

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE						
SYM.	DESCRIPTION	CONNECTIONS (IN.)		SPECIFICATION	REMARKS	
		W	HW			
E1	WATER CLOSET, HET, ADA COMPLIANT, ELONGATED BOWL, WALL HUNG, DIAPHRAGM TYPE FLUSH VALVE, 1.28 GPF	4"	2"	1/4"	FIXTURE: KOHLER K-4329 "KINGSTON" SEAT, CHURCH 9500CT FLUSH VALVE, SLOAN 111-1.28 ROYAL MATERIAL: WITKOUS CHINA COLOR: WHITE CARRIER: ZURN Z-1203 SERIES	PROMOVE LEVER ON WIDE SIDE OF STALL SEAT HEIGHT 17"-19" AFF. SEE NOTE 3 BELOW.
E3	LAVATORY, ADA COMPLIANT, 20" x 18", WALL MOUNTED, GRID DRAIN, SINGLE LEVER HANDLE, 0.5 GPM FAUCET	2"	1/4"	1/4"	FIXTURE: KOHLER K-2032, WHITE DRINKER: MCQUIRE 150A GRID STRAINER FAUCET: DELTA 220151, 0.5 GPM P-T-RAP: MCQUIRE 8902 1/4" x 1/4" STOPS: MCQUIRE LF175LK MATERIAL: WITKOUS CHINA CARRIER: ZURN Z-1231	SEE NOTE 1 BELOW. BOWL RIM HEIGHT 34" AFF
E4	ELECTRIC WATER COOLER, ADA WALL MOUNTED, SPLIT LEVEL, STAINLESS STEEL FINISH, BOTTLE FILLER, FLEXIBLE BUBBLERS	2"	1/4"	1/4"	FIXTURE: ELKAY EZSLBWSLK P-T-RAP: MCQUIRE 8902 1/4" x 1/4" STOPS: MCQUIRE LF175LK CARRIER: FLOOR MOUNTED CHAIR CARRIER	LOWER BUBBLER HEIGHT 34" AFF
IDB1	INDIRECT DRAIN CONNECTION BOX	2"	1/4"	-	FIXTURE: SIOUX CHIEF "OX-BOX" 696 WITH KNOCK-OUT IN TOP OF BOX 2" DRAIN OUTLET WITH 2" P-T-RAP COVER: SIOUX CHIEF 696-1F W/ 696-LC, VENTED SOLID COVER	PROMOVE 1.0" AIR GAP BETWEEN CONDENSATE DRAIN AND BOX OUTLET. SEE NOTE 2 BELOW.
SA-	SHOCK ARRESTOR SIZES A THRU F SEE FLOOR PLAN FOR SIZE	-	-	SEE DWG	EQUIPMENT: SIOUX CHIEF 690 SERIES SEE SHOCK ARRESTOR TABLE THIS SHEET	PROMOVE ACCESS DOOR FOR CONCEALED INSTALLATIONS.

NOTES:
 1. PROVIDE PRE-MANUFACTURED INSULATION KIT FOR EXPOSED TRIM UNDER SINK.
 2. PROVIDE SURSEAL INLINE TRAP SEALER IN DRAIN FOR TRAP SEAL PROTECTION.
 3. PROVIDE WALL HUNG WATER CLOSET CARRIER THAT MEETS ASME A112.6.1M OR ASME A112.6.2 AND 1,000 LB. STATIC LOAD RATING.

APPROVED MANUFACTURERS:
 THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE MODEL WHICH MOST CLOSELY MATCHES THE SPECIFIED PRODUCT. PROVIDE PRODUCTS MADE BY ANY OF THE MANUFACTURER'S LISTED. NO PRIVATE LABELED MATERIALS WILL BE ACCEPTED AS EQUIVALENTS TO PRODUCTS SPECIFIED HEREIN. ALL FIXTURES OF THE SAME TYPE AND/OR MATERIAL SHALL BE PROVIDED BY A SINGLE MANUFACTURER.

SHOCK ARRESTOR TABLE					
DRAWING SYMBOL	FIXTURE UNITS	PDI #/M201 STANDARD DESIGNATION	ARRESTOR SIZE	APPROVED MANUFACTURERS	REMARKS
SA-A	1-11	A	1/4"	- SIOUX CHIEF - WATTS	
SA-B	12-32	B	3/8"	- PIP INC.	
SA-C	33-60	C	1"		
SA-D	61-113	D	1 1/2"		
SA-E	114-154	E	1 1/2"	INSTALL SHOCK ARRESTORS PER PDI #M201 GUIDELINES	
SA-F	155-330	F	2"		

WITKOUS CHINA FIXTURES
 TOILET SEATS
 FLUSH VALVES
 MANUAL FAUCETS
 ELECTRIC WATER COOLERS
 SUPPLIES, P-T-RAPS
 ADA KIT FOR EXPOSED TRIM
 INLINE FLOOR DRAIN TRAP SEALER
 DRAINS, CARRIERS, CLEANOUTS
 WATER SPECIALTIES
 WASTE SPECIALTIES (WASHER BOX)
 WALL HYDRANTS/HOSE BIBBS
 BACKFLOW PREVENTERS, PRRS, ETC

KOHLER, AMERICAN STANDARD, ZURN, TOTO, SLOAN
 CHURCH, OLSONITE, BEMIS, CENTCO
 SLOAN, ZURN, DELANEY
 T&S BRASS, CHICAGO, ZURN, DELTA COMMERCIAL, MOEN COMMERCIAL
 ELKAY, OAKS, HALSEY TAYLOR
 MCQUIRE, BRASSCRAFT, KEENEY
 TRUEBRO, PLUMBERX, KEENEY
 SURSEAL, MIFAS, PROVENT
 ZURN, J.R. SMITH, PADI, OSAM, WATTS
 PIP, SIOUX CHIEF, ZURN, WATTS
 GUY GRAY, SIOUX CHIEF, GATEY
 WOODFORD, ZURN, WATTS
 WATTS, ZURN-WILKINS, APOLLO

PLUMBING MATERIALS AND NOTES

DOMESTIC WATER PIPING:

- DOMESTIC WATER PIPING AND JOINTS ABOVE GRADE: PROVIDE TYPE "K" HARD DRAWN SEAMLESS COPPER TUBING (ASTM B 88) AND CAST COPPER ALLOY FITTINGS (ASME B16.16). JOINTS 1" AND SMALLER SHALL BE LEAD FREE 63-5 TIN/SILVER SOLDER JOINTS (ASTM B 32). JOINTS 1 1/2" AND LARGER SHALL BE COP SILVER/PHOSPHORUS/COPPER BRAZED JOINTS (AWS A5.8).
- STERILIZE THE DOMESTIC WATER SYSTEM IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.
- INSULATE DOMESTIC WATER PIPING ABOVE GRADE (EXCEPT EXPOSED CONNECTIONS TO PLUMBING FIXTURES) WITH GLASS FIBER INSULATION HAVING A VAPOR BARRIER AND JACKET. PIPE INSULATION SHALL HAVE A CONDUCTIVITY NOT EXCEEDING 0.27 BTU/H x SQ. FT. FOLLOW SCHEDULE BELOW:
 DOMESTIC HOT WATER & CIRCULATION: 1/2" - 1 1/4" 1"
 DOMESTIC COLD WATER: 1/2" - 1 1/4" 1"
 DOMESTIC COLD WATER: 1 1/2" - 4" 1"
- DOMESTIC WATER PIPING INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES ARE REQUIRED TO MEET A FLAME-SPREAD RATING OF 25 OR LESS AND A SMOKE-DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ASTM E84 (NFPA 255) METHOD AND SHALL BE PLENUM RATED. PROVIDE PVC JACKET FOR EXPOSED PIPING IN MECHANICAL ROOMS.
- PROVIDE TWO-PIECE, BRONZE OR BRASS BODY, FULL PORT, 600 PSI WDG. BALL TYPE SHUT-OFF VALVES WITH BLOW-OUT PROOF STEMS AND ADJUSTABLE PACKING GLANDS. VALVES SHALL BE LEAD FREE PER NSF 61, ANNEX G REQUIREMENTS. INSTALL VALVES IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS.
- PROTECT COPPER PIPING AGAINST CONTACT WITH DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS AND CLIPS SHALL BE COPPER OR COPPER PLATED. WHERE COPPER PIPING IS CONCEALED OR AGAINST MASONRY PARTITIONS, PROVIDE A HEAVY COATING OF ASPHALT ENAMEL ON THE COPPER PIPING AND 15# ASPHALT SATURATED FELT BETWEEN THE PIPING AND THE MASONRY PARTITION.
- PROTECT COPPER PIPING AGAINST CONTACT WITH ALL MASONRY, WHERE COPPER IS SLEEVED THROUGH MASONRY, PROVIDE COPPER OR RED BRASS SLEEVES. WHERE COPPER MUST BE CONCEALED IN OR AGAINST MASONRY PARTITIONS, PROVIDE A HEAVY COATING OF ASPHALT ENAMEL ON THE COPPER PIPING AND 15# ASPHALT SATURATED FELT BETWEEN THE PIPING AND THE MASONRY PARTITION.
- DOMESTIC WATER PIPING SHALL BE SLOPED FOR DRAINAGE WITH DRAIN VALVES INSTALLED AT LOW POINTS.

SANITARY WASTE / VENT PIPING:

- SANITARY WASTE/VENT PIPING BELOW GRADE: PROVIDE EXTRA HEAVY WEIGHT CAST IRON HUB AND SPOUT PIPE (ASTM A 74) WITH COMPRESSION JOINTS (CSPI HSK) AND NEOPRENE GASKETS (ASTM D 564).
- AFTER INSTALLATION, COMPACTION, AND BACKFILLING OF BELOW GRADE PIPING, CONTRACTOR SHALL RUN A CAMERA DOWN THE LINE TO VERIFY THE INTEGRITY OF THE PIPE INSTALLATION (PROPER PIPE SLOPE MAINTAINED, NO DIP AT FITTINGS, ETC.). PROVIDE A WRITTEN REPORT TO THE ARCHITECT/ENGINEER WITH THE RESULTS. IF INSTALLED PIPING IS FOUND TO HAVE DEFICIENCIES (INCLUDING BUT NOT LIMITED TO FLAT SPOTS IN THE PIPING OR DIP AT FITTINGS), THE CONTRACTOR SHALL REMOVE THE FAULTY PIPING INSTALLATION AND PROVIDE NEW PIPE INSTALLATION AS REQUIRED PER THE SPECIFICATIONS AND DRAWINGS AT NO COST TO THE OWNER.
- SANITARY WASTE/VENT PIPING ABOVE GRADE: PROVIDE SERVICE WEIGHT CAST IRON NO-HUB PIPE AND FITTINGS (CSPI 307) WITH NEOPRENE GASKET AND STAINLESS STEEL CLAMP JOINTS (HEAVY DUTY).
- SLOPE SANITARY WASTE PIPING AT 1/4" PER FOOT MINIMUM FOR PIPING 2 1/2" AND SMALLER AND 1/8" PER FOOT MINIMUM FOR PIPING 3" AND LARGER UNLESS NOTED OTHERWISE.
- PROVIDE CLEAN-OUTS AT THE BASE OF SANITARY WASTE STACKS AND STORM DRAIN RISERS AND AT EVERY TURN IN PIPING IN EXCESS OF 45° AND NO FURTHER THAN 100'-0" APART IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS.
- PROVIDE FLOOR CLEANOUTS WITH TOPS DESIGNED TO MATCH SPECIFIC FLOOR FINISHES SUCH AS CARPET, TILE, ETC.
- WHERE WASTE PIPING IS EXPOSED IN REST ROOM AREAS, PROVIDE CHROME PLATED BRASS PIPING, REMOVABLE P-T-RAPS, MATCHING STOPS AND ESCUTCHEONS FOR ALL LAVATORIES.

DEMOLITION NOTE - SAFING

ALL EQUIPMENT AND UTILITY SERVICES REMOVED FROM THIS PROJECT SERVING AREAS OUTSIDE OF THE SCOPE OF WORK, SHALL BE VALVED, CAPPED, DRAINED, ETC. AND IN GENERAL BE SAFE FOR BUILDING VACANCY.

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PLUMBING GENERAL NOTES

GENERAL REQUIREMENTS:

- PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE NORTH CAROLINA STATE PLUMBING CODE AND WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- SCORE: PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL PLUMBING SYSTEMS IN ACCORDANCE WITH ALL APPLICABLE CODES.
- PERMITS: APPLY AND PAY FOR ALL NECESSARY PERMITS, FEES AND INSPECTIONS REQUIRED BY ANY PUBLIC AUTHORITY HAVING JURISDICTION. ACREAGE CHARGES, FACILITIES CHARGES AND BOND PROVISIONS ARE NOT TO BE CONSIDERED TO BE A PART OF THIS CONTRACT.
- WARRANTY: PROVIDE A ONE-YEAR WARRANTY, FROM THE DATE OF ACCEPTANCE OF WORK BY THE OWNER, FOR ALL PLUMBING MATERIALS AND EQUIPMENT.
- COORDINATE ALL PLUMBING PIPING LOCATIONS, ROUTE-IN LOCATIONS AND EQUIPMENT LOCATIONS WITH OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES. FINAL PIPING AND EQUIPMENT LOCATIONS SHALL BE A CODE COMPLIANT INSTALLATION FOR ALL TRADES.
- FIELD VERIFY PROPER OPERATION OF EXISTING SYSTEMS BEFORE STARTING CONSTRUCTION. NOTIFY THE ARCHITECT / ENGINEER OF RECORD OF ANY PROBLEMS OR DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND EXISTING CONDITIONS AND ANY POTENTIAL PROBLEMS OBSERVED BEFORE CONTINUING WORK IN THE EFFECTED AREAS.
- WHERE DISCREPANCIES ARE FOUND IN THE DRAWINGS AND SPECIFICATIONS THE MORE STRINGENT SHALL APPLY. CONTACT ENGINEER FOR CLARIFICATION.
- ALL PIPING SHALL BE MANUFACTURED IN THE UNITED STATES OF AMERICA.
- ALL VALVES, BACKFLOW PREVENTERS, BOOSTER PUMPS, ETC. SERVING THE DOMESTIC WATER SYSTEM SHALL MEET LEAD FREE STANDARDS PER ANSI/NSF 372 AND NSF 61, ANNEX G.
- CUT WALLS, FLOORS AND CEILING AS REQUIRED FOR INSTALLATION OF PLUMBING WORK. ALL CUTTING SHALL BE HELD TO A MINIMUM. PATCH AND FINISH SURFACES TO MATCH ADJOINING SURFACES.
- PLUMBING PLANS SHALL NOT BE SCALED. REFERENCE THE ARCHITECTURAL PLANS FOR ALL LOCATIONS OF PLUMBING FIXTURES, WALLS, DOORS, WINDOWS, ETC.
- PLUMBING PIPING AND SPECIALTIES SHALL BE LOCATED CONCEALED IN WALLS, PARTITIONS OR ABOVE CEILING UNLESS NOTED OTHERWISE. PLUMBING PIPING IN EXPOSED AREAS SHALL BE RUN TIGHT TO UNDERSIDE OF STRUCTURE. PROVIDE ACCESS DOORS FOR CONCEALED SPECIALTIES.
- PLUMBING PIPING, VENTS, ETC. EXTENDING THROUGH EXTERIOR WALLS AND/OR THE ROOF SHALL BE FLASHED AND COUNTER FLASHED IN A WATERPROOF MANNER. COORDINATE FLASHING WITH THE GENERAL CONTRACTOR.
- DO NOT INSTALL PLUMBING PIPING IN AREAS SUBJECT TO FREEZING TEMPERATURES. INSTALL PLUMBING PIPING SHOWN IN EXTERIOR WALLS ON THE CONDITIONED SIDE OF THE WALL INSULATION.
- PROVIDE NON-CONDUCTING DIELECTRIC JOINTS WHENEVER CONNECTING DISSIMILAR METALS.
- ATTACH HANGERS TO STRUCTURE, HANGERS SHALL NOT ATTACH TO THE DECK.
- PROVIDE ACCESS DOORS FOR VALVES, WATER HAMMER ARRESTORS, TRAP PRIMERS, ETC. CONCEALED IN MASONRY WALLS, CYPBOARD WALLS AND/OR CEILING. PROVIDE ACCESS DOORS FOR MAINTENANCE ACCESS.
- PLUMBING SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO: PLUMBING FIXTURES AND EQUIPMENT, FIRE STOPPING, SMOKE EXHAUSTING, PIPE IDENTIFICATION, DOMESTIC WATER SYSTEM, SANITARY WASTE AND VENT SYSTEMS.
- PROVIDE COMPLETE PLUMBING FIXTURES AND EQUIPMENT, INCLUDING SUPPLIES, STOPS, FAUCETS, DRAINS, TRAPS, TAIL PIECES, ESCUTCHEONS, ETC.
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- THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH SUBSTITUTIONS TO SPECIFIED PLUMBING FIXTURES AND EQUIPMENT. PROVIDE MAINTENANCE ACCESS CLEARANCE. PIPING, ELECTRICAL, MECHANICAL, REPAIRMENT OF OTHER SYSTEM COMPONENTS, INCLUDING ALTERATIONS, ETC. AND ANY REVISIONS TO ASSOCIATED MECHANICAL, ELECTRICAL (SEE SCHEDULES) SYSTEMS REQUIRED BY THE EQUIPMENT'S INSTALLATION INSTRUCTIONS. ALL COSTS ASSOCIATED WITH SUBSTITUTIONS SHALL BE INCLUDED IN THE ORIGINAL BASE BID.

PIPE IDENTIFICATION:

- PIPE IDENTIFICATION SHALL MATCH THE FACILITY'S EXISTING STANDARD, IF NO STANDARD EXISTS, THEN THE PIPE IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI A13.1.
- PROVIDE PIPING LABELS FOR ALL PLUMBING PIPING. PIPING LABELS SHALL BE ACRYLIC FACED, WRAP-AROUND TYPE. EACH LABEL SHALL INDICATE THE PIPING CONTENTS, DIRECTION OF FLOW AND SHALL BEAR THE MANUFACTURER'S STANDARD COLOR FOR THE SERVICE INDICATED.

PLUMBING LEGEND

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- PLUMBING CONTRACTOR SHALL REMOVE UNUSED HW & CW BRANCH PIPING BACK TO WITHIN 12" OF THE MAIN IT CONNECTS. TERMINATE WITH SHUT-OFF VALVE AND CAP.
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WATER HEATER SCHEDULE

SYM.	DESCRIPTION	STORAGE (GALLONS)	TEMP. RISE • FLOW • GPM	ELECTRICAL DATA			SELECTION BASED ON		REMARKS	
				KW	VOLTS	PHASE	HERTZ	MANUFACTURER		MODEL
MH1/MH2	INSTANTANEOUS ELECTRIC WATER HEATER	-	56° RISE 0.5 GPM	4.1	277	1	60	EEMAX	SPEX42771	1,2

REMARKS:
 1. EQUIVALENT MANUFACTURERS: STIEBEL-ELTRON, CHRONOMITE. 2. WATER HEATER SHALL MEET OR EXCEED THE REQUIREMENTS OF ASHRAE 90.1.

EXISTING WATER SERVICE ENTRANCE SCHEMATIC
 NO SCALE

INSTANTANEOUS WATER HEATER
 NO SCALE

CONDENSATE DRAIN WALL BOX SCHEMATIC
 NO SCALE

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PRINCIPAL IN CHARGE: LR
 PROJECT ARCHITECT: APR
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 SHEET TITLE: PLUMBING LEGEND, SCHEDULES, AND NOTES
 SHEET NO: PROJ NO: 017384
 AGENCY REVIEW ID: 17-1742-01A

1 OF 5
 OPTIMA # 17-035