MECHANICAL GENERAL NOTES

1. GENERAL

1.1 THE MECHANICAL WORK SHALL CONFORM TO APPLICABLE STATE AND LOCAL CODES AND THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.

1.2 THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS AND PAY FOR ALL PERMITS, FEES, CHARGES AND INSPECTIONS REQUIRED, AS WELL AS HAULING, RIGGING AND TRANSPORTATION CHARGES APPLICABLE TO HIS WORK.

1.3 THE PROJECT SHALL BE BID ON THE BASIS OF SPECIFIED PRODUCT(S) WHICH ESTABLISH MINIMUM QUALITY REQUIREMENTS. WHERE MORE THAN ONE PRODUCT NAME IS INDICATED, BIDS SHALL BE BASED ON ONE OF THE NAMED PRODUCTS. ALL MECHANICAL EQUIPMENT SHOWN ON CONTRACT DOCUMENTS SHALL BE NEW, SHALL BE ALL LISTED AND SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.

A). WHERE USE OF AN ’ACCEPTABLE EQUAL' PRODUCT REQUIRES CHANGES TO THE BASE DESIGN IN ORDER TO INCORPORATE THE PRODUCT INTO THE PROJECT, THE CONTRACTOR SHALL SUBMIT A LAYOUT SHOWING ALL CHANGES TO ARCHITECTURAL. STRUCTURAL, ELECTRICAL, PLUMBING AND MECHANICAL REQUIREMENTS. CHANGES DUE TO USE OF ’ACCEPTABLE EQUAL’ PRODUCTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER AND THE COST OF CHANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR LAYOUT SHALL ACCOMPANY PRODUCT SUBMITTAL DATA.

B). SUBSTITUTIONS FOR ’ACCEPTABLE EQUAL’ PRODUCTS NOT SPECIFIED WILL BE CONSIDERED WHEN INCLUDED WITH SUBMISSION OF THE BID AND SHALL BE SUBJECT TO ACCEPTANCE BY THE ENGINEER. PROPOSALS FOR SUBSTITUTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO: (1) ANY ADDED CREDIT OR COST. (2) PRODUCT IDENTIFICATION. (3) CODE COMPLIANCE. (4) REFERENCED STANDARD COMPLIANCE. (5) DESCRIPTION OF ALL CHANGES INCLUDING ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING AND MECHANICAL, REQUIRED TO INCORPORATE SUBSTITUTED PRODUCT INTO THE PROJECT. THE OWNER/ENGINEER RESERVES THE RIGHT TO REJECT PROPOSED SUBSTITUTIONS.

C). WHERE ’OR EQUAL’ PRODUCTS ARE INDICATED. THE CONTRACTOR SHALL SUBMIT A LIST OF PROPOSED EQUAL SUBSTITUTE PRODUCTS WITH THE BID. THE LIST SHALL INCLUDE ADEQUATE SUPPORTING INFORMATION AS PROOF OF EQUALITY IN ORDER TO BE CONSIDERED ACCEPTABLE. NO LATER SUBSTITUTES WILL BE CONSIDERED.

D). SUBSTITUTIONS SHALL PROVIDE THE SAME GUARANTEE AS SPECIFIED FOR BASE BID PRODUCTS.

1.4 THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS FOR POINTS OF CONNECTIONS, CAPACITIES, AND LOCATIONS OF SYSTEMS. IN ALL AREAS AFFECTED BY THE PROJECT, CUT, PATCH, REPAIR, AND/OR REPLACE ALL MATERIALS DAMAGED AS A RESULT OF WORK. ALL REPAIRED FINISHES SHALL MATCH APPROPRIATE ADJACENT FINISHES. FILL VOIDS AROUND DUCTWORK PENETRATING WALLS WITH FIRE STOPPING MATERIAL.

1.5 MECHANICAL EQUIPMENT AND PRODUCTS SHALL BE LISTED AND/OR LABELED BY AN APPROVED TESTING OR INSPECTION AGENCY IN ACCORDANCE WITH LOCAL AND GOVERNING CODE REQUIREMENTS.

1.6 THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF WORK INCLUDED IN THE PROJECT. DO NOT SCALE THE DRAWING. THE CONTRACTOR SHALL ESTABLISH FINAL DIMENSIONS FROM FIELD MEASUREMENTS, PRIOR TO STARTING WORK.

1.7 MECHANICAL WORK SHALL BE COORDINATED WITH THE WORK OF ALL OTHER TRADES PRIOR TO INSTALLATION, TO AVOID CONFLICTS AND ALLOCATE SPACE REQUIREMENTS.

1.8 MATERIALS SHALL BE RATES FOR THE OPERATING TEMPERATURE AND PRESSURE OF THE HYDRONIC SYSTEM. MATERIALS SHALL BE SUITABLE FOR THE TYPE OF FLUID IN THE HYDRONIC SYSTEM.

1.9 PROJECT PREMISES SHALL BE THOROUGHLY CLEANED AND READY FOR OCCUPANCY INCLUDING ALL FINISHES OF EQUIPMENT PROVIDED AS PART OF THE CONTRACTOR'S WORK. PROVIDE ONE NEW SET OF CLEAN AIR FILTERS FOR ALL AIR MOVING EQUIPMENT AT PROJECT CLOSEOUT.

1.10 THE WORD ’PROVIDE’ AS USED IN THE PROJECT SHALL BE DEFINED AS ’"FURNISH AND INSTALL"

2. PIPING

2.1 PIPING SHOWN IS SCHEMATIC AND DOES NOT INDICATE EVERY OFFSET, ELBOW, UNION, VALVE, TRAP, ACCESS PANEL, ETC., THAT IS REQUIRED FOR A COMPUTE WORKING SYSTEM. PROVIDE ITEMS AND FITTINGS THAT ARE REQUIRED TO INSTALL THE PIPING SYSTEM WITHIN THE SPACE PROVIDED AND THAT ARE REQUIRED FOR A COMPUTE SYSTEM. PIPING SHALL BE PROPERLY SECURED IN ACCORDANCE WITH MSS STANDARD SP-69.

2.2 MATERIALS SHALL BE RATED FOR THE OPERATING TEMPERATURE AND PRESSURE OF DOMESTIC SYSTEM. MATERIALS SHALL BE SUITABLE FOR THE TYPE OF FLUID IN THE DOMESTIC SYSTEM.

2.3 PIPE SUPPORTS SHALL BE SELECTED AND INSTALLED IN ACCORDANCE WITH THE MSS SP-69 OR LOCAL CODES, WHICHEVER IS MORE STRINGENT. UTILIZE TRAPEZE HANGERS FOR PARALLEL RUNS OR PIPING, OTHER THAN SPRINKLER AND WASTE PIPING. COPPER PIPING SYSTEMS SHALL BE SUPPORTED ON COPPER OR COPPER-PLATED SUPPORTS. HANG PIPE FROM SUBSTANTIAL BUILDING STRUCTURE. PIPING SHALL NOT BE HUNG FROM OTHER PIPING, ALL RIGID HANGERS SHALL PROVIDED A MEANS OF VERTICAL ADJUSTMENT AFTER ERECTION. SHIELD SHALL BE PROVIDED BETWEEN HANGERS AND INSULATION.

2.4 WELDING SHALL CONFORM TO CURRENT STANDARDS AND RECOMMENDATIONS OF THE NATIONAL CERTIFIED PIPE WELDING BUREAU, NFPA 51B, STANDARD FOR FIRE PROTECTION; AND NFPA 241, STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS.

3. EQUIPMENT

3.1 ALL MECHANICAL EQUIPMENT SHOWN ON CONTRACT DOCUMENTS SHALL BE NEW, AND SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.

3.2 EQUIPMENT AND PRODUCT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS FOR INSTALLATION AND OPERATION SHALL BE FOLLOWED IN PERFORMING MECHANICAL WORK, UNLESS OTHERWISE INDICATED OR DIRECTED. MATERIALS AND METHODS USED IN THE WORK SHALL BE COMPATIBLE WITH BUILDING CONDITIONS AND COMPLY WITH THE BUILDING CODE REQUIREMENTS, WHICH SHALL BE THE BASIS FOR MINIMUM PRODUCT QUALITY. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER BY SKILLED WORKMEN EXPERIENCED IN THEIR TRADE. THE WORK SHALL BE SUBJECT TO THE ACCEPTANCE OF THE OWNER OR THE DULY AUTHORIZED REPRESENTATIVE.

4. DUCTWORK

4.1 DUCTWORK SHALL BE FABRICATED OF GALVANIZED SHEET METAL WITH CONSTRUCTION AND INSTALLATION IN ACCORDANCE WITH SMACNA STANDARDS AND SYSTEM REQUIREMENTS. SHEET METAL GAUGES SHALL CONFORM TO THE INTERNATIONAL MECHANICAL CODE (IMC), ASHRAE STANDARDS, AND UL LISTED FIRE RESISTANCE DIRECTORY REQUIREMENTS AS APPLICABLE.

4.2 DUCT COVERINGS, DUCT LININGS, TAPES, AND CORE MATERIAL SHALL HAVE A FLAME SPREAD RATING NOT OVER 25, AND SMOKE DEVELOPMENT NOT OVER 50.

4.3 ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY CONTRACTOR FOR BEAMS. COLUMNS OR OTHER OBSTRUCTIONS OF THE BUILDING OR THE WORK OF OTHER CONTRACTORS. WHETHER OR NOT SAME IS INDICATED. WHERE NECESSARY TO AVOID OBSTRUCTIONS. THE DUCTS SHALL BE TRANSFORMED, DIVIDED OFFSET, RAISED OR LOWERED WITH THE REQUIRED FREE AREA BEING MAINTAINED IN ACCORDANCE WITH SMACNA STANDARDS.

4.4 ALL RECTANGULAR DUCTWORK ELBOWS 30 DEGREE OR GREATER SHALL BE PROVIDED WITH DOUBLE THICKNESS RADIUS TURNING VANES.

4.5 DUCTWORK SIZES SHOWN ARE NET CLEAR INSIDE DIMENSIONS. FOR INTERNALLY LINED DUCTS, FABRICATE SHEET METAL TO ALLOW FOR THICKNESS OF INSULATION AND MAINTAIN NET CLEAR DIMENSIONS.

4.6 DUCTWORK SHALL BE SEALED WITH AN APPROVED DUCT MASTIC OR LIQUID SEALANT AS MANUFACTURED BY UNITED MCGILL CORP., OR APPROVED EQUAL. DUCT SYSTEM LEAKAGE SHALL CONFORM TO SMACNA "HVAC DUCT LEAKAGE TEST MANUAL" FOR CLASS 2" W.C. SEAL CLASS A, LEAKAGE CLASS 24 FOR RECTANGULAR DUCTS AND CLASS 12 FOR ROUND DUCTWORK.

4.7 PROVIDE FIRE DAMPERS IN HVAC AIR DISTRIBUTION SYSTEMS THAT PENETRATE FIRE RATED ASSEMBLIES IN ACCORDANCE WITH THE INTERNATIONAL BUILDING AND MECHANICAL CODES. FIRE DAMPERS SHALL BE TYPE B IN ALL DUCTWORK, IN ADDITION TO SECONDARY FIRE DAMPERS FOR CEILING, WALL AND FLOOR MOUNTED AIR DEVICES.

4.8 COORDINATE SPECIFIC FIRE RESISTIVE CONSTRUCTION REQUIREMENTS WITH THE FIRE RATED ASSEMBLIES INDICATED ON ARCHITECTURAL DRAWINGS. THROUGH PENETRATIONS FIRESTOP SYSTEMS SHALL CONFORM TO UL LISTED FIRE RESISTANCE DIRECTORY OR OTHER METHODS ACCEPTABLE TO LOCAL GOVERNING CODE AUTHORITIES.

4.9 PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS (SUPPLY, RETURN AND EXHAUST) CONNECTED TO AIR HANDLING UNITS, FANS AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION TO THE EQUIPMENT UNLESS OTHERWISE INDICATED.

4.10 PROVIDE ACCESS DOORS IN DUCTWORK TO PROVIDE ACCESS FOR ALL SMOKE DETECTORS, FIRE DAMPERS. SMOKE DAMPERS, VOLUME DAMPERS, COILS, AND OTHER ITEMS LOCATED IN THE DUCTWORK WHICH REQUIRE SERVICE AND/ OR INSPECTION. LABEL ACCESS WITH 1/2" LETTERING.

5. INSULATION

5.1 INSULATION MATERIALS SHALL BE CERTAIN-TEED OR APPROVED EQUAL INSULATION MATERIALS SHALL HAVE A FLAME SPREAD RATING NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING OF NOT MORE THAN 50. PROVIDE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS FOLLOWS:

6. DUCT INSULATION

1. SUPPLY/RETURN AIR DUCTWORK (CONCEALED): INSULATE WITH NOMINAL 1-INCH THICK TYPE 75 STANDARD DUCTWRAP WITH FSK FACING VAPOR BARRIER. MINIMUM 3/4-INCH INSTALLED THICKNESS WITH A 5.6 R VALUE.

2. SUPPLY/RETURN AIR DUCTWORK (INTERIOR EXPOSED WHERE INDICATED): INSULATE WITH 1-INCH THICK TYPE 200 ULTRA-LITE ACOUSTICAL DUCT LINER WITH 100 PERCENT ADHESIVE COVERAGE AND MECHANICAL FASTENERS. MINIMUM INSTALLED R VALUE OF 3.1.

3. SUPPLY/RETURN AIR DUCTS (CONCEALED IN ATTIC/CRAWL/ROOF CEILING SPACE): INSULATE WITH NOMINAL 3-INCH THICK TYPE 75 STANDARD DUCTWRAP WITH FSK FACING, VAPOR BARRIER. MINIMUM 2-1/4-INCH INSTALLED THICKNESS WITH 8.5 R VALUE.

4. SUPPLY/RETURN/EXHAUST/OUTSIDE AIR DUCTS (OA DUCTWORK & DUCTWORK EXPOSED TO WEATHER CONDITIONS): INSULATE DUCTWORK EXTERIOR WITH SEMI-RIGID FIBERGLASS BOARD INSULATION, TYPE 1B300, 3.0 LBS/CU. FT. DENSITY, MINIMUM 2-INCH INSTALLED THICKNESS WITH 8.5 R VALUE. PROVIDE WEATHERPROOF FINISH AS MANUFACTURED BY FOSTERS MONOLAR 60 -95 COATINGS (MINIMUM OF 3 COATS) OR APPROVED EQUAL.

5. PROVIDE ALL NECESSARY FOUNDATIONS, SUPPORTS, PADS AND BASES AS REQUIRED FOR MECHANICAL EQUIPMENT, PIPING, AND DUCTWORK AS PER INTERNATIONAL BUILDING AND MECHANICAL CODES. INSTALL EQUIPMENT, PIPING, AND DUCTWORK SO AS TO BE FREE FROM OBJECTIONABLE NOISE AND VIBRATIONS. CONTRACTOR SHALL COORDINATE WORK WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS PRIOR TO ACTUAL WORK.

7. ELECTRICAL WORK

7.1 ELECTRIC MOTORS FOR MECHANICAL EQUIPMENT SHALL BE PROVIDED UNDER THE MECHANICAL WORK UNLESS OTHERWISE NOTED. ALL MOTORS SHALL BE NEMA STANDARD DESIGN FOR QUIET OPERATION AND SIZED TO PROPERLY OPERATE EQUIPMENT AT RATED LOAD. MOTORS WITH BELT DRIVES SHALL BE PROVIDED WITH ADJUSTABLE PULLEYS AND SHAFTS. ELECTRICAL POWER CONNECTIONS FOR MECHANICAL EQUIPMENT SHALL BE PROVIDED UNDER THE ELECTRICAL WORK.

7.2 MOTOR STARTERS, RELAYS, AND CONTACTORS SHALL BE FURNISHED UNDER THE MECHANICAL WORK AND INSTALLED AND POWERED UNDER THE ELECTRICAL WORK. STARTERS, RELAYS. AND CONTACTORS SHALL BE COMPUTE WITH LUGS SIZED FOR SPECIFIED CONDUCTORS AND INCLUDE REQUIRED ACCESSORIES (I.E. START-STOP PUSH BUTTON, PILOT LIGHTS, H.O.A. SWITCH, AUXILIARY CONTACTS AND OVERLOAD PROTECTION), GENERAL PURPOSE NEMA TYPE 1 ENCLOSURES INDOORS, NEMA TYPE 3R ENCLOSURES OUTDOORS. SINGLE PHASE MOTOR STARTERS SHALL BE MANUAL TYPE WITH OVERLOAD PROTECTION, UNLESS OTHERWISE NOTED. THREE PHASE STARTERS SHALL BE MAGNETIC FULL VOLTAGE, NON-REVERSING, UNLESS OTHERWISE NOTED. STARTERS FOR MECHANICAL SYSTEMS SHALL BE AS MANUFACTURED BY SQUARE-D, GENERAL ELECTRIC, OR CUTLER HAMMER. STARTERS SHALL CONFORM TO NEMA STANDARDS AND NATIONAL ELECTRICAL CODE (NEC) REQUIREMENTS. STARTER CONTROL AND INTERLOCK WIRING SHALL BE PROVIDED UNDER THE MECHANICAL WORK. ALL EQUIPMENT SHALL BE FURNISHED W/ MANUFACTURER PROVIDED DISCONNECT SWITCH.

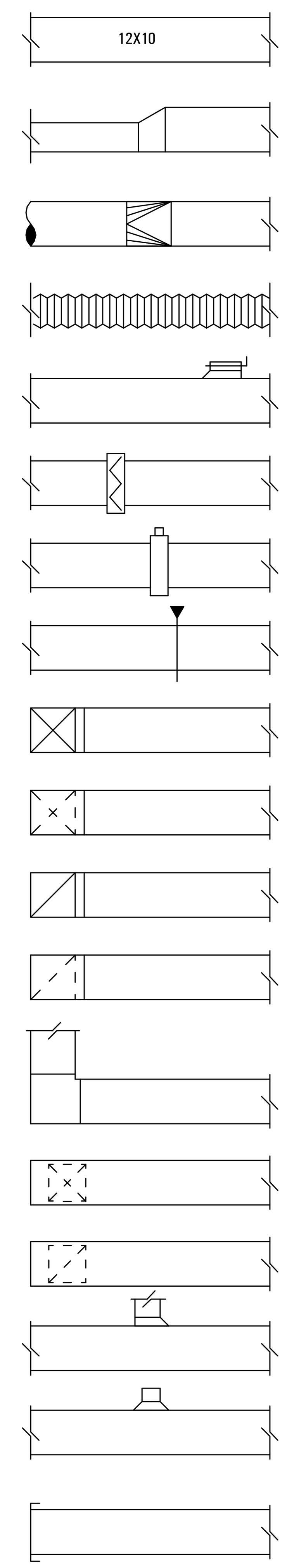
7.3 DUCT SMOKE DETECTORS SHALL BE INSTALLED IN ALL AIR DISTRIBUTION SYSTEMS WITH A DESIGN CAPACITY OF 2000 CFM OR GREATER IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE SECTION 606 AND NATIONAL FIRE PREVENTION CODE NFPA 72 AND 90A. DUCT SMOKE DETECTORS SHALL BE "DUAL CONTAC"’ TYPE (FOR TIE-IN TO FIRE ALARM SYSTEM AND FOR FAN SHUT-DOWN). COMPLETE WITH SAMPLING TUBE, REMOTE RESET, REMOTE PILOT INDICATOR (FOR CONCEALED APPLICATIONS), UL LISTED FOR INTENDED USE AND COMPLETELY COMPATIBLE WITH FIRE ALARM SYSTEM. DUCT SMOKE DETECTORS SHALL BE FURNISHED AND INSTALLED UNDER THE MECHANICAL WORK AND WIRED AND POWERED UNDER THE ELECTRICAL WORK.

8 CONTROLS

8.1 PROVIDE AUTOMATIC TEMPERATURE CONTROL SYSTEM(S) FOR HVAC EQUIPMENT UNDER MECHANICAL WORK. CONTROL DEVICES SHALL BE PROVIDED BY UNIT MANUFACTURER, UNLESS OTHERWISE NOTED. HVAC EQUIPMENT NOT PROVIDED WITH CONTROL DEVICES SHALL BE PROVIDED WITH DEVICES AS MANUFACTURED TO MATCH BASE BUILDING CONTROLS OR APPROVED EQUAL AIR HANDLER SHALL HAVE NIGHT SET BACK CONTROLLED BY A PROGRAMMABLE THERMOSTAT. DEVICE(S) SHALL BE FULLY COMPATIBLE AND SUITABLE FOR INTENDED USE. CONTROL WIRING SHALL BE PROVIDED IN ACCORDANCE WITH THE NEC FOR 24-VOLT CONTROL SYSTEM(S). WIRING SHALL BE A MINIMUM 22 AWG, COLOR CODED AND INSTALLED IN CONDUIT WHERE SUBJECT TO PHYSICAL DAMAGE OR WHERE REQUIRED TO AVOID PLENUM SPACES. EXTEND ALL LOW VOLTAGE WIRING UNBROKEN BETWEEN EACH CONTROL DEVICE AND EQUIPMENT TERMINAL STRIP. INSTALLATION OF CONTROL SYSTEM(S), WRING. AND DEVICES SHALL BE BY A CERTIFIED CONTROLS CONTRACTOR WITH A MINIMUM OF FIVE (5) YEARS EXPERIENCE IN THE INSTALLATION AND SERVICING OF CONTROLS.

8.2 UNLESS OTHERWISE INDICATED, ALL THERMOSTATS SHALL BE MOUNTED IN ACCORDANCE WITH ADA REQUIREMENTS.

SYMBOLS



NEW DUCT (1ST DIMENSION INDICATES SIDE SHOWN, INSIDE CLEAR DIMENSIONS)

DUCT SIZE TRANSITION

RECTANGULAR/SQUARE DUCT TO ROUND DUCT SIZE TRANSITION

FLEX DUCT

MANUAL VOLUME DAMPER

BACKDRAFT DAMPER

AUTOMATIC (MOTORIZED) VOLUME DAMPER/ SMOKE DAMPER

FIRE DAMPER

SUPPLY DUCT TO RISE UP

SUPPLY DUCT TO DROP DOWN

RETURN DUCT TO RISE UP

RETURN DUCT TO DROP DOWN

ELBOW WITH TURNING VANES

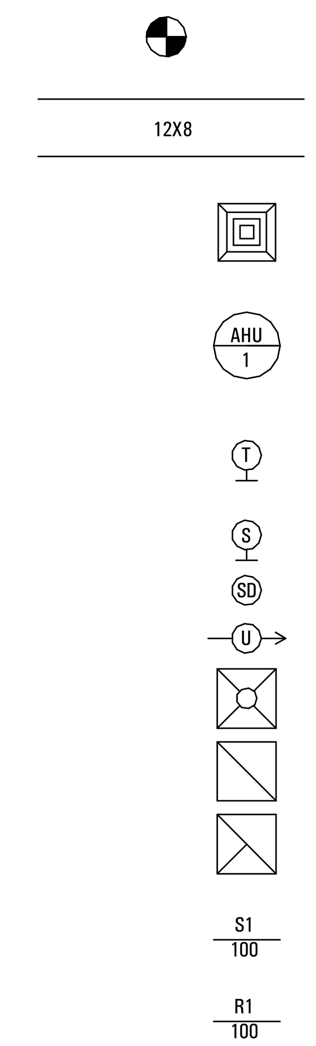
SUPPLY AIR DEVICE

RETURN OR EXHAUST AIR DEVICE

DUCT WITH DUCT BRANCH

DUCT WITH ROUND DUCT TAKE-OFF

DUCT WITH CAPPED END



EXISTING TO NEW CONNECTION

DOUBLE LINE DUCT W/ SIZE IN INCHES

CEILING MOUNTED EXHAUST FAN

UNIT TAG TYPE
UNIT DESIGNATED NUMBER

THERMOSTAT

SWITCH

DUCT SMOKE DETECTOR

DOOR UNDERCUT

2’X2’ SUPPLY DIFFUSER

2’X2' RETURN GRILLE

2’X2' EXHAUST GRILLE

DIFFUSER TAG TYPE
AIR CFM (CUBIC FEET PER MINUTE)

GRILLE TAG TYPE
AIR CFM (CUBIC FEET PER MINUTE)

ABBREVIATIONS

AF	AIR FILTER
AFF	ABOVE FINISHED FLOOR
ACU	AIR CONDITIONING UNIT
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
ARCH	ARCHITECTURAL
BDD	BACKFRAFT DAMPER
BPD	BYPASS DAMPER
BLW	BELOW
BTUH	BRITISH THERMAL UNIT PER HOUR
CC	
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CU	CONDENSING UNIT
CW	COLD WATER
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DIA	DIAMETER
DI	DIGITAL INPUT
DN	DOWN
DO	DAMPER OPERATOR
DO	DIGITAL OUTPUT
DPS	DIFFERENTIAL PRESSURE SWITCH
DWG	DRAWING
DX	DIRECT EXPANSION
(E)	EXISTING
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN

EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EXT	EXTERNAL
F	DEGREE FAHRENHEIT
FD	FIRE DAMPER
FL	FLOOR
FPM	FEET PER MINUTE
FT	FEET
GALV	GALVANIZED
HC	HEATING COIL
HP	HEAT PUMP
HW	HOT WATER
IN	INCH
IN. WG.	INCH WATER GAUGE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LB	POUNDS
LF	LINEAR FEET
MAX	MAXIMUM
MBH	1000 BTUH
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MIN	MINIMUM
MOT	MOTORIZED
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT

NO	NORMALLY OPEN
NOM	NOMINAL
No.	NUMBER
O.A.	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OED	OPEN END DUCT
PD	PRESSURE DROP
PS	PRESSURE SENSOR
PSI	POUND PER SQUARE INCH
RA	RETURN AIR
RAT	RETURN AIR TEMPERATURE
REFRIG	REFRIGERANT
RLA	RUNNING LOAD AMPERE
RPM	REVOLUTION PER MINUTE
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SD	SMOKE DETECTOR
SF	SUPPLY FAN
STRUC	STRUCTURAL
TD	TRANSFER DUCT
TS	TEMPERATURE SENSOR
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
W	WATT
WB	WET BULB
WC	WATER COLUMN
WMC	WIRE MESH SCREEN
WPD	WATER PRESSURE DROP

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Engineer Seal:

Date	Revision Description	By

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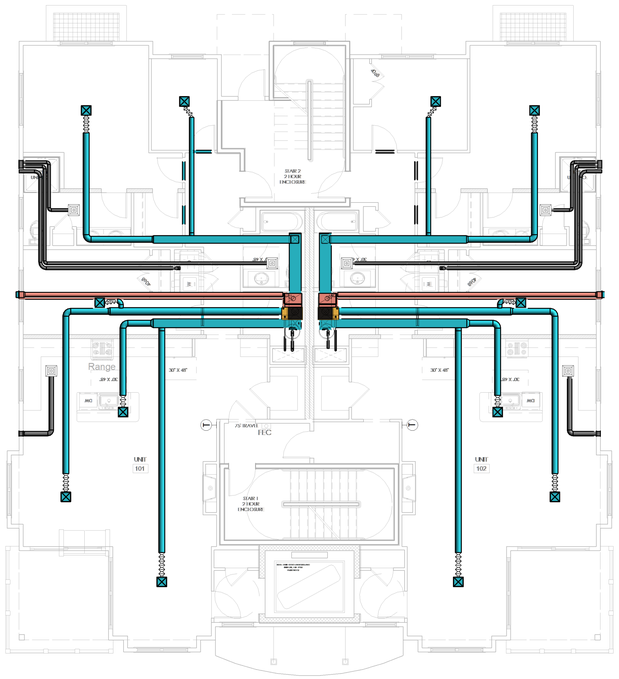
Designed By: EAF
Drawn By: EAF
Checked By: EAF

Project No.
SCALE 12" = 1'-0"
DATE 10/23/29

Gundalow Landing
Dover, NH 03820

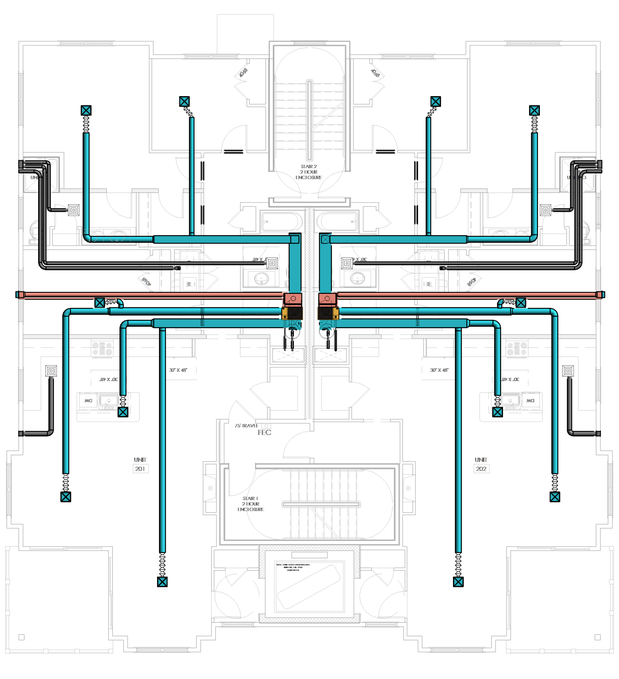
MECHANICAL GENERAL NOTES

M000



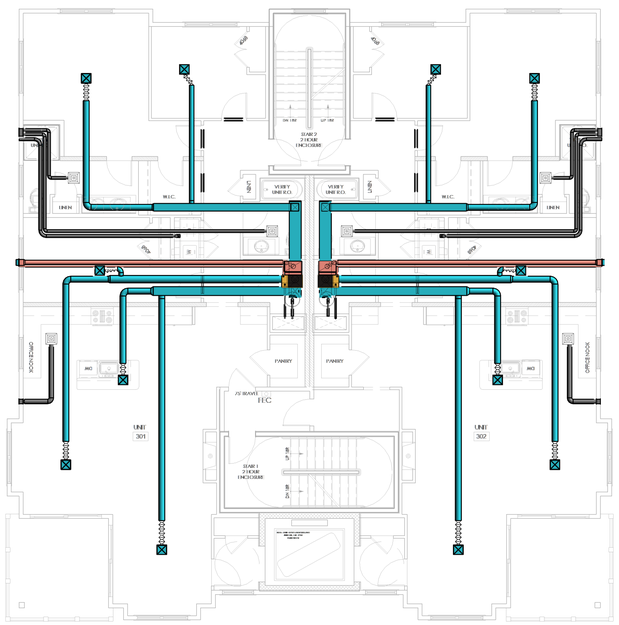
1 1ST FLOOR

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



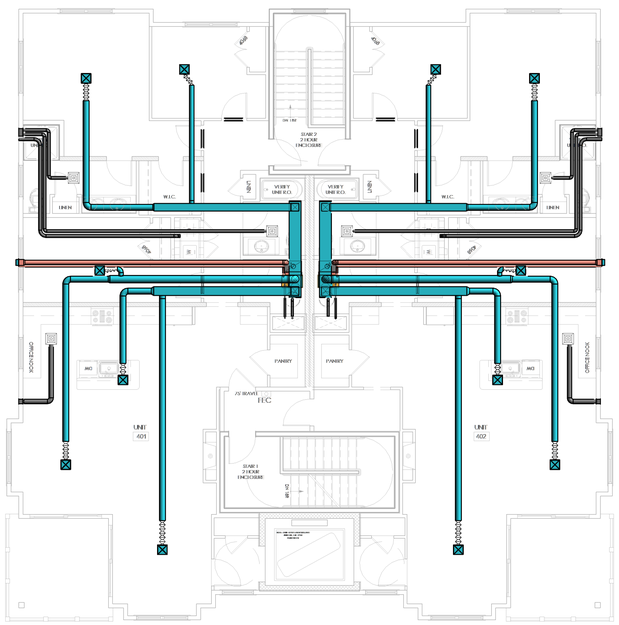
2 2ND FLOOR

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



3 3RD FLOOR

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



4 4TH FLOOR

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

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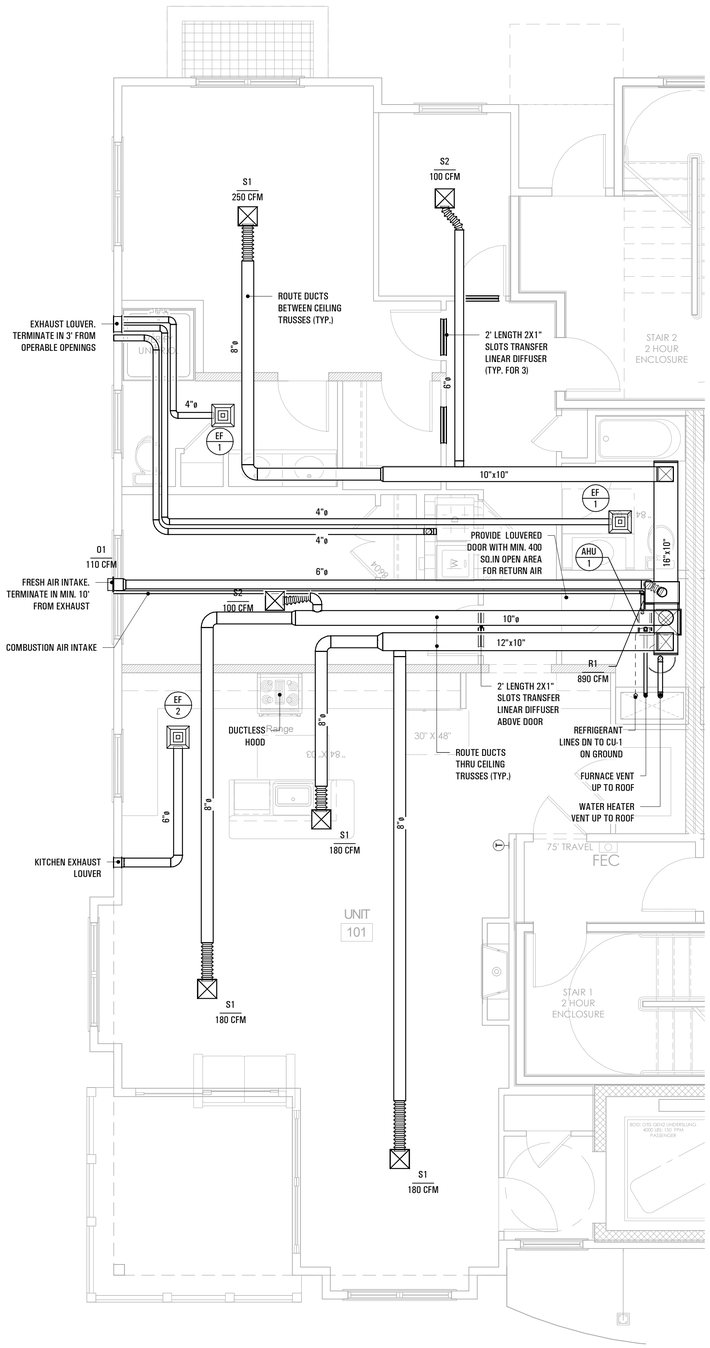
OVERALL MECHANICAL PLANS

M100

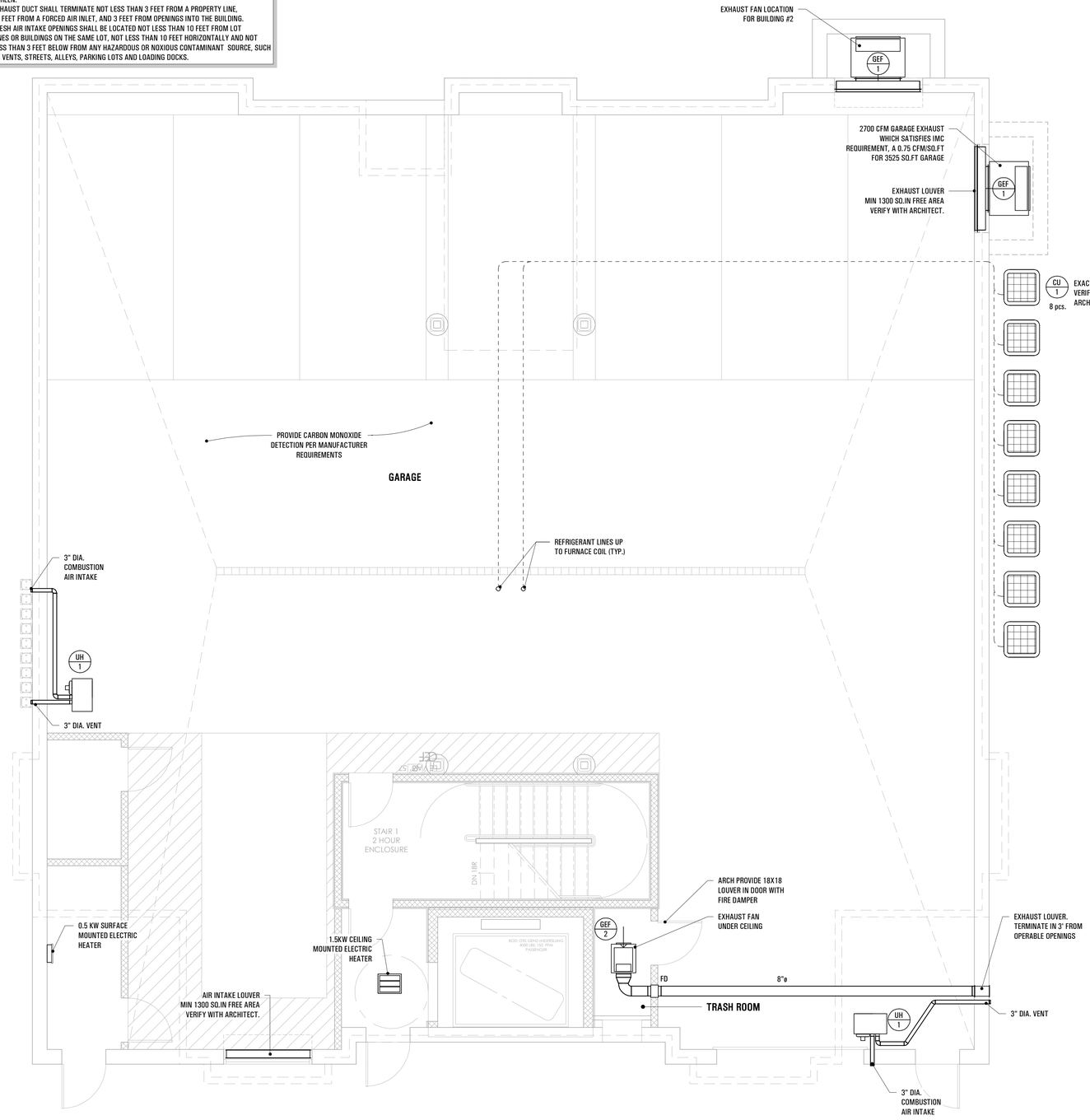
NOTES:

1. OUTDOOR-AIR INTAKES SHALL BE COVERED WITH A SCREEN HAVING NOT LESS THAN 1/4" OPENINGS, AND SHALL HAVE NOT MORE THAN 1/2" OPENINGS.
2. EXHAUST OPENINGS TERMINATING TO THE OUTDOORS SHALL BE COVERED WITH A CORROSION-RESISTANT SCREEN HAVING NOT LESS THAN 1/4" OPENINGS, AND SHALL HAVE NOT MORE THAN 1/2" OPENINGS.
3. DRYER EXHAUST TERMINATIONS SHALL BE EQUIPPED WITH A BACKDRAFT DAMPER WITHOUT SCREEN.
4. EXHAUST DUCT SHALL TERMINATE NOT LESS THAN 3 FEET FROM A PROPERTY LINE, 10 FEET FROM A FORCED AIR INLET, AND 3 FEET FROM OPENINGS INTO THE BUILDING.
5. FRESH AIR INTAKE OPENINGS SHALL BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES OR BUILDINGS ON THE SAME LOT, NOT LESS THAN 10 FEET HORIZONTALLY AND NOT LESS THAN 3 FEET BELOW FROM ANY HAZARDOUS OR NOXIOUS CONTAMINANT SOURCE, SUCH AS VENTS, STREETS, ALLEYS, PARKING LOTS AND LOADING DOCKS.



1 TYPICAL UNIT MECHANICAL PLAN

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



2 LOWER LEVEL MECHANICAL PLAN

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

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Designed By: EAF
Drawn By: EAF
Checked By: EAF
Date: 10/23/29
Scale: 1/4" = 1'-0"

Gundalow Landing
Dover, NH 03820

MECHANICAL FLOOR PLANS

M101

AIR DEVICE SCHEDULE

MARK	SYSTEM	TYPE	MODULE SIZE	NECK SIZE	MAX S.P.D.	MAX NC	MNFCR	MODEL	COMMENTS
O1	Other Air	INTAKE LOUVER	8x8	8x8	0.10 in-wg	< 25			
R1	Return Air	DUCT REGISTER	36x12	36x12	0.10 in-wg	< 25			
S1	Supply Air	CEILING DIFFUSER	24"x24"	8"	0.10 in-wg	< 25			SEE NOTE 1
S2	Supply Air	CEILING DIFFUSER	24"x24"	6"	0.10 in-wg	< 25			SEE NOTE 1

NOTES:
1. EQUIP SUPPLY DIFFUSERS WITH 1 HOUR FIRE RATED UL LISTED CEILING RADIATION DAMPER
2. AIR INTAKE LOUVER TO PROVIDE WITH FACTORY FILTER DEVICE

INDOOR SPLIT UNIT SCHEDULE

UNIT	TYPE	CFM	OA	COOLING					HEATING				ELECTRICAL					UNIT WEIGHT	MFCR AND MODEL	OUTDOOR UNIT	REMARKS
				TOTAL CAPACITY	EA		LAT		TOTAL CAPACITY	EAT	LAT	AFUE	MCA	MOCP	VOLTS	PHASE	CYCLE				
					DB	WB	DB	WB													
AHU-1	GAS FURNACE	1000 CFM	110 CFM	30,000 Btu/h	80 °F	67 °F	55 °F	54 °F	60,000 Btu/h	65 °F	115 °F	92+	9 A	15 A	120 V	1	60 Hz	159 lbf		CU-1	

OUTDOOR SPLIT UNIT SCHEDULE

UNIT	COMPRESSOR			CONDENSER			SEER	HSPF	ELECTRICAL					UNIT WEIGHT	MFCR AND MODEL	REMARKS
	QTY	RLA	LRA	QTY	HP	RPM			MCA	MOCP	VOLTS	PHASE	CYCLE			
CU-1	1	12.8	64	1	1/6	1500	16	-	17 A	25 A	240 V	1	60 Hz	179 lbf		

ROOM VENTILATION RATE SCHEDULE

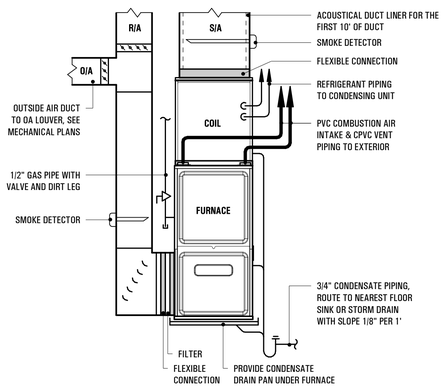
ROOM NAME	AREA	OUTDOOR AIR PER AREA	OUTDOOR AIR PER PERSON	AREA PER PERSON	NUMBER OF PEOPLE	BREATHING OUTDOOR AIR	ZONE OUTDOOR AIR	DESIGN SUPPLY AIR	DESIGN EXHAUST AIR	OUTDOOR AIR FRACTION
UNIT 101	1575 SF	0.00 CFM/SF	15 CFM	525 SF	3	78 CFM	98 CFM	990 CFM	100 CFM	0.10
UNIT 102	1652 SF	0.00 CFM/SF	15 CFM	551 SF	3	82 CFM	102 CFM	990 CFM	100 CFM	0.10
UNIT 201	1646 SF	0.00 CFM/SF	15 CFM	549 SF	3	82 CFM	102 CFM	990 CFM	100 CFM	0.10
UNIT 202	1652 SF	0.00 CFM/SF	15 CFM	551 SF	3	82 CFM	102 CFM	990 CFM	100 CFM	0.10
UNIT 301	1646 SF	0.00 CFM/SF	15 CFM	549 SF	3	82 CFM	102 CFM	990 CFM	100 CFM	0.10
UNIT 302	1652 SF	0.00 CFM/SF	15 CFM	551 SF	3	82 CFM	102 CFM	990 CFM	100 CFM	0.10
UNIT 401	1646 SF	0.00 CFM/SF	15 CFM	549 SF	3	83 CFM	104 CFM	990 CFM	100 CFM	0.11
UNIT 402	1652 SF	0.00 CFM/SF	15 CFM	551 SF	3	84 CFM	104 CFM	990 CFM	100 CFM	0.11
	13123 SF						817 CFM	7920 CFM		

FAN SCHEDULE

UNIT	TYPE	CFM	SERVICE	ESP	ELECTRICAL				UNIT WEIGHT	MFCR AND MODEL	REMARKS
					WATTS	VOLTS	PHASE	CYCLE			
EF-1	CEILING FAN	50 CFM	RESTROOMS	0.10 in-wg	43 W	120 V	1	60 Hz	12 lbf		
EF-2	CEILING FAN	100 CFM	KITCHEN	0.10 in-wg	43 W	120 V	1	60 Hz	12 lbf		
GEF-1	INLINE	2700 CFM	GARAGE	1.00 in-wg	1500 W	240 V	1	60 Hz	220 lbf		INTERLOCK WITH CARBON MONOXIDE DETECTOR
GEF-2	INLINE	170 CFM	GARAGE	0.20 in-wg	450 W	120 V	1	60 Hz	80 lbf		

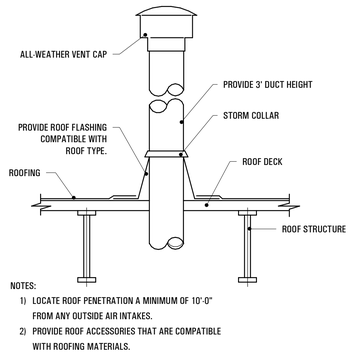
GAS-FIRED UNIT HEATER SCHEDULE

UNIT	SERVICE	CFM	BTU INPUT	AFUE	SET TEMP	ELECTRICAL				UNIT WEIGHT	MFCR AND MODEL	REMARKS
						WATTS	VOLTS	PHASE	CYCLE			
UH-1	GARAGE	720 CFM	45000.0 Btu/h	93	50 °F	425 W	115 V	1	60 Hz	125 lbf		



1 FURNACE INSTALATION DETAIL

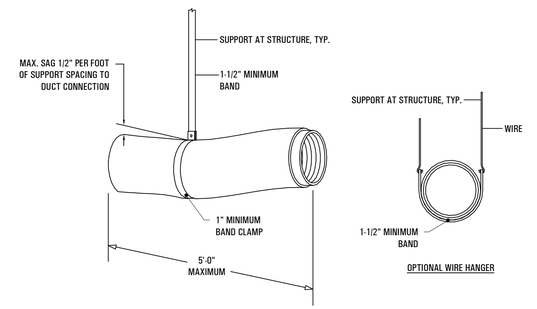
SCALE: NTS



NOTES:
1) LOCATE ROOF PENETRATION A MINIMUM OF 10'-0" FROM ANY OUTSIDE AIR INTAKES.
2) PROVIDE ROOF ACCESSORIES THAT ARE COMPATIBLE WITH ROOFING MATERIALS.

2 EXHAUST ROOF PENETRATION DETAIL

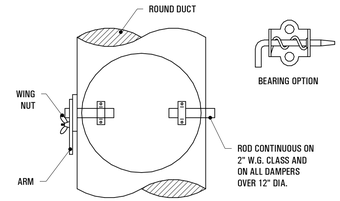
SCALE: NTS



NOTE:
FLEXIBLE INSULATED DUCT IS INDICATED. THIS DETAIL SHALL ALSO APPLY TO UNINSULATED FLEXIBLE DUCT.

3 FLEXIBLE DUCT SUPPORTS DETAILS

SCALE: NTS



4 SINGLE BLADE VOLUME DAMPER DETAIL

SCALE: NTS

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By	Revision Description	Date

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Designed By: EJK
Drawn By: EJK
Checked By: EJK
10/23/19
As indicated

Gundalow Landing
Dover, NH 03820

MECHANICAL DETAILS

M200

PLUMBING SPECIFICATIONS

1. CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND VERIFYING ALL EXISTING FIELD CONDITIONS PRIOR TO SUBMISSION OF BID.

2. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK WITH THE WORK OF ALL OTHER TRADES AND MAKING ANY NECESSARY MODIFICATIONS TO WORK AT NO ADDITIONAL COST, INCLUDING ALL OFFSETS.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OF ANY EXISTING MINOR INTERFERENCES. INCLUDING CONDUIT, HANGERS, ETC., AT NO ADDITIONAL COST.

4. CONTRACTOR SHALL REMOVE EXISTING EQUIPMENT AND MATERIALS PERTAINING TO CONTRACT AS SPECIFIED OR AS REQUIRED WHETHER SHOWN ON THE DRAWINGS OR NOT TO PREPARE FOR THE NEW WORK.

5. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL CODES. THESE CODES SHALL BE FOLLOWED AS MINIMUM PROVIDING HIGHER GRADES OF MATERIAL AND WORKMANSHIP WHERE REQUIRED BY THESE DOCUMENTS. PROVIDE ALL TESTS REQUIRED BY LOCAL CODES.

6. ALL PERMITS. FEES. LICENSES. APPROVALS AND OTHER ARRANGEMENTS FOR WORK SHALL BE OBTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE.

7. SUBMIT ASSEMBLED PRINTED INSTRUCTIONS FOR THE OPERATION AND MAINTENANCE OF EACH ITEM INSTALLED ALONG WITH EQUIPMENT CUTS AND CONTROL WIRING DIAGRAMS.

8. SUBMIT COORDINATED SHOP DRAWINGS FOR REVIEW. THE SHOP DRAWINGS SHALL INDICATE WORK OF OTHER TRADES AND MUST BE SUBMITTED PRIOR TO FABRICATION AND INSTALLATION.

9. SUBMIT EQUIPMENT SPECIFICATIONS FOR REVIEW BEFORE PURCHASE.

10. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIAL FOR ONE YEAR AFTER COMPLETION AGAINST ALL DEFECTS OF MATERIAL, EQUIPMENT, AND WORKMANSHIP.

11. PROVIDE COMPETENT OPERATING TECHNICIAN TO INSTRUCT THE OWNER IN THE OPERATION AND MAINTENANCE OF THE INSTALLED EQUIPMENT.

12. PROVIDE ACCESS PANELS FOR ALL VALVES OR ANY PIECE OF EQUIPMENT WHEN NECESSARY TO LOCATE ABOVE NON-ACCESSIBLE CEILINGS. PROVIDE SUBMITTAL DRAWINGS FOR APPROVAL OF THE ARCHITECT. NO EQUIPMENT SHALL BE LOCATED DIRECTLY ABOVE WALLS.

13. PROVIDE ALL HOLES, SLEEVES, AND CAULKING FOR INSTALLATION OF THIS WORK. CAULKING TO CONFORM TO FIRE RATING OF WALLS.

14. PIPING SHALL BE ABOVE CEILING AND CLEAR ANY EXISTING PIPING, LIGHTING FIXTURES, DUCTS, ETC.

15. RUN NEW WASTE PIPES AS CLOSE AS POSSIBLE TO UNDERSIDE OF FLOOR SLAB AND VENT PIPING AS CLOSE AS POSSIBLE TO SLAB ABOVE.

16. RUN ALL PIPING OCTAGONAL & PARALLEL TO CLOSEST WALL OR PRIMARY STRUCTURAL ELEMENTS.

17. CONTRACTOR SHALL SUBMIT SKETCH TO THE STRUCTURAL ENGINEER FOR APPROVAL, PRIOR TO MAKING REQUIRED BEAM PENETRATIONS.

18. DISRUPTION OF ANY EXISTING SERVICE SHALL BE COORDINATED WITH THE OWNER AND SHALL BE PERFORMED AT A TIME AND MANNER SO AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE.

19. FOR EXACT LOCATION OF PLUMBING FIXTURES, REFER TO ARCHITECTURAL PLANS AND ELEVATIONS.

20. INSULATION: DOMESTIC HOT AND COLD WATER PIPING SHALL BE INSULATED WITH 1'' THICK 4# DENSITY, GLASS FIBER PRE-FORMED, ALL PURPOSE FLAME RETARDANT JACKET WITH BUILT-IN VAPOR BARRIER. PROVIDE INSULATION PIPE HANGERS WHEN NECESSARY, ARMACELL OR ARMAFIX IPH

21. MATERIALS SHALL BE RATED FOR THE OPERATING TEMPERATURE AND PRESSURE OF THE HYDRONIC SYSTEM. MATERIALS SHALL BE SUITABLE FOR THE TYPE OF FLUID IN THE HYDRONIC SYSTEM.

22. PROJECT PREMISES SHALL BE THOROUGHLY CLEANED AND READY FOR OCCUPANCY INCLUDING ALL FINISHES OF EQUIPMENT PROVIDED AS PART OF THE CONTRACTOR'S WORK.

23. THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER AND SHALL REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER ANY PART THEREOF WHICH MAY BECOME DEFECTIVE DURING THE PERIOD OF GUARANTEE, ORDINARY WEAR AND TEAR EXCEPTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PAY FOR ANY DAMAGES RESULTING FROM OR CAUSED BY DEFECTS IN HIS/HER WORK.

24. PIPING SHOWN IS SCHEMATIC AND DOES NOT INDICATE EVERY OFFSET. ELBOW, UNION, VALVE, TRAP. ACCESS PANEL. ETC., THAT IS REQUIRED FOR A COMPLETE WORKING SYSTEM. PROVIDE ITEMS AND FITTINGS THAT ARE REQUIRED TO INSTALL THE PIPING SYSTEM WITHIN THE SPACE PROVIDED AND THAT ARE REQUIRED FOR A COMPLETE SYSTEM. PIPING SHALL BE PROPERLY SECURED IN ACCORDANCE WITH MSS STANDARD SP-69.

25. MATERIALS SHALL BE RATED FOR THE OPERATING TEMPERATURE AND PRESSURE OF DOMESTIC SYSTEM. MATERIALS SHALL BE SUITABLE FOR THE TYPE OF FLUID IN THE DOMESTIC SYSTEM.

26. PIPE SUPPORTS SHALL BE SELECTED AND INSTALLED IN ACCORDANCE WITH THE MSS SP-69 OR LOCAL CODES, WHICHEVER IS MORE STRINGENT. UTILIZE TRAPEZE HANGERS FOR PARALLEL RUNS OR PIPING. OTHER THAN SPRINKLER AND WASTE PIPING. COPPER PIPING SYSTEMS SHALL BE SUPPORTED ON COPPER OR COPPER-PLATED SUPPORTS. HANG PIPE FROM SUBSTANTIAL BUILDING STRUCTURE, PIPING SHALL NOT BE HUNG FROM OTHER PIPING. ALL RIGID HANGERS SHALL PROVIDE A MEANS OF VERTICAL ADJUSTMENT AFTER ERECTION. SHIELD SHALL BE PROVIDED BETWEEN HANGERS AND INSULATION.

27. PLUMBING FIXTURES:

A. FURNISH AND INSTALL PLUMBING FIXTURES INDICATED. FIXTURES TO BE FIRST QUALITY, CONNECTED, CLEANED, AND READY FOR USE. PIPING TO BE PROPERLY SECURED TO WALLS AND STUDS.
B. PROVIDE TRAPS AND SUPPLIES WITH STOPS. MAKE ALL FINAL CONNECTIONS TO EACH FIXTURE.

28. HANGERS:

A. PIPE HANGERS ON HOT PIPING TO BE ON INSIDE OF INSULATION. PROVIDE WITH SADDLES AND/OR SHIELDS AS REQUIRED.

B. PIPE HANGERS ON COLD PIPING TO BE ON OUTSIDE OF INSULATION. PROVIDE WITH SADDLES AHD/OR SHIELDS AS REQUIRED.

29. PROVIDE ANY AND ALL ITEMS NECESSARY TO COMPLETE THE PLUMBING SYSTEM. THE PLUMBING DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW ALL VALVES, FITTINGS, TRAPS, CONTROL DEVICE METHODS.

30. INSTALL ALL ADA FIXTURES IN AN ADA COMPLIANT MANNER.

31. INSTALL SKAL + GARD #SC-100B ON SINKS SUPPLIES AND TRAPS FOR HANDICAPPED USE.

GENERAL NOTES:

THE DRAWINGS PREPARED FOR THIS PROJECT ARE AN OUTLINE TO SHOW WHERE PIPES, DUCTS AND APPARATUSES MUST GO IN ORDER TO HARMONIZE WITH THE BUILDING AND INSTALLATION OF THE VARIOUS TRADES. WORK MUST BE INSTALLED IN ACCORDANCE WITH THE DRAWINGS AS MUCH AS POSSIBLE. DRAWINGS SHALL BE CAREFULLY CHECKED DURING THE COURSE OF BIDDING AND CONSTRUCTION. IF DISCREPANCIES, ERRORS OR OMISSIONS ARE DISCOVERED PRIOR TO OR DURING CONSTRUCTION PHASE, NOTIFY THE ENGINEER IMMEDIATELY FOR INTERPRETATION OR CORRECTION. TAKE NECESSARY MEASUREMENTS AND RESPONSIBLE FOR SAME, INCLUDING CLEARANCES FOR EQUIPMENT THAT ARE TO BE FURNISHED. THE ARCHITECT /ENGINEER RESERVE THE RIGHT TO MAKE MINOR LOCATION CHANGES OF PIPING AND EQUIPMENT WHERE SUCH ADJUSTMENTS ARE DEEMED DESIRABLE FROM AN APPEARANCE OR OPERATIONAL STANDPOINT. SUCH CHANGES WILL BE ANTICIPATED SUFFICIENTLY IN ADVANCE OR AVOID EXTRA WORK OR DELAY THE PROGRESS OF THE PROJECT.

EXAMINATION OF EXISTING CONDITIONS:

32. VISIT AND CAREFULLY EXAMINE THOSE PORTIONS OF THE SHE AND/OR PRESENT BUILDINGS AFFECTED BY THIS WORK SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL ATTEND THE EXECUTION Of THE WORK BEFORE SUBMITTING PROPOSALS.

33. SUBMISSION OF A PROPOSAL WILL BE CONSTRUCTED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION HAD BEEN MADE, WILL NOT BE RECOGNIZED.

CONNECTIONS TO EXISTING WORK:

34. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES.

35. PROJECT PREMISES SHALL BE THOROUGHLY CLEANED AND READY FOR OCCUPANCY INCLUDING ALL FINISHES OF EQUIPMENT PROVIDED AS PART OF THE CONTRACTOR'S WORK AT PROJECT CLOSEOUT.

PLUMBING SYMBOL LIST

	GATE VALVE
	PIPE UP
	PIPE DOWN
AP	ACCESS PANEL
BFP	BACKFLOW PREVENTER
C.O.P	CLEAN OUT PLUG
CW	COLD WATER
DW	DISHWASHER MACHINE
EX.	EXISTING
HW	HOT WATER
LAV	LAVATORY
OSD	OPEN SITE DRAIN
TPV	TRAP PRIMER VALVE
TV	TEMPERING VALVE
S.A.	SHOCK ABSORBER (WATER HAMMER)
SK	SINK
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEAN OUT
	PONT OF CONNECTION OF NEW WORK TO EXISTING WORK
	END OF DEMOLITION
27	NEW WORK KEYED NOTES
W / 2	REFERENCE WATER RISER TAG NUMBER
CO	FLOOR CLEANOUT
FD	FLOOR DRAIN
WH / 1	EQUIPMENT NUMBER
	NEW VENT
	EXISTING VENT
	DEMOLISHED VENT
	NEW SANITARY
	EXISTING SANITARY
	DEMOLISHED SANITARY
	NEW HOT WATER
	EXISTING HOT WATER
	DEMOLISHED HOT WATER
	NEW COLD WATER
	EXISTING COLD WATER
	DEMOLISHED COLD WATER
G	GAS
G	DEMOLISHED GAS
	REMOTE MANUAL PULL STATION

DISREGARD SYMBOLS WHICH ARE NOT APPLICABLE TO THIS PROJECT

PLUMBING FIXTURE / CONNECTION SCHEDULE

MARK	DESCRIPTION	WASTE	VENT	CW	HW	NOTES
BT	BATH TUBE	2"	1 1/2"	1/2"	1/2"	
SH	SHOWER	2"	1 1/2"	1/2"	1/2"	
LAV	LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	NOTE 1
SK	SINK	1 1/2"	1 1/2"	1/2"	1/2"	NOTE 1
WC	WATER CLOSET	3"	2"	1/2"		
FD	FLOOR DRAIN	3"				
WCO	WALL CLEANOUT	2"				
WB	WASHER BOX	2"	1 1/2"	1/2"	1/2"	NOTE 2

NOTES:
1. PROVIDE WITH THERMOSTATIC MIXING VALVE, SET 100°F
2. PROVIDE WITH WATER HAMMER ARRESTOR

DOMESTIC WATER HEATER SCHEDULE

UNIT NO.	SERVED	MOUNTING	MIN. NOM. GAL	GAS INPUT	ELECTRICAL CONNECTION				1ST HOUR DELIVERY (GPH 100F RISE)
					WATTS	VOLTS	PHASE	CYCLE	
WH-1	UNIT HOT WATER	FLOOR	40	50 MBH	200	120	1	60	87

PIPE MATERIAL SCHEDULE

SANITARY STORM	3" AND SMALLER SERVICE WT. C I. NO-HUB PIPE AND FITTINGS. 4" STORM AND LARGER SERVICE WT. C.I. HUB AND SPIGOT PIPE AND FITTINGS.
VENT	3" AND SMALLER SCH. 40 GAL PIPE AND SCREWED FITTINGS OR TYPE M COPPER PIPE AND SOLDER DRAINAGE FITTINGS.
WATER	4" AND LARGER SCH. 40 GAL PIPE AND SCREWED FITTINGS. 3" AND SMALLER TYPE L COPPER PIPE AND SOLDER FITTINGS.
GAS	BLACK STEEL ASTM A53 SCHEDULE 40. FITTINGS, ASME B16.3, MALLEABLE IRON, 150 PSIG. JOINTS;THREADED FOR PIPE 2 INCH AND SMALLER, WELDED FOR PIPE 2 1/2" AND LARGER

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Engineer Seal:

Date	Revision Description	By

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Designed By: EAF
Drawn By: EAF
Checked By: EAF
DATE 10/23/29
SCALE 12" = 1'-0"
Project No.

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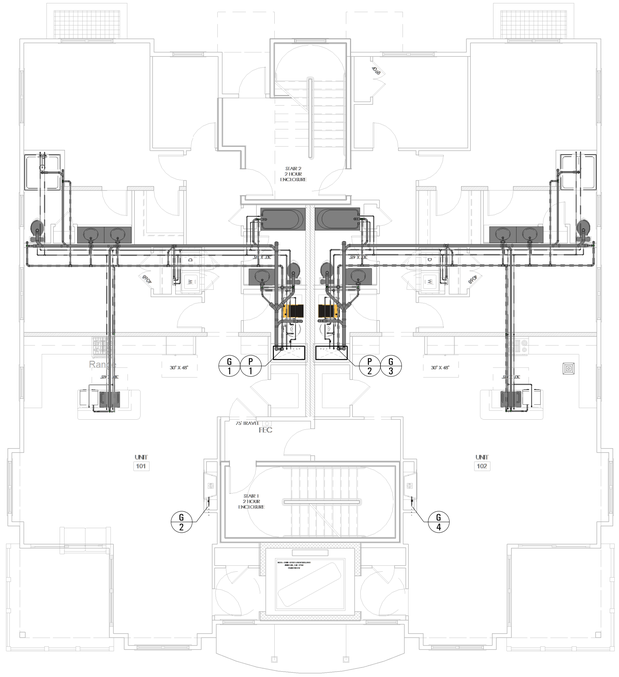
Dover, NH 03820

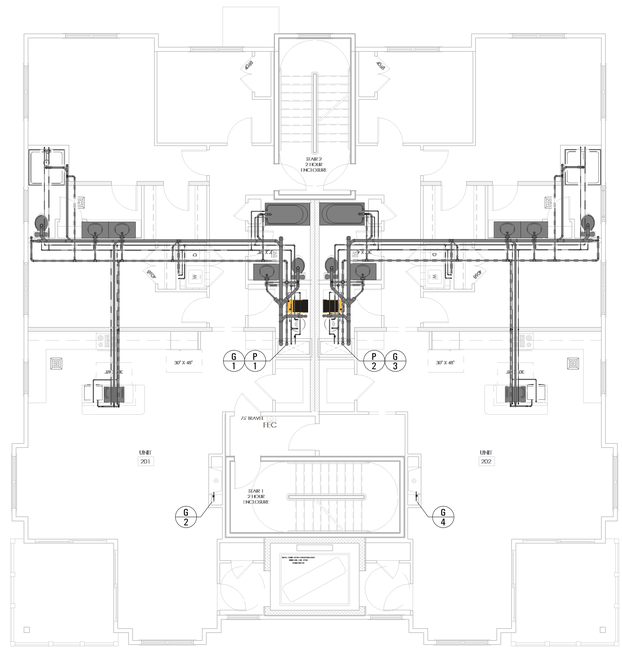
PLUMBING GENERAL NOTES

P000



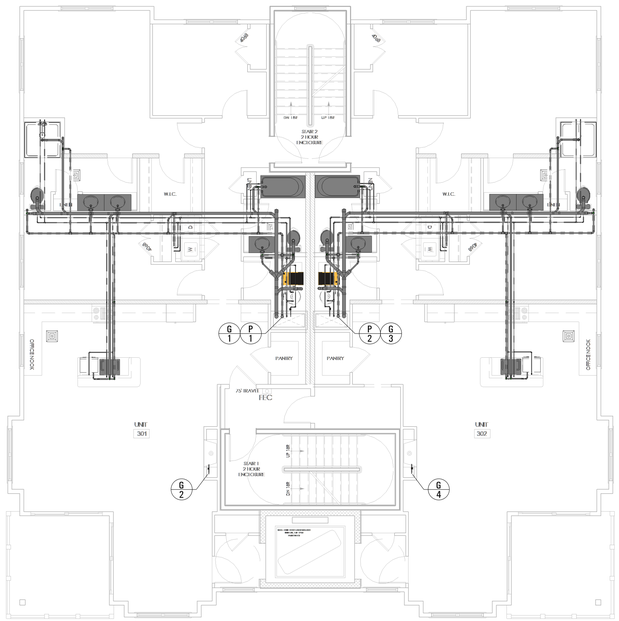
1 1ST FLOOR(P)

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



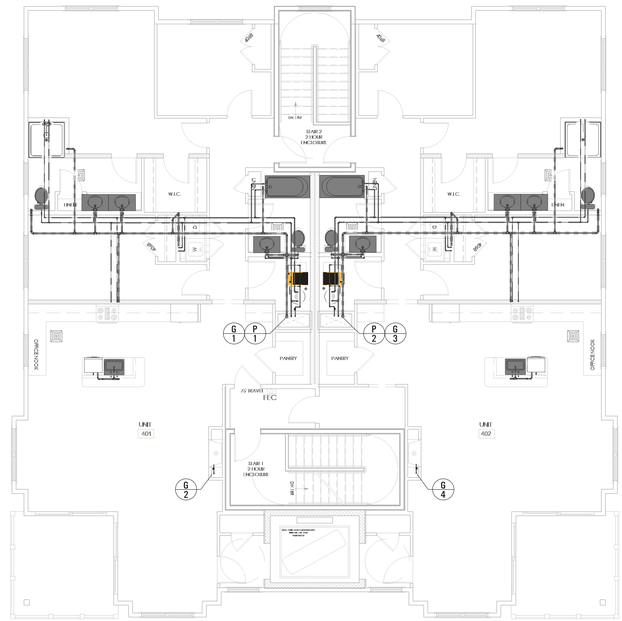
2 2ND FLOOR

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



3 3RD FLOOR

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



4 4TH FLOOR

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

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Drawn By: EAF
Checked By: EAF
10/23/19

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

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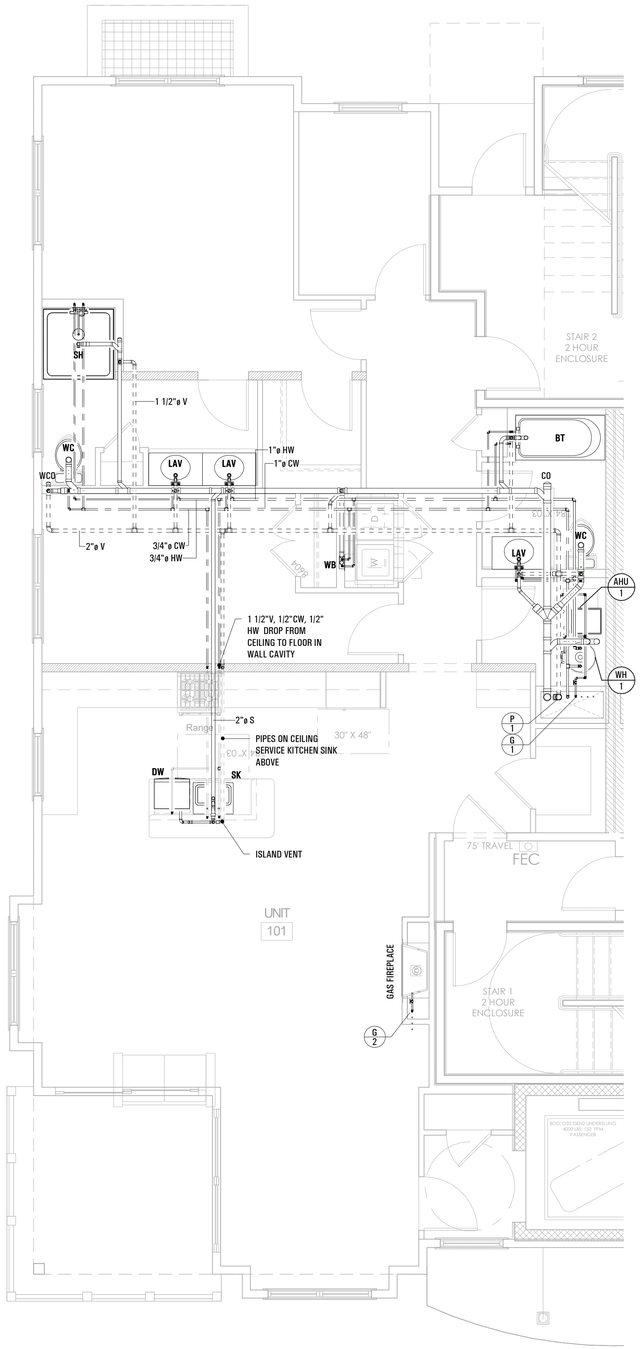
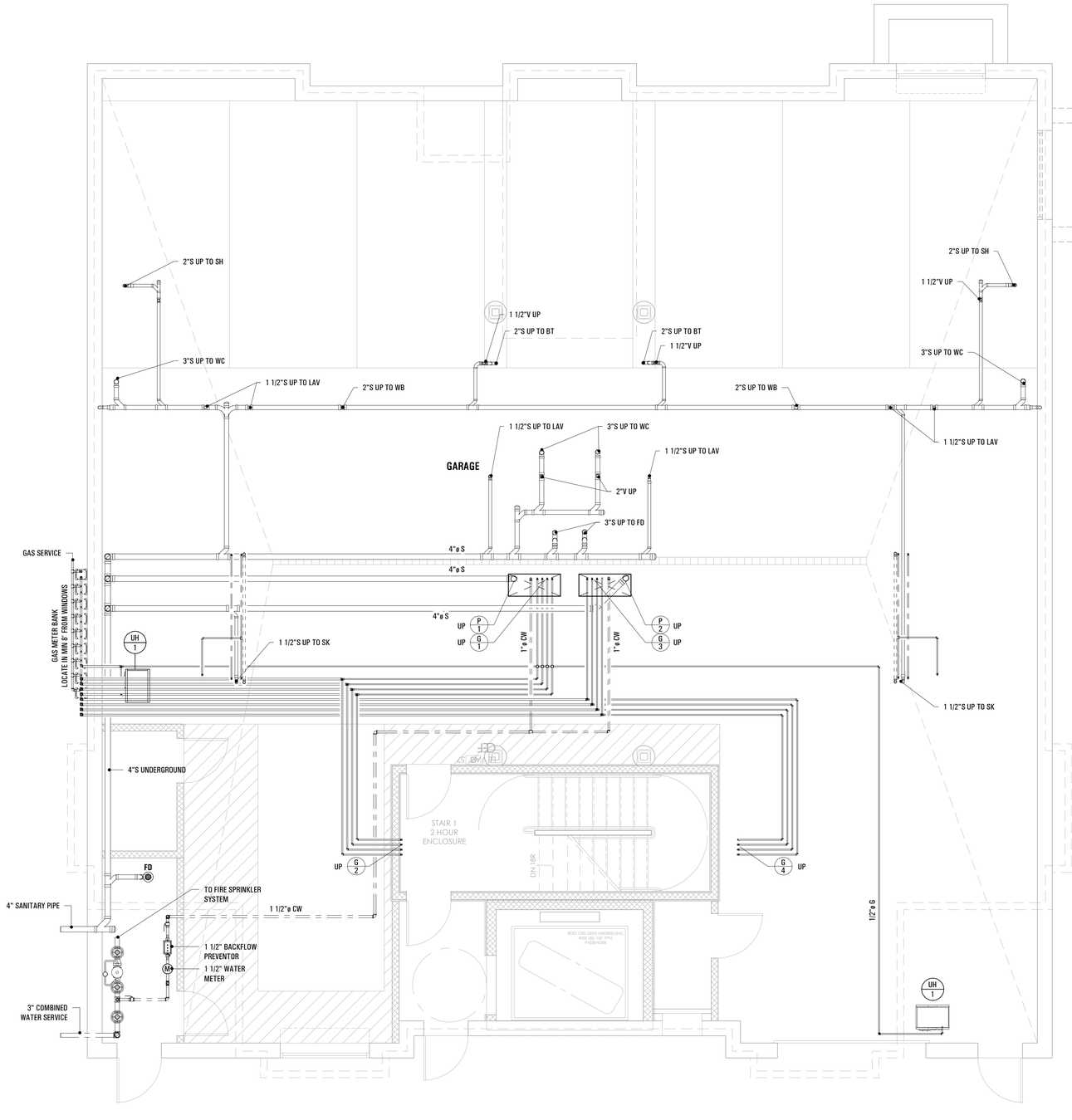
PLUMBING OVERALL PLANS

P100



1 TYPICAL UNIT (P)

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



2 LOWER LEVEL MECHANICAL PLAN

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

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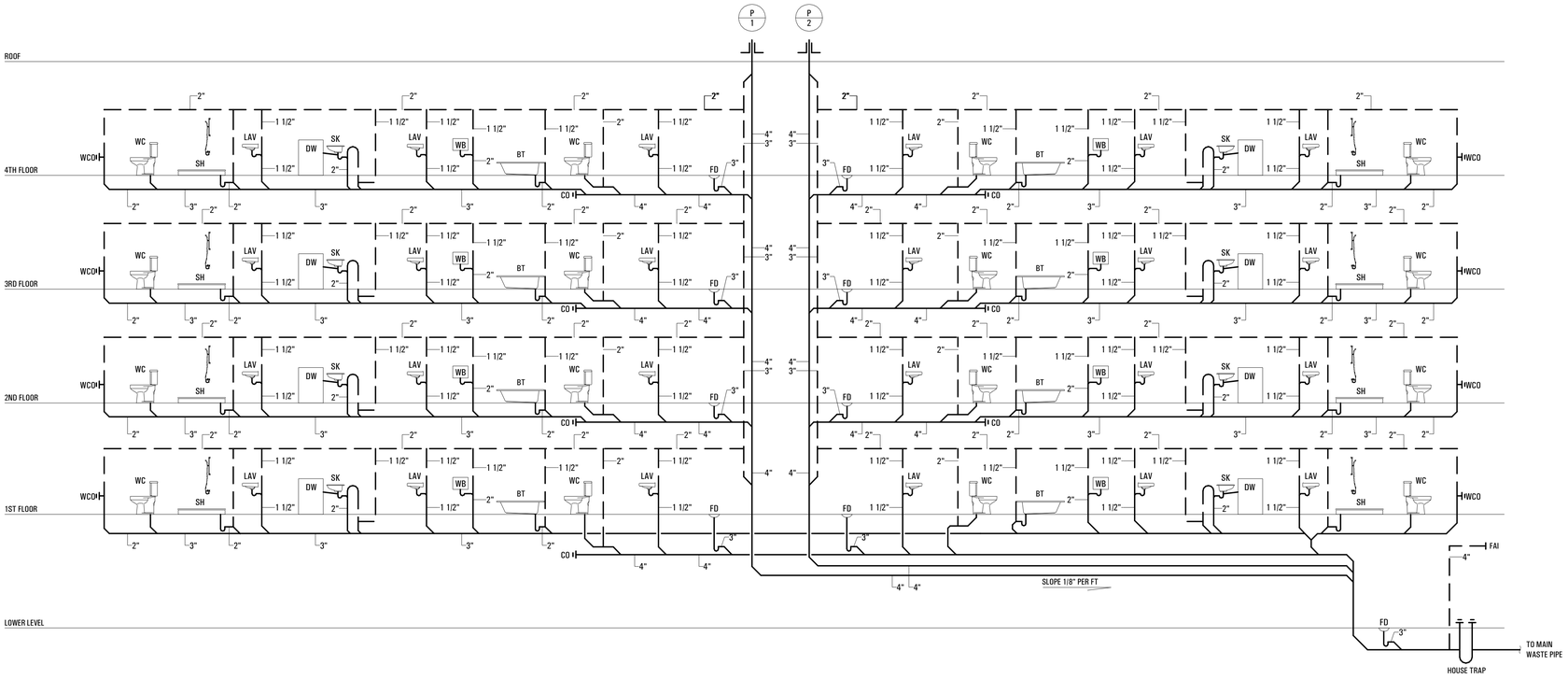
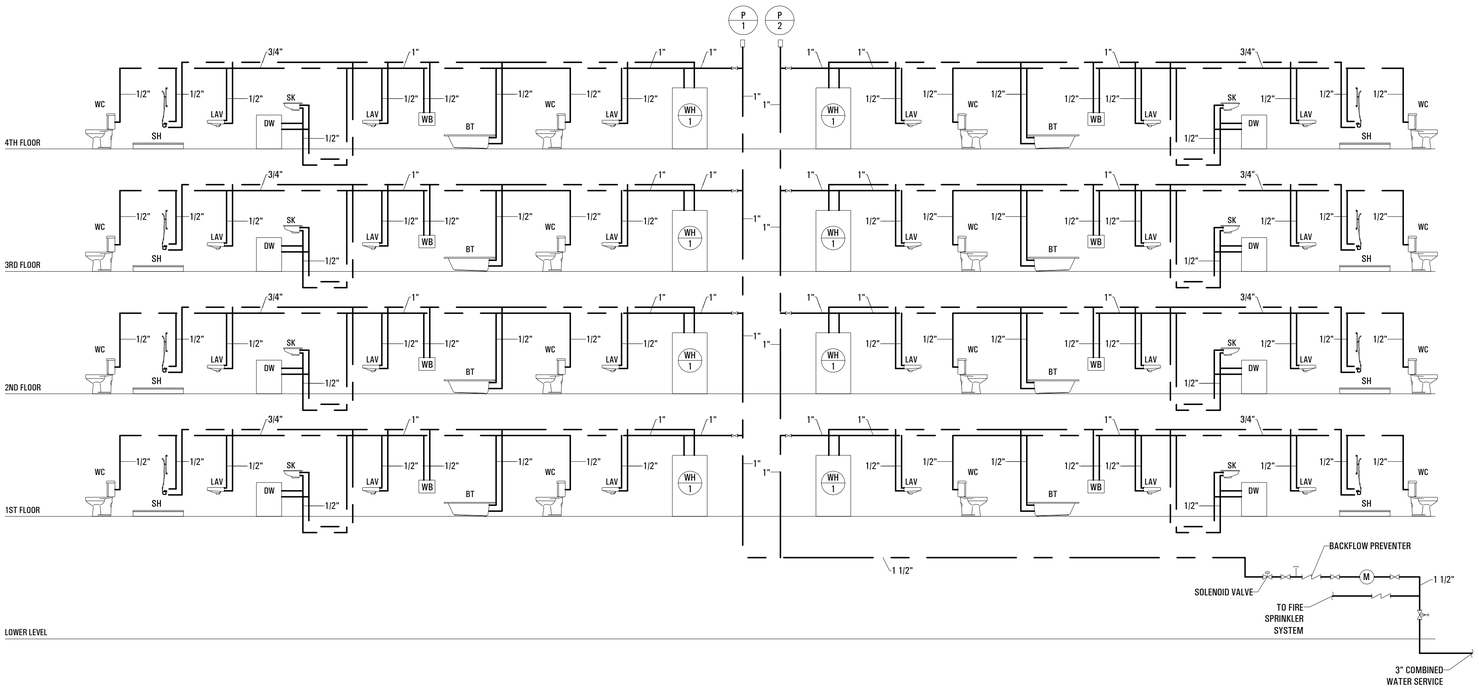
PLUMBING FLOOR PLANS

P101



1 SANITARY RISER DIAGRAM

SCALE: NTS



2 WATER RISER DIAGRAM

SCALE: NTS

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By	Revision Description	Date

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Drawn By: EAF
Reviewed By: EAF
Checked By: EAF
10/23/23
SCALE: NTS

Gundalow Landing
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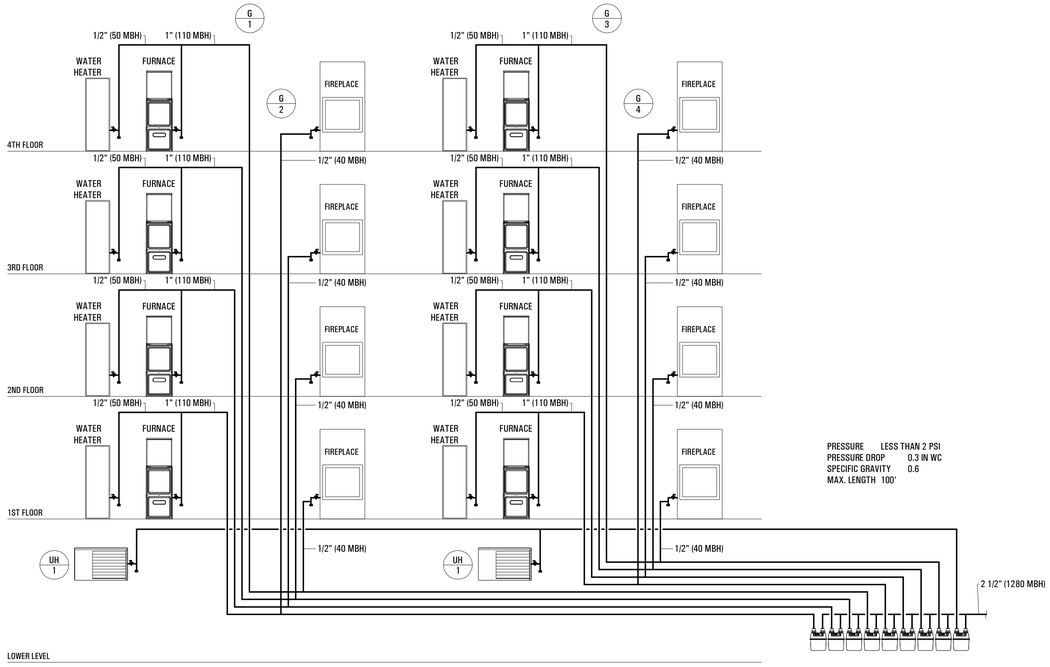
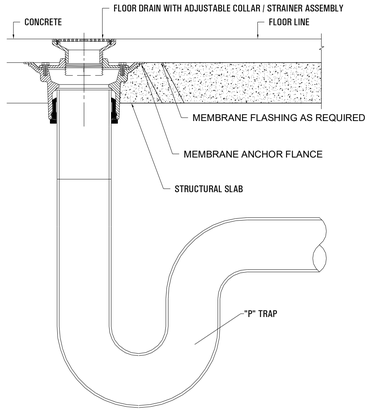
PLUMBING RISER DIAGRAMS

P200



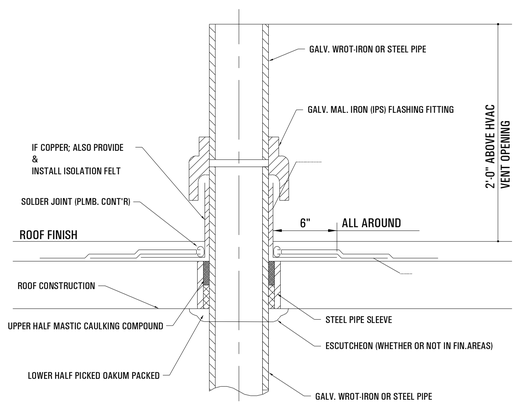
1 GAS RISER DIAGRAM

SCALE: NTS



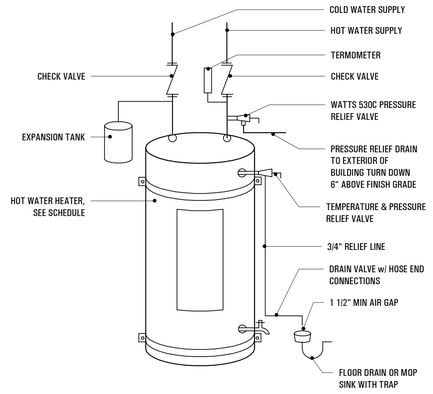
2 FLOOR DRAIN DETAIL

SCALE: NOT TO SCALE



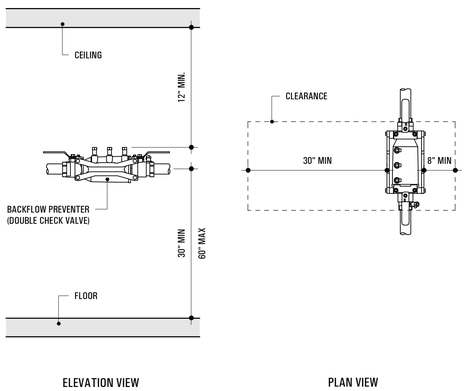
3 VENT STACK DETAIL

SCALE: NOT TO SCALE



4 HOT WATER HEATER DETAIL

SCALE: NTS



ELEVATION VIEW

PLAN VIEW

5 BACKFLOW PREVENTER INSTALLATION

SCALE: NTS

General Contractor:

SJM Construction

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SANFORD, ME 04073

Architect:

CJ Architects

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Engineer Seal:

Date	Revision Description	By

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Designed By: EAF
Drawn By: EAF
Checked By: EAF

Project No.

SCALE: NTS

DATE: 10/23/29

Gundalow Landing

Dover, NH 03820

PLUMBING DETAILS

P201