

## CHARLOTTESVILLE ALBEMARLE AIRPORT AUTHORITY MECHANICAL SYSTEMS UPGRADE

100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911

ISSUED FOR BID

05/10/24

AEC PROJECT NUMBER 20541812009

**2034 10 12003** © 2024 RS&H, INC





2600 Park Tower Dr. Suite 10° Vienna, Virginia 22180 Phone: 703-549-2472 www.rsandh.com Virginia Registration Nos. 0407-003171 \* 0411-000438

VICINITY MAP



LOCATION MAP

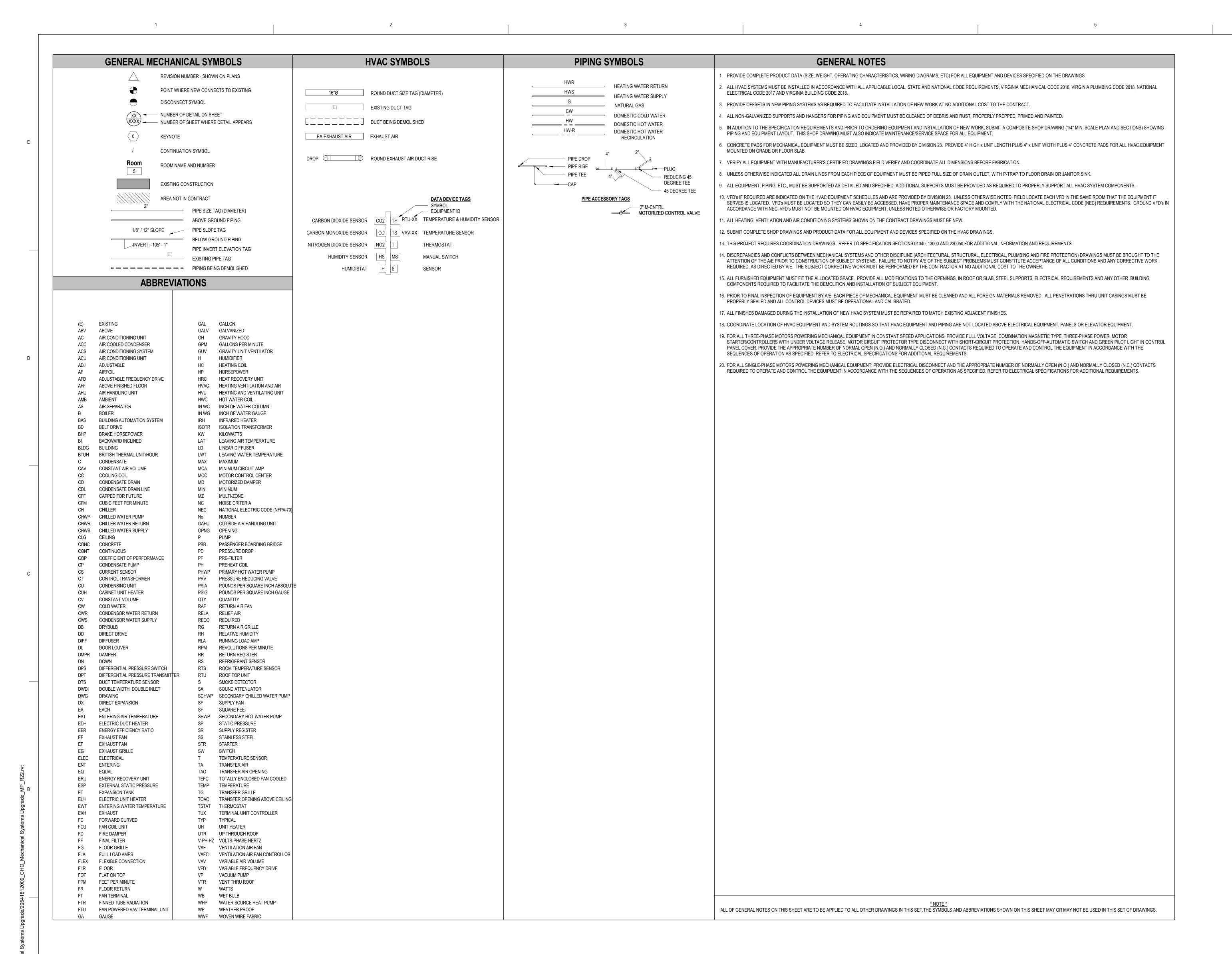
REVISIONS

NO. DESCRIPTION DATE

NOT ISSUED FOR CONSTRUCTION

BUILDING ID: BLDG. ID

0/2024 4:27:39 PM Autodesk Docs://2054181



Copyright © 2024. This drawing is an instrument of service and property of RS&H, Inc. Any use or reproduction without the

expressed written consent of this corporation is prohibited. All rights reserved.

2600 Park Tower Dr. Suite 100 Vienna, Virginia 22180 Phone: 703-549-2472 www.rsandh.com
Virginia Registration Nos.

0407-003171 \* 0411-000438



PROJECT TITLE:
MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS:

100 BOWEN LOOP, SUITE 200
CHARLOTTESVILLE, VA 22911

NO. DESCRIPTION DATE

REVISIONS

 DATE ISSUED:
 05/10/24

 REVIEWED BY:
 KMN

 DRAWN BY:
 SMB

 DESIGNED BY:
 SMB

PROJECT NUMBER:

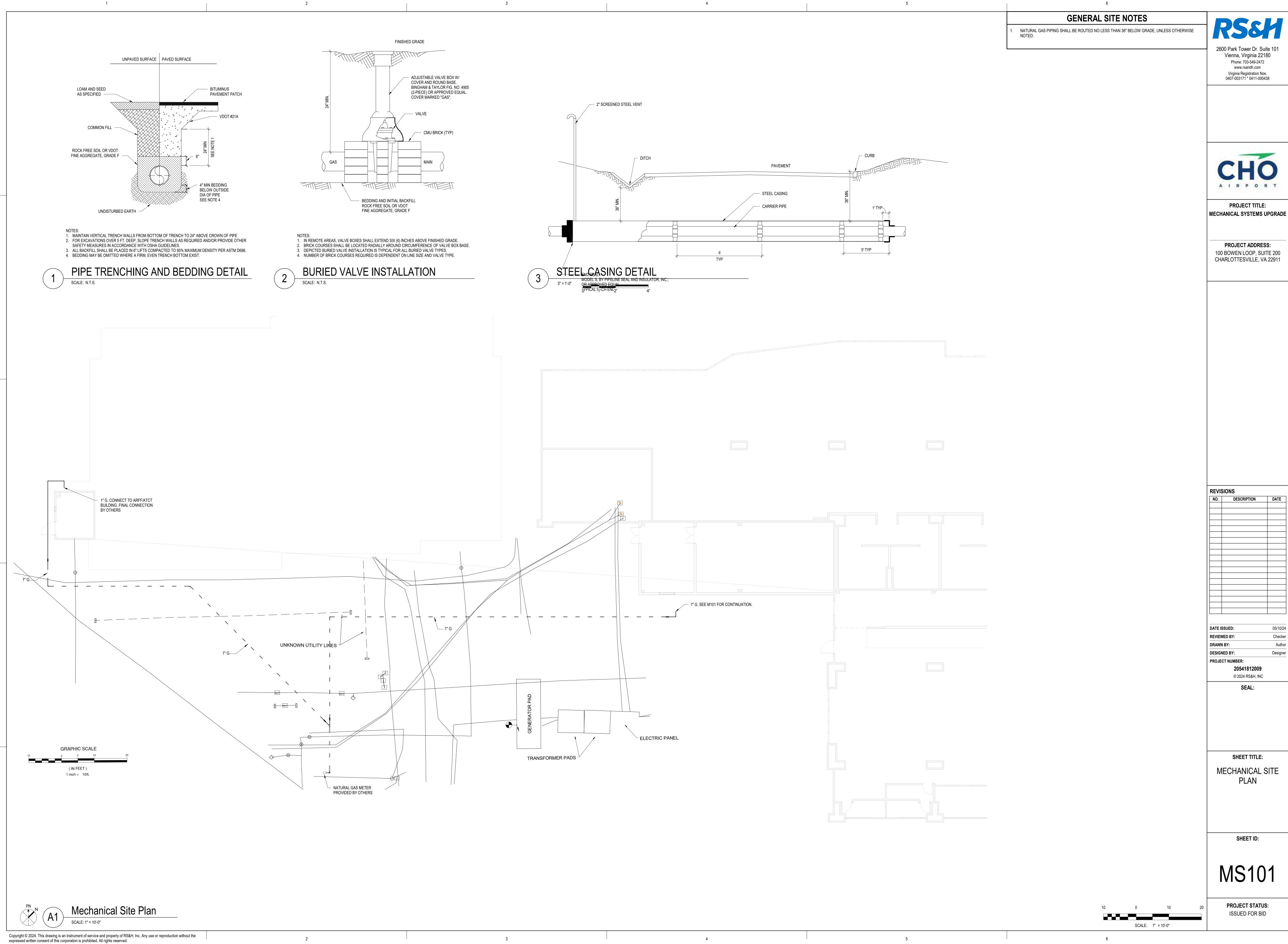
20541812009
© 2024 RS&H, INC

SHEET TITLE:

MECHANICAL GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

SHEET ID:

M00′



Vienna, Virginia 22180 Phone: 703-549-2472 www.rsandh.com



PROJECT TITLE:

PROJECT ADDRESS:

NO. DESCRIPTION DATE

20541812009 © 2024 RS&H, INC

SHEET TITLE:

MECHANICAL SITE PLAN

SHEET ID:

**GENERAL DEMOLITION NOTES** NATURAL GAS PIPING SHALL BE ROUTED NO LESS THAN 12" BELOW GRADE, UNLESS OTHERWISE NOTED. **BOILER ROOM DEMOLITION NOTES** DESCRIPTION REMOVE EXISTING FUEL OIL SYSTEM COMPLETE TO POINT INDICATED. SEE IMAGE 2, THIS SHEET. INCLUDES PIPING, EQUIPMENT, SUPPORTS, CONTROLS, WIRING AND APPURTENANCES. CAP PIPING BELOW FLOOR. REMOVE EXISTING PROPANE SUPPLY SYSTEM COMPLETE. SEE IMAGE 1, THIS SHEET. INCLUDES PIPING, EQUIPMENT, SUPPORTS, WIRING AND APPURTENANCES. CAP PIPING AT ROOM ENTRANCE. REMOVE EXISTING HEATING HOT WATER BOILER COMPLETE. INCLUDES CONTROLS, WIRING, SUPPORTS, AND APPURTENANCES. 4 REMOVE EXISTING HOT WATER PIPING COMPLETE TO POINT INDICATED. INCLUDES INSULATION, SUPPORTS, CONTROLS, WIRING AND APPURTENANCES. 5 REMOVE EXISTING DRAIN PIPING COMPLETE. INCLUDES SUPPORTS AND APPURTENANCES. 6 REMOVE EXISTING EXHAUST FLUE COMPLETE. INCLUDES ROOF STACK, INSULATION, SUPPORTS AND APPURTENANCES. DISCONNECT EXISTING HWS AND HWR PIPING FROM EXISTING HWP. REMOVE HWP COMPLETE, INCLUDES SUPPORTS AND APPURTENANCES. SEE PHOTO 3, THIS SHEET. 8 EXISTING ROOF PENETRATION TO REMAIN FOR NEW WORK. REMOVE EXISTING DOMESTIC HOT WATER HEATER COMPLETE. INCLUDES CONTROLS, WIRING, SUPPORTS, AND APPURTENANCES.

2600 Park Tower Dr. Suite 101 Vienna, Virginia 22180 Phone: 703-549-2472

www.rsandh.com Virginia Registration Nos. 0407-003171 \* 0411-000438

PROJECT TITLE: MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS: 100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911

REVISIONS

**DESIGNED BY:** 

PROJECT NUMBER:

20541812009 © 2024 RS&H, INC

SHEET TITLE:

MECHANICAL ROOM

**DEMO PLANS** 

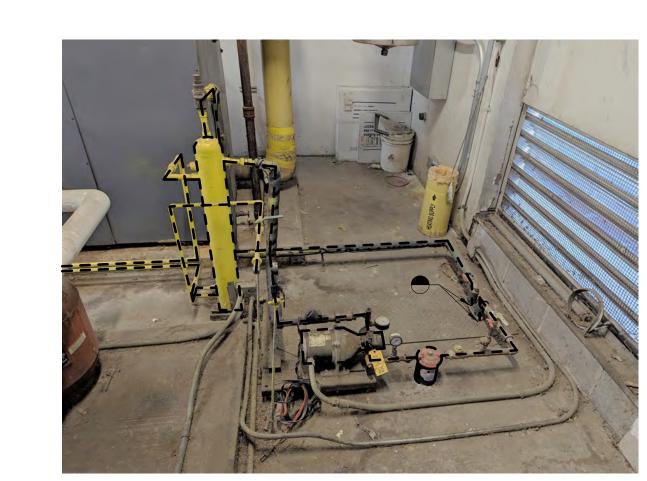
SHEET ID:

MD101

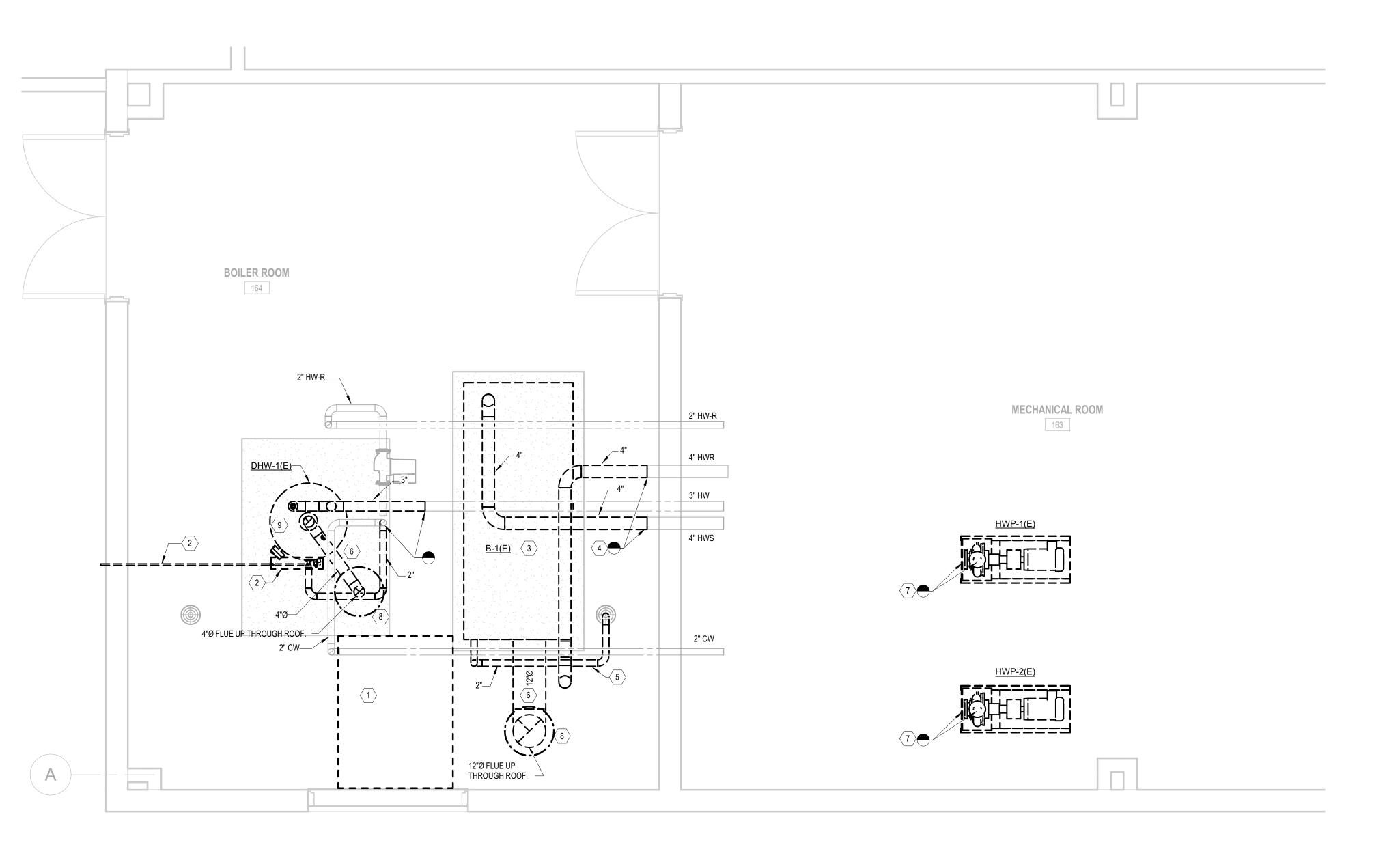
PROJECT STATUS: ISSUED FOR BID

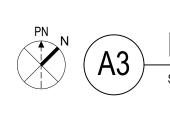
NO. DESCRIPTION DATE





EXISTING FUEL SYSTEM





MAIN TERMINAL BOILER ROOM DEMO PLAN

Copyright © 2024. This drawing is an instrument of service and property of RS&H, Inc. Any use or reproduction without the expressed written consent of this corporation is prohibited. All rights reserved.

**EXISTING HWP** 

A1 SCALE: N.T.S.

SCALE: 1/8" = 1'-0"

**GENERAL NEW WORK NOTES** 

NATURAL GAS PIPING SHALL BE ROUTED NO LESS THAN 12" BELOW GRADE, UNLESS OTHERWISE NOTED.

2600 Park Tower Dr. Suite 101 Vienna, Virginia 22180 Phone: 703-549-2472 www.rsandh.com Virginia Registration Nos. 0407-003171 \* 0411-000438

PROJECT TITLE: MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS: 100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911

REVISIONS NO. DESCRIPTION DATE

DATE ISSUED: REVIEWED BY: DESIGNED BY: PROJECT NUMBER:

20541812009 © 2024 RS&H, INC

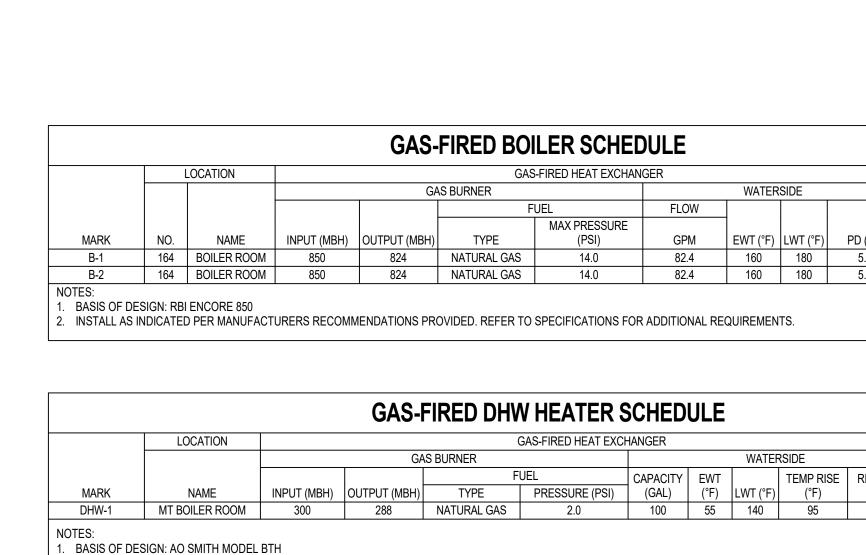
SHEET TITLE:

MECHANICAL ROOM PIPING PLANS

SHEET ID:

PROJECT STATUS: ISSUED FOR BID

SCALE: 1/2" = 1'-0"



CONNECT EXISTING HOT WATER PIPING TO NEW HWP.

			GAS-I	FIRED DHV	V HEATER S	SCHED	ULE					
LOCATION GAS-FIRED HEAT EXCHANGER												
GAS BURNER					JRNER			WATERSIDE				
				F	CAPACITY	EWT		TEMP RISE	RECOVERY	THERMAL	UNIT WEIGHT	
MARK	NAME	INPUT (MBH)	OUTPUT (MBH)	TYPE	PRESSURE (PSI)	(GAL)	(°F)	LWT (°F)	(°F)	(GPH)	EFF	(LBF)
DHW-1	MT BOILER ROOM	300	288	NATURAL GAS	2.0	100	55	140	95	390	96%	523
INSTALL AS I	SIGN: AO SMITH MODEL NDICATED PER MANUFA TEMPERATURE TO 140°I AIN PAN AND DRAIN PAN	CTURERS RECC								IES UPON DETE	ECTION OF W	ATER IN P <i>I</i>

		LOCATION	Г		PUMP				40T0D		I	
		LOCATION			MOTOR			UNIT				
MARK	NO.	NAME	SERVES	TYPE	FLOW (GPM)	PRESSURE DROP (FT)	DRIVE	POWER (HP)	RPM	ECM	WEIGHT	NOTES
CP-1	164	BOILER ROOM	HEATING HOT WATER	CLOSE-COUPLED IN-LINE MOUNTED	85	15.0	DIRECT	0.75	1935	Yes	95	1,3,4,5
CP-2	164	BOILER ROOM	HEATING HOT WATER	CLOSE-COUPLED IN-LINE MOUNTED	85	15.0	DIRECT	0.75	1935	Yes	95	1,3,4,5
HWP-1	163	MECHANICAL ROOM	HEATING HOT WATER	BASE-MOUNTED	195	60.0	DIRECT	5.00	1760	Yes	256	2,3,4,5
HWP-2	163	MECHANICAL ROOM	HEATING HOT WATER	BASE-MOUNTED	195	60.0	DIRECT	5.00	1760	Yes	256	2,3,4,5
INSTALL AS	SIGN: B& NDICATE TH VFD A	G MODEL e1510 D PER MANUFACTURE ND INVERTER RATED N		S PROVIDED. REFER TO SPECIFICATIONS I	FOR ADDITIONAL RE	EQUIREMENTS.						



4"Ø FLUE UP THROUGH ROOF. TERMINATE WITH VENT CAP.

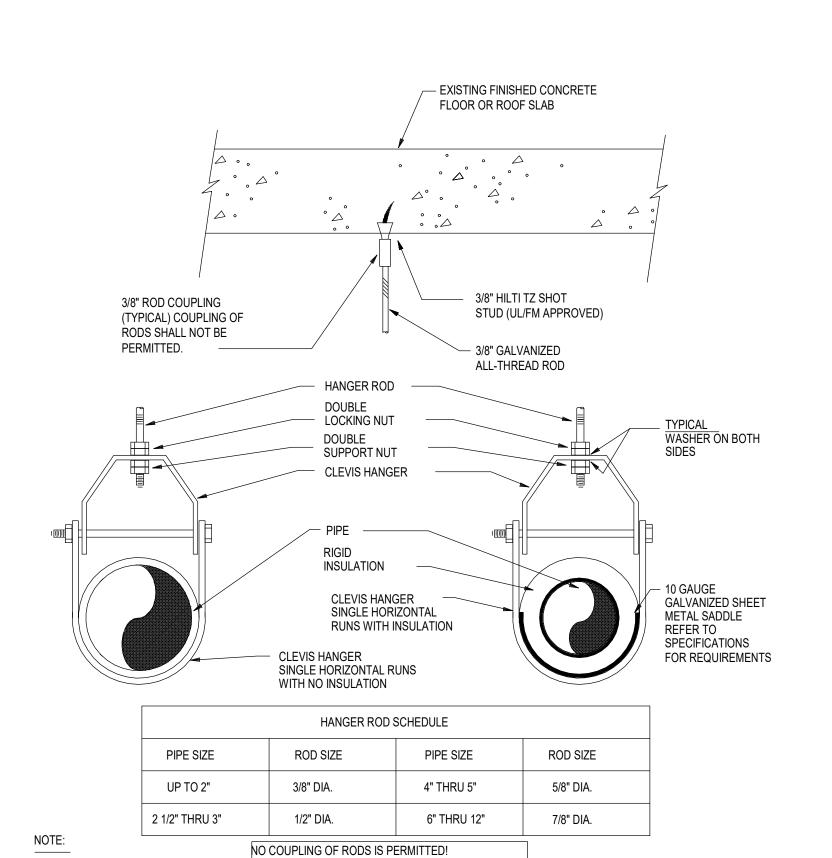
10"Ø FLUE UP THROUGH ROOF. TERMINATE WITH VENT CAP.

1/2" G

1" G FROM NEW GAS METER. SEE
MS101 FOR CONTINUATION.

**BOILER ROOM** 

Copyright © 2024. This drawing is an instrument of service and property of RS&H, Inc. Any use or reproduction without the expressed written consent of this corporation is prohibited. All rights reserved.



INSTALLATION AND MATERIALS SHALL MEET WITH FEDERAL, STATE AND LOCAL CODE REQUIREMENTS, INCLUDING N.F.P.A. 99

REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. INSTALLATION OF SHOT STUDS INTO CONCRETE CONSTRUCTION SHALL HAVE THE APPROVAL AND REVIEW OF THE STRUCTURAL ENGINEER.

NO COUPLING OF RODS IS PERMITTED!

INSTALL HANGER AS CLOSE

TO PIPE ELBOW AS POSSIBLE

- DISCHARGE PIPE

BALANCING VALVE

PRESSURE GAUGE

FLEXIBLE CONNECTOR

CHECK VALVE

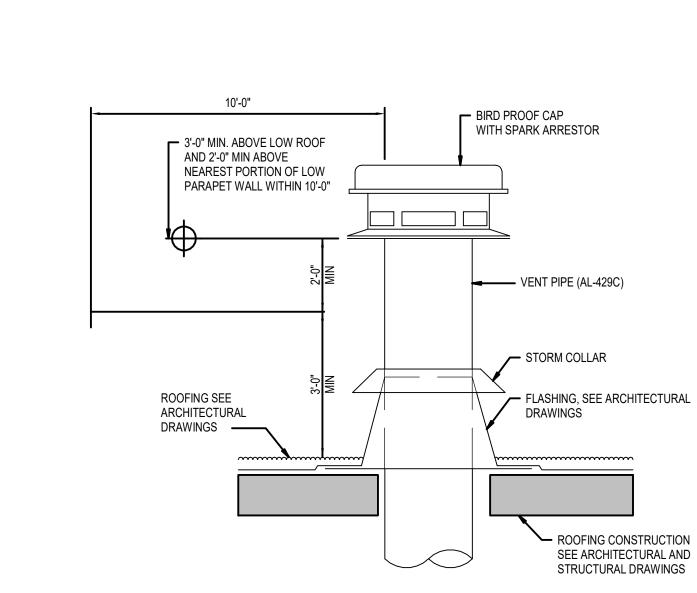
GATE VALVE (TYP)

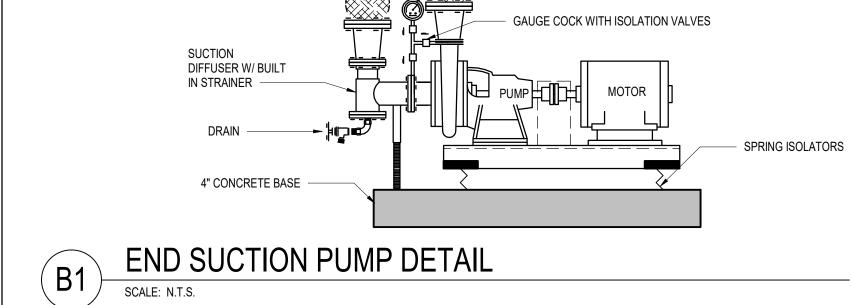
## CLEVIS PIPE HANGER DETAIL SCALE: N.T.S.

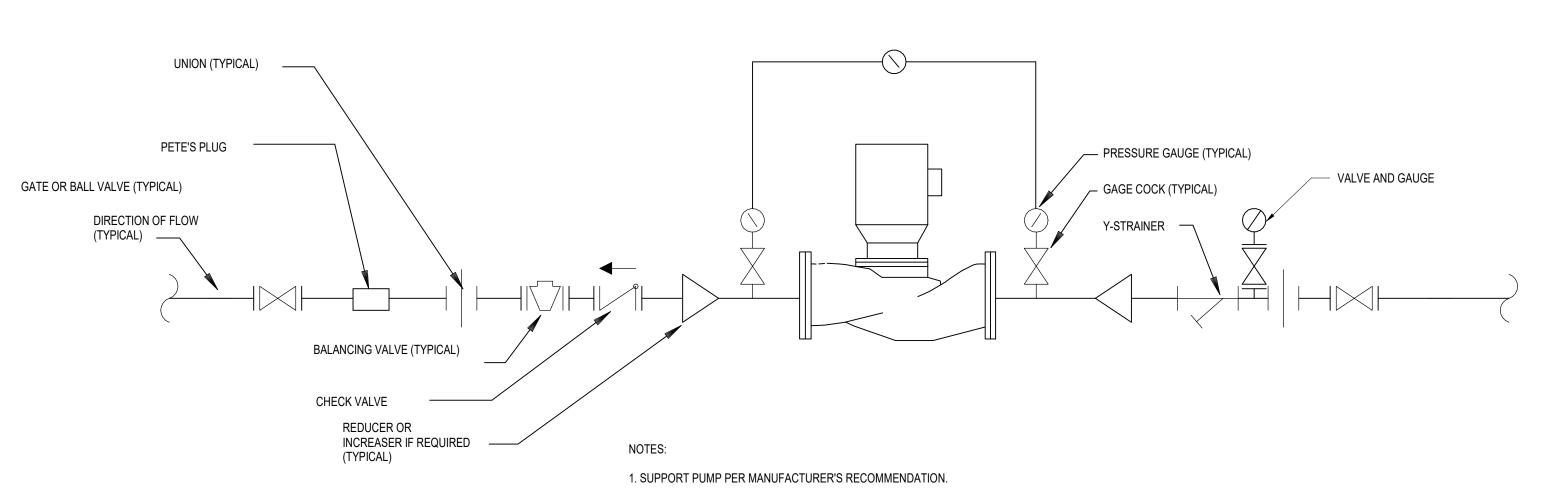
LONG RADIUS ELBOW R/r = 1.5 (TYP)

SUCTION PIPE

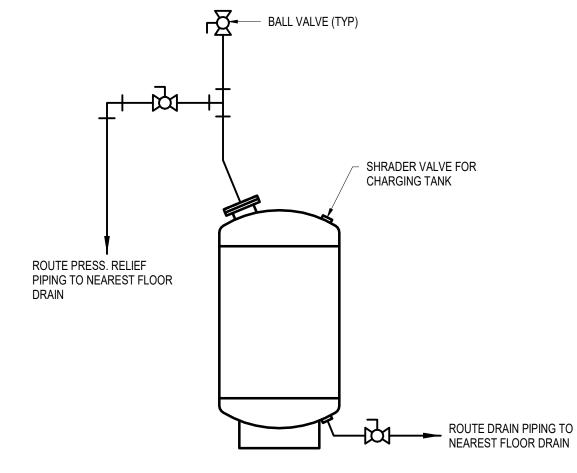
GATE VALVE (TYP) -



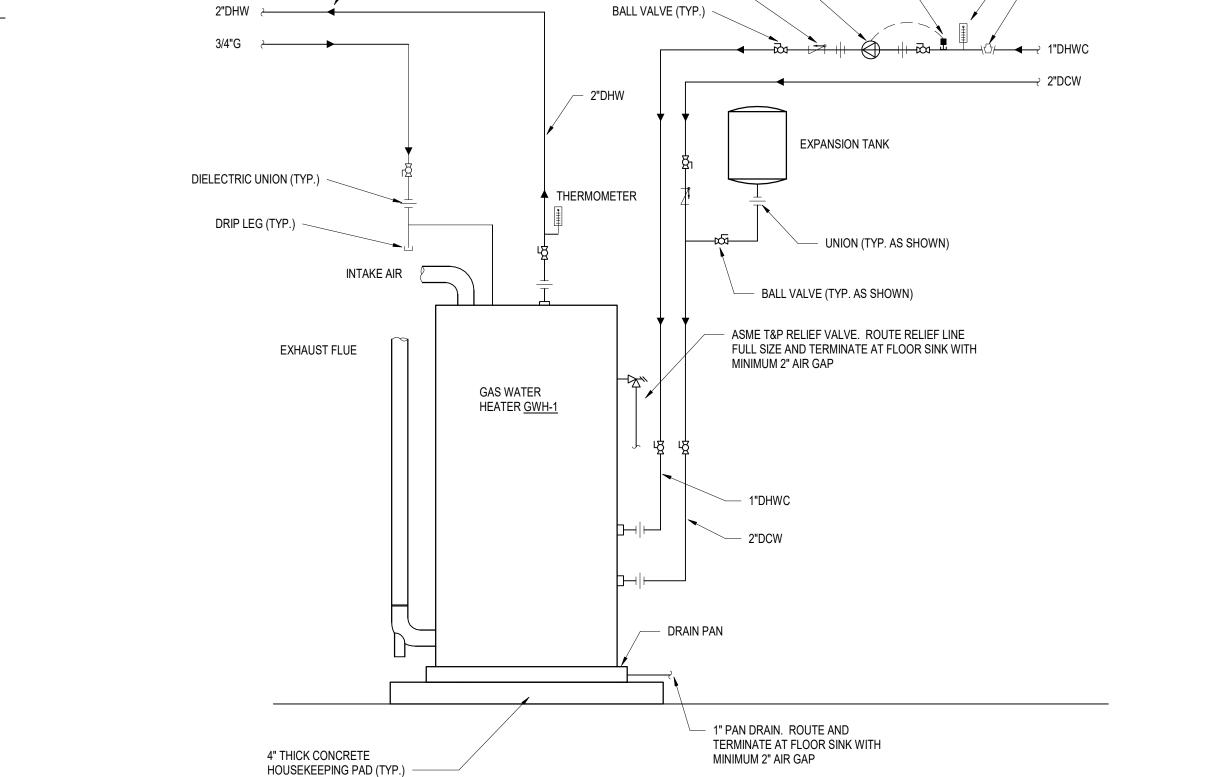




IN-LINE PUMP DETAIL



**EXPANSION TANK DETAIL** 



CIRCULATING PUMP -

CHECK VALVE (TYP.)

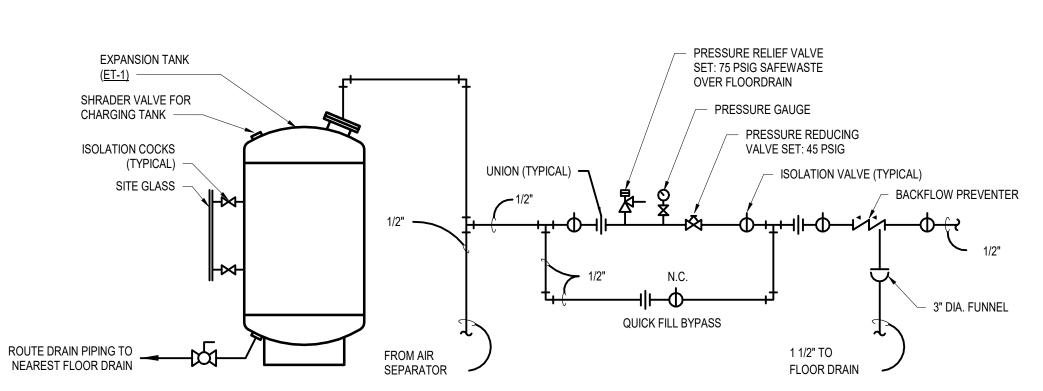
AQUASTAT

THERMOMETER

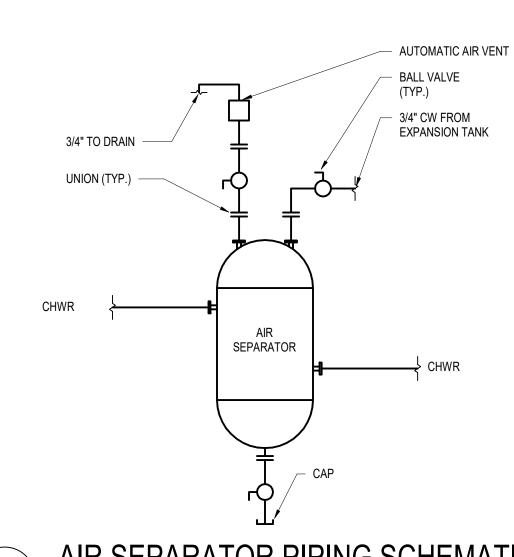
CIRCUIT BALANCING VALVE

GAS WATER HEATER PIPING DETAIL SCALE: N.T.S.

- DIRECTION OF FLOW (TYP.)



HOT WATER SYSTEM MAKE-UP DETAIL



AIR SEPARATOR PIPING SCHEMATIC

Vienna, Virginia 22180 Phone: 703-549-2472 www.rsandh.com Virginia Registration Nos. 0407-003171 \* 0411-000438

PROJECT TITLE:

MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS: 100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911

REVISIONS NO. DESCRIPTION DATE

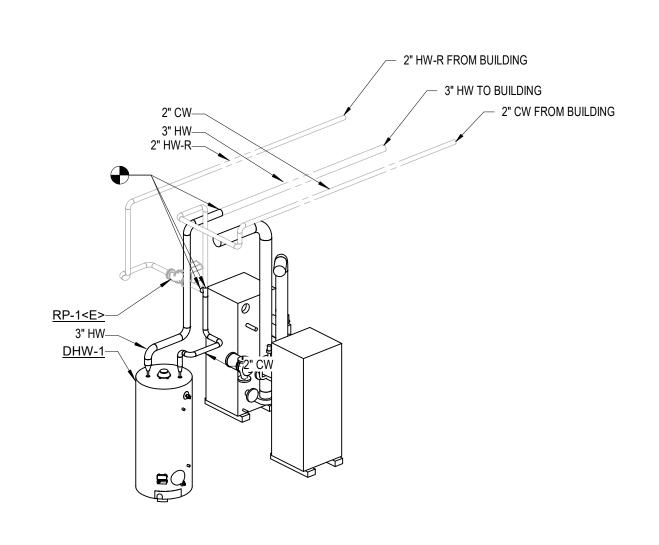
DATE ISSUED: 05/10/24 REVIEWED BY: DRAWN BY: DESIGNED BY:

PROJECT NUMBER: 20541812009 © 2024 RS&H, INC SEAL:

SHEET TITLE:

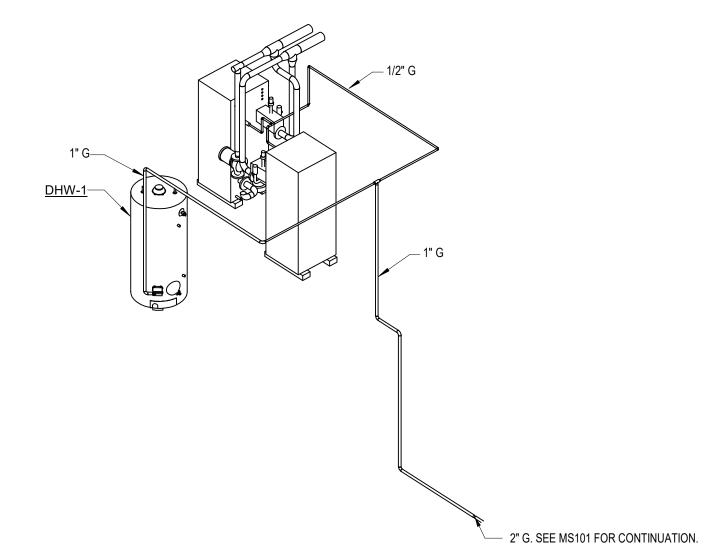
**DETAILS** 

SHEET ID:



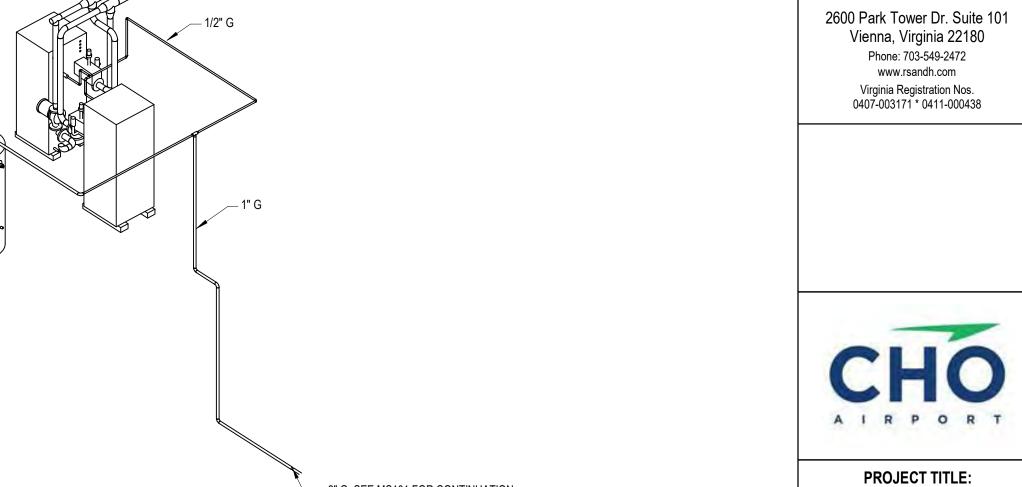
PLUMBING RISER - MAIN TERMINAL PRESSURE

SCALE: N.T.S.



PLUMBING RISER - MAIN TERMINAL NATURAL GAS

SCALE: N.T.S.



PROJECT TITLE: MECHANICAL SYSTEMS UPGRADE

Virginia Registration Nos. 0407-003171 \* 0411-000438

PROJECT ADDRESS: 100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911

REVISIONS NO. DESCRIPTION DATE

**DESIGNED BY:** PROJECT NUMBER:

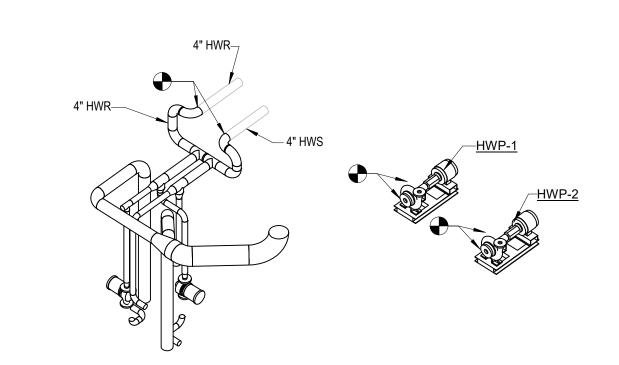
© 2024 RS&H, INC

SHEET TITLE: PIPING DIAGRAMS

SHEET ID:

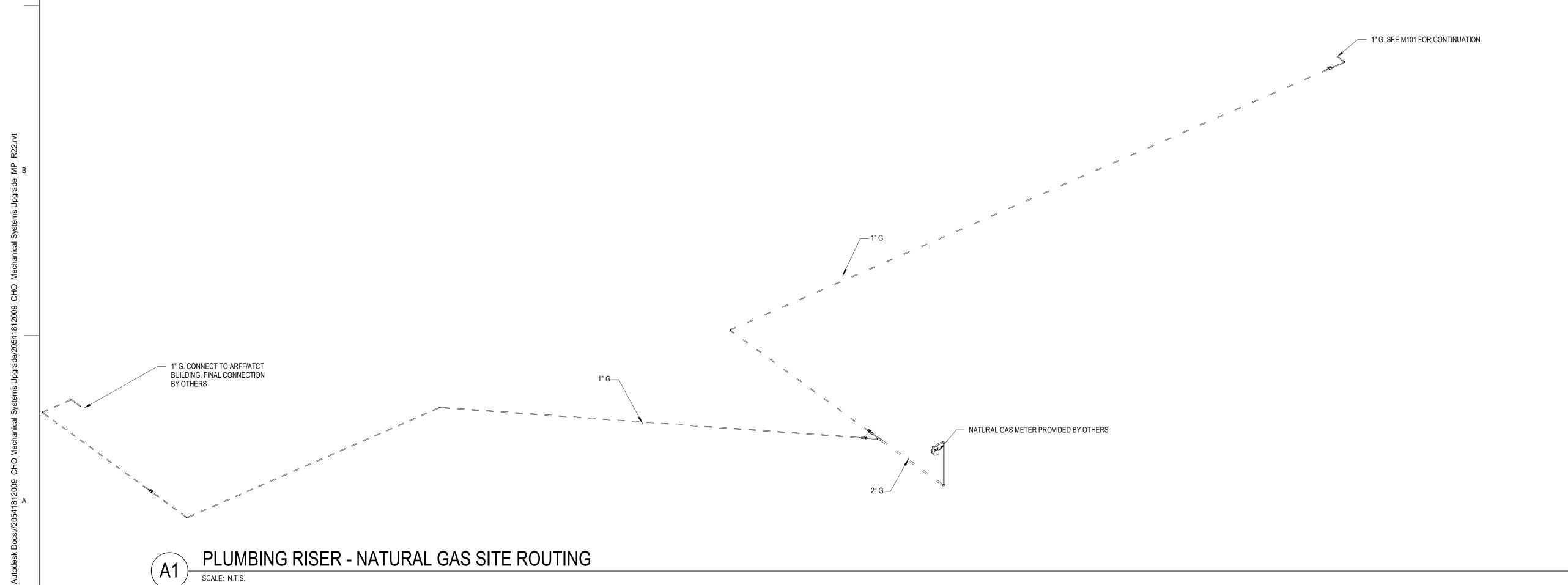
MP701

PROJECT STATUS: ISSUED FOR BID



PIPING RISER - MAIN TERMINAL HOT WATER

SCALE: N.T.S.

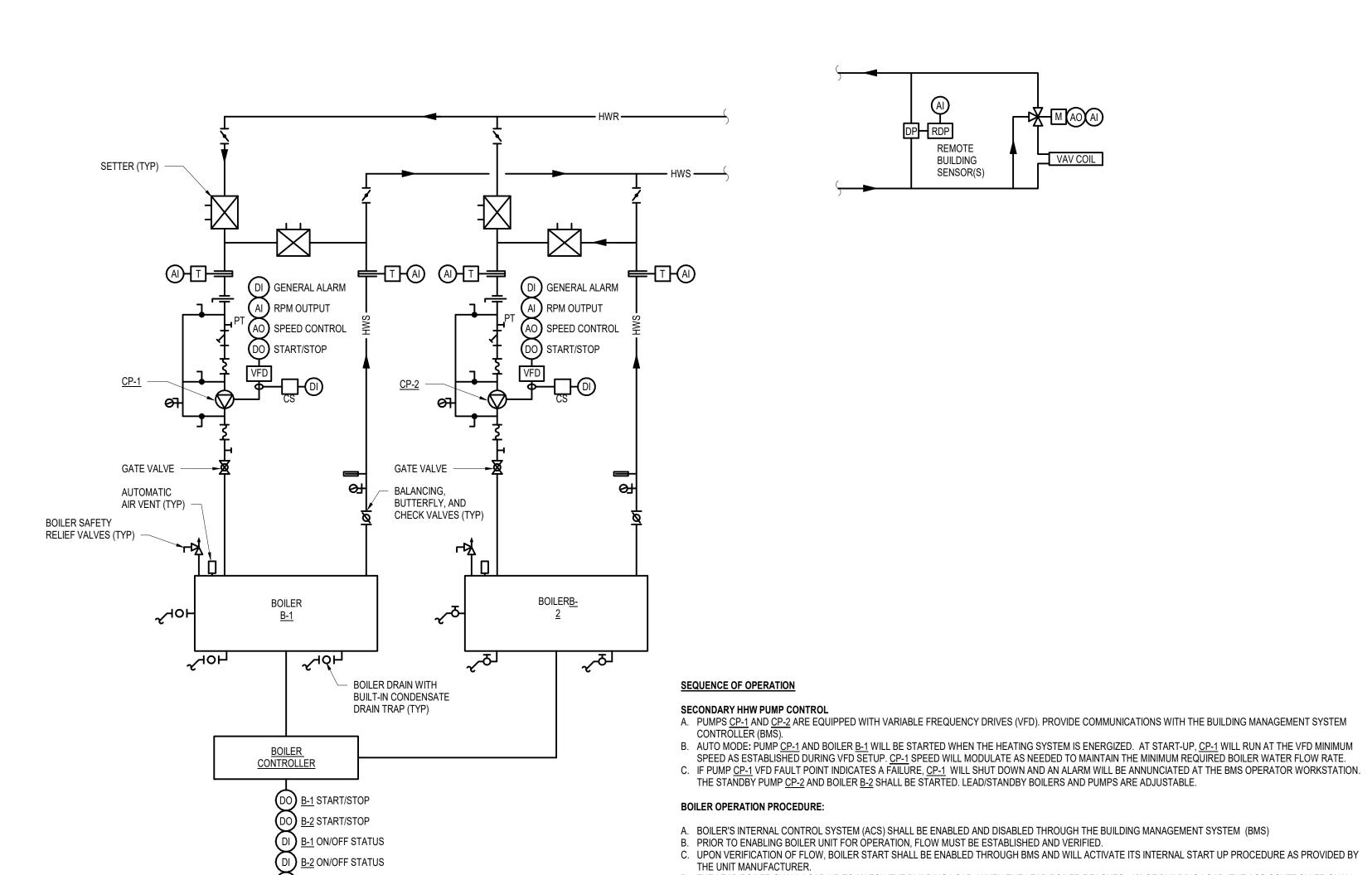


Copyright © 2024. This drawing is an instrument of service and property of RS&H, Inc. Any use or reproduction without the expressed written consent of this corporation is prohibited. All rights reserved.



PROJECT TITLE: MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS: 100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911



B. PRIOR TO ENABLING BOILER UNIT FOR OPERATION, FLOW MUST BE ESTABLISHED AND VERIFIED.

THE UNIT MANUFACTURER.

MANAGEMENT SYSTEM CONTROLLER (BMS).

PREDETERMINED (ADJUSTABLE) TEMPERATURE RESET SCHEDULE.

C. UPON VERIFICATION OF FLOW, BOILER START SHALL BE ENABLED THROUGH BMS AND WILL ACTIVATE ITS INTERNAL START UP PROCEDURE AS PROVIDED BY

D. THE LEAD BOILER SHALL LOAD UP TO MATCH THE BUILDING LOAD. WHEN THE LEAD BOILER REACHES 50% OF BUILDING LOAD, THE ACS CONTROLLER SHALL CAUSE THE SECOND BOILER TO INITIALIZE AND ESTABLISH FLOW AND VERIFY ALL INTERNAL SAFETY PROCEDURES. AS THE SECONDARY BOILER STARTS TO

RAMP UP TO CAPTURE THE BUILDING LOAD, THE LEAD BOILER SHALL REDUCE TO 25% OF BUILDING LOAD AS THE SECONDARY BOILER REACHES 25% OF BUILDING LOAD. BOTH BOILERS SHALL RAMP UP TOGETHER FROM THIS POINT AND SHALL BALANCE THE BUILDING HEATING LOAD EQUALLY BETWEEN THEM.

E. BOILER UNIT SHALL STAGE FIRING BY INTEGRAL CONTROLS THROUGH LOAD CONDITIONS UNTIL SUCH TIME THAT UNIT SHUTDOWN PROCEDURE IS INITIATED

F. UPON A CALL FOR HEATING, THE ACS CONTROL PANEL SHALL VERIFY THAT THE SAFETIES ARE MADE, THE GAS VALVE SHALL OPEN AND THE IGNITER CIRCUIT SHALL LITE THE BOILER'S BURNER FOR PROPER OPERATION.

H. BOILER UNIT INTERNAL CONTROL SYSTEM SHALL NOTIFY BMS OF ALARM CONDITION WHICH WILL CAUSE OR REQUIRE UNIT SHUTDOWN. RECEIPT OF ALARM

SIGNAL TO BMS WILL INITIATE THE SHUTDOWN PROCEDURE.

I. ALTERNATE LEAD BOILER OPERATION TO EQUALIZE RUNTIME HOURS. MONITOR OF RUNTIME HOURS IN PROGRAM OPERATED BY BMS.

J. THE OUTSIDE AIR TEMPERATURE SENSOR THROUGH THE DDC CONTROLLER SHALL RESET THE SUPPLY WATER TEMPERATURE SET POINT TO MAINTAIN A

G. BOILER HOT WATER TEMPERATURE SHALL BE MAINTAINED AT 180° F (ADJUSTABLE). A RESET SCHEDULE SHALL BE PROGRAMMED INTO THE BUILDING

NO. DESCRIPTION DATE

DATE ISSUED: REVIEWED BY: **DESIGNED BY:** 

PROJECT NUMBER: 20541812009 © 2024 RS&H, INC

SHEET TITLE: CONTROLS

SHEET ID:

**PROJECT STATUS:** ISSUED FOR BID

MT HOT WATER SYSTEM CONTROL DIAGRAM AND SEQUENCE OF OPERATION

(AI) <u>B-1</u> SUPPLY TEMPERATURE MONITOR (AO) <u>B-1</u> SUPPLYTEMPERATURE MONITOR

AI) <u>B-2</u> RETURN TEMPERATURE MONITOR

AO B-2 RETURN TEMPERATURE MONITOR

DI) <u>B-1</u> FLOW SWITCH

DI) <u>B-2</u> FLOW SWITCH

DI) <u>B-1</u> ALARM SIGNAL

DI <u>B-2</u> ALARM SIGNAL

Copyright © 2024. This drawing is an instrument of service and property of RS&H, Inc. Any use or reproduction without the

expressed written consent of this corporation is prohibited. All rights reserved.

ELECTRICAL A	BBREVIATIONS		ELECTRICAL SYMBOLS	ELECTRICAL SYMBOL NOTES	GENERAL NOTES	R
AMPERES  VC AIR CONDITIOING  ABOVE COUNTER	HP HORSE POWER HVAC HEATING, VENTILATING & AIR CONDITIONING IC INTERCOM	DEMOLITION LEGEND  XD = EXISTING MUST BE REMOVED	POWER SYSTEMS		<ol> <li>ALL ELECTRICAL WORK MUST COMPLY WITH NATIONAL ELECTRICAL CODE, NFPA 70, THE NATIONAL FIRE CODES, THE AMERICANS WITH DISABILITIES ACT, AND VIRGINIA BUILDING CODES.</li> </ol>	909 N. Was
AIR COMPRESSOR AIR COOLED CONDENSER UNITNING	IG ISOLATED GROUND IMC INTERMEDIATE METAL CONDUIT	XM = EXISTING MUST BE REMOVED  XM = EXISTING MUST BE MOVED TO NEW LOCATION			2. THOROUGHLY REVIEW THE PROJECT TO ENSURE THAT ALL WORK MUST MEET OR EXCEED THE ABOVE REQUIREMENTS. ANY ALLEGED DISCREPANCIES MUST BE BROUGHT TO THE ENGINEER'S ATTENTION.	Alexar 703-54
ACOUSTIC CEILING TILE CU AIR CONDITIONING UNIT AMERICANS WITH DISABILITIES ACT	IR INFRARED ITC INTERCOM TERMINAL CABINET J JUNCTION	XN = EXISTING MUST BE REPLACED WITH NEW DEVICE IN NEW LOCATION  XP = EXISTING IN RELOCATED POSITION		EXIT LIGHTS: STEM INDICATES WALL MOUNTING. NO STEM INDICATES CEILING MOUNTING. SHADED AREA INDICATES ILLUMINATED FACE(S). ARROW INDICATES DIRECTIONAL ARROW ON	<ol> <li>OBTAIN COPIES OF ALL RELATED PLANS, SPECIFICATIONS, SHOP DRAWINGS AND ADDENDA TO COORDINATE THE RELATED WORK AND SCHEDULING.</li> <li>THE ELECTRICAL SERVICE TO AND FOR MECHANICAL AND OTHER EQUIPMENT IS BASED ON EQUIPMENT DESIGN DATA. THE ACTUAL VALUES MAY DIFFER</li> </ol>	Alexandria
DAAG AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES AMP FUSE	JB JUNCTION BOX KAIC (THOUSAND) AMPERE INTERRUPTING CAPACITY Kcmil THOUSANDS OF CIRCULAR MILS	XR = EXISTING MUST REMAIN  XS = EXISTING MUST BE REPLACED WITH NEW DEVICE IN SAME LOCATION	→ SIMPLEX RECEPTACLE  DUPLEX RECEPTACLE ABOVE COUNTER	1 ILLUMINATED FACE(S). THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER.   □ DEVICES: THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH	DEPENDING UPON THE EQUIPMENT TO BE FURNISHED. ANY MODIFICATION TO THE ELECTRICAL INSTALLATION, BASED UPON ACTUAL EQUIPMENT SELECTION, MUST RESULT IN NO ADDITIONAL COST TO THE OWNER.	
FCI ARC FAULT CIRCUIT INTERRUPTER FD ADJUSTABLE FREQUENCY DRIVE FF ABOVE FINISHED FLOOR	KO KNOCK OUT KVA KILOVOLT-AMPERES KW KILOWATT	NOTE 1: EXISTING MUST BE REPLACED WITH NEW DEVICE IN SAME LOCATION  NOTE 1: EXISTING ITEMS NOT SHOWN MUST REMAIN.	→ ✓ DUPLEX RECEPTACLE ABOVE COUNTER  DUPLEX RECEPTACLE AUTOMATICALLY CONTROLLED	1d DESIGNATION IS INDICATED BY A LOWER CASE LETTER.	5. THOROUGHLY REVIEW THE ARCHITECTURAL AND MECHANICAL PLANS TO ASSURE THAT ELECTRICAL SERVICE FOR ALL ITEMS AND/OR EQUIPMENT REQUIRING ELECTRICAL SERVICE IS INCLUDED. ANY ITEM AND/OR EQUIPMENT NOT FURNISH AND INSTALLED WITH ELECTRICAL SERVICE, REQUIRING ELECTRICAL SERVICE, MUST BE BROUGHT TO THE ENGINEER'S ATTENTION.	
G ABOVE FINISHED GRADE U AIR HANDLING UNIT	LBS LOAD BREAK SWITCH LC LIGHTING CONTACTOR		DUPLEX RECEPTACLE	<ul> <li>         ← THE CONTROL DEVICE DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE:         d SINGLE POLE SWITCH "d" TO CONTROL LIGHTING FIXTURES INDICATED BY "d".     </li> </ul>	6. MECHANICAL, FIRE PROTECTION AND ELECTRICAL EQUIPMENT HAVE BEEN LOCATED AND ARRANGED TO MINIMIZE THE INTERFERENCES OF EQUIPMENT AND STRUCTURE. THOROUGHLY FAMILIARIZE ONESELF WITH THE WORK TO BE PERFORMED BY OTHER TRADES AND THE PHYSICAL CHARACTERISTICS OF THE STRUCTURE IN ORDER TO SCHEDULE AND INSTALL EQUIPMENT AND TO MINIMIZE POSSIBLE INTERFERENCE. FAILURE TO PROPERLY COMMUNICATE AND	
AMPS INTERRUPTING CURRENT AMPERE INTERUPTING RATING ALUMINUM	LED LIGHT EMITTING DIODE  LSI LONG TIME, SHORT TIME, INSTANTANEOUS  LSIG LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND		→ 🖫 DUPLEX GFCI RECEPTACLE  DUPLEX RECEPTACLE MOUNTED @ SPECIFIC HEIGHT	PANELBOARDS: PANELBOARD DOORS MAY BE SHOWN TO INDICATE OPENING SIDE OF	STRUCTORE IN ORDER TO SCHEDULE AND INSTALL EQUIPMENT AND TO MINIMIZE POSSIBLE INTERPERENCE. FAILURE TO PROPERLY COMMUNICATE AND SCHEDULE WORK WITH OTHER TRADES THAT RESULTS IN ADDITIONAL WORK AND MATERIAL, MUST BE THE RESPONSIBILITY OF THE CONTRACTOR. THE MODIFICATIONS REQUIRED TO RESOLVE THE CONFLICT MUST BE DECIDED BY THE ENGINEER.	
P AMPERE S ACCESS MANAGEMENT SYSTEM ACCESS PANEL	FAULT LT LIGHT LTG LIGHTING		DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT	RECESSED PANELBOARDS. SEE PANELBOARD IDENTIFICATION FOR DESIGNATION CODES.	7. ALL PANELBOARDS MUST BE FURNISH AND INSTALLED WITH A TYPEWRITTEN SCHEDULE SHOWING CIRCUIT NUMBERS AND A COMPLETE DESCRIPTION OF EACH CIRCUIT, INCLUDING OFFICIAL ROOM NUMBER.	
AUXILIARY POWER UNIT  AIR COOLED CONDENSER UNITNING  ANTITERRORISM/FORCE PROTECTION	MAX MAXIMUM MCA MINIMUM CIRCUIT AMPACITY MCB MAIN CIRCUIT BREAKER		DOUBLE DUPLEX RECEPTACLE	FLOOR CLEARANCE AREA	<ul> <li>8. ALL LIGHT SWITCHES AND DUPLEX RECEPTACLES MUST BE RATED FOR 20 AMPERES AT 120/277 VOLTS AC. WIRING DEVICES MUST BE SPECIFICATION GRADE.</li> <li>9. ALL ELECTRICAL WIRING DEVICES INDICATED TO BE INSTALLED IN MASONRY WALLS OR FLOORS MUST BE FLUSH MOUNTED, INCLUDING BRANCH CIRCUIT</li> </ul>	C
ALL THREADED ROD AUTOMATIC TRANSFER SWITCH	MCC MOTOR CONTROL CENTER MH MANHOLE		→ DOUBLE DUPLEX RECEPTACLE ABOVE COUNTER  DOUBLE DUPLEX RECEPTACLE AUTOMATICALLY CONTROLLED	TRANSFORMERS: "TA" INDICATES THE TRANSFORMER IDENTIFIER, SEE ONE-LINE DIAGRAM FOR TRANSFORMER RATING.	PANELBOARDS, UON. THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.  10. ALL CONDUIT RUNS MUST BE CONCEALED, UON.	AI
AMERICAN WIRE GAUGE BUILDING AUTOMATION SYSTEM BARE COPPER WIRE	MIN MINIMUM MLO MAIN LUGS ONLY MNS MASS NOTIFICATION SYSTEM		⊢⊖ ಕ್ಲ್ರ್ SPECIAL RECEPTACLE MOUNTED @ SPECIFIC HEIGHT & NEMA TYPE	MOTOR CONNECTIONS: THE MOTOR IS INDICATED BY A NUMBER WITHIN OR CHARACTERS	11. FURNISH THE AIR CONDITIONING SUBCONTRACTOR AND THE CEILING SUBCONTRACTOR COPIES OF APPROVED LUMINAIRE SHOP DRAWINGS.	
BUILDING DESIGN AND CONSTRUCTION TEAM BELOW FINISHED GRADE BAGGAGE HANDLING SYSTEM	MTD MOUNTED  MTS MANUAL TRANSFER SWITCH  MUFID MULTI-USER FLIGHT INFORMATION DISPLAY		DUPLEX RECEPTACLE IN FLOOR BOX  DOUBLE DUPLEX RECEPTACLE IN FLOOR BOX	XX-1 ADJACENT TO THE MOTOR SYMBOL. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE MOTOR DESCRIPTION AND ELECTRICAL REQUIREMENTS.	12. ALL SPECIAL PURPOSE OUTLETS MUST BE FURNISHED AND INSTALLED TO MATCH EQUIPMENT TO BE SUPPLIED.	MECHAN
BAGGAGE INFORMATION DISPLAY BEAM TRANSPORT SYSTEM CONDUIT	N NEUTRAL N NORTH N/A NOT APPLICABLE		DUPLEX RECEPTACLE CEILING MOUNTED	GRAPHICAL REPRESENTATION OF PHASING, TYPICAL FOR ALL SYMBOLS  EXISTING TO REMAIN	<ul><li>13. ALL CONDUITS MUST INCLUDE A SEPARATE GREEN EQUIPMENT GROUNDING CONDUCTOR.</li><li>14. ANY EXISTING UTILITIES LOCATED IN THE AREA OF CONSTRUCTION THAT REQUIRE RELOCATION OR TIE-IN MUST BE COORDINATED WITH THE OWNER'S</li></ul>	
CATEGORY 6 ETHERNET CABLE COMMUNITY ANTENNA TELEVISION	NAC NOTIFICATION APPLIANCE CIRCUIT NE NORTH ENTRANCE		SINGLE POLE MANUAL MOTOR SWITCH	→ NEW	REPRESENTATIVE. PROVIDE 72 HOUR ADVANCE NOTICE.  15. ALL DISCONNECT SWITCHES MUST BE THE HEAVY DUTY TYPE, FUSED DISCONNECTS MUST HAVE LITTLEFUSE TIME DELAY, CLASS RK5 AND INDICATING CLASS	PF 100 BC CHARL
CIRCUIT BREAKER CRANE CONTROL CONCRETE CAMERA POLE	NEC NATIONAL ELECTRICAL CODE  NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOC  NFPA NATIONAL FIRE PROTECTION ASSOCIATION		SINGLE POLE THERMAL ELEMENT SWITCH  Single Pole Thermal Element Switch  Single Pole Thermal Element Switch		16. CHECK THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND/OR DIMENSIONS FOR INSTALLATION OF ALL ELECTRICAL ITEMS. ALL QUESTIONABLE LOCATIONS MUST BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.	OHARL
CLOSED CIRCUIT TELEVISION COMMUNICATIONS ENCLOSURE CONTRACTOR FURNISHED CONTRACTOR INSTALLED	NIC NOT IN CONTRACT NL NIGHT LIGHT NO NUMBER		→ JUNCTION BOX WALL MOUNTED		17. ALL EMPTY CONDUITS MUST CONTAIN JET LINE #232 POLYOLEFIN 200 LB. TEST PULL STRING.	
COMPACT FLUORESCENT CHILLER	NTS NOT TO SCALE O.C. ON CENTER		JUNCTION BOX IN FLOOR		18. ALL WORK SHOWN ON THE ELECTRICAL PLANS MUST BE PERFORMED BY THE CONTRACTOR, UON.  19. ALL SURGE PROTECTED OUTLETS MUST BE EQUAL TO HUBBELL #5352.	
CIRCUIT CONCRETE LIGHT POLE COMMUNICATIONS MANHOLE	OAE OR APPROVED EQUAL OAHU OUTSIDE AIR HANDLING UNIT OH OVERHEAD		DATA RECEPTACLE  DATA RECEPTACLE IN FLOOR BOX		20. EQUIPMENT INSTALLED WITHIN CONCEALED SPACES MUST HAVE REASONABLE ACCESS PANELS FURNISH AND INSTALLED NEARBY FOR INSPECTION, TESTING, AND SERVICE CONSIDERATIONS. LOCATION OF ACCESS PANELS PER APPROVAL OF ARCHITECT.	
CONCRETE MASONRY UNIT CONTROLLER CONDUIT ONLY	OS OCCUPANCY SENSOR P PHASE PBB PASSENGER BOARDING BRIDGE		DISCONNECT SWITCH FUSED		21. WHERE CABLES OR CONDUITS ARE REQUIRED TO PASS THROUGH A FIRE RATED WALL, FLOOR, OR CEILING THEY MUST BE SEALED WITH FIRESTOP. THE APPROVED FIRESTOP METHOD MUST COMPLY WITH ARTICLES 300.21 OF NEC AND MUST BE UL LISTED UNDER "THROUGH-PENETRATION FIRESTOP SYSTEM (XHEZ)" IN UL FIRE RESISTANCE DIRECTORY. ALL UNSPRINKLERED FACILITIES MUST BE CONSIDERED TO HAVE INTERIOR CORRIDORS WITH FIRE RATED WALLS,	
COMMUNICATION CONCRETE CONSOLIDATION POINT	PBX PRIVATE BRANCH EXCHANGE PCHWP PRIMARY CHILLED WATER PUMP PIV POST INDICATOR VALVE		☐ DISCONNECT SWITCH NON-FUSED		UNO. ANY PENETRATION THROUGH THESE WALLS AND OTHER FIRE RATED WALLS MUST BE SEALED WITH FIRESTOP. FURNISH AND INSTALL MINIMUM 1" EMT THROUGH WALL PENETRATIONS.	
CARD READER COMPUTER ROOM UNIT	PNEU PNEUMATIC PNL PANELBOARD		COMBINATION MOTOR STARTER FUSED  PUSH BUTTON START/STOP		22. SPARE CONDUITS, WIREWAYS, AND CABLE TRAYS MUST BE SUPPORTED FROM BUILDING STRUCTURE AND NOT FROM OTHER PIPES, DUCTS, OR EXISTING RACKS, UON.	
COOLING TOWER CURRENT TRANSFORMER COOLING TOWER WATER PUMP	PNL PANEL POE POWER OVER ETHERNET PP POWER PANEL		E PUSHBUTTON		23. EXTERIOR BURIED CONDUIT RUNS MUST BE MINIMUM 24" BELOW FINISHED GRADE. FURNISH AND INSTALL CAUTION TAPE 12" BELOW GRADE. FURNISH AND INSTALL (1) SPARE WITH EACH UNDERGROUND RUN. DUCT BANKS MUST BE CONCRETE ENCASED WITH LOCATION PLAQUES PLACED EVERY 50' AND BEFORE AND AFTER EVERY TURN, UON. SUBMIT SHOP DRAWINGS BEFORE DIGGING.	
COPPER CENTRAL UTILITIES BUILDING DIGITAL ALARM COMMUNICATOR TRANSMITTER	PS PRESSURE SWITCH PT POTENTIAL TRANSFORMER PVC POLYVINYLCHLORIDE				24. FURNISH AND INSTALL GROUND STRAP ACROSS ALL CABLE TRAY JOINTS. GROUND CABLE TRAY TO SERVICE GROUND WITH #1/0 AWG BARE COPPER.	
DISTRIBUTED ANTENNA SYSTEM DIRECT CURRENT DUCTLESS SPLIT AIR CONDITIONING OUTDOOR UNIT	RAF RETURN AIR FAN RECP RECEPTACLE REF REFRIGERATOR		DISTRIBUTION TRANSFORMER  AUTOMATIC TRANSFER SWITCH		25. DO NOT LOCATE ELECTRICAL OUTLETS AND DEVICES ON WALL PANEL JOINTS. REFER TO ARCHITECTURAL BUILDING ELEVATIONS FOR WALL PANEL LAYOUT AND PANEL JOINT LOCATIONS.	
DIRECT DIGITAL CONTROL PANEL DOOR HOLDER	RGS RIGID GALVANIZED STEEL RM ROOM		□ SURGE PROTECTIVE DEVICE		26. FURNISH AND INSTALL A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR OF SINGLE POLE BRANCH CIRCUITS THAT SERVE HIGH HARMONIC LOADS, SUCH AS, BALLAST OR SWITCH MODE POWER SUPPLIES (I.E. PERSONAL COMPUTERS AND SERVERS).	
DAYLIGHT HARVESTING ZONE DISCONNECT DOUBLE THROW CENTER OFF	RMC RIGID METAL CONDUIT RTU ROOF TOP UNIT S SOUTH		⊢⊕ ELECTRONIC WALL CLOCK		<ul> <li>27. RACEWAYS INSTALLED IN OUTDOOR LOCATIONS MUST BE HOT DIPPED GALVANIZED, AT MINIMUM, FOR CORROSION RESISTANCE. FOR HIGHLY CORROSIVE ENVIRONMENTS, SUCH AS COASTAL AREAS, ALUMINUM, STAINLESS STEEL, OR PVC COATED RACEWAYS MUST BE REQUIRED.</li> <li>28. POWER CHANGE EXPENSES RESULTING FROM EQUIPMENT SUBSTITUTIONS THAT DIFFER FROM ITEMS CALLED FOR IN DRAWINGS OR SPECIFICATIONS MUST BE</li> </ul>	
DRAWING EXISTING FAST	SCADA SUPERVISORY CONTROL AND DATA ACQUISITION SCCR SHORT CIRCUIT CURRENT RATING SCHWP SECONDARY CHILLED WATER PUMP		RECEPTACLE ON DROP CORD  RECEPTACLE ON CORD REEL		BORNE BY THE CONTRACTOR OR THEIR SUB. THESE MUST INCLUDE CHANGES IN VOLTAGE OR FULL LOAD AMPS RESULTING IN LARGER FEEDERS AND OR CIRCUIT BREAKERS.	
ELECTRICAL CONTRACTOR ELECTRIC DUCT HEATER	SD SUB-DISTRIBUTION CABINET SE SOUTH ENTRANCE		NESET TAGLE ON GOND NEEL		29. COORDINATE FINAL ELECTRICAL DEVICE AND LUMINAIRE LOCATIONS WITH FINAL SPRINKLER HEAD LOCATIONS TO COMPLY WITH NFPA REQUIREMENTS.	
EXHAUST FAN ELEVATION EMERGENCY LIGHT	SEC SECURITY SEGB SERVICE ENTRANCE GROUND BAR SF SUPPLY FAN				30. ALL EXISTING ELECTRICAL DEVICES THAT ARE NOT SHOWN ARE EXISTING TO REMAIN, UON. 31. COORDINATE WITH DIVISION 23 FOR DISCONNECT REQUIREMENTS ON MECHANICAL EQUIPMENT. REFER TO MECHANICAL EQUIPMENT SCHEDULES FOR	REVISIO
ELECTRIC/ELECTRICAL EMERGENCY ENERGY MANAGEMENT CONTROL SYSTEM	SHWP SECONDARY HOT WATER PUMP SIM SIMILAR SLC SIGNAL LINE CIRCUIT				INFORMATION. FURNISH AND INSTALL DISCONNECTS FOR THOSE DEVICES THAT DO NOT COME WITH FACTORY INSTALLED DISCONNECTS.  32. BEFORE INITIATING ANY UNDERGROUND WORK, LOCATE ALL UTILITIES.	NO.
ELECTRICAL MANHOLE ELECTROMAGNETIC INTERFERENCE ELECTRICAL METALLIC TUBING	SN SOLID NEUTRAL SPD SURGE PROTECTIVE DEVICE SPEC SPECIFICATION				33. RAMP LEVEL CONDUIT INSTALLED IN UNCONDITIONED AIR SPACE MUST BE RMC WITH COMPRESSION FITTINGS. CONDUIT LEAVING TENANT SPACE MUST BE 1) LABELED BEFORE AND AFTER THE WALL PENETRATED BY THE CONDUIT. 2) LABELED EVERY 50' OR ON EVERY 90 DEGREE TURN. LABEL MUST BE 1 1/2" LABEL	
ENGINEER OF RECORD EMERGENCY POWER-OFF	SPST SINGLE POLE SINGLE THROW SQ SQUARE				TAPE IDENTIFYING THE ORIGIN AND DESTINATION (ROOM NAME AND NUMBER), CIRCUIT NUMBER AND SYSTEM NAME.	
EQUAL EXISTING TO BE REMOVED ENERGY RECOVERY UNIT	SS STAINLESS STEEL SSF SIDE STREAM FILTER ST SHUNT TRIP COIL					
ENERGY SELECTION SYSTEM ELECTRONIC TRAP SEAL PRIMER ELECTRIC UNIT HEATER	STC SECURITY TERMINAL CABINET STR STARTER STS STAINLESS STEEL					
ELECTRIC WATER COOLER ELECTRIC WATER HEATER EXISTING TO REMAIN	STS STATIC TRANSFER SWITCH SW SWITCH SWBD SWITCHBOARD					
EXISTING TO BE RELOCATED FAX / PRINTER	SWGR SWITCHGEAR SYM SYMMETRICAL					
FIRE ALARM FIRE ALARM AUDIO AMPLIFIER FIRE ALARM ANNUNCIATOR PANEL	T TRANSFORMER TB TELEPHONE BACKBOARD TE THERMAL ELEMENT					DATE ISS
FIRE ALARM CONTROL PANEL FIRE ALARM GRAPHIC ANNUNCIATOR FIRE ALARM INTERFACE CABINET	TEFC TOTALLY ENCLOSED FAN COOLED TEL TELEPHONE TGB TELECOMMUNICATIONS GROUNDING BUS BAR					REVIEWI
FIRE ALARM POWER SUPPLY FIRE ALARM TERMINAL CABINET FAN COIL UNIT	TMGB TELECOMMUNICATIONS MAIN GROUNDING BUS BAR TR TAMPER RESISTANT TS TAMPER SWITCH					DESIGN
FLIGHT INFORMATION DISPLAY FULL LOAD AMPS	TTB TELEPHONE TERMINAL BOARD TV TELEVISION					PROJEC
FLOOR FIBER OPTIC FAN POWERED TERMINAL BOX	TYP TYPICAL UDS UTILITY DISTRIBUTION SYSTEM UG UNDERGROUND					
FAN POWERED TERMINAL UNIT FLOW SWITCH FLUSH/FAUCET SENSOR POWER CONVERTER	UGC UNDERGROUND COMMUNICATIONS UH UNIT HEATER UL UNDERWRITERS LABORATORIES					
FAN POWERED VAV TERMINAL UNIT GROUND GENERAL CONTRACTOR	UNSW UNSWITCHED UON UNLESS OTHERWISE NOTED UT UTILITY					
GAS DUCT FURNACE GROUND FAULT	UTR UP THROUGH ROOF V VOLTS	ABOVE COUNTER DEVICES  MOUNTING HEIGHTS  6" TO BOTTOM WITHOUT BACKSPLASH				
GROUND FAULT CIRCUIT INTERRUPTER GOVERNMENT FURNISHED GOVERNMENT INSTALLED GROUND FAULT PROTECTION	VAV VARIABLE AIR VOLUME (HVAC) VFD VARIABLE FREQUENCY DRIVE VFI VACUUM FAULT INTERRUPTER	WALL LUMINAIRES  4" TO BOTTOM WITH BACKSPLASH  SEE LUMINAIRE SCHEDULE OR KEYNOTE				
GATE INFORMATION DISPLAY GROUND POWER UNIT GROUND ROD	VT VOLTAGE TRANSFORMER W WIRE W WALL MOUNTED	EXTERIOR SPEAKERS 10'-0" TO CENTER OF BOX, UON FIRE ALARM HORNS/SPEAKERS HIGH BAY 80" TO BOTTOM OF BOX				ELEC
GALVANIZED RIGID CONDUIT GAS UNIT HEATER	W WATTS W WEST	FIRE ALARM HORNS/SPEAKERS  FIRE ALARM STROBES HIGH BAY  80" TO BOTTOM OF BOX  80" TO CENTER OF DEVICE				NO.
GAS WATER HEATER HIGH BAY HANDHOLE	WP WEATHERPROOF WR WEATHER-RESISTANT Y WYE (CONNECTED)	FIRE ALARM STROBES  80" TO CENTER OF DEVICE  FIRE ALARM PULL STATIONS HIGH BAY  48" TO CENTER OF DEVICE				AND
HIGH INTENSITY DISCHARGE	Z ZONE Z IMPEDANCE	FIRE ALARM PULL STATIONS  48" TO CENTER OF DEVICE  TV OUTLETS & TV RECEPTACLE  72" TO BOTTOM OF BOX, UON				
		RECEPTACLES IN INDUSTRIAL AREAS  48" AFF TO CENTER LINE, UON  RECEPTACLES  18" AFF TO CENTER LINE, UON				
		SWITCHES  48" AFF TO CENTER OF BOX, UON  GROUND BAR  18" AFF TO BOTTOM OF BAR OR BOX, UON				
		EMERGENCY PHONE  CARD READER  18 AFF TO BOTTOM OF BAR OR BOX, UON  54" AFF TO CENTER LINE, UON  48" AFF TO CENTER LINE, UON				
		EPO SWITCHES  EPO SWITCHES  CEILING MOUNTED DEVICES  48" AFF TO CENTER LINE, UON  54" AFF TO CENTER LINE, UON  EQUAL HEIGHT TO ROOM LUMINAIRES				
	<u>I</u>	CEILING MICCINTED DEVICES EQUAL HEIGHT TO ROOM LUMINAIRES	<u> </u>	I		_

909 N. Washington Street, Suite 330 Alexandria, Virginia 22314 703-549-2472 Fax 703-549-2582 www.rsandh.com Alexandria VA - Virginia Registration No. 0411-000594

PROJECT TITLE: MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS: 100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911

DESIGNED BY: PROJECT NUMBER: 20541812009

SHEET TITLE:

ELECTRICAL GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET ID:

OVERALL FIRST FOOR ELECTRICAL DEMOLITION PLAN

Copyright © 2023. This drawing is an instrument of service and property of RS&H, Inc. Any use or reproduction without the expressed written consent of this corporation is prohibited. All rights reserved.

909 N. Washington Street, Suite 330 Alexandria, Virginia 22314

703-549-2472 Fax 703-549-2582 www.rsandh.com Alexandria VA - Virginia Registration No. 0411-000594

CHO

PROJECT TITLE:
MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS: 100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911

REVISIONS

NO. DESCRIPTION DATE

DATE ISSUED: 05/10/2
REVIEWED BY:
DRAWN BY:
DESIGNED BY:
PROJECT NUMBER:

PROJECT NUMBER:

20541812009
© 2023 RS&H, INC

SEAL:

SHEET TITLE:

OVERALL FIRST FLOOR ELECTRICAL DEMOLITION PLAN

SHEET ID:

ED10

SCALE: 1" = 1'-0"

MAIN TERMINAL BOILER ROOM DEMO PLAN

SCALE: 1/2" = 1'-0"

Copyright © 2023. This drawing is an instrument of service and property of RS&H, Inc. Any use or reproduction without the expressed written consent of this corporation is prohibited. All rights reserved.

DEMOLITION LEGEND

XD = EXISTING MUST BE REMOVED

XM = EXISTING MUST BE MOVED TO NEW LOCATION

XN = EXISTING MUST BE REPLACED WITH NEW DEVICE IN NEW LOCATION

XP = EXISTING IN RELOCATED POSITION

XR = EXISTING MUST REMAIN

XS = EXISTING MUST BE REPLACED WITH NEW DEVICE IN SAME LOCATION

NOTE 1: EXISTING ITEMS NOT SHOWN MUST REMAIN .

## KEYNOTES

- 1 UON , REMOVE JUNCTION BOX, DISCONNECT SWITCH AND ASSOCIATED CONDUIT AND WIRE BACK TO THE SOURCE (PANEL P12) . TYP
- 2 CIRCUITBREAKER TO PANEL PM
- 3 MAINTAIN EXISTING BRANCH CIRCUIT TO RP 1.
- 4 DISCONECT THE EXISTING BRANCH CIRCUIT. REUSE FOR NEW PUMP.

909 N. Washington Street, Suite 330 Alexandria, Virginia 22314 703-549-2472 Fax 703-549-2582 www.rsandh.com Alexandria VA - Virginia Registration No. 0411-000594

CHO

PROJECT TITLE:
MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS: 100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911

REVISIONS

NO. DESCRIPTION DATE

DATE ISSUED: 05/10/2024

REVIEWED BY:

DRAWN BY:

DESIGNED BY:

PROJECT NUMBER:

20541812009

© 2023 RS&H, INC

SHEET TITLE:

ENLARGED FIRST FLOOR ELECTRICAL DEMOLITION PLAN

SHEET ID:

ED401

PROJECT STATUS: ISSUED FOR BID

2 0 2

SCALE: 1/2" = 1'-0"

OVERALL FIRST FLOOR ELECTRICAL PLAN

Copyright © 2023. This drawing is an instrument of service and property of RS&H, Inc. Any use or reproduction without the expressed written consent of this corporation is prohibited. All rights reserved.

909 N. Washington Street, Suite 330
Alexandria, Virginia 22314
703-549-2472 Fax 703-549-2582
www.rsandh.com
Alexandria VA - Virginia Registration No.
0411-000594

CHO

PROJECT TITLE:
MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS: 100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911

IO. DESCRIPTION

DATE ISSUED: 05/10/2
REVIEWED BY: 5
DRAWN BY: 5
DESIGNED BY: 5

DESIGNED BY:
PROJECT NUMBER:
20541812009
© 2023 RS&H, INC

SHEET TITLE:

OVERALL FIRST FLOOR ELECTRICAL PLAN

SHEET ID:

EP111

PROJECT STATUS:
ISSUED FOR BID

SCALE: 1" = 1'-0"

MAIN TERMINAL BOILER ROOM ELECTRICAL PLAN

SCALE: 1/2" = 1'-0"

Copyright © 2023. This drawing is an instrument of service and property of RS&H, Inc. Any use or reproduction without the expressed written consent of this corporation is prohibited. All rights reserved.

909 N. Washington Street, Suite 330 Alexandria, Virginia 22314 703-549-2472 Fax 703-549-2582 www.rsandh.com

Alexandria VA - Virginia Registration No. 0411-000594

KEYNOTES

- 1 UNISTRUT SUPPORT BOLTED TO THE CONCRETE FLOOR.
- NEMA SIZE 1 STARTER, 30 AMP SWITCH, 30AF SAFTEY SWITCH.

  EXTENDED EXISTING CIRCUIT IN LIQUID-TIGHT FLEXIBLE CONDUIT.

  3#10, 1#10GND 3/4"C (LIQUID-TIGHT FLEXIBLE).

CHO

PROJECT TITLE:
MECHANICAL SYSTEMS UPGRADE

**PROJECT ADDRESS:**100 BOWEN LOOP, SUITE 200
CHARLOTTESVILLE, VA 22911

REVISIONS

NO. DESCRIPTION DATE

REVIEWED BY:

DRAWN BY:

DESIGNED BY:

PROJECT NUMBER:

20541812009

**20541812009** © 2023 RS&H, INC **SEAL**:

SHEET TITLE:

ENLARGED FIRST FLOOR ELECTRICAL PLAN

SHEET ID:

EP401

PROJECT STATUS: ISSUED FOR BID

0 2 SCALE: 1/2" = 1'-0"

208Y	/120 VAC					PANEL	BOARD	P12 (XF	?)		200 A BUS W/ 200							
3 PH	ASE 4 WII	RE					LO	CATION	BOILER	ROOM	164			10 kA SCCR, BOTTOM FEED, I	REC	ESSED M	101	
CKT NO		BREAKER TRIP / POLE LOAD CLASS & LOCATION		ID	NOTES	L1	L2	L3	L1	L2	L3	NOTES	ID	LOAD CLASS & LOCATION		REAKER IP / POLE		
3	20 A	2	MOTOR MAIN TERMINAL BOILER ROOM / NEW	B2	1	458	458		0	0				PSO OFFICE DUCT HEATER	3	40 A		
5	20 A	1	SPARE					0			0							
7	20 A	1	SPARE			0			0					SPARE	1	20 A		
9	9 11 20 A 2 MOTOR MAIN TERMINAL BOILER ROOM / NEW	B1	1		458			0				SPARE	1	20 A	7			
11		BOILER ROOM / NEW	ы	'			458			0			GATE 4 TICKET COUNTER	1	20 A	<i></i>		
13	20 A	1	SPARE			0			0					GATE 4 TICKET COUNTER	1	20 A	1	
15	20 A	1	SPARE				0			0				QUAD ON WALL PSO OFFICE	1	20 A		
17	17 19 20 A	2	PUMP MAIN TERMINAL BOILER	CP1	1			562			0			SPARE	1	20 A		
19			ROOM / NEW	CFI	'	562			0					SPARE	1	20 A	2	
21	21 20 A	2	2 PUMP MAIN TERMINAL BOILER ROOM / NEW	CP2	1		562			0				CANOPY LIGHT	1	20 A	2	
23	20 A			OI Z	<b>'</b>			562			0			LIGHT	1	20 A	2	
25	20 A	1	CONVINENCE OUTLET		NEW	180			2005			2 HWP - 1		WATER PUMP	3		_2	
27	20 A	1	SPARE				0			2005						30 A	_2	
29	20 A	1	SPARE					0			2005						(	
31	20 A	1	SPARE			0			2005									
33	20 A	1	SPARE				0			2005		2 HWP - 2		WATER PUMP		30 A		
35	20 A	1	SPARE					0			2005						(	
37	20 A	1	SPARE			0			0					SPARE	1	20 A		
39	20 A	1	SPARE				0			0				SPARE	1	20 A		
41	20 A	1	SPARE					0			0			UV LIGHT	1	20 A	4	
							_1	L	_2	L	.3							
								1										

CONNECTED LOAD: 5210 kVA 5488 kVA 5592 kVA CODE LOAD TOTALS

NONCONTINUOUS: 0 VA CONTINUOUS: 0 VA

NONCONTINUOUS + 125% CONTINUOUS: 0 VA

NONCONTINUOUS + 125% CONTINUOUS: 0 A

GENERAL NOTES:

ALL CIRCUITS ARE TO REMAIN UNLESS NOTED OTHERWISE. NEW BRANCH CIRCUITS ARE 2#12, 1# 12 GND - 3/4"C UNLESS NOTED OTHERWISE

1.REPLACE 2 SPARE CIRCUIT BREAKERS 20A, 1 POLE WITH 2 CICUIT BREAKER 20A, 2POLE. 2. REPLACE 3 SPARE CIRCUIT BREAKERS 20A, 1 POLE WITH 1 CIRCUIT BREAKER 30A, 3POLE BRANCH CIRCUIT SHOULD BE 3#10, 1# 10 GND - 3/4"C 909 N. Washington Street, Suite 330 Alexandria, Virginia 22314

703-549-2472 Fax 703-549-2582 www.rsandh.com

Alexandria VA - Virginia Registration No. 0411-000594

PROJECT TITLE: MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS: 100 BOWEN LOOP, SUITE 200 CHARLOTTESVILLE, VA 22911

NO. DESCRIPTION DATE

DATE ISSUED: REVIEWED BY: DESIGNED BY: PROJECT NUMBER:

20541812009 © 2023 RS&H, INC

SHEET TITLE:

SHEET ID:

PROJECT STATUS: ISSUED FOR BID

SCALE: 1/2" = 1'-0"