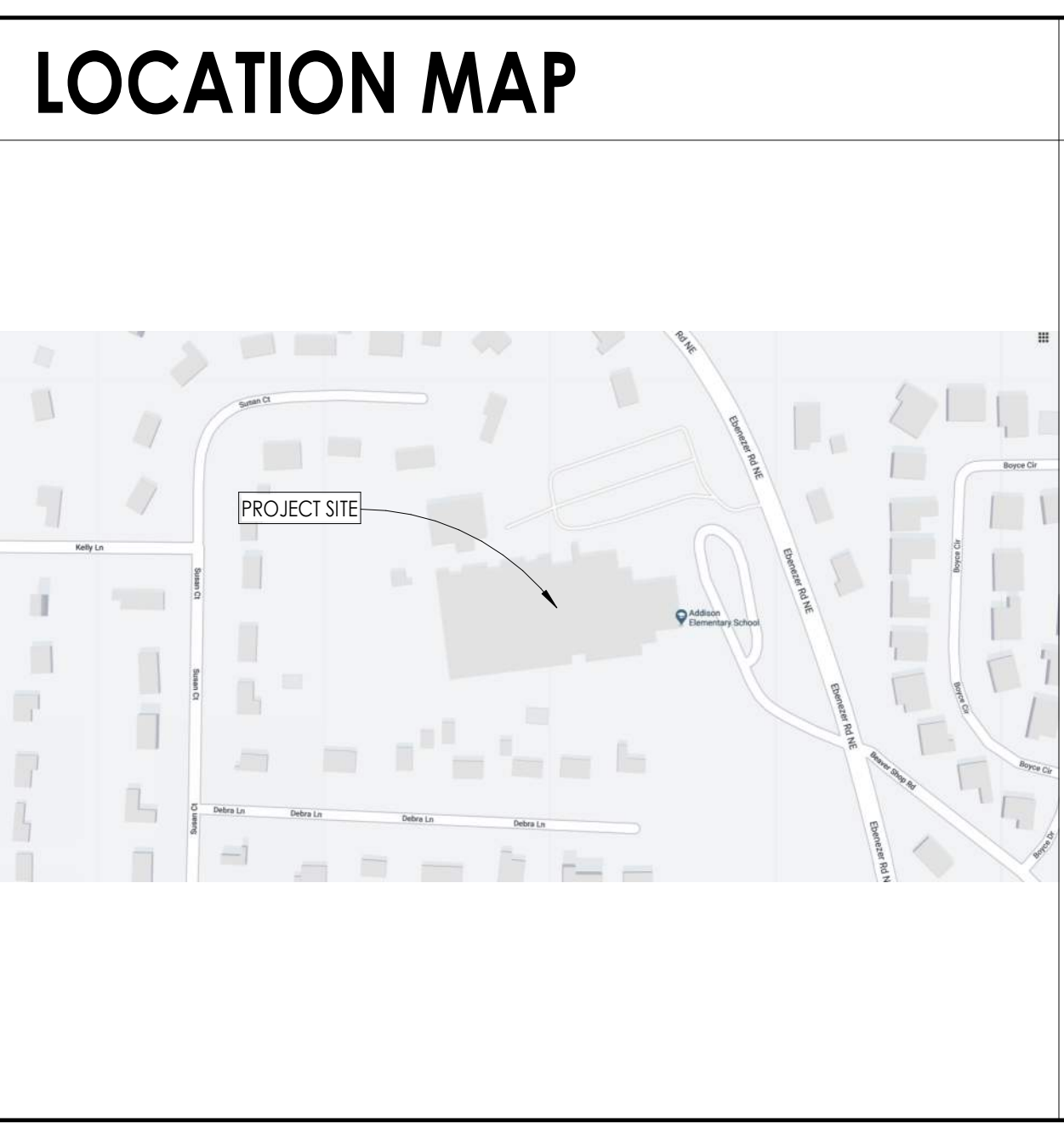
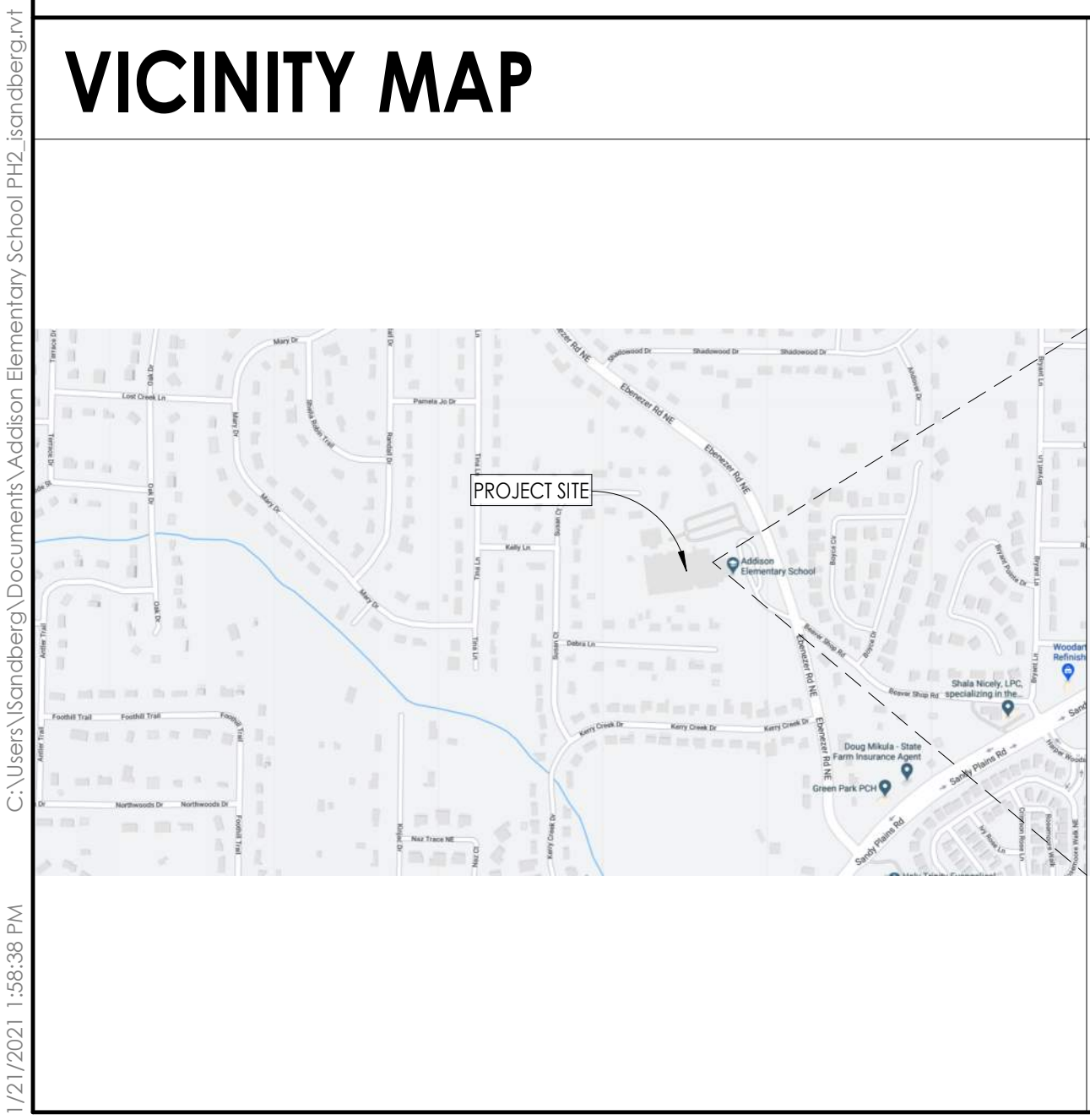
APPLICABLE CODES AND AMENDMENTS		
CODE	EDITION	AMENDMENTS
• INTERNATIONAL BUILDING CODE	2018	2020
• INTERNATIONAL FIRE CODE	2018 *	N/A
• INTERNATIONAL PLUMBING CODE	2018	2020
• INTERNATIONAL MECHANICAL CODE	2018	2020
• INTERNATIONAL FUEL GAS CODE	2018	2020
• NATIONAL ELECTRIC CODE	2017	N/A
• INTERNATIONAL ENERGY CONSERVATION CODE	2015	2020
• NFPA 101, LIFE SAFETY CODE	2018 *	2020
• ADA STANDARDS FOR ACCESSIBLE DESIGN	2010	

NO.	DATE	BY	DESCRIPTION
1	12/15/2020		



RELEASED FOR CONSTRUCTION

COBB COUNTY SCHOOL DISTRICT
ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
HVAC MODIFICATIONS 2021
3055 EBENEZER ROAD NE
MARIETTA, GA 30066
BID SET SUBMITTAL - 12/15/2020



CONSULTANT LIST

CPL
ARCHITECTURE
ENGINEERING
PLANNING
615 MOLLY LANE, SUITE 100
WOODSTOCK, GA 30189

The Local Fire Official having jurisdiction has reviewed and approved a set of documents identical to this set of documents on _____.

Timothy W. Pulver,
AIA, ID, NCARB, LEED AP | Principal Associate

OWNER

COBB COUNTY SCHOOL DISTRICT
514 GLOVER STREET
MARIETTA, GA 30060
TEL: 770-426-3300

ARCHITECT

615 Molly Lane, Suite 100
Woodstock, Georgia, 30189
Tel: (800) 274-9000
CPLteam.com

DATE: 12/15/2020
DRAWN: Author
CHECKED: Checker
SCALE: 1/16" = 1'-0"
SHEET NO: COVER

PROJECT NUMBER: 15883.00
DRAWING NUMBER: CD CVR

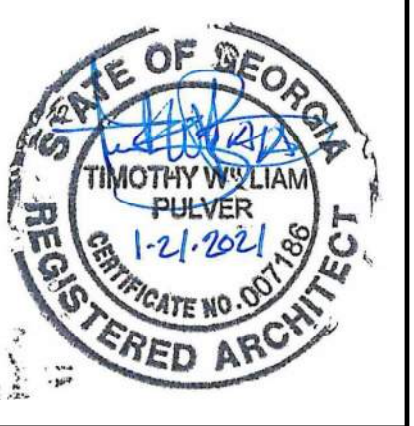
C:\Users\jwheeler\Documents\Addison Elementary School PFD\jwheeler.dwg 12/15/2020 1:58:38 PM



CPL
ARCHITECTURE
ENGINEERING
PLANNING

615 Molly Lane, Suite 100
Woodstock, Georgia, 30189
Tel: (800) 274-8000
CPLteam.com

REVISION SCHEDULE



RELEASED FOR
CONSTRUCTION

COBB COUNTY SCHOOL DISTRICT
ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
HVAC MODIFICATIONS 2021
3055 BENEFER ROAD NE
MARIETTA, GA 30066

BID SET SUBMITTAL - 12/15/2020

DATE	DRAWN	CHECKED
12/15/2020	Author	Checker

SCALE: As indicated

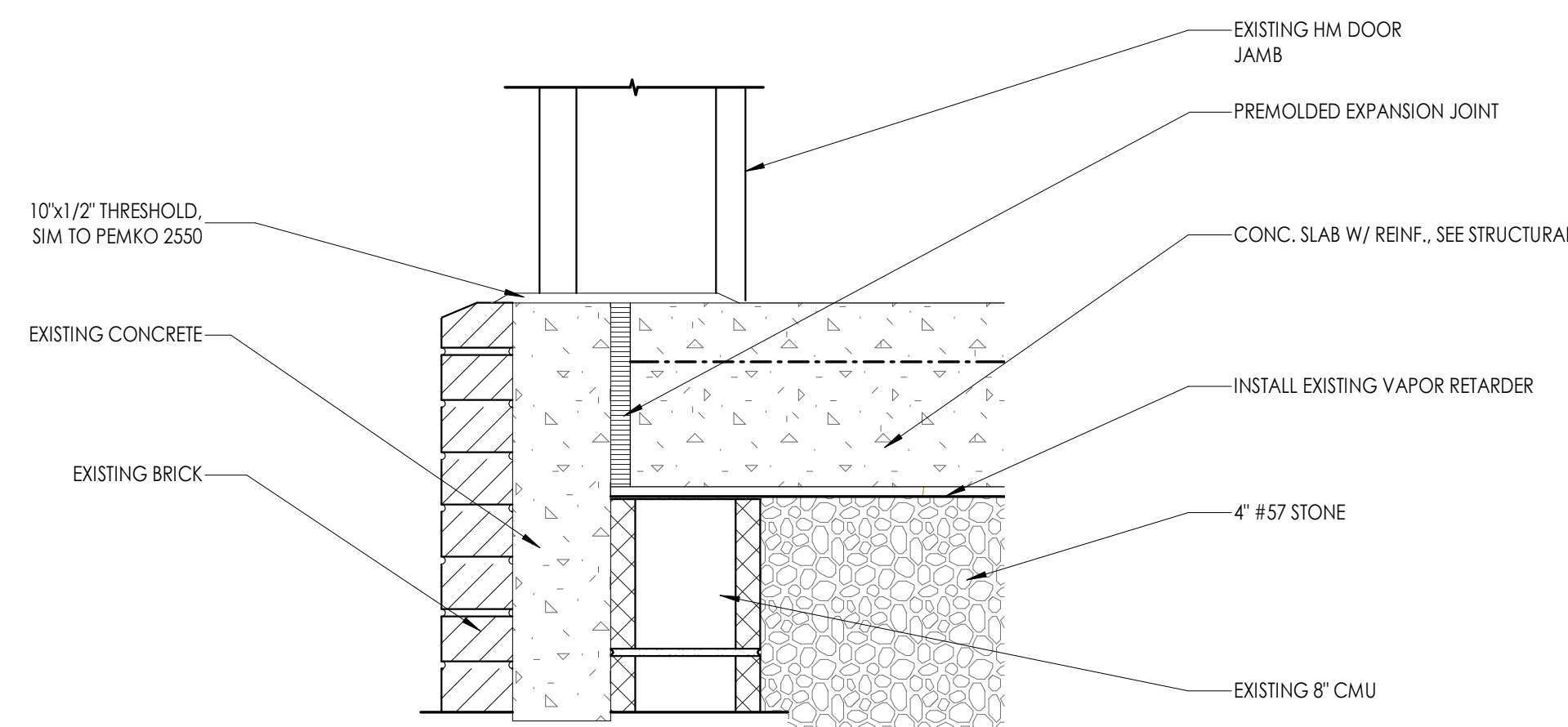
GENERAL INFO/
MECHANICAL ROOM
ADDITION PLAN SHEET

PROJECT NUMBER
15883.00

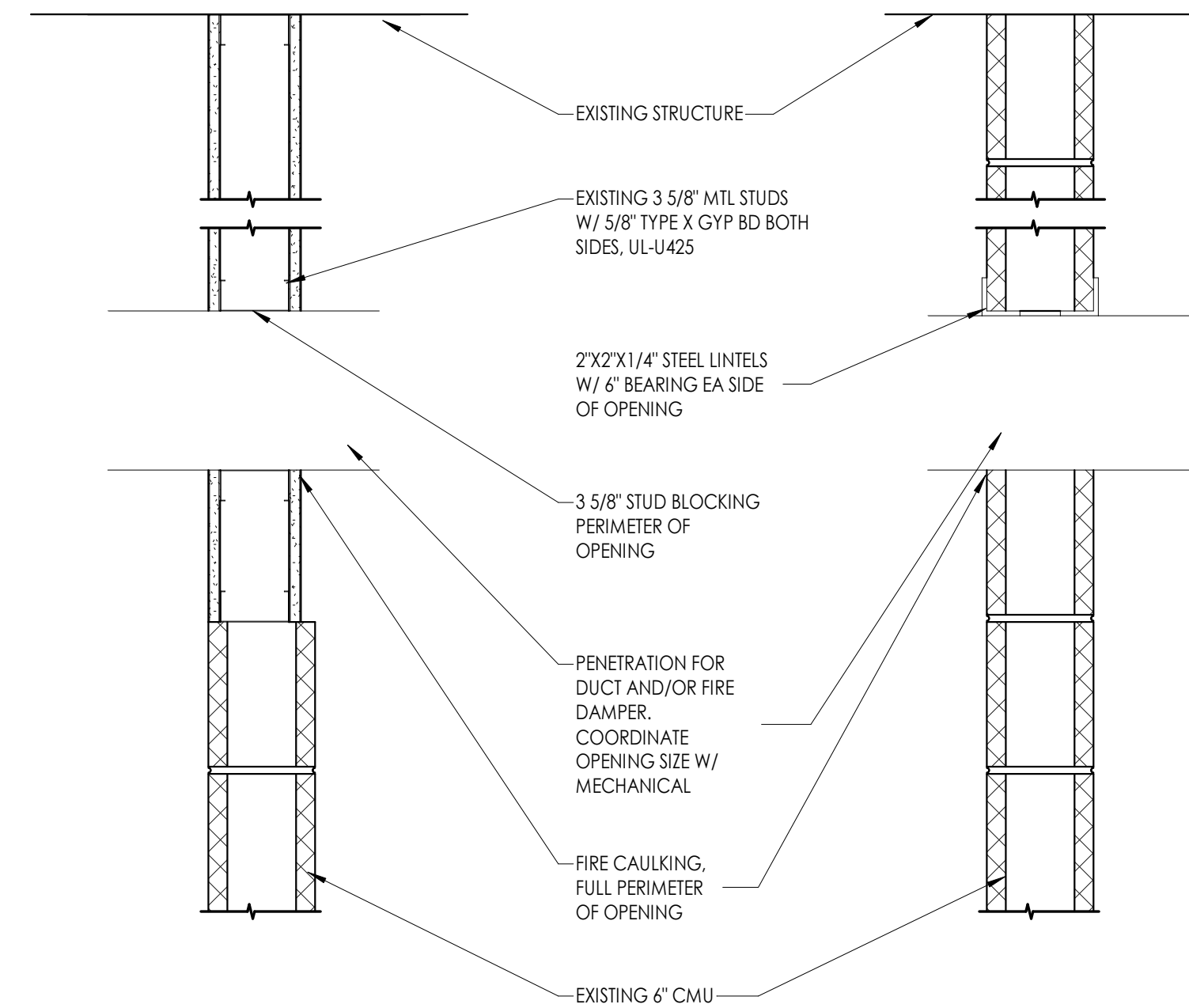
CD
G001
DRAWING NUMBER

PATCHING AND PENETRATION NOTES

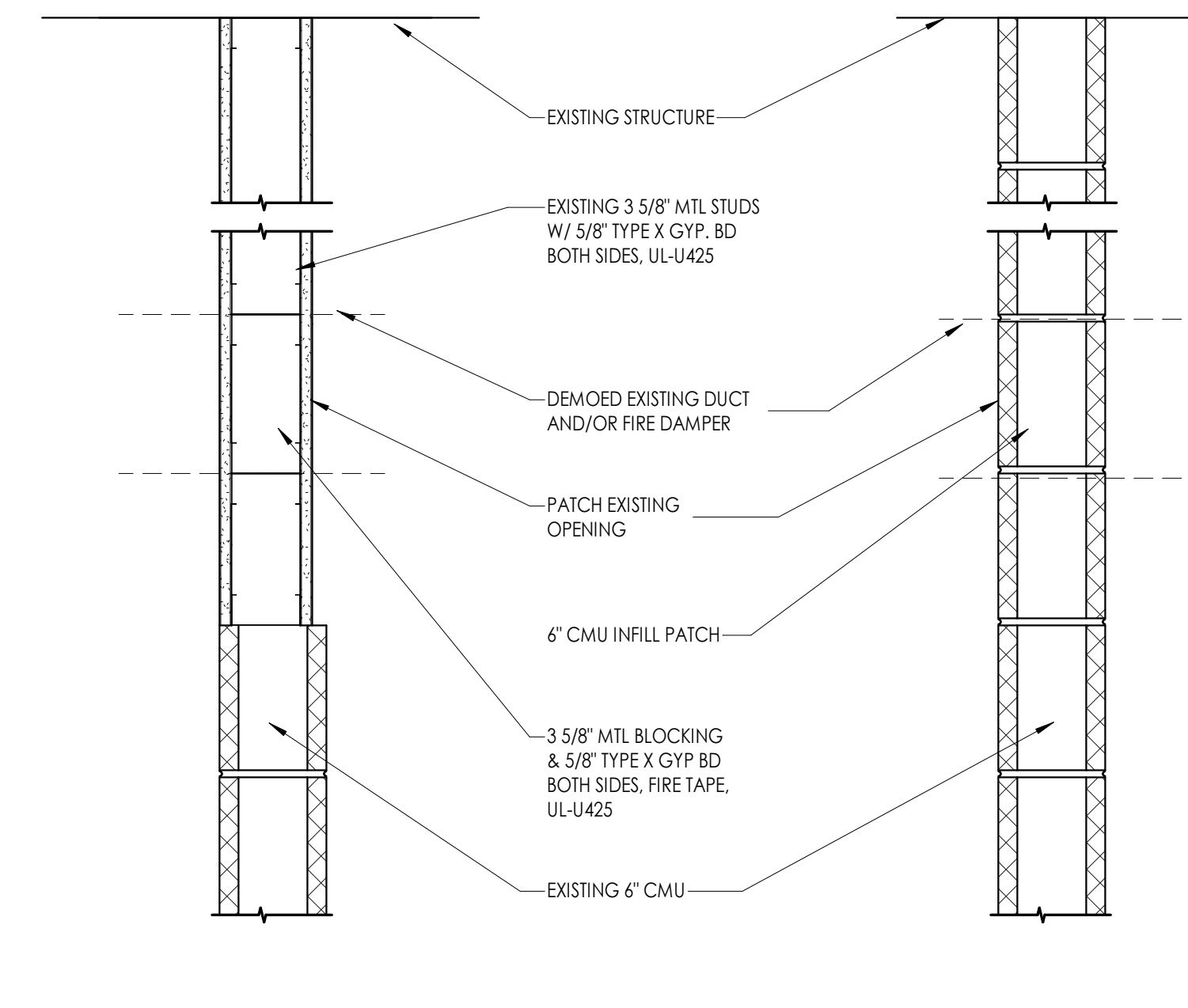
1. ALL EXISTING WALL OPENINGS ARE TO BE PATCHED IN BOTH UNRATED AND RATED WALLS WHERE EXISTING DUCTS AND/OR FIRE DAMPERS ARE DEMOED.
2. ALL PRE-EXISTING OPENINGS ARE TO BE PATCHED IN CORRIDOR WALLS. MATCH EXISTING CONSTRUCTION TO MAINTAIN 1HR FIRE RATING. THIS NOTE APPLIES TO THE CORRIDOR WALLS IN THE 100,200 AND 300 HALLS.
3. ALL EXISTING AND NEW PENETRATIONS FOR PIPES, CONDUITS, ETC. IN FIRE WALLS ARE TO BE FIRE CAULKED.
4. FOR FIRE DAMPER DETAIL REFER TO 3/H800 AND FOR FIRE DAMPER LOCATIONS REFER TO SHEETS H200A AND H200B.



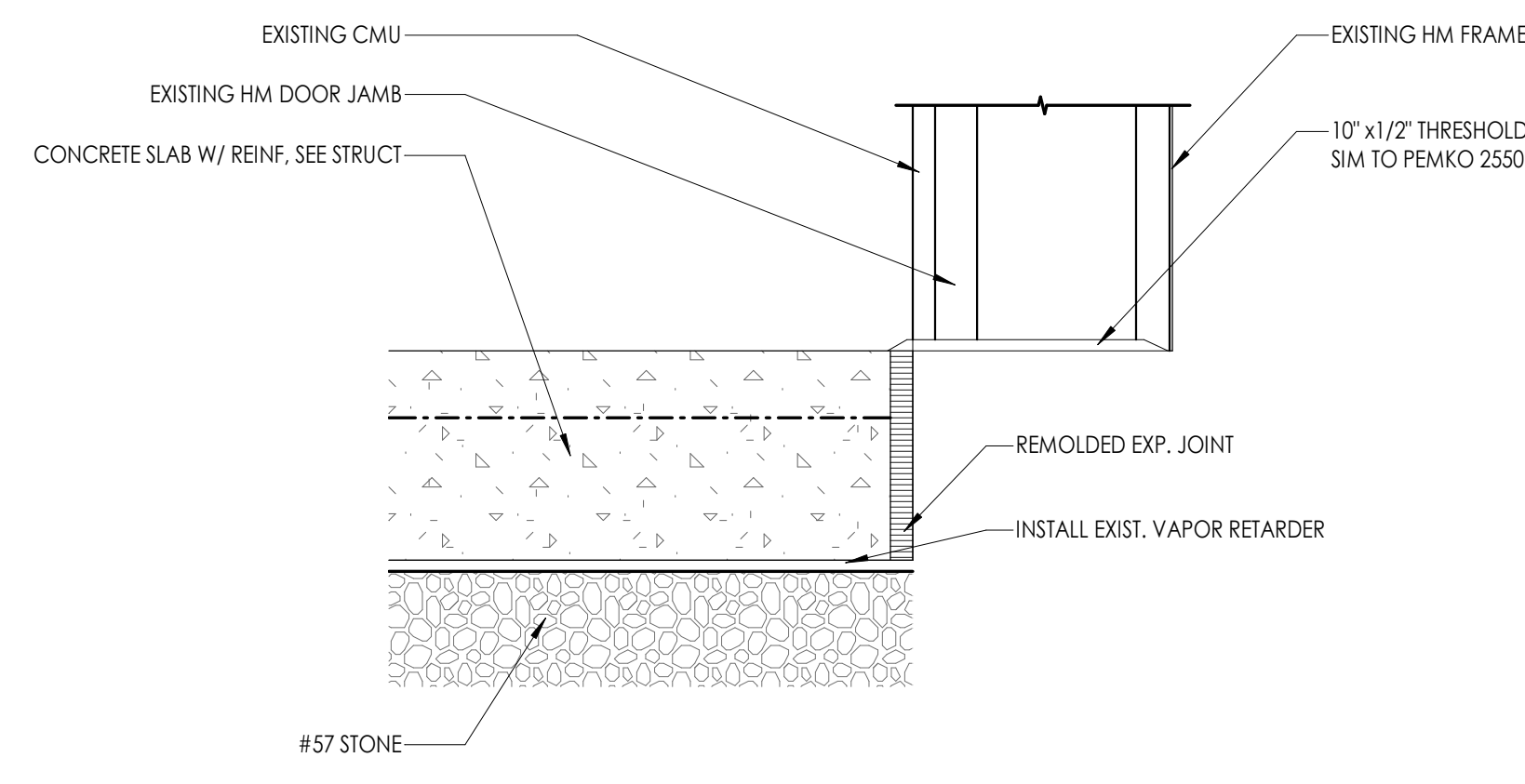
3 SECTION THRU EXTERIOR DBL DOORS THRESHOLD
G001 1 1/2" = 1'-0"



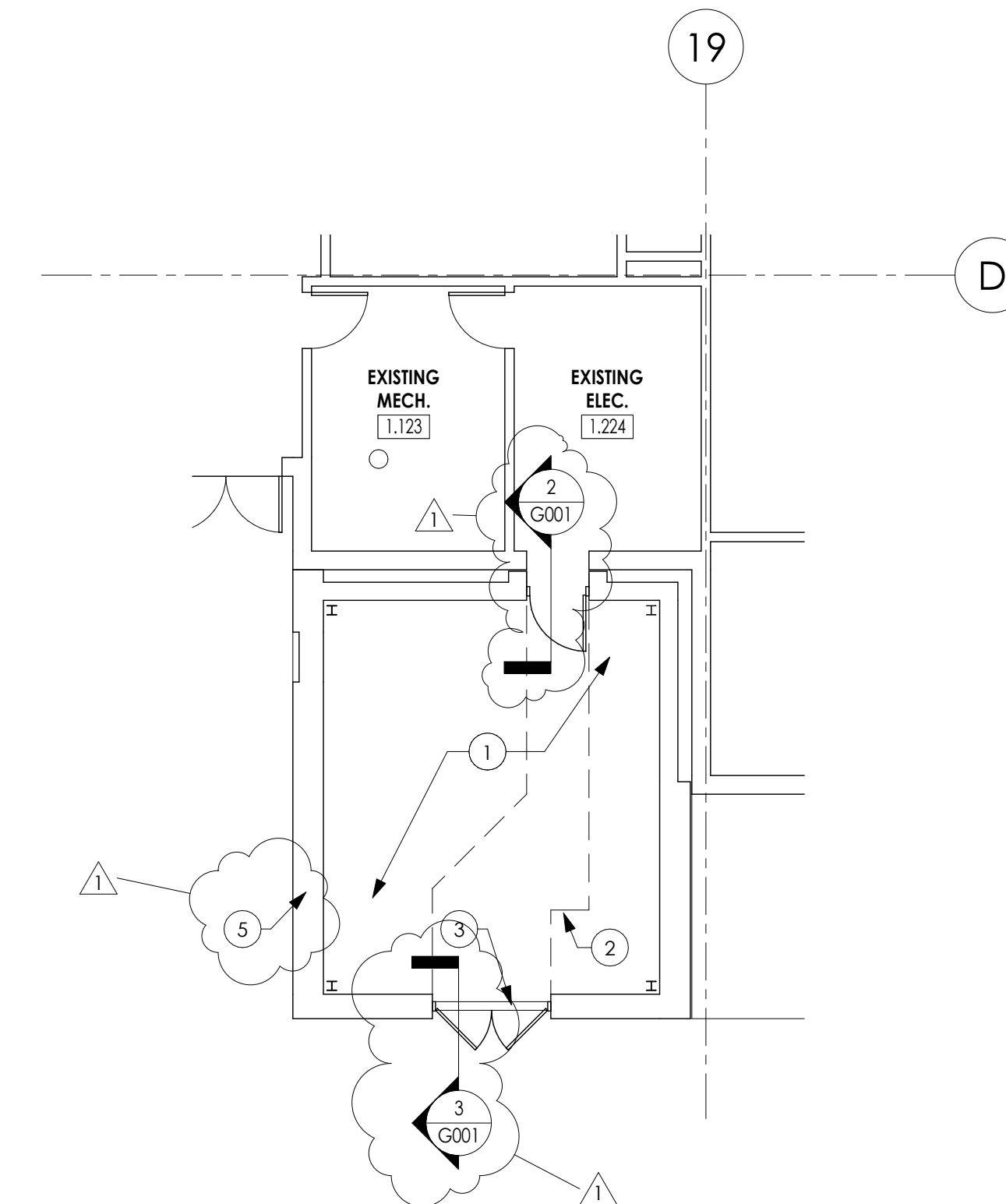
4 SECTIONS THRU WALL PENETRATIONS @ EXISTING 1HR FIRE WALLS
G001 1 1/2" = 1'-0"



5 SECTIONS THRU WALL PATCH @ EXISTING 1HR FIRE WALLS
G001 1 1/2" = 1'-0"



2 SECTION THRU SINGLE DOOR THRESHOLD
G001 1 1/2" = 1'-0"



- KEYNOTE LEGEND**
- 1 CONCRETE SLAB. REFER TO STRUCTURAL. PROVIDE AND INSTALL 4" OF #57 STONE AND EXISTING VAPOR RETARDER LEFT BEHIND BY PREVIOUS 2020 CONTRACTOR.
 - 2 DEMO EXISTING WOODEN WALKWAY. REMOVE THE REMAINING WALL & REINSTALL WITH SLAB AS SHOWN.
 - 3 INSTALL THRESHOLD, DOOR SWEEPS AND REMOVEABLE MULLION LEFT BEHIND BY PREVIOUS 2020 CONTRACTOR.
 - 4 HAND EXPOSED AREAS. SEED W/ THE REBBS SHADE MIX FOR FALL PROTECT. NO WINTER STRAW.
 - 5 EXISTING EXTERIOR WALLS, STRUCTURE AND ROOF.



1 MECHANICAL BUILDING ADDITION FLOOR PLAN
G001 1/8" = 1'-0"

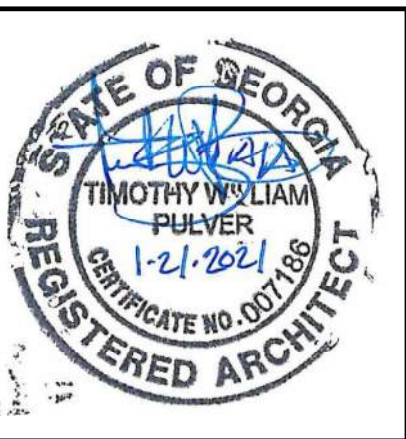
ABBREVIATIONS

AFF ABOVE FINISHED FLOOR	CJT CONSTRUCTION JOINT	FF FINISH FLOOR	JAN JANITOR	OC ON CENTER	SIM SIMILAR
AP ACCESS PANEL	CONT CONTINUOUS	FEC FIRE EXTINGUISHER CABINET	JS JANITOR SINK	OPNG OPENING	SIC SOUND TRANSMISSION COEFFICIENT
ACOUS ACoustICAL	CONTR CONTRACTOR	FH FIRE HOSE	JT JANITOR	OD OUTSIDE DIAMETER	SPEC SPECIFICATION
ADJ ADJACENT	CJ CONTROL JOINT	FL FLR FLOOR	KT KITCHEN	OH OVERHEAD	SQ SQUARE
ACT ACoustICAL CEILING TILE	DP DAMP PROOFING	FD FLOOR DRAIN	LAB LABORATORY	PTD PAINTED	SS STAINLESS STEEL
AWP ACoustICAL WALL PANEL	DEMO DEMOLISH	FIG FOOTING	LAM LAMINATED	PR PAIR	STD STANDARD
A/C AIR CONDITIONING	DEPT DEPARTMENT	FOU FOUNDATION	LAV LAVATORY	PTR PAPER TOWEL RECEPTOR	STL STEEL
ALT ALTERNATE	DETDL DETAIL	FRT FIRE RETARDANT TREATED	LAV LAVATORY	PKG PARKING	STOR STORAGE
ALUM ALUMINUM	DIA DIA METER	FS FULL SIZE	LAV LAVATORY	PART BD PARTICLE BOARD	STRUCT STRUCTURE, STRUCTURAL
ANB ANCHOR BOLT	DN DIMENSION	FUT FUTURE	LAV LAVATORY	PLAM PLASTIC LAMINATE	STRUCT GLAZED FACING TILE
ANOD ANODIZED	DSP DISPENSER	GALV GALVANIZED	LWR LEADER	PL PL	ST, STL STRUCTURAL STEEL
APPROX APPROXIMATE	DSP DISPOSAL	GA GAUGE	LH LEFT HAND	PLM PLASTIC LAMINATE	SUSP SUSPENDED
ARCH ARCHITECT, ARCHITECTURAL	DO DITO, REPEAT, SAME	GEN GENERAL	LIB LIBRARY	PLAT PLATE	SUSP ACoustICAL TILE
AD AREA DRAIN	DR DOOR	GC GENERAL CONTRACTOR	LIB LIBRARY	PLG PLUMBING	SAT SUSPENDED ACoustICAL TILE
@ AT	DBL DOUBLE	GL GLASS, GLAZING	LW LIGHT WEIGHT	PLYWD PLYWOOD	TEL TELEPHONE
AUTO AUTOMATIC	DN DOWN	GB GRAB BAR	MACH MACHINE	PRE FAB PREFABRICATED	TEMP TEMPERATURE
BM BEAM	DS DOWNPOUT	GR GRADE GRADING	MH MAN HOLE	PRT PRESSURE TREATED	THK THICKNESS
BP BEARING PLATE	DR DRAIN TILE	GSF GROSS SQUARE FOOT	MHC MAN HOLE COVER	PI PAINT	TPD TOILET PAPER DISPENSER
BRK BRICK	DWR DRAWER	GSF GROSS SQUARE FOOT	MHC MAN HOLE COVER	PVC POLYVINYL CHLORIDE	TOS TOP OF SLAB/STEEL
BTUM BITUM	DWG DRAWING	CWB CEMENT WALL BOARD	MFR MANUFACTURE	PVC POLYVINYL CHLORIDE	TOW TOP OF WALL
BLKG BLOCKING	DF DRINKING FOUNTAIN	GYP GYPSUM	MFR MANUFACTURE	PC CONC PRECAST CONCRETE	TYP TYPICAL
BLK BLOCK	EA EACH	GYP BD GYPSUM BD	MFR MANUFACTURE	PVMT PAVEMENT	UNFN UNFINISHED
BD BOARD	EF EACH FACE	HDWR HARDWARE	MFR MANUFACTURE	QTY QUANTITY	UNLN UNLESS NOTED OTHERWISE
BOT BOTTOM	EW EACH WAY	HDWR HARDWARE	MFR MANUFACTURE	QT QUARRY TILE	U URINAL
BRK BRICK	E EAST	HDWR HARDWARE	MFR MANUFACTURE	QTB QUARRY TILE BASE	VEN VENER
BLDG BUILDING	ELEC ELECTRICAL	HVAC HEATING, VENTILATING & AIR CONDITIONING	MFR MANUFACTURE	VF VERIFY IN FIELD	VF VESTIBULE
BN BULLNOSE	ELEV ELEVATION	HT, HGT HEIGHT	MECH MECHANICAL	VE VESTIBULE	V8 VINYL BASE
CAB CABINET	EL ELEVATOR	HEX HEXAGONAL	MET METAL	RAD RADIUS	VCT VINYL COMPOSITION TILE
CI CAST IRON	EMER EMERGENCY	HWH HIGHWAY	MEZ MEZANINE	REC RECEPTACLE	VFI VINYL FABRIC
CPT CARPET(ED)	ENCL ENCLOSURE	HM HOLLOW METAL	MIN MINIMUM	REF REFERENCE	VQT VINYL QUARTZ TILE
CB CATCH BASIN	ENTR ENTRANCE	HORZ HORIZONTAL	MISC MISCELLANEOUS	REF REFERENCE	VWC VINYL WALL COVERING
CLG CEILING	EQ EQUIP	EQUL EQUAL	MR MOISTURE RESISTANT	REIN REINFORCED(ING)	VNT VINYL TILE
CLG HT CEILING HEIGHT	EQIP EQUIPMENT	EQUL EQUAL	MTD MOUNTED	REQD REQUIRED	VOL VOLUME
CL CENTER LINE	EST ESTIMATE(D)	HR HOUR	MTL METAL	RVT RESILIENT VINYL TILE	REV REVISED
CER CERAMIC	EXHST EXHAUST	IN INCH	NAT NATURAL	RH RIGHT HAND	WC WATER CLOSET
CT CERAMIC TILE	EXST EXISTING	INCL INCLUDING	NRC NOISE REDUCTION COEFFICIENT	R RISKER	WT WEIGHT
CB CHALK BOARD	EXP EXPANSION	ID INSIDE DIAMETER	NOM NOMINAL	RD ROOF DRAIN	WVF WELDED WIRE FABRIC
CIRC CIRCUMFERENCE	EJ EXPANSION JOINT	INSUL INSULATION	NORTH NORTH	RM ROOM	WWM WELDED WIRE MESH
CMU CONCRETE MASONRY UNIT	F FABRIC	INT INTERIOR	NTC NOT IN CONTRACT	RO ROUGH OPENING	W WIND
CONST CONSTRUCTION	FAB FABRICATE	INTERM INTERMEDIATE	NTS NOT TO SCALE	SAN SANITARY	W/O WITHOUT
	FI FEET	INV INVERT	NO, # NUMBER	SCHED SCHEDULE	WD WOOD
	FIG FIGURE			SEC SECOND	W WEST
	FIN FINISH			SECT SECTION	YD YARD



CPL
ARCHITECTURE
ENGINEERING
PLANNING
 615 Molly Lane, Suite 100
 Woodstock, Georgia, 30189
 Tel: (800) 274-8000
 CPLteam.com

NO.	DATE	BY	CON. #	DESCRIPTION
1	12/15/2020			



RELEASED FOR CONSTRUCTION

COBB COUNTY SCHOOL DISTRICT
 ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
 HVAC MODIFICATIONS 2021
 3055 BENEZER ROAD NE
 MARIETTA, GA 30066
 BID SET SUBMITTAL - 12/15/2020

DATE	DRAWN	CHECKED
12/15/2020	Author	Checker

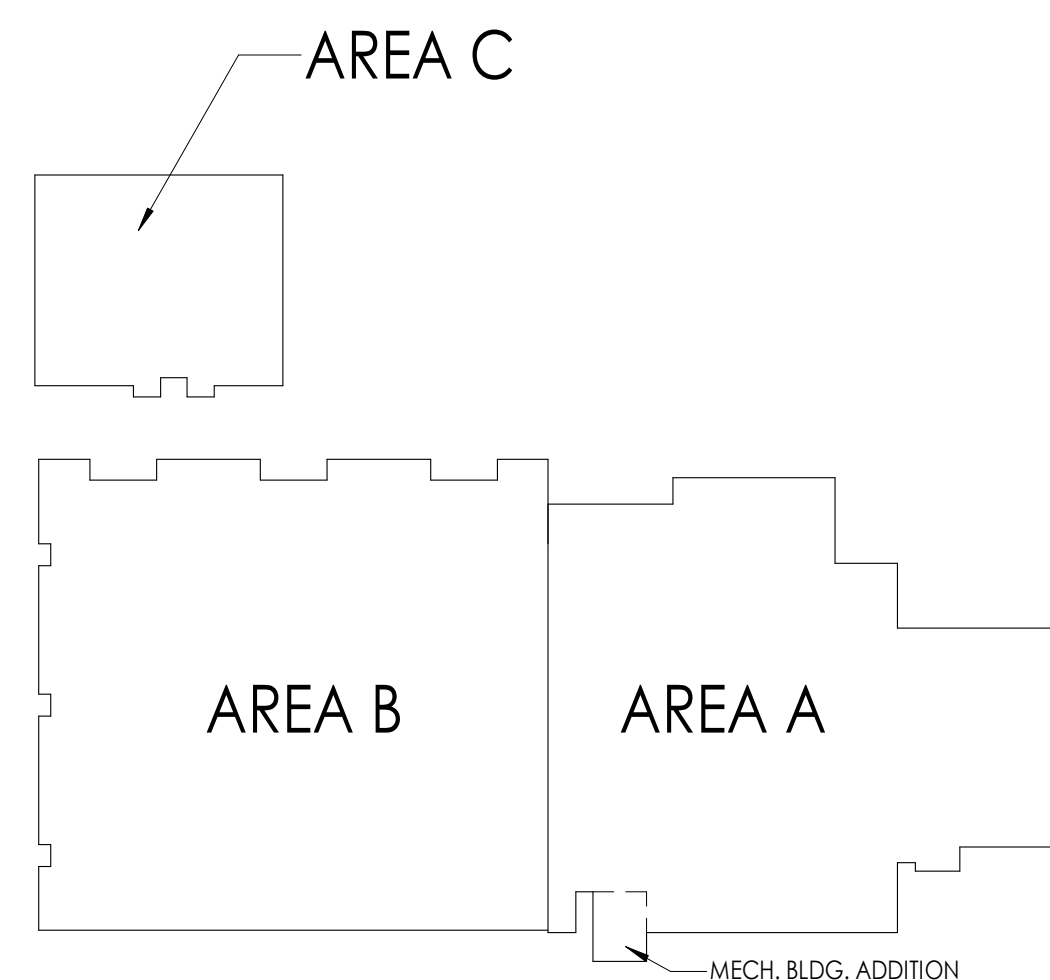
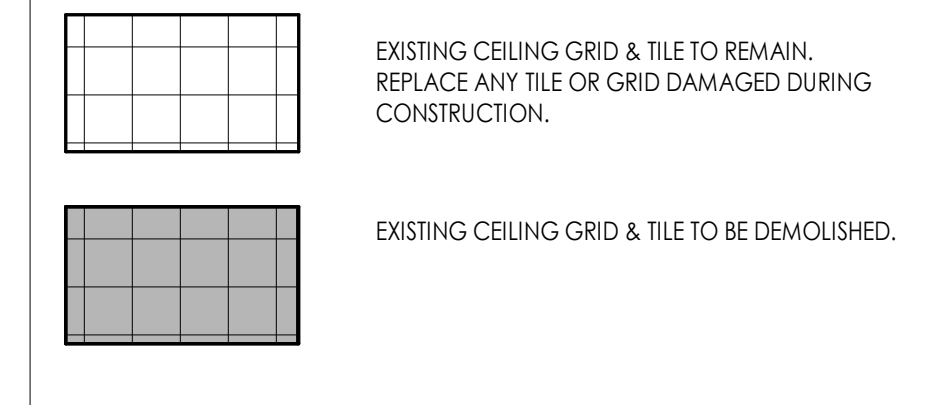
SCALE: As indicated
 SHEET FROM: AREA A REFLECTED CEILING DEMO PLAN

PROJECT NUMBER 15883.00
CD A100A
DRAWING NUMBER

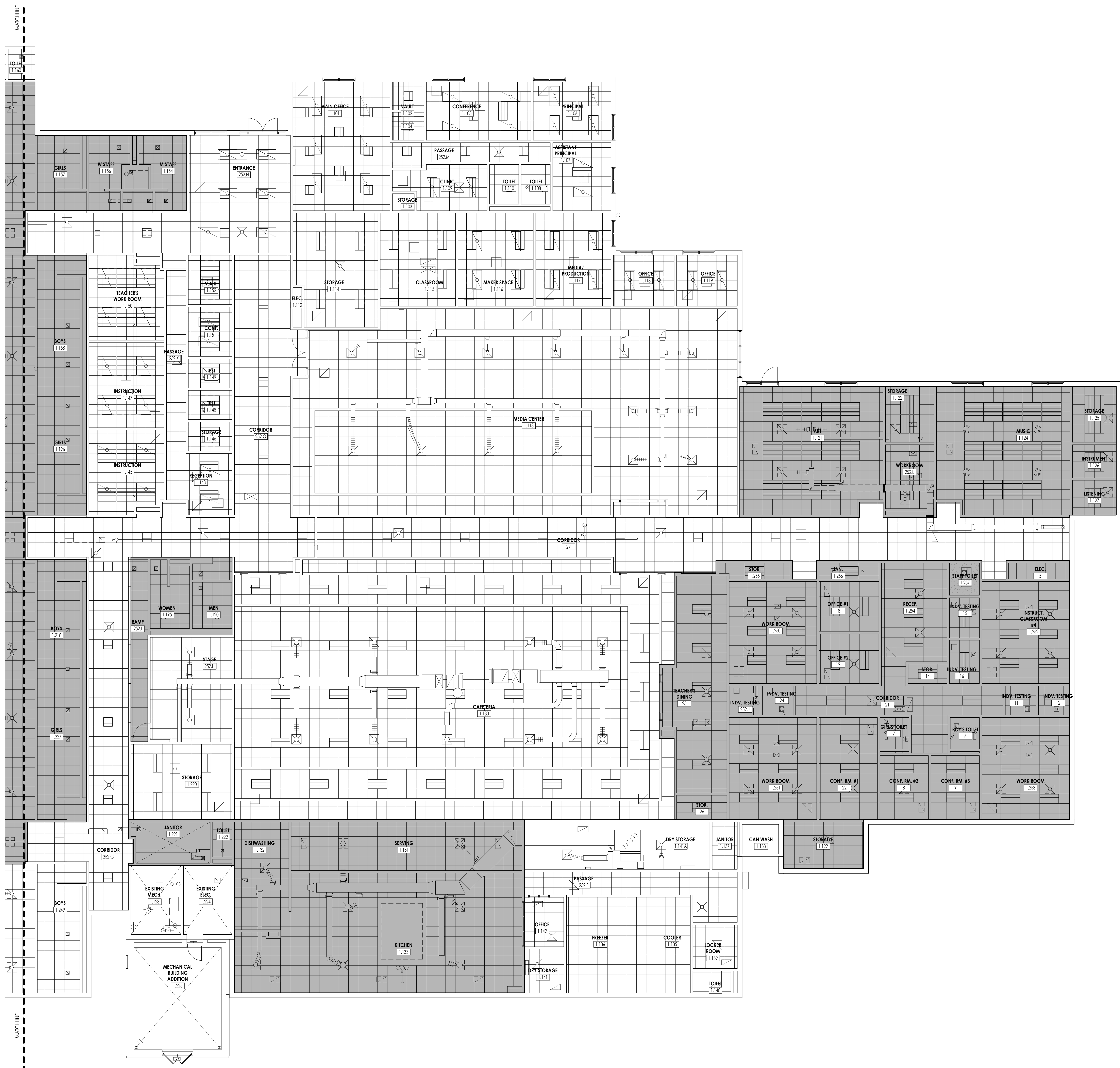
DEMOLITION GENERAL NOTES

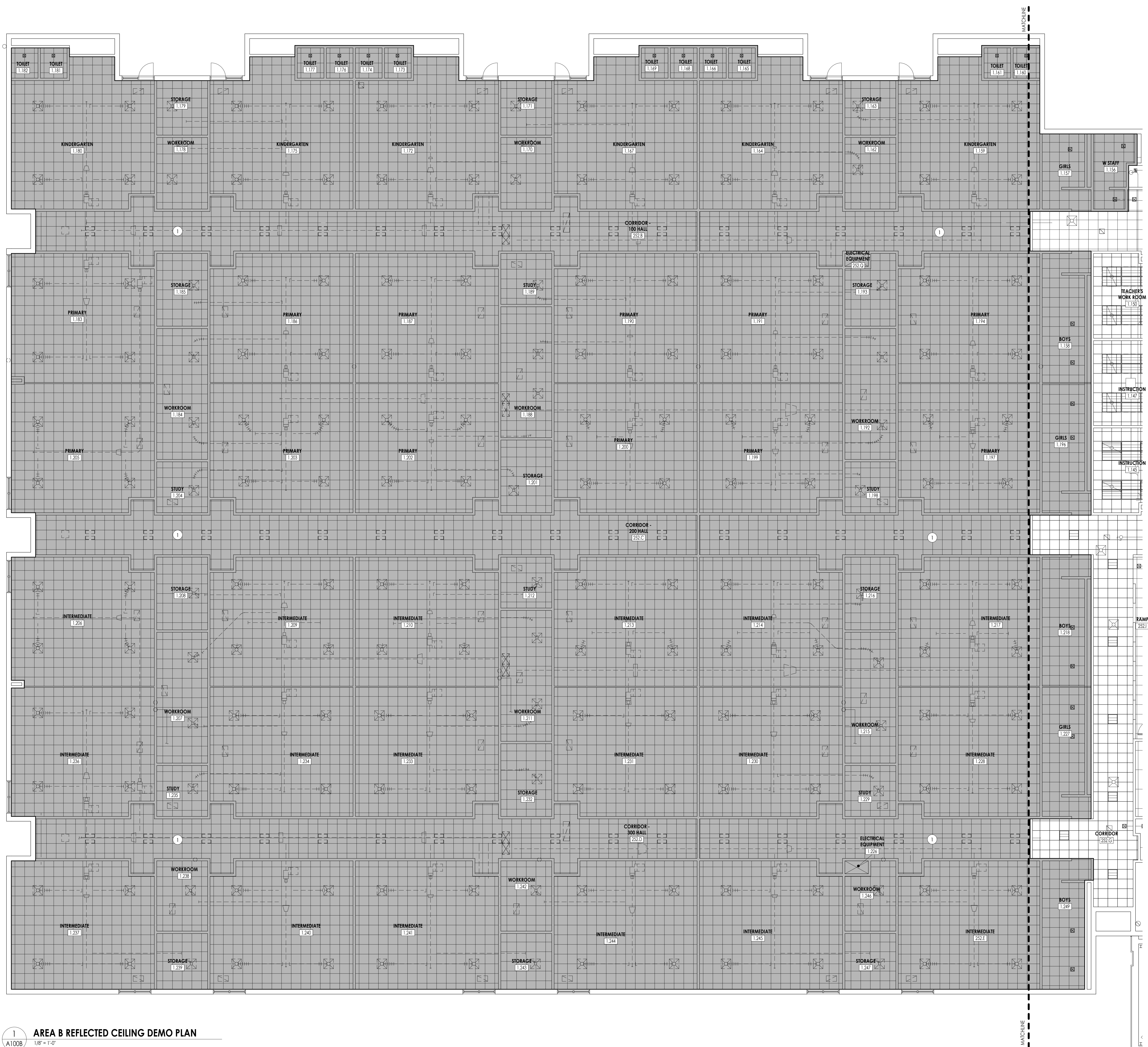
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH ALL DETAILS INVOLVED IN THE DEMOLITION WORK. SPECIFIC INSTRUCTION ON EACH ITEM WILL NOT BE GIVEN.
- CONTRACTOR IS RESPONSIBLE FOR KEEPING BUILDING WEATHERTIGHT DURING DEMOLITION WORK.
- CONTRACTOR IS TO PROVIDE DUST CONTROL BARRIERS AT ALL AREAS OF CONSTRUCTION.
- WALL PATCHING: WHERE ELECTRICAL, FA, OR HVAC DEVICES ARE REMOVED THE WALL SHALL BE PATCHED TO MATCH THE APPEARANCE AND COLOR OF THE EXISTING ADJACENT WALL FINISH.
NOTE: BLANK COVER PLATES ARE NOT ACCEPTABLE.
- WORK AREAS SHALL BE MAINTAINED AND LEFT BROOM CLEANED AT END OF EACH DAY.
- EXISTING BUILDING AND STRUCTURE TO REMAIN EXCEPT AS NOTED.
- ALL EXISTING LOOSE WIRES AND CABLES ABOVE THE EXISTING CEILING THAT ARE LOOPEO THROUGH THE STRUCTURE AND ACROSS THE TOP OF WALLS SHALL BE SECURED ABOVE THE CEILING AS THE EXISTING CEILING TILE AND GRID ARE REMOVED.
CAUTION: REFER TO SECTION "CUTTING AND PATCHING" - 01739.1 A.8.7 - COMMUNICATION AND DATA SYSTEM FOR REQUIREMENTS FOR DEALING WITH EXISTING FIBER & OTHER CABLES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIR AND REPLACEMENT COST INCURRED BY CCSD DUE TO CONTRACTOR'S FAILURE TO PROTECT AND SUPPORT EXISTING CABLES. REFER TO ELECTRICAL DRAWINGS SHEET #000. ELECTRICAL SYSTEM GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
- REFER TO SECTION 02 4119 FOR REQUIREMENTS CONCERNING THE FOLLOWING:
 - TESTING OF EXISTING SYSTEMS.
 - FLOOR PROTECTION.
 - OWNER OCCUPANCY.
 - TEMPORARY BARRICADES.
 - WATER SOURCE HEAT PUMPS INSTALLATION.
 - SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC EXISTING MATERIALS.
 - EXISTING RTU'S
 - LIGHT FIXTURES
 - CAMERAS AND ALERT POINT HUBS
 - MISCELLANEOUS CEILING MOUNTED ITEMS
 - CONTRACTOR SHALL REMOVE ALL LOOSE FURNITURE, ETC.**
- REFER TO G001 FOR SECTION THRU WALL PATCHES AND PENETRATIONS IN EXISTING IHR FIRE WALLS AND FOR PATCHING AND PENETRATION NOTES.

DEMOLITION LEGEND



AREA A REFLECTED CEILING DEMOLITION PLAN
 1/8" = 1'-0"
 PROJECT NORTH





- ### DEMOLITION GENERAL NOTES
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH ALL DETAILS INVOLVED IN THE DEMOLITION WORK. SPECIFIC INSTRUCTION ON EACH ITEM WILL NOT BE GIVEN.
 - CONTRACTOR IS RESPONSIBLE FOR KEEPING BUILDING WEATHERTIGHT DURING DEMOLITION WORK.
 - CONTRACTOR IS TO PROVIDE DUST CONTROL BARRIERS AT ALL AREAS OF CONSTRUCTION.
 - WALL PATCHING: WHERE ELECTRICAL, FA, OR HVAC DEVICES ARE REMOVED THE WALL SHALL BE PATCHED TO MATCH THE APPEARANCE AND COLOR OF THE EXISTING ADJACENT WALL FINISH.
NOTE: BLANK COVER PLATES ARE NOT ACCEPTABLE.
 - WORK AREAS SHALL BE MAINTAINED AND LEFT BROOM CLEANED AT END OF EACH DAY.
 - EXISTING BUILDING AND STRUCTURE TO REMAIN EXCEPT AS NOTED.
 - ALL EXISTING LOOSE WIRES AND CABLES ABOVE THE EXISTING CEILING THAT ARE LOOPED THROUGH THE STRUCTURE AND ACROSS THE TOP OF WALLS SHALL BE SECURED ABOVE THE CEILING AS THE EXISTING CEILING TILE AND GRID ARE REMOVED.
CAUTION: REFER TO SECTION "CUTTING AND PATCHING" - 01739.1.4.8.7 COMMUNICATION AND DATA SYSTEM FOR REQUIREMENTS FOR DEALING WITH EXISTING FIBER & OTHER CABLES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIR AND REPLACEMENT COST INCURRED BY CCSD DUE TO CONTRACTOR'S FAILURE TO PROTECT AND SUPPORT EXISTING CABLES. REFER TO ELECTRICAL DRAWINGS SHEET 0000. ELECTRICAL SYSTEM GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
 - REFER TO SECTION 02 41 19 FOR REQUIREMENTS CONCERNING THE FOLLOWING:
 - TESTING OF EXISTING SYSTEMS.
 - FLOOR PROTECTION.
 - OWNER OCCUPANCY.
 - TEMPORARY BARRICADES.
 - WATER SOURCE HEAT PUMPS INSTALLATION.
 - SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC EXISTING MATERIALS.
 - EXISTING RTUS
 - LIGHT FIXTURES
 - CAMERAS AND ALERT POINT HUBS
 - MISCELLANEOUS CEILING MOUNTED ITEMS
 - CONTRACTOR SHALL REMOVE ALL LOOSE FURNITURE, ETC.**
 - REFER TO G001 FOR SECTION THRU WALL PATCHES AND PENETRATIONS IN EXISTING THR FIRE WALLS AND FOR PATCHING AND PENETRATION NOTES.

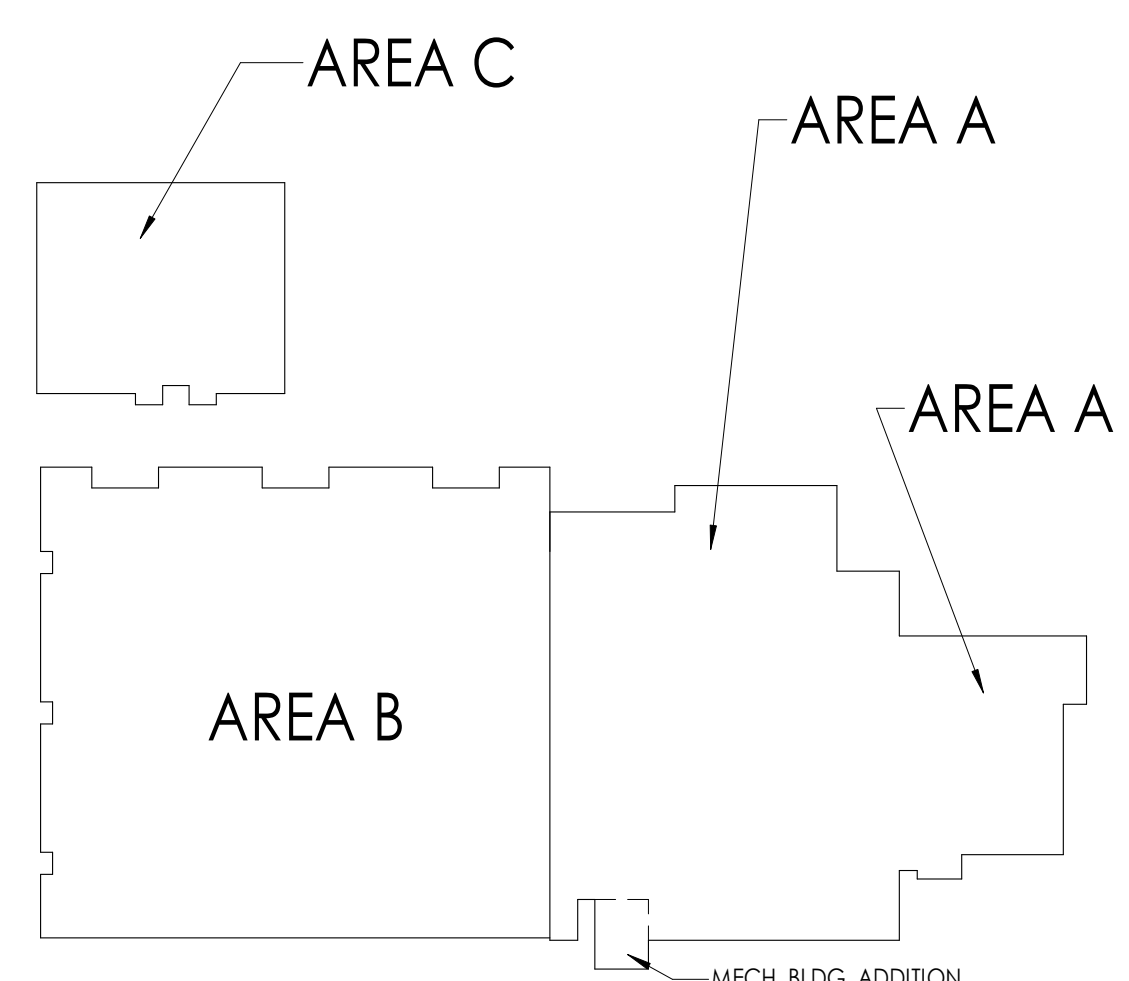
KEYNOTE LEGEND

① REMOVE, STORE AND REINSTALL CEILING HUNG SIGNS & STUDENT PAINTED CEILING TILES.

DEMOLITION LEGEND

EXISTING CEILING GRID & TILE TO REMAIN. REPLACE ANY TILE OR GRID DAMAGED DURING CONSTRUCTION.

EXISTING CEILING GRID & TILE TO BE DEMOLISHED.

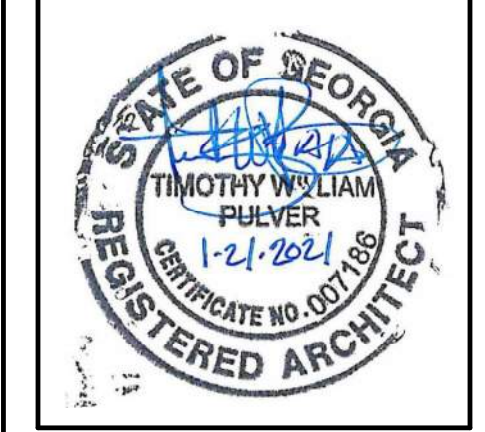


KEYPLAN
NTS
TRUE NORTH

1 AREA B REFLECTED CEILING DEMO PLAN
A100B
1/8" = 1'-0"

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Woodstock, Georgia, 30189
Tel: (800) 274-8000
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NO.	DATE	BY	CONTR.	DESCRIPTION



RELEASED FOR CONSTRUCTION

COBB COUNTY SCHOOL DISTRICT
ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
HVAC MODIFICATIONS 2021
3055 BENEZER ROAD NE
MARIETTA, GA 30066
BID SET SUBMITTAL - 12/15/2020

DATE	DRAWN	CHECKED
12/15/2020	Author	Checker

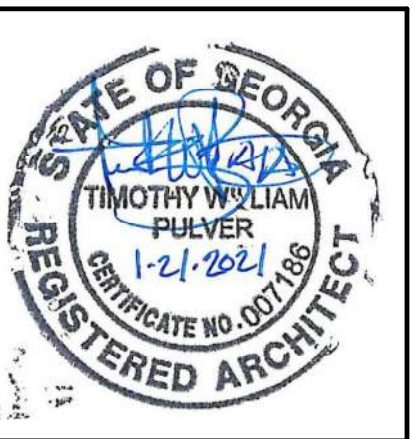
SCALE: As Indicated
SHEET FROM: AREA B REFLECTED CEILING DEMO PLAN

PROJECT NUMBER: 15883.00
CD
A100B
DRAWING NUMBER



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1	12/15/2020	NTS	REVISION SCHEDULE



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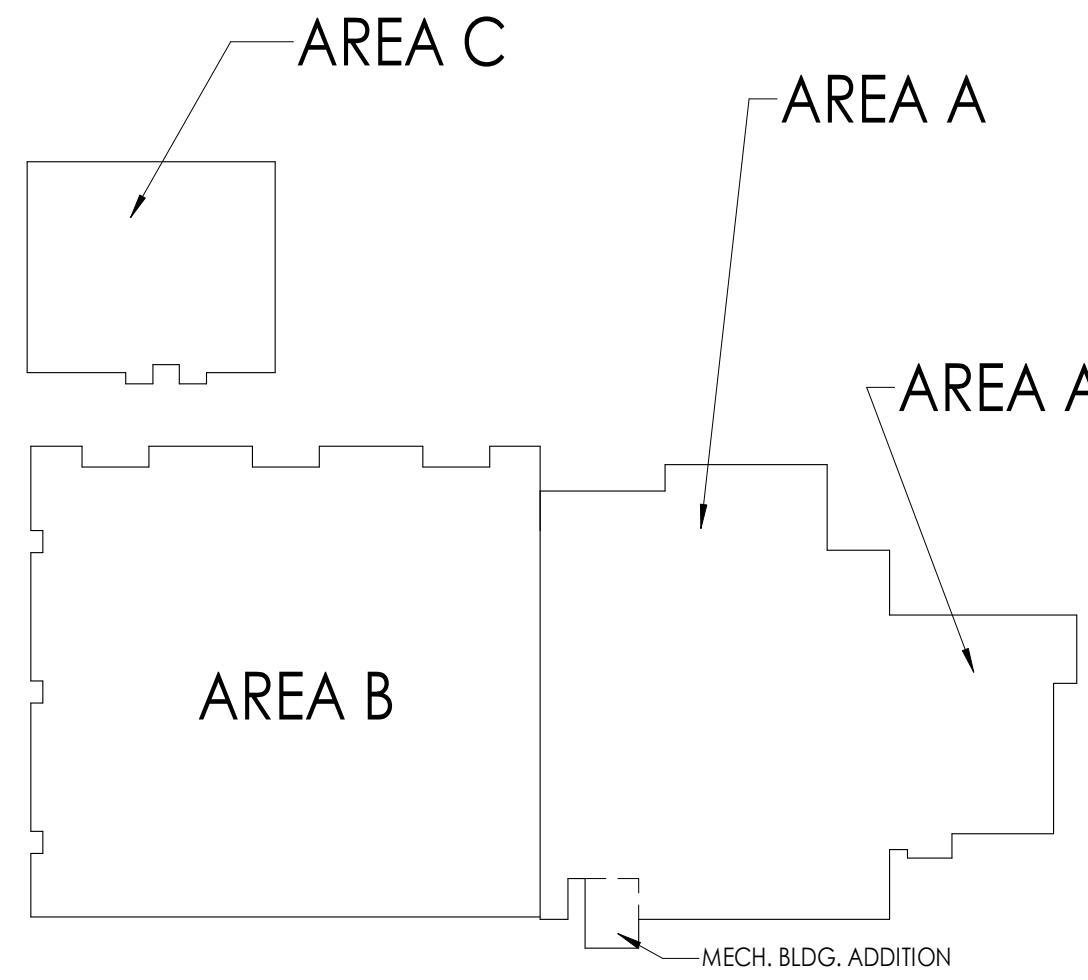
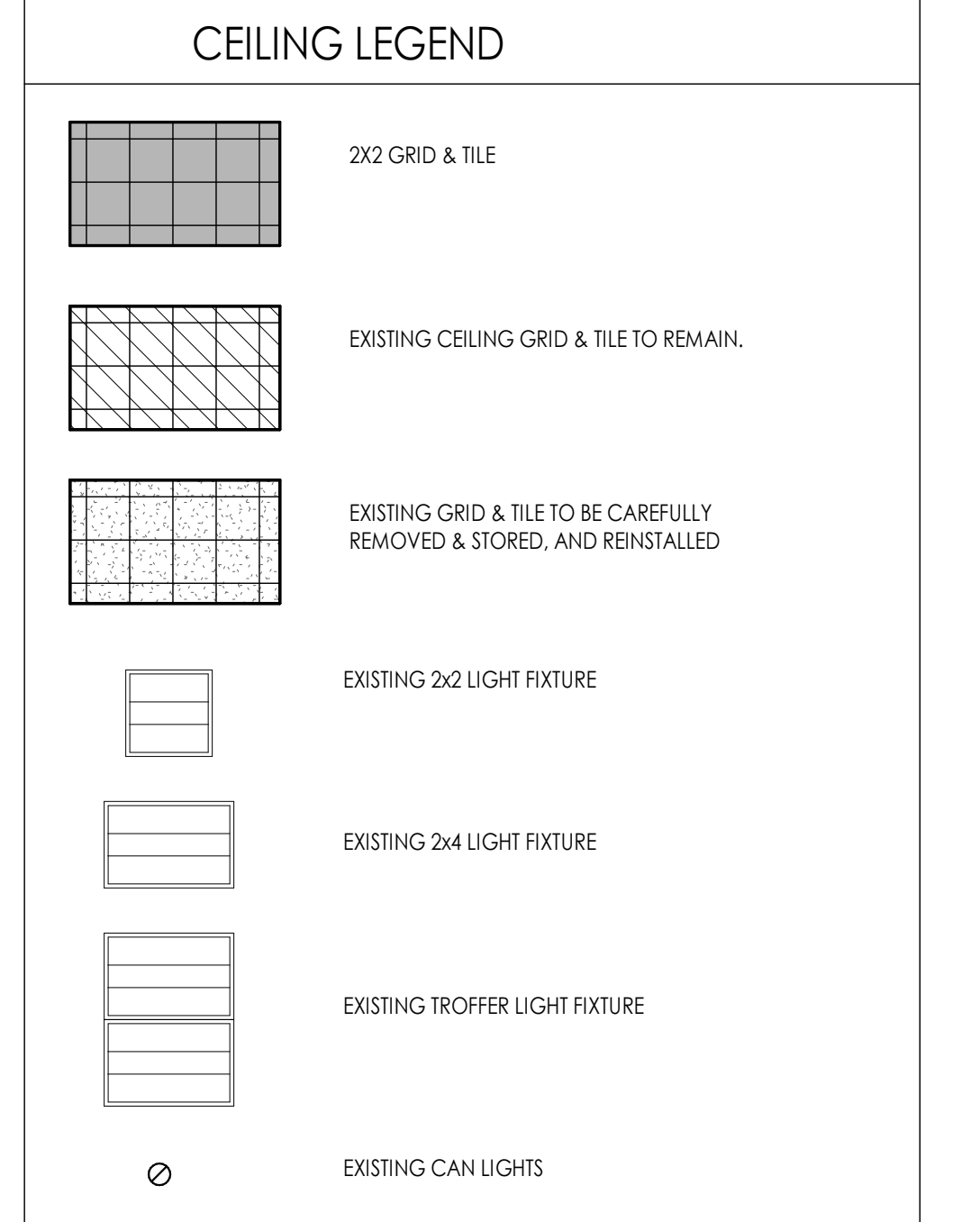
COBB COUNTY SCHOOL DISTRICT
 ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
 HVAC MODIFICATIONS 2021
 3055 BENEZER ROAD NE
 MARIETTA, GA 30066
 BID SET SUBMITTAL - 12/15/2020

DATE	DRAWN	CHECKED
12/15/2020	Author	Checker
SCALE	As indicated	
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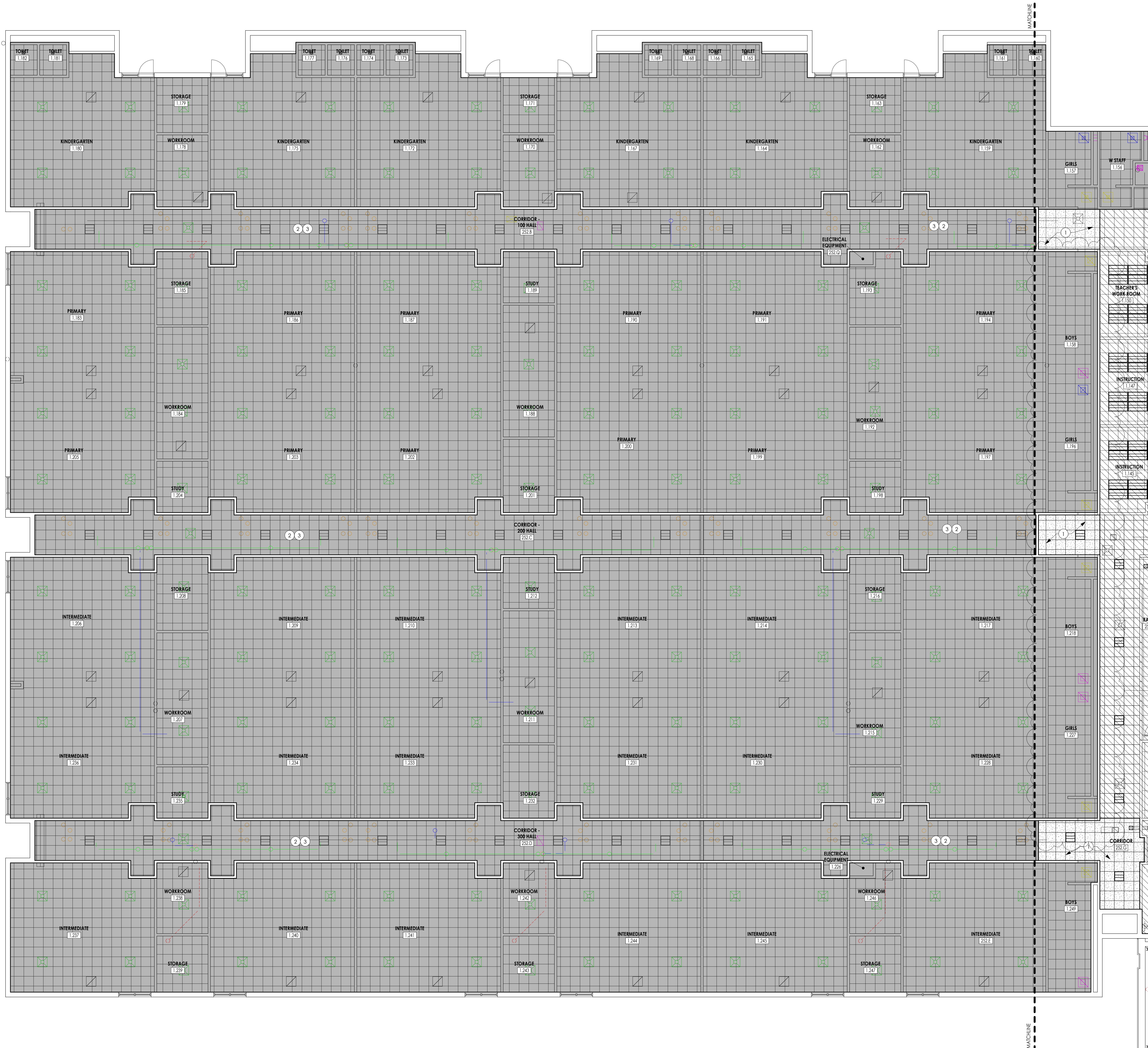
PROJECT NUMBER	15883.00
CD	A201B
DRAWING NUMBER	

- ### GENERAL CEILING NOTES
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIRE STOP MECHANICAL, ELECTRICAL AND PLUMBING ITEMS, INCLUDING BUT NOT LIMITED TO DUCTWORK AND CONDUIT PENETRATIONS THROUGH EXISTING CORRIDOR WALLS.
 - THE CONTRACTOR SHALL COORDINATE CEILING INSTALLATIONS WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
 - REFER TO 'H' SERIES DRAWINGS FOR DIFFUSERS AND GRILLE LOCATIONS.
 - WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE LEFT BROOMED CLEAN AT THE END OF EACH DAY.
 - CENTER CEILING GRID (JEACH WAY) IN ROOMS SCHEDULED TO RECEIVE ACOUSTICAL CEILING SYSTEMS UNLESS OTHERWISE NOTED.
 - CONTRACTOR TO VERIFY WITH ARCHITECT THE INSTALLATION OF ANY CEILING TILES LESS THAN 4" IN WIDTH.
 - WHERE APPLICABLE ALL FIXTURES AND DEVICES SHALL BE CENTERED IN A CEILING TILE.
 - INSTALL NEW METAL ANGLE EDGE MOLDING IN EXACTLY THE SAME LOCATION AS THE EXISTING DEBASED EDGE MOLDING.
 - REINSTALL ALL EXISTING SPEAKERS, POWER RECEPTACLES, AND OTHER DEVICES LOCATED IN EXISTING CEILING SYSTEMS INTO NEW CEILING SYSTEMS. TYPICAL ADJUST HEIGHT OF EQUIPMENT AS NECESSARY. REFER TO ELECTRICAL DRAWINGS SHEET E000, ELECTRICAL SYSTEM GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
 - TRIM NEW CEILING TILE & GRID SYSTEM TO FIT TIGHTLY AROUND EXISTING ITEMS PENETRATING NEW CEILING SYSTEM, INCLUDING BUT NOT LIMITED TO: PIPES, DUCTWORK, POWER POLES, CHASES AND COLUMNS.
 - EXISTING SEISMIC ZONE TO ALL SCHOOL LOCATIONS IS 'CLASS C'; PROVIDE ATTACHMENT DEVICES FOR ALL NEW UTILITIES, EQUIPMENT, AND CEILING SYSTEMS THAT MEET THE SEISMIC ZONE REQUIREMENTS, TYPICAL.
 - WORK SHOWN ON THE DRAWING IS NEW UNLESS NOTED AS EXISTING.
 - INCLUDED IN THIS CONTRACT IS THE ADJUSTMENT OF ANY EXISTING SPRINKLER HEAD TO EXTEND CORRECTLY BELOW THE NEW CEILING TILE AND THE REPLACEMENT OF ANY MISSING SPRINKLER ESCUTCHEON PLATES.
 - RECONNECT SAFETY CHAINS WHEN REINSTALLING EXISTING LIGHT FIXTURES.
 - WHERE AN EXISTING SMOKE/HEAT DETECTOR IS DEMOED AND NOT REPLACED IN AREAS WHERE THE EXISTING CEILING GRID & TILE ARE TO REMAIN, THE CEILING TILE SHALL BE REPLACED.

- ### KEYNOTE LEGEND
- REMOVE, STORE & REINSTALL EXISTING CEILING GRID AND TILE AS NEEDED IN THE AREA OF WORK. REPLACE ANY DAMAGED TILE/ GRID.
 - REMOVE, STORE & REINSTALL CEILING HUNG SIGNS & STUDENT PAINTED CEILING TILES.
 - COORDINATE MAIN CEILING TEES & CROSS TEES LOCATIONS WITH HVAC SUBCONTRACTOR AS REQUIRED FOR WSP ACCESS. REFER TO 1/801 WSP DETAILS.



KEYPLAN
 NTS



1
A201B
AREA B REFLECTED CEILING PLAN
 1/8" = 1'-0"

C:\Users\kcoruberg\Documents\Addison Elementary School RFI2_2020\Area A.rvt



1
A210A
AREA A ROOF PLAN
1/8" = 1'-0"

- ### ROOF PLAN GENERAL NOTES
- ALL DRAWINGS ARE GRAPHIC REPRESENTATIONS OF APPROXIMATE LOCATIONS OF MATERIALS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK.
 - REFER TO THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND PLUMBING DRAWINGS FOR LOCATIONS OF ALL ROOF PENETRATIONS. PROVIDE FRAMING AS REQUIRED. REFER TO STRUCTURAL DWGS.
 - WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE BROOM CLEAN AT THE END OF EACH DAY.
 - ALL WOOD BLOCKING USED SHALL BE PRESSURE TREATED TO INCREASE CURB HEIGHTS AS REQUIRED.
 - THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN WATER TIGHTNESS AND PROVIDE PROTECTION AT ANY (ALL) OPENINGS IN THE ROOF LEFT AT THE END OF EACH DAY.
 - PROVIDE CRICKETS FOR WATER DIVERSION AT ALL CURBS, RAIS, ETC. WHICH RUN PERPENDICULAR TO THE SLOPE OF THE INSULATION/SLOPED STRUCTURE & USE ROOF MATERIALS THAT MATCH THE TYPE OF THE ADJACENT EXISTING ROOF.
 - ALL ROOF TOP UNITS SHALL BE MOUNTED ON 18" MIN. INSULATED METAL CURBS. PROVIDE TAPERED INSULATION CRICKETS AS REQUIRED TO SHED WATER. WOOD BLOCKING SHALL BE PROVIDED SO CURBS ARE 12" ABOVE FINISHED ROOF SURFACE.
 - WORK SHOWN ON THE DRAWINGS IS NEW, UNLESS NOTED AS EXISTING.
 - SEE MECH. DRAWINGS FOR REQUIRED ROOF WORK, CURB REPLACEMENT/ MODIFICATIONS.

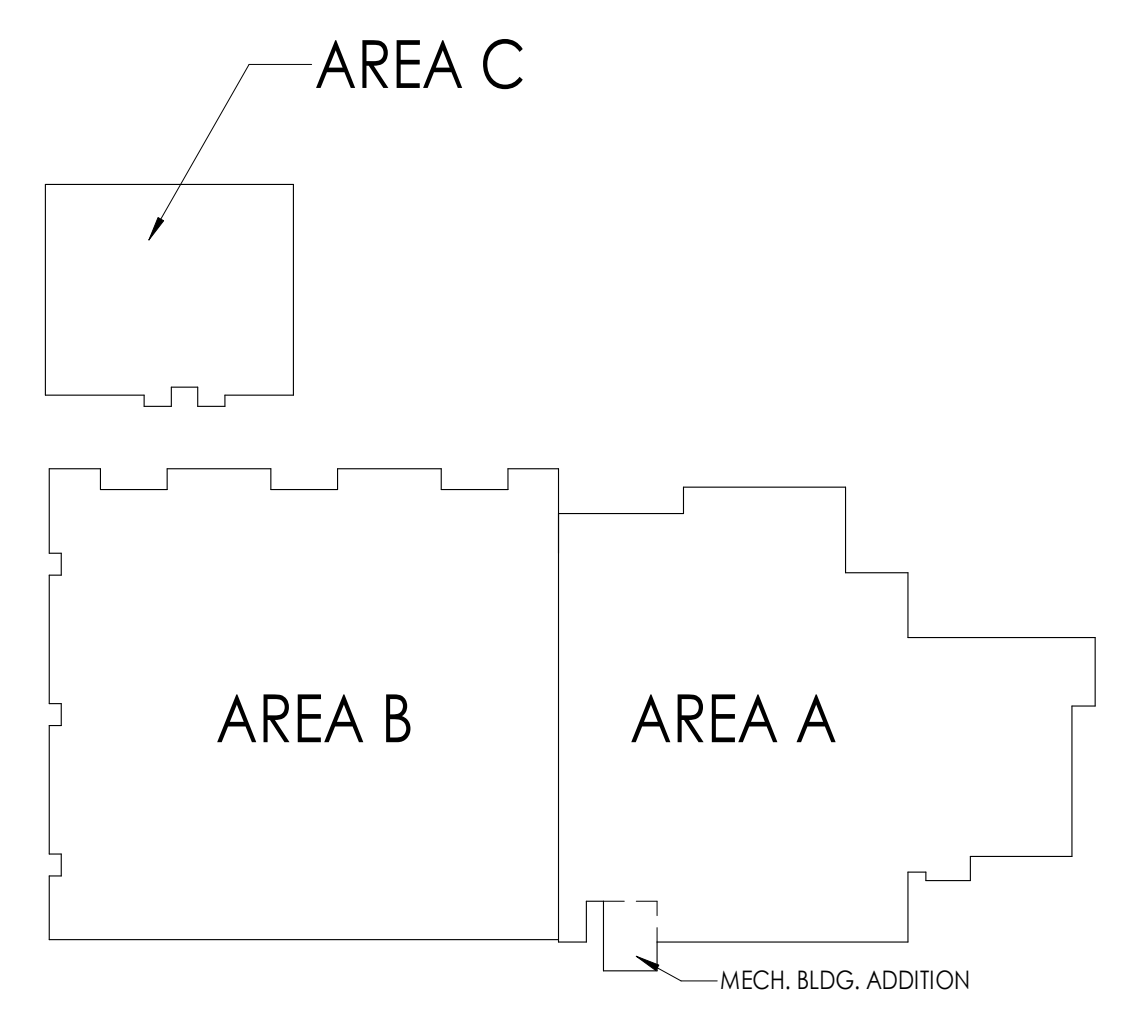
- ### KEYNOTE LEGEND
- REMOVE EXISTING HVAC EQUIPMENT AND CURBS. INSTALL NEW CURB AND HVAC EQUIPMENT. PATCH ROOF TO MATCH EXISTING. SEE MECH DWGS FOR EXTENT OF WORK.
 - CRICKET
 - PROVIDE NEW ROOF OPENING. COORDINATE WITH EXISTING STRUCTURAL JOISTS. INSTALL NEW CURB & PATCH ROOF TO MATCH EXISTING ROOF MATERIALS AND HEIGHT. REFER TO STRUCTURAL
 - REMOVE EXISTING EQUIPMENT RAIS & PATCH ROOF TO MATCH EXISTING
 - REMOVE EXISTING FITCH POCKET AND PATCH ROOF TO MATCH EXISTING. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
 - REMOVE EXISTING DRAISED FLEET AND PATCH ROOF TO MATCH EXISTING.

DEMOLITION LEGEND

ROOF AREA TO BE REPAIRED/INFILLED TO MATCH EXISTING ROOF, MATERIALS AND HEIGHT. REFER TO STRUCTURAL.

ROOF PLAN LEGEND

EX EXISTING ROOF TOP EQUIPMENT



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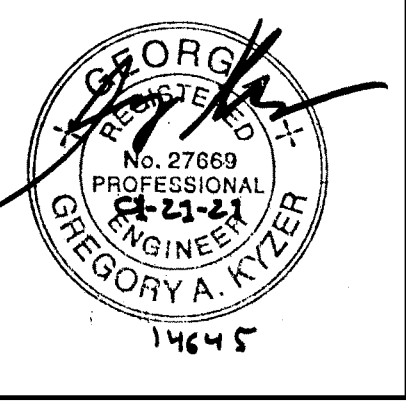
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COBB COUNTY SCHOOL DISTRICT
ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
HVAC MODIFICATIONS 2021
3055 EBENEZER ROAD NE
MARIETTA, GA 30066
BID SET SUBMITTAL - 12/15/2020

DATE	DRAWN	CHECKED
12/15/2020	Author	Checker
SCALE	As indicated	
DRAWN FROM	AREA A ROOF PLAN	

PROJECT NUMBER
15883.00
CD
A210A
DRAWING NUMBER

NO.	DATE	BY	CHKD	DESCRIPTION
1	10/27/2020	GAK		ISSUE FOR BIDDING



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COBB COUNTY SCHOOL DISTRICT
ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 433-0289)
HVAC MODIFICATIONS 2021
3035 EBENEZER ROAD NE
MARIETTA, GA 30066
BID SET SUBMITTAL - 12/15/2020

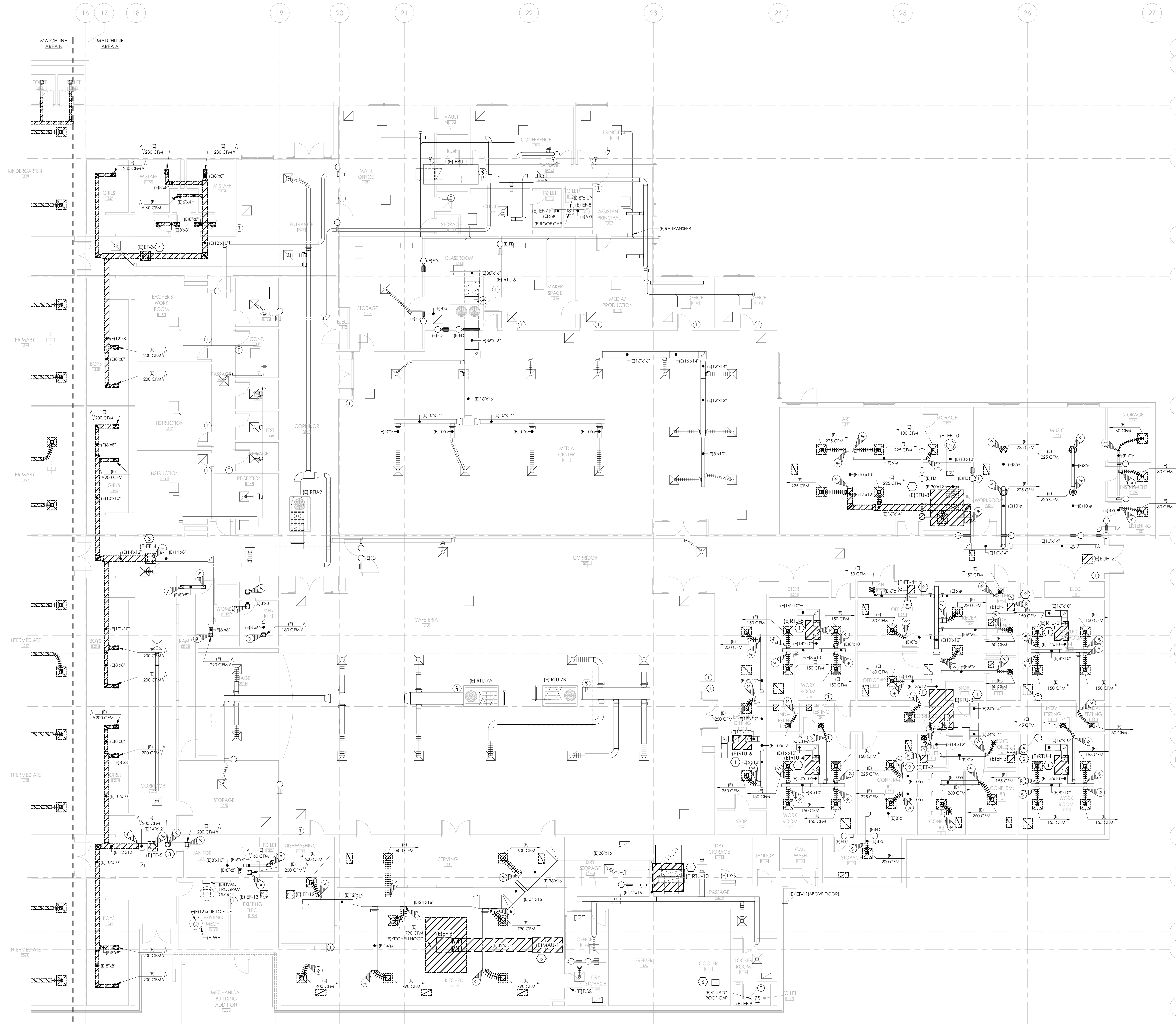
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12/15/2020	LBS	GAK

SCALE: As indicated
SHEET FROM: HVAC DEMOLITION PLAN - AREA A

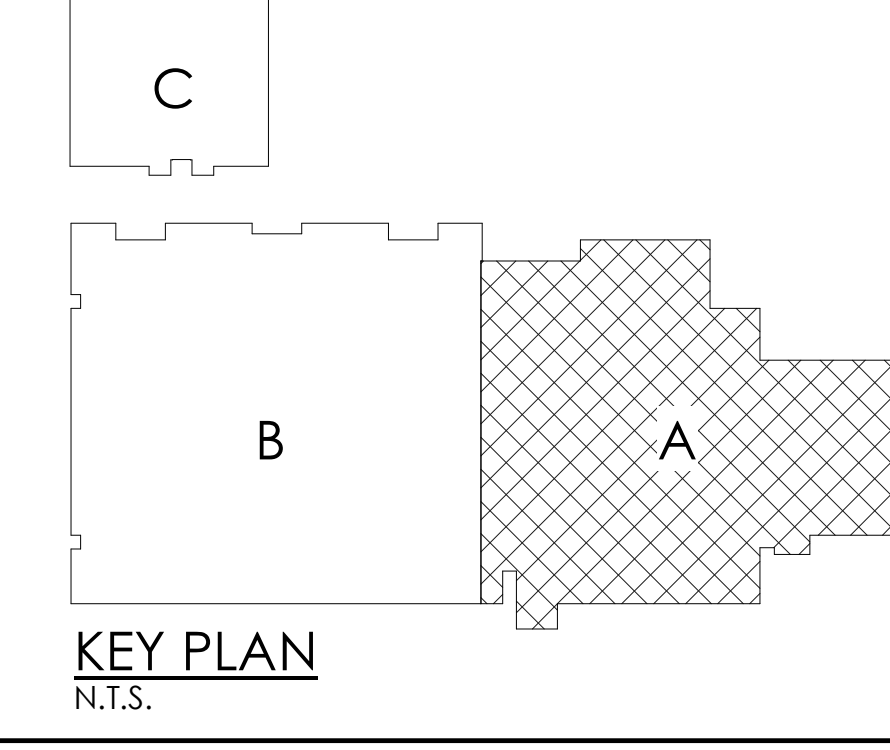
PROJECT NUMBER 14645.00
CD H100A
DRAWING NUMBER

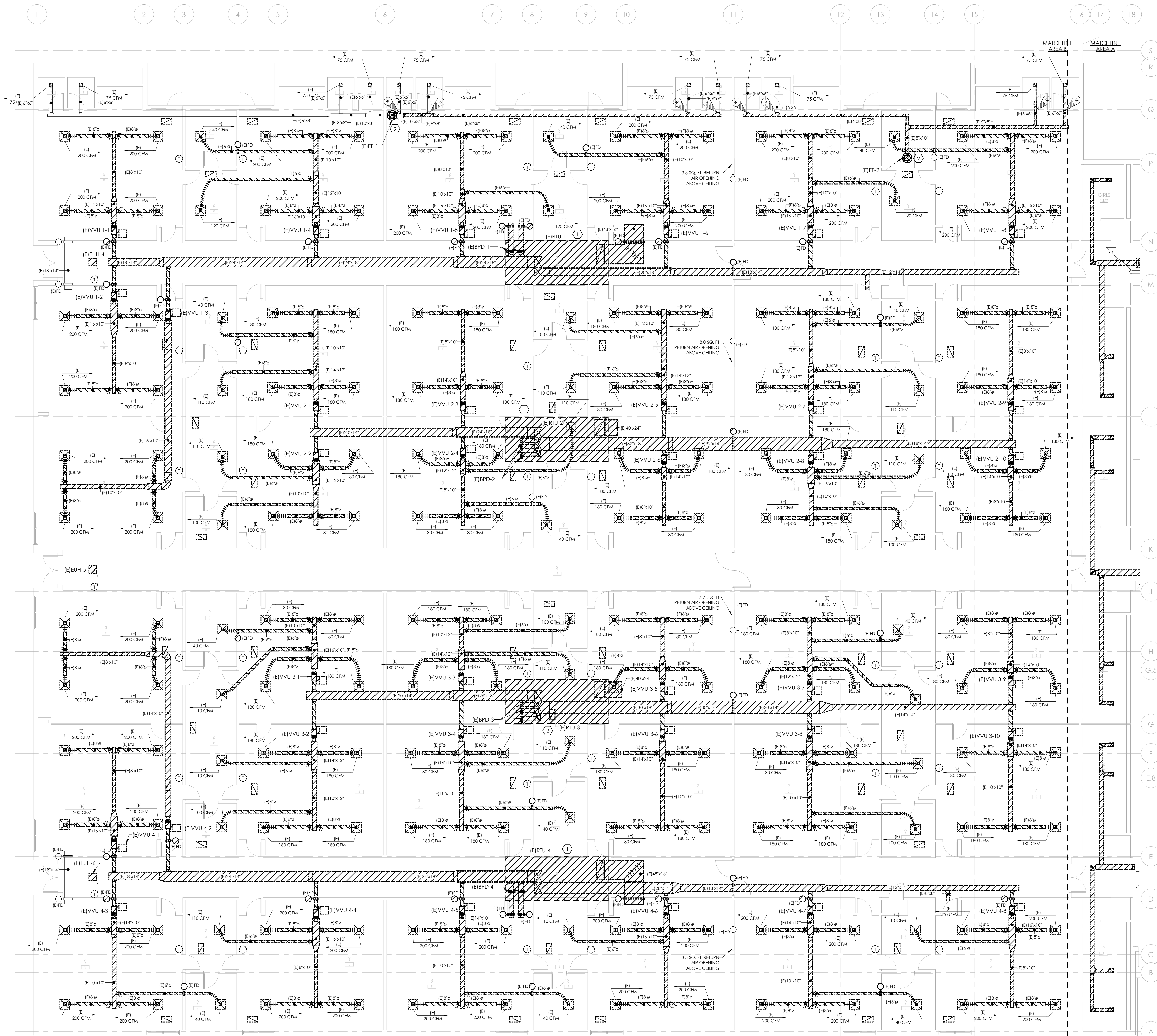
- DEMOLITION NOTES:**
- REMOVE EXISTING UNIT AND CURB. MODIFY EXISTING PENETRATION AS REQUIRED TO ACCEPT THE NEW CURB AND DUCTWORK DROP LOCATIONS. PATCH ROOF TO MATCH EXISTING.
 - REMOVE EXISTING CEILING MOUNTED EXHAUST FAN AND ASSOCIATED CONTROLS. NEW FAN TO BE CONNECTED TO EXISTING DUCTWORK/ROOF CAP.
 - REMOVE EXISTING ROOF MOUNTED EXHAUST FAN AND ASSOCIATED CONTROLS. PREPARE CURB FOR INSTALLATION OF NEW EXHAUST FAN.
 - REMOVE EXISTING ROOF MOUNTED EXHAUST FAN AND ASSOCIATED CONTROLS. CAP CURB WITH WEATHER TIGHT INSULATED CAP.
 - REMOVE EXISTING ROOF MOUNTED MAKEUP AIR UNIT AND CURB. PATCH ROOF TO MATCH EXISTING.
 - REMOVE EXISTING REFRIGERANT LINES FROM ROOF BACK TO SOURCE.

- PATCHING NOTES:**
- PATCH OPENING AT WALL OPENING WHERE EXISTING DUCTWORK IS DEMOLIED TO MATCH EXISTING WALL CONSTRUCTION AND FIRE RATINGS. TYPICAL. SEE ARCH FOR WALL SECTIONS.



HVAC DEMOLITION PLAN - AREA A
PROJECT NORTH
1/100A
1/8" = 1'-0"

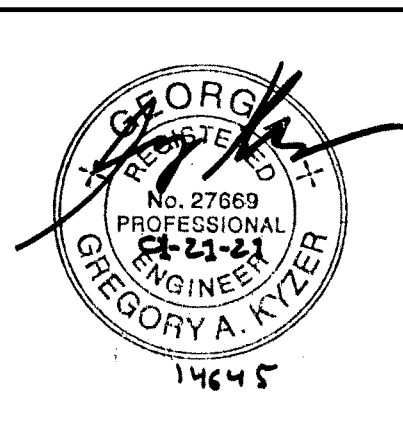




- DEMOLITION NOTES:**
- REMOVE EXISTING UNIT AND CURB. MODIFY EXISTING PENETRATION AS REQUIRED TO ACCEPT THE NEW CURB AND DUCTWORK DROP LOCATIONS. PATCH ROOF TO MATCH EXISTING.
 - REMOVE EXISTING UNIT AND CURB. INFILL/PATCH ROOF TO MATCH EXISTING.
- GENERAL NOTES:**
- DUCTWORK CONFIGURATION MAY BE DIFFERENT FROM SHOWN VERIFY EXISTING DUCTWORK CONNECTIONS IN FIELD.
 - ALL DEMOLITION OF HVAC EQUIPMENT SHALL BE EXECUTED ON THE GROUND. AT NO TIME DURING THE JOB SHALL EQUIPMENT BE DISMANTLED AND/OR DEMOLISHED ON THE ROOF OF A BUILDING.
 - WALL PATCHING: WHERE HVAC DEVICES ARE REMOVED, THE WALL SHALL BE PATCHED TO MATCH THE APPEARANCE AND COLOR OF THE EXISTING ADJACENT WALL FINISH. NOTE: BLANK COVER PLATES ARE NOT ACCEPTABLE.
- PATCHING NOTES:**
- PATCH OPENING AT WALL OPENING WHERE EXISTING DUCTWORK IS DEMOLISHED TO MATCH EXISTING WALL CONSTRUCTION AND FIRE RATINGS, TYPICAL. SEE ARCH FOR WALL SECTIONS.

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Woodstock, Georgia, 30188
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COBB COUNTY SCHOOL DISTRICT
ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 433-0289)
HVAC MODIFICATIONS 2021
3035 EBENEZER ROAD NE
MARIETTA, GA 30066
BID SET SUBMITTAL - 12/15/2020

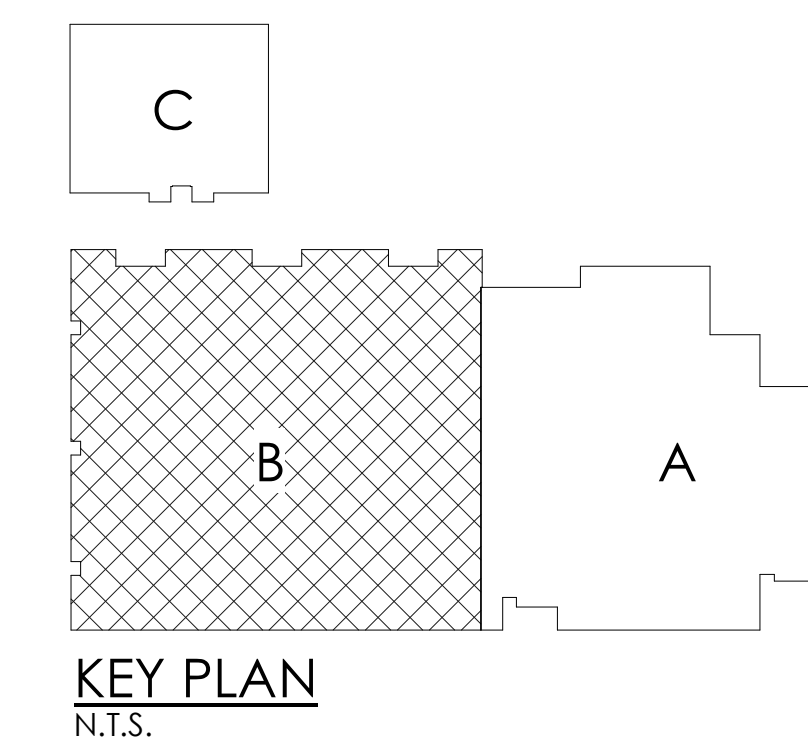
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12/15/2020	LBS	GAK

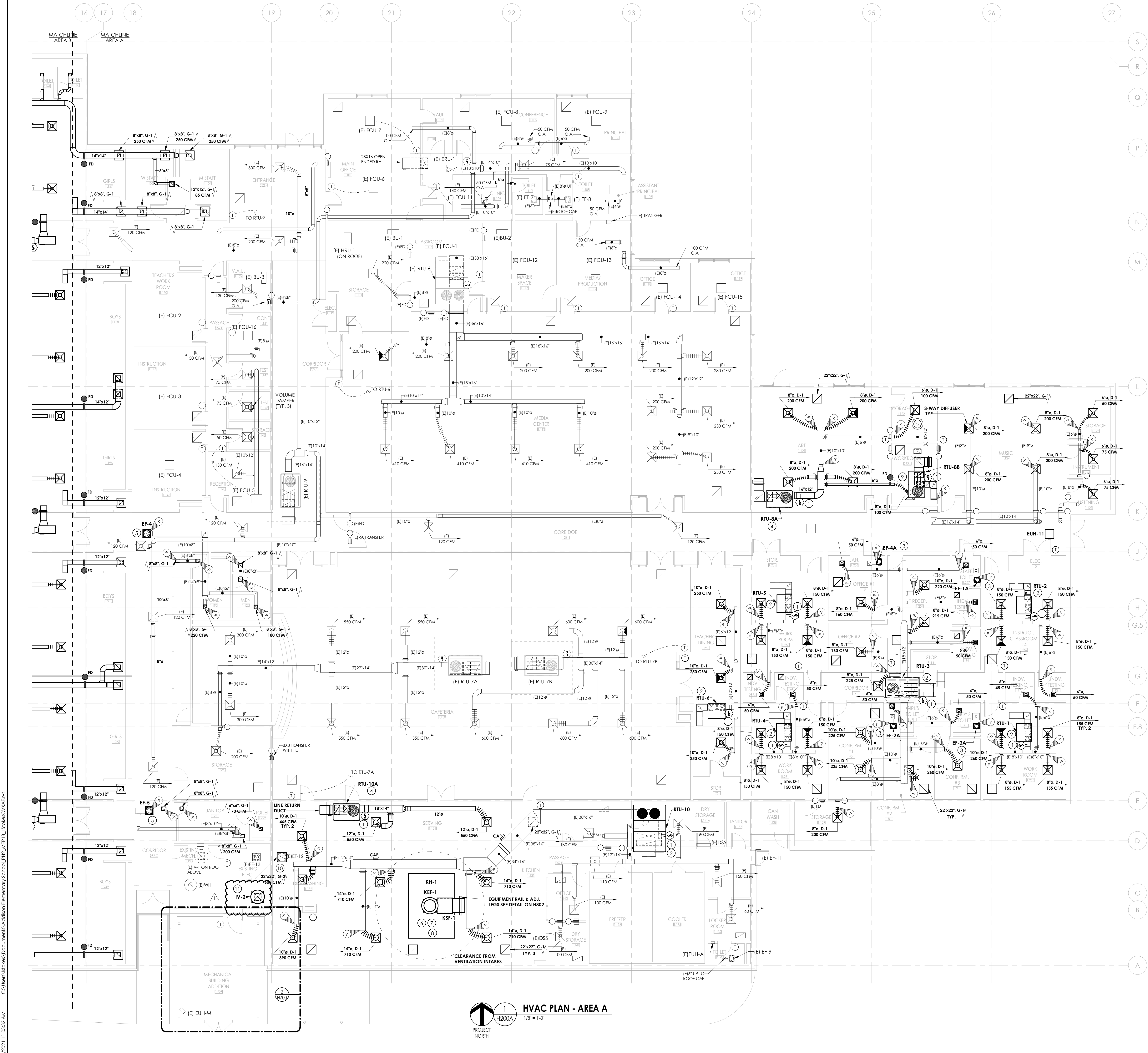
SCALE: As indicated
SHEET FROM: HVAC DEMOLITION PLAN - AREA B

PROJECT NUMBER: 14645.00
CD
H100B
DRAWING NUMBER

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HVAC DEMOLITION PLAN - AREA B
PROJECT H100B
1/8" = 1'-0"





HVAC PLAN - AREA A
 PROJECT H200A
 1/8" = 1'-0"
 NORTH

- KEY NOTES:**
- DUCT DETECTOR PROVIDED AND WIRED BY DIV. 28 INSTALLED BY DIV. 23. LOCATE IN SUPPLY DUCTWORK.
 - FIELD VERIFY EXISTING PENETRATION. MODIFY EXISTING PENETRATION AS REQUIRED FOR NEW UNIT CURBS. NEW PENETRATIONS MAY BE REQUIRED. INSTALL NEW CURB AND PATCH ROOFING TO MATCH EXISTING. TIE INTO EXISTING DUCTWORK. MODIFY/RECONFIGURE DUCTWORK AS NECESSARY TO MAKE PROPER CONNECTIONS TO NEW UNIT.
 - INSTALL NEW CEILING EXHAUST FAN. TIE INTO EXISTING DUCTWORK.
 - PROVIDE NEW ROOF OPENING. COORDINATE WITH EXISTING STRUCTURAL JOISTS. INSTALL NEW CURB AND PATCH ROOFING TO MATCH EXISTING.
 - INSTALL NEW EXHAUST FAN ON EXISTING CURB. TIE INTO EXISTING DUCTWORK.
 - NEW DUO-AIRE SHORT CIRCUIT DOUBLE ISLAND HOOD. 132" X 156" WITH FIRE SUPPRESSION SYSTEM. PROVIDE WITH LIGHTS AND STAINLESS STEEL GREASE FILTER. PROVIDE ALL NECESSARY STAINLESS SKIRT SECTIONS FOR A COMPLETE INSTALLATION. DUO-AIRE IS BASIS OF DESIGN. SEE DETAILS ON H802.
 - PROVIDE UL LISTED CONCENTRIC DUCT ASSEMBLY FOR EXHAUST/SUPPLY TO KITCHEN HOOD. IF THE UL LISTED CONCENTRIC DUCT ASSEMBLY IS USED FIRE WRAP IS NOT REQUIRED. IF SUBSTITUTION FROM BASIS OF DESIGN, GREASE DUCT SHALL BE WRAPPED WITH 2 LAYERS OF 3M FIRE BARRIER WRAP 20A OR APPROVED EQUAL PER MANUFACTURER'S INSTRUCTIONS.
 - PROVIDE PYROCHEM FIRE SUPPRESSION SYSTEM PIPING, SUPPRESSION AGENT AND CONTROLS NECESSARY FOR COMPLETE FIELD INSTALLATION. NOTE: BASE BID LOCATE SUPPRESSION CONTROL AGENT ON WALL IN EXISTING LOCATION. IF UDS ALTERNATE IS ACCEPTED LOCATE SUPPRESSION SYSTEM IN HOOD CABINET. BASE BID HOOD DOES NOT INCLUDE A FIRE CABINET.
 - FIELD VERIFY EXISTING PENETRATION AS REQUIRED FOR NEW UNIT CURB. INSTALL NEW CURB AND PATCH ROOFING TO MATCH EXISTING. RECONFIGURE DUCTWORK AS SHOWN TO SERVE MUSIC CLASSROOM.
 - INSTALL NEW GRILLE AND DUCTWORK AND TIE INTO EXISTING EXHAUST FAN ABOVE.
 - 12X12 INTAKE DUCT TO GRAVITY INTAKE VENTILATOR ON ROOF. PROVIDE AUTOMATIC AIR DAMPER IN DUCT (120V). DAMPER SHALL BE INTERLOCKED WITH EXHAUST FAN OPERATION.

- GENERAL NOTES:**
- MATERIALS EXPOSED WITHIN PLENUMS ARE REQUIRED TO BE NON-COMBUSTIBLE AND SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 AS DETERMINED IN ACCORDANCE WITH ASTM E 84.
 - ANY EXISTING EQUIPMENT, INCLUDING BUT NOT LIMITED TO SPRINKLER HEADS, AND PIPES, CONDUITS, CABLE TRAYS, WIRE, CABLES, WATER PIPES, GAS PIPES, ROOF DRAIN PIPES, OVER-FLOW PIPES, ETC., NEEDING TO BE RELOCATED TO ACCOMMODATE INSTALLATION OF HVAC EQUIPMENT AND REQUIRED CLEARANCES SHALL BE REINSTALLED AND CONNECTED WHEN WORK IS COMPLETE. RELOCATION AND RECONNECTION IS PART OF THE WORK OF THIS CONTRACT. REFER TO SECTION 02 4119.3.4 FOR ADDITIONAL REQUIREMENTS.
 - REPLACEMENT OF EXISTING ROOFTOP UNIT CURBS AND ANY ASSOCIATED REQUIRED ROOFING MODIFICATION, REPAIRS, OR PATCHING TO ACCOMMODATE THE INSTALLATION OF THE HVAC UNITS OR EQUIPMENT IS PART OF THE WORK OF THIS CONTRACT.

Clark Patterson Lee
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NO.	DATE	BY	CHK	DESCRIPTION
1	10/27/2020	LBS	GAK	ISSUE FOR PERMIT



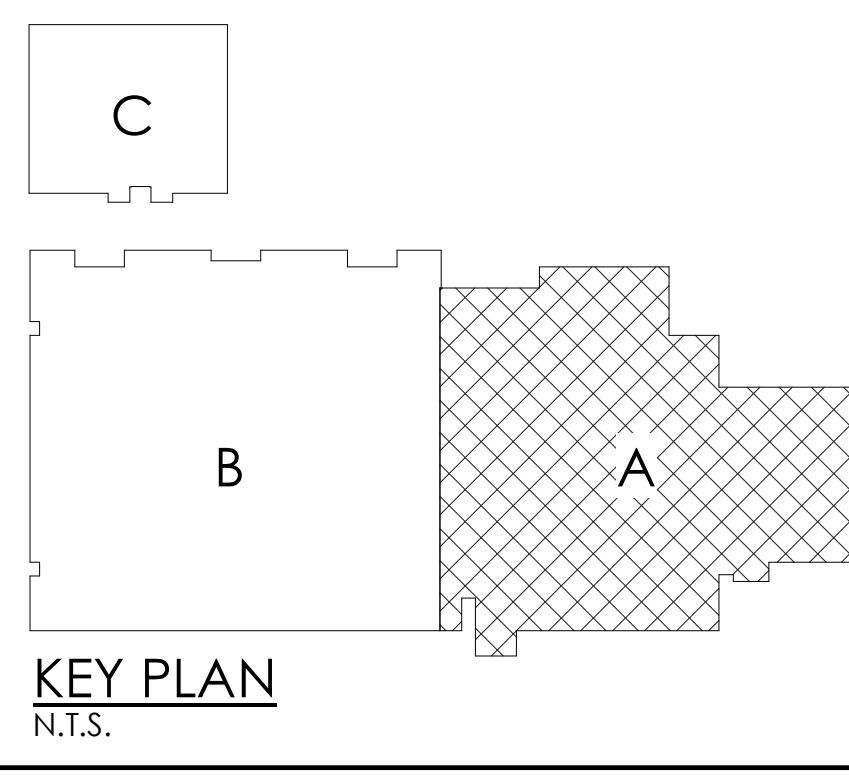
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COBB COUNTY SCHOOL DISTRICT
 ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
 HVAC MODIFICATIONS 2021
 3035 EBENEZER ROAD NE
 MARIETTA, GA 30066
 BID SET SUBMITTAL - 12/15/2020

DATE	DRAWN	CHECKED
12/15/2020	LBS	GAK

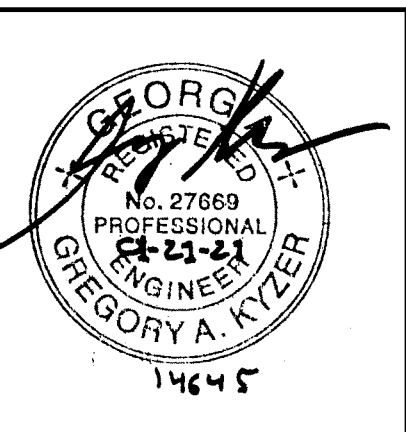
SCALE: As indicated
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PROJECT NUMBER: 14645.00
CD
 H200A
 DRAWING NUMBER



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NO.	DATE	BY	DESCRIPTION
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RELEASED FOR CONSTRUCTION

COBB COUNTY SCHOOL DISTRICT
ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
HVAC MODIFICATIONS 2021
3055 EBENEZER ROAD NE
MARIETTA, GA 30066
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DATE	DRAWN	CHECKED
12/15/2020	LBS	GAK
SCALE	As Indicated	
SHEET TITLE ENLARGED MECHANICAL ROOM PLANS		

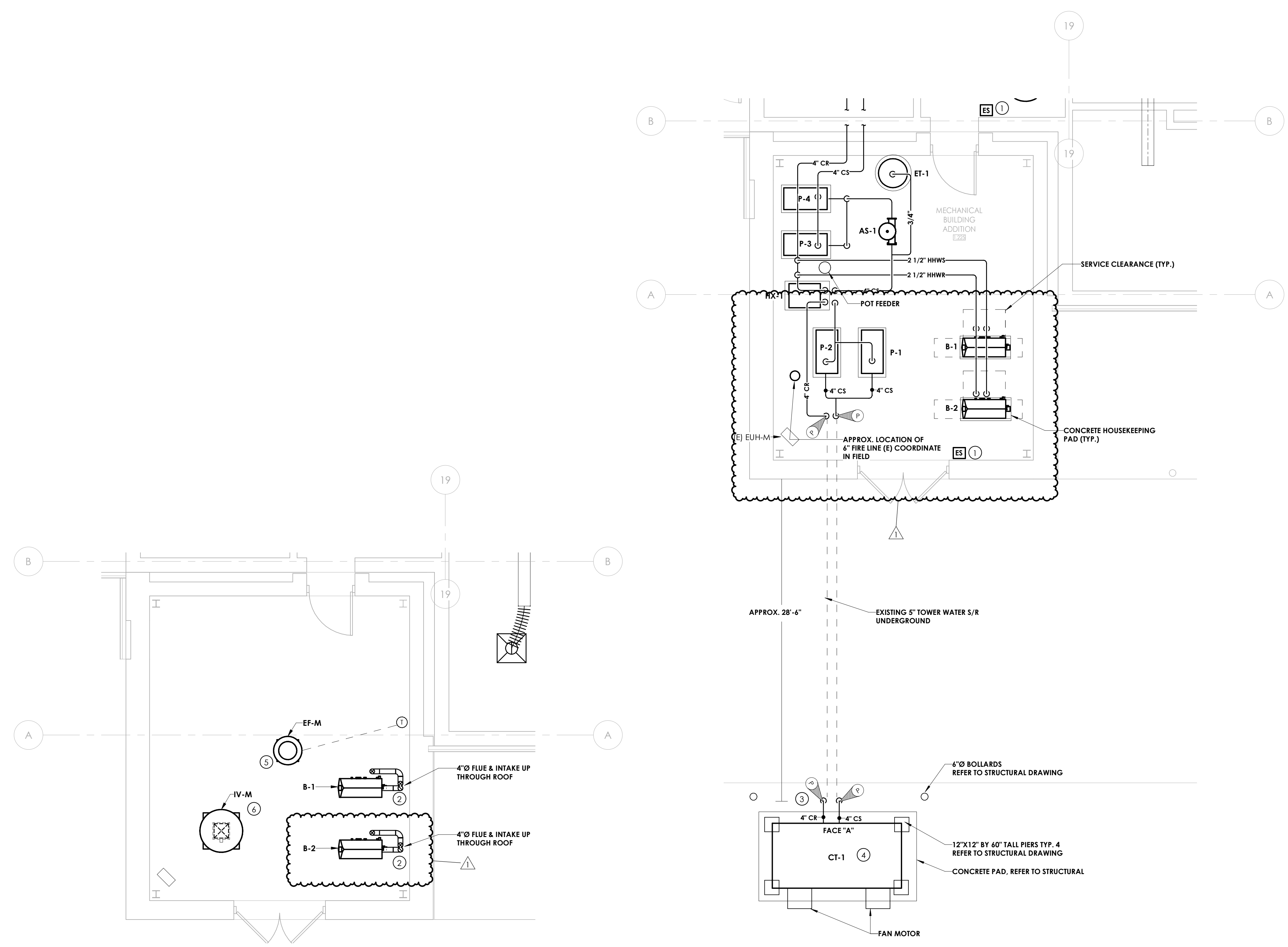
PROJECT NUMBER	14645.00
CD	
H700	
DRAWING NUMBER	

KEY NOTES:

- BOILER EMERGENCY STOP SWITCH, SWITCH SHALL SHUT-DOWN BOILERS AND SHUT-OFF GAS TO BOILERS. STOP SWITCH PROVIDED AND INSTALLED BY DIV. 26. COORDINATE INSTALLATION WITH DIV. 26.
- 4" Ø PVC FLUE AND INTAKE UP THROUGH ROOF. TERMINATE WITH MANUFACTURERS CONCENTRIC VENT KIT AND VENT CAP.
- HEAT TRACE PROVIDED AND INSTALLED UNDER DIV. 26. COORDINATE INSTALLATION WITH DIV. 26 SO THAT HEAT TRACE IS INSTALLED BEFORE PIPING INSULATION.
- INSTALL NEW COOLING TOWER ON CONCRETE PIERS AND STEEL FRAMING PER MANUFACTURER'S INSTRUCTIONS. REFER TO STRUCTURAL DRAWINGS FOR PIER AND FRAMING CONSTRUCTION. PIPE DRAIN AND OVERFLOW TO AREA DRAIN USING FULL SIZE CONNECTION. BASIN OF COOLING TOWER SHALL BE HIGHER THAN INLET OF PUMPS BY APPROX. 24".
- INSTALL NEW EXHAUST FAN ON NEW CURB. 12X12 DUCT UP TO EXHAUST FAN. TERMINATE BOTTOM OF DUCT APPROX. 24" BELOW ROOF WITH BUG SCREEN.
- 12X12 INTAKE DUCT TO GRAVITY INTAKE VENTILATOR ON ROOF. PROVIDE AUTOMATIC AIR DAMPER IN DUCT (120V). DAMPER SHALL BE INTERLOCKED WITH EXHAUST FAN OPERATION.

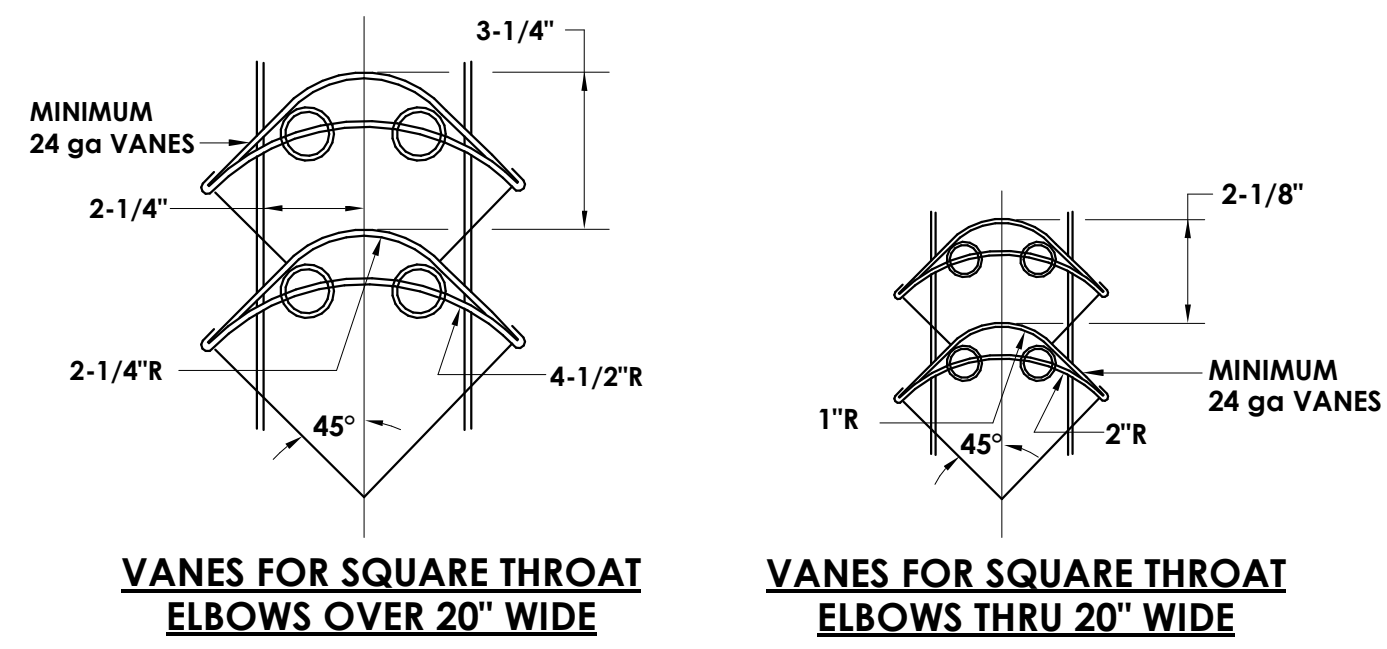
GENERAL NOTES:

- MATERIALS EXPOSED WITHIN PLENUMS ARE REQUIRED TO BE NON-COMBUSTIBLE AND SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 AS DETERMINED IN ACCORDANCE WITH ASTM E 84.
- ANY EXISTING EQUIPMENT, INCLUDING BUT NOT LIMITED TO SPRINKLER HEADS, AND PIPES, CONDUITS, CABLE TRAYS, WIRE, CABLES, WATER PIPES, GAS PIPES, ROOF DRAIN PIPES, OVER-FLOW PIPES, ETC., NEEDING TO BE RELOCATED TO ACCOMMODATE INSTALLATION OF HVAC UNITS AND REQUIRED CLEARANCES DURING CONSTRUCTION SHALL BE REINSTALLED AND CONNECTED WHEN WORK IS COMPLETE. RELOCATION AND RECONNECTION IS PART OF THE WORK OF THIS CONTRACT.
- INSTALLATION OF NEW CURBS AND ANY ASSOCIATED REQUIRED ROOFING MODIFICATION, REPAIRS, OR PATCHING TO ACCOMMODATE THE INSTALLATION OF THE HVAC UNITS OR EQUIPMENT IS PART OF THE WORK OF THIS CONTRACT.
- ALL CONDENSATE PIPING SHALL BE TYPE L COPPER.

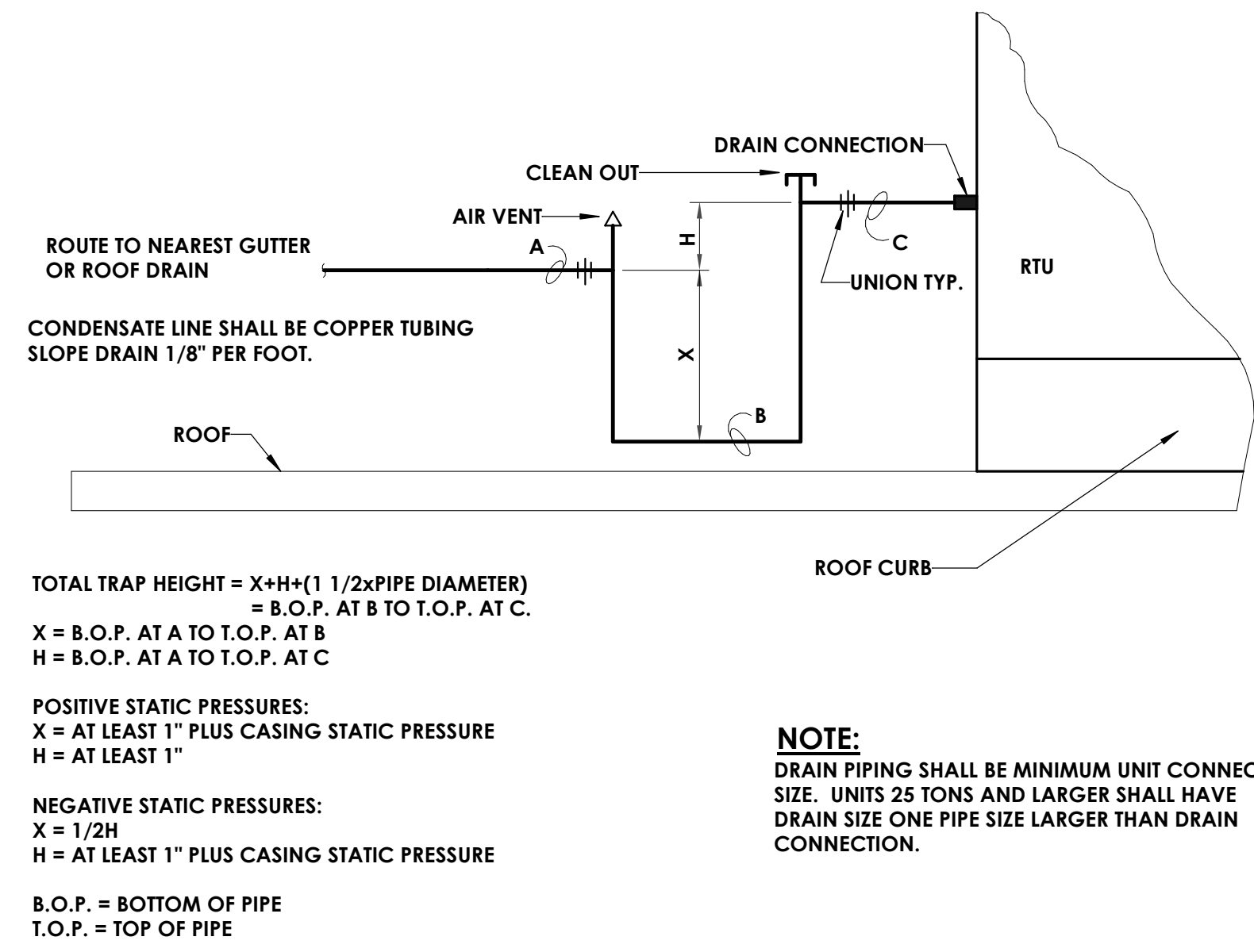


2 ENLARGED MECHANICAL ROOM DUCTWORK PLAN
1/4" = 1'-0"

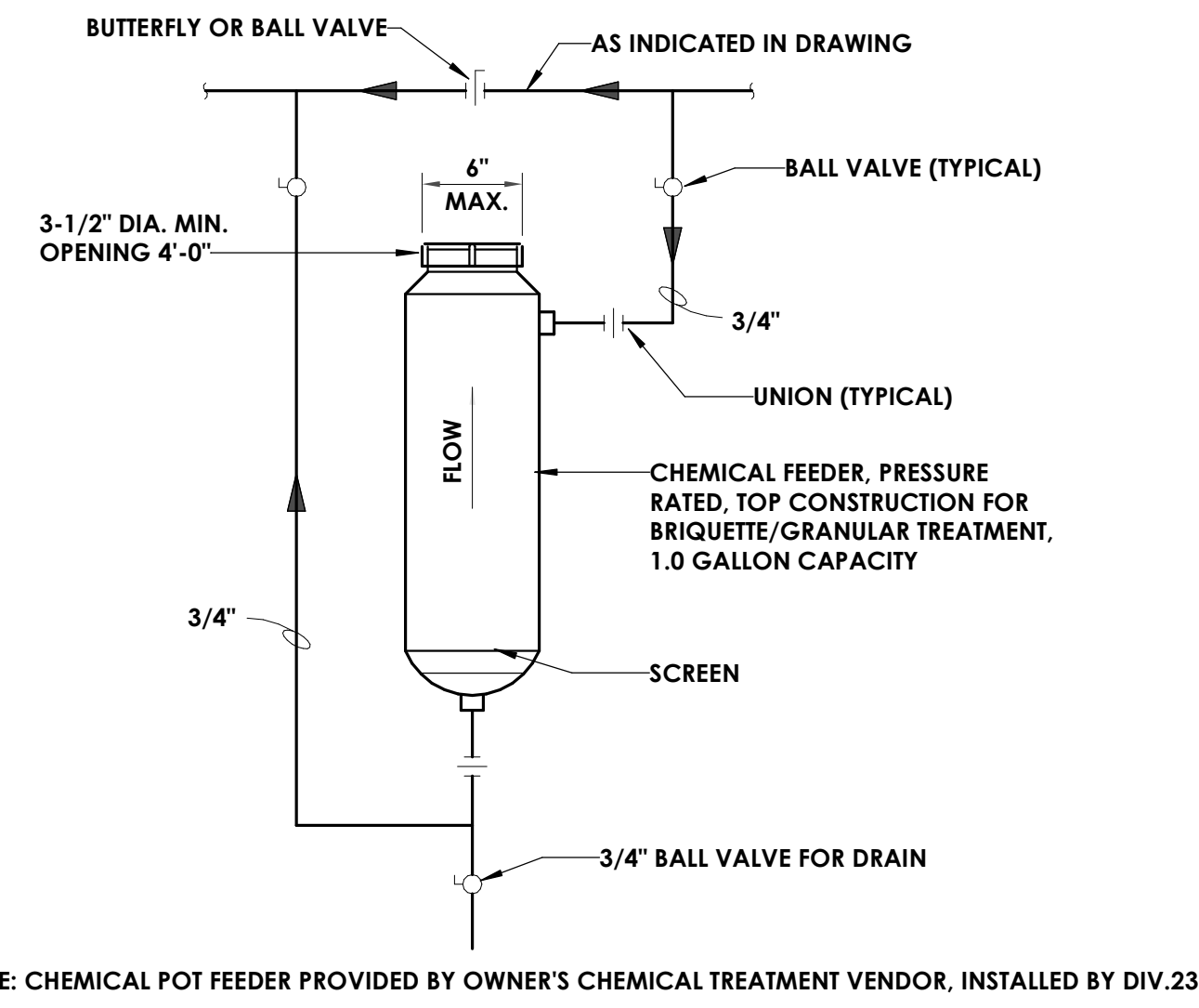
1 ENLARGED MECHANICAL ROOM PIPING PLAN
1/4" = 1'-0"



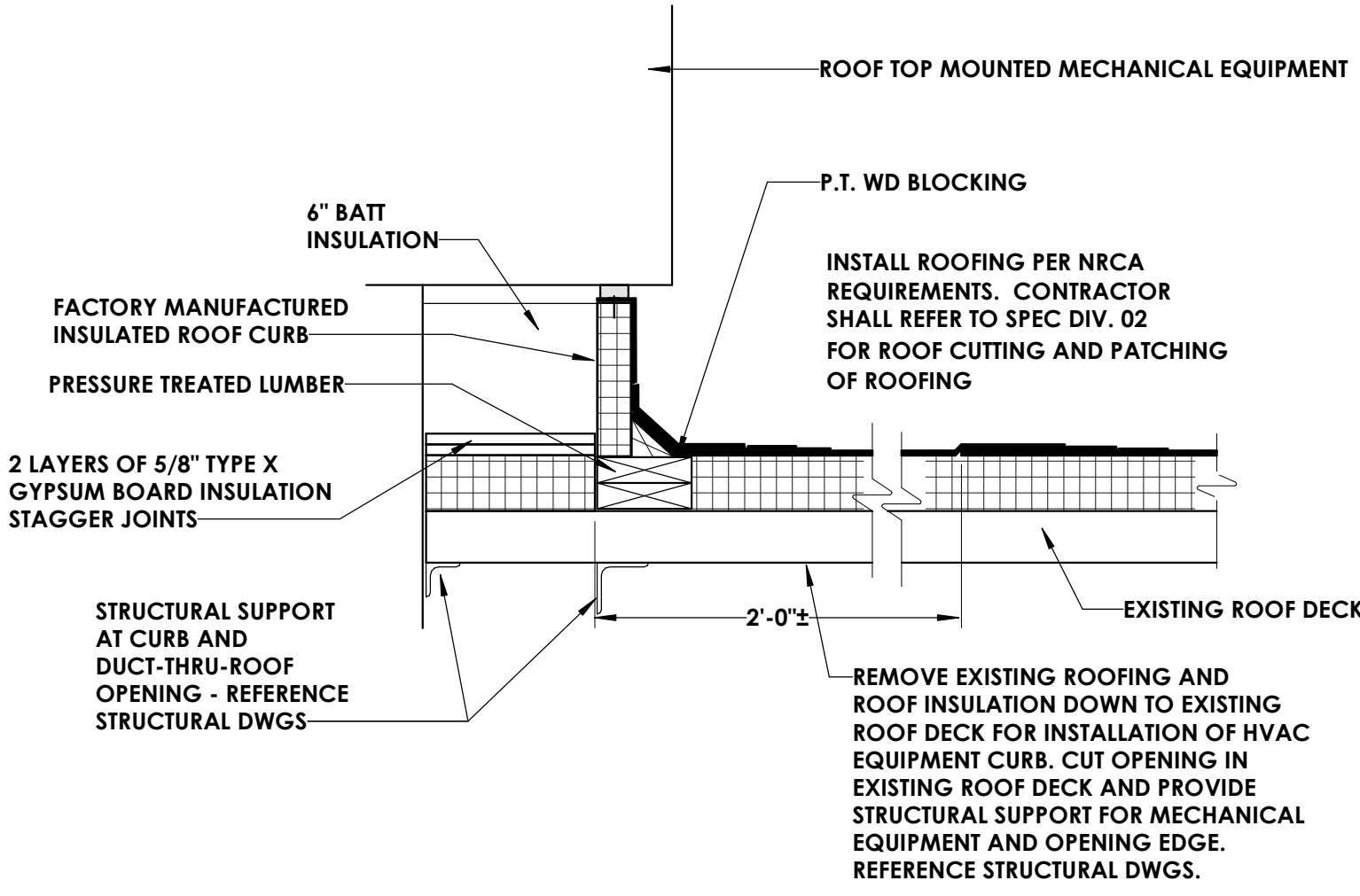
11
H800
TURNING VANES
N.T.S.



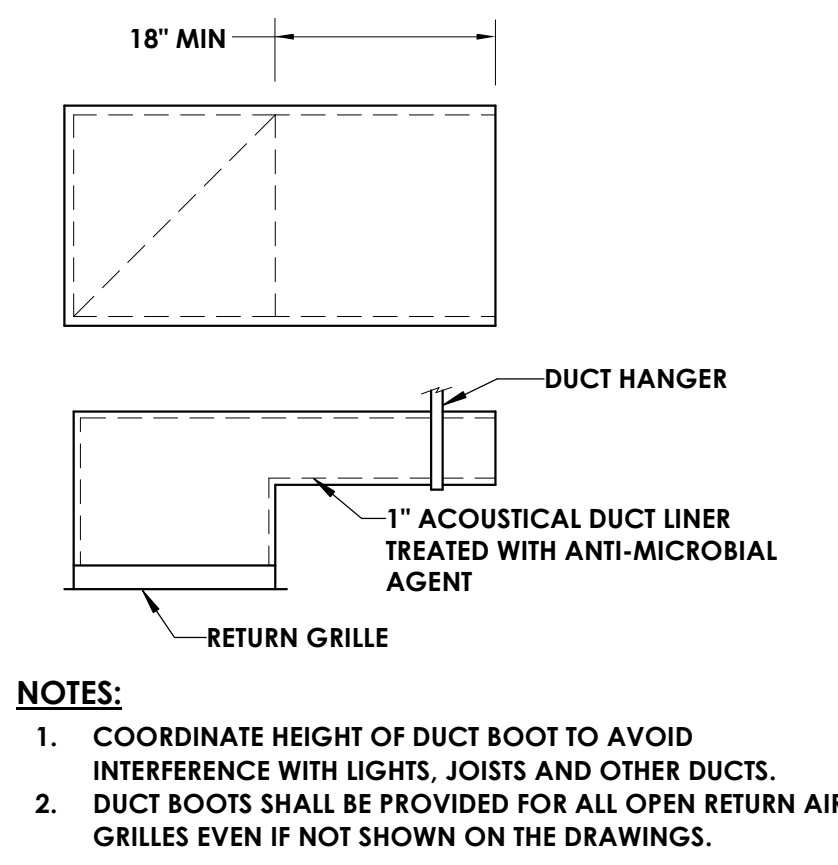
10
H800
RTU CONDENSATE DETAIL
N.T.S.



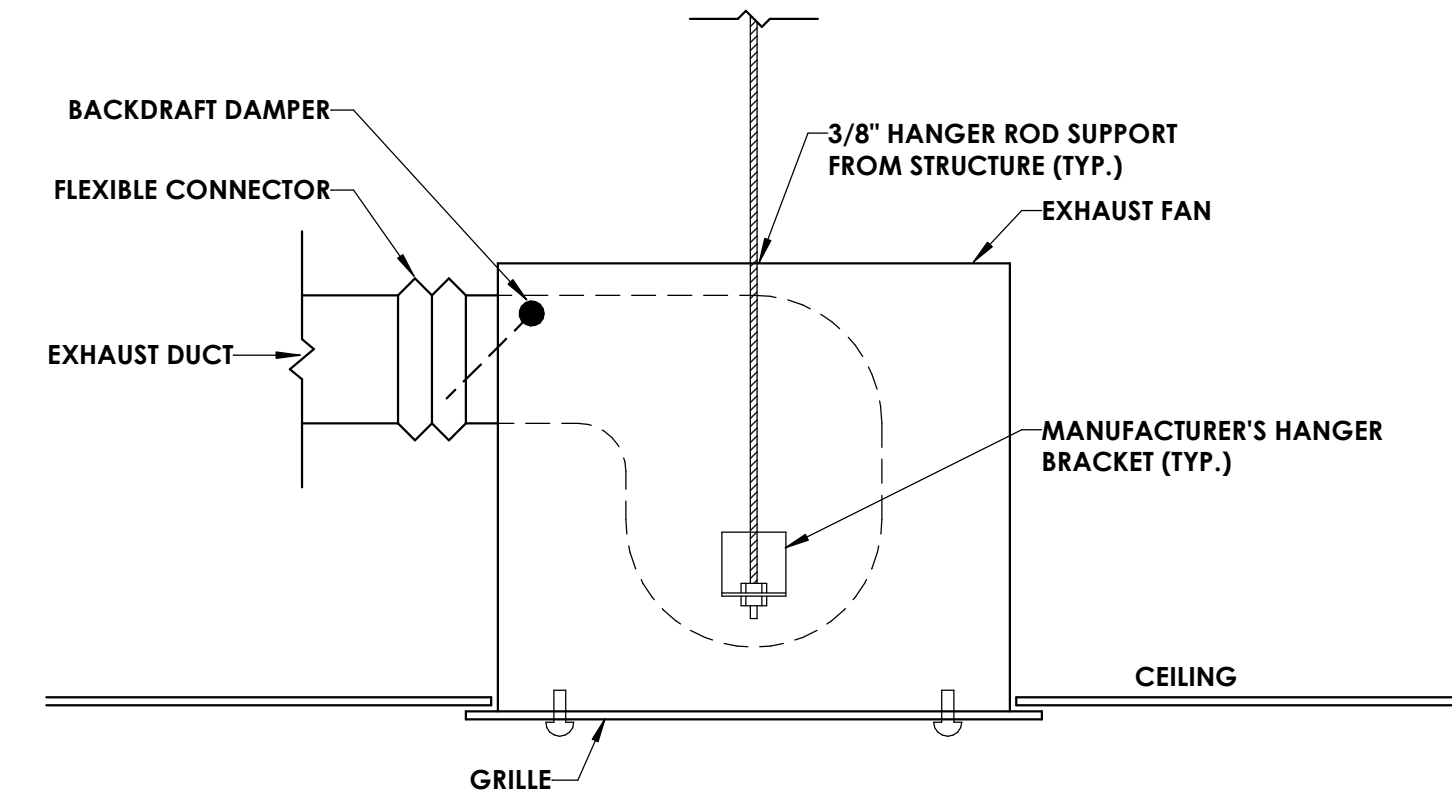
9
H800
CHEMICAL POT FEEDER DETAIL
N.T.S.



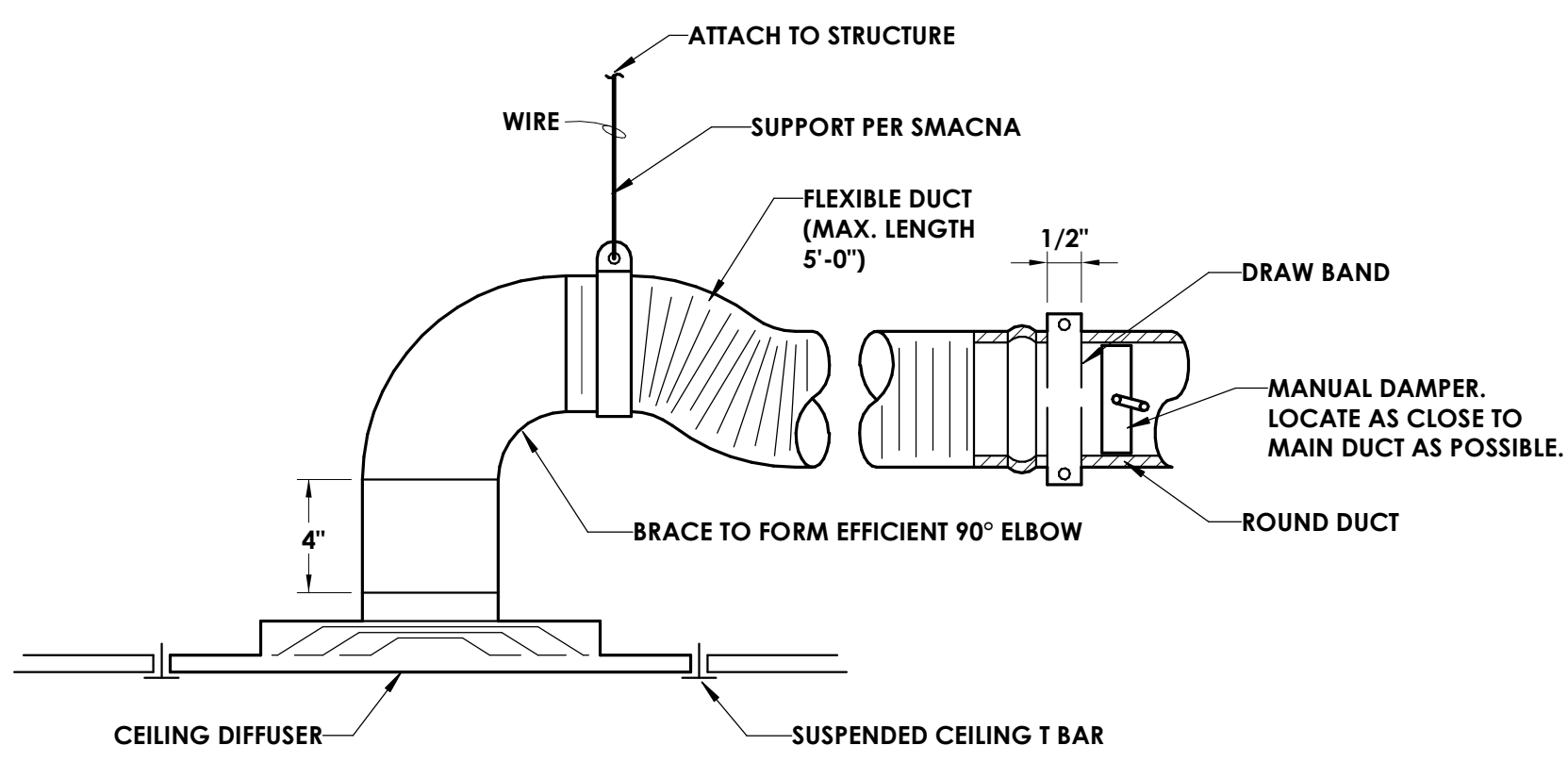
8
H800
ROOF CURB EXISTING ROOF DETAIL
N.T.S.



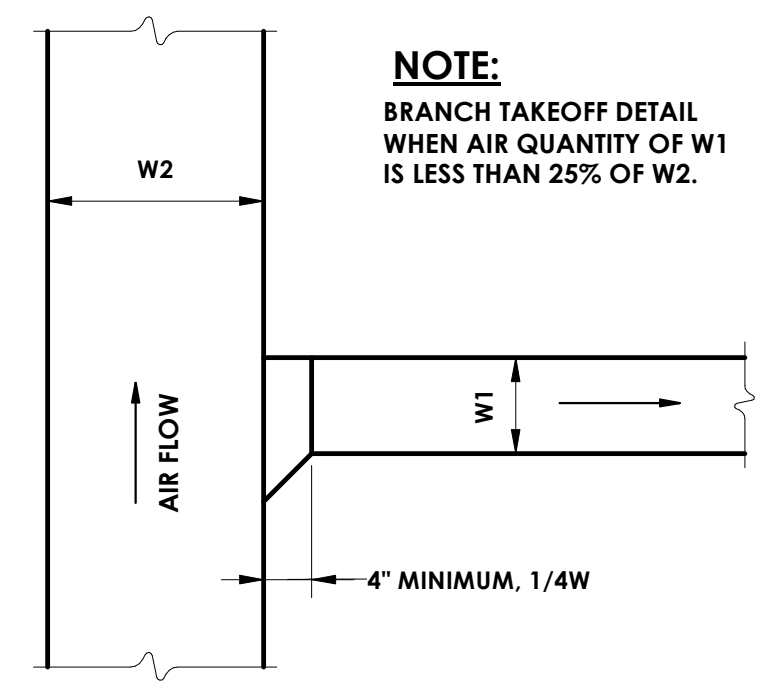
7
H800
RETURN BOOT DETAIL
N.T.S.



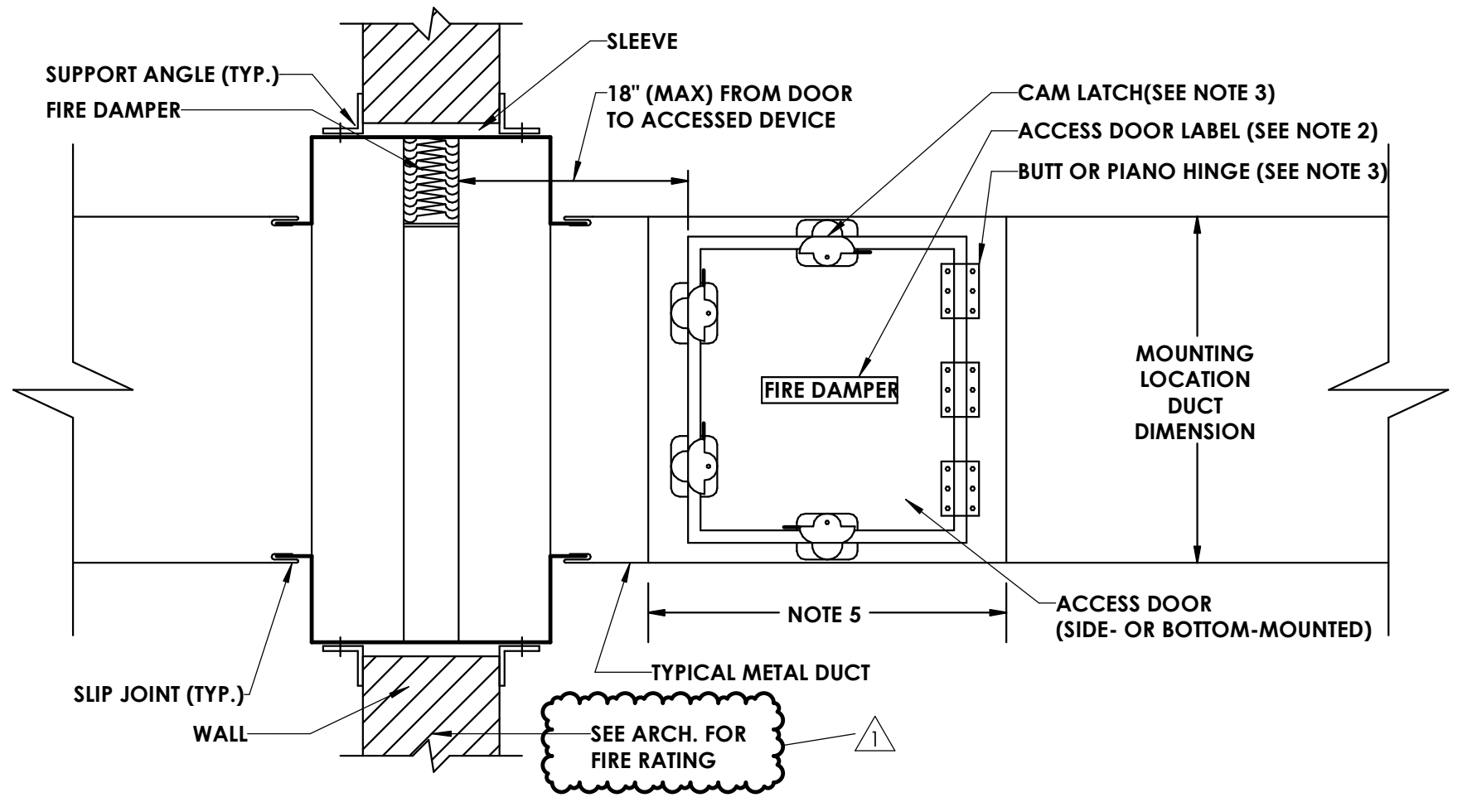
6
H800
CEILING MOUNTED FAN INSTALLATION DETAIL
N.T.S.



5
H800
DIFFUSER DETAIL
N.T.S.



4
H800
BRANCH TAKE-OFF DETAIL
N.T.S.

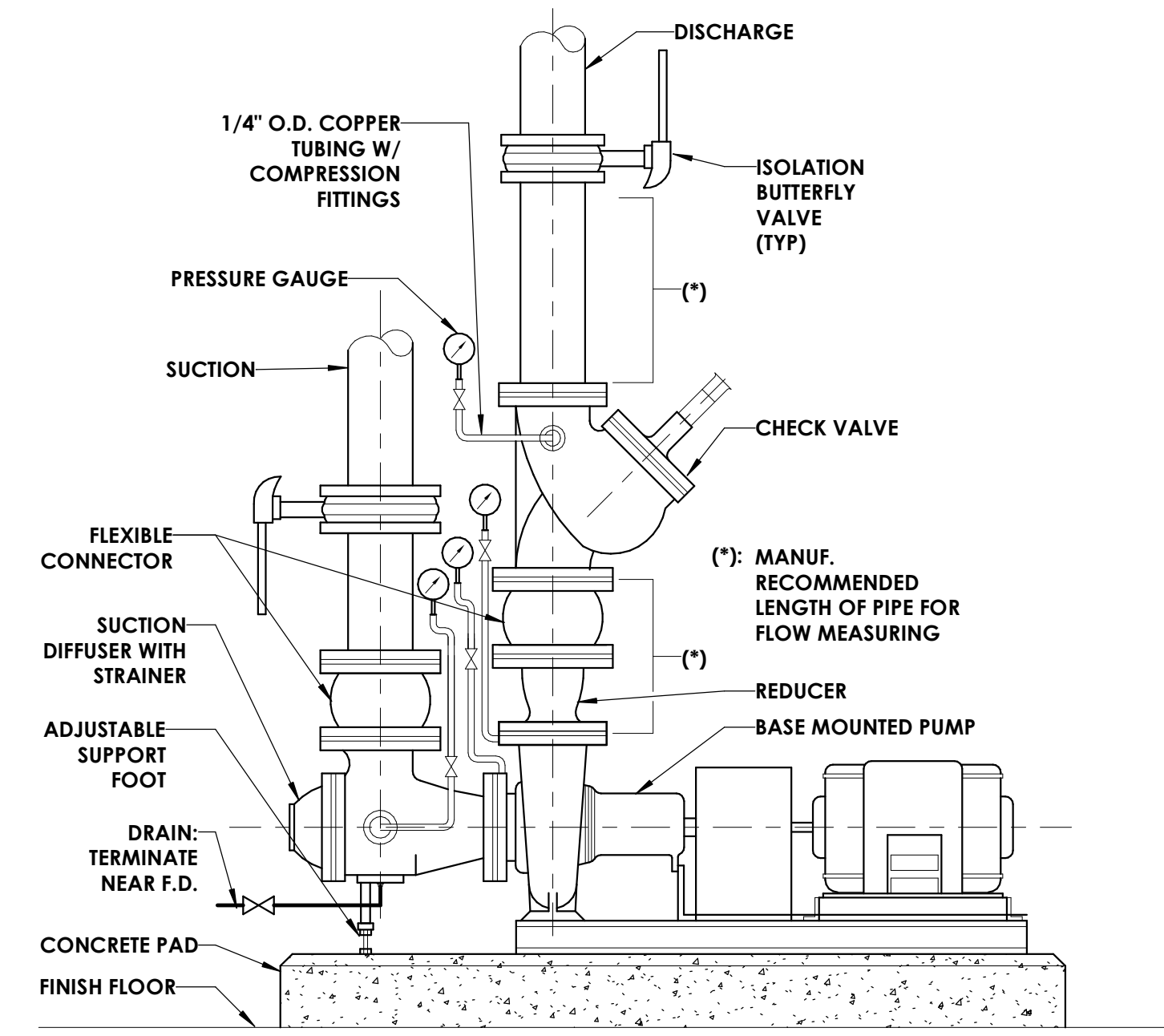


3
H800
FIRE DAMPER & ACCESS DOOR DETAIL
N.T.S.

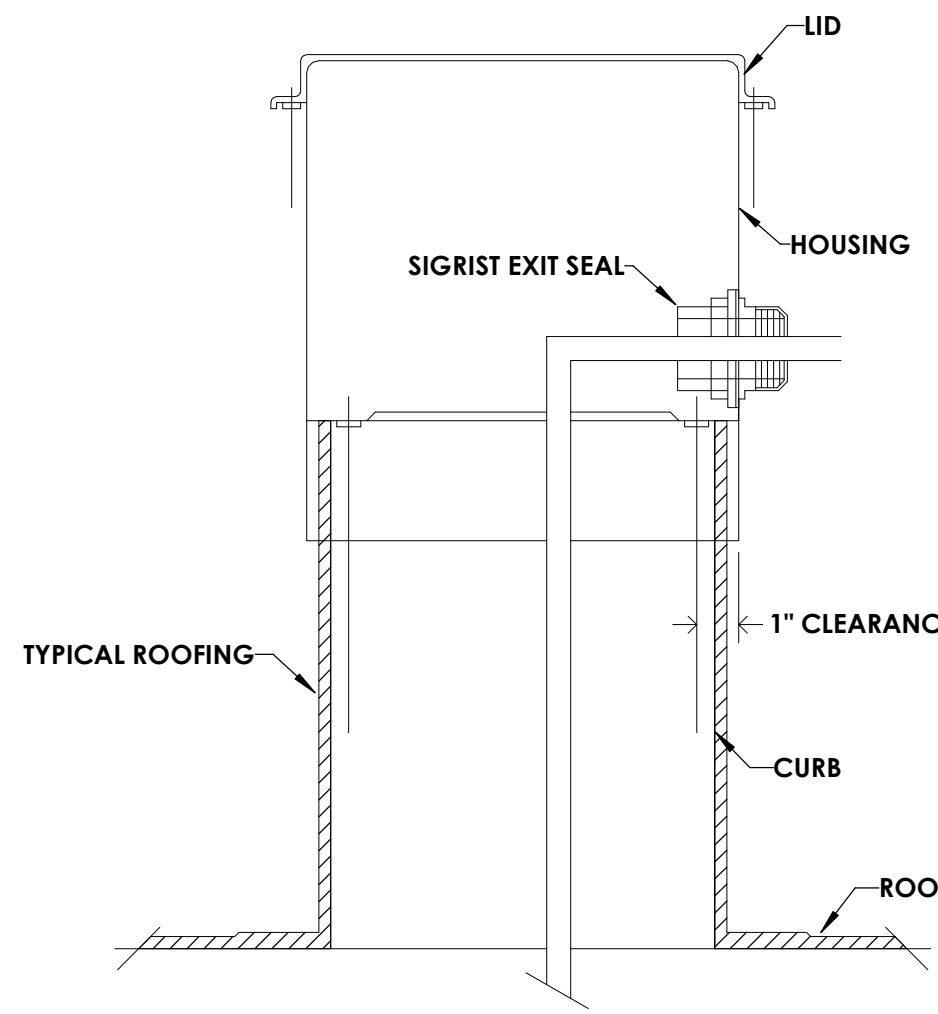
MOUNTING LOCATION DUCT DIMENSION	DOOR SIZE
UP TO 8"	6"x6"
10"	8"x8"
12"	10"x10"
14"	12"x12"
16"	14"x14"
18"	16"x16"
20" - 42"	18"x18"

NOTE: REFER TO "RECTANGULAR DUCT ACCESS DOOR ARRANGEMENT DETAIL" FOR MOUNTING LOCATION DUCT DIMENSIONS GREATER THAN 42"

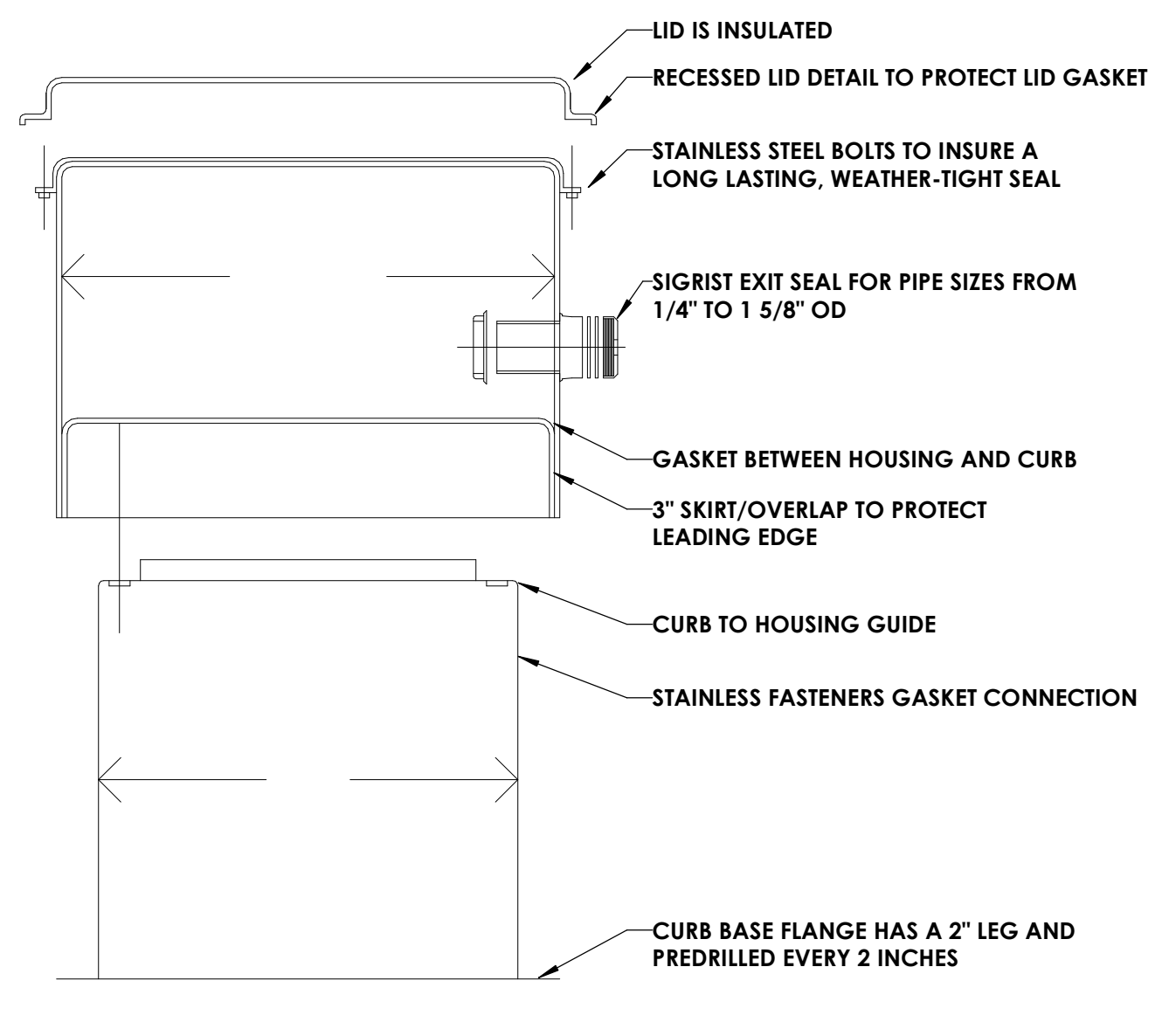
- LOCATE ACCESS DOOR ON THE ACTUATOR, LATCH RELEASE OR FUSIBLE LINK SIDE OF ALL FIRE, SMOKE AND FIRE/SMOKE DAMPERS.
- PROVIDE PERMANENT LABEL WITH 1/2" HIGH (MINIMUM) LETTERING. REFER TO SPECIFICATION SECTION "MECHANICAL IDENTIFICATION" FOR ADDITIONAL INFORMATION.
- REFER TO SPECIFICATION SECTION "DUCT ACCESSORIES" FOR ACCESS DOOR HINGE AND CAM LATCH QUANTITIES AND CONFIGURATIONS. NOTE: CAM LATCHES SHALL BE PROVIDED ON ALL SIDES AT LOCATIONS WHERE A HINGED ACCESS DOOR IS UNABLE TO OPEN A MINIMUM OF 70 DEGREES.
- REFER TO THE TABLE FOR APPROPRIATE ACCESS DOOR SIZE BASED ON THE MOUNTING LOCATION DUCT HEIGHT (SIDE-MOUNTED) OR DUCT WIDTH (BOTTOM-MOUNTED).
- ACCESS DOORS LESS THAN 18"x18" SERVING FIRE, SMOKE OR FIRE/SMOKE DAMPERS SHALL BE LOCATED IN A REMOVABLE SECTION OF DUCT. INCLUDE "REMOVABLE DUCT" SUPPLEMENTAL LABELING.
- MOUNTING LOCATIONS HAVING A DUCT DIMENSION LESS THAN 8" SHALL BE PROVIDED WITH TRANSITIONS AS REQUIRED TO PROVIDE A 6"x6" ACCESS DOOR.
- INSTALL FIRE DAMPER PER MANUFACTURER'S INSTRUCTIONS.



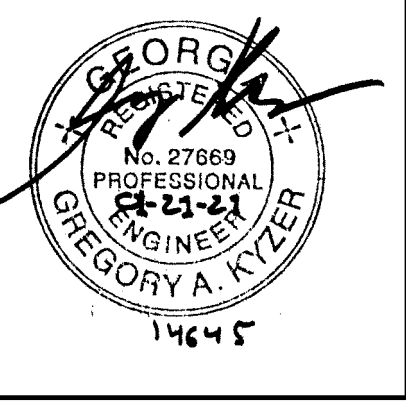
2
H800
BASE MOUNTED PUMP
N.T.S.



1
H800
PIPE CURB DETAIL
N.T.S.



NO.	DATE	SCALE	BY	CHECKED	DESCRIPTION
1	10/27/2020		GAK		



RELEASED FOR CONSTRUCTION

COBB COUNTY SCHOOL DISTRICT
ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
HVAC MODIFICATIONS 2021
3055 EBENEZER ROAD NE
MARIETTA, GA 30066
BID SET SUBMITTAL - 12/15/2020

DATE	DRAWN	CHECKED
12/15/2020	LBS	GAK

SCALE: As indicated
SHEET TITLE: HVAC DETAILS

PROJECT NUMBER: 14645.00
CD
H800
DRAWING NUMBER

NO.	DATE	BY	CHKD	DESCRIPTION
1	12/15/2020	GAK	LBS	ISSUED FOR PERMIT



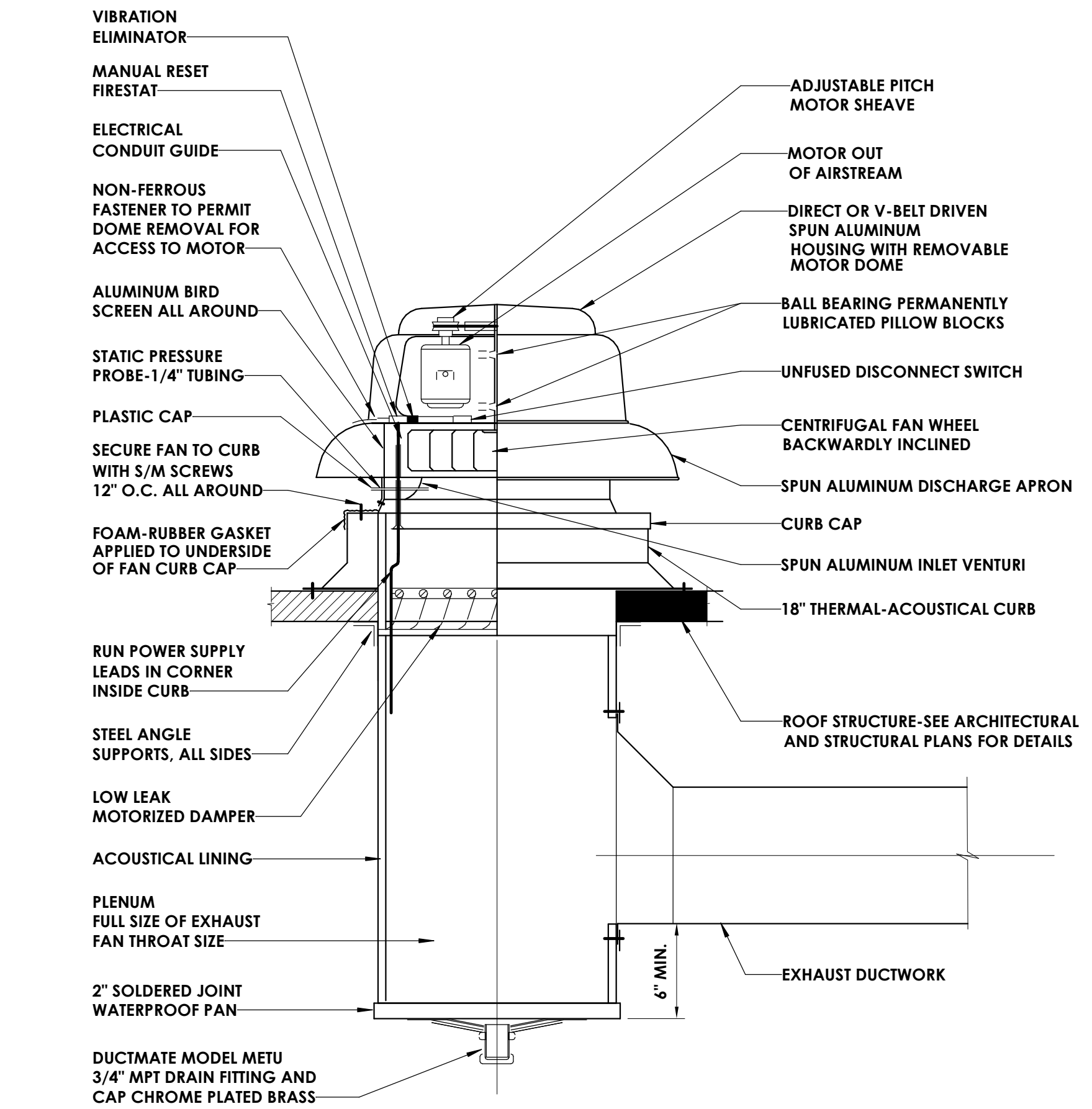
RELEASED FOR CONSTRUCTION

COBB COUNTY SCHOOL DISTRICT
 ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
 HVAC MODIFICATIONS 2021
 3055 EBENEZER ROAD NE
 MARIETTA, GA 30066
 BID SET SUBMITTAL - 12/15/2020

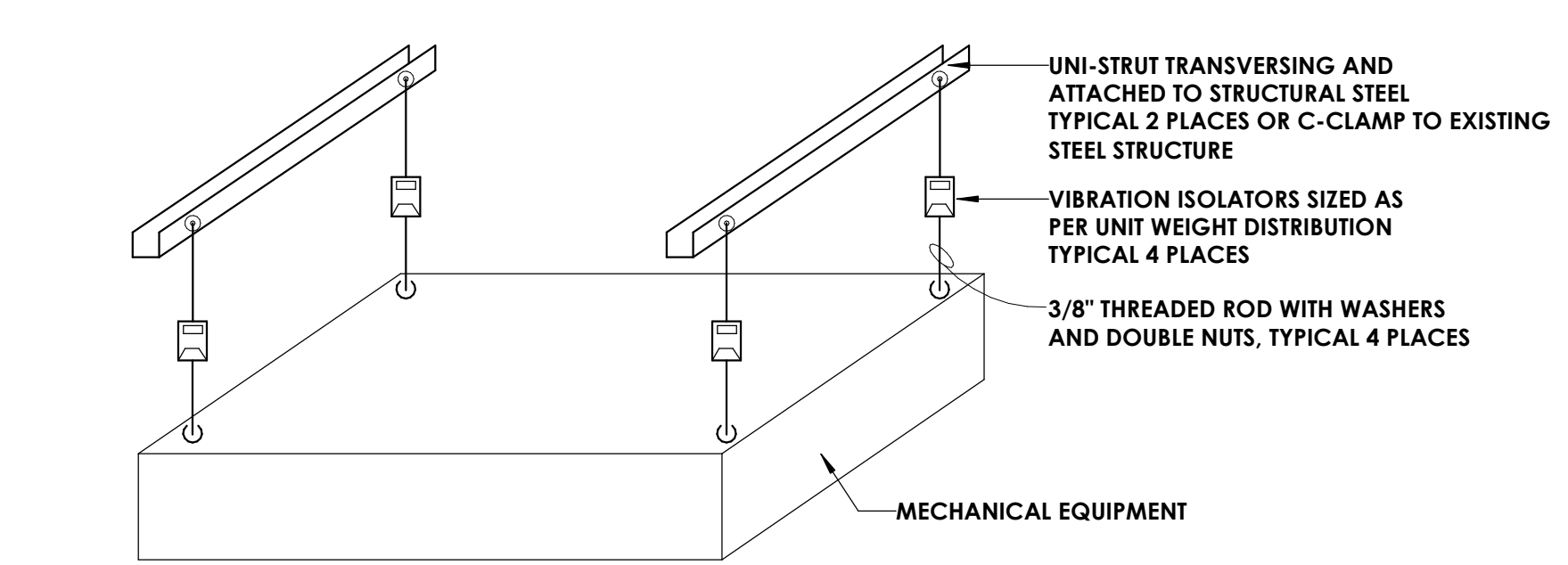
DATE	DRAWN	CHECKED
12/15/2020	LBS	GAK

SCALE: N.T.S.
 SHEET TITLE: HVAC DETAILS CONTINUED

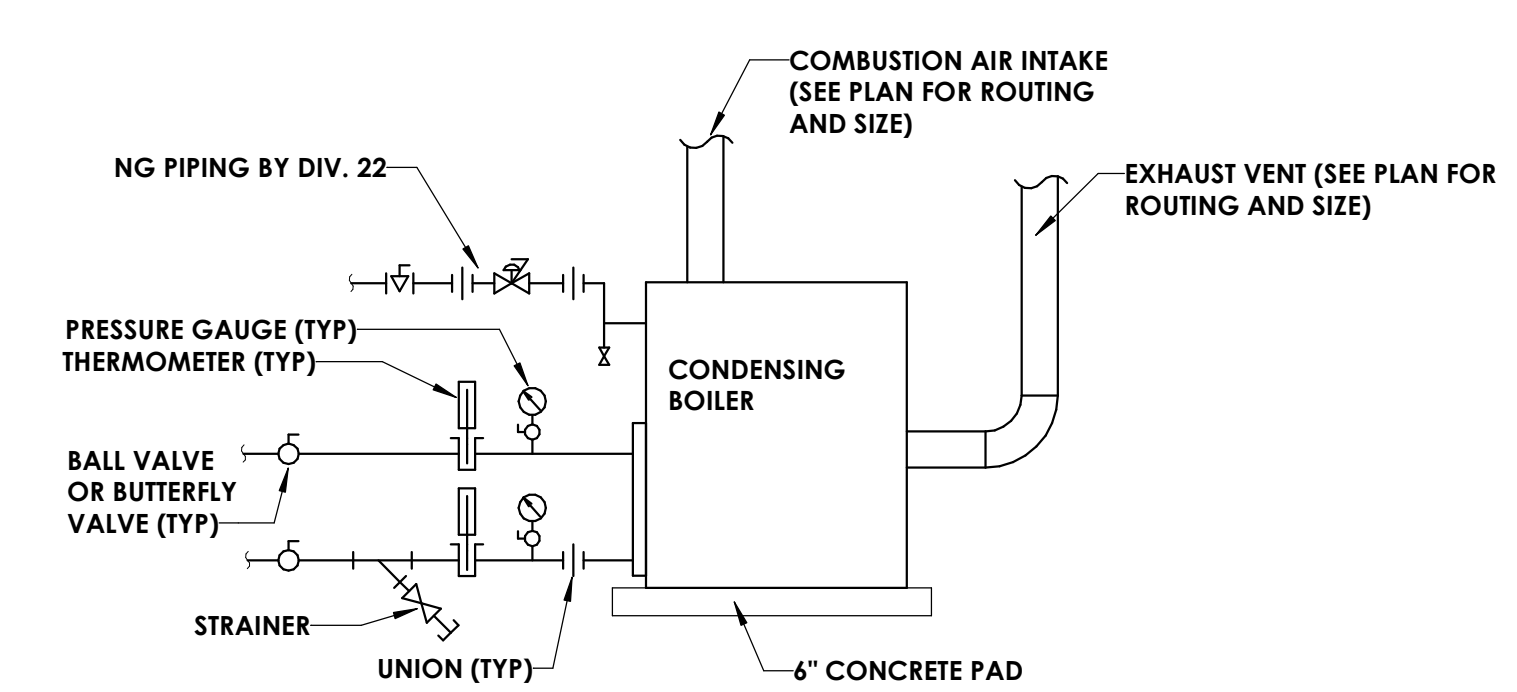
PROJECT NUMBER: 14645.00
CD
H801
 DRAWING NUMBER



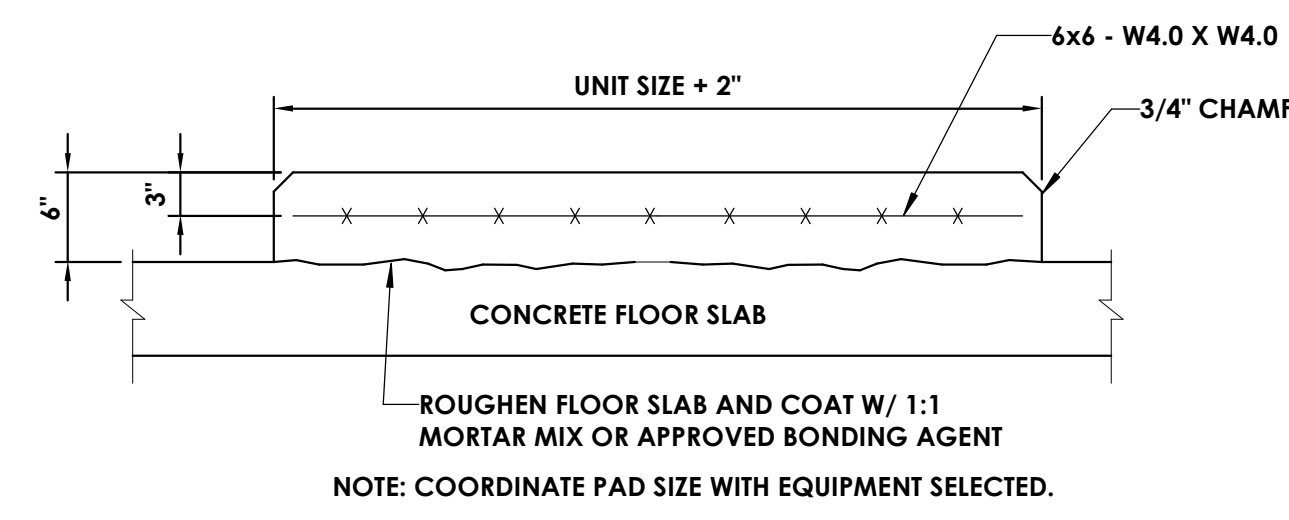
6 ROOF MOUNTED DOWNBLAST FAN DETAIL
 H801 N.T.S.



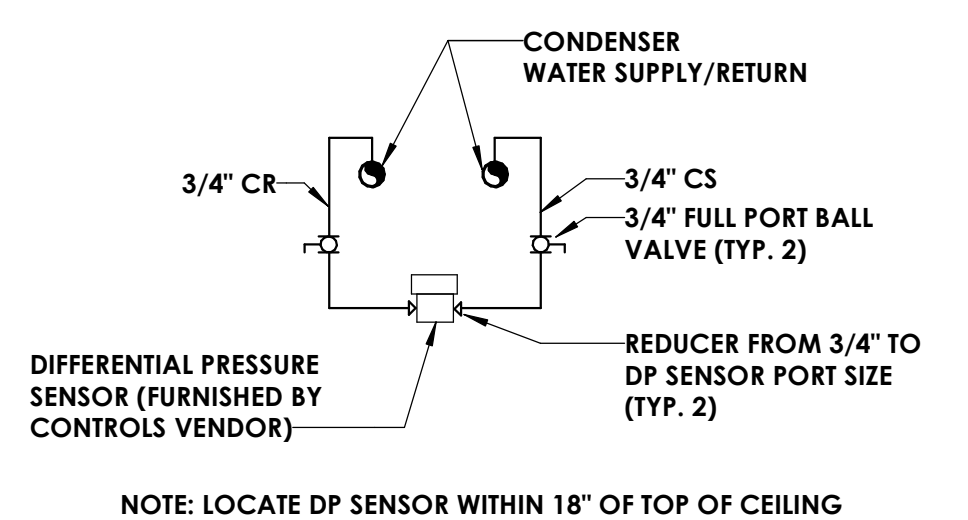
3 UNIT SUPPORT DETAIL
 H801 N.T.S.



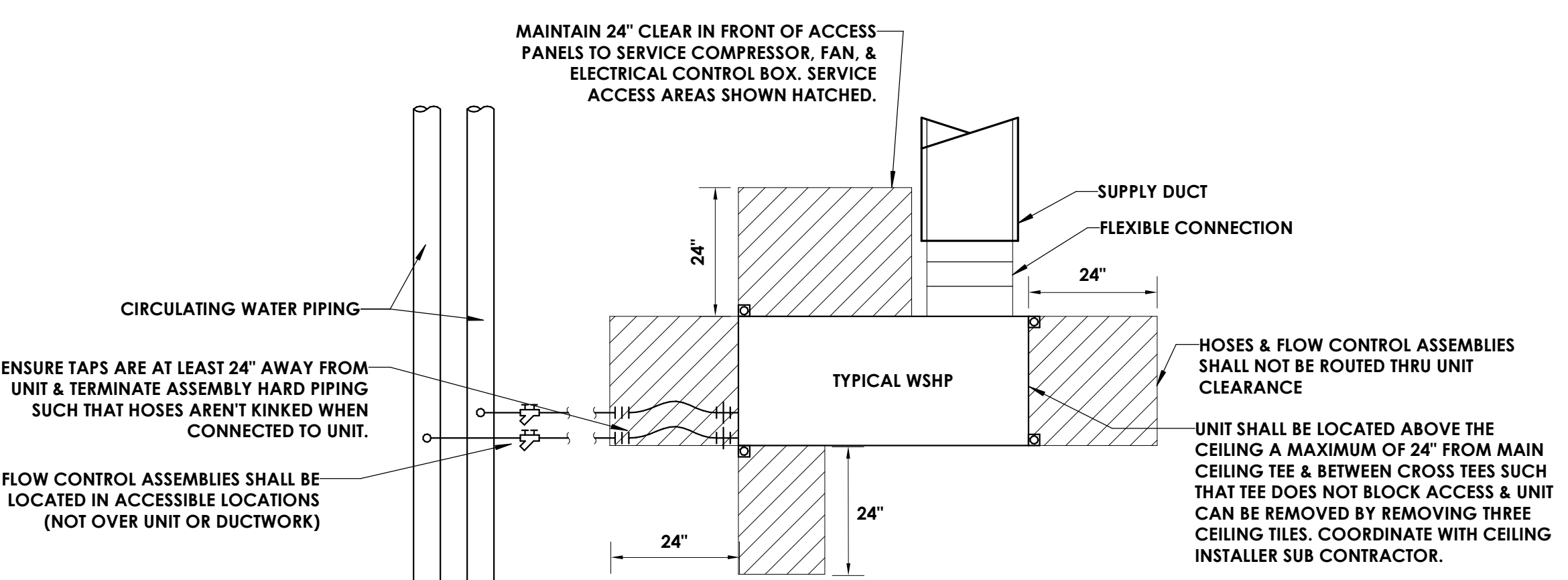
5 BOILER CONNECTION DETAIL
 H801 NOT TO SCALE



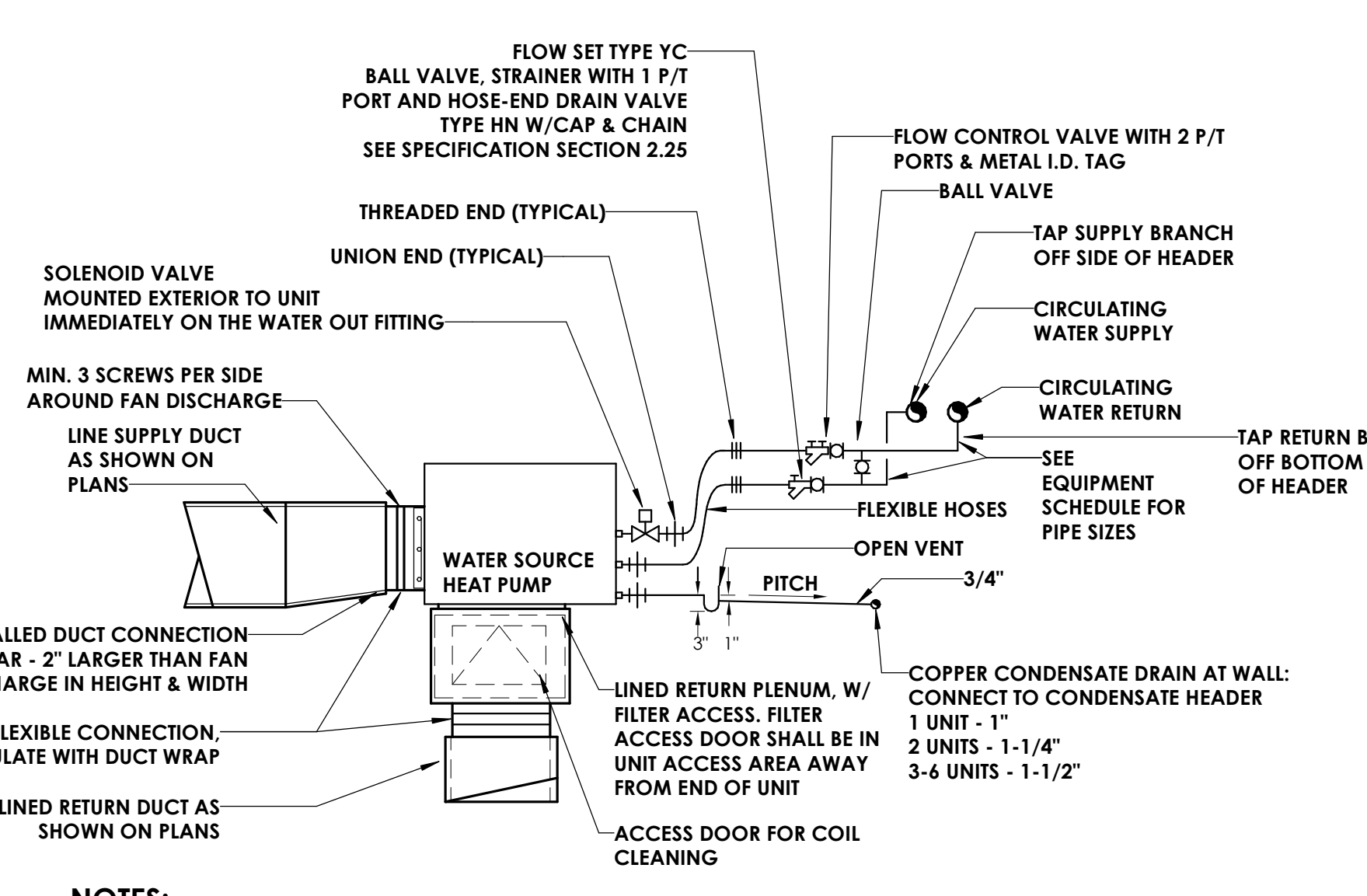
4 HOUSEKEEPING PAD
 H801 N.T.S.



2 WATER DIFFERENTIAL PRESSURE SENSOR DETAIL
 H801 N.T.S.



NOTES:
 1. ANY RELOCATION AND RECONNECTION OF EXISTING DUCTS, PIPES, ELECTRICAL CONDUITS, HOSES, CONDENSATE DRAIN PIPES, VALVES, ETC. TO ACCOMMODATE THE CLEARANCE REQUIREMENTS OF THIS DETAIL IS PART OF THE WORK OF THIS CONTRACT.



NOTES:
 1. ANY RELOCATION AND RECONNECTION OF EXISTING DUCTS, PIPES, ELECTRICAL CONDUITS, HOSES, CONDENSATE DRAIN PIPE VALVES, INCLUDING MODIFICATION OF OR A NEW TRANSITION DUCT IS PART OF THE WORK OF THIS CONTRACT.

PLUMBING GENERAL NOTES:

- VERIFY EXACT LOCATION AND ACTUAL INVERT OF SANITARY LINES PRIOR TO INSTALLATION.
- PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS. USE WATER CLOSET TYPE PRIMER FOR TOILET ROOMS. USE IN-LINE DIFFERENTIAL PRESSURE TYPE PRIMERS WHERE NO SINKS ARE LOCATED NEARBY.
- COORDINATION WITH OTHER DISCIPLINES IS MANDATORY.
- ALL PIPES THROUGH FOOTINGS OR FOUNDATION WALLS SHALL BE SLEEVED IN ACCORDANCE WITH THE 2018 INTERNATIONAL PLUMBING CODE WITH GEORGIA AMENDMENTS.
- SANITARY PIPING UNDERGROUND SHALL BE HUB AND SPIGOT CAST IRON AND ABOVEGROUND HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 888 AND CISPI STANDARD 301. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON PIPE INSTITUTE; AND LISTED BY NSF INTERNATIONAL. HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310 FOR STANDARD COUPLINGS, AND BE LISTED BY NSF INTERNATIONAL OR ASTM C1540 FOR HEAVY DUTY COUPLINGS WHERE INDICATED.
- ALL SANITARY DRAINAGE PIPING 3" AND LARGER SHALL SLOPE 1/8" PER FOOT UNLESS NOTED OTHERWISE. ALL SANITARY DRAINAGE PIPING 2-1/2" AND SMALLER SHALL SLOPE 1/4" PER FOOT UNLESS NOTED OTHERWISE.
- REFERENCE PLUMBING FIXTURE CONNECTION SCHEDULE FOR LINE SIZES NOT SHOWN TO FIXTURES/EQUIPMENT.
- ALL CLEANOUTS AND FLOOR DRAINS SHALL BE INSTALLED PLUMB AND LEVEL WITH FINISHED FLOOR ELEVATION FOR SLAB INSTALLATION. REFER TO STRUCTURAL DRAWINGS FOR SLAB ELEVATIONS AND SLOPES.
- CONTRACTOR SHALL PROVIDE HANGERS AND SUPPORTS FOR SEISMIC RESTRAINT PER THE 2018 INTERNATIONAL BUILDING CODE WITH GEORGIA AMENDMENTS.
- ALL DRAINAGE PIPING AND PRESSURE SYSTEM PIPING SHALL BE RUN AS HIGH AS POSSIBLE TO BOTTOM OF STRUCTURE, UNLESS NOTED OTHERWISE. COORDINATE PIPE ROUTING WITH ALL OTHER TRADES.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT ITEMS TO BE FURNISHED FIT THE SPACE AVAILABLE.
- THESE DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EXACT LOCATIONS OF FIXTURES AND EQUIPMENT. ALL OFFSETS AND FITTINGS FOR COMPLETE INSTALLATION MAY NOT BE DEFINED ON THE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXACT DIMENSIONS AT THE BUILDING AND ANY NECESSARY CHANGES MADE IN ACCORDANCE WITH STRUCTURAL CONDITIONS. EQUIPMENT TO BE INSTALLED AND COORDINATION WITH OTHER SYSTEMS. IF CONFLICTS CANNOT BE RESOLVED THEY SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER.
- CONTRACTOR SHALL COMPLY WITH THE FOLLOWING CODES AND STANDARDS WITH THE GEORGIA AMENDMENTS INsofar AS THEY APPLY: 2018 INTERNATIONAL PLUMBING CODE, 2018 INTERNATIONAL FUEL GAS AND 2018 INTERNATIONAL BUILDING CODE.
- CONTRACTOR SHALL SECURE ALL PERMITS, INSPECTIONS, LICENSES AND TESTS REQUIRED FOR THIS WORK AND PAY ALL FEES IN CONNECTION THERE WITH.
- ALL MATERIALS SHALL BEAR THE MANUFACTURER'S NAME, TRADE NAME AND BE U.L. LABELED IF REQUIRED, UNLESS SPECIFICALLY INDICATED OTHERWISE. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER. ALL EQUIPMENT OF A SIMILAR TYPE SHALL BE OF THE SAME MANUFACTURER.
- CONTRACTOR SHALL PROVIDE AND LOCATE SLEEVES AND INSERTS REQUIRED BEFORE THE FLOOR AND WALLS ARE BUILT OR SHALL BE RESPONSIBLE FOR THE COST OF CUTTING AND PATCHING REQUIRED FOR PIPES WHERE SLEEVES AND INSERTS WERE NOT INSTALLED OR WHERE THEY WERE INCORRECTLY LOCATED.
- THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY THE CONTRACTOR OR OF THE SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL TO THE WORK OF THE CONTRACTOR. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE FAILURE OF THE CONTRACTOR TO PERFORM THE CONSTRUCTION WORK IN ACCORDANCE WITH THE DRAWINGS.
- OFFSET PLUMBING VENTS AND WATER PIPING AS NECESSARY TO AVOID CONFLICTS WITH DUCTWORK. SEE HVAC PLANS.
- IT IS THE INTENT AND MEANING OF THE DRAWINGS TO PROVIDE COMPLETE AND OPERABLE PLUMBING AND DRAINAGE SYSTEMS.
- CONTRACTOR SHALL BE BOUND BY THE REQUIREMENTS OF THE UNDERGROUND UTILITIES DAMAGE PREVENTION ACT.
- ALL PLUMBING LINE SIZE REDUCTIONS SHALL BE MADE WITH REDUCERS AND/OR REDUCING FITTINGS.
- BONDING OF SUBCONTRACTORS: INCLUDE IN THE BASE BID. PERFORMANCE AND LABOR AND MATERIALS PAYMENT BONDS, EACH IN THE AMOUNT OF 100% OF THE SUBCONTRACT SUM, FOR EACH SUBCONTRACTOR HAVING A CONTRACT OF \$50,000.00 OR MORE FOR PLUMBING WORK. THE SURETY COMPANY SHALL HAVE AN A.M. BEST COMPANY MINIMUM RATING WITH A MINIMUM FINANCIAL SIZE IN ACCORDANCE WITH THE GENERAL CONDITIONS.
- ALL POTABLE WATER SYSTEMS SHALL USE LEAD-FREE PIPING, SOLDER, AND FLUX.
- SUPPLY SYSTEMS SHALL USE DIELECTRIC ADAPTERS WHERE PIPES OF DISSIMILAR METALS ARE BEING CONNECTED.
- THE POTABLE WATER SYSTEM SHALL BE PROPERLY DISINFECTED IN ACCORDANCE WITH FEDERAL SPECIFICATION BB-C-120. SUBSEQUENT TO THE DISINFECTION, CONTRACTOR SHALL SUBMIT WATER SAMPLES TO THE LOCAL HEALTH DEPARTMENT (LHD) FOR TESTING AND APPROVAL. LHD APPROVAL MUST BE OBTAINED BEFORE THE SYSTEM IS PUT INTO SERVICE.
- ALL PIPING PENETRATING THE PLANE OF THE ROOF SHALL BE INSULATED WITH MINIMUM ONE-INCH THICK CONTINUOUS INSULATION FROM THE UNDERSIDE OF THE ROOF DECK, ALONG ALL LATERALS, TO 6 INCHES BELOW THE LAST ABOVE-CEILING VERTICAL ELBOW JOINT.
- ALL VERTICAL PIPING PENETRATING THE ROOF SHALL BE BRACED HIGH AND LOW TO THE STRUCTURE TO PREVENT MOVEMENT WHICH WOULD JEOPARDIZE THE INTEGRITY OF THE ROOF FLASHING.
- ALL HORIZONTAL PIPING ON THE ROOF SHALL BE SUPPORTED IN METHODS, MANNERS, AND AT SPACING APPROVED BY BOTH THE PIPE MANUFACTURER AND THE ROOF MANUFACTURER. SUPPORTS SHALL BE DESIGNED FOR UNBINDING SLIPPAGE OR WITH NON-CORRODING ROLLERS TO ALLOW FOR THERMAL MOVEMENT OF THE PIPING WITHOUT JEOPARDIZING THE ROOF SYSTEM. WOOD SUPPORTS PROHIBITED.
- THE BOTTOM ACCESS OF ALL GAS LEG DRIP PIPING SHALL BE MINIMUM 3 INCHES ABOVE ADJACENT HORIZONTAL SURFACE.
- ALL DOMESTIC WATER, SANITARY, VENT, AND FIRE PROTECTION PIPING SHALL BE SLEEVED THROUGH WALLS: SLEEVES SHALL BE SIZED TO ALLOW PASSAGE OF THE PIPE AND ITS FULL INSULATION THICKNESS PLUS ANNUAL SPACE FOR INSTALLATION OF SANDING AND/OR SEALANT AS REQUIRED.
- SEWER VENTS THROUGH THE ROOF MUST TERMINATE A MINIMUM OF 20 FEET AWAY FROM OUTSIDE AIR INTAKES WHICH PROVIDE VENTILATION OR MAKE-UP AIR TO THE BUILDING.

GAS PIPING NOTES:

- PROVIDE NEW GAS PIPING TO NEW SERVICE FROM METER/REGULATOR AS INDICATED ON DRAWINGS.
- COMPLY WITH ALL CODES, GAS PIPING SPECIFICATION AND REGULATIONS INCLUDING 2018 INTERNATIONAL FUEL GAS CODE WITH GEORGIA AMENDMENTS, NFPA 54 AND LOCAL GAS COMPANY.
- ALL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL, SEAMLESS ASTM A 53, ASTM A106 OR ASME B36.10. FITTINGS SHALL BE 3000 FORGED STEEL, SOCKET WELD ASTM A140 AND ANSI B16.11 FOR 2 INCH SMALLER AND STANDARD WEIGHT, SEAMLESS STEEL BUTT WELD, ASTM A234 AND ANSI B16.9 FOR 2-1/2 INCH AND LARGER. ALL FITTINGS AND JOINTS TO BE CLEANED, PRIMED AND WRAPPED WITH 2 SEPARATE COATS OF MANVILLE "TRANTEX" PRESSURE SENSITIVE TAPE. PROVIDE A MINIMUM OF 18" OF COVER ON ALL UNDERGROUND PIPING.
- 1.5" AND SMALLER: THREADED JOINTS
2" AND LARGER: WELDED JOINTS
- GAS COCKS: 150 PSI WG, BRONZE BODY, STRAIGHT-AWAY PATTERN, SQUARE HEAD, THREADED ENDS AND LOCKING LUG.
- ALL EXPOSED GAS PIPING SHALL BE PAINTED AND SHALL HAVE PIPE LABELS AS REQUIRED IN GAS PIPING SPECIFICATION.
- SYSTEM TEST: TEST THE ENTIRE SYSTEM AT 100 PSI WITH COMPRESSED AIR OR NITROGEN FOR 6 HOURS WITH NO LEAKS.

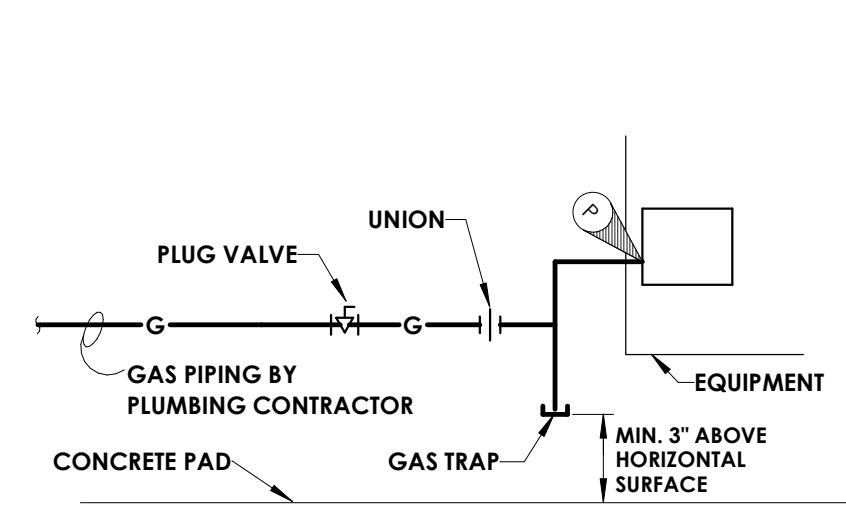
EQUIPMENT	BTU/HR INPUT	PRESSURE-IN WC	
		MINIMUM	MAXIMUM
RTU-1	60 MBH	7" WC	14" WC
RTU-2	60 MBH	7" WC	14" WC
RTU-3	120 MBH	7" WC	14" WC
RTU-4	60 MBH	7" WC	14" WC
RTU-5	60 MBH	7" WC	14" WC
RTU-6	60 MBH	7" WC	14" WC
RTU-8A	60 MBH	7" WC	14" WC
RTU-8B	60 MBH	7" WC	14" WC
RTU-10	60 MBH	7" WC	14" WC
RTU-10A	150 MBH	7" WC	14" WC
ERU-2	75 MBH	7" WC	14" WC
ERU-3	100 MBH	7" WC	14" WC
ERU-4	100 MBH	7" WC	14" WC
B-1	600 MBH	7" WC	14" WC
B-2	600 MBH	7" WC	14" WC

PIPING LEGEND

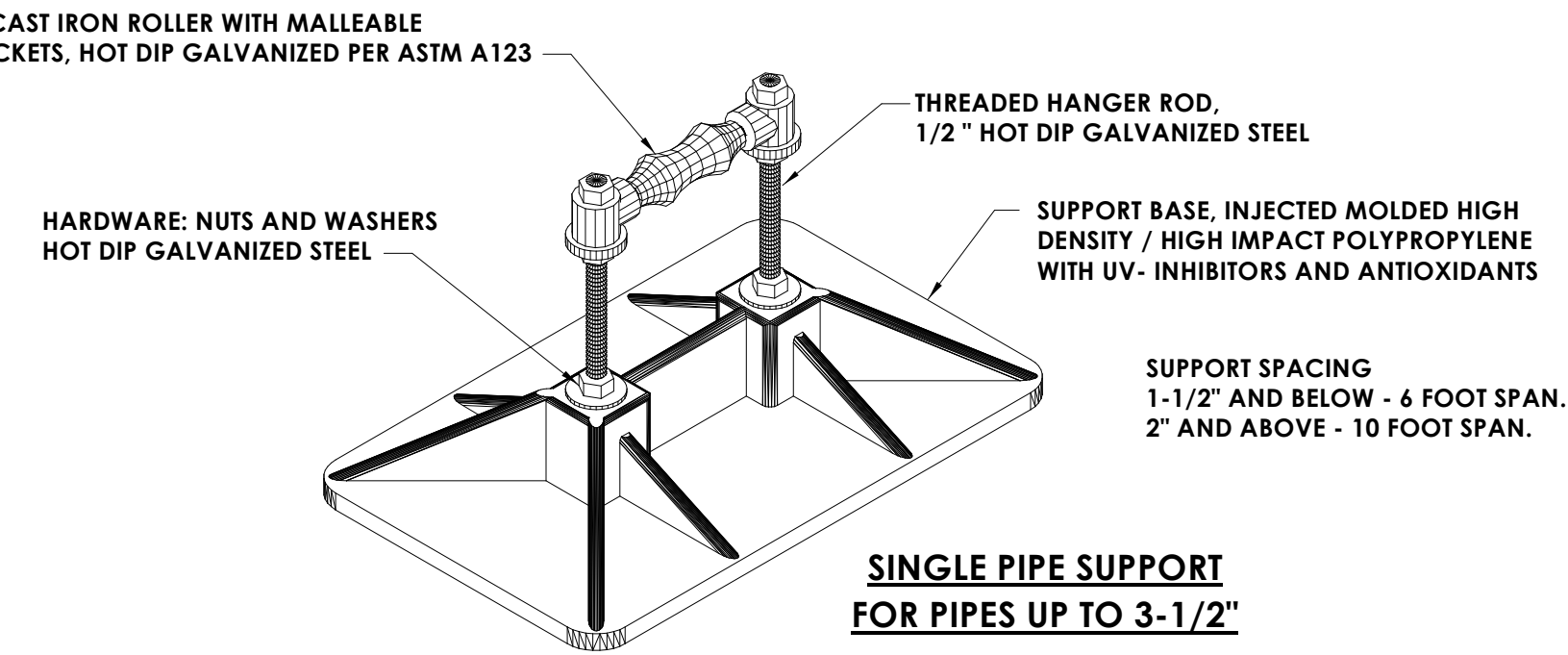
- XX — PIPING
- - - XX - - - PIPING BELOW GRADE
- - - X - - - VENT PIPING
- CW COLD WATER
- CW (E) COLD WATER EXISTING
- HW HOT WATER
- HW (E) HOT WATER EXISTING
- HWR HOT WATER RECIRCULATING
- HWR (E) HOT WATER RECIRCULATING EXISTING
- NG NATURAL GAS
- SPD SUMP PUMPED DRAINAGE
- SAN SANITARY
- SAN U/G SANITARY UNDERGROUND
- SAN (E) SANITARY EXISTING
- SAN U/S (E) SANITARY UNDERSLAB EXISTING
- ST STORM
- ST (E) STORM EXISTING
- ST2 STORM SECONDARY
- ST2 (E) STORM SECONDARY EXISTING
- TW TEMPERED WATER
- V VENT
- V (E) EXISTING VENT
- ETR EXISTING TO REMAIN
- EXISTING TO BE REMOVED / DEMOLISHED

FIXTURES & FITTINGS LEGEND

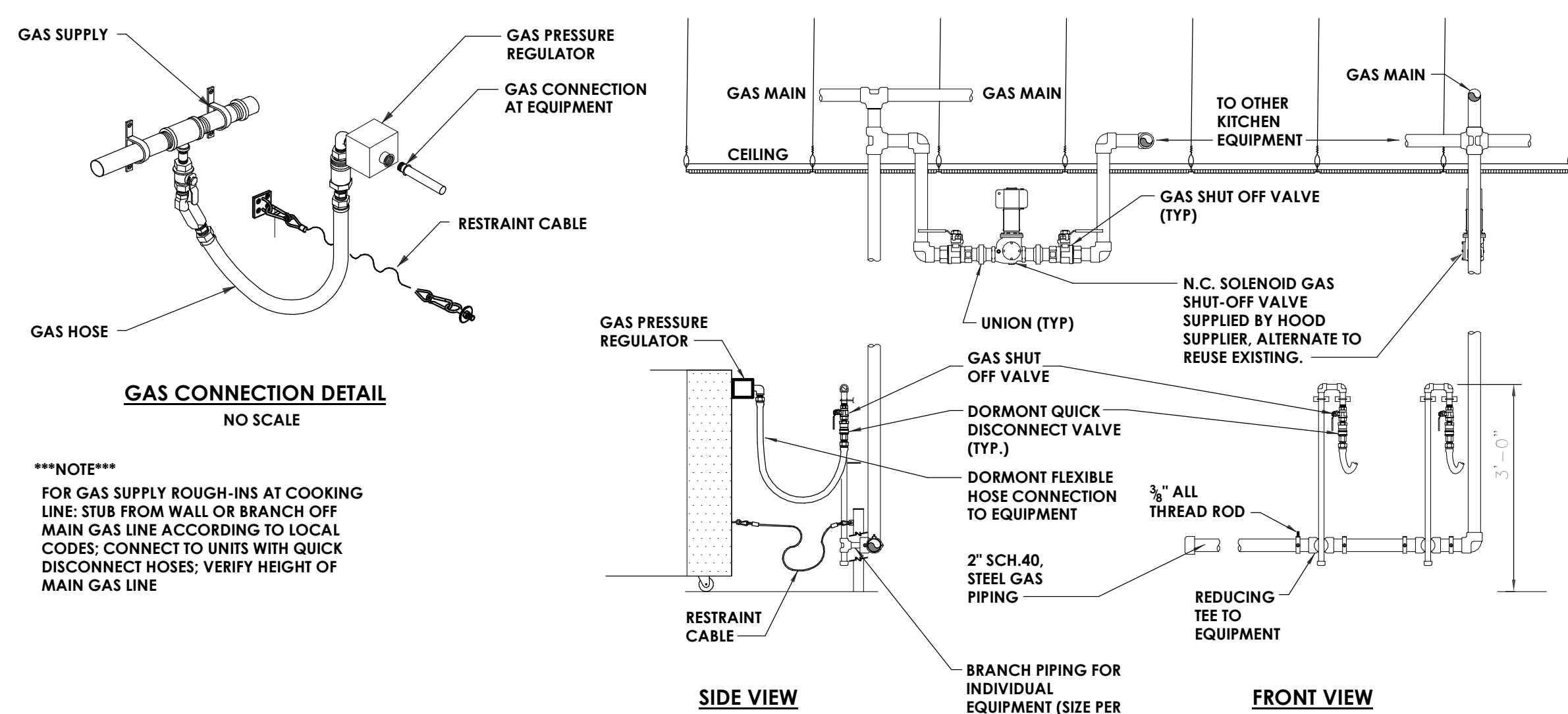
- TEE OUTLET - UP
- TEE OUTLET - DOWN
- CONNECTION - BOTTOM
- CONNECTION - TOP
- ELBOW - TURNED UP
- ELBOW - TURNED DOWN
- PIPE CAP
- UNION
- FLANGE
- BALL VALVE
- BALL VALVE WITH MEMORY STOP
- BALANCING VALVE
- CHECK VALVE
- BUTTERFLY VALVE
- CONTROL VALVE, PNEUMATIC 2-WAY
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- PRESSURE RELIEF VALVE
- TEMPERATURE-PRESSURE RELIEF VALVE
- PRESSURE REDUCING VALVE
- COMBINATION VALVE (ISOLATION, CHECK, BALANCING)
- MOTOR OPERATED VALVE
- SOLENOID OPERATED VALVE
- GAS PRESSURE REGULATOR
- THERMOSTATIC MIXING VALVE
- HW RECIRC VALVES
- CLEAN OUT
- FLOOR CLEAN OUT / GRADE CLEAN OUT
- WALL CLEAN OUT
- HOSE BIBB
- NON FREEZE HOSE BIBB
- NON FREEZE WALL HYDRANT
- YARD HYDRANT
- HUB DRAIN
- FLOOR DRAIN
- FUNNEL FLOOR DRAIN
- FLOOR SINK
- ROOF DRAIN
- DOWN SPOUT
- FLOW SWITCH
- PRESSURE SWITCH
- AQUASTAT
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- STRAINER WITH BLOWOFF
- VACUUM BREAKER
- INLINE PUMP
- WATER HAMMER ARRESTER
- REDUCED PRESSURE ZONE BACK FLOW PREVENTER
- DOUBLE CHECK VALVE ASSEMBLY
- SHOWER HEAD
- POINT OF CONNECTION
- POINT OF REMOVAL



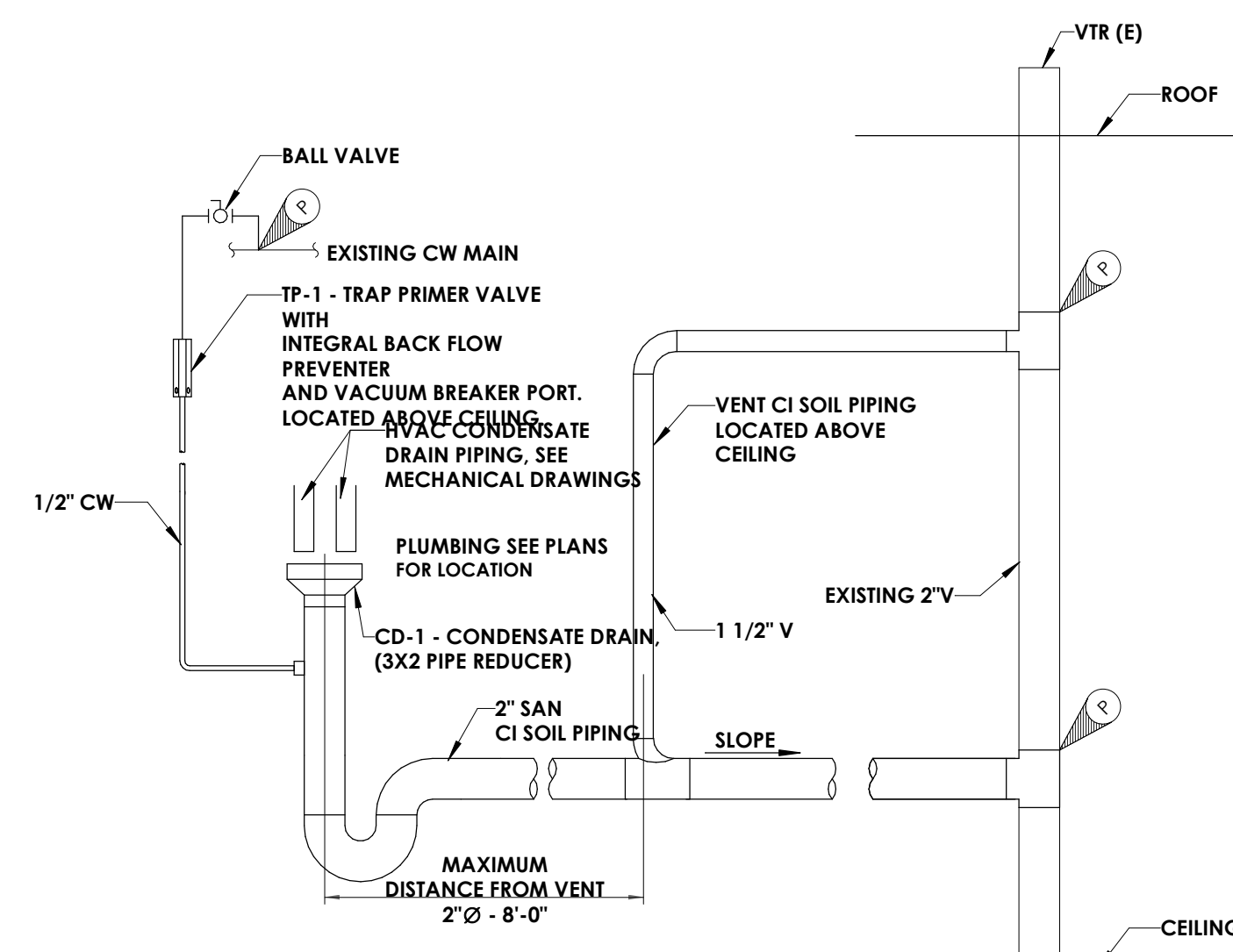
1
P000 NOT TO SCALE
GAS CONNECTION DETAIL



2
P000 NOT TO SCALE
PIPING SUPPORT DETAIL



3
P000 NOT TO SCALE
KITCHEN EQUIPMENT GAS CONNECTION



4
P000 NOT TO SCALE
CD-1 DETAIL

PLUMBING EQUIPMENT & FIXTURE SCHEDULE								
MARK	FIXTURE	CW	HW	SAN	V	DESCRIPTION:	MODEL NUMBER	REMARKS
TP-1	TRAP PRIMER	1/2"	-	-	-	TRAP-DEFENDER™ IS A PRESSURE DROP-ACTIVATED TRAP PRIMER, ACTIVATES ON 3 PSI DROP	J.R. SMITH #2694	-
HB-1	FREEZELESS HOSE BIBB	3/4"	-	-	-	FREEZELESS HOSE BIBB DECK MOUNTED WITH AIR VENT, 3/4" CONNECTION	HOSE BIBB: WOODFORD #SRH-MS	-

FIRE PROTECTION NOTES:

- ADJUST THE SPRINKLER HEAD IN THE PRINCIPALS OFFICE HIGHER TO MATCH CEILING HEIGHT.
- ADJUST THE SPRINKLER HEAD IN THE CAFETERIA LOWER TO MATCH CEILING HEIGHT.
- ADJUST THE SPRINKLER HEAD IN THE CORRIDOR OUTSIDE OF THE MEDIA CENTER LOWER TO MATCH CEILING HEIGHT.

NO.	DATE	BY	CHKD	DESCRIPTION
1	01/21/2021	GAK	RDH	ISSUED FOR PERMIT



RELEASED FOR CONSTRUCTION

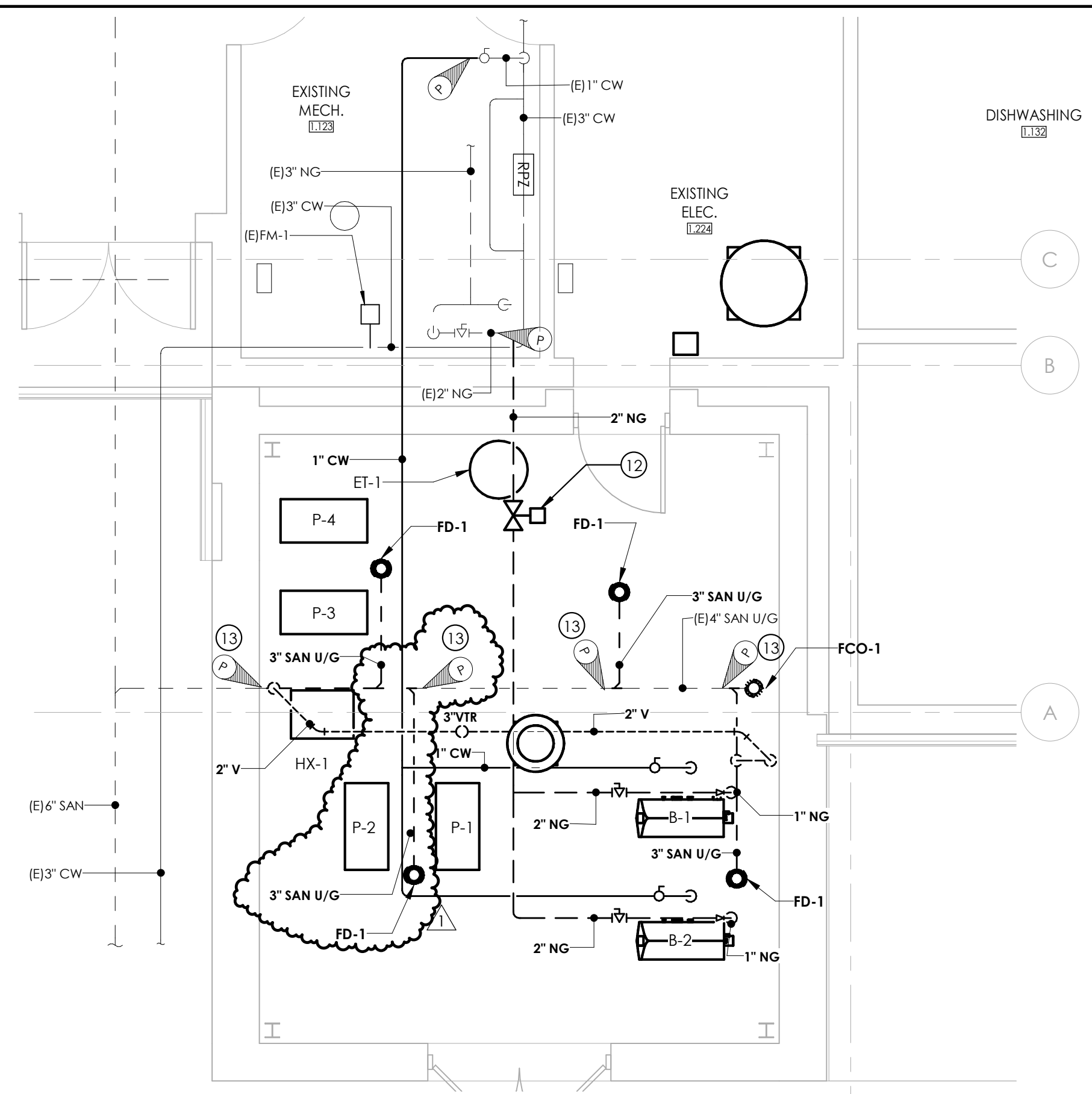
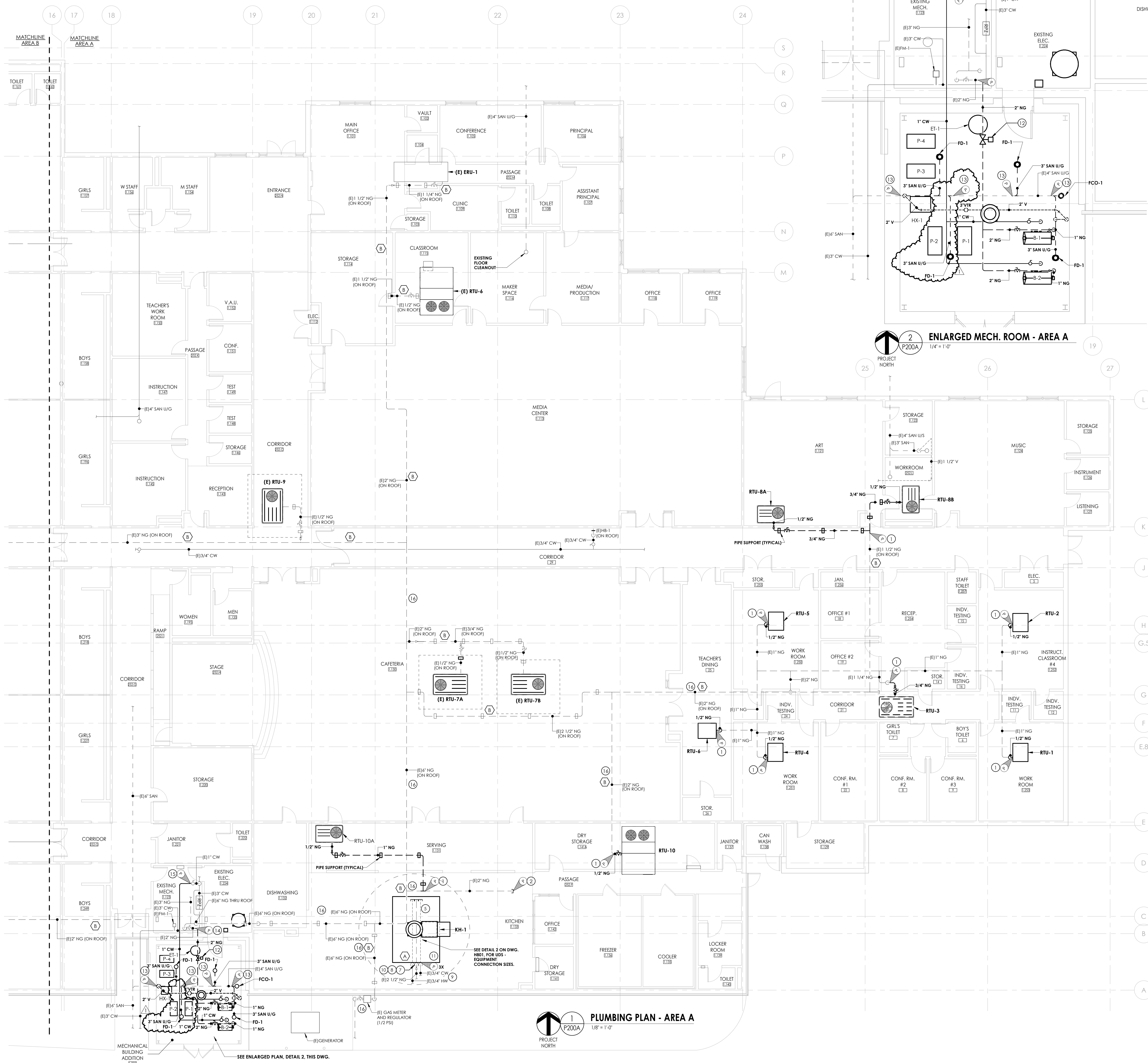
COBB COUNTY SCHOOL DISTRICT
ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 633-0289)
HVAC MODIFICATIONS 2021
3055 EBENEZER ROAD NE
MARIETTA, GA 30066
BID SET SUBMITTAL - 01/21/2021

DATE	DRAWN	CHECKED
01/21/2021	RDH	GAK

SCALE: As indicated
SHEET TITLE: PLUMBING LEGEND, GENERAL NOTES AND SCHEDULE

PROJECT NUMBER 15883.00
CD P000
DRAWING NUMBER

C:\Users\Browns\Documents\Addison Elementary School_PIP2_MEP16_Rework\A1\XY1.dwg 1/20/2021 11:21:52 AM



2 ENLARGED MECH. ROOM - AREA A
1/4" = 1'-0"

1 PLUMBING PLAN - AREA A
1/8" = 1'-0"

- NEW WORK NOTES:**
- CONNECT EXISTING GAS PIPING TO NEW UNIT GAS PIPING ON ROOF. CONNECT TO EXISTING AS SHOWN. CLEAN AND PAINT TO MATCH EXISTING PIPE.
 - CAP EXISTING GAS PIPING ON ROOF.
 - FIELD VERIFY EXISTING CONDITIONS, GAS PIPING SIZES, LOCATIONS AND GAS PRESSURE.
 - INSTALL GAS PRESSURE REGULATOR IF EXISTING GAS PRESSURE IS HIGHER THAN 14" W.C. DESIGN AND SIZES ON DRAWINGS ARE BASED ON 14" W.C.
 - WORK OF BASE BID SHALL INCLUDE THE DISCONNECTION, REMOVAL AND REPLACEMENT OF EXISTING UTILITY BRANCH PIPING WITH HARD CONNECTIONS TO KITCHEN EQUIPMENT. EXISTING FLEXIBLE HOSE PIPING SHALL REMAIN. ALL NEW CONNECTIONS TO EQUIPMENT SHALL BE VIA FLEX HOSES WITH LANYARDS AND QUICK-CONNECT FITTINGS. EXISTING PIPING HEADERS SHALL REMAIN. CONTRACTOR SHALL FIELD VERIFY EXISTING CONNECTION SIZES TO EQUIPMENT.
 - UTILITY DISTRIBUTION SYSTEM (UDS) SHALL BE PROVIDED AS AN ADD ALTERNATE BY THE MECHANICAL CONTRACTOR. WORK OF ALTERNATE SHALL INCLUDE THE REMOVAL OF ALL PIPING BEHIND KITCHEN EQUIPMENT AND THE INSTALLATION OF A UTILITY DISTRIBUTION SYSTEM (UDS). CONNECTIONS TO EQUIPMENT SHALL BE VIA FLEX HOSES WITH LANYARDS AND QUICK-CONNECT FITTINGS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONNECTION SIZES TO EQUIPMENT.
 - CONNECT PIPING TO NEW SHUT-OFF VALVE AND AUTOMATIC SOLENOID VALVE (INCLUDED WITH UDS & INSTALLED BY PLUMBING CONTRACTOR) IN HORIZONTAL PORTION OF GAS PIPE. COORDINATE WITH HOOD LOCATION AND CEILING TILES. COORDINATE EMERGENCY SHUT DOWN ELECTRICAL CONNECTIONS WITH DIVISION 26. ADD ALTERNATE WILL REUSE EXISTING SHUT OFF VALVE.
 - NEW 2" GAS PIPING SHALL CONNECT TO EXISTING BELOW CEILING CAVITY WITHIN UDS TOWER AND CONNECT TO EXISTING COOK LINE AS REQUIRED AS PART OF UDS ADD ALTERNATE.
 - NEW 3/4" CW AND HW SHALL CONNECT TO EXISTING BELOW CEILING AT UDS TOWER AND CONNECT TO EXISTING COOK LINE AS REQUIRED AS PART OF UDS ADD ALTERNATE.
 - INSTALL GAS PRESSURE REGULATORS TO KITCHEN EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS.
 - ALL DISCONNECTED EXISTING KITCHEN EQUIPMENT IS TO BE RECONNECTED AND STARTED.
 - PROVIDE BOILERS GAS SHUT OFF VALVE, ASCO (REDHAT) MODEL #8043A077, 120V/60HZ, 15 WATTS, TYPE 1 ENCLOSURE, 2" NORMALLY CLOSED WITH PROOF CLOSURE AS PER ASME CSD-1 (2009). COORDINATE EMERGENCY SHUT DOWN ELECTRICAL CONNECTIONS WITH DIVISION 26.
 - CONNECT SANITARY DRAIN AND VENT PIPING TO EXISTING 4" SAN U/G PIPING.
 - CONNECT TO EXISTING 2" NG PIPING.
 - CONNECT TO EXISTING 1" CW PIPING.
 - EXISTING NATURAL GAS PIPING SHALL BE SANDED, PRIMED AND PAINTED. REFER TO SPECIFICATION.

- ADD ALTERNATE NOTES:**
- REPLACE NEW GAS SHUT-OFF SOLENOID VALVE TO NEW UDS SYSTEM AT KITCHEN HOOD.
 - REPLACE ALL ROOF TOP GAS PIPING AND PIPE SUPPORTS ON PIPES SMALLER THAN 6", THAT WAS NOT REPLACED IN PHASE 1 PROJECT.

SEE ENLARGED PLAN, DETAIL 2, THIS DWG.

SEE DETAIL 2 ON DWG. H801, FOR UDS EQUIPMENT CONNECTION SIZES.

(E) GAS METER AND REGULATOR (1/2 PSI)

(E) GENERATOR

(E) 1/2" NG (ON ROOF)

(E) 1/2" NG (ON ROOF)

(E) 1/2" NG (ON ROOF)

(E) 1/2" NG (ON ROOF)

(E) 1/2" NG (ON ROOF)

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(E) 1/2" NG (ON ROOF)

(E) 1/2" NG (ON ROOF)

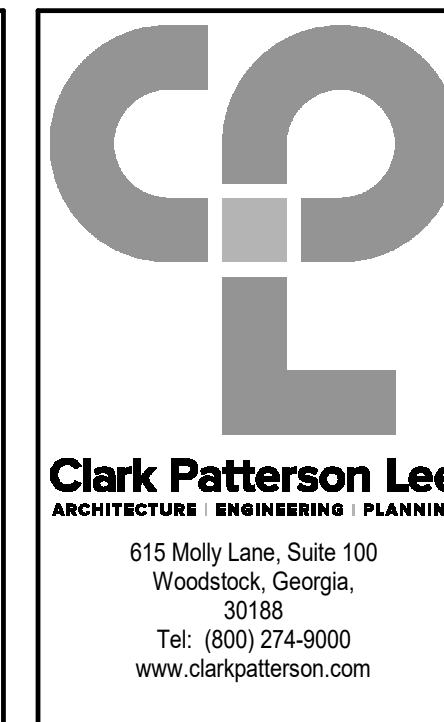
(E) 1/2" NG (ON ROOF)

(E) 1/2" NG (ON ROOF)

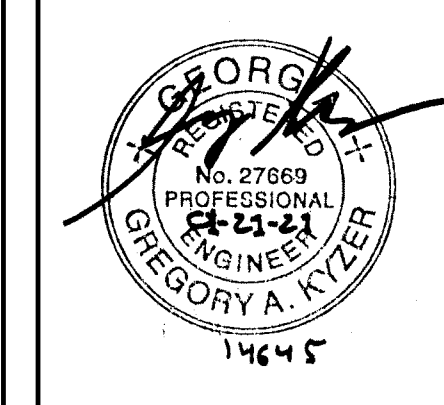
(E) 1/2" NG (ON ROOF)

(E) 1/2" NG (ON ROOF)

(E) 1/2" NG (ON ROOF)



NO.	DATE	BY	CHKD	DESCRIPTION
1	01/21/2021	GAK		ISSUE FOR BIDDING



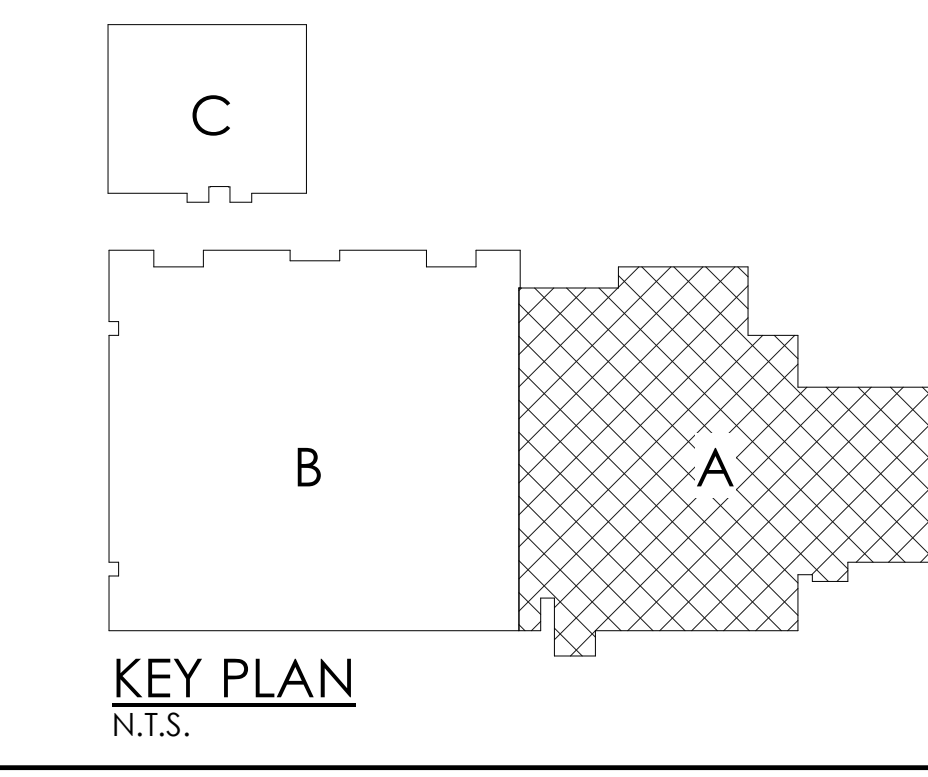
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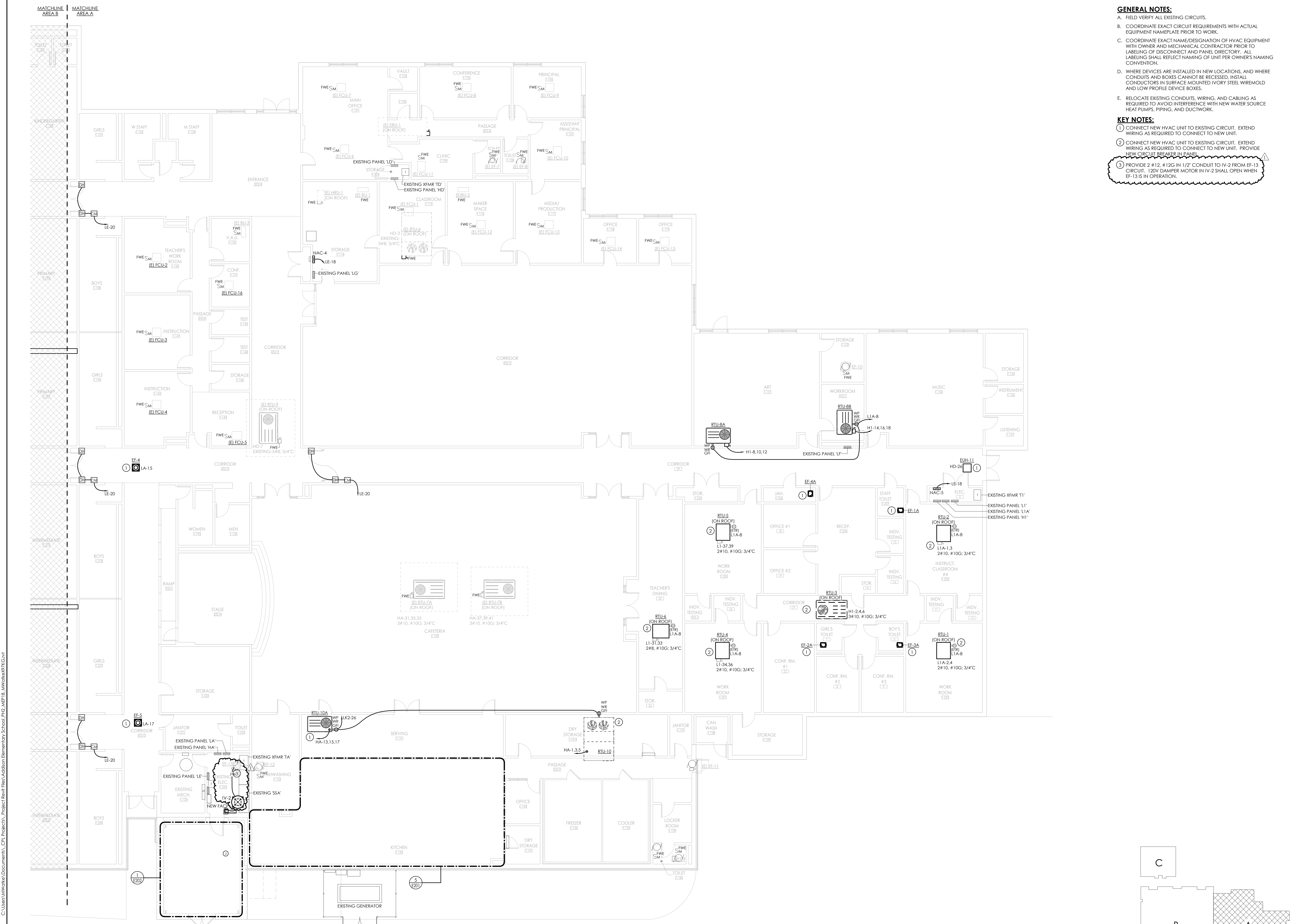
COBB COUNTY SCHOOL DISTRICT
 ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 433-0289)
 HVAC MODIFICATIONS 2021
 3035 EBENEZER ROAD NE
 MARIETTA, GA 30066
 BID SET SUBMITTAL - 01/21/2021

DATE	DRAWN	CHECKED
01/21/2021	RDH	GAK

SCALE: As indicated
SHEET TITLE: PLUMBING NEW WORK PLAN - AREA A

PROJECT NUMBER: 15883.00
CD
 P200A
 DRAWING NUMBER

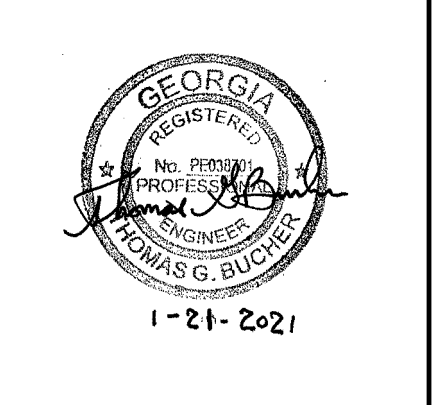




- GENERAL NOTES:**
- FIELD VERIFY ALL EXISTING CIRCUITS.
 - COORDINATE EXACT CIRCUIT REQUIREMENTS WITH ACTUAL EQUIPMENT NAMEPLATE PRIOR TO WORK.
 - COORDINATE EXACT NAME/DESIGNATION OF HVAC EQUIPMENT WITH OWNER AND MECHANICAL CONTRACTOR PRIOR TO LABELING OF DISCONNECT AND PANEL DIRECTORY. ALL LABELING SHALL REFLECT NAMING OF UNIT PER OWNER'S NAMING CONVENTION.
 - WHERE DEVICES ARE INSTALLED IN NEW LOCATIONS, AND WHERE CONDUITS AND BOXES CANNOT BE RECESSED, INSTALL CONDUCTORS IN SURFACE MOUNTED IVORY STEEL WIREMOLD AND LOW PROFILE DEVICE BOXES.
 - RELOCATE EXISTING CONDUITS, WIRING, AND CABLING AS REQUIRED TO AVOID INTERFERENCE WITH NEW WATER SOURCE HEAT PUMPS, PIPING, AND DUCTWORK.
- KEY NOTES:**
- CONNECT NEW HVAC UNIT TO EXISTING CIRCUIT. EXTEND WIRING AS REQUIRED TO CONNECT TO NEW UNIT.
 - CONNECT NEW HVAC UNIT TO EXISTING CIRCUIT. EXTEND WIRING AS REQUIRED TO CONNECT TO NEW UNIT. PROVIDE NEW CIRCUIT BREAKER IN PANEL.
 - PROVIDE 2 #12, #12G IN 1/2" CONDUIT TO IV-2 FROM EF-13 CIRCUIT. 120V DAMPER MOTOR IN IV-2 SHALL OPEN WHEN EF-13 IS IN OPERATION.

Clark Patterson Lee
ARCHITECTURE ENGINEERING PLANNING
615 Molly Lane, Suite 100
Woodstock, Georgia, 30188
Tel: (800) 774-9000
www.clarkpatterson.com

NO.	DATE	BY	DESCRIPTION
1	10/27/2021	ADP/RYD/RYD	REVISION SCHEDULE



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COBB COUNTY SCHOOL DISTRICT
ADDISON ELEMENTARY SCHOOL (FACILITY CODE: 433-0289)
HVAC MODIFICATIONS 2021
3055 EBENEZER ROAD NE
MARIETTA, GA 30066
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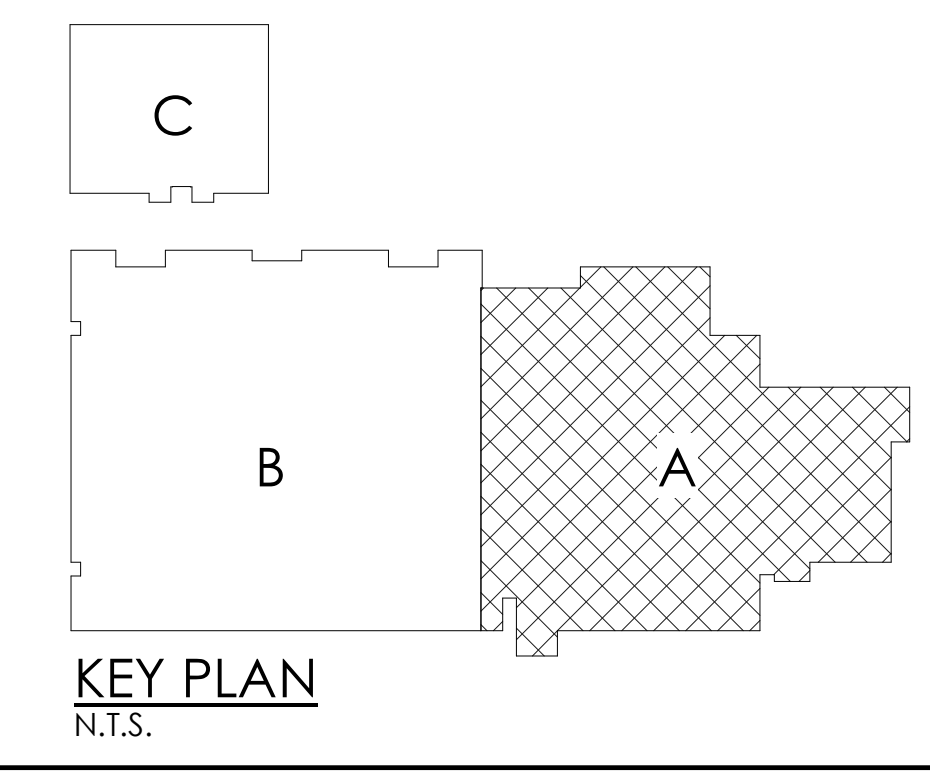
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01/21/2021	JMH	TGB

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SHEET TITLE: ELECTRICAL PLAN - AREA A

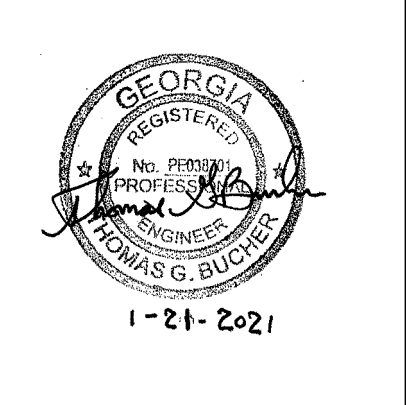
15883.00
CD
E200A
DRAWING NUMBER

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1
E200A
ELECTRICAL PLAN - AREA A
1/8" = 1'-0"
PROJECT NORTH



DATE	BY	DESCRIPTION
01/21/2021	JMH	REVISION SCHEDULE
		CONV. # 1
		NO.

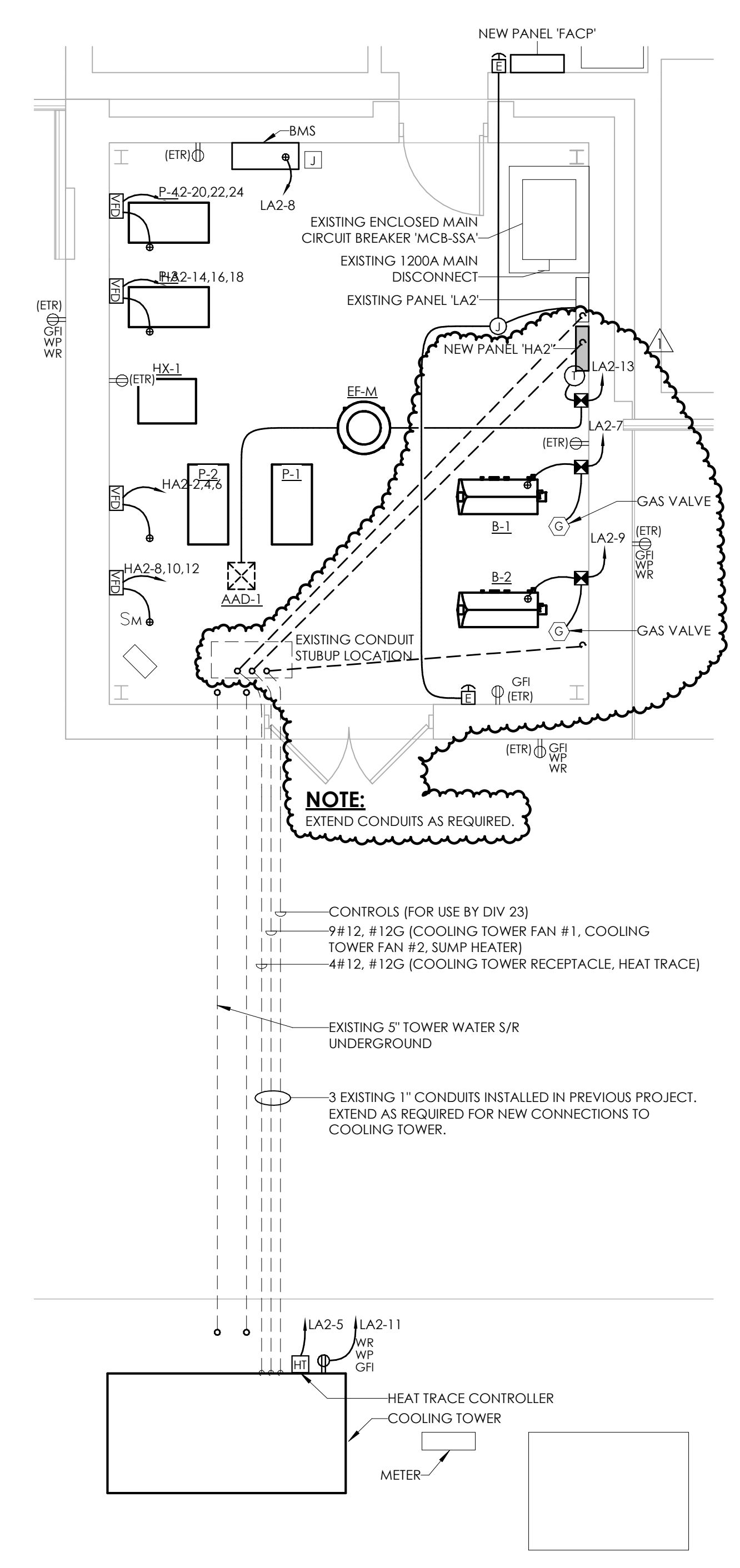


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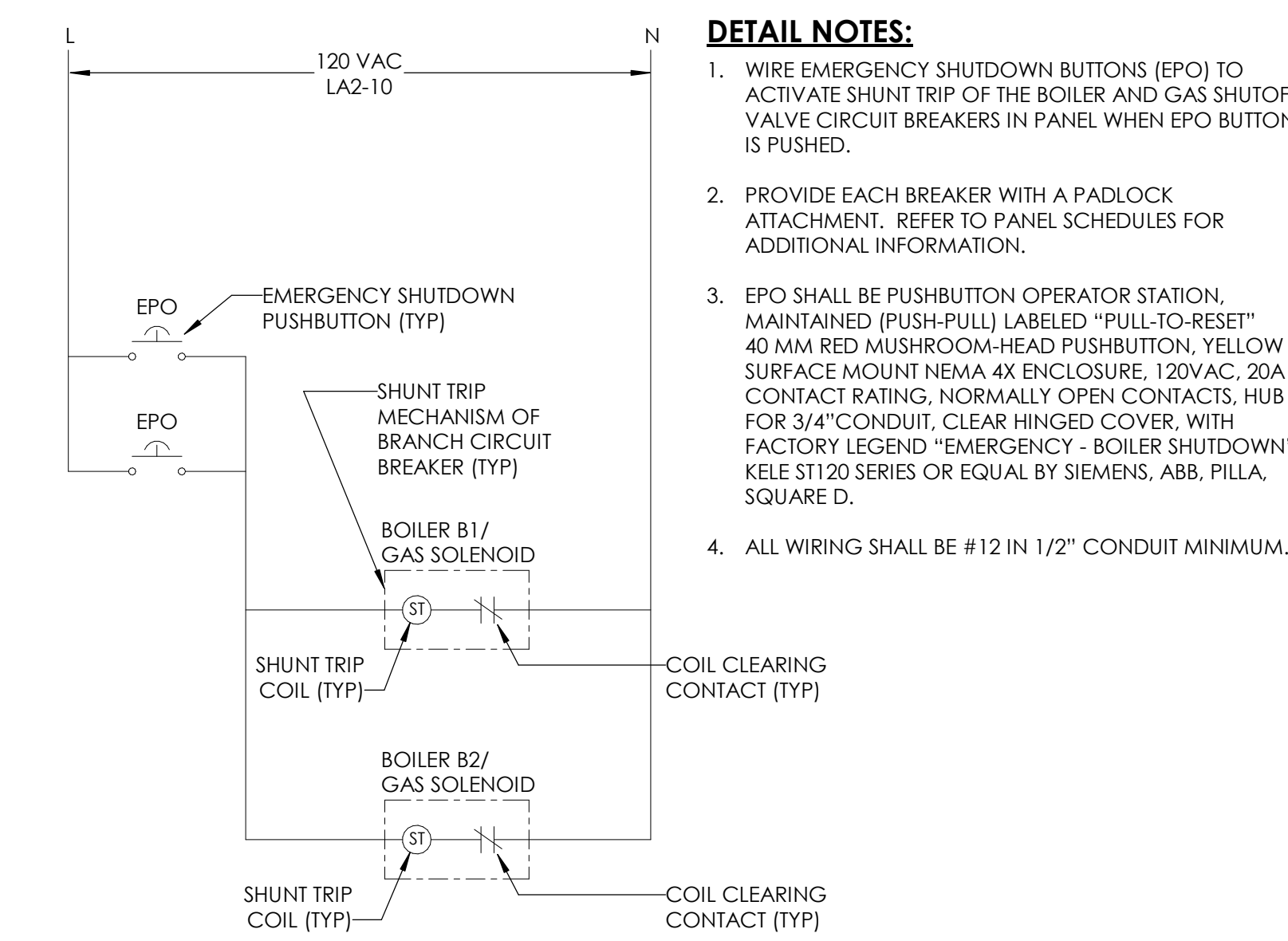
COBB COUNTY SCHOOL DISTRICT
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3055 EBENEZER ROAD NE
MARIETTA, GA 30066
BID SET SUBMITTAL - 01/21/2021

DATE	DRAWN	CHECKED
01/21/2021	JMH	TGB
SCALE	As Indicated	
SHEET TITLE	ELECTRICAL PLAN - AREA A MECHANICAL ROOM	

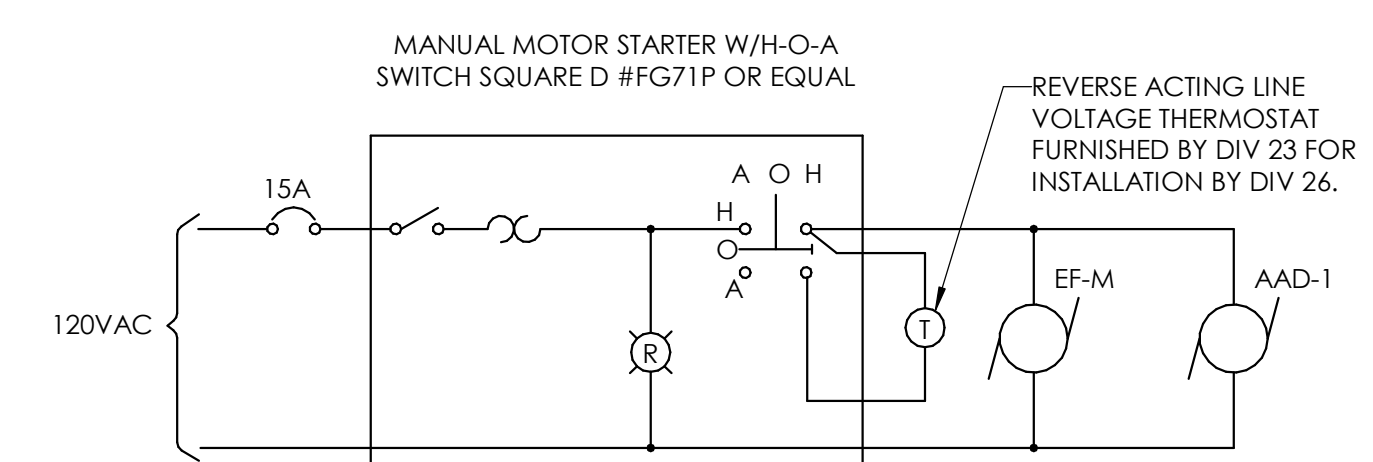
15883.00
CD
E202
DRAWING NUMBER



1
E202
ENLARGED MECHANICAL ROOM ELECTRICAL PLAN
1/4" = 1'-0"
PROJECT NORTH

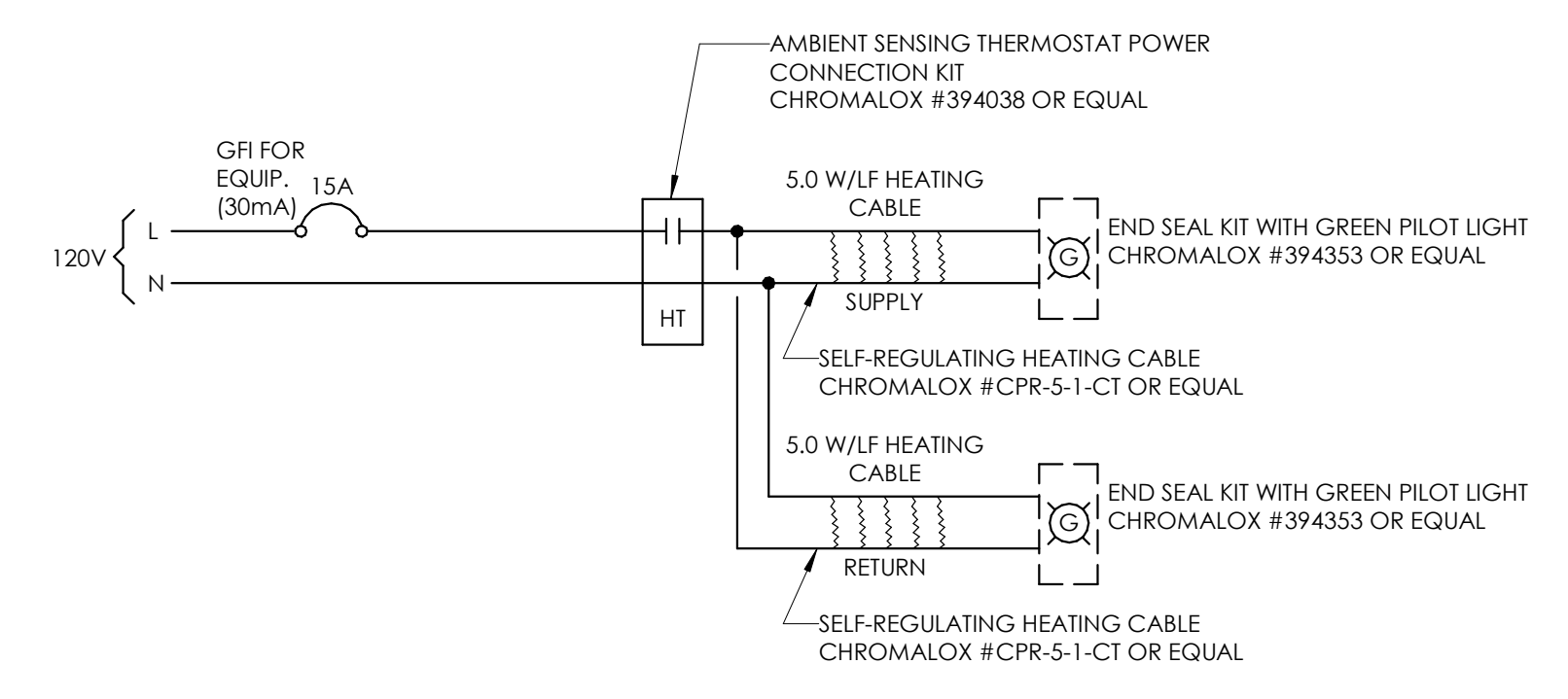


5
E202
BOILER EMERGENCY SHUTDOWN WIRING DETAIL
NOT TO SCALE



4
E202
EXHAUST FAN EF-M CONTROL SCHEMATIC
NOT TO SCALE

PIPE HEAT TRACE SCHEDULE								
Service	Reference Dwgs / Field Location	Diameter	LENGTH (FT)	FLUID	INSULATION	INSULATION TYPE	PURPOSE	LOAD (WATTS)
COOLING TOWER SUPPLY	E202 South of Mechanical Room	5"	20	Water	2"	Fiberglass Metal Jacket	Freeze Protection	100
COOLING TOWER RETURN	E202 South of Mechanical Room	5"	10	Water	2"	Fiberglass Metal Jacket	Freeze Protection	50
							Total Load	150



2
E202
TYPICAL PIPE HEAT TRACE SCHEMATIC
6" = 1'-0"

SECTION 00 0010 – TABLE OF CONTENTS

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

00 0010	Table of Contents	
00 0011	List of Drawings	
00 0012	GDOE Documentation	
00 0200	Invitation to Bid	
00 1010	Instructions to Bidders	
00 2100	Specific Date Construction Schedule	
00 3100	Bid Proposal Form	1-21-2021
00 5100	Agreement Form with Exhibit A	
00 7100	General Conditions	

DIVISION 01 - GENERAL REQUIREMENTS

01 1010	Alternates	
01 2000	General Requirements	
01 3000	Submittals	
01 3100	Construction Schedules	
01 3120	Project Meetings	
01 4000	Testing Laboratory Services	
01 5000	Temporary Facilities	
01 6300	Substitutions	
01 6500	Project Record Documents	
01 6750	Final Cleaning	
01 7000	Contract Closeout	
01 7390	Cutting and Patching	1-21-2021

DIVISION 02 – EXISTING CONDITIONS

02 4119	Selective Demolition	1-21-2021
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DIVISION 03 – CONCRETE

03 3000	Cast-In-Place Concrete	
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DIVISION 04 – MASONRY (NOT USED)

DIVISION 05 – METALS

05 1200	Structural Steel Framing	
05 3100	Steel Decking	
05 5000	Metal Fabrications	

DIVISION 06 – WOOD, PLASTIC, AND COMPOSITES (NOT USED)

DIVISION 07 – THERMAL AND MOISTURE PROTECTION\

07 7200	Roof Accessories	
07 8413	Penetration Firestopping	
07 8446	Fire Resistive Joint Systems	
07 9200	Joint Sealants	

DIVISION 08 – OPENINGS (NOT USED)

DIVISION 09 – FINISHES

CPL		1-21-2021
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09 5113 Acoustical Panel Ceilings
09 9123 Interior Painting

DIVISION 10 – SPECIALTIES (NOT USED)

DIVISION 11 – EQUIPMENT (NOT USED)

DIVISION 12 – FURNISHINGS (NOT USED)

DIVISION 13 – SPECIAL CONSTRUCTION (NOT USED)

DIVISION 14 – CONVEYING EQUIPMENT (NOT USED)

DIVISION 21 – FIRE SUPPRESSION (NOT USED)

DIVISION 22 – PLUMBING

22 0519 Meters and Gages for Plumbing Piping
22 0719 Plumbing Piping Insulation
22 1116 Domestic Water Piping
22 1316 Sanitary Waste and Vent Piping

DIVISION 23 – HEATING VENTILATING AND AIR CONDITIONING

23 0717 Variable Frequency AC Drive Controllers
23 0513 Common Motor Requirements
23 0519 Meters and Gages for HVAC
23 0523 General-Duty Valves for HVAC Piping
23 0529 Hangers and Supports
23 0533 Heat Tracing
23 0553 HVAC Identification
23 0593 Testing, Adjusting, and Balancing
23 0713 Duct Insulation
23 0716 HVAC Equipment Insulation
23 0719 HVAC Piping Insulation
23 0900 Instrumentation and Controls
23 1123 Facility Natural Gas Piping
23 2113 Hydronic Piping
23 2116 Hydronic Piping Specialties
23 2123 Hydronic Pumps
23 3113 Metal Ducts
23 3300 Air Duct Accessories
23 3423 HVAC Power Ventilators
23 3713 Diffusers, Registers, and Grilles
23 3813 Commercial Kitchen Hoods
23 5216 Condensing Boilers
23 6500 Cooling Towers
23 7200 Air-to-Air Energy Recovery Equipment
23 7413 Packaged, Outdoor, Central-Station Air-Handling Units
23 8146 Water to Air Unitary Heat Pumps

DIVISION 26 – ELECTRICAL

26 0010 General Provisions for Electrical Work

26 0510	Electrical Related Work
26 0519	Low-Voltage Electrical Power Conductors and Cables
26 0526	Grounding and Bonding for Electrical Systems
26 0529	Hangers and Supports for Electrical Systems
26 0533	Raceways and Boxes for Electrical Systems
26 0553	Identification for Electrical Systems
26 2200	Low-Voltage Transformers
26 2416	Panelboards
26 2726	Wiring Devices
26 2816	Enclosed Switches
26 2900	Heat Trace

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DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

28 3111	Addressable Fire Alarm Systems	
28 3112	Zoned Fire Alarm Systems	1-21-2021

DIVISION 31 – EARTHWORK (NOT USED)

DIVISION 32 – EXTERIOR IMPROVEMENTS (NOT USED)

DIVISION 33 – UTILITIES (NOT USED)

END OF SECTION 00 0010

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**SECTION 00 3100
BID PROPOSAL FORM**

DATE: _____

TO: OWNER

FROM: BIDDER'S NAME AND ADDRESS

SUPERINTENDENT
COBB COUNTY SCHOOL DISTRICT
514 GLOVER STREET
MARIETTA, GA 30060

Gentlemen:

1. BASE BID:

Pursuant to and in compliance with the Advertisement for Bids and the proposed Contract Documents relating to the construction of:

PROJECT NAME: Addison ES HVAC Modifications 2021

PROJECT NO.: K076

including Addenda _____, the undersigned, having become thoroughly familiar with terms and conditions of the proposed Contract Documents and with local conditions affecting the performance, progress and cost of the work that is to be completed and having fully inspected the site in all particulars, hereby proposes and agrees to fully perform the work within the time stated and in accordance with the Contract Documents including furnishing any and all services, labor, materials, and equipment and to do all the work required to construct and complete said work in accordance with the Contract Documents for the following sum (including, if any, all Alternates, Unit Prices, and Allowances listed below):

_____ Dollars

(\$ _____) which Sum is hereinafter called the "Base Bid".

2. CONTINGENCY ALLOWANCE: Base Bid is to include Owner controlled contingency: \$50,000.00

3. ADD ALTERNATE FOR UDS (Utility Distribution System) AND ALL ASSOCIATED WORK IN THE KITCHEN UNDER THE HOOD:

_____ Dollars

(\$ _____) which will be added to the contract at the Owners option by Change Order.

4. ADD ALTERNATE FOR REPLACING ALL OF THE ROOF TOP GAS PIPING SMALLER THAN 6" DIAMETER ON BOTH THE MAIN BUILDING (AREA A & B) AND THE GYM (AREA C) AND REPLACING ALL PIPE SUPPORTS AND PAINTING ALL OF THE PIPES.

_____ Dollars

(\$ _____) which will be added to the contract at the Owners option by Change Order.

4. **TIME OF COMPLETION:** Bidder hereby agrees to commence actual physical work on the site with an adequate force and equipment within ten (10) days of a date to be specified in a written order of the Owner's (Notice to Proceed) and to substantially complete and finally complete the work by dates stated in Project Manual.
5. For and in consideration of the sum of \$1.00, the receipt of which is hereby acknowledged, the Undersigned agrees that this proposal may not be revoked or withdrawn after the time set for the opening of bids but will remain open for acceptance for a period of sixty (60) days following such time, and that the acceptance of Alternates by the Owner, for the amounts proposed, may occur with-in (60) sixty days of the contract award, and incorporated into the Contract by Change Order.
7. **BID SECURITY: (CERTIFIED CHECK NOT ACCEPTED)**
Bid security in the amount of five percent (5%) of the Base Bid is attached in the amount of Dollars (\$) _____, which is to become the property of the Owner in the event the Contract and Performance Bonds are not executed within the time set forth, as liquidated damages for the delay and additional cost caused the Owner.

The Undersigned agrees that upon receipt of the Notice of Acceptance of his Bid (NOTICE OF AWARD), he will, within ten (10) days from the Notice of Award, execute the formal Contract (AIA Document A101), and will deliver a Surety Bond for the faithful performance of this Contract and such other bonds and insurance as required by the specifications.

The Undersigned further agrees that if he fails or neglects to appear within the specified time to execute the Contract of which this Proposal, the Bidding Documents and the Contract Documents are a part, the Undersigned will be considered as having abandoned the Contract, and the Bidder's Bond accompanying this Proposal will be forfeited to the Owner by reason of such failure on the part of the Undersigned.

8. If awarded a contract, the Undersigned's surety will be _____.

9. If awarded a contract the major subcontractors will be:

Mechanical: _____

Electrical: _____

Acoustical Ceiling: _____

Roofing: _____

Respectfully submitted,
Signature of an Individual: _____

Doing Business as: _____

Business Address: _____

If a Partnership:

By: _____

Member of Firm

Member of Firm

Business Address:

If Corporation:

By:

Title:

Business Address:

Telephone Number:

(Seal - If bid is by Corporation)

DATE OF BID

END OF SECTION 00 3100

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SECTION 00 739 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. CCSD'S specification Section 00 739 is bound with this section.

PART 2 - PRODUCTS (Where Applicable is bound with this section.)

PART 3 - EXECUTION (Where Applicable is bound with this section.)

PART 4 - END OF SECTION 00 739

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SECTION 01739 – CUTTING AND PATCHING

A. GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following;
 - 1. Divisions 02 through 17 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operation Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that result in increased maintenance or decreased operational life or safety. Operating elements include the following:
 - 1. Primary operational systems and equipment.
 - 2. Air or smoke barriers.
 - 3. Fire-suppression systems.
 - 4. Mechanical systems piping and ducts.
 - 5. Control systems.
 - 6. Plumbing and piping.

7. Communication and Data Systems.
 - a. Prior to demo work at ceilings, contractor shall identify existing fiber optic and other cables and note how they are supported. Fiber Optic cables will typically be Aqua Blue or Orange and will be supported by J-hooks attached to ceiling grid support wires or walls, or cable trays. Contractor shall exercise care during demo work to insure that all existing cables to remain shall be properly secured and supported to the building structure. **DO NOT USE ZIP TIES.** When removing existing ceiling grid, cut the wires below existing J-hooks. **DO NOT RE-ATTACH NEW CEILING grid** to support wires which also support J-hooks and cables. Contractor shall be responsible for all repair and replacement costs incurred by CCSD due to Contractor's failure to protect and support existing cabling. (See attached drawings and photographs at end of this Guide Spec for examples.)
8. Electrical wiring systems. Remove all demoed wiring back to the source.
9. Wall Patching: Where electrical, FA or HVAC devices are removed the wall shall be patched to match the appearance and color of the existing adjacent wall finish. NOTE: BLANK COVER PLATES ARE NOT ACCEPTABLE.
- C. Miscellaneous Elements: **Do not cut and patch** miscellaneous elements or related components in a manner that could change their load-carrying capacity that results in reducing their capacity to perform as intended, or that result in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
 1. Water, moisture, or vapor barriers.
 2. Membranes and flashings.
 3. Equipment supports.
 4. Piping, ductwork, vessels, and equipment
 5. Noise-and vibration-control elements and systems.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1.5 WARRANTY

- A. Existing Warranties: Remove, replace, patch and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.
 1. The in-effect warranties and integrity of the existing roof system shall be maintained.
 2. The in-effect Johns-Manville warranty on the Mechanical Room Addition shall be maintained. Note: The warranties on the roofs on the main building (Areas A & B) and the Gym (Area C) have expired and, therefore, do not need to be maintained.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.
- C. Existing Roofing System:
 - 1. Metal Deck: To match existing deck in height and profile.
 - 2. Secondary Framing: Supplemental steel angles same size and weight as indicated at new openings.
 - 3. Roofing Flashing Membrane: Match existing or, if existing material is no longer available, provide alternate product acceptable to the Owner and Existing roofing manufacturer.

PART 3 – EXECUTION

3.1 ACCEPTABLE INSTALLER

- A. Roofing applicator shall have three years' experience installing this type roofing system, shall be approved by the existing roof manufacturer and have successfully completed three projects of similar using the system specified.

3.2 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.3 PREPARATION

- A. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- B. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- C. Existing Utility Services and mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

3.4 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use
 - 2. Finished Surfaces; Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.

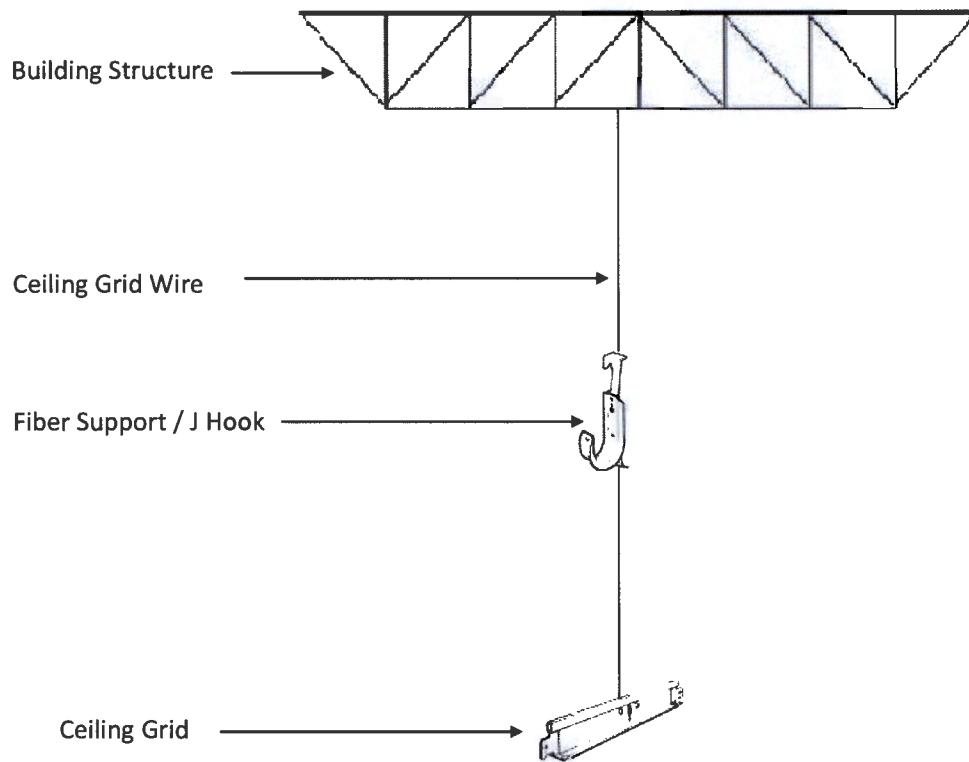
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
 - 1. Inspections: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retrained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: patch components in a manner that restores enclosure to weather-tight condition.
 - a. Roof Infill Material Installation:
 1. Immediately after removal of selected portions of existing membrane roofing system, and inspect and repair, if needed, deck, fill in the tear-off areas to match existing membrane roofing system construction.
 - a. Install new roofing membrane patch over roof infill area. If new roofing membrane is installed the same day tear-off is made, roofing membrane patch is not required.
 - b. Apply roofing accordance with roofing system manufacturer's instructions and the following requirements. Application of roofing membrane components shall immediately follow application of insulation as a continuous operation.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
- E. When cutting or patching inside a building, the area where the work is to be done must be sealed off to prevent dust and smoke from entering the HVAC, electrical, fire alarm, and security systems.
- F. Existing systems that are damaged as a result of the above work must be repaired and returned to their original operational condition. CCSD's Maintenance Services Department must be notified to inspect and approve the work prior to it being covered up.

END OF SECTION

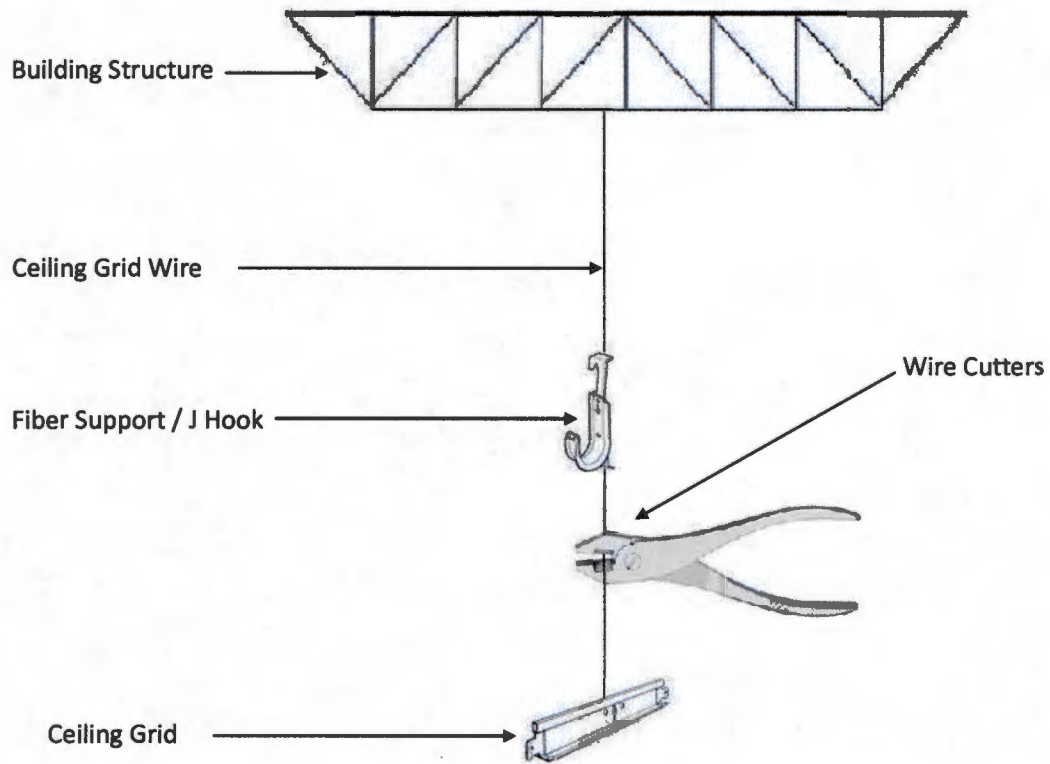
Demo Step 1: Identify Fiber Optic Cables and Support

All inside plant fiber will be aqua blue or orange it will be in J Hooks on ceiling grid or walls or possible cable trays depending on the age and structure of the school. Fiber will need to remain supported as is thru all demolishing. All fiber will be secured with plenum rated Velcro. **NO ZIP TIES !!!!**



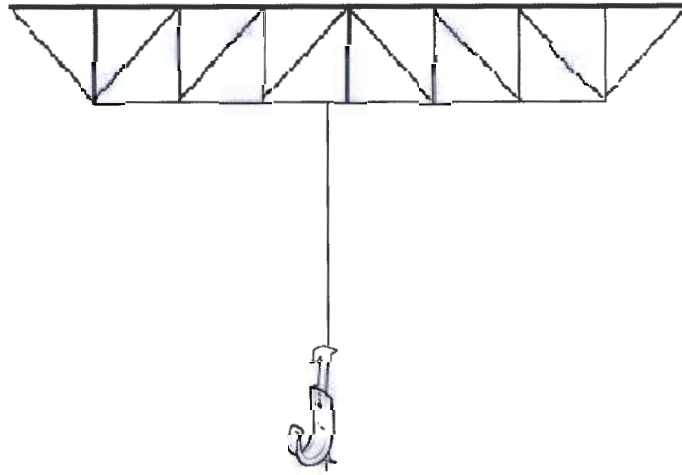
Demo Step 2: Maintaining Support

After identifying the fiber and support we will need to maintain it. In most situations the fiber is on J Hooks that are attached to grid wires. Once the demo begins in order to pass inspection they will need to have there on support to the building structure instead of sharing with the ceiling. And in order to do that we will need to cut the grid wires off below the J Hook that supports the fiber. **NO ZIP TIES !!!!**



Demo Step 3: Finished Product

After the grid wire has been cut below the J Hook and all components of the ceiling are removed we now have a fiber infrastructure that is self supported to the building structure. **NO ZIP TIES !!!!**

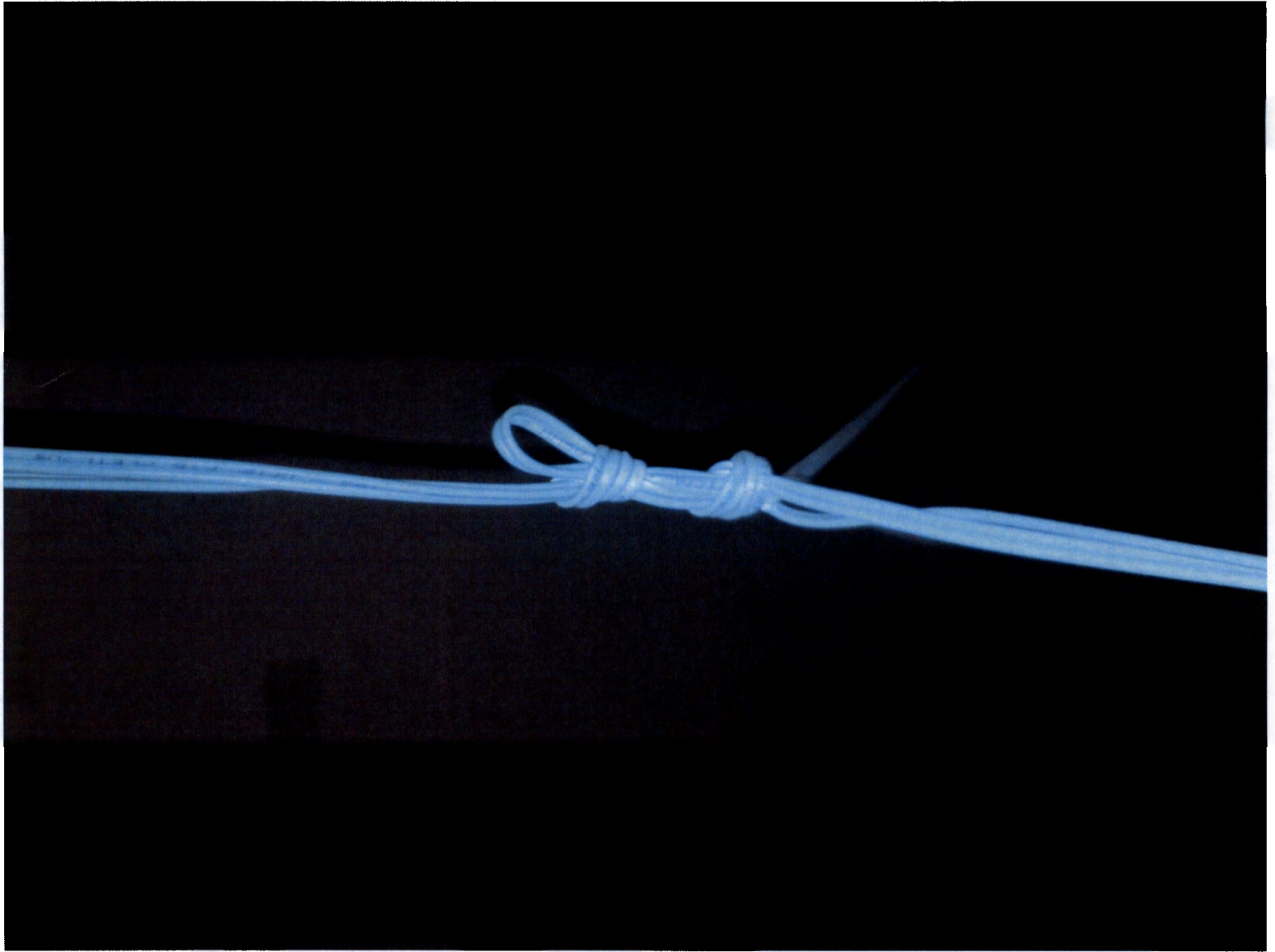


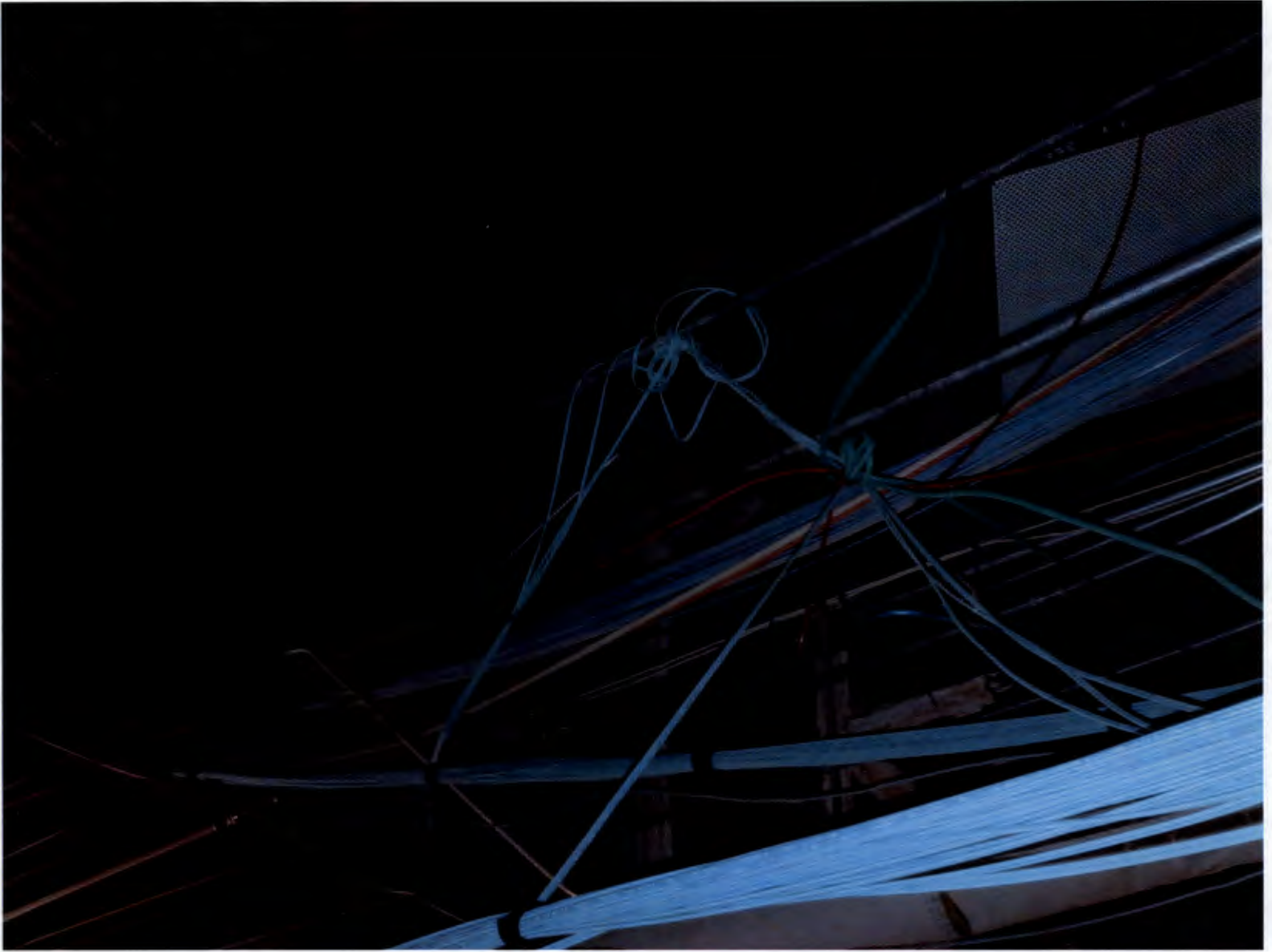
Demo Step 4: Repeat Steps 1– 3

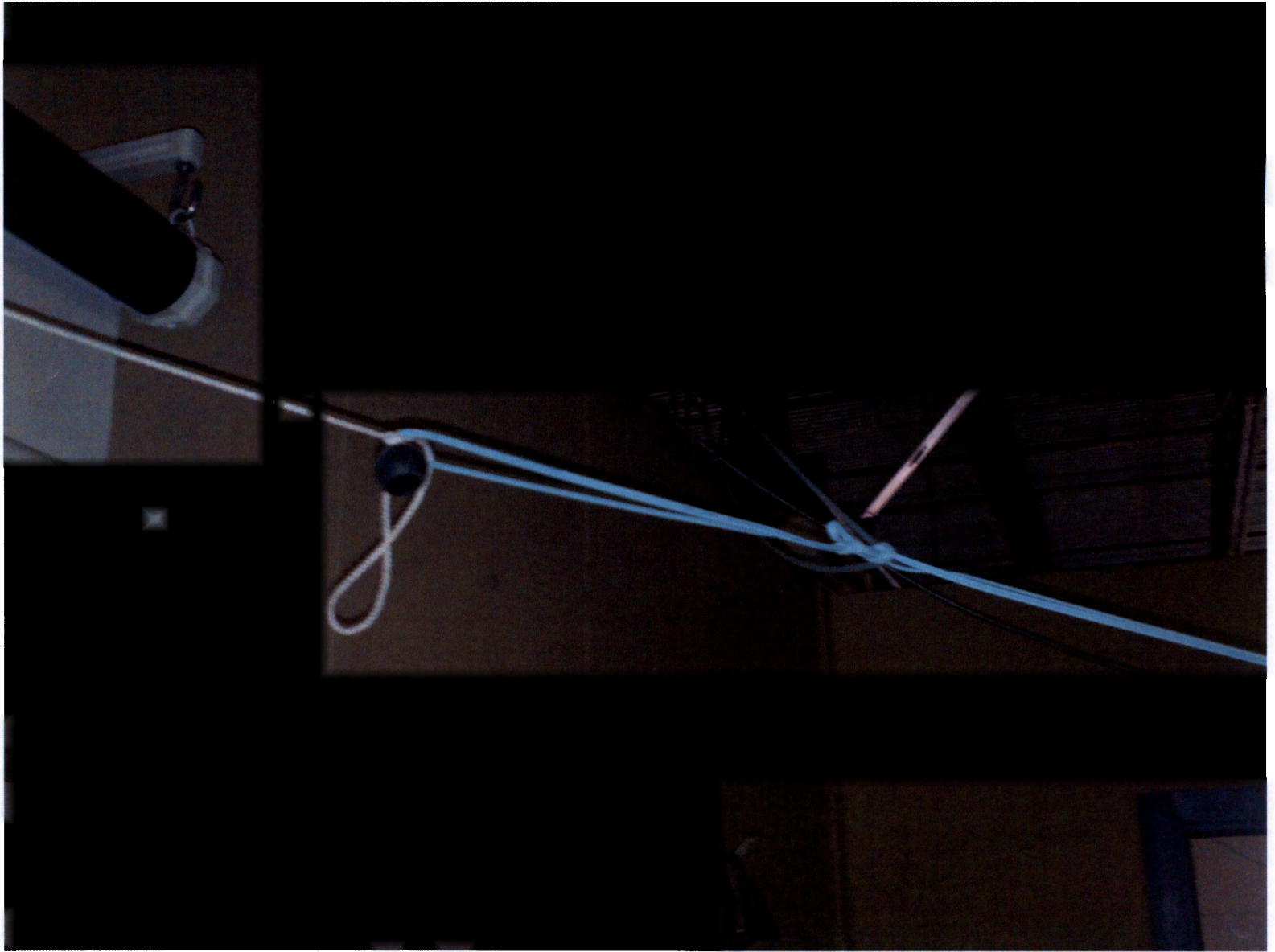
Failure to follow steps 1-3 will result in damage to the fiber infrastructure. At this point the **contractor will be responsible for all damage to infrastructure cabling** and will have to use the CCSD approved vendor to repair or re-pull cables. To sum it all up fiber optic cable is made of glass which means you can not tie it in knots, you can not cut it and wire nut it back, you can not cinch it up with zip ties. If you are not sure what something is contact CCSD and we will have someone check it out and instruct you on how to proceed. We are here to help make every project a success. The next 5 pages are a few examples of what not to do. **NO ZIP TIES !!!!**

1. Place wire
2. write test number
3. for the essay, u
BE THO











SECTION 02 4119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
1. Testing of Existing Systems.
 2. Floor Protection.
 3. Owner Occupancy
 4. Temporary Barricades
 5. Water Source Heat Pumps Installation
 6. Selective Demolition Procedures for Specific Existing Materials.
 - a. Existing RTU's
 - b. Light Fixtures
 - c. Cameras and Alert Point Hubs
 - d. Miscellaneous Ceiling Mounted Items
 - e. **Contractor shall remove all loose furniture, etc.**
 7. Patching and Matching
- B. Related Sections include the following:
1. Division 01 Section "Temporary Facilities" for temporary construction and environmental-protection measures for selective demolition operations.
 2. Division 01 Section "Cutting and Patching" for cutting and patching procedures.
 3. Division 09 Section "Acoustical Panel Ceilings" for ceiling grid and ceiling panel products and requirements where existing ceiling system is replaced. And "Interior Painting" for painting CMU.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated or in their original location.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 SUBMITTALS

- A. Pre-demolition Photographs or Videotapes: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations.

1.4 QUALITY ASSURANCE

- A. Prior to starting any work including demo: The Contractor shall test all existing systems that apply (lighting, HVAC, fire protection, fire alarm, phone, data, thermostats, temperature sensors, intercom, security system, etc.) and issue a report of their findings. Any system component not noted as not working shall be assumed to have been operation before construction started and will be the Contractor's responsibility to repair and/or replace to make the system operational again.

- B. Prior to starting any work including demo: The Contractor shall inspect all sprinkler head locations and issue a report of their findings indicating any existing sprinkler head that is too high or too low. Any head found not to be in the proper location after the new ceiling grid and tile are installed and NOT noted on this report will be the responsibility of the Contractor to adjust to the proper height, this includes draining down the system to do this work.
- C. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- D. Standards: Comply with ANSI A10.6 and NFPA 241.

1.5 PROJECT CONDITIONS

- A. Owner may occupy portions of buildings immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
 - 1. Comply with requirements specified in Division 01 Section "Summary."
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Owner and Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that asbestos materials will be encountered in the Work.
 - 1. If materials suspected of containing asbestos materials are encountered, do not disturb; immediately notify Owner and Architect. Owner will remove asbestos materials as a Change Order to the contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

PART 2 - PRODUCTS

2.1 PRODUCTS

- A. Heavy Duty Temporary Floor Protection:
 - 1. Basis of Design: "Ram Board" Temporary Floor Protection
 - a. Or approved equal.
 - 2. Seam Tape of same manufacturer as HD Temporary Floor Protection.
 - 3. Location: All Corridors and rooms where Work is performed.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

- D. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
1. Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary."
- B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
1. Arrange to shut off indicated utilities with utility companies.
 2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 3. Cut off pipe or conduit in elements to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities."
- B. Temporary Facilities: Provide **temporary barricades** and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations. Protection shall be as follows:
 - a. Wood Gym Floors, if any: Provide 7/16" OSB with 6 mil poly below; tape all joints, typical. Protect entire gym floor.
 - b. Urethane and SportCourt floors, if any: Provide 7/16" OSB with 6 mil poly below; tape all joints, typical. Protect entire floor.
 - c. Sealed/polished concrete floors, if any: paper, etc. to protect paint, striping, etc., in areas where work will impact the floor surface only.
 - d. VCT and all other floors except carpet: Heavy Duty Temporary Floor Protection; tape all joints, typical, to protect floor surfaces, paint, striping, etc., in areas where work will impact the floor surface only.
 - e. Carpet: "Peel and stick" carpet protection film at all heavily traveled locations (each door threshold, circulation pathways, etc.); paper, or a similar product, at all other carpeted locations.
 4. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities."

- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.
- D. Contact Owner Prior to Demolition: At the beginning of the work, prior to any demolition, contact the Owner to coordinate the location for fluorescent lamp containers delivered to project site, when fluorescent lamps are being replaced as a part of the scope of work.
- E. Contractor to pump out existing refrigerants and turn over to Owner and deliver to the CCSD Maintenance Department in 30 to 50-pound drums.

3.4 WATER SOURCE HEAT PUMP (WSHP) INSTALLATION

- A. The disconnection, relocation and reconnection of existing sprinkler heads and pipes(including draining down the system), conduits, cable trays, wires, cables, water pipes, gas pipes, roof drains pipes, over-flow pipes, etc or other existing construction elements for the installation of the electrical conduits, loop piping, condensate drains and WSHP's and their required clearances is part of the work of this contract and shall be performed by the Contractor at no additional cost to the Owner and is to be included in the Base Bid. Difficult installations will not be considered changes to the Contract.

3.5 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower tiers. Complete selective demolition operations above each tier before disturbing supporting members on the next lower tier. Complete selective demolition operations in a manner that prevents damage to existing materials, surfaces, and equipment.
 - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - 5. Maintain adequate ventilation when using cutting torches.
 - 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 7. Remove demolished items and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 - 8. All demo of HVAC equipment shall be executed on the ground. At no time during the job shall equipment be dismantled and/or demolished on the roof of the building.
 - 9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 10. Dispose of demolished items and materials promptly.

- B. Removed and Reinstalled Items:
 - 1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
 - 2. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
 - 3. Restore or replace damaged pipe insulation to its original condition.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.6 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in small sections. Cut concrete to a depth of at least 3/4 inch at junctures with construction to remain, using power-driven saw. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete indicated for selective demolition. Install dowels into the existing slab as indicated and repour concrete after utility pipes are installed and connected.
- B. Existing RTU's:
 - 1. Remove existing RTU's as indicated, install structural steel supports as indicated and patch roof as required.
 - 2. Install metal roof deck with same profile as the existing deck.
 - 3. Install like roofing materials with the same thicknesses as the existing.
 - 4. Use only roof materials that are compatible with the existing roof materials. Roof materials shall all be from the same manufacturer.
- C. HVAC Roofing Modifications for Installation of HCAV (ERU) Equipment.:
 - 1. Remove existing roof membrane, insulation, flashings, copings, and roof accessories, only to the extent necessary for HVAC unit (ERU) installation.
 - 2. Install additional structural steel supports as indicated.
 - 3. Install curb and flashing. Use only roof materials that are compatible with the existing roof materials. Roof materials shall be all from the same manufacturer.
 - 4. Existing roof openings not required for new HVAC equipment shall be filled in by installing metal deck and roofing materials as indicated just above.
- D. Light Fixtures:
 - 1. Suspend existing light fixtures after the existing grid is demoed for temporary light during construction.
 - 2. After new grid is installed, reinstall existing light fixtures. Reinstall two support chains per fixture. Install any missing chains so there are two chains per fixture for all fixtures.
- E. Cameras and Alert Point Hubs:
 - 1. Existing cameras and Alert Point hubs are to be removed and replaced by the Owner after the new grid and tile are installed.
- F. Miscellaneous Ceiling Mounted Items such as speakers, wireless access points, etc.:
 - 1. Temporarily remove, support in place and reinstall after grid and tile are installed.
- G. Existing Ceilings: Remove and replace suspended ceiling grid and panels as indicated.

- H. Existing ceiling mounted smoke/heat detectors: Demo as indicated. And replace ceiling tile at these locations. These requirements apply to the entire Main Building, Areas A & B, and the Gym, Area C.
- I. **Contractor shall remove all loose furniture**, shelving and equipment within the building as required for the installation of new work unless specifically noted otherwise. This requirement applies to all areas where existing grid and tile are indicated to be replaced. All items moved shall be marked as to which room it is removed from. Furniture and equipment are to be placed in the areas in the school designated by the Owner. Upon completion of work the furniture and equipment shall be put back into each classroom from which it was removed.
- J. The existing large flat screen monitors/ interactive panels in each of the 36 classrooms are to be protected in place by the Contractor. They are to be completely wrapped with plastic polyethylene film and tape.
- K. Computers, printers, copiers, and other electronic equipment will be removed and replaced by the Owner.
- L. High storage shelves and their contents that are located next to perimeter walls, typically in storage and work rooms, can be left in place but must be draped with secured polyethylene film.

3.7 PATCHING AND MATCHING

- A. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Among other items this requirement applies to existing electrical boxes where FA, and T'stats have been removed and not replaced.
 - 1. Inspections: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 - 2. Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 3. Restore exposed materials and finishes of patched areas and extend restoration into adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - 4. Painting: paint entire wall where patch occurs from corner to corner (inside or outside corners). Color to match existing.
 - a. Remove cover plates, shelves, or anything else on the wall to be repainted. Allow paint to cure and then reinstall these items.
 - 5. NOTE: BLANK COVER PLATES ARE NOT ACCEPTABLE.

3.8 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
 - 1. Verify demolished items to remain as Owner's property prior to disposal; review items at Pre-construction meeting and document.
 - 2. Do not allow demolished materials to accumulate on-site.
 - 3. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 4. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 - 5. Dispose of fluorescent light fixtures with "wet-type" ballasts, manufactured in 1991 or before, in accordance with 40 CFR 761.

- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.9 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 4119

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SECTION 28 31 11 ADDRESSABLE FIRE ALARM SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions, apply to work of this section.
- B. Division-26 Basic Electrical Requirements sections apply to work specified in this section.

1.2 DESCRIPTION OF WORK:

- A. Extent of fire alarm systems work is indicated by drawings, schedules, and riser diagrams. The following scopes of work are included in this project
 1. Main School Building (Areas A and B): Replace the existing fire alarm system with voice evacuation type system. Remove all existing devices and cabling.
 2. Gymnasium Building (Area C): Replace the existing fire alarm system with voice evacuation type system. Remove all existing devices and cabling.
 3. The Main School Building and Gymnasium Building shall be networked together such that:
 - a. Fire alarm control panels located in the Main School Building and Gymnasium building shall independently monitor and control initiation devices and alarm appliances in their respective buildings.
 - b. Alarm, trouble, and supervisory signals originating in the Gymnasium Building are reported on the main fire alarm annunciator panel in the Main School Building and on the local fire alarm control panel located in the Gymnasium Building.
- B. The Fire Alarm Systems shall consist of all necessary hardware equipment and software programming to perform the following functions:
 1. Control and monitoring of air handling units, smoke doors, and other equipment as indicated in the drawings and specifications.
 2. Fire alarm system detection and notification operations.
 3. One-way supervised automatic voice alarm operations.
- C. The system shall include, but not be limited to, control panels, alarm initiating and indicating peripheral devices, conduit, wire and accessories required to provide a complete operational system.
- D. The work covered by this section of the specifications includes the furnishing of all labor, cabling, installation materials, and performance of all operations associated with the installation of the Fire Alarm system as shown on the contract documents and as herein specified.
- E. Provide preparatory work required to accommodate the system installation i.e., conduit, junction and pull boxes, outlet boxes, brackets and all conduit fittings and accessories, including power outlets as required.

1.3 QUALITY ASSURANCE:

- A. Codes and Standards:

1. NEC Compliance: Comply with applicable requirements of NEC standards pertaining to fire alarm systems.
 2. International Fire Code with Georgia amendments: Comply with all requirements applicable to fire alarm systems in listed occupancies required.
 3. UL Compliance and Labeling: Comply with provisions of UL safety standards pertaining to fire alarm systems; and provide products and components which are UL-listed and labeled.
 4. FM Compliance: Provide fire alarm systems and accessories which are FM-approved.
 5. NFPA 72 Compliance: Comply with applicable requirements of National Fire Alarm Code pertaining to Fire Alarm Systems.
- B. Provide a minimum of two (2) system inspections/tests during the contract year as described in NFPA 72.
- C. All work shall be under the supervision of the manufacturer. It shall be the responsibility of this representative to check and inspect this installation to the Owner's and Engineer's approval. The representative shall also train personnel designated by the Owner in the proper operation and maintenance of equipment. All work in conjunction and with this installation shall be in accordance with good engineering practices.

1.4 SUBMITTALS:

- A. Product Data: Submit manufacturer's technical product data, including specifications and installation instructions, for each type of fire alarm system equipment. Include standard or typical riser and wiring diagrams, and operation and maintenance instructions for inclusion in maintenance manuals.
- B. Shop Drawings: Provide shop drawings showing equipment/device locations and connecting wiring of entire fire alarm system. Include wiring and riser diagrams.
- C. Have manufacturer submit on completion of system verification, a point-by-point checklist indicating the date and time of each item inspected and issue a Certificate confirming that the inspection has been completed and the system is installed and functioning in accordance with the specifications.
- D. Submit voltage drop calculations for the longest and mostly loaded indicating and notification circuits. Calculations shall indicate the circuit, devices, distance of circuit between devices, current on all portions of the circuit, load associated with each type of device, manufacturer recommended maximum voltage drop and wire size to meet the voltage drop.
- E. Provide battery sizing calculations indicating total number of power devices, load associated with each type device and recommended battery capacity (AH).

1.5 DELIVERY, STORAGE, AND HANDLING:

- A. Handle fire alarm equipment carefully to prevent damage, breaking, and scoring. Do not install damaged equipment or components; replace with new.
- B. Store fire alarm equipment in clean, dry place. Protect from weather, dirt, fumes, water, construction debris, and physical damage.

1.6 DEFINITIONS

- A. Definitions related to this section include the following and as indicated in NFPA 72.
1. Initiating Device: A manual or automatic device utilized to monitor a condition and provide a signal to the FACP.
 2. Notification appliance: A device utilized to provide notification to building occupants of an alarm condition.
 3. Signaling Line Circuit: A circuit between any combination of circuit interfaces, control units, or transmitters over which multiple system input signals or output signals, or both, are carried.
 4. FACP: Fire Alarm Control Panel.
 5. FATP: Fire Alarm Terminal Panel
 6. VCC: Voice Command Center

1.7 SEQUENCE OF OPERATION

- A. The fire alarm system sequence of operation shall be as indicated by the local Building Code and NFPA 72.
- B. Alarm Detection
1. When a fire alarm condition is detected by one of the system initiating devices, the following functions shall immediately occur:
 - a. The system alarm LED shall flash.
 - b. The local sounding device in the control panel shall be activated.
 - c. The 80-character LCD display shall indicate all pertinent information associated with the alarm and its location.
 - d. The appropriate status change message shall be sent to remote annunciators.
 - e. All programs assigned to the alarm point shall be executed and the associated indicating devices and relays activated.
 - f. Audio/visual units shall be activated. Audio units will sound in temporal 3 pattern and voice evacuation message where required. Strobe appliances shall be synchronized.
 - g. Initiate communication with remote central station.
 - h. Activate fan shutdown circuits.
- C. System Trouble Detection
1. When a trouble condition is detected by one of the system initiating devices, the following functions shall immediately occur:
 - a. The trouble condition shall be indicated at the FACP and at the remote annunciator with a description and location of the trouble condition.
- D. Control Switch Operation
1. Acknowledge Switch: Activation of the control panel Acknowledge switch in response to a single new trouble or alarm condition shall silence the sounding device and change the System Alarm or Trouble LEDs from flashing to steady-ON. If additional new alarm or trouble conditions exist in the system, activation of this switch shall advance the display to the next alarm or trouble condition that exists, and shall not silence the local audible device or change the LEDs to steady until all new conditions have been so acknowledged. New alarm conditions shall always be displayed before new trouble conditions. Occurrence of a new alarm or trouble condition shall cause the panel to "resound" and the sequences shall repeat.

2. Signal Silence Switch: Activation of the Signal Silence Switch shall cause all appropriate indicating appliances and relays to return to the normal condition after an alarm condition. The selection of indicating circuits and relays silenced by this switch shall be fully programmable and changeable in the field.
3. System Reset Switch: Activation of the System Reset Switch shall cause all electronically-latched initiating devices or zones, as well as all associated output devices and circuits, to return to the normal state. If alarm conditions exist in the system after the System Reset Switch activation, the system shall then resound the alarm conditions.
4. System Test Switch: Activation of the System Test Switch shall initiate an automatic test of all intelligent detectors in the system. Such test shall activate the electronics in each intelligent device, simulating an alarm condition. A report summarizing the results of this test shall be displayed automatically on the front panel, as well as on any CRTs or printers in the system.
5. Lamp Test: Activation of the Lamp Test switch shall turn on all LED indicators, LCD display and local sounder and then return to the previous condition.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS:

- A. Manufacturers: Subject to compliance with requirements, provide fire alarm systems of one of the following:
 1. Fire Lite
 2. Notifier Co.
 3. Edwards iO500 and iO1000 (non-proprietary system)

2.2 GENERAL:

- A. Provide complete fire alarm products of types, sizes, and capacities indicated, which comply with manufacturer's standard design, materials, components; construct in accordance with published product information, and as required for complete installation. Provide fire alarm and detection systems for applications indicated.
- B. All equipment and material shall be new and unused.
- C. All equipment material shall be designed for continuous duty without undue heating or degradation of function or performance.
- D. All equipment, materials, accessories, devices, and other facilities covered by this specification or noted on contract drawings and installation specifications shall be the best suited for their intended use and shall be provided by a single manufacturer or, if provided by different manufacturers, recognized as compatible by both manufacturers.
- E. the system controls shall be UL listed for Power Limited Applications per NEC 760. All circuits must be marked in accordance with NEC article 760-23.
- F. Nodes as defined for this specification shall be intelligent, microprocessor based devices that connect to, and handle network communications in a peer-to-peer manner.
- G. Network operations shall be via communication links that connect all network nodes and include data transfers. All communications trunk wiring shall be electrically supervised.

- H. The system shall have a minimum of 20% spare capacity in FACP including but not limited to initiating modules, alarm modules, power supplies, transient voltage surge suppression, battery backup and central processing unit memory.
- I. The FACP shall have the ability communicate with both addressable and non-addressable initiating, control and signaling devices.
- J. The communications with the addressable devices shall be designed to allow for "T" tap wiring. The system shall allow for 2500 feet circuit length, minimum.
- K. Initiating devices that require power other than from the communications line shall be wired with additional wiring as required by the manufacturer.
- L. The FACP shall have software programs which are executed based on various combinations of situations. These programs shall be resident in the equipment in the form of permanent and nonvolatile memory. The programs written by the manufacturer shall be contained in permanent memory. The volatile memory shall be used to update, modify, or expand upon the manufacturers programs. Prior to final acceptance of the system, all programming changes shall be updated in permanent memory by the manufacturer. Additional Owner specific control features shall be programmable in the control panel using AND, OR, NOT, timing and other functions.
- M. The manufacturer's representative shall be responsible for determining and conveying to the manufacturer, the programming requirements of the system.
- N. The network shall operate using half-duplex, digital RS485 communication techniques at a data rate of 57.6 Kbaud. Communications shall be via twisted and shielded #18 AWG wire.
- O. Provide battery back-up as secondary power supply to all network equipment. Design battery back-up to take over supply to system within 30 seconds of loss of primary system to 85% voltage. Provide battery system capable of operation of system for 24-hours under maximum normal conditions and then for 2 hours under alarm conditions. 15 minutes of evacuation alarm operation at maximum connected load shall be considered equivalent to 2 hours of emergency operation.
- P. The FACP shall have the following features:
 - 1. Full detector sensitivity and device service status reporting.
 - 2. Programmable function switches (minimum 4) at the FACP and annunciators.
 - 3. Dedicated network communications.
 - 4. Speaker and strobe disable from FACP.
 - 5. Audible circuits can be silenced from FACP.
 - 6. Minimum two spare internal expansion card bays for future system expansion.
 - 7. FACP shall allow for reset locally or from network head end.
- Q. All alarm notification appliances shall be synchronized with all others in a given area.
- R. Software: The fire alarm system shall allow for loading and editing instructions and operating sequences as necessary.
 - 1. The system shall be capable of on-site programming to accommodate system expansion and facilitate changes in operation.
 - 2. All software operations shall be stored in a non-volatile programmable memory within the fire alarm control unit. Loss of primary and secondary power shall not erase the instructions stored in memory.

3. Panels shall be capable of full system operation during new site specific configuration download, master exec downloads, and slave exec downloads.
4. Remote panel site-specific software and executive firmware downloads shall be capable of being performed over proprietary fire alarm network communications and via TCP/IP Ethernet network communications. Ethernet access to any fire alarm panel shall be capable of providing access only to authenticated users through a cryptographically authenticated and secure SSL tunnel.
5. Panels shall automatically store all program changes to the panel's non-volatile memory each time a new program is downloaded. Panels shall be capable of storing the active site-specific configuration program and no less than 9 previous revisions in reserve. A compare utility program shall also be available to authorized users to compare any two of the saved programs. The compare utility shall provide a deviation report highlighting the changes between the two compared programs.
6. Panels shall provide electronic file storage with a means to retrieve a record copy of the site-specific software and up to 9 previous revisions. Sufficient file storage shall be provided for other related system documentation such as record drawings, record of completion, owner's manuals, testing and maintenance records, etc.
7. The media used to store the record copy of site-specific software and other related system documentation shall be electrically supervised. If the media is removed a trouble shall be reported on the fire alarm control panel.
8. History Logs: The system shall provide a means to recall alarms and trouble conditions in chronological order for the purpose of recreating an event history. A separate alarm and trouble log shall be provided.
9. Recording of Events: Record all alarm, supervisory, and trouble events by means of system printer. The printout shall include the type of signal (alarm, supervisory, or trouble) the device identification, date and time of the occurrence. The printout differentiates alarm signals from all other printed indications.

2.3 NETWORK EQUIPMENT

- A. Fire Alarm Control Panel (FACP): The Fire Alarm Control Panel shall be a solid state monitoring and alarm system designed and manufactured expressly for the intent to detect the presence of fire and to provide indication of such a detection.
 1. The Fire Alarm Control Panel (FACP) shall be microprocessor based, housed in an all metal cabinet suitable for surface mounting.
 2. The FACP shall be equipped with modular cards for monitoring addressable input and output devices.
 3. Provide battery backup as specified.
 4. Provide network communication card to provide a Class A for network communications with other remote controls panels.
 5. Mount system batteries in a separate enclosure from the FACP.
- B. Power Extender (NAC Panels):
 1. Each power extender shall provide four power limited notification appliance circuits each rated 2 amps at 24 VDC.
 2. Output shall follow synchronized alarm output.
 3. 120 VAC input
 4. Battery backup as required.

- C. Remote Annunciator: Provide 80 character LCD remote alphanumeric display annunciators as indicated with the following features:
1. 80-character LCD display, back lighted.
 2. Control switches for System Acknowledge, Signal Silence and System Reset.
 3. Four programmable control switches.
 4. Communication over twisted shielded pair wire.
 5. Flush mounted in manufacturer supplied backbox.
 6. Brushed aluminum trim.
 7. The annunciator should provide a remote display of the following features:
 - a. General status banner.
 - b. 40-character custom label.
 - c. Alarm/trouble count.
 - d. Custom "normal" message.
 - e. Field-programmable words.
 - f. STEP DISPLAY and TIME/DATE SET switches.
 - g. Internal non-volatile clock for time and date.
 - h. Test and alarm silence switches.
 - i. Manual Voice Paging
- D. Voice Command Center: The system shall be configured to allow voice paging. Upon activation of any speaker manual control switch, the alarm tone shall be sounded over all speakers in that group.
- a. The control panel operator shall be able to make announcements via the push-to-talk paging microphone over the pre-selected speakers.
 - b. Total building paging shall be accomplished by the means of an "All Call" switch.

2.4 PERIPHERAL EQUIPMENT

- A. Analog Fire Sensors:
1. General: Provide analog sensors for digital transmission of analog sensor value via 2-wire signaling line circuit. The following functions shall be provided by the fire alarm control panel:
 - a. Individual sensor sensitivity selection.
 - b. Peak value logging allowing accurate analysis for sensitivity selection.
 - c. Automatic, once per minute individual sensor calibration check.
 - d. Automatic environmental compensation.
 - e. Display of sensitivity directly in percent per foot.
 - f. Multi-stage alarm operation.
 - g. Ability to display and print sensor information in plain English language.
 2. Sensor Bases:
 - a. Standard Sensor Base:
 - 1) General: The sensor base shall contain integral electronics that constantly monitor the status of detachable sensors. Each output will be digitized and transmitted to the system fire alarm control panel every four seconds.
 - 2) The system address shall remain with its programmed location.
 - 3) Address shall be accessible from the front.

- 4) Integral red LED shall pulse to indicate power-on condition and be steady-on to indicate an alarm condition.
 - 5) Locking, tamper resistant design.
 - 6) Magnetically operated functional test.
 - b. In-duct Mountings:
 - 1) General: Provide in-duct mountings for photoelectric type smoke sensors where indicated to sense smoke in HVAC ductwork. These shall be sample tube type and have key operated testing stations accessibly mounted no higher than 72" AFF.
 - 2) Sensor shall be visible through transparent housing cover.
 - 3) Local relay: 24 VDC coil; form C contacts rated 1 amp @ 28 VDC.
 3. Analog Photoelectric Smoke Sensor
 - a. The Analog Photoelectric Smoke Sensor shall connect with two wires to one of the control panel loops. The detectors shall use the photoelectric principal to measure smoke density and shall, on command from the control panel, send data to the panel representing the analog level of smoke density. The detectors shall be wall or ceiling-mount and shall include a twist-lock base.
 - b. Seven levels of sensitivity shall be available for each sensor, ranging from 0.2% to 3.7% per foot of smoke obscuration, selected from the fire alarm control panel.
 4. Analog Ionization Smoke Sensor
 - a. The Analog Ionization Smoke Sensors shall connect with two wires to one of the control panel loops. The detectors shall use the dual-chamber ionization principal to measure products of combustion and shall, on command from the control panel, send data to the panel representing the analog level of products of combustion. The detectors shall be wall or ceiling-mount and shall include a twist-lock base.
 - b. Four levels of sensitivity shall be available for each sensor, ranging from 0.5% to 1.7% per foot of smoke obscuration, selected from the fire alarm control panel.
 5. Analog Thermal Sensor
 - a. The Analog Thermal Detectors shall connect with two wires to one of the control panel loops. The detectors shall use an electronic sensor to measure temperature levels in its chamber and shall, on command from the control panel, send data to the panel representing the analog temperature level. The detectors shall be wall or ceiling-mount and shall include a twist-lock base.
 - b. Heat sensors shall be self-restoring and provide rate compensated, fixed temperature sensing, selectable with or without rate-of-rise temperature sensing.
 - c. Rate-of-rise temperature detection shall be selectable at the control panel for either 15 F or 20 F per minute.
 - d. Fixed temperature sensing shall be independent of rate-of-rise sensing and programmable to operate at 135 F or 155 F.
 - e. Heat sensor shall be programmable as a utility device to monitor temperature extremes in a range from 32 F to 155 F.
- B. Addressable Manual Stations

1. The Addressable Manual Station shall connect with two wires to one of the control panel signaling line circuits. The Manual Station shall, on command from the control panel, send data to the panel representing the state of the manual switch.
 2. The Manual Station shall provide address-setting means using rotary decimal switches and shall also store an internal identifying code which the control panel shall use to identify the type of device.
 3. The manual station shall be double action with break-rod feature and shall be key resettable.
 4. The manual station shall be surface or flush mounted as required.
 5. Indoor Protective Shield: Factory-fabricated clear plastic enclosure hinged at the top to permit lifting for access to initiate an alarm. Lifting the cover actuates an integral battery-powered audible horn intended to discourage false-alarm operation.
 6. Back Box: Manufacturer's standard cast iron, red, for surface mounted units.
 7. Indoor Protective Shield: Factory-fabricated, clear plastic enclosure hinged at the top to permit lifting for access to initiate an alarm. Lifting the cover actuates an integral battery-powered audible horn intended to discourage false-alarm operation.
- C. Monitor Zone Addressable Module
1. The Monitor module shall be used to connect a supervised zone of conventional initiating devices (any n.o. dry contact device) to an intelligent loop. The Monitor Module shall mount in a 4-inch square deep electrical box. The zone shall be wired class A.
 2. The Monitor module shall provide address-setting means using rotary decimal switches and shall also store an internal identifying code which the control panel shall use to identify the type of device. An LED shall be provided which shall flash under normal conditions, indicating that the Monitor module is operational and in regular communication with the control panel.
- D. Control Zone Addressable Module
1. The Control Module shall be used to provide control functions such as elevator recall, HVAC control, damper operation, etc. The relay contacts are to be rated at 2 amps, 120 VHC 04 280 VDC. The Control Module shall mount in a standard 4-inch deep electrical box. The zone shall be wired class A. The control module shall be wired as a dry contact (form C) relay. Power for the relay coil shall be provided by the intelligent detector loop to reduce wiring connection requirements. Audio/visual power shall be provided by a separate loop from the main control panel or from supervised remote power supplies.
 2. The Control Module shall provide address-setting means using rotary decimal switches and shall also store an internal identifying code which the control panel shall use to identify the type of device. An LED shall be provided which shall flash under normal conditions, indicating that the Monitor module is operational and in regular communication with the control panel.
- E. Fire Alarm Speaker/Strobe Light Units. Provide manufacturer's standard combination fire alarm speaker/strobe light units with the following features:
1. Flush mount in finished areas. Surface mounted in unfinished areas. For surface mounted units provide manufacturer's standard red cast mounting box.
 2. 24VDC strobe and speaker.
 3. Strobe Light: See specification below.

4. Speaker: Speaker notification appliances shall be listed to UL 1480. The speaker shall operate on a standard 24 or 70.7 VRMS NAC using twisted/shielded wire. The following taps shall be available: 0.25W, 0.50W, 1.0W and 2.0W. At the 1.0W tap, the speaker shall have a minimum UL rated sound pressure level of 84dBA at 10 feet. The speaker shall have a frequency response of 400 to 4000 Hz for Fire Alarm and 125 to 12kHz for General Signaling.
- F. Alarm Strobe Lights: Provide manufacturer's standard construction fire alarm strobe lights with the following features:
1. Clear polycarbonate lens, lettered red "FIRE".
 2. 24-volt DC Xenon flasher.
 3. 15, 30, or 110 candela as indicated.
 4. UL Listed to Standard 1971, ADA compliant.
 5. Regulated circuit design for constant flash output. Provide flash synchronization modules where multiple visible appliances can be seen from one location.
 6. Backbox: Provide manufacturer's standard red cast iron backbox where surface mounted.
- G. Alarm Strobe Synchronization Modules: Provide manufacturer's standard construction synchronization modules to reduce the probability of photo-sensitive reactions. Provide one module per alarm strobe circuit.
- H. Fan Shutdown Relay: Provide manufacturer's standard construction fan shutdown relay with three poles rated at 20 amps and 24 VDC operating coil. Provide NEMA 1 enclosure for relays where not installed in mechanical units.
- I. Isolator Module
1. Provide Isolator Module to isolate wire-to-wire short circuits on a loop and to limit the number of other modules or detectors that are incapacitated by the short circuit fault. Place isolator modules between every 30 or less devices. If a wire-to-wire short occurs, the isolators on either side of the short shall automatically open-circuit. When the short is corrected, the isolators shall automatically reconnect the isolated section of the loop.
 2. The Isolator module shall not require any address-setting, although each Isolator will electrically reduce the capacity of the loop by one detector or module address. The Isolator module will mount in a standard 4-inch deep electrical box or in the FACP or transponder. It shall provide a single LED which shall flash to indicate that the Isolator is operational and shall illuminate steadily to indicate that a short has been detected and isolated.
- 2.5 AUDIBLE ALARM NOTIFICATION: By voice evacuation and tone signals on loudspeakers in areas as indicated on drawings.
- A. Automatic Voice Evacuation Sequence:
1. The audio alarm signal shall consist of an alarm tone for a maximum of five seconds followed by an automatic digital voice message. At the end of the voice message, the alarm tone shall resume. This sequence shall sound continuously until the "Alarm Silence" switch is activated.
 2. All audio operations shall be activated by the system software so that any required future changes can be facilitated by authorized personnel without any component rewiring or hardware additions.
- B. Manual Voice Paging:

1. The system shall be configured to allow voice paging. Upon activation of any speaker manual control switch, the alarm tone shall be sounded over all speakers in that group.
2. The control panel operator shall be able to make announcements via the push-to-talk paging microphone over the pre-selected speakers.
3. Total building paging shall be accomplished by the means of an "All Call" switch.

2.6 WIRING MATERIALS: Provide basic wiring materials which comply with Division-26 Basic Electrical Requirements sections and "Raceways" and types to be selected by Installer.

1. Provide wire and cable in accordance with requirements of manufacturer.
2. Provide conductor sizes AWG #14, or larger, with maximum 19 strands copper conductor, 7 strands for sizes AWG #16 and #18.
3. Provide multi-conductor cables for wire sizes smaller than AWG #16.
4. Provide conductors which are listed and approved for fire alarm usage.
5. Provide plenum rated cables in plenum areas.

2.7 SERVICE AIDS

A. Automatic Detector Test

1. The system shall include a special Automatic Detector Test which permits a serviceman to test all intelligent detectors from the main control panel.

B. Watch-Dog Timers

1. The system shall include independent "Watch-Dog" timers to detect and report failure of any microprocessor circuit, memory, or software.

2.8 FIELD PROGRAMMING

- A. The system shall be programmable, configurable and expandable in the field without the need for special tools or PROM programmers and shall not require replacement of memory ICs. All programming may be accomplished through the standard control panel keyboard. All programs shall be stored in non-volatile memory.
- B. The programming function shall be entered with a special password that may be selected when the system is installed. The password may be changed in the field to a new value at any time by entering the old password and requesting a password change.
- C. all fire alarm control panel and central station system annunciation text must be approved by the Engineer and those custom messages must be provided as directed.
- D. All fire alarm control panel and central station system annunciation text must utilize room/space designations and room numbers used by the facility.
- E. The Contractor shall provide for three (3) system reprogrammings for each system as directed by the Owner.

EXECUTION

2.9 GENERAL

- A. Installation shall be in strict compliance with manufacturer's recommendations. Consult manufacturer for all wiring diagrams, schematics, sizes, outlets, etc. before installing conduits and pulling wire.

- B. Conductors: Provide complete wiring between all equipment. All wire shall be approved fire alarm cable as recommended by manufacturer. All devices shall be mounted upon and all splices made in listed boxes. Wiring splices are to be avoided to the extent possible and "transposing or changing colors will not be permitted". All junction boxes shall be painted red and labeled as "Fire Alarm System" with decal or approved markings. Comply with all local, state and national codes. All 70V fire alarm speaker cabling is to be installed in conduit (minimum ¾" trade size). 24V fire alarm speakers may be installed as open cable.
- C. All Equipment shall be held firmly in place. Fastening and supports shall be adequate to support the loads with a safety factor of five.
- D. Fire Alarm Control Panel and power expanders shall be connected to a separate dedicated branch circuit, maximum 20 amperes. Circuit shall be labeled as "FIRE ALARM".
- E. All system enclosures shall be mounted using stand-off bolts or vertically mounted Kindorf to isolate the enclosure from water/moisture contamination.
- F. All wiring shall be completely supervised. In the event of a primary power failure, disconnected standby battery, disarrangement of any components, or any open circuits in the system, an audible and visual trouble signal will be activated until the system is restored to normal.
- G. Cable and Wiring
 1. Cable shall be the type "listed for the use" as specified under NEC Article 760-30, (bell wire, intercom or telephone wire are not approved).
 2. All cable shall be installed as per NEC Article 760.
 3. Leave 8-inch wire tails at each device box and 36-inch wire tails at the Fire Alarm Control Panel.
 4. Cable shall be installed from the Monitor Module to the first device, then to each succeeding device within each zone loop. And end-of-line resistor device shall be installed at or after the last device on the circuit.
 5. Cable for conventional indicating devices (audible or visual) shall be looped as stated above from the Control Module. An end-of-line resistor device shall be installed in the fire alarm control or terminal panel after the last device on the circuit, not at the last device on the circuit. Wire may be 16 through 12 AWG.
 6. Cable for Intelligent Detector Loops shall be 18 AWG twisted pair with a shield jacket (colored red/black), installed in conduit. Shield continuity must be maintained and connected to earth ground only at the control panel. Intelligent detector wiring must not be routed adjacent to or in the same conduit with Audio/Visual power wiring, 120/240 VAC power wiring, or other high current circuits. T-taps or branch circuit connections are allowed for all intelligent loop circuits.
 7. Cable must be separated, minimum two (2) inches, from any open conductors of light, power, or class 1 circuits, and shall not be placed in any outlet box or raceway containing these conductors, as per NEC Article 760-29.
 8. Cabling for NAC circuits shall be #14/2 FPLP cable approved for fire alarm usage and approved by FMS.
 9. All splices or connections shall be made within approved junction boxes and with approved fittings. Boxes shall be red and/or labeled "FIRE ALARM SYSTEM" by decal or other approved markings.

10. Device Box Mounting: Unless otherwise noted on the drawings, plans, specifications or by the Architect or Engineer; the recommended mounting heights, type of boxes required and other specific requirements are as follows:
 - a. Fire Alarm Control Panel(s): Mount at +60 inches to center. Install 120 volt AC wiring with green ground wire on a dedicated separate circuit, maximum 20 amperes. Use only identified conduit entries or request approval for other penetrations in cabinets, (certain areas require clear space for interior components). Cabinet shall be grounded to either a cold water pipe or grounding rod.
 - b. Fire alarm strobe lights require a special back-box, either flush or surface. Verify with manufacturer. Mount strobe light as required by the Americans with Disabilities Act. The mounting height for A/V and/or strobe only appliances shall be 80" AFF or 6" below ceiling, whichever is lower.
 - c. Manual Station(s): Install a 4-inch square device box with a 1-Gang ring (1/2-inch minimum depth) at 48 inches center above finished floor. All Manual Stations shall be in unobstructed locations.
- H. All audible and visual notification appliance circuits shall be wired Class A. T-tapping of NAC circuits is not allowed. Install cabling in conduit.
- I. Provide conduit and box drops in areas without ceilings to assure smoke detectors are installed below ductwork, piping, and other obstructions.
- J. Fan Control Interfaces: All fan control relays shall be mounted next to or in close proximity to the associated motor control equipment being serviced.
- K. Do not install smoke detectors within 3 feet of HVAC system air diffusers.

2.10 TESTS AND REPORTS

- A. Initial Testing: Prior to acceptance testing, the contractor and equipment vendor shall perform a 100% test of each system. Upon completion of the initial testing and prior to acceptance testing, the contractor shall complete and submit a preliminary copy of the "Record of Completion" form as identified in NFPA 72 figure 1-7.2.1, Parts 1, 2, and 4 through 10.
- B. Final Acceptance Testing: The system will be accepted only after a satisfactory test of the entire system has been accomplished by a factory-trained distributor in the presence of a representative of the Owner's. Upon completion of the Final Acceptance Testing, complete Part 3 of the "Record of Completion" form and submit a final copy to the Engineer.
- C. On-Site Services: Contractor shall provide the on-site services of an authorized technical representative of the manufacturer, to supervise all connections and fully test all devices and components of the system as installed. Owner's representative shall be instructed in the proper use and testing of the system.

2.11 WARRANTY:

- A. Equipment and Wiring: All equipment and wiring furnished and installed under this specification shall be warranted from inherent mechanical or electrical defects for a period of one (1) year from the date of final acceptance.
- B. Trouble Calls

1. Guarantee response to a trouble call within twenty-four (24) hours after receipt of such a call.
2. Make available to the owner a service department of an authorized representative of the manufacturer who will provide maintenance 24 hours per day including weekends and holidays at no cost to the Owner for a period of twelve (12) months from the date of acceptance.

END OF SECTION 28 31 11



MEETING MINUTES

Meeting/Project Name:	Addison ES HVAC Modifications 2021, B2109		
Date of Meeting:	January 13, 2021	Time:	10:00 AM
Location:	Addison Elementary School, 3055 Ebenezer Road, Marietta, GA 30066		

TOPICS OF DISCUSSION

These minutes, including any responses to the questions documented in these minutes, are provided for informational purposes only. None of the information contained herein is intended to supersede the information provided in the contract documents and is not binding unless it is documented in an addendum to the contract documents.

1. **Introductions: CCSD Attendees** – Susan Hallmark (Addison ES Principal), Rose Zurawski (SPLOST), Daphne Griffin (SPLOST), Carla Bailey-Brooks (SPLOST), Doug Roland (Maintenance), Richard Ingram (CPL/Architect), Tim Pulver (CPL/Architect), Greg Kyzer (CPL/Mechanical Engineer), Chris McSpadden (Procurement), and Wendy Bell (Procurement)
2. **Attendees:** See the sign-in sheet (posted on the website).
3. **Susan Hallmark (Addison ES Principal) welcomed everyone and introduced the head custodian that would be available during the project.**
4. **Chris McSpadden (Procurement) discussed key points and relevant dates of the bid.**
 - Responses are due February 4, 2021, at 3:00 PM ET. Late responses will not be accepted.
 - Bids may only be submitted electronically via email to chris.mcspadden@cobbk12.org with “IFB B2109, Addison ES HVAC Modifications 2021” referenced in the subject line.
 - Attendance at the pre-bid meeting is mandatory in order to submit a bid.
 - The deadline for submitting questions is January 25, 2021, at 3:00 PM ET. All communication must be through Procurement Services/Chris McSpadden.
 - Companies must request plan documents from (CPL) to submit a bid.
 - A general contractor’s license is required to bid.
 - General contractors must be pre-qualified. The deadline for submitting pre-qualification requirements is January 25, 2021, at 3:00 PM ET.
 - The budget for this project is \$2.1 million.
 - This project will go to the March board for approval and work will start beginning/mid-April.
 - **Site visits will only be allowed on January 20th, January 26th and February 3rd. You must visit between the hours of 9:00 -12:00 and bring a ladder and wear a mask. Call the school office before visiting the school. The front office phone number is 770-578-2700.**

MEETING MINUTES

Meeting/Project Name:	Addison ES HVAC Modifications 2021, B2109		
Date of Meeting:	January 13, 2021	Time:	10:00 AM
Location:	Addison Elementary School, 3055 Ebenezer Road, Marietta, GA 30066		

5. Richard Ingram (CPL/Architect) discussed the scope of work and other project details.

- This project consists of, but not limited to, renovations of the existing HVAC systems. Included are demolition, acoustical tile and grid replacement, painting, mechanical, electrical, and other scope of work as indicated in the contract documents.
- This project includes the completion of a new mechanical room addition.
- Work will include the demolition of the existing RTU’s currently serving the classrooms along three corridors and the Counselor’s suite, Art and Music rooms.
- Installation of a cooling tower to be connected to the new water source heat pumps and energy recovery units.
- The existing fire alarm system will be replaced.
- The kitchen hood and ceiling will be replaced.
- The work will include the relocation and reconnection of existing utilities and other construction elements required to install the new water source heat pumps.
- When selecting subs and looking at manpower requirements be aware of the large amount of work to be put into place in a short amount of time.
- The building will be accessible 7 days a week, 24 hours a day after school has been dismissed for the summer.
- Please refer to the specifications for the liquidated damages schedule.
- The Substantial Completion date is July 16, 2021.
- Review all the requirements in Section 02 4119 – Selective Demolition. Closely review the requirement for moving furniture and the installation of the water source heat pumps.
- As soon as the Notice of Award to Proceed has been given submittals can be made, equipment ordered, and work can start in the mechanical room addition.
- The fire lane along the back of the building cannot be blocked during school hours.

6. Rose Zurawski (SPLOST) discussed other project details.

- After Notice to Proceed there will be access to the school on weekends and after school hours, but it must be cleared with the Fire Marshal in order to work in the building while it is still occupied. Also, everything must be in order and back in place by the time the students return to school the next day.

There were no questions asked during the meeting

Bid B2109, Addison ES HVAC Modifications 2021

Pre-Proposal Meeting – 10:00 AM, January 13, 2021

Sign In Sheet

#	Representative Name	Company	Phone	Email
1	CHRIS McSPADDEN	CCSA		
2	DOUG ROLAND	CCSA		
3	WENDY BELL	CCSA		
4	JOHN ROOD	CARROLL DANIEL		
5	SHANE GERMEL	JOHN F PENNEBAKER		
6	BRIAN CHAMWICK	CONDITION AIR SYSTEMS		
7	KAMIN HORVATH	MAX AIR		
8	HANPTON VANN	DAIR CONSTRUCTION		
9	SHANE KEMP	GRAPHITE CONST		
10	SHAWN GABLE	MEJA		
11	JEFF KELLNER	TRANE		
12	PATRICK BURKETT	JOHNSON CONTROLS		

Bid B2109, Addison ES HVAC Modifications 2021

Pre-Proposal Meeting – 10:00 AM, January 13, 2021

Sign In Sheet

#	Representative Name	Company	Phone	Email
13	ICEN MITCHELL	SWOFFORD		
14	CIARA PEREZ	E. ESCHER		
15	STERLING ROBERTSON	TRIAD		
16	KRISTEN WORDSZ	REEVES YOUNG		
17	JIM PETERSON	REEVES YOUNG		
18	KYLE POSEY	RK READING		
19	HUNTER BICKWELL	BMJK		
20	JAY BOWDEN	BON BLDG		
21	RICHARD INGRAM	CPL		
22	TVM PULVER	CPL		
23	JAY KYZER ^{GREGG}	CPL		
24	DAVID MOONEY	ZURIX ROOFING		

Bid B2109, Addison ES HVAC Modifications 2021

Pre-Proposal Meeting – 10:00 AM, January 13, 2021

Sign In Sheet

#	Representative Name	Company	Phone	Email
25	DAVE HEARD	HAWK CONST.		
26	ROCEAL WHITE	QUATERS MECH.		
27	OMAR AAGHEB	E. E. S. CHEL		
28	STEVEN NELSON	PRIME CONTRACTORS		
29	RUSSELL HENDERSHOT	PRIME CONTRACTORS		
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