



Paterson Habitat For Humanity
146 North 1st Street
Paterson, NJ 07522

PROJECT NAME

135 SUMMER STREET
PASSAIC, NJ

CHEN O'NEIL ARCHITECTS, PLLC

29 GANUNG DRIVE
OSSINING, NY 10562
646-812-5566

KEAO
ENGINEERS

Engineering Excellence since 1984
186 WOOD AVE. SOUTH, 1ST FLOOR
ISSELIN, NJ 08850
TEL (732) 635 0044 • FAX (732) 635 1777

2 100% PERMIT SET 2/02/2021

1 80% DD SET 1/08/2021

ISSUE/REVISION DATE

DRAWING TITLE

PLUMBING
FIRST FLOOR
SUPPLY PLAN

DRAWING NO.

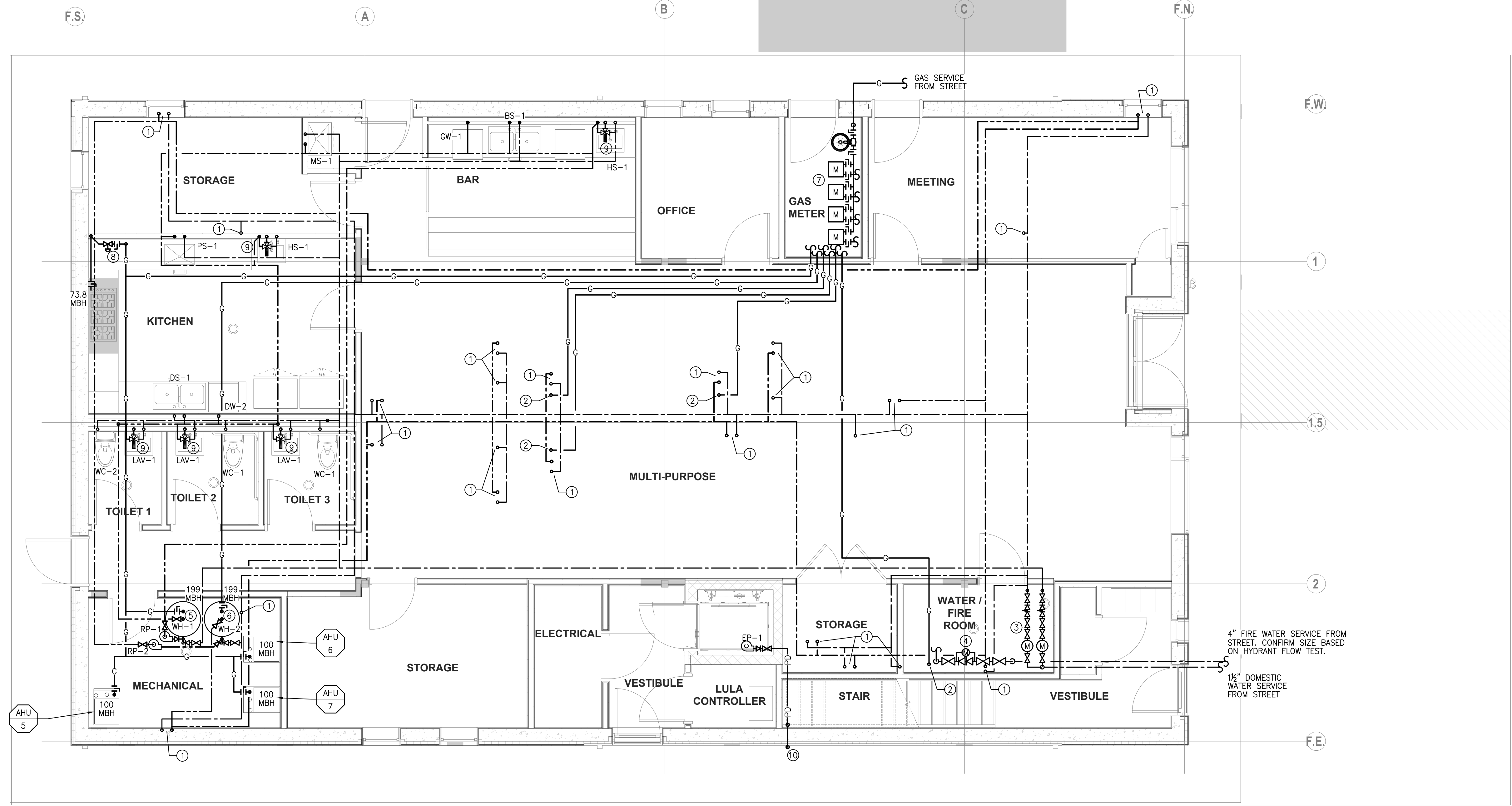
P-101

DATE: 12/01/20

SCALE: AS NOTED

STAMP & SIGNATURE

ARJUN KHACHATRIAN, P.E. - NJ LICENSE #21285
NJ CERTIFICATE OF AUTHORIZATION #246428034700



PLUMBING FIRST FLOOR SUPPLY PLAN
SCALE: 1/4" = 1'-0"

PLUMBING GENERAL NOTES:

- ALL DOMESTIC WATER DISTRIBUTION FOR 1ST FLOOR AND CONDOS IS TO BE RUN IN THE 1ST CEILING.

PLUMBING KEY NOTES:

- WATER LINE(S) UP TO FIXTURES IN 2ND FLOOR CONDO.
- GAS LINE UP TO 2ND FLOOR CONDO.
- PROVIDE TWO 1/2" DOMESTIC WATER METERS AND RPZS, ONE FOR 1ST FLOOR AND ONE FOR 2ND FLOOR CONDOS.
- PROVIDE A 4" SPRINKLER SERVICE WITH DCDA FOR THE BUILDING, CONTINUED ON SPRINKLER PLANS.
- WATER HEATER WH-1 TO SERVE 1ST FLOOR FIXTURES.
- WATER HEATER WH-2 TO SERVE 2ND FLOOR CONDO FIXTURES.
- COORDINATE WITH PSE&G THE INSTALLATION OF 6 STANDARD PRESSURE GAS METERS, ONE TO SERVE THE FIRST FLOOR, ONE TO SERVE EACH OF THE FOUR CONDOS, AND ONE TO SERVE THE CONDOS' WATER HEATER.
- PROVIDE ACCESSIBLE SHUT OFF VALVE AND ANSUL SOLENOID VALVE TO SERVE EQUIPMENT UNDER THE HOOD.
- PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE ON HOT WATER LINE SERVING HAND SINK.
- EXTEND ELEVATOR PUMP DISCHARGE TO GRADE. PROVIDE A PLACARD AT POINT OF TERMINATION INDICATING 'ELEVATOR PIT DISCHARGE' IN 1" HIGH TEXT.



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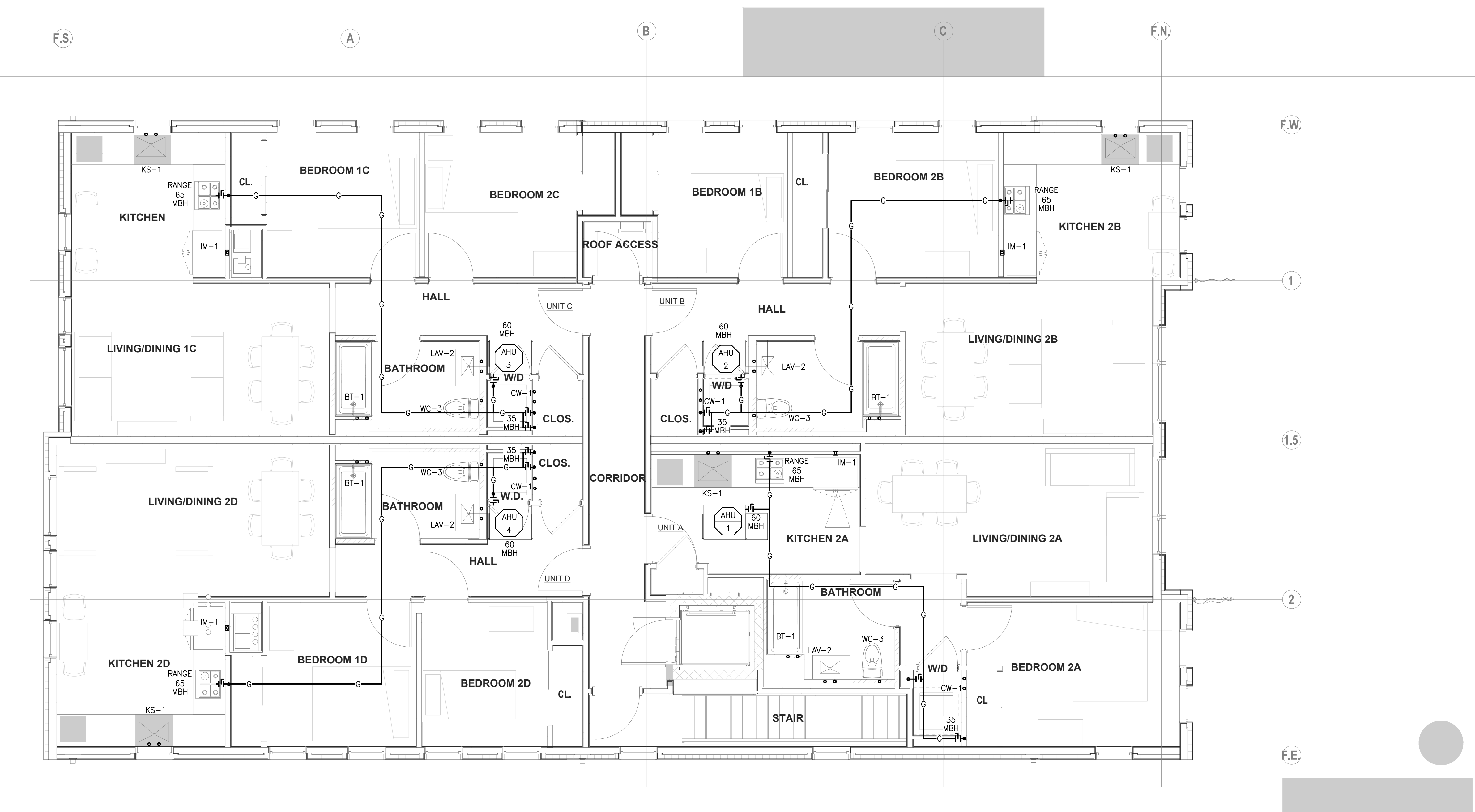
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PLUMBING SECOND FLOOR SUPPLY PLAN
 SCALE: 1/4" = 1'-0"

PLUMBING GENERAL NOTES:

- ALL DOMESTIC WATER DISTRIBUTION FOR 1ST FLOOR AND CONDOS IS TO BE RUN IN THE 1ST CEILING.

2	100% PERMIT SET	2/02/2021
1	80% DD SET	1/08/2021

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**PLUMBING
 SECOND FLOOR
 SUPPLY PLAN**

DRAWING NO.

P-102

DATE: 12/01/20
 SCALE: AS NOTED

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ARMEN KHACHATURIAN, P.E. - NJ LICENSE #21295
 NJ CERTIFICATE OF AUTHORIZATION #246428034700



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2 100% PERMIT SET 2/02/2021

1 80% DD SET 1/08/2021

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DRAWING TITLE

PLUMBING
FIRST FLOOR
WASTE PLAN

DRAWING NO.

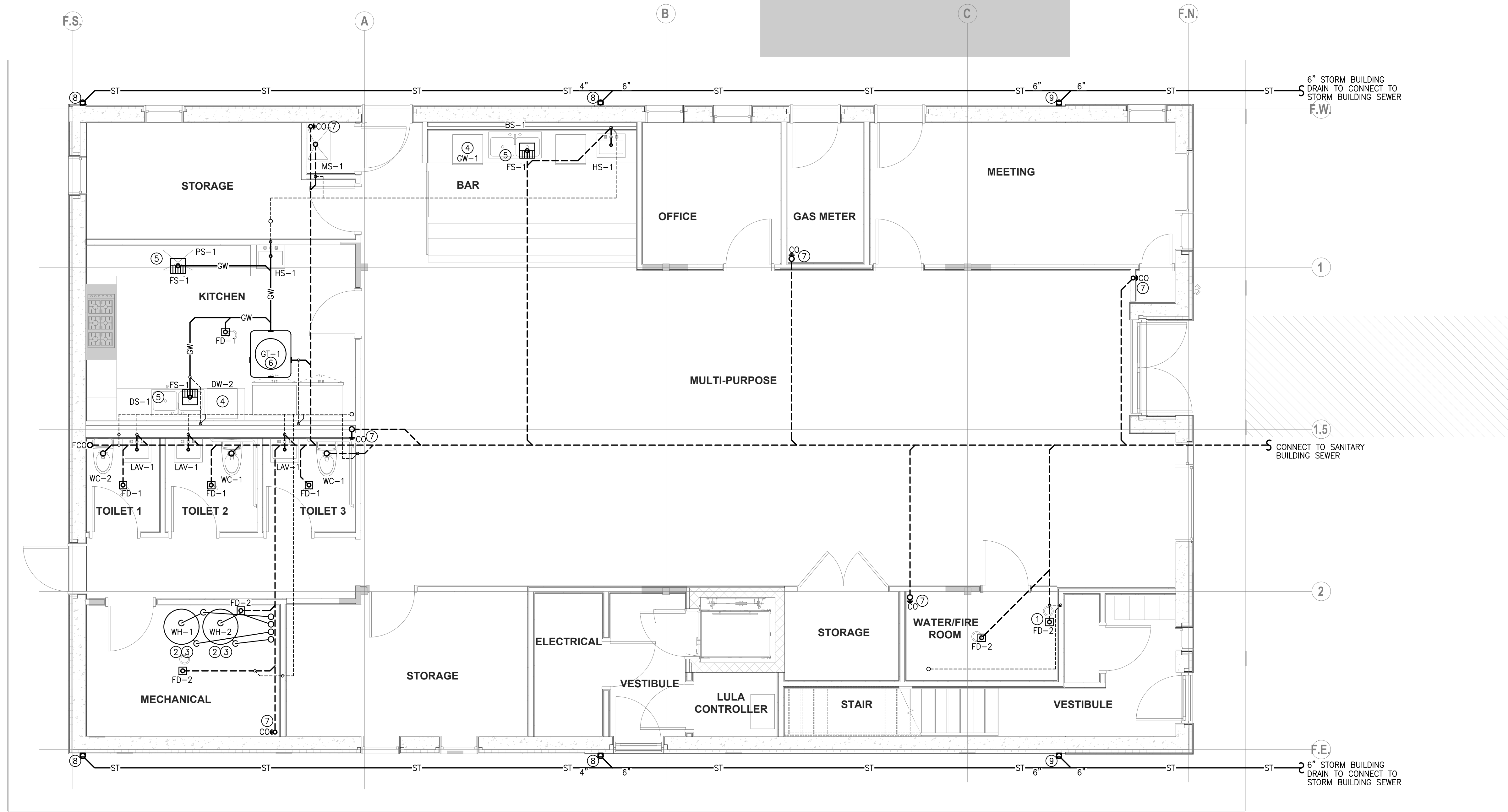
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SCALE: AS NOTED

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ARJUN KUMARATHURAN, P.E. - NJ LICENSE #21225
NJ CERTIFICATE OF AUTHORIZATION #246428034700



PLUMBING FIRST FLOOR WASTE PLAN
SCALE: 1/4" = 1'-0"

PLUMBING GENERAL NOTES:

- ALL DOMESTIC WATER DISTRIBUTION FOR 1ST FLOOR AND CONDOS IS TO BE RUN IN THE 1ST CEILING.

PLUMBING KEY NOTES:

- EXTEND INDIRECT WASTE FROM RP2 DRAIN PORT TO FLOOR DRAIN VIA AN AIR GAP.
- EXTEND WATER HEATER CONDENSATE TO FLOOR DRAIN VIA CONDENSATE NEUTRALIZATION KIT.
- EXTEND 4" PVC COMBUSTION AIR INTAKE AND 4" CPVC VENT PIPE FROM WATER HEATER UP TO ROOF AND TERMINATE PER MANUFACTURERS' REQUIREMENTS.
- EXTEND INDIRECT WASTE FROM DISHWASHER TO FLOOR SINK.
- EXTEND INDIRECT WASTE FROM SINK TO FLOOR SINK.
- PROVIDE AND INSTALL RECESSED GREASE INTERCEPTOR.
- SANITARY DROP FROM 2ND FLOOR FIXTURES.
- PROVIDE AND INSTALL 3"x4" ALUMINUM STORM LEADER DOWN FROM GUTTER SYSTEM. PROVIDE TRANSITION TO 4" UNDERGROUND PIPING. SEE ARCHITECTURAL DRAWINGS FOR FINISH REQUIREMENTS.
- PROVIDE AND INSTALL 2"x3" ALUMINUM STORM LEADER DOWN FROM GUTTER SYSTEM. PROVIDE TRANSITION TO 3" UNDERGROUND PIPING. SEE ARCHITECTURAL DRAWINGS FOR FINISH REQUIREMENTS.



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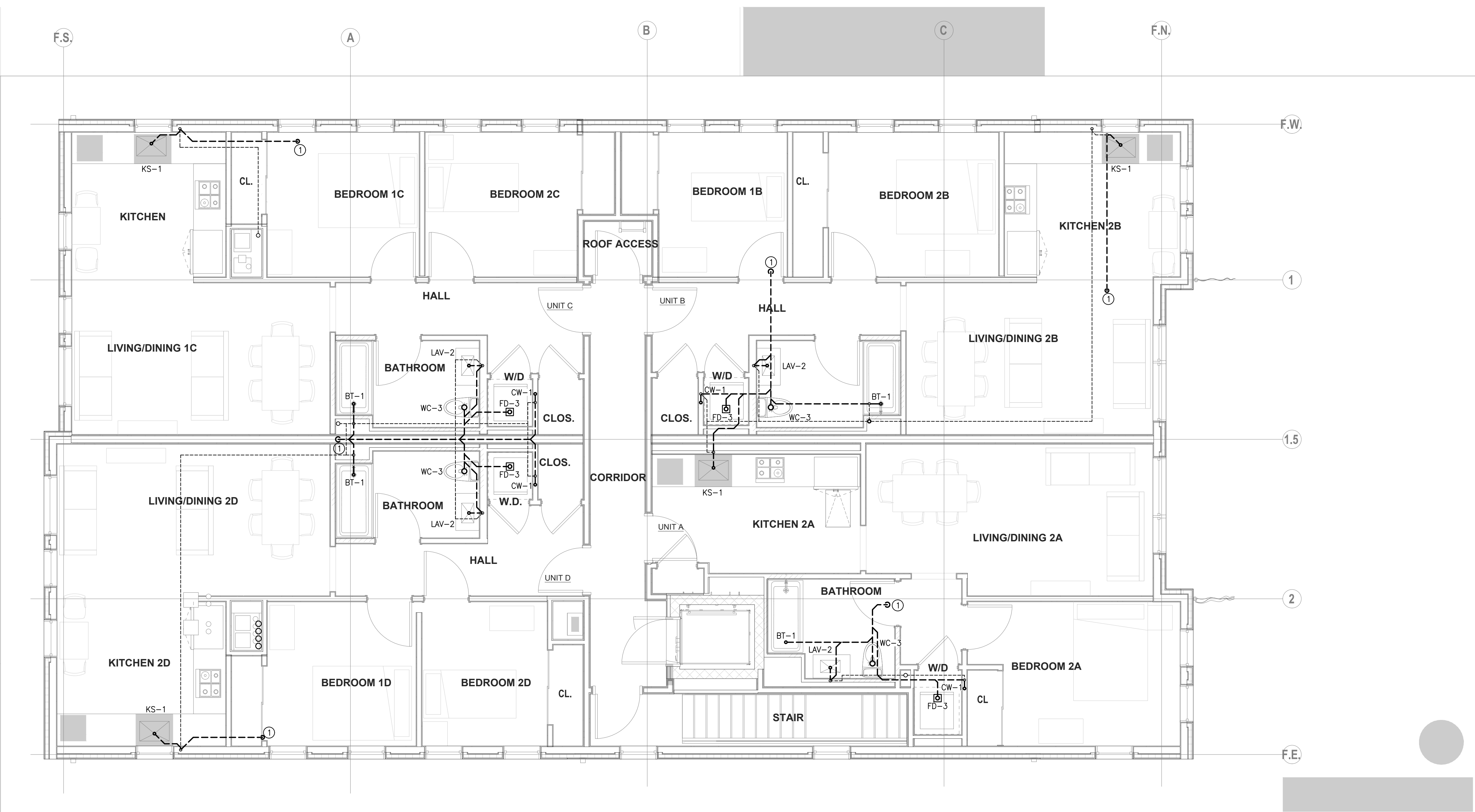
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PLUMBING SECOND FLOOR WASTE PLAN
SCALE: 1/4" = 1'-0"

PLUMBING KEY NOTES:

1. DROP SANITARY LINE DOWN THROUGH 1ST FLOOR AND TIE INTO SANITARY BUILDING DRAIN.

2	100% PERMIT SET	2/02/2021
1	80% DD SET	1/08/2021

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DRAWING TITLE

**PLUMBING
SECOND FLOOR
WASTE PLAN**

DRAWING NO.

P-202

DATE: 12/01/20
SCALE: AS NOTED

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ARMEN KHACHATURIAN, P.E. - NJ LICENSE #21295
NJ CERTIFICATE OF AUTHORIZATION #246428034700



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2 100% PERMIT SET 2/02/2021

1 80% DD SET 1/08/2021

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DRAWING TITLE

PLUMBING
ROOF PLAN

DRAWING NO.

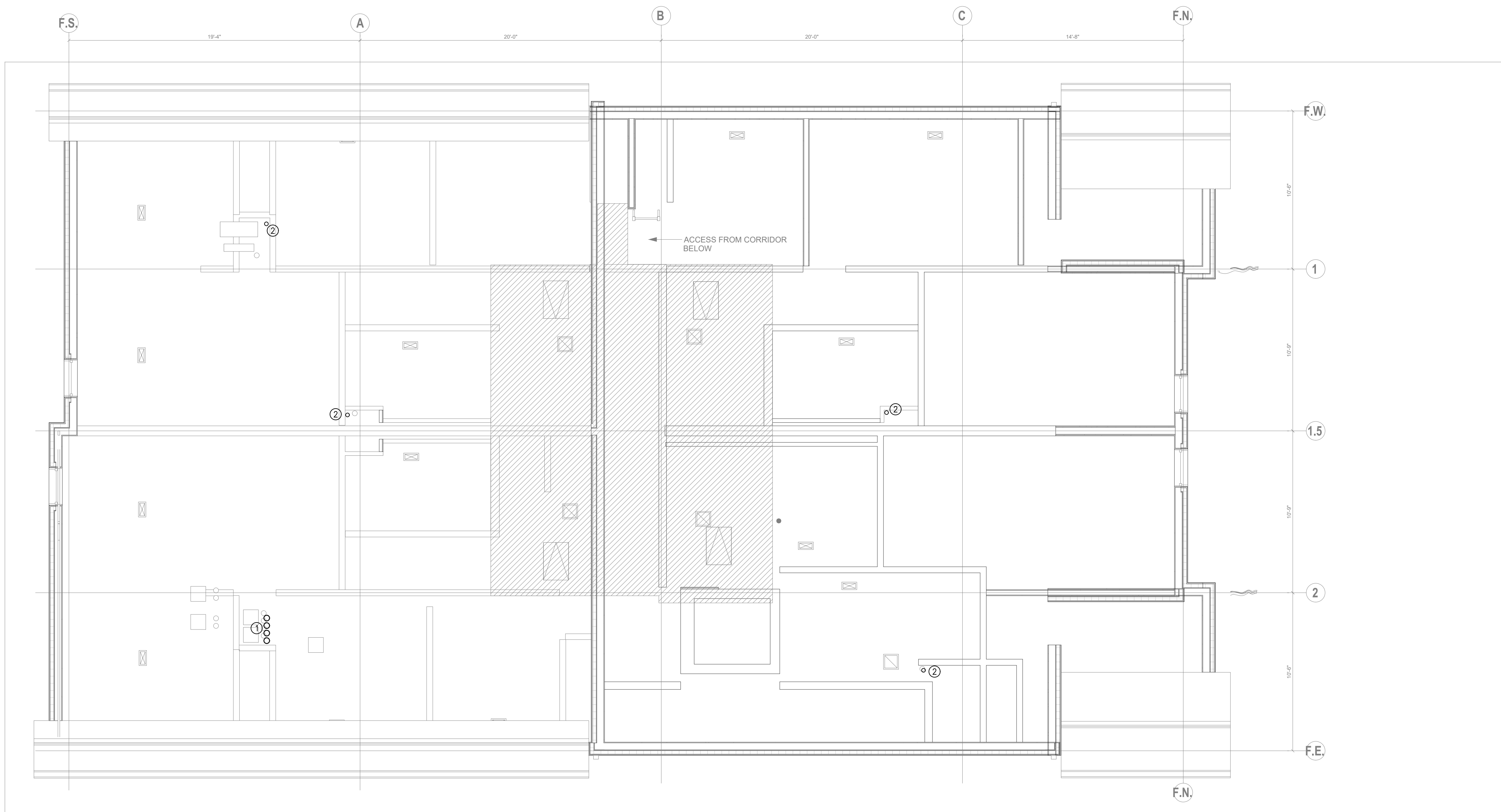
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PLUMBING ROOF PLAN

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

- PLUMBING KEY NOTES:**
1. TERMINATE 4" PVC COMBUSTION AIR INTAKES AND 4" CPVC VENT PIPES FROM WATER HEATERS PER MANUFACTURERS' REQUIREMENTS. VENT PIPES ARE TO TERMINATE 3' ABOVE MECHANICAL FRESH AIR INTAKES.
 2. SANITARY VENT THROUGH ROOF, INSTALL PER DETAIL.

1. SCOPE OF WORK:

1.1. ALL WORK INDICATED ON THE DRAWINGS AND SPECIFICATIONS SHALL BE INCLUDED UNDER THE BASE BID, EXCEPT WHERE THERE IS SPECIFIC REFERENCE TO EXCLUSION AND INCORPORATION IN OTHER QUOTATIONS.

2. GENERAL:

- 2.1. EXISTING PIPING WHERE INDICATED FOR EXISTING SYSTEMS IS DIAGRAMMATIC ONLY.
2.2. BECOME THOROUGHLY FAMILIAR WITH ACTUAL BUILDING SYSTEMS, WHICH ARE TO BE CHANGED, ALTERED, OR TO WHICH NEW CONNECTIONS ARE TO BE MADE. VERIFY ALL EXISTING CONDITIONS INCLUDING PIPE SIZE, LOCATION, AND ELEVATION.
2.3. THE INTENT OF THE WORK IS INDICATED ON THE DRAWINGS AND DESCRIBED HEREINAFTER. NO CONSIDERATION WILL BE GRANTED FOR REASON OF LACK OF FAMILIARITY ON THE PART OF THE CONTRACTOR REGARDING ACTUAL PHYSICAL CONDITIONS AT THE SITE.
2.4. COORDINATE WORK WITH ALL TRADES AND EXISTING CONDITIONS OF THE JOB SITE AND MAINTAIN REQUIRED CEILING HEIGHTS AND SPACE CONDITIONS.
2.5. ALL EQUIPMENT SHALL BE ASBESTOS FREE AND INDICATED AS SUCH.
2.6. PROVIDE APPROVED BACKFLOW PREVENTION FOR CONNECTION TO NON - POTABLE FIXTURES AND EQUIPMENT AS REQUIRED BY CODE.
2.7. ALL PIPING AND EQUIPMENT SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE. HANGERS AND SUPPORTS SHALL BE SPECIFICALLY APPROVED FOR USE IN EACH APPLICATION. WHERE OVERHEAD CONDITIONS DOES NOT PERMIT THE FASTENING OF HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND APPROVED. DO NOT USE EXPANSION SHIELDS.
2.8. NO PLUMBING WORK SHALL BE HUNG FROM DUCTWORK OR THE HANGERS OF OTHER TRADES.
2.9. DUE TO THE NATURE OF ALTERATION WORK WHICH REQUIRES THE BUILDING OR FACILITY TO BE KEPT OPERABLE AT ALL TIMES, IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE ALL ACTIVITIES, CONNECTIONS, SHUT DOWNS AND THE LIKE WITH THE GENERAL CONTRACTOR, TENANT, AND BUILDING OWNER. ANY INTERRUPTIONS OF BUILDING SERVICES INCLUDING PHYSICAL ACCESS TO ADJACENT SPACES MUST BE COORDINATED WITH THE BUILDING OWNER. ALL TEMPORARY CONNECTIONS OR AFTER-HOUR WORK SHALL BE SO ARRANGED WITH ALL PARTIES INVOLVED.
2.10. IF THIS TRADE MUST PERFORM WORK IN OCCUPIED AREAS, IT SHALL MAKE ARRANGEMENTS WITH THE GENERAL CONTRACTOR AND THE OWNER AS TO THE TIME AND METHOD IN WHICH THIS WORK SHALL BE PERFORMED. ARRANGE FOR ALL ADJACENT AREAS TO BE PROPERLY PROTECTED AGAINST DAMAGE, DEBRIS, DIRT AND DUST.

2.11. PROVIDE AS PART OF NEW WORK:

- 2.11.1. HANGERS AND SUPPORTS FOR PIPING
2.11.2. SCAFFOLDING, RIGGING, AND HOISTING
2.11.3. RUBBISH REMOVAL AND CLEANING
2.11.4. CUTTING AND PATCHING
2.11.5. SLEEVES, OPENINGS AND THE CORE DRILLING OF EXISTING SLABS
2.11.6. CAULKING, FIREPROOFING, AND THE PACKING AND FILLING OF SLEEVES AND OPENINGS
2.11.7. SHOP DRAWINGS AND "AS BUILT" DRAWINGS
2.11.8. OBTAINING ALL REQUIRED PERMITS, APPROVALS, ACCEPTANCE, FILING AND INSPECTION CERTIFICATES
2.11.9. GUARANTEE ALL WORK, LABOR AND MATERIALS FOR ONE YEAR FOLLOWING DATE OF ACCEPTANCE
2.11.10. VERIFYING EXISTING CONDITIONS AT THE PROJECT SITE
2.11.11. TESTS: OPERATION, PERFORMANCE AND CODE-REQUIRED TESTS
2.11.12. PROTECTION OF WORK AND ADJACENT SPACES DURING CONSTRUCTION
2.11.13. COORDINATION WITH OTHER TRADES
2.11.14. IDENTIFICATION: VALVE TAGS, VALVE TAG SCHEDULES, AND PIPING IDENTIFICATION
2.11.15. MANUALS: O&M MANUAL & SUBMITTAL DATA TO BE PROVIDED TO OWNER FOR ALL EQUIPMENT AND SYSTEMS REQUIRING MAINTENANCE PROVIDED FOR THE PROJECT.
2.11.16. NARRATIVE OF HOW EACH SYSTEM OPERATES, INCLUDING SETPOINTS

2.12. DRAWINGS ARE DIAGRAMMATIC AND THEREFORE DO NOT RELIEVE THIS CONTRACTOR FROM PROVIDING ALL WORK AND EQUIPMENT NECESSARY TO COMPLETE THE INSTALLATION ACCORDING TO THE REQUIREMENTS.

2.13. THE ARRANGEMENT, POSITION, AND CONNECTION OF PIPES, DRAINS, VALVES, ETC., INDICATED ON THE DRAWINGS SHALL BE TAKEN AS A CLOSE APPROXIMATION, AND WHILE THEY SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE, THE RIGHT IS RESERVED BY THE OWNER TO CHANGE THE LOCATIONS TO ACCOMMODATE ANY CONDITIONS WHICH MAY ARISE DURING THE PROGRESS OF THE WORK, WITHOUT ADDITIONAL COMPENSATION TO THIS CONTRACTOR FOR SUCH CHANGES, PROVIDED THAT THE CHANGES ARE REQUESTED PRIOR TO THE INSTALLATION OF THIS CONTRACTOR'S WORK.

2.14. THE RESPONSIBILITY FOR ACCURATELY LAYING OUT THE WORK RESTS WITH THIS CONTRACTOR, SHOULD IT BE FOUND THAT ANY OF HIS WORK IS SO LAID OUT THAT INTERFERENCE WILL OCCUR, HE SHALL SO REPORT THAT TO THE GENERAL CONTRACTOR.

2.15. ALL MATERIALS AND FIXTURES USED FOR THE ENTIRE PLUMBING PROJECT SHALL BE NEW AND VOID OF ANY DEFECTS. ALL MATERIALS AND FIXTURES SHALL CARRY STANDARD MANUFACTURERS WARRANTY AGAINST ANY DEFECTS AND / OR DEFICIENCIES.

2.16. ALL COMPONENTS AND MATERIALS USE AS A PORTION OF THE DOMESTIC WATER SYSTEM ARE TO BE NSF 61 LISTED FOR USE IN POTABLE WATER SYSTEMS AND NSF-372 LISTED AS "LEAD FREE".

3. CODES, PERMITS, AND INSPECTIONS:

- 3.1. INSTALL ALL WORK IN FULL ACCORDANCE WITH THE REQUIREMENTS OF ALL LOCAL AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION OVER THESE MATTERS, AS WELL AS WITH ANY REQUIREMENTS OF NFPA, UL, FM, ETC., AND OTHER APPLICABLE CODES.
3.2. SECURE AND PAY FOR ALL NECESSARY APPROVALS, PERMITS, INSPECTIONS, CARTING, LEGAL DUMPING, ETC., AND DELIVER THE OFFICIAL RECORDS OF THE GRANTING OF PERMITS TO THE ARCHITECT AND OWNER WITHOUT ANY ADDITIONAL COST TO THE OWNER.
3.3. PAY ALL FILING FEES TO OBTAIN RELEASE OF APPROVED PLANS.
3.4. PAY ROYALTIES OR FEES REQUIRED IN CONNECTION WITH THE USE OF PATENTED DEVICES OR SYSTEMS, AND SAVE THE OWNER, THE ARCHITECT, THE CONSULTING ENGINEER, AND THE TENANT HARMLESS FROM ANY CLAIMS OR LAWSUITS ARISING FROM SUCH USE, AND INDEMNIFY EACH THEREOF AGAINST ATTORNEYS' FEES IN CONNECTION THEREWITH.
3.5. PROVIDE ALL SIGNS REQUIRED BY THE MUNICIPAL AUTHORITIES.

4. GUARANTEES AND CERTIFICATIONS:

4.1. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM LEAKS OR DEFECTS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP AS WELL AS DAMAGE TO THE WORK OF OTHER TRADES RESULTING FROM SAME SHALL BE REPLACED OR REPAIRED AS DIRECTED FOR THE DURATION OF STIPULATED GUARANTEE PERIODS. THE DURATION OF GUARANTEE PERIODS SHALL BE ONE YEAR FROM THE DATE OF THE FINAL ACCEPTANCE OF THE INSTALLATION BY THE OWNER, UNLESS A MORE STRINGENT PERIOD IS STIPULATED ELSEWHERE.

5. ENGINEER'S REVIEW, SHOP DRAWINGS, AND CERTIFICATIONS:

5.1. PREPARE AND SUBMIT DETAILED SHOP DRAWINGS. THE ENGINEER WILL REVIEW SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES IS ONLY FOR THE CONVENIENCE OF THE OWNER IN FOLLOWING THE WORK AND DOES NOT RELIEVE THIS TRADE OF RESPONSIBILITY FOR DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW SHALL NOT BE CONSTRUED AS A COMPLETE OR DETAILED CHECK OF THE WORK SUBMITTED, NOR SHALL IT RELIEVE THIS TRADE OF RESPONSIBILITY FOR ERRORS OF ANY SORT IN THE SHOP DRAWINGS AND SAMPLES, OR FROM THE NECESSITY OF FURNISHING ANY WORK REQUIRED BY THE CONTRACT DOCUMENTS WHICH HAVE BEEN OMITTED FROM THE SHOP DRAWING SUBMITTALS.

5.2. NO PART OF THE WORK SHALL BE STARTED IN THE SHOP OR IN THE FIELD UNTIL THE ENGINEER HAS REVIEWED THE SHOP DRAWINGS AND SAMPLES FOR THAT PORTION OF THE WORK. THEREAFTER, THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE INDICATED STATUS OF THE REVIEWED SHOP DRAWINGS. PRIOR TO ASSEMBLING THE WORK, THE FOLLOWING SHALL BE SUBMITTED: SCALED FLOOR PLAN AND CEILING DRAWINGS WITH DIMENSIONED LOCATIONS OF ALL PIPING AND EQUIPMENT INCLUDING SIZES, ELEVATIONS, AND APPROPRIATE INDICATION OF COORDINATION BETWEEN STRUCTURAL AND MECHANICAL ELEMENTS. MANUFACTURER'S CATALOGUE CUTS OF ALL EQUIPMENT TO BE USED. SAMPLES OF ALL DEVICES, WHICH WILL BE CLEARLY VISIBLE TO VIEW. ALL SUBMITTALS SHALL BE PROPERLY IDENTIFIED WITH PROJECT NAME, ARCHITECT, ENGINEER, AND SUBCONTRACTOR'S NAME, ADDRESS, AND TELEPHONE NUMBER. PROVIDE CLEAR DETAILED REPRODUCIBLE "AS-BUILT" DRAWINGS UPON COMPLETION OF WORK AND PROVIDE SETS OF "THE SAME TO LANDLORD AS DIRECTED.

5.3. THE ARCHITECT AND/OR ENGINEER WILL REVIEW SHOP DRAWINGS AND SAMPLES WITH REASONABLE PROMPTNESS AND WILL RETURN THEM TO THE CONTRACTOR STAMPED TO INDICATE THE APPROPRIATE ACTION AS FOLLOWS:

5.3.1. "NO EXCEPTIONS TAKEN" MEANS THAT FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED PROVIDING THE SUBMITTAL COMPLIES WITH THE CONTRACT DOCUMENTS.

5.3.2. "MAKE CORRECTIONS NOTED" MEANS THAT FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED PROVIDING THE SUBMITTAL COMPLIES WITH THE ARCHITECT'S AND/OR ENGINEER'S NOTATIONS AND THE CONTRACT DOCUMENTS. A COPY OF THE CORRECTED SUBMITTAL SHALL BE RETURNED TO THE ARCHITECT AND/OR ENGINEER FOR RECORD. IF, FOR ANY REASON, THE CONTRACTOR CANNOT COMPLY WITH THE NOTATIONS, THE CONTRACTOR SHALL RESUBMIT AS DESCRIBED FOR SUBMITTALS STAMPED "REVISE AND RESUBMIT".

5.3.3. "REVISE AND RESUBMIT" MEANS THAT THE CONTRACTOR MUST COMPLY WITH THE ARCHITECT'S AND/OR ENGINEER'S NOTATIONS AND RESUBMIT BEFORE FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED. SUBMITTALS STAMPED IN THIS MANNER ARE NOT PERMITTED ON THE JOB SITE.

5.3.4. "REJECTED" MEANS THAT THE SUBMITTAL DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS AND THAT FABRICATION, MANUFACTURE OR CONSTRUCTION SHALL NOT PROCEED. SUBMITTALS STAMPED IN THIS MANNER ARE NOT PERMITTED ON THE JOB SITE.

6. CUTTING AND PATCHING:

6.1. DO ANY CUTTING REQUIRED FOR THE PASSAGE OR INSTALLATION OF PIPES, SUPPORTS, AND THE LIKE. IN GENERAL, OTHERS WILL DO DEMOLITION OF EXISTING WALLS AND CEILINGS.

6.2. OTHERS WILL DO ALL PATCHING, THE EXPENSE OF CUTTING AND RESTORING SURFACES TO THEIR ORIGINAL CONDITION WHEN CAUSED BY THIS TRADE'S FAILURE TO PERFORM ITS PRELIMINARY WORK SHALL BE BORNE BY THIS TRADE.

7. SLEEVES:

7.1. PROVIDE 18 GAUGE GALVANIZED SHEET METAL SLEEVES FOR ALL PIPES PASSING THROUGH WALLS OR FLOORS. PROVIDE SLEEVES WITH AN I.D. OF AT LEAST 1/2" GREATER THAN THE OUTSIDE OF THE PIPE, INCLUDING INSULATION WHICH MUST BE CONTINUOUS THROUGH THE SLEEVE. PACK SPACE BETWEEN PIPES AND SLEEVES WITH AN APPROVED FIRESTOP MATERIAL. WHERE SLEEVES PASS THROUGH RATED CONSTRUCTION, FIT ESCUTCHEONS ON BOTH SIDES OF CONSTRUCTION.

8. GENERAL INSTALLATION OF PIPE:

8.1. MAINTAIN A MINIMUM OF 1/8" PITCH PER FOOT IN THE DIRECTION OF FLOW ON ALL DRAINAGE LINES.

8.2. USE REDUCING FITTINGS, UNLESS OTHERWISE APPROVED IN SPECIAL CASES, IN MAKING REDUCTION IN SIZE OF PIPE. BUSHINGS WILL NOT BE ALLOWED UNLESS SPECIFICALLY APPROVED.

8.3. WHERE CHROME PLATED PIPING IS INSTALLED, CUT AND THREAD PIPE SO THAT NO UN-PLATED PIPE THREADS ARE VISIBLE UPON COMPLETING OF WORK.

8.4. CONNECTION TO GAS APPLIANCES SHALL INCLUDE AN EQUIPMENT SHUTOFF, A DIRT LEG AND FINAL CONNECTION SHALL BE MADE WITH A ANSI Z21.24 LISTED FLEXIBLE CONNECTOR SIZED PER EQUIPMENT CONNECTION SIZE WITH A MAXIMUM LENGTH OF 3' EXCEPT FOR RANGE AND DOMESTIC CLOTHES WASHER WHICH SHALL HAVE A MAX LENGTH OF 6'. CONNECTORS TO BE USED OUTDOORS SHALL ALSO BE ANSI Z21.75 LISTED. CONNECTORS FOR MOVABLE AND COMMERCIAL COOKING EQUIPMENT SHALL BE LISTED AS COMPLYING WITH ANSI Z21.69.

9. MATERIALS OF PIPING SYSTEMS:

9.1. SOLID CORE PVC PIPE AND FITTINGS SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 12454 PER ASTM D 1784 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D 1785 AND ASTM D 2665. FITTINGS SHALL CONFORM TO ASTM D 2665. ALL PIPE AND FITTINGS TO BE PRODUCED BY A SINGLE MANUFACTURER AND TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2564. PRIMER SHALL CONFORM TO ASTM F 656. THE SYSTEM IS INTENDED FOR NON-PRESSURE DRAINAGE APPLICATIONS WHERE THE TEMPERATURE WILL NOT EXCEED 140°F. ANY PENETRATIONS OF FIRE RESISTANCE RATED WALLS AND HORIZONTAL ASSEMBLIES SHALL BE PROTECTED WITH A FIRE COLLAR TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479.

9.2. HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A-888 AND CISPI STANDARD 301. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE. HUBLESS COUPLINGS SHALL CONFORM TO ASTM C-1540 FOR HEAVY DUTY COUPLINGS. GASKETS SHALL CONFORM TO ASTM C-564. ALL PIPE AND FITTINGS TO BE PRODUCED BY A SINGLE MANUFACTURER AND ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS. COUPLINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S BAND TIGHTENING SEQUENCE AND TORQUE. TIGHTEN BANDS WITH A PROPERLY CALIBRATED TORQUE LIMITING DEVICE. TEST THE SYSTEM HYDROSTATICALLY AFTER INSTALLATION TO 10 FT. OF HEAD (4.3 PSI MAXIMUM).

9.3. HUB AND SPIGOT CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A-74. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE. HUB & SPIGOT PIPE AND FITTINGS SHALL BE SERVICE (SV). JOINTS SHALL BE MADE USING A COMPRESSION GASKET MANUFACTURED FROM AN ELASTOMER MEETING THE REQUIREMENTS OF ASTM C-564. ALL PIPE AND FITTINGS TO BE PRODUCED BY A SINGLE MANUFACTURER AND ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS. TEST THE SYSTEM HYDROSTATICALLY AFTER INSTALLATION TO 10 FT. OF HEAD (4.3 PSI MAXIMUM).

9.4. COPPER WATER PIPING SHALL BE SEAMLESS DRAWN OR EXTRUDED TYPE "L" COPPER TUBING, HARD TEMPER IN ACCORDANCE WITH ASTM B-88. FITTINGS SHALL BE WROUGHT OR CAST BRASS SOLDERED FITTINGS CONFORMING WITH ASME B16.18 OR ASME B16.22. SOLDER JOINTS SHALL BE MADE IN ACCORDANCE WITH ASTM B 828 USING ASTM B-32 LEAD FREE SOLDER AND ASTM B-813 FLUX.

9.5. COPPER INDIRECT WASTE PIPING SHALL BE SEAMLESS DRAWN COPPER TUBING, MANUFACTURED IN ACCORDANCE WITH ASTM B-306. FITTINGS SHALL BE WROUGHT OR CAST BRASS SOLDERED FITTINGS CONFORMING WITH ASME B16.23 OR ASME B16.29. SOLDER JOINTS SHALL BE MADE IN ACCORDANCE WITH ASTM B 828 USING ASTM B-32 LEAD FREE SOLDER AND ASTM B-813 FLUX.

9.6. CROSS-LINKED POLYETHYLENE TUBING SHALL MEET THE SDR-9 DIMENSION STANDARD AND PERFORMANCE SPECIFICATIONS OF ASTM F-876/F-877 AND CSA B137.5 AND BE APPROVED FOR USE WITH ASTM F1807 AND ASTM F1960 FITTING SYSTEMS. TUBING SYSTEM SHALL ALSO COMPLY WITH ANSI/NSF 14 AND 61 AS SUITABLE FOR USE WITH POTABLE WATER. TEMPERATURE AND PRESSURE RATINGS SHALL BE 160 PSI AT 73.4°F, 100 PSI AT 180°F, AND 80 PSI AT 200°F. ANY PENETRATIONS OF FIRE RESISTANCE RATED WALLS AND HORIZONTAL ASSEMBLIES SHALL BE PROTECTED WITH A FIRE COLLAR TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479.

9.7. BLACK IRON PIPE SHALL BE SCHEDULE 40 WELDED PIPE CONFORMING TO ASTM A-53 OR SEAMLESS DRAWN PIPE CONFORMING TO ASTM A-53 AND A-106. PIPE SHALL BE INSTALL WITH TAPERED THREADED OR WELDED JOINTS. A SOFT SETTING THREAD SEALANT SHALL BE USED ON ALL THREADED JOINTS. FITTINGS SHALL BE BLACK MALLEABLE IRON FITTINGS.

9.8. CORRUGATED STAINLESS STEEL TUBING WITH ARC RESISTANT JACKET COVERING SYSTEM SHALL BE MANUFACTURED TO COMPLY WITH ANSI LC 1 WITH ALL ADDENDA AND BE LISTED BY CSA. TUBING SHALL BE MANUFACTURED FROM 300 SERIES STAINLESS STEEL STRIP CONFORMING TO ASTM A240. TUBING SHALL HAVE A UV RESISTANT, FIRE RATED POLYETHYLENE JACKET DESIGNED TO COMPLY WITH ASTM E-84 FOR FLAME SPREAD AND SMOKE DEVELOPMENT. TUBING SHALL BE RATED FOR OPERATION UP TO 25 PSI. FITTINGS SHALL BE BRASS FLARE FITTING AS LISTED BY CSA.

9.9. PROVIDE APPROVED TYPE VACUUM BREAKERS AND/OR CHECK VALVES, OR BACKFLOW PREVENTORS AS HEREIN SPECIFIED ON ALL EQUIPMENT AND FIXTURE CONNECTIONS REQUIRED BY CODE, INDICATED ON THE DRAWINGS, AS SPECIFIED, OR AS REQUIRED FOR THE PROPER FUNCTIONING OF THE EQUIPMENT.

9.10. ALL PIPING EXPOSED TO VIEW SHALL BE CHROME PLATED. THE TERM EXPOSED TO VIEW SHALL APPLY TO ALL PIPING FROM THE POINT WHERE IT LEAVES THE WALL, CEILING, OR FLOOR CONSTRUCTION, TO THE POINT OF FINAL CONNECTION TO THE FIXTURE. PIPING "BUILT INTO FIXED BENCHMARK WITH ACCESS DOORS OR PANELS SHALL NOT BE CONSIDERED "EXPOSED TO VIEW."

10. INSULATION:

10.3. DOMESTIC WATER PIPING: FOR COLD WATER PIPING, PROVIDE 1/2" INSULATION WITH FACTORY APPLIED SELFSEALING, CONTINUOUS, VAPOR BARRIER JACKETS. FOR HOT WATER PIPING, THE FIRST 8' OF NON-CIRCULATED HOT WATER SYSTEMS AND ALL PORTIONS OF RECIRCULATED HOT WATER SYSTEMS (140°F. OR LESS) SHALL BE INSULATED. HOT WATER PIPING INSULATION SHALL BE 1" THICK FOR PIPING UP TO 1 1/2", AND 1 1/2" THICK FOR HIGHER PIPING. INSULATION CONDUCTIVITY NOT TO EXCEED 0.27 BTU PER INCH/HOUR*FT²*F.

10.4. ALL INSULATION AND VAPOR BARRIERS SHALL BE SEALED AND CONTINUOUS THROUGH HANGERS, SLEEVES, FITTINGS, VALVES, ETC.

10.5. ON RAIN CONDUCTORS WHICH PASS THROUGH OCCUPIED AREAS PROVIDE 1 1/2" THICK FIBERGLASS INSULATION WITH FACTORY APPLIED SELFSEALING VAPOR BARRIER JACKET.

10.6. ALL EXPOSED SUPPLY AND WASTE PIPING UNDER PUBLIC LAVATORIES AND SINKS SHALL BE INSULATED TO PROTECT AGAINST CONTACT IN ACCORDANCE WITH ANSI A117.1 SECTION 606.6.

11. VALVES:

11.1. ALL WATER VALVES SHALL BE TWO PIECE, FULL PORT BALL VALVES WITH THREADED CONNECTIONS, APOLLO AS STANDARD. NOTE: SOLDERED OR BRAZED CONNECTIONS WILL NOT BE ACCEPTED.

11.2. GAS VALVES SHALL BE LOCKABLE PLUG VALVE-WALLWORTH NO.2911 OR AS APPROVED.

11.3. THERMOSTATIC MIXING VALVES SHALL BE INSTALLED TO PROVIDE TEMPERED WATER (MAX. TEMP. 110°F) TO PUBLIC USE HAND WASHING FACILITIES AND SHALL BE LISTED IN ACCORDANCE WITH ASSE 1070.

11.4. ALL CHECK VALVES ARE TO BE ASSE 1024 DUAL CHECK VALVES UNLESS OTHERWISE NOTED.

11.5. PRESSURE VACUUM BREAKERS SHALL BE INSTALLED 12" ABOVE THE HIGHEST OUTLET THEY ARE PROTECTING. THE VACUUM BREAKER SHALL RENDER POSITIVE PROTECTION AGAINST BACK-SIPHONAGE AND INCORPORATE A CHECK VALVE AND INLET SHUT-OFF.

11.6. VACUUM BREAKERS SHALL BE RATED TO 150 PSI WORKING PRESSURE AND SHALL WITHSTAND TEMPERATURES TO 170 F. THE VACUUM RELIEF VALVE MUST BE OF BRASS CONSTRUCTION WITH A SPRING LOADED DIAPHRAGM MEMBER TO ASSURE POSITIVE OPENING OF AIR INLET WHEN BACK-SIPHONAGE OCCURS. PRESSURE VACUUM BREAKERS SHALL BE WAITS # 800 OR AS APPROVED.

12. HANGERS:

12.1. PROVIDE SUITABLE AND SUBSTANTIAL HANGERS AND SUPPORTS FOR ALL PIPING. SUPPORT HORIZONTAL PIPING IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

Table with 3 columns: MATERIAL, PIPE SIZE, MAX. HANGER. Rows include Copper Tube, Threaded Steel, PEX, PVC, and NO-HUB C.I. with various pipe sizes and hanger dimensions.

12.2. THREADED ROD FOR HANGERS SUPPORTING PIPING UP TO 2" SHALL BE 3/8". FROM PIPING FROM 2 1/2"-4" SHALL BE 1/2".

12.3. NO-HUB PIPING SHALL HAVE A MINIMUM OF TWO HANGERS PER LENGTH OF PIPE. PIPE HANGERS TO BE INSTALLED ON EACH SIDE OF THE JOINT.

13. PLUMBING FIXTURES:

13.1. ALL PLUMBING FIXTURES FINISHES AND TRIM SHALL BE SPECIFIED BY THE ARCHITECT.

13.2. ALL PIPING ESCUTCHEONS, FIXTURE TAILPIECES, TRAPS, ETC., EXPOSED TO VIEW TO BE CHROME PLATED.

13.3. PROVIDE FIXTURE SUPPORTS, I.E. CHAIR CARRIERS, LAVATORY SUPPORTS.

14.1. PRIOR TO UTILIZATION THE POTABLE WATER SYSTEM SHALL BE FLUSHED WITH CLEAN WATER UNTIL WATER RUNS CLEAR AND FREE OF DEBRIS OR PARTICLES. FLUSHING SHALL BE PREFORMED WITH ANY STRAINERS OR AERATORS REMOVED.

14.2. AFTER FLUSHING, THE POTABLE WATER SYSTEM SHALL BE DISINFECTED BY FILLING THE SYSTEM WITH A WATER/ CHLORINE SOLUTION CONTAINING AT LEAST 50 PARTS PER MILLION OF CHLORINE; THE SOLUTION SHALL BE ALOUD TO STAND FOR AT LEAST 24 HOURS. ALTERNATELY A WATER/ CHLORINE SOLUTION CONTAINING AT LEAST 200 PARTS PER MILLION CAN BE USED FOR A DURATION OF AT LEAST 3 HOURS BUT NO MORE THAN 6 HOURS.

14.3. AFTER DISINFECTION THE SYSTEM SHALL BE FLUSHED WITH POTABLE WATER UNTIL THE CHLORINE LEVELS AT ALL OUTLETS ARE EQUAL TO THAT OF THE INCOMING WATER SUPPLY.

14.4. A CERTIFICATION OF PERFORMANCE AND LABORATORY TEST REPORT SHOWING THE ABSENCE OF COLIFORM ORGANISMS IN THE POTABLE WATER SYSTEM SHALL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION.

15. TESTS:

15.1. PRIOR TO SUBMITTING AN APPLICATION FOR FINAL ACCEPTANCE OF THE WORK, ALL TESTS DEEMED NECESSARY TO SHOW PROPER EXECUTION OF THE WORK SHALL HAVE BEEN PERFORMED AND COMPLETED IN THE PRESENCE OF AN ARCHITECT'S / OWNER'S REPRESENTATIVE. SCHEDULING OF ALL TESTING PROCEDURES SHALL BE ARRANGED TO SUIT THE CONVENIENCE OF THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE.

15.2. SUBJECT THE DRAINS, WASTE AND VENT PIPING TO A WATER TEST IN ACCORDANCE WITH ALL LOCAL REQUIREMENTS. THE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE EQUIVALENT TO AT LEAST A TEN FOOT OF HEAD OF WATER. AFTER FILLING, DISCONNECT WATER SUPPLY AND LET IT STAND FOR FIFTEEN (15) MINUTES UNDER TEST, DURING WHICH TIME THERE SHALL BE NO LOSS OR LEAKAGE.

15.3. TEST ALL INTERIOR WATER DISTRIBUTION SYSTEMS TO A PRESSURE OF AT LEAST 50 PSI HIGHER THAN THEIR NORMAL OPERATING STATIC PRESSURE. MINIMUM TEST SHALL BE GAUGE SET AT 150 PSI, WHICH SHALL STAND FOR TWO HOURS WITH NO LOSS IN PRESSURE.

15.4. FURNISH AND PAY FOR ALL DEVICES, MATERIALS, SUPPLIES AND LABOR REQUIRED IN CONNECTION WITH TESTS. MAKE ALL TESTS IN THE PRESENCE, AND TO THE SATISFACTION OF THE OWNER, ENGINEER, PLUMBING AND OTHER INSPECTORS OF THE AGENCIES HAVING JURISDICTION, AND ANY APPLICABLE INSURANCE ASSOCIATIONS AND PUBLIC UTILITIES. REPAIR, OR IF REQUIRED BY THE ENGINEER, REPLACE DEFECTIVE WORK WITH NEW WORK WITHOUT EXTRA CHARGE TO THE OWNER. REPEAT TESTS AS DIRECTED UNTIL ALL WORK IS PROVEN SATISFACTORY. RESTORE TO ITS ORIGINAL CONDITION ANY WORK DAMAGED OR DISTURBED BY TESTS, ENGAGING THE ORIGINAL TRADES TO DO THE RESTORATION WORK. NOTIFY THE OWNER, ENGINEER, AND INSPECTORS HAVING JURISDICTION AT LEAST 48 HOURS IN ADVANCE OF MAKING THE REQUIRED TESTS SO THAT ARRANGEMENTS MAY BE MADE FOR THEIR PRESENCE TO WITNESS THE SAME.

15.5. TEST GAS DISTRIBUTION SYSTEM AT AN AIR PRESSURE OF 1.5 TIMES THE PROPOSED MAXIMUM WORKING PRESSURE BUT NOT LESS THAN 3 PSIG. THE TEST DURATION SHALL BE 30 MINUTES FOR EACH 500 CUBIC FEET OF PIPE OR FRACTION THERE OF WITH NO DROP IN PRESSURES.

15.6. ALL TESTABLE BACKFLOW PREVENTION DEVICES SHALL BE FIELD TESTED IN ACCORDANCE WITH ASSE 5010, BY ASSE 5000 CERTIFIED INDIVIDUAL, PRIOR TO FINAL INSPECTION. COPIES OF TEST RESULTS SHALL BE SENT TO THE AHJ AND WATER SUPPLIER.



Paterson Habitat For Humanity
146 North 1st Street
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PROJECT NAME

135 SUMMER STREET
PASSAIC, NJ



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Table with 3 columns: Revision number, Description, Date. Row 1: 2, 100% PERMIT SET, 2/02/2021

Table with 3 columns: Revision number, Description, Date. Row 1: 1, 80% DD SET, 1/08/2021

ISSUE/REVISION DATE

DRAWING TITLE

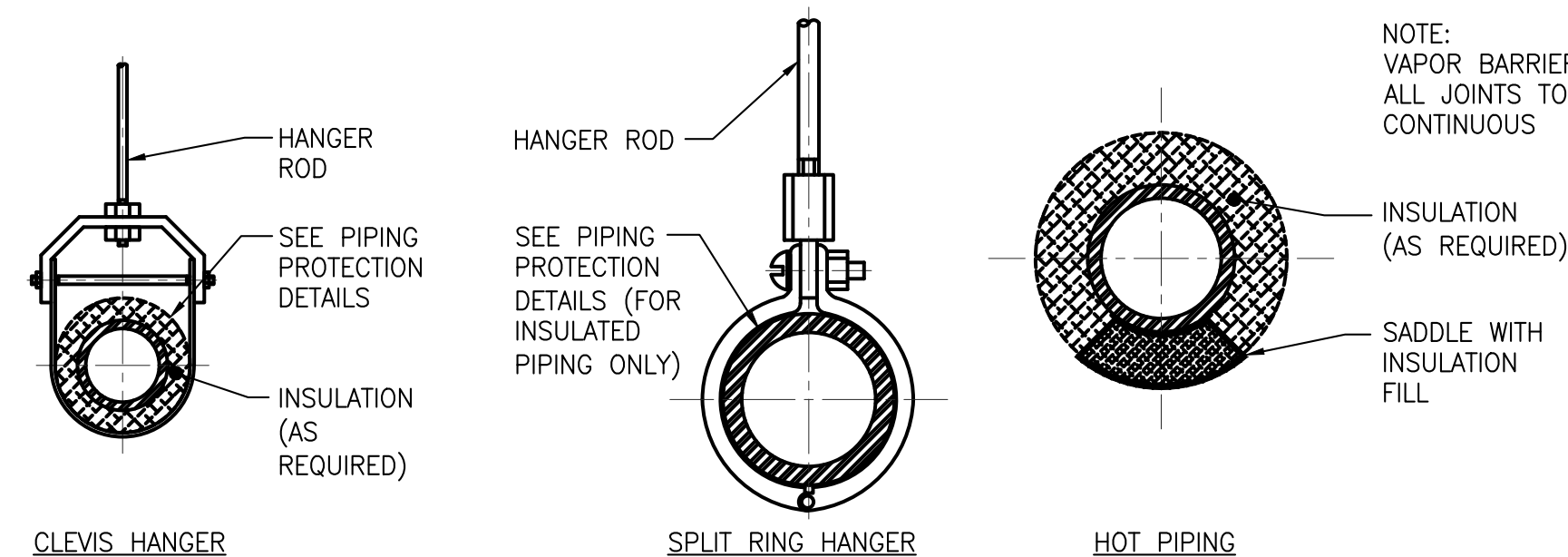
PLUMBING SPECIFICATION

DRAWING NO.

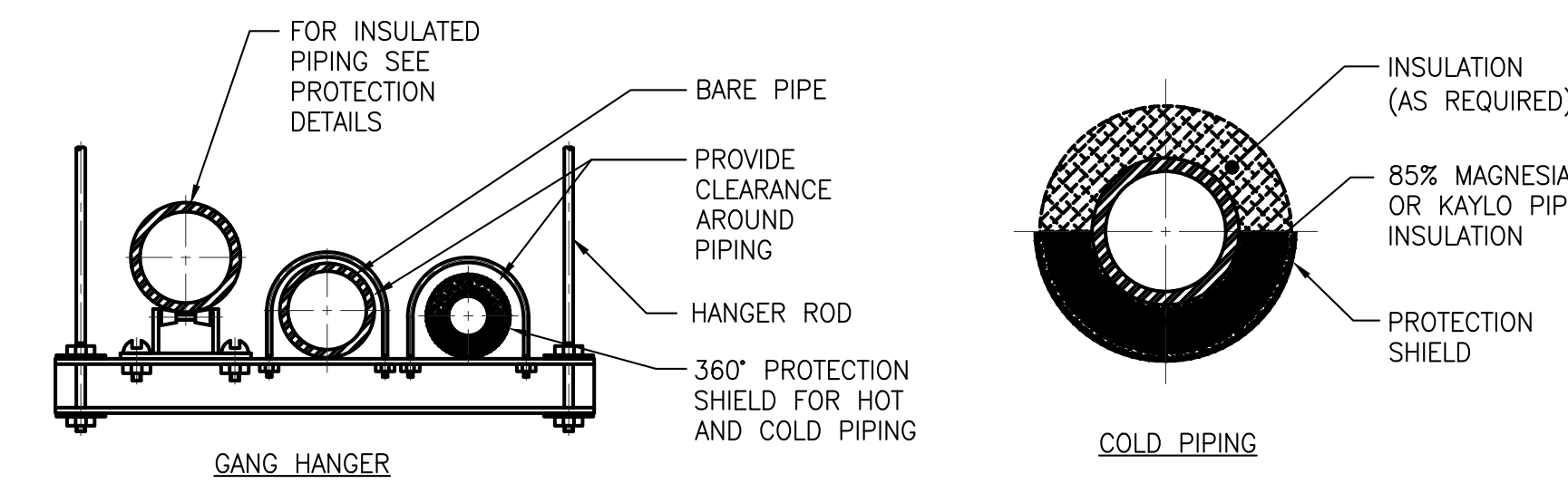
P-301

DATE: 12/01/20
SCALE: AS NOTED

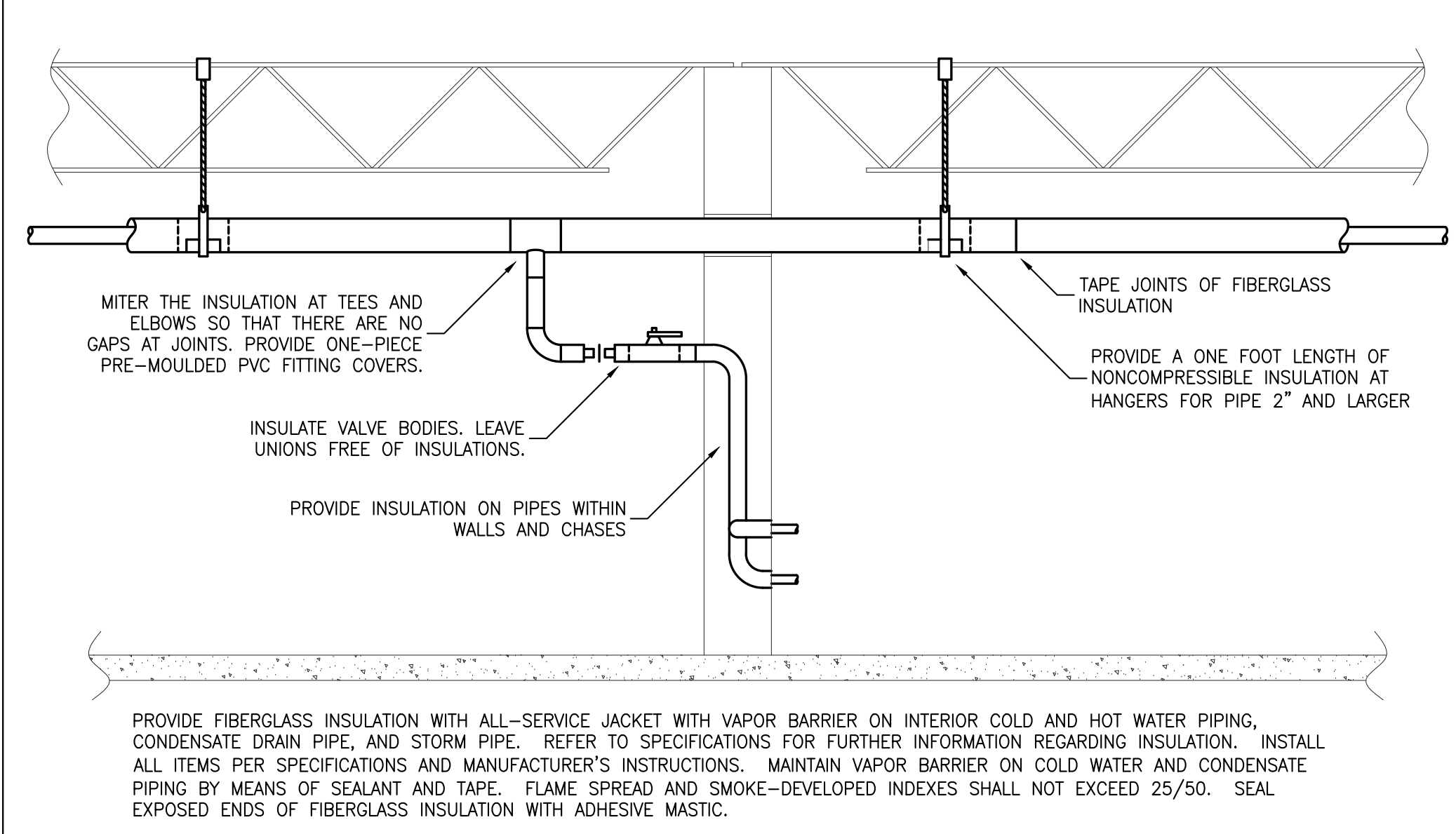
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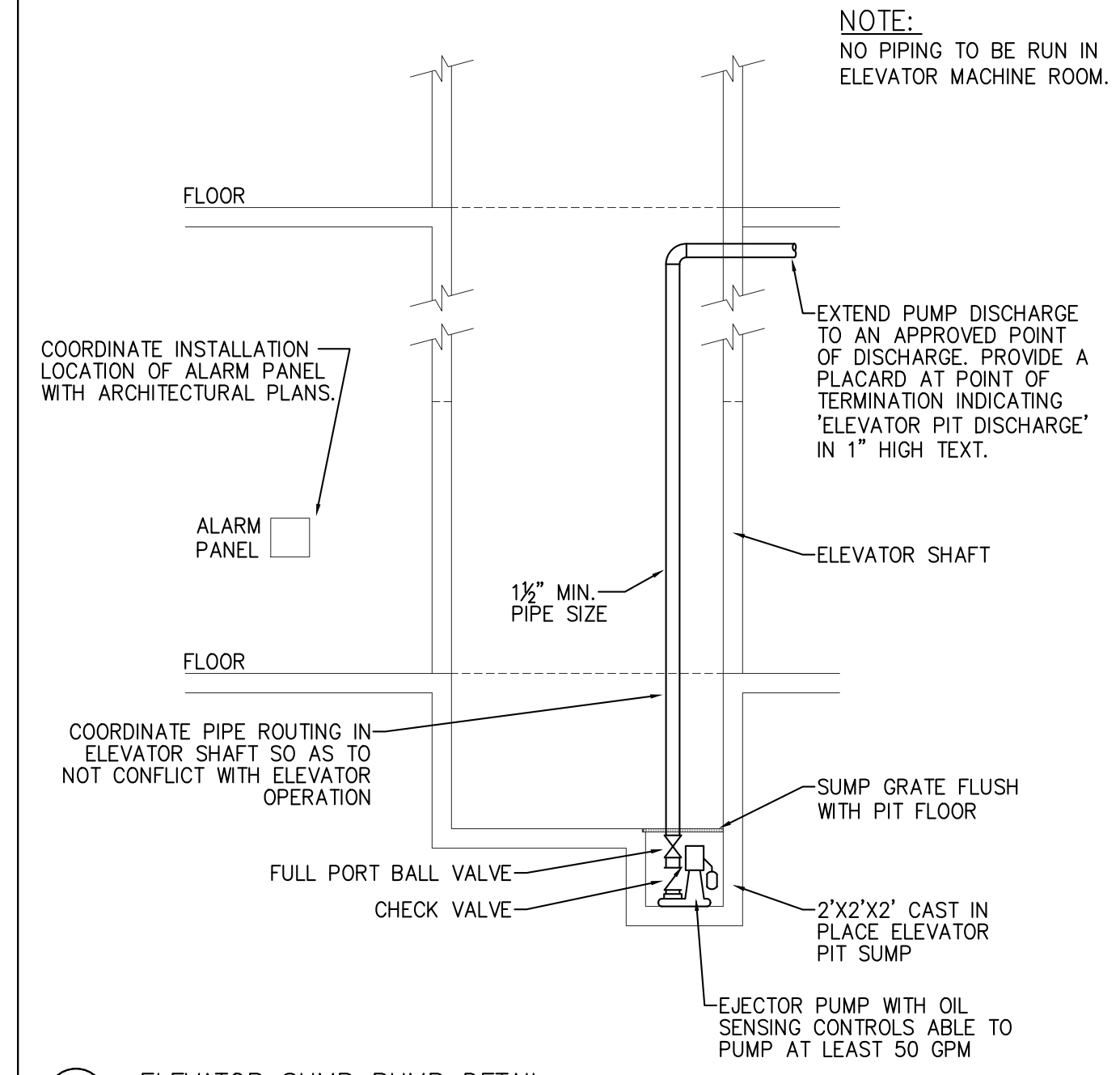
NOTE:
VAPOR BARRIER AT ALL JOINTS TO BE CONTINUOUS



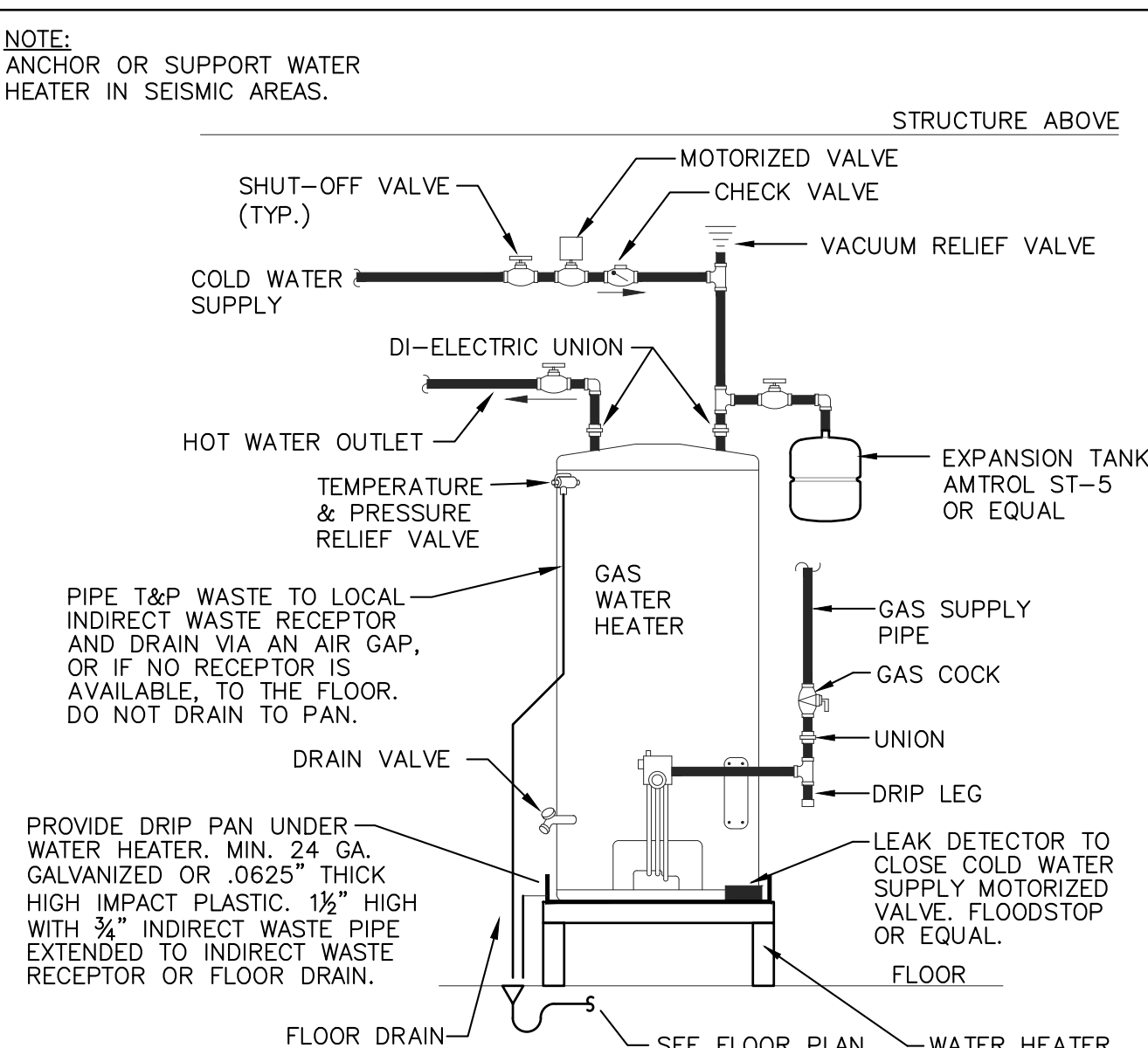
1 PIPING SUPPORT AND INSULATION DETAIL
NOT TO SCALE



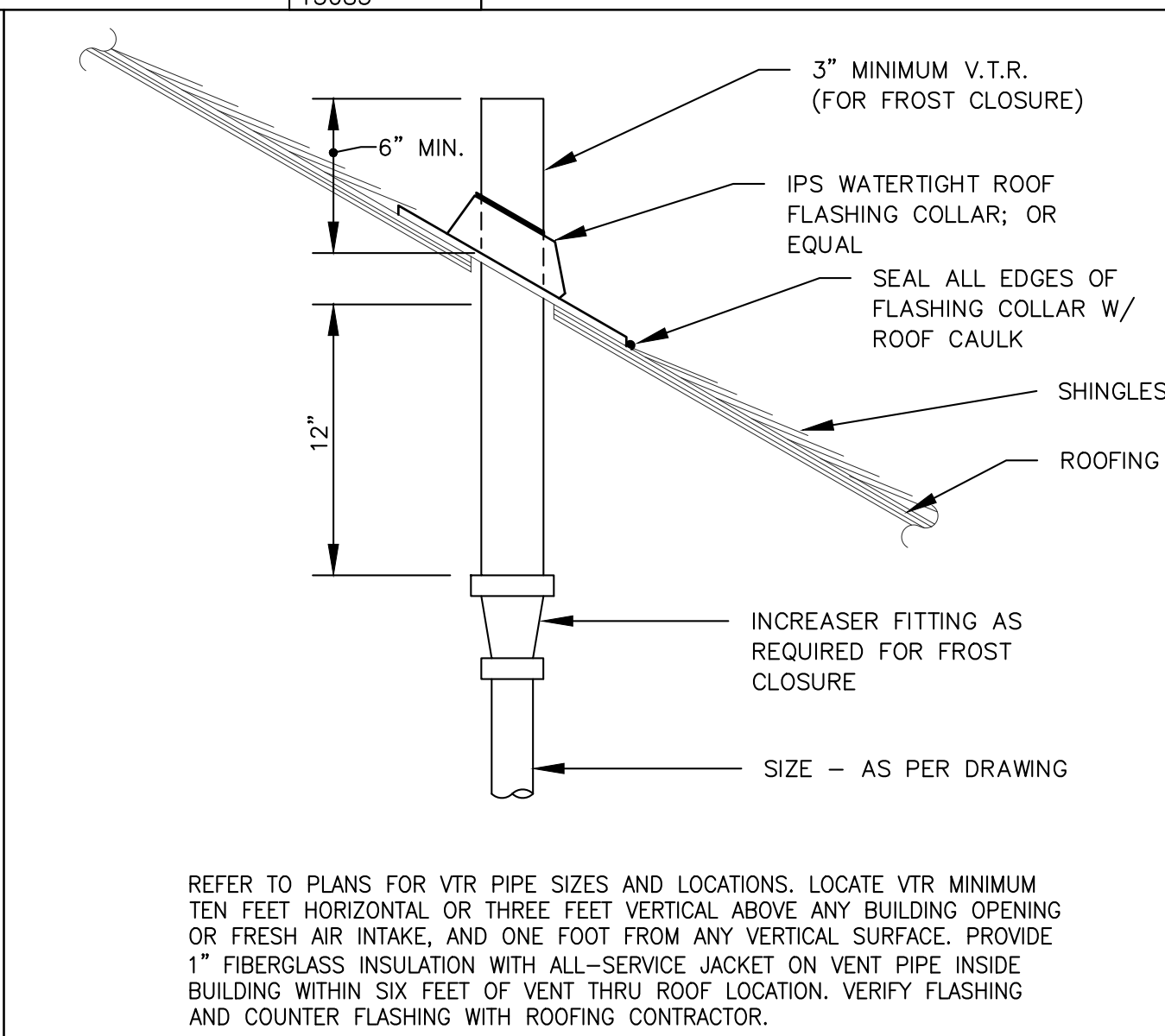
2 PIPE INSULATION DETAIL
NOT TO SCALE



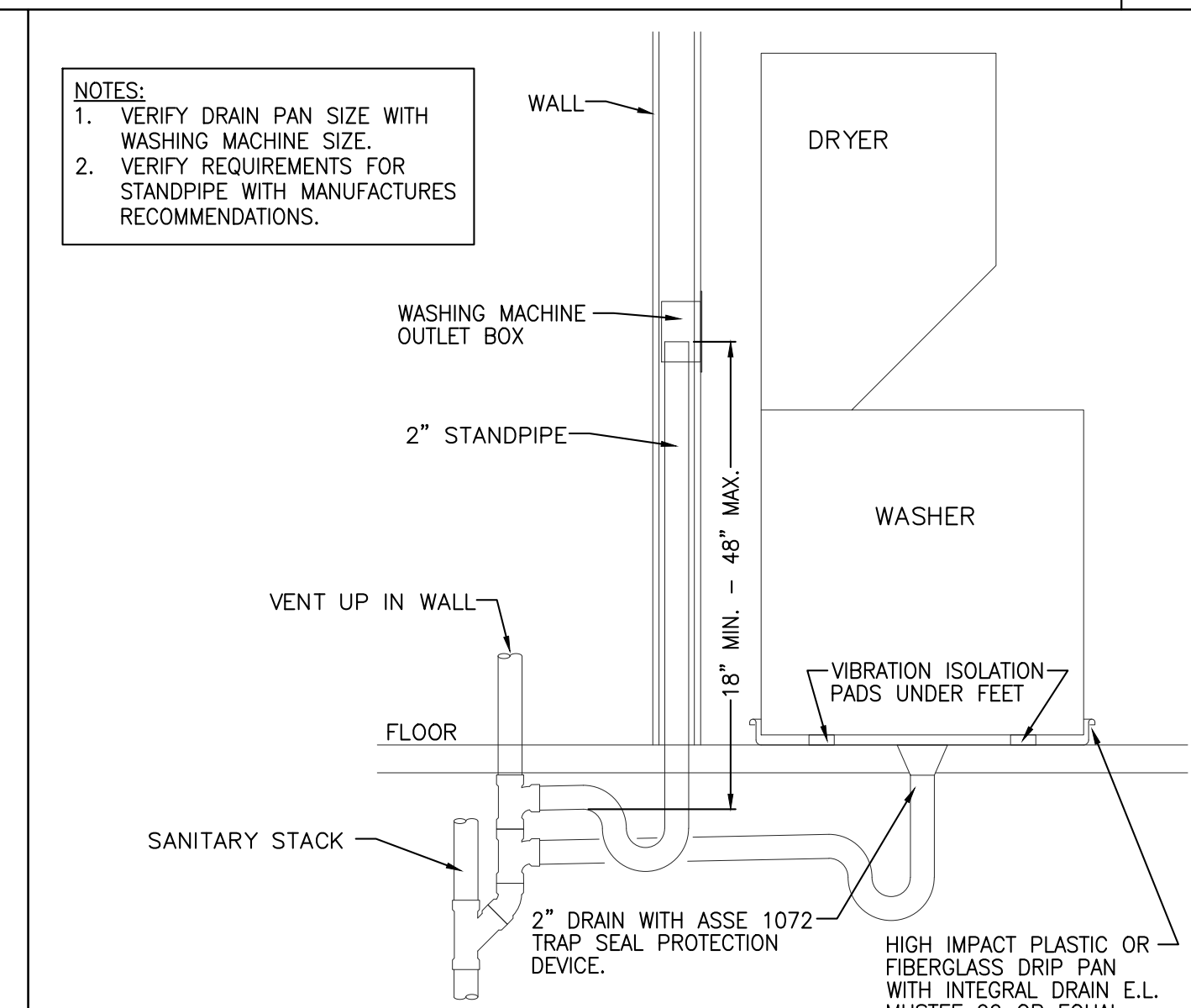
3 ELEVATOR SUMP PUMP DETAIL
NOT TO SCALE



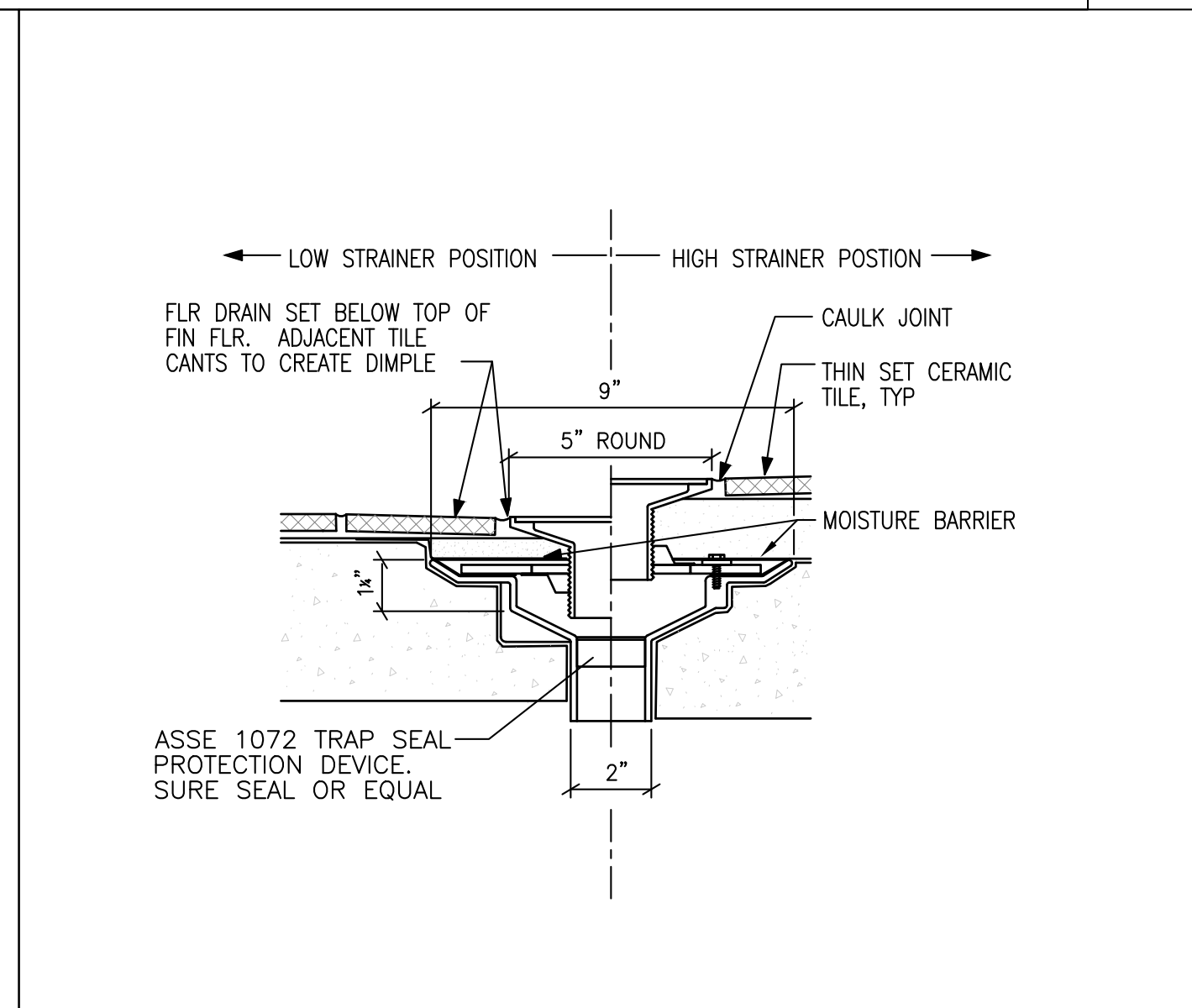
4 HOT WATER HEATER PIPING DETAIL
NOT TO SCALE



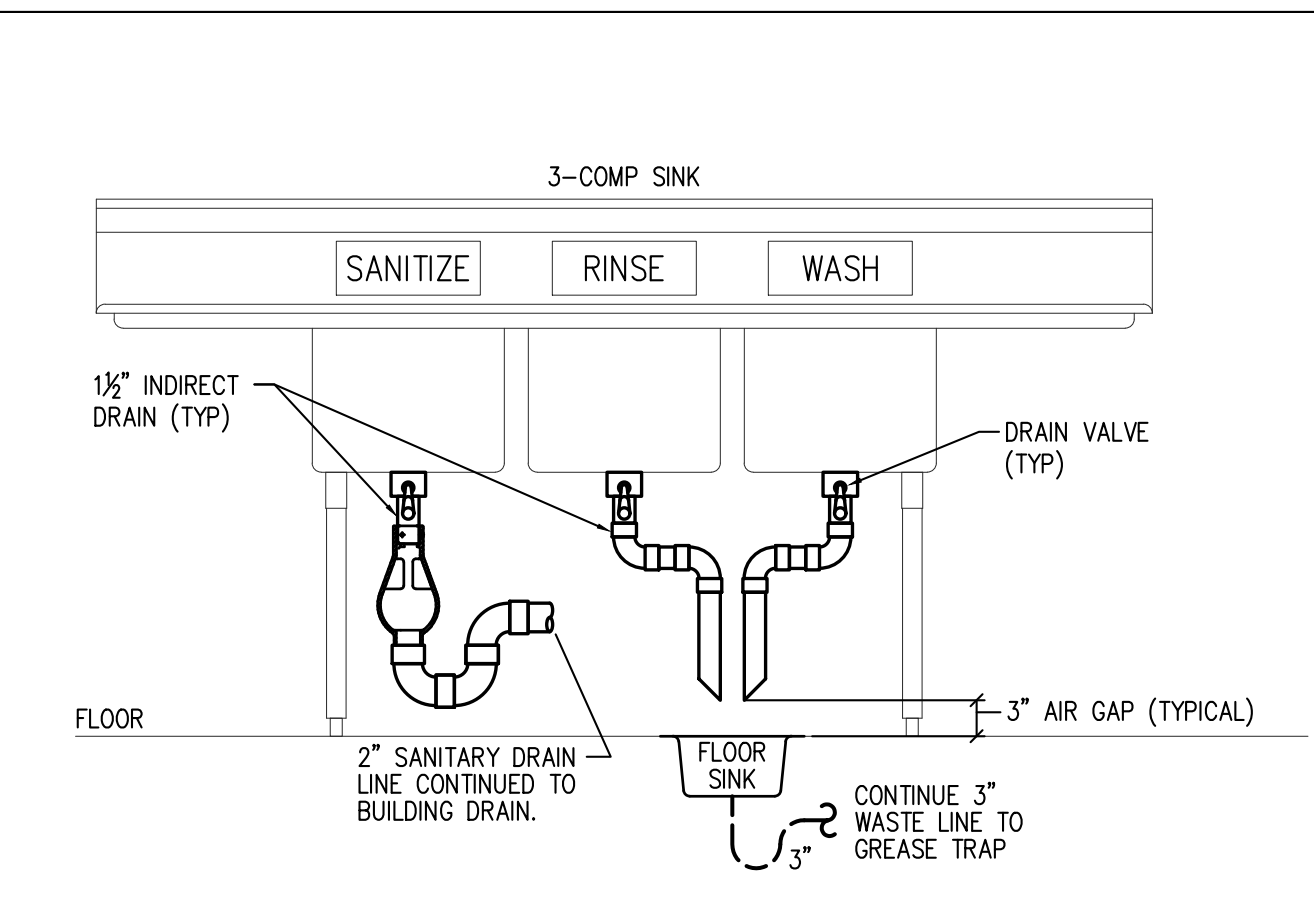
5 VENT THROUGH ROOF DETAIL (SLOPED ROOF)
NOT TO SCALE



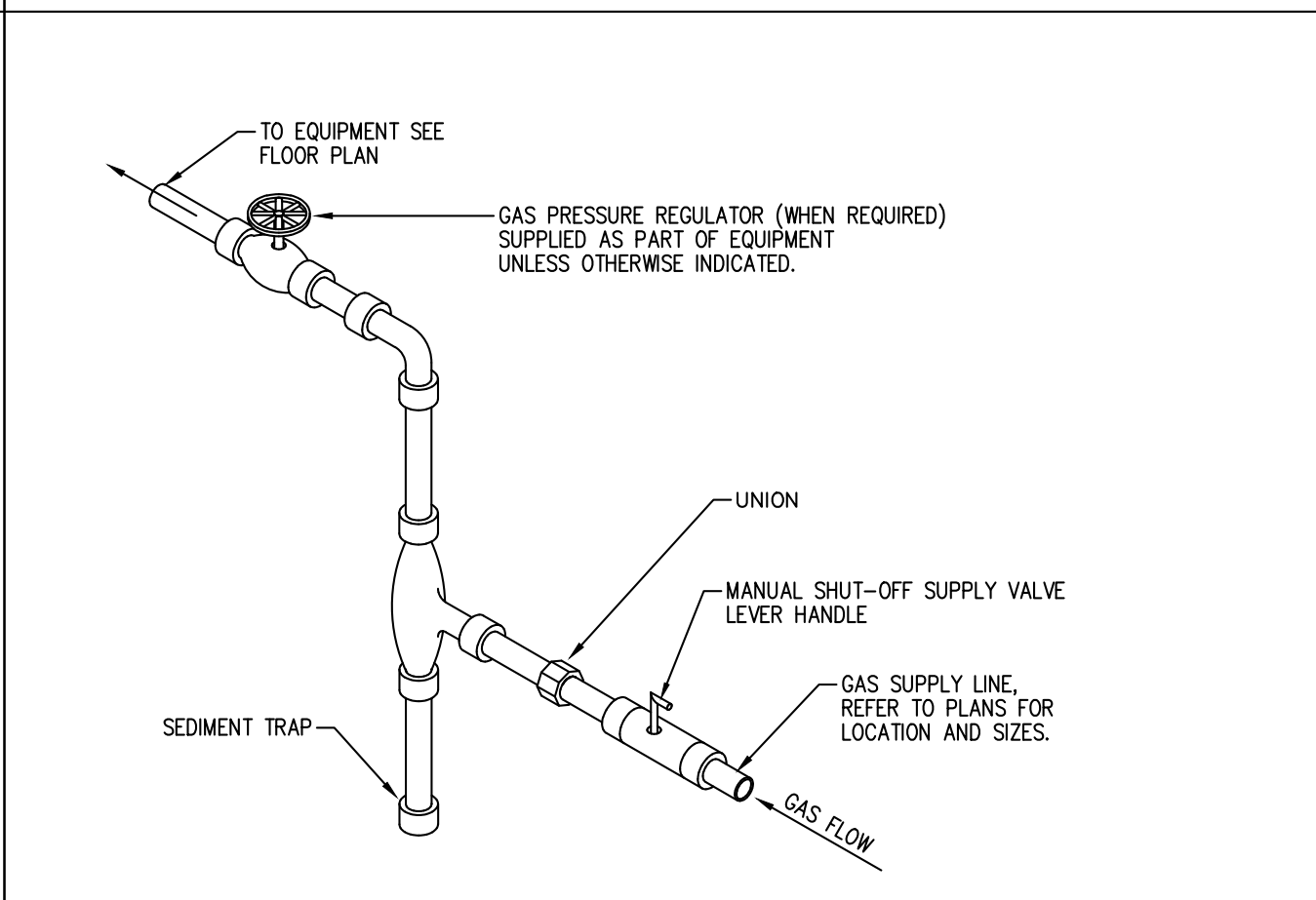
6 CLOTHES WASHER PAN INSTALLATION
NOT TO SCALE



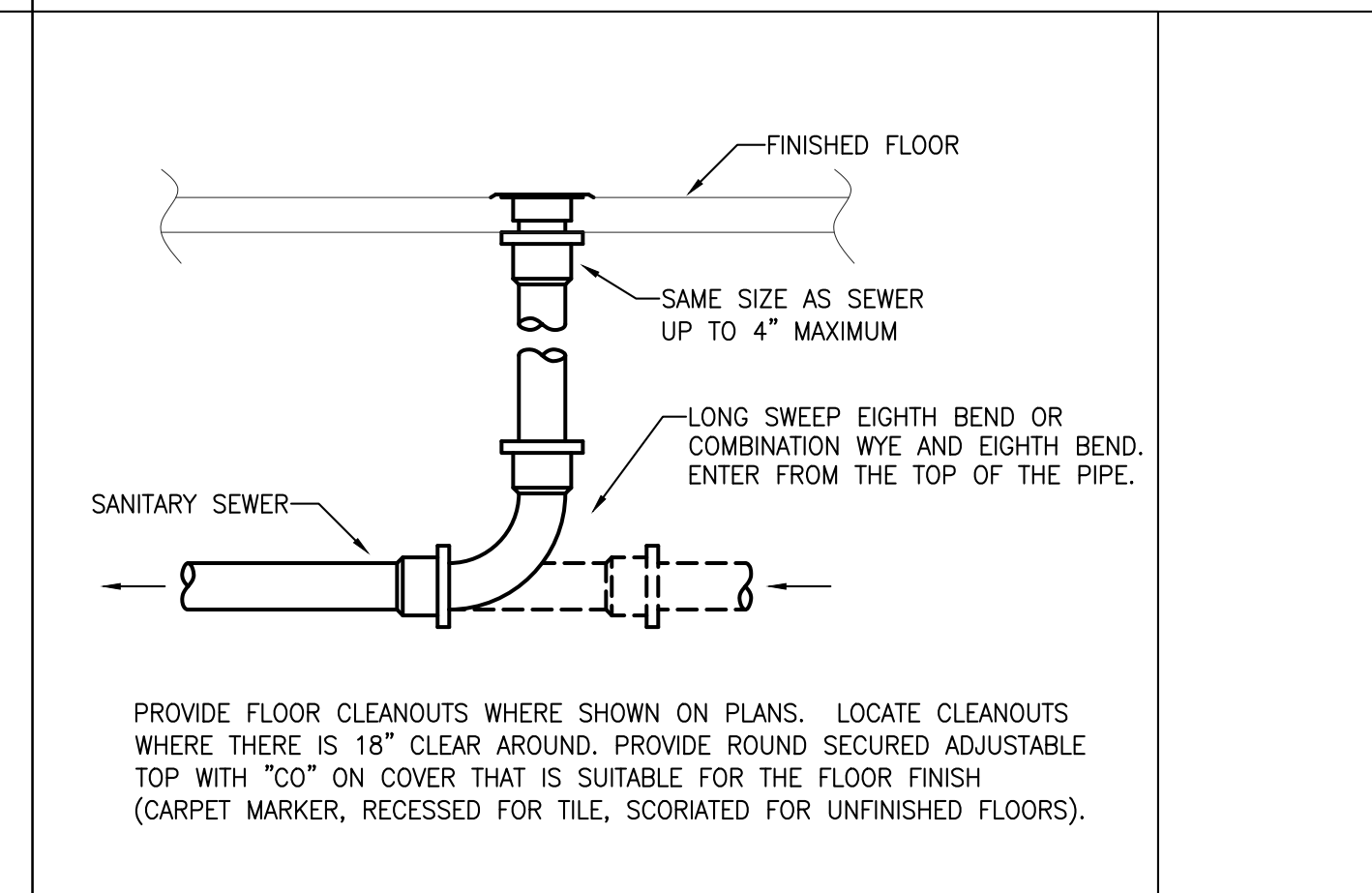
7 FLOOR DRAIN DETAIL
NOT TO SCALE



8 3-COMP SINK DETAIL
NOT TO SCALE



9 DETAIL OF GAS CONNECTION
NOT TO SCALE



10 FLOOR CLEANOUT DETAIL
NOT TO SCALE



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2	100% PERMIT SET	2/02/2021
1	80% DD SET	1/08/2021

ISSUE/REVISION DATE
**PLUMBING
DETAILS**

DRAWING NO.
P-401

DATE: 12/01/20
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STAMP & SIGNATURE

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	LOCATION	MAKE	MODEL	FAUCET	PIPING CONNECTIONS				COMMENTS
						COLD	HOT	TRAP	VENT	
WC-1	ADA COMPLIANT ELONGATED, PRESSURE ASSISTED WATER CLOSET WITH 1.1 GPF FLUSH. FLOOR OUTLET	VFW HALL	AMERICAN STANDARD	2467.100		1/2"	NA	INTEGRAL	2"	PROVIDE WITH A SPLIT FRONT ELONGATED SEAT. COORDINATE FLUSH CONTROL LOCATION WITH OPEN SIDE OF WATER CLOSET.
WC-2	ELONGATED, PRESSURE ASSISTED WATER CLOSET WITH 1.1 GPF FLUSH. FLOOR OUTLET	VFW HALL	AMERICAN STANDARD	2462.100		1/2"	NA	INTEGRAL	2"	PROVIDE WITH A SPLIT FRONT ELONGATED SEAT.
WC-3	ADA COMPLIANT ELONGATED, GRAVITY FLUSH WATER CLOSET WITH 1.28 GPF FLUSH. FLOOR OUTLET	RESIDENTIAL	AMERICAN STANDARD	211AA.104		1/2"	NA	INTEGRAL	2"	PROVIDE WITH A CLOSED FRONT ELONGATED SEAT W/ COVER. COORDINATE FLUSH CONTROL LOCATION WITH OPEN SIDE OF WATER CLOSET.
LAV-1	VITREOUS CHINA, WALL HUNG, LAVATORY FURNISH WITH SELF-POWERED, SINGLE HOLE, AUTOMATIC FAUCET 0.5 GPM	VFW HALL	AMERICAN STANDARD	0124.024	TOTO TEL105-D10ET	3/8"	3/8" TEMPERED	1 1/2"	1 1/2"	
LAV-2	VITREOUS CHINA, DROP-IN SINK WITH SINGLE HANDLE ADA FAUCET	RESIDENTIAL	KOHLER	K-2356-4	KOHLER K-15182-4RA	3/8"	3/8"	1 1/2"	1 1/2"	
BT-1	5' COMPRESSION MOLDED TUB W/ INTEGRAL APRON AND ABOVE FLOOR DRAIN WITH PRESSURE BALANCING VALVE, 1.75 GPM HAND SHOWER	RESIDENTIAL	STERLING	71041112 OR 71041122	AMERICAN STANDARD TUB662.215 & RU101SS	1/2"	1/2"	1 1/2"	1 1/4"	COORDINATED DRAIN END WITH FLOOR PLANS
KS-1	STAINLESS STEEL, SELF-RIMMING, SINGLE COMPARTMENT SINK. FURNISH WITH TOP MOUNT SINGLE HANDLE ADA FAUCET.	RESIDENTIAL	DAYTON \ ELKAY	D12522	ELKAY LK1001CR	1/2"	1/2"	1 1/2"	1 1/4"	
DW-1	DISHWASHER TO BE SPECIFIED BY OTHERS	RESIDENTIAL	BY OTHERS	BY OTHERS		NA	1/2"	NA	NA	WASTE HOSE TO DISCHARGE VIA KITCHEN SINK TAILPIECE
IM-1	RECESSED FIRE RATED WATER SUPPLY ICE MAKER OUTLET BOX FOR REFRIGERATOR. WITH 1/4 TURN BALL VALVE OUTLET	RESIDENTIAL	OATEY	39117	INCLUDED	3/8"	NA	NA	NA	
CW-1	RECESSED CLOTHES WASHER SUPPLY BOX WITH 1/4 TURN BALL VALVES AND 2" STANDPIPE CONNECTION.	RESIDENTIAL	OATEY	38398	INCLUDED	1/2"	1/2"	2"	1 1/2"	PROVIDE WITH A FD-3 CLOTHES WASHER PAN WITH INTEGRAL FLOOR DRAIN
FD-1	ADJUSTABLE DURA-COATED CAST IRON BODY WITH POLISHED NICKEL BRONZE STRAINER.	VFW HALL	ZURN	ZN-415B-3NH		NA	NA	3"	2"	FLOOR DRAINS SHALL BE INSTALLED WITH AN ASSE 1072 TRAP SEAL PROTECTION DEVISE
FD-2	9"Ø HEAVY DUTY CAST IRON FLOOR DRAIN WITH 4"Ø OUTLET	UTILITY	ZURN	Z520-4NH		NA	NA	4"	2"	FLOOR DRAINS SHALL BE INSTALLED WITH AN ASSE 1072 TRAP SEAL PROTECTION DEVISE
FD-3	CLOTHES WASHER PAN WITH INTEGRAL FLOOR DRAIN	RESIDENTIAL	E.L. MUSTEE	99		NA	NA	2"	1 1/2"	FLOOR DRAINS SHALL BE INSTALLED WITH AN ASSE 1072 TRAP SEAL PROTECTION DEVISE
FS-1	12"X12"X8" ENAMEL COATED CAST IRON FLOOR SINK WITH DOME STRAINER AND HALF GRATE AND SEDIMENT BUCKET AND CLAMPING COLLAR AND SEEPAGE HOLES	VFW HALL	ZURN	Z1900 -KC-2		NA	NA	3"	2"	
MS-1	MOLDED STONE MOP SERVICE BASIN, 24"X24"X10" WITH CHROME PLATED SERVICE FAUCET WITH WALL BRACE HOSE THREAD ON SPOUT & INTEGRAL VACUUM BREAKER.	VFW HALL	CRANE/ FIAT	MSB2424	FIAT 830 AA	1/2"	1/2"	3"	2"	
PS-1	KITCHEN PREP SINK SPECIFIED BY OTHERS	VFW HALL	BY OTHERS	BY OTHERS	BY OTHERS	1/2"	1/2"	1 1/2" INDIRECT	NA	
DS-1	DISH SINK SPECIFIED BY OTHERS	VFW HALL	BY OTHERS	BY OTHERS	BY OTHERS	1/2"	1/2"	1 1/2" INDIRECT	NA	
HS-1	HAND SINK SPECIFIED BY OTHERS	VFW HALL	BY OTHERS	BY OTHERS	BY OTHERS	3/8"	3/8" TEMPERED	1 1/2"	1 1/2"	
BS-1	BAR SINK SPECIFIED BY OTHERS	VFW HALL	BY OTHERS	BY OTHERS	BY OTHERS	1/2"	1/2"	1 1/2" INDIRECT	NA	
DW-2	KITCHEN DISHWASHER SPECIFIED BY OTHERS	VFW HALL	BY OTHERS	BY OTHERS	BY OTHERS	NA	1/2"	1 1/2" INDIRECT	NA	VERIFY DRAIN SIZE WITH EQUIPMENT
GW-1	BAR GLASSWASHER SPECIFIED BY OTHERS	VFW HALL	BY OTHERS	BY OTHERS	BY OTHERS	NA	1/2"	1 1/2" INDIRECT	NA	VERIFY DRAIN SIZE WITH EQUIPMENT

GREASE INTERCEPTOR SIZING GT-1											
TAG	LENGTH IN	WIDTH IN	DEPTH IN	# OF COMPS.	VOLUME CU. IN.	IN ³ /GAL.	DRAINAGE LOAD	DRAINAGE PERIOD MIN.	FLOW RATE GPM	LBS.	
DISH SINK	24	X 18	X 14	X 2	= 12096	÷ 231	X .75	÷ 2	= 19.6	39.3	
PREP SINK	24	X 18	X 14	X 1	= 6048	÷ 231	X .75	÷ 2	= 9.8	19.6	
HAND SINK	10	X 8	X 6	X 1	= 480	÷ 231	X .75	÷ 1	= 1.6	3.1	
FLOOR DRAIN				1	= 0	÷ 231	X .75	÷ 2	= 0.0	0.0	

AN ADDITIONAL 5 GPM / 10LBS HAS BEEN ADDED FOR THE DISHWASHER AS PER THE MANUFACTURES RECOMMENDATION FOR A TOTAL OF 36.0 GPM / 72.0 LBS.
SCHIER PRODUCTS GB-50 HAS BEEN SELECTED WITH A FLOW RATE OF 50 GPM / 439 LBS

BACKFLOW PREVENTERS / VACUUM BREAKERS SCHEDULE

APPLICATION	MFR.	MODEL #	DESCRIPTION
BUILDING DOMESTIC SERVICE	WATTS	LF0090T	REDUCED PRESSURE ZONE ASSEMBLY
BUILDING FIRE SERVICE	WATTS	7090CDA	DOUBLE CHECK DETECTOR ASSEMBLY
SERVICE SINK	WATTS	LF8	HOSE CONNECTION VACUUM BREAKER
COMMERCIAL DISHWASHER	WATTS	LF288A	ANIT-SIPHON VACUUM BREAKER

NOTES:
1. ADDITIONAL BACKFLOW PREVENTER OR VACUUM BREAKERS ARE NOT REQUIRED WHERE SUCH DEVICES ARE INSTALLED INTEGRAL TO THE EQUIPMENT.

NATURAL GAS HOT WATER HEATER

TAG	CAPACITY (GAL.)	RECOVERY GPH/°F TEMPERATURE RISE			BTU INPUT PER HOUR	TEMP. SET POINT	HT.	DIA.	WATER CONN. (IN.)	GAS CONN. (IN.)	VENT SIZE (IN.)	F.A.I. SIZE (IN.)	POWER REQ. (V/PH)	AMP (FLA)	MANUFACTURER MAKE AND MODEL	COMMENTS
		40	100	140												
WH-1	100	588	261	168	199,000	130°F	75.5"	27.75"	1 1/2"	3/4"	4" CPVC	4" PVC	120/1	5	A.O. SMITH CYCLONE BTH-199	NOTES 1,2
WH-2	100	588	261	168	199,000	125°F	75.5"	27.75"	1 1/2"	3/4"	4" CPVC	4" PVC	120/1	5	A.O. SMITH CYCLONE BTH-199	NOTES 1,2

NOTES:
1. PROVIDE ALL PIPING ACCESSORIES AND APPURTENANCES AS PER THE HOT WATER HEATER INSTALLATION DETAIL.
2. COORDINATE LOCATION OF 120V CONTROL CIRCUIT FOR WATER HEATER.

RECIRCULATION PUMP SCHEDULE

ITEM NO.	MANUFACTURER	MODEL	VOLTAGE	HP	RPM	GPM	FT. HD.
RP-1	TACO	006-B4-PNP	115/1/60	1/40	3250	2.0	9

NOTES:
1. RECIRCULATION PUMP IS PROVIDED WITH A AN INTEGRAL TIMER TO CONTROL PUMP ON / OFF TIMES OF DAY. PUMP TO BE PROVIDED WITH AND CONTROLLED BY AN AQUASTAT TO BE COORDINATED WITH THE LINE TEMPERATURE.

SUMP PUMP SCHEDULE

TAG	LOCATION	DISCRPTION	PUMP					SUMP					CONTROLS			COMMENTS				
			MFR.	MODEL	DISCHARGE HEAD	GPM	HP	VOLTAGE	MFR.	MODEL	MATERIAL	DIA.	DEPTH	INLET	DISCHARGE		VENT	MFR.	MODEL	DESCRIPTION
EP-1	ELEVATOR PIT	SUMP PUMP WITH OIL GUARD SYSTEM	ZOELLER	N153	1 1/2"	20 FT	52	1/2	115	N/A	N/A	N/A	N/A	24"	N/A	N/A	N/A	ZOELLER	10-1526 OIL SMART ALARM PANEL & PUMP SWITCH	PUMP, ALARM PANEL & PUMP SWITCH CAN BE ORDERED AS 940-0013



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2 100% PERMIT SET 2/02/2021

1 80% DD SET 1/08/2021

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