

LEGEND AND ABBREVIATIONS

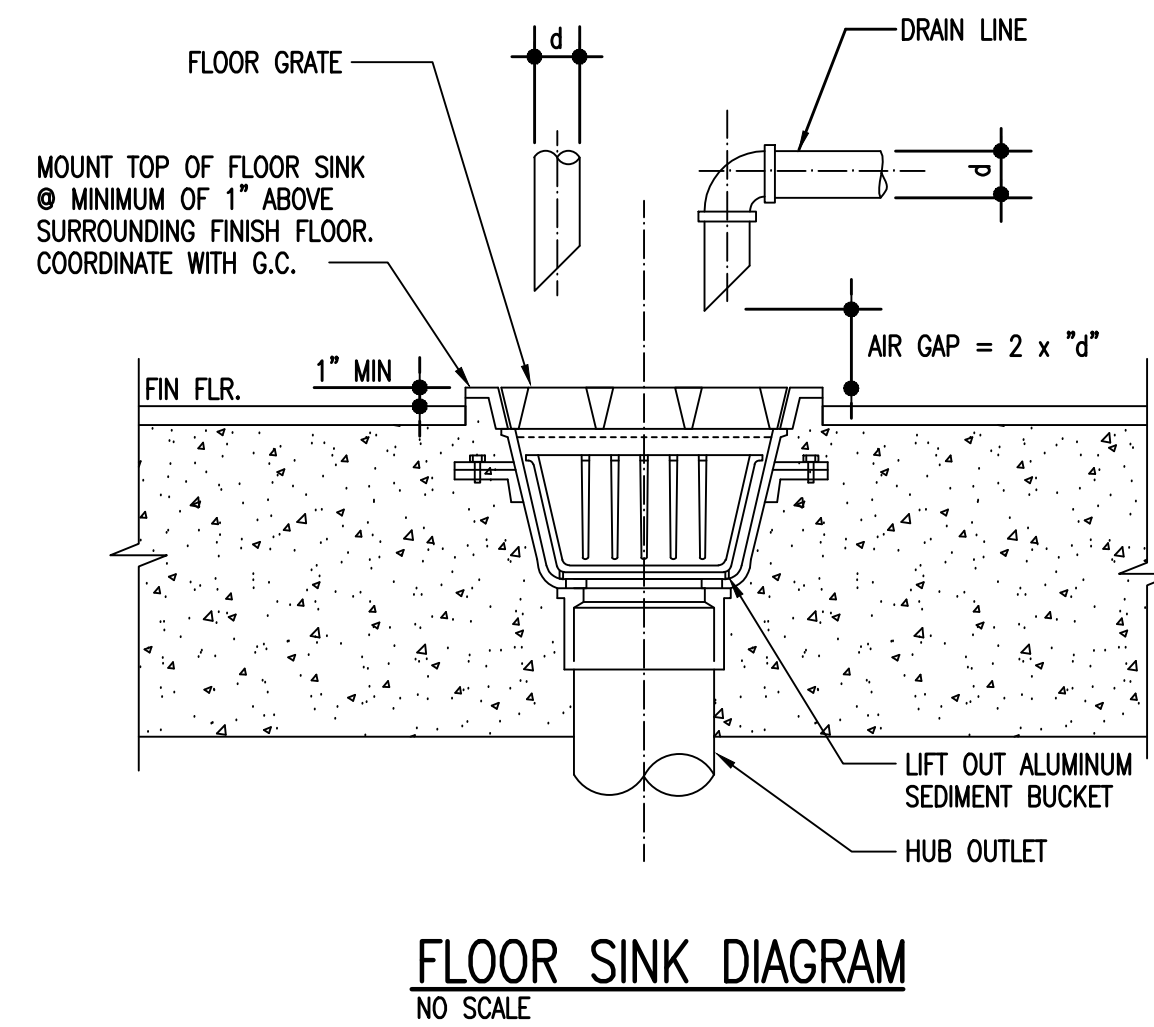
- CONNECT TO EXISTING
- WORK BY THIS CONTRACTOR
- SANITARY WASTE LINE
- GW — GREASE WASTE LINE
- SV — SANITARY VENT PIPING (SV)
- IW — INDIRECT WASTE
- STW — STORMWATER PIPING (STW)
- CW — COLD WATER PIPING (CW)
- CF — COLD WATER FILTER SYSTEM (CF)
- HOT WATER PIPING
- HWR — HOT WATER RECIRCULATING PIPING (HWR)
- G — GAS PIPING (G)
- PIPE TURNING UP
- PIPE TURNING DOWN
- WATER HAMMER ARRESTOR (WHA)
- BALL VALVE
- CHECK VALVE
- CIRCUIT SETTER
- GATE VALVE
- PRESSURE REDUCING VALVE (PRV)
- GAS SHUT OFF VALVE
- TEMPERATURE & PRESSURE VALVE
- THERMOMETER
- GAUGE
- STRAINER
- HOSE BIBB
- CIRCULATING PUMP (INLINE TYPE)
- FIXTURE REFERENCE NUMBER
- METER
- GAS METER
- CONNECT TO EXISTING
- EXTENT OF DEMOLITION
- REVISION NOTE
- DEMOLITION NOTE
- FOOD SERVICE EQUIP NUMBER
- AND BUILDING BELOW CLEANOUT CONTINUATION DRAINAGE FIXTURE UNITS DIAMETER DRAWING EMERGENCY EXISTING FLOOR CLEANOUT FLOOR DRAIN FINISHED FLOOR FLOOR SINK GRADE CLEANOUT HUB DRAIN LAVATORY THOUSAND BRITISH THERMAL UNIT PLUMBING CONTRACTOR PLACES ROOF DRAIN ROOFTOP UNIT TYPICAL URINAL VENT THRU ROOF WATER CLOSET

| FOOD SERVICE EQUIPMENT PIPING SCHEDULE | | | | | | | | | |
|--|---|---------|---------|--------|----------|------|--------------------------|---|--|
| ITEM NO | DESCRIPTION | CW (IN) | HW (IN) | WASTE | | | GAS | REMARKS | |
| | | | | DIRECT | INDIRECT | VENT | | | |
| 03.01 | NEW HAND SINK FOR DR-THRU TABLE | 1/2 | 1/2 | | 1-1/2" | | | SEE NOTES 3 & 5 | |
| 10.01 | NEW 12V SODA SYSTEM W/ ICE | | | | 3/4" | | | SEE NOTES 1 & 7. WATER THROUGH SODA LINES BY OWNER. | |
| 11.01 | NEW SODA SYSTEM, DROP IN 8V W/ ICE | | | | 3/4" | | | SEE NOTES 1 & 7. WATER THROUGH SODA LINES BY OWNER. | |
| 11.02 | NEW CARBONATOR | 1/2 | | | | | | | |
| 16.53 | NEW ICE STORAGE BIN | | | | 3/4" | | | NEW LOCATION, SEE NOTE 6 | |
| 16.73 | EXISTING ICE CUBER | 1/2 | | | 3/4" | | | NEW LOCATION, SEE NOTE 2 | |
| 17.00 | EXISTING BUNN ITCB COFFEE-TEA BREWER | 1/2 | | | | | | NEW LOCATION, FILTERED WATER | |
| 24.00 | EXISTING BROILER - DUKE MODEL FBB NAT. GAS | | | | | | 3/4" - 95,000 BTUH | NEW LOCATION, SEE NOTE 4 | |
| 31.40 | EXISTING PITCO 4-BANK FRYER BKSSH54FD | | | | | | 3/4" EA - 60,000 BTUH EA | NEW LOCATION, SEE NOTE 4 | |
| 62.02 | NEW HAND SINK | 1/2 | 1/2 | 2" | | | | SEE NOTES 3 & 5 | |
| 73.01 | NEW WATER FILTER - SELECTO SCIENTIFIC SEL-80-6202 | 3/4 | | | | | | KITCHEN EQUIPMENT SUPPLIER TO FURNISH AND AN INSTALL. | |

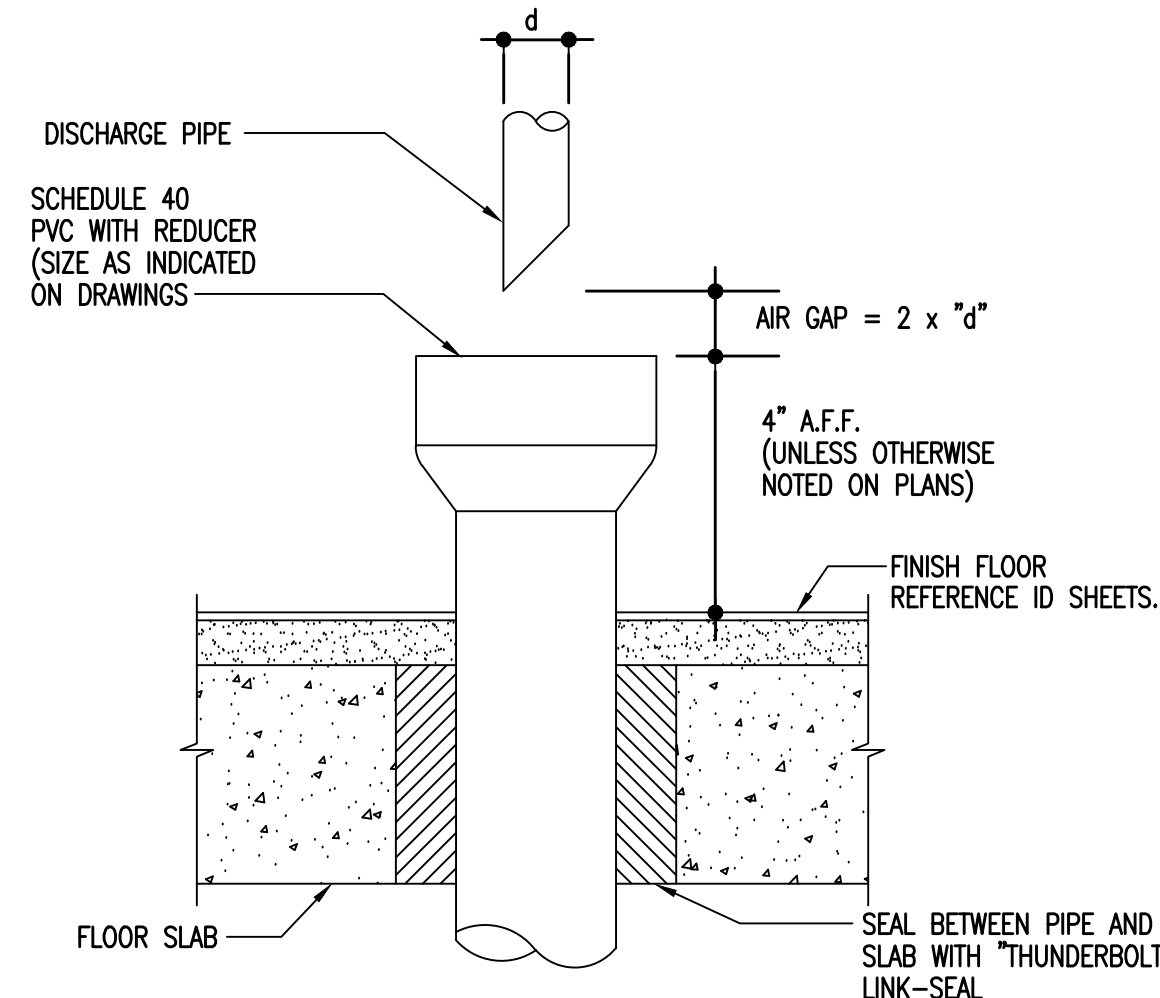
NOTES:
 1. PIPE INDIRECT WASTE TO NEW FLOOR SINK. COORDINATE FINAL LOCATION OF ALL FLOOR SINKS WITH FOOD SERVICE EQUIPMENT FOOTPRINT. PRIOR TO THE START OF ANY PLUMBING SYSTEM ROUGH-IN WORK VERIFY THE FINAL EQUIPMENT PLACEMENT SO THAT EQUIPMENT LEGS/WHEELS DO NOT SET ON TOP OF FLOOR SINK.
 2. PLUMBING CONTRACTOR TO PROVIDE COLD WATER LINE WITH BALL VALVE, DOUBLE CHECK BACKFLOW ASSEMBLY AND CONNECTION(S) TO EQUIPMENT.
 3. PLUMBING CONTRACTOR TO FURNISH AND INSTALL CHROME P TRAP AND SUPPLY STOPS.
 4. SAFE-T-LINK GAS CONNECTOR KIT - FOOD SERVICE CONTRACTOR TO FURNISH 3/4 INCH STAINLESS STEEL BRAID GAS CONNECTOR WITH QUICK DISCONNECT, STREET ELBOW, BALL VALVE AND RESTRAINING CABLE ADJUSTABLE FROM THREE TO FIVE FEET.
 5. PLUMBING CONTRACTOR SHALL PROVIDE THERMOSTATIC MIXING VALVE AT EACH HAND SINK.
 6. PIPE INDIRECT WASTE TO FLOOR SINK CONNECTED TO BUILDING SANITARY DRAIN
 7. WATER LINE IS FROM SODA AREA FILTER ASSEMBLY [73.01] AND TO BE RUN BY SODA VENDOR.

| PLUMBING FIXTURE SCHEDULE | | | | | | | |
|---------------------------|--------------|---------|---------|----------|-----------|-----------|--|
| REF NO | FIXTURE | CW (IN) | HW (IN) | SAN (IN) | TRAP (IN) | VENT (IN) | REMARKS |
| P-1 | WATER CLOSET | 1 1/4 | | 4 | | 2 | FLOOR MOUNT, MANUAL FLUSHOMETER VALVE |
| P-1A | WATER CLOSET | 1 1/4 | | 4 | | 2 | ADA ACCESSIBLE, FLOOR MOUNT, FLUSHOMETER VALVE |
| P-2 | URINAL | 3/4 | | 2 | | 2 | ADA ACCESSIBLE, WALL MOUNT, MANUAL FLUSHOMETER VALVE |
| P-3 | LAVATORY | 1/2 | 1/2 | 2 | 1 1/2 | 1 1/4 | ADA ACCESSIBLE, WALL MOUNT, MANUAL SINGLE LEVER FAUCET |
| P-4 | HUB DRAIN | | | 2 | 2 | 2 | SEE NOTE 1 |
| P-5 | FLOOR SINK | | | 4 | 4 | 2 | SEE NOTE 2 |

NOTES:
 1. SEE HUB DRAIN DIAGRAM ON THIS DRAWING
 2. SEE FLOOR SINK DIAGRAM ON THIS DRAWING.



FLOOR SINK DIAGRAM
NO SCALE



HUB DRAIN DIAGRAM
NO SCALE

GENERAL PLUMBING NOTES:

- ALL PLUMBING WORK SHALL CONFORM TO THE PA UNIFORM CONSTRUCTION CODE, SUB-CODE (INTERNATIONAL PLUMBING CODE 2015) AS ADOPTED BY QUAKERTOWN, BUCKS COUNTY, PA AND SUBSEQUENT AMENDMENTS THERETO.
- VERIFY LOCATIONS, MOUNTING HEIGHTS, TRIM LOCATIONS, ETC. FOR ALL PLUMBING FIXTURES WITH THE ARCHITECT PRIOR TO INSTALLATION. P- designates fixture and fixture TRIM. MOUNTING OF ALL ADA FIXTURES AND RELATED TRIM TO MEET THE AMERICAN DISABILITIES ACT GUIDELINES AND ANSI REQUIREMENTS FOR PEOPLE WITH DISABILITIES.
- CONCEAL ALL PIPING IN WALLS/CHASE SPACE, BELOW FLOORS, AND ABOVE CEILINGS UNLESS OTHERWISE NOTED. INSTALL ALL WATER SUPPLY PIPING IN EXTERIOR WALLS ON THE INSIDE (WARM SIDE) OF THE BUILDING INSULATION. ALL EXPOSED FIXTURE SUPPLIES, STOP VALVES, ETC. SHALL BE CHROME PLATED. SEAL ALL PIPING PENETRATIONS THROUGH RATED ASSEMBLIES ACCORDINGLY. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE AND SOUND RATED PARTITIONS AND CEILINGS.
- SEE RISER DIAGRAMS FOR WATER, DRAINAGE AND VENT SYSTEMS PIPE SIZING AND FIXTURE PIPING SCHEDULE FOR FIXTURE BRANCH COLD WATER, HOT WATER, SOIL, WASTE, AND VENT PIPE SIZES.
- FOOD SERVICE EQUIPMENT IS EXISTING AND OR NEW AS BEING PROVIDED BY THE OWNER OR OWNERS FOOD SERVICE CONTRACTOR. THE PLUMBING CONTRACTOR SHALL FURNISH REQUIRED ROUGH-INS, APPURTENANCES AND MAKE ALL FINAL CONNECTIONS. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL SERVICES AND MAKE ALL NECESSARY FINAL CONNECTIONS TO ALL KITCHEN EQUIPMENT. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, FURNISHING AND INSTALLING ALL VALVES (I.E. THERMOSTATIC MIXING, SOLENOID, ETC.), TRAPS, VACUUM BREAKERS, WATER HAMMER ARRESTORS, AND PIPING. PROVIDE UNIONS, SHUTOFF VALVES, P TRAPS, AND OTHER COMPONENTS AT EACH PIECE OF EQUIPMENT..
- THE PLUMBING CONTRACTOR SHALL REFER TO FOOD SERVICE EQUIPMENT CONTRACTOR'S DRAWINGS FOR ROUGH-IN INFORMATION AND LOCATIONS OF ALL EQUIPMENT PRIOR TO THE INSTALLATION OF ANY PIPING. SEE FOOD SERVICE EQUIPMENT PIPING SCHEDULE FOR EQUIPMENT CONNECTIONS, SIZES, ETC. VERIFY ALL FINAL UTILITY CONNECTIONS WITH FOOD SERVICE EQUIPMENT CONTRACTOR AND OWNER'S VENDORS.
- ALL FOOD SERVICE EQUIPMENT HOT WATER CONNECTIONS SHALL BE 140 DEGREES F UNLESS OTHERWISE NOTED.
- THE PLUMBING CONTRACTOR SHALL COORDINATE ALL INDIRECT WASTE (SAFEWASTE) LINE CONNECTIONS AND EQUIPMENT ROUGH-IN WITH THE FOOD SERVICE EQUIPMENT CONTRACTOR. THE INSTALLATION AND SIZE OF ALL INDIRECT WASTE (SAFEWASTE) PIPING SHALL BE IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
- THE PLUMBING CONTRACTORS SERVICE UTILITIES WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 DOMESTIC WATER SUPPLY - MODIFICATIONS AND EXTENSIONS TO THE EXISTING DOMESTIC BUILDING WATER SUPPLY SERVICE SUPPLY LINE AND DISTRIBUTION SYSTEM.
 DRAINAGE SYSTEMS - MODIFICATIONS AND EXTENSIONS TO THE EXISTING SANITARY BUILDING DRAIN. PRIOR TO INSTALLATION OF ANY DRAINAGE PIPING VERIFY EXISTING BUILDING DRAIN INVERT AND COORDINATE WITH NEW PIPING. COORDINATE FINAL ROUTING OF ALL SOIL AND/OR WASTE PIPING WITH THE EXISTING CONDITIONS.
 GAS SYSTEM (PROPANE) - MODIFICATION AND CONNECTIONS TO EXISTING GAS SERVICE SUPPLY LINE.

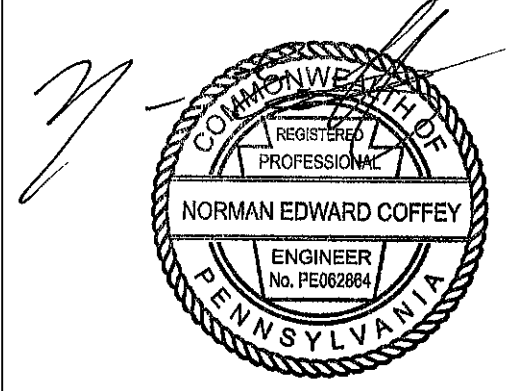
GENERAL DEMOLITION NOTES:

- DRAWINGS ARE DIAGRAMATIC. FIELD VERIFY EXISTING CONDITIONS AND COORDINATE ALL WORK WITH OTHER TRADES. DRAWING INDICATES THE GENERAL SCOPE OF WORK ASSOCIATED WITH THE REMOVAL OF EXISTING MATERIALS, EQUIPMENT, AND PIPING SYSTEMS, BUT IS NOT NECESSARILY INCLUSIVE OF EVERY EXISTING CONDITION. THE FULL EXTENT OF REMOVAL WORK SHALL BE DETERMINED IN THE FIELD BASED ON THE ACTUAL CONDITIONS ENCOUNTERED AND AS REQUIRED FOR THE PROPER EXECUTION OF ALL TRADES WORK.
- THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE TO CLEARLY IDENTIFY ALL PLUMBING FIXTURES AND EQUIPMENT THAT IS TO BE REMOVED AND REVIEW WITH THE OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY DEMOLITION WORK.
- INTENT IS FOR EXISTING SANITARY AND GREASE BUILDING DRAINAGE PIPING LOCATED WITHIN FLOOR SLAB TO BE ABANDONED IN PLACE UNLESS IN CONFLICT WITH NEW BELOW SLAB DRAINAGE PIPING SHOWN ON NEW WORK PLANS. THE DRAINAGE SYSTEMS PIPE ROUTING AS SHOWN ON DEMOLITION PLAN IS BEST GUESS BASED ON INFORMATION REPORTED BY THE OWNERS PLUMBER. REMOVE ALL FLOOR SINKS/DRAINS AND CLEANOUTS AS REQUIRED TO ACCOMMODATE THE DEMOLITION WORK. CAP OR PLUG AND COVER ALL ABANDONED SANITARY DRAINAGE PIPING IN CODE APPROVED MANNER. THE REMOVAL OF EXISTING SANITARY PIPING, DRAINS, CLEANOUTS, ETC. SHALL NOT CREATE 'DEAD-END' LEGS/BRANCHES. ANY EXISTING ACTIVE UNDER-FLOOR PIPING SHALL REMAIN ACCESSIBLE. PROVIDE NEW FLOOR CLEANOUTS WHERE NECESSARY.
- REMOVAL OF ALL EQUIPMENT, PIPING, FIXTURES, ETC. SHALL INCLUDE ALL RELATED SUPPORTS, HANGERS, ETC. WHERE PIPING IS NOTED TO BE ABANDONED IN WALLS OR FLOORS, PIPING SHALL BE REMOVED TO BEYOND FINISH SURFACE, CAPPED OR PLUGGED IN APPROVED MANNER. PATCH SURFACE AND FINISH TO MATCH ADJACENT CONDITIONS. CLOSE OFF AND SEAL TIGHT ALL WALL, FLOOR, AND ROOF PENETRATIONS NOT BEING UTILIZED FOR NEW PIPING SYSTEMS SO AS TO MAINTAIN STRUCTURAL INTEGRITY OF SURROUNDING ASSEMBLY.
- ALL ITEMS NOTED AS 'TO REMAIN' AND AS 'TO BE SERVICED' SHALL BE COMPLETELY CLEANED AND SERVICED BY A QUALIFIED TECHNICIAN AND SHALL BE REPAIRED AS REQUIRED TO ENSURE PROPER OPERATION WITH CAPACITIES AS STATED ON THE EQUIPMENT TAGS.
- ALL MATERIALS, EQUIPMENT, FIXTURES NOT REUSED OR CLAIMED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE REMOVED PROMPTLY FROM THE PREMISES BY THE CONTRACTOR. ANY DEMOLITION ITEMS IN QUESTION SHALL BE REVIEWED WITH THE OWNERS REPRESENTATIVE PRIOR TO REMOVAL. ALL SPACES SHALL BE KEPT FREE OF DEBRIS AT ALL TIMES.

ARCHITECT OF RECORD:
Samantha Ciotti Falcone
AIA, LEED AP
DRAWN BY: MSR
OWNER OF RECORD:
ABIH, LLC



BURGER KING RESTAURANT #3534
ALTERNATIONS TO EXISTING RESTAURANT
100 N. West End Boulevard
Quakertown PA 18951,
Richland Township, Bucks County

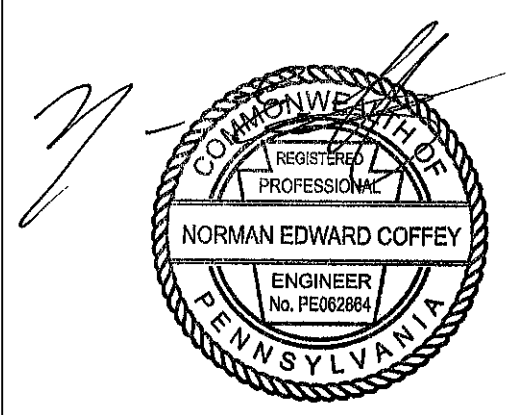


3515 Sunnyside Road
Center Valley, PA 18034
T: 610-297-0140
E: sam@scf-arch.com

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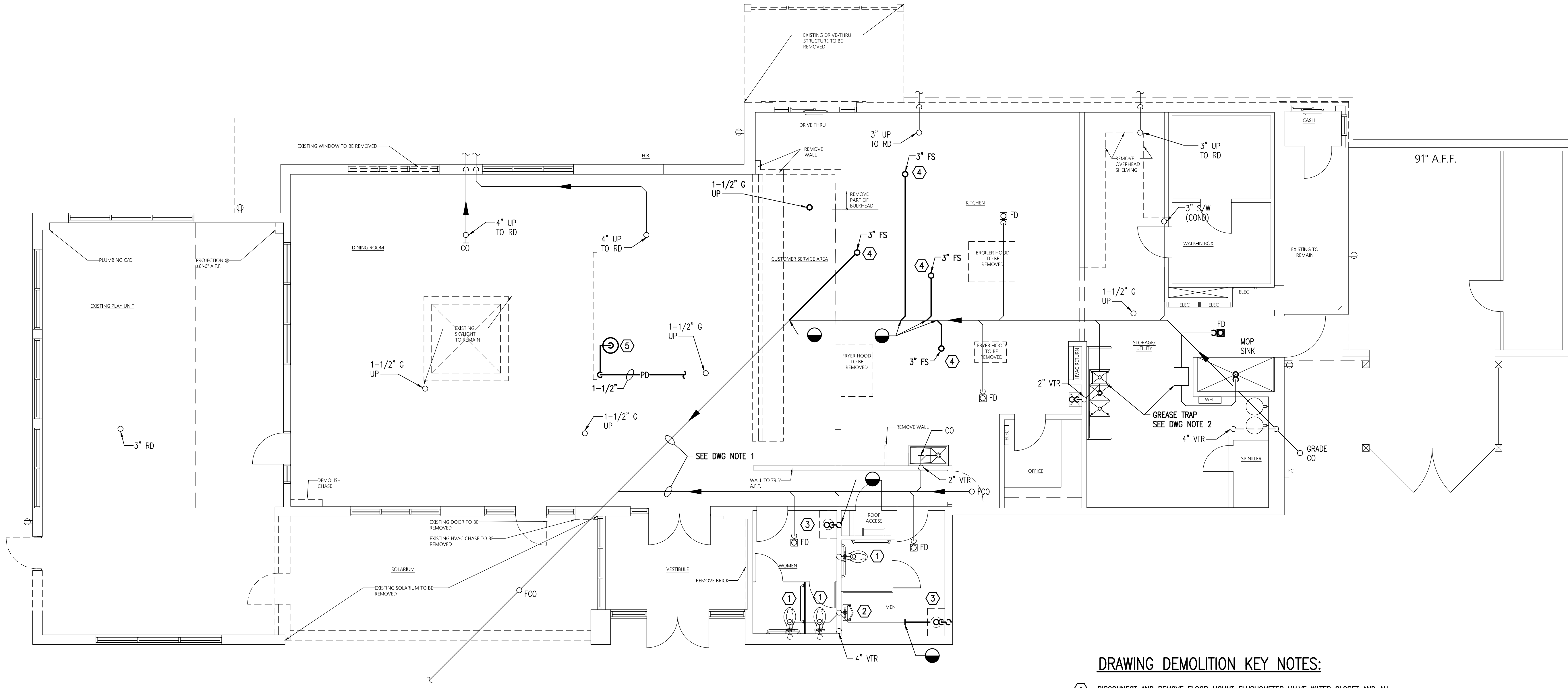
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DEMOLITION
FLOOR PLAN
P1.1



PLUMBING FLOOR PLAN – DEMOLITION
SCALE: 3/16" = 1'-0"

DRAWING DEMOLITION KEY NOTES:

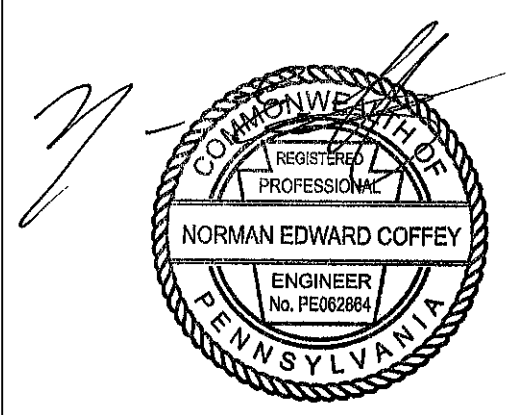
- ① DISCONNECT AND REMOVE FLOOR MOUNT FLUSHMETER VALVE WATER CLOSET AND ALL RELATED TRIM. RETAIN FIXTURE DRAIN PIPING, VENT PIPING, AND COLD WATER SUPPLY PIPING FOR RECONNECTION TO NEW FIXTURE IN SAME LOCATION.
- ② DISCONNECT AND REMOVE URINAL AND ALL RELATED TRIM. RETAIN FIXTURE DRAIN PIPING, VENT PIPING, AND COLD WATER SUPPLY PIPING FOR RECONNECTION TO NEW FIXTURE IN SAME LOCATION.
- ③ DISCONNECT AND REMOVE WALL MOUNT LAVATORY AND ALL RELATED TRIM. REMOVE FIXTURE BRANCH DRAIN PIPING BACK TO POINT INDICATED, REMOVE COLD AND HOT WATER SUPPLY PIPING AND VENT PIPING BACK TO ABOVE CEILING AND RETAIN PIPING FOR RECONNECTION AS SHOWN ON NEW WORK PLANS.
- ④ REMOVE EXISTING FLOOR SINK AND ASSOCIATED BRANCH LINE PIPING BACK TO POINTS INDICATED. CAP OR PLUG ALL UNUSED OUTLETS IN CODE APPROVED MANNER, UNLESS OTHERWISE NOTED ON NEW WORK PLANS.
- ⑤ REMOVE PUMP SERVING BEVERAGE BAR IN ITS ENTIRETY. DISCONNECT AND REMOVE ALL BEVERAGE BAR INDIRECT DRAIN PIPING BACK TO BUILDING DRAIN. REMOVE DOMESTIC WATER SUPPLY PIPING BACK TO LAST ACTIVE MAIN AND CAP OR PLUG IN CODE APPROVED MANNER.

DRAWING NOTES:

- 1. THE EXISTING SANITARY BUILDING DRAIN PIPING HAS NOT BEEN VERIFIED. PIPING ROUTING LAYOUT AS SHOWN IS BEST GUESS BASED ON AVAILABLE INFORMATION. THIS CONTRACTOR IS RESPONSIBLE FOR FIELD INVESTIGATION AND VERIFICATION OF BUILDING DRAIN ROUTING. PROVIDE INSPECTION AND CLEANING OF THE EXISTING SANITARY BUILDING AND SUBMIT WRITTEN REPORT ON ALL FINDINGS.
- 2. THE CLEANING AND REPAIR OF THE EXISTING GREASE INTERCEPTOR (RECESSED IN FLOOR) IS TO BE BY THE OWNER PRIOR TO START OF NEW WORK. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR COORDINATING ASSOCIATED SANITARY BUILDING DRAIN INSPECTION AND CLEANING WORK WITH THE OWNER.
- 3. SEE DRAWING P1.0 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.



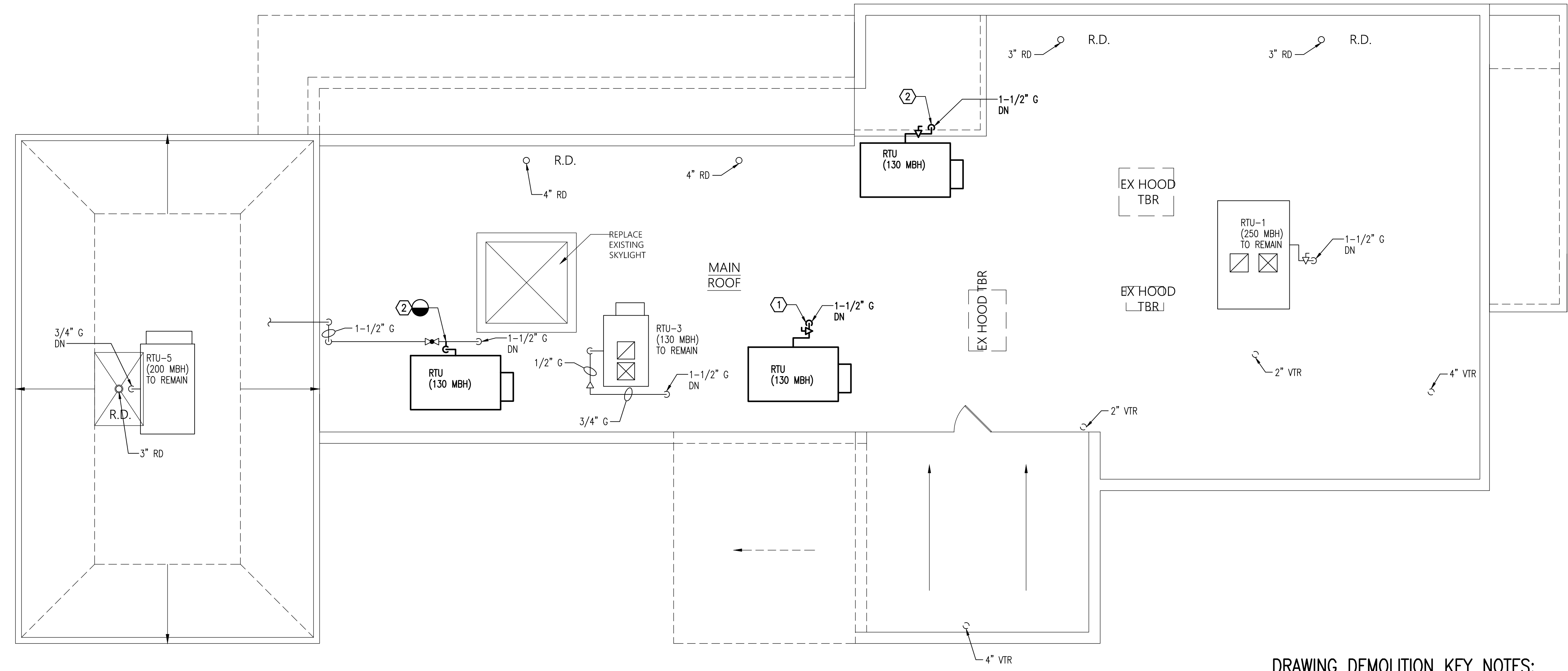
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3515 Sunnyside Road
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T: 610-297-0140
E: sam@scf-arch.com

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DEMOLITION ROOF PLAN P1.2



PLUMBING ROOF PLAN - DEMOLITION
SCALE: 3/16" = 1'-0"

DRAWING DEMOLITION KEY NOTES:

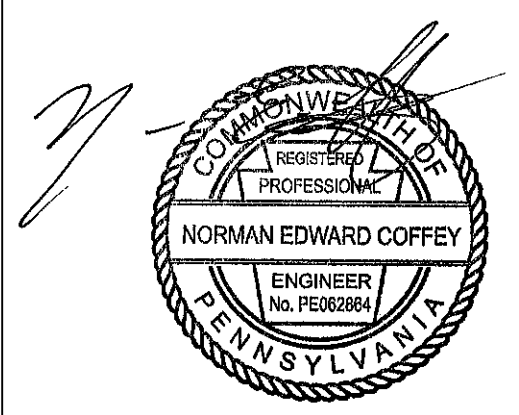
- ① DISCONNECT GAS LINE SERVING ROOF TOP MECHANICAL UNIT AND REMOVE PIPING BACK TO LAST ACTIVE BRANCH TAKE-OFF AND CAP LINE IN CODE APPROVED MANNER.
- ② DISCONNECT GAS LINE SERVING ROOF TOP MECHANICAL UNIT AND REMOVE GAS LINE BACK TO A POINT AS REQUIRED TO FACILITATE REMOVAL OF MECHANICAL UNIT BY THE MECHANICAL CONTRACTOR. RETAIN GAS LINE FOR CONNECTION TO NEW MECHANICAL UNIT AS SHOWN ON NEW WORK PLANS. THE PLUMBING CONTRACTOR SHALL COORDINATE THIS WORK WITH THE MECHANICAL CONTRACTOR.

DRAWING NOTES:

- 1. SEE DRAWING P1.0 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.



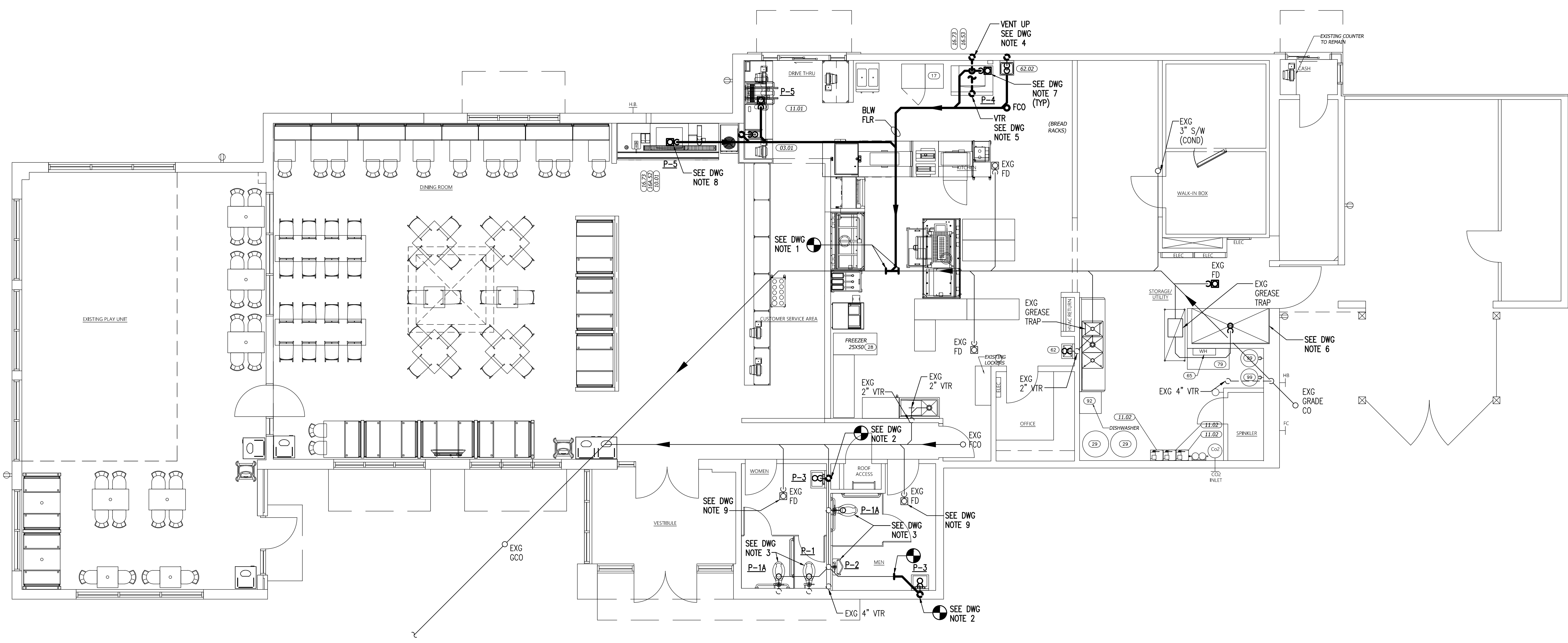
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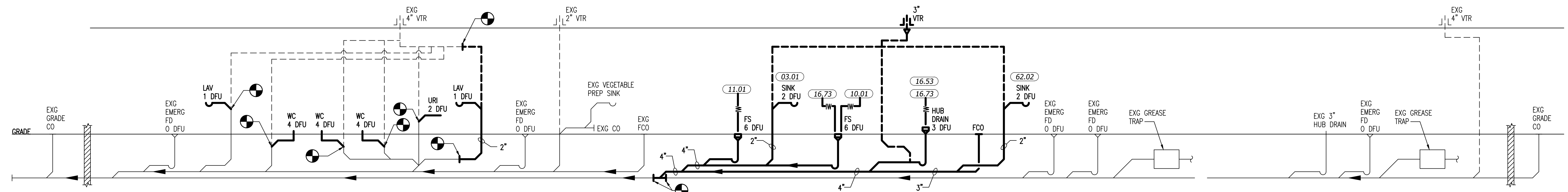
**DRAINAGE & VENT
PIPING FLOOR PLAN
P2.1**



PLUMBING FLOOR PLAN – DRAINAGE AND VENT PIPING
SCALE: 3/16" = 1'-0"

DRAWING NOTES:

- CONNECT NEW SANITARY BRANCH PIPING TO EXISTING SANITARY BUILDING DRAIN. THE UNDER FLOOR SANITARY DRAINAGE PIPING HAS NOT BEEN VERIFIED. PRIOR TO THE START OF ANY NEW DRAINAGE SYSTEM WORK THIS CONTRACTOR IS RESPONSIBLE FOR FIELD INVESTIGATION TO LOCATE EXISTING UNDER FLOOR SANITARY DRAINAGE LINES AND VERIFICATION OF INVERT ELEVATIONS AT NEW TIE-IN POINTS PROMPTLY REPORT ANY PROBLEMS WITH TIE-IN CONNECTIONS TO THE ARCHITECT.
- PROVIDE NEW LAVATORY FIXTURE BRANCH WATER, WASTE AND VENT PIPING AS SHOWN AND CONNECT TO EXISTING PIPING IN SERVING FIXTURE REMOVED IN GENERAL AREA.
- INTENT IS TO PROVIDE REPLACEMENT FIXTURES IN SAME LOCATIONS AS EXISTING FIXTURES AND CONNECT TO EXISTING FIXTURE BRANCH PIPING. PROVIDE NEW TRIM AS REQUIRED (IE CLOSET FLANGES OR FIXTURE SUPPORT REPLACEMENT PIECES). THE REINSTALLATION OF FIXTURES AND TRIM SHALL MEET ALL ADA CLEARANCE REQUIREMENTS.
- NEW FIXTURE VENT LINE, COORDINATE FINAL ROUTING AND LOCATION IN THE FIELD WITH EXISTING CONDITIONS. CONNECT TO EXISTING VENT THROUGH THE ROOF AS SHOWN ON SANITARY RISER DIAGRAM.
- PROVIDE NEW FIXTURE VENT LINES, VENT BRANCH PIPING AND VENT THROUGH ROOF. ROUTE A NEW VENT PIPING AND AS HIGH AS POSSIBLE ABOVE NEW CEILINGS AND CONNECT TO THE VENT THROUGH ROOF AS SHOWN ON SANITARY RISER DIAGRAM.
- REPLACE EXISTING BASIN LINER AND PROVIDE NEW ASSEMBLY COMPLETE WITH STRAINER, TRAP ASSEMBLY, ALL NEW STAINLESS STEEL (18 GAUGE, TYPE 304) INCLUDING BUT NOT LIMITED TO: BASIN LINER WITH BACK-SPLASH ON THREE SIDES, CURB EDGE, WALL PANELS AND ONE WALL END CAP TO MATCH EXISTING. APPROXIMATE NOMINAL DIMENSIONS ARE AS FOLLOWS: BASIN LINER 3'-0" X 6'-10" X 4" DEEP WITH 1'-0" HIGH BACK-SPLASHES, 4'-0" HIGH STAINLESS STEEL WALL PANELS. 6'-0" HIGH WALL END CAP FIELD VERIFY ALL EXISTING DIMENSIONS.
- THE PLUMBING CONTRACTOR SHALL COORDINATE FINAL LOCATION OF ALL FLOOR DRAINS AND FLOOR SINKS WITH THE FOOD SERVICE CONTRACTOR AND REFER TO FOUNDATION PLAN DRAWING. PROVIDE FLOOR SINK GRATE OPENINGS AS REQUIRED TO COORDINATE EQUIPMENT LAYOUT AND INDIRECT WASTE DRAINS LINES. PROVIDE TRAP PRIMER VALVE OR TRAP SEAL FOR ALL FLOOR DRAINS ACCORDING TO LOCAL REQUIREMENTS.
- PIPE ALL INDIRECT DRAINS FROM BEVERAGE CENTER STATION TO THE FLOOR SINK. COORDINATE LOCATIONS, ROUTING, SIZE AND CONNECTION REQUIREMENTS WITH THE FOOD SERVICE EQUIPMENT SUPPLIER.
- PROVIDE A BARRIER TYPE TRAP SEAL PROTECTION DEVICE COMPLYING WITH ASSE 1072 IN EXISTING FLOOR DRAIN. FIELD VERIFY EXISTING FLOOR DRAIN SIZE AND INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- SEE DRAWING P1.0 FOR LEGEND AND ABBREVIATIONS AND PLUMBING GENERAL NOTES.

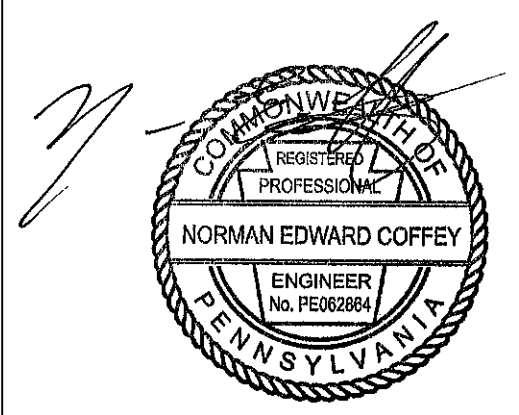


SANITARY RISER DIAGRAM
NO SCALE
SLOPE = 1/8\"/>

- GENERAL SANITARY RISER NOTES:**
- ALL SANITARY PIPING LESS THAN 3" SHALL BE SLOPED AT 1/4"/1'-0". ALL SANITARY PIPING LARGER THAN 3" OR LARGER SHALL BE AT 1/8"/1'-0" (IN ACCORDANCE WITH THE PLUMBING CODE AND ALL LOCAL REQUIREMENTS).
 - ALL SANITARY PIPING LOCATED BELOW THE FLOOR SLAB SHALL BE NO LESS THAN 2".
 - ALL VENT THROUGH THE ROOF PENETRATIONS (VTR'S) SHALL BE LOCATED NO LESS THEN 10'-0" FROM ALL EXISTING OR NEW OUTSIDE AIR INTAKES. COORDINATE WITH MECHANICAL CONTRACTOR IN THE FIELD.



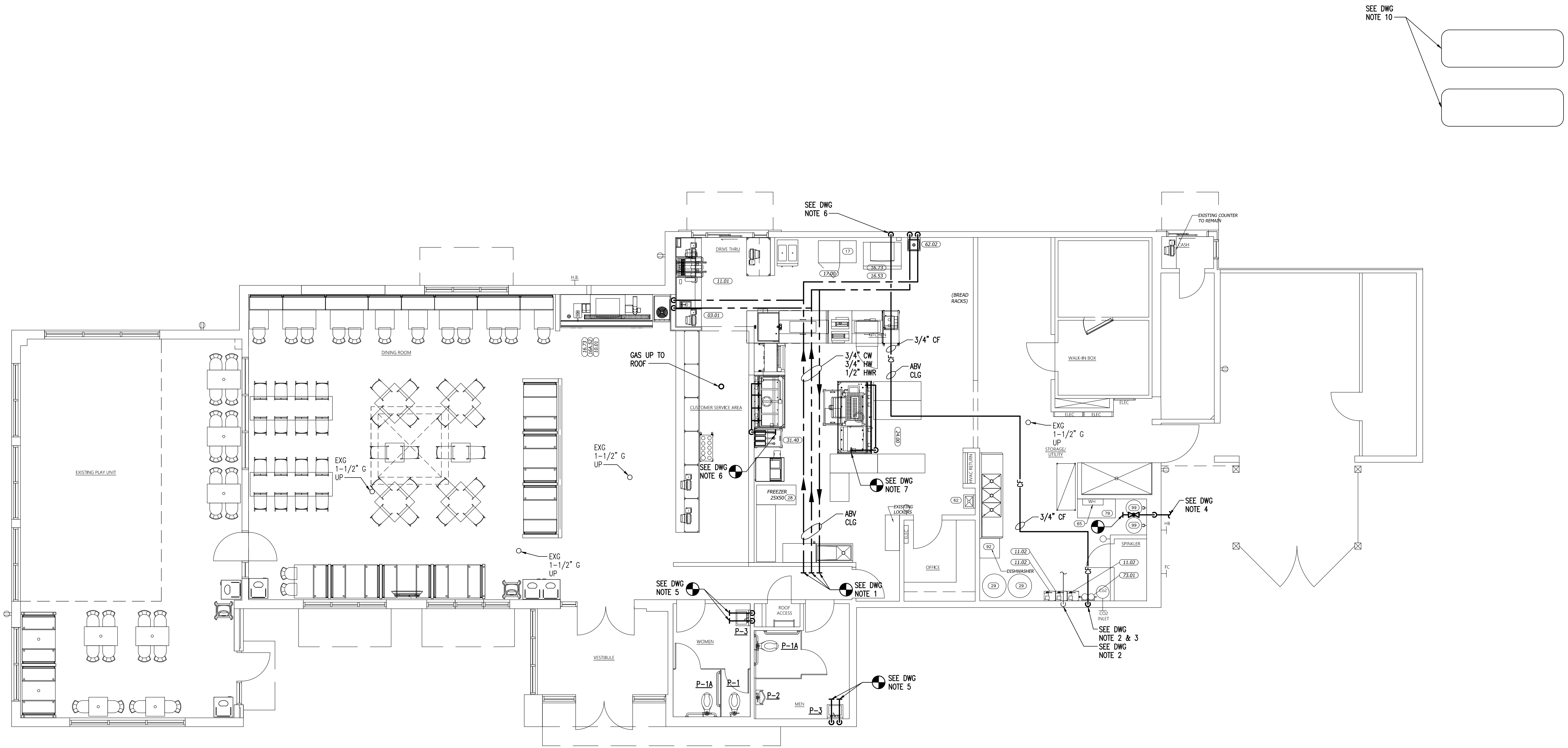
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WATER & GAS
PIPING FLOOR PLAN
P2.2



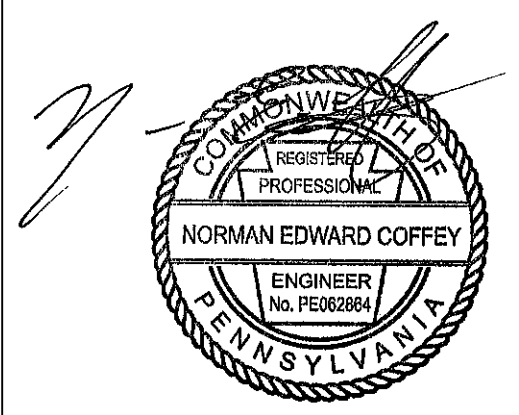
PLUMBING FLOOR PLAN – WATER AND GAS PIPING
SCALE: 3/16" = 1'-0"

DRAWING NOTES:

1. THE PLUMBING CONTRACTOR SHALL CONNECT COLD, HOT AND HOT WATER CIRCULATION SYSTEM PIPING TO EXISTING BRANCH LINES IN MECHANICAL/STORAGE SPACE ABOVE THIS GENERAL AREA. COORDINATE FINAL POINT OF CONNECTIONS IN THE FIELD WITH EXISTING CONDITIONS.
2. NEW FOUNTAIN DRINKS WATER FILTER SYSTEM. FILTER SYSTEM SHALL BE BY THE FOOD SERVICE EQUIPMENT SUPPLIER. COORDINATE FINAL POINT OF CONNECTION TO EXISTING WATER SUPPLY LINE IN THE FIELD WITH FOOD SERVICE EQUIPMENT SUPPLIER.
3. THE PLUMBING CONTRACTOR SHALL BE PROVIDE CONNECTIONS TO WATER FILTER SYSTEM AS BEING FURNISHED BY FOOD SERVICE EQUIPMENT SUPPLIER. COORDINATE FINAL LOCATION AND CONNECTION REQUIREMENTS WITH THE FOOD SERVICE EQUIPMENT SUPPLIER AND GENERAL CONTRACTOR.
4. THE PLUMBING CONTRACTOR SHALL PROVIDE A 1 INCH COLD WATER SUPPLY LINE FOR CONNECTION TO LAWN IRRIGATION SYSTEM. PLUMBING CONTRACTORS WORK TO INCLUDE INSTALLATION (BUILDING INTERIOR) OF A WATTS MODEL 008PCOT BACKFLOW ASSEMBLY OR EQUAL AS RECOMMENDED BY IRRIGATION SYSTEM PROVIDER. COORDINATE FINAL POINT OF CONNECTION TO WATER SERVICE SUPPLY LINE WITH THE OWNER AND IRRIGATION SYSTEM PROVIDER.
5. CONNECT NEW LAVATORY SINK FIXTURE BRANCH COLD AND HOT WATER SUPPLY PIPING TO EXISTING LINES IN THIS GENERAL AREA.
6. PROVIDE BACKFLOW PREVENTER ON COFFEE MAKER, ICE MACHINE AND OTHER BEVERAGE SUPPLY WATER LINES AS REQUIRED BY LOCAL CODES.
7. CONNECT NEW GAS SUPPLY PIPING SERVING 4-BANK FRYER TO THE EXISTING GAS SUPPLY LINE IN THIS GENERAL AREA.
8. CONNECT NEW GAS SUPPLY PIPING SERVING BROILER TO THE EXISTING GAS SUPPLY LINE IN THIS GENERAL AREA.
9. THE BUILDING GAS SUPPLY IS BEING FURNISHED FROM TWO (2) ABOVE GROUND 1000 GALLON PROPANE TANKS. THE EXISTING PROPANE GAS PIPE ROUTING HAS NOT BEEN VERIFIED. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR FIELD INVESTIGATION AND VERIFICATION OF BUILDING GAS PIPE ROUTING AND BUILDING GAS SUPPLY PRESSURE.
10. SEE DRAWING P1.0 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.



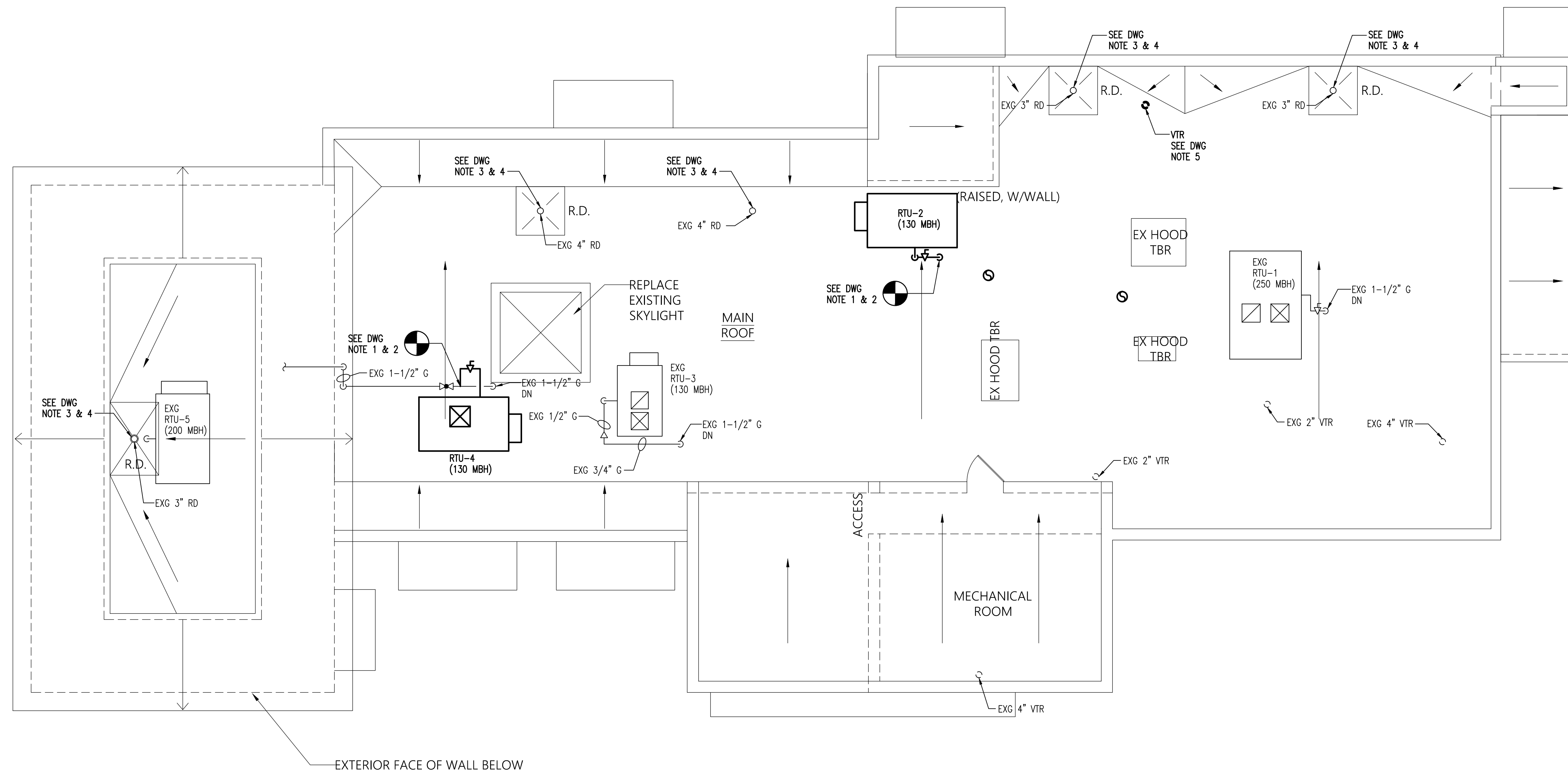
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RESTAURANT #3534
ALTERNATIONS TO EXISTING RESTAURANT
100 N. West End Boulevard
Quakertown PA 18951,
Richland Township, Bucks County



3515 Sunnyside Road
Center Valley, PA 18034
T: 610-297-0140
E: sam@scf-arch.com

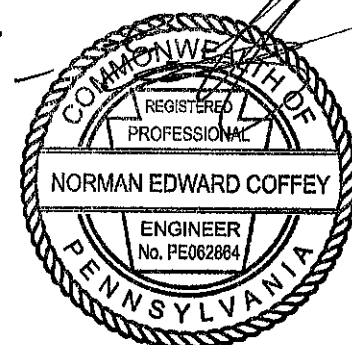
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PIPING
ROOF PLAN
P2.3



PLUMBING ROOF PLAN
SCALE: 3/16" = 1'-0"

- DRAWING NOTES:**
1. PROVIDE EXTENSION OF EXISTING GAS LINE ON ROOF WITH NEW GAS PIPING AND CONNECTION TO NEW ROOFTOP MECHANICAL UNITS AS SHOWN. PRIOR TO THE START OF ANY NEW GAS PIPING, COORDINATE FINAL LOCATIONS OF UNITS AND GAS CONNECTIONS FOR EACH UNIT WITH THE MECHANICAL CONTRACTOR.
 2. CONNECT GAS LINE TO MECHANICAL UNIT, CONNECTION TO BE COMPLETE WITH DIRT LEG, ISOLATION GAS VALVE AND UNION.
 3. THE EXISTING ROOF DRAIN AND STORM WATER PIPING HAS THE CAPACITY TO HANDLE ADDITIONAL ROOF AREAS BEING CREATED AS A RESULT OF BUILDING RENOVATION CONSTRUCTION. REFER TO THE ARCHITECTURAL DRAWINGS FOR SECONDARY (EMERGENCY OVERFLOW) ROOF SCUPPERS
 4. VERIFY ROOF DRAIN SIZE IS AS NOTED AND REMOVE ALL DEBRIS FROM ROOF DRAIN. THE EXISTING STORM WATER LEADERS AND STORM WATER BUILDING SEWER DRAINAGE PIPING HAS NOT BEEN VERIFIED. PROVIDE AN INSPECTION AND CLEANING OF THE EXISTING STORM WATER LEADERS AND STORM WATER SEWER OUT TO POINT OF DISCHARGE, TO CONFIRM ALL LEADERS AND PIPING IS FLOWING AT FULL CAPACITY.
 5. FIELD VERIFY LOCATION OF NEW PLUMBING VENT THROUGH ROOF AND COORDINATE FLASHING OF NEW ROOF PENETRATION AS REQUIRED FOR MAINTAINING ROOFING MATERIAL MANUFACTURERS WARRANTY WITH ARCHITECTURAL ROOF PLAN INSTALLATION DETAILS.
 6. SEE DRAWING P1.0 FOR GENERAL PLUMBING NOTES, LEGEND AND ABBREVIATIONS.



PLUMBING SPECIFICATIONS:

- 1.1 THE ARCHITECTURAL GENERAL CONDITIONS SHALL APPLY TO AND FORM A PART OF THIS SECTION OF THESE SPECIFICATION.
- 1.2 DO NOT SCALE THE DRAWINGS; IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, ACCESS PANELS AND SIMILAR PARTS, WHICH MAY BE REQUIRED. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ARRANGE ALL WORK ACCORDINGLY FURNISHING NECESSARY PARTS AND EQUIPMENT AS MAY BE REQUIRED TO MEET THE VARIOUS CONDITIONS.
- 1.3 PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND SUPERVISION AND PERFORM ALL OPERATIONS NECESSARY FOR THE PROPER AND COMPLETE EXECUTION OF ALL PLUMBING WORK IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS.
- 1.4 ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NATIONAL ELECTRIC CODE, OSHA, PENNSYLVANIA UNIFORM CONSTRUCTION CODE, 2015 INTERNATIONAL PLUMBING CODE AND ALL OTHER STATE AND LOCAL AUTHORITIES HAVING JURISDICTION AND APPLICABLE MANUFACTURER'S RECOMMENDATIONS.
- 1.5 THE CONTRACTOR SHALL VISIT THE SITE, EXAMINE ALL CONDITIONS, AND MAKE ALLOWANCES FOR DIFFICULTIES AND CONTINGENCIES AFFECTING THE PROPER EXECUTION OF THIS CONTRACT.
- 1.6 THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES NECESSARY FOR PERMITS AND INSPECTIONS REQUIRED WITH HIS WORK.
- 1.7 THE CONTRACTOR SHALL VERIFY ALL UTILITY SERVICE INFORMATION SHOWN ON THE DRAWINGS WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING A BID. ANY CHANGES OR SERVICE CHARGES IMPOSED BY THE UTILITY COMPANY SHALL BE QUALIFIED AND INCLUDED IN THE BID.
- 1.8 ALL EQUIPMENT SHALL BE TESTED, LISTED AND LABELED BY AN APPROVED AUTHORITY (UL, AGA, ETL) AND SHALL BE INSTALLED IN ACCORDANCE WITH ITS LISTING.
- 1.9 ALL EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER.
- 1.10 WHERE PRODUCTS ARE SPECIFIED BY BRAND NAME, CATALOG NUMBERS OR BY NAMES OF MANUFACTURERS, THE REFERENCE IS INTENDED TO BE DESCRIPTIVE AND NOT RESTRICTIVE, AND IS SOLELY FOR THE PURPOSE OF INDICATING THE TYPE OF QUALITY OF ITEM THAT WILL BE ACCEPTABLE. AN APPROVED EQUAL WILL BE CONSIDERED UNLESS INDICATED OTHERWISE.
- 1.11 SHOP DRAWINGS SHALL BE SUBMITTED AND REVIEWED PRIOR TO ORDERING ANY EQUIPMENT.
- 1.12 THE CONTRACTOR RESPONSIBLE FOR WORK COVERED BY THESE SPECIFICATIONS SHALL ADJACENT FINISHES. ALL WORK SHALL BE COORDINATED TO AVOID CUTTING OF WORK IN PLACE AND INTERFERING WITH OTHER OPERATIONS.
- 1.13 IN COMPLIANCE WITH ACT 38, CONTACT INDIVIDUAL COMPANIES TO HAVE UTILITY LOCATIONS MARKED IN THE FIELD AND TO OTHERWISE LOCATE UNDERGROUND OBJECTS AS MAY BE NECESSARY PRIOR TO THE START OF CONSTRUCTION. PENNSYLVANIA LAW REQUIRES THREE WORKING DAYS NOTICE FOR THE CONSTRUCTION PHASE AND TEN WORKING DAYS IN DESIGN STAGE. CALL PENNSYLVANIA ONE CALL SYSTEM, INC. (1-800-242-1776, AS OF THIS WRITING).
- 1.14 CONTRACTOR SHALL REVIEW THE DRAWINGS AND INSTALL FIRE PROTECTION PRODUCTS TO MAINTAIN THE INTEGRITY OF ALL PIPE, WIRE, CONDUIT, ETC. PENETRATIONS THROUGH ANY AND ALL FIRE RATED WALLS, FLOORS, BARRIERS, AND ASSEMBLIES. FIRE STOP TRAINING AND PRODUCTS SHALL BE 3M OR APPROVED EQUAL.
- 1.15 ALL EXCAVATIONS REQUIRED FOR INSTALLATION OF PIPE SHALL HAVE SOLID, UNDISTURBED BOTTOMS, AND SHALL BE SUBJECT TO APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PIPING PLACEMENT. SHOULD BOTTOMS BECOME SOFT OR WET BEFORE PIPING IS PLACED, ALL SUCH UNSUITABLE BOTTOMS SHALL BE REMOVED AT NO COST TO THE OWNER AND FILLED WITH CONCRETE.
- 1.16 BACKFILL ALL EXCAVATIONS PERFORMED UNDER THIS CONTRACT AS REQUIRED TO SATISFY FINISHED GRADE REQUIREMENTS.
- 1.17 THE CONTRACTOR SHALL PERFORM ALL DEMOLITION AS SHOWN ON THE DRAWINGS AND SHALL CUT AND PATCH AS REQUIRED TO PERFORM THE DEMOLITION WORK. ALL OPENINGS MUST BE REPAIRED TO MATCH ADJACENT FINISHES. THE OWNER SHALL BE GIVEN THE OPPORTUNITY TO RETAIN OWNERSHIP OF ALL REMOVED MATERIALS AND EQUIPMENT.
- 1.18 FURNISH AND INSTALL ALL NECESSARY HANGERS, INSERTS, SUPPORTS SUPPLEMENTARY STEEL, ETC., TO PROPERLY SUPPORT ALL EQUIPMENT AND PIPING IN AN APPROVED MANNER AND IN FULL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONSULT THE ROOFING INSTALLER FOR INFORMATION REGARDING PIPING THAT IS TO BE RUN ON THE ROOF.
- 1.19 ALL DOMESTIC COLD, HOT AND HOT WATER CIRCULATION PIPING WITHIN THE BUILDING SHALL BE HARD DRAWN TYPE "L" COPPER TUBING IN ACCORDANCE WITH ASTM-B88. FITTINGS SHALL BE WROUGHT COPPER OR CAST BRASS. VALVES SHALL BE CAST BRASS UNLESS NOTED OTHERWISE. HANGERS FOR SUPPORTING COPPER TUBING SHALL BE COPPERIZED. ALL WATER SERVICE PIPING OUTSIDE THE BUILDING SHALL BE TYPE "K" COPPER ASTM B-88. FITTINGS SHALL BE WROUGHT COPPER. ALL JOINTS SHALL BE MADE WITH SOLDER AND FLUX HAVING A LEAD CONTENT OF NOT MORE THAN 0.2 PERCENT.

- 1.20 WHERE PERMITTED BY THE LOCAL AUTHORITY CONSIDERATION WILL BE GIVEN FOR STORMWATER, SANITARY AND VENT PIPING TO BE SCHEDULE 40 PVC, ASTM D2665, D2949, WITH PVC FITTINGS (DWV TYPE) AND SOLVENT WELD JOINTS. DO NOT INSTALL PVC PIPING SHALL IN RETURN AIR PLENUM TYPE CEILINGS OR IN FIRE-RATED CEILING ASSEMBLIES (CONTRACTOR TO VERIFY THESE AREAS WITH ARCHITECT). THE PLUMBING CONTRACTOR SHALL PROVIDE WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITY HAVING JURISDICTION AND THE LOCAL FIRE MARSHALL FOR INSTALLATION OF PVC PIPING.
- A. IF PVC PIPING MATERIALS IS NOT PERMITTED FOR ABOVE OR BELOW SLAB PIPING, STORMWATER, SANITARY AND VENT PIPING SHALL BE NO-HUB SERVICE WEIGHT CAST IRON IN ACCORDANCE WITH ASTM A74; JOINTS SHALL BE A NEOPRENE GASKET WITH STAINLESS STEEL CLAMP AND SHIELD ASSEMBLY, INSTALL IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. SANITARY AND VENT PIPING LOCATED BELOW THE FLOOR SHALL BE SERVICE WEIGHT CAST IRON WITH HUB AND SPIGOT ENDS. JOINTS SHALL BE CONNECTED WITH NEOPRENE PUSH-ON COMPRESSION GASKETS, INSTALL IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
- B. ALL UNDERSLAB PIPING INSIDE THE BUILDING SHALL BE ENCASED IN FLEXIBLE POLYETHYLENE.
- 1.21 FUEL GAS PIPING ABOVE THE FLOOR INSIDE THE BUILDING SHALL BE SCHEDULE 40 BLACK STEEL WITH MECHANICAL JOINTS UP TO 2-1/2 INCHES INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL FUEL GAS CODE, WELDED FOR THREE (3) INCHES AND ABOVE. ALL FUEL GAS PIPING LOCATED OUTSIDE THE BUILDING BELOW GRADE SHALL BE POLYETHYLENE WITH HEAT-FUSION JOINTS IN ACCORDANCE WITH THE INTERNATIONAL FUEL GAS CODE. BRANCH PIPING TO APPLIANCES SHALL BE COMPLETE WITH A SHUTOFF VALVE, UNION, DIRT LEG AND ANY REGULATORS NECESSARY TO ENSURE PROPER EQUIPMENT OPERATION (COORDINATE WITH THE RECOMMENDATIONS OF THE EQUIPMENT MANUFACTURER).
- 1.22 COORDINATE AND COOPERATE WITH ALL OTHER TRADES. TRADES THAT HAVE WORK CONNECTED WITH THE PLUMBING WORK SHALL BE NOTIFIED FOR INSTALLATION REQUIREMENTS AND SCHEDULING. THE CONTRACTOR SHALL SCHEDULE HIS WORK TO AVOID ANY INTERRUPTION OF ANY UTILITY SERVICES TO THE OPERATION AREAS OF THE BUILDING DURING NORMAL WORKING HOURS. INTERRUPTION OF SERVICES SHALL BE DONE DURING OFF HOURS AT NO ADDITIONAL COST TO THE OWNER.
- 1.23 ALL CUTTING AND PATCHING OF EVERY NATURE REQUIRED IN CONNECTION WITH THIS CONTRACT SHALL BE DONE BY THIS CONTRACTOR WITH MECHANICS EXPERIENCED IN THEIR RESPECTIVE TRADES. ALL PATCHING SHALL MATCH ADJACENT FINISH SURFACES. CUTTING AND NOTCHING OF 2 X 4 BEARING WALL NOT TO EXCEED 7/8 INCH. BORED HOLES IN 2 X 4 BEARING WALLS NOT TO EXCEED 2-1/8 INCH.
- 1.24 FUEL GAS PIPING AND FITTINGS OUTSIDE THE BUILDING SHALL BE SCHEDULE 40 GALVANIZED WITH MECHANICAL JOINTS UP TO 2-1/2 INCHES INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL FUEL GAS CODE, WELDED FOR THREE (3) INCHES AND ABOVE. BRANCH PIPING TO APPLIANCES SHALL BE COMPLETE WITH A SHUTOFF VALVE, UNION, DIRT LEG AND ANY REGULATORS NECESSARY TO ENSURE PROPER EQUIPMENT OPERATION (COORDINATE WITH THE RECOMMENDATIONS OF THE EQUIPMENT MANUFACTURER).
- 1.25 WHERE PIPING PASSES THROUGH FIRE RESISTING PORTIONS OF THE STRUCTURE, AN APPROVED FIRE-STOPPING DEVICE SHALL BE INSTALLED TO MAINTAIN THE FIRE RATING OF THAT PORTION OF THE STRUCTURE. ALL FIRE STOPPING DEVICES USED SHALL BE LISTED INTUMESCENT MATERIALS SUCH AS A CAULK, SEALANT, PUTTY, WRAP STRIPS, ETC. AS REQUIRED TO PROPERLY FIRE STOP ALL VOIDS. FIRE STOPPING MATERIAL SHALL BE AS MANUFACTURED BY 3M, HILTI, PRO-SET SYSTEMS OR EQUAL.
- 1.26 ALL SHUTOFF VALVES SHALL BE BALL OR GATE VALVES. ALL BALL GATE, GLOBE AND CHECK VALVES SHALL BE ALL BRONZE, SWEATED PATTERN SUITABLE FOR 125-PSI WORKING PRESSURE.
- A. ALL VALVES AND PIPING EXPOSED TO VIEW SHALL BE CHROME PLATED BRASS.
- 1.27 GAS SHUTOFF VALVES SHALL HAVE A QUARTER-TURN OPERATION AND SHALL BE AGA APPROVED AND U.L. LISTED FOR SYSTEM PRESSURE. INSTALL IN ACCORDANCE WITH THE NATIONAL FUEL GAS CODE REQUIREMENTS.
- A. GAS PRESSURE REGULATING VALVES SHALL BE THE SIZE AND TYPE REQUIRED BY THE APPLIANCE AND THE LOCAL GAS SUPPLIER. VALVES SHALL BE AGA APPROVED.
- 1.28 CLEANOUTS
- A. AS A MINIMUM, PROVIDE CLEANOUTS EVERY 50 FEET ON STORM AND SANITARY DRAINS WHICH ARE FOUR INCHES OR SMALLER. PROVIDE CLEANOUTS AT 100 FEET MAXIMUM SPACING ON ALL DRAINS LARGER THAN FOUR INCHES.
- B. INTERIOR FINISHED FLOOR AREAS: LAQUERED CAST IRON, GAS AND WATER TIGHT BRONZE PLUG, TWO PIECE BODY AND ADJUSTABLE (NICKEL) BRONZE TOP, ROUND WITH SCORATED COVER IN SERVICE AREAS AND ROUND WITH DEPRESSED COVER TO ACCEPT FLOOR FINISHED FLOOR AREAS; MODEL Z[N]-1400-BP; Z-1400-BP-X, MANUFACTURED BY ZURN.
- C. INTERIOR FINISHED WALL AREAS; LINE TYPE WITH LAQUERED CAST IRON BODY AND ROUND GAS AND WATER TIGHT COVER, BRONZE PLUG AND ROUND STAINLESS STEEL ACCESS COVER SECURED WITH MACHINE SCREW; MODEL Z 1441, MANUFACTURED BY ZURN.
- D. INTERIOR UNFINISHED ACCESSIBLE AREAS: CAULKED OR THREADED TYPE OF THE SAME MATERIAL AS THE PIPE. CLEANOUT PLUG SHALL BE GAS AND WATERTIGHT.

1.29 ALL CLEANOUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLUMBING CODE ENFORCED BY THE AUTHORITY HAVING JURISDICTION.

1.30 ROOF DRAINS

- A. ROOF DRAINS (RD-1): ANSI A112.21.2; LAQUERED CAST IRON BODY WITH SLUMP REMOVABLE CAST IRON DOME STRAINER, MEMBRANE FLANGE AND MEMBRANE CLAMP WITH INTEGRAL GRAVEL STOP WITH ADJUSTABLE UNDERDECK CLAMP, ADJUSTABLE EXTENSION SLEEVE FOR INSULATION, OUTLET SIZE TO MATCH PIPE SIZE INDICATED ON THE DRAWINGS; MODEL 2C-100, MANUFACTURED BY ZURN.

1.31 INSULATION

- A. INSULATE ALL COLD WATER, HOT WATER, HOT WATER RECIRCULATION AND HORIZONTAL ROOF DRAIN PIPING, ROOF DRAIN BODIES (SUMPS), PIPE FITTINGS, BACKFLOW ASSEMBLIES, VALVES AND STRAINERS WITH MATERIALS HAVING A "K" FACTOR OF 0.27 AT 75 DEGREES F MEAN TEMPERATURE, A FLAME SPREAD RATING OF 25 OR LESS AND SMOKE DEVELOPED RATING OF 50 OR LESS.

1. THICKNESS:

- COLD WATER AND HOT WATER RUNOUTS UP TO TWO INCHES = 3/4-INCH THICK
- COLD WATER MAINS UP TO TWO INCHES = 3/4-INCH THICK
- HOT WATER MAINS UP TO TWO INCHES = 1- INCH THICK
- HOT WATER RECIRCULATION = 1- INCH THICK
- HORIZONTAL STORM WATER = 1/2-INCH THICK
- ROOF DRAIN BODIES (SUMPS) = 1/2-INCH THICK

2. MATERIALS:

- VAPOR BARRIER ALL SERVICE JACKETED FIBERGLASS WITH FITTINGS COVERED WITH PRE-SHAPED PLASTIC COVERS.
- FOAMED CELLULAR FLEXIBLE ELASTOMERIC INSULATION WITH MITER CUT FITTINGS WITH VAPOR BARRIER JACKET (FOR THICKNESS UP TO ONE INCH). ALL JOINTS SHALL BE GLED IN ACCORDANCE WITH THE INSULATION MANUFACTURER'S RECOMMENDATIONS.

3. MANUFACTURERS - CERTAINTED, MANVILLE, OWENS CORNING, KNAUF, ARMSTRONG OR APPROVED EQUAL.

1.32 TANKLESS WATER HEATER:

- A. THE EXISTING TANKLESS WATER HEATER, INTERIOR INSTALLATION WHERE SHOWN ON THE DRAWINGS IS TO REMAIN
- B. THE EXISTING WATER HEATER IS A NAVIEN MODEL NPE-240A, SERIAL NUMBER 7414X1850221688 WITH INTEGRAL CIRCULATION PUMP AND PROPANE GAS INPUT OF 19,900-199,900 BTUH.

1.33 THERMOSTATIC MIXING VALVE (PROVIDE AT EACH LAVATORY/HAND WASH SINK)

- A. PROVIDE FOR LAVATORIES AND EACH HAND WASH SINK. MIXING VALVES SHALL BE THERMOSTATIC TYPE, TEMPERATURE CONTROL TO ASSE 1070 WITH INTEGRAL CHECKS WITH SCREWS AND CHROME FINISH; MODEL LF6480, MANUFACTURED BY POWERS. INSTALL AND SET UP SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SET MIXING VALVE TO SUPPLY DOMESTIC HOT WATER AT 110 DEGREES F.

- 1.34 FIXTURES AND FIXTURE TRIMMINGS SHALL BE FURNISHED AND INSTALLED AS SPECIFIED HEREIN. FIXTURES SHALL BE COMPLETE WITH ALL NECESSARY WALL HANGERS-SUPPORTS-WOOD BLOCKING, SUPPLY STOP VALVES (LOOSE-KEY STOPS FOR EXPOSED PIPING IN PUBLIC TOILET ROOMS), 17-GAUGE CHROME-PLATED BRASS DRAINAGE FITTINGS/P-TRAPS AND ONE-PIECE CHROME-PLATED ESCUTCHEONS. ALL PIPING EXPOSED TO VIEW SHALL BE CHROME-PLATED BRASS. THE FOLLOWING ITEM NUMBERS CORRESPOND WITH THE "P" NUMBERS NOTED ON THE PLUMBING FIXTURE SCHEDULE AND ON THE DRAWINGS. VITREOUS CHINA FIXTURES SHALL BE AS MANUFACTURED BY AMERICAN STANDARD, KOHLER, ELJER OR ZURN AND FLUSHOMETER VALVES SHALL BE AS MANUFACTURED BY SLOAN ROYAL (NO SUBSTITUTIONS ACCEPTED) AS FOLLOWS:

P-1 WATER CLOSET, ANSI/ASME A112.19.2 - SHALL BE FLOOR MOUNT, TOP SPUD, ELONGATED BOWL, 15 INCH RIM HEIGHT, WHITE VITREOUS CHINA WITH EVERCLEAN SURFACE, WITH BOLT CAPS, MADERA HIGH EFFICIENCY 1.1 GALLONS PER FLUSH TO 1.6 GALLONS PER FLUSH MODEL 3451.001, MANUFACTURED BY AMERICAN STANDARD

EXPOSED MANUAL WATER CLOSET FLUSHOMETER VALVE 1.28 GALLONS PER FLUSH, CHROME FINISH; ROYAL MODEL 111, AS MANUFACTURED BY SLOAN.

COMMERCIAL HEAVY WEIGHT WHITE OPEN FRONT SEAT WITH STAINLESS STEEL CHECK HINGES.

P-1A WATER CLOSET (ADA ACCESSIBLE) , ANSI/ASME A112.19.2, ANSI A117.1 - SHALL BE FLOOR MOUNT, TOP SPUD, ELONGATED BOWL, 16-1/2 INCH RIM HEIGHT, WHITE VITREOUS CHINA WITH EVERCLEAN SURFACE, WITH BOLT CAPS, MADERA HIGH EFFICIENCY 1.1 GALLONS PER FLUSH TO 1.6 GALLONS PER FLUSH MODEL 3461.001, MANUFACTURED BY AMERICAN STANDARD

EXPOSED MANUAL WATER CLOSET FLUSHOMETER VALVE 1.28 GALLONS PER FLUSH, CHROME FINISH; ROYAL MODEL 111, AS MANUFACTURED BY SLOAN.

COMMERCIAL HEAVY WEIGHT WHITE OPEN FRONT SEAT WITH STAINLESS STEEL CHECK HINGES.

INSTALL FIXTURE AND TRIM IN ACCORDANCE WITH ADA REQUIREMENTS.

P-2 URINAL (ADA ACCESSIBLE) ANSI/ASME A112.19.2, ANSI A117.1 (ADA) - SHALL BE WALL MOUNT, WHITE VITREOUS CHINA, TOP SPUD, EXTENDED SIDES FOR PRIVACY, WASHOUT FLUSHING ACTION; WASHBROOK MODEL 6590.001, MANUFACTURED BY AMERICAN STNSDARD.

EXPOSED MANUAL FLUSHOMETER VALVE . 0.05 GALLONS PER FLUSH, CHROME FINISH; ROYAL MODEL 186-0.5 AS MANUFACTURED BY SLOAN.

PROVIDE FIXTURE SUPPORT CARRIER CONSTRUCTED OF CAST IRON AND/OR STEEL AND SHALL BE COMPLETELY CONCEALED BEHIND THE FINISHED WALL SURFACE. SUPPORT SHALL BE COMPLETE WITH A FACEPLATE AND FLOOR ANCHORS. FIXTURE LOADING SHALL NOT BE ON THE WALL.

INSTALL FIXTURE AND TRIM IN ACCORDANCE WITH ADA REQUIREMENTS.

P-3 LAVATORY (ADA ACCESSIBLE), ANSI/ASME A112.19.2, ANSI A117.1 - SHALL BE ZURN WALL MOUNT, 20 X 18 NOMINAL BOWL DIMENSIONS, FAUCET HOLES ON FOUR INCH CENTERS, WHITE VITREOUS CHINA, MODEL 25344. FAUCET SHALL BE ZURN "SIERRA" MODEL Z7440-XL WITH SINGLE LEVER HANDLE AND CHROME-PLATED BRASS GRID DRAIN. FAUCET SHALL BE EQUIPPED WITH A LIMIT STOP TO LIMIT HANDLE ROTATION ON THE HOT WATER SIDE, FIELD ADJUST TO SUPPLY A MAXIMUM HOT WATER TEMPERATURE TO 115 DEGREES F. PROVIDE CHROME-PLATED 17-GAUGE BRASS P-TRAP AND WASTE PIPING, CHROME-PLATED SUPPLIES, STOP VALVES AND ESCUTCHEONS. ALL EXPOSED DRAIN AND WATER SUPPLY PIPING BELOW FIXTURE SHALL BE COMPLETELY COVERED WITH TRUEBRO "HANDI-LAV-GUARD" COVERS. FIXTURE SHALL BE INSTALLED IN ACCORDANCE WITH ADA REQUIREMENTS.

P-4 FLOOR DRAIN - SHALL BE ZURN, MODEL ZN-4155-AR-Y WITH A 8 INCH SQUARE STRAINER, SEDIMENT BUCKET AND THREE-INCH OUTLET.

P-5 FLOOR SINK - SHALL BE A.R.E. SANI-FLOOR RECEPTOR 12 X 12 X 6 INCH DEEP CAST IRON BODY MEDIUM-DUTY GRATE WITH SLOTS, WHITE ACID RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, WHITE A.R.C. ANTI-SPLASH BOTTOM DOME STRAINER; ZURN MODEL Z-1900-33. COORDINATE GRATE OPENING REQUIREMENT WITH THE FOOD SERVICE CONTRACTOR.

1.35 THERMOSTATIC MIXING VALVE (PROVIDE AT EACH LAVATORY/HAND WASH SINK)

- A. MIXING VALVES SHALL BE THERMOSTATIC TYPE WITH INTEGRAL CHECKS WITH SCREWS AND CHROME FINISH; MODEL E480, MANUFACTURED BY POWERS. INSTALL AND SET UP SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SET MIXING VALVE TO SUPPLY DOMESTIC HOT WATER AT 110 DEGREES F.

1.36 GENERAL PIPE INSTALLATION

- A. IN GENERAL, INSTALL ALL PIPING SO AS TO PRESERVE ACCESS TO ALL VALVES, TRAPS, EQUIPMENT, ETC. ALL PIPING, VALVES, FITTINGS, ETC., SHALL BE KEPT A SUFFICIENT DISTANCE FROM THE OTHER WORK TO PERMIT A CLEARANCE OF NOT LESS THAN 1 INCH BETWEEN THE FINISHED COVERING ON SUCH PIPING AND ALL ADJACENT WORK, WEATHER UNDER THIS OR OTHER TRADES. ALL PIPING SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO WALLS, CEILINGS, COLUMNS (CONSISTENT WITH PROPER SPACE FOR COVERING, REMOVAL OF PIPE, ETC. SO AS TO OCCUPY THE MINIMUM OF SPACE. HORIZONTAL RUNS OF PIPING SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE TO MAINTAIN THE REQUIRED PITCH AND GRADE OF THE PIPE LINES. HANGER RODS SHALL BE CONNECTED TO THE BEAM CLAMPS, INSERTS OR HANGER CLIPS WELDED TO THE STRUCTURAL STEEL. THE HANGING OF ONE PIPE FROM ANOTHER SHALL NOT BE PERMITTED. PROPER CARE SHALL BE EXERCISED IN THE ERECTION OF ALL PIPING TO ENSURE PROPER DRAINAGE AND CIRCULATION, INCLUDING PROPER PROVISION FOR EXPANSION AND CONTRACTION OF PIPING. POCKETS OR TRAPS WHEREIN AIR CAN COLLECT SHALL NOT BE PERMITTED. ALL PIPING SHALL BE REAMED TO REMOVE CUTTING BURRS AND SHARP EDGES. ALL COPPER TUBING SHALL BE CUT WITH SQUARE ENDS AND ALL BURRS AND FINIS REMOVED. TUBING SHALL BE CAREFULLY HANDLED AND PROTECTED TO AVOID DAMAGE. REDUCING FITTINGS SHALL BE USED WHEREVER POSSIBLE. THE USE OF BUSHINGS SHALL BE PROHIBITED. ECCENTRIC REDUCERS SHALL BE USED. THREADS FOR SCREW FITTINGS SHALL BE AMERICAN STANDARD TAPER PIPE THREADS. ALL PIPING SHALL BE CAPPED DURING INSTALLATION TO KEEP THE SYSTEM CLEAN. LOCATE ALL WATER PIPING WITHIN HEATED SPACES WITH PROVISIONS FOR DRAINING ALL LINES.

- 1.37 DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF INSTALLATION PRINTS. RECORD THESE PRINTS, ALL DEVIATIONS FROM THE CONTRACT DRAWINGS, INCLUDING BUT NOT LIMITED TO, PIPE ROUTING, SYSTEM CONNECTION POINTS, PIPE SIZES AND EQUIPMENT LOCATION CHANGES. AT

THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL TRANSFER THIS NEATLY ONTO THREE SETS OF PRINTS AND FORWARD THESE PRINTS AND THE AS-BUILT PRINTS TO THE OWNER.

- 1.38 THE CONTRACTOR SHALL FURNISH THREE SETS OF INSTRUCTION MANUALS TO THE OWNER AT COMPLETION OF CONSTRUCTION.

1.39 STERILIZATION OF DOMESTIC WATER SYSTEM

- A. BEFORE BEING PLACED IN SERVICE, ALL DOMESTIC WATER LINES SHALL BE CHLORINATED USING A METHOD THAT IS SATISFACTORY TO THE WATER AUTHORITY OR THE AUTHORITY HAVING JURISDICTION. IN THE ABSENCE OF A PRESCRIBED METHOD, THE PROCEDURE AS DESCRIBED BELOW SHALL BE USED.
- B. PRIOR TO CHLORINATION, ALL DIRT AND FOREIGN MATTER SHALL BE REMOVED BY A THOROUGH FLUSHING. THIS SHALL BE DONE AFTER THE PRESSURE TEST AND LEAKAGE TEST.

- C. A CHLORINE HYPOCHLORITE SOLUTION SHALL BE APPLIED BY MEANS OF A SOLUTION FEED DEVICE OR THE GAS SHALL BE FED DIRECTLY FROM A CHLORINE CYLINDER EQUIPPED WITH PROPER DEVICES FOR REGULATING THE RATE OF FLOW AND THE EFFECTIVE DIFFUSE OF GAS WITHIN THE PIPE.

- D. WATER SHALL BE CONTROLLED TO FLOW SLOWLY INTO THE SYSTEM DURING THE APPLICATION OF CHLORINE IN SUCH PROPORTIONS THAT THE CHLORINE DOSE APPLIED TO THE WATER ENTERING THE PIPE SHALL BE AT LEAST 40 TO 50 PARTS PER MILLION.

- E. TREATED WATER SHALL BE RETAINED IN THE SYSTEM LONG ENOUGH TO DESTROY ALL NON-SPORE FORMING BACTERIA. THIS PERIOD SHALL BE AT LEAST TWENTY FOUR HOURS. A LONGER CHLORINE CONTACT TIME MAY BE REQUESTED BY THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.

- F. AFTER THE CHLORINE TREATED WATER HAS BEEN RETAINED FOR THE REQUIRED TIME, THE CHLORINE RESIDUAL AT THE PIPE EXTREMITIES AND AT OTHER REPRESENTATIVE POINTS SHALL BE AT LEAST FIVE PARTS PER MILLION.

- G. FOLLOWING CHLORINATION, ALL TREATED WATER SHALL BE THOROUGHLY FLUSHED FROM THE SYSTEM AT ITS EXTREMITIES UNTIL THE REPLACEMENT WATER THROUGHOUT ITS LENGTH SHALL, UPON TEST, BE EQUAL TO THE WATER QUALITY SERVED FROM THE WATER SUPPLY SYSTEM.

- H. SHOULD THE INITIAL TREATMENT IN THE OPINION OF THE OWNER'S REPRESENTATIVE PROVE INEFFECTIVE, THE CHLORINATION PROCEDURE SHALL BE REPEATED UNTIL CONFIRMED TESTS SHOW THAT WATER SAMPLED FROM THE SYSTEM CONFORMS TO THE REQUIREMENTS.

- I. IN ADDITION TO THE ABOVE WORK, THE CONTRACTOR SHALL CHECK THE OPERATION OF ALL WATER HEATER THERMOSTAT SETPOINTS AND OPERATIONS.

1.40 TEST OF DRAINAGE SYSTEM

- A. ALL PLUMBING AND DRAINAGE PIPING SHALL BE TESTED BY PLUGGING ALL OPENINGS AND FILL SYSTEM WITH WATER TO THE TOP OF ALL VENT PIPES. THE WATER SHALL STAND FOR 30 MINUTES FOR INSPECTION. ALL TESTS MUST COMPLY WITH LOCAL AUTHORITY REQUIREMENTS.

1.41 TEST OF DOMESTIC WATER PIPING

- A. ALL WATER LINES SHALL BE TESTED TO A HYDROSTATIC PRESSURE EQUAL TO 1-1/2 TIMES THE MAXIMUM OPERATING PRESSURE. THE SYSTEM SHALL BE LEAK-FREE FOR 24 HOURS AT THIS PRESSURE.

1.42 TEST OF GAS PIPING

- A. ALL GAS LINES SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 60 PSIG FOR A MINIMUM OF EIGHT (8) HOURS WITHOUT A LOSS OF PRESSURE. FOLLOWING INSTRUCTIONS 2.11 AND 2.12 IN NFPA MANUAL 54.

- 1.43 THE CONTRACTOR SHALL FURNISH THREE SETS OF INSTRUCTION MANUALS TO THE OWNER AT COMPLETION OF CONSTRUCTION

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