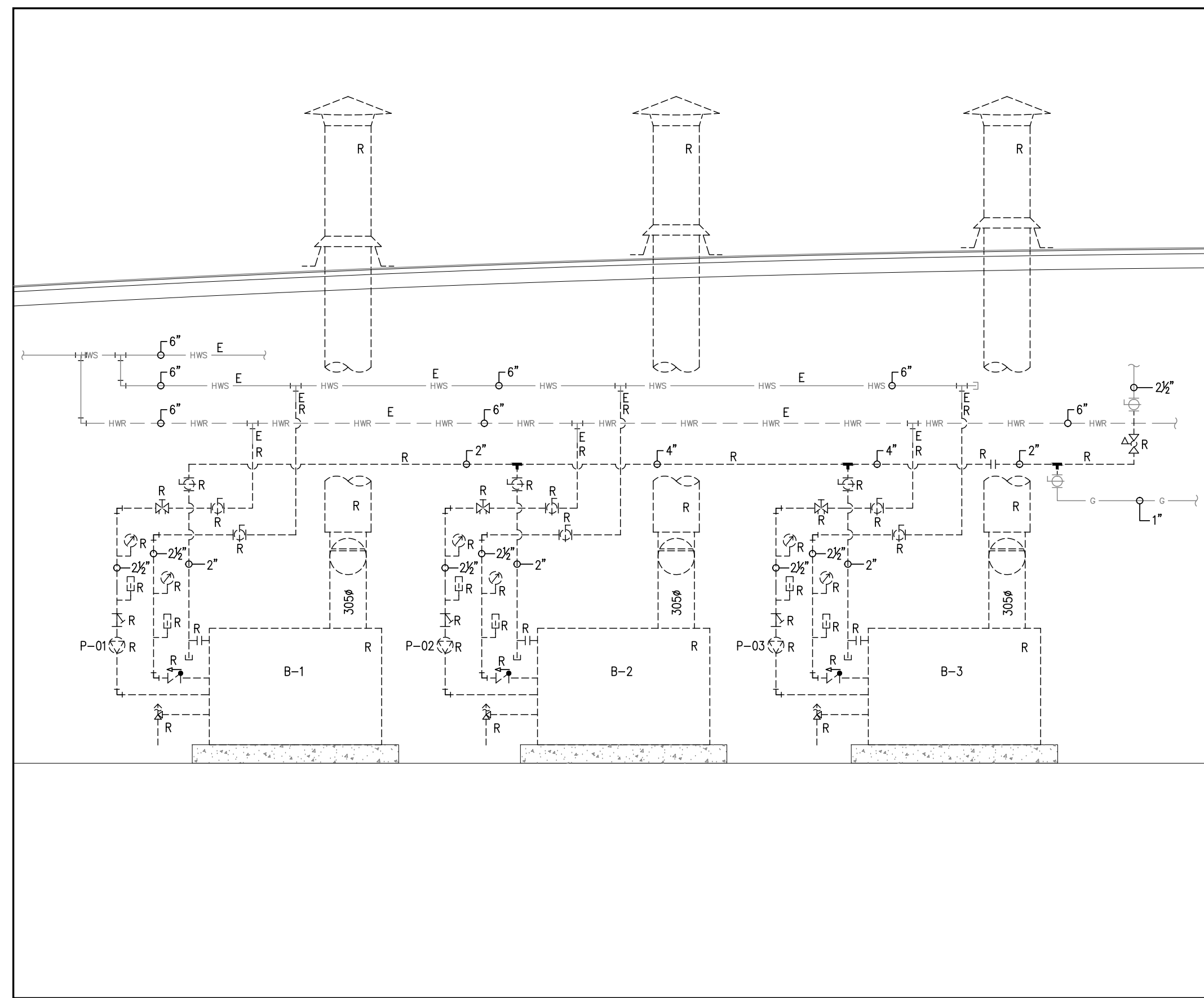
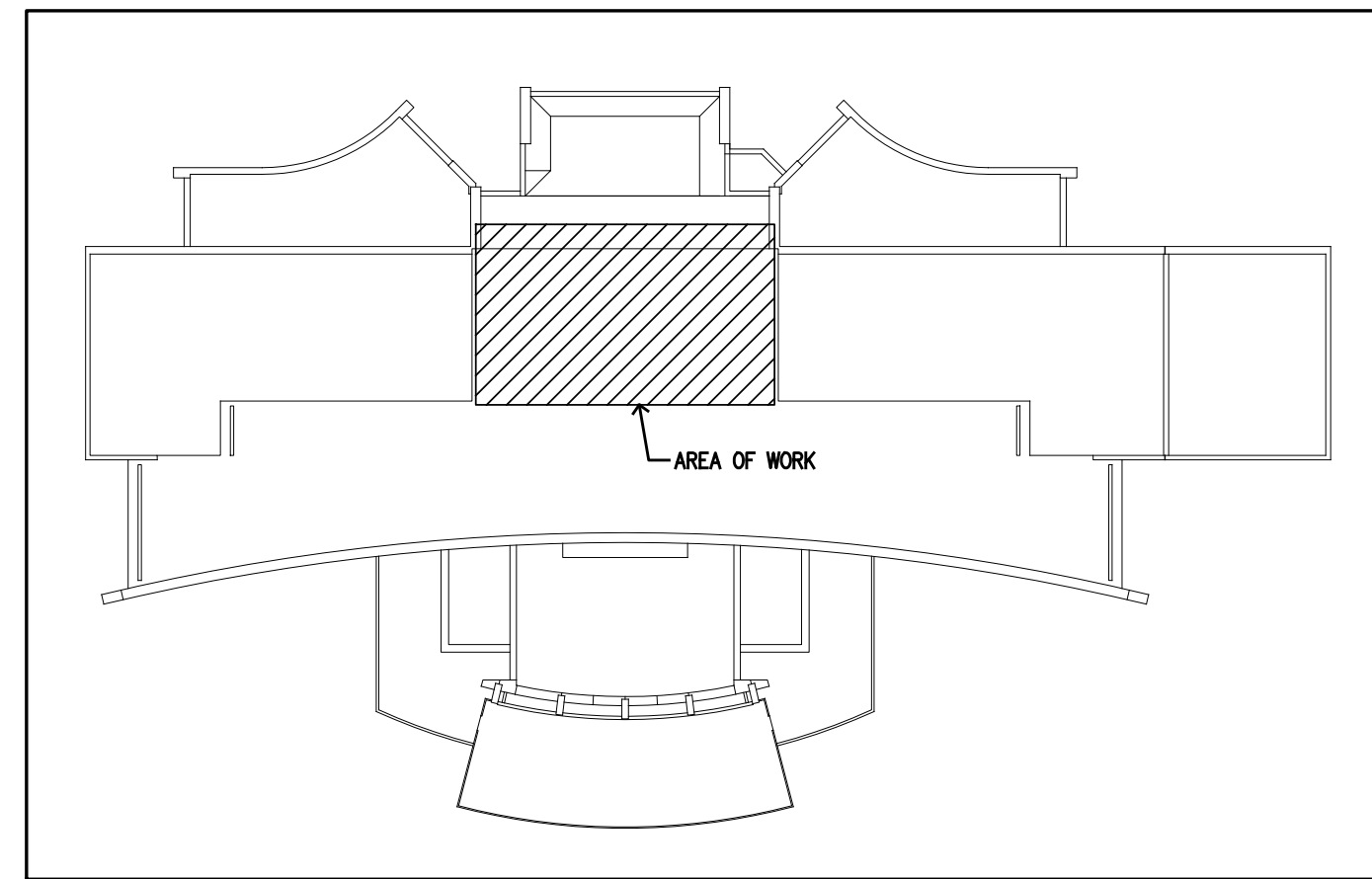


1 Mechanical - Heating - Penthouse Floor Plan - Removals  
M101 1:50



2 Mechanical - Heating - Boiler Riser Diagram - Removals  
M101 N.T.S.



Terminal Building - Keyplan  
N.T.S.

**BUILDING MANAGEMENT SYSTEM CONTROLS MODIFICATIONS:**

1. CONTROLS TO BE THROUGH EXISTING HONEYWELL DDC SYSTEM, ALL CONTROLS WORK WITH CHRIS CAMPEAU AT HONEYWELL (705) 665 6605. CARRY ALL COSTS.

**MECHANICAL CONTRACTOR SCOPE OF WORK:**

- MECHANICAL CONTRACTOR TO PURCHASE AND INSTALL THE NURO BOILER CONTROL PANEL (SUPPLIED BY VENDOR OF BOILERS)
- MECHANICAL CONTRACTOR TO RUN THE REQUIRED COMMUNICATION WIRE TO CASCADE EACH BOILER TOGETHER AND TIE THAT COMMUNICATION WIRE TO THE NURO BOILER CONTROL PANEL.
- MECHANICAL CONTRACTOR REQUIRED TO ADDRESS BOILERS PROPERLY TO ALLOW BOILERS TO CONTROL TOGETHER AND ALLOW THE HONEYWELL GAS TO CONNECT TO THE MASTER BOILER FOR START/STOP AND SETPOINT CONTROL.
- MECHANICAL CONTRACTOR TO INSTALL THE SYSTEM HOT WATER TEMPERATURE SENSORS TO ALLOW FOR BOILER SETPOINT.

**HONEYWELL SCOPE OF WORK:**

- HONEYWELL TO HARDWIRE A START/STOP SIGNAL TO THE MASTER BOILER TO ALLOW THE BOILER SEQUENCE TO BEGIN.
- HONEYWELL TO HARDWIRE AN ANALOG (2 TO 10 VDC) SIGNAL TO THE MASTER BOILER TO TELL THE BOILER WHAT HOT WATER SETPOINT TO RUN AT.
- HONEYWELL TO CONNECT TO THE NURO BOILER CONTROL PANEL (TWO WIRE, MSTP CONNECTION, SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR) AND INTERFACE INTO THE BOILERS TO MONITOR ALARM POINTS/VALUES FROM THE BOILERS.
- HONEYWELL TO UPDATE THE GRAPHICS AND DATABASE OF THE CURRENT EBI FRONT END TO MATCH THE CONTROLS OF THE NEW BOILERS.
- HONEYWELL TO PROVIDE ALL REQUIRED DOCUMENTATION FOR THEIR CONTROL PACKAGE INCLUDING AS-BUILTS, SUBMITTALS, POINT TO POINT, AND SCREENSHOTS OF NEW GRAPHICS CREATED.

**CONTROL SEQUENCE NOTES:**

- GAS TO TURN ON THE BOILER PLANT WHEN THE OAT DROPS BELOW THE HOT WATER BOILER ENABLE SETPOINT OF 13°C (USER ADJUSTABLE).
- GAS TO DISABLE THE BOILER PLANT WHEN OAT RISES ABOVE THE HOT WATER BOILER ENABLE SETPOINT, PLUS 2°C.
- GAS SHALL SEND THE BOILER PLANT A SETPOINT THAT IS RESET BY THE OAT. OAT RESET VALUES SHALL BE AS FOLLOWS (ALL VALUES TO BE USER ADJUSTABLE):

OAT	HWSP
-15°C	83°C
10°C	60°C

**ALARMS:**

- AN ALARM SHALL BE GENERATED WHEN A BOILER AND/OR PUMP HAS FAILED.
- AND ALARM SHALL BE GENERATED WHEN THE HOT WATER TEMPERATURE IS BELOW 50°C (USER ADJUSTABLE) IF THE BOILER PLANT HAS BEEN ENABLED FOR MORE THAN 60 MINUTES (USER ADJUSTABLE).

**INSTALLATION NOTES:**

- INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS AND CODES. INSTALLATION SHALL ONLY BE DONE QUALIFIED PERSONNEL.
- INSTALLATION SHALL BE AS PER MANUFACTURER REQUIREMENTS.
- INSTALL EQUIPMENT, PIPING, WIRING/CONDUIT PARALLEL TO BUILDING LINES. PROVIDE SUFFICIENT SLACK AND FLEXIBLE CONNECTIONS TO ALLOW FOR VIBRATION OF PIPING AND EQUIPMENT.
- INSTALL ALL EQUIPMENT IN READILY ACCESSIBLE LOCATIONS.
- ALL CONTROL WIRING SHALL BE IN EMT CONDUIT. CONDUIT SHALL BE IDENTIFIED IN ORANGE. A MAXIMUM LENGTH OF 60 CM OF FLEXIBLE WIRING JACKET WILL BE TOLERATED FOR CONNECTION TO END DEVICES.
- CONDUIT SHALL BE FILLED TO A 60% MAXIMUM. A PULL CORD SHALL BE INCLUDED AND EASILY ACCESSIBLE FOR FUTURE INSTALLATIONS. INSTALLATION SHALL COMPLY TO DIVISION 16 REQUIREMENTS.
- ALL CONTROL WIRING SHALL BE TAGGED AT EACH END. WIRING TAG NUMBERS SHALL BE LISTED IN CONTROLS SHOP DRAWINGS.

**MECHANICAL LEGEND**

	HWS	HOT WATER SUPPLY
	HWR	HOT WATER RETURN
	SP	SPRINKLER PIPING
	G	GAS LINE
		CAPPED PIPING
		PIPE RISER
		PIPE DROP
		COMBINATION PIPE RISE AND DROP
		THERMOSTAT, ELECTRIC
		TEMPERATURE SENSOR
		BALANCING VALVE
		PUMP
		BALL VALVE
		GATE VALVE
		CHECK VALVE
		THERMOMETER
		AUTOMATIC AIR VENT
		PRESSURE REDUCING VALVE
		PRESSURE GAUGE
		RELIEF VALVE - EXTEND TO DRAIN
		STRAINER
		MOTORIZED VALVE
		DUCT SECTION- POSITIVE PRESSURE
		DUCT SECTION- NEGATIVE PRESSURE
		DUCT WITH DIMENSIONS
		THERMALLY INSULATED DUCT
		DUCT TRANSITION
	R	EXISTING DEVICE TO BE REMOVED
	RL	EXISTING DEVICE TO BE RELOCATED
	E	EXISTING DEVICE TO REMAIN

**MECHANICAL GENERAL NOTES:**

- FIRE STOP ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.
- NEW AND REUSED PENETRATIONS THROUGH MASONRY OR CONCRETE TO BE SLEEVED.
- REMOVE ALL UNUSED EQUIPMENT, PIPING, DUCTWORK, ETC. CUT CAP AND MAKE SAFE.
- VERIFY ALL POINTS OF CONNECTION TO EXISTING SERVICES PRIOR TO ROUGH-IN.
- PROVIDE CLEARANCE TO EQUIPMENT AS PER MANUFACTURERS RECOMMENDATIONS.
- PAINT/PATCH BARE WALL AFTER REMOVAL OR REPLACEMENT OF EXISTING THERMOSTATS, WALL SENSORS.
- NEW THERMOSTATS, TEMPERATURE SENSORS, OPERATOR INTERFACE CONTROLLERS, ETC. TO BE INSTALLED AT MAXIMUM HEIGHT OF 4'7" (1200mm) ABOVE FINISHED FLOOR. COORDINATE ON SITE WITH ALL OTHER TRADES PRIOR TO ROUGH IN.

**BOILER UPGRADE GENERAL NOTES:**

- ALL CONTROL WIRING BETWEEN BOILER, BOILER CIRCULATORS, AND TEMPERATURE SENSORS BY MECHANICAL CONTRACTOR.
- BOILER CONTROLLER SHALL CONTROL EACH BOILER, SUPPLY AND RETURN WATER TEMPERATURE INTERFACE BOILER CONTROLLER WITH #12, #12 AND #12, PUMPS TO RUN 3 MINUTES BEFORE BOILERS ARE ENABLED AND CONTINUE TO RUN 3 MINUTES AFTER BOILERS ARE DISABLED.
- INSULATE AND PVC WRAP ALL NEW PIPING UNDER THIS CONTRACT. (BOILER ROOM ONLY)
- RESTORE HEATING SYSTEM TO PREVIOUS CONDITION DURING BOILER START-UP, BLEED ALL LINES.
- PERFORM FINAL BOILER START-UP DURING BUILDING HEATING LOAD. (OCTOBER/NOVEMBER)
- PATCH ALL OPENINGS AFTER MECHANICAL ELECTRICAL REMOVALS.

**SPRINKLER GENERAL NOTES:**

- COORDINATE THE INSTALLATION OF ALL FIRE PROTECTION SYSTEMS WITH THE WORK OF ALL OTHER TRADES. PROVIDE ALL NECESSARY OFFSETS IN PIPING TO AVOID INTERFERENCE WITH OTHER EQUIPMENT AND SYSTEMS.
- SPRINKLER PIPING TO BE TO ANS/NFPA 13.

**DRAWING NOTES:**

- EXTEND EXISTING CONCRETE HOUSEKEEPING PAD AS SHOWN ON FLOOR PLAN TO SUIT INSTALLATION OF NEW BOILERS.
- EXTEND EXISTING SPRINKLER DRAIN LINE OUT TO ROOF AS SHOWN AND TERMINATE IN EXISTING ROOF DRAIN. NEW PIPING TO BE GALVANIZED STEEL.

ISSUED FOR TENDER 2024.04.24

revision date

the Contractor shall check and verify all dimensions before proceeding with the work

detail no. sheet no. where detailed

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project  
NORTH BAY JACK GARLAND  
AIRPORT  
BOILERS REPLACEMENT

NORTH BAY ONTARIO

title  
MECHANICAL  
HEATING  
FLOOR PLAN & RISER - REMOVALS  
LEGEND AND NOTES

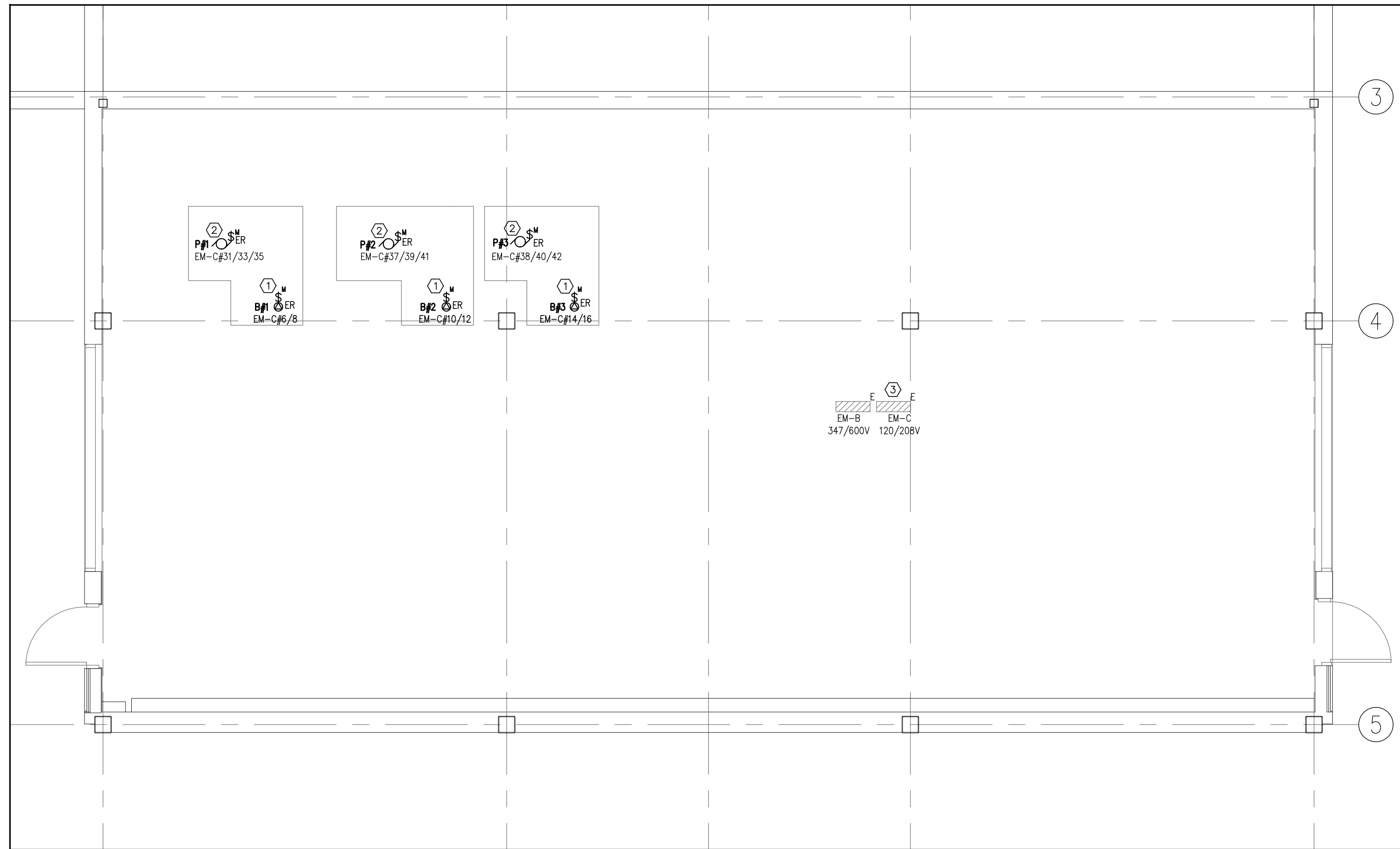
drawn by: AJH date: APRIL 2024

checked by: TK project no: 6684

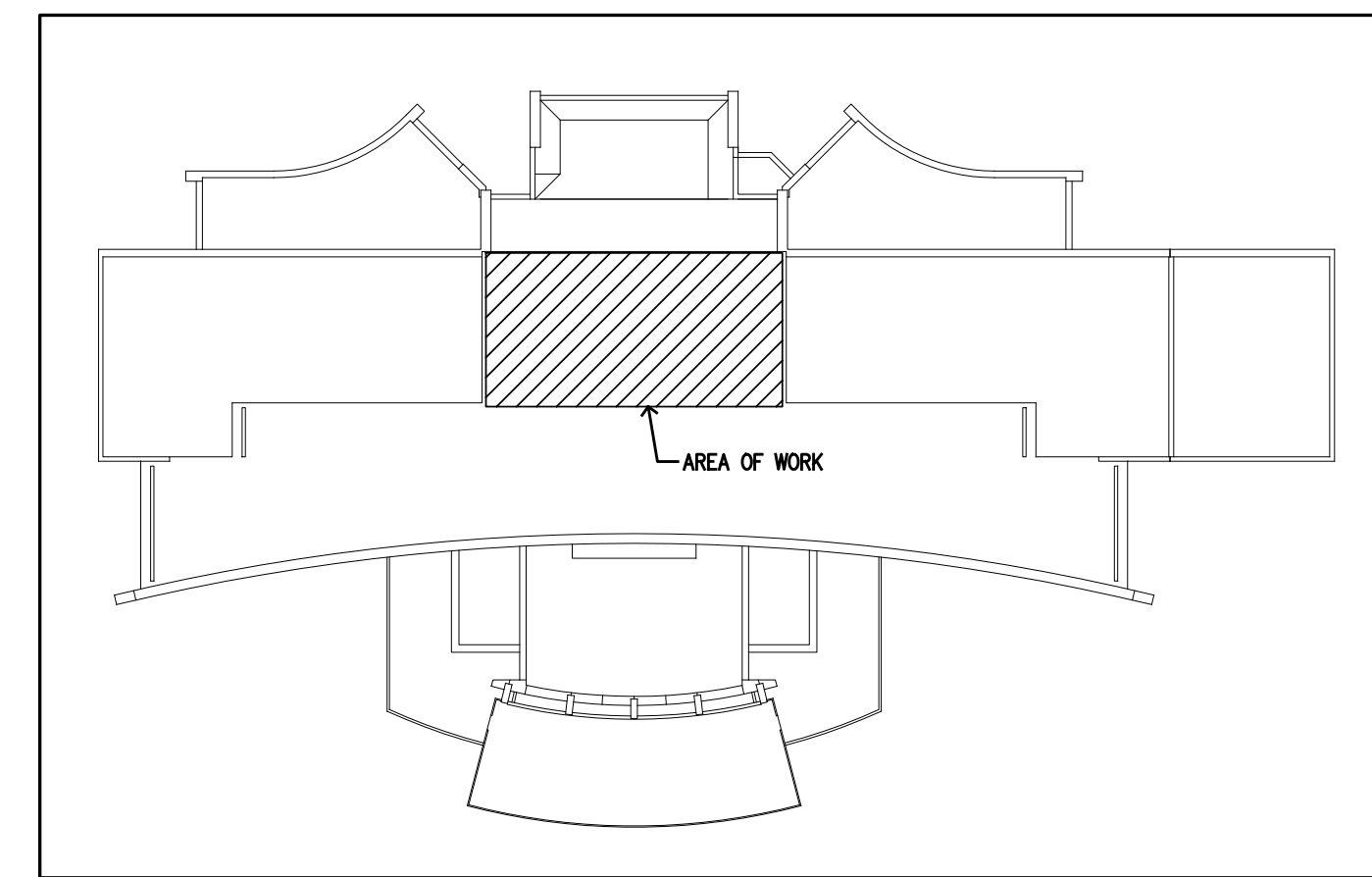
scale: AS NOTED dwg no: M101

plotted: April 24, 2024





1 Power - Partial Floor Plan  
E101 1:50



Terminal Building - Key plan  
N.T.S.

### ELECTRICAL LEGEND

SM	MOTOR RATED SWITCH WITH PILOT LIGHT
EPX	ELECTRICAL PANEL, SURFACE MOUNTED (DESIGNATION AS SHOWN)
DC	DIRECT CONNECTION FOR EQUIPMENT
M	MOTOR CONNECTION
P#X	PUMP (DESIGNATION AS SHOWN)
B#X	BOILER UNIT (DESIGNATION AS SHOWN)
ER	EXISTING DEVICE TO BE REPLACED WITH NEW
E	EXISTING DEVICE TO REMAIN

### ELECTRICAL GENERAL NOTES:

- ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ONTARIO ELECTRICAL SAFETY CODE.
- ELECTRICAL CONTRACTOR IS TO OBTAIN ALL APPROVALS FROM LOCAL ELECTRICAL SAFETY AUTHORITY PRIOR TO COMMENCING WORK.
- ALL DEVICES SHOWN ARE NEW, UNLESS OTHERWISE NOTED.
- FIRE STOP ALL PENETRATIONS THRU FIRE RATED ASSEMBLIES.
- ALL UNUSED WIRING SHALL BE PROPERLY TERMINATED, OR REMOVED. WIRING THAT CANNOT BE REMOVED AND IS CONCEALED AND INACCESSIBLE MUST BE CUT OFF WHERE EXPOSED (SO AS TO BE TOO SHORT TO BE REUSED) AND BE MADE SAFE.
- CIRCUITING SHOWN IS FOR GROUPING PURPOSES ONLY. ALL CIRCUITS TO BE FROM LOCAL 120/208V PANELS, UNLESS OTHERWISE NOTED. RE-USE EXISTING WIRING, WHERE PRACTICAL, AND PROVIDE NEW AS REQUIRED. UPDATE ACTUAL CIRCUIT NUMBERS USED ON AS-BUILT DRAWINGS.

### POWER GENERAL NOTES:

- PROVIDE BONDING CONDUCTOR AND CONNECTION (AS PER OESC) FOR ALL PERMANENTLY CONNECTED EQUIPMENT.
- PROVIDE LABELS ON ALL WIRING DEVICES INDICATING PANEL AND CIRCUIT NUMBERING, (FOR EXAMPLE PNL#A CCT 11.)

### ELECTRICAL DRAWING NOTES:

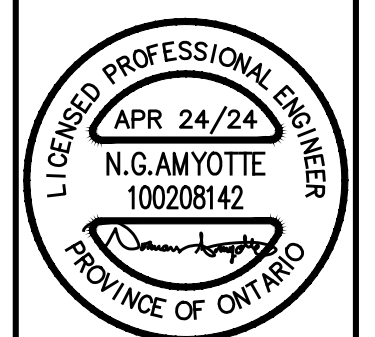
- PROVIDE NEW 20A/2P BREAKER IN PANEL EM-C AND FEED WITH 3/12-16mm<sup>2</sup> NEW BREAKER SHALL MATCH EXISTING PANEL KAIC INTERRUPTING RATING. EXISTING PANEL EM-C IS EATON PRL1.
- EXISTING WIRING MAY BE REUSED AND EXTENDED AS REQUIRED.
- PROVIDE NEW TWO 15A/3P TWIN BREAKERS IN PANEL EM-C AND RECONNECT EXISTING CIRCUITS 2/4/6/8. INSTALL TWIN BREAKERS IN SPACES 2/4. BREAKERS FOR NEW BOILERS 1-3 SHALL BE USED FOR NEW CIRCUITS 6/8, 10/12, 14/16 RESPECTIVELY. NEW BREAKERS SHALL MATCH EXISTING PANEL KAIC INTERRUPTING RATING. EXISTING PANEL EM-C IS EATON PRL1.

ISSUED FOR TENDER	2024.04.24
revision	date

the Contractor shall check and verify all dimensions before proceeding with the work

A	detail no.
B	sheet no. where detailed

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project  
NORTH BAY JACK GARLAND  
AIRPORT  
BOILERS REPLACEMENT

NORTH BAY ONTARIO

title  
ELECTRICAL  
POWER  
LEGEND & NOTES  
PARTIAL FLOOR PLAN

drawn by: SG	date: APRIL 2024
checked by: NGA	project no: 6684
scale: AS NOTED	dwg no: <b>E101</b>
plotted: April 24, 2024	