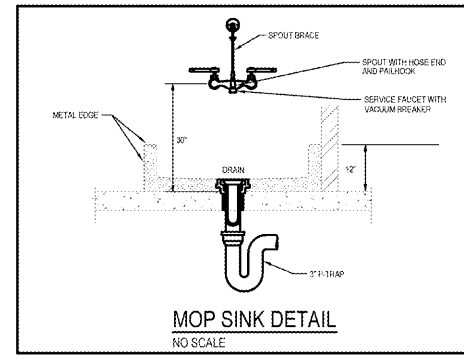
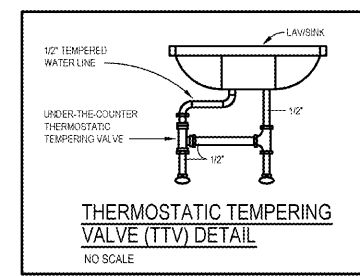
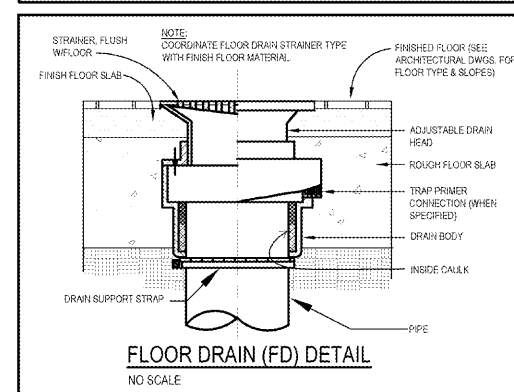
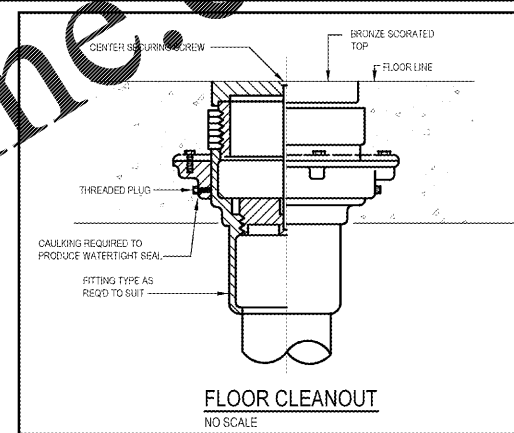
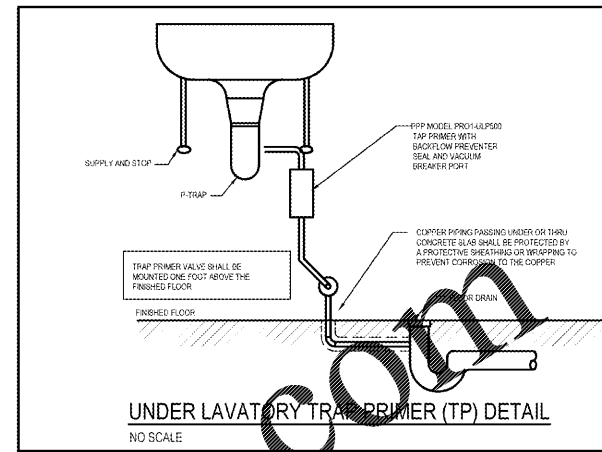
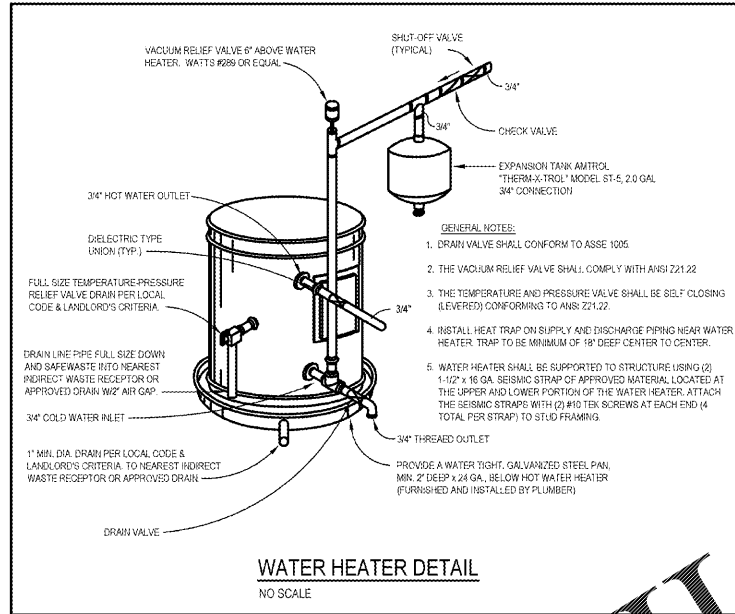
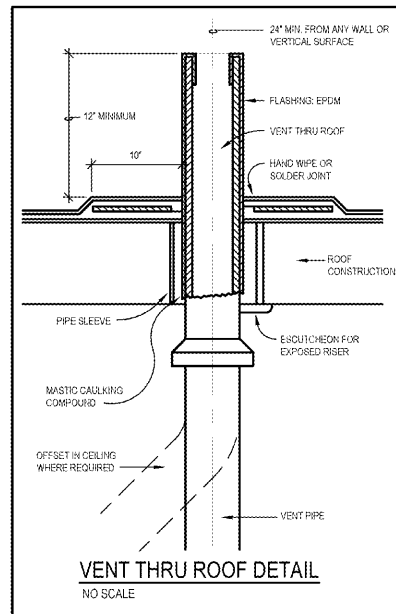


PLUMBING GENERAL NOTES:

- EACH LENGTH OF PIPE, FITTINGS, TRAP, FIXTURE, MATERIAL, ETC., UTILIZED IN THE PLUMBING SYSTEM SHALL BEAR THE IDENTIFICATION OF THE MANUFACTURER, AND APPLICABLE STANDARD TO WHICH IT WAS MANUFACTURED.
- ALL MATERIALS USED SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE STANDARDS UNDER WHICH THE MATERIALS ARE ACCEPTED. ALSO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE FOLLOWED.
- PIPES PASSING THROUGH CONCRETE SHALL BE PROTECTED AGAINST EXTERNAL CORROSION BY A PROTECTIVE SHEATHING OR WRAPPING.
- PLUMBING SYSTEM SHALL BE INSTALLED SO AS TO PREVENT STRAINS AND STRESSES THAT EXCEED THE STRUCTURAL STRENGTH OF THE PIPE.
- JOINTS AT THE FLOOR, ROOF AND AROUND VENT PIPES SHALL BE MADE WATER TIGHT.
- HANGERS, ANCHORS AND SUPPORTS SHALL SUPPORT THE PIPING AND THE CONTENT OF THE PIPING. HANGERS AND STRAPPING MATERIALS SHALL BE OF APPROVED MATERIALS THAT WILL NOT PROMOTE GALVANIC ACTION. PIPE SHALL BE SUPPORTED AS FOLLOWS:

CAST IRON PIPE	MAXIMUM HORIZONTAL 5'-0"
COPPER PIPE	MAXIMUM HORIZONTAL 12'-0"
COPPER TUBING 1-1/4" AND LESS	MAXIMUM HORIZONTAL 8'-0"
COPPER TUBING 1-1/2" AND LARGER	MAXIMUM HORIZONTAL 10'-0"
- RIGID SUPPORT SWAY BRACING SHALL BE PROVIDED AT CHANGES IN DIRECTION OVER 45° FOR PIPE SIZE 4" AND ABOVE.
- PLUMBING CONTRACTOR SHALL MAKE THE APPLICABLE TESTS. PLUMBING CONTRACTOR TO GIVE REASONABLE ADVANCE NOTICE TO THE CITY WHEN THE PLUMBING WORK IS READY FOR TESTS. THE FOLLOWING TESTS ARE REQUIRED:

DRAINAGE & VENT WATER TEST:	MINIMUM 10 FEET OF HEAD AND KEPT IN FOR AT LEAST 15 MINUTES BEFORE INSPECTION STARTS
DRAINAGE & VENT AIR TEST:	MINIMUM 5 PSI FOR AT LEAST 15 MINUTES
DRAINAGE & VENT FINAL TEST:	SHALL BE VISUAL AND IN SUFFICIENT DETAIL TO DETERMINE COMPLIANCE
WATER DISTRIBUTION SYSTEM:	MINIMUM 100 PSI WATER PRESSURE
- THE SUPPLY LINES AND FITTINGS FOR EVERY FIXTURE SHALL BE INSTALLED TO PREVENT BACKFLOW.
- THE FIXTURES SHALL BE SET LEVEL AND IN PROPER ALIGNMENT.
- CONNECTIONS BETWEEN THE DRAIN AND FLOOR OUTLET PLUMBING FIXTURE SHALL BE MADE WITH A FLOOR FLANGE.
- FLOOR DRAIN SHALL CONFORM TO ASME A112.6.3 OR ASME A112.3.1.
- WATER HEATER RELIEF VALVE SHALL CONFORM TO ANSI Z21.22.
- WATER HEATER DRAIN VALVE SHALL CONFORM TO ASSE 1005.
- AFTER CONSTRUCTION THE INDIVIDUAL WATER SUPPLY SYSTEM SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED.
- WATER-HAMMER ARRESTOR SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AND ASSE 1010.
- COPPER OR COPPER-ALLOY TUBING (TYPE K, L & M) SHALL MEET ASTM B75, ASTM B88, ASTM B251, ASTM B447. WATER PIPING TO CONFORM TO NSF61 AND SHALL HAVE A MINIMUM PRESSURE RATING OF 100 PSI. THE JOINING OF SUPPLY PIPING TO BE MADE WITH LEAD-FREE (LESS THAN 2 PERCENT) SOLDER AND FLUXES.
- SANITARY DRAINAGE SYSTEM SHALL HAVE MINIMUM 1/8" PER FOOT SLOPE. FOR PIPING 3" TO 4" & 1/4" PER FOOT SLOPE FOR 2-1/2" PIPE & LESS.
- MECHANICAL JOINTS COUPLINGS FOR HUBLESS PIPE AND FITTINGS SHALL COMPLY WITH CISPI 310 OR ASTM C1277. THE ELASTOMERIC SEALING SLEEVE SHALL CONFORM TO ASTM C564.
- CLEANOUTS PLUGS TO BE BRASS. HORIZONTAL DRAINS SHALL HAVE CLEANOUTS AT 50 FEET ON CENTERS, AT EACH CHANGE (45 DEGREE) IN DIRECTION AND AT EACH BASE OF STACK. CLEANOUTS TO HAVE A MINIMUM CLEARANCE OF 18" FOR RODDING.
- VENT PIPES SHALL EXTEND THROUGH THE ROOF AND TERMINATE AT LEAST 6 INCHES ABOVE THE ROOF. VENT PIPE THROUGH ROOF TO BE MADE WATER TIGHT.
- THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. THE PLUMBING CONTRACTOR SHALL INCLUDE ALL NEEDED OFFSETS, CHANGES IN DIRECTION, ETC. NEEDED FOR COMPLETE AND OPERATIONAL SYSTEMS.
- THE CONTRACTOR WILL VISIT THE SITE AND BE FAMILIAR WITH SITE CONDITIONS. NO EQUIPMENT OR MATERIAL IS TO BE ORDERED OR FABRICATED PRIOR TO FIELD VERIFICATION OF ALL MEASUREMENTS, CLEARANCES, POTENTIAL CONFLICTS WITH EXISTING CONDITIONS OR THAT OF OTHER TRADES ON THE JOB.
- PERFORM ALL WORK IN ACCORDANCE WITH THE RULES & REGULATIONS OF THE APPROPRIATE STATE AND LOCAL BUILDING CODES AND SUBTILES.
- QUESTIONS REGARDING THESE DRAWINGS SHALL BE ADDRESSED TO THE ENGINEER PRIOR TO THE AWARDED OF THE CONTRACT. OTHERWISE THE ENGINEER'S INTERPRETATION OF THE MEANING AND INTENT OF THE DRAWINGS SHALL BE FINAL.
- TENANT'S CONTRACTOR IS TO VERIFY POINTS OF CONNECTION OF ALL VENT, SEWER AND WATER LINES WITH LANDLORD BEFORE PROCEEDING WITH WORK.
- INSTALL SHUT OFF VALVES AT ALL PLUMBING FIXTURES.
- INSTALL HAMMER ARRESTORS AT ALL PLUMBING FIXTURES.
- ALL EXPOSED PIPING ABOVE TENANT'S CEILING SHALL BE INSULATED WITH A MINIMUM OF 1" GLASS FIBER WITH NON-COMBUSTIBLE UL RATED VAPOR BARRIER JACKET PER CODE.
- TENANT'S CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL WITHIN THE LANDLORD'S TENANT CRITERIA MANUAL INCLUDING MALL MANAGEMENT'S RULES AND REGULATIONS.
- THE MOUNTING HEIGHTS OF ALL ACCESSORY ITEMS AND HARDWARE SHALL COMPLY WITH NBHA "RECOMMENDED LOCATIONS FOR BUILDERS HARDWARE" AND/OR THE LATEST REQUIREMENTS OF THE A.D.A. REGULATIONS, OR CABO/ANSI STANDARDS WHICHEVER APPLICATION IS MORE STRINGENT FOR ITS USE.
- TENANT CONTRACTOR IS TO HAVE ALL WEATHERPROOFING OF ROOF PENETRATIONS DONE BY LANDLORD'S APPROVED ROOFING CONTRACTOR.
- PLUMBING CONTRACTOR TO INSULATE ANY EXISTING EXPOSED OR RE-INSULATE ANY DAMAGED, MISSING PIPE INSULATION WITH NEW PIPE INSULATION.
- PLUMBING CONTRACTOR SHALL SNAKE ALL EXISTING SANITARY SEWERS A MINIMUM OF 100 FEET. ANY EXTERIOR TRUCK DOCK DRAINS SHALL BE SNAKED A MINIMUM OF 100 FEET.
- PLUMBING CONTRACTOR SHALL VIDEO ALL STORM AND SANITARY LINES DURING THE FIRST WEEK OF CONSTRUCTION AND AFTER CONSTRUCTION IS COMPLETE. VIDEO OF SANITARY LINES SHALL INCLUDE ALL FLOOR DRAINS AND CLEANOUTS. PLUMBING CONTRACTOR SHALL ISSUE WRITTEN EVALUATIONS TO HARBOR FREIGHT TOOLS' PROJECT MANAGER UPON COMPLETION OF EACH VIDEO AND UPLOAD BOTH VIDEO AND TRACK AND PROVIDE A CD IN CLOSEOUT PACKAGE.
- THE SPOUTS OF DRINKING FOUNTAINS AND WATER COOLERS SHALL BE AT THE FRONT OF THE UNIT AND ALL DIRECT THE WATER FLOW IN A TRAJECTORY THAT IS PARALLEL OR NEARLY PARALLEL TO THE FRONT OF THE UNIT. THE SPOUT SHALL PROVIDE A FLOW OF WATER AT LEAST 4 IN. HIGH SO AS TO ALLOW THE INSERTION OF A CUP OR GLASS UNDER THE FLOW OF WATER. ON AN ACCESSIBLE DRINKING FOUNTAIN WITH A ROUND OR OVAL BOWL, THE SPOUT MUST BE POSITIONED SO THE FLOW OF WATER IS WITHIN 3 IN. OF THE FRONT EDGE OF THE UNIT.
- PIPING TO BE SUPPORTED PER SMACNA STANDARDS RESTRAINT MANUAL AND ALSO THE FEDERAL EMERGENCY MANAGEMENT AGENCY "INSTALLING SEISMIC RESTRAINTS FOR DUCT AND PIPE" AND PER THE TENNESSEE BUILDING CODES.



PLUMBING FIXTURE SPECIFICATIONS

FLOOR DRAIN (FD) - J.R. SMITH MODEL 2000-100 WITH ADJUSTABLE STRAINER HEAD AND TRAP PRIMER CONNECTION.

FLOOR CLEANOUT (CO) - J.R. SMITH NO. 40215 ADJUSTABLE CAST NIKALOY FLOOR CLEANOUT WITH INTERNAL BRONZE COUNTERSINK PLUG AND SOLID SCORATED SECURED ROUND COVER.

WALL CLEANOUT (WCO) J.R. SMITH MODEL NO. 4422 DUCCO CAST IRON CAULK FERRULE WITH CAST BRONZE TAPER THREAD PLUG WITH STAINLESS STEEL COVER.

YARD CLEANOUT (YCO) - JOSAM SERIES 58360 ADJUSTABLE CAST NIKALOY FLOOR CLEANOUT WITH BRONZE COUNTERSINK PLUG AND SOLID SCORATED SECURED ROUND COVER WITH JOSAM SERIES 58580 ABS ACCESS HOUSING WITH SPECIAL POLY SCORATED SECURED ROUND CAST IRON TOP AND LEVELLOC SCREWS.

WATER HEATER (WH) - RHEEM POINT-OF-USE MODEL EGSP20, 20 GALLON STORAGE CAPACITY WITH 1,500 WATT HEATING ELEMENT, 120V, 1 PHASE WITH GALVANIZED DRIP PAN. RUN DRAIN LINE TO MOP SINK.

WATER CLOSET (WC) - AMERICAN STANDARD "MADERA FLOWISE" MODEL 2857.111 FLOOR MOUNTED, ELONGATED FLUSHOMETER TOILET SYSTEM WITH MANUAL FLUSH VALVE, ULTRA LOW-CONSUMPTION (1.1 GPF), AND 16-1/2" RIM HEIGHT. SEAT: BEMIS MODEL NO. 10655SC OPEN FRONT SEAT LESS COVER WITH SELF-SUSTAINING CHECK HINGES WITH NON-CORROSIVE STAINLESS STEEL POSTS, PINTLES, AND HARDWARE. NOTE: MOUNT FLUSH LEVER OPPOSITE SIDE OF WALL.

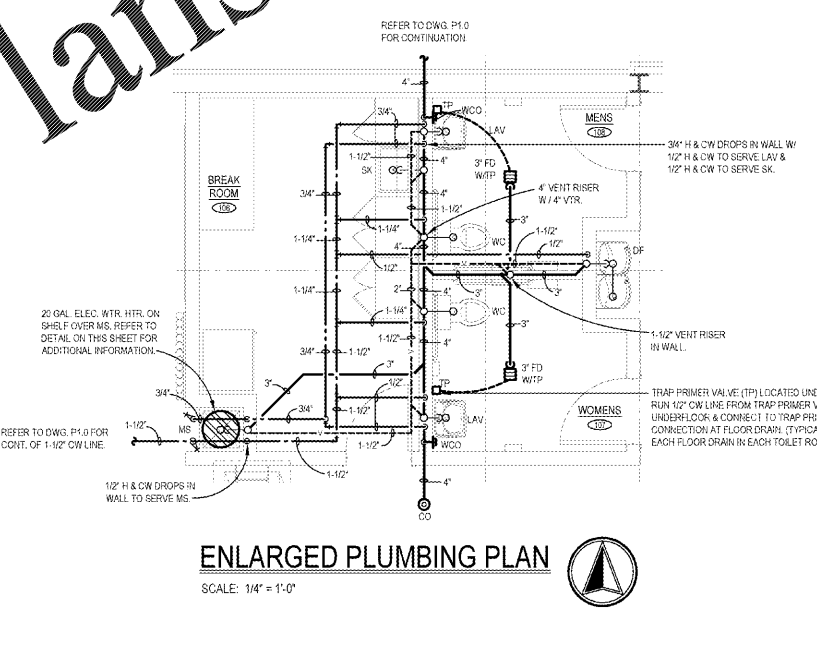
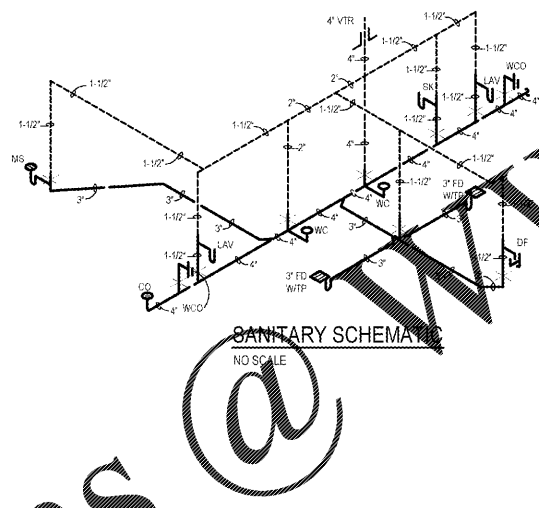
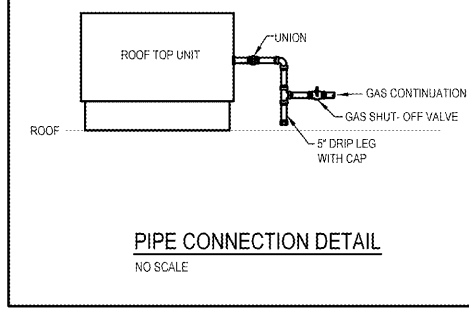
LAVATORY (LAV) - AMERICAN STANDARD "LUCERNE" MODEL 0355.012 WALL HUNG, BARRIER-FREE LAVATORY FAUCET, MOEN MODEL NO. 8986 4" CENTERSET METERING FAUCET WITH 0.5 GPM VANDAL RESISTANT MULTI-STREAM LAMINAR FLOW, AND CHROME PLATED SOLID BRASS CONSTRUCTION. PROVIDE COMPLETE WITH GRID STRAINER, FOOTED WALL CHAIR CARRIER SUPPORT, CHROME TRAP WITH CLEANOUT AND CHROME SUPPLIES WITH LOOSE KEY STOPS. INSULATE WASTE AND WATER LINES WITH TRUEBRO "LAV GUARD 2" INSULATION KIT WITH WHITE FINISH TO CONFORM TO ADA REQUIREMENTS. MOUNT AT ELEVATION AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

MOP SINK (MS) - "FIAT" MODEL TSB100 TERRAZZO MOP SERVICE BASIN (24"x24"x12"). PROVIDE COMPLETE WITH STAINLESS STEEL SINK, 20"x19"x5-1/2" DEEP SINK WITH CENTER REAR DRAIN, FIXTURE WITH FAUCET LEDGE. SET IN BED OF PUTTY. FAUCET: JUST NO. J-902 SINGLE LEVER DECK MOUNTED FAUCET WITH SPRAYER, AND 2.2 GPM AERATOR. DRAIN: JUST NO. J-35-FS STAINLESS STEEL DRAIN WITH REMOVABLE STRAINER WITH 1-1/2" 17 GAUGE OFFSET TAILPIECE. MCGUIRE NO. 8912-C-4-1-1/2" 17 GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP WITH BRASS CLEANOUT WITH ESCUTCHEON AND CHROME SUPPLIES WITH LOOSE KEY STOPS.

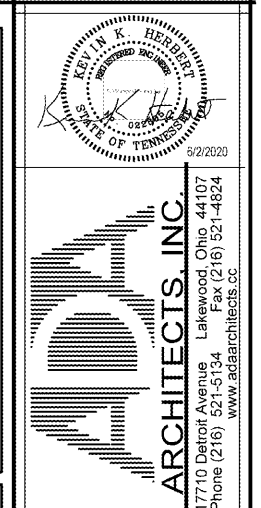
BREAKROOM SINK (SK) - JUST NO. SL-ADA-2019-A-GR, 18 GAUGE TYPE 304 ADA COMPLIANT SINGLE BOWL SELF-RIMMING STAINLESS STEEL SINK, 20"x19"x5-1/2" DEEP SINK WITH CENTER REAR DRAIN, FIXTURE WITH FAUCET LEDGE. SET IN BED OF PUTTY. FAUCET: JUST NO. J-902 SINGLE LEVER DECK MOUNTED FAUCET WITH SPRAYER, AND 2.2 GPM AERATOR. DRAIN: JUST NO. J-35-FS STAINLESS STEEL DRAIN WITH REMOVABLE STRAINER WITH 1-1/2" 17 GAUGE OFFSET TAILPIECE. MCGUIRE NO. 8912-C-4-1-1/2" 17 GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP WITH BRASS CLEANOUT WITH ESCUTCHEON AND CHROME SUPPLIES WITH LOOSE KEY STOPS.

DRINKING FOUNTAIN (DF) - ELKAY MODEL EZSTLDLDC TWO-LEVEL BARRIER-FREE WALL MOUNTED DRINKING FOUNTAIN WITH FLEXI-GUARD SAFETY RUBBLER AND FRONT AND SIDE PUSH BUTTONS AND LIGHT GRAY GRANITE FINISH. REFER TO PLUMBING GENERAL NOTE #36 FOR ADDITIONAL INFORMATION.

TEMPERING VALVE SERVING LAVATORY AND BREAK ROOM SINK SHALL BE WATTS SERIES LFMV WITH A MINIMUM FLOW OF .5 GPM @ 0.8 PSI PRESSURE DIFFERENTIAL. NOTE: TEMPERING VALVE SHALL BE LISTED TO ASSE 1070 STANDARD. SET OUTLET TEMPERATURE TO 105°F.



FIXTURE CONNECTION SCHEDULE				
TAG	DESCRIPTION	OW (IN.)	HW (IN.)	VENT (IN.)
WC	WATER CLOSET	1	-	2
LAV	LAVATORY	1/2	1/2 (108°F)	1-1/2
DF	DRINKING FOUNTAIN	1/2	-	1-1/2
SK	SINK	1/2	1/2 (108°F)	1-1/2
MS	MOP SINK	1/2	1/2	1-1/2



HARBOR FREIGHT TOOLS
 705 WYATT ROAD NORTHWEST
 CLEVELAND, TN 37312

REVISIONS									
#	DATE	TYPE							
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

PLUMBING DETAILS

DATE 06/02/20
 JOB NO. 19155

P1.1
 SHEET NO.