CITY OF NEWTON, MASSACHUSETTS
PURCHASING DEPARTMENT
purchasing@newtonma.gov
Fax (617) 796-1227

April 22, 2024

ADDENDUM #2
INVITATION FOR BID #24-65

NEWTON COMMONWEALTH GOLF COURSE MAINTENANCE FACILITY IMPROVEMENTS AND RENOVATIONS

THIS ADDENDUM IS TO: ANSWER THE FOLLOWING QUESTIONS:

Q1. Please Provide a VRF System Refrigerant Piping Schematic For HPc-1, HPc-2, HPc-3, and HPc-4

A1. REFER TO UPDATED M0.0 PLAN WITH HP SCHEMATIC.

Q2. Heat Pump Schedule Note on Plan M0.0 States to provide Branch Boxes however none are shown or scheduled. Please revise this note, or provide a schedule and show in plan-view the Branch Boxes.

A2. BRANCH BOXES NOT REQUIRED. REFER TO UPDATED HP SCHEDULE AND PIPING SCHEMATIC.

Q3. HPc-4 is scheduled to have associated indoor units HPe-4.1,4.2,4.3,4.4 however the plan view on M1.0 does not show the piping feeding those associated Indoor Units. Please revise this plan to show the correct piping layout.

A3. M1.0 PIPING LAYOUT FROM CONDENSING UNITS TO INDOOR UNITS DOES SHOW PIPING TO EACH UNIT.

Q4. HPc-3 is scheduled to have associated indoor units HPe-3.1,3.2 however the plan view on M1.0 does not show the piping feeding those associated Indoor Units. Please revise this plan to show the correct piping layout.

A4. M1.0 PIPING LAYOUT FROM CONDENSING UNITS TO INDOOR UNITS DOES SHOW PIPING TO EACH UNIT.

Q5. Refrigerant Pipe Roof Penetration Housing Detail on M2.0 states "Refrigerant Line Sets Shall run through roof penetration housing to indoor evaporators similar to roof penetration Housing Vault Models". Please provide TWO Additional Penetration Housing Products (Make/Model) as the "Vault" Brand is the only manufacturer listed on the plans and no specification exists for this product with alternate manufacturers.

A5. ALTA PIPE HOUSING BOX AND ROOFGOOSEJACK WOULD BE ACCEPTIBLE MANUFACTURERS FOR PIPING ENCLOSURES THROUGH ROOF PENETRATIONS.

Q6. Will Alta Housing Box with Curb be allowed as an alternate manufacturer to the Vault Model for Refrigeration Roof Penetration Housings.

A6. YES. REFER TO RESPONSE TO QUESTION 5 FOR ADDTITIONAL INFORMATION.

Q7. Destratification Fan Schedule on M0.0 calls for DF-1, DF-2, DF-3, however Plan M1.0 shows 5 Destratification Fans. Please confirm if DF-1 and DF-2 are existing to remain and the only New Destratification Fans are to be DF-3, DF-4, and DF-5?

A7. REFER TO UPDATED DESTRATIFICATION FAN SCHEDULE ON M0.0

Q8. Please confirm if DF-1 and DF-2 as shown on M1.0 require relocation.

A8. EXISTING CEILING MOUNTED FANS WILL BE REMOVED AND REPLACED WITH NEW AS INDICATED ON DEMOLTION AND NEW WORK PLANS. REFER TO MD1.0 AND M1.0

Q9. Please show on Plan M1.0 all condensate pipe as none is currently shown.

A9. REFER TO M1.0 FOR CONDENSATE PIPE

Q10. Plan M4.0 has a Control Detail for Energy Recovery Unit (ERV-2). Is ERV-2 Existing to remain? If New, please provide a schedule.

A10. ERV WAS REMOVED FROM PROJECT SCOPE. REFERENCE ON M4.0 HAS BEEN REMOVED.

Q11. Plan M4.0 has a Control Detail for Energy Recovery Unit (ERV-2). Is there and ERV-1 in the scope of this project?

A11. ERV WAS REMOVED FROM PROJECT SCOPE. REFERENCE ON M4.0 HAS BEEN REMOVED.

Q12. Will the HVAC/Mechanical Permits and Fees be waived for this project? If No, is the GC or Trade Contractor to carry the cost of Permits and Fees?

A12. FEES ARE WAIVED FOR CITY BUILDINGS PROJECTS.

Q13. Plan M4.0 Ductless Cooling Units detail states "overflow sensors are to be interlocked with the Building Management System". Is there an existing DDC System and ATC Contractor currently in the space? Or confirm that the control system for the new HVAC equipment is standalone

A13. NO BUILDING MANAGEMENT SYSTEM. OVERFLOW SHALL SEND THE UNIT INTO ALARM AT THE HEAT PUMP FRONT END CONTROL PANEL.

Q14. Schedule on M0.0 for the destratification fans calls for ZOO Fans IC-Series. These fans are designed primarily for drop ceilings and can also be installed in hard lids. "IC" stands for "In-Ceiling". The floor plans show these drawn like Big Ass Fans and Big Ass Fans are listed in the spec. The scheduled "IC Silent AC Fans" do not look like the fans shown on the floor plans or the Fan Detail on M4.0.

A14. REFER TO UPDATED DESTRATIFICATION FAN SCHEDULE ON M0.0

Q15. Plan M0.0 Heat Pump Schedule appears to have several issues that prevent Mitsubishi from quoting this project. HPc-1 is ok. HPc-2 (4 Ton unit) is too small to have Two (3 Ton Units) on it. HPc-3 has two small residential style wall heads (1 Ton each) with a 3 Ton outdoor unit where the Model doesn't match the btu's on heating/cooling. HPc-4 has a mix of residential units and city multi units which will not work. Please revise the schedule so the basis of design manufacturer can quote the project.

A15. REFER TO UPDATED HEAT PUMP SCHEDULE AND SCHEMATIC ON M0.0.

Q16. Electrical Specification 260000-1.4.B.1 states "Alternate #4 Photovoltaic system", however no other alternates (1 through 3) are mentioned in the specifications and no "Section 012300 Alternates" was issued with the bid documents. Please confirm exactly what alternates apply to this project.

A16. REFER TO QUESTION 9 RESPONSE IN ADDENDUM 1

Q17. Selective Demolition specification 024119-1.04.A states "HVAC demolition and disposal is to be performed by Section 23 00 00 HVAC", however HVAC Specification 230000-1.15.C states "This Sub-

contractor shall disconnect, lower to floor, and stack near-by all noted mechanical systems being removed. The General Contractor shall remove from the building and dispose of in a legal manner." Please confirm if the HVAC Contractor owns removal of the lowered to floor materials or if removal is by the GC.

A17. CONFIRMED. THE HVAC CONTRACTOR SHALL DISCONNECT, MAKE SAFE AND LOWER TO FLOOR FOR A GC LABORER TO REMOVE.

Q18. Contract Close Out Specification 017000 states the project is subject to a 2 Year Warranty, however HVAC Specification 230000-1.26.A states 1 Year Warranty. Is the HVAC Contractor to own a 1 year or 2 year warranty?

A18. HVAC CONTRACTOR SHALL PROVIDE A 2 YEAR WARRANTY.

Q19. Specification 230000-2.5.B has contradicting notes on Refrigeration insulation size. Please confirm if 1" insulation is acceptable on Refrigeration Liquid AND Suction lines up to 1-1/2" Pipe size?

A19. PIPE INSULATION SHALL BE IN COMPLIANCE WITH TABLE c403.12.3 OF THE INTERNATIONAL ENERGY CONSERVATION CODE.

Q20. Please confirm Specification 230000-2.5.B.e which states all interior refrigeration and condensate lines must be installed within a PVC Enclosure?

A20. CONFIRMED.

Q21. Please provide a material specification for the HVAC Condensate Pipe.

A21. CONDENSATE PIPE SHALL BE COPPER PIPE

Q22. Please confirm there is no relocation of existing mechanical equipment. If yes, Please provide a detailed list of items to be relocated.

A22. CONFIRMED, NO RELOCATION OF EXISTING EQUIPMENT.

Q23. Would you please confirm liquidated damages? Article 4.2.1 states they are $1,500 whereas Article 16.1.1 states they are

A23. SECTION 16.1.1 AT p. 94 OF INVITATION FOR BID #24-65 IS AMENDED TO READ IN ITS ENTIRETY AS FOLLOWS: "IF THE CONTRACTOR FAILS TO COMPLETE THE WORK WITHIN THE TIME SPECIFIED IN THE CONTRACT, OR ANY EXTENSION THEREOF, THE CONTRACTOR SHALL PAY TO THE CITY AS LIQUIDATED DAMAGES, THE SUM OF $1,500.00 FOR EACH DAY OF DELAY."

Q24. Section 090006-3.1.6.B.f.2. calling for Section 096543-Linoleum Flooring, please confirm section 096543-Linoleum flooring not included in this job.

A24. SECTION 09 65 43 LINOLEUM FLOORING is not included in this Project

Q25, Section 096523-5.2.2.B. calling for Type 1- Rubber tile with Water Cut Leaf Patterns and Type 2- Roppe Smooth Marbleized Rubber Tile however drawings not showing any type of Rubber tiles, what type of Rubber tile would be used for this job?

A25. Section 09 65 23, paragraph 2.2, B., 4., a. DELETE the following:

~~a. TYPE 1 Corridor Floor Tile with Water Cut Leaf Patterns: Roppe Corporation, Fostoria OH, "Smooth Marbleized".~~

~~1. Sizes and Patterns: 36" x 36" tile. Patterns as indicated on Drawings. Corridor floor patterns will be comprised of multiple different colors as selected from all available colors and price groups.~~

THERE IS NO 36X36 TILE ON THIS PROJECT WITH WATERCUT LEAF PATTERNS ON THIS PROJECT

All other terms and conditions of the IFB remain unchanged.

PLEASE ENSURE THAT YOU ACKNOWLEDGE ALL ADDENDA ON YOUR BID FORM. FAILURE TO ACKNOWLEDGE ALL ADDENDA COULD RESULT IN REJECTION OF YOUR BID AS NONRESPONSIVE.

Thank you.

Nicholas Read
Chief Procurement Officer

Raymond Design Associates, Inc.
60 Ledgewood Place, Rockland, Massachusetts 02370
Telephone 1-781-421-3480
Fax 1-339-461-1293

Addendum to the Bidding Documents — Addendum No. 2
Newton Commonwealth Golf Course — April 22, 2024
Maintenance Facility Improvements & Renovations

To: Prospective Bidders

The Contractor Questions and Answers provided shall become part of the Contract Documents and are binding to all Filed Sub Bid Subcontractors, Subcontractors and the General Contractor. It is the responsibility of each Subcontractor and the General Contractor to review the questions and answers set forth and to incorporate and include this information within their Bid Submittal.

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated April 21, 2024 as noted below. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.
This Addendum consists of two (2) pages and eleven (11) attachments, which are to be incorporated into the Bidding Documents:

ATTACHMENTS:

A1.1 PROPOSED WORK – ENLARGED FLOOR PLANS dated 2/22/2024
P0.1 – LEGEND, NOTES & DETAILS – PLUMBING dated 2/22/2024
P1.1 – FLOOR PLANS – PLUMBING dated 2/22/2024
M0.0 – HVAC SCHEDULES AND GENERAL NOTES dated 2/22/2024
MD1.0 – HVAC DEMOLITION FLOOR PLANS dated 2/22/2024
M1.0 – HVAC RENOVATION FLOR PLANS dated 2/22/2024
M2.0 – HVAC DETAILS I dated 2/22/2024
M4.0 – HVAC CONTROLS dated 2/22/2024
E2.0 – ELECTRICAL POWER FLOOR PLANS dated 2/22/2024
E3.0 – ELECTRICAL RISER DIAGRAM AND DETAILS dated 2/22/2024
E3.2 – MECHANICAL AND PLUMING SCHEDULES dated 2/22/2024

CHANGES TO THE PROJECT MANUAL:

Item No. FP-2.01 - Section 21 00 00 Fire Protection, Paragraph 1.12, A: Delete “one (1) year” and replace with two (2) years”.

Item No. P-2.01 - Section 22 00 00 Plumbing, Paragraph 1.12, A: Delete “one (1) year” and replace with two (2) years”.

Item No. P-2.02 - Section 22 00 00 Plumbing, Paragraph 2.16, K.8: Delete in its entirety and replace with the following:

1. P-7 Electric Bottle Filler:
   Elkay LZWSSM, wall mounted, filtered, non-refrigerated surface mounted bottle filling station.
   1-1/4 in. x 1-1/2 in. rough p-trap with cleanout; 1/2 in. ball valve stop.

Item No. P-2.03 - Section 22 00 00 Plumbing, Paragraph 2.16, K: Add the following:

1. P-9 Electric Bottle Filler (Recessed):
   Elkay LBWDC00WHC, in-wall, recessed, filtered, non-refrigerated bottle filling station.
   1-1/4 in. x 1-1/2 in. rough p-trap with cleanout; 1/2 in. ball valve stop.

CHANGES TO THE DRAWINGS:

Item No. A-2.01 - Drawing **"A1.1 PROPOSED WORK – ENLARGED FLOOR PLANS", REPLACE** with Drawing "**A1.1 PROPOSED WORK – ENLARGED FLOOR PLANS** dated 2/22/2024" in its entirety.

Item No. P-2.04 – Drawing **P0.1 – LEGEND, NOTES & DETAILS – PLUMBING: REPLACE** with Drawing **P0.1 – LEGEND, NOTES & DETAILS – PLUMBING** dated 2/22/2024" in its entirety.

Item No. P-2.05 - Drawing **P1.1 – FLOOR PLANS – PLUMBING: REPLACE** with Drawing **P1.1 – FLOOR PLANS – PLUMBING** dated 2/22/2024" in its entirety.

Item No. M-2.01 - Drawing **M0.0 – HVAC SCHEDULES AND GENERAL NOTES: REPLACE** with Drawing **M0.0 – HVAC SCHEDULES AND GENERAL NOTES** dated 2/22/2024" in its entirety.

Item No. M-2.02 - Drawing **MD1.0 – HVAC DEMOLITION FLOOR PLANS: REPLACE** with Drawing **MD1.0 – HVAC DEMOLITION FLOOR PLANS** dated 2/22/2024" in its entirety.

Item No. M-2.03 - Drawing **M1.0 – HVAC RENOVATION FLOR PLANS: REPLACE** with Drawing **M1.0 – HVAC RENOVATION FLOR PLANS** dated 2/22/2024" in its entirety.

Item No. M-2.04 - Drawing **M2.0 – HVAC DETAILS I: REPLACE** with Drawing **M2.0 – HVAC DETAILS I** dated 2/22/2024" in its entirety.

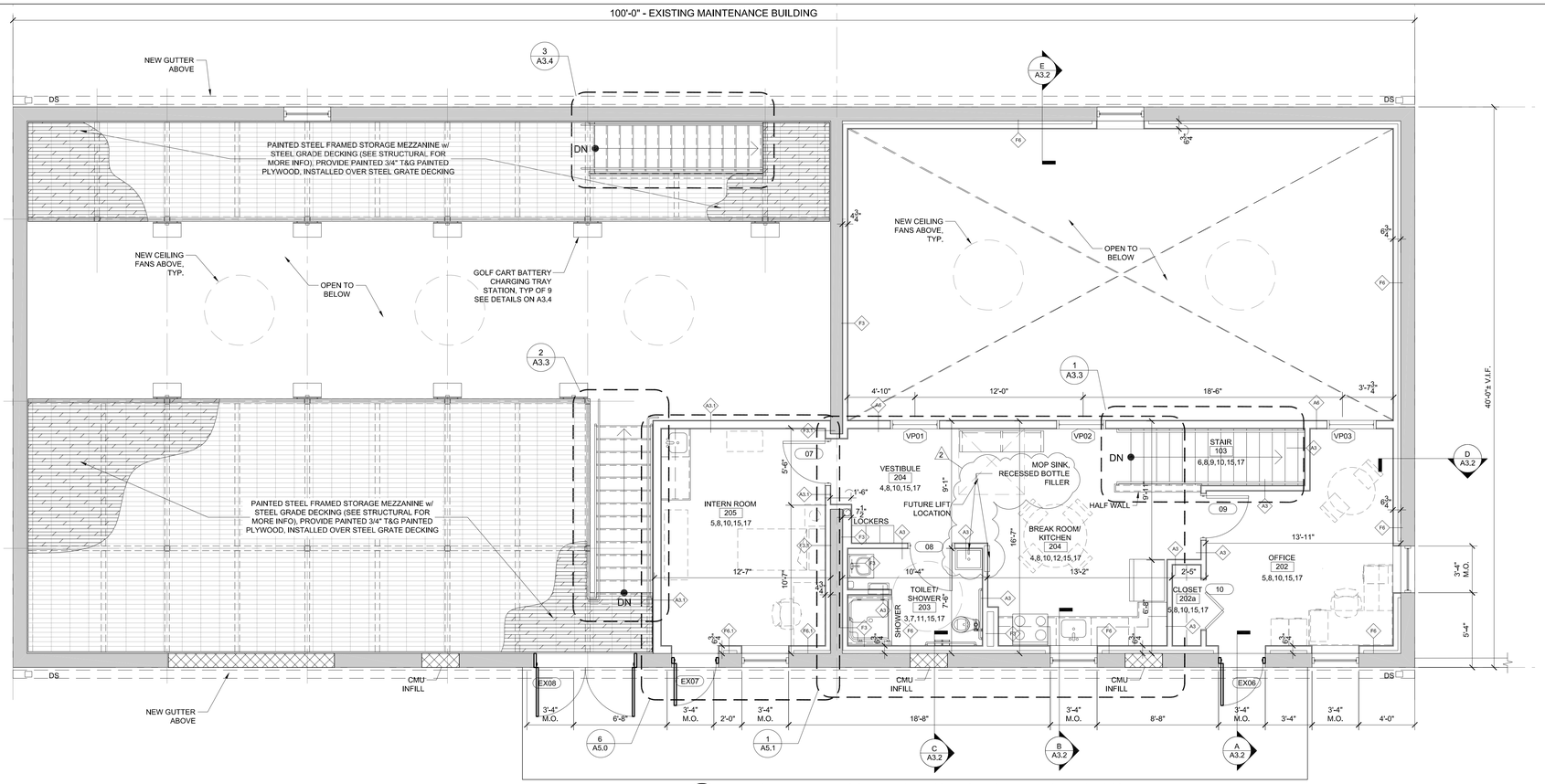
Item No. M-2.05 - Drawing **M4.0 – HVAC CONTROLS: REPLACE** with Drawing **M4.0 – HVAC CONTROLS** dated 2/22/2024" in its entirety.

Item No. E-2.01 - Drawing **E2.0 – ELECTRICAL POWER FLOOR PLANS: REPLACE** with Drawing **E2.0 – ELECTRICAL POWER FLOOR PLANS** dated 2/22/2024" in its entirety.

Item No. E-2.02 - Drawing **E3.0 – ELECTRICAL RISER DIAGRAM AND DETAILS: REPLACE** with Drawing **E3.0 – ELECTRICAL RISER DIAGRAM AND DETAILS** dated 2/22/2024" in its entirety.

Item No. E-2.03 - Drawing **E3.2 – MECHANICAL AND PLUMING SCHEDULES**: **REPLACE** with Drawing **E3.2 – MECHANICAL AND PLUMING SCHEDULES** dated 2/22/2024" in its entirety.

END OF ADDENDUM



TRUE PROJECT NORTH

NEW WORK GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE MASSACHUSETTS BUILDING CODE.
2. THE INFORMATION SHOWN DRAWINGS ARE DERIVED FROM CONSTRUCTION DOCUMENTATION, PHOTOGRAPHS AND SITE VISITS. DUE TO THE NATURE OF AS BUILT CONSTRUCTION, ALL DIMENSIONS AND CONDITIONS MUST BE FIELD VERIFIED.
3. SEE STRUCTURAL AND MEP DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.
4. REFER TO SPECIFICATION SECTION 02 28 20 FOR HAZARDOUS MATERIALS DEMOLITION CONDITIONS.
5. UNLESS NOTED OTHERWISE, THERE SHALL BE A NEW CONCRETE SLAB THROUGHOUT THE ENTIRE GROUND FLOOR LEVEL WITH A CONTINUOUS VAPOR BARRIER AND PITCHED TO FLOOR DRAINS.

NEW WORK LEGEND LEGEND

- EXISTING WALLS AND DOORS TO BE REMAIN
- NEW CMU INTERIOR PARTITION & DOOR - SEE PLAN FOR TYPES
- NEW GWB INTERIOR PARTION WALL & DOOR - SEE PLAN FOR TYPES
- DS — NEW GUTTER (ABOVE) AND DOWNSPOUT - COORDINATE WITH CIVIL DWGS
- FD — NEW FLOOR DRAIN - COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING DRAWINGS; SEE PLUMBING DRAWINGS FOR MORE INFORMATION
- INDICATES FLOOR SLOPE (TO DRAIN)
- INDICATES EPOXY OVER FLOORING OVER NEW CONCRETE SLAB W/ CONTINUOUS VAPOR BARRIER WITH EPOXY FLOORING OVER CONCRETE SLAB

FINISH GENERAL NOTES

1. SEE THE PROJECT MANUAL FOR ADDITIONAL SCOPE REQUIREMENTS FOR ALL FINISH TRADES.
2. ALL EXISTING EXPOSED SURFACES TO BE CLEANED, PREPPED AND EPOXY PAINTED.
3. ALL CMU OUTSIDE CORNERS ARE TO BE BULL-NOSED, TYPICAL
4. ALL EXPOSED TO VIEW GWB AND CMU SURFACES ARE TO BE PAINTED.
5. ALL EXPOSED TO VIEW SURFACES OF GWB CEILINGS AND SOFFITS ARE TO BE PAINTED.
6. SEE REFLECTED CEILING PLANS FOR THE EXTENT OF CEILING TYPES AND SOFFITS.
7. SEE INTERIOR ELEVATIONS AND ENLARGED PLANS FOR THE EXTENT, PATTERNS AND LAYOUT OF WALL TILES.

ROOM FINISH SCHEDULE

FLOORING:

1 EPOXY FLOOR COATING W/6" INTEGRAL BASE
2 NEW CONCRETE SLAB/FLOOR THROUGHOUT, SEALED & POLISHED
3 12x12 PORCELAIN FLOOR TILE
4 RUBBER FLOORING TILE
5 CARPET TILE FLOORING
6 RUBBER SAFETY THREADS & RISERS
6A ENTRY WALK-OFF MAT

FLOORING:

7 PORCELAIN TILE BASE
8 4" RUBBER BASE (ON GWB WALLS ONLY)

WALLS:

9 EPOXY PAINT ON ALL NEW CMU & CIP CONCRETE WALL SURFACES
10 EPOXY PAINT ON ALL NEW GWB WALL SURFACES
11 12x12 PORCELAIN WALL TILE, FULL HEIGHT
12 6x6 PORCELAIN BACK-SPLASH, FULL HEIGHT OF WALL (IN KITCHEN ONLY)
13 3/4" A/C PLYWOOD WAINSCOTING, FULL HEIGHT @ GWB WALL ONLY
14 3/4" A/C PLYWOOD WAINSCOTING @ 8'-0" AFF @ GWB WALLS ONLY

CEILINGS:

15 SUSPENDED ACOUSTICAL CEILING TILES AND GRID
15A SUSPENDED VINYL FACED GYPSUM CEILING TILES AND GRID
16 EPOXY PAINT ON ALL NEW GWB CEILING SURFACES
17 PAINT EXISTING ROOF TRUSSES, UNDERSIDE OF ROOF DECK AND ALL OTHER EXPOSED CONDUITS, DUCTS AND MISCELLANEOUS EQUIPMENT

0' 2' 4' 8'

RDA
Raymond Design Associates Architecture & Planning
60 Ledgewood Pl
Rockland, MA
02370

NEWTON COMMONWEALTH GOLF COURSE MAINTENANCE FACILITY IMPROVEMENTS & RENOVATIONS

212 KENRICK STREET, NEWTON, MA 02458

PROPOSED WORK ENLARGED FLOOR PLANS

Revisions:

No.	Date	Description
1	4/19/2024	REPAIR BAY
2	4/22/2024	MOP SK, WF

Drawn By: MMW
Checked By: JRY
Approved By: JRY

Drawing Scale: As Noted

Project Number: NEW2202

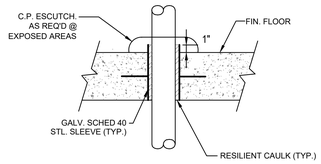
Date: March 21, 2024

A1.1

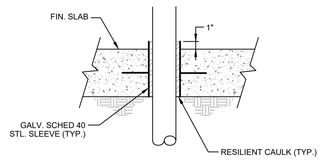
LEGEND

SYMBOL	ABBREV	DESCRIPTION
	NEW	NEW WORK (DARK)
	EX	EXISTING WORK (LIGHT)
	S/W	SOIL/WASTE ABV. GRADE
GW	S/W	SOIL/WASTE UNDERGROUND
	V	VENT ABV. GRADE
GV	V	VENT UNDERGROUND
	GW	GARAGE WASTE UNDERGROUND
	GV	GARAGE VENT UNDERGROUND
IW	IW	INDIRECT WASTE
	RL	RAIN LEADER ABV. GRADE
	RL	RAIN LEADER UNDERGROUND
SSD	SSD	SUB-SOIL DRAIN
FD	FD	FOOTING DRAIN
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
140	HW 140	HOT WATER 140 F
140	HWR 140	HOT WATER RETURN 140 F
TW	TW	TEMPERED WATER
TP	TP	TRAP PRIMER
G	G	FUEL GAS PIPING
	DP,DN	PIPE DROP OR DOWN
	UP	PIPE RISE OR UP
		TEE LOOKING DOWN
		CAP ON END OF PIPE
FD RD AD		FLOOR DRAIN, ROOF DRAIN, AREA DRAIN
		STRAINER
		UNION
	CO	CLEANOUT
	DCO	DANDY CLEANOUT
	FCO	FLOOR CLEANOUT
	PG/TG	PRESSURE GAGE/TEMPERATURE GAGE
	SA	SHOCK ABSORBER
		BALANCING VALVE
	BV	BALL VALVE
	CV	CHECK VALVE
		GAS COCK
		GAS PRESSURE REGULATOR
		SOLENOID VALVE
	GV	GATE VALVE
	PRV	PRESSURE REDUCING VALVE
		BUTTERFLY VALVE
		GAS COCK LUBRICATED
		GLOBE VALVE
	VOV	VALVE ON VERTICAL
	PT	P-TRAP
	S&W	STOP & WASTE VALVE
	EL	EXPANSION LOOP
		PIPE GUIDE
		PIPE ANCHOR
		FLOW IN DIRECTION OF ARROW
	HB/WH	HOSE BIBB/WALL HYDRANT
	EX	EXISTING
	CTE	CONNECT TO EXISTING
	ETR	EXISTING TO REMAIN
	ETBR	EXISTING TO BE REMOVED
	S&W	STOP & WASTE
	TYP.	TYPICAL
	AC	CONCEALED ABOVE CEILING
	ACB	CONCEALED ABOVE CEILING BELOW
	@C	EXPOSED AT CEILING
	@CB	EXPOSED AT CEILING BELOW
	FFE	FINISHED FLOOR ELEVATION
	INV	INVERT ELEVATION
	VTR	VENT THRU ROOF
	GVTR	GARAGE VENT THRU ROOF
	AP	ACCESS PANEL
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	FG	FINISHED GRADE
	CI	CAST IRON
	CP	CHROME PLATED
	UC	UNDER COUNTER
	PC	PLUMBING CONTRACTOR
	F&I	FURNISH AND INSTALL
	FPC	FIRE PROTECTION CONTRACTOR
	GC	GENERAL CONTRACTOR
	HVAC	HEAT, VENT & AIR COND. CONTRACTOR
	DCVA	DOUBLE CHECK VALVE ASSEMBLY
	RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
	STK	STACK
	STP	STANDPIPE
	FBO	FURNISHED BY OTHERS
	EXP	EXPOSED

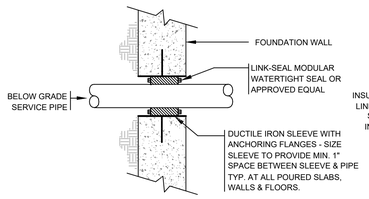
NOTE: NOT ALL SYMBOLS LISTED ARE APPLICABLE TO THIS PROJECT



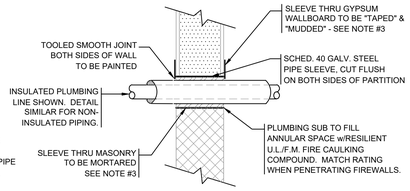
THRU CONC. FLOORS



THRU SLAB ON GRADE



BELOW GRADE



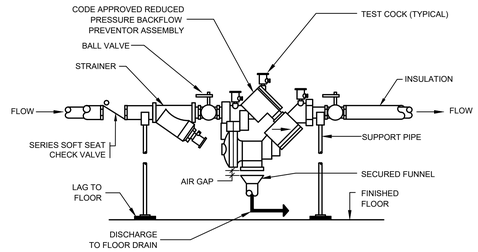
THRU PARTITIONS & WALLS

1 P0.1 TYPICAL PLUMBING SLEEVE CONDITION DETAILS

N.T.S.

NOTE:

1. ALL PIPING PENETRATING ALL PARTITIONS, WHETHER FIRE OR SMOKE RATED OR NOT, CONCEALED OR EXPOSED, SHALL BE SLEEVED AS DETAILED.
2. WHERE CONC. WALLS, SLABS, ETC., ARE CORE DRILLED, INSTALL SLEEVE FLUSH WITH BOTH SIDES, CAULKED & LEADED IN PLACE.
3. REFER TO DIVISION 4 & 9 FOR PROCEDURES & METHODS OF PATCHING AROUND SLEEVES AT GYPSUM, PLASTER & MASONRY. REFER TO SPECS FOR DELINEATION OF RESPONSIBILITY
4. SLEEVES SHALL BE SIZED TO PROVIDE MIN. 1" CLEARANCE BETWEEN PIPE O.D. & SLEEVE I.D.

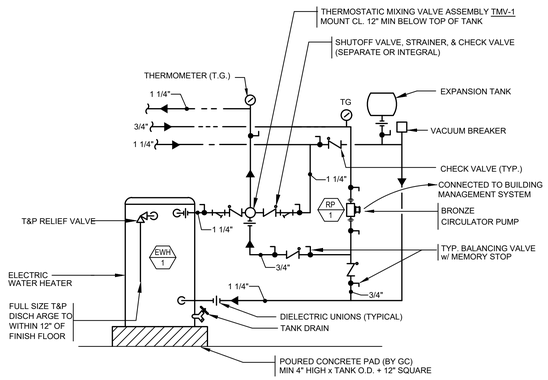


5 P0.1 REDUCED PRESSURE BACKFLOW PREVENTOR ASSEMBLY(R.P.B.P.)

N.T.S.

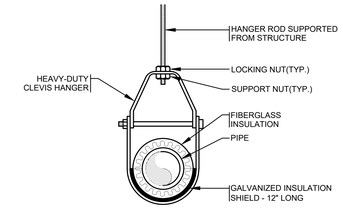
NOTES:

1. LOCATE BACKFLOW PREVENTOR 3' TO 4' ABOVE FINISHED FLOOR, 1" FROM WALL AND EASILY ACCESSIBLE.
2. MATERIALS AND METHODS FOR THIS INSTALLATION SHALL CONFORM TO ALL STATE AND U.S. PUBLIC HEALTH SERVICES CODES AND REGULATIONS.
3. FILE FOR AND OBTAIN ALL REQUIRED APPROVALS AND PERMITS PRIOR TO INSTALLATION



6 P0.1 WATER HEATER PIPING DETAIL

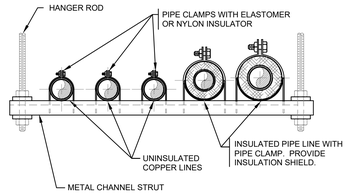
N.T.S.



2 P0.1 TYPICAL PIPE HANGER DETAIL

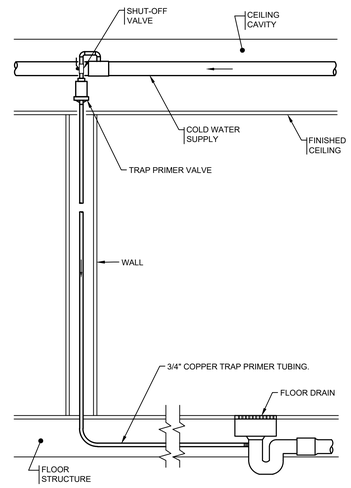
N.T.S.

THIS DETAIL INDICATES HANGING OF INSULATED PIPING WHICH MAY BE EITHER WATER OR STORM DRAIN. CLEVIS HANGER DETAIL APPLIES TO ALL PLUMBING PIPING ON THIS PROJECT.



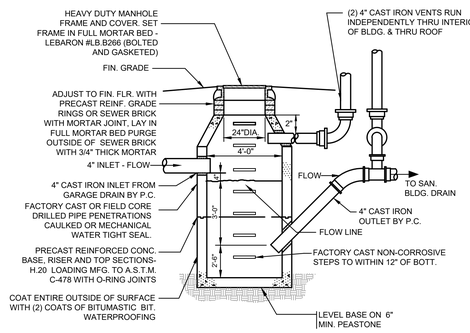
3 P0.1 TRAPEZE PIPE HANGER

N.T.S.



4 P0.1 TRAP PRIMER PIPING DETAIL

N.T.S.



7 P0.1 OIL/GASOLINE INTERCEPTOR DETAIL

N.T.S.

NOTE:
INTERCEPTOR STRUCTURE AND COMPONENTS TO BE FURNISHED AND SET BY DIVISION 22. DIVISION 22 SHALL FURNISH AND INSTALL INLET, OUTLET AND VENT PIPING. CO-ORDINATE PIPING PENETRATION SIZES AND INVERTS WITH G.C.

GENERAL NOTES

1. THE PLUMBING DRAWINGS ARE DIAGRAMMATIC AND ARE TO BE USED FOR THE PURPOSE OF ESTABLISHING GENERAL LOCATIONS OF PIPING RUNS, SIZES OF PIPING, AND QUANTITIES OF FIXTURES AND EQUIPMENT TO BE FURNISHED HEREIN. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS FOR EXACT LOCATIONS OF ALL PLUMBING FIXTURES, AND EQUIPMENT, INCLUDING FLOOR DRAINS, AND MOUNTING HEIGHTS. IN THE EVENT OF CONFLICT OR IF DIMENSIONS ARE NOT SHOWN, OBTAIN FIELD DIRECTIVE FROM THE ARCHITECT AS TO THE LOCATIONS OF ALL VISIBLE EQUIPMENT. PAY PARTICULAR CARE TO COORDINATE WITH THE ARCHITECT'S FIELD REPRESENTATIVE ALL FLOOR DRAIN AND FLOOR CLEANOUT LOCATIONS.
2. ALL PIPING SHOWN ON THIS PLAN SHALL BE RUN CONCEALED ABOVE SUSPENDED CEILINGS, IN CHASES, OR IN PARTITIONS UNLESS SPECIFICALLY NOTED OTHERWISE.
3. EXISTING CONDITIONS INDICATING PIPING AND EQUIPMENT LOCATIONS ARE TAKEN FROM ENGINEERING FIELD NOTES AND DRAWINGS OF THE ORIGINAL BUILDING CONSTRUCTION ARE TO BE CONSIDERED APPROXIMATE ONLY. FIELD VERIFY POINTS OF CONNECTIONS OF NEW TO EXISTING BEFORE INSTALLING ANY PIPE OR EQUIPMENT. BRING ANY DISCREPANCY TO THE ATTENTION OF THE ARCHITECT.
4. INSTALL ALL NEW VALVES SO AS TO BE EASILY ACCESSIBLE AND OPERABLE.
5. WHERE REMOVAL OF EXISTING FIXTURES, EQUIPMENT AND PIPING IS INDICATED CUT AND CAP ALL EXISTING PIPING TO BEYOND THE NEW FINISHED SURFACE SO NO EVIDENCE OF PREVIOUS INSTALLATION WILL REMAIN.
6. MAINTAIN PLUMBING SYSTEMS IN OTHER BUILDING AREAS AT ALL TIMES DURING THE CONSTRUCTION. REFER TO PHASING PLANS AND SPECIFICATIONS ON THE ARCHITECTS DRAWINGS & SPECIFICATIONS.
7. THE PLUMBING DRAWINGS ARE INTENDED TO INDICATE THE SIZING AND DESIGN FOR THE MAIN SUPPLY AND WASTE PIPING AND FOCUSES ON RUNS AND SIZES OF THE MAIN RISERS, STACKS AND VENT TERMINATION. IT IS NOT INTENDED TO INDICATE EVERY TRAP AND FIXTURE CONNECTION, PARTICULARLY IN THE CASE OF GANG TOILETS. CONTRACTOR IS REQUIRED TO PROVIDE ALL CONNECTIONS, TO MAKE ALL CONNECTIONS TO ALL DRAINS AND FIXTURES WHICH ARE SHOWN AND SCHEDULED ON THE PLUMBING DRAWINGS.

SHOCK ABSORBER SCHEDULE

PDI SYMBOL	A	B	C	D	E	F
ZURN SERIES 1250-XL OR EQ.	A	B	C	D	E	F
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330

PIPE SIZE TO FIXTURE SCHEDULE

P. NO.	FIXTURE	S/W	VENT	CW	HW	REMARKS
P-1	WATER CLOSET, ACCESSIBLE	4"	2"	1 1/4"□	-	WALL MOUNTED - ⊐SUPPLY RISER & 1" STUBOUT TO FLUSH VLV., 1.28 GALLON PER FLUSH
P-1A	WATER CLOSET, ACCESSIBLE	4"	2"	1 1/4"□	-	FLOOR MOUNTED - ⊐SUPPLY RISER & 1" STUBOUT TO FLUSH VLV., 1.28 GALLON PER FLUSH
P-2	LAVATORY - WALL MOUNTED, ACCESSIBLE	2"	2"	1/2"	1/2"	0.3 GPM OUTLET
P-3	MOP SINK	3"	2"	1/2"	1/2"	
P-4	SHOWER	2"	2"	1/2"	1/2"	2.0 GPM FLOW
P-5	SINK (GENERAL)	2"	2"	1/2"	1/2"	0.5 GPM OUTLET
P-6	CLOTHES WASHER	2"	2"	1/2"	1/2"	W/ 2" STANDPIPE
P-7	BOTTLE FILLER	2"	2"	1/2"		
P-8	EMERGENCY EYEWASH	2"	2"	1/2"	1/2"	WITH MIXING VALVE
P-9	BOTTLE FILLER (RECESSED)	2"	2"	1/2"		

2 COORDINATE ALL ROUGH-IN REQUIREMENTS WITH ARCHITECTURAL DRAWINGS. ACCESSIBLE HEIGHTS VARY.

PLUMBING ELECTRICAL EQUIPMENT

UNIT NO.	UNIT FUNCTION	UNIT LOCATION	MOTOR HP	MOTOR V	MOTOR PH	MOTOR KW	REMARKS
EWH-1	ELEC. WATER HEATER	MECH. ROOM	-	240	1	6.1	
RP-1	RECIRC. PUMP	MECH. ROOM	1/6	120	1	-	CONNECT TO BMS

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212 KENRICK STREET, NEWTON, MA 02458

LEGEND, SCHEDULES, AND DETAILS - PLUMBING

Raymond Design Associates
Architecture & Planning
60 Ledgewood Pl
Rockland, MA 02370

Revisions:

No.	Date	Description
1	4/19/24	ADDENDUM 1
2	4/22/24	ADDENDUM 2

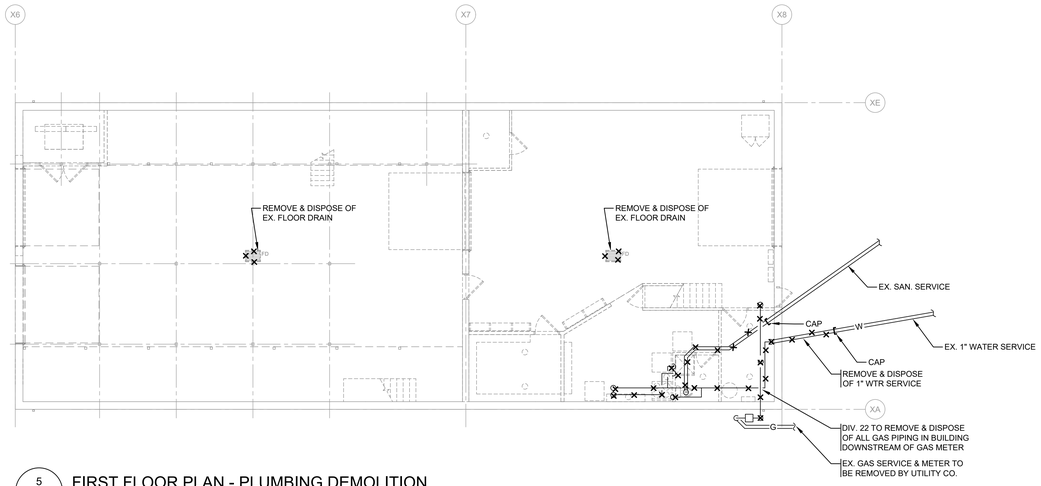
Drawn By: RCD
Checked By: WJA
Approved By: CMG

Drawing Scale: As Noted

Project Number: NEW2202

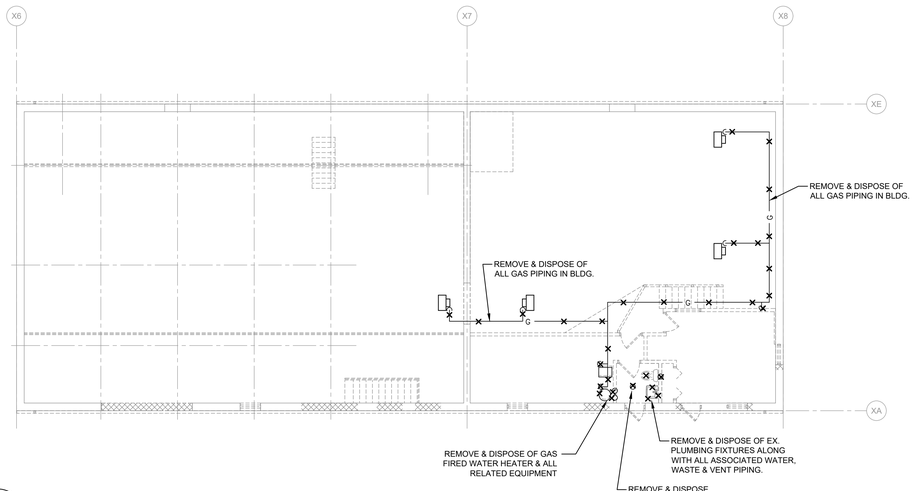
Date: March 21, 2024

P0.1



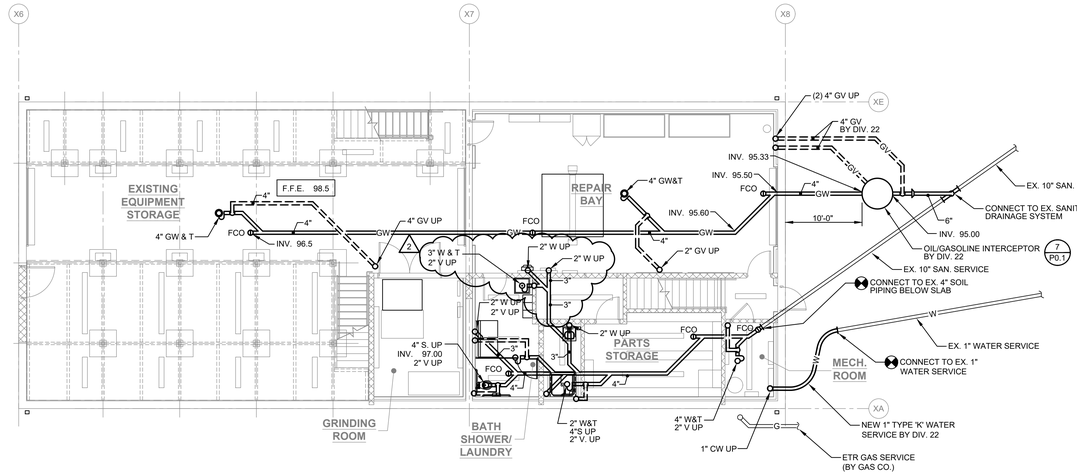
5 P1.1 FIRST FLOOR PLAN - PLUMBING DEMOLITION

SCALE: 1/8" 1'-0"



6 P1.1 SECOND FLOOR PLAN - PLUMBING DEMOLITION

SCALE: 1/8" 1'-0"

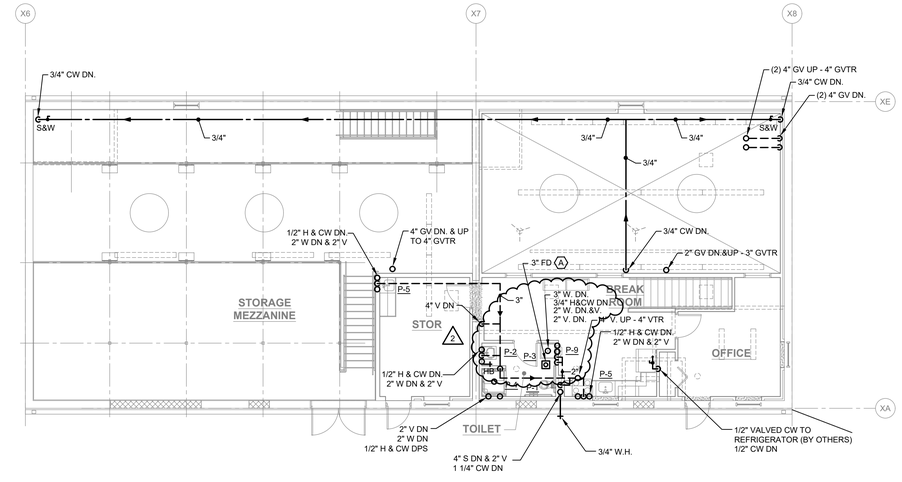


1 P1.1 FIRST FLOOR PLAN BELOW SLAB - PLUMBING NEW WORK

SCALE: 1/8" 1'-0"

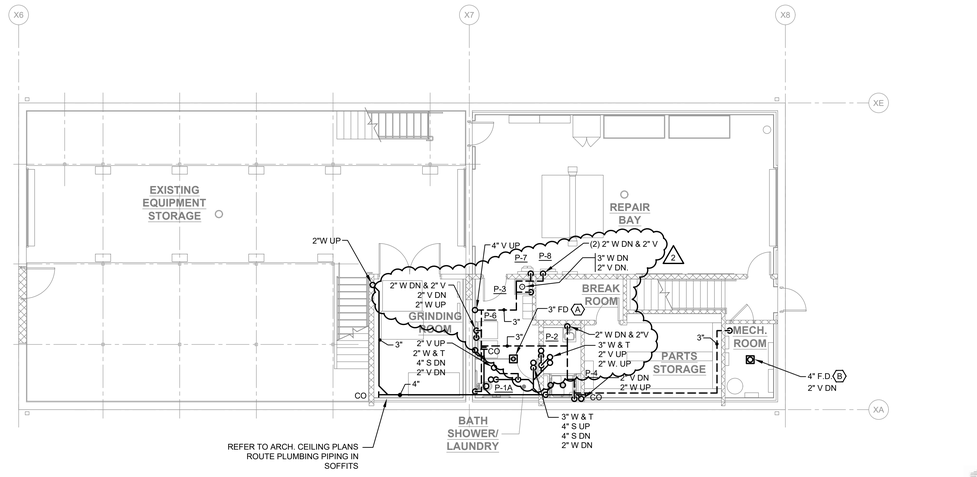
2 P1.1 FIRST FLOOR PLAN - PLUMBING NEW WORK

SCALE: 1/8" 1'-0"



4 P1.1 SECOND FLOOR PLAN - PLUMBING NEW WORK

SCALE: 1/8" 1'-0"



3 P1.1 PARTIAL FIRST FLOOR PLAN - DRAINAGE

SCALE: 1/8" 1'-0"

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02370

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FLOOR PLANS - PLUMBING

Revisions:

No.	Date	Description
1	4/19/24	ADDENDUM 1
2	4/22/24	ADDENDUM 2

Drawn By: RCD
Checked By: WJA
Approved By: CMG

Drawing Scale: As Noted

Project Number: NEW2202

Date: March 21, 2024

P1.1

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EXHAUST FANS

UNIT NO.	MANUF. NO.	BUILDING LOCATION	DRIVE TYPE	SP	CFM	RPM	SONES	MOTOR W/HP	MOTOR V	MOTOR PH	CONTROL TYPE	CONTROL SYST.	REMARKS
EF-1	G-143-VG	BUILDING EXH	DIRECT	1.0	2000	1484	13.8	1	240	1	7 DAYPROG. TIMECLOCK	I	
EF-2	G-143-VG	BUILDING EXH	DIRECT	1.0	1900	1484	13.8	75	115	1	7 DAYPROG. TIMECLOCK	I	
DEF-1	LB-1	ROOF	DIRECT	-	160	3000	-	50	115	1	SWITCH	X	

SELECTION BASED ON "GREENHECK"
PROVIDE SEACOAST PROTECTION ON OUTDOOR EQUIPMENT

DESTRATIFICATION FANS

UNIT NO.	MANUF. NO.	BUILDING LOCATION	DRIVE TYPE	SP	CFM	RPM	dBA	MOTOR W	MOTOR V	MOTOR PH	CONTROL TYPE	REMARKS
DF-1	MK-ES62-05	GARAGE/BAY	DIRECT	-	7,880	144	35	22	100-277	1	CONTROLLER	
DF-2	MK-ES62-05	GARAGE/BAY	DIRECT	-	7,880	144	35	22	100-277	1	CONTROLLER	
DF-3	MK-ES62-05	GARAGE/BAY	DIRECT	-	7,880	144	35	22	100-277	1	CONTROLLER	

SELECTION BASED ON "BIG ASS FANS" OR EQUAL
FANS SHALL BE PROVIDED WITH MOUNTING CABLE AND GRIPPLE HARDWARE
CONTROLLER (MODEL AVST) WITH TEMPERATURE SENSOR CONTROLLERS

AIR CONDITIONING DESIGN DATA

DESIGN AREA	SUMMER OUT D.B.	SUMMER OUT W.B.	SUMMER IN D.B.	SUMMER IN W.B.	WINTER OUT D.B.	WINTER IN D.B.
NEWTON, MASSACHUSETTS	87	74	78	68	7	70

HEAT PUMP SCHEDULE (INDOOR UNIT)

TAG NO.	MANUFACTURER MODEL NO.	TYPE	LOCATION	COOLING (BTU/H)	HEATING (BTU/H)	MAX AIRFLOW (CFM)	ELECTRICAL DATA MCA	MOCP	VOLTS	PH	HZ	ASSOCIATED OUTDOOR UNIT	REMARKS
HPe-1.1	PCFY-P24NKMU	CLNG HUNG	REPAIR SHOP	24,000	27,000	636	0.5	15	208	1	60	HPc-1	CP-1
HPe-1.2	PCFY-P24NKMU	CLNG HUNG	REPAIR SHOP	24,000	27,000	636	0.5	15	208	1	60		CP-1
HPe-2.1	PCFY-P24NKMU	CLNG HUNG	BAY AREA	24,000	27,000	636	0.5	15	208	1	60	HPc- 2	CP-1
HPe-2.2	PCFY-P24NKMU	CLNG HUNG	BAY AREA	24,000	27,000	636	0.5	15	208	1	60		CP-1
HPe-3.1	MSZ-FS09NA-U1	WALL MOUNT	STORAGE	9,000	11,000	437	-	-	-	-	-	HPc-3	CP-1
HPe-3.2	MSZ-FS09NA-U1	WALL MOUNT	GRINDING ROOM	9,000	11,000	437	-	-	-	-	-		CP-1
HPe-4.1	PKFY-P06NLMU	WALL MOUNT	LAUNDRY	6,000	6,700	191	0.24	15	208	1	60	HPc- 4	CP-1
HPe-4.2	PKFY-P08NLMU	WALL MOUNT	OFFICE	8,000	9,000	237	0.24	15	208	1	60		CP-1
HPe-4.3	PKFY-P12NLMU	WALL MOUNT	KITCHEN	12,000	13,500	297	0.24	15	208	1	60		CP-1
HPe-4.4	PKFY-P08NLMU	WALL MOUNT	INTERN ROOM	8,000	9,500	237	0.24	15	208	1	60		CP-1

HEAT PUMP SCHEDULE (OUTDOOR UNIT)

TAG NO	MANUFACTURER MODEL NO.	CAPACITY (MBH) CLNG	CAPACITY (MBH) HEAT	LOCATION	SUCTION LINE (IN. O.D.)	LIQUID LINE (IN. O.D.)	EER OR SEER	ELECTRICAL DATA MCA	MOCP	VOLTS	PH	HZ	ASSOCIATED INDOOR UNIT	REMARKS
HPc- 1	MXZ-SM48NAMHZ-U1	48.0	54.0	ROOF	BY MANUFACTURER		19.5	45	80	208	1	60	HPe-1.1,1.2	
HPc- 2	MXZ-SM48NAMHZ-U1	48.0	54.0	ROOF	BY MANUFACTURER		19.5	45	80	208	1	60	HPe-2.1,2.2	
HPc-3	MXZ-2C20NAHZ4-U1	18.0	22.0	ROOF	BY MANUFACTURER		12.25	27	40	208	1	60	HPe-3.1,3.2	
HPc- 4	MXZ-SM48NAMHZ-U1	48.0	54.0	ROOF	BY MANUFACTURER		19.5	45	80	208	1	60	HPe-4.1,4.2,4.3,4.4	

SELECTION BASED ON "MITSUBISHI", PROVIDE T'STAT & OVERALL SYSTEM PANEL
SELECTIONS BASED ON COOLING DESIGN TEMPS 87 F DB, 67 F WB. HEATING DESIGN TEMPS 5 F DB, 0.8 F WB
SYSTEM SHALL PROVIDE 100 SPECIFIED CAPACITY CAPACITY.
AND CONDENSATE PUMP.
INDOOR UNITS SHALL BE SET TO OPERATE ON LOW SPEED.
PROVIDE SEACOAST PROTECTION ON OUTDOOR EQUIPMENT
EQUIPMENT SHALL BE CAPABLE OF REMOTE MONITORING AND ADJUSTMENT AND ALARM NOTIFICATION VIA TEXT/EMAIL.

REGISTER

NO.	STYLE
1	80D
2	91D
3	LBPH16A

SELECTION BASED ON "PRICE"
NOTE #1: REFER TO DRAWINGS FOR THROW DIRECTION, SIZE & CFM
RETURN/EXHAUST/TRANSFER REGISTER W/ INTEGRAL DAMPER

LOUVERS

UNIT NO.	MANUF. NO.	AREA SERVED	INTAKE/ EXHAUST	SIZE WxH	MIN. FREE AREA	MAX VEL. FPM	REMARKS
L-1	EDS-403	GARAGE	INTAKE	INTAKE	4.0	550	
L-2	EDS-403	GARAGE	INTAKE	INTAKE	4.0	550	

SELECTION BASED ON "GREENHECK"

DIFFUSER

NO.	STYLE
A	AMX
B	LBPH16A
C	SDS100
D	RCBA

SELECTION BASED ON "PRICE"
NOTE #1: REFER TO DRAWINGS FOR THROW DIRECTION, SIZE & CFM

UNIT HEATERS (ELECTRIC)

UNIT NO.	MANUF. NO.	AREA SERVED	CFM	COIL KW	COIL MBH	POWER V	POWER PH	REMARKS
EUH-1	FSSWH2004	MECHANICAL ROOM	100	2.0	6.8	208	1	SEE BELOW
EUH-2	FSSWH2004	REPAIR SHOP	100	2.0	6.8	208	1	SEE BELOW
EUH-3	FSSWH2004	REPAIR SHOP	100	2.0	6.8	208	1	SEE BELOW
EUH-4	FSSWH2004	INTERN ROOM	100	2.0	6.8	208	1	SEE BELOW
EUH-5	FSSWH2004	BAY AREA	100	2.0	6.8	208	1	SEE BELOW
EUH-6	FSSWH2004	BAY AREA	100	3.0	6.8	208	1	SEE BELOW

SELECTION BASED ON "FAHRENHEAT"
HEATER SHALL BE CAPABLE OF SETTINGS LOCKOUT FOR SECURITY PURPOSES.
PROVIDE WITH INTEGRAL THERMOSTAT AND SURFACE MOUNTING FRAME/HARDWARE BY MANUF.
COLOR TO BE SELECTED BY ARCHITECT.

CONDENSATE PUMPS

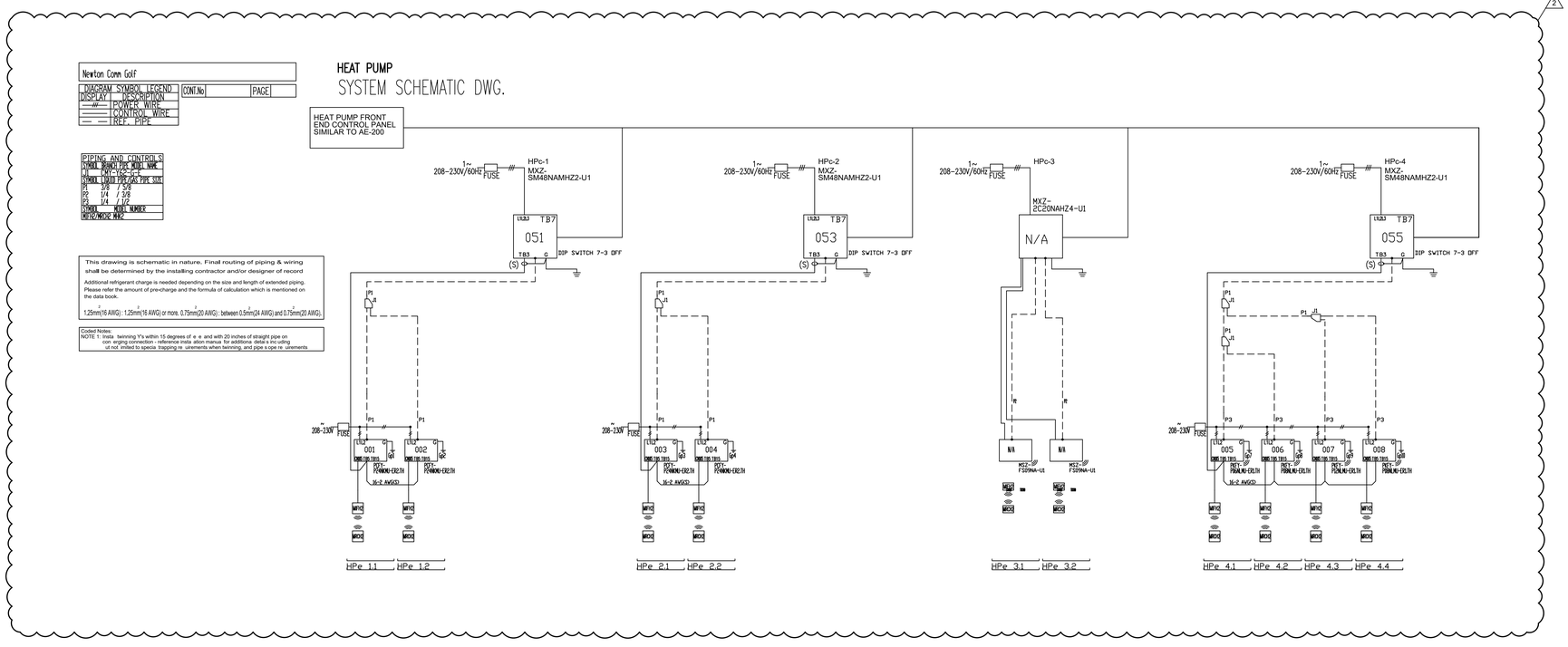
UNIT NO.	MANUF. NO.	SERVICE	G.P.H.	T.D.H. FT WATER	MOTOR WATTS	MOTOR VOLT	MOTOR PH.	REMARKS
CP-1	VCL-14ULS	DCue	65.0	10.0	1/30	120	1	--

SELECTION BASED ON "LITTLE GIANT" FOR CP-1.
PROVIDE OVERFLOW SAFETY SWITCH FOR EACH PUMP W/ ALARM, ALSO EACH
PUMP SHALL BE FURNISHED WITH PROVISIONS FOR DIRECT CONNECTION(HARD WIRE)
WITH PIGTAIL READY FOR CONNECTION BY ELECTRICAL CONTRACTOR.

LEGEND

SYMBOL	ABBREV	DESCRIPTION
	DIA	DIAMETER
		PRESSURE REDUCING VALVE
		GATE VALVE
		GLOBE VALVE
		CHECK VALVE
		BUTTERFLY VALVE
		BALL VALVE
		THREE-WAY CONTROL VALVE
		TWO-WAY CONTROL VALVE
		FLOW METERING ELEMENT
		CIRCUIT SETTER VALVE
		TRIPLE DUTY VALVE
		DRAIN VALVE
		PLUG VALVE
		SAFETY VALVE
		STRAINER
		UNION
		AUTOMATIC AIR VENT
		PIPE UP (ELBOW)
		PIPE DOWN (ELBOW)
		PRESSURE GAGE WITH GAGE COCK
		THERMOMETER
		BRANCH CONNECTION OUT OF TOP
		BRANCH CONNECTION OUT OF BOTTOM
		BRANCH CONNECTION OUT OF SIDE
		CAP ON END OF PIPE
		FLOW IN DIRECTION OF ARROW
		THERMOSTAT/ TEMPERATURE SENSOR
		SUPPLY AIR
		RETURN/EXHAUST AIR
	ACD	AUTOMATIC CONTROL DAMPER
	FD	FIRE DAMPER
	VD	VOLUME DAMPER
		CONNECT TO EXISTING
		TO BE REMOVED
## / #		EQUIPMENT TYPE / EQUIPMENT NUMBER

HEAT PUMP
SYSTEM SCHEMATIC DWG.



GENERAL NOTES

1. ALL PIPING AND DUCTWORK UNLESS DIMENSIONED IS SHOWN DIAGRAMMATICALLY ONLY, EXACT LOCATION SHALL BE DETERMINED IN FIELD AFTER COORDINATING WITH OTHER WORK. DUCTWORK WILL HAVE OFFSETS TO PASS AROUND SUPPLEMENTAL STRUCTURES AND OTHER WORK.
2. FOR TYPICAL PIPING DIAGRAMS AND CONNECTIONS AT EQUIPMENT, SEE DETAIL DRAWINGS.
3. THIS CONTRACTOR SHALL PROVIDE REMOVABLE PANELS AT LOCATIONS WHERE ACCESS TO VALVES, DAMPERS, FIRE DAMPERS, ETC. ARE REQUIRED.
4. PROVIDE SWING JOINTS AT ALL PIPING TAKEOFFS FROM MAINS (MINIMUM OF 3 ELBOWS), AND PROVIDE ISOLATION VALVES ON SUPPLY AND RETURN PIPING TAKEOFFS.
5. ALL AIR VENTS & PRESSURE GAUGES SHALL BE INSTALLED WITH COCKS SUCH THAT THE DEVICE CAN BE REMOVED WITHOUT DRAINING PIPING SYSTEM.
6. H.V.A.C. CONTRACTOR SHALL COORDINATE ALL WORK WITH PLUMBING AND ELECTRICAL CONTRACTORS. H.V.A.C. CONTRACTOR SHALL INFORM G.C. AS TO THE LOCATION AND SIZE OF ALL ACCESS PANELS.
7. TOTAL DYNAMIC HEAD AND STATIC PRESSURE INDICATED IN THE SCHEDULES IS BASED ON ENGINEERING ANALYSIS AND MAY NOT NECESSARILY MATCH ACTUAL INSTALLED CONDITIONS. THIS CONTRACTOR SHALL PROVIDE REQUIRED SHEEVES, BELTS AND DRIVES TO MEET VOLUME FLOW CHARACTERISTICS SPECIFIED.
8. THE MANUFACTURER LISTED IN THE SCHEDULES REFLECTS THE BASIS OF DESIGN AS INDICATED ON THE CONTRACT DRAWINGS AND IS NOT INTENDED TO SUGGEST THE REQUIRED PROVIDER. REFER TO THE SPECIFICATIONS FOR A COMPLETE DESCRIPTION OF EACH PRODUCT REQUIRED AND REFERENCE "OR EQUAL" REQUIREMENTS.
9. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATION OF WALL MOUNTED MOUNTED GRILLES, REGISTERS, DIFFUSERS, THERMOSTATS, CO2 SENSORS, ETC.
10. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATION OF WALL MOUNTED MOUNTED GRILLES, REGISTERS, DIFFUSERS, THERMOSTATS, CO2 SENSORS, ETC.
11. REFRIGERANT SUCTION AND LIQUID LINES SHALL BE SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

ABBREVIATIONS

ABBREV	DESCRIPTION
F	DEGREES FAHRENHEIT
CFM	CUBIC FEET PER MINUTE
D.B.	DRY BULB
DIA	DIAMETER
E.A.T.	ENTERING AIR TEMPERATURE
E.C.	ELECTRICAL CONTRACTOR
E.D.B.	ENTERING DRY BULB
EF	EXHAUST FAN
ENT	ENTERING
E.S.P.	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EUH	ELECTRIC UNIT HEATER
E.W.B.	ENTERING WET BULB
E.W.T.	ENTERING WATER TEMPERATURE
EXH.	EXHAUST
G.C.	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
H	HEIGHT
HP	HORSEPOWER
H.V.A.C.	HEATING,VENTILATING AND AIR COND.
H	HERTZ
Kw	KILOWATT
L.A.T.	LEAVING AIR TEMPERATURE
LBS	POUNDS
L.D.B.	LEAVING DRY BULB
L.W.B.	LEAVING WET BULB
MANUF	MANUFACTURER
MAX	MAXIMUM
MBH	1000 BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
N.T.S.	NOT TO SCALE
O.A.	OUTSIDE AIR
P	PUMP
P.C.	PLUMBING CONTRACTOR
P.D.	PRESSURE DROP
PH	PHASE
PRESS	PRESSURE
R.A.	RETURN AIR
SP	STATIC PRESSURE
T.S.P.	TOTAL STATIC PRESSURE
T'STAT	THERMOSTAT
TYP.	TYPICAL
UH	UNIT HEATER (CABINET OR HORIZONTAL)
V	VOLTS
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WIDTH
W.B.	WET BULB
WPD	WATER PRESSURE DROP

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HVAC SCHEDULES AND GENERAL NOTES

Revisions:

No.	Date	Description
1	4/22/24	ADDENDUM 2

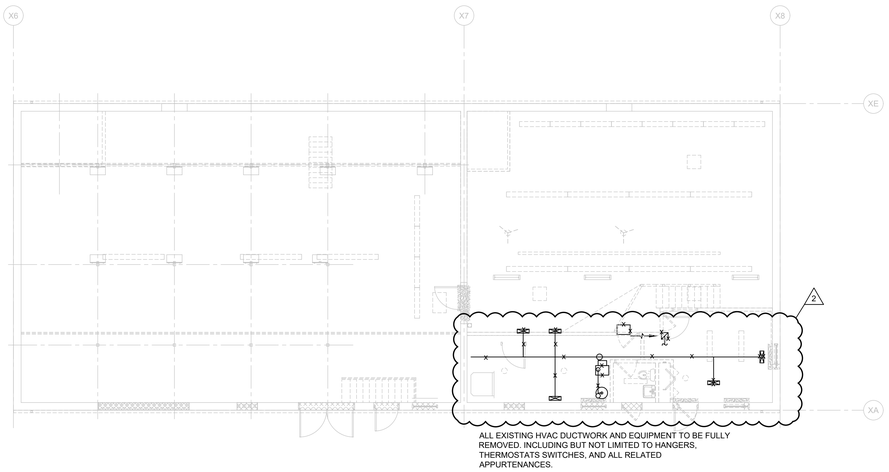
Drawn By: JPF
Checked By: BDM
Approved By: BDM

Drawing Scale: AS NOTED

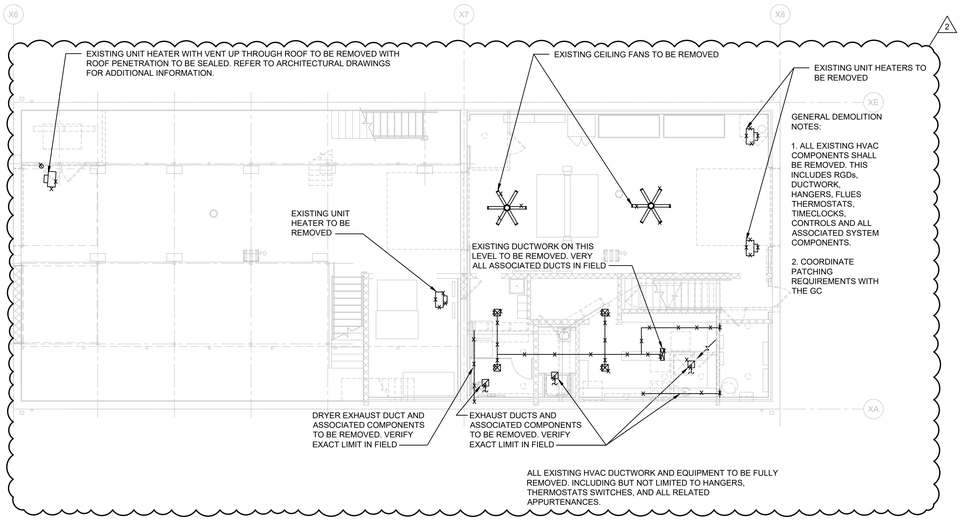
Project Number:

Date: 10-17-2023

M0.0



1 HVAC DEMOLITION UPPER FLOOR PLAN
SCALE: 1/8 1'-0"



2 HVAC DEMOLITION GROUND/LOWER FLOOR PLAN
SCALE: 1/8 1'-0"

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212 KENRICK STREET, NEWTON, MA 02458

HVAC DEMOLITION FLOOR PLANS

Revisions:

No.	Date	Description
1	4/22/24	ADDENDUM 2

Drawn By: JPF
Checked By: BDM
Approved By: BDM

Drawing Scale: AS NOTED

Project Number:

Date: 10-17-2023

MD1.0

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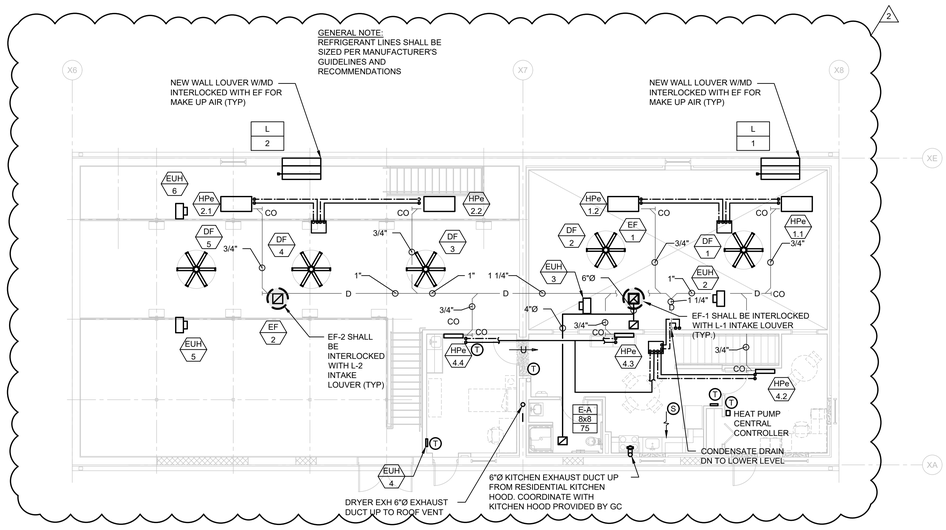
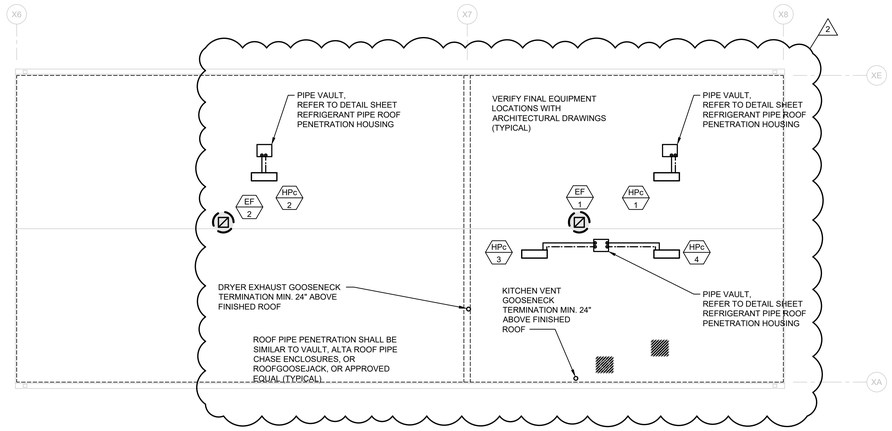
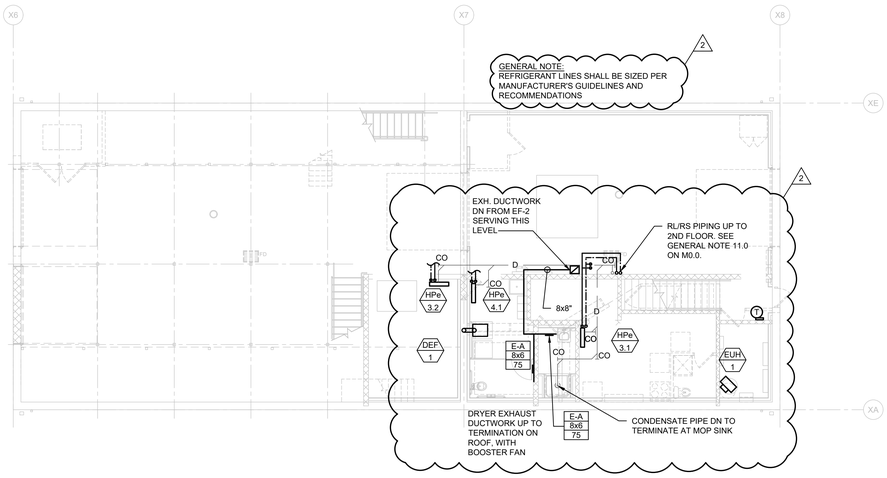


1 HVAC UPPER FLOOR PLAN
SCALE: 1/8 1'-0"



3 HVAC ROOF LEVEL PLAN
SCALE: 1/8 1'-0"



2 HVAC GROUND/LOWER FLOOR PLAN
SCALE: 1/8 1'-0"

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HVAC RENOVATION FLOOR PLANS

Revisions:

No.	Date	Description
1	4/22/24	ADDENDUM 2

Drawn By: JPF
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Project Number:

Date: 10-17-2023

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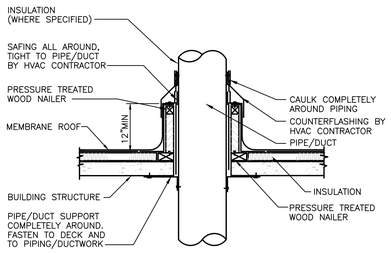
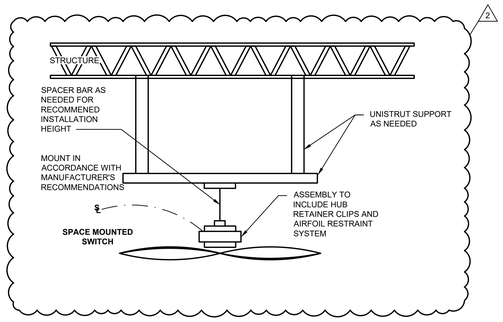
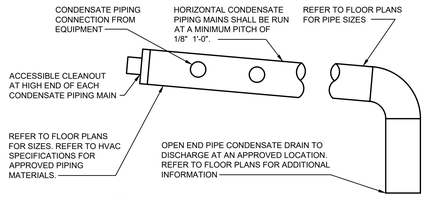


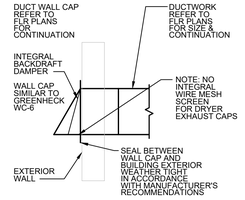
PIPE / DUCT PENETRATION THROUGH ROOF DETAIL
(NOT TO SCALE)



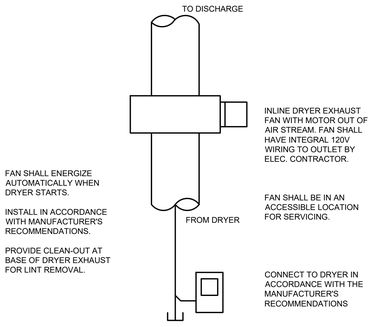
DESTRATIFICATION FANS
(NOT TO SCALE)



CONDENSATE PIPING DETAIL
NO SCALE



EXTERIOR WALL CAP
(NOT TO SCALE)



DRYER EXHAUST DETAIL
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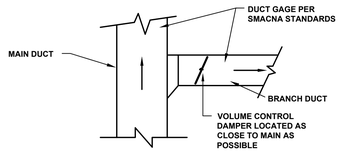
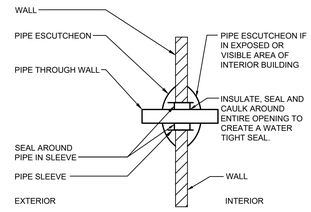


BRANCH DUCT CONNECTION TO MAIN
(NOT TO SCALE)



PIPE THROUGH WALL DETAIL
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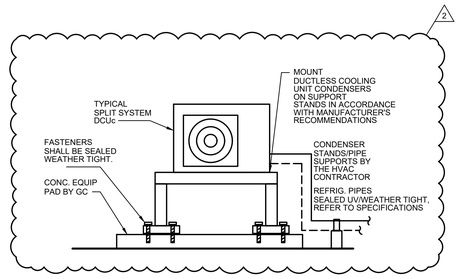
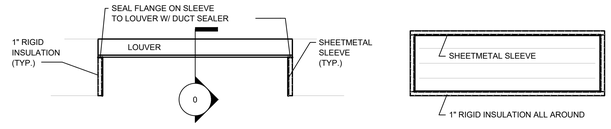
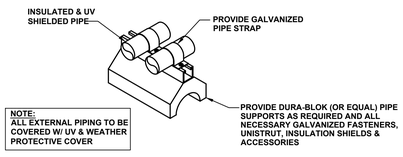
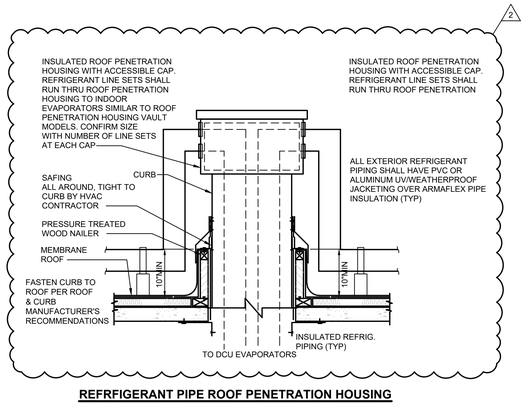


VRF ROOF OUTDOOR EQUIPMENT SUPPORT SYSTEM
(NOT TO SCALE)





ROOF MOUNTED PIPING SUPPORT DETAIL
NOT TO SCALE



REFRFIGERANT PIPE ROOF PENETRATION HOUSING
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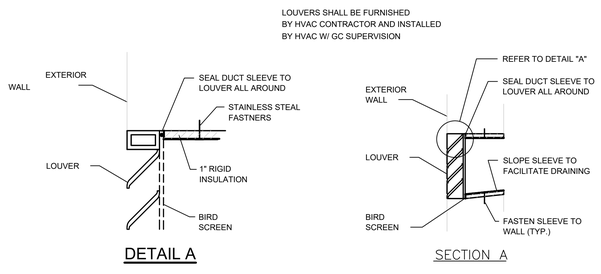
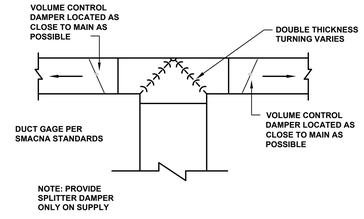


DETAIL OF LOUVER AND SLEEVE
NOT TO SCALE



TYPICAL TEE DUCT CONNECTION
(NOT TO SCALE)

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HVAC DETAILS I

Revisions:

No.	Date	Description
1	4/22/24	ADDENDUM 2

Drawn By: JPF
Checked By: BDM
Approved By: BDM

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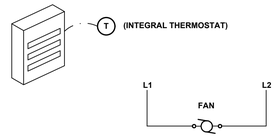
ELECTRIC UNIT HEATERS



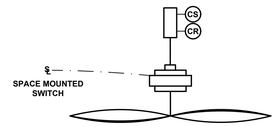
ELECTRIC UNIT HEATER CONTROL

ELECTRIC HEATERS SHALL BE CONTROLLED BY INTEGRAL THERMOSTAT. THERMOSTAT SHALL BE 7 DAY PROGRAMMABLE WITH ADJUSTABLE OCCUPIED AND UNOCCUPIED SETPOINTS. IN AREAS SERVED BY ELECTRIC HEATERS THE HVAC/ATC CONTRACTOR SHALL PROVIDE ANY LOW VOLTAGE PROVISIONS FOR CONTROL AND COORDINATE WITH ELECTRICAL CONTRACTOR.

DESTRATIFICATION FAN

DESTRATIFICATION FAN CONTROL: FAN SHALL BE MANUALLY CONTROLLED

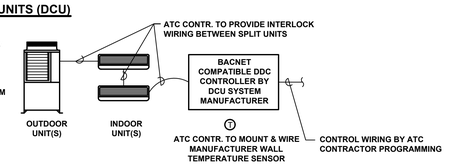
1. DESTRATIFICATION FAN IS CONTROLLED FROM A WALL MOUNTED SWITCH WITH PILOT LIGHT & CONTROL PANEL PROVIDED BY UNIT MFG'R, WIRED BY DIVISION 260000.
2. FAN SHALL BE INTERLOCKED WITH FIRE ALARM CONTROL MODULE PANEL TO DEACTIVATE FAN UPON FIRE ALARM ACTIVATION.



DESTRATIFICATION FAN - TYPE II CONTROLS

DUCTLESS COOLING UNITS (DCU)

ALL CONDENSATE DRAIN PANS ASSOCIATED WITH DCU'S TO BE PROVIDED WITH EQUIPMENT MANUFACTURER'S OVERFLOW SENSORS WHICH ARE TO BE INTERLOCKED WITH THE BUILDING MANAGEMENT SYSTEM FOR MONITORING ONLY. PROVIDE ROOM TEMPERATURE AND HI/LOW ALARM. POINTS IN THE BUILDING MANAGEMENT SYSTEM AND OUTDOOR UNIT.



DUCTLESS COOLING UNIT (DCU)	AI	AO	DI	DO	ALARM	SHOW ON GRAPHIC	REMARKS
DCU SYSTEM INDOOR STATUS			X	X	X	X	
SPACE TEMPERATURE	X				X	X	
CONDENSATE OVERFLOW ALARM			X		X	X	

PROVIDE EVAPORATOR UNIT STATUS CONTROL POINTS VIA DCU SYSTEM CONTROLLER'S BAS INTERFACE.
SAFETY: UPON A HIGH FLOAT CONDITION UNIT SHALL BE DE-ENERGIZED.

1

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HVAC CONTROLS

Revisions:

No.	Date	Description
1	4/22/24	ADDENDUM 2

Drawn By: JPF
Checked By: BDM
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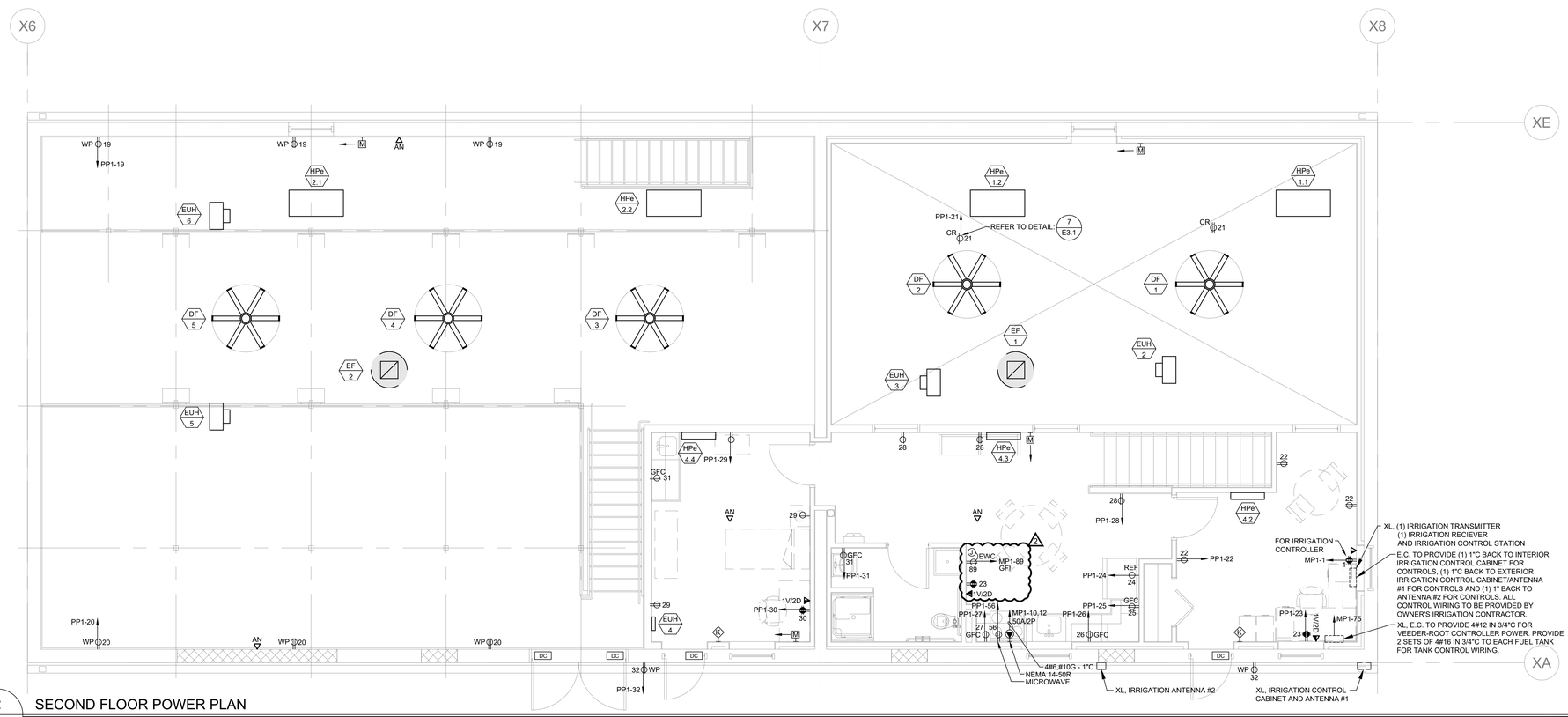
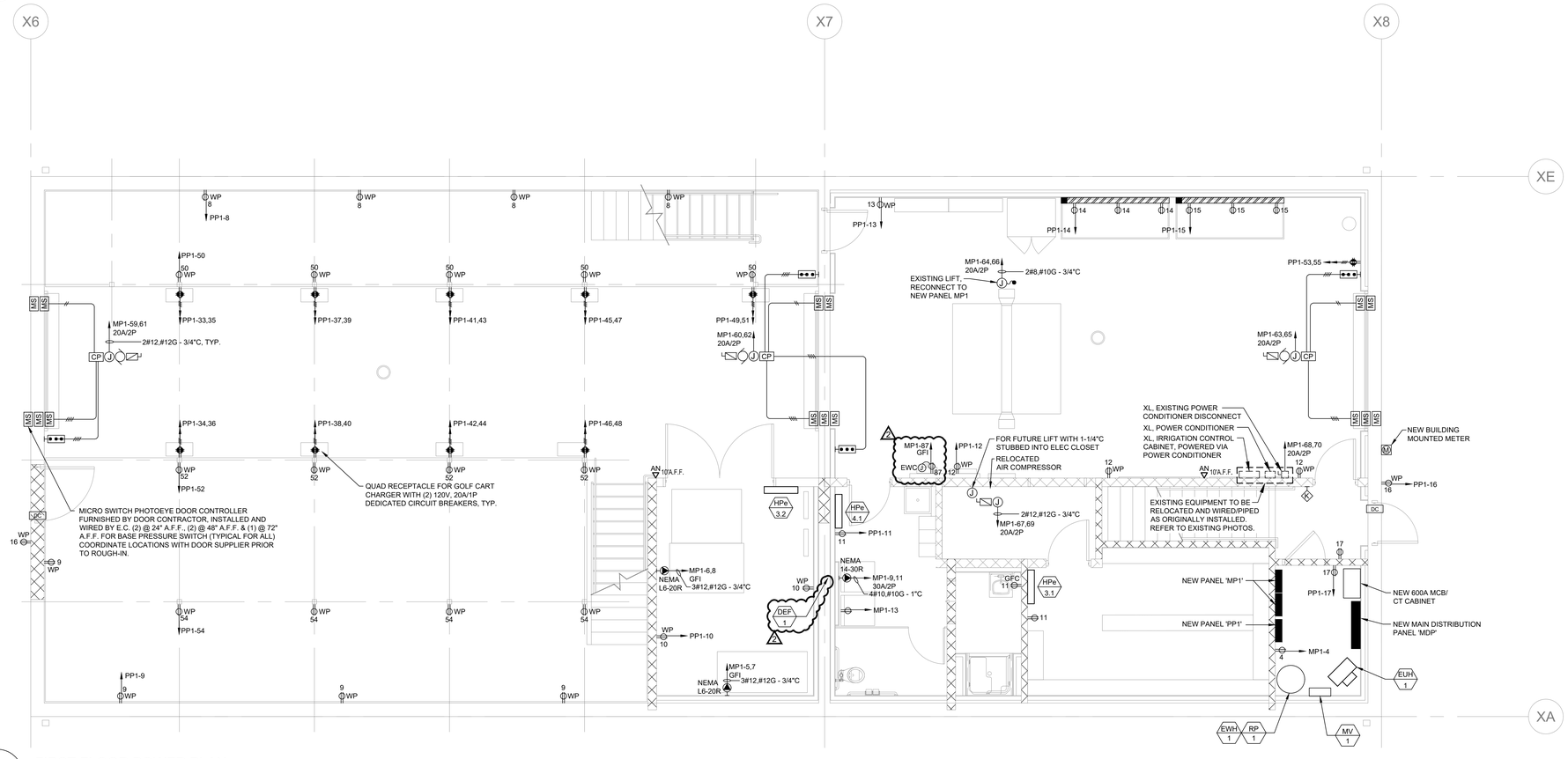
M4.0



2 E2.0 SECOND FLOOR POWER PLAN

SCALE: 1/4" 1'-0"

GENERAL SECOND FLOOR NOTE: ALL RECEPTACLES/CORDREELS IN OPEN GARAGE AND MEZZANINE ARE TO BE FED VIA GFCI CIRCUIT BREAKER.



1 E2.0 FIRST FLOOR POWER PLAN

SCALE: 1/4" 1'-0"

GENERAL FIRST FLOOR NOTE: ALL RECEPTACLES ARE TO BE FED VIA A GFCI CIRCUIT BREAKER.

GENERAL POWER NOTES

1. COORDINATE EXACT LOCATION OF ALL DEVICES AND EQUIPMENT WITH ARCHITECT PRIOR TO INSTALLATION.
2. REFER TO MECHANICAL AND PLUMBING PLANS FOR ANY CHANGES AND FOR EXACT LOCATION OF ALL HVAC EQUIPMENT.
3. WIRING IS SHOWN ON DRAWINGS ONLY FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS.
4. WIRING AND CONDUIT SHALL BE REQUIRED BETWEEN ALL OUTLETS INDICATED WITH CIRCUIT NUMBERS AND PANEL DESIGNATIONS.
5. ALTHOUGH ALL BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE BRANCH CIRCUIT WIRING SYSTEM BE INSTALLED.
6. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE MC 98%%% CONDUCTIVITY, COPPER MINIMUM #12 AWG SIZE, THWN/THHN INSULATION, 600 VOLTS RATED UNLESS OTHERWISE NOTED.
7. REFER TO FIRE PROTECTION PLANS FOR ANY CHANGES AND FOR EXACT LOCATION OF ALL FLOW SWITCH, TAMPER SWITCH, ETC.
8. DO NOT PENETRATE STAIRS WITH ANY UTILITIES EXCEPT FOR UTILITIES SPECIFICALLY SERVING THAT STAIR.
9. WHERE CONDUITS AND/OR BOXES CANNOT BE FLUSH MOUNTED IN BUILDING PROVIDE A SYSTEM OF SURFACE METAL RACEWAYS AND BOXES IN ACCORDANCE WITH ARTICLE 386, EQUAL TO WIREMOLD FOR ALL FINISH SPACES WHERE PUBLIC HAS ACCESS, INCLUDING CORRIDORS, CLASSROOMS, OFFICES, ETC.
10. CONFIRM RATINGS & FINAL LOCATIONS OF EQUIPMENT WITH OWNER PRIOR TO ROUGHING.
11. ALL OUTLETS ON EXTERIOR WALLS WITH CASEWORK SHALL BE MOUNTED 6" ABOVE CASEWORK. CONFIRM HEIGHT OF CASEWORK WITH HVAC AND ARCHITECT PRIOR TO ROUGHING.
12. TYPICALLY PROVIDE GROUND FAULT INTERRUPTER TYPE RECEPTACLES WITHIN 6 FEET OF WATER SOURCES.
13. PROVIDE ALL EMPTY CONDUITS WITH PULL-STRINGS.
14. TYPICALLY PROVIDE (2) 4" SLEEVES OVER EACH CORRIDOR DOOR.
15. PROVIDE (2) 2" THROUGH-WALL SLEEVE ABOVE CEILING OVER THE DOORS INTO EACH ROOM LEADING FROM THE CORRIDOR FOR COMMUNICATIONS/DATA WIRING.
16. LOCATE ALL WALL TELEPHONE OUTLETS 12 INCHES AWAY FROM ALL OTHER OUTLETS/DEVICES.
17. PROVIDE (2) 1" SLEEVES OVER EACH DOOR FOR TEL./DATA SECURITY AND SOUND SYSTEM WIRING. TEL./DATA SHALL BE DEDICATED TO (1) OF THE CONDUITS.
18. TYPICALLY MOUNT LCD PROJECTOR "TVE" DATA OUTLET ABOVE CEILING. MOUNT DUPLEX RECEPTACLE ON CEILING TILE, FACE DOWN CENTERED 10'-12' FROM SCREEN.

3 E2.0 EXISTING IRRIGATION POWER CONDITIONER

4 E2.0 EXISTING IRRIGATION CONTROL CABINET

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POWER FLOOR PLANS

Revisions:

No.	Date	Description
1	4/19/24	ADDENDUM 1
1	4/22/24	ADDENDUM 2

Drawn By: JGD
Checked By: DMP
Approved By: DMP

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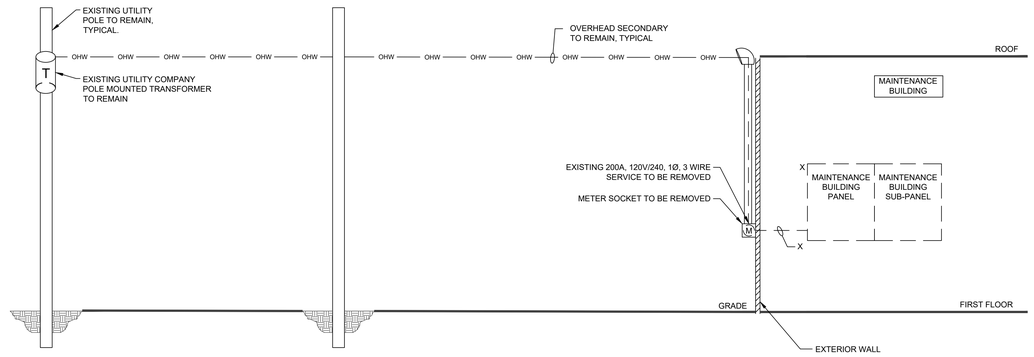
Project Number: NEW2202

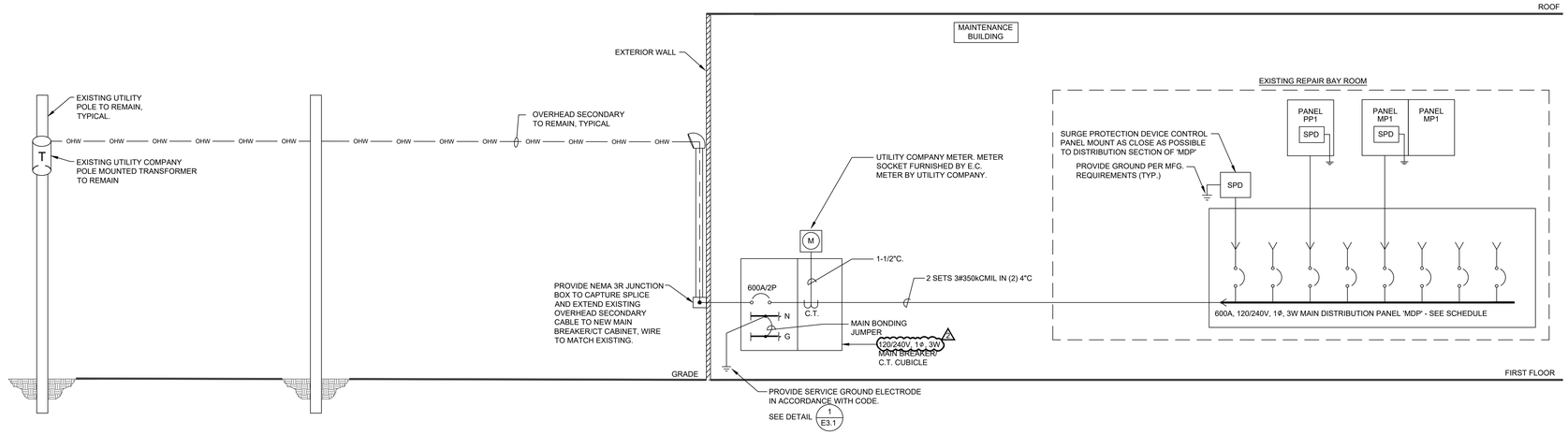
Date: March 21, 2024

E2.0



1 / E3.0 EXISTING POWER RISER DIAGRAM - EXISTING MAINTENANCE BUILDING

SCALE: N.T.S.



2 / E3.0 NEW POWER RISER DIAGRAM - MAINTENANCE BUILDING

SCALE: N.T.S.

600A, 120/240V,1ø,3W
AIC: 22,000 ARMS

MAIN DISTRIBUTION PANEL "MDP" SCHEDULE

OVER CURRENT DEVICES			CIRCUIT	FEEDER SIZE	COND. SIZE	REMARKS
No.	TRIP	FRAME				
-	600	600	MAIN BREAKER	SEE RISER	-	100 RATED
1	60	100	SPD	4#6+#6G	1 1/4"	
2	250	100	PANEL PP1	3#250kCMIL + #4G	2-1/2"	
3	400	400	PANEL MP1	4#600kCMIL + #3G	4"	
4	60	100	SPARE	-	-	
5	60	100	SPARE	-	-	
6	-	100	SPACE PROVISIONS	-	-	
7	-	100	SPACE PROVISIONS	-	-	

AIC: 22,000 ARMS
SERVICE: 120/240V,1ø,3W

NEW PANEL SCHEDULE

	PANEL NO.	LOCATION	MTG	MAIN BUS AMPS	MAIN CB	BRANCH CKT BREAKER (AMPS) 1 POLE 15	1 POLE 20	1 POLE 30	2 POLE 15	2 POLE 20	2 POLE 30	2 POLE 40	2 POLE 50	2 POLE 60	TOTAL POLES	OTHERS
③①	PP1	MAIN ELECTRIC ROOM	S	225	-	-	31	-	-	-	-	-	-	1	84	(41) 20A/1P GFCI
③②	MP1	MAIN ELECTRIC ROOM	S	225	-	-	28	-	5	13	1	6	1	1	120	(4) 20A/1P GFCI, (2) 20A/2P GFCI, (1) 30A/2P GFCI

① PROVIDE SINGLE TUB TALLER IN HEIGHT.
② PROVIDE DOUBLE TUB TALLER IN HEIGHT.
③ 60A/2P CIRCUIT BREAKER IS TO BE UTILIZED FOR INTERNAL SURGE PROTECTION. REFER TO DETAIL 5 ON SHEET E3.1.

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ELECTRICAL RISER DIAGRAM AND SCHEDULES

Revisions:

No.	Date	Description
1	4/19/24	ADDENDUM 1
2	4/22/24	ADDENDUM 2

Drawn By: JGD
Checked By: DMP
Approved By: DMP

Drawing Scale: As Noted

Project Number: NEW2202

Date: March 21, 2024

E3.0

MECHANICAL SCHEDULE KEY NOTES:

1. PROVIDE 3/4"CONDUIT w/ PULL WIRE BETWEEN INDOOR UNIT & OUTDOOR UNIT FOR EACH SPLIT SYSTEM.
2. PROVIDE HARD CONNECTION FOR CONDENSATE PUMP (CP-1). CONNECT TO NEAREST 120V, 1Ø BRANCH CIRCUIT UNLESS OTHERWISE INDICATED. PROVIDE THERMAL SWITCH AT UNIT. FIELD COORDINATE EXACT LOCATION WITH HVAC.

   SEE DETAIL 1/E3.2
3. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF CONDENSATE PUMPS CP-1.
4. VFD FURNISHED INTEGRAL WITH UNIT BY HVAC EQUIPMENT SUPPLIER. SINGLE POINT CONNECTION BY E.C.
5. E.C. SHALL F&I UNI-STRUT, FOR MOUNTING OF DISCONNECT SWITCH, ATTACHED TO ROOF STRUCTURE INDEPENDENT OF HVAC ROOF-TOP EQUIPMENT TO PREVENT EXCESSIVE WEAR DUE TO VIBRATIONS. LOCATE ADJACENT TO ROOFTOP UNIT BEING SERVED.

   SEE DETAIL 2/E3.2
6. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF DUCT TYPE SMOKE DETECTORS.
7. FINAL VAV BOX CONNECTION BY ATC CONTRACTOR. ALSO REFER TO MECHANICAL DRAWINGS FOR UNIT EXACT LOCATIONS AND QUANTITIES. COORDINATE WITH HVAC CONTRACTOR FOR EXACT LOCATION OF JUNCTION BOXES.

MECHANICAL SCHEDULE GENERAL NOTES:

1. DUCT SMOKE DETECTORS SHALL BE PROVIDED ON RETURN DUCT FOR ALL MECHANICAL UNITS OVER 2000CFM. PROVIDE DUCT SMOKE ON RETURN AND SUPPLY DUCTWORK FOR ALL MECHANICAL UNITS OVER 15000 CFM. PROVIDE REMOTE TEST STATION WITH EACH DETECTOR. LOCATION OF TEST STATION SHALL BE WALL MOUNTED IN THE VICINITY OF THE UNIT. DUCT SMOKES TO INITIATE SUPERVISORY ALARM.
2. PROVIDE FLEXIBLE CONNECTION TO EQUIPMENT REFER TO SPECIFICATIONS.
3. CONTROLLERS AND DISCONNECT DEVICES SHALL BE NRTL RATED FOR USE WITH A DESIGN E MOTOR WITH A HORSE POWER RATING NOT LESS THAN 1.4 TIMES THE MOTOR HORSE POWER. (REFER TO ELECTRICAL CODE ARTICLE 430).
4. TWO SPEED MOTORS SHALL HAVE TWO MOTOR BRANCH CIRCUITS AND SIX POLE DISCONNECTS.
5. WHERE INDICATED PROVIDE WEATHERPROOF DUPLEX RECEPTACLES AT MECHANICAL EQUIPMENT. PROVIDE 3/4"C. WITH 2#12+#12G AWG TO NEAREST PANEL AND CONNECT TO 20A/1P CIRCUIT BREAKER UNLESS OTHERWISE INDICATED.
6. TYPICALLY LOCATE STARTERS OR VFDs IN ELECTRIC ROOM (NEAR PANEL).
7. ALL EXTERIOR MOUNTED DISCONNECT SWITCHES, JUNCTION/PULL BOXES, RACEWAYS, FLEXIBLE CONNECTION TO EQUIPMENT, ETC. SHALL BE NEMA "3R."
8. THE E.C. SHALL PROVIDE NEMA 7 DISCONNECT SWITCHES AND SEAL FITTINGS AT EXPLOSION PROOF FANS.
9. WHERE INDICATED PROVIDE 120 VOLT CIRCUIT FOR RECEPTACLE AND LIGHT FIXTURE TYPE "J" AT ROOF TOP UNIT AS NOTED. TYPICALLY CONNECT TO NEAREST 120 VOLT RECEPTACLE CIRCUIT UNLESS OTHERWISE INDICATED.
10. ALL VFD'S SHALL BE PROVIDED WITH CONNECTIONS TO BACNET DATA COMMUNICATIONS PROTOCOL FOR BUILDING AUTOMATION AND CONTROL NETWORK. COORDINATE WITH ATC CONTRACTOR.

ELECTRICAL SCHEDULE OF MECHANICAL EQUIPMENT

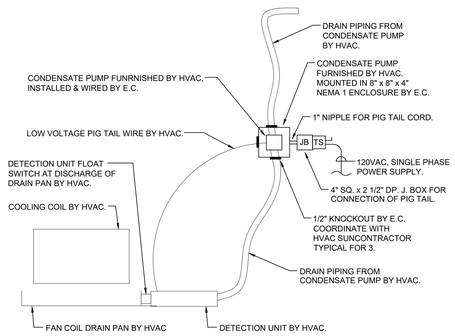
UNIT NO.	DESCRIPTION	LOCATION	LOAD CHARACTERISTICS	VOLT	PH	PANEL CIRCUIT	CIRCUIT BREAKER	FEEDER	EQUIPMENT AND CONNECTIONS												REMARKS
									TS					S D	WP	J	S WP	VFD	NEMA 3R	E	
HPc-1	HEAT PUMP CONDENSOR	ROOF	36A MCA/40A MOCP	240	1	MP1-19,21	40A/2P	3#8,#10G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	-
HPc-2	HEAT PUMP CONDENSOR	ROOF	36A MCA/40A MOCP	240	1	MP1-20,22	40A/2P	3#8,#10G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	-
HPc-3	HEAT PUMP CONDENSOR	ROOF	27A MCA/40A MOCP	240	1	MP1-23,25	40A/2P	3#8,#10G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	-
HPc-4	HEAT PUMP CONDENSOR	ROOF	36A MCA/40A MOCP	240	1	MP1-24,26	40A/2P	3#8,#10G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	-
HPe-1.1	HEAT PUMP INDOOR UNIT	CEILING HUNG	0.5 MCA	240	1	MP1-27,29	15A/2P	3#12,#12G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	PROVIDE 3/4"C WITH PULL WIRE TO HPc-1, ALSO CONNECT CP-1 TO MP1-35. (1)(2)(3)
HPe-1.2	HEAT PUMP INDOOR UNIT	CEILING HUNG	0.5 MCA	240	1	MP1-27,29	-	3#12,#12G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	PROVIDE 3/4"C WITH PULL WIRE TO HPc-1, ALSO CONNECT CP-1 TO MP1-35. (1)(2)(3)
HPe-2.1	HEAT PUMP INDOOR UNIT	CEILING HUNG	1.2 MCA	240	1	MP1-28,30	15A/2P	3#12,#12G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	PROVIDE 3/4"C WITH PULL WIRE TO HPc-2, ALSO CONNECT CP-1 TO MP1-35. (1)(2)(3)
HPe-2.2	HEAT PUMP INDOOR UNIT	CEILING HUNG	1.2 MCA	240	1	MP1-28,30	-	3#12,#12G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	PROVIDE 3/4"C WITH PULL WIRE TO HPc-2, ALSO CONNECT CP-1 TO MP1-35. (1)(2)(3)
HPe-3.1	HEAT PUMP INDOOR UNIT	CEILING HUNG	1.0 MCA	240	1	MP1-31,33	15A/2P	3#12,#12G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	PROVIDE 3/4"C WITH PULL WIRE TO HPc-3, ALSO CONNECT CP-1 TO MP1-35. (1)(2)(3)
HPe-3.2	HEAT PUMP INDOOR UNIT	CEILING HUNG	1.0 MCA	240	1	MP1-31,33	-	3#12,#12G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	PROVIDE 3/4"C WITH PULL WIRE TO HPc-3, ALSO CONNECT CP-1 TO MP1-35. (1)(2)(3)
HPe-4.1	HEAT PUMP INDOOR UNIT	CEILING HUNG	1.0 MCA	240	1	MP1-32,34	15A/2P	3#12,#12G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	PROVIDE 3/4"C WITH PULL WIRE TO HPc-4, ALSO CONNECT CP-1 TO MP1-36. (1)(2)(3)
HPe-4.2	HEAT PUMP INDOOR UNIT	CEILING HUNG	1.0 MCA	240	1	MP1-32,34	-	3#12,#12G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	PROVIDE 3/4"C WITH PULL WIRE TO HPc-4, ALSO CONNECT CP-1 TO MP1-36. (1)(2)(3)
HPe-4.3	HEAT PUMP INDOOR UNIT	CEILING HUNG	0.2 MCA	240	1	MP1-32,34	-	3#12,#12G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	PROVIDE 3/4"C WITH PULL WIRE TO HPc-4, ALSO CONNECT CP-1 TO MP1-36. (1)(2)(3)
HPe-4.4	HEAT PUMP INDOOR UNIT	CEILING HUNG	0.2 MCA	240	1	MP1-32,34	-	3#12,#12G - 3/4"C	-	-	X	-	X	-	X	X	X	-	-	-	PROVIDE 3/4"C WITH PULL WIRE TO HPc-4, ALSO CONNECT CP-1 TO MP1-36. (1)(2)(3)
EF-1	EXHAUST FAN	-	1 HP	240	1	MP1-37,39	20A/2P	2#12, #12G - 3/4"C	-	-	-	X	X	-	-	X	-	-	-	-	-
EF-2	EXHAUST FAN	-	3/4 HP	120	1	MP1-38	20A/1P	2#12, #12G - 3/4"C	X	-	-	-	X	-	-	X	-	-	-	-	-
DEF-1	EXHAUST FAN	-	50 WATTS	120	1	MP1-76	20A/1P	2#12, #12G - 3/4"C	X	-	-	-	X	-	-	X	-	-	-	-	-
EUH-1	ELEC. UNIT HEATER	GARAGE	2.0 kW	240	1	MP1-41,43	20A/2P	2#12, #12G - 3/4"C	-	-	-	X	X	-	-	X	-	-	-	-	-
EUH-2	ELEC. UNIT HEATER	GARAGE	2.0 kW	240	1	MP1-42,44	20A/2P	2#12, #12G - 3/4"C	-	-	-	X	X	-	-	X	-	-	-	-	-
EUH-3	ELEC. UNIT HEATER	GARAGE	2.0 kW	240	1	MP1-45,47	20A/2P	2#12, #12G - 3/4"C	-	-	-	X	X	-	-	X	-	-	-	-	-
EUH-4	ELEC. UNIT HEATER	GARAGE	2.0 kW	240	1	MP1-46,48	20A/2P	2#12, #12G - 3/4"C	-	-	-	X	X	-	-	X	-	-	-	-	-
EUH-5	ELEC. UNIT HEATER	GARAGE	2.0 kW	240	1	MP1-49,51	20A/2P	2#12, #12G - 3/4"C	-	-	-	X	X	-	-	X	-	-	-	-	-
EUH-6	ELEC. UNIT HEATER	STORAGE	3.0 kW	240	1	MP1-50,52	20A/2P	2#12, #12G - 3/4"C	-	-	-	X	X	-	-	X	-	-	-	-	-
DF-1	DESTRATIFICATION FAN	GARAGE	65W	120	1	MP1-53	20A/1P	2#12, #12G - 3/4"C	X	-	-	-	X	-	-	X	-	-	-	-	-
DF-2	DESTRATIFICATION FAN	GARAGE	65W	120	1	MP1-54	20A/1P	2#12, #12G - 3/4"C	X	-	-	-	X	-	-	X	-	-	-	-	-
DF-3	DESTRATIFICATION FAN	GARAGE	65W	120	1	MP1-55	20A/1P	2#12, #12G - 3/4"C	X	-	-	-	X	-	-	X	-	-	-	-	-
DF-4	DESTRATIFICATION FAN	GARAGE	65W	120	1	MP1-56	20A/1P	2#12, #12G - 3/4"C	X	-	-	-	X	-	-	X	-	-	-	-	-
DF-5	DESTRATIFICATION FAN	GARAGE	65W	120	1	MP1-57	20A/1P	2#12, #12G - 3/4"C	X	-	-	-	X	-	-	X	-	-	-	-	-
CP-1	CONDENSTATE PUMP	EACH HPe UNIT	14 WATTS	-	-	-	-	2#12&1#12G - 3/4"C	X	-	-	-	X	-	-	X	-	-	-	-	- (2)(3)

ELECTRICAL SCHEDULE OF PLUMBING / FIRE PROTECTION EQUIPMENT

UNIT NO.	DESCRIPTION	UNIT LOCATION	LOAD CHARACTERISTICS	VOLT	PH	PANEL CIRCUIT	CIRCUIT BREAKER	FEEDER	EQUIPMENT AND CONNECTIONS										REMARKS
									TS					S D		J	S WP		
EWH-1	ELEC. WATER HTR.	MECH ROOM	6.1 kW	240	1	MP1-15,17	40A/2P	3#8, #10G - 1"C	-	-	-	X	X	-	-	X	-	-	-
RP-1	RECIRC. PUMP	MECH ROOM	1/6 HP	120	1	MP1-16	20A/1P	2#12, #12G - 3/4"C	X	-	-	-	X	-	-	X	-	-	-
MV-1	MIXING VALVE	MECH ROOM	-	120	1	MP1-18	20A/1P	2#12, #12G - 3/4"C	X	-	-	-	X	-	-	X	-	-	-

PLUMBING SCHEDULE KEY NOTES:

(1) PROVIDE GFCI TYPE CIRCUIT BREAKER TO FEED EWC CIRCUITS. (2) REFER TO PLUMBING DRAWINGS FOR EXACT UNIT LOCATION AND TOTAL QUANTITIES. (3) REFER TO FLOOR PLANS FOR CONNECTIONS AND CIRCUITRY.

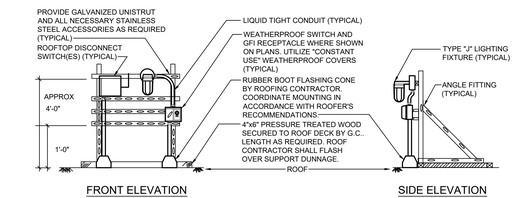


1/E3.2 CONDENSATE PUMP (CP-1 & CP-2) WIRING DETAIL

SCALE : N.T.S.

NOTE:

1. WIRING MAY VARY BY MANUFACTURER. FIELD CONFIRM WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGHING.



2/E3.2 TYPICAL ROOFTOP DISCONNECT SWITCHE(ES) DETAIL

SCALE : N.T.S.

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MECHANICAL AND PLUMBING SCHEDULES

Revisions:

No.	Date	Description
1	4/19/24	ADDENDUM 1
2	4/22/24	ADDENDUM 2

Drawn By: JGD
Checked By: DMP
Approved By: DMP

Drawing Scale: As Noted

Project Number: NEW2202

Date: March 21, 2024

E3.2