CHILLER AND SWITCHGEAR REPLACEMENT

YONKERS PUBLIC LIBRARY GRINTON I. WILL LIBRARY

1500 CENTRAL PARK AVE
YONKERS, NY. 10710

CONSTRUCTION DOCUMENTS

OCTOBER 29TH, 2024

PROJECT DESCRIPTION:

THE SCOPE OF THIS PROJECT PROVIDES NEW EXTERIOR CHILLERS AND ASSOCIATED APPURTENANCES (PIPING, CONNECTIONS, SUPPORTS, ETC.), REMOVAL OF THE EXISTING INTERIOR CHILLER AND WATER PUMPS SYSTEM, NEW WATER PUMPS AND ASSOCIATED APPURTENANCES (CHEMICAL TREATMENT, EXPANSION TANK, PIPING, ETC.), AND A REPLACEMENT FOR THE EXISTING DISTRIBUTION BOARD.

LIST OF DRAWINGS

MECHANICAL

H001 - LEGEND, ABBREVIATIONS AND NOTES
H101 - PART SITE PLAN
H102 - BASEMENT MECHANICAL PLAN
H301 - SCHEDULES
H401 - DETAILS

ELECTRICAL

E001 - LEGEND, ABBREVIATIONS, NOTES AND DETAILS
E101 - ELECTRICAL SITE AND FLOOR PLAN
E102 - ELECTRICAL SCHEDULES AND RISER

YONKERS PUBLIC LIBRARY
GRINTON I. WILL LIBRARY

CHILLER AND SWITCHGEAR REPLACEMENT

KG+D Project No.
2022-1049

DESIGN TEAM

ARCHITECT

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GENERAL REMOVAL NOTES

1. THE SCOPE OF REMOVAL SHOWN ON "REMOVALS" DRAWINGS IS DIAGRAMMATIC ONLY AND INDICATES THE INTENT OF THE WORK TO BE PERFORMED AND NOT THE COMPLETE SCOPE OF DEMOLITION AND/OR REMOVAL WORK. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO REMOVE ANY RELATED MECHANICAL DEVICES EVEN IF NOT SPECIFICALLY INDICATED TO BE REMOVED ON THESE DRAWINGS IN ORDER TO ACCOMMODATE NEW WORK.
2. DEVICES SHOWN CROSS HATCHED ON DRAWINGS ARE ITEMS TO BE REMOVED. ANY DEVICES REMOVED SHALL INCLUDE (BUT SHALL NOT BE LIMITED TO) THE REMOVAL OF ALL ASSOCIATED PIPING, CONTROLS, ETC. THAT ARE NOT INCORPORATED IN THE NEW LAYOUT, UNTIL SUCH REMOVAL IS COMPLETE. THIS CONTRACTOR SHALL PERFORM ALL WORK REQUIRED TO INSURE CONTINUITY OF SERVICE TO EXISTING REMAINING EQUIPMENT. NO EXTRAS RELATING TO THE SCOPE OF WORK DESCRIBED WILL BE ALLOWED.
3. EQUIPMENT, PIPING, ETC., REQUIRED TO RECONNECT SHALL BE INSTALLED CONCEALED WITHIN THE NEW SUSPENDED CEILINGS, PARTITIONS AND/OR WALLS, FLOORS, NO SURFACE MOUNTED OR EXPOSED EQUIPMENT, PIPING, ETC., SHALL BE PERMITTED, UNLESS SPECIFICALLY INDICATED.
4. ALL ITEMS TO BE REMOVED SHALL BE REVIEWED WITH THE OWNER PRIOR TO REMOVAL. OWNER SHALL HAVE FIRST SALVAGE RIGHTS. ITEMS THE OWNER WISHES TO KEEP SHALL BE REMOVED WITH CARE AND STORED AS DIRECTED BY OWNER. ITEMS THE OWNER DOES NOT WISH TO KEEP SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
5. REMOVE OR RELOCATE ALL DEVICES LOCATED ON THE EXTERIOR OF THE BUILDING OR ON THE INTERIOR OF EXTERIOR WALLS AS REQUIRED TO ACCOMMODATE A NEW BUILDING ADDITION OR TO ALLOW THE ADDITION OF DOORWAYS INTO THE NEW ADDITION.
6. REMOVALS SHALL BE COORDINATED WITH OTHER TRADES AFFECTED.
7. REMOVAL OF ANY PIECE OF EQUIPMENT OR TERMINAL DEVICE SHALL INCLUDE REMOVAL OF CONNECTING DUCTWORK AND PIPING BACK TO EXISTING MAINS THAT REMAIN. CAP EACH BRANCH AIR/WATER-TIGHT. CONTROLS AND CONTROL COMPONENTS SHALL ALSO BE REMOVED. DO NOT LEAVE COMPONENTS (CONTROLLERS, PNEUMATICS, ETC.) THAT HAVE NO FUNCTION. PROVIDE CONTROL WIRING, DUCTWORK, PIPING, ETC. AS NECESSARY TO MAINTAIN CONTINUITY OF SERVICE FOR EQUIPMENT OR TERMINAL DEVICES TO REMAIN.
8. ALL PIPING TO BE REMOVED SHALL BE PROPERLY PLUGGED OR CAPPED BENEATH FINISHED SURFACES, SO THAT UPON COMPLETION OF ALL NEW WORK, ALL ABANDONED PIPING SHALL BE CONCEALED IN FINISHED AREAS.
9. NO DEAD ENDS SHALL BE LEFT ON ANY PIPING UPON COMPLETION OF JOB. BRANCHES SHALL BE CUT AND CAPPED AT MAINS. THE EXISTING SYSTEM SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF NEW WORK.
10. CHIMNEY INSPECTION AND SOOT REMOVAL: ON PROJECTS INCLUDING BOILER REMOVAL OR REPLACEMENT, CONTRACTOR SHALL GATHER TOGETHER WITH A VACUUM-CLEANING MACHINE ALL ACCUMULATIONS OF SOOT. HE SHALL REMOVE ALL SOOT FROM THE BASE OF THE CHIMNEY. THE CHIMNEY SHALL BE INSPECTED AND ANY DEFICIENCIES NOTED IN A WRITTEN REPORT.

ABBREVIATIONS

AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
ATC	AUTOMATIC TEMPERATURE CONTROL TRADE CONTRACTOR
ATC	AUTOMATIC TEMPERATURE CONTROL SYSTEM
BMS	BUILDING MANAGEMENT SYSTEM (ATC)
BR	BOTTOM WALL REGISTER
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CR	CEILING REGISTER
CO	CLEAN OUT (DOOR)
CV	MOTORIZED CONTROL VALVE
EC	ELECTRICAL CONTRACTOR
EMS	ENERGY MANAGEMENT SYSTEM (ATC)
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FSC	FULL SIZE CONNECTION
FSD	FIRE/SMOKE DAMPER
GC	GENERAL TRADES CONTRACTOR
HVAC	HEATING, VENTILATING, AIR CONDITIONING CONTRACTOR
MFR	MANUFACTURER
MD	MOTORIZED DAMPER
OAI/FAI	OUTSIDE (FRESH) AIR INTAKE
PFRE	PRE-FINISHED SHEET METAL ENCLOSURE
PL	PLUMBING CONTRACTOR
SMRE	SHEET METAL RISER ENCLOSURE (PRE-FINISHED)
TD	TRANSFER DUCT
TR	TOP WALL REGISTER
WMG	1/2" SQ. WIRE MESH GRILLE
VIF	VERIFY IN FIELD

BEFORE FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS

GENERAL NOTES

1. BEFORE SUBMITTING A PROPOSAL, BIDDERS SHALL EXAMINE ALL RELATED TO THIS WORK AND SHALL BECOME FULLY INFORMED AS TO THE EXTENT AND CHARACTER OF THE WORK REQUIRED AND ITS RELATION TO THE OTHER WORK IN THE BUILDING.
2. BEFORE COMMENCING WORK, THE CONTRACTOR WILL EXAMINE ALL CONDITIONS OF THE PROJECT UPON WHICH HIS WORK IS IN ANY WAY DEPENDENT FOR PERFECT WORKMANSHIP ACCORDING TO THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. NO "WAIVER OF RESPONSIBILITY" FOR INCOMPLETE, INADEQUATE OR DEFECTIVE ADJOINING WORK WILL BE CONSIDERED UNLESS NOTICE HAS BEEN FILED BY THIS CONTRACTOR AND ACCEDED TO BY THE OWNER'S REPRESENTATIVE IN WRITING BEFORE THE CONTRACTOR BEGINS ANY PART OF THE WORK.
3. THE CONTRACTOR WILL PAY FOR ALL LICENSES, PERMITS AND INSPECTION FEES REQUIRED BY CIVIL AUTHORITIES HAVING JURISDICTION. COMPLY WITH ALL LAWS, ORDINANCES, REGULATIONS, AND FIRE UNDERWRITER'S REQUIREMENTS APPLICABLE TO WORK HEREIN SPECIFIED WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
4. SMALL SCALE DRILLING THROUGH WALLS AND FLOORS OR CUTTING OF PIPING INSULATION WHICH MAY CONTAIN ASBESTOS SHALL BE PERFORMED BY A PERSON WITH A "RESTRICTED ASBESTOS HANDLER ALLIED TRADES CERTIFICATE" AND SHALL HAVE A COPY OF IT IN HIS POSSESSION AT ALL TIMES WHILE WORKING OF THE PROJECT. THIS SHALL ALSO APPLY TO REMOVAL OF PIPING, DUCTWORK OR EQUIPMENT INSULATION.
5. IT IS SPECIFICALLY INTENDED THAT ANYTHING (WHETHER MATERIAL OR LABOR), WHICH IS USUALLY FURNISHED AS A PART OF SUCH EQUIPMENT, AS IS HEREINAFTER CALLED FOR (AND WHICH IS NECESSARY FOR THE COMPLETION AND PROPER OPERATION) SHALL BE FURNISHED AS PART OF THIS CONTRACT WITHOUT ADDITIONAL COST THE OWNER, WHETHER OR NOT SHOWN IN DETAIL OR DESCRIBED IN THE SPECIFICATIONS.
6. WHEN DRAWINGS AND SPECIFICATIONS CONFLICT OR THERE IS A QUESTION AS TO THE PROPER INTENT OF THIS CONTRACT, THE CONTRACTOR SHALL ASSUME THE GREATER QUANTITY, THE HIGHER QUALITY AND/OR THE MORE EXPENSIVE METHOD IN HIS PRICING. ALL QUESTIONS SHALL BE DIRECTED TO THE ARCHITECT/ENGINEER IN WRITING ONLY AND ONLY UP TO TEN (10) DAYS PRIOR TO BIDDING.
7. THE DRAWINGS INDICATE THE GENERAL RUNS OF THE PIPING, DUCTWORK, ETC. SYSTEMS AND THE LOCATION OF EQUIPMENT AND APPARATUS, HOWEVER IT SHALL BE UNDERSTOOD THAT THE RIGHT IS RESERVED BY THE ARCHITECT/ENGINEER TO CHANGE THE LOCATION OF PIPING WORK, DUCTWORK, EQUIPMENT AND APPARATUS TO A REASONABLE EXTENT AS BUILDING CONDITIONS MAY DICTATE, PRIOR TO THEIR INSTALLATION WITHOUT EXTRA COST TO THE OWNER.
8. ALL DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS. THE CONTRACTOR SHALL ACCOUNT FOR ANY LINING IN SIZING OF SHEET METAL.
9. ALL COMPONENTS SUPPLIED BY THIS CONTRACTOR SHALL BE UL LISTED AND/OR ETL LABELED AND SHALL CONFORM TO ASHRAE STANDARD 15.
10. ANY CHANGES FROM THE DRAWINGS AND SPECIFICATIONS AND ANY INTERPRETATION THEREOF SHALL HAVE THE PRIOR APPROVAL OF THE ARCHITECT/ENGINEER. THE CONTRACTOR SHALL SUBMIT IN WRITING, AT THE TIME OF SIGNING THE CONTRACT, ANY ITEMS OF NECESSARY LABOR AND MATERIALS, WHICH, IN HIS OPINION, ARE LACKING IN REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS TO INSURE A COMPLETE JOB IN ALL RESPECTS. NO CONSIDERATION WILL BE GRANTED TO ALLEGED MISUNDERSTANDING OF MATERIALS TO BE FURNISHED, WORK TO BE DONE, OR CONDITIONS TO BE COMPLIED WITH, IT BEING UNDERSTOOD THAT THE TENDER OF A PROPOSAL CARRIES WITH IT THE AGREEMENT TO ALL ITEMS AND CONDITIONS REFERRED TO HEREIN, OR INDICATED ON THE ACCOMPANYING DRAWINGS.
11. FURNISH ALL COMBINATION MOTOR STARTER/DISCONNECTS FOR EQUIPMENT (WITH THE EXCEPTION OF STARTERS AND ELECTRIC ITEMS ALREADY MOUNTED ON EQUIPMENT OR EQUIPMENT NOT REQUIRING SAME). FAN MOTOR STARTER/DISCONNECTS SHALL HAVE CONTACTS FOR ATC CONNECTION AND A TERMINAL BLOCK CONNECTION FOR FIRE ALARM FAN SHUTDOWN. STARTERS PER MANUFACTURERS RECOMMENDATIONS. UNDERWRITERS INSPECTION AND CERTIFICATE REQUIRED. COORDINATE WITH ELECTRICAL CONTRACTOR.
12. THIS CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PROVIDING ELECTRIC, GAS, WATER, ETC. CONNECTIONS TO SYSTEMS OR EQUIPMENT THAT ARE PART OF THIS CONTRACT. PROVIDE EQUIPMENT THAT ARE PART OF THIS CONTRACT. PROVIDE EQUIPMENT OUTS AND EXACT LOCATIONS, INCLUDING ORIENTATION, OF ALL SYSTEMS AND EQUIPMENT REQUIRING SUCH CONNECTIONS. THIS SHALL BE DONE WELL IN ADVANCE OF THOSE TRADES INSTALLING THEIR CONNECTION WORK.
13. COORDINATION DRAWINGS (IF APPLICABLE): ATTENTION IS DIRECTED TO DIVISION 1 FOR COORDINATION DRAWING REQUIREMENTS FOR THIS PROJECT. THESE DRAWINGS ARE CRITICAL TO THE PROPER EXECUTION OF THE WORK AND FAILURE TO HONOR THESE REQUIREMENTS MAY BECOME THE BASIS FOR DENIAL OF ANY AND ALL CLAIMS FOR EITHER OR BOTH "TIME" AND "MONEY".
14. LOCATION AND SIZES OF EXISTING PIPING, DUCTWORK, EQUIPMENT, ETC. ARE APPROXIMATE. EXACT SIZES AND LOCATIONS OF ALL EXISTING WORK SHALL BE VERIFIED ON THE JOB.
15. BEFORE FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS.
16. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO SUBMISSION OF BID TO DETERMINE WHAT WORK MUST BE PERFORMED AFTER NORMAL BUSINESS HOURS. UNLESS OTHERWISE DIRECTED ANY NOISY WORK (CHOPPING, CORE DRILLING, HAMMERING, ETC.) AND BUILDING POWER INTERRUPTIONS SHALL BE PERFORMED OUTSIDE OF NORMAL BUSINESS HOURS. CONFIRM NORMAL BUSINESS HOURS WITH BUILDING OWNER. NO ADDITIONAL COST WILL BE CHARGED TO OWNER FOR WORK PERFORMED OUTSIDE NORMAL BUSINESS HOURS.
17. REFER TO ARCHITECT'S REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING MOUNTED ITEMS.
18. OPENINGS AROUND PENETRATIONS THROUGH FIRE RESISTANCE RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE FIRE STOPPED USING APPROVED METHODS. ALL SLEEVES MUST HAVE BUSHINGS. SEALANT SHALL BE 3 HOUR FIRE BARRIER #CP-25 (NO LESS THAN 3" THICK BACKED UP WITH MINERAL WOOL).
19. PREPARE 'AS-BUILT' DRAWINGS THAT REFLECT ACTUAL CONSTRUCTION AND SHOW DEVIATIONS FROM DESIGN DRAWINGS.

LEGEND

EXISTING DUCTWORK, EQUIPMENT, ETC. TO REMAIN	HWC * — HOT WATER COIL IDENTIFICATION
EXISTING DUCTWORK, EQUIPMENT, ETC. TO BE REMOVED	HWH * — HOT WATER HEATER IDENTIFICATION
POINT OF CHANGE IN DUCT SIZE NEW DUCTWORK 1" THERMAL ACOUSTIC LINING-DUCT SIZES ON PLANS ARE CLEAR INSIDE DIMENSIONS	HWP * — HOT WATER PUMP IDENTIFICATION
THERMAL ACOUSTIC LINING NEW DUCTWORK FLEXIBLE CONNECTION / POINT OF CHANGE IN DUCT SIZE	HX * — HEAT EXCHANGER IDENTIFICATION
FLEXIBLE CONNECTION NEW DUCTWORK POINT OF CHANGE IN DUCT SIZE	MAU * — MAKEUP AIR UNIT IDENTIFICATION
SQUARE DUCT TURN WITH TURNING VANES	SA * — SOUND ATTENUATOR IDENTIFICATION
EXISTING CEILING DIFFUSER	SF * — SUPPLY FAN IDENTIFICATION
EXISTING 3-WAY CEILING DIFFUSER	RAU * — ROOF MOUNTED AIR HANDLING UNIT IDENTIFICATION
EXISTING 2-WAY CEILING DIFFUSER	RF * — RETURN FAN IDENTIFICATION
EXISTING CEILING REGISTER	RTU * — ROOFTOP UNIT IDENTIFICATION
TYPE -SEE SCHEDULE NEW 4-WAY CEILING DIFFUSER CFM	UH * — UNIT HEATER IDENTIFICATION
TYPE -SEE SCHEDULE NEW 3-WAY CEILING DIFFUSER CFM	UV * — UNIT VENTILATOR IDENTIFICATION
TYPE -SEE SCHEDULE NEW 2-WAY CEILING DIFFUSER CFM	UVAC * — UNIT VENTILATOR AIR CONDITIONER IDENTIFICATION
TYPE -SEE SCHEDULE CEILING EXHAUST/RETURN REGISTER CFM	UVF * — UNIT VENTILATOR FRESH AIR INTAKE IDENTIFICATION
TYPE-SEE SCHEDULE REGISTER/DIFFUSER IDENTIFICATION CFM	VUH * — VERTICAL UNIT VENTILATOR IDENTIFICATION
D — DUCT DROP; DUCT RISE — R	AC (EXIST) — EXISTING AIR CONDITIONING UNIT IDENTIFICATION
DUCT MTD. MANUAL AIR VOLUME DAMPER (W/LOCKING DEVICE)	AHU (EXIST) — EXISTING AIR HANDLING UNIT IDENTIFICATION
MOTORIZED AIR VOLUME DAMPER (W/ACCESS DOOR)	B (EXIST) — EXISTING BOILER IDENTIFICATION
FD & AD FIRE DAMPER (U.L. APPROVED) & ACCESS DOOR	CFT (EXIST) — EXISTING CHEMICAL FEED TANK IDENTIFICATION
FSD & AD COMBINATION FIRE/SMOKE DAMPER (U.L. APPROVED) & ACCESS DOOR	CH (EXIST) — EXISTING CABINET HEATER IDENTIFICATION
HWS — HOT WATER HEATING SUPPLY PIPING	CHWP (EXIST) — EXISTING CHILLED WATER PUMP IDENTIFICATION
HWR / HWRR — HOT WATER RETURN / HOT WATER REVERSE RETURN PIPING	CU (EXIST) — EXISTING CONDENSATE PUMP IDENTIFICATION
CHWS — CHILLED WATER SUPPLY PIPING	CONV (EXIST) — EXISTING CONVECTOR IDENTIFICATION
CHWR — CHILLED WATER RETURN PIPING	CU (EXIST) — EXISTING CONDENSING UNIT IDENTIFICATION
L — LIQUID REFRIGERANT PIPING	DH (EXIST) — EXISTING DEHUMIDIFIER IDENTIFICATION
S — SUCTION REFRIGERANT PIPING	DOAS (EXIST) — EXISTING DEDICATED OUTDOOR AIR SYSTEM IDENTIFICATION
HG — HOT GAS REFRIGERANT PIPING	DDU (EXIST) — EXISTING DEDICATED DUCTLESS SPLIT INDOOR UNIT IDENTIFICATION
CD — CONDENSATE DRAIN PIPING	DDC (EXIST) — EXISTING DEDICATED DUCTLESS SPLIT OUTDOOR UNIT IDENTIFICATION
GLWS — GEOTHERMAL GROUND LOOP WATER SUPPLY PIPING	DXC (EXIST) — EXISTING DIRECT EXPANSION REFRIGERANT COIL IDENTIFICATION
GLWR — GEOTHERMAL GROUND LOOP WATER RETURN PIPING	EF (EXIST) — EXISTING EXHAUST FAN IDENTIFICATION
EHWS — EXISTING HOT WATER HEATING SUPPLY PIPING	ERU (EXIST) — EXISTING ENERGY RECOVERY UNIT IDENTIFICATION
EHWR — EXISTING HOT WATER HEATING RETURN PIPING	ET (EXIST) — EXISTING EXPANSION TANK IDENTIFICATION
EHWRR — EXISTING HOT WATER HEATING REVERSE RETURN PIPING	FCU (EXIST) — EXISTING INDOOR VRF FAN COIL UNIT IDENTIFICATION
ECHWS — EXISTING CHILLED WATER SUPPLY PIPING	FS (EXIST) — EXISTING VRF FLOW SELECTOR IDENTIFICATION
ECHWR — EXISTING CHILLED WATER RETURN PIPING	FOT (EXIST) — EXISTING FUEL OIL TANK IDENTIFICATION
ELPS — EXISTING LOW PRESSURE STEAM PIPING	FOP (EXIST) — EXISTING FUEL OIL PUMP IDENTIFICATION
ECR — EXISTING CONDENSATE RETURN PIPING	GF (EXIST) — EXISTING GLYCOL FEED SYSTEM IDENTIFICATION
FLOW DIRECTION WITHIN PIPE CONNECTION TO EQUIPMENT ABOVE	GP (EXIST) — EXISTING GEOTHERMAL PUMP IDENTIFICATION
GATE VALVE (HORIZONTAL/VERTICAL)	GRV (EXIST) — EXISTING GRAVITY RELIEF VENT IDENTIFICATION
COMBINATION BALANCING & SHUT-OFF VALVE (CIRCUIT SETTER)	GSHP (EXIST) — EXISTING GROUND SOURCE HEAT PUMP UNIT IDENTIFICATION
2 - WAY CONTROL VALVE	HP (EXIST) — EXISTING AIR SOURCE HEAT PUMP VRF IDENTIFICATION
3 - WAY CONTROL VALVE	HRP (EXIST) — EXISTING CEILING RADIANT HEATING PANEL IDENTIFICATION
EXPANSION JOINT, ANCHOR AND GUIDES	HU (EXIST) — EXISTING HUMIDIFIER IDENTIFICATION
CHECK VALVES	HWC (EXIST) — EXISTING HOT WATER COIL IDENTIFICATION
PIPE CONNS. (BOTTOM; TOP 45 OR 90; PIPE UP)	HWH (EXIST) — EXISTING HOT WATER HEATER IDENTIFICATION
AV — AUTOMATIC AIR VENT IDENTIFICATION	HWP (EXIST) — EXISTING HOT WATER PUMP IDENTIFICATION
THERMOMETER	HX (EXIST) — EXISTING HEAT EXCHANGER IDENTIFICATION
PRESSURE GAUGE (WITH SHUT-OFF COCK)	MAU (EXIST) — EXISTING MAKEUP AIR UNIT IDENTIFICATION
AHU * — AIR HANDLING UNIT IDENTIFICATION	SA (EXIST) — EXISTING SOUND ATTENUATOR IDENTIFICATION
B * — BOILER IDENTIFICATION	SF (EXIST) — EXISTING SUPPLY FAN IDENTIFICATION
CFT * — CHEMICAL FEED TANK IDENTIFICATION	RAU (EXIST) — EXISTING ROOF MOUNTED AIR HANDLING UNIT IDENTIFICATION
CH * — CABINET HEATER IDENTIFICATION	RF (EXIST) — EXISTING RETURN FAN IDENTIFICATION
CHWP * — CHILLED WATER PUMP IDENTIFICATION	RTU (EXIST) — EXISTING ROOFTOP UNIT IDENTIFICATION
CP * — CONDENSATE PUMP IDENTIFICATION	UH (EXIST) — EXISTING UNIT HEATER IDENTIFICATION
CONV * — CONVECTOR IDENTIFICATION	UV (EXIST) — EXISTING UNIT VENTILATOR IDENTIFICATION
CU * — CONDENSING UNIT IDENTIFICATION	UVAC (EXIST) — EXISTING UNIT VENTILATOR AIR CONDITIONER IDENTIFICATION
DH * — DEHUMIDIFIER IDENTIFICATION	UVF (EXIST) — EXISTING UNIT VENTILATOR FRESH AIR INTAKE IDENTIFICATION
DOAS * — DEDICATED OUTDOOR AIR SYSTEM IDENTIFICATION	VUH (EXIST) — EXISTING VERTICAL UNIT VENTILATOR IDENTIFICATION
DDU * — DEDICATED DUCTLESS SPLIT INDOOR UNIT IDENTIFICATION	FT-1 — TYPE NEW FIN TUBE RADIATION IDENTIFICATION ELEMENT LENGTH
DDCU * — DEDICATED DUCTLESS SPLIT OUTDOOR UNIT IDENTIFICATION	FT (EXIST) — EXISTING FIN TUBE RADIATION IDENTIFICATION
DXC * — DIRECT EXPANSION REFRIGERANT COIL IDENTIFICATION	T — TO CONTROLLED ITEM WALL MTD.(5'-2"±A.F.F-U.O.N.) TEMPERATURE SENSOR
EF * — EXHAUST FAN IDENTIFICATION	T — TO CONTROLLED ITEM WALL MTD.(5'-2"±A.F.F-U.O.N.) REVERSE ACTING THERMOSTAT
ERU * — ENERGY RECOVERY UNIT IDENTIFICATION	T/C — TO CONTROLLED ITEM WALL MTD.(5'-2"±A.F.F-U.O.N.) PROGR. HEAT/COOLING THERMOSTAT
ET * — EXPANSION TANK IDENTIFICATION	T — EXISTING WALL MTD. TEMPERATURE SENSOR/THERMOSTAT
FCU * — INDOOR VRF FAN COIL UNIT IDENTIFICATION	CO2 — WALL MTD. CARBON DIOXIDE SENSOR
FS * — VRF FLOW SELECTOR IDENTIFICATION	RH — RELATIVE HUMIDITY SENSOR
FOT * — FUEL OIL TANK IDENTIFICATION	CV — COMBINATION BALANCING & SHUT-OFF VALVE (CIRCUIT SETTER)
FOP * — FUEL OIL PUMP IDENTIFICATION	SWV — SUMMER/WINTER VALVE
GF * — GLYCOL FEED SYSTEM IDENTIFICATION	DOOR UNDERCUT
GP * — GEOTHERMAL PUMP IDENTIFICATION	LL — LOW DOOR LOUVER
GRV * — GRAVITY RELIEF VENT IDENTIFICATION	POINT OF DISCONNECTION
GSHP * — GROUND SOURCE HEAT PUMP UNIT IDENTIFICATION	POINT OF CONNECTION, NEW TO EXISTING
HP * — AIR SOURCE HEAT PUMP VRF IDENTIFICATION	1 — SECTION/DETAIL/ELEVATION/PART PLAN NUMBER DRAWING NUMBER SECTION/ELEVATION IDENTIFICATION
HU * — HUMIDIFIER IDENTIFICATION	

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CONSTRUCTION DOCUMENTS

Professional Seal

STATE OF NEW YORK — PAUL V. GALLAGHER — 087251 — LICENSED PROFESSIONAL ENGINEER

Exp. 11-30-27 CA:0018275

No.	Date	Issue
1	10-29-2024	BID ISSUE

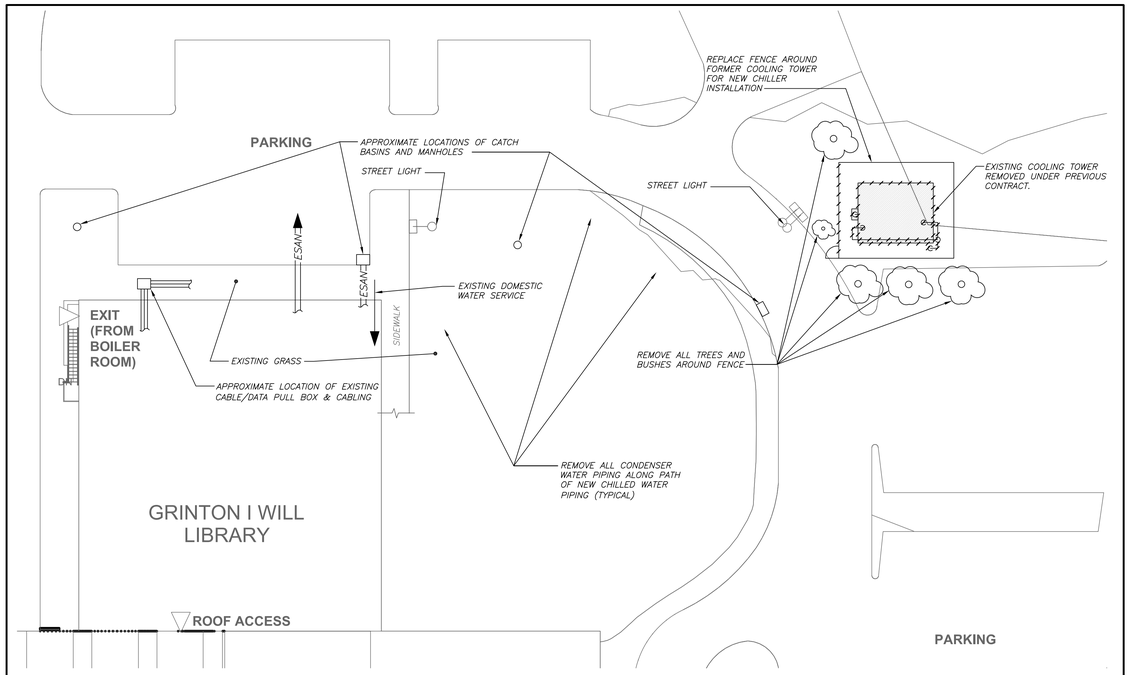
Sheet Title

LEGEND, ABBREVIATIONS, AND NOTES

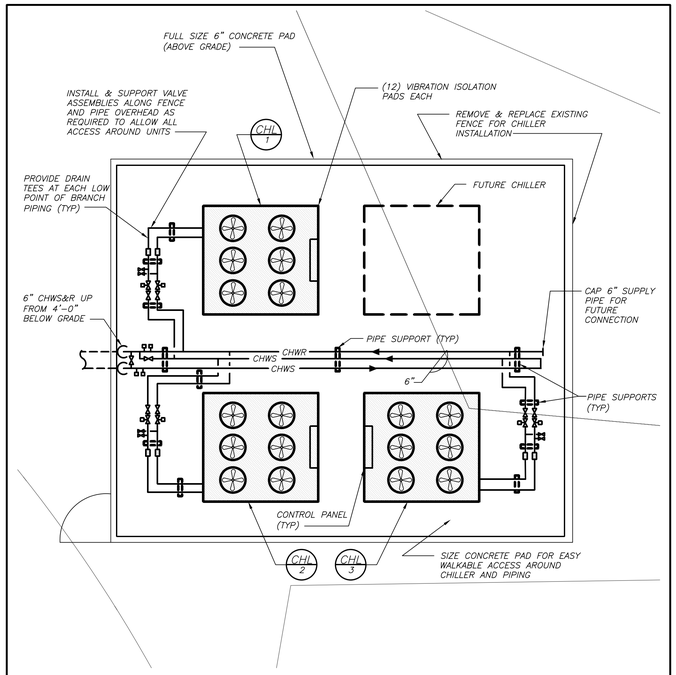
Job No.	Date 07/31/2024
Scale AS NOTED	Drawn / Checked BGA/BGA

Sheet Number

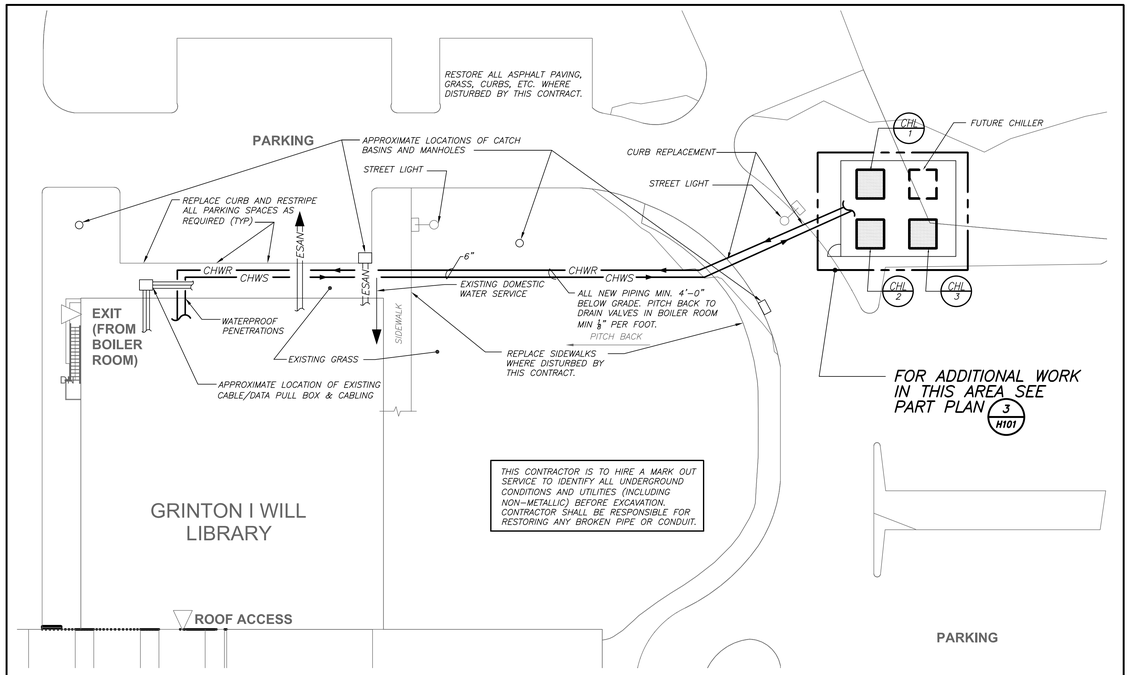
H001



PART SITE PLAN (REMOVALS) — 1 / H101 — 0, 16', 32' — 1/16 inch=1 foot



PART SITE PLAN (NEW WORK) — 3 / H101 — 0, 4', 8' — 1/4 inch=1 foot



PART SITE PLAN (NEW WORK) — 2 / H101 — 0, 16', 32' — 1/16 inch=1 foot

BEFORE FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS

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Exp. 11-30-27 CA:0018275

No.	Date	Issue
1	10-29-2024	BID ISSUE

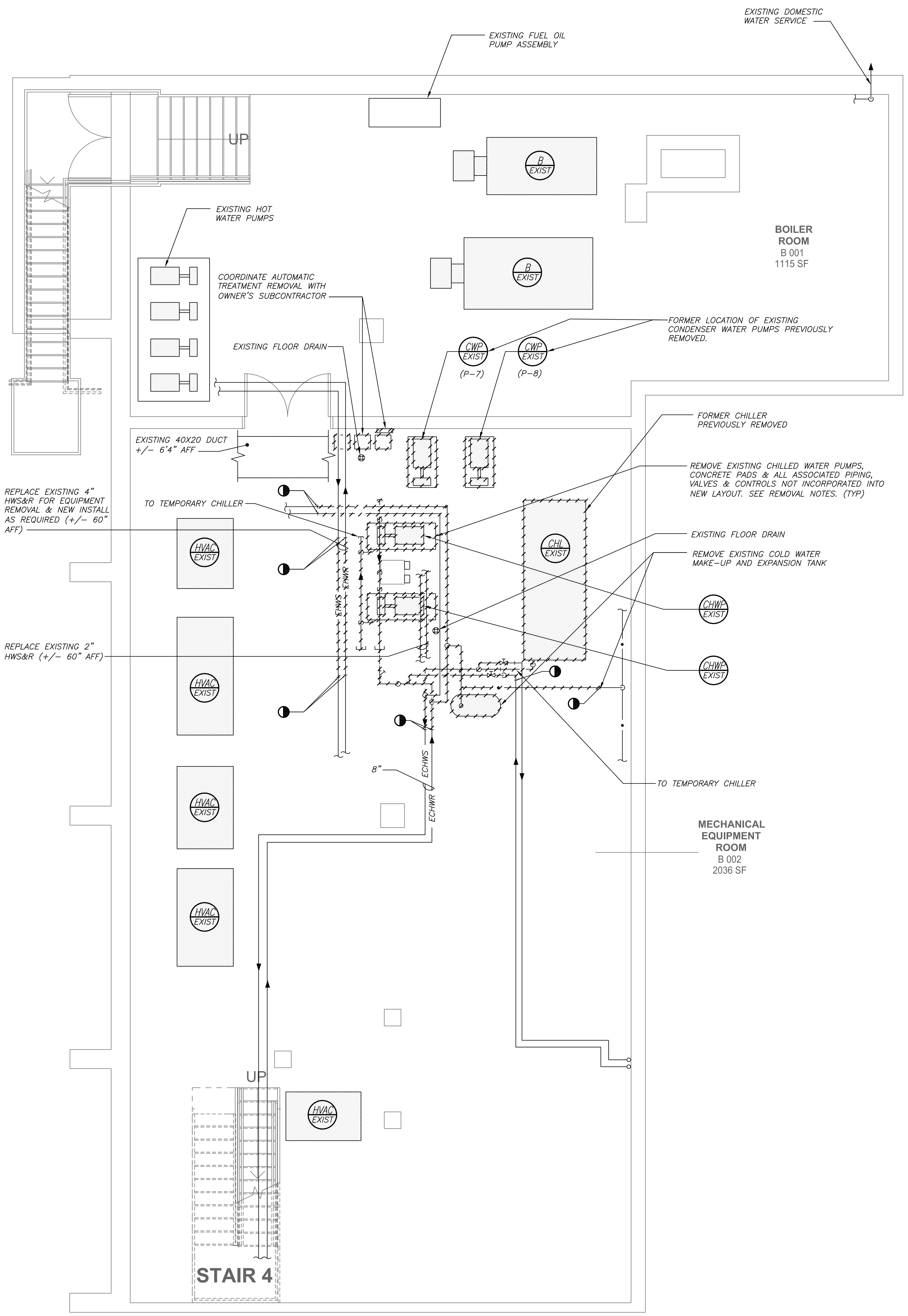
Sheet Title

PART SITE PLAN

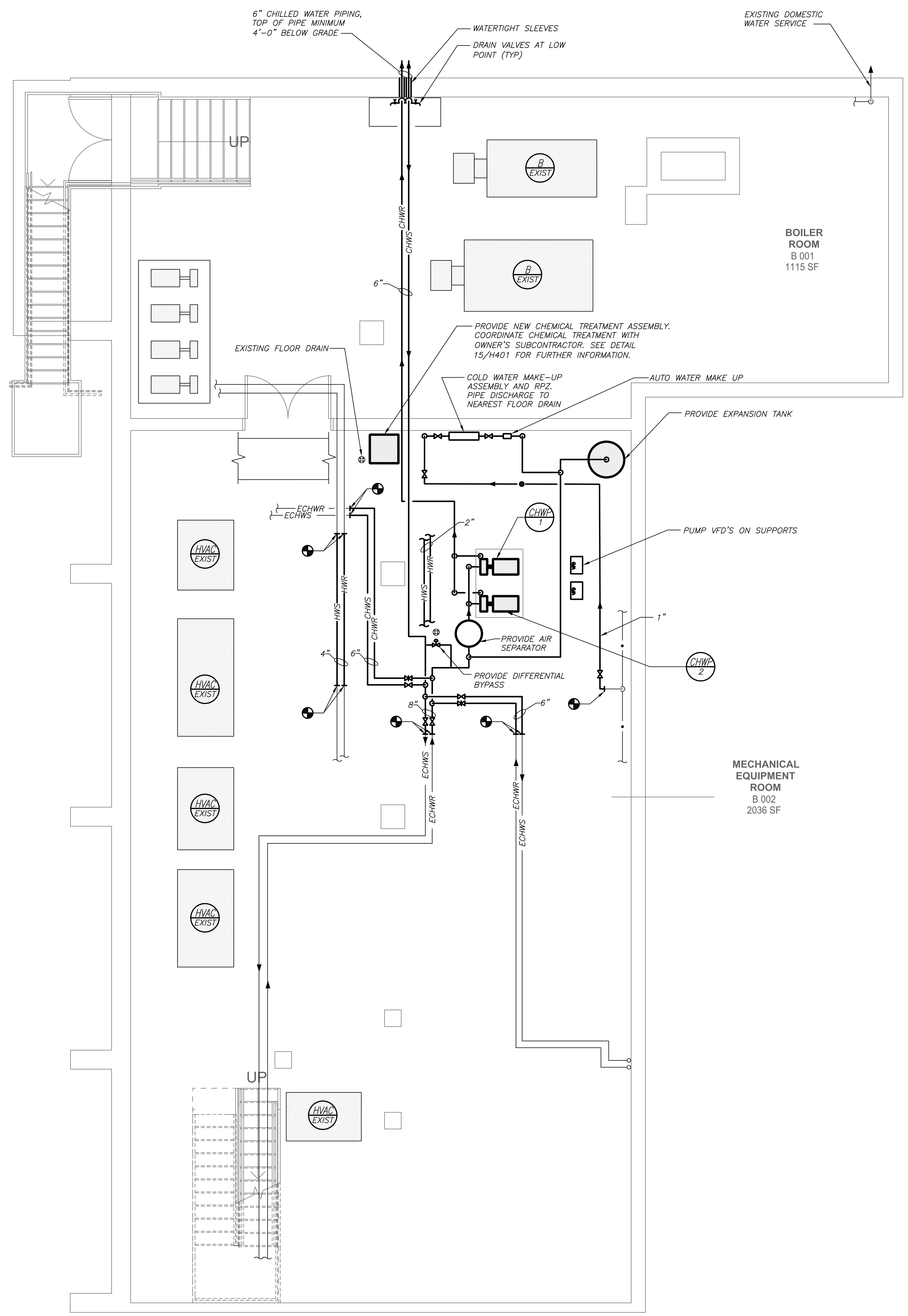
Job No.	Date
	07/31/2024
Scale: AS NOTED	Drawn / Checked: BGA/BGA

Sheet Number

H101



MECH ROOM PLAN (2/H102)
(REMOVALS)
1/4 inch=1 foot



MECH ROOM PLAN (1/H102)
(NEW WORK)
1/4 inch=1 foot

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WRITTEN DIMENSIONS ON THIS DRAWING SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTOR SHALL VERIFY ALL ACTUAL DIMENSIONS AND CONDITIONS ON THE JOB AND THE ARCHITECT MUST BE NOTIFIED OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN. SHOP DETAILS MUST BE SUBMITTED TO THIS OFFICE FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION.

Professional Seal

STATE OF NEW YORK · PAUL J. GALLAGHER · LICENSED PROFESSIONAL ENGINEER

Exp. 11-30-27 CA:0018275

No.	Date	Issue
1	10-29-2024	BID ISSUE

Sheet Title

BASEMENT MECHANICAL ROOM

Job No.	Date 07/31/2024
Scale AS NOTED	Drawn / Checked BGA/BGA
Sheet Number H102	

BEFORE FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS

SCHEDULE OF AIR COOLED CHILLERS

MARK	SERVICE	LOCATION	MODEL Nº (1)	COOLING CAPACITY (TONS)	GPM EACH	COMPRESSOR DATA		CONDENSER FAN DATA			ELECTRIC SERVICE	MCA (11)	MOCP (11)	PHYSICAL DATA DIMENSION / WEIGHT	REMARKS
						QTY / NOM. SIZE	FLA EACH	QTY / WATTS EACH	TOTAL CFM	FLA EACH					
CHL 1, CHL 2, CHL 3	CHILLED WATER	ROOF	KCHH060VDG	60 EACH	113	6/10 TONS	33.7	6/1448	8688	1	208/3/60	80 160	90 175	90"X85"X87"/3064LBS	REFER TO (2)(3)(4)(5)(6)(7)(8)(9)(10)(12)

NOTES

1. AS MANUFACTURED BY "LG".
2. DESIGN CONDITIONS BASED ON OUTDOOR AMBIENT TEMPERATURE 105°F COOLING, 44°F LWT AND 56°F EWT
3. REFRIGERANT USED SHALL BE R–32.
4. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
5. MINIMUM E.E.R. = 9.16.
6. EACH CHILLER MODULE REQUIRES (2) INDEPENDENT POWER CIRCUITS ((1) 90–AMP CIRCUIT AND (1) 175–AMP CIRCUIT).
7. BASED ON ARI STANDARD 370, MAXIMUM 86 dbA SOUND POWER LEVEL, MAXIMUM 61 dBA SOUND PRESSURE LEVEL @ 30FT.
8. MAXIMUM WATER PRESSURE DROP = 6.00 FT.
9. ALL COMPRESSORS SHALL BE INVERTER TYPE.
10. PROVIDE THREE (3) LG MULTISITE EDGE 10 CONTROLLERS MODEL PBASE10 WITH ENCLOSURE PANEL AND SOFTWARE FOR INTERFACE WITH ATC SUB–CONTRACTOR.
11. PROVIDE START–UP SERVICE AND COMMISSIONING BY FACTORY CERTIFIED TECHNICIAN.

SCHEDULE OF PUMPS

MARK	SERVICE	LOCATION	MODEL Nº	GPM	HEAD $FT.H_2O$	RPM	MOTOR HP	ELECTRIC SERVICE	PHYSICAL DATA DIMENSION / WEIGHT	REMARKS
CHWP 1	BUILDING DISTRIBUTION	BASEMENT MER	SERIES E1510 3EB	390	80	1640	15	208/3/60	50"x20"x24" / 602LBS	REFER TO (1)(2)(3)
CHWP 2	BUILDING DISTRIBUTION	BASEMENT MER	SERIES E1510 3EB	390	80	1640	15	208/3/60	50"x20"x24" / 602LBS	REFER TO (1)(2)(3)

NOTES

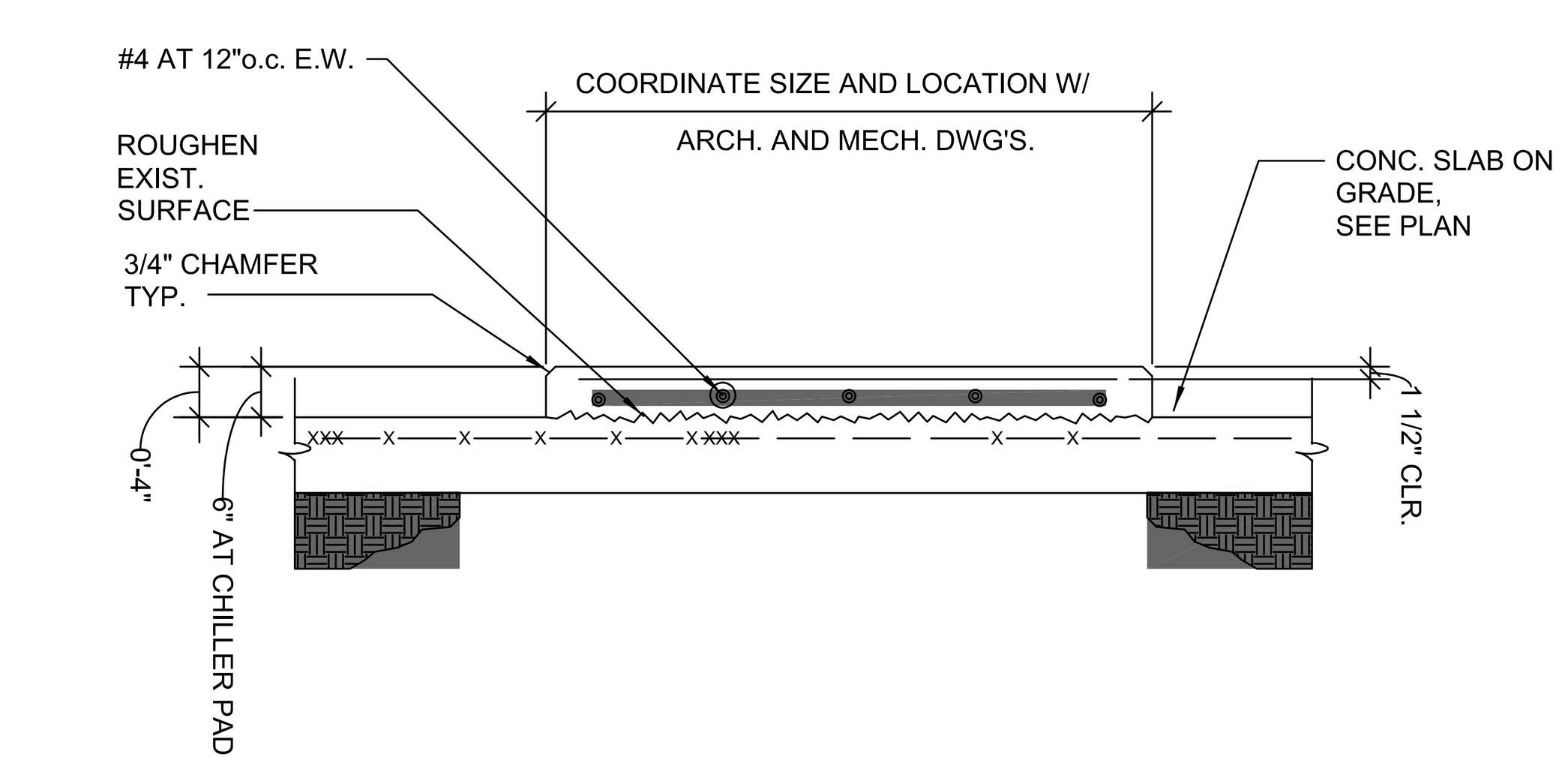
1. AS MANUFACTURED BY "BELL & GOSSETT".
2. INSTALL PUMPS PER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE VFD, TRIPLE DUTY VALVE, SUCTION DIFFUSER PLUS WITH ADJUSTABLE SUPPORT FOOT FOR EACH PUMP.

SCHEDULE OF NEW EXPANSION TANKS

MARK	SERVICE	LOCATION	MODEL Nº	TANK VOLUME GALS.	ACCEPTANCE VOLUME GALS.	PHYSICAL DATA DIMENSION / WEIGHT	REMARKS
ET 1	CHILLED WATER	BASEMENT	B–500	132	132	30ø x 57" / 1430 LBS	REFER TO (1)(2)(3)(4)

NOTES

1. AS MANUFACTURED BY "BELL & GOSSETT".
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. ASME RATED, VERTICAL FLOOR MOUNTING.
4. PROVIDE CONCRETE PAD AS REQUIRED. SEE SPEC & DETAILS.



INTERIOR HOUSEKEEPING PAD DETAIL (1 / H301) NO SCALE

BEFORE FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS

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No.	Date	Issue
1	10-29-2024	BID ISSUE

Sheet Title

SCHEDULES

Job No.

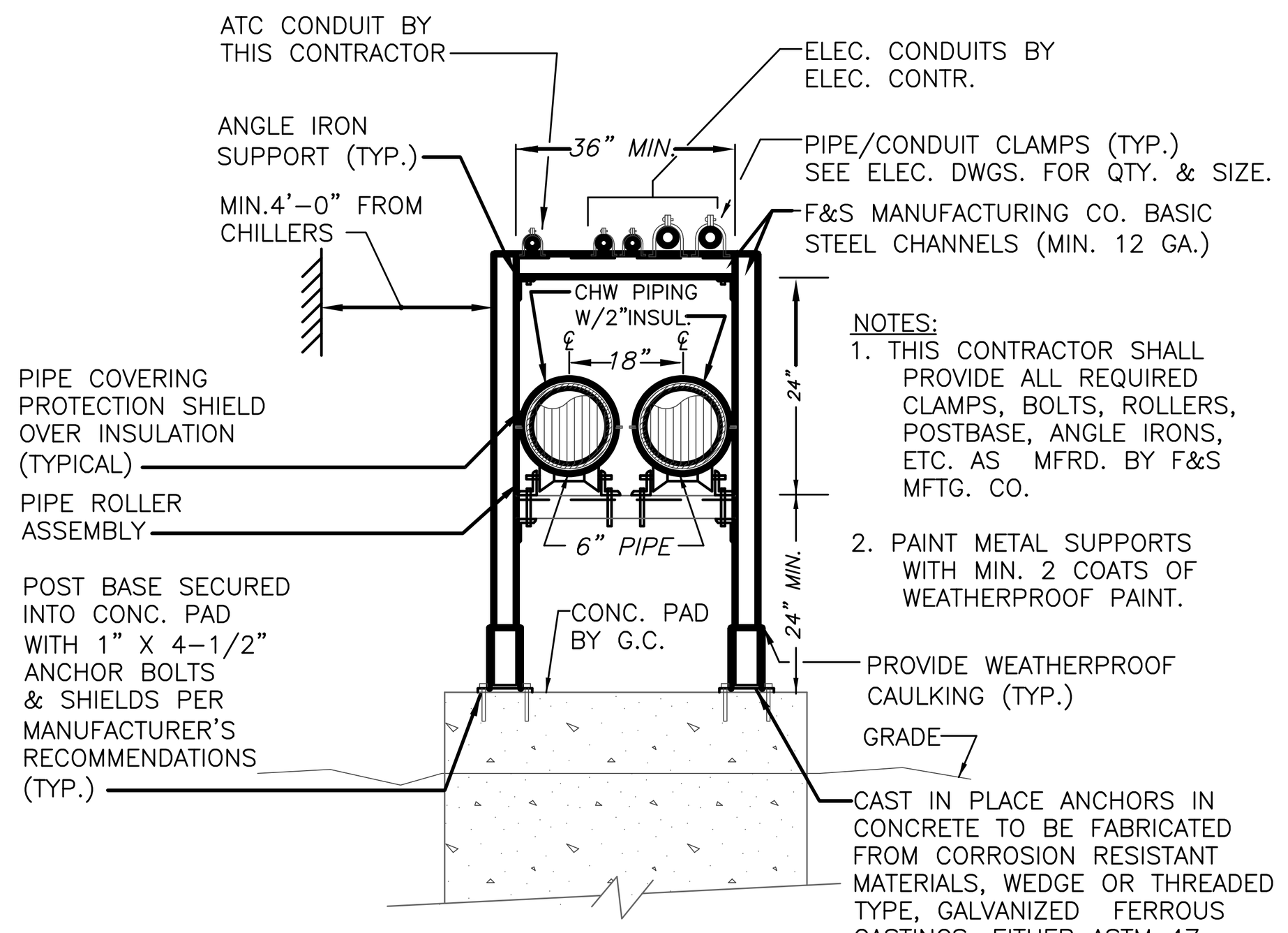
Date 07/31/2024

Scale AS NOTED

Drawn / Checked BGA/BGA

Sheet Number

H301



NOTES:
1. THIS CONTRACTOR SHALL PROVIDE ALL REQUIRED CLAMPS, BOLTS, ROLLERS, POSTBASE, ANGLE IRONS, ETC. AS MFRD. BY F&S MFTG. CO.
2. PAINT METAL SUPPORTS WITH MIN. 2 COATS OF WEATHERPROOF PAINT.

PIPING/CONDUIT SUPPORT ON CONC. PAD DETAIL 12/H401 NO SCALE

1"X1" BLACK VINYL COATED CHAIN LINK FENCE, 9 GAUGE, KNUCKLED ALL SIDES.

ALL POSTS, RAILS, CAPS, ENDS, STRAPS AND TENSION BARS SHALL BE GALVANIZED STEEL.

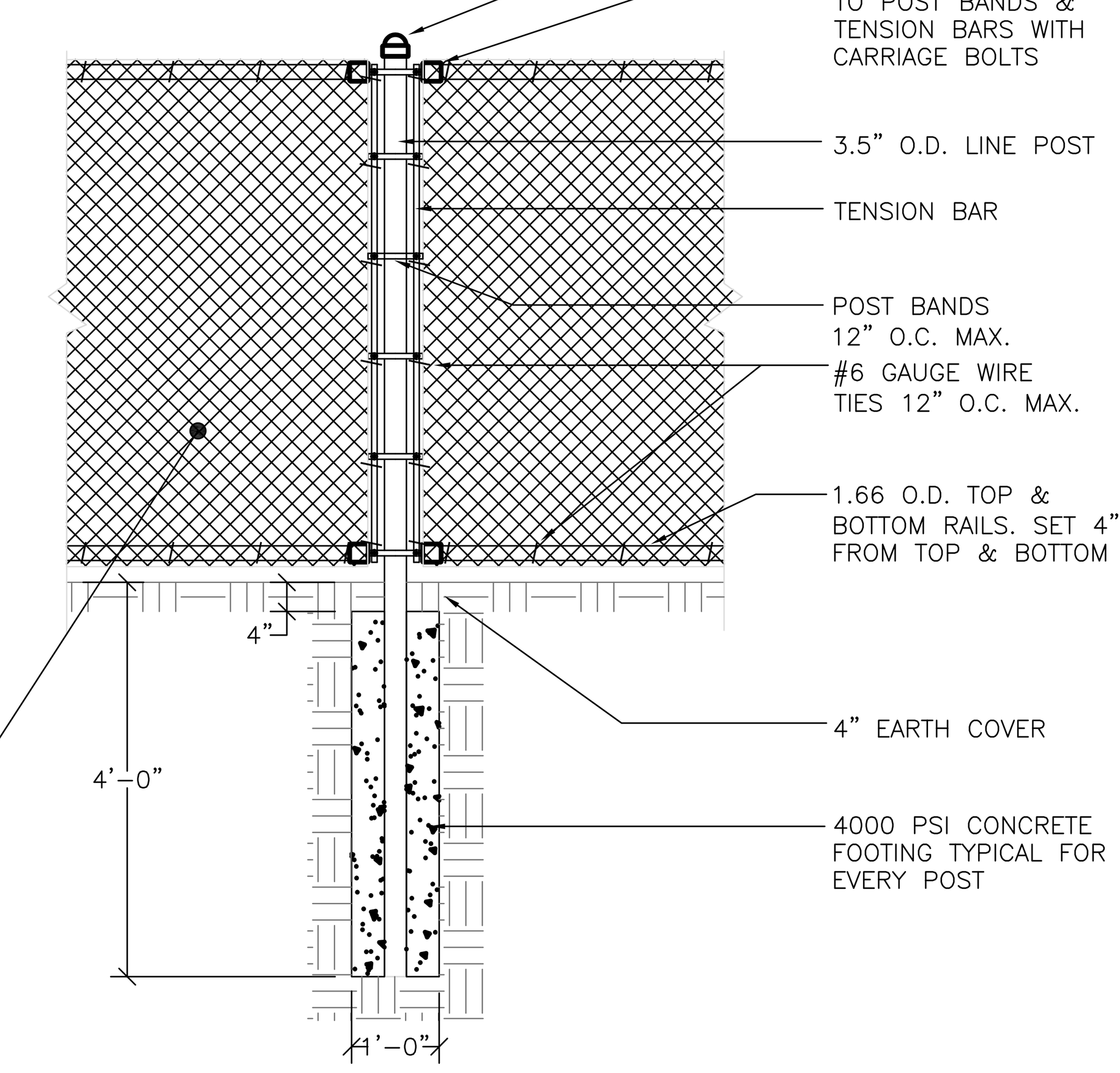
3.5" O.D. LINE POSTS SHALL NOT EXCEED 8 FT. O.C.

TOP AND BOTTOM SHALL BE 1.66 O.D.

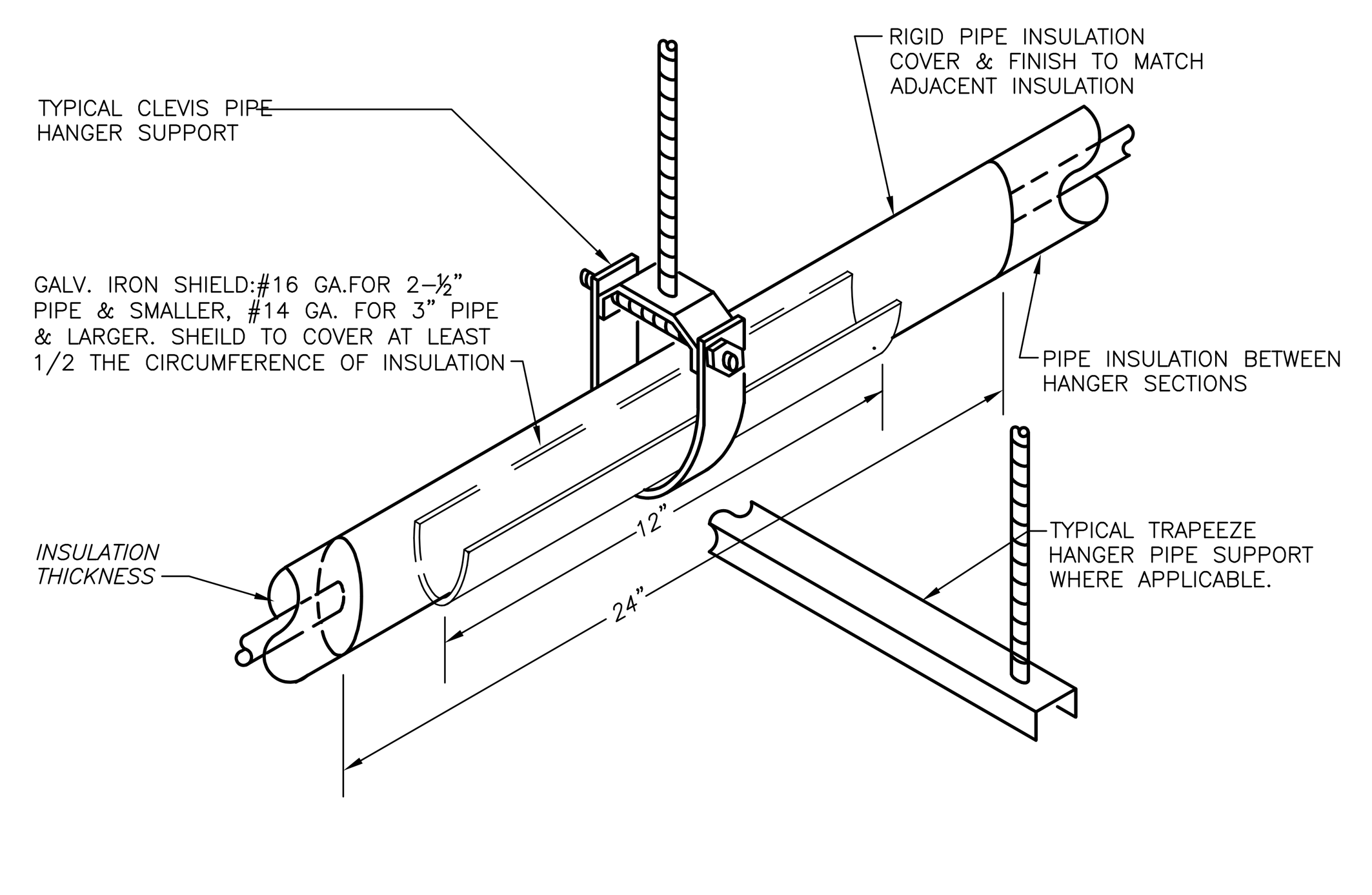
INTERMEDIATE HORIZONTAL RAILS SHALL BE REQUIRED FOR FENCES 6' OR HIGHER. DIAMETER SHALL BE 1.66 OD.

GATE HINGES AND CAPS SHALL BE TACK WELDED TO POSTS.

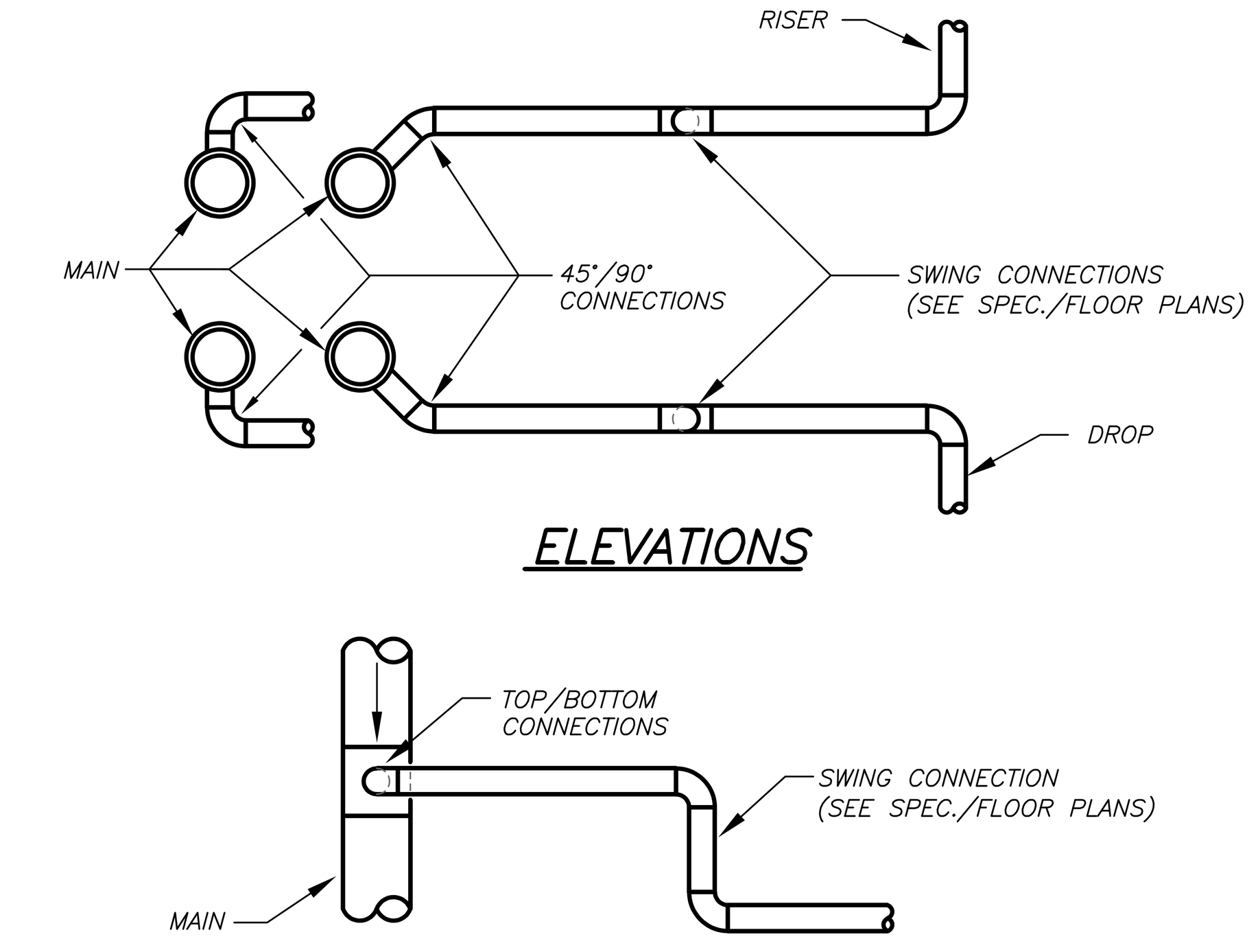
NOISE MITIGATING FENCE CURTAINS APPLIED TO FENCING NRC .078 STC: 27 BASIS OF DESIGN "ACOUSTIFENCE"



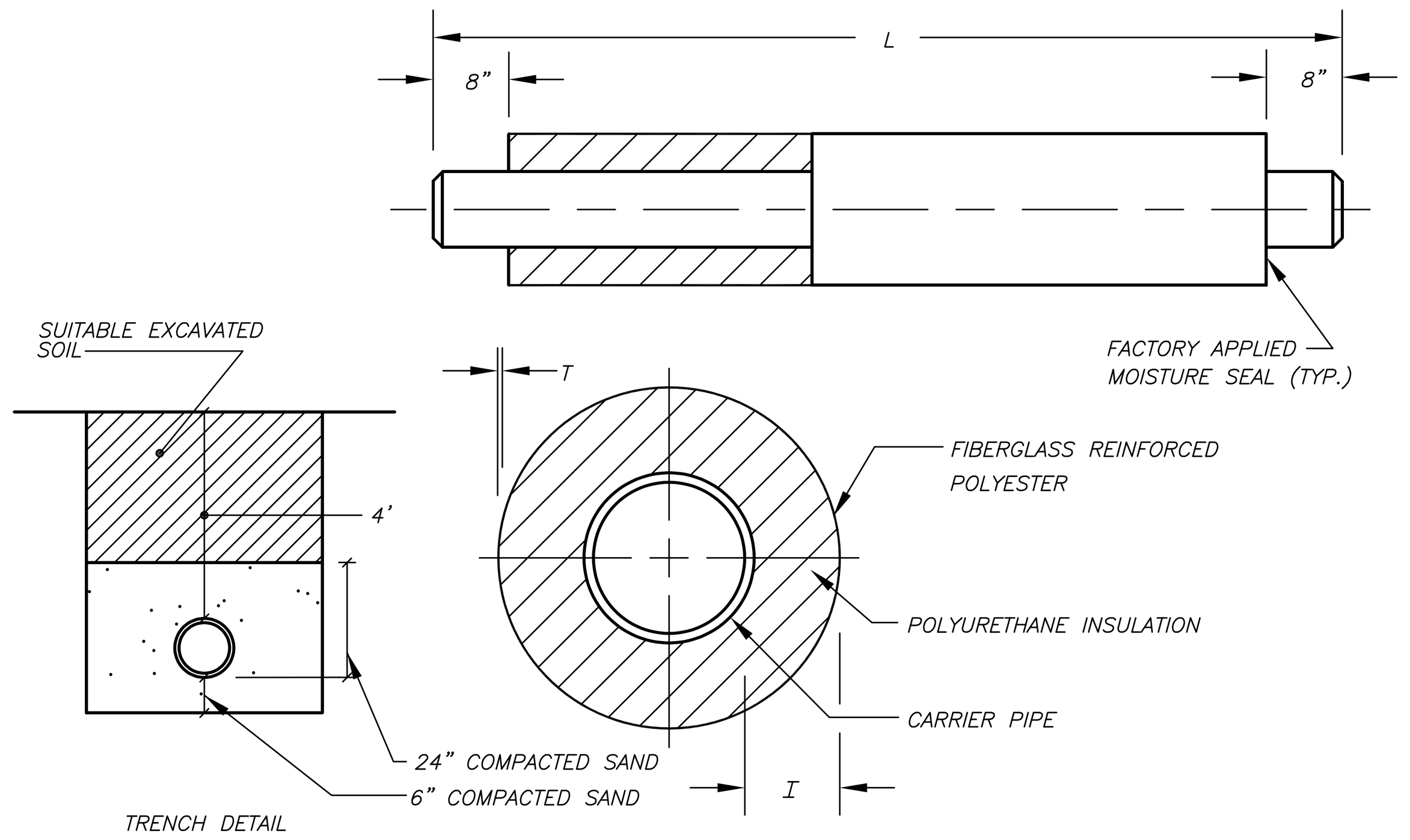
CHAIN LINK FENCE DETAIL 8/H401 NO SCALE



INSULATED PIPE HANGER DETAIL 2/H401 NO SCALE



DETAIL OF PIPING BRANCH CONNECTION 1/H401 NO SCALE

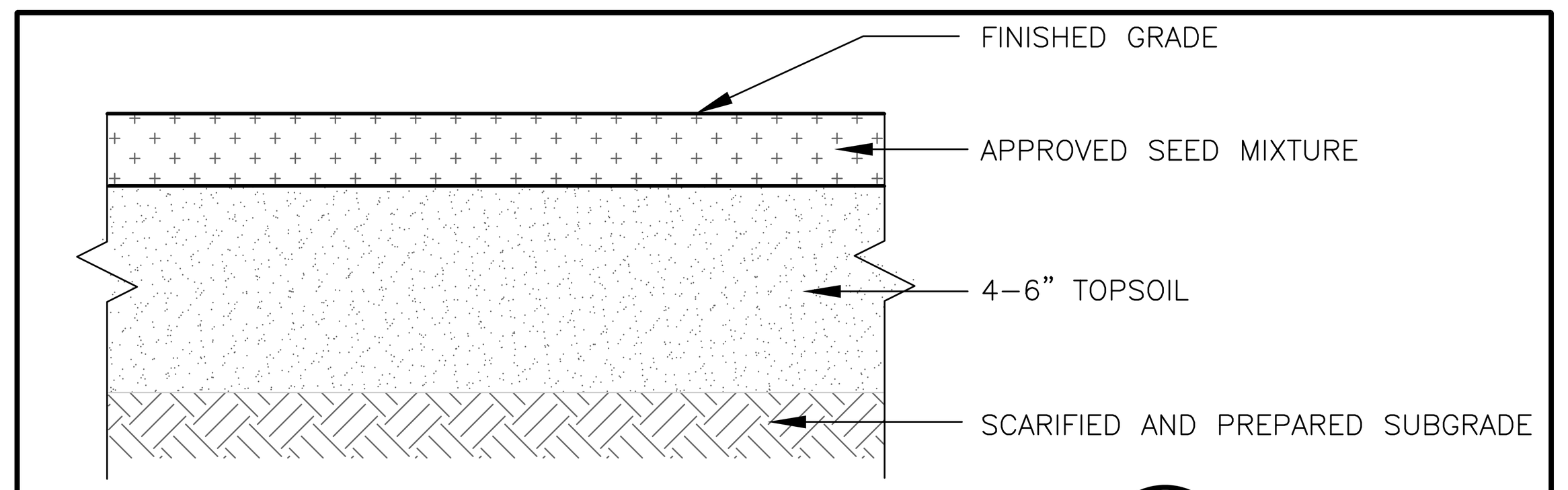


JACKET OUTSIDE DIAMETER	T
UP TO 15.5"	80 MILS
15.6" TO 24.5"	120 MILS
24.6" TO 31.0"	160 MILS
31.1" TO 40"	200 MILS

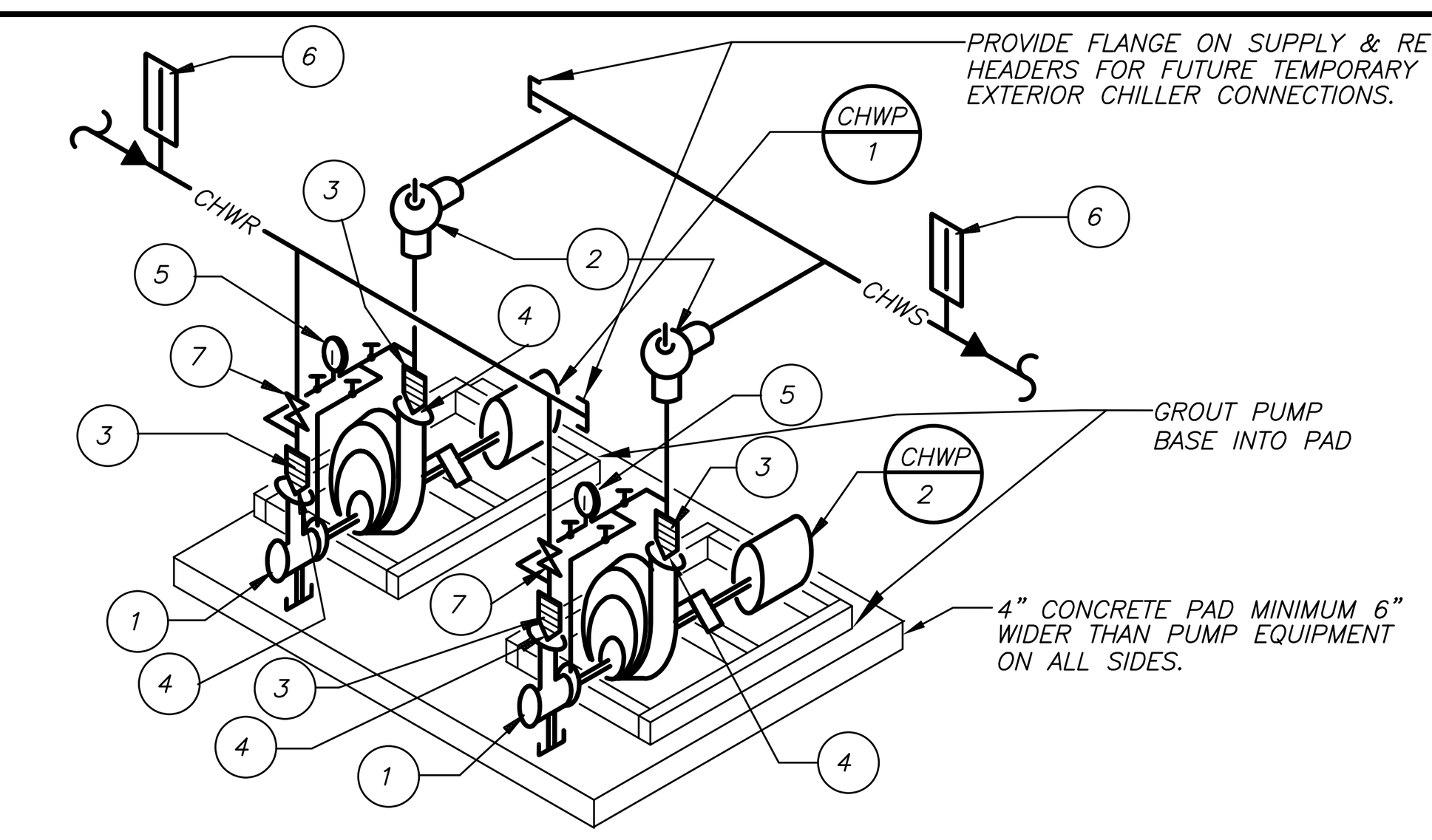
PIPE SIZE	L *	I **
2" & SMALLER	20 FT.	1" OR 1 1/2"
2 1/2" & LARGER	20' OR 40'	1"-1 1/2"-2"

* 20' AND 40' ARE NOMINAL VALUES FOR SINGLE AND DOUBLE RANDOM LENGTHS.
** SEE SPEC FOR APPROPRIATE INSULATION THICKNESS.

UNDERGROUND PIPING DETAIL 14/H401 NO SCALE



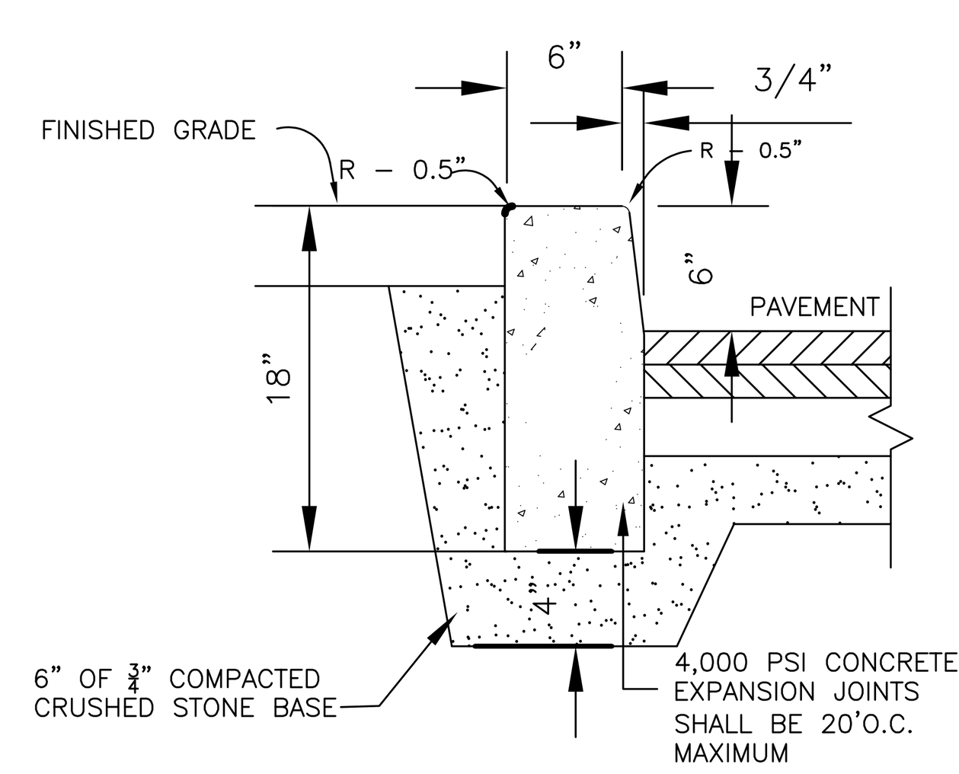
LAWN RESTORATION DETAIL 9/H401 NO SCALE



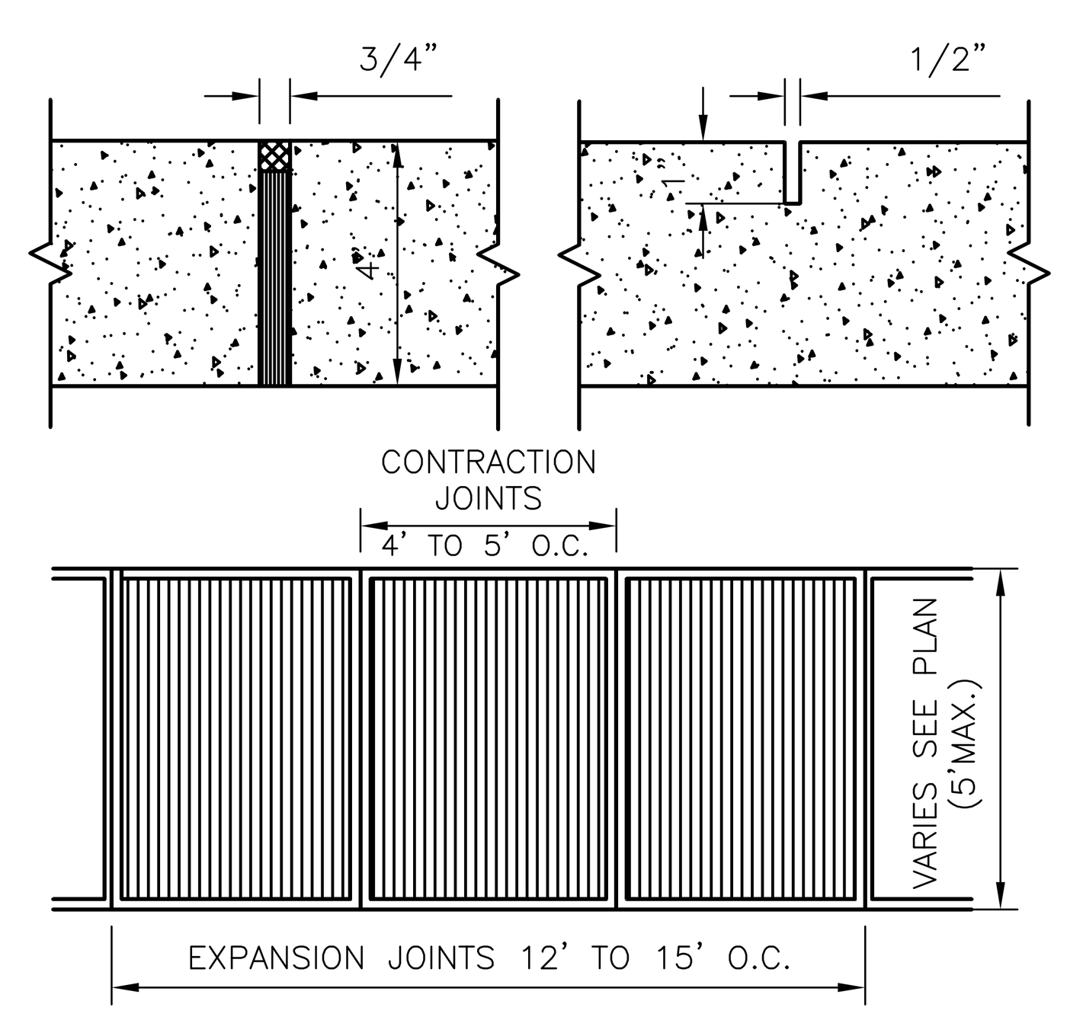
LIST OF APPURTENANCES

MARK	DESCRIPTION
1	SUCTION DIFFUSER WITH ADJUSTABLE SUPPORT FOOT
2	TRIPLE DUTY VALVE (SOFT SEAT)
3	FLEXIBLE PIPE CONNECTION
4	CONCENTRIC REDUCER/INCREASER
5	DIFFERENTIAL PRESSURE GAUGE (WITH SHUT-OFF COCKS)
6	THERMOMETER
7	GATE VALVE

CHILLED WATER PUMP STATION PIPING SCHEMATIC 3/H401 NO SCALE

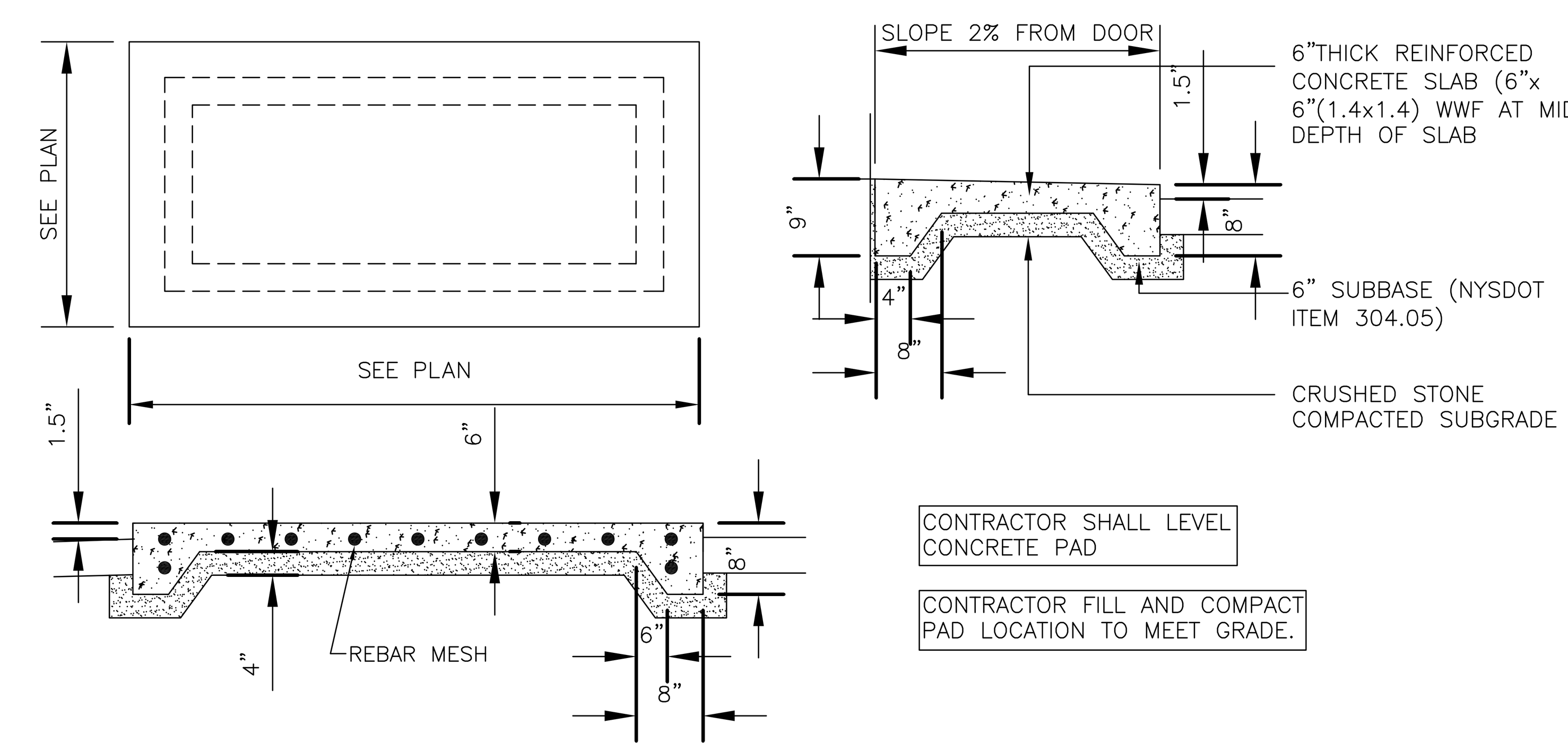


ON-SITE CONCRETE CURB DETAIL 10/H401 NO SCALE

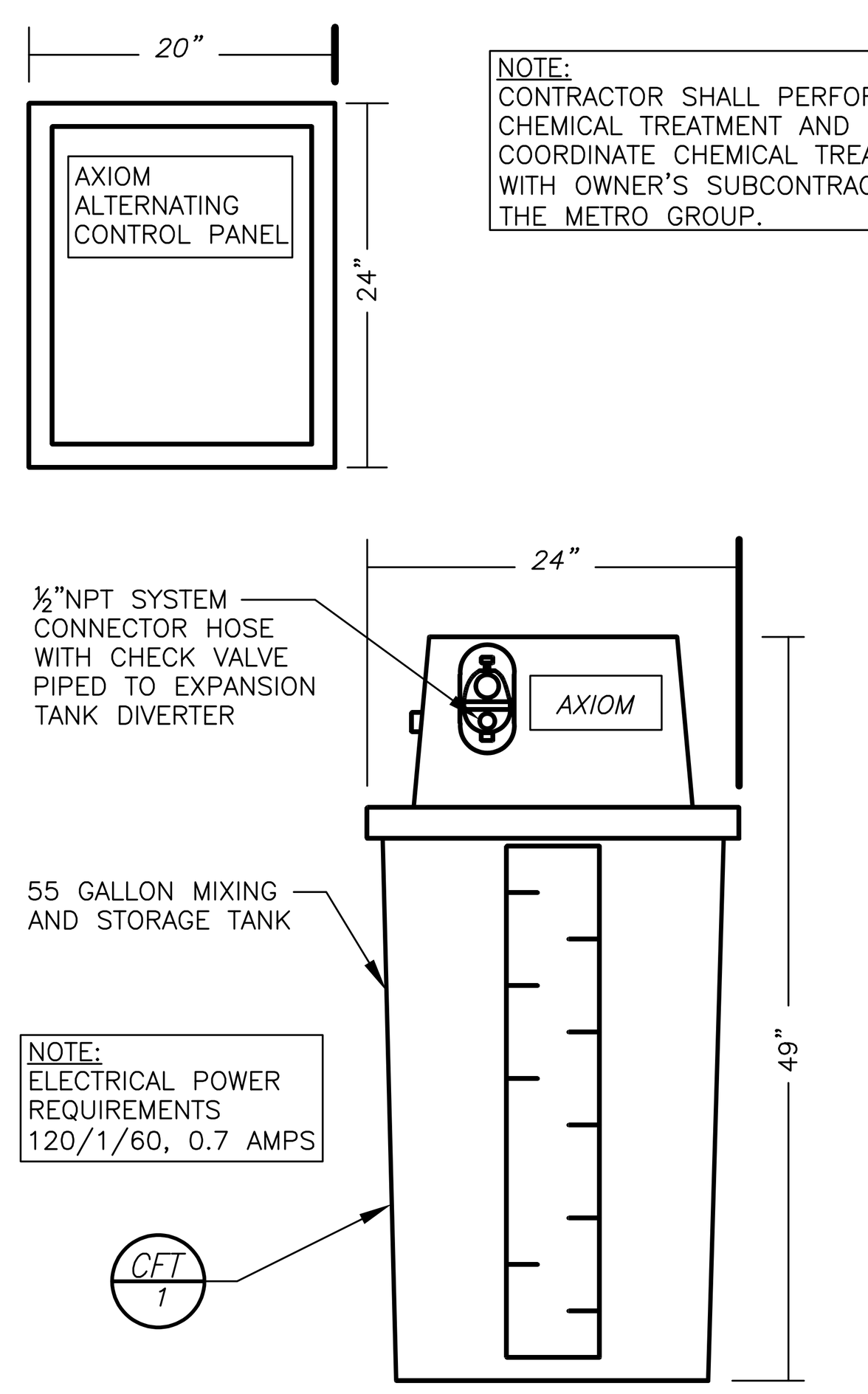


LEGEND DETAIL 2:
1. ¾" CRUSHED STONE COMPACTED SUBGRADE
2. 6" SUBBASE COURSE
3. 6" 4000 PSI CONRETE
4. MESH REINFORCEMENT

CONCRETE SIDEWALK DETAIL 6/H401 NO SCALE



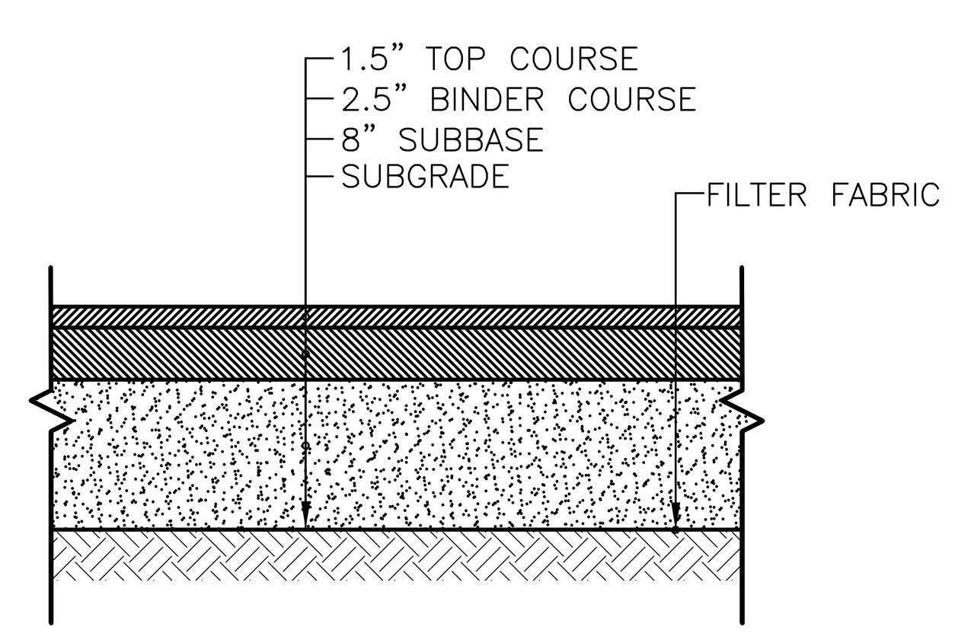
EXTERIOR CONCRETE PAD DETAIL 4/H401 NO SCALE



NOTE:
CONTRACTOR SHALL PERFORM FIRST CHEMICAL TREATMENT AND COORDINATE CHEMICAL TREATMENT WITH OWNER'S SUBCONTRACTOR, THE METRO GROUP.

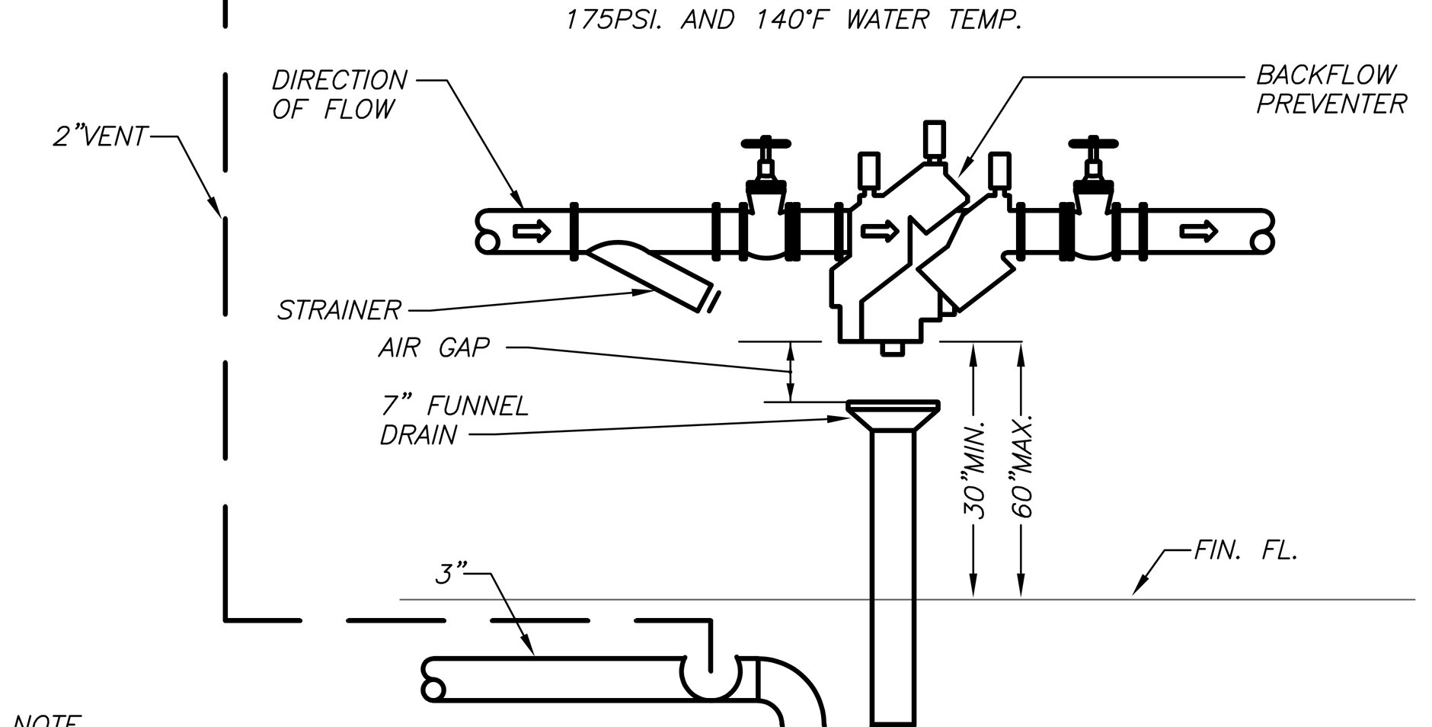
NOTE:
ELECTRICAL POWER REQUIREMENTS 120/1/60, 0.7 AMPS

AUTOMATIC CHEMICAL FEEDER DETAIL 15/H401 NO SCALE



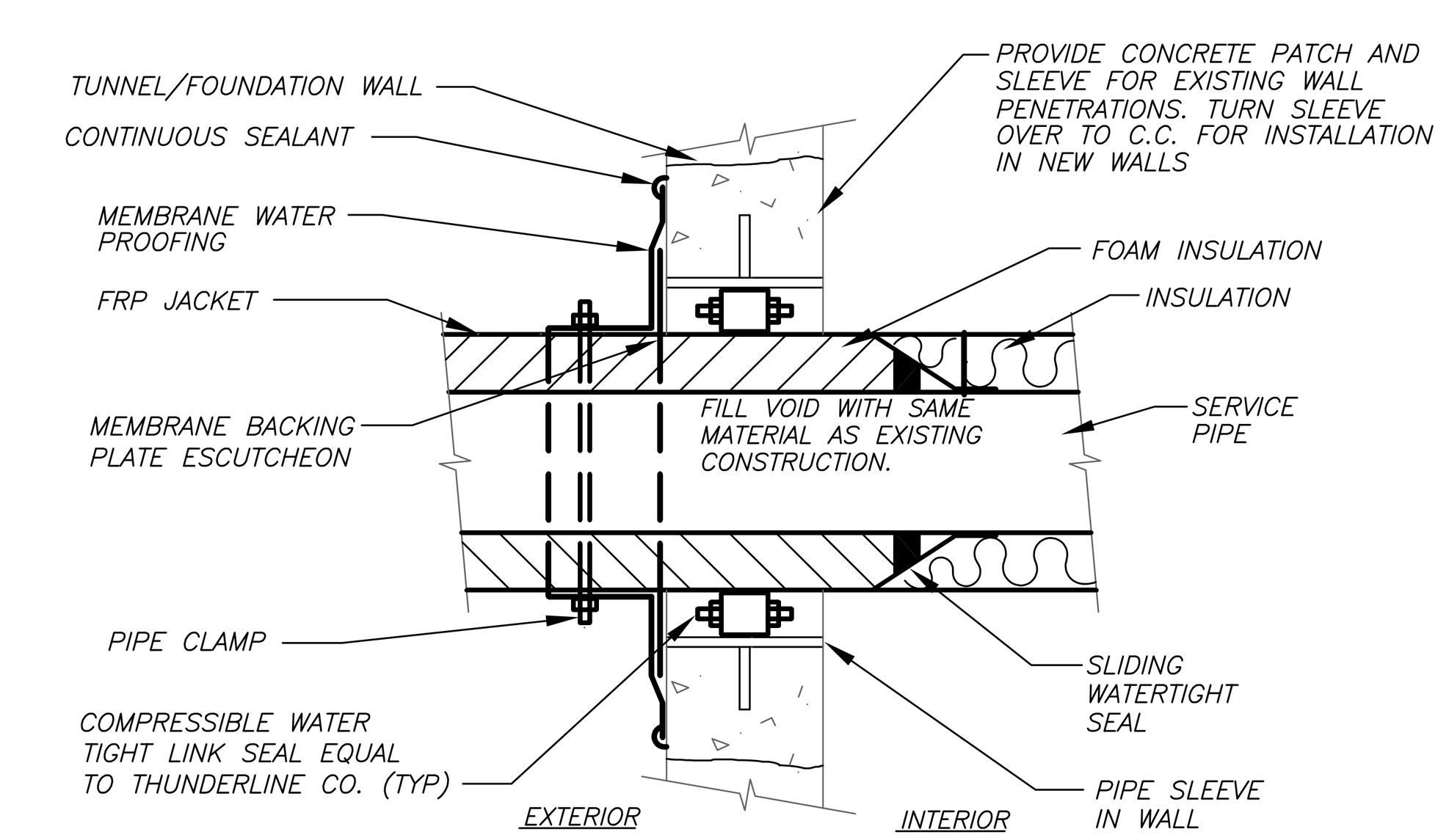
FULL-DEPTH PAVEMENT DETAIL 11/H401 NO SCALE

BACKFLOW PREVENTER DATA:
AS MANUFACTURED BY WATTS REGULATOR OR APPROVED EQUAL. MODEL 909S-QT SUITABLE FOR SUPPLY PRESSURE UP TO 175PSI. AND 140°F WATER TEMP.



NOTE
SUPPORT PIPING AND BACKFLOW PREVENTER IN AN APPROVED MANNER.

CHILLED WATER MAKE-UP BACKFLOW PREVENTER DETAIL 7/H401 NO SCALE



PIPING AT EXTERIOR WALL PENETRATION DETAIL 5/H401 NO SCALE

BEFORE FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS

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1	10-29-2024	BID ISSUE

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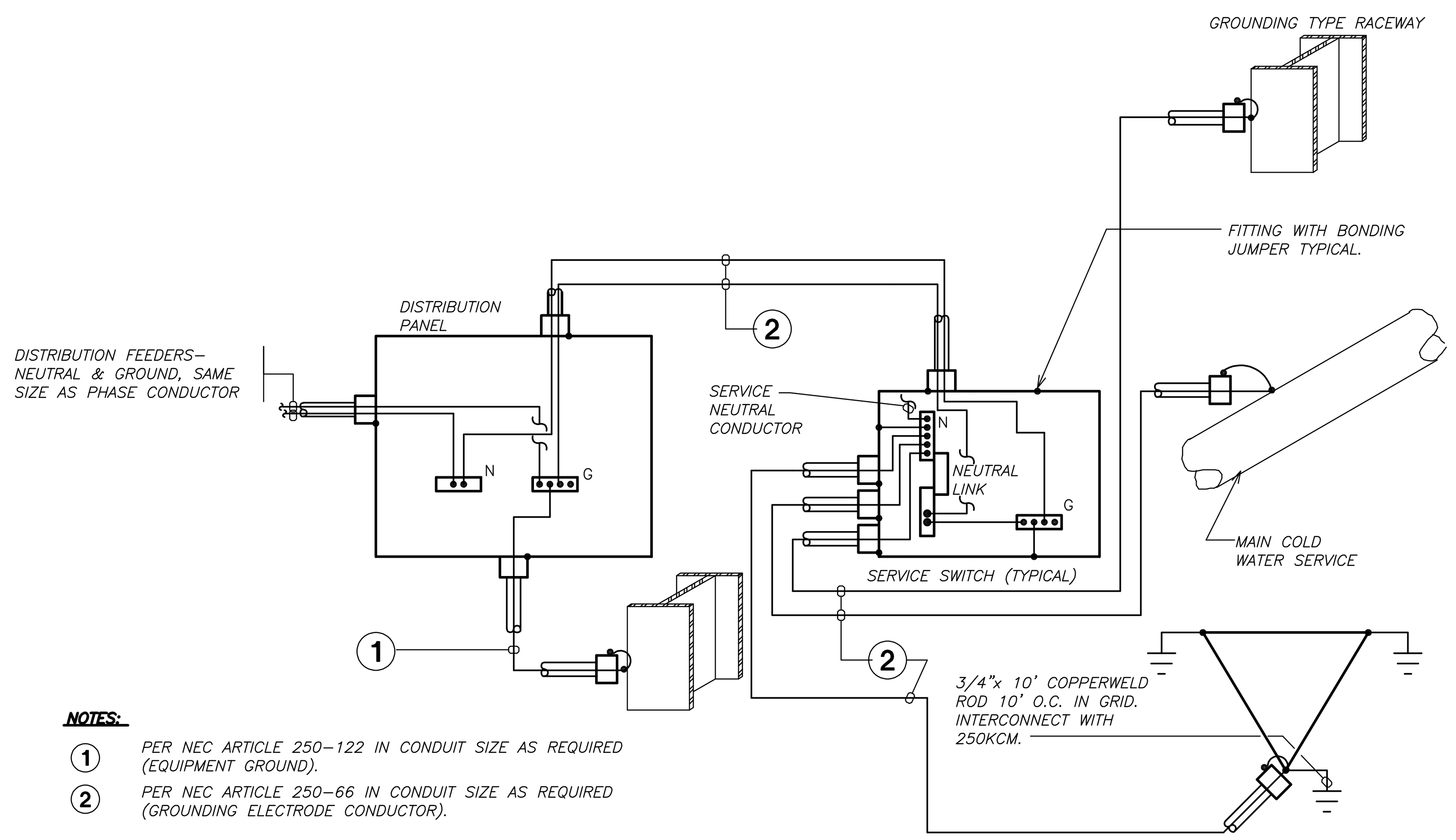
DETAILS

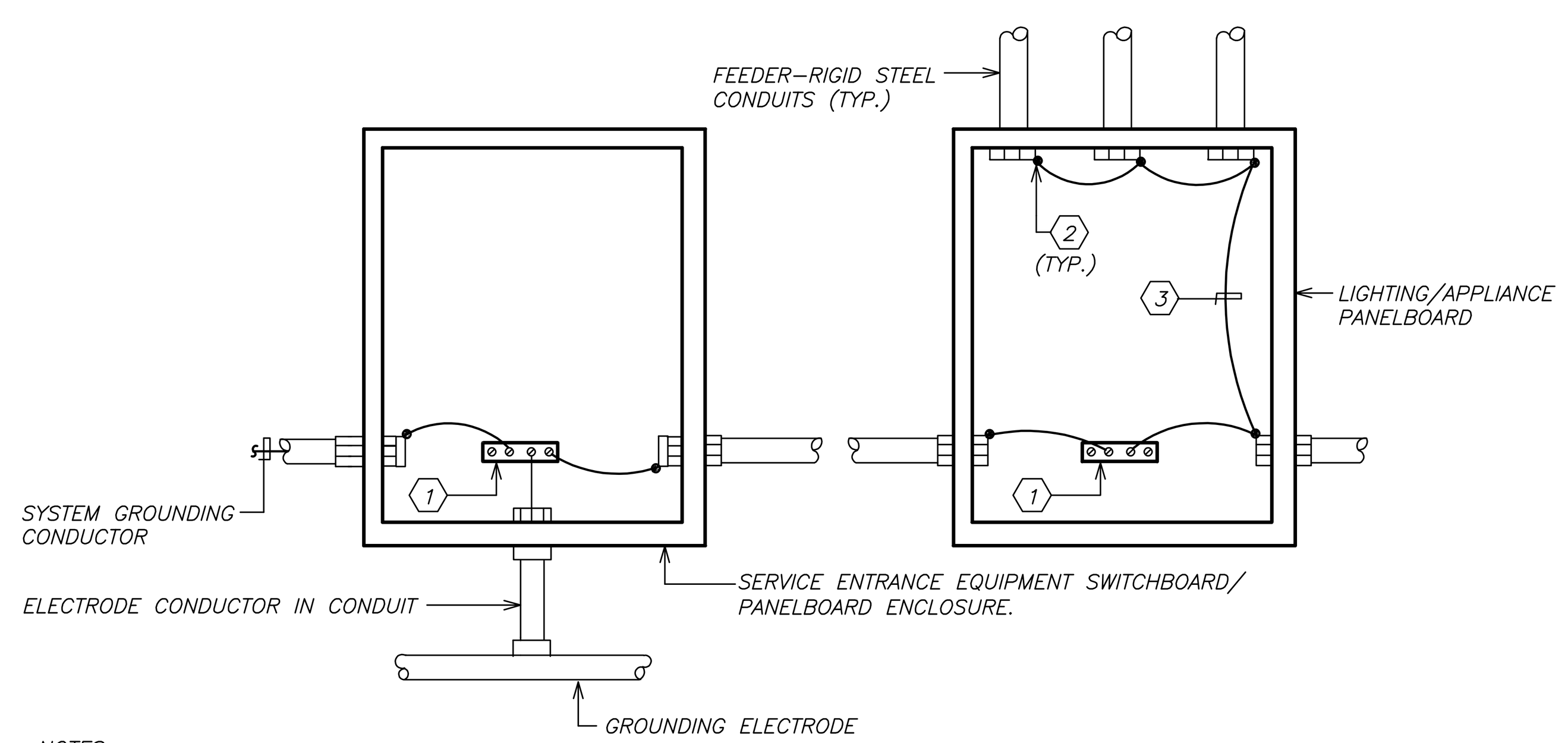
Job No.	Date 07/31/2024
Scale AS NOTED	Drawn / Checked BGA/BGA
Sheet Number H401	



NOTES:

1. PER NEC ARTICLE 250–122 IN CONDUIT SIZE AS REQUIRED (EQUIPMENT GROUND).
2. PER NEC ARTICLE 250–66 IN CONDUIT SIZE AS REQUIRED (GROUNDING ELECTRODE CONDUCTOR).

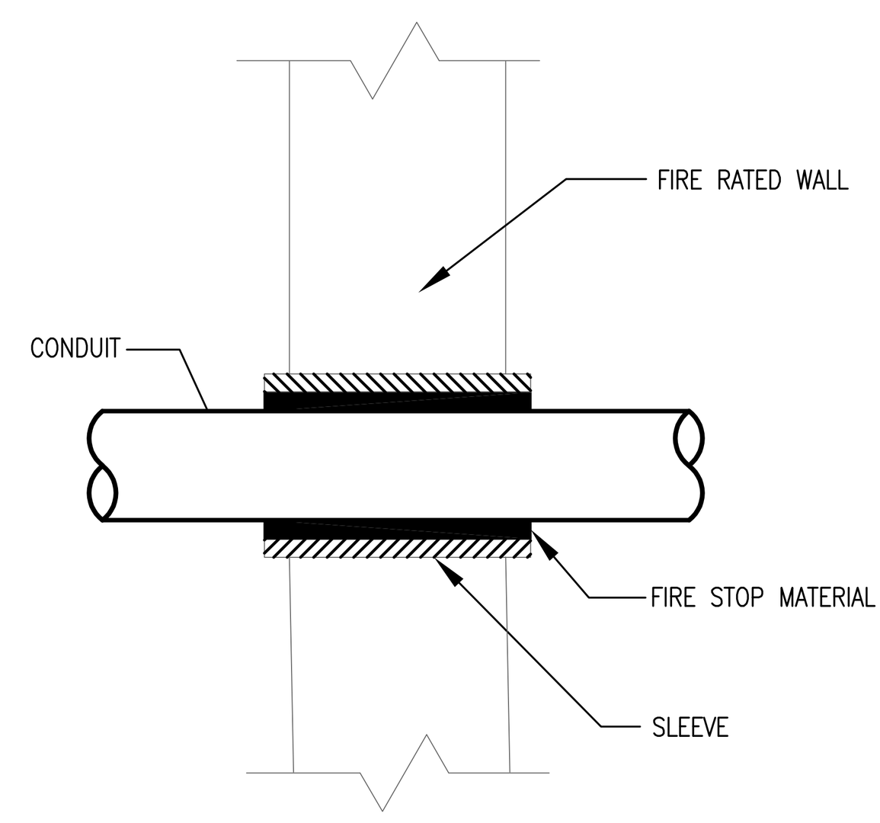
SCHEMATIC SERVICE GROUNDING SYSTEM 1 / E001 N.T.S.



NOTES:

1. PANELBOARD GROUND BUS
2. GROUNDING BUSHING
3. GROUNDING CONDUCTOR

RACEWAY EQUIPMENT GROUNDING SYSTEM 2 / E001 N.T.S.



CONDUIT PENETRATION THRU FIRE RATED WALL

NOTES:

1. USE WHERE CONDUITS PASS THRU FIRE RATED WALL.
2. WHERE CONDUITS PASS THRU CONCRETE BEAM, BRICK WALL, OR WATER PROOF FLOORS, USE PIPE SLEEVES.

CONDUIT PENETRATION DETAILS 3 / E001 N.T.S.

BEFORE FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS

GENERAL REMOVAL NOTES

1. BEFORE COMMENCING WORK, EXAMINE ALL ADJOINING AREAS THAT MAY BE AFFECTED BY REMOVAL. REPORT TO THE GENERAL CONTRACTOR ANY CONDITION THAT PREVENTS PERFORMANCE OF THE WORK.
2. BECOME THOROUGHLY FAMILIAR WITH EXISTING CONDITIONS WHERE CONNECTIONS MUST BE MADE, CHANGED OR ALTERED. THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREINAFTER AND NO CONSIDERATION WILL BE GRANTED BY REASON OF LACK OF FAMILIARITY ON THE PART OF THE CONTRACTOR WITH ACTUAL PHYSICAL CONDITIONS AT THE SITE. INSPECT EACH AND EVERY AREA AFFECTED BY THE ALTERATION OF THE SPACE BEFORE SUBMITTAL OF BID.
3. ALL ELECTRICAL EQUIPMENT IN THE AREA OF WORK IS EXISTING TO BE REMOVED UNLESS OTHERWISE NOTED. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
   A. DISTRIBUTION BOARDS AND PANELBOARDS.
   B. CIRCUIT BREAKERS AND DISCONNECT SWITCHES.
4. ALL CONDUCTORS AND CONDUIT ASSOCIATED WITH REMOVED ELECTRICAL EQUIPMENT SHALL BE REMOVED COMPLETELY BACK TO ITS SOURCE OF POWER AND DISCONNECTED.
5. CIRCUIT BREAKERS AND/OR SWITCHES IN PANELBOARD(S) OR DISTRIBUTION BOARD(S) MADE SPARE DUE TO REMOVAL SHALL BE DESIGNATED AS SUCH ON THE PANEL SCHEDULE.
6. DISPOSE OF ALL REMOVED EQUIPMENT, WHICH IS NOT INTENDED TO BE REUSED. PRIOR TO DISPOSAL, CONTACT BUILDING MANAGER TO DETERMINE IF ANY REMOVED EQUIPMENT IS DESIRED FOR STOCK.

GENERAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS AND ACCESSORIES TO FULFILL APPLICABLE CODES, REGULATIONS, BUILDING STANDARDS AND THE BEST PRACTICES OF THE TRADE FOR FIRST CLASS ELECTRICAL INSTALLATION.
2. THE DRAWINGS INDICATE SIZE AND GENERAL LOCATION OF WORK. SCALED DIMENSIONS SHALL NOT BE USED. THE EXACT LOCATION AND ELEVATION OF ALL ELECTRICAL EQUIPMENT SHALL BE COORDINATED IN FIELD WITH RESPECTIVE CONTRACTOR/OWNER.
3. WHERE PANELBOARDS, SWITCHES, CIRCUIT BREAKERS, ETC. ARE EXISTING AND TO BE REUSED THE CONTRACTOR SHALL CLEAN AND REFURBISH THE EQUIPMENT. THIS SHALL INCLUDE TIGHTENING ALL CONNECTIONS, REPLACING DEFECTIVE MECHANISMS AND PROVIDING ALL REQUIRED AND NECESSARY MISCELLANEOUS COMPONENTS SO THAT THE EQUIPMENT SHALL BE IN PERFECT WORKING ORDER.
4. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO SUBMISSION OF BID TO DETERMINE WHAT WORK MUST BE PERFORMED AFTER NORMAL BUSINESS HOURS. UNLESS OTHERWISE DIRECTED ANY NOISY WORK (CHOPPING, CORE DRILLING, HAMMERING, ETC.) AND BUILDING POWER INTERRUPTIONS SHALL BE PERFORMED OUTSIDE OF NORMAL BUSINESS HOURS. CONFIRM NORMAL BUSINESS HOURS WITH BUILDING OWNER. NO ADDITIONAL COST WILL BE CHARGED TO OWNER FOR WORK PERFORMED OUTSIDE NORMAL BUSINESS HOURS.
5. ALL WORK WHERE SHOWN WITH DARK/SOLID LINES ON THE DRAWINGS IS NEW UNLESS OTHERWISE NOTED. WHERE SHOWN WITH DASHED LINES WITH LETTER (E) IS EXISTING TO REMAIN, WITH LETTER (R) IS EXISTING TO BE REMOVED, WITH LETTER (ER) IS EXISTING RELOCATED, WITH LETTER (RN) IS EXISTING TO BE REPLACED WITH NEW AND WITH LETTER (RR) IS EXISTING TO BE REMOVED AND RELOCATED.
6. CIRCUIT NUMBERS TO EXISTING PANELS ARE SHOWN FOR INTENT ONLY. ACTUAL CIRCUIT NUMBERS TO BE USED SHALL BE AS PER FIELD CONDITIONS BY UTILIZING SPARE CIRCUITS, BREAKERS OR SPACES IN EXISTING PANEL, SIZE AS INDICATED ON THE PLANS. THE ELECTRICAL CONTRACTOR SHALL BALANCE LOAD OF CIRCUITS EVENLY ON ALL PHASES.
7. FEEDERS AND BRANCH CIRCUITRY SHALL BE RUN IN MINIMUM 3/4" CONDUIT UNLESS OTHERWISE NOTED. FINAL CONNECTIONS TO MOTORS MAY BE MADE WITH FLEXIBLE METALLIC CONDUIT (NO LONGER THAN 18"). IN UNFINISHED AREAS CONDUIT SHALL BE RUN EXPOSED AND IN FINISHED AREAS CONDUIT SHALL BE RUN CONCEALED.
8. PROVIDE PANEL NAME PLATE MADE OF BLACK LAMINATED PLASTIC WITH WHITE ENGRAVED LETTERING AND TYPE WRITTEN DIRECTORY FOR ALL NEW AND EXISTING PANELS BEING USED FOR THIS PROJECT.
9. ALL CONDUCTORS SHALL BE COPPER, TYPE THHN/THWN INSULATED. ALL CONDUCTORS SHALL HAVE 600 VOLT RATED INSULATION UNLESS OTHERWISE NOTED.
10. CONDUIT RUNS SHALL BE PARALLEL WITH OR AT RIGHT ANGLES TO WALLS AND CEILINGS. CONDUIT SHALL BE SUPPORTED BY APPROVED MEANS. SUPPORTS FOR HORIZONTAL RUNS OF CONDUIT SHALL NOT EXCEED SEVEN FEET ON CENTERS.
11. PROVIDE PULL BOXES, JUNCTION BOXES, CONDUIT ELBOWS AND OFFSETS TO SUIT FIELD CONDITIONS AND THE NATIONAL ELECTRICAL CODE.
12. THE MINIMUM WIRE SIZE FOR 120 VOLT BRANCH CIRCUITS SHALL BE NO. 12 AWG, EXCEPT OVER 100' IN LENGTH SHALL BE NO. 10 AWG.
13. PROVIDE ALL REQUIRED AND NECESSARY ACCESSORIES (EX. CONNECTORS, ADAPTERS, BUSHINGS, CLAMPS, ETC.) TO FACILITATE COMPLETE INSTALLATION.
14. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT WITH HVAC CONTRACTOR IN FIELD. FUSES FOR ALL MOTOR LOADS SHALL BE DUAL ELEMENT TIME DELAY TYPE.
15. ALL JUNCTION OR OUTLET BOXES SHALL BE INSTALLED SO AS TO ALLOW ACCESS TO COVER. PROVIDE APPROVED ACCESS DOORS OR PLATES AS REQUIRED IN AREAS WHERE UNOBSTRUCTED ACCESS TO BOX OR OUTLET IS NOT POSSIBLE.
16. PRIOR TO ANY CHASING, CHOPPING OR CORE DRILLING BEING PERFORMED, THE CONTRACTOR SHALL FIELD INVESTIGATE CONDITIONS AND COORDINATE ALL WORK TO ENSURE THAT IT WILL BE IN HARMONY AND NOT AFFECT ANY EXISTING BUILDING SYSTEMS. THIS WORK MUST BE APPROVED BY BUILDING OWNER PRIOR TO PROCEEDING.
17. OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE RESISTANCE RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE FIRE STOPPED USING APPROVED METHODS. ALL SLEEVES MUST HAVE BUSHINGS. SEALANT SHALL BE 3 HOUR FIRE BARRIER #CP–25 (NO LESS THAN 3" THICK BACKED UP WITH MINERAL WOOL).
18. ALL PANELBOARD COVERS SHALL BE INSTALLED IN PLACE AT THE COMPLETION OF EACH DAYS WORK.
19. PREPARE 'AS–BUILT' DRAWINGS THAT REFLECT ACTUAL CONSTRUCTION AND SHOW DEVIATIONS FROM DESIGN DRAWINGS.
20. ALL NEW CIRCUIT BREAKERS INSTALLED INTO EXISTING PANELBOARDS SHALL BE UL LISTED FOR USE IN THE PANEL.
21.

ABBREVIATIONS

ABBV.	DESCRIPTION
A	AMP/AMPERE
A.F.F.	ABOVE FINISHED FLOOR
AIC	AMP INTERRUPTING CURRENT
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
C.B.	CIRCUIT BREAKER
CKT	CIRCUIT
CP	CONDENSATE PUMP
(E)	EXISTING TO REMAIN
E.C.	ELECTRICAL CONTRACTOR
EG	EQUIPMENT GROUND
(ER)	EXISTING RELOCATED
EXIST.	EXISTING
G,GRD	GROUND
H	HOT (PHASE)
HVAC	HEATING, VENTILATING AND AIR–CONDITIONING UNIT
HWP	HOT WATER HEATING PUMP
IG	ISOLATED GROUND
kcmil	THOUSAND CIRCULAR MILLS
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUGS ONLY
MTD	MOUNTED
N	NEUTRAL
NTS	NOT TO SCALE
PNL	PANEL
P.O.E.	POINT OF ENTRY
PR	PRINTER
(R)	REMOVE EXISTING
RECPT	RECEPTACLE
(RN)	REPLACE EXISTING W/NEW
(RR)	REMOVED, SALVAGED AND RELOCATED
TVSS	TRANSFER VOLTAGE SURGE SUPPRESSION SYSTEM
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
Ø	PHASE

LEGEND

(symbol)	SURFACE MOUNTED NEW ELECTRICAL PANELBOARD.
(symbol)	SURFACE MOUNTED EXISTING ELECTRICAL PANELBOARD.
240/3 60 40 WP	HEAVY DUTY TYPE DISCONNECT SWITCH WITH FINAL FLEXIBLE EQUIPMENT CONNECTION. 240 INDICATES VOLTAGE, 3 INDICATES NO. OF POLES, 60 INDICATES AMPERE RATING, NF INDICATES NON–FUSED(OR FUSE SIZE) U.O.N. REFER TO SPECIFICATION AND DRAWINGS FOR ENCLOSURE. 'WP' WHERE USED INDICATES WEATHERPROOF ENCLOSURE (NEMA 3R).
VFD	VARIABLE FREQUENCY DRIVE. FURNISHED BY MECHANICAL CONTRACTOR, WIRED AND INSTALLED BY ELECTRICAL CONTRACTOR. THE CONDUIT AND WIRING FROM VFD TO MECHANICAL UNIT INTER CONNECTION SHALL MATCH THE SAME SIZE AND CONDUIT AND WIRE FROM VFD TO DESIGNATED PANELBOARD. REFER TO PANEL SCHEDULE OR NOTES FOR CONDUIT WIRE AND SIZE
(symbol)	20A FLUSH WALL MOUNTED GROUND FAULT INTERRUPTING TYPE DUPLEX RECEPTACLE HUBBELL #GF5362.
S_T	THERMAL SWITCH, CUTLER–HAMMER MS SERIES MANUAL STARTERS SINGLE–PHASE 20AMP, 120V U.O.N. WHERE INDICATED WITH 'WP' PROVIDE WATERTIGHT ENCLOSURE TYPE 3.
S_{2T}	208 VOLT, SINGLE PHASE 2 POLE, THERMAL OVERLOAD PROTECTED TOGGLE TYPE SWITCH. SIMILAR TO EATON #AH4361 + #AH27940G NEMA 1 ENCLOSURE.
(5)	MOTOR (F.B.O. WIRED BY ELEC.) – NUMBER INDICATES HORSEPOWER. REFER TO PANEL SCHEDULES FOR WIRING AND OVER CURRENT PROTECTION.
(F)	FRACTIONAL HORSEPOWER MOTOR (F.B.O. WIRED BY ELEC.). REFER TO PANEL SCHEDULES FOR WIRING AND OVER CURRENT PROTECTION.
(symbol)	CONDUIT TURNING UP.
(symbol)	CONDUIT TURNING DOWN.
(symbol)	FLEXIBLE LIQUIDTIGHT FINAL EQUIPMENT CONNECTION.
3	HOMERUN TO DESIGNATED PANEL, ARROWHEAD INDICATES SINGLE POLE CIRCUIT. HOMERUN SHALL CONSIST OF 2#12–3/4"C U.O.N.
2,(4,6)	HOMERUN TO DESIGNATED PANEL, NUMBERS IN PARENTHESIS INDICATE MULTIPLE CIRCUIT, I.E. 3–HOTS AND 1–GROUND U.O.N.
— — —	EXISTING TO REMAIN
*— *	EXISTING TO BE REMOVED
——	NEW
(1)	TAG SYMBOL. NUMERAL DENOTES REFERENCE TO A WORK NOTE.

MECHANICAL EQUIPMENT IDENTIFICATION:

- * EQUIPMENT ABBREVIATION (FE, SF, HV, ETC. SEE ABBREVIATIONS ON THIS DWG.)
- * EQUIPMENT NUMBER

DETAIL/PART PLAN NUMBER IDENTIFICATION:

- * DETAIL/PART PLAN NUMBER
- * DRAWING NUMBER

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CONSTRUCTION DOCUMENTS

Professional Seal

STATE OF NEW YORK ★ PAUL J. GALLAGHER 075261 1 LICENSED PROFESSIONAL ENGINEER

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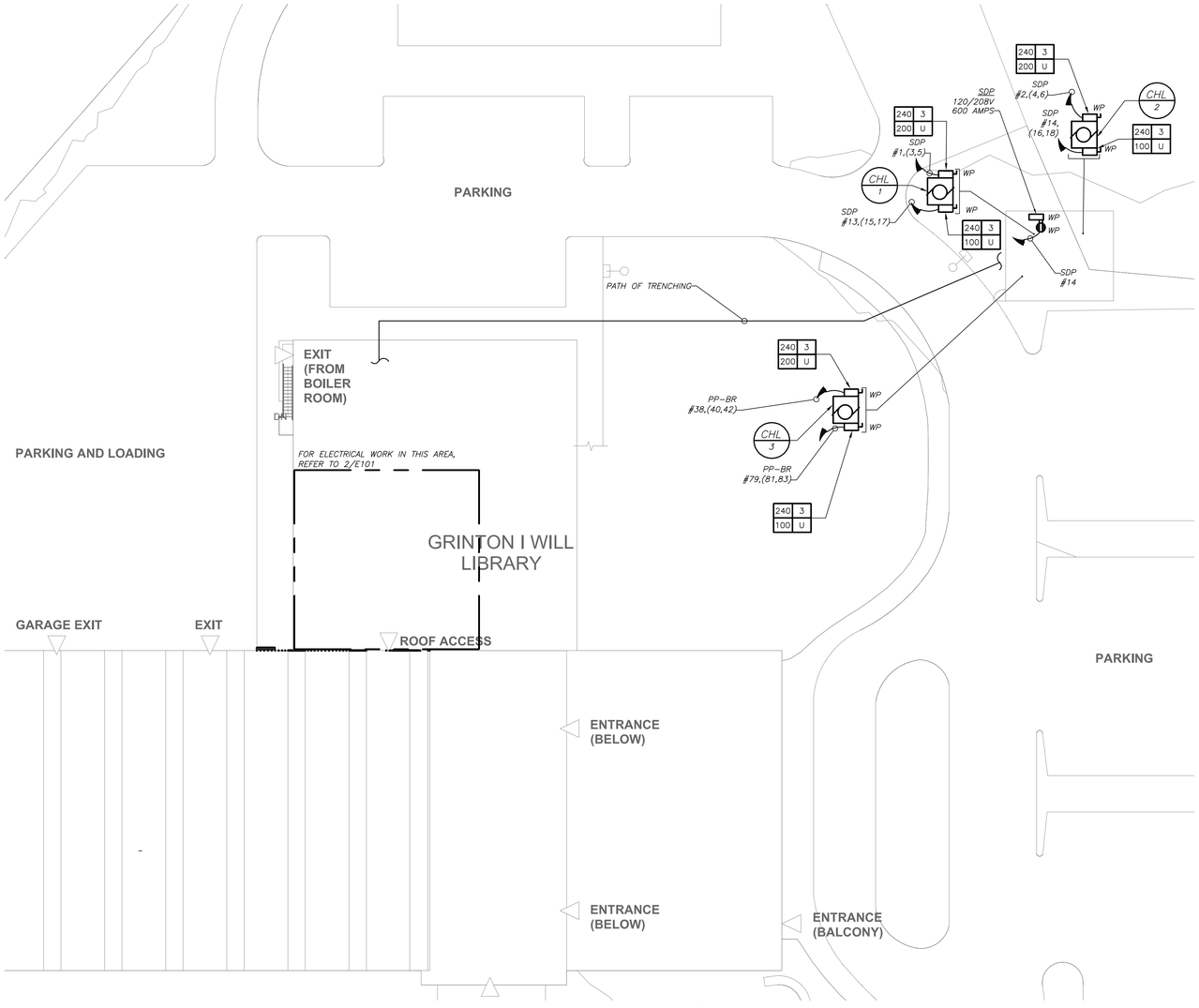
LEGENDS, ABBREVIATIONS NOTES AND DETAILS

Job No.	Date 07/31/2024
Scale AS NOTED	Drawn / Checked BGA/BGA

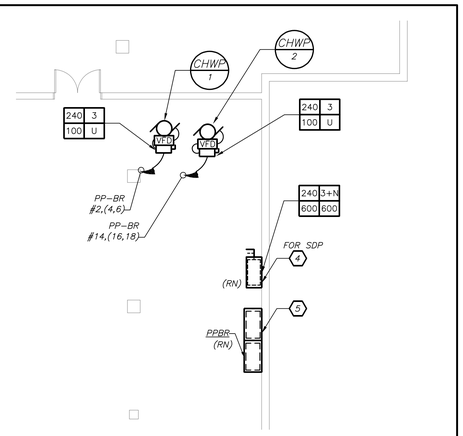
Sheet Number

E001

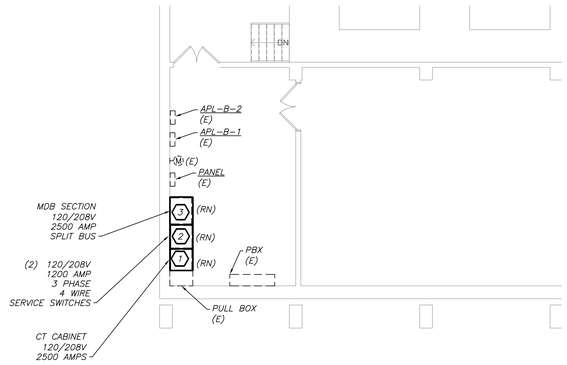


WORK NOTES.

1. REMOVE ALL INTERNAL COMPONENTS OF THE SECTION ALONG WITH FRONT COVER. PROVIDE NEW INTERNAL CUSTOM DISTRIBUTION BOARD SECTION ALONG WITH COVER. REFER TO E102 FOR BREAKER ARRANGEMENT AND RISER DIAGRAM FOR ADDITIONAL INFORMATION.
2. REMOVE ALL INTERNAL COMPONENTS OF THE 1200 AMP SERVICE SWITCH ALONG WITH FRONT COVER. PROVIDE TWO (2) NEW CUSTOM 1200 AMP FUSED AT 1100 DISCONNECT SERVICE SWITCHES ALONG WITH FRONT COVER. THE FUSE SIZES SHALL MATCH THE EXISTING. REFER TO RISER DIAGRAM ON E102 FOR ADDITIONAL INFORMATION.
3. REMOVAL ALL INTERNAL COMPONENTS OF THE CT CABINET ALONG WITH FRONT COVER PLATE. PROVIDE CUSTOM INTERNAL COMPONENTS ALONG WITH FRONT COVER PLATE. REFER TO RISER DIAGRAM ON E102 FOR ADDITIONAL INFORMATION.
4. REPLACE EXISTING 240V/600/3 PHASE DISCONNECT FEEDING NEW EXTERIOR PANEL SDP WITH NEW NEW DISCONNECT AS SHOWN.
5. REMOVE ALL INTERNAL COMPONENTS OF THE (2) SECTION 120V/208V 3 PHASE 4 WIRE 400 AMP PANEL ALONG WITH FRONT COVER. PROVIDE NEW INTERNAL CUSTOM DISTRIBUTION BOARD SECTION ALONG WITH COVER. REFER TO E102 FOR BREAKER ARRANGEMENT AND RISER DIAGRAM FOR ADDITIONAL INFORMATION.



BASEMENT BOILER ROOM POWER PLAN
(NEW WORK)
1/8 inch=1 foot



FIRST FLOOR ELECTRIC ROOM POWER PLAN
(NEW WORK)
1/8 inch=1 foot

BEFORE FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS

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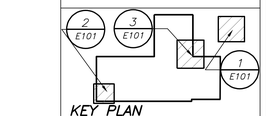

KEY PLAN

Professional Seal

STATE OF NEW YORK · PAUL J. GALLAGHER · 073261 · LICENSED PROFESSIONAL ENGINEER

Exp. 11-30-27 CA:0018275

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ELECTRICAL SITE AND FLOOR PLAN

Job No.	Date 07/31/2024
Scale AS NOTED	Drawn / Checked BGA/BGA

Sheet Number

E101

PANEL DESIGNATION: MDB (NEW)							MOUNTING: FLOOR
SUPPLY CHARACTERISTIC: 120/208 VOLTS, 3 PHASE, 4 WIRES							
MAIN BUS RATING: 2000 AMPS				NEUTRAL: FULL SIZE			
MAIN CIRCUIT BREAKER: 2000 AMPS				USAGE: MAIN ELECTRICAL ROOM			
CKT NO.	CIRCUIT BREAKER BRANCH DEVICE			EQUIPMENT	WIRE	COND.	LOAD
	FRAME SIZE	POLES "N"–NEUT. BAR CONNECTION	TRIP SIZE				
1	100	3+N	100	SPARE	–	–	–
2	100	3+N	100	AUDITORIUM PANEL	–	–	–
3	225	3+N	150	LB WASH/DRY ROOM	–	–	–
4	100	3+N	XXX	SUB PANEL	–	–	–
5	225	3+N	200	CIRC OFF. PANEL 1,2	–	–	–
6	225	3+N	200	AUD LGT	–	–	–
7	225	3+N	225	LB–1 FINE ARTS	–	–	–
8	400	3+N	300	LA STORAGE ROOM	–	–	–
9	100	3+N	60	TVSS	–	–	–
SPLIT BUS							
9	400	3+N	400	PANEL A,B,C 1ST FLR ELEC	–	–	–
10	225	3+N	150	PANEL MR FAN ROOM	–	–	–
11	225	3+N	225	PANEL APL–B SERVICE RM	–	–	–
12	400	3+N	400	PP–BR PUMP ROOM	–	–	–
13	600	3+N	600	CHILLER DISCONNECT	–	–	–
14	100	3+N	100	SPARE	–	–	–
15	100	3+N	100	SPARE	–	–	–
16	100	3+N	100	SPARE	–	–	–
17	100	3+N	60	TVSS	–	–	–

FEEDER SIZES:

(A) (3) SETS OF 4#500KCMIL+1#3/0 GRD IN 4"C+ (1) 4" CONDUIT WITH DRAGWIRE.

POWER RISER DIAGRAM NOTES:

(1) EXISTING PULL BOX SHALL BE PROVIDED WITH NEW COVER AND PAINT THE EXTERIOR BOX WITH ANSI–61 GRAY PAINT.

(1A) FOR SURGE SUPPRESSION, PROVIDE 180KA SURGE CURRENT CAPACITY PER PHASE. AS MANUFACTURED BY COOPER CROUSE HINDS #ZM11–180–PE. REFER TO SPECIFICATION FOR MORE INFORMATION.

(2) THE EXISTING INTERNAL COMPONENTS OF THE 120/208V, 2500AMP, 3 PHASE 4 WIRE ONE (1) CT CABINET, INCLUDING THE BUS, COVER, CABLING, NUTS, AND BOLTS WILL BE REPLACED IN ITS ENTIRETY BY THIS CONTRACTOR INCLUDING THE PAINTING OF THE EXTERIOR OF THE EXISTING CABINET WITH ANSI 61 GRAY PAINT. **CONTACT ROBERT BURNS OF PRECISION SWITCHBOARD, 914.345.0794,** FOR ALL THE NEW FABRICATED INTERNAL COMPONENTS INCLUDING NEW BUS, COVERS, BREAKERS, NUTS, AND BOLTS. THIS CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED AND NECESSARY ACCESSORIES FOR A COMPLETE OPERATIONAL EQUIPMENT INCLUDING ALL CABLING, INTERCONNECTION, ETC. THERE ARE (2) EXISTING BUCKETS AS INDICATED. THE BUCKETS ARE RATED AT 1200 AMPS . THIS CONTRACTOR SHALL PROVIDE TWO (2) 1200/1110AF SERVICE SWITCHES. PROVIDE NEW GROUNDING WIRE TO CONNECT TO EXISTING GROUNDING RODS AHEAD OF THE WATER MAIN AND BUILDING STEEL. REFER TO DETAIL. THIS CONTRACTOR SHALL COORDINATE THE SHUTDOWN WITH CON EDISON AND OWNER BEFORE THE START OF ANYWORK.THE OWNER SHALL DICTATE THE DATE THE SHUT DOWN SHALL OCCUR. THE MAXIMUM ALLOWABLE SHUTDOWN TO DO ALL THE WORK NOTED BELOW SHALL BE 3 WITH DAYS.

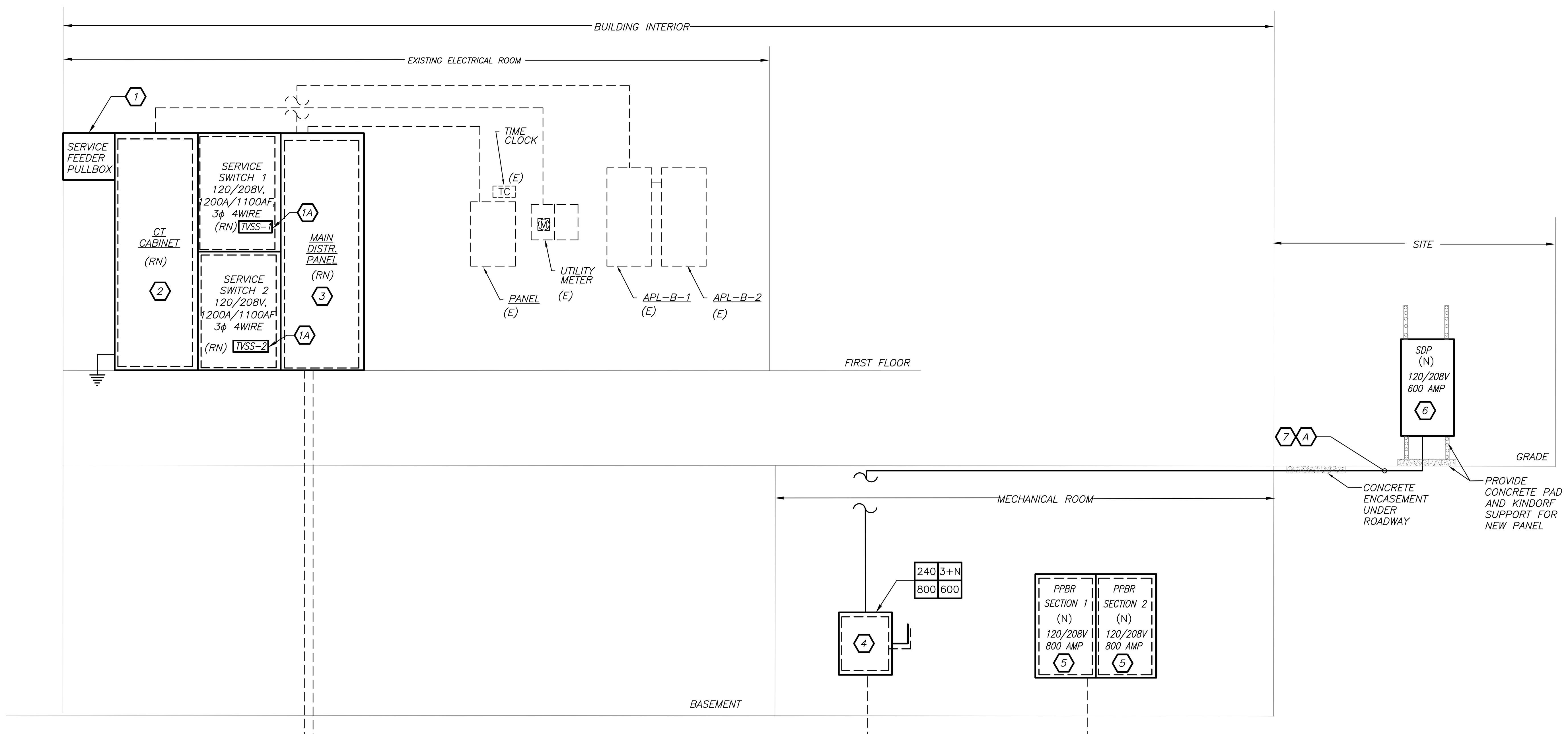
(3) THE EXISTING 120/208V, SPLIT BUS 2500 AMP 3 PHASE 4 WIRE ONE (1) SECTION BOARD, INCLUDING THE BUS, BUCKETS, COVER AND CABLING, NUTS, AND BOLTS WILL BE REPLACED IN ITS ENTIRETY BY THIS CONTACTOR. INCLUDING PAINTING OF THE EXTERIOR OF THE EXISTING CABINET ANSI 61 GRAY PAINT. **CONTACT ROBERT BURNS OF PRECISION SWITCHBOARD, 914.345.0794,** FOR ALL THE NEW FABRICATED INTERNAL COMPONENTS INCLUDING NEW BUS, COVERS, BREAKERS, NUTS, AND BOLTS. THIS CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED AND NECESSARY ACCESSORIES FOR A COMPLETE OPERATIONAL EQUIPMENT INCLUDING ALL CABLING, INTERCONNECTION, ETC. THE NEW FRAME AND BREAKER SIZE SHALL MATCH THE EXISTING CIRCUIT BREAKER AS INDICATED ON THE MAIN DISTRIBUTION SCHEDULE ON THIS DRAWING.

(4) REPLACE EXISTING DISCONNECT SWITCH FEEDING EXTERIOR CHILLER PANEL. CONTACTOR IS RESPONSIBLE FOR ALL INTERCONNECTION OF FEEDER WIRES AND WIRES FEEDING NEW PANEL.

(5) THE EXISTING INTERNAL COMPONENTS OF THE 120/208V, 400AMP, 3 PHASE 4 WIRE TWO SECTION BOARD, INCLUDING THE BUS, BUCKETS, COVER, CABLING, NUTS, AND BOLTS WILL BE REPLACED IN ITS ENTIRETY BY THIS CONTRACTOR INCLUDING THE PAINTING OF THE EXTERIOR OF THE EXISTING CABINET WITH ANSI 61 GRAY PAINT. **CONTACT ROBERT BURNS OF PRECISION SWITCHBOARD, 914.345.0794,** FOR ALL THE NEW FABRICATED INTERNAL COMPONENTS INCLUDING NEW BUS, COVERS, BREAKERS, NUTS, AND BOLTS. THIS CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED AND NECESSARY ACCESSORIES FOR A COMPLETE OPERATIONAL EQUIPMENT INCLUDING ALL CABLING, INTERCONNECTION, ETC. THE NEW FRAME AND BREAKER SIZE SHALL MATCH THE EXISTING CIRCUIT BREAKER AS INDICATED ON THE PANEL SCHEDULE ON THIS DRAWING.

(6) PROVIDE NEW NEMA 3X RATED 120/208V PANELBOARD REFER TO PANEL SCHEDULES FOR PANEL SIZE, TYPE AND CIRCUIT BREAKER ARRANGEMENT.

(7) CONTRACTOR SHALL FOLLOW PATH OF MECHANICAL TRENCHING TO FEED NEW PANEL BOARD AND CHILLERS. REFER TO DRAWINGS E101 FOR MORE INFORMATION



PARTIAL ELECTRICAL POWER RISER 1/E501 N.T.S.

BEFORE FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS

NEW ELECTRICAL PANEL SCHEDULE

PNL: SDP	MOUNTING: SURFACE X	MAIN LUGS ONLY	MAIN C BKR- 600A/3P	GROUND BUS: X
208Y/120, 3 PHASE, 4 WIRE	(NEMA3R) FLUSH	DOUBLE LUGS		ISOLATED GROUND BUS:
65 ,000MIN A.I.C. SYM	IN MCC	FEED THRU LUG	MAIN BUS -	TVSS:
NEUTRAL: 100%		SHUNT TRIP MAIN	800 A	NUMBER OF POLES: 24

CKT No.	TRIP (AMP)	LOAD	WIRE	CND. (IN.)	KVA/PHASE A	B	C	KVA/PHASE A	B	C	CND. (IN.)	WIRE	LOAD	TRIP (AMP)	CKT No.
1	3		-	-	19.2			19.2			-	-		3	2
3		CHP-1A	3#2/0+1#6G	2		19.2			19.2		2	3#2/0+1#6G	CHP-2A		4
5	175		-	-			19.2			19.2	-	-		175	6
7	3		-	-	9.6			9.6			-	-		3	8
9		CHP-1B	3#2+1#8G	1-1/4		9.6			9.6		1-1/4	3#2+1#8G	CHP-2B		10
11	90		-	-			9.6			9.6	-	-		90	12
13	20	SPARE	-					0.2			3/4	2#12+1#12G	RECEPTACLE	20	14
15	20	SPARE	-								-	-	SPARE	20	16
17	20	SPARE	-								-	-	SPARE	20	18
19	20	SPARE	-								-	-	SPARE	20	20
21	-	SPACE	-								-	-	SPACE	-	22
23	-	SPACE	-								-	-	SPACE	-	24
		SUBTOTALS			28.8	28.8	28.8	29.0	28.8	28.8			SUBTOTALS		

TOTAL LOADS	58 KVA	PHASE A	LIGHTING:	0.00 KVA
	58 KVA	PHASE B	RECEPTACLE:	0.18 KVA
	58 KVA	PHASE C	KITCHEN:	0.00 KVA
TOTAL CONN. LOAD	173 KVA	480 A	MOTOR:	172.80 KVA
TOTAL DEMAND LOAD	173 KVA	480 A	POWER:	0.00 KVA
			TOTAL:	172.98 KVA

NEW ELECTRICAL PANEL SCHEDULE

PNL: PP-BR SECT 1	MOUNTING: SURFACE x	MAIN LUGS ONLY	MAIN C BKR- 400A/3P	GROUND BUS: X
208Y/120, 3 PHASE, 4 WIRE	(NEMA 1) FLUSH	DOUBLE LUGS		ISOLATED GROUND BUS:
65 ,000MIN A.I.C. SYM	IN MCC	FEED THRU LUG X	MAIN BUS -	TVSS:
NEUTRAL: 100%		SHUNT TRIP MAIN	400 A	NUMBER OF POLES: 42

CKT No.	TRIP (AMP)	LOAD	WIRE	CND. (IN.)	KVA/PHASE A	B	C	KVA/PHASE A	B	C	CND. (IN.)	WIRE	LOAD	TRIP (AMP)	CKT No.
1	3		-	-				6.36			-	-		3	2
3		R5 (EXISTING)	-	-					6.36		1"	3#6+1#10G	CWP-1		4
5	30		-	-						6.36	-	-		60	6
7	3		-	-							-	-		3	8
9		MOTOR (EXISTING)	-	-							-	-	P2(EXISTING)		10
11	100		-	-							-	-		50	12
13	3		-	-				6.36			-	-		3	14
15		R6 (EXISTING)	-	-					6.36		1"	3#6+1#10G	CWP-2		16
17	30		-	-						6.36	-	-		60	18
19	3		-	-							-	-		3	20
21		P1 (EXISTING)*	-	-							-	-	AC5 (EXISTING)		22
23	50		-	-							-	-		50	24
25	3		-	-							-	-		3	26
27		R3(EXISTING)	-	-							-	-	R7(EXISTING)		28
29	30		-	-							-	-		30	30
31	3		-	-							-	-		3	32
33		AC 3(EXISTING)	-	-							-	-	HC 10 (EXISTING)		34
35	30		-	-							-	-		30	36
37	3		-	-				19.2			-	-		3	38
39		SPARE	-	-					19.2		2	3#3/0+1#4G	CHP-3A		40
41	150		-	-						19.2	-	-		175	42
		SUBTOTALS			0.00	0.00	0.00	31.9	31.9	31.9			SUBTOTALS		

TOTAL LOADS	31.9 KVA	PHASE A	LIGHTING:	0.00 KVA
	31.9 KVA	PHASE B	RECEPTACLE:	0.00 KVA
	31.9 KVA	PHASE C	KITCHEN:	0.00 KVA
TOTAL CONN. LOAD	95.8 KVA	266 A	MOTOR:	95.76 KVA
TOTAL DEMAND LOAD	95.8 KVA	266 A	POWER:	0.00 KVA
			TOTAL:	95.76 KVA

NEW ELECTRICAL PANEL SCHEDULE

PNL: PP-BR SECT 2	MOUNTING: SURFACE X	MAIN LUGS ONLY	MAIN C BKR-	GROUND BUS: X
208Y/120, 3 PHASE, 4 WIRE	(NEMA 1) FLUSH	DOUBLE LUGS		ISOLATED GROUND BUS:
65 ,000MIN A.I.C. SYM	IN MCC	FEED THRU LUG	MAIN BUS -	TVSS:
NEUTRAL: 100%		SHUNT TRIP MAIN	400 A	NUMBER OF POLES: 48

CKT No.	TRIP (AMP)	LOAD	WIRE	CND. (IN.)	KVA/PHASE A	B	C	KVA/PHASE A	B	C	CND. (IN.)	WIRE	LOAD	TRIP (AMP)	CKT No.
43	3		-	-							-	-		3	44
45		MOTOR (EXISTING)	-	-							-	-	MOTOR (EXISTING)		46
47	50		-	-							-	-		30	48
49	3		-	-							-	-		3	50
51		MOTOR (EXISTING)	-	-							-	-	MOTOR (EXISTING)		52
53	70		-	-							-	-		70	54
55	3		-	-							-	-		3	56
57		MOTOR (EXISTING)	-	-							-	-	AC 8		58
59	50		-	-							-	-		30	60
61	3		-	-							-	-		3	62
63		R4 (EXISTING)	-	-							-	-	AC 7		64
65	30		-	-							-	-		30	66
67	3		-	-							-	-		3	68
69		COMP 1 (EXISTING)	-	-							-	-	COMP 2		70
71	30		-	-							-	-		30	72
73	3		-	-							-	-		3	74
75		CHILDREN AC (EXISTING)	-	-							-	-	SPARE		76
77	100		-	-							-	-		100	78
79	3		-	-	9.60						-	-		3	80
81		CHP-3B	3#2+1#6G	2"		9.60					-	-	MOTOR (EXISTING)		82
83	90		-	-			9.60				-	-		100	84
43	3		-	-							-	-		3	44
45		P5 (EXISTING)	-	-							-	-	AL4		46
47	70		-	-							-	-		50	48
		SUBTOTALS			9.60	9.60	9.60	0.00	0.00	0.00			SUBTOTALS		

TOTAL LOADS	9.6 KVA	PHASE A	LIGHTING:	0.00 KVA
	9.6 KVA	PHASE B	RECEPTACLE:	0.00 KVA
	9.6 KVA	PHASE C	KITCHEN:	0.00 KVA
TOTAL CONN. LOAD	28.8 KVA	80.0 A	MOTOR:	28.80 KVA
TOTAL DEMAND LOAD	28.8 KVA	80.0 A	POWER:	0.00 KVA
			TOTAL:	28.80 KVA

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ELECTRICAL SCHEDULES AND RISER

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E102