



WATERLOO REGION DISTRICT SCHOOL BOARD

51 ARDELT AVENUE
KITCHENER, ONTARIO
N2C 2R5

ELGIN STREET PUBLIC SCHOOL BOILER PLANT & MUA UPGRADES TENDER # 26-7883-RFT

685 ELGIN ST. N
CAMBRIDGE, ONTARIO
N1R 7W6

DRAWING LIST:

- A000 PROJECT TITLE SHEET
- A100 BOILER ROOM DEMOLITION AND NEW

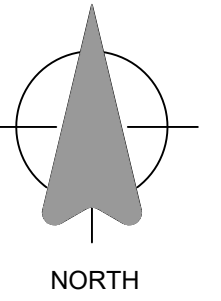
MECHANICAL DRAWINGS

- M000 MECHANICAL LEGEND
- M100 BOILER ROOM - MECHANICAL PIPING - DEMOLITION
- M101 BOILER ROOM - MECHANICAL PIPING - NEW
- M200 BOILER ROOM - MECHANICAL - HVAC DEMO & NEW
- M201 MEZZANINE FAN ROOM - MECHANICAL - DEMO & NEW
- M202 PARTIAL GROUND FLOOR - HVAC & CONTROLS
- M203 PARTIAL GROUND FLOOR - HVAC & CONTROLS
- M204 PARTIAL GROUND FLOOR - HVAC & CONTROLS
- M300 HEATING PIPING SCHEMATICS - DEMO & NEW
- M301 MECHANICAL - DETAILS & SCHEDULES

ELECTRICAL DRAWINGS

- E000 ELECTRICAL LEGEND
- E100 BOILER ROOM - ELECTRICAL - POWER & SYSTEMS
- E101 MEZZANINE FLOOR PLAN - POWER & SYSTEMS
- E102 PARTIAL GROUND FLOOR PLAN - POWER & SYSTEMS
- E103 PARTIAL GROUND FLOOR PLAN - POWER & SYSTEMS
- E200 SCHEDULES & PANEL SCHEDULES

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Revisions

2	2026.06.04	ISSUED FOR TENDER
1	2026.05.29	OWNER'S REVIEW

NO.	DATE	DESCRIPTION
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Approvals

Mechanica



Electrical

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Project Title

**ELGIN STREET P.S. -
BOILER PLANT & MUA
UPGRADE**
685 ELGIN ST. N,
CAMBRIDGE, ONTARIO

TENDER # 26-7883-RFT

EXP Project # LON-26001120-A0

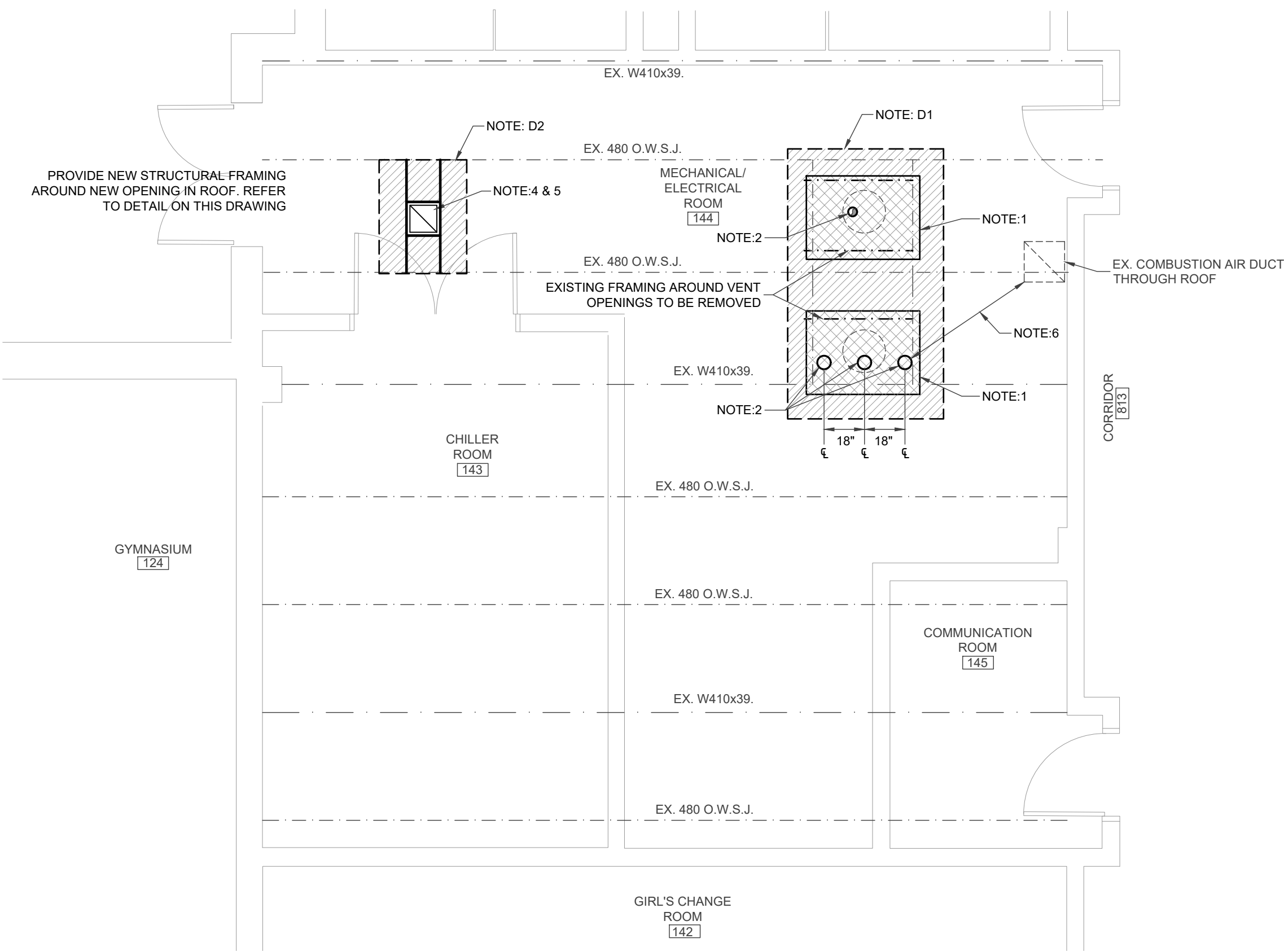
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Date: JUN. 4, 2026 Scale: AS SHOWN

Sheet Title

PROJECT TITLE
SHEET

A000



GROUND FLOOR PLAN - DECK & ROOFING REPAIRS AND NEW OPENINGS

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

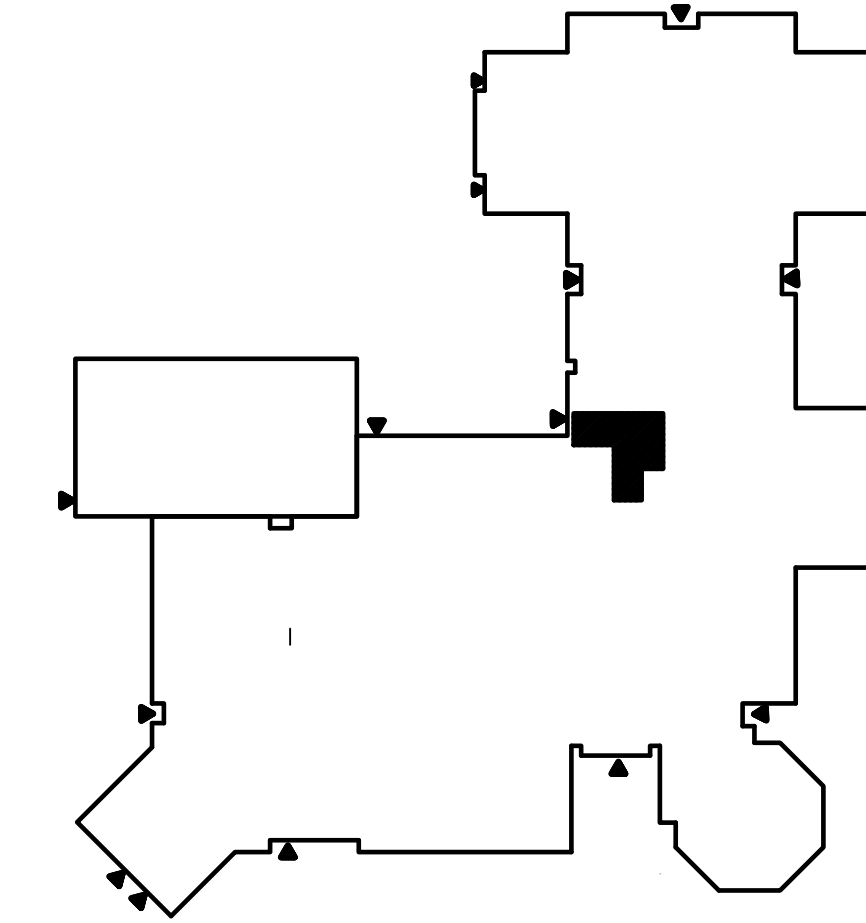
DEMO NOTES:

D1. CONTRACTOR TO REMOVE ENOUGH OF THE EXISTING ROOF MEMBRANE AND ROOF INSULATION TO ALLOW THE REMOVAL OF EXISTING BOILER VENTING AND TO PROVIDE ENOUGH SPACE TO INSTALL NEW STEEL SECTION OF DECK AT EXISTING OPENINGS IN ROOF. CONTRACTOR TO REMOVE EXISTING ANGLE FRAMING AT OPENINGS.

D2. REMOVE SECTION OF EXISTING ROOF MEMBRANE AND ROOF INSULATION TO PROVIDE NEW OPENING THROUGH ROOF FOR VENTILATION AIR FAN INTO MECHANICAL/ELECTRICAL ROOM

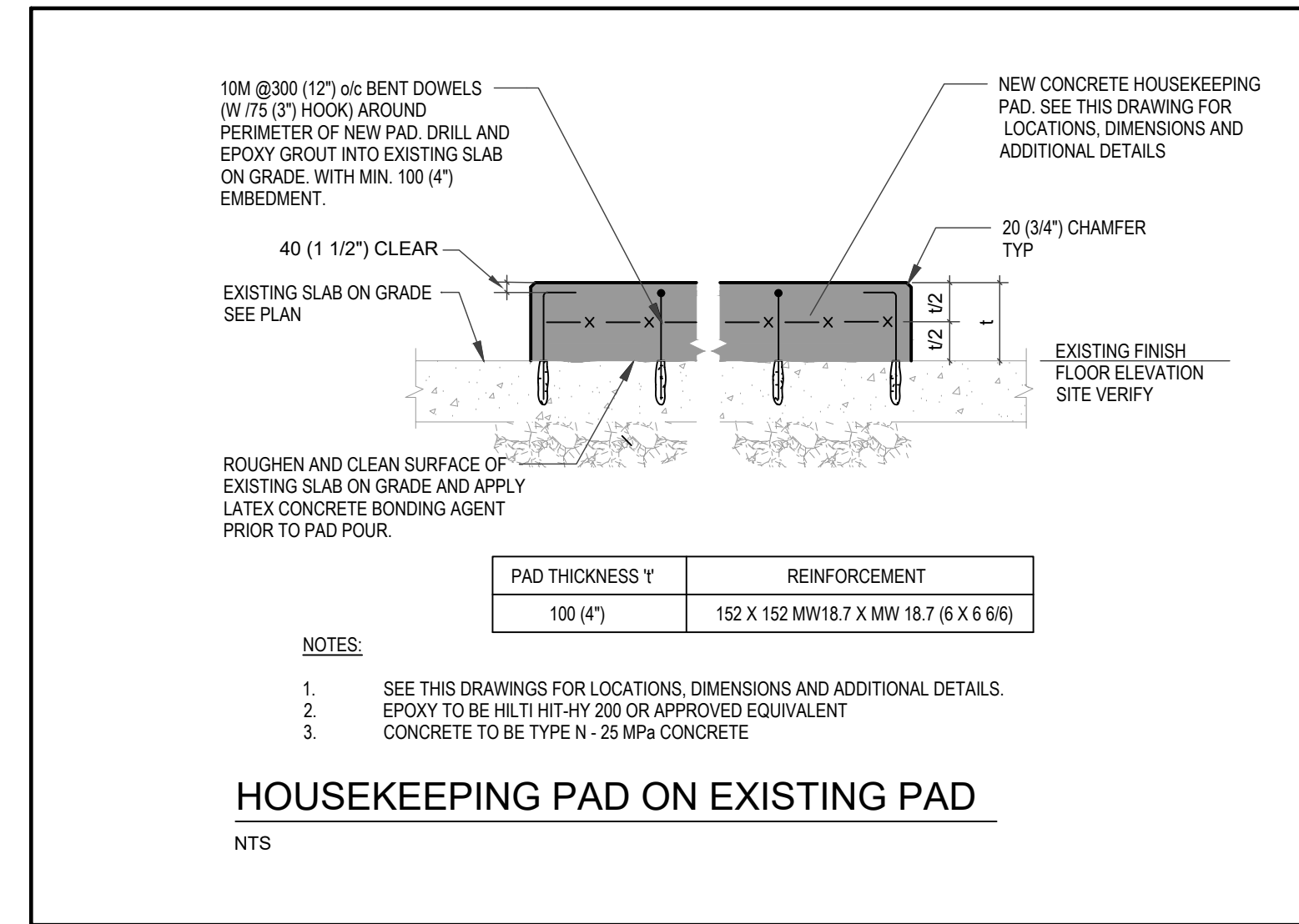
NOTES:

- GENERAL CONTRACTOR TO NEW SUPPORTS AROUND EXISTING OPENINGS AND INDICATED ON STRUCTURAL DETAIL ON THIS DRAWING. PROVIDE NEW STEEL SECTION OF DECK EQUAL TO EXISTING (1 1/2" DEEP X 0.076 mm THICK - TO BE CONFIRMED ON SITE) DECKING OVER EXISTING OPENINGS LEFT IN ROOF BY REMOVAL OF EXISTING BOILER VENTING. NEW DECKING TO EXTENDED TO BEYOND NEW SUPPORT ANGLE FRAMING BELOW OPENING AND AT MINIMUM 6" (150 mm) BEYOND EXISTING OPENING ON ALL DIRECTIONS. SECURE NEW STEEL DECKING WITH 1" (25mm) GALVANIZED #8 SELF TAPPING METAL SCREW ON 6" (150 mm) SPACING.
- GENERAL CONTRACTOR TO ACCOMMODATE AND COORDINATE WITH MECHANICAL CONTRACTOR FOR THE REQUIRED OPENINGS THROUGH THE NEW DECKING TO ACCOMMODATE THE NEW 6"Ø (1500 mm) BOILER VENTS (3 TOTAL) & 4"Ø (1000 mm) VENTILATION DUCT.
- AFTER INSTALLATION OF NEW ROOF DECKING OVER EXISTING OPENINGS, AND THE NEW VENTING, ROOFING CONTRACTOR TO PROVIDE NEW ROOF INSULATION EQUAL IN THICKNESS AND RSI VALUE OF EXISTING ROOF INSULATION. PATCH EXISTING ROOF MEMBRANE WITH NEW EQUAL PRODUCT MEMBRANE MATERIAL. FEATHER NEW ROOFING MEMBRANE INTO EXISTING ROOF AREA. PROVIDE PROPER WEATHER TIGHT SEAL AROUND MECHANICAL ROOFING CONES ETC. NOTE: COORDINATE PROPOSED WORK WITH WRDSB TO ENSURE EXISTING ROOF WARRANTIES ARE NOT COMPROMISED.
- GENERAL CONTRACTOR TO ACCOMMODATE OPENING FOR NEW ROOF MOUNTED SUPPLY AIR FAN AT THIS LOCATION WITH NEW STRUCTURAL FRAMING, THEN PATCH THE EXISTING ROOFING TO SEAL AROUND ROOF CURBING. COORDINATE REQUIRED OPENING SIZE AND LOCATION FOR FAN WITH MECHANICAL CONTRACTOR.
- ANY PIPE, CONDUIT, WIRING ETC. IN THE AREA OF THE NEW S/A FAN OPENING IS TO BE REMOVED AND REINSTALLED TO ALLOW NEW OPENING & REQUIRED STRUCTURAL FRAMING
- COORDINATE LOCATION OF VENTING PIPING WITH MECHANICAL CONTRACTOR TO ENSURE MINIMUM 6'-0" (1.8M) BETWEEN TOP OF VENT STACK AND COMBUSTION AIR INTAKE



SITE KEY PLAN

SCALE - 1/64" = 1'-0"

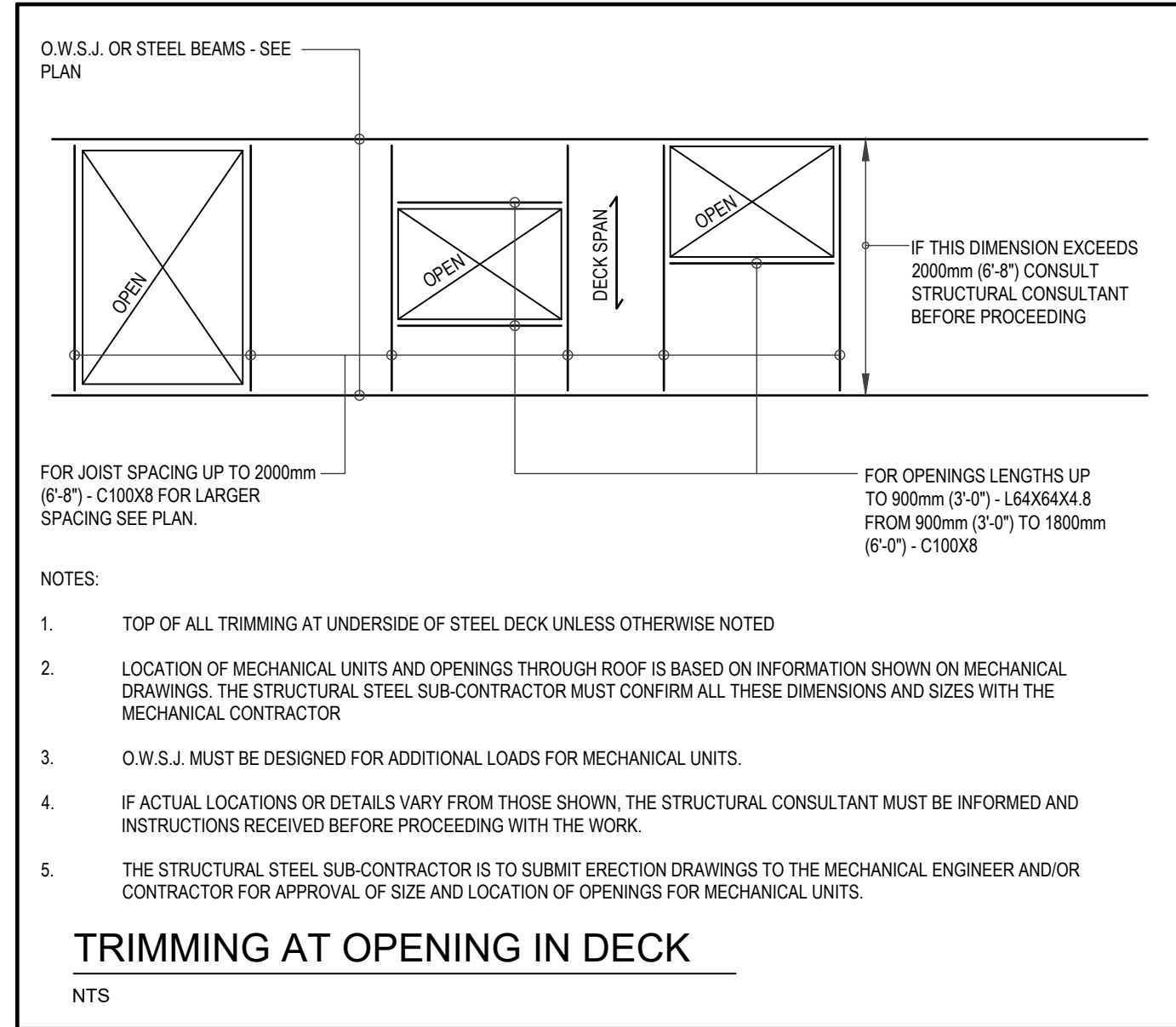


NOTES:

- SEE THIS DRAWINGS FOR LOCATIONS, DIMENSIONS AND ADDITIONAL DETAILS.
- EPOXY TO BE HILTI HIT-HY 200 OR APPROVED EQUIVALENT
- CONCRETE TO BE TYPE N - 25 MPa CONCRETE

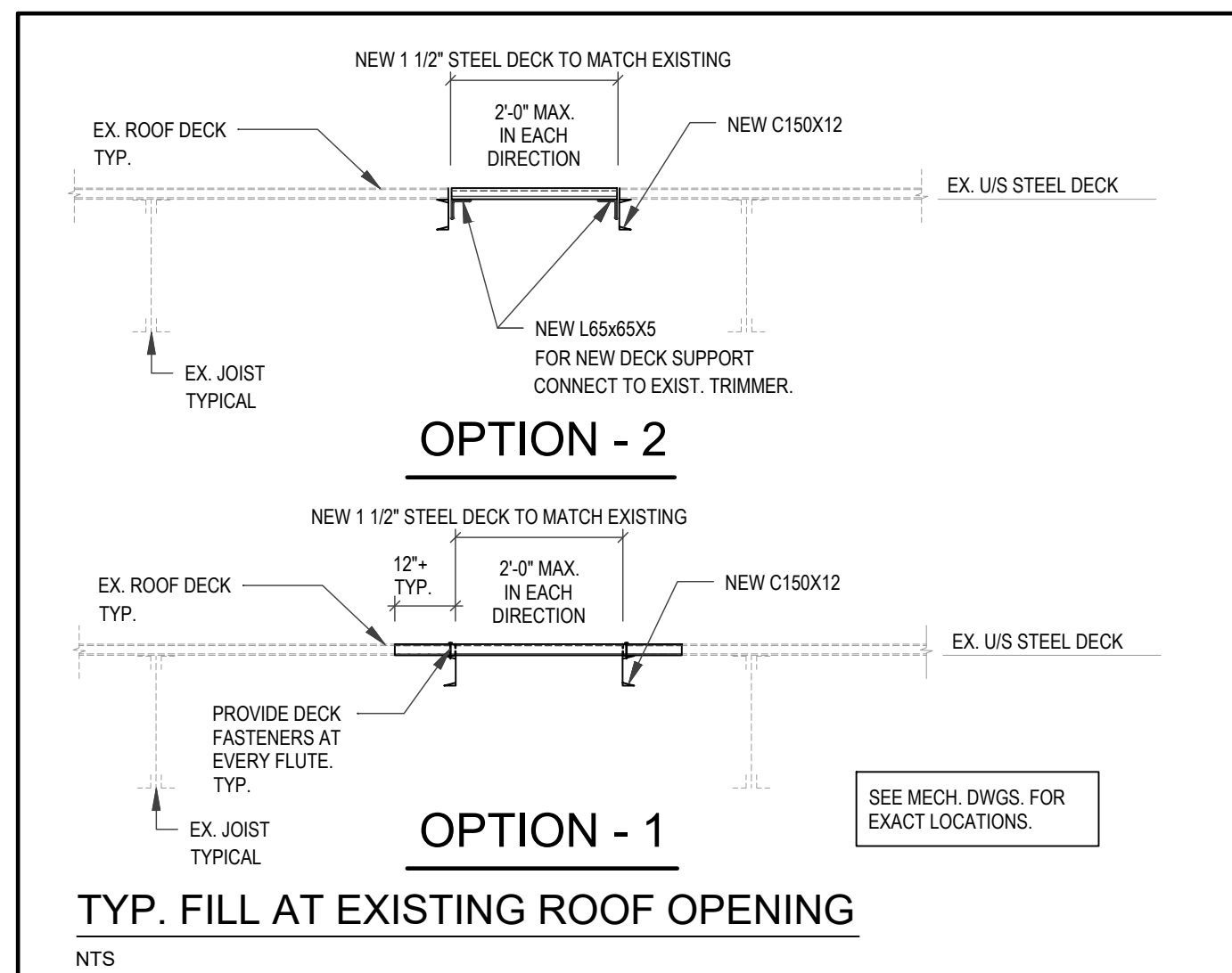
HOUSEKEEPING PAD ON EXISTING PAD

NTS



TRIMMING AT OPENING IN DECK

NTS

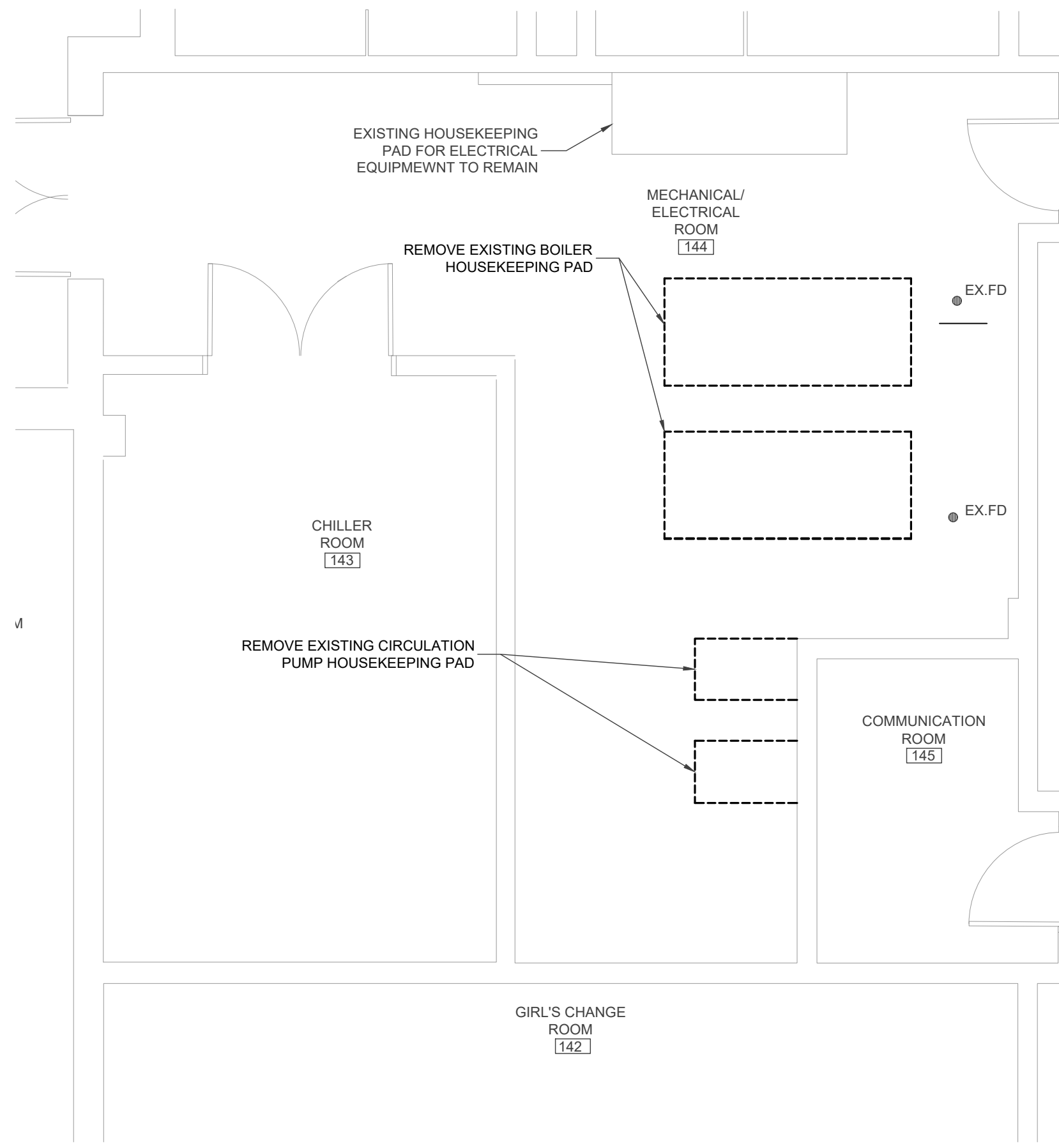


OPTION - 2

OPTION - 1

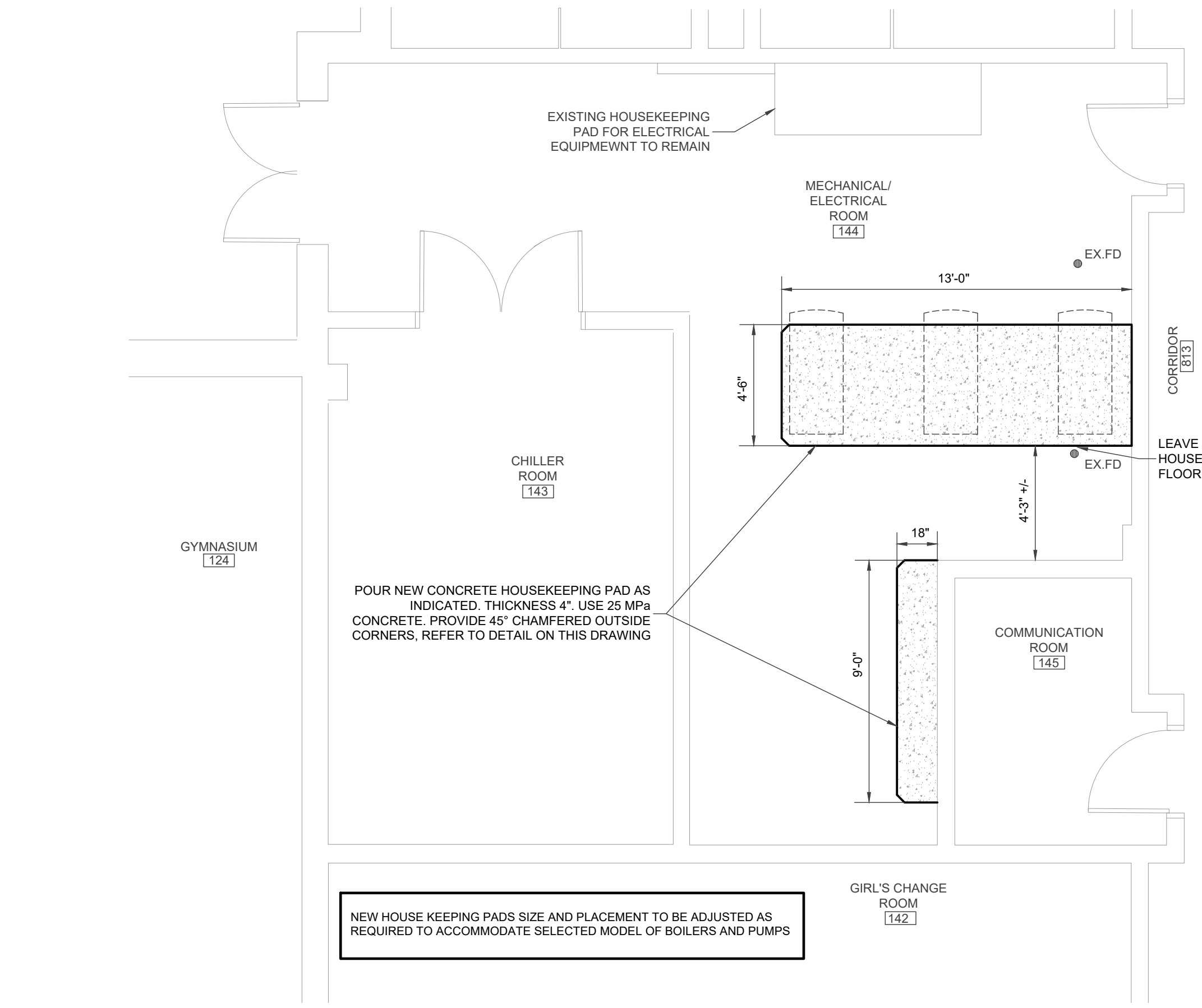
TYP. FILL AT EXISTING ROOF OPENING

NTS



GROUND FLOOR PLAN - HOUSEKEEPING PAD - DEMOLITION

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

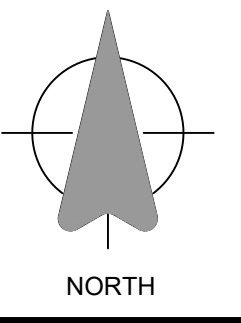


GROUND FLOOR PLAN - NEW HOUSEKEEPING PADS

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

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Revisions

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1	2026.05.29	OWNER'S REVIEW

Approvals

Mechanical

Electrical

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TENDER # **26-7883-RFT**

EXP Project # **LON-26001120-A0**

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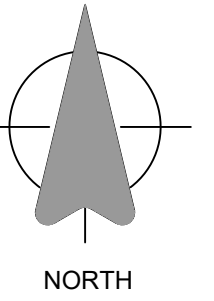
Sheet Title

**BOILER ROOM
 DEMOLITION & NEW**

A100

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MECHANICAL
 LEGEND

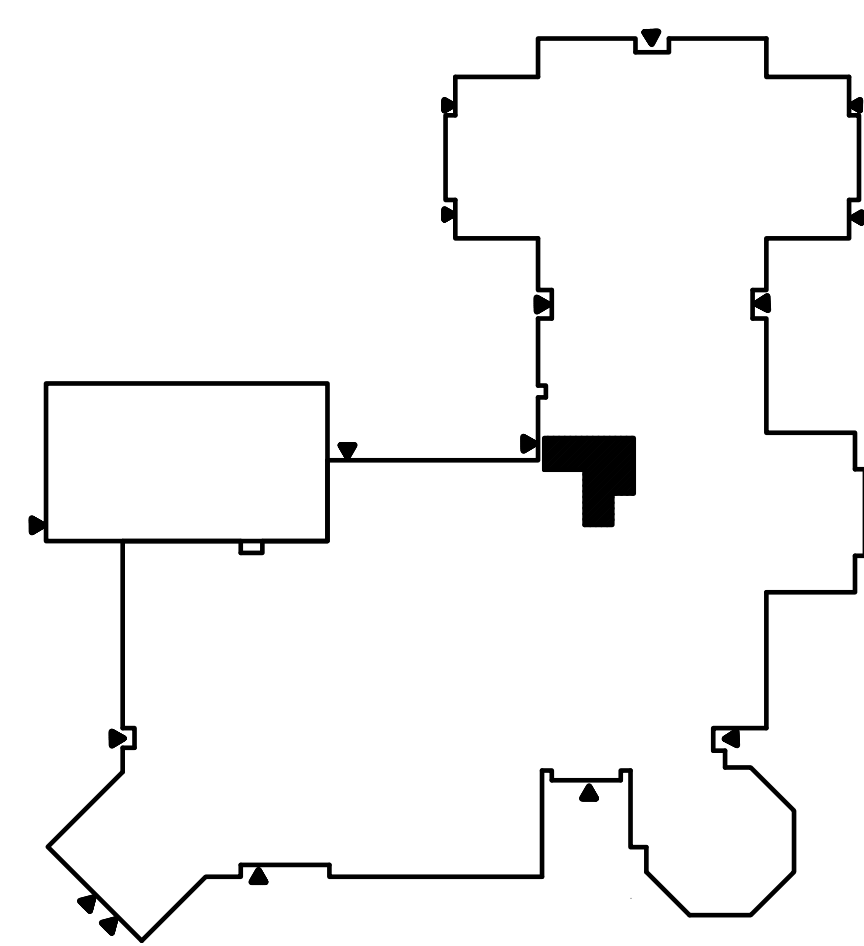
M000

MECHANICAL LEGEND				
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	MOUNTING HEIGHT
PIPING				
EX.S	EXISTING SANITARY PIPING			
S	SANITARY PIPING			
EX.ST	EXISTING STORM PIPING			
ST	STORM PIPING			
	EXISTING COLD WATER PIPING			
	COLD WATER PIPING			
	EXISTING DOMESTIC HOT WATER PIPING			
	DOMESTIC HOT WATER PIPING			
	EXISTING DOMESTIC HOT WATER RECIRCULATING PIPING			
	DOMESTIC HOT WATER RECIRCULATING PIPING			
	EXISTING TEMPERED WATER PIPING			
	TEMPERED WATER PIPING			
V	EXISTING VENT PIPING			
V	VENT PIPING			
EX.SP	EXISTING SPRINKLER PIPING			
SP	SPRINKLER PIPING			
EX.F	EXISTING FIRE PROTECTION PIPING			
F	FIRE PROTECTION PIPING			
EX.G	EXISTING GAS PIPING			
G	GAS PIPING			
EX.STM	EXISTING STEAM PIPING			
STM	STEAM PIPING			
EX.C	EXISTING CONDENSATE PIPING			
C	CONDENSATE PIPING			
EX.D	EXISTING DRAIN PIPING			
D	DRAIN PIPING			
EX.LTHS	EXISTING LOW TEMPERATURE HEATING SUPPLY PIPING			
LTHS	LOW TEMPERATURE HEATING SUPPLY PIPING			
EX.LTHR	EXISTING LOW TEMPERATURE HEATING RETURN PIPING			
LTHR	LOW TEMPERATURE HEATING RETURN PIPING			
EX.HTHS	EXISTING HIGH TEMPERATURE HEATING SUPPLY PIPING			
HTHS	HIGH TEMPERATURE HEATING SUPPLY PIPING			
EX.HTHR	EXISTING HIGH TEMPERATURE HEATING RETURN PIPING			
HTHR	HIGH TEMPERATURE HEATING RETURN PIPING			
EX.HPS	EXISTING HEAT PUMP SUPPLY PIPING			
HPS	HEAT PUMP SUPPLY PIPING			
EX.HPR	EXISTING HEAT PUMP RETURN PIPING			
HPR	HEAT PUMP RETURN PIPING			
EX.GLY.HS	EXISTING GLYCOL HEATING SUPPLY PIPING			
GLY.HS	GLYCOL HEATING SUPPLY PIPING			
EX.GLY.HR	EXISTING GLYCOL HEATING RETURN PIPING			
GLY.HR	GLYCOL HEATING RETURN PIPING			
EX.LIQ	EXISTING LIQUID REFRIGERATION LINE			
LIQ	LIQUID REFRIGERATION LINE			
EX.SUC	EXISTING SUCTION REFRIGERATION LINE			
SUC	SUCTION REFRIGERATION LINE			
EX.CHWS	EXISTING CHILLED WATER SUPPLY			
CHWS	CHILLED WATER SUPPLY			
EX.CHWR	EXISTING CHILLED WATER RETURN			
CHWR	CHILLED WATER RETURN			
/ /	INDICATES PIPING BELOW FLOOR			
VALVES				
	CHECK VALVE			
	CHECK VALVE & BALL DRIP			
	DOUBLE CHECK VALVE ASSEMBLY BACKFLOW PREVENTER			MINIMUM 12" (300mm) AFF per CSA B64.10
	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER			MINIMUM 12" (300mm) AFF per CSA B64.10
	BALL VALVE			
	GATE VALVE			
	THERMOSTATIC MIXING VALVE			
	GLOBE VALVE			
	ELECTRICALLY SUPERVISED O.S & Y VALVE			
	TWO-WAY CONTROL VALVE			
	RADIATION CONTROL VALVE			
	MIXING VALVE			
	BACKFLOW VALVE			
	PRESSURE REDUCING VALVE			
	CIRCUIT BALANCE VALVE			
	THREE-WAY CONTROL VALVE			
	TEMPERATURE & PRESSURE RELIEF VALVE			
	AUTOMATIC AIR VENT			
	GAS COCK (SHUT OFF VALVE)			
	GAS METER			
	FLOW SWITCH			
	DOMESTIC WATER METER			
	IN-LINE PUMP			
	STRAINER			
	UNION			
	THERMOMETER			
	PRESSURE GAUGE			
	PRESSURE AND TEMPERATURE GAUGE			
	FROST PROOF WALL HYDRANT			
	HOSE BIBB			
CLEAN OUTS AND DRAINS				
	FLEXIBLE CONNECTION			
	CLEAN OUT (FLOOR MOUNTED)			
	CLEAN OUT (CEILING MOUNTED)			
	FLOOR DRAIN			
	HUB DRAIN			
	FUNNEL FLOOR DRAIN			
	FLOOR DRAIN			
	HUB DRAIN			
	FUNNEL FLOOR DRAIN			
	ROOF DRAIN			
SPRINKLER				
	UPRIGHT SPRINKLER			
	PENDENT SPRINKLER			
	SEMI RECESSED SPRINKLER			
	SIDEWALL SPRINKLER			
	EXTENDED COVERAGE SIDEWALL SPRINKLER			
	CONCEALED SPRINKLER			
HVAC				
	FIRE DAMPER			
	COMBINATION SMOKE / FIRE DAMPER			
	MOTORIZED DAMPER			
	BALANCING DAMPER			
	BACK DRAFT DAMPER			
	SPLITTER DAMPER			
	THERMOSTAT			48" (1200mm) AFF per 3.8.1.5, O.B.C
	HUMIDISTAT			48" (1200mm) AFF per 3.8.1.5, O.B.C
	SENSOR			48" (1200mm) AFF per 3.8.1.5, O.B.C
	SENSOR			
	FAN SPEED CONTROLLER			48" (1200mm) AFF per 3.8.1.5, O.B.C
	NEW CONNECTION TO EXIST. PIPES/HVAC			
	OPEN ENDED DUCT			
FIRE PROTECTION				
	FIRE HOSE CABINET			
	FIRE EXTINGUISHER CABINET			
	FIRE EXTINGUISHER			40 lbs (18 kg) OR LESS, NOT MORE THAN 60" (1500mm) AFF AS PER 6.2.4, O.F.C. GREATER TO 40 lbs (18 kg) NOT MORE THAN 44" (1100mm) AFF AS PER 6.2.4, O.F.C.
	FIRE DEPARTMENT PUMPER CONNECTION			NOT LESS THAN 12" (300mm) AND NOT MORE THAN 36" (900mm) ABOVE GROUND LEVEL PER 3.2.5.16, O.B.C.

LEGEND NOTES:

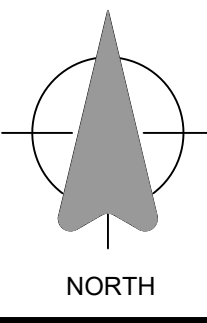
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SITE KEY PLAN
 SCALE - 1/64" = 1'-0"

DEMOLITION NOTES:
 D1. REMOVE EXISTING GAS FIRED BOILERS C/W ASSOCIATED TRIM, VENTING, PIPING, CONTROLS, CIRCULATION PUMPS, ETC.
 D2. DISCONNECT EXISTING HOT & SOFTENED COLD CONNECTIONS AND DROPS TO WATER HEATER AS REQUIRED TO CREATE MORE HEAD ROOM AT WATER HEATER, REFER TO DRAWING M102



Revisions

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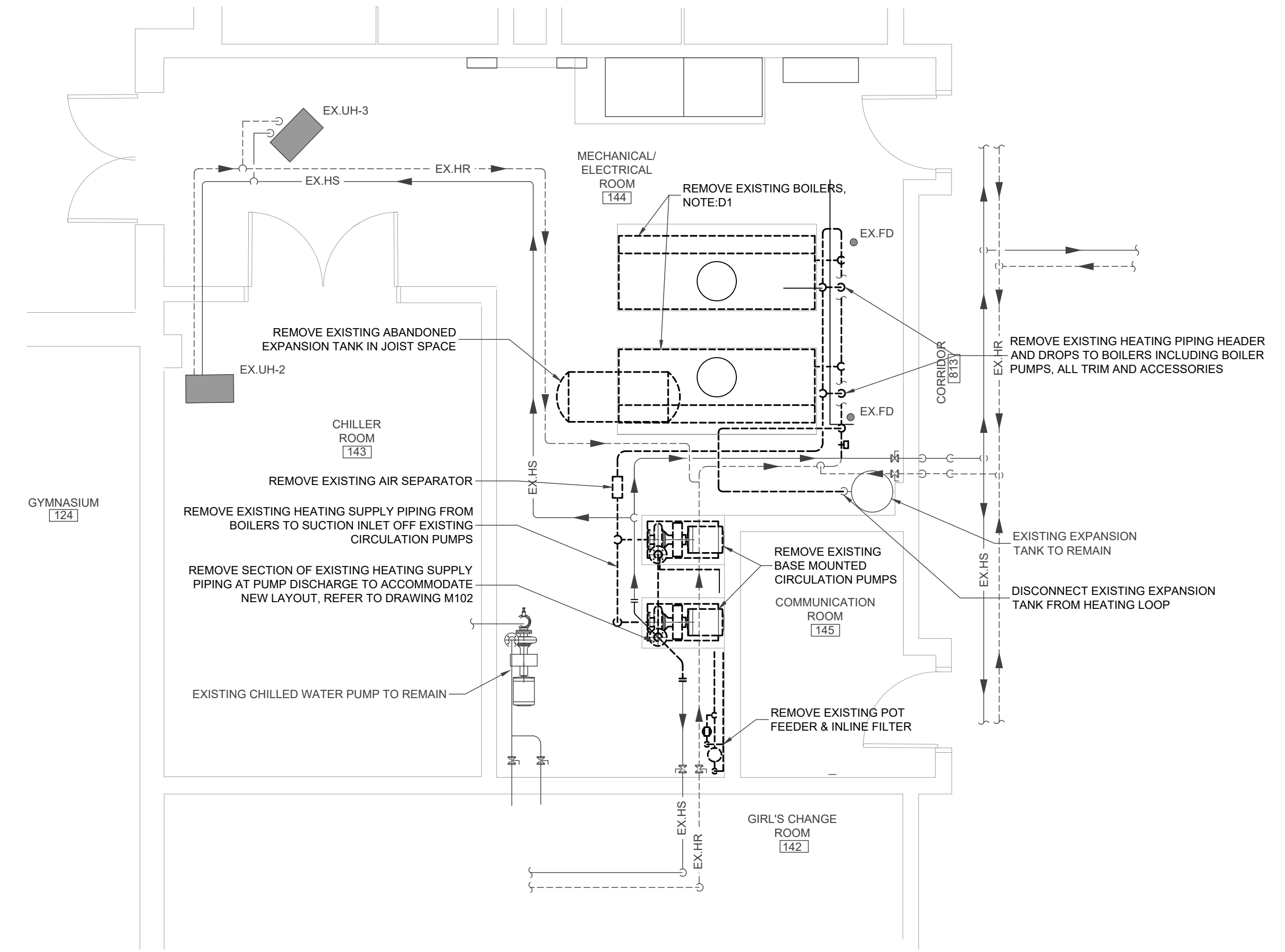
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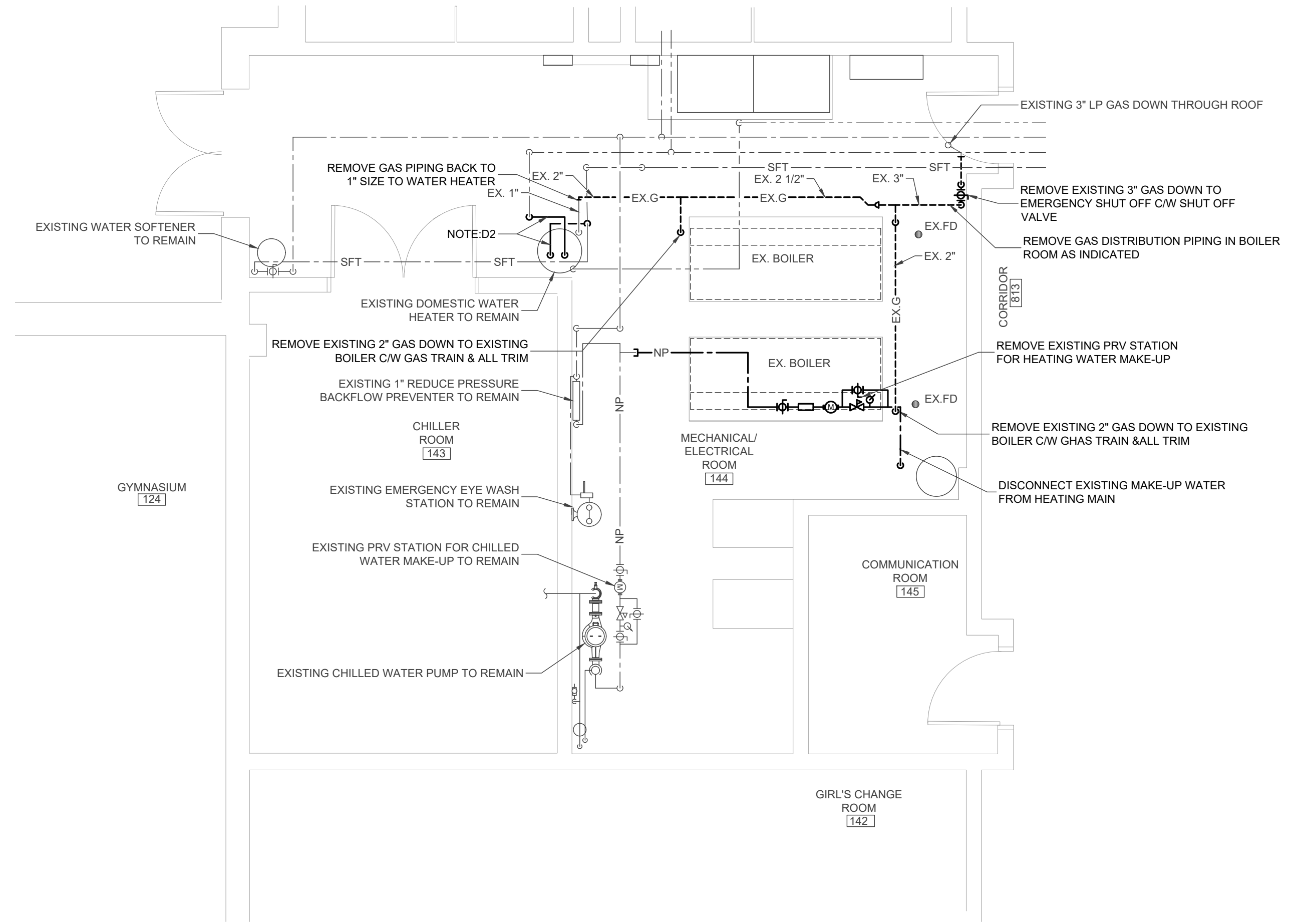
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Sheet Title
**BOILER ROOM
 MECHANICAL PIPING
 DEMOLITION**

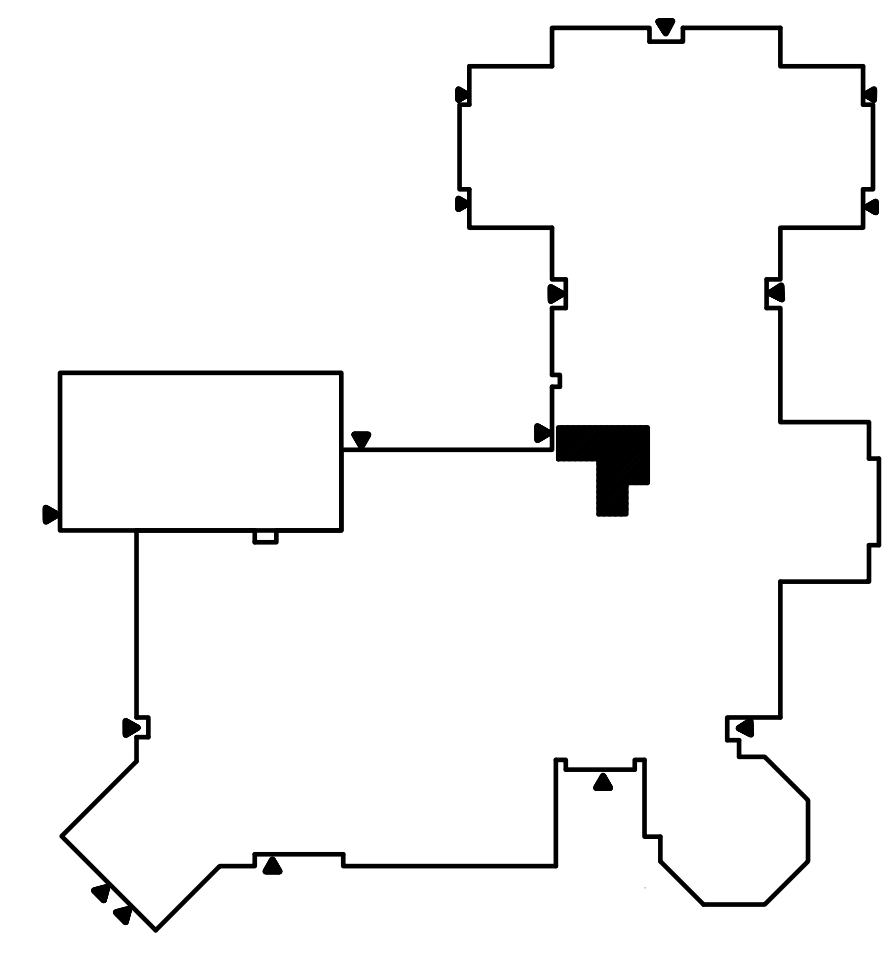
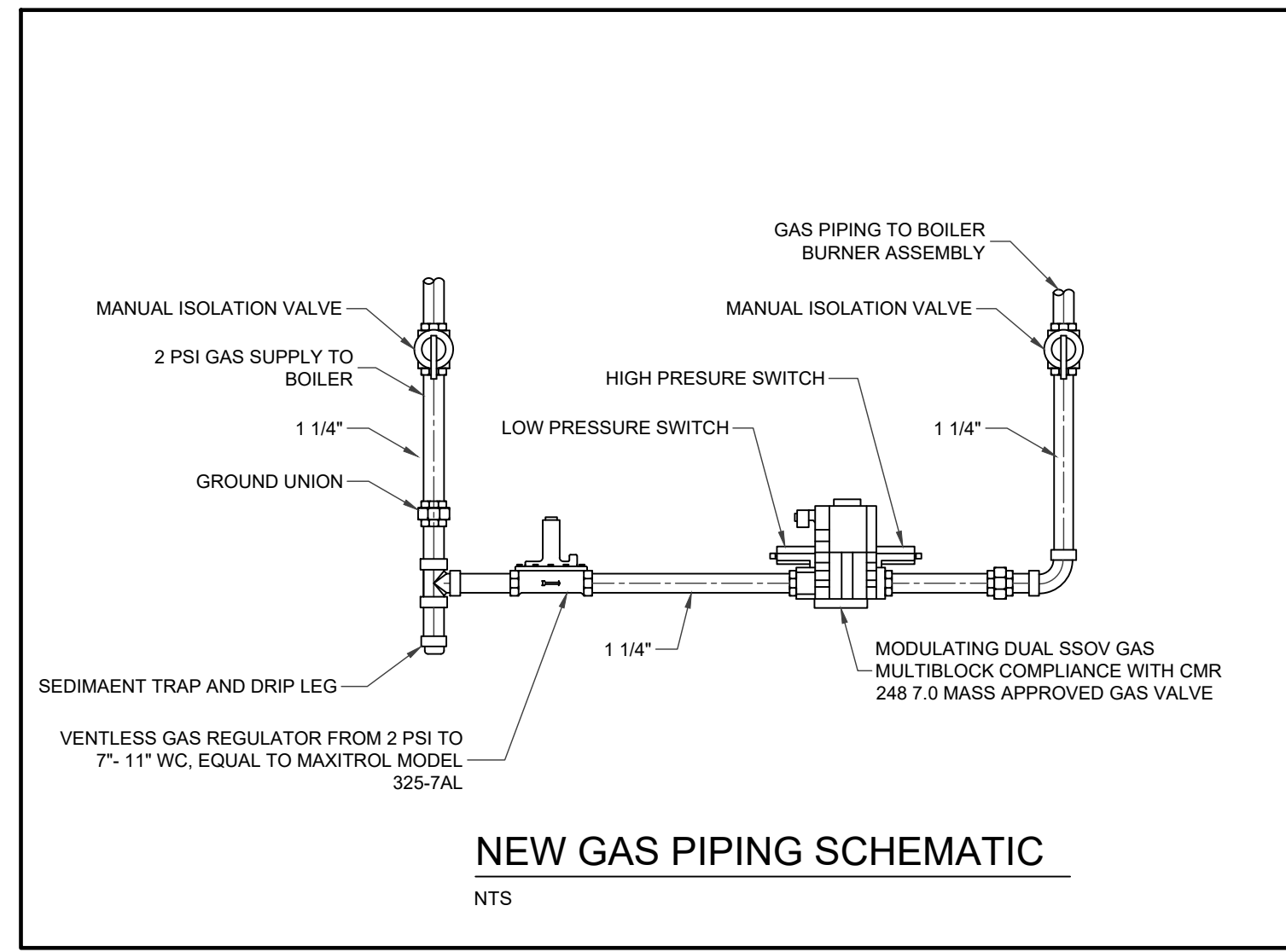
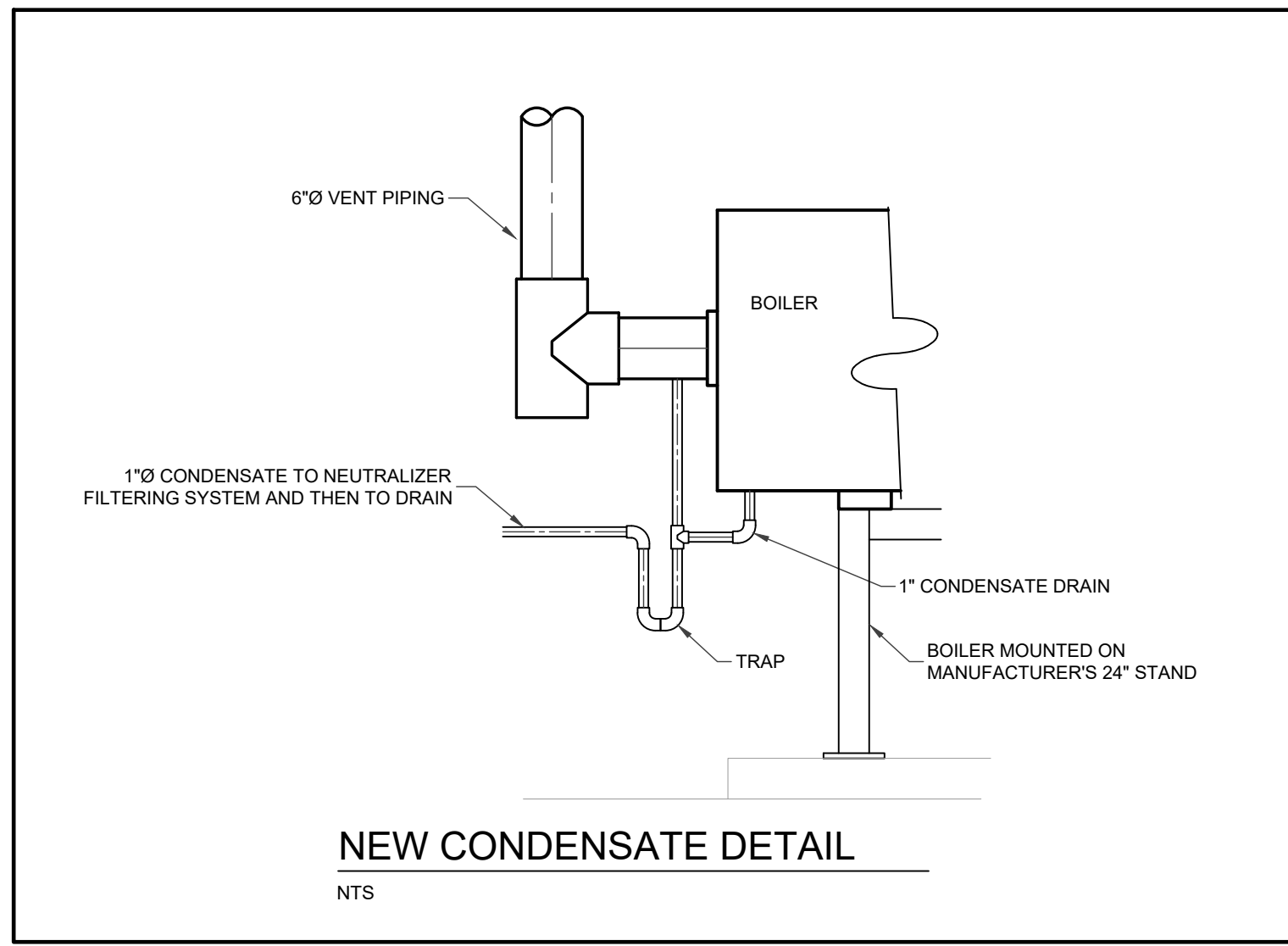
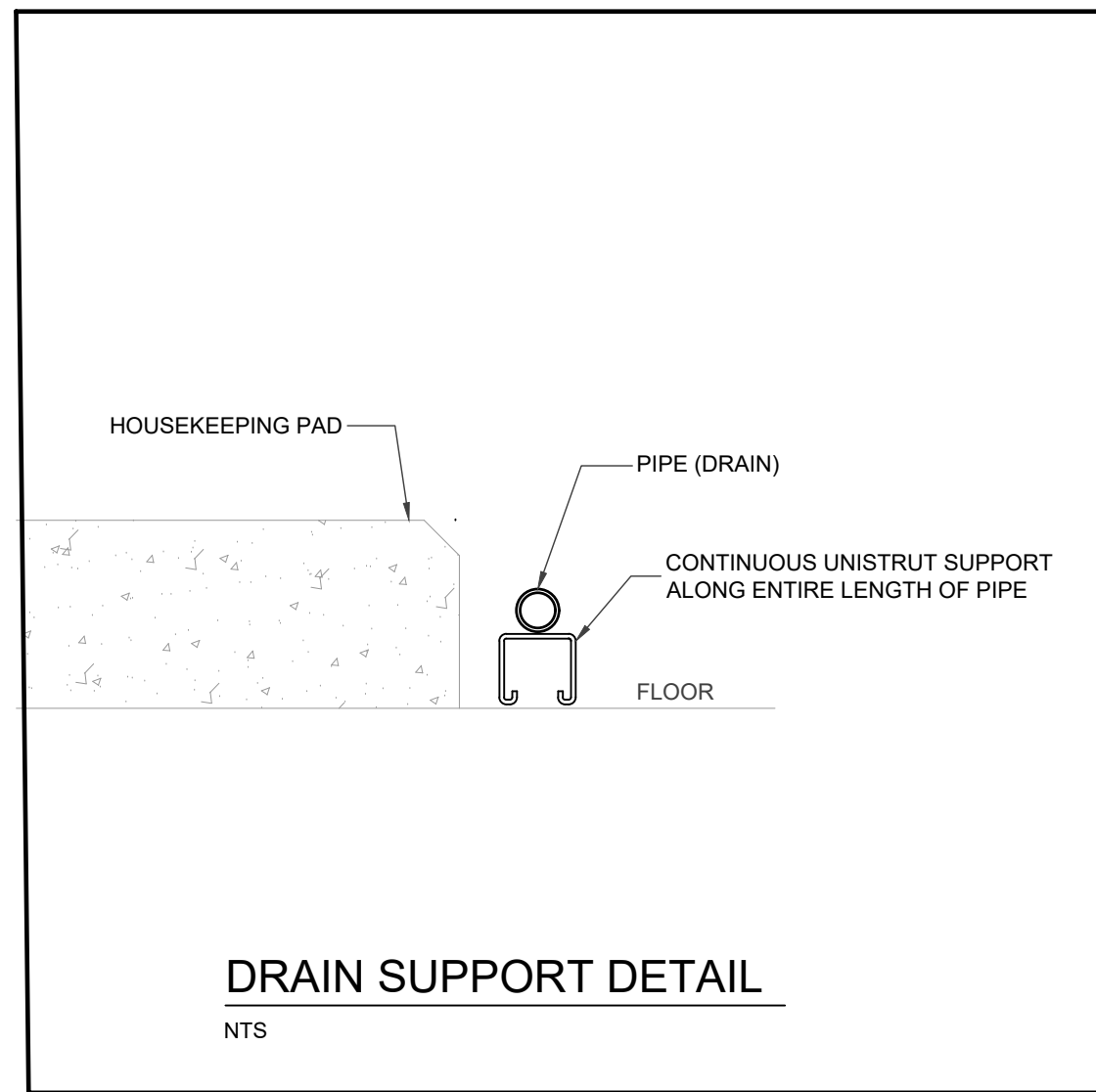
M100



GROUND FLOOR PLAN - MECHANICAL/ ELECTRICAL ROOM - PIPING DEMOLITION
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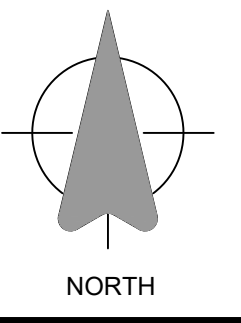


GROUND FLOOR PLAN - MECHANICAL/ ELECTRICAL ROOM - HVAC DEMOLITION
 SCALE - 1/4" = 1'-0"



- GENERAL INSTALLATION NOTES:**
1. BOILER DRAIN- PROVIDE HOSE CONNECTION
 2. PRESSURE RELIEFS ARE TO BE PIPED TO EXISTING DRAIN
 3. ALL PIPING RUN ALONG THE FLOOR (CONDENSATE, DRAINS ETC.) ARE TO BE CRADLED WITH CONTINUOUS UNISTRUT.
 4. SHUT-OFF SWITCH- RED PUSH BUTTON (E-STOP) FOR BOILERS IS TO BE LOCATED AT BOILER ROOM ENTRANCE. COORDINATE WITH ELECTRICIAN, PROVIDE LAMACOID LABEL.
 5. ALL BOILERS ARE TO BE PROVIDED WITH LWCO AUTOSOT SO BOILER(S) WILL RESATRPT ON ITS OWN AFTER A POWER OUTAGE.
 6. HYDRONIC PIPE INSULATION: DO NOT INSULATE UNIONS, VALVES, END PF WYE STRAINERS AND OTHER DEVICES REQUIRING SERVICE
 7. BOILER & FLOOR MOUNTED PUMP SERVICE VALVES ARE TO BE LOCATED WITHIN 6 FEET (1830 MM) OF FLOOR.
 8. ALL SERVICEABLE DEVICES MOUNTED IN PIPING AT CEILING LEVEL ARE TO BE LOCATED WHERE SERVICEABLE WITH A LADDER.
 9. TEMPORARY FILTERS ARE TO BE INSTALLED IN STRAINERS DURING CONSTRUCTION PERIOD, FLUSHING AND CLEANING. FINAL STRAINER FILTERS TO BE INSTALLED AT PROJECT TURNOVER TO OWNER.
 10. BOILERS ARE TO BE PROVIDED WITH LOCAL SWITCH (MANUAL/BAS) INSIDE ITS COVER TO BYPASS BAS OPERATION AND HAVE THE BOILER OPERATE IN MANUAL MODE.
 11. THE CONTROL OF THE BOILER PUMPS AND INTERLOCK WITH THE BOILERS SHALL BE FROM THE BOILER AND NOT THE BAS, THIS SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

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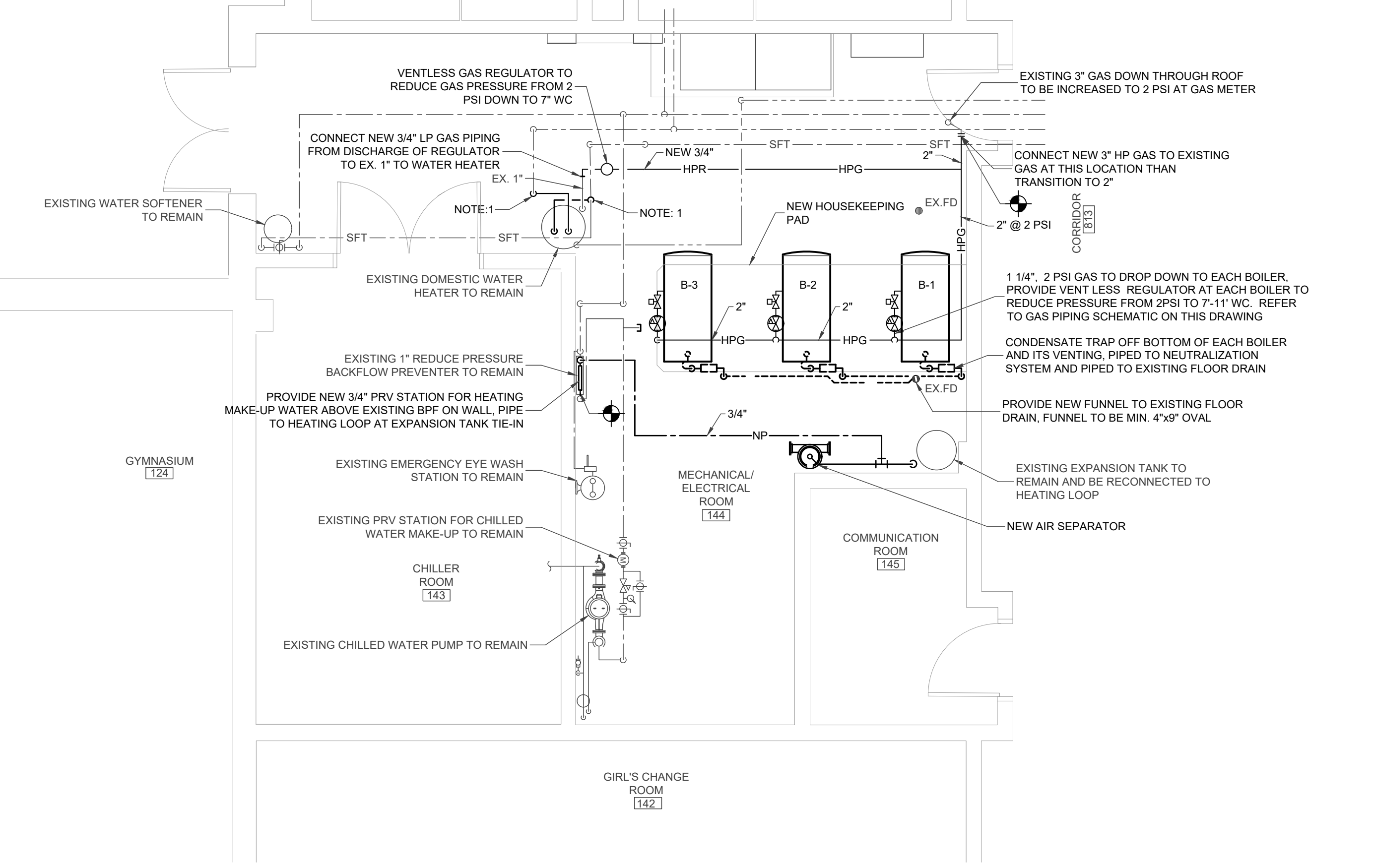
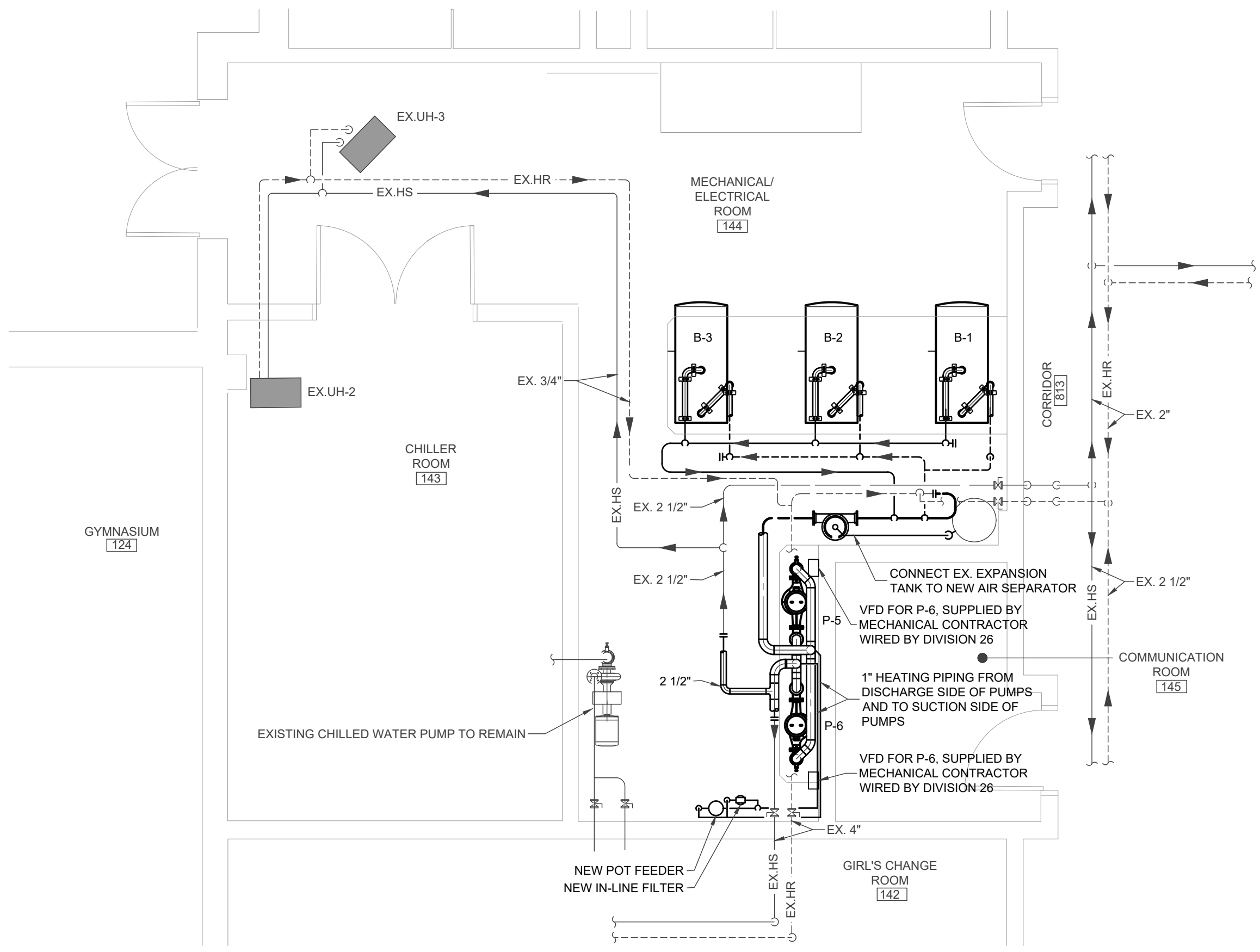
EXP Project # LON-26001120-A0

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Date: JUN. 4, 2026 Scale: AS SHOWN

Sheet Title

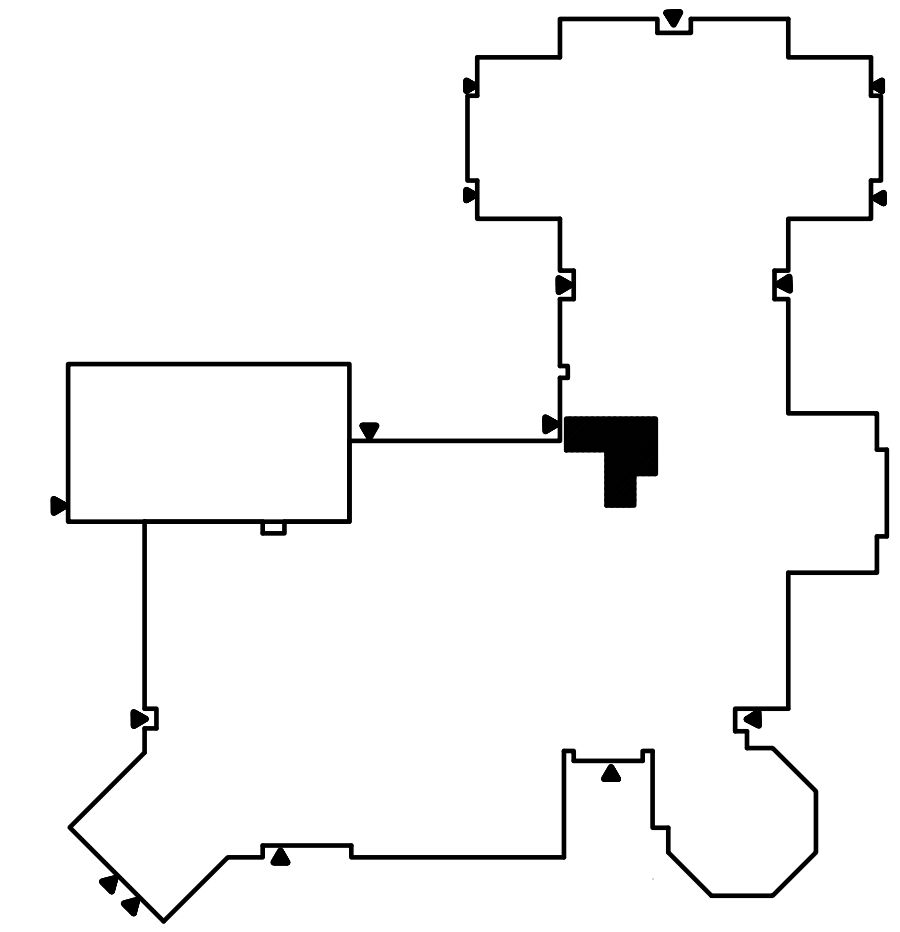
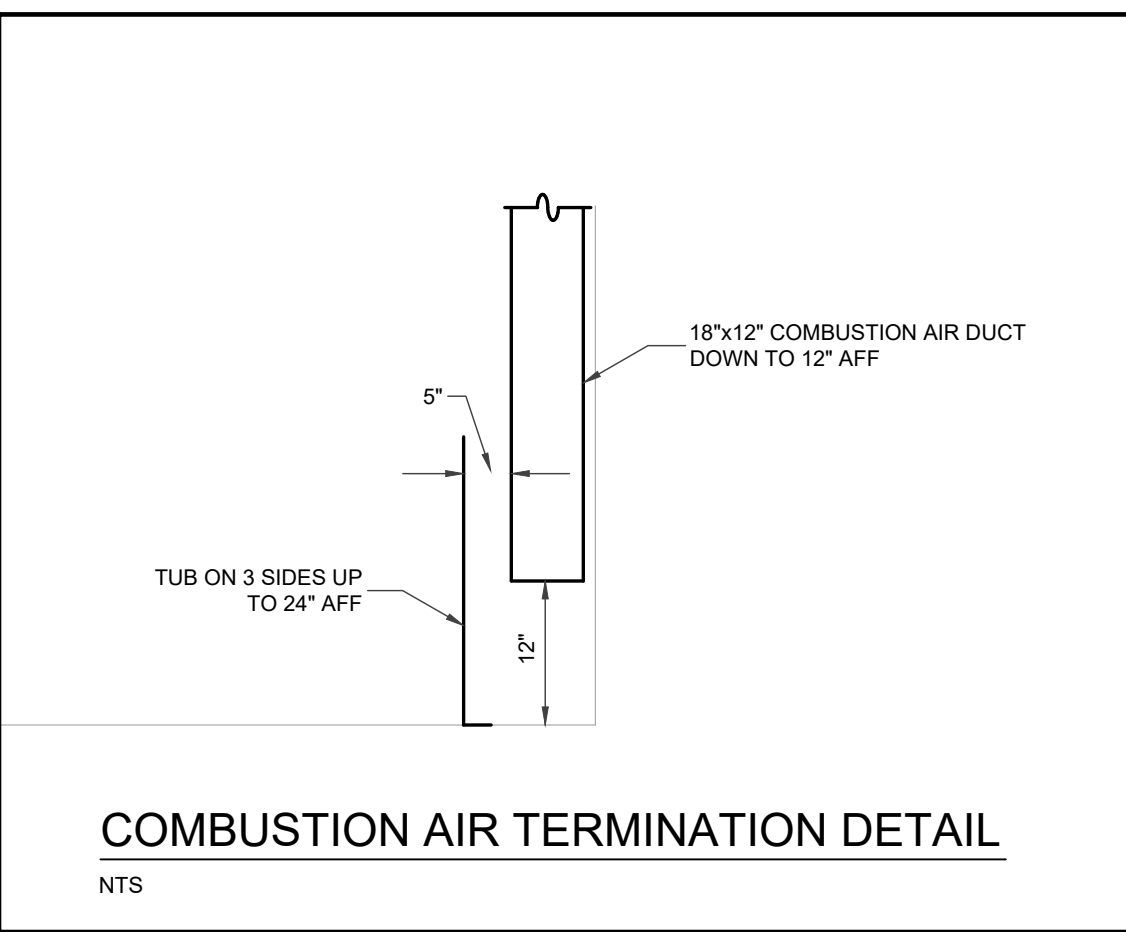
BOILER ROOM MECHANICAL PIPING NEW



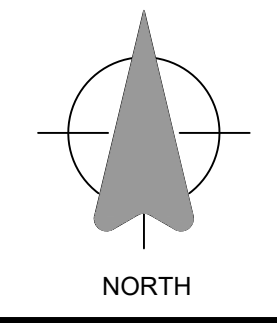
- NOTES:**
1. REWORK EXISTING HOT AND COLD WATER PIPING DROPS DOWN TO WATER HEATER TO PROVIDE MORE HEAD ROOM, MIN 7'-0 AFF.

M101

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SITE KEY PLAN
 SCALE - 1/64" = 1'-0"



Revisions

NO.	DATE	DESCRIPTION
2	2026.06.04	ISSUED FOR TENDER
1	2026.05.29	OWNER'S REVIEW

Approvals



Electrical

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Project Title
**ELGIN STREET P.S. -
 BOILER PLANT & MUA
 UPGRADE**
 685 ELGIN ST. N,
 CAMBRIDGE, ONTARIO

TENDER # **26-7883-RFT**

EXP Project # **LON-26001120-A0**

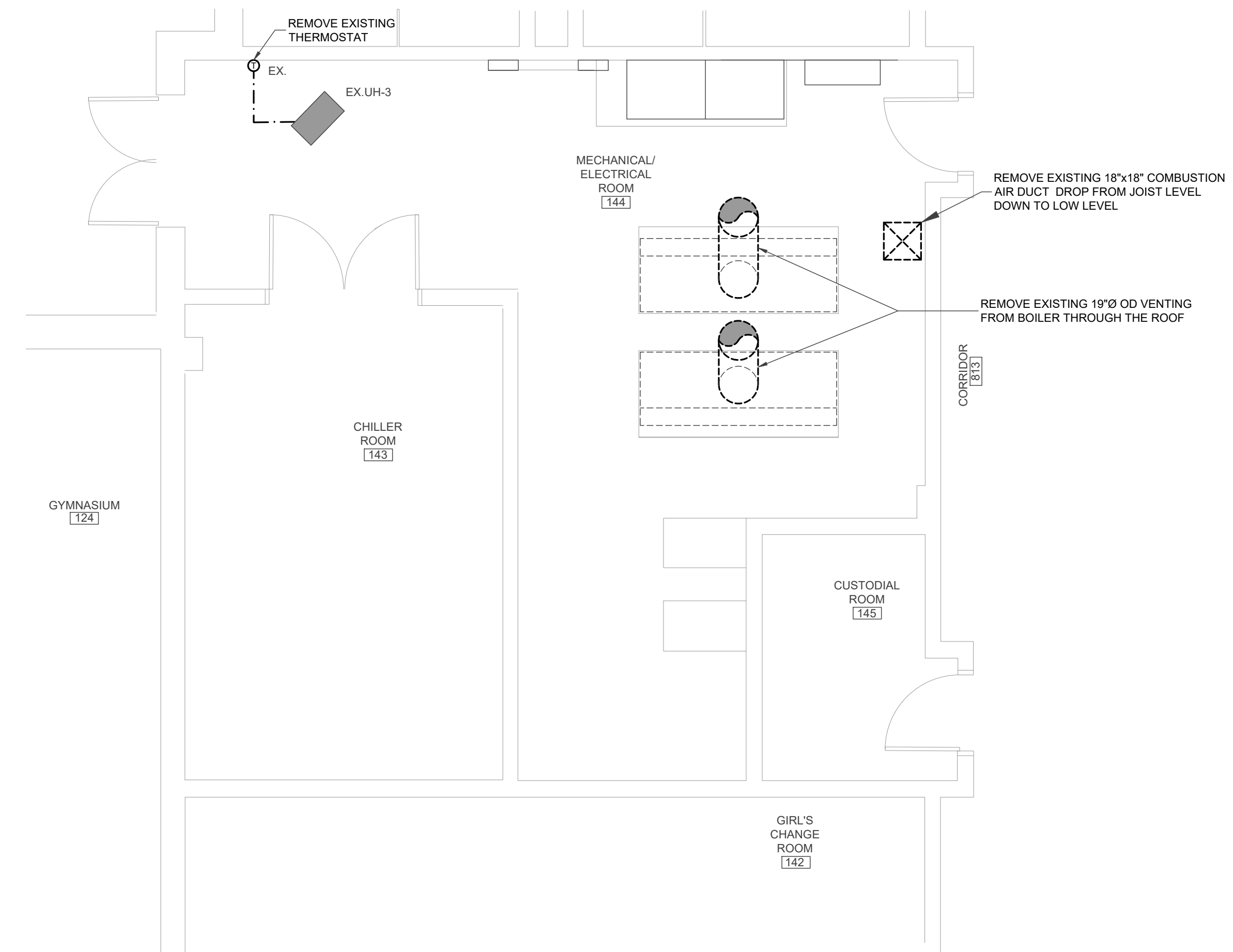
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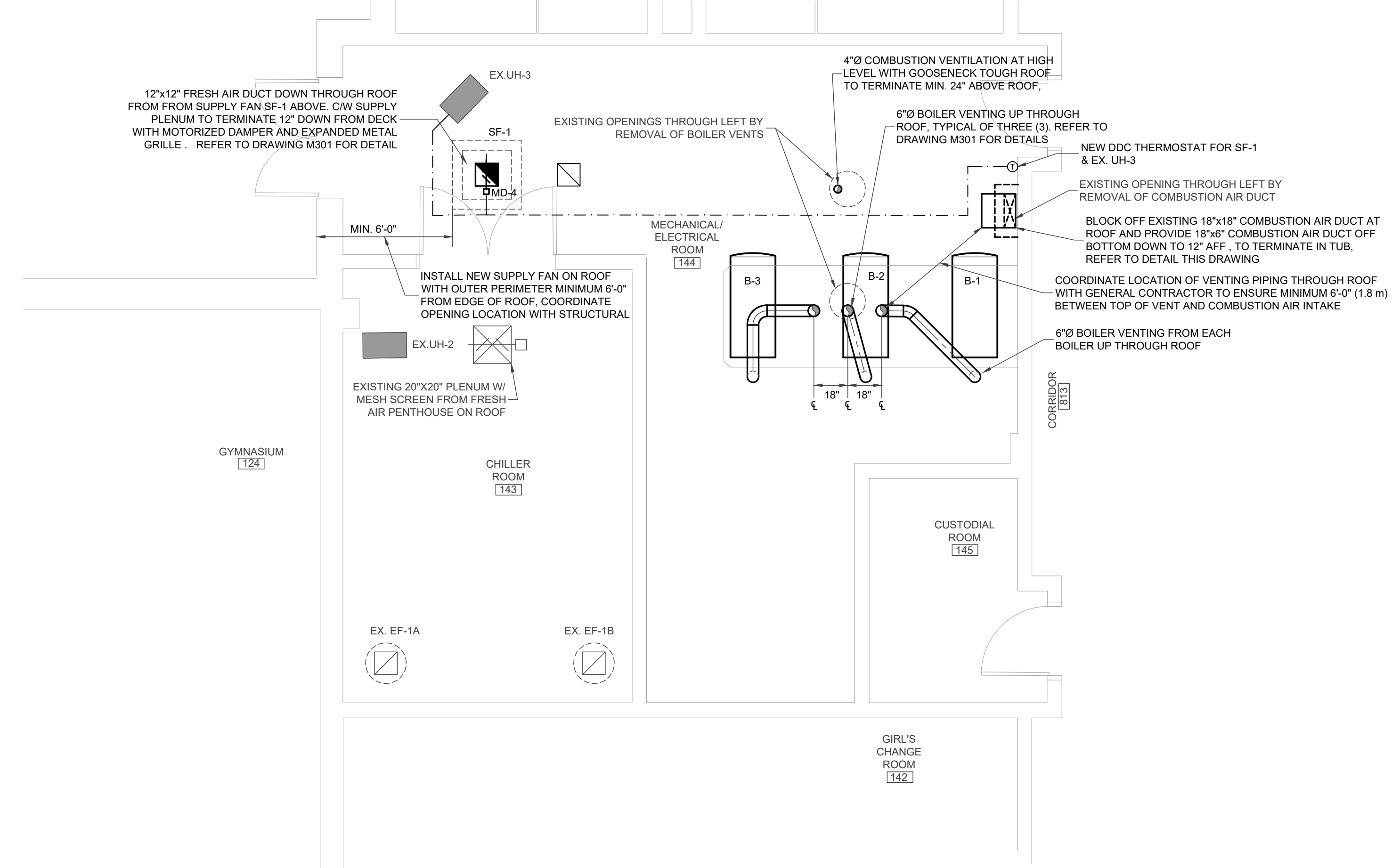
Sheet Title

**BOILER ROOM
 MECHANICAL - HVAC
 DEMO & NEW**

M200

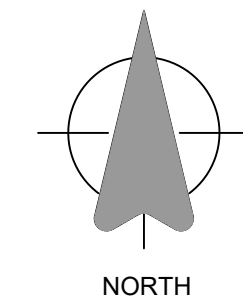


GROUND FLOOR PLAN - MECHANICAL/ ELECTRICAL ROOM - DEMOLITION
 SCALE - 1/4" = 1'-0"



GROUND FLOOR PLAN - MECHANICAL/ ELECTRICAL ROOM - NEW
 SCALE - 1/4" = 1'-0"

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Approvals

NO.	DATE	DESCRIPTION

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Project Title
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EXP Project # **LON-26001120-A0**

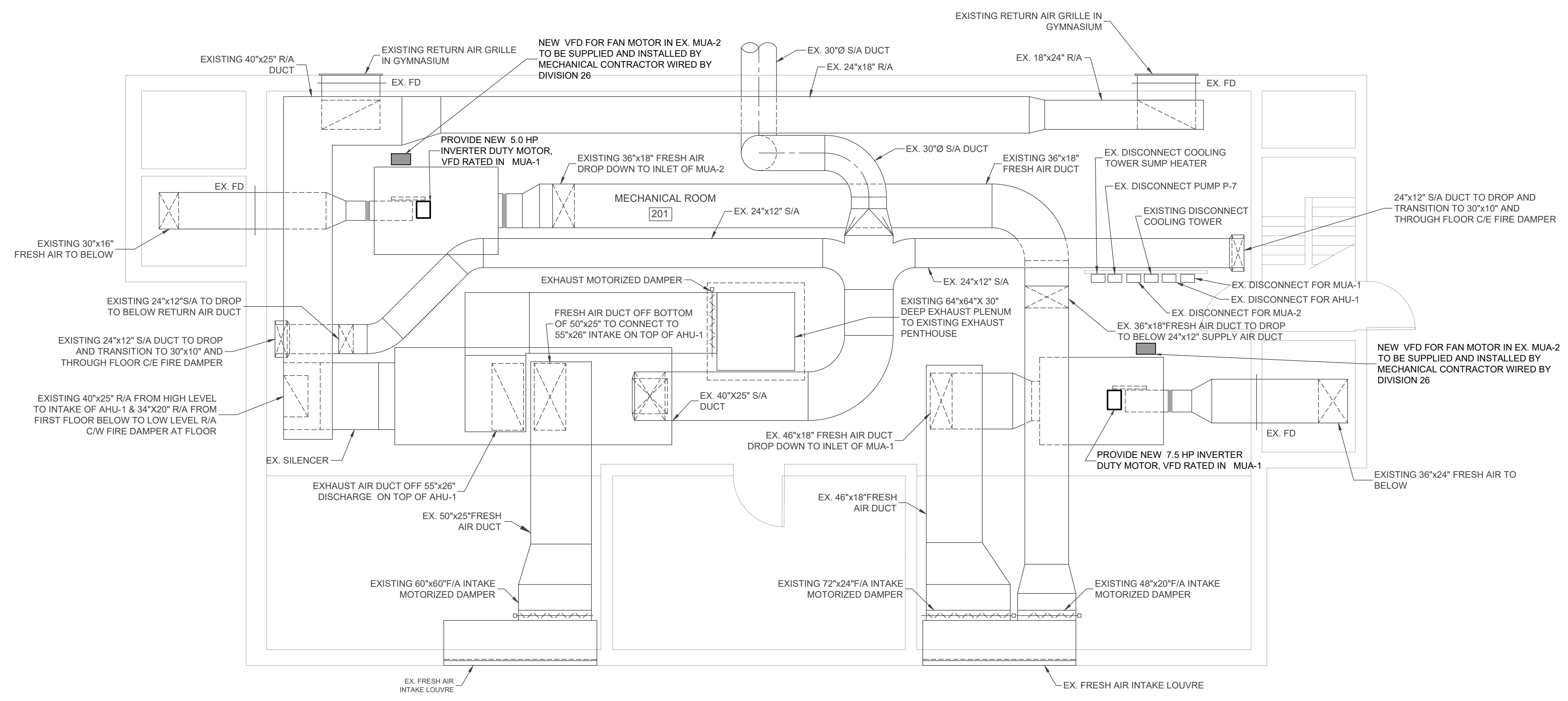
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Date: **JUN. 4, 2026** Scale: **AS SHOWN**

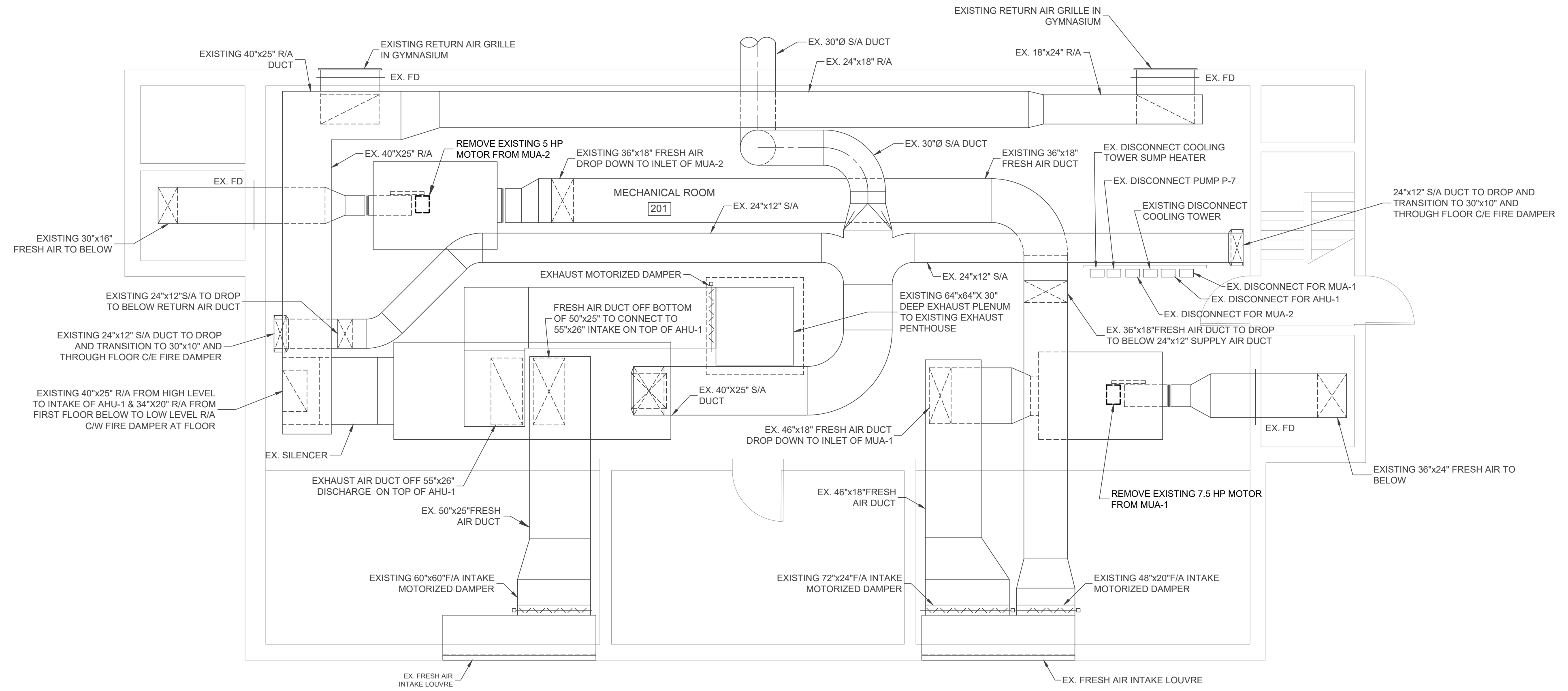
Sheet Title

**MEZZANINE FAN
 ROOM - MECHANICAL
 DEMO & NEW**

M201



MEZZANINE FLOOR PLAN - MECHANICAL FAN ROOM - NEW
 SCALE - 1/8" = 1'-0"



MEZZANINE FLOOR PLAN - MECHANICAL FAN ROOM - DEMOLITION
 SCALE - 3/16" = 1'-0"

SITE KEY PLAN

SCALE - 1/64" = 1'-0"

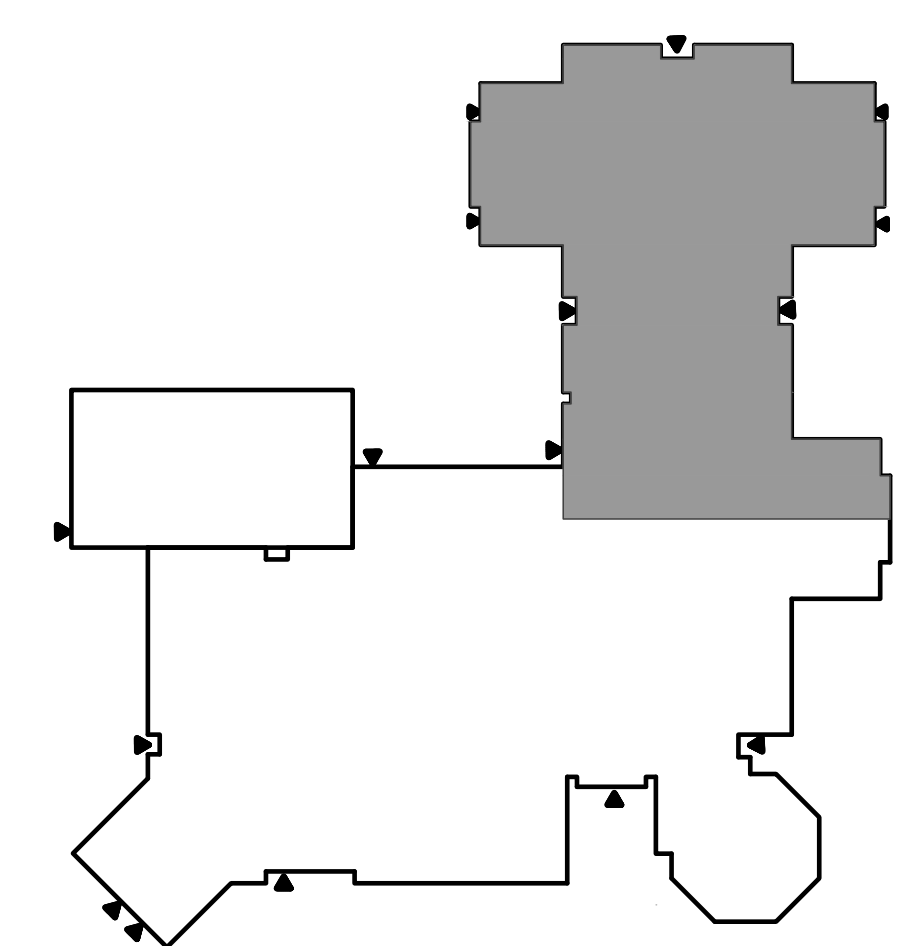
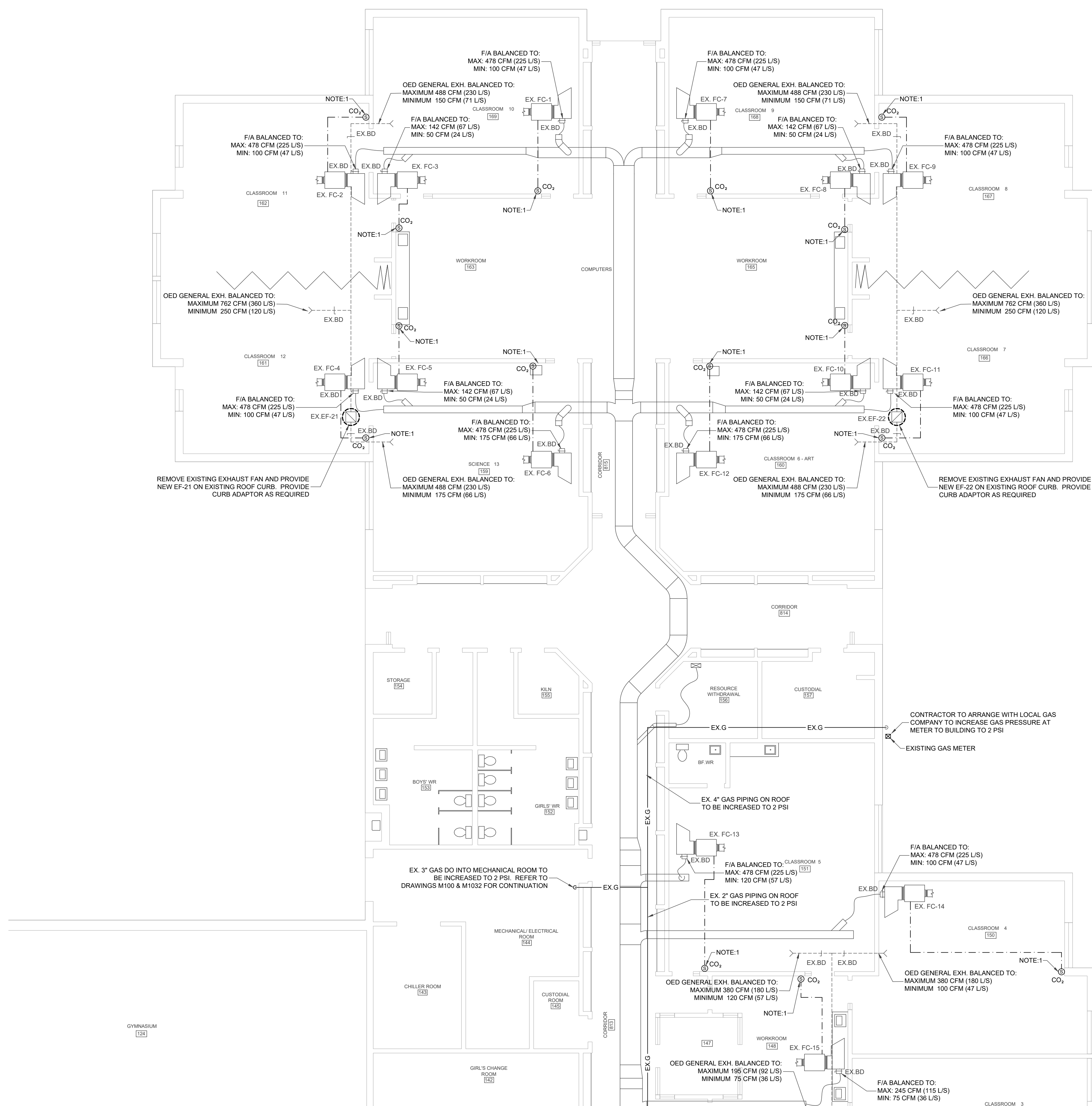
NOTES:

- CONTRACTOR TO PROVIDE NEW VFD'S FOR MUA-1 & 2. THE VFD'S ARE TO ADJUST FRESH AIR FLOW FOR MUA UNITS FROM THEIR MAXIMUM SUPPLY AIR DOWN TO THE MINIMUM FRESH AIR REQUIREMENTS AS FOLLOWS:

MUA-1: MAXIMUM AIR FLOW 7,500 CFM
 MINIMUM AIR FLOW 2,100 CFM

MUA-2: MAXIMUM AIR FLOW 4,300 CFM
 MINIMUM AIR FLOW 1,335 CFM (SCHOOL OCCUPIED TIMES)
 MINIMUM AIR FLOW 1,040 CFM (DAYCARE MODE)

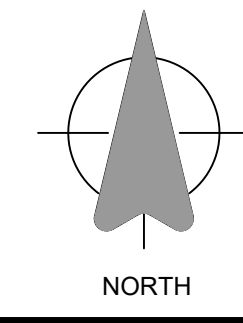
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SITE KEY PLAN
 SCALE - 1/8" = 1'-0"

- NOTES:**
1. PROVIDE NEW COMBINATION ROOM THERMOSTAT/ CO₂ IN PLACE OF EXISTING THERMOSTAT. THE EXISTING LOCATIONS ARE BASED ON EXISTING DRAWINGS DATE 1994, CONTRACTOR TO VERIFY EXACT LOCATION ON SITE.
 2. RE-BALANCE OUTSIDE AIR TO ALL EXISTING FAN COILS AS INDICATED

PARTIAL GROUND FLOOR PLAN - HVAC & CONTROLS
 SCALE - 1/4" = 1'-0"



Revisions

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1	2026.05.29	OWNER'S REVIEW

Approvals



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Project Title
ELGIN STREET P.S. - BOILER PLANT & MUA UPGRADE
 685 ELGIN ST. N., CAMBRIDGE, ONTARIO

TENDER # 26-7883-RFT

EXP Project # LON-26001120-A0

Designed: Drawn: Checked:

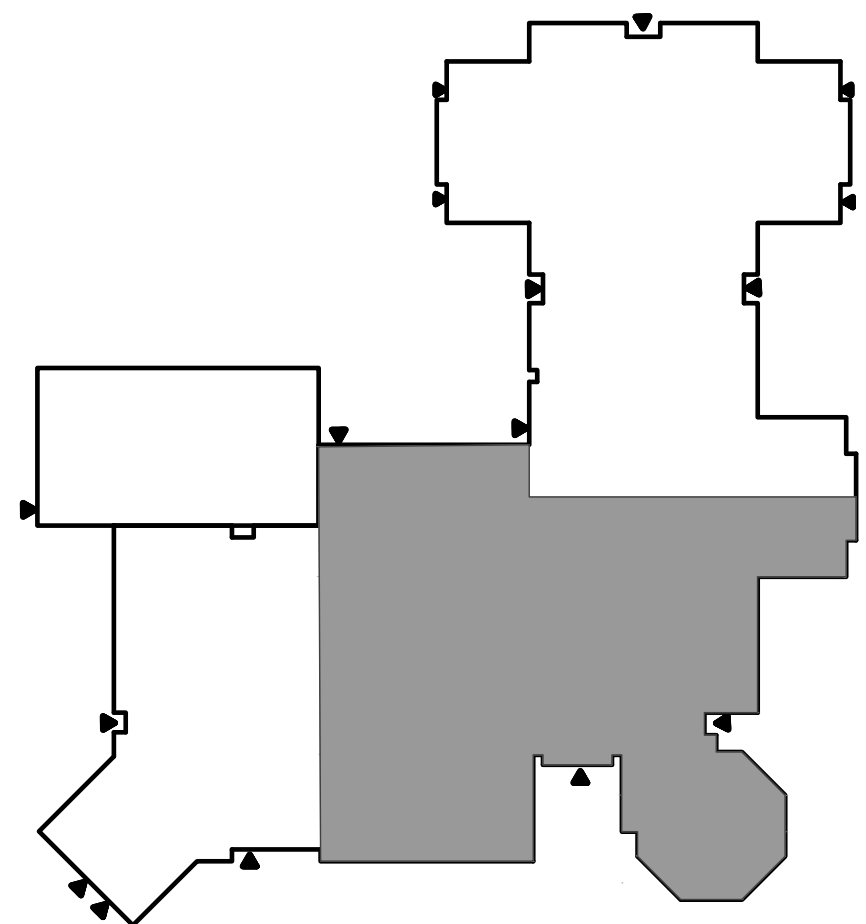
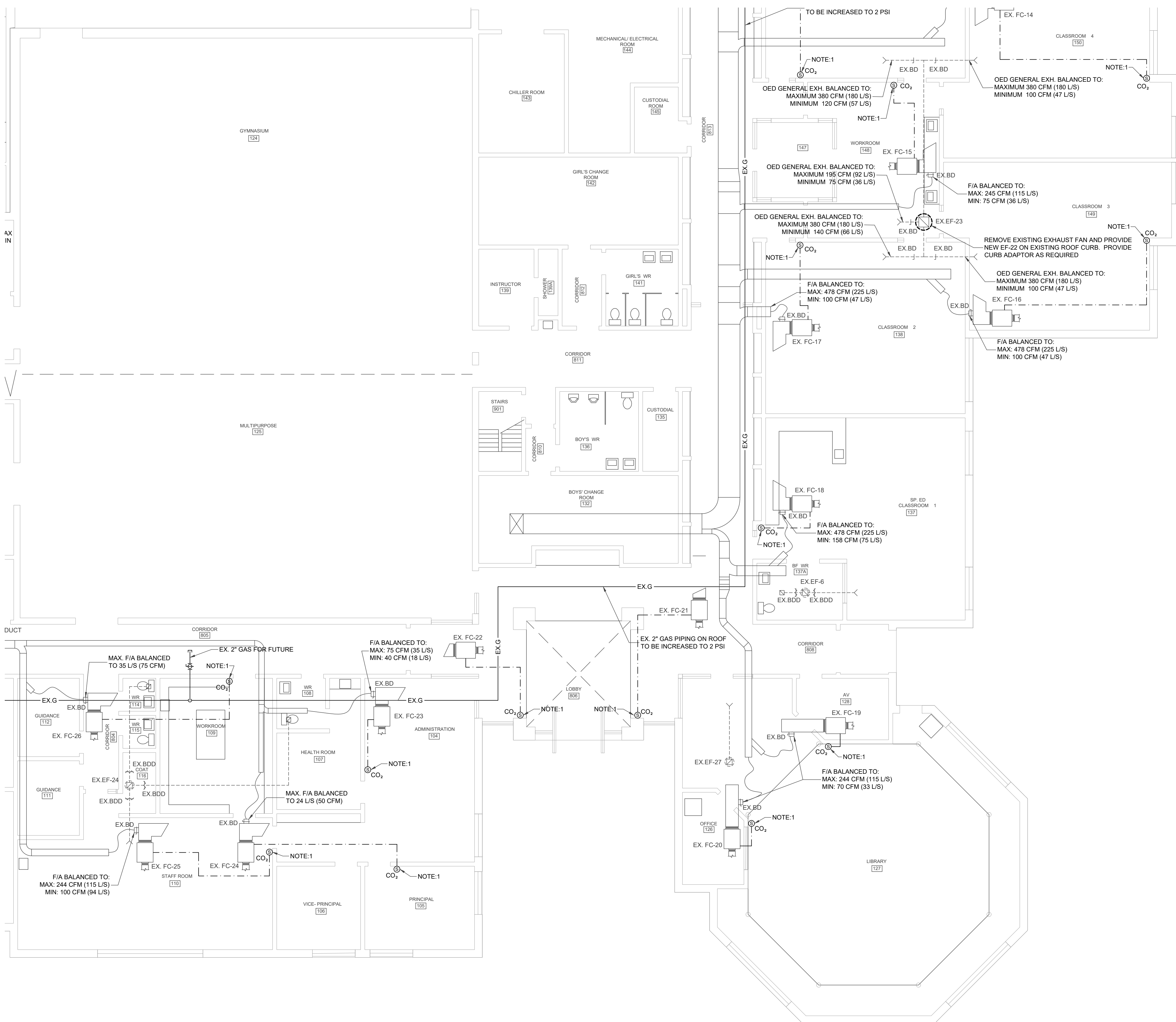
Date: JUN. 4, 2026 Scale: AS SHOWN

Sheet Title

PARTIAL GROUND FLOOR - HVAC & CONTROLS

M202

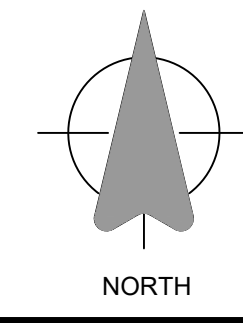
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SITE KEY PLAN

SCALE - 1/64" = 1'-0"

- NOTES:**
1. PROVIDE NEW COMBINATION ROOM THERMOSTAT/ CO₂ IN PLACE OF EXISTING THERMOSTAT. THE EXISTING LOCATIONS ARE BASED ON EXISTING DRAWINGS DATE 1994, CONTRACTOR TO VERIFY EXACT LOCATION ON SITE.
 2. RE-BALANCE OUTSIDE AIR TO ALL EXISTING FAN COILS AS INDICATED



Revisions

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Project Title
**ELGIN STREET P.S. -
 BOILER PLANT & MUA
 UPGRADE**
 685 ELGIN ST. N.,
 CAMBRIDGE, ONTARIO

TENDER # **26-7883-RFT**

EXP Project # **LON-26001120-A0**

Designed: Drawn: Checked:

Date: **JUN. 4, 2026** Scale: **AS SHOWN**

Sheet Title

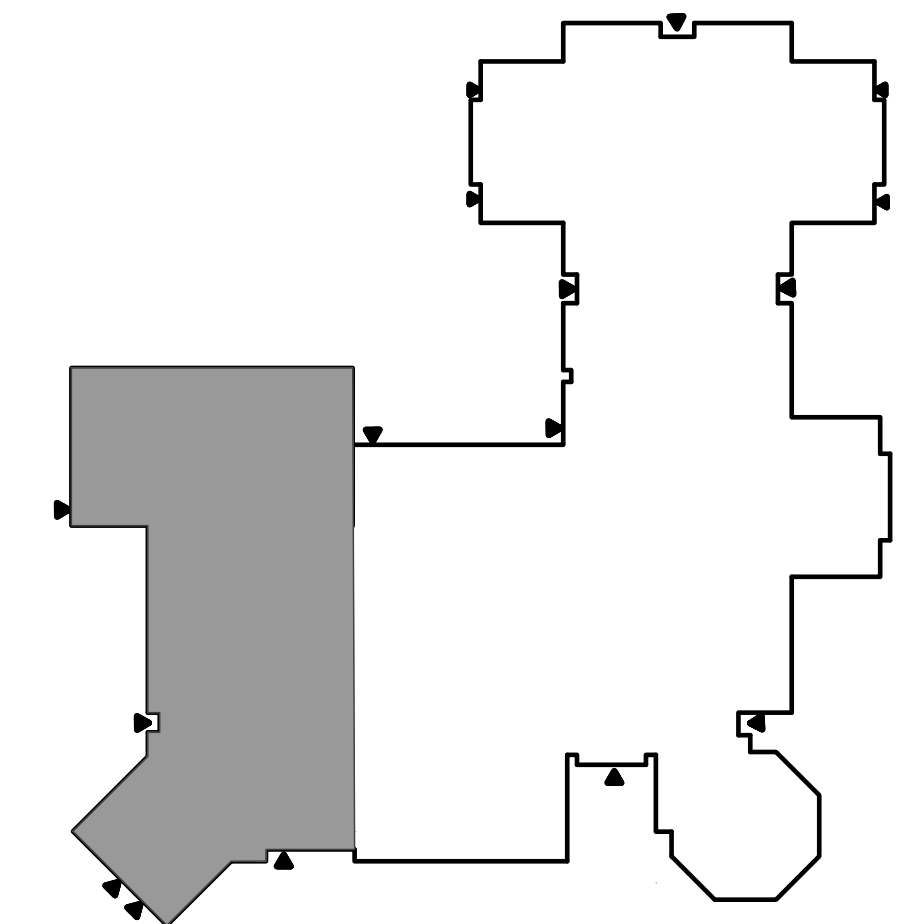
**PARTIAL GROUND
 FLOOR - HVAC &
 CONTROLS**

M203

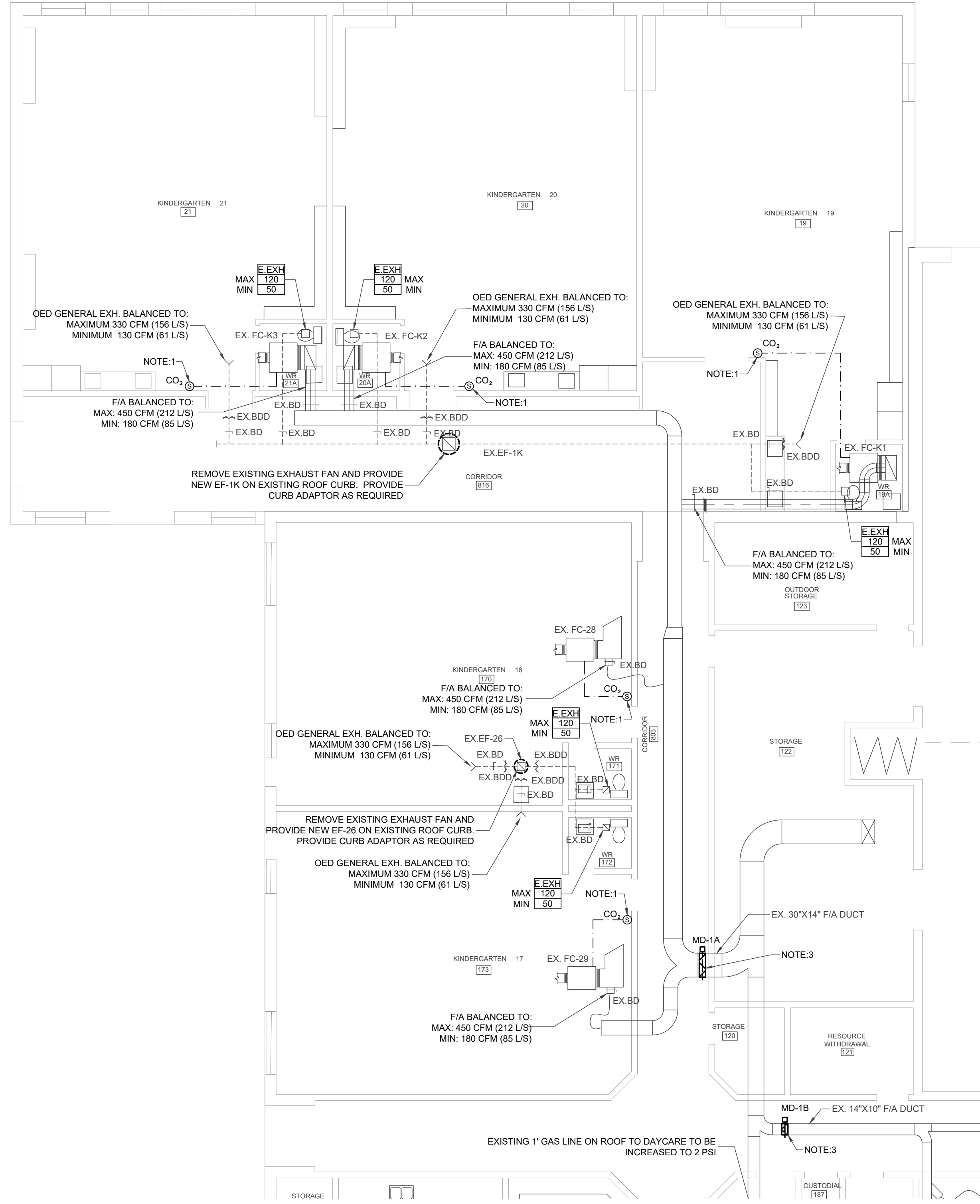
PARTIAL GROUND FLOOR PLAN - HVAC & CONTROLS
 SCALE - 1/4" = 1'-0"

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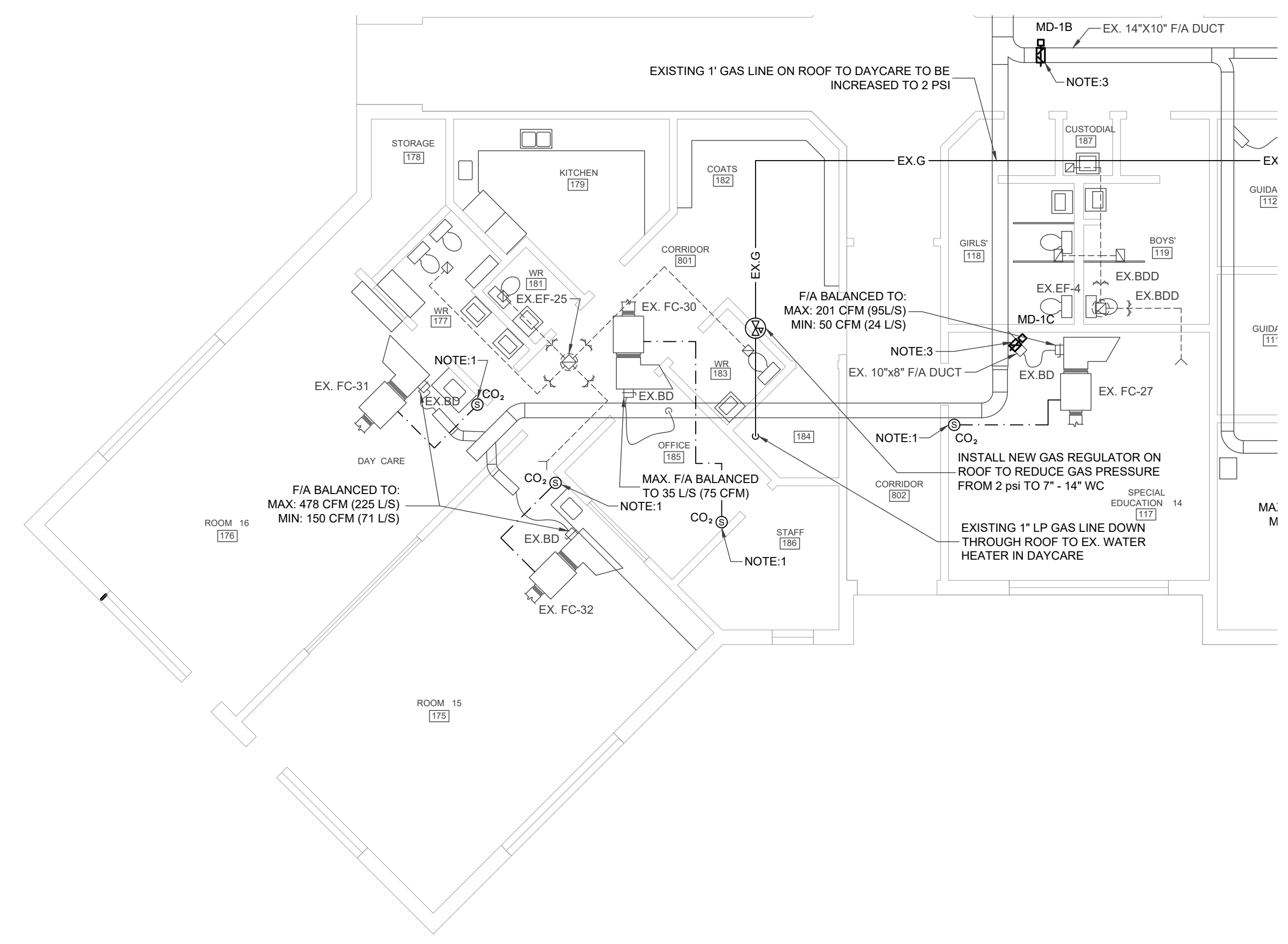
- NOTES:**
1. PROVIDE NEW COMBINATION ROOM THERMOSTAT/ CO₂ IN PLACE OF EXISTING THERMOSTAT. THE EXISTING LOCATIONS ARE BASED ON EXISTING DRAWINGS DATE 1994 & 2011. CONTRACTOR TO VERIFY EXACT LOCATION ON SITE.
 2. RE-BALANCE OUTSIDE AIR TO ALL EXISTING FAN COILS AS INDICATED
 3. INSTALL MOTORIZED DAMPERS MD-1A, 1B & 1C AT LOCATIONS INDICATED ON DRAWINGS. CONTRACTOR TO VERIFY EXISTING DUCT SIZES PRIOR TO ORDERING DAMPERS. (NOTE: EXISTING DUCT SIZES ARE FROM EXISTING DRAWINGS FROM 1994). MOTORIZED DAMPERS ARE TO BE CONTROLLED THROUGH THE BAS TO CLOSE DURING NON-OCCUPIED SCHOOL HOURS WHEN DAYCARE IS STILL IN OPERATION. THIS INCLUDES SCHOOL HOLIDAYS AND SUMMER MONTHS. REFER TO BAS CONTROL SPECIFICATIONS SECTION 25 00 00



SITE KEY PLAN
 SCALE - 1/64" = 1'-0"



PARTIAL GROUND FLOOR PLAN - HVAC & CONTROLS
 SCALE - 1/4" = 1'-0"



PARTIAL GROUND FLOOR PLAN - HVAC & CONTROLS
 SCALE - 1/4" = 1'-0"

Revisions

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Approvals

Mechanical

Electrical

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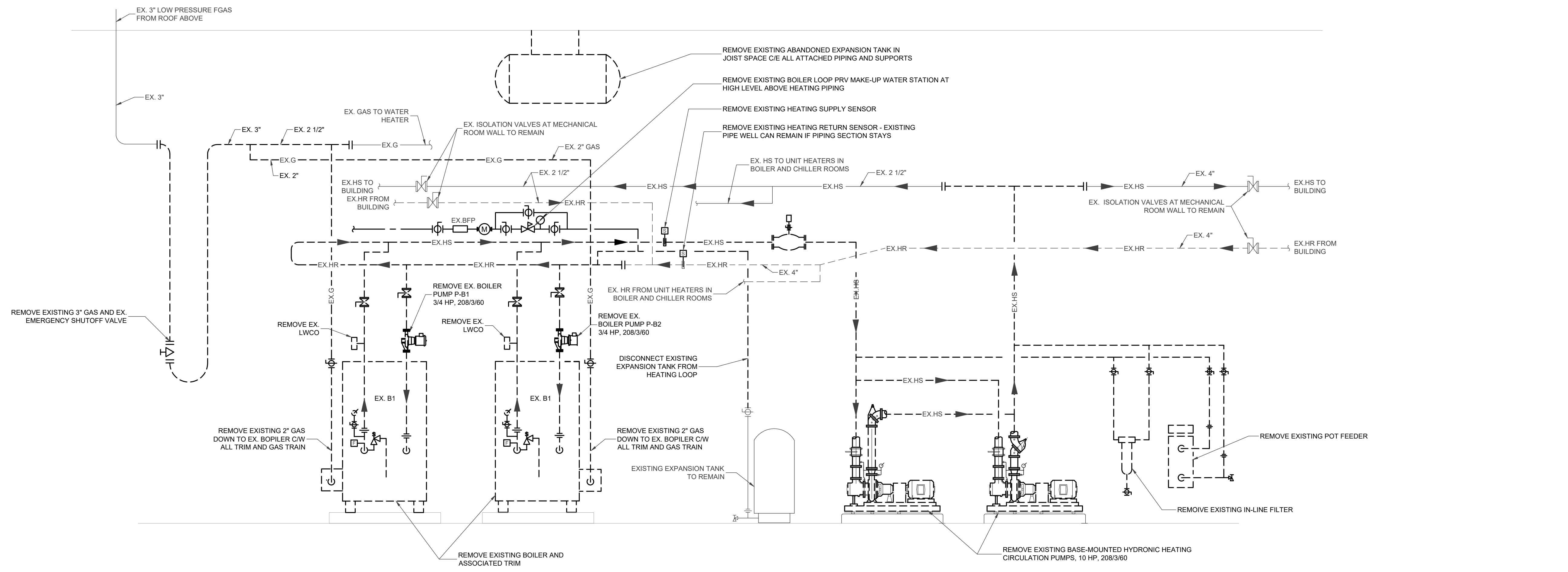
Project Title
ELGIN STREET P.S. - BOILER PLANT & MUA UPGRADE
 685 ELGIN ST. N., CAMBRIDGE, ONTARIO

TENDER # 26-7883-RFT
 EXP Project # LON-26001120-A0
 Designed: Drawn: Checked:
 Date: JUN. 4, 2026 Scale: AS SHOWN

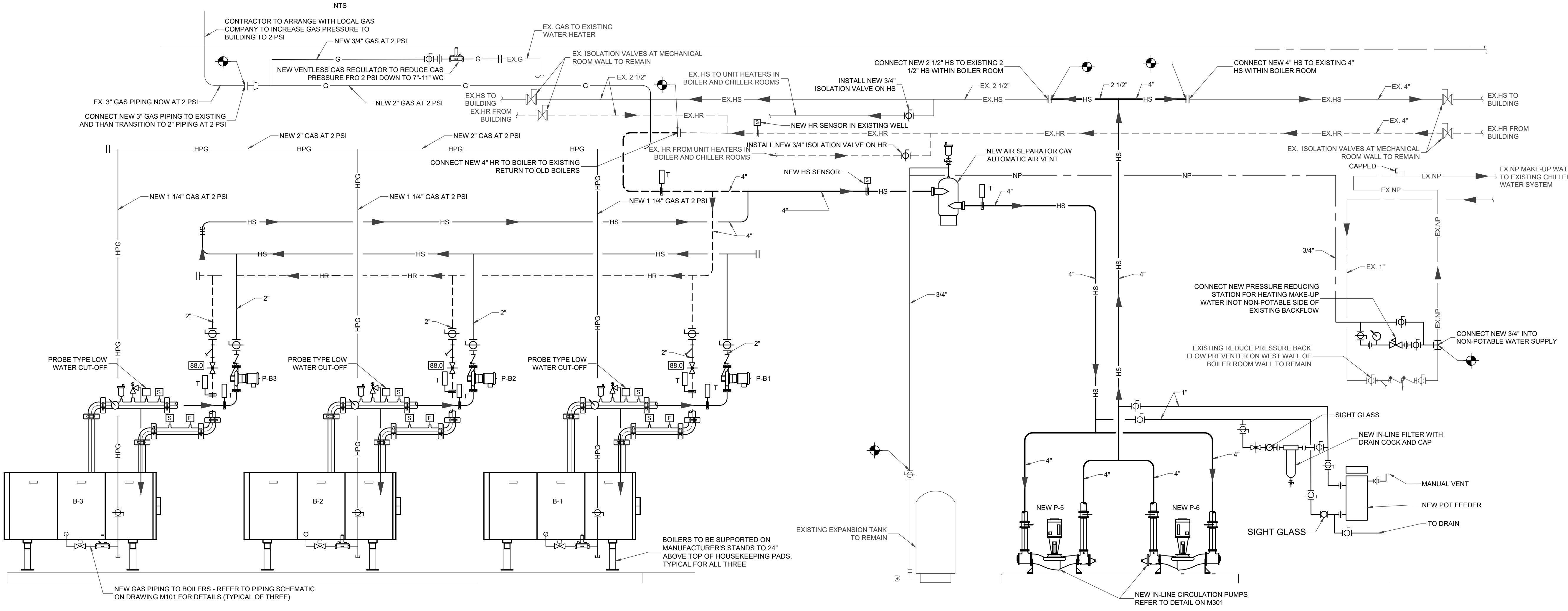
Sheet Title
PARTIAL GROUND FLOOR - HVAC & CONTROLS

M204

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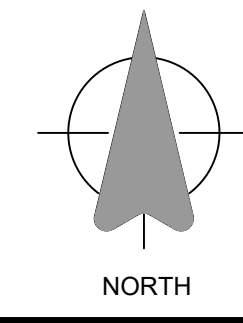


HEATING PIPING SCHEMATIC - MECHANICAL/ ELECTRICAL ROOM - DEMOLITION



HEATING PIPING SCHEMATIC - MECHANICAL/ ELECTRICAL ROOM - RENO
 SCALE - 3/8" = 1'-0"

0.00 INDICATES VALUE IN GPM FOR BALANCING FLOW ON CIRCUIT BALANCING VALVE



Revisions

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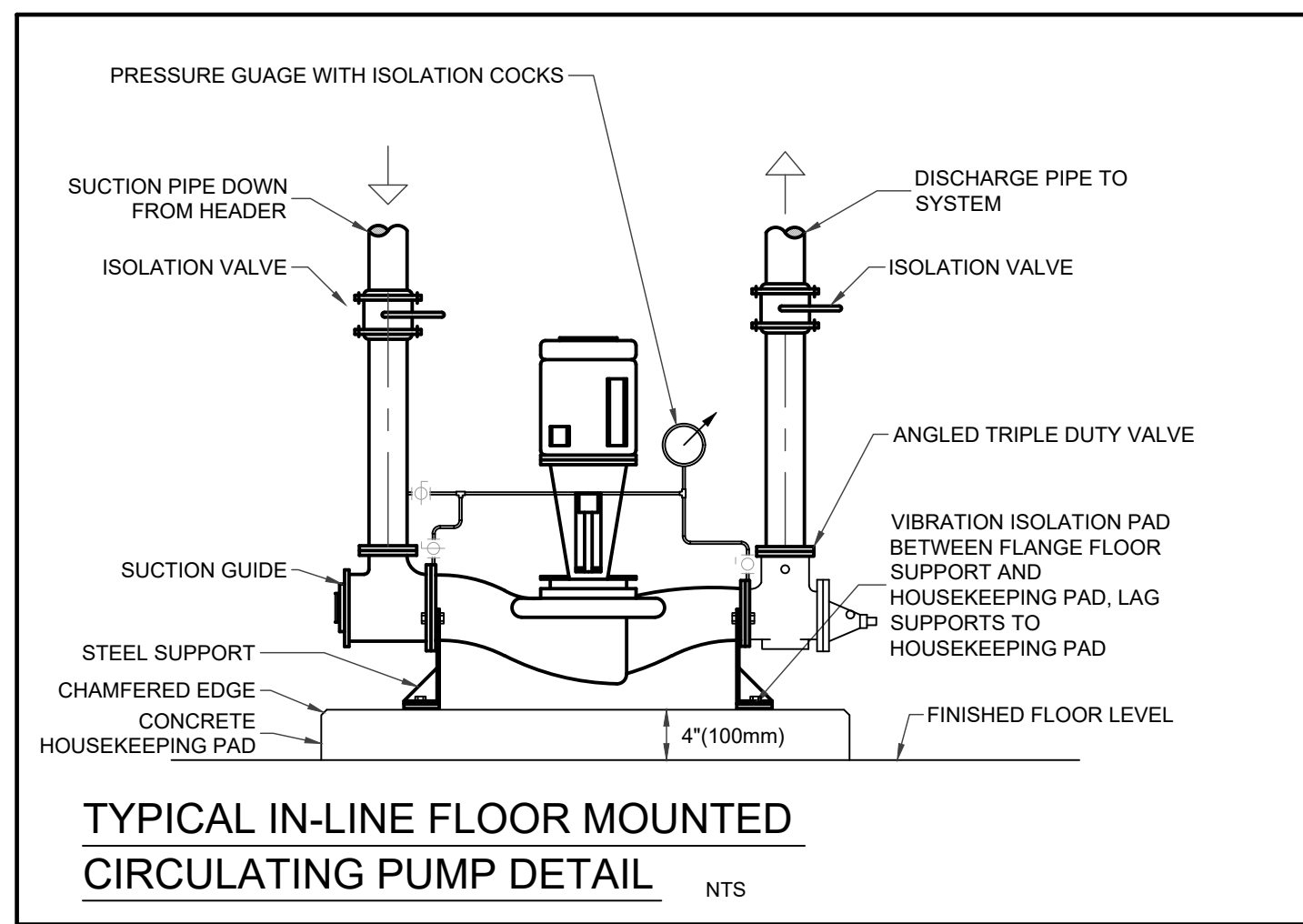
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TENDER # 26-7883-RFT
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Sheet Title
HEATING PIPING SCHEMATICS - DEMO & NEW

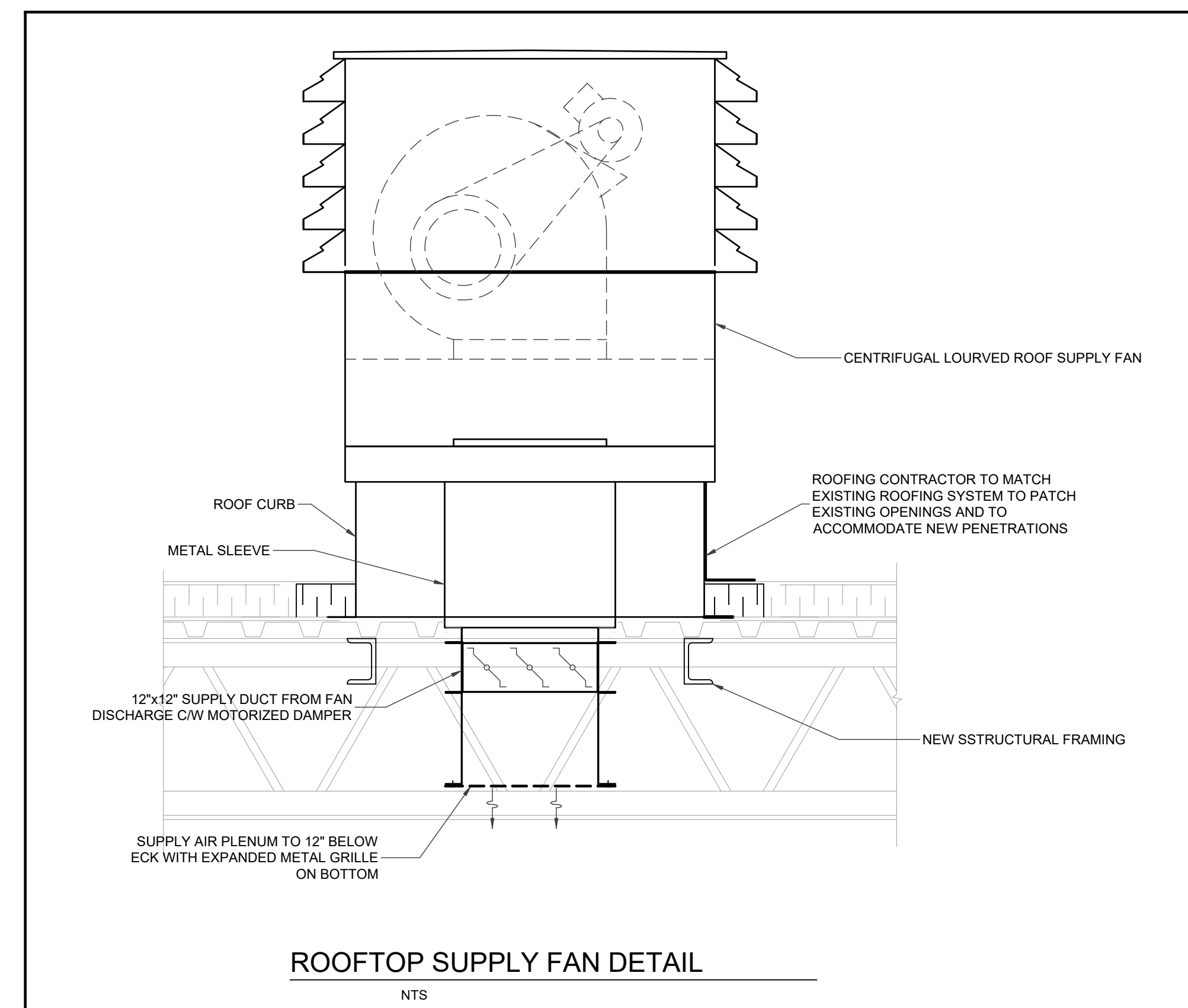
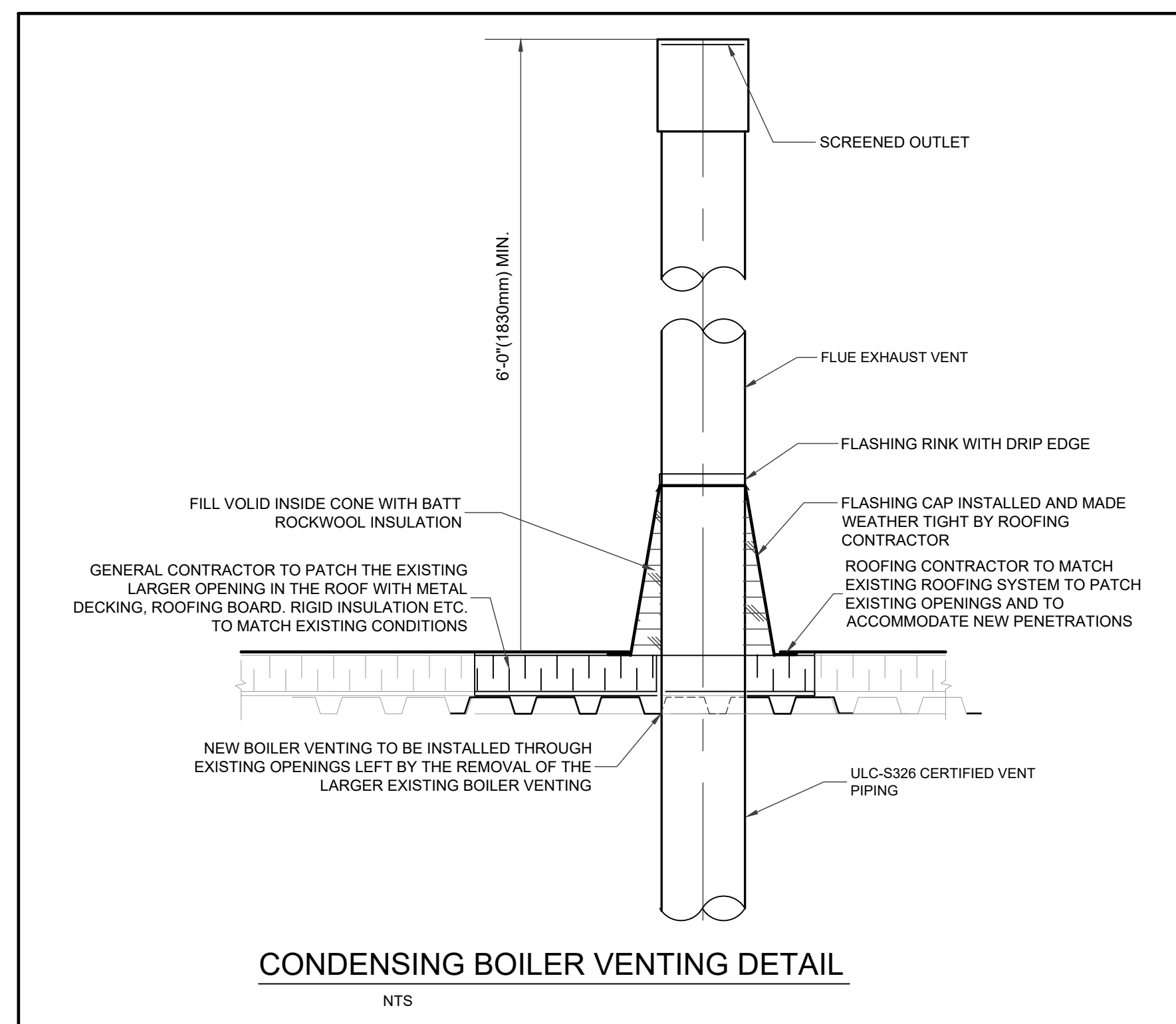
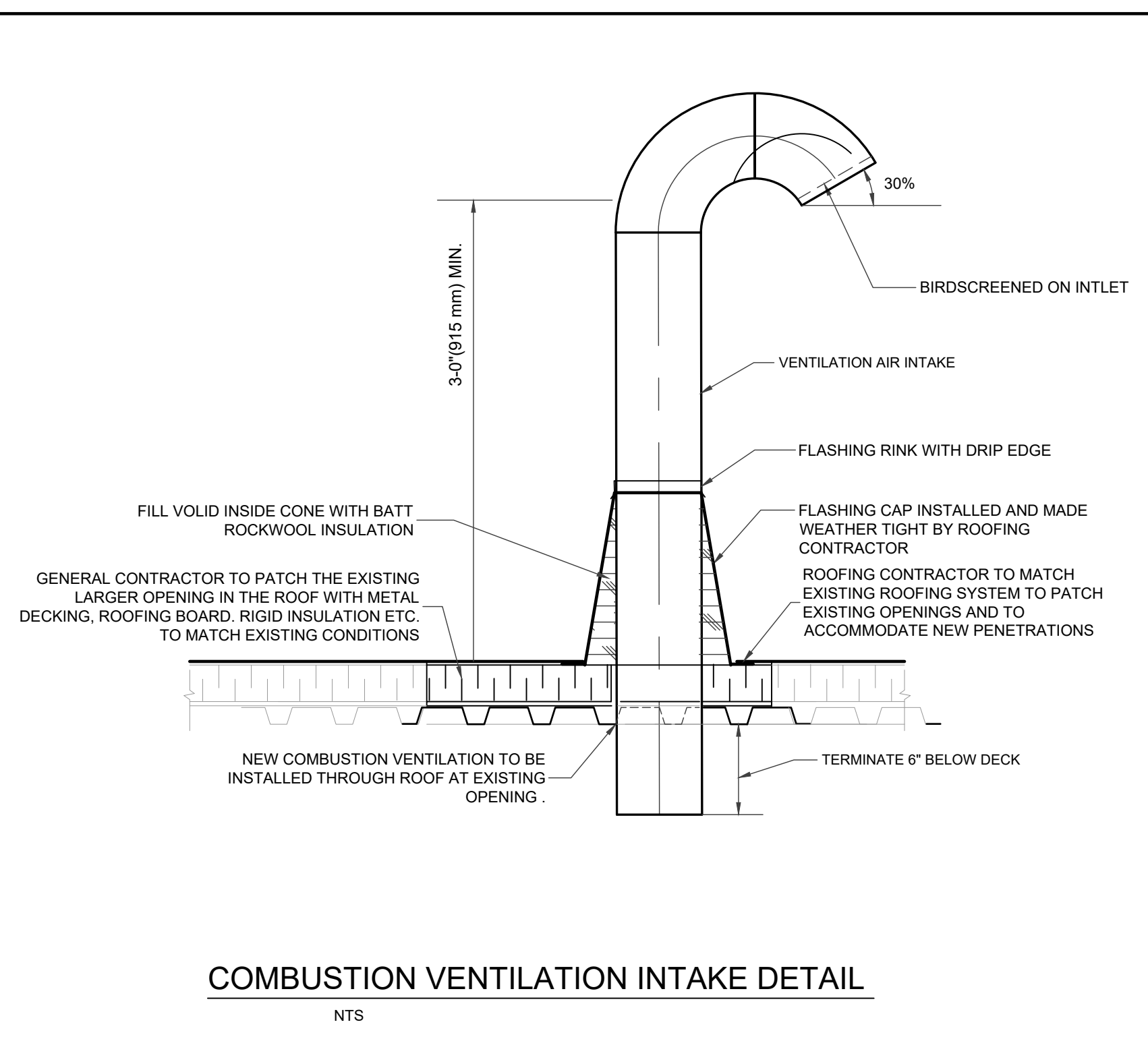
M300



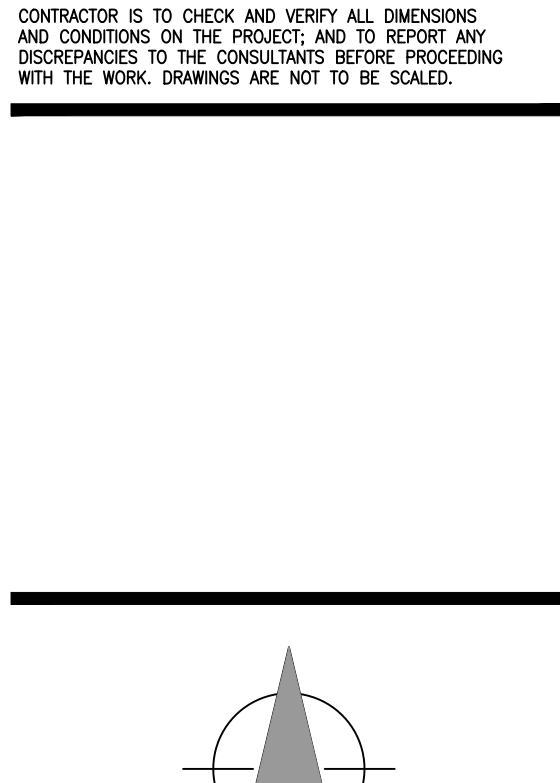
BOILER SCHEDULE															APPROVED EQUALS: LAARS, LOCHINVAR				
SYMBOL	MANUFACTURER	MODEL	LOCATION	INPUT BTUH (KW)	OUTPUT AT 100°F (37.7°C) E.W.T BTUH (KW)	OUTPUT AT 140°F (60°C) E.W.T BTUH (KW)	TURNDOWN	E.W.T °F (°C)	L.W.T °F (°C)	DESIGN FLOW GPM (LPM)	WATER P.D. FT. (KPa)	GAS PRESSURE IN.WC (KPa)	ELECTRICAL				OPERATING WEIGHT LB (KG)	REMARKS	
													V/PHHZ	FLA	MCA	MCOP			
B-1, B-2, B-3	ABSOLUTE	SPIRE SP1000	MECH. ROOM	1,000,000 (293)	930,000 (272.5)	880,000 (257.8)	10:1	140 (60.0)	160 (71.1)	88 (333)	10 (29.89)	7-14 (0.1-3.23)	208/1/60	N/A	N/A	15	579 (263)	PROVIDE THE FOLLOWING ACCESSORIES & FEATURES - DIRECT SPARK IGNITION - LOW NOX OPERATION - GAS TRAIN FOR LOW GAS PRESSURE OPERATION - 316L STAINLESS STEEL HEAT EXCHANGER - COMBUSTION ANALYZER TEST PORT - 160 PSI (1103 kPa) MAXIMUM WORKING PRESSURE - TEMPERATURE /PRESSURE GAUGE (FIELD INSTALLED) - DRAIN VALVE (FIELD INSTALLED) - ACCEPTS EXTERNAL 4-20 mA OR 0-10Vdc MODULATION CONTROL - ALARM OUTPUT - 50 PSI (518 kPa) RELIEF VALVE (FIELD INSTALLED) - AUTO RESET PROBE TYPE LOW WATER CUT-OFF (FIELD INSTALLED & WIRED) - FACTORY INSTALLED & WIRED MANUAL RESET HIGH LIMIT AQUASTAT - FLOW SWITCH (FIELD INSTALLED) - FLUE TEMPERATURE SENSOR - LOW AIR PRESSURE SWITCH - BUILT-IN CONDENSATE TRAP - SYSTEM WATER TEMPERATURE SENSORS, BOTH ON SUPPLY AND RETURN - TEMPERATURE PIPING (FIELD INSTALLED & WIRED) - MANUAL/BAS CONTROL SELECTOR SWITCH - TWO YEAR WARRANTY - ANY WIFI ACCESS TO BE DISABLED - MANUFACTURER TO PROVIDE LOCAL SWITCH (MANUAL/BAS) INSIDE COVER TO BY PASS BAS OPERATION AND HAVE BOILER OPERATE IN MANUAL MODE - C/W AUXILIARY CONTACTS IN BOILER CONTROL TO SIGNAL ON/OFF CONTROL OF BOILER PUMP	

FAN SCHEDULE															APPROVED EQUALS: LOREN COOK, CARNES, TWIN CITY, PENNBARRY, AEROVENT				
UNIT NO.	SERVICE	MANUFACTURER	MODEL	TYPE	CAPACITY			SONES	MOTOR		ACCESSORIES	MOUNTING	REMARKS	NOTE: EC MOTOR DC CONVERTS ALLOWS MOTOR TO ACCEPT 0-10 VDC, 2 VDC IS 15% AND 10VDC IS 100%, 0 TO 0.19 VDC IS OFF					
					AIRFLOW CFM (L/S)	EX. SP IN. WG (Pa)	FAN R.P.M.		AIRFLOW CFM (L/S)	EX. SP IN. WG (Pa)					FAN R.P.M.	POWER HP (KW)	VOLTAGE		
EF-1K	KINDERGARTEN CLASSROOM 19, 20 & 21	GREENHECK	GB-140-VG	DIRECT DRIVE ROOF DOWNBLAST EXHAUST FAN	1560 (736)	0.375 (31.1)	841	540 (255)	0.25 (62.21)	TBD	7.0	1/2 (0.373)	120/1/60	5, 9, 11, 20, 21	EXISTING CURB W/ CURB ADAPTOR C/W ALUMINUM BIRDSCREEN, NEMA-1 DISCONNECT SWITCH, ALUMINUM HOUSING & FAN WHEEL, VARI-GREEN EC MOTOR W/ 0-10VDC INPUT CAPABILITIES FROM BAS, UL/UL 705 LISTED, GALVANIZED CURB ADAPTER.				
EF-21	CLASSROOMS 10, 11, 12 & 13 WORKROOM.	GREENHECK	GB-140-VG	DIRECT DRIVE ROOF DOWNBLAST EXHAUST FAN	1700 (59)	0.375 (31.1)	1104	575 (271)	0.125 (31.1)	TBD	9.4	1/2 (0.373)	120/1/60	5, 9, 11, 20, 21	EXISTING CURB W/ CURB ADAPTOR C/W ALUMINUM BIRDSCREEN, NEMA-1 DISCONNECT SWITCH, ALUMINUM HOUSING & FAN WHEEL, VARI-GREEN EC MOTOR W/ 0-10VDC INPUT CAPABILITIES FROM BAS, UL/UL 705 LISTED, GALVANIZED CURB ADAPTER.				
EF-22	CLASSROOMS 6, 7, 8, & 9 WORKROOM.	GREENHECK	GB-140-VG	DIRECT DRIVE ROOF DOWNBLAST EXHAUST FAN	1700 (59)	0.375 (31.1)	1104	575 (271)	0.125 (31.1)	TBD	9.4	1/2 (0.373)	120/1/60	5, 9, 11, 20, 21	EXISTING CURB W/ CURB ADAPTOR C/W ALUMINUM BIRDSCREEN, NEMA-1 DISCONNECT SWITCH, ALUMINUM HOUSING & FAN WHEEL, VARI-GREEN EC MOTOR W/ 0-10VDC INPUT CAPABILITIES FROM BAS, UL/UL 705 LISTED, GALVANIZED CURB ADAPTER.				
EF-23	CLASSROOMS 2, 3, 4 & 5 WORKROOM.	GREENHECK	GB-140-VG	DIRECT DRIVE ROOF DOWNBLAST EXHAUST FAN	1715 (809)	0.375 (31.1)	1111	535 (253)	0.125 (31.1)	TBD	9.6	1/2 (0.373)	120/1/60	5, 9, 11, 20, 21	EXISTING CURB W/ CURB ADAPTOR C/W ALUMINUM BIRDSCREEN, NEMA-1 DISCONNECT SWITCH, ALUMINUM HOUSING & FAN WHEEL, VARI-GREEN EC MOTOR W/ 0-10VDC INPUT CAPABILITIES FROM BAS, UL/UL 705 LISTED, GALVANIZED CURB ADAPTER.				
EF-26	KINDERGARTEN CLASSROOM 17, KINDERGARTEN CLASSROOM 18	GREENHECK	GB-100-VG	DIRECT DRIVE ROOF DOWNBLAST EXHAUST FAN	775 (366)	0.375 (31.1)	1211	360 (170)	0.25 (62.21)	TBD	6.1	1/4 (0.186)	120/1/60	5, 9, 11, 20, 21	EXISTING CURB W/ CURB ADAPTOR C/W ALUMINUM BIRDSCREEN, NEMA-1 DISCONNECT SWITCH, ALUMINUM HOUSING & FAN WHEEL, VARI-GREEN EC MOTOR W/ 0-10VDC INPUT CAPABILITIES FROM BAS, UL/UL 705 LISTED, GALVANIZED CURB ADAPTER.				
SF-1	MECHANICAL/ELECTRICAL ROOM	GREENHECK	RSF-90-4	CENTRIFUGAL ROOFTOP SUPPLY FAN	620 (293)	0.250 (20.7)	573				5.5	1/4 (0.186)	120/1/60	5, 9, 11, 20, 21	NEW ROOF CURB C/W NEMA-1 DISCONNECT SWITCH, GALVANISHED HOUSING & ALUMINUM CENTRIFUGAL FAN WHEEL, SPRING VIBRATION ISOLATION AND BRACKETS (FOUR), UL/UL 705 LISTED.				

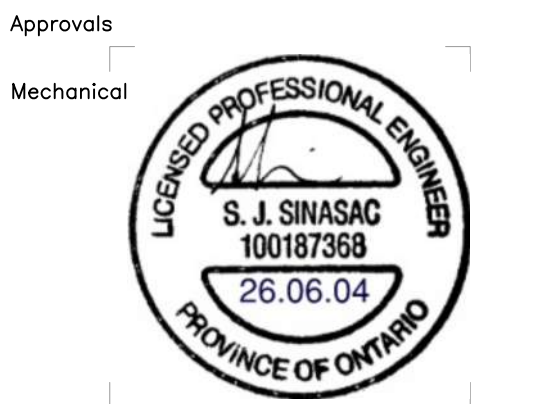
PUMP SCHEDULE															APPROVED EQUALS: ARMSTRONG, GONFOSS				
UNIT NO.	SERVICE	MANUFACTURER	MODEL NO.	TYPE/SERIES	FLOW USGPM (L/S)	HEAD FT. (KPa)	MOTOR			UNIT ACCESSORY	REMARKS								
							R.P.M.	POWER (Kw)	VOLTAGE										
P-B1	BOILER B-1	BELL & GOSSETT	e-90 2AAB	IN-LINE	88.0 (5.55)	15 (44.3)	1800	3/4 (0.54)	208/1/60		PUMPS TO COMPLETE WITH AUXILIARY CONTACTS TO ALLOW INTERLOCKED WITH BOILER B-1, CONTROLLED THROUGH BOILER CONTROLLER								
P-B2	BOILER B-2	BELL & GOSSETT	e-90 2AAB	IN-LINE	88.0 (5.55)	15 (44.3)	1800	3/4 (0.54)	208/1/60		PUMPS TO COMPLETE WITH AUXILIARY CONTACTS TO ALLOW INTERLOCKED WITH BOILER B-2, CONTROLLED THROUGH BOILER CONTROLLER								
P-B3	BOILER B-3	BELL & GOSSETT	e-90 2AAB	IN-LINE	88.0 (5.55)	15 (44.3)	1800	3/4 (0.54)	208/1/60		PUMPS TO COMPLETE WITH AUXILIARY CONTACTS TO ALLOW INTERLOCKED WITH BOILER B-3, CONTROLLED THROUGH BOILER CONTROLLER								
P-5	BUILDING HEATING	BELL & GOSSETT	e-80SC 3x3x9.5C	IN-LINE	275 (17.16)	75 (224)	VFD	10 (7.46)	208/3/60	C/W ANGLED TRIPLE DUTY VALVE & SUCTION GUIDE	PUMP TO BE CONTROLLED THROUGH BAS, TO LEAD/LAG WITH PUMP P-6								
P-6	BUILDING HEATING	BELL & GOSSETT	e-80SC 3x3x9.5C	IN-LINE	275 (17.16)	75 (224)	VFD	10 (7.46)	208/3/60	C/W ANGLED TRIPLE DUTY VALVE & SUCTION GUIDE	PUMP TO BE CONTROLLED THROUGH BAS, TO LEAD/LAG WITH PUMP P-5								



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Project Title
ELGIN STREET P.S. - BOILER PLANT & MUA UPGRADE
685 ELGIN ST. N,
CAMBRIDGE, ONTARIO

TENDER # **26-7883-RFT**

EXP Project # **LON-26001120-A0**

Designed: Drawn: Checked:

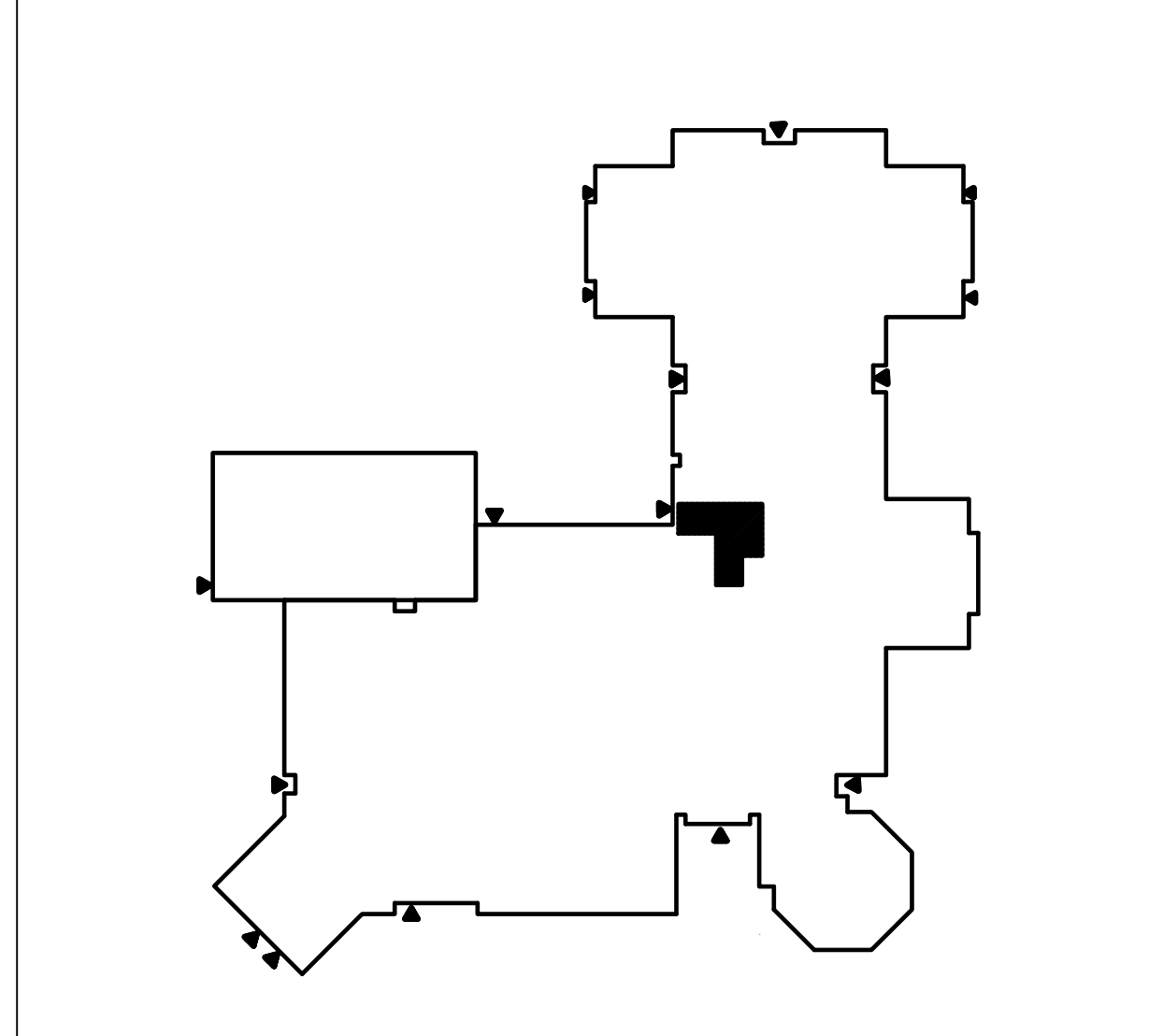
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Sheet Title

MECHANICAL DETAILS & SCHEDULES

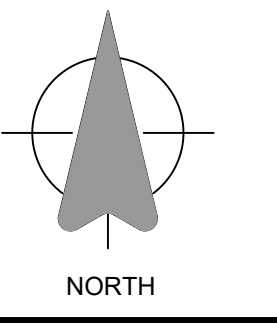
M301

- GENERAL NOTES:**
- ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF MECHANICAL EQUIPMENT POWER CONNECTIONS WITH MECHANICAL TRADE.
 - CONTRACTOR SHALL COORDINATE WITH OWNER IF ANY OF THE EQUIPMENT AND DEVICES REMOVED ARE TO BE DISPOSED OR RETAINED BY OWNER.
 - PENETRATIONS THROUGH ROOF AND WALL FROM FEEDERS TO EQUIPMENT BEING REMOVED SHALL BE PATCHED AND REPAIRED BY GENERAL CONTRACTOR MAINTAINING FIRE RATINGS.
 - ELECTRICAL BIDS SHALL BE BASED ON NEW WIRING, CONDUIT, BREAKERS AS PER THE EQUIPMENT SCHEDULE. CONTRACTOR SHALL NOT BASE BIDS ON RE-USE OF EXISTING INFRASTRUCTURE. THIS SHALL BE EVALUATED ONLY AFTER AWARD OF CONTRACT AND ONCE THE CONTRACTOR HAS CONFIRMED RATINGS TO THE ENGINEER ON RECORD. NO CHANGE ORDER REQUESTS FOR ADDITIONAL LABOUR OR MATERIAL TO RUN NEW WIRING AND CONDUIT SHALL BE ENTERTAINED POST AWARD.
 - CONTRACTOR TO FIRESTOP ALL NEW PENETRATIONS THROUGH EXISTING FIRE SEPARATIONS (WALLS, SLABS) USING ULC LISTED FIRE STOPPING PRODUCTS SUITABLE FOR THE INSTALLED MATERIAL AND FIRE SEPARATION CONSTRUCTION. FIRE STOPPING MATERIAL SHOP DRAWINGS SHALL BE SUBMITTED TO CONSULTANT FOR REVIEW PRIOR TO INSTALLATION.
- DEMOLITION NOTES:**
- REMOVE BOILER PUMP POWER FEED FROM DEDICATED 15A, 3P BREAKER FROM PANEL 'H'. REMOVE THE BREAKER.
 - REMOVE POWER CONNECTION FED FROM PANEL 'H' 70A, 3P DEDICATED BREAKER (CCT 19, 23, 25 & 20, 22, 24). PULL BACK CONDUCTOR TO PANEL AND REMOVE EXISTING STARTER DISCONNECTS.
 - REMOVE EXISTING PANEL 'H' INCLUDING EXISTING FEEDER BACK TO THE MAIN SWITCHBOARD AND BREAKER IN THE SWITCHBOARD. KEEP ALL EXISTING BRANCH CIRCUITS IN PLACE AND RE-CONNECT TO NEW PANEL 'H' ONCE INSTALLED.
 - REMOVE BOILER POWER FEED BACK TO THE SOURCE BREAKER IN PANEL 'H'. REMOVE THE BREAKER.
 - ELECTRICAL CONTRACTOR TO ALLOW FOR THE RELOCATION OF TWO EXISTING LIGHTING FIXTURES TO ACCOMMODATE FOR THE NEW BOILER LAYOUT AND SF-1 INSTALLATION. LIGHTING SCOPE OF WORK RESTRICTED TO THE AREA ABOVE THE BOILERS AND SF-1.
- D6. ELECTRICAL CONTRACTOR TO ALLOW FOR THE RELOCATION OF FIRE ALARM, LIGHTING CONTROL DEVICES, ELECTRICAL RACEWAYS AND BOXES TO ACCOMMODATE FOR THE NEW BOILER LAYOUT AND SF-1 INSTALLATION. SCOPE OF WORK RESTRICTED TO THE AREA ABOVE THE BOILERS AND SF-1.**
- DRAWING NOTES:**
- PROVIDE POWER CONNECTION TO SF-1 WITH DISCONNECT SWITCH FED FROM DEDICATED 15A, 1P BREAKER IN NEW PANEL 'H'. REFER TO EQUIPMENT SCHEDULE FOR POWER CONNECTION DETAILS IN SHEET E200.
 - PROVIDE POWER CONNECTION TO PUMPS P-5 & P-6, FROM NEW 70A, 3P BREAKERS IN PANEL 'H' TO DEDICATED DISCONNECT SWITCH. FOR PUMP POWER CONNECTIONS USE NEW VFD RATED CABLING FOR CONNECTIONS TO EACH NEW VFD INSTALLED BETWEEN DISCONNECT AND THE ASSOCIATED PUMP. REFER TO EQUIPMENT SCHEDULE FOR POWER CONNECTION DETAILS IN SHEET E200.
 - PROVIDE NEW PANEL 'H' 400A MAINS, 120/208V, 72 CIRCUITS, 22KAIC, INCLUDING NEW FEEDER 4/250CMIL-BOND IN 3" EMT CONDUIT AND NEW 250A, 3P BREAKER IN THE MAIN SWITCHBOARD. ALL NEW BREAKERS SHALL MATCH THE EXISTING BREAKER RATINGS. CONTRACTOR TO REVIEW PRIOR TO PLACING PANELBOARD ORDER.
 - PROVIDE POWER CONNECTION TO BOILERS & BOILER PUMPS FROM NEW BREAKERS IN PANEL 'H'. REFER TO EQUIPMENT SCHEDULE FOR POWER CONNECTION DETAILS IN SHEET E200.
 - PROVIDE A E-STOP BUTTON AT THE ROOM ENTRANCE TO DISCONNECT ALL THREE BOILER AND PUMPS BRANCH CIRCUIT. E-STOP TO CONTROL THE BOILER AND PUMPS. PROVIDE SHUNT TRIP BREAKER FOR BOILER BRANCH CIRCUITS AS SHOWN IN PANEL SCHEDULE. REFER TO SHEET E200 FOR E-STOP BUTTON DETAIL.
 - ELECTRICAL CONTRACTOR TO ALLOW FOR THE RELOCATION OF TWO EXISTING LIGHTING FIXTURES AND ALLOW FOR THE SUPPLY & INSTALLATION OF ONE NEW MATCHING FIXTURES TO ACCOMMODATE FOR THE NEW BOILER LAYOUT AND SF-1 INSTALLATION. LIGHTING SCOPE OF WORK RESTRICTED TO THE AREA ABOVE THE BOILERS AND SF-1. CONNECT THE NEW LIGHTING FIXTURE TO THE EXISTING LIGHTING BRANCH CIRCUIT IN THAT AREA.



SITE KEY PLAN
SCALE - 1/64" = 1'-0"

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CONTRACTOR IS TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT, AND TO REPORT ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK. DRAWINGS ARE NOT TO BE SCALED.



Revisions

NO.	DATE	DESCRIPTION
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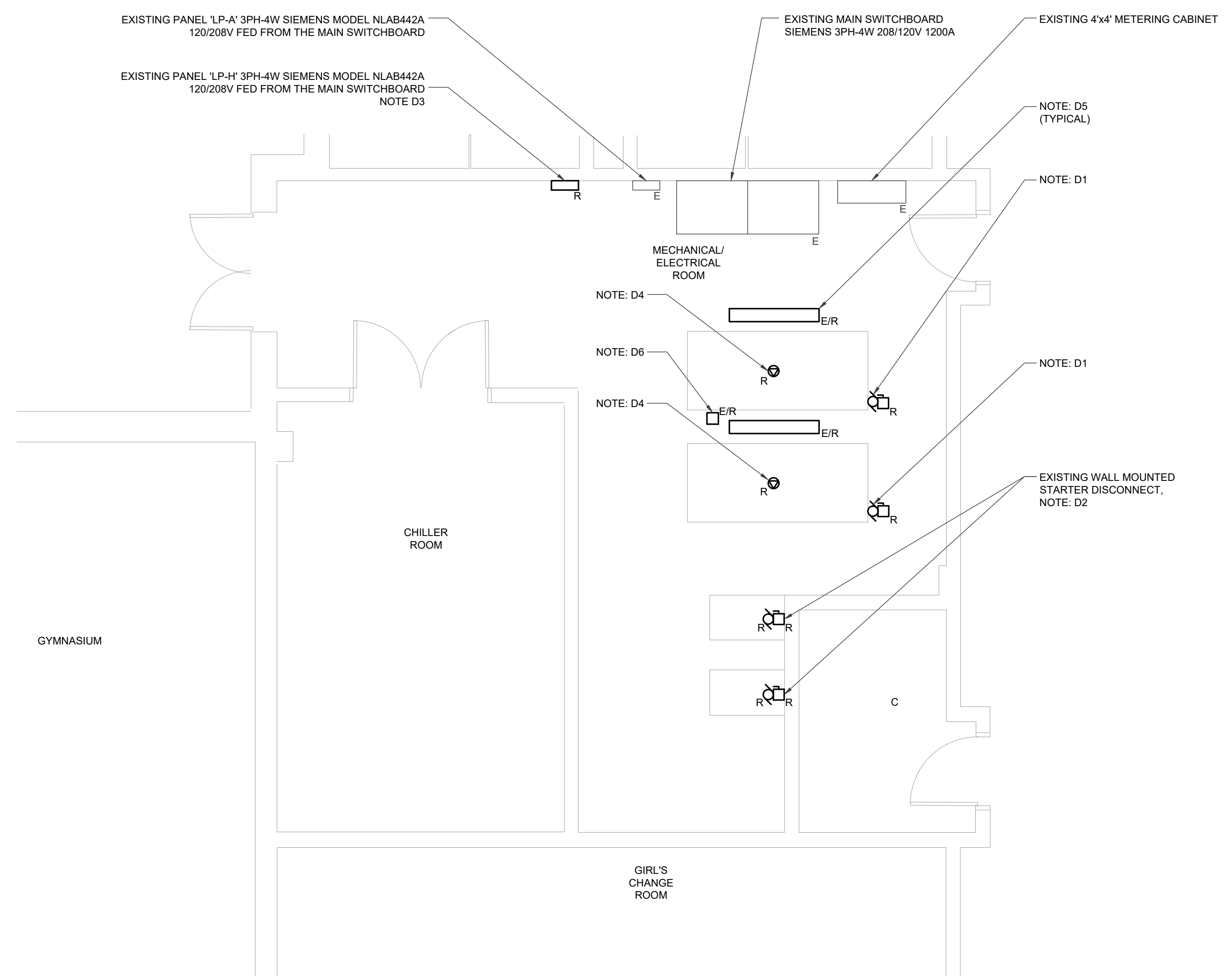
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EXP Project # LON-26001120-A0

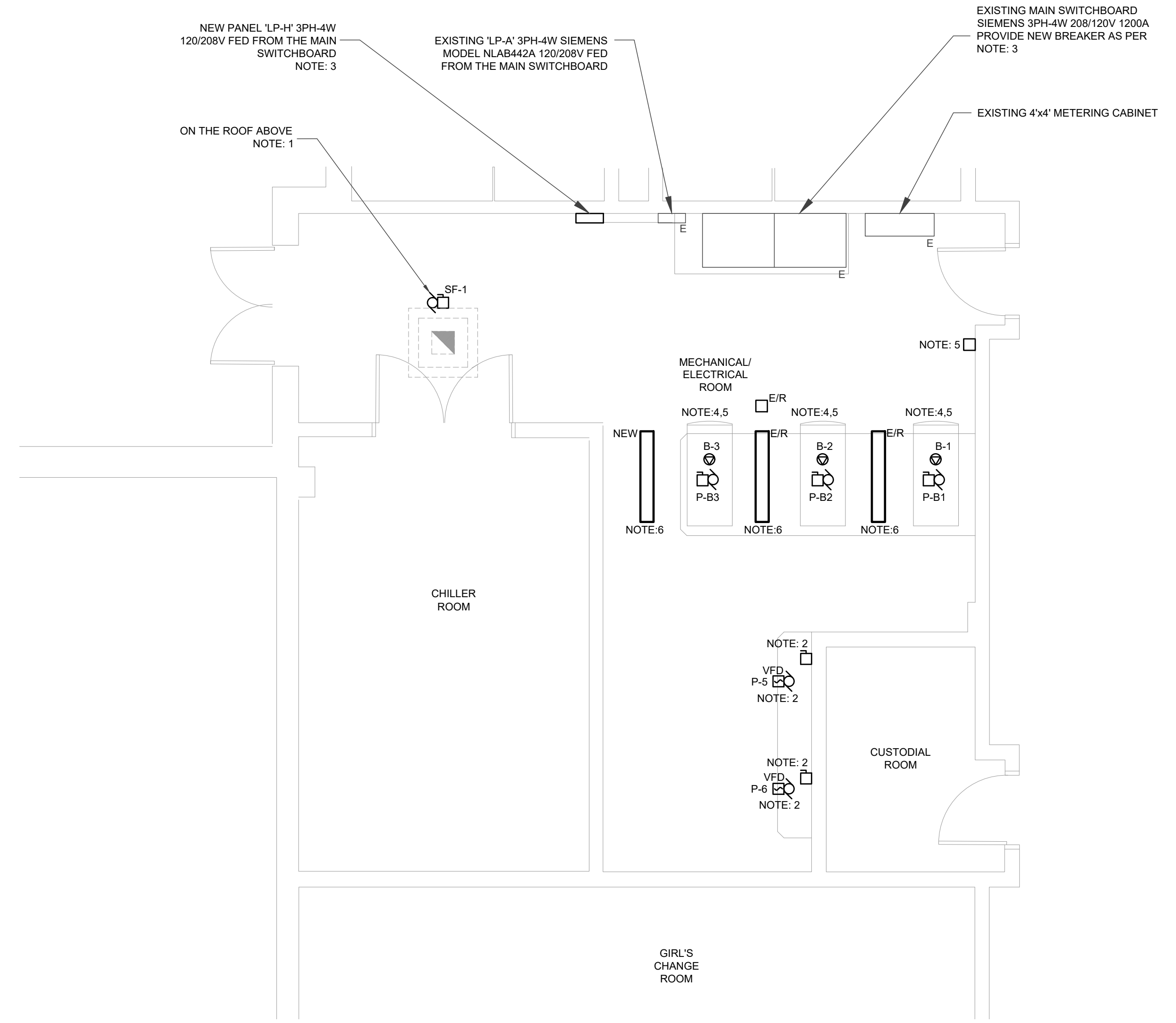
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Date: JUN. 4, 2026 Scale: AS SHOWN

Sheet Title
BOILER ROOM ELECTRICAL - POWER & SYSTEMS

E100



PARTIAL GROUND FLOOR PLAN - MECHANICAL/ ELECTRICAL ROOM - POWER & SYSTEMS DEMOLITION
SCALE - 1/4" = 1'-0"



PARTIAL GROUND FLOOR PLAN - MECHANICAL/ ELECTRICAL ROOM - NEW POWER & SYSTEMS
SCALE - 1/4" = 1'-0"

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DEMOLITION NOTES:

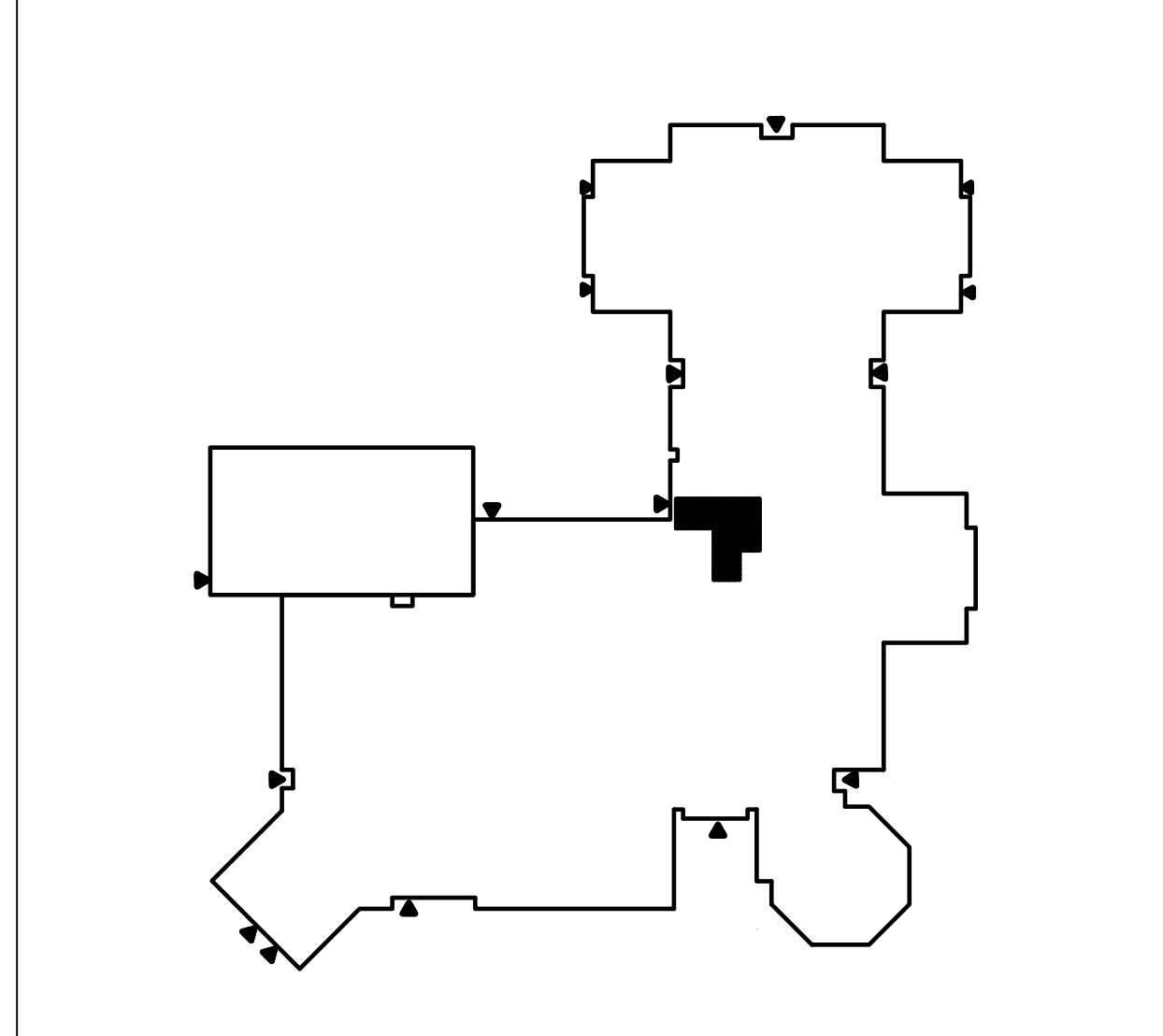
D1. REMOVE MUA-1 POWER CONNECTION, ALL WIRING AND RACEWAY BACK TO DISCONNECT SWITCH. REMOVE DISCONNECT SWITCH.

D2. REMOVE MUA-2 POWER CONNECTION, ALL WIRING AND RACEWAY BACK TO DISCONNECT SWITCH. REMOVE DISCONNECT SWITCH.

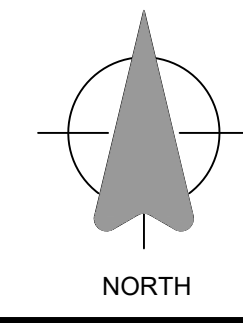
DRAWING NOTES:

1. PROVIDE POWER CONNECTION FROM EXISTING MUA-1 DISCONNECT TO THE NEW VFD-1 WITH NEW VFD RATED CABLING 3#6AWG + BOND IN 1" EMT CONDUIT AND FROM THE NEW VFD TO EXISTING MUA-1 WITH NEW VFD RATED CABLING 3#6AWG + BOND IN 1" EMT CONDUIT. COORDINATE FINAL POWER CONNECTION LOCATION WITH MECHANICAL TRADE. INCLUDE DISCONNECT SWITCH, MUA-1 ELECTRICAL RATINGS FOR REFERENCE 208V, 3PH, 25.5FLA, MOCP 50, 7.5HP.

2. PROVIDE POWER CONNECTION FROM EXISTING MUA-2 DISCONNECT TO THE NEW VFD-2 WITH NEW VFD RATED CABLING 3#6AWG + BOND IN 1" EMT CONDUIT AND FROM THE NEW VFD TO EXISTING MUA-2 WITH NEW VFD RATED CABLING 3#6AWG + BOND IN 1" EMT CONDUIT. COORDINATE FINAL POWER CONNECTION LOCATION WITH MECHANICAL TRADE. INCLUDE DISCONNECT SWITCH, MUA-2 ELECTRICAL RATINGS FOR REFERENCE 208V, 3PH, 18FLA, MOCP 30, 5HP.



SITE KEY PLAN
SCALE - 1/64" = 1'-0"



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CAMBRIDGE, ONTARIO

TENDER # 26-7883-RFT

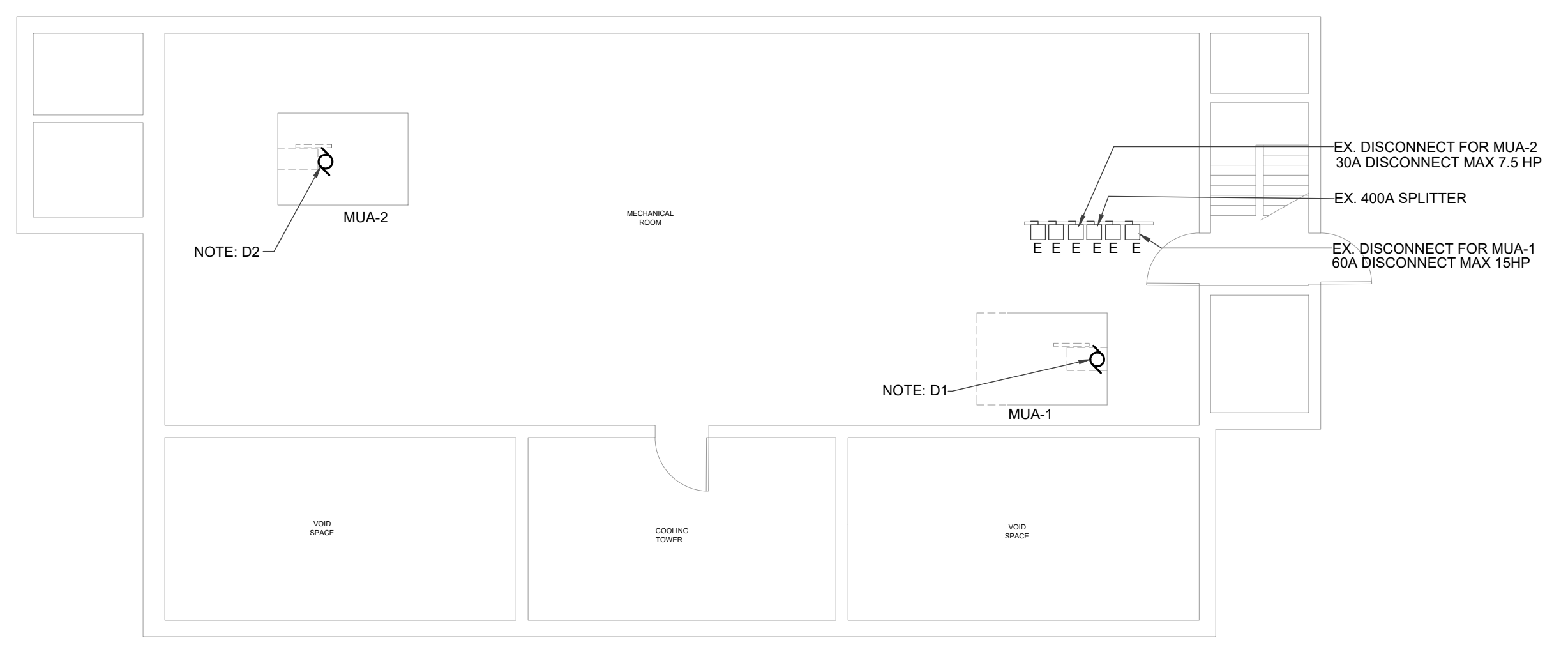
EXP Project # LON-26001120-A0

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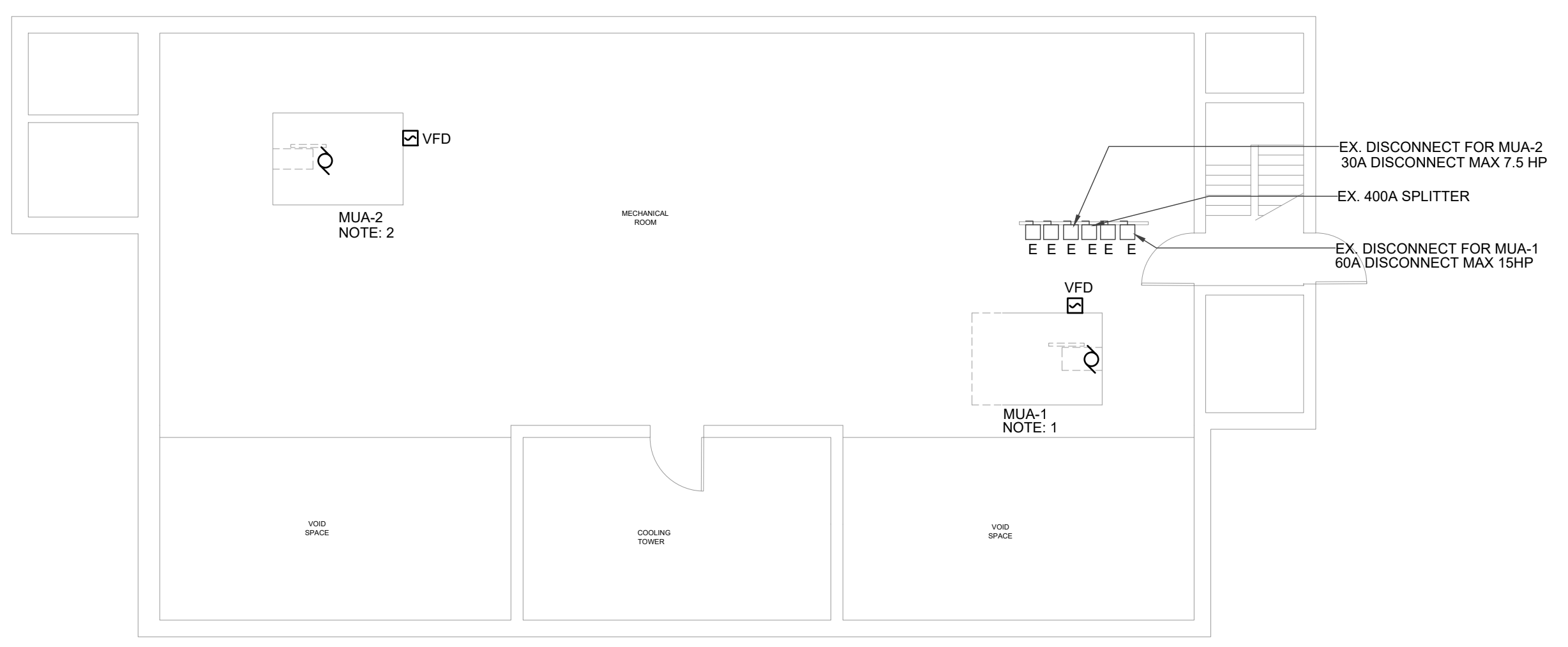
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Sheet Title
**MEZZANINE FLOOR
PLAN - POWER &
SYSTEMS**

E101

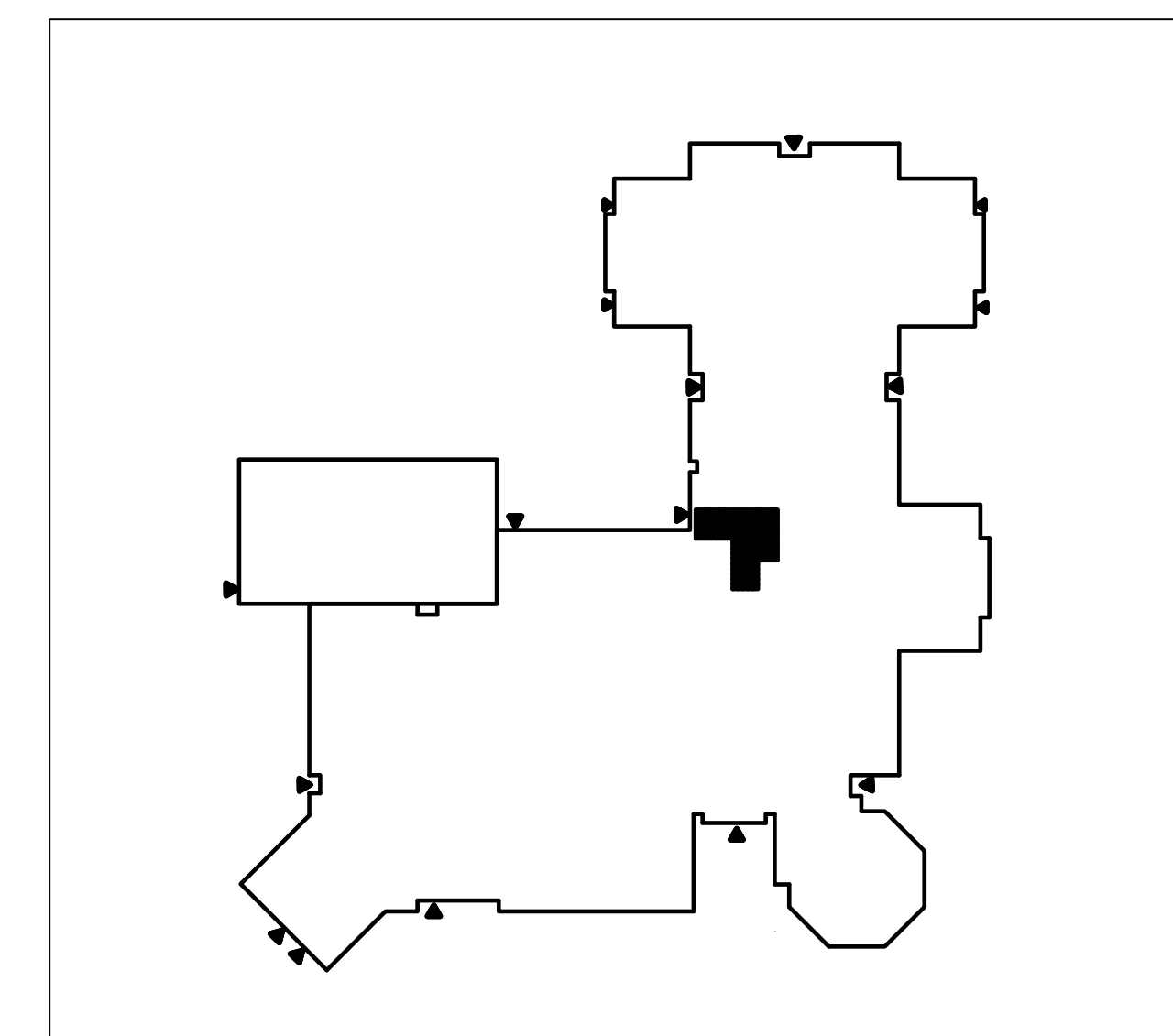


MEZZANINE FLOOR PLAN - FAN ROOM - POWER & SYSTEMS DEMOLITION
SCALE - 1/8" = 1'-0"



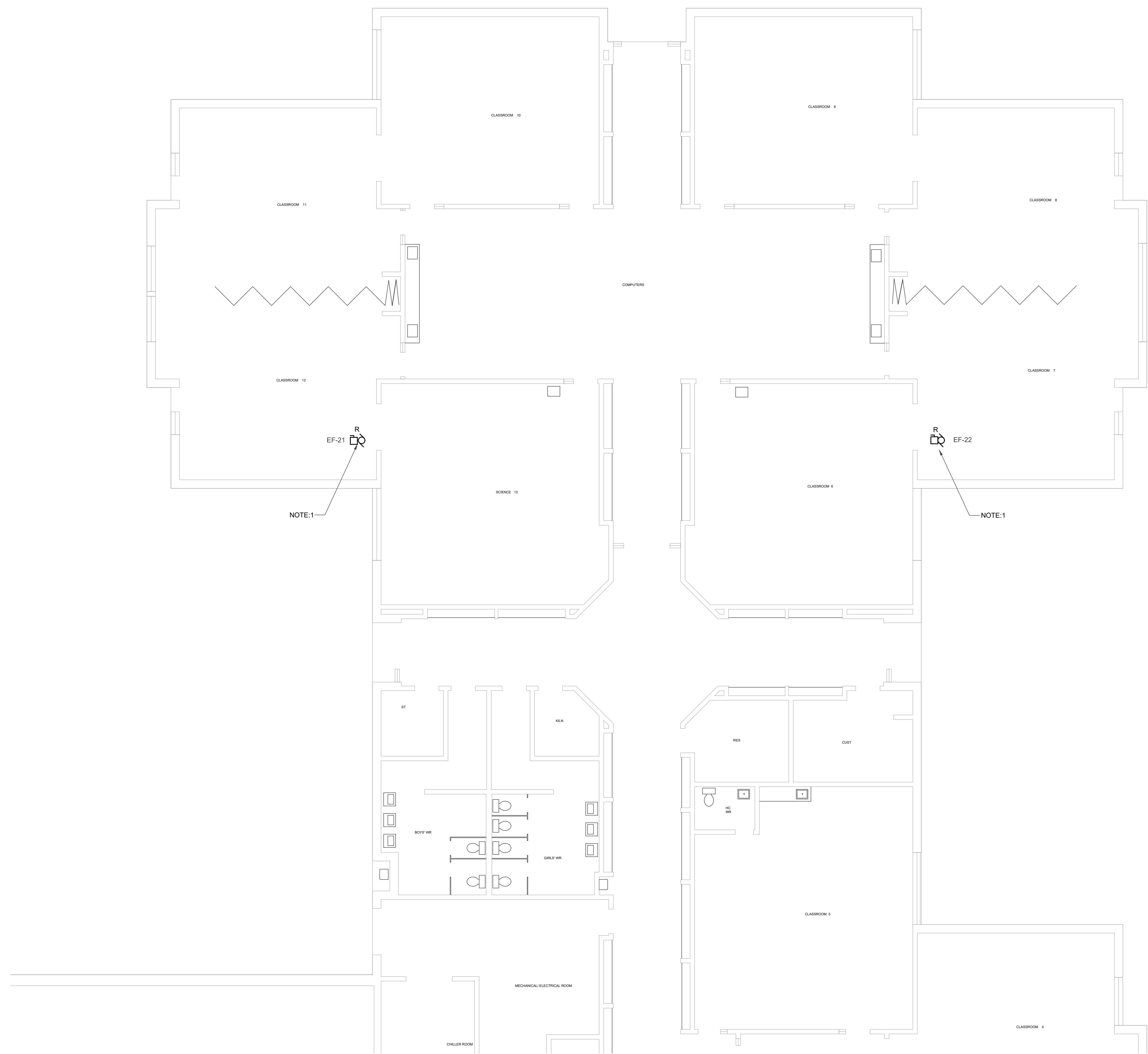
MEZZANINE FLOOR PLAN - FAN ROOM - NEW POWER & SYSTEMS
SCALE - 1/8" = 1'-0"

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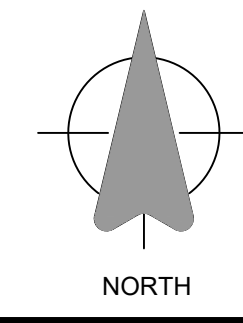


SITE KEY PLAN
 SCALE - 1/64" = 1'-0"

DRAWING NOTES:
 1. DISCONNECT EXISTING EXHAUST FAN, REMOVE EXISTING WIRING BACK TO SOURCE PANELBOARD AND PROVIDE NEW VFD RATED CABLING. FOR CABLE SIZE DETAILS REFER TO SHEET E200 EQUIPMENT SCHEDULE.



PARTIAL GROUND FLOOR PLAN - POWER & SYSTEMS
 SCALE - 1/8" = 1'-0"



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TENDER # **26-7883-RFT**

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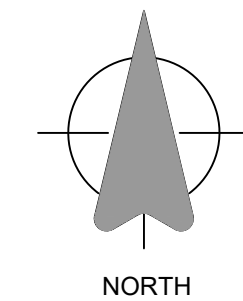
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Sheet Title
**PARTIAL GROUND
 FLOOR PLAN -
 POWER & SYSTEMS**

E102

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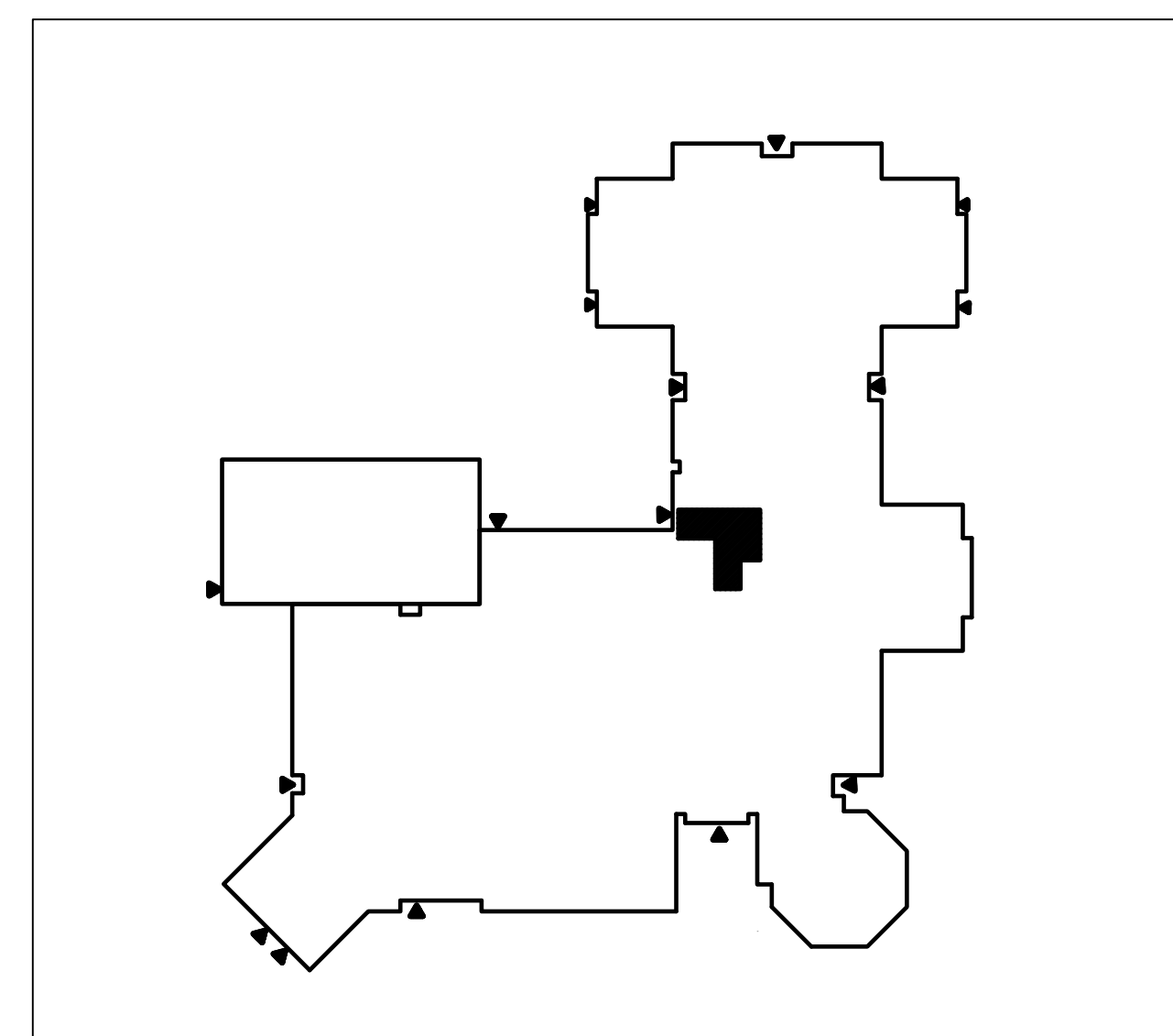
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Date: **JUN. 4, 2026** Scale: **AS SHOWN**

Sheet Title
**PARTIAL GROUND
 FLOOR PLAN -
 POWER & SYSTEMS**

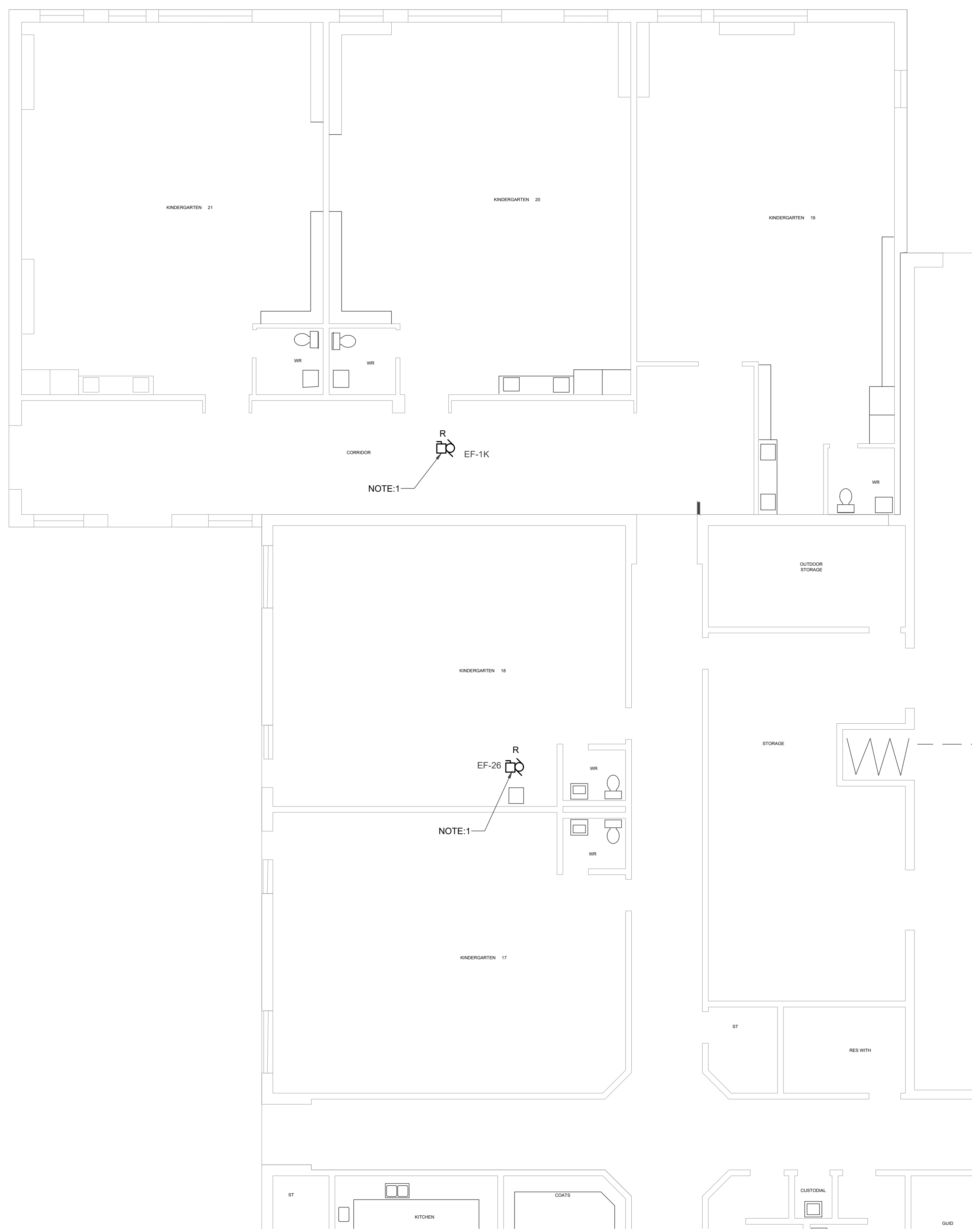
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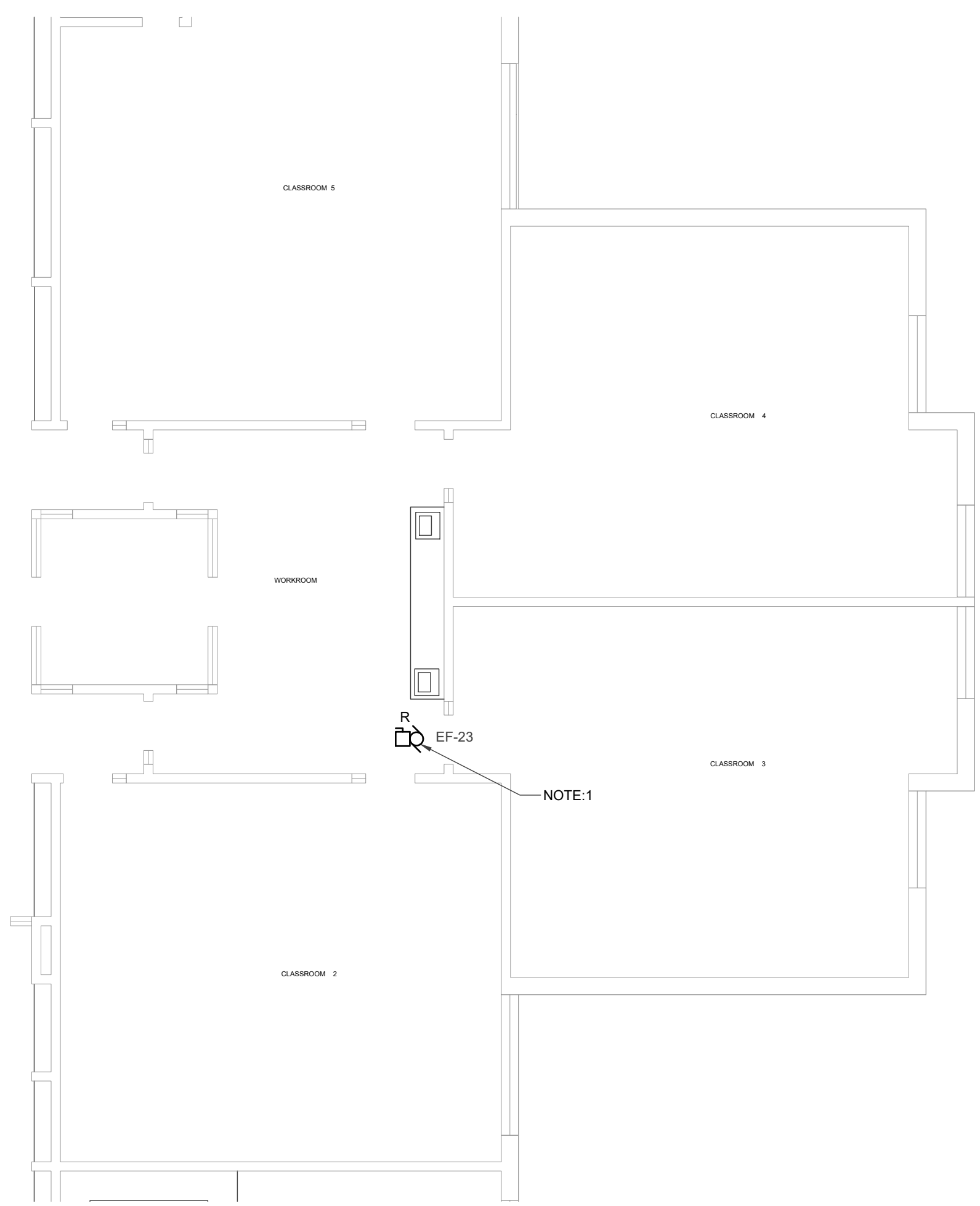
SITE KEY PLAN
 SCALE - 1/64" = 1'-0"

DRAWING NOTES:

- DISCONNECT EXISTING EXHAUST FAN, REMOVE EXISTING WIRING BACK TO SOURCE PANELBOARD AND PROVIDE NEW VFD RATED CABLING; FOR CABLE SIZE DETAILS REFER TO SHEET E200 EQUIPMENT SCHEDULE.



PARTIAL GROUND FLOOR PLAN - POWER & SYSTEMS
 SCALE - 1/8" = 1'-0"



PARTIAL GROUND FLOOR PLAN - POWER & SYSTEMS
 SCALE - 1/8" = 1'-0"

