

**NEVILLE ENGINEERING GROUP**  
**MEP ENGINEERS**

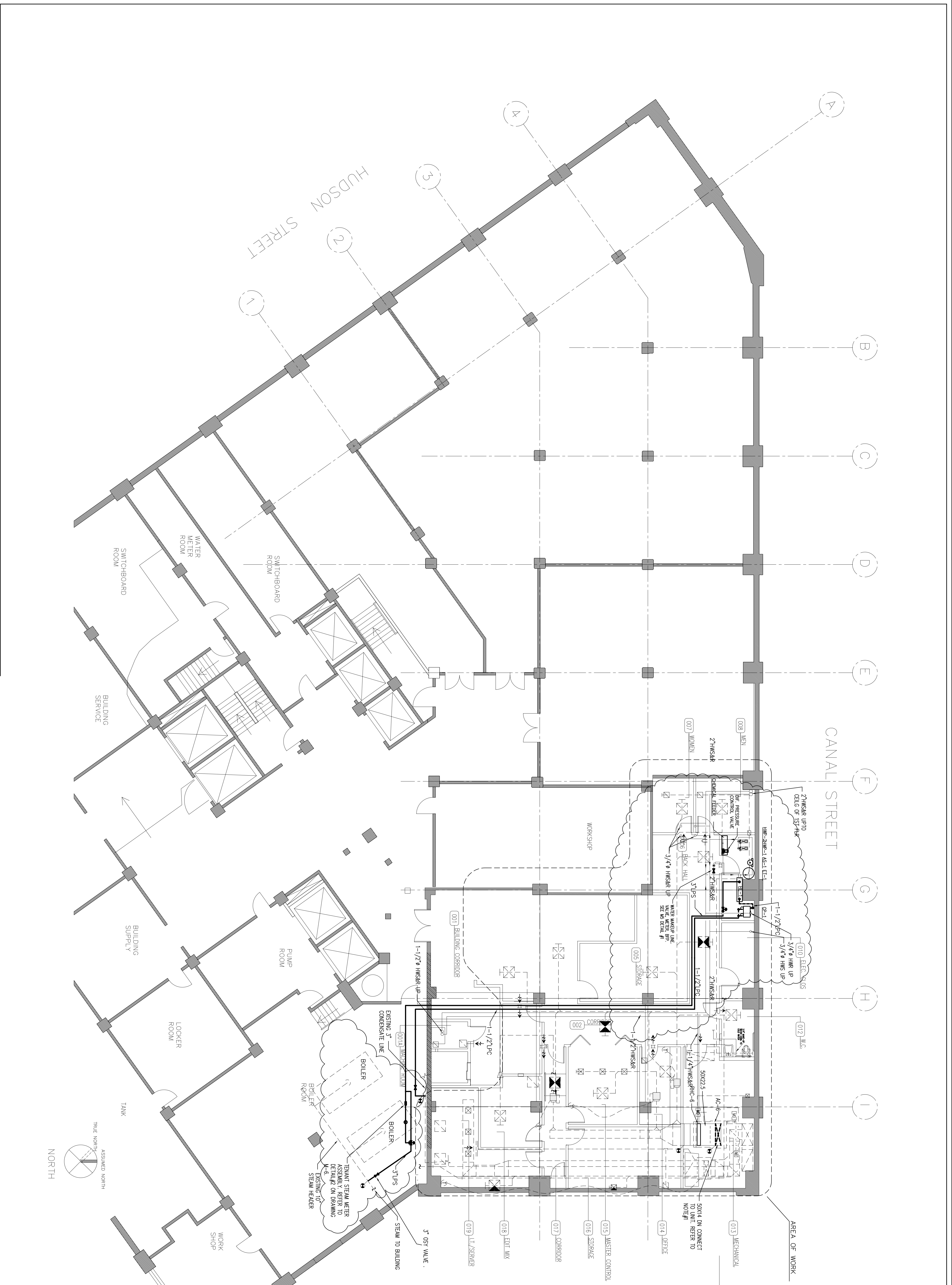
305 SEVENTH AVE., NEW YORK, NY 10001  
 TEL. 212-367-8262, FX: 212 367 8462

No.	Date	Revisions
1	04/10/09	LANDLORD COMMENTS
2	07/21/09	LANDLORD COMMENTS

**Project Name**  
 92nd Street Y  
 Makor/Steinhardt  
 Center  
 200 Hudson Street  
 New York, NY 10013

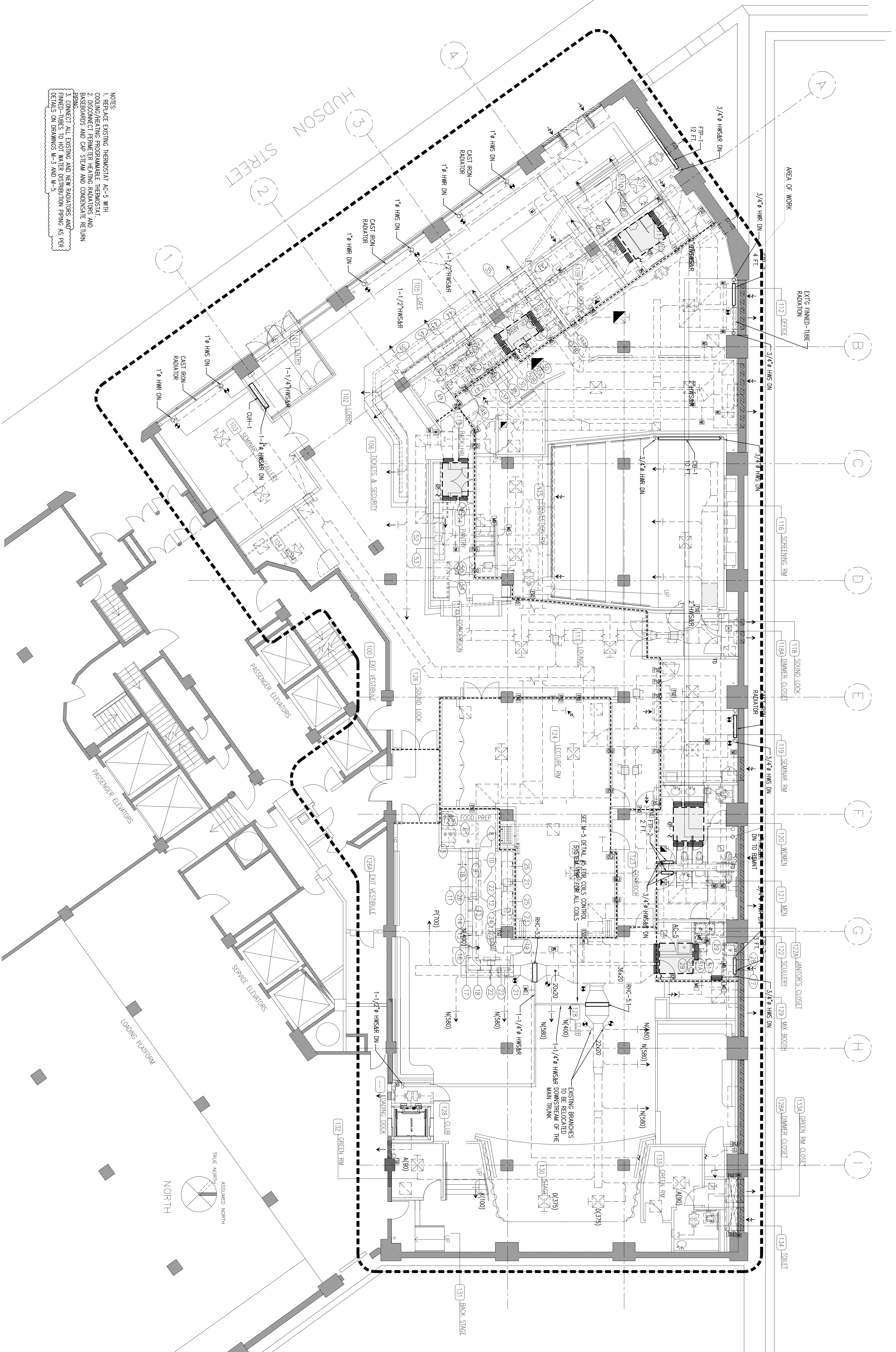
**Drawing Name**  
 HEATING SYSTEM  
 BASEMENT PLAN

<b>Drawing No.</b>	<b>M-1</b>
<b>Scale:</b>	1/4"=1'-0"
<b>Date:</b>	11/01/08
<b>Drawn:</b>	S.B.
<b>Job No.</b>	---



CANAL STREET

- NOTES:
1. REPLACE EXISTING THERMOSTAT AC-5 WITH COOLING/HEATING PROGRAMMABLE THERMOSTAT.
  2. DISCONNECT PERMITTER HEATING RADIATORS AND BASEBOARDS AND CAP STEAM AND CONDENSATE RETURN PIPING.
  3. CONNECT ALL EXISTING AND NEW RADIATORS AND BASEBOARDS TO NEW RADIATOR PIPING AS PER DETAILS ON DRAWINGS M-1 AND M-5.



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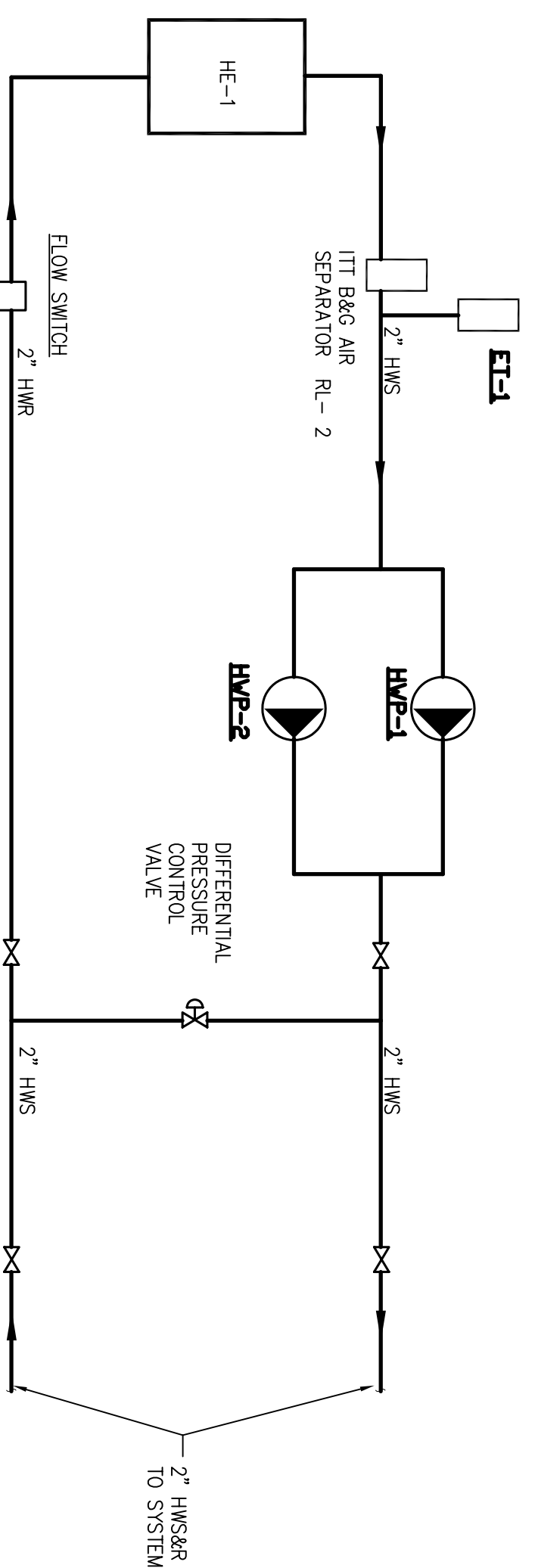
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**Drawing Name**  
 HEATING SYSTEM  
 GROUND FLOOR PLAN

**Drawing No.**  
**M-2**

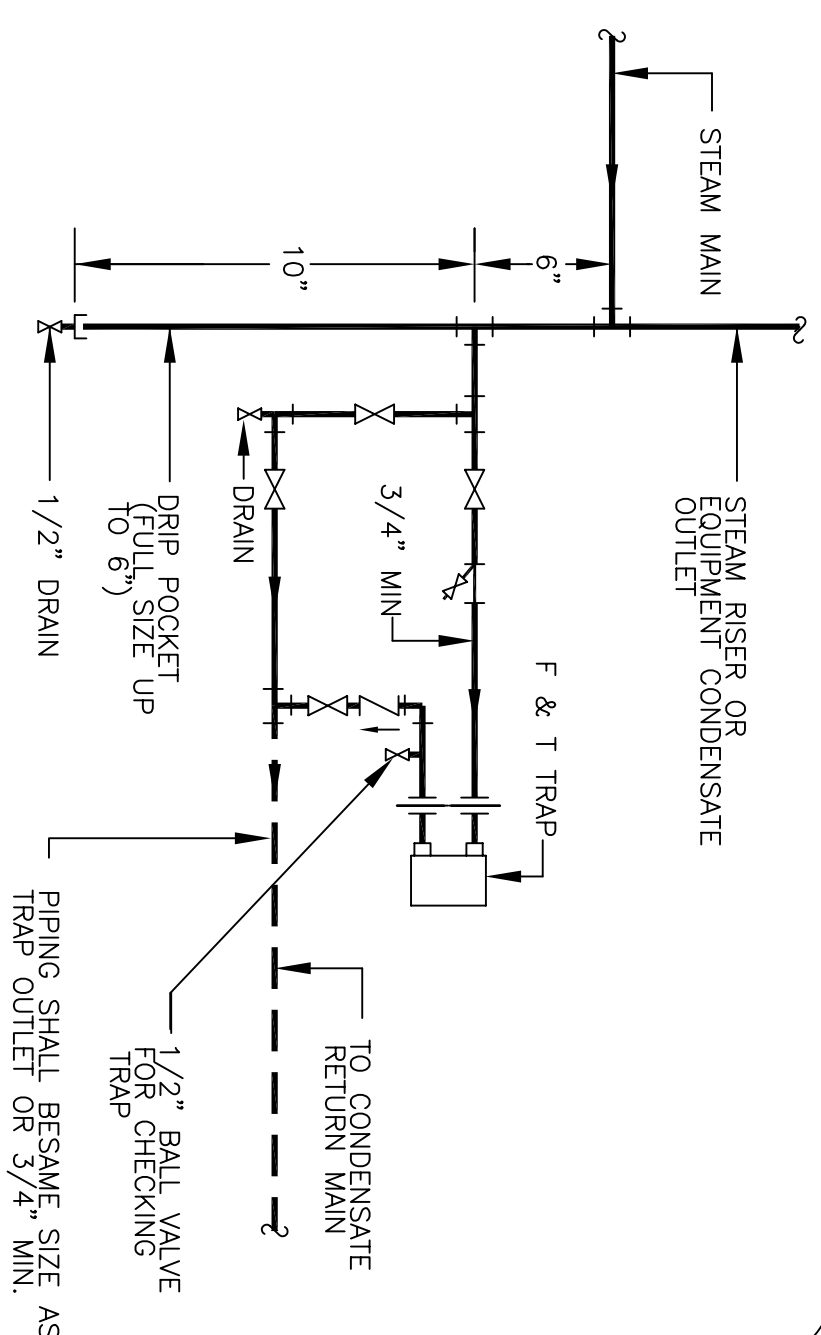
Scale: 1/4" = 1'-0"  
 Date: 11/01/08  
 Drawn: S.B.  
 Job No. ---



**HOT WATER PIPING ARRANGEMENT.**

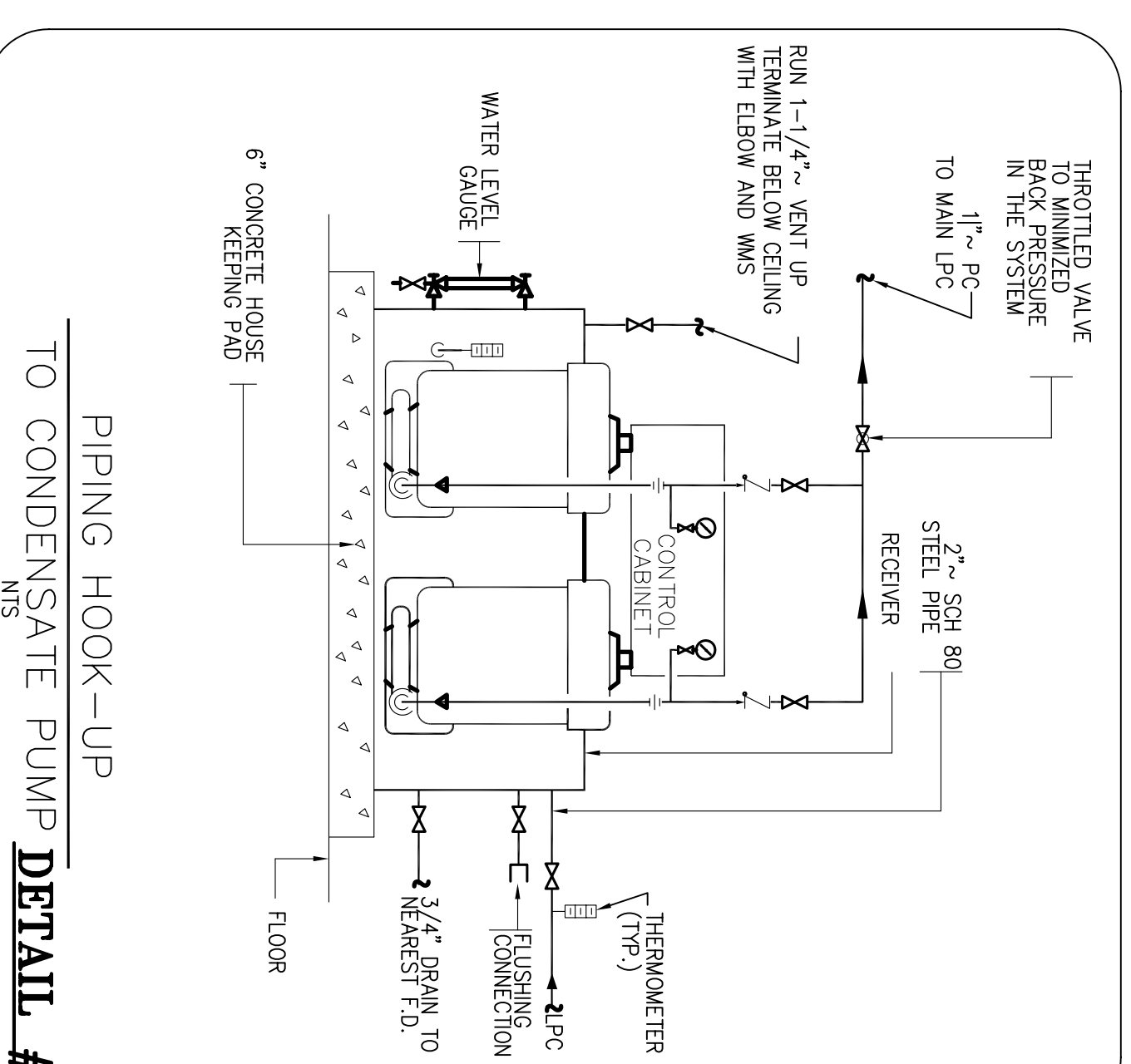
NTS

**DETAIL #1**



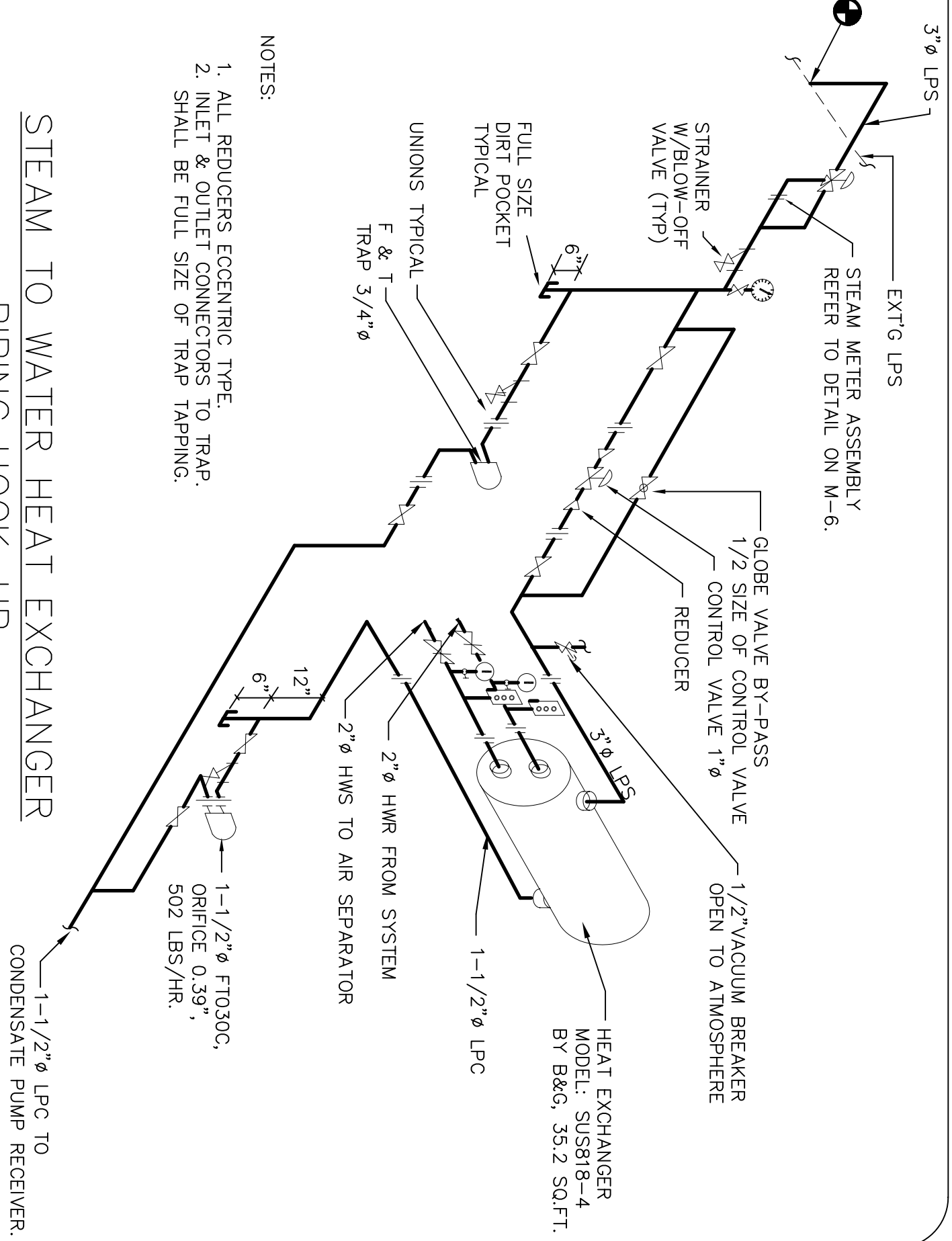
**LOW PRESSURE STEAM TRAP DETAIL**

DETAIL #2



**PIPING HOOK-UP TO CONDENSATE PUMP**

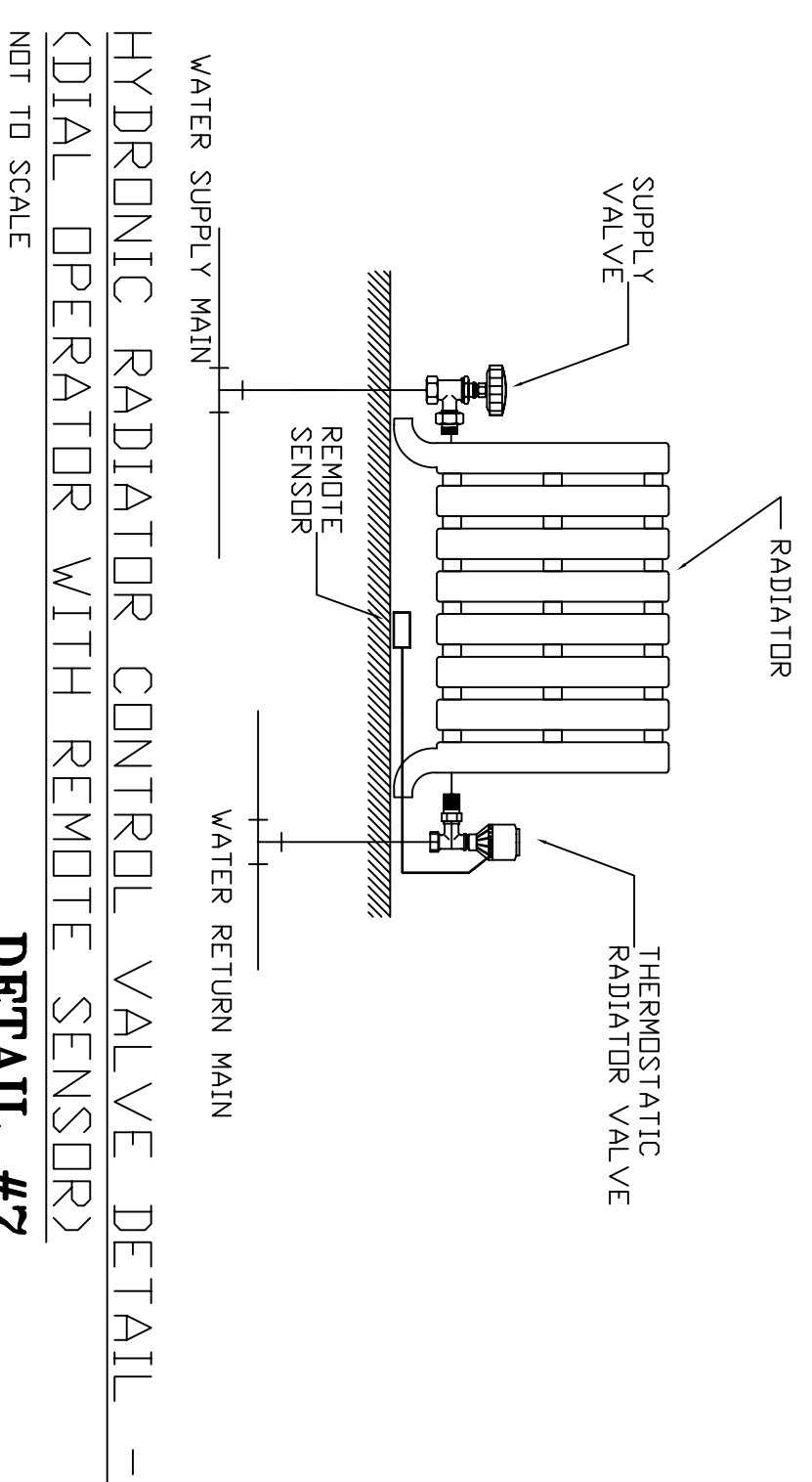
DETAIL #3



**STEAM TO WATER HEAT EXCHANGER PIPING HOOK-UP**

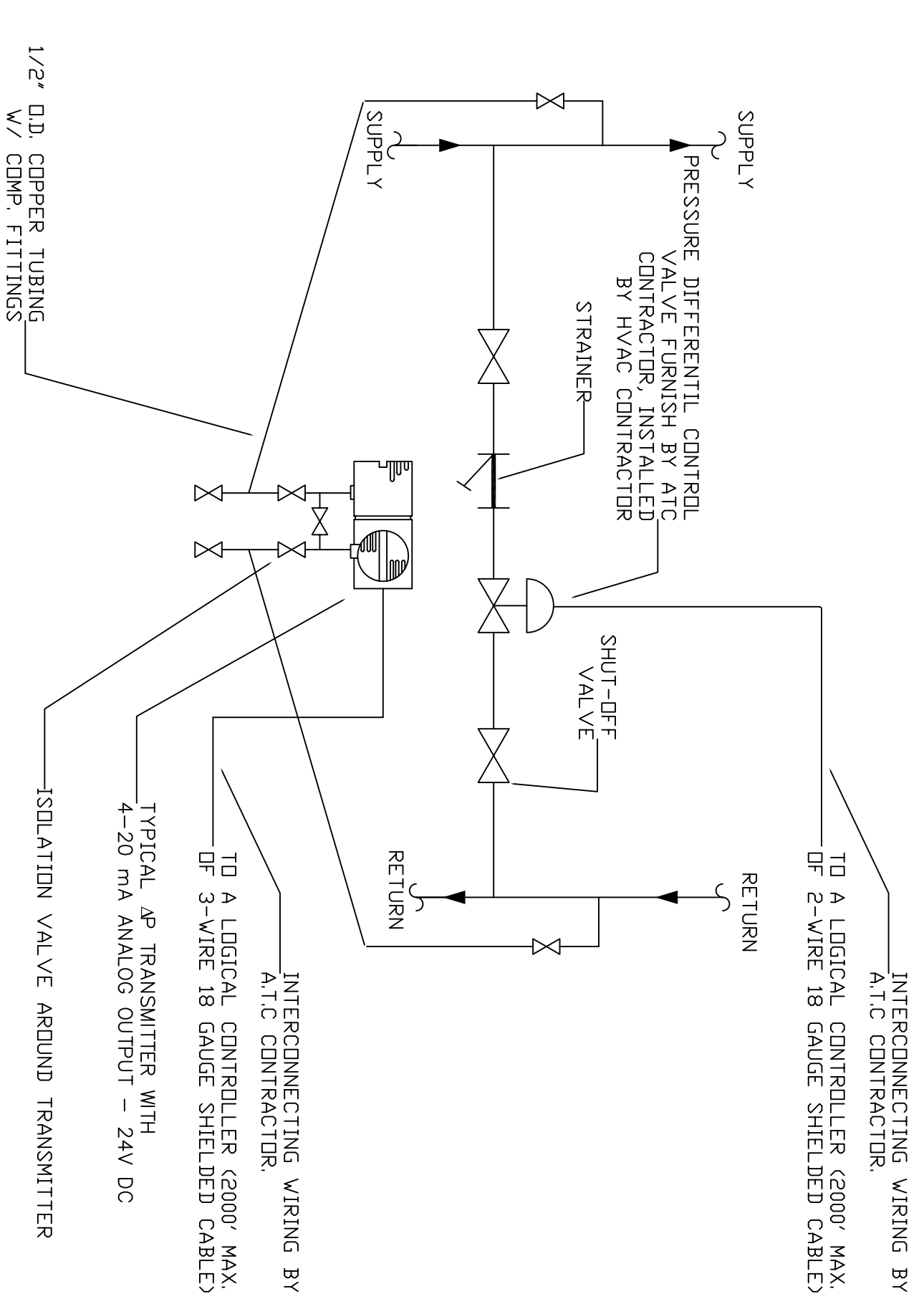
DETAIL #4

- NOTES:
1. ALL REDUCERS ECCENTRIC TYPE.
  2. INLET & OUTLET CONNECTORS TO TRAP SHALL BE FULL SIZE OF TRAP TAPPING.



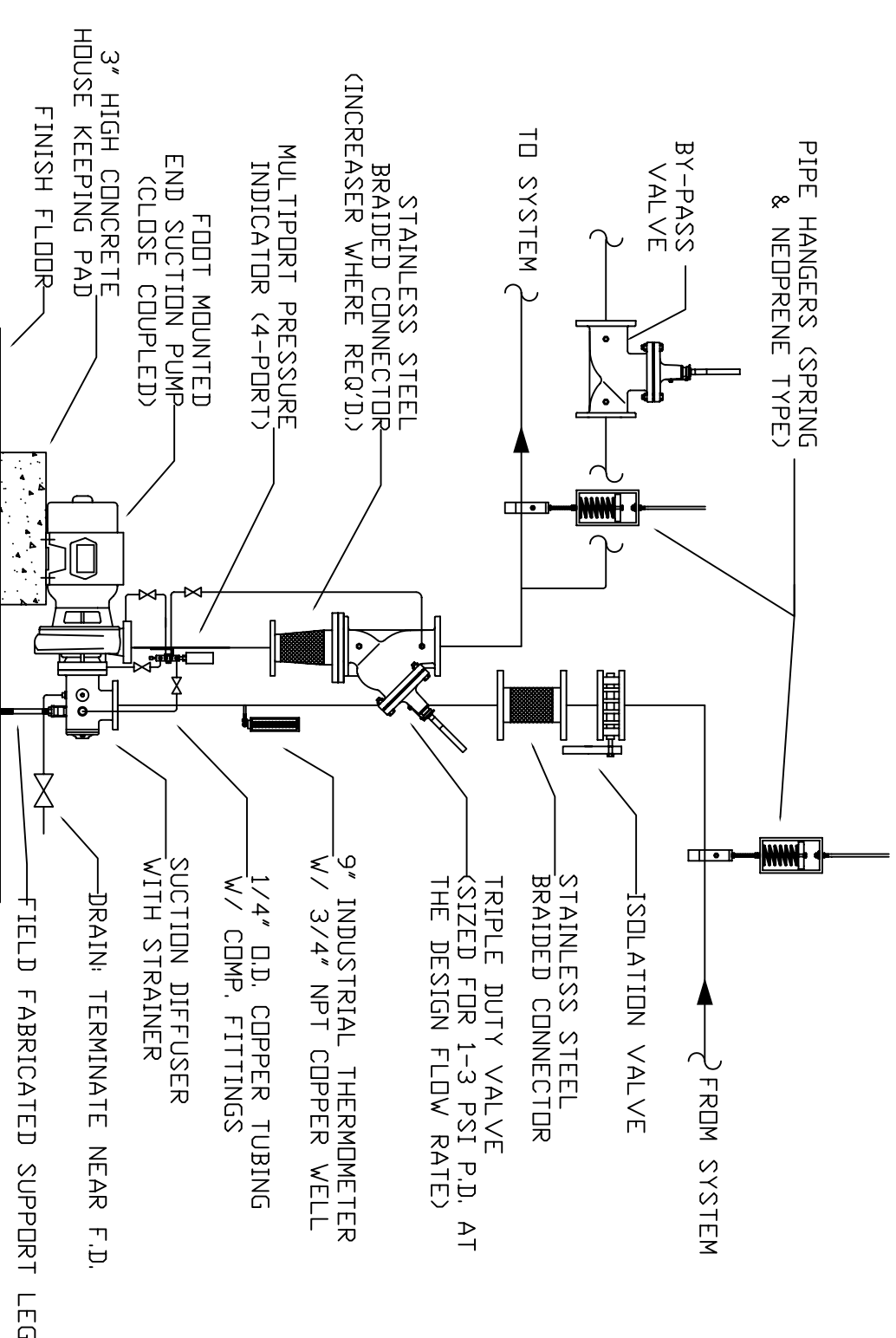
**HYDRONIC RADIATOR CONTROL VALVE DETAIL - (DIAL OPERATOR WITH REMOTE SENSOR)**

DETAIL #7



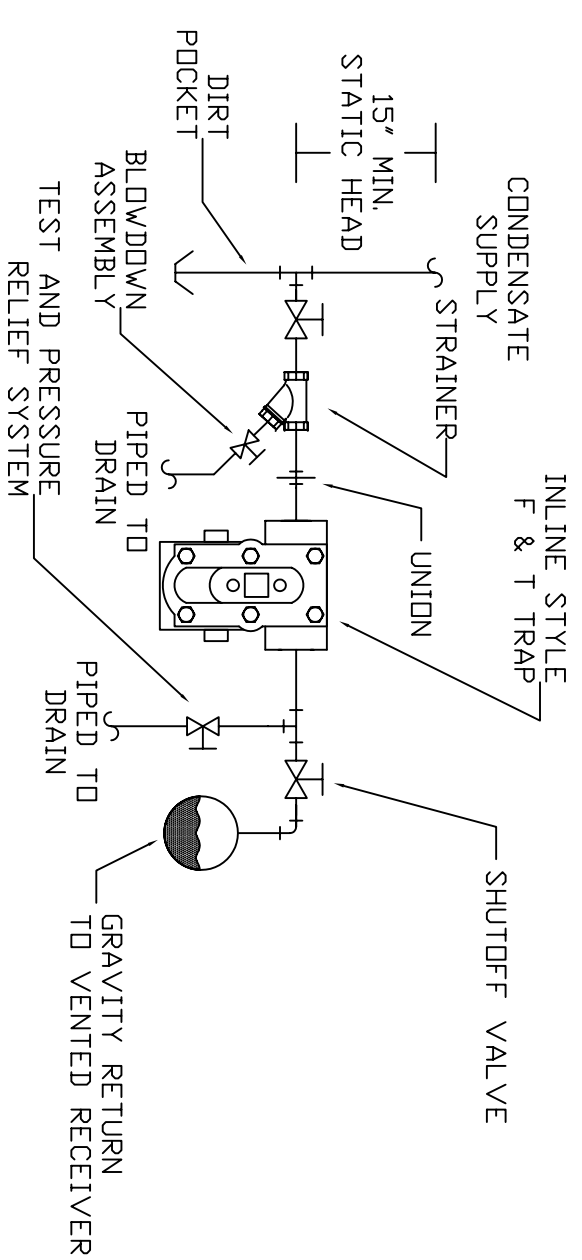
**DIFFERENTIAL PRESSURE TRANSMITTER**

DETAIL #5



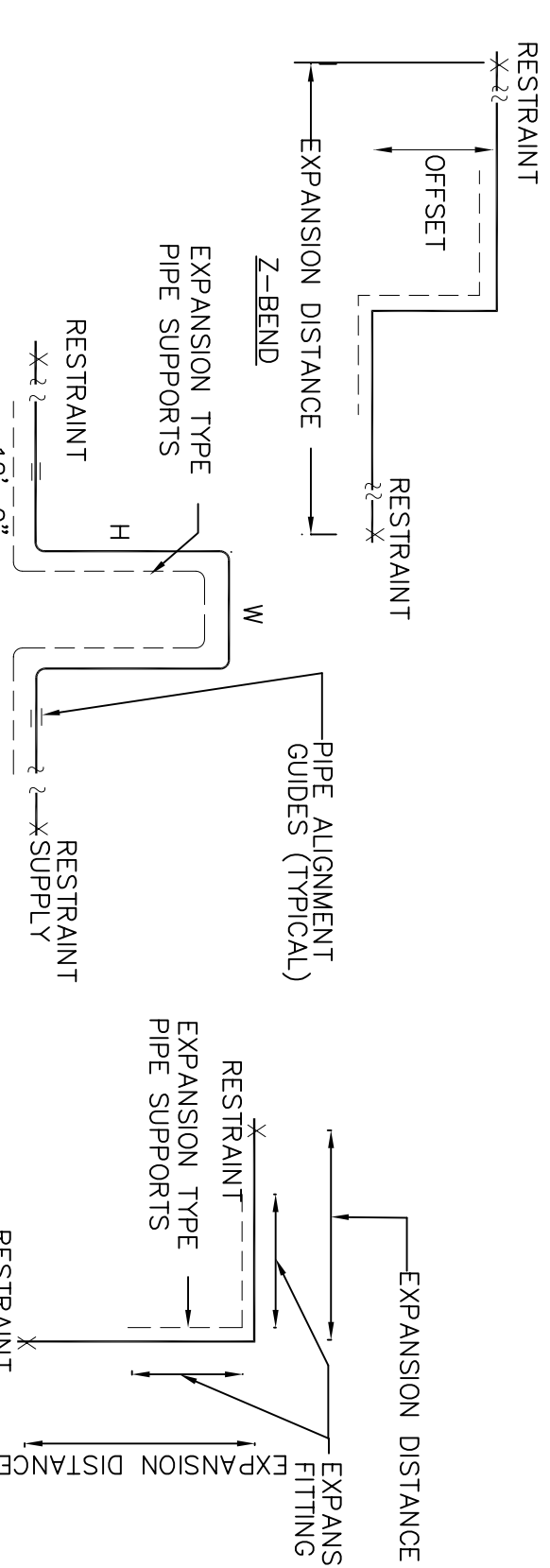
**END SUCTION PUMP DETAIL - (FOOT MOUNTED ON HOUSEKEEPING PAD)**

DETAIL #6



**FLOAT & THERMOSTATIC INLINE STYLE TRAP DETAIL - (GRAVITY RETURN LINE)**

DETAIL #8



**TYPICAL PIPE EXPANSION ARRANGEMENTS**

DETAIL #9

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Drawing Name  
**PIPING DIAGRAMS.**  
DETAILS.

Drawing No.	<b>M-3</b>
Scale:	1/4"=1'-0"
Date:	11/01/08
Drawn:	S.B.
Job No.	---



# DUPLIX CONDENSATE PUMP SCHEDULE

GENERAL		PUMP DATA (EACH)						REMARKS				
UNIT NO.	SERVICE	LOCATION	MODEL PUMP	IMPELLER SIZE	CAPACITY SQ. FT. EDR	WATER CM	DISCH PRESS PSIG	MOTOR HP EA	RPM	VOLTS PH HZ	CONDENSATE TANK CAP	REMARKS
CP-1	COMMERCIAL TENANT HEATING SYSTEM	BASEMENT	91.5CC DUPLIX	6-3/16	9000	9	15	1/3	1750	115/1/60	14	"B&G" AS STANDARD OR APPROVED EQUAL

- PROVIDE:
1. NEMA 2 TYPE CONTROL PANEL UNIT MOUNTED AND WIRED.
  2. CSA LABEL.
  3. MAGNETIC STARTERS WITH FUSED DISCONNECT W/FUSES AUXILIARY CONTACTORS ON STARTER.
  4. 1/2" NIP STEAM NOZZLE, 1" NPT - CONDENSATE CONNECTION.
  5. PIPING HOOK-UP AS PER DETAIL.
  6. CONCRETE PAD.
  7. ALARM W/SILENCING RELAY - ALARM PILOT LIGHT.
  8. SELECTOR SWITCHES - OFF-HAND-LEAD-LAG.
  9. CONTROL POWER TRANSFORMER.
  10. POWER CONTROL SWITCHING RELAY.
  11. PUMP PILOT LIGHT.
  12. 2" NIP WATER CONNECTION.
  13. 2" NIP WATER CONNECTION.
  14. MOUNTING PLATE.
  15. PUSH TO TEST BUTTON.
  16. U.L. LISTING.
  17. DIAL THERMOMETER.
  18. 2" INLET BASKET STRAINER.
  19. DISCHARGE PRESSURE GAUGE.

## PUMP SCHEDULE

UNIT NO.	SERVICE	LOCATION	GPM	TDH FT.	MOTOR DATA			TYPE	EFF. %	OPER. WEIGHT LBS.	MODEL	IMPELLER DIAMETER IN.	FRAME SIZE	REMARKS	
					BHP	HP	HPM								
HWP-1, 2	COMMERCIAL SPACE HOT WATER PUMP	BASEMENT	49	75	165	1.5	3500	208/3/60	END SUCTION	57	57	1535, SIZE 355	5.0	---	ONE IS STAND-BY

- PROVIDE:
1. ALARM LEAD A/S SEQUENCE.
  2. DISCONNECT SWITCHES.
  3. PIPE FLEXIBLE CONNECTION.
  4. MOTOR STARTER.

## HEAT EXCHANGER SCHEDULE

UNIT NO.	LOCATION	MODEL NO.	SIZE LENGTH x DIA.	No. OF PASSES	HEAT LOAD MBH	SHELL SIDE		TUBE SIDE			SURFACE SQ. FT.	WEIGHT LBS.	REMARKS		
						LBS./PD PSIG	HR	EWT °F	LWT °F	GPM				PD PSIG	
HE-1	BASEMENT	SU 84-4	48" L x 8" dia.	4	490	506	--	1	180	200	49	0.63	32.3	---	1.5" NIP STEAM NOZZLE, 1" NPT - CONDENSATE, 2" FL. WATER NOZZLE

"BELL & GOSSETT" AS STANDARD

## FIN TUBE RADIATION SCHEDULE

TYPE	MANUFACTURER	MODEL	E.L.E.M.E.N.T				AVG BASED ON 50°F ΔT	EAT °F	BTUH PER LIN. FT.	GPM	MTG. HT. -IN.	LENGTH	REMARKS
			MATERIAL	PIPE SIZE	No. OF PIPES PER FT.	FIN SIZE							
FR-1	SLANT/IN	MULTI/PAK 90-21	ALUMINUM	1" C-3/40	40	4-1/4"	190	65	2200	2	4-1/4	25-3/4	SEE PLANS
FR-2	SLANT/IN	MULTI/PAK 90-14	COPPER-ALUMINUM	1" C-3/40	40	4-1/4"	190	65	1455	2	4-1/4	18-3/4	SEE PLANS
CB-1	GOVERNABLE	GOV-BOARD	CAST IRON	---	---	---	190	65	640/LF	2	0	---	SEE PLANS

SPACE HEATING SYSTEM GENERAL NOTES:

1. PROVIDE PIPING HOOK-UP AS PER DETAIL AND ACCESS DOOR FOR EACH VALVE.

## HOT WATER COIL SCHEDULE

MANUFACTURER: AEROPFN

COIL TYPE: W

COIL TAG.	RHC-5.1	RHC-5.2	RHC-6
MODEL	W-10MW-22.5 X 50.0-1-0.5	W-10MW-19.5 X 40.0-1-0.5	W-10MW-22.5 X 50.0-1-0.5
TUBE DIAMETER, IN.	5/8	5/8	5/8
TUBE WALL THK, IN.	0.02 COPPER	0.02 COPPER	0.02 COPPER
CASING MATL	GALVANIZED STEEL	GALVANIZED STEEL	GALVANIZED STEEL
FIN MATL	ALUMINUM WAVE	ALUMINUM WAVE	ALUMINUM WAVE
FIN THICKNESS, IN.	0.0075	0.0075	0.0075
FIN LENGTH, IN.	50	40	50
FIN HEIGHT, IN.	22.5	19.5	22.5
DRY WEIGHT, lbs	79	64	79
AIR FLOW, CFM	3170	2260	3200
FACE VELOCITY, FPM	406	417	410
EAT-DB, ° F	60	60	60
LAT-DB, ° F	85	85	85
APD, ° W.G.	0.09	0.1	0.09
HEATING CAPACITY, MBH	85.6	61.1	86.4
EWT, ° F	200	200	200
LWT, ° F	178.4	179.5	180.6
WATER FLOW, GPM	8.0	6.0	9.0
WPD, FT. W.G.	0.2	0.1	0.2
ROWS	1	1	1
CIR	HALF	HALF	HALF
FPI	10	10	10
CONN. SIZE, IN.	1-1/2	1-1/2	1-1/2

## CLOSED EXPANSION TANK SCHEDULE

"TT" BELL & GOSSETT" AS STANDARD

UNIT NO.	SERVICE	LOCATION	SIZE		TANK VOLUME (GALS)	MIN. OPER. PRESS. PSIG	MAX. OPER. PRESS. PSIG	MANUFACTURER AND MODEL NO.	OPER. WEIGHT LBS. EACH	REMARKS
			HEIGHT INCHES	DIA. INCHES						
ET-1	HOT WATER HEATING SYSTEM	BASEMENT	52	24	79	17	30	B-300	897	523 GAL. SYSTEM APPROX.

## CABINET UNIT HEATERS & UNIT HEATERS.

BASIS OF DESIGN: ROSEMEX

TAG NO.	CABINET ARRANG.	HEATING CAPACITY MBH	FIN		P.D. FT. W.G.	MODEL	LOCATION		
			HP	CFM					
CH-1	FLOOR MOUNT FULL IN. 2	51.3	1/4	505	890	5.13	22	F-800-B	VESTIBULE

\* BASED ON 60° F EAT, 200° F EWT.

PROVIDE FOR EACH UNIT HEATER:

1. SHUT-OFF, BALANCING, DRAIN AND AIR VENT VALVE.
2. BUILT IN THERMOSTAT AND STARTER.
3. TWO-WAY HOT WATER CONTROL VALVE.

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No. Revisions

1 04/10/09 LAND/ORD COMMENTS

2 07/21/09 LAND/ORD COMMENTS

Drawing Name  
**SCHEDULES.**

Project Name  
92nd Street Y  
Makov/Stenhardt  
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200 Hudson Street  
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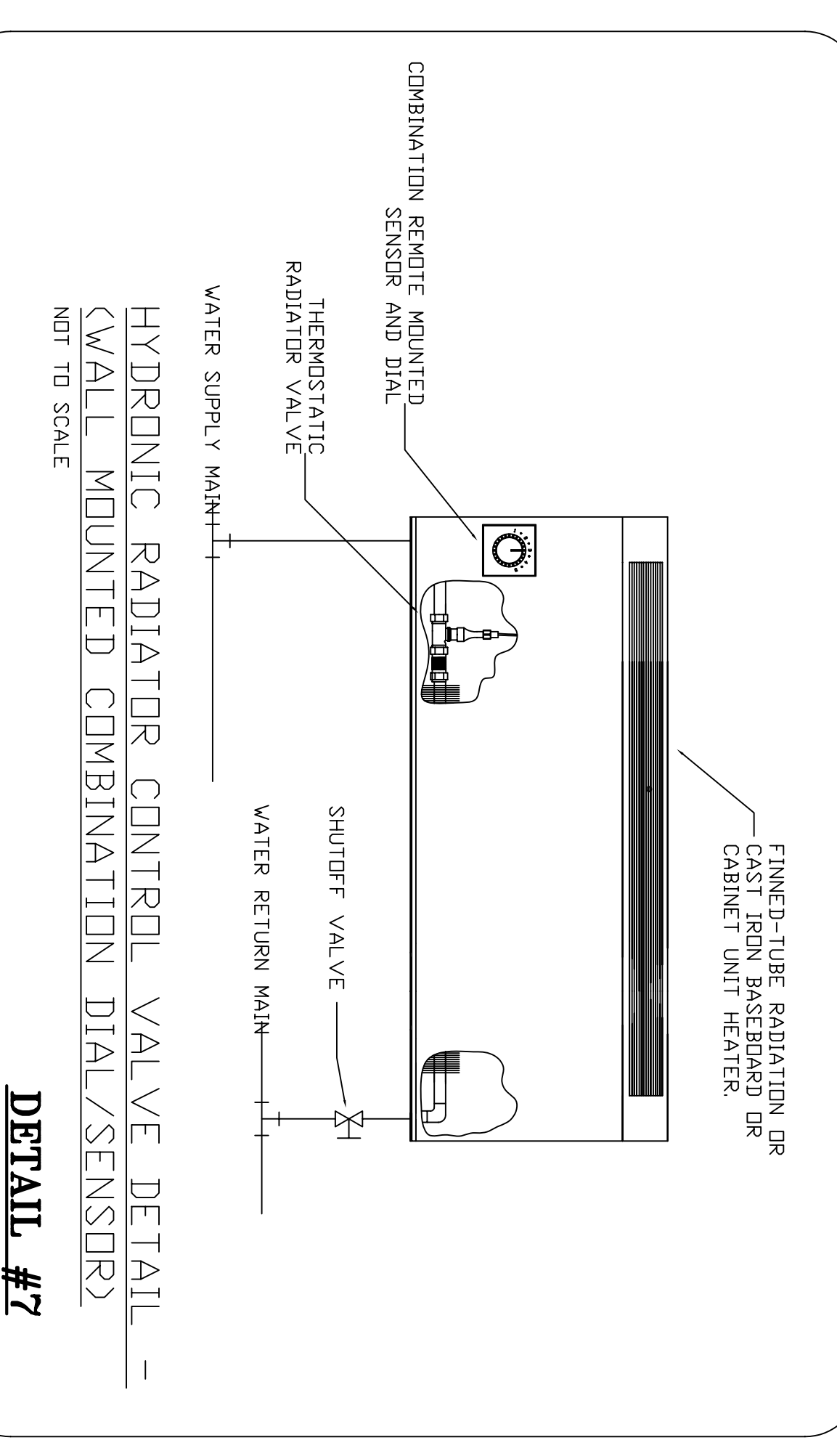
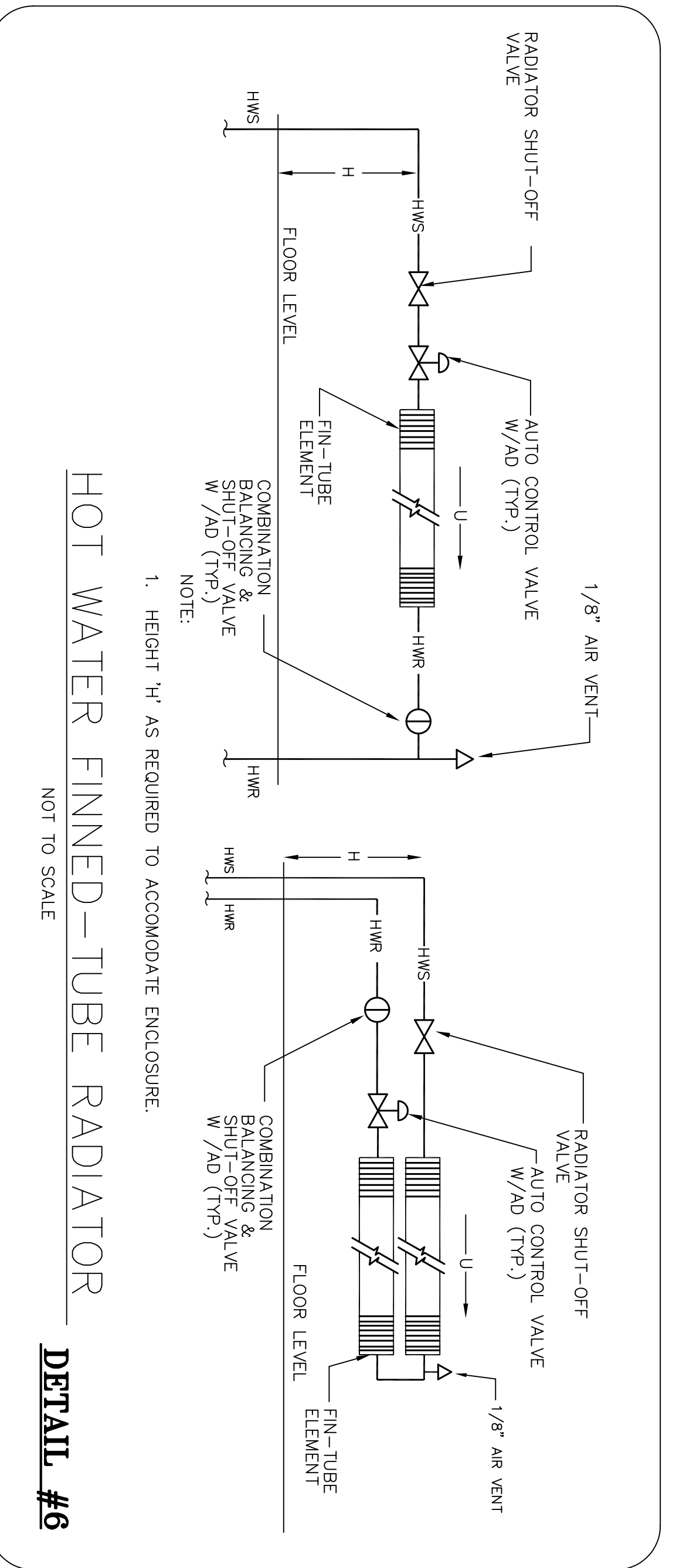
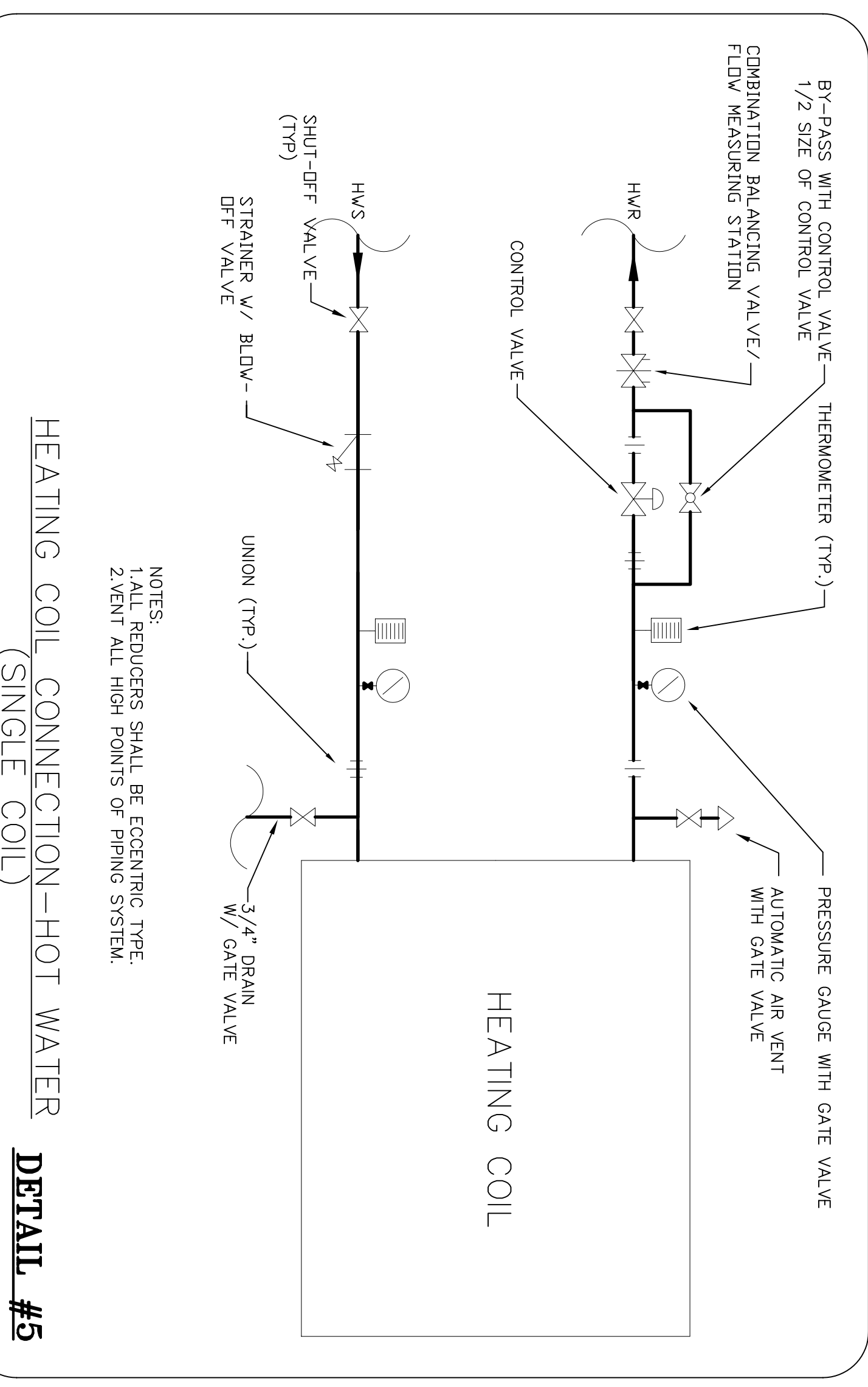
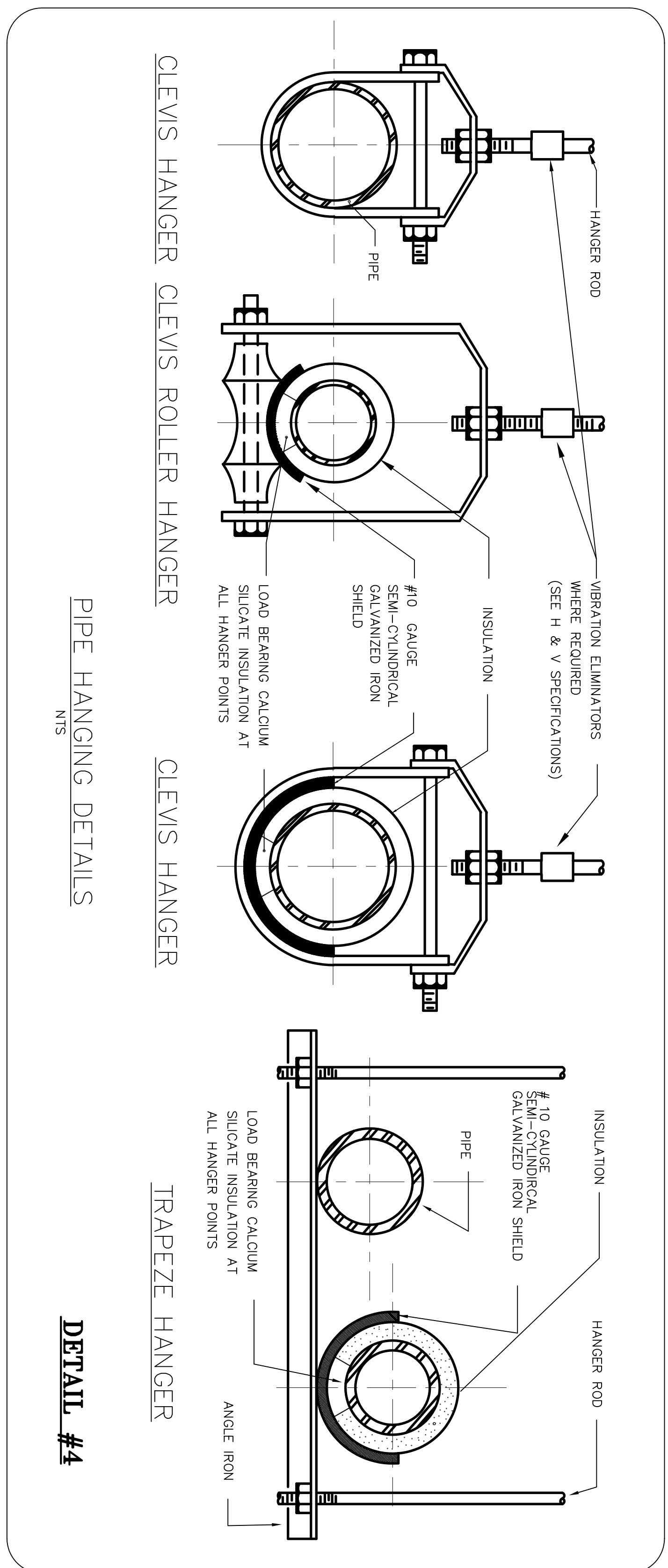
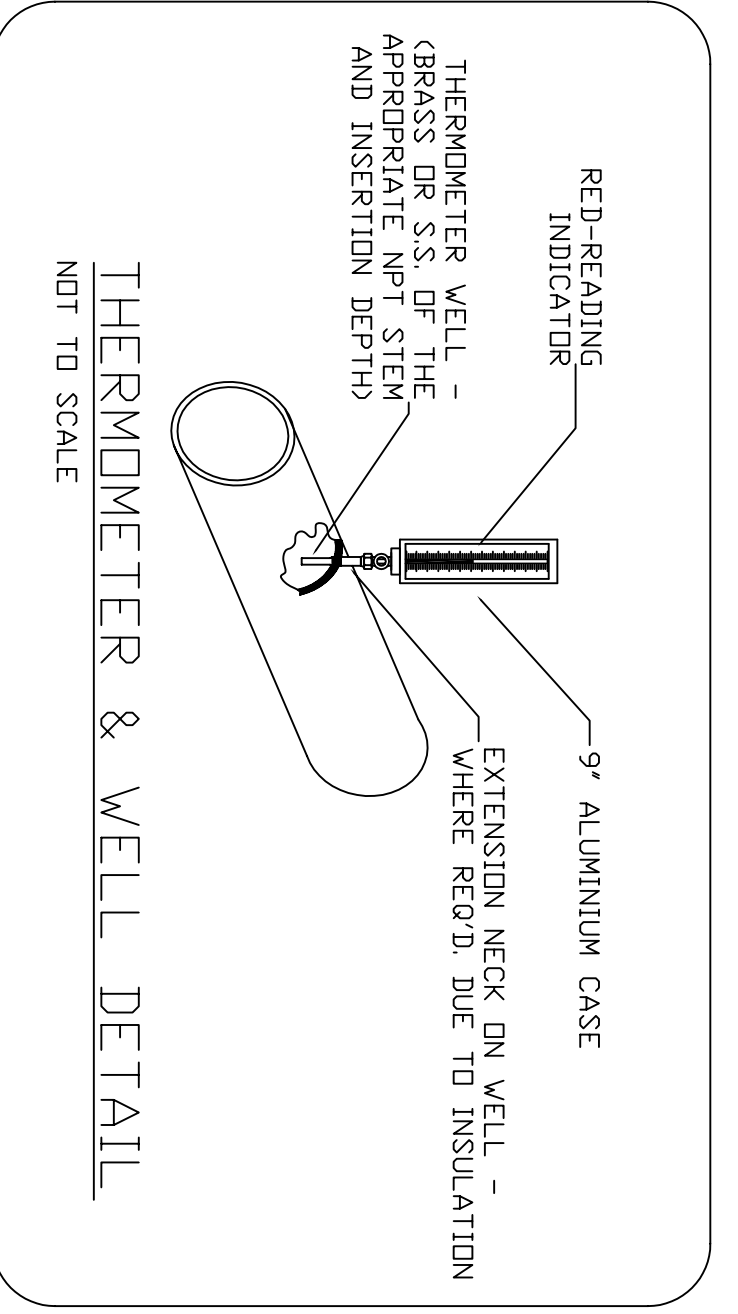
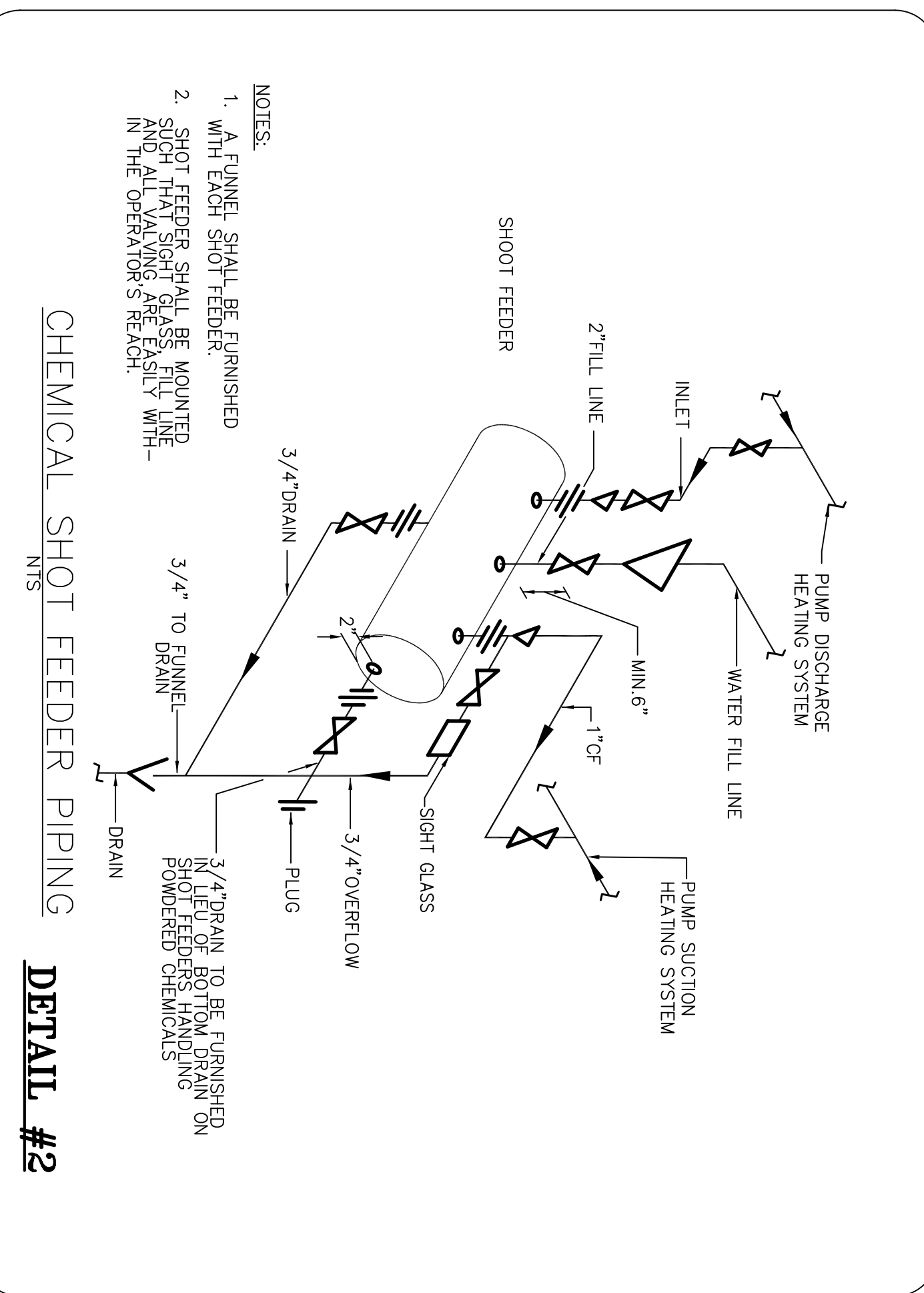
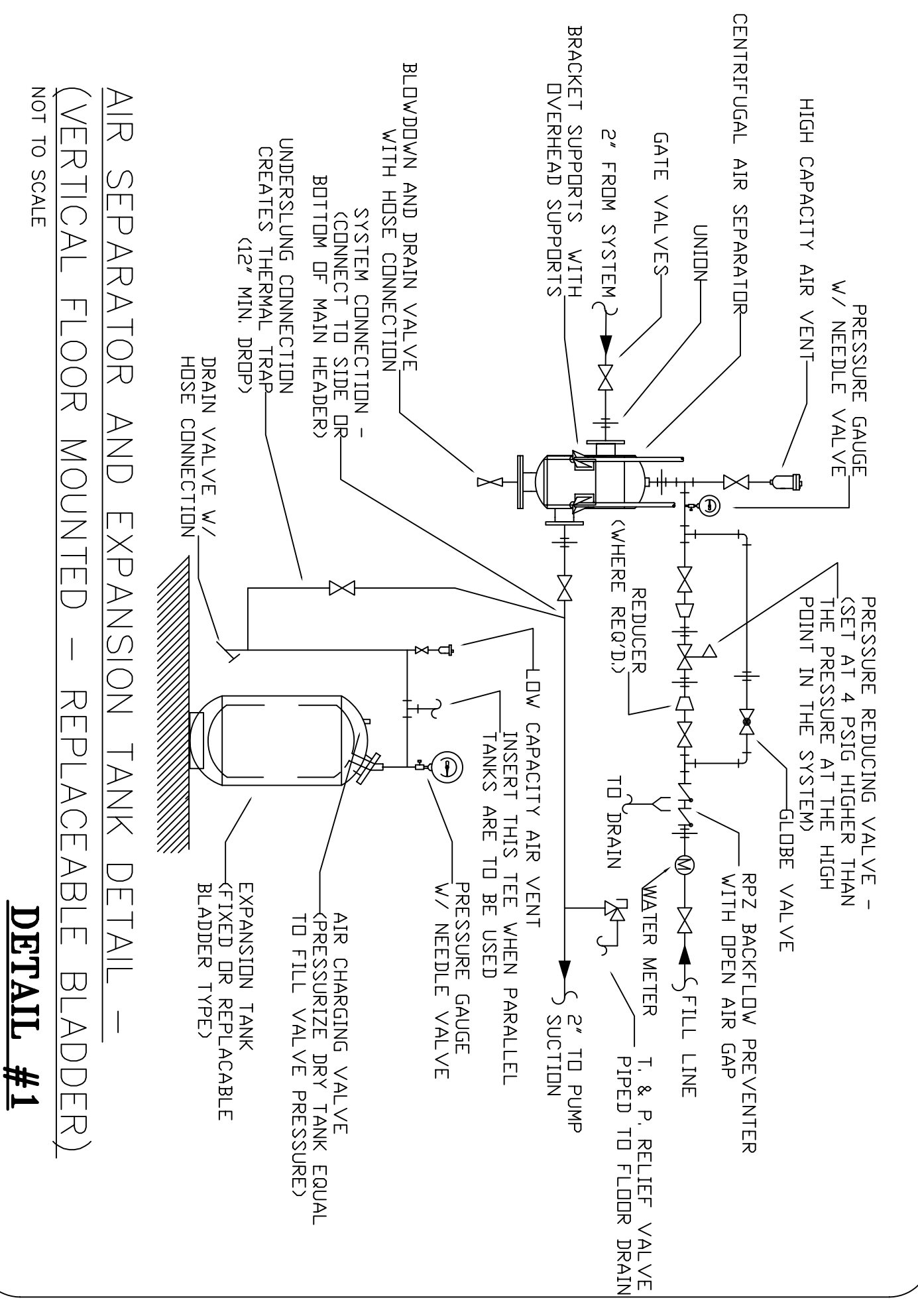
Drawing No.  
**M-4**

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

Date : 11/01/08

Drawn : S.B.

Job No. ---



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Drawing Name  
**PIPING DIAGRAMS.**  
 DETAILS.

Drawing No.  
**M-5**

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

Date:  
 11/01/08

Drawn:  
 S.B.

Job No.  
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No. 1  
 Date 07/21/09  
 Revisions OWNERS COMMENTS

Project Name  
 92nd Street Y  
 Makor/Steinhardt  
 Center  
 200 Hudson Street  
 New York, NY 10003

Drawing Name  
**HEATING SYSTEM**  
**BASEMENT PLAN**  
**ELECTRICAL**

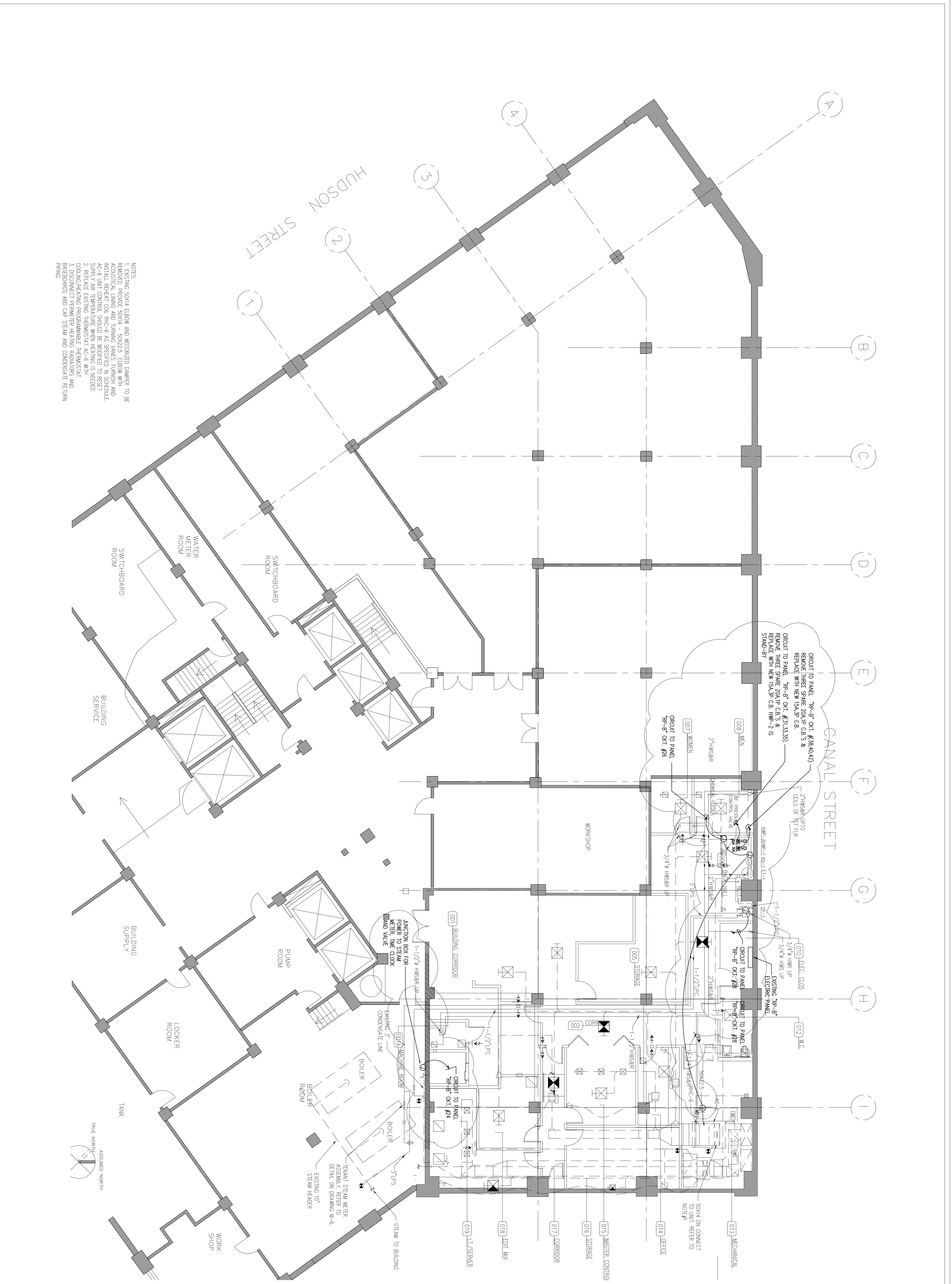
Drawing No.  
**EM-1**

Scale:  
 1"=1'-0"

Date:  
 11/01/08

Drawn:  
 S.B.

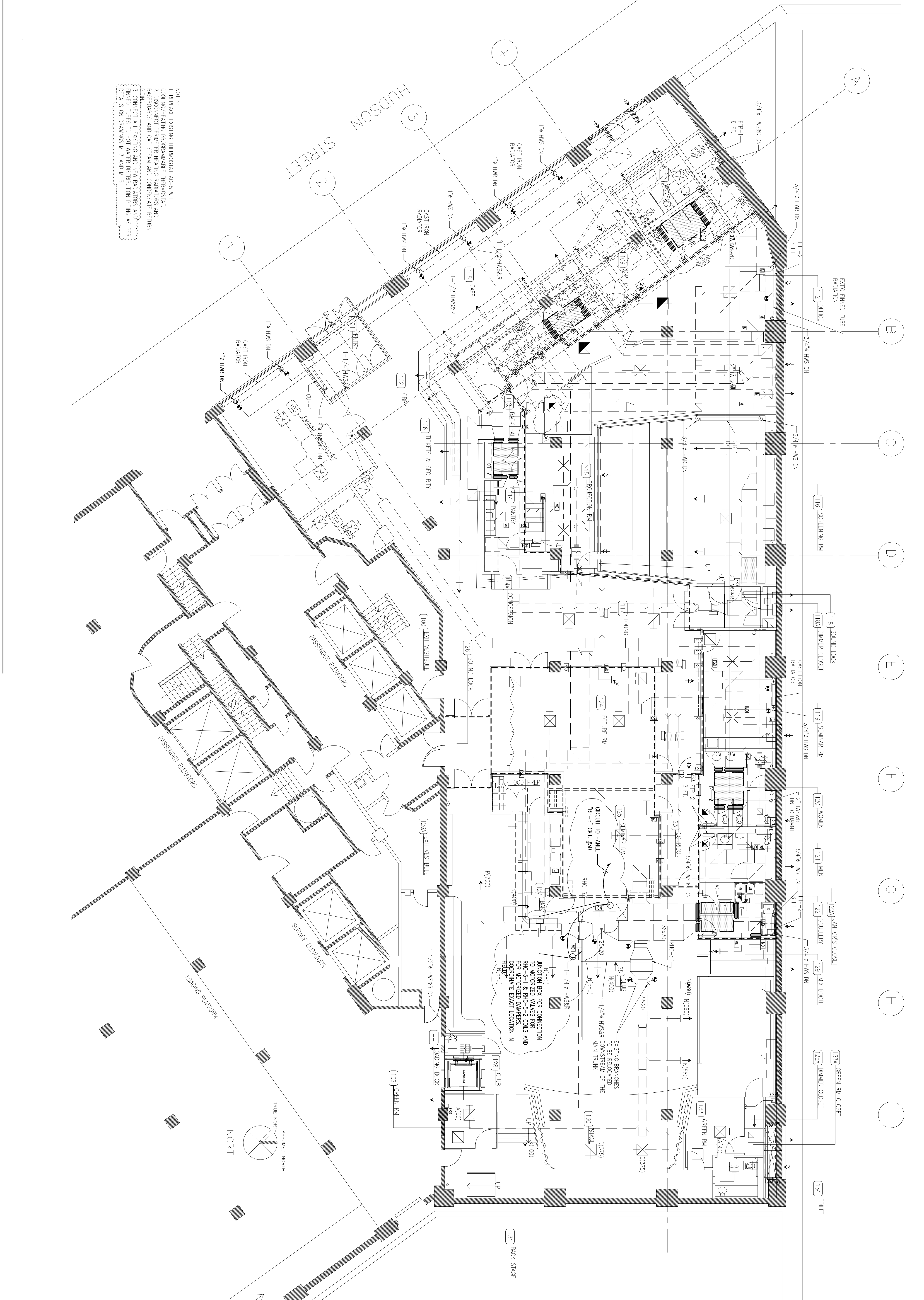
Job No.  
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- NOTES:
1. EXISTING 50014 ELBOW AND MOTORIZED DAMPER TO BE REMOVED. PROVIDE 50014 - 50X22.5 ELBOW WITH ACOUSTICAL LINING AND TURNING VANES. FINISH AND INSTALL REPAIR TOOL RHC-6 AS SPEC'D IN SCHEDULE. PROVIDE 50014 - 50X22.5 ELBOW WITH ACOUSTICAL LINING AND TURNING VANES. FINISH AND INSTALL REPAIR TOOL RHC-6 AS SPEC'D IN SCHEDULE. SUPPLY AIR TEMPERATURE WHEN HEATING IS NEEDED.
  2. REPLACE EXISTING THERMOSTAT AC-6 WITH COOLING/HEATING PROGRAMMABLE THERMOSTAT.
  3. DISCONNECT PERMETER HEATING RADIATORS AND BASEBOARDS AND CAP STEAM AND CONDENSATE RETURN PIPING.



CANAL STREET



- NOTES:
1. REPLACE EXISTING THERMOSTAT AC-5 WITH COOLING/HEATING PROGRAMMABLE THERMOSTAT
  2. COOLING/HEATING PROGRAMMABLE THERMOSTAT AND BASINS/BOSS AND ONE STAIR AND CONDENSATE RETURN BRING
  3. CONNECT ALL EXISTING AND NEW RADIATORS AND FINED-TUBES TO HOT WATER DISTRIBUTION PIPING AS PER DETAILS ON DRAWINGS M-3 AND M-5.

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Drawing Name  
 HEATING SYSTEM  
 GROUND FLOOR PLAN  
 ELECTRICAL

Drawing No.	EM-2
Scale:	1"=1'-0"
Date:	11/01/08
Drawn:	S.B.
Job No.	---