

**Engineering Design Standards**

Page(s)	Section	Revision
general comment		All reference to Caltrans Standard Specifications have been updated to 2018 Caltrans Standard Specifications
5	Subsection 2.2 Preparation, Item C, subitem F	<i>For new Subdivisions: proposed utilities shall be shown on a separate sheet (Scale: 1" = 60', or as approved)</i>
7	subsection 2.2: item 4	Revised signature block for lighting plans.
7	subsection 2.2: item 4, sub item i	<i>The lighting plan shall be reviewed and approved by the Traffic Engineer before improvement plan approval by the City Engineer. Prior to <del>any approval</del> signatures, the lighting plan shall show all existing PG&amp;E badge numbers. Prior to project acceptance as complete, the lighting plan shall show all new PG&amp;E badge numbers and formal as-built drawings shall be submitted to the City on mylar, certified by the professional streetlight consultant.</i>
11	subsection 2.3 Submission	<p><i>For the first submittal of a proposed subdivision, the following shall be submitted to the City Engineer for checking to ensure compliance with these Standards, City of Fairfield Ordinances, and good engineering practice:</i></p> <ul style="list-style-type: none"> <li>• <del>Two</del> <i>Two</i> (2) <del>D</del> <i>D</i>DFs, or similar digital copies, of the submitted construction plan package and final maps on USB, or similar data storage device.</li> <li>• <del>Three</del> <i>Three</i> (3) sets of construction plans</li> <li>• <del>One</del> <i>One</i> (1) copy of the final subdivision map</li> </ul> <p><del>Seven (7) sets of construction plans shall be submitted along with 18 copies of the subdivision final map to the City Engineer for checking to insure compliance with these Standards, City of Fairfield Ordinances, and good engineering practice.</del></p> <p>A <del>current</del> <i>current</i> title report, <i>current within the last sixty (60) days</i> shall be submitted with the final map. The title report shall include the entire legal boundary of property being divided.</p>
12	subsection 2.3 Submission	<p><i>After formal approval of the plans by the City Engineer, the following shall be submitted for filing in the City Engineer's office as official City Records:</i></p> <ul style="list-style-type: none"> <li>• <del>AutoCAD</del> <i>AutoCAD</i> files, or approved similar format, of the site plan, final map, and utility plan on USB, or similar data storage device.</li> <li>• <del>Three</del> <i>Three</i> (3) bond (paper) copies of the approved construction plans.</li> <li>• <del>One</del> <i>One</i> (1) mylar (polyester film 3 mil) sepia copy (with matte surface up)</li> </ul> <p><del>an electronic (Autocad) copy, along with 3 copies plus Mylar (polyester film) sepia copy (with matte surface up) shall be filed with the City Engineer's office for City records.</del></p>

16	subsection 3.3 Appurtenances, item A, subitem 2	<i>The maximum width for a driveway shall be <del>44</del> 40 feet for commercial, except that major street driveways may be greater.</i>
17	subsection 3.3	<i>New subitem B, Traffic Calming in New Development</i>
18	subsection 3.3, item D, Sidewalk, Curbs and Gutters	<i>Public Sidewalks and Walkways: final width of sidewalks and walkways shall be determined by the City Engineer or authorized designee. Wider and/or separate sidewalks may be required by the Engineer depending on the uniformity and consistency of the area.</i>  <i>Handicap ramps shall be installed at all street crossings and curb returns and of the design as shown on the Standard Details.</i>
18	Subsection 3.3, item 9 (new item)	include bulb outs as traffic calming
19	subsection 3.3, item F Street Name Signing	<i>Street names shall require approval by the Planning Commission. Please contact the Community Development Department for more information. A street name exhibit, identifying approved street names, shall be submitted to the City Engineer or authorized designee.</i>
36	subsection 5.1, item B Line Size and Service Policy	1. <i>The line size and service policy requires that the minimum size of any new public sewer main shall be 8 inches in diameter.</i> 2. <i>All side sewers (laterals) 8 inches and larger shall be connected by or at a manhole along the sewer main.</i> 4. <i>Laterals connecting houses-residential, commercial, or industrial lots having a finished floor elevation 12 inches or less above the highest elevation of the nearest upstream structure shall require installation of an approved backflow prevention device next to and immediately upstream of the cleanout.</i>
37	subsection 5.1, item C Separation of Sewer and Water Lines	<i>Sanitary sewer design shall comply with the standards for the separation of water mains and sanitary sewers as stipulated by the California Department of Public Health and outlined in Section 64572, Title 22, of the California Administrative Code. Where the horizontal separation between sewer and water lines is less than 10 feet, from outside of pipe to outside of pipe, or where a sewer crosses over the top of a water line, special requirements shall apply for the type of pipe used and the location of joints.</i>
39	Subsection 5.2, item E	1. <i>Except for frontage roads, the location of sewer mains and trunks relative to the centerline of sewer main and trunk, shall be located 5-6 feet from the centerline of the street on the southerly or westerly side of the street.</i>
44	Subsection 6.2, Item E Valves	<i>Air Release Valves shall be required at every high-point along the water main or as approved by the City Engineer. Valves that require a kicker shall be wrapped with 6mil plastic to protect the valves and bolts from the concrete.</i>

45	Subsection 6.2, Item H Services	<i>The water service manifold is intended for sites where there is limited frontage space for driveways, utilities, trees, etc. Points of connection upstream of the City's water meter shall not be allowed. The City Engineer reserves the right during the review/approval process to determine whether a manifold may be installed. The City Engineer may require the installation of a manifold at site(s) for the sole convenience of the City. Each water service shall be sized appropriately and is intended to serve an individual unit (i.e. water services shall not be connected together downstream of the backflow device). An approved backflow preventer must be installed on each water service.</i>
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Specific Provisions		
Page(s)	Section	Revision
general comment		All reference to Caltrans Standard Specifications have been updated to 2018 Caltrans Standard Specifications
15	subsection 7.2: Adjustment	Revised the finished grade requirements for manhole covers, valve boxes, and survey boxes. Covers are now surrounded with concrete collars.
17	Section 8: General Comment	<i>Section 8: Concrete Curb, <b>Curb Ramps</b>, Gutter, Sidewalk, and Driveways</i>
17	subsection 8.1	Bagged concrete shall not be used.
17	subsection 8.2 Installation, Item A Subgrade Preparation	<i>The sidewalk and driveway finished subgrade immediately prior to placement of aggregate base shall be compacted to <b>90% 92%</b> for a depth of 0.5 feet. <b>The curb and gutter finished subgrade immediately prior to placement of aggregate shall be compacted to 92% for a depth of 0.5 feet.</b></i>
17	subsection 8.2 Installation, Item B Cushion	<i>Shall be Class 2 Aggregate Base mechanically compacted to <b>9 2 5 %</b> for sidewalk and <b>95% for driveways and curb and gutter</b>.</i>
31	subsection 10.2: item D Headwalls, wingwalls, endwalls, and railings	<i>All headwalls, wingwalls, and endwalls shall be of <b>3000-4000</b> psi reinforced Portland Cement Concrete constructed in accordance with the plans and Section 51 of the state specifications.</i>
33	Section 11: Sanitary Sewer	<i>General comment: <b>SDR35</b> should be <b>SDR26</b></i>
33	Section 11: Sanitary Sewer	<i>General comment: inform contractor of tapping info - this also needs to be included in the details</i>
37	Section 11.3, item B: Laterals	<i>Laterals and cleanouts shall <b>not</b> be located in the driveway <b>unless approved by the City Engineer</b>.</i>
37	Section 11.3, item C: Locating Wire	<i><b>Wire shall be #10 AWG single strand wire with insulation.</b></i>
39	item F.	<i><u>Testing of Sewer Lines, <b>Laterals</b>, and Manholes</u></i>
40	subitem 1. Cleaning and Flushing	<i>Prior to performing a leakage test, the pipe <b>and lateral</b> installation shall be thoroughly cleaned. The ball shall pass through the pipe <b>and laterals</b> with only the pressure of the water impling it. If any wedged debris or damaged pipe <b>and lateral</b> shall stop the ball, the Contractor shall remove the obstruction.</i>
42	subitem 4. T.V. Inspection	<i>Prior to acceptance of any sanitary sewer line <b>and laterals</b> by the City, said line <b>and laterals</b> shall be inspected internally by television as outline below at the contractor's expense.  Defects such as high and low spots, joint separations, offset joints, chipped ends, cracked or damaged pipe <b>and laterals</b>, infiltration points and debris in lines <b>and laterals</b> shall be corrected by the contractor at his expense.</i>

45	subsection 12.2 materials, Pipe	AWWA C905 is no longer fabricated
45	subsection 12.2 materials, A. Mains 1. Pipe	<p><i>Polyvinyl Chloride (PVC) Pipe shall be manufactured in accordance with AWWA C900 (4 in. through 12 in.) or AWWA <del>C900</del> <del>C905</del> DR18(14" or larger) (14 in.). All PVC pressure pipe shall have a cast-iron pipe equivalent outside diameter unless noted otherwise. C900 PVC pressure pipe 12" and less shall have a pressure class rating of <del>200</del> 305 PSI and a dimension ratio of 14. C905 C900 PVC pressure pipe greater than 12" shall have a pressure class rating of 235 PSI and a dimension ratio of 18. PVC pressure pipe shall have gasketed joints with an integral bell end. Gaskets shall be part of a complete pipe section and purchased as such. Maximum pipe length not to exceed 20 feet.</i></p>
47	subsection 12.2 Materials, vlaves and valve boxes	<p><i>Valves currently approved by the City Engineer are: i. American Flow control, ii. Clow, iii. Mueller, iv. DeZurik</i></p>
50	item C: backflow prevention devicees	<p><i>Backflow prevention devices for lines larger than 2" 2.5" and larger shall be painted black except when devices are stainless steel. Devices for lines 2" and smaller shall be enclosed using a steel hinging cage that allows unobstructed access to the backflow device. Cages for backflow devices for lines 2.5" and larger shall be Placer Waterworks E2A or approved equal. Cages backflow devices for lines 2" or smaller shall be Placer Waterworks E1A or approved equal. All devices shall <del>have USC approved OS&amp;Y valves</del> and be covered with a thermal bag. Any devices used for fire protection shall USC approved OS&amp;Y valves. Enclosures shall be approved by the City Engineer prior to installation.</i></p> <p><i>All backflow prevention devices shall be tested and certified by an AWWA certified technician. The certification shall be submitted to the Public Works Inspector prior to the Building Department final inspection for project acceptances or issuance of Certificate of Occupancy. No service shall be provided until this certification is submitted.</i></p> <p><i>By-pass meter metron radio read(reading in cubic feet) shall be installed prior to testing/certification.</i></p>

52	new item F: <u>Bedding Material for PVC Water Main</u>	Bedding material for PVC shall be sand <del>or 3/4-inch minus angular crushed rock aggregate</del> around the pipe with a minimum of 12" above the pipe for water mains. Bedding material for PVC shall be ¾ inch angular crushed rock aggregate around the pipe with a maximum of 12" above the pipe for sewer mains. The initial bedding underneath the water main is 4" minimum and for sewer main is 6" minimum.
52	item C	Whenever pipe laying is discontinued for short periods, or when work is stopped at the end of the day, the open ended of all mains shall be closed with water-tight plugs. Plugs shall be tested for a minimum of three minutes at a water pressure of 50 psi. The plug shall not be removed unless or until the trench is dry.
54	item I: testing of water mains: 2nd paragraph	<del>For ACP water main a 4 hour hydrostatic test is performed and the allowable leakage in gallons is equal to: Diameter (inches) x Length (feet) X 0.00158. (Example: 400 feet of 8" line=5.06 gallons allowable leakage).</del>
54	item J: sanitizing	AWWA Standard C651 -05
62	subsection 13.8: item H. Mulch	Mulch shall be Walk-On Bark as distributed by Sun-Ray Landscape Cement Hill ready Mix or Idaho Walk-on Mulch bark as distributed by <del>Sun up</del> The Rock Source . Submit a sample to the City for approval.
71	subsection 14.2: item B: Type of Irrigation	3) low volume stream rotor pop-ups. <del>Inline Drip tubing shall not be used</del> . The system shall....
74	Subsection 14.3: subitem 2 Main or Sub-Main, a	PVC - Polyvinyl Chloride for all pipe 2 1/2 inch or under shall be Schedule 40 - A.S.T.M. 1785 - Type I PVC 1120. Fittings shall....
77 & 78	item I: Irrigation Controller	it shall operate on <del>117</del> 120 volts AC, <del>50</del> 60 Hz power input and be capable of operating 24 volt AC electric control valves.  3. It shall have <del>three</del> sixteen independent programs with <del>four</del> twelve automatic starts per day per program. 4. Each program shall have its own percentage function which allows the watering length of all stations in the program to be changed from 0% to <del>300</del> 999 % in 1% increments and at all times be able to display the original watering length of each station.  <del>10. the controller shall have a rechargeable battery back up to maintain time and the user's program.</del> 13. Controllers of ten stations or more shall be Rainmaster Smart Controller Evolution DX23 with radio communications and antenna. If controller is located in an area where the signal cannot reach a repeater antenna then a high gain antenna will be used. A site assessment by <del>John Deere</del> SiteOne Greentech will be required and a phone/modern setup will be installed, if needed.

80	item J: Electrical, <u>Sub Item 4 PVC Conduit</u>	All conduits shall include a 5/8" nylon traceable flat woven pull tape with footage markings rated at <del>2,500</del> 2,400 lbs.
81	subsection 14.4, item D, sub-item 3	36 inches over pipe crossing under paving, or 12 inches below aggregate base section of the street paving, whichever is greater. <i>Conduit/wire shall be in sleeves.</i>
93	subsection 16.3, item 3 <u>Stenciled Pipe</u>	<del>Asbestos-cement pipe shall have the words "NONPOTABLE WATER" stenciled in 2-inch high green letters on both sides of the pipe in at least three places in a 13-foot length of pipe for a total of 6 places per section of pipe.</del>
99	subsection 17.2, item B: lighting fixtures	light distribution shall be Type II, III, or IV depending on the application and design as per plan, <del>120-277 volt, 4000k, with grey housing ...</del>
101	subsection 17.2, item J: photoelectric control	change <del>12</del> year warranty to a 10 year warranty
102	subsection 17.2, item N: Grounding Bonding	<i>The grounding electrodes shall be UL listed and manufactured to meet the minimum requirements of Article 250-52 of the most recent edition of the National Electric Code. To bond street lights utilities together, a #8 green solid insulated bond wire shall be installed in each of the conduits through the pull boxes and terminated at the base of the pole. This process shall be continue from pole to pole. There shall be three ground wires terminate at the base of the pole two of which are solid #8 green insulated copper bond and one #8 bare stranded originating from the base of the foundation. To bond street utilities together, a #8 solid copper ground shall be used. see traffic signal bonding requirements.</i>
103	subsection 17.3, item A Foundations	Foundations shall be installed a minimum of 6 feet from any fire hydrant and <del>40</del> 20 feet from any anticipated street tree.
105	new item: Warranty	<i>The warranty period for all material installed with the street light system shall be upon City Council Final Acceptance.</i>
116	subsection 18.14: Fused Splice Connectors. New language to apply	<i>This shall apply to all splices (new and existing) included as a part of intersection modifications</i>

117	subsection 18.16: Functional Testing	<p><i>Acceptance of a new or modified traffic signal will be made only after all traffic signal circuits have been thoroughly tested. The Contractor shall perform functional test to show that each part of the system functions as specified.</i></p> <p><i>Functional test for each new or modified system must include at least 5 business days of continuous, satisfactory operation. If unsatisfactory performance of the system occurs, the condition must be corrected and the system retested until the 5 business days of continuous, satisfactory operation is obtained.</i></p> <p><i>Except for new or modified parts of existing lighting circuit and sign illumination system, the Department or local agency will maintain the system during test period and pay the electrical energy cost. Except for electrical energy, you must pay the cost of necessary maintenance performed by the Department or local agency on new circuits or on the portions of existing circuits modified under the Contract.</i></p> <p><i>Shutdown of electrical system caused by traffic, a power interruption, or unsatisfactory performance of Department-furnished materials does not constitute discontinuity of the functional test.</i></p>
120	subsection 18.20: Controller Assembly and Cabinet, new language	<p><i>The controller cabinet shall be a Model 332 D (or as specified) cabinet wired for 8 vehicle phases, 4 pedestrian phases, 24 overlaps, and 24 channels of detection constructed with anodized aluminum. The dimension shall be 67"x49"x30" utilizing 5052-H32 Aluminum 0.125" thick, natural anodized with 2 front and rear door.</i></p>
120	subsection 18.20: Controller Assembly and Cabinet, new language	<p>revise table: 2070 1BC CUP with ethernet port</p> <p>repalce 1b with 1C</p>
120	subsection 18.20 Controller Assembly and Cabinet	<p>revise table: 2070 1BC CUP with ethernet port</p>
120	subsection 18.20: Controller Assembly and Cabinet, item <u>Software</u>	<p>where in the document it says trafficware or Naztec™ modify to "Cubic (Trafficware)"</p>
121	subsection 18.20: Controller Assembly and Cabinet, new language	<p><i>Power Distribution Unit (PDU): PDU shall be Raritan PDU PXE-1145R, 120V, 1Ø, 1.4kVA, 12A with model DPX-T1H1 single combo temperature and humidity sensor, 10', RJ-12 connector.</i></p>



121	subsection 18.21: Description	Revised Adaptive Signal Control (Equipment Table)
122	subsection 18.22: Materials	<i>The contractor shall provide the following components with identified spares as provided by the manufacturer for a fully functional Fusion adaptive control system with pedestrian module utilizing camera and traditional detection or as identified on the plans.</i>
126	subsection 18.22: materials, cable	Cables are Category 5E.
126	subsection 18.22: materials, cable	<i>The contractor shall verify the length with a Time Domain Reflectometer (TDR) or with similar product. If the length of the cable exceeds 300 feet, the Contractor shall work with the supplier to provide a repeater or signal injector to enhance the communications in the cable. obtain instructions from the manufacturer about alternate architecture when length of a single run of CAT 5e cable exceeds 320 feet.</i>
129	subsection 18.24: Warranty, item A & B	<i>Warranty Time Frame: The adaptive traffic control system software, hardware, and technical support shall be free of defects in material workmanship for a minimum of three years from City Council acceptance. The adaptive traffic control system software shall be warranted to be free of defects in material workmanship for a minimum of three years, and hardware for a minimum of two years from full acceptance of project completion.</i>
129	CCTV Camera Equipment - Table	Table Revision change 'HP 2920-24G-PoE+' to <b>Siemens Ruggedcom RST2228</b> change 'HP X121 1G SFP (J4858C)' to <b>Siemens Ruggedcom RSG910C</b>
129	Closed Circuit Television Cameras (CCTV) and Backhaul Communications	Table Revision
130	section 18.24	Table Revision
131	18.25A	<i>The contractor shall supply and install <del>Siemens Ruggedcom Model RSG2488</del> Hub Switch (RST2228) industrially...</i>
131	Order Code:	<b><del>6GK6024-8GS23-3DA0-Z A10+B01+C10+D01+E08+F00+G60+H60-6GK6222-6AB00-5FC0-Z A00+B01+C01+D06+E06+F06+G00</del></b>
131	subsection 18.25A: item B	<i>The Ethernet switches shall be of field swappable modular construction with optional <del>10BaseFL/1000BaseX</del> fiber and 10/100/1000BaseTX copper port combinations. Optional front or rear mount connectors shall also be available for any application and shall support multiple fiber connectors (<del>ST, MTRJ, SC,</del> LC) without loss of port density.</i>
131	subsection 18.25A: item D	<i>1. Up to 24 28 gigabit ethernet ports - copper and/or fiber including four 10G ports.</i>

		6. Connector type ( <del>SC</del> LC ). Where possible, all Ethernet interfaces should support auto-sensing and auto-negotiation
131	subsection 18.25A: Item N, 1.Flexibility	a. Support for up to a total of 28 non-blocking ports (6 4-port modules plus <del>2-2-port modules</del> four 10G ports )  h. Standard four 10G
133	subsection 18.25A: item N, 4. Supports Siemens FastConnect Rj45 cabling system Rugged Operating System (ROS) features	m. Layer three functionality - Static Routing
133	subsection 18.26 Shelf/Din Rail Mount Fiber (Switch), Description	The fiber Ethernet switch, <b>Siemens Ruggedcom Model Cabinet Switch RSG910C RS940G</b> shall include industrially hardened, fully managed Ethernet switch providing 810 ports of Gigabit Ethernet. 86 10/100/1000BaseTX triple speed copper ports shall be included with 24 gigabit fiber or copper ports can be added. 128-bit Encryption; 128-bit Encryption; 6-10/100/1000BaseTX Triple Speed Copper Ports Standard; 2 additional 1000LX SFP Pluggable Gigabit Fiber; 2 10/100/1000BaseTX copper ports 4 additional SFP Combo Gigabit Fiber ports (100FX, 1000LX or 10/100/1000BaseTX copper SFPs supported).  Order Code: <del>6GK6094 OGS23 OBA0 Z A04</del> 6GK6094-OGS23-0BA0-Z A04 6GK6491-OCB00-3CN0-Z X00 (Additional quantity two 10KM, LC, Gig SFPs required – RUGGEDCOM PN 99-25-0100)
134	subsection 18.26, Item B	Port Requirements for the fiber switch shall have Up to 10 ports ( <del>8-10/100BaseTX ports with 2 Fiber SC ports</del> ) ( 6- 10/100/1000Tx ports with 4 Combo ports). The switch shall support the following requirements  <del>1000BaseLX fiber optical ports- 1000LX Gig Combo ports</del>
137	subsection 18.28 Fiber Interconnect	Part no. SPH-24OTR-24A9H ( <del>SC</del> LC )  (XXX-Contractor Determined in field )
139	subsection 18.28 Fiber Interconnect, Fiber Installation	The Contractor shall use a <del>5/8" 3/4"</del> pull <del>2,500 lb</del> 2,400 lb traceable pull tape with footage markings to pull the fiber optic cable into the conduit, or approved equal.
140	subsection 18.28 Fiber Interconnect Fiber	For 1550 nm: Max loss = 0.25L + 0.08N + 0.5C + K; where

	interconnect, fiber Testing	<p>Contractor shall be responsible for installing a working cable, and providing written certification that each strand (even those that are unused or “dark”) meet specifications, prior to the project being considered complete. It is at the contractor’s discretion if pre-testing is needed. <del>It is recommended that</del> The Contractor <del>consider</del> shall test <del>ing</del> the cable at <del>three</del> stages of the cable installation :</p> <p><del>A. Once the cable has been delivered but before it has been installed</del></p> <p><del>B. once the trunk cable has been installed in the conduit, but before it has been spliced /terminated</del></p> <p><del>C. A final tet once all terminations are complete with the adapter and truck cable are conducted .</del></p>
141	subsection 18.29 Battery Back-Up System Assembly, Item	The Contractor shall furnish two (2) SE48-1616 <del>(Formerly S6)</del> 48 H inch x <del>16.5 22W</del> inch x16.5 D inch BBS Assemblies..
146	Subsection 18.35 Audible Pedestrian (APS), item r	new table: 2-Wire Accessible Pedestrian Signal (APS) per intersection
148	Subsection 18.36 Detectors	<p><del>B. If an asphalt overlay is anticipated, loops must be beneath the last lift of asphalt concrete and a non-rubberized emulsified asphalt sealant, like Reed &amp; Graham Overkote” or equivalent shall be used. In no case shall the non-rubberized emulsified asphalt sealant be used on the surface of the final lift of asphalt.</del></p> <p><del>E. Loop wire shall be Caltrans Type 2 with THWN insulation (ISMA 51-5 or equivalent). Detector Lead-in Cable (DLC) shall be Caltrans Type C, 16 AWG stranded (ISMA 50-2 or equivalent). <del>Loop wire shall be IMSA Type 2 and loop detector lead in cable (DLC) shall be Type-B.</del></del></p>
152	Subsection 19.2 Materials and Installation	<p>All thermoplastic traffic stripes and pavement markings shall be alkyd thermoplastic with enhanced wet-night visibility. <del>All thermoplastic for bicycle conflict zones shall be Ennis-Flint Premark Skid/Slip resistant Bike Lane Green Preformed Thermoplastic or approved equal.</del></p> <p><del>The striping section for crosswalks shall be 10’ inside diameter, a 12’ outside diameter with a 12” thick stripe.</del></p> <p><del>The 1st layer of bonded core elements shall be 3M Bonded Core All Weather Reflective Elements or equal as approved by the city Engineer or his/her designee for use in themoplastic traffic stripes and pavement markings.</del></p>

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Subsection 19.2  
Materials and  
Installation

*Only ~~ceramic~~-plastic markers shall be used.*

**General Provisions**

Page(s)	Section	Revision
General Comment		All reference to Caltrans Standard Specifications have been updated to 2018 Caltrans Standard Specifications
14	subsection 4.5, item C, subitem 3	Revised to be consistent with Caltrans.
32	subsection 8.10, item F	update labor code. Added item G.

Standard Details		
Page(s)	Section	Revision
S4	Streets	Hydrant shall be 18" - 24" from back of curb
S5	Streets	New Note 5
S13	Streets	Scorelines
S21	Streets	Concrete Collar
S22	Streets	New Bus Stop and Pad Detail
S23	Streets	New Pedestrian Sidewalk Barricade
S24	Streets	New Street Moratorium Detail (Pavement mitigation)
S24.1	Streets	New Street Moratorium Detail (Pavement mitigation)
SD2	Storm	Cast iron cover, thicker concrete (from 6" to 8")
SD3	Storm	Concrete Collar
SD3.1	Storm	New Detail - Storm Drain Manhole for 48" or Smaller
SD3.2	Storm	New Detail - Storm Drain Manhole for Existing Pipe
SS1	Sanitary Sewer	Pipe bedding requirements specific to Water mains and Sewer Mains
SS2	Sanitary Sewer	installation of false bottoms and concrete collars
SS3	Sanitary Sewer	extended trace wire to main
SS4	Sanitary Sewer	Relocated City/Building responsibility
SS5	Sanitary Sewer	Relocated City/Building responsibility
W2	Water	Removed drawing note stating "2 meter required at 10" depth"
W5	Water	Specifies the application of when Cluster Water Service Manifolds can be used
W6	Water	States there cannot be any obstructions within 6' radius of fire hydrant
W7	Water	installation of concrete collar revised Service Abandonment Note 1
W8	Water	Revised general notes. Specifies painting and cage requirements based on size of the backflow device.
W10	Water	Revised general notes. Specifies painting and cage requirements.
W11	Water	Revised general notes. Specifies painting and cage requirements.
W12	Water	Revised general note 3. Curb stop with locking flange.
W15	Water	installation of concrete collar.
W16	Water	New detail. Sampling station.
L1	Landscaping and Irrigation	Spelling Error for the word Insulated
L2	Landscaping and Irrigation	Added general note 1
L2.1	Landscaping and Irrigation	new controller cabinet detail
F1	Fencing	Added general note 4
T2	Traffic and Street Lighting	Revised the distance between the street light pole and street light pull box from 12"-18" to 2'-4'.
T8	Traffic and Street Lighting	Revised Splicing Procedure Note 3
T13	Traffic and Street Lighting	Added General Note 4
T14	Traffic and Street Lighting	Added General Note 4
T23	Traffic and Street Lighting	Revised General Note 1 to reference 2018 Caltrans Standards
T24	Traffic and Street Lighting	Revised General Note 1 to reference 2018 Caltrans Standards

T25	Traffic and Street Lighting	Revised General Note 1 to reference 2018 Caltrans Standards
T26	Traffic and Street Lighting	New Detail. No Parking Sign Detail