

**DEPARTMENT OF TRANSPORTATION  
COUNTY OF EL DORADO, STATE OF CALIFORNIA  
GREEN VALLEY ROAD SIDEWALK FROM PLEASANT GROVE MIDDLE SCHOOL TO BASS  
LAKE ROAD**

**COUNTY CONTRACT NO. 73113  
FEDERAL AID PROJECT NO. SR2SF-5925 (057)**

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**DEPARTMENT OF TRANSPORTATION  
COUNTY OF EL DORADO, CALIFORNIA  
SPECIAL PROVISIONS  
ANNEXED TO CONTRACT NO. 73113**

**SECTION 1. SPECIFICATIONS AND PLANS**

**1-1.01 GENERAL**

The work embraced herein shall be done in accordance with the California Department of Transportation (Caltrans) Standard Specifications dated May 2006, the Standard Plans, dated May 2006 insofar as the same may apply, the County of El Dorado Design and Improvement Standards Manual revised March 8, 1994, and in accordance with the following special provisions.

In case of conflict between the Standard Specifications and these special provisions, the special provisions shall take precedence over and be used in lieu of such conflicting portions. The Contractors attention is also directed to Section 4-1.01 and 5-1.04 of the Standard Specifications.

**Special Notice:**

**This Project proposes a Base Bid (Schedule A) and an Additive Alternate Bid (Schedule B). This Contract requires special proposal conditions, bid bond requirements, and payment provisions dealing with the Base Bid (Schedule A) and the Additive Alternate Bid (Schedule B). Section 10-3, "Signals, Lighting and Electrical Systems," of these special provisions applies only to the Additive Alternate Bid (Schedule B) Work.**

**1-1.02 DEFINITIONS AND TERMS**

As used in the Contract Documents, unless the context requires otherwise, the following terms have the following meanings:

**CALTRANS** - The State of California Department of Transportation.

**CONTRACTOR** - Contractor responsible for constructing the Green Valley Road Sidewalk from Pleasant Grove Middle School to Bass Lake Road.

**COUNTY** - The County of El Dorado, a political subdivision of the State of California.

**DBE** - Disadvantaged Business Enterprise includes disadvantaged, small, minority, and women owned business enterprises.

**DOT/ DEPARTMENT/ DEPARTMENT OF TRANSPORTATION/ RECIPIENT** - The Department of Transportation as created by the Board of Supervisors for the County of El Dorado.

**US DOT** - The United States of America Department of Transportation.

**DEPUTY DIRECTOR** - The Deputy Director of Engineering or Deputy Director of Transportation Planning and Land Development in the Department of Transportation for the County of El Dorado.

**DIRECTOR OF TRANSPORTATION** - The Director of Transportation for the County of El Dorado.

**EID** - El Dorado Irrigation District.

**ENGINEER / STATE HIGHWAY ENGINEER** - The Director of Transportation for the County of El Dorado or his authorized representative (Resident Engineer).

**FHWA** - Federal Highway Administration.

**LABORATORY** - The established laboratory of the El Dorado County Department of Transportation or laboratories authorized by the Engineer to test materials and work involved in the contract.

**Comment [LB1]:** This definition is not in the Marshall Rd specs

**MUTCD** - California Manual on Uniform Traffic Control Devices (FHWA's MUTCD 2003 Revision 1, as amended for use in California), also called the California MUTCD.

**PLANS** - The improvement plans titled "GREEN VALLEY ROAD SIDEWALK FROM PLEASANT GROVE MIDDLE SCHOOL TO BASS LAKE ROAD" approved by the El Dorado County Department of Transportation, and the Standard Plans.

**STANDARD PLANS** - The May 2006 edition of the Standard Plans of the State of California, Department of Transportation (Caltrans) and Errata.

**STANDARD SPECIFICATIONS** - The May 2006 edition of the Standard Specifications of the State of California, Department of Transportation (Caltrans).

**STATE** - County of El Dorado.

All other definitions and terms are in accordance with the Standard Specifications.

### **1-1.03 AMENDMENTS TO THE STANDARD SPECIFICATIONS**

Attention is directed to Appendix A of these special provisions, containing Amendments to the Standard Specifications as issued by the State of California Department of Transportation. These Amendments are hereby incorporated into the Contract Documents to replace or supplement those sections of the Standard Specifications where an Amendment exists, and are to be treated the same as the Standard Specifications in relation to other Contract Documents.

## **SECTION 2. PROPOSAL REQUIREMENTS AND CONDITIONS**

### **2-1.01 GENERAL**

The bidder's attention is directed to the provisions in Section 2, "Proposal Requirements and Conditions," of the Standard Specifications and these special provisions for the requirements and conditions which it must observe in the preparation of the Proposal form and the submission of the bid.

The first sentence of the second paragraph in Section 2-1.05, "Proposal Forms," of the Standard Specifications is amended to read:

**“The Proposal form is bound together with the Notice to Bidders, Special Provisions, Agreement and attendant documents.”**

A Proposal shall be deemed “Non-Responsive” if the Proposal is submitted without the entire Contract Document package attached.

In addition to whom the bidder proposes to directly subcontract portions of the work as required in accordance with Section 2-1.054, "Required Listing of Proposed Subcontractors", of the Standard Specifications, each Proposal shall have listed therein the percentage of work that will be done by each subcontractor listed. Forms for listing the subcontractors who will work on this Project as well as subcontractors who have submitted quotes or bids, but were not selected to work on this Project are included in the Proposal section of these Contract Documents.

The first sentence of the last paragraph in Section 2-1.07, "Proposal Guaranty," of the Standard Specifications is amended to read:

**The bidder's bond shall conform to the bond form included in this Proposal for the project “Green Valley Road Sidewalk from Pleasant Grove Middle School to Bass Lake Road”, and shall be properly filled out and executed.”**

**(DO NOT DETACH THE FORM).**

**The Proposal shall not be detached and shall be submitted with the Contract Documents bid package in its entirety.**

The form of the Bidder's Bond mentioned in the last paragraph in Section 2-1.07, "Proposal Guaranty," of the Standard Specifications will be found in the Proposal. **The Bidder's Bond shall be in an amount equal to at least ten percent (10%) of the total amount bid reflecting the sum of the Base Bid (Schedule A) and the Additive Alternate Bid (Schedule B).**

In accordance with Public Contract Code Section 7106, A Noncollusion Affidavit is included in the Proposal. Signing the Proposal shall also constitute signature of the Noncollusion Affidavit.

The Contractor, sub recipient 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 Title 49 CFR (Code of Federal Regulations) part 26 in the award and administration of US DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in termination of this contract or such other remedy, as County deems appropriate. Each subcontract signed by the Contractor must include this assurance.

Failure of the bidder to fulfill the requirements of the special provisions for submittals required to be furnished after bid opening, including but not limited to escrowed bid documents, where applicable, may subject the bidder to a determination of the bidder's responsibility in the event it is the apparent low bidder on a future public works contract.

**2-1.02 BASE BID AND ADDITIVE ALTERNATE BID**

Attention is directed to Section 3, "Award and Execution of Contract," and Section 4, "Beginning of Work, Time of Completion and Liquidated Damages" of these Special Provisions. This project proposes a Base Bid (Schedule A) and an Additive Alternate Bid (Schedule B). Both Schedule A and Schedule B must be completed for the Bid to be considered responsible and responsive.

**2-1.03 INCLUSION OF FEDERAL FORM 1273 CONTRACT PROVISIONS**

In accordance with Section 12.9 of Chapter 12 of the Caltrans Local Assistance Procedures Manual (LAPM), and Section 14 "FEDERAL REQUIREMENTS FOR FEDERAL-AID CONSTRUCTION PROJECTS" of these Contract Documents, the provisions of FHWA Form 1273 are required to be physically incorporated into each contract, subcontract and subsequent lower-tier subcontracts. The provisions may not be incorporated by reference.

The prime Contractor is responsible for compliance with the requirements by all subcontractors and lower tier subcontractors. Failure of the prime Contractor to comply with this requirement is grounds for County termination of the contract with the Contractor and debarment of the Contractor by FHWA.

**2-1.04 FEDERAL LOBBYING RESTRICTIONS**

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

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

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

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

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

contained in any disclosure form previously filed by the Contractor, subcontractors and any lower-tier contractors. An event that materially affects the accuracy of the information reported includes:

- 1) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or
- 2) A change in person(s) or individual(s) influencing or attempting to influence a covered Federal action; or
- 3) A change in the officer(s), employee(s), or member(s) influencing or attempting to influence a covered Federal action.

**2-1.05 DISADVANTAGED BUSINESS ENTERPRISE (DBE)**

This Contract is subject to Title 49, Code of Federal Regulations Part 26 (49 CFR 26) entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." The Regulations in their entirety are incorporated herein by reference. In order to ensure Caltrans achieves its federally mandated statewide overall DBE goal, Disadvantaged Business Enterprises (DBEs), as defined in 49 CFR 26 are encouraged to participate in the performance of contracts financed in whole or in part with Federal Funds. Contractor should ensure that DBEs have the opportunity to participate in the performance of this Contract and shall take all necessary and reasonable steps for this assurance. Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts.

Bidders shall be fully informed in respect to the requirements of the DBE Regulations. The DBE Regulations in their entirety are incorporated herein by this reference. Attention is directed to the following matters:

- A. A DBE must be a small business concern as defined pursuant to Section 3 of the U.S. Small Business Act and relevant regulations promulgated pursuant thereto;
- B. A DBE may participate as a prime contractor, subcontractor, joint venture partner with a prime or subcontractor, vendor of material or supplies, or as a trucking company;
- C. A DBE joint venture partner must be responsible for specific contract items of work, or clearly defined portions thereof. Responsibility means actually performing, managing and supervising the work with its own forces. The DBE joint venture partner must share in the capital contribution, control, management, risks and profits of the joint venture commensurate with its ownership interest. A DBE joint venturer must complete Schedule B – Information for Determining Joint Venture Eligibility and the accompanying Affidavit as required in Section 14 of these Special Provisions;
- D. A DBE must perform a commercially useful function, i.e., must be responsible for the execution of a distinct element of the work and must carry out its responsibility by actually performing, managing and supervising the work;
- E. DBEs must be certified by the California Unified Certification Program (CUCP). Listings of DBEs certified by the CUCP are available from the following sources:
  1. The Caltrans web site at <http://www.dot.ca.gov/hq/bep>.
  2. The Caltrans DBE Directory This Directory may be obtained from the Department of Transportation, Material Operations Branch, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, Telephone: (916) 445-3520.
- F. When reporting DBE participation, bidders may count the cost of materials or supplies purchased from DBEs as follows:
  1. If the materials or supplies are obtained from a DBE manufacturer, 100 percent of the cost of the materials or supplies will count. A DBE manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.

2. If the materials or supplies are purchased from a DBE regular dealer, count 60 percent of the cost of the materials or supplies will count. A DBE regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a DBE regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A person may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as provided in this paragraph F.2. if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not DBE regular dealers within the meaning of this paragraph F.2.
3. If the DBE is neither a manufacturer nor a regular dealer, count only the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, provided the fees are reasonable and not excessive as compared with fees charged for similar services.

G. When reporting DBE participation, bidders may count the participation of DBE trucking companies as follows:

1. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract.
2. The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract;
3. The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs;
4. The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract;
5. The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by a DBE;
6. For the purposes of this paragraph G, a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

H. Bidders are encouraged to use services offered by financial institutions owned and controlled by DBEs.

#### **2-1.06 REQUIRED LISTING OF PROPOSED SUBCONTRACTORS**

Each Proposal shall have listed therein the name and address of each subcontractor including the percentage of each item that the subcontractor will work on 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'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.

Forms for listing the subcontractors who will work on this Project as well as subcontractors who have submitted quotes or bids, but were not selected to work on this Project are included in the Proposal section of these Contract Documents.

#### **2-1.07 COMPLIANCE WITH FEDERAL, STATE AND LOCAL AGENCY REQUIREMENTS**

County is relying on federal assistance or grants as well as 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 federal and state funds, County is required to comply with certain federal and state contracting requirements and to extend those requirements to its third party contracts. Contractor shall comply and shall require its subcontractors to comply with all applicable provisions of federal and state regulations, including those required by Caltrans and Federal Highway Administration (FHWA) grant funding requirements, regulations, and related executive orders regarding the use, expenditure, control, reporting, allowable costs and management of such funds as well as those requirements that are detailed in 49 CFR Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments. Contractor shall 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 of Contractor to comply with any federal or state provision may be the basis for withholding payments to Contractor and for such other remedies as may be appropriate including termination of this Contract. Contractor shall 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 Contractor's subcontracts, if any, associated with this Contract. Contractor shall ensure that all subcontractors submit certifications regarding federal lobbying activities as required by Section 1352, Title 31, United States Code and that all such certifications are made a part of any subcontracts entered into as a result of this Contract.

#### **2-1.08 COST PRINCIPLES**

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

- A. Contractor and its subcontractors shall comply with Office of Management and Budget Circular A-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 to Contractor and its subcontractors. This provision shall apply to every sub-recipient receiving funds as a Contractor or subcontractor under this Contract.
- B. Any expenditures for costs for which Contractor has received payment or credit that are determined by subsequent audit to be unallowable under Office of Management and Budget Circular A-87, 48 CFR, Parts 31 et seq. or 49 CFR, Part 18 are subject to repayment by Contractor 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 those costs are incurred and paid for by Contractor.
- D. Notwithstanding any other provision of the Contract Documents to the contrary, payments to Contractor for mileage, travel or subsistence expenses, if applicable, for Contractor's staff or subcontractors claimed for reimbursement shall not exceed the lesser of (1) the rates to be paid to County 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, then Contractor is responsible for the cost difference, and any overpayments inadvertently paid by County shall be reimbursed to County by Contractor on demand within thirty (30) days of such demand.
- E. Contractor and its subcontractors shall establish and maintain accounting systems and records that properly accumulate and segregate funds received under this Agreement by line item. The accounting systems of Contractor and all subcontractors shall conform to Generally Accepted Accounting Principles (GAAP), shall enable the determination of incurred costs at interim points of completion, and shall provide support for reimbursement of payment vouchers or invoices.

### SECTION 3. AWARD AND EXECUTION OF CONTRACT

#### 3-1.01 GENERAL

The bidder's attention is directed to the provisions in Section 3, "Award and Execution of Contract," of the Standard Specifications and these special provisions for the requirements and conditions concerning award and execution of contract.

#### 3-1.01.A DBE INFORMATION

In accordance with Section 26.11 of Title 49 Code of Federal Regulations Part 26, each bidder shall submit the name, contractor's license number, address, telephone and fax numbers, annual gross receipts and the description and percentage of the work to be performed by each subcontractor to whom the bidder proposes to subcontract portions of the work. Each bidder shall submit this information with its Proposal using the "BIDDER'S LIST OF SUBCONTRACTORS (DBE and NON-DBE) PART I" form located in the Proposal section of these Contract Documents. Each bidder shall also list the same information for all subcontractors who provided a quote or bid, but were not selected to participate on this project using the "BIDDER'S LIST OF SUBCONTRACTORS (DBE and NON-DBE) - PART II" form which is also located in the Proposal section of these Contract Documents.

#### 3-1.02 AWARD OF CONTRACT

County may award the work contained in the Base Bid (Schedule A) only, both the Base Bid (Schedule A) and the Additive Alternate Bid (Schedule B) or reject all bids.

Section 3-1.01, "Award of Contract," of the Standard Specifications is amended to read:

**3-1.01 Award of Contract;** The right is reserved to reject any and all Proposals. The award of the contract, if it be awarded, will be to the lowest responsive responsible bidder whose Proposal complies with all the requirements prescribed. The lowest, responsive responsible bid will be based on the **total bid for the Base Bid (Schedule A) only**. Such award, if made, will be made within sixty (60) days after the opening of the Proposals. This period will be subject to extension for such further period as may be agreed upon in writing between the Department and the bidder concerned. County will determine at the time of award to award either: **The Base Bid (Schedule A) work only, or the Base Bid (Schedule A) work and the Additive Alternate Bid (Schedule B) work.**

**The award of the contract, if it be awarded, will be to the lowest responsive responsible bidder whose Proposal complies with all the requirements prescribed.**

A "LOCAL AGENCY BIDDER - DBE INFORMATION" form will be included in the contract documents to be executed by the successful bidder. The purpose of the form is to collect data required under 49 CFR 26. Even if no DBE participation will be reported, the successful bidder must execute and return the form. Information required on this form is in addition to information regarding DBE and NON-DBE subcontractors listed on the forms included in the Proposal section of these Contract Documents.

The successful bidder's "LOCAL AGENCY BIDDER - DBE INFORMATION" form shall include the names, addresses and phone numbers of DBE firms that will participate, with a complete description of work or supplies to be provided by each, and the dollar value of each DBE transaction. When 100 percent of a contract item of work is not to be performed or furnished by a DBE, a description of the exact portion of that work to be performed or furnished by that DBE shall be included in the DBE information, including the planned location of that work. A successful bidder certified as a DBE shall describe the work it has committed to performing with its own forces as well as any other work that it has committed to be performed by DBE subcontractors, suppliers and trucking companies.

The successful bidder is encouraged to provide written confirmation from each DBE that the DBE is participating in the contract. A copy of a DBE's quote will serve as written confirmation that the DBE is participating in the contract. If a

DBE is participating as a joint venture partner, the successful bidder is encouraged to submit a copy of the joint venture agreement.

The "LOCAL AGENCY BIDDER - DBE INFORMATION" form shall be completed and returned to County by the successful bidder with the executed Contract, Contract Bonds and other required Contract Documents.

The lowest responsive responsible bidder shall be the bidder submitting the lowest additive total of all the bid items for the Base Bid (Schedule A). In the event of a discrepancy between the unit price bid and the extended unit total as stated on the Proposal, the amount bid for the unit price shall control and shall be utilized in calculating the additive total of the bid items for purposes of award, including revisions by Addenda, and as specified in the Proposal instructions.

### **3-1.03 EXECUTION OF CONTRACT**

Attention is directed to the "Notice to Bidders" and "Proposal" for this Contract. Barring some unforeseen irregularity, Notice of Award will be sent to the lowest responsive responsible bidder after approval by the El Dorado County Board of Supervisors.

The successful bidder shall return the signed Contract, the Contract bonds, the completed "LOCAL AGENCY – DBE INFORMATION" form, a California Form 590-Withholding Exemption Certificate, a Federal Form W-9-Request for Taxpayer Identification Number and Certification, and certificates of insurance to the Office of the Department of Transportation within eight (8) days, not including Sundays and legal holidays, after receiving the Notice of Award of Contract. Priority delivery or mail of these documents should be to attention of Pat Lester, El Dorado County Department of Transportation at 4505 Golden Foothill Parkway, El Dorado Hills, California 95762.

### **BASE BID (SCHEDULE A) AWARDED ONLY**

If only the work contained in the Base Bid (Schedule A) is awarded, the Contract will contain only the work included in Schedule A. The Notice of Award will state that only Schedule A work has been awarded.

### **BASE BID (SCHEDULE A) AND ADDITIVE ALTERNATE BID (SCHEDULE B) AWARDED**

If the work contained in both the Base Bid (Schedule A) and the Additive Alternate Bid (Schedule B) is awarded, the Contract will contain the work included in both Schedule A and Schedule B. The Notice of Award will state that both the Schedule A and Schedule B work has been awarded.

The failure of the successful bidder to furnish any bond required of it by law or by this Contract, or the failure to execute the contract, or the failure to provide the required insurance documents within the time fixed for the execution of the Contract and return of the bonds and insurance constitutes a failure to execute and return the Contract as required herein. Upon such failure or refusal to return the executed Agreement, or to provide the bonds or insurance required herein, the bidder's security shall be forfeited to the County.

## **SECTION 4. BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES**

### **4-1.01 GENERAL**

Attention is directed to the provisions in Section 8-1.03, "Beginning of Work," in Section 8-1.06, "Time of Completion," and in Section 8-1.07, "Liquidated Damages," of the Standard Specifications and these special provisions.

Section 8-1.03, "Beginning of Work," of the Standard Specifications shall not apply and shall be replaced with the following:

The Contractor shall begin work on the date stated in the Notice to Proceed issued by the Department of Transportation.

The Contractor shall furnish the Engineer with statements from the vendor that the order for the sign panels and, if the Schedule B work is awarded, electrical materials required for this Contract have been received and accepted by the vendor; and the statements shall be furnished within fifteen (15) calendar days after the beginning of work date stated in the Notice to Proceed. The statements shall give the date that the sign panels and electrical materials, if applicable, will be shipped. If the Contractor has the necessary materials on hand, the Contractor will not be required to furnish the vendor's statements.

Should Contractor begin work in advance of receiving the Notice to Proceed, any work performed by Contractor in advance of the date stated in the Notice to Proceed shall be considered as having been done by Contractor at Contractor's own risk and as a volunteer.

If only Base Bid (Schedule A) is awarded, the Contract days shall begin on the date stated in the Notice to Proceed for the Schedule A Work and the Schedule A Work shall be diligently prosecuted to completion before the expiration of

**FORTY-FIVE (45) WORKING DAYS.**

If both the Base Bid (Schedule A) and the Additive Alternate Bid (Schedule B) are awarded,

**FIVE (5) WORKING DAYS**

will be added to the Contract days for a total of fifty (50) working days to allow for completion of both Schedules A and B.

The Contractor shall notify the Engineer, in writing, of the Contractor's intent to begin work at least seventy-two (72) hours before work is begun. The notice shall be delivered to the Engineer at the Department of Transportation office in El Dorado Hills and shall specify the date the Contractor intends to start. If the project has more than one location of work, a separate notice shall be given for each location.

[The Contractor shall pay to the County of El Dorado the sum of **one thousand dollars (\$1,000.00)** for each calendar 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 number of working days specified above. The work pertaining to Schedule A liquidated damages will be assessed for each and every calendar day's delay in the finishing the Work in excess of the forty-five (45) workings days prescribed herein. If both Schedule A and Schedule B are awarded, liquidated damages will be assessed for each and every calendar days delay in the finishing of the work in both Schedule A and B in excess of fifty (50) working days prescribed herein.]

**Comment [LB2]:** P  
project specific  
information.

**Comment [LB3]:** P  
project specific  
information.

**4-1.02 PRE-CONSTRUCTION CONFERENCE AND WEEKLY MEETINGS**

A pre-construction conference will be scheduled by the Engineer between the Engineer and the Contractor or its representative after the project is awarded and prior to the issuance of the Notice to Proceed. The conference will be held at the Construction Office, 2441 Headington Road, Placerville to discuss the work each DBE subcontractor will perform and important aspects of the project and all essential matters pertaining to the prosecution and the satisfactory completion of the project as required, and the Contractor shall bring all required schedules and documents to the meeting.

Before work can begin on a subcontract, the Department will require the Contractor to submit a completed "Subcontracting Request," Exhibit 16-B of the Caltrans Local Assistance Procedures Manual (LAPM) or equivalent. When the Engineer receives the completed form it will be checked for agreement of the first tier subcontractors and DBE's. The Engineer will not approve the request when it identifies someone other than the DBE or first tier subcontractor listed in the previously completed "LOCAL AGENCY BIDDER – DBE INFORMATION" form. The "Subcontracting Request" will not be approved until any discrepancies are resolved. If an issue cannot be resolved at that time, or there is some other concern, the Engineer will require the Contractor to eliminate the subcontractor in question before signing the subcontracting request. A change in the DBE or first tier subcontractor may be addressed during a substitution process at a later date.

Suppliers, vendors, or manufacturers listed on the "LOCAL AGENCY BIDDER – DBE INFORMATION" form will be compared to those listed in the completed Exhibit 16-I "Notice of Materials to be Used", of the LAPM or equivalent. Differences must be resolved by either making corrections or requesting a substitution.

Substitutions will be subject to the Subletting and Subcontracting Fair Practices Act (FPA). The Department will require contractors to adhere to the provisions within Subletting and Subcontracting Fair Practices Act (State Law) Sections 4100-4114. FPA requires the Contractor to list all subcontractors in excess of one half of one percent (0.5%) of the Contractor's total bid or \$10,000, whichever is greater. The statute is designed to prevent bid shopping by contractors. The FPA explains that a contractor may not substitute a subcontractor listed in the original bid except with the approval if the awarding authority.

The Engineer will give the Contractor a blank Exhibit 17-F, "Final Report – Utilization of Disadvantaged Business Enterprises (DBE), First –Tier Subcontractors," from the Caltrans LAPM. This form must be completed and returned to the County before the County will issue final payment.

#### **4-1.03 CONSTRUCTION SCHEDULE**

Normal working hours shall be between the hours of 7:00 a.m. to 8:00 p.m. weekdays, and 8:00 a.m. to 7:00 p.m. on Saturdays. No work shall be allowed on Sundays and legal holidays. The Contractor may conduct nighttime operations outside these hours in accordance with the section entitled "Sound Control Requirements" and section "Nighttime Lighting Requirements" elsewhere in these special provisions.

Attention is directed to section "Maintaining Traffic" and "Sound Control Requirements" of these special provisions regarding allowable times and frequencies of lane closures and work permitted outside of the normal working hours.

The contract time will be extended one working day for each working day (Monday through Friday, excluding legal holidays) that the Contractor's operations are suspended due to weather condition. No time extensions will be allowed for weekends or holidays where the Contractor's operations are suspended due to weather condition, unless the Contractor's operations on the working day before and after the weekend or holiday are suspended due to weather condition. The Engineer has sole authority for determining time extensions pursuant to this section.

#### **4-1.04 CONTRACTOR SUBMITTALS**

Attention is directed to the sections entitled "Sound Control Requirements", "Order of Work", "Air Pollution Control", "Dust Control", "Water Pollution Control", "Progress Schedule", "Stage Construction", "Closure Requirements and Conditions" and "Remove Traffic Stripe and Pavement Marking" elsewhere in these special provisions.

Contractor may provide the submittals required in this section to the Engineer as early as ten (10) working days after the receipt of the Notice of Award, but must comply with these submittal requirements within five (5) working days of receipt of Notice to Proceed:

Contractor must submit a Construction Schedule for the Engineer's review and approval. If the Engineer requires changes to the initial Construction Schedule, Contractor shall provide the Engineer with a revised schedule within twelve (12) calendar days of receipt of the Notice to Proceed. Subsequent Schedules shall be updated and submitted to the Engineer at the weekly meetings. Contents of all schedules shall conform to Section 8-1.04, "Progress Schedule," of the Standard Specifications.

Contractor must submit the name and address of its authorized representative who is to receive all written notices under this Contract.

Attention is directed to the sections entitled "Air Pollution Control" and "Dust Control" elsewhere in these special provisions. The Contractor must submit its Fugitive Dust Mitigation Plan to the Engineer prior to start of any work. The Contractor shall prepare and obtain approval of the Fugitive Dust Mitigation Plan by the El Dorado County Air Pollution Control Officer prior to submitting them to the Engineer.

Attention is directed to the section entitled "Water Pollution Control" elsewhere in these special provisions. The Contractor must submit a Storm Water Pollution Prevention Plan (SWPPP) to the Engineer and obtain approval of the SWPPP prior to start of any work having the potential to cause water pollution.

Attention is directed to the section entitled "Maintaining Traffic" elsewhere in these special provisions

No mobilization payments will be made until all of the above submittals have been reviewed and approved by the Engineer. For weekly schedule update submittals, the provisions regarding these submittals and progress payments shall be in accordance with Section 8-1.04, "Progress Schedule," of the Standard Specifications.

The Contractor must comply with the time frames listed in the applicable special provisions sections for the following submittals:

The Contractor shall furnish the Engineer a statement from the vendor that the order for the seed required for this Contract has been received and accepted by the vendor. The statement from the vendor shall include the names and quantity of seed ordered and the anticipated date of delivery.

Contractor, if applicable, will submit an excavation and/or trenching and shoring plan in accordance with Sections 5-1.02A and 7-1.01E of the Standard Specifications and the Construction Safety Orders of the Division of Occupational Safety and Health.

Contractor, if applicable, shall prepare a project specific Lead Compliance Plan in accordance with Title 8, California Code of Regulations, Section 1532.1

Contractor must submit AC mix design and testing in accordance with section "Asphalt Concrete," of these special provisions.

If nighttime operations are proposed, Contractor must submit a Sound Mitigation Plan in accordance with "Sound Control Requirements" of these special provisions.

Cost break-downs shall conform to the provisions in Section 86-1.03, "Cost Break-Down," of the Standard Specifications and these special provisions.

The cost break-down shall be submitted to the Engineer for approval within ten (10) days of the date of the Notice to Proceed. The cost break-down shall be approved, in writing, by the Engineer before any partial payment for the items of electrical work will be made.

Contractor must submit all certificates of compliance in accordance with these special provisions and the Standard Specifications.

Approval of all submittals by the Engineer does not relieve the Contractor of its responsibility to perform the work in an acceptable manner and in accordance with the Plans, the Standard Specifications, and these special provisions.

#### **4-1.05 PROSECUTION AND PROGRESS**

Attention is directed to the provisions of Section 8 "Prosecution and Progress," of the Standard Specifications.

The Contractor shall notify the Engineer within five (5) working days of any occurrence, which in the Contractor's opinion entitles it to an extension of time for completion. Such notice shall be in writing. The Engineer shall acknowledge, in writing, receipt of any such claim by the Contractor within five (5) working days of its receipt.

### **SECTION 5. GENERAL**

#### **SECTION 5-1 MISCELLANEOUS**

##### **5-1.01 LINES AND GRADES**

Attention is directed to Section 5-1.07, "Lines and Grades," of the Standard Specifications. Stakes or marks will be set by the Engineer in conformance with the requirements in Chapter 12, "Construction Surveys," of the Caltrans Surveys Manual.

The Contractor shall be solely responsible for maintenance and protection of the survey stakes or marks, once set. All stakes and survey markers will be conspicuously marked. It will be the obligation of the Contractor to inform its employees and subcontractors of the importance of their preservation. The Contractor is specifically advised that it shall be its sole responsibility to protect and maintain all stakes and monuments from any source. In the event that stakes or monuments are damaged or destroyed, the Engineer has sole authority to order replacement of same. The Contractor will be charged for the cost of replacement or restoration of stakes and marks. This charge will be deducted from any moneys due or to become due the Contractor.

The Contractor shall submit a construction staking request form to the County at least two (2) working days prior to the beginning of staking for each construction phase. The construction staking request form will be provided by the County at the pre-construction meeting.

### **5-1.02 CONTRACT BONDS**

Attention is directed to Section 3-1.02, "Contract Bonds," of the Standard Specifications and these special provisions.

The performance bond shall be in a sum not less than one hundred percent (100%) of the total amount payable by the terms of the contract.

The payment bond shall be in a sum not less than one hundred percent (100%) of the total amount payable by the terms of the contract.

### **5-1.03 GUARANTEE**

#### **GENERAL**

The Contractor shall guarantee the work is in accordance with contract requirements and remains free from substantial defects in materials and workmanship for a period of one (1) year after contract acceptance. For certain portions of the work where the Director relieves the Contractor of responsibility in accordance with Section 7-1.15, "Relief from Maintenance and Responsibility," of the Standard Specifications, the guarantee period starts on the relief date and ends one (1) year there from.

Substantial defects in materials and workmanship means defective work objectively manifested by damaged, displaced, or missing parts or components; and workmanship resulting in improper function of materials, components, equipment, or systems, as installed or manufactured by the Contractor, subcontractor, supplier, or manufacturer.

During the guarantee period, the Contractor shall repair or replace contract work and associated work which is not in accordance with contract requirements or has substantial defects in materials and workmanship. The Contractor shall perform the corrective work with no expense to the Department other than County-provided field inspection services.

The guarantee of work excludes damage or displacement that is outside the control of the Contractor and caused by normal wear and tear, improper operation, insufficient maintenance, abuse, unauthorized modification, or natural disaster as described in Section 7-1.165, "Damage by Storm, Flood, Tsunami or Earthquake," of the Standard Specifications.

The Contractor shall have the same insurance coverage during corrective work operations as prior to contract acceptance, in accordance with Section 7 "Contractor's Insurance," of these special provisions.

The contract bonds furnished in accordance with Section 5-1.02, "Contract Bonds," of these special provisions must remain in full force and effect during the guarantee period and until all corrective work is complete.

In the case of conflict between this guarantee provision and any warranty provision included in the contract, the warranty provision shall govern for the specific construction product or feature covered.

#### **CORRECTIVE WORK**

During the guarantee period, the Department will monitor performance of the highway facilities completed by the Contractor and will perform a thorough review of the contract work at least sixty (60) days before the expiration of the one-year guarantee.

If the Engineer discovers contract work not in compliance with contract requirements or that has substantial defects in materials and workmanship, at any time during the guarantee period, a list of items that require corrective work will be developed and forwarded to the Contractor. Within fifteen (15) days of receipt of a list, the Contractor shall submit to the Engineer a detailed plan for performing corrective work. The work plan shall include a start to finish schedule. It shall include a list of labor, equipment, materials, and any special services intended to be used. It shall clearly show related work including traffic control, temporary delineation, and permanent delineation.

The Contractor shall start the corrective and related work within ten (10) days of receiving notice from the Engineer that the Contractor's work plan is approved. The corrective work shall be diligently prosecuted and completed within the time allotted in the approved work plan.

If the Engineer determines that corrective work, covered by the guarantee, is urgently needed to prevent injury or property damage, the Engineer will give the Contractor a request to start emergency repair work and a list of items that require repair work. The Contractor shall mobilize within twenty four (24) hours and diligently perform emergency repair work on the damaged highway facilities. The Contractor shall submit a work plan within five (5) days of starting emergency repair work.

If the Contractor fails to commence and execute, with due diligence, corrective work and related work required under the guarantee in the time allotted, the Engineer may proceed to have the work performed by County forces or other forces at the Contractor's expense. Upon demand, the Contractor shall pay all costs incurred by the Department for work performed by County forces or other forces including labor, equipment, material, and special services.

## **PAYMENT**

Full compensation for performing corrective work; and related work such as traffic control, temporary delineation, and permanent delineation, and to maintain insurance coverage and bonds, shall be considered as included in the contract prices paid for the various contract items of work and no separate payment will be made therefor.

### **5-1.04 COST REDUCTION INCENTIVE**

Attention is directed to Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications.

Prior to preparing a written cost reduction proposal, the Contractor shall request a meeting with the Engineer to discuss the proposal in concept. Items of discussion will also include permit issues, impact on other projects, impact on the project schedule, peer reviews, overall merit of the proposal, and review times required by the Department and other agencies.

If a cost reduction proposal submitted by the Contractor, and subsequently approved by the Engineer, provides for a reduction in contract time, fifty percent (50%) of that contract time reduction shall be credited to the County by reducing the contract working days, not including plant establishment. Attention is directed to "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions regarding the working days.

If a cost reduction proposal submitted by the Contractor, and subsequently approved by the Engineer, provides for a reduction in traffic congestion or avoids traffic congestion during construction, sixty percent (60%) of the estimated net savings in construction costs attributable to the cost reduction proposal will be paid to the Contractor. In addition to the requirements in Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications, the Contractor shall provide detailed comparisons of the traffic handling between the existing contract and the proposed change, and estimates of the traffic volumes and congestion.

### **5-1.05 LABOR NONDISCRIMINATION**

Attention is directed to the following Notice that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

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

Attention is further directed to the "Nondiscrimination Clause," set forth in Section 7-1.01A(4), "Labor 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.

Attention is also directed to the draft Agreement contained in these Contract Documents for additional nondiscrimination and fair employment practices provisions that will apply to this federal-aid contract.

### **5-1.06 PREVAILING WAGE**

Attention is directed to Section 7-1.01A(2), "Prevailing Wage," of the Standard Specifications.

Interested parties can obtain the current wage information by submitting 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/dlsr/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 Department of Transportation's principal office, and are available upon request, and in case of projects involving federal funds, federal wage requirements have been included in the Contract Documents.

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.

In the case of federally funded projects, where federal and state prevailing wage requirements apply, compliance with both is required. This project is funded in whole or in part by federal funds. Contractors attention is directed to Section 14 of these Specifications and the requirements of, and compliance with, the Copeland Act (18 U.S.C. 874 and 29 CFR Part 3), the Davis-Bacon Act (40 U.S.C. 276a to 276a-7 and 29 CFR Part 5), and the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330 and 29 CFR Part 5).

If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, Contractor and subcontractors shall pay not less than the higher wage rate. The Department will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by Contractor and subcontractors, Contractor and subcontractors shall pay not less than the Federal minimum wage rate which most closely approximates the duties of the employees in question.

The U.S. Department of Transportation (USDOT) provides a toll-free "hotline" service to report bid rigging activities. Bid rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 5:00 p.m., Eastern Time, at (800) 424-9071. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report these activities. The "hotline" is part of the USDOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

**5-1.07 APPRENTICES**

Attention is directed to Sections 1777.5, 1777.6 and 1777.7 of the California Labor Code and Title 8, California Code of Regulations Section 200 et seq. To ensure compliance and complete understanding of the law regarding apprentices, and specifically the required ratio thereunder, each Contractor or subcontractor should, where some question exists, contact the Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, CA 94102, or one of its branch offices prior to commencement of work on the public works contract. Responsibility for compliance with this section lies with the Contractor.

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

**5-1.08 CERTIFIED PAYROLL**

As required under the provisions of Labor Code Section 1776, the Contractor and any subcontractors shall keep accurate payroll records as follows:

1. The payroll records shall show the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by the Contractor or subcontractors in connection with this project.
2. A certified copy of all payroll records enumerated above shall be available for inspection at all reasonable hours at the principal office of the Contractor as follows:
  - a. Make available or furnish to the employee or his or her authorized representative on request.

- b. Make available for inspection or furnished upon request to a representative of the County, the State Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the State Department of Industrial Relations.
- c. Make available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the County, the State Division of Labor Standards Enforcement, or the State Division of Apprenticeship Standards. The requesting party shall, prior to being provided the records, reimburse the costs of preparation by the Contractor, subcontractor, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the Contractor.

#### **5-1.09 DISPUTES RESOLUTION**

Attention is Directed to Section 9, "Measurement and Payment" of the Standard Specifications, and Article 7, "Disputes Resolution" of the Draft Agreement included in this booklet.

#### **5-1.10 RECORDS**

The Contractor shall maintain cost accounting records for the contract pertaining to, and in such a manner as to provide a clear distinction between the following six categories of costs of work during the life of the contract:

- A. Direct costs of contract item work.
- B. Direct costs of changes in character in conformance with Section 4-1.03C, "Changes in Character of Work," of the Standard Specifications.
- C. Direct costs of extra work in conformance with Section 4-1.03D, "Extra Work," of the Standard Specifications.
- D. Direct costs of work not required by the contract and performed for others.
- E. Direct costs of work performed under a notice of potential claim in conformance with the provisions in Section 9-1.04, "Notice of Potential Claim," of the Standard Specifications.
- F. Indirect costs of overhead.

Cost accounting records shall include the information specified for daily extra work reports in Section 9-1.03C, "Records," of the Standard Specifications. The requirements for furnishing the Engineer completed daily extra work reports shall only apply to work paid for on a force account basis.

The cost accounting records for the contract shall be maintained separately from other contracts, during the life of the contract, and for a period of not less than three (3) years after the date of acceptance of the Work. If the Contractor intends to file claims against the Department, the Contractor shall keep the cost accounting records specified above until complete resolution of all claims has been reached.

#### **5-1.11 RECORDS EXAMINATION, AUDIT & RETENTION REQUIREMENTS**

Contractor shall maintain and make available to the FHWA, the US DOT, the Comptroller General of the United States, the State of California, the California State Auditor, and County or to any of its duly authorized representatives all books, papers, job cost records, detailed cost estimates, claims, and accounts, including payment, property, payroll, personnel, subcontractor records, and financial records related to or which arise out of the Work or under terms of this Contract. Contractor shall maintain such books, records, data and documents in accordance with generally accepted accounting principles and in accordance with these special provisions and federal and state requirements. These books, papers, records, claims, and accounts shall be made available for examination during normal business hours and shall be readily available and accessible at Contractor's principal place of business in California, for audit during normal business hours at such place of business. Contractor shall provide office space, photocopies and other assistance to enable audit or inspection representatives to conduct such audits or inspections. This right to audit books and records directly related to this Contract shall also extend to any first-tier subcontractors employed under this Contract. Contractor shall incorporate this provision in any subcontract entered into as a result of this Contract and shall require its subcontractors to agree to cooperate with the above-listed agencies by making all appropriate and relevant Project records available to those agencies for audit and copying.

All of Contractor's books, papers, job cost records, detailed cost estimates, claims, and accounts, including payment, property, payroll, personnel, subcontractor records, and financial records related to or which arise out of the work or under terms of this Contract shall be retained for access, inspection and/or audit by the FHWA, the US DOT, the Comptroller General of the United States, the State, County or their duly authorized representatives for at least three (3)

years after County's final payment to Contractor and/or the final resolution of any claims under this Contract. Contractor shall incorporate this provision in any subcontract entered into as a result of this Contract.

#### **5-1.12 SUBCONTRACTOR AND DBE RECORDS**

The Contractor shall maintain records showing the name and business address of each first-tier subcontractor. The records shall also show the name and business address of every DBE subcontractor, DBE vendor of materials and DBE trucking company, regardless of tier. The records shall show the date of payment and the total dollar figure paid to all of these firms. DBE prime contractors shall also show the date of work performed by their own forces along with the corresponding dollar value of the work.

Upon completion of the contract, a summary of these records shall be prepared on the form, (which is available from the Department) entitled "Final Report – Utilization of Disadvantaged Business Enterprises – (DBE), First-Tier Subcontractors" (Form CEM-2402F) and certified correct by the Contractor or the Contractor's authorized representative, and shall be furnished to the Engineer. The form shall be furnished to the Engineer within ninety (90) days from the completion date stated in the Notice of Completion. The amount of \$10,000 will be withheld from payments due to Contractor until a satisfactory form is submitted.

If a DBE subcontractor is decertified during the life of the project, the decertified subcontractor shall notify Contractor in writing with the date of decertification. If a subcontractor becomes a certified DBE during the life of the project, the subcontractor shall notify the Contractor in writing with the date of certification. Contractor shall furnish the written documentation to the Engineer. This information shall also be included in the DBE Records Summary.

Upon completion of the contract, "Disadvantaged Business Enterprises (DBE) Certification Status Change Form CEM-2403(F) indicating the DBE's existing certification status shall be signed and certified correct by the Contractor. The certified form shall be furnished to the Engineer within 90 days from the date of the contract acceptance

Prior to the fifteenth of each month, the Contractor shall submit documentation to the Engineer showing the amount paid to DBE trucking companies. Contractor shall also obtain and submit documentation to the Engineer showing the amount paid by DBE trucking companies to all firms, including owner-operators, for the leasing of trucks. If the DBE leases trucks from a non-DBE, Contractor may count only the fee or commission the DBE receives as a result of the lease arrangement.

Contractor shall also obtain and submit documentation to the Engineer showing the truck number, owner's name, California Highway Patrol CA number, and if applicable, the DBE certification number of the owner of the truck for all trucks used during that month. This documentation shall be submitted on the form entitled, "Monthly Trucking Verification" Form CEM-2404F, which is available from the Department.

#### **5-1.13 PERFORMANCE OF DBE SUBCONTRACTORS AND SUPPLIERS**

The subcontractors listed by the Contractor in conformance with Section 2-1.054, "Required Listing of Proposed Subcontractors," of the Standard Specifications shall perform the work and supply the materials for which they are listed, unless the Contractor has received prior written authorization to perform the work with other forces or to obtain the materials from other sources.

Contractor should notify the Engineer in writing of any changes to its anticipated DBE participation. This notice should be provided prior to the commencement of that portion of the work.

#### **5-1.14 SUBCONTRACTING**

Attention is directed to the provisions in Section 8-1.01, "Subcontracting," of the Standard Specifications, and Section 2, "Proposal Requirements and Conditions," and Section 3, "Award and Execution of Contract," elsewhere in these special provisions.

The information furnished under Section 3-1.01A, "DBE Information," of these special provisions is part of the subcontractor information required to be furnished under Section 8-1.01, "Subcontracting," and Section 2-1.054, "Required Listing of Proposed Subcontractors," of the Standard Specifications. See the forms entitled "BIDDER'S LIST OF SUBCONTRACTORS (DBE and NON-DBE) – Part I" and "BIDDER'S LIST OF SUBCONTRACTORS (DBE and NON-DBE) – PART II" that are located in the Proposal section of these Contract Documents.

The requirement in Section 2-1.04, "Disadvantaged Business Enterprises," of these special provisions that DBE's must be certified on the date bids are open does not apply to authorized DBE substitutions after award of the Contract.

Pursuant to the provisions of Section 1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a list of contractors ineligible to perform work as a subcontractor on a public works project. This list of debarred contractors is available from the Department of Industrial Relations web site at:

<http://www.dir.ca.gov/DLSE/Debar.html>

The provisions in the third paragraph of Section 8-1.01, "Subcontracting," of the Standard Specifications, that Contractor shall perform with the Contractor's own organization contract work amounting to not less than 50% of the original contract price, are not changed by the Federal Aid requirement specified under "Required Contract Provisions Federal-Aid Construction Contracts" in Section 14 of these special provisions that the Contractor perform not less than 30% of the original contract work with the Contractor's own organization.

Each subcontract and any lower tier subcontract that may in turn be made shall include the "Required Contract Provisions Federal-Aid Construction Contracts" in Section 14 of these special provisions. This requirement shall be enforced as follows:

Noncompliance shall be corrected. Payment for subcontracted work involved will be withheld from progress payments due, or to become due, until correction is made. Failure to comply may result in termination of the Contract.

#### **5-1.15 BUY AMERICA PROVISIONS**

Attention is directed to the "Buy America" requirements of the Surface Transportation Assistance Act of 1982 (Section 165) and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) Sections 1041(a) and 1048(a), and the regulations adopted pursuant thereto. In conformance with the law and regulations, all manufacturing processes for steel and iron materials furnished for incorporation into the work on this project shall occur in the United States; with the exception that pig iron and processed, pelletized and reduced iron ore manufactured outside of the United States may be used in the domestic manufacturing process for such steel and iron materials. The application of coatings, such as epoxy coating, galvanizing, painting, and other coatings that protect or enhance the value of steel or iron materials shall be considered a manufacturing process subject to the "Buy America" requirements.

A Certificate of Compliance conforming to the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications shall be furnished for steel and iron materials. The certificates, in addition to certifying that the materials comply with the specifications, shall specifically certify that all manufacturing processes for the materials occurred in the United States, except for the above exceptions.

The requirements imposed by the law and regulations do not prevent a minimal use of foreign steel and iron materials if the total combined cost of the materials used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. The Contractor shall furnish the Engineer acceptable documentation of the quantity and value of the foreign steel and iron prior to incorporating the materials into the work.

#### **5-1.16 PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS**

Attention is directed to the provisions in Sections 10262 and 10262.5 of the Public Contract Code. Attention is also directed to Section 7108.5 of the Business and Professions Code, which requires a prime contractor or subcontractor to pay any subcontractor not later than ten (10) days of receipt of each progress payment, unless otherwise agreed to in writing. In addition, Federal Regulation (49 CFR 26.29) requires a prime contractor or subcontractor to pay a subcontractor no later than thirty (30) days after receipt of each payment, unless any delay or postponement of payment among the parties takes place only for good cause and with the prior written approval of County. Section 7108.5 of the Business and Professions Code also contains enforcement actions and penalties. These requirements apply to both DBE and non-DBE subcontractors.

#### **5-1.17 PROMPT PAYMENT OF WITHHELD FUNDS TO SUBCONTRACTORS**

The Department shall hold retainage from the prime Contractor and shall make prompt and regular incremental acceptances of portions, as determined by the Department of the contract work and pay retainage to the prime Contractor

based on these acceptances. The prime Contractor or subcontractor shall return all monies withheld in retention from the subcontractor within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the Department. Any delay or postponement of payment may take place only for good cause and with the Department's prior written approval. Any violation of these provisions shall subject the violating Contractor or subcontractor to the penalties, sanctions, and remedies specified in Section 7108.5 of the California Business and Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor, deficient subcontract or performance, and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

**5-1.18 PAYMENTS**

Attention is directed to Sections 9-1.06, "Partial Payments," and 9-1.07, "Payment After Acceptance," of the Standard Specifications and these special provisions.

For the purpose of making partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications, the amount set forth for the contract items of work hereinafter listed shall be deemed to be the maximum value of the contract item of work for progress payment purposes:

- A. Clearing and Grubbing \$ 10,000
- B. Prepare Storm Water Pollution Prevention Plan \$ 5,000

After acceptance of the contract pursuant to the provisions in Section 7-1.17, "Acceptance of Contract," of the Standard Specifications, the amount, if any, payable for a contract item of work in excess of the maximum value for progress payment purposes hereinabove listed for the item, will be included for payment in the first estimate made after acceptance of the contract.

No partial payment will be made for any materials on hand which are furnished but not incorporated in the work.

**5-1.19 PAYMENT OF WITHHELD FUNDS**

Payment of withheld funds shall conform to Section 9-1.065, "Payment of Withheld Funds," of the Standard Specifications and these special provisions.

The phrase ..."with the State Treasurer"... is deleted from the first sentence of the second paragraph of section 9-1.065, "Payment of Withheld Funds" of the Standard Specifications.

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.

Funds withheld 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 California Public Contract Code do not include funds withheld or deducted from payment due to failure of the Contractor to fulfill a contract requirement.

**5-1.20 INTEREST ON PAYMENTS**

Interest shall be payable on progress payments, payments after acceptance, final payments, extra work payments, and claim payments as follows:

- A. Unpaid progress payments, payments after acceptance, and final payments shall begin to accrue interest thirty (30) days after the Contractor submits the pay estimate to the Engineer; provided the pay estimate is undisputed and properly submitted.
- B. Unpaid extra work bills shall begin to accrue interest thirty (30) days after preparation of the first pay estimate following receipt of a properly submitted and undisputed extra work bill. To be properly submitted, the bill must be submitted within seven (7) days of the performance of the extra work and in conformance with the provisions in Section 9-1.03C, "Records," and Section 9-1.06, "Partial Payments," of the Standard Specifications. An undisputed extra work bill not submitted within seven (7) days of performance of the extra

work will begin to accrue interest thirty (30) days after the preparation of the second pay estimate following submittal of the bill.

- C. The rate of interest payable for unpaid progress payments, payments after acceptance, final payments, and extra work payments shall be ten percent (10%) per annum.
- D. The rate of interest payable on a claim, protest or dispute ultimately allowed under this contract shall be six percent (6%) per annum. Interest shall begin to accrue sixty-one (61) days after the Contractor submits to the Engineer information in sufficient detail to enable the Engineer to ascertain the basis and amount of said claim, protest or dispute.

The rate of interest payable on any award in arbitration shall be six percent (6%) per annum in accordance with Public Contract Code Section 20104.6.

#### **5-1.21 PUBLIC SAFETY**

The Contractor shall provide for the safety of traffic and the public in conformance with the provisions in Section 7-1.09, "Public Safety," of the Standard Specifications and these special provisions.

The Contractor shall install temporary railing (Type K) between a lane open to public traffic and an excavation, obstacle or storage area when the following conditions exist:

- A. Excavations. The near edge of the excavation is 12 feet or less from the edge of the lane, except:
  - 1. Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.
  - 2. Excavations less than one foot deep.
  - 3. Trenches less than one foot wide for irrigation pipe or electrical conduit, or excavations less than 0.3-m {one foot} in diameter.
  - 4. Excavations parallel to the lane for the purpose of pavement widening or reconstruction.
  - 5. Excavations in side slopes, where the slope is steeper than 1:4 (vertical: horizontal).
  - 6. Excavations protected by existing barrier or railing.
- B. Temporarily Unprotected Permanent Obstacles. The work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and the Contractor elects to install the obstacle prior to installing the protective system; or the Contractor, for the Contractor's convenience and with permission of the Engineer, removes a portion of an existing protective railing at an obstacle and does not replace such railing complete in place during the same day.
- C. Storage Areas. Material or equipment is stored within 12 feet of the lane and the storage is not otherwise prohibited by the provisions of the Standard Specifications and these special provisions.

The approach end of temporary railing (Type K), installed in conformance with the provisions in this section "Public Safety" and in Section 7-1.09, "Public Safety," of the Standard Specifications, shall be offset a minimum of 4.6 m {15 feet} from the edge of the traffic lane open to public traffic. The temporary railing shall be installed on a skew toward the edge of the traffic lane of not more than 0.3-m {one foot} transversely to 3 m {10 feet} longitudinally with respect to the edge of the traffic lane. If the 4.6-m {15 foot } minimum offset cannot be achieved, the temporary railing shall be installed on the 10 to 1 skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules shall be installed at the approach end of the temporary railing.

Temporary railing (Type K) shall conform to the provisions in Section 12-3.08, "Temporary Railing (Type K)," of the Standard Specifications. Temporary railing (Type K), conforming to the details shown on 2006 Standard Plan T3, may be used. Temporary railing (Type K) fabricated prior to January 1, 1993, and conforming to 1988 Standard Plan B11-30 may be used, provided the fabrication date is printed on the required Certificate of Compliance.

Temporary crash cushion modules shall conform to the provisions in "Temporary Crash Cushion Module" of these special provisions.

Except for installing, maintaining and removing traffic control devices, whenever work is performed or equipment is operated in the following work areas, the Contractor shall close the adjacent traffic lane unless otherwise provided in the Standard Specifications or these special provisions:

Approach Speed of Public Traffic {Posted Limit} Miles Per Hour	Work Areas
Over 45	Within 6 feet of a traffic lane but not on a traffic lane
35 to 45	Within 3 feet of a traffic lane but not on a traffic lane

The lane closure provisions of this section shall not apply if the work area is protected by permanent or temporary railing or barrier.

When traffic cones or delineators are used to delineate a temporary edge of a traffic lane, the line of cones or delineators shall be considered to be the edge of the traffic lane, however, the Contractor shall not reduce the width of an existing lane to less than ten (10) feet without written approval from the Engineer.

When work is not in progress on a trench or other excavation that required closure of an adjacent lane, the traffic cones or portable delineators used for the lane closure shall be placed off of and adjacent to the edge of the traveled way. The spacing of the cones or delineators shall be not more than the spacing used for the lane closure.

Suspended loads or equipment shall not be moved nor positioned over public traffic or pedestrians.

Full compensation for conforming to the provisions in this section "Public Safety," shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefor.

**5-1.22 TESTING**

Testing of materials and work shall conform to the provisions in Section 6-3, "Testing," of the Standard Specifications and these special provisions.

Whenever the provisions of Section 6-3.01, "General," of the Standard Specifications refer to tests or testing, it shall mean tests to assure the quality and to determine the acceptability of the materials and work.

The Engineer will deduct the costs for testing of materials and work found to be unacceptable, as determined by the tests performed by the Department, and the costs for testing of material sources identified by the Contractor which are not used for the work, from moneys due or to become due to the Contractor. The amount deducted will be determined by the Engineer.

**5-1.23 REMOVAL OF ASBESTOS AND HAZARDOUS SUBSTANCES**

Attention is directed to the Sections entitled "Air Pollution Control", "Dust Control" and "Existing\_Highway Facilities-Remove Traffic Stripe and Pavement Markings" elsewhere in these special provisions.

It is brought to the Contractor's attention that some areas of El Dorado County may contain naturally occurring asbestos (NOA) and asbestiform containing soils. Attention is directed to the requirements for the Dust Mitigation Plan in Section "Dust Control" elsewhere in these special provisions.

When the presence of asbestos or hazardous substances is not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be asbestos as defined in Section 25914.1 of the Health and Safety Code or a hazardous substance as defined in Section 25117 of the Health and Safety Code, and the asbestos or hazardous substance has not been rendered harmless, the Contractor may continue work in unaffected areas reasonably believed to be safe. The Contractor shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In conformance with Section 25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including exploratory work to identify and determine the extent of the asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for the delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

#### **5-1.24 PROJECT INFORMATION**

The information in this section has been compiled specifically for this project and is made available for bidders and Contractors. Other information referenced in the Standard Specifications and these special provisions do not appear in this section. The information is subject to the conditions and limitations set forth in Section 2-1.03, "Examination of Plans, Specifications, Contract, and Site of Work," and Section 6-2, "Local Materials," of the Standard Specifications. Bidders and Contractors shall be responsible for knowing the procedures for obtaining information.

The Retaining Wall Parameters and Grading Recommendations, dated December 10, 2007, for Green Valley Road SRTS Sidewalk Installation, prepared by Youngdahl Consulting Group is available from the El Dorado County Department of Transportation Office free of charge to all parties who purchased Contract Documents.

The El Dorado County Department of Transportation Office in which the information may be obtained is located at 2850 Fairlane Court, Placerville, California 95667.

#### **5-1.25 SOUND CONTROL REQUIREMENTS**

Sound control shall conform to the provisions in Section 7-1.01I, "Sound Control Requirements," of the Standard Specifications and these special provisions.

##### **Sound Level Criteria**

The maximum allowable noise exposure shall be as specified in the following table for work within the community types and land use designations as follows:

The town of Rescue, California is located in a Community Region with Higher-Density Residential, Commercial and Public Facility land use designations.

The Engineer may approve work that produces noise levels above the specified limits in accordance with the exceptions allowed in the El Dorado County 2004 General Plan. The El Dorado County 2004 General Plan states:

"Exceptions are allowed if it can be shown that construction beyond these limits is necessary to alleviate traffic congestion and safety hazards."

Contractor may only proceed with operations that produce noise levels above the specified limits after receiving written notification from the Engineer of such approval. Operations approved by the Engineer shall otherwise comply with these special provisions or as directed by the Engineer. The Contractor shall comply with the Engineer's directive to use methods and equipment that reduce construction noise. The sound mitigating equipment shall remain functional at all times during these operations.

When the Engineer denies a request for operations that produces noise levels above the specified limits, or issues a directive to stop the operations that had been previously approved, the Contractor shall diligently pursue completion of the contract using methods that limit noise levels to the specified limits.

<b>MAXIMUM ALLOWABLE NOISE EXPOSURE FOR NONTRANSPORTATION NOISE SOURCES IN COMMUNITY REGIONS AND ADOPTED PLAN AREAS—CONSTRUCTION NOISE</b>			
<b>Land Use Designation</b> <sup>1</sup>	<b>Time Period</b>	<b>Noise Level (dB)</b>	
		<b>L<sub>eq</sub></b>	<b>L<sub>max</sub></b>
Higher-Density Residential (MFR, HDR, MDR)	7 pm–10 pm	50	65
	10 pm–7 am	45	60
Commercial and Public Facilities (C, R&D, PF)	7 pm–7 am	65	75
Industrial (I)	Any Time	80	90
Open Space (OS)	7 pm–7 am	50	65
<b>Note:</b>			
<sup>1</sup> 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 requirement shall apply to the equipment on the job or related to the job measured at the affected building facade, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

#### **5-1.26 NIGHTTIME LIGHTING REQUIREMENTS**

The Contractor shall provide nighttime lighting for operations that occur between sunset and sunrise that conform to the minimum illumination intensities established by California Division of Occupational Safety and Health Construction Safety Orders.

If nighttime operations are proposed by the Contractor, the following requirements shall apply:

- Lighting shall be directed only onto the immediate area under construction,
- Floodlights on light towers shall be angled no more than 45 degrees,
- Floodlights on light towers shall be raised not more than 20 feet above grade when adjacent to a residence.
- Light shields shall be used to reflect lighting towards the work areas and away from traffic and residences.

Full compensation for complying with the requirements contained in this section shall be considered included in the various items of work and no separate compensation will be allowed therefor.

#### **5-1.27 WATER CONSERVATION**

Attention is directed to the various sections of the Standard Specifications and these special provisions which require the use of water for the construction of this project. Attention is directed to Section 7, "Legal Relations and Responsibility," of the Standard Specifications with regard to the Contractor's responsibilities for public convenience, public safety, preservation of property, indemnification and insurance.

Nothing in this section "Water Conservation" shall relieve the Contractor from furnishing an adequate supply of water required for the proper construction of this project in conformance with the provisions in the Standard Specifications or these special provisions or relieve the Contractor from the legal responsibilities defined in Section 7 of the Standard Specifications.

The Contractor shall, whenever possible and not in conflict with the above requirements, minimize the use of water during construction of the project. Watering equipment shall be kept in good working order; water leaks shall be repaired promptly; and washing of equipment, except when necessary for safety or for the protection of equipment, shall be discouraged.

Minor structures and miscellaneous concrete construction shall not be cured by using water.

Attention is directed to Section 17-1.025, "Chemical Additives," of the Standard Specifications. When ordered by the Engineer, a chemical additive shall be added to water used for compaction. The additive shall be approved by the Engineer and shall be used in conformance with instructions issued by the Engineer. Chemical additive ordered by the Engineer will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

The Contractor is advised to contact local water supply agencies in the area as to the availability of water sources for the Project work and mitigation. Temporary local water conservation measures may affect the supply of water during this Project and it is the Contractor's responsibility to plan for such impacts and meet the requirements of the contract Documents and full compensation for planning and supplying water to conform to the requirements of the plans and Contract Documents under such conditions shall be considered as included in the prices for the various contract items of work and no additional compensation will be allowed therefor.

The Contractor is advised to contact El Dorado Irrigation District (EID) for availability of water and conditions set in place for its potential water conservation periods and measures:

El Dorado Irrigation District  
Brian Mueller (530) 642-4029  
2890 Mosquito Road  
Placerville, CA 95667

#### **5-1.28 PROJECT APPEARANCE**

The Contractor shall maintain a neat appearance to the work. In areas visible to the public, the following shall apply:

- A. When practicable, broken concrete and debris developed during clearing and grubbing shall be disposed of concurrently with its removal. If stockpiling is necessary, the material shall be removed or disposed of weekly.
- B. Trash bins shall be furnished for debris from structure's construction. Debris shall be placed in trash bins daily. Forms or falsework that are to be re-used shall be stacked neatly concurrently with their removal. Forms and falsework that are not to be re-used shall be disposed of concurrently with their removal.

Full compensation for conforming to the provisions in this section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

#### **5-1.29 CONTRACTOR'S RESPONSIBILITY FOR MATERIALS**

The Contractor shall be responsible for the condition of all materials which it has furnished, and shall replace at its own expense all such material found to be defective or which has been damaged after delivery. This includes the replacement of material which is found to be defective at any time prior to expiration of the guarantee period.

#### **5-1.30 AIR POLLUTION CONTROL**

Attention is directed to the Section 7-1.01F, "Air Pollution Control" of the Standard Specifications and the section entitled "Dust Control" elsewhere in these special provisions.

The Contractor's attention is directed to the El Dorado County Air Quality Management District ordinances, rules, and regulations and other applicable statutes relating to pollution prevention or abatement.

Attention is directed to Rule 300 "Open Burning" of the El Dorado County AQMD. A valid permit from an El Dorado County Air Pollution Control Officer is required when open burning of wood waste is proposed. A copy of the permit shall be filed with the Engineer prior to any burning.

The Contractor shall comply with applicable State and County Air Quality Management District (AQMD) rules and regulations regarding reduction of construction related impacts on air quality, including the implementation of the following measures, as well as measures found else where in these special provisions and the Standard Specifications:

- Use low-emission onsite mobile construction equipment.
- Maintain equipment in tune per manufacturer's specifications.
- Retard diesel engine injection timing by two to four degrees unless not recommended by manufacturer (due to lower emission output in-place).
- Use reformulated low-emission diesel fuel.
- Substitute electric and gasoline-powered equipment for diesel-powered equipment where feasible.
- Use catalytic converters on gasoline-powered equipment.
- Do not leave inactive construction equipment idling for prolonged periods (i.e., more than 2 minutes).

Full compensation for conforming to the requirements in this section shall be considered as included in the prices for the various contract items of work and no additional compensation will be allowed therefor.

### **5-1.31 UTILITIES**

Attention is directed to Section 8-1.10 "Utility and Non-Highway Facilities" of the Standard Specifications and these special provisions.

If the Contractor while performing the Contract, discovers utility facilities not identified by the Engineer in the Contract Plans or Specifications or if the utility located in the field by the Contractor is different than that shown on the Contract Plans, Contractor shall immediately notify the Engineer in writing. The Contractor shall schedule the project so as to allow the Engineer forty-eight (48) hours, excluding Saturdays, Sundays, and holidays, to determine the work to be done when a conflict exists. The County will not compensate the Contractor for idle equipment during potholing, nor will the County compensate the Contractor for right-of-way delays during the forty-eight (48) hours allotted for a decision to be reached. The owner of the utility facility shall have the sole discretion to perform the repairs or relocation work itself, or to permit the Contractor to do such repairs or relocation work at a reasonable price. In the event that the owner authorizes the Contractor to perform the work, the parties shall proceed with a written Change Order. Compensation to the Contractor for said cost shall be in accordance with Section 4215 of the Government Code and with Section 9-1.03 of the Standard Specifications.

Nothing herein shall be construed to require the County to locate the presence of any existing services not expressly included in Government Code Section 4215, nor limit the County's rights or remedies set forth therein.

The Contractor shall protect from damage existing utility and other non-highway facilities that are to remain in place. This protection may consist of shoring an existing utility. Damage due to the Contractor's failure to exercise reasonable care shall be repaired at its cost and expense.

Any damage to the facilities or damage cause by the failure of a facility due to the Contractor's operations shall be the responsibility of the Contractor. The Contractor shall contact the appropriate utility company listed below should any problems, concerns or questions arise during the construction.

Full compensation for working around said facilities, which are to remain whether shown on the Plans or not, and for potholing, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

The Contractor shall notify the following listed utility companies forty-eight (48) hours in advance of doing any work at the site of the project: **Underground Service Alert Phone: 1-800-642-2444**

**El Dorado Irrigation District**  
**Main # 24 hr: (530) 622-4513**  
Attn: Elisabeth Wells, Sewer Division  
(530) 642-4146  
Fax (530) 622-8597  
Attn: Brian Mueller, Water Division  
(530) 642-4029  
2890 Mosquito Road  
Placerville, CA 95667

**Comcast**  
Attn: Steve Abelia  
(916)-830-6757  
Cell (916) 275-1402  
Fax (916)-830-6634  
1242 National Dr.  
Sacramento, CA 95834

**Pacific Gas and Electric Company**  
**24 Hr # 1-800-743-5000**  
Attn: Brian Richie  
(530) 621-7264  
Fax (530) 621-7241  
4636 Missouri Flat Road  
Placerville, CA 95667

**AT&T**  
Attn: Carol Prince  
(530)-888-2031  
Fax: (530) 823-6041  
12824 Earhart Avenue  
Auburn, CA 95602

#### **5-1.32 FINAL INSPECTION**

The Contractor shall notify the Engineer, in writing, of the completion of the work contained in either or both the Base Bid (Schedule A) and Additive Alternate Bid (Schedule B), and the Engineer shall promptly inspect the work. The Contractor will be notified, in writing, of any defects or deficiencies to be remedied. Within five (5) working days of such notification, the Contractor shall proceed to correct such defects or deficiencies. When notified that the work has been completed, the Engineer will again inspect the work to ensure that the work has been done in accordance with the Contract Documents and recommend to the Board of Supervisors that the project be accepted and the Notice of Completion be recorded.

#### **5-1.33 ACCESS TO INSPECTION OF WORK**

Representatives of County, the State of California, Federal Highway Administration (FHWA), El Dorado Irrigation District, Pacific Gas and Electric, AT&T and Comcast shall at all times, have full access for inspection and testing of the work accomplished under this contract and the Contractor shall provide proper and safe facilities for such access.

#### **5-1.34 AREAS FOR CONTRACTOR'S USE**

Attention is directed to the provisions in Section 7-1.19, "Rights in Land and Improvements," of the Standard Specifications and these special provisions.

The County right of way shall be used only for purposes that are necessary to perform the required work. The Contractor shall not occupy the right of way, or allow others to occupy the right of way, for purposes which are not necessary to perform the required work.

No area is available within the contract limits for the exclusive use of the Contractor. However, temporary storage of equipment and materials on County property may be arranged with the Engineer, subject to the prior demands of County maintenance forces and to other contract requirements. Use of the Contractor's work areas and other County owned property shall be at the Contractor's own risk, and the County shall not be held liable for damage to or loss of materials or equipment located within such areas.

The Contractor shall obtain encroachment permits prior to occupying County-owned parcels outside the contract limits. The required encroachment permits may be obtained from the Department of Transportation, Sheri Woodford, (530) 621-5941.

Residence trailers will not be allowed within the County right of way.

The Contractor shall remove equipment, materials, and rubbish from the work areas and other County owned property which the Contractor occupies. The Contractor shall leave the areas in a presentable condition in conformance with the provisions in Section 4-1.02, "Final Cleaning Up," of the Standard Specifications.

The Contractor shall secure, at the Contractor's own expense, areas required for plant sites, storage of equipment or materials or for other purposes, if sufficient area is not available to the Contractor within the contract limits, or at the sites designated on the plans outside the contract limits.

Before the Contractor makes use of any property owner's land where the Department has not made previous arrangements with the owner for the use of said land, the Contractor shall supply to the County a fully executed "Agreement" form. The "Agreement" form shall be a Department supplied form, available upon request.

Full compensation for meeting this provision shall be considered as included in the various items of work, and no additional compensation will be allowed therefor.

#### **5-1.35 SAFETY AND HEALTH PROVISIONS**

Attention is directed to the Standard Specifications Section 7-1.06 and these special provisions.

In addition to other specifications, definitions and provisions, the Contractor is also hereby categorized and designated as the following types of employer for this Project.

- **Exposing Employer** – the employer whose employees are exposed to a hazard
- **Creating Employer** – the employer who actually is creating a hazard
- **Controlling Employer** – the employer who is responsible and who has the authority for ensuring that a hazardous condition is corrected
- **Correcting Employer** - the employer who has the responsibility for actually correcting a hazard

The Contractor's Safety Officer(s) shall be certified as a competent person for controlling this Project's workplace safety. A Contractor's Safety Officer shall be on the site, at a minimum, each and every day that work is in progress or periodically when work is not active and shall have the authority to correct any safety violation. In addition, the Contractor is required to develop a Safety Program specifically for this project, which will be available on site, at all times, and updated periodically during the project.

#### **5-1.36 ARCHEOLOGICAL DISCOVERIES**

If archaeological materials, including but not limited to human skeletal material and disarticulated human bone, are discovered at the job site, protect and leave undisturbed and in place archaeological materials in accordance with the following codes and these special provisions:

1. California Public Resources Code, Division 5, Chapter 1.7 § 5097.5
2. California Public Resources Code, Division 5, Chapter 1.75 § 5097.98 and § 5097.99
3. California Administrative Code, Title 14 § 4308
4. California Penal Code, Part 1, Title 14 § 622-1/2
5. California Health and Safety Code, Division 7, Part 1, Chapter 2, § 7050.5

Archaeological materials are the physical remains of past human activity and include historic-period archaeological materials and prehistoric Native American archaeological materials. Nonhuman fossils are not considered to be archaeological except when showing direct evidence of human use or alteration or when found in direct physical association with archaeological materials as described in these special provisions.

Historic-period archaeological materials include cultural remains beginning with initial European contact in California, but at least 50 years old. Historical archaeological materials include:

1. Trash deposits or clearly defined disposal pits containing tin cans, bottles, ceramic dishes, or other refuse indicating previous occupation or use of the site
2. Structural remains of stone, brick, concrete, wood, or other building material found above or below ground or
3. Human skeletal remains from the historic period, with or without coffins or caskets, including any associated grave goods

Prehistoric Native American archaeological materials include:

1. Human skeletal remains or associated burial goods such as beads or ornaments.

2. Evidence of tool making or hunting such as arrowheads and associated chipping debris of fine-grained materials such as obsidian, chert, or basalt.
3. Evidence of plant processing such as pestles, grinding slabs, or stone bowls.
4. Evidence of habitation such as cooking pits, stone hearths, packed or burnt earth floors or
5. Remains from food processing such as concentrations of discarded or burnt animal bone, shellfish remains, or burnt rocks used in cooking.

Immediately upon discovery of archaeological materials, stop all work within a 60-foot radius of the archaeological materials and immediately notify the Engineer. Archaeological materials found during construction are the property of the State. Do not resume work within the 60-foot radius of the find until the Engineer gives you written approval. If, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of an archeological find or investigation or recovery of archeological materials, you will be compensated for resulting losses and an extension of time will be granted in the same manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The Department may use other forces to investigate and recover archaeological materials from the location of the find. When ordered by the Engineer furnish labor, material, tools and equipment, to secure the location of the find, and assist in the investigation or recovery of archaeological materials and the cost will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

Full compensation for immediately notifying the Engineer upon discovery of archaeological materials and leaving undisturbed and in place archaeological materials discovered on the job site shall be considered as included in the contract price paid for various items of work involved and no additional compensation will be allowed therefor.

#### **5-1.37 SAFETY PROVISIONS**

Reference is hereby made to Section 7-1.06, "Safety and Health Provisions," of the Standard Specifications concerning safety provisions by Contractor.

Contractor shall note the following directive from the Division of Occupational Safety & Health (DOSH):

"Construction Safety Order Section 1592 and General Industry Safety Order Section 3706 require an acceptable automatic backup alarm to sound immediately upon backing. Warning devices such as wheel-mounted bell types (ding-dongs) normally sound on a quarter revolution of the wheel. These units do not meet the immediate sounding requirements of these orders and are not acceptable in California. Electronic warning devices which begin to sound as soon as the machine is put into reverse not only will meet this requirement, but have the added advantage of sounding even before actually backing."

In addition, Contractor should take particular note of Section 1592, "Warning Methods," of the Construction Safety Orders, Cal-OSHA.

#### **5-1.38 CERTIFICATES OF COMPLIANCE**

Attention is directed to Section 6-1.07, "Certificates of Compliance," of the Standard Specifications, "Certificates of Compliance," and these special provisions.

Certificates of Compliance are required for the following materials:

- Liquid Asphalt & Emulsions
- Asphalt Binder
- Asphalt Concrete (open-graded and Alternative 1 or 2)
- Porous Pavement
- Crack Sealant
- Class 1 Types A and B Permeable Material
- Corrugated Metal Sediment Traps & Culvert
- Portland Cement

Portland Cement Concrete  
Concrete Curing Compound  
Precast SDMHs  
Reinforcing Steel  
Galvanizing Repair Material  
Grout  
High Density Polyethylene Pipe  
Corrugated Steel Pipe  
Class 2 Aggregate Base (3/4" max.)  
Humus  
Mulch  
Tackifier  
All Signing and Delineation Products Used in the Work  
Slurry Cement Backfill  
Non-woven Filter Fabric for Tire Wash Area  
Non-woven Filter Fabric for DI and ST Protection  
Filter Fabric  
Filter Fabric for Types 1, 2, and 3 Filter Fence  
Rice Fiber Rolls  
Rice Bales  
Erosion Control Blanket  
Turf Reinforcement Mat

Contractor shall submit all Certificates of Compliance within twenty (20) working days of the contract start date noted in the Notice to Proceed, or within 3 working days before the materials are to be used, whichever is sooner. The provisions of Sections 4-1.03, "Contractor Submittals," and 4-1.04, "Pre-Construction Conference and Weekly Meetings," of these Special Provisions regarding submittals shall apply.

**SECTION 6. (BLANK)**

**SECTION 7. CONTRACTOR'S INSURANCE**

**7-1.01 GENERAL INSURANCE REQUIREMENTS**

The Contractor shall provide proof of a policy of insurance satisfactory to the El Dorado County Risk Management Division and documentation evidencing that the Contractor maintains insurance that meets the following requirements:

1. Full Workers' Compensation and Employers' Liability Insurance covering all employees of the Contractor as required by law in the State of California.
2. Commercial General Liability (CGL) Insurance of not less than Two Million Dollars (\$2,000,000) combined single limit per occurrence for bodily injury and property damage, including but not limited to endorsements for the following coverage: Premises, personal injury, operations, products and completed operations, blanket contractual, and independent contractors liability. This insurance can consist of a minimum \$1 Million primary layer of CGL and the balance as an excess/umbrella layer, but only if the County is provided with written confirmation that the excess/umbrella layer "follows the form" of the CGL policy.
3. Automobile Liability Insurance of not less than One Million Dollars (\$1,000,000) is required in the event motor vehicles are used by the Contractor in performance of the Contract.
4. In the event Contractor is a licensed professional and is performing professional services under this contract, professional liability is required with a limit of liability of not less than One Million Dollars (\$1,000,000).
5. Explosion, Collapse and Underground coverage is required when the scope of work includes XCU exposures. For the purpose of this contract, XCU coverage is required.

**7-1.02 PROOF OF INSURANCE REQUIREMENTS**

1. Contractor shall furnish proof of coverage satisfactory to the El Dorado County 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.

2. The County of El Dorado its officers, officials, employees, and volunteers shall be included as additional insured, but only insofar as the operations under this Contract are concerned. This provision shall apply to all general liability and excess liability policies. Proof that the County is named additional insured shall be made by providing the Risk Management Division with a certified copy, or other acceptable evidence, of an endorsement to Contractor's insurance policy naming the County additional insured.

3. In the event Contractor cannot provide an occurrence policy, Contractor shall 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.

4. Any deductibles or self-insured retentions must be declared to and approved by the County. At the option of the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the County, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

5. Contractor shall require each of its subcontractors to procure and maintain commercial liability insurance and automobile liability insurance of the types and in the amounts specified above, or shall insure the activities of its subcontractors in its own policy in like amounts. Contractor shall also require each of its subcontractors to name Contractor, and the County of El Dorado and any other additional insured listed above as additional insureds.

**7-1.03 INSURANCE NOTIFICATION REQUIREMENTS**

1. Contractor agrees no cancellation or material change in any policy shall become effective except upon thirty (30) days prior written notice to the County of El Dorado Project Manager at the office of the Department of Transportation, 2850 Fair Lane Court, Placerville, CA 95667.

2. Contractor agrees that the insurance required herein shall 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, Contractor shall immediately provide a new certificate of insurance as evidence of the required insurance coverage. In the event Contractor fails 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

**7-1.04 ADDITIONAL STANDARDS**

Certificates shall 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.

**7-1.05 COMMENCEMENT OF PERFORMANCE**

Contractor shall not commence performance of this Contract unless and until compliance with each and every requirement of the insurance provisions is achieved.

**7-1.06 MATERIAL BREACH**

Failure of Contractor to maintain the insurance required herein, or to comply with any of the requirements of the insurance provisions, shall constitute a material breach of the entire Contract.

**7-1.07 REPORTING PROVISIONS**

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

**7-1.08 PRIMARY COVERAGE**

The Contractor's insurance coverage shall be primary insurance as respects the County, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the County, its officers, officials, employees or volunteers shall be in excess of the Contractor's insurance and shall not contribute with it.

**7-1.09 PREMIUM PAYMENTS**

The insurance companies shall 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.

**7-1.10 CONTRACTOR'S OBLIGATIONS**

Contractor's indemnity and other obligations shall not be limited by the insurance required herein and shall survive the expiration of this Contract.

**7-1.11 GOVERNING PRECEDENCE**

To the extent that this Section 7, "Contractor's Insurance," is inconsistent with 7-1.12, "Indemnification and Insurance," of the Standard Specifications, this Section shall govern; otherwise each and every provision of such Section 7-1.12 shall be applicable to this Contract.

**SECTION 8. MATERIALS**

**SECTION 8-1. MISCELLANEOUS**

**8-1.01 PREQUALIFIED AND TESTED SIGNING AND DELINEATION MATERIALS**

The Department maintains the following list of Prequalified and Tested Signing and Delineation Materials. The Engineer shall not be precluded from sampling and testing products on the list of Prequalified and Tested Signing and Delineation Materials.

The manufacturer of products on the list of Prequalified and Tested Signing and Delineation Materials shall furnish the Engineer a Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for each type of traffic product supplied.

For those categories of materials included on the list of Prequalified and Tested Signing and Delineation Materials, only those products shown within the listing may be used in the work. Other categories of products, not included on the list of Prequalified and Tested Signing and Delineation Materials, may be used in the work provided they conform to the requirements of the Standard Specifications.

Materials and products may be added to the list of Prequalified and Tested Signing and Delineation Materials if the manufacturer submits a New Product Information Form to the New Product Coordinator at the Transportation Laboratory. Upon a Departmental request for samples, sufficient samples shall be submitted to permit performance of required tests. Approval of materials or products will depend upon compliance with the specifications and tests the Department may elect to perform.

**PAVEMENT MARKERS, PERMANENT TYPE**

**Retroreflective With Abrasion Resistant Surface (ARS)**

1. Apex, Model 921AR (4" x 4")
2. Ennis Paint, Models C88 (4" x 4"), 911 (4" x 4") and 953 (2.75" x 4.5")
3. Ray-O-Lite, Model "AA" ARS (4" x 4")
4. 3M Series 290 (3.5" x 4")
5. 3M Series 290 PSA, with pressure sensitive adhesive pad (3.5" x 4")

**Retroreflective With Abrasion Resistant Surface (ARS)**

(for recessed applications only)

1. Ennis Paint, Model 948 (2.3" x 4.7")
2. Ennis Paint, Model 944SB (2" x 4")\*
3. Ray-O-Lite, Model 2002 (2" x 4.6")
4. Ray-O-Lite, Model 2004 ARS (2" x 4")\*

\*For use only in 4.5 inch wide (older) recessed slots

**Non-Reflective, 4-inch Round**

1. Apex Universal (Ceramic)
2. Apex Universal, Models 929 (ABS) and 929PP (Polypropylene)
3. Glowlite, Inc. (Ceramic)
4. Hi-Way Safety, Inc., Models P20-2000W and 2001Y (ABS)
5. Interstate Sales, "Diamond Back" (Polypropylene)
6. Novabrite Models Cdot (White) Cdot-y (Yellow), Ceramic
7. Novabrite Models Pdot-w (White) Pdot-y (Yellow), Polypropylene
8. Three D Traffic Works TD10000 (ABS), TD10500 (Polypropylene)

**PAVEMENT MARKERS, TEMPORARY TYPE**

**Temporary Markers For Long Term Day/Night Use (180 days or less)**

1. Vega Molded Products "Temporary Road Marker" (3" x 4")

**Temporary Markers For Short Term Day/Night Use (14 days or less)**

(For seal coat or chip seal applications, clear protective covers are required)

1. Apex Universal, Model 932
2. Filtrona Extrusion, Models T.O.M., T.R.P.M., and "HH" (High Heat)
3. Hi-Way Safety, Inc., Model 1280/1281
4. Glowlite, Inc., Model 932

**STRIPING AND PAVEMENT MARKING MATERIAL**

**Permanent Traffic Striping and Pavement Marking Tape**

1. Advanced Traffic Marking, Series 300 and 400
2. Brite-Line, Series 1000
3. Brite-Line, "DeltaLine XRP"
4. Swarco Industries, "Director 35" (For transverse application only)
5. Swarco Industries, "Director 60"
6. 3M, "Stamark" Series 380 and 5730
7. 3M, "Stamark" Series 420 (For transverse application only)

**Temporary (Removable) Striping and Pavement Marking Tape (180 days or less)**

1. Advanced Traffic Marking, Series 200
2. Brite-Line, Series 100
3. Garlock Rubber Technologies, Series 2000
4. P.B. Laminations, Aztec, Grade 102
5. Swarco Industries, "Director-2"
6. Trelleborg Industries, R140 Series
7. 3M Series 620 "CR", and Series A750
8. 3M Series A145, Removable Black Line Mask  
(Black Tape: for use only on Hot mix asphalt surfaces)
9. Advanced Traffic Marking Black "Hide-A-Line"  
(Black Tape: for use only on Hot mix asphalt surfaces)
10. Brite-Line "BTR" Black Removable Tape  
(Black Tape: for use only on Hot mix asphalt surfaces)
11. Trelleborg Industries, RB-140  
(Black Tape: for use only on Hot mix asphalt surfaces)

**Preformed Thermoplastic (Heated in place)**

1. Flint Trading Inc., "Hot Tape"
2. Flint Trading Inc., "Premark Plus"
3. Ennis Paint Inc., "Flametape"

**Ceramic Surfacing Laminate, 6" x 6"**

1. Highway Ceramics, Inc.

**CLASS 1 DELINEATORS**

**One Piece Driveable Flexible Type, 66-inch**

1. Filtrona Extrusion, "Flexi-Guide Models 400 and 566"
2. Carsonite, Curve-Flex CFRM-400
3. Carsonite, Roadmarker CRM-375
4. FlexStake, Model 654 TM
5. GreenLine Model CGD1-66

**Special Use Type, 66-inch**

1. Filtrona Extrusion, Model FG 560 (with 18-inch U-Channel base)
2. Carsonite, "Survivor" (with 18-inch U-Channel base)
3. Carsonite, Roadmarker CRM-375 (with 18-inch U-Channel base)
4. FlexStake, Model 604
5. GreenLine Model CGD (with 18-inch U-Channel base)
6. Impact Recovery Model D36, with #105 Driveable Base
7. Safe-Hit with 8-inch pavement anchor (SH248-GP1)
8. Safe-Hit with 15-inch soil anchor (SH248-GP2) and with 18-inch soil anchor (SH248-GP3)

**Surface Mount Type, 48-inch**

1. Bent Manufacturing Company, Masterflex Model MF-180EX-48
2. Carsonite, "Channelizer"
3. FlexStake, Models 704, 754 TM, and EB4
4. Impact Recovery Model D48, with #101 Fixed (Surface-Mount) Base
5. Three D Traffic Works "Channelflex" ID No. 522248W

**CHANNELIZERS**

**Surface Mount Type, 36-inch**

1. Bent Manufacturing Company, Masterflex Models MF-360-36 (Round) and MF-180-36 (Flat)
2. Filtrona Extrusion, Flexi-Guide Models FG300PE, FG300UR, and FG300EFX
3. Carsonite, "Super Duck" (Round SDR-336)
4. Carsonite, Model SDCF03601MB "Channelizer"
5. FlexStake, Models 703, 753 TM, and EB3
6. GreenLine, Model SMD-36
7. Hi-way Safety, Inc. "Channel Guide Channelizer" Model CGC36
8. Impact Recovery Model D36, with #101 Fixed (Surface-Mount) Base
9. Safe-Hit, Guide Post, Model SH236SMA
10. Three D Traffic Works "Boomerang" ID No. 522053W

**Lane Separation System**

1. Filtrona Extrusion, "Flexi-Guide (FG) 300 Curb System"
2. Qwick Kurb, "Klemmfix Guide System"
3. Dura-Curb System

**CONICAL DELINEATORS, 42-inch**

(For 28-inch Traffic Cones, see Standard Specifications)

1. Bent Manufacturing Company "T-Top"
2. Plastic Safety Systems "Navigator-42"
3. Traffix Devices "Grabber"
4. Three D Traffic Works "Ringtop" TD7000, ID No. 742143
5. Three D Traffic Works, TD7500

## **OBJECT MARKERS**

### **Type "K", 18-inch**

1. Filtrona Extrusion, Model FG318PE
2. Carsonite, Model SMD 615
3. FlexStake, Model 701 KM
4. Safe-Hit, Model SH718SMA

### **Type "K-4" / "Q" Object Markers, 24-inch**

1. Bent Manufacturing "Masterflex" Model MF-360-24
2. Filtrona Extrusion, Model FG324PE
3. Carsonite, "Channelizer"
4. FlexStake, Model 701KM
5. Safe-Hit, Models SH824SMA\_WA and SH824GP3\_WA
6. Three D Traffic Works ID No. 531702W and TD 5200
7. Three D Traffic Works ID No. 520896W

## **CONCRETE BARRIER MARKERS AND TEMPORARY RAILING (TYPE K) REFLECTORS**

### **Impactable Type**

1. ARTUK, "FB"
2. Filtrona Extrusion, Models PCBM-12 and PCBM-T12
3. Duraflex Corp., "Flexx 2020" and "Electriflexx"
4. Hi-Way Safety, Inc., Model GMKRM100
5. Plastic Safety Systems "BAM" Models OM-BARR and OM-BWAR
6. Three D Traffic Works "Roadguide" Model TD 9304

### **Non-Impactable Type**

1. ARTUK, JD Series
2. Plastic Safety Systems "BAM" Models OM-BITARW and OM-BITARA
3. Vega Molded Products, Models GBM and JD
4. Plastic Vacuum Forming, "Cap-It C400"

## **METAL BEAM GUARD RAIL POST MARKERS**

(For use to the left of traffic)

1. Filtrona Extrusion, "Mini" (3" x 10")
2. Creative Building Products, "Dura-Bull, Model 11201"
3. Duraflex Corp., "Railrider"
4. Plastic Vacuum Forming, "Cap-It C300"

## **CONCRETE BARRIER DELINEATORS, 16-inch**

(For use to the right of traffic)

1. Filtrona Extrusion, Model PCBM T-16
2. Safe-Hit, Model SH216RBM

## **CONCRETE BARRIER-MOUNTED MINI-DRUM (10" x 14" x 22")**

1. Stinson Equipment Company "SaddleMarker"

## **GUARD RAILING DELINEATOR**

(Place top of reflective element at 48 inches above plane of roadway)

### **Wood Post Type, 27-inch**

1. Filtrona Extrusion, FG 427 and FG 527
2. Carsonite, Model 427
3. FlexStake, Model 102 GR
4. GreenLine GRD 27
5. Safe-Hit, Model SH227GRD
6. Three D Traffic Works "Guardflex" TD9100

7. New Directions Mfg, NDM27

**Steel Post Type**

1. Carsonite, Model CFGR-327

**RETROREFLECTIVE SHEETING**

**Channelizers, Barrier Markers, and Delineators**

1. Avery Dennison T-6500 Series (For rigid substrate devices only)
2. Avery Dennison WR-7100 Series
3. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
4. Reflexite, PC-1000 Metalized Polycarbonate
5. Reflexite, AC-1000 Acrylic
6. Reflexite, AP-1000 Metalized Polyester
7. Reflexite, Conformalight, AR-1000 Abrasion Resistant Coating
8. 3M, High Intensity

**Traffic Cones, 4-inch and 6-inch Sleeves**

1. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
2. Reflexite, Vinyl, "TR" (Semi-transparent) or "Conformalight"
3. 3M Series 3840
4. Avery Dennison S-9000C

**Drums**

1. Avery Dennison WR-6100
2. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
3. Reflexite, "Conformalight", "Super High Intensity" or "High Impact Drum Sheeting"
4. 3M Series 3810

**Barricades: Type I, Medium-Intensity (Typically Enclosed Lens, Glass-Bead Element)**

1. Nippon Carbide Industries, CN8117
2. Avery Dennison, W 1100 series
3. 3M Series CW 44

**Barricades: Type II, Medium-High-Intensity (Typically Enclosed Lens, Glass-Bead Element)**

1. Avery Dennison, W-2100 Series

**Signs: Type II, Medium-High-Intensity (Typically Enclosed Lens, Glass-Bead Element)**

1. Avery Dennison, T-2500 Series
2. Nippon Carbide Industries, Nikkalite 18000

**Signs: Type III, High-Intensity (Typically Encapsulated Glass-Bead Element)**

1. Avery Dennison, T-5500A and T-6500 Series
2. Nippon Carbide Industries, Nikkalite Brand Ultralite Grade II
3. 3M 3870 and 3930 Series

**Signs: Type IV, High-Intensity (Typically Unmetallized Microprismatic Element)**

1. Avery Dennison, T-6500 Series
2. Nippon Carbide Industries, Crystal Grade, 94000 Series
3. Nippon Carbide Industries, Model No. 94847 Fluorescent Orange
4. 3M Series 3930 and Series 3924S

**Signs: Type VI, Elastomeric (Roll-Up) High-Intensity, without Adhesive**

1. Avery Dennison, WU-6014
2. Novabrite LLC, "Econobrite"
3. Reflexite "Vinyl"

4. Reflexite "SuperBright"
5. Reflexite "Marathon"
6. 3M Series RS20

**Signs: Type VII, Super-High-Intensity (Typically Unmetallized Microprismatic Element)**

1. 3M Series 3924S, Fluorescent Orange
2. 3M LDP Series 3970

**Signs: Type VIII, Super-High-Intensity (Typically Unmetallized Microprismatic Element)**

1. Avery Dennison, T-7500 Series
2. Avery Dennison, T-7511 Fluorescent Yellow
3. Avery Dennison, T-7513 Fluorescent Yellow Green
4. Avery Dennison, W-7514 Fluorescent Orange
5. Nippon Carbide Industries, Nikkalite Crystal Grade Series 92800
6. Nippon Carbide Industries, Nikkalite Crystal Grade Model 92847 Fluorescent Orange

**Signs: Type IX, Very-High-Intensity (Typically Unmetallized Microprismatic Element)**

1. 3M VIP Series 3981 Diamond Grade Fluorescent Yellow
2. 3M VIP Series 3983 Diamond Grade Fluorescent Yellow/Green
3. 3M VIP Series 3990 Diamond Grade
4. Avery Dennison T-9500 Series
5. Avery Dennison, T9513, Fluorescent Yellow Green
6. Avery Dennison, W9514, Fluorescent Orange

**SPECIALTY SIGNS**

1. Reflexite "Endurance" Work Zone Sign (with Semi-Rigid Plastic Substrate)

**ALTERNATIVE SIGN SUBSTRATES**

**Fiberglass Reinforced Plastic (FRP) and Expanded Foam PVC**

1. Fiber-Brite (FRP)
2. Sequentia, "Polyplate" (FRP)
3. Intoplast Group "InteCel" (0.5 inch for Post-Mounted CZ Signs, 48-inch or less)(PVC)

**Aluminum Composite, Temporary Construction Signs Only**

1. Alcan Composites "Dibond Material, 80 mils"
2. Mitsubishi Chemical America, Alpolic 350

**SECTION 8-2. CONCRETE**

**8-2.01 PORTLAND CEMENT CONCRETE**

Portland cement concrete shall conform to the provisions in Section 90, "Portland Cement Concrete," of the Standard Specifications and these special provisions.

The Department maintains a list of sources of fine and coarse aggregate that have been approved for use with a reduced amount of supplementary cementitious material in the total amount of cementitious material to be used. A source of aggregate will be considered for addition to the approved list if the producer of the aggregate submits to the Transportation Laboratory certified test results from a qualified testing laboratory that verify the aggregate complies with the requirements. Before the testing starts, the aggregate test shall be registered with the Department. A registration number can be obtained by calling (916) 227-7228. The registration number shall be used as the identification for the aggregate sample in correspondence with the Department. Upon request, a split of the tested sample shall be provided to the Department. Approval of aggregate will depend upon compliance with the specifications, based on the certified test results submitted, together with any replicate testing the Department may elect to perform. Approval will expire 3 years from the date the most recent registered and evaluated sample was collected from the aggregate source.

Qualified testing laboratories shall conform to the following requirements:

1. Laboratories performing ASTM Designation: C 1293 shall participate in the Cement and Concrete Reference Laboratory (CCRL) Concrete Proficiency Sample Program and shall have received a score of 3 or better on each test of the previous 2 sets of concrete samples.
2. Laboratories performing ASTM Designation: C 1260 shall participate in the Cement and Concrete Reference Laboratory (CCRL) Pozzolan Proficiency Sample Program and shall have received a score of 3 or better on the shrinkage and soundness tests of the previous 2 sets of pozzolan samples.

Aggregates on the list shall conform to one of the following requirements:

1. When the aggregate is tested in conformance with the requirements in California Test 554 and ASTM Designation: C 1293, the average expansion at one year shall be less than or equal to 0.040 percent; or
2. When the aggregate is tested in conformance with the requirements in California Test 554 and ASTM Designation: C 1260, the average of the expansion at 16 days shall be less than or equal to 0.15 percent.

If the aggregates used in the concrete are on the Department's list, the minimum amount of supplementary cementitious material shall conform to the following:

1. If fly ash or natural pozzolan conforming to the provisions in Section 90-2.01C, "Required Use of Supplementary Cementitious Materials," of the Standard Specifications is used, the minimum amount of supplementary cementitious material shall be 15 percent by weight of the total cementitious material; or
2. If silica fume conforming to the provisions in Section 90-2.01C, "Required Use of Supplementary Cementitious Materials," of the Standard Specifications is used, the minimum amount of supplementary cementitious material shall be 7 percent by weight of the total cementitious material.

The limitation on tricalcium silicate (C<sub>3</sub>S) content in Type II cement specified in Section 90-2.01A, "Cement," of the Standard Specifications shall not apply.

## **SECTION 9. DESCRIPTION OF WORK**

The work to be done, in general, consists of:

- A. Base Bid (Schedule A) consists of construction of new concrete curbs and sidewalks on south side of the road and asphalt concrete sidewalk and dike on the north side of the road. Perform roadway excavation, asphalt paving and reconstruct of existing drainage facilities.
- B. Additive Alternate Bid (Schedule B) work consists of trenching for a communication conduit, installing conduit, tracking wire and pull boxes.

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.

## **SECTION 10-1. GENERAL**

### **10-1.01 CONSTRUCTION PROJECT FUNDING SIGNS**

Before any major physical construction work readily visible to highway users is started on this contract, the Contractor shall furnish and erect 2 Type 1 Construction Project Funding signs at the locations designated by the Engineer.

The signs and overlays shall be of a type and material consistent with the estimated time of completion of the project and shall conform to the details shown on the plans.

The sign letters, the border and the Department's construction logos shall conform to the colors (non-reflective) and details shown on the plans, and shall be on a white background (non-reflective). The colors blue and orange shall conform to PR Color Number 3 and Number 6, respectively, as specified in the Federal Highway Administration's Color Tolerance Chart.

The sign message to be used for the Year of Completion of Project Construction will be furnished by the Engineer. The Contractor shall furnish and install the "Year" sign overlay within 10 working days of notification of the year date to be used.

The letter sizes to be used shall be as shown on the detail included in Appendix C of these special provisions. The information shown on the signs shall be limited to that shown on the plans. The signs shall be kept clean and in good repair by the Contractor.

Upon completion of the work, the signs shall be removed and disposed of outside the highway right of way in conformance with the provisions in Section 7-1.13 of the Standard Specifications.

Full compensation for furnishing, erecting, maintaining, and removing and disposing of the construction project information signs shall be considered as included in the contract lump sum price paid for mobilization and no additional compensation will be allowed therefor.

#### **10-1.02 ORDER OF WORK**

Order of work shall conform to the provisions in Section 5-1.05, "Order of Work," of the Standard Specifications, Section 10-1.03 "Stage Construction" of these special provisions and these special provisions.

The Contractor shall furnish the Engineer with statements from the vendor that the order for the sign panels and, if the Schedule B work is awarded, electrical materials required for this Contract have been received and accepted by the vendor; and the statements shall be furnished within fifteen (15) calendar days after the beginning of work date stated in the Notice to Proceed. The statements shall give the date that the sign panels and electrical materials, if applicable, will be shipped. If the Contractor has the necessary materials on hand, the Contractor will not be required to furnish the vendor's statements.

Attention is directed to "Maintaining Traffic" and "Temporary Pavement Delineation" of these special provisions and to the stage construction sheets of the plans. Construction Project Funding Signs and Construction Area Signs shall be in place prior to any other construction. They shall be covered, or made visible, to the travelling public as detailed and shown on the Stage Construction sheets of the Contract Plans.

Attention is directed to "Water Pollution Control" of these special provisions regarding the submittal and approval of the Storm Water Pollution Prevention Plan (SWPPP) prior to performing work having potential cause water pollution.

Attention is directed to Section 10-1.27 "Seal Random Cracks in Existing Surfacing" of these Special Provisions. Random cracks in existing pavement shall be sealed as shown on the plans and as directed by the Engineer after placement of lane closure.

For the work of Additive Alternate Bid (Schedule B): The first order of work after the Stage 2 traffic control is in place is to positively determine the location of existing underground utilities within the area the communication conduit is to be placed. Upon positive location of all underground utilities, the Engineer shall define the alignment and maximum depth of the communication conduit.

Trenching for placement of communication conduits shall be accomplished before installing sidewalk as shown on the plans and as directed by the Engineer.

#### **10-1.03 STAGE CONSTRUCTION**

Attention is directed to "Maintaining Traffic" and "Temporary Pavement Delineation" of these special provisions and to the stage construction sheets of the plans.

The work shall be performed in conformance with the stages of construction shown on the plans. Non-conflicting work in subsequent stages may proceed concurrently with work in preceding stages, provided satisfactory progress is maintained in the preceding stages of construction.

In each stage, after completion of the preceding stage, the first order of work shall be the removal of existing pavement delineation as directed by the Engineer. Pavement delineation removal shall be coordinated with new delineation so that lane lines are provided at all times on traveled ways open to public traffic. Full compensation for pavement delineation removal shall be considered as included in the contract prices paid for new pavement delineation and no additional compensation will be allowed therefor.

Before obliterating any pavement delineation (traffic stripes, pavement markings, and pavement markers) that is to be replaced on the same alignment and location, as determined by the Engineer, the pavement delineation shall be referenced by the Contractor, with a sufficient number of control points to reestablish the alignment and location of the new pavement delineation. The references shall include the limits or changes in striping pattern, including one- and two-way barrier lines, limit lines, crosswalks and other pavement markings. Full compensation for referencing existing pavement delineation shall be considered as included in the contract prices paid for new pavement delineation and no additional compensation will be allowed therefor.

Prior to applying slurry seal, the Contractor shall cover all manholes, valve and monument covers, grates, or other exposed facilities located within the area of application, using a plastic or oil resistant construction paper secured to the facility being covered by tape or adhesive. The covered facilities shall be referenced by the Contractor, with a sufficient number of control points to relocate the facilities after the slurry seal has been placed. After completion of the slurry seal operation, all covers shall be removed and disposed of in a manner satisfactory to the Engineer. Full compensation for covering manholes, valve and monument covers, grates, or other exposed facilities, referencing, and removing temporary cover shall be considered as included in the contract price paid per ton for slurry seal, and no additional compensation will be allowed therefor.

At the end of each working day if a difference in excess of 0.3- foot exists between the elevation of the existing pavement and the elevation of excavations within 8 feet of the traveled way, material shall be placed and compacted against the vertical cuts adjacent to the traveled way. During excavation operations, native material may be used for this purpose; however, once placing of the structural section commences, structural material shall be used. The material shall be placed to the level of the elevation of the top of existing pavement and tapered at a slope of 4:1 (horizontal: vertical) or flatter to the bottom of the excavation. Treated base shall not be used for the taper. Full compensation for placing the material on a 4:1 slope, regardless of the number of times the material is required, and subsequent removing or reshaping of the material to the lines and grades shown on the plans shall be considered as included in the contract price paid for the materials involved and no additional compensation will be allowed therefor. No payment will be made for material placed in excess of that required for the structural section.

Not less than 45 calendar days prior to applying seeds, the Contractor shall furnish the Engineer a statement from the vendor that the order for the seed required for this contract has been received and accepted by the vendor. The statement from the vendor shall include the names and quantity of seed ordered and the anticipated date of delivery.

#### **10-1.04 WATER POLLUTION CONTROL**

Water pollution control work shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications and these special provisions.

This project lies within the boundaries of the Central Valley (Sacramento) Regional Water Quality Control Board (RWQCB).

This project is subject to the current Statewide General Permit issued by the SWRCB entitled "Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Construction Activity," which regulates discharges of storm water and non-storm water from construction activities disturbing one acre or more of soil in a common plan of development. Copies of the Statewide General Permit and modifications thereto are available for review from the SWRCB, Storm Water Permit Unit, 1001 "I" Street, P.O. Box 1977, Sacramento, California 95812-1977, Telephone: (916) 341-5254 and may also be obtained from the SWRCB Internet website at: <http://www.swrcb.ca.gov/stormwtr/construction.html>.

The Permit requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall be prepared by the Contractor in conformance with the requirements of the Permits and the document entitled "Storm Water Management Plan for Western El Dorado County" Final October 2004 (SWMP) (available from the El Dorado County

Department of Transportation, or from the County website at: <http://www.co.el-dorado.ca.us/emd/solidwaste/storm.html#SWMP>).

The Contractor shall know and fully comply with applicable provisions of the Permits and all modifications thereto, the SWMP, and Federal, State, and local regulations and requirements that govern the Contractor's operations and storm water and non-storm water discharges from the project site construction. Attention is directed to Sections 7-1.01, "Laws to be Observed," and 7-1.12, "Indemnification and Insurance," of the Standard Specifications.

The Contractor shall be responsible for penalties assessed or levied on the Contractor or the Department as a result of the Contractor's failure to comply with the provisions in this section "Water Pollution Control" including, but not limited to, compliance with the applicable provisions of the Permits, the SWMP, and Federal, State and local regulations and requirements as set forth therein.

Penalties as used in this section, "Water Pollution Control," shall include fines, penalties and damages, whether proposed, assessed, or levied against the Department or the Contractor, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Control Act, by governmental agencies or as a result of citizen suits. Penalties shall also include payments made or costs incurred in settlement for alleged violations of the Permits, the SWMP, or applicable laws, regulations, or requirements. Costs incurred could include sums spent instead of penalties, in mitigation or to remediate or correct violations.

### **RETENTION OF FUNDS**

Notwithstanding any other remedies authorized by law, the Department may retain money due the Contractor under the contract, in an amount determined by the Department, up to and including the entire amount of Penalties proposed, assessed, or levied as a result of the Contractor's violation of the Permits, the SWMP, or Federal or State law, regulations or requirements. Funds may be retained by the Department until final disposition has been made as to the Penalties. The Contractor shall remain liable for the full amount of Penalties until such time as they are finally resolved with the entity seeking the Penalties.

Retention of funds for failure to conform to the provisions in this section, "Water Pollution Control," shall be in addition to the other retention amounts required by the contract. The amounts retained for the Contractor's failure to conform to provisions in this section will be released for payment on the next monthly estimate for partial payment following the date when an approved SWPPP has been implemented and maintained, and when water pollution has been adequately controlled, as determined by the Engineer.

When a regulatory agency identifies a failure to comply with the Permits and modifications thereto, the SWMP, or other Federal, State or local requirements, the Department may retain money due the Contractor, subject to the following:

- A. The Department will give the Contractor thirty (30) days notice of the Department's intention to retain funds from partial payments which may become due to the Contractor prior to acceptance of the contract. Retention of funds from payments made after acceptance of the contract may be made without prior notice to the Contractor.
- B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications.
- C. If the Department has retained funds, and it is subsequently determined that the County is not subject to the entire amount of the Costs and Liabilities assessed or proposed in connection with the matter for which the retention was made, the Department shall be liable for interest on the amount retained for the period of the retention. The interest rate payable shall be six percent (6%) per annum.

During the first estimate period that the Contractor fails to conform to the provisions in this section, "Water Pollution Control," the Department may retain an amount equal to twenty five percent (25%) of the estimated value of the contract work performed.

The Contractor shall notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to water pollution control work. The Contractor and the Department shall provide copies of correspondence, notices of violation, enforcement actions or proposed fines by regulatory agencies to the requesting regulatory agency.

## **STORM WATER POLLUTION PREVENTION PLAN PREPARATION, APPROVAL AND AMENDMENTS**

As part of the water pollution control work, a Storm Water Pollution Prevention Plan (SWPPP) is required for this contract and must be submitted by the Contractor. The SWPPP shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications, the requirements in the SWMP, the requirements of the Permits, and these special provisions. Upon the Engineer's approval of the SWPPP, the SWPPP shall be considered to fulfill the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications for development and submittal of a Water Pollution Control Program.

No work having potential to cause water pollution shall be performed until the SWPPP has been approved by the Engineer. Approval shall not constitute a finding that the SWPPP complies with applicable requirements of the Permits, the SWMP and applicable Federal, State and local laws, regulations, and requirements.

The SWPPP shall incorporate the water pollution control practices identified in Section 4.4.5, "Minimum Construction Site Practices" of the County's Storm Water Management Plan.

The Contractor shall develop a Water Pollution Control Schedule that describes the timing of grading or other work activities that could affect water pollution. The Water Pollution Control Schedule shall be updated by the Contractor to reflect changes in the Contractor's operations that would affect the necessary implementation of water pollution control practices.

Within twenty (20) working days after the approval of the contract, the Contractor shall submit three (3) copies of the draft SWPPP to the Engineer. The Engineer will have ten (10) working days to review the SWPPP. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the SWPPP within ten (10) working days of receipt of the Engineer's comments. The Engineer will have five (5) working days to review the revisions. Upon the Engineer's approval of the SWPPP, four (4) approved copies of the SWPPP, incorporating the required changes, shall be submitted to the Engineer. In order to allow construction activities to proceed, the Engineer may conditionally approve the SWPPP while minor revisions are being completed.

In the event the Engineer fails to complete the review within the time allowed, and if, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of the Engineer's delay in completing the review, the Contractor will be compensated for resulting losses, and an extension of time will be granted, in the same manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The Contractor shall prepare an amendment to the SWPPP when there is a change in construction activities or operations which may affect the discharge of pollutants to surface waters, ground waters, municipal storm drain systems, or when the Contractor's activities or operations violate a condition of the Permits, or when directed by the Engineer. Amendments shall identify additional water pollution control practices or revised operations, including those areas or operations not identified in the initially approved SWPPP. Amendments to the SWPPP shall be prepared and submitted for review and approval within a time approved by the Engineer, but in no case longer than the time specified for the initial submittal and review of the SWPPP. At a minimum, the SWPPP shall be amended annually and submitted to the Engineer twenty five (25) days prior to the rainy season.

**The Contractor shall keep one (1) copy of the approved SWPPP and approved amendments at the Project site.** The SWPPP shall be made available upon request by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or the local storm water management agency. Requests by the public shall be directed to the Engineer.

## **SWPPP IMPLEMENTATION**

Unless otherwise specified, upon approval of the SWPPP, the Contractor shall be responsible throughout the duration of the Project for installing, constructing, inspecting, maintaining, removing, and disposing of the water pollution control practices specified in the SWPPP and in the amendments. Unless otherwise directed by the Engineer, the Contractor's responsibility for SWPPP implementation shall continue throughout temporary suspensions of work ordered in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. Requirements for installation, construction, inspection, maintenance, removal, and disposal of water pollution control practices shall conform to the requirements in the SWMP and these special provisions.

If the Contractor or the Engineer identifies a deficiency in the implementation of the approved SWPPP or amendments, the deficiency shall be corrected immediately unless requested by the Contractor and approved by the Engineer in writing, but shall be corrected prior to the onset of precipitation. If the Contractor fails to correct the identified deficiency by the date agreed or prior to the onset of precipitation, the project shall be in nonconformance with this section, "Water Pollution Control." Attention is directed to Section 5-1.01, "Authority of Engineer," of the Standard Specifications, and to "Retention of Funds" of this section for possible nonconformance penalties.

If the Contractor fails to conform to the provisions of this section, "Water Pollution Control," the Engineer may order the suspension of construction operations until the project complies with the requirements of this section.

Implementation of water pollution control practices may vary by season. The SWMP and these special provisions shall be followed for control practice selection of year-round, rainy season and non-rainy season water pollution control practices.

#### **Minimum Construction Site Storm Water Management Practices**

The storm water management practices described below is the minimum, required water quality protection measures applicable to all construction sites below 3000 feet in elevation within Western El Dorado County. This listing does not include the various inspection, record keeping, training and reporting requirements. Additionally, there will be instances where project and site conditions require supplementing or deviating from these minimum protection requirements. The Contractor is expected to deploy measures sufficient to achieve compliance with the State Water Resources Control Board's (SWRCB) NPDES General Permit for Storm Water Discharges Associated with Construction Activity.

#### **Preservation of Existing Vegetation and Protect Environmentally Sensitive Areas**

Prior to the commencement of soil-disturbing activities, areas of existing vegetation that are to remain and environmentally sensitive areas (i.e. wetlands, protected habitats, etc) shall be fenced for protection.

#### **Storm Water Run-On and Concentrated Flows**

Existing watercourses shall be protected; and if diverted, handled in a non-eroding fashion. To the extent feasible, all concentrated water flows shall be channeled away from disturbed soil areas / stockpiles. Concentrated water flows shall be conveyed in a non-eroding fashion.

#### **Stockpile Management**

Stockpiles shall be managed as follows:

- Soil stockpiles
  - Rainy season:
    - Covered, or protected with soil stabilization measures and perimeter sediment barriers
  - Non-rainy season:
    - Covered or protected with perimeter sediment barriers
- Concrete/asphalt rubble, rock and aggregate base/sub-base
  - Covered or protected with perimeter sediment barriers
- "Cold mix" asphalt
  - Covered

#### **Sediment Tracking Control**

Appropriate measures shall be deployed to minimize any tracking of sediment off-site by vehicles and/or equipment. These measures include stabilized construction entrances/exits and roadways, and tire washing. Where tracking occurs, streets shall be swept using a pickup sweeper with water supply.

#### **Non-Storm Water Management**

Non-storm water discharges shall be minimized to the extent feasible. Sediment-laden non-storm water is required to be filtered (or equivalent treatment) prior to discharging. Measures required to manage non-storm water discharges include: water conservation practices, dust control, material storage practices, vehicle/equipment operation and maintenance requirements, waste management practices, and spill prevention/control measures.

## **Disturbed Soil Area Management**

Disturbed soil areas (DSA) shall be protected with an “effective combination” of measures including soil stabilization, sediment barriers and basins / traps. There may be situations where “Sediment Basins” or “Treatment” are able to substitute as alternative control measures to the normally required “effective combination” of soil stabilization, sediment barriers and basins / traps. However, when substituting these measures, the Contractor must be prepared to demonstrate that the sediment load within storm water discharges from the construction site does not exceed natural or pre-construction levels.

Soil stabilization measures include:

- Hydraulic mulch (ref. CASQA BMP # EC-3)
- Hydroseeding (ref. CASQA BMP # EC-4)
- Suitably stabilized, non-polluting straw / wood / organic mulch (ref. CASQA BMP #'s EC-6 & EC-8)
- Geotextiles, mats, plastic covers and erosion control blankets (ref. CASQA BMP # EC-7)
- Stabilized construction roadways (ref. CASQA BMP # TC-2)

Sediment barriers include:

- Silt fences (ref. CASQA BMP # SE-1)
- Sand/gravel bag barriers (ref. CASQA BMP #'s SE-6 & SE-8)
- Straw bale barriers (ref. CASQA BMP # SE-9)
- Fiber rolls (ref. CASQA BMP # SE-5)

Basin / traps include:

- Desilting basins (ref. Caltrans BMPs)
- Sediment traps (ref. Caltrans BMPs)

On DSAs with slope lengths greater than ten (10) feet, the following measures shall be deployed:

Rainy season (Oct. 15th to May 1st):

- Non-active areas (no soil disturbing activities for twenty one (21) or more days)
  - On slopes equal to or flatter than 1:20 (V/H), soil stabilization
  - On slopes steeper than 1:20 (V/H), soil stabilization and sediment barriers
- Active areas
  - On slopes steeper than 1:20 (V/H), sediment barriers
  - On slopes steeper than 1:2 (V/H) with slope lengths greater than fifty (50) feet: soil stabilization; sediment barriers; and where feasible, basins / traps.

Non-rainy season:

- Non-active areas (no soil disturbing activities for twenty one (21) or more days)
  - On slopes steeper than 1:2 (V/H), sediment barriers

General:

- Protection shall be deployed on non-active DSAs within fourteen (14) days from the cessation of soil-disturbing activities or one day prior to the predicted (40% or more chance) onset of significant precipitation, whichever occurs first. Protection shall be deployed on active DSAs prior to the predicted (40% or more chance) onset of significant precipitation.
- Properly drained terraces, at least eight (8) feet wide, shall be provided at intervals not more than every twenty five (25) feet in height on all permanent slopes and non-active DSAs exceeding 30 feet in height.
- “Sediment Basin”: A basin with a capacity equivalent to at least 3600 cubic feet of storage (as measured from the bottom of the basin to the principal outlet) per acre draining into the basin. The length of the basin shall be more than twice the basin’s width (length is determined by measuring the distance between the inlet and the outlet). The depth of the basin must not be less than three feet nor greater than five feet.
- “Treatment”: A combination of basin and treatment engineered to capture and treat (to remove 0.01 mm sized particles and larger) the 10-year, 6-hour rain event using  $Q=CxIxA$  where  $C=0.5$  and  $I$  ranges from 0.286 (El Dorado Hills) to 0.500 (Sly Park).

**General reference: El Dorado County “Storm Water Management Plan,” October 2004. Available online at: <http://www.co.el-dorado.ca.us/emd/solidwaste/storm.html>**

**Detailed references:**

1. **California Storm water Quality Association (CASQA) "Construction Handbook," January 2003. Available online at: <http://www.cabmphandbooks.com/>**
2. **Caltrans "Statewide Storm Water Quality Practice Guidelines," April 2003. Available online at: <http://www.dot.ca.gov/hq/env/stormwater/special/newsetup/index.htm>**

**MAINTENANCE**

To ensure the proper implementation and functioning of water pollution control practices, the Contractor shall regularly inspect and maintain the construction site for the water pollution control practices identified in the SWPPP.

**REPORTING REQUIREMENTS**

**Report of Discharges, Notices or Orders**

If the Contractor identifies discharges into surface waters or drainage systems in a manner causing, or potentially causing, a condition of pollution, or if the project receives a written notice or order from a regulatory agency, the Contractor shall immediately inform the Engineer. The Contractor shall submit a written report to the Engineer within seven (7) days of the discharge event, notice or order. The report shall include the following information:

- A. The date, time, location, nature of the operation, and type of discharge, including the cause or nature of the notice or order.
- B. The water pollution control practices deployed before the discharge event, or prior to receiving the notice or order.
- C. The date of deployment and type of water pollution control practices deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent reoccurrence.
- D. An implementation and maintenance schedule for affected water pollution control practices.

**Report of First-Time Non-Storm Water Discharge**

The Contractor shall notify the Engineer at least three (3) days in advance of first-time non-storm water discharge events, excluding exempted discharges. The Contractor shall notify the Engineer of the operations causing non-storm water discharges and shall obtain field approval for first-time non-storm water discharges. Non-storm water discharges shall be monitored at first-time occurrences and routinely thereafter.

**Annual Certifications**

By June 15 of each year, the Contractor shall complete and submit an Annual Certification of Compliance to the Engineer.

**PAYMENT**

The contract lump sum price paid for preparing the storm water pollution prevention plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in developing, preparing, obtaining approval of, revising, and amending the SWPPP, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The cost of implementing, maintaining, and removing temporary water pollution control practices in accordance with these special provisions shall be addressed through written contract change order and shall be paid for as provided in Section 9-1.03, "Force Account Payment," of the Standard Specifications. Payment for temporary water pollution control measures shall be limited to those measures contained in the March 2003 Caltrans Construction Site Best Management Practices (BMP) Manual, excluding Section 7, "Non-Storm Water Best Management Practices." If the Contractor elects to use BMP's, methods, or practices not included therein, the cost of implementing, maintaining, and removal of such BMP's shall be at the expense of the Contractor.

The cost of cleanup, repair, removal, disposal, improper installation, and replacement of water pollution control practices damaged by the Contractor's negligence shall be born by the Contractor and no separate payment will be made therefore.

**10-1.05 PROGRESS SCHEDULE**

Progress schedules are required for this contract and shall be submitted in conformance with the provisions in Section 8-1.04, "Progress Schedule," of the Standard Specifications and these special provisions, unless otherwise authorized in writing by the Engineer.

The second paragraph of Section 8-1.04, "Progress Schedule," of the Standard Specifications shall not apply.

**10-1.06 OBSTRUCTIONS**

Attention is directed to Section 8-1.10, "Utility and Non-Highway Facilities," and Section 15, "Existing Highway Facilities," of the Standard Specifications and these special provisions.

Attention is directed to the existence of certain underground facilities that may require special precautions be taken by the Contractor to protect the health, safety and welfare of workers and of the public. Facilities requiring special precautions include, but are not limited to: underground electric supply system conductors or cables, with potential to ground of more than 300 V, either directly buried or in a duct or conduit which do not have concentric grounded or other effectively grounded metal shields or sheaths.

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least 2 working days, but not more than 14 calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. Regional notification centers include, but are not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert-Northern California (USA)	1-800-642-2444 1-800-227-2600

The Contractor shall also notify those utility company representatives listed in the section entitled "Utilities" elsewhere in these special provisions.

Some underground facilities are in close proximity to the work. If underground facilities are not located on the plans in both alignment and elevation, the Contractor shall positively locate such facilities by potholing by hand or other non-destructive excavation methods prior to excavation with backhoe, auger or other mechanical methods. Positive location of existing underground facilities shall be to the extent necessary to perform the work shown on the plans and prior to excavation for sidewalk structures.

It is anticipated that no utility facilities will be rearranged or temporarily deactivated in advance of or for the duration of the project construction. Should the Contractor desire to have any of the utility facilities rearranged or temporarily deactivated for his convenience, the Contractor shall make the necessary arrangements as provided in Section 8-1.10 of the Standard Specifications.

Full compensation for positive location of existing underground facilities, shall be considered included in the various items of work and no separate payment will be made therefore.

**10-1.07 HIGH RISK FACILITY ON SPECIAL PROJECTS**

If these facilities are not located on the Plans in both alignment and elevation, no work shall be performed in the vicinity of the facilities until the utility owner, or the utility owner's representative, has located the facility by potholing, probing or other means that will locate and identify the facility. If, in the opinion of the Engineer, the Contractor's operations are delayed or interfered with by reason of the utility facilities not being located by the utility owner or the utility owner's representative, the County will compensate the Contractor for the delays to the extent provided in Section 8-1.09, "Right of Way Delays," of the Standard Specifications, and not otherwise, except as provided in Section 8-1.10, "Utility and Non-Highway Facilities," of the Standard Specifications.

**10-1.08 DUST CONTROL**

Dust control shall conform to the provisions in Section 10, "Dust Control," of the Standard Specifications, Rules 223, 223-1 and 223-2 (Dust Rules) of the Rules and Regulations of the El Dorado County Air Quality Management District (AQMD) and these special provisions.

Nothing in these special provisions shall be construed as relieving the Contractor of the responsibilities as set forth in Section 7, "Legal Relations and Responsibility" of the Standard Specifications.

The Dust Rules can be obtained from the AQMD, 2850 Fairlane Court, Placerville, CA, 95667, (530) 621-6662, and is available at: [http://www.co.el-dorado.ca.us/emd/apcd/construction\\_dust\\_rules.html](http://www.co.el-dorado.ca.us/emd/apcd/construction_dust_rules.html)

#### **DUST CONTROL PLAN PREPARATION, APPROVAL AND AMENDMENTS**

The Contractor shall 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. The Contractor shall provide the Engineer with four (4) copies of the AQMD approved FDP prior to starting any work that may generate dust.

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

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

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

#### **DUST CONTROL IMPLEMENTATION**

The Contractor shall implement the measures contained in the FDP to control dust in accordance with Dust Rules, the Standard Specifications and these special provisions, and as directed by the Engineer.

The Contractor is advised that significant dust control measures will be required during construction operations. In order to mitigate dust, past projects have required extensive pre-wetting to depths of cuts, the use of a dedicated water truck for each piece of earthmoving equipment (e.g., scrapers, dozers, excavators, loaders, haul trucks, backhoes, compactors, graders, etc.), and the use of rock track out pads and wheel wash stations at all points of egress from unpaved construction areas. These examples are not necessarily the exact mitigation measures needed on this project; rather, they have been listed to provide an idea of the extensive nature of dust control activities that may be necessary. The dust control measures that will be required to mitigate dust may impact the Contractor's productivity during construction activities. All impacts to productivity are considered included in the Contractor's bid price for the associated items of work and no additional compensation will be allowed therefor.

The Contractor shall know and fully comply with applicable provisions of the Permits and all modifications thereto, Dust Rules, and Federal, State, and local regulations and requirements that govern the Contractor's operations. Attention is directed to Sections 7-1.01, "Laws to be Observed," and 7-1.12, "Indemnification and Insurance," of the Standard Specifications.

The Contractor shall be responsible for penalties assessed or levied on the Contractor or the Department as a result of the Contractor's failure to comply with the provisions in this section "Dust Control" including, but not limited to, compliance with the applicable provisions of the Permits, Dust Rules, and Federal, State and local regulations and requirements as set forth therein.

Penalties as used in this section, "Dust Control," shall include fines, penalties and damages, whether proposed, assessed, or levied against the Department or the Contractor by governmental agencies or as a result of citizen suits. Penalties shall also include payments made or costs incurred in settlement for alleged violations of the Permits, Dust Rules, or applicable laws, regulations, or requirements. Costs incurred could include sums spent instead of penalties, in mitigation or to remediate or correct violations.

## **RETENTION OF FUNDS**

Notwithstanding any other remedies authorized by law, the Department may retain money due the Contractor under the contract, in an amount determined by the Department, up to and including the entire amount of Penalties proposed, assessed, or levied as a result of the Contractor's violation of the Permits, Dust Rules, or Federal or State law, regulations or requirements. Funds may be retained by the Department until final disposition has been made as to the Penalties. The Contractor shall remain liable for the full amount of Penalties until such time as they are finally resolved with the entity seeking the Penalties.

Retention of funds for failure to conform to the provisions in this section, "Dust Control," shall be in addition to the other retention amounts required by the contract. The amounts retained for the Contractor's failure to conform to provisions in this section will be released for payment on the next monthly estimate for partial payment following the date when an approved FDP has been implemented and maintained, and when dust has been adequately controlled, as determined by the Engineer.

When a regulatory agency identifies a failure to comply with the Permits and modifications thereto, Dust Rules, or other Federal, State or local requirements, the Department may retain money due the Contractor, subject to the following:

- A. The Department will give the Contractor thirty (30) days notice of the Department's intention to retain funds from partial payments which may become due to the Contractor prior to acceptance of the contract. Retention of funds from payments made after acceptance of the contract may be made without prior notice to the Contractor.
- B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications.
- C. If the Department has retained funds, and it is subsequently determined that the County is not subject to the entire amount of the Costs and Liabilities assessed or proposed in connection with the matter for which the retention was made, the Department shall be liable for interest on the amount retained for the period of the retention. The interest rate payable shall be six percent (6%) per annum.

During the first estimate period that the Contractor fails to conform to the provisions in this section, "Dust Control," the Department may retain an amount equal to twenty five percent (25%) of the estimated value of the contract work performed.

The Contractor shall notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to dust control work. The Contractor and the Department shall provide copies of correspondence, notices of violation, enforcement actions or proposed fines by regulatory agencies to the requesting regulatory agency.

## **PAYMENT**

The contract lump sum price paid for prepare dust control plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in developing, preparing, obtaining approval, revising, and amending the FDP, for maintaining and submitting all dust control records, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

In the event naturally occurring asbestos is found within the project limits (where it is not known to exist), the Contractor shall prepare an Asbestos Dust Mitigation Plan in accordance with the requirements of Rule 223-2 and implement dust control in accordance with the requirements of Rule 223-2. Preparing an Asbestos Dust Mitigation Plan will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

The cost of performing and implementing dust control in accordance with these special provisions shall be addressed through written contract change order and shall be paid for as provided in Section 9-1.03, "Force Account Payment," of the Standard Specifications.

### **10-1.09 MOBILIZATION**

Mobilization shall conform to the provisions in Section 11, "Mobilization," of the Standard Specifications.

### 10-1.10 CONSTRUCTION AREA TRAFFIC CONTROL DEVICES

Flagging, signs, and temporary traffic control devices furnished, installed, maintained, and removed when no longer required shall conform to the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Category 1 temporary traffic control devices are defined as small and lightweight (less than 100 pounds) devices. These devices shall be certified as crashworthy by crash testing, crash testing of similar devices, or years of demonstrable safe performance. Category 1 temporary traffic control devices include traffic cones, plastic drums, portable delineators, and channelizers.

If requested by the Engineer, the Contractor shall provide written self-certification for crashworthiness of Category 1 temporary traffic control devices at least 5 days before beginning any work using the devices or within 2 days after the request if the devices are already in use. Self-certification shall be provided by the manufacturer or Contractor and shall include the following:

- A. Date,
- B. Federal Aid number (if applicable),
- C. Contract number, district, county, route and post mile of project limits,
- D. Company name of certifying vendor, street address, city, state and zip code,
- E. Printed name, signature and title of certifying person; and
- F. Category 1 temporary traffic control devices that will be used on the project.

The Contractor may obtain a standard form for self-certification from the Engineer.

Category 2 temporary traffic control devices are defined as small and lightweight (less than 100 pounds) devices that are not expected to produce significant vehicular velocity change, but may cause potential harm to impacting vehicles. Category 2 temporary traffic control devices include barricades and portable sign supports.

Category 2 temporary traffic control devices shall be on the Federal Highway Administration's (FHWA) list of Acceptable Crashworthy Category 2 Hardware for Work Zones. This list is maintained by FHWA and can be located at:

[http://safety.fhwa.dot.gov/roadway\\_dept/road\\_hardware/listing.cfm?code=workzone](http://safety.fhwa.dot.gov/roadway_dept/road_hardware/listing.cfm?code=workzone)

The Department also maintains this list at:

<http://www.dot.ca.gov/hq/traffops/signtech/signdel/pdf/Category2.pdf>

Category 2 temporary traffic control devices that have not received FHWA acceptance shall not be used. Category 2 temporary traffic control devices in use that have received FHWA acceptance shall be labeled with the FHWA acceptance letter number and the name of the manufacturer. The label shall be readable and permanently affixed by the manufacturer. Category 2 temporary traffic control devices without a label shall not be used.

If requested by the Engineer, the Contractor shall provide a written list of Category 2 temporary traffic control devices to be used on the project at least 5 days before beginning any work using the devices or within 2 days after the request if the devices are already in use.

Category 3 temporary traffic control devices consist of temporary traffic-handling equipment and devices that weigh 100 pounds or more and are expected to produce significant vehicular velocity change to impacting vehicles. Temporary traffic-handling equipment and devices include crash cushions, truck-mounted attenuators, temporary railing, temporary barrier, and end treatments for temporary railing and barrier.

Type III barricades may be used as sign supports if the barricades have been successfully crash tested, meeting the NCHRP Report 350 criteria, as one unit with a construction area sign attached.

Category 3 temporary traffic control devices shall be shown on the plans or on the Department's Highway Safety Features list. This list is maintained by the Division of Engineering Services and can be found at:

[http://www.dot.ca.gov/hq/esc/approved\\_products\\_list/HighwaySafe.htm](http://www.dot.ca.gov/hq/esc/approved_products_list/HighwaySafe.htm)

Category 3 temporary traffic control devices that are not shown on the plans or not listed on the Department's Highway Safety Features list shall not be used.

Full compensation for providing self-certification for crashworthiness of Category 1 temporary traffic control devices and for providing a list of Category 2 temporary traffic control devices used on the project shall be considered as included in the prices paid for the various items of work requiring the use of the Category 1 or Category 2 temporary traffic control devices and no additional compensation will be allowed therefor.

**10-1.11 CONSTRUCTION AREA SIGNS**

Construction area signs for temporary traffic control shall be furnished, installed, maintained, and removed when no longer required in conformance with the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Attention is directed to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions. Type II retroreflective sheeting shall not be used on construction area sign panels. Type III, IV, VII, VIII, or IX retroreflective sheeting shall be used for stationary mounted construction area sign panels.

Attention is directed to "Construction Project Funding Signs" of these special provisions regarding the type of construction project funding signs to be furnished, erected, maintained, and removed and disposed of.

Unless otherwise shown on the plans or specified in these special provisions, the color of construction area warning and guide signs shall have black legend and border on orange background, except W10-1 or W47(CA) (Highway-Rail Grade Crossing Advance Warning) sign shall have black legend and border on yellow background.

Orange background on construction area signs shall be fluorescent orange.

Repair to construction area sign panels will not be allowed, except when approved by the Engineer. At nighttime under vehicular headlight illumination, sign panels that exhibit irregular luminance, shadowing or dark blotches shall be immediately replaced at the Contractor's expense.

The Contractor shall notify the appropriate regional notification center for operators of subsurface installations at least 2 working days, but not more than 14 calendar days, prior to commencing excavation for construction area sign posts. The regional notification centers include, but are not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert-Northern California (USA)	(800) 642-2444 (800) 227-2600

Excavations required to install construction area signs shall be performed by hand methods without the use of power equipment, except that power equipment may be used if it is determined there are no utility facilities in the area of the proposed post holes. The post hole diameter, if backfilled with portland cement concrete, shall be at least 4 inches greater than the longer dimension of the post cross section.

Construction area signs placed within 15 feet from the edge of the travel way shall be mounted on stationary mounted sign supports as specified in "Construction Area Traffic Control Devices" of the Standard Specifications and these special provisions.

The Contractor shall maintain accurate information on construction area signs. Signs that are no longer required shall be immediately covered or removed. Signs that convey inaccurate information shall be immediately replaced or the information shall be corrected. Covers shall be replaced when they no longer cover the signs properly. The Contractor shall immediately restore to the original position and location any sign that is displaced or overturned, from any cause, during the progress of work.

The contract lump sum price paid for Construction Area Signs shall include full compensation for furnishing all labor materials, tools, equipment, and incidentals, and for doing all the work involved in placing, removing, storing,

maintaining, moving to new locations, replacing, covering, uncovering, and disposing of as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed.

#### **10-1.12 MAINTAINING TRAFFIC**

Maintaining traffic shall conform to the provisions in Sections 7-1.08, "Public Convenience," Section 7-1.09, "Public Safety," and Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications, "Public Safety" of these special provisions and these special provisions.

Closure is defined as the closure of a traffic lane or lanes, including shoulder, connector lanes, within a single traffic control system.

Closures shall conform to the provisions in "Traffic Control System for Lane Closure" of these special provisions.

Closures are only allowed during the hours shown in the lane requirement chart included in this section "Maintaining Traffic," except for work required under Sections 7-1.08, "Public Convenience," and Section 7-1.09, "Public Safety," of the Standard Specifications.

Local authorities shall be notified at least 5 business days before work begins. The Contractor shall cooperate with local authorities to handle traffic through the work area and shall make arrangements to keep the work area clear of parked vehicles.

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

When work vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed with fluorescent orange traffic cones or portable delineators placed 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. A minimum of 9 traffic cones or portable delineators shall be used for the taper. A W20-1 (ROAD WORK AHEAD) or W21-5b (RIGHT/LEFT SHOULDER CLOSED AHEAD) or C24(CA) (SHOULDER WORK AHEAD) sign shall be mounted on a crashworthy portable sign support with flags. The sign shall be placed where designated by the Engineer. The sign shall be a minimum of 48" x 48" in size. The Contractor shall immediately restore to the original position and location a traffic cone or delineator that is displaced or overturned, during the progress of work.

When work is being performed within the construction lane, as shown on sheet SC-3 of the Contract Plans, the provisions of Section 5-1.21 "Public Safety" of these Special Provisions shall apply.

A minimum of one paved traffic lane, not less than 11 feet wide, shall be open for use by public traffic in each direction of travel at all the times during construction **on Green Valley Road** with the exception of the following activities:

Slurry Seal Stripe Removal and Temporary Stripes and Markers, Thermoplastic Stripe operations:

'C' Line, Station 30+00 to Station 56+10 – Overlay Operations

During the above listed activities a minimum of one paved traffic lane, with reversing traffic control, not less than 11 feet wide, shall be open for use by public traffic during hours allowed per the lane closure chart in this section. When construction operations are not actively in progress, not less than 2 of these lanes shall be open to public traffic.

All lane closures associated with this work shall be in accordance with the lane closure chart in this section.

Minor deviations from the requirements of this section concerning hours of work which do not significantly change the cost of the work may be permitted upon the written request of the Contractor if, in the opinion of the Engineer, public traffic will be better served and the work expedited. These deviations shall not be adopted by the Contractor until the Engineer has approved the deviations in writing. Other modifications will be made by contract change order.

No work shall be allowed on Sundays or legal holidays.

Designated legal holidays are: January 1st, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, November 11th, Thanksgiving Day, and December 25th. When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When November 11th falls on a Saturday, the preceding Friday shall be a designated legal holiday.

Full compensations for furnishing, erecting, maintaining, and removing and disposing of the W20-1, W21-5b and C24 (CA) signs shall be considered as included in the contract lump sum price paid for construction area signs and no additional compensation will be allowed therefore.

Chart No. 1 – Green Valley Road Two Lane Conventional Highway Lane Requirements																								
Location:	AM												PM:											
FROM HOUR TO HOUR																								
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R	R	2	2	2	2	2	2	2	2	2	2	2	2	2	2	R	R	R	R
Fridays	R	R	R	R	R	R	2	2	2	2	2	2	2	2	2									
Saturdays							2	2	2	2	2	2	2	2	2	2	2	2						
Sunday																								
Day before designated legal holiday	R	R	R	R	R	R	2	2	2	2	2	2	2	2	2	2	2							
Legend:																								
R	Only for operations specifically allowed in these special provisions. A minimum of one paved traffic lane, not less than 11 feet wide, shall be open for use by public traffic (Reversing Control). Maximum time limit to hold traffic at Reverse traffic conditions shall be 5 minutes.																							
2	A minimum of two paved traffic lanes shall be open for use by public traffic. (One lane not less than 11 feet wide in each direction of travel) except as provided for in these special provisions.																							
	No work that interferes with public traffic will be allowed																							
REMARKS:																								

**10-1.13 CLOSURE REQUIREMENTS AND CONDITIONS**

Closures shall conform to the provisions in "Maintaining Traffic" of these special provisions and this section of the special provisions.

The term closure, as used herein, is defined as the closure of a traffic lane or lanes, including ramp or connector lanes, within a single traffic control system.

**CLOSURE SCHEDULE**

By noon on each Monday, the Contractor shall submit a written schedule of planned closures for the following week period, defined as Friday noon through the following Friday noon.

The Closure Schedule shall show the locations and times of the proposed closures. The Closure Schedule request forms furnished by the Engineer shall be used. Closure Schedules submitted to the Engineer with incomplete or inaccurate information will be rejected and returned for correction and resubmittal. The Contractor will be notified of disapproved closures or closures that require coordination with other parties as a condition of approval.

Closure Schedule amendments, including adding additional closures, shall be submitted by noon to the Engineer, in writing, at least 3 business days in advance of a planned closure. Approval of Closure Schedule amendments will be at the discretion of the Engineer.

Closures that are cancelled due to unsuitable weather may be rescheduled at the discretion of the Engineer.

## **CONTINGENCY PLAN**

A detailed contingency plan shall be prepared for reopening closures to public traffic. The contingency plan shall be submitted to the Engineer within one business day of the Engineer's request.

## **LATE REOPENING OF CLOSURES**

If a closure is not reopened to public traffic by the specified time, work shall be suspended in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. No further closures are to be made until the Engineer has accepted a work plan, submitted by the Contractor, that will insure that future closures will be reopened to public traffic at the specified time. The Engineer will have 2 business days to accept or reject the Contractor's proposed work plan. The Contractor will not be entitled to compensation for the suspension of work resulting from the late reopening of closures.

## **COMPENSATION**

The Engineer shall be notified of delays in the Contractor's operations due to the following conditions, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of those conditions, and the Contractor's loss due to that delay could not have been avoided by rescheduling the affected closure or by judicious handling of forces, equipment and plant, the delay will be considered a right of way delay and will be compensated in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications:

1. The Contractor's proposed Closure Schedule is denied and his planned closures are within the time frame allowed for closures in "Maintaining Traffic" of these special provisions, except that the Contractor will not be entitled to compensation for amendments to the Closure Schedule that are not approved.
2. The Contractor is denied a confirmed closure.

Should the Engineer direct the Contractor to remove a closure before the time designated in the approved Closure Schedule, delay to the Contractor's schedule due to removal of the closure will be considered a right of way delay and compensation for the delay will be determined in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

## **10-1.14 TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE**

A traffic control system shall consist of closing traffic lanes in conformance with the details shown on the plans, the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications, the provisions under "Maintaining Traffic" and "Construction Area Signs" of these special provisions, and these special provisions.

The provisions in this section will not relieve the Contractor from the responsibility to provide additional devices or take measures as may be necessary to comply with the provisions in Section 7-1.08, "Public Convenience" and Section 7-1.09, "Public Safety," of the Standard Specifications.

If components in the traffic control system are displaced or cease to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair the components to the original condition or replace the components and shall restore the components to the original location.

When lane closures are made for work periods only, at the end of each work period, components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way, shall be removed from the traveled way and shoulder. If the Contractor so elects, the components may be stored at selected central locations designated by the Engineer within the limits of the highway right of way.

One-way traffic shall be controlled through the project in conformance with the plan entitled "Traffic Control System for Lane Closure on Two Lane Conventional Highways" and these special provisions.

During traffic stripe operations and pavement marker placement operations using bituminous adhesive, traffic shall be controlled, at the option of the Contractor, with either stationary or moving lane closures. During other operations, traffic shall be controlled with stationary lane closures. Attention is directed to the provisions in Section 84-1.04, "Protection From Damage," and Section 85-1.06, "Placement," of the Standard Specifications.

Utilizing a pilot car will be at the option of the Contractor. If the Contractor elects to use a pilot car, the cones shown along the centerline on the plan need not be placed. The pilot car shall have radio contact with personnel in the work area. The maximum speed of the pilot car through the traffic control zone shall be 25 miles per hour.

The contract lump sum price paid for traffic control system shall include full compensation for furnishing all labor (except for flagging costs), materials (including signs), tools, equipment, and incidentals, and for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing, and disposing of the components of Temporary Railing (K rail), Channelizer, and Temporary Crash Cushion Modules) of the traffic control system and for furnishing and operating the pilot car, (including driver, radios, other equipment, and labor required), as shown on the plans, as specified in the Standard Specifications and these special provisions, or as directed by the Engineer. Flagging costs will be paid for as provided in Section 12-2.02, "Flagging Costs," of the Standard Specifications.

The adjustment provisions in Section 4-1.03, "Changes," of the Standard Specifications shall not apply to the item of traffic control system. Adjustments in compensation for traffic control system will be made only for increased or decreased traffic control system required by changes ordered by the Engineer and will be made on the basis of the cost of the increased or decreased traffic control necessary. The adjustment will be made on a force account basis as provided in Section 9-1.03, "Force Account Payment," of the Standard Specifications for increased work and estimated on the same basis in the case of decreased work.

Traffic control system required by work which is classed as extra work, as provided in Section 4-1.03D of the Standard Specifications, will be paid for as a part of the extra work.

#### **10-1.15 TEMPORARY PAVEMENT DELINEATION**

Temporary pavement delineation shall be furnished, placed, maintained, and removed in conformance with the provisions in Section 12-3.01, "General," of the Standard Specifications and these special provisions and as shown on the plans and as directed by the Engineer. Nothing in these special provisions shall be construed as reducing the minimum standards specified in the California MUTCD or as relieving the Contractor from the responsibilities specified in Section 7-1.09, "Public Safety," of the Standard Specifications.

##### **GENERAL**

When the work causes obliteration of pavement delineation, temporary or permanent pavement delineation shall be in place before opening the traveled way to public traffic. Laneline or centerline pavement delineation shall be provided for traveled ways open to public traffic.

The Contractor shall perform the work necessary to establish the alignment of temporary pavement delineation, including required lines or markers. Surfaces to receive application of paint or removable traffic tape temporary pavement delineation shall be dry and free of dirt and loose material. Temporary pavement delineation shall not be applied over existing pavement delineation or other temporary pavement delineation. Temporary pavement delineation shall be maintained until superseded or replaced with a new pattern of temporary pavement delineation or permanent pavement delineation, or as determined by the Engineer.

Temporary pavement markers, including underlying adhesive, and removable traffic tape that are applied to the final layer of surfacing or existing pavement to remain in place or that conflict with a subsequent or new traffic pattern for the area shall be removed when no longer required for the direction of public traffic, as determined by the Engineer.

##### **TEMPORARY LANELINE AND CENTERLINE DELINEATION**

When lanelines or centerlines are obliterated and temporary pavement delineation to replace the lines is not shown on the plans, the minimum laneline and centerline delineation to be provided for that area shall be temporary pavement markers placed at longitudinal intervals of not more than 24 feet. The temporary pavement markers shall be the same color as the laneline or centerline the pavement markers replace. Temporary pavement markers shall be, at the option of the Contractor, one of the temporary pavement markers listed for short term day/night use (14 days or less) or long term day/night use (180 days or less) in "Prequalified and Tested Signing and Delineation Materials" of these special provisions. The temporary pavement markers shall be placed in conformance with the manufacturer's instructions. Temporary pavement markers defined on the stage construction sheets of the contract plans shall be long term day/night use (6 months or less) as defined "Prequalified and Tested Signing and Delineation Materials" of these special provisions. Temporary pavement markers for long term day/night use (180 days or less) shall be cemented to the surfacing with the

adhesive recommended by the manufacturer, except epoxy adhesive shall not be used to place the temporary pavement markers in areas where removal of the temporary pavement markers will be required.

Temporary laneline or centerline delineation consisting entirely of temporary pavement markers listed for short term day/night use (14 days or less), shall be placed on longitudinal intervals of not more than 24 feet and shall be used for a maximum of 14 days on lanes opened to public traffic. Before the end of the 14 days the permanent pavement delineation shall be placed. If the permanent pavement delineation is not placed within the 14 days, the Contractor shall replace the temporary pavement markers and provide additional temporary pavement delineation and shall bear the cost thereof. The additional temporary pavement delineation to be provided shall be equivalent to the pattern specified for the permanent pavement delineation for the area, as determined by the Engineer.

Where "no passing" centerline pavement delineation is obliterated, the following "no passing" zone signing shall be installed before opening the lanes to public traffic. W20-1 (ROAD WORK AHEAD) signs shall be installed from 1,000 feet to 2,000 feet in advance of "no passing" zones. R4-1 (DO NOT PASS) signs shall be installed at the beginning and at every 2,000-foot interval within "no passing" zones. The exact location of "no passing" zone signing will be as determined by the Engineer and shall be maintained in place until permanent "no passing" centerline pavement delineation has been applied. The signing for "no passing" zones, shall be removed when no longer required for the direction of public traffic. The signing for "no passing" zones shall conform to the provisions in "Construction Area Signs" of these special provisions, except for payment.

### **TEMPORARY PAVEMENT MARKING AND MARKERS**

Temporary pavement marking consisting of painted pavement marking shall be applied, maintained, and removed at the locations shown on the plans. The painted temporary pavement marking shall be complete in place at the location shown prior to opening the traveled way to public traffic. Temporary painted pavement marking shall conform to the provisions of Section 84-3 "Paint Traffic Stripe and Pavement Markings" of the Standard Specifications, except for payment. The method of payment is directed under "Measurement and Payment" within this section.

Temporary pavement markers shall be, at the option of the Contractor, one of the temporary pavement markers for long term day/night use (180 days or less) listed in "Prequalified and Tested Signing and Delineation Materials" of these special provisions.

Temporary pavement markers shall be placed in conformance with the manufacturer's instructions and shall be cemented to the surfacing with the adhesive recommended by the manufacturer, except epoxy adhesive shall not be used in areas where removal of the pavement markers will be required.

Retroreflective pavement markers conforming to the provisions in "Pavement Markers" of these special provisions and Section 85, "Pavement Markers," of the Standard Specifications may be used in place of temporary pavement markers for long term day/night use (180 days or less) except to simulate patterns of broken traffic stripe. Placement of the retroreflective pavement markers used for temporary pavement markers shall conform to the provisions in "Pavement Markers" of these special provisions except the waiting period provisions before placing the pavement markers on new hot mix asphalt surfacing as specified in Section 85-1.06, "Placement," of the Standard Specifications shall not apply and epoxy adhesive shall not be used to place pavement markers in areas where removal of the pavement markers will be required.

### **MEASUREMENT AND PAYMENT**

Temporary traffic stripe shown on the plans will be measured and paid for in the same manner specified for paint traffic stripe and paint pavement marking in Section 84-3.06, "Measurement," and Section 84-3.07, "Payment," of the Standard Specifications.

Temporary pavement markers shown on the plans will be measured and paid for by the unit in the same manner specified for retroreflective pavement markers in Section 85-1.08, "Measurement," and Section 85-1.09, "Payment," of the Standard Specifications.

Flexible channelizers (tubular markers) and temporary pavement markings, as shown on the plans for temporary edgeline delineation and directional movements, shall be considered as included in the contract prices paid for Traffic Control System and no separate payment will be made therefor.

Full compensation for furnishing, placing, maintaining, and removing the temporary pavement markers (including underlying adhesive, layout (dribble) lines to establish alignment of temporary pavement markers or used for temporary laneline and centerline delineation and signing specified for "no passing" zones for those areas where temporary laneline and centerline delineation is not shown on the plans and for providing equivalent patterns of permanent traffic lines for those areas when required, shall be considered as included in the contract prices paid for Traffic Control System and no separate payment will be made therefor.

Full compensation for furnishing, placing, maintaining, and removing temporary edgeline delineation not shown on the plans shall be considered as included in the contract price for Traffic Control System and no separate payment will be made therefor.

Temporary pavement delineation shall be furnished, placed, maintained, and removed in conformance with the provisions in Section 12-3.01, "General," of the Standard Specifications and these special provisions and as shown on the contract plans. Nothing in these special provisions shall be construed as reducing the minimum standards specified in the California MUTCD or as relieving the Contractor from the responsibilities specified in Section 7-1.09, "Public Safety," of the Standard Specifications.

#### **10-1.16 PORTABLE CHANGEABLE MESSAGE SIGN**

Portable changeable message signs shall be furnished, placed, operated, and maintained at those locations shown on the plans or where designated by the Engineer in conformance with the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Attention is directed to "Maintaining Traffic" of these special provisions regarding the use of the portable changeable message signs.

Portable changeable message signs shall be in place and operational a minimum of five (5) days in advance of any work affecting public traffic and lane closures to inform the public of upcoming construction work and related days or as directed by the Engineer. They shall be paid for on a per day basis for each sign in use.

The contract unit price paid for portable changeable message signs shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all work involved in furnishing, placing, operating, maintaining and repairing, transporting from location to location and removing portable changeable message signs, complete in place as specified in the Standard Specifications and these special provisions, at locations as shown on the plans and as directed by the Engineer. The provisions of Section 4-1.03B(1) "Increases of More Than 25 Percent" shall not apply to this contract item.

#### **10-1.17 TEMPORARY RAILING**

Temporary railing (Type K) shall be placed as shown on the plans, as specified in the Standard Specifications or these special provisions or where ordered by the Engineer and shall conform to the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Reflectors on temporary railing (Type K) shall conform to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions.

Attention is directed to "Public Safety" and "Order of Work" of these special provisions.

Temporary railing (Type K) placed in conformance with the provisions in "Public Safety" of these special provisions will be neither measured nor paid for.

Full compensation for temporary railing (Type K) shall be considered as included in the contract lump sum price paid for traffic control system and no separate payment will be allowed therefor.

#### **10-1.18 CHANNELIZER**

Channelizers shall conform to the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Channelizers shall conform to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions.

When no longer required for the work as determined by the Engineer, channelizers (except channelizers to be left in place) and underlying adhesive used to cement the channelizer bases to the pavement shall be removed. Removed channelizers and adhesive shall become the property of the Contractor and shall be removed from the site of work.

Full compensation for channelizer shall be considered as included in the contract lump sum price paid for traffic control system and no separate payment will be allowed therefor.

#### **10-1.19 TEMPORARY CRASH CUSHION MODULE**

This work shall consist of furnishing, installing, and maintaining sand filled temporary crash cushion modules in groupings or arrays at each location shown on the plans, as specified in these special provisions or where designated by the Engineer. The grouping or array of sand filled modules shall form a complete sand filled temporary crash cushion in conformance with the details shown on the plans and these special provisions.

Attention is directed to "Public Safety," "Order of Work," and "Temporary Railing" of these special provisions.

Whenever the work or the Contractor's operations establishes a fixed obstacle, the exposed fixed obstacle shall be protected with a sand filled temporary crash cushion. The sand filled temporary crash cushion shall be in place prior to opening the lanes adjacent to the fixed obstacle to public traffic.

Sand filled temporary crash cushions shall be maintained in place at each location, including times when work is not actively in progress. Sand filled temporary crash cushions may be removed during a work period for access to the work provided that the exposed fixed obstacle is 15 feet or more from a lane carrying public traffic and the temporary crash cushion is reset to protect the obstacle prior to the end of the work period in which the fixed obstacle was exposed. When no longer required, as determined by the Engineer, sand filled temporary crash cushions shall be removed from the site of the work.

At the Contractor's option, the modules for use in sand filled temporary crash cushions shall be either Energite III Inertial Modules, Fitch Inertial Modules or TrafFix Sand Barrels manufactured after March 31, 1997, or equal:

1. Energite III and Fitch Inertial Modules, manufactured by Energy Absorption Systems, Inc., 35 East Wacker Drive, Suite 1100, Chicago, IL 60601:
  - 1.1. Northern California: Traffic Control Service, Inc., 8585 Thys Court, Sacramento, CA 95828, telephone (800) 884-8274, FAX (916) 387-9734
  - 1.2. Southern California: Traffic Control Service, Inc., 1818 E. Orangethorpe, Fullerton, CA 92831-5324, telephone (800) 222-8274, FAX (714) 526-9501
2. TrafFix Sand Barrels, manufactured by TrafFix Devices, Inc., 220 Calle Pinteroesco, San Clemente, CA 92672, telephone (949) 361-5663, FAX (949) 361-9205.
  - 2.1. Northern California: United Rentals, Inc., 1533 Berger Drive, San Jose, CA 95112, telephone (408) 287-4303, FAX (408) 287-1929
  - 2.2. Southern California: Statewide Safety & Sign, Inc., P.O. Box 1440, Pismo Beach, CA 93448, telephone (800) 559-7080, FAX (805) 929-5786

Modules contained in each temporary crash cushion shall be of the same type at each location. The color of the modules shall be the standard yellow color, as furnished by the vendor, with black lids. The modules shall exhibit good workmanship free from structural flaws and objectionable surface defects. The modules need not be new. Good used undamaged modules conforming to color and quality of the types specified herein may be utilized. If used Fitch modules requiring a seal are furnished, the top edge of the seal shall be securely fastened to the wall of the module by a continuous strip of heavy duty tape.

Modules shall be filled with sand in conformance with the manufacturer's directions, and to the sand capacity in pounds for each module shown on the plans. Sand for filling the modules shall be clean washed concrete sand of

commercial quality. At the time of placing in the modules, the sand shall contain not more than 7 percent water as determined by California Test 226.

Modules damaged due to the Contractor's operations shall be repaired immediately by the Contractor at the Contractor's expense. Modules damaged beyond repair, as determined by the Engineer, due to the Contractor's operations shall be removed and replaced by the Contractor at the Contractor's expense.

Temporary crash cushion modules shall be placed on movable pallets or frames conforming to the dimensions shown on the plans. The pallets or frames shall provide a full bearing base beneath the modules. The modules and supporting pallets or frames shall not be moved by sliding or skidding along the pavement.

A Type R or P marker panel shall be attached to the front of the crash cushion as shown on the plans, when the closest point of the crash cushion array is within 12 feet of the traveled way. The marker panel, when required, shall be firmly fastened to the crash cushion with commercial quality hardware or by other methods determined by the Engineer.

At the completion of the project, temporary crash cushion modules, sand filling, pallets or frames, and marker panels shall become the property of the Contractor and shall be removed from the site of the work. Temporary crash cushion modules shall not be installed in the permanent work.

Temporary crash cushion modules placed in conformance with the provisions in "Public Safety" of these special provisions will not be measured nor paid for.

Full compensation for temporary crash cushion modules shall be considered as included in the contract lump sum price paid for traffic control system and no separate payment will be allowed therefor.

#### **10-1.20 EXISTING HIGHWAY FACILITIES**

The work performed in connection with various existing highway facilities shall conform to the provisions in Section 15, "Existing Highway Facilities," of the Standard Specifications and these special provisions.

#### **REMOVE TRAFFIC STRIPE AND PAVEMENT MARKING**

Traffic stripe and pavement marking shall be removed at the locations shown on the plans and as directed by the Engineer.

Attention is directed to "Water Pollution Control" of these special provisions.

Waste from removal of yellow thermoplastic and yellow painted traffic stripe and pavement marking contains lead chromate in average concentrations greater than or equal to 350 mg/kg {350 ppm}. Yellow thermoplastic and yellow paint traffic stripe exist throughout the full length of the project. Residue produced when yellow thermoplastic and yellow paint are removed may contain heavy metals in concentrations that exceed thresholds established by the California Health and Safety Code and may produce toxic fumes when heated.

The removed yellow thermoplastic and yellow paint and thermoplastic traffic stripe shall be disposed of at a Class 1 disposal facility or a Class 2 disposal facility permitted by the Regional Water Quality Control Board in conformance with the requirements of the disposal facility operator within 20 days after accumulating 100 kg {220 pounds} of residue and dust. The Contractor shall make necessary arrangements with the operator of the disposal facility to test the yellow thermoplastic and yellow paint residue as required by the facility and these special provisions. Testing shall include, at a minimum, (1) Total Lead and Chromium by EPA Method 7000 series and (2) Soluble Lead and Chromium by California Waste Extraction Test. From the first 3360 L {887 gallons} of waste or portion thereof, if less than 3360 L {887 gallons} of waste are produced; a minimum of four randomly selected samples shall be taken and analyzed. From each additional 840 L {222 gallons} of waste or portion thereof, if less than 840 L {222 gallons} are produced; a minimum of one additional random sample shall be taken and analyzed. The Contractor shall submit the name and location of the disposal facility and analytical laboratory along with the testing requirements to the Engineer not less than 10 days prior to the start of removal of yellow thermoplastic and yellow painted traffic stripe and pavement marking. The analytical laboratory shall be certified by the Department of Health Services Environmental Laboratory Accreditation Program. Test results shall be provided to the Engineer for review prior to signing a waste profile as requested by the disposal facility, prior to issuing an EPA identification number and prior to allowing removal of the waste from the site.

The Contractor shall prepare a project specific Lead Compliance Plan to prevent or minimize worker exposure to lead while handling removed yellow thermoplastic and yellow paint residue. Attention is directed to Title 8, California Code of Regulations, Section 1532.1, "Lead," for specific Cal-OSHA requirements when working with lead.

The Lead Compliance Plan shall contain the elements listed in Title 8, California Code of Regulations, Section 1532.1(e)(2)(B). Before submission to the Engineer, the Lead Compliance Plan shall be approved by an Industrial Hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene. The Plan shall be submitted to the Engineer at least 7 days prior to beginning removal of yellow thermoplastic and yellow paint.

Prior to removing yellow thermoplastic and yellow painted traffic stripe, personnel who have no prior training, including County personnel, shall complete a safety training program provided by the Contractor that meets the requirements of Title 8, California Code of Regulations, Section 1532.1, "Lead," and the Contractor's Lead Compliance Program.

Personal protective equipment, training, and washing facilities required by the Contractor's Lead Compliance Plan shall be supplied to County personnel by the Contractor. The number of County personnel will be two (2).

Where grinding or other methods approved by the Engineer are used to remove yellow thermoplastic and yellow painted traffic stripe and pavement marking, the removed residue, including dust, shall be contained and collected immediately. Sweeping equipment shall not be used. Collection shall be by a high efficiency particulate air (HEPA) filter equipped vacuum attachment operated concurrently with the removal operations or other equally effective methods approved by the Engineer. The Contractor shall submit a written work plan for the removal, storage, and disposal of yellow thermoplastic and yellow painted traffic stripe and pavement marking to the Engineer for approval not less than 10 days prior to the start of the removal operations. Removal operations shall not be started until the Engineer has approved the work plan.

The removed yellow thermoplastic and yellow painted traffic stripe residue shall be stored and labeled in covered containers. Labels shall conform to the provisions of Title 22, California Code of Regulations, Sections 66262.31 and 66262.32. Labels shall be marked with date when the waste is generated, the words "Hazardous Waste", composition and physical state of the waste (for example, asphalt grindings with thermoplastic or paint), the word "Toxic", the name and address of the Engineer, the Engineer's telephone number, contract number, and Contractor or subcontractor. The containers shall be a type approved by the United States Department of Transportation for the transportation and temporary storage of the removed residue. The containers shall be handled so that no spillage will occur. The containers shall be stored in a secured enclosure at a location within the project limits until disposal, as approved by the Engineer.

If the yellow thermoplastic and yellow painted traffic stripe residue is transported to a Class 1 disposal facility, a manifest shall be used, and the transporter shall be registered with the California Department of Toxic Substance Control. The Engineer will obtain the United States Environmental Protection Agency Identification Number and sign all manifests as the generator within 2 working days of receiving sample test results and approving the test methods.

The Contractor shall assume that the yellow paint removed is not regulated under the Federal Resource Conservation and Recovery Act (RCRA). Additional disposal costs for removal residue regulated under RCRA, as determined by test results required by the disposal facility, will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

Nothing in these special provisions shall relieve the Contractor of the Contractor's responsibilities as specified in Section 7-1.09, "Public Safety," of the Standard Specifications.

The contract price paid per linear foot, for remove yellow traffic stripe includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparing the Lead Compliance Plan, including paying the Certified Industrial Hygienist, and for providing personnel protective equipment, training, air monitoring, and medical surveillance, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for the work to remove store, and dispose of yellow traffic stripe , white traffic stripe, and traffic pavement marking is under the appropriate contract items for Remove Yellow Traffic Stripe, Remove White Traffic Stripe and Remove Traffic Pavement Marking and no separate payment will be made therefor.

**REMOVE PAVEMENT MARKER**

Existing pavement markers, including underlying adhesive, when no longer required for traffic lane delineation as determined by the Engineer, shall be removed and disposed of.

Full compensation for removing and disposing of pavement markers and underlying adhesive shall be considered as included in the contract price paid for traffic control system and no separate payment will be made therefor.

**REMOVE ROADSIDE SIGN**

Existing roadside signs, at those locations shown on the plans to be removed, shall be removed and disposed of.

Existing roadside signs shall not be removed until replacement signs have been installed or until the existing signs are no longer required for the direction of public traffic, unless otherwise directed by the Engineer.

Full compensation for removal and disposing of roadside sign shall be considered as included in the contract unit price paid for remove roadside sign and no separate payment will be made therefor.

**REMOVE DRAINAGE FACILITY**

Existing pipe downdrain, where shown on the plans to be removed, shall be completely removed and disposed of.

Existing box culverts, inlets, headwalls and endwalls, where any portion of these structures is within 3 feet of the grading plane in excavation areas, or within one foot of original ground in embankment areas, or where shown on the plans to be removed, shall be completely removed and disposed of.

Full compensation for removing and disposing of existing pipe downdrain, pipe culverts, inlets, headwalls and endwalls shall be considered as included in the contract lump sum price paid for clearing and grubbing and no additional compensation will be allowed therefor.

**RELOCATE ROADSIDE SIGN**

Existing roadside signs shall be removed and relocated to the new locations shown on the plans.

Each roadside sign shall be installed at the new location on the same day that the sign is removed from its original location.

Two holes shall be drilled in each existing post as required to provide the breakaway feature shown on the plans.

Full compensation for removing and relocating roadside sign shall be considered as included in the contract price paid per each for relocate roadside sign and no separate payment/additional compensation will be made/allowed therefor.

**REMOVE ASPHALT CONCRETE DIKE**

Existing asphalt concrete dike, where shown on the plans to be removed, shall be removed.

Prior to removing the dike, the outside edge of the asphalt concrete to remain in place shall be cut on a neat line to a minimum depth of 0.17-foot.

The dike shall be removed in such a manner that the surfacing which is to remain in place is not damaged.

The dike shall be disposed of outside the highway right of way in conformance with the provisions in Section 7-1.13 of the Standard Specifications.

The dike may be buried in embankments in the same manner provided for burying concrete in embankments in Section 15-3, "Removing Concrete," of the Standard Specifications.

Full compensation for removing asphalt concrete dike shall be considered as included in the contract price paid per cubic yard for Roadway Excavation and no separate payment/additional compensation will be made/allowed therefor.

### **RELOCATE MAILBOX**

Existing mailboxes shall be removed and reset in conformance with the details shown on the plans.

During construction operations, the mailboxes shall be moved as necessary to clear the way for the Contractor's operations, but shall be accessible for delivery at all times. During construction, the mailboxes shall be installed on posts set in the ground or the mailboxes may be installed on temporary supports approved by the Engineer.

When construction is complete, the mailboxes shall be installed in the final position on new redwood posts.

Redwood posts shall conform to the provisions for sign posts in Section 56-2.02B, "Wood Posts," of the Standard Specifications.

The space around the posts shall be backfilled with earthy material. The backfill material shall be placed in layers approximately 4 inches thick and each layer shall be moistened and thoroughly compacted.

Existing posts, mounts, and hardware shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

A multiple-box installation shall consist of 2 mailboxes installed on a single post. Each multi-box installation shall be considered as 2 units for payment purposes.

Newspaper boxes on individual posts will be considered as mailboxes for measurement and payment.

Newspaper boxes attached to existing mailbox posts shall be removed and fastened to the new mailbox posts and no separate payment will be made therefor.

Full compensation for disposing of existing posts, mounts, and hardware; moving and maintaining the mailboxes (regardless of the number of moves required); and for furnishing new posts, planks, and hardware shall be considered as included in the contract unit price paid for relocate mailbox and no additional compensation will be allowed therefor.

### **10-1.21 CLEARING AND GRUBBING**

Clearing and grubbing shall conform to the provisions in Section 16, "Clearing and Grubbing," of the Standard Specifications and these special provisions.

Vegetation and tree branch shall be cleared and grubbed only within the excavation and embankment slope lines.

Existing vegetation outside the areas to be cleared and grubbed shall be protected from injury or damage resulting from the Contractor's operations.

Existing pipe down drain at approximate station 47+00 shall be removed outside the County right of way.

Activities controlled by the Contractor, except cleanup or other required work, shall be confined within the graded areas of the roadway.

Nothing herein shall be construed as relieving the Contractor of the Contractor's responsibility for final cleanup of the highway as provided in Section 4-1.02, "Final Cleaning Up," of the Standard Specifications.

Full compensation for clearing and grubbing shall be considered as included in the contract lump sum price paid for clearing and grubbing and no separate payment will be allowed therefor.

### **10-1.22 WATERING**

Developing a water supply and applying watering shall conform to the provisions in Section 17, "Watering," of the Standard Specifications and these special provisions.

The Contractor is advised that construction water meters are required to obtain water from facilities owned and operated by the El Dorado Irrigation District (EID). The Contractor is advised to contact EID, 2890 Mosquito Road, Placerville, CA 95667, (530) 622-4513.

### **10-1.23 EARTHWORK**

Earthwork shall conform to the provisions in Section 19, "Earthwork," of the Standard Specifications and these special provisions.

It is anticipated that serpentine material will be encountered during roadway excavation. Geotechnical investigations did not encounter the presence of naturally occurring asbestos (NOA), but noted that the project is located near mapped faulting within a region known to contain naturally occurring asbestos.

Surplus excavated material shall become the property of the Contractor and shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications. At the option of the Contractor, surplus excavated material will be hauled, dumped and rolled over to a location near State Route 50 and Silva Valley Parkway. The exact location, timing and schedule will be determined by the Engineer. Full compensation for hauling, dumping and rolling over the excess material at the location determined by the Engineer is considered as included in the contract price paid per cubic yard for roadway excavation and no additional compensation will be allowed therefor.

Where a portion of the existing surfacing including AC dike and AC pavement are to be removed, the outline of the area to be removed shall be cut on a neat line with a power-driven saw to a minimum depth of 0.17-foot before removing the surfacing. Full compensation for cutting the existing surfacing shall be considered as included in the contract price paid per cubic yard for roadway excavation and no additional compensation will be allowed therefor.

The quantities given in the Engineers Estimate for roadway excavation are final pay quantities. Payment for roadway excavation to be paid for by the cubic yard will be determined as provided in Section 9-1.015 "Final Pay Items" and Section 19-2.08 "Measurement" and Section 19-2.09, "Payment," of the Standard Specifications and as defined in Remove Asphalt Dike elsewhere in these special provisions.

### **10-1.24 EROSION CONTROL (TYPE D)**

Erosion control (Type D) shall conform to the provisions in Section 20-3, "Erosion Control," of the Standard Specifications and these special provisions and shall consist of applying erosion control materials to embankment and excavation slopes and other areas disturbed by construction activities.

If the slope on which the erosion control is to be placed is finished during the rainy season as specified in "Water Pollution Control" of these special provisions, the erosion control shall be applied immediately to the slope.

Prior to installing erosion control materials, soil surface preparation shall conform to the provisions in Section 19-2.05, "Slopes," of the Standard Specifications, except that rills and gullies exceeding 2 inches in depth or width shall be leveled. Vegetative growth, temporary erosion control materials, and other debris shall be removed from areas to receive erosion control.

### **MATERIALS**

Materials shall conform to the provisions in Section 20-2, "Materials," of the Standard Specifications and these special provisions.

#### **Seed**

Seed shall conform to the provisions in Section 20-2.10, "Seed," of the Standard Specifications. Individual seed species shall be measured and mixed in the presence of the Engineer.

Seed shall be delivered to the project site in unopened separate containers with the seed tag attached. Containers without a seed tag attached will not be accepted.

A sample of approximately one ounce of seed will be taken from each seed container by the Engineer.

**Legume Seed**

Legume seed shall be pellet-inoculated or industrial-inoculated and shall conform to the following:

- A. Inoculated seed shall be inoculated in conformance with the provisions in Section 20-2.10, "Seed," of the Standard Specifications.
- B. Inoculated seed shall have a calcium carbonate coating.
- C. Industrial-inoculated seed shall be inoculated with Rhizobia and coated using an industrial process by a manufacturer whose principal business is seed coating and seed inoculation.
- D. Industrial-inoculated seed shall be sown within 180 calendar days after inoculation.
- E. Legume seed shall consist of the following:

LEGUME SEED		
Botanical Name (Common Name)	Percent Germination (Minimum)	{Pounds Pure Live Seed Per Acre} (Slope Measurement)
Trifolium hirtum hykon (Rose Clover)	60	16

**Non-Legume Seed**

Non-legume seed shall consist of the following:

NON-LEGUME SEED		
Botanical Name (Common Name)	Percent Germination (Minimum)	{Pounds Pure Live Seed Per Acre} (Slope Measurement)
Blando Brome	80	27

**Commercial Fertilizer**

Commercial fertilizer shall conform to the provisions in Section 20-2.02, "Commercial Fertilizer," of the Standard Specifications and shall have a guaranteed chemical analysis of 16 percent nitrogen, 20 percent phosphoric acid and zero percent water soluble potash.

**Straw**

Straw shall conform to the provisions in Section 20-2.06, "Straw," of the Standard Specifications and these special provisions.

Wheat and barley straw shall be derived from irrigated crops.

Prior to delivery of wheat or barley straw to the project site, the Contractor shall provide the name, address and telephone number of the grower.

**Stabilizing Emulsion**

Stabilizing emulsion shall conform to the provisions in Section 20-2.11, "Stabilizing Emulsion," of the Standard Specifications and these special provisions.

Stabilizing emulsion shall be in a dry powder form, may be reemulsifiable, and shall be a processed organic adhesive used as a soil tackifier.

**APPLICATION**

Erosion control materials shall be applied in separate applications in the following sequence:

- A. Legume seed shall be applied by a dry method at the rate of 16 pounds per acre (slope measurement). Legume seed shall not be applied with hydro-seeding equipment.

B. The following mixture in the proportions indicated shall be applied with hydro-seeding equipment within 60 minutes after the seed has been added to the mixture:

Material	{ Pounds Per Acre} (Slope Measurement)
Non-Legume Seed	27
Fiber	180
Commercial Fertilizer	500

Straw shall be applied at the rate of 2 tons per acre based on slope measurements. Incorporation of straw will not be required. Straw shall be distributed evenly without clumping or piling.

C. The following mixture in the proportions indicated shall be applied with hydro-seeding equipment:

Material	Pounds Per Acre (Slope Measurement)
Fiber	360
Stabilizing Emulsion (Solids)	135

The ratio of total water to total stabilizing emulsion in the mixture shall be as recommended by the manufacturer.

Once straw work is started in an area, stabilizing emulsion applications shall be completed in that area on the same working day.

The proportions of erosion control materials may be changed by the Engineer to meet field conditions.

**MEASUREMENT AND PAYMENT**

Erosion control (Type D) will be measured by the square yard of the actual slope area covered.

The contract price paid per square yard for erosion control (Type D) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in applying for erosion control, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**10-1.25 OPEN TRENCHES IN EXISTING SURFACING**

Electrical conduits, tracking wires and pull boxes to be installed under existing asphalt concrete surfacing and/or portland cement concrete sidewalks, shall be installed in open trenches. Electrical conduits, pull boxes and tracking wires shall be installed in a common trench. Open trenches shall not be excavated across traffic lanes. Electrical conduit installations shall conform to the provisions in Section 20-5.03D, "Trenching and Backfilling," of the Standard Specifications. Trenches shall be excavated in the locations shown on the plans and as directed by the Engineer. Minor deviations from the locations shown on the plan, if approved by the Engineer will be admissible.

For electrical conduits 3 inches or less in diameter, the trench widths in asphalt concrete surfacing shall not exceed 12 inches and in portland cement concrete sidewalks shall not exceed 18 inches. Tops of the installed pipe supply lines and electrical conduits shall be a minimum of 18 inches below finished grade

Where no joint exists in a monolithic concrete sidewalk, the concrete sidewalk shall be cut on a neat line at the location designated by the Engineer.

The outline of areas of surfacing to be removed shall be cut with an abrasive type saw (power sawcut) specifically designed for this purpose. The minimum depth of cuts in asphalt concrete and portland cement concrete shall be 0.17-foot. Cuts shall be neat and true with no shatter outside the removal area. Removed asphalt concrete, portland cement concrete, and surplus excavated material shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Electrical conduits shall be installed at the bottom of trenches and the trenches shall be backfilled with sand to a depth of 2 inches over the top of the pipes and conduits. The remainder of the trench, excluding the surfacing or

pavement, shall be backfilled with material excavated from the trenches, except that rocks, broken concrete, asphalt concrete and other lumps larger than 2 inches in greatest dimension shall not be used.

The compacted thicknesses of the replacement underlying material, HP hot mix asphalt surfacing pavement shall be not less than the thickness of the respective material removed. The finished surface of the compacted HP hot mix asphalt shall be flush with the adjacent surface. Where HP hot mix asphalt surfacing is placed adjacent to curbs, the finished surface of the HP hot mix asphalt surfacing shall be flush with the top of the adjacent curb.

Full compensation for cutting, removing, and replacing improvements (including disposing of surplus removed materials), installing 3" conduits, tracking wires and pull boxes shall be considered as included in the lump sum contract price for 3-inch Conduit Installation and no additional compensation will be allowed therefor.

**10-1.26 AGGREGATE BASE**

Aggregate base must comply with Section 26, "Aggregate Bases," of the Standard Specifications and these special provisions.

Aggregate for Class 2 aggregate base may include reclaimed glass. Aggregate base incorporating reclaimed glass shall not be placed at locations where surfacing will not be placed over the aggregate base.

The quantities of Class 2 Aggregate Base will be paid for by the cubic yard.

**10-1.27 SEAL RANDOM CRACKS IN EXISTING SURFACING**

Cracks in existing asphalt concrete surfacing of traffic lanes and shoulders shall be prepared and filled with crack sealant as shown on the plans and in conformance with these special provisions.

Attention is directed to the "Notice to Bidders" regarding pre-bid meetings.

Cracks 1/4 inch wide and wider in existing asphalt concrete surfacing and shoulders shall be prepared and sealed. Limits of lanes and shoulders to be prepared and sealed shall be as designated on the plans or directed by the Engineer.

The Contractor shall provide the Engineer with a Certificate of Compliance conforming to the provisions in Section 6-1.07, "Certificate of Compliance," of the Standard Specifications for each shipment of crack sealant. The certificate shall certify that the sealant conforms to the specifications, and shall be accompanied with storage and heating instructions and cautions for the material.

**MATERIALS**

Low modulus asphalt crack sealant shall be a mixture of paving asphalt and polymer.

Low modulus asphalt crack sealant shall conform to the following requirements:

Test	Test Method	Requirements
Softening Point	ASTM Designation: D 36	82°C min.
Ductility @ 4°C, 10 mm/min	ASTM Designation: D 113	300 mm min.
Force Ductility @ 4°C	Utah DOT Test Method (1)	18 N max.
Flow	ASTM Designation: D 3407	3 mm max.

Note:

- (1) The Utah DOT Test Method is available for review at the Transportation Laboratory.

Low modulus asphalt crack sealant shall be furnished premixed in containers with an inside liner of polyethylene. Packaged material shall not exceed 66 pounds in weight.

The sealant shall be capable of being melted and applied to cracks at temperatures below 400° F. When heated, it shall readily penetrate cracks 1/4 inch wide or wider.

Cracks that are one inch wide or wider shall be filled with sealant flush with the existing asphalt concrete surfacing and shoulders. While the sealant is still hot, these cracks shall be covered with crushed aggregate conforming to the

provisions for Type II slurry seal in Section 37-2.02C, "Aggregate," of the Standard Specifications and compacted with a wetted steel wheel roller or vibrating plate compactor large enough to compact the sealant to the cross section shown on the plans.

#### **PREPARATION**

Cracks to be filled and adjacent asphalt concrete surfacing shall be cleaned and shall be free of dirt, vegetation, debris and loose sealant. Cleaning shall be done by air blasting. Old sealant which protrudes above the asphalt concrete surfacing shall be completely removed. Routing will not be required.

Hot compressed air or other means, approved by the Engineer, shall be used to clean and dry the crack immediately prior to application of crack sealant.

When moisture is present, hot compressed air or other means, approved by the Engineer, shall be used to clean and dry the crack immediately prior to application of crack sealant.

#### **APPLICATION**

Crack sealant shall be applied only after the cracks and adjacent asphalt concrete surfacing have been cleaned and dried.

Crack sealant material shall be spread with a nozzle or device approved for use by the Engineer and be placed within the specified temperature range and to the dimensions shown on the plans.

Cracks shall be squeegeed as necessary after application of the crack sealant material.

Within 2 days after application of sealant, sealed cracks that reopen or in which the sealant material sags below the surrounding asphalt concrete surfacing and shoulders shall be resealed.

Light brooming shall be performed to remove loose excessive sand prior to opening a lane to public traffic that is not controlled by a pilot car.

#### **MEASUREMENT AND PAYMENT**

The work for seal random cracks, as shown on the plans and determined by the Engineer is included in price paid for concrete sidewalk and curb and no separate payment shall be paid for.

The contract price paid for concrete sidewalk and curb shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in sealing random cracks, complete in place, including furnishing and applying sand (in exposed areas) and for brooming excessive sand as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

#### **10-1.28 SLURRY SEAL**

Slurry seal shall conform to the provisions in Section 37-2, "Slurry Seal," of the Standard Specifications and these special provisions.

The aggregate for slurry seal shall be Type II.

Polymer modified asphaltic emulsion shall be composed of a bituminous material uniformly emulsified with water and an emulsifying or stabilization agent and shall contain a polymer.

The polymer used in the manufacture of polymer modified asphaltic emulsions shall be at the option of the Contractor, either neoprene, or a copolymer of butadiene and styrene. The polymer used in the polymer modified asphaltic emulsion shall be homogenous and shall be milled into the product at the colloid mill.

The polymer modified asphaltic emulsion shall be Grade PMCQS1h and shall conform to the following requirements:

Type	Cationic	
Grade	PMCQS1h	
Properties	Min.	Max
Tests on Emulsion:		
Viscosity SSF @ 25°C, sec AASHTO Designation: T 59	15	90
Sieve Test, % AASHTO Designation T 539	—	0.30
Storage Stability, 1 day, % AASHTO Designation: T 59	—	1
Residue by Evaporation, % California Test 331	57	—
Particle Charge AASHTO Designation: T 59	Positive	
Tests on Residue from Evaporation Test		
Penetration, 25°C AASHTO Designation: T 49	40	90
Ductility, 25°C, mm AASHTO Designation: T 51	400	—
Torsional Recovery, % California Test 332	18	—
or Polymer Content, % California Test 401	2.5	—

Note: When the test for polymer content of polymer modified asphaltic emulsion is used, see sampling requirements in Section 94-1.03, "Sampling" of the Standard Specifications.

At least 24 hours prior to the beginning of slurry seal operations, the Contractor shall notify all residents, businesses, and agencies by an approved, written notice detailing streets and limits of work to be done and the hours of work. The Contractor shall, prior to the beginning of slurry seal operations, post streets that are to be worked upon with approved "No Parking - Tow Away" signs at 100-foot intervals. These signs shall state the day of the week and the hours of no parking.

Existing pavement markers shall be removed prior to placement of the slurry seal.

#### MEASUREMENT AND PAYMENT

The contract price paid per ton for slurry seal shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing slurry seal, complete in place, including testing for and furnishing mix design, cleaning the surface, furnishing added water and set-control additives, mixing water with asphaltic emulsion for coating the pavement, protection the seal until it has set and removing pavement markers as shown on the plans, and as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

#### 10-1.29 ASPHALT CONCRETE

##### GENERAL

Asphalt concrete shall be Type A, 1/2 maximum, and shall conform to the provisions in Section 39, "Asphalt Concrete," of the Standard Specifications and these special provisions.

Asphalt concrete leveling course, overlay and widening shall be Type A, 1/2" Maximum, medium gradation, and shall conform to provisions in Section 39, "Asphalt Concrete," of the Standard Specifications and these special provisions.

The grade of asphalt binder to be mixed with aggregate for Type A asphalt concrete shall be Grade PG-64-16 conforming to the provisions in Section 92, "Asphalts," of the Standard Specifications. The grade of asphalt binder to be mixed with aggregate for Type 'A' Asphalt Concrete used in dikes gutters, overside drains and aprons at end of drainage structures shall be Grade PG70-10 conforming to the provisions in Section 92, "Asphalts," of the Standard Specification.

The asphalt content of the asphalt mixture will be determined in conformance with the requirements in California Test 379, or in conformance with the requirements in California Test 382.

The amount of asphalt binder used in asphalt concrete placed in dikes, gutters, gutter flares, overside drains and aprons at the ends of drainage structures shall be increased one percent by weight of the aggregate over the amount of asphalt binder determined for use in asphalt concrete placed on the traveled way.

Aggregate for asphalt concrete placed in dikes, gutters, gutter flares, overside drains and aprons at the ends of drainage structures shall conform to the provisions for 3/8" maximum grading in Section 39-2.02, "Aggregate," of the Standard Specifications.

If the Contractor selects the batch mixing method, asphalt concrete shall produced by the automatic batch mixing method in conformance with the provisions in Section 39-3.03A(2), "Automatic Proportioning ," of the Standard Specifications.

### **RECLAIMED ASPHALT PAVEMENT**

The Contractor may produce asphalt concrete using reclaimed asphalt pavement (RAP). Asphalt concrete produced using RAP shall conform to the provisions for asphalt concrete in this section, "Asphalt Concrete," and these special provisions. The Contractor may substitute RAP for a portion of the virgin aggregate in asphalt concrete in an amount not exceeding 15 percent of the asphalt concrete dry aggregate mass.

RAP shall be processed from asphalt concrete removed from pavement surfaces. RAP shall be stored in stockpiles on smooth surfaces free of debris and organic material. RAP stockpiles shall consist only of homogeneous RAP. The Contractor may process and stockpile RAP throughout the project's life. Processing and stockpiling operations shall prevent material contamination and segregation.

The Contractor shall determine the amount of asphalt binder to be mixed with the combined virgin aggregate and RAP in conformance with the requirements in California Test 367 amended by Lab Procedure-9 (LP-9), "Hot Mix Asphalt (HMA) Using Up To 15% Reclaimed Asphalt Pavement (RAP)." LP-9 is available at:

<http://www.dot.ca.gov/hq/esc/Translab/fpmlab.htm>

At least 21 days before starting production of asphalt concrete using RAP, the Contractor shall submit a proposed asphalt concrete mix design in writing to the Engineer. The mix design submittal shall consist of the following:

- A. RAP:
  - 1. Processed stockpile locations.
  - 2. LP-9 test results.
  - 3. Correlation factor for aggregate gradations from California Test 382 and LP-9.
  - 4. Three 70-pound samples of processed RAP representing the material to be used. The three samples shall be split from the sample the Contractor uses to determine the mix design. The Contractor shall obtain and split the samples in conformance with the requirements in California Test 125 and LP-9.
  - 5. The substitution rate for virgin aggregate and percent RAP.
  
- B. Virgin aggregate and supplemental fine aggregate blend:
  - 1. Percent passing values for each sieve size.
  - 2. Aggregate quality tests results.
  - 3. Each aggregate source to be used including producer, location, and California Mine Identification number.
  - 4. Percentage of each aggregate stockpile, cold feed, and hot bin to be used.
  - 5. Gradation of each aggregate stockpile, cold feed, and hot bin to be used.
  
- C. Asphalt binder:
  - 1. Source.
  - 2. Material Safety Data Sheets.

D. Antistrip additives, if used:

1. Name of product.
2. Name of manufacturer.
3. Manufacturer's designation and proposed rate.
4. Location and method of addition.
5. Material Safety Data Sheets.

E. Asphalt concrete:

1. A completed mix design that reflects the percent of RAP to be used including the electronic worksheet identified in LP-9.
2. In graphical format, stability and air voids versus asphalt binder percentage of asphalt in conformance with the requirements in CTM 367.

Asphalt concrete production using RAP shall not begin until the Engineer approves the mix design. If the Engineer fails to review the mix design in 21 days, and if, in the opinion of the Engineer, work completion is delayed as a result of the failure to review, the Engineer will adjust payment and contract time in conformance with the requirements in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

If proposing a change in the RAP substitution rate, the Contractor shall notify the Engineer. If the substitution rate changes more than 5 percent by dry aggregate mass in the asphalt concrete mixture, the Contractor shall submit a new mix design.

The aggregate gradation for the asphalt concrete produced with RAP shall be calculated based on the mathematical combination of the virgin aggregate gradation during production and the daily RAP gradation. RAP shall be sampled and gradation shall be determined in conformance with the requirements in LP-9. RAP gradations shall be:

- A. Determined daily by the Contractor.
- B. Used for the mathematical combination of that day's asphalt concrete production.
- C. Reported to the Engineer.

The Contractor shall perform quality control testing of the RAP source each day asphalt concrete using RAP is produced.

The Contractor shall perform quality control testing of the aggregates and the asphalt concrete mixture at least once for every 1,000 tons of asphalt concrete using RAP produced, but not less than 2 tests per day.

Daily, the Contractor shall submit to the Engineer:

- A. Results for RAP gradation and the asphalt binder content in RAP determined in conformance with the requirements in LP-9.
- B. Mathematical calculation of the gradation of the virgin aggregate and RAP aggregate blend.
- C. Correlation factor for RAP burn-off determined in conformance with the requirements in LP-9.

RAP proportioning shall conform to the provisions for aggregate proportioning specified in Section 39-3.03, "Proportioning," of the Standard Specifications and these special provisions. The Contractor's mixing equipment shall have a device that safely provides a sample representative of the virgin aggregate and RAP incorporated into the asphalt concrete. The Contractor shall sample in conformance with the requirements in California Test 125 and LP-9.

The temperature of asphalt concrete using RAP shall not exceed 330° F.

If batch mixing is used, RAP shall be kept separate from the virgin aggregate until both ingredients enter the weighhopper or pugmill. After introduction to the pugmill and before asphalt binder is added, the mixing time for the virgin aggregate and RAP shall not be less than 5 seconds. After asphalt binder is added, the mixing time shall not be less than 30 seconds.

If continuous mixing is used, the RAP shall be protected from direct contact with the burner flame with a device such as a shield, separator, or second drum.

**PAINT BINDER (TACK COAT)**

Paint binder (tack coat) shall be applied to existing surfaces to be surfaced and between layers of asphalt concrete, except when eliminated by the Engineer.

Paint binder (tack coat) shall be, at the option of the Contractor, either slow-setting asphaltic emulsion, rapid-setting asphaltic emulsion or paving asphalt. Slow-setting asphaltic emulsion and rapid-setting asphaltic emulsion shall conform to the provisions in Section 39-4.02, "Prime Coat and Paint Binder (Tack Coat)," and the provisions in Section 94, "Asphaltic Emulsions," of the Standard Specifications. When paving asphalt is used for paint binder, the grade will be determined by the Engineer. Paving asphalt shall conform to the provisions in Section 39-4.02, "Prime Coat and Paint Binder (Tack Coat)," and the provisions in Section 92, "Asphalts," of the Standard Specifications.

Paint binder (tack coat) shall be applied in the gallon per square yard range limits specified for the surfaces to receive asphalt concrete in the tables below. The exact application rate within the range will be determined by the Engineer.

Application Rates for Asphaltic Emulsion Paint Binder (Tack Coat) on Asphalt Concrete (except Open Graded) and on Portland Cement Concrete Pavement (PCCP)		
Type of surface to receive paint binder (tack coat)	Slow-Setting Asphaltic Emulsion gal/sq yd (Note A)	Rapid-Setting Asphaltic Emulsion gal/sq yd (Note B)
Dense, compact surfaces, between layers, and on PCCP	0.04 - 0.08	0.02 - 0.04
Open textured, or dry, aged surfaces	0.08 - 0.20	0.04 - 0.09

Note A: Slow-setting asphaltic emulsion is asphaltic emulsion diluted with additional water. Water shall be added and mixed with the asphaltic emulsion (containing up to 43 percent water) so the resulting mixture contains one part asphaltic emulsion and not more than one part added water. The water shall be added by the emulsion producer or at a facility that has the capability to mix or agitate the combined blend.

Note B: Undiluted rapid-setting asphaltic emulsion.

Application Rates for Paint Binder (Tack Coat) on Asphalt Concrete (except Open Graded) and on Portland Cement Concrete Pavement (PCCP)	
Type of surface to receive paint binder (tack coat)	Paving Asphalt gal/sq yd
Dense, compact surfaces, between layers, and on PCCP	0.01 – 0.02
Open textured, or dry, aged surfaces	0.02 – 0.06

If the Contractor selects the batch mixing method, asphalt concrete shall be produced by the automatic batch mixing method in conformance with the provisions in Section 39-3.03A(2), "Automatic Proportioning," of the Standard Specifications.

**MEASUREMENT AND PAYMENT**

The miscellaneous areas to be paid for at the contract price per square yard for place asphalt concrete (miscellaneous area), shall be limited to the areas listed on the plans.

**10-1.30 CONCRETE STRUCTURES**

Portland cement concrete structures shall conform to the provisions in Section 51, "Concrete Structures," of the Standard Specifications and these special provisions.

### **10-1.31 ROADSIDE SIGNS**

Roadside signs shall be furnished and installed at the locations shown on the plans or where designated by the Engineer and in conformance with the provisions in Section 56-2, "Roadside Signs," of the Standard Specifications and these special provisions.

Wood posts shall be pressure treated after fabrication in conformance with the provisions in Section 58, "Preservative Treatment of Lumber, Timber and Piling," of the Standard Specifications and AWWA Use Category System: UC4A, Commodity Specification A or B.

### **10-1.32 PLASTIC PIPE**

Plastic pipe shall conform to the provisions in Section 64, "Plastic Pipe," of the Standard Specifications and these special provisions.

Plastic pipe shall be smooth interior wall type in accordance with Section 64, "Plastic Pipe" of the Standard Specifications.

Joint systems for plastic pipe shall be positive joints conforming to section 61, "Culvert and Drainage Pipe Joints of the Standard Specifications.

### **10-1.33 PIPE OVERSIDE DRAIN**

Entrance tapers, slip joints, plastic pipe downdrain and anchor assemblies shall conform to the provisions in Section 69, "Overside Drains," of the Standard Specifications and these special provisions.

Plastic pipe for overside drains shall be Type S corrugated high density polyethylene or ribbed polyvinyl chloride pipe conforming to the provisions in Section 64, "Plastic Pipe," of the Standard Specification.

Plastic pipe joints shall conform to the provisions in Section 61-1.02, "Performance Requirements for Culvert and Drainage Pipe Joints," of the Standard Specifications for downdrain joints, except that the alternatives selected for plastic pipe joint restrainer assemblies shown on the plans shall serve in lieu of the tensile strength requirements. The joint overlap requirements for integral joints shall conform to the requirements for positive joints.

Plastic pipe joint restrainer assembly, Alternative A, when used shall be installed immediately below the pipe bell.

Polyvinyl chloride pipe shall not be used unless the overside drain is covered for the entire length of the overside drain.

Plastic pipe overside drains shall be installed with the bell end of the pipe facing uphill.

### **10-1.34 MISCELLANEOUS FACILITIES**

Flared end sections, drainage manholes, and drainage openings (Type G3) shall conform to the provisions in Section 70 - "Miscellaneous Facilities," Section 73 - "Concrete Curbs and Sidewalks," and Section 75, "Miscellaneous Metal," of the Standard Specifications and these special provisions.

The contract unit price paid for each flared end section shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing flared end section, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

#### **DRAINAGE OPENING (Metal Sheet Cover)**

The plate cover, plates, and angles shall be fabricated from structural steel conforming to the requirements in ASTM Designations A36 or A576. They shall be galvanized in accordance with Section 75-1.05 "Galvanizing" of the Standard Specifications

The contract unit price paid for each drainage opening (metal sheet cover) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing drainage opening (metal sheet cover) , complete in place and to limits shown, as shown per detail "Drainage Opening

(Metal Sheet Cover)" on the drainage plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

#### **10-1.35 MISCELLANEOUS CONCRETE CONSTRUCTION**

Concrete curbs, gutters, sidewalks, driveways and curb ramps shall conform to the provisions in Section 73, "Concrete Curbs and Sidewalks," of the Standard Specifications and these special provisions.

Full compensation for construction of concrete curb shall be considered as included in the contract unit price paid per linear foot for minor concrete curb (type A1-6) and no additional compensation will be allowed therefor.

Full compensation for construction of sidewalk shall be considered as included in the contract unit price paid per cubic yard for minor concrete sidewalk and no separate additional compensation will be allowed therefor.

#### **10-1.36 MISCELLANEOUS IRON AND STEEL**

Miscellaneous iron and steel shall conform to the provisions in Section 75, "Miscellaneous Metal," of the Standard Specifications and these special provisions.

#### **10-1.37 CHAIN LINK RAILING**

Chain link railing shall conform to the provisions in Section 83-1, "Railings," of the Standard Specifications and these special provisions.

The chain link fabric shall be 9-gage (0.148-inch diameter), Type IV, Class B, bonded vinyl coated fabric, conforming to the requirements in AASHTO Designation: M 181.

The strength of the bond between the coating material and steel of the bonded vinyl coated chain link fabric shall be equal to or greater than the cohesive strength of the polyvinyl chloride (PVC) coating material.

#### **10-1.38 MARKERS AND DELINEATORS**

Markers and delineators shall conform to the provisions in Section 82, "Markers and Delineators," of the Standard Specifications and these special provisions.

Markers and delineators on flexible posts shall conform to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions. Flexible posts shall be made from a flexible white plastic which shall be resistant to impact, ultraviolet light, ozone, and hydrocarbons. Flexible posts shall resist stiffening with age and shall be free of burns, discoloration, contamination, and other objectionable marks or defects which affect appearance or serviceability.

Retroreflective sheeting for metal and flexible target plates shall be the retroreflective sheeting designated for channelizers, markers, and delineators conforming to the requirements in ASTM Designation: D 4956-95 and in conformance with the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions.

#### **10-1.39 THERMOPLASTIC PAVEMENT MARKING**

Thermoplastic traffic stripes (traffic lines) and pavement markings shall be applied in conformance with the provisions in Section 84, "Traffic Stripes and Pavement Markings," of the Standard Specifications and these special provisions.

Thermoplastic material shall be free of lead and chromium, and shall conform to the requirements in State Specification PTH-02ALKYD.

Retroreflectivity of the thermoplastic traffic stripes and pavement markings shall conform to the requirements in ASTM Designation: D 6359-99. White thermoplastic traffic stripes and pavement markings shall have a minimum initial retroreflectivity of  $250 \text{ mcd m}^{-2} \text{ lx}^{-1}$ . Yellow thermoplastic traffic stripes and pavement markings shall have a minimum initial retroreflectivity of  $150 \text{ mcd m}^{-2} \text{ lx}^{-1}$ .

Where striping joins existing striping, as shown on the plans, the Contractor shall begin and end the transition from the existing striping pattern into or from the new striping pattern a sufficient distance to ensure continuity of the striping pattern.

Thermoplastic traffic stripes shall be applied at the minimum thickness and application rate as specified below. The minimum application rate is based on a solid stripe of 4 inches in width.

Minimum Stripe Thickness (inch)	Minimum Application Rate (lb/ft)
0.079	0.27
0.098	0.34

Thermoplastic traffic stripes and pavement markings shall be free of runs, bubbles, craters, drag marks, stretch marks, and debris.

At the option of the Contractor, permanent pavement marking tape conforming to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions may be placed instead of the thermoplastic pavement markings specified herein. Permanent tape, if used, shall be installed in conformance with the manufacturer's specifications.

If permanent tape is placed instead of thermoplastic pavement markings, the tape will be measured and paid for by the square foot as thermoplastic pavement marking.

**10-1.40 THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)**

Sprayable thermoplastic traffic stripes (traffic lines) shall be applied in conformance with the provisions in Section 84, "Traffic Stripes and Pavement Markings," of the Standard Specifications and these special provisions.

Sprayable thermoplastic material shall be free of lead and chromium, and shall conform to the requirements in State Specification No. PTH-02SPRAY.

Retroreflectivity of the sprayable traffic stripes shall conform to the requirements in ASTM Designation: D 6359-99. White sprayable thermoplastic traffic stripes shall have a minimum initial retroreflectivity of 250 mcd m-2 lx-1. Yellow sprayable thermoplastic traffic stripes shall have a minimum initial retroreflectivity of 150 mcd m-2 lx-1.

At the option of the Contractor, permanent traffic striping and pavement marking tape conforming to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions may be placed instead of the sprayable thermoplastic traffic stripes. Permanent tape, if used, shall be installed in conformance with the manufacturer's specifications.

Where striping joins existing striping, as shown on the plans, the Contractor shall begin and end the transition from the existing striping pattern into or from the new striping pattern a sufficient distance to ensure continuity of the striping pattern.

Sprayable thermoplastic material shall be applied to the pavement at a minimum thickness of 0.039-inch and a minimum rate of 0.13-lb/ft. The minimum application rate is based on a solid stripe of 4 inches in width.

Sprayable thermoplastic material shall be applied to the pavement at a temperature between 351° F and 401° F, unless a different temperature is recommended by the manufacturer.

Sprayable thermoplastic traffic stripes shall be free of runs, bubbles, craters, drag marks, stretch marks, and debris.

If permanent tape is placed instead of sprayable thermoplastic traffic stripes, the tape will be measured and paid for by the linear foot as thermoplastic traffic stripe (sprayable).

Sprayable thermoplastic traffic stripes will be measured by the linear foot along the line of the traffic stripes, without deductions for gaps in broken traffic stripes. A double traffic stripe, consisting of two 4-inch wide yellow stripes, will be measured as one traffic stripe.

The contract price paid per linear foot for thermoplastic traffic stripe (sprayable) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in applying sprayable

thermoplastic traffic stripes (regardless of the number, widths, and patterns of individual stripes involved in each traffic stripe) including establishing alignment for stripes, and layout work, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

#### **10-1.41 PAVEMENT MARKERS**

Pavement markers shall be placed in conformance with the provisions in Section 85, "Pavement Markers," of the Standard Specifications and these special provisions.

The Contractor shall furnish the Engineer certificates of compliance for the pavement markers in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications.

Retroreflective pavement markers shall be marked as abrasion resistant on the body of the markers.

Attention is directed to "Traffic Control System For Lane Closure" of these special provisions regarding the use of moving lane closures during placement of pavement markers with bituminous adhesive.

#### **SECTION 10-2. (BLANK)**

#### **SECTION 10-3. SIGNALS, LIGHTING AND ELECTRICAL SYSTEMS**

##### **10-3.01 DESCRIPTION**

Trench and install a 3" Id conduit with tracer wire for from Station 30+84 to 56+19 a minimum depth of 18 inches below finish grade of the adjacent roadway and as shown on the contract plans. Work shall conform to the provisions in Section 86, "Signals, Lighting and Electrical Systems," of the Standard Specifications and these special provisions.

##### **10-3.02 COST BREAK-DOWN**

Cost break-downs shall conform to the provisions in Section 86-1.03, "Cost Break-Down," of the Standard Specifications and these special provisions.

The Engineer shall be furnished a cost break-down of the contract lump sum item of work described in this Section 10-3.

The cost break-down shall be submitted to the Engineer for approval within ten (10) days of the date of the Notice to Proceed. The cost break-down shall be approved, in writing, by the Engineer before any partial payment for the items of electrical work will be made.

##### **10-3.03 PULL BOXES**

Grout shall not be placed in the bottom of pull boxes.

All pull boxes located in drivable areas shall be traffic rated.

As a general condition:

- a. Pull boxes shall conform to the provisions in the latest version of the Caltrans Standard Specifications and these special provisions.
- b. All new pull boxes shall be number 6 (PB#6), except for the fiber splice box in front of the traffic signal controller pad. PB#6 shall have nominal dimensions of 36 inch L x 23 inch W x 24 inch D, unless otherwise noted on the Plans. Pull box in front of the traffic signal controller shall be a fiber splice box (type 48).
- c. The cover marking for each pull box shall read "SIGNAL INTERCONNECT" as shown on the Plans.
- d. Pull boxes shall be provided with locking mechanisms as specified in the Caltrans Standard Plans.
- e. All pull boxes shall have vertical proof-load strength of 111kN. This load shall be placed anywhere on the box and cover for a period of one minute without causing any cracks or permanent deformations.

- f. Pull boxes covers in the sidewalk or behind the curb shall be composite concrete. Pull boxes shall be Christy "Fiberlite", Armorcast polymer concrete, or other Engineer-approved equivalent, unless otherwise noted on the Plans.

All pull boxes shall be placed:

- g. Outside of sidewalk areas.
- h. Behind signal poles (away from traffic side)

#### **10-3.04 CONDUCTORS AND WIRING**

##### **1. Interconnect Conduit**

- a. All signal interconnect conduit shall be 3". It may be PVC or HDPE as described below. Bends shall have a minimum of 36" sweeps. Conduit shall have tracer wire and pull rope.
- b. If PVC is installed, it shall be Schedule 40 UL conduit and shall be designed and engineered for direct burial or encased underground applications. Where the conduits enter pull boxes or splice vaults through the side, they shall be grouted to form a seal against the entry of soil. The PVC conduit shall be straight and the ends shall be cut square to the conduit outer surface. The PVC conduit system shall be designed so that straight sections and fittings will assemble without the need for, nor use of, lubricants or cement.
- c. If high density polyethylene (HDPE) is used, it shall be Schedule 40 UL continuous conduit and be designed and engineered for direct burial, directionally drilled installation, or encased underground applications. Where the HDPE conduits enter pull boxes or splice vaults through the side, they shall be grouted to form a seal against the entry of soil.
- d. All conduit shall be free from defects including non-circularity, foreign inclusions, etc. It shall be nominally uniform (as commercially practical) in color, density, and physical properties.
- e. If new conduit is being installed into an existing pull box location not designated for a new pull box, the Contractor shall protect existing pull box and conduit from damage. Should the existing pull box and/or conduit become damaged, the Contractor shall repair and/or replace damaged pull box and conduit at the cost of the Contractor and not the City. Prior to repair/replacement, the Contractor shall notify the City of exact location and contents of damaged pull box and conduit. If the Contractor's inspection reveals that the pull box is cracked or broken and cannot likely be protected, the Contractor shall notify the Engineer prior to work at the pull box so that the work item can be converted to a replacement pull box.

#### **PAYMENT**

The contract lump sum price for 3-inch conduit installation as listed in the Engineer's Estimate shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved with furnishing and installing this communication conduit system, as shown on the contract plans, and as specified in these special provisions.

