

NOTES

1. LOCATE UNDERGROUND UTILITIES PRIOR TO DIGGING. CALL USA (UNDERGROUND SERVICE ALERT) 1-800-277-2600, MON THRU FRI 6AM TO 7PM, A MINIMUM 2 WORKING DAYS WITH A MAXIMUM 14 CALENDAR DAYS, TO OBTAIN A TICKET. CONTACT THE DISTRICT INSPECTOR OR PARK SUPERVISOR FOR DISTRICT UTILITIES NOT LOCATED BY USA.
2. DOMESTIC WATER PIPE 4 INCH NOMINAL DIAMETER AND LARGER SHALL BE PER PLANS AND SPECIFICATIONS.
3. UON, BURIED DOMESTIC WATER PIPE 3 INCH NOMINAL DIAMETER AND SMALLER SHALL BE SOLVENT WELD PVC SCHEDULE 40, TYPE 1, GRADE 1, ASTM D1785, ANSI/NSF STD 61 AND STD 14, 20FT STD LENGTH WITH BELLED END.
 - A. SOLVENT WELD FITTINGS SHALL BE PVC SCHEDULE 40, TYPE 1, GRADE 1, ASTM D2466, ANSI/NSF STD 61 AND STD 14.
 - B. THREADED FITTINGS AND NIPPLES SHALL BE PVC SCHEDULE 80, TYPE 1, GRADE 1, ASTM D2467, ANSI/NSF STD 61 AND STD 14.
4. PRIMER FOR SOLVENT WELD PVC PIPE AND FITTINGS SHALL BE INDUSTRIAL GRADE, LOW VOC EMISSION, NON-BODIED, FAST ACTING, COLOR PURPLE, ASTM F-656, ANSI/NSF STD 61 AND STD 14, WELD-ON P-70, OR EQUAL.
5. SOLVENT CEMENT FOR PVC PIPE AND FITTINGS SHALL BE INDUSTRIAL GRADE, COLOR GRAY, LOW VOC EMISSION, HEAVY BODIED, MEDIUM SETTING, ASTM D2564, ANSI/NSF STD 61 AND STD 14, WELD-ON 711, OR EQUAL.
6. UON, SOLVENT WELD STORM DRAIN PIPE, SEWER PIPE, AND FITTINGS 4" THRU 10" SHALL BE PVC SCHEDULE 40 DWV (DRAIN, WASTE, VENT), BELLED ENDS, ASTM D1785 AND D2665.
7. UON, GASKETED STORM DRAIN PIPE, SEWER PIPE, AND FITTINGS 4" THRU 10" SHALL BE PVC SDR 26, ASTM D3034, D1784, F477, AND D3212.
8. PERFORATED DRAIN PIPE 4" THRU 6" SHALL BE SOLVENT WELD, PVC SDR 35 MIN, WITH BELLED ENDS AND 2 ROWS OF 1/2" DIA HOLES SPACED 5" ON CENTER ON ONE SIDE OF THE PIPE, ASTM D1784 AND D3034 (PRIOR TO PERFORATION).
9. UON, STORM DRAIN PIPE 12" AND LARGER SHALL BE HDPE DUAL WALL PIPE WITH SMOOTH INTERIOR, ANNULAR EXTERIOR CORRUGATIONS, WATER TIGHT GASKETED BELL AND SPIGOT CONNECTIONS, ADS N-12 MEGA GREEN, OR EQUAL. FITTINGS SHALL BE WATER TIGHT GASKETED, SAME MANUFACTURER AS PIPE. GASKET LUBRICANT PER PIPE MANUFACTURER.
10. BURIED COPPER PIPE SHALL BE TYPE K OR L PER ASTM B88 WITH BRAZED JOINTS PER THE CALIFORNIA PLUMBING CODE.
11. JOINT COMPOUND
 - A. THREAD SEALANT SHALL BE USED ON ALL PVC THREADED CONNECTIONS. SEALANT SHALL BE NSF 61, LOW OR NO VOC, WELD-ON BLUE SEAL OR EQUAL.
 - B. PTFE (TEFLON) TAPE SHALL BE USED FOR ALL METALLIC THREADED CONNECTIONS. TAPE SHALL BE NSF 61 AND U.L. APPROVED.
12. BRONZE/BRASS VALVES AND FITTINGS SHALL BE CERTIFIED LEAD-FREE PER CALIFORNIA PLUMBING CODE SECTION 116875NSF AND BE LISTED NSF 61 FOR POTABLE WATER USE.



UTILITIES AND DRAINAGE NOTES

DRAWN	CR	KEY	REVISIONS	DATE	APPROVED
CHECKED	GG	△	ORIGINAL ISSUE	06-20-17	<i>Glenn D. Gilchrist</i>
OPERATIONS					GLENN GILCHRIST, PE, DESIGN MANAGER, ASD DIV.
					DATE <i>6/21/2017</i>

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NOT TO SCALE

EAST BAY REGIONAL PARK DISTRICT – STANDARD PLANS

13. DOMESTIC WATER VALVES (1 1/2 INCH AND SMALLER) SHALL BE BRONZE GATE VALVE, SOLID WEDGE DISK, NON-RISING STEM, THREADED ENDS, THREADED BONNET, CLASS 125 MIN, 200 PSI MIN (WATER), MILWAUKEE VALVE, NIBCO, OR EQUAL.
14. DOMESTIC WATER VALVES (2 INCH TO 3 INCH) SHALL BE AWWA C509 RESILIENT WEDGE VALVE, UL/FM APPROVED 200 PSI, AWWA C550/NSF 61 FUSION BONDED EPOXY INTERIOR AND EXTERIOR, WITH NON-RISING STEM, 2 INCH SQUARE OPERATING NUT, AND THREADED END CONNECTIONS (FIPT), CLOW VALVE, AMERICAN, OR EQUAL.
15. BALL VALVES SHALL BRONZE, TWO-PIECE BODY, FULL PORT, 600 PSI MIN (WATER), NIBCO, APOLLO, OR EQUAL.
16. HOSE BIBBS SHALL BE BRASS, VANDAL RESISTANT (LOOSE KEY), FIPT X HOSE, MATCO-NORCA, OR EQUAL.
17. BRONZE/BRASS UNIONS AND FITTINGS SHALL BE CLASS 125, MATCO-NORCA, OR EQUAL.
18. THREADED BRASS PIPE AND NIPPLES SHALL BE SCHEDULE 40 RED BRASS.
19. VALVE BOX SHALL BE CONCRETE TRAFFIC RATED WITH BOLT DOWN STEEL OR CAST IRON LID MARKED BY UTILITY (WATER, SEWER, OR STORM), CHRISTY G5, BROOKS 3RT, OR EQUAL.
20. BEDDING FOR PERFORATED PIPE
 - A. CLASS 1A PERMEABLE MATERIAL PER CALTRANS STANDARD SPECIFICATION 68-2.02F(2) COMPLETELY WRAPPED IN FILTER FABRIC, OR
 - B. CLASS 2 PERMEABLE MATERIAL PER CALTRANS STANDARD SPECIFICATION 68-2.02F(3).
21. BEDDING FOR NON-PERFORATED PIPE
 - A. CRUSHED ROCK SHALL CONTAIN AT LEAST 75% OF THE PARTICLES HAVING ONE OR MORE FRACTURED FACES (NOT OVER 25% SHALL BE PIECES THAT SHOWN NO SUCH FACE RESULTING FROM CRUSHING), BE GRADED WITH 100% PASSING A 1-INCH SIEVE, 90-100% PASSING A 3/4-INCH SIEVE, 0-15% PASSING A NO. 4 SIEVE, AND 0-4% PASSING A NO. 200 SIEVE.
22. BACKFILL FOR WATER, STORM, AND SEWER PIPE
 - A. AGGREGATE BASE ROCK (AB) SHALL CONFORM TO SECTION 26 OF THE CALTRANS STANDARD SPECIFICATIONS FOR CLASS 2, 3/4-INCH MAXIMUM GRADE.
 - B. NATIVE BACKFILL SHALL BE ON-SITE MATERIAL FREE OF VEGETABLE MATTER AND REFUSE AND CONTAIN NO CONCRETE STONES OR CLOUDS LARGER THAN 3 INCH IN DIAMETER.
 - C. THE TOP 2 FEET OF BACKFILL PLACED BELOW AGGREGATE BASE ROCK OR PAVEMENT SHALL BE COMPACTED TO 95% RELATIVE COMPACTION. ALL OTHER BACK FILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION OR EQUAL TO SURROUNDING NATIVE MATERIAL.
23. FILTER FABRIC SHALL BE MIRAFI 140N, US FABRICS 120NW, OR EQUAL NON-WOVEN FILTER FABRIC.
24. TRACER WIRE SHALL BE #10 AWG STRANDED COPPER WITH U.S.E. RATED INSULATION OR #10 GAUGE SOLID COPPER WITH POLYETHYLENE JACKET, LABELED FOR EACH UTILITY AND COLOR CODED PER APWA UNIFORM COLOR CODE. SPLICES SHALL BE MADE WITH SPEARS DRI-SPLICE WIRE PRE-FILLED CONNECTOR, OR EQUAL.



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25. WARNING TAPE SHALL BE 3" WIDE, NONMETALLIC, NON-DETECTABLE, LABELED FOR EACH UTILITY AND COLOR CODED PER APWA UNIFORM COLOR CODE.
26. PIPE WRAP TAPE FOR CORROSION PROTECTION OF UNDERGROUND METAL PIPE SHALL BE CORRISION-RESISTANT, MOISTURE-RESISTANT, IAPMO UNIFORM PLUMBING CODE APPROVED, 10 MIL X 2" WIDE PVC PIPE WRAP TAPE.
27. CONCRETE USED FOR FOR SUPPORT AND THRUST BLOCKS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS. A FAST SETTING PREMIX CONCRETE MIX MAY BE USED, QUIKRETE FASTSET DOT MIX EXTENDED - 80 LB BAGS, OR EQUAL.
28. MORTAR OR GROUT SHALL BE CEMENTICIOUS, NONMETALLIC, HIGH-STRENGTH AND NON-SHRINK, PACKABLE GROUT SUITABLE FOR SEALING PIPE PENETRATIONS THROUGH THE SIDES OF PRECAST CONCRETE DRAINAGE STRUCTURES, QUADEX ALUMINALINER, OR EQUAL.
29. CONCRETE SEALER AND/OR CURING COMPOUND SHALL BE ENVIRONMENTALLY NEUTRAL, ZERO VOC/VOS, AND APPROVED FOR USE IN FISHERY HABITATS, DEEP SEAL AS MANUFACTURED BY ACCELERATED CONCRETE TECHNOLOGIES, OR EQUAL.



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