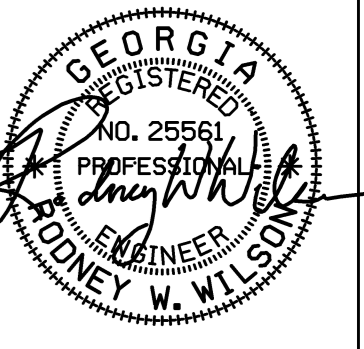
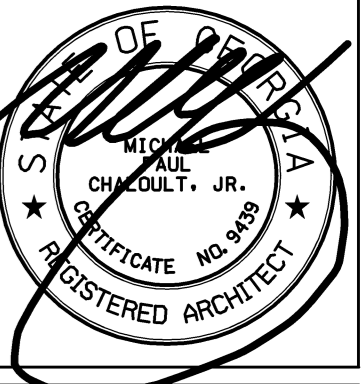




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for the

HVAC ADDITIONS
BIBB COUNTY MIDDLE SCHOOLS

Bibb County School District
Macon, Georgia

PROJECT NO.
16-014

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HVAC ADDITIONS

BIBB COUNTY MIDDLE SCHOOLS

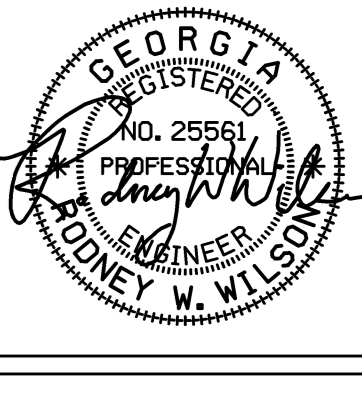
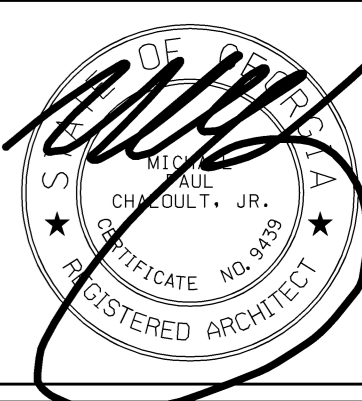
for the
Bibb County School District
Macon, Georgia

T1	TITLE SHEET
AE1.1	BALLARD HUDSON - OVERALL EXIST. PLAN & PARTIAL POWER FLOOR PLAN
AE2.1	HG WEAVER - PARTIAL POWER PLAN @ GYM
AE3.1	HOWARD - OVERALL EXIST. PLAN & PARTIAL POWER PLAN @ GYM
AE4.1	RUTLAND - OVERALL EXIST. PLAN & PARTIAL POWER PLAN @ GYM
M0.1	MISCELLANEOUS DETAILS
M1.1	BALLARD HUDSON - MECHANICAL DEMOLITION PLAN
M1.2	HOWARD - MECHANICAL DEMOLITION PLAN
M1.3	RUTLAND - MECHANICAL DEMOLITION PLAN
M1.4	WEAVER - MECHANICAL DEMOLITION PLAN
M2.1	BALLARD HUDSON - MECHANICAL NEW WORK PLAN
M2.2	HOWARD - MECHANICAL NEW WORK PLAN
M2.3	RUTLAND - MECHANICAL NEW WORK PLAN
M2.4	HG WEAVER - MECHANICAL NEW WORK PLAN

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BALLARD
HUDSON

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LEGEND	
SYMBOL	DESCRIPTION
	WIRING IN CONDUIT CONCEALED IN WALL OR ABOVE CEILING
	WIRING IN CONDUIT CONCEALED IN OR BELOW SLAB
	WIRING IN EXPOSED CONDUIT
	WIRING IN FLEXIBLE CONDUIT
	ONE CONDUCTOR PER CROSSHATCH - TWO IF NOT INDICATED
	HOMERUN TO PANEL - ONE CIRCUIT PER ARROW
	FUSED DISCONNECT
	NONFUSED DISCONNECT
	SMOKE DETECTOR - CLG MOUNTED
	SMOKE DETECTOR - DUCT MOUNTED
	JUNCTION BOX - CEILING MOUNTED
	JUNCTION BOX - WALL MOUNTED
	CONDUIT STUB-UP
	SINGLE POLE SINGLE THROW (SPST) - WALL MOUNTED
	SINGLE POLE - MOTOR RATED
	POWER PANEL 208Y/120V
	DISTRIBUTION PANEL/PANELBOARD 480Y/277V
	FIRE ALARM PANEL
	MOUNTING HEIGHT
	WEATHERPROOF
	GROUND FAULT

NEW EXTERIOR LOUVERS SEE MECHANICAL
OUT IN AND SEAL
WEATHERTIGHT WITH NFI SEALANT

EXISTING

PANEL HG
EXISTING 400A 480Y/277V 3P, 4W
2-30A/3P BREAKERS
TO SERVE NEW AC UNITS

PANEL LG
ADD 2 - 2 20A/3P CKTS
TO SERVE NEW MAHU-2
AND MAHU-3

HG(30A/3P, #10, 1/2" C.)
MCU-2

HG(30A/3P, #10, 1/2" C.)
MCU-3

LG(20A/3P, #12, 1/2" C.)

LG(20A/3P, #12, 1/2" C.)

DUCT @

MAHU-2

MAHU-3

REMOVE EXISTING CEILING
TILE AND GRID THIS SPACE
FOR INSTALLATION OF NEW
MAHU. INSTALL NEW GRID
AND TILE TO MATCH EXISTING.

FIELD COORDINATE
EXACT LOCATION OF
WALL PENETRATIONS
WITH ENGINEER

REMOVE EXISTING CEILING
TILE AND GRID THIS SPACE
FOR INSTALLATION OF NEW
MAHU. INSTALL NEW GRID
AND TILE TO MATCH EXISTING.

CUT AND PATCH
EXISTING MASONRY
AS REQUIRED
TYPICAL

PROVIDE 6 x 6 x 3/8
FRAME INSERT/SLEEVE
GROUT IN PLACE

RELOCATE EXISTING SCOREBOARD
LOUVER TO MAKE TOP EVEN WITH TOP
OF EXISTING CMU.
REWORK EXISTING POWER AND COMM WIRE

NOTE
SEE HVAC DEMOLITION PLAN
REMOVE ASSOCIATED ELECTRICAL
TO EQUIPMENT TO BE REMOVED

FIRE ALARM NOTES
SEE KEY PLAN BELOW FOR APPROXIMATE LOCATION
OF EXISTING FIRE ALARM PANEL.
MODIFY AS REQUIRED TO ADD NEW DUCT MOUNTED
SMOKE DETECTORS AND TIE IN SHUT DOWN
OF NEW HVAC UNITS

A PARTIAL POWER & MISC FLOOR PLAN
SCALE: 1/8" = 1' - 0"

1/2" DIA THREADED ROD WITH
4" 1/2" EMBEDMENT IN
HILTI HIT-HY 10 ADHESIVE

MASONRY BOND BEAM

6 x 6 x 3/8

UNIT

PAN

6 x 6 x 3/8

1/2" DIA THREADED ROD WITH
4" 1/2" EMBEDMENT IN
HILTI HIT-HY 10 ADHESIVE
2 PER FILLED CELL &
16" O.C. MAX

6 x 6 x 3/8 CONT.

16" MIN.

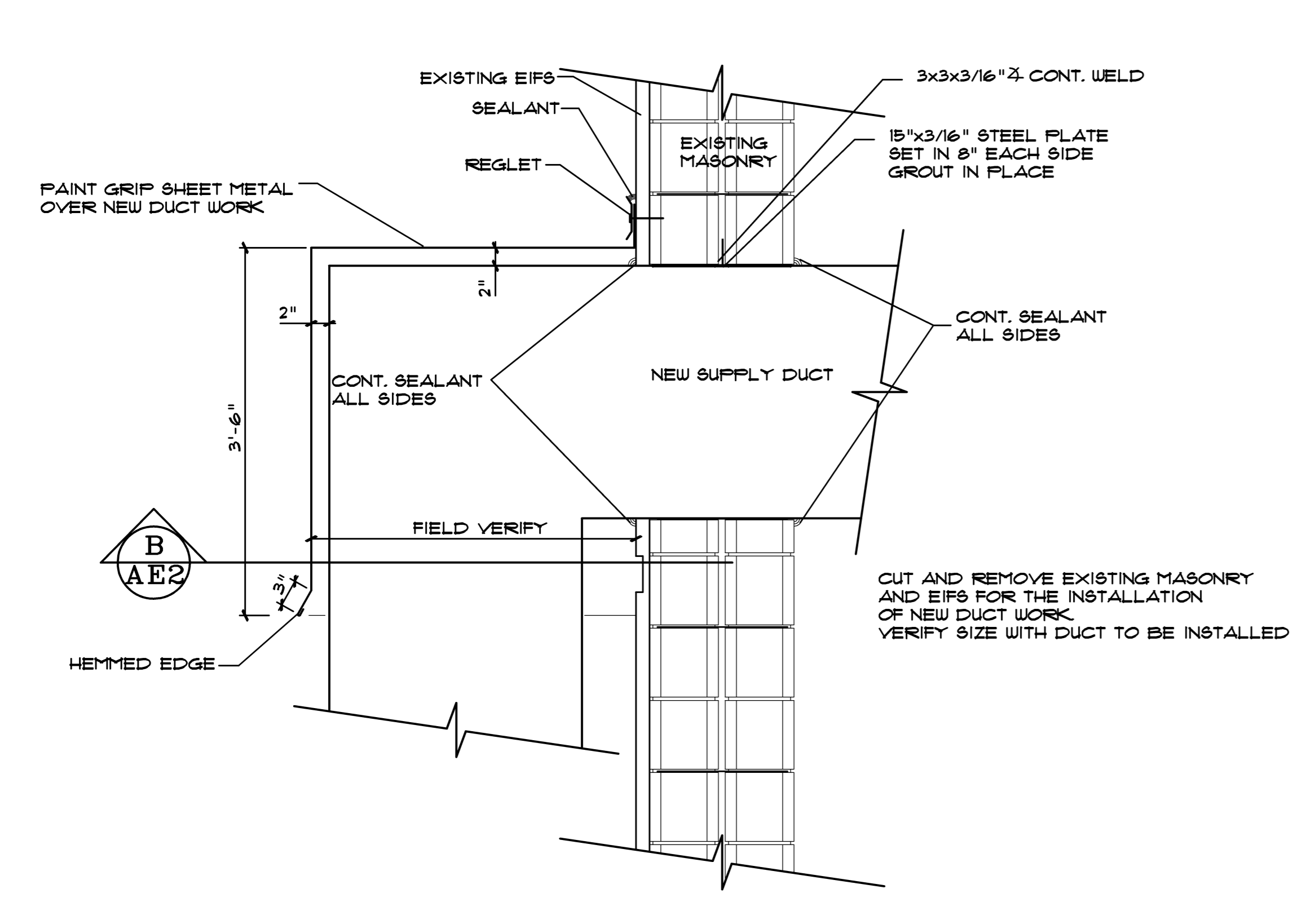
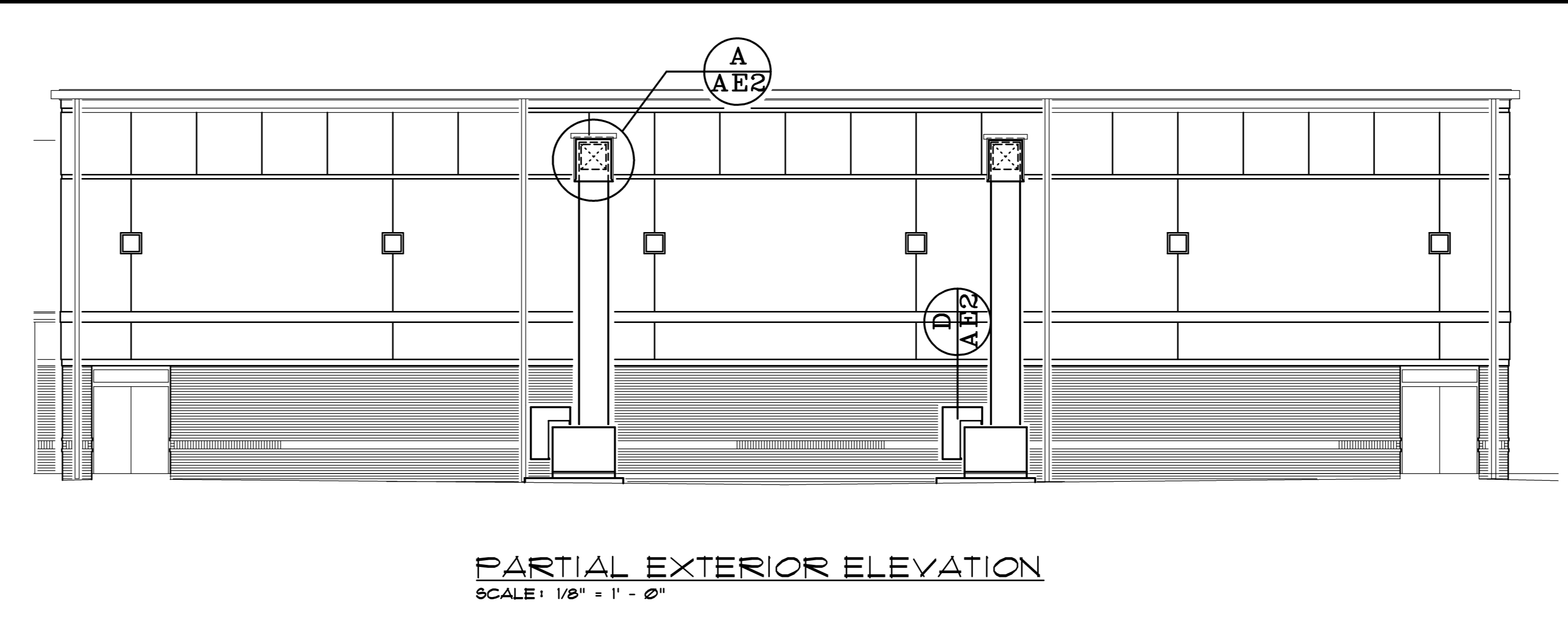
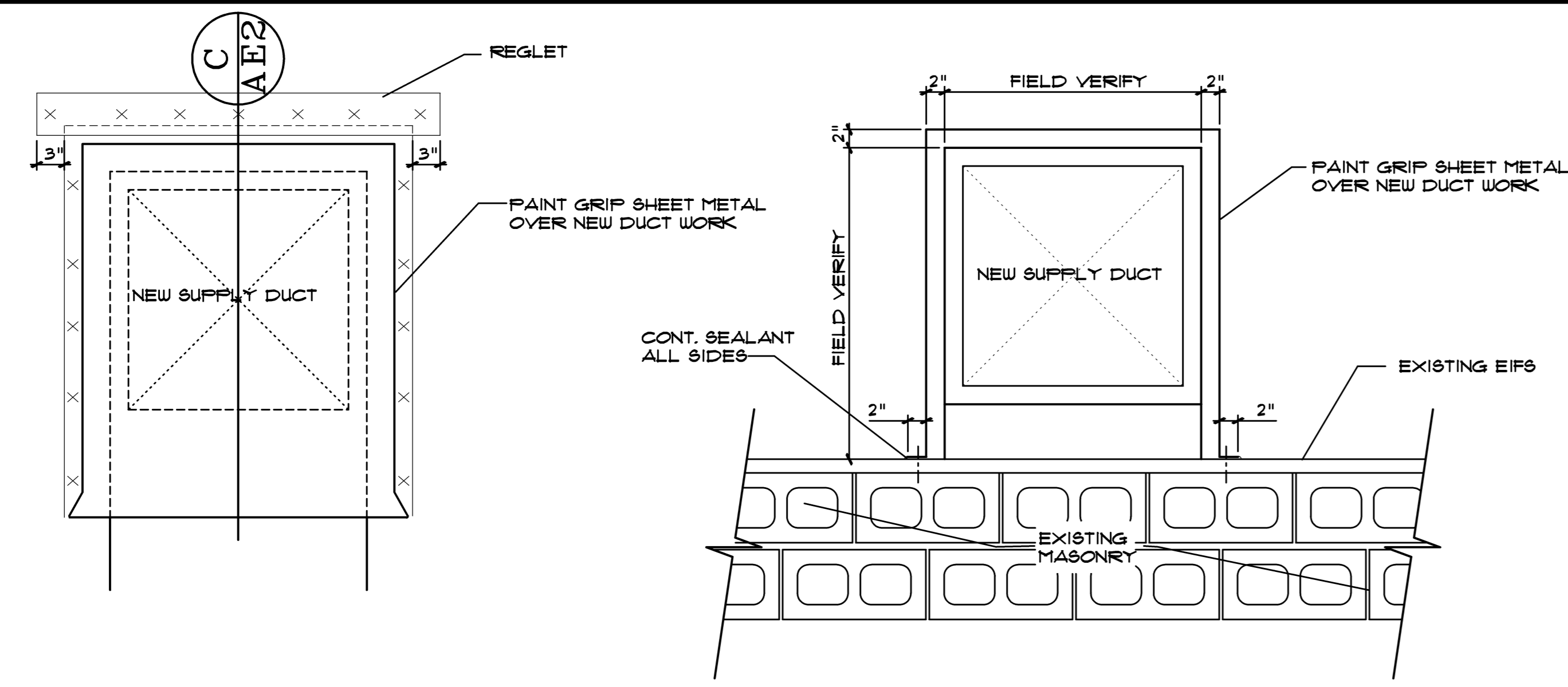
EXTERIOR MASONRY WALLS
MIN 2 FILLED VERTICAL CELLS &
COVERED FILL CELLS & ANCHORS
AND BELOW

6 x 6 x 3/8
2 PER UNIT

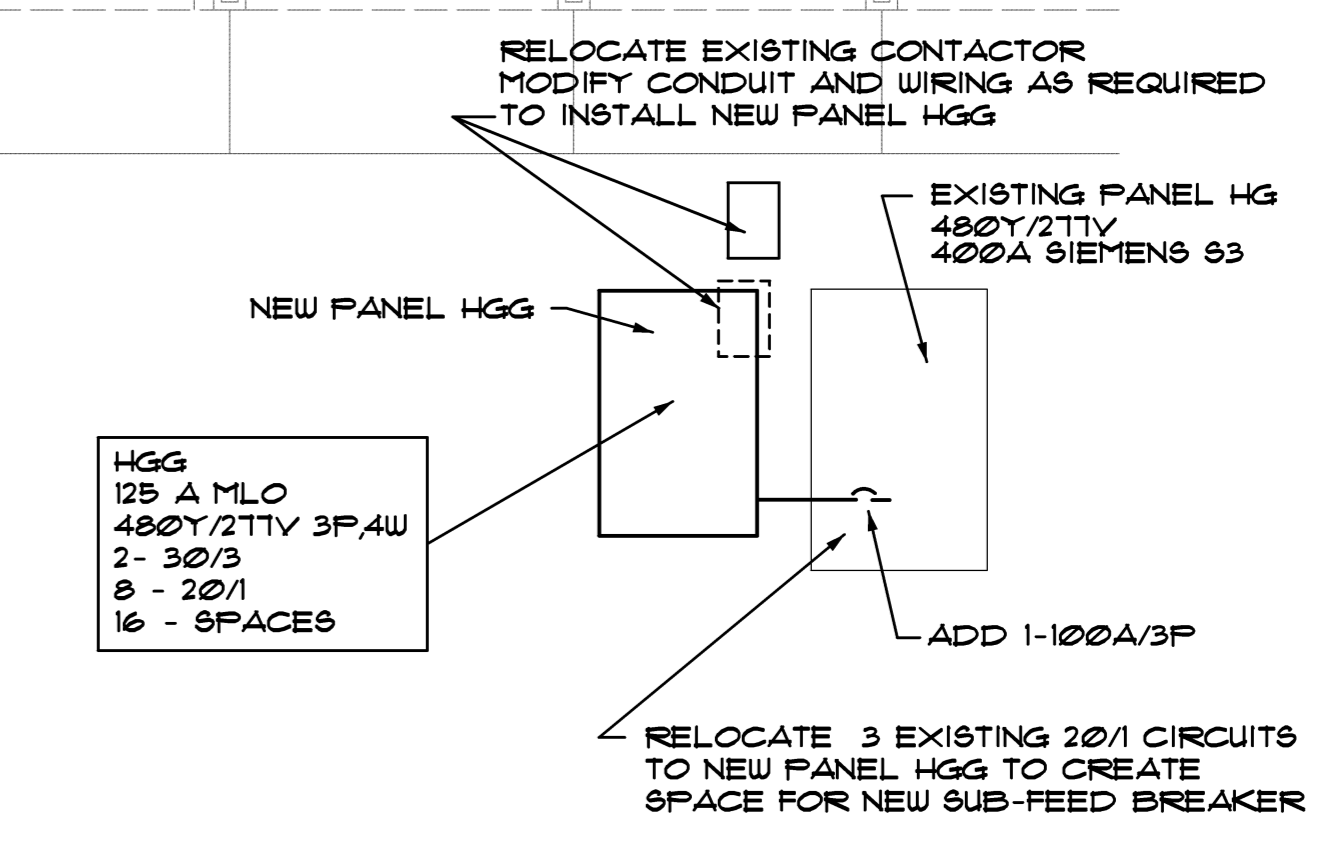
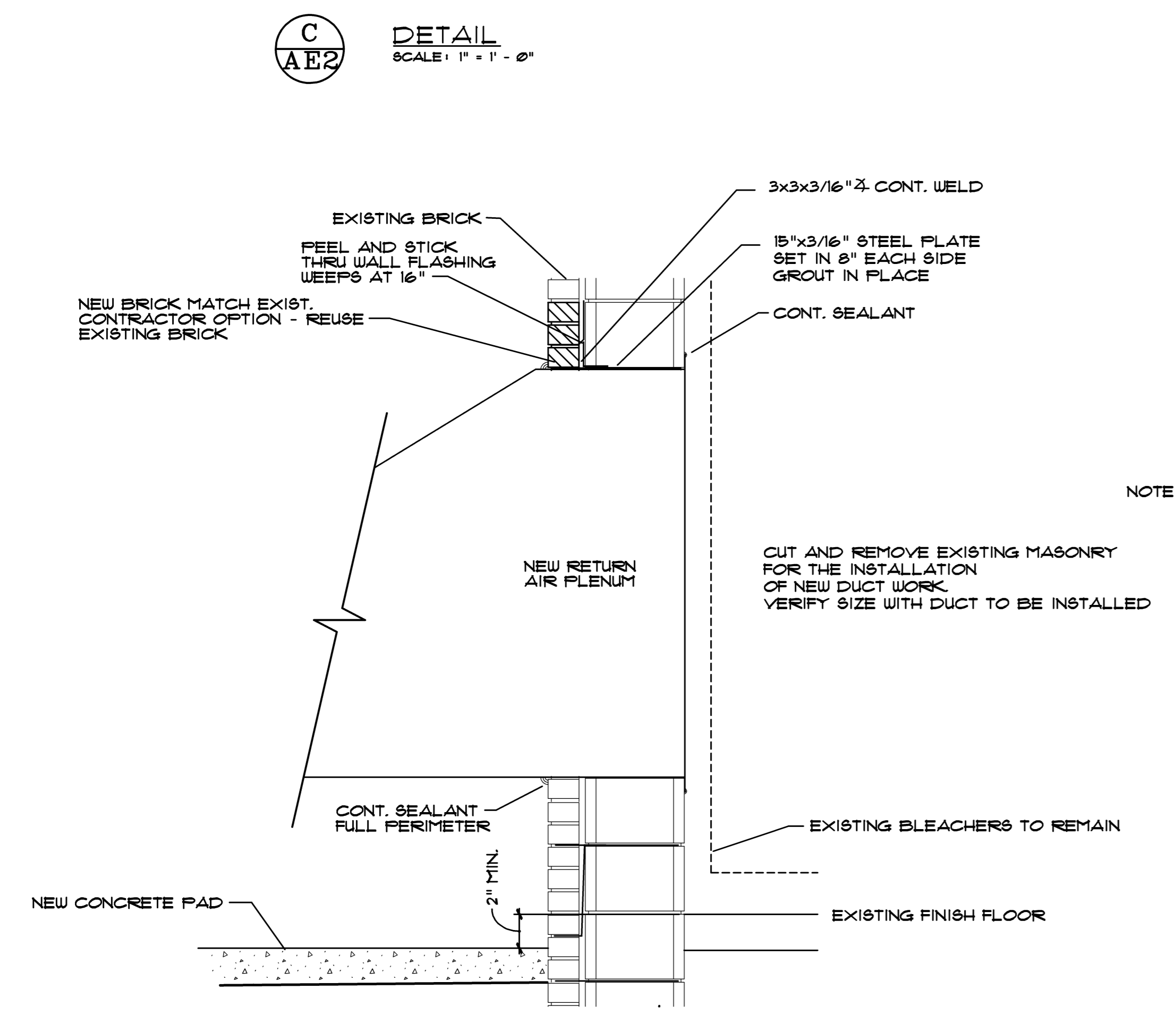
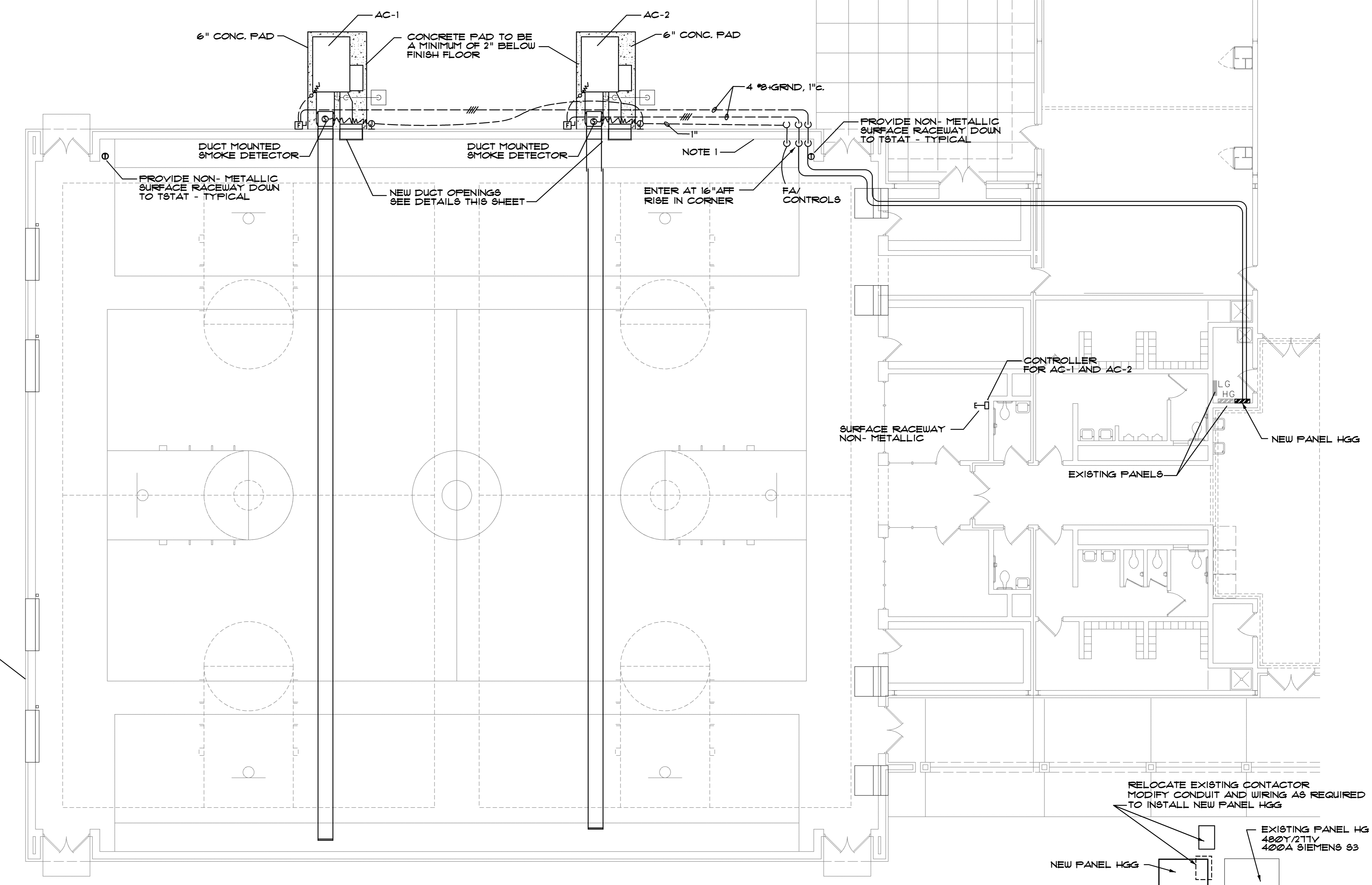
MECHANICAL UNIT SUPPORT DETAILS
SCALE: 1" = 1' - 0"

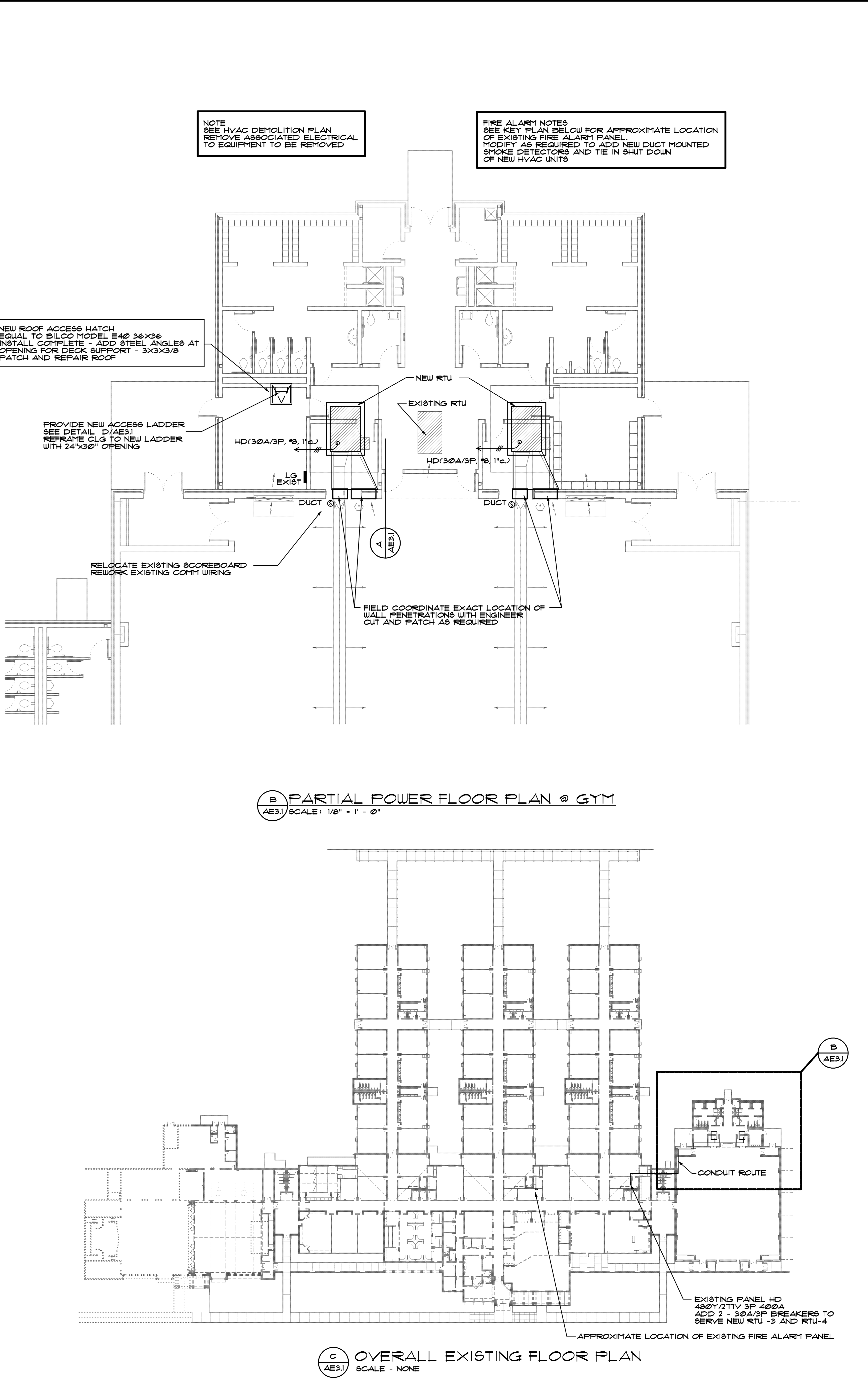
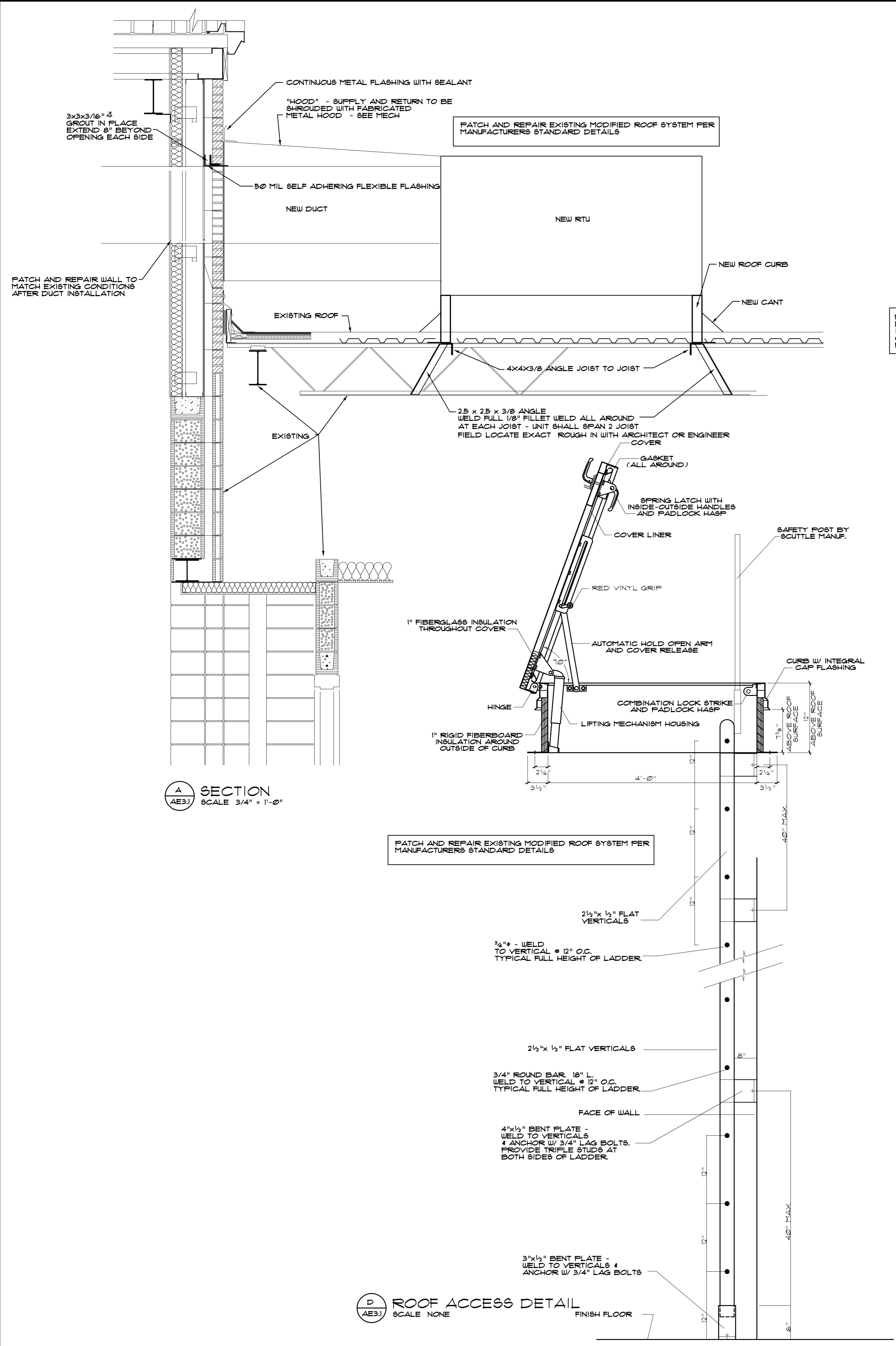
APPROXIMATE LOCATION OF EXISTING FA SYSTEM

B OVERALL EXISTING FLOOR PLAN
SCALE - NONE



NOTE:
1. PATCH AND REPAIR EXTERIOR WALLS WHERE GAS FLUES WERE REMOVE. PATCH USING PAINT GRIP SHEET METAL BOTH SIDES. FILL CAVITY WITH BATT INSULATION. PAINT TO MATCH.





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OF

REGISTERED ARCHITECT

GEORGIA

REGISTERED PROFESSIONAL ENGINEER

NO. 25561

DAVID W. WILSON

HOWARD

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HVAC ADDITIONS

for the

BIBB COUNTY MIDDLE SCHOOLS

Bibb County School District

Macon, Georgia

PROJECT NO.
16-014

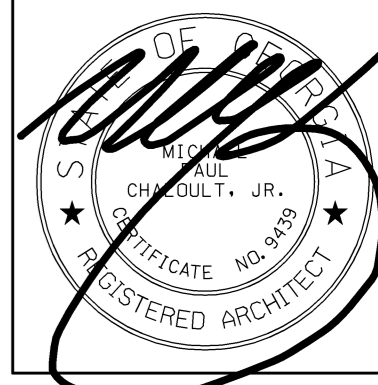
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AE3.1



RUTLAND

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for the
Bibb County School District
Macon, Georgia

PROJECT NO.
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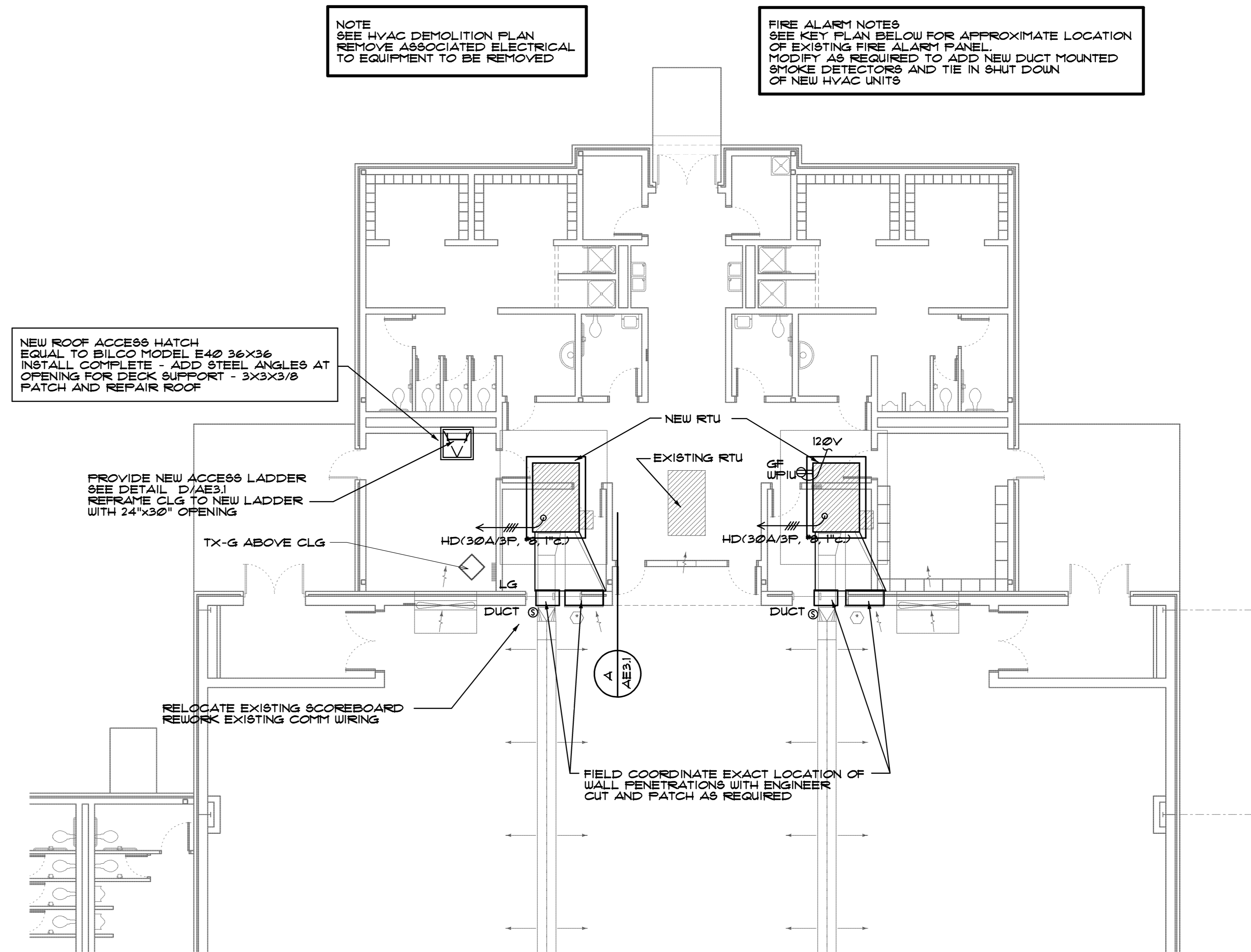
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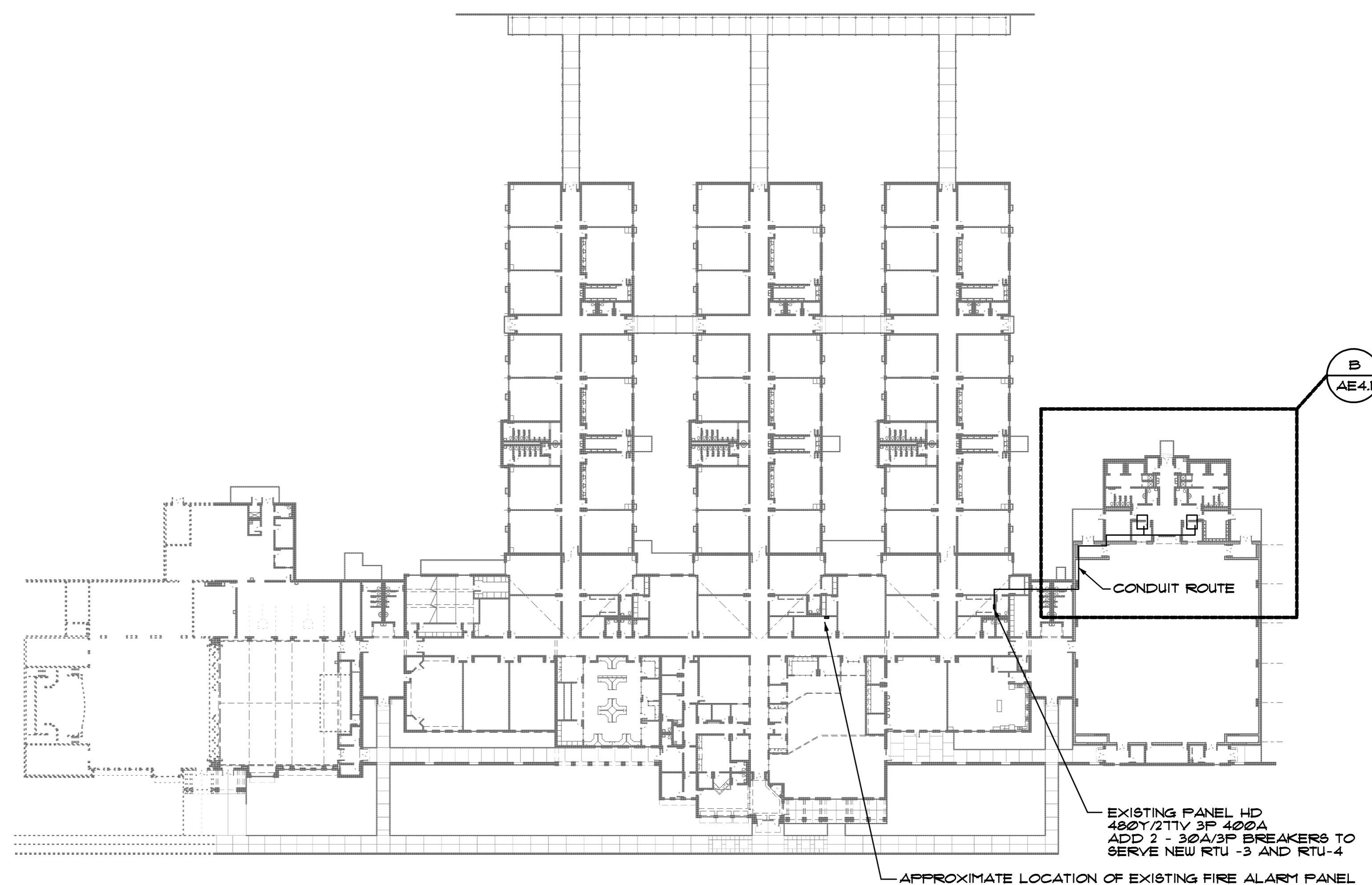
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AE4.1



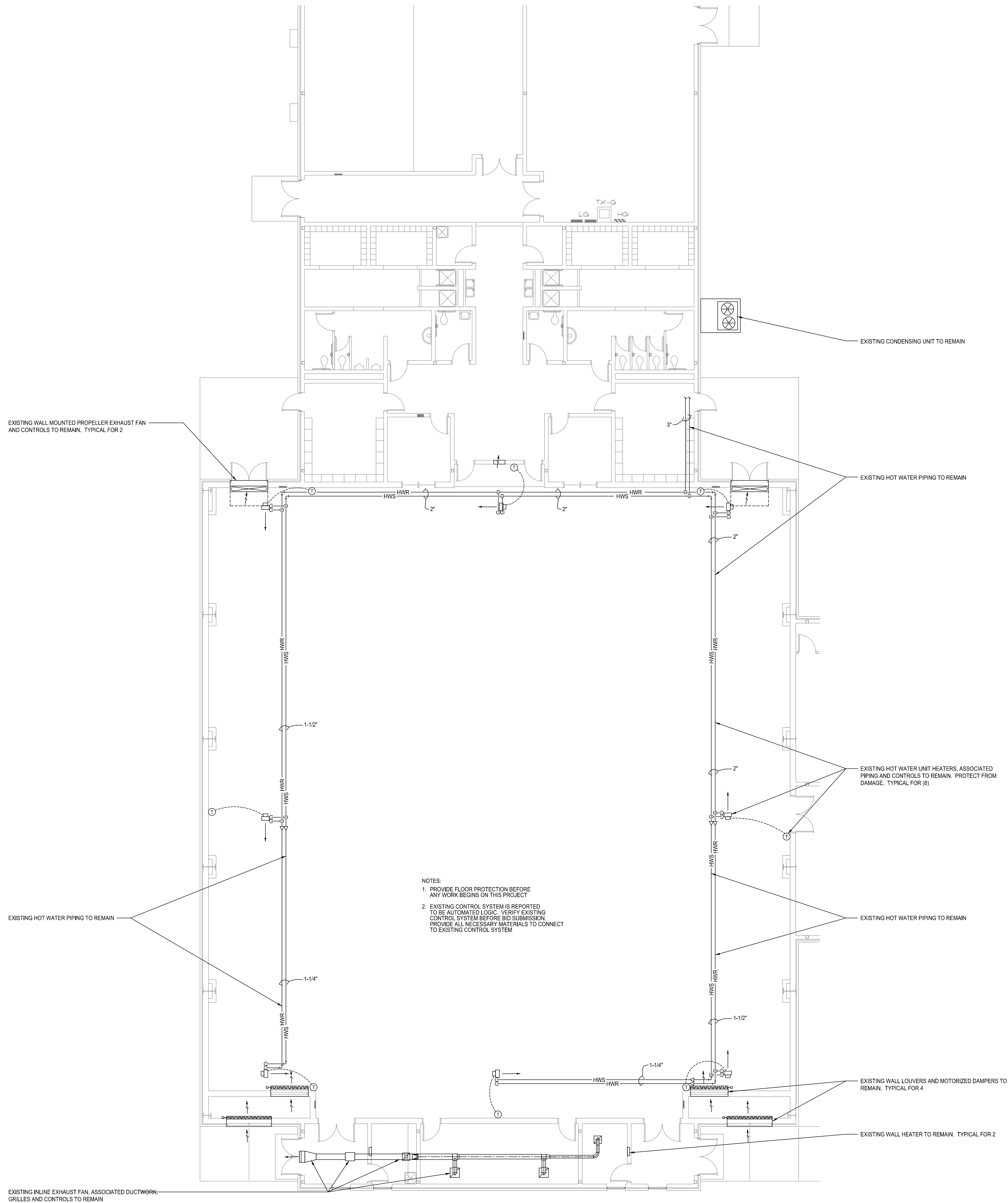
B PARTIAL POWER FLOOR PLAN @ GYM
AE4.1 SCALE: 1/8" = 1' - 0"



C OVERALL EXISTING FLOOR PLAN
AE4.1 SCALE - NONE

MECHANICAL LEGEND	
LINE WEIGHTS	
	EXISTING TO REMAIN
	TO BE DEMOLISHED OR NEW WORK
SYMBOLS	
	CONDENSATE DRAIN PIPING
	REFRIGERANT PIPING
	DROPPING OR RISING PIPE
	PIPE TO OR FROM ABOVE
	RECTANGULAR DUCT SIZE: FIRST DIMENSION IS SIDE DRAWN
	ROUND DUCTWORK
	RECTANGULAR TO ROUND DUCT TRANSITION
	FLEXIBLE ROUND DUCT
	EXPOSED ROUND DUCTWORK
	FLEXIBLE DUCT CONNECTION
	ADJUSTABLE DEFLECTOR VANES AT BRANCH DUCT
	SQUARE DUCT ELBOW WITH TURNING VANES
	MANUAL VOLUME DAMPER
	AUTOMATIC (MOTORIZED) CONTROL DAMPER
	ONE INCH THICK DUCT LINER
	SPLITTER DAMPER WITH SPLIT DIMENSIONS SHOWN
	VERTICAL OFFSET: ARROW INDICATES RISE
	EQUIPMENT ON ROOF ABOVE
	WALL MOUNTED THERMOSTAT OR TEMPERATURE SENSOR
	UNDERCUT DOOR 3/4"
	CONCRETE PAD
	POINT OF CONNECTION OR LIMIT OF SCOPE OF WORK
	CUBIC FEET PER MINUTE AIRFLOW
ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
APPROX	APPROXIMATE
BAS	BUILDING AUTOMATION SYSTEM
CFM	CUBIC FEET PER MINUTE
DIA	DIAMETER
DB	DRY BULB
DX	DIRECT EXPANSION
EER	ENERGY EFFICIENCY RATING
ESP	EXTERNAL STATIC PRESSURE
EVAP	EVAPORATOR
FPM	FEET PER MINUTE
FT	FEET
H	HEIGHT
HP	HORSE POWER
HW	HOT WATER
IN	INCHES
IN. WG	INCHES WATER GAUGE
KW	KILOWATTS
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MIN	MINIMUM
OA	OUTDOOR AIR
RPM	REVOLUTIONS PER MINUTE
TYP	TYPICAL
°F	DEGREES FAHRENHEIT
Δt	TEMPERATURE DIFFERENCE





1 MECHANICAL DEMOLITION PLAN - BALLARD HUDSON MIDDLE SCHOOL
SCALE: 1/8" = 1'-0"



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BALLARD HUDSON

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BIBB COUNTY SCHOOL DISTRICT
MACON, GEORGIA

PROJECT NO.
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SHEET TITLE
MECHANICAL
DEMOLITION PLAN -
BALLARD HUDSON
MIDDLE SCHOOL

DATE
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HOWARD

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BIBB COUNTY MIDDLE SCHOOLS
BIBB COUNTY SCHOOL DISTRICT
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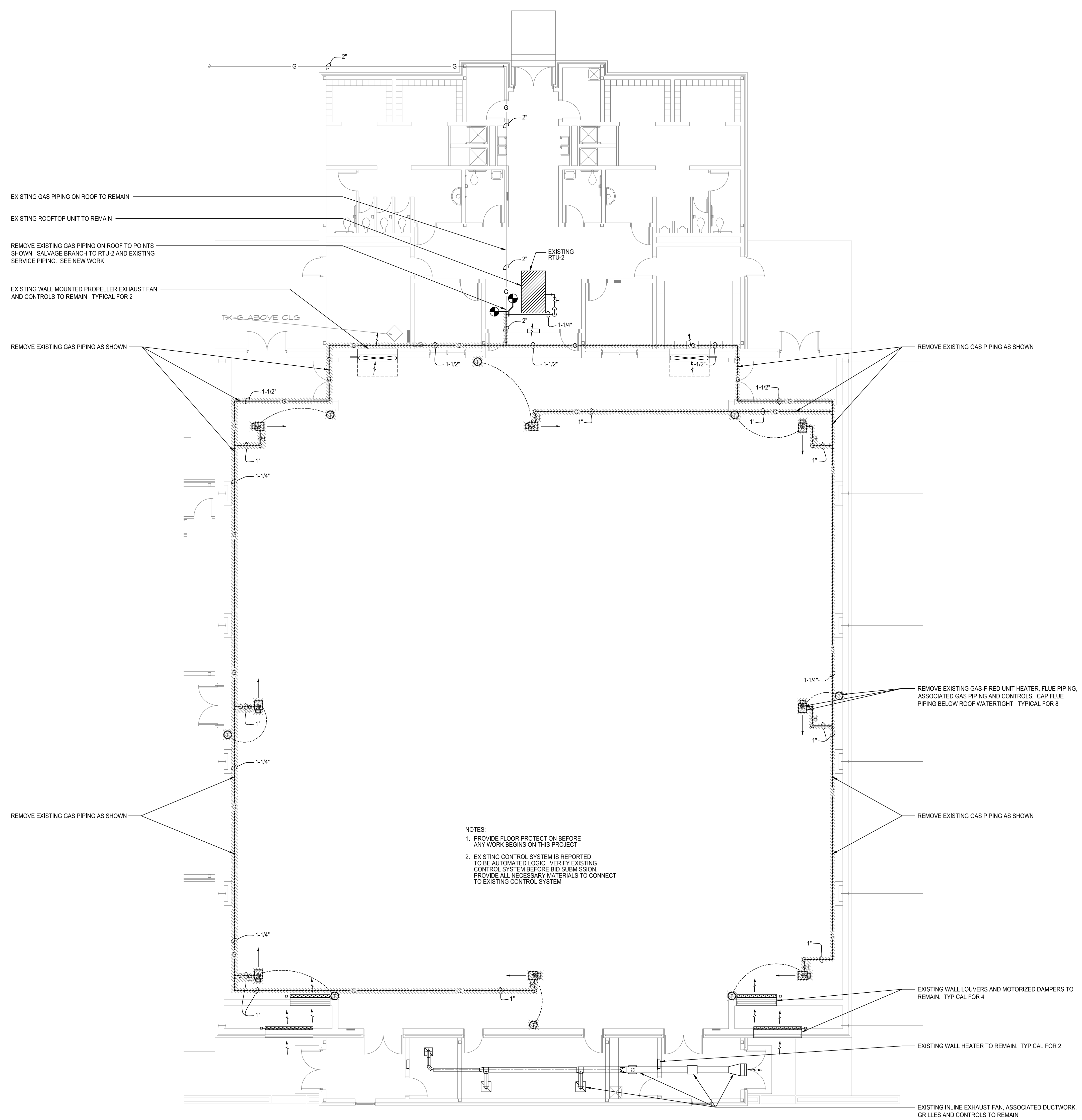
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MECHANICAL DEMOLITION PLAN -
HOWARD MIDDLE
SCHOOL

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- NOTES:
1. PROVIDE FLOOR PROTECTION BEFORE ANY WORK BEGINS ON THIS PROJECT
 2. EXISTING CONTROL SYSTEM IS REPORTED TO BE AUTOMATED LOGIC. VERIFY EXISTING CONTROL SYSTEM BEFORE BID SUBMISSION. PROVIDE ALL NECESSARY MATERIALS TO CONNECT TO EXISTING CONTROL SYSTEM

1 MECHANICAL DEMOLITION PLAN - HOWARD MIDDLE SCHOOL
SCALE: 1/8" = 1'-0"



RUTLAND

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BIBB COUNTY MIDDLE SCHOOLS
BIBB COUNTY SCHOOL DISTRICT
MACON, GEORGIA**

PROJECT NO.
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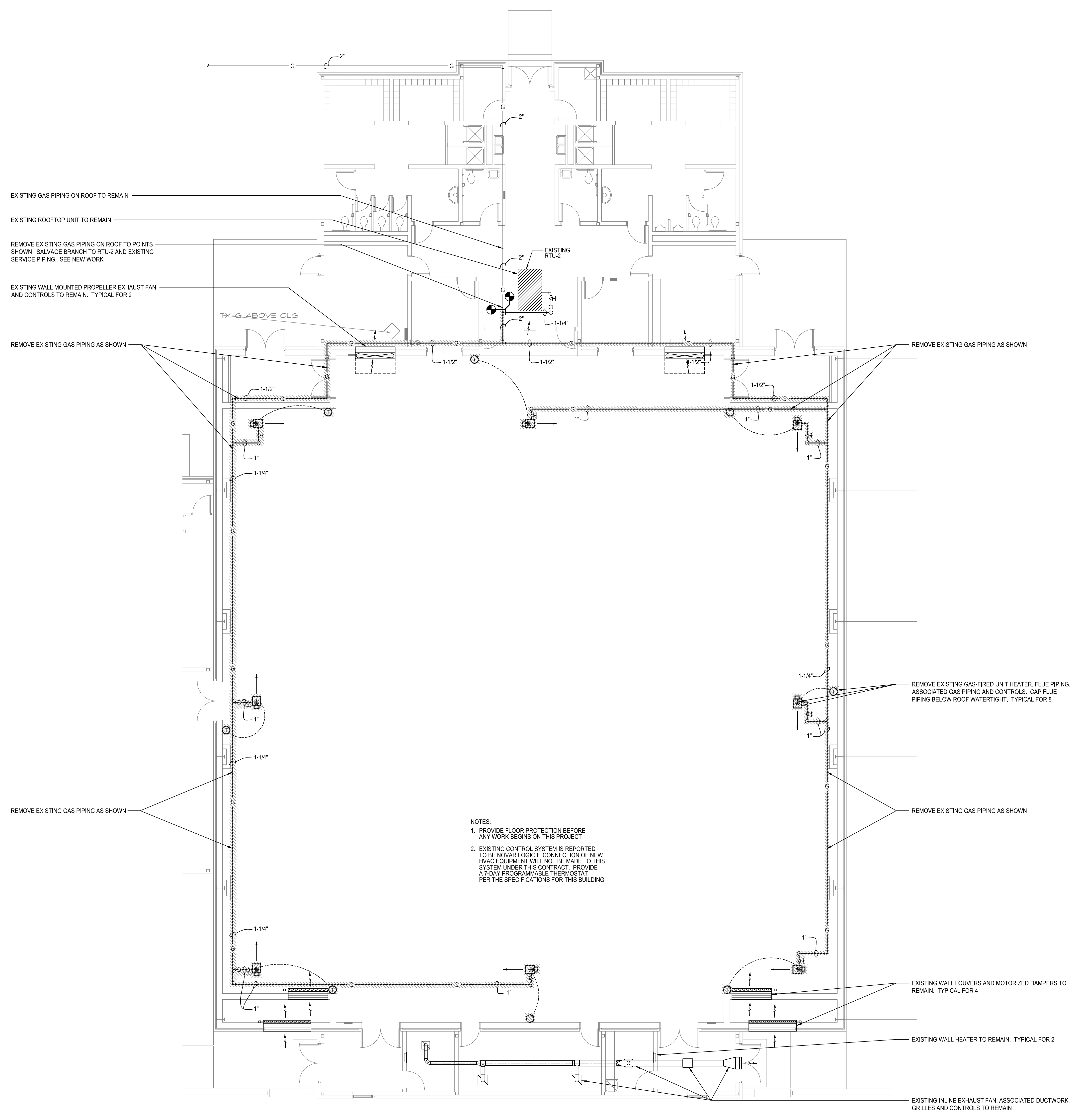
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MECHANICAL DEMOLITION PLAN -
RUTLAND
MIDDLE SCHOOL

DATE
AUGUST 3, 2016

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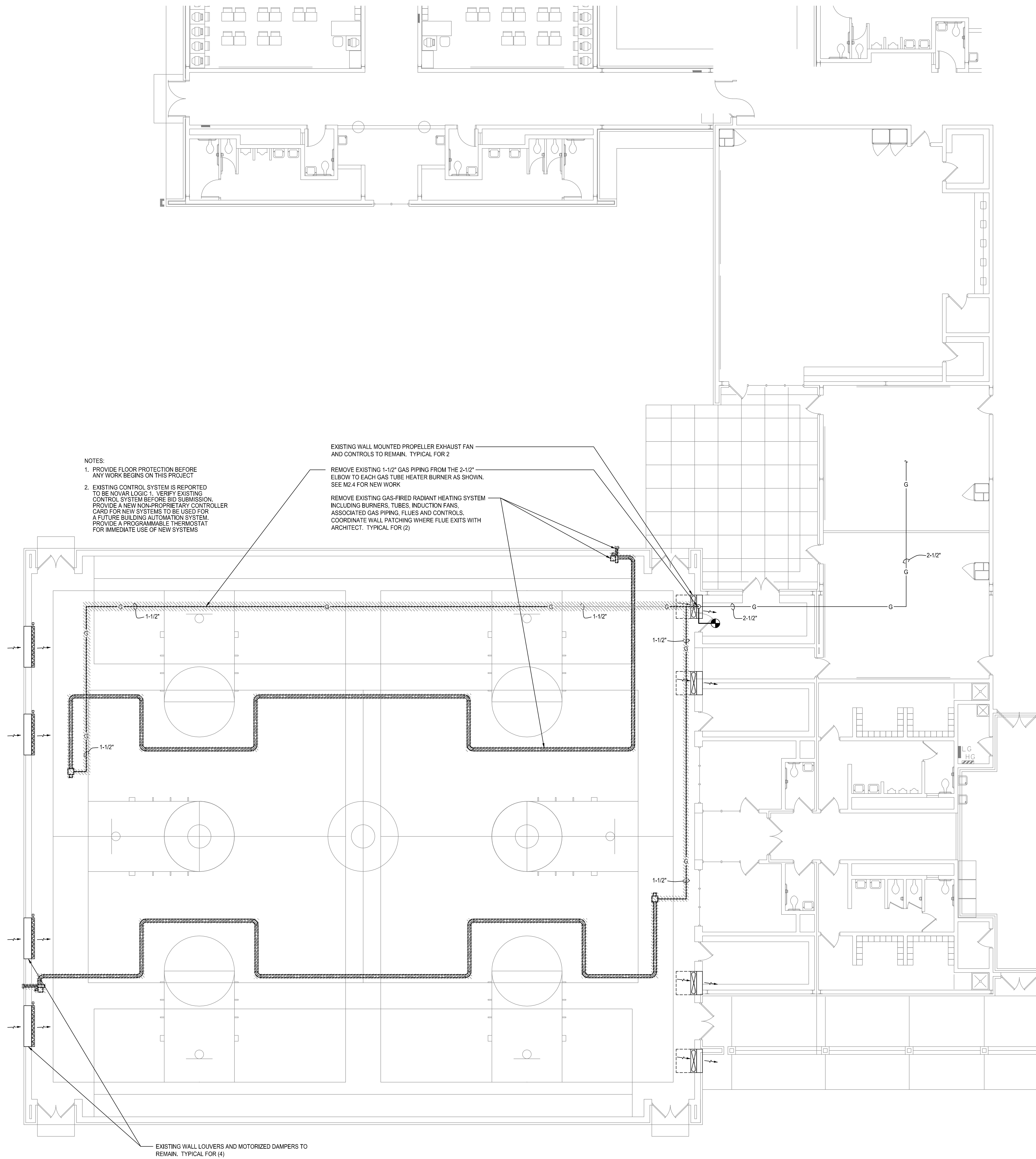
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SHEET NUMBER
M1.3




- NOTES:
1. PROVIDE FLOOR PROTECTION BEFORE ANY WORK BEGINS ON THIS PROJECT
 2. EXISTING CONTROL SYSTEM IS REPORTED TO BE NOVAR LOGIC I. CONNECTION OF NEW HVAC EQUIPMENT WILL NOT BE MADE TO THIS SYSTEM UNDER THIS CONTRACT. PROVIDE A 7-DAY PROGRAMMABLE THERMOSTAT PER THE SPECIFICATIONS FOR THIS BUILDING

1 MECHANICAL DEMOLITION PLAN - RUTLAND MIDDLE SCHOOL
SCALE: 1/8" = 1'-0"




1 MECHANICAL DEMOLITION PLAN - WEAVER MIDDLE SCHOOL
SCALE: 1/8" = 1'-0"



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WEAVER

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**HVAC ADDITIONS
BIBB COUNTY MIDDLE SCHOOLS**

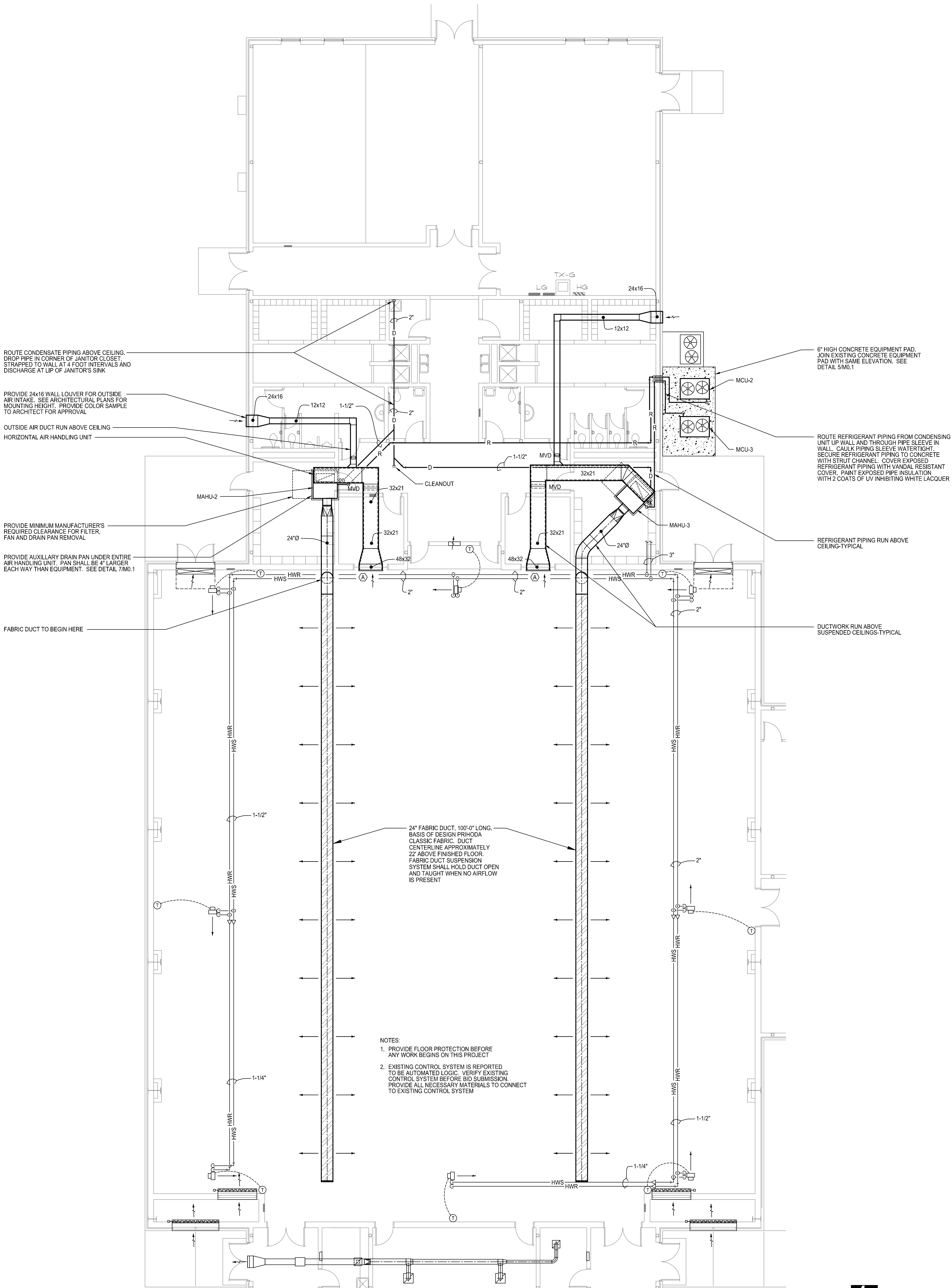
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PROJECT NO. 16-014
SHEET TITLE MECHANICAL DEMOLITION PLAN - WEAVER MIDDLE SCHOOL
DATE AUGUST 3, 2016
DRAWN BY TDH
CHECKED BY MVS
SHEET NUMBER M1.4

AIR HANDLING UNIT SCHEDULE								
MARK	CARRIER MODEL No.	TOTAL COOLING MBH	SENSIBLE COOLING MBH	TOTAL SUPPLY CFM	OA CFM	APPROX ESP IN. WG	MOTOR HP	NOTES
MAHU-2	40RUAA12T	118.7	89.3	4000	500	0.75"	3.7	1:2:3:4:5:
MAHU-3	40RUAA12T	118.7	89.3	4000	500	0.75"	3.7	1:2:3:4:5:
1. HORIZONTAL AIR HANDLING UNIT WITH FRONT DISCHARGE AND BACK INLET 2. PROVIDE AUXILIARY DRAIN PAN UNDER ENTIRE AIR HANDLING UNIT. SEE DETAIL 7/M0.1 3. COOLING CAPACITIES BASED ON AIR ENTERING EVAPORATOR AT 80°Fdb, 67°Fwb 4. PROVIDE DUAL-CIRCUITED EVAPORATOR COIL 5. COOLING-ONLY UNIT								

CONDENSING UNIT SCHEDULE				
MARK	CARRIER MODEL No.	TOTAL COOLING MBH	MIN EER	NOTES
MCU-2	38AUDA12A	118.7	11.0	1:2:3:4:
MCU-3	38AUDA12A	118.7	11.0	1:2:3:4:
1. COOLING CAPACITY BASED ON 95°F AMBIENT AIR TEMPERATURE 2. PROVIDE 1/4" THICK NEOPRENE WAFFLE-PAD UNDER ALL SUPPORT POINTS 3. PROVIDE CONDENSER HAIL GUARDS 4. PROVIDE TWO REFRIGERATION CIRCUITS				

GRILLE SCHEDULE				
MARK	CARNES MODEL No.	SIZE	FINISH	NOTES
(A)	RAAMH	48x32	WHITE	2:9:10:
1. ALUMINUM SIDEWALL RETURN GRILLE 2. 3/4" BLADE SPACING, FRONT BLADES HORIZONTAL 3. HORIZONTAL BLADES SET AT 45° ANGLE				




1 MECHANICAL NEW WORK PLAN - BALLARD HUDSON MIDDLE SCHOOL
SCALE: 1/8" = 1'-0"

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BALLARD HUDSON

HVAC ADDITIONS
BIBB COUNTY MIDDLE SCHOOLS
BIBB COUNTY SCHOOL DISTRICT
MACON, GEORGIA

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PROJECT NO.
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SHEET TITLE
MECHANICAL
NEW WORK PLAN -
BALLARD HUDSON
MIDDLE SCHOOL

DATE
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HVAC ADDITIONS
BIBB COUNTY MIDDLE SCHOOLS

BIBB COUNTY SCHOOL DISTRICT
MACON, GEORGIA

PROJECT NO.
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SHEET TITLE
MECHANICAL
NEW WORK PLAN -
HOWARD MIDDLE
SCHOOL

DATE
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M2.2

ROOFTOP AIR CONDITIONING UNIT SCHEDULE										
MARK	CARRIER MODEL No.	TOTAL COOLING MBH	SENSIBLE COOLING MBH	TOTAL SUPPLY CFM	MIN. OA CFM	APPROX. ESP. IN WG	SUPPLY FAN HP	GAS INPUT MBH	MIN. EER	NOTES
RTU-3	4BHCSE11B3	109.7	92.4	4000	500	0.8"	5.0	180	12.0	1,2,3,4,5,6,7,8,9,10,11,12
RTU-4	4BHCSE11B3	109.7	92.4	4000	500	0.8"	5.0	180	12.0	1,2,3,4,5,6,7,8,9,10,11,12
1. COOLING CAPACITIES BASED ON AIR ENTERING EVAPORATOR AT 80°F db, 67°F wb AND 95°F AMBIENT AIR TEMPERATURE 2. HEATING CAPACITY BASED ON FIRING NATURAL GAS 3. DOWN FLOW UNIT. PROVIDE FULL PERIMETER ROOF CURB. SEE DETAIL 3/M0.1 4. SIDE HORIZONTAL SUPPLY AND RETURN DUCT CONNECTIONS 5. PROVIDE AIR-SIDE ECONOMIZER WITH POWERED EXHAUST 6. PROVIDE WITH HINGED ACCESS PANELS 7. PROVIDE WITH HOT GAS REHEAT DEHUMIDIFICATION CYCLE 8. PROVIDE WITH CONDENSER HAIL GUARDS 9. ROUTE CONDENSATE DRAIN TO NEAREST ROOF DRAIN. SEE DETAIL 2/M0.1 10. PROVIDE FACTORY INSTALLED DISCONNECT 11. ROOF SLOPE COMPENSATION TO BE ACHIEVED THROUGH ROOF CURB SLOPE. DO NOT SHIM ROOF CURB 12. PROVIDE VARIABLE FREQUENCY DRIVE AND SOFT START FOR EVAPORATOR FAN MOTOR										

GRILLE SCHEDULE					
MARK	CARNES MODEL No.	SIZE	THROW	FINISH	NOTES
(A)	RAAMH	48x32	-	WHITE	2/9/10
1. ALUMINUM SIDEWALL RETURN GRILLE 2. 3/4" BLADE SPACING. FRONT BLADES HORIZONTAL 3. HORIZONTAL BLADES SET AT 45° ANGLE					

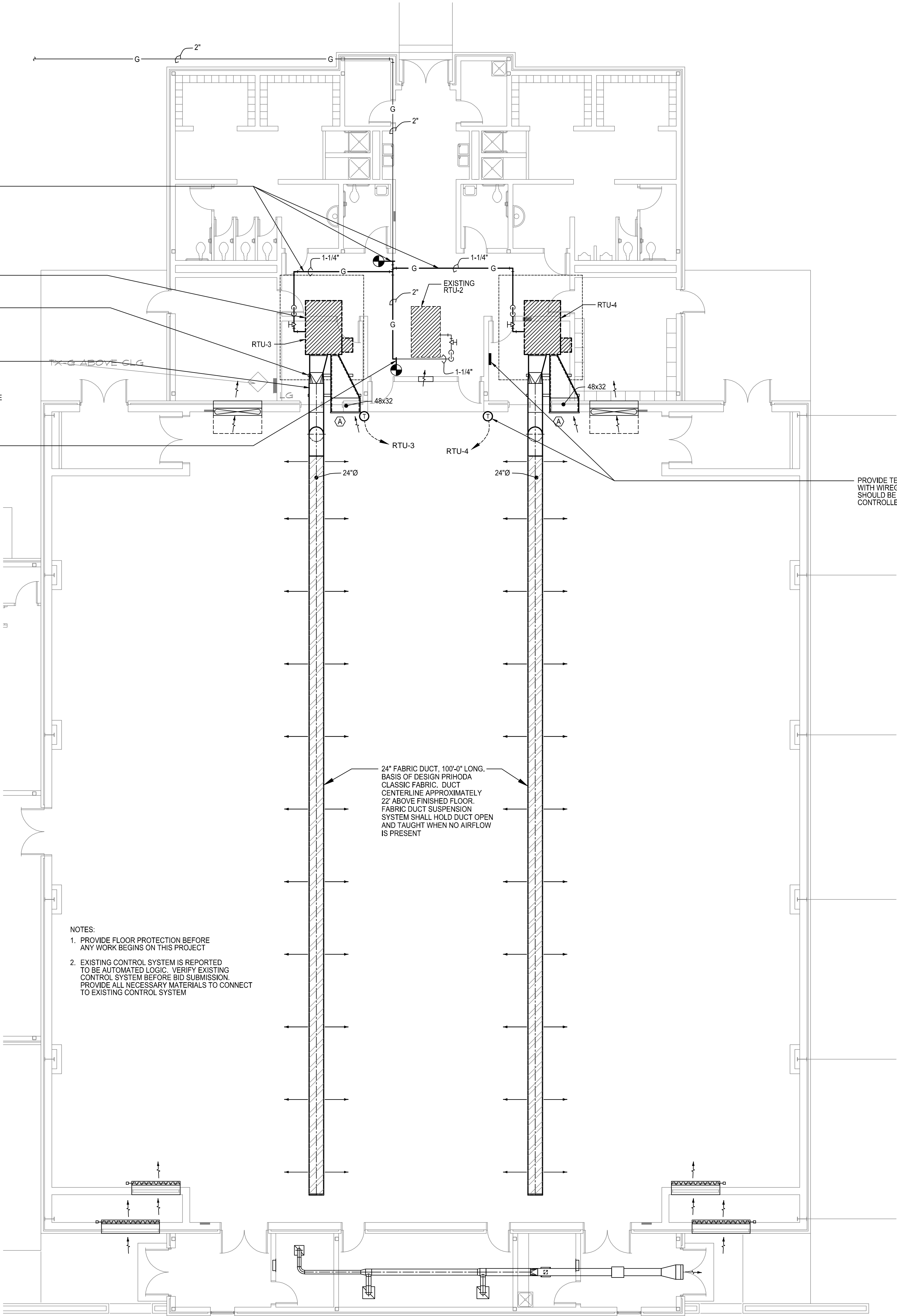
CONNECT NEW 2" GAS PIPING TO EXISTING PIPING ON ROOF. ROUTE NEW BRANCHES TO NEW RTU-3 AND RTU-4

PROVIDE NEW ROOFTOP AIR CONDITIONING UNIT WITH NEW ROOF CURB

ABOVE ROOF DUCT SUPPORTS. SEE DETAIL 6/M0.1

PROVIDE GALVANIZED SHEET METAL COVER ON ALL EXPOSED DUCTWORK ON ROOF. SEAL JOINTS WATER-TIGHT AND PROVIDE PAINT GRIP FINISH. PAINT WITH ONE COAT OF EXTERIOR ENAMEL PRIMER AND TWO FINISH COATS OF EXTERIOR ENAMEL PAINT. COORDINATE COLOR WITH OWNER

CONNECT NEW 2" GAS PIPING TO EXISTING PIPING ON ROOF



NOTES:
1. PROVIDE FLOOR PROTECTION BEFORE ANY WORK BEGINS ON THIS PROJECT
2. EXISTING CONTROL SYSTEM IS REPORTED TO BE AUTOMATED LOGIC. VERIFY EXISTING CONTROL SYSTEM BEFORE BID SUBMISSION. PROVIDE ALL NECESSARY MATERIALS TO CONNECT TO EXISTING CONTROL SYSTEM

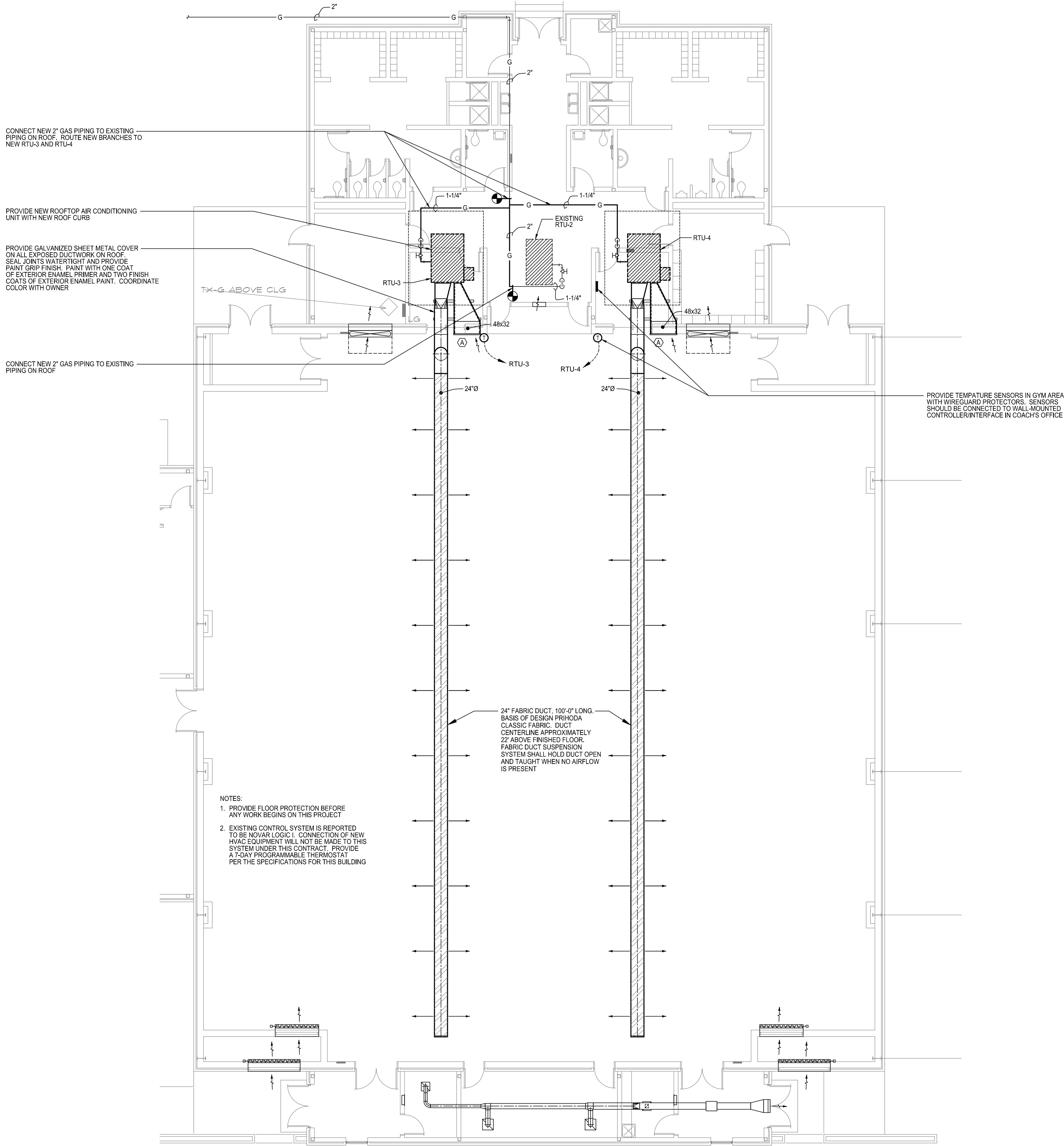
1 MECHANICAL NEW WORK PLAN - HOWARD MIDDLE SCHOOL
SCALE: 1/8" = 1'-0"



SPENCER BRISTOL ENGINEERING, INC.
505 Peachtree Parkway, Suite 100
Norcross, Georgia 30092
TEL: 770.464.6028 FAX: 770.464.6024
SBE Project No. 16068

ROOFTOP AIR CONDITIONING UNIT SCHEDULE											
MARK	CARRIER MODEL No.	TOTAL COOLING MBH	SENSIBLE COOLING MBH	TOTAL SUPPLY CFM	MIN OA CFM	APPROX. ESP IN WG	SUPPLY FAN HP	GAS INPUT MBH	MIN. EER	NOTES	
RTU-3	48HCSE11B3	109.7	92.4	4000	500	0.8"	5.0	180	12.0	1,2,3,4,5,6,7,8,9,10,11,12	
RTU-4	48HCSE11B3	109.7	92.4	4000	500	0.8"	5.0	180	12.0	1,2,3,4,5,6,7,8,9,10,11,12	
1. COOLING CAPACITIES BASED ON AIR ENTERING EVAPORATOR AT 80°Fdb, 67°Fwb AND 95°F AMBIENT AIR TEMPERATURE 2. HEATING CAPACITY BASED ON FIRING NATURAL GAS 3. DOWN FLOW UNIT. PROVIDE FULL PERIMETER ROOF CURB. SEE DETAIL 3/MO.1 4. SIDE HORIZONTAL SUPPLY AND RETURN DUCT CONNECTIONS 5. PROVIDE AIR-SIDE ECONOMIZER WITH POWERED EXHAUST 6. PROVIDE WITH HINGED ACCESS PANELS 7. PROVIDE WITH HOT GAS REHEAT DEHUMIDIFICATION CYCLE 8. PROVIDE WITH CONDENSER HAIL GUARDS 9. ROUTE CONDENSATE DRAIN TO NEAREST ROOF DRAIN. SEE DETAIL 2/MO.1 10. PROVIDE FACTORY INSTALLED DISCONNECT 11. ROOF SLOPE COMPENSATION TO BE ACHIEVED THROUGH ROOF CURB SLOPE. DO NOT SHIM ROOF CURB 12. PROVIDE VARIABLE FREQUENCY DRIVE AND SOFT START FOR EVAPORATOR FAN MOTOR											

GRILLE SCHEDULE					
MARK	CARNES MODEL No.	SIZE	THROW	FINISH	NOTES
(A)	RAAMH	48x32	-	WHITE	1,2,3
1. ALUMINUM SIDEWALL RETURN GRILLE 2. 3/4" BLADE SPACING. FRONT BLADES HORIZONTAL 3. HORIZONTAL BLADES SET AT 45° ANGLE					



1 MECHANICAL NEW WORK PLAN - RUTLAND MIDDLE SCHOOL
SCALE: 1/8" = 1'-0"



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RUTLAND

REVISION

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HVAC ADDITIONS
BIBB COUNTY MIDDLE SCHOOLS

BIBB COUNTY SCHOOL DISTRICT
MACON, GEORGIA

PROJECT NO.
16-014

SHEET TITLE
MECHANICAL
NEW WORK PLAN -
RUTLAND MIDDLE
SCHOOL

DATE
AUGUST 3, 2016

DRAWN BY
TDH

CHECKED BY
MVS

SHEET NUMBER
M2.3

1. COOLING CAPACITIES BASED ON AIR ENTERING EVAPORATOR AT 80°F DB, 67°F WB AND 85°F AMBIENT AIR TEMPERATURE
2. HEATING CAPACITY BASED ON FIRING NATURAL GAS
3. SIDE HORIZONTAL SUPPLY AND RETURN DUCT CONNECTIONS
4. PROVIDE WITH HINGED ACCESS PANELS
5. PROVIDE WITH HOT GAS REHEAT DEHUMIDIFICATION CYCLE
6. PROVIDE WITH CONDENSER HALL GUARDS
7. ROUTE CONDENSATE DRAIN TO DRYWELL (SEE DETAIL 880.1)
8. PROVIDE FACTORY INSTALLED DISCONNECT
9. PROVIDE VARIABLE FREQUENCY DRIVE AND SOFT START FOR EVAPORATOR FAN MOTOR

1. WELDED STEEL "STURDICORE" RETURN GRILLE
2. 3/4" BLADE SPACING, FRONT BLADES HORIZONTAL
3. HORIZONTAL BLADES SET AT 40° ANGLE

