

**COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION**

**CONTRACT DOCUMENTS
INCLUDING
NOTICE TO BIDDERS, SPECIAL PROVISIONS, PROPOSAL, AND CONTRACT**

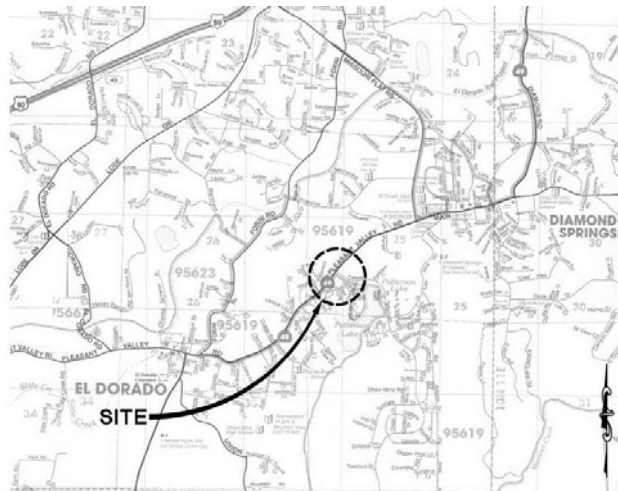
FOR CONSTRUCTION OF

**PLEASANT VALLEY RD (SR 49) / PATTERSON DR INTERSECTION
SIGNALIZATION**

On State Route 49 in El Dorado County California

CONTRACT No. PW [09-30425](#)
CIP No. [73320](#)

**03-ED-49
PM 10.6 to 10.9**



FOR USE WITH

STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS 2010
STANDARD PLANS 2010

BID OPENING DATE: [October 14, 2013](#)

at

El Dorado County Board of Supervisors Office
330 Fair Lane
Placerville, CA

COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

PLEASANT VALLEY RD (SR 49) / PATTERSON DR INTERSECTION SIGNALIZATION

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The various portions of the Contract Documents have been prepared under the direction of the following licensed Civil Engineer(s), in accordance with California Business and Professions Code § 6735.

ROADWAY IMPROVEMENTS:



County of El Dorado, Community Development Agency, Transportation Division
Registered Civil Engineer



Monika Pedigo
8/13/13



TRAFFIC SIGNAL IMPROVEMENTS:



County of El Dorado, Community Development Agency, Transportation Division
Registered Civil Engineer

COMMUNITY DEVELOPMENT AGENCY TRANSPORTATION DIVISION
COUNTY OF EL DORADO, STATE OF CALIFORNIA

PLEASANT VALLEY RD (SR 49) / PATTERSON DR INTERSECTION SIGNALIZATION

CONTRACT NO. PW 09-30425, CIP NO. 73320

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**COUNTY OF EL DORADO, CALIFORNIA
COMMUNITY DEVELOPMENT AGENCY,
TRANSPORTATION DIVISION**

NOTICE TO BIDDERS

NOTICE IS HEREBY GIVEN by the County of El Dorado, State of California, that sealed bids for work in accordance with the Project Plans (Plans) and Contract Documents designated:

PLEASANT VALLEY ROAD (SR 49) / PATTERSON DRIVE INTERSECTION SIGNALIZATION

CONTRACT NO. PW 09-30425

CIP No. 73320

will be received by the Clerk to the Board of Supervisors, at the Board of Supervisors Office, 330 Fair Lane, Placerville, California, until **Monday, October 14, 2013 at 2:00 PM**, at which time bids will be publicly opened and read by the County of El Dorado Community Development Agency, Transportation Division.

No Bid may be withdrawn after the time established for receiving bids or before the award and execution of the Contract, unless the award is delayed for a period exceeding sixty (60) calendar days. Bids must be executed in accordance with the instructions given and forms provided in the bound Contract Documents furnished by the County of El Dorado community Development Agency, Transportation division. The Proposal shall not be detached and shall be submitted with the Contract Documents bid package in its entirety. All bids must be clearly marked on the envelope:

**"PROPOSAL FOR PLEASANT VALLEY ROAD (SR 49) / PATTERSON DRIVE INTERSECTION
SIGNALIZATION"**

CONTRACT NO. PW 09-30425, CIP No. 73320

TO BE OPENED Monday, October 14, 2013 at 2:00 PM

LOCATION / DESCRIPTION OF THE WORK: The project is located in County of El Dorado near the Town of Diamond Springs. The Work to be done is shown on the Plans, and generally consists of, but is not limited to:

- A. Widening of portions of Pleasant Valley Road (State Route 49) and portions of Patterson Drive, roadway improvements, traffic signal installation, including stage construction to facilitate grading, clearing and grubbing, permanent and temporary fence removal and construction, drainage removal and construction, concrete and steel drainage inlets, grade ditch, excavation, rock base, HMA paving, signing and striping, cold planing, permanent and temporary erosion control. Other items or details not mentioned above, that are required by the Plans, Standard Specifications, or these Special Provisions, shall be performed, constructed or installed.
- B. Bids are required for the entire Work described herein.
- C. The contract time shall be ONE HUNDRED TWENTY-FIVE (125) WORKING DAYS
- D. For bonding purposes the anticipated project cost is less than \$ 1,800,000.
- E. A pre-bid meeting is scheduled for this project on **September 30, 2013 at 2:00 PM**, at the County of El Dorado Community Development Agency, Transportation Division, 2441 Headington Road, Placerville,

Pleasant Valley Road (SR 49) / Patterson Drive Intersection Signalization
Contract No. PW 09-30425 / CIP No. 73320
September 10, 2013

County of El Dorado
Notice to Bidders
N-1

CA. The meeting will be held in the downstairs conference room. Attendance at the pre-bid meeting is not mandatory.

OBTAINING OR INSPECTING CONTRACT DOCUMENTS:

The Contract Documents book and Plans may be examined at the County of El Dorado Community Development Agency, Transportation Division or may be purchased in person or by mail from the Community Development Agency, Transportation Division, 2850 Fairlane Court, Placerville, California, 95667. The purchase price of each set of Contract Documents book and Plans (half size plans are included in each set) is ONE HUNDRED AND THIRTY dollars (\$130.00) and is not refundable.

To receive Contract Documents book and Plans by Federal Express, send request and payment prior to shipping and include an additional THIRTY dollars (\$30.00), for a total of ONE HUNDRED AND SIXTY dollars (\$160.00), to include shipping and handling. For information regarding the purchase of the Contract Documents book and Plans contact Sheri Woodford at (530) 621-5941. **Only Contract Documents books and project Plans purchased from the Community Development Agency, Transportation Division will be acceptable for bid submittal.**

Supplemental Project Information consists of the contract cross-sections. The Informational Handout consists of the "Geotechnical Engineering Study for Pleasant Valley at Patterson Drive Signalization" by Youngdahl Consulting, Group Inc. dated September 2011; "Bi-Annual 2012 Groundwater Monitoring Report-Former Cheaper! Store #182, 130 Pleasant Valley Road, Diamond Springs, El Dorado County (APN#329-280-12: Case# 90096)" by H2GeoL Consultants, dated March 15, 2012; "Revised Soil Vapor Workplan, Tower Mart #182, 130 Pleasant Valley Rd, Diamond Springs, CA 95619, El Dorado File #00077, RWQCB Case #090096", by West Associates Env. Engineers, Inc, dated May 2012; "No Further Action Request (NFAR) and Case Closure Summary, Tower Mart #182, 130 Pleasant Valley Rd, Diamond Springs, CA 95619, El Dorado File #00077, RWQCB Case #090096", by West Associates Env. Engineers, Inc, dated Dec 2011; "Sampling and Analysis of Aerially Deposited Lead, Road Improvement Projects, Pleasant Valley Rd (SR-49) at Patterson Dr Intersection Signalization, Milepost 10.6 to 10.9, El Dorado County, CA", by EDC Env. Management Dept., dated Sept 12, 2011; "Phase I Environmental Site Assessment, Pleasant Valley Road at Patterson Drive, Diamond Springs, CA" by Youngdahl, dated July 2011; Applicable Revised Standard Plans and New Standard Plans.

Supplemental Project Information and Informational Handout will be provided to Contract document holders as pdf files on the DOT's website: <http://www.edcgov.us/Government/DOT/Bids.aspx>.

CONTRACTORS LICENSE CLASSIFICATION:

Bidders shall be properly licensed to perform the Work pursuant to the Contractors' State License Law (Business and Professions Code Section 7000 et seq.) and shall possess a **CLASS A** license or equivalent combination of Classes required by the categories and type of Work included in the Contract Documents and Plans at the time bids are submitted, and shall maintain a valid license through completion and acceptance of the Work, including the guarantee and acceptance period. Failure of the successful Bidder to obtain proper adequate licensing for an award of the Contract shall constitute a failure to execute the Contract and shall result in the forfeiture of the Bidder's security.

BUSINESS LICENSE:

The County Business License Ordinance provides that it is unlawful for any person to furnish supplies or services, or transact any kind of business in the unincorporated territory of County of El Dorado without possessing a County business license unless exempt under County Ordinance Code Section 5.08.070. The Bidder to whom an

award is made shall comply with all of the requirements of the County Business License Ordinance, where applicable, prior to beginning work under this Contract and at all times during the term of this Contract.

SUBCONTRACTORS LIST:

Each Proposal shall have listed therein the name, contractor's license number and address of each subcontractor to whom the bidder proposes to subcontract portions of the work in an amount in excess of 0.5 % of the total bid or \$10,000, whichever is greater, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code. The Bidder shall also describe in the Subcontractor Listing the work to be performed by each subcontractor listed. The work to be performed by the subcontractor shall be shown by listing the bid item number, bid item description, and portion of the work to be performed by the subcontractor in the form of a percentage calculated by dividing the work to be performed by the subcontractor by the respective bid item amount(s) (not by the total bid price). The percentage of each bid item subcontracted may be submitted with the Bidder's bid or sent via email or fax to Janel Gifford, County of El Dorado Community Development Agency, Transportation Division, email-Janel.Gifford@edcgov.us, Fax-(530) 626-0387 by 4:00 p.m. on the first business day after the bid opening. The email or fax shall contain the name of each subcontractor submitted with the Bidder's bid along with the bid item number, the bid item description, and the percentage of each bid item subcontracted, as described above. At the time bids are submitted, all listed subcontractors shall be properly licensed to perform their designated portion of the work. The bidder's attention is directed to other provisions of the Act related to the imposition of penalties for failure to observe its provisions by using unauthorized subcontractors or by making unauthorized substitutions.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION:

The County of El Dorado affirms that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation.

Bidder will take all necessary affirmative steps to assure that minority firms, women's business enterprises and labor surplus area firms are used when possible.

NONDISCRIMINATION:

Comply with Chapter 5 of Division 4 of Title 2, California Code of Regulations and the following:

**NOTICE OF REQUIREMENT FOR NONDISCRIMINATION PROGRAM
(GOVERNMENT CODE SECTION 12990)**

Comply with Section 7-1.01A(4), "Nondiscrimination", of the Standard Specifications, which is applicable to all nonexempt State contracts and subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth therein. The specifications are applicable to all nonexempt State construction contracts and subcontracts of \$5,000 or more.

Comply with the fair employment practices provisions in the *Draft Agreement* contained in these Contract Documents that will apply to this Contract.

PREVAILING WAGE REQUIREMENTS:

Contractor's attention is directed to the requirements of Division 2 Part 7, Chapter 1 of the California Labor Code, including but not limited to Sections 1773, 1773.1, 1773.2, 1773.6, and 1773.7. The general prevailing rate of wages in the county in which the Work is to be done has been determined by the Director of the California Department of Industrial Relations.

Interested parties can obtain the current wage information by submitting their requests to the Department of Industrial Relations, Division of Labor Statistics and Research, PO Box 420603, San Francisco CA 94142-0603, Telephone (415) 703-4708 or by referring to the website at <http://www.dir.ca.gov/OPRL/PWD>. The rates at the time of the bid advertisement date of a project will remain in effect for the life of the project in accordance with the California Code of Regulations, as modified and effective January 27, 1997.

Copies of the general prevailing rate of wages in the county in which the Work is to be done are also on file at the County of El Dorado Community Development Agency, Transportation Division's principal office, and are available upon request.

In accordance with the provisions of Labor Code 1810, eight (8) hours of labor shall constitute a legal day's work upon all work done hereunder, and Contractor and any subcontractor employed under this Contract shall conform to and be bound by the provisions of Labor Code Sections 1810 through 1815.

This project is subject to the requirements of Title 8, Chapter 8, Subchapter 4.5 of the California Code of Regulations including the obligation to furnish certified payroll records directly to the Compliance Monitoring Unit under the Labor Commissioner within the Department of Industrial Relations Division of Labor Standards Enforcement in accordance with Section 16461.

BID SECURITY:

A bid security shall be provided with each bid. Bid security shall be in an amount of not less than ten percent (10%) of the total amount of the Bid for bid and shall be cash, a certified check or cashier's check drawn to the order of the County of El Dorado or a Bidder's Bond executed by a surety satisfactory to the County of El Dorado **on the form provided in the Proposal section of these Contract Documents (do not detach the form).**

BID PROTEST PROCEDURE:

The protest procedure is intended to handle and resolve disputes related to the bid award for this project pursuant to Title 49 Code of Federal Regulations Part 18 Section 18.36 (b) (12)(i)-(ii) and County of El Dorado policies and procedures. A protestor must exhaust all administrative remedies with the County of El Dorado before pursuing a protest with a Federal Agency. Reviews of protests by the Federal agency will be limited to:

- (i.) Violations of Federal law or regulations and the standards of 49 CFR Part 18 Section 18.36 (b) (12) (i)-(ii). Violations of State of California or local law will be under the jurisdiction of the State of California or the County of El Dorado; and
- (ii.) Violation of the County of El Dorado's protest procedures for failure to review a complaint or protest. Protests received by the Federal agency other than those specified above will be referred to the County of El Dorado.

The protest procedure is an extension of the formal bid process and allows those who wish to protest the recommendation of an award after bid the opportunity to be heard.

Policy:

Upon completion of the bid evaluation, the County of El Dorado Community Development Agency, Transportation Division will notify all bidders of the recommendation of award, the basis therefore, and the date and time on which the recommendation for award will be considered and acted upon by the Board of Supervisors. All bidders may attend the Board of Supervisors meeting at the time the agenda item is considered, address the Board of Supervisors, and be heard.

Procedure:

If a bidder wishes to protest the award, this is the procedure:

1. The County of El Dorado Community Development Agency, Transportation Division will review the bids received in a timely fashion under the terms and conditions of the Notice to Bidders, and notify the bidders in writing, at the fax number designated in the Proposal, of its recommendation including for award or rejection of bids (“All Bidders Letter”).
2. Within five (5) working days from the date of the “All Bidders Letter,” the bidder protesting the recommendation for award must submit a letter of protest to and must be received by the County of El Dorado Community Development Agency, Transportation Division, Attention Janel Gifford, 2850 Fairlane Court, Placerville, CA 95667, and state in detail the basis and reasons for the protest. The bidder must provide facts to support the protest, including any evidence it wishes to be considered, together with the law, rule, regulation, or criteria on which the protest is based.
3. If the County of El Dorado Community Development Agency, Transportation Division finds the protest to be valid, it may modify its award recommendations and notify all bidders of that decision. If the Community Development Agency Transportation Division does not agree with the protest, or otherwise fails to resolve the protest, the Community Development Agency Transportation Division will notify the bid protestor and all interested parties of its decision and the date and time that the recommendation for award will be agendized for the Board of Supervisors’ consideration and action. The County of El Dorado Community Development Agency, Transportation Division will also include in its report to the Board of Supervisors the details of the bid protest.
4. The bidder may attend the Board of Supervisors meeting at which the recommendation and bid protest will be considered. The Board of Supervisors will take comment from the bidder, staff, and members of the public who wish to speak on the item. In the event that the bidder is not in attendance at that time, the bid protest may be dismissed by the Board of Supervisors without further consideration of the merits; and

The decision of the Board of Supervisors on the bid protest will be final.

AWARD OF CONTRACT:

Bids will be considered for award by the Board of Supervisors. The County of El Dorado reserves the right after opening bids to reject any or all bids, to waive any irregularity in a bid, or to make award to the lowest responsive, responsible Bidder and reject all other bids, as it may best serve the interests of the County.

As a condition of award, the successful Bidder will be required to submit bonds and evidence of insurance prior to execution of the Agreement by the County. Failure to meet this requirement shall constitute abandonment of the Bid by the Bidder and forfeiture of the Bidder’s security. Award will then be made to the next lowest, responsive, responsible Bidder.

RETAINAGE FROM PAYMENTS:

The Contractor may elect to receive one hundred percent (100%) of payments due under the Contract from time to time, without retention of any portion of the payment by the County, by depositing securities of equivalent value with the County in accordance with the provisions of Section 22300 of the Public Contract Code. Securities eligible for deposit hereunder shall be limited to those listed in Section 16430 of the Government Code, or bank or savings and loan certificates of deposit.

PROJECT ADMINISTRATION:

All communications relative to the Contract Documents book and Plans shall be directed to Janel Gifford in County of El Dorado Community Development Agency, Transportation Division, 2850 Fairlane Court, Placerville, CA 95762, telephone: (530) 621-5974, Janel.Gifford@edcgov.us. No oral responses to any questions concerning the content of the Plans and Contract Documents will be given. All responses will be in the form of written addenda to the Contract Documents book and Plans or written responses to bidders' inquiries. Responses to bidders' inquiries and addenda will be posted on the County of El Dorado Community Development Agency, Transportation Division website at www.edcgov.us/Government/DOT/Bids.aspx. It is the bidders' responsibility to check this website for responses and addenda during the bid period.

The list of plan holders will also be posted on the County of El Dorado Community Development Agency, Transportation Division website at www.edcgov.us/Government/DOT/Bids.aspx.

BY ORDER OF the Director of the Community Development Agency, County of El Dorado, State of California.

Authorized by the Board of Supervisors on September 10, 2013, at Placerville, California.

By _____
Kimberly A. Kerr, Interim Transportation Director
Acting Community Development Agency Director
County of El Dorado

STANDARD PLANS LIST

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

ABBREVIATIONS, LINES, SYMBOLS AND LEGEND

- A10A Abbreviations (Sheet 1 of 2)
- A10B Abbreviations (Sheet 2 of 2)
- A10C Lines and Symbols (Sheet 1 of 3)
- A10D Lines and Symbols (Sheet 2 of 3)

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
- RSP A24A Pavement Markings - Arrows
- A24B Pavement Markings - Arrows and Symbols
- RSP A24C Pavement Markings - Symbols and Numerals
- A24D Pavement Markings - Words
- RSP A24E Pavement Markings - Words, Limit and Yield Lines
- RSP A24F Pavement Markings - Crosswalks

EXCAVATION AND BACKFILL

- A62D Excavation and Backfill - Concrete Pipe Culverts
- A62DA Excavation and Backfill - Concrete Pipe Culverts - Indirect Design Method
- A62F Excavation and Backfill - Metal and Plastic Culverts

OBJECT MARKERS, DELINEATORS, CHANNELIZERS AND BARRICADES

- A73B Markers
- A73C Delineators, Channelizers and Barricades

CONCRETE BARRIER TYPE 60 SERIES

- A76G Concrete Barrier Type 60S

METAL BEAM GUARD RAILING - STANDARD RAILING SECTIONS

- A77A1 Metal Beam Guard Railing - Standard Railing Section (Wood Post with Wood Block)
- A77A2 Metal Beam Guard Railing - Standard Railing Section (Steel Post with Notched Wood or Notched Recycled Plastic Block)
- A77B1 Metal Beam Guard Railing - Standard Hardware
- A77C1 Metal Beam Guard Railing - Wood Post and Wood Block Details
- A77C2 Metal Beam Guard Railing - Steel Post and Notched Wood Block Details

METAL BEAM GUARD RAILING - TYPICAL LAYOUTS FOR STRUCTURES

- A77F1 Metal Beam Guard Railing - Typical Layouts for Structure Approach

RAILING TO BRIDGE RAILINGS, ABUTMENTS AND WALLS

- A77J3 Metal Beam Guard Railing - Connections to Abutments and Walls
- A77J4 Metal Beam Guard Railing - Transition Railing (Type WB)
- A77K1 Metal Beam Guard Railing - Connections to Bridge Railings with Sidewalks Details No. 1
- A77K2 Metal Beam Guard Railing - Connections to Bridge Railings with Sidewalks Details No. 2

FENCES

RSP A85	Chain Link Fence
A85A	Chain Link Fence Details
RSP A85B	Chain Link Fence Details
A86	Barbed Wire and Wire Mesh Fences
CURBS, DRIVEWAYS, DIKES, CURB RAMPS AND ACCESSIBLE PARKING	
A87A	Curbs and Driveways
A87B	Hot Mix Asphalt Dikes
A88A	Curb Ramp Details

PAVEMENTS

RSP P74	Pavement Edge Treatments
RSP P75	Pavement Edge Treatments - Overlays
RSP P76	Pavement Edge Treatments - New Construction

DRAINAGE INLETS, PIPE INLETS AND GRATES

D72	Drainage Inlets
RSP D73	Drainage Inlets
D74B	Drainage Inlets
D74C	Drainage Inlet Details
D75A	Steel Pipe Inlets
D75C	Pipe Inlets - Ladder and Trash Rack Details
RSP D77B	Grate Details No. 2

GUTTER AND INLET DEPRESSIONS

D78A	Gutter Depressions
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CONSTRUCTION LOADS ON CULVERTS AND STRUT DETAILS

D88	Construction Loads on Culverts
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FLARED END SECTIONS

D94A	Metal and Plastic Flared End Sections
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PIPE COUPLING AND JOINT DETAILS

D97E	Corrugated Metal Pipe Coupling Details No. 5 - Standard Joint
D97F	Corrugated Metal Pipe Coupling Details No. 6 - Positive Joint

TEMPORARY CRASH CUSHIONS, RAILING AND TRAFFIC SCREEN

T1A	Temporary Crash Cushion, Sand Filled (Unidirectional)
T1B	Temporary Crash Cushion, Sand Filled (Bidirectional)
T2	Temporary Crash Cushion, Sand Filled (Shoulder Installations)
T3A	Temporary Railing (Type K)
T3B	Temporary Railing (Type K)

TEMPORARY TRAFFIC CONTROL SYSTEMS

RSP T13	Traffic Control System for Lane Closure on Two Lane Conventional Highways
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TEMPORARY WATER POLLUTION CONTROL

T56	Temporary Water Pollution Control Details (Temporary Fiber Roll)
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)

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		RETAINING WALLS
B3-6	Retaining Wall Details No. 2	
		UTILITY OPENING
B7-11	Utility Details	
		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, NOTES AND ABBREVIATIONS
ES-1A	Electrical Systems (Legend, Notes and Abbreviations)	
ES-1B	Electrical Systems (Legend, Notes and Abbreviations)	
ES-1C	Electrical Systems (Legend, Notes and Abbreviations)	
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		ELECTRICAL SYSTEMS - TELEPHONE DEMARCATION CABINETS
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ES-4E	Electrical Systems (Signal Faces and Emergency Vehicle Detector Mountings)	
		ELECTRICAL SYSTEMS - DETECTORS
ES-5A	Electrical Systems (Detectors)	
ES-5B	Electrical Systems (Detectors)	
ES-5C	Electrical Systems (Detector, Pedestrian Push Button and Signs)	
ES-5D	Electrical Systems (Curb Termination and Handhole)	
		ELECTRICAL SYSTEMS - SIGNAL AND LIGHTING STANDARD, TYPE TS, AND PEDESTRIAN PUSH BUTTON POST
ES-7A	Electrical Systems (Signal and Lighting Standard, Type TS, and Pedestrian Push Button Post)	
		ELECTRICAL SYSTEMS - SIGNAL AND LIGHTING STANDARDS
ES-7B	Electrical Systems (Signal and Lighting Standard - Type 1 and Equipment Numbering)	
ES-7E	Electrical Systems (Signal and Lighting Standard - Case 3 Signal Mast Arm Loading, Wind Velocity = 100 mph and Signal Mast Arm Lengths 15' to 45')	
ES-7F	Electrical Systems (Signal and Lighting Standard - Case 4 Signal Mast Arm Loading, Wind Velocity = 100 mph and Signal Mast Arm Lengths 25' to 45')	
		ELECTRICAL SYSTEMS - FLASHING BEACONS
ES-7J	Electrical Systems (Flashing Beacons)	
		ELECTRICAL SYSTEMS - SIGNAL AND LIGHTING STANDARD DETAILS
ES-7M	Electrical Systems (Signal and Lighting Standard - Detail No. 1)	
ES-7N	Electrical Systems (Signal and Lighting Standard - Detail No. 2)	

ES-7O	Electrical Systems (Signal and Lighting Standard - Detail No. 3) ELECTRICAL SYSTEMS - SIGNAL AND LIGHTING, MISCELLANEOUS ATTACHMENT
ES-7R	Electrical Systems (Signal and Lighting, Miscellaneous Attachment) ELECTRICAL SYSTEMS - PULL BOX
RSP ES-8A	Electrical Systems (Pull Box)
RSP ES-8B	Electrical Systems (Traffic Rated Pull Box)
ES-11	Electrical Systems (Foundation Installations) ELECTRICAL SYSTEMS - SPLICING, FUSE RATING, KINKING AND BANDING DETAILS
ES-13A	Electrical Systems (Splicing Details)
ES-13B	Electrical Systems (Fuse Rating, Kinking and Banding Detail) ELECTRICAL SYSTEMS - EXTINGUISHABLE MESSAGE SIGN
ES-14B	Electrical Systems (Control Assembly Wiring Diagrams) ELECTRICAL SYSTEMS - CLOSED CIRCUIT TELEVISION POLE AND FOUNDATION DETAILS
ES-16B	Electrical Systems (Closed Circuit Television, 25' to 45' Pole)

**DEPARTMENT OF TRANSPORTATION
COUNTY OF EL DORADO, STATE OF CALIFORNIA**

**PLEASANT VALLEY ROAD (SR49) / PATTERSON DRIVE
INTERSECTION SIGNALIZATION**

PW# 09-30425

SPECIAL PROVISIONS

DIVISION I GENERAL PROVISIONS

1 GENERAL

Add to section 1-1.01:

Bid Items and Applicable Sections

Item code	Item description	Applicable section
072007	EXCAVATION SAFETY	7
128651A	PORTABLE CHANGEABLE MESSAGE SIGN	15
149001A	PREPARE FUGITIVE DUST PLAN	14
150745A	REMOVE FLASHING SIGNAL POLE	15
150807A	REMOVE STORM DRAIN CULVERT (18" DIAM OR LESS)	15
150807B	REMOVE STORM DRAIN CULVERT (33" X 48" CMPA)	15
150812A	REMOVE PIPE (WATERLINE)	15
150828A	REMOVE UTILITY BOX	15
151287A	SALVAGE FLASHING SIGNAL POLE & LUMINAIRE	15
151508A	RECONSTRUCT MANHOLE (EXISTING SSMH)	15
151531A	RECONSTRUCT FENCE (chain link with slats)	15
152453A	ADJUST WATER BLOW-OFF VALVE BOX TO GRADE	15
153103A	COLD PLANE ASPHALT CONCRETE PAVEMENT (Minimum depth = 0.10')	15
153103B	COLD PLANE ASPHALT CONCRETE PAVEMENT (Minimum depth = 0.20')	15
153121A	REMOVE SIGNAL POLE FOUNDATIONS	15
153215A	REMOVE CONCRETE (Curbs, Gutters and Driveways)	15
153218	REMOVE CONCRETE (Sidewalk)	15
192059	STRUCTURE EXCAVATION (TYPE DC)	14
394090A	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)(SIDEWALK & RAMP)	39
510502A	TYPE OS INLET	51
510502B	TYPE GO INLET	51
510502C	TYPE G3 INLET	51
510526	MINOR CONCRETE (BACKFILL)	62
520101A	BAR REINFORCING STEEL (PCC Slab, Arch Culvert)	52
700639A	36" GMP (0.109" THICK)	70
705001A	49" X 33" STEEL FLARED END SECTION	70

730045A	MINOR CONCRETE (VALLEY GUTTER)	73
801150A	10' WIRE MESH GATE (58" TALL, TYPE BW)	80
850111A	PAVEMENT MARKER, BLUE (RETROREFLECTIVE)	85

Add to section 1-1.07B:

APN: Assessor's Parcel Number.

AT&T: Communications utility company.

Replace the definition of Bid Item List in section 1-1.07B with:

Bid Item List: List of bid items and the associated quantities. The Proposal Pay Items and Bid Price Schedule in the Proposal section is the Bid Item List. The verified Bid Item List is Exhibit A Contractor's Bid and Bid Price Schedule in the fully-executed contract for the project.

Add to section 1-1.07B:

CDFW: California Department of Fish and Wildlife

CEQA/ CEQA DOCUMENT: California Environmental Quality Act. CEQA document for this project is the "Initial Study/ Mitigated Negative Declaration for the Pleasant Valley Road (State Route 49)/ Patterson Drive Intersection Project", dated April 2009.

Comcast: Communications utility company.

Contract acceptance: County Clerk/Recorder's recordation of the executed written Notice of Acceptance of a completed Contract.

Contract approval: Execution of the Contract by the Board of Supervisors, County of El Dorado.

Contract award package: The Notice of Award of Contract letter, two originals of the Agreement, Payment and Performance bond forms, and other forms the successful Bidder must complete for Contract Execution.

Add to section 1-1.07B:

Contract Documents: See Article 2 "Contract Documents" of the Draft Agreement.

County: County of El Dorado, a political subdivision of the State of California.

Replace the corresponding definitions in section 1-1.07B with:

Department or Department of Transportation: The County of El Dorado, Community Development Agency, Transportation Division or Department of Transportation as defined in St & Hwy Code § 20 and authorized in St & Hwy Code § 90; its authorized representatives.

Engineer– The Director of Transportation for County of El Dorado, or authorized representative (Resident Engineer) responsible for the Contract's administration; the Resident Engineer's authorized representatives.

Delete estimated cost in section 1-1.07B.

Add to section 1-1.07B:

EID: El Dorado Irrigation District

Delete informal-bid contract in section 1-1.07B.

Add to section 1-1.07B:

Laboratory: The established laboratory of the County of El Dorado, Community Development Agency, Transportation Division or laboratories authorized by the Engineer to test materials and work involved in the contract.

Office Engineer: The Office Engineer in the County of El Dorado, Community Development Agency, Transportation Division or, depending on context, Caltrans Office Engineer

PG&E: Pacific Gas and Electric utility company.

Proposal: The Proposal section of the Contract Documents book, or the Bidder's bid.

PUE: Public Utility Easement.

Replace the corresponding definitions in section 1-1.07B under "specifications" definitions with:

2. revised standard specifications: New or revised standard specifications. These specifications are in a section titled *Revised Standard Specifications* of a book titled *Contract Documents including Notice to Bidders, Special Provisions, Proposal, and Contract*.

3. special provisions: Specifications specific to the project. These specifications are in a section titled *Special Provisions* of a book titled *Contract Documents including Notice to Bidders, Special Provisions, Proposal, and Contract*.

Add to section 1-1.07B:

State: The State of California, including its agencies, departments, or divisions, whose conduct or action is related to the work, or County of El Dorado, a political subdivision of the State, and it's Department of Transportation

Structure Design: The Transportation Division for County of El Dorado, Community Development Agency or Offices of Structure Design of the California Department of Transportation.

Add to section 1-1.07B:

TCE: Temporary Construction Easement.

Add to section 1-1.09:

This project is in a freeze-thaw area.

Add to section 1-1.11:

Reference or agency or department unit	Web site	Address	Telephone no.
County of El Dorado Department of Transportation	http://www.edcgov.us/DOT/	2850 Fairlane Court Placerville, CA 95667	
County of El Dorado Department of Transportation Office Engineer		2850 Fairlane Court Placerville, CA 95667	(530) 621-5974

Replace section 1-1.12 with:

Make checks payable to County of El Dorado. Use the bond forms provided in the book titled *Contract Documents including Notice to Bidders, Special Provisions, Proposal, and Contract*.

Supplemental Project Information

Means	Description
Included in <i>Information Handout</i>	<ul style="list-style-type: none"> • “Geotechnical Engineering Study for Pleasant Valley at Patterson Drive Signalization” by Youngdahl Consulting, Group Inc. dated September 2011 • “Bi-Annual 2012 Groundwater Monitoring Report-Former Cheaper! Store #182, 130 Pleasant Valley Road, Diamond Springs, El Dorado County (APN#329-280-12: Case# 90096)” by H2GeoL Consultants, dated March 15, 2012; “Revised Soil Vapor Workplan, Tower Mart #182, 130 Pleasant Valley Rd, Diamond Springs, CA 95619, El Dorado File #00077, RWQCB Case #090096”, by West Associates Env. Engineers, Inc, dated May 2012 • “No Further Action Request (NFAR) and Case Closure Summary, Tower Mart #182, 130 Pleasant Valley Rd, Diamond Springs, CA 95619, El Dorado File #00077, RWQCB Case #090096”, by West Associates Env. Engineers, Inc, dated Dec 2011 • “Sampling and Analysis of Aerially Deposited Lead, Road Improvement Projects, Pleasant Valley Rd (SR-49) at Patterson Dr. Intersection Signalization, Milepost 10.6 to 10.9, El Dorado County, CA”, by EDC Env. Management Dept., dated Sept 12, 2011 • “Phase 1 Environmental Site Assessment, Pleasant Valley Road at Patterson Drive, Diamond Springs, CA, by Youngdahl, dated July 2011” • Applicable Revised Standard Plans and New Standard Plans.
Available as specified in the <i>Notice to Bidders</i>	<ul style="list-style-type: none"> • Cross Sections

Add to section 2-1.12B(1):

The Contractor shall also carry out applicable requirements of 49 CFR Part 18 in the award and administration of this UNITED STATES DEPARTMENT OF TRANSPORTATION (USDOT)-assisted Contract. The applicable requirements of 49 CFR Part 18 are as follows:

- (a) *Contracting with small and minority firms, women's business enterprise and labor surplus area firms.*
- (1) Contractor will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.
 - (2) Affirmative steps shall include:
 - (i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
 - (ii) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

- (iii) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;
- (iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;
- (v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and
- (vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (a)(2) (i) through (v) of this section.

Bidder will take all necessary affirmative steps to assure that minority firms, women's business enterprises and labor surplus area firms are used when possible.

Replace section 2-1.15 "Disabled Veterans Business Enterprise" with:

2-1.15 RESERVED

Replace section 2-1.18 "Small Business and Non-Small Business Subcontractor Preferences" with:

2-1.18 RESERVED

Delete the 1st and 2nd paragraph of section 2-1.24.

Replace section 2-1.27 "California Companies" with:

2-1.27 RESERVED

Replace the 1st paragraph of section 2-1.33A with:

Complete the Proposal in the Contract Documents book. Submit the Proposal bound to the Contract Documents book. Failure to submit the Proposal bound to the Contract Documents book results in a non-responsive bid.

Delete the 3rd paragraph of section 2-1.33A.

Replace the 2nd paragraph of section 2-1.33C and added paragraph shown in RSS for section 2-1.33C with:

The Subcontractor List in the Proposal must show the name, contractor's license number, and address of and work portions to be performed by each subcontractor listed. The work portion to be performed must be shown by listing the bid item number, bid item description, and portion of the work to be performed by the subcontractor in the form of a percentage calculated by dividing the work to be performed by the subcontractor by the respective bid item amount(s) (not by the total bid price). You may submit the percentage of each bid item subcontracted with your Proposal or email or fax to Office Engineer, email-Janel.Gifford@edcgov.us, Fax-(530) 626-0387 by 4:00 p.m. on the first business day after the bid opening. The email or fax must contain the name of each subcontractor submitted with your Proposal

along with the bid item number, bid item description, and the percentage of each bid item subcontracted. Failure to do so results in a non-responsive bid.

Replace the 4th item of the 1st paragraph of section 2-1.34 with:

4. Bidder's bond signed by an authorized representative of a surety insurer who is licensed in California. The authorized representative's signature must be notarized and authorization documentation must be provided.

Replace the last paragraph of section 2-1.34 with:

If using a bidder's bond you must complete the Bidder's bond form included in the Proposal bound to the Contract Documents book. Copy the form and staple the executed form to the form included in the Proposal, or unbind the form for execution, and rebind it. Failure to submit the entire Proposal bound to the Contract Documents book results in a non-responsive bid.

If applicable, submit proof of each required SSPC QP certification with your Proposal. Failure to do so results in a non-responsive bid.

Replace the 1st paragraph of section 2-1.37 with:

For Proposal submittal comply with the instructions in the Notice to Bidders and section 2-1.33A.

Replace "Reserved" in section 2-1.44 with:

2-1.44 BID PROTEST PROCEDURE

The protest procedure is intended to handle and resolve disputes related to the bid award for this project pursuant to Title 49 Code of Federal Regulations Part 18 Section 18.36 (b) (12)(i)-(ii) and County policies and procedures. A protestor must exhaust all administrative remedies with County before pursuing a protest with a Federal Agency. Reviews of protests by the Federal agency will be limited to:

- (i.) Violations of Federal law or regulations and the standards of 49 CFR Part 18 Section 18.36 (b) (12)(i)-(ii). Violations of State of California or local law will be under the jurisdiction of the State or County; and
- (ii.) Violation of County's protest procedures for failure to review a complaint or protest. Protests received by the Federal agency other than those specified above will be referred to County.

The protest procedure is an extension of the formal bid process and allows those who wish to protest the recommendation of an award after bid the opportunity to be heard.

Policy: Upon completion of the bid evaluation, the Department will notify all bidders of the recommendation of award, the basis therefore, and the date and time on which the recommendation for award will be considered and acted upon by the Board of Supervisors. All bidders may attend the Board of Supervisors meeting at the time the agenda item is considered, address the Board of Supervisors, and be heard.

Procedure: If you wish to protest the award, this is the procedure:

1. The Department will review the bids received in a timely fashion under the terms and conditions of the *Notice to Bidders*, and notify you in writing, at the fax number designated in the Proposal, of its recommendation including for award or rejection of bids ("All Bidders Letter").
2. Within five (5) business days from the date of the "All Bidders Letter," the Bidder protesting the recommendation for award must submit a letter of protest to and must be received by Office Engineer, Attention Janel Gifford, and state in detail the basis and reasons for the protest. The Bidder must provide facts to support the protest, including any evidence it wishes to be considered, together with the law, rule, regulation, or criteria on which the protest is based.
3. If the Department finds the protest to be valid, it may modify its award recommendations and notify all bidders of that decision. If the Department does not agree with the protest, or otherwise fails to resolve the protest, the Department will notify the bid protestor and all interested parties of its decision and the

date and time that the recommendation for award will be agendized for the Board of Supervisors' consideration and action. The Department will also include in its report to the Board of Supervisors the details of the bid protest.

4. The Bidder may attend the Board of Supervisors meeting at which the recommendation and bid protest will be considered. The Board of Supervisors will take comment from the Bidder, staff, and members of the public who wish to speak on the item. If the Bidder is not in attendance at that time, the bid protest may be dismissed by the Board of Supervisors without further consideration of the merits; and

The decision of the Board of Supervisors on the bid protest will be final.

The protest procedure is intended to handle and resolve disputes related to the bid award for this project pursuant to County policies and procedures.

The protest procedure is an extension of the formal bid process and allows those who wish to protest the recommendation of an award after bid the opportunity to be heard.

Policy: Upon completion of the bid evaluation, the Department will notify all bidders of the recommendation of award, the basis therefore, and the date and time on which the recommendation for award will be considered and acted upon by the Board of Supervisors. All bidders may attend the Board of Supervisors meeting at the time the agenda item is considered, address the Board of Supervisors, and be heard.

3. If the Department finds the protest to be valid, it may modify its award recommendations and notify all bidders of that decision. If the Department does not agree with the protest, or otherwise fails to resolve the protest, the Department will notify the bid protestor and all interested parties of its decision and the date and time that the recommendation for award will be agendized for the Board of Supervisors' consideration and action. The Department will also include in its report to the Board of Supervisors the details of the bid protest.

4. The Bidder may attend the Board of Supervisors meeting at which the recommendation and bid protest will be considered. The Board of Supervisors will take comment from the Bidder, staff, and members of the public who wish to speak on the item. If the Bidder is not in attendance at that time, the bid protest may be dismissed by the Board of Supervisors without further consideration of the merits; and

The decision of the Board of Supervisors on the bid protest will be final.

Replace the 1st sentence in section 2-1.46 with:

County Board of Supervisors may reject:

Replace section 2-1.47 with:

2-1.47 BID RELIEF

County Board of Supervisors may grant bid relief under Pub Cont. Code § 5100 et seq. Submit any request for bid relief to Office Engineer, email-Janel.Gifford@edcgov.us, Fax-(530) 626-0387. Requests for bid relief must be in writing within 5 business day of the bid opening and must demonstrate:

1. A mistake was made in your bid.
2. The mistake made the bid materially different than what you intended.
3. The mistake was made in filling out the bid and not due to an error in judgment or to carelessness in inspecting the site of work or in reading the plans or specifications.

AA

5 CONTROL OF WORK

Replace the 5th paragraph of section 5-1.01 with:

Ensure the Department's, Caltrans, Army Corps of Engineers, CDFW, California Regional Water Quality Control Board Central Valley Region, EID, El Dorado Air Quality Management District, PG&E, AT&T and COMCAST safe access to the work.

Furnish facilities necessary for the Department's, Caltrans, Army Corps of Engineers, CDFW, California Regional Water Quality Control Board Central Valley Region, EID, El Dorado Air Quality Management District, PG&E, AT&T and COMCAST inspection.

You agree that CDFW, Army corps of Engineers, and Central Valley RWQCB or authorized representative personnel may enter the project site to verify compliance with agreements and permits.

Delete section 5-1.09.

Replace the 6th paragraph of section 5-1.13A with:

Each subcontract must include the provisions of this contract and each subcontractor must comply with the applicable terms and conditions of this contract.

Replace the 7th paragraph of section 5-1.13A with:

The Department encourages you to and, for USDOT federal-aid assisted projects, you must include a dispute resolution process in each subcontract.

Replace section 5-1.13C "Disabled Veterans Business Enterprise" with:

5-1.13C RESERVED

Replace section 5-1.13D "Non-small Business" with:

5-1.13D RESERVED

Add to 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:

Coincident or Adjacent Contracts

Contract no.	County–Route–Post Mile	City	Type of work
CVIN Vast Network (by EDC Encroachment Permit)	ED-49-0.0/22.0	Diamond Springs, Placerville	Underground cable installation

You must thoroughly coordinate your Stage 1 and Stage 2 construction work operations with other Contractors working in the same general area, in connection with traffic shifts, temporary or permanent lane striping, opening of new lanes, closing of ramps, lanes or local roads, and during any other operation that may affect or be influenced by adjacent projects.

Add to section 5-1.20B(1):

The Department has obtained and included in Appendix B:

1. U.S. Army Corps of Engineers Nationwide Permit number 14 (Section 404 Permit).

2. U.S. Fish and Wildlife Service Informal Endangered Species Act Consultation
3. Central Valley Regional Water Quality Control Board Clean Water Act 401 Technically Conditioned Water Quality Certification
4. California Department of Fish and Wildlife Streambed Alteration Agreement. (Notification # 1600-2012-0208-R2)
5. State of California Encroachment Permit – before beginning work within state right of way you must obtain a no cost State of California Encroachment permit from:

CALTRANS, DISTRICT 3
 PERMIT ENGINEER
 703 B Street
 Marysville, CA 95901
 (530) 741-4403

Replace item 2 of the 1st paragraph section 5-1.20B(4):

2. Request, execute, and submit Department-supplied *Release from Liability* form.

Add to the 1st paragraph of section 5-1.20B(4):

3. Obtain authorization to start.

Add section 5-1.20B(5):

5-1.20B(5) Right of Way Easements

The Department has obtained temporary easements from:

APN	Temporary Construction Easement (TCE)	Duration (Months)
329-280-12	X	24
329-280-13	X	24
329-280-15	X	24
329-280-16	X	24
331-310-08	X	24
331-331-27	X	24

The Department has obtained permanent easements from:

APN	Public Utilities Easement (PUE)	HIGHWAY EASEMENT
329-280-12	X	X
329-280-13	X	X
329-280-16		X
329-310-08		X
331-310-09	X	X

Temporary Construction Easements allow the County or its agents, employees, and contractors the right of ingress and egress as may be reasonably necessary for construction purposes inclusive of such repairs, replacements, and removals as well as for other purposes incidental to construction of the project, including any staging, stockpiling, and parking of construction vehicles and equipment unless such use would violate any conditions of the permits or Section 13.

You have the use of the temporary construction easements (TCE) for a period not to exceed the duration specified in the above table, beginning with the first entry on the property. You must give 20 days advanced notice to the Engineer before entering any temporary construction easement area. The use of the TCE must not extend beyond the completion of the work within the TCE.

Should the actual use of the TCE extend beyond the prescribed period of time, the Contractor must notify the Engineer in writing 20 working days prior to the expiration of the TCE. The Contractor must bear all costs incurred by the State for use of the TCE's beyond the duration period.

When use of the TCE is no longer required, the Contractor must clean all debris, repair any damage to the property caused by the Contractor's operations and leave the property in a neat, clean, and presentable condition.

**Replace "Reserved" in section 5-1.20E with:
5-1.20E COORDINATION WITH PROPERTY OWNERS**

You must obtain from the Engineer a list of all the property owner names and contact information. A copy of the Right of Way Certification and the list must be kept on-site at all times.

You must make every effort to communicate with adjacent property owners and tenants to inform them of required access for construction operations, and must give forty-eight (48) hours' notice to the property owners and tenants when work is to be performed on their property.

You must coordinate with adjacent property owners regarding fence relocations, removal and installations.

Access to gas station must be maintained/ coordinated so that delivery and sale of fuel will not be impacted.

Access to adjacent businesses must be maintained so that the businesses can remain open during all normal business hours.

Provide Nextel continuous access to its easement on APN 329-280-15.

Replace “ Reserved” in section 5-1.20F with:

5-1.20F COORDINATION WITH SCHOOL DISTRICTS

You must provide written notice to the following adjacent school districts at least one (1) week prior to any lane closures, construction staging or any work that may affect traffic or pedestrians through the construction area:

El Dorado Union High School District

Union Mine High School

6530 Koki Lane
El Dorado, CA 95623
Principal: Tony DeVille
530-621-4003, ext. 4120
<http://umhs.eduhsd.k12.ca.us>

Mother Lode Union Elementary School District

Charles F. Brown Elementary

6520 Oak Dell Rd
El Dorado, CA 95623
Principal: Ed Watkins
530-622-5775
www.mlusd.net/cbschool.php

El Dorado Union High School District

Shenandoah High School

6540 Koki Lane
El Dorado, CA 95623
Principal: Debbie Hanson
530-622-6212
www.shenandoahhigh.org

Replace the 3rd paragraph of section 5-1.23A with:

Each sheet of a submittal must include:

1. Contract number and CIP number: PW 09-30425/ CIP No. 73320
2. Project name: Pleasant Valley Rd (SR 49)/ Patterson Dr. Intersection Signalization
3. District – County - Route – Post Mile or County Road name: ED 49 PM 10.6/10.9

Replace section 5-1.24 with:

5-1.24 COST PRINCIPLES

Comply with the Federal Acquisition Regulations in Title 48, CFR, Part 31 et seq. as applicable, regarding allowable elements of cost for the Work to be performed under this Contract.

- A. You and your subcontractors must comply with 2 CFR Part 225 (formerly OMBA-87), Cost Principles for State, Local And Indian Tribal Governments; with Federal administrative procedures pursuant to 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments; and with Contract Cost Principles, 48 CFR, Federal Acquisition Regulations System, Chapter 1, Parts 31 et seq., insofar as those regulations may apply. This provision applies to every sub-recipient receiving funds as a Contractor or subcontractor under this Contract.
- B. Any expenditures for costs for which you have received payment or credit that are determined by subsequent audit to be unallowable under 2 CFR Part 225, 48 CFR, Parts 31 et seq. or 49 CFR, Part 18 are subject to repayment to County.
- C. Travel and per diem reimbursements, if applicable, and third-party contract reimbursements to subcontractors will be allowable as project costs only after you incur and pay for those costs.
- D. Notwithstanding any other provision of the Contract Documents to the contrary, payments for mileage, travel or subsistence expenses, if applicable, for your staff or your subcontractors claimed for reimbursement must not exceed the lesser of (1) the rates to be paid to County

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Signalization
Contract No. PW 09-30425 / CIP No. 73320
September 10, 2013

County of El Dorado
Special Provisions
SP-14

employees under the current Board of Supervisors Travel Policy in effect at the time the expenses are incurred; or (2) the rates authorized to be paid to rank and file State employees under current State Department of Personnel Administration (DPA) rules. If the rates claimed are in excess of those authorized DPA rates, you are responsible for the cost difference, and you must reimburse County for any overpayments inadvertently within thirty (30) days of County's demand.

- E. You and your subcontractors must establish and maintain accounting systems and records that properly accumulate and segregate funds received under this Agreement by line item. Your and your subcontractor's accounting systems must conform to Generally Accepted Accounting Principles (GAAP), must enable the determination of incurred costs at interim points of completion, and must provide support for reimbursement of payment vouchers or invoices.

Replace item 2 of the 2nd paragraph of section 5-1.26 with:

2. On a *Request for Construction Staking* form.

Add item 3 to the 1st paragraph of section 5-1.27B:

3. All other pending matters under this Contract are closed.

Replace the opening phrase of the 2nd paragraph of section 5-1.27B with:

County's Cooperative Agreement with the State requires records provisions remain in effect until terminated or modified by mutual written agreement. Retain project records, including cost records, until mutually agreed in writing otherwise.

Replace Section 5-1.27C with:

5-1.27C Record Inspection, Copying, and Auditing

Make your records available for inspection, copying, and auditing by FHWA, the United States Department of Transportation, the Comptroller General of the United States, the State, County or their duly authorized representatives for the same time frame specified under section 5-1.27 B. The records of subcontractors and suppliers must be made available for inspection, copying, and auditing by FHWA, the United States Department of Transportation, the Comptroller General of the United States, the State, County or their duly authorized representatives for the same period. Make records available for examination during normal business hours at your principal place of business in California, for audit during normal business hours at this place of business. Provide office space, photocopies and other assistance to enable audit or inspection representatives to conduct these audits or inspections. Incorporate this provision in any subcontract entered into as a result of this Contract. Require subcontractors to agree to cooperate with the listed agencies by making all appropriate and relevant Project records available to those agencies for audit and copying.

Replace section 5-1.27E with:

5-1.27E Change Order Bills

Maintain separate records for change order work costs. Submit paper copy change order bills.

Replace the 3rd paragraph of section 5-1.32 with:

Defend, indemnify, and hold the County harmless to the same extent as under Article 5 "Indemnity" of the Agreement.

Add to the list in the 1st paragraph of section 5-1.36A:

10. Survey monuments

Add to the 3rd paragraph of section 5-1.36D:

Underground Service Alert Phone: 811

El Dorado Irrigation District (EID)

Main # 24 hr: (530) 622-4513

Bob Rice

(530) 642-4079

Fax (530) 642-4354

2890 Mosquito Road

Placerville, CA 95667

Pacific Gas and Electric Company

24 Hr # (800) 743-5000

Jennifer Donovan

(530) 621-7228

Fax (530) 383-7258

4636 Missouri Flat Road

Placerville, CA 95667

Comcast

Kip Miller

(650) 444-5865

Fax (916) 376-7981

8170 Elder Creek Road

Sacramento, CA 95824

AT&T

24 Hr # (866) 346-1168

Astrid Willard

(916) 453-6136

Fax (916) 451-8504

3675 T Street Room 170

Sacramento, CA 95816-6648

Add to section 5-1.36D:

During the progress of the work under this Contract, the utility owner will relocate a utility shown in the following table within the corresponding number of days shown. Notify AT&T utility company and inform the Engineer at least 48 hours before the relocation work is necessary on their facility. Notify PG&E utility company and inform the Engineer at least 2 weeks before the relocation work is necessary on their facility.

Utility Relocation By Others and Department-Arranged Time for the Relocation:

Plan sheet, Item No.	Utility	Location	By Whom (duration of relocation work)
U1, 9	Power Supply Box (TV)	"PV" 6+50, Rt	By Others, prior to Construction.
U1, 10	Comcast Splice Box	"PV" 4+57, Rt	By Others, prior to Construction.
U2, 13	AT&T Manhole Adjust to Grade	"PV" 10+50, 40 ' Lt	By AT&T during construction (allow 2 working days)
U2, 15	Remove PG&E Pole & Light	"PV" 11+10, 48' Rt	By PG&E during construction (allow 2 working days)
U2, 16	New PGE conduit from new Pole	PV" 9+82, Rt to "PV" 10+42 Rt	By PG&E Prior to Construction
U3, 28	AT&T Manhole Adjust to Grade	"PV" 17+30, 16' Lt	By AT&T during construction (allow 2 working days)
U4, 31	Comcast Splice Box	"P" 12+80, 22' Lt	By Others, prior to Construction
U4, 33	Abandon Extraction Well	"P" 13+80, Rt	By Others, prior to Construction
U4, 34	Remove EID Valve	"P" 13+36, Rt	By Others, prior to Construction
U4, 36	PG&E to remove conduit	"P" 15+13, 22' Lt to "P" 15+85, 55' Lt	By Others, prior to Construction
U4, 38	EID remove Pressure Reducing Station	"P" 13+20, Rt	By others, prior to Construction
U4, 46	PG&E install vault	"P" 12+75, Lt	By others, prior to Construction
U4, 55	EID install Pressure Reducing Station	"P" 13+30, Rt	By others, prior to Construction
U4, 57	EID remove waterline and valve	"P" 13+00 to "P" 13+50, Rt	By others, prior to Construction

Modification of the utilities by you and shown in the following table requires coordination with your activities and with the utility company. Make the necessary arrangements with the utility company through the Engineer and submit a schedule.

Provide at least 72 hours notice to EID's District Construction Inspector, Skip Haskell, (530) 642-4120 before performing any work on its utilities.

Contractor to Adjust/Construct/Relocate/ Reconstruct Utility and Contractor-Arranged Time with Utilities for the Work:

Plan Sheet, Item No.	Utility	Location	Work Description
U1, 2	EID Water Blow Off Valve Box	"PV" 5+40, Lt	Adjust
U1, 5	EID SSMH	"PV" 5+67, Rt	Reconstruct
U2, 11	EID SSMH	"PV" 10+67, Rt	Reconstruct
U2, 12	EID SSMH	"PV" 14+17, Rt	Reconstruct
U2, 20	EID Water Valve Cover	"PV" 11+82, Rt	Adjust
U2, 22	EID Water Valve Cover	"PV" 10+93, Rt	Adjust
U2, 23	EID Water Valve Cover	"PV" 10+97, Rt	Adjust
U4, 44	EID SSMH & Lid	"P" 13+20, Lt	Adjust
U4, 48	EID Water Valve Cover	"P" 12+82, Rt	Adjust
U4, 50	EID Water Valve Cover	"P" 12+97, Rt	Adjust
U4, 51	EID Water Valve Cover	"P" 13+40, Rt	Adjust
U4, 52	EID Water Valve Cover	"P" 13+70, Rt	Adjust

Abandon/Remove/Salvage of the utilities by you and shown in the following table requires coordination with your activities and with the utility company. Make the necessary arrangements with the utility company through the Engineer and submit a schedule.

Provide at least 72 hours notice to EID's District Construction Inspector, Skip Haskell, (530) 642-4120 before performing any work on its utilities.

Add to section 6-2.05C:

Section 6-2.05C applies to federal-aid contract.

Replace the 1st sentence of the 3rd paragraph of section 6-3.05C with:

The Department provides an inspection request form and procedures for its submittal.

Replace the 3rd paragraph of section 6-3.05G with:

Submit material to be tested with a *Sample Identification Card* provided by the Department.

AA

7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

Add to section 7-1.02A:

County is relying on state funds for all or a portion of the funding for the Work to be provided under this Contract. As a requirement of County's use of state funds, County is required to comply with certain federal and state contracting requirements and to extend those requirements to its third party contracts. You must comply and must require your subcontractors to comply with all applicable provisions of federal and state regulations, including those required by Caltrans grant funding requirements, regulations, and related executive orders regarding the use, expenditure, control, reporting, allowable costs and management of such funds as well as these requirements detailed in 49 CFR Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments. You must further comply with all applicable provisions of the Caltrans Local Assistance Procedures Manual and the Local Assistance Program Guidelines, all Title 23 Federal requirements and all applicable state and federal laws, regulations and policy; procedural or instructional memoranda. Failure to comply with any federal or state provision may be the basis for withholding payments and for such other remedies as may be appropriate including termination of this Contract. You must also comply with any flow-down or third-party contracting provisions which may be required under the federal and state regulations and which may apply to your subcontracts, if any, associated with this contract.

Replace section 7-1.02C "Emission Reduction" with:

Section 7-1.02C Emission Reduction

Sign the Emissions Reduction Certification in the Article 13 "Emission Reduction" of the Agreement.

Add section 7-1.02D:

7-1.02D REPORTING (49 CFR 18.36 (i) (8) & 49 CFR 18.40)

In order to monitor the progress of projects funded in whole or in part by federal funds, federal agencies rely heavily on inspection data. Inspections by the County will be performed on a regular basis and data compiled in report form, as necessary. Supply reporting information to County when requested.

Incorporate this provision in any subcontract entered into as a result of this contract.

Add section 7-1.02E:

7-1.02E COPYRIGHTS (49 CFR 18.34)

The USDOT reserves a royalty-free, non-exclusive, and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, for Federal Government proposes:

- a) The copyright in any work developed under a grant, sub-grant, or contract under a grant or subgrant; and
- b) Any rights of copyright to which a grantee, subgrantee or a contractor purchases ownership with grant support.

Incorporate this provision in any subcontract entered into as a result of this contract.

Add section 7-1.02H:

7-1.02H REHABILITATION ACT OF 1973 AND AMERICAN DISABILITIES ACT OF 1990

Comply with:

- (i) Section 504 of the Rehabilitation Act of 1973 (Rehabilitation Act) which prohibits discrimination on the basis of disability in federally assisted programs;
- (ii) (ii) the Americans with Disabilities Act (ADA) of 1990 which prohibits discrimination on the basis of disability irrespective of funding; and
- (iii) (iii) all applicable regulations and guidelines issued pursuant to both the Rehabilitation Act and the ADA.

Incorporate this provision in any subcontract entered into as a result of this contract.

Add to section 7-1.02I(2):

You must comply and must require your subcontractors to comply with the Fair Employment Practices Addendum attached as Exhibit B to the Draft Agreement of these Contract Documents.

Replace item 1 of the 2nd paragraph of section 7-1.02K(2) with:

- 1. At the County of El Dorado Community Development Agency Transportation Division's principal office, and are available upon request.

Add to section 7-1.02K(2):

Comply with Division 2, Part 7, Chapter 1 of the California Labor Code.

This project is subject to the requirements of Title 8, Chapter 8, Subchapter 4.5 of the California Code of Regulations including the obligation to furnish certified payroll records directly to the Compliance Monitoring Unit under the Labor Commissioner within the Department of Industrial Relations Division of Labor Standards Enforcement in accordance with Section 16461.

Prior to the start of any work, post and maintain the following notice in a conspicuous location on the jobsite:

"This public works project is subject to monitoring and investigative activities by the Compliance Monitoring Unit (CMU) of the Division of Labor Standards Enforcement, Department of Industrial Relations, State of California. This Notice is intended to provide information to all workers employed in the execution of the contract for public work and to all contractors and other persons having access to the job site to enable the CMU to ensure compliance with and enforcement of prevailing wage laws on public works projects.

The prevailing wage laws require that all workers be paid at least the minimum hourly wage as determined by the Director of Industrial Relations for the specific classification (or type of work) performed by workers on the project. These rates are listed on a separate job site posting of minimum prevailing rates required to be maintained by the public entity which awarded the public works contract. Complaints

concerning nonpayment of the required minimum wage rates to workers on this project may be filed with the CMU at any office of the Division of Labor Standards Enforcement (DLSE).

Local Office Telephone Number: (916)-263-1811

Complaints should be filed in writing immediately upon discovery of any violations of the prevailing wage laws due to the short period of time following the completion of the project that the CMU may take legal action against those responsible.

Complaints should contain details about the violations alleged (for example, wrong rate paid, not all hours paid, overtime rate not paid for hours worked in excess of 8 per day or 40 per week, etc) as well as the name of the employer, the public entity which awarded the public works contract, and the location and name of the project.

For general information concerning the prevailing wage laws and how to file a complaint concerning any violation of these prevailing wage laws, you may contact any DLSE office. Complaint forms are also available at the Department of Industrial Relations website found at: "www.dir.ca.gov/dlse/PublicWorks.html."

Replace \$50 in the 1st sentence in the 6th paragraph of section 7-1.02K(2) with:
\$200

Delete paragraphs 5 through 9 of section 7-1.02K(3).

Add to section 7-1.02K(3):

Submit a copy of all payrolls weekly directly to the Compliance Monitoring Unit (CMU) within the Division of Labor Standards Enforcement of the Department of Industrial Relations, State of California. Submit copy of all payrolls within 10 days of any separate request by the CMU.

Replace \$25 in the 2nd sentence in the 13th paragraph of section 7-1.02K(3) with:
\$100

Add to Section 7-1.02K(4):

It is County policy to encourage the employment and training apprentices on public works contracts as may be allowed under local apprenticeship standards.

Replace the 1st sentence of the 1st paragraph of section 7-1.02K(6)(b) with:
Comply with OSHA 29 CFR 1926 Subpart P.

Add to section 7-1.02K(6)(b)

You must provide a safe means of egress in trenches and excavations 5 feet deep and greater by the use of sheeting, shoring, bracing, sloping of the sides of the trench or excavation, or equivalent method. You must not slope the sides of the excavation or trench in a manner that results in the excavation or trench limits extending beyond the right-of-way.

At the end of each workday, all open trenches must be covered to prevent animals from becoming entrapped. If it is not possible to cover the trench at the end of each workday, you must either (1) install an exclusion fence surrounding and enclosing the open end(s) of the trench, or (2) must place an escape ramp at each end of open trench. The ramp must be constructed of either dirt or wood planking or other suitable material that is placed at an angle no greater than 30 degrees.

7-1.02K(6)(b)(i) Payment

The Department pays for preparing and submitting protection system shop drawings and installing, maintaining, and removing sheeting, shoring and bracing, sloping the sides of excavations, or equivalent method for excavations 5 feet deep and greater. The Engineer has the discretion to reduce payment where the need for excavation protection is indicated on the Plans but not required in the field.

Replace section 7-1.02K(6)(j)(iii) with:

7-1.02K(6)(j)(iii) Earth Material Containing Lead

Section 7-1.02K(6)(j)(iii) includes specifications for handling, removing, and disposing of earth material containing lead.

Submit a lead compliance plan.

Lead is present in earth material on the job site. The average lead concentrations are below 1,000 mg/kg total lead and below 5 mg/L soluble lead. The material on the job site:

1. Is not a hazardous waste
2. Does not require disposal at a permitted landfill or solid waste disposal facility

Lead is typically found within the top 2 feet of material in unpaved areas of the highway. Reuse all of the excavated material on the right-of-way. Lead has been detected in material to a depth of 1 to 2 feet in unpaved areas of the highway. Levels of lead found on the job site range from less than 11 to 130 mg/kg total lead with an average concentration of 50 mg/kg total lead as analyzed by EPA test method 6010 or EPA test method 7000 series and based upon a 95 percent upper confidence limit. Levels of lead found within the project limits have a predicted average soluble concentration of less than 5 mg/L (STLC-wet limit) as analyzed by the California Waste Extraction Test and based upon a 95 percent upper confidence limit.

Handle the material under all applicable laws, rules, and regulations, including those of the following agencies:

1. Cal/OSHA
2. CA RWQCB, Region 5S
3. CA Department of Toxic Substances Control
4. County of El Dorado Environmental Management

Replace section 7-1.05 “Indemnification” with:

7-1.05 INDEMNIFICATION

Comply with Article 5 “Indemnity” of the Agreement.

Replace section 7-1.06 “Insurance” with:

7-1.06 INSURANCE

7-1.06A GENERAL INSURANCE REQUIREMENTS

County will not execute this contract and you are not entitled to any rights, unless certificates of insurances, or other sufficient proof satisfactory to County of El Dorado Risk Management Division that the following provisions have been complied with, and these certificate(s) are filed with the County.

Without limiting your indemnification required by Article 5 “Indemnity” of the Draft Agreement, you must procure and maintain and must require any of your subcontractors to procure and maintain for the duration of the contract, including the one-year guarantee period, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by you, your agents, representatives, employees or subcontractors. The following policies of insurance must be placed with insurers with a current A.M. Best’s rating of no less than A-.VII. Coverage must be at least as broad as:

Workers’ Compensation as required by law in the State of California, with Statutory Limits, and Employer’s Liability Insurance with a limit of no less than \$1,000,000 per accident for bodily injury or disease.

Commercial General Liability (CGL) Insurance and Umbrella or Excess Liability Insurance: Insurance Services Office (ISO) Form CG 00 01 covering CGL on an “occurrence” basis covering all operations by or on behalf of the Contractor providing insurance for bodily injury liability and property damage liability for the following limits and including coverage for: Premises, operations, and mobile equipment; personal injury, products and completed operations; broad form property damage including completed operations; explosion, collapse, and underground hazards; contractual liability. The limits of liability must be at least the amounts shown in the following table:

Total Bid	For Each Occurance ¹	Aggregate for Products/Completed Operation	General Aggregate ²	Umbrella or Excess Liability ³
≤ \$1,000,000	\$1,000,000	\$2,000,000	\$2,000,000	\$5,000,000
>\$1,000,000 ≤\$10,000,000	\$1,000,000	\$2,000,000	\$2,000,000	\$10,000,000
>\$10,000,000 ≤\$25,000,000	\$2,000,000	\$2,000,000	\$4,000,000	\$15,000,000
>\$25,000,000	\$2,000,000	\$2,000,000	\$4,000,000	\$25,000,000

1. Combined single limit for bodily injury and property damage.
2. This limit applies separately to your work under this contract.
3. The umbrella or excess policy must contain a clause stating that it takes effect (drops down) if the primary limits are impaired or exhausted.

*Comply with exclusion provisions for Small Business subcontractors in Section 7-1.06B

1. Automobile Liability: ISO Form Number CA 00 01 covering any auto (Code 1), or if Contractor has no owned autos, hired, (Code 8) and non-owned autos (Code 9), with limit no less than \$1,000,000 per accident for bodily injury and property damage.

If you are a licensed professional and are performing professional services under this contract, Professional Liability Insurance is required with a limit of liability of not less than One Million Dollars (\$1,000,000).

7-1.06B PROOF OF INSURANCE REQUIREMENTS

Furnish proof of coverage satisfactory to the County of El Dorado Risk Management Division as evidence that the insurance required herein is being maintained. The insurance will be issued by an insurance company acceptable to the Risk Management Division, or be provided through partial or total self-insurance likewise acceptable to the Risk Management Division. Self-insurance programs and self-insured retentions in insurance policies are subject to separate annual review and approval by the County and the State of California.

If you use a self-insurance program or self-insured retention, you must provide the County and the State of California with the same protection from liability and defense of suits as would be afforded by first-dollar insurance. Execution of the contract is your acknowledgement that you will be bound by all laws as if you were an insurer as defined under Insurance Code Section 23 and that the self-insurance program or self-insured retention will operate as insurance as defined under Insurance Code Section 22.

The County of El Dorado, its officers, officials, employees, and volunteers and the State of California, its officers, directors, agents (excluding agents who are design professionals), employees, and State Contractors doing work within the right-of-way limits, EID, and any property owners from whom the County obtained easements must be named as additional insured under the general liability and excess liability policies with respect to liability arising out of or connected with work or operations performed by or on your behalf under this Contract. Coverage for such additional insured does not extend to liability:

- a) Arising from any defective or substandard condition of the roadway which existed at or before the time you started work, unless such condition has been changed by the work or scope of the work requires you to maintain existing roadway facilities and the claim arises from failure to maintain;
- b) For claims occurring after the work is completed and accepted unless these claims are directly related to alleged acts or omissions of you that occurred during the course of the work; or
- c) To the extent prohibited by Insurance Code Section 11580.04

Proof that the County, EID, and the State are named additional insureds must be made as follows: by providing to the County's Risk Management Division and separately to the State, with a certified copy, or other acceptable evidence, of an endorsement to your insurance policy naming the County, EID, and the State of California additional insureds. Additional insured coverage for the County, EID, and the State of California must be provided by a policy provision or by an endorsement providing coverage at least as broad as Additional Insured (Form B) endorsement form CG 2010, as published by the Insurance Services Office (ISO), or other form designated by the County or State of California. Deliver this form to the County with the executed contract, bonds, and associated documents, and separately to the State, before issuance of the State's Encroachment Permit to you.

If you cannot provide an occurrence policy, provide insurance covering claims made as a result of performance of this contract for not less than three (3) years following completion of performance of this contract.

Any deductibles or self-insured retentions must be declared to and approved by the County. At the option of the County, either: the insurer must reduce or eliminate such deductibles or self-insured retentions as respects the County, its officers, officials, employees and volunteers; or you must procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses. You must require each of your subcontractors to procure and maintain commercial general liability insurance, umbrella or excess liability insurance, workers' compensation insurance and automobile liability insurance of the types and in the amounts specified above, or you must insure the activities of your subcontractors in your policy in like amounts. For each subcontractor, the "Total Bid" in the Table above will be interpreted as the total amount of work subcontracted to the subcontractor. You must also require each of your subcontractors to name you and the County of El Dorado and any other additional insured listed above as additional insureds. You must not require certified Small Business subcontractors to carry Liability Insurance that exceeds the limits in the table above. Notwithstanding the limits specified herein, at the option of the Contractor, the liability insurance limits for certified Small Business subcontractors of any tier may be less than those limits specified in the table. For Small Business subcontracts, "Total Bid" will be interpreted as the amount of subcontracted work to a certified Small Business.

7-1.06C INSURANCE NOTIFICATION REQUIREMENTS

You agree no cancellation or material change in any policy will become effective except upon ten (10) days prior written notice to the Community Development Agency, Contract Services Unit, 2850 Fairlane Court, Placerville, CA 95667.

You agree that the insurance required herein will be in effect at all times during the term of this contract. In the event said insurance coverage expires at any time or times during the term of this contract, you must immediately provide a new certificate of insurance as evidence of the required insurance coverage. If you fail to keep in effect at all times insurance coverage as herein provided, County may, in addition to any other remedies it may have, terminate this contract upon the occurrence of such event. New certificates of insurance are subject to the approval of the Risk Management Division.

7-1.06D ADDITIONAL STANDARDS

Certificates must meet such additional standards as may be determined by the Department either independently or in consultation with the Risk Management Division, as essential for protection of the County.

You must maintain completed operations coverage with a carrier acceptable to the County and State of California through the expiration of the patent deficiency in construction statute of repose set forth in Code of Civil Procedure Section 337.1.

7-1.06E COMMENCEMENT OF PERFORMANCE

You must not commence performance of this contract unless and until compliance with every requirement of the insurance provisions is achieved.

7-1.06F MATERIAL BREACH

Failure to maintain the insurance required herein, or to comply with any of the requirements of the insurance provisions, constitutes a material breach of the entire contract.

7-1.06G REPORTING PROVISIONS

Any failure to comply with the reporting provisions of the policies must not affect coverage provided to the County, its officers, officials, employees or volunteers.

7-1.06H PRIMARY COVERAGE

Your insurance coverage must be primary insurance as respects the County, its officers, officials, employees and volunteers and the State of California. Any insurance or self-insurance maintained by the County, its officers, officials, employees, volunteers or State of California, must be in excess of the your insurance and will not contribute with it.

7-1.06I PREMIUM PAYMENTS

The insurance companies will have no recourse against the County of El Dorado its officers, agents, employees, or any of them for payment of any premiums or assessments under any policy issued by any insurance company.

7-1.06J CONTRACTOR'S OBLIGATIONS

Your indemnity and other obligations must not be limited by the insurance required herein and must survive the expiration of this contract.

^^

8 PROSECUTION AND PROGRESS

Replace 1st sentence of 8-1.02B (1) with:

Section 8-1.02B applies to this contract.

Replace item 2.1. of the list in the 3rd paragraph of section 8-1.02B(2) with:

Contract number and CIP number

Replace item 8 of section 8-1.02B(2) with:

8. Start milestone date as Notice of Award letter date

Add to Section 8-1.02B(2):

9. Change working hours to match Lane Closure Charts and whether or not school is in session.

Replace the 1st and last sentences of the 1st paragraph of section 8-1.03 with:

At the Construction Division Office, 2441 Headington Road, Placerville attend a pre-construction conference with key personnel, including all major superintendents for the work and major subcontractors. The pre-construction conference will be scheduled after the project is awarded and prior to the issuance of the Notice to Proceed. At this conference, submit in writing, signed by the officers of the corporation, if applicable, the names of two employees who will be the superintendents on the project. The second name serves as an alternate in the absence of the first designee. The superintendent must be on the site at all times that work is in progress.

With the exception of preparing and obtaining Department's authorization of the Storm Water Pollution Prevention Plan (SWPPP) and preparing and obtaining Department's acceptance of the Critical Path Method (CPM) baseline schedule, any work performed in advance of the date stated in the Notice to Proceed is at your risk and as a volunteer. Submit a completed Subcontracting Request form, Exhibit 16-B of the Caltrans Local Assistance Procedures Manual (LAPM), or equivalent and obtain approval before beginning work on a subcontract. Comply with applicable parts of section 5-1.13B(1).

Delete "Partnering" from the table in section 8-1.03.

Add to section 8-1.03.

You must attend weekly meetings to discuss construction issues and scheduling.

Replace section 8-1.04B with:

The contract working days begin on the date stated in the Notice to Proceed.

The Engineer will issue Notice to Proceed within 12 days of Contract approval.

Do not start job site activities until the Department authorizes or accepts your submittal for:

1. CPM baseline schedule

Do not start jobsite activities until the Department accepts your SWPPP submittal and obtains a Waste Discharge Identification Number (WDID).

You may enter the job site only to measure controlling field dimensions and locating utilities.

Do not start other job site activities until all the submittals from the above list are authorized or accepted and the following information is received by the Engineer:

1. *Notice of Materials To Be Used.*
2. Contingency plan for reopening closures to public traffic.
3. Written statement from the vendor that the order for the sign panels has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.
4. Written statement from the vendor that the order for electrical material has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.

Replace the 1st paragraph of section 8-1.05 with:

Contract time starts on the day specified in section 8-1.04B.

Contract working hours are between the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and from 8:00 a.m. to 5:00 p.m. on Saturdays and Sundays, unless otherwise authorized.

4. Add to the end of section 8-1.06 as revised by the RSS:

The Engineer may suspend work do to environmental permit restrictions and/or inclement weather.

During the suspension, the Department pays for winterization costs or costs associated with water pollution control within the County's project area under section 13-2.04 or 13-3.04, as applicable. The

Department pays for any other contract work required to be performed within the County's project area during the suspension under the applicable bid item.

Since you are being made aware of this possible suspension of work prior to bid submittal, the Department does not pay for change order work for direct and indirect costs (including time related overhead, home office overhead, field office overhead, and mobilization or remobilization) related to this suspension of work.

Delete the revision made to section 8-1.10D in the RSS.

Replace section 8-1.13 "Contractor's Control Termination" with:

Refer to Article 9 "Termination By County for Convenience" and Article 10 "Termination By County for Cause" of the Agreement.

Replace section 8-1.14 "Contract Termination" with:

Refer to Article 9 "Termination By County for Convenience" and Article 10 "Termination By County for Cause" of the Agreement.

^^

9 PAYMENT

Add to end of section 9-1.03:

The Department pays 6 percent annual interest for the period of the retention for penalty withholds later determined not owed.

Replace the last paragraph of section 9-1.03 with:

Pay your subcontractors within 10 days of receipt of each progress payment unless otherwise agreed to in writing (Bus & Prof Code § 7108.5). Violation of this section subjects you to the penalties, sanctions and other remedies of Bus and Prof § 7108.5. This section must not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to you in the event of a dispute involving late payment or nonpayment by you, deficient subcontract performance, or noncompliance by a subcontractor.

Replace the headings and paragraphs in section 9-1.11 of the RSS with:

9-1.11 TIME –RELATED OVERHEAD

Not used.

Add to section 9-1.16C:

The following items are eligible for progress payment even if they are not incorporated into the work:

- 1. Construction area Signs
- 2. Plastic Pipe
- 3. Corrugated Steel Pipe
- 4. Precast Concrete Pipe Manhole
- 5. Luminaires
- 6. Signal and Lighting Standards
- 7. Signal Heads and Mounting Brackets
- 8. Bar Reinforcing Steel
- 9. Fence (Type BW)

Replace the last sentence of the 3rd paragraph of section 9-1.16E(2) with:

These amounts are shown on the *Pay Estimate*.

Replace the last sentence of the 1st paragraph of section 9-1.16E(3) with:

The documents include QC plans, schedules, traffic control plans, water pollution control submittals, and dust control submittals.

Add to the 1st paragraph of section 9-1.16E(3):

If you fail to comply with water pollution control or dust control requirements, the Department withholds part of the progress payment.

Replace the 2nd paragraph of section 9-1.16E(4) with:

Stop notice information may be obtained from the Department's Construction Division.

Replace the section 9-1.16F with:

9-1.16F Retentions

9-1.16F(1) General

The Department will retain 5% of the value of each progress payment (excluding mobilization payments) from each progress payment. After the Engineer determines that the project is substantially complete, the Department may, at the Engineer's sole discretion, release half of all retention previously withheld and reduce any subsequent retentions withheld from subsequent progress payments to 2.5% of the value of any subsequent progress payments (excluding mobilization payments). The retained funds will be retained until thirty five (35) days after recordation of the Notice of Acceptance. (Pub Cont Code §9203)

You may elect to receive one hundred percent (100%) of payments due under the Contract from time to time, without retention of any portion of the payment by the County, by depositing securities of equivalent value with the County (Pub Cont Code 22300). Securities eligible for deposit hereunder are limited to those listed in Section 16430 of the Government Code, or bank or savings and loan certificates of deposit.

Funds retained from progress payments to ensure performance of the Contract that are eligible for payment into escrow or to an escrow agent pursuant to Section 22300 of the Public Contract Code do not include funds withheld or deducted from payment due to your failure to fulfill a contract requirement.

9-1.16F(2) Prompt Payment of Retained Funds to Subcontractors

Section 9-1.16F(1) describes retainage and release of retainage to you. You and/or your subcontractor must return all monies withheld in retention from subcontractors within 30 days after receiving payment of retainage. Violation of this section subjects you to the penalties, sanctions, and other remedies of Bus & Prof Code § 7108.5. This section must not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to you in the event of a dispute involving late payment or nonpayment by you, deficient subcontract performance, or noncompliance by a subcontractor.

Replace section 9-1.22 "Arbitration" with:

9-1.22 DISPUTES RESOLUTION

As permitted by Public Contract Code section 20104, the County has elected to resolve any claims between you and the County pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2 of the Public Contract Code. Sections 5-1.43 and 9-1.17 describe the contract claim procedure. The provisions of these sections constitute a non-judicial claim settlement procedure, and also step one of a two-step claim presentment procedure by agreement under Section 930.2 of the California Government Code. Specifically, step one is compliance with the contract claim procedure in accordance with the Contract Documents, including, sections 5-1.43 and 9-1.17. Step two is the filing of a timely Government Code Section 910 et seq. claim in accordance with the California Government Code. Any such claim shall affirmatively indicate your prior compliance with the contract claim procedure and previous dispositions under sections 5-1.43 and 9-1.17. Any claim that fails to conform to the contract claim procedure required in step one may not be asserted in any subsequent Government Code Section 910 et seq. claim.

The legend must be retroreflective, except for nonreflective black letters and numerals. The colors blue and orange must comply with PR Color no. 3 and no. 6, respectively, as specified in the Federal Highway Administration's *Color Tolerance Chart*.

The legend for the type of project on construction project funding signs must read as follows:

HIGHWAY IMPROVEMENT ON
PLEASANT VALLEY ROAD (SR49) / PATTERSON DRIVE INTERSECTION SIGNALIZATION

The legend for the types of funding on construction project funding signs must read as follows and in the following order:

STATE-LOCAL PARTNERSHIP PROGRAM
SHOPP FUNDS
COUNTY TIM FEES

The legend for the year of completion on construction project funding signs must read as follows:

YEAR OF COMPLETION 2014

The size of the legend on construction project funding signs must be as described in Appendix C. Do not add any additional information unless authorized.

12-2.03 CONSTRUCTION

Install 2 Type 1 construction project funding signs at the locations designated by the Engineer before starting major work activities visible to highway users.

When authorized, remove and dispose of construction project funding signs upon completion of the project.

12-2.04 PAYMENT

Construction project information signs are included in the payment for "Construction Area Signs".

Replace Item 1.3 of the 1st paragraph of section 12-3.01A(3) with:

Contract number, CIP number, Caltrans district, county, route and post mile of project limits or County Road name.

Replace section 12-3.05 with:

12-3.05 PORTABLE FLASHING BEACONS

12-3.05A General

Section 12-3.05 includes specifications for installing, removing, and moving portable flashing beacons.

Nine (9) Portable Flashing Beacons (PFB) must be placed within the intersection facing each direction of vehicle travel.

- Sheet SC-1: Place six (6) PFBs to face traffic approaching project site as shown. These are to remain in place throughout the construction of the project
- Sheet SC-2: Place three (3) additional PFBs, for a total of 9 PFBs.
- Sheet SC-3: One (1) PFB to be relocated.
- Sheet SC-4: One (1) PFB to be relocated.

Each portable flashing beacon must have:

1. Mounting hardware to be placed on top of temporary stop sign or proposed Type 1-B pole
2. Lighting unit
3. Flasher unit (for flashing red light)
4. Battery power source

Assemble units to form a complete, self-contained, flashing beacon that can be delivered to the job site and placed into immediate operation.

12-3.05B Materials

The lens for the beacon lighting unit must have a visible diameter of 12 inches. The lens must be glass or plastic as specified in ANSI D-10.1 for a red traffic signal lens.

Provide a minimum 8-inch-long visor and a backplate for the beacon lighting unit. Visors are not required during the hours of darkness.

The flasher unit must provide 50 to 60 flashes per minute with 250- to 350-milliseconds dwell time.

The standard must be adjustable to provide variable mounting of the lighting unit from 6 to 10 feet, measured from the bottom of the base to the center of the lens, with provisions for securing the standard at the desired height. Securely attach the standard to the base and provide enough length of multi-conductor, neoprene jacketed cable as required for the full vertical height.

The base must be large enough to accommodate a minimum of two 12-V automotive-type storage batteries, and must be of such shape and mass that the beacon will not roll in the event it is struck by a vehicle or pushed over.

The lamp must be rated at 25 W for operation on 12-V battery current.

You are responsible for providing battery service or electrical hookup to Portable Flashing Beacon at all times it is in service

The flashing beacon assembly must be weatherproof and must be capable of operating a minimum of 150 hours between battery recharging or other routine maintenance.

12-3.05C Construction

You may store the flashing beacon at selected central locations within the highway where designated by the Engineer.

Moving flashing beacons from location to location as ordered after initial placement is change order work.

Immediately repair and repaint, or replace flashing beacons in their original locations when they are displaced or not in an upright position from any cause.

The Department does not pay for repair or replacement of portable flashing beacons.

12-3.05D Payment

Portable flashing beacons are measured once at each location.

Replace section 12-3.12A(2) with:

Section 12-3.12A(2) Definitions

Sign working day (SWD): unit of measure for payment for Portable Changeable Message Sign – per sign per each day used.

Replace section 12-3.12A(3) with:

12-3.12A(3) Submittals

Upon notification, submit a certificate of compliance for each portable changeable message sign.

Add section 12-3.12A(4):

12-3.12A(4) Quality Control and Assurance

Comply with the manufacturer's operating instructions for the portable changeable message sign.

Approaching drivers must be able to read the entire message at least 2 times before passing the portable changeable message sign at the posted speed limit. Use more than 1 portable changeable message sign to comply with this requirement if necessary.

Add to section 12-3.12C:

Place and operate portable changeable message signs (PCMS) in advance of any work affecting public traffic. Place and operate PCMS one week in advance of any lane closures, to inform the public of upcoming contract work and related delays or as directed by the Engineer.

For 5 days, starting on the day of signal activation, place 1 portable changeable message sign in each direction of travel and display the following message: "SIGNAL AHEAD -- PREPARE TO STOP."

Replace section 12-3.12D with:

Portable changeable message sign is measured in sign working days (SWD). Portable changeable message signs at the project site but not in use will not be paid for.

Replace section 12-3.13 with:

12-3.13 IMPACT ATTENUATOR VEHICLE

12-3.13A General

12-3.13A(1) Summary

Section 12-3.13 includes specifications for protecting traffic and workers with an impact attenuator vehicle during moving lane closures and when placing and removing components of stationary lane closures, ramp closures, shoulder closures, or a combination.

You may use an impact attenuator vehicle, but it is not required.

Do not use an impact attenuator vehicle to place, remove, or place and remove components of a stationary traffic control system on 2-lane, 2-way highways where the useable shoulder width is less than 8 feet unless authorized by the Engineer.

Impact attenuator vehicles must comply with the following test levels under National Cooperative Highway Research Program 350:

1. Test level 3 if the preconstruction posted speed limit is 50 mph or more
2. Test levels 2 or 3 if the preconstruction posted speed limit is 45 mph or less

Comply with the attenuator manufacturer's instructions for:

1. Support truck
2. Trailer-mounted operation
3. Truck-mounted operation

Flashing arrow signs must comply with section 12-3.03. You may use a portable changeable message sign instead of a flashing arrow sign. If a portable changeable message sign is used as a flashing arrow sign, it must comply with section 6F.56 "Arrow Panels" of the *California MUTCD*.

12-3.13A(2) Definitions

impact attenuator vehicle: A support truck that is towing a deployed attenuator mounted to a trailer or a support truck with a deployed attenuator that is mounted to the support truck.

12-3.13A(3) Submittals

Upon request, submit a certificate of compliance for each attenuator used on the project.

12-3.13A(4) Quality Control and Assurance

Do not start impact attenuator vehicle activities until authorized.

Before starting impact attenuator vehicle activities, conduct a pre-installation meeting with the Engineer, subcontractors, and other parties involved with traffic control to discuss the operation of the impact attenuator vehicle during moving lane closures and when placing and removing components of stationary traffic control systems.

Schedule the location, time, and date for the pre-installation meeting with all participants. Furnish the facility for the pre-installation meeting within 5 miles of the job site or at another location if authorized.

12-3.13B Materials

Attenuators must be a brand on the Authorized Material List for highway safety features.

The combined weight of the support truck and the attenuator must be at least 19,800 pounds, except the weight of the support truck must not be less than 16,100 or greater than 26,400 pounds.

For the Trinity MPS-350 truck-mounted attenuator, the support truck must not have a fuel tank mounted underneath within 10'-6" of the rear of the support truck.

Each impact attenuator vehicle must have:

1. Legal brake lights, taillights, sidelights, and turn signals
2. Inverted "V" chevron pattern placed across the entire rear of the attenuator composed of alternating 4-inch wide nonreflective black stripes and 4-inch wide yellow retroreflective stripes sloping at 45 degrees
3. Type II flashing arrow sign
4. Flashing or rotating amber light
5. Operable 2-way communication system for maintaining contact with workers

12-3.13C Construction

Except where prohibited, use an impact attenuator vehicle:

1. To follow behind equipment and workers who are placing and removing components of a stationary lane closure, ramp closure, shoulder closure, or any combination. Operate the flashing arrow sign in the arrow or caution mode during this activity, whichever applies. Follow at a distance that prevents intrusion into the workspace from passing traffic.
2. As a shadow vehicle in a moving lane closure.

After placing components of a stationary traffic control system you may place the impact attenuator vehicle in advance of the work area or at another authorized location to protect traffic and workers.

Secure objects, including equipment, tools, and ballast on impact attenuator vehicles to prevent loosening upon impact by an errant vehicle.

Do not use a damaged attenuator in the work. Replace any attenuator damaged from an impact during work activities at your expense.

12-3.13D Payment

Not Used

Add to section 12-4.01:

Payment for accommodating bicyclists through a 1-way reversing traffic control work zone is included in the payment for traffic control system.

Add to section 12-4.02A:

For grinding operations, sawcutting, and installing loop detectors with an impact attenuator vehicle as a shadow vehicle, closure of the adjacent traffic lane is not required.

Designated holidays are as shown in the following table:

Designated Holidays	
Holiday	Date observed
New Year's Day	January 1st
Washington's Birthday	3rd Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4th
Labor Day	1st Monday in September
Veterans Day	November 11th
Thanksgiving Day	4th Thursday in November
Christmas Day	December 25th

If a designated holiday falls on a Sunday, the following Monday is a designated holiday. If November 11th falls on a Saturday, the preceding Friday is a designated holiday.

Under a 1-way reversing traffic control operation, traffic may be stopped in 1 direction for periods not to exceed five (5) minutes. After each stoppage, all accumulated traffic for that direction must pass through the work zone before another stoppage is made.

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

If work vehicles or equipment are parked within 6 feet of a traffic lane, close the shoulder area with fluorescent orange traffic cones or portable delineators. Place the cones or delineators on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. Use at least 9 cones or delineators for the taper. Use a W20-1, "Road Work Ahead," W21-5b, "Right/Left Shoulder Closed Ahead," or C24(CA), "Shoulder Work Ahead," sign mounted on a crashworthy, portable sign support with flags. The sign must be placed as ordered by the Engineer and at least 48 by 48 inches in size. If a cone or delineator is displaced or overturned, immediately restore the device to its original position or location.

Add to Section 12-4.02A:

If your closure is different from the Lane Closure Charts, then submit a written Lane Closure Amendment schedule of planned closures for the next week period, defined as Sunday noon through the following Sunday noon, by noon each Monday. The Engineer will submit the Lane Closure Schedule to Caltrans District 3 for review and approval.

Submit a written schedule for Lane Closure Amendment not less than ten (10) days and not more than thirty (30) days before the anticipated start of any operation that will:

1. Reduce horizontal clearances, traveled way, including shoulders, to two lanes or less.
2. Reduce the vertical clearances available to the public due to such operations as pavement overlay or overhead sign installation.

Replace the last sentence of the last paragraph of Section 12-4.03 with:

Approval of Closure Schedule amendments will be at the discretion of the Engineer and Caltrans District 3.

Replace "Reserved" in section 12-4.04 with:

Lane Closure Restriction for Designated Holidays and Special Days										
Thu	Fri	Sat	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Sun
	H xx									
		H xx								
			H xx	xx						
				H xx						
					H xx					
						H xx				
							H xx			
								H xx	xx	xx
Legend:										
	Refer to lane requirement charts									
x	The full width of the traveled way must be open for use by traffic after 2:30 P.M..									
xx	The full width of the traveled way must be open for use by traffic.									
H	Designated holiday									
SD	Special day									

Replace "reserved" in section 12-4.05A with:

Conventional highway lanes may be closed only if signed for closing lane seven (7) days in advance. Notify the Engineer at least ten (10) business days before signing the conventional highway. The Engineer will submit your Traffic Management plan to the Caltrans District 3 Traffic Management Center (TMC) at least seven (7) days before initiating lane closure on state highway or conducting activity that may cause a traffic impact on State highway. Caltrans will send a confirmation notification at least three (3) days before any lane closure within State Right of Way that will interfere with traffic. In emergency situations when the corrective work or the emergency itself may affect traffic, TMC and the Caltrans representative will be notified as soon as possible by the Engineer. If the conventional highway is not closed on the posted day, change the closure to allow a six (6)-business-day advance notice before closure.

Replace "Reserved" in section 12-4.05F with:

Chart no. 1 Conventional Highway Lane Requirements																									
County: El Dorado	Route/Direction: 49 (Pleasant Valley Rd.)/ NB & SB												PM:10.6/10.9												
Closure limits: From 500 feet southwest of Patterson Drive to 950 feet northeast of Patterson Drive																									
From hour to hour																									
	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Fridays	R	R	R	R	R	R	R													R	R	R	R	R	R
Saturdays	R	R	R	R	R	R	R	R	R	R					R	R	R	R	R	R	R	R	R	R	R
Sundays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Legend:																									
<input type="checkbox"/> R	Provide at least 1 through traffic lane, not less than 11 feet in width, for use by both directions of travel (Reversing Control)																								
<input type="checkbox"/>	Work allowed within the highway where shoulder or lane closure is not required																								
REMARKS: Comply with Section 5-1.20F "Coordination with School Districts" of these special provisions for hours schools are in session and required notification.																									

**Chart no. 2
Conventional Highway Lane Requirements**

County: El Dorado	Route/Direction: Patterson Dr. /EB & WB	PM:
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Closure limits: From Pleasant Valley Rd. (Route 49) to 380 feet south of Pleasant Valley Rd.

From hour to hour	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Fridays										R	R	R	R	R	R										
Saturdays										R	R	R	R	R	R	R									
Sundays										R	R	R	R	R	R	R									

Legend:

- R Provide at least 1 through traffic lane, not less than 11 feet in width, for use by both directions of travel
(Reversing Control)
- Work allowed within the highway where shoulder or lane closure is not required

REMARKS:

- 1-This chart is for days school is in session.
- 2-Comply with Section 5-1.20F "Coordination with School Districts" of these special provisions for hours schools are in session.

Chart no. 3 Conventional Highway Lane Requirements																										
County: El Dorado							Route/Direction: Patterson Dr. /EB & WB							PM:												
Closure limits: From Pleasant Valley Rd. (Route 49) to 380 feet south of Pleasant Valley Rd.																										
From hour to hour		24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Fridays										R	R	R	R	R	R	R	R	R	R	R						
Saturdays											R	R	R	R	R	R	R	R								
Sundays											R	R	R	R	R	R	R	R								
Legend:																										
R		Provide at least 1 through traffic lane, not less than 11 feet in width, for use by both directions of travel (Reversing Control)																								
		Work allowed within the highway where shoulder or lane closure is not required																								
REMARKS:																										
1-This chart is for days school is not in session. 2-Comply with Section 5-1.20F "Coordination with School Districts" of these special provisions for the hours schools are in session.																										

Replace section 12-5 with:

12-5 TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE

12-5.01 GENERAL

Section 12-5 includes specifications for closing traffic lanes with stationary and moving lane closures on 2-lane, 2-way highways. The traffic control system for a lane closure must comply with the details shown.

Traffic control system includes signs.

12-5.02 MATERIALS

Vehicles equipped with attenuators must comply with section 12-3.13.

12-5.03 CONSTRUCTION

12-5.03A General

During traffic striping and pavement marker placement using bituminous adhesive, control traffic with a stationary or a moving lane closure. During other activities, control traffic with stationary lane closures.

Whenever components of the traffic control system are displaced or cease to operate or function as specified from any cause, immediately repair the components to the original condition or replace the components and restore the components to the original location.

12-5.03B Stationary Lane Closures

For a stationary lane closure made only for the work period, remove components of the traffic control system from the traveled way and shoulder, except for portable delineators placed along open trenches or excavation adjacent to the traveled way at the end of each work period. You may store the components at selected central locations designated by the Engineer within the limits of the highway.

You may use a pilot car to control traffic. If a pilot car is used for traffic control, the cones shown along the centerline need not be placed. The pilot car must have radio contact with personnel in the work area. Operate the pilot car through the traffic control zone at a speed not greater than 25 miles per hour.

12-5.03C Moving Lane Closures

A changeable message sign used in a moving lane closure must comply with section 12-3.12 except the sign must be truck-mounted. The full operational height to the bottom of the sign may be less than 7 feet above the ground but must be as high as practicable.

A flashing arrow sign used in a moving lane closure must be truck-mounted. Operate the flashing arrow sign in the caution display mode whenever it is being used on a 2-lane, 2-way highway.

12-5.04 PAYMENT

Traffic control system for lane closure is paid for as traffic control system. Flagging costs are paid for as specified in section 12-1.03.

The requirements in section 4-1.05 for payment adjustments do not apply to traffic control system. Payment adjustments for traffic control system will be made for an increase or decrease in traffic control work if ordered and will be made on the basis of the cost of the necessary increased or decreased traffic control. The adjustments will be made on a force account basis for increased work and estimated on the same basis in the case of decreased work.

A traffic control system required by change order work is paid for as a part of the change order work.

Replace section 12-8 with: 12-8 TEMPORARY PAVEMENT DELINEATION

12-8.01 GENERAL

Section 12-8 includes specifications for placing, applying, maintaining, and removing temporary pavement delineation.

Temporary signing for no-passing zones must comply with section 12-3.06.

Temporary painted traffic stripes and painted pavement markings used for temporary delineation must comply with section 84-3.

12-8.02 MATERIALS

12-8.02A General

Temporary centerline and laneline must be placed.

12-8.02B Temporary Lane Line and Centerline Delineation

Temporary pavement markers must be the same color as the lane line or centerline markers being replaced. Temporary pavement markers must be temporary pavement markers on the Authorized Material List for short-term day/night use, 14 days or less, or long-term day/night use, 180 days or less. Place temporary pavement markers under the manufacturer's instructions.

12-8.02C Temporary Edge Line Delineation

On multilane roadways, freeways, and expressways open to traffic where edge lines are obliterated and temporary pavement delineation to replace those edge lines is not shown, provide temporary pavement delineation for:

1. Right edge lines consisting of portable delineators or channelizers placed longitudinally at intervals not exceeding 100 feet

12-8.02D Temporary Traffic Stripe Tape

Not Used.

12-8.02F Temporary Pavement Marking Tape

Not used.

12-8.02G Temporary Pavement Marking Paint

You may use one of the types of temporary removable pavement marking tape or permanent pavement marking tape on the Authorized Material List instead of temporary pavement marking paint.

12- 8.02H Temporary Pavement Markers

Temporary pavement markers must be one of the temporary pavement markers on the Authorized Material List for long term day/night use, 180 days or less.

12-8.03 CONSTRUCTION

12-8.03A General

Wherever work activities obliterate pavement delineation, place temporary or permanent pavement delineation before opening the traveled way to traffic. Place centerline pavement delineation for traveled ways open to traffic. On multilane roadways, freeways and expressways, place edge line delineation for traveled ways open to traffic.

Establish the alignment for the temporary pavement delineation including required lines. Surfaces to receive an application of paint must be dry and free of dirt and loose material. Do not apply temporary pavement delineation over existing pavement delineation or other temporary pavement delineation. Maintain temporary pavement delineation until it is superseded or you replace it with a new pattern of temporary pavement delineation or permanent pavement delineation.

When the Engineer determines the temporary pavement delineation is no longer required for the direction of traffic, remove temporary pavement delineation that conflicts with any subsequent or new traffic pattern for the area.

12-8.03B Temporary Lane line and Centerline Delineation

Whenever centerlines are obliterated and temporary pavement delineation to replace the lines is not shown, the minimum centerline delineation must consist of temporary pavement markers placed longitudinally at intervals not exceeding 24 feet. For temporary pavement markers on the Authorized Material List for long-term day/night use, 180 days or less, cement the markers to the surfacing with the adhesive recommended by the manufacturer except do not use epoxy adhesive to place the pavement markers in areas where removal of the markers will be required.

For centerline delineation consisting entirely of temporary pavement markers on the Authorized Material List for short-term day/night use, 14 days or less, place the markers longitudinally at intervals not exceeding 24 feet. Do not use the markers for more than 14 days on lanes opened to traffic. Place the permanent pavement delineation before the end of the 14 days. If the permanent pavement delineation is not placed within the 14 days, replace the temporary pavement markers with additional temporary pavement delineation equivalent to the pattern specified or shown for the permanent pavement delineation for the area. The Department does not pay for the additional temporary pavement delineation.

Where no-passing centerline pavement delineation is obliterated, install the following temporary no-passing zone signs before opening lanes to traffic. Install a W20-1, "Road Work Ahead," sign from 1,000 feet to 2,000 feet in advance of a no-passing zone. Install a R4-1, "Do Not Pass," sign at the beginning of a no-passing zone and at 2,000-foot intervals within the no-passing zone. Install a R4-2, "Pass With Care," sign at the end of the no-passing zone. The Engineer determines the exact location of temporary no-passing zone signs. Maintain the temporary no-passing zone signs in place until you place the permanent no-passing centerline pavement delineation. Remove the temporary no-passing zone signs when the Engineer determines they are no longer required for the direction of traffic.

12-8.03C Temporary Edge Line Delineation

You may apply temporary painted traffic stripe where removal of a 4-inch wide traffic stripe is not required.

The Engineer determines the lateral offset for traffic cones, portable delineators, and channelizers used for temporary edge line delineation. If traffic cones or portable delineators are used for temporary pavement delineation for edge lines, maintain the cones or delineators during hours of the day when the cones or delineators are being used for temporary edge line delineation.

Channelizers used for temporary edge line delineation must be an orange surface-mounted type. Cement channelizer bases to the pavement under section 85 for cementing pavement markers to pavement except do not use epoxy adhesive to place channelizers on the top layer of the pavement. Channelizers must be one of the 36-inch, surface-mounted types on the Authorized Material List.

Remove the temporary edge line delineation when the Engineer determines it is no longer required for the direction of traffic.

12-8.03D Temporary Traffic Stripe Tape

Not used.

12-8.03E Temporary Traffic Stripe Paint

Apply 1 or 2 coats of temporary traffic stripe paint for new or existing pavement.

The painted temporary traffic stripe must be complete in place at the location shown before opening the traveled way to traffic. Removal of painted temporary traffic stripe is not required.

12-8.03F Temporary Pavement Marking Tape

Not used.

12-8.03G Temporary Pavement Marking Paint

Apply and maintain temporary pavement markings consisting of painted pavement markings at the locations shown. The painted temporary pavement marking must be complete in place at the location shown before opening the traveled way to traffic. Removal of painted temporary pavement marking is not required.

Apply 1 or 2 coats of temporary pavement marking paint for new or existing pavement.

12- 8.03H Temporary Pavement Markers

Place temporary pavement markers under the manufacturer's instructions. Cement the markers to the surfacing with the manufacturer's recommended adhesive, except do not use epoxy adhesive in areas where removal of the pavement markers is required.

You must use retroreflective pavement markers specified in section 85 instead of temporary pavement markers, per detail 22 on Caltrans Standard Plan A20A. Retroreflective pavement markers used for temporary pavement markers must comply with section 85, except the waiting period before placing pavement markers on new HMA surfacing as specified in section 85-1.03 does not apply. Do not use epoxy adhesive to place pavement markers in areas where removal of the pavement markers is required.

Temporary pavement markers must be complete in place before opening the traveled way to traffic.

12-8.04 PAYMENT

Not Used

Replace the first paragraph in section 13-3.01B(2)(a) with:

1. Within 21 days after the date of the Notice of Award letter submit 3 copies of your SWPPP for review. Allow 7 days for the Department's review. The Engineer provides comments and specifies the date when the review is stopped if revisions are required.
2. Change and resubmit the SWPPP within 7 days of receiving the Engineer's comments. The Department's review resumes when a complete SWPPP is resubmitted.
3. When the Engineer authorizes the SWPPP, submit an electronic and 4 printed copies of the authorized SWPPP.
4. The Engineer submits the authorized SWPPP to the RWQCB for review to obtain coverage under the Permit and a WDID. Allow 14 days for RWQCB review and comment.
5. If the Engineer requests changes to the SWPPP based on the RWQCB's comments, amend the SWPPP within 10 days.

The Engineer will not postpone issuance of the Notice to Proceed if your SWPPP submittal fails to meet the contract requirements requiring multiple submittals and reviews of your SWPPP.

Replace Item 4 of the 4th paragraph of section 13-3.01B(2)(a) with:

4. Copy of County-furnished CEQA document and copy of permits obtained by the Department, including Fish & Wildlife permits, US Army Corps of Engineers permits, RWQCB 401 certifications, aerially deposited lead variance from the Department of Toxic Substance Control, aerially deposited lead variance notification, and RWQCB waste discharge requirements for aerially lead reuse.

Replace item 2.6 of the fifth paragraph in section 13-3.01B(2)(a) with:

2.6 There is a Permit violation.

Replace 13-3.01B(2)(e) with:

13-3.01B(2)(e) Surface Water Sampling

The SAP must include surface water sampling required by Item 4 of the Technical Certification Conditions of the RWCBB 401 certification (401 WQ cert), included in Appendix B. The SAP must also describe a procedure for determining natural (background) turbidity as required by item 5 of the Technical Certification Conditions of the 401 WQ cert.

Replace section 13-3.01B(3) with:

13-3.01B(3) Reserved

Replace item 1 in the 1st paragraph of section 13-3.01B(5) with:

1. Each qualifying rain event. Include:

Replace section 13-3.01B(6)(b) with:

13-3.01B(6)(b) Numeric Action Level Exceedance Report

For Risk Level 2 and 3 projects, whenever a NAL is exceeded, notify the Engineer and submit a NAL exceedance report within 48 hours after conclusion of a storm event. The report must include:

1. Field sampling results and inspections, including:
 - 1.1. Analytical methods, reporting units, and detection limits
 - 1.2. Date, location, time of sampling, visual observations, and measurements
 - 1.3. Quantity of precipitation from the storm event
2. Description of BMPs and corrective actions taken to manage NAL exceedance

Replace 13-3.01B(6)(e) with:

Prepare and submit to County Surface Water Monitoring Report as required by Item 4 of the Technical Certification Conditions of the 401 WQ cert.

Add to the 1st paragraph of Section 13-3.01B(7):

For work within the seasonal wetland areas submit REAP whenever the National Oceanic and Atmospheric Administration (NOAA) is predicting a storm event with more than 30 percent probability of precipitation within 72 hours. Weather forecasts must be documented upon request by CDFW.

Add to section 13-3.03A

If the Engineer determines that resources sufficient to bring you into compliance with section 13 have not been allocated, the Engineer may redirect any of your resources available at the project site toward this effort. If the Engineer redirects resources due to your non-compliance with the provisions of section 13, the County will not be responsible for any delays to your schedule resulting from the reallocation, and no compensation will be made for these delays.

Install water pollution control (WPC) practices when an area is inactive or before predicted precipitation, whichever occurs first, and:

1. By September 1 install WPC practices such that disturbed areas without WPC practices do not exceed the lesser of 50% of the total amount of area to be disturbed for the project or 10 acres
2. By September 15 install WPC practices such that disturbed areas without WPC practices do not exceed the lesser of 25% of the total amount of area to be disturbed for the project or 5 acres
3. By October 1 install WPC practices such that disturbed areas without WPC practices do not exceed the lesser of 10% of the total amount of area to be disturbed for the project or 2 acres
4. By October 15 install WPC practices such that disturbed areas without WPC practices do not exceed the lesser of 5% of the total amount of area to be disturbed for the project or 1 acres

During fall and winter do not exceed the specified amount of disturbance unless weather conditions permit and you request in writing and receive a waiver from the Engineer. Include in your request a contingency plan for installing WPC practices should weather conditions change.

Add to Section 13-3.03C:

Sample surface water for the constituents listed in Table 1 of item 4 of the Technical Certification conditions of the 401 Water Quality Certification, as shown in Appendix B.

Delete item 1 of the first paragraph of section 13-3.03C.

Replace item 2.4 of the first paragraph of section 13-3.03C with:

2.4 All locations where storm water is discharged off-site

Delete item 2 of the second paragraph of section 13-3.03C.

Replace item 3 of the second paragraph of section 13-3.03C with:

3. First 2 hours of each qualifying rain event that produces runoff

Delete the third paragraph of section 13-3.03C.

Replace item 2 in the 1st paragraph of section 13-3.04 with:

2. A total of 100% percent of the item total in the Proposed Final Pay Estimate.

Replace item 2 in the 2nd paragraph of section 13-3.04 with:

4. A total of 100% percent of the item total in the Proposed Final Pay Estimate.

Add to section 13-3.04:

The Department does not pay for implementation of WPC practices in areas outside the highway right-of-way not specifically provided for in the plans or in the special provisions.

Unless the WPC practice is required under section 13-4, the Department pays for WPC practices under section 9-1.04, excluding travel and subsistence allowances paid to workers.

The Department does not pay for WPC practices that the Engineer determines are installed for the purposes of conveying runoff as part of maintaining adequate drainage described in Section 10-1.02.

If you find it necessary to use WPC practices not specified to achieve compliance with local, state, and federal water pollution control regulations, then implementation, maintenance, and removal of the unspecified WPC practices will be at your expense.

The Department does not pay for the cleanup, repair, removal, disposal, or replacement of water pollution control practices due to improper installation or your negligence.

The work to complete the final storm water annual report is excluded from section 5-1.46.

The Department pays for preparing surface water SAP under prepare storm water pollution prevention plan. The Department pays for sampling and reporting for surface water required by the Technical Certification Conditions of the 401 WQ cert under section 9-1.04, excluding travel and subsistence allowances paid to workers, but only if the WPC practices for protection of surface waters are properly implemented and maintained.

Replace the 4th paragraph of Section 13-4.03C(1) with:

The following activities must be performed at least 100 feet from concentrated flows of stormwater, drainage courses, and inlets if within the floodplain, and at least 300 feet outside the floodplain and/or waterway; as far away as practicable from seasonal wetlands (shown also as environmentally sensitive areas); outside of the dripline of oak trees; and not in a location where spoils may be washed back into Waters of the State, or where spoils may cover aquatic or riparian vegetation, unless otherwise authorized:

1. Stockpiling materials
2. Storing pile-driving equipment and liquid waste containers
3. Washing vehicles and equipment in outside areas
4. Fueling and maintaining vehicles and equipment

Discharge of petroleum products or other excavated materials to surface water is prohibited.

Add item #11 to Section 13-4.03C(2):

11. Project building material and/or construction equipment must not be placed where materials could pass into Waters of the State or where they may cover aquatic or riparian vegetation.

Add to Section 13-4.03E(10):

Concrete must be completely cured before coming into contact with waters of the United States and/or Waters of the State (e.g. seasonal wetlands).

Add to the 3rd paragraph of Section 13-4.03F:

3. 8 hours of predicted rain

Add to Section 13-4.03G:

Comply with Section 14-11.11 Petroleum Contaminated Material of these special provisions.

Groundwater fluctuates between less than 8 feet to 15 feet below ground surface. Dewatering may be required during construction activities.

Comply with Notice to Bidders Information Handout: "Geotechnical Engineering Study for Pleasant Valley Road at Patterson Drive".

Add item 5 to the 3rd paragraph of Section 13-4.03G:

5. Surface water that contacts wet concrete must be pumped out and disposed of at an appropriate off-site commercial facility which is authorized to accept wastes.

Delete the 1st sentence of section 13-5.04 and replace the 2nd paragraph of section 13-5.04 with:

The Department pays for temporary soil stabilization for stockpiles under job site management. The Department pays for temporary soil stabilization for other than stockpiles under section 9-1.04 excluding travel and subsistence allowances paid to workers.

Replace 1st paragraph of section 13-6.03C with:

Provide temporary drainage inlet protection around drainage inlets as changing conditions require. Drainage inlet protection must be Type 1, Type 3A, Type 3B, Type 4A Type 4B or Type 5, as appropriate for conditions around the drainage inlet.

Add to section 13-6.03H:

Temporary reinforced silt fence must be Type 1.

Replace section 13-6.04 with:

The Department pays for temporary sediment control, except for Temporary Drainage Inlet Protection, under section 9-1.04 excluding travel and subsistence allowances paid to workers.

Replace section 13-7.04 with:

The Department pays for temporary tracking control under job site management.

Replace section 13-9.04 with:

The Department pays for temporary concrete washouts under job site management.

Replace section 13-10.04 with:

The Department pays for temporary linear sediment barriers for stockpiles under job site management.

The Department pays for temporary linear sediment barriers for other than stockpiles under section 9-1.04 excluding travel and subsistence allowances paid to workers.

AA

14 ENVIRONMENTAL STEWARDSHIP

Add to section 14-1.02:

An ESA exists on this project. Temporary Fence (Type ESA) provided to delineate limits of Temporary Construction Easement, Right of Way limits and protect trees and wetlands.

Before start of work, protect the ESA by installing Temporary Fence (Type ESA).

Limited access to the ESA is allowed by you for installing, maintaining, and removing of fence. Limited access to ESA is allowed for monitoring (as set forth in the permits in Appendix B of these contract documents) and shall be allowed for County Surveyor, Engineer, County Archaeologist, County Biologist, Caltrans inspector, RWQCB Inspector, California Department of Fish and Wildlife personnel & Army Corps of Engineer's Inspector. Notify the Engineer two (2) business days before the planned entry date. Any other access to an ESA is prohibited.

All native oak trees to remain in place must be surrounded by a temporary 4-foot tall brightly colored orange plastic construction (exclusion) fencing. The exclusion fencing must be installed as far outside as feasible of the drip line of each specimen tree. No encroachment into the fenced areas is permitted; fencing shall remain in place until all construction activities are ceased. Remove fencing after the completion of construction activities.

Add item 5 to paragraph 1 of Section 14-1.03C(1):

- 5. Place signs on the Type ESA Temporary Fence which read "Protected area. KEEP OUT. Access with permission of the Engineer only."

Add to Section 14-1.03D:

Installation, maintenance, and removal of Temporary Fence (Type ESA) for oak tree protection is change order work.

Add parts 4 and 5 to paragraph 1 Section 14-2.02A:

- 4. Engineer will notify United States Army Corps of Engineers (USACOE). USACOE will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
- 5. El Dorado County Coroner.

Replace "not used" in section 14-2.02C with:

In the event archeological resources (e.g., buildings, structures, or objects older than 45 years of age), are unearthed during excavation activities, all work in the immediate vicinity of the discovery must be stopped immediately and the Engineer must be notified. A County Archaeologist will evaluate the finding and recommend appropriate conservation measures. The conservation measures must be implemented prior to re-initiation of construction activities in the immediate vicinity of the discovery.

If human remains are found in the undertaking are during earth-moving activities such as grading or trenching, work must be suspended and the El Dorado County Coroner's Office must be notified. All work

in the immediate vicinity of the discovery must be stopped immediately. Construction Activities in the vicinity of the discovery cannot begin until given permission by the County coroner.

If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by the Army Corps 404 Permit (as shown in Appendix B), you shall immediately notify the Engineer, whom will notify the Corps of what you have found. The Corps will initiate the federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places. These standard provisions are aimed at ensuring compliance with the relevant laws and regulations (i.e. Public Resource Code sections 5097.5, 5097.98, and 5097.99; 14 California Regulations., section 4308; Penal code section 622-1/2; Health and Safety Code section 7050.5) and at avoiding significant impacts associated with unanticipated discoveries.

Add to Section 14-6.01A(1):

A Biologist will be supplied by the County. The County will contact qualified Biologist when construction begins. Biologist will have authority to immediately stop any activity that is not in compliance with the CDFW Streambed Alteration Agreement, and/or to order any reasonable measure to avoid or minimize impacts to fish and wildlife resources. You must work with the Engineer to ensure compliance with the CDFW Streambed Alteration Agreement.

Add to Section 14-6.01A(2):

CRLF- California Red-Legged Frogs

Replace Section 14-6.01C with:

County-supplied Biologist will conduct pre-construction field surveys within 24 hours prior to initiation of any construction activities within seasonal wetlands. If any CRLFs are detected during the pre-construction inspection, the U.S. Fish and Wildlife Service will be notified and no construction activities within the season wetlands can be initiated until Engineer obtains from U. S. Fish and Wildlife Service Incidental Take authorization or other authorization to proceed.

14-6.02 SPECIES PROTECTION

Replace “reserved” in section 14-6.02 with:

14-6.02A General

Section 14-6.02 includes specifications for protecting regulated species or their habitat.

Comply with Section 7-1.02K(6)(b).

This project is within or near habitat for regulated species shown in the following table:

California Red-Legged Frog
Loggerhead Shrike
Western Burrowing Owl
White -tailed Kite

The Department anticipates nesting or attempted nesting by migratory and nongame birds during the following periods:

Type of Bird	Anticipated Nesting Period
Loggerhead Shrike	March 1 through August 31
Western Burrowing Owl	February 1 through August 31
White-tailed Kite	October 1 through February 14
Other Raptors	March 1 through August 31
Most non-raptor, migratory birds	March 1 through August 31

14-6.02B Material

Not Used

14-6.02C Construction

14-6.02C(1) General

You must notify the Engineer ten (10) days before any tree/shrub removal that will occur within the anticipated bird nesting period. County-supplied Biologist will conduct pre-construction field surveys in accordance with the protocols in 14-6.03C(3) prior to initiation of any tree/shrub removal or trimming activities to verify the absence of nesting birds. No tree/shrub removal may occur unless authorization to proceed has been obtained from the CDFW.

14-6.02C(2) Protective Radius

Upon discovery of a regulated species, stop construction activities within radius defined in the table below. Immediately notify the Engineer. Do not resume activities until receiving notification from the Engineer.

Regulated species name	Protective radius
Loggerhead Shrike, Western Burrowing Owls & White-tailed Kite	250 feet
Non-raptor & Migratory Bird	50 feet

14-6.02C(3) Protocols

The following protocols apply:

Regulated species name	Protocol
Western Burrowing Owl	County-supplied biologist will conduct a pre-construction survey no more than 30 days before the initiation of any construction activities within and 250 feet beyond the project area.
White-tailed Kite Loggerhead Shrike and other Raptor Birds	County-supplied biologist will conduct a pre-construction survey no more than 7 days prior to the initiation of any construction activities. The County-supplied biologist will inspect all trees within and 250 feet of the project impacted areas for nests. If an active nest is found, the County-supplied biologist will consult with CDFW to determine the extent of construction free buffer –zone to be established around the nest.
Non-raptor Migratory Birds	County-supplied biologist will conduct a pre-construction survey no more than 7 days prior to the initiation of any construction activities. The County-supplied biologist will inspect all trees within and 50 feet of the project impacted areas for nests. If an active nest is found, the County-supplied biologist will consult with CDFW to determine the extent of construction free buffer –zone to be established around the nest.

If burrowing owls are identified within the designated area of potential affect, the following measures will be implemented.

- All burrows occupied by western burrowing owl, and a 250-foot buffer around the active burrow, must not be disturbed if the burrow is discovered during the nesting season unless County-supplied biologist verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
- In the event that the County-supplied biologist determines that owls can be moved, the County-supplied biologist will move the owls away from the Project Area using passive relocation techniques (e.g., one-way doors). Construction activities within 250 feet of burrows (formerly occupied by burrowing owl) containing passive relocation devices shall not be initiated for a minimum of 15 days after the installation of passive relocation devices unless the County-supplied biologist, based on observation of the owls successfully relocating to alternate burrows, allows a shortened waiting period.

14-6.02C(4) Biological Resource information

Not used.

14-6.02C(5) Protection Measures

Not used.

14-6.02D Payment

Not Used

Moved to 14-1.02

Replace section 14-8.02A with:

The work is located in a community with Multifamily Residential and Commercial land use designation.

The following table specifies the maximum allowable noise exposure for work within the community types and land use designations listed above.

MAXIMUM ALLOWABLE NOISE EXPOSURE FOR NONTRANSPORTATION NOISE SOURCES IN COMMUNITY REGIONS AND ADOPTED PLAN AREAS—CONSTRUCTION NOISE			
Land Use Designation ¹	Time Period	Noise Level (dB)	
		L_{eq}	L_{max}
Higher-Density Residential (MFR, HDR, MDR)	7 am- 7pm	55	75
	7 pm– pm	50	65
	10 pm–7 am	45	60
Commercial and Public Facilities (C, R&D, PF)	7 am-7 pm	70	90
	7 pm–7 am	65	75
Industrial (I)	Any Time	80	90
Note: ¹ Adopted Plan areas should refer to those land use designations that most closely correspond to the similar General Plan land use designations for similar development.			

The noise level requirements apply to the equipment on the job or related to the job measured at the affected building facade, including trucks, transit mixers or transient equipment that you may or may not own. Avoid the use of loud sound signals in favor of light warnings except those required by safety laws for the protection of personnel.

In the interest of the public safety and/or public convenience, the allowable noise levels may be waived.

Implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, shutting off idling equipment, rescheduling your activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources such that noise from construction does not exceed the limits specified above. If the existing background noise levels exceed the values above, then the limit for construction noise may be increased from the background noise level by the same percentage that the background noise level exceeds the values above.

Replace section 14-9.03 with:

14-9.03 DUST CONTROL

14-9.03A GENERAL

14-9.03A(1) Summary

Section 14-9.03 includes specifications relating to dust control.

Comply with Rules 223, 223-1 and 223-2 (Dust Rules) of the Rules and Regulations of the El Dorado County Air Quality Management District (AQMD).

The Dust Rules can be obtained from the AQMD, 330 Fair Lane, Placerville, CA, 95667, (530) 621-6662, and are available at AQMD’s website.

The materials within the project limits are neither known nor suspected to contain naturally occurring asbestos and the project is not located within designated Naturally Occurring Asbestos Review Areas on the current El Dorado County Naturally Occurring Asbestos Review Area Map.

14-9.03A(2) Submittals

Submit a site specific Fugitive Dust Control Plan / Fugitive Dust Plan (FDP) for all proposed work, meeting the requirements of Dust Rules and approved by AQMD, to the AQMD prior to start of any work. Provide the Engineer with four (4) copies of the AQMD approved FDP prior to starting any work that may generate dust.

Prepare an amendment to the FDP when there is a change in construction activities not included in the FDP, when the Contractor's activities violate a condition of AQMD, or when ordered by the Engineer. Amendments must identify additional dust control practices or revised operations, including those areas or activities not identified in the initially approved FDP. Amendments to the FDP must be prepared and submitted for review and approval within a time approved by the Engineer. At a minimum, the FDP must be amended annually.

Keep one (1) copy of the approved FDP and approved amendments at the project site. Make the FDP available upon request by a representative of the AQMD, California Air Resource Board, United States Environmental Protection Agency, or Caltrans. Requests by the public must be directed to the Engineer.

Provide all notices to the AQMD and create and maintain all records as required by Dust Rules. Copies of all related records must be submitted to the Engineer within thirty (30) calendar days of completion of the work.

14-9.03B Materials

Not used.

14-9.03C Construction

Implement the measures contained in the FDP to control dust.

Control dust using measures that include the following:

1. Stabilize unpaved areas subject to vehicular traffic by keeping adequately wetted, or covered with material that contains less than 0.25 percent asbestos.
2. The speed of vehicles and equipment traveling across unpaved areas must not be more than 15 mph unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment going faster from causing dust that is visible from crossing job site limits.
3. Stockpiles and disturbed areas not subject to vehicular traffic must be located in the plan and stabilized by being kept adequately wetted, or covered with material that contains less than 0.25 percent asbestos.
4. Conduct activities so that no dirt or mud tracking is visible on any paved roadway open to the public.
5. Use rock track out pads and wheel wash stations at all points of egress from unpaved construction areas.
6. Use a dedicated water truck for each piece of earthmoving equipment (e.g., scrapers, dozers, excavators, loaders, haul trucks, backhoes, compactors, graders, etc),
7. Pre-wet excavations to depths of cuts.

Dust control measures that will be required to mitigate dust may impact your productivity during construction activities.

Replace section 14-9.03D with:

14-9.03D PAYMENT

The Department does not pay for impacts to your productivity from mitigating dust from your activities.

If naturally occurring asbestos is found within the project limits, prepare an Asbestos Dust Mitigation Plan. Preparing an Asbestos Dust Mitigation Plan and its implementation is change order work.

Payment for preparing, obtaining approval for, revising, and amending the FDP, for AQMD FDP review fees and for maintaining and submitting all dust control records is paid for under Prepare Fugitive Dust Plan. Payment for performing dust control is not paid for under Prepare Fugitive Dust Plan.

Replace “reserved” in section 14-11.07 with:

14-11.07 REMOVE YELLOW TRAFFIC STRIPE AND PAVEMENT MARKING WITH HAZARDOUS WASTE RESIDUE

14-11.07A General

14-11.07A(1) Summary

You must first remove yellow traffic stripe and pavement marking with hazardous waste residue before removing any other traffic stripe or pavement marking shown on the plans.

Section 14-11.07 includes specifications for removing existing yellow thermoplastic and yellow painted traffic stripe and pavement marking. The residue from the removal of this material is a Department-generated hazardous waste.

Residue from removal of yellow thermoplastic and yellow painted traffic stripe and pavement marking contains lead chromate. The average lead concentration is at least 1,000 mg/kg total lead or 5 mg/l soluble lead. When applied to the roadway, the yellow thermoplastic and yellow painted traffic stripe and pavement marking contained as much as 2.6 percent lead. Residue produced from the removal of this yellow thermoplastic and yellow painted traffic stripe and pavement marking contains heavy metals in concentrations that exceed thresholds established by the Health & Safety Code and 22 CA Code of Regs. For bidding purposes, assume the residue is not regulated under the Federal Resource Conservation and Recovery Act (RCRA), 42 USC § 6901 et seq.

Work associated with disposal of hazardous waste residue regulated under RCRA as determined by test results is change order work.

Yellow thermoplastic and yellow paint may produce toxic fumes when heated.

14-11.07A(2) Submittals

14-11.07A(2)(a) General

Reserved

14-11.07A(2)(b) Lead Compliance Plan

Submit a lead compliance plan under section 7-1.02K(6)(j)(ii).

14-11.07A(2)(c) Work Plan

Submit a work plan for the removal, containment, storage, and disposal of yellow thermoplastic and yellow painted traffic stripe and pavement marking. The work plan must include:

1. Objective of the operation
2. Removal equipment
3. Procedures for removal and collection of yellow thermoplastic and yellow painted traffic stripe and pavement marking residue, including dust
4. Type of hazardous waste storage containers
5. Container storage location and how it will be secured
6. Hazardous waste sampling protocol and QA/QC requirements and procedures
7. Qualifications of sampling personnel
8. Analytical lab that will perform the analyses
9. DTSC registration certificate and CA Highway Patrol (CHP) Biennial Inspection of Terminals (BIT) Program compliance documentation of the hazardous waste hauler that will transport the hazardous waste
10. Disposal site that will accept the hazardous waste residue

The Engineer will review the work plan within 5 business days of receipt.

Do not perform work that generates hazardous waste residue until the work plan has been authorized.

Correct any rejected work plan and resubmit a corrected work plan within 5 business days of notification by the Engineer. A new review period of 5 business days will begin from date of resubmittal.

14-11.07A(2)(d) Analytical Test Results

Submit analytical test results of the residue from removal of yellow thermoplastic and yellow painted traffic stripe and pavement marking, including chain of custody documentation, for review and acceptance before:

1. Requesting the Engineer's signature on the waste profile requested by the disposal facility
2. Requesting the Engineer obtain an US EPA Generator Identification Number for disposal
3. Removing the residue from the site

14-11.07A(2)(e) U.S. Environmental Protection Agency Identification Number Request

Submit a request for the US EPA Generator Identification Number when the Engineer accepts analytical test results documenting that residue from removal of yellow thermoplastic and yellow painted traffic stripe and pavement marking is a hazardous waste.

14-11.07A(2)(f) Disposal Documentation

Submit documentation of proper disposal from the receiving landfill within 5 business days of residue transport from the project.

14-11.07B Materials

Not Used

14-11.07C Construction

Where grinding or other authorized methods are used to remove yellow thermoplastic and yellow painted traffic stripe and pavement marking that will produce a hazardous waste residue, immediately contain and collect the removed residue, including dust. Use a HEPA filter-equipped vacuum attachment operated concurrently with the removal operations or other equally effective approved methods for collection of the residue.

Make necessary arrangements to test the yellow thermoplastic and yellow paint hazardous waste residue as required by the disposal facility and these special provisions. Testing must include:

1. Total lead by US EPA Method 6010B
2. Total chromium by US EPA Method 6010B
3. Soluble lead by California Waste Extraction Test (CA WET)
4. Soluble chromium by CA WET
5. Soluble lead by Toxicity Characteristic Leaching Procedure (TCLP)
6. Soluble chromium by TCLP

From the first 220 gal of hazardous waste or portion thereof if less than 220 gal of hazardous waste are produced, a minimum of 4 randomly selected samples must be taken and analyzed individually. Samples must not be composited. From each additional 880 gal of hazardous waste or portion thereof if less than 880 gal are produced, a minimum of 1 additional random sample must be taken and analyzed. Use chain of custody procedures consistent with chapter 9 of US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) while transporting samples from the project to the laboratory. Each sample must be homogenized before analysis by the laboratory performing the analyses. A sample aliquot sufficient to cover the amount necessary for the total and the soluble analyses must then be taken. This aliquot must be homogenized a 2nd time and the total and soluble analyses run on this aliquot. The homogenization process must not include grinding of the samples. Submit the name and location of the disposal facility that will be accepting the hazardous waste and the analytical laboratory along with the testing requirements not less than 5 business days before the start of removal of yellow thermoplastic and yellow painted traffic stripe and pavement marking. The analytical laboratory must be certified by the California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) for all analyses to be performed.

After the Engineer accepts the analytical test results, dispose of yellow thermoplastic and yellow paint hazardous waste residue at a Class 1 disposal facility located in California under the requirements of the disposal facility operator within thirty (30) days after accumulating 220 pounds of residue and dust.

If less than 220 pounds of hazardous waste residue and dust is generated in total, dispose of it within thirty (30) days after the start of accumulation of the residue and dust.

The Engineer will sign all manifests as the generator within 2 business days of receiving and accepting the analytical test results and receiving your request for the US EPA Generator Identification Number. Use a transporter with a current DTSC registration certificate and that is in compliance with the CHP BIT Program when transporting hazardous waste.

14-11.07D Payment

Payment for a lead compliance plan is not included in the payment for environmental stewardship work. If analytical results demonstrate that the residue is hazardous waste, then this contract includes a separate pay item for lead compliance plan.

If analytical test results demonstrate that the residue is a non-hazardous waste and the Engineer agrees, dispose of the residue at an appropriately permitted CA Class II or CA Class III facility. The Department does not adjust payment for this disposal.

Replace "Reserved" in Section 14-11.11 with:

14-11.11 PETROLEUM CONTAMINATED MATERIAL

14-11.11A General

14-11.11A(1) Summary

Section 14-11.11 includes specifications for preparing a Health and Safety Plan; providing safety training; preparing an Excavation, Transportation, and Dewatering Plan; and stockpiling, sampling, handling and reuse of petroleum impacted material (soil and groundwater) generated during excavation and dewatering.

Groundwater fluctuates between eight (8) to twelve(12) feet below ground surface (bgs).

The following Site Investigation Reports containing soil and groundwater concentration data for petroleum hydrocarbons and constituents were prepared and are included in the Informational Handout:

- "Bi-Annual 2012 Groundwater Monitoring Report-Former Cheaper! Store #182, 130 Pleasant Valley Road, Diamond Springs, El Dorado County (APN#329-280-12: Case# 90096)" by H2Geol Consultants, dated March 15, 2012;
- "Revised Soil Vapor Workplan, Tower Mart #182, 130 Pleasant Valley Rd, Diamond Springs, CA 95619, El Dorado File #00077, RWQCB Case #090096", by West Associates Env. Engineers, Inc, dated May 2012; and
- "No Further Action Request (NFAR) and Case Closure Summary, Tower Mart #182, 130 Pleasant Valley Rd, Diamond Springs, CA 95619, El Dorado File #00077, RWQCB Case #090096", by West Associates Env. Engineers, Inc, dated Dec 2011;

Type DC material will be encountered during structure excavation work at the following locations:

- Traffic Signal Pole Foundation at "PV" 11+47.02, 29.48' RT from six feet bgs to the bottom of the foundation excavation as shown.

Applicable Rules and Regulations

Excavation and stockpiling of Type DC material and management of petroleum impacted material (groundwater) must be in conformance with the rules and regulations of the following agencies:

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Signalization
Contract No. PW 09-30425 / CIP No. 73320
September 10, 2013

County of El Dorado
Special Provisions
SP-57

- Regional Water Quality Control Board
- El Dorado County Air Quality Management District (EDC AQMD)
- California Division of Occupational Safety and Health Administration (CAL-OSHA)
- El Dorado County Department of Health and Human Services
- Laws and regulations that govern work related to Type DC materials include:
- Water Code, Division 7 (Porter-Cologne Water Quality Control Act),
- Title 8, California Code of Regulations.

Permits and Licenses

Comply with section 5-1.20B to procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of work .

14-11.11A(2) Definitions

Petroleum impacted material: soil and groundwater having low concentrations of petroleum hydrocarbons, and constituents including benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and 1,2-dichloroethane (1,2-DCA).

Type DC material: petroleum impacted material (soil) that requires disposal if it cannot be reused on the project site.

14-11.11A(3) Submittals

Health and Safety Plan

Prepare and submit a detailed Health and Safety Plan, signed by an Industrial Hygienist certified in comprehensive practice by the American Board of Industrial Hygiene, for site personnel that identifies potential health and safety hazards associated with work involving petroleum impacted material and specifies work practices that will be used to protect workers from those hazards in conformance with Title 8. At a minimum, the Health and Safety Plan must identify key site safety personnel, describe risks associated with the work, describe training requirements, describe appropriate personal protective equipment, describe site-specific medical surveillance requirements, describe air monitoring requirements, define appropriate site work zones and describe decontamination requirements. Submit the Health and Safety Plan at least 15 working days prior to beginning work for review and acceptance by the Engineer. Type DC excavation will not be allowed until the Engineer has accepted the plan.

Prior to performing work at the locations containing petroleum impacted material, personnel, including State personnel, must complete a safety training program, including subsequent training required until

completion of work, provided by the Contractor that communicates potential health and safety hazards associated with work involving petroleum impacted material and instructs personnel in procedures for doing the work safely. The level of training provided must be consistent with the person's job function and must conform to OSHA and CAL-OSHA regulations. The Contractor must provide a certification of completion of the Safety Training Program to personnel. Personal protective equipment, training, and washing facilities required by the Contractor's Health & Safety Plan for personnel working within the exclusion zone will be supplied to State personnel by the Contractor. The number of State personnel requiring the safety training program and personal protective equipment will be 3.

Excavation, Transportation and Dewatering Plan

Prepare and submit a detailed Excavation, Transportation and Dewatering Plan. Include in the plan:

1. schedule for excavation of Type DC material
2. stockpile location(s)
3. stockpiling procedures
4. dust control measures
5. transportation equipment and routes
6. truck waiting and staging areas
7. spill prevention measures
8. site for disposal of petroleum impacted material
9. dewatering methods and procedures
10. dewatering equipment and containers

Submit the plan at least 3 weeks prior to beginning Type DC excavation. Allow 10 days for the Engineer to review and approve the plan. If revisions are required, as determined by the Engineer, revise and resubmit the plan within 5 days of receipt of the Engineer's comments and allow 5 days for the Engineer to review the revisions. Type DC excavation will not be allowed until the Engineer has approved the plan.

14-11.11B Materials

Materials necessary for dewatering must comply with Section 5 "Control of Work", Section 6, "Control of Materials," and Section 74, "Pumping Equipment and Controls".

Provide holding tanks sufficient to meet the needs of all dewatering activities described in the dewatering plan. Holding tanks must be transportable and totally enclosed. Holding tanks must have an inlet and outlet capable of receiving and discharging minimum flows. Holding tanks must be able to accommodate temporary installation of submersible pumps of such capability to discharge water. The tanks must remain on the job site until dewatering operations are no longer necessary as determined by the Engineer.

Pumps must be capable of being submerged in water and be capable of discharging water and other materials; including, but not limited to, small rocks, gravel, sand and sediments.

Properly maintain all of the equipment and materials to operational levels necessary to comply with provisions outlined in these special provisions. If the Contractor or the Engineer identifies a deficiency in the functioning of any equipment or material, the deficiency must be immediately corrected by the Contractor.

14-11.11C Construction

14-11.11C(1) Earthwork

Earthwork must comply with Section 19, "Earthwork". Type DC material excavation consists of excavating petroleum impacted material (soil) within excavation limits specified in this section, and stockpiling the material.

Continuously monitor the excavation site and excavated Type DC material as it is excavated, using appropriate air monitoring devices consistent with the Health and Safety Plan required in this special provision. Prevent the flow of surface runoff from entering any excavated area.

14-11.11C(2) Stockpiling

Stockpile all excavated Type DC material from the locations identified in this section for analytical testing. Segregate Type DC material from non-impacted soil.

Transfer Type DC material directly from the excavation to a storage container approved for transport of contaminated material by the United States Department of Transportation or to an approved or designated stockpile. Maintain stockpile locations in accordance with the following requirements:

- A. Stockpile type DC materials at designated locations.
- B. Type DC material must be stored on undamaged 0.06-in high-density polyethylene or an equivalent impermeable barrier unless stockpiling is on a paved surface. If the stockpile location is on a paved surface, the thickness of the barrier can be reduced to 0.02-in high-density polyethylene or equivalent. The barrier must extend a minimum of 1.5-ft beyond the stockpile. Seams in the barrier must be sealed to prevent leakage.
- C. At the end of each day, stockpiled Type DC material must be covered with undamaged 0.012-in polyethylene or an equivalent impermeable barrier to prevent windblown dispersion and precipitation run-off and run-on. When more than one sheet is required to cover the material, sheets must be securely overlapped a minimum of 1.5-ft so it is kept in place at all times. Driven anchors must not be used except at the perimeter of the stockpile. Covers must be inspected and maintained in accordance with the requirements in "Water Pollution Control".
- D. Stockpiling requirements apply to temporary storage of Type DC material outside of excavations or transport containers including staging excavated material next to excavations prior to pick up by loading equipment, accumulating material for full transport loads and waiting for test results. You are responsible for cleanup after removal and disposal of stockpiled materials.

Type DC material on exteriors of transport vehicles must be removed and placed into the current transport vehicle, a stockpile or a storage container prior to vehicles leaving the area of excavation or stockpiling. No Type DC material will be deposited on public roads.

Test Type DC material to verify that disposal at a permitted landfill is not required. Once testing results are available confirming that the Type DC material does not require special disposal, the Type DC material will be available for reuse on the project or relinquishment to the Contractor. The Engineer will provide the Contractor with the laboratory analytical data within 30 days. This 30-day period will begin once the Engineer has received written notice from the Contractor that a particular stockpile is ready for sampling.

For bidding purposes, assume that Type DC material will be available for reuse on the project or relinquished to you. Reuse or dispose of stockpiled material within 60 days of analysis. If analytical results indicate that Type DC material does require special disposal remove and dispose of the material within 10 days.

Analytical testing and disposal of additional Type DC material resulting from excavations performed outside of the locations designated for your convenience, will be at your expense.

14-11.11C(3) Dewatering

You are responsible for dewatering activities. If groundwater or perched groundwater is encountered during excavation of Type DC material, immediately notify the Engineer. Pump groundwater or perched groundwater, encountered during structure excavation activities, into a holding tank.

Conduct a daily inspection of the dewatering equipment, when in use, to ensure that all components are functional and routinely maintained to prevent leakage. Should any component of the dewatering equipment be damaged or affect the performance of the equipment, immediately discontinue the dewatering operation and repair the component or replace it with substitute equipment.

Comply with the provisions in the Water Quality Control Board Statewide General Construction Permit. You are responsible for penalties assessed or levied on you or the Department as a result of your failure

to comply with the provisions in this section and as specified in Section 13 "Water Pollution Control" and Section 19-3 "Structure Excavation and Backfill" .

Test the groundwater within 5 days after completing dewatering activities or filling a holding tank to determine if it requires disposal as a contaminated liquid. Dispose of the groundwater within 30 days.

14-11.11D Payment

Additional Structure Excavation (Type DC) required beyond the limits and location described in this section is change order work.

Off-hauling Type DC material that requires special disposal is change order work.

Replace “Reserved” of section 14-12.05 with:

14-12.05 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE STREAMBED ALTERATION AGREEMENT

14-12.05A General

14-12.05A(1) Summary

Section 14-12.05 includes specifications for work in areas under the jurisdiction of CDFW. Comply with CDFW PLACs in Appendix B.

You must provide copies of the SAA and any extensions and amendments to the SAA to all persons who will be working on the project at the project site on behalf of County, including but not limited to subcontractors, inspectors, and monitors.

You must notify the Engineer if you determine or learn that a provision in the SAA might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW will contact the Engineer to resolve any conflict.

The SAA does not authorize you to take any species listed under the California Endangered Species Act (CESA) as a result of project activities.

Species designated by the Federal Government as Threatened/Endangered or Candidate Species may be present at this site. Any and all impacts to these species are strictly prohibited and are punished by Federal and State Laws.

14-12.05A(2) Definitions

SAA: Streambed Alteration Agreement issued by CDFW and executed by County and you.

14-12.05B Materials

Not. Used.

14-12.05C Construction

To the extent practicable, all construction activities that involve direct impacts to the season wetlands shall be conducted during the dry season to minimize the potential for erosion and sedimentation.

Comply with Section 13-3.01B(7).

The work period within the seasonal wetland (shown as Environmentally Sensitive Areas) is restricted to periods of low rainfall (less than ¼” per 24 hour period) and periods of dry weather.

14-12.05 Payment

Not used.

AA

15 EXISTING FACILITIES

Replace section 15-1.03B with:

15-1.03B Residue Containing Lead from Paint and Thermoplastic

Residue from grinding or cold planing contains lead from paint and thermoplastic. The average lead concentrations are less than 1,000 mg/kg total lead and 5 mg/L soluble lead. This residue:

1. Is a nonhazardous waste
2. Does not contain heavy metals in concentrations that exceed thresholds established by the Health and Safety Code and 22 CA Code of Regs
3. Is not regulated under the Federal Resource Conservation and Recovery Act (RCRA), 42 USC § 6901 et seq.
5. Is generated by cold planing at:
 - 5.1. PV 4+53 to PV 6+10
 - 5.2. P 10+00 to 15+78
 - 5.3. PV 18+63 to 19+28

Submit a lead compliance plan under section 7-1.02K(6)(j)(ii). Payment for a lead compliance plan is not included in the payment for existing facilities work. Payment for handling, removal, and disposal of grinding or cold planing residue that is a nonhazardous waste is included in the payment for the type of removal work involved.

Replace section 15-2.02B(3) with:

15-2.02B(3) Cold Planing Asphalt Concrete Pavement

15-2.02B(3)(a) General

Schedule cold planing activities to ensure that cold planing, placement of HMA, and reopening the area to traffic is completed during the same work shift:

If you do not complete HMA placement before opening the area to traffic, you must:

1. Construct a temporary HMA taper to the level of the existing pavement
2. Place HMA during the next work shift
3. Submit a corrective action plan that shows you will complete cold planing and placement of HMA in the same work shift. Do not restart cold planing activities until the Engineer approves the corrective action plan.

15-2.02B(3)(b) Materials

Use the same quality of HMA for temporary tapers that is used for the HMA overlay or comply with the specifications for minor HMA in section 39.

15-2.02B(3)(c) Construction

15-2.02B(3)(c)(i) General

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. If the cutter head width is wider than the cold plane area shown, submit to the Engineer a request for using a wider cutter head. Do not cold plane unless the Engineer approves your request.
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 so that no fumes or smoke is produced.

Replace broken, missing, or worn machine teeth.

15-2.02B(3)(c)(ii) Grade Control and Surface Smoothness

Furnish, install, and maintain grade and transverse slope references.

The depth, length, width, and shape of the cut must be as shown or as ordered. The final cut must result in a neat and uniform surface. Do not damage the remaining surface.

The completed surface of the planed asphalt concrete pavement must not vary more than 0.02 foot when measured with a 12-foot straightedge parallel with the centerline. With the straightedge at right angles to the centerline, the transverse slope of the planed surface must not vary more than 0.03 foot.

Where lanes are open to traffic, the drop-off of between adjacent lanes must not be more than 0.15 foot.

15-2.02B(3)(c)(iii) Temporary HMA Tapers

If a drop-off between the existing pavement and the planed area at transverse joints cannot be avoided before opening to traffic, construct a temporary HMA taper. The HMA temporary taper must be:

1. Placed to the level of the existing pavement and tapered on a slope of 30:1 (horizontal: vertical) or flatter to the level of the planed area
2. Compacted by any method that will produce a smooth riding surface

Completely remove temporary tapers before placing permanent surfacing.

15-2.02B(3)(c)(iv) Remove Planed Material

Remove cold planed material concurrent with planing activities so that removal does not lag more than 50 feet behind the planer.

15-2.02B(3)(d) Payment

Payment for removal of thermoplastic traffic stripe, painted traffic stripe, and pavement marking within the area of cold planing is included in the payment for cold plane asphalt concrete pavement, except that residue containing lead from paint and thermoplastic that is hazardous waste will be paid as Remove Yellow Traffic Stripe (Hazardous Waste).

Replace section 15-2.02C(2) with:

15-2.02C(2) Remove Traffic Stripes and Pavement Markings Containing Lead

Residue from removing traffic stripes and pavement markings contains lead from the paint or thermoplastic. The average lead concentrations are less than 1,000 mg/kg total lead and 5 mg/L soluble lead. This residue:

1. Is a nonhazardous waste
2. Does not contain heavy metals in concentrations that exceed thresholds established by the Health and Safety Code and 22 CA Code of Regs
3. Is not regulated under the Federal Resource Conservation and Recovery Act (RCRA), 42 USC § 6901 et seq.

Submit a lead compliance plan under section 7-1.02K(6)(j)(ii).

Payment for a lead compliance plan is not included in the payment for existing facilities work.

Payment for handling, removal, and disposal of pavement residue that is a nonhazardous waste is included in the payment for the type of removal work involved.

Replace paragraph 2 in section 15-2.02C(3) with:

The payment quantity for remove traffic stripe does not include the gaps in broken traffic stripes nor does it include the traffic stripes removed by cold planing. Payment for removal of paint evident in a gap is included in the payment for remove traffic stripe of the type involved.

Replace the 1st paragraph in section 15-2.02K with:

Existing storm drain pipes, drainage inlets, headwalls, and endwalls must be completely removed if any portion of these structures is (1) within 3 feet of the grading plane in excavation areas, (2) within one foot of original ground in embankment areas, or (3) shown to be removed.

Add to section 15-2.02K with:

Remove inlet Right of station PV 10+90. The end of the pipe leaving this inlet must be securely closed by a 6-inch-thick, tight-fitting plug or wall of commercial-quality concrete.

The cost for placing plug in pipe is included in the price for Remove Inlet.

Replace "Reserved" of section 15-2.02M with:

15-2.02M Remove Fence

Comply with Section 5-1.20E before removing any fence.

The Contractor must schedule fence removal operations with the installation of temporary or permanent fence to provide positive access control during non-working hours.

Replace section 15-2.02N Reserved with:

15-2.02N Remove Pipe (Waterline)

Section 15-2.02N includes:

- necessary traffic control for waterline removal
- excavation
- removal with proper disposal of 12" ACP waterline and documentation of proper disposal
- furnish and install a 12-inch ductile iron blind flange
- removal of coupling
- furnish and install a 12-inch ductile iron cap
- furnish and install concrete thrust block (in accordance with EID Standard for End of Line Thrust Block)
- remove valve

Comply with Section 14-11 for handling and disposal of the ACP waterline.

EID Design and Construction Standards, including the EID Technical Specifications, are available through the EID Engineering Department, 2890 Mosquito Rd., Placerville, CA 95677 (530) 622-4513 and can be obtained from EID's website *Under "Doing Business with EID" menu.*

Comply with Section 7-1.02K (6) (b).

Notify the Engineer and EID seventy-two (72) hours prior to any work related to remove pipe (waterline).

Replace section 15-2.020 "Reserved" with:

15-2.020 Remove Flashing Signal Pole Foundations

Removing flashing signal pole foundations associated with flashing beacons shown for removal, includes removal of:

1. Frames, braces, supports, and brackets
2. Complete concrete foundations
3. Hardware

Concrete signal pole foundations to be removed, must be completely removed and disposed of, including anchor bolts, reinforcing steel, and conduits.

Replace paragraph 2 of section 15-2.03A(1) with:

The following salvaged material and items remain the property of the California Department of Transportation (Caltrans):

Location No.	Item Description	Approximate Station & Offset
1	Type 17 pole & Mast arms (flashing signal & luminaire)	PV 10+77 ±, 25' ± LT

Replace section 15-2.03A(2)(b) with:

15-2.03A(2)(b) Department Salvage Location

You must contact the following at least three (3) days prior to necessary removal of the poles with luminaire and flashing beacon:

Greg Briggs
Caltrans, Sacramento Electric Maintenance Station
11325 Sanders Drive
Sacramento, CA 95742
916-859-7307

Replace Section 15-2.04F with:

15-2.04F Reconstruct Fence (Chain link with slats)

Comply with Section 5-1.20 E and 10-1.02 before any fence is removed.

Reconstruct existing chain link fence (wood slats) as shown and as discussed in Section 80-1.07.

Remove existing concrete footing of fence posts to a depth of at least 3 feet below the adjacent finished grade. Construct new concrete fence post footing under standard plans A 85, A85A and A85B and section 80-1.04.

Foundations and metal posts must comply with Section 80-3. Replace damaged wood slats in kind. Comply with 80-3.02E.

Payment for Reconstruct Fence (Chain-link with wood slats) includes concrete footings.

Replace Section 15-2.04G with:

15-2.04G Reconstruction Sanitary Sewer Manhole

You must remove upper portion of manhole and construct new upper portion of manhole with precast units and adjust manhole cover to new roadway finished grade.

Replace section 15-2.05C with:

15-2.05C Abandon Culverts, Pipelines and Conduits

15-2.05C(1) General

Abandon culverts, pipelines or conduits by removing portions of the culverts, pipelines or conduits, filling the inside, and backfilling the depressions and trenches to grade. As an alternative to abandoning a culvert, pipeline or conduit, you may remove the culvert, pipeline or conduit, dispose of it, and backfill.

Notify the Engineer before abandoning a culvert, pipeline or conduit.

15-2.05C(2) Materials

Openings into existing structures that are to remain in place must be plugged with minor concrete under section 90.

15-2.05C(3) Construction

Wherever culverts, pipelines or conduits intersect side slopes, remove them to a depth of at least 3 feet. Measure the depth normal to the plane of the finished side slope. Abandon the remaining portion of the culvert, pipeline or conduit.

Culverts, pipelines or conduits that are 12 inches or more in diameter must be completely filled by authorized methods. Backfill with sand that is clean, free draining, and free from roots and other deleterious substances. As an alternative to sand, you may backfill with one of the following:

1. Controlled low-strength material under section 19-3.02F
2. Slurry cement backfill under section 19-3.02D

Ends of culverts and pipelines and conduits must be securely closed by a 6-inch-thick, tight-fitting plug or wall of commercial-quality concrete.

15-2.05C(4) Payment

If backfilling inside the conduit is required, payment for backfilling inside the conduit is included in the payment for Remove Utility Box. Payment for backfilling outside the conduit is included in the payment for Remove Utility Box.

If backfilling inside the culvert or pipeline is required, payment for backfilling inside the culvert or pipeline is paid for as sand backfill. Payment for backfilling outside the culvert or pipeline is included in the payment for abandon culvert or abandon pipeline.

Replace section 15-2.07E with:

15-2.07E MODIFY IRRIGATION SYSTEM

Existing irrigation facilities outside of the limits of work must remain in place. You must inform the Engineer at least one (1) week prior to working near landscaped areas on or adjacent to Towermart Gas Station property. Irrigation facilities outside of the limits of work that are damaged by operations must be reported immediately to the Engineer and repaired at your expense.

You must cut and cap existing irrigation lines at the outside edge of the proposed roadway cut/fill limits. Mark capped irrigation facilities with a metal wire with flag or wooden stake. Modify irrigation system is included in the payment for Clearing and Grubbing.

Add to section 15-2.10B :

Adjust Water Blow-off Valve Box to Grade, Adjust EID Water Valve Cover to Grade, Adjust Sanitary Sewer Manhole, and Adjust Storm Drain Manhole to Grade after paving.

All utility covers must be traffic bearing.

Grade changes within the drip lines of Oak trees should be avoided. However, if grade changes must be made within the drip lines of Oak trees, the roots must be cleanly pruned back to within 1 to 2 inches of the soil level.

Remove only the trees defined within the limits stated above. When a tree is removed, the stump must also be completely removed before commencing grading activities.

Existing vegetation outside the areas to be cleared and grubbed must be protected from injury or damage resulting from your operations.

Activities that you control, except cleanup or other required work, must be confined within the graded areas of the roadway.

Prior to construction PG&E will have removed portions of the trees from right of "PV" 3+50 to right of 4+80 and about station "PV" 14+50 through right of about station "PV" 18+00 and t leave stumps up to 10 feet tall. It is your responsibility to remove these stumps.

Replace paragraph 2 of Section 16-1.03B with:

Disturbance or removal of vegetation must be kept to the minimum necessary to complete project related activities. Except for trees marked for removal in plans submitted to and approved by Biologist, no native trees with trunk diameter at breast height (DBH) in excess of four (4) inches must be removed or damaged without prior consultation and approval from the Biologist. Vegetation marked for protection by the Biologist must only be trimmed with hand tools to the extent necessary to gain access to the work sites.

If you want to trim trees that are fenced for avoidance, then you must submit a written request. These trees may be trimmed only upon written authorization by CDFW and as directed by the Biologist through the Engineer.

Payment for Trimming Trees is included in Clearing and Grubbing.

Replace section 16-1.04 with:

16-1.04 Payment

Modify Irrigation System is paid for under Clearing and Grubbing.

Trees outside the limits specified in section 16-1.03A marked for removal by the Engineer is change order work.



17 WATERING

Add to section 17-2.01A:

You must contact El Dorado Irrigation District (EID) as to the availability of water sources for the Project work.

El Dorado Irrigation District (EID)

Main # 24 hr: (530) 622-4513

Attn: Bob Rice

4079 Mosquito Road

Placerville, CA 95667

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Signalization
Contract No. PW 09-30425 / CIP No. 73320
September 10, 2013

County of El Dorado
Special Provisions
SP-69

Replace section 39-1.30 with:

39-1.30 EDGE TREATMENT, HOT MIX ASPHALT PAVEMENT

39-1.30A General

Section 39-1.30 includes specifications for constructing the edges of HMA pavement as shown.

39-1.30B Materials

For the safety edge, use the same type of HMA used for the adjacent lane or shoulder.

39-1.30C Construction

The edge of roadway where the safety edge treatment is to be placed must have a solid base, free of debris such as loose material, grass, weeds, or mud. Grade areas to receive the safety edge as required.

The safety edge treatment must be placed monolithic with the adjacent lane or shoulder and shaped and compacted with a device attached to the paver.

The device must be capable of shaping and compacting HMA to the required cross section as shown. Compaction must be by constraining the HMA to reduce the cross sectional area by 10 to 15 percent. The device must produce a uniform surface texture without tearing, shoving, or gouging and must not leave marks such as ridges and indentations. The device must be capable of transition to cross roads, driveways, and obstructions.

For safety edge treatment, the angle of the slope must not deviate by more than ± 5 degrees from the angle shown. Measure the angle from the plane of the adjacent finished pavement surface.

If paving is done in multiple lifts, the safety edge treatment can be placed either with each lift or with the final lift.

Short sections of hand work are allowed to construct transitions for safety edge treatment.

For more information on the safety edge treatment, go to:

http://safety.fhwa.dot.gov/roadway_dept/pavement/safedge/

You can find a list of commercially available devices at the above Web site under "Frequently Asked Questions" and "Construction Questions."

39-1.30D Payment

Not Used

39-6 Payment

Add to Section 39-6:

Constructing curb ramp detectable warning surfaces at HMA ramp is paid for under Place Hot Mix Asphalt (Miscellaneous Area)(Sidewalk & Ramp).

The bid item for place hot mix asphalt (miscellaneous area) is limited to the areas shown and is in addition to the bid items for the materials involved.

Payment for tack coat for miscellaneous areas is included in payment for the hot mix asphalt used in miscellaneous areas.

AA

49 PILING

Replace "Reserved" in section 49-3.02A(4)(b) with:

Schedule and hold a preconstruction meeting for CIDH concrete pile construction (1) at least 5 business days after submitting the pile installation plan and (2) at least 10 days before the start of CIDH concrete pile construction. You must provide a facility for the meeting.

The meeting must include the Engineer, your representatives, and any subcontractors involved in CIDH concrete pile construction.

The purpose of this meeting is to:

1. Establish contacts and communication protocol between you and your representatives, any subcontractors, and the Engineer
2. Review the construction process, acceptance testing, and anomaly mitigation of CIDH concrete piles

The Engineer will conduct the meeting. Be prepared to discuss the following:

1. Pile placement plan, dry and wet
2. Acceptance testing, including gamma-gamma logging, cross-hole sonic logging, and coring
3. *Pile Design Data Form*
4. Mitigation process
5. Timeline and critical path activities
6. Structural, geotechnical, and corrosion design requirements
7. Future meetings, if necessary, for pile mitigation and pile mitigation plan review
8. Safety requirements, including Cal/OSHA and Tunnel Safety Orders

Add to section 49-3.02A(4)(d)(ii):

If inspection pipes are not shown:

1. Include in the pile installation plan a plan view drawing of the pile showing reinforcement and inspection pipes.
2. Place inspection pipes radially around the pile, inside the outermost spiral or hoop reinforcement and no more than 1 inch clear of the outermost spiral or hoop reinforcement.
3. Place inspection pipes around the pile at a uniform spacing not exceeding 33 inches measured along the circle passing through the centers of inspection pipes. Use at least 2 inspection pipes per pile. Place inspection pipes to provide the maximum diameter circle that passes through the centers of the inspection pipes while maintaining the spacing required herein.
4. Place inspection pipes at least 3 inches clear of the vertical reinforcement. Where the vertical reinforcement configuration does not allow this clearance while achieving radial location requirements, maximize the distance to vertical rebar while still maintaining the requirement for radial location.

Where the dimensions of the pile reinforcement do not allow inspection pipes to be placed as specified above, submit a request for deviation before fabricating pile reinforcement.

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 GCV	CETCO CONSTRUCTION DRILLING PRODUCTS 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

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 the Offices of Structure 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

Property	Test	Value
Density During drilling	Mud Weight (density), API 13B-1, section 1	≤ 67.0 pcf ^a
Before final cleaning and immediately before placing concrete		≤ 64.0 pcf ^a
Viscosity During drilling	Marsh Funnel and Cup. API 13B-1, section 2.2	50–120 sec/qt
Before final cleaning and immediately before placing concrete		≤ 70 sec/qt
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 13B-1, section 5	≤ 0.5 percent

^aIf authorized, you may use slurry in salt water. The allowable density of slurry in salt water may be increased by 2 pcf.

Slurry temperature must be at least 40 degrees F when tested.

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

SUPER MUD

Property	Test	Value
Density During drilling	Mud Weight (Density), API 13B-1, section 1	≤ 64.0 pcf ^a
Before final cleaning and immediately before placing concrete		≤ 64.0 pcf ^a
Viscosity During drilling	Marsh Funnel and Cup. API 13B-1, section 2.2	32–60 sec/qt
Before final cleaning and immediately before placing concrete		≤ 60 sec/qt
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 13B-1, section 5	≤ 0.5 percent

^aIf authorized, you may use slurry in salt water. The allowable density of slurry in salt water may be increased by 2 pcf.

Slurry temperature must be at least 40 degrees F when tested.

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

SHORE PAC GCV

Property	Test	Value
Density During drilling	Mud Weight (Density), API 13B-1, section 1	≤ 64.0 pcf ^a
Before final cleaning and immediately before placing concrete		≤ 64.0 pcf ^a
Viscosity During drilling	Marsh Funnel and Cup. API 13B-1, section 2.2	33–74 sec/qt
Before final cleaning and immediately before placing concrete		≤ 57 sec/qt
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 13B-1, section 5	≤ 0.5 percent

^aIf authorized, you may use slurry in salt water. The allowable density of slurry in salt water may be increased by 2 pcf.

Slurry temperature must be at least 40 degrees F when tested.

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

TERRAGEL OR NOVAGEL POLYMER		
Property	Test	Value
Density During drilling	Mud Weight (Density), API 13B-1, section 1	≤ 67.0 pcf ^a
Before final cleaning and immediately before placing concrete		≤ 64.0 pcf ^a
Viscosity During drilling	Marsh Funnel and Cup. API 13B-1, section 2.2	45–104 sec/qt
Before final cleaning and immediately before placing concrete		≤ 104 sec/qt
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 13B-1, section 5	≤ 0.5 percent

^aIf authorized, you may use slurry in salt water. The allowable density of slurry in salt water may be increased by 2 pcf.
Slurry temperature must be at least 40 degrees F when tested.

Replace Section 49-3.02D with:

CIDH piles for Traffic Signal poles are paid under the Lump Sum price for “Signal and Lighting”.

AA

51 CONCRETE STRUCTURES

Add to Section 51-7.01A:

Precast Storm Drain Manholes are minor structures.

Add to Section 51-7.01C:

OS type inlet must be constructed per Caltrans Standard Plan D 72, except without side opening.

Replace 2nd paragraph of section 51-7.01D with:

51-7.01D Payment

“Type OS Inlet”, “Type GO Inlet” and “Type G3 Inlet” are measured and paid per each..

PCC Slab and reinforcing steel over 33” x49” CMP Arch is paid under structural concrete (pcc slab, arch culvert) and bar reinforcing steel (pcc slab, arch culvert).

Miscellaneous iron and steel for metal frames and covers or frames and grates are included in the payment for the various types of Inlets or manholes.

Replace "Reserved" in section 51-7.02 with:

51-7.02A General

51-7.02A(1) Summary

Section 51-7.02 includes specifications for constructing PC drainage inlets.

51-7.02A(2) Definitions

Reserved

51-7.02A(3) Submittals

For inlets with oval or circular cross sections, submit shop drawings with calculations. Shop drawings and calculations must be sealed and signed by an engineer who is registered as a civil engineer in the State. Allow 15 days for the Engineer's review.

Submit field repair procedures and a patching material test sample before repairs are made. Allow 10 days for the Engineer's review.

51-7.02A(4) Quality Control and Assurance

The Engineer may reject PC drainage inlets exhibiting any of the following:

1. Cracks passing through walls more than 1/16 inch wide
2. Nonrepairable honeycombed or spalled areas of more than 6 square inches
3. Noncompliance with reinforcement tolerances or cross sectional area shown
4. Wall or lid less than minimum thickness
5. Internal dimensions less than plan dimensions by 1 percent or 1/2 inch, whichever is greater
6. Defects affecting performance or structural integrity

51-7.02B Materials

51-7.02B(1) General

Nonshrink grout must be a dry, packaged type complying with ASTM C 1107.

Concrete for basin or inlet floors placed in the field must comply with the specifications for minor concrete.

Joint sealant must be butyl-rubber complying with ASTM C 990. Joint primer must be recommended by the joint seal manufacturer.

Resilient connectors must comply with ASTM C 923.

Sand bedding must comply with section 19-3.02E.

Bonding agents must comply with ASTM C 1059, Type II.

51-7.02B(1) Fabrication

If oval or circular shape cross-sections are furnished, they must comply with *AASHTO LRFD Bridge Design Specifications, Fourth Edition with California Amendments*.

Wall and slab thicknesses may be less than the dimensions shown by at most 5 percent or 3/16 inch, whichever is greater.

Reinforcement placement must not vary more than 1/2 inch from the positions shown.

Cure PC drainage inlets under section 90-4.03.

51-7.02C Construction

Repair PC drainage inlet sections to correct damage from handling or manufacturing imperfections before installation.

Center pipes in openings to provide a uniform gap. Seal gaps between the pipe and the inlet opening with nonshrink grout under the grout manufacturer's instructions. For systems designated as watertight, seal these gaps with resilient connectors.

Match fit keyed joints to ensure uniform alignment of walls and lids. Keys are not required at the inlet floor level if the floor is precast integrally with the inlet wall. Seal keyed joint locations with preformed butyl rubber joint sealant. You may seal the upper lid and wall joint with grout.

Clean keyed joint surfaces before installing sealant. Joint surfaces must be free of imperfections that may affect the joint. Use a primer if surface moisture is present. Use a sealant size recommended by the sealant manufacturer. Set joints using sealant to create a uniform bearing surface.

Flat drainage inlet floors must have a field-cast topping layer at least 2 inches thick with a slope of 4:1 (horizontal: vertical) toward the outlet. Use a bonding agent when placing the topping layer. Apply the bonding agent under the manufacturer's instructions.

51-7.02D Payment

Not Used

51-7.02D Payment

The quantity of concrete for Type GO, G3 or OS PC drainage inlets is based on the quantities shown for GO, G3 and OS CIP drainage inlets.



56 SIGNS

Replace the 1st paragraph of section 56-2.01D with:

Furnishing Sign Panels is paid for under "Roadside Sign – One Post".

Replace section 56-2.02D with:

Single Sheet Aluminum Panels are paid for under "Roadside Sign – One Post".

Add to section 56-4.02E:

Strap and saddle bracket sign fastening hardware must be per California Department of Transportation Standard Plan RS4.

Sign panel fastening hardware must comply with Standard Plan RS2 except that 5/16" hexhead bolt is replaced with a 5/16" carriage bolt. The washer directly behind the carriage bolt must be a 7/16" metal washer. The top bolt of each panel will be fastened with a Hawkins M2G-VP56N theft proof nut. The fiber washer is replaced with a neoprene washer.

Add to section 56-4.04:

Strap and Saddle Bracket Method of attaching signs to signal standards are included in the payment for "Signal and Lighting".

AA

70 MISCELLANEOUS DRAINAGE FACILITIES

Replace the 6th paragraph of section 70-1.04 with:

GMP inlets are measured and paid for each.

Add to section 70-1.04:

Inlet frames, grates, covers and concrete base are included in the payment for type of inlet involved.

Replace 1st sentence of paragraph 1 of section 70-2.02 with:

Corrugated metal pipe must be fabricated from zinc-coated steel sheet.

Replace section 70-4.04 with:

70-4.04 Payment

Concrete Pipe Manhole base and frames and covers are included in the payment for the type of manhole involved.

Precast concrete pipe manholes are measured and paid per each.

AA

DIVISION VIII MISCELLANEOUS CONSTRUCTION

AA

73 CONCRETE CURBS AND SIDEWALKS

Replace 1st paragraph of section 73-1.01A with:

Section 73-1 includes general specifications for constructing minor concrete items including, concrete curbs, curbs and gutters, sidewalks, gutter depressions, valley gutter, driveways, curbs ramps, and detectable warning surfaces.

Replace 1st paragraph in section 73-1.03A:

If you repair any part of a curb, sidewalk, curb ramp, driveway, curb and gutter, valley gutter, or gutter depression, remove and replace the entire section between contraction or expansion joints. At contraction joints saw cut a true line at least 1-1/2 inch deep before concrete removal.

Replace 1st paragraph of Section 73-1.03B with:

Prepare subgrade to required grade and cross section. Remove soft or spongy basement material 6 inches below subgrade elevation for curbs, gutter depressions, island paving, curb and gutter, valley gutter and driveways and 3 inches below subgrade elevation for sidewalks and curb ramps. Backfill with earth, sand, or gravel to produce a stable foundation.

73-1.04 Payment

Replace 2nd paragraph of section 73-1.04 with:

Furnishing and installing curb ramp detectable warning surfaces is included in the payment for "Minor Concrete (Curb Ramp)".

Payment for Gutter Depression at driveway is included in Minor Concrete (Curb & Gutter).

Payment for concrete driveway is included in Minor Concrete (Sidewalk).

73-3.01A Summary

Replace 1st paragraph of section 73-3.01A with:

Section 73-3 includes specifications for constructing gutters, sidewalks, gutter depressions, valley gutter, driveways, curbs ramps, and detectable warning surfaces.

^^

75 MISCELLANEOUS METAL

Replace section 75-1.02D with:

75-1.02D Payment

The cost for miscellaneous iron and steel for metal frames and covers or frames and grates are included in the contract price for the type of (concrete) Inlet or the type of metal pipe inlet.

^^

80 FENCES

Add to section 80-1.01:

Comply with Section 5-1.20E.

Comply with Section 10-1.02 for order of fence placement.

Add to section 80-1.07:

Continuous Temporary Fence (Type CL-6) must be placed near the outer limits of the Temporary Construction Easement on concrete blocks. Adjacent fence posts must be linked together to form a stable continuous barrier to comply with the Right of Way Acquisition Agreements at the following parcels/ locations during construction:

APN	FROM	TO
331-310-08	RT PV 3+25	RT PV 5+87
329-280-12 329-280-13	RT P 14+21	RT P 15+80
329-280-12 329-280-13	RT PV 11+25	RT PV 13+10

Continuous Temporary Fence (Type BW) must be placed near the outer limits of the Temporary Construction Easement to comply with the Right of Way Acquisition Agreements at the following parcels/ locations during construction:

APN	FROM	TO
329-280-15 & 329-280-16	Lt PV 14+46	LT PV 16+97

Each end of Temporary Fence must attach to existing fence or relocated Fence (chain link with slats) or new Fence (Type BW) as applicable to create a continuous fenced enclosure.

You must get prior approval from the Engineer if you want to change the temporary fence locations to more closely match your construction operations.

Add to Section 80-1.10

Payment for Temporary Fence (Type BW) and Temporary Fence (Type CL-6) includes installation and removal.

Replace "Reserved" in section 80-2.02A with:

Posts for Fence (Type BW) must be metal.

Add to section 80-2.02B:

Posts for Fence (Type BW) must be galvanized posts under section 75-1.05.

Add to section 80-2.03:

Excavation and backfill must comply with section 19.

Add to section 80-10.02

Property owner will provide the lock for the gates for driveway left of "PV" 12+00.

AA

DIVISION IX TRAFFIC CONTROL FACILITIES

AA

83 RAILINGS AND BARRIERS

Replace section 83-1.02C(2) with:

83-1.02C(2) Alternative In-Line Terminal System

Alternative in-line terminal system must be furnished and installed as shown on the plans and under these special provisions.

The allowable alternatives for an in-line terminal system must consist of one of the following or a Department-authorized equal.

1. TYPE SKT TERMINAL SYSTEM - Type SKT terminal system must be a SKT 350 sequential kinking terminal manufactured by Road Systems, Inc., located in Big Spring, Texas, and must include items detailed for Type SKT terminal system shown on the plans. The SKT 350 sequential kinking terminal can be obtained from the distributor, Universal Industrial Sales, P.O. Box 699, Pleasant Grove, UT 84062, telephone (801) 785-0505 or from the distributor, Gregory Highway Products, 4100 13th Street, S.W., Canton, OH 44708, telephone (330) 477-4800.
2. TYPE ET TERMINAL SYSTEM - Type ET terminal system must be an ET-2000 PLUS (4-tube system) extruder terminal as manufactured by Trinity Highway Products, LLC, and must include items detailed for Type ET terminal system shown on the plans. The ET-2000 PLUS (4-tube system) extruder terminal can be obtained from the manufacturer, Trinity Highway Products, LLC, P.O. Box 99, Centerville, UT 84012, telephone (800) 772-7976.

Submit a certificate of compliance for terminal systems.

Terminal systems must be installed under the manufacturer's installation instructions and these specifications. Each terminal system installed must be identified by painting the type of terminal system in neat black letters and figures 2 inches high on the backside of the rail element between system posts numbers 4 and 5.

For Type ET terminal system, the steel foundation tubes with soil plates attached must be, at the Contractor's option, either driven, with or without pilot holes, or placed in drilled holes. Space around the steel foundation tubes must be backfilled with selected earth, free of rock, placed in layers approximately 4 inches thick and each layer must be moistened and thoroughly compacted. The wood terminal posts must be inserted into the steel foundation tubes by hand and must not be driven. Before the wood terminal posts are inserted, the inside surfaces of the steel foundation tubes to receive the wood posts must be coated with a grease that will not melt or run at a temperature of 149 degrees F or less. The edges of the wood terminal posts may be slightly rounded to facilitate insertion of the post into the steel foundation tubes.

For Type SKT terminal system, the soil tubes must be, at the Contractor's option, driven with or without pilot holes, or placed in drilled holes. Space around the steel foundation tubes must be backfilled with selected earth, free of rock, placed in layers approximately 4 inches thick and each layer must be moistened and thoroughly compacted. Wood posts must be inserted into the steel foundation tubes by hand. Before the wood terminal posts are inserted, the inside surfaces of the steel foundation tubes to receive the wood posts must be coated with a grease that will not melt or run at a temperature of 149 degrees F or less. The edges of the wood posts may be slightly rounded to facilitate insertion of the post into the steel foundation tubes.

After installing the terminal system, dispose of surplus excavated material in a uniform manner along the adjacent roadway where designated by the Engineer.

AA

84 TRAFFIC STRIPES AND PAVEMENT MARKINGS

Replace the 2nd paragraph in section 84-2.03B with:

Apply thermoplastic for traffic stripes by the ribbon extrusion method in a single pass. Apply the thermoplastic at a rate of at least 0.34 lb./ft. of 4-inch-wide solid stripe. The applied thermoplastic must be at least 0.100 inch thick.

AA

86 ELECTRICAL SYSTEMS

Add to section 86-1.01:

Locations of existing traffic signal boxes to be removed are shown on the Utility plans and electrical plans.

Traffic signal work must be performed at the following locations:

Pleasant Valley Road and Patterson Drive.

Add to section 86-1.03:

Submit a schedule of values within 15 days after Contract approval.

Add to section 86-2.03B:

Use sleeve nuts on Type 1-B standards. The bottom of the base plate must be flush with finished grade.

Add to section 86-2.04A:

Where the side tenon detail at the end of the signal mast arm is shown, you may substitute the applicable tip tenon detail.

The sign mounting hardware must be installed at the locations shown.

Set the Type 1B standards with the handhole on the downstream side of the pole in relation to traffic or as shown.

Add to section 86-2.05A:

Conduit installed underground must be Type 3.

Add to section 86-2.05C:

If Type 3 conduit is placed in a trench, not in the pavement or under concrete sidewalk, after the bedding material is placed and the conduit is installed, backfill the trench to not less than 4 inches above the conduit with minor concrete under section 90-2, except the concrete must contain not less than 421 pounds of cementitious material per cubic yard. Backfill the remaining trench to finished grade with backfill material.

After conductors have been installed, the ends of the conduits terminating in pull boxes, service equipment enclosures, and controller cabinets must be sealed with an authorized type of sealing compound.

At those locations where conduit is required to be installed under pavement and underground facilities designated as high priority subsurface installation under Govt Code § 4216 et seq. exist, conduit must be placed by the trenching in pavement method under section 86-2.05C.

At other locations where conduit is required to be installed under pavement and if a delay to vehicles will not exceed 5 minutes, conduit may be installed by the trenching in pavement method.

The final 2 feet of conduit entering a pull box in a reinforced concrete structure may be Type 4.

Replace the 3rd paragraph in section 86-2.06A(2) of the RSS for section 86-2.06 with:

In a ground or sidewalk area, embed the bottom of a pull box in crushed rock.

Replace "Reserved" in section 86-2.06B of the RSS for section 86-2.06 with:

86-2.06B(1) General

86-2.06B(1)(a) Summary

Section 86-2.06B includes specifications for installing non-traffic-rated pull boxes.

86-2.06B(1)(b) Submittals

Before shipping pull boxes to the jobsite, submit a list of materials, Contract number, pull box manufacturer, manufacturer's instructions for pull box installation, and your contact information to METS.

Submit reports for pull box from an NRTL-accredited lab.

86-2.06B(1)(c) Quality Control and Assurance

86-2.06B(1)(c)(i) General

Pull boxes may be tested by the Department. Deliver pull boxes and covers to METS and allow 30 days for testing. When testing is complete, you will be notified. You must pick up the boxes and covers from the test site and deliver it to the job site.

Any failure of the pull box or the cover that renders the unit noncompliant with these specifications will be a cause for rejection. If the unit is rejected, you must allow 30 days for retesting. Retesting period starts when the replacement pull box is delivered to the test site. You must pay for all retesting costs. Delays resulting from the submittal of noncompliant materials does not relieve you from executing the Contract within the allotted time.

If the pull box submitted for testing does not comply with the specifications, remove the unit from the test site within 5 business days after notification that it is rejected. If the unit is not removed within that period, it may be shipped to you at your expense.

You must pay for all shipping, handling, and transportation costs related to the testing and retesting.

86-2.06B(1)(c)(ii) Functional Testing

The pull box and cover must be tested under ANSI/SCTE 77, "Specification for Underground Enclosure Integrity."

86-2.06B(1)(c)(iii) Warranty

Provide a 2-year manufacturer replacement warranty for pull box and cover from the date of installation of the pull box and cover. All warranty documentation must be submitted before installation.

Replacement parts must be provided within 5 business days after receipt of failed pull box, cover, or both at no cost to the Department and must be delivered to the Department's Maintenance Electrical Shop at:

Caltrans Maintenance Station
11325 Sanders Drive
Rancho Cordova, CA 95742
916-859-7803

86-2.06B(2) Materials

The pull box and cover must comply with ANSI/SCTE 77, "Specification for Underground Enclosure Integrity," for tier 22 load rating and must be gray or brown.

Each pull box cover must have an electronic marker cast inside.

Extension for the pull box must be of the same material as the pull box and attached to the pull box to maintain the minimum combined depths as shown.

Include recesses for a hanger if a transformer or other device must be placed in a pull box.

The bolts, nuts, and washers must be a captive bolt design.

The captive bolt design must be capable of withstanding a torque range of 55 to 60 ft-lb and a minimum pull out strength of 750 lb. Perform the test with the cover in place and the bolts torqued. The pull box and cover must not be damaged while performing the test to the minimum pull out strength.

Stainless steel hardware must have an 18 percent chromium content and an 8 percent nickel content.

Galvanize ferrous metal parts under section 75-1-.05.

Manufacturer's instructions must provide guidance on:

1. Quantity and size of entries that can be made without degrading the strength of the pull box below tier 22 load rating
2. Where side entries cannot be made
3. Acceptable method to be used to create the entry

Tier 22 load rating must be labeled or stenciled by the manufacturer on the inside and outside of the pull box and on the underside of the cover.

86-2.06B(3) Construction

Do not install pull box in curb ramps or driveways.

A pull box for a post or a pole standard must be located within 5 feet of the standard. Place a pull box adjacent to the back of the curb or edge of the shoulder. If this is impractical, place the pull box in a suitable, protected, and accessible location.

All traffic-rated pull boxes within the project limits must be welded closed, per detail shown on the electrical plans.

Replace "reserved" section 86-2.07 with:

86-2.07A 8 PORT ETHERNET SWITCH

86-2.07A(1) General

86-2.07A(1)(a) Summary

The Ethernet switch must be a hardened switch used to expand the amount of Ethernet ports available at the network hub. The Ethernet switch must have a minimum capacity of eight (8) network connections. The Ethernet switch must be installed on a DIN rail.

86-2.07A(1)(b) Definitions

HUB - Network focal point

DIN - Top Hat Type 35mm

RTMC - Regional Transportation Management Center

86-2.07A(1)(c) Submittals

Before furnishing Ethernet switch to the job site, submit equipment document. Include:

1. Contract number
2. Manufacturer's name
3. Manufacturer's installation instructions
4. Your contact information
5. Manufacturer specification sheet along with the complete ordering number of the equipment.

Send an additional copy for approval to the RTMC Office of Electrical Systems at:

3165 Gold Valley Dr., Rancho Cordova, CA 95742

86-2.07A(1)(d) Quality Control and Assurance

Not used.

86-2.07A(2) Materials

The Ethernet switch must meet or exceed the following requirements:

1. Ethernet Interface: 10/100Base T, IEEE 802.3, Auto-Negotiate, Auto-MDI-MDIX
2. Ports: (8) RJ-45, STP and UTP
3. LED Indicators: Power, Per Port Link Speed Status
4. Memory: 768 Kbits packet buffer
5. Input Voltage: 12 - 48 V(dc)
6. DIN Mount: Top Hat 35 mm
7. Operating Temperature: -40°F to +167°F
8. Warranty: Three year minimum

86-2.07A(3) Construction

Deliver the equipment to the Engineer for configuration and installation. The Department will test the equipment as part of the existing network system.

86-2.07A(4) Payment

Not Used

86-2.07B Ethernet Security Router

86-2.07B(1) General

86-2.07B(1)(a) Summary

The Ethernet Security Router (router) is to create a secure internet connection to the Caltrans existing WAN. The router shall back-haul the local ITS element data to the RTMC for processing.

86-2.07B(1)(b) Definitions

WAN – Wide Area Network

ITS – Intelligent Transportation System

VPN – Virtual Private Network

RTMC – Regional Transportation Management Center

86-2.07B(1)(c) Submittals

Before furnishing router to the job site, submit equipment document. Include:

1. Contract number
2. Manufacturer's name
3. Manufacturer's installation instructions
4. Your contact information
5. Manufacturer specification sheet along with the complete ordering number of the equipment.

Send an additional copy for approval to the RTMC Office of Electrical Systems at:

3165 Gold Valley Dr., Rancho Cordova, CA 95742

86-2.07B(1)(d) Quality Control and Assurance

Must be compatible with the existing Caltrans Cisco VPN Aggregation Router (ASR 1001).

86-2.07B(2) Materials

The router shall meet or exceed the following requirements:

1. LAN interfaces: 4-port 10/100 Mbps
2. WAN Interface: 1-port 10/100 Mbps
3. Security Feature: Dynamic Multipoint VPN (DMVPN) (multipoint GRE Tunnel Interface and Next Hop Resolution Protocol (NHRP)
4. Dynamic Memory: 256Mb DRAM
5. Flash Memory: 128Mb (Flash)
6. LAN Switch: Managed 4-port 10/100Base-T, Auto-Negotiate, Auto MDI/MDIX
7. Console Port: RJ-45
8. Power Supply: Universal 100 to 240 VAC
9. LED Indicators: PWR, WAN (Rx,Tx), PPP, VPN, LAN (0-3)
10. 1-year manufacturer's warranty

86-2.07B(3) Construction

Deliver the equipment to the Engineer for configuration and installation. The Department will test the equipment as part of the existing network system.

86-2.07B(4) Payment

Not Used

Add to section 86-2.08A:

Wrap conductors around the projecting end of conduit in pull boxes as shown. Secure conductors and cables to the projecting end of the conduit in pull boxes.

Replace the 1st sentence of the 1st paragraph of section 86-2.08E with:

Signal interconnect cable must be the 6-pair type with stranded tinned copper no. 20 conductors.

Replace the 1st paragraph of section 86-2.09E with:

Splices must be insulated by "Method B."

Delete the 6th and 7th paragraphs of section 86-2.09E.

Replace the 1st paragraph of section 86-2.09E with:

Splices must be insulated by "Heat-shrink tubing."

Delete the 8th paragraph of section 86-2.09E.

Add to section 86-2.11A:

Circuit breakers must be the cable-in/cable-out type mounted on non-energized clips. All circuit breakers must be mounted vertically with the up position of the handle being the "ON" position.

Each service must be provided with up to 2 main circuit breakers that will disconnect ungrounded service entrance conductors. Where the "Main" circuit breaker consists of 2 circuit breakers as described, each of the circuit breakers must have a minimum interrupting capacity of 10,000 A, rms.

Replace section 86-2.18 with:

86-2.18 NUMBERING ELECTRICAL EQUIPMENT

The placement of numbers on electrical equipment will be done by others.

Replace 1st paragraph of section 86-2.18 with:

Place numbers on the equipment as ordered.

Delete 2nd sentence of 3rd paragraph of section 86-2.18.

Replace the 1st paragraph of section 86-3.02A(1) with:

This work includes installing a battery backup system. Comply with TEES.

You will furnish Batteries.

Batteries must have a written warranty against defects in materials and workmanship from the manufacturer prorated for a period of 60 months after installation. You must provide the Engineer with all warranty documentation before installation. Replacement batteries must be available within 5 business days after receipt of failed batteries. The Department pays to ship the failed batteries. Replacement batteries must be delivered to Caltrans Maintenance Electrical Shop at:

Chris Seale-Caltrans Electrical Area Superintendent
Caltrans Maintenance Station
11325 Sanders Drive
Rancho Cordova, CA 95742
916-859-7803

Add to section 86-3.02B:

External cabinet must be capable of housing:

1. four (4) batteries
2. Inverter/charger unit
3. Power transfer relay
4. Manually-operated bypass switch
5. Required control panels
6. Wiring and harnesses

Replace the 3rd paragraph of section 86-3.02B with:

Dimensions and details for the external cabinet, for attaching the external cabinet to the Model 332L cabinet, and for wiring the Department-furnished equipment are shown on the plans.

Replace the 1st paragraph of section 86-3.02C with:

Mount external cabinet to either the left or right side of the Model 332L cabinet. The typical side-mounting location of the external cabinet is flush with the bottom of the Model 332L cabinet and approximately equidistant from the front and rear door edges.

Replace "Reserved" in section 86-3.02D with:

The Department will assemble the BBS.

Payment for installing battery backup system is included in the payment for Signal and Lighting.

Replace "reserved" in section 86-3.03 with:

86-3.03 REMOTE POWER CONTROLLER

The Remote power controller must be fit in a standard 19" rack and provide Remote Power Management and Control using three methods of connection for accessing configuration and switching functions. The Web Browser Interface method must consist of a series of simple, easy-to-use web page menus that allow the selection of configuration parameters or initiation of switching operations using the Ethernet network. The Console Control port must be EIA232 and can be connected to a local terminal using Hyperterminal or TeraTerm. The telephone control interface shall support a PSTN (Public Switched Telephone Network) connection. The menu be voice announced and controlled using DTMF (Dual-Tone Multi-Frequency) tones.

The Remote power controller must meet the following minimum technical requirements:

Features:

- A. Web Browser Access for Easy Setup and Operation
- B. Password Security
- C. Control Four Individual Outlets
- D. Each Outlet can Switch a 10 Amp Load
- E. On / Off / Reboot Switching
- F. IP Addressed, 10Base-T Interface (RJ-45)
- G. RS232 Modem / Console Port
- H. Telephone control over PSTN (RJ-II)
- I. Network Security Features
- J. Real-Time Current monitor

Power Input/Output:

- A. AC Inputs: 15 Ampere (maximum)
- B. Voltage: 105 - 120 V(ac), 60 Hz
- C. Connectors: IEC-320 Inlet, Line Cord (supplied)
- D. AC Outputs: Four (4)
- E. Connector: NEMA 5-15 Outlet
- F. Load: 15 Amperes circuit breaker
- G. Load: 15 Amperes (total)

Console / Modem Port Interface:

- A. Connector: DB9M, RS232C, DTE (9-to-9 Pin provided)
- B. Coding: Serial ASCII, 8 Bits, No Parity

Physical / Environmental:

Size:

- A. The unit shall be no larger than 1U and mount in a standard 19" rack

Operation Temperature:

- A. 32° F to 140° F

Humidity:

- A. 10 percent to 95 percent (relative humidity)

Add section 86-3.06:

86-3.06 ETHERNET GPRS MODEM

FUNTIONAL REQUIREMENTS

Furnish and install the High Speed Ethernet GPRS modem capable of connecting to a General Packet Radio Service (GPRS) wireless data network . The modem must be capable of providing high-speed connectivity as well as backup network connectivity including physical Serial and Ethernet connectivity for transmitting and receiving data from field controllers to the Transportation Management Center in Rancho Cordova via a frame relay connection.

Provide SMA-M / TNC-F adaptor for SMA-F modem and TNC-M antenna connection.

Provide necessary power supplies, mounting hardware and wiring. The High Speed Ethernet GPRS modem shall meet or exceed the following requirements:

Description	Specifications
Network	Quad band 1900/850 and 1800/900 MHz GSM HSDPA/UMTS
Transmit Frequency	1850-1910 MHz and 824-849 MHz
Transmit Power Range At Antenna Port	1.0W for 1900 MHz and 0.8W for 850MHz
Throughput	Up to 240 Kbps, 100 to 130 Kbps typical
Receiver Frequency	1930-1990 MHz and 869-894 MHz
Receiver Sensitivity	Typical -107dBm
Network Protocols	UDP/TCP, DHCP
Features	NAT, Port forwarding, VPN pass-through, DES, 3DES and up to 256-bit AES Encryption, IPsec with IKE/ISAKMP, Multiple tunnel support, SCEP for X.509 certificates, IP filtering, HTTP, Web management
Security	SSL, SSH v2, FIPS 197
Ethernet Interface	IEEE 802.3, 10/100Base-T, 4 EIA RJ45 switch ports, 10/100 Mbps (auto-sensing), Full or half duplex (auto-sensing)
Serial Interface	2 EIA RS232 DB-9M ports, Up to 230 Kbps, Hardware and software flow control, Full signal support for TX, RX, RTS, CTS, DTR, DSR and DCD, Hardware and software flow control
RF Antenna Connector	50 Ω SMA-F
Regulatory Approvals / Certifications	UL 60950, CE, CSA 22.2 No. 60950, EN60950, FCC Part 15, Class A, AS/NZS CISPR 22, EN55024, EN55022, Class A, PTCRB, NAPRD.03, GCF-CC, R&TTE, EN 301 511, GSM GPRS/EDGE, HSDPA/UMTS
LED Indicators	Ethernet, Power On, RSSI, Link/Activity
Input Voltage	9 Vdc to 30 Vdc
Input Current	40mA to 200 mA
Operating Temperature	-22° F to +140° F
Max Weight	1.5lb
Max Size	4.11" W x 1.30" H x 7.75" L

ACTIVATION

Send all necessary activation information from the manufacturer to the Engineer in an electronic text format. With the information provided, the State will activate the modems after installation.

WARRANTY

The Ethernet Modem must have a 2-year warranty by the manufacturer. The warranty must include hardware parts and labor needed for repair. Provide the Engineer with warranty documentation and the appropriate manufacturer contact information. The warranty period begins upon Contract Acceptance.

Replace item #3 in paragraph 2 of Section 86-4.01D(1)(a) with:

"3. 8-inch arrow section"

Replace section 86-4.01D(1)(c)(ii) with:

86-4.01D(1)(c)(ii) Warranty

The manufacturer must provide a written warranty against defects in materials and workmanship for LED signal modules for a minimum period of 48 months after installation of LED signal modules. Replacement LED signal modules must be provided within 15 days after receipt of failed LED modules at your expense. The Department pays for shipping the failed modules to you. All warranty documentation must be

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Signalization
Contract No. PW 09-30425 / CIP No. 73320
September 10, 2013

County of El Dorado
Special Provisions
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submitted to the Engineer before installation. Replacement LED signal modules must be delivered to State Maintenance Electrical Shop at:

Caltrans Maintenance Station
11325 Sanders Drive
Rancho Cordova, CA 95742
916-859-7803

Add to section 86-4.01D(2)(a):

LED signal module must be manufactured for 12-inch section, 8-inch section and arrow.

Replace section 86-4.03I with:

86-4.03I LED Countdown Pedestrian Signal Face Modules

86-4.03I(1) General

86-4.03I(1)(a) Summary

Section 86-4.03 includes specifications for installing LED countdown PSF module into a standard Type A pedestrian signal housing. Comply with TEES.

86-4.03I(1)(b) Submittals

Before shipping to the job site, submit all LED countdown PSF modules with the following to METS:

1. Delivery form including Contract number and contact information
2. List containing all LED countdown PSF module serial nos.
3. Installation manual and schematic wiring diagram
4. Manufacturer's name, trademark, model no., lot number, and month and year of manufacture

Submit documentation of a production QA performed by the manufacturer that ensures the LED countdown PSF modules comply with the section 86-4.03 specifications. Submit documentation as an following requirements:

1. Luminous intensity as shown in the table titled "Luminance Values."
2. Power factor after burn-in.
3. Test current flow measurements in amperes after burn-in. The measured values must comply with the design qualification figures. Record the measured ampere values with rated voltage on the product labels.

Submit warranty documentation as an informational submittal before installing LED countdown PSF modules.

86-4.03I(1)(c) Quality Control and Assurance

86-4.03I(1)(c)(i) General

If the Engineer determines by visual inspection that there is exterior physical damage, assembly anomalies, scratches, abrasions, cracks, chips, discoloration, or other defects to the surface of the lens, the module will be rejected.

The Department tests LED countdown PSF modules under ANSI/ASQ Z1.4 and California Test 606. The module submitted for testing must be representative of typical production units. All parameters specified in section 86-4.03 specifications may be tested on the module.
Comply with section 86-2.14A.

86-4.03(1)(c)(ii) Warranty

The manufacturer must provide a written warranty against defects in materials and workmanship for LED PSF modules for a minimum period of 48 months after installation of LED PSF modules. Replacement LED PSF modules must be provided within 15 days after receipt of failed LED PSF modules at your expense. The Department pays for shipping the failed modules to you. All warranty documentation must be submitted to the Engineer before installation. Replacement LED PSF modules must be delivered to State Maintenance Electrical Shop at:

Chris Seale-Caltrans Electrical Area Superintendent
Caltrans Maintenance Station
11325 Sanders Drive
Rancho Cordova, CA 95742
916-859-7803

86-4.03(2) Materials

86-4.03(2)(a) General

All LED countdown PSF module must be from the same manufacturer.

LED countdown PSF module must:

1. Be installed in a standard Type A pedestrian signal housing.
2. Use LED as the light source.
3. Be designed to mount behind or to replace face plates of a standard Type A housing as specified in ITE publication, Equipment and Material Standards, chapter 3, "Pedestrian Traffic Control Signal Indications" and the *California MUTCD*.
4. Have a minimum power consumption of 10 W for the "upraised hand."
5. Use the required color and be ultra-bright type rated for 100,000 hours of continuous operation for a temperature range of -40 to +74 degrees C.
6. Be able to replace the signal lamp optical units.
7. Fit into a pedestrian signal section housing without modifications.
8. Be a single, self-contained device, not requiring on-site assembly for installation.
9. Have the following information permanently marked on the back of the module:
 - 9.1. Manufacturer's name
 - 9.2. Trademark
 - 9.3. Model no.
 - 9.4. Serial no.
 - 9.5. Lot number
 - 9.6. Month and year of manufacture
 - 9.7. Required operating characteristics, including:

- 9.7.1. Rated voltage
- 9.7.2. Power consumption
- 9.7.3. Volt-ampere (VA)
- 9.7.4. Power factor

10. Have prominent and permanent vertical markings for accurate indexing and orientation within the signal housing if a specific mounting orientation is required. Markings must include an up arrow, or the word "up" or "top." Marking must be a minimum of 1-inch diameter.

The circuit board and the power supply must be contained inside of the LED countdown PSF module. The circuit board must comply with chapter 1, section 6 of TEES.

The individual LEDs must be wired such that a catastrophic loss or a failure of 1 LED does not result in the loss of:

- 1. More than 5 percent of the luminous output of the PSF module
- 2. Entire string of LEDs or the indication

The LEDs must be evenly distributed in each indication. Do not use outline shape.

No special tools for the installation are allowed.

The assembly and manufacturing process for the LED countdown PSF module must be designed to ensure internal components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

Material used for the LED countdown PSF module must comply with ASTM D 3935.

The enclosure containing the power supply or the electronic components of the LED countdown PSF module, except the lens, must be made of UL94VO flame-retardant material.

Each symbol must not be less than 9 inches high and 5.25 inches wide. The uniformity of the signal output across the emitting section of the module lens for the "walking person" and "upraised hand" symbols and the countdown display must not exceed a ratio of 5 to 1 between the highest and lowest luminance values. The symbols must comply with ITE publication, Equipment and Material Standards, chapter 3, "Pedestrian Traffic Control Signal Indications," and the *California MUTCD*.

The LED countdown PSF module must be designed to operate over the specified ambient temperature and voltage range and be readable both day and night at all distances up to the full width of the area to be crossed.

The LED countdown PSF module must maintain an average luminance value for over 60 months of continuous use in signal operation for a temperature range of -40 to +74 degrees C. In addition, upon initial testing at 25 degrees C, the LED countdown PSF module must have at least the luminance values shown in the following table:

Luminance Values

PSF module	Luminance
"Upraised hand" and 2-digit countdown timer	1,094 FL
"Walking person"	1,547 FL

The color output of LED countdown PSF module must comply with the chromaticity requirements in section 5.3 of ITE publication, Equipment and Material Standards, chapter 3, "Pedestrian Traffic Control Signal Indications."

When operating over a temperature range of -40 to +74 degrees C, the measured chromaticity coordinates of the LED countdown PSF module must comply with the following chromaticity requirements for 60 months:

Chromaticity Standards (CIE Chart)

"Upraised hand" and 2-digit countdown timer (portland orange)	Y: not greater than 0.390 nor less than 0.331 nor less than 0.997-X
"Walking person" (lunar white)	X: not less than 0.280 nor greater than 0.320 Y: not less than 1.055*X - 0.0128 nor greater than 1.055*X + 0.0072

The LED countdown PSF module must not exceed the power consumption requirements shown in the following table:

Maximum Power Consumption Requirements

PSF module display	@ 24 °C	@ 74 °C
"Upraised hand"	10.0 W	12.0 W
"Walking person"	9.0 W	12.0 W
2-digit countdown timer	6.0 W	8.0 W

The wiring and terminal block must comply with section 13.02 of ITE publication, Equipment and Material Standards, chapter 2, "Vehicle Traffic Control Signal Heads." The LED countdown PSF module must be supplied with spade lugs and 3 secured, color-coded, 3-foot long, 600 V(ac), 20 AWG minimum stranded jacketed copper wires. Wires must comply with NEC, rated for service at +105 degrees C.

The LED countdown PSF module must operate:

1. At a frequency of 60 ± 3 Hz over a voltage range from 95 to 135 V(ac) without perceptible flicker to the unaided eye. Fluctuations of the line voltage must have no visible effect on the luminous intensity of the indications. The rated voltage for measurements must be 120 V(ac).
2. Compatible with currently-used State controller assemblies including solid-state load switches, flashers, and conflict monitors. Comply with TEES chapters 3 and 6. If a 20 mA alternating current or less is applied to the unit, the voltage read across the 2 leads must be 15 V(ac) or less.
3. With a "smart" control and regulation module that exhibits countdown displays automatically adjusted to the traffic controller programmed intervals.

The mode of operation of the countdown PSF module must be during the pedestrian change interval. The module will begin counting down when the flashing "upraised hand" interval turns on, counting down to "0," and turn off when the steady "upraised hand" interval turns on.

The LED countdown PSF module on-board circuitry must:

1. Include voltage surge protection to withstand high-repetition noise transients. The voltage surge protection must comply with NEMA Standard TS2, section 2.1.6.
2. Comply with the Class A emission limits provided in 47 CFR 15, subpart B concerning the emission of electronic noise.

The LED countdown PSF module must provide a power factor of 0.90 or greater.

The total harmonic distortion from a current and a voltage induced into an alternating current power line by an LED countdown PSF module must not exceed 20 percent at an operating temperature of 25 degrees C.

The LED countdown PSF module circuitry must prevent perceptible light emission to the unaided eye when a voltage, 50 V(ac) or less is applied to the unit.

When power is applied to the LED countdown PSF module, light emission must occur within 90 ms.

The "upraised hand" and "walking person" symbol indications must be electrically isolated from each other. Sharing a power supply or interconnect circuitry between the 3 indications is not allowed.

86-4.03I(3) Construction

Not Used

Add to section 86-5.01A(1):

Loop wire must be Type 2.

Loop detector lead-in cable must be Type B.

Slots must be filled with elastomeric sealant or asphaltic emulsion sealant hot-melt rubberized asphalt sealant.

The depth of the loop sealant above the top of the upper most loop wire in the sawed slots must be 2 inches, minimum.

Replace "Reserved" in section 86-5.01D with:

86-5.01D(1) General

Each traffic signal must have an emergency vehicle detector system that must comply with the special provisions.

Each emergency vehicle detector system must consist of an optical emitter assembly or assemblies located on the appropriate vehicle and an optical detector/discriminator assembly or assemblies located at the traffic signal.

Emitter assemblies are not required for this project except units for testing purposes to demonstrate that the systems perform as specified. Tests must be conducted in the presence of the Engineer as described below under "System Operation" during the signal test period. The Engineer must be provided a minimum of 2 working days' notice prior to performing the tests.

Each system must allow detection of 2 classes of authorized vehicles. Class I (mass transit) vehicles must be detected at ranges of up to 1,000 feet from the optical detector. Class II (emergency) vehicles must be detected at ranges up to 1,800 feet from the optical detector.

Class I signals (those emitted by Class I vehicles) must be distinguished from Class II signals (those emitted by Class II vehicles) on the basis of the modulation frequency of the light from the respective emitter. The modulation frequency for Class I signal emitters must be $9.639 \text{ Hz} \pm 0.110 \text{ Hz}$. The modulation frequency for Class II signal emitters must be $14.035 \text{ Hz} \pm 0.250 \text{ Hz}$.

A system must establish a priority of Class II vehicle signals over Class I vehicle signals and must comply with the requirements in section 25352 of the California Vehicle Code.

86-5.01D(2) Emitter Assembly

Each emitter assembly, provided for testing purposes, must consist of an emitter unit, an emitter control unit, and connecting cables.

86-5.01D(2)(a) General

Each emitter assembly, including lamp, must operate over an ambient temperature range of -34 to +60 degrees C at both modulation frequencies and operate continuously at the higher frequency for a minimum of 3,000 hours at 25 degrees C ambient before failure of the lamp or other components.

Each emitter unit must be controlled by a single, maintained-contact switch on the respective emitter control unit. The switch must be located to be readily accessible to the vehicle driver. The control unit must contain a pilot light to indicate that the emitter power circuit is energized and must generate only 1 modulating code, either that for Class I vehicles or that for Class II vehicles.

86-5.01D(2)(b) Functional

Each emitter unit must transmit optical energy in 1 direction only.

The signal from each Class I signal emitter unit must be detectable at a distance of 1,000 feet when used with a standard optical detection/discriminator assembly and filter to eliminate visible light. Visible light must be considered eliminated when the output of the emitter unit with the filter is less than an average of 0.0003 candela per energy pulse in the wavelength range of 380 nm to 750 nm when measured at a distance of 10 feet. Submit a certificate of compliance for each Class I emitter unit.

The signal from each Class II signal emitter unit must be detectable at a distance of 1,800 feet when used with a standard optical detection/discriminator assembly.

The standard optical detection/discriminator assembly to be used in making the range tests must be available from the manufacturer of the system. A certified performance report must be furnished with each assembly.

86-5.01D(2)(c) Electrical

Each emitter assembly must provide full light output with input voltages of between 12.5 V (dc) and 17.5 V (dc). An emitter assembly must not be damaged by input voltages up to 7.5 V (dc) above supply voltage. The emitter assembly must not generate voltage transients, on the input supply, that exceed the supply voltage by more than 4 volts.

Each emitter assembly must consume not more than 100 W at 17.5 V (dc) and must have a power input circuit breaker rated at 10 A to 12 A, 12 V (dc).

The design and circuitry of each emitter must allow its use on vehicles with either negative or positive ground without disassembling or rewiring of the unit.

86-5.01D(2)(d) Mechanical

Each emitter unit must be housed in a weatherproof corrosion-resistant housing. The housing must be provided with facilities to allow mounting on various types of vehicles and must have provision for aligning the emitter unit properly and for locking the emitter unit into this alignment.

Each emitter control unit must be provided with hardware to allow the unit to be mounted in or on an emergency vehicle or mass transit vehicle. Where required for certain emergency vehicles, the emitter control unit and exposed controls must be weatherproof.

86-5.01D(3) Optical Detection/Discriminator Assembly

86-5.01D(3)(a) General

Each optical detection/discriminator assembly must consist of 1 or more optical detectors, connecting cable and a discriminator module.

Each assembly, when used with standard emitters, must have a range of at least 1,000 feet for Class I signals and 1,800 feet for Class II signals. Standard emitters for both classes of signals must be available from the manufacturer of the system. Range measurements must be taken with all range adjustments on the discriminator module set to "maximum".

86-5.01D(3)(b) Optical Detector

Each optical detector must be a waterproof unit capable of receiving optical energy from 2 separately aimable directions. The horizontal angle between the 2 directions must be variable from 180 degrees to 5 degrees.

The reception angle for each photocell assembly must be a maximum of 8 degrees in all directions about the aiming axis of the assembly. Measurements of reception angle will be taken at a range of 1,000 feet for a Type I emitter and at a range of 1,800 feet for a Type II emitter.

Internal circuitry must be solid state and electrical power must be provided by the associated discriminator module.

Each optical detector must be contained in a housing, which must include 2 rotatable photocell assemblies, an electronic assembly and a base. The base must have an opening to allow mounting on a mast arm or a vertical pipe nipple, or suspension from a span wire. The mounting opening must have female threads for 3/4 inch conduit. A cable entrance must be provided which must have male threads and gasketing to allow a waterproof cable connection. Each detector must have weight of less than 2.5 pounds and must present a maximum wind load area of 36 square inches. The housing must be provided with weep holes to allow drainage of condensed moisture.

Each optical detector must be installed, wired and aimed as specified by the manufacturer.

86-5.01D(3)(c) Cable

Optical detector cable (EV-C) must comply with the requirements of IPCEA-S-61-402/NEMA WC 5, section 7.4, 600-V (ac) control cable, 75 degrees C, Type B, and the following:

1. The cable must contain 3 conductors, each of which must be No. 20 (7 x 28) stranded, tinned copper with low-density polyethylene insulation. Minimum average insulation thickness must be 25 mils. Insulation of individual conductors must be color coded: 1-yellow, 1-blue, 1-orange.
2. The shield must be either tinned copper braid or aluminized polyester film with a nominal 20 percent overlap. Where film is used, a No. 20 (7 x 28) stranded, tinned, bare drain wire must be placed between the insulated conductors and the shield and in contact with the conductive surface of the shield.
3. The jacket must be black polyvinyl chloride with minimum ratings of 600 V (ac) and 80 degrees C and a minimum average thickness of 43 mils. The jacket must be marked as required by IPCEA/NEMA.
4. The finished outside diameter of the cable must not exceed 0.35-inch.

5. The capacitance, as measured between any conductor and the other conductors and the shield, must not exceed 48 pf per foot at 1000 Hz.
6. The cable run between each detector and the controller cabinet must be continuous without splices or must be spliced only as directed by the detector manufacturer.

86-5.01D(3)(d) Discriminator Module

Each discriminator module must be designed to be compatible and usable with a Model 2070 controller unit and to be mounted in the input file of a Model 332AL or Model 336L controller cabinet, and must comply with the requirements of chapter I of the State of California, Department of Transportation, "Traffic Signal Control Equipment Specifications."

Each discriminator module must be capable of operating 2 channels, each of which must provide an independent output for each separate input.

Each discriminator module, when used with its associated detectors, must perform the following:

1. Receive Class I signals at a range of up to 1,000 feet and Class II signals at a range of up to 1,800 feet.
2. Decode the signals, on the basis of frequency, at $9.639 \text{ Hz} \pm 0.119 \text{ Hz}$ for Class I signals and $14.035 \text{ Hz} \pm 0.255 \text{ Hz}$ for Class II signals.
3. Establish the validity of received signals on the basis of frequency and length of time received. A signal must be considered valid only when received for more than 0.50-second. No combination of Class I signals must be recognized as a Class II signal regardless of the number of signals being received, up to a maximum of 10 signals. Once a valid signal has been recognized, the effect must be held by the module in the event of temporary loss of the signal for a period adjustable from 4.5 seconds to 11 seconds in at least 2 steps at $5 \text{ seconds} \pm 0.5 \text{ second}$ and $10 \text{ seconds} \pm 0.5 \text{ second}$.
4. Provide an output for each channel that will result in a "low" or grounded condition of the appropriate input of a Model 2070 controller unit. For Class I signals the output must be a $6.25 \text{ Hz} \pm 0.1 \text{ percent}$, rectangular waveform with a 50 percent duty cycle. For Class II signals the output must be steady.

Each discriminator module must receive electric power from the controller cabinet at either 24 V (dc) or 120 V (ac).

Each channel together with the channel's associated detectors must draw not more than 100 mA at 24 V (dc) or more than 100 mA at 120 V (ac). Electric power, 1 detector input for each channel and 1 output for each channel must terminate at the printed circuit board edge connector pins shown in the following table:

Board Edge Connector Pin Assignment

A	DC ground		
B	+24 V (dc)	P	(NC)
C	(NC)		
D	Detector input, Channel A	R	(NC)
E	+24V (dc) to detectors	S	(NC)
F	Channel A output (C)	T	(NC)
		U	(NC)
H	Channel A output (E)	V	(NC)
J	Detector input, Channel B	W	Channel B output (C)
K	DC ground to detectors	X	Channel B output (E)
L	Chassis ground	Y	(NC)
M	AC-	Z	(NC)
N	AC+		

(C) Collector, slotted for keying

(E) Emitter, slotted for keying

(NC) Not connected, cannot be used by manufacturer for any purpose.

Two auxiliary inputs for each channel must enter each module through the front panel connector. Pin assignment for the connector must be as follows:

1. Auxiliary detector 1 input, Channel A
2. Auxiliary detector 2 input, Channel A
3. Auxiliary detector 1 input, Channel B
4. Auxiliary detector 2 input, Channel B

Each channel output must be an optically isolated NPN open collector transistor capable of sinking 50 mA at 30 V (ac) and must be compatible with the Model 2070 controller unit inputs.

Each discriminator module must be provided with means of preventing transients received by the detector from affecting the Model 2070 controller assembly.

Each discriminator module must have a single connector board and must occupy 1 slot width of the input file. The front panel of each module must have a handle to facilitate withdrawal and the following controls and indicators for each channel:

1. Three separate range adjustments each for both Class I and Class II signals.
2. A 3-position, center-off, momentary contact switch, 1 position (down) labeled for test operation of Class I signals, and 1 position (up) labeled for test operation of Class II signals.
3. A "signal" indication and a "call" indication each for Class I and for Class II signals. The "signal" indication denotes that a signal above the threshold level has been received. A "call" indication denotes that a steady, validly coded signal has been received. These 2 indications may be accomplished with a single indication lamp; "signal" being denoted by a flashing indication and "call" with a steady indication.

In addition, the front panel must be provided with a single circular, bayonet-captured, multi-pin connector for 2 auxiliary detector inputs for each channel. Connector must be a mechanical configuration complying with the requirements in Military Specification MIL-C-26482 with 10-4 insert arrangement, such as Burndy Trim Trio Bantamate Series, consisting of the following:

1. Wall mounting receptacle, G0B10-4PNE with SM20M-1S6 gold plated pins.
2. Plug, G6L10-4SNE with SC20M-1S6 gold plated sockets, cable clamp and strain relief that must provide for a right angle turn within 2-1/2 inches maximum from the front panel surface of the discriminator module.

86-5.01D(3)(e) Cabinet Wiring

The Model 332L cabinet has provisions for connections between the optical detectors, the discriminator module and the Model 2070 controller unit.

Wiring for a Model 332L cabinet must comply with the following:

1. Slots 12 and 13 of input file "J" have each been wired to accept a 2-channel module.
2. Field wiring for the primary detectors, except 24-V (dc) power, must terminate on either terminal board TB-9 in the controller cabinet or on the rear of input file "J," depending on cabinet configuration. Where TB-9 is used, position assignments must be as shown in the following table:

Position	Assignment
4	Channel A detector input, 1st module (Slot J-12)
5	Channel B detector input, 1st module (Slot J-12)
7	Channel A detector input, 2nd module (Slot J-13)
8	Channel B detector input, 2nd module (Slot J-13)

The 24-V (dc) cabinet power will be available at Position 1 of terminal board TB-1 in the controller cabinet.

Field wiring for the auxiliary detectors must terminate on terminal board TB-O in the controller cabinet. Position assignments are as shown in the following table:

For module 1 (J-12)		For module 2 (J-13)	
Position	Assignment	Position	Assignment
1	+24V (dc) from (J-12E)	7	+24V (dc) from (J-13E)
2	Detector ground From (J-12K)	8	Detector ground from (J-13K)
3	Channel A auxiliary detector input 1	9	Channel A auxiliary detector input 1
4	Channel A auxiliary detector input 2	10	Channel A auxiliary detector input 2
5	Channel B auxiliary detector input 1	11	Channel B auxiliary detector input 1
6	Channel B auxiliary detector input 2	12	Channel B auxiliary detector input 2

86-5.01D(4) System Operation

You must demonstrate that the components of each system are compatible and will perform satisfactorily as a system. Satisfactory performance must be determined using the following test procedure during the functional test period:

1. Each system to be used for testing must consist of an optical emitter assembly, an optical detector, an optical detector cable and a discriminator module.
2. The discriminator modules must be installed in the proper input file slot of the Model 2070 controller assembly.
3. Two tests must be conducted; 1 using a Class I signal emitter and a distance of 1,000 feet between the emitter and the detector, the other using a Class II signal emitter and a distance of 1,800 feet between the emitter and the detector. Range adjustments on the module must be set to "Maximum" for each test.
4. Each test must be conducted for a period of 1 hour, during which the emitter must be operated for 30 cycles, each consisting of a 1 minute "on" interval and a 1 minute "off" interval. During the total test period the emitter signal must cause the proper response from the Model 2070 controller unit during each "on" interval and there must be no improper operation of either the Model 2070 controller unit or the monitor during each "off" interval.

Add to section 86-5.01:

86-5.01E Video Image Vehicle Detection System

86-5.01E(1) General

86-5.01E(1)(a) Summary

Section 86-5.01E includes installing video image vehicle detection system (VIVDS) for traffic signals.

86-5.01E(1)(b) Definitions

Video Detection Unit (VDU): Processor unit that converts the video image from the camera and provides vehicle detection in defined zones. Unit includes an image processor, extension module, and communication card.

Video Image Sensor Assembly (VIS): An enclosed and environmentally-protected camera assembly used to collect the video image.

Video Image Vehicle Detection System (VIVDS): A system that detects video images of vehicles in defined zones and provides video output.

86-5.01E(1)(c) Submittals

Submit documentation within 30 days after Contract approval but before installing VIVDS equipment.

The documentation submittal must include:

1. Certificate of Compliance: As specified in Section 6-3.05E, "Certificates of Compliance," of the Standard Specifications.
2. Site Analysis Report: Written analysis for each detection site, recommending the optimum video image sensor assembly placement approved by the manufacturer.
3. Lane Configuration: Shop drawing showing:
 - 3.1. Detection zone setback
 - 3.2. Detection zone size
 - 3.3. Camera elevation
 - 3.4. Selected lens viewing angle
 - 3.5. Illustration of detection zone mapping to reporting contact output
 - 3.6. Illustration of output connector pin or wire terminal for lane assignment.
4. Configuration Record: Windows XP PC compatible CD containing:
 - 4.1. Proposed zone designs
 - 4.2. Calibration settings
5. Mounting and Wiring Information: Manufacturer approved wiring, video cable and service connection diagrams.
6. Communication Protocol: Industry standard available in public domain. Document defining:
 - 6.1. Message structure organization
 - 6.2. Data packet length
 - 6.3. Message usability
 - 6.4. Necessary information to operate a system from a remote windows based personal computer.
7. Programming Software: CD containing set up and calibration software that observes and detects the vehicular traffic, including bicycles, motorcycles, and sub-compact cars, with overlay of detection zones and allows adjustment of the detection sensitivity for a traffic signal application.
8. Detector Performance DVD Recordings and Analysis: Performance analysis based on 24-hour DVD recording of contiguous activity for each approach. Include:
 - 8.1. Two contiguous hours of sunny condition, with visible shadows projected a minimum of 6 feet into the adjacent lanes
 - 8.2. Two 1-hour night periods with vehicle headlights present.
9. Preventative Maintenance Parts Documentation: List of equipment replacement parts for preventative maintenance, including:
 - 9.1. Electrical parts, wiring and video cable
 - 9.2. Mechanical parts
 - 9.3. Assemblies.

Allow 7 days for the Engineer to review the documentation submittal.

If the Engineer requires revisions, submit a revised submittal within 5 days of receipt of the Engineer's comments and allow 5 days for the Engineer to review. If agreed to by the Engineer, revisions may be included as attachments in the resubmittal. The Engineer may conditionally approve, in writing, resubmittals that include revisions submitted as attachments, in order to allow construction activities to proceed.

Upon the Engineer's approval of the resubmittal, submit copies of the final documents (with approved revisions incorporated) to the Engineer.

Submit an acceptance testing schedule for approval 15 days before starting acceptance testing.

When beginning acceptance testing of VIVDS and detector performance and analysis, submit approved copies of the following:

1. Configuration Record: Windows XP PC compatible CD containing:
 - 1.1. Final zone designs
 - 1.2. Calibration settings to allow reinstallation.
2. Mounting and Wiring Information: Final wiring and service connection diagrams.
 - 2.1. One copy for the Engineer
 - 2.2. A second copy wrapped in clear self-adhesive plastic, be placed in a heavy duty plastic envelope, and secured to the inside of the cabinet door.

86-5.01E(1)(d) Quality Control and Assurance

86-5.01E(1)(d)(1) General

VIVDS and support equipment required for acceptance testing must be new and as specified in the manufacturer's recommendations. Date of manufacture, as shown by date codes or serial numbers of electronic circuit assemblies, must not be older than 12 months from the scheduled installation start date. Material substitutions must not deviate from the material list approved by the Engineer.

86-5.01E(1)(d)(1)(b) Warranty

Furnish a 3-year replacement warranty from the manufacturer of VIS and VDU against defects in materials and workmanship or failures. The effective date of the warranty is the date of acceptance of the installation. Submit all warranty documentation before installation.

Replacement VIS and VDU must be furnished within 10 days of receipt of a failed unit. The Department does not pay for replacement. Deliver replacement VIS and VDU to Caltrans Maintenance Electrical Shop at: 1325 Sanders Drive, Rancho Cordova, California 95742

86-5.01E(2) Materials

86-5.01E(2)(a) General

VIVDS must include necessary firmware, hardware, and software for designing the detection patterns or zones at the intersection or approach. Detection zones must be created with a graphic user interface designed to allow to anyone trained in VIVDS system setup to configure and calibrate a lane in less than 15 minutes.

System elements must comply with the manufacturer's recommendations and be designed to operate continuously in an outdoor environment.

All equipment, cables, and hardware must be part of an engineered system that is designed by the manufacturer to fully interoperate with all other system components. Mounting assemblies must be

corrosion resistant. Connectors installed outside the cabinets and enclosures must be corrosion resistant, weather proof, and watertight. Exposed cables must be sunlight and weather resistant.

86-5.01E(2)(a)(1) Physical and Mechanical Requirements

VIVDS must include:

1. VIS and mounting hardware. Use a clamping device as mounting hardware on a pole or mast-arm.
2. VDU
3. Power supply
4. Surge suppression
5. Cables
6. Connectors
7. Wiring for connecting to the Department-furnished Model 332L traffic controller cabinet.
8. Communication card

86-5.01E(2)(a)(2) Electrical

VIVDS must operate between 90 to 135 V(ac) service as specified in NEMA TS-1. VIS, excluding the heater circuit, must draw less than 10 W of power. Power supply or transformer for the VIVDS must meet the following minimum requirements:

Minimum Requirements for Power Supply and Transformers		
Item	Power Supply	Transformer
Power Cord	Standard 120 V(ac), 3 prong cord, 3 feet minimum length (may be added by Contractor)	Standard 120 V(ac), 3 prong cord, 3 feet minimum length (may be added by Contractor)
Type	Switching mode type	Class 2
Rated Power	Two times (2x) full system load	Two times (2x) full system load
Operating Temperature	From -37 to 74 °C	From -37 to 74 °C
Operating Humidity Range	From 5 to 95 percent	From 5 to 95 percent
Input Voltage	From 90 to 135 V(ac)	From 90 to 135 V(ac)
Input Frequency	60 ± 3 Hz	60 ± 3 Hz
Inrush Current	Cold start, 25 A Max. at 115 V(ac)	N/A
Output Voltage	As required by VIVDS	As required by VIVDS
Overload Protection	From 105 to 150 percent in output pulsing mode	Power limited at >150 percent
Over Voltage Protection	From 115 to 135 percent of rated output voltage	N/A
Setup, Rise, Hold Up	800ms, 50ms, 15ms at 115 V(ac)	N/A
Withstand Voltage	I/P-0/P:3kV, I/P-FG:1.5kV, for 60 s.	I/P-0/P:3kV, I/P-FG:1.5kV, for 60 s
Working Temperature	Not to exceed 70°C at 30 percent load	Not to exceed 70 °C at 30 percent load
Safety Standards	UL 1012, UL 60950	UL 1585

Field terminated circuits must include transient protection as specified in IEEE Standard 587-1980, Category C. Video connections must be isolated from ground.

86-5.01E(2)(a)(3) Technical Requirements

Camera and zoom lens assembly must be housed in an environmentally sealed enclosure that complies with NEMA 4 standards. Enclosure must be watertight and protected from dust. Enclosure must include a thermostat controlled heater to prevent condensation and to ensure proper lens operation at low temperatures. Adjustable sun shield that diverts water from the camera's field of view must be included. Connectors, cables and wiring must be enclosed and protected from weather. An environmentally sealed (protected from dust and moisture ingress) connector must be used at the rear plate of the housing. Wiring to the connector must be sealed with silicone or putty compound.

Each camera and its mounting hardware must be less than 10 pounds and less than 1 square foot equivalent pressure area. Only one camera must be mounted on a traffic signal or luminaire arm. Top of camera must not be more than 12 inches above top of luminaire arm. or 30 inches above top of traffic signal arm.

VIS must use a charge-coupled device (CCD) element, support National Television Standards Committee (NTSC) and RS170 video output formats, and have a horizontal resolution of at least 360 lines. VIS must include an auto gain control (AGC) circuit, have a minimum sensitivity to scene luminance from 0.01 to 930 foot-candle, and produce a usable video image of vehicular traffic under all roadway lighting conditions regardless of the time of day. VIS must have a motorized lens with variable focus and zoom control with an aperture of f/1.4 or better. Focal length must allow ± 50 percent adjustment of the viewed detection scene.

A flat panel video display with a minimum 8-inch screen and that supports NTSC video output must be enclosed in the Model 332L cabinet for viewing video detector images and for performing diagnostic testing. Display must be viewable in direct sunlight. Each VIVDS must have video system connections that support the NTSC video output format, can be seen in each camera's field of view, and has a program to allow the user to switch to any video signal at an intersection. A metal shelf or pull-out document tray with metal top capable of supporting the VDU and monitor must be furnished and placed on an EIA 19 inch rack with 10-32 "Universal Spacing" threaded holes in the Model 332L cabinet. System must allow independent viewing of a scene while video recording other scenes without interfering with the operation of the system's output.

Mounting hardware must be powder-coated aluminum, stainless steel, or treated to withstand 250 hours of salt fog exposure as specified in ASTM B 117 without any visible corrosion damage.

VDU must operate between -37 to $+74$ °C and from 0 to 95 percent relative humidity.

VDU front panel must have indicators for power, communication, presence of video input for each VIS, and a real time detector output operation. Hardware or software test switch must be included to allow the user to place either a constant or momentary call for each approach. Indicators must be visible in daylight from 5 feet away.

VDU must have a serial communication port, EIA 232/USB 2.0 that supports sensor unit setup, diagnostics, and operation from a local PC compatible laptop with Windows XP or later version operating system. VIVDS must have an Ethernet communication environment, including Ethernet communication card. VIVDS must include central and field software to support remote real-time viewing and diagnostics for operational capabilities through wide area network (WAN).

VDU, image processors, extension modules, and video output assemblies must be inserted into the controller input file slots using the edge connector to obtain limited 24 V(dc) power and to provide contact closure outputs. Cabling the output file to a "D" connector on the front of the VDU is acceptable. No rewiring to the standard Model 332L cabinet is allowed. Controller cabinet resident modules must comply with the requirements in Chapter 1 and Sections 5.2.8, 5.2.8.1, 5.2.8.2, 5.4.1, 5.4.5, 5.5.1, 5.5.5, and 5.5.6 of TEES.

86-5.01E(2)(a)(4) Functional Requirements

VIVDS must support normal operation of existing detection zones while a zone is being added or modified. Zone must flash or change color on a viewing monitor when vehicular traffic is detected. Length and width of each detection zone for each lane must be approved by the Engineer.

Software and firmware must detect vehicular traffic presence, provide vehicle counts, set up detection zones, test VIVDS performance, and allow video scene and system operation viewing from the local traffic management center/office. VIVDS must support a minimum of 2 separate detection patterns or zones that can be enacted by a remote operator at the signal controller cabinet.

VIVDS detection zone must detect vehicles by providing an output for presence and pulse. At least one detection output must be provided for each detection zone. One spare detection output must be provided for each approach. Detection performance must be achieved for each detection zone with a maximum of 8 user-defined zones for every camera's field of view.

VIVDS must detect the presence of vehicles under all types of adverse weather and environmental conditions, including snow, hail, fog, dirt, dust or contaminant buildup on the lens or faceplate, minor camera motion due to winds, and vibration. Under low visibility conditions, the VIVDS must respond by selecting a fail-safe default pattern, placing a constant call mode for all approaches. VIVDS outputs must assume a fail-safe "on" or "call" pattern for presence detection if video signal or power is not available and must recover from a power failure by restoring normal operations within 3 minutes without manual intervention. If powered off for more than 90 days, system must maintain the configuration and calibration information in memory.

Detection algorithm must be designed to accommodate naturally occurring lighting and environment changes, specifically the slow moving shadows cast by buildings, trees, and other objects. These changes must not result in a false detection or mask a true detection. VIVDS must not require manual interventions for day-night transition or for reflections from poles, vehicles or pavement during rain and weather changes. VIVDS must suppress blooming effects from vehicle headlights and bright objects at night.

Vehicle detection must call service to a phase only if a demand exists and extend green service to the phase until the demand is taken care of or until the flow rates have reduced to levels for phase termination. VIVDS must detect the presence of vehicular traffic at the detection zone positions and provide the call contact outputs to the Model 2070 controller assembly with the following performance:

Detector Performance

Requirements	Performance during AMBER and RED interval	Performance during GREEN interval
Average response time after vehicle enters 3 feet into detection zone or after exiting 3 feet past detection zone	≤ 1 s	≤ 100 ms
Maximum number of MISSED CALLS in 24-hour duration, where MISSED CALLS are greater than 5 s during AMBER and RED intervals and greater than 1 s during GREEN intervals (upon entering 3 feet of detection zone or after exiting 3 feet past detection zone).	0	10
Maximum number of FALSE CALLS in 24-hour duration (calls greater than 500ms without a vehicle present)	20	20

VIVDS must be able to locally store, for each lane, vehicle count data in 5, 15, 30, and 60 minute intervals for a minimum period of 7 days and be remotely retrievable. VIVDS must count vehicular traffic in detection zone with a 95 percent accuracy or better for every hour counted over a morning or an evening

peak hour. VIVDS detection zone tested must have a minimum range of 50 feet behind the limit line for each approach. Testing period will be pre-approved by the Engineer 48 hours in advance.

86-5.01E(3) Construction

Install VDU in a Department-furnished Model 2070 controller assembly. Install VIS power supply or transformer on a standard DIN rail using standard mounting hardware and power conductors wired to DIN rail mounted terminal blocks in the controller cabinet.

Wiring must be routed through end caps or existing holes and sealed. New holes for mounting or wiring must be shop-drilled.

Wire each VIS to the controller cabinet with a wiring harness that includes all power, control wiring, and coaxial video cable. Attach harness with standard MIL type and rated plugs. Cable type and wire characteristics must comply with manufacturer's recommendations for the VIS to cabinet distance. Wiring and cables must be continuous, without splices, between the VIS and controller cabinet. Coil a minimum of 7 feet of slack in the bottom of the controller cabinet. For setup and diagnostic access, terminate serial data communication output conductors at TB-0 and continue for a minimum of 10 feet to a DB9F connector. Tape ends of unused and spare conductors to prevent accidental contact to other circuits.

Label conductors inside the cabinet for the functions depicted the approved detailed diagrams. Label cables with permanent cable labels at each end.

Adjust the lens to view 110 percent of the largest detection area dimension. Zones or elements must be logically combined into reporting contact outputs that are equivalent to the detection loops and with the detection accuracy required.

Verify the performance of each unit, individually, and submit the recorded average and necessary material at the conclusion of the performance test. Determine and document the accuracy of each unit, individually, so that each unit may be approved or rejected separately. Failure to submit necessary material at the conclusion of testing invalidates the test. The recorded media serves as acceptance evidence and must not be used for calibration. Calibration must have been completed before testing and verification.

Verify the detection accuracy by observing the VIVDS performance and recorded video images for a contiguous 24-hour period. The recorded video images must show the viewed detection scene, the detector call operation, the signal phase status for each approach, the vehicular traffic count, and time-stamp to 1/100 of a second, all overlaid on the recorded video. Transfer the 24-hour analysis to DVD.

VIVDS must meet the detection acceptance criterion specified in table titled "Detector Performance."

Calculate the VIVDS's vehicular traffic count accuracy as $100[1-(|TC-DC|/TC)]$, where DC is the detector's vehicular traffic count and TC is the observed media-recorded vehicular traffic count and where the resulting fraction is expressed as an absolute value.

The Engineer will review the data findings and accept or reject the results within 7 days. Vehicle anomalies or unusual occurrences will be decided by the Engineer. Data or counts not agreed by the Engineer will be considered errors and count against the unit's calibration. If the Engineer determines that the VIVDS does not meet the performance requirements, you must re-calibrate and retest the unit, and resubmit new test data within 7 days. After 3 failed attempts, you must replace the VIVDS with a new unit.

Notify the Engineer 20 days before the unit is ready for acceptance testing. Acceptance testing must be scheduled to be completed before the end of a normal work shift. You must demonstrate that all VIS and VDUs satisfy the functional requirements.

Replace the 1st sentence of the 1st paragraph of section 86-5.02 and the 5th paragraph of section 86-5.02 with:

Housing must be either (1) die-cast aluminum, (2) permanent mold-cast aluminum, or (3) UV-stabilized, self-extinguishing structural plastic type. Pedestrian push button signs must be porcelain-enameled metal

for aluminum housing and structural plastic for plastic housing. Plastic housing must match color no. 17038, 27038, or 37038 of FED-STD-595 and colored throughout.

Housing must be UV-stabilized, self-extinguishing structural plastic type. Pedestrian push button signs must be structural plastic. Plastic housing must match color no. 17038, 27038, or 37038 of FED-STD-595 and colored throughout.

Add to section 86-5:

86-5.03 ACCESSIBLE PEDESTRIAN SIGNALS

86-5.03A General

86-5.03A(1) Summary

Section 86-5.03 includes specifications for installing accessible pedestrian signal (APS). Comply with TEES.

86-5.03A(2) Definitions

APS: As defined in the *California MUTCD*.

accessible walk indication: Activated audible and vibrotactile action during the walk interval.

ambient sound: Background sound level in dB at a given location.

ambient sound sensing microphone: Microphone that measures the ambient sound level in dB and automatically adjusts the APS speaker's volume, accordingly.

APS pedestrian push button (APS PPB) assembly: Assembly that must include a PPB to actuate the APS components.

audible speech walk message: Audible prerecorded message that communicates to pedestrians which street has the walk interval.

programming mechanism: Device to program the APS operation.

push button information message: Audible prerecorded message actuated when the push button is pressed and the walk interval is not timing.

push button locator tone: As defined in the *California MUTCD*.

vibrotactile pedestrian device: As defined in the *California MUTCD*.

86-5.03A(3) Submittals

Submit the APS wiring diagram and product data.

Submit 5 APS user and operator manuals for each signalized location as an informational submittal. Each manual must include a master item index that describes the purpose and a brief description to the directory. The index must include an overall description of the APS and its associated equipment and cables with illustrative block diagrams, manufacturer contact information, technical data specification, a parts list, part descriptions, and settings. The manuals must include fault diagnostic and repair procedures and procedures for preventative maintenance in order to maintain APS performance parameters.

Before shipping to the job site, submit all APSs with the following to METS:

1. Delivery form including Contract number and contact information

2. List containing all APS serial nos.
3. Manufacturer's name, trademark, model no., lot number, and month and year of manufacture
4. Programming mechanism if not integral to the APS

Submit a record of completed field tests, APS final configuration, audible sound levels and threshold, and a list of all parameter settings.

Submit warranty documentation as an informational submittal before installing APSs.

86-5.03A(4) Quality Control and Assurance

86-5.03A(4)(a) General

The APS must be compatible with the Department-furnished Model 2070L controller assembly. The power to the APS must be connected to the pedestrian signal section terminal blocks. The Department may test each APS. All functional and dimensional parameters specified in section 86- 5.03 specifications may be tested on the APS.

Comply with section 86-2.14A.

86-5.03A(4)(b) Functional Testing

Field tests must be completed twice, when traffic is noisy such as during peak traffic hours and when traffic is quiet such as during off peak hours. Notify the Engineer 15 days before testing the APS.

86-5.03A(4)(c) Warranty

Furnish a 2-year replacement warranty from the manufacturer of the APS against any defects or failures. The effective date of the warranty is the date of acceptance of the installation. Furnish replacement parts within 10 days after receipt of the failed parts. The Department does not pay for the replacement. Deliver replacement parts to the following department maintenance electrical shop:

Caltrans Maintenance Station
11325 Sanders Drive
Rancho Cordova, CA 95742
916-859-7803

86-5.03A(4)(d) Training

Provide a minimum of 8 hours of training by a certified manufacturer's representative for up to 8 Department employees selected by the Engineer. The content of the training must include instructions for installing, programming, adjusting, calibrating, and maintaining the APS. Furnish materials and equipment for the training. Notify the Engineer 15 days before the training. The time and location of the training must be agreed upon by you and the Engineer. If no agreement can be reached, the Engineer determines the time and location.

86-5.03B Materials

The APS PPB assembly must include:

1. PPB actuator with a minimum diameter of 2 inches. The PPB must be rainproof and shockproof in any weather condition. If a mechanical switch is used, the switch must have:

- 1.1. Operating force of 3.5 lb
- 1.2. Maximum pretravel of 5/64 inch
- 1.3. Minimum overtravel of 1/32 inch
- 1.4. Differential travel from 0.002 to 0.04 inch
2. Vibrotactile device on the push button or on the arrow.
3. Enclosure with an ambient sound level sensing microphone and weatherproof speaker. Type B PPB assembly may be substituted with an APS PPB assembly enclosure, but must be less than 7 lb, be less than 16 by 6 by 5 inches, and fit the standard. Maximum diameter of the hole for passage of wiring must not exceed 1.125 inches. Attachment to the pole must be with 2 screws of a diameter from 1/4 to 3/8 inch suitable for use in tapped holes. Clear space between any 2 holes in the post must be at least twice the diameter of the larger hole.

The APS PPB color must match color no. 33538 of FED-STD-595.

The APS speakers and electronic equipment must be installed inside the APS PPB assembly enclosure. Speakers must not interfere with the PPB or its mounting hardware. Speaker grills must be located on the APS PPB assembly enclosure.

The conductor cable between the APS PPB assembly and the pedestrian signal head must be a nine-no. 20-conductor cable complying with MIL-W-16878D. The wiring must comply with section 13.02 of ITE publication, Equipment and Material Standards, chapter 2, "Vehicle Traffic Control Signal Heads" and the NEC rated for service at +105 degrees C. Electronic switches, a potentiometer, or a handheld device must be used to control and program the volume level and the messaging for the APS. After successful installation of the APS, hand over the programming mechanism to the Engineer.

The APS must:

1. Include a provision to enable and disable the APS operation.
2. Have a failsafe operation. In the event of APS failure, the PPB, when pressed, must activate the pedestrian "walk" signal timing.
3. Provide information using:
 - 3.1. Audible speech walk message that plays when the PPB is pressed. The message must include the name of the street to be crossed associated with that push button. An example of the message is: "Peachtree, "walk" sign is on to cross Peachtree." The message must be repeated for the duration of the walk interval. The APS must include at least 5 sound options to be played during the walk interval. The Engineer may field select the "walk" sound option. The message must be activated for use from the beginning of the walk interval. The message must have a percussive tone consisting of multiple frequencies with a dominant component of 880 Hz. If the tone is selected as the message, it must repeat 8 to 10 ticks per second.
 - 3.2. Push button information message that provides the name of the street to be crossed associated with that push button. The message must play when the PPB is pressed. An example of the message is: "Wait to cross Howard at Grand. Wait."
 - 3.3. Push button locator tone that clicks or beeps. The locator tone must come from the PPB and repeat at 1 tone per second interval. Each tone has a maximum duration of 0.15 second. The locator tone volume must adjust in response to ambient sound and be audible up to 12 feet from the push button or to the building line, whichever is less.
4. Have a functional push button when pressed that activates the pedestrian "walk" signal even if the audible speech walk message, push button information message, push button locator tone, and the vibrating surface features are disabled.

86-5.03C Construction

Arrange to have a manufacturer's representative at the job site when the APS is installed, modified, connected, or reconnected.

The APS must not interfere with the Department-furnished controller assembly, the signal installation on signal standards, the pedestrian signal heads, or the terminal compartment blocks. The APS electronic control equipment must reside inside the APS PPB assembly and the standard pedestrian signal head. You are responsible for the compatibility of the components and for making the necessary calibration adjustments to deliver the performance specified. Furnish the equipment and hardware, then set up, calibrate, and verify the performance of the APS.

Upon successful completion of the APS installation, if there is no immediate need for APS function, then the system will be disabled until such need is determined.

86-5.03D Payment

Not Used

Add as Section 86-5.04 :

86-5.04 CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM

You must furnish and install the CCTV System.

86-5.04A GENERAL REQUIREMENTS

The CCTV System must comply with all rules and regulations of the Federal Communications Commission and these special provisions. The CCTV System must include the installation and testing of all components (Camera, Environmental Enclosures, Positioning Unit, Camera Control Unit, Power Supplies, and associated cables). All items of the CCTV System must be Contractor-furnished.

The CCTV System must be installed as a complete and operational system.

You must be responsible for providing any mounting adapter and/or attachment required for installation of the CCTV Camera System. You must also be responsible for any power supplies, connector adapters, and converters required to operate the CCTV Camera System. All materials furnished, assembled, fabricated or installed under this item must be new, corrosion resistant and in strict accordance with the details shown on the plans and in the specifications.

You must be responsible for all deliveries. You must provide submittals for equipment specified in these special provisions for approval by the Engineer and a copy sent to the Regional Transportation Management Center (RTMC), Office of Electrical Systems, 3165 Gold Valley Dr., Rancho Cordova, CA 95742.

All components of the CCTV System, except the cameras, must have a minimum one-year manufacturer's warranty for parts and labor. The cameras must have a minimum of a one-year manufacturer's warranty for parts and labor to begin from installation acceptance. The Resident Engineer and the CCTV Camera System vendor representative must verify the installation acceptance date.

86-5.04B FUNCTIONAL REQUIREMENTS

All units must communicate using the asynchronous serial communication standard EIA-422. At a minimum the communication port settings available must be 9600 baud, 8-bit data, 1 stop-bit, and no-parity. The camera must be addressable by a unique identifier to enable multi-drop configuration. The communications transmission interface must be terminated in a DB-9F connector as a DCE at the CCTV cabinet. A converter must be supplied to convert EIA-422 to EIA-232.

The control protocol must be non-proprietary or made public to allow integration into the existing camera control system. The control protocol must be common for all cameras. The firmware/software used in the CCTV System must be programmable via the serial interface (no UV-EPROMS). You must provide as

minimum three copies of a Microsoft Windows based application to control all camera unit functions for testing and operation.

The control protocol must return an ACK message to acknowledge the command. If the command is not executable or failed to execute, the camera returns an error message instead of the acknowledge message. Complete hardware interface document and detailed control protocol description listing every complete command message must be supplied to the State as part of the required documentation.

Unless otherwise shown on the plans, all field equipment not housed in an environmental enclosure must be operational in all weather conditions and shall be watertight to withstand the effects of sand, dust, snow, rain and a wind load of 80 mph without permanent damage to mechanical and electrical equipment. Equipment used must be identical at each field location and shall be completely interchangeable.

86-5.04C CAMERA

The existing CCTV system deployed in the district is the Cohu i-View II 3965 series, Model #3965-5100/LPED. The new system furnished by you must be compatible with the existing CCTV system and these special provisions.

86-5.04D CAMERA CONTROL UNIT

The existing camera control unit deployed in the district is the Cohu 9300 series, Model #9305-0100. The new camera control unit furnished by you must be compatible with the CCTV system and these special provisions.

The camera control unit (CCU) must be compatible with the camera assembly. The CCU shall be 19 inch EIA rack mountable.

86-5.04E CAMERA INTERCONNECT CABLE

The existing composite cable deployed in the district is the Cohu CA290 series, Model #CA297H. The new cable system furnished by you must be compatible with the existing CCTV system and these special provisions.

The composite cable must provide video, data, and power conductors in a single jacketed cable. The same manufacturer as the camera assembly make the composite cable.

The cable must have a strain relief located towards the top of the CCTV pole and hung on the pole j-hook. Wiring must run continuous from source to destination. No splices must be allowed. You must verify composite cable length prior to ordering of materials.

86-5.04F CAMERA CABLE

The Camera Cable must be terminated with a cable Plug and strain relief/clamp (Amphenol 206036-3 Clamp 1310307-103 or equivalent). The Camera Cable must be three feet in length maximum to allow connection to the Camera Interconnect Cables on top of the pole as shown on plans. In order to assure compatibility and performance compliance, the assembly of the Camera Cable and the Cable Plug must be provided by the manufacturer.

The pin assignments for the Cable Receptacle (AMP 206036-3) must be as follows:

PIN	FUNCTION
1	Video
2	Video Ground
3	Chassis Ground
4	TX- (out from cam) (for EIA-422) →
5	TX+ (out from cam) →
6	RX+ (in to cam) ←
7	RX- (in to cam) (for EIA-422) ←
8	RS232 TXD
9	RS232 RXD
10	DATA GND
11	NOT USED
12	115 VAC HI
13	115 VAC LOW
14	OVERALL SHIELD
15	AC GROUND

86-5.04G ACCEPTANCE TEST PROCEDURE

Upon installation of the CCTV System in the field, you must perform the following tests locally in the presence of the Engineer, with a Contractor provided camera controller. The camera controller can be a laptop computer with the latest version of the vendor supplied camera control software and be compatible with the CCTV System DB-9F control cable connector (to PC Com port).

a. Iris Auto/Manual Operation

- With IRIS Auto/Manual switch in Manual, open Iris and verify that the video image lightens.
- Close the Iris and verify that the video image darkens.
- Open the Iris to lighten the image and then switch IRIS Auto/Manual switch to auto. Verify that the camera iris closes to produce the original video image.
- Close the Iris to darken the image and then switch IRIS Auto/Manual switch to auto. Verify that the camera iris opens to produce the original video image.

b. Focus Auto/Manual Operation

- With Focus Auto/Manual switch in Manual, demonstrate that the camera can focus on objects both near and far in the field of view.
- Focus near, then switch FOCUS Auto/Manual switch to auto and demonstrate that the camera focus adjusts automatically to bring the image back in focus.
- Focus far, then switch FOCUS Auto/Manual switch to auto and demonstrate that the camera focus adjusts automatically to bring the image back in focus.

c. Zoom Telephoto//Wide Operation

- With the IRIS and FOCUS Auto/Manual switches in Auto you must demonstrate that the auto IRIS & FOCUS adjustments operate with a focused picture present in the video image and that the picture zooms in and out.
- With IRIS and FOCUS Auto/Manual switch in Manual and operating the Zoom from wide angle to Telephoto you must demonstrate that all IRIS & FOCUS adjustments do not operate as if in Auto and that picture still zooms in and out.
- Demonstrate that the Digital zoom functions through 10 times the focal length.

d. Tilt Operation

You must demonstrate that with Iris and Focus in Auto & Zoom in wide mode that the camera has free movement with a minimum of +30° to – 80° Elevation range travel.

e. Pan Right/Left Operation

You must demonstrate that with Iris and Focus in Auto, and Zoom in wide mode and with the camera tilted at +30° to -80° the camera must rotate with free movement, with a minimum of 360° pan travel range.

f. Camera Preset Operation

Using camera control software, you must demonstrate that the camera system must execute a minimum of 6 various preset positions employing various degrees of zoom, pan and tilt. The camera must move freely from on preset position to the next. The camera system must not take more than 4 seconds to go to a preset position. Once in the preset position the camera must not move unless directed by another command.

The camera control software must automatically and continuously test all 6 preset positions in succession for a minimum of one hour.

g. ID Generation

Using camera ID Generator and vendor supplied camera control software the you must demonstrate the insertion of 20 text characters into the video image.

You must demonstrate that the text can be cleared using the control software.

86-5.04H TRAINING

You must provide a minimum of 4 hours of operational and maintenance training to State personnel. You must provide enough documentation for up to 15 Caltrans Personnel. You must provide two weeks' notice prior to the start of training. The State will provide facilities for training.

86-5.04I VIDEO ENCODER UNIT (VEU)

You must furnish video encoders where shown on the plans and as specified in this special provision. Video Encoder must have a minimum one-year manufacturer's warranty for parts and labor. You must deliver the encoders to the Engineer for testing, configuration and installation. The encoder must meet or exceed the following general specifications:

Specifications	Description
Video Input Format	NTSC
Video Output Format	H.264 Encoding, ONVIF compliant
Number of H.264 Channels	2
Output Resolutions	D1, 4CIF, VGA, CIF, QCIF
Output Encoding Rates	56 kb/s to 10 Mb/s
Output Frame Rates	1 to 30 fps selectable
JPEG Image Capture	Capture JPEG images every 1 to 600 secs using FTP and HTTP pull
Input Impedance	75Ω/ Hi-Impedance selectable
Network Interface	10/100 Base-T, Connector RJ-45,
Control Port Control	RS232/422/486 serial port, with TCP/IP pass through capability or socket addressable
Serial Data Connector	DB-9 configurable
JPEG Image Time Inserter	Time and Date placed on image
Remote Management	HTTP Web GUI
ONVIF Compliant	Yes
Firmware	Remote upgradeable
Ruggedized Construction	Solid State
Dimensions	2"W x 7"H x 9"D Max
Power Requirements	Hardened 120V External DC Power Supply is OK
Operating Temperature	-40° to +165°F

86-5.04J Performance

Once configured the VEU must power up and begin streaming video and creating JPEG images.

86-5.04K Acceptance test procedure

The Video Encoder must operate at +165°F for 4 hours using the following procedure:

- A. The VEU must output a 640 x 480 H.264 video stream at 30fps and a 320 x 240 H.264 video stream at 5fps.
- B. The VEU must output a 320 x 240 JPEG image every 10 seconds.
- C. The video stream must be monitored using a VLC media player and simultaneously archived. The archived stream must be played back to verify uninterrupted performance.
- D. The JPEG image must be archived and examined for regularity.
- E. The video output streams must be distributed using a Wowza Media Server without the need for transcoding. This must verify compatibility; allow multicasting and multiple-unicasting of the single video output stream under test.

Replace section 86-6.01 with:

86-6.01 LED LUMINAIRES

86-6.01A General

86-6.01A(1) Summary

Section 86-6.01 includes specifications for installing LED luminaires.

You must plan your stage construction to provide street lighting at all times. You must not remove any existing street lights until the proposed street light in the same area are installed and operational and as approved by the Engineer.

86-6.01A(2) Definitions

CALiPER: Commercially Available LED Product Evaluation and Reporting. A U.S. DOE program that individually tests and provides unbiased information on the performance of commercially available LED luminaires and lights.

correlated color temperature: Absolute temperature in kelvin of a blackbody whose chromaticity most nearly resembles that of the light source.

house side lumens: Lumens from a luminaire directed to light up areas between the fixture and the pole (e.g., sidewalks at intersection or areas off of the shoulders on freeways).

International Electrotechnical Commission (IEC): Organization that prepares and publishes international standards for all electrical, electronic and related technologies.

junction temperature: Temperature of the electronic junction of the LED device. The junction temperature is critical in determining photometric performance, estimating operational life, and preventing catastrophic failure of the LED.

L70: Extrapolated life in hours of the luminaire when the luminous output depreciates 30 percent from initial values.

LM-79: Test method from the Illumination Engineering Society of North America (IESNA) specifying test conditions, measurements, and report format for testing solid state lighting devices, including LED luminaires.

LM-80: Test method from the IESNA specifying test conditions, measurements, and report format for testing and estimating the long term performance of LEDs for general lighting purposes.

National Voluntary Laboratory Accreditation Program (NVLAP): U.S. DOE program that accredits independent testing laboratories to qualify.

power factor: Ratio of the real power component to the complex power component.

street side lumens: Lumens from a luminaire directed to light up areas between the fixture and the roadway (e.g., traveled ways, freeway lanes).

surge protection device (SPD): Subsystem or component that can protect the unit against short duration voltage and current surges.

total harmonic distortion: Ratio of the rms value of the sum of the squared individual harmonic amplitudes to the rms value of the fundamental frequency of a complex waveform.

86-6.01A(3) Submittals

Product submittals must include:

1. LED luminaire checklist.
2. Product specification sheets, including:
 - 2.1. Maximum power in watts.
 - 2.2. Maximum designed junction temperature.
 - 2.3. Heat sink area in square inches.
 - 2.4. Designed junction to ambient thermal resistance calculation with thermal resistance components clearly defined.

- 2.5. L70 in hours when extrapolated for the average nighttime operating temperature.
3. IES LM-79 and IES LM-80 compliant test reports from a CALiPER-qualified or NVLAP-approved testing laboratory for the specific model submitted.
4. Photometric file based on LM-79 test report.
5. Initial and depreciated isofootcandle diagrams showing the specified minimum illuminance for the particular application. The diagrams must be calibrated to feet and show a 40 by 40 foot grid. The diagrams must be calibrated to the mounting height specified for that particular application. The depreciated isofootcandle diagrams must be calculated at the minimum operational life.
6. Test report showing SPD performance as tested under ANSI/IEEE C62.41.2 and ANSI/IEEE C62.45.
7. Test report showing mechanical vibration test results as tested under California Test 611 or equal.
8. Data sheets from the LED manufacturer that include information on life expectancy based on junction temperature.
9. Data sheets from the power supply manufacturer that include life expectancy information.

Submit documentation of a production QA performed by the luminaire manufacturer that ensures the minimum performance levels of the modules comply with the section 86-6.01 specifications and includes a documented process for resolving problems. Submit documentation as an informational submittal.

Submit warranty documentation as an informational submittal before installing LED luminaires.

86-6.01A(4) Quality Control and Assurance

86-6.01A(4)(a) General

The Department may perform random sample testing on the shipments. The Department completes testing within 30 days after delivery to METS. Luminaires are tested under California Test 678. All parameters specified in section 86-6.01 specifications may be tested on the shipment sample. When testing is complete, the Department notifies you. Pick up the equipment from the test site and deliver to the job site.

One sample luminaire must be fitted with a thermistor or thermo-couple temperature sensor. A temperature sensor must be mounted on the LED solder pad as close to the LED as possible. A temperature sensor must be mounted on the power supply case. Light bar or modular systems must have 1 sensor for each module mounted as close to the center of the module as possible. Other configurations must have at least 5 sensors per luminaire. Contact METS for advice on sensor location. Thermocouples must be either Type K or C. Thermistors must be a negative temperature coefficient type with a nominal resistance of 20 k Ω . The appropriate thermocouple wire must be used. The leads must be a minimum of 6 feet. Documentation must accompany the test unit that details the type of sensor used.

The sample luminaires must be energized for a minimum of 24 hours, at 100 percent on-time duty cycle, at a temperature of +70 degrees F before performing any testing.

The luminaire lighting performance must be depreciated for the minimum operating life by using the LED manufacturer's data or the data from the LM-80 test report, whichever results in a higher lumen depreciation.

Failure of the luminaire that renders the unit noncompliant with section 86-6.01 specifications is cause for rejection. If a unit is rejected, allow 30 days for retesting. The retesting period starts when the replacement luminaire is delivered to the test site.

If a luminaire submitted for testing does not comply with section 86-6.01, remove the unit from METS within 5 business days after notification the unit is rejected. If the unit is not removed within that period, the Department may ship the unit to you and deduct the cost.

86-6.01A(4)(b) Warranty

Furnish a 7-year replacement warranty from the manufacturer of the luminaires against any defects or failures. The effective date of the warranty is the date of installation. Furnish replacement luminaires within 10 days after receipt of the failed luminaire. The Department does not pay for the replacement. Deliver replacement luminaires to the following department maintenance electrical shop:

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Signalization
Contract No. PW 09-30425 / CIP No. 73320
September 10, 2013

County of El Dorado
Special Provisions
SP-119

Caltrans Maintenance Station
11325 Sanders Drive
Rancho Cordova, CA 95742
916-859-7803

86-6.01B Materials

86-6.01B(1) General

You must furnish LED Lights –roadway 4. The June 27, 2012 Caltrans Pre-qualified Product List LED Luminaires list can be found at the following website:

<http://www.dot.ca.gov/hq/esc/ttsb/electrical/pdf/PRE%20QPL%20LED%20LUMINAIRE.pdf>

The luminaire must include an assembly that uses LEDs as the light source. The assembly must include a housing, an LED array, and an electronic driver. The luminaire must:

1. Be UL listed under UL 1598 for luminaires in wet locations or an equivalent standard from a recognized testing laboratory
2. Have a minimum operational life of 63,000 hours
3. Operate at an average operating time of 11.5 hours per night
4. Be designed to operate at an average nighttime operating temperature of 70 degrees F
5. Have an operating temperature range from -40 to +130 degrees F
6. Be defined by the following application:

Application	Replaces
Roadway 1	200 Watt HPS mounted at 34 ft
Roadway 2	310 Watt HPS mounted at 40 ft
Roadway 3	310 Watt HPS mounted at 40 ft with back side control
Roadway 4	400 Watt HPS mounted at 40 ft

This project must use Roadway 4 LED lights, which are to be supplied by Caltrans.

The individual LEDs must be connected such that a catastrophic loss or a failure of 1 LED does not result in the loss of more than 20 percent of the luminous output of the luminaire.

86-6.01B(2) Luminaire Identification

Each luminaire must have the following identification permanently marked inside the unit and outside of its packaging box:

1. Manufacturer's name
2. Trademark
3. Model no.
4. Serial no.
5. Date of manufacture (month-year)
6. Lot number
7. Contract number
8. Rated voltage
9. Rated wattage
10. Rated power in VA

86-6.01B(3) Electrical Requirements

The luminaire must operate from a 60 ± 3 Hz AC power source. The fluctuations of line voltage must have no visible effect on the luminous output. The operating voltage may range from 120 to 480 V(ac). The luminaire must operate over the entire voltage range or the voltage range must be selected from either of the following options:

1. Luminaire must operate over a voltage range of 95 to 277 V(ac). The operating voltages for this option are 120 V(ac) and 240 V(ac).
2. Luminaire must operate over a voltage range of 347 to 480 V(ac). The operating voltage for this option is 480 V(ac).

The power factor of the luminaire must be 0.90 or greater. The total harmonic distortion, current and voltage, induced into an AC power line by a luminaire must not exceed 20 percent. The maximum power consumption allowed for the luminaire must be as shown in the following table:

Application	Maximum consumption (Watts)
Roadway 1	165
Roadway 2	235
Roadway 3	235
Roadway 4	300

86-6.01B(4) Surge Suppression and Electromagnetic Interference

The luminaire on-board circuitry must include an SPD to withstand high repetition noise transients caused by utility line switching, nearby lightning strikes, and other interferences. The SPD must protect the luminaire from damage and failure due to transient voltages and currents as defined in Tables 1 and 4 of ANSI/IEEE C64.41.2 for location category C-High. The SPD must comply with UL 1449. The SPD performance must be tested under ANSI/IEEE C62.45 based on ANSI/IEEE C62.41.2 definitions for standard and optional waveforms for location category C-High.

The luminaires and associated on-board circuitry must comply with the Class A emission limits provided in 47 CFR 15, subpart B concerning the emission of electronic noise.

86-6.01B(5) Compatibility

The luminaire must be operationally compatible with currently used lighting control systems and photoelectric controls.

86-6.01B(6) Photometric Requirements

The luminaire must maintain a minimum illuminance level throughout the minimum operating life. The L70 of the luminaire must be the minimum operating life or greater. The measurements must be calibrated to standard photopic calibrations. The minimum maintained illuminance values measured at a point must be as shown in the following table:

Application	Mounting height (ft)	Minimum maintained illuminance (fc)	Light pattern figure (isofootcandle curve)
Roadway 1	34	0.15	<p>Pattern defined by an ellipse with the equation:</p> $\frac{x^2}{(82)^2} + \frac{(y - 20)^2}{(52)^2} = 1$ <p>where: x = direction longitudinal to the roadway y = direction transverse to the roadway and the luminaire is offset from the center of the pattern by 20 feet to the house side of the pattern.</p>
Roadway 2	40	0.2	<p>Pattern defined by an ellipse with the equation:</p> $\frac{x^2}{(82)^2} + \frac{(y - 20)^2}{(52)^2} = 1$ <p>where: x = direction longitudinal to the roadway y = direction transverse to the roadway and the luminaire is offset from the center of the pattern by 20 feet to the house side of the pattern.</p>
Roadway 3	40	0.2	<p>Pattern defined by an ellipse with the equation:</p> $\frac{x^2}{(92)^2} + \frac{(y - 23)^2}{(55)^2} = 1$ <p>for $y \geq 0$ (street side)</p> <p>where: x = direction longitudinal to the roadway y = direction transverse to the roadway and the luminaire is offset from the center of the pattern by 23 feet to the house side of the pattern.</p>

Roadway 4	40	0.2	<p>Pattern defined by an ellipse with the equation:</p> $\frac{x^2}{(92)^2} + \frac{(y - 23)^2}{(55)^2} = 1$ <p>where: x = direction longitudinal to the roadway y = direction transverse to the roadway and the luminaire is offset from the center of the pattern by 23 feet to the house side of the pattern.</p>
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The luminaire must have a correlated color temperature range from 3,500 to 6,500 K. The color rendering index must be 65 or greater.

The luminaire must not allow more than:

1. 10 percent of the rated lumens to project above 80 degrees from vertical
2. 2.5 percent of the rated lumens to project above 90 degrees from vertical

86-6.01B(7) Thermal Management

The passive thermal management of the heat generated by the LEDs must have enough capacity to ensure proper operation of the luminaire over the minimum operation life. The LED maximum junction temperature for the minimum operation life must not exceed 221 degrees F.

The junction-to-ambient thermal resistance must be 95 degrees F per watt or less. The use of fans or other mechanical devices is not allowed. The heat sink material must be aluminum or other material of equal or lower thermal resistance.

The luminaire must contain circuitry that automatically reduces the power to the LEDs to a level that ensures the maximum junction temperature is not exceeded when the ambient outside air temperature is 100 degrees F or greater.

86-6.01B(8) Physical and Mechanical Requirements

The luminaire must be a single, self-contained device, not requiring job site assembly for installation. The power supply for the luminaire is integral to the unit. The weight of the luminaire must not exceed 35 lb. The maximum effective projected area when viewed from either side or either end must be 1.4 sq ft. The housing color must match a color no. from 26152 to 26440 or from 36231 to 36375, or color no. 36440 of FED-STD-595.

The housing must be fabricated from materials designed to withstand a 3,000-hour salt spray test under ASTM B 117. All aluminum used in housings and brackets must be of a marine grade alloy with less than 0.2 percent copper. All exposed aluminum must be anodized.

Each refractor or lens must be made from UV-inhibited high impact plastic such as acrylic or polycarbonate or heat- and impact-resistant glass and be resistant to scratching. Polymeric materials except lenses of enclosures containing either the power supply or electronic components of the luminaire must be made of UL94VO flame retardant materials. Paint or powder coating of the housing must comply with section 86-2.16. A chromate conversion undercoating must be used underneath a thermoplastic polyester powder coat.

Each housing must be provided with a slip fitter capable of mounting on a 2-inch pipe tenon. This slip fitter must fit on mast arms with outside diameters from 1-5/8 to 2-3/8 inches. The slip fitter must be capable of being adjusted a minimum of ± 5 degrees from the axis of the tenon in a minimum of five steps: +5, +2.5, 0, -2.5, -5. The clamping brackets of the slip fitter must not bottom out on the housing bosses when adjusted within the designed angular range. No part of the slip fitter mounting brackets on the luminaires must develop a permanent set in excess of 1/32 inch when the two or four 3/8-inch diameter cap screws used for mounting are tightened to 10 ft-lb. Two sets of cap screws may be furnished to allow the slip fitter to be mounted on the pipe tenon in the acceptable range without the cap screws bottoming out in the threaded holes. The cap screws and the clamping brackets must be made of corrosion resistant materials or treated to prevent galvanic reactions and be compatible with the luminaire housing and the mast arm.

The assembly and manufacturing process for the LED luminaire must be designed to ensure internal components are adequately supported to withstand mechanical shock and vibration from high winds and other sources. When tested under California Test 611, the luminaire to be mounted horizontally on the mast arm must be capable of withstanding the following cyclic loading for a minimum of 2 million cycles without failure of any luminaire part:

DIVISION X MATERIALS

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90 CONCRETE

Delete "Soluble chloride" from the table in Section 90-3.02A.

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Improvements

Contract No. PW No. 09-30425

CIP No. 73320

Appendix A

Revised Standard Specifications

REVISED STANDARD SPECIFICATIONS DATED 04-19-13

Revised standard specifications 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*. A date under a main-section heading is the date of the latest revision to the section.

Each revision to the *Standard Specifications* begins with a revision clause that describes a revision to the *Standard Specifications* or introduces a revision to the *Standard Specifications*. For a revision clause that describes a revision, the date on the right above the clause is the publication date of the revision. For a revision clause that introduces a revision, the date on the right above a revised term, phrase, clause, paragraph, or section is the publication date of the revised term, phrase, clause, paragraph, or section. For a multiple-paragraph or multiple-section revision, the date on the right above a paragraph or section is the publication date of the paragraphs or sections that follow.

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

04-19-13

Replace "current" in the 2nd paragraph of section 1-1.05 with:

most recent

04-20-12

Add to the 4th paragraph of section 1-1.05:

04-20-12

Any reference directly to a revised standard specification section is for convenience only. Lack of a direct reference to a revised standard specification section does not indicate a revised standard specification for the section does not exist.

Add to the 1st table in section 1-1.06:

04-19-13

LCS	Department's lane closure system
POC	pedestrian overcrossing
QSD	qualified SWPPP developer
QSP	qualified SWPPP practitioner
TRO	time-related overhead
WPC	water pollution control

Delete the abbreviation and its meaning for *UDBE* in the 1st table of section 1-1.06.

06-20-12

Delete "Contract completion date" and its definition in section 1-1.07B.

10-19-12

Delete "critical delay" and its definition in section 1-1.07B.

10-19-12

Replace "day" and its definition in section 1-1.07B with:

10-19-12

day: 24 consecutive hours running from midnight to midnight; calendar day.

1. **business day:** Day on the calendar except a Saturday and a holiday.
2. **working day:** Time measure unit for work progress. A working day is any 24-consecutive-hour period except:
 - 2.1. Saturday and holiday.
 - 2.2. Day during which you cannot perform work on the controlling activity for at least 50 percent of the scheduled work shift with at least 50 percent of the scheduled labor and equipment due to any of the following:
 - 2.2.1. Adverse weather-related conditions.
 - 2.2.2. Maintaining traffic under the Contract.
 - 2.2.3. Suspension of a controlling activity that you and the Engineer agree benefits both parties.
 - 2.2.4. Unanticipated event not caused by either party such as:
 - 2.2.4.1. Act of God.
 - 2.2.4.2. Act of a public enemy.
 - 2.2.4.3. Epidemic.
 - 2.2.4.4. Fire.
 - 2.2.4.5. Flood.
 - 2.2.4.6. Governor-declared state of emergency.
 - 2.2.4.7. Landslide.
 - 2.2.4.8. Quarantine restriction.
 - 2.2.5. Issue involving a third party, including:
 - 2.2.5.1. Industry or area-wide labor strike.
 - 2.2.5.2. Material shortage.
 - 2.2.5.3. Freight embargo.
 - 2.2.5.4. Jurisdictional requirement of a law enforcement agency.
 - 2.2.5.5. Workforce labor dispute of a utility or nonhighway facility owner resulting in a nonhighway facility rearrangement not described and not solely for the Contractor's convenience. Rearrangement of a nonhighway facility includes installation, relocation, alteration, or removal of the facility.
 - 2.3. Day during a concurrent delay.
3. **original working days:**
 - 3.1. Working days to complete the work shown on the *Notice to Bidders* for a non-cost plus time based bid.
 - 3.2. Working days bid to complete the work for a cost plus time based bid.

Where working days is specified without the modifier "original" in the context of the number of working days to complete the work, interpret the number as the number of original working days as adjusted by any time adjustment.

2 BIDDING

10-19-12

Replace the 3rd paragraph of section 2-1.06B with:

01-20-12

If an *Information Handout* or cross sections are available:

1. You may view them at the Contract Plans and Special Provisions link at the Office Engineer--All Projects Currently Advertised Web site
2. For an informal-bid contract, you may obtain them at the Bidders' Exchange street address

01-20-12

Add a paragraph break between the 1st and 2nd sentences of the 5th paragraph of section 2-1.06B.

Add between "and" and "are" in item 2 in the list in the 7th paragraph of section 2-1.06B:

04-20-12

they

06-20-12

Delete "Underutilized" in "Underutilized Disadvantaged Business Enterprises" in the heading of section 2-1.12B.

06-20-12

Delete *U* in *UDBE* at each occurrence in section 2-1.12B.

Replace the 2nd paragraph of section 2-1.12B(1) with:

06-20-12

To ensure equal participation of DBEs provided in 49 CFR 26.5, the Department shows a goal for DBEs.

06-20-12

Delete the 3rd paragraph of section 2-1.12B(1):

Replace the 7th paragraph of section 2-1.12B(1) with:

06-20-12

All DBE participation will count toward the Department's federally-mandated statewide overall DBE goal.

Replace "offered" at the end of the 2nd sentence of item 7 in the list of 2nd paragraph of section 2-1.12B(3) with:

06-20-12

provided

01-20-12

Delete the 2nd paragraph of section 2-1.33A.

Replace the 3rd paragraph of section 2-1.33A with:

01-20-12

Except for each subcontracted bid item number and corresponding percentage and proof of each required SSPC QP certification, do not fax submittals.

Add to section 2-1.33C:

10-19-12

On the *Subcontractor List*, you must either submit each subcontracted bid item number and corresponding percentage with your bid or fax these numbers and percentages to (916) 227-6282 within 24 hours after bid opening. Failure to do so results in a nonresponsive bid.

Replace the paragraph in section 2-1.35 with:

01-20-12

Submit proof of each required SSPC QP certification with your bid or fax it to (916) 227-6282 no later than 4:00 p.m. on the 2nd business day after bid opening. Failure to do so results in a nonresponsive bid.

^^

3 CONTRACT AWARD AND EXECUTION

10-19-12

Add to the end of section 3-1.04:

10-19-12

You may request to extend the award period by faxing a request to (916) 227-6282 before 4:00 p.m. on the last day of the award period. If you do not make this request, after the specified award period:

- 1. Your bid becomes invalid
- 2. You are not eligible for the award of the contract

Replace the paragraph in section 3-1.11 with:

10-19-12

Complete and deliver to the Office Engineer a *Payee Data Record* when requested by the Department.

Replace section 3-1.13 with:

07-27-12

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. Interpret the training and promotion section as specified in section 7-1.11A.

Add to item 1 in the list in the 2nd paragraph of section 3-1.18:

07-27-12

, including the attached form FHWA-1273

Delete item 4 of the 2nd paragraph of section 3-1.18.

10-19-12

AA

5 CONTROL OF WORK

10-19-12

Add between "million" and ", professionally" in the 3rd paragraph of section 5-1.09A:

10-19-12

and 100 or more working days

Add to the list in the 4th paragraph of section 5-1.09A:

10-19-12

9. Considering discussing with and involving all stakeholders in evaluating potential VECPs

Add to the end of item 1.1 in the list in the 7th paragraph of section 5-1.09A:

10-19-12

, including VECPs

Replace the 1st paragraph of section 5-1.09C with:

10-19-12

For a contract with a total bid over \$10 million and 100 or more working days, training in partnering skills development is required.

Delete the 2nd paragraph of section 5-1.09C.

10-19-12

Replace "at least 2 representatives" in the 5th paragraph of section 5-1.09C with:

10-19-12

field supervisory personnel

Replace the 1st and 2nd sentences in the 7th paragraph of section 5-1.13B(1) with:

06-20-12

If a DBE is decertified before completing its work, the DBE must notify you in writing of the decertification date. If a business becomes a certified DBE before completing its work, the business must notify you in writing of the certification date.

Replace "90" in the last sentence of the 7th paragraph of section 5-1.13B(1) with:

06-20-12

30

Replace "Underutilized" in "Underutilized Disadvantaged Business Enterprises" in the heading of section 5-1.13B(2) with:

Performance of

06-20-12

Delete *U* in *UDBE* at each occurrence in section 5-1.13B(2).

06-20-12

Replace the 3rd paragraph of section 5-1.13B(2) with:

Do not terminate or substitute a listed DBE for convenience and perform the work with your own forces or obtain materials from other sources without authorization from the Department.

06-20-12

Replace item 6 in the list in the 4th paragraph of section 5-1.13B(2) with:

6. Listed DBE is ineligible to work on the project because of suspension or debarment.

06-20-12

Add to the list in the 4th paragraph of section 5-1.13B(2):

8. Listed DBE voluntarily withdraws with written notice from the Contract.
9. Listed DBE is ineligible to receive credit for the type of work required.
10. Listed DBE owner dies or becomes disabled resulting in the inability to perform the work on the Contract.
11. Department determines other documented good cause.

06-20-12

Add between the 4th and 5th paragraphs of section 5-1.13B(2):

Notify the original DBE of your intent to use other forces or material sources and provide the reasons. Provide the DBE with 5 days to respond to your notice and advise you and the Department of the reasons why the use of other forces or sources of materials should not occur. Your request to use other forces or material sources must include:

07-20-12

1. 1 or more of the reasons listed in the preceding paragraph
2. Notices from you to the DBE regarding the request
3. Notices from the DBE to you regarding the request

Add between "terminated" and ", you" in the 5th paragraph of section 5-1.13B(2):

or substituted

07-20-12

Replace "Contract" in item 1 in the list in the 5th paragraph of section 5-1.13C with:

work

10-19-12

Replace "Reserved" in section 5-1.20C with:

10-19-12

If the Contract includes an agreement with a railroad company, the Department makes the provisions of the agreement available in the *Information Handout* in the document titled "Railroad Relations and Insurance Requirements." Comply with the requirements in the document.

Add between the 2nd and 3rd paragraphs of section 5-1.23A:

10-19-12

Submit action and informational submittals to the Engineer.

Add to section 5-1.36C:

07-20-12

If the Contract does not include an agreement with a railroad company, do not allow personnel or equipment on railroad property.

Prevent material, equipment, and debris from falling onto railroad property.

Add between the 1st and 2nd paragraphs of section 5-1.37A:

10-19-12

Do not remove any padlock used to secure a portion of the work until the Engineer is present to replace it. Notify the Engineer at least 3 days before removing the lock.

Replace the 1st sentence of the 1st paragraph of section 5-1.39C(2) with:

10-19-12

Section 5-1.39C(2) applies if a plant establishment period of 3 years or more is shown on the *Notice to Bidders*.

Replace "working days" in the 1st paragraph of section 5-1.43E(1)(a) with:

10-19-12

original working days

^^

6 CONTROL OF MATERIALS

04-19-13

Replace section 6-2.05C with:

04-19-13

6-2.05C 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 does not exceed the greater of 0.1 percent of the total bid or \$2,500, materials produced outside the United States 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.

AA

7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

07-27-12

Replace "20 days" in the 14th paragraph of section 7-1.04 with:

25 days

09-16-11

Replace "90 days" in the 14th paragraph of section 7-1.04 with:

125 days

09-16-11

Add between the 18th and 19th paragraphs of section 7-1.04:

09-16-11

Temporary facilities that could be a hazard to public safety if improperly designed must comply with design requirements described in the Contract for those facilities or, if none are described, with standard design criteria or codes appropriate for the facility involved. Submit shop drawings and design calculations for the temporary facilities and show the standard design criteria or codes used. Shop drawings and supplemental calculations must be sealed and signed by an engineer who is registered as a civil engineer in the State.

Replace the 2nd paragraph of section 7-1.11A with:

07-27-12

A copy of form FHWA-1273 is included in section 7-1.11B. The training and promotion section of section II refers to training provisions as if they were included in the special provisions. The Department specifies the provisions in section 7-1.11D of the *Standard Specifications*. If a number of trainees or apprentices is required, the Department shows the number on the *Notice to Bidders*. Interpret each FHWA-1273 clause shown in the following table as having the same meaning as the corresponding Department clause:

FHWA-1273 Nondiscrimination Clauses

FHWA-1273 section	FHWA-1273 clause	Department clause
Training and Promotion	In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.	If section 7-1.11D applies, section 7-1.11D supersedes this subparagraph.
Records and Reports	If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.	If the Contract requires on-the-job training, collect and report training data.

Replace the form in section 7-1.11B with:

07-20-12

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

^^

8 PROSECUTION AND PROGRESS

10-19-12

Replace "working days" in the 1st paragraph of section 8-1.02B(1) with:

original working days

10-19-12

Replace "working days" at each occurrence in the 1st paragraph of section 8-1.02C(1) with:

original working days

10-19-12

Delete the 4th paragraph of section 8-1.02C(1).

04-20-12

Replace "Contract" in the 9th paragraph of section 8-1.02C(1) with:

work

10-19-12

Replace the 1st paragraph of section 8-1.02C(3)(a) with:

Submit a description of your proposed schedule software for authorization.

04-20-12

Delete the last paragraph of section 8-1.02C(3)(a).

04-20-12

Replace section 8-1.02C(3)(b) with:

8-1.02C(3)(b) Reserved

10-19-12

Delete the 3rd paragraph of section 8-1.02C(5).

04-20-12

Replace "Contract" in the last paragraph of section 8-1.02C(5) with:

original

10-19-12

Replace "working days" in the 1st paragraph of section 8-1.02D(1) with:

original working days

10-19-12

Replace "8-1.02D(1)" in the 2nd paragraph of section 8-1.02D(1) with:
8-1.02C(1) 01-20-12

Replace "Contract" in the 3rd paragraph of section 8-1.02D(2) with:
work 10-19-12

Replace "Contract" in item 9 in the list in the 4th paragraph of section 8-1.02D(4) with:
work 10-19-12

Replace "Contract completion" in the 4th paragraph of section 8-1.02D(6) with:
work completion 10-19-12

Replace "Contract working days" in the 4th paragraph of section 8-1.02D(6) with:
original working days 10-19-12

Delete items 1.3 and 1.4 in the list in the 1st paragraph of section 8-1.02D(10). 04-20-12

Replace the last paragraph of section 8-1.04B with:
The Department does not adjust time for starting before receiving notice of Contract approval. 10-19-12

Replace the 1st paragraph of section 8-1.05 with:
Contract time starts on the last day specified to start job site activities in section 8-1.04 or on the day you start job site activities, whichever occurs first. 10-19-12

Replace the 2nd paragraph of section 8-1.05 with:
Complete the work within the Contract time. 10-19-12

Delete "unless the Contract is suspended for reasons unrelated to your performance" in the 4th paragraph of section 8-1.05. 10-19-12

Replace the headings and paragraphs in section 8-1.06 with:
The Engineer may suspend work wholly or in part due to conditions unsuitable for work progress. Provide for public safety and a smooth and unobstructed passageway through the work zone during the 10-19-12

suspension as specified under sections 7-1.03 and 7-1.04. Providing the passageway is force account work. The Department makes a time adjustment for the suspension due to a critical delay.

The Engineer may suspend work wholly or in part due to your failure to (1) fulfill the Engineer's orders, (2) fulfill a Contract part, or (3) perform weather-dependent work when conditions are favorable so that weather-related unsuitable conditions are avoided or do not occur. The Department may provide for a smooth and unobstructed passageway through the work during the suspension and deduct the cost from payments. The Department does not make a time adjustment for the suspension.

Upon the Engineer's order of suspension, suspend work immediately. Resume work when ordered.

Replace the 1st sentence in the 1st paragraph of section 8-1.07B with:

10-19-12

For a critical delay, the Department may make a time adjustment.

Add to the end of section 8-1.07C:

10-19-12

The Department does not make a payment adjustment for overhead incurred during non-working days that extend the Contract into an additional construction season.

Replace the 1st paragraph of section 8-1.07C with:

10-19-12

For an excusable delay that affects your costs, the Department may make a payment adjustment.

Replace "8-1.08B and 8-1.08C" in the 1st paragraph of section 8-1.10A with:

08-05-11

8-1.10B and 8-1.10C

Replace section 8-1.10D with:

10-19-12

8-1.10D Reserved

AA

9 PAYMENT

01-18-13

Replace item 1 in the 3rd paragraph of section 9-1.03 with:

01-18-13

- 1. Full compensation for all work involved in each bid item shown on the Bid Item List by the unit of measure shown for that bid item

Replace "in" in the 3rd paragraph of section 9-1.04A with:

10-19-12

for

Add to the end of section 9-1.04A:

10-19-12

For nonsubcontracted work paid by force account for a contract with a TRO bid item, the markups are those shown in the following table instead of those specified in sections 9-1.04B–D:

Cost	Percent markup
Labor	30
Materials	10
Equipment rental	10

Delete ", Huntington Beach," in the 3rd paragraph of section 9-1.07A.

04-20-12

Replace the formula in section 9-1.07B(2) with:

04-20-12

$$Qh = HMATT \times Xa$$

Replace "weight of dry aggregate" in the definition of the variable *Xa* in section 9-1.07B(2) with:

04-20-12

total weight of HMA

Replace the formula in section 9-1.07B(3) with:

04-20-12

$$Qrh = RHMATT \times 0.80 \times Xarb$$

Replace "weight of dry aggregate" in the definition of the variable *Xarb* in section 9-1.07B(3) with:

04-20-12

total weight of rubberized HMA

Replace the heading of section 9-1.07B(4) with:

04-20-12

Hot Mix Asphalt with Modified Asphalt Binder

Add between "in" and "modified" in the introductory clause of section 9-1.07B(4):

04-20-12

HMA with

Replace the formula in section 9-1.07B(4) with:

04-20-12

$$Qmh = MHMATT \times [(100 - Xam) / 100] \times Xmab$$

Replace "weight of dry aggregate" in the definition of the variable *Xmab* in section 9-1.07B(4) with:

04-20-12

total weight of HMA

Replace the formula in section 9-1.07B(5) with:

04-20-12

$Qrap = HMATT \times Xaa$

Replace "weight of dry aggregate" in the definitions of the variables Xaa and Xfa in section 9-1.07B(5) with:

04-20-12

total weight of HMA

Add after the variable definitions in section 9-1.07B(9):

04-20-12

The quantity of extender oil is included in the quantity of asphalt.

Replace the headings and paragraphs in section 9-1.11 with:

10-19-12

9-1.11A General

Section 9-1.11 applies if a bid item for time-related overhead is included in the Contract. If a bid item for time-related overhead is included, you must exclude the time-related overhead from every other bid item price.

9-1.11B Payment Quantity

The TRO quantity does not include the number of working days to complete plant establishment work.

For a contract with a TRO lump sum quantity on the Bid Item List, the Department pays you based on the following conversions:

1. LS unit of measure is replaced with WDAY
2. Lump sum quantity is replaced with the number of working days bid
3. Lump sum unit price is replaced with the item total divided by the number of working days bid

9-1.11C Payment Inclusions

Payment for the TRO bid item includes payment for time-related field- and home-office overhead for the time required to complete the work.

The field office overhead includes time-related expenses associated with the normal and recurring construction activities not directly attributed to the work, including:

1. Salaries, benefits, and equipment costs of:
 - 1.1. Project managers
 - 1.2. General superintendents
 - 1.3. Field office managers
 - 1.4. Field office staff assigned to the project
2. Rent
3. Utilities
4. Maintenance
5. Security
6. Supplies
7. Office equipment costs for the project's field office

The home-office overhead includes the fixed general and administrative expenses for operating your business, including:

1. General administration
2. Insurance
3. Personnel and subcontract administration
4. Purchasing
5. Accounting
6. Project engineering and estimating

Payment for the TRO bid item does not include payment for:

1. The home-office overhead expenses specifically related to:
 - 1.1. Your other contracts or other businesses
 - 1.2. Equipment coordination
 - 1.3. Material deliveries
 - 1.4. Consultant and legal fees
2. Non-time-related costs and expenses such as mobilization, licenses, permits, and other charges incurred once during the Contract
3. Additional overhead involved in incentive/disincentive provisions to satisfy an internal milestone or multiple calendar requirements
4. Additional overhead involved in performing additional work that is not a controlling activity
5. Overhead costs incurred by your subcontractors of any tier or suppliers

9-1.11D Payment Schedule

For progress payments, the total work completed for the TRO bid item is the number of working days shown for the pay period on the *Weekly Statement of Working Days*.

For progress payments, the Department pays a unit price equal to the lesser of the following amounts:

1. Price per working day as bid or as converted under section 9-1.11B.
2. 20 percent of the total bid divided by the number of original working days

For a contract without plant establishment work, the Department pays you the balance due of the TRO item total as specified in section 9-1.17B.

For a contract with plant establishment work, the Department pays you the balance due of the TRO item total in the 1st progress payment after all non-plant establishment work is completed.

9-1.11E Payment Adjustments

The 3rd paragraph of section 9-1.17C does not apply.

The Department does not adjust the unit price for an increase or decrease in the TRO quantity except as specified in section 9-1.11E.

Section 9-1.17D(2)(b) does not apply except as specified for the audit report below.

If the TRO bid item quantity exceeds 149 percent of the quantity shown on the Bid Item List or as converted under section 9-1.11B, the Engineer may adjust or you may request an adjustment of the unit price for the excess quantity. For the adjustment, submit an audit report within 60 days of the Engineer's request. The report must be prepared as specified for an audit report for an overhead claim in section 9-1.17D(2)(b).

Within 20 days of the Engineer's request, make your financial records available for an audit by the State for the purpose of verifying the actual rate of TRO described in your audit. The actual rate of TRO described is subject to the Engineer's authorization.

The Department pays the authorized actual rate for TRO in excess of 149 percent of the quantity shown on the Bid Item List or as converted under section 9-1.11B.

The Department pays for 1/2 the cost of the report; the Contractor pays for the other 1/2. The cost is determined under section 9-1.05.

10-2.01B–10-2.01H Reserved
10-2.02 CALGREEN TIER 1
10-2.02A–10-2.02H Reserved
10-2.03 LEED
10-2.03A–10-2.03H Reserved

10-3–10-5 RESERVED
10-6 JOB SITE WATER CONTROL

10-6.01 GENERAL

Section 10-6 includes specifications for controlling water to provide a dry working area at the job site.

10-6.02 WATER-FILLED COFFERDAM

Reserved

10-6.03–10-6.10 RESERVED

10-7–10-20 RESERVED

^

12 TEMPORARY TRAFFIC CONTROL

04-19-13

Replace the 1st paragraph of section 12-3.01A(4) with:

10-19-12

Category 2 temporary traffic control devices must be on FHWA's list of acceptable, crashworthy Category 2 hardware for work zones. This list is available on FHWA's Safety Program Web site.

Replace "project" in the 4th paragraph of section 12-3.02C with:

10-19-12

work

Add after "Display" in item 4 in the list in the 2nd paragraph of section 12-3.03B:

04-19-13

or Alternating Diamond

Replace "project" in the 3rd paragraph of section 12-3.07C with:

10-19-12

work

Replace the 3rd through 5th paragraphs of section 12-4.03 with:

04-19-13

Submit closure schedules using the Department's Internet-based LCS program to show the locations and times of the proposed closures.

The Department provides LCS training. Request LCS training at least 30 days before submitting the 1st lane closure request. The Department provides the training within 15 days after your request. The training may be web based.

Except for web-based training, the training is held at a time and location you and the Engineer agree to.

For web-based training, the Engineer provides you the website address to access the training.

Within 5 business days after completion of the training, the Department provides LCS accounts and user identifications to your assigned representatives.

Each representative must maintain a unique password and current user information in the LCS.

You will be notified through LCS of unauthorized closures or closures that require coordination with other parties as a condition for authorization.

Submit closure schedule amendments using LCS, including adding additional closures, by noon at least 3 business days before a planned closure. Authorization of amendments will be at the discretion of the Engineer.

Cancel closure requests using LCS at least 48 hours before the time of the closure.

Add between the 7th and 8th paragraphs of section 12-4.03:

10-19-12

The contingency plan must identify the operations, equipment, processes, and materials that may fail and delay a reopening of a closure to traffic. List the additional or alternate equipment, materials, or workers necessary to ensure continuing operations and on-time opening of closures whenever a problem occurs. If the additional or alternate equipment, materials, or workers are not on site, specify their location, the method for mobilizing these items, and the required time to complete mobilization.

Based on the Engineer's review, additional materials, equipment, workers, or time to complete operations from that specified in the contingency plan may be required.

Provide a general time-scaled logic diagram displaying the major activities and sequence of planned operations that comply with the requirements of section 12-4.03. For each operation, identify the critical event when the contingency plan will be activated.

Submit any revisions to the contingency plan for an operation at least 3 business days before starting that operation. Do not close any lanes until the contingency plan has been authorized.

The 5th paragraph of section 5-1.23B(1) does not apply to reviewing contingency plans.

Replace section 12-7 with:

09-16-11

12-7 RESERVED

AA

13 WATER POLLUTION CONTROL

04-19-13

04-19-13

Delete item 3 in the list in the 4th paragraph of section 13-1.01A.

Add to section 13-1.01A:

01-20-12

Comply with the Department's general permit issued by the State Water Resources Control Board for *Order No. 99-06-DWQ, NPDES No. CAS000003, National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans)*. The Department's general permit governs

stormwater and nonstormwater discharges from the Department's properties, facilities, and activities. The Department's general permit may be viewed at the Web site for the State Water Resources Control Board, Storm Water Program, Caltrans General Permit.

Add to the list in the 1st paragraph of section 13-1.01D(3)(b):

3. Have completed SWRCB approved QSD training and passed the QSD exam

10-21-11

Add to the list in the 2nd paragraph of section 13-1.01D(3)(b):

3. Have completed SWRCB approved QSP training and passed the QSP exam

10-21-11

Replace "NEL violation" in item 3.6.2 in the list in the 1st paragraph of section 13-1.01D(3)(c) with:

receiving water monitoring trigger

04-19-13

Replace the 1st paragraph in section 13-2.01B with:

Within 7 days after Contract approval, submit 2 copies of your WPCP for review. Allow 5 business days for review.

04-19-13

After the Engineer authorizes the WPCP, submit an electronic copy and 3 printed copies of the authorized WPCP.

If the RWQCB requires review of the authorized WPCP, the Engineer submits the authorized WPCP to the RWQCB for its review and comment. If the Engineer orders changes to the WPCP based on the RWQCB's comments, amend the WPCP within 3 business days.

Replace the 1st paragraph in section 13-3.01B(2)(a) with:

Within 15 days of Contract approval, submit 3 copies of your SWPPP for review. The Engineer provides comments and specifies the date when the review stopped if revisions are required. Change and resubmit a revised SWPPP within 15 days of receiving the Engineer's comments. The Department's review resumes when a complete SWPPP has been resubmitted.

04-19-13

When the Engineer authorizes the SWPPP, submit an electronic copy and 4 printed copies of the authorized SWPPP.

If the RWQCB requires review of the authorized SWPPP, the Engineer submits the authorized SWPPP to the RWQCB for its review and comment. If the Engineer requests changes to the SWPPP based on the RWQCB's comments, amend the SWPPP within 10 days.

Replace "NELs" in item 3.1 in the 3rd paragraph of section 13-3.01B(2)(a) with:

receiving water monitoring triggers

04-19-13

Replace section 13-3.01B(6)(c) with:

04-19-13

13-3.01B(6)(c) Receiving Water Monitoring Trigger Report

Whenever a receiving water monitoring trigger is exceeded, notify the Engineer and submit a receiving water monitoring trigger report within 48 hours after conclusion of a storm event. The report must include:

1. Field sampling results and inspections, including:
 - 1.1. Analytical methods, reporting units, and detection limits
 - 1.2. Date, location, time of sampling, visual observation and measurements
 - 1.3. Quantity of precipitation from the storm event
2. Description of BMPs and corrective actions

Replace "NEL" in the 6th paragraph of section 13-3.01C(1) with:

04-19-13

receiving water monitoring trigger

Replace section 13-3.01C(3) with:

04-19-13

13-3.01C(3) Receiving Water Monitoring Trigger

For a risk level 3 project, receiving water monitoring triggers must comply with the values shown in the following table:

Receiving Water Monitoring Trigger

Parameter	Test method	Detection limit (min)	Unit	Value
pH	Field test with calibrated portable instrument	0.2	pH	Lower limit = 6.0 Upper limit = 9.0
Turbidity	Field test with calibrated portable instrument	1	NTU	500 NTU max

The storm event daily average for storms up to the 5-year, 24-hour storm must not exceed the receiving water monitoring trigger for turbidity.

The daily average sampling results must not exceed the receiving water monitoring trigger for pH.

04-19-13

Delete "and NELs are violated" in the 3rd paragraph of section 13-3.03C.

Replace "working days" at each occurrence in section 13-3.04 with.

10-19-12

original working days

Delete the 1st sentence in the 2nd paragraph of section 13-4.03C(3).

04-19-13

Add between the 2nd and 3rd paragraphs of section 13-4.03C(3):

04-19-13

Manage stockpiles by implementing water pollution control practices on:

1. Active stockpiles before a forecasted storm event
2. Inactive stockpiles according to the WPCP or SWPPP schedule

Replace the paragraph in section 13-4.04 with:

04-20-12

Not Used

Delete "or stockpile" in the 3rd paragraph of section 13-5.02F.

10-19-12

Replace section 13-5.03F with:

04-20-12

13-5.03F Reserved

Delete "or stockpile" in item 1 in the list in the 1st paragraph of section 13-5.03K.

10-19-12

Delete the 3rd paragraph of section 13-5.03K.

10-19-12

Replace the 2nd sentence in the 1st paragraph of section 13-9.01A with:

10-19-12

You may use any of the following systems for temporary concrete washout:

1. Temporary concrete washout facility
2. Portable temporary concrete washout
3. Temporary concrete washout bin

Replace the 2nd paragraph of section 13-9.01B with:

10-19-12

Retain and submit an informational submittal for records of disposed concrete waste.

Delete the 4th paragraph of section 13-9.01B.

10-19-12

Delete "if authorized" in the 1st sentence in the 1st paragraph of section 13-9.02A.

10-19-12

Delete "and concrete expansion dams" in the 3rd paragraph of section 15-5.01C(4).

04-19-13

Replace the 2nd paragraph of section 15-5.03A(2) with:

For a contract with less than 60 original working days, submit certificates of compliance for the filler material and bonding agents.

10-19-12

Replace "51-1.02C" in the 1st paragraph of section 15-5.03B with:

51-1.02F

04-19-13

Replace the 4th paragraph of section 15-5.03B with:

For a contract with less than 60 original working days, alternative materials must be authorized before use.

10-19-12

Add between the 5th and 6th paragraphs of section 15-5.03C:

The final surface finish of the patched concrete surface must comply with section 51-1.03F.

10-19-12

Delete the 4th paragraph of section 15-5.05C.

10-19-12

Replace "51-1.03F(5)" in the 3rd paragraph of section 15-5.06C(1) with:

51-1.01D(4)

10-19-12

Replace "51-1.03E(5)" in the 5th paragraph of section 15-5.06C(1) with:

51-1.03F(5)

10-19-12

Delete the 9th paragraph of section 15-5.06C(1).

10-19-12

Delete the 15th paragraph of section 15-5.06C(1).

04-19-13

Add to section 15-5.06C(1):

Texture the polyester concrete surface before gelling occurs by longitudinal tining under 51-1.03F(5)(b)(iii), except do not perform initial texturing.

10-19-12

Replace section 15-5.06C(2) with:

04-19-13

15-5.06C(2) Reserved

04-19-13

Delete the 3rd paragraph of section 15-5.06D.

Replace the 1st paragraph in section 15-5.07B(4) with:

10-19-12

Payment for furnishing dowels is not included in the payment for core and pressure grout dowel.

Replace section 15-5.09 with:

04-19-13

15-5.09 POLYESTER CONCRETE EXPANSION DAMS

15-5.09A General

Section 15-5.09 includes specifications for constructing polyester concrete expansion dams.

Polyester concrete expansion dams must comply with the specifications for polyester concrete overlays in section 15-5.06, except a trial slab is not required.

Reinforcement must comply with section 52.

15-5.09B Materials

Not Used

15-5.09C Construction

For new asphalt concrete overlays, place the asphalt concrete overlay before starting polyester concrete activities. Saw cut and remove asphalt concrete at expansion dam locations.

For existing asphalt concrete overlays, remove expansion dams and asphalt concrete to the limits shown. Removing expansion dams must comply with section 15-4 except a bridge removal work plan is not required.

Where a portion of the asphalt concrete overlay is to remain, saw cut a 2-inch-deep neat line along the edge to remain in place before removing the asphalt concrete. Do not damage the existing surfacing to remain in place.

Prepare the deck surface under section 15-5.01C(2).

You may use a mechanical mixer to mix the polyester concrete for expansion dams. The mixer capacity must not exceed 9 cu ft unless authorized. Initiate the resin and thoroughly blend it immediately before mixing it with the aggregate. Mix the polyester concrete for at least 2 minutes before placing.

The application rate of methacrylate resin must be approximately 100 sq ft/gal.

You may place and finish expansion dams using hand methods.

Protect expansion dams from moisture, traffic, and equipment for at least 4 hours after finishing.

For expansion dams over 6 feet long, install 1/4-inch-wide joint material at 6-foot intervals across the width of the expansion dam. Joint material must be either expanded polyurethane or expanded polyethylene.

15-5.09D Payment

Not Used

Replace the heading of section 19-3.03D with:

04-19-13

19-3.03B(5) Water Control and Foundation Treatment

Replace the 1st paragraph of section 19-3.03E(3) with:

01-20-12

Compact structure backfill behind lagging of soldier pile walls by hand tamping, mechanical compaction, or other authorized means.

Replace the 2nd paragraph of section 19-3.03F with:

01-20-12

Do not backfill over or place material over slurry cement backfill until 4 hours after placement. When concrete sand is used as aggregate and the in-place material is free draining, you may start backfilling as soon as the surface water is gone.

Add between the 2nd and 3rd paragraphs of section 19-3.03K:

01-20-12

Before you excavate for the installation of ground anchors in a wall zone:

1. Complete stability testing
2. Obtain authorization of test data

Replace the 2nd sentence of the 7th paragraph of section 19-3.03K:

01-20-12

Stop construction in unstable areas until remedial measures have been taken. Remedial measures must be submitted and authorized.

Add between the 8th and 9th paragraphs of section 19-3.03K:

01-20-12

When your excavation and installation methods result in a discontinuous wall along any soil nail row, the ends of the structurally completed wall section must extend beyond the ends of the next lower excavation lift by a distance equal to twice the lift height. Maintain temporary slopes at the ends of each wall section to ensure slope stability.

Replace the 9th paragraph of section 19-3.03K:

01-20-12

Do not excavate to the next underlying excavation lift until the following conditions have been attained for the portion of the soil nail or ground anchor wall in the current excavation lift:

1. Soil nails or ground anchors are installed and grouted.
2. Reinforced shotcrete facing is constructed.
3. Grout and shotcrete have cured for at least 72 hours.
4. Specified tests are complete for that portion of wall and the results are authorized.
5. Soil nail facing anchorages are attached or ground anchors are locked off.

01-18-13

01-20-12

Replace the 2nd sentence in the 7th paragraph of section 19-3.04 with:

Structure excavation more than 0.5 foot from the depth shown is paid for as a work-character change if you request an adjustment or the Engineer orders an adjustment.

01-18-13

Replace "Contract completion time" in the 8th paragraph of section 19-6.03D with:

work completion date

10-19-12

Add to section 19:

19-10-19-20 RESERVED

01-18-13

^^

20 LANDSCAPE

10-19-12

10-19-12

Add "preparing holes," before "and" in the 1st paragraph of section 20-7.01A.

Replace "and handling" in the 1st paragraph of section 20-7.03A with:

handling, and preparing holes

10-19-12

Replace the 1st paragraph of section 20-7.03D with:

The location of all plants is as shown unless the Engineer designates otherwise. If the Engineer designates the location of plants, the location will be marked by stakes, flags, or other markers.

10-19-12

Replace item 1 in the list in the 1st paragraph of section 20-7.03I(1) with:

- 1. Preparing holes and planting plants

10-19-12

Delete "Prepare Hole," in the last paragraph of section 20-7.04.

10-19-12

^^

21 EROSION CONTROL

04-19-13

Replace ", bonded fiber matrix, and polymer-stabilized fiber matrix" in the 1st paragraph of section 21-1.01B with:

and bonded fiber matrix

04-20-12

Delete the last paragraph of section 21-1.02E.

04-20-12

Replace section 21-1.02F(2) with:

21-1.02F(2) Reserved

04-20-12

Replace section 21-1.02J with:

21-1.02J Reserved

04-20-12

Replace the row for organic matter content in the table in the 4th paragraph of section 21-1.02M with:

01-18-13

Organic matter content	TMECC 05.07-A Loss-on-ignition organic matter method (LOI) % dry weight basis	30–100
------------------------	---	--------

Replace the paragraph in section 21-1.02P with:

10-19-12

Fiber roll must be a premanufactured roll filled with rice or wheat straw, wood excelsior, or coconut fiber. Fiber roll must be covered with biodegradable jute, sisal, or coir fiber netting secured tightly at each end and must be one of the following:

1. 8 to 10 inches in diameter and at least 1.1 lb/ft
2. 10 to 12 inches in diameter and at least 3 lb/ft

Fiber roll must have a minimum functional longevity of 1 year.

Add between the 1st and 2nd paragraphs of section 21-1.03A:

01-18-13

Remove and dispose of trash, debris, and weeds in areas to receive erosion control materials.

Remove and dispose of loose rocks larger than 2-1/2 inches in maximum dimension unless otherwise authorized.

Protect the traveled way, sidewalks, lined drainage channels, and existing vegetation from overspray of hydraulically-applied material.

AA

DIVISION V SURFACINGS AND PAVEMENTS

37 BITUMINOUS SEALS

01-18-13

Replace section 37-1.01 with:

01-18-13

37-1.01 GENERAL

37-1.01A Summary

Section 37-1 includes general specifications for applying bituminous seals.

37-1.01B Definitions

Reserved

37-1.01C Submittals

Reserved

37-1.01D Quality Control and Assurance

37-1.01D(1) General

Reserved

37-1.01D(2) Prepaving Conference

For seal coats and micro-surfacing, schedule a prepaving conference at a mutually agreed upon time and place to meet with the Engineer.

Prepaving conference attendees must sign an attendance sheet provided by the Engineer. The prepaving conference must be attended by your:

1. Project superintendent
2. Paving construction foreman
3. Traffic control foreman

Be prepared to discuss:

1. Quality control
2. Acceptance testing
3. Placement
4. Training on placement methods
5. Checklist of items for proper placement
6. Unique issues specific to the project, including:
 - 6.1. Weather
 - 6.2. Alignment and geometrics
 - 6.3. Traffic control issues
 - 6.4. Haul distances
 - 6.5. Presence and absence of shaded areas
 - 6.6. Any other local issues

37-1.02 MATERIALS

Not Used

37-1.03 CONSTRUCTION

Not Used

37-1.04 PAYMENT

Not Used

Replace "Reserved" in section 37-2.01D(1) with:

01-18-13

Aggregate suppliers, chip spreader operators, emulsion distributor, and for coated chips, the coated chips producer must attend the prepaving conference.

Add to section 37-2.03A:

04-20-12

If you fail to place the permanent traffic stripes and pavement markings within the specified time, the Department withholds 50 percent of the estimated value of the seal coat work completed that has not received permanent traffic stripes and pavement markings.

Add to section 37-3.01D(1):

01-18-13

Micro-surfacing spreader operators must attend the prepaving conference.

^^

39 HOT MIX ASPHALT

02-22-13

Add to section 39-1.01B:

02-22-13

processed RAP: RAP that has been fractionated.

substitution rate: Amount of RAP aggregate substituted for virgin aggregate in percent.

binder replacement: Amount of RAP binder in OBC in percent.

surface course: Upper 0.2 feet of HMA exclusive of OGFC.

Add to the end of the paragraph in section 39-1.02A:

10-19-12

as shown

Replace the paragraphs in section 39-1.02F with:

02-22-13

39-1.02F(1) General

You may produce HMA Type A or B using RAP. HMA produced using RAP must comply with the specifications for HMA, except aggregate quality specifications do not apply to RAP. You may substitute RAP at a substitution rate not exceeding 25 percent of the aggregate blend. Do not use RAP in OGFC and RHMA-G.

Assign the substitution rate of RAP aggregate for virgin aggregate with the JMF submittal. The JMF must include the percent of RAP used.

Provide enough space for meeting RAP handling requirements at your facility. Provide a clean, graded, well-drained area for stockpiles. Prevent material contamination and segregation.

If RAP is from multiple sources, blend the RAP thoroughly and completely. RAP stockpiles must be homogeneous.

Isolate the processed RAP stockpiles from other materials. Store processed RAP in conical or longitudinal stockpiles. Processed RAP must not be agglomerated or be allowed to congeal in large stockpiles.

AASHTO T 324 (Modified) is AASHTO T 324, "Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)," with the following parameters:

1. Target air voids must equal 7 ± 1 percent
2. Number of test specimens must be 4
3. Test specimen must be a 6-inch gyratory compacted specimen
4. Test temperature must be set at 140 ± 2 degrees F
5. Measurements for impression must be taken at every 100 passes
6. Inflection point defined as the number of wheel passes at the intersection of the creep slope and the stripping slope
7. Testing shut off must be set at 25,000 passes

39-1.02F(2) Substitution Rate of 15 Percent or Less

For a RAP substitution rate of 15 percent or less, you may stockpile RAP during the entire project.

39-1.02F(3) Substitution Rate Greater than 15 Percent

For a RAP substitution rate greater than 15 percent, fractionate RAP into 2 sizes, a coarse fraction RAP retained on 1/4-inch screen and a fine fraction RAP passing 1/4-inch screen.

Sample and test processed RAP at a minimum frequency of 1 sample per 1000 tons with a minimum of 6 samples for each processed RAP stockpile. The asphalt binder content and specific gravity must meet the processed RAP quality characteristics. If a processed RAP stockpile is augmented, sample and test processed RAP quality characteristics at a minimum frequency of 1 sample per 500 tons of augmented RAP.

The processed RAP asphalt binder content must be within ± 2.0 percent of the average processed RAP stockpile asphalt binder content when tested under ASTM D 2172, Method B. If a new processed RAP stockpile is required, the average binder content of the new processed RAP stockpile must be within ± 2.0 percent of the average binder content of the original processed RAP stockpile.

The maximum specific gravity for processed RAP must be within ± 0.06 when tested under California Test 309 of the average maximum specific gravity reported on page 4 of your *Contractor Hot Mix Asphalt Design Data* form.

Replace "less than 10 percent" in note "b" in the table in the 5th paragraph of section 39-1.02E with:

01-20-12

10 percent or less

Replace items 7 and 8 in the 5th paragraph of section 39-1.03A with:

02-22-13

7. Substitution rate by more than 5 percent if your assigned RAP substitution rate is 15 percent or less
8. Substitution rate by more than 3 percent if your assigned RAP substitution rate is greater than 15 percent

9. Average binder content by more than 2 percent from the average binder content of the original processed RAP stockpile used in the mix design
10. Maximum specific gravity of processed RAP by more than ± 0.060 from the average maximum specific gravity of processed RAP reported on page 4 of your *Contractor Hot Mix Asphalt Design Data* form
11. Any material in the JMF

Replace the 1st paragraph of section 39-1.03B with:

02-22-13

Perform a mix design that produces HMA with the values for the quality characteristics shown in the following table:

HMA Mix Design Requirements

Quality characteristic	Test method	HMA type		
		A	B	RHMA-G
Air void content (%)	California Test 367	4.0	4.0	Section 39-1.03B
Voids in mineral aggregate (% min.)	California Test 367			
No. 4 grading		17.0	17.0	--
3/8" grading		15.0	15.0	--
1/2" grading		14.0	14.0	18.0–23.0
3/4" grading	13.0	13.0	18.0–23.0	
Voids filled with asphalt (%)	California Test 367			Note a
No. 4 grading		65.0–75.0	65.0–75.0	
3/8" grading		65.0–75.0	65.0–75.0	
1/2" grading		65.0–75.0	65.0–75.0	
3/4" grading	65.0–75.0	65.0–75.0		
Dust proportion	California Test 367			Note a
No. 4 and 3/8" gradings		0.6–1.2	0.6–1.2	
1/2" and 3/4" gradings	0.6–1.2	0.6–1.2		
Stabilometer value (min.)	California Test 366			
No. 4 and 3/8" gradings		30	30	--
1/2" and 3/4" gradings	37	35	23	

^a Report this value in the JMF submittal.

For RAP substitution rate greater than 15 percent, the mix design must comply with the additional quality characteristics shown in the following table:

**Additional HMA Mix Design Requirements
for RAP Substitution Rate Greater Than 15 Percent**

Quality characteristic	Test method	HMA type		
		A	B	RHMA-G
Hamburg wheel track (minimum number of passes at 0.5 inch average rut depth)	AASHTO T 324 (Modified) ^a			
PG-58		10,000	10,000	--
PG-64		15,000	15,000	
PG-70		20,000	20,000	
PG-76 or higher		25,000	25,000	
Hamburg wheel track (inflection point minimum number of passes)	AASHTO T 324 (Modified) ^a			
PG-58		10,000	10,000	--
PG-64		10,000	10,000	
PG-70		12,500	12,500	
PG-76 or higher		15000	15000	
Moisture susceptibility (minimum dry strength, psi)	California Test 371 ^a	120	120	--
Moisture susceptibility (tensile strength ration, %)	California Test 371 ^a	70	70	--

^aTest plant produced HMA.

For HMA with RAP, the maximum binder replacement must be 25.0 percent of OBC for surface course and 40.0 percent of OBC for lower courses.

For HMA with a binder replacement less than or equal to 25 percent of OBC, you may request that the PG asphalt binder grade with upper and lower temperature classifications be reduced by 6 degrees C from the specified grade.

For HMA with a binder replacement greater than 25 percent but less than or equal to 40 percent of OBC, you must use a PG asphalt binder grade with upper and lower temperature classifications reduced by 6 degrees C from the specified grade.

Replace item 4 in the list in the 1st paragraph of section 39-1.03C with:

4. JMF renewal on a *Caltrans Job Mix Formula Renewal* form, if applicable

01-20-12

Add after the last paragraph of section 39-1.03C:

For RAP substitution rate greater than 15 percent, submit with the JMF submittal:

02-22-13

- California Test 371 tensile strength ratio and minimum dry strength test results
- AASHTO T 324 (Modified) test results

For RAP substitution rate greater than 15 percent, submit California Test 371 and AASHTO T 324 (Modified) test results to the Engineer and to:

Moisture_Tests@dot.ca.gov

Replace the 2nd paragraph of section 39-1.03E with:

04-20-12

Use the OBC specified on your *Contractor Hot Mix Asphalt Design Data* form. No adjustments to asphalt binder content are allowed. Based on your testing and production experience, you may submit an adjusted aggregate gradation TV on a *Contractor Job Mix Formula Proposal* form before verification testing. Aggregate gradation TV must be within the TV limits specified in the aggregate gradation tables.

Add between the 3rd and 4th paragraphs of section 39-1.03E:

04-20-12

Asphalt binder set point for HMA must be the OBC specified on your *Contractor Hot Mix Asphalt Design Data* form. When RAP is used, asphalt binder set point for HMA must be:

$$\text{Asphalt Binder Set Point} = \frac{\frac{BC_{OBC}}{\left(1 - \frac{BC_{OBC}}{100}\right)} - R_{RAP} \left[\frac{BC_{RAP}}{\left(1 - \frac{BC_{RAP}}{100}\right)} \right]}{100 + \frac{BC_{OBC}}{\left(1 - \frac{BC_{OBC}}{100}\right)}}$$

Where:

BC_{OBC} = optimum asphalt binder content, percent based on total weight of mix

R_{RAP} = RAP ratio by weight of aggregate

BC_{RAP} = asphalt binder content of RAP, percent based on total weight of RAP mix

Replace item 4 in the list in the 8th paragraph of section 39-1.03E with:

04-20-12

4. HMA quality specified in the table titled "HMA Mix Design Requirements" except:
 - 4.1. Air void content, design value ± 2.0 percent
 - 4.2. Voids filled with asphalt, report only
 - 4.3. Dust proportion, report only

Replace the 12th paragraph of section 39-1.03E with:

04-20-12

If tests on plant-produced samples do not verify the JMF, the Engineer notifies you and you must submit a new JMF or submit an adjusted JMF based on your testing. JMF adjustments may include a change in aggregate gradation TV within the TV limits specified in the aggregate gradation tables.

Replace the 14th paragraph of section 39-1.03E with:

01-20-12

A verified JMF is valid for 12 months.

Replace the last sentence in the 15th paragraph of section 39-1.03E with:

01-20-12

This deduction does not apply to verifications initiated by the Engineer or JMF renewal.

Replace the 16th paragraph of section 39-1.03E with:

02-22-13

Except for RAP substitution rate greater than 15 percent, for any HMA produced under the QC/QA process the Department does not use California Test 371 test results for verification.

Add between the 1st and 2nd paragraphs of section 39-1.03F:

04-20-12

Target asphalt binder content on your Contractor *Job Mix Formula Proposal* form and the OBC specified on your *Contractor Hot Mix Asphalt Design Data* form must be the same.

Delete the 4th paragraph of section 39-1.03F.

01-20-12

Replace items 3 and 5 in the list in the 6th paragraph of section 39-1.03F with:

01-20-12

3. Engineer verifies each proposed JMF renewal within 20 days of receiving verification samples.
5. For each HMA type and aggregate gradation specified, the Engineer verifies at the Department's expense 1 proposed JMF renewal within a 12-month period.

Add between the 6th and 7th paragraphs of section 39-1.03F:

01-20-12

The most recent aggregate quality test results within the past 12 months may be used for verification of JMF renewal or the Engineer may perform aggregate quality tests for verification of JMF renewal.

Replace section 39-1.03G with:

04-20-12

39-1.03G Job Mix Formula Modification

For an accepted JMF, you may change asphalt binder source one time during production.

Submit your modified JMF request a minimum of 3 business days before production. Each modified JMF submittal must consist of:

1. Proposed modified JMF on *Contractor Job Mix Formula Proposal* form
2. Mix design records on *Contractor Hot Mix Asphalt Design Data* form for the accepted JMF to be modified
3. JMF verification on *Hot Mix Asphalt Verification* form for the accepted JMF to be modified
4. Quality characteristics test results for the modified JMF as specified in section 39-1.03B. Perform tests at the mix design OBC as shown on the *Contractor Asphalt Mix Design Data* form
5. If required, California Test 371 test results for the modified JMF.

With an accepted modified JMF submittal, the Engineer verifies each modified JMF within 5 business days of receiving all verification samples. If California Test 371 is required, the Engineer tests for California Test 371 within 10 days of receiving verification samples.

The Engineer verifies the modified JMF after the modified JMF HMA is placed on the project and verification samples are taken within the first 750 tons following sampling requirements in section 39-1.03E, "Job Mix Formula Verification." The Engineer tests verification samples for compliance with:

1. Stability as shown in the table titled "HMA Mix Design Requirements"
2. Air void content at design value ± 2.0 percent

3. Voids in mineral aggregate as shown in the table titled "HMA Mix Design Requirements"
4. Voids filled with asphalt, report only
5. Dust proportion, report only

If the modified JMF is verified, the Engineer revises your *Hot Mix Asphalt Verification* form to include the new asphalt binder source. Your revised form will have the same expiration date as the original form.

If a modified JMF is not verified, stop production and any HMA placed using the modified JMF is rejected.

The Engineer deducts \$2,000 from payments for each modified JMF verification. The Engineer deducts an additional \$2,000 for each modified JMF verification that requires California Test 371.

Add to section 39-1.03:

01-20-12

39-1.03H Job Mix Formula Acceptance

You may start HMA production if:

1. The Engineer's review of the JMF shows compliance with the specifications.
2. The Department has verified the JMF within 12 months before HMA production.
3. The Engineer accepts the verified JMF.

Replace "3 days" in the 1st paragraph of section 39-1.04A with:

01-20-12

3 business days

Replace the 2nd sentence in the 2nd paragraph of section 39-1.04A with:

01-20-12

During production, take samples under California Test 125. You may sample HMA from:

Replace the 2nd paragraph of section 39-1.04E with:

02-22-13

For RAP substitution rate of 15 percent or less, sample RAP once daily.

For RAP substitution rate of greater than 15percent, sample processed RAP twice daily.

Perform QC testing for processed RAP aggregate gradation under California Test 367, appendix B, and submit the results with the combined aggregate gradation.

Replace "5 days" in the 1st paragraph of section 39-1.06 with:

01-20-12

5 business days

Replace the 3rd paragraph of section 39-1.08A with:

04-20-12

During production, you may adjust hot or cold feed proportion controls for virgin aggregate and RAP.

Add to section 39-1.08A:

04-20-12

During production, asphalt binder set point for HMA Type A, HMA Type B, HMA Type C, and RHMA-G must be the OBC shown in *Contractor Hot Mix Asphalt Design Data* form. For OGFC, asphalt binder set point must be the OBC shown on *Caltrans Hot Mix Asphalt Verification* form. If RAP is used, asphalt binder set point for HMA must be calculated as specified in section 39-1.03E.

02-22-13

For RAP substitution rate of 15 percent or less, you may adjust the RAP by ± 5 percent.

For RAP substitution greater than 15, you may adjust the RAP by ± 3 percent.

04-20-12

You must request adjustments to the plant asphalt binder set point based on new RAP stockpiles average asphalt binder content. Do not adjust the HMA plant asphalt binder set point until authorized.

Replace the 3rd paragraph of section 39-1.08B with:

09-16-11

Asphalt rubber binder must be from 375 to 425 degrees F when mixed with aggregate.

Replace section 39-1.11 with:

01-18-13

39-1.11 CONSTRUCTION

39-1.11A General

Do not place HMA on wet pavement or a frozen surface.

You may deposit HMA in a windrow and load it in the paver if:

1. Paver is equipped with a hopper that automatically feeds the screed
2. Loading equipment can pick up the windrowed material and deposit it in the paver hopper without damaging base material
3. Activities for deposit, pickup, loading, and paving are continuous
4. HMA temperature in the windrow does not fall below 260 degrees F

You may place HMA in 1 or more layers on areas less than 5 feet wide and outside the traveled way, including shoulders. You may use mechanical equipment other than a paver for these areas. The equipment must produce uniform smoothness and texture.

HMA handled, spread, or windrowed must not stain the finished surface of any improvement, including pavement.

Do not use petroleum products such as kerosene or diesel fuel to release HMA from trucks, spreaders, or compactors.

HMA must be free of:

1. Segregation
2. Coarse or fine aggregate pockets
3. Hardened lumps

39-1.11B Longitudinal Joints

39-1.11B(1) General

Longitudinal joints in the top layer must match specified lane edges. Alternate the longitudinal joint offsets in the lower layers at least 0.5 foot from each side of the specified lane edges. You may request other longitudinal joint placement patterns.

A vertical longitudinal joint of more than 0.15 ft is not allowed at any time between adjacent lanes open to traffic.

For HMA thickness of 0.15 ft or less, the distance between the ends of the adjacent surfaced lanes at the end of each day's work must not be greater than can be completed in the following day of normal paving.

For HMA thickness greater than 0.15 ft, you must place HMA on adjacent traveled way lanes so that at the end of each work shift the distance between the ends of HMA layers on adjacent lanes is from 5 to 10 feet. Place additional HMA along the transverse edge at each lane's end and along the exposed longitudinal edges between adjacent lanes. Hand rake and compact the additional HMA to form temporary conforms. You may place Kraft paper or another authorized bond breaker under the conform tapers to facilitate the taper removal when paving operations resume.

39-1.11B(2) Tapered Notched Wedge

For divided highways with an HMA lift thickness greater than 0.15 foot, you may construct a 1-foot wide tapered notched wedge joint as a longitudinal joint between adjacent lanes open to traffic. A vertical notch of 0.75 inch maximum must be placed at the top and bottom of the tapered wedge.

The tapered notched wedge must retain its shape while exposed to traffic. Pave the adjacent lane within 1 day.

Construct the tapered portion of the tapered notched wedge with an authorized strike-off device. The strike-off device must provide a uniform slope and must not restrict the main screed of the paver.

You may use a device attached to the screed to construct longitudinal joints that will form a tapered notched wedge in a single pass. The tapered notched wedge must be compacted to a minimum of 91 percent compaction.

Perform QC testing on the completed tapered notch wedge joint as follows:

1. Perform field compaction tests at the rate of 1 test for each 750-foot section along the joint. Select random locations for testing within each 750-foot section.
2. Perform field compaction tests at the centerline of the joint, 6 inches from the upper vertical notch, after the adjacent lane is placed and before opening the pavement to traffic.
3. Determine maximum density test results.
4. Determine percent compaction of the longitudinal joint as the ratio of the average of the field compaction values and the maximum density test results.

For HMA under QC/QA construction process, the additional quality control compaction results associated with the tapered notch wedge will not be included in the computation of any quality factor and process control.

For acceptance of the completed tapered notch wedge joint, take two 4- or 6-inch diameter cores 6 inches from the upper vertical notch of the completed longitudinal joint for every 3,000 feet at locations designated by the Engineer. Take cores after the adjacent lane is placed and before opening the pavement to traffic. Cores must be taken in the presence of the Engineer and must be marked to identify the test sites. Submit the cores. One core will be used for determination of the field density and 1 core will be used for dispute resolution. The Engineer determines:

1. Field compaction by measuring the bulk specific gravity of the cores under California Test 308, Method A
2. Percent compaction as the ratio of the average of the bulk specific gravity of the core for each day's production to the maximum density test value

For HMA under QC/QA construction process, the additional quality assurance testing by the Engineer to determine field compaction associated with the tapered notch wedge will not be included in the Engineer's verification testing and in the computation of any quality factor and process control.

Determine percent compaction values each day the joint is completed and submit values within 24 hours of testing. If the percent compaction of 1 day's production is less than 91 percent, that day's notched wedge joint is rejected. Discontinue placement of the tapered notched wedge and notify the Engineer of changes you will make to your construction process in order to meet the specifications.

For HMA under QC/QA construction process, quantities of HMA placed in the completed longitudinal joint will have a quality factor QF_{QC5} of 1.0.

39-1.11C Widening Existing Pavement

If widening existing pavement, construct new pavement structure to match the elevation of the existing pavement's edge before placing HMA over the existing pavement.

39-1.11D Shoulders, Medians, and Other Road Connections

Until the adjoining through lane's top layer has been paved, do not pave the top layer of:

1. Shoulders
2. Tapers
3. Transitions
4. Road connections
5. Driveways
6. Curve widenings
7. Chain control lanes
8. Turnouts
9. Turn pockets

If the number of lanes changes, pave each through lane's top layer before paving a tapering lane's top layer. Simultaneous to paving a through lane's top layer, you may pave an adjoining area's top layer, including shoulders. Do not operate spreading equipment on any area's top layer until completing final compaction.

39-1.11E Leveling

If leveling with HMA is specified, fill and level irregularities and ruts with HMA before spreading HMA over the base, existing surfaces, or bridge decks. You may use mechanical equipment other than a paver for these areas. The equipment must produce uniform smoothness and texture. HMA used to change an existing surface's cross slope or profile is not paid for as HMA (leveling).

If placing HMA against the edge of existing pavement, sawcut or grind the pavement straight and vertical along the joint and remove extraneous material.

39-1.11F Compaction

Rolling must leave the completed surface compacted and smooth without tearing, cracking, or shoving. Complete finish rolling activities before the pavement surface temperature is:

1. Below 150 degrees F for HMA with unmodified binder
2. Below 140 degrees F for HMA with modified binder
3. Below 200 degrees F for RHMA-G

If a vibratory roller is used as a finish roller, turn the vibrator off.

Do not use a pneumatic-tired roller to compact RHMA-G.

For Standard and QC/QA construction processes, if 3/4-inch aggregate grading is specified, you may use a 1/2-inch aggregate grading if the specified total paved thickness is at least 0.15 foot and less than 0.20 foot thick.

Spread and compact HMA under sections 39-3.03 and 39-3.04 if any of the following applies:

1. Specified paved thickness is less than 0.15 foot.

2. Specified paved thickness is less than 0.20 foot and 3/4-inch aggregate grading is specified and used.
3. You spread and compact at:
 - 3.1. Asphalt concrete surfacing replacement areas
 - 3.2. Leveling courses
 - 3.3. Areas for which the Engineer determines conventional compaction and compaction measurement methods are impeded

Do not open new HMA pavement to public traffic until its mid-depth temperature is below 160 degrees F.

If you request and if authorized, you may cool HMA Type A and Type B with water when rolling activities are complete. Apply water under section 17-3.

Spread sand at a rate from 1 to 2 lb/sq yd on new RHMA-G, RHMA-O, and RHMA-O-HB pavement when finish rolling is complete. Sand must be free of clay or organic matter. Sand must comply with section 90-1.02C(4)(c). Keep traffic off the pavement until spreading sand is complete.

Replace the 5th and 6th paragraphs of section 39-1.12C with:

07-20-12

On tangents and horizontal curves with a centerline radius of curvature 2,000 feet or more, the PI_0 must be at most 2.5 inches per 0.1-mile section.

On horizontal curves with a centerline radius of curvature between 1,000 feet and 2,000 feet including pavement within the superelevation transitions, the PI_0 must be at most 5 inches per 0.1-mile section.

Add to section 39-1.12:

01-20-12

39-1.12E Reserved

Add to section 39-1.14:

01-20-12

Prepare the area to receive HMA for miscellaneous areas and dikes, including any excavation and backfill as needed.

Replace "6.8" in item 3 in the list in the 4th paragraph of section 39-1.14 with:

04-20-12

6.4

Replace "6.0" in item 3 in the list in the 4th paragraph of section 39-1.14 with:

04-20-12

5.7

Replace "6.8" in the 1st paragraph of section 39-1.15B with:

04-20-12

6.4

Replace "6.0" in the 1st paragraph of section 39-1.15B with:

04-20-12

5.7

Replace the 1st paragraph of section 39-2.02B with:

02-22-13

Perform sampling and testing at the specified frequency for the quality characteristics shown in the following table:

Minimum Quality Control—Standard Construction Process

Quality characteristic	Test method	Minimum sampling and testing frequency	HMA type			
			A	B	RHMA-G	OGFC
Aggregate gradation ^a	California Test 202	1 per 750 tons and any remaining part at the end of the project	JMF ± Tolerance ^b	JMF ± Tolerance ^b	JMF ± Tolerance ^b	JMF ± Tolerance ^b
Sand equivalent (min) ^c	California Test 217		47	42	47	--
Asphalt binder content (%)	California Test 379 or 382		JMF±0.40	JMF±0.40	JMF ± 0.40	JMF ± 0.40
HMA moisture content (% max)	California Test 226 or 370	1 per 2,500 tons but not less than 1 per paving day	1.0	1.0	1.0	1.0
Field compaction (% max. theoretical density) ^{d,e}	QC plan	2 per business day (min.)	91–97	91–97	91–97	--
Stabilometer value (min) ^c No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 366	1 per 4,000 tons or 2 per 5 business days, whichever is greater	30	30	--	--
			37	35	23	--
Air void content (%) ^{c, f}	California Test 367			4 ± 2	4 ± 2	TV ± 2
Aggregate moisture content at continuous mixing plants and RAP moisture content at continuous mixing plants and batch mixing plants ^g	California Test 226 or 370	2 per day during production	--	--	--	--
Percent of crushed particles coarse aggregate (% min) One fractured face Two fractured faces Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face	California Test 205	As designated in the QC plan. At least once per project	90	25	--	90
			75	--	90	75
			70	20	70	90
Los Angeles	California					

Rattler (% max) Loss at 100 rev. Loss at 500 rev.	Test 211		12 45	-- 50	12 40	12 40
Flat and elongated particles (% max by weight @ 5:1)	California Test 235		Report only	Report only	Report only	Report only
Fine aggregate angularity (% min) ^h	California Test 234		45	45	45	--
Voids filled with asphalt (%) ⁱ No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367		65.0-75.0 65.0-75.0 65.0-75.0 65.0-75.0	65.0-75.0 65.0-75.0 65.0-75.0 65.0-75.0	Report only	--
Voids in mineral aggregate (% min) ⁱ No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367		17.0 15.0 14.0 13.0	17.0 15.0 14.0 13.0	-- -- 18.0-23.0 18.0-23.0	--
Dust proportion ^l No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 367		0.6-1.2 0.6-1.2	0.6-1.2 0.6-1.2	Report only	--
Hamburg wheel track (minimum number of passes at 0.5 inch average rut depth) ^j PG-58 PG-64 PG-70 PG-76 or higher	AASHTO T 324 (Modified)	1 per 10,000 tons or 1 per project whichever is more	10,000 15,000 20,000 25,000	10,000 15,000 20,000 25,000	--	--
Hamburg wheel track (inflection point minimum number of passes) ^j PG-58 PG-64 PG-70 PG-76 or higher	AASHTO T 324 (Modified)	1 per 10,000 tons or 1 per project whichever is more	10,000 10,000 12,500 15000	10,000 10,000 12,500 15000	--	--
Moisture susceptibility (minimum dry strength, psi) ^j	California Test 371	For RAP ≥15% 1 per 10,000 tons or 1 per project	120	120	--	--

		whichever is greater				
Moisture susceptibility (tensile strength ration, %) ^j	California Test 371	For RAP ≥15% 1 per 10,000 tons or 1 per project whichever is greater	70	70	--	--
Smoothness	Section 39-1.12	--	12-foot straight-edge, must grind, and PI ₀	12-foot straight-edge, must grind, and PI ₀	12-foot straight-edge, must grind, and PI ₀	12-foot straight-edge, must grind, and PI ₀
Asphalt rubber binder viscosity @ 375 °F, centipoises	Section 39-1.02D	Section 39-1.04C	--	--	1,500–4,000	1,500–4,000
Asphalt modifier	Section 39-1.02D	Section 39-1.04C	--	--	Section 39-1.02D	Section 39-1.02D
CRM	Section 39-1.02D	Section 39-1.04C	--	--	Section 39-1.02D	Section 39-1.02D

^a Determine combined aggregate gradation containing RAP under California Test 367.

^b The tolerances must comply with the allowable tolerances in section 39-1.02E.

^c Report the average of 3 tests from a single split sample.

^d Determine field compaction for any of the following conditions:

1. 1/2-inch, 3/8-inch, or no. 4 aggregate grading is used and the specified total paved thickness is at least 0.15 foot.
2. 3/4-inch aggregate grading is used and the specified total paved thickness is at least 0.20 foot.

^e To determine field compaction use:

1. In-place density measurements using the method specified in your QC plan.
2. California Test 309 to determine the maximum theoretical density at the frequency specified in California Test 375, Part 5C.

^f Determine the bulk specific gravity of each lab-compacted briquette under California Test 308, Method A, and theoretical maximum specific gravity under California Test 309.

^g For adjusting the plant controller at the HMA plant.

^h The Engineer waives this specification if HMA contains 10 percent or less of nonmanufactured sand by weight of total aggregate. Manufactured sand is fine aggregate produced by crushing rock or gravel.

ⁱ Report only.

^j Applies to RAP substitution rate greater than 15 percent.

Replace the 1st paragraph of section 39-2.03A with:

02-22-13

The Department samples for acceptance testing and tests for the quality characteristics shown in the following table:

HMA Acceptance—Standard Construction Process

Quality characteristic	Test method	HMA type						
		A	B	RHMA-G	OGFC			
Aggregate gradation^a	California Test 202	JMF ± tolerance ^c	JMF ± tolerance ^c	JMF ± tolerance ^c	JMF ± tolerance ^c			
Sieve						3/4"	1/2"	3/8"
1/2"						X ^b		
3/8"							X	
No. 4								X
No. 8						X	X	X
No. 200	X	X	X					
Sand equivalent (min) ^d	California Test 217	47	42	47	--			
Asphalt binder content (%)	California Test 379 or 382	JMF±0.40	JMF±0.40	JMF ± 0.40	JMF ± 0.40			
HMA moisture content (% max)	California Test 226 or 370	1.0	1.0	1.0	1.0			
Field compaction (% max. theoretical density) ^{e, f}	California Test 375	91–97	91–97	91–97	--			
Stabilometer value (min) ^d No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 366	30	30	--	--			
		37	35	23	--			
Air void content (%) ^{d, g}	California Test 367	4 ± 2	4 ± 2	TV ± 2	--			
Percent of crushed particles Coarse aggregate (% min) One fractured face Two fractured faces Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face	California Test 205	90	25	--	90			
		75	--	90	75			
		70	20	70	90			
Los Angeles Rattler (% max) Loss at 100 rev. Loss at 500 rev.	California Test 211	12	--	12	12			
		45	50	40	40			
Fine aggregate angularity (% min) ^h	California Test 234	45	45	45	--			
Flat and elongated particles (% max by weight @ 5:1)	California Test 235	Report only	Report only	Report only	Report only			
Voids filled with asphalt (%) ⁱ No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367	65.0–75.0	65.0–75.0	Report only	--			
		65.0–75.0	65.0–75.0					
		65.0–75.0	65.0–75.0					
		65.0–75.0	65.0–75.0					
Voids in mineral aggregate (% min) ⁱ No. 4 grading 3/8" grading	California Test 367	17.0	17.0	--	--			
		15.0	15.0	--	--			

1/2" grading		14.0	14.0	18.0–23.0	
3/4" grading		13.0	13.0	18.0–23.0	
Dust proportion ⁱ No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 367	0.6-1.2 0.6–1.2	0.6-1.2 0.6–1.2	Report only	--
Hamburg wheel track (minimum number of passes at 0.5 inch average rut depth) ^j PG-58 PG-64 PG-70 PG-76 or higher	AASHTO T 324 (Modified)	10,000 15,000 20,000 25,000	10,000 15,000 20,000 25,000	--	--
Hamburg wheel track (inflection point minimum number of passes) ^j PG-58 PG-64 PG-70 PG-76 or higher	AASHTO T 324 (Modified)	10,000 10,000 12,500 15000	10,000 10,000 12,500 15000	--	--
Moisture susceptibility (minimum dry strength, psi) ^j	California Test 371	120	120	--	--
Moisture susceptibility (tensile strength ration, %) ^j	California Test 371	70	70	--	--
Smoothness	Section 39-1.12	12-foot straight- edge, must grind, and PI ₀	12-foot straight- edge, must grind, and PI ₀	12-foot straight- edge, must grind, and PI ₀	12-foot straight- edge and must grind
Asphalt binder	Various	Section 92	Section 92	Section 92	Section 92
Asphalt rubber binder	Various	--	--	Section 92- 1.01D(2) and section 39-1.02D	Section 92-1.01D(2) and section 39-1.02D
Asphalt modifier	Various	--	--	Section 39-1.02D	Section 39-1.02D
CRM	Various	--	--	Section 39-1.02D	Section 39-1.02D

^a The Engineer determines combined aggregate gradations containing RAP under California Test 367.

^b "X" denotes the sieves the Engineer tests for the specified aggregate gradation.

^c The tolerances must comply with the allowable tolerances in section 39-1.02E.

^d The Engineer reports the average of 3 tests from a single split sample.

^e The Engineer determines field compaction for any of the following conditions:

1. 1/2-inch, 3/8-inch, or no. 4 aggregate grading is used and the specified total paved thickness is at least 0.15 foot.
2. 3/4-inch aggregate grading is used and the specified total paved thickness is at least 0.20 foot.

^f To determine field compaction, the Engineer uses:

1. California Test 308, Method A, to determine in-place density of each density core.
2. California Test 309 to determine the maximum theoretical density at the frequency specified in California Test 375, Part 5C.

^g The Engineer determines the bulk specific gravity of each lab-compacted briquette under California Test 308, Method A, and theoretical maximum specific gravity under California Test 309.

^h The Engineer waives this specification if HMA contains 10 percent or less of nonmanufactured sand

by weight of total aggregate. Manufactured sand is fine aggregate produced by crushing rock or gravel.

ⁱ Report only.

^j Applies to RAP substitution rate greater than 15 percent.

Replace the 5th paragraph of section 39-2.03A with:

01-20-12

The Engineer determines the percent of maximum theoretical density from density cores taken from the final layer measured the full depth of the total paved HMA thickness if any of the following applies:

1. 1/2-inch, 3/8-inch, or no. 4 aggregate grading is used and the specified total paved thickness is at least 0.15 foot and any layer is less than 0.15 foot.
2. 3/4-inch aggregate grading is used and the specified total paved thickness is at least 0.2 foot and any layer is less than 0.20 foot.

Replace the 1st paragraph of section 39-3.02A with:

02-22-13

The Department samples for acceptance testing and tests for the quality characteristics shown in the following table:

HMA Acceptance—Method Construction Process

Quality characteristic	Test method	HMA type			
		A	B	RHMA-G	OGFC
Aggregate gradation ^a	California Test 202	JMF ± tolerance ^b	JMF ± tolerance ^b	JMF ± tolerance ^b	JMF ± tolerance ^b
Sand equivalent (min) ^c	California Test 217	47	42	47	--
Asphalt binder content (%)	California Test 379 or 382	JMF±0.40	JMF±0.40	JMF ± 0.40	JMF ± 0.40
HMA moisture content (% max)	California Test 226 or 370	1.0	1.0	1.0	1.0
Stabilometer value (min) ^c No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 366	30	30	--	--
		37	35	23	--
Percent of crushed particles Coarse aggregate (% min) One fractured face Two fractured faces Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face	California Test 205	90	25	--	90
		75	--	90	75
		70	20	70	90
Los Angeles Rattler (% max) Loss at 100 rev. Loss at 500 rev.	California Test 211	12	--	12	12
		45	50	40	40
Air void content (%) ^{c,d}	California Test 367	4 ± 2	4 ± 2	TV ± 2	--
Fine aggregate angularity (% min) ^e	California Test 234	45	45	45	--
Flat and elongated particles (% max by weight @ 5:1)	California Test 235	Report only	Report only	Report only	Report only
Voids filled with asphalt (%) ^f No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367	65.0–75.0	65.0–75.0	Report only	--
		65.0–75.0	65.0–75.0		
		65.0–75.0	65.0–75.0		
		65.0–75.0	65.0–75.0		
Voids in mineral aggregate (% min) ^f No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367	17.0	17.0	--	--
		15.0	15.0	--	--
		14.0	14.0	18.0–23.0	--
		13.0	13.0	18.0–23.0	--
Dust proportion ^f No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 367	0.6–1.2	0.6–1.2	Report only	--
		0.6–1.2	0.6–1.2		
Hamburg wheel track (minimum number of passes at	AASHTO T 324			--	--

0.5 inch average rut depth) ^g PG-58 PG-64 PG-70 PG-76 or higher	(Modified)	10,000 15,000 20,000 25,000	10,000 15,000 20,000 25,000		
Hamburg wheel track (inflection point minimum number of passes) ^g PG-58 PG-64 PG-70 PG-76 or higher	AASHTO T 324 (Modified)	10,000 10,000 12,500 15000	10,000 10,000 12,500 15000	--	--
Moisture susceptibility (minimum dry strength, psi) ^g	California Test 371	120	120	--	--
Moisture susceptibility (tensile strength ration, %) ^g	California Test 371	70	70	--	--
Smoothness	Section 39-1.12	12-foot straight- edge and must-grind	12-foot straight- edge and must-grind	12-foot straight- edge and must-grind	12-foot straight- edge and must-grind
Asphalt binder	Various	Section 92	Section 92	Section 92	Section 92
Asphalt rubber binder	Various	--	--	Section 92- 1.01D(2) and section 39-1.02D	Section 92- 1.01D(2) and section 39-1.02D
Asphalt modifier	Various	--	--	Section 39-1.02D	Section 39-1.02D
CRM	Various	--	--	Section 39-1.02D	Section 39-1.02D

^a The Engineer determines combined aggregate gradations containing RAP under California Test 367.

^b The tolerances must comply with the allowable tolerances in section 39-1.02E.

^c The Engineer reports the average of 3 tests from a single split sample.

^d The Engineer determines the bulk specific gravity of each lab-compacted briquette under California Test 308, Method A, and theoretical maximum specific gravity under California Test 309.

^e The Engineer waives this specification if HMA contains 10 percent or less of nonmanufactured sand by weight of total aggregate. Manufactured sand is fine aggregate produced by crushing rock or gravel.

^f Report only.

^g Applies to RAP substitution rate greater than 15 percent.

Replace "280 degrees F" in item 2 in the list in the 6th paragraph of section 39-3.04 with:

285 degrees F

01-20-12

Replace "5,000" in the 5th paragraph of section 39-4.02C with:

10,000

02-22-13

Replace the 7th paragraph of section 39-4.02C with:

02-22-13

Except for RAP substitution rate of greater than 15 percent, the Department does not use results from California Test 371 to determine specification compliance.

Replace the 8th paragraph of section 39-4.02C with:

02-22-13

Comply with the values for the HMA quality characteristics and minimum random sampling and testing for quality control shown in the following table:

Minimum Quality Control—QC/QA Construction Process

Quality characteristic	Test method	Minimum sampling and testing frequency	HMA Type			Location of sampling	Maximum report -ing time allowance
			A	B	RHMA-G		
Aggregate gradation ^a	California Test 202	1 per 750 tons	JMF ± tolerance ^b	JMF ± tolerance ^b	JMF ± tolerance ^b	California Test 125	24 hours
Asphalt binder content (%)	California Test 379 or 382		JMF±0.40	JMF±0.40	JMF ±0.40	Loose mix behind paver See California Test 125	
Field compaction (% max. theoretical density) ^{c,d}	QC plan		92–96	92–96	91–96	QC plan	
Aggregate moisture content at continuous mixing plants and RAP moisture content at continuous mixing plants and batch mixing plants ^e	California Test 226 or 370	2 per day during production	--	--	--	Stock-piles or cold feed belts	--
Sand equivalent (min) ^f	California Test 217	1 per 750 tons	47	42	47	California Test 125	24 hours
HMA moisture content (% max)	California Test 226 or 370	1 per 2,500 tons but not less than 1 per paving day	1.0	1.0	1.0	Loose Mix Behind Paver See California Test 125	24 hours
Stabilometer value (min) ^f	California Test 366	1 per 4,000 tons or 2 per 5 business days, whichever is greater	30	30	--		48 hours
No. 4 and 3/8" gradings 1/2" and 3/4" gradings			37	35	23		
Air void content (%) ^{f,g}	California Test 367		4 ± 2	4 ± 2	TV ± 2		

Percent of crushed particles coarse aggregate (% min.): One fractured face Two fractured faces	California Test 205	As designated in QC plan. At least once per project.	90	25	--	California Test 125	48 hours
			75	--	90		
Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve): One fractured face			70	20	70		
Los Angeles Rattler (% max): Loss at 100 rev. Loss at 500 rev.	California Test 211		12	--	12	California Test 125	
			45	50	40		
Fine aggregate angularity (% min) ⁿ	California Test 234	45	45	45	California Test 125		
Flat and elongated particle (% max by weight @ 5:1)	California Test 235	Report only	Report only	Report only	California Test 125		
Voids filled with asphalt (%) ⁱ No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367			Report only			
		65.0–75.0	65.0–75.0				
		65.0–75.0	65.0–75.0				
		65.0–75.0	65.0–75.0				

Voids in mineral aggregate (% min.) ⁱ No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367		17.0 15.0 14.0 13.0	17.0 15.0 14.0 13.0	-- -- 18.0–23.0 18.0–23.0		
Dust proportion ⁱ No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 367		0.6–1.2 0.6–1.2	0.6–1.2 0.6–1.2	Report only		
Hamburg wheel track (minimum number of passes at 0.5 inch average rut depth) ⁱ PG-58 PG-64 PG-70 PG-76 or higher	AASHTO T 324 (Modified)	1 per 10,000 tons or 1 per project whichever is greater	10,000 15,000 20,000 25,000	10,000 15,000 20,000 25,000	--	--	
Hamburg wheel track (inflection point minimum number of passes) ^j PG-58 PG-64 PG-70 PG-76 or higher	AASHTO T 324 (Modified)	1 per 10,000 tons or 1 per project whichever is greater	10,000 10,000 12,500 15000	10,000 10,000 12,500 15000	--	--	
Moisture susceptibility (minimum dry strength, psi) ^j	California Test 371	1 per 10,000 tons or 1 per project whichever is greater	120	120	--	--	
Moisture susceptibility (tensile strength ratio, %) ^j	California Test 371	1 per 10,000 tons or 1 per project whichever is greater	70	70	70	--	

Smoothness	Section 39-1.12	--	12-foot straight-edge, must-grind, and PI_0	12-foot straight-edge, must-grind, and PI_0	12-foot straight-edge, must-grind, and PI_0	--	
Asphalt rubber binder viscosity @ 375 °F, centipoises	Section 39-1.02D	--	--	--	1,500–4,000	Section 39-1.02D	24 hours
CRM	Section 39-1.02D	--	--	--	Section 39-1.02D	Section 39-1.02D	48 hours

^a Determine combined aggregate gradation containing RAP under California Test 367.

^b The tolerances must comply with the allowable tolerances in section 39-1.02E.

^c Determines field compaction for any of the following conditions:

1. 1/2-inch, 3/8-inch, or no. 4 aggregate grading is used and the specified total paved thickness is at least 0.15 foot.
2. 3/4-inch aggregate grading is used and the specified total paved thickness is at least 0.20 foot.

^d To determine field compaction use:

1. In-place density measurements using the method specified in your QC plan.
2. California Test 309 to determine the maximum theoretical density at the frequency specified in California Test 375, Part 5C.

^e For adjusting the plant controller at the HMA plant.

^f Report the average of 3 tests from a single split sample.

^g Determine the bulk specific gravity of each lab-compacted briquette under California Test 308, Method A, and theoretical maximum specific gravity under California Test 309.

^h The Engineer waives this specification if HMA contains 10 percent or less of nonmanufactured sand by weight of total aggregate. Manufactured sand is fine aggregate produced by crushing rock or gravel.

ⁱ Report only.

^j Applies to RAP substitution rate greater than 15 percent.

Replace the 1st sentence in the 1st paragraph of section 39-4.03B(2) with:

01-20-12

For aggregate gradation and asphalt binder content, the minimum ratio of verification testing frequency to quality control testing frequency is 1:5.

Replace the 2nd "and" in the 7th paragraph of section 39-4.03B(2) with:

01-20-12

or

Replace the 1st paragraph of section 39-4.04A with:

02-22-13

The Engineer samples for acceptance testing and tests for the following quality characteristics:

HMA Acceptance—QC/QA Construction Process

Index (i)	Quality characteristic				Weight -ing factor (w)	Test method	HMA type		
							A	B	RHMA-G
		Aggregate gradation ^a				California Test 202	JMF ± Tolerance ^c		
	Sieve	3/4"	1/2"	3/8"					
1	1/2"	X ^b	--	--	0.05				
1	3/8"	--	X	--	0.05				
1	No. 4	--	--	X	0.05				
2	No. 8	X	X	X	0.10				
3	No. 200	X	X	X	0.15				
4	Asphalt binder content (%)				0.30	California Test 379 or 382	JMF±0.40	JMF±0.40	JMF ± 0.40
5	Field compaction (% max. theoretical density) ^{d, e}				0.40	California Test 375	92–96	92–96	91–96
	Sand equivalent (min) ^f					California Test 217	47	42	47
	Stabilometer value (min) ^f No. 4 and 3/8" gradings 1/2" and 3/4" gradings					California Test 366	30 37	30 35	-- 23
	Air void content (%) ^{f, g}					California Test 367	4 ± 2	4 ± 2	TV ± 2
	Percent of crushed particles coarse aggregate (% min) One fractured face Two fractured faces Fine aggregate (% min) (Passing no. 4 sieve and retained on No. 8 sieve.) One fractured face					California Test 205	90 75	25 --	-- 90
	HMA moisture content (% max)					California Test 226 or 370	1.0	1.0	1.0
	Los Angeles Rattler (% max) Loss at 100 rev. Loss at 500 rev.					California Test 211	12 45	-- 50	12 40
	Fine aggregate angularity (% min) ^h					California Test 234	45	45	45
	Flat and elongated particle (% max by weight @ 5:1)					California Test 235	Report only	Report only	Report only

	Voids in mineral aggregate (% min) ⁱ No. 4 grading 3/8" grading 1/2" grading 3/4" grading		California Test 367	17.0 15.0 14.0 13.0	17.0 15.0 14.0 13.0	-- -- 18.0–23.0 18.0–23.0
	Voids filled with asphalt (%) ⁱ No. 4 grading 3/8" grading 1/2" grading 3/4" grading		California Test 367	65.0–75.0 65.0–75.0 65.0–75.0 65.0–75.0	65.0–75.0 65.0–75.0 65.0–75.0 65.0–75.0	Report only
	Dust proportion ¹ No. 4 and 3/8" gradings 1/2" and 3/4" gradings		California Test 367	0.6–1.2 0.6–1.2	0.6–1.2 0.6–1.2	Report only
	Hamburg Wheel Tracker (minimum number of passes at 0.5 inch average rut depth) ^j PG-58 PG-64 PG-70 PG-76 or higher		AASHTO T 324 (Modified)	10,000 15,000 20,000 25,000	10,000 15,000 20,000 25,000	--
	Hamburg Wheel Tracker (inflection point minimum number of passes) ^j PG-58 PG-64 PG-70 PG-76 or higher		AASHTO T 324 (Modified)	10,000 15,000 20,000 25,000	10,000 15,000 20,000 25,000	--
	Moisture susceptibility (minimum dry strength, psi) ^j		California Test 371	120	120	--
	Moisture susceptibility (tensile strength ratio %) ^j		California Test 371	70	70	70
	Smoothness		Section 39-1.12	12-foot straight-edge, must grind, and PI ₀	12-foot straight-edge, must grind, and PI ₀	12-foot straight-edge, must grind, and PI ₀
	Asphalt binder		Various	Section 92	Section 92	Section 92
	Asphalt rubber binder		Various	--	--	Section 92-1.01D(2) and section 39-1.02D
	Asphalt modifier		Various	--	--	Section 39-1.02D
	CRM		Various	--	--	Section 39-1.02D

Replace the 2nd and 3rd paragraphs in section 40-1.01D(4) with:

01-20-12

The QC plan must include details of corrective action to be taken if any process is out of control. As a minimum, a process is out of control if any of the following occurs:

1. For fine and coarse aggregate gradation, 2 consecutive running averages of 4 tests are outside the specification limits
2. For individual penetration or air content measurements:
 - 2.1. One point falls outside the suspension limit line
 - 2.2. Two points in a row fall outside the action limit line

Stop production and take corrective action for out of control processes or the Engineer rejects subsequent material.

Replace the 1st paragraph in section 40-1.01D(5) with:

01-20-12

Determine the minimum cementitious materials content. Use your value for minimum cementitious material content for *MC* in equation 1 and equation 2 of section 90-1.02B(3).

Replace the 1st sentence of the 3rd paragraph of section 40-1.01D(9) with:

01-20-12

Use a California profilograph to determine the concrete pavement profile.

Replace the title of the table in section 40-1.01D(13)(a) with:

01-20-12

Concrete Pavement Acceptance Testing

Replace the 2nd and 3rd paragraphs in section 40-1.01D(13)(a) with:

01-20-12

Pavement smoothness may be accepted based on the Department's testing. A single test represents no more than 0.1 mile.

Acceptance of modulus of rupture, thickness, dowel bar and tie bar placement, coefficient of friction, smoothness, and air content, does not constitute final concrete pavement acceptance.

Delete item 4 in the list in the 2nd paragraph in section 40-1.01D(13)(c)(2).

01-20-12

Replace items 1 and 2 in the list in the 2nd paragraph in 40-1.01D(13)(d) with:

01-20-12

1. For tangents and horizontal curves having a centerline radius of curvature 2,000 feet or more, the PI_0 must be at most 2-1/2 inches per 0.1-mile section.
2. For horizontal curves having a centerline radius of curvature from 1,000 to 2,000 feet including concrete pavement within the superelevation transitions of those curves, the PI_0 must be at most 5 inches per 0.1-mile section.

Replace the 1st and 2nd variables in the equation in section 40-1.01D(13)(f) with:

01-20-12

- n_c = Number of your quality control tests (minimum of 6 required)
 n_v = Number of verification tests (minimum of 2 required)

Replace "Your approved third party independent testing laboratory" in the 4th paragraph of section 40-1.01D(13)(f) with:

01-20-12

The authorized laboratory

Replace item 2 in the list in the 2nd paragraph of section 40-1.01D(13)(g):

01-20-12

2. One test for every 4,000 square yards of concrete pavement with tie bars or remaining fraction of that area. Each tie bar test consists of 2 cores with 1 on each tie-bar-end to expose both ends and allow measurement.

Replace section 40-1.01D(13)(h) with:

01-20-12

40-1.01D(13)(h) Bar Reinforcement

Bar reinforcement is accepted based on inspection before concrete placement.

Replace the paragraph in section 40-1.02B(2) with:

01-20-12

PCC for concrete pavement must comply with section 90-1 except as otherwise specified.

Replace the paragraphs in section 40-1.02D with:

01-20-12

Bar reinforcement must be deformed bars.

If the project is not shown to be in high desert or any mountain climate region, bar reinforcement must comply with section 52.

If the project is shown to be in high desert or any mountain climate regions, bar reinforcement must be one of the following:

1. Epoxy-coated bar reinforcement under section 52-2.03B except bars must comply with either ASTM A 706/A 706M; ASTM A 996/A 996M; or ASTM A 615/A 615M, Grade 40 or 60. Bars must be handled under ASTM D 3963/D 3963M and section 52-2.02C.
2. Low carbon, chromium steel bar complying with ASTM A 1035/A 1035M

Replace the paragraphs in section 40-1.02E with:

01-20-12

Tie bars must be deformed bars.

If the project is not shown to be in high desert or any mountain climate region, tie bars must be one of the following:

1. Epoxy-coated bar reinforcement. Bars must comply with either section 52-2.02B or 52-2.03B except bars must comply with either ASTM A 706/A 706M; ASTM A 996/A 996M; or ASTM A 615/A 615M, Grade 40 or 60.
2. Stainless-steel bars. Bars must be descaled, pickled, polished, and solid stainless-steel bars under ASTM A 955/A 955M, Grade 60, UNS Designation S31603 or S31803.
3. Low carbon, chromium-steel bars under ASTM A 1035/A 1035M.

If the project is shown to be in high desert or any mountain climate region, tie bars must be one of the following:

1. Epoxy-coated bar reinforcement. Bars must comply with section 52-2.03B except bars must comply with either ASTM A 706/A 706M; ASTM A 996/A 996M; or ASTM A 615/A 615M, Grade 40 or 60.
2. Stainless-steel bars. Bars must be descaled, pickled, polished, and solid stainless-steel bars under ASTM A 955/A 955M, Grade 60, UNS Designation S31603 or S31803.

Fabricate, sample, and handle epoxy-coated tie bars under ASTM D 3963/D 3963M, section 52-2.02C, or section 52-2.03C.

Do not bend tie bars.

Replace the 1st, 2nd, and 3rd paragraphs in section 40-1.02F with:

01-20-12

Dowel bars must be plain bars. Fabricate, sample, and handle epoxy-coated dowel bars under ASTM D 3963/D 3963M and section 52-2.03C except each sample must be 18 inches long.

If the project is not shown to be in high desert or any mountain climate region, dowel bars must be one of the following:

1. Epoxy-coated bars. Bars must comply with ASTM A 615/A 615M, Grade 40 or 60. Epoxy coating must comply with either section 52-2.02B or 52-2.03B.
2. Stainless-steel bars. Bars must be descaled, pickled, polished, and solid stainless-steel bars under ASTM A 955/A 955M, Grade 60, UNS Designation S31603 or S31803.
3. Low carbon, chromium-steel bars under ASTM A 1035/A 1035M.

If the project is shown to be in high desert or any mountain climate region, dowel bars must be one of the following:

1. Epoxy-coated bars. Bars must comply with ASTM A 615/A 615M, Grade 40 or 60. Epoxy coating must comply with section 52-2.03B.
2. Stainless-steel bars. Bars must be descaled, pickled, polished, and solid stainless-steel bars under ASTM A 955/A 955M, Grade 60, UNS Designation S31603 or S31803.

Replace the paragraphs in section 40-1.02G with:

01-20-12

For dowel and tie bar baskets, wire must comply with ASTM A 82/A 82M and be welded under ASTM A 185/A 185M, Section 7.4. The minimum wire-size no. is W10. Use either U-frame or A-frame shaped assemblies.

If the project is not shown to be in high desert or any mountain climate region. Baskets may be epoxy-coated, and the epoxy coating must comply with either section 52-2.02B or 52-2.03B.

If the project is shown to be in high desert or any mountain climate region, wire for dowel bar and tie bar baskets must be one of the following:

1. Epoxy-coated wire complying with section 52-2.03B

2. Stainless-steel wire. Wire must be descaled, pickled, and polished solid stainless-steel. Wire must comply with (1) the chemical requirements in ASTM A 276/A 276M, UNS Designation S31603 or S31803 and (2) the tension requirements in ASTM A 1022/ A 1022M.

Handle epoxy-coated tie bar and dowel bar baskets under ASTM D 3963/D 3963M and either section 52-2.02B or 52-2.03B.

Fasteners must be driven fasteners under ASTM F 1667. Fasteners on lean concrete base or HMA must have a minimum shank diameter of 3/16 inch and a minimum shank length of 2-1/2 inches. For asphalt treated permeable base or cement treated permeable base, the shank diameter must be at least 3/16 inch and the shank length must be at least 5 inches.

Fasteners, clips, and washers must have a minimum 0.2-mil thick zinc coating applied by either electroplating or galvanizing.

Replace the 1st paragraph in section 40-1.02H with:

01-20-12

Chemical adhesive for drilling and bonding dowels and tie bars must be on the Authorized Material List. The Authorized Material List indicates the appropriate chemical adhesive system for the concrete temperature and installation conditions.

Replace section 40-1.02I(2) with:

01-20-12

40-1.02I(2) Silicone Joint Sealant

Silicone joint sealant must be on the Authorized Material List.

Replace the last sentence in section 40-1.02I(4) with:

01-20-12

Show evidence that the seals are compressed from 30 to 50 percent for the joint width at time of installation.

Replace the paragraph in section 40-1.02L with:

01-20-12

Water for core drilling may be obtained from a potable water source, or submit proof that it does not contain:

1. More than 1,000 parts per million of chlorides as Cl
2. More than 1,300 parts per million of sulfates as SO₄
3. Impurities that cause pavement discoloration or surface etching

Replace the paragraph in section 40-1.03B with:

01-20-12

Before placing concrete pavement, develop enough water supply for the work under section 17.

Replace the last paragraph in section 40-1.03D(1) with:

01-20-12

Removal of grinding residue must comply with section 42-1.03B.

Replace the 1st and 2nd paragraphs in section 40-1.03E(6)(c) with:

01-20-12

Install preformed compressions seals in isolation joints if specified in the special provisions.

Install longitudinal seals before transverse seals. Longitudinal seals must be continuous except splicing is allowed at intersections with transverse seals. Transverse seals must be continuous for the entire transverse length of concrete pavement except splices are allowed for widenings and staged construction. With a sharp instrument, cut across the longitudinal seal at the intersection with transverse construction joints. If the longitudinal seal does not relax enough to properly install the transverse seal, trim the longitudinal seal to form a tight seal between the 2 joints.

If splicing is authorized, splicing must comply with the manufacturer's written instructions.

Replace the 12th and 13th paragraphs in section 40-1.03G with:

01-20-12

Construct additional test strips if you:

1. Propose different paving equipment including:
 - 1.1. Paver
 - 1.2. Dowel bar inserter
 - 1.3. Tie bar inserter
 - 1.4. Tining
 - 1.5. Curing equipment
2. Change concrete mix proportions

You may request authorization to eliminate the test strip if you use paving equipment and personnel from a Department project (1) for the same type of pavement and (2) completed within the past 12 months. Submit supporting documents and previous project information with your request.

Replace the 1st paragraph in section 40-1.03I with:

01-20-12

Place tie bars in compliance with the tolerances shown in the following table:

Tie Bar Tolerance	
Dimension	Tolerance
Horizontal and vertical skew	10 degrees maximum
Longitudinal translation	± 2 inch maximum
Horizontal offset (embedment)	± 2 inch maximum
Vertical depth	1. Not less than 1/2 inch below the saw cut depth of joints 2. When measured at any point along the bar, not less than 2 inches clear of the pavement's surface and bottom

Replace item 4 in the list in the 2nd paragraph in section 40-1.03I with:

01-20-12

4. Use tie bar baskets. Anchor baskets at least 200 feet in advance of pavement placement activity. If you request a waiver, describe the construction limitations or restricted access preventing the advanced anchoring. After the baskets are anchored and before paving, demonstrate the tie bars do

not move from their specified depth and alignment during paving. Use fasteners to anchor tie bar baskets.

Replace "The maximum distance below the depth shown must be 0.05 foot." in the table in section 40-1.03J with:

01-20-12

The maximum distance below the depth shown must be 5/8 inch.

Replace sections 40-1.03L and 40-1.03M with:

01-20-12

40-1.03L Finishing

40-1.03L(1) General

Reserved

40-1.03L(2) Preliminary Finishing

40-1.03L(2)(a) General

Preliminary finishing must produce a smooth and true-to-grade finish. After preliminary finishing, mark each day's paving with a stamp. The stamp must be authorized before paving starts. The stamp must be approximately 1 by 2 feet in size. The stamp must form a uniform mark from 1/8 to 1/4 inch deep. Locate the mark 20 ± 5 feet from the transverse construction joint formed at each day's start of paving and 1 ± 0.25 foot from the pavement's outside edge. The stamp mark must show the month, day, and year of placement and the station of the transverse construction joint. Orient the stamp mark so it can be read from the pavement's outside edge.

Do not apply more water to the pavement surface than can evaporate before float finishing and texturing are completed.

40-1.03L(2)(b) Stationary Side Form Finishing

If stationary side form construction is used, give the pavement a preliminary finish by the machine float method or the hand method.

If using the machine float method:

1. Use self-propelled machine floats.
2. Determine the number of machine floats required to perform the work at a rate equal to the pavement delivery rate. If the time from paving to machine float finishing exceeds 30 minutes, stop pavement delivery. When machine floats are in proper position, you may resume pavement delivery and paving.
3. Run machine floats on side forms or adjacent pavement lanes. If running on adjacent pavement, protect the adjacent pavement surface under section 40-1.03P. Floats must be hardwood, steel, or steel-shod wood. Floats must be equipped with devices that adjust the underside to a true flat surface.

If using the hand method, finish pavement smooth and true to grade with manually operated floats or powered finishing machines.

40-1.03L(2)(c) Slip-Form Finishing

If slip-form construction is used, the slip-form paver must give the pavement a preliminary finish. You may supplement the slip-form paver with machine floats.

Before the pavement hardens, correct pavement edge slump in excess of 0.02 foot exclusive of edge rounding.

40-1.03L(3) Final Finishing

After completing preliminary finishing, round the edges of the initial paving widths to a 0.04-foot radius. Round transverse and longitudinal construction joints to a 0.02-foot radius.

Before curing, texture the pavement. Perform initial texturing with a burlap drag or broom device that produces striations parallel to the centerline. Perform final texturing with a steel-tined device that produces grooves parallel with the centerline.

Construct longitudinal grooves with a self-propelled machine designed specifically for grooving and texturing pavement. The machine must have tracks to maintain constant speed, provide traction, and maintain accurate tracking along the pavement surface. The machine must have a single row of rectangular spring steel tines. The tines must be from 3/32 to 1/8 inch wide, on 3/4-inch centers, and must have enough length, thickness, and resilience to form grooves approximately 3/16 inch deep. The machine must have horizontal and vertical controls. The machine must apply constant down pressure on the pavement surface during texturing. The machines must not cause ravels.

Construct grooves over the entire pavement width in a single pass except do not construct grooves 3 inches from the pavement edges and longitudinal joints. Final texture must be uniform and smooth. Use a guide to properly align the grooves. Grooves must be parallel and aligned to the pavement edge across the pavement width. Grooves must be from 1/8 to 3/16 inch deep after the pavement has hardened.

For irregular areas and areas inaccessible to the grooving machine, you may hand-construct grooves under section 40-1.03L(2) using the hand method. Hand-constructed grooves must comply with the specifications for machine-constructed grooves.

Initial and final texturing must produce a coefficient of friction of at least 0.30 when tested under California Test 342. Notify the Engineer when the pavement is scheduled to be opened to traffic to allow at least 25 days for the Department to schedule testing for coefficient of friction. Notify the Engineer when the pavement is ready for testing which is the latter of:

1. Seven days after paving
2. When the pavement has attained a modulus of rupture of 550 psi

The Department tests for coefficient of friction within 7 days of receiving notification that the pavement is ready for testing.

Do not open the pavement to traffic unless the coefficient of friction is at least 0.30.

40-1.03M Reserved

Replace the 4th paragraph of 40-1.03P with:

01-20-12

Construct crossings for traffic convenience. If authorized, you may use RSC for crossings. Do not open crossings until the Department determines that the pavement's modulus of rupture is at least 550 psi under California Test 523 or California Test 524.

Replace the 1st paragraph of section 40-6.01A with:

01-20-12

Section 40-6 includes specifications for applying a high molecular weight methacrylate resin system to pavement surface cracks that do not extend the full slab depth.

DIVISION VI STRUCTURES
46 GROUND ANCHORS AND SOIL NAILS

04-19-13

Replace the 1st paragraph of section 46-1.01C(2) with:

04-19-13

Submit 5 copies of shop drawings to OSD, Documents Unit. Notify the Engineer of the submittal. Include in the notification the date and contents of the submittal. Allow 30 days for the Department's review. After review, submit from 6 to 12 copies, as requested, for authorization and use during construction.

Shop drawings and calculations must be sealed and signed by an engineer who is registered as a civil engineer in the State.

Replace the 3rd paragraph of section 46-1.01C(2) with:

01-18-13

Ground anchor shop drawings must include:

1. Details and specifications for the anchorage system and ground anchors.
2. Details for the transition between the corrugated plastic sheathing and the anchorage assembly.
3. If shims are used during lock-off, shim thickness and supporting calculations.
4. Calculations for determining the bonded length. Do not rely on any capacity from the grout-to-ground bond within the unbonded length.

01-18-13

Delete the 5th and 6th paragraphs of section 46-1.01C(2).

Replace the 4th paragraph of section 46-1.01D(2)(b) with:

01-18-13

Each jack and its gage must be calibrated as a unit under the specifications for jacks used to tension prestressing steel permanently anchored at 25 percent or more of its specified minimum ultimate tensile strength in section 50-1.01D(3).

10-19-12

Delete the 3rd paragraph of section 46-1.01D(2)(d).

Add to section 46-1.03B:

04-20-12

Dispose of drill cuttings under section 19-2.03B.

Replace the 1st sentence of the 3rd paragraph of section 46-2.01A with:

04-20-12

Ground anchors must comply with section 50.

Add to section 46-2.02B:

04-20-12

Strand tendons, bar tendons, bar couplers, and anchorage assemblies must comply with section 50.

AA

47 EARTH RETAINING SYSTEMS

04-19-13

Replace the 2nd paragraph of section 47-2.01D with:

02-17-12

Coupler test samples must comply with minimum tensile specifications for steel wire in ASTM A 82/A 82M. Total wire slip must be at most 3/16 inch when tested under the specifications for tension testing of round wire test samples in ASTM A 370.

Replace "78-80" in the 1st table in the 2nd paragraph of section 47-2.02C with:

10-19-12

78-100

Replace the value for the sand equivalent requirement in the 2nd table in the 3rd paragraph of section 47-2.02C with:

01-20-12

12 minimum

Replace the 1st paragraph of section 47-2.02E with:

02-17-12

Steel wire must comply with ASTM A 82/A 82M. Welded wire reinforcement must comply with ASTM A 185/A 185M.

Add between the 2nd and 3rd paragraphs of section 47-3.02A:

10-19-12

Reinforcement must comply with section 52.

Delete the 1st paragraph of section 47-3.02B(2)(b).

10-19-12

Add between the 3rd and 4th paragraphs of section 47-5.01:

10-19-12

Reinforcement must comply with section 52.

Add to section 47-6.01A:

10-19-12

The alternative earth retaining system must comply with the specifications for the type of wall being constructed.

Replace "sets" at each occurrence in the 1st paragraph of section 47-6.01C with:

04-19-13

copies

AA

48 TEMPORARY STRUCTURES

04-19-13

Replace "previously welded splice" and its definition in section 48-2.01B with:

04-19-13

previously welded splice: Splice made in a falsework member in compliance with AWS D1.1 or other recognized welding standard before contract award.

04-19-13

Delete "field" in the 1st sentence of the 5th paragraph of section 48-2.01C(1).

Replace item 1 in the list in the 6th paragraph of section 48-2.01C(1) with:

04-19-13

1. Itemize the testing, inspection methods, and acceptance criteria used

Replace the 7th paragraph of section 48-2.01C(2) with:

09-16-11

If you submit multiple submittals at the same time or additional submittals before review of a previous submittal is complete:

1. You must designate a review sequence for submittals
2. Review time for any submittal is the review time specified plus 15 days for each submittal of higher priority still under review

Replace the 1st paragraph of section 48-2.01D(2) with:

04-19-13

Welding must comply with AWS D1.1 or other recognized welding standard, except for fillet welds where the load demands are 1,000 lb or less per inch for each 1/8 inch of fillet weld.

Replace the 1st through 3rd sentences in the 2nd paragraph of section 48-2.01D(2) with:

04-19-13

Perform NDT on welded splices using UT or RT. Each weld and any repair made to a previously welded splice must be tested.

Replace the 3rd paragraph of section 48-2.01D(2) with:

04-19-13

For previously welded splices, perform and document all necessary testing and inspection required to certify the ability of the falsework members to sustain the design stresses.

AA

49 PILING

04-19-13

Replace "sets" in the 1st paragraph of section 49-1.01C(2) with:

copies

04-19-13

Replace "set" in the 2nd paragraph of section 49-1.01C(2) with:

copy

04-19-13

Replace "Load Applied to Pile by Hydraulic Jack(s) Acting at One End of Test Beam(s) Anchored to the Pile" in the 5th paragraph of section 49-1.01D(2) with:

"Tensile Load Applied by Hydraulic Jack(s) Acting Upward at One End of Test Beam(s)"

07-20-12

Add to section 49-1.03:

Dispose of drill cuttings under section 19-2.03B.

04-20-12

Replace the 2nd paragraph of section 49-2.01D with:

Furnish piling is measured along the longest side of the pile from the specified tip elevation shown to the plane of pile cutoff.

01-20-12

Replace "sets" in the 1st paragraph of section 49-2.04A(3) with:

copies

04-19-13

Replace the 3rd and 4th paragraphs of section 49-2.04B(2) with:

Piles in a corrosive environment must be steam or water cured under section 90-4.03.

10-19-12

If piles in a corrosive environment are steam cured, either:

1. Keep the piles continuously wet for at least 3 days. The 3 days includes the holding and steam curing periods.
2. Apply curing compound under section 90-1.03B(3) after steam curing.

Add to section 49-3.01A:

Concrete must comply with section 51.

01-20-12

Replace the 1st paragraph of section 49-3.01C with:

01-20-12

Except for CIDH concrete piles constructed under slurry, construct CIP concrete piles such that the excavation methods and the concrete placement procedures provide for placing the concrete against undisturbed material in a dry or dewatered hole.

Replace "Reserved" in section 49-3.02A(2) with:

01-20-12

dry hole:

1. Except for CIDH concrete piles specified as end bearing, a drilled hole that:
 - 1.1. Accumulates no more than 12 inches of water in the bottom of the drilled hole during a period of 1 hour without any pumping from the hole during the hour.
 - 1.2. Has no more than 3 inches of water in the bottom of the drilled hole immediately before placing concrete.
2. For CIDH concrete piles specified as end bearing, a drilled hole free of water without the use of pumps.

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

01-20-12

If plastic spacers are proposed for use, submit the manufacturer's data and a sample of the plastic spacer. Allow 10 days for review.

Replace item 5 in the list in the 1st paragraph of section 49-3.02A(3)(b) with:

10-19-12

5. Methods and equipment for determining:
 - 5.1. Depth of concrete
 - 5.2. Theoretical volume of concrete to be placed, including the effects on volume if casings are withdrawn
 - 5.3. Actual volume of concrete placed

Add to the list in the 1st paragraph of section 49-3.02A(3)(b):

01-18-13

8. Drilling sequence and concrete placement plan.

Replace item 2 in the list in the 1st paragraph of section 49-3.02A(3)(g) with:

01-20-12

2. Be sealed and signed by an engineer who is registered as a civil engineer in the State. This requirement is waived for either of the following conditions:
 - 2.1. The proposed mitigation will be performed under the current Department-published version of *ADSC Standard Mitigation Plan 'A' - Basic Repair* without exception or modification.
 - 2.2. The Engineer determines that the rejected pile does not require mitigation due to structural, geotechnical, or corrosion concerns, and you elect to repair the pile using the current Department-published version of *ADSC Standard Mitigation Plan 'B' - Grouting Repair* without exception or modification.

Replace item 1 in the list in the 1st paragraph of section 49-3.02A(4)(d)(ii) with:

01-20-12

1. Inspection pipes must be schedule 40 PVC pipe complying with ASTM D 1785 with a nominal pipe size of 2 inches. Watertight PVC couplers complying with ASTM D 2466 are allowed to facilitate pipe lengths in excess of those commercially available. Log the location of the inspection pipe couplers with respect to the plane of pile cutoff.

Add to section 49-3.02A(4)(d)(iv):

01-20-12

If the Engineer determines it is not feasible to use one of ADSC's standard mitigation plans to mitigate the pile, schedule a meeting and meet with the Engineer before submitting a nonstandard mitigation plan.

The meeting attendees must include your representatives and the Engineer's representatives involved in the pile mitigation. The purpose of the meeting is to discuss the type of pile mitigation acceptable to the Department.

Provide the meeting facility. The Engineer conducts the meeting.

Replace the 1st paragraph of section 49-3.02B(5) with:

01-20-12

Grout used to backfill casings must comply with section 50-1.02C, except:

1. Grout must consist of cementitious material and water, and may contain an admixture if authorized. Cementitious material must comply with section 90-1.02B, except SCMs are not required. The minimum cementitious material content of the grout must not be less than 845 lb/cu yd of grout.
2. Aggregate must be used to extend the grout as follows:
 - 2.1. Aggregate must consist of at least 70 percent fine aggregate and approximately 30 percent pea gravel, by weight.
 - 2.2. Fine aggregate must comply with section 90-1.02C(3).
 - 2.3. Size of pea gravel must be such that 100 percent passes the 1/2-inch sieve, at least 90 percent passes the 3/8-inch sieve, and not more than 5 percent passes the no. 8 sieve.
3. California Test 541 is not required.
4. Grout is not required to pass through a sieve with a 0.07-inch maximum clear opening before being introduced into the grout pump.

Replace section 49-3.02B(8) with:

01-20-12

49-3.02B(8) Spacers

Spacers must comply with section 52-1.03D, except you may use plastic spacers.

Plastic spacers must:

1. Comply with sections 3.4 and 3.5 of the Concrete Reinforcing Steel Institute's *Manual of Standard Practice*
2. Have at least 25 percent of their gross plane area perforated to compensate for the difference in the coefficient of thermal expansion between the plastic and concrete
3. Be of commercial quality

Falsework must comply with section 48-2.

Joints must comply with section 51-2.

Elastomeric bearing pads must comply with section 51-3.

Reinforcement for the following concrete structures must comply with section 52:

1. Sound wall footings
2. Sound wall pile caps
3. Barrier slabs
4. Junction structures
5. Minor structures
6. PC concrete members

You may use RSC for a concrete structure only where the specifications allow the use of RSC.

Replace the heading of section 51-1.01D(4) with:

04-19-13

Testing Concrete Surfaces

Add to section 51-1.01D(4)(a):

04-19-13

The Engineer tests POC deck surfaces for smoothness and crack intensity.

Add to the list in the 1st paragraph of section 51-1.01D(4)(b):

04-19-13

3. Completed deck surfaces, including ramps and landings of POCs

Replace the 4th paragraph in section 51-1.01D(4)(b) with:

04-19-13

Except for POCs, surface smoothness is tested using a bridge profilograph under California Test 547. Two profiles are obtained in each lane approximately 3 feet from the lane lines and 1 profile is obtained in each shoulder approximately 3 feet from the curb or rail face. Profiles are taken parallel to the direction of traffic.

Add between the 5th and 6th paragraphs of section 51-1.01D(4)(b):

04-19-13

POC deck surfaces must comply with the following smoothness requirements:

1. Surfaces between grade changes must not vary more than 0.02 foot from the lower edge of a 12-foot-long straightedge placed parallel to the centerline of the POC
2. Surface must not vary more than 0.01 foot from the lower edge of a 6-foot-long straightedge placed perpendicular to the centerline of the POC

Add to section 51-1.01D(4)(d):

04-19-13

The Engineer measures crack intensity of POC deck surfaces after curing, before prestressing, and before falsework release. Clean the surface for the Engineer to measure surface crack intensity.

In any 100 sq ft portion of a new POC deck surface, if there are more than 10 feet of cracks having a width at any point of over 0.02 inch, treat the deck with methacrylate resin under section 15-5.05. Treat the entire deck width between the curbs to 5 feet beyond where the furthest continuous crack emanating from the 100 sq ft section is 0.02 inch wide. Treat the deck surface before grinding.

Add to section 51-1.03C(2)(c)(i):

04-20-12

Permanent steel deck forms are only allowed where shown or if specified as an option in the special provisions.

Replace the 3rd paragraph of section 51-1.03C(2)(c)(ii) with:

04-20-12

Compute the physical design properties under AISI's *North American Specification for the Design of Cold-Formed Steel Structural Members*.

Replace the 8th paragraph of section 51-1.03D(1) with:

10-19-12

Except for concrete placed as pipe culvert headwalls and endwalls, slope paving and aprons, and concrete placed under water, consolidate concrete using high-frequency internal vibrators within 15 minutes of placing concrete in the forms. Do not attach vibrators to or hold them against forms or reinforcing steel. Do not displace reinforcement, ducts, or prestressing steel during vibrating.

Add to section 51-1.03E(5):

08-05-11

Drill the holes without damaging the adjacent concrete. If reinforcement is encountered during drilling before the specified depth is attained, notify the Engineer. Unless coring through the reinforcement is authorized, drill a new hole adjacent to the rejected hole to the depth shown.

Add to section 51-1.03F(5)(a):

04-19-13

For approach slabs, sleeper slabs, and other roadway surfaces of concrete structures, texture the roadway surface as specified for bridge deck surfaces in section 51-1.03F(5)(b).

Replace "Reserved" in section 51-1.03F(5)(b) with:

04-20-12

51-1.03F(5)(b)(i) General

Except for bridge widenings, texture the bridge deck surfaces longitudinally by grinding and grooving or by longitudinal tining.

10-19-12

For bridge widenings, texture the deck surface longitudinally by longitudinal tining.

04-20-12

In freeze-thaw areas, do not texture PCC surfaces of bridge decks.

51-1.03F(5)(b)(ii) Grinding and Grooving

When texturing the deck surface by grinding and grooving, place a 1/4 inch of sacrificial concrete cover on the bridge deck above the finished grade shown. Place items to be embedded in the concrete based on the final profile grade elevations shown. Construct joint seals after completing the grinding and grooving.

Before grinding and grooving, deck surfaces must comply with the smoothness and deck crack treatment requirements.

Grind and groove the deck surface as follows:

1. Grind the surface to within 18 inches of the toe of the barrier under section 42-3. Grinding must not reduce the concrete cover on reinforcing steel to less than 1-3/4 inches.
2. Groove the ground surfaces longitudinally under section 42-2. The grooves must be parallel to the centerline.

51-1.03F(5)(b)(iii) Longitudinal Tining

When texturing the deck surface by longitudinal tining, perform initial texturing with a burlap drag or broom device that produces striations parallel to the centerline. Perform final texturing with spring steel tines that produce grooves parallel with the centerline.

The tines must:

1. Be rectangular in cross section
2. Be from 3/32 to 1/8 inch wide on 3/4-inch centers
3. Have enough length, thickness, and resilience to form grooves approximately 3/16 inch deep

Construct grooves to within 6 inches of the layout line of the concrete barrier toe. Grooves must be from 1/8 to 3/16 inch deep and 3/16 inch wide after concrete has hardened.

For irregular areas and areas inaccessible to the grooving machine, you may hand construct grooves. Hand-constructed grooves must comply with the specifications for machine-constructed grooves.

Tining must not cause tearing of the deck surface or visible separation of coarse aggregate at the surface.

Add to section 51-1.03F:

04-19-13

51-1.03F(6) Finishing Pedestrian Overcrossing Surfaces

Construct deck surfaces, including ramps and landings of POCs to the grade and cross section shown. Surfaces must comply with the specified smoothness, surface texture, and surface crack requirements.

The Engineer sets deck elevation control points for your use in establishing the grade and cross section of the deck surface. The grade established by the deck elevation control points includes all camber allowances. Except for landings, elevation control points include the beginning and end of the ramp and will not be closer together than approximately 8 feet longitudinally and 4 feet transversely to the POC centerline. Landing elevation control points are at the beginning and the end of the landing.

Broom finish the deck surfaces of POCs. Apply the broom finish perpendicular to the path of travel. You may apply water mist to the surface immediately before brooming.

Clean any discolored concrete by abrasive blast cleaning or other authorized methods.

Replace the paragraphs of section 51-1.04 with:

10-19-12

If concrete involved in bridge work is not designated by type and is not otherwise paid for under a separate bid item, the concrete is paid for as structural concrete, bridge.

The payment quantity for structural concrete includes the volume in the concrete occupied by bar reinforcing steel, structural steel, prestressing steel materials, and piling.

The payment quantity for seal course concrete is the actual volume of seal course concrete placed except the payment quantity must not exceed the volume of concrete contained between vertical planes 1 foot outside the neat lines of the seal course shown. The Department does not adjust the unit price for an increase or decrease in the seal course concrete quantity.

Structural concrete for pier columns is measured as follows:

1. Horizontal limits are vertical planes at the neat lines of the pier column shown.
2. Bottom limit is the bottom of the foundation excavation in the completed work.
3. Upper limit is the top of the pier column concrete shown.

The payment quantity for drill and bond dowel is determined from the number and depths of the holes shown.

Replace section 51-2.01B(2) with:

04-19-13

51-2.01B(2) Reserved

04-19-13

Delete the 4th paragraph of section 51-2.01C.

Replace "SSPC-QP 3" in the 1st paragraph of section 51-2.02A(2) with:

10-19-12

AISC-420-10/SSPC-QP 3

Replace the 2nd and 3rd paragraphs of section 51-2.02B(3)(b) with:

04-20-12

Concrete saws for cutting grooves in the concrete must have diamond blades with a minimum thickness of 3/16 inch. Cut both sides of the groove simultaneously for a minimum 1st pass depth of 2 inches. The completed groove must have:

1. Top width within 1/8 inch of the width shown or ordered
2. Bottom width not varying from the top width by more than 1/16 inch for each 2 inches of depth
3. Uniform width and depth

Cutting grooves in existing decks includes cutting any conflicting reinforcing steel.

Replace "sets" in the 1st and 2nd paragraphs of section 51-2.02D(1)(c)(ii) with:

04-19-13

copies

Replace "set" in the 7th paragraph of section 51-2.02D(1)(c)(ii) with:

04-19-13

copy

Add to the 1st paragraph of section 51-2.02D(3):

04-19-13

POC deck surfaces must comply with section 51-1.03F(6) before placing and anchoring joint seal assemblies.

Replace "sets" in the 2nd paragraph of section 51-2.02E(1)(c) with:

04-19-13

copies

Replace "set" in the 6th paragraph of section 51-2.02E(1)(c) with:

04-19-13

copy

Replace the 2nd paragraph of section 51-2.02E(1)(e) with:

08-05-11

Except for components in contact with the tires, the design loading must be the AASHTO LRFD Bridge Design Specifications Design Truck with 100 percent dynamic load allowance. Each component in contact with the tires must support a minimum of 80 percent of the AASHTO LRFD Bridge Design Specifications Design Truck with 100 percent dynamic load allowance. The tire contact area must be 10 inches measured normal to the longitudinal assembly axis by 20 inches wide. The assembly must provide a smooth-riding joint without slapping of components or tire rumble.

Replace "sets" in the 1st and 2nd paragraphs of section 51-2.02F(1)(c) with:

04-19-13

copies

Add between the 1st and 2nd paragraphs of section 51-4.01A:

10-19-12

Prestressing concrete members must comply with section 50.

Delete the 2nd paragraph of section 51-4.01A.

04-20-12

Replace the 3rd paragraph of section 51-4.01C(2) with:

04-20-12

For segmental or spliced-girder construction, shop drawings must include the following additional information:

1. Details showing construction joints or closure joints
2. Arrangement of bar reinforcing steel, prestressing tendons, and pressure-grouting pipe
3. Materials and methods for making closures
4. Construction joint keys and surface treatment

5. Other requested information

For segmental girder construction, shop drawings must include concrete form and casting details.

Replace "sets" in the 1st paragraph of section 51-4.01C(3) with:

copies

04-19-13

Delete the 1st and 2nd paragraphs of section 51-4.02A.

10-19-12

Replace the 3rd paragraph of section 51-4.02B(2) with:

For segmental or spliced-girder construction, materials for construction joints or closure joints at exterior girders must match the color and texture of the adjoining concrete.

04-20-12

Add to section 51-4.02B(2):

At spliced-girder closure joints:

04-20-12

1. If shear keys are not shown, the vertical surfaces of the girder segment ends must be given a coarse texture as specified for the top surface of PC members.
2. Post-tensioning ducts must extend out of the vertical surface of the girder segment closure end sufficiently to facilitate splicing of the duct.

For spliced girders, pretension strand extending from the closure end of the girder segment to be embedded in the closure joint must be free of mortar, oil, dirt, excessive mill scale and scabby rust, and other coatings that would destroy or reduce the bond.

Add to section 51-4.03B:

The specifications for prestressing force distribution and sequencing of stressing in the post-tensioning activity in 50-1.03B(2)(a) do not apply if post-tensioning of spliced girders before starting deck construction is described. The composite deck-girder structure must be post-tensioned in a subsequent stage.

04-20-12

Temporary spliced-girder supports must comply with the specifications for falsework in section 48-2.

Before post-tensioning of spliced girders, remove the forms at CIP concrete closures and intermediate diaphragms to allow inspection for concrete consolidation.

Add between the 1st and 2nd paragraphs of section 51-7.01A:

Minor structures include:

10-19-12

1. Pipe culvert headwalls and endwalls for a pipe with a diameter less than 5 feet
2. Drainage inlets
3. Other structures described as minor structures

You must provide enclosures for cleaning and painting structural steel. Cleaning and painting of new structural steel must be performed in an Enclosed Shop as defined in AISC-420-10/SSPC-QP 3. Maintain atmospheric conditions inside enclosures within specified limits.

Except for blast cleaning within closed buildings, perform blast cleaning and painting during daylight hours.

Replace item 1 in the list in the 2nd paragraph of section 59-2.03C(1) with:

10-19-12

1. Apply a stripe coat of undercoat paint on all edges, corners, seams, crevices, interior angles, junctions of joining members, weld lines, and similar surface irregularities. The stripe coat must completely hide the surface being covered. If spot blast cleaning portions of the bridge, apply the stripe coat of undercoat paint before each undercoat and follow with the undercoat as soon as practical. If removing all existing paint from the bridge, apply the undercoat first as soon as practical and follow with the stripe coat of undercoat paint for each undercoat.

Replace the heading of section 59-2.03C(2) with:

04-19-13

Zinc Coating System

Add to section 59-2.03C(2)(a):

04-19-13

Coatings for new structural steel and connections between new and existing structural steel must comply with the requirements shown in the following table:

Zinc Coating System		
Description	Coating	Dry film thickness (mils)
All new surfaces:		
Undercoat	Inorganic zinc primer, AASHTO M 300 Type I or II	4–8
Finish coat ^a	Exterior grade latex ^b , 2 coats	2 minimum each coat, 4–8 total
Total thickness, all coats		8–14
Connections to existing structural steel:^c		
Undercoat	Inorganic zinc primer, AASHTO M 300 Type I or II	4–8
Finish coat ^a	Exterior grade latex ^b , 2 coats	2 minimum each coat, 4–8 total
Total thickness, all coats		8–14

^aIf no finish coats are described, a final coat of inorganic zinc primer is required.

^bExterior grade latex must comply with section 91-2.02 unless otherwise specified.

^cIncludes the following locations:

1. New and existing contact surfaces
2. Existing member surfaces under new HS bolt heads, nuts, or washers
3. Bare surfaces of existing steel after trimming, cutting, drilling, or reaming
4. Areas within a 4-inch radius from the point of application of heat for welding or flame cutting

Add to section 59-2.03C:

04-19-13

59-2.03C(3) Moisture-Cured Polyurethane Coating System

Reserved

59-2.03C(4) State Specification Paint Waterborne Coating System

59-2.03C(4)(a) General

The State Specification PWB coating system for existing structural steel must comply with the requirements shown in the following table:

State Specification PWB Coating System

Surface	Description	State Specification PWB Coating	Dry film thickness (mils)
Surfaces cleaned to bare metal ^a :	1st undercoat	145	2-3
	2nd undercoat	146	2-3
	1st finish coat	171	1.5-3
	2nd finish coat	172	1.5-3
	Total thickness, all coats	--	7-12
Existing painted surfaces to be topcoated:	Undercoat	146	2-3
	1st finish coat	171	1.5-3
	2nd finish coat	172	1.5-3
	Total thickness, new coats	--	5-9

^aIncludes locations of spot blast cleaning

59-2.03C(4)(b) Finish Coats

Pressure rinse undercoated surfaces to receive finish coats. Perform pressure rinsing no sooner than 72 hours after the final application of undercoat.

The 1st finish coat must be applied within 48 hours of pressure rinsing.

Apply the 1st finish coat in 2 applications. The 1st application consists of a spray-applied mist application. Apply the 2nd application after the mist application has dried to a set-to-touch condition as determined using the procedure in section 7 of ASTM D 1640.

Apply the 2nd finish coat after the 1st finish coat has dried 12 hours unless authorized. You may apply the 2nd finish coat in a single application.

Add to section 59-5.01:

04-19-13

Where specified, prepare and paint sign structures under sections 59-2 and 59-3.

Instead of submitting proof of the certification complying with SSPC-QP 1, you may submit documentation with the painting quality work plan showing compliance with the requirements in section 3 of SSPC-QP 1.

Instead of submitting proof of the certification complying with SSPC-QP 2, you may submit documentation with the painting quality work plan showing compliance with the requirements in sections 4.2 through 4.4 of SSPC-QP 2, Category A.

Instead of submitting proof of the certification complying with AISC-420-10/SSPC-QP 3 (Enclosed Shop), you may submit documentation with the painting quality work plan showing compliance with the requirements in sections 5 through 18 of AISC-420-10/SSPC-QP3.

AA

DIVISION VIII MISCELLANEOUS CONSTRUCTION
72 SLOPE PROTECTION

01-18-13

Replace the row under "Class" in the table in the 1st paragraph of section 72-3.02B with:

01-20-12

1/2 T	1/4 T	Light	Facing	Cobble
-------	-------	-------	--------	--------

Replace the row under "Rock class" in the table in the 2nd paragraph of section 72-3.03E with:

01-20-12

1/2 T	1/4 T	Light	Facing	Cobble
-------	-------	-------	--------	--------

Add to section 72-11.01B:

01-18-13

Expanded polystyrene and premolded expansion joint filler must comply with section 51-2.

Replace the 1st paragraph of section 72-11.01C(2) with:

01-18-13

Construct and finish minor concrete slope paving under section 51-1.

AA

74 PUMPING EQUIPMENT AND CONTROLS

04-19-13

Replace the 1st paragraph of section 74-1.01C(3) with:

04-19-13

Submit at least 5 copies of product data to OSD, Documents Unit. Each copy must be bound together and include an index stating equipment names, manufacturers, and model numbers. Two copies will be returned. Notify the Engineer of the submittal. Include in the notification the date and contents of the submittal.

Replace the 1st sentence of the 1st paragraph in section 74-2.01D(2) with:

01-20-12

Drainage pumps must be factory certified under ANSI/HI 14.6.

AA

Replace the 3rd and 4th paragraphs of section 80-2.02F with:

10-19-12

Each staple used to fasten barbed wire and wire mesh fabric to wood posts must:

1. Comply with ASTM F 1667
2. Be at least 1-3/4 inches long
3. Be manufactured from 9-gage galvanized wire

Wire ties used to fasten barbed wire and wire mesh to metal posts must be at least 11-gage galvanized wire complying with ASTM F 626. Clips and hog rings used for metal posts must be at least 9-gage galvanized wire complying with ASTM F 626.

Replace the 8th through 14th paragraphs of section 80-2.03 with:

10-19-12

Attach the wire mesh and barbed wire to each post.

Securely fasten tension wires to wood posts. Make a single or double loop around each post at each attachment point and staple the wire to the post. Use wire ties, hog rings, or wire clips to fasten the wires to the metal posts.

Connect each wood brace to its adjacent post with a 3/8 by 4-inch steel dowel. Twist the tension wires until the installation is rigid.

Stretch barbed wire and wire mesh fabric and fasten to each wood or steel end, corner, or gate post. Apply tension according to the manufacturer's instructions using a mechanical stretcher or other device designed for such use. If no tension is specified by the manufacturer, use 250 pounds for the required tension. Evenly distribute the pull over the longitudinal wires in the wire mesh such that no more than 50 percent of the original depth of the tension curves is removed. Do not use a motorized vehicle, truck, or tractor to stretch the wire.

Attach barbed wire and wire mesh fabric to the private-property side of posts. On curved alignments, place the wire mesh and barbed wire on the face of the post against which the normal pull of the wire mesh and wire will be exerted. Terminate the wire mesh and barbed wire at each end, corner, pull, and gate post in the new fence line. Attach wire mesh and barbed wire to each wood or steel end, corner, pull, or gate post by wrapping each horizontal strand around the post and tying it back on itself with at least 4 tightly-wound wraps.

At line posts, fasten the wire mesh to the post at the top and bottom and at intermediate points not exceeding 10 inches apart. Fasten each line of barbed wire to each line post. Use wire ties or clips to fasten the wires to metal posts under the post manufacturer's instructions. Drive staples crosswise with the grain of the wood and pointed slightly downward. Drive staples just short of actual contact with the wires to allow free longitudinal movement of those wires and to prevent damage to the wire's protective coating. Secure all wires to posts to maintain horizontal alignment.

Splices in barbed wire and wire mesh are allowed provided there are no more than 2 splices per 50 feet of fence. Use commercially-available galvanized mechanical wire splices or a wire splice created by tying off wire. Install mechanical wire splices with a tool designed for that purpose under the manufacturer's instructions. Tie off the wire as follows:

1. Carry the ends of each wire 3 inches past the tied-off knot location and wrap around the wire for at least 6 turns in opposite directions.
2. Remove the splice tool and close the space by pulling the end of the wires together.
3. Cut the unused ends of the wire close and neat.

AA

86 ELECTRICAL SYSTEMS

10-19-12

Replace section 86-2.06 with:

01-20-12

86-2.06 PULL BOXES

86-2.06A General

86-2.06A(1) Cover Marking

Marking must be clearly defined, uniform in depth, and parallel to either the long or short sides of the cover.

Marking letters must be 1 to 3 inches high.

Before galvanizing steel or cast iron cover, apply marking by one of the following methods:

1. Use cast iron strip at least 1/4 inch thick with letters raised a minimum of 1/16 inch. Fasten strip to cover with 1/4-inch flathead stainless steel machine bolts and nuts. Peen bolts after tightening.
2. Use sheet steel strip at least 0.027 inch thick with letters raised a minimum of 1/16 inch. Fasten strip to cover by spot welding, tack welding, or brazing, with 1/4-inch stainless steel rivets or 1/4-inch roundhead stainless steel machine bolts and nuts. Peen bolts after tightening.
3. Bead weld the letters on cover such that the letters are raised a minimum of 3/32 inch.

86-2.06A(2) Installation and Use

Space pull boxes no more than 200 feet apart. You may install additional pull boxes to facilitate the work.

You may use a larger standard size pull box than that shown on the plans or specified.

A pull box in ground or sidewalk area must be installed as follows:

1. Embed bottom of the pull box in crushed rock.
2. Place a layer of roofing paper on the crushed rock.
3. Place grout over the layer of roofing paper. Grout must be 0.50 to 1 inch thick and sloped toward the drain hole.
4. Make a 1-inch drain hole in the center of the pull box through the grout and roofing paper.
5. Place grout between the pull box and the pull box extension, and around conduits.

The top of the pull box must be flush with the surrounding grade or the top of an adjacent curb, except in unpaved areas where the pull box is not immediately adjacent to and protected by a concrete foundation, pole, or other protective construction. Place the pull box 1-1/4 inches above the surrounding grade. Where practical, place a pull box shown in the vicinity of curbs or adjacent to a standard on the side of the foundation facing away from traffic. If a pull box is installed in a sidewalk area, adjust the depth of the pull box so that the top of the pull box is flush with the sidewalk.

Reconstruct the sump of an existing pull box if disturbed by your activities. Remove old grout and replace with new if the sump was grouted.

86-2.06B Non-Traffic-Rated Pull Boxes

Reserved

86-2.06C Traffic Pull Boxes

Traffic pull box and cover must comply with ASTM C857, "Standard Practice for Minimum Structural Design Loading for Underground Precast Concrete Utility Structures," for HS20-44 loading. You must be able to place the load anywhere on the box and cover for 1 minute without causing cracks or permanent deformations.

Frame must be anchored to the box with 1/4 by 2-1/4 inch concrete anchors. Four concrete anchors must be included for No. 3-1/2(T) pull box; one placed in each corner. Six concrete anchors must be included for No. 5(T) and No. 6(T) pull boxes; one placed in each corner and one near the middle of each of the longer sides.

Nuts must be zinc-plated carbon steel, vibration resistant, and have a wedge ramp at the root of the thread.

After installation of traffic pull box, install the steel cover and keep it bolted down when your activities are not in progress at the pull box. When the steel cover is placed for the final time, the cover and Z bar frame must be cleaned of debris and tightened securely.

Steel cover must be countersunk approximately 1/4 inch to accommodate the bolt head. When tightened, the bolt head must not exceed more than 1/8 inch above the top of the cover.

Concrete placed around and under traffic pull boxes must be minor concrete.

Replace "project" in the 3rd paragraph of section 86-2.11A with:

work

10-19-12

Replace "Contract" in item 2 in the list in the 11th paragraph of section 86-2.11A with:

work

10-19-12

^^

88 GEOSYNTHETICS

01-18-13

Replace the row for hydraulic bursting strength in the table in the 2nd paragraph of section 88-1.02B with:

Puncture strength, lb min	ASTM D 6241	310
Trapezoid tearing strength, lb min	ASTM D 4533	56

10-19-12

Replace the 3rd paragraph in section 88-1.02C with:

Geocomposite wall drain must be from 0.25 to 2 inches thick.

10-19-12

Replace the value for permittivity of woven fabric in the table in the 1st paragraph of section 88-1.02E with:

0.05

01-20-12

Replace the value for apparent size opening of nonwoven fabric in the table in the 1st paragraph of section 88-1.02E with:

01-20-12

0.012

Replace the table in the 1st paragraph of section 88-1.02G with:

01-20-12

Sediment Filter Bag

Property	Test	Values	
		Woven	Nonwoven
Grab breaking load, lb, 1-inch grip min, in each direction	ASTM D 4632	200	250
Apparent elongation, percent min, in each direction	ASTM D 4632	10	50
Water flow rate, gal per minute/sq ft min and max average roll value	ASTM D 4491	100-200	75-200
Permittivity, sec ⁻¹ min	ASTM D 4491	1.0	1.0
Apparent opening size, inches max average roll value	ASTM D 4751	0.023	0.012
Ultraviolet resistance, % min retained grab breaking load, 500 hr.	ASTM D 4355	70	70

Replace the table in the 1st paragraph of section 88-1.02H with:

01-20-12

Temporary Cover

Property	Test	Values	
		Woven	Nonwoven
Grab breaking load, lb, 1-inch grip min, in each direction	ASTM D 4632	200	200
Apparent elongation, percent min, in each direction	ASTM D 4632	15	50
Water flow rate, gal per minute/sq ft min and max average roll value	ASTM D 4491	4-10	80-120
Permittivity, sec ⁻¹ min	ASTM D 4491	0.05	1.0
Apparent opening size, inches max average roll value	ASTM D 4751	0.023	0.012
Ultraviolet resistance, % min retained grab breaking load, 500 hr.	ASTM D 4355	70	70

Replace section 88-1.02P with:

01-18-13

88-1.02P Biaxial Geogrid

Geosynthetics used for biaxial geogrid must be a punched and drawn polypropylene material formed into an integrally formed biaxial grid. When tested under the referenced test methods, properties of biaxial geogrid must have the values shown in the following table:

Biaxial Geogrid

Property	Test	Value
Aperture size, inch ^a min and max	Calipered	0.8-1.3 x 1.0-1.6
Rib thickness, inch min	Calipered	0.04
Junction thickness, inch min	Calipered	0.150
Tensile strength, 2% strain, lb/ft ^a min	ASTM D 6637	410 x 620
Tensile strength at ultimate, lb/ft ^a min	ASTM D 6637	1,310 x 1,970
Ultraviolet resistance, percent min retained tensile strength, 500 hours	ASTM D 4355	100
Junction strength, lb/ft ^a min	ASTM D 7737	1,220 x 1,830
Overall flexural rigidity, mg-cm min	ASTM D 7748	750,000
Torsional rigidity at 20 cm-kg, mm-kg/deg ^b min	GRI:GG9	0.65

^aMachine direction x cross direction

^bGeosynthetic Research Institute, Test Method GG9, *Torsional Behavior of Bidirectional Geogrids When Subjected to In-Plane Rotation*

AA

DIVISION X MATERIALS

90 CONCRETE

08-05-11

Replace the 3rd paragraph of section 90-1.01C(7) with:

08-05-11

Submit weighmaster certificates in printed form or, if authorized, in electronic media. Present electronic media in a tab-delimited format on a CD or DVD. Captured data for the ingredients represented by each batch must be line feed carriage return and one line separate record with sufficient fields for the specified data.

Replace the 3rd paragraph of section 90-3.01C(5) with:

08-05-11

Production data must be input by hand into a pre-printed form or captured and printed by the proportioning device. Present electronic media containing recorded production data in a tab-delimited

format on a CD or DVD. Each capture of production data must be followed by a line feed carriage return with sufficient fields for the specified data.

AA

91 PAINT

10-19-12

Add to section 91-2:

10-19-12

91-2.03 MOISTURE-CURED POLYURETHANE COATING

Reserved

Replace "saint" in the 1st paragraph of section 91-4.05 with:

10-19-12

paint

AA

92 ASPHALTS

01-20-12

Replace the row for dynamic shear for original binder in the table in the 1st paragraph of section 92-1.02B with:

01-20-12

Dynamic shear, Test temperature at 10 rad/s, °C	T 315	58	64	64	64	70
min G*/sin(delta), kPa		1.00	1.00	1.00	1.00	1.00
max G*/sin(delta), kPa		2.00	2.00	2.00	2.00	2.00

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Improvements

Contract No. PW No. 09-30425

CIP No. 73320

Appendix B
Permits



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

RECEIVED
DOT

2013 APR -4 AM 11:41

REPLY TO
ATTENTION OF

April 1, 2013

Regulatory Division (SPK-2009-00709)

Ms. Janet Postlewait
El Dorado County Department of Transportation
2850 Fairlane Court
Placerville, California 95667

Dear Ms. Postlewait:

We are responding to your November 19, 2012, request for a Department of the Army permit for the Pleasant Valley Road & Patterson Drive Intersection Project. This approximately 8.99-acre project involves activities, including discharges of dredged or fill material, in waters of the United States to improve and widen the intersection of Pleasant Valley Road and Patterson Drive. The project is located in Section 25, Township 10 North, Range 10 East, Mount Diablo Meridian, Latitude 38.6886306733967°, Longitude -120.831330360175°, Town of Diamond Springs, El Dorado County, California.

Based on the information you provided, the proposed activity, resulting in the permanent loss of approximately 0.0456 acre of waters of the U.S., is authorized by Nationwide Permit (NWP) Number 14. However, until Section 401 Water Quality Certification for the activity has been issued or waived, our authorization is denied without prejudice. Once you have provided us evidence of water quality certification, the activity is authorized and the work may proceed subject to the conditions of certification and the NWP. Your work must comply with the general terms and conditions listed on the enclosed NWP information sheets and regional conditions (enclosure 1), and the following Special Conditions:

Special Conditions

1. To ensure your project complies with the Federal Endangered Species Act, you must implement all of the mitigating measures proposed as part of your project description, which are identified in the enclosed U.S. Fish and Wildlife Service letter of concurrence (Number 08ESMF00-2013-I-0150, dated March 19, 2013) (enclosure 2). If you are unable to implement any of the proposed measures, you must immediately notify the Corps and the U.S. Fish and Wildlife Office so we may consult as appropriate, prior to initiating the work, in accordance with federal law.
2. Within 30 days prior to initiation of construction activities within waters of the U.S., you shall submit to the Corps pre-construction site photographs of the project site, which have been taken no more than 30 days prior to initiation of construction activities. Within 30 days following construction activities, you shall submit post-construction site photographs of the

project site, showing the work conducted, to the Corps. The camera positions and view angles of post-construction photographs shall be identified on a map, aerial photos, or project drawing. Construction locations shall include all major project features and waters of the U.S.

3. You and your authorized contractor shall allow representatives from the Corps to inspect the authorized activity and avoidance areas at any time deemed necessary to ensure that work is being or has been accomplished in accordance with the terms and conditions of this verification.

4. To ensure permit compliance, the enclosed drawing entitled *Figure 2 Impacts to waters of the United States*, dated November 19, 2012, is incorporated as a condition of this authorization (enclosure 3).

5. You are responsible for all work authorized herein and ensuring that all contractors and workers are made aware and adhere to the terms and conditions of this permit authorization. You shall ensure that a copy of the permit authorization and associated drawings are available for quick reference at the project site until all construction activities are completed.

6. To mitigate for the loss of 0.0456 acre of waters of the U.S. you shall submit a check to the Corps in the amount of \$8,550.00 (\$150,000.00 per acre x 0.0456 acre x 1.25 ratio) payable to the National Fish and Wildlife Foundation (NFWF). Prior to initiation of any construction activities within waters of the U.S., you must receive written notification from the Corps that the check has been deposited in NFWF's Sacramento District Wetlands Conservation Fund.

7. You shall clearly identify the limits of disturbance in the field with highly visible markers (e.g. construction fencing, flagging, silt barriers, etc.) prior to commencement of construction activities within waters of the U.S. You shall maintain such identification properly until construction is completed and the soils have been stabilized. You are prohibited from any activity (e.g. equipment usage or materials storage) that impacts waters of the U.S. outside of the permit limits (as shown on Figure 2 above).

8. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you shall immediately notify the Corps of what you have found. The Corps will initiate the federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places

You must sign the enclosed Compliance Certification and return it to this office within 30 days after completion of the authorized work.

This verification is valid until March 18, 2017, when the existing NWP's are scheduled to be modified, reissued, or revoked. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant NWP is modified, reissued or revoked, you will have twelve (12) months from the date of the modification, reissuance or revocation of the NWP to complete the activity under the present terms and conditions. Failure to comply with the General and Regional Conditions of this NWP, or the project-specific Special Conditions of this authorization, may result in the suspension or revocation of your authorization.

We would appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2009-00709 in any correspondence concerning this project. If you have any questions, please contact Mr. Peck Ha at California North Branch Office, Regulatory Division, Sacramento District, U.S. Army Corps of Engineers, 1325 J Street, Room 1350, Sacramento, California 95814-2922, email Peck.Ha@usace.army.mil, or telephone 916-557-6617. For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,



Nancy Arcady Haley
Chief, California North Branch

Enclosures

Copy Furnished without enclosures:

Ms. Leslie Perry, North State Resources, 1321 20th Street, Sacramento, CA 95811

COMPLIANCE CERTIFICATION

Permit File Number: SPK-2009-00709

Nationwide Permit Number: 14

Permittee: Janet Postlewait
El Dorado County Department of Transportation
2850 Fairlane Court
Placerville, California 95667

County: El Dorado

Date of Verification: April 1, 2013

Within 30 days after completion of the activity authorized by this permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Sacramento District
1325 J Street, Room 1350
Sacramento, California 95814-2922
DLL-CESPK-RD-Compliance@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions of the permit your authorization may be suspended, modified, or revoked. If you have any questions about this certification, please contact the Corps of Engineers.

* * * * *

I hereby certify that the work authorized by the above-referenced permit, including all the required mitigation, was completed in accordance with the terms and conditions of the permit verification.

Signature of Permittee

Date



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
08ESMF00-2013-I-0150

MAR 22 2013

MAR 19 2013

Mr. William Ness
Senior Project Manager, California North Branch
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Subject: Informal Endangered Species Consultation for the Pleasant Valley Road & Patterson Drive Intersection Signalization Project (SPK-2009-00709), El Dorado County, California

Dear Mr. Ness:

This is in response to your December 6, 2012, letter requesting informal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Pleasant Valley Road & Patterson Drive Intersection Signalization Project (Project). The Project site is located at the intersection of Pleasant Valley Road (SR 49) and Patterson Drive in Diamond Springs, El Dorado County, California. At issue are the potential effects to the threatened California red-legged frog (*Rana draytonii*). This response is provided in accordance with the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

Our response is based on: (1) the December 20, 2012, letter to initiate informal consultation from the U.S. Army Corps of Engineers (Corps); (2) the July 2008 (Revised March 2009) *Biological Resources Assessment*; (3) the April 2009 California Red-legged Frog Habitat Site Assessment; (4) the November 16, 2012 Pre-construction Notification and (5) other information available to the Service.

The County of El Dorado Department of Transportation (County) is proposing an improvement project to the intersection of Pleasant Valley Road and Patterson Drive. The proposed improvements would include: widening approaches to the intersection; installation of curbs, gutters, and sidewalks; installation of three traffic signals; and the addition of turn pockets. The purpose of the Project is to alleviate traffic congestion and is part of the County growth plan. The Project would entail the reconstruction of the road prism 600 feet southwest from the intersection and 800 feet northwest from the intersection, the alignment and profile of Pleasant Valley Road would remain unchanged. An excavation depth of 12 – 18 inches is anticipated

Mr. William Ness

3

Given the distance to the nearest known California red-legged frog occurrence, the absence of suitable breeding habitat within the action area, the seasonal nature of the wetland and drainage, and the implementation of proposed conservation measures, the Service concurs with your determination that the proposed Pleasant Valley Road & Patterson Drive Intersection Signalization Project may affect, but is not likely to adversely affect the California red-legged frog. Adverse effects to this species are extremely unlikely to occur as a result of the Project and are therefore discountable.

Unless new information reveals effects of the proposed action that may affect federally listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act, is necessary.

Please address any questions or concerns regarding this response on the proposed Pleasant Valley Road & Patterson Drive Intersection Signalization Project, to Amanda Piscitelli, Fish and Wildlife Biologist, or Ryan Olah, Coast Bay/Forest Foothills Division Chief, at (916) 414-6600, or via email at Amanda_Piscitelli@fws.gov or Ryan_Olah@fws.gov.

Sincerely,



for Eric Tattersall
Deputy Assistant Field Supervisor

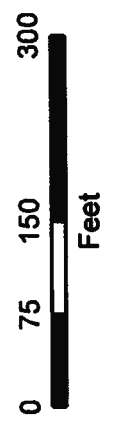


- Project Area**
- Project Area
 - Area of Disturbance (5.7 ac)
- Waters of the United States**
- Ephemeral Drainage (0.001 ac, 15 linear feet)
 - Seasonal Wetland (0.230 ac)

- Impacts**
- Ephemeral Drainage (0.001 ac, 15 linear feet)
 - Seasonal Wetland (0.045 ac)



1:1,800



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Pleasant Valley Road (SR 49)/Patterson Drive Intersection Signalization Project

Figure 2
Impacts to Waters of the United States

Nov 19, 2012



Central Valley Regional Water Quality Control Board

10 April 2013

Janet Postlewait
El Dorado County
Department of Transportation
2850 Fairlane Court
Placerville, CA 95667

CERTIFIED MAIL
7012 0010 0002 1419 9692

CLEAN WATER ACT §401 TECHNICALLY CONDITIONED WATER QUALITY CERTIFICATION; EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION, PLEASANT VALLEY ROAD/PATTERSON DRIVE INTERSECTION SIGNALIZATION PROJECT (WDID#5B09CR00022), EL DORADO COUNTY

This Order responds to the 19 November 2012 application submitted by the El Dorado County Department of Transportation (Applicant) for the Water Quality Certification of a road improvements project permanently impacting 0.056 acre of waters of the United States.

This Order serves as certification of the United States Army Corps of Engineers' Nationwide Permit# 14 (SPK# 2009-00709) under § 401 of the Clean Water Act, and a Waste Discharge Requirement under the Porter-Cologne Water Quality Control Act.

WATER QUALITY CERTIFICATION STANDARD CONDITIONS:

1. This Order serves as a Water Quality Certification (Certification) action that is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to § 13330 of the California Water Code and § 3867 of the California Code of Regulations.
2. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to § 3855(b) of the California Code of Regulations, and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. The validity of any non-denial Certification action shall be conditioned upon total payment of the full fee required under § 3860(c) of the California Code of Regulations.

4. This Certification is no longer valid if the project (as described) is modified, or coverage under § 404 of the Clean Water Act has expired.
5. All reports, notices, or other documents required by this Certification or requested by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) shall be signed by a person described below or by a duly authorized representative of that person.
 - (a) For a corporation: by a responsible corporate officer such as (1) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function; (2) any other person who performs similar policy or decision-making functions for the corporation; or (3) the manager of one or more manufacturing, production, or operating facilities if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - (b) For a partnership or sole proprietorship: by a general partner or the proprietor.
 - (c) For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.
6. Any person signing a document under Standard Condition number 5 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

TECHNICAL CERTIFICATION CONDITIONS:

In addition to the above standard conditions, the Applicant shall satisfy the following:

1. The Applicant shall notify the Central Valley Water Board in writing seven (7) days in advance of the start of any work within waters of the United States. The notification shall include the name of the project and the WDID number, and shall be sent to the Central Valley Water Board Contact indicated in this Certification.
2. Except for activities permitted by the United States Army Corps of Engineers under § 404 of the Clean Water Act, soil, silt, or other organic materials shall not be placed where such materials could pass into surface water or surface water drainage courses.

3. The Applicant shall maintain a copy of this Certification and supporting documentation (Project Information Sheet) at the Project site during construction for review by site personnel and agencies. All personnel (employees, contractors, and subcontractors) performing work on the proposed project shall be adequately informed and trained regarding the conditions of this Certification.
4. The Applicant shall perform surface water sampling:
 - a) when performing any in-water work;
 - b) in the event that project activities result in any materials reaching surface waters; or
 - c) when any activities result in the creation of a visible plume in surface waters. The monitoring requirements in Table 1 shall be conducted upstream out of the influence of the project, and 300 feet downstream of the work area. The sampling frequency may be modified for certain projects with written approval from Central Valley Water Board staff.

Table 1:

Parameter	Unit	Type of Sample	Minimum Sampling Frequency	Required Analytical Test Method
Turbidity	NTU	Grab ⁽¹⁾	Every 4 hours during in-water work	(2)
Settleable Material	mL/L	Grab ⁽¹⁾	Every 4 hours during in-water work	(2)
Visible construction related pollutants ⁽³⁾	Observations	Visual Inspections	Continuous throughout the construction period	—
pH	Standard Units	Grab ⁽¹⁾	Every 4 hours during in-water work	(2)

⁽¹⁾ Grab samples shall not be collected at the same time each day to get a complete representation of variations in the receiving water.

⁽²⁾ Pollutants shall be analyzed using the analytical methods described in 40 Code of Federal Regulations Part 136; where no methods are specified for a given pollutant, the method shall be approved by Central Valley Water Board staff.

⁽³⁾ Visible construction-related pollutants include oil, grease, foam, fuel, petroleum products, and construction-related, excavated, organic or earthen materials.

A surface water monitoring report shall be submitted to the Central Valley Water Board Contact indicated in this Certification within two weeks of initiation of sampling and every two weeks thereafter. In reporting the monitoring data, the Applicant shall arrange the data in tabular form so that the sampling locations, date, constituents, and concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the project complies with Certification requirements. The report shall include surface water sampling results, visual observations, and identification of the turbidity increase in the receiving water applicable to the natural turbidity conditions specified in the turbidity criteria below.

If no monitoring is conducted, the Applicant shall submit a written statement to the Central Valley Water Board Contact indicated in the Certification stating, "No monitoring was required."

5. The Central Valley Water Board adopted a *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised October 2011 (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Turbidity, settleable matter, pH limits are based on water quality objectives contained in the Basin Plan and are part of this Certification as follows:

- a) Activities shall not cause turbidity increases in surface water to exceed:
 - i. where natural turbidity is less than 1 Nephelometric Turbidity Units (NTUs), controllable factors shall not cause downstream turbidity to exceed 2 NTUs;
 - ii. where natural turbidity is between 1 and 5 NTUs, increases shall not exceed 1 NTU;
 - iii. where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent;
 - iv. where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs; and
 - v. where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.

Except that these limits will be eased during in-water working periods to allow a turbidity increase of 15 NTUs over background turbidity. In determining compliance with the above limits, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. Averaging periods may only be used with prior approval of the Central Valley Water Board staff.

- b) Activities shall not cause settleable matter to exceed 0.1 mL/L in surface waters as measured in surface waters within 300 feet downstream of the project.
 - c) Activities shall not cause pH to be depressed below 6.5 nor raised above 8.5 in surface water.
6. The Applicant shall notify the Central Valley Water Board immediately if the above criteria for turbidity, settleable matter, pH or other water quality objectives are exceeded.
7. In-water work shall occur during periods of no flow and no precipitation.

8. Refueling of equipment within the floodplain or within 300 feet of the waterway is prohibited. If critical equipment must be refueled within 300 feet of the waterway, spill prevention and countermeasures must be implemented to avoid spills. Refueling areas shall be provided with secondary containment including drip pans and/or placement of absorbent material. No hazardous materials, pesticides, fuels, lubricants, oils, hydraulic fluids, or other construction-related potentially hazardous substances should be stored within a floodplain or within 300 feet of a waterway. The Applicant must perform frequent inspections of construction equipment prior to utilizing it near surface waters to ensure leaks from the equipment are not occurring and are not a threat to water quality.
9. Concrete must completely be cured before coming into contact with waters of the United States. Surface water that contacts wet concrete must be pumped out and disposed of at an appropriate off-site commercial facility, which is authorized to accept concrete wastes.
10. Silt fencing, straw wattles, or other effective management practices must be used along the construction zone to minimize soil or sediment along the embankments from migrating into the waters of the United States through the entire duration of the project.
11. The use of netting material (e.g., monofilament-based erosion blankets) that could trap aquatic dependent wildlife is prohibited within the project area, as indicated in the attached map (Figure 1).
12. All areas disturbed by project activities shall be protected from washout or erosion.
13. All temporarily affected areas shall be restored to pre-construction contours and conditions upon completion of construction activities.
14. All materials resulting from the project shall be removed from the site and disposed of properly.
15. This Certification does not allow permanent water diversion of flow from the receiving water. This Certification is invalid if any water is permanently diverted as a part of the project.
16. The discharge of petroleum products or other excavated materials to surface water is prohibited. Activities shall not cause visible oil, grease, or foam in the receiving water. The Applicant shall notify the Central Valley Water Board immediately of any spill of petroleum products or other organic or earthen materials.
17. If unanticipated discharges to the waters of the United States, and/or soil occur, the Applicant shall notify the Central Valley Water Board Contact indicated in this Certification in writing within five (5) calendar days of occurrence. Unanticipated discharges may include, but are not limited to, any construction materials, hazardous materials, pesticides, fuels, lubricants, oils, hydraulic fluids, raw cement, concrete, asphalt, paint, coating material, drilling fluids, or other construction-related potentially hazardous substances.

18. The Applicant shall comply with all California Department of Fish and Wildlife requirements, including but not limited to those requirements described in Lake or Streambed Alteration Agreement No. 1600-2012-0208-R2.
19. The Applicant shall comply with all United States Fish and Wildlife Service requirements, including but not limited to those requirements described in the Letter of Concurrence (08ESMF00-20130I-0150), provided to the United States Army Corps of Engineers dated 19 March 2013.
20. The Applicant shall obtain coverage under the National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ for discharges to surface waters comprised of storm water associated with construction activity, including, but not limited to, demolition, clearing, grading, excavation, and other land disturbance activities of one or more acres, or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres.
21. The Conditions in this Certification are based on the information in the attached "Project Information Sheet." If the actual project, as described in the attached Project Information Sheet, is modified or changed, this Certification is no longer valid until amended by the Central Valley Water Board.
22. The Applicant shall implement each of the mitigation measures specified in the approved Mitigated Negative Declaration for the project, as they pertain to biology, hydrology and water quality impacts as required by § 21081.6 of the Public Resource Code and § 15097 of the California Code of Regulations.
23. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under state and federal law. The applicability of any state law authorizing remedies, penalties, process, or sanctions for the violation or threatened violation constitutes a limitation necessary to ensure compliance with this Certification.
 - (a) If the Applicant or a duly authorized representative of the project fails or refuses to furnish technical or monitoring reports, as required under this Certification, or falsifies any information provided in the monitoring reports, the applicant is subject to civil liability, for each day of violation, and/or criminal liability.
 - (b) In response to a suspected violation of any condition of this Certification, the Central Valley Water Board may require the Applicant to furnish, under penalty of perjury, any technical or monitoring reports the Central Valley Water Board deems appropriate, provided that the burden, including cost of the reports, shall be in reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

- (c) The Applicant shall allow the staff(s) of the Central Valley Water Board, or an authorized representative(s), upon the presentation of credentials and other documents, as may be required by law, to enter the project premises for inspection, including taking photographs and securing copies of project-related records, for the purpose of assuring compliance with this Certification and determining the ecological success of the project.
24. The Applicant shall provide a Notice of Completion (NOC) no later than 30 days after the project completion. The NOC shall demonstrate that the project has been carried out in accordance with the project description in the Certification and in any amendments approved. The NOC shall include a map of the project location(s), including final boundaries of any on-site restoration area(s), if appropriate, and representative pre and post construction photographs. Each photograph shall include a descriptive title, date taken, photographic site, and photographic orientation.
25. The Applicant shall provide evidence of all on-site and off-site compensatory mitigation requirements, including, but not limited to, the payment of in-lieu fees to the National Fish and Wildlife Foundation, Sacramento District as required by the United States Army Corps of Engineers prior to commencing construction to the Central Valley Water Board.

Compensatory mitigation must comply with the effective policy at the time of Certification, which ensures no overall net loss of wetlands for impacts to waters of the State.

Evidence of compliance with compensatory mitigation requirements include providing a letter from the National Fish and Wildlife Foundation, Sacramento District. The letter must: (a) be on the National Fish and Wildlife Foundation, Sacramento District's letterhead; (b) be signed by an authorized representative of the National Fish and Wildlife Foundation, Sacramento District; (c) indicate the United States Army Corps of Engineers' SPK number; (d) describe the project name and location; and (e) detail the type of in-lieu fees paid for the project's impacts.

CENTRAL VALLEY WATER BOARD CONTACT:

Trevor Cleak, Environmental Scientist
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-8114
tcleak@waterboards.ca.gov
(916) 464-4684

CALIFORNIA ENVIRONMENTAL QUALITY ACT:

The El Dorado County Department of Transportation is the Lead Agency responsible for compliance with the California Environmental Quality Act for the Pleasant Valley Road/Patterson Drive Intersection Signalization Project pursuant to § 21000 et seq. of the Public Resources Code. The El Dorado County Department of Transportation approved the Mitigated Negative Declaration on 30 June 2009. The El Dorado County Department of Transportation filed a Notice of Determination with the State Clearinghouse on 23 May 2012 (State Clearinghouse Number 2009042125).

The Central Valley Water Board is a responsible agency for the project. The Central Valley Water Board has determined that the Mitigated Negative Declaration is in accordance with the requirements of the California Environmental Quality Act.

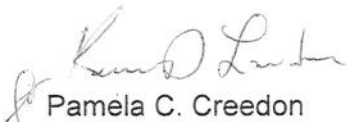
The Central Valley Water Board has reviewed and evaluated the impacts to water quality identified in the Mitigated Negative Declaration to minimize project impacts are required by this Certification.

With regard to the remaining impacts identified in the Mitigated Negative Declaration, the corresponding mitigation measures proposed are within the responsibility and jurisdiction of other public agencies.

WATER QUALITY CERTIFICATION:

I hereby issue an Order certifying that any discharge from the El Dorado County Department of Transportation, Pleasant Valley Road/Patterson Drive Intersection Signalization Project (WDID#5B09CR00022) will comply with the applicable provisions of § 301 ("Effluent Limitations"), § 302 ("Water Quality Related Effluent Limitations"), § 303 ("Water Quality Standards and Implementation Plans"), § 306 ("National Standards of Performance"), and § 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Resources Control Board Water Quality Order No. 2003-0017 DWQ "Statewide General Waste Discharge Requirements For Dredged Or Fill Discharges That Have Received State Water Quality Certification (General WDRs)".

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in compliance with the conditions of this Certification, the El Dorado County Department of Transportation's application package, and the attached Project Information Sheet, and (b) compliance with all applicable requirements of the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised October 2011.


Pamela C. Creedon
Executive Officer

Enclosure: Project Information

Attachment: Figure 1 – Project Location Map

cc: Distribution List, page 13

PROJECT INFORMATION SHEET

Application Date: 19 November 2012

Applicant: Janet Postlewait
El Dorado County Department of Transportation
2850 Fairlane Court
Placerville, CA 95667

Applicant Representative: Leslie Perry
1321 20th Street
Sacramento, CA 95811

Project Name: Pleasant Valley Road/Patterson Drive Intersection Signalization Project

Application Number: WDID#5B09CR00022

Type of Project: Road Improvements

Timeframe of Project Implementation: 1 October 2013 through 30 November 2014

Project Location: Section 25, Township 10 North, Range 10 East, MDB&M.
Latitude: 38°41'19.63"N and Longitude: 120°49'53.961" W

County: El Dorado

Receiving Water(s) (hydrologic unit): An unnamed tributary to Patterson Lake, San Joaquin Hydrologic Basin, Middle Sierra Hydrologic Unit #532.23, North Fork Consumes HSA

Water Body Type: Wetland, Streambed

Designated Beneficial Uses: The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised October 2011 (Basin Plan) has designated beneficial uses for surface and ground waters within the region. Beneficial uses that could be impacted by the project include, but are not limited to: Municipal and Domestic Water Supply (MUN); Agricultural Supply (AGR); Industrial Supply (IND); Hydropower Generation (POW); Groundwater Recharge (GWR); Water Contact Recreation (REC-1); Non-Contact Water Recreation (REC-2); Warm Freshwater Habitat (WARM); Cold Freshwater Habitat (COLD); Preservation of Biological Habitats of Special Significance (BIOL); Rare, Threatened, or Endangered Species (RARE); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and/or Early Development (SPWN); and Wildlife Habitat (WILD). A comprehensive and specific list of the beneficial uses applicable for the project area can be found at http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/index.shtml.

303(d) List of Water Quality Limited Segments: An unnamed tributary to Patterson Lake is the receiving water for the Pleasant Valley Road/Patterson Drive Intersection Signalization Project. The unnamed tributary is not listed on the 303(d) list. This project does not impact an already impaired water body. The most recent list of approved water quality limited segments is found at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

Project Description: The 5.7-acre Pleasant Valley Road/Patterson Drive Intersection Signalization Project consists of signalizing and improving approximately 1,800 feet of Pleasant Valley Road and approximately 850 feet of Patterson Road. The project is located at the intersection of Pleasant Valley Road and Patterson Road in Diamond Springs.

Proposed improvements include 1.) the widening of the road approaches to the intersection; 2.) adding turn pockets; 3.) installing traffic signals, curbs, gutters; and 4.) replacing a culvert. Constructing these improvements will require grading and filling existing wetlands and roadside ditches.

The road widening will grade approximately 0.055 acre of existing seasonal wetlands on the northeast side of Pleasant Valley Road. Approximately 0.01 acre of the graded wetlands will be filled with asphalt, concrete, and aggregate base. An existing 65-foot long culvert will be replaced with an approximately 115 feet long by 33-inches tall by 49-feet wide box culvert on the southwest side of the project area. The modifications will require concrete slurry and rock slope protection to be placed into 0.001 acre of roadside ditches. Dewatering of the roadside ditches will not occur.

The project will permanently impact 0.056 acre of waters of the United States.

Preliminary Water Quality Concerns: Construction activities may impact surface waters with increased turbidity, settleable matter, and pH.

Proposed Mitigation to Address Concerns: The Applicant will implement Best Management Practices to control sedimentation and erosion. All temporary affected areas will be restored to pre-construction contours and conditions upon completion of construction activities. The Applicant will conduct turbidity, settleable matter, and pH testing during in-water work, stopping work if Basin Plan criteria are exceeded or are observed.

Excavation/Fill Area: Approximately 140 cubic yards of fill, 10 cubic yards of asphalt, 10 cubic yards of aggregate base, and 5 cubic yards of concrete slurry will be placed into 0.056 acre of waters of the United States.

Dredge Volume: None

United States Army Corps of Engineers File Number: SPK# 2009-00709

United States Army Corps of Engineers Permit Type: Nationwide Permit# 14

California Department of Fish and Wildlife Lake or Streambed Alteration Agreement:
1600-2012-0208-R2

Possible Listed Species: California red-legged frog, Western burrowing owl, and White-tailed kite.

Status of CEQA Compliance: The El Dorado County Department of Transportation approved the Mitigated Negative Declaration on 30 June 2009. The El Dorado County Department of Transportation filed a Notice of Determination with the State Clearinghouse on 23 May 2012 (State Clearinghouse Number 2009042125).

The Central Valley Water Board filed a Notice of Determination with the State Clearinghouse as a responsible agency within five (5) days of the date of this Certification.

Compensatory Mitigation: As required by the United States Army Corps of Engineers, the Applicant will pay in-lieu fees to mitigate for 0.055 acre of impacts to seasonal wetland and 0.001 acre of seasonal drainage. Evidence of this payment shall be provided to the Central Valley Water Board prior to proceeding with the activity authorized by this Certification.

Application Fee Provided: Total fees of \$1,188.00 have been submitted to the Central Valley Water Board as required by § 3833(b)(3)(A) and § 2200(a)(3) of the California Code of Regulations.

DISTRIBUTION LIST

Peck Ha
United States Army Corps of Engineers
Sacramento District Office
Regulatory Division
1325 J Street, Suite 1350
Sacramento, CA 95814-2922

Amanda Piscitelli
United States Fish & Wildlife Service
Sacramento Fish & Wildlife Office
2800 Cottage Way
Sacramento, CA 95825

Patrick Moeszinger
Department of Fish and Wildlife
1701 Nimbus Road, Suite A
Rancho Cordova

Bill Jennings
CA Sportfishing Protection Alliance
3536 Rainier Avenue
Stockton, CA 95204

Bill Orme (Electronic copy only)
401 Certification and Wetlands Unit Chief
State Water Resources Control Board

Jason A. Brush (Electronic copy only)
Wetlands Office Supervisor (WTR-8)
United States Environmental Protection Agency

Leslie Perry
1321 20th Street
Sacramento, CA 95811

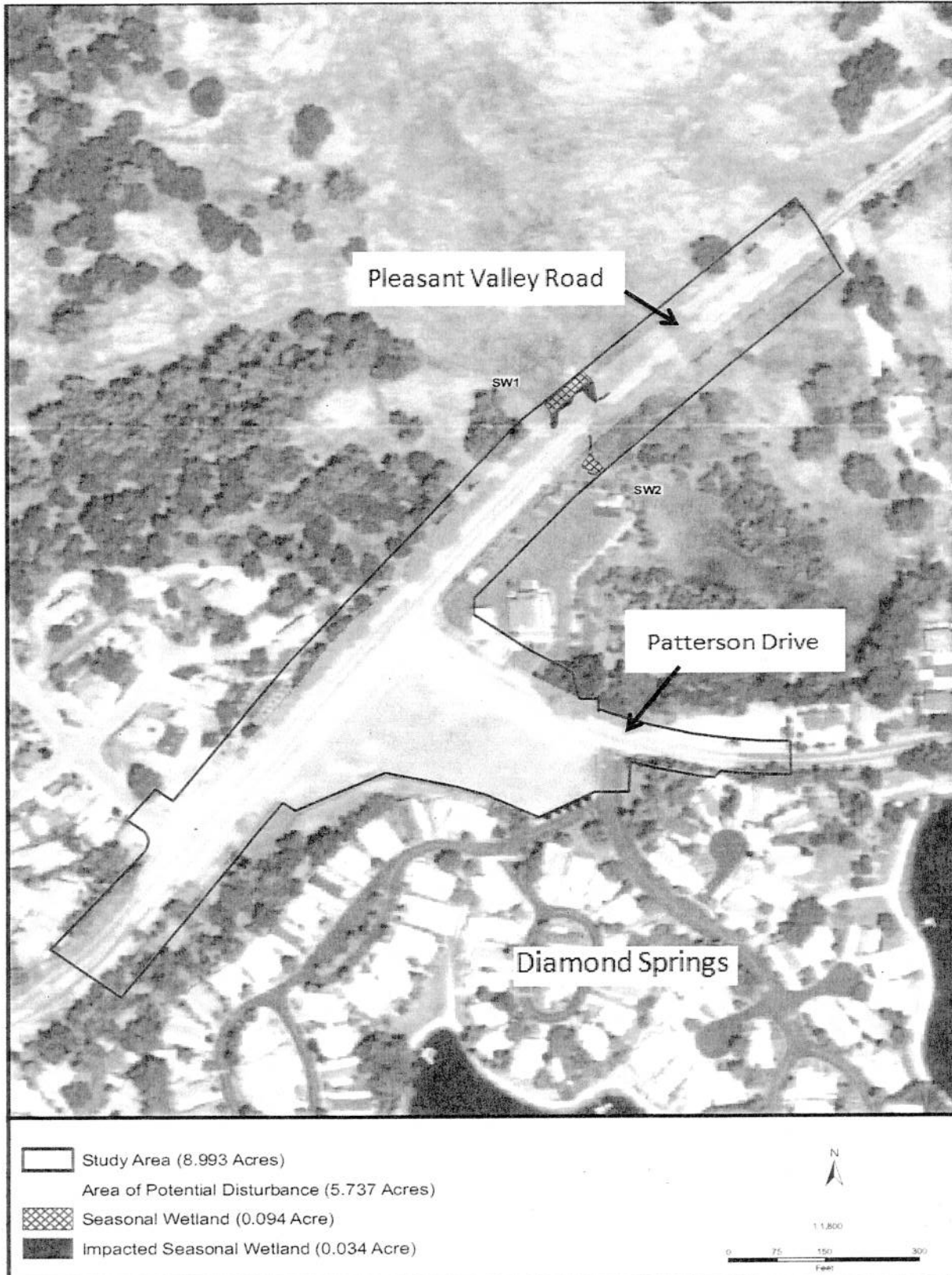


Figure 1 – Project Location Map



DEPARTMENT OF FISH AND WILDLIFE

Charlton H. Bonham, Director

North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670-4599
916-358-2900
www.wildlife.ca.gov



3-15-13

Date

Janet Postlewait
El Dorado County Department of Transportation
2850 Fairlane Court
Placerville, CA 95667

Subject: Final Lake or Streambed Alteration Agreement
Notification No. 1600-2012-0208 -R2
Patterson Drive Intersection Signalization Project

Dear Ms. Postlewait:

Enclosed is the final Streambed Alteration Agreement (Agreement) for the Patterson Drive Intersection Signalization Project (Project). Before the Department of Fish and Wildlife (Department) may issue an Agreement, it must comply with the California Environmental Quality Act (CEQA). In this case, the Department, acting as a responsible agency, filed a notice of determination (NOD) on the same date it signed the Agreement. The NOD was based on information contained in the Mitigated Negative Declaration the lead agency prepared for the Project.

Under CEQA, filing a NOD starts a 30-day period within which a party may challenge the filing agency's approval of the project. You may begin your project before the 30-day period expires if you have obtained all necessary local, state, and federal permits or other authorizations. However, if you elect to do so, it will be at your own risk.

If you have any questions regarding this matter, please contact Patrick Moeszinger, Environmental Scientist at (916) 358-2850 or Patrick.Moeszinger@wildlife.ca.gov.

Sincerely,

for Tina Bartlett
Regional Manager

ec: Patrick Moeszinger
Patrick.Moeszinger@wildlife.ca.gov

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
NORTH CENTRAL REGION
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CA 95670



STREAMBED ALTERATION AGREEMENT
NOTIFICATION No. 1600-2012-0208-R2
Unnamed Intermittent Stream

EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION
PATTERSON DRIVE INTERSECTION SIGNALIZATION PROJECT

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and El Dorado County Department of Transportation (DOT; Permittee) as represented by Janet Postlewait.

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified CDFW on November 19, 2012 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, CDFW has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project is located at an unnamed tributary to Patterson Lake, in the County of El Dorado, State of California; Latitude 38.689774, Longitude -120.830591.

PROJECT DESCRIPTION

The project is limited to improvements of the intersection located at Patterson Drive and Pleasant Valley Road associated with the installation of new traffic signals. For the purposes of this Agreement, the project is more specifically limited to those road improvement activities impacting the seasonal wetland which crosses under Pleasant Valley Road east of the intersection.

The project will result in the grading of and placement of fill material into up to 0.06 acres of jurisdictional water features, including 0.055 acres of seasonal wetlands and 0.001 acres (15 linear feet) of ephemeral drainage. These aquatic features convey surface runoff underneath Pleasant Valley Road to Patterson Lake, located approximately 0.25 miles southeast of the project site.

Construction is anticipated to occur between October 2013 and November 2014. El Dorado County DOT anticipates that the project will take 140 working days (approximately 200 calendar days) to complete construction activities.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: nesting birds or raptors, California red-legged frog, and other common amphibians and aquatic macroinvertebrates.

The adverse effects the project could have on the fish or wildlife resources identified above include: loss of natural bed or bank; increase of bank erosion during construction; increased turbidity; loss or decline of riparian and/or emergent marsh habitat; disruption to nesting birds and other wildlife; loss or decline of aquatic species' habitat, migration corridors, spawning or rearing areas; and direct loss of resources for aquatic organisms.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative requirement described below.

- 1.1 **Documentation at Project Site.** Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to CDFW personnel, or personnel from another state, federal, or local agency upon request.
- 1.2 **Providing Agreement to Persons at Project Site.** Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 **Notification of Conflicting Provisions.** Permittee shall notify CDFW if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall contact Permittee to resolve any conflict.

- 1.4 **Project Site Entry.** Permittee agrees that CDFW personnel may enter the project site at any time to verify compliance with the Agreement.
- 1.5 **Designated Representative.** Before initiating ground- or vegetation-disturbing project activities, Permittee shall designate a representative (Designated Representative) responsible for communications with CDFW and overseeing compliance with this Agreement. The Permittee shall notify CDFW in writing thirty (30) days prior to commencement of ground- or vegetation-disturbing activities of the Designated Representative's name, business address, and contact information. Permittee shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this Agreement.
- 1.6 **Designated Biologist.** At least thirty (30) days before initiating ground- or vegetation-disturbing activities, Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information for a biological monitor (Designated Biologist). The Designated Biologist shall be knowledgeable and experienced in the biology and natural history of local fish and wildlife resources present at the project site. The Designated Biologist shall be responsible for monitoring all project activities, including construction and any ground- or vegetation-disturbing activities in areas subject to this Agreement.
- 1.7 **Designated Biologist Authority.** The Designated Biologist shall have authority to immediately stop any activity that is not in compliance with this Agreement, and/or to order any reasonable measure to avoid or minimize impacts to fish and wildlife resources. Neither the Designated Biologist nor CDFW shall be liable for any costs incurred as a result of compliance with this measure. This includes cease-work orders issued by CDFW.
- 1.8 **Notification to the California Natural Diversity Database.** If any special status species are observed in project surveys, Permittee or designated representative shall submit Natural Diversity Data Base (NDDDB) forms to the NDDDB for all preconstruction survey data within five (5) working days of the sightings, and provide to CDFW's Regional office three (3) copies of the NDDDB forms and survey maps.
- 1.9 **California Endangered Species Act.** This Agreement does not authorize the Permittee to take any species listed under the California Endangered Species Act (CESA) as a result of project activities.
- 1.10 **No Negative Impacts to Federally Listed Species.** Species designated by the Federal Government as Threatened/Endangered or Candidate Species may be present at this site. Any and all impacts to these species are strictly prohibited and are punishable by Federal and State laws.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

- 2.1 Work Period in Low Rainfall / Dry Weather Only. The work period within jurisdictional water features shall be restricted to periods of low rainfall (less than ¼" per 24 hour period) and periods of dry weather. All erosion control measures shall be initiated prior to all storm events (more than a 30% chance of rain). Revegetation, restoration and erosion control work is not confined to this work period. Permittee shall monitor the National Oceanic and Atmospheric Administration (NOAA) 72-hr forecast for the project area. Weather forecasts shall be documented upon request by CDFW.
- 2.2 Post Storm Event Inspection. After any storm event, Permittee shall immediately inspect all sites scheduled to begin or continue construction within the next 72 hours. Corrective action for erosion and sedimentation shall be taken as needed. National Weather Service 72 hour weather forecasts shall be reviewed prior to the start of any phase of the project that may result in sediment runoff to the ephemeral drainage, and construction plans adjusted to meet this requirement. The National Weather Service forecast can be found at: <http://www.nws.noaa.gov>.
- 2.3 Vegetation Removal. Disturbance or removal of vegetation shall be kept to the minimum necessary to complete project related activities. Except for trees marked for removal in plans submitted to and approved by CDFW, no native trees with a trunk diameter at breast height (DBH) in excess of four (4) inches shall be removed or damaged without prior consultation and approval from CDFW. Vegetation marked for protection may only be trimmed with hand tools to the extent necessary to gain access to the work sites.
- 2.4 Vegetation Marked for Protection. Prior to clearing and grubbing operations, the Designated Biologist shall clearly mark vegetation within the project area that shall be avoided. Vegetation outside the project area shall not be removed or damaged without prior consultation and approval from a CDFW representative. If the Permittee requests to trim trees that are marked for avoidance, those trees shall only be trimmed upon written approval by CDFW and as directed by the Designated Biologist.
- 2.5 Building Material Storage. Project building material and/or construction equipment shall not be placed where materials could pass into the waters of the state or where they may cover aquatic or riparian vegetation.
- 2.6 Spoil sites. Spoil sites shall not be located where spoils may be washed back into jurisdictional water features, or where it may cover aquatic or riparian vegetation.

- 2.7 **Erosion Control Measures.** Permittee shall utilize erosion control measures throughout all phases of operation where sediment runoff from exposed slopes threatens to enter a stream or lake.
- 2.8 **Silt Laden Runoff.** At no time shall silt laden runoff be allowed to enter the ephemeral stream or directed to where it may enter the stream. Erosion control measures, such as, silt fences, straw hay bales, gravel or rock lined ditches, water check bars, and broadcasted straw shall be used where ever silt laden water has the potential to leave the work site and enter jurisdictional water features.
- 2.9 **Disturbed Soils.** Permittee shall stabilize all disturbed soils within the project site to reduce erosion potential, both during and following construction. Planting, seeding with native species, sterile seed mix, and mulching is acceptable. Where suitable vegetation cannot reasonably be expected to become established, non-erodible materials, such as coconut fiber matting, shall be used for such stabilization.
- 2.10 **Escape Ramp in Trench.** At the end of each work day, all open trenches shall be covered to prevent animals from becoming entrapped. If it is not possible to cover the trench at the end of the work day, Permittee shall either 1) Install an exclusion fence surrounding and enclosing the open end(s) of the trench, or 2) shall place an escape ramp at each end of open trench. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees.
- 2.11 **Removal of Trees/Shrubs During Fall/Winter Months.** To avoid potential impact to tree nesting birds, trees and shrubs designated for removal should be cut down during the time period of September 15th to January 31st. Trees/shrubs may be removed from the period of September 15th to January 31st provided the Permittee has a qualified biologist survey the proposed work area to verify the absence of nesting birds. The detailed survey shall be submitted to CDFW for review and comment prior to commencement of tree/shrub removal. At the discretion of CDFW, tree/shrub removal may be authorized between the time period of February 1st to September 14th following confirmed absence of nesting birds.

3. Compensatory Measures

To compensate for adverse impacts to fish and wildlife resources identified above that cannot be avoided or minimized, Permittee shall implement each measure listed below.

- 3.1 **Revegetation Plan.** Permittee shall submit a Revegetation Plan to CDFW for review and written approval within thirty (30) days of start of construction activities. The revegetation plan shall include a plant palette of species to be used in revegetation, success criteria, monitoring & reporting, and corrective actions to be

taken when mitigation measures do not meet the proposed success criteria. The revegetation plan shall ensure no net loss of habitat or fish and wildlife resource values.

- 3.2 **Replace Trees In-Kind.** Native trees including the following types: cottonwoods, willows, oaks, and alders shall be replaced in kind by species at a ratio of 2:1, and maintained until established, under the direction of CDFW and the Designated Biologist. Permittee shall monitor and maintain, as necessary, all plantings for five (5) years to ensure successful revegetation. All planting shall have a minimum of 80% survival at the end of five (5) years.

4. Reporting Measures

Permittee shall meet each reporting requirement described below.

- 4.1 **CDFW Notification.** Permittee shall notify CDFW at least five days prior to project commencement and again at least five days prior to completion of work. Notification shall be made by email to Patrick Moeszinger, Environmental Scientist at Patrick.Moeszinger@wildlife.ca.gov, or, alternatively, to the Lake and Streambed Alteration Program office at R2LSA@wildlife.ca.gov.
- 4.2 **Monitoring Report – Success Criteria.** Permittee shall submit an annual monitoring report to the CDFW by January 31 following each year that construction occurs, and for five (5) years after completion of the construction project. The report shall discuss the mitigation performance as it relates to the success criteria. The report shall include the success of natural revegetation establishment, survival, percent cover, and height of both tree and shrub species. The number by species of plants replaced (if applicable), an overview of the revegetation effort, and the method used to assess these parameters shall also be included. Monitoring reports should include photographs from designated photo stations.

CONTACT INFORMATION

Any communication that Permittee or CDFW submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or CDFW specifies by written notice to the other.

To Permittee:

Janet Postlewait
El Dorado County Department of Transportation
2850 Fairlane Drive
Placerville, CA 95667
Fax: (530) 626-0387

Email: janet.postlewait@edcgov.us

To CDFW:

California Department of Fish and Wildlife
North Central Region
1701 Nimbus Road, Suite A
Attn: Lake and Streambed Alteration Program
Notification #1600-2012-0208-R2
Fax: (916) 358-2912
Email: R2LSA@wildlife.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before CDFW suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes CDFW from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 *et seq.* (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

CDFW may amend the Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and Permittee. To request an amendment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form

and include with the completed form payment of the minor amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). CDFW shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (Fish & G. Code, § 1605, subd. (f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after Permittee's signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.wildlife.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall expire five years from the date it is signed by CDFW, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

AUTHORIZATION

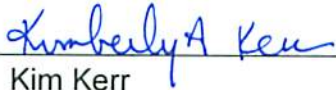
This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may

be subject to civil or criminal prosecution for failing to notify CDFW in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

**FOR EL DORADO COUNTY DEPARTMENT OF
TRANSPORTATION**



Kim Kerr

Director of Transportation



Date

FOR DEPARTMENT OF FISH AND WILDLIFE



for Tina Bartlett

Regional Manager



Date

Prepared by: Patrick Moeszinger
Environmental Scientist

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Improvements

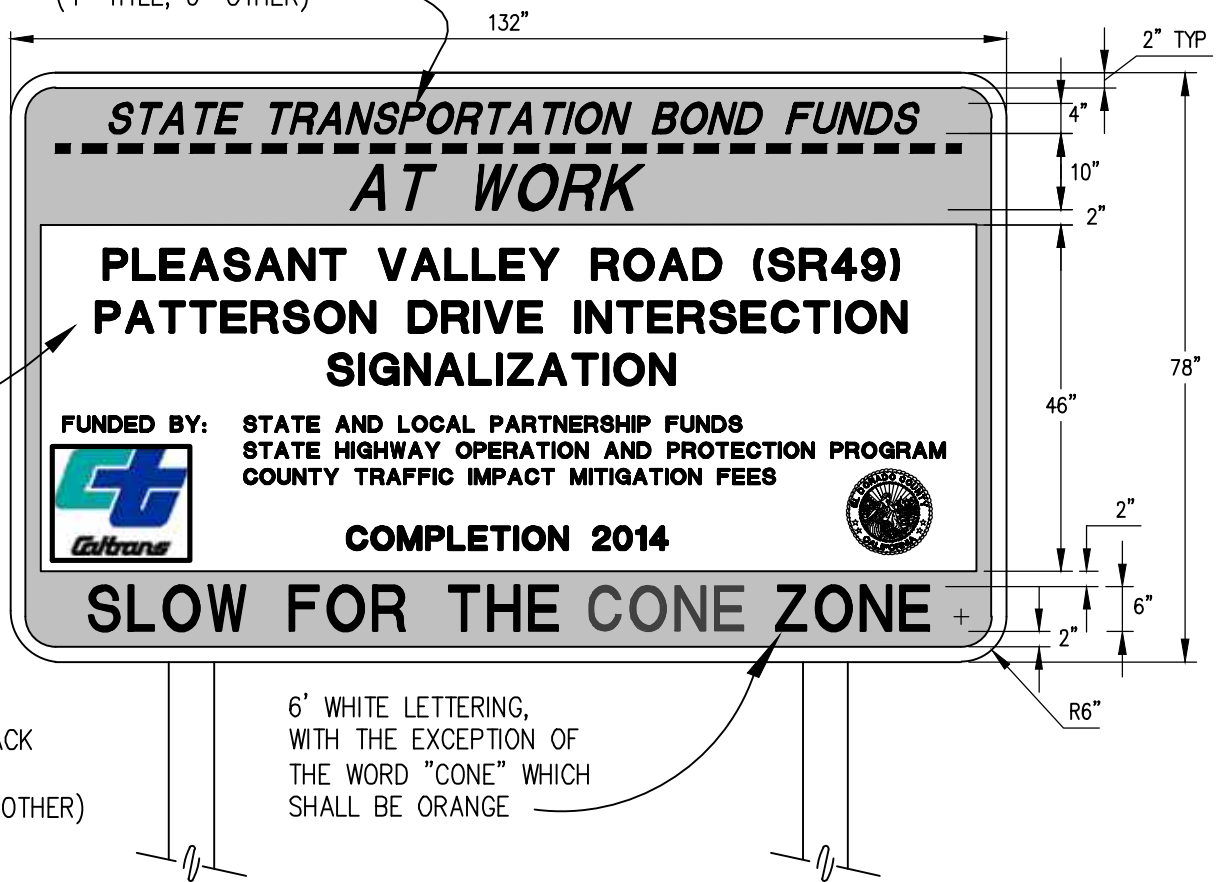
Contract No. PW No. 09-30425

CIP No. 73320

Appendix C

Project Information Sign

BACKGROUND—PURPLE
 (PANTONE #520) W/
 WHITE LETTERING
 (4" TITLE, 6" OTHER)



BACKGROUND
 WHITE W/ BLACK
 LETTERING
 (4" TITLE, 2" OTHER)

6" WHITE LETTERING,
 WITH THE EXCEPTION OF
 THE WORD "CONE" WHICH
 SHALL BE ORANGE

**PLEASANT VALLEY ROAD/PATTERSON DRIVE
 FUNDING SIGN EXHIBIT**

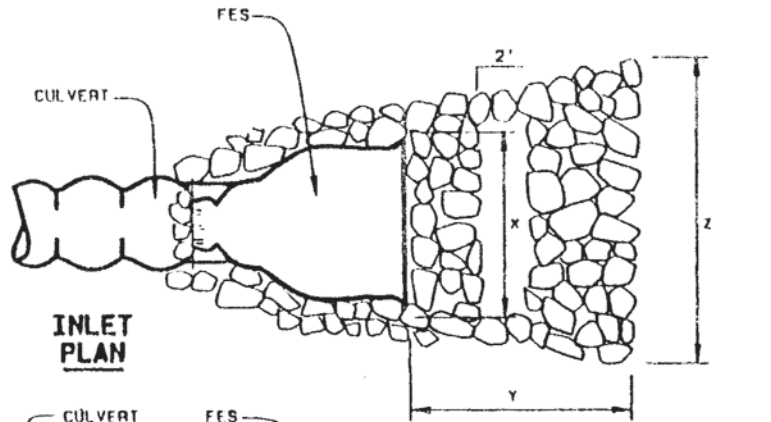
Pleasant Valley Road (SR 49) at Patterson Drive Intersection Improvements

Contract No. PW No. 09-30425

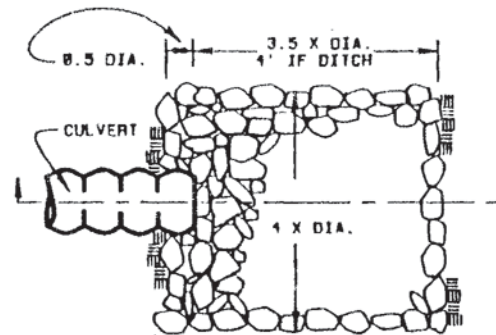
CIP No. 73320

Appendix D

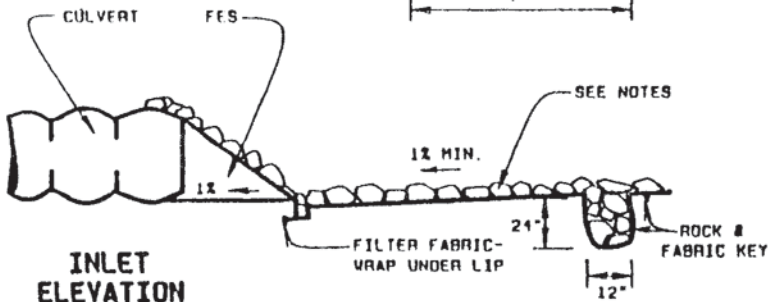
County Standard Plans



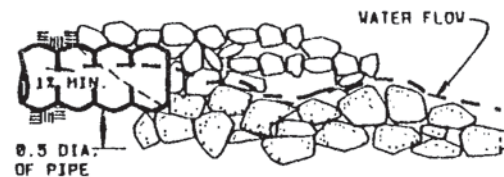
INLET PLAN



OUTLET PLAN



INLET ELEVATION



OUTLET ELEVATION

ROCK CLASS	PIPE Ø IN.	(3X PIPE Ø)		(5X)	
		X, FT	Y, FT	Z, FT	
NO. 1 BACKING	12	3	4	5	
"	18	4.5	6	7.5	
"	24	6	8	10	
"	30	7.5	10	12.5	
"	36	9	12	15	

NOTES:

1. HAND PLACE ROCK.
2. ALL ROCK SHALL BE ANGULAR AND HAVE TWO FACES.
3. WHERE SLOPES OF OUTLET EXCEEDS 5%, A SEDIMENT BOWL OR ENERGY DISSIPATER SHALL BE REQUIRED.
4. FLARED END SECTION AND ROCK SLOPE PROTECTION WILL SLOPE AT A MINIMUM OF 1% INTO OR OUT OF THE CULVERT.
5. 12" X 24" KEY TO BE PLACED FOR BOTH INLET AND OUTLET APPLICATIONS.
6. ON OUTLET APPLICATIONS, 50% OF THE ROCK SHALL BE LARGER THAN HALF THE DIAMETER OF THE PIPE.

NOT TO SCALE

GENERATED DATE: 3/12/90 DESIGNED: JH DRAWN: JM/SR/BS CHECKED:	REVISIONS	APPROVED: <i>Scott Chasler</i> DIRECTOR OF TRANSPORTATION	EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS		ROCK INLET/OUTLET PROTECTION	STD. PLAN T-504
		SENIOR CIVIL ENGINEER <i>Steve B. Wolfe</i> C33427 P.E. NO.				

**County of El Dorado, State of California
Community Development Agency
Transportation Division**

P&C No. 113-C1499 / CIP No. 73320

**PLEASANT VALLEY RD (SR 49)/ PATTERSON DR INTERSECTION
SIGNALIZATION**

THIS AGREEMENT ("Agreement") approved by the Board of Supervisors this ____st day of _____, in the year of 20__, made and concluded, in duplicate, between the COUNTY OF EL DORADO, a political subdivision of the State of California, by the Community Development Agency, Transportation Division thereof, the party of the first part hereinafter called "County," and [contractor], party of the second part hereinafter called "Contractor."

RECITALS:

WHEREAS, County has caused the above-captioned project to be let to formal bidding process; and

WHEREAS, Contractor has duly submitted a bid response for the captioned project upon which County has awarded this contract;

NOW, THEREFORE, the parties hereto have mutually covenanted and agreed, and by these presents do covenant and agree, each with the other, as follows:

Article 1. THE WORK

The improvement contemplated in the performance of this Contract is an improvement over which the County shall exercise general supervision. The County, therefore, shall have the right to assume full and direct control over this Contract whenever the County, at its sole discretion, shall determine that its responsibility is so required.

Contractor shall complete the Work as specified or indicated under the Bid Schedule(s) of County's Contract Documents entitled:

**PLEASANT VALLEY RD (SR 49)/ PATTERSON DR INTERSECTION
SIGNALIZATION**

The project is located near the Town of Diamond Springs in County of El Dorado. The Work to be done is shown on the Plans, and generally consists of, but is not limited to:

Widening of portions of Pleasant Valley Road (State Route 49) and portions of Patterson Drive, roadway improvements, traffic signal installation, including stage construction to facilitate grading, clearing and grubbing, permanent and temporary fence removal and construction, drainage removal and construction,

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concrete and steel drainage inlets, grade ditch, excavation, rock base, HMA paving, signing and striping, cold planing, permanent and temporary erosion control.

Other items or details not mentioned above, that are required by the plans, Standard Plans, Standard Specifications, or these Special Provisions shall be performed, constructed or installed.

Article 2. CONTRACT DOCUMENTS

The Contract Documents consist of: the Notice to Bidders; the bid forms which include the accepted Proposal, Bid Price Schedule and Total Bid, Subcontractor List, Section 10285.1 Statement, Section 10162 Questionnaire, Section 10232 Statement, Noncollusion Affidavit, Iran Contracting Act Certification, Debarment, Suspension, Ineligibility, and Voluntary Exclusion Certification, Opt Out of Payment Adjustments for Price Index Fluctuation form, if elected, the Contract which includes this Agreement with all Exhibits thereto, including the Fair Employment Practices Addendum, the Performance Bond, and Payment Bond the drawings listed and identified as the Project Plans; the Special Provisions which incorporate by reference the State of California Department of Transportation (Caltrans) Standard Plans 2010, and Standard Specifications 2010, Revised Standard Specifications, and standard drawings from the Design and Improvement Standards Manual of the County of El Dorado Community Development Agency, Transportation Division, revised March 8, 1994 including Resolution 199-91 and Resolution 58-94 to adopt changes to the Design and Improvement Standards Manual; all Addenda incorporated in those documents before their execution, and all Contract Change Orders issued in accordance with the Contract Documents which may be delivered or issued after the Effective Date of this Agreement and are not attached hereto; the prevailing Labor Surcharge And Equipment Rental Rates (when required) as determined by the Caltrans to be in effect on the date the Work is accomplished; all the obligations of County and of Contractor which are fully set forth and described therein; and all Contract Documents which are hereby specifically referred to and by such reference made a part hereof. All Contract Documents are intended to cooperate so that any work called for in one and not mentioned in the other is to be executed the same as if mentioned in all Contract Documents. Contractor agrees to perform all of its promises, covenants, and conditions set forth in the Contract Documents, and to abide by and perform all terms and conditions set forth therein. In case of conflict between this Agreement and any other contract document, this Agreement shall take precedence.

Article 3. COVENANTS AND CONTRACT PRICE

County hereby promises and agrees with said Contractor to employ, and does hereby employ, said Contractor to provide the material and to do the Work according to the terms and conditions of the Contract Documents herein contained and referred to, for the prices hereinafter set forth, and hereby contracts to pay the same at the time, in the manner and upon the conditions herein set forth; and the said parties for themselves, their heirs, executors, administrators, successors and assigns, do hereby agree to the full performance of the covenants herein contained. County shall pay Contractor for the completion of the Work in accordance with the Contract Documents in current funds the Contract Prices named in Contractor's Bid and Bid Price Schedule, a copy of which is attached hereto as Exhibit A.

Article 4. COMMENCEMENT AND COMPLETION

The Work to be performed under this Contract shall commence on the date specified in the Notice to Proceed issued by County, and the Work shall be fully completed within the time specified in the Notice to Proceed pursuant to Section 8 of the Special Provisions.

County and Contractor recognize that time is of the essence of the Agreement and that County will suffer financial loss if the Work is not completed within the time specified in the Notice to Bidders annexed hereto, plus any extensions thereof allowed in accordance with Section 8 of the Standard Specifications and the Special Provisions. They also recognize the delays, expense, and difficulties involved with proving in a legal proceeding

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the actual loss suffered by County if the Work is not completed on time. Accordingly, instead of requiring any such proof, County and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay County the sum of **Three Thousand (\$3,000) Dollars** per day as liquidated damages and not as a penalty, for each and every calendar day's delay in finishing the Work in excess of the contract time prescribed herein.

Article 5. INDEMNITY

To the fullest extent allowed by law, Contractor shall defend, indemnify, and hold County, its officers, directors, and employees, and the State of California (State), its officers and employees, directors, agents (excluding agents who are design professionals), State Contractors doing work within the project limits, El Dorado Irrigation District, and any property owners from whom the County obtained easements harmless against and from any and all claims, suits, losses, damages, and liability for damages, including attorney's fees and other costs of defense brought for or on account of injuries to or death of any person, including but not limited to, workers and the public, or on account of injuries to or death of County, State, El Dorado Irrigation District, any property owners from whom the County obtained easements, or damage to property, or any economic, consequential or special damages which are claimed or which shall in any way arise out of or be connected with Contractor's services, operations or performance hereunder, regardless of the existence or degree of fault or negligence on the part of the County, the State, El Dorado Irrigation District, or any property owners from whom the County has obtained easements, the Contractor, subcontractors or employees of any of these, except for the active, or sole negligence of the County, El Dorado Irrigation District, or the State or their officers and employees, or any property owners from whom the County has obtained easements, or where expressly prescribed by statute.

The duty to indemnify and hold harmless the County, the State, El Dorado Irrigation District, and any property owners from whom the County obtained easements associated with this Contract specifically includes the duties to defend set forth in Section 2778 of the Civil Code. The insurance obligations of Contractor are separate, independent obligations under the Contract Documents, and the provisions of this defense and indemnity are not intended to modify nor should they be construed as modifying or in any way limiting the insurance obligations set forth in the Contract Documents.

This indemnification will remain in effect until terminated or modified in writing by mutual agreement.

Article 6. VENUE

Any litigation arising out of this Contract shall be brought in County of El Dorado and governed by California law.

Article 7. NOTIFICATION OF SURETY COMPANY

The surety company shall familiarize itself with all of the conditions and provisions of this Contract, and shall waive the right of special notification of any change or modifications of this Contract or extension of time, or of decreased or increased work, or of the cancellation of the Contract, or of any other act or acts by County or its authorized agents, under the terms of this Contract; and failure to so notify the aforesaid surety company of changes shall in no way relieve the surety company of its obligation under this Contract.

Article 8. ASSIGNMENT OF ANTITRUST ACTIONS

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the Contractor offers and agrees and will require all of its subcontractors and suppliers to agree to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to Contractor, without further acknowledgment by the parties.

If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under Government Code Sections 4550-4554, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery. Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under Government Code Sections 4550-4554 if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action.

Article 9. TERMINATION BY COUNTY FOR CONVENIENCE

County reserves the right to terminate the Contract at any time upon determination by County's representative that termination of the Contract is in the best interest of County. County shall issue Contractor a written notice specifying that the Contract is to be terminated.

Upon receipt of said written notice, Contractor shall stop all work under the Contract except: (1) work specifically directed to be completed prior to termination, (2) work the Inspector deems necessary to secure the project for termination, (3) removal of equipment and plant from the site of the Work, (4) action that is necessary to protect materials from damage, (5) disposal of materials not yet used in the Work as directed by County, and (6) clean up of the site.

If the Contract is terminated for County's convenience as provided herein, all finished or unfinished work and materials previously paid for shall, at the option of County, become its property. Contractor shall be paid an amount which reflects costs incurred for work provided to the date of notification of termination. In addition, Contractor shall be paid the reasonable cost, as solely judged by County, and without profit, for all work performed to secure the project for termination.

Article 10. TERMINATION BY COUNTY FOR CAUSE

If Contractor is adjudged as bankrupt or insolvent, or makes a general assignment for the benefit of its creditors or if a trustee or receiver is appointed for Contractor or for any of its property, or if Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or on more than one occasion fails to supply sufficient skilled workmen or suitable material or equipment, or on more than one occasion fails to make prompt payments to subcontractors for labor, materials, or equipment, or disregards the authority of the County's representative, or the Engineer, if one is appointed, or violates any of the Contract assurances, nondiscrimination provisions or any other federal or state requirements as identified in Section 7-1.02 of the Special Provisions, or otherwise violates any provision of the Contract Documents, then County may, without prejudice to any other right or remedy and after giving Contractor and its Surety a minimum of ten (10) days from delivery of a written termination notice, terminate the services of Contractor and take equipment and machinery thereon owned by Contractor and finish the Work by whatever method County may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until the Work is finished.

Without prejudice to other rights or remedies County may have, if Contractor fails to begin delivery of materials and equipment, to commence Work within the time specified, to maintain the rate of delivery of material, to execute the Work in the manner and at such locations as specified, or fails to maintain a work program which will ensure County's interest, or, if Contractor is not carrying out the intent of the Contract, an Inspector's written notice may be served upon Contractor and the Surety on its faithful performance bond demanding satisfactory compliance with the Contract. If Contractor or its Surety does not comply with such notice within five (5) days after receiving it, or after starting to comply, fails to continue, County may exclude it from the premises and take possession of all material and equipment, and complete the Work by County's own forces, by letting the unfinished Work to another Contractor, or by a combination of such methods.

Where Contractor's services have been so terminated by County, said termination shall not affect any right of County against Contractor then existing or which may thereafter accrue. Any retention or payment of monies by County due Contractor will not release Contractor from compliance with the Contract Documents.

If the unpaid balance of the Contract price exceeds the direct and indirect costs of completing the Work, including compensation for additional professional services, such excess shall be paid to Contractor. If the sums under the Contract are insufficient for completion, Contractor or Surety shall pay to County within five (5) days after the completion, all costs in excess of the Contract price. In any event, the cost of completing the Work shall be charged against Contractor and its Surety and may be deducted from any money due or becoming due from County.

The provisions of this Article shall be in addition to all other rights and remedies available to County under law.

If after notice of termination, it is determined for any reason that Contractor was not in default, the rights and obligations of the parties shall be the same as if the notice of termination had not been issued. The Contract shall be equitably adjusted to compensate for such termination.

Article 11. SUCCESSORS AND ASSIGNS

This Agreement shall bind and inure to the heirs, devisees, assignees, and successors in interest of Contractor and to the successors in interest of County in the same manner as if such parties had been expressly named herein.

Article 12. REPORTING ACCIDENTS

Contractor shall prepare and submit (within 24 hours of such incidents) reports of accidents at the site and anywhere else the work is in progress in which bodily injury is sustained or property loss in excess of Five Hundred Dollars (\$500.00) occurs.

Article 13. EMISSIONS REDUCTION

Contractor shall comply with emission reduction regulations mandated by the California Air Resources Board, and sign a certification of knowledge thereof:

CERTIFICATE OF KNOWLEDGE – EMISSIONS REDUCTION REGULATIONS

I am aware of the emissions reduction regulations being mandated by the California Air Resources Board. I will comply with such regulations before commencing the performance of the Work and maintain compliance throughout the duration of this Contract.

Signed: _____ Date _____

Article 14. WORKERS' COMPENSATION CERTIFICATION

Contractor shall comply with Labor Code Sections 3700 et seq., requiring it to obtain Workers' Compensation Insurance, and sign a certificate of knowledge thereof.

CERTIFICATE OF KNOWLEDGE - LABOR CODE SECTION 3700

I am aware of the provisions of Section 3700 of the Labor Code, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of work of this Contract.

Signed: _____ Date _____

Article 15. WARRANTY

Contractor warrants to County that materials and equipment furnished for the Work will be of good quality and new, unless otherwise required or permitted under the Contract Documents, that the Work will be free from defects or flaws and is of the highest quality of workmanship and that the Work will conform with the requirements herein. Work not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective.

Article 16. RETAINAGE

The retainage from payment is set forth in Section 9-1.16F(1) of the Special Provisions. Contractor may elect to receive one hundred percent (100%) of payments due as set forth in the Contract Documents, without retention, by depositing securities of equivalent value with County, in accordance with, and as set forth in Section 22300 of the Public Contract Code. Securities eligible for deposit hereunder shall be limited to those listed in Section 16430 of the Government Code, or bank or savings and loan certificates of deposit.

Article 17. DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM

The Contractor shall carry out applicable requirements of 49 CFR Part 18 in the award and administration of this UNITED STATES DEPARTMENT OF TRANSPORTATION (USDOT)-assisted Contract. The applicable requirements of 49 CFR Part 18 are as follows:

(a) *Contracting with small and minority firms, women's business enterprise and labor surplus area firms.*

- (1) Contractor will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.
- (2) Affirmative steps shall include:
 - (i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
 - (ii) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
 - (iii) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and

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women's business enterprises;

- (iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;
- (v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and
- (vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (a)(2) (i) through (v) of this section.

Bidder will take all necessary affirmative steps to assure that minority firms, women's business enterprises and labor surplus area firms are used when possible.

Article 18. PREVAILING WAGE REQUIREMENTS

Contractor's attention is directed to the requirements of Division 2 Part 7, Chapter 1 of the California Labor Code, including but not limited to Sections 1773, 1773.1, 1773.2, 1773.6, and 1773.7. The general prevailing rate of wages in the county in which the Work is to be done has been determined by the Director of the California Department of Industrial Relations.

Interested parties can obtain the current wage information by submitting their requests to the Department of Industrial Relations, Division of Labor Statistics and Research, PO Box 420603, San Francisco CA 94142-0603, Telephone (415) 703-4708 or by referring to the website at <http://www.dir.ca.gov/OPRL/PWD>. The rates at the time of the bid advertisement date of a project will remain in effect for the life of the project in accordance with the California Code of Regulations, as modified and effective January 27, 1997.

Copies of the general prevailing rate of wages in the county in which the Work is to be done are also on file at the Community Development Agency, Transportation Division's principal office, and are available upon request

In accordance with the provisions of Labor Code 1810, eight (8) hours of labor constitutes a legal day's work upon all work done hereunder, and Contractor and any subcontractor employed under this Contract must conform to and be bound by the provisions of Labor Code Sections 1810 through 1815.

This project is subject to the requirements of Title 8, Chapter 8, Subchapter 4.5 of the California Code of Regulations including the obligation to furnish certified payroll records directly to the Compliance Monitoring Unit under the Labor Commissioner within the Department of Industrial Relations Division of Labor Standards Enforcement in accordance with Section 16461.

Article 19. NONDISCRIMINATION

- A. In connection with its performance under this Contract, Contractor shall comply with all applicable nondiscrimination statutes and regulations during the performance of this Contract including, but not limited to the following: Contractor, its employees, subcontractors and representatives shall not unlawfully discriminate against any employee or applicant for employment because of race, color, sex, sexual orientation, religion, ancestry or national origin, physical disability, medical condition, marital status, political affiliation, family and medical care leave, pregnancy leave or disability leave. Contractor will take affirmative action to ensure that employees are treated during employment, without regard to their race, color, sex, sexual orientation, religion, ancestry or national origin, physical disability, medical condition, marital status, political affiliation, family and medical care leave, pregnancy leave or disability leave. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or

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transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor shall post in conspicuous places, available to employees for employment, notices to be provided by State setting forth the provisions of this Fair Employment section. Contractor shall, unless exempt, comply with the applicable provisions of the Fair Employment and Housing Act (Government Code, Sections 12900 et seq.) and applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Sections 7285.0 et seq.); the applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990, set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations incorporated into this Agreement by reference and made a part hereof as if set forth in full; and Title VI of the Civil Rights Act of 1964, as amended. Contractor, its employees, subcontractors and representatives shall give written notice of their obligations under this clause as required by law.

- B. Where applicable, Contractor shall include these nondiscrimination and compliance provisions in any of its subcontracts that affect or are related to the Work performed herein.
- C. The Congress of the United States, the Legislature of the State of California and the Governor of the State of California, each within their respective jurisdictions, have prescribed certain nondiscrimination requirements with respect to contract and other work financed with public funds. Contractor agrees to comply with the requirements of Exhibit B, marked "Fair Employment Practices Addendum" is incorporated herein and made by reference a part hereof. Contractor further agrees that any agreement entered into by Contractor with a third party for the performance of project-related work shall incorporate Exhibit B (with third party's name replacing Contractor) as essential parts of such agreement to be enforced by that third party as verified by Contractor.
- D. Contractor's signature executing this Contract shall provide any certifications necessary under the federal laws and the laws of the State of California, including but not limited to Government Code Section 12990 and Title 2, California Code of Regulations, Section 8103.

Article 20. CONTRACTOR ASSURANCES

By executing this Contract, Contractor certifies that it:

- a. Will abide by all administrative, contractual or legal remedies in instances where Contractor violates or breaches contract terms, and will comply with sanctions and penalties as the Contract Administrator deems appropriate.
- b. Will comply with the termination for cause and termination for convenience provisions of the Contract including the manner by which such termination may be effected and the basis for settlement afforded by those provisions.
- c. Will comply with County, State of California and FHWA requirements and regulations pertaining to reporting;
- d. Will comply with: (i) Section 504 of the Rehabilitation Act of 1973 (Rehabilitation Act) which prohibits discrimination on the basis of disability in federally assisted programs; (ii) the Americans with Disabilities Act (ADA) of 1990 which prohibits discrimination on the basis of disability irrespective of funding; and (iii) all applicable regulations and guidelines issued pursuant to both the Rehabilitation Act and the ADA.

Any subcontract entered into as a result of this Contract shall contain all of the provisions of this Article.

Article 21. BUSINESS LICENSE

The County Business License Ordinance provides that it is unlawful for any person to furnish supplies or services, or transact any kind of business in under County Ordinance Code Section 5.08.070. Contractor warrants and represents that it shall the unincorporated territory of County of El Dorado without possessing a County business

license unless exempt comply with all of the requirements of the County Business License Ordinance, where applicable, prior to beginning work under this Contract and at all times during the term of this Contract.

Article 22. CONTRACT ADMINISTRATOR

The County Officer or employee with responsibility for administering this Agreement is John Kahling, Deputy Director Engineering, Construction Division, Community Development Agency, Transportation Division, or successor.

Article 23. AUTHORIZED SIGNATURES

The parties hereto represent that the undersigned individuals executing this Agreement on behalf of their respective parties are fully authorized to do so by law or other appropriate instrument and to bind upon said parties the obligations set forth herein.

Article 24. PARTIAL INVALIDITY

If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions will continue in full force and effect without being impaired or invalidated in any way.

Article 25. ENTIRE AGREEMENT

This document and the documents referred to herein or exhibits hereto are the entire Agreement between the parties and they incorporate or supersede all prior written or oral agreements or understandings.

IN WITNESS WHEREOF, the said Community Development Agency, Transportation Division of the County of El Dorado, State of California, has caused this Agreement to be executed by County's Board of Supervisors, on its behalf, and the said Contractor has signed this Agreement the day and year written below.

COUNTY OF EL DORADO

Dated: _____

Board Date: _____

Board of Supervisors
Attest:
James S. Mitrison
Clerk of the Board of Supervisors

Dated: _____

Board Date: _____

Deputy Clerk

CONTRACTOR

Dated: _____

License No. Federal Employee Identification Number

By: _____

President

By: _____

Corporate Secretary

NOTE: If Contractor is a corporation, the legal name of the corporation shall be set forth above together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation; if Contractor is a co-partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign contracts on behalf of the co-partnership; and if Contractor is an individual, his/her signature shall be placed above. Contractor executing this document on behalf of a corporation or partnership shall be prepared to demonstrate by resolution, article, or otherwise that it is appropriately authorized to act in these regards. For such corporation or partnership, such authority shall be demonstrated to the satisfaction of County. If signature is by an agent, other than officer of a corporation or a member of a partnership, an appropriate Power of Attorney shall be on file with the County prior to signing this document.

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Signalization
Contract No. PW 09-30425 / CIP No. 73320
September 10, 2013

County of El Dorado
Contract
C-10

Mailing Address: _____

Business Address: _____

Email Address: _____

Phone: _____

Fax: _____

EXHIBIT A
CONTRACTOR'S BID AND BID PRICE SCHEDULE
(Engineer's Estimate)
CONTRACT NO. PW 09-30425 / CIP NO. 73320

Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
1	070030	LEAD COMPLIANCE PLAN	LS	1		
2	072007	EXCAVATION SAFETY	LS	1		
3	080050	PROGRESS SCHEDULE (CRITICAL PATH METHOD)	LS	1		
4	P 120090	CONSTRUCTION AREA SIGNS	LS	1		
5	120100	TRAFFIC CONTROL SYSTEM	LS	1		
6	120149	TEMPORARY PAVEMENT MARKING (PAINT)	SF	409		
7	120159	TEMPORARY TRAFFIC STRIPE (PAINT)	LF	8,711		
8	120182	PORTABLE DELINEATOR	EA	129		
9	120199	TRAFFIC PLASTIC DRUM	EA	10		
10	120200	FLASHING BEACON (PORTABLE)	EA	9		
11	120300	TEMPORARY PAVEMENT MARKER	EA	422		
12	128651A	PORTABLE CHANGEABLE MESSAGE SIGN	SWD	480		
13	130100	JOB SITE MANAGEMENT	LS	1		
14	130300	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	1		
15	130310	RAIN EVENT ACTION PLAN	EA	10	\$500.00	\$5,000.00
16	130320	STORM WATER SAMPLING AND ANALYSIS DAY	EA	10		
17	130330	STORM WATER ANNUAL REPORT	EA	1	\$2,000.00	\$2,000.00
18	130620	TEMPORARY DRAINAGE INLET PROTECTION	EA	10		
19	141000	TEMPORARY FENCE (TYPE ESA)	LF	3,360		

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Signalization
Contract No. PW 09-30425 / CIP No. 73320
September 10, 2013

County of El Dorado
Contract
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Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
20	141103	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (Hazardous Waste)	LF	3,300		
21	149001A	PREPARE FUGITIVE DUST CONTROL PLAN	LS	1		
22	150204	ABANDON CULVERT (33"X49")	LF	43		
23	150606	REMOVE FENCE (TYPE BW)	LF	1,388		
24	150714	REMOVE THERMOPLASTIC TRAFFIC STRIPE	LF	4,242		
25	150715	REMOVE THERMOPLASTIC PAVEMENT MARKING	SF	411		
26	150722	REMOVE PAVEMENT MARKER	EA	315		
27	150742	REMOVE ROADSIDE SIGNS	EA	8		
28	150745A	REMOVE FLASHING SIGNAL POLE	EA	1		
29	150807A	REMOVE STORM DRAIN CULVERT (18" Dia or less)	LF	84		
30	150807B	REMOVE STORM DRAIN CULVERT (33" X 49" CMPA)	LF	30		
31	150812A	REMOVE PIPE (WATERLINE)	LF	250		
32	150820	REMOVE INLET	EA	2		
33	150821	REMOVE HEADWALL	EA	2		
34	150828A	REMOVE UTILITY BOX	EA	2		
35	151281	SALVAGE ROADSIDE SIGN	EA	9		
36	151287A	SALVAGE FLASHING SIGNAL POLE & LUMINAIRE	EA	1		
37	151508A	RECONSTRUCT MANHOLE (EXISTING SSMH)	EA	3		

Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
38	151531A	RECONSTRUCT FENCE (chain link with slats)	LF	290		
39	152390	RELOCATE ROADSIDE SIGN	EA	7		
40	152402	ADJUST WATER VALVE COVER TO GRADE	EA	7		
41	152440	ADJUST MANHOLE TO GRADE	EA	2		
42	152453A	ADJUST WATER BLOW-OFF VALVE BOX TO GRADE	EA	1		
43	153103A	COLD PLANE ASPHALT CONCRETE PAVEMENT (Minimum depth = 0.10')	SY	482		
44	153103B	COLD PLANE ASPHALT CONCRETE PAVEMENT (Minimum depth = 0.20')	SY	2,018		
45	153121A	REMOVE SIGNAL POLE FOUNDATIONS	CY	2		
46	153215A	REMOVE CONCRETE (Curbs, Gutters and Driveways)	CY	78		
47	153218	REMOVE CONCRETE (Sidewalk)	SF	1,655		
48	155232	SAND BACKFILL	CY	25		
49	160102	CLEARING AND GRUBBING	LS	1		
50	F 190101	ROADWAY EXCAVATION	CY	2,524		
51	192059	STRUCTURE EXCAVATION (TYPE DC)	LS	1		
52	193013	STRUCTURE BACKFILL (RETAINING WALL)	CY	17		
53	210270	ROLLED EROSION CONTROL PRODUCT (NETTING -Type C)	SF	198		
54	210300	HYDROMULCH	SF	82,380		
55	210350	FIBER ROLLS	LF	2,670		
56	210430	HYDROSEED	SF	82,578		
57	210600	COMPOST	SF	198		

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Signalization
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County of El Dorado
Contract
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Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
58	210630	INCORPORATE MATERIALS	SF	82,380	57	
59	260203	CLASS 2 AGGREGATE BASE	CY	888		
60	390132	HOT MIX ASPHALT (TYPE A)	TON	2,777		
61	390135	HOT MIX ASPHALT (LEVELING)	TON	2,181		
62	394073	PLACE HOT MIX ASPHALT DIKE (TYPE A)	LF	53		
63	394090A	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)(SIDEWALK & RAMP)	SQYD	212		
64	F 510050	STRUCTURAL CONCRETE (PCC SLAB, ARCH CULVERT)	CY	13		
65	F 510060	STRUCTURAL CONCRETE (RETAINING WALL)	CY	44		
66	510502A	TYPE OS INLET	EA	1		
67	510502B	TYPE GO INLET	EA	4		
68	510502C	TYPE G3 INLET	EA	1		
69	F 510526	MINOR CONCRETE (BACKFILL)	CY	42		
70	P-F 520103	BAR REINFORCING STEEL (RETAINING WALL)	LB	2,475		
71	P-F 520101A	BAR REINFORCING STEEL (PCC Slab, Arch Culvert)	LB	700		
72	566011	ROADSIDE SIGN - ONE POST	EA	7		
73	P 641101	12" PLASTIC PIPE	LF	105		
74	P 641107	18" PLASTIC PIPE	LF	680		
75	P 667028	49" x 33" CORRUGATED STEEL PIPE ARCH (.079" THICK)	LF	115		
76	700639A	36" GMP (0.109" THICK)	EA	2		

Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
77	705001A	49" x 33" STEEL FLARED END SECTION	EA	2		
78	705011	18" STEEL FLARED END SECTION	EA	1		
79	P 707225	48" PRECAST CONCRETE PIPE MANHOLE	EA	3		
80	F 721026	ROCK SLOPE PROTECTION (BACKING NO. 1, METHOD B)	CY	33		
81	F 721028	ROCK SLOPE PROTECTION (BACKING NO. 2, METHOD B)	CY	2		
82	729011	ROCK SLOPE PROTECTION FABRIC (CLASS 8)	SY	67		
83	F 730020	MINOR CONCRETE (CURB)	CY	17		
84	F 730045A	MINOR CONCRETE (VALLEY GUTTER)	CY	18		
85	F 731504	MINOR CONCRETE (CURB & GUTTER)	CY	96		
86	F 731521	MINOR CONCRETE (SIDEWALK)	CY	100		
87	F 731623	MINOR CONCRETE (CURB RAMP)	CY	9		
88	P 800001	FENCE (TYPE BW)	LF	1,225		
89	800101	TEMPORARY FENCE (TYPE BW)	LF	231		
90	800103	TEMPORARY FENCE (TYPE CL-6)	LF	611		
91	801150A	10' WIRE MESH GATE (58" TALL, TYPE BW)	EA	2		
92	820107	DELINEATOR (CLASS 1)	EA	4		
93	832001	METAL BEAM GUARD RAILING	LF	38		
94	839541	TRANSITION RAILING (TYPE WB)	EA	1		
95	839584	ALTERNATIVE IN-LINE TERMINAL SYSTEM	EA	1		
96	840501	THERMOPLASTIC TRAFFIC STRIPE	LF	8,851		

Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
97	840519	THERMOPLASTIC CROSSWALK AND PAVEMENT MARKING	SF	1,212		
98	850111	PAVEMENT MARKER (RETROREFLECTIVE)	EA	2,445		
99	850111A	PAVEMENT MARKER, BLUE (RETROREFLECTIVE)	EA	2		
100	P 860201	SIGNAL AND LIGHTING	LS	1		
101	999990	MOBILIZATION	LS	1		
TOTAL BID:						

(F) Final Pay Quantity
(P) Eligible for Partial Payment

(LS) Lump Sum
(SWD) Sign Working Day

EXHIBIT B

FAIR EMPLOYMENT PRACTICES ADDENDUM

1. In the performance of this Agreement, Contractor will not discriminate against any employee for employment because of race, color, sex, sexual orientation, religion, ancestry or national origin, physical disability, medical condition, marital status, political affiliation, family and medical care leave, pregnancy leave or disability leave. Contractor will take affirmative action to ensure that employees are treated during employment, without regard to their race, color, sex, sexual orientation, religion, ancestry or national origin, physical disability, medical condition, marital status, political affiliation, family and medical care leave, pregnancy leave or disability leave. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor shall post in conspicuous places, available to employees for employment, notices to be provided by State setting forth the provisions of this Fair Employment section.

2. Contractor and all subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code Section 1290-0 et seq.), and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12900(a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this Agreement by reference and made a part hereof as if set forth in full. Each of Contractor's contractors and all subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreements, as appropriate.

3. Contractor shall include the nondiscrimination and compliance provisions of this clause in all contracts and subcontracts to perform work under this Agreement.

4. Contractor will permit access to the records of employment, employment advertisements, application forms and other pertinent data and records by County, State, the State Fair Employment and Housing Commission or any other agency of the State of California designated by State, for the purposes of investigation to ascertain compliance with the Fair Employment section of this Agreement.

5. Remedies for Willful Violation:

(a) County may determine a willful violation of the Fair Employment provision to have occurred upon receipt of a final judgment to that effect from a court in an action to which Contractor was a party, or upon receipt of a written notice from the Fair Employment and Housing Commission that it has investigated and determined that Contractor has violated the Fair Employment Practices Act and had issued an order under Labor Code Section 1426 which has become final or has obtained an injunction under Labor Code Section 1429.

(b) For willful violation of this Fair Employment provision, County shall have the right to terminate this Agreement either in whole or in part, and any loss or damage sustained by County in securing the goods or services thereunder shall be borne and paid for by Contractor and by the surety under the performance bond, if any, and County may deduct from any moneys due or thereafter may become due to Contractor, the difference between the price named in the Agreement and the actual cost thereof to County to cure Contractor's breach of this Agreement.

COUNTY OF EL DORADO

PAYMENT BOND

(Section 3247, Civil Code)

Bond No. _____

WHEREAS, the County of El Dorado, a political subdivision of the State of California, hereafter referred to as "Obligee", has awarded to Contractor

_____ hereafter referred to as "Principal", a contract for the work described as follows:

PLEASANT VALLEY RD (SR 49) / PATTERSON DR INTERSECTION SIGNALIZATION
CONTRACT No. PW 09-30425 / CIP No. 73320

WHEREAS, the State of California, acting through its Department of Transportation is hereafter referred to as "Additional Obligee", both Obligee and Additional Obligee collectively referred to as "Obligees";

AND, WHEREAS, said Principal is required to furnish a bond in connection with said contract, guaranteeing the faithful performance thereof:

NOW, THEREFORE, we the undersigned Principal and Surety are held and firmly bound unto the Obligees, in the sum of

_____ Dollars,
(\$ _____) to be paid to the Obligees, for which payment we bind ourselves, jointly and severally.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That if said Principal or its subcontractors shall fail to pay any of the persons named in Civil Code Section 3181, or amounts due under the Unemployment Insurance Code with respect to work or labor performed by such claimant, or any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from the wages of employees of the Principal and his subcontractors pursuant to Section 18806 of the Revenue and Taxation Code, with respect to such work and labor, that the Surety herein will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, the Surety will pay a reasonable attorney's fee to be fixed by the court.

This bond shall inure to the benefit of any of the persons named in Civil Code Section 3181 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

Dated: _____

Correspondence or Claims relating to this bond should be sent to the Surety at the following address:

PRINCIPAL

SURETY

ATTORNEY-IN-FACT

NOTE: Signatures of those executing for the Principal and for the Surety must be properly acknowledged, and a Power of Attorney attached for the Surety.

NOTARY ACKNOWLEDGMENTS ATTACHED

PRINCIPAL

ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____,
(here insert name and title of the officer)

personally appeared _____

_____ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

SURETY

ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____,

(here insert name and title of the officer)

personally appeared _____

_____ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

COUNTY OF EL DORADO

PERFORMANCE BOND

Bond No. _____

KNOW ALL MEN BY THESE PRESENTS, that we _____

the Contractor in the Contract hereto annexed, as Principal, and _____

as Surety, are held firmly bound unto the County of El Dorado, a political subdivision of the State of California, hereinafter called the "Obligee" and the State of California, acting through its Department of Transportation, hereafter referred to as "Additional Obligee", both Obligee and Additional Obligee collectively referred to as "Obligees" in the sum of _____ DOLLARS,

(\$ _____) lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, jointly and severally, firmly by these presents.

Signed, sealed and dated: _____

The condition of the above obligation is such that if said Principal as Contractor in the Contract hereto annexed shall faithfully perform each and all of the conditions of said Contract to be performed by him, and shall furnish all tools, equipment, apparatus, facilities, transportation, labor and material, other than material, if any, agreed to be furnished by the Obligees, necessary to perform and complete, and to perform and complete in a good and workmanlike manner, the work of **Contract No. PW 09-30425 / CIP No. 73320 for the PLEASANT VALLEY RD (SR 49)/ PATTERSON DR INTERSECTION SIGNALIZATION** in strict conformity with the terms and conditions set forth in the Contract hereto annexed, then this obligation shall be null and void; otherwise this bond shall remain in full force and effect and the said Surety will complete the Contract work under its own supervision, by Contract or otherwise, and pay all costs thereof for the balance due under terms of the Contract, and the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work.

In the event suit is brought upon this bond by the Obligees and judgment is recovered, the Surety shall pay all costs incurred by the Obligees in such suit, including a reasonable attorney's fee to be fixed by the court.

This guarantee shall insure the Obligees during the work required by any Contract and for a period of one (1) year from the date of acceptance of the work against faulty or improper materials or workmanship that may be discovered during that time.

No right of action shall accrue under this bond to or for the use of any person other than the Obligees named herein.

Dated: _____, 20 _____.

Correspondence or Claims relating to this bond should be sent

to the Surety at the following address:

PRINCIPAL

SURETY

ATTORNEY-IN-FACT

NOTE: Signatures of those executing for the Principal and the Surety must be properly acknowledged, and a Power of Attorney attached for the Surety.

NOTARY ACKNOWLEDGMENTS ATTACHED

PRINCIPAL

ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____,

(here insert name and title of the officer)

personally appeared _____

_____ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

SURETY

ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____,

(here insert name and title of the officer)

personally appeared _____

_____ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

COMPLETING BID IN PENCIL, ERASURES, OVERWRITES, AND USE OF CORRECTION FLUID OR TAPE ARE NOT ACCEPTABLE. BID PROPOSALS WITH PENCIL, ERASURES, OVERWRITES, OR USE OF CORRECTION FLUID OR TAPE WILL BE REJECTED. ALL CHANGES MUST BE LINED OUT AND CORRECTIONS INSERTED ADJACENT TO AND INITIALED BY THE BIDDER'S AUTHORIZED REPRESENTATIVE.

PROPOSAL

(to be attached to and submitted with this bound Contract Document bid package)

TO: COUNTY OF EL DORADO,
STATE OF CALIFORNIA
COMMUNITY DEVELOPMENT AGENCY,
TRANSPORTATION DIVISION

for the construction of
the

PLEASANT VALLEY RD (SR 49)/ PATTERSON DR INTERSECTION SIGNALIZATION

CONTRACT No. PW 09-30425 / CIP No. 73320

NAME OF BIDDER _____

MAILING ADDRESS _____

CITY, STATE, ZIP _____

PHYSICAL ADDRESS _____

(Please include even if Mailing Address used)

CITY, STATE, ZIP _____

TELEPHONE NO: AREA CODE () _____

FAX NO: AREA CODE () _____

EMAIL ADDRESS _____

The work for which this Proposal is submitted is for the construction in accordance with these Contract Documents (including the payment of not less than the State general prevailing wage rates set forth herein), the Project Plans described below, including any addenda thereto, the Contract annexed hereto, and also in accordance with the California Department of Transportation Standard Plans 2010, the Standard Specifications 2010, Revised Standard Specifications, standard drawings from the Design and Improvement Standards Manual of the County of El Dorado Community Development Agency, Transportation Division,

Pleasant Valley Road (SR 49) at Patterson Drive Intersection Signalization
Contract No. PW 09-30425 / CIP No. 73320
September 10, 2013

County of El Dorado
Proposal
P-1

revised March 8, 1994 including Resolutions 199-91 and 58-94 to adopt changes to the Design and Improvement Standards Manual; EID Design and Construction Standards, the Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished, and in accordance with the General Prevailing Wage rates. The Project Plans and Contract Documents for the work to be done are entitled:

**PLEASANT VALLEY RD (SR 49)/ PATTERSON DR INTERSECTION
SIGNALIZATION**

CONTRACT No. PW 09-30425 / CIP No. 73320

Bids are to be submitted for the entire work. The amount of the bid for comparison purposes will be the total of all the items.

The Bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for this purpose. In the case of unit basis items, the amount set forth under the "Item Total" column shall be the product of the unit price bid and the estimated quantity for the item.

In case of discrepancy between the item price and the total set forth for a unit basis item, the unit price shall prevail, except as provided in (a) or (b), as follows:

- (a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item total column, then the amount set forth in the total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price;
- (b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc., from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage wise the unit price or item total in the Community Development Agency, Transportation Division's Final Estimate of cost.

If this Proposal is accepted and the undersigned Bidder shall fail to enter into the Contract and furnish the two bonds in the sums required by the State Contract Act, with surety satisfaction to the County of El Dorado in accordance with the Special Provisions within ten (10) days, not including Saturdays, Sundays, and legal holidays, of the date of the letter notice from the County of El Dorado that the Contract has been awarded, the County of El Dorado may, at its option, determine that the Bidder has abandoned the Contract, and thereupon this Proposal and the acceptance thereof shall be null and void and the forfeiture of such security accompanying this Proposal shall operate and the same shall be the property of the County of El Dorado.

The undersigned, as Bidder, declares under penalty of perjury under the laws of the State of California that the only persons or parties interested in this Proposal, as principals, are those named herein; that this Proposal is made without collusion with any other person, firm, or corporation; that it has carefully examined the location of the proposed work, the annexed proposed form of Contract, and the Plans therein referred to; and that it proposes, and agrees if this Proposal is accepted, that it will contract with the County of El Dorado, in the form of the copy of the Draft Contract annexed hereto, to provide all necessary machinery, tools, apparatus, and other means of construction, and to do all the work and furnish all the materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that it will take in full payment therefore the following item prices, to wit:

PROPOSAL PAY ITEMS AND BID PRICE SCHEDULE

**PLEASANT VALLEY RD (SR 49) / PATTERSON DR INTERSECTION SIGNALIZATION
CONTRACT NO. PW 09-30425/ CIP NO. 73320**

Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
1	070030	LEAD COMPLIANCE PLAN	LS	1		
2	072007	EXCAVATION SAFETY	LS	1		
3	080050	PROGRESS SCHEDULE (CRITICAL PATH METHOD)	LS	1		
4	P 120090	CONSTRUCTION AREA SIGNS	LS	1		
5	120100	TRAFFIC CONTROL SYSTEM	LS	1		
6	120149	TEMPORARY PAVEMENT MARKING (PAINT)	SF	409		
7	120159	TEMPORARY TRAFFIC STRIPE (PAINT)	LF	8,711		
8	120182	PORTABLE DELINEATOR	EA	129		
9	120199	TRAFFIC PLASTIC DRUM	EA	10		
10	120200	FLASHING BEACON (PORTABLE)	EA	9		
11	120300	TEMPORARY PAVEMENT MARKER	EA	422		
12	128651A	PORTABLE CHANGEABLE MESSAGE SIGN	SWD	480		
13	130100	JOB SITE MANAGEMENT	LS	1		
14	130300	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	1		
15	130310	RAIN EVENT ACTION PLAN	EA	10	\$500.00	\$5,000.00
16	130320	STORM WATER SAMPLING AND ANALYSIS DAY	EA	10		
17	130330	STORM WATER ANNUAL REPORT	EA	1	\$2,000.00	\$2,000.00
18	130620	TEMPORARY DRAINAGE INLET PROTECTION	EA	10		
19	141000	TEMPORARY FENCE (TYPE ESA)	LF	3,360		

Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
20	141103	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (Hazardous Waste)	LF	3,300		
21	149001A	PREPARE FUGITIVE DUST CONTROL PLAN	LS	1		
22	150204	ABANDON CULVERT (33"X49")	LF	43		
23	150606	REMOVE FENCE (TYPE BW)	LF	1,388		
24	150714	REMOVE THERMOPLASTIC TRAFFIC STRIPE	LF	4,242		
25	150715	REMOVE THERMOPLASTIC PAVEMENT MARKING	SF	411		
26	150722	REMOVE PAVEMENT MARKER	EA	315		
27	150742	REMOVE ROADSIDE SIGNS	EA	8		
28	150745A	REMOVE FLASHING SIGNAL POLE	EA	1		
29	150807A	REMOVE STORM DRAIN CULVERT (18" Dia or less)	LF	84		
30	150807B	REMOVE STORM DRAIN CULVERT (33" X 49" CMPA)	LF	30		
31	150812A	REMOVE PIPE (WATERLINE)	LF	250		
32	150820	REMOVE INLET	EA	2		
33	150821	REMOVE HEADWALL	EA	2		
34	150828A	REMOVE UTILITY BOX	EA	2		
35	151281	SALVAGE ROADSIDE SIGN	EA	9		
36	151287A	SALVAGE FLASHING SIGNAL POLE & LUMINAIRE	EA	1		
37	151508A	RECONSTRUCT MANHOLE (EXISTING SSMH)	EA	3		

Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
38	151531A	RECONSTRUCT FENCE (chain link with slats)	LF	290		
39	152390	RELOCATE ROADSIDE SIGN	EA	7		
40	152402	ADJUST WATER VALVE COVER TO GRADE	EA	7		
41	152440	ADJUST MANHOLE TO GRADE	EA	2		
42	152453A	ADJUST WATER BLOW-OFF VALVE BOX TO GRADE	EA	1		
43	153103A	COLD PLANE ASPHALT CONCRETE PAVEMENT (Minimum depth = 0.10')	SY	482		
44	153103B	COLD PLANE ASPHALT CONCRETE PAVEMENT (Minimum depth = 0.20')	SY	2,018		
45	153121A	REMOVE SIGNAL POLE FOUNDATIONS	CY	2		
46	153215A	REMOVE CONCRETE (Curbs, Gutters and Driveways)	CY	78		
47	153218	REMOVE CONCRETE (Sidewalk)	SF	1,655		
48	155232	SAND BACKFILL	CY	25		
49	160102	CLEARING AND GRUBBING	LS	1		
50	F 190101	ROADWAY EXCAVATION	CY	2,524		
51	192059	STRUCTURE EXCAVATION (TYPE DC)	LS	1		
52	193013	STRUCTURE BACKFILL (RETAINING WALL)	CY	17		
53	210270	ROLLED EROSION CONTROL PRODUCT (NETTING-Type C)	SF	198		
54	210300	HYDROMULCH	SF	82,380		
55	210350	FIBER ROLLS	LF	2,670		
56	210430	HYDROSEED	SF	82,578		

Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
57	210600	COMPOST	SF	198		
58	210630	INCORPORATE MATERIALS	SF	82,380		
59	260203	CLASS 2 AGGREGATE BASE	CY	888		
60	390132	HOT MIX ASPHALT (TYPE A)	TON	2,777		
61	390135	HOT MIX ASPHALT (LEVELING)	TON	2,181		
62	394073	PLACE HOT MIX ASPHALT DIKE (TYPE A)	LF	53		
63	394090A	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)(SIDEWALK & RAMP)	SQYD	212		
64	F 510050	STRUCTURAL CONCRETE (PCC SLAB, ARCH CULVERT)	CY	13		
65	F 510060	STRUCTURAL CONCRETE (RETAINING WALL)	CY	44		
66	510502A	TYPE OS INLET	EA	1		
67	510502B	TYPE GO INLET	EA	4		
68	510502C	TYPE G3 INLET	EA	1		
69	F 510526	MINOR CONCRETE (BACKFILL)	CY	42		
70	P-F 520103	BAR REINFORCING STEEL (RETAINING WALL)	LB	2,475		
71	P-F 520101A	BAR REINFORCING STEEL (PCC Slab, Arch Culvert)	LB	700		
72	566011	ROADSIDE SIGN - ONE POST	EA	7		
73	P 641101	12" PLASTIC PIPE	LF	105		
74	P 641107	18" PLASTIC PIPE	LF	680		

Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
75	P	667028	49" x 33" CORRUGATED STEEL PIPE ARCH (.079" THICK)	LF	115	
76		700639A	36" GMP (0.109" THICK)	EA	2	
77		705001A	49" x 33" STEEL FLARED END SECTION	EA	2	
78		705011	18" STEEL FLARED END SECTION	EA	1	
79	P	707225	48" PRECAST CONCRETE PIPE MANHOLE	EA	3	
80	F	721026	ROCK SLOPE PROTECTION (BACKING NO. 1, METHOD B)	CY	33	
81	F	721028	ROCK SLOPE PROTECTION (BACKING NO. 2, METHOD B)	CY	2	
82		729011	ROCK SLOPE PROTECTION FABRIC (CLASS 8)	SY	67	
83	F	730020	MINOR CONCRETE (CURB)	CY	17	
84	F	730045A	MINOR CONCRETE (VALLEY GUTTER)	CY	18	
85	F	731504	MINOR CONCRETE (CURB & GUTTER)	CY	96	
86	F	731521	MINOR CONCRETE (SIDEWALK)	CY	100	
87	F	731623	MINOR CONCRETE (CURB RAMP)	CY	9	
88	P	800001	FENCE (TYPE BW)	LF	1,225	
89		800101	TEMPORATY FENCE (TYPE BW)	LF	231	
90		800103	TEMPORARY FENCE (TYPE CL-6)	LF	611	
91		801150A	10' WIRE MESH GATE (58" TALL, TYPE BW)	EA	2	
92		820107	DELINEATOR (CLASS 1)	EA	4	
93		832001	METAL BEAM GUARD RAILING	LF	38	
94		839541	TRANSITION RAILING (TYPE WB)	EA	1	

Item No.	Item Code	Item Description	Unit of Measure	ESTIMATED QUANTITY	ITEM PRICE	TOTAL PRICE (In Figures)
95	839584	ALTERNATIVE IN-LINE TERMINAL SYSTEM	EA	1		
96	840501	THERMOPLASTIC TRAFFIC STRIPE	LF	8,851		
97	840519	THERMOPLASTIC CROSSWALK AND PAVEMENT MARKING	SF	1,212		
98	850111	PAVEMENT MARKER (RETROREFLECTIVE)	EA	2,445		
99	850111A	PAVEMENT MARKER, BLUE (RETROREFLECTIVE)	EA	2		
100	P 860201	SIGNAL AND LIGHTING	LS	1		
101	999990	MOBILIZATION	LS	1		
TOTAL BID:						

(F) Final Pay Quantity
(P) Eligible for Partial Payment

(LS) Lump Sum
(SWD) Sign Working Day

(NOTICE: Bidders failure to execute the questionnaires and statements contained in this proposal as required by applicable laws and regulations, or the determinations by County of El Dorado based upon those questionnaires and statements, may prohibit award of the subject Contract to the bidder.)

SUBCONTRACTOR LIST

The Bidder must list the name, address, and license number, of each subcontractor to whom the Bidder proposes to subcontract portions of the work, as required by the provisions in section 2-1.33C. The Bidder must also list the work portion to be performed by each subcontractor by listing the bid item number, bid item description, and portion of the work to be performed by the subcontractor in the form of a percentage calculated by dividing the work to be performed by the subcontractor by the respective bid item amount(s) (not by the total bid price).

Name	Location of Business	License No.	Bid Item Number and Bid Item Description	Percentage of Each Bid Item Subcontracted

Public Contract Code Section 10285.1 Statement

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the Bidder hereby declares under penalty of perjury under the laws of the State of California that the Bidder has _____, has not _____ been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "Bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: **The Bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. The above Statement is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.**

Public Contract Code Section 10162 Questionnaire

In conformance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the Bidder, any officer of the Bidder, or any employee of the Bidder who has a proprietary interest in the Bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes _____ No _____

If the answer is yes, explain the circumstances in the following space.

Public Contract Code Section 10232 Statement

In conformance with Public Contract Code Section 10232, the Bidder, hereby states under penalty of perjury under the laws of the State of California, that no more than one final unappealable finding of contempt of court by a Federal Court has been issued against the Bidder within the immediately preceding two year period because of the Bidder's failure to comply with an order of a Federal Court which orders the Bidder to comply with an order of the National Labor Relations Board.

Note: The above Statement and Questionnaire are part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement and Questionnaire.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

NONCOLLUSION AFFIDAVIT

(Title 23 United States Code Section 112 and
Public Contract Code Section 7106)

In conformance with Title 23 United States Code Section 112 and Public Contract Code 7106 the Bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

NOTE:

The above Noncollusion Affidavit is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Noncollusion Affidavit.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

**DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSION
CERTIFICATION, UNITED STATES DEPARTMENT OF
TRANSPORTATION(USDOT) 2 CODE OF FEDERAL REGULATIONS (CFR)
1200 FEDERAL AGENCY REGULATIONS FOR GRANTS AND AGREEMENTS
AND EXECUTIVE ORDER 12549**

The Bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, or manager:

- is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- does not have a proposed debarment pending; and

has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award, but will be considered in determining Bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Bidder further agrees by submitting this Proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where any lower tier participant is unable to certify to this statement, it shall attach an explanation to its proposal to the prime contractor.

Notes: Providing false information may result in criminal prosecution or administrative sanctions.

The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.

IRAN CONTRACTING ACT CERTIFICATION

(Public Contract Code Section 2200 *et seq.*)

As required by California Public Contract Code Section 2204, you certify subject to penalty for perjury that the option checked below relating to your status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 *et seq.*) is true and correct:

You are not:

(i) identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203; or

(ii) a financial institution that extends, for 45 days or more, credit in the amount of \$20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran.

The Authority has exempted you from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, the Authority will be unable to obtain the goods and/or services to be provided pursuant to the contract.

The amount of the contract payable to the you for the work does not exceed \$1,000,000.

Signed _____

Titled _____

Firm _____

Date _____

Note: In accordance with Public Contract Code Section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of \$250,000 or twice the contract amount, termination of the contract and/or ineligibility to bid on public contracts for three years.

OPT OUT OF PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS

You may opt out of the payment adjustments for price index fluctuations as specified in "Payment Adjustments for Price Index Fluctuations" of the special provisions. If you elect to opt out of the provisions of this specification, complete this form and submit it with your bid.

Bidder Name: _____

Contract No. PW 09-30425

I opt out of the payment adjustments for price index fluctuations.

Date: _____

Signature: _____

Accompanying this proposal is _____

(NOTICE: INSERT THE WORDS "CASH(\$___),"CASHIER'S CHECK," "CERTIFIED CHECK," OR "BIDDERS BOND," AS THE CASE MAY BE)

in amount equal to at least ten percent of the total amount of the bid.

The names of all persons interested in the forgoing Proposal as principals are as follows:

IMPORTANT NOTICE: If the Bidder or other interested person is a corporation, state legal name of corporation and place of incorporation, also names of the president, secretary, treasurer, and executive officer thereof; if a partnership, state name of partnership, also names of all individual partners; if Bidder or other interested person is an individual, state first and last names in full.

Licensed in accordance with an act providing for the registration of Contractors,

License No. _____ Classification(s) _____

(A Copy of the afore-referenced license must be attached hereto.)

ADDENDA: This Proposal is submitted with respect to the changes to the Contract included in addenda number (s)

(Fill in addenda numbers if addenda have been received and insert, in this Proposal, any Proposal Pay Items and Bid Price Schedules that were received as part of the addenda)

By my signature on this Proposal I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Sections 10162, 10232, and 10285.1 are true and correct and that the Bidder has complied with the requirements of Sections 4104 of the Subletting and Subcontracting Fair Practices Act and of Section 8103 of the Fair Employment and Housing Commission Regulations (Chapter 5 of Division 4 of Title 2 of the California Code of Regulations). By my signature on this Proposal I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Noncollusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106; and the Debarment Suspension, Ineligibility and Voluntary Exclusion Certification; the Fair Employment Practice Addendum, Iran Contracting Act Certification, and the Opt Out of Payment Adjustments for Price Index Fluctuations if elected, are true and correct.

The person or persons executing this Proposal on behalf of a corporation or partnership shall be prepared to demonstrate by resolution, article, or otherwise, that such person is or that such persons are appropriately authorized to act in these regards for such corporation or partnership. Such authority shall be demonstrated to the satisfaction of the County of El Dorado.

If the signature is by an agent other than an officer of a corporation or a member of a partnership, a power of attorney authorizing said act by the agent on behalf of his principal shall be submitted with the bid forms; otherwise, the bid may be disregarded as irregular and unauthorized.

The Bidder's execution on the signature portion of this Proposal shall constitute an endorsement and execution of those affidavits, declarations and certifications which are part of this Proposal.

Executed this _____ day of _____, 20__

at _____ County, State of _____



Name and Title of Bidder _____

Name of Firm _____

COUNTY OF EL DORADO

BIDDER'S BOND

this form MUST be used

KNOW ALL PEOPLE BY THESE PRESENTS, THAT WE _____
_____, as PRINCIPAL, and

as Surety are held and firmly bound unto the County of El Dorado, a political subdivision of the State of California (hereinafter referred to as "Obligee"), in the penal sum of **TEN (10) PERCENT OF THE AMOUNT OF THE TOTAL BID PRICE** of the Principal above named, submitted by said Principal to the Obligee for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made to the Obligee, we the Principal and Surety bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. In no case shall the liability of the Surety hereunder exceed the sum of

TEN PERCENT (10%) OF THE AMOUNT OF THE TOTAL BID PRICE

THE CONDITION OF THIS OBLIGATION IS SUCH, THAT:

WHEREAS, the Principal has submitted the above-mentioned Bid to the Obligee, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at Placerville, El Dorado County, California, for the construction of the

PLEASANT VALLEY RD (SR 49)/ PATTERSON DR INTERSECTION SIGNALIZATION

CONTRACT No. PW 09-30425 / CIP No. 73320

NOW, THEREFORE, if the aforesaid Principal is awarded the Contract and, within the time and manner required under the Contract Documents, after the prescribed forms are presented to it for signature, enters into a written contract, in the prescribed form, in accordance with the Bid, and files two bonds with the Obligee, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall remain in full force and virtue.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the Court.

IN WITNESS WHEREOF, we have set our hands and seals on this _____ day of _____ 20__

(seal) _____
Principal

(seal) _____
Surety

Address: _____

(NOTE: Signature of those executing for the Surety shall be properly acknowledged, and accompanied by a Certificate of Acknowledgment.)

SURETY

ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____,

(here insert name and title of the officer)

personally appeared _____

_____ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)