STATE OF CALIFORNIA

CITY OF PLACERVILLE

ENGINEERING DEPARTMENT

SPECIAL PROVISIONS

BOOK 3 OF 3

FOR CONSTRUCTION OF

PLACERVILLE DRIVE BRIDGE REPLACEMENT PROJECT
FEDERAL PROJECT NO. BRLS-5015(024)
CIP #41410

JUNE 2026

For use in connection with California Department of Transportation, Standard Specifications Dated **2024**, Caltrans Standard Plans Dated **2024** and Revised Standard Plans dated April 21st, 2025, El Dorado County Standard Plans, State of California Labor Surcharge and Equipment Rental Rates, and Director of Industrial Relations General Prevailing Wage Rates.

CITY OF PLACERVILLE, CALIFORNIA
ENGINEERING DEPARTMENT

PLACERVILLE DRIVE BRIDGE REPLACEMENT PROJECT
FEDERAL PROJECT NO. BRLS-5015(024)
CIP #41410

The Special Provisions contained herein have been prepared by or under the direction of the following Registered Persons:

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CITY OF PLACERVILLE, CALIFORNIA
ENGINEERING DEPARTMENT

PLACERVILLE DRIVE BRIDGE REPLACEMENT PROJECT (CIP #41410)
FEDERAL PROJECT NO. BRLS - 5015(024)

TABLE OF CONTENTS

ORGANIZATION 8

DIVISION I GENERAL PROVISIONS 8

1 GENERAL 8

2 BIDDING 10

3 CONTRACT AWARD AND EXECUTION 12

4 SCOPE OF WORK 15

5 CONTROL OF WORK 16

6 CONTROL OF MATERIALS 26

7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC 33

8 PROSECUTION AND PROGRESS 34

9 PAYMENT 35

DIVISION II GENERAL CONSTRUCTION 36

10 GENERAL 36

11 WELDING 36

12 TEMPORARY TRAFFIC CONTROL 36

13 WATER POLLUTION CONTROL 49

14 ENVIRONMENTAL STEWARDSHIP 54

15 EXISTING FACILITIES 56

16 TEMPORARY FACILITIES 58

DIVISION III EARTHWORK AND LANDSCAPE 60

17 GENERAL 60

18 DUST PALLIATIVES 61

19 EARTHWORK 62

20 LANDSCAPE 63

21 EROSION CONTROL 65

22 FINISHING ROADWAY 65

DIVISION IV SUBBASES AND BASES 65

23 GENERAL 65

24 STABILIZED SOILS 65
25 AGGREGATE SUBBASES 65
26 AGGREGATE BASES 65
27 CEMENT TREATED BASES 66
28 CONCRETE BASES 66
29 TREATED PERMEABLE BASES 66
30 RECYCLED PAVEMENT 66
31–35 RESERVED 66
DIVISION V SURFACINGS AND PAVEMENTS 66
36 GENERAL 66
37 SEAL COATS 67
38 RESERVED 67
39 ASPHALT CONCRETE 67
40 CONCRETE PAVEMENT 69
41 EXISTING CONCRETE PAVEMENT 69
42 GROOVE AND GRIND CONCRETE 69
43–44 RESERVED 69
DIVISION VI STRUCTURES 69
45 GENERAL 69
46 GROUND ANCHORS AND SOIL NAILS 69
47 EARTH RETAINING SYSTEMS 69
48 TEMPORARY STRUCTURES 69
49 PILING 70
50 PRESTRESSING CONCRETE 76
51 CONCRETE STRUCTURES 76
52 REINFORCEMENT 76
53 SHOTCRETE 77
54 WATERPROOFING 77
55 STEEL STRUCTURES 78
56 OVERHEAD SIGN STRUCTURES, STANDARDS, AND POLES 78
57 WOOD AND PLASTIC LUMBER STRUCTURES 78
58 SOUND WALLS 78
59 STRUCTURAL STEEL COATINGS 78

60 EXISTING STRUCTURES 78
DIVISION VII DRAINAGE FACILITIES 78
61 GENERAL 78
62 STORMWATER TREATMENT 78
63 RESERVED 78
64 PLASTIC PIPE 79
65 CONCRETE PIPE 79
66 CORRUGATED METAL PIPE 79
67 STRUCTURAL PLATE CULVERTS 79
68 SUBSURFACE DRAINS 79
69 OVERSIDE DRAINS 79
70 MISCELLANEOUS DRAINAGE FACILITIES 79
71 EXISTING DRAINAGE FACILITIES 80
DIVISION VIII MISCELLANEOUS CONSTRUCTION 81
72 SLOPE PROTECTION 81
73 CONCRETE CURBS AND SIDEWALKS 81
74 PUMPING EQUIPMENT AND CONTROLS 83
75 MISCELLANEOUS METAL 83
76 WELLS 83
77 LOCAL INFRASTRUCTURE 83
77-2.01 GENERAL 88
77-2.02 MATERIALS 88
77-2.03 CONSTRUCTION 89
77-2.04 PAYMENT 89
77-3.01 GENERAL 89
77-3.02 MATERIALS 89
77-3.02A Summary 89
77-3.02B Foundations 89
77-3.02D Poles 89
77-5 GRAVITY SEWER LINE RELOCATION 99
78 INCIDENTAL CONSTRUCTION 106
79 RESERVED 108
80 FENCES 108

DIVISION IX TRAFFIC CONTROL DEVICES 108
81 MISCELLANEOUS TRAFFIC CONTROL DEVICES 108
82 SIGNS AND MARKERS 108
83 RAILINGS AND BARRIERS 108
84 MARKINGS 109
85 RESERVED 110
DIVISION X ELECTRICAL WORK 110
86 GENERAL 110
87 ELECTRICAL SYSTEMS 110
88 RESERVED 111
DIVISION XI MATERIALS 111
89 AGGREGATE 111
90 CONCRETE 111
91 PAINT 111
92 ASPHALT BINDERS 112
93 RESERVED 112
94 ASPHALTIC EMULSIONS 112
95 EPOXY 112
96 GEOSYNTHETICS 112
97–98 RESERVED 112
DIVISION XII BUILDING CONSTRUCTION 112
99 BUILDING CONSTRUCTION 112

STANDARD PLANS LIST

The standard plan sheets applicable to this Contract include those listed below. When applicable, revised standard plans (RSPs) listed below are included in the project plans.

	ABBREVIATIONS, LINES, SYMBOLS, AND LEGEND
A3A	**Abbreviations (Sheet 1 of 3)**
A3B	**Abbreviations (Sheet 2 of 3)**
A3C	**Abbreviations (Sheet 3 of 3)**
A10A	**Legend - Lines and Symbols (Sheet 1 of 5)**
A10B	**Legend - Lines and Symbols (Sheet 2 of 5)**
A10C	**Legend - Lines and Symbols (Sheet 3 of 5)**
A10D	**Legend - Lines and Symbols (Sheet 4 of 5)**
A10E	**Legend - Lines and Symbols (Sheet 5 of 5)**
	PAVEMENT MARKERS, TRAFFIC LINES, AND PAVEMENT MARKINGS
A20A	**Pavement Markers and Traffic Lines - Typical Details**
A20B	**Pavement Markers and Traffic Lines - Typical Details**
A20D	**Pavement Markers and Traffic Lines - Typical Details**
A24A	**Pavement Markings - Arrows**
A24B	**Pavement Markings - Arrows and Symbols**
A24C	**Pavement Markings - Symbols and Numerals**
A24D	**Pavement Markings - Words**
A24E	**Pavement Markings - Words**
A24G	**Pavement Markings - Yield Lines, Limit Lines, and Wrong Way Details**
	EXCAVATION AND BACKFILL
A62A	**Excavation and Backfill - Miscellaneous Details**
A62B	**Limits of Payment for Excavation and Backfill - Bridge Surcharge and Wall**
A62C	**Limits of Payment for Excavation and Backfill - Bridge**
	OBJECT MARKERS, DELINEATORS, CHANNELIZERS, AND BARRICADES
A73A	**Object Markers**
A73B	**Markers**
A73C	**Delineators, Channelizers and Barricades**
	SURVEYS
A74	**Survey Monuments**
	MIDWEST GUARDRAIL SYSTEM - STANDARD RAILING SECTIONS AND TRANSITION TO METAL BEAM GUARDRAIL
A77L1	**Midwest Guardrail System - Standard Railing Section (Wood Post with Wood Block)**
A77L2	**Midwest Guardrail System - Standard Railing Section (Steel Post with Notched Wood or Notched Recycled Plastic Block)**
A77L4	**Midwest Guardrail System - Transition to Metal Beam Guardrail**
A77M1	**Midwest Guardrail System - Standard Hardware**
A77N1	**Midwest Guardrail System - Wood Post and Wood Block Details**
A77N2	**Midwest Guardrail System - Steel Post and Block Details**
A77N3	**Midwest Guardrail System - Typical Line Post Embedment and Hinge Point Offset Details**

A77N4	**Midwest Guardrail System - Typical Railing Delineation and Dike Positioning Details**
	MIDWEST GUARDRAIL SYSTEM - TYPICAL LAYOUTS FOR STRUCTURES
A77Q1	**Midwest Guardrail System - Typical Layouts for Structure Approach**
	APPROACH GUARDRAIL TRANSITION (TYPE AGT) - AND DEPARTING CONNECTIONS - MIDWEST GUARDRAIL SYSTEM AND THRIE BEAM BARRIER (TYPE M) CONNECTION DETAILS TO BRIDGE RAILINGS, ABUTMENTS, AND WALLS
A79A1	**Transition Railing (Type AGT)**
A79A3	**Transition Railing (Type AGT) Details**
A79B2	**Transition Railing (Type AGT) to Bridge Railings with Sidewalks**
	FENCES
A85	**Chain Link Fence**
A85A	**Chain Link Fence Details**
A85B	**Chain Link Fence Details**
	CURBS, DRIVEWAYS, DIKES, CURB RAMPS AND ACCESSIBLE PARKING
A87A	**Curbs and Driveways**
A87B	**Hot Mix Asphalt Dikes**
A88A	**Curb Ramp Details**
A88B	**Curb Ramp and Island Passageway Details**
A90A	**Accessible Parking Off-Street**
	DRAINAGE INLETS, PIPE INLETS AND GRATES
D71	**Drainage Inlet Markers**
D73B	**Precast Drainage Inlets - Types G1, G2, G3, G4, G5 and G6**
D73C	**Precast Drainage Inlets - Types G1, G2, G3, G4, G5 and G6**
D73F	**Precast Drainage Inlet Notes**
D73G	**Precast Drainage Inlet Tables**
D74	**Drainage Inlet Details**
D75B	**Concrete Pipe Inlets**
D75C	**Pipe Inlets - Ladder and Trash Rack Details**
D77A	**Grate Details No. 1**
D77B	**Grate Details No. 2**
	FLARED END SECTIONS
	Metal and Plastic Flared End Sections
	Concrete Flared End Sections
T3A	**Temporary Railing (Type K)**
T3B	**Temporary Railing (Type K)**
	TEMPORARY WATER POLLUTION CONTROL
T51	**Temporary Water Pollution Control Details (Temporary Silt Fence)**
T56	**Temporary Water Pollution Control Details (Temporary Fiber Roll)**
T57	**Temporary Water Pollution Control Details (Temporary Check Dam)**
T58	**Temporary Water Pollution Control Details (Temporary Construction Entrance)**
T59	**Temporary Water Pollution Control Details (Temporary Concrete Washout Facility)**
T61	**Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)**

T62	**Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)**
T63	**Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)**
T64	**Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)**
T65	**Temporary Water Pollution Control Details (Temporary High-Visibility Fence)**
B0-3	**Bridge Details**
B0-13	**Bridge Details**
B3-1A	**Retaining Wall Type 1 (Case 1)**
B3-4A	**Retaining Wall Type 5 (Case 1)**
B3-5	**Retaining Wall Details No. 1**
B3-6	**Retaining Wall Details No. 2**
	JOINT SEALS
B6-21	**Joint Seals (Maximum Movement Range = 2")**
	ROADSIDE SIGNS
RS1	**Roadside Signs - Typical Installation Details No. 1**
RS2	**Roadside Signs - Wood Post - Typical Installation Details No. 2**
RS4	**Roadside Signs - Typical Installation Details No. 4**
	ELECTRICAL SYSTEMS - LEGEND AND ABBREVIATIONS
ES-1A	**Electrical Systems (Legend)**
ES-1B	**Electrical Systems (Legend)**
ES-1C	**Electrical Systems (Legend)**

ORGANIZATION

Special provisions are under headings that correspond with the main-section headings of the *Standard Specifications*. A main-section heading is a heading shown in the table of contents of the *Standard Specifications*.

Each special provision begins with a revision clause that describes or introduces a revision to the *Standard Specifications*.

Any paragraph added or deleted by a revision clause does not change the paragraph numbering of the *Standard Specifications* for any other reference to a paragraph of the *Standard Specifications*.

^^

DIVISION I GENERAL PROVISIONS

1 GENERAL

Add to section 1-1.01:

The work embraced herein shall be done in accordance with the State Standard Specifications of the Department of Transportation dated **2024**, hereinafter referred to as the Standard Specifications, and the Standard Plans of the Department of Transportation dated 2024 supplemented by the Revised Standard Plans of the Department of Transportation as of April 21, 2025, hereinafter referred to as the Standard Plans, insofar as the same may apply and in accordance with the following Special Provisions.

The components of the Contract Documents are intended to supplement each other. In the event of a conflict in the Contract Documents, the following order of precedence will govern interpretation of the Contract:

1. Field instruction or other written directives
2. Addenda
3. Special Provisions
4. Placerville Drive Bicycle and Pedestrian Facilities Project Plans
5. Standard Specifications
6. Standard Plans

Add to section 1-1.07B:

A term not defined in the Contract Documents or Standard Specifications has the meaning defined in Means Illustrated Construction Dictionary, Condensed Version, Second Edition.

Approval of the Contract: Execution of the Contract by the City Council of the City of Placerville.

Caltrans/Department of Transportation: Department of Transportation as defined in the St & Hwy Code § 20 and authorized in St & Hwy Cod § 90; its authorized representatives.

City: The City of Placerville, a municipal corporation of the State of California.

CCTV: Closed-circuit television.

City Council: City Council of the City of Placerville, State of California.

Contract: Written and executed Contract as approved by the City Council between the City of Placerville and the Contractor.

Contract Documents: Plans, Notice to Bidders, Special Provisions, and Proposal and Agreement

Contractor: Person of business or its legal representative approved by the City Council and entering into a Contract with the City of Placerville for performance of the work.

Department: The City of Placerville except that any reference to the Department's forms, websites, manuals, guides, and test methods. These shall be defined as forms, websites, manuals, guides, and test methods of Caltrans.

Design Engineer: Dewberry and their subconsultant engineers.

Director: The City Engineer for the City of Placerville.

EID: El Dorado Irrigation District.

Engineer: The Resident Engineer of the City acting either directly or through properly authorized agents; such agents acting within the scope of the particular duties delegated to them.

Inspector or City Inspector: An authorized agent acting on behalf of the City Engineer and within the scope of the particular duties delegated to him/her.

Plans: The Plans are specific details and dimensions particular to the work and are supplemented by the Standard Plans where applicable. This term is used interchangeably to describe the plans for the *Placerville Drive Bridge Replacement Project (CIP #41410)*.

Project Plans: The Project Plans are specific details and dimensions particular to the work and are supplemented by the Standard Plans where applicable. This term is used interchangeably to describe the plans for the *Placerville Drive Bridge Replacement Project (CIP #41410*).

Special Provisions: The Special Provisions are specific clauses required by the City setting forth conditions of requirements peculiar to the work and supplementary to the Standard Specifications of the State of California.

Standard Plans: 2024 Standard Plans of the State of California, Department of Transportation and the current Revised Standard Plans as of October 21, 2024.

Standard Specifications: 2024 Standard Specifications of the State of California, Department of Transportation (Caltrans) and the current Revised Standard Specifications as of October 21, 2024.

State: The State of California, including its agencies, departments or divisions whose conduct or action is related to the work or when referenced in the Standard Specifications "State" shall mean the City of Placerville, including its authorized officers, agents, consultants, and volunteers.

Project: The work as contemplated in these documents and Project Plans.

Proposal: The un-approved offer as submitted to the City for contemplation for the completion of the Project.

USDOT: The United States of America Department of Transportation.

Add to section 1-1.09:

This project is located in a freeze-thaw area.

Add to section 1-1.11:

Websites, Addresses, and Telephone Numbers

Reference or Agency or Department Unit	Website	Address	Telephone no.
El Dorado County Fire Protection	http://www.eldoradocountyfire.com	4040 Carson Road Camino, CA	(530) 644-9630
Placerville Police Department	http://www.cityofplacerville.org/depts/police	730 Main Street Placerville, CA	(530) 642-5210
Placerville Downtown Association	http://www.placerville-downtown.org	--	(530) 672-3436
El Dorado Transit Authority	http://www.eldoradotransit.com/	6565 Commerce Way Diamond Springs, CA	(530) 642-5383
Placerville Union School District Transportation Department	https://www.pusdk8.us/page/bus-routes	2877 Schnell School Rd Placerville, CA 95667	(530) 622-6244
El Dorado Union School District Transportation Department	https://www.eduhsd.k12.ca.us/Transportation/2026-2027-Bus-Routes/	4675 Missouri Flat Rd Placerville, CA 95667	(530) 344-8538

Replace the paragraph in section 1-1.12 with:

Make checks and bonds payable to the City of Placerville.

^^

2 BIDDING

Replace section 2-1.05 with:

2-1.05 FEDERAL LOBBYING RESTRICTIONS

Section 1352, Title 31, United States Code prohibits Federal funds from being expended by the recipient or any lower tier sub recipient of a Federal-aid contract to pay for any person for influencing or attempting to influence a Federal agency or Congress in connection with the awarding of any Federal aid contract, the making of any Federal grant or loan, or the entering into of any cooperative agreement.

If any funds other than Federal funds have been paid for the same purposes in connection with this Federal-aid contract, the recipient shall submit an executed certification and, if required, submit a completed disclosure form as part of the bid documents.

A certification for Federal-aid contracts regarding payment of funds to lobby Congress or a Federal agency is included in the Bid book. Standard Form - LLL, “Disclosure of Lobbying Activities,” with instructions for completion of the Standard Form is also included in the Bid book. Signing the Bid book shall constitute signature of the Certification.

The above referenced certification and disclosure of lobbying activities shall be included in each subcontract and any lower-tier contracts exceeding $100,000. All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the Engineer.

The Contractor, subcontractors and any lower-tier contractors shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by the Contractor,

subcontractors and any lower-tier contractors. An event that materially affects the accuracy of the information reported includes:

(1) A cumulative increase if $25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(2) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(3) A change in the officer(s), employees(s), or Member(s) contacted to influence or attempt to influence a covered Federal Action.

Replace the paragraphs in section 2-1.06A with:

Standard Specifications and Standard Plans may be viewed at the Caltrans Web Site and may be purchased at the Publication Distribution Unit.

The Notice to Bidders, Special Provisions, Proposal and Agreement, and any Project Plans may be viewed and obtained at the locations stated in the Notice to Bidders.

Add between the 1st and 2nd paragraphs of section 2-1.06B:

The Department makes the following supplemental project information available:

Supplemental Project Information

Means	Description
Available as attached to these *Special Provisions*	• *Foundation Report - Placerville Drive at Hangtown Creek Bridge Replacement*, dated October 2025. • *Mitigation and Monitoring Plan: Placerville Drive Bridge Replacement Project*

Replace the paragraphs in section 2-1.33A with:

Complete forms in Bid book. Submit forms with your bid.

Except where stated acceptable elsewhere, do not fax submittals.

Failure to submit the forms and information as specified may result in a non-responsive bid.

Add to section 2-1.33A:

On the Subcontractor List, you must submit each subcontractor's license number, each subcontracted bid item number and corresponding percentage with your bid or email these numbers and percentages to Melissa Savage, City of Placerville Engineering Department or email (msavage@cityofplacerville.org). Failure to do so results in a nonresponsive bid.

You must either submit with your bid the BIDDER'S LIST OF SELECTED SUBCONTRACTORS and BIDDER'S LIST OF NON-SELECTED SUBCONTRATORS or email to Melissa Savage, City of Placerville Engineering Department or email msavage@cityofplacerville.org within 24 hours after bid opening. Failure to do so results in a nonresponsive bid.

Replace the last paragraph of section 2-1.34 with:

If using a bidder's bond, you must use the form in the Proposal section.

Replace the paragraph in section 2-1.47 with:

The Department may grant bid relief under Public Contracts Code § 5100 et seq. Submit any request for bid relief to Melissa Savage, City of Placerville Engineering Department or email (msavage@cityofplacerville.org). The Relief of Bid Request form is available at the Caltrans Web site.

^^

3 CONTRACT AWARD AND EXECUTION

Replace the paragraphs in section 3-1.04 with:

The City reserves the right to reject any or all bids or any parts thereof and waive any irregularities or informalities in any bid or in the bidding to the extent permitted by law and to make awards in all or part of the best interest of the City. No bidder may withdraw his/her bid for a period of sixty (60) days after the date set for the bid opening. Bid protests must be submitted in writing to the attention of the City Clerk in accordance with the procedures and timeline for filing a protest outlined below.

If the City awards the contract, the award is made to the lowest responsible bidder for the total combined bid amount for both Placerville Drive Bicycle and Pedestrian Facilities Phase 1 Project and Placerville Drive Bridge Replacement Project within 60 days after bid opening. The City may extend the specified award period if the bidder agrees. The City retains the right to remove any and/or all additive alternative to or from the plans as they see fit.

Barring some unforeseen irregularity, Notice of Award will be sent to the lowest responsive bidder after approval by the City Council.

3-1.04A Bid Protest Procedures

3-1.04A(1)General

These Bid Protest Procedures specify procedures for interested parties to protest the following:

1. A provision of the bid specifications,
2. A City of Placerville staff recommendation to the City Council to disqualify a bidder or subcontractor and/or,
3. A City of Placerville staff recommendation to the City Council to award a Contract to a particular bidder.

3-1.04A(2) Effect of Protest on Contract Award or Bid Opening

When a protest of the provisions of the bid specifications has been properly filed, pursuant to these procedures, before the opening of bids, the bids will not be opened prior to the City's final decision on the protest.

When a protest of recommendation of contract award or disqualification of a bidder has been properly filed, pursuant to these procedures, prior to the City Council award of the contract, the City Council will not award the Contract prior to issuance of a final decision on the protest.

3-1.04A(3) Release of Protest Information

Materials submitted as a part of the protest resolution process will be available to the public except to the extent that:

1. The withholding of information is permitted or required by law or regulation; and
2. The information is designated proprietary by the person submitting the information to the City of Placerville. If the person submitting material to the City of Placerville indicates that the material contains proprietary material that should be withheld, a statement advising of this fact must be affixed to the front page of the material submitted, and the alleged proprietary information must be specifically identified in the body of the materials wherever it appears. Notwithstanding such designation, if the City of Placerville determines, within its discretion, that it is legally obligated to release or disclosure such information, the City of Placerville will attempt to notify the person submitting the information prior to its disclosure in order to allow that person an opportunity to seek an appropriate protective order.

3-1.04A(4) Maintenance of Protest Records

The City Manager or his/her designee will maintain a written record of each step taken in every bid protest. The record will list dates of each event and photocopies of all correspondence sent and/or received by the City of Placerville pertaining to the protest. These records will be retained for at least 3 years from the date each protest is resolved.

3-1.04A(5) Who May File a Protest

Protests may be filed only by interested parties. Interested parties are defined as actual or prospective bidders for a City of Placerville contract and subcontractors or suppliers at any tier whose direct economic interest would be affected by an award or failure to amend a Contract, a provision of the specifications, or a bid submitted to the City of Placerville by a prime Contractor, or by the interpretation of the provisions of such documents. Submission of a bid or sub-bid protest will be deemed a waiver of any protest to any provision of the specifications or issue which is not expressly listed as a part of the protest, and entitle the protesting party only to protest any subsequent recommendations/decisions of the City of Placerville staff, the City Manager, or the City Council to disqualify the bidder, reject its bid, or award the Contract pursuant to the protest as submitted.

3-1.04A(6) Time For Filing a Protest

Protest to any particular provision of the bid specifications must be received by the City of Placerville City Clerk no later than five (5) business days prior to the date established in the Notice to Bidders as the deadline for the submittal of bids.

Protest of staff's recommendation to the City Council pertaining to the award of a Contract or disqualification of a bidder must be received by the City of Placerville City Clerk no later than five (5) business days from the date of the notice of the staff recommendation.

All protests must be actually received by the City Clerk by the close of business on the specified date and not simply postmarked by that date.

3-1.04A(7) Form For Filing a Protest

All protests shall be in writing and be submitted to the City Clerk, City of Placerville, 3101 Center Street, Placerville, CA 95667. The protest shall contain, at a minimum:

- The name, address, email and phone number of the protester, including name, the phone number and email of the designated representative.
- The signature of the protester, or representative
- The contract project number
- A detailed statement of the legal and/or factual grounds for the protest with supporting documentation; and
- The form of relief that is requested.

The City Manager or their designee will provide notice, by email or mail letter, to all bidders known to the City of Placerville for the Contract that is the subject of the protest. Such Notice will state that a protest has been filed with the City of Placerville and it will identify the name of the protester. The notice will be given not more than five (5) business days after receipt of a properly filed protest. The notice will state that interested parties will receive further information related to the protest only if they submit a written request to the City Manager within five (5) business days of the notice date.

The protest shall be accompanied by any processing fee that the City Council may establish for bid protests.

3-1.04A(8) The City of Placerville's Response to a Protest

All City of Placerville responses to a protest will be issued in writing. The City Manager will designate a City staff person who, not more than ten (10) business days after receiving a properly filed protest, will prepare and mail the following information to the protester and all interested parties requesting such information:

1. A staff response to the protest including a discussion of the investigation conducted, findings, and rationale supporting the response; and
2. The proposed time, date and place of the meeting at which the protester and The City of Placerville staff will attempt to resolve the protest, if such a meeting is appropriate in the judgment of the City Manager.

Within five (5) business days after the meeting, or if no meeting is scheduled, within five (5) calendar days after the date the City of Placerville's response was mailed, the protester must give the City Manager written notice that the protest is withdrawn or, alternatively, that the protester requests further consideration of the protest by the City Council. The notice must be actually received by the City Manager by the close of business on the specified date and not simply postmarked by that date.

If the protester fails to deliver such notice to the office of the City Manager by the applicable deadline, the protest will be deemed withdrawn.

3-1.04A(9) Submittal of Protest to the City Council

If the protest is continued to the City Council for resolution, the protester, and all interested parties requesting such information, will be notified of the date, time and place of the City Council's hearing at which the protest will be considered; and the date that the protester and other interested parties must submit written comments with respect to the recommendation. The date established by the City Manager, within his or her discretion, for submittal of comments by the protester and other persons will allow a reasonable period for rebuttal and may vary according to the complexity of the particular protest. In any event, the protester and other persons shall have at least five (5) business days to submit any written comments.

A copy of the agenda package sent to City Council members prior to a protest hearing will be sent to the protester and sent or made available to any interested person who requested such materials upon posting of the agenda and will include the City Council's recommendation and all written comments received from the protester and other persons within the submittal period. If the City Manager has revised his/her recommendation since its distribution, a written description of the new intended decision and the reason(s) for revision will be sent to the protestor and sent or otherwise made available to any interested person.

3-1.04A(10) City Council's Decision

At the City Council meeting scheduled for the protest hearing, the City Council, in its discretion, may conduct the hearing and/or continue the hearing to a subsequent City Council meeting, or refer the matter to an impartial hearing officer to conduct a hearing and prepare a written recommended decision including findings of fact. Applicable provisions of the City of Placerville City Code, Title 1, Chapter 4A, Article III, governing administrative hearings shall govern proceeding before the hearing officer.

At the City Council hearing, the Mayor may announce procedural rules, including those that are reasonably necessary to preclude repetitious or irrelevant testimony including reasonable time limitations. The City of Placerville staff, the protester, and any interested person may present evidence relating to the protest. If either party arranges for the use of a court reporter to transcribe the hearing, the other party shall upon request receive a copy of the transcript upon payment of reasonable copy costs.

If a hearing officer conducts the hearing, the City Manager will provide written notice to the protester, and all interested parties requesting such information, of the date, time and place of the City Council meeting at which the hearing officer's recommendation will be considered for adoption, and the date that the protester must provide written comments for submittal to the City Council. A copy of the documents pertaining to the protest that is provided to the City Council with its meeting agenda will be sent to the protester and sent or made available to any interested person who requested such materials upon posting of the agenda.

In rendering its decision on the protest, the City Council, in its discretion, may adopt the decision recommended by the City Manager, adopt the written recommendation and findings of fact prepared by a hearing officer, or adopt a separate decision. The protester and all interested parties will be notified in

writing of the final decision of the City Council within 30 calendar days from the date of the City Council meeting.

The decision of the City Council shall be final and any subsequent judicial review shall occur pursuant to Code of Civil Procedure section 1094.6.

3-1.04A(11) Waiver of Damages

By submitting a bid, each bidder and sub-bidder agrees that in the event that it submits any protest to the terms of the specifications or to any subsequent decision of the City of Placerville staff, City Manager or City Council, it waives damages as provided for herein. The City of Placerville retains the discretion to reject all bids or to make no decision whatsoever. If the City of Placerville City Manager or City Council rejects all bids for any reason, or overrules any protest and awards the Contract, the protesting person or entity waives all claims, rights and causes of action for loss of anticipated profits from the Contract or any subcontract, regardless of whether the City of Placerville's decision is subsequently invalidated by a court of law. The City of Placerville will be deemed to have relied to its detriment on such waiver in deciding either to reject all bids or to award the Contract. Any attempted reservation of rights waived herein will be grounds to reject a bid as nonresponsive.

3-1.04A(12) Emergency Circumstances.

The dates and deadlines set forth in these procedures are subject to modification upon determination by the City Manager or City Council, within the exercise of their discretion, that emergency circumstances justify a modified response time. The City Manager shall provide written notice of any modification to the protesting party and any interested party requesting notice.

Replace section 3-1.13 with:

3-1.13 FORM FHWA-1273

For a federal-aid contract, form FHWA-1273 is included with the Contract form in the documents sent to the successful bidder for execution. Comply with its provisions. Physically incorporate a current form FHWA-1273 in each subcontract and lower tier subcontract. Interpret the training and promotion section as specified in section 7-1.11A.

^^

4 SCOPE OF WORK

Replace the paragraphs in section 4-1.13 with:

4-1.13 CLEANUP

4-1.13A General

Section 4-1.13 includes specifications for daily, weekly, and final cleanup.

The Contractor must locate and negotiate terms of use for their staging area.

If at any time the cleaning of the job site and/or staging area(s) is not performed to the satisfaction of the City and the Engineer, the Contractor will be notified and shall immediately return to the project site and perform satisfactory cleaning. If the Contractor is unable to perform cleaning activities in a timely matter as determined by the City, the cleaning may be performed for the Contractor at their expense.

4-1.13A(1) Daily Cleanup

At the end of each working day, return all materials and equipment to approved staging areas. All rubbish and debris shall be completely removed from the project site. If pedestrian and/or vehicular signage is required during non-working hours, signage shall be placed to the satisfaction of the City and Engineer.

If Contractor utilizes cold mix asphalt (CMA) for temporary ramping or paving, the Contractor is responsible for maintaining the cold mix during non-working hours. Cold mix shall be properly compacted by an approved compaction device. Equipment tires or vehicle tires shall not be used for compaction of CMA, unless otherwise approved by the engineer.

Contractor shall use vactor trucks or other approved equipment to prevent domestic water from entering the storm drain system.

The Contractor is responsible for always maintaining vehicular and pedestrian traffic equal to or better than pre-construction conditions and repairing and replacing all striping affected by the day's work. Crosswalk, limit line, lane striping, etc. must be visible at all times.

All cleaning activities must be completed prior to opening of lane and/or roadway. The Contractor shall schedule work and cleaning activities to ensure streets can be reopened within the timeframes specified in the Contract Documents.

4-1.13A(2) Weekly Cleanup

Contractor Shall perform Daily Cleanup per Section 4-1.13A(1).

At the end of each work week, remove all equipment and materials from daily staging area(s) and transport them to an approved staging area.

All staging areas shall be cleaned to the satisfaction of the City and Engineer.

4-1.13A(3) Final Cleanup

Contractor Shall perform Daily Cleanup per Section 4-1.13A(1) and Weekly Cleanup per Section 4-1.13A(2).

Before final inspection, leave the job site neat and presentable and dispose of:

1. Rubbish and debris
2. Excess materials
3. Falsework
4. Temporary structures
5. Equipment

Do not remove warning, regulatory, or guide signs until Contract acceptance unless otherwise directed by the Engineer.

4-1.13A(4) Payment

There is no specific bid item for Cleanup. Cleanup shall be considered included in the other various bid items and no additional payment will be made therefore.

^^

5 CONTROL OF WORK

Replace section 5-1.13E with:

5-1.13E Prompt Payment

Section 5-1.13E applies to all contracts.

Pay your subcontractors within 7 days of receipt of each progress payment under Pub Cont Code §§ 10262 and 10262.5. Pay duly authorized motor carriers of property in dump trucks for transportation charges under Bus & Prof Code § 7108.6. Pay other entities, such as material suppliers, within 30 days of receipt of each progress payment.

Each month, after the 15th and prior to 20th, submit the following payment information through the Department's prompt payment monitoring system at https://caltrans.dbesystem.com:

1. Subcontractor's or entity's business name
2. Description of work performed
   2.1. Bid item numbers or change order numbers
   2.2. Written narrative of work performed
3. Value of work performed
4. Amount paid to subcontractor or entity
5. Withhold amount, if applicable
6. Explanation of withhold reasoning, if applicable

Your subcontractors and other entities may validate payments received using the prompt payment monitoring system.

If a subcontractor's or other entity's work is in dispute, provide a written withhold notification to the subcontractor or entity and the Engineer no later than 7 days after receipt of the corresponding progress payment that includes the following:

1. Value of the disputed work
2. Amount of the withhold being taken
3. Bid item numbers or change order numbers associated with the disputed work
4. Explanation of the deficiencies of the disputed work and how the corresponding value was calculated
5. Corrective actions to be taken for release of withheld amount

The Department may request additional documentation from you to evaluate whether you applied the withhold in good faith. Submit requested documents within 10 days of receipt of request.

The Department may withhold the same amount of your withhold from a future progress pay estimate if the Department determines any of the following has occurred:

1. Withhold was not applied in good faith
2. Requested additional withhold documentation records were not provided
3. Payment information was not submitted through the prompt payment monitoring system
4. Required withhold notification was not provided

The Department may also apply a 2 percent penalty on the withhold amount for every month payment is not made.

Replace section 5-1.15 with:

5-1.15 SAFETY REPRESENTATIVE

5-1.15A General

Designate an on-site safety representative to superintend project safety for the duration of this Contract. The safety representative may perform other non-safety related work if safety responsibilities are fulfilled. The safety representative must be available after work hours as needed. The safety representative is not required to be on-site during plant establishment period, erosion control establishment period, or temporary suspensions when no other Contract work is being performed.

Develop a written site-specific safety program (SSSP) that incorporates known hazards associated with the project.

5-1.15A(1) Submittals

Submit a resume of the safety representative before starting work on the project, including education, completed safety training, and safety experience in heavy construction, heavy industrial, or oil and energy industry.

Submit a copy of the safety representative's certificate for the Cal/OSHA 30-hour – Cal/OSHA Standards for the Construction Industry or OSHA 510 - OSHA Standards for the Construction Industry training course as an informational submittal. The certificate must include:

1. Name of the entity providing certification
2. Name of the individual receiving certification
3. Date when the certification was provided
4. Expiration date, if applicable

Submit a copy of the SSSP as an informational submittal:

1. At least 15 days before starting work
2. At least 48 hours before starting work whenever a revision is made to the SSSP

5-1.15A(2) Quality Assurance

5-1.15A(2)(a) General

Not Used

5-1.15A(2)(b) Certifications

The safety representative must have completed training and received a certificate of completion for the Cal/OSHA 30-hour - Cal/OSHA Standards for the Construction Industry or OSHA 510 – OSHA Standards for the Construction Industry training course.

The safety representative must have one of the following certifications:

1. Certified Safety Professional from the Board of Certified Safety Professionals
2. Construction Health and Safety Technician from the Board of Certified Safety Professionals
3. Occupational Hygiene and Safety Technician from the Board of Certified Safety Professionals
4. Safety Trained Supervisor from the Board of Certified Safety Professionals
5. Safety Trained Supervisor Construction from the Board of Certified Safety Professionals
6. Associate Safety Professional from the Board of Certified Safety Professionals
7. Master Safety Professional from the National Association of Safety Professionals
8. Certified Safety Director from the National Association of Safety Professionals

5-1.15A(2)(c) Qualifications

The safety representative must be a competent and qualified person, as defined by Cal/OSHA, and must provide safety oversight on the project. The safety representative must have:

1. At least 3 years of safety experience in heavy construction, heavy industrial, or oil and energy industry
2. Knowledge in the area of safety procedure for all types of work being performed on this project
3. Knowledge of Department specifications and plans, Cal/OSHA policy and procedures, and 8 CA Code of Regs safety requirements

The safety representative must have completed safety training and maintain valid certifications for:

1. First aid
2. Cardiopulmonary resuscitation

5-1.15B Materials

Not Used

5-1.15C Construction

The safety representative must be available by:

1. Cellular telephone
2. Two-way radio

3. Mobile internet access

The safety representative must:

1. Develop the SSSP
2. Conduct the on-site new project orientation for each worker assigned to the project
3. Review the construction work plans for each subcontractor before starting work
4. Conduct or attend pre-planning sessions for high hazard work such as excavations, demolition, confined space entry, falsework, crane hoisting, high-risk utilities such as high-pressure pipelines with fuel or natural gas, and tunneling or boring
5. Conduct weekly job site safety meetings
6. Review work schedules, including subcontractors' work schedules, to ensure adequacy of job hazard analyses and address all safety concerns and issues
7. Ensure safety data sheets are available on-site for all materials and have a hazard communication program for informing workers of material hazards
8. Verify compliance with hazardous waste requirements under section 14-11, including spill prevention and control measures
9. Conduct daily safety inspections of the job site for hazards and compliance with safety requirements in the specifications and 8 CA Code of Regs
10. Report all incidents to the Engineer immediately, including the investigation of any close calls

When monitoring the job site, including work zones with certified flaggers or traffic control technicians, take immediate corrective action and notify the Engineer if an imminent danger is identified.

If the Engineer determines the safety representative is not meeting the intended duties and responsibilities, you must replace the safety representative within 30 days of written notice from the Engineer. If you need to replace the safety representative, notify the Engineer and provide replacement safety representative resume and required certifications at least 15 days before the replacement.

You may submit a secondary safety representative to act on behalf of the designated safety representative during extended shifts, continuous operations, or short-term absences that will not exceed 14 days in duration. The secondary safety representative must meet the same required qualifications and certifications as the designated safety representative.

5-1.15D Payment

Not Used

Add to the end of section 5-1.20A:

During the progress of the work under this Contract, work under the following contracts may be in progress at or near the job site of this Contract:

Contract no.	Location	Type of work
Broadband	Placerville Road and Ray Lawyer Drive	Underground Broadband
Middletown Apartments	180 Middletown Road	Building, Frontage, Retaining Wall, Sidewalk

Coordinate lane closures and traffic handling with the Engineer and with contractors of coincident or adjacent projects. Potential conflicts may not be limited to the contracts listed above.

Replace section 5-1.20D with:

5-1.20D Permits

1. The Contractor shall be responsible for the application process and fees associated with obtaining all permits required for the commencement and execution of the project, including but not limited to, work within any street right of way, storm water pollution prevention, discharge of construction water into the local drainage system, right-of-entry, excavation and trench safety. Any work performed within the City right-of-way will require encroachment permits. The Contractor shall obtain a no-fee encroachment permit from the City. Any work performed within Caltrans right-of-way will require an encroachment permit. The Contractor is responsible for any forms, submittals, and fees necessary to obtain encroachment permit.

2. The Contractor must obtain a water use permit for construction water from El Dorado Irrigation District. Water use and permit fees will be subject to the El Dorado Irrigation District Temporary Water Use Permit for Fixed Meters. Construction water may alternately be obtained from the El Dorado Irrigation District (EID) card lock water station at 108 Placerville Drive. Card lock water stations provide water to customers using prepaid cards that are available at the District office at 2890 Mosquito Road, Monday through Friday, 8:00 a.m. to 5:00 p.m. For additional information, contact EID at (530) 622-4513.

The payment for the cost for this permit and water usage shall be included with the various items of the proposal and no separate payment will be made.

Replace the paragraphs in section 5-1.23A with:

5-1.23A GENERAL

5-1.23A(1) Submittal Procedure

Section 5-1.23 includes specifications for action and informational submittals.

Any submittal not specified as an informational submittal is an action submittal.

Accompany each submittal with a Submittal form, which contains the following information:

1. Contractor's name and the name of Subcontractor or supplier who prepared the submittal.
2. The project name and identifying number.
3. Description of the submittal and reference to the Contract requirement or technical specification section and paragraph number being addressed.

Electronic submittals are preferred. Provide original hard copies to the Engineer upon request. If hard copies are submitted in lieu of an electronic submittal, submit the number and type of copies for each submittal and follow the procedures described below or in other paragraphs in this Section. Submit three copies of submittals not covered in this Section.

1. Designation of Superintendent: Submit three copies for information. Include name, address, telephone number, and a brief resume.
2. List of Subcontractors and Major Suppliers: Submit three copies for information. Include address, telephone number, and name of responsible party.
3. Subcontractors'/Suppliers'/Manufacturers' Affidavits. Submit three copies for items specified in the Technical Specifications.

The City or Engineer rejects a submittal if it has any error or any omission.

Failure to provide submittals requested by the Engineer constitutes contract noncompliance on that item of work and may be deducted in accordance with Sections 5-1.30 and 9-1.16E.

Convert foreign language documents to English and U.S. customary units.

5-1.23A(2) Schedule of Submittals

Submit three (3) copies for information. No copy will be returned.

At the pre-construction meeting, submit a Schedule of Submittals showing the date by which each submittal required for Product Review or Product Information will be made. Identify the items that will be included in each submittal by listing the item or group of items and the Specification Section and

paragraph number under which they are specified. Indicate whether the submittal is required for Product Review of Proposed Equivalents, Shop Drawings, Product Data or Samples or required for Product Information only.

5-1.23A(3) Plan of Operations

Submit three (3) copies.

Before beginning on site work, submit a plan showing Contractor's intended use of the Work site, including on site storage of materials, on site handling of materials, and field offices. Private property shall not be used for storage without the express written consent of the property owner.

5-1.23A(5) Shop Drawing, Product Data and Sample Submitted for Product Review

This paragraph covers submittal of Shop Drawings, Product Data and Samples required for the Engineer's review referred to as Product Review submittals for the Technical Specifications of the contract documents. Submittals required for information only are referred to as Product Information submittals in the Technical Specifications and are covered in section 5-1.23C.

Number and type of submittals:

1. Shop Drawings: Submit three (3) clear, sharp high contrast copies, one of which will be marked, stamped and returned to the Contractor. The Contractor shall make and distribute the required number of additional copies to its superintendent, subcontractors and suppliers. Shop drawings must comply with section 5-1.23B(2).
2. Product Data: Submit three (3) clear copies. One copy will be marked, stamped and returned. The Contractor shall make and distribute the required number of additional copies to its superintendent, subcontractors and suppliers.

The Contractor shall make all Product Review submittals early enough to allow adequate time for the Engineer's review, for manufacture, and for delivery at the construction site without causing delay to the Work. Submittals shall be made early enough to allow for unforeseen delays such as:

1 Failure to obtain Favorable Review because of inadequate or incomplete submittal or because the item submitted does not meet the requirements of the Contract Documents.
2 Delays in manufacture.
3 Delays in delivery.

Content of Submittals:

1. Each submittal shall include all the items and material required for a complete assembly, system or Specification Section.
2. Submittals shall contain all the physical, technical and performance data required by the specifications or necessary to demonstrate conclusively that the items comply with the requirements of the Contract Documents.
3. Provide verification that the physical characteristics of items submitted, including size, configuration, clearances, mounting points, utility connection points and service access points, are suitable for the space provided and are compatible with other interrelated items that are existing or have or will be submitted.
4. Label each Product Data Submittal, Shop Drawing and Sample with the information required in paragraph 5-1.23A of this Section. Highlight or mark every page of every copy of all Product Data submittals to show the specific items being submitted and all options included or choices offered.
5. Additional requirements for Product Review submittals are contained in the Technical Specification sections.
6. Designation of work as "by others," shown on Shop Drawings, shall mean that the work will be the responsibility of the Contractor rather than the subcontractor or supplier who has prepared the Shop Drawings.

Requirements for Contractor Designed Items:

Verify that products delivered meet requirements of Contract Documents.

Compatibility of Equipment and Material:

1. Similar items, equipment, devices or products furnished under a single specification section shall all be made by the same maker and have interchangeable parts.
2. In addition, but only if so stated in each affected Specification Section, similar items furnished under two or more Specification Sections shall be made by the same maker and have interchangeable parts.
3. All similar materials or products that are interrelated or used together in an assembly shall be compatible with each other.

Requirements for the Contractor's review and stamping of submittals prepared by the Contractor or by Subcontractors or suppliers prior to submitting them to the Engineer. The Contractor warrants:

1. Work or items submitted are complete, accurate and meet the requirements of the Contract Documents, or else any deviations are identified and described in a separate letter accompanying the submittal form.
2. Work or items submitted have been coordinated with and meet the requirements of other submittals, field conditions and the Work. All quantities and dimensions have been confirmed to be accurate and in compliance with project requirements.
3. Proposed Equivalent items are at least equal in quality, utility and appearance to the first specified item, or else any deviations are identified in a separate letter accompanying the submittal form.
4. Adjustments to other work required to accommodate Proposed Equivalent items including second named items have been delineated on the submittal and will be made at the Contractor’s expense.
5. This submittal includes all items needed for a particular specification section or assembly for which submittals are required.

Submittals that contain deviations from the requirements of the Contract Documents shall be accompanied by a separate letter explaining the deviations. The Contractor's letter shall:

1. Cite the specific Contract requirement including the Specification Section and paragraph number for which approval of a deviation is sought.
2. Describe the proposed alternate material, item or construction and explain its advantages and/or disadvantages to the Owner.
3. State the reduction in Contract Price if any that is offered to the Owner.

Engineer's Review Procedure and Meaning:

The Engineer will stamp and mark each Product Review submittal prior to returning it to the Contractor. The stamp will indicate whether or not the review was favorable and what action is required of the Contractor. Review categories" Approved" and "Approved as Corrected" both indicate Favorable Review.

The Engineer's Favorable Review is contingent on the Contractor's warranties. Favorable Review is also contingent on:

1. The compatibility of items included in a submittal with other related or interdependent items included in previous or future submittals.
2. Future submittal of items related to or required to be part of this submittal that were not included with this submittal.

Favorable Review of a submittal does not constitute approval or deletion of items required as part of the submittal but not included with the submittal. Favorable Review of items included in the submittal does

not constitute deletion of specified features, options or accessories that were not included in the submittal or that are included as part of the contract.

The action required by the Contractor for each category of review is as follows:

1. **APPROVED**. NO RESUBMITTAL REQUIRED.
2. **APPROVED AS CORRECTED**. The submittal is approved as corrected by the reviewer. The contractor is responsible for incorporating the reviewer's corrections. The corrected submittal complies with the Contract Documents.
3. **REVISE & RESUBMIT**. The Contractor shall revise and resubmit the submittal as noted or required to comply with the Contract Documents.
4. **REJECTED**. The item submitted does not comply with the Contract Documents in a major way. Resubmit items that comply with the requirements of the Contract Documents.

The letter of transmittal accompanying the returned Product Review submittal may contain numbered notes. Marking a corresponding number on a Shop Drawing or Product Data submittal shall have the same effect as applying the entire note to the submittal.

Re-submittals that contain changes that were not requested by the Engineer on the previous submittal shall be accompanied by a letter explaining the revised items.

Favorable Review required prior to proceeding. Proceeding without a Favorable Review will be considered unauthorized work per section 5-1.30.

Do not proceed with manufacture, fabrication, delivery or installation of items prior to obtaining the Engineers Favorable Review of Product Review submittals.

Any work performed by the Contractor in advance of an approved submittal for said work is done so at the Contractor's sole risk.

Intent and Limitation on Engineer's Review:

The Contractor has primary responsibility for submitting and providing work that complies with the requirements of the Contract Documents. That responsibility cannot be delegated in whole or in part to subcontractors or suppliers. Neither the Engineer's Favorable Review nor the Engineer's failure to notice or comment on deficiencies in the Contractor's submittals shall relieve the Contractor from the duty to provide work, which complies with the requirements of the Contract Documents.

5-1.23A(6) Proposed Equivalents

Submittal for Proposed Equivalent products or materials shall comply with the submittal requirements for Shop Drawings, Product Data, and Samples submitted for Product Review in this Section. Bidders wanting to use "or approved equal items" may submit a Substitution Request Form no later than five (5) days after the issuance of the Notice to Proceed.

Time of Submittal:

1. Submittal of Proposed Equivalents shall be received within five (5) days of the Notice to Proceed. The Engineer may agree to a later submittal date if requested in writing within five (5) days of the Notice to Proceed. The request shall identify the item, providing the Specification reference, and proposed manufacturer and model number of the item that will be submitted and the proposed submittal date.
2. The Engineer's agreement to a later submittal date shall be in writing and shall not be construed as Favorable Review or acceptance of the manufacturer or item proposed.

Content of submittals shall be the same as that required for Product Data, Shop Drawings and Samples submitted for Product Review in another paragraph of this Section. In addition, the Contractor shall provide information on several recent similar installations of the item to verify its suitability. The

information shall include the project name and location, the Owner's name, address, telephone number and name of a knowledgeable person to contact for information on performance of the product.

When the Contractor has listed specific maker's products submitted with its Bid no changes will be permitted without submittal of acceptable evidence justifying the change and the Engineer's written approval.

If a non-equivalent substitute is submitted for review, it shall be accompanied by a proposed reduction in Contract Price which shall include the increased cost of Engineering service required to evaluate the proposed substitute (which shall be paid to the Owner whether or not the substitute is accepted) plus the greater of 1) the difference in price between the first specified item and the item submitted and 2) the difference in value to the Owner between the two items.

5-1.23A(7) Product Information Submittals

1. Submit three (3) copies. No copies will be returned.
2. Product Information submittals are required for the Owner's permanent records and will be used for future maintenance, repair, modification or replacement work. Product Information submittals will be examined only to verify that the required submittals have been made; they will NOT be reviewed for compliance with the Contract Documents.
3. Make Product Information submittals prior to delivering material, products or items for which Product Information submittals are required.
4. The Contractor has the sole and exclusive responsibility for furnishing products and work that meets the requirements of the Contract Documents.
5. The Engineer reserves the right to comment on any submittal and to reject any product or work delivered, installed or otherwise at any time that the Engineer become aware that it is defective or does not meet the requirements of the Contract Document.

5-1.23A(8) Manufacture Certificates

1. Submit three (3) copies.
2. When specified in Technical Specification section, submit manufacturers' certificate to Engineer for review. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate. Certificates may be recent or previous test results on material or Product but must be acceptable to the Engineer.

Replace Section 5-1.24 with:

5-1.24 CONSTRUCTION SURVEYS

5-1.24A General

The contractor must set construction stakes and markers to establish the lines and grades required for the completion of the work on the plans and as specified in the Standard Specifications and these Special Provisions and as necessary for the Engineer to check lines, grades, alignment and elevations.

All procedures, methods, and typical stake markings shall be in accordance with Chapter 12, Construction Surveys, of the Caltrans “Survey Manual.” Copies of the “Survey Manual” may be purchased from Caltrans Publications Unit, 1900 Royal Oaks Drive, Sacramento, and California 95815, (916) 445-3520.

Staking must be performed under the direction of a licensed surveyor or registered civil engineer with the authority to perform land surveying.

5-1.24B Payment

Construction surveys (contractor provided construction staking) shall be paid for under the Construction Staking bid item. Progress payments will be made based upon the percentage of work items requiring staking staked by that point. No additional compensation will be made for resetting stakes.

Replace section 5-1.26 with:

5-1.26 GRADE QUALITY CONTROL

Use a global navigation satellite system (GNSS) rover, robotic total station equipment, or a level to check the grades at the frequencies shown in the following table:

Grade Checking Requirements

Type of work	Area or distance represented by the grade checking	Frequency (number of grade points)
Earthwork for cut and fill slopes ≤15 feet	200 feet	2
Earthwork for cut and fill slopes >15 feet	1,000 sq yd	1
Rough grading	1,000 sq yd	1
Trenching	100 feet	6
Subgrade	1 mi	30
Subbase layer	1 mi	50
Base layer	1 mi	100
Curb and gutter	100 feet	6
Concrete barrier	100 feet	5
Finishing roadway	1,000 sq yd	2

Increase the frequency of grade checking of a roadway:

1. Wherever its curve radius is 500 feet or less
2. In areas of a superelevation transition
3. At intersections

Notify the Engineer when an area is ready for line and grade inspection. Submit the grade checking results on a Grade Checking Report form as an informational submittal.

Replace the paragraphs in section 5-1.27E with:

Maintain separate records for change order work costs.

Submit change order bills to the Engineer.

Add to the end of section 5-1.32:

Personal vehicles of the Contractor's employees must not be parked on the traveled way or shoulders, including sections closed to traffic.

Add between the 2nd and 3rd paragraphs of section 5-1.36C(3):

Utilities shown on the Project Plans as being relocated or rearranged by others will be relocated or rearranged by others, but the Contractor shall coordinate those efforts with the utility owner(s) to ensure no schedule impacts or delays. Contact information for the utility purveyors are as follows:

1. PG&E: Josh Deadmore (530) 514-5301
2. AT&T: Lee Nieto (916) 505-7308
3. Comcast: Cameron Alves (916) 200-9060
4. EID: Patrick Wilson (530) 642-4001

Replace the paragraphs in section 5-1.46 with:

When you complete the work, request the Engineer's final inspection. You will be notified, in writing, of any defects or deficiencies to be remedied. Correct all defects and deficiencies within 5 working days of notification and notify the Engineer all defects and deficiencies have been addressed. When notified that the work is complete, the Engineer will again inspect the work to ensure compliance with the Contract Documents.

If the Engineer determines that the work is complete, the Engineer recommends to the City Council that the Contract be accepted and the Notice of Completion be recorded to accept the Contract. Immediately after Contract acceptance, you are relieved from:

1. Maintenance and protection duties
2. Responsibility for injury to persons or property or damage to the work occurring after Contract acceptance except as specified in section 5-1.47.

^^

6 CONTROL OF MATERIALS

Add to section 6-1.01:

No materials are allowed to be stockpiled in the State or City Right of Way unless a written request is made to Caltrans or the City in advance. The Contractor is responsible for maintaining and final cleaning after work and restoring the Right of Way to its original condition.

The Contractor shall provide a list of all hazardous materials and associated Safety Data Sheets (SDS) to be used within the State Right of Way to Caltrans before materials are used.

The Contractor shall provide a list of all hazardous materials and associated SDS to be used within the City Right of Way to the City before materials are used.

Replace section 6-1.03B with:

6-1.03B Submittals

6-1.03B(1) General

Not Used

6-1.03B(2) Work Plan

For local material, such as rock, gravel, earth, structure backfill, pervious backfill, imported borrow, and culvert bedding, obtained from a (1) noncommercial source, or (2) source not regulated under California jurisdiction, submit a local material plan for each material at least 60 days before placing the material. The local material plan must include:

1. Certification signed by you and an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

   > I am aware local material from a noncommercial source or a source not regulated under CA jurisdiction must be sampled and analyzed for pH and lead and may require sampling and analysis under section 6-1.03B(3) for other constituents of concern based on the land use history. I am aware that local material sources must not contain ADL at concentrations greater than 80 mg/kg total lead or equal to or greater than 5 mg/L soluble lead as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II. I am aware that a maximum quantity of material may be excavated at the site based on the minimum number of samples taken before excavating at the site under section 6-1.03B(3).

2. Land use history of the local material location and surrounding property
3. Sampling protocol
4. Number of samples per volume of local material
5. QA and QC requirements and procedures
6. Qualifications of sampling personnel
7. Stockpile history
8. Name and address of the analytical laboratory that will perform the chemical analyses
9. Analyses that will be performed for lead and pH
10. Other analyses that will be performed for possible hazardous constituents based on:

10.1. Source property history
10.2. Land use adjacent to source property
10.3. Constituents of concern in the ground water basin where the job site is located

The plan must be sealed and signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State.

If the plan requires revisions, the Engineer provides comments. Submit a revised plan within 7 days of receiving comments. Allow 7 days for the review.

6-1.03B(3) Analytical Test Results

At least 15 days before placing local material, submit analytical test results for each local material obtained from a noncommercial source or a source not regulated under CA jurisdiction. The analytical test results must include:

1. Certification signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

   > The analytical testing described in the local material plan has been performed. I performed a statistical analysis of the test results using the US EPA's ProUCL software with the applicable 95 percent upper confidence limit. I certify that the material from the local material source is suitable for unrestricted use at the job site, it has a pH above 5.0, does not contain soluble lead in concentrations equal to or greater than 5mg/l as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II, does not contain lead in concentrations above 80 mg/kg total lead, is free from all other contaminants identified in the local material plan, and will comply with the job site's basin plan and water quality objectives of the RWQCB.

2. Chain of custody of samples
3. Analytical results no older than 1 year
4. Statistical analysis of the data using US EPA’s ProUCL software with a 95 percent upper confidence limit
5. Comparison of sample results to hazardous waste concentration thresholds and the RWQCB's basin plan requirements and water quality objectives for the job site location

6-1.03B(4) Sample and Analysis

Sample and analyze local material from a (1) noncommercial source or (2) a source not regulated under CA jurisdiction:

1. Before bringing the local material to the job site
2. As described in the local material plan
3. Under US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)

The sample collection must be designed to generate a data set representative of the entire volume of proposed local material.

Before excavating at the (1) noncommercial material source or (2) a source not regulated under CA jurisdiction, collect the minimum number of samples and perform the minimum number of analytical tests for the corresponding maximum volume of local material as shown in the following table:

Minimum Number of Samples and Analytical Tests for Local Material

Maximum volume of imported borrow (cu yd)	Minimum number of samples and analytical tests
< 5,000	8
5,000–10,000	12 for the first 5,000 cu yd plus 1 for each additional 1,000 cu yd or portion thereof
10,000–20,000	17 for the first 10,000 cu yd plus 1 for each additional 2,500 cu yd or portion thereof
20,000-40,000	21 for the first 20,000 cu yd plus 1 for each additional 5,000 cu yd or portion thereof
40,000–80,000	25 for the first 40,000 cu yd plus 1 for each additional 10,000 cu yd or portion thereof
> 80,000	29 for the first 80,000 cu yd plus 1 for each additional 20,000 cu yd or portion thereof

Do not collect composite samples or mix individual samples to form a composite sample.

Analyze the samples using the US EPA's ProUCL software with a 95 percent upper confidence limit. All chemical analysis must be performed by a laboratory certified by the SWRCB's Environmental Laboratory Accreditation Program (ELAP).

The analytical test results must demonstrate that the local material:

1. Is not a hazardous waste
2. Has a pH above 5.0
3. Has an average total lead concentration, based upon the 95 percent upper confidence limit, at or below 80 mg/kg
4. Is free of possible contaminants identified in the local material plan
5. Complies with the RWQCB's basin plan for the job site location
6 Complies with the RWQCB's water quality objectives for the job site location

6-1.03B(3) Analytical Test Results

At least 15 days before placing local material, submit analytical test results for each local material obtained from a noncommercial source or a source not regulated under CA jurisdiction. The analytical test results must include:

1. Certification signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

    The analytical testing described in the local material plan has been performed. I performed a statistical analysis of the test results of the analytical testing described in the local material plan using the US EPA's ProUCL software with the applicable 95 percent upper confidence limit. I certify that the material from the local material source is suitable for unrestricted use at the job site and the material has met the following criteria:

    1. Has a pH above 5.0.
    2. Does not contain soluble lead in concentrations equal to or greater than 5 mg/L as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II.
    3. Does not contain lead in concentrations above 80 mg/kg total lead.
    4. Is not contaminated with the other constituents of concern identified in the local material plan in average concentration (95 percent upper confidence limit) in excess of these constituents' respective San Francisco Bay RWQCB commercial/industrial environmental screening levels ESLs, except for arsenic.

5. Does not exceed the maximum allowed concentration limit table listed in Section 6-1.03B(4).

2. Chain of custody of samples.
3. Analytical results no older than 1 year.
4. Statistical analysis of the data using US EPA's ProUCL software with a 95 percent upper confidence limit.
5. Comparison of sample results and 95 percent upper confidence limits to hazardous waste concentration thresholds and the applicable San Francisco Bay RWQCB environmental screening levels (ESLs) given in direct exposure human health risk levels (Table S-1), commercial/industrial: Shallow soil exposure, under Summary of Soil ESLs tables (2019 Rev 2). The Summary of Soil ESLs tables (2019 Rev 2) can be obtained by sending an email to ESLs.ESLs@waterboards.ca.gov with "Request for ESL Documents" in the subject line.

6-1.03B(4) Sample and Analysis

Sample and analyze local material from a (1) noncommercial source or (2) a source not regulated under CA jurisdiction:

1. Before bringing the local material to the job site
2. As described in the local material plan
3. Under US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)

The sample collection must be designed to generate a data set representative of the entire volume of proposed local material.

Before excavating at (1) a noncommercial material source or (2) a source not regulated under CA jurisdiction, collect the minimum number of samples, and perform the minimum number of analytical tests for the corresponding maximum volume of local material as shown in the following table:

Minimum Number of Samples and Analytical Tests for Local Material

Maximum volume of imported borrow (cu yd)	Minimum number of samples and analytical tests
< 5,000	8
5,000–10,000	12 for the first 5,000 cu yd plus 1 for each additional 1,000 cu yd or portion thereof
10,000–20,000	17 for the first 10,000 cu yd plus 1 for each additional 2,500 cu yd or portion thereof
20,000-40,000	21 for the first 20,000 cu yd plus 1 for each additional 5,000 cu yd or portion thereof
40,000–80,000	25 for the first 40,000 cu yd plus 1 for each additional 10,000 cu yd or portion thereof
> 80,000	29 for the first 80,000 cu yd plus 1 for each additional 20,000 cu yd or portion thereof

Do not collect composite samples or mix individual samples to form a composite sample.

Statistically analyze the samples' laboratory results using the US EPA's ProUCL software to define 95 percent upper confidence limit for the various contaminants of concern. All chemical analysis must be performed by a laboratory certified by the SWRCB's Environmental Laboratory Accreditation Program (ELAP).

The analytical test results must demonstrate that the local material:

1. Is not a hazardous waste
2. Has a pH above 5.0

3. Has an average total lead concentration, based upon the 95 percent upper confidence limit, at or below 80 mg/kg
4. Is not contaminated with local material plan-identified constituents of concern at average concentrations (95 percent upper confidence limits) in excess of their respective commercial/industrial San Francisco Bay RWQCB environmental screening levels ESLs, except for arsenic.
5. Does not contain any of the following compounds, chemicals, or elements at an estimated average concentration (95 percent upper confidence limit) above the maximum allowed concentration defined in the following table:

Compound/Chemical	Maximum allowed concentration (mg/kg)
Arsenic	11
Barium	1500
Benzene	1
Beryllium	10
Cadmium	10
Chromium (total)	1000
Cobalt	100
Diesel	150
Ethylbenzene	10
Gasoline	500
Mercury	10
Motor oil	500
Nickel	150
Selenium	10
Toluene	10
Trichloroethene	1
Vanadium	200
Xylenes	10
Zinc	600

6-1.03C Local Material Management

Do not place local material until authorized.

If the Engineer determines the appearance, odor, or texture of any delivered local material suggests possible contamination, sample and analyze the material. The sampling and analysis is change order work unless (1) hazardous waste is discovered or (2) the analytical test results indicate the material does not comply with section 6-1.03B(3).

Dispose of noncompliant local material at an appropriately permitted CA Class I, CA Class II or CA Class III facility. You are the generator of noncompliant local materials.

Replace section 6-1.04 with:

6-1.04 BUY AMERICA

This Project is subject to the “Buy America” provisions of the Surface Transportation Assistance Act of 1982, as amended by the Intermodal Surface Transportation Efficiency Act of 1991.

6-1.04A General

Buy America requirements do not apply to the following:

1. Tools and construction equipment used in performing the work
2. Temporary work that is not incorporated into the finished project

6-1.04B Crumb Rubber (Pub Res Code § 42703(d))

Furnish crumb rubber with a certificate of compliance. Crumb rubber must be:

1. Produced in the United States
2. Derived from waste tires taken from vehicles owned and operated in the United States

6-1.04C Steel and Iron Materials

Steel and iron materials must be melted and manufactured in the United States except:

1. Foreign pig iron and processed, pelletized, and reduced iron ore may be used in the domestic production of the steel and iron materials
2. If the total combined cost of the materials produced outside the United States does not exceed the greater of 0.1 percent of the total bid or $2,500, the material may be used if authorized

Furnish steel and iron materials to be incorporated into the work with certificates of compliance and certified mill test reports. Mill test reports must indicate where the steel and iron were melted and manufactured.

All melting and manufacturing processes for these materials, including an application of a coating, must occur in the United States. Coating includes all processes that protect or enhance the value of the material to which the coating is applied.

6-1.04D Manufactured Products

Iron and steel used in precast concrete manufactured products must meet the requirements of section 6-1.04C regardless of the amount used.

Iron and steel used in other manufactured products must meet the requirements of section 6-1.04C if the weight of steel and iron components constitute 90 percent or more of the total weight of the manufactured product.

6-1.04E Construction Materials

The following construction materials must be produced in the United States under standards in 2 CFR 184.6:

1. Non-ferrous metals
2. Plastic and polymer-based products such as:
   2.1. Polyvinylchloride
   2.2. Composite building materials
3. Glass
4. Fiber optic cable including drop cable
5. Optical fiber
6. Lumber
7. Engineered wood
8. Drywall

All manufacturing processes for these materials as defined in 2 CFR 184.6 must occur in the United States.

Furnish construction materials to be incorporated into the work with certificates of compliance with each project delivery. Manufacturer's certificate of compliance must identify where the construction material was manufactured and attest specifically to compliance with its 2 CFR 184.6 standard.

Minor additions of articles, materials, supplies, or binding agents to these construction materials do not change the categorization of the construction material.

Add to section 6-1:

6-1.08 ENVIRONMENTAL PRODUCT DECLARATIONS FOR HOT MIX ASPHALT AND CONCRETE

Section 6-1.08 includes specifications for environmental product declarations for hot mix asphalt and concrete materials and products.

See section 6-1.06B for definitions.

For projects with bid opening dates after February 1, 2025, with a total bid over $1 million and 175 or more original working days, materials or products specified in the following table require facility-specific, product stage, environmental product declarations as informational submittals:

Material or product	Material specifications
Hot mix asphalt[a]	Section 39-2, "Hot Mix Asphalt" Excludes RHMA, OGFC, and BWC materials.
Concrete[b]	Section 28-2, "Lean Concrete Bases," Section 28-3, "Rapid Strength Concrete Base," Section 28-4, "Lean Concrete Base Rapid Setting," Section 28-5, "Concrete Base," Section 40, "Concrete Pavement," Section 47-5, "Type 6 Retaining Walls," Section 49-3, "Cast-In-Place Concrete Piling," Section 49-4, "Steel Soldier Piling," Section 51, "Concrete Structures," Section 58-2, "Masonry Block," Section 73, "Concrete Curbs and Sidewalks," Section 83, "Railings and Barriers," and Section 99, "Building Construction." Excludes volumetric-proportioned rapid strength concrete and Section 90-4 PC concrete members.

[a]For each hot mix asphalt plant providing 2,250 tons or more on the project by job mix formula.
[b]For each concrete plant providing 250 cubic yards or more on the project by mix design.

The requirements in section 6-1.08 do not apply to seasonal plants operating fewer than 6 months per year.

The requirements in section 6-1.08 do not apply to informal-bid contracts.

For product category rules for hot mix asphalt or concrete, go to the METS website. Use the product category rule in effect on the date of bid opening unless otherwise authorized. An environmental product declaration for hot mix asphalt or concrete is not required for either of the following conditions:

1. Applicable product category rule has expired without replacement as of the bid opening date.
2. Applicable product category rule was issued less than 50 days before the bid opening date.

Immediately notify the Engineer if a program operator has determined their product category rule does not allow for development of a facility-specific environmental product declaration. Include written correspondence from the program operator with your notification to the Engineer. If the Engineer determines the development of a facility-specific environmental product declaration cannot be achieved, an environmental product declaration will not be required for that material or product.

You must register on the Department’s Data Interchange for Materials Engineering (DIME) at least 15 days before submitting environmental product declarations. Follow the registration process at:

https://dime.dot.ca.gov/

Within 30 days of initial placement of each applicable material or product, submit a facility-specific, product stage, environmental product declaration informational submittal to DIME and provide proof of submission in PDF file format to the Engineer. The DIME entry information must include intended use of materials and estimated quantities of materials to be used as represented by the environmental product declaration.

Failure to provide a required environmental product declaration informational submittal will result in a $6,000 performance failure withhold for each missing declaration. The Department returns the withhold within 30 days after receipt of the compliant declaration if submitted prior to Contract acceptance. Withholds become permanent deductions if the declaration is not submitted before Contract acceptance.

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7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

Replace the 11th paragraph of section 7-1.02K(3) with:

Submit certified payroll records to the Engineer and upload them to the Department of Industrial Relations.

Add to section 7-1.02K(6)(a):

All Personnel shall wear hard hats and ANSI Class II or higher visibility garments as appropriate.

Add to section 7- 1.02K(6)(j)(ii):

The contractor will prepare a Lead Compliance Plan (consistent with CCR Title 8, §1532.1, "Lead in Construction" standard) to minimize worker exposure to lead-containing soil and residue resulting from paint removal work.

The payment quantity for the Lead Compliance Plan bid item is paid for by lump sum and include implementation of recommendations in Attachment C – Preliminary Site Investigation.

Add to section 7- 1.02K(6)(j)(iii):

The contractor will prepare a Lead Compliance Plan (consistent with CCR Title 8, §1532.1, "Lead in Construction" standard) to minimize worker exposure to lead-containing soil. The Lead Compliance Plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-containing soil.

Add to section 7-1.03:

Contractor shall notify the City, El Dorado Disposal, El Dorado County Fire District, Placerville Police Department, Placerville Downtown Association, El Dorado County Transit Authority, El Dorado County Fairgrounds, Placerville Union School District, and local US Post Office three (3) weeks prior to start of construction and two (2) weeks prior to any partial road closures. Notifications shall be by E-mail and copies of the notifications shall be provided to the City.

Any interruption of a transit route or temporary relocation of a transit stop shall be coordinated with applicable operator (El Dorado Transit Authority, Placerville Union School District, etc.) a minimum of one (1) week prior.

Each day, the Contractor is to leave the site in a condition that is acceptable as directed by the Engineer.

Delete the 24th paragraph of section 7-1.04.

Add to section 7-1.04:

At all times, Contractor shall maintain pedestrian, local vehicular traffic, and emergency vehicle traffic and maintain all ADA paths of travel per ADA regulations for access to all residential and commercial property, unless written approval is otherwise obtained from the City allowing for reduced access.

Public traffic shall always be allowed to pass through the work area, unless a closure plan has been approved in writing by the City.

Contractor shall allow for passage of emergency vehicles at all times.

See Section 12 for temporary traffic control requirements.

Add to section 7-1.06F:

New certificates of insurance are subject to City approval.

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8 PROSECUTION AND PROGRESS

Add to section 8-1.02C(1):

Before or at the preconstruction conference, submit a CPM baseline schedule.

Replace the 1st paragraph of section 8-1.02C(6) with:

Submit an updated schedule at all weekly construction meetings that includes the status of work completed to date and the work yet to be performed as planned. Each updated schedule must comply with section 8-1.02B(3).

Replace the paragraphs in section 8-1.02C(10) with:

There is no specific bid item for project schedules and no additional payment will be made therefore.

Replace the 3rd sentence of the 1st paragraph of section 8-1.03 with:

You may not start work prior to the preconstruction conference.

Replace the row for *Schedule* in the table in the 2nd paragraph of section 8-1.03 with:

Schedule	Baseline schedule and weekly statement of working days report

Replace the 1st and 2nd paragraphs of section 8-1.04B with:

The contractor shall begin construction on the date specified on the Notice to Proceed (NTP), which is anticipated to be [MONTH] 202#. All preconstruction submittals must be approved prior to starting job site activities. The Contractor is encouraged to submit preconstruction submittals prior to receiving the NTP to allow for proper review and approval of the submittals.

Replace the 4th and 5th paragraphs of section 8-1.05 with:

The Engineer issues a weekly statement of working days report by the end of the following week. If you disagree with a weekly statement of working days report, submit an RFI within 5 business days of receipt of the report.

The weekly statement of working days report shows:

1. Working days and non–working days during the reporting week
2. Time adjustments
3. Calculations of work completion dates, including working days remaining
4. Controlling activities

Delete the 6th paragraph of section 8-1.05.

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9 PAYMENT

Delete section 9-1.11.

Add to section 9-1.16D(1):

Mobilization includes, but is not limited to, preparing and maintaining a schedule per the Standard Specifications and these Special Provisions and construction and maintenance of staging area(s) and laydown yards(s). Demobilization is part of the Mobilization bid item and includes, but is not limited to, issuing a hard copy and/or digital set of as-built plans to the Engineer within 10 working days after substantial completion notification and restoring staging area(s) and laydown yard(s) to pre-construction conditions.

Add to section 9-1.16D(2):

Final compensation will be delayed until as-built plans are submitted and approved.

Add to section 9-1.16E(3):

The City returns performance-failure withholds in the progress payment following the correction of non-compliance.

Replace the paragraphs in section 9-1.16F with:

The City will withhold five percent (5%) of all progress payments as retention. Retention will be paid to the Contractor on Final Payment.

In accordance with Part 5 (§ 22300), Division 2 of the Public Contract Code, a Contractor may substitute securities for retention moneys withheld by a public agency to ensure performance under this Contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the City of Placerville, or with a state or federally chartered bank, as the escrow agent, who shall then pay such moneys to the Contractor, and upon satisfactory completion of the Contract, the securities shall be returned to the Contractor. No substations will be accepted until:

1. the City approves the securities and their value,
2. the parties have entered into an escrow agreement (if the securities are to be held in escrow) in a form substantially similar to that under § 22300,
3. all documentation necessary for assignment of the securities to the City or to the escrow agent are delivered in a form satisfactory to the City.

If the Contractor has substituted securities for any of the retention, the City may request that such securities be revalued from time to time, but not more often than monthly, at the expense of the Contractor. Such revaluation will be made by a person or entity designated by the City and approved by the Contractor. If such a revaluation results in a determination that the securities have a market value less than the amount of retention for which they were substituted, then the amount of the retention required under the Contract will be increased by such difference in market value.

Such increased retention will be withheld from the next progress payment(s) due to the Contractor under the Contract.

The Contractor, or subcontractor, shall return all monies withheld in retention from a subcontractor within 30 days after receiving retention payment with Final Payment. Federal law (49CFR26.29) requires that any delay or postponement of payment over 30 days may take place only for good cause and with the City's prior written approval. Any violation of this provision shall subject the violating Contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial, remedies otherwise available to the Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor, deficient subtract performance, or noncompliance by a subcontractor.

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DIVISION II GENERAL CONSTRUCTION

10 GENERAL

Add to the end of section 10-1.02C(2):

Protect any irrigation component to be relocated before performing any other construction activity in the area.

Add to the beginning of section 10-1.02E:

Construct the new pavement structure adjacent to the existing traveled way by successively excavating, preparing subgrade, placing base materials, and paving. Perform these activities concurrently after you start paving. Excavation within _____ feet of the existing traveled way must not precede the paving operation by more than _____ working days unless:

1. Authorized.
2. Material is placed and compacted against the vertical cuts within _____ feet of the existing traveled way. During excavation, you may use native material for this purpose except you must use structural material once you start placing the pavement structure. Place the material to the top of the existing pavement and taper at a slope of 4:1 (horizontal:vertical) or flatter to the bottom of the excavation. Do not use treated base for the taper.

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11 WELDING

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12 TEMPORARY TRAFFIC CONTROL

Add to the section 12-1.01:

Along with the project schedule, the Contractor shall submit a construction staging/sequencing plan for review and obtain approval by the Engineer prior to the start of construction.

The staging/sequencing plan must:

1. Take into account material ordering and lead times.
2. Break work impacting the flow of traffic and/or access to residents or businesses into stages.
3. Only allow one side of the street to be under active construction at a time for portions of Placerville Drive that are outside the limits of the portion closed as part of the temporary detour.
4. Identify any impacted bicycle or pedestrian facilities/circulation.
5. Identify any impacted driveways, businesses, or residences.
6. Ensure a minimum of one driveway to each parking lot or parcel remains open at all times.
7. When one driveway to each parking lot or parcel is not achievable, ensure a minimum of one-half of a driveway remains open at all times where only one driveway to a business or residence exists, unless otherwise approved by the Engineer. Driveways shall be constructed such that driveway concrete has

a maximum of one cold joint. Temporary driveways may be required while planned driveways are being constructed and shall be provided at no additional cost.

8. Require notice to parcel owners, businesses, and residents ten (10) working days in advance of when vehicle access will be altered or utility outages are to take place. Notice to parcel owners must include details of work, start date, and duration of work to take place in front of their property. This notice may be in the form of door-hangers, flyers, or other format deemed acceptable by the Engineer.
9. Require that access must be maintained during business hours to 2850 Cold Springs Road and 511 Placerville Drive for sewer work on private property and that trenching to be covered with steel plates during business hours to facilitate access. Work may be scheduled at night (9 pm to 5 am) or on weekends since property access must be maintained during business hours.
10. Require construction activities to be performed within the public right-of-way and not on private property where no easements on private property or a permit to enter and construct exist.
11. Require coordination with any gas station affected so that their scheduled refueling trucks maintain access to the tanks on the property. Access to all gas pumps shall be maintained between the hours of 6:00 AM and 9:00 PM.
12. Require any **lane closures** outside the portion of Placerville Drive that will be closed as part of the temporary detour, if needed, to take place between the hours of **9:00 am – 3:00 pm**.

The Contractor shall submit traffic control plans, including closure plans, for review and obtain approval prior to any construction activities requiring temporary traffic control. The Engineer shall review and approve all traffic control systems, including hardware and location/placement, prior to beginning construction activities each workday. Public traffic shall be allowed to pass through the work area at all times unless a full road closure plan has been previously approved.

Contractor shall provide and maintain traffic control devices, flaggers and all other necessary items per this section, the Caltrans Traffic Manual, and California MUTCD where applicable. The Contractor will be responsible for the maintenance of all traffic control items and equipment during and outside of working hours.

When practical, the full width of the roadway must be open to pedestrian and vehicular traffic outside of working hours. When not practical, the Contractor must make every effort to open the maximum number of lanes possible. The full width of the roadway must be open for all planned City of Placerville Events and holidays. At the completion of each workday, all existing lanes of traffic shall be opened to traffic unless advanced approval is given to the Contractor by the City with the exception of the portion of Placerville Drive that will be closed as part of the temporary detour,. Provisions must be made for the uninterrupted passage of emergency vehicles through the project limits at all times, regardless of the controlled traffic conditions existing at that time. Additionally, provisions shall be in place to allow residents to have safe access to the businesses within the project limits at all times.

The Contractor must provide a bicycle and pedestrian circulation plan along with the staging/sequencing plan and all traffic control plans as a submittal for approval by the Engineer. Pedestrians regularly use the existing roadway shoulders since there are no existing pedestrian facilities and they may continue to travel through this area during construction. The expectation is that the pre-construction bicycle and pedestrian circulation will be maintained during construction and any temporary facilities implemented by the contractor to accommodate the flow of bicyclists and pedestrians during construction will be equal to or better than the existing conditions.

Temporary pedestrian access routes per section 12-4.04 are only required where existing pedestrian facilities that meet those requirements are being affected by construction. Should the Engineer request a temporary access route per section 12-4.04 where none currently exists, that work is change order work and will be compensated per section 9.

Replace the paragraph in section 12-1.04 with:

There is no separate bid item for flagging, so that work shall be included within the Traffic Control System bid item and no additional compensation will be allowed therefore. The Contractor shall be responsible for the entire cost of flagging and is responsible for including that cost in the Traffic Control System bid item.

Replace the paragraph in section 12-3.11B(5) with:

A 4-ft x 2.5-ft C50B (CA) sign must comply with the details shown on the Caltrans Traffic Operations website and Appendix A of these project specifications. The FHWA and City of Placerville agency logos shall be inserted into the two spaces provided for the agency logos. The sign and post must comply with Section 82.

Replace section 12-3.20 with:

12-3.20 TEMPORARY BARRIER SYSTEMS

12-3.20A General

12-3.20A(1) Summary

Section 12-3.20 includes specifications for placing, maintaining, repairing, and removing temporary barrier systems.

Temporary barrier system consists of:

1. New or undamaged used interconnected barrier segments
2. Segment connection hardware
3. Stakes and anchor bolts

12-3.20A(2) Definitions

approach zone: Area immediately upstream of the work area and buffer space.

clear area width: Minimum width throughout the length of the barrier system that must be maintained clear of obstructions, objects, and work resources during non-working hours. The width is measured perpendicular from the non-traffic side toe.

departure zone: Area past the work area and the trailing end of the construction area.

height differential: May be an excavation, a downward slope greater than 4:1, or a difference in elevation. The height differential is measured down from the top of pavement.

set back distance: Space measured between the closest toe of temporary barrier and the edge of traveled way for each direction of traffic.

12-3.20A(3) Submittals

Submit as informational submittal for each type of temporary barrier system:

1. Certificate of compliance.
2. Manufacturer's installation instructions except for temporary concrete barriers with loop and pin and temporary concrete barriers with cross bolt.
3. Manufacturer's concrete QC test results and daily production log of precast concrete activities, through the Data Interchange for Materials Engineering (DIME) website, except for Type K temporary railing. For QC test results, use project identifier 88887 in the DIME sample record. QC test results must include the concrete mix design number, barrier stamped ID, and must be submitted within 3 business days of QC test completion.

Submit test reports for cross bolts that certify compliance with the applicable ASTM requirements. The test reports must be from a laboratory that is accredited to International Standards Organization/International Electrotechnical Commission 17025 by the American Association for Laboratory Accreditation (A2LA) or the ANSI-ASQ National Accreditation Board.

Submit a signed manufacturer's replacement evaluation report within 10 days of damage to a temporary steel barrier system.

12-3.20A(4) Quality Assurance

12-3.20A(4)(a) General

Temporary barrier systems must comply with MASH Test Level 3 except for Type K temporary railing.

Except for temporary concrete barriers with loop and pin and temporary concrete barriers with cross bolt, temporary barrier systems must:

1. Be on the Authorized Materials List for highway safety features
2. Comply with the manufacturer's drawings shown on the Department's Division of Safety Programs website and the manufacturer's installation instructions

If a discrepancy exists, governing ranking in descending order is:

1. These specifications
2. Manufacturer's drawings
3. Manufacturer's installation instructions

QC sampling, testing, and inspection personnel must have an ACI Concrete Field-Testing Technician, Grade 1 certification.

Temporary concrete barrier segments must:

1. Comply with the requirements for tier 3 precast concrete in section 90-4
2. Be fabricated at a plant on the Authorized Facility Audit List

Concrete must be sampled and tested as shown in the following table.

Concrete QC Tests

Quality characteristic	Test method	Minimum testing frequency
Compressive strength	ASTM C172/C172M, ASTM C31/C31M, and ASTM C39/C39M	Once per 300 cu yd of concrete cast, or every day of casting, whichever is more frequent
Slump	ASTM C143/C143M	
Temperature at time of mixing	ASTM C1064/C1064M	
Density	ASTM C138	Once per 600 cu yd of concrete cast or every 7 days of batching, whichever is more frequent
Air content	ASTM C231/C231M or ASTM C173/C173M	If concrete is air entrained, once for each set of cylinders, and when conditions warrant

A daily production log of precast concrete activities must be maintained under section 90-4.01C(4).

12-3.20A(4)(b) Quality Control

Replace damaged temporary concrete barrier segments with exposed reinforcing steel or concrete spalls 1-1/2 inches in depth and 4 inches in width or greater. Repair minor damage under section 51-1.03F(2), for temporary concrete barriers with loop and pin and temporary concrete barriers with cross bolt.

Replace damaged temporary steel barrier segments with permanent bends, tearing, or buckling as described in the signed manufacturer's replacement evaluation report.

Realign temporary barrier system within 2 days of impact or displacement when displaced more than 3 inches except when the temporary barrier system is displaced into a traveled lane realign immediately.

12-3.20B Materials

12-3.20B(1) General

Temporary barrier segment must:

1. Be a minimum 31-1/2 inches in height
2. Have at least two lifting holes
3. Be designed to be used with temporary traffic screen when required

Temporary barrier segment may have your name or logo on each barrier segment. The name or logo must be no more than 4 inches in height and must be located no more than 12 inches above the bottom of the barrier segment.

12-3.20B(2) Temporary Concrete Barriers

12-3.20B(2)(a) General

Temporary concrete barrier segment must:

1. Be precast concrete with a minimum 5,000-psi compressive strength, except for Type K Temporary Railing.
2 Have reinforcement steel that complies with section 52.
3. Have a finished surface that complies with section 51-1.03F(2).
4. Include the manufacturer's name, lot number, and month and year of manufacture stamped on the top of each barrier segment except for Type K temporary railing. The stamped information must be:
   4.1. No more than 6 inches in height
   4.2. From 3/16 to 1/4 inch in depth
   4.3. Centered on the top width of the barrier segment
5. Use one of the following segment connections:
   5.1. Loop and pin
   5.2. "J" hook
   5.3. Cross bolt
6. Comply with the tolerances shown in the following table:

Precast Barrier Tolerances

Dimension	Tolerance(±)
Length (in)	1
Insert placement (in)	1/2
Horizontal alignment (in)	1/8 per 10 feet of length
Deviation of ends (in):	
Horizontal skew	1/4
Vertical batter	1/8 per foot of depth

Reinforcement steel must:

1. Comply with ASTM A615 or ASTM A706, Grade 60
2. Be galvanized under section 52-3, when required

Combinations of reinforcing steel and welded wire reinforcement are allowed. Welded wire reinforcement must comply with ASTM A1064.

Stake must:

1. Comply with ASTM A36/A36M-14 or ASTM A529-14, Grade 50
2. Be 1-1/2 inches in diameter and 36 inches long, except "J" Hook must be 48 inches long
3. Have a 1/2-by-3-1/2-by-3-1/2-inch plate welded 2 inches down from the upper end using a 3/8-inch fillet weld under AWS D1.1 or D1.4

Anchor bolt must:

1. Be a bolt or threaded rod 1-1/8 inches in diameter
2. Comply with ASTM A307
3. Include a 1/2-by-3-1/2-by-3-1/2-inch plate washer:
    3.1. With a 1-3/8-inch-diameter hole in the center
    3.2. Complying with ASTM A36/A36M
    3.3. Galvanized post fabrication under section 75-1.02B

Threaded rod must include a nut complying with ASTM A563.

Anchor steel plate must:

1. Be 1/2 inch thick
2. Comply with ASTM A572, Grade 50
3. Be galvanized post fabrication under section 75-1.02B

Chemical adhesive must be on the Authorized Materials List for chemical adhesives and must be for a threaded rod at least 1 inch in diameter.

12-3.20B(2)(b) Temporary Concrete Barriers with Cross Bolt

Cross bolt hardware includes:

1. Cross bolt
2. Nut complying with ASTM A563
3. Hardened washer complying with ASTM F436, Type 1
4. Plate washer complying with ASTM A36/A36M and galvanized post fabrication under section 75-1.02B

Cross bolt must:

1. Be a 7/8-inch bolt or threaded rod and comply with one of the following:
    1.1. HS threaded rod ASTM A193, Grade B7
    1.2. HS threaded rod ASTM A449, Type 1
    1.3. HS nonheaded anchor bolt ASTM F1554, Grade 105, Class 2A
2. Have a permanent grade symbol and manufacturer's identifier

12-3.20B(2)(c) Temporary Concrete Barriers with Loop and Pin

12-3.20B(2)(c)(i) General

Not Used

12-3.20B(2)(c)(ii) Temporary Barrier Systems CAL F-23

Connecting loop must:

1. Be a steel bar 3/4 inch in diameter
2. Comply with ASTM A36/A36M, cold roll
3. Be galvanized after fabrication

Connecting pin must:

1. Comply with ASTM A449
2. Be forged, no welds
3. Be 1 inch in diameter and a minimum 30-1/4 inches long
4. Be galvanized under ASTM F2329 and A153

12-3.20B(2)(c)(iii) Type K Temporary Railings

Connecting pin must comply with ASTM A307, be 1-1/4 inch in diameter, and be a minimum 26 inches long. A round bar of the same diameter and length may be substituted for the connecting bolt. The round bar must:

1. Comply with ASTM A36/A36M
2. Have a 3-inch-diameter, 3/8-inch-thick plate welded on the upper end using a 3/16-inch fillet weld

Stake must:

1. Comply with ASTM A706, Grade 60
2. Be 1 inch in diameter and 24 inches long
3. Have a 2-3/4-inch-diameter, 1/2-inch-thick plate, welded 1 inch down from the upper end using a 3/8-inch fillet welds under AWS D1.1 or D1.4

Anchor bolt must:

1. Be a threaded rod, 1 inch in diameter and 15-1/2 inches long
2. Comply with ASTM A307
3. Include a nut complying with ASTM A563
4. Include a 3/8-by-2-1/2-by-3-inch plate washer:
    4.1. With a 1-1/8-inch-diameter hole in the center
    4.2. Complying with ASTM A36/A36M
    4.3. Galvanized post fabrication under section 75-1.02B

12-3.20B(2)(d) Temporary Concrete Barriers with "J" Hook

"J" hook must:

1. Comply with ASTM A36/A36M
2. Be 3/8-inch-thick steel plate
3. Be a minimum 18 inches in height

Anchor hardware must include:

1. Anchor bolt insert 1 inch in diameter and 6 inches long
2. Hex head bolt 1 inch in diameter with a minimum length of 11 inches plus thickness of asphalt overlay
3. 3/8-by-3-by-3-inch plate washer
4. Retainer ring

12-3.20B(3) Temporary Steel Barriers

Temporary steel barrier segment must:

1. Be galvanized steel.
2. Have a joint connection.
3. Include permanent identification information with no more than 6 inches in height and 12 inches in length and centered on the top width of the segment. The identification information must include:
    3.1. Manufacturer's name
    3.2. Serial number
    3.3. Lot number
    3.4. Month and year of manufacture

Temporary steel barrier 19-foot segment must be filled to a depth of 11-13/16 inches with concrete ballast.

12-3.20C Construction

12-3.20C(1) General

Install the minimum length of application for temporary barrier systems, including:

1. Approach zone
2. Work area
3. Departure zone

Clean temporary barrier segments at time of installation and at least every 6 months thereafter.

Install temporary barrier systems based on the requirements shown in the following table:

Minimum Clear Area Width

Barriers	Configuration	Height differentials 3 feet or less (ft)	Height differentials greater than 3 feet up to 8 feet (ft)	Edge of deck or height differentials greater than 8 feet (ft)	Fixed objects, falsework members, or temporary supports[a] (ft)
10-foot & 30-foot temporary concrete barrier with cross bolt	Freestanding	1	2	5	5
	3 stakes or anchor bolts per segment traffic side	1	1	2	3
20-foot temporary concrete barrier with cross bolt	Freestanding	1	2	5	5
	4 stakes or anchor bolts per segment traffic side	1	1	2	3
12-foot temporary concrete barrier CAL F-23	Freestanding	4	5	8	8
	3 stakes or anchor bolts per segment traffic side	1	1	2	3
20-foot temporary concrete barrier CAL F-23	Freestanding	4	5	8	8
	4 stakes or anchor bolts per segment traffic side	1	1	2	3
12.5-foot temporary concrete barriers with "J" hook	Freestanding	3	4	8	7
	3 stakes per segment traffic side	1	1	2	3
	2 anchor bolts per segment traffic side	1	1	2	3
20-foot temporary concrete barriers with "J" hook	Freestanding	3	4	8	7
	4 stakes per segment traffic side	1	1	2	3
	3 anchor bolts per segment traffic side	1	1	2	3
50-foot temporary steel barriers	Staked or anchored at both ends only	6	7	9	10
	Staked or anchored every 250 feet	5	6	8	9
	Staked or anchored every 33 feet	1	1	3	4
19-foot temporary steel barriers	Freestanding	4	5	7	8

12-foot-9-inch temporary steel barriers	Staked every 30 feet	1	2	4	5
20-foot Type K temporary railings (NCHRP 350)	Freestanding	2	3	8	7
	2 stakes or 2 anchor bolts per segment traffic side	1	1	3	4
	4 stakes or 4 anchor bolts per segment	N/A	N/A	3	3

[a]The minimum clear area width to a falsework or temporary support footing can be 2 feet less than the clear area width shown. Measure clear area width to the footing edge closest to traffic.

Place temporary barrier systems on concrete or asphalt concrete pavement.

When required, stake temporary barrier systems placed on asphalt concrete pavement.

When required, anchor temporary barrier systems placed on concrete pavement. For bridge decks, confirm the anchor will not penetrate closer than 1-1/2 inches from the bottom of the deck before placement. When temporary barrier is not shown, request the Engineer to verify the bridge deck thickness.

For installations on concrete pavement, drill holes and bond anchor bolts, threaded rods, or dowels under section 51-1.03E(5). Do not drill the top of supporting beams or girders, bridge expansion joints, or drains.

Install stakes and anchor bolts so the heads do not project above the top of the temporary barrier pocket profile.

Offset the approach zone of temporary barrier systems a minimum of 15 feet from the edge of an open traffic lane and stake or anchor barrier ends as shown. Taper the temporary barrier approach zone toward the edge of the open traffic lane at the rate shown in the following table:

Temporary Barrier System Taper Rate

Posted speed (mph)	Rate[a]
0 to 45	10:1
46 to 60	15:1
61 to 65	20:1

[a]Rate is longitudinally to transversely with respect to the edge of the traveled way

When a 15-foot minimum tapered offset cannot be achieved, offset temporary barrier systems the maximum distance available, place the first segment at the approach end parallel to the road, and install an authorized temporary crash cushion system at each barrier approach end. Ensure the temporary barrier approach zone length is a minimum:

1. 60 feet on facilities with a posted speed of 45 mph or less
2. 100 feet on facilities with a posted speed greater than 45 mph

Place a minimum 60 feet temporary barrier departure zone length.

Install a reflector on the top or face of barrier segments placed within 10 feet of a traffic lane. Space reflectors at approximately 20-foot intervals. Apply adhesive for mounting the reflector under the reflector manufacturer's instructions.

Install a Type P marker panel complying with section 82 at:

1. Each end of a temporary barrier system placed adjacent to a two-lane, two-way highway

2. The end facing traffic for a temporary barrier system installed adjacent to a one-way roadbed
3. The end of the skew nearest the traveled way when a temporary barrier system is placed on a skew

Maintain a minimum height of 31-1/2 inches above pavement for temporary barrier systems. For paving activities adjacent to temporary barriers, do not pave within 2 feet of the barrier segments unless authorized. For paving under the temporary barrier, remove and reset the barrier.

Remove temporary barrier systems when no longer required for the work. Remove stakes and anchor bolts so that minimal damage is done to pavement.

After removing the temporary barrier systems:

1. Restore the area to its previous condition or construct it to its planned condition if temporary excavation or embankment was used to accommodate the temporary barrier.
2. Remove all threaded rods or dowels to a depth of at least 1 inch below the top of concrete pavement. Fill the resulting holes with mortar under section 51-1 except cure the mortar by the water method or by the curing compound method using curing compound no. 6.
3. Repair damaged asphalt pavement by providing a clean, smooth edge around the damaged area. Repair any heaving caused by stake removal to provide a uniform surface. Remove loose debris and use compressed air to clean out the stake hole. Comply with manufacturer's requirements except fill the stake hole with grout to existing pavement elevation under section 51-1.

If the Engineer orders a lateral move of a temporary barrier system and repositioning is not shown, the lateral move is change order work except for work area access, clear area width compliance, or because of your means and methods to perform the work.

12-3.20C(2) Temporary Concrete Barriers

12-3.20C(2)(a) General

Before placing temporary barrier systems on the job site and after each described relocation, paint the exposed surfaces of the segments with white paint complying with specifications for acrylic emulsion paint for exterior masonry.

Place and maintain the abutting ends of segments in alignment without substantial offset from each other.

For freestanding temporary barrier systems, you may extend the taper by 60 feet beyond the required 15-foot tapered offset instead of anchoring the barrier ends.

Install stakes or anchors as shown and maintain a minimum 1-foot set back distance on both sides of barrier, when temporary barrier systems are placed with traffic on both sides.

12-3.20C(2)(b) Temporary Concrete Barriers with Cross Bolt

Intermix segments of different lengths within a temporary barrier system when necessary.

For temporary barrier systems placed on a curved layout, maintain the minimum curve radius shown in the following table:

Minimum Curve Radius

Segment length (ft)	Curve radius (ft)
10	125
20	265
30	400

12-3.20C(2)(c) Temporary Concrete Barriers with Loop and Pin

12-3.20C(2)(c)(i) General

Not Used

12-3.20C(2)(c)(ii) Temporary Concrete Barriers CAL F-23

Intermix segments of different lengths within a temporary barrier system when necessary.

For temporary barrier systems placed on a curved layout, maintain the minimum curve radius shown in the following table:

Minimum Curve Radius

Segment length (ft)	Curve radius (ft)
12	100
20	165

12-3.20C(2)(c)(iii) Type K Temporary Railings

Do not install Type K temporary railings on projects advertised after December 31, 2026.

Install a minimum 160 feet of Type K temporary railing.

Excavate and backfill under section 19-3.

Do not compact earth fill placed behind Type K temporary railings in a curved layout.

Place temporary barrier systems on a firm, stable surface. Grade the area to provide a uniform bearing surface throughout the entire length of the system.

12-3.20C(2)(d) Temporary Concrete Barriers with "J" Hook

When temporary barrier systems are placed with traffic on both sides, install on each side:

1. 2 anchors or stakes for 12.5-foot segments
2. 3 anchors or stakes for 20-foot segments

12-3.20C(3) Temporary Steel Barriers

12-3.20C(3)(a) General

Install temporary barrier systems under manufacturer's instructions.

12-3.20C(3)(b) 50-Foot Temporary Steel Barriers

Use 50-foot temporary steel barriers with or without rubber pads.

Install a minimum 250 feet of 50-foot temporary steel barrier.

Maintain a minimum radius of 800 feet for segments placed on a curved layout. For tighter curves down to a 250-foot radius, contact the manufacturer before installation and provide manufacturer's written recommendation for the installation.

Stake or anchor segments every 33 feet and maintain a minimum 2-foot set back distance on both sides of barrier, when temporary barrier systems are placed with traffic on both sides.

12-3.20C(3)(c) 19-Foot Temporary Steel Barriers

Install a minimum 323 feet of 19-foot temporary steel barrier.

Maintain a minimum radius of 262 feet for segments placed on a curved layout.

Maintain a minimum 5-foot set back distance on both sides of barrier, when temporary barrier systems are placed with traffic on both sides.

12-3.20C(3)(d) 12-Foot-9-Inch Temporary Steel Barriers

Install a minimum 260 feet of 12-foot-9-inch temporary steel barrier.

Maintain a minimum radius of 755 feet for segments placed on a curved layout.

Stake or anchor segments and maintain a minimum 2-foot set back distance on both sides of barrier, when temporary barrier systems are placed with traffic on both sides.

12-3.20D Payment

The payment quantity for temporary barrier systems is the length measured along the top of the barrier segments.

Add to before the 1st paragraph of section 12-3.32C:

PCMS boards shall be installed two weeks prior to construction through the end of construction.

Add to section 12-4.02A(2):

Martin Luther King Jr. Day is a designated holiday that is observed on the 3rd Monday in January. The day after Thanksgiving is a designated holiday that is observed the day after Thanksgiving Day. Christmas Eve is a designated holiday that is observed on December 24th

Add to the end of section 12-4.02C(3)(a):

Keep a minimum of 1 paved traffic lane at least 10 feet wide open in each direction for traffic to businesses east of the bridge on Placerville Drive.

Replace "Reserved" in section 12-5 with:

12-5.01 GENERAL

Contractor shall notify the City, El Dorado Disposal, El Dorado County Fire District, Placerville Police Department, Placerville Downtown Association, El Dorado County Transit Authority, El Dorado County Fairgrounds, the local US Post Office, El Dorado Union High School District Transportation, Motherlode Union School District, and Placerville Union School District Transportation Division 48 hours prior to any lane closures, including partial road closures.

Replace Section 12-8 with:

12-8 CONSTRUCTION ZONE STANDARDS

12-8.01 GENERAL

12-8.01A Summary

Contractor is responsible for maintaining a safe work area during and after working hours.

12-8.02 Maintaining Traffic

12-8.02A Tow-Away Lanes

Contractor shall be responsible for keeping "Tow-Away No Stopping" traffic lanes clear during the effective hours posted.

12-8.02B Metal Plating

Any temporary metal plating and metal bridging shall be coated with a non-skid and rust inhibitive product. Examples of non-skid metal plating are surfaces with waffle or herringbone pattern undulations. Plating shall be installed with no edges or corners sticking up and with no bouncing or shifting. Plates shall be secured against shifting by tack welding, or fasteners. Any non-skid product shall have a friction factor of 0.35 or greater as measured by the California Test 342.

Plates shall be free of any openings greater than one quarter (¼) inch.

12-8.02C Transitioning (Ramping)

Whenever the grade difference between the existing pavement and the excavated area is greater than ¼ inch, Contractor shall provide longitudinal and transverse transitions prior to opening the lanes to traffic.

The maximum slope on these transitions shall be 1:18. Transitions shall be installed with hot mix asphalt. This section applies to newly constructed roadway base, manholes, metal plating, bridging, trenching etc.

Cold mix asphalt may be used in lieu of hot mix asphalt for temporary ramping. The contractor is responsible for maintaining cold mix asphalt at all times and complying with ADA regulations if applicable. Cold mix shall comply with Sections 4-1.13 and 7-1.04.

12-8.03 Security and Contractor Property

The Contractor shall be responsible for the security of all Contractor property including, but not limited to, equipment, material that has not yet been installed, and tools. If the Contractor fails to properly lock, store, and secure equipment, tools, materials, etc., his property may be stolen. No additional payment shall be made for added security measures. No additional payment shall be made for equipment, tools, materials, or any other property of the Contractor that is lost or stolen.

^^

13 WATER POLLUTION CONTROL

Add to the end of section 13-3.01A:

This project's risk level is 2.

The receiving water for this project is American River – Placerville to Folsom Lake. The receiving water is not listed with a TMDL.

Add between the 4th and 5th paragraphs of section 13-3.01C(2)(a):

The following RWQCBs will review the authorized SWPPP:

1. Central Valley Regional Water Quality Control Board

Replace the 2nd sentence of the 1st paragraph of section 13-6.03C with:

The drainage inlet protection must be Type 4A, Type 5, or Type 6A, as appropriate for the conditions around the drainage inlet.

Replace section 13-12 with:

13-12 TEMPORARY CREEK DIVERSION SYSTEMS

13-12.01 GENERAL

13-12.01A Summary

Section 13-12 includes specifications for constructing, maintaining, reconstructing, and removing temporary creek diversion system (TCDS), and restoring creek bed to original condition. The temporary diversion system is used to divert upstream water flows to allow construction in a dry or dewatered location.

13-12.01B Definitions

Not Used

13-12.01C Submittals

13-12.01C(1) General

Submit a certificate of compliance for:

1. Pump system
2. Gravel gradations
3. Gravel bags

4. Plastic Sheeting
5. Pipe Material
6. Seepage pumps
7. Minor coffer dam materials

13-12.01C(2) Temporary Creek Diversion System Plan

Within 20 days of Contract approval, submit 3 copies of the Temporary Creek Diversion System Plan (TCDSP). The TCDSP must include:

1. Installation and removal process, including equipment, platforms for equipment, and access locations.
2. Anticipated flow rates.
3. Calculations supporting the sizing of piping, channels, pumps, or other conveyance by using FHWA HY-8 or other equivalent method. Calculate the discharge water flow rate and velocity anticipated where it discharges on any erodible surface, so its conveyance does not cause erosion within the project or at the discharge to the water body. Temporary culverts attached to banks, walls, or other locations must be designed to hold the full weight of the culvert at capacity and restrain the culvert for any expected hydraulic forces.
4. Plans showing locations of diversion, including layouts, cross sections, and elevations.
5. Materials proposed for use, including SDS if applicable.
6. Operation and maintenance procedures for the TCDS.
7. Restoration plans showing before and after conditions, including photos of existing conditions for areas disturbed during the installation, operation, and removal of the TCDS.
8. Monitoring and reporting plan to ensure applicable water quality objectives are met. This includes schedule of work including Temporary BMP implementation as part of the Construction Site BMP strategy, and SWPPP or WPCP as applicable. Use with section 13-3.01A.
9. Details of the pumping system, if used, including power source, debris handling, fish screens, and monitoring requirements.
10 The TCDS design must demonstrate how it will comply with section 13-12.03A, water tightness, and prevent seepage.
11. Contingency plan to remove workers, equipment, materials, fuels, and any other work items that will cause pollution or violation of PLACs during a rain event out of the flow area. Develop the contingency plan for when a 12-inch freeboard cannot be maintained and overtopping of the coffer dams may occur.
12. Fish passage plan, following the Caltrans Fish Passage Design for Road Crossings, CA Department of Fish and Wildlife (CDFW), CA Salmonid Stream Habitat Restoration Manual, and National Marine Fisheries Service (NMFS), Guidelines for Salmonid Passage at Stream Crossings, as required by the applicable PLACs.

If revisions are required, the Engineer notifies you of the date when the review stopped and provides comments. Submit a revised TCDSP within 15 days of receiving the comments. The Department's review resumes when a complete TCDSP has been resubmitted.

Submit an electronic copy on a read-only CD, DVD, or other Engineer-authorized data storage device and 4 printed copies of the authorized TCDSP.

If the RWQCB or other regulatory agency requires review of the authorized TCDSP, the Engineer submits it to the RWQCB for review and comment. If the Engineer orders changes to the TCDSP based on the RWQCB's comments, submit a revised TCDSP within 10 days.

All submittals which include plans, specifications, and calculations must be sealed and signed by a civil engineer registered in the State.

13-12.01D Quality Assurance

Not Used

13-12.02 MATERIALS

13-12.02A General

Not Used

13-12.02B Gravel

Gravel must:

1. Be river run gravel obtained from a river or creek bed with gradation of 100 percent passing a 3/4 inch sieve and 0 percent passing a 3/8 inch sieve
2. Be clean, hard, sound, durable, uniform in quality, and free of any detrimental quantity of soft, thin, elongated or laminated pieces, disintegrated material, organic matter, or other deleterious substances
3. Be composed entirely of particles that have no more than 1 fractured face
4. Have a cleanliness value of at least 85, as determined by California Test 227

13-12.02C Impermeable Plastic Membrane

Impermeable plastic membrane must be:

1. Single ply, commercial quality, polyethylene with a minimum thickness of 10 mils complying with ASTM D2103. You must use stronger plastic membrane if required as part of design to resist hydraulic forces.
2. Free of holes, punctures, tears or other defects that compromise the impermeability of the material.
3. Suitable for use as an impermeable membrane.
4. Resistant to UV light, retaining a minimum grab breaking load of 70 percent after 500 hours under ASTM D4355.

13-12.02D Gravel-Filled Bags

Gravel-filled bags must comply with section 13-5.02G.

The 2nd paragraph of section 13-5.02G does not apply.

13-12.02E Plastic Pipes

Plastic pipe must comply with section 61-3.01 and must:

1. Be clean, uncoated, in good condition free of rust, paint oil dirt or other residues that could potentially contribute to water pollution
2. Be adequately supported for planned loads
3. Use watertight joints under section 61-2.01.
4 Be made of a material or combination of materials that are suitable for clean water and which do not contain banned, hazardous or unlawful substances
5. For temporary pipes not reused on the project you may use the following materials:
   - 5.1. PVC closed-profile wall pipe must comply with ASTM F1803
   - 5.2. PVC solid wall pipe must comply with ASTM D3034, ASTM F679, AWWA C900, AWWA C905, or ASTM D2241 and cell class 12454 defined by ASTM D1784
   - 5.3. HDPE solid wall pipe must comply with AASHTO M 326 and ASTM F714
   - 5.4. Polyethylene large-diameter-profile wall sewer and drain pipe must comply with ASTM F894

13-12.02F Rock

Rock layer must comply with the table titled *Rock Gradation for 7-inch-thick Layer* in section 72-4.02.

13-12.02G Pumping System

Pumping system must:

1. Comply with section 74-2.02B
2. Be equipped with secondary containment
3. Be free of fuel and oil leaks
4. Meet intake screen regulatory requirements

13-12.02H Seepage Pumping System

If seepage occurs in the dewatered work area, the water must be removed by sump pumps as part of the TCDS.

Seepage pumping system must:

1. Comply with section 74-2.02B
2. Ensure discharge water conform with PLACs or is treated on site
3. Be free of fuel and oil leaks

13-12.02I Discharge Water Energy Dissipation and Erosion Control

Discharge water from pumps, pipes, ditches, or other conveyances must have BMPs to dissipate the flows and velocity of water discharged from the temporary diversion system if erosion would otherwise occur.

Energy dissipation measures:

1. May be plastic sheeting, flared end sections, rubber matting, or other materials appropriate for the design hydraulics
2. Must be anchored to prevent movement by expected flows
3. Must be removed when the TCDS is removed

13-12.03 CONSTRUCTION

13-12.03A General

Construction, use and removal of the TCDS is restricted to the time period from May 1st to October 31st. If the work cannot be completed during the initial restricted time period, remove TCDS, restore the creek to original flow condition, and reconstruct the TCDS after May 1st of the following year. No work is allowed within the stream except during the restricted time period.

Do not use motorized equipment or vehicles in areas of flowing or standing water for the construction or removal of the TCDS in compliance with section 13-4.03.

Remove vegetation to ground level and clear away debris.

Place temporary or permanent fill as allowed by PLACs.

Place rock at outlet of diversion pipe under section 72-4.03, except motorized vehicles and equipment must not be used in areas of flowing or standing water.

Do not construct or reconstruct TCDS if the 72-hour forecasts predict a 50 percent or greater chance of rain in the project area.

Stop all work and remove all material and equipment from the creek between upstream and downstream cofferdams if the 72-hour forecasts predict a 50 percent or greater chance of rain in the project area and the predicted rainfall is estimated to produce a flow rate exceeding the design capacity of the TCDS.

If the required freeboard cannot be maintained and overtopping may occur, implement contingency plan to remove all workers, equipment, and potential sources of pollution from the dry working area of the creek bed.

The TCDS must be constructed within the temporary impact footprint as described in the environmental commitments.

Lap and join joints between the edges of impermeable plastic membrane with commercial-quality waterproof tape with minimum 4-inch lapping at the edges.

Seal openings or penetrations through the impermeable plastic membrane with commercial quality waterproof tape.

The TCDS must be water tight to keep the work area dry for construction and prevent the creation of pollutants. Maintain all portions of the TCDS and fix leaks as soon as they are discovered.

Contact water agencies that discharge to the construction area to ensure that unexpected water is not discharged during construction which could compromise the TCDS.

13-12.03B Maintenance

Maintain the TCDS to provide a minimum freeboard of 12 inches between the water surface and the impermeable top of the cofferdams.

Do not discharge runoff from existing or proposed drainage systems into the dry work area between the cofferdams. Runoff from these systems may be connected to the diversion pipe or conveyed by pipes downstream of the cofferdam.

Prevent leaks in the TCDS. Provide seepage pumps as necessary and keep the work area dry to prevent the creation of sediment-laden water.

Repair holes, rips and voids in the impermeable plastic membrane with commercial-quality waterproof tape. Replace impermeable plastic membrane when patches or repairs compromise the impermeability of the material.

Repair TCDS within 24 hours after the damage occurs.

Prevent debris from entering the TCDS and receiving water.

Remove and immediately replace gravel, gravel-filled bags, impermeable plastic membrane, or plastic pipes contaminated by construction activities.

Remove sediment deposits and debris from the TCDS as needed. If removed sediment is deposited within project limits, it must be stabilized and not subject to erosion by wind or water, under sections 19-1.01 and 19-2.03 B.

13-12.03C Removal

When no longer required, remove all components of TCDS. Return the creek bed and banks to the original condition.

Do not excavate the native creek material. Backfill ground disturbance, including holes and depressions caused by the installation and removal of the TCDS with gravel. Maintain the original line and grade of the creek bed.

13-12.04 PAYMENT

Payment for maintaining and removal of TCDS is included in the payment for the TCDS. The work to be performed for Temporary Creek Diversion will be paid for on a lump sum basis. This includes installation, dewatering, maintenance and removal.

Payment for doing all the work involved in restoration of the line and grade of the creek bed and banks is included in the various bid items on the Bid Schedule and no separate payment will be made.

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14 ENVIRONMENTAL STEWARDSHIP

Replace section 14-11.08 with:

14-11.08 REGULATED MATERIAL CONTAINING AERIALLY DEPOSITED LEAD

14-11.08A General

Section 14-11.08 includes specifications for management of regulated material containing ADL Management of the material includes:

1. Excavating
2. Loading and unloading containers or trucks
3. Stockpiling
4. Transporting
5. Placing
6. Disposal

Manage regulated material containing ADL under the rules and regulations of the following agencies:

1. US Department of Transportation
2. US EPA
3. California Environmental Protection Agency
4. CDPH
5. DTSC
6. Cal/OSHA
7. California Department of Recycling and Recovery
8. California Air Resources Board
9. Central Valley Regional Water Quality Control Board
10. El Dorado County AQMD

The Department entered into agreement Docket No. ESPO-SMA 15/16-001 Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils with the DTSC (ADL Agreement) regarding the management of regulated material containing ADL. As the responsible entity and the generator of waste, only the Department determines material classification. For the ADL agreement, go to the Caltrans Hazardous Waste Management website.

Regulated material containing ADL is present within the project limits and the ADL Agreement applies. Management of regulated material containing ADL exposes workers to health hazards that must be addressed in your lead compliance plan under section 7-1.02K(6)(j)(ii).

14-11.08B Definitions

average ADL concentration: Average ADL concentration calculated using the 95 percent upper confidence limit.

regulated material: ADL-contaminated material that has average ADL concentrations over 80 mg/kg total lead or equal to or greater than 5 mg/L soluble lead tested using the California Waste Extraction Test (CA-WET) or equal to or greater than 5 mg/L soluble lead tested using the Toxicity Characteristic Leaching Procedure (TCLP).

Type Z-2: Regulated material that is a Department-generated California hazardous waste that must be disposed of at an appropriately permitted California Class I disposal facility. Type Z-2 material has average ADL concentrations greater than or equal to 1,000 mg/kg total lead or 5.0 mg/L soluble lead as tested using the CA-WET.

14-11.08C Site Conditions

Concentration data and sample location maps for regulated material are included in the *Information Handout*.

Type Z-2 material exists from the surface to below the existing grade as shown and listed in the following table:

Location	Elements of work	Depth
Sta 69+65 to Sta 72+78 Lt 48', Rt 65'	Roadway reconstruction Bridge replacement Channel Grading	1' to 2'

14-11.08D Submittals

14-11.08D(1) General

Not Used

14-11.08D(2) Perimeter Air Monitoring Requirements

Include perimeter air monitoring under section 14-11.08F as part of your lead compliance plan. Include:

1. Location and type of equipment
2. Sampling frequency
3. Name and address of the laboratory that will perform the analyses

14-11.08D(3) Excavation and Transportation Plan

Within 15 days of Contract approval, submit 3 copies of an excavation and transportation plan for regulated material. Allow 7 days for review. If the plan requires revisions, the Department provides comments. Submit a revised plan within 7 days of receiving comments. The Engineer may allow construction to proceed while minor revisions or amendments are being completed.

The excavation and transportation plan must comply with:

1. DTSC regulations
2. ADL Agreement
3. Cal/OSHA regulations

The excavation and transportation plan must include:

1. Procedures for managing the material.
2. Excavation schedule by location and date.
3. Locations for temporary stockpiles.
4. Air monitoring locations.
5. Transportation equipment and routes.
6. Method for preventing spills and tracked material onto public roads.
7. Truck waiting and staging areas.
8. Name and address of the California Class I disposal facility where hazardous waste will be disposed of.

14-11.08D(4) Burial Location Report

Not Used

14-11.08D(5) Bill of Lading

Not Used

14-11.08D(6) Disposal Documentation

Submit documentation from the receiving disposal facility confirming appropriate disposal within 5 business days of transporting Type Z-2 material from the job site.

14-11.08E Dust Control

Prevent visible dust migration under section 14-11.04 during management of regulated material.

14-11.08F Air Monitoring

Conduct perimeter air monitoring at upwind and downwind locations as detailed in the authorized lead compliance plan. Monitor using personal air samplers by the National Institute of Safety and Health Method 7082. Your sampling procedures must achieve a detection limit of 2.6 µg/m^3 of air per day. Under the direction of a CIH, monitor the air daily while clearing and grubbing and performing earthwork activities. Analyze a single representative daily sample for lead and provide results within 24 hours. Analyses must be performed by a laboratory accredited by the Environmental Lead Laboratory-Accreditation Program of the American Industrial Hygiene Association.

Daily lead concentrations must not exceed 2.6 µg/m^3 of air per day. If a daily concentration exceeds 2.6 µg/m^3 of air per day, stop work and modify the work to prevent release of lead. The air monitoring data must be reviewed and signed by the CIH.

14-11.08G Stockpiling

Do not stockpile Type Z-2 material. Transfer Type Z-2 material directly from the excavation to containers or trucks for transportation to the disposal facility.

14-11.08H Placement

Not Used

14-11.08I Surveying Burial Site

Not Used

14-11.08J Material Transportation

Transport excavated Type Z-2 material using:

1. Hazardous waste manifest
2. Hazardous waste transporter with a current DTSC registration certificate and CA Highway Patrol (CHP) Basic Inspection of Terminals (BIT) Program documentation with a satisfactory rating.

14-11.08K Disposal

14-11.08K(1) General

Laws and regulations that govern disposal of regulated material include:

1. Health & Safety Code § 25100 et seq
2. 22 CA Code of Regs § 66250 et seq
3. 8 CA Code of Regs

The Department does not pay for additional sampling and analysis required by disposal facilities.

14-11.08K(2) Type Com Material

Not Used

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15 EXISTING FACILITIES

Add to section 15-1.01:

The types, locations, sizes and/or depths of existing underground utilities as shown on the Contract Documents were obtained from sources of varying reliability. The Contractor is cautioned that only actual excavation will reveal the types, extent, sizes, locations and depths of such underground utilities. A reasonable effort has been made to locate and delineate all known underground utilities. However, the City can assume no responsibility for the completeness or accuracy of its delineation of such

underground utilities nor for the existence of other buried objects or utilities which may be encountered but which are not shown on these Plans. The majority of the utilities shown on the Plans were drafted per locations indicated on the respective purveyors' facility maps, non-destructive utility locating, and minimal potholing.

The Contractor shall contact the Underground Service Alert (U.S.A.) two working days (not including the day of notification) in advance of performing any excavation work by calling the toll-free number 1-800-227-2600. The Contractor shall perform adequate potholing to positively identify existing utilities prior to performing underground construction activities.

Locations of utility services and laterals are not always provided by utility companies and when shown are approximate (unless potholed). Nothing herein shall be deemed to require the City to indicate the presence of existing utility services, laterals, or appurtenances whenever their presence can be inferred from other visible facilities such as buildings, meters, junction boxes, valves, service facilities, identification markings, and other indicators on or adjacent to the work.

Potholing will be at the discretion of the Contractor and no separate bid item will be included for such pothole excavations.

Replace section 15-1.03D with:

15-1.03D Adjust Frames, Covers, Grates, and Manholes

Adjust frames, covers, grates and manholes by lowering before cold planning and surface preparation and raising after final paving or surfacing. Before opening the lane to traffic, either (1) complete permanent paving or surfacing or (2) temporarily fill any depressions with HMA or cold mix asphalt.

Where paving or surfacing work is shown, do not adjust to final grade until the adjacent pavement or surfacing is complete. For a structure that is to be raised, remove the cover or frame and trim the top of the structure to provide a suitable foundation for the new material. Instead of using new materials similar in character to those in the existing structure, you may use raising devices to adjust a manhole to grade. Before starting paving work, measure, fabricate, and install raising devices. Raising devices must:

1. Comply with the specifications for Section 75 except that galvanizing is not required
2. Have a shape and size that matches the existing frame
3. Be match marked by painting identification numbers on the device and corresponding structure
4. Result in an installation that is equal to or better than the existing one in stability, support, and non-rocking characteristics
5. Be fastened securely to the existing frame without projections above the surface of the road or into the clear opening

Manholes, valve boxes, monument boxes, etc., shall be brought to grade, as shown on the plans, after final pavement lift has been placed.

All existing manhole frames, lids or gates, valve boxes, monument boxes, and any other style of box or lid shall be reused, unless otherwise noted on the Project Plans. If any damages occur in the process of adjusting iron to grade then at Contractor's expense must supply new manhole frames, lids or gates, valve boxes, monument boxes, and any other style of box or lid.

Concrete collars must comply with section 90 and the Project Plans.

Eccentric manhole cone installed on and connected to existing manhole barrels must pass the Low-Pressure Air Test. Any lining of the manhole (existing or new portion) required to pass the air test shall be performed at the contractor's expense and no additional payment will be allowed therefore.

Low Pressure-Air Test shall comply with section 61-1.01.

Replace paragraph in 15-1.04 with:

There is no separate bid item for sawcutting, so the payment for sawcutting shall be considered included in the various bid items on the Bid Schedule and no additional compensation will be allowed therefore.

Utilities adjusted to grade shall be paid under the various Adjust Utility to Grade bid items, delineated by utility type. The payment quantity for the Adjust Utility to Grade bid items is the number of utilities adjusted to grade determined by actual count.

There is no separate bid item for temporary lowering of frames, covers, boxes, grates, manholes rims, etc., so the payment for temporary lowering shall be considered included in the various bid items on the Bid Schedule and no additional compensation will be allowed therefore.

Additional payment will not be made for new iron or utility boxes installed as a result of contractor damage during initial removal.

No payment will be made for adjusting frames, covers, boxes, grates, or manholes not indicated for adjustment on the Project Plans.

If adjusting frames, covers, boxes, grates, manhole rims, etc. not indicated for adjustment on the Project Plans is required, then payment for adjusting these materials is included in the payment for the type of pavement or type of surfacing involved.

If adjusting frames, covers, boxes, grates, or manholes not indicated for adjustment on the Project Plans is required, and if pavement or surfacing is not involved, payment for adjusting these materials is included in the payment of various other bid items, and no additional payment will be made therefore.

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16 TEMPORARY FACILITIES

Replace section 16-2.05B with:

16-2.05B Water Filled Cofferdam

16-2.05B(1) General

16-2.05B(1)(a) Summary

Section 16-2.05B includes specifications for using a water-filled cofferdam to dewater a work area.

The use of the cofferdam is restricted to the period from May 1 to October 31. If the work in the enclosed area requires more than 1 restricted period, remove the cofferdam before the end of the restricted period and reinstall it during the following restricted period.

16-2.05B(1)(b) Definitions

Not Used

16-2.05B(1)(c) Submittals

Submit 2 sets of shop drawings for your dewatering system, including the cofferdams and any pump equipment. Include construction methods and calculations with the shop drawings. Shop drawings and calculations must be sealed and signed by an engineer who is registered as a civil or structural engineer in the State.

16-2.05B(1)(d) Quality Assurance

Not Used

16-2.05B(2) Materials

The cofferdam must (1) be able to stand alone without additional external mechanical or gravitational stabilization devices, (2) not degrade the aquatic environment by siltation or other means or harm native wildlife, and (3) be as watertight as practicable to provide a reasonably dry working area suitable for construction activities.

The cofferdam must consist of a system of at least 1 pair of water-filled inner tubes in a side-by-side position contained by 1 outer tube that forms a stable, nonrolling wall of water.

The inner tube fabric must be impervious. The outer tube fabric must be UV and puncture resistant.

Each cofferdam unit must have (1) threaded fill and drain ports and (2) lifting loops for the installation and removal of the cofferdam.

16-2.05B(3) Construction

Comply with the manufacturer's instructions for the cofferdam's installation and for dewatering the work area. Maintain the cofferdam to provide complete enclosure of the work area and prevent outside water from entering the work area. Overlap individual units at each end to produce a watertight connection under the manufacturer's instructions except you may use another type of connection if you demonstrate to the Engineer that it is watertight.

Immediately repair or replace any cofferdam damaged during the work. Reposition or relocate portions of the cofferdam to accommodate changing phases of the work.

Maintain a minimum cofferdam freeboard of the greater of 25 percent of the cofferdam height or 1 foot.

Remove the cofferdam when it is no longer needed. Repair depressions and other ground disturbances caused by the removal of the cofferdam. Return disturbed soil to its original condition. If no suitable backfill material is available, you may use washed Class 1 permeable material, Type B, if authorized.

16-2.05B(4) Payment

Payment for doing all the work involved in constructing, maintaining, and removing water filled cofferdams are included in the various bid items on the Bid Schedule and no separate payment will be made.

Add to section 16-2:

16-2.06 TEMPORARY TRANSIT FACILITIES

16-2.06A General

Section 16-2.06 includes specifications for constructing temporary transit facilities.

16.2.06B Submittals

Not Used

16-2.06C Construction

16-2.06C(1) Temporary Transit Stop

Temporary Transit Stops shall be established at locations specified by El Dorado Transit while permanent transit stops are out of service or being relocated due to project operations.

Associated existing transit stops out of service or being relocated due to project operations shall have their Bus Stop Sign temporarily covered with an opaque poly bag such that the sign is not visible. An A-frame mounted sign indicating the transit stop out of service shall also be placed at the immediate location of the transit stop.

A temporary Bus Stop Sign shall be provided at each Temporary Transit Stop location that match the specifications shown below. Bus stop signs shall be clearly visible in the immediate location of the temporary transit stop and secured such that wind-induced displacement/overturning is minimized. Bus stop signs shall allow a minimum of 32” wide clearance along the pedestrian path, if placed within the sidewalk.

Provide a shop drawing of the sign placard to El Dorado Transit for approval prior to installation.

16-2.06D Payment

Temporary Transit Stop shall be paid for on a per unit basis, as one complete installed unit. Measurement will be based on the actual number of temporary transit stops installed as determined by actual count. The maximum quantity of temporary transit stops shall not exceed the number of existing transit stops placed out of service, unless directed otherwise by the City. The contract unit price per each Temporary Transit Stop shall include full compensation for labor, materials, tools and equipment and for doing all work for the complete establishment of the Temporary Transit Stop, including furnishing bus stop signs, complete in place, all as specified in these special provisions, El Dorado County Transit Authority Transit Design Manual and as directed by the Engineer, and no additional compensation will be allowed. No compensation will be allowed for moving the temporary transit stop, if required.

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DIVISION III EARTHWORK AND LANDSCAPE

17 GENERAL

Replace the 4th paragraph in section 17-2.03A with:

Clear and grub before performing earthwork in an area.

Do not injure standing trees, plants, and improvements shown to be protected.

Clear and grub vegetation only within the excavation and embankment slope lines.

Replace section 17-2.03D with:

Dispose of objectionable materials resulting from clearing and grubbing activities.

Do not leave objectionable material in or under embankments, including dikes.

Accumulation of flammable material is not allowed.

Replace Section 17-3 with:

17-3 TREE REMOVAL

17-3.01 GENERAL
17-3.01A Summary

Section 17-3 includes specifications for removing trees. Remove Tree includes trees 6 inches in diameter at breast height and larger. Trees smaller than 6 inches in diameter at breast height shall be removed under clearing and grubbing.

The contractor shall obtain approval from the City prior to removal of any tree 6 inches in diameter or greater at breast height not shown on the Project Plans.

Trees shall be removed in a manner that will not jeopardize the public safety or damage structures including utility lines, utility services, or adjacent trees. In most cases, trees shall be entirely removed. Contractor is to submit a report to the City detailing the trees removed that have a trunk 6 inches or greater in diameter at breast height and shall mark those trees in the field for approval by the Engineer prior to tree removal.

17-3.02 MATERIALS

Not used.

17-3.03 CONSTRUCTION
17-3.03A Completion

To prevent the creation of hazards from partially removed trees, once work has commenced to remove a tree, this work shall be completed in a timely manner.

A tree will be considered completely removed when the stump is ground out up to 18 inches below grade.

17-3.03B Disposal of Wood

Disposal, use, or reuse of wood and woody debris from trees is at the sole discretion of the City of Placerville including specific disposal methods for infected wood. Payment for tree disposal is included in the payment for Remove Tree.

17-3.04 PAYMENT

The payment quantity for the Remove Tree bid item is the number of trees removed which were marked for removal and approved by the Engineer.

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18 DUST PALLIATIVES

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19 EARTHWORK

Add to section 19-1.01A:

Contractor is to conform to the grades as indicated on the Project Plans.

Add to section 19-2.03A:

Expect difficult excavation conditions due to the presence of cobble and boulder sized material within existing soil and fills at the site, and the contractor must be prepared to remove oversized material. Expect to encounter variably fractured hard rock in some areas.

Replace section 19-2.03E with:

Only excavation tools and equipment will be permitted for roadway excavation. Other methods of excavation including blasting, chemical expanders, or hydraulic splitters will not be allowed.

Add to section 19-2.04:

The Roadway Excavation bid item includes all tools, equipment, materials, and labor necessary for the removal of cobble and boulder sized materials, including oversized material along with removal of variably fractured hard rock.

Add to the end of section 19-3.01A:

Structure backfill includes constructing the geocomposite drain system. The systems must comply with section 68-7.

Add to the beginning of section 19-3.03B(1):

For footings at locations with structure excavation (Type D), ground or surface water is expected to be encountered but seal course concrete is not needed.

Expect difficult excavation conditions due to the presence of cobble and boulder sized material within existing soil and fills at the site, and the contractor must be prepared to remove oversized material. Expect to encounter variably fractured hard rock in some areas. Only excavation tools and typical heavy earthmoving equipment will be permitted for structure excavation. Other methods of excavation including blasting, chemical expanders, or hydraulic splitters will not be allowed.

Add to section 19-3.04:

Structure excavation for footings at locations not shown as structure excavation (Type D) and where ground or surface water is encountered is paid for as structure excavation (bridge).

Structure Excavation (Type D), Structure Excavation (Bridge), and Structure Excavation (Retaining Wall), bid items include all tools, equipment, materials, and labor necessary for the removal of cobble and boulder sized materials, including oversized material along with removal of variably fractured hard rock.

Add to the end of section 19-7.02C:

Imported borrow placed within 4 feet of the grading plane must comply with the quality characteristics shown in the following table:

Quality Characteristic	Test Method	Requirement
Plasticity Index (max)	California Test 204	12
Resistance (R-value) (min)	California Test 301	25

Process the imported borrow to comply with the grading requirements. Imported borrow should have 100 percent passing the 3-inch sieve and a minimum of 30 percent retaining on the #200 sieve. Imported borrow placed within 30 inches of the grading plane should have low expansion material. Otherwise, medium expansion potential is acceptable.

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20 LANDSCAPE

Replace the 1st through 5th paragraphs of section 20-1.02C with:

Do not use pesticides.

Replace the 3rd paragraph of section 20-1.02C with:

Do not use rodenticides.

Add to section 20-1.02C:

Select herbicides from the following table:

Herbicides

Herbicide name	Herbicide type				
	Preemergent	Post-emergent	Selective	Non-selective	Systemic
Aminocyclopyrachlor	X	--	--	X	X
Aminopyralid	--	--	X	--	--
Chlorsulfuron	--	--	X	--	--
Clopyralid	--	--	--	X	--
Diquat dibromide	--	--	--	X	--
Dithiopyr	X	--	--	--	--
Fluazifop-P-Butyl	--	--	X	--	--
Glyphosate	--	X	--	--	X
Imazapyr	--	--	--	X	--
Indaziflam	X	--	--	X	X
Isoxaben	X	--	--	--	--
Oryzalin	X	--	--	--	--
Oxadiazon	X	--	--	--	X
Oxyfluorfen	X	X	--	--	--
Pendimethalin	X	X	--	--	--
Rimsulfuron	--	--	X	--	--
Sethoxydim	--	X	X	--	--
Sulfentrazone	--	--	--	X	--
Sulfometuron-methyl	--	--	--	X	--
Sulfosulfuron	--	--	--	X	--
Triclopyr	--	--	--	--	X

Delete the 5th paragraph of section 20-1.03A.

Add to section 20-1.03C(3):

Control weeds within the highway including medians and surfaced areas such as new and existing pavement, curbs, and sidewalks.

In areas where plants are to be planted in groups or rows 15 feet or less apart, control weeds within the planting area and the area extending 6 feet beyond the outer limits of the groups or rows of plants with

herbicides or by hand pulling. Hand pull weeds within and on the plant basin walls, spot treat with herbicides outside of the plant basin.

Control weeds under guard rails, from within asphalt concrete surfacing, concrete surfacing, rock blankets, rock mulch, gravel mulch or decomposed granite areas, and unpaved gore areas between the edge of pavement and planting areas with herbicides or by hand pulling.

Where pavement, dikes, curbs, sidewalks, walls, and fences are located 12 feet or more beyond mulched areas, plant basins, and groundcover areas, limit mowing to 6 feet beyond these areas.

Delete item 2 in the list in the 1st paragraph of section 20-2.02B(1).

Add to section 20-3.01B(3)(a):

Soil Amendment and Fertilizer shall be determined from the soils test results. For purposes of bidding only, assume the use of 6-20-20 commercial fertilizer, iron sulfate, and 20-10-5 Best-Pak planting packets by J.R. Simplot Company.

Replace the 3rd paragraph of section 20-3.01B(9) with:

Support stakes must be 2-inch nominal diameter or 2-by-2 inch nominal size wood stakes a minimum of 5 feet long. Wood stakes must be straight.

Add between the 2nd and 3rd paragraphs of section 20-4.01A:

Minimum-bid plant establishment work is work (1) that is described as plant establishment work and (2) for which a minimum item total must be bid.

This project has a Type 2 plant establishment period.

Replace the 1st paragraph of section 20-4.01C(1) with:

Submit the following seasonal watering schedules for use during the plant establishment period:

1. March through May
2. June through August
3. September through October
4. November through February

Submit the first season's watering schedule within 10 days after the start of the plant establishment period. Submit subsequent watering schedules at least 5 business days before start of the next seasonal period. Remote irrigation control system watering schedule must use the remote irrigation control system software program.

Add to the beginning of the 1st paragraph of section 20-4.03A:

Maintain a neat and presentable job site during plant establishment including areas not visible to the public.

Replace the introductory clause in the 1st paragraph of section 20-10.03A(3) with:

Submit a work plan within 20 days before the start of job site activities for:

Replace item 2 in the list in the 1st paragraph of section 20-10.03A(3) with:

2. Maintaining existing planted areas as shown. The work plan must have a detailed description that includes work methods and areas, rates of fertilizer per plant, and a schedule for:
   2.1. Watering
   2.2. Controlling weeds and invasive plants
   2.3. Controlling pests
   2.4. Applying fertilizer
   2.5. Repair and maintenance of plant basins, stakes, foliage protectors and plant identification markers
   2.6. Replacing dead or unhealthy trees

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21 EROSION CONTROL

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22 FINISHING ROADWAY

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Recycled AB and/or appropriately ground and blended material generated from Remove Base and Surfacing or Cold Plane AC activities can be used in lieu of Class 2 AB under the minor concrete items, as approved by the Engineer.

Add to section 26-1.04:

Payment will not be made for any Class 2 AB outside of the limits determined by the Engineer. No additional payment will be made for Class 2 AB depths greater than what is indicated on the Project Plans unless otherwise directed or approved by the Engineer.

Class 2 AB placed under HMA for the construction of roadways shall be paid for under the Class 2 AB bid item. Scarification and recompaction of the subgrade material, where necessary, to place the Class 2 AB under the HMA shall be included in the Class 2 AB bid item. The payment quantity for the Class 2 AB bid item is the theoretical volume of Class 2 AB placed under the HMA measured in cubic yards. Class 2 AB used for the construction of all other bid items is included in those bid items and no additional compensation shall be made therefore.

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27 CEMENT TREATED BASES

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28 CONCRETE BASES

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29 TREATED PERMEABLE BASES

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30 RECYCLED PAVEMENT

^^

31–35 RESERVED

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DIVISION V SURFACINGS AND PAVEMENTS

36 GENERAL

^^

37 SEAL COATS

^^

38 RESERVED

^^

39 ASPHALT CONCRETE

Delete items 2, 3, 4, and 5 in section 39-2.01A(1).

Add to section 39-2.01A(1):

Hot mix asphalt (HMA) for this Project will be Type A HMA.

Add to 1st paragraph of section 39-2.01C(4)(a):

If it is impractical or impossible for longitudinal joints to match the lane lines, then the Contractor shall limit the paving seams to the least amount practical.

Add to before 1st paragraph of section 39-2.01C(4)(b):

Contractor to construct tapered notch wedge into and out of sections of asphalt left 2 inches low as shown on Project Plans.

Replace section 39-2.01D with:

39-2.01D Payment

HMA for the roadway shall be paid for under the HMA bid item. The payment quantity for HMA shown on the Bid Item List is measured based on the combined mixture weight. If recorded batch weights are printed automatically, the bid item for HMA is measured by using the printed batch weights, provided:

1. Total aggregate and supplemental fine aggregate weight per batch is printed. If supplemental fine aggregate is weighed cumulatively with the aggregate, the total aggregate batch weight must include the supplemental fine aggregate weight.
2. Total virgin asphalt binder weight per batch is printed.
3. Each truckload's zero tolerance weight is printed before weighing the first batch and after weighing the last batch.
4. Time, date, mix number, load number and truck identification is correlated with a load slip.
5. Copy of the recorded batch weights is certified by a licensed weigh master and submitted.

Payment will not be made for any HMA outside of the limits determined by the Engineer. No additional payment will be made for HMA depths greater than what is indicated on the Project Plans unless otherwise directed or approved by the Engineer.

The Engineer does not adjust the unit price for an increase or decrease in the pre-paving grinding quantity.

Payment will not be made for any HMA used as a temporary paving surface.

Crack filling shall be paid for under a separate bid item. Payment includes all labor, materials, and equipment necessary to clean and prepare cracks, apply crack sealant, and allow adequate curing time before subsequent surface treatments.

Replace section 39-2.02B(3) with:

Asphalt binder used in HMA must be PG 64-16.

Add to section 39-2.02B(4)(b):

Follow section 39-2.02C placing type A HMA in multiple lifts

HMA used to in the lower lifts must comply with the ¾" HMA Type A gradation.

Aggregate used in final surface paving must comply with the ½" HMA Type A gradation.

Replace section 39-3.04B with:

Temporary tapers must be either HMA or CMA. No additional payment will be made for the placement of temporary tapers.

Replace section 39-3.04C(1) with:

Do not use a heating device to soften the pavement.

The cold planing machine must be:

1. Equipped with a cutter head width that matches the planing width unless a wider cutter head is authorized.
2. Equipped with automatic controls for the longitudinal grade and transverse slope of the cutter head and:
   2.1. If a ski device is used, it must be at least 30 feet long, rigid, and a 1-piece unit. The entire length must be used in activating the sensor.
   2.2. If referencing from existing pavement, the cold planing machine must be controlled by a self-contained grade reference system. The system must be used at or near the centerline of the roadway. On the adjacent pass with the cold planing machine, a joint-matching shoe may be used.
3. Equipped to effectively control dust generated by the planing operation
4. Operated such that no fumes or smoke is produced.

Replace broken, missing, or worn machine teeth.

If contractor does not complete placing the HMA surfacing before opening the area to traffic, contractor must:

1. Ensure the surface is safe for vehicular, bicycle, and pedestrian travel, as applicable.
2. Construct a temporary HMA or CMA taper to the level of the existing pavement.

If contractor does not complete placing the HMA surfacing before opening the area to traffic, contractor must:

1. Ensure the surface is safe for vehicular, bicycle, and pedestrian travel, as applicable.
2. Construct a temporary HMA or CMA taper to the level of the existing pavement.

Replace the 2nd paragraph of 39-3.04A with:

Cold plane asphalt concrete pavement includes the removal of pavement markers, traffic stripes, pavement markings, and any encountered paving fabric within the area of cold planing.

Add to section 39-3.04C(4):

Remove, transport, and appropriately dispose of cold planed material.

Replace the paragraph in section 39-3.04D with:

Payment for cold planing asphalt concrete as shown on the Project Plans will be paid for under the Cold Plane AC bid item. The payment quantity for the Cold Plane AC bid item is the area in square yards measured parallel to the ground surface. No additional payment will be made for cold planing depths different from what are shown on the Project Plans or the discovery and/or removal of paving fabric.

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40 CONCRETE PAVEMENT

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41 EXISTING CONCRETE PAVEMENT

^^

42 GROOVE AND GRIND CONCRETE

^^

43–44 RESERVED

^^

DIVISION VI STRUCTURES

45 GENERAL

^^

46 GROUND ANCHORS AND SOIL NAILS

^^

47 EARTH RETAINING SYSTEMS

^^

48 TEMPORARY STRUCTURES

^^

49 PILING

Add to section 49-1.03:

Expect difficult pile installation due to the conditions shown in the following table:

Pile location		Conditions
Bridge no.	Support location	
25C00152	Pier 2 and Pier 3	Groundwater is likely to be encountered in pile excavations extending below creek water elevation. The Contractor must be prepared to provide at a minimum creek diversion and sump pumping to lower the groundwater level to below excavation elevations. Cobble- and boulder sized material may be present, and the Contractor must be prepared to remove oversized material. Contractor must be prepared to excavate variably fractured hard rock. Alluvial soils and decomposed rock have a high probability of caving.

Due to the difficult pile installation conditions, CIDH construction methods must utilize full length temporary casings either rotated or oscillated into place. The temporary casings must be removed using the same method as installation. Augment casing with slurry to prevent heaving of the soil at the pile tip.

Add to section 49-3.02A(1):

Contractor constructing the CIDH piles must have completed at least 3 jobs using full length temporary casing in similar soils installed by either the rotator or oscillator methods. Contractors must provide a list of projects to the engineer. Contractors that do not possess this experience will be deemed to be not qualified.

Replace section 49-3.02A(3)(a) with:

49-3.02A(3)(a) General

Submit as an informational submittal the proposed drilling equipment operational capacities or descriptions for:

1. Downward force in lb
2. Torque in ft-lb
3. Rotational speed in rpm
4. Rate of penetration in ft/hr
5. Number and type of drilling cutters or drilling teeth on drilling tool

Add to section 49-3.02A(3):

49-3.02A(3)(l) Experience Qualifications

At least 15 days before the start of CIDH concrete pile construction, submit as an informational submittal the following experience qualifications in compliance with section 49-3.02A(4)(f):

1. List of CIDH concrete pile installations performed by the drilling contractor. The submittal must include:
   1.1. Project description
   1.2. Name and phone number of the owner
   1.3. CIDH pile plans

1.4. Log of test borings
1.5. Estimated dates of major CIDH pile installation activities
1.6. CIDH pile acceptance testing reports

2. List of on-site foremen and drill rig operators who will perform the CIDH concrete pile work and a summary of each individual's experience. The submittal must include:
   2.1. Detailed summary of each individual's experience in CIDH pile excavation operations and placement of assembled reinforcing cages and concrete
   2.2. Experience from at least 3 relevant projects, including:
      2.2.1. Project Description
      2.2.2. Date of work
      2.2.3. Actual work performed
      2.2.4. Name and phone number of a reference person for each project
   2.3. Proof of on-site foremen and drill rig operators experience qualifications

Add to section 49-3.02A(4):

49-3.02A(4)(f) Experience Qualifications

The drilling contractor must have successfully constructed at least 3 separate foundation projects in the last 5 years. The foundation projects must:

1. Have CIDH piles of similar or larger diameter and depth, and installed under similar substructure conditions to this contract
2. Demonstrate experience with drilling fluids and successful construction of CIDH piles under the wet conditions

Each on-site foremen and drill rig operator must have 2 years of experience installing CIDH concrete piles on at least 3 projects. The CIDH pile foundations must be of similar or larger diameter and depth, and installed under similar subsurface conditions to this contract.

On-site foremen experience must be supervising construction of CIDH concrete pile foundations. Indirect supervision of on-site CIDH concrete pile construction operations is not acceptable.

Drill rig operator experience must be in construction of CIDH concrete pile foundations.

Add to section 49-3.02B(6)(c):

The synthetic slurry must be one of the materials shown in the following table:

Material	Manufacturer
SlurryPro CDP	KB INTERNATIONAL LLC 735 BOARD ST STE 209 CHATTANOOGA TN 37402 (423) 266-6964
Super Mud	PDS CO INC 105 W SHARP ST EL DORADO AR 71731 (870) 863-5707
Shore Pac	CETCO 2870 FORBS AVE HOFFMAN ESTATES IL 60192 (800) 527-9948
Terragel or Novagel Polymer	GEO-TECH SERVICES LLC 220 N. ZAPATA HWY STE 11A-449A LAREDO TX 78043 (210) 259-6386
BIG FOOT	MATRIX CONSTRUCTION PRODUCTS 50 S MAIN ST STE 200 NAPERVILLE IL 60540 (877) 591-3137
POLY-BORE	BAROID INDUSTRIAL DRILLING PRODUCTS 3000 N SAM HOUSTON PKWY EAST HOUSTON TX 77032 (877) 379-7412

Use synthetic slurries in compliance with the manufacturer's instructions. Synthetic slurries shown in the above table may not be appropriate for a given job site.

Synthetic slurries must comply with the Department's requirements for synthetic slurries to be included in the above table. The requirements are available from:

OFFICES OF BRIDGE DESIGN
P.O. BOX 168041
MS# 9-4/11G
SACRAMENTO, CA 95816-8041

SlurryPro CDP synthetic slurry must comply with the requirements shown in the following table:

SlurryPro CDP

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	 ≤ 67.0[a] ≤ 64.0[a]
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	 50–120 ≤ 70
pH	Glass electrode pH meter or pH paper	6.0–11.5
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	 ≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.
[a]If authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

Super Mud synthetic slurry must comply with the requirements shown in the following table:

Super Mud

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	 ≤ 64.0[a] ≤ 64.0[a]
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	 32–60 ≤ 60
pH	Glass electrode pH meter or pH paper	8.0–10.0
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	 ≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.
[a]If authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

Shore Pac synthetic slurry must comply with the requirements shown in the following table:

Shore Pac

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	 ≤ 64.0[a] ≤ 64.0[a]
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	 33–132 ≤ 118
pH	Glass electrode pH meter or pH paper	8.0–11.0
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	 ≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.
[a]If authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

Terragel or Novagel Polymer synthetic slurry must comply with the requirements shown in the following table:

Terragel or Novagel Polymer

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	 ≤ 67.0[a] ≤ 64.0[a]
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	 45–104 ≤ 104
pH	Glass electrode pH meter or pH paper	6.0–11.5
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	 ≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.
[a]If authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

BIG-FOOT synthetic slurry must comply with the requirements shown in the following table:

BIG-FOOT

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	 ≤ 64.0[a] ≤ 64.0[a]
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	 30–125 55–114
pH	Glass electrode pH meter or pH paper	8.5–10.5
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	 ≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.
[a]If authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

POLY-BORE synthetic slurry must comply with the requirements shown in the following table:

POLY-BORE

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	 62.8–65.8[a] 62.8–64.0[a]
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	 50–80 50–80
pH	Glass electrode pH meter or pH paper	7.0–10.0
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	 ≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.
[a]If authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

Add to section 49-3.02C(1):

Drilling equipment must be equipped with instrumentation to accurately measure the downward force in pounds. The instrumentation dial or display must be clearly visible for reading during operation.

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50 PRESTRESSING CONCRETE

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51 CONCRETE STRUCTURES

Add to section 51-1.01C(1):

If the methacrylate crack treatment is applied to a bridge deck within 100 feet of a residence, business, or public space, submit a public safety plan. Include with the submittal:

1. Copy of public notification letter with a list of delivery addresses and posting locations. The letter must describe the work to be performed and state the treatment work locations, dates, and times. Deliver copies of the letter to residences and businesses within 100 feet of the treatment work and to local fire and police officials, at least 7 days before starting treatment activities. Post a copy of the letter at the job site.
2. Airborne emissions monitoring plan. Plan must include monitoring point locations. A CIH certified in comprehensive practice by the American Board of Industrial Hygiene must prepare and execute the plan.
3. Action plan for protecting the public if levels of airborne emissions exceed permissible levels.
4. Copy of the CIH's certification.

After completing methacrylate crack treatment activities, submit results from monitoring production airborne emissions as an informational submittal.

Replace the 2nd paragraph of section 51-1.01C(1) with:

Submit a deck placement plan for concrete bridge decks. Include in the placement plan your method and equipment for ensuring that the concrete bridge deck is kept damp by misting immediately after finishing the concrete surface.

Replace section 51-1.01D(1) with:

51-1.01D(1) General

The job site must have at least 4 airborne emissions monitoring points, including the mixing point, application point, and point of nearest public contact. Monitor airborne emissions during methacrylate crack treatment activities.

Add to section 51-1.03G(1):

The concrete surface texture for the Type 6 retaining walls must match the texture, color, and pattern of the colors and pattern of the wall at Highway 50 above the eastbound off-ramp for Exit 45 Ray Lawyer Drive as shown in the image in section 78.

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52 REINFORCEMENT

Add to section 52-2.01A(3):

52-2.01A(3)(c) Certificates

Submit a certificate of compliance for each shipment of dual-coated bar reinforcing steel. Include the following with the submittal:

1. Certification that the reinforcement complies with ASTM A1055
2. All certifications specified in ASTM A1055

Add to section 52-2.01B:

You may use dual-coated bar reinforcing steel complying with ASTM A1055 as an alternative to epoxy-coated reinforcement or epoxy-coated prefabricated reinforcement. Bar reinforcing steel to be dual-coated must be deformed, Grade 60 bars complying with ASTM A706.

Dual-coated bar reinforcement must be the same bar size and must be placed at the same spacing as described for epoxy-coated reinforcement and epoxy-coated prefabricated reinforcement.

Add to section 52-2.01C:

Do not bend bar reinforcing steel complying with ASTM A1055 after coating application if used as an alternative to epoxy coated prefabricated reinforcement.

Job site and PC plant practices for substituted bar reinforcement must comply with appendix X1 of ASTM A1055, except replace "should" with "must."

Add to section 52-2.02A(3)(c):

For low carbon, chromium-steel bar reinforcement, submit a certificate of compliance for each shipment. Include with the submittal:

1. Certification that the reinforcement complies with ASTM A1035, Alloy Type CS
2. All certifications specified in ASTM A1035

Add to section 52-2.02B:

You may use low carbon, chromium-steel bar reinforcement complying with ASTM A1035, Alloy Type CS, as an alternative to epoxy-coated reinforcement at the following locations:

1. Abutments
2. Wingwalls
3. Concrete Barrier

Low carbon, chromium-steel bar reinforcement must be the same bar size and must be placed at the same spacing as described for epoxy-coated reinforcement.

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53 SHOTCRETE

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54 WATERPROOFING

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64 PLASTIC PIPE

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65 CONCRETE PIPE

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66 CORRUGATED METAL PIPE

^^

67 STRUCTURAL PLATE CULVERTS

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68 SUBSURFACE DRAINS

^^

69 OVERSIDE DRAINS

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70 MISCELLANEOUS DRAINAGE FACILITIES

Add to section 70-5.01C:

Drainage inlet markers shall be 4” stainless steel medallions by Almetek Industries, Inc. or approved equal. Medallions are to be installed using rivets per manufacturer’s specifications at locations indicated on the Project Plans. Medallions are not to be installed by adhesive alone.

Replace paragraph in section 70-5.05D:

Drainage inlet markers shall be paid for under the Drainage Inlet Marker bid item. The payment quantity for Drainage Inlet Marker bid item is the actual number of drainage inlet markers installed.

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71 EXISTING DRAINAGE FACILITIES

Add to section 71-1.03:

Existing drainage facilities not scheduled for removal shall be protected in place. Any damage done to existing drainage facilities not scheduled for removal due to the Contractor's operations shall be repaired to the satisfaction of the City Engineer at the Contractor's expense.

Replace "Not Used" in section 71-1.04 with:

There is no separate bid item for the material used to backfill the trenches, holes, depressions, pits, etc. caused by removing, salvaging, reconstructing, abandoning, destroying, modifying, resetting, relocating, adjusting, relaying, remodeling, and rehabilitating existing drainage facilities and no additional compensation will be allowed therefore.

Add to section 71-2.04:

The payment quantity for the Remove Storm Drain Pipe bid item is the length of removed pipe measured parallel to the ground surface along the centerline of the trench at the finished grade.

Replace RESERVED in section 71-6.03 with:

71-6.03A General
This section governs abandonment of culverts and pipelines.

71-6.03B Submittals
Upon request, schedules and method of abandonment shall be submitted to the Engineer for approval.

71-6.03C Materials
Pipe fill material may consist of the following:

1. Controlled low-strength material under section 19-3.02G.
2. Slurry cement backfill under section 19-3.02E.
3. Foam concrete.

71-6.03D Construction
Pipelines are to be abandoned in place by either plugging the ends or filling the entire pipeline with the material noted on the Plans and listed in section 71-6.03C, above.

No pipeline shall be abandoned until the new pipeline and all services, if applicable, are installed, tested, and in service.

Pipelines to be abandoned shall be securely closed at all pipe ends by an approved cap, blind flange, or, at
manhole entries, by a watertight plug of concrete, or brick and cement mortar, not less than 2-feet thick.

When laterals are abandoned, they shall be capped with an approved fitting at the property line.

For pipelines to be completely filled, the pumping pressure within the pipe shall not exceed 20 PSI. The Contractor's equipment shall be capable of pumping between 0-20 psi. In the event pump pressures are exceeded and the pipe fails, the Contractor shall be responsible for providing all labor, material, and equipment necessary to clean up any slurry. Contractor is made aware that where necessary multiple slurry insertion and monitoring locations will be required to ensure adequate abandonment.

The Contractor shall be responsible for the cutting, removing, and legally disposing of all materials and for the dismantling of any fittings and valves necessary to perform the abandonment. The Contractor shall anticipate the need for removal of sections of the existing pipeline during tie-ins to the existing system and abandonment of the existing pipelines where indicated on the plans.

All Asbestos Concrete Pipe shall be handled and disposed of according to California Code of Regulations (CCR) Tile 8, Section 1529; or most current regulations. Contractor shall provide a plan for disposal of the Asbestos Cement pipe and provide evidence of proper disposal to the Engineer.

71-6.03E Payment

The payment quantity for the Abandon Pipeline bid item is the number of locations as shown on the Project Plans.

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DIVISION VIII MISCELLANEOUS CONSTRUCTION

72 SLOPE PROTECTION

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73 CONCRETE CURBS AND SIDEWALKS

Add to section 73-1.01:

Project is in a freeze thaw area and requires air entrained concrete.

Add to section 73-1.02A:

Concrete must be minor concrete complying with section 90-2 and may contain returned plastic concrete complying with section 90-9.

Replace paragraph in section 73-2.04 with:

Minor concrete for curbs shall be paid under the Minor Concrete (Curb), Minor Concrete (Retaining Curb), Minor Concrete (Deep Curb) types shown on the Bid Item List. The payment quantity for minor concrete curbs shall be linear feet as measured along the curb face. Class 2 aggregate base (or approved recycled material) required for the construction of Minor Concrete types shown on the Bid Item List shall be included in the unit price for each type. Recompaction of the existing base and/or subbase material below the Class 2 aggregate base required for the construction of Minor Concrete types shown on the Bid Item List shall be included in the unit price for each type. The various Minor Concrete bid items shall include all tools, equipment, materials, and labor necessary to construct the Minor Concrete curbs including, but not limited to, concrete, reinforcing bars (if necessary), and all other incidental work for constructing the various Minor Concrete curbs.

Add to section 73-3.01C:

Within 2 business days of completing the surveys, submit preconstruction and post-construction surveys sealed and signed by one of the following:

1. Land surveyor licensed in the State
2. Engineer who is registered as a civil engineer in the State

Replace section 73-3.01D(3) with:

73-3.01D(3) Quality Control

For locations shown, perform a preconstruction survey to ensure forms and job site constraints will allow for compliance with required design dimensions and slopes shown. Upon completing the work, perform a post-construction survey to verify design dimensions and slopes requirements are met. The post-construction survey must include a minimum of 3 measurements for each dimension and slope requirement shown. Individual measurements must be equally distributed across the specified slope or dimensional surface. Document and submit these measurements on the Americans with Disabilities Act

Compliance Inspection Report form for the facility type shown. Include the equipment and control used to conduct the survey.

Add to the beginning of section 73-3.03:

Before placing concrete, verify that forms and job site constraints allow the required dimensioning and slopes shown. Immediately notify the Engineer if you encounter job site conditions that will not accommodate the design details. Ordered modifications are change order work.

Add to section 73-3.03:

All concrete used for curb ramps, driveways, sidewalks, and landings shall be broom finished.

Concrete used for Minor Concrete (Driveway) shall be 3,600 PSI with Solomon UltraFiber 500 or approved equal. Minor Concrete (Driveway) shall extend up to the top of adjacent curb ramps as shown on the Project Plans.

Replace paragraph in section 73-3.04 with:

Minor concrete for sidewalk, driveway, curb and gutter, and barrier curb shall be paid under the appropriate Minor Concrete types shown on the Bid Item List. Class 2 aggregate base (or approved recycled material) required for the construction of Minor Concrete types shown on the Bid Item List shall be included in the unit price for each type. Recompaction of the existing base and/or subbase material below the Class 2 aggregate base required for the construction of Minor Concrete types shown on the Bid Item List shall be included in the unit price for each type. The various Minor Concrete bid items shall include all tools, equipment, materials, and labor necessary to construct the Minor Concrete sidewalk, driveway, and all other incidental work for constructing the minor concrete sidewalks and driveways.

Add section 73-5 Wheel Stop:

Section 73-5 includes specifications for performing work to install wheel stops (parking bumpers) at locations indicated on the Project Plans.

Contractor to submit shop drawings of parking bumpers, including installation details and attachment details to at-grade asphalt pavement for approval.

Parking bumpers shall be precast, 3.5% minimum air-entrained concrete; 4000 psi minimum compressive strength. Each stop shall be reinforced with two No. 4 deformed steel reinforcing bars, minimum. Provide chamfered corners and provide holes for dowel-anchoring to substrate. Unless indicated otherwise, provide stops of half octagonal configuration and 36-inch length. Provide adhesive for anchoring the bumpers to existing parking lot pavement. Epoxy adhesive manufactured for the purpose, similar and equal to the adhesives specified in Caltrans Standard Specifications, Section 95-2.04 or 95-2.05. Adhesive for bonding dowels to parking bumpers shall be proposed by Contractor and approved by the Engineer. Steel Bars for anchoring shall be galvanized 5/8” diameter steel dowels or galvanized No. 5 steel reinforcing bars.

Parking bumpers are to be securely attached into at-grade asphalt pavement with not less than two galvanized steel dowels embedded in holes cast into the bumpers. Firmly bond each dowel to wheel stop and to pavement.

The payment quantity for the Wheel Stop bid item is the number of parking bumpers installed per the Project Plans. Each location is considered a measurement of one (1). Wheel Stop bid item includes all tools, equipment, materials, and labor necessary to install the parking bumper including, but not limited to, drilling for the steel anchor bars, furnishing and installing the parking bumper, anchor bars, and epoxy.

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74 PUMPING EQUIPMENT AND CONTROLS

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75 MISCELLANEOUS METAL

Replace section 75-1.04 with:

There is no specific bid item for miscellaneous metal material. Miscellaneous metal materials shall be paid under the various bid items requiring miscellaneous metal materials and no additional compensation will be allowed therefore.

Replace section 75-2.04 with:

There is no specific bid item for manhole frames or drainage inlet frames and grates. Manhole frames and drainage inlet frames and grates shall be paid under the various bid items requiring manhole frames and drainage inlet frames and grates and no additional payment shall be made therefore.

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76 WELLS

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77 LOCAL INFRASTRUCTURE

Replace "Reserved" in section 77-1 with:

77-1 TRENCH EXCAVATION, BACKFILL, AND COMPACTION

77-1.01 GENERAL

77-1.01A Summary

This section governs the work for trench excavation, backfill, and compaction for underground pipeline work including, but not limited to, the installation of HDPE pipe.

77-1.01B Submittals

Upon request, the following items shall be submitted and approved by the Engineer:

1. Test results showing gradation, durability, and sand equivalent of pipe zone material.
2. Permit and notification form for excavations 5 feet or more in depth as required by Cal-OSHA, including any trench excavation or shoring plans.

The testing frequency and location shall be approved by the Engineer.

77-1.02 MATERIALS

77-1.02A Trench Excavation

Excavation is unclassified. The Contractor shall complete all excavations regardless of the type of materials encountered. The Contractor shall make his own estimate of the kind and extent of the various materials which will be encountered in the excavation.

77-1.02B Pipe Zone

Material for the pipe zone shall be ¾ inch Class II Aggregate Base. The aggregate size gradation shall comply with Caltrans Specifications. The sand equivalent shall be 30 minimum. The durability index shall be 35 minimum.

77-1.02C Backfill

Material for the initial backfill from 12 inches above the top of the pipe to subgrade shall be ¾ inch Class 2 Aggregate Base. The aggregate size gradation shall comply with Caltrans Specifications. The sand equivalent shall be 30 minimum. The durability index shall be 35 minimum.

77-1.03 CONSTRUCTION

77-1.03A Excavation

77-1.03A(1) General

Excavation for pipelines, fittings, and appurtenances shall be open trench to the depth and in the direction necessary for the proper installation of the same as shown on the contract drawings or as otherwise approved by the Engineer. Excavation shall only proceed when the necessary materials have been delivered to the site.

The Contractor shall bear all costs of disposing of roots and all other waste materials from the excavation. Material shall be disposed of in such a manner as to meet all requirements of the state, county, and local regulations regarding health, safety, and public welfare. Non-flammable material and flammable material, when burning is not permitted, shall be disposed of off the construction site in an approved location at the Contractor's expense.

The Contractor shall remove obstructions within the trench area or adjacent thereto, such as abandoned concrete structures, logs, and debris of all types, without additional compensation. The Engineer may, if requested, make changes in the trench alignment to avoid major obstructions, if such alignment can be made without adversely affecting the intended function of the facility.

77-1.03A(2) Existing Pavement Removal

Pavement to be removed shall be removed and replaced in the manner prescribed by the Standard Specifications.

Existing pavement, curbs, gutters, sidewalks and driveways to be removed in connection with construction shall be neatly saw cut prior to removal. Saw cuts shall have a minimum depth of one inch in concrete sidewalk.

If the saw cut in a sidewalk or driveway would fall within 12 inches of a construction joint, expansion joint, or edge, the concrete shall be removed and replaced to the joint or edge. If the saw cut would fall within 6 inches of a score mark, the concrete shall be removed and replaced to the score mark. Concrete shall be removed by jackhammer.

77-1.03A(3) Grading and Stockpiling

The Contractor shall control grading in a manner to prevent water running into excavations. Obstructions of surface drainage shall be avoided and means shall be provided whereby storm and wastewater can be uninterrupted in existing gutters, other surface drains, or temporary drains. Material for backfill or for protection of excavation in public roads from surface drainage shall be neatly placed and kept shaped so as to cause the least possible interference with public travel. Free access must be provided to all fire hydrants, water valves, meters and private drives.

77-1.03A(4) Line and Grade

The Contractor shall excavate the trench to the lines and grades shown on the plans. Any deviations shall first be approved by the Engineer.

The trench shall be excavated to a minimum depth of 6 inches below the bottom of the pipe. The sides of the trench shall be excavated and maintained as nearly vertical as is practical.

77-1.03A(5) Trench Support

The trench shall be adequately supported and the safety of workers provided for as required by the standard of the appropriate regulatory agency.

All shoring for open excavations shall conform to the State of California, Department of Industrial Relations, Division of Industrial Safety "Construction Safety Orders."

The Contractor shall be responsible for adequately shored and braced excavations so that the earth will not slide, move or settle, and so that all existing improvements of any kind will be fully protected from damage.

No shoring once installed, shall be removed until the trench has been approved for backfill operations. Removal of shoring shall only be accomplished during backfill operations and in such a manner as to prevent any movement of the ground or damage to the pipe or other structures.

The Contractor shall obtain all permits for any excavations over five feet in depth into which a person is required to descend or any excavation less than five feet in depth in soils where hazardous ground movement may be expected and into which a person is required to descend.

Excavated material shall not be placed closer than two feet from the top edge of the trench. Heavy equipment should not be used or placed near the sides of the trench unless the trench is adequately braced.

77-1.03A(6) Use of Explosives

Blasting is not permitted.

77-1.03A(7) Preservation of Trees

Excavation within the dripline of any tree shall conform to the following. Trees shall not be removed outside of fill or excavated areas, except as authorized by the Engineer.

Tree roots larger than 2 inches in diameter shall not be cut and shall be kept moist during exposure. For damaged or severed root systems, trees shall be trimmed to compensate for the decreased root system. Trimming shall be done to the satisfaction of the Inspector. All roots shall be neatly cut with saw or sharp cutter.

Any trimming required to compensate for a decreased root system will be performed at the Contractor’s expense and no additional compensation with be made therefore.

77-1.03A(8) Dewatering

The Contractor shall provide and maintain, at all times during construction, ample means and devices with which to promptly remove and properly dispose of all water from any source entering the excavations or other parts of the work. Dewatering shall be accomplished by methods which will ensure a dry excavation and preservation of the final lines and grades of the bottoms of excavations. Said methods may include well points, cofferdams, sump pumps, suitable rock or gravel placed below the required bedding for drainage and pumping purposes, temporary pipelines and other means, all subject to the approval of the Engineer.

Dewatering for the structures and pipelines shall commence when groundwater is first encountered and shall continue until the backfill at the pipe zone has been completed.

The Contractor shall dispose of the water from the work in a suitable manner without damage to adjacent property. No water shall be drained into work built or under construction without prior consent of the Engineer. Water shall be disposed in such a manner as not to be a menace to public health.

The Contractor shall be responsible to obtain all required Local and State Permits.

Dewatering is incidental to other items of work and no additional compensation will be allowed for dewatering.

77-1.03A(9) Correction of Faulty Grades

Any over-excavation carried below the grade as specified or shown, shall be rectified by backfilling with approved sand and/or graded gravel, and shall be compacted to provide a firm and unyielding subgrade and/or foundation, as directed by the Engineer.

77-1.03A(10) Structure Protection

Temporary support, adequate protection, and maintenance of all underground and surface structures, drains, sewers, and other obstructions encountered in the progress of the work shall be furnished by the Contractor at his expense and subject to the approval of the Engineer. Any structure that has been disturbed shall be restored upon completion of the work.

77-1.03A(11) Trench Width and Grade

The width of the trench within the pipe zone shall be such that the clear space between the barrel of the pipe and the trench wall shall not exceed the amount shown in the standard details. In general, the following shall be adhered to:

Nominal Pipe Diameter	Trench Width Minimum	Trench Width Maximum
12” or less	O.D. + 12”	O.D. + 18”
greater than 12”	O.D. + 18”	O.D. + 24”

Trench widths in excess of those specified must have prior written approval.

77-1.03A(12) Maximum Length of Open Trench

Unless otherwise specified or directed by the Engineer, the maximum length of open trench during working hours shall be 500 feet, or the distance necessary to accommodate twice the amount of pipe installed in a single day, whichever is greater. The maximum length of open trench appropriately covered during non-working hours is the distance necessary to accommodate the amount of pipe installed in a single day. The distance is the collective length of any location, including open excavation, pipe laying and appurtenant construction, and backfill, which has not been temporarily resurfaced. Failure by the Contractor to comply with the limitations specified herein may result in an order to halt progress of the work until compliance has been achieved. The Contractor shall provide proper barricades for excavated areas.

Open trenches must be appropriately covered during non-working hours. Open trenches are not allowed during the scheduled events listed in section 7-1.03. Prior to those events, all trenches must be temporarily resurfaced to the satisfaction of the Engineer.

77-1.03A(13) Rock Excavation

Excavation of unrippable rock requiring a larger excavator and/or hydraulic hammering will be paid for as an additional cost above and beyond the cost for excavation and trenching for ordinary excavation. The City Engineer will determine when rock excavation for unrippable rock is required per the definition below.

Definition of Rock: Rock encountered during the course of excavation which is sufficiently hard that it cannot be removed using a Caterpillar 320 class excavator or equivalent using conventional methods shall be deemed inexcavatable. Rock deemed inexcavatable shall be removed by substantial means such as reciprocating hydraulic hammers and shall conform to this specification.

77-1.03A(14) Payment

There is no separate bid item for trench excavation. Trench excavation shall be considered incidental to other items of work and no additional compensation will be allowed therefore.

77-1.03B Trench Foundation

77-1.03B(1) General

The trench bottom shall be graded to provide a smooth, firm and stable foundation at every point throughout the length of the pipe. Should large gravel and cobbles be encountered at the trench bottom or pipe subgrade, they shall be removed from beneath the pipe and replaced with clean imported sand which shall be compacted to provide uniform support and a firm foundation.

77-1.03B(2) Foundations in Poor Soil

If excessively wet, soft, spongy, unstable, or similarly unsuitable material is encountered at the surface upon which the bedding material is to be placed, the unsuitable material shall be removed to a depth as determined in the field by the Engineer. The Contractor's attention is called to section 77-7.03A(8), regarding his/her responsibilities in maintaining adequate dewatering procedures to ensure that an otherwise stable foundation will not be rendered unfit due to accumulation of water.

77-1.03C Backfill and Compaction

77-1.03C(1) General

Backfill shall be completed within the shortest possible time so that the construction area or street can be opened to traffic. If for any reason construction of the pipeline or appurtenances thereto is delayed, the City may require that the trench be backfilled and such areas or streets opened to traffic.

77-1.03C(2) Pipe Zone

After completion of the trench excavation and proper preparation of the foundation, 6 inches of bedding material shall be placed on the trench bottom for support under the pipe. Bell holes shall be dug to provide adequate clearance between the pipe bell and the bedding material. All pipes shall be installed in such a manner as to insure full support of the pipe barrel over its entire length. After the pipe is adjusted for line and grade and the joint is made, the remainder of the pipe bedding shall be placed to the limits as shown on the Drawings. All bedding material shall be compacted 90% as measured by Test Method California 231, prior to placement of subsequent backfill.

When bedding material is selected material or imported sand, the pipe bedding backfill shall be brought to optimum moisture content and shall be placed by hand in layers not exceeding 3 inches in thickness to the centerline (string line) of the pipe and each layer shall be solidly tamped with the proper tools so as not to injure, damage, or disturb the pipe. Backfilling shall be carried on simultaneously on each side of the pipe to assure proper protection of the pipe.

Each lift shall be "walked in" and supplemented by slicing with a shovel to ensure that all voids around the pipe have been completely filled. Mechanical compaction such as "pogo sticks" or "wackers", as approved, shall be used for compaction of pipe zone.

77-1.03C(3) Initial Backfill

The remaining portion of the trench shall be backfilled, compacted, and/or consolidated by approved methods to obtain a 90% compaction as measured by CTM 231. Backfill shall be good sound earth, sand or gravel. Bituminous pavement, concrete, rock, or other lumpy material shall not be used in the backfill unless these materials are scattered and do not exceed 6 inches in any dimension and are not placed within 1½ feet of the surface. Material of perishable, organic matter, spongy or otherwise improper nature, shall not be used.

When backfill is placed mechanically, the backfill material shall be pushed onto the slope of the backfill previously placed and allowed to slide down into the trench. The Contractor shall not push backfill into the trench in such a way as to permit free fall of the material until at least 18 inches of cover is provided over the top of the pipe. Under no circumstances shall sharp, heavy pieces of materials be allowed to be

dropped directly onto the pipe or the tamped material around the pipe. Backfill shall be placed in layers not exceeding 8 inches and compacted by an approved method.

Heavy duty compacting equipment having an overall weight in excess of 125 pounds shall not be used until backfill has been completed to a depth of 2 feet over the top of the pipe.

If hydro-hammer is used for compaction of overlying materials, at least 4 feet of backfill must be placed over the top of pipe prior to its use. This is required to ensure that the pipe is not damaged.

77-1.03C(4) Final Backfill

Final backfill placed in trenches shall be compacted to a density of not less than 95% as measured by CTM 231. .

Backfill shall be placed in layers not exceeding 8 inches, compacted and brought up to the subgrade.

77-1.03D Excess Excavated Material

The Contractor shall make the necessary arrangements for and shall remove and dispose of all excess excavated material. All surplus material not required for backfill or fill shall be disposed of by the Contractor outside the limits of the public right-of-way and/or easements at no liability to the City. Excess material becomes property of the Contractor and is incidental to other items of work.

No excavated material shall be deposited on private property unless written permission from the owner thereof is secured by the Contractor. Before the City will accept the work as being completed, the Contractor shall file a written release signed by all property owners with whom he has entered into agreements for disposal of excess excavated material absolving the District from any liability connected therewith.

Full compensation for haul-off and disposal of native trench material is included in the prices paid per linear foot of the respective sizes, grades, and types of pipes listed in the contract, and no additional compensation will be paid.

77-1.03E Restoration of Damaged Surfaces or Property

If any pavement, trees, shrubbery, landscaping, fences, poles, or other property and surface structures have been damaged, removed, or disturbed by the Contractor, whether deliberately or through failure to carry out the requirements of the contract documents, state laws, municipal ordinances, or the specific direction of the City, or through failure to employ usual and reasonable safeguards, such property and surface structures shall be replaced or repaired in-kind at the expense of the Contractor.

77-1.03F Final Clean-Up

After backfill has been completed, the right-of-way shall be dressed smooth and left in a neat and presentable condition to the satisfaction of the Engineer.

77-1.04 PAYMENT

There is no separate bid item for the material, equipment, or labor used to backfill the trenches, holes, depressions, pits, etc. or restoration of surfaces caused by removing, salvaging, abandoning, destroying, modifying, adjusting, rehabilitating existing or installing new drainage or water facilities and no additional compensation will be allowed therefore. Backfill of trenches and restoration of surfaces shall be considered incidental to other items of work.

77-2 GENERAL FOR ELECTRICAL SYSTEMS

77-2.01 GENERAL

Section 77-2 includes general specifications for constructing electrical systems.

77-2.02 MATERIALS

The electrical equipment and materials must comply with section 86 and these special provisions.

77-2.03 CONSTRUCTION

Install electrical equipment per PG&E requirements, section 87, and these special provisions.

77-2.04 PAYMENT

Not Used

77-3 LIGHTING (CITY STREET)

77-3.01 GENERAL

77-3.01A Summary

Section 77-3 includes specifications for constructing lighting (City Street).

Lighting (City Street) includes removing, adjusting, or adding:

Foundations
Pull boxes
Junction boxes
Conduit
Conductors/cables
Poles
Luminaires
Photoelectric control
Fuse splice connectors

The components for lighting (city street) are shown on the project plans.

77-3.02 MATERIALS

77-3.02A Summary

The electrical equipment and materials must comply with Pacific Gas & Electric (PG&E) requirements and these special provisions.

The contractor must furnish materials from PG&E approved electric distribution materials manufactures.

77-3.02B Foundations

The contractor shall construct street light foundations according to PG&E requirements and these special provisions. Contractor shall install anchor bolts per PG&E requirements. See plans for pole foundation locations.

77-3.02C Pull Boxes

The pull box cover marking must include “PG&E”. See plans for pull box size and locations.

77-3.02D Poles

Streetlight poles shall be single-arm be galvanized steel poles per PG&E approved materials list. See plans for locations and sizes of poles.

77-3.03 CONSTRUCTION

Install electrical equipment per PG&E requirements and these special provisions.

No grout shall be placed between street light pole and top of foundation per PG&E requirements.

Install ground rod within 2ft of the outside of the streetlight pole foundation per PG&E requirements.

Paint all street lighting poles and luminaire mast arms Federal color code 34092.

77-3.04 PAYMENT

Not Used

77-4 WATER LINE RELOCATION

77-4.01 GENERAL

77-4.01A Summary

Section 77-4 includes specifications for relocating the El Dorado Irrigation District (EID) 10-inch water distribution pipeline across the Placerville Drive Bridge, installation of fire hydrants, and re-connecting commercial services. Waterline work shall comply with EID Construction Standards. Materials shall be NSF 60/61 approved.

Notify the City / EID at least 10 days before starting utility work, 21 days if a utility shutdown is required.

77-4.01B Submittals

77-4.01B(1) General

Submit a Bill of Materials listing materials and quantities

77-4.01B(2) Shop Drawings

Submit shop drawings for components of the water distribution pipeline for approval:

1. Pipe, fittings, and appurtenances
2. Seismic expansion assembly
3. Joints and mechanical coupling systems
4. Stops
5. Boxes
6. Valves
7. Service saddles
8. Trench details
9. Testing equipment

77-4.01B(3) Product Data, and Manufacturer's Instructions

Submit at least five copies of product data. Each copy shall be bound together and include an index stating equipment names, manufacturers, and model numbers. Two copies will be returned.

Product data shall include:

1. Catalog cuts including:
    a. Manufacturer's name
    b. Catalog or part number
    c. Size
    d. Capacity
    e. Finish
    f. Maintenance requirements
    g. Identification symbols
    h. Installation instructions
2. Performance data

Submit certification of factory hydrostatic testing for ductile iron pipe (IAW AWWA/ANSI C151/A21.51), valves (IAW AWWA C504), flanges (IAW AWWA C110/A21.10, C153/A21.53), couplings (IAW AWWA C228), and seismic expansion assemblies (IAW AWWA C600, C605, or ASTM D2774).

Valve data shall include:

1. Acknowledgement that products submitted comply with the standards referenced
2. Manufacturer's installation instructions
3. Valve pressure and temperature rating

4. Valve material of construction
5. Special linings
6. Valve dimensions and weight
7. Valve flow coefficient

Piping data shall include:

1. Acknowledgement that products submitted comply with the standards referenced
2. Copies of manufacturer's written directions regarding material handling, delivery, storage and installation
3. Schedule sheet showing compliance of system components
4. Technical product data on gaskets, pipe, fittings, and other components

Submit fabrication and/or layout drawings, including the following information:

1. Piping drawings (minimum scale 1-inch equals 10 feet) with dimensions of piping lengths, invert or centerline elevations of piping crossings, and acknowledgement of bury depth requirements.
2. Details of fittings, tapping locations, restrained joint segments, seismic joint segments, and related appurtenances.
3. Acknowledge designated valve or gate tag numbers, instrument tag numbers, pipe and line numbers.
4. Line slopes.

Informational submittals include:

1. Copies of pressure test results on piping systems.
2. Reports defining results of dielectric testing and corrective action taken.
3. Notification of time and date of piping pressure tests.

77-4.01B(4) Work Plans

Provide a written plan describing the method of water disposal for review.

77-4.01B(5) Closeout Submittals

77-4.01B(5)(a) Maintenance and Operation Manual

Submit a maintenance and operations manual before completion of the work. Submit 1 copy of PDF files on a CD or DVD and 2 copies in print format in 3-ring binders with tabbed dividers. The manual-must include authorized action submittals for water line work. Organize each binder as follows:

1. Index
2. Parts lists
3. Operating instructions
4. Maintenance instructions

Incomplete or inadequate documents will be returned for correction and resubmittal.

77-4.01B(5)(b) As-Built Drawings

Submit a set of as-built drawings within 30 days of installation. Each sheet of the plans shall be noted “AS-BUILT” or “RECORD DRAWING.”

Each drawing sheet must:

1. Be 24 by 36 inches
2. Be on a minimum of 20 pound paper
3. Have text a minimum nominal height of 5/32 inch

In addition, the as-built drawing submittal shall include:

1. 11 x 17 copy of the as-built plans
2. PDF electronic copy of the as-built plans

77-4.01C Quality Control and Assurance

77-4.01C(1) General

Notify the City / EID at least 10 days before testing.

77-4.01C(2) Testing Requirements

Furnish water, equipment, and other materials necessary for testing. Remove equipment and other materials after testing is complete. Dispose of water from testing.

Work, materials, and equipment are subject to the inspection and approval of City / EID. The City / EID shall have access to the work at all times during its construction and shall be furnished with every reasonable facility and assistance for ascertaining that the materials and the workmanship comply with the requirements and intent of the contract drawings and specifications. Any work constructed without inspection shall be uncovered for examination and properly restored. An Inspector shall have the authority to order the work entrusted to the inspector's supervision stopped until the City Public Works Director is notified and has determined and ordered that the work may proceed.

Provide electrical check between metallic non-ferrous pipe or appurtenances and ferrous elements of construction to assure discontinuity has been maintained. Wherever electrical contact is demonstrated by such test, locate the point or points of continuity and correct the condition.

All valves and similar appurtenances (blow-offs, etc.) shall be field tested to demonstrate proper operation. Field testing shall include operation of the device (on/off) at least twice and shall be witnessed by a City / EID representative before final acceptance.

77-4.01C(3) Cleaning

Clean water line as follows:

1. Clean interior of piping systems thoroughly before installing.
2. Maintain pipe in clean condition during installation.
3. Before joining piping, thoroughly clean and wipe joint contact surfaces and then properly dress and make joint.
4. Immediately before pressure testing, clean and remove grease, metal cuttings, dirt, or other foreign materials which may have entered the system.
5. At completion of work and prior to Final Acceptance, thoroughly clean work. Clean equipment, fixtures, pipe, valves, and fittings of grease, metal cuttings, and sludge which may have accumulated by operation of system, from testing, or from other causes.

77-4.01C(4) Hydrostatic Testing

Perform hydrostatic test on the waterline and appurtenances.

Test exposed piping systems upon completion of system. Test buried piping prior to backfilling. Assemble and test new piping systems before connection to existing pipe systems.

The hydrostatic test shall be a combined pressure and leakage test. Furnish the necessary equipment and material including the closure pieces and make the taps as required for the testing.

Isolate equipment in piping system with rated pressure lower than pipe test pressure.

Leave joints, including welds, exposed for examination during the test.

Provide temporary restraints for expansion joints for additional pressure load under test.

Notify EID 48 hours before each test.

1. Slowly fill the pipe with water at a rate such that the velocity does not exceed 3 inches per second applied over full area of the pipe
2. Expel all air from the pipe and allow to stand for a minimum of 24 hours under a slight pressure
3. After the pipe is filled with water, but before applying test pressure, maintain a pressure up to the operating pressure to allow for absorption by the pipe lining for 10 hours minimum
4. Apply and maintain the specified test pressure by continuous pumping for the entire test period
5. Test the pipe for 2 hours at a test pressure of 150 psi minimum, or 1-1/2 times the normal working pressure, whichever is greater
6. Measure accurately, within 1 ± gallon, the amount of water required to maintain the test pressure by using a barrel or similar device or metered to suction the water from the pump
7. The pressure shall not drop more than 5 psi below the test pressure
8. Allowable leakage is determined by the following formula

   $L = ND(P^{1/2})/28$

   where:

   L = allowable leakage, in cubic gallons per hour
   N = number of joints
   D = nominal diameter of pipe, in inches
   P = average test pressure during test, in psig (gauge)

9. Inspect, locate, and remedy leaks and retest and re-examine the system on business days between 8 a.m. and 5 p.m. unless authorized.
10. The tests shall be witnessed by a representative of EID.
11. Do not coat or insulate exposed piping until successful performance of pressure test.
12. Acknowledge satisfactory performance of tests and inspections in writing to City / EID before final acceptance.

77-4.01C(5) Chlorine Disinfection

Following successful completion of pressure testing, disinfect water pipelines in accordance with AWWA C651.

77-4.02 MATERIALS

77-4.02A General

All piping materials and coatings in contact with potable water shall be NSF Certified.

Coordinate flange dimensions and drillings between piping, valves, and equipment.

All materials shall meet or exceed applicable standards, including AWWA standards, latest edition.

77-4.02B Delivery, Storage and Handling

Lifting and handling of pipe shall be accomplished to prevent damage to the pipe coating. Do not use cable or chain slings. When not being handled, support the pipe on timber cradles or on properly prepared ground, graded to eliminate all rock points and to provide uniform support along the full length. Support pipe at all times during transportation to prevent distort or damage to the lining or coating.

Protect the interiors of pipes, fittings and valves against contamination. Pipe shall be transported, stored and handled in a manner to prevent the entrance of foreign material. Keep pipe, fittings and valves clean and dry.

Inspect each pipe and fitting, including protective coating before they are lowered into the trench. Repair abrasions, scars, and blemishes. If repair of satisfactory quality cannot be achieved, replace damaged material immediately. Clean ends of the pipe thoroughly.

Any pipe or fitting, damaged shall be removed from the job site.

Use proper implements, tools, and facilities for the safe and proper protection of the pipe. Do not drop or dump pipe from trucks or into trenches.

77-4.02C Hardware

Bolts shall comply with AWWA/ANSI C207 and ASTM A193, Grade B7 with fluoropolymer/PTFE coating.

Bolt ends shall project 1/4 to 1/2 inch beyond surface of nuts. Bolt dimensions shall comply with ANSI/ASME B18.2.1 and shall be regular pattern for square pattern for hexagonal.

Nuts shall be hexagonal. Nut material shall comply with ASTM A19/A194M.

Nut dimensions shall comply with ANSI/ASME B18.21, heavy, semi-finished pattern.

For mechanical coupling system, utilize pipe thickness and grade under AWWA C606.

Polyethylene encasement shall be tube style and comply with AWWA ANSI C1 05/A21.5. Sheet encasement is not acceptable.

End of bolts and nuts on fittings and valves used with 12 inch and smaller pipe shall be covered with SAP-SEALS.

77-4.02D Trench Materials

77-4.02D(1) Backfill

Trench backfill shall conform to EID Standard Detail W-10

77-4.02D(2)

Pipe Bedding

Pipe bedding shall conform to EID Standard Detail W-10

77-4.02E Tracer Wire and Warning Tape

Tracer wire shall be 12-gauge copper wire.

Warning tape shall be 2-inch-wide, inert, fade-resistant plastic film resistant to acids, alkalis and other components likely to be encountered in soil. Tape shall be marked "Water" and shall be installed 12 inches above the pipe in the trench.

77-4.02F Corrosion Protection Wrap

Corrosion protection wrap shall be used for buried ductile iron pipe, cast or ductile iron fittings, valves, couplings, sleeves and transitions. Wrap shall be at least 8 mil high-density polyethylene sheeting sealed with duct tape or equivalent system per AWWA C105. Wrap shall completely enclose bolted joints and metals susceptible to corrosion.

77-4.02G Pipe

77-4.02G(1) Ductile Iron Pipe

Ductile iron pipe shall be Thickness Class 50 per AWWA C151, cement mortar lined complying with ANSI/AWWA C104/A21.4 and the latest revision of ANSI/AWWA C151/A21.51. Cement mortar lining shall be double thickness. Pipe exterior for buried piping shall be coated with minimum 1 mil asphaltic coating in accordance with AWWA C104. Ductile iron pipe shall be rated for a working pressure of 350 psi. Pipe shall be furnished with restrained joints. Pipe shall be furnished in 20 foot standard lengths.

Exposed piping shall be field abrasive blasted according to SSPC-SP-10 to provide a surface profile of 1.5-2 mils. Pipe shall receive two coats of epoxy to a total thickness of 13 mils minimum.

77-4.02G(2) Ductile Iron Pipe Fittings

Ductile iron pipe connections to seismic expansion assemblies shall be a flanged joint complying with ANSI/AWWA C115/A21.15. Flange gaskets shall be rated for a working pressure of 350 psi. Fasteners shall comply with Section 75-2, except that stainless steel fasteners may not be used.

All fittings shall have an asphaltic coating complying with ANSI/AWWA C151/A21.51 and a cement mortar lining complying with ANSI/AWWA C104/A21.4.

All other ductile iron pipe fitting joints shall be push-on, restrained type complying with ANSI/AWWA C110/A21.10 and be rated for a working pressure of 350 psi unless shown otherwise. Push-on, restrained type joints may use proprietary dimensions and restrained joint locking systems.

Fully-restrained repair sleeves shall consist of an EBAA Iron Megalug Series 1100 with mechanical joint gasket, EBAA Iron Mega-Coupling Series 300, or approved equal.

At a minimum, fittings shall be of the same class and rating as the pipe.

Gaskets for flange fittings shall comply with the requirements of ANSI/AWWA C115/A21.15.

77-4.02G(3) Polyethylene Tubing or Wrapping

Polyethylene tubing for buried water pipeline shall comply with ANSI/AWWA C105/A21.5.

77-4.02H Joints

All pipe joints shall be restrained. Provide reaction blocking, anchors, joint harnesses, or other acceptable means for preventing movement of piping caused by forces in or on buried piping tees, wye branches, plugs, or bends. Above ground pipe runs shall have approved "Flex-lock" type restrained joints.

77 -4.02I Boxes

Valve boxes shall be two-piece adjustable cast iron box, Christy G5 or equal, with Christy Cast Iron cover or approved equal. Lid shall be marked "water" on the outside of the lid. Valve box shall comply with EID Standard Detail No. W-12, W-13, and W-14.

77 -4.02J Valves

77 -4.02J(1) General

Valves and valve boxes shall be installed at the locations shown on the plans.

In installations where the operating nut is at least 4 feet below finished grade, extend the operating nut to 3 feet or less below ground level.

Furnish accessories required to provide a completely operable valve.

77-4.02J(2) Gate Valves

Gate valves shall be resilient seated complying with AWWA C509 with a 200 psi or more working pressure. The interior and exterior of the valve body shall be fusion-bonded epoxy coated with a NSF 61 approved coating material. Valves shall have non-rising stems with a 2-inch operating nut. Stuffing boxes shall be o-ring seal type with minimum of two rings located in the stem above the thrust collar. Low friction tongue reduction thrust bearings shall be located above and below the stem collar. Gate valves shall be Mueller Series 2360, CLOW Resilient Wedge, American Flow Control Series 2500, or approved equal.

77-4.02K Seismic Expansion Assembly

Expansion joints/flexible couplings shall be selected by manufacturer to accommodate anticipated settlement with foundation design and movement from seismic events. Joints shall consist of an expansion joint designed and cast as an integral part of a ball and socket type flexible joint. Expansion

joints shall be double ball type, EBAA Flex-Tend, or approved equal. Joints shall be flanged per AWWA C110 and constructed of ASTM A536 ductile iron. Exterior surface shall be coated with minimum 6 mils of fusion bonded epoxy under AWWA C116. Flexible couplings shall be Romac, Dresser, Smith Blair, or approved equal.

77-4.02L Service Saddles

Service clamps (saddles) for 1-inch, 1½-inch, 2-inch, and 4-inch taps shall be made of bronze and shall fit the contour of the pipe on which they are to be installed. Reducer brushings shall be bronze.

Saddles for PVC C900 pipe shall be brass body, single-wide bolted brass band, female iron pipe thread outlet, Ford Model S91 or Mueller Series H-13000.

77-4.02M Fire Hydrant

Fire hydrant shall conform to EID Standards Details W-17 and W-18

77-4.03 CONSTRUCTION

77-4.03A General

Excavation and backfill shall comply with EID Construction Standards

Manufacturers' recommendations, warnings and safeguards shall be followed. The use of diamond tipped blades is prohibited in any cut-off saw application. Only abrasive blades may be used with cut-off saws.

Tracer wire shall be installed on main line. Installations shall comply with EID Standard Detail W-19.

Separation from sanitary sewers and sewer facilities shall comply with the "California Waterworks Standards" in Section 64630, Title 22, of the California Administrative Code.

Pipes shall be capped at the end of each work day to prohibit foreign matter from entering pipes.

77-4.03B Pipe Preparation

Take the following steps to prepare the pipe before the installation:

1. Clean the pipe bell. Remove sand, dirt, grease, and debris. Swab pipe bell with liquid hypochlorite solution as necessary.
2. Check the gasket. Seat gasket uniformly. Clean gasket area as necessary. Do not remove factory installed gaskets from bells. Swab gasket with liquid hypochlorite solution as necessary.
3. Clean the spigot end of the pipe. Wipe spigot end clean with a clean rag and liquid hypochlorite solution.

77-4.03B(1) Exterior Bridge Piping Installation

Support piping from the bridge superstructure as shown.

77-4.03B(2) Expansion Assembly Installation

The expansion joint shall be installed as shown. The expansion joints shall be flanged.

Install expansion joints in accordance with manufacturer’s recommendations and as determined by EID.

77-4.03B(3) Exterior Buried Piping Installation

When entering or leaving structures or passing beneath the vertical projection of a structure wall, use flexible joint piping with first joint installed within 2 feet of point where pipe enters or leaves structure. Install second joint between 4 and 6 feet from first joint.

When entering or leaving structures with buried mechanical joint piping, install joint within 2 feet of point where pipe enters or leaves structure. Install second joint between 4 and 6 feet from first joint.

Install expansion devices as necessary to allow expansion and contraction movement.

Lay pipe in trench as follows:

1. Excavate and backfill trench per EID construction standards
2. Clean each pipe length thoroughly and inspect for compliance to specifications.
3. Grade trench bottom and excavate for pipe bell and lay pipe on trench bottom.
4. Install gasket or joint material according to manufacturer's directions after joints have been thoroughly cleaned and examined.
5. Except for first two joints, before making final connections of joints, install two full sections of pipe with earth tamped alongside of pipe or final with bedding material placed.
6. Lay pipe in only suitable weather with good trench conditions.
7. Seal open end of line with watertight plug if pipe laying is stopped.
8. Remove water in trench before removal of plug.

Line up push-on joint piping as follows:

1. Lay piping on route lines.
2. Deflect from straight alignments or grades by vertical or horizontal curves or offsets.
3. Observe maximum deflection values stated in manufacturer's written literature.
4. Provide special bends when specified or where required alignment exceeds allowable deflections stipulated.
5. Install shorter lengths of pipe in such length and number that angular deflection of any joint, as represented by specified maximum deflection, is not exceeded.

77-4.03C Pipe Laying

Install pipe, fittings, and appurtenances in compliance with the manufacturer's instructions. Lay pipe to the lines and grades shown. Do not lay pipe in water or when trench conditions are unsuitable.

Proceed pipe laying from upgrade with the spigot ends of bell and spigot pipe pointing in the direction of the flow. Lay each piece true to line and grade as to form a close concentric joint with the adjoining pipe and to prevent sudden offsets in the flow line. As the work progresses, clean the pipe interior from all dirt and debris. When the work is not in progress, plug or cap open ends of pipe and fittings.

As pipe laying proceeds, the trench may be enlarged at each bell spigot joint site to facilitate the jointing operations. Do not excavate the trench at joint site more than of sufficient size for the purpose. Do not excavate more than 6 joint sites ahead of actual pipe laying. Excavated joint site shall provide a uniform bearing under the full length of the pipe to a width of at least 60 percent of the internal diameter of the pipe.

Insert spigot end into the pipe until it contacts the gasket uniformly. Alignment of pipe shall be straight. Apply steady pressure by hand or suitable mechanical means, such as bar and block, come-along, hydraulic jack, until the spigot slips through the gasket. Do not use backhoe bucket. Protect bells and gaskets from damage.

77-4.03D Pipeline Alignment

Curves on the pipeline alignment shall be constructed by deflections at the joints. The deflections shall not exceed 75 percent of the maximum allowable by the pipe manufacturer.

Where horizontal or vertical curves in the alignment cannot be constructed by joint deflection of standard pipe lengths, use one of the following options:

1. Shorter pipe lengths and allowable joint deflection as specified
2. Special mitered joints
3. Standard or special fabricated bends

Maintain a distance from the sewer as shown.

77-4.03E Valves

77-4.03E(1) General

Install gate valves or drop-in valves for pipe as shown.

Valves shall be thoroughly cleaned of foreign material, and inspected for proper operation, both opening and closing, before installation. Valves shall be properly set and installed with the stems set vertical.

Jointing shall comply with the requirements in ANSI/AWWA C600.

Epoxy-coated valves shall be wrapped in polyethylene bags before backfilling.

Valve joints shall be tested with the adjacent pipeline. If the test shows leaking joint, disconnect and reconnect the valve. Retest the valve with the adjacent pipeline

Clean the faces of flanges thoroughly before flanged joints are assembled. After cleaning, insert the gasket and tighten the nuts uniformly around the flange. If the test shows leaking flange, loosen the nuts and reset or replace the gasket and retighten the nuts. Retest the flange and the valve with the adjacent pipeline.

77-4.03E(2) Valve Box

Center and set the valve box plumb over the valve nuts. Set valve box shall not transmit shock or stress to the valve. Cut the stem extensions to the proper length where the valve box set at grade does not ride on the stem extension.

Use pipe trench backfill shown for the backfill around the valve box. Backfill shall be compacted as described for pipe trench backfill and shall not damage or displace the valve box from proper alignment or grade. Misaligned valve boxes shall be excavated, plumbed, and backfilled

Backfill shall be the same as specified for the adjacent pipe. Backfill around the valve boxes shall be compacted to a density equal to that described for the adjacent trench and to prevent damage or displace the valve box from proper alignment or grade. Misaligned valve boxes shall be removed, reset, and backfilled.

77-4.03F Connections to Existing Water Lines and Shut Down Periods

Connections to existing water lines and facilities must be scheduled and coordinated with the EID to result in a minimum interruption of existing services. The Contractor must notify business owners in writing at least 72 hours prior to scheduled shut downs. Shut downs will only be allowed from 12am to 5am and on weekends.

The Contractor shall notify the EID 72 hours in advance of making connections to existing water lines and such connections must be made only at a time approved and authorized by the EID. When connecting to an existing pipe, the Contractor shall pothole and verify the type and size of pipe and its location a minimum of 20 days in advance of laying new pipe to that location.

77-4.04 PAYMENT

Not used

77-5 GRAVITY SEWER LINE RELOCATION

77-5.01 GENERAL

77-5.01A Summary

Section 77-5 includes specifications for relocating the City 20-inch gravity trunk line from the Placerville Drive Bridge.

Trench shoring and bracing for sewer installation will be required to avoid impacting existing trees, utilities and other facilities. Any shoring or bracing required for sewer installation is included in the payment for various items of work and no separate payment will be made for shoring or bracing.

Sewer line construction shall comply with City Construction Standards.

77-5.01B Submittals

77-5.01B(1) General

Submit a bill of materials listing materials and quantities.

77-5.01B(2) Shop Drawings

Submit shop drawings and product data for approval for:

1. Pipe (Casing and Carrier Pipes)
2. Precast manholes and bases
3. Epoxy coating
4. Materials
5. Reinforcing steel
6. Fabricated items
7. Detailed piping layouts
8. Trench details
9. Trench safety plan
10. Testing equipment
11. CCTV

77-5.01B(3) Product Data and Manufacturer's Instructions

Submit at least five copies of product data. Each copy shall be bound together and include an index stating equipment names, manufacturers, and model numbers. Two copies will be returned.

Product data must include:

1. Catalog cuts including:
    a. Manufacturer's name
    b. Catalog or part number
    c. Size
    d. Capacity
    e. Finish
    f. Maintenance and adjustment requirements
    g. Identification symbols
    h. Installation instructions
2. Performance data
3. Installation instructions

77-5.01B(4) Work Plans

Provide a written plan describing the method of water disposal for review.

77-5.01B(5) Closeout Submittals

77-5.01B(5)(a) As-Built Drawings

Submit a set of as-built drawings within 30 days of installation. Each sheet of the plans shall be noted "AS-BUILT" or "RECORD DRAWING."

Each drawing sheet must:

1. Be 24 by 36 inches
2. Be on a minimum of 20 pound paper
3. Have text a minimum nominal height of 5/32 inch

In addition, the as-built drawing submittal shall include:

1. 11 x 17 copy of the as-built plans
2. PDF electronic copy of the as-built plans

77-5.01C Quality Control and Assurance

77-5.01C(1) General

Notify the City at least 10 days before testing.

77-5.01C(2) Testing Requirements

Sewers and sewer services shall be tested by the Contractor and observed by the City for obstructions and leakage. Provide 48 hours' notice to the City before sewer and manhole testing. Where the leakage of the sewer exceeds the allowed amount, correct it immediately and reduce the amount of leakage to a quantity within the specified amount. Stop individual leaks that are observed.

After the manholes have been set to grade and are complete in place, the Contractor shall provide necessary testing equipment and test the manholes. Additional testing may be required by the City.

After balling and flushing and before acceptance of the project, pull a deflection gage or mandrel through each section of pipe. The gage must be designed to resist movement through the pipe when a deflection of 3 percent of the base inside diameter of the pipe is reached.

77-5.01C(3) Tests for Obstructions

After construction to subgrade and after manholes are raised to grade, clean sewer lines by balling and flushing. Control the ball by a tag line or rope, or sewer rods, and move the ball slowly through the sewer. The ball must be of the inflatable, grooved type and inflated to have a snug fit in the pipe.

Place a swivel between the rope and the ball to allow the ball to rotate and cause the proper flushing action.

Remove or repair obstructions or irregularities. Perform testing, cleaning, and repairing to the satisfaction of the City. Provide necessary labor, materials, and equipment for the test and dispose of waste, including water.

77-5.01C(4) Tests for Leakage

After laying, backfilling, and compaction to subgrade, test sewers for leakage. Take necessary precautions to prevent joints from separating while the pipelines or their appurtenances are being tested. Correct excess leakage and repair damage to the pipe and its appurtenances or to structures indicated by, or resulting from, the test. Leakage testing shall be in accordance with City Construction Standards.

If the test fails, find and repair leaks to the satisfaction of the City.

77-5.01C(5) Manhole Testing

Vacuum test manholes for leakage after assembly of the manhole but before backfill. Perform the test and supply test equipment. Vacuum procedure shall be in accordance with City Construction Standards

77-5.01C(6) TV Inspection

Inspect sewer pipes, including service sewers (from the property line cleanout to the wye), and manholes after backfill by means of an inline sewer TV camera. The TV camera used must have color with a 270-degree articulating lens. Take care to make sure that the channel of manholes is televised as well as the first few feet of the sewer pipe leaving the manhole.

Turn in records and video to the City. The video shall be compatible with the City's viewing equipment. Irregularities in construction or grade must be corrected before acceptance of the project. Sewer lines are subject to viewing via CCTV by the City.

1. The Contractor shall submit still images captures on JPEG or TIFF format on a flash drive, CD or DVD.
2. The Contractor shall submit CCTV inspection digital color video files in MPG-1 format compatible with Windows XP.
3. The Contractor's CCTV equipment shall include video camera with transporter, a color video monitor, video recording equipment with voice recording capabilities, cables, power sources, and all other equipment necessary to perform a CCTV inspection in accordance with this Specification.
4. The CCTV camera shall be specifically designed for the sanitary sewer. The camera shall be waterproof and shall have O-ring sealed windows and double-sealed body. The camera shall be a solid state color TV unit with a panning and rotational camera head with three hundred sixty (360°) degrees scan of the circumference, and tilt to allow viewing up to one hundred thirty-five (135°) degrees back from the axis of the camera. The camera shall provide: remote adjustable optical focus and automatic light compensation iris with remote override; camera controller with remote focus, iris and auto centering control; minimum total zoom capability of twenty (20X) times; and an adjustable lighting system to provide clear visual of surface fractures and defects without glare. The camera shall produce an image with no- geometrical distortion of the image. The camera and monitor shall be able to produce a minimum four hundred sixty (460) lines of horizontal resolution and four hundred (400) lines of vertical resolution. Camera focal distance shall be adjustable through a range of 1/2-inch to infinity. The camera shall be mounted on a tractor suitably sized for each pipe diameter to be inspected. The camera shall be equipped with a sufficient cable to allow video inspection for each manhole to manhole pipe segment in a single setup.
5. The camera transport drive assembly shall be specifically manufactured for the pipe material and diameters being inspected. Distance shall be measured in both forward and reverse and shall be to the nearest 0.1 feet.
6. The Contractor shall utilize a computerized data logging and retrieval system capable of recording, indexing and processing data and printing CCTV Inspection Reports and graphics in accordance with these Specifications and the Contract. The system shall be capable of recording, storing and playing video, and shall be capable of capturing still images of defects and other significant visual information with associated screen text identifiers. The system shall be capable of recording color video in high-resolution standard MPG-1 digital format on a CD or DVD. The digital video files shall be compatible with Windows XP. The system shall be able to produce CCTV inspection data and reports in accordance with these specifications.
7. CD's or DVD's shall be new, and labeled with the project name, date of CCTV inspection, and CD or DVD number. The CD's or DVD's shall be sequentially numbered in the order CCTV inspections were performed. Each CD or DVD shall be submitted in a plastic protective case.

Before televising sewer pipes, service sewers, and manholes, sufficient clean water shall be placed into the pipes to fill sags and dips. Place a water stream into the pipe until it enters the next downstream manhole. Fix a weighted target of known size in front of the TV camera to allow the measurement of the depth of standing water.

Correct deviations from the plans or specifications.

Sags or dips in the pipes or manholes creating standing water deeper than 0.05 ft are not acceptable. Offset joints due to rubber “band” couplings which are greater than half the pipe wall thickness are also considered unacceptable.

77-5.02 MATERIALS

77-5.02A General

All materials shall meet or exceed applicable standards, including AWWA standards, latest edition.

77-5.02B Delivery, Storage, and Handling

Lifting and handling of pipe shall be accomplished to prevent damage to the pipe coating. Do not use cable or chain slings. When not being handled, support the pipe on timber cradles or on properly prepared ground, graded to eliminate all rock points and to provide uniform support along the full length. Support pipe at all times during transportation to prevent distort or damage to the lining or coating.

Protect the interiors of pipes, fittings and valves against contamination. Pipe shall be transported, stored and handled in a manner to prevent the entrance of foreign material. Keep pipe, fittings and valves clean and dry.

Inspect each pipe and fitting, including protective coating before they are lowered into the trench. Repair abrasions, scars, and blemishes. If repair of satisfactory quality cannot be achieved, replace damaged material immediately. Clean ends of the pipe thoroughly.

Any pipe or fitting, damaged shall be removed from the job site.

Use proper implements, tools, and facilities for the safe and proper protection of the pipe. Do not drop or dump pipe from trucks or into trenches.

77-5.02C Hardware

Bolts shall comply with AWWA/ANSI C207 and ASTM A193, Grade B7 with fluoropolymer/PTFE coating.

Bolt ends shall project 1/4 to 1/2 inch beyond surface of nuts. Bolt dimensions shall comply with

ANSI/ASME B18.2.1 and shall be regular pattern for square pattern for hexagonal.

Nuts shall be hexagonal. Nut material shall comply with ASTM A19/A194M.

Nut dimensions shall comply with ANSI/ASME B18.21, heavy, semi-finished pattern.

For mechanical coupling system, utilize pipe thickness and grade under AWWA C606.

Polyethylene encasement shall be tube style and comply with AWWA ANSI C1 05/A21.5. Sheet encasement is not acceptable.

End of bolts and nuts on fittings and valves used with 12 inch and smaller pipe shall be covered with SAP-SEALS.

77-5.02D Trench Materials

77-5.02D(1) Backfill

77-5.02D(1)(a) Outside Asphalt Road Sections

Materials for backfill from 12-inches above the top pf the pipe to subgrade, shall be free from organic matter, debris, and rocks larger than 6-inches in diameter or length. The City shall be the sole judge of conformance of backfill material to this specification.

Backfill material shall generally conform to the following gradation:

Sieve Size	Percent Passing
6”	100
3”	50
#4	35 – 100
#30	20 - 100

77-5.02D(1)(b) Within Asphalt Road Sections

Trench shall be backfilled with Class II AB or controlled low strength material (CLSM) as approved by the Engineer.

77-5.02D(2) Pipe Bedding

Material for the pipe zone shall conform to the following: Class 2 Aggregate Base – Shall conform with the specifications of Section 26 - Aggregate Bases – of the State Specifications.

77-5.02E Tracer Wire and Warning Tape

Tracer wire shall be 12-gauge copper wire.

Warning tape shall be 2-inch-wide, inert, fade-resistant plastic film resistant to acids, alkalis and other components likely to be encountered in soil. Tape shall be marked "Sewer" and shall be installed 12 inches above the pipe in the trench.

77-5.02F Corrosion Protection Wrap

Corrosion protection wrap shall be used for buried ductile iron pipe, cast or ductile iron fittings, valves, couplings, sleeves and transitions. Wrap shall be at least 8 mil high-density polyethylene sheeting sealed with duct tape or equivalent system per AWWA C105. Wrap shall completely enclose bolted joints and metals susceptible to corrosion.

77-5.02G Manhole

Material shall be in accordance with City Construction Standards. Manholes shall receive an epoxy coating.

77-5.02H Ductile Iron Pipe

Sewer pipe shall be ductile iron. Pipe shall be furnished with restrained joints and Perma-Shield 431 lining.

Exposed pipe shall be field abrasive blasted according to SSPC-SP-10 to provide a surface profile of 1.5-2 mils. Pipe shall receive two coats of epoxy to a total thickness of 13 mils minimum.

77-5.02I Welded Steel Casing

Welded steel casing shall be ¼-inch thick.

77-5.02J Casing Spacers

Casing spacers shall be Calpico Model M series galvanized casing insulator polyethylene runners or approved qual.

77-5.03 CONSTRUCTION

77-5.03A General

Entries into active sanitary sewer manholes are confined-space entries; comply with U.S. and California OSHA confined-space requirements.

Excavation and backfill shall comply with City Construction Standards

Pipes shall be capped at the end of each workday to prohibit foreign matter from entering pipe.

77-5.03B Pipe Preparation

Take the following steps to prepare the pipe before the installation:

1. Clean the pipe bell. Remove sand, dirt, grease, and debris. Swab pipe bell with liquid hypochlorite solution as necessary.
2. Check the gasket. Seat gasket uniformly. Clean gasket area as necessary. Do not remove factory installed gaskets from bells. Swab gasket with liquid hypochlorite solution as necessary.
3. Clean the spigot end of the pipe. Wipe spigot end clean with a clean rag and liquid hypochlorite solution.

77-5.03B(1) Casing Spacer Installation

Casing spacers shall be used to prevent the ductile iron pipe bell from touching the casing and to maintain a uniform space between the pipe and casing interior.

Install casing spacers in accordance with manufacturer's recommendations and as determined by the City.

Casing spacers should be uniformly tightened so that approximately ½-inch space exists at each flange of the casing spacers. The studs (bolts) at each flange shall be tightened uniformly resulting in a torque reading of 60 inch-pounds (5 foot-pounds).

77-5.03B(2) Exterior Buried Piping Installation

When entering or leaving structures or passing beneath the vertical projection of a structure wall, use flexible joint piping with first joint installed within 2 feet of point where pipe enters or leaves structure. Install second joint between 4 and 6 feet from first joint.

When entering or leaving structures with buried mechanical joint piping, install joint within 2 feet of point where pipe enters or leaves structure. Install second joint between 4 and 6 feet from first joint.

Install expansion devices as necessary to allow expansion and contraction movement.

Lay pipe in trench as follows:

1. Excavate and backfill trench.
2. Clean each pipe length thoroughly and inspect for compliance to specifications.
3. Grade trench bottom and excavate for pipe bell and lay pipe on trench bottom.
4. Install gasket or joint material according to manufacturer's directions after joints have been thoroughly cleaned and examined.
5. Except for first two joints, before making final connections of joints, install two full sections of pipe with earth tamped alongside of pipe or final with bedding material placed.
6. Lay pipe in only suitable weather with good trench conditions.
7. Seal open end of line with watertight plug if pipe laying is stopped.
8. Remove water in trench before removal of plug.

77-5.03C Excavation and Backfill

Excavation and backfill must comply with City Construction Standards.

If the trench is constructed in unsuitable material as determined by the City, the minimum trench width must be the outside diameter of the pipe plus 2.5 pipe diameters on either side of the pipe.

Grade and prepare the bottom of the trench to provide a firm and uniform bearing through the length of the pipe barrel.

Make suitable excavation to receive the bell of the pipe so the joint does not bear upon the bottom of the trench. Make adjustments to the line and grade by scraping away or filling in with approved initial backfill material under the body of the pipe and not by wedging or blocking. Use shovel slicing to ensure adequate initial backfill will support the bottom of the pipe.

As required by the Trench Construction Safety Orders of the California Construction Safety Orders of the Division of Occupational Safety and Health, bracing and shoring must be installed in trenches of 5 feet or greater depth to ensure the safety of workers and to protect and facilitate the work.

Support the excavation so the excavation will be safe and the ground alongside the excavation will not slide or settle, and that existing improvements will be protected from damage.

Remove supports after construction is completed. Withdraw supports in a manner that will prevent the caving of the sides of the excavation. Fill openings caused by the removal of supports with compacted suitable material.

77-5.03D Pipe Laying

Install pipe, fittings, and appurtenances in compliance with the manufacturer's instructions. Lay pipe to the lines and grades shown. Do not lay pipe in water or when trench conditions are unsuitable.

Proceed pipe laying from upgrade with the spigot ends of bell and spigot pipe pointing in the direction of the flow. Lay each piece true to line and grade as to form a close concentric joint with the adjoining pipe and to prevent sudden offsets in the flow line. As the work progresses, clean the pipe interior from all dirt and debris. When the work is not in progress, plug or cap open ends of pipe and fittings.

As pipe laying proceeds, the trench may be enlarged at each bell spigot joint site to facilitate the jointing operations. Do not excavate the trench at joint site more than of sufficient size for the purpose. Do not excavate more than 6 joint sites ahead of actual pipe laying. Excavated joint site shall provide a uniform bearing under the full length of the pipe to a width of at least 60 percent of the internal diameter of the pipe.

Insert spigot end into the pipe until it contacts the gasket uniformly. Alignment of pipe shall be straight. Apply steady pressure by hand or suitable mechanical means, such as bar and block, come-along, hydraulic jack, until the spigot slips through the gasket. Do not use backhoe bucket. Protect bells and gaskets from damage.

Maintain a distance from the water pipeline as shown.

77-5.03E Placing Pipe in Casing

Placing of pipe in casing shall be as shown. Casing shall not be filled with sand following pipe placement.

77-5.03F Manhole

Manhole installation shall be in accordance with City Construction Standards. Contractor to construct cone, top ring, and cover to match finished grade.

77-5.03G Pipe

Protect pipe during handling against impact shocks and free fall.

Chipped or cracked pipes will be rejected.

Set grade stakes and check each pipe length for grade lines. Use three consecutive joints shown on the same rate of slope in common to detect variations from straight grade. If a discrepancy exists, stop work and correct grades to the satisfaction of the City. The horizontal alignment of the pipe must not vary more than 0.10 foot from the design alignment. Immediately before backfilling the trench, the pipe flowline must not vary more than 0.05 foot above or below the design grade at any point.

Lay pipe without break upgrade from structure to structure, with bell end upgrade for bell and spigot pipe. Lay pipe on a firm bed with a true bearing for the length between bell holes. Do not wedge or block up segment of the pipe. Clean bell and spigot and inside of pipe before the joint is made and take care that nothing but the joint-making material enters the joints. Lay pipe true to line and grade to form a watertight, concentric joint with the adjoining pipe.

Do not connect new sewer line to an existing sewer system until the new sewer lines are balled, flushed, and satisfactorily tested, and approved by the City. If a construction connection is approved, place a plug at the connection to prevent water or debris from entering the existing sewer system. The plug must remain in place until construction is completed and the City has authorized its removal.

Remove debris and testing water from the new system before its entrance into the existing system. If this is not possible, removal must be at the nearest clean-out facility of the existing system.

77-5.03H Connections to Existing Sewer Lines and Shut Down Periods

Connections to existing sewer lines and facilities must be scheduled and coordinated with the City to result in a minimum interruption of existing services. The Contractor must notify property owners in writing at least 48 hours prior to scheduled shut downs. Shut downs will only be allowed from 12am to 5am and on weekends.

The Contractor shall notify the City 48 hours in advance of making connections to existing sewer lines and such connections must be made only at a time approved and authorized by the Engineer. When connecting to an existing pipe, the Contractor shall pothole and verify the type and size of pipe and its location a minimum of 20 days in advance of laying new pipe to that location.

77-5.04 PAYMENT

Not used.

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78 INCIDENTAL CONSTRUCTION

Add to the beginning of section 78-4.04C(3)(a):

Stain the bridge abutments and retaining walls surfaces such that they closely resemble the colors and pattern of the wall at Highway 50 above the eastbound off-ramp for Exit 45 Ray Lawyer Drive as shown in the image below.

Replace paragraphs in section 78-23.03 with:

Adjust frames, covers, grates, and manholes by lowering before cold planning and surface preparation, and raising after final paving or surfacing. Before opening the lane to traffic, either (1) complete permanent paving or surfacing or (2) temporarily fill any depressions with HMA or cold mix asphalt.

Where paving or surfacing work is shown, do not adjust to final grade until the adjacent pavement or surfacing is complete.

For a structure that is to be raised, remove the cover or frame and trim the top of the structure to provide a suitable foundation for the new material.

Instead of using new materials similar in character to those in the existing structure, you may use raising devices to adjust a manhole to grade. Before starting paving work, measure, fabricate, and install raising devices. Raising devices must:

1. Comply with the specifications for Section 75 except that galvanizing is not required
2. Have a shape and size that matches the existing frame
3. Be match marked by painting identification numbers on the device and corresponding structure
4. Result in an installation that is equal to or better than the existing one in stability, support, and non-rocking characteristics
5. Be fastened securely to the existing frame without projections above the surface of the road or into the clear opening

Manholes, valve boxes, monument boxes, etc., shall be brought to grade, as shown on the plans, after final pavement lift has been placed.

Where manholes are to be lowered, remove the top portion to an authorized depth. Adjust the manhole using the taper needed to match the finished grade.

All existing manhole frames, lids or gates, valve boxes, monument boxes, and any other style of box or lid shall be reused, unless otherwise noted on the Project Plans. If any damages occur in the process of adjusting iron to grade then at Contractor's expense must supply new manhole frames, lids or gates, valve boxes, monument boxes, and any other style of box or lid.

If a manhole cover is unstable or noisy under traffic, place a coil of asphalt-saturated rope, a plastic washer, or asphaltic compound on the cover seat. Before placement, obtain authorization for use of the material.

Concrete collars must comply with section 90 and the Project Plans.

Replace paragraphs in section 78-23.04 with:

Utilities adjusted to grade shall be paid under the various Adjust Utility to Grade and Adjust Manhole Frame and Cover bid items, delineated by utility type. The payment quantity for the Adjust Utility to Grade bid items is the number of utilities adjusted to grade determined by actual count.

There is no separate bid item for temporary lowering of frames, covers, boxes, grates, manholes rims, etc., so the payment for temporary lowering shall be considered included in the various bid items on the Bid Schedule and no additional compensation will be allowed therefore.

Additional payment will not be made for new iron or utility boxes installed as a result of contractor damage during initial removal.

No payment will be made for adjusting frames, covers, boxes, grates, or manholes not indicated for adjustment on the Project Plans.

If adjusting frames, covers, boxes, grates, manhole rims, etc. not indicated for adjustment on the Project Plans is required, then payment for adjusting these materials is included in the payment for the type of pavement or type of surfacing involved.

If adjusting frames, covers, boxes, grates, or manholes not indicated for adjustment on the Project Plans is required, and if pavement or surfacing is not involved, payment for adjusting these materials is included in the payment of various other bid items, and no additional payment will be made therefore.

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79 RESERVED

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80 FENCES

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Universal TAU-M Parallel Crash Cushion, TL-2 (4 element)	Barrier Systems by Lindsay	MASH

The Contractor must furnish the Engineer one copy of the manufacturer's plan and parts list for the crash cushion system to be installed.

The Contractor must provide the Engineer with a Certificate of Compliance from the manufacturer in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications. The Certificate of Compliance must certify that the crash cushion systems furnished conform to the contract plans and specifications, conform to the prequalified design and material requirements, and were manufactured in conformance with the approved quality control program.

83-4.02C Construction

Alternative crash cushion system must be furnished and installed as shown on the plans and in conformance with these special provisions.and the manufacturer's installation instructions.

Surplus excavated material remaining after the crash cushion system has been installed must be disposed of in a uniform manner along the adjacent roadway where designated by the Engineer.

84-4.01D Payment

Transition panel and other related crash cushion system items and materials are included in the price paid for Alternative Crash Cushion System and no other compensation will be provided therefor.

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84 MARKINGS

Add to section 84-2.02A:

Pavement Markings and Traffic Stripes shall be thermoplastic, unless otherwise specified on the Project Plans.

Green Traffic Stripe and Green Pavement Marking shall be methyl methacrylate (MMA).

Add to section 84-2.02B:

Green Pavement Markings shall conform to the California Manual on Uniform Traffic Control Devices 2014 Edition Revision 4 (Mach 29, 2019), including the Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA-14) which specifies design parameters for the green color.

Add to section 84-2.04:

The payment quantity for the 4” Methyl Methacrylate Paint Traffic Stripe (Green Traffic Stripe) bid item is the length measured along the line of the green stripe.

Green pavement marking covering the width of the bike lane as shown on the Project Plans shall be paid for under the Methyl Methacrylate Paint Pavement Marking (Green Pavement Marking) bid item. The payment quantity for the Methyl Methacrylate Paint Pavement Marking (Green Pavement Marking) bid item is the area measured parallel to the ground surface, not including the additional quantity used for overlap.

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85 RESERVED

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88 RESERVED

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92 ASPHALT BINDERS

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93 RESERVED

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94 ASPHALTIC EMULSIONS

^^

95 EPOXY

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96 GEOSYNTHETICS

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97–98 RESERVED

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