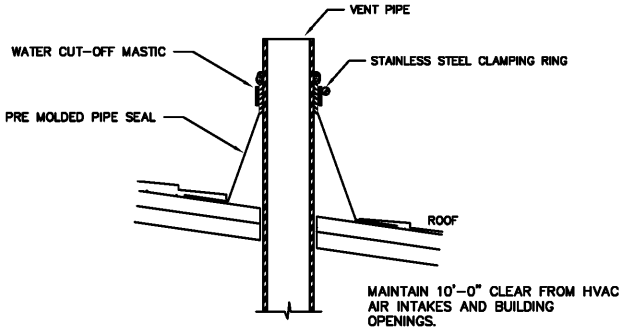
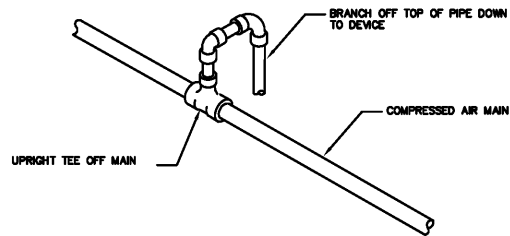


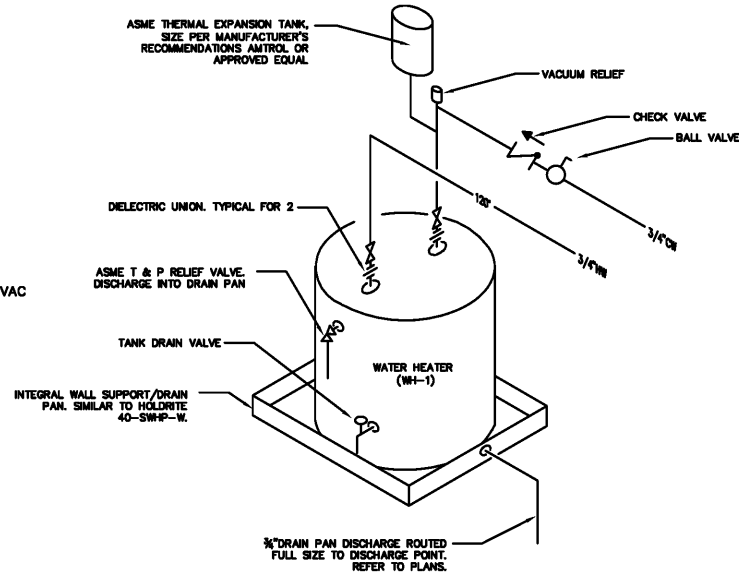
THE ARCHITECT/ENGINEER DOES NOT DEFINE THE SCOPE OF INDIVIDUAL TRADES, SUBCONTRACTORS, MATERIAL SUPPLIERS, OR VENDORS. ANY SHEET NUMBERING SYSTEM USED WHICH IDENTIFIES DISCIPLINES IS SOLELY TO SEPARATE ARCHITECT'S AND ENGINEER'S SCOPE. IT DOES NOT DEFINE A SUBCONTRACTOR'S SCOPE OF WORK. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, CODES OR CONSTRUCTION SEQUENCING SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING. NO CONSIDERATION WILL BE GIVEN TO REQUESTS FOR CHANGE ORDERS FOR FAILURE TO OBTAIN AND REVIEW THE COMPLETE SET OF CONSTRUCTION DOCUMENTS, OR FOR FAILURE TO SEEK INTERPRETATION FROM ARCHITECT FOR DISCREPANCIES.



1 DETAIL - VENT THRU ROOF TERMINATION
PO.1 SCALE: N.T.S.



3 DETAIL - COMPRESSED AIR BRANCH
PO.1 SCALE: N.T.S.



2 DETAIL - ELECTRIC WATER HEATER
PO.1 SCALE: N.T.S.

OIL/WATER SEPARATOR NOTES

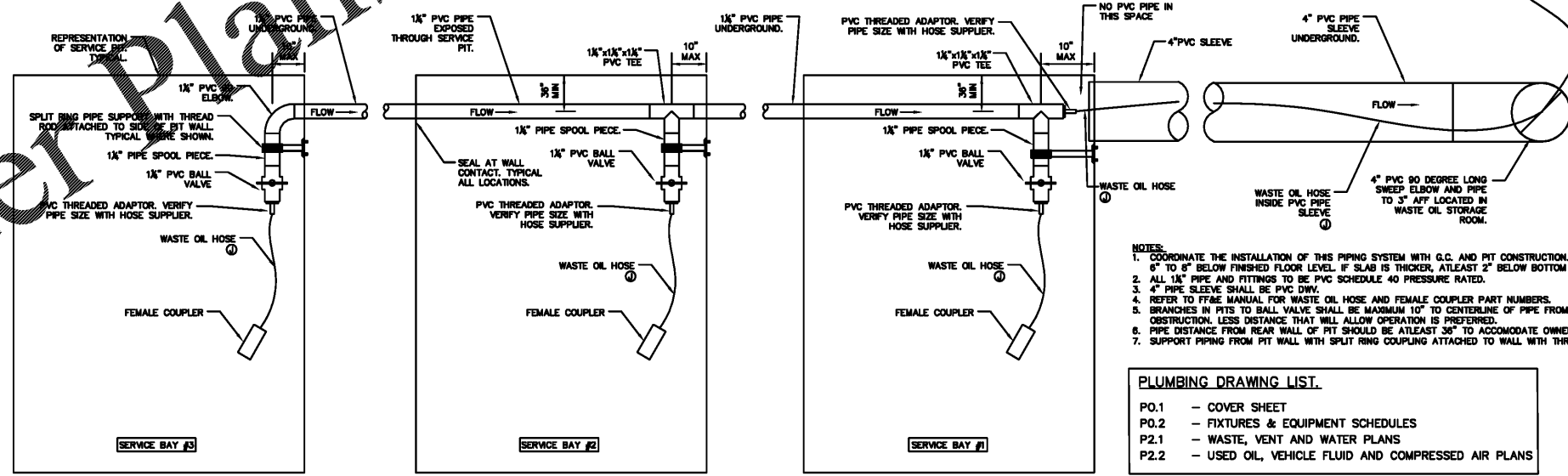
THERE IS NO OIL/WATER SEPARATOR PROVIDED FOR THIS FACILITY AS THERE ARE NO OPEN DRAINS TO THE SANITARY SEWER LOCATED WITHIN THE SERVICE BAYS. THE CORPORATE POLICY FOR STRICKLAND OIL COMPANY IS TO CAPTURE AND RE-CLAIM ALL USED OIL IN SPECIFIC CONTAINERS FOR TRANSPORTATION OFF THE PREMISES BY AN OIL DISPOSAL COMPANY. ANY SPILLS WILL BE WIPED UP WITH RAGS.

LEGEND

CW	COLD WATER
HW	HOT WATER (120F)
TW	TEPID WATER (75F)
SAN	SANITARY SEWER
OW	OIL WASTE
V	VENT
CA	COMPRESSED AIR
WF	WASHER FLUID PIPING
AF	ANTI-FREEZE PIPING
VTR	VENT THROUGH ROOF
UG	UNDERGROUND
BFF	BELOW FINISHED FLOOR
AFF	ABOVE FINISHED FLOOR
INV	INVERT
PC	PLUMBING CONTRACTOR
MC	MECHANICAL CONTRACTOR
GC	GENERAL CONTRACTOR
EC	ELECTRICAL CONTRACTOR
○	PIPE TURNING UP
⊖	PIPE TURNING DOWN
○	PIPE DROP FROM MAIN
○	PUMP
○	BALL VALVE
○	WATER CLOSET
L	LAVATORY
SK	SERVICE SINK
MXV	POINT OF USE MIXING VALVE
FPHB	FREEZE PROOF HOSE BIBB
EM-EW	EMERGENCY EYE WASH
EM-MXV	EMERGENCY FIXTURE MIXING VALVE
FCO	FLOOR CLEANOUT
WHA	WATER HAMMER ARRESTOR
WH	WATER HEATER
AD	ACCESS DOOR

EMERGENCY EYE WASH - WATER CALCS

PER ANSI Z358.1, AN EMERGENCY EYE WASH MUST DELIVER 0.4 GPM OF "TEPID" WATER FOR 15 MINS.
(0.4 GPM) * (15 MINS) = 6 GALLONS OF TEPID WATER REQUIRED.
TEPID WATER IS DEFINED AS BEING BETWEEN 60F & 100F.
THIS DESIGN HAS A NEW 10 GALLON CAPACITY STORAGE WATER TANK FOR THE BUILDING AND THIS TANK SERVES THE EMERGENCY FIXTURE VIA AN EMERGENCY THERMOSTATIC MIXING VALVE.
THE STORED WATER IS AT 120F.
ASSUMED COLD WATER TEMP IS 45F.
DESIRED "TEPID" WATER IS 75F.
FOR A TEPID WATER OUTPUT OF 75F, GIVEN THE CONDITIONS ABOVE, THE PERCENTAGE OF 120F HOT WATER REQUIRED IS:
HW % REQUIRED = (TEPID WATER - COLD WATER)/(HOT WATER - COLD WATER)
= (75 - 45)/(120 - 45)
= (30)/(75)
= 0.4
THEREFORE 40% OF THE WATER MUST BE HOT WATER.
(0.4) * (6 GALLONS) = 2.4 GALLONS OF 120F HOT WATER REQUIRED.
10 GALLONS OF 120F HOT WATER PROVIDED BY NEW WATER HEATER.



4 DETAIL - WASTE OIL PIPING DETAIL
PO.1 SCALE: N.T.S.

PLUMBING SPECIFICATIONS

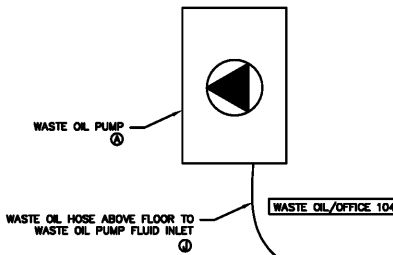
- PLUMBING CONTRACT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FEES, AND PERMITS REQUIRED FOR AND REASONABLY INCIDENTAL TO THE EXECUTION OF THE PLUMBING WORK.
- ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE APPLICABLE STATE BUILDING CODE, PLUMBING, ENERGY, AND LOCAL BUILDING CODES.
- THE PLUMBING CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE PLUMBING PLANS, SCHEDULES AND DETAILS PRIOR TO INSTALLATION OF THE PLUMBING SYSTEM AND REVIEW ANY CONFLICTS THAT ARE NOTED WITH THE OWNER, ARCHITECT AND/OR ENGINEER FOR RESOLUTION. FIELD VERIFY ALL EXISTING LINE SIZES AND LOCATION PRIOR TO BIDDING.
- IT WILL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO INSURE THAT ITEMS TO BE FURNISHED UNDER THIS CONTRACT WILL FIT THE SPACE AVAILABLE. HE SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS, AND SHALL FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE INTENT AND MEANING OF THE DRAWINGS AND SPECIFICATIONS.
- THE PLUMBING CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE OTHER TRADES PRIOR TO THE INSTALLATION OF ANY OF HIS PIPING OR EQUIPMENT.
- THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING THE ITEMS SHOWN ON THE FLOOR PLAN DRAWINGS AND ALSO THE ITEMS REFERENCED IN THE EQUIPMENT AND MATERIALS LIST ON DRAWING P0.2.
- MEASUREMENTS: BEFORE ORDERING ANY MATERIAL OR DOING ANY WORK, THE PLUMBING CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND LINE SIZES AND BE RESPONSIBLE FOR THE CORRECTNESS OF SAME. HE SHALL ALSO BE RESPONSIBLE FOR VERIFYING THE INVERT ELEVATION OF THE EXISTING SANITARY PIPING PRIOR TO CONSTRUCTION.
- STANDARDS OF MATERIALS: ALL MATERIALS USED SHALL BE NEW UNLESS OTHERWISE SHOWN OR CALLED FOR, AND SHALL BE FURNISHED IN ACCORDANCE WITH STANDARD SPECIFICATION OF THE AMERICAN SOCIETY FOR TESTING MATERIALS, THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS, THE AMERICAN CONCRETE INSTITUTE, AND OTHER ADEQUATE SPECIFICATIONS.
- DIAGRAMS AND COORDINATION: THE DRAWINGS ARE DIAGRAMMATIC AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. THE DRAWINGS INDICATE OFFSETS REQUIRED BUT BY NO MEANS INDICATE ALL SUCH SITUATIONS.
- INSPECTIONS: THE CONTRACTOR MUST AT ALL TIMES LEND ANY ASSISTANCE NECESSARY FOR ENGINEERS OR THEIR AUTHORIZED REPRESENTATIVE TO CONDUCT TESTS, INSPECTIONS, ETC.
- BLOWING OUT, CLEANING AND TESTING SYSTEMS: ALL PIPING AND EQUIPMENT SHALL BE BLOWN OUT UNDER PRESSURE AND CLEANED OF FOREIGN MATTER BEFORE THE SYSTEM IS PUT INTO OPERATION. EQUIPMENT SHALL NOT BE CONNECTED TO PIPING UNTIL IT HAS BEEN BLOWN OUT AND CLEANED. PRESSURE TEST ALL NEW WATER PIPING SYSTEM. ANY DEFECTS MADE EVIDENT BY THE TEST SHALL BE CORRECTED BY THIS CONTRACTOR WITHOUT EXTRA COST TO THE OWNER. DISCONNECT WATER PIPING IN ACCORDANCE WITH N.C. PLUMBING CODE, SECTION 610.1.
- GUARANTEE: CONTRACTOR SHALL GUARANTEE HIS MATERIAL, EQUIPMENT AND WORKMANSHIP FOR A PERIOD OF 12 MONTHS AFTER THE DATE OF FINAL ACCEPTANCE BY ENGINEERS AND OWNERS (PARTS AND LABOR). ALL GUARANTEE FAILURE SHALL BE CORRECTED OR REPLACED BY CONTRACTOR AS SOON AS POSSIBLE AFTER NOTIFICATION OF SUCH FAILURE.
- SANITARY WASTE AND VENT PIPING: PVC DWV PIPE AND FITTINGS CONFORMING TO ASTM D2685.
- DOMESTIC WATER PIPING: ABOVE GROUND WATER: TYPE L HARD COPPER WATER PIPING CONFORMING TO ASTM-B-88, WROUGHT-COPPER FITTINGS CONFORMING TO ASTM-B-16.23. UNDERGROUND WATER: TYPE K ROLLED COPPER TUBING. PEX PIPING IS NOT ACCEPTABLE.
- COMPRESSED AIR PIPING: THREADED BLACK STEEL PIPE AND FITTINGS.
- WASTE OIL PIPING (HARD PIPE): PRESSURE RATED PVC PIPE AND FITTINGS.
- WASTE OIL PIPING (HOSES): REFER TO F&E MANUAL FOR REQUIRED HOSES. 10' TO FIELD MEASURE LENGTH REQUIRED.
- WASHER FLUID DISTRIBUTION PIPING: CHARLOTTE PIPE "CHEM-DRAIN" CPVC PIPE AND FITTINGS.
- ANTI-FREEZE DISTRIBUTION PIPING: CHARLOTTE PIPE "CHEM-DRAIN" CPVC PIPE AND FITTINGS.
- INSULATION: ALL ABOVE GROUND DOMESTIC WATER PIPING SHALL BE WRAPPED WITH 1" FIBERGLASS INSULATION WITH PAPER JACKET. ALL EXPOSED PIPING IN ROOM 104 SHALL HAVE PVC JACKET OVER INSULATION.
- PROVIDE BALL VALVES TO ISOLATE ALL GROUPS OF FIXTURES AND AS SHOWN ON THE PLANS TO FACILITATE FUTURE SERVICING.
- PROVIDE DIELECTRIC UNIONS OR FLANGES TO ISOLATE DISSIMILAR METALS.
- ALL PIPING EXPOSED TO HUMIDITY SHALL BE LABELED WITH PREFAB. LABELS, INCLUDE DIRECTION OF FLOW ARROWS.
- HORIZONTAL DRAINAGE PIPING 2" AND LARGER SHALL HAVE A MINIMUM FALL OF 1/8" PER FOOT AND PIPING 2" AND SMALLER SHALL HAVE A MINIMUM FALL OF 1/4" PER FOOT. FIELD VERIFY INVERTS PRIOR TO CONSTRUCTION.
- CLEANOUTS SHALL BE PROVIDED IN ALL PIPING AS SHOWN OR INDICATED BY THE A.H.I.
- TRAPS SHALL HAVE STAINLESS STEEL COVERS.
- ALL VENT PIPING SHALL SLOPE UP TO THE POINT OF DISCHARGE AT MINIMUM 1/8" PER FOOT.
- P.C. SHALL COORDINATE ALL FLOOR CUTTING WITH G.C.
- REFER TO F&E MANUAL FOR ALL EQUIPMENT TO BE INSTALLED BY P.C.

BACKFLOW PREVENTER NOTES

THE SITE WATER SUPPLY IS PROVIDED WITH A NEW RPZ BACKFLOW PREVENTER AT THE METER. THIS IS PROVIDED UNDER THE CIVIL SITE DRAWING SCOPE OF WORK.

HOT WATER RE-CIRCULATION NOTES

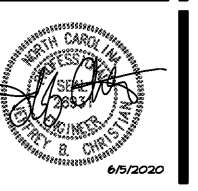
A HOT WATER RE-CIRCULATION LOOP AND PUMP IS NOT REQUIRED IN THIS PROJECT AS THE DEVELOPED LENGTH OF HOT WATER PIPING FROM THE WATER HEATER TO THE FURTHEST FIXTURE (SINK IN UNISEX RESTROOM 102) DOES NOT EXCEED 50 FT, PER NCPD 607.2



- NOTES:**
- COORDINATE THE INSTALLATION OF THIS PIPING SYSTEM WITH G.C. AND PIT CONSTRUCTION. PIPING SHOULD BE APPROX 6" TO 8" BELOW FINISHED FLOOR LEVEL. IF SLAB IS THICKER, AT LEAST 2" BELOW BOTTOM OF SLAB.
 - ALL 1 1/2" PIPE AND FITTINGS TO BE PVC SCHEDULE 40 PRESSURE RATED.
 - 4" PIPE SLEEVE SHALL BE PVC DWV.
 - REFER TO F&E MANUAL FOR WASTE OIL HOSE AND FEMALE COUPLER PART NUMBERS.
 - BRANCHES IN FITS TO BALL VALVE SHALL BE MAXIMUM 10" TO CENTERLINE OF PIPE FROM PIT WALL TO LIMIT PIT USE OBSTRUCTION. LESS DISTANCE THAT WILL ALLOW OPERATION IS PREFERRED.
 - PIPE DISTANCE FROM REAR WALL OF PIT SHOULD BE AT LEAST 36" TO ACCOMMODATE OWNER PROVIDED FILTER RACKS.
 - SUPPORT PIPING FROM PIT WALL WITH SPLIT RING COUPLING ATTACHED TO WALL WITH THREADED ROD.

PLUMBING DRAWING LIST.

- P0.1 - COVER SHEET
- P0.2 - FIXTURES & EQUIPMENT SCHEDULES
- P2.1 - WASTE, VENT AND WATER PLANS
- P2.2 - USED OIL, VEHICLE FLUID AND COMPRESSED AIR PLANS



STRICKLAND BROTHERS
10 MINUTE OIL CHANGE
810 SOUTH MAIN STREET
GRAHAM, NC



PLUMBING COVER SHEET

ISSUE DATE: 6/5/20
REVISION 1: _____
REVISION 2: _____
REVISION 3: _____
REVISION 4: _____
PROJECT #: 20-127
CONTENT: _____

PROJECT ARCHITECT: ECE
DRAWN BY: VW
CADD FILE NAME: 20-127



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P0.1