PLUMBING SPECIFICATIONS

1. ALL GENERAL MECHANICAL SPECIFICATIONS APPLY TO THIS SECTION.

PIPING SHALL BE CONCEALED IN WALLS, ABOVE THE CEILING, OR BELOW GRADE UNLESS OTHERWISE NOTED. ROUTE PIPING TO AVOID CUTTING STRUCTURAL MEMBERS. WHERE CUTTING OR NOTCHING IS REQUIRED. THE STRUCTURAL MEMBER SHALL BE REINFORCED IN ACCORDANCE WITH CBC. PIPING SHALL BE INSTALLED TO ENSURE UNRESTRICTED FLOW, ELIMINATE AIR POCKETS, PREVENT UNUSUAL NOISE AND PERMIT COMPLETE DRAINAGE OF THE SYSTEM. PROVIDE INDIVIDUAL SHUT OFF VALVES AT EACH FIXTURE AND EQUIPMENT

3. PIPING MATERIAL

A. SOIL, WASTE, AND VENT i. INSIDE BUILDING AND WITHIN FIVE FEET OF BUILDING WALLS - STANDARD WEIGHT COATED CAST IRON PIPE AND FITTINGS. PLAIN END, CISPI 301, ASTM A888, OR HUB END WITH RUBBER GASKETS. ASTM A74, ASTM C564. COUPLINGS SHALL BE HEAVY DUTY SHIELDED COUPLINGS, TYPE 304 STAINLESS STEEL, WITH NEOPRENE GASKET, ASTM C-1540. HUSKY HD 2000, CLAMP-ALL 80, MISSION

ii. OUTSIDE BUILDING - SAME AS INSIDE BUILDING

OR POLYVINYL CHLORIDE (PVC), SCHEDULE 40, ASTM D1785 WITH SOLVENT WELD FITTINGS WHERE APPROVED BY ADMINISTRATIVE AUTHORITY. PIPING WITH LESS THAN 24" OF COVER OUTSIDE BUILDING WALLS SHALL BE CAST IRON.

iii. PIPE CLEANOUTS - IRON BODY WITH THREADED BRASS PLUG.

iv. CLEANOUT BOX - PRECAST REINFORCED CONCRETE. CAST IRON LID MARKED WITH "SEWER" LETTERING. CHRISTY G05T.

B. DOMESTIC COLD WATER

i. INSIDE BUILDING, WITHIN FIVE FEET OF BUILDING WALLS, AND ALL ABOVE GRADE - SCHEDULE 40 GALVANIZED STEEL PIPE, ASTM A53, 150 PSI GALVANIZED MALLEABLE IRON SCREWED FITTINGS.

OR HARD TEMPER SEAMLESS COPPER, ASTM B88. WROUGHT COPPER FITTINGS, ANSI B16.22. TYPE L WITH BRAZED JOINTS (1100F MIN.). 1-1/2" AND SMALLER ABOVE GRADE MAY BE SOLDERED, 95-5 TIN-ANTIMONY SOLDER, ALL NIPPLES SHALL BE RED BRASS (85% COPPER). ii. OUTSIDE BUILDING, BELOW GRADE - SAME AS INSIDE BUILDING. GALVANIZED STEEL SHALL HAVE

PROTECTIVE COATING. OR 3" AND SMALLER MAY BE POLYVINYL CHLORIDE (PVC), SCHEDULE 40, ASTM D1785 WITH SOLVENT WELD FITTINGS WHERE APPROVED BY ADMINISTRATIVE AUTHORITY.

4. GATE VALVES:

A. 2" AND SMALLER - ALL BRONZE. THREADED BONNET. NON-RISING STEM. WEDGE DISK. MALLEABLE IRON HANDWHEEL. 200 PSI WOG. NIBCO T-113-LF.

B. 2-1/2" AND LARGER - IRON BODY, BRONZE MOUNTED. NON-RISING STEM. WEDGE DISK. 200 PSI WOG. FLANGED OR AWWA HUB END AS APPLICABLE. NIBCO F-619. UNDERGROUND VALVES SHALL HAVE SQUARE OPERATING NUT. PROVIDE OPERATING "T" HANDLES FOR UNDERGROUND VALVES. C. VALVE BOX - PRECAST REINFORCED CONCRETE. CAST IRON LID MARKED WITH "WATER" LETTERING.

CHRISTY G05T. PROVIDE MINIMUM 6" DIAMETER PIPE EXTENDED FROM TOP OF VALVE TO 6" OF TOP OF D. "T" HANDLES FOR UNDERGROUND VALVES: PROVIDE A MINIMUM OF TWO OPERATING "T" HANDLES FOR UNDERGROUND VALVES FOR EACH UNDERGROUND SYSTEM WHERE VALVES ARE REQUIRED. THE

LENGTHS OF THE HANDLES ARE DEPENDENT UPON THE DEPTH OF THE VALVES AND THE ABILITY OF THE HANDLES TO FULLY OPEN AND/OR CLOSE THE VALVES. AT LEAST ONE "T" HANDLE FOR EACH SYSTEM SHALL BE ON SITE AT THE BEGINNING OF THE INSTALLATION OF A PARTICULAR SYSTEM FOR EMERGENCIES, AND THE CONSTRUCTION MANAGER SHALL HAVE ACCESS TO THESE "T" HANDLES AND

MISCELLANEOUS SPECIALTIES:

A. TRANSITION FITTINGS: MANUFACTURED FITTING OR COUPLING SAME SIZE AS, WITH PRESSURE RATING AT LEAST EQUAL TO AND ENDS COMPATIBLE WITH, PIPING TO BE JOINED. B. UNION:

i. 2" AND SMALLER - AAR MALLEABLE IRON, BRONZE TO IRON GROUND SEAT. 300 PSI. UNIONS FOR COPPER PIPING SHALL BE COPPER OR CAST BRONZE, ANVIL. ii. 2-1/2" AND LARGER - GROOVED PIPE, SYNTHETIC GASKET, MALLEABLE IRON HOUSING. EPDM

GASKET UL CLASSIFIED IN ACCORDANCE WITH ANSI/NSF 61. VICTAULIC STYLE 77 GRADE E GASKET, GRUVLOK 7001 GRADE EP GASKET. C. DIELECTRIC COUPLING - INSULATING UNION OR FLANGE RATED FOR 250 PSIG. EPCO, ZURN WILKINS

MISCELLANEOUS PIPING ITEMS:

SERIES DUXL.

A. DETECTABLE WARNING TAPE - SEE GENERAL MECHANICAL SPECIFICATIONS.

B. PROTECTIVE COATING FOR UNDERGROUND PIPING - SEE GENERAL MECHANICAL SPECIFICATIONS. C. TRACER WIRE - SEE GENERAL MECHANICAL SPECIFICATIONS.

PIPING INSULATION MATERIALS:

A. ALL PIPING INSULATION MATERIALS SHALL HAVE FIRE AND SMOKE HAZARD RATINGS AS TESTED UNDER ASTM E84 AND UL 723 NOT EXCEEDING A FLAME SPREAD OF 25 AND SMOKE DEVELOPED OF 50. B. PRE-MOLDED FIBERGLASS - HEAVY DENSITY SECTIONAL PRE-MOLDED FIBERGLASS WITH VAPOR

BARRIER LAMINATED ALL SERVICE JACKET AND PRESSURE SEALING VAPOR BARRIER LAP. THERMAL CONDUCTIVITY SHALL NOT EXCEED 0.25 BTU-IN/HR-FT2-F AT A MEAN TEMPERATURE OF 75F. PERM RATING 0.02, ASTM E96. PUNCTURE RATING 50 BEACH UNITS, ASTM D781.1-1/2" THICKNESS FOR PIPES 2" AND SMALLER, OTHERWISE 2" THICKNESS. PROVIDE 3" MINIMUM WIDE TAPE OF SAME MATERIAL AS LAP FOR BUTT JOINTS. JOHNS-MANVILLE, KNAUF, OWENS-CORNING.

C. FIBERGLASS ADHESIVE - WATER BASED, SHALL MEET ASTM C916 TYPE II REQUIREMENTS. CHILDERS CHIL-QUIK CP-127, FOSTER 85-60, VIMASCO 795.

D. ALUMINUM JACKETING - ALUMINUM PIPE AND FITTING JACKETING. 0.016" THICKNESS FOR STRAIGHT PIPE. 0.024" THICKNESS FOR FITTINGS. STUCCO-EMBOSSED FINISH. INTEGRAL MOISTURE BARRIER. PROVIDE PRE-FABRICATED ALUMINUM STRAPPING AND SEALS BY SAME MANUFACTURER. ITW PABCO/CHILDERS, RPR PRODUCTS.

E. METAL JACKETING/FLASHING SEALANT - CHILDERS CHIL-BYL CP-76, FOSTER 95-44 ELASTOLAR, PITTSBURGH CORNING PITTSEAL 727, GALLON CONTAINER QUANTITIES ONLY; NO TUBES.

F. INSULATING TAPE - GROUND VIRGIN CORK AND SYNTHETIC ELASTOMERIC, 1/8" THICKNESS. BLACK, ODORLESS, AND NON-TOXIC. THERMAL CONDUCTIVITY SHALL NOT EXCEED 0.43 BTU-IN/HR-FT2-F AT A MEAN TEMPERATURE OF 75F. NON-SHRINKING. FOR OUTDOOR USE, PROVIDE PROTECTIVE FINISH BY SAME MANUFACTURER. SEALERS 1401.

PIPING INSTALLATION:

A. SANITARY SEWER PIPING - INSTALL AT 1/4" PER FOOT PITCH. i. CLEANOUTS - INSTALL AT ENDS OF LINES, AT CHANGES OF DIRECTION GREATER THAN 45 DEGREES, 12. SUPPORTS AND SEISMIC RESTRAINTS: AND NOT GREATER THAN 100 FOOT INTERVALS.

B. WATER PIPING: i. CONNECTIONS TO BRANCHES AND RISERS SHALL BE MADE FROM TOP OF MAIN. MINIMUM PIPE SIZE SHALL BE 3/4", UNLESS OTHERWISE NOTED. ALL STUB OUTS SHALL BE INSTALLED WITH BRASS NIPPLES OR TYPE K COPPER FOR COPPER PIPING AND GALVANIZED NIPPLES FOR GALVANIZED PIPING. NIPPLES ARE TO EXTEND FROM OUTSIDE OF WALL TO FITTING AT HEADER OR DROP BEHIND FINISH WALL SURFACES. PROVIDE SHUTOFF FOR EACH BUILDING AND EACH CONNECTION TO

ii. WATER PIPING THAT RISES UP FROM BELOW GRADE SHALL BE TYPE L COPPER WITH BRAZED JOINTS, WRAPPED WITH 40 MILS OF PIPE WRAP TAPE. FEMALE PVC ADAPTERS SHALL NOT BE USED.

 WATER PIPING THAT RISES UP FROM BELOW GRADE SHALL BE TYPE L COPPER WITH BRAZED JOINTS, WRAPPED WITH 40 MILS OF PIPE WRAP TAPE. FEMALE PVC ADAPTERS SHALL NOT BE USED.

SECURE INSULATED TRACER WIRE TO PIPE WITH NYLON TIES AT MAXIMUM 10 FEET INTERVAL. TRACER WIRES SHALL TERMINATE 6" ABOVE GROUND AT EACH END OF PIPING. D. UNIONS - INSTALL A UNION ON THE LEAVING SIDE OF EACH VALVE, AT EQUIPMENT CONNECTIONS, AND

ELSEWHERE AS NECESSARY FOR ASSEMBLY OR DISASSEMBLY OF PIPING. E. VALVES - INSTALL FULL LINE SIZE VALVES. PROVIDE SHUT-OFF VALVE AT EACH POINT OF CONNECTION TO EXISTING PIPING, AND AT EQUIPMENT CONNECTION.

9. PIPING INSULATION INSTALLATION:

A. FREEZE PROTECTION OF COLD WATER PIPING - ALL COLD WATER PIPING EXPOSED TO WEATHER OR OTHER AREAS SUBJECT TO FREEZING SHALL BE INSULATED WITH 1" THICKNESS. COVER WITH ALUMINUM JACKETING WHERE EXPOSED TO WEATHER. SHORT LENGTHS OF PIPE, LESS THAN 2 FEET, AND VALVES MAY BE WRAPPED WITH INSULATING TAPE, 50% OVERLAP. COVER VALVES TO STEM. APPLY AT LEAST TWO COATS OF PROTECTIVE FINISH WHERE EXPOSED TO WEATHER.

PERFORM ALL TEST AS REQUIRED BY APPLICABLE CODES IN PRESENCE OF INSPECTOR.

A. GRAVITY SYSTEMS: i. SANITARY SEWER - ALL ENDS OF THE SANITARY SEWER SYSTEM SHALL BE CAPPED AND LINES FILLED WITH WATER TO THE TOP OF THE HIGHEST VENT, 10 FEET ABOVE GRADE MINIMUM. THIS TEST SHALL BE MADE BEFORE ANY FIXTURES ARE INSTALLED. TEST SHALL BE MAINTAINED UNTIL ALL JOINTS HAVE BEEN INSPECTED, BUT NO LESS THAN 2 HOURS.

i. DOMESTIC COLD AND HOT WATER PIPING - MAINTAIN 100 PSIG WATER PRESSURE FOR 4 HOURS.

PROVIDE CERTIFICATE OF BACTERIOLOGICAL PURITY AT CLOSEOUT AND DELIVER TO THE OWNER THROUGH THE ARCHITECT.

GENERAL MECHANICAL SPECIFICATIONS

CODES AND REGULATIONS:

ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

A. CALIFORNIA CODE OF REGULATIONS, TITLE 8, INDUSTRIAL RELATIONS

B. CALIFORNIA CODE OF REGULATIONS, TITLE 24, BUILDING STANDARDS

C. CALIFORNIA BUILDING CODE - CBC - 2013 D. CALIFORNIA ELECTRICAL CODE - CEC - 2013

E. CALIFORNIA MECHANICAL CODE - CMC - 2013 F. CALIFORNIA PLUMBING CODE - CPC - 2013

G. CALIFORNIA ENERGY CODE - CEEC - 2013 H. CALIFORNIA FIRE CODE - CFC - 2013

I. CALIFORNIA GREEN BUILDING STANDARDS CODE - CALGREEN - 2013

PERMIT AND FEES

THE CONTRACTOR SHALL TAKE OUT ALL PERMITS AND ARRANGE FOR ALL TESTS IN CONNECTION WITH HIS WORK AS REQUIRED. ALL CHARGES ARE TO BE INCLUDED IN THE WORK.

UNLESS OTHERWISE NOTED, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING AND

GUARANTEE:

THE CONTRACTOR SHALL REPAIR ANY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THEREFROM WHICH APPEARS WITHIN A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF WORK.

DAMAGES BY LEAKS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES CAUSED BY LEAKS IN THE TEMPORARY OR PERMANENT PIPING SYSTEMS PRIOR TO COMPLETION OF WORK AND DURING THE PERIOD OF THE GUARANTEE, AND FOR DAMAGES CAUSED BY DISCONNECTED PIPES OR FITTINGS, AND THE OVERFLOW OF EQUIPMENT PRIOR TO COMPLETION OF THE WORK.

COMPATIBILITY WITH EXISTING SYSTEMS: ANY WORK WHICH IS DONE AS AN ADDITION, EXPANSION OR REMODEL OF AN EXISTING SYSTEM SHALL BE COMPATIBLE WITH THAT SYSTEM.

MATERIALS, EQUIPMENT, AND INSTALLATION: A. EACH ITEM REFERRED TO ON THE PLANS AND IN THE SPECIFICATIONS REPRESENTS THE STANDARD OF QUALITY DESIRED FOR MATERIALS, EQUIPMENT, AND INSTALLATION.

B. ALL SUBSTITUTIONS MUST BE REVIEWED IN WRITING BY THE ENGINEER C. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND FREE FROM DEFECTS. MATERIALS AND

EQUIPMENT OF A GIVEN TYPE SHALL BE BY THE SAME MANUFACTURER

D. ALL INSTALLATIONS SHALL BE AS RECOMMENDED BY THE MANUFACTURER AND AS SHOWN ON PLANS. E. MATERIALS AND EQUIPMENT SHALL BE COVERED OR OTHERWISE PROTECTED DURING CONSTRUCTION AS REQUIRED TO MAINTAIN THE MATERIAL AND EQUIPMENT IN NEW FACTORY CONDITION UNTIL PROJECT ACCEPTANCE.

SUBMITTALS:

WITHIN 30 DAYS OF CONTRACT AWARD, THE CONTRACTOR SHALL SUBMIT SIX COPIES OF SHOP DRAWINGS FOR ALL MATERIALS, EQUIPMENT, ETC. PROPOSED FOR USE ON THIS PROJECT. MATERIAL OR EQUIPMENT SHALL NOT BE ORDERED OR INSTALLED UNTIL WRITTEN REVIEW IS PROCESSED BY THE ENGINEER. ANY ITEM OMITTED FROM THE SUBMITTAL SHALL BE PROVIDED AS SPECIFIED WITHOUT

9. EXCAVATION AND BACKFILL:

A. GENERAL - BARREL OF PIPE SHALL HAVE UNIFORM SUPPORT ON SAND BED. SAND SHALL BE FREE FROM CLAY OR ORGANIC MATERIAL, SUITABLE FOR THE PURPOSE INTENDED AND SHALL BE OF SUCH SIZE THAT 90% TO 100% WILL PASS A NO. 4 SIEVE AND NOT MORE THAN 5% WILL PASS A NO. 200 SIEVE. UNLESS OTHERWISE NOTED, MINIMUM EARTH COVER ABOVE TOP OF PIPE OR TUBING OUTSIDE BUILDING WALLS SHALL BE 24", NOT INCLUDING BASE AND PAVING IN PAVED AREAS.

B. EXCAVATION - WIDTH OF TRENCHES AT TOP OF PIPE SHALL BE MINIMUM OF 16", PLUS THE OUTSIDE DIAMETER OF THE PIPE. PROVIDE ALL SHORING REQUIRED BY SITE CONDITIONS. WHERE OVER EXCAVATION OCCURS, PROVIDE COMPACTED SAND BACKFILL TO PIPE BOTTOM, WHERE GROUNDWATER IS ENCOUNTERED, REMOVE TO KEEP EXCAVATION DRY, USING WELL POINTS AND PUMPS AS REQUIRED.

C. BACKFILL: i. 6" BELOW, AROUND, AND TO 12" ABOVE PIPE - MATERIAL SHALL BE SAND. PLACE CAREFULLY

AROUND AND ON TOP OF PIPE, TAKING CARE NOT TO DISTURB PIPING, CONSOLIDATE WITH

ii. ONE FOOT ABOVE PIPE TO GRADE - MATERIAL SHALL BE SANDY OR SILTY LOAM, FREE OF LUMPS, LAID IN 6" LAYERS, UNIFORMLY MIXED TO PROPER MOISTURE AND COMPACTED TO REQUIRED DENSITY, IF BACKFILL IS DETERMINED TO BE SUITABLE AND REQUIRED COMPACTION IS DEMONSTRATED BY LABORATORY TEST, WATER COMPACTION IN 6" LAYERS MAY BE USED, SUBJECT TO REVIEW BY ENGINEER.

D. COMPACTION - COMPACT TO DENSITY OF 95% WITHIN BUILDING AND UNDER WALKWAYS, DRIVEWAYS, TRAFFIC AREAS, PAVED AREAS, ETC. AND TO 90% ELSEWHERE. DEMONSTRATE PROPER COMPACTION BY TESTING AT TOP, BOTTOM AND ONE-HALF OF THE TRENCH DEPTH. PERFORM THESE TESTS AT THREE LOCATIONS PER 100 FEET OF TRENCH.

10. PROTECTIVE COATING FOR UNDERGROUND PIPING:

A. ALL FERROUS PIPE BELOW GRADE (EXCEPT CAST IRON) SHALL HAVE A FACTORY APPLIED PROTECTIVE COATING OF EXTRUDED HIGH DENSITY POLYETHYLENE, 35 TO 70 MILS TOTAL THICKNESS. PROTECTIVE COATING SHALL BE EXTENDED 6" ABOVE SURROUNDING GRADE. X-TRU-COAT, SCOTCHKOTE.

B. ALL FERROUS PIPE FITTINGS AND AREAS OF DAMAGED COATING SHALL BE COVERED WITH TWO LAYERS DOUBLE WRAP OF 10 MIL POLYVINYL TAPE TO TOTAL THICKNESS OF 40 MILS. JOHNS-MANVILLE. 11. PIPES PASSING THROUGH FIRE RATED SURFACES:

PIPES PASSING THROUGH FIRE RATED WALLS, FLOORS, CEILINGS, PARTITIONS, ETC. SHALL HAVE THE ANNULAR SPACE SURROUNDING THE PIPE OR PIPE INSULATION SEALED WITH FIRE RATED MATERIALS IN ACCORDANCE WITH THE REQUIREMENTS OF CBC SECTION 714 AND THE FIRE AUTHORITY HAVING JURISDICTION.

ALL MECHANICAL SYSTEMS (EQUIPMENT, DUCTWORK, PIPING, ETC.) SHALL BE PROVIDED WITH SUPPORTS AND SEISMIC RESTRAINTS IN ACCORDANCE WITH SEISMIC HAZARD LEVEL "A" OF THE "SEISMIC RESTRAINT MANUAL: GUIDELINES FOR MECHANICAL SYSTEMS, APPENDIX B" LATEST EDITION, AS PUBLISHED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. (SMACNA), CHANTILLY, VIRGINIA, OR OTHER OSHPD PRE-APPROVED SYSTEM, AND IN ACCORDANCE WITH CBC SECTION 1613A. BRACE SPACING SHALL BE REDUCED BY 50% FOR CAST IRON, PLASTIC, NO-HUB, OR OTHER NON-DUCTILE PIPING. A COPY OF THIS MANUAL SHALL BE KEPT ON SITE AT ALL TIMES DURING

SYSTEM IDENTIFICATION:

A. EQUIPMENT - ALL EQUIPMENT SHALL BE IDENTIFIED WITH A PLASTIC LAMINATED, ENGRAVED NAMEPLATE WHICH BEARS THE UNIT MARK NUMBER AS INDICATED ON THE DRAWINGS (e.g. WH-1). PROVIDE 1/2" HIGH LETTERING, WHITE ON BLACK BACKGROUND. CONTACT TYPE PERMANENT ADHESIVE, COMPATIBLE WITH LABEL AND WITH SUBSTRATE. NAMEPLATES SHALL BE PERMANENTLY SECURED TO THE EXTERIOR OF THE UNIT. SETON.

B. BELOW GRADE PIPING: i. DETECTABLE WARNING TAPE - BURY A CONTINUOUS, PRE-PRINTED WITH A DESCRIPTION OF UNDERGROUND UTILITY, BRIGHT COLORED, METALLIC RIBBON MARKER CAPABLE OF BEING LOCATED WITH A METAL DETECTOR WITH EACH UNDERGROUND PIPE. THE DETECTABLE WARNING TAPE SHALL BE A MINIMUM 6" WIDE AND 4 MILS THICK. LOCATE DIRECTLY OVER BURIED PIPE, 6" TO 8" BELOW FINISHED GRADE. BRADY CORP, SETON.

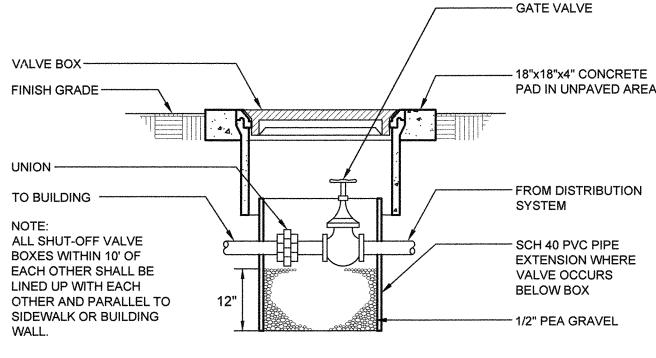
ii. TRACER WIRE - SECURE 14 AWG MINIMUM, CORROSION RESISTANT INSULATED TRACER WIRE, TO UNDERGROUND PVC/PLASTIC PIPE WITH NYLON TIES AT MAXIMUM 10 FEET INTERVAL. TERMINATE TRACER WIRE 6" ABOVE GRADE AT EACH END OF PIPING.

C. ALL ABOVE GROUND PIPING (EXCEPT GALVANIZED AND CAST IRON) - PAINT PIPE TO MATCH EXISTING. PROVIDE OUTDOOR FINISH FOR PIPES EXPOSED TO WEATHER. PROVIDE PIPE LABELS IN COLOR, STYLE AND PLACEMENT TO MATCH EXISTING.

PROGRESSIVELY AND AT COMPLETION OF THE JOB, THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL OF HIS WORK, REMOVING ALL DEBRIS, STAIN AND MARKS RESULTING FROM HIS WORK, THIS INCLUDES BUT IS NOT LIMITED TO BUILDING SURFACES, PIPING, EQUIPMENT AND DUCTWORK, INSIDE AND OUT. SURFACES SHALL BE FREE OF DIRT, GREASE, LABELS, TAGS, TAPE, RUST, AND ALL FOREIGN MATERIAL.

15. OPERATING AND MAINTENANCE INSTRUCTIONS: THREE COPIES OF ALL EQUIPMENT OPERATION AND MAINTENANCE INSTRUCTIONS AND WIRING DIAGRAMS SHALL BE FURNISHED TO THE OWNER, THROUGH THE ARCHITECT.

AS WORK PROGRESSES, THE CONTRACTOR SHALL MAINTAIN A RECORD OF ALL DEVIATIONS IN THE WORK FROM THAT INDICATED ON THE DRAWINGS. THE RECORD DRAWINGS SHALL BE SUBMITTED TO THE

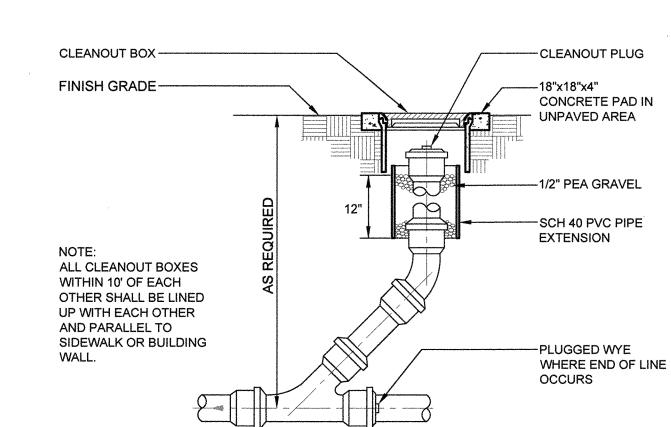


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G:\2016frs\16-5204 Wayside Pre-K\Sheets\5204-P301 PLUMBING DETAILS AND SPECS.dwg RICHARD DELLANINI



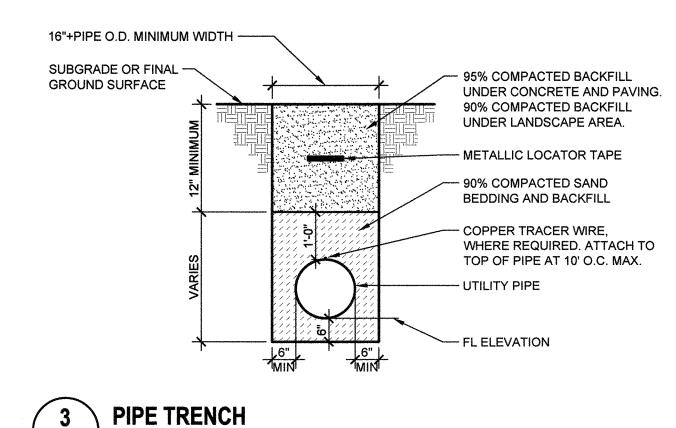
CLEANOUT TO GRADE (COTG)

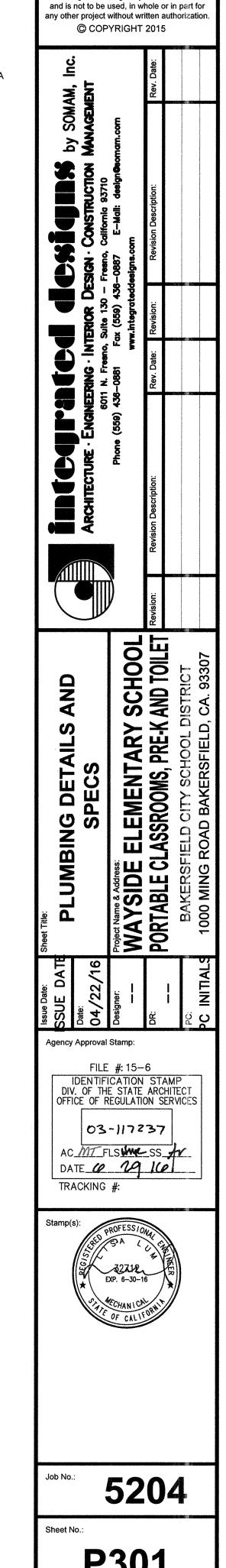
SHUT OFF VALVE IN BOX

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