ROCKFORD BOARD OF EDUCATION
INVITATION FOR BID ON SUPPLIES, MATERIALS, EQUIPMENT OR SERVICES
FOR SCHOOL DISTRICT NO. 205
ROCKFORD, ILLINOIS

IFB No. **17-36 Flinn Middle School HVAC, Lighting and Ramp Renovations**

DATE: **Friday, March 17, 2017**

RE: **ADDENDUM NO. 2**

To All Bidders:

Attached are modifications, clarifications and/or corrections for the Project Manual and are hereby made a part of the contract documents. Please attach this addendum to the Project Manual(s) in your possession. Please note the receipt of this addendum on the bid form. Bidders shall review changes to all portions of this work as changes to one portion may affect the work of another.

If you plan to hand deliver your IFB submission on the due date, please note you must check in on the 3rd floor prior to coming to the bid opening. Please allow time for this as late submission will not be accepted.

Refer all questions relative to the business aspect, Instructions to Bidders, Special Conditions, and questions concerning the technical aspect of the documents to the Purchasing Manager by email at tamara.pugh@rps205.com.

LARSON & DARBY GROUP **ARCHITECTS-ENGINEERS-PLANNERS**
4949 Harrison Avenue, Suite 100 P. O. Box 5207, Rockford, IL 61125-0207
815/484-0739 FAX 815.229.9867

TO: ALL BIDDERS

RE: ADDENDUM #2

Changes to Bidding Documents Dated February 10, 2017

PROJECT: FLINN MIDDLE SCHOOL HVAC, LIGHTING AND RAMP RENOVATIONS
ROCKFORD PUBLIC SCHOOLS 205
ROCKFORD, ILLINOIS

PROJECT NO.: 25109

DATE: March 16, 2017

Please attach this Addendum to the Project Manual and Drawings for the referenced project. Take the changes to the Project Manual and Drawings into consideration in preparing your Bid.

Bidders shall make note in writing on Bid Form that this Addendum has been taken into consideration. Failure to do so may be sufficient cause to reject the Bid.

LARSON & DARBY GROUP

By___________________________________
Stephen M. Nelson

This Addendum consists of 3 pages, plus materials itemized herein.

I. GENERAL CLARIFICATIONS

A. The following is clarified, added or modified:

1. Clarification: The following questions were raised: Answers in bold.
   a. Could you provide drawings of the tunnels under the school?
      Attached are original scanned in drawings of the tunnels under the school.

   b. Is BACnet communication protocol acceptable for the building automation system?
      Yes. Refer revisions for specifications section 23 09 00 "Instrumentation and Controls For HVAC" issued under this addendum.

II. ADDITIONS OR CHANGES TO THE PROJECT MANUAL

Section 23 09 00 - INSTRUMENTATION AND CONTROL FOR HVAC:

a. ADD "Johnson Controls" to the list of acceptable manufacturers in paragraph 2.2.A.

b. REVISE paragraph 2.2.B to read" The control equipment shall incorporate **BacNet or LonMark** technology at the controller level and Niagara Frame AX version technology at the network device level and as network device level and as network management tool.

c. REVISE all references to LonWorks in this section to allow Bacnet as well.

Section 23 52 39 – FIRE TUBE BOILERS:

a. ADD "Hurst" to the list of acceptable manufacturers in paragraph 2.1.A.

III. ADDITIONS OR CHANGES TO THE DRAWINGS

ORIGINAL DRAWINGS OF TUNNELS FOR REFERENCE

A. Drawings 64.1 and 64.2 attached for tunnels below school.

Sheet MD1.1

A. Sheet has been revised and re-issued.

Sheet M1.1

A. Sheet has been revised and re-issued.

Sheet M2.2

A. Sheet has been revised and re-issued.

Sheet M3.1

A. Sheet has been revised and re-issued.

Sheet ED1.0 (Drawing is attached)

A. Overall Basement Plan added.
B. Key Note-2 revised.

Sheet E1.0

A. Suspended Unit Heater (SUH-1) added in boiler room.
B. BFS-1 moved closer to Panel LLR1.

Sheet E3.1

A. Suspended Unit Heater (SUH-1) added in Motor and Equipment Schedule. SUH-1 shall be 120 Volt, 1/12 HP and shall be fed from circuit 19, Panel BMEQ via 2 #12 & 1# 12 Grd in ½" conduit. Provide 20A-1P toggle disconnect switch for it.

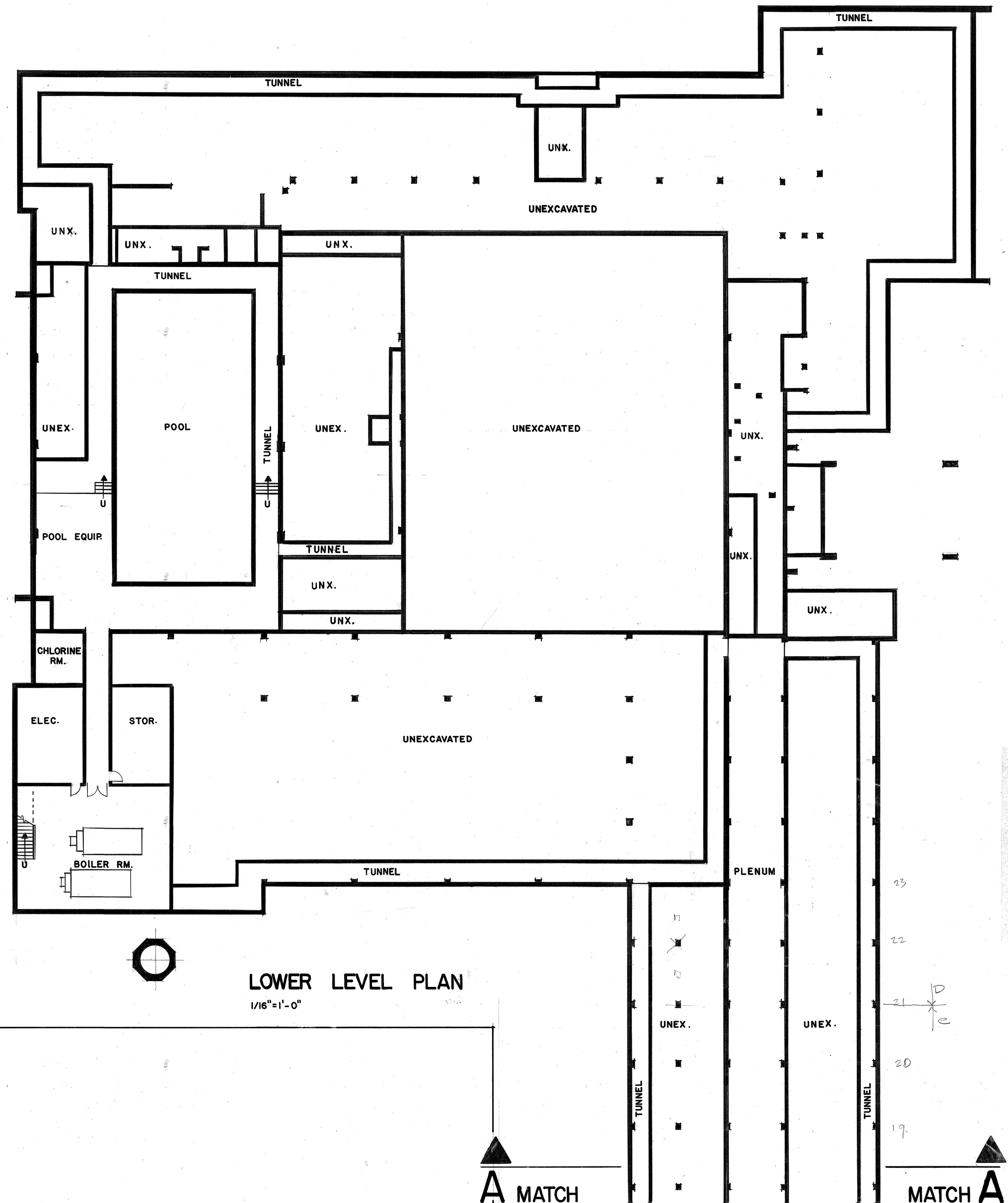
Sheet E3.2

A. SUH-1 added in Panel Schedule for BMEQ.

Sheet E3.4

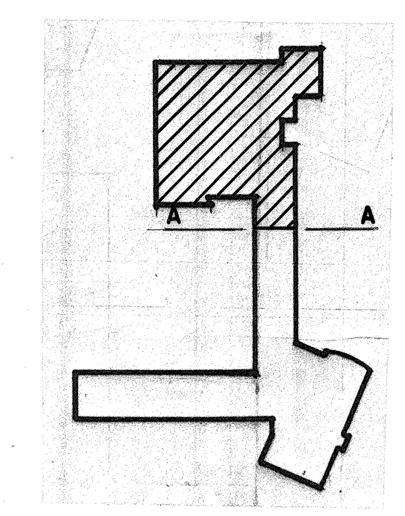
A. Add General Note 60 to read “Low voltage wiring above accessible ceiling space may be exposed. Low voltage wiring in electrical/mechanical equipment room may be exposed if located 15’ above floor level. Unless otherwise noted, all other wiring shall either be in conduits, in surface metallic raceway or in surface non-metallic raceway system.”

END OF ADDENDUM #2



LOWER LEVEL PLAN

1/16"=1'-0"



PLAN KEY

SYMBOLS

FLINN MIDDLE SCHOOL

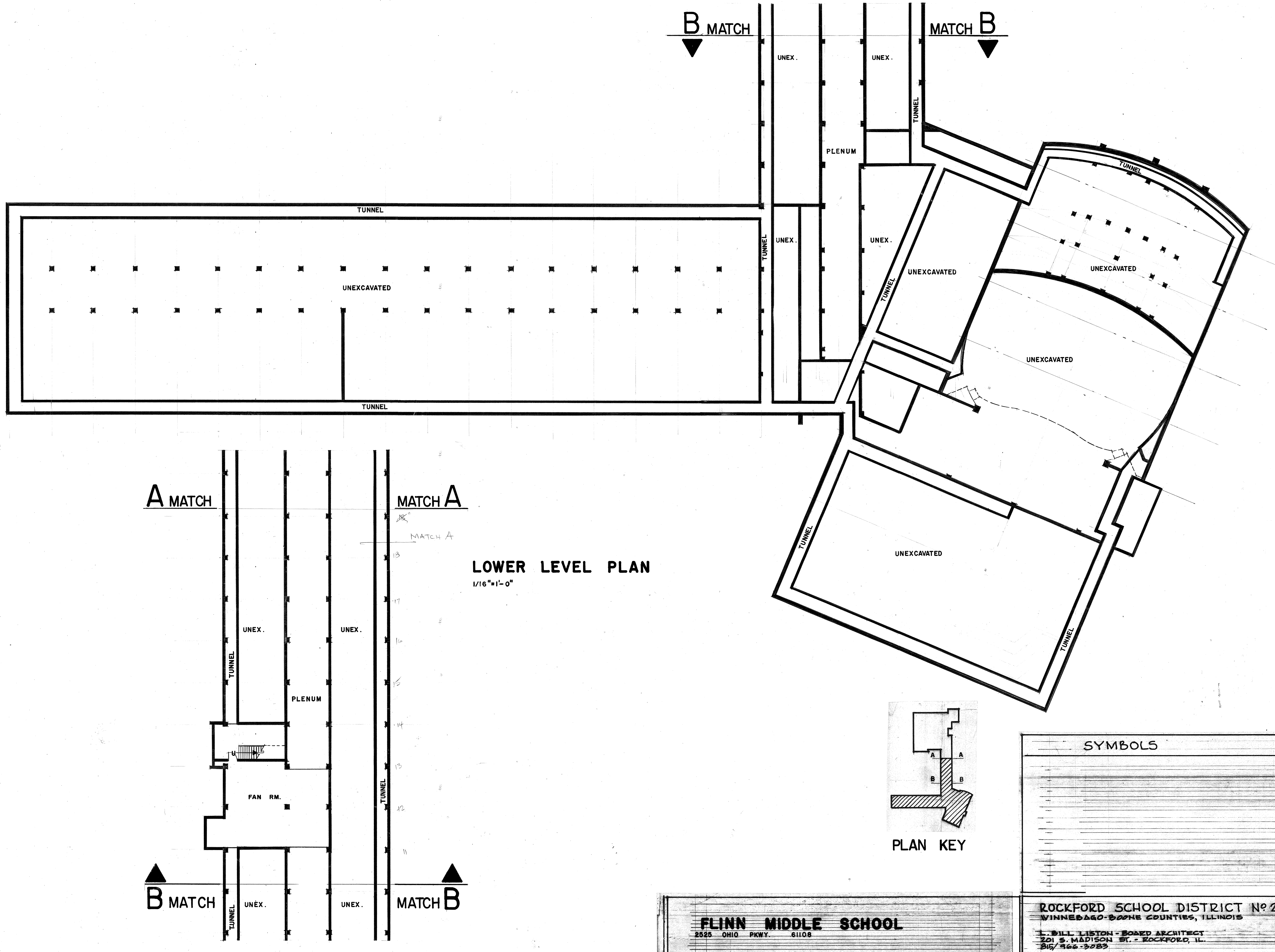
2525 OHIO PKWY 61108

ROCKFORD SCHOOL DISTRICT No 205
WINNEBAGO-BOONE COUNTIES, ILLINOIS

I. BILL LISTON - BOARD ARCHITECT
201 S. MADISON ST. - ROCKFORD, IL.
815/966-3083

CF

DRWG. NO.
64-1
JOB No
DATE:



LOWER LEVEL PLAN

1/16"=1'-0"

PLAN KEY

SYMBOLS

DATE	REVISIONS	NO.

FLINN MIDDLE SCHOOL
2525 OHIO PKWY. 61108

ROCKFORD SCHOOL DISTRICT Nº 205
WINNEBAGO-BOONE COUNTIES, ILLINOIS

L. BILL LISTON - BOARD ARCHITECT
201 S. MADISON ST. - ROCKFORD, IL.
815/ 966-3083

CF

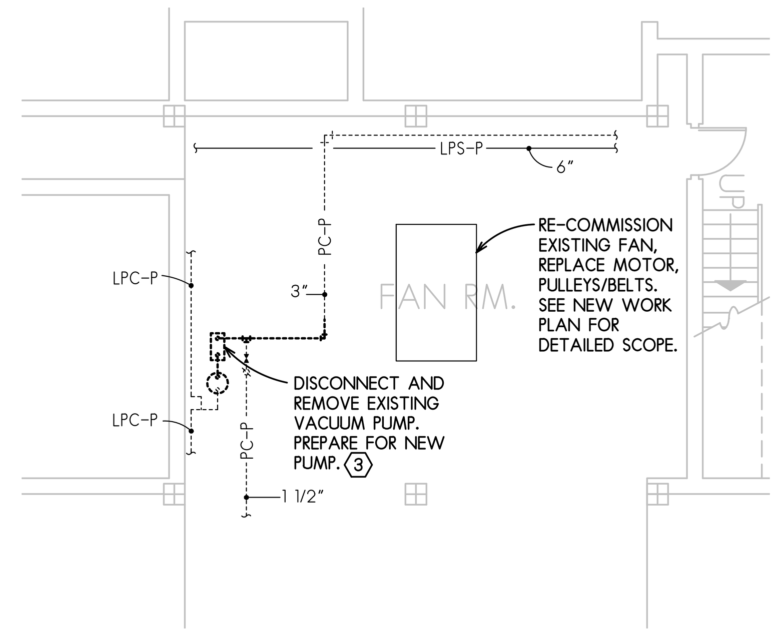
DRWG. NO.
64-2
JOB Nº
DATE:

GENERAL DEMOLITION NOTES

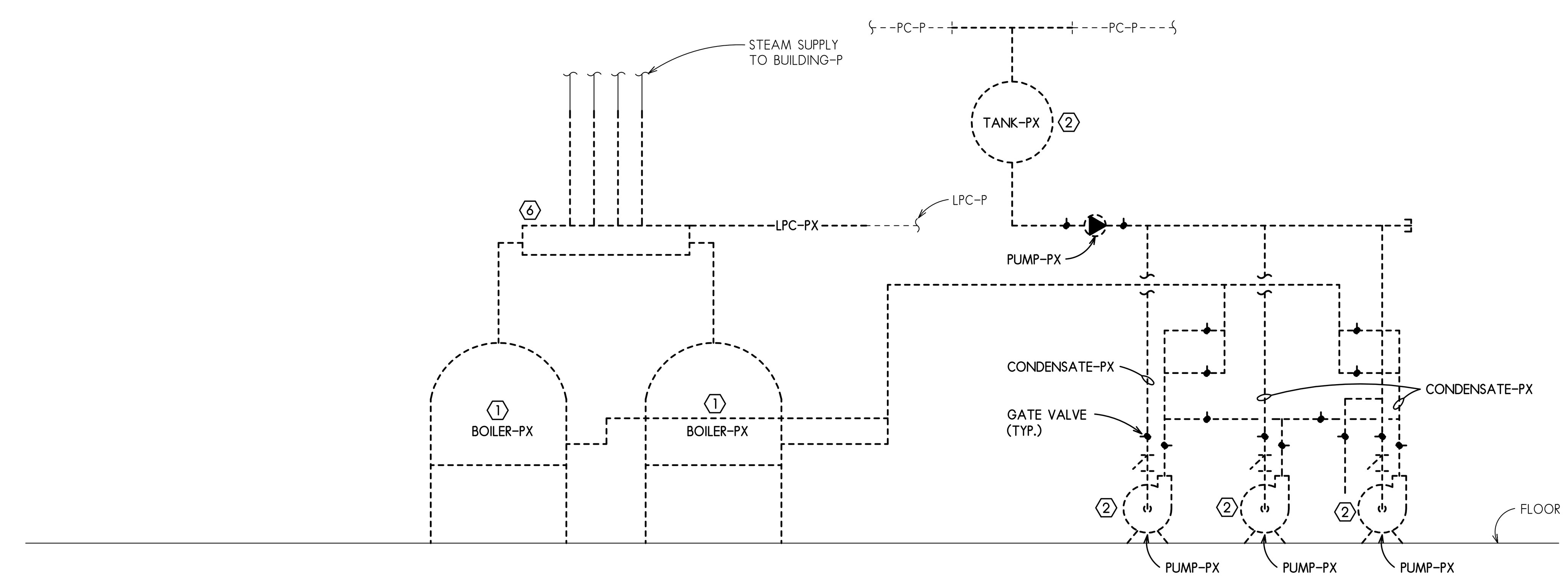
1. EXISTING STEEL PLATFORM SUPPORTING EXISTING ELEC. CONDUITS, PLUMBING & HVAC PIPING SHALL BE REMOVED TEMPORARILY TO ALLOW FOR THE REMOVAL OF EXISTING BOILERS & INSTALLATION OF THE NEW BOILERS AS SHOWN ON NEW WORK PLANS.
2. ALL EXISTING PLUMBING & HVAC PIPING SUPPORTED AND/OR ATTACHED TO EXISTING PLATFORM SHALL BE RELOCATED/RE-SUPPORTED/RE-PIPED AS REQUIRED TO FACILITATE THE REMOVAL OF EXISTING PLATFORM/BOILERS AND INSTALLATION OF NEW BOILERS. 1
3. EXISTING STEAM BOILER SYSTEM IN MECHANICAL ROOM SHALL BE REMOVED IN ITS ENTIRETY. THIS SHALL INCLUDE BUT NOT LIMITED TO BOILERS, BOILERS SUPPORTS, BURNERS, STEAM SUPPLY, CONDENSATE, FEED WATER PIPING, FEED WATER TANK & PUMPS, GAS PIPING, CONTROL PANELS, CONTROL VALVES, ETC...
4. EXISTING PLASTER CEILING IN BOILER ROOM SHALL BE REMOVED IN ITS ENTIRETY. EXISTING PIPING, CONDUITS, HANGERS AND SUPPORTS SHALL BE RELOCATED AND NEW HANGERS SHALL BE PROVIDED & INSTALLED AS REQUIRED.
5. EXISTING VACUUM/CONDENSATE PUMPS LOCATED THROUGHOUT THE BUILDING SHALL BE REMOVED AND REPLACED WITH NEW EQUIPMENT OF EQUAL SIZE AND CAPACITY.

DEMOLITION KEYED NOTES

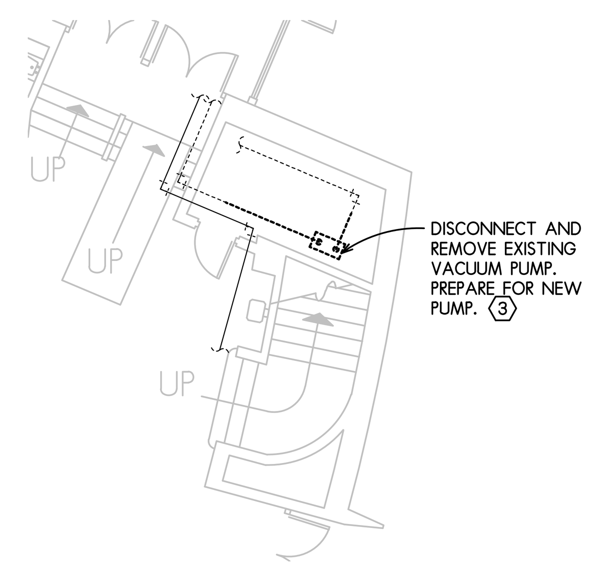
1. REMOVE EXISTING STEAM BOILER, MASONRY, REFRACTORY, STRUCTURAL SUPPORT, NATURAL GAS POWER BURNER, BURNER CONTROL PANEL, CONTROLS, TRIM, RELIEF VALVES, ASSOCIATED VALVES AND PIPING, INSULATION, ETC. AS REQUIRED FOR THE INSTALLATION OF NEW BOILERS AS SHOWN ON NEW WORK PLANS
2. REMOVE EXISTING BOILER FEED SYSTEM, TANK, PUMPS, SUPPORTS, CONTROLS, ASSOCIATED PIPING, VALVES, CONTROLS, INSULATION, ETC...
3. REMOVE EXISTING VACUUM CONDENSATE PUMP AND ASSOCIATED PIPING, VALVES, CONTROLS, CONCRETE PAD, ETC...
4. REMOVE EXISTING BLOW DOWN SEPARATOR AND ALL ASSOCIATED PIPING.
5. REMOVE EXISTING BREECHING, SUPPORT, INSULATION, ETC... CAP AND SEAL OPENING WITH SHEET METAL AIR TIGHT. 1
6. REMOVE EXISTING STEAM/CONDENSATE/PUMPED CONDENSATE/MAKE-UP/DRAIN PIPING, VALVES, SUPPORTS, INSULATION, ETC...
7. REMOVE EXISTING CHEMICAL FEEDER SYSTEM.
8. EXISTING WATER SOFTENER TO REMAIN.
9. EXISTING ELECTRICAL PANEL WITH TEMPERATURE CONTROL RELAYS. REMOVE ALL CONTROL RELAYS ASSOCIATED WITH HVAC EQUIPMENT TO BE DEMOLISHED UNDER THIS PROJECT. FILED VERIFY ALL EXISTING CONDITIONS AND COORDINATE ALL REMOVAL WORK WITH ELECTRICAL AND TEMP. CONTROL CONTRACTORS.
10. EXISTING CONTROL PANEL & EQUIPMENT, AIR COMPRESSOR, CONCRETE PAD, AIR DRYER, AND ALL ASSOCIATED PNEUMATIC PIPING, VALVES & CONTROLS PART OF EXISTING ACTIVE SYSTE,S IN THE BUILDING SHALL REMAIN.
11. EXISTING EMERGENCY GENERATOR.
12. REMOVE EXISTING STEAM SUPPLY BACK TO THIS POINT (APPROXIMATELY). PREPARE TO CONNECT WITH NEW STEAM SUPPLY AS SHOWN ON NEW WORK PLAN.
13. CAP EXISTING WALL OPENING.
14. REMOVE EXISTING BOILER CONDENSATE RETURN AS SHOWN.
15. REMOVE EXISTING CONCRETE PAD AS SHOWN. PATCH FLOOR TO MATCH EXISTING.
16. EXISTING DOMESTIC WATER HEATER, STORAGE TANK AND ASSOCIATED PIPING AND PUMPS SHALL REMAIN.
17. REMOVE EXISTING PUMPED CONDENSATE AS SHOWN BACK TO THIS POINT (APPROX.) TO ALLOW FOR INSTALLATION OF NEW PUMP AS SHOWN ON SHEET M1.1.
18. REMOVE EXISTING COMBUSTION AIR INTAKE DAMPER & DAMPER OPERATOR WITH ALL ASSOCIATED PNEUMATIC TUBING. REMOVE EXISTING INTAKE HOOD ON ROOF. CAP EXISTING OPENING WITH INSULATED PANEL. PATCH TO MATCH ADJACENT ROOF MATERIAL. 1



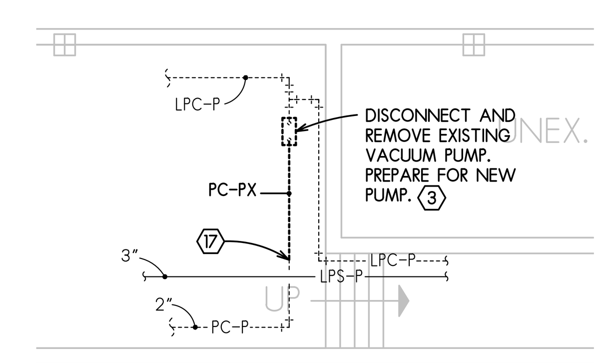
3 BASEMENT FLOOR- FAN ROOM DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



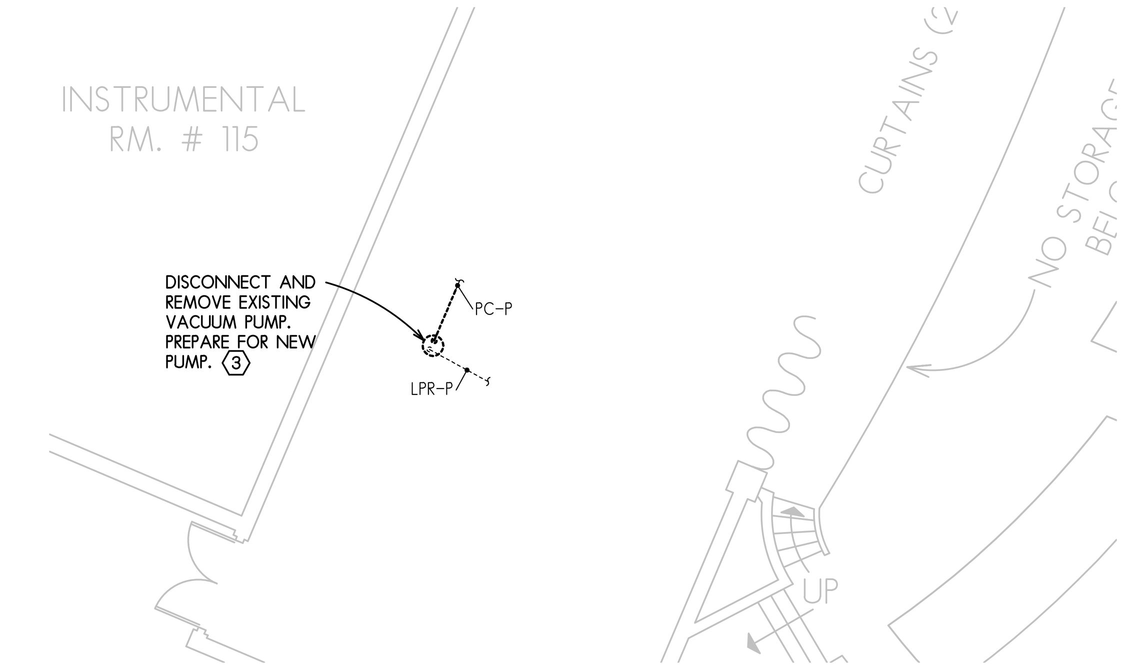
2 BOILER ROOM PIPING DIAGRAM
SCALE: N/A



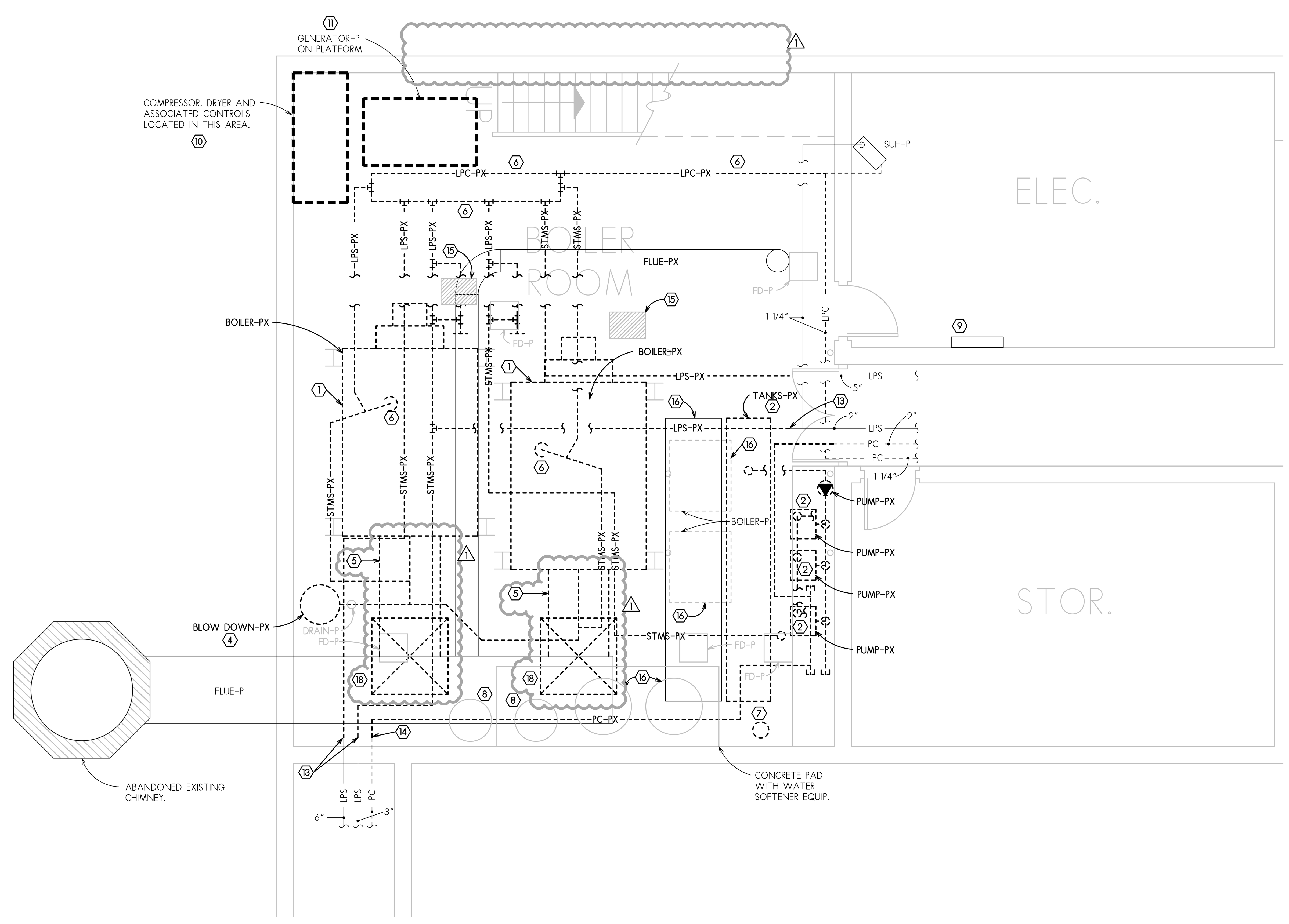
5 FIRST FLOOR - VACUUM/CONDENSATE PUMP AREA #2
SCALE: 1/8" = 1'-0"



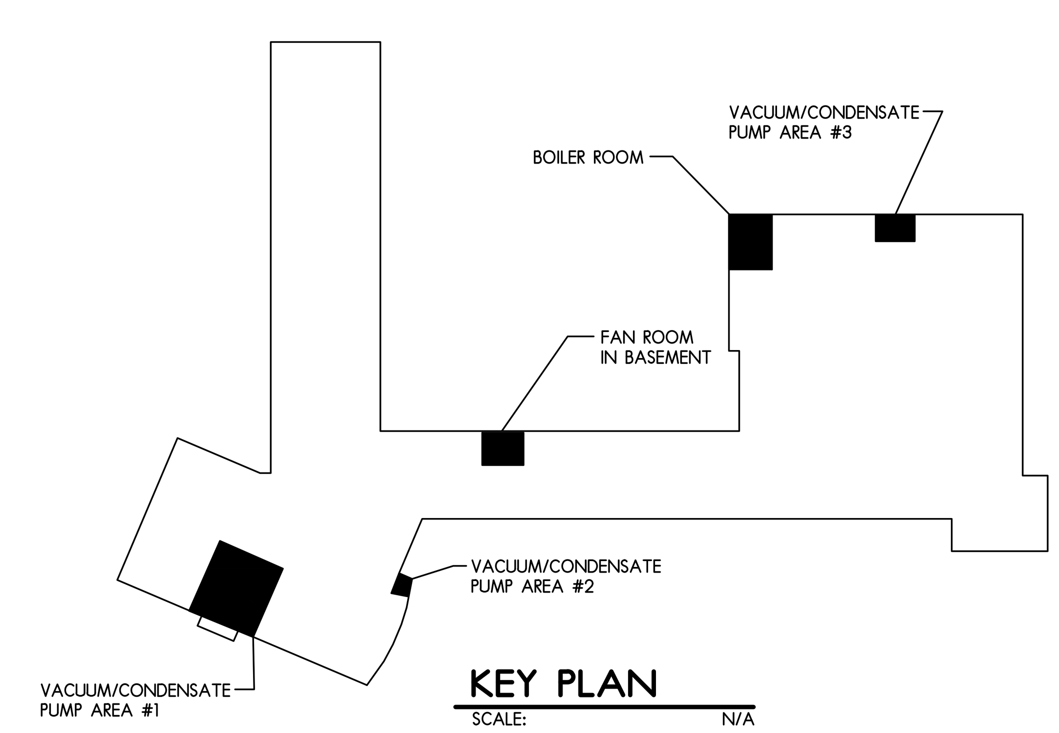
6 BASEMENT FLOOR- VACUUM/CONDENSATE PUMP AREA #3
SCALE: 1/8" = 1'-0"



4 FIRST FLOOR - VACUUM/CONDENSATE PUMP AREA #1
SCALE: 1/8" = 1'-0"



1 BOILER ROOM MECHANICAL DEMOLITION
SCALE: 1/4" = 1'-0"



KEY PLAN
SCALE: N/A

North

MECHANICAL DEMOLTION PLANS

SCALE: AS NOTED

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HVAC, LIGHTING AND RAMP RENOVATIONS - ROCKFORD IL
ROCKFORD PUBLIC SCHOOLS 205

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2 ADDENDUM 2	03-16-17

DRAWN	APPROVED
PM	RAS

DATE: 11-13-2015
PROJECT NUMBER 25109
SHEET NUMBER MD1.1

GENERAL INSULATION NOTES

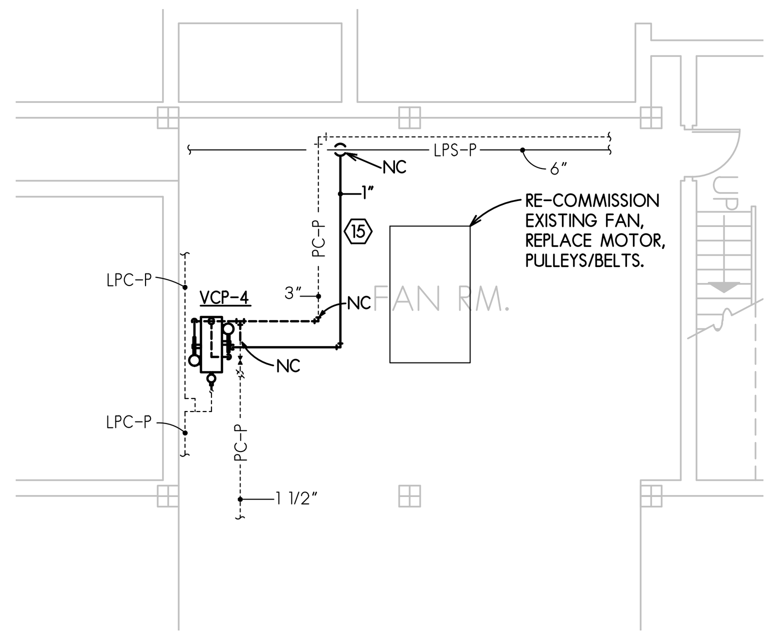
IN ADDITION TO INSULATION REQUIREMENT FOR ALL NEW PIPING AND EQUIPMENT.
REMOVE ALL EXISTING INSULATION FROM ALL EXISTING PLUMBING & HVAC PIPING AND EQUIPMENT IN BOILER ROOM AFTER THE COMPLETION OF ASBESTOS ABATEMENT DONE BY THE DISTRICT.
REPLACE INSULATION ON ALL EXISTING DOMESTIC COLD WATER, HOT WATER , HOT WATER RE-CIRCULATION PIPING, HVAC STEAM AND HEATING WATER PIPING, STORAGE TANKS, ETC... REFER TO SPECIFICATION FOR INSULATION MATERIAL AND THICKNESS.
FIELD VERIFY ALL EXISTING EQUIPMENT & PIPING QUANTITIES.

NATURAL GAS PIPING NOTE

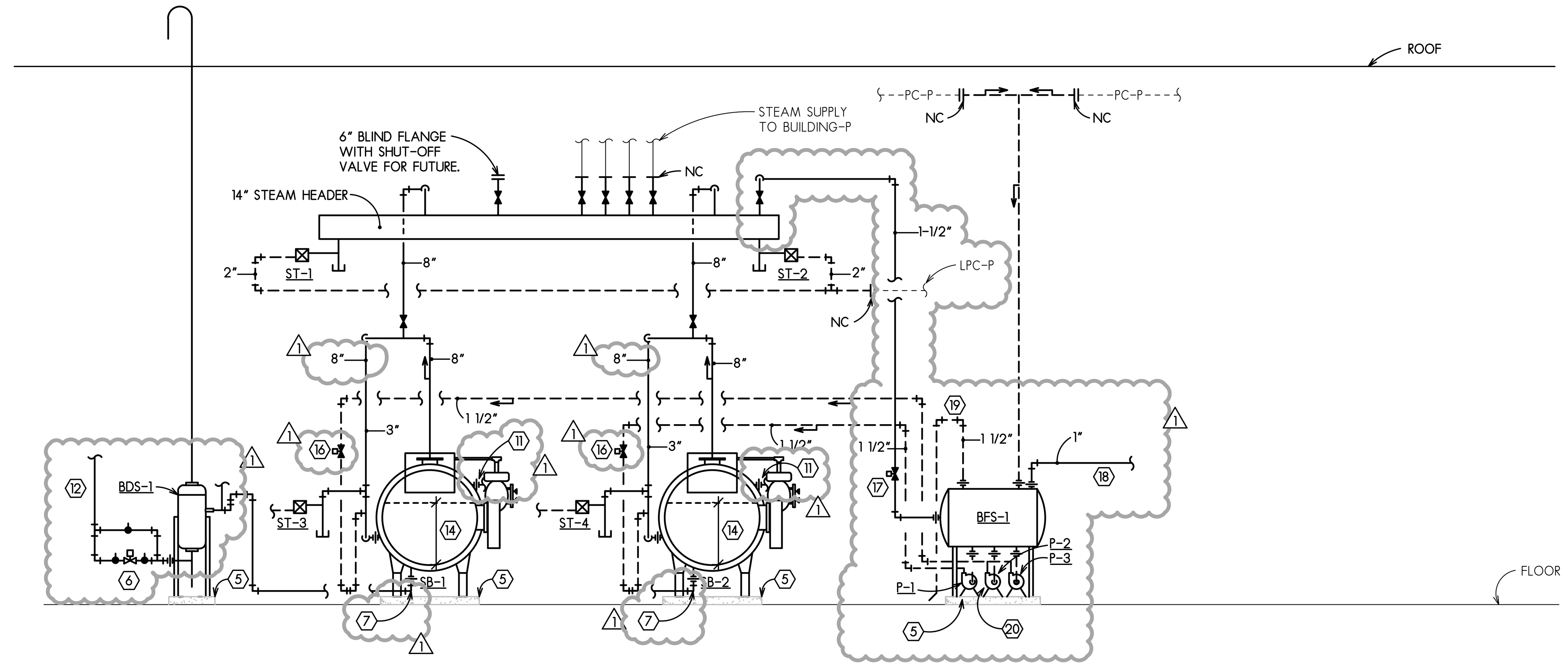
CONTRACTOR SHALL DISCONNECT EXISTING GAS SERVICE TO EXISTING STEAM BOILERS TO BE REMOVED.
MODIFY & EXTEND PIPING FROM CURRENT LOCATION TO CONNECT WITH NEW BOILERS GAS CONNECTION. PROVIDE DIRT LEG, SHUTOFF VALVES, VENT PIPING AS REQUIRED.
FIELD VERIFY ALL EXISTING CONDITIONS.

KEYED NOTES

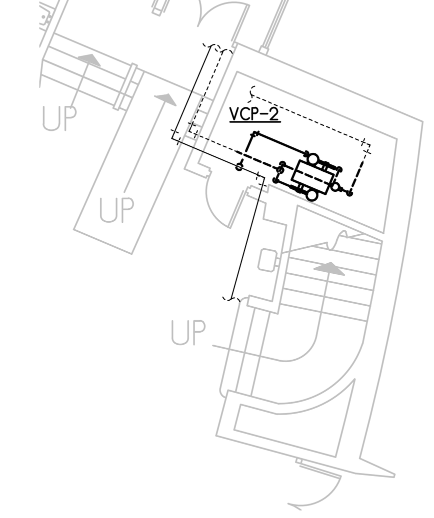
1. OUTLINE OF SERVICE CLEARANCE, TUBE PULL OUT, AND DOOR SWING SHOWN FOR REFERENCE. COORDINATE EXACT BOILER LOCATION TO ALLOW FOR PROPER SERVICE CLEARANCE PER MFR RECOMMENDATION.
2. CUT NEW OPENING IN EXISTING WALL TO INSTALL NEW LOUVER & MOD AS SHOWN. LOUVER SHALL BE RUSKIN ELF-375DX OR APPROVED EQUAL. INTERLOCK MOD OPERATION WITH PRE-1.
3. 6" BLIND FLANGE AND SHUT OFF GATE VALVE FOR FUTURE CONNECTION.
4. 14" STEAM SUPPLY HEADER.
5. 4" THICK CONCRETE HOUSE KEEPING PAD.
6. TEMPERATURE REGULATOR AND SOLENOID VALVES.
7. TERMINATE SLOW & QUICK OPEN BOTTOM BLOW DOWN PIPING AT BLOW DOWN SEPARATOR.
8. 48"x48" COMBUSTION AIR DUCT DROP TO 24" ABOVE BOILER.
9. 12" BOILER FLUE STACK THROUGH ROOF.
10. INTERLOCK MOTOR OPERATED DAMPER WITH BOILER OPERATION.
11. TERMINATE AUTOMATIC SURFACE BLOW DOWN SYSTEM (PROVIDED BY BOILER MFR.) AT BLOW DOWN SEPARATOR.
12. EXTEND AND CONNECT TO NEAREST COLD WATER WITH RPZ.
13. BOILER EMERGENCY SHUT OFF SWITCH LOCATED AND WIRED PER AHJ REQUIREMENT.
14. BOILER WATER LEVEL (VERIFY WITH BOILER MFR)
15. 1" EQUALIZING LINE FROM BOILER MAIN SUPPLY HEADER TO VCP WITH CHECK VALVE. REFER TO MFR. SPECIFIC INSTALLATION INSTRUCTIONS AND PIPING DIAGRAM.
16. BOILER FEED WATER CONTROL VALVE PROVIDED BY THE FEED WATER SYSTEM SUPPLIER AND INTEGRATED WITH FEED WATER SYSTEM CONTROL PANEL. FIELD LOCATE EXACT LOCATION.
17. 1 1/2" STEAM SUPPLY TO SPARGE TUBE HEATER.
18. 1" SOFT MAKE UP WATER WITH AIR GAP. EXTEND AND CONNECT TO HVAC SOFT MAKE UP WATER. PROVIDE RPZ AS REQUIRED. FIELD VERIFY EXACT CONDITIONS.
19. STEAM FLASH RELIEF PIPE UP 10' ABOVE FEED TANK AND DISCHARGE AS SHOWN.
20. PIPE MIDDLE FEED PUMP AS A BACK-UP TO ANY OF THE OTHER TWO PUMPS. PROVIDE & INSTALL ALL REQUIRED VALVES, FITTINGS & CONTROL.



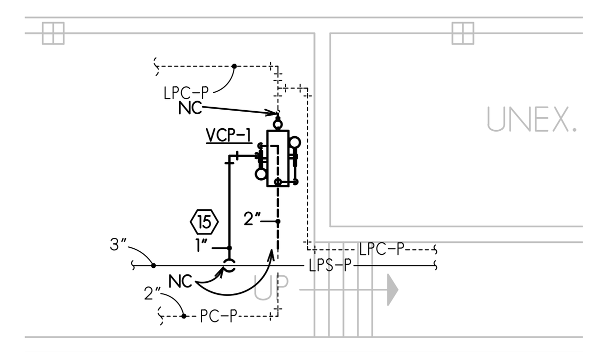
3 BASEMENT - FAN ROOM NEW WORK PLAN
SCALE: 1/8" = 1'-0"



2 BOILER ROOM PIPING DIAGRAM
SCALE: N/A

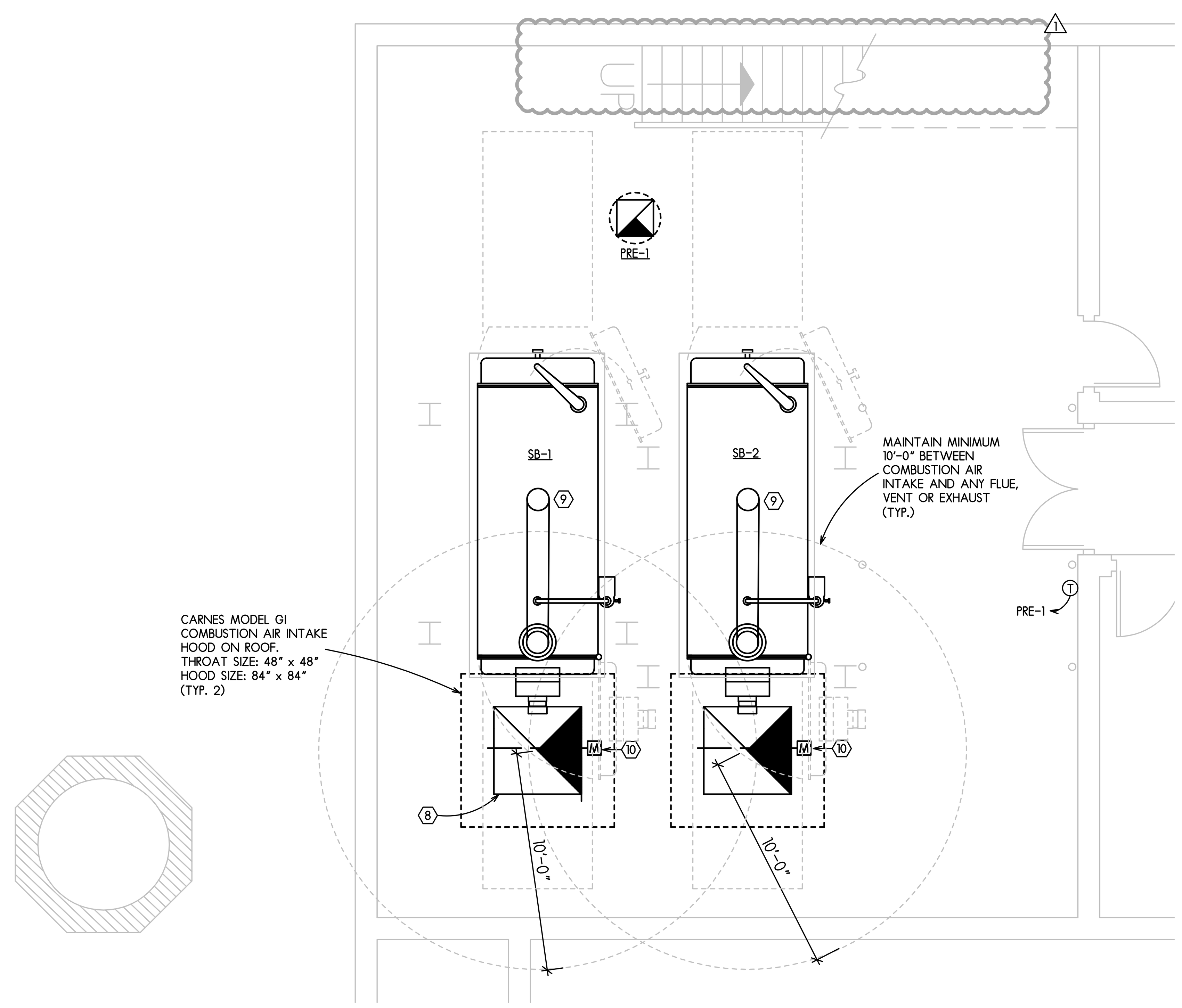


5 FIRST FLOOR - VACUUM/CONDENSATE PUMP AREA #2
SCALE: 1/8" = 1'-0"

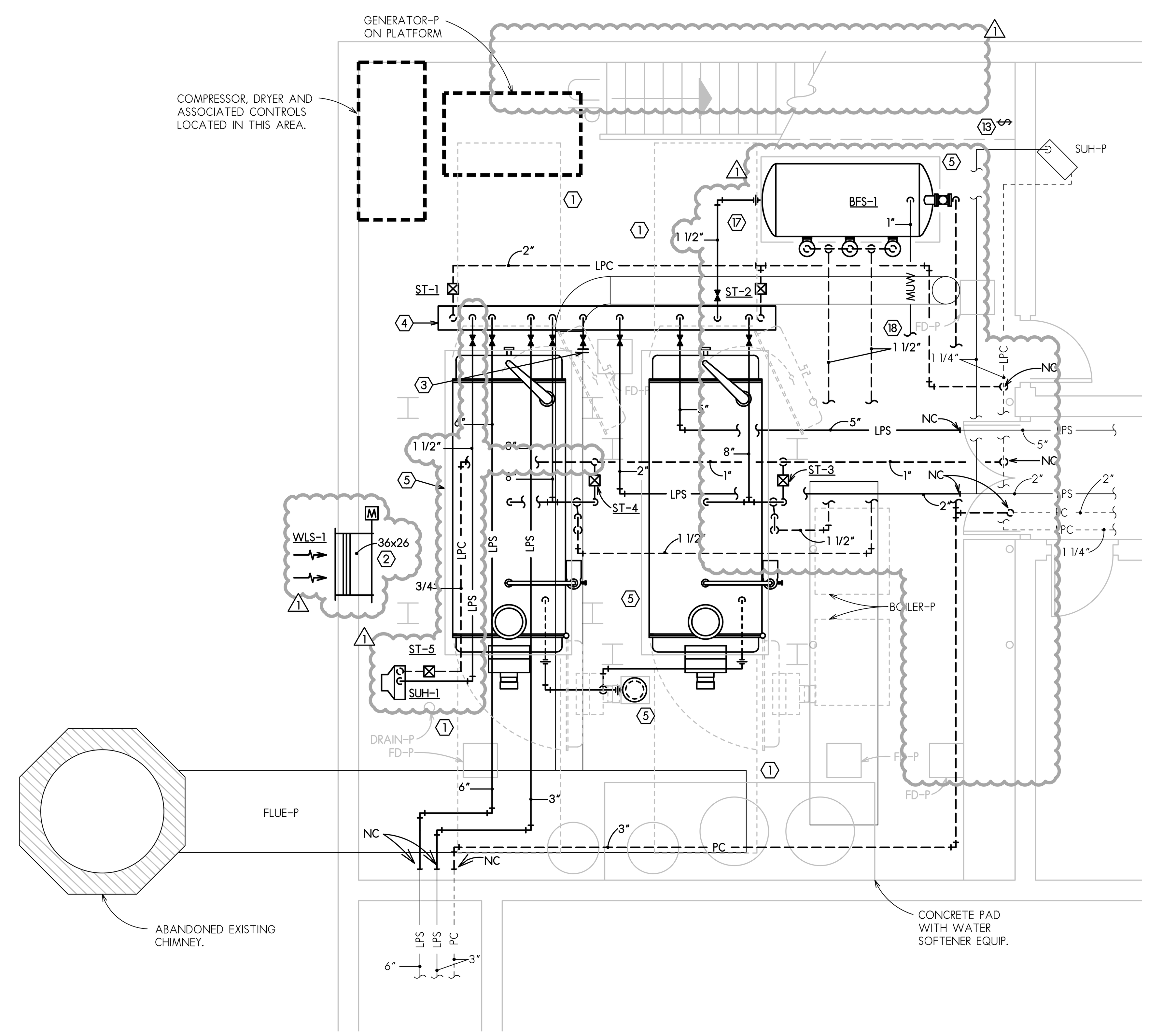


6 BASEMENT - VACUUM/CONDENSATE PUMP AREA #3
SCALE: 1/8" = 1'-0"

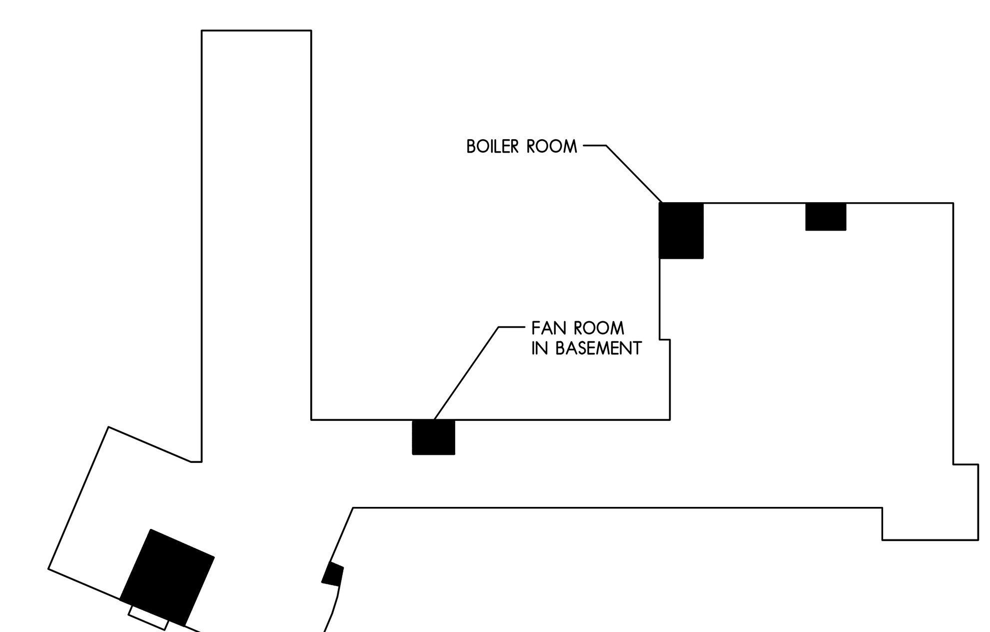
4 FIRST FLOOR - VACUUM/CONDENSATE PUMP AREA #1
SCALE: 1/8" = 1'-0"



7 BOILER ROOM HVAC NEW WORK
SCALE: 1/4" = 1'-0"



1 BOILER ROOM PIPING NEW WORK
SCALE: 1/4" = 1'-0"



KEY PLAN
SCALE: N/A

MECHANICAL NEW WORK PLANS

SCALE: 1/4" = 1'-0"

North

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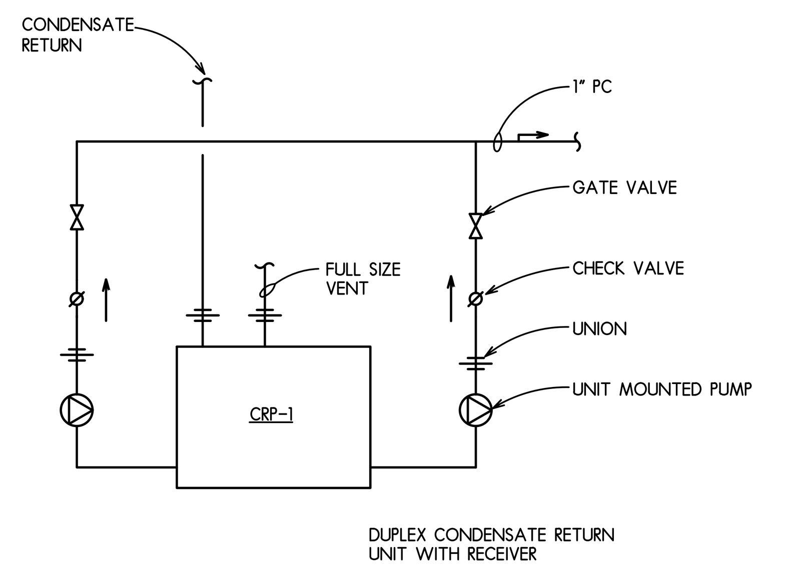
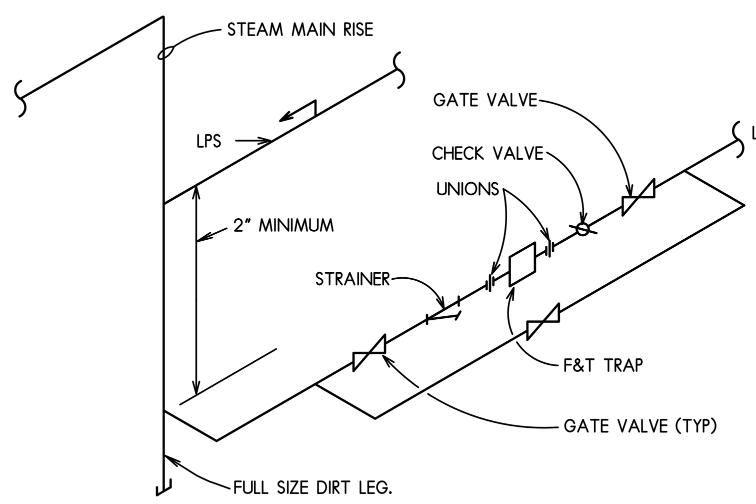
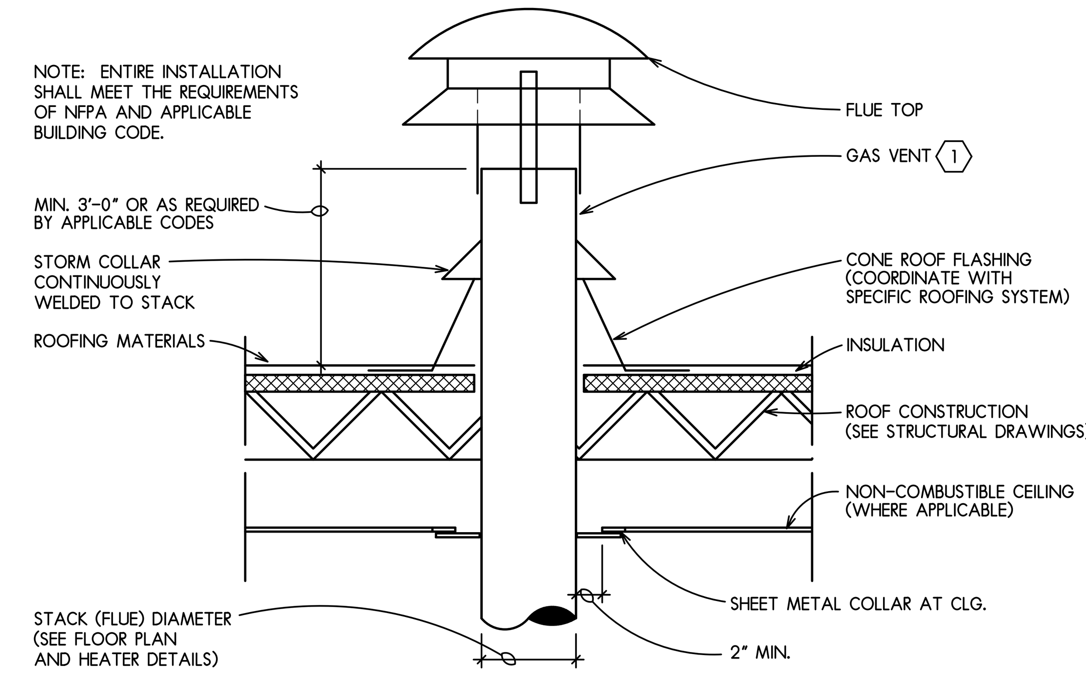


1 CONDENSATE RECEIVER PIPING DETAIL
NTS

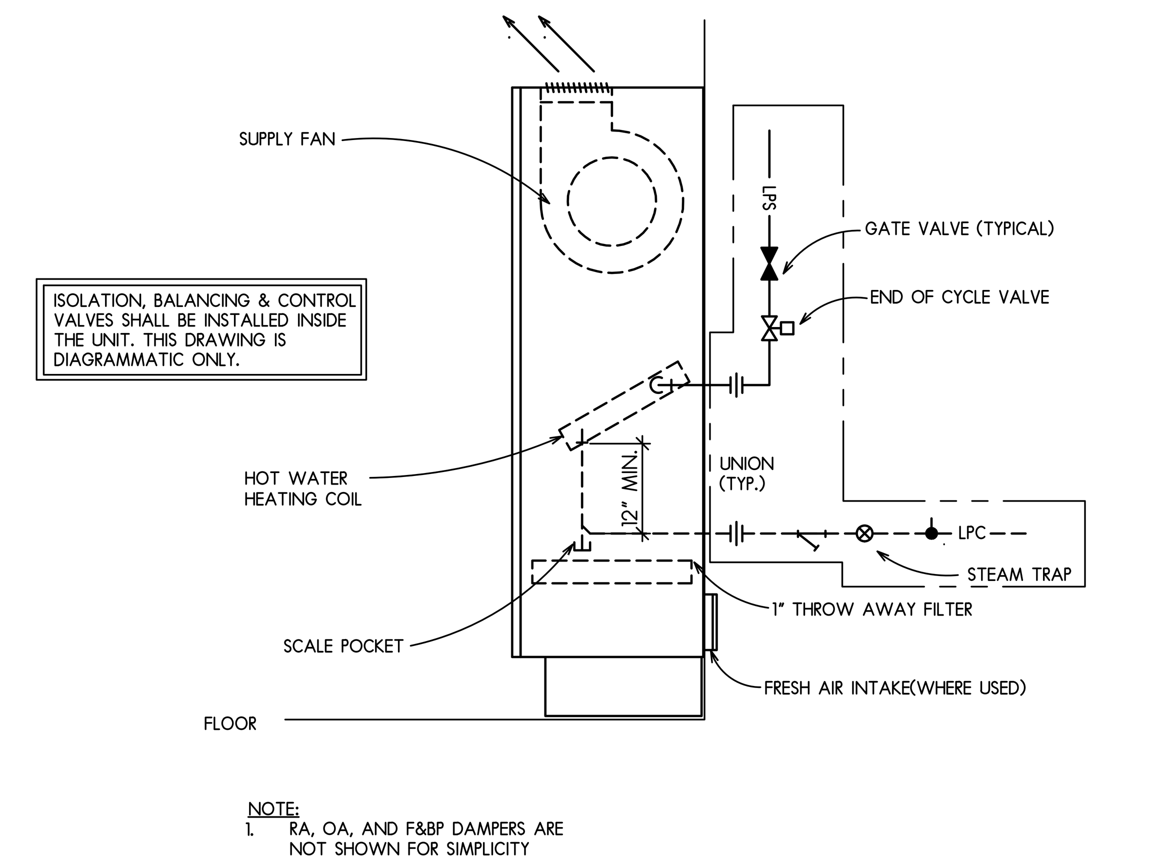


STEAM MAIN RISE
OR END OF MAIN
2 DRIP & TRAP DETAIL
NTS



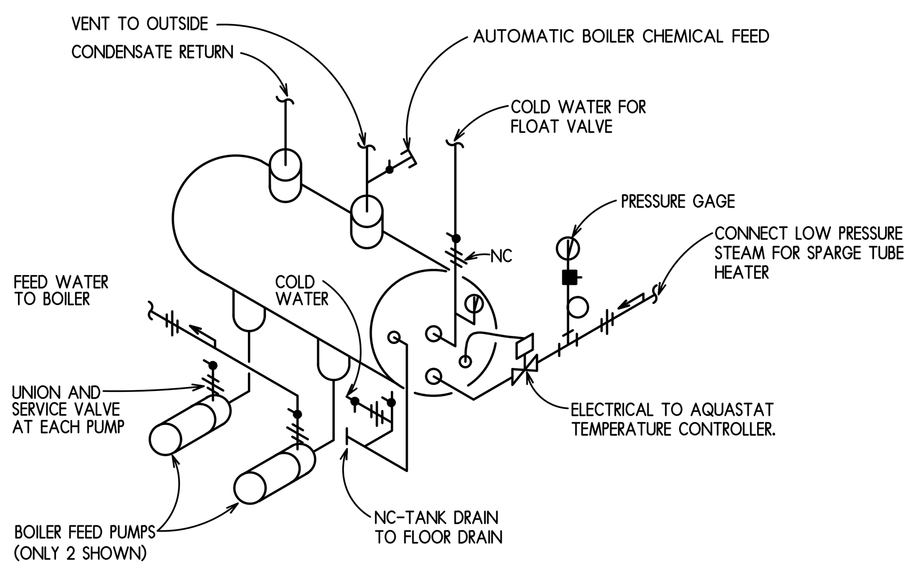
NOTATIONS:
1 TYPE B, DOUBLE WALL, AGA AND UL LISTED, GAS VENT. ACCEPTABLE MANUFACTURERS: DURA-VENT, SELKIRK, METALBESTOS, VAN PACKER. METALBESTOS MODEL QC.
2 SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

3 FLUE THRU ROOF
NO SCALE

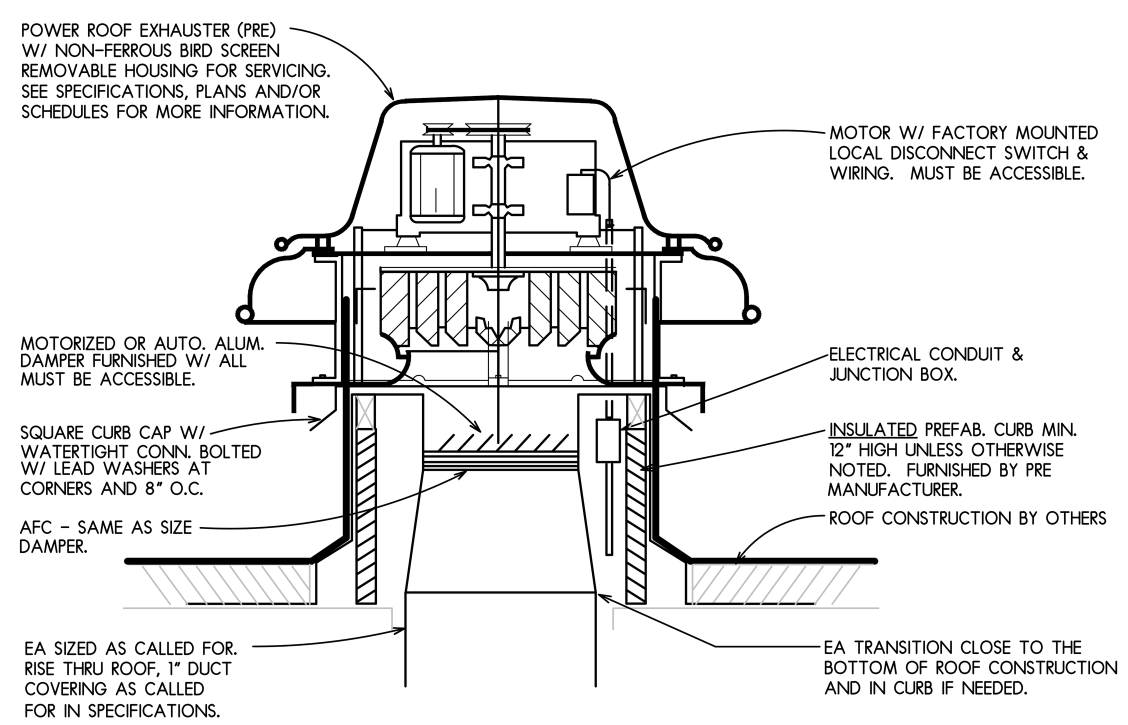


NOTE:
1. RA, OA, AND F&BP DAMPERS ARE NOT SHOWN FOR SIMPLICITY

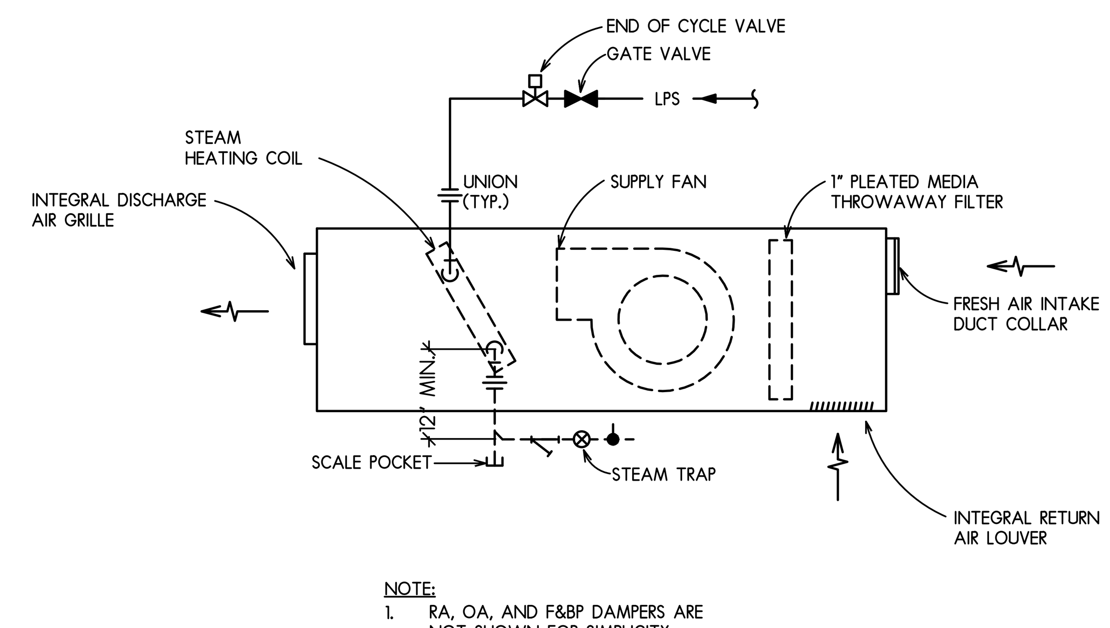
4 VERTICAL CLASSROOM UNIT VENTILATOR DETAIL
NO SCALE



5 BOILER FEED TANK AND PUMPS
NTS

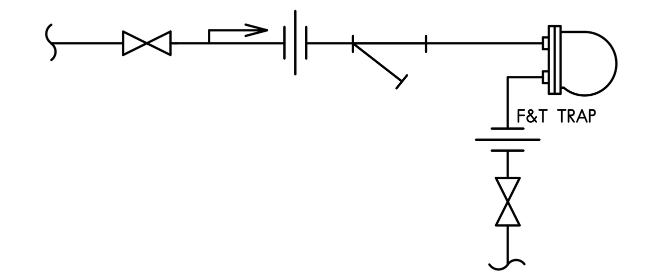


6 POWER ROOF EXHAUSTER (PRE) DETAIL
NTS

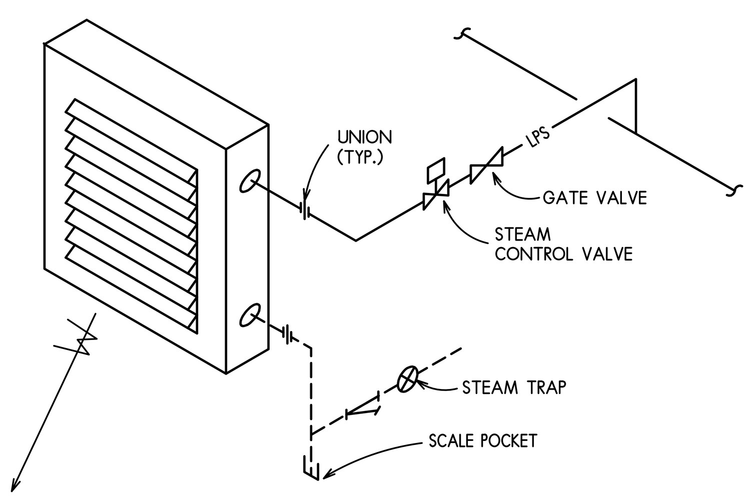


NOTE:
1. RA, OA, AND F&BP DAMPERS ARE NOT SHOWN FOR SIMPLICITY

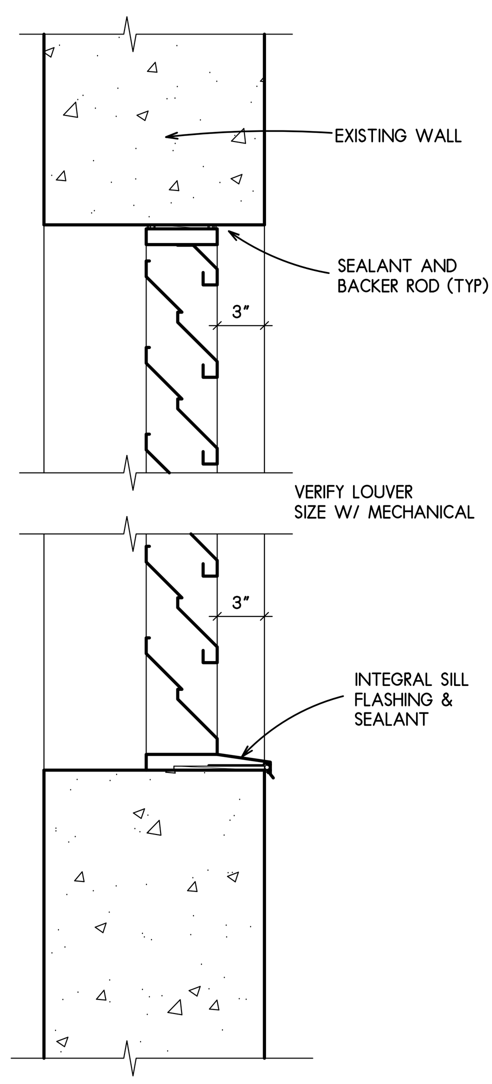
7 2 PIPE HORIZONTAL CLASSROOM UV DETAIL
NO SCALE



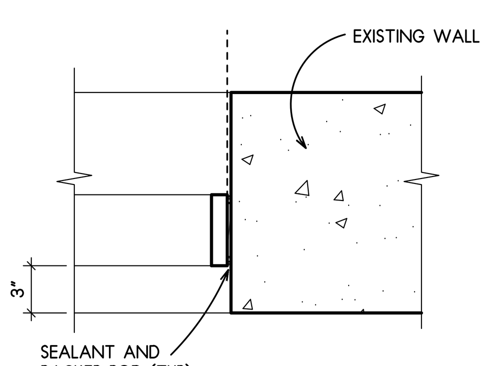
8 STEAM TRAP CONNECTION DETAIL
NTS



9 HOT WATER UNIT HEATER - PIPING DIAGRAM
NTS



10 LOUVER DETAIL
SCALE: 1½" = 1'-0"



11 LOUVER JAMB
SCALE: 1½" = 1'-0"

1

MECHANICAL DETAILS

SCALE: AS NOTED

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BIDDING	03-30-17
ADDENDUM 2	05-16-17

DRAWN: PM
APPROVED: RAS

DATE: 11-13-2015
PROJECT NUMBER 25109
SHEET NUMBER M2.2

SUSPENDED UNIT HEATER (SUH) SCHEDULE

PLAN NO.	SUH-1
SERVICE	BOILER ROOM
MANUFACTURER	TRANE
MODEL	UHSB-108
MBH	108
LBS/HR (STEAM)	110
PRESSURE (PSIG)	5.0
EAT (°F)	60
CFM	1,800
HP	1/12
VOLTS/ PH	115/1/60
NOTES	-

NOTES:
1. PROVIDE WITH REMOTE THERMOSTAT & SUMMER/WINTER SWITCH.

STEAM TRAP SCHEDULE

PLAN NO.	ST-1 & 2	ST-3	ST-4	ST-5	
SERVICE	S. HEADER	SB-1	SB-2	SUH-1	
MANUFACTURER	SPIRAX SARCO	SPIRAX SARCO	SPIRAX SARCO	SPIRAX SARCO	
MODEL	FT-15	FT-15	FT-15	FT-15	
TYPE	F&T	F&T	F&T	F&T	
CONNECTION SIZE	1-1/2"	1"	1"	3/4"	
MAX PRESSURE PSI	15	15	15	15	
CAPACITY (LBS/HR)	910	250	250	175	
NOTES	-	-	-	-	

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
1. CAPACITY IS MEASURED IN # / HOUR AT 1/2 PSI PRESSURE DIFFERENTIAL.

POWER ROOF EXHAUSTER (PRE) SCHEDULE

PLAN NO.	PRE-1
SERVICE	BOILER ROOM SUMMER VENTILATION
MANUFACTURER	COOK
MODEL	135C3B
CFM	1,275
ESP (IN WC)	0.5
HP/BHP	0.25/0.21
MAX SONES	8.4
VOLTS/PH	120/1
WEIGHT (LBS)	120
NOTES	1, 2, 3, 4

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
1. PROVIDE MANUFACTURER'S INSULATED PREFAB ROOF CURB. MIN. 14" HIGH
2. CONTROL WITH T-STAT.
3. PROVIDE FACTORY WIRED DISCONNECT SWITCH.
4. PROVIDE BACKDRAFT DAMPER.

BOILER FEED WATER SYSTEM (BFS) SCHEDULE

GENERAL	PLAN NO.	BFS-1
	LOCATION	BOILER RM
	SERVICE	BUILDING
	MANUFACTURER	B&G
	MODEL	0.95-CMHD-2.0-C35
	TYPE	TRIPLEX
	CAPACITY (EDR)	28,000
RECIEVER	MATERIAL	STEEL
	VOL (GAL)	492
	INLET SIZE (IN)	4
PUMP	QUANTITY	3
	MOUNTING	VER
	GPM	15
	DISCH. PRESS. (PSI)	20
	HP/BHP	1/3
	VOLTS/PHASE	208/3
	RPM	3,500
NOTES		1, 2, 3, 4, 5

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
1. PROVIDE WITH 3 VALVE BY-PASS AROUND MAKEUP VALVE.
2. PROVIDE WITH AIR GAP FITTING ON MAKEUP ASSEMBLY.
3. PROVIDE WITH LOW WATER CUTOFF, GUAGE GLASS, DIAL THERMOMETER & DISCHARGE PRESSURE GAUGE.
4. PROVIDE INLET BASKET STRAINER AND BUTTERFLY SUCTION VALVE.
5. PROVIDE WITH CONTROL PANEL-SEE SPECS FOR REQUIREMENT.

CONDENSATE VACUUM PUMP (VCP) SCHEDULE

GENERAL	PLAN NO.	VCP-1	VCP-2,3	VCP-4
	LOCATION	BOILER RM	BOILER RM	BOILER RM
	SERVICE	BUILDING	BUILDING	BUILDING
	MANUFACTURER	B&G	B&G	B&G
	MODEL	10VLR1-30-35	5VLR1-30-35	20VLR1-30-35
	TYPE	DUPLEX	DUPLEX	DUPLEX
	CAPACITY (EDR)	30,000	10,000	65,000
RECIEVER	MATERIAL	CAST IRON	CAST IRON	CAST IRON
	VOL (GAL)	37	23	43
	INLET SIZE (IN)	2	2	2 1/2
PUMP	QUANTITY	2	2	2
	MOUNTING	VER	VER	VER
	GPM	15	7.5	30
	DISCH. PRESS. (PSI)	30	30	30
	HP/BHP	1.5	1.0	2.0
	VOLTS/PHASE	208/3	208/3	208/3
	RPM	3500	3500	3500
VACUUM	CFM	4	2.5	6.8
	Hg (IN)	5.5	5.5	5.5
NOTES		1, 2, 3	1, 2, 3	1, 2, 3

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
1. PROVIDE WITH WATER LEVEL GAUGE & COMPOUND GAUGE.
2. PROVIDE WITH INLET STRAINER, SOLENOID VALVE, DISCHARGE VALVE, VACUUM. SWITCH, AND ANGLE THERMOMETER.
3. PROVIDE WITH CONTROL PANEL-SEE SPECS FOR REQUIREMET.

STEAM BOILER (SB) SCHEDULE

PLAN NO.	SB-1	SB-2	
LOCATION	BOILER PLANT	BOILER PLANT	
MANUFACTURER	CLEAVER BROOKS	CLEAVER BROOKS	
MODEL	CBLE-150	CBLE-150	
TYPE	FIRE TUBE	FIRE TUBE	
OPERATING PRESSURE (PSI)	10	10	
FIRING OUTPUT (MBH)	5,021	5,021	
STEAM CAP. (LBS/HR)	5,175	5,175	
BOILER HP	150	150	
FUEL	N. GAS	N. GAS	
FIRING STAGES	FULL MOD.	FULL MOD.	
ELECTRICAL	208/3/60	208/3/60	
HP	10	10	
NOTES	1, 2, 3	1, 2, 3	

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
1. PROVIDE STANDARD TRIM AS SPECIFIED.
2. PROVIDE FORCED DRAFT BURNER AND 5 PSI GAS TRAIN.
3. MOUNT ON 4" CEB.

BLOWDOWN SEPARATOR (BDS) SCHEDULE

PLAN NO.		BDS-1
LOCATION		BOILER ROOM
SERVICE		SB-1, SB-2
TANK DATA	MANUFACTURER	CB
	MODEL	A20B
	DIAMETER (IN)	14
	HEIGHT (IN)	22
	INLET SIZE (IN)	1
	VENT SIZE (IN)	2 1/2
	DRAIN SIZE (IN)	2
	OPERATING WEIGHT (LBS)	-
AFTER COOLER	MODEL	16DS
	TYPE	AUTO
	DRAIN SIZE	2
	WATER INLET (IN)	1/2
NOTES		1

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
1. PROVIDE WITH FLOOR STAND, TEMP. REGULATOR VALVE & SOLENIOD VALVE.

UNIT HEATER (UH) SCHEDULE

		UH-1 THRU UH-3	UH-4	UH-5	UH-6 THRU UH-7	UH-8	UH-9	UH-10
PLAN NO.		UH-1 THRU UH-3	UH-4	UH-5	UH-6 THRU UH-7	UH-8	UH-9	UH-10
SERVICE		HALLWAY	HALLWAY	HALLWAY	HALLWAY	HALLWAY	HALLWAY	HALLWAY
MANUFACTURER		TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
MODEL		FFHB-12	FFHB12	FFHB08	FFHB12	FFHB08	FFHB12	FFHB08
CFM		777	777	550	777	550	777	550
ARRANGEMENT		VERTICAL RECESSED	VERTICAL RECESSED	VERTICAL RECESSED	VERTICAL RECESSED	VERTICAL RECESSED	VERTICAL RECESSED	VERTICAL RECESSED
STEAM	EAT/LAT (°F)	60.0/135.5	60.0/135.5	60.0/132.9	60.0/135.5	60.0/132.9	60.0/135.5	60.0/132.9
	MBH	63.7	63.7	43.5	63.7	43.5	63.7	43.5
	PRESSURE	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG
	CONDENSATE	66.2 LB./HR.	66.2 LB./HR.	45.2 LB./HR.	66.2 LB./HR.	45.2 LB./HR.	66.2 LB./HR.	45.2
MOTOR	VOLTS/PH	120/1	120/1	120/1	120/1	120/1	120/1	120/1
	WATTS	160	160.0	122.0	160.0	122.0	160.0	122.0
	SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
	AMPS	6.1	6.1	3.9	6.1	3.9	6.1	3.9
NOTES:		-	-	-	-	-	-	-

		UH-11	UH-12	UH-13	UH-14 THRU UH-16	UH-17	UH-18	UH-19
PLAN NO.		UH-11	UH-12	UH-13	UH-14 THRU UH-16	UH-17	UH-18	UH-19
SERVICE		HALLWAY	HALLWAY	NOT USED	HALLWAY	HALLWAY	HALLWAY	HALLWAY
MANUFACTURER		TRANE	TRANE		TRANE	TRANE	TRANE	TRANE
MODEL		FFHB08	FFHB08		FFHB12	FFHB08	FFHB06	FFHB12
CFM		550	550		777	550	428	777
ARRANGEMENT		VERTICAL RECESSED	VERTICAL RECESSED		VERTICAL RECESSED	VERTICAL RECESSED	VERTICAL RECESSED	VERTICAL RECESSED
STEAM	EAT/LAT (°F)	60.0/132.9	60.0/132.9		60.0/135.5	60.0/132.9	60.0/133.1	60.0/135.5
	MBH	43.5	43.5		63.7	43.5	33.9	63.7
	PRESSURE	5.0 PSIG	5.0 PSIG		5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG
	CONDENSATE	45.2 LB./HR.	45.2		66.2 LB./HR.	45.2 LB./HR.	35.3 LB./HR.	66.2 LB./HR.
MOTOR	VOLTS/PH	120/1	120/1		120/1	120/1	120/1	120/1
	WATTS	122.0	122.0		160.0	122.0	79.0	160.0
	SPEED	HIGH	HIGH		HIGH	HIGH	HIGH	HIGH
	AMPS	3.9	3.9		6.1	3.9	3.9	6.1
NOTES:		-	-		-	-	-	-

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
1. PROVIDE WITH 40 CFM O.A.
2. FACE & BYPASS CONTROL.
3. 3 ROW COIL FOR BOTH HEATING & COOLING FOR A 2 PIPE SYSTEM.
4. F.A.I. DUCT THROUGH THE WALL - 24" x 3" W/ INTAKE LOUVER.

CLASSROOM UNIT VENTILATOR (UV) SCHEDULE

			UV-1 THRU UV-3,	UV-4	UV-5 & UV-6	UV-7 & UV-8	UV-9 & UV-10	UV-11 THRU UV-13	UV-14 & UV-15	UV-16 & UV-17
PLAN NO.			UV-1 THRU UV-3,	UV-4	UV-5 & UV-6	UV-7 & UV-8	UV-9 & UV-10	UV-11 THRU UV-13	UV-14 & UV-15	UV-16 & UV-17
SERVICE			CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS
MANUFACTURER			TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
MODEL			HUVC1501	HUVC1501	HUVC1501	HUVC1501	HUVC1501	HUVC1501	HUVC1501	HUVC1501
CFM			1409	1409	1409	1409	1409	1409	1409	1409
MIN. OA (CFM)			220	400	300	400	300	400	220	400
HEATING	AIR(°F)	EAT (°F)	57.5	47.3	53.0	47.3	53.0	47.3	57.5	47.3
		LAT (°F)	109.0	109.0	109.0	123.3	129.0	123.3	125.0	125.0
	STEAM	PRESSURE	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG
		COND.	120.4 LB./HR.	120.4 LB./HR.	103.9 LB./HR.	120.4 LB./HR.	103.9 LB./HR.	120.4 LB./HR.	120.4 LB./HR.	120.4 LB./HR.
		MBH	115.7	115.7	115.7	115.7	99.9	115.7	99.9	99.9
MOTOR		HP	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
		VOLTAGE/PH	120/1	120/1	120/1	120/1	120/1	120/1	120/1	120/1
		RPM	1050	1050	1050	1050	1050	1050	1050	1050
NOTES:			1	1	1	1	1	1	1	1

			UV-18	UV-19	UV-20 THRU UV-22	UV-23 THRU UV-25	UV-26 THRU UV-31	UV-32 THRU UV-34	UV-35 & UV-36	UV-37 THRU UV-40	UV-41 & UV-42
PLAN NO.			UV-18	UV-19	UV-20 THRU UV-22	UV-23 THRU UV-25	UV-26 THRU UV-31	UV-32 THRU UV-34	UV-35 & UV-36	UV-37 THRU UV-40	UV-41 & UV-42
SERVICE			CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CAFETERIA	KITCHEN	CLASSROOMS	LOCKERS	CLASSROOMS
MANUFACTURER			TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
MODEL			VUVE1500	VUVE1250	VUVE1500	VUVE1250	VUVE1500	HUVC1501	VUVE1250	HUVC1501	VUVE1500
CFM			1500	1250	1500	1250	1500	1409	1250	1409	1500
MIN. OA (CFM)			400	350	400	350	780	780	350	1409	350
HEATING	AIR(°F)	EAT (°F)	48.7	47.6	48.7	47.6	30.0	30.0	47.6	-10.0	51.3
		LAT (°F)	112.0	114.0	112.0	114.0	107.3	109.4	114.0	85.6	112.0
	STEAM	PRESSURE	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG	5.0 PSIG
		COND.	120 LB./HR.	102 LB./HR.	120 LB./HR.	102 LB./HR.	127 LB./HR.	120.4 LB./HR.	114.8 LB./HR.	102 LB./HR.	102 LB./HR.
		MBH	117.4	97.5	117.4	97.5	122.4	115.7	97.5	139.2	117.4
MOTOR		HP	0.25	0.25	0.25	0.25	0.25	1.0	1.0	0.25	0.25
		VOLTAGE/PH	120/1	120/1	120/1	120/1	120/1	120/1	120/1	120/1	120/1
		RPM	1116	1116	1116	1116	1116	1050	1050	1116	1116
NOTES:			1	1	1	1	1	1	1	1	1

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
1. PROVIDE WITH DISCHARGE GRILLE, OUTDOOR INTAKE GRILLE WITH HORIZONTAL LOUVERS. FRONT RETURN AIR, FACE & BYPASS DAMPERS FOR ASHRE TYPE 2 CONTROL, STEAM COIL FOR TWO PIPE SYSTEM. BAKED ENAMEL FINISH.

MECHANICAL SCHEDULES

SCALE: N/A

Larson & Darby Group
Architects Engineers Interiors
Rockford Office - 4949 Harrison Ave., Suite 100, P.O.Box 5207 Rockford, IL 61125 Tel (815) 484-0739 Fax (815) 229-9867

FLINN MIDDLE SCHOOL
HVAC, LIGHTING AND RAMP RENOVATIONS - ROCKFORD IL
ROCKFORD PUBLIC SCHOOLS 205

ISSUED FOR:	DATE
OWNER REVIEW	11-13-15
OWNER REVIEW	02-15-16
PROGRESS SET	01-24-17
BIDDING	02-10-17
2 ADDENDUM 2	03-16-17

DRAWN	APPROVED
PM	RAS

DATE: 11-13-2015
PROJECT NUMBER
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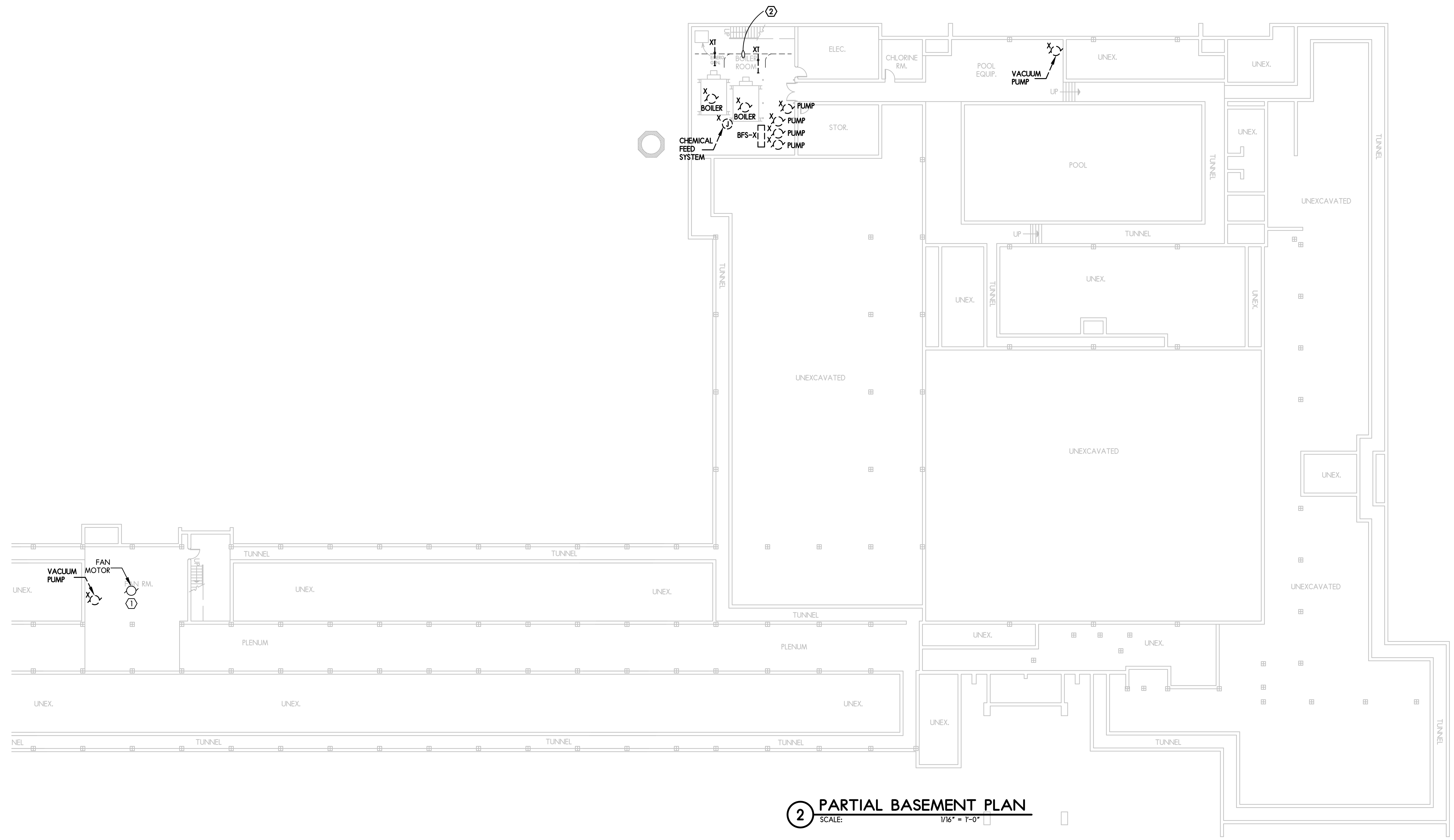
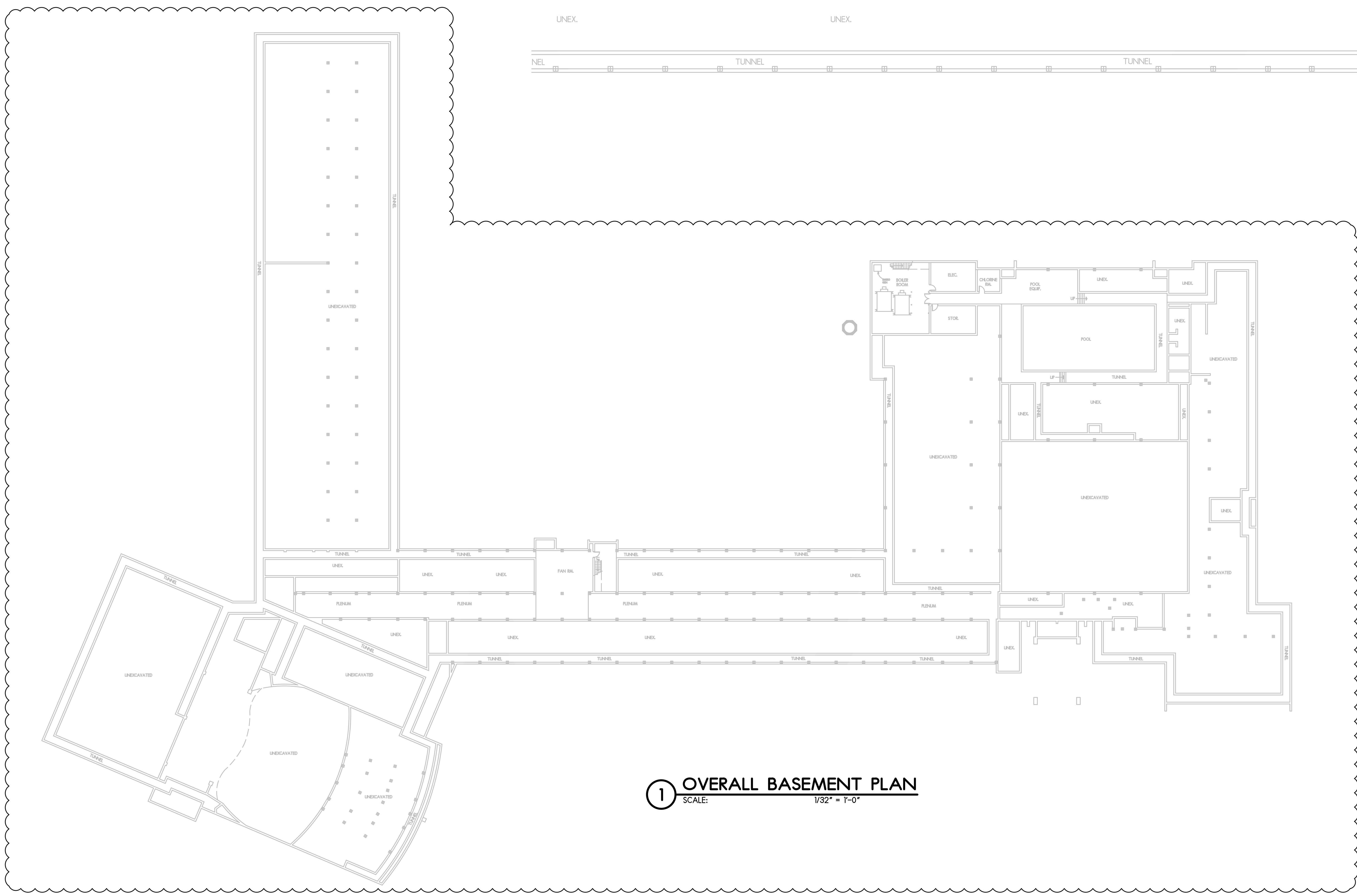
SHEET NUMBER
M3.1



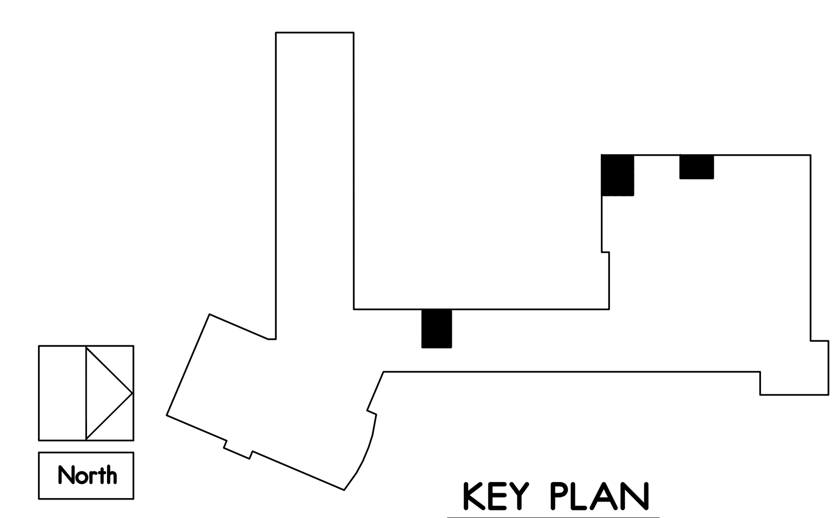
2 PARTIAL BASEMENT PLAN
SCALE: 1/16" = 1'-0"



1 OVERALL BASEMENT PLAN
SCALE: 1/32" = 1'-0"

KEYED NOTES:

1. DISCONNECT EXISTING FAN FOR REFURBISHMENT.
2. ALL EXISTING LIGHT FIXTURES, ELECTRICAL CONDUITS, LOW VOLTAGE WIRING AND CONDUITS, FIRE ALARM DEVICES, ETC. SUPPORTED BY OR ATTACHED TO EXISTING PLASTER CEILING AND OR SERVICE PLATFORM SHALL BE RELOCATED/ RESUPPORTED/ REWIRED AS REQUIRED TO FACILITATE THE REMOVAL OF EXISTING PLATFORM/BOILERS AND THE INSTALLATION OF NEW BOILERS.



KEY PLAN

BASEMENT LEVEL LIGHTING & POWER DEMOLITION PLAN

Larson & Darby Group
Architects Engineers Interiors
Rockford Office - 4949 Harrison Ave., Suite 100, P.O.Box 5207 Rockford, IL. 61125 Tel (815) 484-0739 Fax (815) 229-9867

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ED1.0