

COUNTY OF EL DORADO, CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CONTRACT DOCUMENTS**

INCLUDING

NOTICE TO BIDDERS, SPECIAL PROVISIONS,  
PROPOSAL AND CONTRACT

FOR  
CONSTRUCTION OF

**BOULDER MOUNTAIN  
EROSION CONTROL PROJECT**

**CONTRACT NO. PW 13-30675 CIP NO. 95153**

**MAY 2013**

FOR USE WITH

STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, CALTRANS

STANDARD SPECIFICATIONS, MAY 2006

STANDARD PLANS, MAY 2006

AMENDMENTS TO MAY 2006 STANDARD SPECIFICATIONS

**BID OPENING DATE: MAY 31, 2013**



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

**BOULER MOUNTAIN EROSION CONTROL PROJECT**

CONTRACT NO. PW 13-30675

CIP NO. 95153

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**APPENDIX E – TAHOE REGIONAL PLANNING AGENCY PERMIT**







**TAHOE ENGINEERING:**  
924B Emerald Bay Road  
South Lake Tahoe, CA 96150  
Phone: (530) 573-7900  
Fax: (530) 541-7049

**KIMBERLY A. KERR**  
Interim Director of Transportation

Internet Web Site:  
<http://edcgov.us/dot>

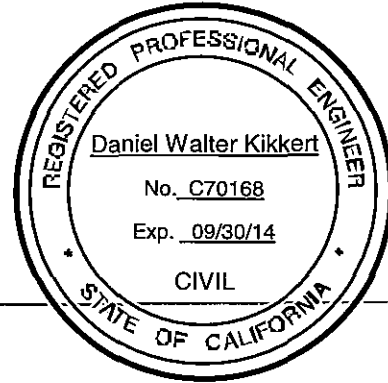
**MAIN OFFICE:**  
2850 Fairlane Court  
Placerville CA 95667  
Phone: (530) 621-5900  
Fax: (530) 626-0387



These Contract Documents provided herein have been prepared by or under the direction of the following registered person:

 4/10/2013

CIVIL ENGINEER, RCE #C70168  
**Daniel Kikkert, P.E.**  
Acting Senior Civil Engineer





COUNTY OF EL DORADO, CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**NOTICE TO BIDDERS**

**NOTICE IS HEREBY GIVEN**

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

**BOULDER MOUNTAIN EROSION CONTROL PROJECT**

**CONTRACT NO. PW 13-30675  
CIP NO. 95153**

will be received at the County of El Dorado Department of Transportation office in South Lake Tahoe, California, at 924B Emerald Bay Road, until **May 31, 2013, at 2:00 PM**, at which time bids will be publicly opened and read by the County of El Dorado Department of Transportation.

No Bid may be withdrawn after the time established for receiving bids or before the award and execution of the Contract, unless the award is delayed for a period exceeding sixty (60)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

**“PROPOSAL FOR THE  
BOULDER MOUNTAIN EROSION CONTROL PROJECT”  
CONTRACT NO. PW 13-30675  
CIP NO. 95153**

**TO BE OPENED AT 2:00 PM, Friday, May 31, 2013**

**LOCATION/DESCRIPTION OF THE WORK**

The Project area is located in eastern El Dorado County, in the Tahoe Basin, south of Angora Highlands, north of Lake Tahoe Blvd, and west of Tahoe Mountain Road. The Work to be done is shown on the Plans, and generally consists of, but is not limited to:

- A. Construction of erosion control improvements including culverts and subdrains, grass-lined swales, curb and gutter, drainage inlets, a drain basin, restoring pavement on Boulder Mountain Drive, stabilizing the entrance of a dirt access road with pavement and rock, and road shoulder stabilizing. Other items or details not mentioned above, that are required by the Plans, Standard Specifications, or these Special Provisions, shall be performed, constructed, or installed.
- B. Bids are required for the entire Work described herein.
- C. The contract time shall be **TWENTY FIVE (25) WORKING DAYS**.
- D. For bonding purposes the anticipated project cost is less than \$475,000.
- E. A pre-bid meeting is scheduled for this project on Thursday, May 23, 2013 at 2:00 P.M. at the County of El Dorado Department of Transportation in South Lake Tahoe, California, at 924B Emerald Bay Road. Attendance at this meeting is not mandatory.

**OBTAINING OR INSPECTING CONTRACT DOCUMENTS**

The Contract Documents and Plans may be examined at the County of El Dorado Department of Transportation or may be purchased in person or by mail from the Department of Transportation, 924B Emerald Bay Road, South Lake Tahoe, California 96150. The Contract Documents including full size Plans can be purchased with a check only, for EIGHTY FIVE dollars (\$85.00) and is non-refundable. To receive the Contract Documents including full size Plans by Federal Express, send request and payment prior to shipping and include an additional

FIFTY dollars (\$50.00), for a total of ONE HUNDRED THIRTY FIVE dollars (\$135.00), to include shipping and handling. **Only Contract Documents and Plans purchased from the Department of Transportation will be acceptable for bid submittal.**

### **CONTRACTOR'S LICENSE CLASSIFICATION**

Bidders shall be properly licensed to perform the Work pursuant to the Contractors' State License Law (Business and Professions Code section 7000 et seq.) and shall possess a **CLASS A** license or equivalent combination of Classes required by the categories and type of Work included in the Contract Documents and Plans at the time the Contract is awarded, and shall maintain a valid license through completion and acceptance of the Work including guarantee and acceptance period. If the Contractor possesses a Class A license instead of the equivalent combination of Classes required by the categories and type of work included in the Contract Documents and Plans, then the Contractor or a subcontractor must also possess a **CLASS C27** "Landscaping Contractor" license. Failure of the successful Bidder to obtain proper and adequate licensing for an award of the Contract shall constitute a failure to execute the Contract, and shall result in forfeiture of the Bidder's security.

### **BUSINESS LICENSE**

The County Business License Ordinance provides that it is unlawful for any person to furnish supplies or services, or transact any kind of business in the unincorporated territory of El Dorado County without possessing a County Business License unless exempt under County Ordinance Code Section 5.08.070. The Bidder to whom an award is made shall comply with all of the requirements of the County Business License Ordinance, where applicable, prior to beginning work under this Contract and at all times during the term of this Contract.

### **REQUIRED LISTING OF PROPOSED SUBCONTRACTORS**

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

### **BUY AMERICA**

This project is subject to the "BUY AMERICA" provisions of the Surface Transportation Assistance Act of 1982, as amended by the Intermodal Surface Transportation Efficiency Act of 1991.

### **DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION**

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

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

## **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 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.

This Contract is subject to federal and state contract nondiscrimination and compliance requirements including Government Code, Section 12990, and shall be construed and interpreted in compliance with said provisions.

The Department of Transportation hereby notifies all Bidders that it will affirmatively ensure that in any Contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, national origin, religion, age, or disability in consideration for the award.

In accordance with Federal Law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. (Not all prohibited bases apply to all programs.)

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

## **PREVAILING WAGE REQUIREMENTS**

In accordance with the provisions of California Labor Code Sections 1770 et seq., including but not limited to sections 1773, 1773.1, 1773.2, 1773.6, and 1773.7, the general prevailing rate of wages in the county in which the Work is to be done has been determined by the Director of the California Department of Industrial Relations. These wage rates appear in the California Department of Transportation publication entitled General Prevailing Wage Rates. Interested parties can obtain the current wage information by submitting their requests to the Department of Industrial Relations, Division of Labor Statistics and Research, PO Box 420603, San Francisco CA 94142-0603, Telephone (415) 703-4708, or by referring to the website at <http://www.dir.ca.gov/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 the case of projects involving federal funds, federal wage requirements as predetermined by the United States Secretary of Labor have been included in the Contract Documents. Addenda to modify the Federal minimum wage rates, if necessary, will be issued as described in the Project Administration section of this Notice to Bidders.

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. Contractor's attention is directed to Section 14 of these Special Provisions 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, the 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 the Contractor and subcontractors, the Contractor and subcontractors shall pay not less than the Federal minimum wage rate which most closely approximates the duties of the employees in question.

## **BID SECURITY**

A bid security shall be provided with each bid. Bid security shall be in an amount of not less than ten percent (10%) of the total amount of the Bid and shall be cash, a certified check, or cashier's check drawn to the order of the County of El Dorado or a Bidder's Bond executed by a surety satisfactory to the County of El Dorado and shall be **on the form provided in the Proposal section of these Contract Documents (do not detach the form)**. The Bidder to whom award is made shall provide Certificates of Insurance as required in Section 7 of the Special Provisions, and shall complete and submit the Performance Bond and Payment Bond forms contained in the Contract Documents.

## **BID PROTEST PROCEDURE**

The protest procedure is intended to handle and resolve disputes related to the bid award for this project pursuant to Title 7 Code of Federal Regulations Chapter XXX Part 3016 and County of El Dorado policies and procedures. A protestor must exhaust all administrative remedies with the County of El Dorado before pursuing a protest with a Federal Agency. Reviews of protests by the Federal agency will be limited to:

- (i.) Violations of Federal law or regulations and the standards of 7 CFR Chapter XXX Part 3016. Violations of State of California or local law will be under the jurisdiction of the State of California or the County of El Dorado; and
- (ii.) Violation of the County of El Dorado's protest procedures for failure to review a complaint or protest. Protests received by the Federal agency other than those specified above will be referred to the County of El Dorado.

The protest procedure is an extension of the formal bid process and allows those who wish to protest the recommendation of an award after bid the opportunity to be heard. This procedure is available after the informal methods have failed to reach a solution.

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

**Procedure:** If a bidder wishes to protest the award, the procedure shall be as follows:

1. The Department of Transportation will review the bids received in a timely fashion under the terms and conditions of the Notice to Bidders, and notify the bidders in writing, at the address designated in the bid, of its recommendation including for award or rejection of bids ("All Bidders Letter").
2. Within five (5) working days from the date of the "All Bidders Letter," the bidder protesting the recommendation for award shall submit a letter of protest to and shall be received by the County of El Dorado, Department of Transportation, Attention Janel Gifford, 2850 Fairlane Court, Placerville, CA 95667, and state in detail the basis and reasons for the protest. The bidder must provide facts to support the protest, including any evidence it wishes to be considered, together with the law, rule, regulation, or criteria on which the protest is based.
3. If the Department of Transportation finds the protest to be valid, it may modify its award recommendations and notify all bidders of that decision. If the Department of Transportation does not agree with the protest, or otherwise fails to resolve the protest, the Department of Transportation will notify the bid protestor and all interested parties of its decision and the date and time that the recommendation for award will be agendized for the Board of Supervisors' consideration and action. The Department of Transportation shall also include in its report the details of the bid protest.

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

In its discretion, the County of El Dorado may accept or reject any bids. The decision of the Board of Supervisors shall be final in accepting or rejecting the bid protest, awarding the bid, or rejecting any or all bids.

### **AWARD OF CONTRACT**

Bids will be considered for award by the Board of Supervisors. The County of El Dorado reserves the right after opening bids to reject any or all bids, to waive any irregularity in a bid, or to make award to the lowest, responsive, responsible Bidder and reject all other bids, as it may best serve the interest of the County. As a condition of award, the successful Bidder will be required to submit bonds and evidence of insurance prior to execution of the Agreement by the County. Failure to meet this requirement shall constitute abandonment of the Bid by the Bidder and forfeiture of the Bidder's security. Award will then be made to the next lowest, responsive, responsible Bidder.

### **RETAINAGE FROM PAYMENTS**

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

### **PROJECT ADMINISTRATION**

All communications relative to the Contract Documents and Plans shall be directed to Daniel Kikkert at the County of El Dorado Department of Transportation, 924B Emerald Bay Road, South Lake Tahoe, CA 96150, telephone-(530) 573-7900, email-dan.kikkert@edcgov.us. No oral responses to any questions concerning the content of the Plans and Contract Documents will be given. All responses will be in the form of written addenda to the Contract Documents and Plans or written responses to bidders' inquiries. Responses and addenda will be posted on the Department of Transportation website at <http://www.edcgov.us/Government/DOT/Bids.aspx>. It is the Bidders' responsibility to check this website for responses and addenda during the bid period.

Inquiries or questions based on alleged patent ambiguity of the plans, specifications, or estimate must be communicated as a bidder inquiry prior to bid opening. Any such inquiries or questions, submitted after bid opening will not be treated as a bid protest.

**BY ORDER OF** the Director of the Department of Transportation, County of El Dorado, State of California.

Authorized by the Board of Supervisors on May 14, 2013 at Placerville, California.

By \_\_\_\_\_  
Kimberly A. Kerr, Interim Director  
Department of Transportation  
County of El Dorado





(Because some colored inks will not reproduce in copy machines, please use black ink to complete this Proposal)

**COMPLETING BID IN PENCIL, ERASURES, OVERWRITES, AND USE OF CORRECTION FLUID OR TAPE ARE NOT ACCEPTABLE. BID PROPOSALS WITH PENCIL, ERASURES, OVERWRITES, OR USE OF CORRECTION FLUID OR TAPE WILL BE REJECTED. ALL CHANGES MUST BE LINED OUT AND CORRECTIONS INSERTED ADJACENT TO AND INITIALED BY THE BIDDER'S AUTHORIZED REPRESENTATIVE.**

**PROPOSAL**

**(to be attached to and submitted with this bound Contract Document bid package)**

**TO: THE DEPARTMENT OF TRANSPORTATION  
COUNTY OF EL DORADO  
STATE OF CALIFORNIA**

for the construction of  
**BOULDER MOUNTAIN EROSION CONTROL PROJECT**

**CONTRACT NO. PW 13-30675  
CIP NO. 95153**

NAME OF BIDDER

\_\_\_\_\_

BUSINESS P.O. BOX

\_\_\_\_\_

CITY, STATE, ZIP

\_\_\_\_\_

BUSINESS STREET ADDRESS

\_\_\_\_\_

*(Please include even if P.O. Box used)*

CITY, STATE, ZIP

\_\_\_\_\_

TELEPHONE NO:    AREA CODE (    ) \_\_\_\_\_

FAX NO:            AREA CODE (    ) \_\_\_\_\_

The work for which this Proposal is submitted is for the construction in accordance with these Contract Documents (including the payment of not less than the State general prevailing wage rates or Federal minimum wage rates set forth herein), the Project Plans described below, including any addenda thereto, the Contract annexed hereto, and also in accordance with the California Department of Transportation Standard Plans, dated May 2006, the Standard Specifications, dated May 2006, Amendments to the May 2006 Standard Specifications, standard drawings from the Design and Improvement Standards Manual of the County of El Dorado, revised March 8, 1994 including Resolutions 199-91 and 54-94 to adopt changes to the Design and Improvement Standards Manual, the Labor

Surcharge and Equipment Rental Rates in effect on the date the work is accomplished, and in accordance with the General Prevailing Wage rates. The Project Plans and Contract Documents for the work to be done are entitled:

**BOULDER MOUNTAIN EROSION CONTROL PROJECT**  
**CONTRACT NO. PW 13-30675**  
**CIP NO. 95153**

Bids are to be submitted for the entire work. The amount of the bid for comparison purposes will be the total of all the items.

The Bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for this purpose. In the case of unit basis items, the amount set forth under the "Item Total" column shall be the product of the unit price bid and the estimated quantity for the item.

In case of discrepancy between the item price and the total set forth for a unit basis item, the unit price shall prevail, except as provided in (a) or (b), as follows:

- (a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount of the entry in the item total column, then the amount set forth in the total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price;
- (b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc., from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage wise the unit price or item total in the Department's Final Estimate of cost.

If both the unit price and the item total are unreadable or otherwise unclear, or are omitted, the bid may be deemed irregular. Likewise if the item total for a lump sum item is unreadable or otherwise unclear, or is omitted, the bid may be deemed irregular unless the project being bid has only a single item and a clear, readable total bid is provided.

Symbols such as commas and dollar signs will be ignored and have no mathematical significance in establishing any unit price or item total or lump sums. Written unit prices, item totals, and lump sums will be interpreted according to the number of digits and, if applicable, decimal placement. Cents symbols also have no significance in establishing any unit price or item total since all figures are assumed to be expressed in dollars and/or decimal fractions of a dollar. Bids on lump sum items shall be item totals only; if any unit price for a lump sum item is included in a bid and it differs from the item total, the items total shall prevail.

The foregoing provisions for the resolution of specific irregularities cannot be so comprehensive as to cover every omission, inconsistency, error, or other irregularity which

may occur in a bid. Any situation not specifically provided for will be determined at the discretion of the County of El Dorado, and that discretion will be exercised in the manner deemed by the County of El Dorado to best protect the public interest in the prompt and economical completion of the work. The decision of the County of El Dorado respecting the amount of a bid, or the existence or treatment of any irregularity in a bid, shall be final.

If this Proposal is accepted and the undersigned Bidder shall fail to enter into the Contract and furnish the two bonds in the sums required by the State Contract Act, with surety rider(s), if applicable, in accordance with Section 5-1.04, "Contract Bonds," of the Special Provisions, with surety satisfaction to the County of El Dorado in accordance with the Special Provisions within five (5) days, not including Saturdays, Sundays, and legal holidays, of the date of the letter notice from the County of El Dorado that the Contract has been awarded, the County of El Dorado may, at its option, determine that the Bidder has abandoned the Contract, and thereupon this Proposal and the acceptance thereof shall be null and void and the forfeiture of such security accompanying this Proposal shall operate and the same shall be the property of the County of El Dorado.

**Attention!** The undersigned Bidder acknowledges that: a bid security must be in an amount of not less than ten percent (10%) of the total amount of the Bid.

The undersigned, as Bidder, declares under penalty of perjury under the laws of the State of California that the only persons or parties interested in this Proposal, as principals, are those named herein; that this Proposal is made without collusion with any other person, firm, or corporation; that it has carefully examined the location of the proposed work, the annexed proposed form of Contract, and the Project Plans therein referred to; and that it proposes, and agrees if this Proposal is accepted, that it will contract with the County of El Dorado, in the form of the copy of the Sample Contract annexed hereto, to provide all necessary machinery, tools, apparatus, and other means of construction, and to do all the work and furnish all the materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that it will take in full payment therefore the following item prices, to wit:

**PROPOSAL PAY ITEMS AND BID PRICE SCHEDULE**  
**BOULDER MOUNTAIN EROSION CONTROL PROJECT**  
**CONTRACT NO. PW 13-30675**  
**CIP NO. 95153**

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE (in Figures)		ITEM TOTAL (in Figures)	
1	Mobilization	1	LS				
2	Traffic Control	1	LS				
3	Sweeping	25	DAY				
4	Trench and Excavation Safety	1	LS				
5	Humus For Topsoil Mix	15	CY				
6	Mulch and Mulch Application	29	CY				
7	Tackifier and Tackifier Application	8385	SF				
8	Install & Maintain Tire Wash Area (On Pavement)	1	EA				
9	Install & Maintain Concrete Wash Area	1	EA				
10	Install & Maintain Weighted Fiber Rolls or Gravel-Filled Rolls	42	EA				
11	Install & Maintain Filter Fence	40	LF				
12	Install & Maintain Visqueen with Gravel Bags or Gravel-Filled Rolls	223	LF				
13	Install and Maintain Drain Inlet Protection	5	EA				
14	Install & Maintain Tree Protection & Construction Limit Fence	330	LF				
15	AC Pavement Sections Type 1 and Type 2	28432	SF				
16	Driveway Access	566	SF				
17	Driveway R&R	280	SF				
18	AB Shoulder	145	LF				
19	Miscellaneous Grading	4	CY				

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE (in Figures)		ITEM TOTAL (in Figures)	
20	Sod Salvage and Transplant	1419	SF				
21	Drainage Inlet	2	EA				
22	24" Drain Basin	1	EA				
23	Sediment Trap Window	1	EA				
24	Rolled Curb and Gutter with Tie-In Pavement	24	LF				
25	Concrete Curb End Transition	2	EA				
26	Concrete Encasement	2	EA				
27	15"x21" Arch CMP (In Pavement)	52	LF				
28	15"x21" Arch CMP (Out of Pavement)	8	LF				
29	18" HDPE (In Pavement)	60	LF				
30	18" HDPE (Out of Pavement)	6	LF				
31	12" HDPE (Out of Pavement)	39	LF				
32	6" Perforated HDPE with Salvaged Sod GLS	259	LF				
33	6" HDPE Cleanout	3	EA				
34	Subdrain	500	LF				
35	15"x21" Arch FES	2	EA				
36	12" FES	1	EA				
37	Rock Dissipator	92	SF				
38	No. 1 Backing	240	SF				
39	Rock-Lined Channel R&R	40	LF				
40	Remove Existing Pipe	43	LF				

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE (in Figures)		ITEM TOTAL (in Figures)	
41	Remove Willow Clump	5	EA				
42	Adjust SMH and SDMH Rim to Grade	4	EA				
43	Adjust WV Cover to Grade	2	EA				
44	Dewatering for BM Pipes and Subdrain	2	EA				
45	Dewatering for FM D/W and No. 1 Backing	1	EA				
46	Dewatering for LTB Pipes and DIs	1	EA				
47	Dewatering for GM Pipe and DB	1	EA				
48	Dewatering for IM Pipes and GLS	2	EA				
49	Modifying Existing Concrete Cutoff Wall	25	EA				
50	Roadway Signs	4	EA				
51	Overexcavate and Remove Unsuitable Material	50	CY				
52	Rock Fracturing and Removal	10	CY				
<b>TOTAL BID</b>							

(LS) Denotes Lump Sum

**(NOTICE: Bidder's failure to execute the questionnaires and statements contained in this Proposal as required by applicable laws and regulations, or the determinations by County of El Dorado based upon those questionnaires and statements, may prohibit award of the subject Contract to the Bidder.)**

*(THE BIDDER'S EXECUTION ON THE SIGNATURE PORTION OF THIS PROPOSAL SHALL ALSO CONSTITUTE AN ENDORSEMENT AND EXECUTION OF THOSE CERTIFICATIONS WHICH ARE A PART OF THIS PROPOSAL)*

**EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION**

	<u>Has</u>	<u>Has Not</u>
The Bidder _____	_____	_____
Proposed Subcontractor(s) _____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

hereby certifies the above information regarding participation in a previous contract or subcontract subject to the equal opportunity clauses, as required by Executive Orders 10925, 11114, 11246, and 11375, and as supplemented by 41 CFR 60, and that, where required he has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

**NOTE:** The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by Bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

### **SMALL BUSINESS STATUS**

Are you certified as a Small Business by the Office of Small and Business of the Department of General Services of the State of California?

Please check one of the following:    yes, no, unsure.

(Note: This small business questionnaire is included for statistical reporting only, and your answer neither affects your bid on this contract, nor will it be cause for penalty.)





## PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

In accordance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury under the laws of the State of California, the following questionnaire:

Has the Bidder, any officer of the Bidder, or any employee of the Bidder who has a proprietary interest in the Bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

**Yes:** \_\_\_\_\_ **No:** \_\_\_\_\_

If the answer is yes, explain the circumstances in the following space:

---

## PUBLIC CONTRACT CODE SECTION 10232 STATEMENT

In accordance with Public Contract Code Section 10232, the Bidder hereby states under penalty of perjury under the laws of the State of California, that no more than one final unappealable finding of contempt of court by a Federal Court has been issued against the Bidder within the immediate preceding two year period because of the Bidder's failure to comply with an order of a Federal Court which orders the Bidder to comply with an order of the National Labor Relations Board.

**NOTE:** The above Statement and Questionnaire are part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement and Questionnaire.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

**NONCOLLUSION AFFIDAVIT**  
(Title 23 United States Code Section 112 and  
Public Contract Code Section 7106)

In accordance with Title 23 United States Code, Section 112, and Public Contract Code Section 7106, the Bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

**NOTE:** The above Noncollusion Affidavit is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Noncollusion Affidavit.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

**DEBARMENT AND SUSPENSION CERTIFICATION, UNITED STATES DEPARTMENT OF  
AGRICULTURE (USDA) UNIFORM FEDERAL ASSISTANCE REGULATIONS, 7 CFR 3016, UNIFORM  
ADMINISTRATIVE REQUIREMENTS FOR GRANTS AND COOPERATIVE AGREEMENTS TO STATE  
AND LOCAL GOVERNMENTS, AND EXECUTIVE ORDER 12549**

The Bidder, under penalty of perjury under the laws of the State of California, certifies that, except as noted below, he or any person associated therewith in the capacity of owner, partner, director, officer, manager:

- is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- does not have a proposed debarment pending; and,
- has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space:

Exceptions may result in denial of award, and will be considered in determining Bidder responsibility. For any exception noted above, indicate below to whom it applied, initiating agency, and dates of action.

**NOTES:** Providing false information may result in criminal prosecution or administrative sanctions. The above Certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.

## NON-LOBBYING CERTIFICATION FOR FEDERAL-AID CONTRACTS

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his knowledge and belief, that:

- 1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form–LLL, “Disclosure of Lobbying Activities,” in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his bid or proposal that he shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

COMPLETE THE FEDERAL FORM **SF-LLL** ONLY IF YOU PAID FUNDS, OTHER THAN FEDERAL FUNDS, FOR LOBBYING ANY FEDERAL OFFICER OR EMPLOYEE. SEE THE PRECEDING NON-LOBBYING CERTIFICATION FOR FEDERAL AID CONTRACTS, AND FEDERAL LOBBYING RESTRICTIONS OF THE SPECIAL PROVISIONS.



## INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of covered Federal action or a material change to previous filing pursuant to title 31 U.S.C. section 1352. The filing of a form is required for such payment or agreement to make payment to lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress an officer or employee of Congress or an employee of a Member of Congress in connection with a covered Federal action. Attach a continuation sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence, the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last, previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District if known. Check the appropriate classification of the reporting entity that designates if it is or expects to be a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the first tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in Item 4 checks "Subawardee" then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organization level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identification in item 1 (e.g., Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract grant. or loan award number, the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitments for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.  
(b) Enter the full names of the individual(s) performing services and include full address if different from 10 (a). Enter Last Name, First Name and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed or will be expected to perform and the date(s) of any services rendered. Include all preparatory and related activity not just time spent in actual contact with Federal officials. Identify the Federal officer(s) or employee(s) contacted or the officer(s) employee(s) or Member(s) of Congress that were contacted.
15. Check whether or not a continuation sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name title and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

SF-LLL-Instructions Rev. 06-04-90

## PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT

In accordance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the Bidder hereby declares under penalty of perjury under the laws of the State of California that the Bidder has \_\_\_\_\_, has not \_\_\_\_\_ been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "Bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

**NOTE:** The Bidder must place a check mark after "has" or "has not" in one of the blank spaces provided.

The above Statement is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.



Accompanying this Proposal are \_\_\_\_\_  
(NOTICE: INSERT THE WORDS "CASH(\$\_\_\_\_\_),"CASHIER'S CHECK," "CERTIFIED CHECK," OR "BIDDERS BOND," AS THE CASE MAY BE)

in amounts equal to at least ten percent of the total of the Bid.

The names of all persons interested in the forgoing Proposal as principals are as follows:

**IMPORTANT NOTICE:** If the Bidder or other interested person is a corporation, state legal name of corporation and place of incorporation, also names of the president, secretary, treasurer, and executive officer thereof; if a partnership, state name of partnership, also names of all individual partners; if Bidder or other interested person is an individual, state first and last names in full.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Licensed in accordance with an act providing for the registration of Contractors,

License No. \_\_\_\_\_ Classification(s) \_\_\_\_\_  
**(A Copy of the afore-referenced license must be attached hereto)**

**ADDENDA:** This Proposal is submitted with respect to the changes to the Contract included in addenda number(s) \_\_\_\_\_

(Fill in addenda numbers if addenda have been received and insert, in this Proposal, any Proposal Pay Items and Bid Price Schedules that were received as part of the addenda)

By my signature on this Proposal I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Sections 10162, 10232, and 10285.1 are true and correct and that I have complied with the requirements of Section 4104 of the Subletting and Subcontracting Fair Practices Act, and that I have complied with the requirements of Section 8103 of the Fair Employment and Housing Commission Regulations (Chapter 5, of Division 4 of Title 2 of the California Code of Regulations). By my signature on this proposal I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Noncollusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106; and Debarment and Suspension Certification are true and correct. By my signature on this Proposal, I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Equal Employment Opportunity Certification, the Small Business Status questionnaire, the Non-Lobbying Certification for Federal Aid Contracts, and the questionnaire regarding Disclosure of Lobbying Activities are true and correct.

The person or persons executing this Proposal on behalf of a corporation or partnership, shall be prepared to demonstrate by resolution, article, or otherwise, that such person is or that such persons are appropriately authorized to act in these regards for such corporation or partnership. Such authority shall be demonstrated to the satisfaction of the County of El Dorado.

If the signature is by an agent other than an officer of a corporation or a member of a partnership, a power of attorney authorizing said act by the agent on behalf of his principal shall be submitted with the bid forms, otherwise the bid may be disregarded as irregular and unauthorized.

The Bidder's execution on the signature portion of this Proposal shall constitute an endorsement and execution of those affidavits, declarations and certifications which are part of this Proposal.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 2012

at \_\_\_\_\_ County, State of \_\_\_\_\_

Date: \_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature of Bidder

Name and Title of Bidder \_\_\_\_\_

Name of Firm \_\_\_\_\_

**END OF PROPOSAL**

**COUNTY OF EL DORADO**

**BIDDER'S BOND**

**this form MUST be used**

KNOW ALL PEOPLE BY THESE PRESENTS, THAT WE, \_\_\_\_\_

\_\_\_\_\_ as **PRINCIPAL**, and

\_\_\_\_\_  
\_\_\_\_\_

as Surety are held and firmly bound unto the County of El Dorado, a political subdivision of the State of California (hereinafter referred to as "Obligee"), in the penal sum of **TEN (10) PERCENT OF THE AMOUNT OF THE TOTAL AMOUNT BID** of the Principal above named, submitted by said Principal to the Obligee for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made to the Obligee, we the Principal and Surety bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. In no case shall the liability of the Surety hereunder exceed the sum of

**TEN PERCENT (10%) OF THE AMOUNT OF THE TOTAL BID PRICE**

**THE CONDITION OF THIS OBLIGATION IS SUCH, THAT:**

**WHEREAS**, the Principal has submitted the above-mentioned Bid to the Obligee, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at 924B Emerald Bay Road, South Lake Tahoe, California 96150, for the construction of the

**BOULDER MOUNTAIN EROSION CONTROL PROJECT  
CONTRACT NO. PW 13-30675  
CIP NO. 95153**

**NOW, THEREFORE**, if the aforesaid Principal is awarded the Contract and, within the time and manner required under the Contract Documents, after the prescribed forms are presented to it for signature, enters into a written contract, in the prescribed form, in accordance with the Bid, and files two bonds with the Obligee, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall remain in full force and virtue.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the Court.

**IN WITNESS WHEREOF**, we have set our hands and seals on this day \_\_\_\_\_ of, \_\_\_\_\_ 2013.

(seal) \_\_\_\_\_  
Principal

(seal) \_\_\_\_\_  
Surety

Address: \_\_\_\_\_  
\_\_\_\_\_

NOTE: Signature of those executing for the Surety shall be properly acknowledged, and accompanied by the attached Acknowledgment.

**ACKNOWLEDGMENT**

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_,  
(here insert name and title of the officer)

personally appeared \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of \_\_\_\_\_ that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_

(Seal)



# S A M P L E

**County of El Dorado, State of California  
Department of Transportation**

**CONTRACT NO. PW 13-30675**

**CIP NO. 95153**

for the construction of

**BOULDER MOUNTAIN EROSION CONTROL PROJECT**

**THIS AGREEMENT** ("Agreement") approved by the Board of Supervisors this \_\_\_\_ day of \_\_\_\_\_, in the year of 2013, made and concluded, in duplicate, between the COUNTY OF EL DORADO, a political subdivision of the State of California, by the Department of Transportation thereof, the party of the first part hereinafter called "County," and CONTRACTOR, the party of the second part hereinafter called "Contractor."

**RECITALS:**

WHEREAS, County has caused the above-captioned project to be let to formal bidding process, and

WHEREAS, Contractor has duly submitted a bid response for the captioned project upon which County has awarded this Contract;

NOW, THEREFORE, the parties hereto have mutually covenanted and agreed, and by these presents do covenant and agree, each with the other, as follows:

**Article 1. THE WORK**

The improvement contemplated in the performance of the Contract is an improvement over which County shall exercise general supervision. County, therefore, shall have the right, but not the duty, to assume full and direct control over the Contract whenever County, at its sole discretion, shall determine that its responsibility is so required.

Contractor shall complete, in accordance with the Contract Documents, the Work as specified or indicated under the Bid Schedule(s) of County's Contract Documents entitled:

**Boulder Mountain Erosion Control Project, dated May 2013**

The Project area is located in eastern El Dorado County, in the Tahoe Basin, south of Angora Highlands, north of Lake Tahoe Blvd, west of Tahoe Mountain Road. The Work to be done is shown on the Plans, and generally consists of, but is not limited to the construction of erosion control improvements including culverts and subdrains, rock-lined channels, grass-lined swales, curb and gutter, drainage inlets, a junction structure, restoring pavement on Boulder Mountain Drive, stabilizing the entrance of a dirt access road with pavement and rock, and road shoulder stabilizing. 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.

**Article 2. CONTRACT DOCUMENTS**

The Contract Documents consist of: the Notice to Bidders; the bid forms which include the accepted Proposal, Bid Price Schedule and Total Bid, Subcontractors Listing, Equal Employment Opportunity Certification, Section 10285.1 Statement, Section 10162 Questionnaire, Section 10232 Statement, Noncollusion Affidavit, Debarment and Suspension Certification, Small Business Status, Non-Lobbying Certification for Federal-Aid Contracts, Disclosure of Lobbying Activities (Standard Form LLL), the Contract which includes this Agreement with all Exhibits thereto, the Performance Bond; and Payment Bond, the drawings listed and identified as the Project Plans; the Special Provisions which incorporate by reference the

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Caltrans Standard Plans, dated May 2006, and Standard Specifications, dated May 2006, Amendments to the May 2006 Standard Specifications; and standard drawings from the Design and Improvement Standards Manual of County of El Dorado, revised March 8, 1994 including Resolutions 199-91 and 58-94 to adopt changes to the Design and Improvement Standards Manual; all Addenda incorporated in those documents before their execution; and all Contract Change Orders issued in accordance with the Contract Documents which may be delivered or issued after the Effective Date of this Agreement and are not attached hereto; the prevailing Labor Surcharge And Equipment Rental Rates (when required) as determined by the California Department of Transportation to be in effect on the date the Work is accomplished; all the obligations of County and of Contractor which are fully set forth and described therein; and all Contract Documents which are hereby specifically referred to and by such reference made a part thereof. All Contract Documents are intended to cooperate so that any work called for in one and not mentioned in the other is to be executed the same as if mentioned in all Contract Documents. Contractor agrees to perform all of its promises, covenants, and conditions set forth in the Contract Documents, and to abide by and perform all terms and conditions set forth therein. In case of conflict between this Agreement and any other contract document, this Agreement shall take precedence.

## **Article 3. COVENANTS AND CONTRACT PRICE**

County hereby promises and agrees with Contractor to employ, and does hereby employ, said Contractor to provide the material and to do the Work according to the terms and conditions of the Contract Documents duplicitous herein contained and referred to, for the prices hereinafter set forth, and hereby contracts to pay the same at the time, in the manner and upon the conditions herein set forth; and the said parties for themselves, their heirs, executors, administrators, successors and assigns, do hereby agree to the full performance of the covenants herein contained. County shall pay Contractor for the completion of the Work in accordance with the Contract Documents in current funds the Contract Prices named in Contractor's Bid and Bid Schedule, a copy of which is attached hereto as Exhibit A.

## **Article 4. COMMENCEMENT AND COMPLETION**

The Work to be performed under the Contract shall commence on the date specified in the Notice to Proceed by County. The Work shall be fully completed within the time specified in the Notice to Proceed pursuant to Section 4 of the Special Provisions.

County and Contractor recognize that time is of the essence of the Agreement and that County will suffer financial loss if the Work is not completed within the time specified in Section 4 of the Special Provisions annexed hereto, plus any extensions thereof allowed in accordance with Section 4 of the Special Provisions. They also recognize the delays, expense, and difficulties involved with proving in a legal proceeding the actual loss suffered by County if the Work is not completed on time. Accordingly, instead of requiring any such proof, County and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay County the sum of **Three Thousand Two Hundred dollars (\$3,200.00) per day**, as liquidated damages and not as penalty, for each and every calendar day's delay in finishing the Work in excess of the number of days prescribed herein.

## **Article 5. INDEMNITY**

To the fullest extent allowed by law, Contractor shall defend, indemnify, and hold County, agencies of the federal government, and the State of California (State), and each of its members, officers, agents, directors, and employees harmless against and from any and all claims, suits, losses, demands, and liability for damages, including attorney's fees and other costs of defense brought for or on account of injuries to or death of any person, including but not limited to, workers and the public, or on account of injuries to or death of County, federal government agency, or State, employees, or damage to property, or any economic, consequential or special damages which are claimed or which shall in any way arise out of or be connected with Contractor's services, operations or performance hereunder, regardless of the existence or degree of fault or negligence on the part of County, agencies of the federal government, State, Contractor,

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subcontractors or employees of any of these, except active or sole negligence of County, agencies of the federal government, State, and each of its members, officers, agents, directors, and employees, or where expressly prescribed by statute.

In those instances where County has entered or will enter into agreements with adjacent property owners or has obtained easements from private property owners upon whose property it will be necessary for Contractor to enter to perform the Work to be done under the Contract, Contractor shall indemnify such property owners in the same manner and to the same extent as County is indemnified herein.

The duty to indemnify and hold harmless as set forth above, specifically includes the duties to defend set forth in Section 2778 of the Civil Code.

The insurance obligations of Contractor are separate, independent obligations under the Contract Documents, and the provisions of this defense and indemnity are not intended to modify, nor should they be construed as modifying or in any way limiting, the insurance obligations set forth in the Contract Documents.

## **Article 6. GUARANTEES**

Contractor shall repair or replace any or all Work provided hereunder which is defective due to faulty materials, poor workmanship, or defective equipment at no expense to County, ordinary wear or tear and unusual abuse or neglect excepted, during the term of the Contract and for a period of one (1) year from acceptance of the Contract.

Contractor shall be required to repair or replace any and all adjacent facilities or areas which have been damaged or displaced due to Contractor's work performed under this Agreement at no expense to County during the term of this Agreement and for a period of one (1) year from acceptance of the Contract.

If a warranty or guarantee exceeding one (1) year is provided by the supplier or manufacturer of any equipment or materials used in this Project, or if a warranty or guarantee exceeding one (1) year is required elsewhere in these Contract Documents, then the guarantee for such equipment or materials shall be extended for such term. Contractor expressly agrees to act as co-guarantor of such equipment and materials, and Contractor shall supply County with all warranty and guaranty documents relative to equipment and materials incorporated in the job and guaranteed by its suppliers or manufacturers.

The parties agree that this guarantee and the rights and obligations accruing therefrom shall be in addition to, and not by way of limitation in any manner whatsoever to, the rights, obligations, warranties or remedies otherwise provided for by law.

In the event of Contractor's failure to comply with the above mentioned conditions within ten (10) calendar days after being notified in writing by County, Contractor hereby authorizes County to proceed to have said defects repaired and made good at Contractor's expense, and Contractor will honor and pay all costs and charges therefore upon written demand.

## **Article 7. VENUE**

Any litigation arising out of this Contract shall be brought in County of El Dorado and governed by California law.

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## **Article 8. ASSIGNMENT OF ANTITRUST ACTIONS**

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract Contractor offers and agrees and will require all of its subcontractors and suppliers to agree to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to Contractor, without further acknowledgment by the parties.

If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under Government Code Sections 4450-4554, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under Government Code Sections 4450-4554 if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action.

## **Article 9. TERMINATION BY COUNTY FOR CONVENIENCE**

County reserves the right to terminate the Contract at any time upon determination by County's Representative that termination of the Contract is in the best interest of County. County shall issue Contractor a written notice specifying that the Contract is to be terminated.

Upon receipt of said written notice, Contractor shall stop all work under the Contract except: (1) work specifically directed to be completed prior to termination, (2) work the Inspector deems necessary to secure the project for termination, (3) removal of equipment and plant from the site of the Work, (4) action that is necessary to protect materials from damage, (5) disposal of materials not yet used in the Work as directed by County, and (6) clean up of the site.

If the Contract is terminated for County's convenience as provided herein, all finished or unfinished work and materials previously paid for shall, at the option of County, become its property. Contractor shall be paid an amount which reflects costs incurred for work provided to the date of notification of termination. In addition, Contractor shall be paid the reasonable cost, as solely judged by County, and without profit, for all work performed to secure the project for termination.

## **Article 10. TERMINATION BY COUNTY FOR CAUSE**

If Contractor is adjudged as bankrupt or insolvent, or makes a general assignment for the benefit of its creditors or if a trustee or receiver is appointed for Contractor or for any of its property, or if Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or on more than one occasion fails to supply sufficient skilled workmen or suitable material or equipment, or on more than one occasion fails to make prompt payments to subcontractors for labor, materials, or equipment, or disregards the authority of County's Representative, or the Engineer, if one is appointed, or otherwise violates any provision of the Contract Documents, then County may, without prejudice to any other right or remedy and after giving Contractor and its Surety a minimum of 10 days from delivery of a written termination notice, terminate the services of Contractor and take equipment and machinery thereon owned by Contractor and finish the Work by whatever method County may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until the Work is finished.



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Without prejudice to other rights or remedies County may have, if Contractor fails to begin delivery of materials and equipment, to commence Work within the time specified, to maintain the rate of delivery of material, to execute the Work in the manner and at such locations as specified, or fails to maintain a work program which will ensure County's interest, or, if Contractor is not carrying out the intent of the Contract, an Inspector's written notice may be served upon Contractor and the Surety on its faithful performance bond demanding satisfactory compliance with the Contract.

If Contractor or its Surety does not comply with such notice within five (5) days after receiving it, or after starting to comply, fails to continue, County may exclude it from the premises and take possession of all material and equipment, and complete the Work by County's own forces, by letting the unfinished Work to another Contractor, or by a combination of such methods.

Where Contractor's services have been so terminated by County, said termination shall not affect any right of County against Contractor then existing or which may thereafter accrue. Any retention or payment of monies by County due Contractor will not release Contractor from compliance with the Contract Documents.

If the unpaid balance of the Contract price exceeds the direct and indirect costs of completing the Work, including compensation for additional professional services, such excess shall be paid to Contractor. If the sums under the Contract are insufficient for completion, Contractor or Surety shall pay to County within five (5) days after the completion, all costs in excess of the Contract price. In any event, the cost of completing the Work shall be charged against Contractor and its Surety and may be deducted from any money due or becoming due from County.

The provisions of this Article shall be in addition to all other rights and remedies available to County under law.

If after notice of termination, it is determined for any reason that Contractor was not in default, the rights and obligations of the parties shall be the same as if the notice of termination had not been issued. The Contract shall be equitably adjusted to compensate for such termination.

## **Article 11. WORKERS' COMPENSATION CERTIFICATION**

Contractor shall comply with Labor Code Sections 3700 et seq., requiring it to obtain Workers' Compensation Insurance, and sign a certificate of knowledge thereof.

### **CERTIFICATE OF KNOWLEDGE - LABOR CODE SECTION 3700**

I am aware of the provisions of Section 3700 of the Labor Code, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of work of this Contract.

Signed: \_\_\_\_\_ Date \_\_\_\_\_

## **Article 12. WARRANTY**

Contractor warrants to County that materials and equipment furnished for the Work will be good quality and new, unless otherwise required or permitted under the Contract Documents, that the Work will be free from defects or flaws and is of the highest quality of workmanship and that the Work will conform with the requirements therein. Work not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective.

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## **Article 13. RETAINAGE**

The retainage from payment is set forth in "Payments" of the Special Provisions. Contractor may elect to receive one hundred percent (100%) of payments due as set forth in the Contract Documents, without retention, by depositing securities of equivalent value with County, in accordance with, and as set forth in Section 22300 of the Public Contract Code. Securities eligible for deposit hereunder shall be limited to those listed in Section 16430 of the Government Code, or bank or savings and loan certificates of deposit.

## **Article 14. DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM**

Contractor or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. Contractor shall carry out applicable requirements of 7 CFR Part 3016 in the award and administration of this United States Forest Service assisted Contract. The applicable requirements of 7 CFR Part 3016 is as follows:

- (a) *Contracting with small and minority firms, women's business enterprise and labor surplus area firms.*
  - (1) Contractor will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.
  - (2) Affirmative steps shall include:
    - (i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
    - (ii) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
    - (iii) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;
    - (iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;
    - (v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and
    - (vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (a)(2) (i) through (v) of this Article.

Failure by Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as County deems appropriate. Contractor shall include this assurance in every subcontract entered into as a result of this Agreement.

## **Article 15. PROMPT PAYMENT OF SUBCONTRACTORS**

### Prompt Progress Payment to Subcontractors

Attention is 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. Any violation of Section 7108.5 shall subject the violating contractor or subcontractor to the penalties, sanction and other remedies of that section. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise

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available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

## Prompt Payment of Withheld Funds to Subcontractors

The Department shall hold retainage from the prime Contractor, as determined by the Department, of the contract work and pay retainage to the prime Contractor in accordance with "Payments" and "Payment of Withheld Funds" of these special provisions. The prime Contractor or subcontractor shall return all monies withheld in retention from the subcontractor within 30 days after receiving payment of withheld funds from the Department or prime contractor as applicable. Any violation of this provision 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 and contractual, administrative, or judicial remedies otherwise available to the prime contractor or subcontractor in the event of a dispute involving late payment or non payment by the prime contractor, deficient subcontract or performance, and/or noncompliance by a subcontractor.

## **Article 16. PREVAILING WAGE REQUIREMENTS**

In accordance with the provisions of California Labor Code sections 1770, et seq., including but not limited to 1773, 1773.1, 1773.2, 1773.6 and 1773.7, the general prevailing rate of wages in County in which the Work is to be done has been determined by the Director of the California Department of Industrial Relations. These wage rates appear in the California Department of Transportation publication entitled General Prevailing Wage Rates. Interested parties can obtain the current wage information by submitting their requests to the Department of Industrial Relations, Division of Labor Statistics and Research, PO Box 420603, San Francisco CA 94142-0603, Telephone (415) 703-4708 or by referring to the website at <http://www.dir.ca.gov/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 County in which the Work is to be done are also on file at the Department of Transportation's principal office, and shall be made available upon request, and in the case of projects involving federal funds, federal wage requirements as predetermined by the United States Secretary of Labor have been included in the Contract Documents. Addenda to modify the federal minimum wage rates, if necessary, will be issued as described in the Project Administration section of this Notice to Bidders.

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. Contractor's 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

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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.

## **Article 17. 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 (GOV. CODE, SECTION 12990)**

Attention is 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.

This Contract is subject to federal and state contract nondiscrimination and compliance requirements including Government Code, Section 12990, and shall be construed and interpreted in compliance with said provisions.

During the performance of this contract, Contractor agrees as follows:

- (1) Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
- (3) Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (5) Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

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- (6) In the event of Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (7) Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency Contractor may request the United States to enter into such litigation to protect the interests of the United States.

Contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. Contractor shall carry out applicable requirements of 7 CFR Part 3016 in the award and administration of USDA assisted contracts. Failure by Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy, as County deems appropriate. Each subcontract signed by the bidder must include this assurance.

## **Article 18. CONTRACTOR ASSURANCES**

By executing this Contract, Contractor certifies that it:

- a. Will abide by all administrative, contractual or legal remedies in instances where Contractor violates or breaches contract terms, and will comply with sanctions and penalties as the Contract Administrator deems appropriate.
- b. Will comply with the termination for cause and termination for convenience provisions of the Contract including the manner by which such termination may be effected and the basis for settlement afforded by those provisions.
- c. Will comply with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR Chapter 60).
- d. Will comply with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3).
- e. Will comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented in Department of Labor regulations (29 CFR part 3).
- f. Will comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5).
- g. Will comply with County, State of California, and federal requirements and regulations pertaining to:

# S A M P L E

(a) reporting; (b) patent rights with respect to any discovery or invention which arises or is developed in the course of or under this Contract; and (c) copyrights and rights in data.

- h. Will comply with all applicable standards, orders or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857 [h]), Section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).
- i. Will comply with mandatory standards and policies relating to energy efficiency, which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub.: 94-163, 89 Stat. 871).
- j. Will comply with: (i) Section 504 of the Rehabilitation Act of 1973 (Rehabilitation Act) which prohibits discrimination on the basis of disability in federally assisted programs; (ii) the Americans with Disabilities Act (ADA) of 1990 which prohibits discrimination on the basis of disability irrespective of funding; and (iii) all applicable regulations and guidelines issued pursuant to both the Rehabilitation Act and the ADA.

Any subcontract entered into as a result of this Contract shall contain all of the provisions of this Article.

## **Article 19. BUSINESS LICENSE**

The County Business License Ordinance provides that it is unlawful for any person to furnish supplies or services, or transact any kind of business in the unincorporated territory of El Dorado County without possessing a County Business License unless exempt under County Ordinance Code Section 5.08.070. Contractor warrants and represents that it shall comply with all of the requirements of the County Business License Ordinance, where applicable, prior to beginning work under this Contract and at all times during the term of this Contract.

## **Article 20. CONTRACT ADMINISTRATOR**

The County Officer or employee with responsibility for administering this Agreement is Steve Kooyman, P.E., Acting Deputy Director of Engineering, Transportation Planning and Land Development, Department of Transportation, or successor.

## **Article 21. RETENTION AND ACCESS TO RECORDS**

All accounting records and other supporting papers of Contractor's connected with performance under this Agreement shall be maintained for a minimum of three (3) years from the date of final payment by County or when all other pending matters are closed and shall be held open to inspection and audit by representatives of County, United States Forest Service (USFS), Comptroller General of the United States, or any duly authorized representative of the Federal Government and copies thereof shall be furnished upon request.

Contractor and its subcontractors shall maintain all books, documents, papers, accounting records, and other evidence pertaining to the performance of such contracts, including but not limited to, the costs of administering the various contracts. All of the above-referenced parties shall make such materials available at their respective offices at all reasonable times during the contract period and for three (3) years from the date of final payment by County or all other pending matters are closed. Representatives of County, USFS, Comptroller General of the United States, or any duly authorized representative of the Federal Government shall have access to any books, documents, papers, and records that are pertinent to the contract for audit, examination, excerpts, transactions, and copies thereof shall be furnished upon request.

In order to monitor the progress of projects funded in whole or in part by federal funds, federal agencies rely heavily on inspection data. Inspections shall be performed on a regular basis and data compiled in report form, as necessary, in conformance with 7 CFR 3016.40(c). Information to be supplied by Contractor shall

# S A M P L E

be reported to County on an as requested basis.

## **Article 22. BUY AMERICA REQUIREMENTS**

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 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 any other coating that protects or enhances the value of such 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 also 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%) of the total contract cost, or \$2,500, whichever is greater. Contractor shall furnish the Engineer acceptable documentation of the quantity and value of any foreign steel and iron prior to incorporating such materials into the work.

In accordance with Section 502 of the Energy and Water Development Appropriations Act, 2002, Public Law 107-66, it is the sense of Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available in this Act should be American-made.

## **Article 23. ELIGIBLE WORKERS**

Contractor shall ensure that all employees complete an I-9 form to certify that they are eligible for lawful employment under the Immigration and Nationality Act (8 USC 1324a). Contractor shall comply with regulations regarding certification and retention of completed forms. Subcontractors shall also comply with these requirements.

## **Article 24. AUTHORIZED SIGNATURES**

The parties hereto represent that the undersigned individuals executing this Agreement on their behalf are fully authorized to do so by law or other appropriate instrument and to bind upon said parties the obligations set forth herein.

# S A M P L E

**IN WITNESS WHEREOF**, the said Department of Transportation of the County of El Dorado, State of California, has caused this Agreement to be executed by County's Board of Supervisors, on its behalf, and the said Contractor has signed this Agreement the day and year written below.

## COUNTY OF EL DORADO

Dated \_\_\_\_\_

\_\_\_\_\_  
Board of Supervisors

Attest:  
James S. Mitrison  
Clerk of the Board of Supervisors

By: \_\_\_\_\_  
Deputy Clerk

## CONTRACTOR

Dated \_\_\_\_\_

\_\_\_\_\_  
Name of Company

By \_\_\_\_\_  
President License No. Federal Employer Identification #

By \_\_\_\_\_  
Corporate Secretary

NOTE: If Contractor is a corporation, the legal name of the corporation shall be set forth above together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation; if Contractor is a co-partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign contracts in behalf of the co-partnership; and if Contractor is an individual, his/her signature shall be placed above. Contractor executing this document on behalf of a corporation or partnership shall be prepared to demonstrate by resolution, article, or otherwise that they are appropriately authorized to act in these regards. For such corporation or partnership, such authority shall be demonstrated to the satisfaction of County. If signature is by an agent, other than officer of a corporation or a member of a partnership, an appropriate Power of Attorney shall be on file with the Department prior to signing this document.

Mailing Address \_\_\_\_\_

Business Address \_\_\_\_\_

City, Zip \_\_\_\_\_

Phone (\_\_\_\_) \_\_\_\_\_ Fax (\_\_\_\_) \_\_\_\_\_



**EXHIBIT A  
CONTRACTOR'S BID AND BID SCHEDULE  
BOULDER MOUNTAIN EROSION CONTROL PROJECT  
CONTRACT NO. PW 13-30675  
CIP NO. 95153**

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE (in Figures)		ITEM TOTAL (in Figures)	
1	Mobilization	1	LS				
2	Traffic Control	1	LS				
3	Sweeping	25	DAY				
4	Trench and Excavation Safety	1	LS				
5	Humus For Topsoil Mix	15	CY				
6	Mulch and Mulch Application	29	CY				
7	Tackifier and Tackifier Application	8385	SF				
8	Install & Maintain Tire Wash Area (On Pavement)	1	EA				
9	Install & Maintain Concrete Wash Area	1	EA				
10	Install & Maintain Weighted Fiber Rolls or Gravel-Filled Rolls	42	EA				
11	Install & Maintain Filter Fence	40	LF				
12	Install & Maintain Visqueen with Gravel Bags or Gravel-Filled Rolls	223	LF				
13	Install and Maintain Drain Inlet Protection	5	EA				
14	Install & Maintain Tree Protection & Construction Limit Fence	330	LF				
15	AC Pavement Sections Type 1 and Type 2	28432	SF				
16	Driveway Access	566	SF				
17	Driveway R&R	280	SF				
18	AB Shoulder	145	LF				

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE (in Figures)		ITEM TOTAL (in Figures)	
19	Miscellaneous Grading	4	CY				
20	Sod Salvage and Transplant	1419	SF				
21	Drainage Inlet	2	EA				
22	24" Drain Basin	1	EA				
23	Sediment Trap Window	1	EA				
24	Rolled Curb and Gutter with Tie-In Pavement	24	LF				
25	Concrete Curb End Transition	2	EA				
26	Concrete Encasement	2	EA				
27	15"x21" Arch CMP (In Pavement)	52	LF				
28	15"x21" Arch CMP (Out of Pavement)	8	LF				
29	18" HDPE (In Pavement)	60	LF				
30	18" HDPE (Out of Pavement)	6	LF				
31	12" HDPE (Out of Pavement)	39	LF				
32	6" Perforated HDPE with Salvaged Sod GLS	259	LF				
33	6" HDPE Cleanout	3	EA				
34	Subdrain	500	LF				
35	15"x21" Arch FES	2	EA				
36	12" FES	1	EA				
37	Rock Dissipator	92	SF				
38	No. 1 Backing	240	SF				
39	Rock-Lined Channel R&R	40	LF				

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE (in Figures)		ITEM TOTAL (in Figures)	
40	Remove Existing Pipe	43	LF				
41	Remove Willow Clump	5	EA				
42	Adjust SMH and SDMH Rim to Grade	4	EA				
43	Adjust WV Cover to Grade	2	EA				
44	Dewatering for BM Pipes and Subdrain	2	EA				
45	Dewatering for FM D/W and No. 1 Backing	1	EA				
46	Dewatering for LTB Pipes and DIs	1	EA				
47	Dewatering for GM Pipe and DB	1	EA				
48	Dewatering for IM Pipes and GLS	2	EA				
49	Modifying Existing Concrete Cutoff Wall	25	EA				
50	Roadway Signs	4	EA				
51	Overexcavate and Remove Unsuitable Material	50	CY				
52	Rock Fracturing and Removal	10	CY				
<b>TOTAL BID</b>							

(LS) Denotes Lump Sum



**County of El Dorado**

**PAYMENT BOND**

(Section 3247, Civil Code)

Bond No. \_\_\_\_\_

WHEREAS, the County of El Dorado, a political subdivision of the State of California, hereafter referred to as "Obligee", has awarded to Contractor

\_\_\_\_\_ ,

hereafter referred to as "Principal", a contract for the work described as follows:

**BOULDER MOUNTAIN EROSION CONTROL PROJECT  
CONTRACT NO. PW 13-30675  
CIP NO. 95153**

AND, WHEREAS, said Principal is required to furnish a bond in connection with said contract, guaranteeing the faithful performance thereof:

NOW, THEREFORE, we the undersigned Principal and Surety are held and firmly bound unto the Obligee, in the sum of

\_\_\_\_\_ Dollars,

(\$ \_\_\_\_\_ ) to be paid to the Obligee, for which payment we bind ourselves, jointly and severally.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That if said Principal or its subcontractors shall fail to pay any of the persons named in Civil Code Section 3181, or amounts due under the Unemployment Insurance Code with respect to work or labor performed by such claimant, or any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from the wages of employees of the Principal and his subcontractors pursuant to Section 18806 of the Revenue and Taxation Code, with respect to such work and labor, that the Surety herein will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, the Surety will pay a reasonable attorney's fee to be fixed by the court.

This bond shall inure to the benefit of any of the persons named in Civil Code Section 3181 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

Dated: \_\_\_\_\_, 20\_\_\_\_\_.

Correspondence or Claims relating to this bond should be sent to the Surety at the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
PRINCIPAL  
\_\_\_\_\_  
SURETY  
\_\_\_\_\_  
ATTORNEY-IN-FACT

NOTE: Signatures of those executing for the Principal and for the Surety must be properly acknowledged, and a Power of Attorney attached for the Surety.

**NOTARY ACKNOWLEDGMENTS ATTACHED**

# PRINCIPAL

## ACKNOWLEDGMENT

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_,  
(here insert name and title of the officer)

personally appeared \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of \_\_\_\_\_ that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_

(Seal)

# SURETY

## ACKNOWLEDGMENT

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_,  
(here insert name and title of the officer)

personally appeared \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of \_\_\_\_\_ that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_

(Seal)





# County of El Dorado

## PERFORMANCE BOND

Bond No. \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that we \_\_\_\_\_

the Contractor in the Contract hereto annexed, as Principal, and \_\_\_\_\_

as Surety, are held firmly bound unto the County of El Dorado, a political subdivision of the State of California, hereinafter called the "Obligee" in the sum of \_\_\_\_\_ Dollars,

( \$ \_\_\_\_\_ ) lawful money of the United States, for which payment, well and truly to be made,

we bind ourselves, jointly and severally, firmly by these presents.

Signed, sealed and dated: \_\_\_\_\_

The condition of the above obligation is such that if said Principal as Contractor in the Contract hereto annexed shall faithfully perform each and all of the conditions of said Contract to be performed by him, and shall furnish all tools, equipment, apparatus, facilities, transportation, labor and material, other than material, if any, agreed to be furnished by the Obligee, necessary to perform and complete, and to perform and complete in a good and workmanlike manner, the work of **Contract No. PW 13-30675, CIP No. 95153 for the Boulder Mountain Erosion Control Project** in strict conformity with the terms and conditions set forth in the Contract hereto annexed, then this obligation shall be null and void; otherwise this bond shall remain in full force and effect and the said Surety will complete the Contract work under its own supervision, by Contract or otherwise, and pay all costs thereof for the balance due under terms of the Contract, and the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the court.

This guarantee shall insure the Obligee during the work required by any Contract and for a period of one (1) year from the date of acceptance of the work against faulty or improper materials or workmanship that may be discovered during that time.

No right of action shall accrue under this bond to or for the use of any person other than the Obligee named herein.

Dated: \_\_\_\_\_, 20\_\_\_\_\_.

Correspondence or Claims relating to this bond should be sent to the Surety at the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
PRINCIPAL  
\_\_\_\_\_  
SURETY  
\_\_\_\_\_  
ATTORNEY-IN-FACT

NOTE: Signatures of those executing for the Principal and for the Surety must be properly acknowledged, and a Power of Attorney attached for the Surety.

**NOTARY ACKNOWLEDGMENTS ATTACHED**

**PRINCIPAL**

**ACKNOWLEDGMENT**

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_,  
(here insert name and title of the officer)

personally appeared \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of \_\_\_\_\_ that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_

(Seal)

# SURETY

## ACKNOWLEDGMENT

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_,  
(here insert name and title of the officer)

personally appeared \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of \_\_\_\_\_ that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_

(Seal)



# 2013 Withholding Exemption Certificate

**590**

This form can only be used to certify exemption from nonresident withholding under California Revenue and Taxation Code (R&TC) Section 18662. Do not use this form for exemption from wage withholding.

File this form with your withholding agent. (Please type or print)

Withholding agent's name \_\_\_\_\_

Payee's name _____	Payee's <input type="checkbox"/> SSN or ITIN <input type="checkbox"/> FEIN <input type="checkbox"/> CA corp. no. <input type="checkbox"/> CA SOS file no
Address (number and street, PO Box, or PMB no.) _____	Apt. no./ Ste. no. _____
City _____	State _____ ZIP Code _____

Read the following carefully and check the box that applies to the payee.

I certify that for the reasons checked below, the payee named on this form is exempt from the California income tax withholding requirement on payment(s) made to the entity or individual.

- Individuals — Certification of Residency:**  
I am a resident of California and I reside at the address shown above. If I become a nonresident at any time, I will promptly notify the withholding agent. See instructions for General Information D, Who is a Resident, for the definition of a resident.
- Corporations:**  
The above-named corporation has a permanent place of business in California at the address shown above or is qualified through the California Secretary of State (SOS) to do business in California. The corporation will file a California tax return and withhold on payments of California source income to nonresidents when required. If this corporation ceases to have a permanent place of business in California or ceases to do any of the above, I will promptly notify the withholding agent. See instructions for General Information F, What is a Permanent Place of Business, for the definition of permanent place of business.
- Partnerships or limited liability companies (LLC):**  
The above-named partnership or LLC has a permanent place of business in California at the address shown above or is registered with the California SOS, and is subject to the laws of California. The partnership or LLC will file a California tax return and will withhold on foreign and domestic nonresident partners or members when required. If the partnership or LLC ceases to do any of the above, I will promptly inform the withholding agent. For withholding purposes, a limited liability partnership (LLP) is treated like any other partnership.
- Tax-Exempt Entities:**  
The above-named entity is exempt from tax under California Revenue and Taxation Code (R&TC) Section 23701 \_\_\_\_\_ (insert letter) or Internal Revenue Code Section 501(c) \_\_\_\_\_ (insert number). The tax-exempt entity will withhold on payments of California source income to nonresidents when required. If this entity ceases to be exempt from tax, I will promptly notify the withholding agent. Individuals cannot be tax-exempt entities.
- Insurance Companies, Individual Retirement Arrangements (IRAs), or Qualified Pension/Profit Sharing Plans:**  
The above-named entity is an insurance company, IRA, or a federally qualified pension or profit-sharing plan.
- California Trusts:**  
At least one trustee and one noncontingent beneficiary of the above-named trust is a California resident. The trust will file a California fiduciary tax return and will withhold on foreign and domestic nonresident beneficiaries when required. If the trustee becomes a nonresident at any time, I will promptly notify the withholding agent.
- Estates — Certification of Residency of Deceased Person:**  
I am the executor of the above-named person's estate. The decedent was a California resident at the time of death. The estate will file a California fiduciary tax return and will withhold on foreign and domestic nonresident beneficiaries when required.
- Nonmilitary Spouse of a Military Servicemember:**  
I am a nonmilitary spouse of a military servicemember and I meet the Military Spouse Residency Relief Act (MSRRA) requirements. See instructions for General Information E, MSRRA.

**CERTIFICATE:** Please complete and sign below.

Under penalties of perjury, I hereby certify that the information provided in this document is, to the best of my knowledge, true and correct. If conditions change, I will promptly notify the withholding agent.

Payee's name and title (type or print) \_\_\_\_\_ Daytime telephone no. \_\_\_\_\_

Payee's signature ► \_\_\_\_\_ Date \_\_\_\_\_

# Instructions for Form 590

## Withholding Exemption Certificate

References in these instructions are to the California Revenue and Taxation Code (R&TC).

### General Information

For purposes of California income tax, references to a spouse, husband, or wife also refer to a Registered Domestic Partner (RDP) unless otherwise specified. For more information on RDPs, get FTB Pub. 737, Tax Information for Registered Domestic Partners.

**Private Mail Box (PMB)** – Include the PMB in the address field. Write “PMB” first, then the box number. Example: 111 Main Street PMB 123.

**Foreign Address** – Enter the information in the following order: City, Country, Province/Region, and Postal Code. Follow the country’s practice for entering the postal code. **Do not** abbreviate the country’s name.

### A Purpose

Use Form 590, Withholding Exemption Certificate, to certify an exemption from nonresident withholding. California residents or entities should complete and present Form 590 to the withholding agent. The withholding agent is then relieved of the withholding requirements if the agent relies in good faith on a completed and signed Form 590 unless told by the Franchise Tax Board (FTB) that the form should not be relied upon.

**Important – This form cannot be used for exemption from wage and real estate withholding.**

- If you are an employee, any wage withholding questions should be directed to the FTB General Information number, 800.852.5711. Employers should call 888.745.3886 or go to [edd.ca.gov](http://edd.ca.gov).
- Sellers of California real estate use Form 593-C, Real Estate Withholding Certificate, to claim an exemption from real estate withholding.

### B Requirement

R&TC Section 18662 requires withholding of income or franchise tax on payments of California source income made to nonresidents of California.

Withholding is required on the following, but is not limited to:

- Payments to nonresidents for services rendered in California.
- Distributions of California source income made to domestic nonresident S corporation shareholders, partners and members and allocations of California source income made to foreign partners and members.
- Payments to nonresidents for rents if the payments are made in the course of the withholding agent’s business.
- Payments to nonresidents for royalties with activities in California.

- Distributions of California source income to nonresident beneficiaries from an estate or trust.
- Prizes and winnings received by nonresidents for contests in California.

However, withholding is optional if the total payments of California source income are \$1,500 or less during the calendar year.

For more information on withholding get FTB Pub. 1017, Resident and Nonresident Withholding Guidelines. To get a withholding publication see General Information H, Publications, Forms, and Additional Information.

**Backup Withholding** – Beginning on or after January 1, 2010, with certain limited exceptions, payers that are required to withhold and remit backup withholding to the Internal Revenue Service (IRS) are also required to withhold and remit to the FTB. The California backup withholding rate is 7% of the payment. For California purposes, dividends, interests, and any financial institutions release of loan funds made in the normal course of business are exempt from backup withholding. For additional information on California backup withholding, go to [ftb.ca.gov](http://ftb.ca.gov) and search for **backup withholding**.

If a payee has backup withholding, the payee must contact the FTB to provide a valid Taxpayer Identification Number (TIN) before filing a tax return. The following are acceptable TINs: social security number (SSN); individual taxpayer identification number (ITIN); federal employer identification number (FEIN); California corporation number (CA Corp No.); or California Secretary of State (SOS) file number. Failure to provide a valid TIN will result in the denial of the backup withholding credit. For more information go to [ftb.ca.gov](http://ftb.ca.gov) and search for **backup withholding**.

**Who is Excluded from Withholding** – The following are excluded from withholding and completing this form:

- The United States and any of its agencies or instrumentalities
- A state, a possession of the United States, the District of Columbia, or any of its political subdivisions or instrumentalities
- A foreign government or any of its political subdivisions, agencies, or instrumentalities

### C Who Certifies this Form

Form 590 is certified by the payee. An incomplete certificate is invalid and the withholding agent should not accept it. If the withholding agent receives an incomplete certificate, the withholding agent is required to withhold tax on payments made to the payee until a valid certificate is received. In lieu of a completed certificate on the preprinted form, the

withholding agent may accept as a substitute certificate a letter from the payee explaining why the payee is not subject to withholding. The letter must contain all the information required on the certificate in similar language, including the under penalty of perjury statement and the payee’s taxpayer identification number. The withholding agent must retain a copy of the certificate or substitute for at least four years after the last payment to which the certificate applies, and provide it upon request to the FTB.

For example, if an entertainer (or the entertainer’s business entity) is paid for a performance, the entertainer’s information must be provided. **Do not** submit the entertainer’s agent or promoter information.

The grantor of a grantor trust shall be treated as the payee for withholding purposes.

Therefore, if the payee is a grantor trust and one or more of the grantors is a nonresident, withholding is required. If all of the grantors on the trust are residents, no withholding is required. Resident grantors can check the box on Form 590 labeled “Individuals — Certification of Residency.”

### D Who is a Resident

A California resident is any individual who is in California for other than a temporary or transitory purpose or any individual domiciled in California who is absent for a temporary or transitory purpose.

An individual domiciled in California who is absent from California for an uninterrupted period of at least 546 consecutive days under an employment-related contract is considered outside California for other than a temporary or transitory purpose.

An individual is still considered outside California for other than a temporary or transitory purpose if return visits to California do not total more than 45 days during any taxable year covered by an employment contract.

This provision does not apply if an individual has income from stocks, bonds, notes, or other intangible personal property in excess of \$200,000 in any taxable year in which the employment-related contract is in effect.

A spouse/RDP absent from California for an uninterrupted period of at least 546 days to accompany a spouse/RDP under an employment-related contract is considered outside of California for other than a temporary or transitory purpose.

Generally, an individual who comes to California for a purpose which will extend over a long or indefinite period will be considered a resident. However, an individual who comes to perform a particular contract of short duration will be considered a nonresident.

For assistance in determining resident status, get FTB Pub. 1031, Guidelines for Determining Resident Status, and FTB Pub. 1032, Tax Information for Military Personnel, or call the FTB at 800.852.5711 or 916.845.6500.

## E Military Spouse Residency Relief Act (MSRRA)

Generally, for tax purposes you are considered to maintain your existing residence or domicile. If a military servicemember and nonmilitary spouse have the same state of domicile, the MSRRA provides:

- A spouse shall not be deemed to have lost a residence or domicile in any state solely by reason of being absent to be with the servicemember serving in compliance with military orders.
- A spouse shall not be deemed to have acquired a residence or domicile in any other state solely by reason of being there to be with the servicemember serving in compliance with military orders.

**Domicile** is defined as the one place:

- Where you maintain a true, fixed, and permanent home
- To which you intend to return whenever you are absent

A military servicemember's nonmilitary spouse is considered a nonresident for tax purposes if the servicemember and spouse have the same domicile outside of California and the spouse is in California solely to be with the servicemember who is serving in compliance with Permanent Change of Station orders. Note: California may require nonmilitary spouses of military servicemembers to provide proof that they meet the criteria for California personal income tax exemption as set forth in the MSRRA.

Income of a military servicemember's nonmilitary spouse for services performed in California is not California source income subject to state tax if the spouse is in California to be with the servicemember serving in compliance with military orders, and the servicemember and spouse have the same domicile in a state other than California.

For additional information or assistance in determining whether the applicant meets the MSRRA requirements, get FTB Pub. 1032.

## F What is a Permanent Place of Business

A corporation has a permanent place of business in California if it is organized and existing under the laws of California or if it is a foreign corporation qualified to transact intrastate business by the California SOS. A corporation that has not qualified to transact intrastate business (e.g., a corporation engaged exclusively in interstate commerce) will be considered as having a permanent place of business in California only if it maintains a permanent office in California that is permanently staffed by its employees.

## G Withholding Agent

Keep Form 590 for your records. **Do not** send this form to the FTB unless it has been specifically requested.

For more information, contact Withholding Services and Compliance, see General Information H.

The payee must notify the withholding agent if any of the following situations occur:

- The individual payee becomes a nonresident.
- The corporation ceases to have a permanent place of business in California or ceases to be qualified to do business in California.
- The partnership ceases to have a permanent place of business in California.
- The LLC ceases to have a permanent place of business in California.
- The tax-exempt entity loses its tax-exempt status.

The withholding agent must then withhold and report the withholding using Form 592, Resident and Nonresident Withholding Statement, and remit the withholding using Form 592-V, Payment Voucher for Resident and Nonresident Withholding. Form 592-B, Resident and Nonresident Withholding Tax Statement, is retained by the withholding agent and a copy is given to the payee.

## H Additional Information

To get additional nonresident withholding information, contact the Withholding Services and Compliance.

WITHHOLDING SERVICES AND  
COMPLIANCE MS F182  
FRANCHISE TAX BOARD  
PO BOX 942867  
SACRAMENTO CA 94267-0651

Telephone: **888.792.4900**  
916.845.4900

Fax: 916.845.9512

You can download, view, and print California tax forms and publications at [ftb.ca.gov](http://ftb.ca.gov).

OR to get forms by mail write to:

TAX FORMS REQUEST UNIT MS F284  
FRANCHISE TAX BOARD  
PO BOX 307  
RANCHO CORDOVA CA 95741-0307

For all other questions unrelated to withholding or to access the TTY/TDD numbers, see the information below.

### Internet and Telephone Assistance

Website: [ftb.ca.gov](http://ftb.ca.gov)

Telephone: 800.852.5711 from within the United States  
916.845.6500 from outside the United States

TTY/TDD: 800.822.6268 for persons with hearing or speech impairments

### Asistencia Por Internet y Teléfono

Sitio web: [ftb.ca.gov](http://ftb.ca.gov)

Teléfono: 800.852.5711 dentro de los Estados Unidos  
916.845.6500 fuera de los Estados Unidos

TTY/TDD: 800.822.6268 personas con discapacidades auditivas y del habla







**PAYEE DATA RECORD**

(REVERSE)

<p><b>1</b></p>	<p><b>Requirement to Complete Payee Data Record</b></p> <p>A completed Payee Data Record is required for payments to all non-governmental entities and will be kept on file at the County of El Dorado Auditor-Controller's Office.</p> <p>Payees who do not wish to complete the Payee Data Record may elect to not do business with the County of El Dorado. If the payee does not complete the form and the required payee data is not otherwise provided, payment may be reduced for federal backup withholding and nonresident State income tax withholding. Amounts reported on Information Returns (1099) are in accordance with the Internal Revenue Code and the California Revenue and Taxation Code.</p>
<p><b>2</b></p>	<p>Enter the payee's legal business name. Sole proprietorships must also include the owner's full name. An individual must list his/her full name. The mailing address should be the address at which the payee chooses to receive correspondence. Do not enter payment address or lock box information here.</p>
<p><b>3</b></p>	<p>Check the box that corresponds to the payee business type. Check only one box. Corporations must check the box that identifies the type of corporation. The County of El Dorado requires that all parties entering into business transactions that may lead to payment(s) from the County provide their Taxpayer Identification Number (TIN). The TIN is required by the California Revenue and Taxation Code Section 18646 to facilitate tax compliance enforcement activities and the preparation of Form 1099 and other information returns as required by the Internal Revenue Code Section 6109(a).</p> <p>The TIN for individuals and sole proprietorships is the Social Security Number (SSN). Only partnerships, estates, trusts, limited liability corporations and corporations will enter their Federal Employer Identification Number (FEIN).</p>
<p><b>4</b></p>	<p><b>Are you a California resident or nonresident?</b></p> <p>A corporation will be defined as a "resident" if it has a permanent place of business in California or is qualified through the Secretary of State to do business in California.</p> <p>A partnership is considered a resident partnership if it has a permanent place of business in California. An estate is a resident if the decedent was a California resident at time of death. A trust is a resident if at least one trustee is a California resident.</p> <p>For individuals and sole proprietors, the term "resident" includes every individual who is in California for other than a temporary or transitory purpose and any individual domiciled in California who is absent for a temporary or transitory purpose. Generally, an individual who comes to California for a purpose that will extend over a long or indefinite period will be considered a resident. However, an individual who comes to perform a particular contract of short duration will be considered a nonresident.</p> <p>Payments to all nonresidents may be subject to withholding. Nonresident payees performing services in California or receiving rent, lease, or royalty payments from property (real or personal) located in California will have 7% of their total payments withheld for State income taxes. However, no withholding is required if total payments to the payee are \$1,500 or less for the calendar year. Nonresidents who have been granted a waiver on payments of California source income from the California Franchise Tax Board must submit a copy of the waiver.</p> <p>For information on Nonresident Withholding, contact the Franchise Tax Board at the numbers listed below:                  Withholding Services and Compliance Section: 1-888-792-4900 E-mail address: wscs.gen@ftb.ca.gov                  For hearing impaired with TDD, call: 1-800-822-6268 Website: www.ftb.ca.gov</p> <p>California nonresidents charging California sales tax are required to provide their California sales tax number.</p>
<p><b>5</b></p>	<p>Provide the name, title, signature, and telephone number of the authorized individual completing this form. Provide the date the form was completed.</p>
<p><b>6</b></p>	<p>This section must be completed by the department/office requesting the information.</p>
	<p><b>Privacy Statement</b></p> <p>Section 7(b) of the Privacy Act of 1974 (Public Law 93-579) requires that any federal, State, or local governmental agency, which requests an individual to disclose their social security account number, shall inform that individual whether that disclosure is mandatory or voluntary, by which statutory or other authority such number is solicited, and what uses will be made of it.</p> <p>It is mandatory to furnish the information requested. Federal law requires that payment for which the requested information is not provided is subject to federal backup withholding and State law imposes noncompliance penalties of up to \$20,000.</p> <p>You have the right to access records containing your personal information, such as your SSN. To exercise that right, please contact the County of El Dorado Auditor-Controller's Office in writing.</p> <p>All questions should be referred to the County of El Dorado Auditor-Controller's Office.</p>

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

**SPECIAL PROVISIONS**

ANNEXED TO CONTRACT NO. PW 13-30675  
CIP NO. 95153

**SECTION 1. SPECIFICATIONS AND PLANS**

**1-1.01 GENERAL**

The work embraced herein shall be done in accordance with the Standard Specifications dated May 2006 and the Standard Plans dated May 2006, of the Department of Transportation (Caltrans) insofar as the same may apply, County of El Dorado Design and Improvement Standards Manual, revised March 8, 1994, including Resolutions 199-91 and 58-94 to adopt changes to the Design and Improvement Standards Manual and these special provisions.

Attention is directed to Appendix A of these special provisions containing Amendments to May 2006 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.

Amendments to the Standard Specifications set forth in these special provisions shall be considered as part of the Standard Specifications for the purposes set forth in Section 5-1.04, "Coordination and Interpretation of Plans, Standard Specifications and Special Provisions," of the Standard Specifications. Whenever either the term "Standard Specifications is amended" or the term "Standard Specifications are amended" is used in the special provisions, the indented text or table following the term shall be considered an amendment to the Standard Specifications. **In case of conflict between such amendments and the Standard Specifications, the amendments shall take precedence over and be used in lieu of the conflicting portions.**

**In case of conflict between the Standard Specifications, the Amendments to Standard Specifications, and these special provisions, the special provisions shall take precedence over and be used in lieu of the conflicting portions.**

**1-1.02 DEFINITIONS AND TERMS**

As used in the contract documents, unless the context otherwise requires, the following terms have the following meanings:

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

**CONTRACTOR** – Contractor responsible for constructing the **BOULDER MOUNTAIN EROSION CONTROL PROJECT**.

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

**CTC** – California Tahoe Conservancy.

**CCC** – California Conservation Corps.

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

**COUNTY SURVEYOR** – The elected official holding the title of County Surveyor for the County of El Dorado, whose office is located in Placerville, California.

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

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

**ENGINEER / STATE HIGHWAY ENGINEER** – The Director of Transportation in the Department of Transportation for the County of El Dorado, or his/her authorized representative (Resident Engineer).

**FHWA** – Federal Highway Administration.

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

**LAHONTAN** – The California Regional Water Quality Control Board (CRWQCB) in the Lake Tahoe area known as the Lahontan Region.

**MUTCD** – California Manual on Uniform Traffic Control Devices (FHWA's 2009 Edition, as amended for use in California) 2012 Edition, also called the California MUTCD.

**OSHA** – Occupational Safety and Health Administration.

**PLANS** – The improvement plans titled “**BOULDER MOUNTAIN EROSION CONTROL PROJECT**” approved by the County of E Dorado Department of Transportation, and the Standard Plans.

**SEZ** – Stream Environment Zone - Land Capability Class 1b.

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

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

**STPUD** – South Tahoe Public Utility District.

**SURVEYOR** – An employee of the County of El Dorado Department of Transportation who is a registered Land Surveyor or who is performing surveying under the license of a registered Land Surveyor who is also employed by the Department of Transportation.

**STATE** – County of El Dorado.

**TRCD** – Tahoe Resource Conservation District.

**TRPA** – Tahoe Regional Planning Agency.

**USDA** – United States Department of Agriculture.

**USDOT** – United States Department of Transportation.

**USFS** – United States Forest Service; also known as the USDA Forest Service – an agency of the United States Department of Agriculture.

All other Definitions and Terms are in accordance with the Standard Specifications.

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

### **2-1.01 GENERAL**

The Bidders' 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, the list of subcontractors shall also set forth the percentage of each bid item that will be done by each subcontractor listed. A sheet for listing the subcontractors is included in the Proposal.

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 bonds shall conform to the bond form included in this Proposal for the project "BOULDER MOUNTAIN EROSION CONTROL PROJECT", and shall be properly filled out and executed. Do not detach the bidder's bonds from the proposal.**

**(DO NOT DETACH THE FORM)**

**The proposal shall be attached and submitted with the Contract Documents bid package in its entirety.**

The form of 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 shall furnish one Bidder's Bond in an amount equal to at least ten percent (10%) of the total amount bid.**

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.

### **2-1.02 NOT USED**

### **2-1.03 FEDERAL LOBBYING RESTRICTIONS**

Section 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 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. Information regarding standard Form - LLL, "Disclosure of Lobbying Activities," is 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:

- A. 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
- B. A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or,
- C. A change in the officer(s), employee(s), or member(s) influencing or attempting to influence a covered Federal action.

#### **2-1.04 DISADVANTAGED BUSINESS ENTERPRISE (DBE)**

Contractor or Subcontractor shall not discriminate on the basis of race, color, national origin, sex in the performance of this Contract. Contractor shall also carry out applicable requirements of 7 CFR Part 3016 in the award and administration of this United State Forest Service assisted Contract. The applicable requirements of 7 CFR Part 3016 are as follows:

(a) *Contracting with small and minority firms, women's business enterprise and labor surplus area firms.*

- (1) Contractor will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.
- (2) Affirmative steps shall include:
  - (i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
  - (ii) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
  - (iii) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;
  - (iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;
  - (v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and
  - (vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (a)(2) (i) through (v) of this section.

Failure by Contractor to carry out these requirements is a material breach of the Contract, which may result in the termination of the Contract or such other remedy as County deems appropriate. Contractor shall include this assurance in every subcontract entered into as a result of the Contract.

#### **2-1.05 REQUIRED LISTING OF PROPOSED SUBCONTRACTORS**

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

Forms for listing the subcontractors who will work on this Project are included in the Proposal section of these Contract Documents.

#### **2-1.06 COMPLIANCE WITH FEDERAL REQUIREMENTS**

County may rely on federal assistance or grants for all or a portion of the funding for the services to be provided herein. As a requirement of County's use of federal grant funds, County is required to comply with certain contracting requirements and to extend those agency requirements to all third party contracts. Contractor shall comply with all applicable provisions of federal regulations, including those required by the USFS, including grant funding requirements and any related executive orders regarding the use, expenditure, control, reporting, allowable costs and management of such funds. The following Office of Management and Budget (OMB) Circulars, as applicable, and as implemented by various parts of the Code of Federal Regulations (CFR), are incorporated by reference and made a part of these Contract Documents:

*2 CFR Part 225, "Cost Principles for State, Local, and Indian Tribal Governments (formerly OMB Circular A-87)"*

*Circular A-102, as amended August 29, 1997, "Grants and Cooperative Agreements with State and Local Governments"*

*Circular A-133, revised June 26, 2007, "Audits of States, Local Governments, and Non-Profit Organizations"*

Copies of OMB Circulars are available on the Internet at:  
<http://www.whitehouse.gov/omb/circulars/index.html>.

Failure of Contractor to comply with any federal provision may be the basis for withholding payments for charges made by Contractor and for such other remedies as may be appropriate including termination of this Contract.

Contractor shall further comply with any flow-down or third-party contracting provisions which may be required under the federal regulations and which may apply to Contractor's subcontracts, if any, associated with this Contract.

## 2-1.07 COST PRINCIPLES

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

- A. Contractor shall comply with 2 CFR Part 225, Cost Principles for State and Local Governments, and with federal administrative procedures pursuant to 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments, and 49 CFR, Chapter 1, Parts 31 et seq., Federal Acquisition Regulations System, insofar as those regulations may apply to Contractor. This provision shall apply to every sub-recipient receiving funds as a Contractor or subcontractor under this Contract.
- B. Contractor shall comply with all applicable provisions of County's grant funding agreements and related documents with USFS, including the applicable requirements of 7 CFR 3015, 7 CFR 3016, 7 CFR 3018, 7 CFR 3052, and the cost principles of 2 CFR 225 and 48 CFR 31.2 as applicable. Contractor shall include those provisions, if applicable, in any of its agreements for goods or services that affect or are related to the services performed herein and shall ensure that any clauses required by federal or state statutes and executive orders and their implementing regulations are also incorporated.
- C. Any expenditures for costs for which Contractor has received payment or credit that are determined by subsequent audit to be unallowable under 2 CFR Part 225, 48 CFR, Parts 31 et seq. or 49 CFR, Part 18 are subject to repayment by Contractor to County.
- D. Travel and subsistence (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.
- E. Notwithstanding any other provision of this Agreement to the contrary, payments to Contractor for travel and subsistence (per diem) and mileage expenses, if applicable, for Contractor's staff or for 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 the then current State Department of Personnel Administration (DPA) rules. If the rates invoiced are in excess of these authorized rates, then Contractor is responsible for the cost difference and any overpayments shall be reimbursed to County upon demand. For the purposes of this Agreement, only mileage expenses shall be eligible for reimbursement in accordance with Article III, Compensation for Services above. No reimbursements for travel and subsistence (per diem) expenses for Contractor or subcontractors shall be allowed.
- F. 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.

## 2-1.08 BID PROTEST PROCEDURE

The protest procedure is intended to handle and resolve disputes related to the bid award for this project pursuant to Title 7 Code of Federal Regulations Chapter XXX Part 3016, and County of El Dorado policies and procedures. A protestor must exhaust all administrative remedies with the County of El Dorado before pursuing a protest with a Federal Agency. Reviews of protests by the Federal agency will be limited to:

- (i.) Violations of Federal law or regulations and the standards of 7 CFR Chapter XXX Part 3016. Violations of State of California or local law will be under the jurisdiction of the State of California or the County of El Dorado; and



- (ii.) Violation of the County of El Dorado's protest procedures for failure to review a complaint or protest. Protests received by the Federal agency other than those specified above will be referred to the County of El Dorado.

The protest procedure is an extension of the formal bid process and allows those who wish to protest the recommendation of an award after bid the opportunity to be heard. This procedure is available after the informal methods have failed to reach a solution.

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

**Procedure:** If a bidder wishes to protest the award, the procedure shall be as follows:

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

In its discretion, the County of El Dorado may accept or reject any bids. The decision of the Board of Supervisors shall be final in accepting or rejecting the bid protest, awarding the bid, or rejecting any or all bids.

## **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.

### **3-1.02 AWARD OF CONTRACT**

Section 3-1.02, "Award of Contract", of the Standard Specifications is amended to read:

**3-1.01 Award of Contract;** Bids will be considered for award by the Board of Supervisors. The County of El Dorado reserves the right after opening bids to reject

any or all bids, to waive any irregularity in a bid, or to make award to the lowest, responsive, responsible Bidder and reject all other bids, as it may best serve the interest of the County. The award of Contract, if it be awarded, will be to the lowest, responsive, responsible bidder whose Proposal complies with all the requirements prescribed. 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.

All bids will be compared on the basis of the Proposal Pay Items and Bid Price Schedule of the quantities of work to be done.

The lowest, responsive, responsible bidder shall be the bidder submitting the lowest additive total of all the bid items and meeting all other requirements. 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 County of El Dorado Board of Supervisors.

The successful bidder shall return the signed Contract, the Contract bonds, a California Form 590- Withholding Exemption Certificate, a County's Payee Data Record Form, and certificates of insurance to the Office of the Department of Transportation within five (5) days, not including Saturdays, Sundays, and legal holidays, of the date of the Notice of Award of Contract Letter. Priority delivery or mail of these documents should be to the attention of Janel Gifford, County of El Dorado Department of Transportation at 2850 Fairlane Court, Placerville, California 95667, Janel.Gifford@edcgov.us.

The failure of the successful bidder to furnish any bond required of it by law or by this Agreement, 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 documents 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 8-1.06, "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 contract working days shall begin on the date stated in the Notice to Proceed issued by the Department of Transportation.

The work shall be diligently prosecuted to completion before the expiration of **TWENTY FIVE WORKING DAYS.**

The Contractor shall pay to the County of El Dorado the sum of three thousand two hundred dollars (**\$3,200.00**) per day, for each and every calendar day's delay in finishing the work in excess of **TWENTY FIVE (25) WORKING DAYS.** The County will suspend the assessment of liquidated damages for each day

between October 15 and May 1 on which climatic conditions or governing agency rules and regulation prohibit the Contractor from performing the Work.

Contractor is advised that most construction operations are prohibited by local agency ordinances in the period between October 15 and May 1. Contractor is responsible for contacting the TRPA and Lahontan to determine the conditions under which this requirement may be modified for specific types of work and for unusual weather conditions.

#### **4-1.02 CONSTRUCTION SCHEDULE AND WORK HOURS**

Contractor shall schedule its work day between the hours of 8:00 a.m. to 6:30 p.m. weekdays. These work hours may be extended only with the written approval of the Engineer. A working day shall be defined as Monday through Friday excluding the following County-observed holidays: New Years Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving, Friday after Thanksgiving, Christmas Eve, and Christmas Day. Contractor may work on Saturdays, Sundays, or County-observed holidays, from 8:00 a.m. to 5:00 p.m., only with the written approval of the Engineer. If the Engineer approves work on such days and Contractor works on the controlling operation or operations for at least 60% of the total daily time, these days will be counted as working days. Controlling operation is defined in Section 8-1.06 "Time of Completion" of the Standard Specifications.

#### **4-1.02A COMMENCEMENT OF WORK REQUIREMENTS**

The Contract working days shall begin on the date specified in the Notice to Proceed letter issued to Contractor. The Engineer will review and work with Contractor cooperatively to approve Contractor's submittals and schedule the pre-grade inspection by TRPA within ten (10) days of the date specified in the Notice to Proceed. Contractor shall install Temporary Erosion Control measures within ten (10) days of the date specified in the Notice to Proceed.

Contractor shall complete the work within: **twenty five (25) working days** of the date specified in the Notice to Proceed.

The Contract days shall begin on the date specified in the Notice to Proceed, and Contractor may not begin work (other than the temporary erosion control installation) until all required submittals are approved by the Engineer and TRPA completes its required pre-grade inspection.

Contractor's attention is directed to Section 10-1.01, "Order of Work," in these Special Provisions.

#### **4-1.03 CONTRACTOR SUBMITTALS**

Contractor may provide the Submittals required in Section 4-1.03, "Contractor Submittals," 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, or as stated below. Contractor shall provide a minimum of two (2) hardcopies of each submittal listed below. Additional copies may be required at the request of the Engineer.

- Contractor must submit a Construction Schedule for the Engineer's review and approval. The first two paragraphs of Section 8-1.04, "Progress Schedule," of the Standard Specifications shall not apply. If the Engineer requires changes to the initial Construction Schedule, Contractor shall provide the Engineer with a revised schedule within five (5) working days of receipt of notification requiring changes to the initial Construction Schedule. Subsequent Schedules shall be updated and submitted to the Engineer at the weekly meetings if Contractor falls behind the initially approved schedule by more than three (3) days. Contents of all schedules shall conform to paragraphs three, four, and five of 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.

- Contractor must submit a Temporary Erosion Control Plan that shall include the locations and descriptions of erosion control measures and daily clean up measures in accordance with all federal, state, and local agency regulations, the Plans, the Storm Water Pollution Prevention Plan (SWPPP), and these Special Provisions. Contractor may use the temporary erosion control measures and details shown on the Plans in preparing a Temporary Erosion Control Plan. However, Contractor's Temporary Erosion Control Plan shall show specifically where filter fence, weighted fiber rolls or gravel-filled rolls, and gravel bags will be applied, where the tire wash and concrete wash areas will be located, and any additional temporary erosion control required due to Contractor's method of operation or required to meet TRPA and Lahontan permit requirements. Contractor's Temporary Erosion Control Plan shall also detail specifically what temporary erosion control measures will be applied and where the temporary erosion control measures will be placed in any area to be used to store Contractor's materials, equipment, and supplies. All temporary erosion control measures, their implementation, and maintenance shall conform to the Plans and the provisions of the SWPPP outlined in Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions. A complete copy of the SWPPP is available for review at the office of County of El Dorado Department of Transportation, 924B Emerald Bay Road, South Lake Tahoe, CA 96150. Contractor shall not propose or use alternative temporary erosion control measures unless the Contract Documents specify where and which alternatives may be used. Contractor's Temporary Erosion Control Plan is subject to TRPA review and approval.
- Contractor must submit a Traffic Control Plan for the Engineer's review and approval. Contractor must use the requirements specified in the Traffic Control Plan contained in the Plans in preparing its Traffic Control Plan. Contractor's Plan must also coordinate with the traffic control plan provisions described in Section 10-1.04, "Traffic Control Plan," of these Special Provisions. All Traffic Control shall be in accordance with Section 10-1.03, "Maintaining Traffic," of these Special Provisions.
- Contractor must submit shop drawings for the concrete drainage inlets and drain basin in accordance with the item descriptions.
- Contractor must submit a Spill Contingency Plan in accordance with Section 5-1.56, "Spill Contingency Plan," of these Special Provisions.
- The Dewatering Plan shall be in accordance with Section 10-1.20, "Dewatering," of these Special Provisions and in accordance with the applicable Item descriptions.
- The Dust Control Plan shall be in accordance with Section 5-1.55, "Dust and Tracking Control," of these Special Provisions and in accordance with the applicable Item descriptions.
- Contractor must submit for County and Lahontan review any proposed revisions to the SWPPP. Upon approval, County will enter the revision into the SWPPP Amendment Log.
- Contractor must submit a concrete cutoff wall removal plan for modifying the top of the concrete cutoff wall in accordance with the item description.
- Contractor must submit a set of "As-Constructed Plans". The "As-Constructed Plans" shall contain changes made to the Plans to reflect actual construction of the proposed improvements. The "As-Constructed Plans" shall be current and updated in a timely manner so the Plans and its information are made available to the Engineer for review during the weekly meetings. Contractor shall make "As-Constructed Plans" corrections and additions using red ink. Corrections and additions are, but not limited to: changes to pipes, channels, drainage structures, and other drainage details; corrected typical sections, base, and surfacing details; changes in vertical and horizontal alignment; establish or re-establish right-of-way markers, monuments, and bench marks; new, replaced, removed or abandoned utilities, especially underground; and, any other construction details or appurtenances not shown on the Plans. When Engineer has made the final inspection as provided in Section 5-1.36, "Final Inspection," of these Special Provisions, then the Contractor shall submit the complete set of "As-Constructed Plans".

With the exception of the "As-Constructed Plans," no mobilization payments will be made until **all** of the above submittals have been reviewed and approved by the Engineer. When weekly schedule update submittals are required, the provisions regarding this submittal and progress payments shall be in accordance with paragraphs three, four, and five of Section 8-1.04, "Progress Schedule", of the Standard Specifications.

Contractor must comply with the time frames listed in the applicable Special Provisions Sections for the following submittals:

- Contractor must submit a Shoring and Excavation Plan in accordance with Section 7-1.01E, "Trench Safety," of the Standard Specifications, as it applies to sediment trap and pipe installations (See Section 10-1.26, "Shoring and Excavation Plan," of these Special Provisions).
- Contractor must submit AC mix designs and testing in accordance with Section 10-1.15 "Asphalt Concrete," of these Special Provisions.
- Contractor must submit concrete mix designs in accordance with Section 90, "Portland Cement Concrete," of the Standard Specifications and Section 10-1.19, "Concrete Structures," of these Special Provisions.
- Contractor must submit Certificates of Compliance in accordance with Section 5-1.53, "Certificates of Compliance," of these Special Provisions.
- Contractor must submit a plan for driveway access in accordance with Section 10-1.03, "Maintaining Traffic," of these Special Provisions.
- Contractor must submit information regarding the equipment to be used for the application of mulch and tackifier in accordance with Section 10-1.10D, "Excavating and Grading, Materials," of these Special Provisions.

Approval of all submittals by the Engineer does not relieve 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. County review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Any action is subject to the requirements of the Plans, Standard Specifications, and these Special Provisions. Contractor is responsible for dimensions which shall be confirmed and correlated at the project site; fabrication processes and techniques of construction; coordination of its work with that of all other trades, and the satisfactory performance of its work.

#### **4-1.04 PRE-CONSTRUCTION CONFERENCE**

Prior to the start of any work, the Engineer will hold a pre-construction conference to discuss important aspects of the project. At this conference, Contractor shall submit in writing, signed by the officers of the corporation if applicable, the names of two employees who will be the superintendent on the project. The second name serves as an alternate in the absence of the first designee. The superintendent shall be on the site at all times that work is in progress. Failure to be on site at all times of work constitutes **suspension** of work by Contractor. Weekly meetings will be held to discuss construction issues and scheduling. Contractor's (or designee's) attendance is mandatory.

Full compensation for the required attendance shall be considered as included in the various items of work and no additional compensation will be allowed therefor.

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

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

Contractor shall notify the Engineer within five (5) working days of any occurrence which, in 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 Contractor within five (5) working days of its receipt.

## **SECTION 5. GENERAL**

### **5-1.01 NOT USED**

### **5-1.02 NOT USED**

### **5-1.03 LINES AND GRADES**

Stakes or marks will be set by the Engineer in conformance with Section 5-1.57, "Construction Staking," of these Special Provisions.

### **5-1.04 CONTRACT BONDS**

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

Bonds shall be a Performance Bond equal to one hundred percent (100%) of the total amount payable by the terms of the Contract and a Payment Bond equal to one hundred percent (100%) of the total amount payable under the terms of the Contract.

### **5-1.05 COST REDUCTION INCENTIVE**

Attention is directed to Section 5-1.05, "Cost Reduction Incentive," of the Standard Specifications.

Prior to preparing a written cost reduction proposal, 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 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 County by reducing the contract working days, not including plant establishment if applicable. Attention is directed to "Beginning of Work, Time of Completion and Liquidated Damages" of these Special Provisions regarding the working days.

### **5-1.06 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 (GOV. CODE, SECTION 12990)**

Attention is 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 or County contracts and subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth therein. The Specifications are applicable to all nonexempt State or County construction contracts and subcontracts of \$5,000 or more.

This Contract is subject to federal and state contract nondiscrimination and compliance requirements including Government Code, Section 12990, and shall be construed and interpreted in compliance with said provisions.

During the performance of this contract, Contractor agrees as follows:

- (1) Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
- (3) Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (5) Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (6) In the event of Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (7) Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency Contractor may request the United States to enter into such litigation to protect the interests of the United States.

Contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. Contractor shall carry out applicable requirements of 7 CFR Part 3016 in the award and administration of USDA assisted contracts. Failure by Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy, as County deems appropriate. Each subcontract signed by the bidder must include this assurance.

### **5-1.07 PREVAILING WAGE**

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

In accordance with the provisions of California Labor Code sections 1770, et seq., including but not limited to 1773, 1773.1, 1773.2, 1773.6 and 1773.7 the general prevailing rate of wages in the county in which the Work is to be done has been determined by the Director of the California Department of Industrial Relations. These wage rates appear in the California Department of Transportation publication entitled General Prevailing Wage Rates. Interested parties can obtain the current wage information by submitting their requests to the Department of Industrial Relations, Division of Labor Statistics and Research, PO Box 420603, San Francisco CA 94142-0603, Phone (415) 703-4774. This information is also available at the following address on the Internet: <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 shall be made available upon request, and in the case of projects involving federal funds, federal prevailing 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.

### **5-1.08 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 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.

### **5-1.09 CERTIFIED PAYROLL**

As required under the provisions of Labor Code Section 1776, 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 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 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 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 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 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 Contractor.

#### **5-1.10 DISPUTES RESOLUTION**

As permitted by Public Contract Code section 20104, the County has elected to resolve any claims between the Contractor and the County pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2 of the Public Contract Code. Attention is directed to Section 9, "Measurement and Payment" of the Standard Specifications for the contract claim procedure. The provisions of that Section constitute a non-judicial claim settlement procedure, and also step one of a two-step claim presentment procedure by agreement under Section 930.2 of the California Government Code. Specifically, step one is compliance with the contract claim procedure in accordance with the Contract Documents, including, but not limited to, Section 9, "Measurement and Payment" of the Standard Specifications. Step two is the filing of a timely Government Code Section 910 et seq. claim in accordance with the California Government Code. Any such claim shall affirmatively indicate Contractor's prior compliance with the contract claim procedure herein and previous dispositions under Section 9, "Measurement and Payment" of the Standard Specifications. Any claim that fails to conform to the contract claim procedure required in step one may not be asserted in any subsequent Government Code Section 910 et seq. claim.

As a condition precedent to arbitration or litigation, claims must first be mediated. Mediation shall be non-binding and utilize the services of a mediator mutually acceptable to the parties and, if the parties cannot agree, a mediator selected by the American Arbitration Association from its panel of approved mediators trained in construction industry mediation. All statutes of limitations shall be tolled from the date of the demand for mediation until a date two weeks following the mediation's conclusion. The cost of mediation shall be equally shared by the parties.

If Contractor fails to comply with these claim procedures as to any claim, then Contractor waives its rights to such claim. County shall not be deemed to waive or alter any provision of this section or Section 9, "Measurement and Payment" of the Standard Specifications if, at County's sole discretion, County administers a claim in a manner not in accord with those provisions.

These provisions shall survive termination, breach, or completion of the Contract Documents.

#### **5-1.11 RECORDS**

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 contact:

- 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 four (4) years after the date of acceptance of the Work. If Contractor intends to file claims against the Department, Contractor shall keep the cost accounting records specified above until complete resolution of all claims has been reached.

#### **5-1.12 RECORDS EXAMINATION AND AUDIT REQUIREMENTS**

Contractor shall maintain and make available to the USFS, the Comptroller General of the United States, the State of California, the California State Auditor, and County or to any of their 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 the USFS, the Comptroller General of the United States, the State, County or their duly authorized representatives for at least four (4) 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.

#### **5-1.13 SUBCONTRACTING**

No subcontract releases the Contractor from the contract or relieves the Contractor of their responsibility for a subcontractor's work.

If the Contractor violates Pub Cont Code § 4100 et seq., the County of El Dorado may exercise the remedies provided under Pub Cont Code § 4110. The County of El Dorado may refer the violation to the Contractors State License Board as provided under Pub Cont Code § 4111.

The Contractor shall perform work equaling at least 30 percent of the value of the original total bid with the Contractor's own employees and equipment, owned or rented, with or without operators.

Each subcontract must comply with the contract.

Each subcontractor must have an active and valid State contractor's license with a classification appropriate for the work to be performed (Bus & Prof Code, § 7000 et seq.).

Upon request by the Engineer, immediately remove and not again use a subcontractor who fails to prosecute the work satisfactorily.

Pursuant to the provisions in 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. The list of debarred contractors is available from the Department of Industrial Relations web site at <http://www.dir.ca.gov/DLSE/Debar.html>. Contractor shall not make or permit any award of a subcontract at any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal Assistance programs under Executive Order 12549 "Debarment and Suspension." Contractor and its subcontractors shall include in subcontracts at any tier the Debarment and Suspension Certification contained in the Proposal section of these Contract Documents.

**5-1.14 NOT USED**

**5-1.15 NOT USED**

**5-1.16 NOT USED**

**5-1.17 PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS**

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. Any violation of Section 7108.5 shall subject the violating contractor or subcontractor to the penalties, sanction and other remedies of that section. 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 prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

**5-1.18 PROMPT PAYMENT OF WITHHELD FUNDS TO SUBCONTRACTORS**

The Department shall hold retainage from the prime Contractor, as determined by the Department, of the contract work and pay retainage to the prime Contractor in accordance with "Payments" and "Payment of Withheld Funds" of these special provisions. The prime Contractor or subcontractor shall return all monies withheld in retention from the subcontractor within 30 days after receiving payment of withheld funds from the Department or prime contractor as applicable. Any violation of this provision 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 and contractual, administrative, or judicial remedies otherwise available to the prime contractor or subcontractor in the event of a dispute involving late payment or non payment by the prime contractor, deficient subcontract or performance, and/or noncompliance by a subcontractor.

**5-1.19 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.

Partial payments will be made no more than once each month for work completed in place. Work completed in place less than two working days prior to the preparation of the monthly pay estimate shall not be eligible for payment until the following month's estimate. The Department will retain five percent (5%) of the value of each progress payment. After Engineer determines that the project is substantially complete, the Department may, at Engineer's sole discretion, release half of all retention previously withheld and reduce any subsequent retentions withheld from subsequent progress payments to two and one-half percent (2.5%) of the value of subsequent progress payments. The retained funds shall be retained until thirty five (35) days after recordation of the Notice of Acceptance.

At the discretion of the Engineer, partial payment may be made for materials on hand which are furnished but not yet incorporated in the work.

#### **5-1.20 PAYMENT OF WITHHELD FUNDS**

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

#### **5-1.21 MEASUREMENT AND PAYMENT**

Attention is directed to Section 9, "Measurement and Payment," of the Standard Specifications.

In lieu of Section 11-1.02 items A through E of "Mobilization" of the Standard Specifications, the first monthly payment estimate will be prepared when the Engineer determines that 5% of the contract amount, not including mobilization, has been completed. Subsequent monthly pay estimates shall be made on the same day of the month as the first monthly pay estimate. Work completed in place less than 2 working days prior to the preparation of the monthly pay estimate shall not be eligible for payment until the following month's estimate. The third to last paragraph of Section 11, "Mobilization," of the Standard Specifications shall be amended to read: "The adjustment provisions in Section 4-1.03, "Changes," shall not apply to the contract lump sum item of mobilization."

Measurement shall be in accordance with Section 9 "Measurement and Payment," of the Standard Specifications or these Special Provisions.

#### **5-1.22 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, payment after acceptance, and final payments shall begin to accrue interest thirty (30) days after the receipt of an undisputed and properly submitted pay request from Contractor defined herein as the pay estimate prepared by Engineer and approved by the Contract Administrator for the County.
- 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 unpaid and undisputed claims 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 accept the claim statement.

The rate of interest payable on any award in arbitration shall not exceed six percent (6%) per annum in accordance with Public Contract Code Section 10240.13.

### 5-1.23 PUBLIC SAFETY

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

Attention is directed to Section 5-1.40, "Storage of Equipment, Materials, Supplies, Etc.," Section 10-1.03, "Maintaining Traffic," and Section 10-1.04, "Traffic Control Plan," of these Special Provisions.

Contractor shall install temporary railing (Type K) between any lanes carrying public traffic and any excavation, obstacle, or storage area when the following conditions exist:

1. Excavations – Whenever the near edge of which is 12 feet or less from the edge of the lane, except for:
  - a. Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.
  - b. Excavations less than one foot deep.
  - c. Trenches less than one foot wide for irrigation pipe or electrical conduit, or excavations less than one foot in diameter.
  - d. Excavations parallel to the lane for the purpose of pavement widening or reconstruction.
  - e. Excavations in side slopes, where the slope is steeper than 4:1.
  - f. Excavations protected by existing barrier or railing.

Contractor's attention is directed to Section 10-1.03, "Maintaining Traffic," of these Special Provisions.

2. Temporarily Unprotected Permanent Obstacles – Whenever the Work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and Contractor elects to install the obstacle prior to installing the protective system; or whenever Contractor, for its 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.
3. Storage Areas – Whenever material or equipment is stored within 12 feet of the lane and such storage is not otherwise prohibited by the Standard Specifications or these Special Provisions.

The approach end of temporary railing (Type K), installed in accordance 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 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 one foot transversely to 10 feet longitudinally with respect to the edge of the traffic lane. If the 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, with one longitudinal No. 5 reinforcing steel bar near the top in lieu of the 2 longitudinal No. 5 reinforcing steel bars near the top, as shown on the plans, 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" elsewhere in 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, Contractor shall close the adjacent traffic lane unless otherwise provided in the Standard Specifications or these Special Provisions:

<u>Approach Speed of Public Traffic (Posted Limit, Miles Per Hour)</u>	<u>Work Areas</u>
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 traffic lane, the line of cones or delineators shall be considered to be the edge of traffic lane, however, Contractor shall not reduce the width of an existing lane to less than 10 feet without written approval from the Engineer.

When work is not in progress on a trench or other excavation that requires 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 including furnishing and installing temporary railing (Type K) and temporary crash cushion modules 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.

**5-1.24 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.

**5-1.25 REMOVAL OF ASBESTOS AND HAZARDOUS SUBSTANCES**

When the presence of asbestos or hazardous substances is not shown on the plans or indicated in the Contract Documents and Contractor encounters materials which 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, Contractor may continue work in unaffected areas reasonably believed to be safe. Contractor shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In accordance with Section 25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including any exploratory work to identify and determine the extent of such 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 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.

#### **5-1.26 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.

The noise level requirement shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers, or transient equipment that may or may not be owned by 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 in this section shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

#### **5-1.27 NOT USED**

#### **5-1.28 NOT USED**

#### **5-1.29 PROJECT APPEARANCE**

The Contractor shall maintain a neat appearance to the work.

In any areas visible to the public, the following shall apply:

- A. When practicable, broken concrete, asphalt 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 false work that are to be reused shall be stacked neatly concurrently with their removal. Forms and false work that are not to be reused shall be disposed of concurrently with their removal, if applicable.

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.

#### **5-1.30 CONTRACTOR'S RESPONSIBILITY FOR MATERIALS**

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.

#### **5-1.31 LAKE, STREAM, AND AIR POLLUTION**

Contractor's attention is directed to the Fish and Game Code, El Dorado County Air Quality Management District Ordinances and Regulations, Section 7-1.01G "Water Pollution," of the Standard Specifications and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions, and other applicable statutes relating to pollution prevention or abatement. Contractor shall exercise every reasonable precaution to prevent silt, sand or other detritus from entering Lake Tahoe and live streams.

Attention is directed to Rule 300 "Open Burning", Rule 223 "Fugitive Dust - General Requirements", and Rule 223.1 "Fugitive Dust - Construction, Bulk Material Handling, Blasting, and Other Earthmoving Activities and Carryout and Trackout Prevention," of the County Air Quality Management District Rules and Regulations. A valid permit from an El Dorado County Air Quality Management District 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, TRPA, and County Air Quality Management District rules and regulations regarding reduction of construction related impacts on air quality, including the implementation of the following measures:

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

Pursuant to 7 CFR 3016.36(i)(12), Contractor shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 USC 1875(h)), section 508 of the Clean Water Act (33 USC 1368), Executive Order 11738, Environmental Protection Agency regulations (40 CFR part 15).

Oil, chemical, or greasy substances, cement or cement products originating from Contractor's operations shall not be allowed to enter or be placed where they will later enter streams. Washing of vehicles or construction equipment within the project area shall be in accordance with Sections 5-1.54, "Local, State, and Federal Agencies' Conditions of Approval and Permits," and 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions.

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.

### **5-1.32 UTILITIES**

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

Contractor shall still determine by potholing or other means the exact locations in advance of performing the contract items of work especially placement of the drainage work.

If the Contractor while performing the Contract discovers utility facilities not identified by the Engineer in the Contract Plans or Specifications, the 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. 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 utility owner permits the Contractor to perform the work, the work will be paid for by the County, via Force Account 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, "Force Account Payment," of the Standard Specifications.

Nothing herein shall be construed to require the Utility Owner to locate the presence of any existing services not expressly included in Government Code Section 4215, nor limit the Owner'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 Contractor's failure to exercise reasonable care shall be repaired at its cost and expense.



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: conductors of petroleum products, oxygen, chlorine, and toxic or flammable gases; natural gas in pipelines greater than six (6) inches (150 mm) in diameter or pipelines operating at pressures greater than 60 psi (415 kPa) (gage); 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 two (2) business days, but not more than fourteen (14) 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	1-800-642-2444

The Contractor shall determine the exact location of existing underground utilities in conflict with the excavation by excavating with hand tools within the area of the approximate location of the underground utility as determined by the field marking provided in accordance with Section 4216.3 of the Government Code before using any power-operated or power-driven excavating or boring equipment within the approximate location of the underground utilities. Power-operated or power-driven excavating or boring equipment may be used for the removal of any existing pavement if there are no existing underground utilities contained in the pavement. If mutually agreeable with the utility company and Contractor, Contractor may utilize power-operated or power-driven excavating or boring equipment within the approximate location of the underground utilities and to any depth.

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**

**Liberty Utilities  
(formerly Sierra Pacific Power Company)**

Attn: Jeff Matthews  
933 Eloise Avenue  
So. Lake Tahoe, CA 96150  
(530) 543-5297  
FAX (530) 544-4811

**South Tahoe Public Utility District  
(water & sewer)**

Attn: Randy Curtis  
1275 Meadow Crest Drive  
So. Lake Tahoe, CA 96150  
(530) 544-6474 or Emergency or after hours  
at (530) 544-4964  
FAX (530) 544-6359

**AT&T  
(telephone)**

Attn: Astrid Willard, PW Mgr.  
3675 "T" Street, Room 170  
Sacramento, CA  
(916)-453-6136  
FAX (916)-451-8504

**Charter Communications  
(cable)**

Attn: Jake Newnham  
P.O. Box 11019  
Zephyr Cove, NV 89448  
(775) 588-1077  
FAX (775) 588-0508

**Southwest Gas Corporation  
(natural gas)**

Attn: Chris Peters  
1740 D Street, Unit No. 4  
South Lake Tahoe, CA 96150  
(530) 543-3225

It is anticipated that the following utility facility will be relocated prior to and during construction by Southwest Gas.

Utility Company	Facility	Construction Stage	Working Days
Southwest Gas (SWG)	2" plastic, gas relocate near end of pipe near Sta 17+80	• Sheet P-1: Gas line to be relocated by SWG.	Contractor shall allow SWG one (1) working day to perform the relocation. Contractor shall notify SWG twenty-four (24) hours in advance of beginning any roadway excavation work.
	1/2" plastic, gas relocate near drainage inlet at 12+33	• Sheet P-4: Gas line to be relocated by SWG.	
	2" plastic, gas relocate near 24" drain basin near Sta 5+36	• Sheet P-5, Gas line to be relocated by SWG.	

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

Full compensation for working around said facilities, performing any necessary potholing and coordination of facility relocation shall be considered as included in the prices paid for the various contract items and no additional compensation will be allowed therefor.

**5-1.33 NOT USED**

**5-1.34 NOT USED**

**5-1.35 NOT USED**

**5-1.36 FINAL INSPECTION**

Contractor shall notify the Engineer, in writing, of the completion of the work and the Engineer shall promptly inspect the work. Contractor will be notified, in writing, of any defects or deficiencies to be remedied. Within five (5) working days of such notification, Contractor shall proceed to correct such defects or deficiencies. The provisions of Section 4-1.01, "General" of the Special Provisions regarding time of completion and liquidated damages shall apply. When notified that the work has been completed, the Engineer will inspect the work to ensure that the work has been done in accordance with the Contract Documents and to recommend to the Board of Supervisors that it formally accept the Contract and record the Notice of Acceptance.

**5-1.37 ACCEPTANCE OF CONTRACT**

Section 7-1.17, "Acceptance of Contract," of the Standard Specifications is amended to read:

When the Engineer has made the final inspection and determines that the contract work has been completed in all respects in accordance with the plans and specifications, the Engineer will recommend to the Board of Supervisors that the contract be accepted and the Notice of Acceptance be recorded to accept the contract, and immediately upon and after the acceptance by the Board of Supervisors, notwithstanding Section 7-1.15, "Relief from Maintenance and Responsibility," of the Standard Specifications, the Contractor will be relieved of the duty of maintaining and protecting the work as a whole, and the Contractor will not be required to perform any further work thereon except work required under "Repair and Correction," of these Special Provisions; and the Contractor will be relieved of the responsibility for injury to persons or property or damage to the work which occurs after the formal acceptance by the Board of Supervisors.

### **5-1.38 REPAIR AND CORRECTION**

For a period of 365 calendar days, commencing on the date of acceptance of the Contract by the Board of Supervisors, Contractor shall, upon receipt of notice in writing from County, promptly make all repairs arising out of defective materials, workmanship, or equipment. County is hereby authorized to make such repairs, at Contractor's expense, if ten (10) days after giving of such notice to Contractor, Contractor has failed to make or undertake the repairs with due diligence. In case of an emergency, where, in the opinion of County, delay could cause serious loss or damage, repairs may be made without notice being sent to Contractor and the expenses in connection therewith shall be charged to Contractor.

### **5-1.39 ACCESS FOR INSPECTION OF WORK**

Representatives of County, Engineer, USFS, Lahontan, TRPA, Southwest Gas, STPUD, AT&T, Liberty Utilities, and Charter Communications shall, at all times, have full access for inspection and testing of the work accomplished under this contract and Contractor shall provide proper and safe facilities for such access.

### **5-1.40 STORAGE OF EQUIPMENT, MATERIALS, SUPPLIES, ETC.**

Attention is directed to the provisions of Section 6-1.03, "Storage of Materials," of the Standard Specifications, and Sections 5-1.23 "Public Safety," 10-1.01, "Order of Work," 10-1.03, "Maintaining Traffic," and 10-1.04, "Traffic Control Plan," of these Special Provisions.

Sheets EC-1 and T-1 of the Plans shows the following staging areas that Contractor may use for storage of equipment, materials, and supplies.

- 1) Approximately 3,500 SF on dirt road (Sawmill Road at Tahoe Mtn. Road).
- 2) Approximately 1,650 SF on Granite Mtn. Circle.
- 3) Approximately 710 SF on Forest Mtn. Drive.
- 4) Approximately 4,715 SF on Forest Mtn. Drive.
- 5) Approximately 4,400 SF on Boulder Mtn. Drive.

A locked gate blocks access to the dirt road staging and storage area. Coordination with the County will be required prior to accessing this area.

Contractor's attention is directed to Section 4-1.02, "Construction Schedule and Work Hours," of these Special Provisions regarding work hours. These hours apply to working on or starting up equipment in these storage areas.

Contractor has the option of storing equipment and materials on private property after first obtaining written authorization from the property owner and filing a copy of said authorization with the Engineer. Contractor shall be responsible for appropriate security of all storage areas to protect property and persons.

Attention is directed to Sections 10-1.01 "Order of Work," 10-1.10 "Excavation and Grading," 10-1.24 "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," and Items "Install and Maintain Filter Fence," "Install and Maintain Weighted Fiber Rolls or Gravel-filled Rolls," and "Install and Maintain Tree Protection and Construction Limit Fence," of these Special Provisions.

### **5-1.41 COORDINATION WITH PROPERTY OWNERS**

Contractor shall communicate with property owners to all extent possible to inform them of access construction operations.

The Contractor shall be responsible for protecting or replacing any facilities damaged by Contractor adjacent to County right-of-way and adjacent properties affected by the work unless otherwise specified in the contract documents or by the Engineer. Where not specified for payment elsewhere, full compensation for conforming to all requirements and conditions listed in this section will be considered as included in the contract unit prices bid for the various items of work with no additional compensation therefor.

### 5-1.42 SAFETY AND HEALTH PROVISIONS

Attention is directed to the Standard Specifications Section 7-1.06, "Material Breach," and these Special Provisions.

In addition to other specifications, definitions and provisions, 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

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, 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.

### 5-1.43 ARCHAEOLOGICAL 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; and,
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 Contractor 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, 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 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.

#### **5-1.44 EMPLOYEE CHEMICAL EXPOSURES**

Contractor shall provide, directly to the Engineer, Material Safety Data Sheets conforming to all requirements of Title 8, California Code of Regulations, Section 5194. Only if applicable Contractor may instead provide a statement to the effect that any given substance is exempt from these regulations. This requirement shall be met a minimum of five (5) working days before any chemical substance is brought onto the premises where County Employees are present. Contractor shall cooperate with County's effort to communicate substance hazards to its employees and to provide them with a safe and healthy workplace. As appropriate, Contractor may be required to acknowledge in writing that it has received Material Safety Data Sheets and County's departmental rules and procedures for safety around chemical substances which may be present on County premises.

#### **5-1.45 DISPOSAL OF WATER**

It shall be the responsibility of Contractor to dispose of all water resulting from this work, according to all local, state, and federal agencies standards and requirements, including, but not limited to, the NPDES permit attached hereto, and Section 10-1.20, "Dewatering," of these Special Provisions.

#### **5-1.46 UTILITIES REQUIRED BY CONTRACTOR**

Except as set out otherwise herein, all water, electric current, telephone, and/or any utility service, including portable sanitary facilities, required by Contractor during construction shall be furnished at its own expense.

#### **5-1.47 CONSTRUCTION INSPECTION AND CONTRACT ADMINISTRATION**

Resident construction inspection and contract administration will be performed by the County of El Dorado, Department of Transportation, under the supervision of Daniel Kikkert, P.E. (Resident Engineer), or successor and with approval of contract change orders, claims processing, and payment review by Daniel W. Kikkert, P.E. (Project Manager) or successor, and preparation of contract change orders, claims processing, and pay estimates by Steve P. Kooyman, P.E. (Contract Administrator), or successor. In order to monitor the progress of projects funded in whole or in part by federal funds, federal agencies rely heavily on inspection data. Inspections shall be performed on a regular basis and data compiled in report form, as necessary, in conformance with 7 CFR 3016.40(c). Information to be supplied by Contractor shall be reported to County on an as requested basis.

#### **5-1.48 HIGHWAY CONSTRUCTION EQUIPMENT**

Attention is directed to Section 7-1.01D, "Vehicle Code," and 7-1.02, "Load Limitations," of the Standard Specifications and these Special Provisions.

Pursuant to the authority contained in Section 591 of the Vehicle Code, the Department has determined that, within such areas as are within the limits of the Project and are open to public traffic, Contractor shall comply

with all the requirements set forth in Divisions 11, 12, 13, 14, and 15 of the Vehicle Code. Attention is directed to the statement in Section 591 that this section shall not relieve Contractor or any person from the duty of exercising due care. Contractor shall take all necessary precautions for safe operation of Contractor's equipment and the protection of the public from injury and damage from Contractor's equipment.

#### **5-1.49 SITE INVESTIGATION AND REPRESENTATION**

Contractor and its Subcontractor(s) acknowledge that they have satisfied themselves as to the nature and location of the Work, the general and local conditions, particularly those bearing upon availability of transportation; disposal of materials, handling, and storage of materials; availability of labor, water, electric power, and roads; uncertainties of weather, or similar physical conditions at the site; the conformation and conditions of the ground; the character of equipment and facilities needed preliminary to and during the prosecution of the Work; and all other matters which can in any way affect the Work or the cost thereof under this Contract.

Contractor further acknowledges that it has satisfied itself as to the character, quality, and quantity of the surface and subsurface materials to be encountered from inspecting the site, as well as from information presented by the plans and specifications made a part of the Contract. Any failure by Contractor to acquaint itself with all the available information or obtaining any additional information deemed necessary, will not relieve it from responsibility for properly estimating the difficulty or cost of successfully performing the work.

Contractor warrants that as a result of its examination and investigation of all the aforesaid data that it can perform the work in a good and workmanlike manner and to the satisfaction of County. County assumes no responsibility for any representations made by any of its officers or agents during or prior to the execution of this Contract, unless: (1) such representations are expressly stated in the Contract, and (2) the Contract expressly provides that the responsibility therefore is assumed by County.

The submission of a Proposal shall be conclusive evidence that Contractor and its Subcontractor(s) have investigated and are satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the contract documents.

#### **5-1.50 ASSIGNMENT OF ANTITRUST ACTIONS**

Contractor's attention is directed to the following provisions of Public Contract Code 7103.5 and Government Code Sections 4553 and 4554, which shall be applicable to Contractor and its subcontractors:

"In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract the contractor or subcontractor offers and agrees to assign the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgment by the parties."

"If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under this chapter, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery."

“Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under this part if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action.”

#### **5-1.51 PERSONAL LIABILITY**

Neither the Director, the Engineer nor any other officer or authorized employee of the State of California nor any officer or employee of any county, city or district shall be personally responsible for any liability arising under or by virtue of the contract.

#### **5-1.52 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.

#### **5-1.53 CERTIFICATES OF COMPLIANCE**

Attention is directed to Section 6-1.07, “Certificates of Compliance,” of the Standard Specifications and these Special Provisions.

Certificates of Compliance are required for the following materials:

- Evidence for steam cleaning of construction equipment
- Liquid Asphalt & Emulsions
- Asphalt Binder
- Asphalt Concrete (Alternative 1 or 2)
- Class 1 Types A and B Permeable Material
- Corrugated Metal Pipe
- High Density Polyethylene (HDPE) Pipe
- Portland Cement
- Portland Cement Concrete
- Concrete Curing Compound
- Galvanizing Repair Material
- Grout
- Class 2 Aggregate Base (3/4” max.)
- Humus
- Mulch
- Tackifier
- All Signing and Delineation Products Used in the Work
- Slurry Cement Backfill
- Weighted Fiber Rolls or Gravel-Filled Rolls for Drain Inlet Protection
- Filter Fabric
- Filter Fabric for Filter Fence

Rice Straw Fiber Rolls  
Turf Reinforcement Mat

Contractor shall submit all Certificates of Compliance within ten (10) working days of the contract start date noted in the Notice to Proceed, or within three (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.

**5-1.54 LOCAL, STATE, AND FEDERAL AGENCIES' CONDITIONS OF APPROVAL AND PERMITS**

Attention is directed to the following items:

1. California Regional Water Quality Control Board, Lahontan Region, Board Order No. R6T-2011-0101A1, dated October 10, 2012. (See Appendix D)
2. Tahoe Regional Planning Agency Permit, No. (not available at print date). (See Appendix E)

As applicable the permit conditions shall be made a part of every subcontract executed pursuant to this Agreement.

County will obtain all permits above prior to bid opening and will provide copies to all Contract Document Holders.

Contractor shall comply with the conditions of the permits where applicable and shall comply with the regulations and conditions of the TRPA and Lahontan. All fines levied against County due to Contractor's action or inaction shall be paid by Contractor.

Contractor shall procure at its own expense all permits, licenses, and insurance policies not already obtained by County as may be necessary to comply with Federal and State laws associated with the performance of the Work.

These shall include but are not limited to the following:

- Timber Operator's license as specified in Section 10-1.27, "Timber Removal Practices," of these Special Provisions.
- Water Truck Permit from STPUD.

**5-1.55 DUST AND TRACKING CONTROL**

The following requirements shall be applicable to this Contract in addition to the requirements of Section 10, "Dust Control," of the Standard Specifications.

Dust Control

Contractor shall provide an acceptable plan for preventing the generation of dust due to its operations in the construction zones, along the haul or traveled routes, or in equipment parking zones. Contractor's Dust Control Plan and daily dust control operations shall not conflict with requirements of any agency having jurisdiction in the project area. Contractor is required to have a water truck on site at all times during construction.

At the end of each day's work and as necessary during the work day, Contractor shall wet down the construction area to control dust. On days that Contractor is not working, it shall take such action as may be required to prevent the generation of dust within the project area if it is deemed necessary by the Engineer.



In the event the control of dust is not satisfactory to the Engineer, the Engineer shall take such measures as may be necessary to insure satisfactory dust control and shall deduct the cost of those measures from any payments due Contractor.

Dust shall be controlled through a combination of sweeping and use of the water truck. **Dust control is a temporary erosion control measure or Best Management Practices (BMP). A fine of \$100/day will be levied against Contractor for each day Contractor delays in responding to Engineer's request to implement this temporary erosion control measure.**

#### Tracking Control

Tracking of sediment onto public streets shall be minimized by a combination of road sweeping and use of tire wash areas designated on the Plans during soil hauling operations, during equipment transporting from one work area to another, and as necessary to keep the streets clear of soil and debris. Tracking control applies to streets within the project area as well as to streets adjacent to the project area that have the potential to be impacted by tracking from the project construction.

Affected streets shall be swept a **minimum of three (3) times daily** (e.g. mid-morning, mid-afternoon, and at the end of the day) during soil hauling operations, during equipment transporting from one work area to another, and as necessary to keep the streets clear of soil and debris.

**Tracking control is a temporary erosion control measure or BMP. A fine of \$100/day will be levied against Contractor for each day Contractor delays in responding to Engineer's request to implement this temporary erosion control measure.**

The costs associated with installing, maintaining, and removing the Tire Wash Area on Pavement shall be included in the Item "Install and Maintain Tire Wash Area on Pavement." The costs associated with sweeping and disposing of the swept material shall be included in the Item "Sweeping."

Contractor shall post a publicly visible sign at the staging areas shown on Sheets EC-1 and T-1 of the Plans. The visible sign shall contain the Contractor's telephone number and name of person to contact for complaints and/or inquiries on dust control and other air quality problems resulting from construction activities.

Full compensation for conforming to the requirements in this section pertaining to using the water truck for dust control, using the tire wash area, cleaning equipment/vehicles, and providing the Contractor contact information sign shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

#### **5-1.56 SPILL CONTINGENCY PLAN**

Contractor shall provide the information requested in Appendix B, Spill Contingency Plan, of the Storm Water Pollution Prevention Plan within five (5) working days of receipt of Notice to Proceed. This Spill Contingency Plan is included in Appendix B of these Special Provisions.

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

#### **5-1.57 CONSTRUCTION STAKING**

The Surveyor will furnish one (1) set of construction stakes as set forth below and Contractor shall be solely responsible for the maintenance and protection of the survey stakes or marks, once set, in accordance with the provisions of this section. Any additional stakes or marks requested and any replacement of stakes or marks shall be set by the Surveyor at Contractor's expense. The Surveyor will provide Contractor with copies of the staking cut sheets, when applicable. The construction staking furnished by the Surveyor will be as outlined below, unless otherwise agreed to by the Surveyor and Contractor at the pre-construction meeting. Where site constraints do not allow for staking to be placed as specified herein, other staking

configurations will be agreed upon by the Surveyor and Contractor at the pre-construction meeting or when the staking request is submitted.

1. Willow Clump removal – All willow clumps to be removed will be conspicuously marked by the Engineer or the Surveyor for removal with an X, or other agreed upon marking.
2. Curb and Gutter and Curb End Transitions – One set of offset stakes will be set at 3' from Top Back of Curb (TBC) for vertical and horizontal control at 50' intervals on tangents and on curves with radius greater than or equal to 500', and at 25' intervals on curves with a radius less than 500', at the beginning and end of horizontal curves (BCs and ECs), at the beginning and end of significant vertical curves (BVCs and EVCs), at high points or low points as appropriate, at the beginning and end and quarter points of curb returns, and at the beginning and end of any transitions. Vertical control will reference TBC elevations.
3. Drainage Inlets (DI) and Drain Basin (DB) – One set of double offset stakes (two stakes total) will be set for each structure. The stakes will be set sufficient for Contractor to determine location, orientation, and grade of each structure. Due to the nature of the design and to site conditions, the offset locations will be agreed upon by the Surveyor and Contractor at the pre-construction meeting. The closer of the offset stakes to the drain basin and drainage inlets will be marked with grades to all Invert Elevations of pipes and structure (IEs), ~~Window Invert Elevations (WIEs)~~, and to Grate (TG), and Top Back of Curb (TBC), as applicable. The farther offset will be marked with an elevation and is to be used for line only.
4. Storm Drain Pipe and Culvert – All grade breaks will be staked with one offset (at a distance to be agreed to by the Surveyor and Contractor) perpendicular from the line at the grade break and graded to flowline of the pipe. Except for runs containing grade breaks, storm drain pipe will not be staked on runs shorter than 50'. On short runs, the pipe is to be placed based upon the staking of the drainage structures. For runs greater than 50', one offset (at a distance to be agreed to by the Surveyor and Contractor) perpendicular from the line at the midpoint will be set and graded to flowline of the pipe. Curved pipe will be staked at 50' intervals for curves with radius greater than or equal to 500', and at 25' intervals for curves with radius less than 500'. For Angle Points (AP), one set of double offset stakes (two stakes total) will be set. The closer of the offset stakes will be graded to flowline of the pipe at the AP and the farther offset stake will be set for line only.
5. Channels and Swales – One set of single offset stakes will be set at 5' from centerline of channel at 50' intervals and at grade breaks. The stakes will be graded to the finished surface at the flowline of the channel. For Angle Points (AP) and Curve Points (B.C./E.C.), one set of double offset stakes (two stakes total) will be set. The closer of the offset stakes will be graded to flowline at the B.C, E.C. and AP, and the farther offset stake will be line only.
6. Filter Fence, Wooden Tree Trunk Protection, and Construction Limit Fence – Stakes for these items will be provided only when these items are shown on the Plans. One set of stakes for horizontal control will be provided at 50' intervals and at angle points. For Wooden Tree Trunk Protection, the trees will be marked with flagging marked "TREE PROTECTION."
7. Benchmark – Elevations of the Surveyor's control points will be provided to Contractor on the Survey Control Sheet. In the event that the control points are not in usable positions for Contractor, the Surveyor will set up to four (4) temporary benchmarks throughout the project, at locations to be agreed upon by the Surveyor and Contractor.
8. No. 1 Backing and Rock Dissipators – One set of double offset stakes (two stakes total) will be set for horizontal and vertical control. The closer of the two stakes will be graded to top of rock and the farther of the two stakes will be line only. For rock slope protection, one set of double offset stakes (two stakes total) will be set at the beginning and end depending on

the length of rock slope protection, stakes will be provided at 50' intervals on tangent sections, 25' intervals on curves, and at E.C.s, B.C.s, and APs.

9. AC Pavement Removal – Removal limits, as indicated on the plans, will be clearly marked with paint.
10. AC Paving – Where there is sawcut with existing retained pavement within the roadway, no stakes will be provided. The Contractor will pave to the existing sawcut per the appropriate plan detail. Where paving limits are not bounded by an existing sawcut, stakes will be provided to delineate pavement edge and will be graded to finish surface
11. Boulder Mountain Drive – Two sets of double offset stakes (four stakes total) will be set for vertical and horizontal control for initial grading at 50' intervals on tangents, on curves with radius greater than or equal to 1000', at 25' intervals on curves with a radius less than 1000', at the beginning and end of horizontal curves (BCs and ECs), at the beginning and end of significant vertical curves (BVCs and EVCs), at high points or low points as appropriate, and at the beginning and end of any transitions. One set of stakes each side of which the closer of the two will be marked with offsets, slopes and cut/fill for catch point, hinge point, edge of pavement, and centerline. The farther of the two will be for line only. Vertical control will reference finished grade elevations. Once the initial grading is complete, two sets of double offset stakes (four stakes total) will be set for vertical and horizontal control at 25' intervals, at the beginning and end of horizontal curves (BCs and ECs), at the beginning and end of significant vertical curves (BVCs and EVCs), at high points or low points as appropriate, and at the beginning and end of any transitions. One set of stakes each side of which the closer of the two will be marked with an offset and cut/fill to edge of pavement and the slope of the finished grade. The farther of the two will be for line only. Vertical control will reference finished grade elevations.
12. Tire and Concrete Wash Areas – Will be delineated by the Engineer or the Surveyor.
13. Revegetation Limits – Paint or flagging for horizontal control. Areas will be marked in the field by Engineer or Surveyor.

**In order to match existing conditions, dimensions and elevations in the field may vary from those shown on the Plans. Any such field changes will be with the approval of the Engineer or Surveyor, and Contractor will be notified of such changes.**

Surveying provided will not, nor is intended to, supplant or supplement any layout work normally provided by Contractor. Contractor is advised that it shall furnish personnel and equipment necessary to perform any additional layout for construction purposes that it may require.

All stakes and survey markers will be conspicuously marked with flagging and/or paint. It will be the obligation of Contractor to inform its employees and subcontractors of the importance of their preservation. The Surveyor has placed control monuments necessary for the work. Contractor is specifically advised that it shall be its sole responsibility to protect and maintain all stakes and monuments from destruction by any source. In the event that one or more of the stakes are damaged or destroyed, the Surveyor will replace the stakes at Contractor's expense. If a control point cannot be preserved, Contractor shall give the Surveyor sufficient notice (i.e. 48 hours excluding Saturdays, Sundays, and Holidays) to place alternate control points in the immediate vicinity before the original point(s) is (are) destroyed.

Contractor shall give the Surveyor not less than two (2) full working days (i.e. 48 hours excluding Saturdays, Sundays, and Holidays) notice for each staking order, and a minimum staking order shall be not less than a full day's work as determined by the Surveyor. Timeliness of surveying services will not be guaranteed without written notice submitted to the Surveyor not less than two (2) working days prior to the day staking is needed. County will supply Contractor with staking request forms.

Contractor and its subcontractor shall insure that existing property survey monuments and markers that are not designated to be removed will not be impacted by construction activities. Any right-of-way or property corner monuments, not designated to be removed per the Plans or as directed by Engineer, disturbed or destroyed by Contractor shall be replaced, at Contractor's expense, by a Professional Land Surveyor registered in the State of California in accordance with Business and Professions Code Sections 8700 et seq. Contractor shall also ensure that a Corner Record or Record of Survey is prepared and submitted as required by the Professional Land Surveyors Act, at Contractor's expense, to County Surveyor's office to document this replacement. A copy of the approved Corner Record or Record of Survey shall be submitted to the Engineer or Surveyor. County may retain Two Thousand Dollars (\$2,000.00) of the ten percent (10%) retention money withheld for each Corner Record and/or Record of Survey, until the documentation specified above is provided. Since the project is funded by grants with a finite term, should the grants expire before Contractor provides proof of the submittal, Contractor shall forfeit the amount retained.

**5-1.58 NOT USED**

**5-1.59 NOT USED**

**5-1.60 COPYRIGHTS, TRADEMARKS, AND PATENTS**

This project will be funded, in part, with federal funds. The USFS reserves a royalty-free, non-exclusive, and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, for Federal Government purposes:

- (a) The copyright in any work developed under a grant, sub-grant, or contract under a grant or subgrant;
- (b) Any rights of copyright to which a grantee, subgrantee or a contractor purchases ownership with grant support; and
- (c) The patent rights to any discovery or invention which arises or is developed in the course of or under such contract.

**5-1.61 ENERGY CONSERVATION**

Pursuant to 7 CFR 3016.36(i)(13) Contractor shall comply with all mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

**SECTION 6. (NOT USED)**

**SECTION 7. CONTRACTOR'S INSURANCE**

**7-1.01 GENERAL INSURANCE REQUIREMENTS**

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

1. Full Workers' Compensation and Employers' Liability Insurance covering all employees of Contractor as required by law in the State of California.
2. Commercial General Liability (CGL) Insurance of not less than Two Million Dollars (\$2,000,000.00) 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, independent contractors liability. This insurance can consist of a minimum One Million Dollars

(\$1,000,000.00) 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 (\$1,000,000.00) is required in the event motor vehicles are used by 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 Insurance is required with a limit of liability of not less than One Million Dollars (\$1,000,000.00).
5. Explosion, Collapse and Underground (XCU) 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 County of El Dorado Risk Management Division as evidence that the insurance required herein is being maintained. The insurance will be issued by an insurance company acceptable to Risk Management Division, or be provided through partial or total self-insurance likewise acceptable to Risk Management Division.
2. The County of El Dorado, its officers, officials, employees, and volunteers; and agencies of the federal government, its officers, officials, employees, and volunteers are included as additional insured, but only insofar as the operations under this Contract are concerned. This provision shall apply to all general liability, automobile liability and excess liability policies. Proof that County and agencies of the federal government are named additional insureds 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 County and agencies of the federal government as additional insureds.
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 County. At the option of County, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects to 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 general liability insurance, automobile liability insurance, and workers’ compensation 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 Contract Services Unit at the office of the Department of Transportation, 2850 Fairlane 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 Risk Management Division, as essential for protection of 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 County, its officers, officials, employees or volunteers.

#### **7-1.08 PRIMARY COVERAGE**

Contractor's insurance coverage shall be primary insurance as respects the County, its officers, officials, employees and volunteers; and agencies of the federal government, and 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, the State of California and their officers, agents, employees, agencies of the federal government 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 Section 7-1.12, "Indemnification and Insurance," of the Standard Specifications May 2006, this Section shall govern; otherwise each and every provision of such Section 7-1.12 shall be applicable to this Contract.

## **SECTION 8. MATERIALS**

#### **8-1.01 BUY AMERICA REQUIREMENTS**

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 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 any other coating that protects or enhances the value of such 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 also 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%) of the total contract cost, or \$2,500, whichever is greater. Contractor shall furnish the Engineer acceptable documentation of the quantity and value of any foreign steel and iron prior to incorporating such materials into the work.

In accordance with Section 502 of the Energy and Water Development Appropriations Act, 2002, Public Law 107-66, it is the sense of Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available in this Act should be American-made.

### **8-1.02 PREQUALIFIED AND TESTED SIGNING AND DELINEATION MATERIALS**

Caltrans 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**

#### **Retroflective With Abarasion Resistant Surface (ARS)**

1. Apex, Model 921AR (4" x 4")
2. Ennis-Flint, Models C88 (4" x 4"), 911 (4" x 4") and C80FH (3.1" x 4.5")
3. Ray-O-Lite, Models "AA" ARC II (4" x 4") and ARC Round Shoulder (4" x 4")
4. 3M Series 290 (3.5" x 4")
5. 3M Series 290 PSA
6. Glowlite, Inc Model 988AR (4" x 4")

#### **Retroflective With Abarasion Resistant Surface (ARS)**

(for recessed applications only)

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

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

#### **Non-Retroflective, 4-inch round**

1. Apex Universal (Ceramic)
2. Apex Universal, Models 929 (ABS) and 929PP (Polypropylene)
3. Glowlite, Inc. (Ceramic) and PP (Polypropylene)
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)
9. Ray-O-Lite, Ray-O-Dot (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")
2. Pexco LLC, Halfrack model 25, 26 and 35

##### **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. Pexco LLC, 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 270 ES
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", "Deltaline TWR"
3. Garlock Rubber Technologies, Series 2000
4. Tape 4, Aztec, Grade 102
5. Swarco Industries, "Director-2", "Director 2-Wet Reflective"
6. Trelleborg Industries, R140 Series
7. 3M Series 620 "CR", Series 780 and Series 710
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. Ennis-Flint, "Hot Tape"
2. Ennis-Flint, "Premark Plus"
3. Ennis-Flint, "Flametape"

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

1. Highway Ceramics, Inc.

#### **CLASS 1 DELINEATORS**

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

1. Pexco LLC, "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. Pexco LLC, 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)
9. Safe-Hit RT 360 Post with Soil Mount Anchor (GPS)
10. Shur-Tite Products, Shur-Flex Drivable

**Surface Mount Type, 48-inch**

1. Bent Manufacturing Company, Masterflex Model MFEX 180-48
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
6. Flexible Marker Support, Flexistiff Model C-9484
7. Safe-Hit, SH 248 SMR

**CHANNELIZERS**

**Surface Mount Type, 36-inch**

1. Bent Manufacturing Company, Masterflex Models MF-360-36 (Round) MF-180-36 (Flat) and MFEX 180—36
2. Pexco LLC, 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 and Dura-Post, Model SHL36SMA
10. Three D Traffic Works "Boomerang" 5200 Series
11. Flexible Marker Support, Flexistiff Model C-9484-36
12. Shur-Tite Products, Shur-Flex

**Lane Separation System**

1. Pexco LLC, "Flexi-Guide (FG) 300 Curb System"
2. Qwick Kurb, "Klemmfix Guide System"
3. Dura-Curb System
4. Tuff Curb
5. FG 300 Turnpike Curb
6. Shur-Tite Products, SHUR-Curb , Model No. SF0200

**CONICAL DELINEATORS, 42-inch**

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

1. Bent Manufacturing Company "T-Top", TDSC Series
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
6. Work Area Protection Corp. C-42

7. Custom-Pak 4600 (Part No. 93005-0001)
8. Plasticade, Navicade, 650 RI

## **OBJECT MARKERS**

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

1. Pexco LLC, Model FG318PE
2. Carsonite, Model SMD 615
3. FlexStake, Model 701 KM
4. Safe-Hit, Model SH718SMA
5. Impact Recover Systems, Model 282-K

### **Type "Q" Object Markers, 24-inch**

1. Bent Manufacturing "Masterflex" Model MF-360-24
2. Pexco LLC, 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
8. Safe-Hit, Dura-Post SHLQ-24"
9. Flexible Marker Support, IMC 9484-24
10. Impact Recover Systems, Model 282-Q

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

### **Impactable Type**

1. ARTUK, "FB"
2. Pexco LLC, Models PCBM-12 and PCBM-T12, PCBM 912
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 9300

### **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. Pexco LLC, "Mini" (3" x 10"), I-Flex
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. Pexco LLC, Model PCBM T-16
2. Safe-Hit, Model SH216RBM
3. Three D Traffic Works "Roadguide" Model 9400

## **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. Pexco LLC, 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
8. Shur-Tite Products, Shur-Tite Flat Mount
9. Glasforms, Hiway-Flex, GR-27-00
10. Impact Recover Systems, 200-GRP

**Barrier, Guardrail Visibility Enhancement**

1. UltraGuard Safety System, Potters Industries, Inc.
2. Worldwide Safety and Irwin Hodson, Monarch Butterfly Reflective Device (MBGR only)

**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 and WR-6100
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", C85
3. 3M Series 3840, Series 3340
4. Avery Dennison S-9000C

**Drums**

1. Avery Dennison WR-6100 Series
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

**Barricades: Type IV, High Intensity (Typically Unmetalized Microprismatic Retroreflective Element)**

1. 3M Series 3334/3336

**Vertical Clearance Signs: Structure Mounted**

1. 3M Model 4061, Diamond Grade DG3, Fluorescent Yellow

**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
4. Changzhou Hua R Sheng, Series TM 1200
5. Oracal, Oralite Series 5800

**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 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
7. Avery Dennison, T-9511 Fluorescent Yellow

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

1. 3M Diamond Grade, DG3, Series 4000
2. 3M Diamond Grade, DG3, Series 4081, Fluorescent Yellow
3. 3M Diamond Grade, DG3, Series 4083, Fluorescent Yellow/Green
4. 3M Diamond Grade, DG3, Series 4084, Fluorescent Orange
5. Avery Dennison, OmniCube, T-11500 Series
6. Avery Dennison, OmniCube, T-11511, Fluorescent Yellow
7. Avery Dennison, OmniCube, T-11513, Fluorescent Yellow Green
8. Avery Dennison, OmniCube, W-11514 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. Inteplast Group "InteCel" (0.5 inch for Post-Mounted CZ Signs, 48-inch or less)(PVC)

**Aluminum Composite, Temporary Construction Signs and Permanent Signs up to 4 foot, 7 Inches**

1. Alcan Composites "Dibond Material, 80 mils"
2. Mitsubishi Chemical America, Alpolic 350
3. Bone Safety Signs, Bone Light ACM (temporary construction signs only)
4. Kommerling, USA, KomAlu 3 mm

**8-1.03 TEST METHODS**

Whenever a reference is made in the specifications to any of the California Test numbers specified below, the corresponding ASTM Designation or AASHTO Designation test may be used to determine the quality of the work or materials. The latest edition of each standard test method shall be used.

California <u>Test</u>	ASTM <u>Designation</u>	AASHTO <u>Designation</u>
231	D 2922	T 238(a)
203	D 422	T 88
204	D 4318	T 89 and T 90
504	C 231	T 152
518	C 138	T 121
521	C 39	T 22
523	C 293 and C 78	T 177 and T 97
533	C 360	-----
211	C131 and C 535	T 96

Note: When ASTM Designation: D 2922 or AASHTO Designation: T 238 is used, the frequency and real distribution of such tests shall comply with the requirements specified in California Test 231. For each determination of relative compaction by ASTM test methods, laboratory compaction tests per ASTM Designation: D 1557 shall be performed, except when the use of previous laboratory maximum dry unit weights are allowed. Previous laboratory maximum dry unit weights may be used to determine relative compaction if the material, as determined by the Engineer, is from the same general excavation or plant source and has the same visual characteristics of color, gradation, and soil classification as the previous laboratory maximum dry unit weights.

**8-2.00 FREEZE-THAW REQUIREMENTS**

Aggregates proposed for use in Portland Cement Concrete and precast Portland Cement Concrete products shall pass the freezing and thawing test, as specified in Section 90-2.02, "Aggregates," of the Standard Specifications and these Special Provisions.

A list of sources of aggregates which have previously passed the freeze-thaw test is available at the Caltrans District Office at 703 "B" Street, Marysville, California 95901.

Contractor's attention is directed to the fact that California Test 528, "Test for Freeze-Thaw Resistance of Aggregates in Air-Entrained Concrete," does not include procedures that determine compliance of the aggregates with the other requirements of the Plans and Specifications.

The mortar strength of fine aggregate relative to the mortar strength of Ottawa sand shall be 100%, minimum, as determined by California Test 515.

Unless a higher cement content is otherwise required, the minimum cement content for all Portland Cement Concrete and for all precast Portland Cement Concrete products shall be 590 pounds per cubic yard.

An air-entraining admixture conforming to the requirements in Section 90-4, "Admixture," of the Standard Specifications shall be added to the concrete at the rate required to result in an air content of 5 ½% ± 1 ½% in the freshly mixed concrete, unless a different air content is specified elsewhere in these Special Provisions.

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

Work to be done is shown on the Plans, and generally consists of, but is not limited to the construction of erosion control improvements including culverts and subdrains, rock-lined channels, grass-lined swales, curb and gutter, drainage inlets, a drain basin, restoring pavement on Boulder Mountain Drive, stabilizing the entrance of a dirt access road with pavement and rock, and road shoulder stabilizing. 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. CONSTRUCTION DETAILS**

### **10-1.00 DESCRIPTION OF CONTRACT ITEMS**

#### **ITEM 1 – MOBILIZATION**

Mobilization shall conform to the provisions of Sections 4-1.03, "Contractor Submittals," and 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions.

Mobilization shall include the obtaining of all bonds, insurance, and permits; moving onto the site of all equipment; and the furnishing and erecting of temporary buildings and other facilities required for the performance and completion of the Work. Mobilization shall also include the following items:

- 1) Providing on-site sanitary facilities.
- 2) Arranging for and setting up Contractor's storage area(s) in accordance with Section 5-1.40, "Storage of Equipment, Materials, Supplies, Etc."
- 3) Posting all OSHA required notices and establishment of safety programs.
- 4) Posting of all Prevailing Wage Requirements.
- 5) Preparing and transmitting the Submittals outlined in Section 4-1.03, "Contractor Submittals."
- 6) Obtaining and Submitting Certificates of Compliance.
- 7) Cleaning excavating and loading equipment prior to mobilization on site and presenting receipts to Engineer.
- 8) Preparation of "As-Constructed Plans as outlined in Section 4-1.03, "Contractor Submittals."

Contractor shall be entitled to progress payments in accordance with Public Contract Code Section 20104.50. In lieu of Section 11-1.02 items A through E of "Mobilization" of the Standard Specifications, the first monthly payment estimate will be prepared when Engineer determines that five percent (5%) of the contract amount, not including mobilization, has been completed. Subsequent monthly pay estimates shall be made on the same day of the month as the first monthly pay estimate. Work completed in place less than two (2) working days prior to the preparation of the monthly pay estimate shall not be eligible for payment until the following month's estimate. The third to last paragraph of Section 11, "Mobilization," of the Standard Specifications shall be amended to read: "The adjustment provisions in Section 4-1.03, "Changes" shall not apply to the contract lump sum item of mobilization."

Payment for Mobilization Item as specified above will be made at the lump sum price bid, with no additional compensation therefor. In lieu of Section 11-1.02, "Payment," of the Standard Specifications, one partial payment of 50% of the bid price will be made upon completion of 50% of the mobilization of equipment on site and completion of items 1-7 above. The final payment of the remainder of the mobilization bid will be after satisfactory completion of the final project punch list and submittal of item 8 above. Satisfactory work completion for the partial or final payment will be determined by Engineer.

#### **ITEM 2 – TRAFFIC CONTROL**

Work under this item shall include all flaggers, temporary signs, lights, barricades, communication devices, and other devices required for the direction of local traffic through or around the work during construction. Contractor shall furnish all sign panels, posts, hardware, and all barricades and shall erect, maintain and remove all construction area signs, necessary for construction of project improvements, as specified in the Plans and these Special Provisions.

Traffic Control Requirements will be strictly enforced. Violation of these requirements is justification for Engineer to stop work until these requirements are met.

Attention is directed to Section 10-1.03, "Maintaining Traffic," and Section 10-1.04, "Traffic Control Plan," of these Special Provisions.

In lieu of Section 12-2.02, "Flagging Costs," of the Standard Specifications, the full cost of any flagging necessary shall be borne by Contractor.

Payment for Traffic Control Item as specified above shall be made at the lump sum price bid, with no additional compensation therefor. Partial payments for traffic control will be made based on the percentage of work requiring traffic control completed as determined by Engineer.

### **ITEM 3 – SWEEPING**

Work under this item shall consist of furnishing all labor, tools, materials, and equipment necessary to sweep the project site and dispose of the swept materials. Tracking of sediment onto public streets shall be minimized by a combination of road sweeping and use of tire wash areas designated on the Plans during soil hauling operations, during equipment transporting from one work area to another, and as necessary to keep the streets clear of soil and debris. Tracking control applies to streets within the project area as well as streets adjacent to the project area that have the potential to be impacted by tracking from the project construction.

Contractor shall provide sweeping equipment that conforms to the following minimum requirements:

- The sweeper shall be a chassis-mounted vehicle capable of vacuuming the roadways such that the swept material is placed into a hopper, from which the swept material can be removed and disposed of. **Broom sweepers that are attachments to other equipment are not acceptable sweepers.**

Affected streets shall be swept a minimum of **three (3) times daily** (e.g. mid-morning, mid-afternoon, and at the end of the day) during soil hauling operations, during equipment transporting from one work area to another, and as necessary to keep the streets clear of soil and debris. The swept material shall be disposed of in accordance with Section 10-1.10C.6, "Excavation and Grading," of these Special Provisions.

Attention is directed to Section 5-1.55, "Dust and Tracking Control," of these Special Provisions.

**Sweeping is a temporary erosion control measure or BMP. A fine of \$100/day will be levied against Contractor for each day Contractor delays in responding to Engineer's request to implement this temporary erosion control measure.**

Payment for Sweeping Item shall be based on the per day price bid and on performing the sweeping operations as specified above. Partial payments for sweeping will be made based on the percentage of work completed as determined by Engineer.

### **ITEM 4 – TRENCH AND EXCAVATION SAFETY**

Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to install sheeting, shoring and bracing, sloping the sides of trenches/excavations, or equivalent method for trenches/excavations five feet and greater in accordance with the Plans, the Standard Specifications, and these Special Provisions.

Attention is directed to Section 10-1.10, "Excavation and Grading," and Section 10-1.26, "Shoring and Excavation Plan," of these Special Provisions. If Section 10-1.26, "Shoring and Excavation Plan," requires shoring and bracing the excavation in lieu of sloping the sides of the excavation and Contractor doesn't comply, no payment will be made under this item.

Payment for Trench and Excavation Safety Item shall be based on the lump sum price bid as specified above. Engineer has the discretion to reduce payments for this item where the need for trench and excavation protection is indicated on the Plans but not required in the field.



#### **ITEM 5 – HUMUS FOR TOPSOIL MIX**

Work under this item shall consist of furnishing all labor, tools, material, and equipment necessary to furnish and deliver humus to the project to be mixed with the soil salvaged from the excavation for the various items of work to create "topsoil mix."

Attention is directed to Section 10-1.10, "Excavation and Grading," of these Special Provisions regarding humus specifications, mixing humus with salvaged soil, and placing, and compacting topsoil mix. The costs associated with mixing the humus with salvaged soil and placing and compacting topsoil mix are included in the unit prices bid for the various items of work for which topsoil mix is required.

Payment for Humus for Topsoil Mix Item shall be based on the unit price bid and on the number of cubic yards of humus delivered as specified above. An invoice certifying the number of cubic yards delivered to the site for mixing with salvaged soil will be the basis for determining the quantity for payment.

#### **ITEM 6 – MULCH AND MULCH APPLICATION**

Work under this item consists of furnishing all labor, tools, materials, and equipment necessary to supply mulch and apply one-inch thick layer of mulch over topsoil mix after seeding by CCC is completed and over disturbed areas beyond new facilities but within the filter fence and construction limit fence in accordance with the Plans, the Standard Specifications, and these Special Provisions.

The CCC under the direction of Engineer will provide flagging on the slopes or other means to identify the location of mulch to be supplied and applied by Contractor. Attention is directed to Section 10-1.10, "Excavation and Grading," of these Special Provisions regarding mulch specifications and application specifications.

Payment for Mulch and Mulch Application Item shall be based on the unit price bid and on the number of cubic yards of mulch supplied and applied as specified above. An invoice certifying the number of cubic yards supplied and applied will be the basis for determining the quantity for payment.

#### **ITEM 7 – TACKIFIER AND TACKIFIER APPLICATION**

Work under this item consists of furnishing all labor, tools, materials, and equipment necessary to supply and apply tackifier over the mulched areas in accordance with the Plans, the Standard Specifications, and these Special Provisions.

Attention is directed to Section 10-1.10, "Excavation and Grading," of these Special Provisions regarding tackifier specifications and application equipment specifications.

Payment for Tackifier and Tackifier Application Item shall be based on the unit price bid and on the number of square feet of tackifier supplied and applied as specified above or the number of gallons applied for the equivalent square feet. An invoice certifying the number of square feet supplied and applied by the application equipment will be the basis for determining the quantity for payment.

#### **ITEM 8 – INSTALL AND MAINTAIN TIRE WASH AREA (ON PAVEMENT)**

Work under this item shall consist of furnishing all labor, tools, equipment and material necessary to install, maintain, remove, and dispose of the tire wash area on pavement in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item includes furnishing, installing, maintaining, removing and disposing of gravel bags or gravel-filled rolls and the Class 1 Type A permeable rock filter.

Attention is directed to Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)." Attention is directed to Section 5-1.55, "Dust and Tracking Control," of these Special Provisions regarding payment for the actual washing of tires.

**A fine of \$100/day will be levied against Contractor for each day Contractor delays in responding to Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices.**

Payment for Install and Maintain Tire Wash Area (On Pavement) Item shall be based on the unit price bid and on the number of tire wash areas installed and maintained as specified above. Progress payments for this Item will be a maximum of 50% of the unit cost bid multiplied by the number of tire wash areas installed on pavement during the pay period as determined by Engineer and/or required by TRPA's Compliance Division. Payment for the maintenance, removal, and disposal of all tire wash areas on pavement will be made in the Final Pay Estimate providing that satisfactory maintenance was performed throughout the duration of the project and removal was completed as specified.

#### **ITEM 9 – INSTALL AND MAINTAIN CONCRETE WASH AREA**

Work under this item shall consist of furnishing all labor, tools, equipment and material necessary to install, maintain, remove, and dispose of the concrete wash area in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item includes clearing and grubbing, excavation and disposal of excess material, grading, furnishing, installing, maintaining, removing and disposing of the rice straw fiber roll, woven filter fabric, and Class 1 Type A Permeable rock filter.

Attention is directed to Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," and Section 10-1.10, "Excavation and Grading," of these Special Provisions.

**The Concrete Wash Area is a temporary erosion control device or BMP. A fine of \$100/day will be levied against Contractor for each day Contractor delays in responding to Engineer's request to maintain this temporary erosion control device. A separate \$100 fine will be levied for each time that Contractor, subcontractor, or suppliers do not use the concrete wash out and wash out in a location that has not been approved.**

Payment for Install and Maintain Concrete Wash Area Item shall be based on the unit price bid and on the number of concrete wash areas installed and maintained as specified above. Progress payments for this Item will be a maximum of 50% of the unit cost bid multiplied by the number of concrete wash areas installed during the pay period as determined by Engineer and/or required by TRPA's Compliance Division. Payment for the maintenance, removal, and disposal of all concrete wash areas will be made in the Final Pay Estimate providing that satisfactory maintenance was performed throughout the duration of the project and removal was completed as specified.

#### **ITEMS 10, 11, AND 12 – INSTALL AND MAINTAIN WEIGHTED FIBER ROLLS OR GRAVEL-FILLED ROLLS, INSTALL AND MAINTAIN FILTER FENCE, AND INSTALL AND MAINTAIN VISQUEEN WITH GRAVEL BAGS OR GRAVEL-FILLED ROLLS**

Work under these items shall consist of furnishing all labor, tools, equipment, and materials necessary to install, maintain, remove, and dispose of, where applicable, these temporary erosion control measures as required by the Plans, the Standard Specifications, these Special Provisions, and the TRPA Best Management Practices.

Attention is direction to Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions.

**A fine of \$100/day will be levied against Contractor for each day Contractor delays in responding to Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices.**

INSTALL AND MAINTAIN WEIGHTED FIBER ROLLS OR GRAVEL-FILLED ROLLS: Weighted fiber rolls or alternatively, gravel-filled rolls shall be used only in areas of compacted soil, concrete, or paved surfaces. An example of this is the area near the AC prior to placing and compacting the aggregate base shoulders. The spacing intervals shall be maintained and new sections of weighted fiber rolls or gravel-filled rolls added as the installations of these improvements progress. In addition to the placement of the weighted fiber rolls or gravel-filled rolls at the specified spacing intervals, Contractor shall place weighted fiber rolls or gravel-filled rolls at the location where each installation is temporarily discontinued. This section of weighted fiber rolls or gravel-filled rolls shall be reused to satisfy the specified intervals once the installation that had been

temporarily discontinued is completed. However, payment for the installation and maintenance of this section of weighted fiber rolls or gravel-filled rolls will be made only once. The configuration for the use of weighted fiber rolls or gravel-filled rolls is intended to filter sediment from runoff before the runoff enters any inlets.

Areas where Contractor stores equipment or material on pavement may require the use of weighted fiber rolls or gravel-filled rolls for temporary erosion control. If a section of weighted fiber rolls or gravel-filled rolls is used in storage/staging more than once, or removed and replaced at a single location more than once, payment for installation and maintenance will be made only once. Attention is directed to Section 5-1.40, "Storage of Equipment, Materials, Supplies, Etc.," of these Special Provisions and Sheets EC-1 and T-1 of the Plans for staging/storage areas. Weighted Fiber Rolls or Gravel-Filled Rolls shall be a minimum length of 5 feet.

Contractor shall remove and dispose of all weighted fiber rolls or gravel-filled rolls measures after construction in the area is completed and TRPA approval is obtained.

Contractor shall note that **straw bales** shall not be used for any temporary erosion control measures.

Payment for Install and Maintain Weighted Fiber Rolls or Gravel-Filled Rolls Item shall be based on the unit price bid and on the number of weighted fiber rolls or gravel-filled rolls installed and maintained as described above with no additional compensation therefor. Progress payments for this Item will be a maximum of 50% of the unit cost bid multiplied by the number of weighted fiber rolls or gravel-filled rolls installed during the pay period as determined by Engineer and/or required by TRPA's Compliance Division. Payment for maintenance, removal, and disposal of all weighted fiber rolls or gravel-filled rolls will be made in the Final Pay Estimate providing that satisfactory maintenance was performed throughout the duration of the project.

INSTALL AND MAINTAIN FILTER FENCE (FF): FF shall be placed at the downstream edge of fill and elsewhere noted on the Plans.

TRPA or Lahontan may require that FF be used at additional locations.

Areas where Contractor temporarily stockpiles excavated materials may require FF for temporary erosion control. Attention is directed to Section 5-1.40, "Storage of Equipment, Materials, Supplies, Etc.," of these Special Provisions and Sheets EC-1 and T-1 of the Plans for the designated temporary staging/storage areas.

FF shall be removed and disposed of by Contractor after construction is completed.

Payment for Install and Maintain Filter Fence Item shall be based on the unit price bid and on the number of linear feet of FF installed and maintained as described above with no additional compensation therefor. Progress payments for these Items will be a maximum of 50% of the unit cost bid multiplied by the number of linear feet of FF installed during the pay period as determined by Engineer and/or required by TRPA's Compliance Division. Payments for maintenance, removal, and disposal, as applicable, of filter fence will be made in the Final Pay Estimate providing that satisfactory maintenance was performed through the duration of the project and removal was completed as specified.

INSTALL AND MAINTAIN VISQUEEN WITH GRAVEL BAGS OR GRAVEL-FILLED ROLLS: Visqueen sheeting weighted with gravel bags or gravel-filled rolls shall be placed in all swales and channels along the entire length of the swale and/or channel after grading is completed when the turf reinforcement mat cannot be placed in the swale or channel immediately after that section of swale or channel is graded, unless from weather reports, Engineer determines that the interim use of visqueen sheeting weighted with gravel bags or gravel-filled rolls is unnecessary. Contractor shall be paid per linear foot of channel or swale along which visqueen with gravel bags or gravel-filled bags are installed. Gravel bags or gravel-filled rolls shall be placed along the visqueen at the spacing shown on Sheet EC-2 of the Plans. Visqueen shall be overlapped as shown on Sheet EC-2 of the Plans. The visqueen sheeting shall cover the swale or channel cross section and extend one foot either side of the top of the swale or channel bank. Once installed in a graded swale or

channel, visqueen sheeting with gravel bags or gravel-filled rolls shall remain in place until turf reinforcement mat is placed.

The quantity shown on the item is approximate and may be reduced or may be increased. The increase or reduction of this quantity compared with that set forth in the bid schedule shall not constitute a basis for a claim by Contractor for extra payment or damages and Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications shall not apply.

Payment for Install and Maintain Visqueen with Gravel Bags or Gravel-Filled Rolls Item shall be based on the unit price bid and on the number of linear feet of channel or swale over which the visqueen with gravel bags or gravel-filled rolls are installed and maintained as described above with no additional compensation therefor. Progress payments for this item will be a maximum of 50% of the unit cost bid multiplied by the number of linear feet of swale or channel over which visqueen with gravel bags or gravel-filled rolls are installed and maintained during the pay period as determined by Engineer and/or required by TRPA's Compliance Division. As described above, once the swale or channel is covered, the visqueen and gravel bags or gravel-filled rolls will remain in place until the swale or channel permanent protection is installed. Therefore, the maximum payment for each swale and/or channel location will be the length of the swale and/or channel. Payments for maintenance, removal, and disposal of visqueen with gravel bags or gravel-filled rolls will be made in the Final Pay Estimate providing that satisfactory maintenance was performed through the duration of the project and removal was completed as specified.

#### **ITEM 13 – INSTALL AND MAINTAIN DRAIN INLET PROTECTION**

Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to install, maintain, remove, and dispose of this temporary erosion control measure as required by the Plans, the Standard Specifications, these Special Provisions, and the TRPA Best Management Practices. Work under this Item includes furnishing, installing, maintaining, removing, and disposing of the drain inlet protection as shown on Sheet EC-2 of the Plans.

Attention is directed to Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions.

**A fine of \$100/day will be levied against Contractor for each day Contractor delays in responding to Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices.**

Drain inlet protection shall be placed as denoted on the Plans in areas where grading has been completed and final stabilization and seeding are pending.

Payment for Install and Maintain Drain Inlet Protection Item shall be based on the unit cost bid and on the number of drain inlet protections (one per inlet as designated by the Engineer and/or shown on the Plans to receive inlet protection) installed and maintained with no additional compensation therefor. Progress payments for this Item will be a maximum of 50% of the unit cost bid multiplied by the number of drain inlet protections installed during the pay period as determined by Engineer and/or required by TRPA's Compliance Division. Payment for the maintenance, removal, and disposal of all drain inlet protections will be made in the Final Pay Estimate providing that satisfactory maintenance was performed throughout the duration of the project and removal was completed as specified.

#### **ITEM 14 – INSTALL AND MAINTAIN TREE PROTECTION AND CONSTRUCTION LIMIT FENCE**

Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to install, maintain, remove, and dispose of this temporary erosion control measure as required by the Plans, the Standard Specifications, these Special Provisions, and TRPA Best Management Practices.

Attention is directed to Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions.

**A fine of \$100/day will be levied against Contractor for each day Contractor delays in responding to Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices.**

Contractor shall perform all construction activities that are outside the road right-of-way within the construction limits staked by Engineer and delineated with construction limit fence installed by Contractor. Where directed by Engineer and/or shown on the Plans, construction limit fence shall be placed around individual trees that are to remain, in accordance with the Construction Limit Fence Detail shown on the Plans. Attention is directed to Section 10-1.22, "Disturbance and Revegetation," of these Special Provisions.

The area within which Contractor will be allowed to work will be the area within the limits of the construction limit fence. At trees near the work area, the width of the work area will be reduced in order to protect the trees. Contractor shall review each such location to determine what equipment can be used to install the improvements at these locations or if hand work will be necessary. The costs associated with working within these reduced widths shall be included in the unit price bid for the applicable item of work with no additional compensation therefor.

All construction limit fence shall remain in place until equipment access is no longer necessary in the area and TRPA approval is obtained.

Where tree protection fencing cannot be placed at the dripline of the tree, the detail showing wooden tree trunk protection shall apply. The unit price bid for Install and Maintain Wooden Tree Trunk Protection shall apply to this condition.

Payment for Install and Maintain Tree Protection and Construction Limit Fence Item shall be based on the unit cost bid and on the number of linear feet of construction limit fence and/or tree protection fencing installed and maintained with no additional compensation therefor. Progress payments for this Item will be a maximum of 50% of the unit cost bid multiplied by the number of linear feet of construction limit fence and/or tree protection fencing installed during the pay period as determined by Engineer and/or required by TRPA's Compliance Division. Payment for the maintenance, removal, and disposal of all construction limit fence and/or tree protection fence will be made in the Final Pay Estimate providing that satisfactory maintenance was performed throughout the duration of the project and removal was completed as specified.

#### **ITEM 15 – AC PAVEMENT SECTIONS TYPE 1 AND TYPE 2**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to construct the asphalt concrete (AC) pavement sections type 1 and type 2 on Boulder Mountain Drive in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item includes sawcutting, AC removal and disposal, clearing and grubbing, excavation, disposal of excess material, scarifying and compaction of subgrade to a depth of 6", placement and compaction of fill, furnishing, placing, and compacting aggregate base including shoulders (8" compacted thickness), furnishing, placing, and compacting asphalt concrete (3" compacted thickness), furnishing and placing paint binder (tack coat), mixing soil and humus, placing and compacting topsoil mix on the slopes and in the disturbed area around the perimeter of the new AC sections but within the construction area limits.

The costs associated with warping fill over the existing rock and pipe outlet, as shown on Sheet P-2 of the Plans, are included in the unit price bid for this item.

The costs associated with the removal of the top portion of the existing concrete cutoff walls are included in the "Modify Existing Concrete Cutoff Wall" item.

Attention is directed to Section 10-1.01, "Order of Work," Section 10-1.10, "Excavation and Grading," Section 10-1.12, "Aggregate Base, Class 2," Section 10-1.14, "Asphaltic Emulsion (Paint Binder)," Section 10-1.15, "Asphalt Concrete," and Section 10-1.22, "Disturbance and Revegetation," of these Special Provisions.

Payment for AC Pavement Sections Type 1 and Type 2 Item shall be based on the unit price bid and on the number of square feet of AC pavement installed as specified above.

### **ITEM 16 – DRIVEWAY ACCESS**

Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to construct the AC driveway access in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item shall include sawcutting, excavation and disposal of excess material, scarifying and compaction of subgrade to a depth of 6", furnishing, placing, and compacting 8" thickness of aggregate base including shoulders, furnishing, placing, and compacting AC (3" compacted thickness), and furnishing and placing paint binder (tack coat). AC paving for the driveway access shall be warped to maintain a smooth transition and shall prevent ponding or trapping water.

The sawcut limits will be marked in the field by the Engineer.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.12, "Aggregate Base, Class 2," Section 10-1.14 "Asphaltic Emulsion (Paint Binder)," and Section 10-1.15 "Asphalt Concrete" of these Special Provisions. Attention is also directed to Item "Dewatering for FM D/W and No. 1 Backing," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for Driveway Access Item shall be based on the unit price bid and on the number of square feet of AC paving at driveways installed as specified above.

### **ITEM 17 – DRIVEWAY R&R**

Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to remove and replace AC paving at driveways in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item shall include sawcutting, excavation and disposal of excess material, scarifying and compaction of subgrade to a depth of 6", furnishing, placing, and compacting 4" thickness of aggregate base, furnishing, placing, and compacting AC (2 1/2" compacted thickness), and furnishing and placing paint binder (tack coat). AC paving for driveways shall be warped to maintain a smooth transition and shall prevent ponding or trapping water.

The sawcut limits will be marked in the field by the Engineer.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.12, "Aggregate Base, Class 2," Section 10-1.14 "Asphaltic Emulsion (Paint Binder)," and Section 10-1.15 "Asphalt Concrete" of these Special Provisions.

Payment for Driveway R&R Item shall be based on the unit price bid and on the number of square feet of AC paving at driveways installed as specified above.

### **ITEM 18 – AB SHOULDER**

Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to install aggregate base (AB) shoulders in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item shall include excavation and disposal of excess material, scarifying and compaction of subgrade to a depth of 6", and furnishing, placing, and compacting 8" thickness of aggregate base.

The costs associated with salvaging soil at the AB Shoulder locations are included in the unit price bid for this item.

The costs associated with installation of AB shoulder along Boulder Mtn. Drive and around the perimeter of the driveway access on Forest Mtn. Drive are included in the "AC Pavement Sections Type 1 and Type 2" and "Driveway Access" items, respectively.

The costs associated with salvaging sod prior to excavation for AB shouldering are included in the "Sod Salvage and Transplant" item.

Attention is directed to Section 10-1.10, "Excavation and Grading," and Section 10-1.12, "Aggregate Base, Class 2," of these Special Provisions.

Payment for the AB Shoulder Item shall be based on the unit price bid and on the number of linear feet of AB shoulder installed as specified above.

#### **ITEM 19 – MISCELLANEOUS GRADING**

Work under this item shall consist of providing all labor, tools, materials, and equipment necessary to perform miscellaneous grading (regrading of the road shoulder) as shown on the Plans and as directed by Engineer. Work under this item shall include clearing and grubbing, excavating, scarifying and compaction of subgrade to a depth of 6", placement and compaction of fill, disposal of excess material, mixing soil and humus, and placing and compacting topsoil mix.

Work under this item is separate from excavation, fill, backfill, compaction, disposal of excess material, and scarifying and compacting of subgrade required within other items of work in these Special Provisions.

The grading quantities shown on the plans and listed below include the topsoil mix.

- Sheet P-4 – 0.2 CY from Sta 21+63.00 to Sta 21+93.00, between the AB shoulder and No. 1 backing.
- Sheet P-5 – 3.5 CY from Sta 10+35.00 to Sta 11+50.00, between the AB shoulder and grass-lined swale, and 0.3 CY from Sta 12+35.00 to Sta 13+33.00, between the road shoulder and grass-lined swale.

Measurement for payment under this item shall be based on the number of cubic yards of soil excavated or the number of cubic yards of soil placed and compacted as shown on the Plans. If miscellaneous grading is required but not shown and quantified on the Plans or these Special Provisions, the payment quantity shall be mutually agreed upon by Engineer and Contractor. The quantity shown in the bid schedule is approximate and may be reduced or may be increased.

The costs associated with salvaging soil at the miscellaneous grading locations are included in the unit price bid for this item.

Attention is directed to Section 10-1.07, "Clearing and Grubbing," and Section 10-1.10, "Excavation and Grading," of these Special Provisions.

Payment for Miscellaneous Grading Item shall be based on the unit price bid and on the number of cubic yards of soil excavated or placed and compacted as quantified on the Plans and these Special Provisions and/or as determined by mutual agreement between Engineer and Contractor.

#### **ITEM 20 – SOD SALVAGE AND TRANSPLANT**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to salvage and transplant the following quantities of sod as shown on the Plans in accordance with the Plans, the Standard Specifications, and these Special Provisions:

##### Salvage Sod Areas

- P-1 – 50 SF maximum at rock dissipator near Sta 17+80.00.
- P-5 – 900 SF maximum between Sta 10+35.00 and Sta 11+50.00, Iron Mtn. Circle.
- P-5 – 510 SF maximum between Sta 12+33.00 and Sta 13+42.00, Iron Mtn. Circle.
- P-5 – 75 SF maximum at rock dissipator near Sta 4+92, drain basin near Sta 5+36, and grade to drain area near Sta 5+40, Granite Mtn. Circle.

##### Transplant Sod Areas:

- Salvage sod grass-lined swales, including transitions to existing swales.

- Over pipe trench near Sta 5+02±, around drain basin at Sta 5+36.94, and grade to drain area near Sta 5+40, Granite Mtn. Circle.
- Around rock dissipators at Sta 17+80±, Boulder Mtn. Drive, and Sta 4+95±, Granite Mtn. Circle.
- Between salvage sod grass-lined swale and AB shoulder, Sta 10+35.00 to Sta 11+50.00, Iron Mtn. Circle.
- Between salvage sod grass-lined swale and edge of pavement, Sta 12+33.00 to Sta 12+50.00, Iron Mtn. Circle.
- At excavation for sediment trap window, Sta 11+67.25, Iron Mtn. Circle.
- Salvage sod grass-lined swale cut and fill slopes, Sta 10+35.00 to Sta 11+52.37 and Sta 12+33.00 to Sta 12+50.00, Iron Mtn. Circle.
- Above 6" perf pipe trench, Sta 11+50.00 to 11+67.00, Iron Mtn. Circle.
- Around 6" clean out at Sta 12+17.00, Iron Mountain Circle.

All sod salvaging and transplant procedures shall be in accordance with Section 10-1.08, "Sod Salvage and Transplant," of these Special Provisions. Contractor's attention is directed to the fact that the salvaged sod grass-lined swales shall be given first priority for the salvaged sod. Attention is directed to "6" Perforated HDPE with Salvaged Sod GLS" Item for the provisions for sod by others should salvaged sod quantities be deficient.

Attention is directed to Section 10-1.07, "Clearing and Grubbing," Section 10-1.08, "Sod Salvage and Transplant," and Section 10-1.10, "Excavation and Grading," of these Special Provisions. Attention is also directed to Items "Dewatering for BM Pipes and Subdrain," "Dewatering for GM Pipes and DB," and "Dewatering for IM Pipes and GLS", Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding dewatering and for dewatering operation requirements.

Payment for Sod Salvage and Transplant Item shall be based on the unit price bid and on the number of square feet of sod salvaged and transplanted in accordance with the procedures specified in these Special Provisions.

#### **ITEM 21 – DRAINAGE INLET**

Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to construct drainage inlets in accordance with the Plans, the Standard Specifications, and these Special Provisions. The work shall include excavation, disposal of excess materials, backfill, compaction, shoring and bracing or sloping the sides of the excavation for trenches less than or equal to five feet deep, concrete and its forming and placement, furnishing and installation of reinforcing steel, frame, chain, grate, and hood, drain holes, connection to culvert system with concrete collars, and installation of Class 1 Type B permeable material. Backfill shall be native and compacted in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. except the upper section of backfill shall be aggregate base and conform to the thickness specified for the curb and gutter section. The costs associated with placing and compacting the aggregate base are included in this bid item. The costs associated with the removal and disposal of sediment accumulated in the drainage inlets during construction shall be included in the unit price bid for this item. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

The costs associated with furnishing all labor, tools, equipment and materials necessary to remove the existing AC pavement shown on the Plans around the proposed drainage inlet shall also be included in the unit price bid for this item in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item includes sawcutting, removal of existing AC pavement, and disposal of AC pavement that is removed.

Payment for the construction of the curb and gutter within the limits of the concrete behind the drainage inlet, per detail 5/D-2, at the drainage inlets is included in the payment of this bid item.



The costs associated with furnishing all labor, tools, equipment and materials necessary to construct the AC pavement section (tie-in pavement) between the grate and the sawcut limits up to three feet (i.e. tie-in pavement) between the curb and existing pavement on Sheet P-05 is included in this bid item. The tie-in pavement section shall consist of 3" AC over 8" of aggregate base.

The costs associated with shoring, bracing, or laying back the sides of the excavation in the trenches deeper than five feet are included in the "Shoring, Bracing of Trenches Greater than Five Feet Deep" item.

It is the Contractor's responsibility to verify the top back curb (TBC) elevation shown on the Plans at the drainage inlet prior to excavation for the drainage inlet installation and to notify the Engineer if any discrepancies are discovered. Contractor is also responsible for the protection of the existing utilities in the performance of work described herein. The costs associated with providing such protection shall be included in the unit price bid for this item.

Attention is directed to Section 10-1.26, "Shoring and Excavation Plan," for submittal requirements for safety requirements and a description of the conditions under which sloping the sides of the excavation will be allowed in lieu of shoring and/or bracing, and Section 10-1.10, "Excavation and Grading," regarding compaction specifications. Attention is directed to Item "Dewatering for LTB Pipes and DIs," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements. Contractor shall submit a Shoring and Excavation Plan to the Engineer within five (5) working days before commencing the excavation for the culvert(s) connecting to the drainage inlets.

The Contractor shall submit shop drawings of each inlet shown on the Plans at least five (5) working days before the start of the excavation for the drainage inlets for Engineer's approval. A precast unit with cast-in-place top section (2.0' deep minimum measured from the top of hood) to receive grate, frame, and hood will be an acceptable alternative to cast-in-place drainage inlets. Drainage inlets that are entirely precast will not be acceptable. Reinforcing steel in the drainage inlet walls of the precast section shall extend into the cast-in-place section in the same manner as if it were entirely precast.

The grates shall be of an approved "bicycle-proof" type as shown in the Standard Plans. The grates and hoods shall be cast iron and painted black.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.17, "Culvert, CMP Structures, Perforated Pipe, and Drain Basin," and Section 10-1.19, "Concrete Structures," of these Special Provisions.

Payment for Drainage Inlet Item shall be based on the unit price bid and the number of drainage inlets installed as specified above.

#### **ITEM 22 – 24" DRAIN BASIN**

Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to construct drain basins in accordance with the Plans, the Standard Specifications, and these Special Provisions. The work shall include excavation, disposal of excess materials, backfill, scarifying and compacting subgrade (if disturbed), shoring and bracing or sloping the sides of the excavation for trenches less than or equal to five feet deep, furnishing and installing drain basin, ductile iron frame with standard grate, locking device, drilling drain holes, connection to culvert system with watertight adapter, and furnishing and placing Class 1 Type B permeable material. Backfill shall be native and compacted in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. The costs associated with the removal and disposal of sediment and storm water accumulated in the drain basins during construction shall also be included in the unit price bid for this item. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

The costs associated with the salvage and transplant of sod around the drain basin and the grade to drain area are included in the "Sod Salvage and Transplant" Item. The costs associated with grading the existing

swale to drain in the drain basin and adding the compacted fill mound around the drain basin grate are included in this item.

Attention is directed to Section 10-1.17, "Culvert, CMP Structures, Perforated Pipe, and Drain Basin," of these Special Provisions.

Attention is directed to Section 10-1.26, "Shoring and Excavation Plan," and Item "Trench and Excavation Safety" for submittal requirements for safety and a description of the conditions under which sloping the sides of the excavation will be allowed in lieu of shoring and/or bracing, and Section 10-1.10, "Excavation and Grading," regarding compaction specifications. Contractor shall submit a Shoring and Excavation Plan to Engineer within five (5) working days before commencing the excavation for the culvert(s) connecting to the drain basins.

Attention is also directed to Item "Dewatering for GM Pipes and DB," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Contractor shall submit shop drawings of each drain basin shown on the Plans at least five (5) working days before the start of the excavation for the drain basin for Engineer's approval.

Payment for 24" Drain Basin Item shall be based on the unit price bid and the number of drain basins installed as specified herein and on the Plans.

#### **ITEM 23 – SEDIMENT TRAP WINDOW**

Work under this item shall consist of furnishing all labor, tools, materials, and equipment necessary to construct a sediment trap window as shown on the Plans in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item includes clear and grub, excavation and grading to drain, cutting a window into the side of the existing sediment trap, welding vertical bars, and galvanizing.

The costs associated with the salvage and transplant of sod in the area excavated to drain into the sediment trap window are included in the "Sod Salvage and Transplant" Item.

Galvanized areas damaged during cutting, welding, or handling shall be repaired with suitable corrosion resistant coating approved by Engineer (see Section 5-1.53, "Certificates of Compliance").

Attention is directed to Section 10-1.07, "Clearing and Grubbing," Section 10-1.08, "Sod Salvage and Transplant," Section 10-1.10, "Excavation and Grading," of these Special Provisions. Attention is also directed to Item "Dewatering for IM Pipes and GLS," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for Sediment Trap Window Item shall be based on the unit price bid and on the number of sediment trap windows constructed as specified above.

#### **ITEM 24 – ROLLED CURB AND GUTTER WITH TIE-IN PAVEMENT**

Work under this item shall consist of furnishing all labor, tools, equipment, and material necessary to construct the Portland cement concrete curb and gutter with tie-in pavement in accordance with the Plans the Standard Specifications, and these Special Provisions. Work under this item shall include concrete curb and gutter and AC pavement removal and disposal in the areas in which curb and gutter with tie-in pavement is to be installed, clearing and grubbing, excavation, disposal of excess material, sawcutting, scarifying and compacting subgrade, furnishing, placing, and compacting aggregate base, concrete and its forming, placement, and finishing, expansion joints, crack joints, tie-in pavement placement, compacting, paint binder, and grading (including fill or excavation and compaction of fill and subgrade) an average of two feet behind the curb, mixing soil and humus, and placing and compacting topsoil mix behind curb.

Construction of the AC pavement section up to three feet wide (i.e. tie-in pavement) between curb and gutter and existing pavement is included in this item. The tie-in pavement section adjacent to the drainage inlet grates is also included in this item. The tie-in pavement section shall consist of 3" compacted AC over 8" of compacted aggregate base. Regardless of the condition of the existing pavement, the Contractor shall take such care of the sawcut edge of the pavement as is necessary to ensure that tie-in pavement greater than that shown on the Plans is not necessary. All pavement disturbed beyond the limits shown on the Plans shall be replaced at the Contractor's expense and shall include an additional sawcut.

The costs associated with furnishing all labor, tools, equipment and materials necessary to form the curb transition to the drainage inlet and the costs associated with furnishing all labor, tools, equipment and materials necessary to construct an expansion joint using 3 - #4 x 24" bars at the seam between the existing curb and gutter and the proposed curb and gutter and at the proposed curb end transition and proposed curb and gutter are included in the unit price bid for this item.

Backfill and topsoil mix behind the curb included in this item as well as AC disposal shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Attention is directed to items "Humus for Topsoil Mix," "Mulch and Mulch Application," and "Tackifier and Tackifier Application."

The costs associated with the construction of the concrete curb end transitions are included in the "Concrete Curb End Transition" item.

Construction control lines for curb and gutter will be set by the Contractor based on horizontal control and vertical control staked by the Engineer. The string line shall be set sufficiently in advance of the scheduled pour, but in no case less than two hours, to allow the Engineer to check the line against cut sheet grades and provide time for adjustment, if necessary.

All curb and gutter shall be water tested and shall drain without ponding. If ponding does occur, the Contractor shall be responsible for removal and replacement of a sufficient amount of curb and gutter to eliminate the ponding. Grinding of the flowline will not be permitted.

Contractor is responsible for protecting the lip of the gutter after it is constructed and before AC paving is in place.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.12, "Aggregate Base, Class 2," Section 10-1.14 "Asphaltic Emulsion (Paint Binder)," Section 10-1.15 "Asphalt Concrete," Section 10-1.19, "Concrete Structures," "Humus for Topsoil Mix," "Mulch and Mulch Application," and "Tackifier and Tackifier Application" Items of these Special Provisions.

Payment for Rolled Curb and Gutter with Tie-in Pavement Item shall be based on the unit price bid for curb and gutter with tie-in pavement and on the number of linear feet of curb and gutter installed as specified above.

#### **ITEM 25 – CONCRETE CURB END TRANSITION**

Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to construct Portland cement concrete curb end transitions in accordance with the Plans, Standard Specification, and these Special Provisions. Work under this item shall include sawcutting, removing and disposing of existing AC under the curb end transition and within the three-foot tie-in pavement width and within the extended AC pavement (up to three feet past the end of the transition), excavation, disposal of excess material, scarifying and compaction of subgrade, furnishing, placing, and compacting aggregate base under the curb end transition, extended AC pavement, and under tie-in pavement, concrete and its forming, placement, and finishing, furnishing and placing expansion joint material paint binder, placing and compacting the extended AC pavement and tie-in pavement section, backfilling and compacting behind the curb end transition, mixing soil and humus, and placing and compacting topsoil mix. The extended AC pavement and tie-in pavement section shall consist of 3" compacted AC over 8" of compacted aggregate base.

The costs associated with furnishing all labor, tools, equipment and materials necessary to construct an expansion joint using 3 - #4 x 24" bars at the seam between the curb end transition and curb and gutter is included in the "Curb and Gutter with Tie-In Pavement" item.

Attention is directed to Section 10-1.10, "Excavation and Grading," regarding compaction and topsoil mix specifications, Section 10-1.12, "Aggregate Base, Class 2," Section 10-1.14 "Asphaltic Emulsion (Paint Binder)," Section 10-1.15 "Asphalt Concrete," and Section 10-1.19, "Concrete Structures," "Humus for Topsoil Mix," "Mulch and Mulch Application," and "Tackifier and Tackifier Application" Items of these Special Provisions.

Payment for Curb End Transition Item shall be based on the unit price bid and on the number of concrete curb end transitions installed as specified above.

#### **ITEM 26 – CONCRETE ENCASEMENT**

Work under this item shall consist of furnishing all labor, tools, materials, and equipment necessary to install a concrete encasement as shown on the Plans in accordance with the Plans, the Standard Specifications, and these Special Provisions.

Encasement locations shall be where noted on the Plans and where directed in the field by the Engineer. Where directed in the field, encasement limits shall be similar to that described above.

Concrete for the encasement shall have a minimum of 282 pounds of cement (three-sack mix minimum).

Attention is directed to Section 10-1.10, "Concrete Structures" of these Special Provisions.

Payment for Concrete Encasement Item shall be based on the unit price bid and on the number of concrete encasements installed as specified above.

#### **ITEM 27 – 15"x21" ARCH CMP (IN PAVEMENT)**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to construct CMP culverts in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under this item includes sawcutting, excavation, disposal of excess material, scarifying and compacting subgrade, shoring, bracing, or sloping of the sides of the excavation for trenches less than or equal to five feet deep, furnishing and laying pipe, elbows, couplings, and bends, furnishing, placing, and compacting bedding, if applicable; backfilling and compaction, if applicable; furnishing, placing, and compacting aggregate base or furnishing and placing slurry cement, asphalt concrete removal, disposal, and replacement, and removal and disposal of existing culverts within the new pipe trench where noted on the Plans. The costs associated with the removal and disposal of sediment accumulated in the culverts during construction shall also be included in the unit price bid for this item. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

Cover is the distance from the finished surface of the proposed AC paving to the top of the pipe. Slurry cement backfill shall be used in conformance with Section 10-1.19, "Concrete Structures," of these Special Provisions where the cover over the pipe is less than 18 inches. Attention is directed to Section 10-1.10, "Excavation and Grading," of these Special Provisions for backfill and compaction requirements where cover is greater than or equal to 18 inches.

The new AC section shall be 3 inches of compacted AC over 8 inches compacted aggregate base at all locations under this item. Cold AC mix shall be placed, compacted, and maintained over the pipe trench and shall be placed and compacted immediately after the backfill compaction is complete or the slurry cement has set. The costs associated with furnishing, placing, compacting, and maintaining cold AC mix shall be included in the unit price bid for CMP in pavement.

Costs associated with slurry cement backfill placement, where applicable, are included in the unit price bid for this item.

Contractor is responsible for the protection of the existing utilities in the performance of the work described herein. The costs associated with providing such protection shall be included in the unit price bid for CMP in pavement installed.

Attention is directed to Item "Remove Existing Pipe," Section 10-1.03, "Maintaining Traffic," Section 10-1.04, "Traffic Control Plan," Section 10-1.10, "Excavation and Grading," Section 10-1.12, "Aggregate Base, Class 2," Section 10-1.14 "Asphaltic Emulsion (Paint Binder)," Section 10-1.15 "Asphalt Concrete," Section 10-1.17, "Culvert, CMP Structures, Perforated Pipe, and Drain Basin, and Drain Basin," Section 10-1.19, "Concrete Structures," and Section 10-1.26, "Shoring and Excavation Plan," of these Special Provisions. Attention is also directed to Item "Dewatering for BM Pipes and subdrain," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 15"x21" Arch CMP (in pavement) Item shall be based on the unit price bid and on the number of linear feet of CMP constructed as specified above.

#### **ITEM 28 – 15"x21" ARCH CMP (OUT OF PAVEMENT)**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to construct CMP culverts beyond the edge of pavement in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under this item includes clearing and grubbing, excavation, disposal of excess material, scarifying and compacting subgrade, shoring, bracing, or sloping of the sides of the excavation for trenches five feet deep or less, furnishing and laying pipe, elbows, couplings, and bends, furnishing, placing, and compacting bedding, backfilling and compaction, mixing soil and humus, placing and compacting topsoil mix, and removal and disposal of existing culverts within the new pipe trench where noted on the Plans. Topsoil mix shall be mounded over the top of the pipe as shown on the pipe trench detail on Plan Sheet D-3. The costs associated with the removal and disposal of sediment accumulated in the culverts during construction shall also be included in the unit price bid for this item. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

Cover over the pipes shall be a minimum of 12 inches where cover is defined as the distance from finished grade elevation of the backfilled pipe trench to the top of the pipe.

Contractor is responsible for the protection of the existing utilities in the performance of the work described herein. The costs associated with providing such protection shall be included in the unit price bid for CMP out of pavement.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.17, "Culvert, CMP Structures, Perforated Pipe, and Drain Basin, and Drain Basin," and Section 10-1.26, "Shoring and Excavation Plan," "Humus for Topsoil Mix," "Mulch and Mulch Application," and "Tackifier and Tackifier Application" Items of these Special Provisions. Attention is also directed to Item "Dewatering for BM Pipes and Subdrain," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 15"x21" Arch CMP (out of pavement) Item shall be based on the unit price bid and on the number of linear feet of CMP constructed as specified above.

#### **ITEM 29 – 18" HDPE (IN PAVEMENT)**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to construct HDPE culverts in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under this item includes sawcutting, excavation, disposal of excess material, scarifying and compacting subgrade, shoring, bracing, or sloping of the sides of the excavation for trenches less than or equal to five feet deep, furnishing and laying pipe, elbows, couplings, and bends, removing and disposing of the drain rock and plywood covering the 18" HDPE stubs on the existing SDMH, connecting to the stubs, furnishing, placing, and compacting bedding, if applicable; backfilling and compaction, if applicable; furnishing, placing, and compacting aggregate base or furnishing and placing slurry cement, asphalt

concrete removal, disposal, and replacement, and removal and disposal of existing culverts within the new pipe trench where noted on the Plans. The costs associated with the removal and disposal of sediment accumulated in the culverts during construction shall also be included in the unit price bid for this item. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

Cover is the distance from the finished surface of the proposed AC Paving to the top of the pipe. Slurry cement backfill shall be used in conformance with Section 10-1.19, "Concrete Structures," of these Special Provisions where the cover over the pipe is less than 18 inches. Attention is directed to Section 10-1.10, "Excavation and Grading," of these Special Provisions for backfill and compaction requirements where cover is greater than or equal to 18 inches.

The new AC section shall be 3 inches of compacted AC over 8 inches compacted aggregate base at all locations under this item. Cold AC mix shall be placed, compacted, and maintained over the pipe trench and shall be placed and compacted immediately after the backfill compaction is complete or the slurry cement has set. The costs associated with furnishing, placing, compacting, and maintaining cold AC mix shall be included in the unit price bid for HDPE in pavement.

Costs associated with slurry cement backfill placement, where applicable, and the costs associated with removing and disposing of a portion of the existing 6" steel abandoned waterline, if found to be in conflict with the proposed storm drain pipe, are included in this item.

Contractor is responsible for the protection of the existing utilities in the performance of the work described herein. The costs associated with providing such protection shall be included in the unit price bid for HDPE in pavement installed.

Attention is directed to Section 10-1.03, "Maintaining Traffic," Section 10-1.04, "Traffic Control Plan," Section 10-1.10, "Excavation and Grading," Section 10-1.12, "Aggregate Base, Class 2," Section 10-1.14 "Asphaltic Emulsion (Paint Binder)," Section 10-1.15 "Asphalt Concrete," Section 10-1.17, "Culvert, CMP Structures, Perforated Pipe, and Drain Basin, and Drain Basin," Section 10-1.19, "Concrete Structures," and Section 10-1.26, "Shoring and Excavation Plan," of these Special Provisions. Attention is also directed to Item "Dewatering for LTB Pipes and DIs," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 18" HDPE (in pavement) Item shall be based on the unit price bid and on the number of linear feet of HDPE constructed as specified above.

#### **ITEMS 30 AND 31 – 18" HDPE (OUT OF PAVEMENT) AND 12" HDPE (OUT OF PAVEMENT)**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to construct HDPE culverts beyond the edge of pavement or under AC driveways in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under this item includes clearing and grubbing, excavation, disposal of excess material, scarifying and compacting subgrade, shoring, bracing, or sloping of the sides of the excavation for trenches five feet deep or less, furnishing and laying pipe, elbows, couplings, and bends, connecting to existing culvert, furnishing, placing, and compacting bedding, backfilling and compaction, mixing soil and humus, placing and compacting topsoil mix (where applicable), and removal and disposal of existing culverts within the new pipe trench where noted on the Plans. Where applicable, topsoil mix shall be mounded over the top of the pipe as shown on the pipe trench detail on Plan Sheet D-3. The costs associated with the removal and disposal of sediment accumulated in the culverts during construction shall also be included in the unit price bid for this item. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

Cover over the pipes shall be a minimum of 12 inches where cover is defined as the distance from finished grade elevation of the backfilled pipe trench to the top of the pipe. Backfill for the 12" HDPE (out of pavement) under the driveway at Granite Mtn. Sta 5+20± shall be slurry cement. The costs associated with

slurry cement backfill placement shall be included in the unit price bid for the "12" HDPE (Out of Pavement)" item.

The costs associated with the removal, storage, and installation of the existing 18" FES on the 18" HDPE at Boulder Mtn Sta 21+05.25 is included in the unit price bid for the 18" HDPE (out of pavement) item. Contractor is responsible for ensuring that no damage occurs to the existing FES.

Contractor is responsible for the protection of the existing utilities in the performance of the work described herein. The costs associated with providing such protection shall be included in the unit price bid for HDPE out of pavement.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.17, "Culvert, CMP Structures, Perforated Pipe, and Drain Basin," Section 10-1.26, "Shoring and Excavation Plan," and "Humus for Topsoil Mix," "Mulch and Mulch Application," and "Tackifier and Tackifier Application" Items of these Special Provisions. Attention is also directed to Items "Dewatering for BM Pipes and Subdrain," "Dewatering for GM Pipe and DB," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 18" HDPE (out of pavement) and 12" HDPE (out of pavement) Items shall be based on the unit prices bid and on the number of linear feet of HDPE constructed as specified above.

#### **ITEM 32 – 6" PERFORATED HDPE WITH SALVAGED SOD GLS**

Work under this item shall consist of furnishing all labor, tools, equipment, and material necessary to construct the 6" perforated HDPE pipe with salvaged sod grass-lined swale (GLS) in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under this item includes clearing and grubbing, salvaging soil and mixing soil with humus, excavation, disposal of excess material, grading to ensure a smooth subgrade surface free of debris or other deleterious material, furnishing and placing turf reinforcement mat, furnishing and placing class 1 type B permeable material, furnishing and laying 6" perforated HDPE, elbows, couplings, and bends, placing and compacting native backfill, and placing and compacting topsoil mix. Topsoil mix shall be placed between the GLS and edge of existing pavement from Iron Mtn. Sta 12+50.00 to Sta 13+10.00±, on GLS cut and fill slopes from Iron Mtn. Sta 12+50 to Sta 13+42, and over that portion of pipe trench not under the GLS. Topsoil mix over the pipe trench shall be mounded over the top of the pipe as shown on the pipe trench detail on Plan Sheet D-3. The costs associated with the removal and disposal of sediment accumulated in the pipes during construction shall also be included in the unit price bid for this item. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

The costs associated with the placement of salvaged sod in the GLS and between the GLS and edge of pavement are included in the "Sod Salvage and Transplant" item. Should salvaged sod quantities for placement in the swale become deficient, the costs associated with furnishing and installing turf reinforcement mat, mixing soil and humus, and placing and compacting topsoil mix shall be included in the unit price bid for this item. Under these conditions, propagated sod will be supplied and placed by others.

The costs associated with extending the perforated HDPE pipe into the existing sediment trap (ST) at Iron Mtn. Sta 11+67±, cutting the ST, connection of culvert to vertical CMP with concrete collar, backfilling and compacting native material to subgrade of salvaged sod are included in the unit price bid for this item. The costs associated with extending the perforated HDPE pipe under the AC driveway near Iron Mtn. Sta 12+25± and backfilling and compacting native material to subgrade is included in the unit price bid for this item. The costs associated with extending the perforated HDPE pipe into the existing rock dissipator near Iron Mtn. Sta 13+47.79, repositioning the existing rock around the pipe, and backfilling and compacting native material over the pipe trench to match existing grade is included in the unit price bid for this item. The costs associated with extending the GLS and TRM five feet beyond the perforated HDPE pipe trench at Iron Mtn. Sta 13+37.00 and to match the existing channel at Iron Mtn. Sta 13+42.00 are included in the unit price bid for this item.

The costs associated with salvaging soil at the 6" perforated HDPE pipe trench and salvaged sod GLS locations are included in the unit price bid for this item.

The costs associated with the salvage and placement of sod are included in the "Sod Salvage and Transplant" item. The costs associated with furnishing and installing the 6" HDPE cleanouts are included in the "6" HDPE Cleanout" item.

Attention is directed to Section 10-1.08, "Sod Salvage and Transplant," Section 10-1.10, "Excavation and Grading," Section 10-1.17, "Culvert, CMP Structures, Perforated Pipe, and Drain Basin," Section 10-1.19, "Concrete Structures," Section 10-1.23, "Turf Reinforcement Mat and Filter Fabric," and "Humus for Topsoil Mix," "Mulch and Mulch Application," and "Tackifier and Tackifier Application" Items of these Special Provisions. Attention is also directed to Item "Dewatering for IM Pipes and GLS," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 6" Perforated HDPE with Salvaged Sod GLS Item shall be based on the unit price bid and on the number of linear feet of 6" perforated HDPE installed as specified above.

### **ITEM 33 – 6" HDPE CLEANOUT**

Work under this item shall consist of furnishing all labor, tools, equipment, and material necessary to install the 6" HDPE cleanouts in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item includes excavation, disposal of excess material, furnishing and placing turf reinforcement mat, furnishing and placing class 1 type B permeable material, native backfill placement and compaction, furnishing and placing 6" HDPE with couplings, bends, and water tight end caps. The costs associated with the removal and disposal of sediment accumulated in the cleanouts during construction shall also be included in the unit price bid for this item. Disposal of sediment shall be in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Sediment shall be removed just prior to demobilization.

The costs associated with the connection of the 6" HDPE cleanout to the 6" perforated HDPE pipe are included in the unit price bid for this item.

Attention is directed to Sections 10-1.10, "Excavation and Grading," and Section 10-1.17, "Culvert, CMP Structures, Perforated Pipe, and Drain Basin," and Section 10-1.23, "Turf Reinforcement Mat and Filter Fabric," of these Special Provisions. Attention is also directed to Item "Dewatering for IM Pipes and GLS," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 6" HDPE Cleanout Item shall be based on the unit price bid and on the number of cleanouts installed as specified above.

### **ITEM 34 – SUBDRAIN**

Work under this item shall consist of furnishing all labor, tools, equipment, and material necessary to construct the subdrain in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item includes clearing and grubbing, excavation, disposal of excess material, furnishing and placing turf reinforcement mat, furnishing and placing Class 1 Type B permeable material, and furnishing, placing, and epoxying woven filter fabric to concrete, where applicable.

The Contractor shall locate the westerly limit of the existing concrete cutoff walls and use the concrete edge as a guide to determine the subdrain alignment. To avoid extreme zig-zag configurations, Contractor shall retain a straight alignment where possible.

The costs associated with extending the subdrain trench into the existing GLS and RLC adjacent to Boulder Mtn. Drive and repositioning existing rock around the subdrain are included in the unit price bid for this item.



The costs associated with salvaging soil at the subdrain locations are included in the unit price bid for this item.

Attention is directed to Sections 10-1.10, "Excavation and Grading," and Section 10-1.23, "Turf Reinforcement Mat and Filter Fabric," of these Special Provisions. Attention is also directed to Item "Dewatering for BM Pipes and Subdrain," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for Subdrain Item shall be based on the unit price bid and on the number of linear feet of subdrain installed as specified above.

#### **ITEMS 35 AND 36 – 15"x21" FES AND 12" FES**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to install galvanized metal flared end sections in accordance with the Plans, Standard Specifications, and these Special Provisions. Work under this item includes excavation, disposal of excess material, backfill, compaction, installation, attachment to culvert, furnishing and installing No. 1 backing each side and over the FES.

The Contractor shall backfill and compact in and around the excavation as necessary to match the configuration of the No.1 backing shown on the "FES with Rock Dissipator" detail.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.17, "Culvert, CMP Structures, Perforated Pipe, and Drain Basin," Section 10-1.23, "Turf Reinforcement Mat and Filter Fabric," and Section 10-1.18, "Flared End Sections," of these Special Provisions. Attention is also directed to Items "Dewatering for BM Pipes and JS," "Dewatering for GM Pipes and RLC," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for 15"x21" FES and 12" FES Items shall be based on the unit price bid for each type of flared end section and on the number of each type of flared end section installed as specified above.

#### **ITEM 37 – ROCK DISSIPATOR**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to construct the rock dissipators in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item consists of clearing and grubbing, excavation, placement and compaction of fill, where applicable, disposal of excess material, scarifying and compaction of subgrade, furnishing and placing turf reinforcement mat, salvaging soil and mixing soil with humus, placing and compacting topsoil mix in the disturbed area around the perimeter of the rock dissipator but within the construction area limits, and furnishing and placing No. 1 rock backing, including the 18"x24" rock key.

The costs associated with salvaging soil at the rock dissipator locations are included in the unit price bid for this item.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.21, "Rock Specifications," and Section 10-1.23, "Turf Reinforcement Mat and Filter Fabric," of these Special Provisions. Attention is directed to the "FES with Rock Dissipator" detail regarding the pay limits for the rock dissipator. Attention is also directed to Items "Dewatering for BM Pipes and Subdrain," "Dewatering for GM Pipe and DB," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for Rock Dissipator Item shall be based on the unit price bid and on the number of square feet of rock dissipator installed as specified above.

### **ITEM 38 – NO. 1 BACKING**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to place the No. 1 backing in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item consists of clearing and grubbing, excavation, disposal of excess material, scarifying and compaction of subgrade, furnishing and placing turf reinforcement mat, backfill and compaction, and furnishing and placing No. 1 backing.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.21, "Rock Specifications," and Section 10-1.23, "Turf Reinforcement Mat and Filter Fabric," of these Special Provisions. Attention is also directed to Item "Dewatering for FM D/W and No. 1 Backing," Section 10-1.20, "Dewatering," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which excavations may require dewatering and for dewatering operation requirements.

Payment for No.1 Backing Item shall be based on the unit price bid and on the number of square feet of No. 1 backing installed as specified above.

### **ITEM 39 – ROCK-LINED CHANNEL R&R**

Work under this item consists of furnishing all labor, tools, materials, and equipment necessary to remove and replace the existing rock-lined channel side slope adjacent to Boulder Mtn. Drive in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item includes clear and grub, removal of No. 1 backing, regrading of the east slope of the RLC and shoulder, and placement of No. 1 backing.

Following removal of the No. 1 backing along the east side slope of the RLC, the fabric under the channel shall be protected and folded over the remaining rock on the west side. Once the slope and shoulder has been regraded, the fabric will be laid back and keyed into the slope. If the existing fabric cannot be reused, Contractor will be required to supply and install Turf Reinforcement Mat (TRM) over the compacted side slope and flow line prior to placement of the No.1 backing. Placement of the TRM shall be such that the edge of the TRM is upslope of the flowline a minimum of 1.0 linear feet. This will likely require additional rock on the west side of the RLC to be removed and restored. The costs associated with this work are included in this item.

Attention is directed to Section 10-1.10, "Excavation and Grading," and Section 10-1.21, "Rock Specifications," of these Special Provisions. Attention is also directed to Items "Dewatering for BM Pipes and Subdrain," Section 10-1.20, "Dewatering," Section 10-1.23, "Turf Reinforcement Mat and Filter Fabric," and Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," for information regarding which areas of work may require dewatering and for dewatering operation requirements.

Payment for Rock-Lined Channel R&R Item shall be based on the unit price bid and on the number of linear feet of rock-lined channel removed and replaced as specified above.

### **ITEM 40 – REMOVE EXISTING PIPE**

Work under this item consists of furnishing all labor, tools, materials, and equipment necessary to remove existing culverts that are not within excavations required to perform the various improvements but are noted on the Plans for removal in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item includes clearing and grubbing or sawcutting, excavation, disposal of excess material, shoring and bracing, or sloping the sides of the excavation for trenches less than five feet deep, removal and disposal of culvert, backfilling and compacting, where applicable, furnishing, placing, and compacting aggregate base or furnishing and placing slurry cement, and where applicable, asphalt concrete removal, disposal, and replacement. The width of the trench for removal of the culvert shall be sufficient to allow for proper compaction of the backfill, and where applicable, compaction of the AC replacement after the culvert is removed.

Where the removal occurs outside of the pavement, the trench shall be backfilled with native material. Where the removal occurs within the pavement section, the new AC section shall be 3 inches of compacted AC over 8 inches compacted aggregate base. Cold AC mix shall be placed, compacted, and maintained

over the trench and shall be placed and compacted immediately after the backfill compaction is complete. The costs associated with furnishing, placing, compacting, and maintaining cold AC mix shall be included in the unit price for the removal of culvert.

Alternatively, where the removal occurs within pavement, trenches may be backfilled entirely with slurry cement at Contractor's option. Where this option is selected, Contractor may temporarily extend slurry cement to the finished road surface in lieu of placing, compacting, and maintaining cold AC mix. Where this option is implemented, Contractor shall remove and dispose of the necessary thickness of slurry cement needed for the new AC thickness. Slurry cement backfill shall be in conformance with Section 10-1.19, "Concrete Structures," of these Special Provisions. Compensation for slurry cement backfill placement, and removal and replacement, where applicable, shall be included in the linear foot cost of culvert removal.

The costs associated with shoring and bracing, or sloping the sides of the excavation in the trenches deeper than five feet are included in the "Trench and Excavation Safety" item.

Attention is directed to Section 10-1.10, "Excavation and Grading," Section 10-1.03, "Maintaining Traffic," Section 10-1.04, "Traffic Control Plan," and Section 10-1.19, "Concrete Structures," of these Special Provisions.

Payment for Remove Existing Pipe Item shall be based on the unit price bid and on the number of linear feet of culvert or drain removed as specified above.

#### **ITEM 41 – REMOVE WILLOW CLUMP**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary for the removal and disposal of willow clumps. Work under this item includes limbing, cutting, removal and disposal of all parts of the willow clump, including the limbs, rootball, and debris resulting from the limbing and cutting operation. Willow clumps to be removed are shown on the Plans and will be marked in the field by Engineer. Willow clumps that interfere with the construction of project improvements, but are not shown on the Plans, may be removed upon mutual agreement between Contractor and Engineer.

The costs associated with the removal of willows that interfere with the construction of project improvements, but are not designated on the Plans to be removed or not mutually agreed upon between Contractor and Engineer to be removed under this item, shall be included as part of clearing and grubbing and no additional compensation shall be made therefor.

The void created by the removal of the rootball shall be backfilled with native material. The costs associated with backfilling and compacting this void are included in the unit price bid for this item.

Attention is directed to Section 10-1.07, "Clearing and Grubbing," and Section 10-1.10, "Excavation and Grading," of these Special Provisions.

Payment for Remove Willow Clump Item shall be based on the unit price bid and the number of willow clumps removed as specified above.

#### **ITEMS 42 AND 43 – ADJUST SMH AND SDMH RIM TO GRADE AND ADJUST WV COVER TO GRADE**

Work under this item shall consist of furnishing all labor, tools, materials, and equipment necessary to adjust sewer manhole (SMH) and storm drain manhole (SDMH) rims and water valve (WV) covers to grade in accordance with the Plans, Standard Specifications, and these Special Provisions. All manhole rims shall be adjusted in accordance with Section 15-2.05, "Reconstruction," of the Standard Specifications. Rims and covers to be adjusted to grade are either within the AC paving or AB shoulder.

Contractor shall be responsible for providing a record (e.g. stake) in the field of the locations of the existing manholes and valve covers. During the AC paving operation, Contractor shall use this record to locate the buried facilities and adjust them to grade. Contractor's method of paving over these facilities, removing and disposing of the paving to expose and to adjust the facilities to grade, and repaving around the facilities shall minimize the size of the pavement patches repaved around the facilities.

All adjustments shall provide a watertight seal in the raised portion and in the connecting existing portions of the facility.

Work shall include excavation, removal of existing concrete, removal of cover and frame, adding or removing grade rings as required, and resetting the cover and frame 1/4" below the finish surface of the AC paving or AB shoulder. The South Tahoe Public Utility District (STPUD) will provide the rings for the SMHs and SDMH.

Payment for Adjust SMH and SDMH Rim to Grade and Adjust WV Cover to Grade Items shall be based on the unit price bid and on the number of SMH, SDMH, and WV covers adjusted as specified above.

**ITEMS 44, 45, 46, 47, AND 48 – DEWATERING FOR BM PIPES AND SUBDRAIN, DEWATERING FOR FM D/W AND NO. 1 BACKING, DEWATERING FOR LTB PIPES AND DIS, DEWATERING FOR GM PIPE AND DB, AND DEWATERING FOR IM PIPES AND GLS**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to dewater the excavations for the following:

Boulder Mountain Drive (BM), two locations:

- Sheet P-1 – Sod salvage, Arch CMP and rock dissipators at Boulder Mtn. Drive and Cone Road intersection; HDPE pipe and rock-lined channel R&R,
- Sheet P-1 and P-2 – Subdrain from Sta 21+39± to Sta 26+45±.

Forest Mountain Drive (FM), one location:

- Sheet P-4 – Driveway access and No. 1 backing.

Lake Tahoe Blvd. (LTB), one location:

- Sheet P-4 – HDPE pipe and drainage inlets.

Granite Mountain Circle (GM), one location:

- Sheet P-5 – Sod salvage, HDPE pipe, drain basin, rock dissipator, grade to drain.

Iron Mountain Circle (IM), two locations

- Sheet P-5 – Sod salvage, HDPE pipe, HPDE cleanouts, GLS, rock dissipators, ST window.

It is anticipated that these areas may exhibit wet conditions. Contractor shall consider that dewatering the upper location(s) of Boulder Mountain Drive may eliminate the need for dewatering at the lower location(s). Discussions between Contractor and Engineer will determine if dewatering is necessary. If it is decided that dewatering at a particular location is unnecessary, no payment for this location will be made. If it is decided that dewatering is unnecessary at each of these locations, no payment for these items will be made. The elimination or reduction of this item shall not constitute the basis for a claim of extra payment or damage by Contractor and Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications shall not apply.

Attention is directed to Section 4-1.03, "Contractor Submittals," Section 10-1.01, "Order of Work," Section 10-1.20, "Dewatering," Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions.

Payment for Dewatering for BM Pipes and Subdrain, Dewatering for FM D/W and No. 1 Backing, Dewatering for LTB Pipes and Dis, Dewatering for GM Pipes and DB, and Dewatering for IM Pipes and GLS Items shall be based on the unit price bid and on the number of locations dewatered as specified above. Alternatively no payments shall also be as specified above.

#### **ITEM 49 – MODIFY EXISTING CONCRETE CUTOFF WALL**

Work under this item consists of furnishing all labor, tools, materials, and equipment necessary to remove concrete from the top of the existing concrete cutoff walls that are within the excavation and scarification limits required for construction of the Boulder Mountain Drive improvements noted in accordance with the Plans, the Standard Specifications, and these Special Provisions. The concrete shall be removed flush across the top of the entire cutoff wall. Work under this item includes clearing and grubbing, excavation, sawcutting, chipping, removal and disposal of concrete.

The concrete cutoff walls, as installed, encase an existing 10" PVC water line. In order to protect the existing water line, the section of the concrete shall be removed by means of sawcutting and chipping of the concrete. Contractor shall submit a concrete cutoff wall removal plan which shall include the proposed equipment and procedures, for review and approval by the Engineer. Any other method of removal may be considered, but will require the submittal of a concrete cutoff wall removal plan for review and approval by Engineer.

Attention is directed to Section 4-1.03, "Contractor Submittals," Section 10-1.10, "Excavation and Grading," Section 10-1.03, "Maintaining Traffic," Section 10-1.04, "Traffic Control Plan," and Section 10-1.19, "Concrete Structures," of these Special Provisions.

Payment for Modify Existing Concrete Cutoff Wall Item shall be based on the unit price bid and on the number of Concrete Cutoff Walls modified as specified above.

#### **ITEM 50 – ROADWAY SIGNS**

Work under this item shall consist of furnishing all labor, tools, equipment and materials necessary to install roadway signs in accordance with the Plans, the Standard Specifications, and these Special Provisions. Work under this item shall include furnishing and installing signs and posts.

The costs associated with the removal of the existing road sign as shown on the Plans and backfilling and compacting the resulting void with Class 1 Type A permeable material are included in the unit price bid for this item. This sign shall remain the property of the County.

Attention is directed to Section 10-1.10, "Excavation and Grading," of these Special Provisions, County Design Standard Plan 105A and/or 105B in Appendix C of these Special Provisions, and the California MUTCD.

Payment for Roadway Signs Item shall be based on the unit price bid for each sign and on the number of each sign installed as specified above.

#### **ITEM 51 – OVEREXCAVATE AND REMOVE UNSUITABLE MATERIAL**

Work done under this item shall be directed by Engineer. When directed by Engineer, Contractor shall excavate below the lower limit of the excavation line shown on the Plans.

All work done under this item shall conform to the requirements of applicable portions of the Standard Specifications except as modified herein.

The quantity of this item listed in the bid schedule represents no actual estimate, is nominal only, and may be greatly increased, decreased, or reduced to zero.

Payment under this item will be limited to the volume of material removed, as directed by Engineer, below the lower limit of the excavation line and outside the dimensional limits designated on the Plans.

If excavation below the lower limit of excavation as shown on the Plans is required, the ensuing void shall be backfilled with Class 1 Type A permeable material compacted in accordance with Section 10-1.10. The permeable material shall conform to Section 10-1.10, "Excavation and Grading," of these Special Provisions.

If the improvements at which overexcavation and removal of unsuitable material is performed are in the roadway section and are to receive aggregate base and/or native backfill over the permeable material, Contractor shall place woven geotextile (filter) fabric in accordance with Section 10-1.23, "Turf Reinforcement Mat and Filter Fabric," of these Special Provisions over the permeable material prior to completing the backfilling operation.

All unsuitable material removed under this item shall be removed from the Tahoe Basin in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions.

Payment for Overexcavate and Remove Unsuitable Material Item shall be based on the unit price bid and on the number of cubic yards of unsuitable material excavated as specified above. Measurement of the number of cubic yards shall be based on the dimensions of the void resulting from the excavation as measured by the Engineer.

#### **ITEM 52 – ROCK FRACTURING AND REMOVAL**

Work under this item shall consist of furnishing all labor, tools, equipment, and material necessary to fracture and remove any existing rock that prohibits installation of the proposed improvements to the grades shown on the Plans and that can't be removed after a reasonable effort with the equipment being used on the site has been made. Work under this item shall consist of the use of a cracking agent, or non-detonating rock breaking equipment, rather than blasting; blasting will not be allowed. The work includes fracturing the rock in accordance with the manufacturer's recommendations and removing the rock. If the rock can not be used in the construction of other improvements, Contractor shall dispose of the rock in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions. Contractor shall be responsible for any damage to persons, private property, the work, or existing structures or utilities associated with this Item.

This specification is intended to illustrate the minimum effort that can reasonably be expected from Contractor if rock is encountered and must be removed. Should Contractor have larger equipment on site for use on the project, Contractor shall make a reasonable effort with the larger equipment to remove the rock and compensation shall not be made under this item, but shall be included in the unit price bid for the item of work for which the rock was encountered.

The quantity of this Item listed in the bid schedule represents no actual estimate, is nominal only, and may be increased, decreased, or reduced to zero.

Contractor shall notify Engineer immediately when rock is encountered that meets the definition described in the first paragraph of this Item. Engineer will consider whether the lines and grades can be adjusted to avoid fracturing and removing the rock. If Engineer determines adjustments in the lines and grades are not feasible, that the rock meets the definition described herein, and that Contractor has made a reasonable effort to remove, fracture and remove, or scrape and remove the rock with the minimum equipment specified above, then the removal and disposal of the obstructing rock shall be accomplished and paid for in accordance with the methods described in this item. Contractor and Engineer will agree to the number of cubic yards of rock fractured and removed immediately after the removal of the rock from the excavation.

The void created by the rock removal shall be backfilled with native material or whichever is applicable per the Plans and details. The backfill shall conform to and shall be compacted in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions.

The cracking agent shall be soundless chemical demolition agent such as Bentonamit or Fract.Ag, or approved equal. The non-detonating rock breaking equipment shall be Boulder Buster, NoneX, or approved equal.

Payment for Rock Fracturing and Removal Item shall be based on the unit price bid and on the number of cubic yards of rock fractured and removed as specified above and mutually agreed upon by Contractor and the Engineer.

### **10-1.01 ORDER OF WORK**

Order of work shall conform to the provisions in Section 5-1.05, "Order of Work," of the Standard Specifications and these Special Provisions.

Contractor shall schedule work to reduce the need for dewatering by working on the drier areas of the project first.

As described in Section 4-1.02A, "Commencement of Work Requirements," Contractor shall install temporary erosion control.

Any work started (i.e., soil disturbance) must be winterized by October 15 unless County is able to obtain an extension to the grading deadline from both TRPA and Lahontan. If extensions are not granted, County will negotiate a Contract Change Order with Contractor to remobilize to complete the remaining work during the 2014 construction season.

Contractor shall implement the following sequence of work for the project:

- All AC paving must be complete by October 31, 2013.

The California Conservation Corps (CCC), under County's direction, will perform revegetation work for the project. Contractor shall coordinate the mulch and tackifier applications with Engineer to minimize the need for additional mobilization and demobilization of the mulch and tackifier operations. The CCC will perform this work while Contractor is still fulfilling his construction contract. In areas where the CCC is to follow the work of Contractor (e.g. after Contractor places and compacts topsoil mix over pipes), Contractor shall notify Engineer when he has completed such work so revegetation can begin. Any disturbance of this revegetation work by Contractor's operations shall be repaired at Contractor's expense by the CCC.

Attention is directed to Section 5-1.23, "Public Safety," of these Special Provisions.

### **10-1.02 NOT USED**

### **10-1.03 MAINTAINING TRAFFIC**

Attention is directed to Section 7, "Legal Relations and Responsibility," and Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications, Section 5-1.23, "Public Safety," and Section 10-1.01, "Order of Work," and these Special Provisions.

Traffic Control Requirements will be strictly enforced. Any violation of such requirements is justification for Engineer to stop work until requirements are met.

When entering or leaving roadways carrying public traffic, Contractor's equipment, whether empty or loaded shall in all cases yield to public traffic.

Project-related vehicles will observe the posted speed limit on hard-surfaced road and 15 miles per hour speed limit on unpaved road during travel in the project area.

Local and emergency traffic shall be permitted to pass through construction operations at all times with as little inconvenience as possible. With the exception of the closed portion of Boulder Mountain Drive, at the end of the day's work and when construction operations are suspended, roadways shall be opened for public traffic in both directions. Contractor's attention is directed to Section 10-1.01, "Order of Work."

When work is in progress, at least one 10-foot minimum lane shall be opened to public traffic. Otherwise, two 10-foot lanes of traffic shall be maintained.

Contractor shall provide access to all driveways at all times. No driveways shall be out of service unless other arrangements are made with the property owner(s). Contractor shall notify County 48 hours in advance of any work that will affect any owner's driveway. Contractor shall submit a plan that describes his

method of operation that will provide for operable driveways. This plan shall be in accordance with Section 4-1.03, "Contractor Submittals," of these Special Provisions and shall be submitted for Engineer's acknowledgment at least two weeks prior to the performance of any work that affects driveways.

Equipment actively engaged in construction shall be confined to the work corridor marked by delineators spaced at 30-foot intervals, and will not be allowed to travel or encroach upon the travel lane(s) used to convey local traffic through the project, unless traffic is controlled by an adequate number of flaggers.

Except for the closed portion of Boulder Mountain Drive, at the end of each working day if a difference in excess of 0.15 foot exists between the elevation of the existing pavement and the elevation of any excavation within twenty (20) 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 the placing of the new AC section commences, aggregate base 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 or flatter to the bottom of the excavation. Treated Class 2 Aggregate 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 it is required to be removed and replaced shall be considered as included in the contract price paid for the applicable item and no additional compensation will be allowed therefor. No payment will be made for material placed in excess of that required for the new AC section.

Alternatively, at the end of each working day, the edge of the excavations adjacent to the travel lane for aggregate base shoulder shall be delineated with traffic cones or flexible delineators. Any excavations for drainage inlets or drain basins not backfilled at the end of the work day shall be covered with trench plates and delineated with traffic cones or flexible delineators and flashing barricades. Contractor shall not excavate more than can be installed and backfilled in one working day. If the backfill for the culvert installation is placed but not compacted by the end of the work day, the trench shall be plated, or otherwise prepared to safely provide a minimum of two ten-foot travel lanes.

When traffic cones or delineators are used to delineate a temporary edge of travel lane, the line of cones or delineators shall be considered to be the edge of travel lane, however, Contractor shall not reduce the width of the travel lane to less than 10 feet within County right-of-way without written approval from Engineer.

When work is not in progress on a trench or other excavation that requires reduction or closure of the travel lane, the traffic cones or portable delineators used for the travel lane reduction or 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.

Personal vehicles of Contractor's employees shall not be parked within the construction limits at any time. Contractor shall make his own arrangements relative to keeping the work area clear of parked vehicles, whether belonging to his employees or to private individuals.

Construction area signs shall not be used until they are needed and when no longer needed they shall become the property of Contractor and shall be removed from the site of the work.

The seventh paragraph of Section 12-3.06, "Construction Area Signs," of the Standard Specifications shall be amended to read as follows:

Contractor shall clean all construction area sign panels at the time of installation and as often thereafter as Engineer determines to be necessary, but at least once every month.

Signs damaged by any cause shall be repaired or, if determined by Engineer to be irreparable, replaced by Contractor at his expense.

All construction area signs shall conform to the dimensions, color, legends, and reflectorization or lighting requirements of the Plans, the California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's 2009 Edition, as amended for use in California), also called the California MUTCD, and



these Special Provisions. All sign panels shall be the product of a commercial sign manufacturer, but need not be new. Used sign panels, in good repair may be furnished with Engineer's approval.

Except as otherwise shown on the Plans, construction area signs shall be stationary signs or portable signs. Construction area signs shall be erected at the locations shown on the Plans or in Contractor's Traffic Plan approved by Engineer.

Stationary signs shall conform to Section 12-3.06A, "Stationary Mounted Signs," of the Standard Specifications with the following additions:

Stationary signs that are shown on the Plans or described in these Special Provisions, or as directed for placement by Engineer, shall be attached to 4" x 4" wood posts with 5/16" galvanized carriage bolts and washers. The posts shall be securely set a minimum of 30" in the ground and such that the bottom of the signs will be five (5) feet above the pavement.

Sign panels for stationary mounted signs shall consist of high quality reflective sheeting applied to a base of aluminum or plywood in conformance with the following:

Base material shall be exterior grade plywood not less than 3/8" thick, or sheet aluminum not less than 0.063" thick for widths up to 42" and not less than 0.080" thick for widths of 48" or greater.

Portable signs shall conform to the provisions of Section 12-3.06B, "Portable Signs," of the Standard Specifications except the third paragraph shall be amended to read: "The sign standard or framework shall be capable of supporting the size of the sign specified."

The fact that rain or other causes, either within or beyond the control of Contractor, forces delay of the work, shall in no way relieve Contractor of his responsibility for maintaining traffic through the project as specified herein. Contractor shall at all times keep on the job such material, force, equipment as may be necessary to keep the roads within the project open to traffic and in good repair, and shall expedite the passage of traffic using such labor and equipment as may be necessary.

The term "Construction Area Signs" shall include all temporary signs required for the direction of local traffic through or around the work during construction. Such signs are shown in or referred to in the California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's 2009 Edition, as amended for use in California), also called the California MUTCD, hereinafter referred to as California MUTCD.

Construction Area Signs shall conform to Section 12-3.06, "Construction Area Signs," of the Standard Specifications with the following additions and amendments:

Contractor shall furnish all sign panels, posts and hardware, and shall erect, maintain, and remove all construction area signs shown on the Plans as provided in these Special Provisions.

Traffic cones shall conform to the provisions of Section 12-3.10, "Traffic Cones," of the Standard Specifications.

In lieu of the provisions in Section 7-1.08, "Public Convenience," Section 7-1.09, "Public Safety," and Section 12-2.02, "Flagging Costs," of the Standard Specifications, Contractor shall bear the entire cost of furnishing flaggers and furnishing, installing, maintaining, and removing signs, lights, flares, barricades, delineators, and other warning and safety devices.

Full compensation for providing signs, covering and uncovering signs, lights, flares, traffic cones, flaggers, delineators, barricades, warning and safety devices shall be made under the lump sum item "Traffic Control."

#### **10-1.04 TRAFFIC CONTROL PLAN**

Traffic Control Procedures on County roads shall conform generally to Caltrans Standard Plans, the California MUTCD, and these Special Provisions.

The Traffic Control Plan shown on Sheet T-1 of the Plans has been prepared as a guide to Contractor in preparation of a complete Traffic Control Plan and to aid in Contractor's planning for staging/storage of materials and equipment. Contractor's Traffic Control Plan shall include detailed controls, including flaggers, lane closures and signs, road closures and signs, as applicable, for all items of road work which will require alteration of existing traffic patterns. Contractor's Traffic Control Plan shall include all signing required on intersecting streets within the area that will require traffic control. Contractor's plan shall address traffic control related to truck traffic associated with the project construction.

Contractor's Traffic Control Plan shall conform to the provisions of Section 5-1.23, "Public Safety," Section 10-1.01, "Order of Work," and Section 10-1.03, "Maintaining Traffic," of these Special Provisions and the California MUTCD.

Submittal of Contractor's Traffic Control Plan shall conform to Section 4-1.03, "Contractor Submittals," of these Special Provisions. No work shall be commenced on County roads until the Traffic Control Plan is approved by Engineer. Any violation of the Traffic Control requirements is justification for Engineer to stop work until the requirements are met.

The costs associated with the requirements outlined in this section shall be included in the Item "Traffic Control" and no additional compensation will be made therefor.

#### **10-1.05 NOT USED**

#### **10-1.06 NOT USED**

#### **10-1.07 CLEARING AND GRUBBING**

Construction areas to receive improvements shall be cleared of all logs, stumps, trees, roots of felled trees, brush, grass, weeds, debris, gravel, and all other deleterious material. Grubbing in these areas shall consist of removal of all buried roots, stumps, trees, logs, and any foreign objects encountered within a radius of one foot beyond the proposed structure. Areas shall only be cleared and grubbed to the minimum required for installation of improvements as specified.

Contractor's attention is directed to Section 10-1.10, "Excavation and Grading," of these Special Provisions regarding salvaging of soil from excavated areas. Removal and disposal of trash, branches, shrubs, and pine cones from the excavated material to be salvaged is included in the clearing and grubbing within the specific improvement item.

Trees shall be removed in such a manner as to cause no damage to the road, existing drainage facilities, adjacent property or utilities, or the public. Contractor shall remove felled logs from site within 48 hours of felling. Logs infested with insects shall be covered with clear plastic sheeting and sealed at the ground until the wood is disposed of.

All areas where tree stumps are removed shall be backfilled with native material or other material as applicable to the location of the void relative to the improvements compacted in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions, and regraded to match adjacent existing ground elevations. Stumps that interfere with the installation of improvements shall be removed to a depth of 2' below the bottom of the improvement. Stumps shall not be removed in areas that will be graded (e.g. rock-lined channels) until just prior to the beginning of grading to minimize the areas of exposed bare soil.

All activities controlled by Contractor, except cleanup or other required work, shall be confined within County road rights-of-way, the permanent and temporary easements, and construction limits.

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

Except as noted herein, all cleared and grubbed and waste material shall become the property of Contractor and shall be disposed of outside the Tahoe Basin or at a site approved by all local, state, and federal agencies.

Contractor shall take all necessary precautions to preserve all on-site trees and vegetation not designated for removal. Such precautions shall include placing construction limit fence along the length of the construction limits noted on the Plans. If ordered by Engineer and where noted on the Plans, Contractor shall provide and install suitable safeguards, approved by Engineer, to protect trees and/or vegetation from injury or damage. If trees and/or vegetation are injured or damaged by reason of Contractor's operations, they shall be replaced in kind by Contractor to a condition acceptable to Engineer and at Contractor's expense.

Where roots of live trees are encountered and can't be protected as described in Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)," of these Special Provisions, and must be removed, all roots larger than 1 1/2" in diameter shall be saw cut, leaving a clean cut. The ends of the remaining root shall be treated with emulsified asphalt.

Contractor's attention is directed to Section 10-1.27, "Timber Removal Practices," of these Special Provisions.

Full compensation for all work involved in clearing and grubbing, which includes trees with a diameter less than 8" and all stumps, regardless of size, shall be considered as included in the compensation for the various contract items of work and no additional compensation will be allowed therefor.

#### **10-1.08 SOD SALVAGE AND TRANSPLANT**

##### **SOD SALVAGING AND TRANSPLANT PROCEDURES:**

- 1) The Engineer will delineate with paint in the field the exact areas of sod to be salvaged from the locations specified in the contract item description and on the Plans. After discussions with the Contractor a quantity of salvageable sod from each location will be agreed upon. The Contractor shall notify the Engineer prior to beginning each and every salvage operation in order for the Engineer to schedule a County representative to observe the salvaging operations. A minimum of two hours notice shall be given. After salvaging operations in an area are complete, the County representative will determine the exact quantity of sod that was finally salvaged.
- 2) All sod shall be salvaged immediately before any excavation work is begun at the area where sod is to be salvaged and improvements are to be constructed. Sod to be salvaged shall be irrigated prior to removal such that conditions are moist from the surface to a depth of 4" below the surface. Sod removal shall result in the salvaged sod having a uniform thickness with a smooth bottom. The sod shall be removed in clumps with a minimum thickness of 2" and a maximum of 6" and in as large a length and width as practicable. Sod shall be salvaged in such a manner as to minimize the disturbance of the soil bound by the root mass and the contiguous integrity of the sod section.
- 3) Salvaged sod shall be stored on the ground near the improvement where it is to be transplanted in an area that is already disturbed or that will be disturbed by the proposed construction. Salvaged sod shall be stored no longer than 72 hours.
- 4) Sod clumps shall be placed on the ground side by side, roots facing down, in the shade, one layer deep, with the edges snugly adjoining adjacent sections. Sod on the perimeter of the storage area shall have the outermost edges covered with wetted burlap within 30 minutes of storage to protect the roots and conserve soil moisture. The Contractor shall be responsible for providing adequate moisture to the sod during the interim storage period.

- 5) As soon as the work in the area where the sod is to be transplanted is completed such that the sod can be transplanted, the Contractor shall saturate the subgrade to a minimum depth of 4" before transplanting the sod. Sod shall be placed with sides snugly adjoining adjacent sod sections. Voids between sod sections shall be filled with topsoil mix. Sod shall be firmly tamped or rolled after placement to eliminate air pockets between the prepared surface and the roots. Sod shall be placed so that the top surface forms a continuous shape.
- 6) Sod shall be thoroughly irrigated immediately following placement. The Contractor shall be responsible for providing adequate irrigation to all sod salvaged and transplanted during the period of this contract. Sod shall be irrigated thoroughly a minimum of every 3 days.

If an excavator bucket is used for sod salvage, the bucket shall have a plate lip or cutting bar. The bucket shall also be equipped with a hydraulic tilt or swivel to allow angling of the bucket 45 degrees to the right or left. Section 5-1.11 of the Standard Specifications applies with the condition that the written request for "Alternate Equipment" be submitted within three (3) working days of receiving the Notice to Proceed.

#### **10-1.09 WATERING**

Watering shall conform to the provisions in Section 17, "Watering," of the Standard Specifications, except that full compensation for developing a water supply shall be considered as included in the prices paid for the various contract items of work involving the use of water and no separate payment will be made therefor.

No guarantees of an available source of water supply, implied or otherwise, are made by County. It shall be the sole responsibility of Contractor to make all necessary arrangements in order to develop a source of water supply.

#### **10-1.10 EXCAVATION AND GRADING**

##### **A. GENERAL**

Earthwork shall conform to the provisions in Section 19, "Earthwork," of the Standard Specifications and these Special Provisions. In lieu of the applicable provisions in Section 19-3.08, "Payment," full compensation for excavation, backfill, and pervious material shall be considered included in the contract item prices paid for the applicable items of work. Excavation and grading for erosion control improvements as shown on the Plans shall be considered as a part of the respective erosion control item and no additional compensation will be allowed therefor.

If rock is encountered in the bottom of the trenches where culverts or structures are to be placed, Contractor shall immediately notify Engineer so that an assessment of the impact on the design can be made. If the design can not be modified and the removal of the rock is necessary, the cost associated with the rock removal and disposal shall be paid for in accordance with the unit price bid for "Rock Fracturing and Removal" item of these Special Provisions.

##### **B. COMPACTION**

County will, at their expense except as noted in Section 5-1.24, "Testing," of these Special Provisions, provide compaction testing of subgrade to verify that Contractor has achieved the required compaction. Relative compaction will be based on the maximum dry unit weight as determined by ASTM D-1557. Corrections to the Unit Weight for Soil Containing Oversize Particles will be made in accordance with ASTM 4718.

Compaction testing will be performed on subgrade (where applicable), aggregate base, fill, backfill, topsoil, and where applicable, permeable material. Contractor shall provide a 24-hour notice to Engineer stating when Contractor will be completed with an operation that requires compaction testing to allow Engineer time to schedule testing before Contractor begins with the next operation. County will make every effort to collect native samples and to provide moisture-density curves in a timely manner. However, should Contractor

choose to proceed with the work before compaction criteria for native soil or fill material can be verified, he assumes the risk of having to remove this work at his expense if subgrade compaction is later found to be inadequate. Subgrade that exhibits pumping will not be accepted.

All compaction shall be accomplished with mechanical compaction. Fill or backfill that exhibits pumping will not be accepted.

With the exception of perforated HDPE trenches and the subdrain trenches, all areas where Portland cement concrete, Class 1 Types A and B permeable material, fill, backfill, or No. 1 backing is to be placed over native material, the native material shall be scarified a minimum of six (6) inches, thoroughly mixed with water to the optimum moisture for compaction, and compacted to a minimum of 90% relative compaction prior to placement of fill or other material unless noted otherwise on the Plans.

All areas where asphalt concrete and aggregate base is to be placed over native material, the native material shall be scarified a minimum of six (6) inches, thoroughly mixed with water to the optimum moisture for compaction, and compacted to a minimum of 95% relative compaction.

In any case where undisturbed native material becomes disturbed during excavation, the native material shall be scarified a minimum of six (6) inches, thoroughly mixed with water to the optimum moisture for compaction, and compacted to a minimum of 90% relative compaction prior to placement of fill or other material as shown on the Plans.

All fill and backfill using native material or excess excavated material shall be thoroughly mixed with water to the optimum moisture for compaction. Lift thickness shall be a maximum of 8" thick, loose, prior to compaction. Unless otherwise specified, all fill and backfill placed shall be compacted to a minimum relative compaction of 90%. These provisions also apply to imported fill or backfill if it is necessary.

Native backfill at the drain basin, drainage inlets, and culverts shall be compacted to a minimum of 90% relative compaction.

All Class 2 aggregate base to be placed over native material or for pipe backfill as applicable, culvert removal backfill, and at edge of pavement, shall be compacted to a minimum of 95% relative compaction.

Class 1 Types A and B permeable material to be placed over native material shall be compacted to a minimum of 90% relative compaction. Compaction of permeable material shall be verified by an established method agreed upon by Engineer and Contractor.

The void created by willow clump removal, stump removal, culvert removal, or rock removal shall be filled with native material and compacted to a minimum of 90% relative compaction if such backfill material is consistent with the required backfill for the location of the void. The void resulting from the removal of unsuitable material and the road sign shall be backfilled with Class 1 Type A permeable material and compacted to a minimum relative compaction of 95%, except if unsuitable material is overexcavated from the bottom of a sediment basin. In this case 85% minimum and 90% maximum relative compaction will be required.

The mixture of salvaged soil and humus (i.e. topsoil mix) shall be compacted to a minimum of 85% relative compaction and a maximum of 90% relative compaction. Compaction of topsoil mix shall be verified by an established method agreed upon by the Engineer and the Contractor.

All costs associated with compaction shall be included in the various items of work and no additional compensation will be made therefor.

#### Compaction Requirements at Storm Drain Pipe

##### General

Where rock is encountered at the bottom of the trench where the pipe is to be laid such that a point load on the pipe is created by the rock, the rock shall be removed to a depth of 6" below the trench bottom. The 6" shall be backfilled with Class 1 Type A permeable material and compacted to 90% relative compaction. Compaction of permeable material shall be verified by an established method agreed upon by Engineer and Contractor. The costs associated with the rock removal and disposal shall be included in the applicable pipe bid item, unless the rock removal meets the criteria for payment under "Rock Fracturing and Removal" item of these Special Provisions.

For pipe in pavement, cover is defined as the distance between the top of the pipe and the finished surface of the proposed AC paving. For pipe out of pavement, cover is defined as the distance between the top of the pipe and the top of the pipe trench finish grade.

All costs associated with bedding and backfill shall be included in the various items of work and no additional compensations shall be made.

#### C. EXCESS MATERIAL, TOPSOIL, MULCH, HUMUS, AND TACKIFIER

##### 1. CUT, FILL, SOIL SALVAGE, TOPSOIL MIX, MULCH, AND HUMUS VOLUMES

The following quantities have been calculated using topographic information shown on the Plans. The volumes shown are "raw" meaning that neither shrinkage, subsidence, nor bulking have been taken into account. It is assumed for the quantities shown that no rock was encountered. It is Contractor's responsibility to review these quantities and apply the necessary factors to determine the volume of import material necessary (or if it is necessary).

EARTHWORK SUMMARY BY IMPROVEMENT

ALL VOLUMES ARE IN CY	CUT	FILL	SALVAGED SOIL	HUMUS FOR TOPSOIL MIX	TOPSOIL MIX	MULCH
Boulder Mountain Drive	540	52	-	11.5	47	23.5
Culvert (displacement), pipe removal, FES, and Subdrain	31	5	30	-	-*	-
Rock Dissipator, RLC R&R, and No. 1 Backing	3	3	5	1	2.5	1
Salvage Sod GLS	-	1	2	-	-	-
Driveway Access and Driveway R&R	19	-	-	-	-	-
Concrete Encasement	5	-	-	-	-	-
Drainage Inlets and Drain Basin	8	-	-	-	-	-
C&G w/Tie-In Pavement, Curb End Transitions	2	1	-	0.5	1.5	1
Misc Grading and Remove Willow Clumps	-	3	4	0.5	1	0.5
AB Shoulder	-	-	4	-	-	-
Revegetation (not associated with other improvements)				1.5	6	3
<b>TOTAL</b>	<b>608</b>	<b>65</b>	<b>45</b>	<b>15</b>	<b>58</b>	<b>29</b>

\* Quantity of topsoil around subdrains on sheets P-1 and P-2 of the Plans is included in the Boulder Mtn. Drive topsoil quantity.

Importing of material (other than humus, mulch, and tackifier) or disposal of excess material shall be included in Contractor's bid for the various items of work and no additional compensation will be made therefore.

Any material excavated on site shall be used for fill or backfill and shall contain less than 2% by volume nondecomposed organic material and material no larger than 1 1/2" in the largest dimension.

2. TOPSOIL MIX

Salvage

After removal and disposal of pine cones, branches, trash, and other large debris (i.e. clearing and grubbing) and/or salvaging sod an average depth of 4", Contractor shall excavate and stockpile the native soil and undecomposed plant material from the AB shoulder, misc grading, rock dissipators, the 6" perforated HDPE trenches and GLS, and a portion from the subdrain trenches.

The stockpiled, excavated material will be mixed in a ratio of 3:1 (salvaged material to humus) with humus at the project site to create the topsoil mix. The humus shall conform to the provisions of 10-1.10D of this section. Compaction of the topsoil mix shall be in accordance with 10-1.10B of this section.

### Mixture, Placement, and Compaction

Contractor shall place and compact the topsoil mix (2" compacted thickness unless noted otherwise below) at the following improvements:

- Slopes and disturbed areas along both sides of the reconstructed Boulder Mountain Drive;
- Behind curb and gutter and drainage inlets;
- Over the top of pipe backfill for pipe out of pavement not designated for salvaged sod;
- Areas of miscellaneous grading not designated for salvaged sod;
- Around rock dissipators not designated for salvaged sod; and
- Around No.1 backing;

Humus shall be mixed with salvaged soil in a ratio of 3:1 (soil to humus) to create topsoil mix. Humus and salvaged soil must be mixed together in a separate stockpile. Mixing of these materials in place at the locations the topsoil mix will be placed will not be acceptable. The costs associated with salvaging and stockpiling soil, furnishing humus, mixing the soil with humus, and placing and compacting the topsoil mix shall be included in the various items of work requiring topsoil mix and no additional compensation will be made therefor.

### 3. MULCH

Mulch and its application shall conform to 10-1.10D of this section. After topsoil mix is placed and compacted, Contractor shall apply 1" mulch to the following improvements and as noted on the Revegetation Plan of the Plans:

- Slopes and disturbed areas along both sides of the reconstructed Boulder Mountain Drive;
- Behind curb and gutter and drainage inlets;
- Over the top of pipe backfill for pipe out of pavement not designated for salvaged sod;
- Areas of miscellaneous grading not designated for salvaged sod;
- Around rock dissipators not designated for salvaged sod; and
- Around No.1 backing.

The cost associated with furnishing and applying mulch shall be included in the unit price bid for the Item "Mulch and Mulch Application."

### 4. HUMUS

Humus and its application shall conform to 10-1.10D of this section. The cost associated with furnishing and applying humus shall be included in the unit price bid for the Item "Humus For Topsoil Mix."

### 5. TACKIFIER

Contractor shall apply tackifier to all areas that have been mulched. Tackifier and its application shall conform to 10-1.10D of this section. The cost associated with furnishing and applying mulch shall be included in the unit price bid for the Item "Tackifier and Tackifier Application."

### 6. DISPOSAL OF EXCESS MATERIAL

#### Asphalt & Concrete

Asphalt concrete (e.g. pavement) and Portland cement concrete (e.g. existing curb and gutter, existing concrete cutoff walls, existing concrete at SMH, and concrete wash area) removed from any portion of the project shall be disposed of by Contractor at his expense and shall be disposed of outside of the Lake Tahoe Basin. AC and concrete may be disposed of in the Lake Tahoe Basin provided Contractor obtains and submits written approval from all applicable state, local, and federal agencies.



Soil & Rock

Section 19-2.06, "Surplus Material," of the Standard Specifications is amended to read as follows:

Surplus excavated materials from any portion of the project, if suitable according to the provisions of these Specifications and the Plans, shall be used to balance material deficiencies in any other portion of the work. **As the excavation for an item of work progresses, the excess excavated material shall not be stockpiled adjacent to where it was excavated unless the area is an approved storage area.** The excess excavated material shall be removed as it is excavated from the site of the excavation for stockpiling in an approved staging area or for use as fill or backfill in an applicable item of work. Excess material that can not be reused on site shall be defined as unsuitable material; or material that is removed from temporary erosion control devices and the sweeper in satisfying the maintenance of these devices; or material that is larger than 1 1/2" in the largest dimension, but doesn't meet the rock specifications outlined in these Special Provisions; or material that has less than 2% by volume nondecomposed organic matter and contains material no larger than 1 1/2" in the largest dimension, but is in excess of what is needed for fill or backfill for the proposed improvements. Any excess or unsuitable material shall be disposed of by Contractor at his own expense and shall be disposed **outside of the Lake Tahoe Basin.** Materials may be disposed of in the Lake Tahoe Basin providing Contractor obtains and submits to County written approval from all applicable state, local, and federal agencies. At no time shall excess material be disposed of or stockpiled in such a way as to allow erosion of the material or to pose a threat of adverse water quality impact. The costs associated with stockpiling, disposing of, or reusing excess material are included in the applicable items with no additional compensation therefor.

D. MATERIALS

1. Permeable Material

Permeable Material shall be in conformance with the provisions in Section 68-1.025, "Permeable Material," of the Standard Specifications.

Class 1 Type A 3/4" and Class 1 Type B 1 1/2" permeable material shall be crushed, angular stone conforming to the following requirements:

Class 1 Type A 3/4"	
Sieve Sizes	Percent Passing
1"	100
3/4"	90
1/2"	59
3/8"	39
No. 4	2
No. 10	2

Class 1 Type B 1 1/2"	
Sieve Sizes	Percent Passing
1 1/2"	100
1 1/4"	88
1"	24
3/4"	9
1/2"	7
3/8"	4

2. Imported Fill or Backfill

If required, imported fill or backfill shall be a silty sand material designated by SM in the Unified Soil Classification System (USCS).

Should such imported material be required, Contractor shall notify Engineer of the borrow site location 72 hours before Contractor plans to pick-up the material so Engineer can verify the suitability of the material.

3. Humus

Humus shall consist of an amendment that shall be the result of an aerobic composting process maintaining temperatures greater than 130°F and less than 165°F, for a minimum of 10 days. Nitrogen introduction shall be derived from cow manure. The humus shall be maximum 70% Humus Fines (3/8"

minus) and minimum 30% wood "overs" (3/8" plus). Full Circle Compost (Humus is called "Integrated 50%") in Minden, NV and Tahoe Sand and Gravel, in South Lake Tahoe, CA, produce a humus that satisfies these requirements.

Contractor shall notify Engineer of the proposed location of the source of imported humus 72 hours before Contractor plans to pick-up the material so Engineer can verify the suitability of the material. Contractor shall submit written verification that the humus is certified weed free.

#### 4. Mulch

Material shall be the result of an aerobic composting process maintaining temperatures greater than 130 degrees Fahrenheit and less than 165 degrees Fahrenheit for a minimum of 10 days. Nitrogen introduction shall be derived from cow manure. The resulting finished compost shall consist of minimum 75% wood "overs" (3/8" plus) and maximum 25% humus fines (3/8" minus). Full Circle Compost (Mulch is called "Integrated 25%") in Minden, NV and Tahoe Sand and Gravel, in South Lake Tahoe, CA, produce a mulch that satisfies these requirements. Contractor shall submit written verification that the mulch is certified weed free.

Mulch can be applied by non-motorized means or by means of a pneumatic conveying system capable of blowing the mulch at rates between 10 and 15 cubic yards per hour and shall be capable of blowing the mulch a distance of 300 feet as necessary to access slopes. If selected, the conveying equipment shall have a self-contained dust suppression system.

Contractor shall submit written certification that the mulch is weed free.

#### 5. Tackifier

Tackifier shall include wood-cellulose fiber mulch. The term "tackifier" used in these Special Provisions shall mean tackifier with wood-cellulose fiber mulch. The Tackifier material shall be of an organic, plant-derived substance containing psyllium, guar gum, cornstarch such as PT-TAC, Reclamare 2400, M-Binder, Eco-tak, Fisch-Stick, or approved equal. Material shall form a transparent 3-dimensional film-like crust permeable to water and air and containing no agents toxic to seed germination. Mulch shall consist of degradable green-dyed wood-cellulose fiber or 100%-recycled long-fiber pulp (recycled newspaper), free from weeds or other foreign matter toxic to seed germination.

Mulch shall be anchored with tackifier within 48 hours of application. A hydroseeder with a paddle wheel agitator shall be used to evenly apply the tackifier mixture at the following rates under suspension unless otherwise approved. Contractor shall apply tackifier to all areas where mulch has been applied. The Tackifier shall be mixed and applied in accordance with the following:

Wood-cellulose fiber mulch:	500 lbs/acre
Tackifier:	130 lbs/acre
Water:	As needed

Tackifiers shall be applied using a commercial hydraulic mulcher with a built-in agitation system that has sufficient capacity to agitate, suspend, homogenize, and apply materials (at indicated rates) specified for hydraulic application in this section of the Special Provisions.

Information regarding mulch application method and tackifier application equipment that Contractor proposes to use for this project shall be presented for review and approval by Engineer no later than ten (10) days prior to the proposed use. Hydraulic/Pneumatic applications of humus, mulch, and tackifier shall not be conducted during windy conditions (greater than 8 mph) to insure uniform application and proper placement of these materials at specified rates. To facilitate proper placement of these materials, applications shall consist of a continuous operation where each treatment follows the preceding as specified above. Specified materials shall be applied to individual identified areas within a single seeding work shift. Under no circumstances shall any one application be completed independent of completion of the others.

**10-1.11 NOT USED**

**10-1.12 AGGREGATE BASE, CLASS 2**

Aggregate base shall be Class 2 in conformance with the provisions in Section 26, "Aggregate Base," of the Standard Specifications.

In lieu of the second sentence in the second paragraph in Section 26-1.02A, "Class 2 Aggregate Base," of the Standard Specifications, the grading for 3/4" maximum shall be used where aggregate base other than recycled AC base is specified.

County will, at their expense, provide compaction testing of Class 2 Aggregate Base to verify that Contractor has achieved the specified compaction. Relative compaction will be based on the maximum dry unit weight as determined by ASTM D-1557. Corrections to the Unit Weight for containing oversize particles will be made in accordance with ASTM 4718. Any areas of Class 2 Aggregate Base that are pumping will not be acceptable.

**10-1.13 NOT USED**

**10-1.14 ASPHALTIC EMULSION (PAINT BINDER)**

Asphaltic emulsion (paint binder) shall conform to the provisions of Section 94, "Asphaltic Emulsions," and Section 39-4.02, "Prime Coat and Paint Binder," of the Standard Specifications and these Special Provisions.

Paint binder shall be asphaltic emulsion SS-1, applied in one application at the approximate rate of 0.05 gallons per square yard of surface covered. The exact rate of application will be determined by Engineer.

Full compensation for furnishing all labor, equipment, and materials involved in applying asphaltic emulsion as a paint binder shall be considered as included in the various contract items of work and no additional compensation will be allowed therefor.

**10-1.15 ASPHALT CONCRETE**

All Asphalt Concrete shown on the Plans shall conform to these Special Provisions and to the provisions in Section 39, "Asphalt Concrete," of the Standard Specifications except that the material shall be as specified herein.

Alternative 1 – Asphalt Concrete

Unless otherwise directed by Engineer, asphalt binder to be mixed with the mineral aggregate shall be steam-refined paving asphalt, performance grade, PG 64-28.

Aggregate grading shall conform to the following gradation requirements:

Sieve Sizes	Percentage Passing
2"	95-100
3/8"	90-100
No. 4	60-77
No. 8	42-60
No. 30	25-38
No. 200	5-10

S.E. = 32 minimum for all material passing No. 4 sieve. The gradation above shall be considered the "contract compliance range" as described in the Standard Specifications.

Alternative 2 – Asphalt Concrete

Asphalt concrete shall conform to Type A 1/2" maximum medium of the Standard Specifications. Asphalt binder to be mixed with the mineral aggregate shall be steam-refined paving asphalt conforming to the provisions in Section 92 "Asphalts," of the Standard Specifications and shall be PG 64-28PM.

General

Contractor shall submit an asphalt concrete mix design for each type of asphalt proposed for use on the project including Sand Equivalent test results, optimum bitumen content, unit weight, source of aggregate, gradation tests of aggregate, percent (%) air voids and stabilometer values for the proposed design mix to be used. The mix design shall be no older than six (6) months, to insure that the mix supplied is consistent with the mix design. The design and test results shall be submitted to Engineer within ten (15) working days of after the Notice to Award of Contract letter and at least ten (10) working days prior to the start of paving operations. No work shall be done until the design is approved by Engineer. The mix design shall be in effect until modified by Engineer. Should a change in sources of material be made, a new mix design, and Sand Equivalent test must be established before the new material is used.

Unless otherwise directed in writing by Engineer, Contractor shall furnish and use canvas tarpaulins to cover all loads of asphalt concrete from the time that the mixture is loaded until it is discharged from the delivery vehicle.

Measurement and Payment

Measurement of asphalt concrete quantities shall be in accordance with the item descriptions containing asphalt concrete work.

Full compensation for the asphalt concrete, including supply, spreading, and compaction shall be included in the various contract items that require asphalt concrete.

**10-1.16 NOT USED**

**10-1.17 CULVERT, CMP STRUCTURES, PERFORATED PIPE, AND DRAIN BASIN**

Culvert pipe shall be high-density polyethylene pipe (HDPE) or corrugated metal pipe (CMP) as specified on the Plans. All culverts shall have soil tight gasketed joints.

CMP

Corrugated metal pipe shall be steel and conform to the requirements of Section 66, "Corrugated Metal Pipe," of the Standard Specifications, and these Special Provisions. CMP structures shall be corrugated galvanized steel pipe. Galvanizing shall conform to Section 75-1.05, "Galvanizing," of the Standard Specifications. For CMP culvert the maximum allowable horizontal deflection at a joint shall be 5 degrees.

Corrugated Metal Pipe (CMP) shall have the following minimum thickness:

STEEL THICKNESS FOR CORRUGATED METAL PIPE	
Diameter of pipe, inches	Steel Gauge thickness, minimum
6	16 gauge (0.064")
12	14 gauge (0.079")
15 (rise) x 21 (span) Arch	14 gauge (0.079")
18	14 gauge (0.079")
24	14 gauge (0.079")
30	14 gauge (0.079")
36	12 gauge (0.108")
48	12 gauge (0.108")

## HDPE

Solid wall HDPE pipe shall conform to AASHTO M294, "Standard Specification for Corrugated Polyethylene Pipe 305 to 915 mm (12" to 36") Diameter" and Section 64, "Plastic Pipe," of the Standard Specifications. If there are any discrepancies between these Standard Specifications and the Special Provisions, the Special Provisions shall prevail. HDPE pipe shall be Type S. The pipe and fittings shall be made of virgin PE compounds conforming to the requirements of Cell Classifications 324420C for 4" and 6" diameter and 335420C for 12" and 18" diameter, as defined and described in ASTM D3350. Pipe and fittings shall be installed in accordance with ASTM D-2321 and these Special Provisions.

The pipe and fittings shall be free of foreign inclusion and visible defects. For solid wall HDPE, holes of any kind in the corrugations or sidewalls shall be considered unacceptable. The ends of the pipe shall be cut squarely and cleanly so as not to adversely affect joining.

The maximum allowable deflection at a joint is 5 degrees.

## HDPE Perforated Pipe

The perforated pipe shown on the Plans shall conform to AASHTO M252, "Standard Specification for Corrugated Polyethylene Drainage Pipe" and Section 68-1.02K, "Perforated Plastic Pipe," of the Standard Specifications. The perforations shall be located outside the valleys of the corrugations. The specified perforation size and spacing shall be in accordance with AASHTO M294 Class II. The trench receiving the perforated HDPE shall be lined with turf reinforcement mat as specified in Section 10-1.23, "Turf Reinforcement Mat and Filter Fabric," and shall be wrapped around the Class 1 Types A or B permeable material.

Perforations for the 4" and 6" perforated HDPE pipe shall be in a shape and configuration that allows for the maximum number of perforations per linear foot per the manufacturer.

## Drain Basin

The Drain Basin shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the specified configuration. The drainage pipe connection stub shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain plastic pipe using flexible elastomeric seals. The pipe bell spigot shall be joined to the main body of the drain basin. The pipe stock used to manufacture the main body and pipe stub of the surface drainage inlets shall meet the mechanical property requirements for fabricated fittings as described by ASTM D3034 and ASTM F1336.

The grate furnished for the drain basin shall be a ductile iron grate for 24" size and shall be made specifically for the drain basin so as to provide a round bottom flange that closely matches the diameter of the surface drain basin. Metal used in the manufacture of the castings shall conform to ASTM A536 and ASTM A-48-83. Grates shall be provided painted black.

Drain Basins shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc. or approved equal.

## General

Pipes shall be laid to the lines and grades shown on the Plans and established by Engineer. The subgrade on which the culverts will be placed shall be finish graded with the use of a string line or other similar method to assure the culverts are set on smooth, straight grades consistent with the slopes and elevations shown on the Plans with no deviations along the length of pipe. Compaction of bedding and backfill shall conform to Section 10-1.10, "Excavation and Grading," of these Special Provisions.

Attachment of culverts to sediment traps shall conform to the concrete collar detail shown on the Plans and as specified in Section 10-1.19, "Concrete Structures," of these Special Provisions. Field fabrication and

prefabrication requirements for the sediment trap window and drain basin and their attachments shall be as specified in the respective contract items. Welded joints that damage galvanizing shall be repaired with a corrosion resistant coating.

Contractor's method of operation for culvert installation shall conform to the requirements of the Traffic Control Plan and as outlined in Section 10-1.03, "Maintaining Traffic," and Section 10-1.04, "Traffic Control Plan," of these Special Provisions.

The interior of the pipeline shall be cleaned as the work progresses.

#### **10-1.18 FLARED END SECTIONS**

Flared end sections shall be galvanized prefabricated steel flared end sections and shall conform to the requirements in AASHTO M36 and M218. The flared end sections shall be equipped with galvanized toe plates.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in installing flared end sections, including excavation and backfill, complete and in place shall be considered as included in the contract unit price for flared end sections, and no additional compensation will be allowed therefor.

#### **10-1.19 CONCRETE STRUCTURES**

Portland cement concrete structures shall conform to the provisions in Section 51, "Concrete Structures," and/or Section 73, "Concrete Curbs & Sidewalks," of the Standard Specifications and these Special Provisions. Portland cement concrete shall conform to Section 90, "Portland Cement Concrete," of the Standard Specifications, except as noted herein.

Reinforcement shall conform to the details shown on the Plans, these Special Provisions, and Section 52, "Reinforcement," of the Standard Specifications and shall conform to the requirements of ASTM Designation A615 Grade 60.

Portland cement shall be Type II with no mineral admixtures.

Contractor shall supply concrete mix designs for all items of work requiring concrete within fifteen (15) working days of the receipt of the Notice to Proceed and at least five (5) working days prior to the start of the concrete work associated with these items.

Portland cement concrete for curb and gutter, concrete curb ends, and drainage inlets shall have a compressive strength of a minimum of 4000 PSI at 28 days. The tenth bulleted item of Section 90-1.01, "Description," of the Standard Specifications shall not apply. Engineer will take a set of cylinders (5) for each 100 cubic yards of concrete or for a day's pour whichever comes first. Compressive strength tests at 7 days and at 28 days shall be performed on the cylinders at County's expense. If the 28-day compressive strength of any cylinder tests below 3500 psi, Contractor shall replace the concrete (100 cubic yards or the quantity of one day's pour) at his expense. Alternatively, also at Contractor's expense, Contractor shall core the areas that tested below 3500 psi, patch the holes, test the corings, and replace if the coring tests still show strengths below 3500 psi and retest the replacement section.

An air-entraining agent conforming to the requirements in Section 90-4, "Admixtures," of the Standard Specifications shall be added to the concrete at the rate required to result in an air content of 4-7% in the freshly mixed concrete. Air Content will be tested by and at the discretion of Engineer at County's expense.

Slump tests shall be performed by Engineer at Engineer's discretion and at County's expense. Slump for Portland cement concrete shall be no more than 2 inches nor less than 1 inch. Slump for grout shall be 3".

A mechanical power driven internal vibrator shall be used for concrete consolidation.

Curb and gutter and curb ends shall be finished by brushing with a soft broom and shall be sprayed uniformly with a clear pigmented curing compound conforming to Section 90-7, "Curing Concrete," of the Standard Specifications.

The string line for curb and gutter shall be set sufficiently in advance of the scheduled pour, but in no case less than 2 hours to allow Engineer to check the line against cut sheet grades and field conditions and provide time for adjustment if necessary. All curb and gutter shall be water tested and shall drain with no ponding. If ponding does occur, Contractor shall be responsible for removal and replacement of a sufficient amount of curb and gutter to eliminate ponding. Grinding of the flowline will not be permitted.

One-half inch pre-molded transverse expansion joint filler conforming to Section 51-1.12C, "Premolded Expansion Joint Fillers," of the Standard Specifications shall be placed at 200 foot intervals in the curb and gutter, at all curb returns, at any transition from machine extruded curb to formed curb, at any location where curb placement is against existing concrete, and at any location where curb placement or other concrete placement will stop long enough for concrete to set prior to continuing on with additional curb or concrete, and at curb returns. Place 3 - #4 x 24" rebar at each of these cold (expansion) joints. Contractor shall provide 3" deep crack joints every 10' in curb and gutter.

Concrete for concrete encasement over utilities, and concrete collars shall be minor concrete as defined in Section 51, "Concrete Structures," of the Standard Specifications and shall have not less than 548 pounds of cement per cubic yard. Grout shall be a six-sack mix with not less than 590 pounds of Portland cement per cubic yard.

Slurry cement backfill shall conform to the provisions of Section 19-3.062, "Slurry Cement Backfill," of the Standard Specifications, except that the mix shall contain 282 pounds of cement (i.e. 3-sack mix). Backfilling over or placing any material over slurry cement backfill shall not commence until four (4) hours after the slurry cement backfill has been placed, or as directed by the Engineer.

#### **10-1.20 DEWATERING**

This section outlines acceptable dewatering methods and locations for the disposal of dewatering effluent for the installation of project improvements identified in the dewatering item descriptions.

Contractor shall furnish, install, and operate pumps, pipe, appliances, and equipment of sufficient capacity to keep all excavations that require casting concrete in place or all construction that requires compaction under optimum moisture conditions free from water until the areas are backfilled and compacted in accordance with these Special Provisions. All water removed from such excavations shall be placed in a water truck(s). Contractor shall provide water truck(s) of sufficient capacity so as not to delay the dewatering operations by frequent emptying of the water truck(s). Contractor shall provide all means or facilities to conduct water to the pumps and to the water truck(s) for disposal as specified herein.

The dewatering effluent shall be discharged from the water truck(s) and applied to high land capability areas (Class 3, 4, 5, 6, 7, not SEZ = Class 1b. See Sheet L-1 of the Plans) for dust control, irrigation, or for use in the tire wash areas.

Alternatively, Contractor may discharge the dewatering effluent onto non-sensitive lands by pumping the effluent through a piping system.

The dewatering effluent shall be discharged in such a manner as to prevent erosion. Contractor shall install temporary erosion control measures where dewatering effluent is discharged as necessary to control sediment transport.

Full compensation for furnishing all labor, tools, material, and equipment necessary to dewater the above referenced excavations and areas to be compacted shall be included in the price bid for each dewatering item and no additional compensation will be made therefor.

**10-1.21 ROCK SPECIFICATIONS**

This section applies to all rock for No. 1 backing, rock-lined channels, and rock dissipators included in the Contract work. Attention is directed to Section 10-1.10, "Excavation and Grading," of these Special Provisions for the specifications for permeable material.

This Section 10-1.21, "Rock Specifications," shall **replace** Section 72, "Slope Protection," of the Standard Specifications.

All rock shall conform to the following quality requirements:

<i>Test</i>	<i>California Test</i>	<i>Requirement</i>
Apparent Specific Gravity	206	2.5 min.
Absorption	206	4.2% max*
Durability Index	229	52 min.*
 <u>Coarse Durability Index</u>		
% Absorption + 1	=	Durability Absorption Ratio (DAR)

\*Based on the formula contained herein, absorption may exceed 4.2% if DAR is greater than 10. Durability Index may be less than 52 if DAR is greater than 24.

Rock Materials. The following grading restrictions shall apply to each type of rock specified:

No. 1 Rock Backing

<u>Rock Size</u>	<u>Percent Smaller Than</u>
16"	100
12"	75-100
8"	0-20
6"	0

Percentage is based on the number of rocks per size range versus the total number of rocks in any 100 SF area. Rock size shall be measured along the smallest dimension of each rock.

Where 18" thickness of rock layering is designated on the Plans, it shall be interpreted as a nominal thickness. This means that some areas may be 16" thick, some may be 18" and some may be greater than 18" thick. In any case, in any 100 SF area of rock, the average thickness of the rock layering shall not be less than 18".

Rock shall be angular with not fewer than three fractured surfaces and of such shape as to form a stable protective structure after placement. The use of rounded cobbles will not be permitted.

All rock color shall blend with the surroundings and shall not consist of bright, light colors such as light gray, white, or off-white. At least 50% of the rock shall have at least one surface that is weathered (i.e. exhibiting signs of oxidation). Samples of acceptable rock coloring are available for viewing at County of El Dorado Department of Transportation, 924B Emerald Bay Road, in South Lake Tahoe, CA.

Application of turf reinforcement mat or filter fabric or prior to rock placement shall be performed in accordance with other portions of these Special Provisions and in accordance with applicable Plan details.

Rock Placement for No.1 Backing, Rock-Lined Channel, and Rock Dissipator. On each rock, three perpendicular axes can be identified in three dimensions: a short axis, an intermediate axis, and a long axis. In order to produce the most stable and aesthetic appearing revetment, with a relatively uniform rock surface, rock shall be placed with the short axis in a vertical plane parallel to the face of the slope, the intermediate axis perpendicular to the face of the slope, and the long axis horizontal and parallel to the face of the slope.



Each rock shall have a minimum of three points bearing on the rocks below and adjacent. Every effort shall be made to place the rock with the weathered surface exposed.

Rocks shall be placed so as to provide a minimum of voids. The larger rocks shall be placed in the toe course. The rock shall be placed in accordance with the lines and grades as shown on the Plans to form the specified cross section in a roughly regular surface without large cavities or excess projections above the general lines of the rock layer.

For rock dissipator, Contractor shall key in the full diameter of the rocks such that the top of all rock is at the same elevation at the edge of the rock structure (e.g. top of bank for rock-lined channel) as the adjacent finished grade. Rock placement for channels shall proceed both from the lowest end towards the upper end and from the center of the channel towards the sides.

Compensation for furnishing and installing all rock, including all necessary disposal of excavated material, will be at the contract price per various associated items of work and no additional compensation will be allowed therefor.

**10-1.22 DISTURBANCE AND REVEGETATION**

Other than topsoil mix, mulch, and tackifier furnishing and application performed by Contractor, the CCC under the direction of County will perform all revegetation work including, but not limited to, slopes and pipe out of pavement, all disturbance within the filter fencing or construction limit fencing and staging areas that are disturbed. Attention is directed to Section 10-1.01, "Order of Work," of these Special Provisions for requirements regarding Contractor's cooperation with the CCC.

Contractor shall not disturb any area beyond the construction area limits shown on the Plans, and staked and fenced in the field, or disturb any areas outside of the areas to be disturbed by construction of the improvements as indicated on the Plans. Should such disturbance occur, Contractor will be liable for the following costs:

1. \$3.65/sq ft revegetation cost to be performed by the CCC's.
2. Provide mitigation of disturbance as required by TRPA.

**10-1.23 TURF REINFORCEMENT MAT AND FILTER FABRIC**

This section applies to the turf reinforcement mat and filter fabric specified to be placed underneath the various rock-lined structures and grass-lined swales, and around subdrain and perforated pipe trenches shown on the Plans. The table below outlines the acceptable products for each of the aforementioned applications.

	<b>APPLICATION</b>	<b>PRODUCT</b>
<b>TURF REINFORCEMENT MAT</b>	Under rock-lined channel R&R and grass-lined swales over native soil, rock dissipators, No. 1 backing, around perimeter of subdrain and perforated pipe trench, around HDPE cleanouts.	Landlok TRM 450 as manufactured by Propex Geosynthetics or P300 as manufactured by North American Green, or approved equal.
<b>FILTER FABRIC (woven)</b>	Filter fence material, between class 1 type B permeable material and fill at subdrain and concrete wash liner.	Geotex 2130 as manufactured by Propex, or 100X as manufactured by Mirafi, or approved equal.

The fabric shall be furnished in protective covers capable of protecting the fabric from ultraviolet rays and water.

Contractor's attention is directed to Section 10-1.24, "Temporary Erosion Control and Storm Water Pollution Plan (SWPPP)," of these Special Provisions for the filter fabric requirements associated with temporary erosion control measures.

Full compensation for furnishing and installing turf reinforcement mat and filter fabric as shown on the Plans and as specified in these Special Provisions shall be considered as included in the various items of work, and no additional compensation shall be made therefor.

**10-1.24 TEMPORARY EROSION CONTROL AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**

Contractor is advised that, due to the steepness and erodability of the work area, temporary erosion control provisions of these Specifications will be strictly enforced. It is Contractor's responsibility to determine the effect that temporary erosion control measures will have on construction operations, and to fully account for this effect in the bid price for the work.

Contractor shall attend a pre-grade inspection meeting with TRPA prior to the start of any work, other than temporary erosion control installation. All temporary erosion control facilities shown on the Plans shall be in place prior to any soil disturbance or excavation.

In addition to temporary erosion control facilities shown on the Plans, Contractor shall provide additional temporary erosion control facilities as necessary to prevent adverse water quality impacts.

**A fine of \$100/day will be levied against Contractor for each day Contractor delays in responding to Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices.**

Requirements: Temporary erosion control requirements shall be in accordance with Tahoe Regional Planning Agency's "Best Management Practices and Ordinances" and permits for this project, the Lahontan Regional Board Order pertaining to the project, and the California Tahoe Conservancy requirements. Water quality effluent limits must be in accordance with the following values:

TRPA and Lahontan Water Quality Limits

Constituent	Surface Waters		Infiltration Systems	
	Lahontan	TRPA	Lahontan	TRPA
Total Nitrogen as N	0.5 mg/l		5 mg/l	
Dissolved Nitrogen as N		0.5 mg/l		5 mg/l
Total Phosphate as P	0.1 mg/l		1 mg/l	
Dissolved Phosphate as P		0.1 mg/l		1 mg/l
Total Iron	0.5 mg/l		4 mg/l	
Dissolved Iron		0.5 mg/l		4 mg/l
Turbidity	20 NTU		200 NTU	
Suspended Sediment		250 mg/l		
Grease & Oil	2 mg/l	2 mg/l	40 mg/l	40 mg/l

Source: Storm Water Quality Improvement Committee document

Note: Surface Water values also apply to discharges to SEZs.

Temporary erosion control shall consist of taking necessary measures to minimize erosion and resulting transport of sediment from graded or disturbed areas into natural or man-made facilities within and outside the project limits. Temporary erosion control shall continue to be effective through the completion of Work and shall be maintained as required during the course of Work.

Contractor shall install and maintain all erosion control measures shown on the plans as well as all measures required by TRPA's permit conditions, including but not limited to Best Management Practices and the following construction/grading conditions:

**Construction/Grading Conditions:**

Boulder Mountain Erosion Control Project  
 Contract No. PW 13-30675, CIP No. 95153  
 May 2013

The following conditions shall be complied with during the grading and construction phase of the project:

1. All construction shall be accomplished in strict compliance with the Plans approved by TRPA.
2. The TRPA permit and final construction drawings bearing the TRPA stamp of approval shall be present on the construction site from the time construction commences to final TRPA site inspection. The permit and Plans shall be available for inspection upon request by any TRPA employee. Failure to present the TRPA permit and approved Plans may result in the issuance of a Cease and Desist Order by TRPA.
3. There shall be no grading or land disturbance performed with respect to the project between October 15 and May 1, unless proper approvals are obtained from TRPA, as provided in the limited exemption described in Subsection 4.2.A of the TRPA Code of Ordinances. Approvals from Lahontan are also required.
4. Except as provided in Subsection 64.2.B of the Code of Ordinances, there shall be no grading at any time of the year during periods of precipitation and for the resulting period of time when the site is covered with snow or is in a saturated, muddy, or unstable condition.
5. Replanting of all exposed surfaces by others, in accordance with the Plans, shall be accomplished within the first growing season following disturbance, unless an approved construction/inspection schedule establishes otherwise.
6. All trees and natural vegetation to remain on the site shall be fenced for protection. Scarring of trees shall be avoided and, if scarred, damaged areas shall be repaired with tree seal.
7. Soil and construction material shall not be tracked off the construction site. Grading operations shall cease in the event that a danger of violating this condition exists. The site shall be cleaned up and road right-of-way swept clean when necessary.
8. During grading and construction, environmental protection devices such as erosion control devices, dust control, and vegetation protection barriers shall be maintained.
9. Loose soil mounds or surfaces shall be protected from wind or water erosion by being appropriately covered when construction is not in active progress or when required by TRPA.
10. Excavated material shall be stored up grade from the excavated areas to the extent possible. No material shall be stored in any stream environment zone (SEZ land capability 1b) or wet areas as shown on Sheet L-1 of the Plans.
11. Only equipment of a size and type that, under prevailing site conditions, and considering the nature of the work to be performed, will do the least amount of damage to the environment shall be used. Construction equipment and vehicles shall be stored on pavement in the area designated on the Plans and in Section 5-1.40, "Storage of Equipment, Materials, Supplies, Etc.," of these Special Provisions when not in use.
12. Washing of tires of earth moving equipment/vehicles and washing of concrete equipment shall be allowed only in the areas designated on the Plans for these specific purposes. Cleaning of vehicles or construction equipment for other purposes shall not be permitted within the project area.
13. No vehicles or heavy equipment shall be allowed in any stream environment zone, or wet area, except as authorized by TRPA. All construction equipment authorized by TRPA to work in or near SEZ areas must be steam cleaned prior to mobilization to the SEZ area and maintained in clean and good working order with maintenance logs made available to TRPA at their request.

14. All construction sites shall be winterized by October 15 to reduce water quality impacts associated with winter weather as follows:

A. For sites that will be inactive between October 15 and May 1:

- (1) Temporary erosion controls shall be installed;
- (2) Temporary vegetation protection fencing shall be installed;
- (3) Disturbed areas shall be stabilized;
- (4) Onsite construction slash and debris shall be cleaned up and removed;
- (5) Where feasible, mechanical stabilization and drainage improvements shall be installed; and
- (6) Spoil piles shall be removed from the site.

B. For sites that will be active between October 15 and May 1, in addition to the above requirements;

- (1) Permanent mechanical erosion control devices shall be installed, including paving of driveway and parking areas; and
- (2) Parking of vehicles and storage of building materials shall be restricted to paved areas.

15. No Toxic materials shall be treated, stored, disposed of, spilled, or leaked in significant quantities within the project area. Contractor shall submit a Spill Contingency Plan in accordance with Section 5-1.40, "Storage of Equipment, Materials, Supplies, Etc.," of these Special Provisions.

The following are requirements for Best Management Practices that are to be installed and maintained to provide temporary erosion control prior to and throughout construction:

Sediment Barriers and Erosion Control Devices: Throughout the entire construction period Contractor shall be responsible for insuring that no material eroded from the site leaves the construction area via the conveyance system. Contractor shall provide adequate sediment barriers at all storm drain pipe outlets, drainage inlets and other collection points and provide adequate erosion control at channels and swales that have been graded but turf reinforcement mat, cobble, salvaged sod, or mulch, as applicable has not been installed. Sediment barriers shall be constructed in accordance with the details shown on the Plans and include weighted fiber rolls or gravel-filled rolls, filter fence, and rice straw fiber rolls. Erosion control at channels and swales shall be constructed in accordance with the details shown on the Plans and shall consist of visqueen sheeting held in place with gravel bags or gravel-filled rolls.

Contractor shall install and maintain filter fences to intercept and filter sediment-laden runoff water leaving the construction site via overland flow. Care must be taken to insure that all runoff water must pass through, not over, under or around, the filter fence. The filter fence should be constructed from material specified in this section and in a manner to filter the runoff water without overtopping, collapsing, becoming overfilled with sediment, or having runoff flows skirt around the filter fence.

Visqueen sheeting shall be overlapped with the upstream edge over the top of the downstream edge to prevent runoff from flowing underneath the visqueen.

Protection of Existing Trees and Vegetation: Protect existing trees and other vegetation indicated to remain in place, against the following: Unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line.

At areas inside the drip line of existing tree branches within the construction area tree trunks shall be wrapped with construction limit fence then wrapped with the wooden tree trunk protection in accordance with detail shown on the Plans. Boards for wooden tree trunk protection shall not be nailed to trees and Construction Limit Fence shall be placed along the work area limits and around tree drip line perimeters as shown on the Plans and staked by Engineer.

Contractor shall water trees and other vegetation to remain within limits of contract work, as required to maintain their health during course of construction operations.

Contractor shall provide protection for roots over 1 1/2" diameter cut during construction operations. Contractor shall coat cut faces with emulsified asphalt, or other acceptable coating, formulated for use on damaged plant tissues. Contractor shall temporarily cover exposed roots with wet burlap to prevent roots from drying out; cover with earth as soon as possible. Contractor shall repair or replace, except where noted otherwise in these Special Provisions, trees and vegetation indicated to remain, which are damaged by construction operations, in a manner acceptable to Engineer at Contractor's expense.

Tire Wash Areas: Throughout the entire construction period, Contractor shall ensure that tracking of sediment to public streets outside the project area is minimized by cleaning all earth moving equipment/vehicles at a tire wash area before leaving the project site (i.e. entering Lake Tahoe Blvd.).

Concrete Wash Areas: Contractor shall ensure that concrete equipment is washed out only at the designated concrete wash areas. The concrete wash area shall be sized for washing all concrete equipment without overtopping the wash area.

Materials:

Gravel Bags shall be non-woven polypropylene geotextile or comparable polymer and shall conform to the following requirements:

Specification	Requirements
Mass per unit area, ounces per square yard, min. ASTM Designation: D 5261	8.0
Grab tensile strength (1 inch grip), pounds, min. ASTM Designation: D4632*	200
Ultraviolet stability, percent tensile strength retained after 500 hours, ASTM Designation: D4355, xenon arc lamp method	70

\* or appropriate test method for specific polymer

Gravel bags shall be between 24 inches and 32 inches in length, and between 16 inches and 20 inches in width. Yarn used for binding gravel bags shall be as recommended by the manufacturer or bag supplier and shall be of a contrasting color.

Gravel shall be 1/2" to 1" and shall be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags shall be secured to prevent gravel from escaping. Gravel-filled bags shall be between 26 pounds and 45 pounds in mass.

Gravel-filled rolls shall be wrapped in woven high-density polyethylene with heat welded seams and shall contain 1/4" gravel.

Filter fence shall be constructed with metal fence posts, #14 gauge wire, and covered with filter fence material, Geotex 2130 as manufactured by Propex, or 100X as manufactured by Mirafi, or approved equal.

Visqueen shall be 6 mil polyethylene sheeting wide enough to cover the swale or channel cross section plus one-foot either side of the top of the swale or channel bank. To contain sediment and control erosion in an emergency (such as a heavy rainstorm), Contractor shall have on site 6 mil polyethylene film in a sufficient amount to cover all spoils. Contractor shall maintain the polyethylene film cover over the stockpile of materials in the staging/storage areas when not accessing the stockpile. The film shall be secured to remain in place during storm events. The costs associated with covering stockpiles of materials and securing the film in place shall be included in the unit prices bid for the various temporary erosion control items with no additional compensation therefor.

Weighted fiber rolls shall be eight inches in diameter and shall consist of a machined mat or blanket of shaved aspen wood curled excelsior with a weighted inner core contained in a photodegradable, extruded, high visibility netting tube with a handle on each end. Eighty percent of the excelsior material shall consist of

fibers at least 6 inches in length. The fiber roll shall be contained in a tubular orange-colored netting knotted at each end made from 85% high-density polyethylene and 14% ethyl vinyl acetate with titanium oxide for UV inhibition.

Rice Fiber Rolls (also known as straw wattles) shall be at least eight inches in diameter and shall be an Earth Savers wattle as manufactured by R.H. Dyck, Inc. or Rice Straw Fiber Roll as manufactured by Kristar or approved equal. Wood stakes for securing rice straw fiber rolls shall be untreated fir, redwood, cedar, or pine, shall be cut from sound timber, and shall be straight and free of loose or unsound knots and other defects which would render them unfit for the purpose intended.

Woven Filter Fabric for concrete wash shall be Geotex 2130 as manufactured by Propex or 100X as manufactured by Mirafi, or approved equal.

Class 1 Types A and B Permeable rock filter shall conform to Section 10-1.10D, "Excavation and Grading," of these Special Provisions.

Tree Protection and Construction Limit Fence shall be constructed with high-density polyethylene open pattern safety barrier fence or metal mesh fence and shall be at least 48 inches high. Additional tree protection where fence cannot be placed at tree dripline shall be 2" x 4" x 8' wooden boards tied together by wire or rope laced through staples attached to boards. Wooden fence shall be bound to tree with wire or rope at three locations minimum. Construction Limit Fence shall be wrapped around the tree trunk prior to wrapping the wooden tree trunk protection around the trunk.

#### Maintenance of Sediment Barriers:

##### General

Engineer will take periodic turbidity readings of the effluent discharging from all filtering devices. If the effluent levels fall below the allowable limits listed above, Contractor shall take appropriate measures to bring the effluent levels within the allowable limits. These measures include removing deposited sediment from filter fencing, and other filter materials (e.g. weighted fiber rolls, gravel-filled rolls, or rice fiber rolls) after each storm and cleaning or replacing filter materials. The sediment removed shall be disposed of in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions.

##### Specific

Temporary gravel bags shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary gravel bag resulting from Contractor's vehicles, equipment, or operations shall be repaired at Contractor's expense. Gravel bags or gravel-filled rolls shall be replaced when the bag material or roll material is ruptured or when the yarn has failed, allowing the bag contents to spill out.

Filter fence shall be repaired or replaced on the same day when the damage occurs. Damage to the filter fence resulting from Contractor's vehicles, equipment, or operations shall be repaired at Contractor's expense.

Rice straw fiber roll and weighted fiber rolls shall be maintained to disperse concentrated water runoff and to reduce runoff velocities. Split, torn, or unraveling rolls shall be repaired or replaced. Where applicable, broken or split stakes shall be replaced. Sagging or slumping fiber rolls shall be repaired with additional stakes or replaced. Locations where rills and other evidence of concentrated runoff have occurred beneath the rolls shall be corrected. Rice straw fiber roll and weighted fiber rolls shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary fiber rolls resulting from Contractor's vehicles, equipment, or operations shall be repaired at Contractor's expense.

Filter Fabric shall be repaired or replaced the same day damage occurs. Damage to the filter fabric resulting from Contractor's vehicles, equipment, or operations shall be repaired at Contractor's expense.

Maintenance of Tire Wash Areas: Engineer will take periodic turbidity readings of the effluent discharging from the tire wash areas. If effluent limits for turbidity are exceeded, Contractor shall take the appropriate

measures to bring the effluent limits into compliance. These measures include flushing the area to remove clogging of gravel bags or gravel-filled rolls and replacing Class 1 Type A Permeable Material filter medium.

Maintenance and replacement of gravel bags or gravel-filled rolls used in Tire Wash Areas shall conform to the requirements outlined above under Maintenance of Sediment Barriers.

Maintenance of Concrete Wash Areas: Contractor shall vacuum or otherwise clean the concrete wash areas as necessary to prevent overtopping of these facilities and before removing the woven filter fabric when the concrete wash area is no longer needed. Contractor shall remove hardened concrete and dispose of it in accordance with Section 10-1.10, "Excavation and Grading," of these Special Provisions and replace Class 1 Type A Permeable rock filter as necessary to keep the facility functional. After the facility is vacuumed and hardened concrete is removed, Contractor shall return the facility to a functional condition.

Maintenance and replacement of rice fiber rolls and woven filter fabric used in Concrete Wash Areas shall conform to the requirements outlined above under Maintenance of Sediment Barriers.

Removal: Except where noted otherwise in the Item descriptions, remove temporary erosion control measures only when all permanent structural and permanent erosion control measures have been implemented, and where designated elsewhere in these Special Provisions, upon approval by TRPA. Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary erosion control measures shall be backfilled and compacted.

Payment for compliance with this section shall be considered as included in the applicable Items and no additional compensation will be made therefor.

#### **10-1.25 CLEANUP**

This section describes the cleanup of construction areas associated with the erosion control construction:

Cleanup and Dressing: After all of the work indicated on the Plans and Specifications is complete and before final acceptance of the project, the entire construction site including areas used for storage of supplies and equipment shall be neatly finished to the lines and grades shown on the Plans. Slopes shall be graded so as to produce a slightly roughened (natural) appearance without damaging the existing or new improvements, trees, and shrubs.

Machine dressing shall be supplemented by hand work as necessary. At the completion of dressing, the project shall appear uniform in all respects. Trash of any kind shall be removed from the construction site and disposed of at Contractor's expense and all culverts shall be cleaned, unless otherwise directed by Engineer. All temporary erosion control devices shall be cleaned first and then removed unless noted otherwise. All pavement surfaces whether new or old shall be thoroughly cleaned by watering and sweeping.

No direct compensation shall be paid for cleanup work and Contractor shall include cleanup work as a part of the items of work.

#### **10-1.26 SHORING AND EXCAVATION PLAN**

Attention is directed to Sections 5-1.02A, "Excavation and Safety Plans," and 7-1.01E, "Trench Safety," of the Standard Specifications and OSHA 29 CFR Part 1926 Construction Industry Regulations and these Special Provisions.

Contractor shall provide a safe means of egress in trenches/excavations five (5) feet deep and greater by the use of sheeting, shoring and bracing, sloping the sides of the trenches/excavations, or equivalent method.

Contractor shall submit a detailed plan showing the design of the sheeting, shoring and bracing, or equivalent method which Contractor proposes to use during construction to Engineer in accordance with Section 5-1.02A, "Excavation Safety Plans," of the Standard Specifications, except that this plan shall be submitted to Engineer within five (5) working days prior to any proposed work requiring protection. No

excavation or trenching requiring protection shall commence until the "Shoring and Excavation Plan" is acknowledged by Engineer.

Nothing in this provision shall be construed to impose tort liability on County or any of its employees.

If the Engineer determines that resources sufficient to bring the Contractor in compliance with this section "Shoring and Excavation Plan" have not been allocated, Engineer may redirect any and all of the Contractor's resources available at the project site toward this effort. In the event that Engineer redirects resources due to Contractor's non-compliance with the provisions of this section, "Shoring and Excavation Plan", the County will not be responsible for any delays to the Contractor's schedule resulting from the reallocation, and no compensation shall made therefor.

The following excavations require the use of sheeting, shoring and bracing, or equivalent method rather than sloping the sides of the excavation:

SHEET	STRUCTURE DESCRIPTION	APPROX. STATION
P-04	Drainage Inlet	12+35.52 LT Lake Tahoe Blvd.
P-04	Drainage Inlet	13+03.74 LT Lake Tahoe Blvd.

For all other trenches/excavations, unless sloping the sides of the trench/excavation causes no disturbance to the existing adjacent AC pavement, slopes and vegetation and does not extend beyond County right-of-way and/or the construction limit fence, Contractor shall shore or brace the trenches/excavations.

The costs associated with installing sheeting, shoring and bracing, sloping the sides of the trenches/excavations or equivalent method for trenches/excavations five feet deep and greater shall be paid for in accordance with the lump sum price bid for Item "Trench and Excavation Safety" and no additional compensation will be made. Contractor's attention is directed to Section 5-1.54, "Local, State, and Federal Agencies' Conditions of Approval and Permits," of these Special Provisions regarding permitting and Section 10-1.22, "Disturbance and Revegetation," of these Special Provisions regarding violation of the above requirements such that disturbance results.

**10-1.27 TIMBER REMOVAL PRACTICES**

1. Prior to timber harvest, all project temporary erosion control devices must be in place.
2. All care must be taken to minimize damage to trees and other vegetation not marked for removal. If such occurs, damaged vegetation will be removed at Contractor expense. Revegetation of the area will be in accordance with Section 10-1.22, "Disturbance and Revegetation," of these Special Provisions.
3. Contractor shall be liable for damage to utility service lines, fences or other structures.
4. Trees shall be felled to minimize disturbance to surrounding vegetation and traffic flow.
5. Contractor shall be responsible for all traffic control during timber harvest where applicable in accordance with the California MUTCD. This shall include, but is not limited to, two flaggers in constant eye or radio contact. Contractor shall also coordinate traffic control with the emergency service providers.
6. Trees noted to be removed must be cut to stump height sufficient for subsequent easy stump removal to a depth of 2 feet below the bottom of the proposed improvements if the stump and roots will interfere with the installation of the improvements.
7. Within a SEZ, trees to be removed must be felled, bucked to firewood length, and the green wood covered tightly with plastic and left in place, if not removed within 48 hours. Tree removal from the area shall occur when soil is dry and stable. Lengths shall be winched out, lifted with a cherry picker, or carried by hand. No mechanical equipment for tree removal shall be operated within an SEZ (Sheet L-1 of the Plans denotes the SEZ areas).



8. All wood products for resale must be removed from the site prior to resale.
9. All trees marked for removal must be removed from the site within 48 hours to reduce the spread of insects.
10. Contractor is responsible for complete site cleanup, including slash disposal. No slash may be stored or burned on site.

Other Requirements:

1. Contractor shall obtain a Timber Operator's License from the California Department of Forestry and Fire Protection (CAL FIRE) prior to starting work if the fuel wood or timber is to be sold.
2. Contractor must meet all County requirements for comprehensive and liability insurance prior to starting work.

**SECTION 11. (NOT USED)**

**SECTION 12. (NOT USED)**

**SECTION 13. (NOT USED)**

**SECTION 14. FEDERAL PREVAILING WAGES**

**14-1.01 GENERAL**

The work will be funded, in part, with Federal funds. The Federal Minimum Wages are included hereinafter and incorporated by reference, and are intended to comply with the federal requirements for partially federally funded projects, where applicable.

# FEDERAL PREVAILING WAGES

General Decision Number: CA130009 04/05/2013 CA9

Superseded General Decision Number: CA20120009

State: California

Construction Types: Building, Heavy (Heavy and Dredging) and Highway

Counties: Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Marin, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Solano, Sonoma, Sutter, Tehama, Trinity, Yolo and Yuba Counties in California.

BUILDING CONSTRUCTION PROJECTS (excluding Amador County only);  
DREDGING CONSTRUCTION PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); AND HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	01/04/2013
1	01/11/2013
2	02/08/2013
3	03/01/2013
4	03/08/2013
5	03/22/2013
6	04/05/2013

ASBE0016-001 08/01/2012

AREA 1: ALAMEDA, CONTRA COSTA, LAKE, MARIN, MENDOCINO, MONTEREY, NAPA, SAN BENITO, SAN FRANCISCO, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, & SONOMA COUNTIES

AREA 2: ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA, DEL NORTE, EL DORADO, FRESNO, GLENN, HUMBOLDT, KINGS, LASSEN, MADERA, MARIPOSA, MERCED, MODOC, MONO, NEVADA, PLACER, PLUMAS, SACRAMENTO, SAN JOAQUIN, SHASTA, SIERRA, SISKIYOU, STANISLAU, SUTTER, TEHEMA, TRINITY, TULARE, TUOLUMNE, YOLO, & YUBA COUNTIES

Rates Fringes

Asbestos Workers/Insulator  
(Includes the application of all insulating materials, Protective Coverings, Coatings, and Finishes to all types of mechanical systems)

Area 1.....	\$ 54.70	18.47
Area 2.....	\$ 42.45	18.47

\* ASBE0016-007 01/01/2013

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)....	\$ 31.13	6.95

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BOIL0549-002 01/01/2009

	Rates	Fringes
<b>BOILERMAKER</b>		
(1) Marin & Solano Counties..	\$ 40.17	22.32
(2) Remaining Counties.....	\$ 37.01	22.25

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BRCA0003-001 06/01/2011

	Rates	Fringes
MARBLE FINISHER.....	\$ 28.02	12.22

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BRCA0003-004 05/01/2011

AREA 1: ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN,  
LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA,  
SIERRA, SUTTER, TEHAMA, YOLO AND YUBA COUNTIES

AREA 2: MARIN, NAPA, SISKIYOU, SOLANO, SONOMA AND TRINITY  
COUNTIES

	Rates	Fringes
<b>BRICKLAYER</b>		
AREA 1.....	\$ 35.11	18.99
AREA 2.....	\$ 39.85	22.00

**SPECIALTY PAY:**

(A) Underground work such as tunnel work, sewer work,  
manholes, catch basins, sewer pipes and telephone conduit  
shall be paid \$1.25 per hour above the regular rate. Work  
in direct contact with raw sewage shall receive \$1.25 per  
hour in addition to the above.

(B) Operating a saw or grinder shall receive \$1.25 per hour  
above the regular rate.

(C) Gunite nozzle person shall receive \$1.25 per hour above  
the regular rate.

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BRCA0003-008 06/01/2011

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 30.30	13.77
TERRAZZO WORKER/SETTER.....	\$ 39.30	21.20

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BRCA0003-010 01/01/2011

	Rates	Fringes
TILE FINISHER		
Area 1.....	\$ 21.21	10.01
Area 2.....	\$ 21.26	12.44
Area 3.....	\$ 21.44	12.31
Area 4.....	\$ 20.93	11.79
Tile Layer		
Area 1.....	\$ 36.08	11.95
Area 2.....	\$ 34.41	13.68
Area 3.....	\$ 38.61	13.73
Area 4.....	\$ 35.45	13.68

AREA 1: Butte, Colusa, El Dorado, Glenn, Lassen, Modoc,  
Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter,  
Tehama, Yolo, Yuba

AREA 2: Alpine, Amador

AREA 3: Marin, Napa, Solano, Siskiyou

AREA 4: Sonoma

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BRCA0003-014 06/01/2011

	Rates	Fringes
MARBLE MASON.....	\$ 39.22	18.68

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CARP0034-001 07/01/2012

	Rates	Fringes
Diver		
Assistant Tender, ROV		
Tender/Technician.....	\$ 37.75	28.88
Diver standby.....	\$ 42.53	28.88
Diver Tender.....	\$ 41.53	28.88
Diver wet.....	\$ 85.06	28.88
Manifold Operator (mixed gas).....	\$ 46.53	28.88
Manifold Operator (Standby).\$	41.53	28.88

DEPTH PAY (Surface Diving):  
050 to 100 ft \$2.00 per foot  
101 to 150 ft \$3.00 per foot  
151 to 220 ft \$4.00 per foot

**SATURATION DIVING:**

The standby rate shall apply until saturation starts. The saturation diving rate applies when divers are under pressure continuously until work task and decompression are

complete. The diver rate shall be paid for all saturation hours.

**DIVING IN ENCLOSURES:**

Where it is necessary for Divers to enter pipes or tunnels, or other enclosures where there is no vertical ascent, the following premium shall be paid: Distance traveled from entrance 26 feet to 300 feet: \$1.00 per foot. When it is necessary for a diver to enter any pipe, tunnel or other enclosure less than 48" in height, the premium will be \$1.00 per foot.

**WORK IN COMBINATION OF CLASSIFICATIONS:**

Employees working in any combination of classifications within the diving crew (except dive supervisor) in a shift are paid in the classification with the highest rate for that shift.

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CARP0034-003 07/01/2012

	Rates	Fringes
Piledriver.....	\$ 37.75	28.88

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CARP0035-001 08/01/2012

AREA 1: MARIN, NAPA, SOLANO & SONOMA

AREA 3: SACRAMENTO, WESTERN EL DORADO (Territory west of an including highway 49 and the territory inside the city limits of Placerville), WESTERN PLACER (Territory west of and including highway 49), & YOLO

AREA 4: ALPINE, BUTTE, COLUSA, EASTERN EL DORADO, GLENN, LASSEN, MODOC, NEVADA, EASTERN PLACER, PLUMAS, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, & YUBA

	Rates	Fringes
Drywall Installers/Lathers:		
Area 1.....	\$ 38.50	26.12
Area 3.....	\$ 33.12	26.12
Area 4.....	\$ 31.77	26.12
Drywall Stocker/Scrapper		
Area 1.....	\$ 19.25	15.03
Area 3.....	\$ 16.56	15.03
Area 4.....	\$ 15.89	15.03

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CARP0035-009 07/01/2012

Marin County

	Rates	Fringes
CARPENTER		
Bridge Builder/Highway		

Carpenter.....	\$ 38.50	25.68
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer.....	\$ 38.65	25.68
Journeyman Carpenter.....	\$ 38.50	25.68
Millwright.....	\$ 38.60	27.27

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 CARP0035-010 07/01/2012

AREA 1: Marin, Napa, Solano & Sonoma Counties

AREA 2: Alpine, San Benito and Santa Cruz

AREA 3: Alpine, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc,  
 Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou,  
 Sutter, Tehama, Trinity, Yolo & Yuba counties

Rates Fringes

Modular Furniture Installer

Area 1		
Installer I.....	\$ 22.61	16.71
Installer II.....	\$ 19.18	16.71
Lead Installer.....	\$ 26.06	17.21
Master Installer.....	\$ 30.28	17.21
Area 2		
Installer I.....	\$ 19.96	16.71
Installer II.....	\$ 17.01	16.71
Lead Installer.....	\$ 22.93	17.21
Master Installer.....	\$ 26.56	17.21
Area 3		
Installer I.....	\$ 19.01	16.71
Installer II.....	\$ 16.24	16.71
Lead Installer.....	\$ 21.81	17.21
Master Installer.....	\$ 25.23	17.21

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 CARP0046-001 07/01/2012

El Dorado (West), Placer (West), Sacramento and Yolo Counties

Rates Fringes

Carpenters

Bridge Builder/Highway Carpenter.....		
	\$ 38.50	25.68
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer.....	\$ 32.77	25.68
Journeyman Carpenter.....	\$ 32.62	25.68
Millwright.....	\$ 35.12	27.27

Footnote: Placer County (West) includes territory West of and

including Highway 49 and El Dorado County (West) includes territory West of and including Highway 49 and territory inside the city limits of Placerville.

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CARP0046-002 07/01/2012

Alpine, Colusa, El Dorado (East), Nevada, Placer (East), Sierra, Sutter and Yuba Counties

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter.....	\$ 38.50	25.68
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer.....	\$ 31.42	25.68
Journeyman Carpenter.....	\$ 31.27	25.68
Millwright.....	\$ 33.77	27.27

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CARP0152-003 07/01/2012

Amador County

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter.....	\$ 38.50	25.68
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer.....	\$ 31.42	25.68
Journeyman Carpenter.....	\$ 31.27	25.68
Millwright.....	\$ 33.77	27.27

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CARP0180-001 07/01/2012

Solano County

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter.....	\$ 38.50	25.68
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer.....	\$ 38.65	25.68
Journeyman Carpenter.....	\$ 38.50	25.68
Millwright.....	\$ 38.60	27.27

CARP0751-001 07/01/2012

Napa and Sonoma Counties

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter.....	\$ 38.50	25.68
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer.....	\$ 38.65	25.68
Journeyman Carpenter.....	\$ 38.50	25.68
Millwright.....	\$ 38.60	27.27

CARP1599-001 07/01/2012

Butte, Glenn, Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama  
and Trinity Counties

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter.....	\$ 38.50	25.68
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer.....	\$ 31.42	25.68
Journeyman Carpenter.....	\$ 31.27	25.68
Millwright.....	\$ 33.77	27.27

ELEC0006-002 12/01/2011

MARIN, NAPA, SOLANO & SONOMA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer.....	\$ 30.12	3%+13.70
Technician.....	\$ 34.29	3%+13.70

**SCOPE OF WORK INCLUDES-**

SOUND & VOICE TRANSMISSION (Music, Intercom, Nurse Call, Telephone); FIRE ALARM SYSTEMS [excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs],

TELEVISION & VIDEO SYSTEMS, SECURITY SYSTEMS, COMMUNICATIONS SYSTEMS that transmit or receive information and/or control systems that are intrinsic to the above.

**EXCLUDES-**



Excludes all other data systems or multiple systems which include control function or power supply; excludes installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excludes energy management systems.

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 ELEC0180-001 06/01/2012

NAPA AND SOLANO COUNTIES

	Rates	Fringes
CABLE SPLICER.....	\$ 42.81	22.161
ELECTRICIAN.....	\$ 42.81	22.161

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 ELEC0340-002 12/01/2012

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, NEVADA, PLACER, PLUMAS, SACRAMENTO, TRINITY, YOLO, YUBA COUNTIES

	Rates	Fringes
Communications System		
Sound & Communications		
Installer.....	\$ 24.38	3%+12.05
Sound & Communications		
Technician.....	\$ 28.04	3%+12.05

SCOPE OF WORK

Includes the installation testing, service and maintenance, of the following systems which utilize the transmission and/or transference of voice, sound, vision and digital for commercial, education, security and entertainment purposes for the following TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, nurse call system, radio page, school intercom and sound, burglar alarms, and low voltage master clock systems.

A. SOUND AND VOICE TRANSMISSION/TRANSFERENCE SYSTEMS

Background foreground music Intercom and telephone interconnect systems, Telephone systems, Nurse call systems, Radio page systems, School intercom and sound systems, Burglar alarm systems, Low voltage master clock systems, Multi-media/multiplex systems, Sound and musical entertainment systems, RF systems, Antennas and Wave Guide.

B. FIRE ALARM SYSTEMS

Installation, wire pulling and testing

C. TELEVISION AND VIDEO SYSTEMS   Television monitoring and surveillance systems, Video security systems, Video

entertainment systems, Video educational systems, Microwave transmission systems, CATV and CCTV

D. SECURITY SYSTEMS Perimeter security systems  
Vibration sensor systems Card access systems Access control systems Sonar/infrared monitoring equipment

E. COMMUNICATIONS SYSTEMS THAT TRANSMIT OR RECEIVE INFORMATION AND/OR CONTROL SYSTEMS THAT ARE INTRINSIC TO THE ABOVE LISTED SYSTEMS SCADA (Supervisory Control and Data Acquisition) PCM (Pulse Code Modulation) Inventory Control Systems Digital Data Systems Broadband and Baseband and Carriers Point of Sale Systems VSAT Data Systems Data Communication Systems RF and Remote Control Systems Fiber Optic Data Systems WORK EXCLUDED Raceway systems are not covered (excluding Ladder-Rack for the purpose of the above listed systems). Chases and/or nipples (not to exceed 10 feet) may be installed on open wiring systems. Energy management systems. SCADA (Supervisory Control and Data Acquisition) when not intrinsic to the above listed systems (in the scope). Fire alarm systems when installed in raceways (including wire and cable pulling) shall be performed at the electrician wage rate, when either of the following two (2) conditions apply:  
1. The project involves new or major remodel building trades construction.  
2. The conductors for the fire alarm system are installed in conduit.

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ELEC0340-003 12/01/2012

ALPINE (West of Sierra Mt. Watershed), AMADOR, BUTTE, COLUSA, EL DORADO (West of Sierra Mt. Watershed), GLENN, LASSEN, NEVADA (West of Sierra Mt. Watershed), PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA (West of Sierra Mt. Watershed), SUTTER, TEHAMA, TRINITY, YOLO & YUBA COUNTIES

Rates Fringes

ELECTRICIAN

Remaining area.....	\$ 38.93	18.29
Sierra Army Depot, Herlong..	\$ 48.66	3%+13.25
Tunnel work.....	\$ 40.88	3%+13.25

CABLE SPLICER: Receives 110% of the Electrician basic hourly rate.

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ELEC0401-005 12/01/2009

ALPINE (east of the main watershed divide), EL DORADO (east of the main watershed divide), NEVADA (east of the main watershed), PLACER (east of the main watershed divide) and SIERRA (east of the main watershed divide) COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 35.40	13.02+3%
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ELEC0551-004 06/01/2012		

MARIN AND SONOMA COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 46.00	14.63
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ELEC0659-006 01/01/2012		

DEL NORTE, MODOC and SISKIYOU COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 30.02	14.45
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ELEC0659-008 02/01/2010		

DEL NORTE, MODOC & SISKIYOU COUNTIES

	Rates	Fringes
Line Construction		
(1) Cable Splicer.....	\$ 47.34	13.74
(2) Lineman, Pole Sprayer, Heavy Line Equipment Man....	\$ 42.27	13.54
(3) Tree Trimmer.....	\$ 29.70	9.94
(4) Line Equipment Man.....	\$ 36.35	10.85
(5) Powdermen, Jackhammermen.....	\$ 31.90	10.00
(6) Groundman.....	\$ 29.59	10.24
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ELEC1245-004 06/01/2012		

ALL COUNTIES EXCEPT DEL NORTE, MODOC & SISKIYOU

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer..	\$ 48.95	14.05
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment).....	\$ 39.09	12.97
(3) Groundman.....	\$ 29.91	12.70
(4) Powderman.....	\$ 43.71	13.15

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day,  
Independence Day, Labor Day, Veterans Day, Thanksgiving Day

and day after Thanksgiving, Christmas Day

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ELEV0008-001 01/01/2012

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 57.29	23.535

FOOTNOTE:

PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.  
 PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

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ENGI0003-008 07/01/2012

	Rates	Fringes
Dredging: (DREDGING: CLAMSHELL & DIPPER DREDGING; HYDRAULIC SUCTION DREDGING:)		
AREA 1:		
(1) Leverman.....	\$ 39.68	25.69
(2) Dredge Dozer; Heavy duty repairman.....	\$ 34.72	25.69
(3) Booster Pump Operator; Deck Engineer; Deck mate; Dredge Tender; Winch Operator.....	\$ 33.60	25.69
(4) Bargeman; Deckhand; Fireman; Leveehand; Oiler..	\$ 33.60	25.69
AREA 2:		
(1) Leverman.....	\$ 41.68	25.69
(2) Dredge Dozer; Heavy duty repairman.....	\$ 36.72	25.69
(3) Booster Pump Operator; Deck Engineer; Deck mate; Dredge Tender; Winch Operator.....	\$ 35.60	25.69
(4) Bargeman; Deckhand; Fireman; Leveehand; Oiler..	\$ 32.30	25.69

AREA DESCRIPTIONS

AREA 1: ALAMEDA,BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED, NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS, SUTTER, YOLO, AND YUBA COUNTIES

AREA 2: MODOC COUNTY

THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS NOTED BELOW:

ALPINE COUNTY:

Area 1: Northernmost part

Area 2: Remainder

CALAVERAS COUNTY:

Area 1: Remainder

Area 2: Eastern part

COLUSA COUNTY:

Area 1: Eastern part

Area 2: Remainder

ELDORADO COUNTY:

Area 1: North Central part

Area 2: Remainder

FRESNO COUNTY:

Area 1: Remainder

Area 2: Eastern part

GLENN COUNTY:

Area 1: Eastern part

Area 2: Remainder

LASSEN COUNTY:

Area 1: Western part along the Southern portion of border  
with Shasta County

Area 2: Remainder

MADERA COUNTY:

Area 1: Except Eastern part

Area 2: Eastern part

MARIPOSA COUNTY

Area 1: Except Eastern part

Area 2: Eastern part

MONTERREY COUNTY

Area 1: Except Southwestern part

Area 2: Southwestern part

NEVADA COUNTY:

Area 1: All but the Northern portion along the border of  
Sierra County

Area 2: Remainder

PLACER COUNTY:

Area 1: All but the Central portion

Area 2: Remainder

PLUMAS COUNTY:

Area 1: Western portion

Area 2: Remainder

SHASTA COUNTY:

Area 1: All but the Northeastern corner

Area 2: Remainder

SIERRA COUNTY:  
Area 1: Western part  
Area 2: Remainder

SISKIYOU COUNTY:  
Area 1: Central part  
Area 2: Remainder

SONOMA COUNTY:  
Area 1: All but the Northwestern corner  
Area 2: Remainder

TEHAMA COUNTY:  
Area 1: All but the Western border with Mendocino & Trinity  
Counties  
Area 2: Remainder

TRINITY COUNTY:  
Area 1: East Central part and the Northeastern border with  
Shasta County  
Area 2: Remainder

TUOLUMNE COUNTY:  
Area 1: Except Eastern part  
Area 2: Eastern part

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ENGI0003-018 06/25/2012

"AREA 1" WAGE RATES ARE LISTED BELOW

"AREA 2" RECEIVES AN ADDITIONAL \$2.00 PER HOUR ABOVE AREA 1  
RATES.

SEE AREA DEFINITIONS BELOW

	Rates	Fringes
OPERATOR: Power Equipment (AREA 1:)		
GROUP 1.....	\$ 37.77	25.16
GROUP 2.....	\$ 36.24	25.16
GROUP 3.....	\$ 34.76	25.16
GROUP 4.....	\$ 33.38	25.16
GROUP 5.....	\$ 32.11	25.16
GROUP 6.....	\$ 30.79	25.16
GROUP 7.....	\$ 29.65	25.16
GROUP 8.....	\$ 28.51	25.16
GROUP 8-A.....	\$ 26.30	25.16
OPERATOR: Power Equipment (Cranes and Attachments - AREA 1:)		
GROUP 1		
Cranes.....	\$ 38.65	25.16
Oiler.....	\$ 29.39	25.16

Truck crane oiler.....\$ 31.68	25.16
GROUP 2	
Cranes.....\$ 36.89	25.16
Oiler.....\$ 29.18	25.16
Truck crane oiler.....\$ 31.42	25.16
GROUP 3	
Cranes.....\$ 35.14	25.16
Hydraulic.....\$ 30.79	25.16
Oiler.....\$ 28.90	25.16
Truck Crane Oiler.....\$ 31.18	25.16
OPERATOR: Power Equipment (Piledriving - AREA 1:)	
GROUP 1	
Lifting devices.....\$ 38.99	25.16
Oiler.....\$ 29.73	25.16
Truck crane oiler.....\$ 32.01	25.16
GROUP 2	
Lifting devices.....\$ 37.17	25.16
Oiler.....\$ 29.46	25.16
Truck Crane Oiler.....\$ 31.76	25.16
GROUP 3	
Lifting devices.....\$ 35.49	25.16
Oiler.....\$ 29.24	25.16
Truck Crane Oiler.....\$ 31.47	25.16
GROUP 4	
Lifting devices.....\$ 33.72	25.16
GROUP 5	
Lifting devices.....\$ 32.42	25.16
GROUP 6	
Lifting devices.....\$ 31.08	25.16
OPERATOR: Power Equipment (Steel Erection - AREA 1:)	
GROUP 1	
Cranes.....\$ 39.62	25.16
Oiler.....\$ 30.07	25.16
Truck Crane Oiler.....\$ 32.30	25.16
GROUP 2	
Cranes.....\$ 37.85	25.16
Oiler.....\$ 29.80	25.16
Truck Crane Oiler.....\$ 32.08	25.16
GROUP 3	
Cranes.....\$ 36.37	25.16
Hydraulic.....\$ 31.42	25.16
Oiler.....\$ 29.58	25.16
Truck Crane Oiler.....\$ 31.81	25.16
GROUP 4	
Cranes.....\$ 34.35	25.16
GROUP 5	
Cranes.....\$ 33.05	25.16
OPERATOR: Power Equipment (Tunnel and Underground Work - AREA 1:)	
SHAFTS, STOPES, RAISES:	
GROUP 1.....\$ 33.87	25.16
GROUP 1-A.....\$ 36.34	25.16
GROUP 2.....\$ 32.61	25.16
GROUP 3.....\$ 31.28	25.16

GROUP 4.....	\$ 30.14	25.16
GROUP 5.....	\$ 29.00	25.16
UNDERGROUND:		
GROUP 1.....	\$ 33.77	25.16
GROUP 1-A.....	\$ 36.24	25.16
GROUP 2.....	\$ 32.51	25.16
GROUP 3.....	\$ 31.18	25.16
GROUP 4.....	\$ 30.04	25.16
GROUP 5.....	\$ 28.90	25.16

FOOTNOTE: Work suspended by ropes or cables, or work on a Yo-Yo Cat: \$.60 per hour additional.

**POWER EQUIPMENT OPERATOR CLASSIFICATIONS**

GROUP 1: Operator of helicopter (when used in erection work); Hydraulic excavator, 7 cu. yds. and over; Power shovels, over 7 cu. yds.

GROUP 2: Highline cableway; Hydraulic excavator, 3-1/2 cu. yds. up to 7 cu. yds.; Licensed construction work boat operator, on site; Power blade operator (finish); Power shovels, over 1 cu. yd. up to and including 7 cu. yds. m.r.c.

GROUP 3: Asphalt milling machine; Cable backhoe; Combination backhoe and loader over 3/4 cu. yds.; Continuous flight tie back machine assistant to engineer or mechanic; Crane mounted continuous flight tie back machine, tonnage to apply; Crane mounted drill attachment, tonnage to apply; Dozer, slope brd; Gradall; Hydraulic excavator, up to 3 1/2 cu. yds.; Loader 4 cu. yds. and over; Long reach excavator; Multiple engine scraper (when used as push pull); Power shovels, up to and including 1 cu. yd.; Pre-stress wire wrapping machine; Side boom cat, 572 or larger; Track loader 4 cu. yds. and over; Wheel excavator (up to and including 750 cu. yds. per hour)

GROUP 4: Asphalt plant engineer/box person; Chicago boom; Combination backhoe and loader up to and including 3/4 cu. yd.; Concrete batch plant (wet or dry); Dozer and/or push cat; Pull- type elevating loader; Gradesetter, grade checker (GPS, mechanical or otherwise); Grooving and grinding machine; Heading shield operator; Heavy-duty drilling equipment, Hughes, LDH, Watson 3000 or similar; Heavy-duty repairperson and/or welder; Lime spreader; Loader under 4 cu. yds.; Lubrication and service engineer (mobile and grease rack); Mechanical finishers or spreader machine (asphalt, Barber-Greene and similar); Miller Formless M-9000 slope paver or similar; Portable crushing and screening plants; Power blade support; Roller operator, asphalt; Rubber-tired scraper, self-loading (paddle-wheels, etc.); Rubber- tired earthmoving equipment (scrapers); Slip form paver (concrete); Small tractor with drag; Soil stabilizer (P & H or equal); Spider plow and spider puller; Tubex pile rig; Unlicensed constuction work boat operator,



on site; Timber skidder; Track loader up to 4 yds.; Tractor-drawn scraper; Tractor, compressor drill combination; Welder; Woods-Mixer (and other similar Pugmill equipment)

GROUP 5: Cast-in-place pipe laying machine; Combination slusher and motor operator; Concrete conveyor or concrete pump, truck or equipment mounted; Concrete conveyor, building site; Concrete pump or pumpcrete gun; Drilling equipment, Watson 2000, Texoma 700 or similar; Drilling and boring machinery, horizontal (not to apply to waterliners, wagon drills or jackhammers); Concrete mixer/all; Person and/or material hoist; Mechanical finishers (concrete) (Clary, Johnson, Bidwell Bridge Deck or similar types); Mechanical burm, curb and/or curb and gutter machine, concrete or asphalt; Mine or shaft hoist; Portable crusher; Power jumbo operator (setting slip-forms, etc., in tunnels); Screed (automatic or manual); Self-propelled compactor with dozer; Tractor with boom D6 or smaller; Trenching machine, maximum digging capacity over 5 ft. depth; Vermeer T-600B rock cutter or similar

GROUP 6: Armor-Coater (or similar); Ballast jack tamper; Boom- type backfilling machine; Assistant plant engineer; Bridge and/or gantry crane; Chemical grouting machine, truck-mounted; Chip spreading machine operator; Concrete saw (self-propelled unit on streets, highways, airports and canals); Deck engineer; Drilling equipment Texoma 600, Hughes 200 Series or similar up to and including 30 ft. m.r.c.; Drill doctor; Helicopter radio operator; Hydro-hammer or similar; Line master; Skidsteer loader, Bobcat larger than 743 series or similar (with attachments); Locomotive; Lull hi-lift or similar; Oiler, truck mounted equipment; Pavement breaker, truck-mounted, with compressor combination; Paving fabric installation and/or laying machine; Pipe bending machine (pipelines only); Pipe wrapping machine (tractor propelled and supported); Screed (except asphaltic concrete paving); Self-propelled pipeline wrapping machine; Tractor; Self-loading chipper; Concrete barrier moving machine

GROUP 7: Ballast regulator; Boom truck or dual-purpose A-frame truck, non-rotating - under 15 tons; Truck-mounted rotating telescopic boom type lifting device, Manitex or similar (boom truck) - under 15 tons; Cary lift or similar; Combination slurry mixer and/or cleaner; Drilling equipment, 20 ft. and under m.r.c.; Firetender (hot plant); Grouting machine operator; Highline cableway signalperson; Stationary belt loader (Kolman or similar); Lift slab machine (Vagtborg and similar types); Maginnes internal full slab vibrator; Material hoist (1 drum); Mechanical trench shield; Pavement breaker with or without compressor combination); Pipe cleaning machine (tractor propelled and supported); Post driver; Roller (except asphalt); Chip Seal; Self-propelled automatically applied concrete curing machine (on streets, highways, airports and canals); Self-propelled compactor (without dozer); Signalperson;

Slip-form pumps (lifting device for concrete forms); Tie spacer; Tower mobile; Trenching machine, maximum digging capacity up to and including 5 ft. depth; Truck- type loader

GROUP 8: Bit sharpener; Boiler tender; Box operator; Brakeperson; Combination mixer and compressor (shotcrete/gunite); Compressor operator; Deckhand; Fire tender; Forklift (under 20 ft.); Generator; Gunite/shotcrete equipment operator; Hydraulic monitor; Ken seal machine (or similar); Mixermobile; Oiler; Pump operator; Refrigeration plant; Reservoir-debris tug (self-propelled floating); Ross Carrier (construction site); Rotomist operator; Self-propelled tape machine; Shuttlecar; Self-propelled power sweeper operator (includes vacuum sweeper); Slusher operator; Surface heater; Switchperson; Tar pot firetender; Tugger hoist, single drum; Vacuum cooling plant; Welding machine (powered other than by electricity)

GROUP 8-A: Elevator operator; Skidsteer loader-Bobcat 743 series or smaller, and similar (without attachments); Mini excavator under 25 H.P. (backhoe-trencher); Tub grinder wood chipper

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#### ALL CRANES AND ATTACHMENTS

GROUP 1: Clamshell and dragline over 7 cu. yds.; Crane, over 100 tons; Derrick, over 100 tons; Derrick barge pedestal-mounted, over 100 tons; Self-propelled boom-type lifting device, over 100 tons

GROUP 2: Clamshell and dragline over 1 cu. yd. up to and including 7 cu. yds.; Crane, over 45 tons up to and including 100 tons; Derrick barge, 100 tons and under; Self-propelled boom-type lifting device, over 45 tons; Tower crane

GROUP 3: Clamshell and dragline up to and including 1 cu. yd.; Cranes 45 tons and under; Self-propelled boom-type lifting device 45 tons and under; Boom Truck or dual purpose A-frame truck, non-rotating over 15 tons; Truck-mounted rotating telescopic boom type lifting device, Manitex or similar (boom truck) over 15 tons;

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#### PILEDRIVERS

GROUP 1: Derrick barge pedestal mounted over 100 tons; Clamshell over 7 cu. yds.; Self-propelled boom-type lifting device over 100 tons; Truck crane or crawler, land or barge mounted over 100 tons

GROUP 2: Derrick barge pedestal mounted 45 tons to and including 100 tons; Clamshell up to and including 7 cu.

yds.; Self-propelled boom-type lifting device over 45 tons;  
Truck crane or crawler, land or barge mounted, over 45 tons  
up to and including 100 tons; Fundex F-12 hydraulic pile rig

GROUP 3: Derrick barge pedestal mounted under 45 tons; Self-propelled boom-type lifting device 45 tons and under;  
Skid/scow piledriver, any tonnage; Truck crane or crawler, land or barge mounted 45 tons and under

GROUP 4: Assistant operator in lieu of assistant to engineer;  
Forklift, 10 tons and over; Heavy-duty repairperson/welder

GROUP 5: Deck engineer

GROUP 6: Deckhand; Fire tender

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### STEEL ERECTORS

GROUP 1: Crane over 100 tons; Derrick over 100 tons; Self-propelled boom-type lifting device over 100 tons

GROUP 2: Crane over 45 tons to 100 tons; Derrick under 100 tons; Self-propelled boom-type lifting device over 45 tons to 100 tons; Tower crane

GROUP 3: Crane, 45 tons and under; Self-propelled boom-type lifting device, 45 tons and under

GROUP 4: Chicago boom; Forklift, 10 tons and over; Heavy-duty repair person/welder

GROUP 5: Boom cat

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### TUNNEL AND UNDERGROUND WORK

GROUP 1-A: Tunnel bore machine operator, 20' diameter or more

GROUP 1: Heading shield operator; Heavy-duty repairperson; Mucking machine (rubber tired, rail or track type); Raised bore operator (tunnels); Tunnel mole bore operator

GROUP 2: Combination slusher and motor operator; Concrete pump or pumpcrete gun; Power jumbo operator

GROUP 3: Drill doctor; Mine or shaft hoist

GROUP 4: Combination slurry mixer cleaner; Grouting Machine operator; Motorman

GROUP 5: Bit Sharpener; Brakeman; Combination mixer and compressor (gunite); Compressor operator; Oiler; Pump

operator; Slusher operator

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AREA DESCRIPTIONS:

POWER EQUIPMENT OPERATORS, CRANES AND ATTACHMENTS, TUNNEL AND UNDERGROUND [These areas do not apply to Piledrivers and Steel Erectors]

AREA 1: ALAMEDA, BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED, NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS, SUTTER, YOLO, AND YUBA COUNTIES

AREA 2 - MODOC COUNTY

THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS NOTED BELOW:

ALPINE COUNTY:

Area 1: Northernmost part

Area 2: Remainder

CALAVERAS COUNTY:

Area 1: Except Eastern part

Area 2: Eastern part

COLUSA COUNTY:

Area 1: Eastern part

Area 2: Remainder

DEL NORTE COUNTY:

Area 1: Extreme Southwestern corner

Area 2: Remainder

ELDORADO COUNTY:

Area 1: North Central part

Area 2: Remainder

FRESNO COUNTY

Area 1: Except Eastern part

Area 2: Eastern part

GLENN COUNTY:

Area 1: Eastern part

Area 2: Remainder

HUMBOLDT COUNTY:

Area 1: Except Eastern and Southwestern parts

Area 2: Remainder

LAKE COUNTY:

Area 1: Southern part

Area 2: Remainder

LASSEN COUNTY:

Area 1: Western part along the Southern portion of border

with Shasta County  
Area 2: Remainder

MADERA COUNTY  
Area 1: Remainder  
Area 2: Eastern part

MARIPOSA COUNTY  
Area 1: Remainder  
Area 2: Eastern part

MENDOCINO COUNTY:  
Area 1: Central and Southeastern parts  
Area 2: Remainder

MONTEREY COUNTY  
Area 1: Remainder  
Area 2: Southwestern part

NEVADA COUNTY:  
Area 1: All but the Northern portion along the border of  
Sierra County  
Area 2: Remainder

PLACER COUNTY:  
Area 1: All but the Central portion  
Area 2: Remainder

PLUMAS COUNTY:  
Area 1: Western portion  
Area 2: Remainder

SHASTA COUNTY:  
Area 1: All but the Northeastern corner  
Area 2: Remainder

SIERRA COUNTY:  
Area 1: Western part  
Area 2: Remainder

SISKIYOU COUNTY:  
Area 1: Central part  
Area 2: Remainder

SONOMA COUNTY:  
Area 1: All but the Northwestern corner  
Area 2: Remainder

TEHAMA COUNTY:  
Area 1: All but the Western border with Mendocino & Trinity  
Counties  
Area 2: Remainder

TRINITY COUNTY:  
Area 1: East Central part and the Northeast border with  
Shasta County  
Area 2: Remainder

TULARE COUNTY;  
Area 1: Remainder  
Area 2: Eastern part

TUOLUMNE COUNTY:  
Area 1: Remainder  
Area 2: Eastern Part

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ENGI0003-019 06/25/2012

SEE AREA DESCRIPTIONS BELOW

	Rates	Fringes
OPERATOR: Power Equipment (LANDSCAPE WORK ONLY)		
GROUP 1		
AREA 1.....	\$ 28.64	23.75
AREA 2.....	\$ 30.64	23.75
GROUP 2		
AREA 1.....	\$ 25.04	23.75
AREA 2.....	\$ 27.04	23.75
GROUP 3		
AREA 1.....	\$ 20.43	23.75
AREA 2.....	\$ 22.43	23.75

GROUP DESCRIPTIONS:

GROUP 1: Landscape Finish Grade Operator: All finish grade work regardless of equipment used, and all equipment with a rating more than 65 HP.

GROUP 2: Landscape Operator up to 65 HP: All equipment with a manufacturer's rating of 65 HP or less except equipment covered by Group 1 or Group 3. The following equipment shall be included except when used for finish work as long as manufacturer's rating is 65 HP or less: A-Frame and Winch Truck, Backhoe, Forklift, Hydragraphic Seeder Machine, Roller, Rubber-Tired and Track Earthmoving Equipment, Skiploader, Straw Blowers, and Trencher 31 HP up to 65 HP.

GROUP 3: Landscae Utility Operator: Small Rubber-Tired Tractor, Trencher Under 31 HP.

AREA DESCRIPTIONS:

AREA 1: ALAMEDA, BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED, NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS, SUTTER, YOLO, AND YUBA COUNTIES

AREA 2 - MODOC COUNTY

THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS NOTED BELOW:

ALPINE COUNTY:

Area 1: Northernmost part

Area 2: Remainder

CALAVERAS COUNTY:

Area 1: Except Eastern part

Area 2: Eastern part

COLUSA COUNTY:

Area 1: Eastern part

Area 2: Remainder

DEL NORTE COUNTY:

Area 1: Extreme Southwestern corner

Area 2: Remainder

ELDORADO COUNTY:

Area 1: North Central part

Area 2: Remainder

FRESNO COUNTY

Area 1: Except Eastern part

Area 2: Eastern part

GLENN COUNTY:

Area 1: Eastern part

Area 2: Remainder

HUMBOLDT COUNTY:

Area 1: Except Eastern and Southwestern parts

Area 2: Remainder

LAKE COUNTY:

Area 1: Southern part

Area 2: Remainder

LASSEN COUNTY:

Area 1: Western part along the Southern portion of border  
with Shasta County

Area 2: Remainder

MADERA COUNTY

Area 1: Remainder

Area 2: Eastern part

MARIPOSA COUNTY

Area 1: Remainder

Area 2: Eastern part

MENDOCINO COUNTY:

Area 1: Central and Southeastern parts

Area 2: Remainder

MONTEREY COUNTY

Area 1: Remainder

Area 2: Southwestern part

NEVADA COUNTY:

Area 1: All but the Northern portion along the border of  
Sierra County  
Area 2: Remainder

PLACER COUNTY:

Area 1: All but the Central portion  
Area 2: Remainder

PLUMAS COUNTY:

Area 1: Western portion  
Area 2: Remainder

SHASTA COUNTY:

Area 1: All but the Northeastern corner  
Area 2: Remainder

SIERRA COUNTY:

Area 1: Western part  
Area 2: Remainder

SISKIYOU COUNTY:

Area 1: Central part  
Area 2: Remainder

SONOMA COUNTY:

Area 1: All but the Northwestern corner  
Area 2: Reaminder

TEHAMA COUNTY:

Area 1: All but the Western border with mendocino & Trinity  
Counties  
Area 2: Remainder

TRINITY COUNTY:

Area 1: East Central part and the Northeaster border with  
Shasta County  
Area 2: Remainder

TULARE COUNTY;

Area 1: Remainder  
Area 2: Eastern part

TUOLUMNE COUNTY:

Area 1: Remainder  
Area 2: Eastern Part

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IRON0002-004 01/01/2013

Rates Fringes

Ironworkers:

Fence Erector.....	\$ 26.58	16.74
Ornamental, Reinforcing and Structural.....	\$ 33.00	25.30



PREMIUM PAY:

\$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland, Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB

\$4.00 additional per hour at the following locations:

Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center

\$2.00 additional per hour at the following locations:

Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

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LABO0067-002 12/01/2012

AREA "A" - ALAMEDA, CONTRA COSTA, MARIN, SAN FRANCISCO, SAN MATEO AND SANTA CLARA COUNTIES

AREA "B" - ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA, DEL NORTE, EL DORADO, FRESNO, GLENN, HUMBOLDT, KINGS, LAKE, LASSEN, MADERA, MARIPOSA, MENDOCINO, MERCED, MODOC, MONTEREY, NAPA, NEVADA, PLACER, PLUMAS, SACRAMENTO, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, SHASTA, SIERRA, SISKIYOU, SOLANO, SONOMA, STANISLAUS, SUTTER, TEHAMA, TRINITY, TULARE, TUOLUMNE, YOLO AND YUBA COUNTIES

	Rates	Fringes
Asbestos Removal Laborer		
Areas A & B.....	\$ 19.06	8.62
LABORER (Lead Removal)		
Area A.....	\$ 36.25	9.19
Area B.....	\$ 35.25	9.19

ASBESTOS REMOVAL-SCOPE OF WORK: Site mobilization; initial site clean-up; site preparation; removal of asbestos-containing materials from walls and ceilings; or from pipes, boilers and mechanical systems only if they are being scrapped; encapsulation, enclosure and disposal of asbestos-containing materials by hand or with equipment or machinery; scaffolding; fabrication of temporary wooden barriers; and assembly of decontamination stations.

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LABO0067-003 07/01/2009

AREA A: ALAMEDA, CONTRA COSTA, MARIN, SAN FRANCISCO, SAN MATEO & SANTA CLARA

AREA B: ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA, DEL NORTE, EL DORADO, FRESNO, GLENN, HUMBOLDT, KINGS, LAKE, LASSEN, MADERA, MARIPOSA, MENOCINO, MERCED, MODOC, MONTEREY, NAPA, NEVADA, PLACER, PLUMAS, SANCRMENTO, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, SIERRA, SHASTA, SISKIYOU, SOLANO, SONOMA, STANISLAUS,TEHAMA,TRINITY, TULARE, TUOLUMNE, YOLO & YUBA COUNTIES

Rates Fringes

LABORER (TRAFFIC CONTROL/LANE CLOSURE)

Escort Driver, Flag Person		
Area A.....	\$ 26.89	14.93
Area B.....	\$ 25.89	14.93
Traffic Control Person I		
Area A.....	\$ 27.19	14.93
Area B.....	\$ 26.19	14.93
Traffic Control Person II		
Area A.....	\$ 24.69	14.93
Area B.....	\$ 23.69	14.93

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

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LABO0067-006 06/28/2010

AREA "A" - ALAMEDA, CONTRA COSTA, MARIN, SAN FRANCISCO, SAN MATEO AND SANTA CLARA COUNTIES

AREA "B" - ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA, EL DORADO, FRESNO, GLENN, KINGS, LASSEN, MADERA, MARIPOSA, MERCED, MODOC, MONTEREY, NAPA, NEVADA, PLACER, PLUMAS, SACRAMENTO, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, SHASTA, SIERRA, SISKIYOU, SOLANO, SONOMA, STANISLAUS, SUTTER, TEHAMA, TRINITY, TULARE, TUOLUMNE, YOLO AND YUBA COUNTIES

Rates Fringes

Laborers: (CONSTRUCTION CRAFT LABORERS - AREA A:)

Construction Specialist		
Group.....	\$ 27.84	15.82
GROUP 1.....	\$ 27.14	15.82
GROUP 1-a.....	\$ 27.36	15.82
GROUP 1-c.....	\$ 27.19	15.82
GROUP 1-e.....	\$ 27.69	15.82
GROUP 1-f.....	\$ 27.72	15.82
GROUP 1-g (Contra Costa County).....	\$ 27.34	15.82

GROUP 2.....	\$ 26.99	15.82
GROUP 3.....	\$ 26.89	15.82
GROUP 4.....	\$ 20.58	15.82

See groups 1-b and 1-d under laborer classifications.

Laborers: (CONSTRUCTION CRAFT  
LABORERS - AREA B:)

Construction Specialist		
Group.....	\$ 26.84	15.82
GROUP 1.....	\$ 26.14	15.82
GROUP 1-a.....	\$ 26.36	15.82
GROUP 1-c.....	\$ 26.19	15.82
GROUP 1-e.....	\$ 26.69	15.82
GROUP 1-f.....	\$ 26.72	15.82
GROUP 2.....	\$ 25.99	15.82
GROUP 3.....	\$ 25.89	15.82
GROUP 4.....	\$ 19.58	15.82

See groups 1-b and 1-d under laborer classifications.

Laborers: (GUNITE - AREA A:)

GROUP 1.....	\$ 28.10	15.82
GROUP 2.....	\$ 27.60	15.82
GROUP 3.....	\$ 27.60	15.82
GROUP 4.....	\$ 27.60	15.82

Laborers: (GUNITE - AREA B:)

GROUP 1.....	\$ 27.10	15.82
GROUP 2.....	\$ 26.60	15.82
GROUP 3.....	\$ 26.01	15.82
GROUP 4.....	\$ 25.89	15.82

Laborers: (WRECKING - AREA A:)

GROUP 1.....	\$ 27.14	15.82
GROUP 2.....	\$ 26.99	15.82

Laborers: (WRECKING - AREA B:)

GROUP 1.....	\$ 26.14	15.82
GROUP 2.....	\$ 25.99	15.82

Landscape Laborer (GARDENERS,  
HORTICULTURAL & LANDSCAPE  
LABORERS - AREA A:)

(1) New Construction.....	\$ 26.89	15.82
(2) Establishment Warranty Period.....	\$ 20.58	15.82

Landscape Laborer (GARDENERS,  
HORTICULTURAL & LANDSCAPE  
LABORERS - AREA B:)

(1) New Construction.....	\$ 25.89	15.82
(2) Establishment Warranty Period.....	\$ 19.58	15.82

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive \$0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

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LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and buckler; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active,

large diameter sewers, and all recently active sewer manholes shall receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shotcrete

GROUP 1-g, CONTRA COSTA COUNTY: Pipelayer (including grade checking in connection with pipelaying); Caulker; Bander; Pipewrapper; Conduit layer; Plastic pipe layer; Pressure pipe tester; No joint pipe and stripping of same, including repair of voids; Precast manhole setters, cast in place manhole form setters

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:

- A: at demolition site for the salvage of the material.
- B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
- C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

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GUNITE LABORER CLASSIFICATIONS

- GROUP 1: Structural Nozzleman
- GROUP 2: Nozzleman, Gunman, Potman, Groundman
- GROUP 3: Reboundman
- GROUP 4: Guniting laborer

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WRECKING WORK LABORER CLASSIFICATIONS

- GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)
- GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

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LABO0067-010 07/01/2010

	Rates	Fringes
Tunnel and Shaft Laborers:		
GROUP 1.....	\$ 33.35	16.08
GROUP 2.....	\$ 33.12	16.08
GROUP 3.....	\$ 32.87	16.08
GROUP 4.....	\$ 32.42	16.08
GROUP 5.....	\$ 31.88	16.08
Shotcrete Specialist.....	\$ 33.87	16.08

TUNNEL AND SHAFT CLASSIFICATIONS

- GROUP 1: Diamond driller; Groundmen; Guniting and shotcrete nozzlemen
- GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

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LABO0073-001 07/01/2009

	Rates	Fringes
Plasterer tender.....	\$ 28.37	14.14

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LABO0139-002 07/01/2011

NAPA, SOLANO AND SONOMA COUNTIES

	Rates	Fringes
LABORER (Brick)		
Mason Tender-Brick.....	\$ 30.87	14.52

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LABO0185-002 07/01/2011

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO AND YUBA COUNTIES

	Rates	Fringes
LABORER		
Mason Tender-Brick.....	\$ 30.62	14.43

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LABO0291-001 07/01/2011

MARIN COUNTY

	Rates	Fringes
LABORER		
Mason Tender-Brick.....	\$ 31.87	14.43

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PAIN0016-004 01/01/2013

MARIN, NAPA, SOLANO & SONOMA COUNTIES

	Rates	Fringes
Painters:.....	\$ 33.86	20.26

PREMIUMS:  
 EXOTIC MATERIALS - \$0.75 additional per hour.  
 SPRAY WORK: - \$0.50 additional per hour.  
 INDUSTRIAL PAINTING - \$0.25 additional per hour  
 [Work on industrial buildings used for the manufacture and processing of goods for sale or service; steel construction (bridges), stacks, towers, tanks, and similar structures]

HIGH WORK:  
 over 50 feet - \$2.00 per hour additional  
 100 to 180 feet - \$4.00 per hour additional  
 Over 180 feet - \$6.00 per hour additional

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 PAIN0016-005 01/01/2013

ALPINE, BUTTE, COLUSA, EL DORADO (west of the Sierra Nevada Mountains), GLENN, LASSEN (west of Hwy. 395, excluding Honey Lake); MARIN, MODOC, NAPA, NEVADA (west of the Sierra Nevada Mountains), PLACER (west of the Sierra Nevada Mountains), PLUMAS, SACRAMENTO, SHASTA, SIERRA (west of the Sierra Nevada Mountains), SISKIYOU, SOLANO, SONOMA, SUTTER, TEHAMA, TRINITY, YOLO AND YUBA COUNTIES

	Rates	Fringes
DRYWALL FINISHER/TAPER.....	\$ 36.24	18.67

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 PAIN0016-007 01/01/2013

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO (west of the Sierra Nevada Mountains), GLENN, LASSEN (west of Highway 395, excluding Honey Lake), MODOC, NEVADA (west of the Sierra Nevada Mountains), PLACER (west of the Sierra Nevada Mountains), PLUMAS, SACRAMENTO, SHASTA, SIERRA (west of the Sierra Nevada Mountains), SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO & YUBA COUNTIES

	Rates	Fringes
Painters:.....	\$ 29.06	15.98

SPRAY/SANDBLAST: \$0.50 additional per hour.  
 EXOTIC MATERIALS: \$1.00 additional per hour.  
 HIGH TIME: Over 50 ft above ground or water level \$2.00 additional per hour. 100 to 180 ft above ground or water level \$4.00 additional per hour. Over 180 ft above ground or water level \$6.00 additional per hour.

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 PAIN0016-008 01/01/2013



MARIN, NAPA, SOLANO AND SONOMA COUNTIES

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 44.87	17.98

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 PAIN0169-004 01/01/2012

MARIN , NAPA & SONOMA COUNTIES; SOLANO COUNTY (west of a line defined as follows: Hwy. 80 corridor beginning at the City of Fairfield, including Travis Air Force Base and Suisun City; going north of Manakas Corner Rd., continue north on Suisun Valley Rd. to the Napa County line; Hwy. 80 corridor south on Grizzly Island Rd. to the Grizzly Island Management area)

	Rates	Fringes
GLAZIER.....	\$ 41.88	20.39

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 \* PAIN0567-001 01/01/2013

EL DORADO COUNTY (east of the Sierra Nevada Mountains); LASSEN COUNTY (east of Highway 395, beginning at Stacey and including Honey Lake); NEVADA COUNTY (east of the Sierra Nevada Mountains); PLACER COUNTY (east of the Sierra Nevada Mountains); AND SIERRA COUNTY (east of the Sierra Nevada Mountains)

	Rates	Fringes
Painters:		
Brush and Roller.....	\$ 23.60	9.89
Spray Painter & Paperhanger.	\$ 24.45	9.89

PREMIUMS:  
 Special Coatings (Brush), and Sandblasting = \$0.50/hr  
 Special Coatings (Spray), and Steeplejack = \$1.00/hr  
 Special Coating Spray Steel = \$1.25/hr  
 Swing Stage = \$2.00/hr

\*A special coating is a coating that requires the mixing of 2 or more products.

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 PAIN0567-007 07/01/2012

EL DORADO COUNTY (east of the Sierra Nevada Mountains); LASSEN COUNTY (east of Highway 395, beginning at Stacey and including Honey Lake); NEVADA COUNTY (east of the Sierra Nevada Mountains); PLACER COUNTY (east of the Sierra Nevada Mountains) AND SIERRA COUNTY (east of the Sierra Nevada Mountains)

Rates	Fringes
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SOFT FLOOR LAYER.....\$ 25.15      11.24

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PAIN0567-010 07/01/2012

EL DORADO COUNTY (east of the Sierra Nevada Mountains); LASSEN COUNTY (east of Highway 395, beginning at Stacey and including Honey Lake); NEVADA COUNTY (east of the Sierra Nevada Mountains); PLACER COUNTY (east of the Sierra Nevada Mountains); AND SIERRA COUNTY (east of the Sierra Nevada Mountains)

Rates      Fringes

Drywall

(1) Taper.....\$ 27.07      10.57  
(2) Steeplejack - Taper,  
over 40 ft with open space  
below.....\$ 28.57      10.57

-----  
PAIN0767-004 01/01/2012

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SOLANO (Remainder), SUTTER, TEHAMA, TRINITY, YOLO, YUBA

Rates      Fringes

GLAZIER.....\$ 32.24      18.59

PAID HOLIDAYS: New Year's Day, Martin Luther King, Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

Employee required to wear a body harness shall receive \$1.50 per hour above the basic hourly rate at any elevation.

-----  
PAIN1176-001 07/01/2011

HIGHWAY IMPROVEMENT

Rates      Fringes

Parking Lot Striping/Highway Marking:

GROUP 1.....\$ 31.35      11.65  
GROUP 2.....\$ 26.65      11.65  
GROUP 3.....\$ 26.96      11.65

CLASSIFICATIONS

GROUP 1: Striper: Layout and application of painted traffic stripes and marking; hot thermo plastic; tape, traffic stripes and markings

GROUP 2: Gamecourt & Playground Installer

GROUP 3: Protective Coating, Pavement Sealing

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 PAIN1237-001 01/01/2013

ALPINE; COLUSA; EL DORADO (west of the Sierra Nevada Mountains); GLENN; LASSEN (west of Highway 395, beginning at Stacey and including Honey Lake); MODOC; NEVADA (west of the Sierra Nevada Mountains); PLACER (west of the Sierra Nevada Mountains); PLUMAS; SACRAMENTO; SHASTA; SIERRA (west of the Sierra Nevada Mountains); SISKIYOU; SUTTER; TEHAMA; TRINITY; YOLO AND YUBA COUNTIES

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 28.25	16.73

-----  
 PLAS0300-003 07/01/2009

	Rates	Fringes
PLASTERER		
AREA 295: Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Solano, Sutter, Tehema, Trinity, Yolo & Yuba Counties.....	\$ 32.82	15.10
AREA 355: Marin, Napa & Sonoma Counties.....	\$ 32.82	15.30

-----  
 PLAS0300-005 06/28/2010

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 28.65	18.56

-----  
 PLUM0038-002 07/01/2012

MARIN AND SONOMA COUNTIES

	Rates	Fringes
PLUMBER (Plumber, Steamfitter, Refrigeration Fitter)		
(1) Work on wooden frame structures 5 stories or less excluding high-rise buildings and commercial work such as hospitals, prisons, hotels, schools, casinos, wastewater treatment plants, and		

research facilities as well  
 as refrigeration  
 pipefitting, service and  
 repair work - MARKET  
 RECOVERY RATE.....\$ 51.00      37.36  
 (2) All other work - NEW  
 CONSTRUCTION RATE.....\$ 60.00      39.94

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PLUM0038-006 07/01/2012

MARIN & SONOMA COUNTIES

	Rates	Fringes
Landscape/Irrigation Fitter (Underground/Utility Fitter).....	\$ 51.00	29.40

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PLUM0228-001 01/01/2013

BUTTE, COLUSA, GLENN, LASSEN, MODOC, PLUMAS, SHASTA, SIERRA,  
 SISKIYOU, SUTTER, TEHAMA, TRINITY & YUBA COUNTIES

	Rates	Fringes
PLUMBER.....	\$ 36.20	24.29

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PLUM0343-001 07/01/2012

NAPA AND SOLANO COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER		
Light Commercial.....	\$ 30.60	18.50
All Other Work.....	\$ 46.25	26.45

DEFINITION OF LIGHT COMMERCIAL:  
 Work shall include strip shopping centers, office buildings,  
 schools and other commercial structures which the total  
 plumbing bid does not exceed Two Hundred and Fifty Thousand  
 (\$250,000) and the total heating and cooling does not  
 exceed Two Hundred Fifty Thousand (\$250,000); or Any  
 projects bid in phases shall not qualify unless the total  
 project is less than Two Hundred Fifty Thousand (\$250,000)  
 for the plumbing bid; and Two Hundred Fifty Thousand  
 (\$250,000) for the heating and cooling bid. Excluded are  
 hospitals, jails, institutions and industrial projects,  
 regardless size of the project

FOOTNOTES: While fitting galvanized material: \$.75 per hour  
 additional. Work from trusses, temporary staging,  
 unguarded structures 35' from the ground or water: \$.75 per  
 hour additional. Work from swinging scaffolds, boatswains  
 chairs or similar devices: \$.75 per hour additional.

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PLUM0350-001 01/01/2011

EL DORADO COUNTY (Lake Tahoe area only); NEVADA COUNTY (Lake Tahoe area only); AND PLACER COUNTY (Lake Tahoe area only)

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 34.60	10.50

-----  
 PLUM0355-001 07/01/2012

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NAPA, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SOLANO, SUTTER, TEHAMA, TRINITY, YOLO, AND YUBA COUNTIES

	Rates	Fringes
Underground Utility Worker /Landscape Fitter.....	\$ 28.35	8

-----  
 PLUM0442-003 01/01/2013

AMADOR (South of San Joaquin River) and ALPINE COUNTIES

	Rates	Fringes
PLUMBER.....	\$ 36.45	24.29

-----  
 PLUM0447-001 07/01/2012

AMADOR (north of San Joaquin River), EL DORADO (excluding Lake Tahoe area), NEVADA (excluding Lake Tahoe area); PLACER (excluding Lake Tahoe area), SACRAMENTO AND YOLO COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER		
Journeyman.....	\$ 40.02	22.35
Light Commercial Work.....	\$ 30.48	17.22

-----  
 ROOF0081-006 08/01/2011

MARIN, NAPA, SOLANO AND SONOMA COUNTIES

	Rates	Fringes
Rofer.....	\$ 33.16	10.90

-----  
 ROOF0081-007 08/01/2012

ALPINE, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO, AND YUBA COUNTIES

	Rates	Fringes
Roofer.....	\$ 32.33	11.97
-----		
SFCA0483-003 01/01/2013		

MARIN, NAPA, SOLANO AND SONOMA COUNTIES

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 52.16	24.87
-----		
SFCA0669-003 01/01/2013		

ALPINE, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA,  
PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER,  
TEHAMA, TRINITY, YOLO AND YUBA COUNTIES

	Rates	Fringes
SPRINKLER FITTER.....	\$ 33.03	19.37
-----		
SHEE0104-006 07/01/2009		

MARIN, NAPA, SOLANO SONOMA & TRINITY COUNTIES

	Rates	Fringes
Sheet Metal Worker Mechanical Contracts \$200,000 or less.....	\$ 43.32	26.40
All other work.....	\$ 47.73	26.67
-----		
SHEE0104-009 07/01/2012		

AMADOR, COLUSA, EL DORADO, NEVADA, PLACER, SACRAMENTO, SUTTER,  
YOLO AND YUBA COUNTIES

	Rates	Fringes
SHEET METAL WORKER.....	\$ 37.81	27.95
-----		
SHEE0104-010 07/01/2012		

AIPINE COUNTY

	Rates	Fringes
SHEET METAL WORKER.....	\$ 34.75	25.35
-----		
SHEE0104-011 07/01/2012		

BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER,

PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA,  
YOLO AND YUBA COUNTIES

	Rates	Fringes
Sheet Metal Worker (Metal decking and siding only).....	\$ 37.81	27.95
-----		
SHEE0104-014 07/01/2012		

MARIN, NAPA, SOLANO, SONOMA AND TRINITY COUNTIES

	Rates	Fringes
SHEET METAL WORKER (Metal Decking and Siding only).....	\$ 33.11	29.98
-----		
SHEE0104-019 07/01/2012		

BUTTE, GLENN, LASSEN, MODOC, PLUMAS, SHASTA, SIERRA, SISKIYOU  
AND TEHAMA COUNTIES

	Rates	Fringes
SHEET METAL WORKER Mechanical Jobs \$200,000 & under.....	\$ 29.08	26.14
Mechanical Jobs over \$200,000.....	\$ 37.81	27.95
-----		
TEAM0094-001 07/01/2012		

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 27.13	22.49
GROUP 2.....	\$ 27.43	22.49
GROUP 3.....	\$ 27.73	22.49
GROUP 4.....	\$ 28.08	22.49
GROUP 5.....	\$ 28.43	22.49

FOOTNOTES:  
Articulated dump truck; Bulk cement spreader (with or without auger); Dumpcrete truck; Skid truck (debris box); Dry pre-batch concrete mix trucks; Dumpster or similar type; Slurry truck: Use dump truck yardage rate.  
Heater planer; Asphalt burner; Scarifier burner; Industrial lift truck (mechanical tailgate); Utility and clean-up truck: Use appropriate rate for the power unit or the equipment utilized.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Dump trucks, under 6 yds.; Single unit flat rack (2-

axle unit); Nipper truck (when flat rack truck is used appropriate flat rack shall apply); Concrete pump truck (when flat rack truck is used appropriate flat rack shall apply); Concrete pump machine; Fork lift and lift jitneys; Fuel and/or grease truck driver or fuel person; Snow buggy; Steam cleaning; Bus or personhaul driver; Escort or pilot car driver; Pickup truck; Teamster oiler/greaser and/or serviceperson; Hook tender (including loading and unloading); Team driver; Tool room attendant (refineries)

GROUP 2: Dump trucks, 6 yds. and under 8 yds.; Transit mixers, through 10 yds.; Water trucks, under 7,000 gals.; Jetting trucks, under 7,000 gals.; Single-unit flat rack (3-axle unit); Highbed heavy duty transport; Scissor truck; Rubber-tired muck car (not self-loaded); Rubber-tired truck jumbo; Winch truck and "A" frame drivers; Combination winch truck with hoist; Road oil truck or bootperson; Buggymobile; Ross, Hyster and similar straddle carriers; Small rubber-tired tractor

GROUP 3: Dump trucks, 8 yds. and including 24 yds.; Transit mixers, over 10 yds.; Water trucks, 7,000 gals. and over; Jetting trucks, 7,000 gals. and over; Vacuum trucks under 7500 gals. Trucks towing tilt bed or flat bed pull trailers; Lowbed heavy duty transport; Heavy duty transport tiller person; Self-propelled street sweeper with self-contained refuse bin; Boom truck - hydro-lift or Swedish type extension or retracting crane; P.B. or similar type self-loading truck; Tire repairperson; Combination bootperson and road oiler; Dry distribution truck (A bootperson when employed on such equipment, shall receive the rate specified for the classification of road oil trucks or bootperson); Ammonia nitrate distributor, driver and mixer; Snow Go and/or plow

GROUP 4: Dump trucks, over 25 yds. and under 65 yds.; Water pulls - DW 10's, 20's, 21's and other similar equipment when pulling Aqua/pak or water tank trailers; Helicopter pilots (when transporting men and materials); Lowbedk Heavy Duty Transport up to including 7 axles; DW10's, 20's, 21's and other similar Cat type, Terra Cobra, LeTourneau Pulls, Tournorocker, Euclid and similar type equipment when pulling fuel and/or grease tank trailers or other miscellaneous trailers; Vacuum Trucks 7500 gals and over and truck repairman

GROUP 5: Dump trucks, 65 yds. and over; Holland hauler; Low bed Heavy Duty Transport over 7 axles

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within



the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

#### Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

#### Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

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## WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION



## **APPENDIX A**

### **AMENDMENTS TO MAY 2006 STANDARD SPECIFICATIONS**

**AMENDMENTS TO MAY 2006 STANDARD SPECIFICATIONS  
UPDATED JUNE 6, 2008**

**SECTION 0: GLOBAL REVISIONS**

Issue Date: July 31, 2007

Global revisions are changes to contract documents not specific to a section of the Standard Specifications.

- In each contract document at each occurrence:
  1. Except where existing asphalt concrete is described, replace "asphalt concrete" with "hot mix asphalt"
  2. Except where existing AC is described, replace "AC" with "HMA" where AC means asphalt concrete

**SECTION 1: DEFINITIONS AND TERMS**

Issue Date: January 18, 2008

Section 1-1.01, "General," of the Standard Specifications is amended by adding the following:

- The Department is gradually changing the style and language of the specifications. The new style and language includes:
  1. Use of:
    - 1.1. Imperative mood
    - 1.2. Introductory modifiers
    - 1.3. Conditional clauses
  2. Elimination of:
    - 2.1. Language variations
    - 2.2. Definitions for industry-standard terms
    - 2.3. Redundant specifications
    - 2.4. Needless cross-references
- The use of this new style does not change the meaning of a specification not yet using this style.
- The specifications are written to the Bidder before award and the Contractor after. Before award, interpret sentences written in the imperative mood as starting with "The Bidder must" and interpret "you" as "the Bidder" and "your" as "the Bidder's." After award, interpret sentences written in the imperative mood as starting with "The Contractor must" and interpret "you" as "the Contractor" and "your" as "the Contractor's."

- Unless an object or activity is specified to be less than the total, the quantity or amount is all of the object or activity.
- All items in a list apply unless the items are specified as choices.
- Interpret terms as defined in the Contract documents. A term not defined in the Contract documents has the meaning defined in Means Illustrated Construction Dictionary, Condensed Version, Second Edition.

The 1st table in Section 1-1.02, "Abbreviations," of the Standard Specifications is amended by adding:

SSPC	The Society for Protective Coatings
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Section 1, "Definitions and Terms," of the Standard Specifications is amended by adding the following sections:

**1-1.082 BUSINESS DAY**

- Day on the calendar except Saturday or holiday.

**1-1.084 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES**

- The California Manual on Uniform Traffic Control Devices for Streets and Highways (California MUTCD) is issued by the Department of Transportation and is the Federal Highway Administration's MUTCD 2003 Edition, as amended for use in California.

**1-1.125 DEDUCTION**

- Amount of money permanently taken from progress payment and final payment. Deductions are cumulative and are not retentions under Pub Cont Code § 7107.

**1-1.205 FEDERAL-AID CONTRACT**

- Contract that has a Federal-aid project number on the cover of the Notice to Contractors and Special Provisions.

**1-1.245 HOLIDAY**

1. Every Sunday
2. January 1st, New Year's Day
3. 3rd Monday in January, Birthday of Martin Luther King, Jr.
4. February 12th, Lincoln's Birthday
5. 3rd Monday in February, Washington's Birthday
6. March 31st, Cesar Chavez Day
7. Last Monday in May, Memorial Day
8. July 4th, Independence Day
9. 1st Monday in September, Labor Day
10. 2nd Monday in October, Columbus Day
11. November 11th, Veterans Day
12. 4th Thursday in November, Thanksgiving Day
13. Day after Thanksgiving Day
14. December 25th, Christmas Day

- If January 1st, February 12th, March 31st, July 4th, November 11th, or December 25th falls on a Sunday, the Monday following is a holiday. If November 11th falls on a Saturday, the preceding Friday is a holiday. Interpret "legal holiday" as "holiday."

#### **1-1.475 WITHHOLD**

- Money temporarily or permanently taken from progress payment. Withholds are cumulative and are not retentions under Pub Cont Code § 7107.

Section 1-1.255, "Legal Holidays," of the Standard Specifications is deleted.

Section 1-1.265, "Manual on Uniform Traffic Control Devices," of the Standard Specifications is deleted.

Section 1-1.266, "Manual on Uniform Traffic Control Devices California Supplement," of the Standard Specifications is deleted.

Section 1-1.39 "State," of the Standard Specifications is amended to read:

#### **1-1.39 STATE**

- The State of California, including its agencies, departments, or divisions, whose conduct or action is related to the work.

### **SECTION 3: AWARD AND EXECUTION OF CONTRACT**

Issue Date: August 17, 2007

Section 3-1.025, "Insurance Policies," of the Standard Specifications is amended to read:

#### **3-1.025 INSURANCE POLICIES**

- The successful bidder shall submit:
  1. Copy of its commercial general liability policy and its excess policy or binder until such time as a policy is available, including the declarations page, applicable endorsements, riders, and other modifications in effect at the time of contract execution. Standard ISO form No. CG 0001 or similar exclusions are allowed if not inconsistent with Section 7-1.12, "Indemnification and Insurance." Allowance of additional exclusions is at the discretion of the Department.
  2. Certificate of insurance showing all other required coverages. Certificates of insurance, as evidence of required insurance for the auto liability and any other required policy, shall set forth deductible amounts applicable to each policy and all exclusions that are added by endorsement to each policy. The evidence of insurance shall provide that no cancellation, lapse, or reduction of coverage will occur without 10 days prior written notice to the Department.
  3. A declaration under the penalty of perjury by a certified public accountant certifying the accountant has applied Generally Accepted Accounting Principles (GAAP) guidelines confirming the successful bidder has sufficient funds and resources to cover any self-insured retentions if the self-insured retention is \$50,000 or higher.



- If the successful bidder uses any form of self-insurance for workers compensation in lieu of an insurance policy, it shall submit a certificate of consent to self-insure in accordance with the provisions of Section 3700 of the Labor Code.

Section 3-1.03, "Execution of Contract," of the Standard Specifications is amended to read:

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

- The contract shall be signed by the successful bidder and returned, together with the contract bonds and the documents identified in Section 3-1.025, "Insurance Policies," within 10 business days of receiving the contract for execution.

Section 3-1.04, "Failure to Execute Contract," of the Standard Specifications is amended to read:

### **3-1.04 FAILURE TO EXECUTE CONTRACT**

- Failure of the lowest responsible bidder, the second lowest responsible bidder, or the third lowest responsible bidder to execute the contract as required in Section 3-1.03, "Execution of Contract," within 10 business days of receiving the contract for execution shall be just cause for the forfeiture of the proposal guaranty. The successful bidder may file with the Department a written notice, signed by the bidder or the bidder's authorized representative, specifying that the bidder will refuse to execute the contract if it is presented. The filing of this notice shall have the same force and effect as the failure of the bidder to execute the contract and furnish acceptable bonds within the time specified.

Section 3-1.05, "Return of Proposal Guaranties," of the Standard Specifications is amended to read:

### **3-1.05 RETURN OF PROPOSAL GUARANTIES**

- The Department keeps the proposal guaranties of the 1st, 2nd and 3rd lowest responsible bidders until the contract has been executed. The other bidders' guaranties, other than bidders' bonds, are returned upon determination of the 1st, 2nd, and 3rd apparent lowest bidders, and their bidders' bonds are of no further effect.

## **SECTION 4: SCOPE OF WORK**

Issue Date: August 17, 2007

Section 4-1.01, "Intent of Plans and Specifications," of the Standard Specifications is amended by adding the following:

- Nothing in the specifications voids the Contractor's public safety responsibilities.

## **SECTION 5: CONTROL OF WORK**

Issue Date: February 1, 2008

Section 5, "Control of Work," of the Standard Specifications is amended by adding the following sections:

### **5-1.005 GENERAL**

- Failure to comply with any specification part is a breach of the contract and a waiver of your right to time or payment adjustment.
- After contract approval, submit documents and direct questions to the Engineer. Orders, approvals, and requests to the Contractor are by the Engineer.
- The Engineer furnishes the following in writing:
  1. Approvals
  2. Notifications
  3. Orders
- The Contractor must furnish the following in writing:
  1. Assignments
  2. Notifications
  3. Proposals
  4. Requests, sequentially numbered
  5. Subcontracts
  6. Test results
- The Department rejects a form if it has any error or any omission.
- Convert foreign language documents to English.
- Use contract administration forms available at the Department's Web site.
- If the last day for submitting a document falls on a Saturday or holiday, it may be submitted on the next business day with the same effect as if it had been submitted on the day specified.

### **5-1.015 RECORD RETENTION, INSPECTION, COPYING, AND AUDITING**

- Retain project records and make them available for inspection, copying, and auditing by State representatives from bid preparation through:
  1. Final payment
  2. Resolution of claims, if any
- For at least 3 years after the later of these, retain and make available for inspection, copying, and auditing cost records by State representatives including:
  1. Records pertaining to bid preparation
  2. Overhead
  3. Payroll records and certified payroll
  4. Payments to suppliers and subcontractors
  5. Cost accounting records
  6. Records of subcontractors and suppliers
- Maintain the records in an organized way in the original format, electronic and hard copy, conducive to professional review and audit.
- Before contract acceptance, the State representative notifies the Contractor, subcontractor, or supplier 5 days before inspection, copying, or auditing.

- If an audit is to start more than 30 days after contract acceptance, the State representative notifies the Contractor, subcontractor, or supplier when the audit is to start.

Section 5-1.01, "Authority of Engineer," of the Standard Specifications is amended by adding:

- Failure to enforce a contract provision does not waive enforcement of any contract provision.

Section 5-1.04, "Coordination and Interpretation of Plans, Standard Specifications, and Special Provisions," of the Standard Specifications is amended to read:

#### **5-1.04 CONTRACT COMPONENTS**

- A component in one contract part applies as if appearing in each. The parts are complementary and describe and provide for a complete work.

- If a discrepancy exists:

1. The governing ranking of contract parts in descending order is:

- 1.1. Special provisions
- 1.2. Project plans
- 1.3. Revised Standard Plans
- 1.4. Standard Plans
- 1.5. Amendments to the Standard Specifications
- 1.6. Standard Specifications
- 1.7. Project information

2. Written numbers and notes on a drawing govern over graphics

3. A detail drawing governs over a general drawing

4. A detail specification governs over a general specification

5. A specification in a section governs over a specification referenced by that section

- If a discrepancy is found or confusion arises, request correction or clarification.

Section 5-1.07, "Lines and Grades," of the Standard Specifications is replaced with the following:

#### **5-1.07 LINES AND GRADES**

- The Engineer places stakes and marks under Chapter 12, "Construction Surveys," of the Department's Surveys Manual.

- Submit your request for Department-furnished stakes:

1. On a Request for Construction Stakes form. Ensure:

- 1.1. Requested staking area is ready for stakes
- 1.2. You use the stakes in a reasonable time

2. A reasonable time before starting an activity using the stakes

- Establish priorities for stakes and note priorities on the request.
- Preserve stakes and marks placed by the Engineer. If the stakes or marks are destroyed, the Engineer replaces them at the Engineer's earliest convenience and deducts the cost.

Section 5-1.116, "Differing Site Conditions," is amended to read:

### **5-1.116 DIFFERING SITE CONDITIONS (23 CFR 635.109)**

#### **5-1.116A Contractor's Notification**

- Promptly notify the Engineer if you find either of the following:
  1. Physical conditions differing materially from either of the following:
    - 1.1. Contract documents
    - 1.2. Job site examination
  2. Physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract
- Include details explaining the information you relied on and the material differences you discovered.
  - If you fail to notify the Engineer promptly, you waive the differing site condition claim for the period between your discovery of the differing site condition and your notification to the Engineer.
  - If you disturb the site after discovery and before the Engineer's investigation, you waive the differing site condition claim.

#### **5-1.116B Engineer's Investigation and Decision**

- Upon your notification, the Engineer investigates job site conditions and:
  1. Notifies you whether to resume affected work
  2. Decides whether the condition differs materially and is cause for an adjustment of time, payment, or both

#### **5-1.116C Protests**

- You may protest the Engineer's decision by:
  1. Submitting an Initial Notice of Potential Claim within 5 business days after receipt of the Engineer's notification
  2. Complying with claim procedures
- The Initial Notice of Potential Claim must detail the differences in your position from the Engineer's determination and support your position with additional information, including additional geotechnical data. Attach to the Initial Notice of Potential Claim a certification stating that you complied with Section 2-1.03, "Examination of Plans, Specifications, Contract, and Site of Work."
  - Promptly submit supplementary information when obtained.

## SECTION 6: CONTROL OF MATERIALS

Issue Date: August 17, 2007

Section 6-1.05, "Trade Names and Alternatives," of the Standard Specifications is amended to read:

### **6-1.05 Specific Brand or Trade Name and Substitution**

- A reference to a specific brand or trade name establishes a quality standard and is not intended to limit competition. You may use a product that is equal to or better than the specified brand or trade name if approved.
  - Submit a substitution request within a time period that:
    1. Follows Contract award
    2. Allows 30 days for review
    3. Causes no delay
  - Include substantiating data with the substitution request that proves the substitution:
    1. Is of equal or better quality and suitability
    2. Causes no delay in product delivery and installation

Section 6, "Control of Materials," of the Standard Specifications is amended by adding the following sections:

### **6-1.085 BUY AMERICA (23 CFR 635.410)**

- For a Federal-aid contract, furnish steel and iron materials to be incorporated into the work that are produced in the United States except:
  1. Foreign pig iron and processed, pelletized, and reduced iron ore may be used in the domestic production of the steel and iron materials [60 Fed Reg 15478 (03/24/1995)]
  2. If the total combined cost of the materials does not exceed the greater of 0.1 percent of the total bid or \$2,500, material produced outside the United States may be used
- Production includes:
  1. Processing steel and iron materials, including smelting or other processes that alter the physical form or shape (such as rolling, extruding, machining, bending, grinding, and drilling) or chemical composition
  2. Coating application, including epoxy coating, galvanizing, and painting, that protects or enhances the value of steel and iron materials
- For steel and iron materials to be incorporated into the work, submit a Certificate of Compliance under Section 6-1.07, "Certificates of Compliance," of the Standard Specifications that certifies all production processes occurred in the United States except for the above exceptions.

#### **6-1.087 BUY AMERICA (PUB RES CODE § 42703(d))**

- Furnish crumb rubber to be incorporated into the work that is produced in the United States and is derived from waste tires taken from vehicles owned and operated in the United States.
- For crumb rubber to be incorporated into the work, submit a Certificate of Compliance under Section 6-1.07, "Certificates of Compliance," of the Standard Specifications that certifies only crumb rubber manufactured in the United States and derived from waste tires taken from vehicles owned and operated in the United States is used.

The 7th and 8th paragraph of Section 6-2.01, "General," of the Standard Specifications are amended to read:

- Upon the Contractor's written request, the Department tests materials from an untested local source. If satisfactory material from that source is used in the work, the Department does not charge the Contractor for the tests; otherwise, the Department deducts the test cost.

The 2nd sentence of the 7th paragraph of Section 6-2.02, "Possible Local Material Sources," of the Standard Specifications is amended to read:

- The Department deducts the charges for the removed material.

### **SECTION 7: LEGAL RELATIONS AND RESPONSIBILITIES**

Issue Date: May 2, 2008

Section 7-1.01, "Laws To Be Observed," of the Standard Specifications is amended to read:

#### **7-1.01 LAWS TO BE OBSERVED**

- Comply with laws, regulations, orders, decrees, and permits applicable to the project. Indemnify and defend the State against any claim or liability arising from the violation of a law, regulation, order, decree, or permit by you or your employees. Immediately report to the Engineer in writing a discrepancy or inconsistency between the contract and a law, regulation, order, decree, or permit.

The 3rd listed requirement of the 1st paragraph of Section 7-1.01A(2), "Prevailing Wage," of the Standard Specifications is amended to read:

3. Upon becoming aware of the subcontractor's failure to pay the specified prevailing rate of wages to the subcontractor's workers, the Contractor must diligently take corrective action to stop or rectify the failure, including withholding sufficient funds due the subcontractor for work performed on the public works project.

The 2nd paragraph of Section 7-1.01A(2), "Prevailing Wage," of the Standard Specifications is amended to read:

- Pursuant to Section 1775 of the Labor Code, the Division of Labor Standards Enforcement must notify the Contractor on a public works project within 15 days of the receipt by the Division of Labor Standards Enforcement of a complaint of the failure of a subcontractor

on that public works project to pay workers the general prevailing rate of per diem wages. If the Division of Labor Standards Enforcement determines that employees of a subcontractor were not paid the general prevailing rate of per diem wages and if the Department did not withhold sufficient money under the contract to pay those employees the balance of wages owed under the general prevailing rate of per diem wages, the Contractor must withhold an amount of moneys due the subcontractor sufficient to pay those employees the general prevailing rate of per diem wages if requested by the Division of Labor Standards Enforcement. The Contractor must pay any money withheld from and owed to a subcontractor upon receipt of notification by the Division of Labor Standards Enforcement that the wage complaint has been resolved. If notice of the resolution of the wage complaint has not been received by the Contractor within 180 days of the filing of a valid notice of completion or acceptance of the public works project, whichever occurs later, the Contractor must pay all moneys withheld from the subcontractor to the Department. The Department withholds these moneys pending the final decision of an enforcement action.

The 2nd paragraph of Section 7-1.01A(3), "Payroll Records," of the Standard Specifications is amended to read:

- The Department withholds the penalties specified in subdivision (g) of Labor Code § 1776 for noncompliance with the requirements in Section 1776.

The 4th paragraph of Section 7-1.01A(3), "Payroll Records," of the Standard Specifications is amended to read:

- The Department withholds for delinquent or inadequate payroll records (Labor Code § 1771.5). If the Contractor has not submitted an adequate payroll record by the month's 15th day for the period ending on or before the 1st of that month, the Department withholds 10 percent of the monthly progress estimate, exclusive of mobilization. The Department does not withhold more than \$10,000 or less than \$1,000.

The 5th paragraph of Section 7-1.01A(3), "Payroll Records," of the Standard Specifications is deleted.

Section 7-1.01A(6), "Workers' Compensation," of the Standard Specifications is amended to read:

**7-1.01A(6) (Blank)**

The fourth sentence of the second paragraph of Section 7-1.02, "Load Limitations," of the Standard Specifications is amended to read:

- Trucks used to haul treated base, portland cement concrete, or hot mix asphalt shall enter onto the base to dump at the nearest practical entry point ahead of spreading equipment.

Section 7-1.02, "Load Limitations," of the Standard Specifications is amended by adding the following paragraph after the 4th paragraph:

- Loads imposed on existing, new, or partially completed structures shall not exceed the load carrying capacity of the structure or any portion of the structure as determined by AASHTO

LRFD with interims and California Amendments, Design Strength Limit State II. The compressive strength of concrete ( $f'_c$ ) to be used in computing the load carrying capacity shall be the smaller of the following:

1. Actual compressive strength at the time of loading
2. Value of  $f'_c$  shown on the plans for that portion of the structure or 2.5 times the value of  $f'_c$  (extreme fiber compressive stress in concrete at service loads) shown on the plans for portions of the structure where no  $f'_c$  is shown

The first sentence of the eighth paragraph of Section 7-1.09, "Public Safety," of the Standard Specifications is amended to read:

- Signs, lights, flags, and other warning and safety devices and their use shall conform to the requirements set forth in Part 6 of the California MUTCD.

The sixteenth paragraph of Section 7-1.09, "Public Safety," of the Standard Specifications is amended to read:

- When vertical clearance is temporarily reduced to 15.5 feet or less, low clearance warning signs shall be placed in accordance with Part 2 of the California MUTCD and as directed by the Engineer. Signs shall conform to the dimensions, color, and legend requirements of the California MUTCD and these specifications except that the signs shall have black letters and numbers on an orange retroreflective background. W12-2P signs shall be illuminated so that the signs are clearly visible.

The last sentence of the 2nd paragraph of Section 7-1.11, "Preservation of Property," of the Standard Specifications is amended to read:

- The cost of the repairs must be borne by the Contractor and will be deducted.

Section 7-1.12, "Indemnification and Insurance," of the Standard Specifications is amended to read:

#### **7-1.12 INDEMNIFICATION AND INSURANCE**

- The Contractor's obligations regarding indemnification of the State of California and the requirements for insurance shall conform to the provisions in Section 3-1.025, "Insurance Policies," and Sections 7-1.12A, "Indemnification," and 7-1.12B, "Insurance," of this Section 7-1.12.

##### **7-1.12A Indemnification**

- The Contractor shall defend, indemnify, and save harmless the State, including its officers, employees, and agents (excluding agents who are design professionals) from any and all claims, demands, causes of action, damages, costs, expenses, actual attorneys' fees, losses or liabilities, in law or in equity (Section 7-1.12A Claims) arising out of or in connection with the Contractor's performance of this contract for:

1. Bodily injury including, but not limited to, bodily injury, sickness or disease, emotional injury or death to persons, including, but not limited to, the public, any employees or agents of the Contractor, the State, or any other contractor; and



2. Damage to property of anyone including loss of use thereof; caused or alleged to be caused in whole or in part by any negligent or otherwise legally actionable act or omission of the Contractor or anyone directly or indirectly employed by the Contractor or anyone for whose acts the Contractor may be liable.

- Except as otherwise provided by law, these requirements apply regardless of the existence or degree of fault of the State. The Contractor is not obligated to indemnify the State for Claims arising from conduct delineated in Civil Code Section 2782 and to Claims arising from any defective or substandard condition of the highway that existed at or before the start of work, unless this condition has been changed by the work or the scope of the work requires the Contractor to maintain existing highway facilities and the Claim arises from the Contractor's failure to maintain. The Contractor's defense and indemnity obligation shall extend to Claims arising after the work is completed and accepted if the Claims are directly related to alleged acts or omissions by the Contractor that occurred during the course of the work. State inspection is not a waiver of full compliance with these requirements.

- The Contractor's obligation to defend and indemnify shall not be excused because of the Contractor's inability to evaluate liability or because the Contractor evaluates liability and determine that the Contractor is not liable. The Contractor shall respond within 30 days to the tender of any Claim for defense and indemnity by the State, unless this time has been extended by the State. If the Contractor fails to accept or reject a tender of defense and indemnity within 30 days, in addition to any other remedy authorized by law, the Department may withhold such funds the State reasonably considers necessary for its defense and indemnity until disposition has been made of the Claim or until the Contractor accepts or rejects the tender of defense, whichever occurs first.

- With respect to third-party claims against the Contractor, the Contractor waives all rights of any type to express or implied indemnity against the State, its officers, employees, or agents (excluding agents who are design professionals).

- Nothing in the Contract is intended to establish a standard of care owed to any member of the public or to extend to the public the status of a third-party beneficiary for any of these indemnification specifications.

#### **7-1.12B Insurance**

##### **7-1.12B(1) General**

- Nothing in the contract is intended to establish a standard of care owed to any member of the public or to extend to the public the status of a third-party beneficiary for any of these insurance specifications.

##### **7-1.12B(2) Casualty Insurance**

- The Contractor shall procure and maintain insurance on all of its operations with companies acceptable to the State as follows:

1. The Contractor shall keep all insurance in full force and effect from the beginning of the work through contract acceptance.
2. All insurance shall be with an insurance company with a rating from A.M. Best Financial Strength Rating of A- or better and a Financial Size Category of VII or better.
3. The Contractor shall maintain completed operations coverage with a carrier acceptable to the State through the expiration of the patent deficiency in construction statute of repose set forth in Code of Civil Procedure Section 337.1.

### **7-1.12B(3) Workers' Compensation and Employer's Liability Insurance**

- In accordance with Labor Code Section 1860, the Contractor shall secure the payment of worker's compensation in accordance with Labor Code Section 3700.
- In accordance with Labor Code Section 1861, the Contractor shall submit to the Department the following certification before performing the work:

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

- Contract execution constitutes certification submittal.
- The Contractor shall provide Employer's Liability Insurance in amounts not less than:
  1. \$1,000,000 for each accident for bodily injury by accident
  2. \$1,000,000 policy limit for bodily injury by disease
  3. \$1,000,000 for each employee for bodily injury by disease
- If there is an exposure of injury to the Contractor's employees under the U.S. Longshoremen's and Harbor Workers' Compensation Act, the Jones Act, or under laws, regulations, or statutes applicable to maritime employees, coverage shall be included for such injuries or claims.

### **7-1.12B(4) Liability Insurance**

#### **7-1.12B(4)(a) General**

- The Contractor shall carry General Liability and Umbrella or Excess Liability Insurance covering all operations by or on behalf of the Contractor providing insurance for bodily injury liability and property damage liability for the following limits and including coverage for:

1. Premises, operations, and mobile equipment
2. Products and completed operations
3. Broad form property damage (including completed operations)
4. Explosion, collapse, and underground hazards
5. Personal injury
6. Contractual liability

#### **7-1.12B(4)(b) Liability Limits/Additional Insureds**

- The limits of liability shall be at least the amounts shown in the following table:

Total Bid	For Each Occurrence <sup>1</sup>	Aggregate for Products/Completed Operation	General Aggregate <sup>2</sup>	Umbrella or Excess Liability <sup>3</sup>
≤\$1,000,000	\$1,000,000	\$2,000,000	\$2,000,000	\$5,000,000
>\$1,000,000	\$1,000,000	\$2,000,000	\$2,000,000	\$10,000,000
≤\$5,000,000				
>\$5,000,000	\$2,000,000	\$2,000,000	\$4,000,000	\$15,000,000
≤\$25,000,000				
>\$25,000,000	\$2,000,000	\$2,000,000	\$4,000,000	\$25,000,000
1. Combined single limit for bodily injury and property damage. 2. This limit shall apply separately to the Contractor's work under this contract. 3. The umbrella or excess policy shall contain a clause stating that it takes effect (drops down) in the event the primary limits are impaired or exhausted.				

- The Contractor shall not require certified Small Business subcontractors to carry Liability Insurance that exceeds the limits in the table above. Notwithstanding the limits specified herein, at the option of the Contractor, the liability insurance limits for certified Small Business subcontractors of any tier may be less than those limits specified in the table. For Small Business subcontracts, "Total Bid" shall be interpreted as the amount of subcontracted work to a certified Small Business.

- The State, including its officers, directors, agents (excluding agents who are design professionals), and employees, shall be named as additional insureds under the General Liability and Umbrella Liability Policies with respect to liability arising out of or connected with work or operations performed by or on behalf of the Contractor under this contract. Coverage for such additional insureds does not extend to liability:

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

- Additional insured coverage shall be provided by a policy provision or by an endorsement providing coverage at least as broad as Additional Insured (Form B) endorsement form CG 2010, as published by the Insurance Services Office (ISO), or other form designated by the Department.

**7-1.12B(4)(c) Contractor's Insurance Policy is Primary**

- The policy shall stipulate that the insurance afforded the additional insureds applies as primary insurance. Any other insurance or self-insurance maintained by the State is excess only and shall not be called upon to contribute with this insurance.

**7-1.12B(5) Automobile Liability Insurance**

- The Contractor shall carry automobile liability insurance, including coverage for all owned, hired, and nonowned automobiles. The primary limits of liability shall be not less than \$1,000,000 combined single limit each accident for bodily injury and property damage. The

umbrella or excess liability coverage required under Section 7-1.12B(4)(b) also applies to automobile liability.

#### **7-1.12B(6) Policy Forms, Endorsements, and Certificates**

- The Contractor shall provide its General Liability Insurance under Commercial General Liability policy form No. CG0001 as published by the Insurance Services Office (ISO) or under a policy form at least as broad as policy form No. CG0001.

#### **7-1.12B(7) Deductibles**

- The State may expressly allow deductible clauses, which it does not consider excessive, overly broad, or harmful to the interests of the State. Regardless of the allowance of exclusions or deductions by the State, the Contractor is responsible for any deductible amount and shall warrant that the coverage provided to the State is in accordance with Section 7-1.12B, "Insurance."

#### **7-1.12B(8) Enforcement**

- The Department may assure the Contractor's compliance with its insurance obligations. Ten days before an insurance policy lapses or is canceled during the contract period, the Contractor shall submit to the Department evidence of renewal or replacement of the policy.

- If the Contractor fails to maintain any required insurance coverage, the Department may maintain this coverage and withhold or charge the expense to the Contractor or terminate the Contractor's control of the work in accordance with Section 8-1.08, "Termination of Control."

- The Contractor is not relieved of its duties and responsibilities to indemnify, defend, and hold harmless the State, its officers, agents, and employees by the Department's acceptance of insurance policies and certificates.

- Minimum insurance coverage amounts do not relieve the Contractor for liability in excess of such coverage, nor do they preclude the State from taking other actions available to it, including the withholding of funds under this contract.

#### **7-1.12B(9) Self-Insurance**

- Self-insurance programs and self-insured retentions in insurance policies are subject to separate annual review and approval by the State.

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

### **SECTION 8: PROSECUTION AND PROGRESS**

Issue Date: August 17, 2007

The 2nd paragraph of Section 8-1.02, "Assignment," of the Standard Specifications is amended to read:

- If the Contractor assigns the right to receive contract payments, the Department accepts the assignment upon the Engineer's receipt of a notice. Assigned payments remain subject to

deductions and withholds described in the contract. The Department may use withheld payments for work completion whether payments are assigned or not.

## **SECTION 9: MEASUREMENT AND PAYMENT**

Issue Date: August 17, 2007

The last sentence of the 1st paragraph of Section 9-1.02, "Scope of Payment," of the Standard Specifications is amended to read:

- Neither the payment of any estimate nor of any retained percentage or withhold relieves the Contractor of any obligation to make good any defective work or material.

The 6th paragraph of Section 9-1.03C, "Records," of the Standard Specifications is deleted.

The 2nd sentence of the 14th paragraph of Section 9-1.04, "Notice of Potential Claim," of the Standard Specifications is amended to read:

- Administrative disputes are disputes of administrative deductions or withholds, contract item quantities, contract item adjustments, interest payments, protests of contract change orders as provided in Section 4-1.03A, "Procedure and Protest," and protests of the Weekly Statement of Working Days as provided in Section 8-1.06, "Time of Completion."

Section 9-1.05, "Stop Notices," of the Standard Specifications is amended to read:

### **9-1.05 STOP NOTICE WITHHOLDS**

- The Department may withhold payments to cover claims filed under Civ Code § 3179 et seq.

Section 9, "Measurement and Payment," of the Standard Specifications is amended by adding the following sections:

### **9-1.053 PERFORMANCE FAILURE WITHHOLDS**

- During each estimate period you fail to comply with a contract part, including submittal of a document as specified, the Department withholds a part of the progress payment. The documents include quality control plans, schedules, traffic control plans, and water pollution control submittals.

- For 1 performance failure, the Department withholds 25 percent of the progress payment but does not withhold more than 10 percent of the total bid.

- For multiple performance failures, the Department withholds 100 percent of the progress payment but does not withhold more than 10 percent of the total bid.

- The Department returns performance-failure withholds in the progress payment following the correction of noncompliance.

### **9-1.055 PENALTY WITHHOLDS**

- Penalties include fines and damages that are proposed, assessed, or levied against you or the Department by a governmental agency or citizen lawsuit. Penalties are also payments made or costs incurred in settling alleged permit violations of Federal, State, or local laws, regulations,

or requirements. The cost incurred may include the amount spent for mitigation or correcting a violation.

- If you or the Department is assessed a penalty, the Department may withhold the penalty amount until the penalty disposition has been resolved. The Department may withhold penalty funds and notify you within 15 days of the withhold. If the penalty amount is less than the amount being withheld from progress payments for retentions, the Department will not withhold the penalty amount.

- If the penalty is resolved for less than the amount withheld, the Department pays interest at a rate of 6 percent per year on the excess withhold. If the penalty is not resolved, the withhold becomes a deduction.

- Instead of the withhold, you may provide a bond payable to the Department of Transportation equal to the highest estimated liability for any disputed penalties proposed.

### **9-1.057 PROGRESS WITHHOLDS FOR FEDERAL-AID CONTRACTS**

- Section 9-1.057, "Progress Withholds for Federal-Aid Contracts," applies to a Federal-aid contract.

- The Department withholds 10 percent of a partial payment for noncompliant progress. Noncompliant progress occurs when:

1. Total days to date exceed 75 percent of the revised contract working days
2. Percent of working days elapsed exceeds the percent of value of work completed by more than 15 percent

- The Engineer determines the percent of working days elapsed by dividing the total days to date by the revised contract working days and converting the quotient to a percentage.

- The Engineer determines the percent of value of work completed by summing payments made to date and the amount due on the current progress estimate, dividing this sum by the current total estimated value of the work, and converting the quotient to a percentage. These amounts are shown on the Progress Payment Voucher.

- When the percent of working days elapsed minus the percent of value of work completed is less than or equal to 15 percent, the Department returns the withhold in the next progress payment.

The 3rd paragraph of Section 9-1.06, "Partial Payments," of the Standard Specifications is amended to read:

- For a non-Federal-aid project, the Department retains 10 percent of the estimated value of the work done and 10 percent of the value of materials estimated to have been furnished and delivered and unused or furnished and stored as part security for the fulfillment of the contract by the Contractor, except that at any time after 20 percent of the work has been completed, if the Engineer finds that satisfactory progress is being made, the Department may reduce the total amount being retained from payment pursuant to the above requirements to 5 percent of the total estimated value of the work and materials and may also reduce the amount retained from any of the remaining partial payments to 5 percent of the estimated value of the work and materials. In addition, on any partial payment made after 95 percent of the work has been completed, the Department may reduce the amount retained from payment pursuant to the requirements of this Section 9-1.06, to such lesser amount as the Department determines is adequate security for the fulfillment of the balance of the work and other requirements of the contract, but in no event is that amount reduced to less than 125 percent of the estimated value of the work yet to be

completed as determined by the Engineer. The reduction is made only upon the request of the Contractor and must be approved in writing by the surety on the performance bond and by the surety on the payment bond. The approval of the surety must be submitted to the Disbursing Officer of the Department; the signature of the person executing the approval for the surety must be properly acknowledged and the power of attorney authorizing the person to give that consent must either accompany the document or be on file with the Department. The retentions specified in this paragraph are those defined in Pub Cont Code § 7107(b).

The 1st sentence of the 4th paragraph of Section 9-1.06, "Partial Payments," of the Standard Specifications is amended to read:

- The Department shall pay monthly to the Contractor, while carrying on the work, the balance not retained, as aforesaid, after deducting therefrom all previous payments and all sums to be deducted or withheld under the provisions of the contract.

The title and 1st and 2nd paragraphs of Section 9-1.065, "Payment of Withheld Funds," of the Standard Specifications are amended to read:

#### **9-1.065 RELEASE OF RETAINED FUNDS**

- The Department releases retained funds if you:
  1. Request release of the retention (Pub Cont Code § 10263) in writing
  2. Deposit securities equivalent to the funds you want released into escrow with the State Treasurer or with a bank acceptable to the Department
  3. Are the beneficial owner of and receive interest on the deposited securities substituted for the retained funds

The 2nd sentence Section 9-1.07A, "Payment Prior to Proposed Final Estimate," of the Standard Specifications is amended to read:

- The Department pays the balance due less previous payments, deductions, withholds, and retentions under the provisions of the contract and those further amounts that the Engineer determines to be necessary pending issuance of the proposed final estimate and payment thereon.

The 1st paragraph of Section 9-1.07B, "Final Payment and Claims," of the Standard Specifications is amended to read:

- After acceptance by the Director, the Engineer makes a proposed final estimate of the total amount payable to the Contractor, including an itemization of the total amount, segregated by contract item quantities, extra work, and other basis for payment, and shows each deduction made or to be made for prior payments and amounts to be deducted, withheld, or retained under the provisions of the contract. Prior estimates and payments are subject to correction in the proposed final estimate. The Contractor must submit written approval of the proposed final estimate or a written statement of claims arising under or by virtue of the contract so that the Engineer receives the written approval or statement of claims no later than close of business of the 30th day after receiving the proposed final estimate. The Contractor's receipt of the proposed final estimate must be evidenced by postal receipt. The Engineer's receipt of the Contractor's written approval or statement of claims must be evidenced by postal receipt or the Engineer's written receipt if delivered by hand.

## **SECTION 12: CONSTRUCTION AREA TRAFFIC CONTROL DEVICES**

Issue Date: October 6, 2006

The first sentence of the second paragraph of Section 12-1.01, "Description," of the Standard Specifications is amended to read:

- Attention is directed to Part 6 of the California MUTCD.

Section 12-2.01, "Flaggers," of the Standard Specifications is amended to read:

### **12-2.01 FLAGGERS**

• Flaggers while on duty and assigned to traffic control or to give warning to the public that the highway is under construction and of any dangerous conditions to be encountered as a result thereof, shall perform their duties and shall be provided with the necessary equipment in conformance with Part 6 of the California MUTCD. The equipment shall be furnished and kept clean and in good repair by the Contractor at the Contractor's expense.

The first paragraph of Section 12-3.01, "General," of the Standard Specifications is amended to read:

• In addition to the requirements in Part 6 of the California MUTCD, all devices used by the Contractor in the performance of the work shall conform to the provisions in this Section 12-3.

The second sentence of the first paragraph of Section 12-3.06, "Construction Area Signs," of the Standard Specifications is amended to read:

- Construction area signs are shown in or referred to in Part 6 of the California MUTCD.

The first sentence of the fourth paragraph of Section 12-3.06, "Construction Area Signs," of the Standard Specifications is amended to read:

• All construction area signs shall conform to the dimensions, color and legend requirements of the plans, Part 6 of the California MUTCD and these specifications.

The first sentence of the eighth paragraph of Section 12-3.06, "Construction Area Signs," of the Standard Specifications is amended to read:

• Used signs with the specified sheeting material will be considered satisfactory if they conform to the requirements for visibility and legibility and the colors conform to the requirements in Part 6 of the California MUTCD.

## **SECTION 19: EARTHWORK**

Issue Date: July 31, 2007



Section 19-1.03, "Grade Tolerance," of the Standard Specifications is amended to read:

- Immediately prior to placing subsequent layers of material thereon, the grading plane shall conform to one of the following:
  - A. When hot mix asphalt is to be placed on the grading plane, the grading plane at any point shall not vary more than 0.05-foot above or below the grade established by the Engineer.
  - B. When subbase or base material to be placed on the grading plane is to be paid for by the ton, the grading plane at any point shall not vary more than 0.10-foot above or below the grade established by the Engineer.
  - C. When the material to be placed on the grading plane is to be paid for by the cubic yard, the grading plane at any point shall be not more than 0.05-foot above the grade established by the Engineer.

The first paragraph of Section 19-3.025C, "Soil Cement Bedding," of the Standard Specifications is amended to read:

- Cementitious material used in soil cement bedding shall conform to the provisions in Section 90-2.01, "Cementitious Materials." Supplementary cementitious material will not be required.

The fourth paragraph of Section 19-3.025C, "Soil Cement Bedding," of the Standard Specifications is amended to read:

- The aggregate, cementitious material, and water shall be proportioned either by weight or by volume. Soil cement bedding shall contain not less than 282 pounds of cementitious material per cubic yard. The water content shall be sufficient to produce a fluid, workable mix that will flow and can be pumped without segregation of the aggregate while being placed.

The first paragraph of Section 19-3.062, "Slurry Cement Backfill," of the Standard Specifications is amended to read:

- Slurry cement backfill shall consist of a fluid, workable mixture of aggregate, cementitious material, and water.

The fifth paragraph of Section 19-3.062, "Slurry Cement Backfill," of the Standard Specifications is amended to read:

- Cementitious material shall conform to the provisions in Section 90-2.01, "Cementitious Materials." Supplementary cementitious material will not be required.

The eighth paragraph of Section 19-3.062, "Slurry Cement Backfill," of the Standard Specifications is amended to read:

- The aggregate, cementitious material, and water shall be proportioned either by weight or by volume. Slurry cement backfill shall contain not less than 188 pounds of cementitious material per cubic yard. The water content shall be sufficient to produce a fluid, workable mix that will flow and can be pumped without segregation of the aggregate while being placed.

## **SECTION 20: EROSION CONTROL AND HIGHWAY PLANTING**

Issue Date: August 17, 2007

Section 20-2.03, "Soil Amendment," of the Standard Specifications is amended to read:

### **20-2.03 SOIL AMENDMENT**

- Soil amendment shall comply with the requirements in the California Food and Agricultural Code.
- Soil amendment producers shall comply with the following:
  1. Be fully permitted to produce compost as specified under the California Integrated Waste Management Board, Local Enforcement Agencies and any other State and Local Agencies that regulate Solid Waste Facilities. If exempt from State permitting requirements, the composting facility must certify that it follows guidelines and procedures for production of compost meeting the environmental health standards of Title 14, California Code of Regulations, Division 7, Chapter 3.1, Article 7.
  2. Be a participant in United States Composting Council's Seal of Testing Assurance program.
- Soil amendment shall be composted and may be derived from any single, or mixture of any of the following feedstock materials:
  1. Green material consisting of chipped, shredded, or ground vegetation; or clean processed recycled wood products
  2. Biosolids
  3. Manure
  4. Mixed food waste
- Soil amendment feedstock materials shall be composted to reduce weed seeds, pathogens and deleterious materials as specified under Title 14, California Code of Regulations, Division 7, Chapter 3.1, Article 7, Section 17868.3.
- Soil amendment shall not be derived from mixed municipal solid waste and must be reasonably free of visible contaminants. Soil amendment must not contain paint, petroleum products, pesticides or any other chemical residues harmful to animal life or plant growth. Soil amendment must not possess objectionable odors.
- Metal concentrations in soil amendment must not exceed the maximum metal concentrations listed in Title 14, California Code of Regulations, Division 7, Chapter 3.1, Section 17868.2.
- Soil amendment must comply with the following:

Physical/Chemical Requirements		
Property	Test Method	Requirement
pH	*TMECC 04.11-A, Elastometric pH 1:5 Slurry Method, pH Units	6.0–8.0
Soluble Salts	TMECC 04.10-A, Electrical Conductivity 1:5 Slurry Method dS/m (mmhos/cm)	0-10.0
Moisture Content	TMECC 03.09-A, Total Solids & Moisture at 70+/- 5 deg C, % Wet Weight Basis	30–60
Organic Matter Content	TMECC 05.07-A, Loss-On-Ignition Organic Matter Method (LOI), % Dry Weight Basis	30–65
Maturity	TMECC 05.05-A, Germination and Vigor Seed Emergence Seedling Vigor % Relative to Positive Control	80 or Above 80 or Above
Stability	TMECC 05.08-B, Carbon Dioxide Evolution Rate mg CO <sub>2</sub> -C/g OM per day	8 or below
Particle Size	TMECC 02.02-B Sample Sieving for Aggregate Size Classification % Dry Weight Basis	95% Passing 5/8 inch 70% Passing 3/8 inch
Pathogen	TMECC 07.01-B, Fecal Coliform Bacteria < 1000 MPN/gram dry wt.	Pass
Pathogen	TMECC 07.01-B, Salmonella < 3 MPN/4 grams dry wt.	Pass
Physical Contaminants	TMECC 02.02-C, Man Made Inert Removal and Classification: Plastic, Glass and Metal, % > 4mm fraction	Combined Total: < 1.0
Physical Contaminants	TMECC 02.02-C, Man Made Inert Removal and Classification: Sharps (Sewing needles, straight pins and hypodermic needles), % > 4mm fraction	None Detected

\*TMECC refers to "Test Methods for the Examination of Composting and Compost," published by the United States Department of Agriculture and the United States Compost Council (USCC).

- Prior to application, the Contractor shall provide the Engineer with a copy of the soil amendment producer's Compost Technical Data Sheet and a copy of the compost producers STA certification. The Compost Technical Data Sheet shall include laboratory analytical test results, directions for product use, and a list of product ingredients.
- Prior to application, the Contractor shall provide the Engineer with a Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications.

The last 3 paragraphs of Section 20-2.10, "Seed," of the Standard Specifications are deleted.

The last paragraph of Section 20-3.04A, "General," of the Standard Specifications is deleted.

Section 20-4.055, "Pruning," of the Standard Specifications is amended to read:

#### **20-4.055 PRUNING**

- Pruning of plants shall be consistent with American National Standards Institute (ANSI), "Tree, Shrub and Other Woody Plant Maintenance Standard Practices," ANSI 300 (Part 1)-2001 and "Best Management Practices Tree Pruning," 2002 (ISBN 1-881956318), published by the International Society of Arboriculture, P.O. Boc 3129, Champaign, IL 61826.

## **SECTION 25: AGGREGATE SUBBASES**

Issue Date: February 16, 2007

The first paragraph of Section 25-1.02A, "Class 1, Class 2, and Class 3 Aggregate Subbases," of the Standard Specifications is amended to read:

- Aggregate must be clean and free from organic matter and other deleterious substances. Aggregate must consist of any combination of:

1. Broken stone
2. Crushed gravel
3. Natural rough surfaced gravel
4. Sand
5. Up to 100 percent of any combination of processed:
  - 5.1. Asphalt concrete
  - 5.2. Portland cement concrete
  - 5.3. Lean concrete base
  - 5.4. Cement treated base

The first paragraph of Section 25-1.02B, "Class 4 Aggregate Subbase," of the Standard Specifications is amended to read:

- Aggregate must be clean and free from organic matter and other deleterious substances. Aggregate must consist of any combination of:

1. Broken stone
2. Crushed gravel
3. Natural rough surfaced gravel
4. Sand
5. Up to 100 percent of any combination of processed:
  - 5.1. Asphalt concrete
  - 5.2. Portland cement concrete
  - 5.3. Lean concrete base
  - 5.4. Cement treated base

## **SECTION 26: AGGREGATE BASE**

Issue Date: February 16, 2007

The first paragraph of Section 26-1.02A, "Class 2 Aggregate Base," of the Standard Specifications is amended to read:

- Aggregate must be clean and free from organic matter and other deleterious substances. Aggregate must consist of any combination of:

1. Broken stone

2. Crushed gravel
3. Natural rough surfaced gravel
4. Sand
5. Up to 100 percent of any combination of processed:
  - 5.1. Asphalt concrete
  - 5.2. Portland cement concrete
  - 5.3. Lean concrete base
  - 5.4. Cement treated base

The first paragraph of Section 26-1.02B, "Class 3 Aggregate Base," of the Standard Specifications is amended to read:

- Aggregate must be clean and free from organic matter and other deleterious substances. Aggregate must consist of any combination of:

1. Broken stone
2. Crushed gravel
3. Natural rough surfaced gravel
4. Sand
5. Up to 100 percent of any combination of processed:
  - 5.1. Asphalt concrete
  - 5.2. Portland cement concrete
  - 5.3. Lean concrete base
  - 5.4. Cement treated base

## **SECTION 27: CEMENT TREATED BASES**

Issue Date: July 31, 2007

The first paragraph of Section 27-1.02, "Materials," of the Standard Specifications is amended to read:

- Cement shall be Type II portland cement conforming to the provisions in Section 90-2.01A, "Cement."

The third paragraph of Section 27-1.02, "Materials," of the Standard Specifications is amended to read:

- Aggregate for use in Class A cement treated base shall be of such quality that when mixed with cement in an amount not to exceed 5 percent by weight of the dry aggregate and compacted at optimum moisture content, the compressive strength of a sample of the compacted mixture shall not be less than 750 pounds per square inch at 7 days, when tested by California Test 312.

The fourth paragraph of Section 27-1.02, "Materials," of the Standard Specifications is amended to read:

- Aggregate for use in Class B cement treated base shall have a Resistance (R-value) of not less than 60 before mixing with cement and a Resistance (R-value) of not less than 80 after mixing with cement in an amount not to exceed 2.5 percent by weight of the dry aggregate.

The ninth paragraph of Section 27-1.07, "Compacting," of the Standard Specifications is amended to read:

- When surfacing material is hot mix asphalt, the low areas shall be filled with hot mix asphalt conforming to the requirements for the lowest layer of hot mix asphalt to be placed as surfacing. This filling shall be done as a separate operation prior to placing the lowest layer of surfacing, and full compensation for this filling will be considered as included in the contract price paid for cement treated base and no additional compensation will be allowed therefor.

## **SECTION 28: LEAN CONCRETE BASE**

Issue Date: July 31, 2007

The first paragraph of Section 28-1.02, "Materials," of the Standard Specifications is amended to read:

- Cement shall be Type II portland cement conforming to the provisions in Section 90-2.01A, "Cement."

The sixth paragraph of Section 28-1.02, "Materials," of the Standard Specifications is amended to read:

- Aggregate shall be of such quality that, when mixed with cement in an amount not to exceed 300 pounds per cubic yard, and tested in conformance with the requirements in California Test 548, the compressive strength of a sample will be not less than 700 pounds per square inch at 7 days.

The second paragraph of Section 28-1.06, "Spreading, Compacting and Shaping," of the Standard Specifications is amended to read:

- In advance of curing operations, lean concrete base to be surfaced with hot mix asphalt shall be textured with a drag strip of burlap, a broom or a spring steel tine device which will produce scoring in the finished surface. The scoring shall be parallel with the centerline or transverse thereto. The operation shall be performed at a time and in a manner to produce the coarsest texture practical for the method used.

The second paragraph of Section 28-1.08, "Surfaces Not Within Tolerance," of the Standard Specifications is amended to read:

- Hardened lean concrete base with a surface lower than 0.05-foot below the grade established by the Engineer shall be removed and replaced with lean concrete base which complies with these specifications, or if permitted by the Engineer, the low areas shall be filled with pavement material as follows:

1. When pavement material is hot mix asphalt, the low areas shall be filled with hot mix asphalt conforming to the requirements for the lowest layer of hot mix asphalt to be placed as pavement. This shall be done as a separate operation prior to placing the lowest layer of pavement, and full compensation for this filling will be considered as included in the contract price paid per cubic yard for lean concrete base and no additional compensation will be allowed therefor.
2. When pavement material is portland cement concrete, the low areas shall be filled with pavement concrete at the time and in the same operation that the pavement is placed. Full compensation for this filling will be considered as included in the contract price paid per cubic yard for lean concrete base and no additional compensation will be allowed therefor.

## **SECTION 29: TREATED PERMEABLE BASES**

Issue Date: July 31, 2007

The second paragraph of Section 29-1.02B, "Cement Treated Permeable Base," of the Standard Specifications is amended to read:

- Cement shall be Type II portland cement conforming to the provisions in Section 90-2.01A, "Cement."

The first paragraph of Section 29-1.04A, "Asphalt Treated Permeable Base," of the Standard Specifications is amended to read:

- Aggregates and asphalt for asphalt treated permeable base shall be stored, proportioned and mixed in the same manner provided for storing, proportioning and mixing aggregates and asphalt for hot mix asphalt in Section 39-1.08, "Production," except as follows:

1. The aggregate need not be separated into sizes.
2. The temperature of the aggregate before adding the asphalt binder shall be not less than 275° F nor more than 325° F.
3. Asphalt treated permeable base stored in excess of 2 hours shall not be used in the work.
4. The aggregate shall be combined with 2.5 percent paving asphalt by weight of the dry aggregate. After testing samples of the Contractor's proposed aggregate supply, the Engineer may order an increase or decrease in the asphalt content. If an increase or decrease is ordered, and the increase or decrease exceeds the specified amount by more than 0.1-percent by weight of the dry aggregate, the compensation payable to the Contractor for the asphalt treated permeable base will be increased or decreased on the basis of the total increase or decrease in asphalt.
5. The asphalt content of the asphalt mixture will be determined, at the option of the Engineer, by extraction tests in conformance with the requirements in California Test 310 or 362, or will be determined in conformance with the requirements in California Test 379. The bitumen ratio pounds of asphalt per 100 pounds of dry aggregate shall not vary by more than 0.5-pound of asphalt above or 0.5-pound of asphalt below the amount designated by the Engineer. Compliance with this requirement will be determined either by taking samples from trucks at the plant or from the mat behind the paver before rolling. If the sample is taken from the mat behind the paver, the bitumen ratio shall be

not less than the amount designated by the Engineer, less 0.7-pound of asphalt per 100 pounds of dry aggregate.

The second paragraph of Section 29-1.04B, "Cement Treated Permeable Base," of the Standard Specifications is amended to read:

- Cement treated permeable base shall contain not less than 287 pounds of cement per cubic yard.

The first paragraph of Section 29-1.05, "Spreading and Compacting Asphalt Treated Permeable Base," of the Standard Specifications is amended to read:

- Asphalt treated permeable base shall be spread and compacted as specified for hot mix asphalt under the "Method" construction process in Section 39, "Hot Mix Asphalt," and these specifications.

The second paragraph of Section 29-1.07, "Surfaces Not Within Tolerance," of the Standard Specifications is amended to read:

- Hardened treated permeable base with a surface lower than 0.05-foot below the grade established by the Engineer shall be removed and replaced with treated permeable base which complies with these specifications, or if permitted by the Engineer, the low areas shall be filled with pavement material as follows:

1. When pavement material is hot mix asphalt, the low areas shall be filled with hot mix asphalt conforming to the requirements for the lowest layer of hot mix asphalt to be placed as pavement. This shall be done as a separate operation prior to placing the lowest layer of pavement.
2. When pavement material is portland cement concrete, the low areas shall be filled with pavement concrete at the time and in the same operation in which the pavement is placed.
3. Full compensation for filling low areas will be considered as included in the contract price paid per cubic yard for treated permeable base and no additional compensation will be allowed therefor.

## **SECTION 37: BITUMINOUS SEALS**

Issue Date: August 17, 2007

The fourth through sixth paragraphs in Section 37-1.03, "Maintaining Traffic," of the Standard Specifications are amended to read:

- On 2-lane two-way roadways, W8-7 "LOOSE GRAVEL" signs and W13-1 (35) speed advisory signs shall be furnished and placed adjacent to both sides of the traveled way where screenings are being spread on a traffic lane. The first W8-7 sign in each direction shall be placed where traffic first encounters loose screenings, regardless of which lane the screenings are being spread on. The W13-1 (35) signs need not be placed in those areas with posted speed limits of less than 40 MPH. The signs shall be placed at maximum 2,000-foot intervals along each side of the traveled way and at public roads or streets entering the seal coat area as directed by the Engineer.



- On multilane roadways (freeways, expressways and multilane conventional highways) where screenings are being spread on a traffic lane, W8-7 "LOOSE GRAVEL" signs and W13-1 (35) speed advisory signs shall be furnished and placed adjacent to the outside edge of the traveled way nearest to the lane being worked on. The first W8-7 sign shall be placed where the screenings begin with respect to the direction of travel on that lane. The W13-1 (35) signs need not be placed in those areas with posted speed limits of less than 40 MPH. The signs shall be placed at maximum 2,000-foot intervals along the edge of traveled way and at on-ramps, public roads or streets entering the seal coat area as directed by the Engineer.

- The W8-7 and W13-1 signs shall be maintained in place at each location until final brooming of the seal coat surface at that location is completed. The W8-7 and W13-1 signs shall conform to the provisions for construction area signs in Section 12, "Construction Area Traffic Control Devices." The signs may be set on temporary portable supports with the W13-1 below the W8-7 or on barricades with the W13-1 sign alternating with the W8-7 sign.

The second paragraph of Section 37-1.07, "Finishing," of the Standard Specifications is amended to read:

- Rollers shall be oscillating type pneumatic-tired rollers. A minimum of 2 pneumatic-tired rollers conforming to the provisions in Section 39-3.03 "Spreading and Compacting Equipment," shall be furnished.

The second paragraph in Section 37-1.09, "Payment," of the Standard Specifications is amended to read:

- The above prices and payments shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in applying seal coat, complete in place, including furnishing, placing, maintaining, and removing W8-7 and W13-1 signs, when required, and temporary supports or barricades for the signs, as shown on the plans, and as specified in these specifications and the special provisions, and as directed by the Engineer.

## **SECTION 40: PORTLAND CEMENT CONCRETE PAVEMENT**

Issue Date: January 5, 2007

Section 40-1.015, "Cement Content," is deleted.

Section 40-1.05, "Proportioning," of the Standard Specifications is amended to read:

- Aggregate and cementitious material proportioning shall conform to the provisions in Section 90-5, "Proportioning."

The first paragraph in Section 40-1.105, "Exit Ramp Termini," of the Standard Specifications is amended to read:

- Concrete pavement shall be constructed at the ends of exit ramps when required by the plans or the special provisions. Texturing for exit ramp termini shall be by means of heavy brooming in a direction normal to ramp centerline. The hardened surface shall have a coefficient

of friction not less than 0.35 as determined by California Test 342. Minimum cementitious material content of concrete in pavement for exit ramp termini shall be 590 pounds per cubic yard.

The first paragraph in Section 40-1.14, "Payment," of the Standard Specifications is amended to read:

- The contract price paid per cubic yard for concrete pavement shall include full compensation for furnishing all labor, materials (including cementitious material in the amount specified), tools, equipment, and incidentals, and for doing all the work involved in constructing the portland cement concrete pavement, complete in place, as shown on the plans, and as specified in these specifications and the special provisions, and as directed by the Engineer.

#### **SECTION 41: PAVEMENT SUBSEALING AND JACKING**

Issue Date: January 5, 2007

The second paragraph of Section 41-1.02, "Materials," of the Standard Specifications is amended to read:

- Cement for grout shall be Type II portland cement conforming to the provisions in Section 90-2.01A, "Cement."

The third paragraph of Section 41-1.02, "Materials," of the Standard Specifications is amended to read:

- Fly ash shall conform to the requirements in AASHTO Designation: M 295 for either Class C or for Class F. The brand of fly ash used in the work shall conform to the provisions for approval of admixture brands in Section 90-4.03, "Admixture Approval."

The fifth paragraph of Section 41-1.02, "Materials," of the Standard Specifications is amended to read:

- Chemical admixtures and calcium chloride may be used. Chemical admixtures in the grout mix shall conform to the provisions in Section 90-4, "Admixtures." Calcium chloride shall conform to ASTM Designation: D 98.

#### **SECTION 49: PILING**

Issue Date: June 6, 2008

The 4th paragraph of Section 49-1.03, "Determination of Length," of the Standard Specifications is amended to read:

- Modification to the specified installation methods and specified pile tip elevation will not be considered at locations where settlement, tension demands, or lateral load demands control design pile tip elevations or when the plans state that specified pile tip elevation shall not be revised.

The first sentence of the sixth paragraph of Section 49-1.03, "Determination of Length," of the Standard Specifications is amended to read:

- Indicator compression pile load testing shall conform to the requirements in ASTM Designation: D 1143-81.

The first sentence of the seventh paragraph of Section 49-1.03, "Determination of Length," of the Standard Specifications is amended to read:

- Indicator tension pile load testing shall conform to the requirements in ASTM Designation: D 3689-90.

The 9th paragraph of Section 49-1.03, "Determination of Length," of the Standard Specifications is amended to read:

- The Contractor shall furnish piling of sufficient length to obtain the specified tip elevation shown on the plans or specified in the special provisions.

The sixth paragraph in Section 49-1.04, "Load Test Piles," of the Standard Specifications is amended to read:

- The Contractor may use additional cementitious material in the concrete for the load test and anchor piles.

The 1st paragraph of Section 49-6.01, "Measurement," of the Standard Specifications is amended to read:

- The length of timber, steel, and precast prestressed concrete piles, and of cast-in-place concrete piles consisting of driven shells filled with concrete, shall be measured along the longest side, from the tip elevation shown on the plans to the plane of pile cut-off.

Section 49-6.02, "Payment," of the Standard Specifications is amended by adding the following:

- When pile tips are revised by the Engineer for timber, steel, and precast prestressed concrete piles, and for cast-in-place concrete piles consisting of driven shells filled with concrete, the additional length required, including all materials, equipment, and labor for furnishing, splicing, and installing the piling, will be paid for as extra work as provided in Section 4-1.03D, "Extra Work."

- All remedial work required to achieve the required nominal resistance, including suspending driving operations above the required tip elevation and re-driving piles at a later time, when directed by the Engineer, will be paid for as extra work as provided in Section 4-1.03D, "Extra Work."

## **SECTION 50: PRESTRESSING CONCRETE**

Issue Date: April 4, 2008

The 2nd paragraph in Section 50-1.07, "Ducts," of the Standard Specifications is amended to read:

- Ducts shall be fabricated with either welded or interlocked seams. Galvanizing of the welded seam will not be required. Ducts shall have sufficient strength to maintain their correct alignment during placing of concrete. Joints between sections of duct shall be positive metallic connections which do not result in angle changes at the joints. Waterproof tape shall be used at the connections. Ducts shall be bent without crimping or flattening. Transition couplings connecting the ducts to anchoring devices shall be either ferrous metal or polyolefin. Ferrous metal transition couplings need not be galvanized.

The 3rd paragraph in Section 50-1.05, "Prestressing Steel," of the Standard Specifications is amended by deleting item A.

The seventh paragraph in Section 50-1.07, "Ducts," of the Standard Specifications is amended to read:

- All ducts with a total length of 400 feet or more shall be vented. Vents shall be placed at intervals of not more than 400 feet and shall be located within 6 feet of every high point in the duct profile. Vents shall be 1/2 inch minimum diameter standard pipe or suitable plastic pipe. Connections to ducts shall be made with metallic or plastic structural fasteners. Plastic components, if selected, shall not react with the concrete or enhance corrosion of the prestressing steel and shall be free of water soluble chlorides. The vents shall be mortar tight, taped as necessary, and shall provide means for injection of grout through the vents and for sealing the vents. Ends of vents shall be removed one inch below the roadway surface after grouting has been completed.

Item B of the eleventh paragraph in Section 50-1.08, "Prestressing," of the Standard Specifications is amended to read:

B. When the concrete is designated by class or cementitious material content, either the concrete compressive strength shall have reached the strength shown on the plans at the time of stressing or at least 28 days shall have elapsed since the last concrete to be prestressed has been placed, whichever occurs first.

The second and third paragraphs in Section 50-1.09, "Bonding and Grouting," of the Standard Specifications are amended to read:

- Grout shall consist of cement and water and may contain an admixture if approved by the Engineer.
- Cement shall conform to the provisions in Section 90-2.01A, "Cement."

The first paragraph in Section 50-1.11, "Payment," of the Standard Specifications is amended to read:

- No separate payment will be made for pretensioning precast concrete members. Payment for pretensioning precast concrete members shall be considered as included in the contract price paid for furnish precast members as provided for in Section 51, "Concrete Structures."

## SECTION 51: CONCRETE STRUCTURES

Issue Date: May 2, 2008

The first sentence of the eleventh paragraph of Section 51-1.05, "Forms," of the Standard Specifications is amended to read:

- Form panels for exposed surfaces shall be furnished and placed in uniform widths of not less than 3 feet and in uniform lengths of not less than 6 feet, except at the end of continuously formed surfaces where the final panel length required is less than 6 feet.

The first sentence of the eleventh paragraph of Section 51-1.06C, "Removing Falsework," of the Standard Specifications is amended to read:

- Falsework for box culverts and other structures with decks lower than the roadway pavement and with span lengths of 14 feet or less shall not be released until the last placed concrete has attained a compressive strength of 1,600 psi, provided that curing of the concrete is not interrupted.

The 6th paragraph of Section 51-1.11, "Construction Methods," of the Standard Specifications is amended to read:

- Construction methods and equipment employed by the Contractor shall conform to the provisions in Section 7-1.02, "Load Limitations."

The fourth paragraph in Section 51-1.12D, "Sheet Packing, Preformed Pads, and Board Fillers," of the Standard Specifications is amended to read:

- Expanded polystyrene shall be a commercially available polystyrene board. Expanded polystyrene shall have a minimum flexural strength of 35 psi determined in conformance with the requirements in ASTM Designation: C 203 and a compressive yield strength of between 16 and 40 psi at 5 percent compression. Surfaces of expanded polystyrene against which concrete is placed shall be faced with hardboard. Hardboard shall be 1/8 inch minimum thickness, conforming to ANSI A135.4, any class. Other facing materials may be used provided they furnish equivalent protection. Boards shall be held in place by nails, waterproof adhesive, or other means approved by the Engineer.

The 3rd paragraph of Section 51-1.12F, "Sealed Joints," of the Standard Specifications is amended to read:

- Type A and AL joint seals shall consist of a groove in the concrete that is filled with field-mixed silicone sealant.

The table in the 6th paragraph of Section 51-1.12F, "Sealed Joints," of the Standard Specifications is amended to read:

Movement Rating (MR)	Seal Type
MR ≤ 1 inch	Type A or Type B
1 inch < MR ≤ 2 inches	Type B
2 inches < MR ≤ 4 inches	Joint Seal Assembly (Strip Seal)
MR > 4 inches	Joint Seal Assembly (Modular Unit) or Seismic Joint

The 1st paragraph of Section 51-1.12F(3)(a), "Type A and AL Seal, " of the Standard Specifications is amended to read:

- The sealant must consist of a 2-component silicone sealant that will withstand up to ±50 percent movement.

The 2nd paragraph of Section 51-1.12F(3)(a), "Type A and AL Seal," of the Standard Specifications is amended to read:

- Silicone sealants must be tested under California Test 435 and must comply with the following:

Specification	Requirement
Modulus at 150 percent elongation	8–75 psi
Recovery	21/32 inch max.
Notch Test	Notched or loss of bond 1/4 inch, max.
Water Resistance	Notched or loss of bond 1/4 inch, max.
Ultraviolet Exposure ASTM Designation: G 154, Table X2.1, Cycle 2.	No more than slight checking or cracking.
Cone Penetration	4.5-12.0 mm

The 3rd paragraph of Section 51-1.12F(3)(a), "Type A and AL Seal," of the Standard Specifications is deleted.

The 8th paragraph of Section 51-1.12F(3)(a), "Type A and AL Seal," of the Standard Specifications is deleted.

The 10th paragraph of Section 51-1.12F(3)(a), "Type A and AL Seal," of the Standard Specifications is amended to read:

- A Certificate of Compliance accompanied by a certified test report must be furnished for each batch of silicone sealant in conformance with the provisions in Section 6-1.07, "Certificates of Compliance."

The 2nd paragraph of Section 51-1.12F(3)(b), "Type B Seal," of the Standard Specifications is amended to read:

- The preformed elastomeric joint seal must conform to the requirements in ASTM D 2628 and the following:

1. The seal must consist of a multichannel, nonporous, homogeneous material furnished in a finished extruded form.
2. The minimum depth of the seal measured at the contact surface must be at least 95 percent of the minimum uncompressed width of the seal as designated by the manufacturer.
3. When tested in conformance with the requirements in California Test 673 for Type B seals, joint seals must provide a movement rating (MR) of not less than that shown on the plans.
4. The top and bottom edges of the joint seal must maintain continuous contact with the sides of the groove over the entire range of joint movement.
5. The seal must be furnished full length for each joint with no more than 1 shop splice in any 60-foot length of seal.
6. The Contractor must demonstrate the adequacy of the procedures to be used in the work before installing seals in the joints.
7. One field splice per joint may be made at locations and by methods approved by the Engineer. The seals are to be manufactured full length for the intended joint, then cut at the approved splice section and rematched before splicing. The Contractor must submit splicing details prepared by the joint seal manufacturer for approval before beginning splicing work.
8. Shop splices and field splices must have no visible offset of exterior surfaces and must show no evidence of bond failure.
9. At all open ends of the seal that would admit water or debris, each cell must be filled to a depth of 3 inches with commercial quality open cell polyurethane foam or closed by other means subject to approval by the Engineer.

The 7th paragraph of Section 51-1.12F(3)(b), "Type B Seal," of the Standard Specifications is amended to read:

- The joint seal must be installed full length for each joint with equipment that does not twist or distort the seal, elongate the seal longitudinally, or otherwise cause damage to the seal or to the concrete forming the groove.

The first sentence of the eleventh paragraph of Section 51-1.12F(3)(b), "Type B Seal," of the Standard Specifications is amended to read:

- Samples of the prefabricated joint seals, not less than 3 feet in length, will be taken by the Engineer from each lot of material.

The fourth and fifth sentences of the sixth paragraph of Section 51-1.12H(1), "Plain and Fabric Reinforced Elastomeric Bearing Pads," of the Standard Specifications are amended to read:

- Each ply of fabric shall have a breaking strength of not less than 800 pounds per inch of width in each thread direction when 3" x 36" samples are tested on split drum grips. The bond between double plies shall have a minimum peel strength of 20 pounds per inch.

The hardness (Type A) requirement in the table in the eighth paragraph of Section 51-1.12H(1), "Plain and Fabric Reinforced Elastomeric Bearing Pads," of the Standard Specifications is amended to read:

Hardness (Type A)	D 2240 with 2kg mass.	55 ±5
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The first sentence of subparagraph A of the first paragraph of Section 51-1.12H(2), "Steel Reinforced Elastomeric Bearings," of the Standard Specifications is amended to read:

- The bearings shall consist of alternating steel laminates and internal elastomer laminates with top and bottom elastomer covers. Steel laminates shall have a nominal thickness of 0.075 inch (14 gage).

The first paragraph in Section 51-1.135, "Mortar," of the Standard Specifications is amended to read:

- Mortar shall be composed of cementitious material, sand, and water proportioned and mixed as specified in this Section 51-1.135.

The third paragraph in Section 51-1.135, "Mortar," of the Standard Specifications is amended to read:

- The proportion of cementitious material to sand, measured by volume, shall be one to 2 unless otherwise specified.

The third sentence of the fourth paragraph of Section 51-1.17, "Finishing Bridge Decks," of the Standard Specifications is amended to read:

- The surfaces shall have a profile trace showing no high points in excess of 0.25 inch, and the portions of the surfaces within the traveled way shall have a profile count of 5 or less in any 100-foot section.

Section 51-1.17, "Finishing Bridge Decks," of the Standard Specifications is amended by adding the following subsection:

#### **51-1.17A DECK CRACK TREATMENT**

- The Contractor shall use all means necessary to minimize the development of shrinkage cracks.
- The Contractor shall remove all equipment and materials from the deck and clean the surface as necessary for the Engineer to measure the surface crack intensity. Surface crack intensity will be determined by the Engineer after completion of concrete cure, before prestressing, and before the release of falsework. In any 500 square foot portion of deck within the limits of the new concrete deck, should the intensity of cracking be such that there are more than 16 feet of cracks whose width at any location exceeds 0.02 inch, the deck shall be treated with methacrylate resin. The area of deck to be treated shall have a width that extends for the entire width of new deck inside the concrete barriers and a length that extends at least 5 feet beyond the furthest single continuous crack outside the 500 square foot portion, measured from where that crack exceeds 0.02 inch in width, as determined by the Engineer.
- Deck crack treatment shall include furnishing, testing, and application of methacrylate resin and sand. If grinding is required, deck treatment shall take place before grinding.



### **51-1.17A(1) Submittals**

- Before starting deck treatment, the Contractor shall submit plans in conformance with Section 5-1.02, "Plans and Working Drawings," for the following:

1. Public safety plan for the use of methacrylate resin
2. Placement plan for the construction operation

- The plans shall identify materials, equipment, and methods to be used.
- The public safety plan for the use of methacrylate resin shall include details for the following:

1. Shipping
2. Storage
3. Handling
4. Disposal of residual methacrylate resin and the containers

- The placement plan for construction shall include the following:

1. Schedule of deck treatment for each bridge. The schedule shall be consistent with "Maintaining Traffic" of the special provisions and shall include time for the Engineer to perform California Test 342.
2. Methods and materials to be used, including the following:
  - 2.1. Description of equipment for applying the resin
  - 2.2. Description of equipment for applying the sand
  - 2.3. Gel time range and final cure time for the resin

- If the measures proposed in the safety plan are inadequate to provide for public safety associated with the use of methacrylate resin, the Engineer will reject the plan and direct the Contractor to revise the plan. Directions for revisions will be in writing and include detailed comments. The Engineer will notify the Contractor of the approval or rejection of a submitted or revised plan within 15 days of receipt of that plan.

- 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 any resulting loss, and an extension of time will be granted, in the same manner as provided for in Section 8-1.09, "Right of Way Delays."

### **51-1.17A(2) Materials**

- Before using methacrylate resin, a Material Safety Data Sheet shall be submitted for each shipment of resin.

- Methacrylate resin shall be low odor and have a high molecular weight. Before adding initiator, the resin shall have a maximum volatile content of 30 percent when tested in conformance with the requirements in ASTM Designation: D 2369, and shall conform to the following:

PROPERTY	REQUIREMENT	TEST METHOD
* Viscosity	25 cP, maximum, (Brookfield RVT with UL adaptor, 50 RPM at 77°F)	ASTM D 2196
* Specific Gravity	0.90 minimum, at 77°F	ASTM D 1475
* Flash Point	180°F, minimum	ASTM D 3278
* Vapor Pressure	1.0 mm Hg, maximum, at 77°F	ASTM D 323
Tack-free Time	400 minutes, maximum at 25°C	Specimen prepared per California Test 551
PCC Saturated Surface-Dry Bond Strength	3.5 MPa, minimum at 24 hours and 21±1°C	California Test 551
* Test shall be performed before adding initiator.		

### 51-1.17A(3) Testing

- The Contractor shall allow 20 days for sampling and testing by the Engineer of the methacrylate resin before proposed use. If bulk resin is to be used, the Contractor shall notify the Engineer in writing at least 15 days before the delivery of the bulk resin to the job site. Bulk resin is any resin stored in containers in excess of 55 gallons.

- Before starting production treatment, the Contractor shall treat a test area of approximately 500 square feet that is within the project limits and at a location approved by the Engineer. When available the test area shall be outside of the traveled way. Weather and pavement conditions during the test treatment shall be similar to those expected on the deck. Equipment used for testing shall be similar to those used for deck treating operations.

- During test and production deck treatment, test tiles shall be used to evaluate the resin cure time. The Contractor shall coat at least one 4" x 4" commercial quality smooth glazed tile for each batch of methacrylate resin. The coated tile shall be placed adjacent to the corresponding treated area. Sand shall not be applied to the test tiles.

- The acceptance criteria for a treated area is as follows:

- The test tiles are dry to the touch.
- The treated deck surface is tack free (non-oily).
- The sand cover adheres and resists brushing by hand.
- Excess sand has been removed by vacuuming or sweeping.
- The coefficient of friction is at least 0.35 when tested in conformance with California Test 342.

- Deck treatment on the test area shall demonstrate that the methods and materials meet the acceptance criteria and that the production work will be completed within the specified time for maintaining traffic.

- If a test or production area fails to meet the acceptance criteria, as determined by the Engineer, the treatment will be rejected, and the treatment shall be removed and replaced until the area complies with the acceptance criteria.

#### **51-1.17A(4) Construction**

- Equipment shall be fitted with suitable traps, filters, drip pans, or other devices as necessary to prevent oil or other deleterious material from being deposited on the deck.
- Before deck treatment with methacrylate resin, the bridge deck surface shall be cleaned by abrasive blasting, and all loose material shall be blown from visible cracks using high-pressure air. Concrete curing seals shall be cleaned from the deck surface to be treated, and the deck shall be dry when blast cleaning is performed. If the deck surface becomes contaminated at any time before placing the resin, the deck surface shall be cleaned by abrasive blasting.
- Where abrasive blasting is being performed within 10 feet of a lane occupied by public traffic, the residue including dust shall be removed immediately after contact between the abrasive and the surface being treated. The removal shall be by a vacuum attachment operating concurrently with the abrasive blasting operation.
- A compatible promoter/initiator system shall be capable of providing the resin gel time range shown on the placement plan. Gel time shall be adjusted to compensate for the changes in temperature throughout treatment application.
- Resin shall be applied by machine and by using a two-part resin system with a promoted resin for one part and an initiated resin for the other part. This two-part resin system shall be combined at equal volumes to the spray bars through separate positive displacement pumps. Combining of the 2 components shall be by either static in-line mixers or by external intersecting spray fans. The pump pressure at the spray bars shall not be great enough to cause appreciable atomization of the resin. Compressed air shall not be used to produce the spray. A shroud shall be used to enclose the spray bar apparatus.
- At the Contractor's option, manual application may be used. For manual application, (1) the quantity of resin mixed with promoter and initiator shall be limited to 5 gallons at a time, and (2) the resin shall be distributed by squeegees and brooms within 10 minutes after application.
- The Contractor shall apply methacrylate resin only to the specified area. Barriers, railing, joints, and drainage facilities shall be adequately protected to prevent contamination by the treatment material. Contaminated items shall be repaired at the Contractor's expense.
- The relative humidity shall be less than 90 percent at the time of treatment. The prepared area shall be dry and the surface temperature shall be at least 50°F and not more than 100°F when the resin is applied. The rate of application of promoted/initiated resin shall be approximately 90 square feet per gallon; the exact rate shall be determined by the Engineer.
- The deck surfaces to be treated shall be completely covered with resin so the resin penetrates and fills all cracks. The resin shall be applied within 5 minutes after complete mixing. A significant increase in viscosity shall be cause for rejection. Excess material shall be redistributed by squeegees or brooms within 10 minutes after application. For textured deck surfaces, including grooved surfaces, excess material shall be removed from the texture indentations.
- After the resin has been applied, at least 20 minutes shall elapse before applying sand. The sand shall be commercial quality dry blast sand. At least 95 percent of the sand shall pass the No. 8 sieve and at least 95 percent shall be retained on the No. 20 sieve. The sand shall be applied at a rate of approximately 2 pounds per square yard or until refusal as determined by the Engineer.
- Traffic will not be allowed on treated areas until the acceptance criteria has been met as determined by the Engineer.

The second paragraph in Section 51-1.18C, "Class 2 Surface Finish (Gun Finish)," of the Standard Specifications is amended to read:

- When Class 2 surface finish (gun finish) is specified, ordinary surface finish shall first be completed. The concrete surfaces shall then be abrasive blasted to a rough texture and thoroughly washed down with water. While the washed surfaces are damp, but not wet, a finish coating of machine applied mortar, approximately 1/4 inch thick, shall be applied in not less than 2 passes. The coating shall be pneumatically applied and shall consist of either (1) sand, cementitious material, and water mechanically mixed prior to its introduction to the nozzle, or (2) premixed sand and cementitious material to which water is added prior to its expulsion from the nozzle. The use of admixtures shall be subject to the approval of the Engineer as provided in Section 90, "Portland Cement Concrete." Unless otherwise specified, supplementary cementitious materials will not be required. The proportion of cementitious material to sand shall be not less than one to 4, unless otherwise directed by the Engineer. Sand shall be of a grading suitable for the purpose intended. The machines shall be operated and the coating shall be applied in conformance with standard practice. The coating shall be firmly bonded to the concrete surfaces on which it is applied.

The fifth paragraph in Section 51-1.18C, "Class 2 Surface Finish (Gun Finish)," of the Standard Specifications is amended to read:

- When surfaces to be finished are in pedestrian undercrossings, the sand shall be silica sand and the cementitious material shall be standard white portland cement.

Section 51-1.23, "Payment," of the Standard Specifications is amended by adding the following:

- Full compensation for deck crack treatment, including execution of the public safety plan, shall be considered as included in the contract price paid per cubic yard for structural concrete, bridge, and no additional compensation will be allowed therefor.

## SECTION 52: REINFORCEMENT

Issue Date: December 7, 2007

The table in the eleventh paragraph of Section 52-1.07, "Placing," of the Standard Specifications is amended to read:

Height Zone (H) (Feet above ground)	Wind Pressure Value (psf)
$H \leq 30$	20
$30 < H \leq 50$	25
$50 < H \leq 100$	30
$H > 100$	35

The table in the second paragraph of Section 52-1.08B(1), "Mechanical Splices," of the Standard Specifications is amended to read:

Reinforcing Bar Number	Total Slip
4	0.010-inch
5	0.010-inch
6	0.010-inch
7	0.014-inch
8	0.014-inch
9	0.014-inch
10	0.018-inch
11	0.018-inch
14	0.024-inch
18	0.030-inch

The subparagraph under the sixth paragraph of Section 52-1.08B(2), "Butt Welded Splices," of the Standard Specifications is amended to read:

- The minimum preheat and interpass temperatures shall be 400° F for Grade 40 bars and 600° F for Grade 60 bars. Immediately after completing the welding, at least 6 inches of the bar on each side of the splice shall be covered by an insulated wrapping to control the rate of cooling. The insulated wrapping shall remain in place until the bar has cooled below 200° F.

Item A of the 3rd paragraph of Section 52-1.08C, "Service Splice and Ultimate Butt Splice Testing Requirements," of the Standard Specifications is amended to read:

- A. Proper facilities, including a calibrated tensile testing machine capable of breaking the largest size of reinforcing bar to be tested.

The 5th paragraph of Section 52-1.08C, "Service Splice and Ultimate Butt Splice Testing Requirements," of the Standard Specifications is amended to read:

- Prequalification and production sample splices and testing shall conform to California Test 670 and these specifications.

The 6th paragraph of Section 52-1.08C, "Service Splice and Ultimate Butt Splice Testing Requirements," of the Standard Specifications is deleted.

The 5th paragraph of Section 52-1.08C(2)(a), "Production Test Requirements for Service Splices," of the Standard Specifications is amended to read:

- If 3 or more sample splices from a production test conform to the provisions in this Section 52-1.08C(2), "Service Splice Test Criteria," all splices in the lot represented by this production test will be considered acceptable.

The 2nd paragraph of Section 52-1.08C(3), "Ultimate Butt Splice Test Criteria," of the Standard Specifications is amended to read:

- A minimum of 1 control bar shall be removed from the same bar as, and adjacent to, all ultimate prequalification, production, and quality assurance sample splices. The lengths of control bars shall conform to the lengths specified for sample splices in California Test 670. The portion of adjacent bar remaining in the work shall also be identified with weatherproof markings that correspond to its adjacent control bar.

The 2nd sentence of the 6th paragraph of Section 52-1.08C(3), "Ultimate Butt Splice Test Criteria," of the Standard Specifications is amended to read:

- In addition, necking of the bar, as defined in California Test 670, shall occur at rupture regardless of whether the bar breaks inside or outside the affected zone.

### **SECTION 53: SHOTCRETE**

Issue Date: November 2, 2007

The third paragraph in Section 53-1.01, "Description," of the Standard Specifications is amended to read:

- The dry-mix process shall consist of delivering dry mixed aggregate and cementitious material pneumatically or mechanically to the nozzle body and adding water and mixing the materials in the nozzle body. The wet-mix process shall consist of delivering mixed aggregate, cement, and water pneumatically to the nozzle and adding any admixture at the nozzle.

The first through fourth paragraphs in Section 53-1.02, "Materials," of the Standard Specifications is amended to read:

- Cementitious material, fine aggregate, and mixing water shall conform to the provisions in Section 90, "Portland Cement Concrete."
  - Shotcrete to be mixed and applied by the dry-mix process shall consist of one part cementitious material to not more than 4.5 parts fine aggregate, thoroughly mixed in a dry state before being charged into the machine. Measurement may be either by volume or by weight. The fine aggregate shall contain not more than 6 percent moisture by weight.
  - Shotcrete to be mixed and applied by the wet-mix process shall consist of cementitious material, fine aggregate, and water and shall contain not less than 632 pounds of cementitious material per cubic yard. A maximum of 30 percent pea gravel may be substituted for fine aggregate. The maximum size of pea gravel shall be such that 100 percent passes the 1/2 inch screen and at least 90 percent passes the 3/8 inch screen.
  - Admixtures may be added to shotcrete and shall conform to the provisions in Section 90-4, "Admixtures."

Item C of the third paragraph in Section 53-1.04, "Placing Shotcrete," of the Standard Specifications is amended to read:

- C. Aggregate and cementitious material that have been mixed for more than 45 minutes shall not be used unless otherwise permitted by the Engineer.

Section 53-1.07, "Measurement," of the Standard Specifications is amended to read:

- Quantities of shotcrete will be measured by the cubic yard computed from measurements, along the slope, of actual areas placed and the theoretical thickness shown on the plans. The Department does not pay for shotcrete placed outside the dimensions shown on the plans or to fill low foundation.

Section 53-1.08, "Payment," of the Standard Specifications is amended to read:

- The contract price paid per cubic yard for shotcrete shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in placing shotcrete, including preparing the foundation, wire reinforcement, structure backfill, joint filling material, and if required by the plans, drains with sacked pervious backfill material, as shown on the plans, as specified in these specifications and the special provisions, and as directed by the Engineer.

## **SECTION 55: STEEL STRUCTURES**

Issue Date: May 2, 2008

The 3rd paragraph of Section 55-1.05, "Falsework," of the Standard Specifications is amended to read:

- Construction methods and equipment employed by the Contractor shall conform to the provisions in Section 7-1.02, "Load Limitations."

The CVN impact value for Grade HPS 50W in the table in the fifth paragraph of Section 55-2.01, "Description," of the Standard Specifications is amended to read:

Grade HPS 50W* (4 inches and under in thickness)	20 at 10° F
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The first paragraph in Section 55-3.05, "Flatness of Faying and Bearing Surfaces," of the Standard Specifications is amended to read:

- Surfaces of bearing and base plates and other metal surfaces that are to come in contact with each other or with ground concrete surfaces or with asbestos sheet packing shall be flat to within 1/32-inch tolerance in 12 inches and to within 1/16-inch tolerance overall. Surfaces of bearing and base plates and other metal bearing surfaces that are to come in contact with preformed fabric pads, elastomeric bearing pads, or mortar shall be flat to within 1/8-inch tolerance in 12 inches and to within 3/16-inch tolerance overall.

Item B of the first paragraph of Section 55-3.10, "Fastener Threads," of the Standard Specifications is amended to read:

B. Internal threads shall conform to the requirements in ASTM Designation: A 563.

The third paragraph in Section 55-3.19, "Bearings and Anchorages," of the Standard Specifications is amended to read:

- Immediately before setting bearing assemblies or masonry plates directly on ground concrete surfaces, the Contractor shall thoroughly clean the surfaces of the concrete and the metal to be in contact and shall apply a coating of nonsag polysulfide or polyurethane caulking conforming to the requirements in ASTM Designation: C 920 to contact areas to provide full bedding.

The fifth paragraph in Section 55-3.19, "Bearings and Anchorages," of the Standard Specifications is amended to read:

- Mortar to be placed below masonry plates or bearing plates of the bearing assemblies and in anchor bolt sleeves or canisters shall conform to the provisions in Section 51-1.135, "Mortar," except that the proportion of cementitious material to sand shall be 1:3.

Item D of the first paragraph of Section 55-4.01, "Measurement," of the Standard Specifications is amended to read:

- D. To determine the pay quantities of galvanized metal, the weight to be added to the calculated weight of the base metal for the galvanizing will be determined from the table of weights of zinc coatings specified in ASTM Designation: A 153/A 153M.

## **SECTION 56: SIGNS**

Issue Date: March 16, 2007

The fifth paragraph in Section 56-1.03, "Fabrication," of the Standard Specifications is amended to read:

- Clips, eyes, or removable brackets shall be affixed to all signs and all posts and shall be used to secure the sign during shipping and for lifting and moving during erection as necessary to prevent damage to the finished galvanized or painted surfaces. Brackets on tubular sign structures shall be removed after erection. Details of the devices shall be shown on the working drawings.

The fourth paragraph of Section 56-1.10, "Payment," of the Standard Specifications is amended to read:

- The contract price paid per pound for install sign structure of the type or types designated 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 in installing sign structures, complete in place, including installing anchor bolt assemblies, removable sign panel frames, and sign panels and performing any welding, painting or galvanizing required during installation, as shown on the plans, as specified in these specifications and the special provisions, and as directed by the Engineer.

The fourth paragraph in Section 56-2.03, "Construction," of the Standard Specifications is amended to read:

- Backfill material for metal posts shall consist of minor concrete conforming to the provisions in Section 90-10, "Minor Concrete," and shall contain not less than 463 pounds of cementitious material per cubic yard.

## **SECTION 59: PAINTING**

Issue Date: May 1, 2006



The third paragraph of Section 59-2.12, "Painting," of the Standard Specifications is amended to read:

- Contact surfaces of stiffeners, railings, built up members or open seam exceeding 6 mils in width that would retain moisture, shall be caulked with polysulfide or polyurethane sealing compound conforming to the requirements in ASTM Designation: C 920, Type S, Grade NS, Class 25, Use O, or other approved material.

The fourth paragraph of Section 59-2.12, "Painting," of the Standard Specifications is amended to read:

- The dry film thickness of the paint will be measured in place with a calibrated Type 2 magnetic film thickness gage in conformance with the requirements in SSPC-PA 2, "Measurement of Dry Coating Thickness with Magnetic Gages," of the "SSPC: The Society for Protective Coatings," except that there shall be no limit to the number or location of spot measurements to verify compliance with specified thickness requirements.

#### **SECTION 64: PLASTIC PIPE**

Issue Date: July 31, 2007

The first paragraph of Section 64-1.06, "Concrete Backfill," of the Standard Specifications is amended to read:

- At locations where pipe is to be backfilled with concrete as shown on the plans, the concrete backfill shall be constructed of minor concrete or Class 4 concrete conforming to the provisions in Section 90, "Portland Cement Concrete." Minor concrete shall contain not less than 380 pounds of cementitious material per cubic yard. The concrete to be used will be designated in the contract item or shown on the plans.

The third paragraph of Section 64-1.06, "Concrete Backfill," of the Standard Specifications is amended to read:

- The surface of the concrete backfill shall be broomed with a heavy broom to produce a uniform rough surface if hot mix asphalt is to be placed directly thereon.

#### **SECTION 65: REINFORCED CONCRETE PIPE**

Issue Date: July 31, 2007

The first paragraph of Section 65-1.02, "Materials," of the Standard Specifications is amended to read:

- Cementitious material and aggregate shall conform to the provisions in Section 90-2, "Materials" except that mortar strengths relative to Ottawa sand and grading requirements shall not apply to the aggregate. Use of supplemental cementitious material shall conform to AASHTO Designation: M 170.

Subparagraph "c" of the eleventh paragraph of Section 65-1.02A(1) "Circular Reinforced Concrete Pipe (Designated or Selected by Class)," of the Standard Specifications is amended to read:

- c. Cementitious material and aggregate for non-reinforced concrete pipe shall conform to the provisions in Section 65-1.02, "Materials."

The first paragraph of Section 65-1.035, "Concrete Backfill," of the Standard Specifications is amended to read:

- At locations where pipe is to be backfilled with concrete as shown on the plans, the concrete backfill shall be constructed of minor concrete or Class 4 concrete in conformance with the provisions in Section 90, "Portland Cement Concrete." Minor concrete shall contain not less than 380 pounds of cementitious material per cubic yard. The concrete to be used will be designated in the contract item.

The third paragraph of Section 65-1.035, "Concrete Backfill," of the Standard Specifications is amended to read:

- The surface of the concrete backfill shall be broomed with a heavy broom to produce a uniform rough surface if hot mix asphalt is to be placed directly thereon.

The first subparagraph of the second paragraph of Section 65-1.06, "Joints," of the Standard Specifications is amended to read:

- Cement Mortar.- Mortar shall be composed of one part cementitious material and 2 parts sand by volume. Supplementary cementitious material will not be required.

## **SECTION 66: CORRUGATED METAL PIPE**

Issue Date: July 31, 2007

The first paragraph of Section 66-1.045, "Concrete Backfill," of the Standard Specifications is amended to read:

- At locations where pipe is to be backfilled with concrete as shown on the plans, the concrete backfill shall be constructed of minor concrete or Class 4 concrete conforming to the provisions in Section 90, "Portland Cement Concrete." Minor concrete shall contain not less than 380 pounds of cementitious material per cubic yard. The concrete to be used will be designated in the contract item or shown on the plans.

The third paragraph of Section 66-1.045, "Concrete Backfill," of the Standard Specifications is amended to read:

- The surface of the concrete backfill shall be broomed with a heavy broom to produce a uniform rough surface if hot mix asphalt is to be placed directly thereon.

## **SECTION 68: SUBSURFACE DRAINS**

Issue Date: July 31, 2007

The first and second paragraphs of Section 68-3.02D, "Miscellaneous," of the Standard Specifications are amended to read:

- Concrete for splash pads shall be produced from minor concrete conforming to the provisions in Section 90-10, "Minor Concrete." Minor concrete shall contain not less than 470 pounds of cementitious material per cubic yard.
- Mortar placed where edge drain outlets and vents connect to drainage pipe and existing drainage inlets shall conform to the provisions in Section 51-1.135, "Mortar."

The thirteenth paragraph of Section 68-3.03, "Installation," of the Standard Specifications is amended to read:

- Cement treated permeable material, which is not covered with hot mix asphalt within 12 hours after compaction of the permeable material, shall be cured by either sprinkling the material with a fine spray of water every 4 hours during daylight hours or covering the material with a white polyethylene sheet, not less than 6 mils thick. The above curing requirements shall begin at 7:00 a.m. on the morning following compaction of the cement treated permeable material and continue for the next 72 hours or until the material is covered with hot mix asphalt, whichever is less. The cement treated permeable material shall not be sprayed with water during the first 12 hours after compacting, but may be covered with the polyethylene sheet during the first 12 hours or prior to the beginning of the cure period.

The seventeenth and eighteenth paragraphs of Section 68-3.03, "Installation," of the Standard Specifications are amended to read:

- Hot mix asphalt for backfilling trenches in existing paved areas shall be produced from commercial quality aggregates and asphalt and mixed at a central mixing plant. The aggregate shall conform to the 3/4 inch grading, or the 1/2 inch grading for Type A and Type B hot mix asphalt specified in Section 39-1.02E, "Aggregate." The amount of asphalt binder to be mixed with the aggregate shall be between 4 percent and 7 percent by weight of the dry aggregate, as determined by the Engineer.
- Hot mix asphalt backfill shall be spread and compacted in approximately 2 equal layers by methods that will produce a hot mix asphalt surfacing of uniform smoothness, texture and density. Each layer shall be compacted before the temperature of the mixture drops below 250° F. Prior to placing the hot mix asphalt backfill, a tack coat of asphaltic emulsion conforming to the provisions in Section 94, "Asphaltic Emulsions," shall be applied to the vertical edges of existing pavement at an approximate rate of 0.05-gallon per square yard.

The twentieth paragraph of Section 68-3.03, "Installation," of the Standard Specifications is amended to read:

- Type A pavement markers conforming to the details shown on the plans and the provisions in Section 85, "Pavement Markers," shall be placed on paved shoulders or dikes at outlet, vent and cleanout locations as directed by the Engineer. The waiting period for placing pavement markers on new hot mix asphalt surfacing will not apply.

Section 68-3.05, "Payment," of the Standard Specifications is amended to read:

- The contract price paid per linear foot for plastic pipe (edge drain) of the size or sizes shown 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 in installing edge drains complete in place, including excavation (and removal of any concrete deposits that may occur along the lower edge of the concrete pavement in Type 1 installations) and hot mix asphalt backfill for Type 1 edge drain installation, tack coat, filter fabric, and treated permeable material, as shown on the plans, as specified in these specifications and the special provisions, and as directed by the Engineer.

- The contract price paid per linear foot for plastic pipe (edge drain outlet) of the size or sizes shown 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 in installing edge drain outlets, vents and cleanouts complete in place, including outlet and vent covers, expansion plugs, pavement markers, concrete splash pads, connecting outlets and vents to drainage facilities, and excavation and backfill [aggregate base, hot mix asphalt, tack coat, and native material] for outlets, vents, and cleanouts to be installed in embankments and existing shoulders, as shown on the plans, as specified in these specifications and the special provisions, and as directed by the Engineer.

## **SECTION 69: OVERSIDE DRAINS**

Issue Date: July 31, 2007

The first paragraph of Section 69-1.01, "Description," of the Standard Specifications is amended to read:

- This work shall consist of furnishing and installing entrance tapers, pipe downdrains, tapered inlets, flume downdrains, anchor assemblies, reducers, slip joints and hot mix asphalt overside drains to collect and carry surface drainage down the roadway slopes as shown on the plans or as directed by the Engineer and as specified in these specifications and the special provisions.

Section 69-1.02D, "Asphalt Concrete," of the Standard Specifications is amended to read:

### **69-1.02D Hot Mix Asphalt**

- Hot mix asphalt for overside drains shall conform to the provisions in Section 39-1.13, "Miscellaneous Areas."

Section 69-1.04, "Asphalt Concrete Overside Drains," is amended to read:

### **69-1.04 HOT MIX ASPHALT OVERSIDE DRAINS**

- Hot mix asphalt overside drains shall be constructed as shown on the plans or as directed by the Engineer. The hot mix asphalt shall be placed in conformance with the provisions in Section 39-1.13, "Miscellaneous Areas."

The second paragraph of Section 69-1.06, "Payment," of the Standard Specifications is amended to read:

- Quantities of hot mix asphalt placed for overside drains will be paid for as provided in Section 39-5, "Measurement and Payment," for hot mix asphalt placed in miscellaneous areas.

## **SECTION 70: MISCELLANEOUS FACILITIES**

Issue Date: January 5, 2007

The second paragraph of Section 70-1.02C, "Flared End Sections," of the Standard Specifications is amended to read:

- Precast concrete flared end sections shall conform to the requirements for Class III Reinforced Concrete Pipe in AASHTO Designation: M 170M. Cementitious materials and aggregate shall conform to the provisions in Section 90-2, "Materials," except that mortar strengths relative to Ottawa sand and grading requirements shall not apply to the aggregate. Use of supplementary cementitious material shall conform to the requirements in AASHTO Designation: M 170. The area of steel reinforcement per meter of flared end section shall be at least equal to the minimum steel requirements for circular reinforcement in circular pipe for the internal diameter of the circular portion of the flared end section. The basis of acceptance of the precast concrete flared end section shall conform to the requirements of Section 5.1.2 of AASHTO Designation: M 170.

The first paragraph of Section 70-1.02H, "Precast Concrete Structures," of the Standard Specifications is amended to read:

- Precast concrete pipe risers and pipe reducers, and precast concrete pipe sections, adjustment rings and tapered sections for pipe energy dissipators, pipe inlets and pipe manholes shall conform to the requirements in AASHTO Designation: M 199M/M 199, except that the cementitious material and aggregate shall conform to the provisions in Section 90-2, "Materials," except that mortar strengths relative to Ottawa sand and grading requirements shall not apply to the aggregate. Use of supplementary cementitious material shall conform to the requirements in AASHTO Designation: M 170.

The second paragraph of Section 70-1.03, "Installation," of the Standard Specifications is amended to read:

- Cutoff walls for precast concrete flared end sections shall be constructed of minor concrete conforming to the provisions in Section 90-10, "Minor Concrete." Minor concrete shall contain not less than 470 pounds of cementitious material per cubic yard.

## **SECTION 73: CONCRETE CURBS AND SIDEWALKS**

Issue Date: July 31, 2007

The second subparagraph of the second paragraph of Section 73-1.01, "Description," of the Standard Specifications is amended to read:

2. Minor concrete shall contain not less than 463 pounds of cementitious material per cubic yard except that when extruded or slip-formed curbs are constructed using

3/8-inch maximum size aggregate, minor concrete shall contain not less than 548 pounds of cementitious material per cubic yard.

The fifteenth paragraph of Section 73-1.06, "Sidewalk, Gutter Depression, Island Paving, Curb Ramp (Wheelchair Ramp) and Driveway Construction," of the Standard Specifications is amended to read:

- Where hot mix asphalt or portland cement concrete pavements are to be placed around or adjacent to manholes, pipe inlets or other miscellaneous structures in sidewalk, gutter depression, island paving, curb ramps or driveway areas, the structures shall not be constructed to final grade until after the pavements have been constructed for a reasonable distance on each side of the structures.

## **SECTION 75: MISCELLANEOUS METAL**

Issue Date: January 18, 2008

The 13th paragraph of Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications is amended to read:

- Concrete anchorage devices shall be mechanical expansion or resin capsule types installed in drilled holes or cast-in-place insert types. The anchorage devices shall be selected from the Department's Pre-Qualified Products List at:

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

- The anchorage devices shall be a complete system, including threaded studs, hex nuts, and cut washers. Thread dimensions for externally threaded concrete anchorage devices prior to zinc coating, shall conform to the requirements in ANSI Standard: B1.1 having Class 2A tolerances or ANSI Standard: B1.13M having Grade 6g tolerances. Thread dimensions for internally threaded concrete anchorage devices shall conform to the requirements in ASTM A 563.

The 18th paragraph of Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications is amended to read:

- Mechanical expansion anchors shall, when installed in accordance with the manufacturer's instructions and these specifications and tested in conformance with the requirements in California Test 681, withstand the application of a sustained tension test load of at least the following values for at least 48 hours with a movement not greater than 0.035 inch:

Stud Diameter (inches)	Sustained Tension Test Load (pounds)
*3/4	5,000
5/8	4,100
1/2	3,200
3/8	2,100
1/4	1,000

\* Maximum stud diameter permitted for mechanical expansion anchors.

- Resin capsule anchors shall, when installed in accordance with the manufacturer's instructions and these specifications and tested in conformance with the requirements in California Test 681, withstand the application of a sustained tension test load of at least the following values for at least 48 hours with a movement not greater than 0.010 inch:

Stud Diameter (inches)	Sustained Tension Test Load (pounds)
1-1/4	31,000
1	17,900
7/8	14,400
3/4	5,000
5/8	4,100
1/2	3,200
3/8	2,100
1/4	1,000

- At least 25 days before use, the Contractor shall submit one sample of each resin capsule anchor per lot to the Transportation Laboratory for testing. A lot of resin capsule anchors is 100 units, or fraction thereof, of the same brand and product name.

The 20th paragraph of Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications is amended to read:

- The Pre-Qualified Products List for concrete anchorage devices has been developed from data previously furnished by suppliers or manufacturers for each type and size. Approval of additional anchorage device types and sizes is contingent upon the Contractor submitting to the Engineer one sample of each type of concrete anchorage device, manufacturer's installation instructions, and certified results of tests, either by a private testing laboratory or the manufacturer, indicating compliance with the above requirements.

The twenty-fourth paragraph of Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications is amended to read:

- Sealing compound, for caulking and adhesive sealing, shall be a polysulfide or polyurethane material conforming to the requirements in ASTM Designation: C 920, Type S, Grade NS, Class 25, Use O.

The 1st sentence of the 3rd paragraph of Section 75-1.035, "Bridge Joint Restrainer Units." of the Standard Specifications is amended to read:

Cables shall be 3/4 inch preformed, 6 x 19, wire strand core or independent wire rope core (IWRC), galvanized in conformance with the requirements in Federal Specification RR-W-410, right regular lay, manufactured of improved plow steel with a minimum breaking strength of 23 tons.

Item C of the fourth paragraph of Section 75-1.035, "Bridge Joint Restrainer Units," of the Standard Specifications is amended to read:

- C. Nuts shall conform to the requirements in ASTM Designation: A 563 including Appendix X1, except lubrication is not required.

The twelfth paragraph in Section 75-1.035, "Bridge Joint Restrainer Units," of the Standard Specifications is amended to read:

- Concrete for filling cable drum units shall conform to the provisions in Section 90-10, "Minor Concrete," or at the option of the Contractor, may be a mix with 3/8-inch maximum size aggregate and not less than 675 pounds of cementitious material per cubic yard.

The sixth paragraph of Section 75-1.05, "Galvanizing," of the Standard Specifications is amended to read:

- Galvanizing of iron and steel hardware and nuts and bolts, when specified or shown on the plans, shall conform to the requirements in ASTM Designation: A 153/A 153M, except whenever threaded studs, bolts, nuts, and washers are specified to conform to the requirements in ASTM Designation: A 307, A 325, A 449, A 563, or F 436 and zinc coating is required, they shall be hot-dip zinc coated or mechanically zinc coated in conformance with the requirements in the ASTM Designations. Unless otherwise specified, galvanizing shall be performed after fabrication.

The eighth paragraph of Section 75-1.05, "Galvanizing," of the Standard Specifications is amended to read:

- Tapping of nuts or other internally threaded parts to be used with zinc coated bolts, anchor bars or studs shall be done after galvanizing and shall conform to the requirements for thread dimensions and overtapping allowances in ASTM Designation: A 563.

## **SECTION 80: FENCES**

Issue Date: January 5, 2007

The fourth paragraph of Section 80-3.01F, "Miscellaneous," of the Standard Specifications is amended to read:

- Portland cement concrete for metal post and brace footings and for deadmen shall be minor concrete conforming to the provisions in Section 90-10, "Minor Concrete." Minor concrete shall contain not less than 470 pounds of cementitious material per cubic yard.



The fourth paragraph of Section 80-4.01C, "Miscellaneous," of the Standard Specifications is amended to read:

- Portland cement concrete for metal post and for deadmen shall be produced from minor concrete conforming to the provisions in Section 90-10, "Minor Concrete." Minor concrete shall contain not less than 470 pounds of cementitious material per cubic yard.

### **SECTION 83: RAILINGS AND BARRIERS**

Issue Date: August 17, 2007

The seventh paragraph in Section 83-1.02, "Materials and Construction," of the Standard Specifications is amended to read:

- Mortar shall conform to the provisions in Section 51-1.135, "Mortar," and shall consist of one part by volume of cementitious material and 3 parts of clean sand.

The 1st sentence of the 8th subparagraph of the 24th paragraph of Section 83-1.02B, "Metal Beam Guard Railing," of the Standard Specifications is amended to read:

Anchor cable shall be 3/4 inch preformed, 6 x 19, wire strand core or independent wire rope core (IWRC), galvanized in conformance with the requirements in Federal Specification RR-W-410, right regular lay, manufactured of improved plow steel with a minimum breaking strength of 23 tons.

The 2nd sentence of the 6th paragraph of Section 83-1.02E, "Cable Railing," of the Standard Specifications is amended to read:

Cable shall be galvanized in conformance with the requirements in Federal Specification RR-W-410.

The 5th paragraph of Section 83-1.02I, "Chain Link Railing," of the Standard Specifications is amended to read:

Where shown on the plans, cables used in the frame shall be 5/16 inch in diameter, wire rope, with a minimum breaking strength of 5,000 pounds and shall be galvanized in conformance with the requirements in Federal Specification RR-W-410.

The 14th paragraph of Section 83-1.02I, "Chain Link Railing," of the Standard Specifications is amended to read:

Chain link fabric shall be either 11-gage Type I zinc-coated fabric conforming to the requirements in AASHTO M 181 or 11-gage Type IV polyvinyl chloride (PVC) coated fabric conforming to the requirements in Federal Specification RR-F-191/1.

Item b of the first paragraph in Section 83-2.02D(2), "Materials," of the Standard Specifications is amended to read:

- b. If the 3/8-inch maximum size aggregate grading is used to construct extruded or slip-formed concrete barriers, the cementitious material content of the minor concrete shall be not less than 675 pounds per cubic yard.

The third paragraph in Section 83-2.02D(2), "Materials," of the Standard Specifications is amended to read:

- The concrete paving between the tops of the 2 walls of concrete barrier (Types 50E, 60E, 60GE, and 60SE) and the optional concrete slab at the base between the 2 walls of concrete barrier (Types 50E, 60E, 60GE, and 60SE) shall be constructed of minor concrete conforming to the provisions of Section 90-10, "Minor Concrete," except that the minor concrete shall contain not less than 505 pounds of cementitious material per cubic yard.

## **SECTION 85: PAVEMENT MARKERS**

Issue Date: July 31, 2007

The sixth paragraph in Section 85-1.06, "Placement," of the Standard Specifications is amended to read:

- Pavement markers shall not be placed on new hot mix asphalt surfacing or seal coat until the surfacing or seal coat has been opened to public traffic for a period of not less than 7 days when hot melt bituminous adhesive is used, and not less than 14 days when epoxy adhesive is used.

The second sentence of the fourteenth paragraph in Section 85-1.06, "Placement," of the Standard Specifications is amended to read:

- Cleaning shall be done by blast cleaning on all surfaces regardless of age or type, except that blast cleaning of clean, new hot mix asphalt and clean, new seal coat surfaces will not be required when hot melt bituminous adhesive is used.

## **SECTION 86: SIGNALS, LIGHTING AND ELECTRICAL SYSTEMS**

Issue Date: July 31, 2007

The first sentence of the first paragraph of Section 86-2.02, "Removing and Replacing Improvements," of the Standard Specifications is amended to read:

- Improvements such as sidewalks, curbs, gutters, portland cement concrete and hot mix asphalt pavement, underlying material, lawns and plants and any other improvements removed, broken or damaged by the Contractor's operations, shall be replaced or reconstructed with the same kind of material as found on the work or with materials of equal quality.

The fourth paragraph in Section 86-2.03, "Foundations," of the Standard Specifications is amended to read:

- After each post, standard, and pedestal on structures is in proper position, mortar shall be placed under the base plate as shown on the plans. The exposed portions shall be formed to

present a neat appearance. Mortar shall conform to Section 51-1.135, "Mortar," except the mortar shall consist of one part by volume of cementitious material and 3 parts of clean sand and shall contain only sufficient moisture to permit packing. Mortar shall be cured by keeping it damp for 3 days.

Item D of the eighteenth paragraph in Section 86-2.05C, "Installation," of the Standard Specifications is amended to read:

- D. The conduit shall be placed in the bottom of the trench, and the trench shall be backfilled with minor concrete conforming to the provisions in Section 90-10, "Minor Concrete." Minor concrete shall contain not less than 590 pounds of cementitious material per cubic yard. Concrete backfill shall be placed to the pavement surface except, when the trench is in hot mix asphalt pavement and additional pavement is not being placed, the top 0.10 foot of the trench shall be backfilled with hot mix asphalt produced from commercial quality paving asphalt and aggregates.

Item E of the eighteenth paragraph in Section 86-2.05C, "Installation," of the Standard Specifications is amended to read:

- E. Prior to spreading hot mix asphalt, tack coat shall be applied in conformance with the provisions in Section 39, "Hot Mix Asphalt." Spreading and compacting of hot mix asphalt shall be performed by any method which will produce a hot mix asphalt surfacing of uniform smoothness, texture and density.

Item C of the twenty-third paragraph in Section 86-2.05C, "Installation," of the Standard Specifications is amended to read:

- C. Precast concrete conduit cradles shall conform to the dimensions shown on the plans and shall be constructed of minor concrete and commercial quality welded wire fabric. Minor concrete shall conform to the provisions in Section 90-10, "Minor Concrete," and shall contain not less than 590 pounds of cementitious material per cubic yard. The cradles shall be moist cured for not less than 3 days.

Item G of the twenty-third paragraph in Section 86-2.05C, "Installation," of the Standard Specifications is amended to read:

- G. The space around conduits through bridge abutment walls shall be filled with mortar conforming to the provisions in Section 51-1.135, "Mortar," except that the proportion of cementitious material to sand shall be one to 3.

The fifth paragraph in Section 86-2.07, "Traffic Pull Boxes," of the Standard Specifications is amended to read:

- Concrete placed around and under traffic pull boxes as shown on the plans shall be minor concrete conforming to the provisions in Section 90-10, "Minor Concrete."

The traffic signal controller cabinet requirement in the table in Section 86-2.08A, "Conductor Identification," of the Standard Specifications is amended to read:

Traffic Signal	Ungrounded Circuit Conductor	Blk	None	CON-1	6
Controller Cabinet	Grounded Circuit Conductor	Wht	None	CON-2	6

The first sentence of the first paragraph of Section 86-4.06, "Pedestrian Signal Faces," of the Standard Specifications is amended to read:

- Message symbols for pedestrian signal faces shall be white WALKING PERSON and Portland orange UPRAISED HAND conforming to the requirements in the Institute of Transportation Engineers Standards: "Pedestrian Traffic Control Signal Indications" and the "California MUTCD."

The second sentence of the tenth paragraph of Section 86-4.07, "Light Emitting Diode Pedestrian Signal Face 'Upraised Hand' Module," of the Standard Specifications is amended to read:

- The color of "UPRAISED HAND" shall be Portland orange conforming to the requirements of the Institute of Transportation Engineers Standards: "Pedestrian Traffic Control Signal Indications" and the "California MUTCD."

The second sentence of the first paragraph of subsection, "Elastomeric Sealant," of Section 86-5.01A(5), "Installation Details," of the Standard Specifications is amended to read:

- Sealant shall be suitable for use in both hot mix asphalt and portland cement concrete.

The first sentence of the first paragraph of subsection, "Asphatic Emulsion Sealant," of Section 86-5.01A(5), "Installation Details," of the Standard Specifications is amended to read:

- Asphaltic emulsion sealant shall conform to the requirements in State Specification 8040-41A-15 and shall be used only for filling slots in hot mix asphalt pavement.

The third sentence of the first paragraph of subsection, "Hot-Melt Rubberized Asphalt Sealant," of Section 86-5.01A(5), "Installation Details," of the Standard Specifications is amended to read:

- Sealant shall be suitable for use in both hot mix asphalt and portland cement concrete.

The tenth paragraph of subsection, "Hot-Melt Rubberized Asphalt Sealant," of Section 86-5.01A(5), "Installation Details," of the Standard Specifications is amended to read:

- If hot mix asphalt surfacing is to be placed, the loop conductors shall be installed prior to placing the uppermost layer of hot mix asphalt. The conductors shall be installed, as shown on the plans, in the compacted layer of hot mix asphalt immediately below the uppermost layer. Installation details shall be as shown on the plans, except the sealant shall fill the slot flush to the surface.

The first paragraph in Section 86-5.01D, "Removing or Abandoning Existing Pressure-Sensitive Detectors," of the Standard Specifications is amended to read:

- When a foundation for a pressure-sensitive vehicle detector is to be removed, the hole left by removing the detector frame and foundation shall be filled with minor concrete, except the roadway surface shall be reconstructed with material to match existing surfacing. Minor concrete shall conform to the provisions in Section 90-10, "Minor Concrete," except that the concrete shall contain not less than 420 pounds of cementitious material per cubic yard for hot mix asphalt surfaced roadways and not less than 590 pounds of cementitious material per cubic yard for portland cement concrete surfaced roadways.

The first paragraph of Section 86-8.01, "Payment," of the Standard Specifications is amended to read:

- The contract lump sum price or prices paid for signal, ramp metering, flashing beacon, lighting, sign illumination, traffic monitoring station, highway advisory radio systems, closed circuit television systems, or combinations thereof; for modifying or removing those systems; for temporary systems; or the lump sum or unit prices paid for various units of those systems; or the lump sum or per foot price paid for conduit of the various sizes, types and installation methods 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 in furnishing and installing, modifying, or removing the systems, combinations or units thereof, as shown on the plans, as specified in these specifications and the special provisions, and as directed by the Engineer, including any necessary pull boxes (except when the type required is shown as a separate contract item); excavation and backfill; concrete foundations (except when shown as a separate contract item); pedestrian barricades; furnishing and installing illuminated street name signs; installing sign panels on pedestrian barricades, on flashing beacon standards, and on traffic signal mast arms; restoring sidewalk, pavement and appurtenances damaged or destroyed during construction; salvaging existing materials; and making all required tests.

## **SECTION 90: PORTLAND CEMENT CONCRETE**

Issue Date: January 5, 2007

Section 90, "Portland Cement Concrete," of the Standard Specifications is amended to read:

## **SECTION 90: PORTLAND CEMENT CONCRETE**

### **90-1 GENERAL**

#### **90-1.01 DESCRIPTION**

- Portland cement concrete shall be composed of cementitious material, fine aggregate, coarse aggregate, admixtures if used, and water, proportioned and mixed as specified in these specifications.
  - The Contractor shall determine the mix proportions for concrete in conformance with these specifications.
    - Class 1 concrete shall contain not less than 675 pounds of cementitious material per cubic yard.
    - Class 2 concrete shall contain not less than 590 pounds of cementitious material per cubic yard.
    - Class 3 concrete shall contain not less than 505 pounds of cementitious material per cubic yard.

- Class 4 concrete shall contain not less than 420 pounds of cementitious material per cubic yard.
- Minor concrete shall contain not less than 550 pounds of cementitious material per cubic yard unless otherwise specified in these specifications or the special provisions.
- Unless otherwise designated on the plans or specified in these specifications or the special provisions, the amount of cementitious material used per cubic yard of concrete in structures or portions of structures shall conform to the following:

Use	Cementitious Material Content (Pounds/CY)
Concrete designated by compressive strength:	
Deck slabs and slab spans of bridges	675 min., 800 max.
Roof sections of exposed top box culverts	675 min., 800 max.
Other portions of structures	590 min., 800 max.
Concrete not designated by compressive strength:	
Deck slabs and slab spans of bridges	675 min.
Roof sections of exposed top box culverts	675 min.
Prestressed members	675 min.
Seal courses	675 min.
Other portions of structures	590 min.
Concrete for precast members	590 min., 925 max.

- Whenever the 28-day compressive strength shown on the plans is greater than 3,600 pounds per square inch, the concrete shall be designated by compressive strength. If the plans show a 28-day compressive strength that is 4,000 pounds per square inch or greater, an additional 14 days will be allowed to obtain the specified strength. The 28-day compressive strengths shown on the plans that are 3,600 pounds per square inch or less are shown for design information only and are not a requirement for acceptance of the concrete.
- Concrete designated by compressive strength shall be proportioned such that the concrete will attain the strength shown on the plans or specified in the special provisions.
- Before using concrete for which the mix proportions have been determined by the Contractor, or in advance of revising those mix proportions, the Contractor shall submit in writing to the Engineer a copy of the mix design.
- Compliance with cementitious material content requirements will be verified in conformance with procedures described in California Test 518 for cement content. For testing purposes, supplementary cementitious material shall be considered to be cement. Batch proportions shall be adjusted as necessary to produce concrete having the specified cementitious material content.
- If any concrete has a cementitious material, portland cement, or supplementary cementitious material content that is less than the minimum required, the concrete shall be removed. However, if the Engineer determines that the concrete is structurally adequate, the concrete may remain in place and the Contractor shall pay to the State \$0.25 for each pound of cementitious material, portland cement, or supplementary cementitious material that is less than the minimum required. The Department may deduct the amount from any moneys due, or that may become due, the Contractor under the contract. The deductions will not be made unless the difference between the contents required and those actually provided exceeds the batching tolerances permitted by Section 90-5, "Proportioning." No deductions will be made based on the results of California Test 518.
- The requirements of the preceding paragraph shall not apply to minor concrete or commercial quality concrete.

## 90-2 MATERIALS

### 90-2.01 CEMENTITIOUS MATERIALS

- Unless otherwise specified, cementitious material shall be either a combination of Type II or Type V portland cement and a supplementary cementitious material, or a blended cement.
- Cementitious materials used in cast-in-place concrete for exposed surfaces of like elements of a structure shall be from the same sources and of the same proportions.
- Cementitious materials shall be protected from moisture until used. Sacked cementitious materials shall be piled to permit access for tallying, inspecting, and identifying each shipment.
- Facilities shall be provided to ensure that cementitious materials meeting this Section 90-2.01 are kept separate from other cementitious materials. Sampling cementitious materials shall be in conformance with California Test 125.
- The Contractor shall furnish a Certificate of Compliance for cementitious materials in conformance with the provisions in Section 6-1.07, "Certificates of Compliance." The Certificate of Compliance shall indicate the source by name and location (including country, state, and city). If cementitious material is delivered directly to the job site, the Certificate of Compliance shall be signed by the cementitious material supplier. If the cementitious material is used in ready-mixed concrete or in precast concrete products purchased as such by the Contractor, the Certificate of Compliance shall be signed by the manufacturer of the concrete or product.

#### 90-2.01A CEMENT

- Portland cement shall conform to the requirements in ASTM Designation: C 150 except, using a 10-sample moving average, limestone shall not exceed 2.5 percent. The C<sub>3</sub>S content of Type II cement shall not exceed 65 percent.
- Blended cement shall conform to the requirements for Portland Blast-Furnace Slag, Cement Type IS (MS) or Portland-Pozzolan Cement, Type IP (MS) in AASHTO Designation: M 240 and shall be comprised of an intimate and uniform blend of Type II or Type V cement and supplementary cementitious material in an amount conforming to the requirements in Section 90-2.01C, "Required Use of Supplementary Cementitious Materials."
- In addition, blended cement, Type II portland cement, and Type V portland cement shall conform to the following requirements:
  - A. The cement shall not contain more than 0.60-percent by mass of alkalis, calculated as the percentage of Na<sub>2</sub>O plus 0.658 times the percentage of K<sub>2</sub>O, when determined by methods as required in AASHTO Designation: T 105;
  - B. The autoclave expansion shall not exceed 0.50-percent; and
  - C. Mortar, containing the cement to be used and Ottawa sand, when tested in conformance with California Test 527, shall not expand in water more than 0.010-percent and shall not contract in air more than 0.048-percent, except that when cement is to be used for precast prestressed concrete piling, precast prestressed concrete members, or steam cured concrete products, the mortar shall not contract in air more than 0.053-percent.
- Type III portland cement shall be used only as specified in the special provisions or with the approval of the Engineer. Type III portland cement shall conform to the additional requirements listed above for Type II portland cement, except when tested in conformance with California Test 527, mortar containing Type III portland cement shall not contract in air more than 0.075-percent.

### **90-2.01B SUPPLEMENTARY CEMENTITIOUS MATERIALS (SCM)**

- Fly ash shall conform to the requirements in AASHTO Designation: M 295, Class F, and the following:

- A. Calcium oxide content shall not exceed 10 percent.
- B. The available alkali, as sodium oxide equivalent, shall not exceed 1.5 percent when determined in conformance with the requirements in ASTM Designation: C 311 or the total alkali, as sodium oxide equivalent, shall not exceed 5.0 percent when determined in conformance with the requirements in AASHTO Designation: T 105.
- C. Commingling of fly ash from different sources at uncontrolled ratios is permissible only if the following criteria are satisfied:
  1. Sources of fly ash to be commingled shall be on the approved list of materials for use in concrete.
  2. Testing of the commingled product is the responsibility of the fly ash supplier.
  3. Each fly ash's running average of density shall not differ from any other by more than 0.01-pound per cubic inch at the time of commingling.
  4. Each fly ash's running average of loss on ignition shall not differ from any other by more than one percent at the time of commingling.
  5. The final product of commingled fly ash shall conform to the requirement in AASHTO Designation: M 295.

- Raw or calcined natural pozzolans shall conform to the requirements in AASHTO Designation: M 295, Class N and the following requirements:

- A. Calcium oxide content shall not exceed 10 percent.
- B. The available alkali, as sodium oxide equivalent, shall not exceed 1.5 percent when determined in conformance with the requirements in ASTM Designation: C 311 or the total alkali, as sodium oxide equivalent, shall not exceed 5.0 percent when determined in conformance with the requirements in AASHTO Designation: T 105.

- Ground Granulated Blast Furnace Slag (GGBFS) shall conform to the requirements in AASHTO Designation: M 302, Grade 100 or Grade 120.

- Silica Fume shall conform to the requirements of AASHTO Designation: M 307, with reduction in mortar expansion of 80 percent, minimum, using the cement from the proposed mix design.

### **90-2.01C REQUIRED USE OF SUPPLEMENTARY CEMENTITIOUS MATERIALS**

- The amount of portland cement and SCM used in portland cement concrete shall conform to the minimum cementitious material content provisions in Section 90-1.01, "Description," or Section 90-4.05, "Optional Use of Chemical Admixtures," and the following:

- A. If a blended cement conforming to the provisions in Section 90-2.01A, "Cement," is used, the minimum amount of SCM incorporated into the cement shall conform to the provisions in this Section 90-2.01C.
- B. Fly ash or natural pozzolan, silica fume, or GGBFS shall not be used with Type IP or Type IS cements.

- Use of SCMs shall conform to the following:



- A. If fly ash or natural pozzolan is used:
1. The minimum amount of portland cement shall not be less than 75 percent by weight of the specified minimum cementitious material content.
  2. The minimum amount of fly ash or natural pozzolan shall be:
    - a. Fifteen percent by weight of the total amount of cementitious material if the calcium oxide content of fly ash or natural pozzolan is equal to or less than 2 percent by weight;
    - b. Twenty-five percent by weight of the total amount of cementitious material if the calcium oxide content of fly ash or natural pozzolan is greater than 2 percent by weight.
  3. The total amount of fly ash or natural pozzolan shall not exceed 35 percent by weight of the total amount of cementitious material to be used in the mix. If Section 90-1.01, "Description," specifies a maximum cementitious material content in pounds per cubic yard, the total weight of portland cement and fly ash or natural pozzolan per cubic yard shall not exceed the specified maximum cementitious material content.
- B. If silica fume is used:
1. The amount of silica fume shall not be less than 10 percent by weight of the total amount of cementitious material.
  2. The amount of portland cement shall not be less than 75 percent by weight of the specified minimum cementitious material content.
  3. If Section 90-1.01, "Description," specifies a maximum cementitious material content in pounds per cubic yard, the total weight of portland cement and silica fume per cubic yard shall not exceed the specified maximum cementitious material content.
- C. If GGBFS is used:
1. The minimum amount of GGBFS shall be either:
    - a. Forty percent of the total cementitious material to be used, if the aggregates used in the concrete are on the Department's list of "Approved Aggregates For Use in Concrete with Reduced Fly Ash."
    - b. No less than 50 percent.
  2. The amount of GGBFS shall not exceed 60 percent by weight of the total amount of cementitious materials to be used.

## **90-2.02 AGGREGATES**

- Aggregates shall be free from deleterious coatings, clay balls, roots, bark, sticks, rags, and other extraneous material.
- The Contractor shall provide safe and suitable facilities, including necessary splitting devices for obtaining samples of aggregates, in conformance with California Test 125.
- Aggregates shall be of such character that it will be possible to produce workable concrete within the limits of water content provided in Section 90-6.06, "Amount of Water and Penetration."

- Aggregates shall have not more than 10 percent loss when tested for soundness in conformance with the requirements in California Test 214. The soundness requirement for fine aggregate will be waived, provided that the durability index,  $D_f$ , of the fine aggregate is 60 or greater when tested for durability in conformance with California Test 229.

- If the results of any one or more of the Cleanness Value, Sand Equivalent, or aggregate grading tests do not meet the requirements specified for "Operating Range" but all meet the "Contract Compliance" requirements, the placement of concrete shall be suspended at the completion of the current pour until tests or other information indicate that the next material to be used in the work will comply with the requirements specified for "Operating Range."

- If the results of either or both the Cleanness Value and coarse aggregate grading tests do not meet the requirements specified for "Contract Compliance," the concrete that is represented by the tests shall be removed. However, if the Engineer determines that the concrete is structurally adequate, the concrete may remain in place, and the Contractor shall pay to the State \$3.50 per cubic yard for paving concrete and \$5.50 per cubic yard for all other concrete for the concrete represented by these tests and left in place. The Department may deduct the amount from any moneys due, or that may become due, the Contractor under the contract.

- If the results of either or both the Sand Equivalent and fine aggregate grading tests do not meet the requirements specified for "Contract Compliance," the concrete which is represented by the tests shall be removed. However, if the Engineer determines that the concrete is structurally adequate, the concrete may remain in place, and the Contractor shall pay to the State \$3.50 per cubic yard for paving concrete and \$5.50 per cubic yard for all other concrete for the concrete represented by these tests and left in place. The Department may deduct the amount from any moneys due, or that may become due, the Contractor under the contract.

- The 2 preceding paragraphs apply individually to the "Contract Compliance" requirements for coarse aggregate and fine aggregate. When both coarse aggregate and fine aggregate do not conform to the "Contract Compliance" requirements, both paragraphs shall apply. The payments specified in those paragraphs are in addition to any payments made in conformance with the provisions in Section 90-1.01, "Description."

- No single Cleanness Value, Sand Equivalent, or aggregate grading test shall represent more than 300 cubic yards of concrete or one day's pour, whichever is smaller.

- When the source of an aggregate is changed, the Contractor shall adjust the mix proportions and submit in writing to the Engineer a copy of the mix design before using the aggregates.

#### **90-2.02A COARSE AGGREGATE**

- Coarse aggregate shall consist of gravel, crushed gravel, crushed rock, reclaimed aggregate, crushed air-cooled iron blast furnace slag or combinations thereof. Crushed air-cooled blast furnace slag shall not be used in reinforced or prestressed concrete.

- Reclaimed aggregate is aggregate that has been recovered from plastic concrete by washing away the cementitious material. Reclaimed aggregate shall conform to all aggregate requirements.

- Coarse aggregate shall conform to the following quality requirements:

Tests	California Test	Requirements
Loss in Los Angeles Rattler (after 500 revolutions)	211	45% max.
Cleanness Value		
Operating Range	227	75 min.
Contract Compliance	227	71 min.

- In lieu of the above Cleanness Value requirements, a Cleanness Value "Operating Range" limit of 71, minimum, and a Cleanness Value "Contract Compliance" limit of 68, minimum, will be used to determine the acceptability of the coarse aggregate if the Contractor furnishes a Certificate of Compliance, as provided in Section 6-1.07, "Certificates of Compliance," certifying that:

- Coarse aggregate sampled at the completion of processing at the aggregate production plant had a Cleanness Value of not less than 82 when tested in conformance with the requirements in California Test 227; and
- Prequalification tests performed in conformance with the requirements in California Test 549 indicated that the aggregate would develop a relative strength of not less than 95 percent and would have a relative shrinkage not greater than 105 percent, based on concrete.

**90-2.02B FINE AGGREGATE**

- Fine aggregate shall consist of natural sand, manufactured sand produced from larger aggregate or a combination thereof. Manufactured sand shall be well graded.
- Fine aggregate shall conform to the following quality requirements:

Test	California Test	Requirements
Organic Impurities	213	Satisfactory <sup>a</sup>
Mortar Strengths Relative to Ottawa Sand	515	95%, min.
Sand Equivalent:		
Operating Range	217	75, min.
Contract Compliance	217	71, min.

a Fine aggregate developing a color darker than the reference standard color solution may be accepted if it is determined by the Engineer, from mortar strength tests, that a darker color is acceptable.

- In lieu of the above Sand Equivalent requirements, a Sand Equivalent "Operating Range" limit of 71, minimum, and a Sand Equivalent "Contract Compliance" limit of 68, minimum, will be used to determine the acceptability of the fine aggregate if the Contractor furnishes a Certificate of Compliance, as provided in Section 6-1.07, "Certificates of Compliance," certifying that:

- Fine aggregate sampled at the completion of processing at the aggregate production plant had a Sand Equivalent value of not less than 82 when tested by California Test 217; and
- Prequalification tests performed in conformance with California Test 549 indicated that the aggregate would develop a relative strength of not less than 95 percent and would have a relative shrinkage not greater than 105 percent, based on concrete.

### **90-2.03 WATER**

- In conventionally reinforced concrete work, the water for curing, for washing aggregates, and for mixing shall be free from oil and shall not contain more than 1,000 parts per million of chlorides as Cl, when tested in conformance with California Test 422, nor more than 1,300 parts per million of sulfates as SO<sub>4</sub>, when tested in conformance with California Test 417. In prestressed concrete work, the water for curing, for washing aggregates, and for mixing shall be free from oil and shall not contain more than 650 parts per million of chlorides as Cl, when tested in conformance with California Test 422, nor more than 1,300 parts per million of sulfates as SO<sub>4</sub>, when tested in conformance with California Test 417. In no case shall the water contain an amount of impurities that will cause either: 1) a change in the setting time of cement of more than 25 percent when tested in conformance with the requirements in ASTM Designation: C 191 or ASTM Designation: C 266 or 2) a reduction in the compressive strength of mortar at 14 days of more than 5 percent, when tested in conformance with the requirements in ASTM Designation: C 109, when compared to the results obtained with distilled water or deionized water, tested in conformance with the requirements in ASTM Designation: C 109.

- In nonreinforced concrete work, the water for curing, for washing aggregates and for mixing shall be free from oil and shall not contain more than 2,000 parts per million of chlorides as Cl, when tested in conformance with California Test 422, or more than 1,500 parts per million of sulfates as SO<sub>4</sub>, when tested in conformance with California Test 417.

- In addition to the above provisions, water for curing concrete shall not contain impurities in a sufficient amount to cause discoloration of the concrete or produce etching of the surface.

- Water reclaimed from mixer wash-out operations may be used in mixing concrete. The water shall not contain coloring agents or more than 300 parts per million of alkalis (Na<sub>2</sub>O + 0.658 K<sub>2</sub>O) as determined on the filtrate. The specific gravity of the water shall not exceed 1.03 and shall not vary more than ±0.010 during a day's operations.

### **90-2.04 ADMIXTURE MATERIALS**

- Admixture materials shall conform to the requirements in the following ASTM Designations:

- A. Chemical Admixtures—ASTM Designation: C 494.

- B. Air-entraining Admixtures—ASTM Designation: C 260.

## **90-3 AGGREGATE GRADINGS**

### **90-3.01 GENERAL**

- Before beginning concrete work, the Contractor shall submit in writing to the Engineer the gradation of the primary aggregate nominal sizes that the Contractor proposes to furnish. If a primary coarse aggregate or the fine aggregate is separated into 2 or more sizes, the proposed gradation shall consist of the gradation for each individual size, and the proposed proportions of each individual size, combined mathematically to indicate one proposed gradation. The proposed gradation shall meet the grading requirements shown in the table in this section, and shall show the percentage passing each of the sieve sizes used in determining the end result.

- The Engineer may waive, in writing, the gradation requirements in this Section 90-3.01 and in Sections 90-3.02, "Coarse Aggregate Grading," 90-3.03, "Fine Aggregate Grading," and 90-3.04, "Combined Aggregate Gradings," if, in the Engineer's opinion, furnishing the gradation is not necessary for the type or amount of concrete work to be constructed.

- Gradations proposed by the Contractor shall be within the following percentage passing limits:

Primary Aggregate Nominal Size	Sieve Size	Limits of Proposed Gradation
1 1/2" x 3/4"	1"	19 - 41
1" x No. 4	3/4"	52 - 85
1" x No. 4	3/8"	15 - 38
1/2" x No. 4	3/8"	40 - 78
3/8" x No. 8	3/8"	50 - 85
Fine Aggregate	No. 16	55 - 75
Fine Aggregate	No. 30	34 - 46
Fine Aggregate	No. 50	16 - 29

- Should the Contractor change the source of supply, the Contractor shall submit in writing to the Engineer the new gradations before their intended use.

### 90-3.02 COARSE AGGREGATE GRADING

- The grading requirements for coarse aggregates are shown in the following table for each size of coarse aggregate:

Sieve Sizes	Percentage Passing Primary Aggregate Nominal Sizes							
	1 1/2" x 3/4"		1" x No. 4		1/2" x No. 4		3/8" x No. 8	
	Operating Range	Contract Compliance	Operating Range	Contract Compliance	Operating Range	Contract Compliance	Operating Range	Contract Compliance
2"	100	100	—	—	—	—	—	—
1 1/2"	88 - 100	85 - 100	100	100	—	—	—	—
1"	X ±18	X ±25	88 - 100	86 - 100	—	—	—	—
3/4"	0 - 17	0 - 20	X ±15	X ±22	100	100	—	—
1/2"	—	—	—	—	82 - 100	80 - 100	100	100
3/8"	0 - 7	0 - 9	X ±15	X ±22	X ±15	X ±22	X ±15	X ±20
No. 4	—	—	0 - 16	0 - 18	0 - 15	0 - 18	0 - 25	0 - 28
No. 8	—	—	0 - 6	0 - 7	0 - 6	0 - 7	0 - 6	0 - 7

- In the above table, the symbol X is the gradation that the Contractor proposes to furnish for the specific sieve size as provided in Section 90-3.01, "General."

• Coarse aggregate for the 1 1/2 inch, maximum, combined aggregate grading as provided in Section 90-3.04, "Combined Aggregate Gradings," shall be furnished in 2 or more primary aggregate nominal sizes. Each primary aggregate nominal size may be separated into 2 sizes and stored separately, provided that the combined material conforms to the grading requirements for that particular primary aggregate nominal size.

• When the one inch, maximum, combined aggregate grading as provided in Section 90-3.04, "Combined Aggregate Gradings," is to be used, the coarse aggregate may be separated into 2 sizes and stored separately, provided that the combined material shall conform to the grading requirements for the 1" x No. 4 primary aggregate nominal size.

### 90-3.03 FINE AGGREGATE GRADING

- Fine aggregate shall be graded within the following limits:

Sieve Sizes	Percentage Passing	
	Operating Range	Contract Compliance
3/8"	100	100
No. 4	95 - 100	93 - 100
No. 8	65 - 95	61 - 99
No. 16	X ±10	X ±13
No. 30	X ±9	X ±12
No. 50	X ±6	X ±9
No. 100	2 - 12	1 - 15
No. 200	0 - 8	0 - 10

- In the above table, the symbol X is the gradation that the Contractor proposes to furnish for the specific sieve size as provided in Section 90-3.01, "General."
- In addition to the above required grading analysis, the distribution of the fine aggregate sizes shall be such that the difference between the total percentage passing the No. 16 sieve and the total percentage passing the No. 30 sieve shall be between 10 and 40, and the difference between the percentage passing the No. 30 and No. 50 sieves shall be between 10 and 40.
- Fine aggregate may be separated into 2 or more sizes and stored separately, provided that the combined material conforms to the grading requirements specified in this Section 90-3.03.

#### 90-3.04 COMBINED AGGREGATE GRADINGS

- Combined aggregate grading limits shall be used only for the design of concrete mixes. Concrete mixes shall be designed so that aggregates are combined in proportions that shall produce a mixture within the grading limits for combined aggregates as specified herein.
- The combined aggregate grading, except when otherwise specified in these specifications or the special provisions, shall be either the 1 1/2 inch, maximum grading, or the 1 inch, maximum grading, at the option of the Contractor.

Grading Limits of Combined Aggregates

Sieve Sizes	Percentage Passing			
	1 1/2" Max.	1" Max.	1/2" Max.	3/8" Max.
2"	100	—	—	—
1 1/2"	90 - 100	100	—	—
1"	50 - 86	90 - 100	—	—
3/4"	45 - 75	55 - 100	100	—
1/2"	—	—	90 - 100	100
3/8"	38 - 55	45 - 75	55 - 86	50 - 100
No. 4	30 - 45	35 - 60	45 - 63	45 - 63
No. 8	23 - 38	27 - 45	35 - 49	35 - 49
No. 16	17 - 33	20 - 35	25 - 37	25 - 37
No. 30	10 - 22	12 - 25	15 - 25	15 - 25
No. 50	4 - 10	5 - 15	5 - 15	5 - 15
No. 100	1 - 6	1 - 8	1 - 8	1 - 8
No. 200	0 - 3	0 - 4	0 - 4	0 - 4

- Changes from one grading to another shall not be made during the progress of the work unless permitted by the Engineer.

### 90-4 ADMIXTURES

#### 90-4.01 GENERAL

- Admixtures used in portland cement concrete shall conform to and be used in conformance with the provisions in this Section 90-4 and the special provisions. Admixtures

shall be used when specified or ordered by the Engineer and may be used at the Contractor's option as provided herein.

- Chemical admixtures and air-entraining admixtures containing chlorides as Cl in excess of one percent by weight of admixture, as determined by California Test 415, shall not be used.
- Admixtures shall be uniform in properties throughout their use in the work. Should it be found that an admixture as furnished is not uniform in properties, its use shall be discontinued.
- If more than one admixture is used, the admixtures shall be compatible with each other so that the desirable effects of all admixtures used will be realized.
- Chemical admixtures shall be used in conformance with the manufacturer's written recommendations.

#### **90-4.02 MATERIALS**

- Admixture materials shall conform to the provisions in Section 90-2.04, "Admixture Materials."

#### **90-4.03 ADMIXTURE APPROVAL**

- No admixture brand shall be used in the work unless it is on the Department's current list of approved brands for the type of admixture involved.
- Admixture brands will be considered for addition to the approved list if the manufacturer of the admixture submits to the Transportation Laboratory a sample of the admixture accompanied by certified test results demonstrating that the admixture complies with the requirements in the appropriate ASTM Designation and these specifications. The sample shall be sufficient to permit performance of all required tests. Approval of admixture brands will be dependent upon a determination as to compliance with the requirements, based on the certified test results submitted, together with tests the Department may elect to perform.
- If the Contractor proposes to use an admixture of a brand and type on the current list of approved admixture brands, the Contractor shall furnish a Certificate of Compliance from the manufacturer, as provided in Section 6-1.07, "Certificates of Compliance," certifying that the admixture furnished is the same as that previously approved. If a previously approved admixture is not accompanied by a Certificate of Compliance, the admixture shall not be used in the work until the Engineer has had sufficient time to make the appropriate tests and has approved the admixture for use. The Engineer may take samples for testing at any time, whether or not the admixture has been accompanied by a Certificate of Compliance.

#### **90-4.04 REQUIRED USE OF CHEMICAL ADMIXTURES**

- If the use of a chemical admixture is specified, the admixture shall be used at the dosage specified, except that if no dosage is specified, the admixture shall be used at the dosage normally recommended by the manufacturer of the admixture.

#### **90-4.05 OPTIONAL USE OF CHEMICAL ADMIXTURES**

- The Contractor may use Type A or F, water-reducing; Type B, retarding; or Type D or G, water-reducing and retarding admixtures as described in ASTM Designation: C 494 to conserve cementitious material or to facilitate any concrete construction application subject to the following conditions:

- A. If a water-reducing admixture or a water-reducing and retarding admixture is used, the cementitious material content specified or ordered may be reduced by a maximum of

5 percent by weight, except that the resultant cementitious material content shall be not less than 505 pounds per cubic yard; and

B. When a reduction in cementitious material content is made, the dosage of admixture used shall be the dosage used in determining approval of the admixture.

- Unless otherwise specified, a Type C accelerating chemical admixture conforming to the requirements in ASTM Designation: C 494, may be used in portland cement concrete. Inclusion in the mix design submitted for approval will not be required provided that the admixture is added to counteract changing conditions that contribute to delayed setting of the portland cement concrete, and the use or change in dosage of the admixture is approved in writing by the Engineer.

#### **90-4.06 REQUIRED USE OF AIR-ENTRAINING ADMIXTURES**

- When air-entrainment is specified or ordered by the Engineer, the air-entraining admixture shall be used in amounts to produce a concrete having the specified air content as determined by California Test 504.

#### **90-4.07 OPTIONAL USE OF AIR-ENTRAINING ADMIXTURES**

- When air-entrainment has not been specified or ordered by the Engineer, the Contractor will be permitted to use an air-entraining admixture to facilitate the use of any construction procedure or equipment provided that the average air content, as determined by California Test 504, of 3 successive tests does not exceed 4 percent, and no single test value exceeds 5.5 percent. If the Contractor elects to use an air-entraining admixture in concrete for pavement, the Contractor shall so indicate at the time the Contractor designates the source of aggregate.

#### **90-4.08 BLANK**

#### **90-4.09 BLANK**

#### **90-4.10 PROPORTIONING AND DISPENSING LIQUID ADMIXTURES**

- Chemical admixtures and air-entraining admixtures shall be dispensed in liquid form. Dispensers for liquid admixtures shall have sufficient capacity to measure at one time the prescribed quantity required for each batch of concrete. Each dispenser shall include a graduated measuring unit into which liquid admixtures are measured to within  $\pm 5$  percent of the prescribed quantity for each batch. Dispensers shall be located and maintained so that the graduations can be accurately read from the point at which proportioning operations are controlled to permit a visual check of batching accuracy prior to discharge. Each measuring unit shall be clearly marked for the type and quantity of admixture.

- Each liquid admixture dispensing system shall be equipped with a sampling device consisting of a valve located in a safe and readily accessible position such that a sample of the admixture may be withdrawn slowly by the Engineer.

- If more than one liquid admixture is used in the concrete mix, each liquid admixture shall have a separate measuring unit and shall be dispensed by injecting equipment located in such a manner that the admixtures are not mixed at high concentrations and do not interfere with the effectiveness of each other. When air-entraining admixtures are used in conjunction with other liquid admixtures, the air-entraining admixture shall be the first to be incorporated into the mix, unless it is demonstrated that a different sequence improves performance.



- When automatic proportioning devices are required for concrete pavement, dispensers for liquid admixtures shall operate automatically with the batching control equipment. The dispensers shall be equipped with an automatic warning system in good operating condition that will provide a visible or audible signal at the point at which proportioning operations are controlled when the quantity of admixture measured for each batch of concrete varies from the preselected dosage by more than 5 percent, or when the entire contents of the measuring unit are not emptied from the dispenser into each batch of concrete.

- Unless liquid admixtures are added to premeasured water for the batch, their discharge into the batch shall be arranged to flow into the stream of water so that the admixtures are well dispersed throughout the batch, except that air-entraining admixtures may be dispensed directly into moist sand in the batching bins provided that adequate control of the air content of the concrete can be maintained.

- Liquid admixtures requiring dosages greater than one-half gallon per cubic yard shall be considered to be water when determining the total amount of free water as specified in Section 90-6.06, "Amount of Water and Penetration."

#### **90-4.11 BLANK**

### **90-5 PROPORTIONING**

#### **90-5.01 STORAGE OF AGGREGATES**

- Aggregates shall be stored or stockpiled in such a manner that separation of coarse and fine particles of each size shall be avoided and the various sizes shall not become intermixed before proportioning.

- Aggregates shall be stored or stockpiled and handled in a manner that prevent contamination by foreign materials. In addition, storage of aggregates at batching or mixing facilities that are erected subsequent to the award of the contract and that furnish concrete to the project shall conform to the following:

A. Intermingling of the different sizes of aggregates shall be positively prevented. The Contractor shall take the necessary measures to prevent intermingling. The preventive measures may include, but are not necessarily limited to, physical separation of stockpiles or construction of bulkheads of adequate length and height; and

B. Contamination of aggregates by contact with the ground shall be positively prevented. The Contractor shall take the necessary measures to prevent contamination. The preventive measures shall include, but are not necessarily limited to, placing aggregates on wooden platforms or on hardened surfaces consisting of portland cement concrete, asphalt concrete, or cement treated material.

- In placing aggregates in storage or in moving the aggregates from storage to the weigh hopper of the batching plant, any method that may cause segregation, degradation, or the combining of materials of different gradings that will result in any size of aggregate at the weigh hopper failing to meet the grading requirements, shall be discontinued. Any method of handling aggregates that results in excessive breakage of particles shall be discontinued. The use of suitable devices to reduce impact of falling aggregates may be required by the Engineer.

#### **90-5.02 PROPORTIONING DEVICES**

- Weighing, measuring, or metering devices used for proportioning materials shall conform to the requirements in Section 9-1.01, "Measurement of Quantities," and this Section 90-5.02. In

addition, automatic weighing systems shall comply with the requirements for automatic proportioning devices in Section 90-5.03A, "Proportioning for Pavement." Automatic devices shall be automatic to the extent that the only manual operation required for proportioning the aggregates, cement, and supplementary cementitious material for one batch of concrete is a single operation of a switch or starter.

- Proportioning devices shall be tested as frequently as the Engineer may deem necessary to ensure their accuracy.

- Weighing equipment shall be insulated against vibration or movement of other operating equipment in the plant. When the plant is in operation, the weight of each batch of material shall not vary from the weight designated by the Engineer by more than the tolerances specified herein.

- Equipment for cumulative weighing of aggregate shall have a zero tolerance of  $\pm 0.5$  percent of the designated total batch weight of the aggregate. For systems with individual weigh hoppers for the various sizes of aggregate, the zero tolerance shall be  $\pm 0.5$  percent of the individual batch weight designated for each size of aggregate. Equipment for cumulative weighing of cement and supplementary cementitious material shall have a zero tolerance of  $\pm 0.5$  percent of the designated total batch weight of the cement and supplementary cementitious material. Equipment for weighing cement or supplementary cementitious material separately shall have a zero tolerance of  $\pm 0.5$  percent of their designated individual batch weights. Equipment for measuring water shall have a zero tolerance of  $\pm 0.5$  percent of its designated weight or volume.

- The weight indicated for any batch of material shall not vary from the preselected scale setting by more than the following:

- A. Aggregate weighed cumulatively shall be within 1.0 percent of the designated total batch weight of the aggregate. Aggregates weighed individually shall be within 1.5 percent of their respective designated batch weights; and
- B. Cement shall be 99 to 102 percent of its designated batch weight. When weighed individually, supplementary cementitious material shall be 99 to 102 percent of its designated batch weight. When supplementary cementitious material and cement are permitted to be weighed cumulatively, cement shall be weighed first to 99 to 102 percent of its designated batch weight, and the total for cement and supplementary cementitious material shall be 99 to 102 percent of the sum of their designated batch weights; and
- C. Water shall be within 1.5 percent of its designated weight or volume.

- Each scale graduation shall be approximately 0.001 of the total capacity of the scale. The capacity of scales for weighing cement, supplementary cementitious material, or cement plus supplementary cementitious material and aggregates shall not exceed that of commercially available scales having single graduations indicating a weight not exceeding the maximum permissible weight variation above, except that no scale shall be required having a capacity of less than 1,000 pounds, with one pound graduations.

### **90-5.03 PROPORTIONING**

- Proportioning shall consist of dividing the aggregates into the specified sizes, each stored in a separate bin, and combining them with cementitious material and water as provided in these specifications. Aggregates shall be proportioned by weight.

- At the time of batching, aggregates shall have been dried or drained sufficiently to result in a stable moisture content such that no visible separation of water from aggregate will take place during transportation from the proportioning plant to the point of mixing. In no event shall

the free moisture content of the fine aggregate at the time of batching exceed 8 percent of its saturated, surface-dry weight.

- Should separate supplies of aggregate material of the same size group, but of different moisture content or specific gravity or surface characteristics affecting workability, be available at the proportioning plant, withdrawals shall be made from one supply exclusively and the materials therein completely exhausted before starting upon another.

- Bulk Type IP (MS) cement shall be weighed in an individual hopper and shall be kept separate from the aggregates until the ingredients are released for discharge into the mixer.

- Bulk cement and supplementary cementitious material may be weighed in separate, individual weigh hoppers or may be weighed in the same weigh hopper and shall be kept separate from the aggregates until the ingredients are released for discharge into the mixer. If the cement and supplementary cementitious material are weighed cumulatively, the cement shall be weighed first.

- If cement and supplementary cementitious material are weighed in separate weigh hoppers, the weigh systems for the proportioning of the aggregate, the cement, and the supplementary cementitious material shall be individual and distinct from all other weigh systems. Each weigh system shall be equipped with a hopper, a lever system, and an indicator to constitute an individual and independent material-weighing device. The cement and the supplementary cementitious material shall be discharged into the mixer simultaneously with the aggregate.

- The scales and weigh hoppers for bulk weighing cement, supplementary cementitious material, or cement plus supplementary cementitious material shall be separate and distinct from the aggregate weighing equipment.

- For batches of one cubic yard or more, the batching equipment shall conform to one of the following combinations:

- A. Separate boxes and separate scale and indicator for weighing each size of aggregate.

- B. Single box and scale indicator for all aggregates.

- C. Single box or separate boxes and automatic weighing mechanism for all aggregates.

- In order to check the accuracy of batch weights, the gross weight and tare weight of batch trucks, truck mixers, truck agitators, and non-agitating hauling equipment shall be determined when ordered by the Engineer. The equipment shall be weighed on scales designated by the Engineer.

### **90-5.03A PROPORTIONING FOR PAVEMENT**

- Aggregates and bulk supplementary cementitious material for use in pavement shall be proportioned by weight by means of automatic proportioning devices of approved type conforming to these specifications.

- The Contractor shall install and maintain in operating condition an electronically actuated moisture meter that will indicate, on a readily visible scale, changes in the moisture content of the fine aggregate as it is batched within a sensitivity of 0.5 percent by weight of the fine aggregate.

- The batching of cement, supplementary cementitious material, or cement plus supplementary cementitious material and aggregate shall be interlocked so that a new batch cannot be started until all weigh hoppers are empty, the proportioning devices are within zero tolerance, and the discharge gates are closed. The interlock shall permit no part of the batch to be discharged until all aggregate hoppers and the cement and supplementary cementitious material hoppers or the cement plus supplementary cementitious material hopper are charged

with weights that are within the tolerances specified in Section 90-5.02, "Proportioning Devices."

- If interlocks are required for cement and supplementary cementitious material charging mechanisms and cement and supplementary cementitious material are weighed cumulatively, their charging mechanisms shall be interlocked to prevent the introduction of mineral admixture until the weight of cement in the cement weigh hopper is within the tolerances specified in Section 90-5.02, "Proportioning Devices."

- If concrete is completely mixed in stationary paving mixers, the supplementary cementitious materials shall be weighed in a separate weigh hopper and the supplementary cementitious material and cement shall be introduced simultaneously into the mixer proportionately with the aggregate. If the Contractor provides certification that the stationary mixer is capable of mixing the cement, supplementary cementitious material, aggregates, and water uniformly before discharge, weighing the supplementary cementitious material cumulatively with the cement is permitted. Certification shall contain the following:

- A. Test results for 2 compressive strength test cylinders of concrete taken within the first one-third and 2 compressive strength test cylinders of concrete taken within the last one-third of the concrete discharged from a single batch from the stationary paving mixer. Strength tests and cylinder preparation will be in conformance with the provisions of Section 90-9, "Compressive Strength";
- B. Calculations demonstrating that the difference in the averages of 2 compressive strengths taken in the first one-third is no greater than 7.5 percent different than the averages of 2 compressive strengths taken in the last one-third of the concrete discharged from a single batch from the stationary paving mixer. Strength tests and cylinder preparation will be in conformance with the provisions of Section 90-9, "Compressive Strength;" and
- C. The mixer rotation speed and time of mixing before discharge that are required to produce a mix that meets the requirements above.

- The discharge gate on the cement and supplementary cementitious material hoppers or the cement plus supplementary cementitious material hopper shall be designed to permit regulating the flow of cement, supplementary cementitious material, or cement plus supplementary cementitious material into the aggregate as directed by the Engineer.

- If separate weigh boxes are used for each size of aggregate, the discharge gates shall permit regulating the flow of each size of aggregate as directed by the Engineer.

- Material discharged from the several bins shall be controlled by gates or by mechanical conveyors. The means of withdrawal from the several bins, and of discharge from the weigh box, shall be interlocked so that not more than one bin can discharge at a time, and so that the weigh box cannot be tripped until the required quantity from each of the several bins has been deposited therein. Should a separate weigh box be used for each size of aggregate, all may be operated and discharged simultaneously.

- If the discharge from the several bins is controlled by gates, each gate shall be actuated automatically so that the required mass is discharged into the weigh box, after which the gate shall automatically close and lock.

- The automatic weighing system shall be designed so that all proportions required may be set on the weighing controller at the same time.

## 90-6 MIXING AND TRANSPORTING

### 90-6.01 GENERAL

- Concrete shall be mixed in mechanically operated mixers, except that when permitted by the Engineer, batches not exceeding 1/3 cubic yard may be mixed by hand methods in conformance with the provisions in Section 90-6.05, "Hand-Mixing."
- Equipment having components made of aluminum or magnesium alloys that would have contact with plastic concrete during mixing, transporting, or pumping of portland cement concrete shall not be used.
- Concrete shall be homogeneous and thoroughly mixed, and there shall be no lumps or evidence of undispersed cementitious material.
- Uniformity of concrete mixtures will be determined by differences in penetration as determined by California Test 533, or slump as determined by ASTM Designation: C 143, and by variations in the proportion of coarse aggregate as determined by California Test 529.
- When the mix design specifies a penetration value, the difference in penetration, determined by comparing penetration tests on 2 samples of mixed concrete from the same batch or truck mixer load, shall not exceed 1/2-inch. When the mix design specifies a slump value, the difference in slump, determined by comparing slump tests on 2 samples of mixed concrete from the same batch or truck mixer load, shall not exceed the values given in the table below. Variation in the proportion of coarse aggregate will be determined by comparing the results of tests of 2 samples of mixed concrete from the same batch or truck mixer load and the difference between the 2 results shall not exceed 170 pounds per cubic yard of concrete.

Average Slump	Maximum Permissible Difference
Less than 4"	1"
4" to 6"	1 1/2"
Greater than 6" to 9"	2"

- The Contractor shall furnish samples of the freshly mixed concrete and provide satisfactory facilities for obtaining the samples.

### 90-6.02 MACHINE MIXING

- Concrete mixers may be of the revolving drum or the revolving blade type, and the mixing drum or blades shall be operated uniformly at the mixing speed recommended by the manufacturer. Mixers and agitators that have an accumulation of hard concrete or mortar shall not be used.
- The temperature of mixed concrete, immediately before placing, shall be not less than 50° F or more than 90° F. Aggregates and water shall be heated or cooled as necessary to produce concrete within these temperature limits. Neither aggregates nor mixing water shall be heated to exceed 150° F. If ice is used to cool the concrete, discharge of the mixer will not be permitted until all ice is melted.
- The batch shall be so charged into the mixer that some water will enter in advance of cementitious materials and aggregates. All water shall be in the drum by the end of the first one-fourth of the specified mixing time.
- Cementitious materials shall be batched and charged into the mixer by means that will not result either in loss of cementitious materials due to the effect of wind, in accumulation of cementitious materials on surfaces of conveyors or hoppers, or in other conditions that reduce or vary the required quantity of cementitious material in the concrete mixture.

- Paving and stationary mixers shall be operated with an automatic timing device. The timing device and discharge mechanism shall be interlocked so that during normal operation no part of the batch will be discharged until the specified mixing time has elapsed.
- The total elapsed time between the intermingling of damp aggregates and all cementitious materials and the start of mixing shall not exceed 30 minutes.
- The size of batch shall not exceed the manufacturer's guaranteed capacity.
- When producing concrete for pavement or base, suitable batch counters shall be installed and maintained in good operating condition at job site batching plants and stationary mixers. The batch counters shall indicate the exact number of batches proportioned and mixed.
- Concrete shall be mixed and delivered to the job site by means of one of the following combinations of operations:

- A. Mixed completely in a stationary mixer and the mixed concrete transported to the point of delivery in truck agitators or in nonagitating hauling equipment (central-mixed concrete).
- B. Mixed partially in a stationary mixer, and the mixing completed in a truck mixer (shrink-mixed concrete).
- C. Mixed completely in a truck mixer (transit-mixed concrete).
- D. Mixed completely in a paving mixer.

- Agitators may be truck mixers operating at agitating speed or truck agitators. Each mixer and agitator shall have attached thereto in a prominent place a metal plate or plates on which is plainly marked the various uses for which the equipment is designed, the manufacturer's guaranteed capacity of the drum or container in terms of the volume of mixed concrete and the speed of rotation of the mixing drum or blades.
- Truck mixers shall be equipped with electrically or mechanically actuated revolution counters by which the number of revolutions of the drum or blades may readily be verified.
- When shrink-mixed concrete is furnished, concrete that has been partially mixed at a central plant shall be transferred to a truck mixer and all requirements for transit-mixed concrete shall apply. No credit in the number of revolutions at mixing speed will be allowed for partial mixing in a central plant.

### **90-6.03 TRANSPORTING MIXED CONCRETE**

- Mixed concrete may be transported to the delivery point in truck agitators or truck mixers operating at the speed designated by the manufacturer of the equipment as agitating speed, or in non-agitating hauling equipment, provided the consistency and workability of the mixed concrete upon discharge at the delivery point is suitable for adequate placement and consolidation in place, and provided the mixed concrete after hauling to the delivery point conforms to the provisions in Section 90-6.01, "General."
- Truck agitators shall be loaded not to exceed the manufacturer's guaranteed capacity and shall maintain the mixed concrete in a thoroughly mixed and uniform mass during hauling.
- Bodies of nonagitating hauling equipment shall be constructed so that leakage of the concrete mix, or any part thereof, will not occur at any time.
- Concrete hauled in open-top vehicles shall be protected during hauling against rain or against exposure to the sun for more than 20 minutes when the ambient temperature exceeds 75° F.
- No additional mixing water shall be incorporated into the concrete during hauling or after arrival at the delivery point, unless authorized by the Engineer. If the Engineer authorizes additional water to be incorporated into the concrete, the drum shall be revolved not less than 30 revolutions at mixing speed after the water is added and before discharge is commenced.

- The rate of discharge of mixed concrete from truck mixer-agitators shall be controlled by the speed of rotation of the drum in the discharge direction with the discharge gate fully open.
- If a truck mixer or agitator is used for transporting concrete to the delivery point, discharge shall be completed within 1.5 hours or before 250 revolutions of the drum or blades, whichever occurs first, after the introduction of the cement to the aggregates. Under conditions contributing to quick stiffening of the concrete, or if the temperature of the concrete is 85° F or above, the time allowed may be less than 1.5 hours. If an admixture is used to retard the set time, the temperature of the concrete shall not exceed 85° F, the time limit shall be 2 hours, and the revolution limitation shall be 300.
- If nonagitating hauling equipment is used for transporting concrete to the delivery point, discharge shall be completed within one hour after the addition of the cement to the aggregates. Under conditions contributing to quick stiffening of the concrete, or when the temperature of the concrete is 85° F or above, the time between the introduction of cement to the aggregates and discharge shall not exceed 45 minutes.
- Each load of concrete delivered at the job site shall be accompanied by a weighmaster certificate showing the mix identification number, nonrepeating load number, date and time at which the materials were batched, the total amount of water added to the load, and for transit-mixed concrete, the reading of the revolution counter at the time the truck mixer is charged with cement. This weighmaster certificate shall also show the actual scale weights (pounds) for the ingredients batched. Theoretical or target batch weights shall not be used as a substitute for actual scale weights.
- Weighmaster certificates shall be provided in printed form, or if approved by the Engineer, the data may be submitted in electronic media. Electronic media shall be presented in a tab-delimited format on a 3 1/2-inch diskette with a capacity of at least 1.4 megabytes. Captured data, for the ingredients represented by each batch shall be "line feed, carriage return" (LFCR) and "one line, separate record" with allowances for sufficient fields to satisfy the amount of data required by these specifications.
- The Contractor may furnish a weighmaster certificate accompanied by a separate certificate that lists the actual batch weights or measurements for a load of concrete provided that both certificates are imprinted with the same nonrepeating load number that is unique to the contract and delivered to the jobsite with the load.
- Weighmaster certificates furnished by the Contractor shall conform to the provisions in Section 9-1.01, "Measurement of Quantities."

#### **90-6.04 TIME OR AMOUNT OF MIXING**

- Mixing of concrete in paving or stationary mixers shall continue for the required mixing time after all ingredients, except water and admixture, if added with the water, are in the mixing compartment of the mixer before any part of the batch is released. Transfer time in multiple drum mixers shall not be counted as part of the required mixing time.
- The required mixing time, in paving or stationary mixers, of concrete used for concrete structures, except minor structures, shall be not less than 90 seconds or more than 5 minutes, except that when directed by the Engineer in writing, the requirements of the following paragraph shall apply.
- The required mixing time, in paving or stationary mixers, except as provided in the preceding paragraph, shall be not less than 50 seconds or more than 5 minutes.
- The minimum required revolutions at the mixing speed for transit-mixed concrete shall not be less than that recommended by the mixer manufacturer, but in no case shall the number of revolutions be less than that required to consistently produce concrete conforming to the provisions for uniformity in Section 90-6.01, "General."

- When a high range water-reducing admixture is added to the concrete at the job site, the total number of revolutions shall not exceed 300.

**90-6.05 HAND-MIXING**

- Hand-mixed concrete shall be made in batches of not more than 1/3 cubic yard and shall be mixed on a watertight, level platform. The proper amount of coarse aggregate shall be measured in measuring boxes and spread on the platform and the fine aggregate shall be spread on this layer, the 2 layers being not more than one foot in total depth. On this mixture shall be spread the dry cementitious materials and the whole mass turned no fewer than 2 times dry; then sufficient clean water shall be added, evenly distributed, and the whole mass again turned no fewer than 3 times, not including placing in the carriers or forms.

**90-6.06 AMOUNT OF WATER AND PENETRATION**

- The amount of water used in concrete mixes shall be regulated so that the penetration of the concrete as determined by California Test 533 or the slump of the concrete as determined by ASTM Designation: C 143 is within the nominal values shown in the following table. When the penetration or slump of the concrete is found to exceed the nominal values listed, the mixture of subsequent batches shall be adjusted to reduce the penetration or slump to a value within the nominal range shown. Batches of concrete with a penetration or slump exceeding the maximum values listed shall not be used in the work. If Type F or Type G chemical admixtures are added to the mix, the penetration requirements shall not apply and the slump shall not exceed 9 inches after the chemical admixtures are added.

Type of Work	Nominal		Maximum	
	Penetration (inches)	Slump (inches)	Penetration (inches)	Slump (inches)
Concrete Pavement	0 - 1	—	1 1/2	—
Non-reinforced concrete facilities	0 - 1 1/2	—	2	—
Reinforced concrete structures				
Sections over 12 inches thick	0 - 1 1/2	—	2 1/2	—
Sections 12 inches thick or less	0 - 2	—	3	—
Concrete placed under water	—	6 - 8	—	9
Cast-in-place concrete piles	2 1/2 - 3 1/2	5 - 7	4	8

- The amount of free water used in concrete shall not exceed 310 pounds per cubic yard, plus 20 pounds for each required 100 pounds of cementitious material in excess of 550 pounds per cubic yard.
  - The term free water is defined as the total water in the mixture minus the water absorbed by the aggregates in reaching a saturated surface-dry condition.
  - If there are adverse or difficult conditions that affect the placing of concrete, the above specified penetration and free water content limitations may be exceeded providing the Contractor is granted permission by the Engineer in writing to increase the cementitious material content per cubic yard of concrete. The increase in water and cementitious material shall be at a ratio not to exceed 30 pounds of water per added 100 pounds of cementitious material per cubic yard. Full compensation for additional cementitious material and water added under these conditions shall be considered as included in the contract price paid for the concrete work involved and no additional compensation will be allowed therefor.
  - The equipment for supplying water to the mixer shall be constructed and arranged so that the amount of water added can be measured accurately. Any method of discharging water into the mixer for a batch shall be accurate within 1.5 percent of the quantity of water required to be



added to the mix for any position of the mixer. Tanks used to measure water shall be designed so that water cannot enter while water is being discharged into the mixer and discharge into the mixer shall be made rapidly in one operation without dribbling. All equipment shall be arranged so as to permit checking the amount of water delivered by discharging into measured containers.

## **90-7 CURING CONCRETE**

### **90-7.01 METHODS OF CURING**

- Newly placed concrete shall be cured by the methods specified in this Section 90-7.01 and the special provisions.

#### **90-7.01A WATER METHOD**

- The concrete shall be kept continuously wet by the application of water for a minimum curing period of 7 days after the concrete has been placed.

- Cotton mats, rugs, carpets, or earth or sand blankets may be used as a curing medium to retain the moisture during the curing period.

- If a curing medium consisting of cotton mats, rugs, carpets, polyethylene sheeting, polyethylene sheeting on burlap, or earth or sand blankets is to be used to retain the moisture, the entire surface of the concrete shall be kept damp by applying water with a nozzle that so atomizes the flow that a mist and not a spray is formed, until the surface of the concrete is covered with the curing medium. The moisture from the nozzle shall not be applied under pressure directly upon the concrete and shall not be allowed to accumulate on the concrete in a quantity sufficient to cause a flow or wash the surface. At the expiration of the curing period, the concrete surfaces shall be cleared of all curing media.

- At the option of the Contractor, a curing medium consisting of white opaque polyethylene sheeting extruded onto burlap may be used to cure concrete structures. The polyethylene sheeting shall have a minimum thickness of 4-mil, and shall be extruded onto 10-ounce burlap.

- At the option of the Contractor, a curing medium consisting of polyethylene sheeting may be used to cure concrete columns. The polyethylene sheeting shall have a minimum thickness of 10-mil achieved in a single layer of material.

- If the Contractor chooses to use polyethylene sheeting or polyethylene sheeting on burlap as a curing medium, these media and any joints therein shall be secured as necessary to provide moisture retention and shall be within 3 inches of the concrete at all points along the surface being cured. When these media are used, the temperature of the concrete shall be monitored during curing. If the temperature of the concrete cannot be maintained below 140° F, use of these curing media shall be disallowed.

- When concrete bridge decks and flat slabs are to be cured without the use of a curing medium, the entire surface of the bridge deck or slab shall be kept damp by the application of water with an atomizing nozzle as specified above, until the concrete has set, after which the entire surface of the concrete shall be sprinkled continuously with water for a period of not less than 7 days.

#### **90-7.01B CURING COMPOUND METHOD**

- Surfaces of the concrete that are exposed to the air shall be sprayed uniformly with a curing compound.

- Curing compounds to be used shall be as follows:

1. Pigmented curing compound conforming to the requirements in ASTM Designation: C 309, Type 2, Class B, except the resin type shall be poly-alpha-methylstyrene.
2. Pigmented curing compound conforming to the requirements in ASTM Designation: C 309, Type 2, Class B.
3. Pigmented curing compound conforming to the requirements in ASTM Designation: C 309, Type 2, Class A.
4. Nonpigmented curing compound conforming to the requirements in ASTM Designation: C 309, Type 1, Class B.
5. Nonpigmented curing compound conforming to the requirements in ASTM Designation: C 309, Type 1, Class A.
6. Nonpigmented curing compound with fugitive dye conforming to the requirements in ASTM Designation: C 309, Type 1-D, Class A.

- The infrared scan for the dried vehicle from curing compound (1) shall match the infrared scan on file at the Transportation Laboratory.

- The loss of water for each type of curing compound, when tested in conformance with the requirements in California Test 534, shall not be more than 0.28-pounds per square yard in 24 hours.

- The curing compound to be used will be specified elsewhere in these specifications or in the special provisions.

- If the use of curing compound is required or permitted elsewhere in these specifications or in the special provisions and no specific kind is specified, any of the curing compounds listed above may be used.

- Curing compound shall be applied at a nominal rate of one gallon per 150 square feet, unless otherwise specified.

- At any point, the application rate shall be within  $\pm 50$  square feet per gallon of the nominal rate specified, and the average application rate shall be within  $\pm 25$  square feet per gallon of the nominal rate specified when tested in conformance with the requirements in California Test 535. Runs, sags, thin areas, skips, or holidays in the applied curing compound shall be evidence that the application is not satisfactory.

- Curing compounds shall be applied using power operated spray equipment. The power operated spraying equipment shall be equipped with an operational pressure gage and a means of controlling the pressure. Hand spraying of small and irregular areas that are not reasonably accessible to mechanical spraying equipment, in the opinion of the Engineer, may be permitted.

- The curing compound shall be applied to the concrete following the surface finishing operation, immediately before the moisture sheen disappears from the surface, but before any drying shrinkage or craze cracks begin to appear. In the event of any drying or cracking of the surface, application of water with an atomizing nozzle as specified in Section 90-7.01A, "Water Method," shall be started immediately and shall be continued until application of the compound is resumed or started; however, the compound shall not be applied over any resulting freestanding water. Should the film of compound be damaged from any cause before the expiration of 7 days after the concrete is placed in the case of structures and 72 hours in the case of pavement, the damaged portion shall be repaired immediately with additional compound.

- At the time of use, compounds containing pigments shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. A paddle shall be used to loosen all settled pigment from the bottom of the container, and a power driven agitator shall be used to disperse the pigment uniformly throughout the vehicle.

- Agitation shall not introduce air or other foreign substance into the curing compound.

- The manufacturer shall include in the curing compound the necessary additives for control of sagging, pigment settling, leveling, de-emulsification, or other requisite qualities of a satisfactory working material. Pigmented curing compounds shall be manufactured so that the pigment does not settle badly, does not cake or thicken in the container, and does not become granular or curdled. Settlement of pigment shall be a thoroughly wetted, soft, mushy mass permitting the complete and easy vertical penetration of a paddle. Settled pigment shall be easily redispersed, with minimum resistance to the sideways manual motion of the paddle across the bottom of the container, to form a smooth uniform product of the proper consistency.

- Curing compounds shall remain sprayable at temperatures above 40° F and shall not be diluted or altered after manufacture.

- The curing compound shall be packaged in clean 274-gallon totes, 55-gallon barrels or 5-gallon pails shall be supplied from a suitable storage tank located at the jobsite. The containers shall comply with "Title 49, Code of Federal Regulations, Hazardous Materials Regulations." The 274-gallon totes and the 55-gallon barrels shall have removable lids and airtight fasteners. The 5-gallon pails shall be round and have standard full open head and bail. Lids with bungholes will not be permitted. Settling or separation of solids in containers, except tanks, must be completely redispersed with low speed mixing prior to use, in conformance with these specifications and the manufacturer's recommendations. Mixing shall be accomplished either manually by use of a paddle or by use of a mixing blade driven by a drill motor, at low speed. Mixing blades shall be the type used for mixing paint. On-site storage tanks shall be kept clean and free of contaminants. Each tank shall have a permanent system designed to completely redisperse settled material without introducing air or other foreign substances.

- Steel containers and lids shall be lined with a coating that will prevent destructive action by the compound or chemical agents in the air space above the compound. The coating shall not come off the container or lid as skins. Containers shall be filled in a manner that will prevent skinning. Plastic containers shall not react with the compound.

- Each container shall be labeled with the manufacturer's name, kind of curing compound, batch number, volume, date of manufacture, and volatile organic compound (VOC) content. The label shall also warn that the curing compound containing pigment shall be well stirred before use. Precautions concerning the handling and the application of curing compound shall be shown on the label of the curing compound containers in conformance with the Construction Safety Orders and General Industry Safety Orders of the State.

- Containers of curing compound shall be labeled to indicate that the contents fully comply with the rules and regulations concerning air pollution control in the State.

- When the curing compound is shipped in tanks or tank trucks, a shipping invoice shall accompany each load. The invoice shall contain the same information as that required herein for container labels.

- Curing compound will be sampled by the Engineer at the source of supply, at the job site, or at both locations.

- Curing compound shall be formulated so as to maintain the specified properties for a minimum of one year. The Engineer may require additional testing before use to determine compliance with these specifications if the compound has not been used within one year or whenever the Engineer has reason to believe the compound is no longer satisfactory.

- Tests will be conducted in conformance with the latest ASTM test methods and methods in use by the Transportation Laboratory.

#### **90-7.01C WATERPROOF MEMBRANE METHOD**

- The exposed finished surfaces of concrete shall be sprayed with water, using a nozzle that so atomizes the flow that a mist and not a spray is formed, until the concrete has set, after which

the curing membrane, shall be placed. The curing membrane shall remain in place for a period of not less than 72 hours.

- Sheeting material for curing concrete shall conform to the requirements in AASHTO Designation: M 171 for white reflective materials.

- The sheeting material shall be fabricated into sheets of such width as to provide a complete cover for the entire concrete surface. Joints in the sheets shall be securely cemented together in such a manner as to provide a waterproof joint. The joint seams shall have a minimum lap of 0.33-foot.

- The sheets shall be securely weighted down by placing a bank of earth on the edges of the sheets or by other means satisfactory to the Engineer.

- Should any portion of the sheets be broken or damaged before the expiration of 72 hours after being placed, the broken or damaged portions shall be immediately repaired with new sheets properly cemented into place.

- Sections of membrane that have lost their waterproof qualities or have been damaged to such an extent as to render them unfit for curing the concrete shall not be used.

#### **90-7.01D FORMS-IN-PLACE METHOD**

- Formed surfaces of concrete may be cured by retaining the forms in place. The forms shall remain in place for a minimum period of 7 days after the concrete has been placed, except that for members over 20 inches in least dimension the forms shall remain in place for a minimum period of 5 days.

- Joints in the forms and the joints between the end of forms and concrete shall be kept moisture tight during the curing period. Cracks in the forms and cracks between the forms and the concrete shall be resealed by methods subject to the approval of the Engineer.

#### **90-7.02 CURING PAVEMENT**

- The entire exposed area of the pavement, including edges, shall be cured by the waterproof membrane method, or curing compound method using curing compound (1) or (2) as the Contractor may elect. Should the side forms be removed before the expiration of 72 hours following the start of curing, the exposed pavement edges shall also be cured. If the pavement is cured by means of the curing compound method, the sawcut and all portions of the curing compound that have been disturbed by sawing operations shall be restored by spraying with additional curing compound.

- Curing shall commence as soon as the finishing process provided in Section 40-1.10, "Final Finishing," has been completed. The method selected shall conform to the provisions in Section 90-7.01, "Methods of Curing."

- When the curing compound method is used, the compound shall be applied to the entire pavement surface by mechanical sprayers. Spraying equipment shall be of the fully atomizing type equipped with a tank agitator that provides for continual agitation of the curing compound during the time of application. The spray shall be adequately protected against wind, and the nozzles shall be so oriented or moved mechanically transversely as to result in the minimum specified rate of coverage being applied uniformly on exposed faces. Hand spraying of small and irregular areas, and areas inaccessible to mechanical spraying equipment, in the opinion of the Engineer, will be permitted. When the ambient air temperature is above 60° F, the Contractor shall fog the surface of the concrete with a fine spray of water as specified in Section 90-7.01A, "Water Method." The surface of the pavement shall be kept moist between the hours of 10:00 a.m. and 4:30 p.m. on the day the concrete is placed. However, the fogging done after the curing compound has been applied shall not begin until the compound has set

sufficiently to prevent displacement. Fogging shall be discontinued if ordered in writing by the Engineer.

### **90-7.03 CURING STRUCTURES**

- Newly placed concrete for cast-in-place structures, other than highway bridge decks, shall be cured by the water method, the forms-in-place method, or, as permitted herein, by the curing compound method, in conformance with the provisions in Section 90-7.01, "Methods of Curing."

- The curing compound method using a pigmented curing compound may be used on concrete surfaces of construction joints, surfaces that are to be buried underground, and surfaces where only ordinary surface finish is to be applied and on which a uniform color is not required and that will not be visible from a public traveled way. If the Contractor elects to use the curing compound method on the bottom slab of box girder spans, the curing compound shall be curing compound (1).

- The top surface of highway bridge decks shall be cured by both the curing compound method and the water method. The curing compound shall be curing compound (1).

- Concrete surfaces of minor structures, as defined in Section 51-1.02, "Minor Structures," shall be cured by the water method, the forms-in-place method or the curing compound method.

- When deemed necessary by the Engineer during periods of hot weather, water shall be applied to concrete surfaces being cured by the curing compound method or by the forms-in-place method, until the Engineer determines that a cooling effect is no longer required. Application of water for this purpose will be paid for as extra work as provided in Section 4-1.03D, "Extra Work."

### **90-7.04 CURING PRECAST CONCRETE MEMBERS**

- Precast concrete members shall be cured in conformance with any of the methods specified in Section 90-7.01, "Methods of Curing." Curing shall be provided for the minimum time specified for each method or until the concrete reaches its design strength, whichever is less. Steam curing may also be used for precast members and shall conform to the following provisions:

- A. After placement of the concrete, members shall be held for a minimum 4-hour presteaming period. If the ambient air temperature is below 50° F, steam shall be applied during the presteaming period to hold the air surrounding the member at a temperature between 50° F and 90° F.
- B. To prevent moisture loss on exposed surfaces during the presteaming period, members shall be covered as soon as possible after casting or the exposed surfaces shall be kept wet by fog spray or wet blankets.
- C. Enclosures for steam curing shall allow free circulation of steam about the member and shall be constructed to contain the live steam with a minimum moisture loss. The use of tarpaulins or similar flexible covers will be permitted, provided they are kept in good repair and secured in such a manner as to prevent the loss of steam and moisture.
- D. Steam at the jets shall be at low pressure and in a saturated condition. Steam jets shall not impinge directly on the concrete, test cylinders, or forms. During application of the steam, the temperature rise within the enclosure shall not exceed 40° F per hour. The curing temperature throughout the enclosure shall not exceed 150° F and shall be maintained at a constant level for a sufficient time necessary to develop the required transfer strength. Control cylinders shall be covered to prevent moisture loss and shall be

- placed in a location where temperature is representative of the average temperature of the enclosure.
- E. Temperature recording devices that will provide an accurate, continuous, permanent record of the curing temperature shall be provided. A minimum of one temperature recording device per 200 feet of continuous bed length will be required for checking temperature.
  - F. Members in pretension beds shall be detensioned immediately after the termination of steam curing while the concrete and forms are still warm, or the temperature under the enclosure shall be maintained above 60° F until the stress is transferred to the concrete.
  - G. Curing of precast concrete will be considered completed after termination of the steam curing cycle.

#### **90-7.05 CURING PRECAST PRESTRESSED CONCRETE PILES**

- Newly placed concrete for precast prestressed concrete piles shall be cured in conformance with the provisions in Section 90-7.04, "Curing Precast Concrete Members," except that piles in a corrosive environment shall be cured as follows:

- A. Piles shall be either steam cured or water cured. If water curing is used, the piles shall be kept continuously wet by the application of water in conformance with the provisions in Section 90-7.01A, "Water Method."
- B. If steam curing is used, the steam curing provisions in Section 90-7.04, "Curing Precast Concrete Members," shall apply except that the piles shall be kept continuously wet for their entire length for a period of not less than 3 days, including the holding and steam curing periods.

#### **90-7.06 CURING SLOPE PROTECTION**

- Concrete slope protection shall be cured in conformance with any of the methods specified in Section 90-7.01, "Methods of Curing."
- Concreted-rock slope protection shall be cured in conformance with any of the methods specified in Section 90-7.01, "Methods of Curing," with a blanket of earth kept wet for 72 hours, or by sprinkling with a fine spray of water every 2 hours during the daytime for a period of 3 days.

#### **90-7.07 CURING MISCELLANEOUS CONCRETE WORK**

- Exposed surfaces of curbs shall be cured by pigmented curing compounds as specified in Section 90-7.01B, "Curing Compound Method."
- Concrete sidewalks, gutter depressions, island paving, curb ramps, driveways, and other miscellaneous concrete areas shall be cured in conformance with any of the methods specified in Section 90-7.01, "Methods of Curing."
- Shotcrete shall be cured for at least 72 hours by spraying with water, by a moist earth blanket, or by any of the methods provided in Section 90-7.01, "Methods of Curing."
- Mortar and grout shall be cured by keeping the surface damp for 3 days.
- After placing, the exposed surfaces of sign structure foundations, including pedestal portions, if constructed, shall be cured for at least 72 hours by spraying with water, by a moist earth blanket, or by any of the methods provided in Section 90-7.01, "Methods of Curing."

## **90-8 PROTECTING CONCRETE**

### **90-8.01 GENERAL**

- In addition to the provisions in Section 7-1.16, "Contractor's Responsibility for the Work and Materials," the Contractor shall protect concrete as provided in this Section 90-8. If required by the Engineer, the Contractor shall submit a written outline of the proposed methods for protecting the concrete.
  - The Contractor shall protect concrete from damage from any cause, which shall include, but not be limited to: rain, heat, cold, wind, Contractor's actions, and actions of others.
  - Concrete shall not be placed on frozen or ice-coated ground or subgrade nor on ice-coated forms, reinforcing steel, structural steel, conduits, precast members, or construction joints.
  - Under rainy conditions, placing of concrete shall be stopped before the quantity of surface water is sufficient to damage surface mortar or cause a flow or wash of the concrete surface, unless the Contractor provides adequate protection against damage.
  - Concrete that has been frozen or damaged by other causes, as determined by the Engineer, shall be removed and replaced by the Contractor at the Contractor's expense.

### **90-8.02 PROTECTING CONCRETE STRUCTURES**

- Structure concrete and shotcrete used as structure concrete shall be maintained at a temperature of not less than 45° F for 72 hours after placing and at not less than 40° F for an additional 4 days.

### **90-8.03 PROTECTING CONCRETE PAVEMENT**

- Pavement concrete shall be maintained at a temperature of not less than 40° F for 72 hours.
  - Except as provided in Section 7-1.08, "Public Convenience," the Contractor shall protect concrete pavement against construction and other activities that abrade, scar, discolor, reduce texture depth, lower coefficient of friction, or otherwise damage the surface. Stockpiling, drifting, or excessive spillage of soil, gravel, petroleum products, and concrete or asphalt mixes on the surface of concrete pavement is prohibited unless otherwise specified in these specifications, the special provisions or permitted by the Engineer.
  - If ordered by the Engineer or shown on the plans or specified in the special provisions, pavement crossings shall be constructed for the convenience of public traffic. The material and work necessary for the construction of the crossings, and their subsequent removal and disposal, will be paid for at the contract unit prices for the items of work involved and if there are no contract items for the work involved, payment for pavement crossings will be made by extra work as provided in Section 4-1.03D, "Extra Work.". Where public traffic will be required to cross over the new pavement, Type III portland cement may be used in concrete, if permitted in writing by the Engineer. The pavement may be opened to traffic as soon as the concrete has developed a modulus of rupture of 550 pounds per square inch. The modulus of rupture will be determined by California Test 523.
  - No traffic or Contractor's equipment, except as hereinafter provided, will be permitted on the pavement before a period of 10 days has elapsed after the concrete has been placed, nor before the concrete has developed a modulus of rupture of at least 550 pounds per square inch. Concrete that fails to attain a modulus of rupture of 550 pounds per square inch within 10 days shall not be opened to traffic until directed by the Engineer.
  - Equipment for sawing weakened plane joints will be permitted on the pavement as specified in Section 40-1.08B, "Weakened Plane Joints."

- When requested in writing by the Contractor, the tracks on one side of paving equipment will be permitted on the pavement after a modulus of rupture of 350 pounds per square inch has been attained, provided that:

- A. Unit pressure exerted on the pavement by the paver shall not exceed 20 pounds per square inch;
- B. Tracks with cleats, grousers, or similar protuberances shall be modified or shall travel on planks or equivalent protective material, so that the pavement is not damaged; and
- C. No part of the track shall be closer than one foot from the edge of pavement.

- In case of visible cracking of, or other damage to the pavement, operation of the paving equipment on the pavement shall be immediately discontinued.

- Damage to the pavement resulting from early use of pavement by the Contractor's equipment as provided above shall be repaired by the Contractor.

- The State will furnish the molds and machines for testing the concrete for modulus of rupture, and the Contractor, at the Contractor's expense, shall furnish the material and whatever labor the Engineer may require.

## **90-9 COMPRESSIVE STRENGTH**

### **90-9.01 GENERAL**

- Concrete compressive strength requirements consist of a minimum strength that shall be attained before various loads or stresses are applied to the concrete and, for concrete designated by strength, a minimum strength at the age of 28 days or at the age otherwise allowed in Section 90-1.01, "Description." The various strengths required are specified in these specifications or the special provisions or are shown on the plans.

- The compressive strength of concrete will be determined from test cylinders that have been fabricated from concrete sampled in conformance with the requirements of California Test 539. Test cylinders will be molded and initially field cured in conformance with California Test 540. Test cylinders will be cured and tested after receipt at the testing laboratory in conformance with the requirements of California Test 521. A strength test shall consist of the average strength of 2 cylinders fabricated from material taken from a single load of concrete, except that, if any cylinder should show evidence of improper sampling, molding, or testing, that cylinder shall be discarded and the strength test shall consist of the strength of the remaining cylinder.

- When concrete compressive strength is specified as a prerequisite to applying loads or stresses to a concrete structure or member, test cylinders for other than steam cured concrete will be cured in conformance with Method 1 of California Test 540. The compressive strength of concrete determined for these purposes will be evaluated on the basis of individual tests.

- When concrete is designated by 28-day compressive strength rather than by cementitious material content, the concrete strength to be used as a basis for acceptance of other than steam cured concrete will be determined from cylinders cured in conformance with Method 1 of California Test 540. If the result of a single compressive strength test at the maximum age specified or allowed is below the specified strength but is 95 percent or more of the specified strength, the Contractor shall make corrective changes, subject to approval of the Engineer, in the mix proportions or in the concrete fabrication procedures, before placing additional concrete, and shall pay to the State \$10 for each in-place cubic yard of concrete represented by the deficient test. If the result of a single compressive strength test at the maximum age specified or allowed is below 95 percent of the specified strength, but is 85 percent or more of the specified strength, the Contractor shall make the corrective changes specified above, and shall pay to the



State \$15 for each in-place cubic yard of concrete represented by the deficient test. In addition, such corrective changes shall be made when the compressive strength of concrete tested at 7 days indicates, in the judgment of the Engineer, that the concrete will not attain the required compressive strength at the maximum age specified or allowed. Concrete represented by a single test that indicates a compressive strength of less than 85 percent of the specified 28-day compressive strength will be rejected in conformance with the provisions in Section 6-1.04, "Defective Materials."

- If the test result indicates that the compressive strength at the maximum curing age specified or allowed is below the specified strength, but is 85 percent or more of the specified strength, payments to the State as required above shall be made, unless the Contractor, at the Contractor's expense, obtains and submits evidence acceptable to the Engineer that the strength of the concrete placed in the work meets or exceeds the specified 28-day compressive strength. If the test result indicates a compressive strength at the maximum curing age specified or allowed below 85 percent, the concrete represented by that test will be rejected, unless the Contractor, at the Contractor's expense, obtains and submits evidence acceptable to the Engineer that the strength and quality of the concrete placed in the work are acceptable. If the evidence consists of tests made on cores taken from the work, the cores shall be obtained and tested in conformance with the requirements in ASTM Designation: C 42.

- No single compressive strength test shall represent more than 320 cubic yards.

- If a precast concrete member is steam cured, the compressive strength of the concrete will be determined from test cylinders that have been handled and stored in conformance with Method 3 of California Test 540. The compressive strength of steam cured concrete will be evaluated on the basis of individual tests representing specific portions of production. If the concrete is designated by 28-day compressive strength rather than by cementitious material content, the concrete shall be considered to be acceptable whenever its compressive strength reaches the specified 28-day compressive strength provided that strength is reached in not more than the maximum number of days specified or allowed after the member is cast.

- When concrete is specified by compressive strength, prequalification of materials, mix proportions, mixing equipment, and procedures proposed for use will be required prior to placement of the concrete. Prequalification shall be accomplished by the submission of acceptable certified test data or trial batch reports by the Contractor. Prequalification data shall be based on the use of materials, mix proportions, mixing equipment, procedures, and size of batch proposed for use in the work.

- Certified test data, in order to be acceptable, shall indicate that not less than 90 percent of at least 20 consecutive tests exceed the specified strength at the maximum number of cure days specified or allowed, and none of those tests are less than 95 percent of specified strength. Strength tests included in the data shall be the most recent tests made on concrete of the proposed mix design and all shall have been made within one year of the proposed use of the concrete.

- Trial batch test reports, in order to be acceptable, shall indicate that the average compressive strength of 5 consecutive concrete cylinders, taken from a single batch, at not more than 28 days (or the maximum age allowed) after molding shall be at least 580 pounds per square inch greater than the specified 28-day compressive strength, and no individual cylinder shall have a strength less than the specified strength at the maximum age specified or allowed. Data contained in the report shall be from trial batches that were produced within one year of the proposed use of specified strength concrete in the project. Whenever air-entrainment is required, the air content of trial batches shall be equal to or greater than the air content specified for the concrete without reduction due to tolerances.

- Tests shall be performed in conformance with either the appropriate California Test methods or the comparable ASTM test methods. Equipment employed in testing shall be in good condition and shall be properly calibrated. If the tests are performed during the life of the contract, the Engineer shall be notified sufficiently in advance of performing the tests in order to witness the test procedures.

- The certified test data and trial batch test reports shall include the following information:
  - A. Date of mixing.
  - B. Mixing equipment and procedures used.
  - C. The size of batch in cubic yards and the weight, type, and source of all ingredients used.
  - D. Penetration or slump (if the concrete will be placed under water or placed in cast-in-place concrete piles) of the concrete.
  - E. The air content of the concrete if an air-entraining admixture is used.
  - F. The age at time of testing and strength of all concrete cylinders tested.

- Certified test data and trial batch test reports shall be signed by an official of the firm that performed the tests.

- When approved by the Engineer, concrete from trial batches may be used in the work at locations where concrete of a lower quality is required and the concrete will be paid for as the type or class of concrete required at that location.

- After materials, mix proportions, mixing equipment, and procedures for concrete have been prequalified for use, additional prequalification by testing of trial batches will be required prior to making changes that, in the judgment of the Engineer, could result in a strength of concrete below that specified.

- The Contractor's attention is directed to the time required to test trial batches and the Contractor shall be responsible for production of trial batches at a sufficiently early date so that the progress of the work is not delayed.

- When precast concrete members are manufactured at the plant of an established manufacturer of precast concrete members, the mix proportions of the concrete shall be determined by the Contractor, and a trial batch and prequalification of the materials, mix proportions, mixing equipment, and procedures will not be required.

## **90-10 MINOR CONCRETE**

### **90-10.01 GENERAL**

- Concrete for minor structures, slope paving, curbs, sidewalks and other concrete work, when designated as minor concrete on the plans, in the specifications, or in the contract item, shall conform to the provisions specified herein.

- The Engineer, at the Engineer's discretion, will inspect and test the facilities, materials and methods for producing the concrete to ensure that minor concrete of the quality suitable for use in the work is obtained.

### **90-10.02 MATERIALS**

- Minor concrete shall conform to the following requirements:

#### **90-10.02A CEMENTITIOUS MATERIAL**

- Cementitious material shall conform to the provisions in Section 90-1.01, "Description."

### **90-10.02B AGGREGATE**

- Aggregate shall be clean and free from deleterious coatings, clay balls, roots, and other extraneous materials.
- Use of crushed concrete or reclaimed aggregate is acceptable only if the aggregate satisfies all aggregate requirements.
- The Contractor shall submit to the Engineer for approval, a grading of the combined aggregate proposed for use in the minor concrete. After acceptance of the grading, aggregate furnished for minor concrete shall conform to that grading, unless a change is authorized in writing by the Engineer.
- The Engineer may require the Contractor to furnish periodic test reports of the aggregate grading furnished. The maximum size of aggregate used shall be at the option of the Contractor, but in no case shall the maximum size be larger than 1 1/2-inch or smaller than 3/4-inch.
- The Engineer may waive, in writing, the gradation requirements in this Section 90-10.02B, if, in the Engineer's opinion, the furnishing of the gradation is not necessary for the type or amount of concrete work to be constructed.

### **90-10.02C WATER**

- Water used for washing, mixing, and curing shall be free from oil, salts, and other impurities that would discolor or etch the surface or have an adverse affect on the quality of the concrete.

### **90-10.02D ADMIXTURES**

- The use of admixtures shall conform to the provisions in Section 90-4, "Admixtures."

### **90-10.03 PRODUCTION**

- Cementitious material, water, aggregate, and admixtures shall be stored, proportioned, mixed, transported, and discharged in conformance with recognized standards of good practice that will result in concrete that is thoroughly and uniformly mixed, that is suitable for the use intended, and that conforms to requirements specified herein. Recognized standards of good practice are outlined in various industry publications such as are issued by American Concrete Institute, AASHTO, or the Department.
- The cementitious material content of minor concrete shall conform to the provisions in Section 90-1.01, "Description."
- The amount of water used shall result in a consistency of concrete conforming to the provisions in Section 90-6.06, "Amount of Water and Penetration." Additional mixing water shall not be incorporated into the concrete during hauling or after arrival at the delivery point, unless authorized by the Engineer.
- Discharge of ready-mixed concrete from the transporting vehicle shall be made while the concrete is still plastic and before stiffening occurs. An elapsed time of 1.5 hours (one hour in non-agitating hauling equipment), or more than 250 revolutions of the drum or blades, after the introduction of the cementitious material to the aggregates, or a temperature of concrete of more than 90° F will be considered conditions contributing to the quick stiffening of concrete. The Contractor shall take whatever action is necessary to eliminate quick stiffening, except that the addition of water will not be permitted.
- The required mixing time in stationary mixers shall be not less than 50 seconds or more than 5 minutes.

- The minimum required revolutions at mixing speed for transit-mixed concrete shall be not less than that recommended by the mixer manufacturer, and shall be increased, if necessary, to produce thoroughly and uniformly mixed concrete.
- When a high range water-reducing admixture is added to the concrete at the job site, the total number of revolutions shall not exceed 300.
- Each load of ready-mixed concrete shall be accompanied by a weighmaster certificate that shall be delivered to the Engineer at the discharge location of the concrete, unless otherwise directed by the Engineer. The weighmaster certificate shall be clearly marked with the date and time of day when the load left the batching plant and, if hauled in truck mixers or agitators, the time the mixing cycle started.
- A Certificate of Compliance conforming to the provisions in Section 6-1.07, "Certificates of Compliance," shall be furnished to the Engineer, prior to placing minor concrete from a source not previously used on the contract, stating that minor concrete to be furnished meets contract requirements, including minimum cementitious material content specified.

#### **90-10.04 CURING MINOR CONCRETE**

- Curing minor concrete shall conform to the provisions in Section 90-7, "Curing Concrete."

#### **90-10.05 PROTECTING MINOR CONCRETE**

- Protecting minor concrete shall conform to the provisions in Section 90-8, "Protecting Concrete," except the concrete shall be maintained at a temperature of not less than 40° F for 72 hours after placing.

#### **90-10.06 MEASUREMENT AND PAYMENT**

- Minor concrete will be measured and paid for in conformance with the provisions specified in the various sections of these specifications covering concrete construction when minor concrete is specified in the specifications, shown on the plans, or indicated by contract item in the Engineer's Estimate.

### **90-11 MEASUREMENT AND PAYMENT**

#### **90-11.01 MEASUREMENT**

- Portland cement concrete will be measured in conformance with the provisions specified in the various sections of these specifications covering construction requiring concrete.
- For concrete measured at the mixer, the volume in cubic feet shall be computed as the total weight of the batch in pounds divided by the density of the concrete in pounds per cubic foot. The total weight of the batch shall be calculated as the sum of all materials, including water, entering the batch. The density of the concrete will be determined in conformance with the requirements in California Test 518.

#### **90-11.02 PAYMENT**

- Portland cement concrete will be paid for in conformance with the provisions specified in the various sections of these specifications covering construction requiring concrete.
- Full compensation for furnishing and incorporating admixtures required by these specifications or the special provisions will be considered as included in the contract prices paid for the concrete involved and no additional compensation will be allowed therefor.
- Should the Engineer order the Contractor to incorporate any admixtures in the concrete when their use is not required by these specifications or the special provisions, furnishing the

admixtures and adding them to the concrete will be paid for as extra work as provided in Section 4-1.03D, "Extra Work."

- Should the Contractor use admixtures in conformance with the provisions in Section 90-4.05, "Optional Use of Chemical Admixtures," or Section 90-4.07, "Optional Use of Air-entraining Admixtures," or should the Contractor request and obtain permission to use other admixtures for the Contractor's benefit, the Contractor shall furnish those admixtures and incorporate them into the concrete at the Contractor's expense and no additional compensation will be allowed therefor.

## **SECTION 91: PAINT**

Issue Date: May 1, 2006

Section 91-3, "Paints for Timber," of the Standard Specifications is amended to read:

### **91-3 PAINTS FOR TIMBER**

#### **91-3.01 WOOD PRIMER, LATEX-BASE**

**Classification:**

- This specification covers a ready-mixed priming paint for use on unpainted wood or exterior woodwork. It shall conform with the requirements in the Detailed Performance Standards of the Master Painters Institute (MPI) for exterior wood primers, and be listed on the Exterior Latex Wood Primer MPI List Number 6.

#### **91-3.02 PAINT; LATEX-BASE FOR EXTERIOR WOOD, WHITE AND TINTS**

**Classification:**

- This specification covers a ready-mixed paint for use on wood surfaces subject to outside exposures. This paint shall conform to the requirements in the Detailed Performance Standards of the Master Painters Institute (MPI) for Paint, Latex, Exterior, and shall be listed on the following MPI Approved Products List:

- A. Exterior Latex, Flat MPI Gloss Level 1, MPI List Number 10.
- B. Exterior Latex, Semi-Gloss, MPI Gloss Level 5, MPI List Number 11.
- C. Exterior Latex, Gloss, MPI Gloss Level 6, MPI List Number 119.

- Unpainted wood shall first be primed with wood primer conforming to the provisions in Section 91-3.01, "Wood Primer, Latex-Base."

Section 91-4, "Miscellaneous Paints," of the Standard Specifications is amended to read:

### **91-4 MISCELLANEOUS PAINTS**

#### **91-4.01 THROUGH 91-4.04 (BLANK)**

#### **91-4.05 PAINT; ACRYLIC EMULSION, EXTERIOR WHITE AND LIGHT AND MEDIUM TINTS**

**Classification:**

- This specification covers an acrylic emulsion paint designed for use on exterior masonry. This paint shall conform to the requirements in the Detailed Performance Standards of the

Master Painters Institute (MPI) for Paint, Latex, Exterior, and shall be listed on the following MPI Approved Products Lists:

- A. Exterior Latex, Flat MPI Gloss Level 1, MPI List Number 10.
  - B. Exterior Latex, Semi-Gloss, MPI Gloss Level 5, MPI List Number 11.
  - C. Exterior Latex, Gloss, MPI Gloss Level 6, MPI List Number 119.
- This paint may be tinted by using "universal" or "all purpose" concentrates.

## **SECTION 92: ASPHALTS**

Issue Date: March 21, 2008

Section 92, "Asphalts," of the Standard Specifications is amended to read:

### **92-1.01 DESCRIPTION**

- Asphalt is refined petroleum or a mixture of refined liquid asphalt and refined solid asphalt that are prepared from crude petroleum. Asphalt is:
  1. Free from residues caused by the artificial distillation of coal, coal tar, or paraffin
  2. Free from water
  3. Homogeneous

### **92-1.02 MATERIALS**

#### **GENERAL**

- Furnish asphalt under the Department's "Certification Program for Suppliers of Asphalt." The Department maintains the program requirements, procedures, and a list of approved suppliers at:

<http://www.dot.ca.gov/hq/esc/Translab/fpm/fpmcoc.htm>

- Transport, store, use, and dispose of asphalt safely.
- Prevent the formation of carbonized particles caused by overheating asphalt during manufacturing or construction.

#### **GRADES**

- Performance graded (PG) asphalt binder is:

Performance Graded Asphalt Binder

Property	AASHTO Test Method	Specification				
		Grade				
		PG 58-22 <sup>a</sup>	PG 64-10	PG 64-16	PG 64-28	PG 70-10
Original Binder						
Flash Point, Minimum °C	T 48	230	230	230	230	230
Solubility, Minimum % <sup>b</sup>	T 44	99	99	99	99	99
Viscosity at 135°C, <sup>c</sup> Maximum, Pa·s	T 316	3.0	3.0	3.0	3.0	3.0
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T 315	58 1.00	64 1.00	64 1.00	64 1.00	70 1.00
RTFO Test, <sup>e</sup> Mass Loss, Maximum, %	T 240	1.00	1.00	1.00	1.00	1.00
RTFO Test Aged Binder						
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T 315	58 2.20	64 2.20	64 2.20	64 2.20	70 2.20
Ductility at 25°C Minimum, cm	T 51	75	75	75	75	75
PAV <sup>f</sup> Aging, Temperature, °C	R 28	100	100	100	100	110
RTFO Test and PAV Aged Binder						
Dynamic Shear, Test Temp. at 10 rad/s, °C Maximum G*sin(delta), kPa	T 315	22 <sup>d</sup> 5000	31 <sup>d</sup> 5000	28 <sup>d</sup> 5000	22 <sup>d</sup> 5000	34 <sup>d</sup> 5000
Creep Stiffness, Test Temperature, °C Maximum S-value, Mpa Minimum M-value	T 313	-12 300 0.300	0 300 0.300	-6 300 0.300	-18 300 0.300	0 300 0.300

Notes:

- a. Use as asphalt rubber base stock for high mountain and high desert area.
- b. The Engineer waives this specification if the supplier is a Quality Supplier as defined by the Department's "Certification Program for Suppliers of Asphalt."
- c. The Engineer waives this specification if the supplier certifies the asphalt binder can be adequately pumped and mixed at temperatures meeting applicable safety standards.
- d. Test the sample at 3°C higher if it fails at the specified test temperature. G\*sin(delta) remains 5000 kPa maximum.
- e. "RTFO Test" means the asphaltic residue obtained using the Rolling Thin Film Oven Test, AASHTO Test Method T 240 or ASTM Designation: D 2872. The residue from mass change determination may be used for other tests.
- f. "PAV" means Pressurized Aging Vessel.

- Performance graded polymer modified asphalt binder (PG Polymer Modified) is:

Performance Graded Polymer Modified Asphalt Binder <sup>a</sup>

Property	AASHTO Test Method	Specification Grade		
		PG 58-34 PM	PG 64-28 PM	PG 76-22 PM
Original Binder				
Flash Point, Minimum °C	T 48	230	230	230
Solubility, Minimum % <sup>b</sup>	T 44 <sup>c</sup>	98.5	98.5	98.5
Viscosity at 135°C, <sup>d</sup> Maximum, Pa·s	T 316	3.0	3.0	3.0
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T 315	58 1.00	64 1.00	76 1.00
RTFO Test, Mass Loss, Maximum, %	T 240	1.00	1.00	1.00
RTFO Test Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T 315	58 2.20	64 2.20	76 2.20
Dynamic Shear, Test Temp. at 10 rad/s, °C Maximum (delta), %	T 315	Note e 80	Note e 80	Note e 80
Elastic Recovery <sup>f</sup> , Test Temp., °C Minimum recovery, %	T 301	25 75	25 75	25 65
PAV <sup>g</sup> Aging, Temperature, °C	R 28	100	100	110
RTFO Test and PAV Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Maximum G*sin(delta), kPa	T 315	16 5000	22 5000	31 5000
Creep Stiffness, Test Temperature, °C Maximum S-value, MPa Minimum M-value	T 313	-24 300 0.300	-18 300 0.300	-12 300 0.300

Notes:

- a. Do not modify PG Polymer Modified using acid modification.
- b. The Engineer waives this specification if the supplier is a Quality Supplier as defined by the Department's "Certification Program for Suppliers of Asphalt."
- c. The Department allows ASTM D 5546 instead of AASHTO T 44
- d. The Engineer waives this specification if the supplier certifies the asphalt binder can be adequately pumped and mixed at temperatures meeting applicable safety standards.
- e. Test temperature is the temperature at which G\*/sin(delta) is 2.2 kPa. A graph of log G\*/sin(delta) plotted against temperature may be used to determine the test temperature when G\*/sin(delta) is 2.2 kPa. A graph of (delta) versus temperature may be used to determine delta at the temperature when G\*/sin(delta) is 2.2 kPa. The Engineer also accepts direct measurement of (delta) at the temperature when G\*/sin(delta) is 2.2 kPa.
- f. Tests without a force ductility clamp may be performed.
- g. "PAV" means Pressurized Aging Vessel.

**SAMPLING**

- Provide a sampling device in the asphalt feed line connecting the plant storage tanks to the asphalt weighing system or spray bar. Make the sampling device accessible between 24 and 30 inches above the platform. Provide a receptacle for flushing the sampling device.
- Include with the sampling device a valve:



1. Between 1/2 and 3/4 inch in diameter
  2. Manufactured in a manner that a one-quart sample may be taken slowly at any time during plant operations
  3. Maintained in good condition
- Replace failed valves.
  - In the Engineer's presence, take 2 one-quart samples per operating day. Provide round, friction top, one-quart containers for storing samples.

### **92-1.03 EXECUTION**

- If asphalt is applied, you must comply with the heating and application specifications for liquid asphalt in Section 93, "Liquid Asphalts."

### **92-1.04 MEASUREMENT**

- If the contract work item for asphalt is paid by weight, the Department measures asphalt tons by complying with the specifications for weight determination of liquid asphalt in Section 93, "Liquid Asphalts."

- The Engineer determines the asphalt weight from volumetric measurements if you:

1. Use a partial asphalt load
2. Use asphalt at a location other than a mixing plant and no scales within 20 miles are available and suitable
3. Deliver asphalt in either of the following:
  - 3.1. A calibrated truck with each tank accompanied by its measuring stick and calibration card
  - 3.2. A truck equipped with a calibrated thermometer that determines the asphalt temperature at the delivery time and with a vehicle tank meter complying with the specifications for weighing, measuring, and metering devices in Section 9-1.01, "Measurement of Quantities"

- If you furnish hot mix asphalt from a mixing plant producing material for only one project, the Engineer determines the asphalt quantity by measuring the volume in the tank at the project's start and end provided the tank is calibrated and equipped with its measuring stick and calibration card.

- The Engineer determines pay quantities from volumetric measurements as follows:

1. Before converting the volume to weight, the Engineer reduces the measured volume to that which the asphalt would occupy at 60 °F.
2. The Engineer uses 235 gallons per ton and 8.51 pounds per gallon for the average weight and volume for PG and PG Polymer Modified asphalt grades at 60 °F.
3. The Engineer uses the Conversion Table in Section 93, "Liquid Asphalts."

## **SECTION 93: LIQUID ASPHALTS**

Issue Date: November 3, 2006

The ninth paragraph of Section 93-1.04, "Measurement," of the Standard Specifications is amended to read:

- The following Legend and Conversion Table is to be used for converting volumes of liquid asphalt products, Grades 70 to 3000, inclusive, and paving asphalt Grades PG 58-22, PG 64-10, PG 64-16, PG 64-28, and PG 70-10, and Grades PG 58-34 PM, PG 64-28 PM, and PG 76-22 PM.

**END OF AMENDMENTS**

**APPENDIX B**

**SPILL CONTINGENCY PLAN FROM SWPPP**



**APPENDIX B**  
**BOULDER MOUNTAIN EROSION CONTROL PROJECT**  
**CONTRACT NO. PW 13-30675**  
**CIP NO. 95153**

**SPILL CONTINGENCY PLAN**

I. SEWAGE SPILLS:

A. Agency Contacts:

<u>Agency</u>	<u>Contact Person</u>	<u>Phone</u>
1. South Tahoe Public Utility District	Randy Curtis	544-6474
2. El Dorado County Environmental Management	Karen Bender	573-3453
3. Water Quality Control Board Lahontan Region	Robert Larsen	542-5439
4. El Dorado County Department of Transportation	Steve Kooyman Daniel Kikkert	573-7910 573-7914

B. Contractor Representative:

Clean up operation shall be directed by \_\_\_\_\_, phone number \_\_\_\_\_ in cooperation with agencies listed in A.

C. Containment and Disposal:

Spills shall be contained with earthen berms or other approved methods. Liquid sewage shall be disinfected as necessary, and pumped to an adjacent sewer or transported to South Tahoe Public Utility District facilities by approved methods as instructed by South Tahoe Public Utility District.

II. PETROLEUM AND CHEMICAL SPILLS

A. Agency Contacts:

	<u>Agency</u>	<u>Contact Person</u>	<u>Phone</u>
1.	South Tahoe Public Utility District	Randy Curtis	544-6474
2.	El Dorado County Environmental Management	Karen Bender	573-3453
3.	Water Quality Control Board Lahontan Region	Robert Larsen	542-5439
4.	El Dorado County Department of Transportation	Steve Kooyman Daniel Kikkert	573-7910 573-7914

B. Contractor Representative:

Clean up operation shall be directed by \_\_\_\_\_, phone number \_\_\_\_\_ in cooperation with agencies listed in A.

C. Materials shall be excavated with a backhoe or other excavation equipment and placed on an impermeable membrane \_\_\_\_\_(type) and covered with such membrane, as required for containment.

D. Materials shall be disposed of as directed by El Dorado County Environmental Management.

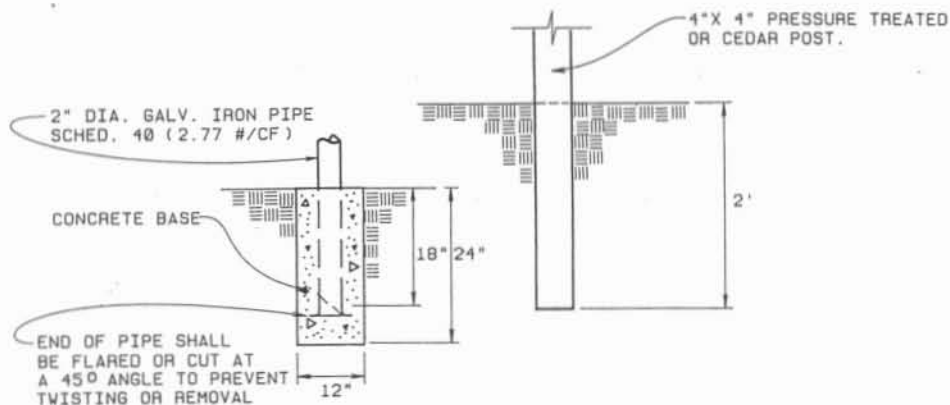
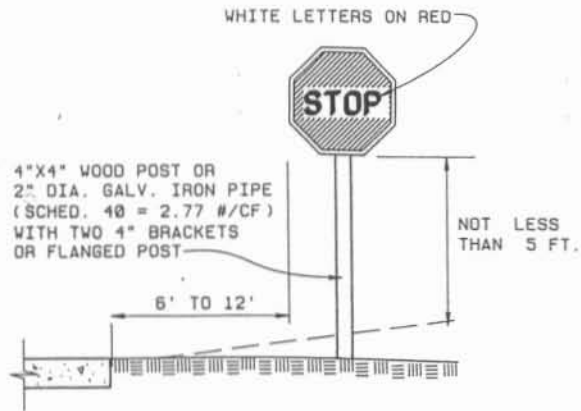
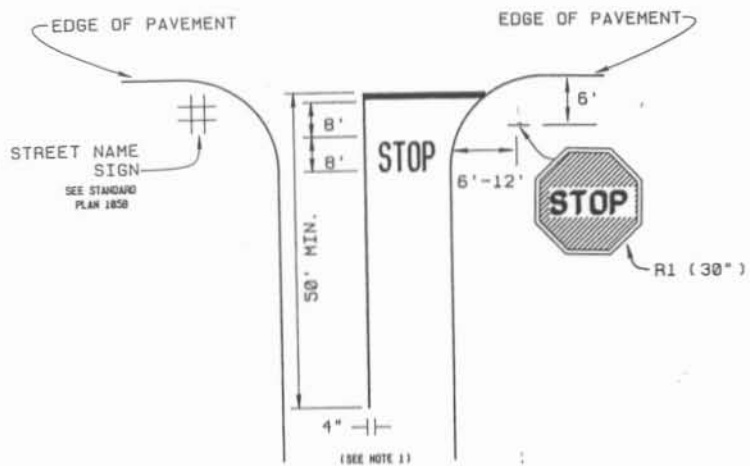
Minor Spills – South Tahoe Refuse – Jeanne Lear 542-8366  
Major Spills – Forward Inc. Manteca, CA (209) 466-4482  
Or as approved by Environmental Management

E. Contractor shall keep petroleum and chemical absorbent materials on site at all times.

**APPENDIX C**  
**STANDARD PLANS**







ALTERNATE BASE

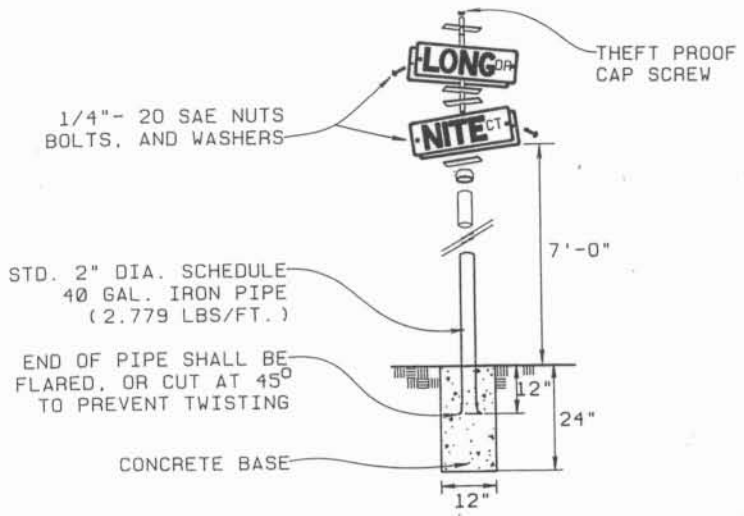
**NOTES:**

1. 4" STRIPE TO BE YELLOW REFLECTORIZED TRAFFIC PAINT. TWO 4" STRIPES WILL BE USED IF ADT'S WARRANT.
2. 12" STOP BAR TO BE WHITE REFLECTORIZED TRAFFIC PAINT AND LOCATED TO PROVIDE MAXIMUM VISIBILITY ALONG THROUGH STREET.
3. ALL SIGNS SHALL BE FABRICATED OF HIGH INTENSITY REFLECTIVE SHEETING ON AN ALUMINUM BLANK PER EL DORADO COUNTY SPECIFICATIONS.

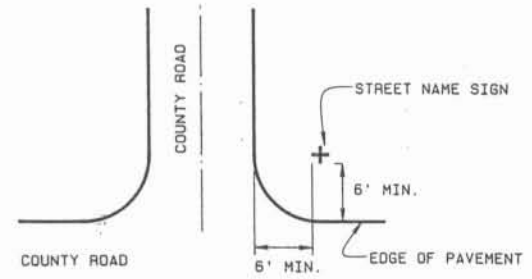
NOT TO SCALE

13-0360B 305 of 368

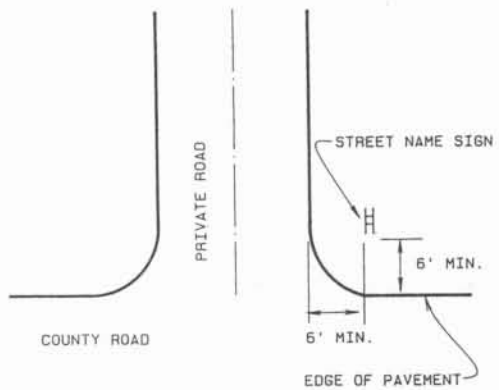
GENERATED		REVISIONS		APPROVED:		EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION		STOP SIGN	STD. PLAN 105A
NO.				<i>Scott Chadd</i> DIRECTOR OF TRANSPORTATION					
DATE	3/14/90			<i>Scott Chadd</i> SENIOR CIVIL ENGINEER		C 33427 P.E. NO.			
DESIGNED BY									
DRAWN BY	M/SR/BS								
CHECKED BY	SKP								
APPROVED BY									



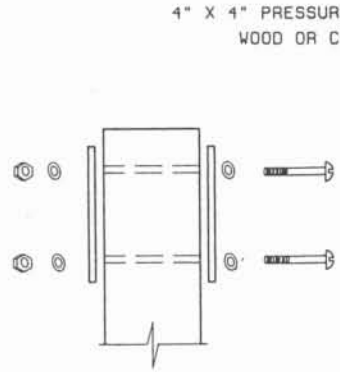
COUNTY ROAD STREET SIGN (SEE NOTE 1)



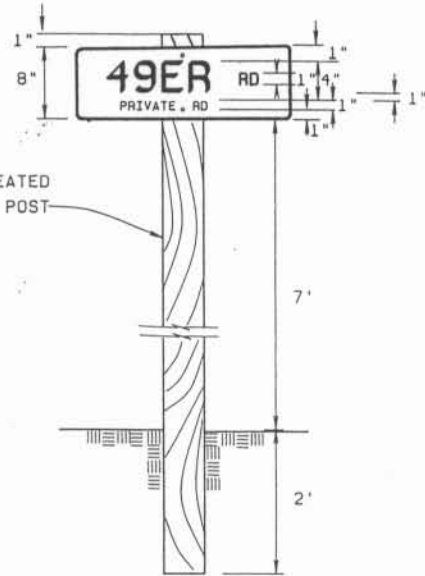
LOCATION OF COUNTY ROAD STREET SIGN



LOCATION OF PRIVATE STREET SIGN



PRIVATE ROAD TYPICAL SIGN ASSEMBLY



PRIVATE ROAD STREET SIGN (SEE NOTE 2)

NOTES:

1. STREET NAME PANELS FOR COUNTY ROADS SHALL BE FLAT ALUMINUM PLATES, 0.08" THICK. PANELS SHALL BE 6" X 24" OR 6" X 30", DEPENDING ON STREET NAME LENGTH. LETTERING TO BE 1" AND 4" SERIES "B", SILVER REFLECTIVE SHEETING ON GREEN SCOT-LITE BACKING.
2. STREET NAME PANELS FOR PRIVATE ROADS SHALL BE FLAT ALUMINUM PLATES, 0.08" THICK. PANELS SHALL BE 8" X 30" OR 8" X 24", DEPENDING ON STREET NAME LENGTH. LETTERING TO BE 1" AND 4" SERIES "B", SILVER REFLECTIVE SHEETING ON BROWN SCOT-LITE BACKING.

NOT TO SCALE

13-0360 B 306 of 368

GENERATED	REVISIONS
NO.	
DATE: 3/14/90	
DESIGNED:	
DRAWN: JM/SR/BS	
CHECKED: SKP	
APPROVED:	

APPROVED:

*Scott Chubb*  
 DIRECTOR OF TRANSPORTATION

*Ken Kleye* C33427  
 SENIOR CIVIL ENGINEER P.E. NO.

EL DORADO COUNTY  
 DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS



STREET SIGN

STD. PLAN  
 105B

**APPENDIX D**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD-  
LAHONTAN REGION**

**BOARD ORDER R6T-2011-0101A1**

**STATE OF CALIFORNIA**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION**

**ORDER NO. R6T-2011-101A1  
NPDES NO. CAG616001**

**UPDATED WASTE DISCHARGE REQUIREMENTS AND NATIONAL  
POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT  
FOR  
STORM WATER/URBAN RUNOFF DISCHARGES FROM EL DORADO  
COUNTY, PLACER COUNTY, AND THE CITY OF SOUTH LAKE TAHOE  
WITHIN THE LAKE TAHOE HYDROLOGIC UNIT**

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**FINDINGS**

The California Regional Water Quality Control Board, Lahontan Region (hereinafter referred to as the Water Board) finds that:

**A. Discharger Information and Permit History**

1. The City of South Lake Tahoe (City), El Dorado County, and Placer County discharge storm water/urban runoff to surface waters of the Lake Tahoe Hydrologic Unit (LTHU). These discharges occur within various hydrologic sub-areas (watersheds) throughout the LTHU. The City, El Dorado County, and Placer County are considered Co-Permittees under this National Pollutant Discharge Elimination System (NPDES) Permit and are referred to collectively as "Permittees".
2. These Updated Waste Discharge Requirements and NPDES Permit for Storm Water/Urban Runoff Discharges from El Dorado County, Placer County, and the City of South Lake Tahoe will be referred to throughout this Order as the "Permit."
3. Prior to issuance of this Permit, storm water discharges from the Permit Area were covered under Order No. R6T-2005-0026, adopted by the Water Board on October 12, 2005, which replaced Order No. 6-00-82, adopted by the Regional Water Board on October 12, 2000.
4. The Permittees submitted Reports of Waste Discharge in April 2010 requesting renewal of waste discharge requirements under the NPDES program to permit storm water discharges from municipal storm collection, conveyance, and treatment facilities within their jurisdictions.

**B. Permit Area**

1. The jurisdictional areas of the City, El Dorado County, and Placer County that fall within the LTHU are considered the "Permit Area." The Permittees are responsible for all storm water/urban runoff discharges in the Lake Tahoe watershed within the LTHU of their respective City and Counties.
2. Federal, state, regional, or local entities within the Permittees' jurisdictional boundaries and not currently named in this Permit may operate storm drain facilities and/ or discharge storm water to storm drains and receiving waters covered by this NPDES Permit. The Permittees may lack legal jurisdiction over these entities under State and Federal constitutions.

The Water Board will coordinate with these entities not named in this Permit that operate storm drain facilities and/ or discharge storm water to storm drains and receiving waters covered by this NPDES Permit to implement programs that are consistent with the requirements of this Permit.

3. Permittees should work cooperatively to control the contribution from pollutants from one jurisdiction to an adjacent jurisdiction through inter-agency agreements or other formal arrangements.

**C. Nature of Discharge**

1. Municipal point source discharges of runoff from urbanized areas remain a leading cause of impairment of surface waters in California. Urban runoff contains wastes, as defined in the California Water Code, and pollutants, as defined in the federal Clean Water Act (CWA), and adversely affects the waters of the State and their designated beneficial uses. The most common pollutant categories in urban runoff within the LTHU include total suspended solids, sediment (due to anthropogenic activities); pathogens (e.g., bacteria, viruses, protozoa); nutrients (e.g., nitrogen and phosphorus); oxygen demanding substances (decaying vegetation, animal waste); oil, grease, and other petroleum hydrocarbons; and trash. In general, the pollutants that are found in municipal storm water runoff can harm human health and aquatic ecosystems.
2. In addition, the high volumes and high velocities of storm water discharged from municipal separate storm sewer systems (MS4s) into receiving waters can adversely impact aquatic ecosystems and stream habitat and cause stream bank erosion and physical modifications. These changes are collectively termed "hydromodification".

3. Lake Tahoe's deep water transparency, as measured by the Secchi disk, has been declining since transparency measurement began in the late 1960's. The Lake Tahoe TMDL Report (November 2010) identifies elevated levels of very fine sediment (particles less than 16 microns) and increased algal growth rates as the causes of transparency loss. Consequently, the primary pollutants of concern for storm water treatment in the LTHU are the number of fine sediment particles (less than 16 microns) and the mass of nutrients that support algal growth (nitrogen and phosphorus).
4. One of the leading sources of very fine sediment particles is roadways. To enhance the safety of motorists in the winter months, the Permittees' winter roadway operations include the application of traction abrasive and deicing materials. If not properly applied and recovered, traction abrasives can be a significant source of the pollutants of concern.
5. Storm water runoff within the Permittees jurisdiction generally flows into pipes and open channels and often passes through pretreatment vaults, treatment basins, and other treatment structures before being discharged to surface waters or land. This Permit describes all storm water management infrastructure maintained by the Permittees as "collection, conveyance, and treatment facilities". For purposes of this Permit, collection, conveyance, and treatment facilities are synonymous with "municipal separate storm sewer systems" or MS4s.

#### **D. Federal, State and Regional Regulations**

1. The Water Quality Act of 1987 added § 402(p) to the CWA(33U.S.C. § 1251-1387). This section requires the United States Environmental Protection Agency (U.S. EPA) to establish regulations setting forth NPDES requirements for storm water discharges in two phases.
  - a. U.S. EPA Phase I storm water regulations were directed at MS4s serving a population of 100,000 or more, and storm water discharges associated with ten categories of industrial activities, including construction activities disturbing more than five acres. In addition, municipalities whose storm water discharges contribute to violations of water quality standards or is a significant contributor of pollutants to waters of the United States may also be issued a NPDES permit under Phase I. Consequently, some MS4s that serve a population below 100,000, such as the Permittees, were brought into the Phase I program by NPDES permitting authorities. The Phase 1 regulations were published on November 16, 1990 (55 Fed. Reg. 47990).

- b. U.S. EPA Phase II storm water regulations are directed at storm water discharges not covered in Phase I, including small MS4s (population of less than 100,000) in urbanized areas, small construction projects (less than five acres, but greater than one acre), municipal facilities with delayed coverage under the Intermodal Surface Transportation Efficiency Act of 1991, and other discharges for which the U.S. EPA Administrator or the State determines that the storm water discharge contributes to a violation of a water quality standard, or is a significant contributor of pollutants to waters of the U.S. The Phase II Final Rule was published on December 8, 1999 (64 Fed. Reg. 68722).
2. The CWA allows the U.S. EPA to authorize states with an approved environmental regulatory program to administer the NPDES program in lieu of the U.S. EPA. The State of California is an authorized State. The Porter-Cologne Water Quality Control Act (California Water Code) authorizes the State Water Resources Control Board (State Water Board), through the Regional Water Boards, to regulate and control the discharge of wastes that could affect the quality of waters of the State, including waters of the United States, and tributaries thereto.
3. Under CWA § 303(d), States are required to identify a list of impaired water bodies and develop and implement Total Maximum Daily Loads (TMDLs) for these waterbodies (33 USC § 1313(d)(1)). Lake Tahoe is listed on the CWA § 303(d) impaired water bodies list. On November 16, 2010 the Water Board adopted an amendment to its Water Quality Control Plan (Basin Plan) to incorporate a TMDL for Lake Tahoe. The amendment was approved by the State Water Board on April 19, 2011 and the TMDL was approved by the U.S. EPA on August 17, 2011. The Basin Plan amendment established pollutant load reduction requirements for urban storm water discharges for fine sediment particles, total nitrogen, and total phosphorus. Section IV of this Permit incorporates approved load reduction requirements as effluent limits for municipal storm water discharges in the LTHU and requires the preparation of Pollutant Load Reduction Plans (PLRPs) to meet established waste load reduction requirements.
4. This Permit does not constitute an unfunded local government mandate subject to subvention under Article XIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following.

First, this Permit implements federally mandated requirements under CWA § 402, subdivision (p)(3)(B)(33 U.S.C. § 1342(p)(3)(B)). This includes federal requirements to effectively prohibit non-storm water discharges and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. The authority exercised under this Permit is not reserved state authority

under the CWA's savings clause (cf. *Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4<sup>th</sup> 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region* (2006) 135 Cal.App.4<sup>th</sup> 1377, 1389; *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4<sup>th</sup> 866, 882-883.)

Likewise, this Permit implements federally mandated requirements under 303(d) of the CWA and section 122.44(d)(1)(vii)(B) of the Code of Federal Regulations. Specifically, the provisions of this Permit to implement the Lake Tahoe TMDL are federal mandates. The CWA requires TMDLs to be developed for waterbodies that do not meet federal water quality standards (33 U.S.C. § 1313(d)). Once the U.S. EPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable waste load allocation. (40 CFR 122.44(d)(1)(vii)(B)).

Second, the Permittees' obligations under this Permit are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the CWA regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the California Water Code regulates the discharge of waste (Water Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding that comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The CWA and the California Water Code largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, in many respects this Permit does not require strict



compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Permit, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order subject to certain voting requirements contained in the California Constitution. (See California Constitution XIII D, section 6, subdivision (c); see also *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal. App. 4th 1351, 1358-1359.) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have requested Permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)). To the extent that the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) The local agencies' voluntary decision to file a report of waste discharge proposing a program based permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the Permittees' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIII B, Section (6) of the California Constitution.

5. The Water Board adopted a Basin Plan for the Lahontan Region on March 31, 1995. The Basin Plan specifies the beneficial uses of water bodies within the LTHU and contains both narrative and numerical water quality objectives for these waters. The following beneficial uses identified in the Basin Plan apply to all watersheds covered by this Permit:
  - a. Municipal and domestic supply,
  - b. Agricultural supply,
  - c. Water contact recreation,
  - d. Non-contact water recreation,
  - e. Groundwater recharge,
  - f. Freshwater replenishment,
  - g. Navigation,
  - h. Commercial and sport fishing,
  - i. Cold freshwater habitat,
  - j. Wildlife habitat,

- k. Preservation of biological habitats of special significance,
  - l. Rare, threatened, or endangered species,
  - m. Migration of aquatic organisms,
  - n. Spawning, reproduction, and development,
  - o. Water quality enhancement, and
  - p. Flood peak attenuation/flood water storage
6. State Water Board Resolution No. 68-16 contains the state Antidegradation Policy, titled "Statement of Policy with Respect to Maintaining High Quality Waters in California" (Resolution 68-16), which applies to all waters of the state, including ground waters of the state, whose quality meets or exceeds (is better than) water quality objectives. Resolution No. 68-16 is considered to incorporate the federal Antidegradation Policy (40 CFR131.12) where the federal policy applies, (State Water Board Order WQO 86-17). Administrative policies that implement both federal and state antidegradation policies acknowledge that an activity that results in a minor water quality lowering, even if incrementally small, can result in violation of Antidegradation Policies through cumulative effects, for example, when the waste is a cumulative, persistent, or bioaccumulative pollutant.

Federal Antidegradation Policy (40 CFR131.12) states that the State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:

- a. Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
- b. Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully.
- c. Where high quality waters constitute an outstanding National resource, including waters of exceptional recreational or ecological significance like Lake Tahoe, that water quality shall be maintained and protected.

The proposed Permit requirements are consistent with both state and federal antidegradation policies. Permittees storm water management and PLRP actions will reduce pollutant loading to Lake Tahoe consistent with established TMDL requirements to maintain and improve water quality.

7. The requirements in this Permit may be more specific or detailed than those enumerated in federal regulations under 40 CFR122.26 or in U.S. EPA guidance. However, the requirements have been designed to implement and be consistent with the federal statutory mandates described in CWA § 402(p)(3)(B)(ii) and (iii) and the related federal regulations. Consistent with federal law, all of the conditions in this Permit could have been included in a permit adopted by U.S. EPA in the absence of the in lieu authority of California to issue NPDES permits.

#### **E. Storm Water Management Plans**

1. The 2005 permit (Order R6T-2005-0026) required the Permittees to develop and implement comprehensive, activity-based storm water management programs that include construction, commercial, industrial, and residential site controls coupled with a facilities inspection program and thorough public outreach and education plans. Each Permittee prepared and submitted detailed Storm Water Management Plans (SWMPs) as required.
2. The current SWMPs provide many of the necessary elements for the Permittees' storm water programs. It will be necessary for the Permittees to update and re-submit their current SWMPs to incorporate all requirements in Section III.B of this Permit, and to reflect current conditions and planned activities.

#### **F. Total Maximum Daily Loads – Lake Tahoe**

1. On November 16, 2010 the Water Board adopted Resolution R6T-2010-0058, amending the Basin Plan to incorporate the TMDL for sediments and nutrients for Lake Tahoe to restore Lake Tahoe to meet the water quality objective for the lake's deep water transparency. The TMDL identified pollutant loads by source category, set load allocations at a basin-wide scale, and identified an implementation plan for restoring Lake Tahoe's deep water transparency.
2. The approved Basin Plan amendment requires the Permittees and the California Department of Transportation (CalTrans) to meet pollutant load reduction requirements specified by the Lake Tahoe TMDL. Pollutant load allocation tables are included in Attachment B of this Permit. The Basin Plan acknowledges that these agencies will likely consider a variety of alternative treatment options, roadway operations

practices, and local ordinances to reduce average annual pollutant loads to meet load reduction requirements.

3. The Permit incorporates numeric and narrative effluent limitations consistent with 40 CFR 122.44(d) that implement the Lake Tahoe TMDL pollutant load reduction requirements. The approved Basin Plan amendment replaces some of the concentration-based storm water effluent limits with effluent limits expressed as annual average pollutant load reduction requirements for the primary pollutants of concern. The Basin Plan eliminated the application of the concentration-based limit for oil and grease to municipal runoff in deference to the Basin Plan's more stringent receiving water limit. Similarly, the Basin Plan removed the concentration-based iron limit because there is no evidence indicating that urban runoff is a source of iron.
4. The Basin Plan amendment and the Lake Tahoe TMDL require Lake Tahoe basin municipalities and the CalTrans to develop and implement comprehensive PLRPs to describe how proposed operations and maintenance activities, capital improvements, facilities retrofit projects, ordinance enforcement, and other actions are expected to meet required pollutant load reduction requirements. PLRPs provide the Permittees the opportunity to prioritize pollutant load reduction efforts and target sub-watersheds that generate the highest annual average pollutant loads.
5. Permittees have primarily relied upon state and federal grant sources to fund water quality improvement infrastructure programs and generally use in-house resources for water quality operations and maintenance practices. As of November 2011 there are fewer grant funds available and economic conditions have negatively impacted local government budgets. Consequently, Permittees will need to effectively prioritize future infrastructure and operations and maintenance actions to maximize pollutant load reductions that can be achieved with available funding.
6. The Water Board developed the Lake Clarity Crediting Program (see Attachment D of this Permit) to establish protocols for accounting and tracking pollutant load reductions within the urban environment.
7. The Lake Tahoe TMDL baseline pollutant loading and load reduction requirements are provided as average annual estimates. For consistency with the TMDL requirements, the Lake Clarity Crediting Program uses average annual pollutant load estimates generated by numeric models. Verification of field conditions and water quality monitoring are needed to ensure that on-the-ground, measured variables are in line with model input parameters and that measured pollutant loading is consistent with modeled estimates.

8. On February 9, 2011 the Water Board Executive Officer issued the Permittees and CalTrans an Order to submit technical reports in accordance with California Water Code Section 13267 requiring the development of jurisdiction-specific baseline load estimates for the Lake Tahoe TMDL pollutants of concern. The submitted baseline pollutant load estimates provide the basis for translating percentage based pollutant load reduction requirements defined by the TMDL into jurisdiction-specific, particle and mass-based pollutant load reduction requirements.
9. The Lake Tahoe TMDL requires new development and re-development project proponents and private property retrofit efforts to first consider opportunities to infiltrate storm water runoff from impervious surfaces. At a minimum, permanent storm water infiltration facilities must be designed and constructed to infiltrate runoff generated by the 20 year, 1-hour storm, which equates to approximately one inch of runoff over all impervious surfaces during a 1-hour period. Infiltrating runoff volumes generated by the 20 year, 1-hour storm may not be possible in some locations due to shallow depth to seasonal groundwater levels, unfavorable soil conditions, or other site constraints such as existing infrastructure or rock outcroppings. In the event that site constraints prohibit opportunities to infiltrate the runoff volume generated by a 20 year, 1-hour storm, project proponents must either (1) meet the numeric effluent limits contained in Basin Plan Table 5.6-1, or (2) document coordination with one of the Permittees or CalTrans to demonstrate that storm water treatment facilities treating private property discharges and public right-of-way storm water are sufficient to meet the Permittees' or CalTrans' average annual fine sediment and nutrient load reduction requirements.
10. The Basin Plan amendment and the Lake Tahoe TMDL requires municipalities to annually demonstrate on a catchment (i.e. sub-watershed) basis that no increased loading in fine sediment particle, total nitrogen, and total phosphorus will result from any land-disturbing activity permitted in the catchment. The Permit includes a narrative effluent limitation to implement this provision.
11. The Basin Plan amendment acknowledges a decline in nearshore water quality as evidenced by increased growth of attached algae. Pollutant load reduction actions taken to implement the Lake Tahoe TMDL, including pollutant load reductions required by this Permit, are anticipated to improve the nearshore environment by decreasing pollutant loads entering the lake. Additional analysis, however, is needed to quantify this benefit and to determine if additional resource management actions are needed to address the nearshore water quality problems. Such analysis is beyond the scope of this Permit.

12. The Basin Plan amendment recognizes the need for a comprehensive program to adaptively manage the Lake Tahoe TMDL program. Future research and monitoring findings, coupled with implementation experience and fiscal realities, may cause the Water Board to revisit the Lake Tahoe TMDL and associated regulatory activities. The Lake Tahoe TMDL Management System will provide the framework for synthesizing and reporting new information and for identifying the need for policy changes.

The Basin Plan amendment further acknowledges the need for adaptive management of the Lake Tahoe TMDL program by explicitly stating “should funding and implementation constraints impact the ability to meet the load reduction milestones, the Water Board will consider amending the implementation plan and load reduction schedules.”

This Permit requires the Permittees to develop PLRPs (Section IV.C) and conduct a fiscal analysis (Section III.B.8) within the first two years of this Permit term. The information provided in these reports, or from other relevant sources, may provide the rationale for future modifications to the Basin Plan load reduction schedules and associated Permit requirements.

#### **G. Public Notification**

1. The issuance of waste discharge requirements pursuant to California Water Code section 13370 et seq. is exempt from the California Environmental Quality Act in accordance with California Water Code section 13389. *County of Los Angeles et al., v. California Water Boards et al.*, (2006), 143 Cal.App.4th 985.
2. The Water Board has notified the Permittees, and interested agencies and persons of its intent to issue waste discharge requirements for this discharge, and has provided them with an opportunity to make statements and submit their comments.
3. This Permit shall serve as a NPDES permit, pursuant to CWA § 402, and shall take effect 90 days from Order adoption date provided the Regional Administrator of the U.S. EPA has no objections.
4. Pursuant to California Water Code § 13320, any aggrieved party may seek review of this Permit by filing a petition with the State Board within 30 days of the date of adoption of the Permit by the Regional Water Board. A petition must be sent to:

State Water Resources Control Board  
Office of the Chief Counsel  
P.O. Box 100  
Sacramento, CA 95812-0100

5. This Permit may be modified or alternatively revoked or reissued prior to its expiration date or any administrative extension thereto, in accordance with 40 CFR 122.41(f) and 122.62.

**IT IS HEREBY ORDERED** that Order No. R6T-2005-0026 is rescinded, and in order to meet the provisions contained in Division 7 of the Cal. Water Code and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, the Permittees shall comply with the following:

**I. Non-Storm Water Discharges**

- A. The Permittees shall, within their respective jurisdictions, effectively prohibit non-storm water discharges into its collection, conveyance, and treatment facilities and receiving waters, except where such discharges:
  1. Originate from a State, Federal, or other source for which they are preempted from regulating by State or Federal law; or
  2. Are covered by a separate individual or general NPDES permit, or conditional waivers; or
  3. Flows from firefighting activities.
- B. Pursuant to 40 CFR 122.26(d)(2)(iv)(B)(1) the following categories of non-storm water discharges need only be prohibited from entering the Permittees storm water collection, conveyance, and treatment facilities and receiving waters if such categories of discharges are identified by the Permittee (in its SWMP) as a source of pollutants to waters of the United States and the State of California:
  1. Waterline flushing
  2. Landscape irrigation
  3. Diverted stream flows
  4. Rising groundwater
  5. Uncontaminated groundwater infiltration [as defined by 40 CFR 35.2005(20)]
  6. Uncontaminated pumped groundwater
  7. Discharges from potable water sources
  8. Fountain drains
  9. Air conditioning condensation
  10. Irrigation water
  11. Springs
  12. Water from crawl space pumps
  13. Footing drains
  14. Lawn watering
  15. Individual residential car washing
  16. Flows from riparian habitats and wetlands
  17. Dechlorinated swimming pool and spa discharges

- C. When a non-storm water discharge category listed above is identified as a source of pollutants to waters of the State, Permittees shall either:
1. Prohibit the discharge category from entering its storm water collection, conveyance, and treatment system; or
  2. Authorize the discharge category and require implementation of appropriate or additional Best Management Practices to ensure that the discharge will not be a source of pollutants; or
  3. Require or obtain coverage under separate Regional or State Water Board permit for the discharge.

## **II. Other Prohibitions**

- A. Unless specifically granted, authorization pursuant to this Permit does not constitute an exemption to applicable discharge prohibitions prescribed in the Basin Plan.
- B. Discharges from the Permittees' collection, conveyance, and treatment facilities that cause or contribute to a violation of narrative or numeric water quality standards or objectives, as listed in Attachment E and F, are prohibited.
- C. Discharges from the Permittees' collection, conveyance, and treatment facilities shall not cause or contribute to a condition of nuisance.
- D. Storm water discharges regulated by this Permit shall not contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.
- E. The removal of vegetation or disturbance of ground surface conditions between October 15 of any year and May 1 of the following year is prohibited. Where it can be shown that granting a variance would not cause or contribute to the degradation of water quality, a variance to the dates stated above may be granted in writing by the Executive Officer.
- F. Discharge of any waste or deleterious material to surface waters of the LTHU is prohibited.
- G. The discharge, or threatened discharge, attributable to human activities, of solid or liquid waste materials, including soil, silt, clay, sand, and other organic and earthen materials to the surface waters of the LTHU is prohibited.



- H. The discharge or threatened discharge, attributable to human activities, of solid or liquid waste materials, including soil, silt, clay, sand and other organic and earthen materials, to lands below the high-water rim of Lake Tahoe or within the 100-year floodplain of any tributary to Lake Tahoe, is prohibited.
- I. The discharge or threatened discharge, attributable to new development in Stream Environment Zones, of solid or liquid waste, including soil, silt, sand, clay, rock, metal, plastic, or other organic, mineral or earthen materials to Stream Environment Zones in the LTHU is prohibited.
- J. Waste discharge prohibitions in this Section do not apply to discharges of storm water when wastes in the discharge are controlled through the application of management practices or other means and the discharge does not cause a violation of water quality objectives.

### **III. Storm Water Program Implementation**

#### A. Legal Authority

- 1. No later than **March 15, 2013**, Permittees shall establish, maintain, and enforce the necessary legal authority to prohibit, including, but not limited to:
  - a. Illicit connections and illicit discharges to its collection, conveyance, and treatment facilities,
  - b. The discharge of non-storm water to the Permittees' storm water collection, conveyance, and treatment facilities<sup>2</sup>. Permittees shall maintain adequate legal authority to:
    - a. Control through interagency agreement, the contribution of pollutants from one municipal jurisdiction to another
    - b. Require persons within their jurisdiction to comply with conditions in the Permittees' ordinances, permits, or orders (i.e. hold dischargers to its collection, conveyance, and treatment facilities accountable for their contributions of pollutants and flows)
    - c. Remove illicit connections to public storm water collection, conveyance, and treatment facilities
    - d. Control the discharge of spills, dumping, or material disposal other than storm water to public storm water collection, conveyance, and treatment facilities
    - e. Utilize enforcement measures (e.g., stop work orders, notice of violations, fines, referral to City, County, and/ or District Attorneys,

etc.) by ordinances, permits, contracts, orders, administrative authority, and civil and criminal prosecution

- f. Control the quality of storm water runoff from industrial and construction sites
  - g. Carry out all inspections, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition on illicit discharges.
  - h. Require the use of control measures to prevent or reduce the discharge of pollutants to the maximum extent practicable.
3. No later than **March 15, 2012** each Permittee shall submit a statement certified by its legal counsel as to whether or not the Permittee possesses the legal authority necessary to comply with this Permit. If the Permittee finds that it does not have the necessary legal authority, the statement must identify specific deficiencies.

No later than **March 15, 2013** each Permittee shall submit a statement certified by its legal counsel that the Permittee possesses all necessary legal authority to comply with this Permit through adoption of ordinances and/ or municipal code modifications. The statement shall include:

- a. Identification of all departments within the jurisdiction that conduct urban runoff related activities and their roles and responsibilities under this Order.
- b. Citation of urban runoff related ordinances and the reasons they are enforceable.
- c. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances.
- d. Description of how these ordinances or other legal mechanisms are implemented and actions taken can be appealed.
- e. Description of how the municipality can issue administrative orders and injunctions, or if it must go through the court system for enforcement actions.

#### B. Storm Water Management Plans

Federal Regulations (40 CFR 122.26(d)(2)(iv)) require the Permittees to develop and implement a SWMP during the term of this Order. Each Permittee shall amend its SWMP to include components 1-9 below.

Permittees shall submit amended SWMPs for Water Board consideration no later than **October 1, 2013**. The Water Board will circulate the amended SWMPs for public comment and will consider accepting them at a publicly noticed meeting.

If no hearing for SWMP acceptance is requested during the public comment period, the Executive Officer may accept the amended SMWPs.

1. Construction Component

Each Permittee shall implement a Construction Component of its SWMP to reduce pollutants in runoff from construction sites that involve more than three cubic yards of soil disturbance during all construction phases. The SWMP shall include a description of procedures for identifying inspection priorities and enforcing control measures. At a minimum the construction component plan shall address the following:

a. Construction Site Inventory

Permittees shall develop and update, at least annually, a complete inventory of construction sites within its jurisdiction that involve more than three cubic yards of soil disturbance. This requirement is applicable to all construction sites regardless of whether the construction site is subject to the General Construction Permit (Order R6T-2011-0019). The use of a Geographical Information System (GIS) database is highly recommended, but not required.

b. Construction Site Outreach

Permittees shall conduct construction site outreach efforts that include, at a minimum, measures to educate construction site operators about local ordinance and other regulatory requirements and applicable enforcement mechanisms prior to construction commencement.

c. Construction Site Prioritization and Inspection

Permittees shall develop a prioritization process for its watershed-based inventory (developed pursuant to III.B.1.a above) by threat to water quality. Each construction site shall be classified as a high, medium, or low threat to water quality. In evaluating threat to water quality each Permittee shall consider (1) the magnitude of fine sediment particle discharge potential; (2) site slope; (3) project size and type; (4) stage of construction; (5) proximity and connectivity to receiving water bodies; and (6) any other factors the Permittee deems relevant.

Each Permittee shall conduct construction site inspections for compliance with its ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and discharge prohibitions contained in this Permit in accordance with Section II.B of the Monitoring and Reporting Program (Attachment C). Inspections shall include review of site erosion control and BMP implementation plans. Inspection frequencies and priorities shall be determined by the threat to water quality prioritization.

During the construction season (May 1 through October 15 of each year), each Permittee shall inspect each high priority construction site and all construction projects overseen by the Permittee (e.g. erosion control and storm water treatment projects) at least once per week. Each Permittee shall inspect medium and low priority construction sites at a frequency sufficient to ensure that sediment and other pollutants are controlled and that unauthorized non-storm water discharges are prevented.

d. Construction Site Enforcement

Permittees shall enforce their storm water ordinances and other regulatory mechanisms for all construction sites to maintain compliance with local ordinances and discharge prohibitions contained in this Permit. Permittees shall document any non-compliance with Permit or ordinance requirements and report identified compliance issues as part of their Annual Report as described under Section IV.C of the Monitoring and Reporting Program (Attachment C).

Each Permittee shall follow up on identified compliance issues and take actions necessary for construction sites to comply with Permit requirements.

e. Oversight by Others

Permittees may make use of construction site outreach, inspection, and enforcement actions taken by other responsible agencies (such as the Tahoe Regional Planning Agency (TRPA) or the Water Board). If a Permittee chooses to use the efforts of other agencies to meet Permit requirements, Permittees must provide detailed documentation of the outreach, inspection, and/or enforcement action taken by others.

## 2. Commercial, Industrial, Municipal and Residential Component

Each Permittee shall implement SWMP elements to reduce, to the maximum extent practicable, pollutants in runoff from commercial, industrial, municipal, and residential properties within its jurisdiction. The purpose of this Component is to identify potential pollutant sources, prioritize existing or potential water quality threats associated with different land uses, and provide outreach, education, and enforcement measures to reduce and/or eliminate storm water pollution from these sources.

### a. Commercial, Industrial, and Municipal Site Inventory and Prioritization

Each Permittee shall develop and annually update an inventory of high priority commercial, industrial, and municipal activities and pollutant sources. The high priority commercial, industrial, and municipal site inventory shall consider including the following business types and activities:

- (1) Automobile mechanical repair, maintenance, or cleaning;
- (2) Automobile and other vehicle body repair or painting;
- (3) Retail or wholesale fueling;
- (4) Eating or drinking establishments;
- (5) Mobile carpet, drape or furniture cleaning;
- (6) Concrete mixing or cutting;
- (7) Painting and coating;
- (8) Mobile pool and spa cleaning;
- (9) Snow removal and storage activities;
- (10) Parking areas with more than 30 parking spaces;
- (11) Off-pavement parking and storage yards;
- (12) Municipal maintenance yards.

The use of a GIS database is highly recommended, but not required.

### b. Commercial, Industrial, and Municipal Site Outreach

Permittee outreach efforts shall include, at a minimum, educating commercial, industrial, and municipal site operators about local ordinances and other regulatory measure and associated tiered enforcement mechanisms applicable to commercial, industrial, or municipal site runoff problems.

c. Commercial, Industrial, and Municipal Site Inspections

Each Permittee shall implement a program to inspect high priority commercial, industrial, and municipal sites at least once per year in accordance with Section II.C of the Monitoring and Reporting Program (Attachment C).

d. Commercial, Industrial, and Municipal Site Enforcement

Permittees shall enforce their storm water ordinances and other regulatory mechanisms for all commercial, industrial, and municipal sites to maintain compliance with applicable local ordinances and discharge prohibitions contained in this Permit. Permittees shall document any non-compliance with ordinance and/or Permit requirements and report inspection findings as part of their Annual Report as described under Section IV.D of the Monitoring and Reporting Program (Attachment C).

Each Permittee shall follow up on inspection findings and take actions necessary for commercial, industrial, and municipal sites to comply with Permit and local ordinance requirements.

e. Oversight by Others

Permittees may make use of commercial and industrial site outreach, inspection, and enforcement actions taken by other responsible agencies (such as the TRPA or the Water Board). If a Permittee chooses to use the efforts of other agencies to meet Permit requirements, Permittees must provide detailed documentation of the outreach, inspection, and/or enforcement action taken by others.

f. Residential Property – Outreach and Education

Each Permittee shall identify high priority residential areas and activities for targeted outreach and education. These areas/activities should include:

- (1) Automobile repair and maintenance;
- (2) Off-pavement automobile parking;
- (3) Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- (4) Disposal of household hazardous waste (e.g., paints, cleaning products);
- (5) Snow removal activities

Permittees shall develop and implement a program to target education and outreach efforts toward identified high priority activities. Such outreach program should include coordination with other Lake Tahoe Basin agencies involved with BMP implementation, including but not limited to the Tahoe Resource Conservation District and the TRPA Erosion Control Team.

3. Storm Water Facilities Inspection Component

Each Permittee shall develop and implement an inspection program to assess the condition of its storm water collection, conveyance and treatment facilities and maintenance needs on a catchment, or sub-watershed basis in accordance with the following requirements, and Section II.A of the Monitoring and Reporting Program (Attachment C).

- a. By the end of the Permit term, each Permittee shall develop and maintain an up-to-date and accurate system map of its collection, conveyance, and treatment facilities.
- b. Each Permittee shall inspect its storm water collection, conveyance and treatment systems at least once annually and maintain a database of inspection findings.
- c. As part of its storm water collection, conveyance, and treatment system inspections, each Permittee shall evaluate and identify potential pollutant sources including but not limited to: private property/residential runoff, commercial site runoff, eroding cut slopes, eroding road shoulders, intercepted groundwater discharges, excessive traction abrasive application, and construction site tracking.
- d. Each Permittee shall document and prioritize identified maintenance needs and perform needed maintenance to ensure storm water systems effectively collect, convey, and treat urban runoff as designed.

4. Illicit Discharge Detection and Elimination Component

Permittees shall implement an Illicit Discharge Detection and Elimination Component containing measures to actively seek and eliminate illicit discharges and connections. At a minimum the Illicit Discharge Detection and Elimination Component shall include the following elements:

- a. Each Permittee shall visually inspect all storm water collection, conveyance, and treatment systems at least once annually as described in Section II.A of the Monitoring and Reporting Program (Attachment C) for evidence of illicit discharges, illicit connections, or other sources of non-storm water discharges.

- b. Each Permittee shall establish and implement a program to investigate and inspect any portion of the storm water collection and conveyance system that indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water. Each Permittee shall establish criteria to identify portions of the system where follow-up investigations are needed to determine whether illicit discharges, illicit connections, or other sources of non-storm water have occurred or are likely to occur.
  - c. Each Permittee shall implement and enforce its ordinances, orders, or other legal authority or regulatory mechanism to prevent and eliminate illicit discharges and connections to its storm water collection and conveyance system.
  - d. Each Permittee shall promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from its storm water collection and conveyance system. Each Permittee shall facilitate public reporting through development and operation of a public hotline. Public hotlines can be Permittee-specific or shared by Permittees. All storm water hotlines should be capable of receiving reports in both English and Spanish 24 hours per day, seven days per week. Permittees shall respond to and resolve each reported incident. Each Permittee shall keep a record of all reported incidents and how each was resolved.
5. New Development and Redevelopment Component

For new development and redevelopment projects, Permittees shall require project proponents to incorporate permanent storm water treatment facilities that are designed to infiltrate, at a minimum, runoff generated by the 20 year, 1-hour storm, which equates to approximately one inch of runoff over all impervious surfaces during a 1-hour period.

If infiltrating the entire volume of the 20 year, 1-hour storm is not possible at a given new development or redevelopment site, the Permittee shall require project proponents to infiltrate as much runoff as possible and either:

- a. Document how the project proponent will treat runoff to meet the numeric effluent limits described in Table III.B.1 below; or



- b. Document coordination with the project proponent to demonstrate that shared storm water treatment facilities treating private property discharges and public right-of-way storm water are sufficient to meet the municipality's average annual fine sediment and nutrient load reduction requirements described in Section IV.B of this Permit.

Table III.B.1 – Numeric effluent limits for runoff discharges

<u>Constituent</u>	<u>Units</u>	<u>Land Treatment/ Infiltration Systems</u>	<u>Surface Waters</u>
Total Nitrogen	mg/L as N	5.0	0.5
Total Phosphorus	mg/L as P	1.0	0.1
Turbidity	NTU	200	20
Oil and Grease	mg/L	40	2.0
Total Iron	mg/L	4.0	0.5

#### 6. Public Education Component

Permittees shall implement a public education program using any appropriate media to increase the community's knowledge of the effect of urban runoff on surface waters and the measures the public can take to help control storm water pollution and encourage behavior to reduce pollutant discharges.

#### 7. Municipal Personnel Training and Education Component

Permittees shall ensure that all municipal personnel and contractors responsible for implementing Permit requirements, for operating municipal facilities covered under Section III.B.2 of this Permit, and for conducting inspections required under Section III.B1-5 of this Permit are adequately trained and educated to perform such tasks.

#### 8. Fiscal Analysis

Each Permittee shall conduct a fiscal analysis of its urban runoff management program in its entirety, including development and implementation of both SWMP and PLRPs (IV.C below), along with operations and maintenances costs. This analysis shall, for each fiscal year covered by this Permit, evaluate the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) expected for Permit implementation. Such analysis shall include a description of the source(s) of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

#### **IV. Lake Tahoe Total Maximum Daily Load Implementation – Pollutant Load Reduction Requirements**

##### **A. Baseline Pollutant Loads**

The Lake Tahoe TMDL expresses waste load allocations for the urban upland source, which includes discharges from the Permittee's municipal storm water collection, conveyance, and treatment facilities, as percent reductions from a basin-wide baseline load. The baseline basin-wide pollutant loads for the TMDL reflect conditions as of water year 2003/2004 (October 1, 2003 – September 30, 2004), hereafter referred to as "baseline".

To translate basin-wide urban runoff load reduction requirements into jurisdiction-specific load reduction requirements, the Water Board has required the Permittees to conduct a jurisdiction-scale baseline load analysis as the first step in the TMDL implementation process for the urban pollutant source. Each Permittee has completed this analysis, and the submitted baseline pollutant load estimates are the basis for the particle number- and mass-based effluent limits in this Permit (Table IV.B.1).

Permittees will likely gather additional information in the future to enhance the accuracy of the baseline load analysis. Similarly, numeric models used to estimate pollutant loads may be improved over time. Should a Permittee determine that updated load estimation tools or other information are expected to change its baseline pollutant load estimate may request that the Water Board amend its baseline load estimate. Requests for baseline load estimate amendment must include a description of any new information informing the estimate, the magnitude of the proposed adjustment, and a discussion of how the baseline load estimate adjustment will (or will not) change the Permittees PLRP. Water Board staff will bring all requests to amend Permittee baseline load estimates to the Water Board for consideration.

##### **B. Pollutant Load Reduction Requirements and Water Quality-Based Effluent Limits**

For the first five year milestone, jurisdiction-specific waste load reduction requirements, incorporated into this Permit as average annual particle number- and mass-based effluent limits (Table IV.B.1), are calculated by multiplying the percentage of reduction required by the urban uplands for each pollutant by each jurisdiction's individual baseline load. Each jurisdiction must reduce fine sediment particle (FSP), total phosphorus (TP), and total nitrogen (TN) loads by 10%, 7%, and 8%, respectively, by **September 30, 2016.**

**Table IV.B.1 – Maximum average annual particle number- and mass-based effluent limits for Fine Sediment Particles (FSP) Total Phosphorus (TP) and Total Nitrogen (TN) to meet the first five year TMDL milestone**

Jurisdiction	Baseline FSP (# of particles)	FSP Allowable Load	Baseline TP (kg)	TP Allowable Load	Baseline TN (kg)	TN Allowable Load
El Dorado County	$2.2 \times 10^{19}$	$2.0 \times 10^{19}$	1043	970	4082	3755
Placer County	$2.6 \times 10^{19}$	$2.3 \times 10^{19}$	1111	1033	4635	4264
City of South Lake Tahoe	$1.9 \times 10^{19}$	$1.7 \times 10^{19}$	789	734	3361	3092

Pollutant load reductions shall be measured in accordance with the processes outlined in the Lake Clarity Crediting Program Handbook (Attachment D). To demonstrate compliance with the average annual fine sediment particle pollutant load reduction requirements outlined in Table IV.B.1, each Permittee must earn and maintain Lake Clarity Credits in accordance with Table IV.B.2 for water year October 1, 2015 to September 30, 2016, and for subsequent water years.

**Table IV.B.2 – Minimum Lake Clarity Credit Requirements**

Jurisdiction	Min. Lake Clarity Credit Requirement*
El Dorado County	220
Placer County	260
City of South Lake Tahoe	190

\*The Lake Clarity Crediting Program Handbook defines one (1) Lake Clarity Credit as equal to  $1.0 \times 10^{16}$  fine sediment particles with a diameter less than 16 micrometers

To ultimately achieve the deep water transparency standard, Permittees shall reduce FSP, TP, and TN loading according to the requirements in the Lake Tahoe TMDL outlined for the “Urban Upland” pollutant source (Attachment B). In accordance with the TMDL, incremental pollutant load reductions will result in attaining the deep water transparency standard by the year 2076.

#### C. Pollutant Load Reduction Plans

Each Permittee shall prepare a detailed plan describing how it expects to meet the pollutant load reduction requirements described in Section IV.B above. Permittees shall submit a plan no later than **March 15, 2013** that shall include, at a minimum, the following elements:

2. Catchment registration schedule

The Pollutant Load Reduction Plan (PLRP) shall include a list of catchments that the Permittee plans to register pursuant to the Lake Clarity Crediting Program (see Attachment D) to meet load reduction requirements. The list shall include catchments where capital improvement projects have been constructed since May 1, 2004 that the Permittee expects to claim credit for, and catchments where projects will be constructed during this Permit term.

The list may also include catchments where Permittees plan actions other than capital improvements (such as enhanced operations and maintenance). The plan shall describe which catchments the Permittee anticipates it will register for each year of this Permit term.

3. Proposed pollutant control measures

For each catchment in the registration plan, the PLRP shall describe storm water program activities to reduce fine sediment particle, total phosphorus, and total nitrogen loading.

4. Pollutant load reduction estimates

For each catchment in the registration plan (or a catchment subset that provides adequate representation of various land use and management practice variables) Permittees shall provide estimates of both baseline pollutant loading and expected pollutant loading to demonstrate that proposed actions will, over the course of this Permit term, reduce the Permittee's jurisdiction-wide pollutant load by the amounts specified in Section IV.B above. The pollutant load reduction estimate shall differentiate between estimates of pollutant load reductions achieved since May 1, 2004 and pollutant load reductions from actions not yet taken.

5. Load reduction schedule

The PLRP shall describe a schedule for achieving the pollutant load reduction requirements described in Section IV.B above. The schedule shall include an estimate of expected pollutant load reductions for each year of this Permit term based on preliminary numeric modeling results.

6. Annual adaptive management

The PLRP shall include a description of the internal process and procedures to annually assess storm water management activities and associated load reduction progress. The adaptive management discussion shall describe how the Permittee will use information from the previous years' monitoring and implementation efforts to make needed adjustments to ensure compliance with the load reduction requirements specified in Section IV.B.

The Water Board will circulate the submitted PLRPs for public review and will consider PLRP acceptance at a Water Board meeting. Each Permittee's PLRP must be accepted by the Water Board for Permittees to achieve Permit compliance.

D. Land Use Changes and Management Practices

If either land use changes or management practices associated with development or re-development result in a reduction of pollutant loads from the estimated baseline, then this reduction can be counted toward meeting pollutant load reduction requirements. Conversely, actions to eliminate any pollutant load *increase* from these changes will not be counted towards the annual load reduction requirements.

In accordance with the Basin Plan, Permittees must ensure that changes in land use, impervious coverage, or operations and maintenance practices do not increase a catchment's average annual baseline pollutant load.

E. Storm Water Facility Operations and Maintenance

Permittees shall operate and maintain storm water collection, conveyance, and treatment facilities to ensure, at a minimum, that the baseline pollutant loading specified in Table IV.B.1 does not increase.

F. Pollutant Load Reduction Progress

To demonstrate pollutant load reduction progress, each Permittee shall submit a Progress Report by **October 1, 2013**. The Progress Report shall include:

1. A list of erosion control and storm water treatment projects the Permittee completed between the May 1, 2004 and October 15, 2011.
2. Pollutant load reduction estimates for all erosion control and storm water projects and any other load reduction actions up to October 15, 2011. The report shall compare the pollutant load estimates for work completed with the pollutant load reduction requirements described in Section IV.B above.

G. Pollutant Load Reduction Monitoring Requirements

Permittees shall comply with all monitoring and reporting requirements specified in Section I of the attached Monitoring and Reporting Program (Attachment C).

**V. Receiving Water Limitations**

The Permittees shall comply with discharge prohibitions specified in Sections I and II of this Permit through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the Permittees' SWMPs and other requirements of this Permit, including any modifications. The Permittees' SWMPs shall be designed to achieve compliance with the requirements of Sections I and II of this Permit. If exceedances of water quality objectives or water quality standards (collectively, WQS) persist notwithstanding implementation of the SWMPs and other requirements of this Permit, the Permittees shall assure compliance with discharge prohibitions and receiving water limitations in Sections I and II of this Permit by complying with the following procedure:

1. Upon a determination by either the Permittee or the Water Board that discharges are causing or contributing to an exceedance of an applicable WQS, the Permittee shall notify and thereafter submit a report to the Water Board that describes Best Management Practices (BMPs) that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be incorporated into the annual report required under Section IV of the Monitoring and Reporting Program (Attachment C) unless the Water Board directs an earlier submittal. The report shall include an implementation schedule. The Water Board may require modifications to the report.
2. If SWMP and/or monitoring program modifications are needed to incorporate new or revised BMPs, adjust implementation schedules, or add additional monitoring, the Permittee will make such changes within 30 days following approval of the report described above by the Water Board.
3. If changes have been made, implement the revised SWMP and monitoring program in accordance with the approved schedule.

So long as the Permittee has complied with the procedures set forth above and is implementing its revised SWMP, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Water Board to develop additional BMPs.

**VI. Administrative Provisions**

- A. The Water Board reserves the right to revise any portion of this Order upon legal notice to, and after opportunity to be heard is given to, all concerned parties.
- B. Permittees may request that the Water Board consider Permit revisions if new information arises that would influence Permittees ability to comply with pollutant load reduction requirements. Such a request must include and be supported by information consistent with that developed pursuant to Permit Sections III.B.8 and IV.C.
- C. All terms of the attached Monitoring and Reporting Program (Attachment C) are hereby incorporated by reference as requirements under this Permit.
- D. Each Permittee shall comply with the Standard Provisions, Reporting Requirements, and Notifications contained in Attachment G of this Order. This includes 24 hour/5 day reporting requirements for any instance of non-compliance with this Order as described in section B.6 of Attachment G.
- E. All plans, reports, and subsequent amendments submitted in compliance with this Order shall be implemented immediately (or as otherwise specified) and shall be an enforceable part of this Order upon submission to the Water Board. All Permittee submittals must be responsive to, and consistent with the requirements of this Order.
- F. This Order expires on **December 5, 2016**. The Permittees must file a report of waste discharge in accordance with Title 23, California Code of Regulations, no later than 180 days in advance of such date as application for an updated Municipal NPDES Permit.

The report of waste discharge must include a preliminary PLRP as outlined in Permit Sections IV.C.2 and IV.C3 The preliminary PLRP shall describe how each Permittee could meet the pollutant load reduction requirements for the second five-year TMDL implementation period, defined as the ten-year load reduction milestone in Attachment B. Specifically, the preliminary Pollutant Load Reduction Plans shall demonstrate how each Permittee could reduce baseline fine sediment particle, total nitrogen, and total phosphorus loads by 21 percent, 14 percent, and 14 percent, respectively, by the end of the next permit term.

## G. Table of Required Submittals

Permit Submittal	Permit Section	Submittal/Required Completion Date
Analysis of Existing Legal Authority	III.A.4	March 15, 2012
Statement of Legal Authority	III.A.4	March 15, 2013
Amended Storm Water Management Plan	III.B	October 1, 2013
Pollutant Load Reduction Plan	IV.C	March 15, 2013
Pollutant Load Reduction Progress Report	IV.F	October 1, 2013
Report of Waste Discharge and preliminary Pollutant Load Reduction Plan	VI.F	June 9, 2016
<b>Monitoring and Reporting Program Submittal</b>	<b>Attach. C Section</b>	<b>Submittal/Required Completion Date</b>
Two (2) Catchment Credit Schedules	I.D	March 15, 2012
Storm Water Monitoring Plan	III.C	March 15, 2013
Annual Report	IV	March 15, 2014 and annually thereafter
Development Impact Statement	I.G, IV.I	March 15, 2015

I, Patty Z. Kouyoumdjian, Executive Officer, do hereby certify that the forgoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on October 10, 2012.

  
PATTY Z. KOUYOUMDJIAN  
EXECUTIVE OFFICER

- Attachments:
- A. Fact Sheet
  - B. Pollutant Load Allocation Tables
  - C. Monitoring and Reporting Program
  - D. Lake Clarity Crediting Program Handbook V1.0
  - E. Water Quality Objectives
  - F. Compliance with Water Quality Objectives
  - G. Standard Provisions, Reporting Requirements, and Notifications



# ATTACHMENT C

## STATE OF CALIFORNIA

### CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LAHONTAN REGION

#### MONITORING AND REPORTING PROGRAM ORDER NO. R6T-2011-0101A1 NPDES NO. CAG616001

#### UPDATED WASTE DISCHARGE REQUIREMENTS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR STORM WATER/URBAN RUNOFF DISCHARGES FROM EL DORADO COUNTY, PLACER COUNTY, AND THE CITY OF SOUTH LAKE TAHOE WITHIN THE LAKE TAHOE HYDROLOGIC UNIT

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#### **I. Pollutant Load Reduction Monitoring Requirements**

##### **A. Lake Clarity Crediting Program**

The Lake Tahoe Total Maximum Daily Load (TMDL) established pollutant load estimates and load reduction requirements for total nitrogen, total phosphorus, and fine sediment particles that source categories must meet on an average annual basis. The Lake Clarity Program (Crediting Program) defines a system to evaluate and track pollutant load reductions to demonstrate compliance with the load reduction requirements for fine particle sediment in the TMDL. This system provides methods for consistently linking implementation of pollutant controls to average annual pollutant load reduction estimates using numeric modeling tools. It establishes Lake Clarity Credits (credits) for actions taken to reduce pollutant loads as required by the Lake Tahoe TMDL. Credits are used in this Monitoring and Reporting Program to provide a consistent metric for assessing compliance with average annual pollutant load reduction requirements. The Crediting Program therefore provides a comprehensive and consistent accounting system to track estimated fine sediment particle load reductions into the Lake Tahoe Hydrologic Unit from urban storm water, provides methods to assess ongoing performance of implementation actions, and guides interaction between the Water Board and Permittees regarding load reduction progress assessment.

Load reductions are defined as the difference between the estimated average annual amount of pollutants entering Lake Tahoe under standardized baseline conditions and the estimated average annual amount of pollutants entering the lake under expected conditions following management practice implementation.

Effective implementation of any pollutant control can generate credits, provided that the Permittees effectively demonstrate to the Water Board that the action (1) will reduce the load of the pollutants of concern to Lake Tahoe from urban land uses, (2) is supported by reasonable load reduction estimate, and (3) is implemented and maintained over time.

Effective implementation of pollutant controls results in actual conditions of urban lands and treatment best management practices (BMPs) that are at or better-than the conditions used as the basis for modeled load reduction estimates, referred to as “expected” conditions. Actual conditions, as assessed during annual inspections outlined in Section I.E of this Monitoring and Reporting Program, are compared to the expected conditions to determine the appropriate amount of credit to award in a given year. When actual conditions are at or better-than expected conditions, the actual pollutant loading from the catchment is considered to be the same or better than the expected pollutant loading and full credit will be awarded. If actual conditions are worse than expected, the actual loading is considered to be higher than expected loading and the credit award will be less than the full credit potential amount.

Credits are tracked and awarded annually. The credit accounting period is a water year, October 1 through September 30. Each year is a unique accounting period – credits awarded in one year cannot be used to meet load reduction requirements in a subsequent or prior year.

The following sections briefly describe components of the Crediting Program protocols and establish phased Crediting Program implementation requirements.

## B. Credit Definition and Credit Requirements

The Crediting Program Handbook (Attachment D) defines one (1) Lake Clarity Credit as equal to  $1.0 \times 10^{16}$  fine sediment particles with a diameter smaller than 16 micrometers ( $\mu\text{m}$ ).

To demonstrate compliance with the pollutant load reduction requirements outlined in Permit Table IV.B.1, each Permittee must earn and maintain Lake Clarity Credits in accordance with Permit Table IV.B.2 for water year October 1, 2015 to September 30, 2016, and for subsequent water years.

### C. Crediting Program Handbook

The Lake Clarity Crediting Program Handbook version 1.0 (Crediting Program Handbook) defines the protocols for implementing the Crediting Program. The Crediting Program Handbook provides detailed technical guidance for estimating load reductions, preparing catchment credit schedules, reporting conditions and awarding credits. The Crediting Program Handbook provides forms, templates, and examples to aide users in implementing the process.

Crediting Program Handbook version 1.0 is incorporated into the Permit as Attachment D and all Lake Clarity Crediting Program procedures are incorporated as enforceable requirements under this Permit. Within the context of this Monitoring and Reporting Program, all Crediting Program Handbook references to “regulator” should be understood to mean the Water Board.

### D. Catchment Credit Schedules

The credit potential for an urban catchment (or subwatershed) is based on estimates of load reduction from baseline to expected conditions. The Crediting Program Handbook describes a document called a *catchment credit schedule*, which defines the baseline condition for all catchments and provides the means to inventory treatment facilities, roadways, private property BMPs, and other pollutant controls. This information is then used to compare the expected conditions to the baseline value after the implementation of pollutant controls and forms the basis for the load reduction estimate and establishes the credit potential for a given catchment.

Crediting Program Handbook Chapter 1 describes the steps for developing a catchment credit schedule and submitting it for Water Board approval. Crediting Program Handbook Appendix A includes a complete example of each step in the process of establishing a catchment credit schedule, and the Tools and Templates section of the Crediting Program Handbook provides detailed instructive support. Generally, the process steps are:

1. Estimate pollutant load reductions and draft catchment credit schedule (see Crediting Program Handbook section 1.1).
2. Verify pollutant load reduction estimate and catchment credit schedule (see Crediting Program Handbook section 1.2).
3. Register catchment in the Accounting and Tracking Tool (see Crediting Program Handbook section 1.3).

For area-wide maintenance practices, Permittees may choose to register their entire jurisdiction as a single catchment. The details associated with such action must follow the procedures and protocols outlined in the Handbook.

To demonstrate proficiency at developing catchment credit schedules and to document pollutant load reduction actions, each Permittee prepared two (2) catchment credit schedules by **March 15, 2012** and participated in catchment credit schedule verification meetings with Water Board staff. Each Permittee will register additional catchments as needed to earn enough credits to meet the requirements contained in Permit Table IV.B.2.

#### E. Condition Assessments

Credits are awarded annually by the Water Board for ongoing implementation of effective pollutant control measures that result in actual, observable conditions of urban lands and treatment BMPs that are consistent with the expected conditions used to estimate pollutant load reductions. Actual conditions, as determined by field inspection findings, are compared to expected conditions to determine the appropriate credit award. In some instances, partial credit may be awarded when actual conditions are worse than expected (see Crediting Program Handbook Appendix C).

Actual field conditions are evaluated and compared with expected conditions used to estimate pollutant load reductions. Each Permittee shall conduct treatment BMP and roadway condition assessments as described in the Crediting Program Handbook for all registered catchments.

Crediting Program Handbook Chapter 2.1 describes the process for defining inspection needs, performing facilities inspections, and recording results for registered catchments. Crediting Program Handbook Appendix B includes a detailed example of condition assessment inspection and reporting. Crediting Program Handbook Appendix C provides an overview of how actual conditions are compared with expected conditions to determine how much credit will be awarded.

Permittees shall use the Best Management Practices Maintenance Rapid Assessment Methodology (BMP RAM) and the Road Rapid Assessment Methodology (Road RAM) or their equivalents (subject to Water Board acceptance) to assess, score, and document the actual condition of treatment BMPs and roadways.

BMP RAM and Road RAM technical documents, users manuals, and databases can be found on the Water Board's website at:

[http://www.waterboards.ca.gov/lahontan/water\\_issues/programs/tmdl/lake\\_tahoe/index.shtml#imp](http://www.waterboards.ca.gov/lahontan/water_issues/programs/tmdl/lake_tahoe/index.shtml#imp)

The BMP RAM and Road RAM technical documents and users manuals are hereby incorporated into this Monitoring and Reporting Program by reference.

#### F. Condition Assessment Method Alternatives

Should a Permittee consider using a treatment facility assessment method other than the BMP RAM, the Permittee must submit a proposal to the Water Board Executive Officer. The submittal must describe how the Permittee will demonstrate that the proposed equivalent method will effectively evaluate treatment facility condition based on treatment process (infiltration, particle settling, media filtration, or nutrient cycling), is capable of evaluating the condition of the BMP on a 0-5 scale, with 5 representing the highest functioning condition, and produces repeatable results that are consistent with the BMP RAM.

Should a Permittee consider using a roadway condition assessment method other than the established Road RAM, it must submit a detailed proposal to the Water Board Executive Officer. The submittal must demonstrate that any proposed equivalent method will effectively evaluate roadway condition based on field observations of sediment accumulation, can demonstrably extrapolate results to other roadway areas, is capable of evaluating the condition of representative roadway segments on a 0-5 scale, with 5 representing the cleanest condition, and produces repeatable results consistent with the Road RAM.

The initial submittal for alternative condition assessment methods need not contain all technical information of the proposed alternative methods, but must establish a schedule for fully developing and submitting details for Water Board approval. Water Board staff and the Executive Officer will review any proposed alternatives and will bring the proposals before the Water Board for consideration.

#### G. Impacts Influencing Baseline Pollutant Loads

In accordance with the Basin Plan and Permit Section IV.D, Permittees must ensure that changes in land use, impervious coverage, or operations and maintenance practices do not increase a catchment's average annual baseline pollutant load.

For the 2014 water year (October 1 2013 – September 30, 2014) each Permittee shall conduct a general assessment of the changes in land use, impervious coverage, and operations and maintenance practices to determine whether such changes have increased the baseline average annual pollutant loading as described in Permit Table IV.B. The assessment need only consider land use, impervious cover, and operations and maintenance changes that have occurred in hydraulically connected catchments not registered as part of the Crediting Program that may have occurred since the initial baseline analysis was conducted.

If Permittees determine that changes in baseline loading have occurred, each Permittee shall identify the specific catchments where pollutant loads have changes and ensure those catchments have been registered under the Crediting Program.

## II. Inspection Requirements

### A. Storm Water System Inspections

Visual inspection of storm water collection, conveyance, and treatment facilities is the most efficient tool to assess facility function and evaluate maintenance needs.

For portions of a Permittee's jurisdiction not included in a Crediting Program registered catchment, Permittees shall inspect its storm water collection, conveyance, and treatment systems **annually**. Permittees shall conduct facilities inspections between the period of time following spring snow melt and before fall rain and snow storms each year to provide the opportunity to perform facilities maintenance as needed.

Storm water facilities shall be inspected for signs of needed maintenance, evidence of erosion, damage from snow removal equipment, and accumulated sediment and debris. During inspections, Permittees shall also consider potential storm water pollutant sources including but not limited to:

- Private property/residential runoff
- Commercial property runoff
- Eroding cut slopes
- Eroding road shoulders
- Traction abrasive application
- Dislodged sediment from snow removal activities
- Vehicles tracking sediment onto the roadway
- Parking related erosion

Permittees shall implement an inspection documentation and tracking system to record inspection findings and prioritize maintenance needs. At a minimum, the tracking system shall provide mechanisms to document the following:

- Inspector's name
- Date and time of inspection
- Field and weather conditions at the time of the inspection
- Mapped inspection location (i.e. catchment)
- Observed system condition at time of inspection
- An assessment of needed maintenance or other follow-up actions
- Prioritization of needed maintenance

#### B. Construction Site Inspections

Permittees shall establish construction site inspection frequencies based on the water quality prioritization described in Permit Section III.B.1. At a minimum, Permittees shall conduct weekly inspections during the construction season of high priority construction projects and construction projects overseen by the Permittee (e.g. erosion control projects).

Permittees shall inspect each medium and low priority construction site at a frequency sufficient to ensure that sediment and other pollutants are properly controlled and that unauthorized, non-storm water discharges are prevented.

Permittees shall implement a construction site inspection documentation and tracking system to record inspection findings. At a minimum, the tracking system shall provide mechanisms to document the following:

- Inspector's name
- Date and time of inspection
- Field and weather conditions at the time of the inspection
- Inspection location
- Observed facility conditions
- A summary of follow up and enforcement actions taken, if violations are observed.

#### C. Commercial, Industrial, and Municipal Site Inspections

Permittees shall establish commercial, industrial, and municipal site inspection frequencies based on the water quality prioritization described in Permit Section III.B.2. Each Permittee shall inspect each high priority commercial, industrial, and municipal site annually.

Permittees shall implement a commercial, industrial, and municipal site inspection documentation and tracking system to record inspection findings. At a minimum, the tracking system shall provide mechanisms to document the following:

- Inspector's name
- Date and time of inspection
- Field and weather conditions at the time of the inspection
- Inspection location
- Observed facility conditions
- A summary of follow up and enforcement actions taken, if violations are observed.

#### D. Traction Abrasive and Deicing Material

The goal of traction abrasive monitoring program is to measure the quality and quantity of material applied and recovered. To meet that objective, Permittees shall implement a program that, at a minimum, includes the following:

1. Specifications for the amounts of fine sediment particles, total nitrogen, and total phosphorus allowable in material the Permittee applies as traction abrasives.
2. A program to sample supplied traction abrasive materials to determine whether materials meet the specifications defined according to II.D.1 above.
3. A system to track and record the total amount of abrasive and deicing material applied to its roads and parking areas per winter season. Materials applied to Permittee roads by other authorized entities shall be tracked and recorded along with Permittee applied material.
4. A system to track and record the location and amount that maintenance crews, Permittee contractors, or other authorized entities apply abrasive and deicing material (i.e. amount applied per "zone").

### III. Water Quality Monitoring Requirements

#### A. Catchment Scale Runoff Water Quality Monitoring

The Crediting Program and associated load estimation tools, including the Pollutant Load Reduction Model (PLRM), estimate the average annual pollutant load reductions at a catchment scale as a result of pollutant control actions. Storm water monitoring is needed to verify that implementing cumulative pollutant control actions is resulting in



measurable pollutant load reductions at the catchment scale. Documenting and reporting pollutant load reductions at select catchment outlets will help verify that the jurisdictions cumulative pollutant control actions are effective and confirm credit awards are warranted.

To assess the water quality at the urban catchment outfalls and provide load estimation tool comparison data, each Permittee shall, at a minimum:

1. Establish monitoring locations at storm water outfalls of no less than two (2) Crediting Program registered catchments, targeting catchments that discharge directly to surface waters.
2. Obtain continuous flow data at the catchment outfall and report data as seasonal [Fall/Winter (October 1 – February 28) Snow melt (March 1 – May 31) and Summer (June 1 – September 30)] total outflow volumes (in cubic feet).
3. Collect the first flush sample for each seasonal event type (rain-on-snow, snowmelt, summer thunderstorm, fall rain) and collect additional samples spanning storm event hydrographs. For all event types, report the average first flush concentration (mg/L) for each year sampled.

Due to the large total volume of the spring snow melt, collect supplemental samples periodically throughout the snow melt hydrograph. Designate each sample as first flush, rising limb or falling limb of the snow melt hydrograph. Use the range of samples collected to estimate the snow melt event mean concentration (mg/L) for each year sampled, in addition to the first flush concentration.

4. Analyze all collected water samples for the Lake Tahoe TMDL pollutants of concern – fine sediment particles, total suspended sediment, total nitrogen, and total phosphorus. The priority pollutant is fine sediment particles (FSP) less than 16 micrometers ( $\mu\text{m}$ ) in diameter, that should be reported as both concentration by mass (mg/L) and the number of particles per liter of water. Samples collected and analyzed for FSP shall span the range of expected FSP concentrations experienced at the selected catchment outfall.
5. Total nitrogen, total phosphorus, and total suspended solids sample analyses may be conducted with lesser frequency than FSP analyses provided. Permittees must demonstrate the proposed approach will adequately reflect the range of nutrient and total suspended solid concentrations at the catchment outlet. The sampling strategy shall include a range of event types that is proportional to their frequency of occurrence and total seasonal volume contributions.

6. Collect paired turbidity and FSP measurements concurrently with flow at the catchment outfall. Relate FSP concentration by mass (mg/L) results to turbidity measurements by developing an FSP concentration/turbidity rating curve that correlates FSP concentration data collected over the range of conditions to measured turbidity. Use accepted FSP mass to particle number conversions to report FSP results as number of particles.
7. Use collected data to estimate the average flow-weighted concentration of each pollutant for each season monitored.
8. Calculate the total load (mass in kilograms for total nitrogen, total phosphorus, and total suspended solids and number of particles for FSP) of each pollutant for each season monitored as the product of the total seasonal volume and the average seasonal concentration.
9. Use long-term regional meteorological data to identify whether the data were collected during dry, average, or wet seasons.
10. Follow quality assurance protocols established by the Regional Storm Water Monitoring Program (RSWMP) Quality Assurance Project Plan (May 2011) for all sampling activities.
11. Maintain monitoring locations and collect samples for no fewer than three water years (October 1 – September 30).

B. Best Management Practice (BMP) Effectiveness Monitoring

The PLRM and other pollutant load estimation tools use the best available information to assess water quality benefits expected from implementing storm water treatment devices and other BMPs. Condition assessments are used to verify that the condition of a BMP or specific land use is being maintained at an acceptable condition. BMP effectiveness monitoring is needed to verify that each Permittee's BMP implementation and maintenance practices are resulting in actual measured pollutant load reductions. BMP effectiveness monitoring is also needed to improve installation and maintenance practices for various BMPs to optimize water quality benefits.

Each Permittee must, at a minimum:

1. Select at least one (1) storm water treatment device or other BMP and monitor effectiveness for at least three successive years.

2. If the selected BMP is a flow-through structure/device, obtain continuous flow at the inlet and outlet to support seasonal [Fall/Winter (October 1 – February 28) Snow melt (March 1 – May 31) and Summer (June 1 – September 30)] inflow and outflow volume reporting.

If the selected BMP is not a flow-through device, devise a reasonable method to obtain continuous flow at the inlet to support seasonal volume reporting of storm water treated/infiltrated/contained by the BMP.

If the selected BMP is a pollutant source control measure, the Permittee need not report hydrology and the monitoring plan shall describe methods to calculate the mass of pollutant controlled per land surface area.

3. Collect influent (or up gradient) and effluent (or down gradient) storm water samples to assess treatment device/activity performance.
4. Analyze all collected water samples for the Lake Tahoe TMDL pollutants of concern – fine sediment particles, total nitrogen, and total phosphorus. The priority pollutant is FSP reported as the number of particles per liter of water. Samples collected and analyzed for FSP shall span the range of expected FSP concentrations experienced at the inlet and outlet.

Total nitrogen, total phosphorus, and total suspended solids sample analyses may be conducted with lesser frequency than FSP analyses provided Permittees demonstrate the proposed approach will provide a representative sampling of the range of pollutant concentrations. The sampling strategy should include a range of event types that is proportional to their frequency of occurrence and total seasonal volume contributions.

5. Use collected data to estimate the average concentration of each pollutant for each season monitored.
6. If evaluating a pollutant or hydrologic source control BMP, describe a data collection approach and reasonable extrapolation method to estimate volume of runoff eliminated (hydrologic source control) or the mass of the pollutant, or number of particles eliminated per unit area of the land surface affected (pollutant source control). Describe how this value will be used to estimate pollutant loads controlled per season [Fall/Winter (October 1 – February 28) Snow melt (March 1 – May 31) and Summer (June 1 – September 30)].

7. Use long-term regional meteorological data to identify whether the data were collected during dry, average, or wet seasons.
8. Follow quality assurance protocols established by the RSWMP Quality Assurance Project Plan (May 2011) for all sampling activities.

C. Monitoring Plan

By **March 15, 2013** each Permittee shall prepare and submit to the Water Board a storm water monitoring plan to implement the requirements described in Sections III.A and III.B above.

For catchment outfall monitoring, the plan shall describe how the requirements in Section III.A above will be met, including which catchments the Permittee proposes to monitor, proposed monitoring instrumentation, proposed sampling frequency, data management and proposed analysis and reporting methods. The monitoring plan shall include a detailed discussion of the rationale for the chosen sampling sites, methods, and frequency and a discussion of how the proposed monitoring will support, enhance, or otherwise inform the Permittee's existing load estimation or condition assessment methods and the Permittee's pollutant load reduction program.

For the BMP effectiveness monitoring, the plan shall describe how the requirements in Section III.B above will be met, including a description of the selected storm water treatment device or BMP, a discussion of influent (or upstream) and effluent (downstream) monitoring locations, and a description of how the proposed monitoring will evaluate the effectiveness of the chosen BMP and provide information to improve the collective understanding of how the chosen BMP should be installed and maintained over time.

The submitted monitoring plans must be reviewed and approved by the Water Board to ensure compliance with Permit and Monitoring and Reporting Program requirements.

D. Storm Water Monitoring Data Management

Electronic data shall be in a format compatible with the Surface Water Ambient Monitoring Program (SWAMP) database (See <http://mpsl.mlml.calstate.edu/swdataformats.htm>) and the *California Environmental Data Exchange Network (CEDEN)* at [www.ceden.org](http://www.ceden.org).

Permittees shall make all monitoring data and associated analytical reports available to managers of a regional data center (such as the Tahoe Integrated Information Management System or RSWMP database), and through their web sites. Permittees shall notify stakeholders and members of the general public about the availability of electronic and paper monitoring reports through notices distributed through appropriate means, such as an electronic mailing list or posting on Permittee websites.

#### E. Storm Water Monitoring Compliance Options

To promote cost savings through economies of scale and avoid monitoring redundancy, Permittees may obtain monitoring data through various organizational structures, including use of data obtained by other parties.

Permittees may also choose to comply with the storm water monitoring requirements through a collaborative effort. Should the Permittees chose to conduct monitoring described in Sections III.A and III.B above as part of a collaborative effort, the group may submit a single storm water monitoring plan to fulfill the requirement contained in Section III.C above.

Any collaborative monitoring plan shall include plans to collect samples from no less than four (4) urban catchments (with at least one catchment in each jurisdiction) and evaluate performance of no less than two (2) BMPs. Permittees must describe how the selected catchments span an adequate range of land use conditions, size, and water quality improvement strategies to avoid duplication of data collection efforts.

Similarly, selected BMPs must reflect differing treatment processes and treatment approaches implemented by the Permittees to provide a range of useful monitoring findings. The submitted monitoring plan shall describe how the proposed collaborative effort will effectively enhance the usefulness of collected data, achieve cost savings, and meet the requirements outlined in Sections III.A and III.B above.

For each monitoring component that is conducted collaboratively, Permittees shall prepare a single report on behalf of all contributing Permittees; separate water quality monitoring reports are not required.

If an existing collaborative organization or other research and monitoring effort has initiated plans after the adoption of this Permit to conduct monitoring that would fulfill the requirements described in Sections III.A, III.B, and III.C above, the Permittees may request the Water Board adjust monitoring and reporting dates to synchronize with such efforts.

#### IV. Annual Reporting Requirements

For each water year (October 1-September 30), Permittees shall develop and submit an Annual Report by **March 15, 2014** and by **March 15** of each subsequent year of the permit term. Annual Reports shall include the following elements:

##### A. Pollutant Load Reduction Reporting

Each Permittee must describe actions taken to fulfill the requirements of Monitoring and Reporting Section I. Specifically, each Permittee's annual report must include a list of catchments registered in the Accounting and Tracking Tool and a summary of applicable condition assessment results for all registered catchments pursuant to Section I.D above.

Each Permittee shall list its total credit award for the previous water year to demonstrate progress at meeting pollutant load reduction requirements.

Each Permittee shall describe load reduction progress in context of its Pollutant Load Reduction Plan (PLRP), including a discussion of whether catchment registration, associated load reduction estimates, and implementation actions are consistent with the submitted and accepted PLRP. Permittees shall discuss any deviations from the accepted PLRP, provide rationale for those deviations, and, if necessary, describe how the Permittee will compensate for any noted shortfalls in expected pollutant load reductions.

##### B. Storm water Facilities Inspection Report

The annual report shall include a summary report of all storm water facility inspections performed pursuant to Section II.A of this Monitoring and Reporting Program. The report shall include a list of all areas inspected, a description of identified pollutant sources and/or problem areas, and a discussion of any planned or completed maintenance and/or enforcement follow up activities.

C. Construction Site Inspection Report

The annual report shall include a summary report of all construction inspections performed pursuant to Section II.B of this Monitoring and Reporting Program. The summary report shall include a list of all construction sites inspected, a description of identified problems, and a discussion of any planned or completed enforcement follow up activities.

D. Commercial, Industrial, and Municipal Site Inspection Report

The annual report shall include a summary of all commercial, industrial, and municipal site inspections performed pursuant to Section II.C of this Monitoring and Reporting Program. The summary shall include a list of all commercial, industrial, and municipal sites inspected, a description of identified problems, and a discussion of any planned or completed enforcement follow up activities.

E. Traction Abrasive and Deicing Material Report

The annual report shall include a summary report of the monitoring data collected pursuant to Section II.C of this Monitoring and Reporting Program.

F. Storm water Monitoring Report

By March 15, 2014 and by **March 15** of each subsequent year of the Permit term, each Permittee shall submit a comprehensive electronic report that summarizes cumulative storm water monitoring results from the catchment load monitoring and BMP effectiveness evaluations conducted during the previous water year (October 1 – September 30).

The storm water monitoring report shall include, at a minimum, the following:

1. A discussion of monitoring purpose and study design and the underlying rationale.
2. Details of the data collection methods, sampling protocols and analytical methods including detection limits.
3. Quality Assurance/Quality Control summaries.
4. Maps and descriptions of all monitoring locations including latitude and longitude coordinates and data obtained at each location.
5. Raw analytical data that includes sample identification, collection date, time and analytical reporting results for all collected samples.

6. Documentation of data management procedure.
7. Details of data analysis, calculations and assumptions used to obtain results and draw conclusions.
8. Catchment outlet monitoring - data tables and graphical data summaries that include seasonal total volume (cubic feet), seasonal average concentrations (milligrams/liter and number of particles/liter) and load (kilograms and number of particles) of each pollutant outlined in section III.A.4 of this Monitoring and Reporting Program.
9. Catchment outlet monitoring – provide interpretation of annually collected data relative to modeled average annual estimates and conduct an assessment of this data in the context of the water year type (wet, average, dry) using the regional meteorological analysis.
10. For long-term catchment monitoring, provide recent data in context with cumulative comparable results from previous years, noting trends. Consider the season type (wet, average, dry,) for each seasonal data point when evaluating trends and inter-annual variability in catchment results. Compare measured pollutant loads with modeled average annual variables and model outputs.
11. For flow-through BMPs - data tables and graphical data summaries of seasonal volume (cubic feet), average inlet and outlet pollutant concentrations (milligrams/liter and number of particles/liter) and pollutant loads (kilograms and number of particles) for each pollutant outlined in section III.B.4 of this Monitoring and Reporting Program. Permittees shall report the seasonal storm water volume (cubic feet) and pollutant load reduced (kilograms and number of particles) for each pollutant for each season of measure.
12. For hydrologic or pollutant source control BMPs - data tables and graphical summaries of seasonal storm water volumes (cubic feet) (hydrologic source control) as a result of the BMP implementation and maintenance or seasonal pollutant mass (kilograms and number of particles) reduced over the area of land surface subject to the chosen BMP for each pollutant described in Section III.B.4. For multi-year BMP evaluations, provide recent data in context with cumulative comparable results from previous years, noting trends.
13. For BMP monitoring – provide interpretation of annually collected data relative to applicable model parameters and conduct an assessment of this data in the context of the water year type (wet, average, dry) using the regional meteorological analysis.



14. A final monitoring summary including the following values for each monitored location.

Season	Seasonal Volume (cf)	Pollutant	Seasonal Concentration (mg/L)	Seasonal Concentration (# particles/L)	Seasonal Load (kg)
Fall Winter (Oct 1-Feb 28)	x	FSP	x	x	x
		TSS	x		x
		TP	x		x
		TN	x		x
Spring Melt (Mar 1-May 31)	x	FSP	x	x	x
		TSS	x		x
		TP	x		x
		TN	x		x
Summer (June 1-Sept 31)	x	FSP	x	x	x
		TSS	x		x
		TP	x		x
		TN	x		x
<b>Water Year Totals: Total WY precipitation (in/yr)</b>					
<b>Water year type: very dry, dry, average, wet, very wet</b>					
Water Year Total	x	FSP			x
		TSS			x
		TP			x
		TN			x

15. A discussion of lessons learned from storm water monitoring efforts including, but not limited to, catchment water quality improvement strategies, pollutant sources analyses, pollutant fate and transport within sampled catchments, BMP design and/or implementation improvements, and maintenance strategy effectiveness (including techniques or frequency).

16. A discussion of any proposed changes to the storm water monitoring program and the rationale for each proposed change.

If Permittees are working collaboratively to meet the requirements specified in Section III of this Monitoring and Reporting Program, a single report for participating Permittees will be accepted.

**G. Illicit Discharge Report**

To assess compliance with Permit Sections I.A and III.B.5 each Permittee’s annual report shall describe actions taken to prevent unauthorized non-storm water discharges and report any identified illicit discharges to its collection, conveyance, and treatment facilities. The report shall include a description of any education, outreach, or inspection activities conducted pursuant to Permit Sections III.B.1, III.B.2, III.B.3 and III.B.4 that support the Permittee’s program to prohibit unauthorized non-storm water discharges.

H. Education Component Report

Each Permittee's annual report shall summarize all training and education activities conducted during the previous year, including a list of all education materials distributed and training provided to the public, to municipal employees, and to construction, commercial, industrial, or municipal site operators.

I. Impacts Influencing Baseline Pollutant Loads Report

In the annual report for the 2014 water year, Each Permittee shall summarize the assessment conducted pursuant to Monitoring and Reporting Program Section I.G to demonstrate compliance with Permit Order IV.D.

J. Provisions

Permittees shall comply with the "General Provisions for Monitoring and Reporting" dated September 1, 1994 that is attached to and made part of this Monitoring and Reporting Program as Attachment G.

**APPENDIX E**

**TAHOE REGIONAL PLANNING AGENCY**

**PERMIT**





**TRPA PROJECT NUMBER 510-101-00  
FILE NO. EIPC2013-0003**

Security Posted: N/A

Required plans determined to be in conformance with approval: Date: \_\_\_\_\_

TRPA ACKNOWLEDGEMENT: The permittee has complied with all pre-construction conditions of approval as of this date:

\_\_\_\_\_  
TRPA Executive Director/Designee

\_\_\_\_\_  
Date

---

***SPECIAL CONDITIONS***

1. This permit specifically authorizes the installation of erosion control and water quality improvements within the Boulder Mountain area of the Mountain View Estates Subdivision to reduce the discharge of sediment and pollutants into Lake Tahoe. Improvements include paving a portion of Boulder Mountain Drive that is currently unpaved, culverts, drain inlets, a grass-lined swale, revegetation and other BMPs for Boulder Mountain in El Dorado County, California.
2. The standard conditions listed in Attachment Q shall apply to this permit.
3. Prior to permit acknowledgement, submit three sets of final construction plans.
4. Prior to the pre-grade inspection, submit a construction schedule for TRPA approval which should include dates for the following:
  - When installation of temporary erosion control, and vegetation protection and construction site boundary fencing will occur;
  - When construction will start;
  - When all disturbed areas will be stabilized;
  - When initial grading will be completed;
  - When all construction slash and debris will be removed;
  - When installation of permanent mechanical erosion control devices will occur;
  - When installation of permanent drainage improvements will occur;
  - When vegetation will be planted;
  - When construction will be completed; and
  - When the site will be winterized.

**PERMIT CONTINUED ON NEXT PAGE**

**TRPA PROJECT NUMBER 510-101-00**  
**FILE NO. EIPC2013-0003**

5. An on-site inspection by TRPA staff is required prior to any construction or grading activity. TRPA staff shall determine if the on-site improvements required by Attachment Q (Standard Conditions of Approval) have been properly installed. No grading or construction shall commence until TRPA pre-grade conditions of approval are met.
6. Install an EIP project sign at the entrance of the project area. The project sign should include the EIP logo. A Jpeg of the logo is available from TRPA upon request.
7. All above ground facilities, new or currently existing, such as sign posts, the back of signs, electrical boxes, etc. shall be colored dark green or brown, unless an alternative color is approved by TRPA.
8. Temporary Best Management Practices (BMPs) are to be installed and maintained prior to excavation and during all phases of the proposed project.
9. All new and existing conveyance and treatment facilities shall be fitted with temporary Best Management Practices (BMPs) to prevent the transport of sediment during storm events occurring during construction. The permittee shall be responsible for ensuring that all temporary BMPs are constructed as directed by the TRPA Inspector.
10. TRPA waived the requirement to conduct any subsurface investigations and approved all excavations as proposed on the plans. The permittee is required to notify TRPA immediately if significantly different subsurface conditions are encountered than what has been interpreted, or if groundwater is intercepted during construction.
11. Any trees to be removed shall be shown on the approved drawings. All other trees within areas of construction not shown to be removed shall be retained and protected from damage during construction. In no case shall any additional trees be removed without the written approval of the TRPA.
12. All construction equipment working in or near Stream Environment Zones (SEZ) areas must be steam cleaned prior to mobilization at the project site and maintained in clean and good working order with maintenance logs made available to TRPA at their request.
13. All excavated materials shall be hauled away from the site to a legally acceptable location. No fills, or re-contouring, other than backfill for the cut-retaining structures, shall be allowed.
14. Any normal construction activities creating noise in excess of the TRPA noise standards shall be considered exempt from said standards provided all such work is conducted between the hours of 8:00 A.M. and 6:30 P.M.

**PERMIT CONTINUED ON NEXT PAGE**

**TRPA PROJECT NUMBER 510-101-00**  
**FILE NO. EIPC2013-0003**

15. Grading is prohibited any time of the year during periods of precipitation and for the resulting period of time when the site is covered with snow, or is in a saturated, muddy, or unstable conditions (pursuant to Subsection 64.2.C of the TRPA Code of Ordinances). If a storm event is predicted to occur during active construction, immediately stop work and ensure that all temporary BMPs are in place and functioning.
16. This site shall be winterized in accordance with the provisions of Attachment Q by October 15<sup>th</sup> of each construction season. All disturbed areas shall be stabilized with a 3-inch layer of mulch or covered with an erosion control blanket.
17. Vegetation shall not be disturbed, injured or removed except in accordance with the TRPA Code or the conditions of project approval. All trees, major roots, and other vegetation, not specifically designated or approved for removal shall be protected according to methods approved by TRPA. All vegetation outside the construction site/project area boundary shall not be disturbed. If possible, construction for any work within the riparian area should be done with hand work to minimize disturbance in the SEZ. All efforts should be made to retain existing vegetation such as grass swales, and willow and alder shrubs.
18. All rock material (gravel, cobble, and boulders) shall be clean prior to arrival at the site to ensure that the rock is free of any excess silt or clay particles.
19. The discharge of petroleum products, construction waste and litter (including sawdust), or earthen materials to the surface waters of the Lake Tahoe Region is prohibited. All surplus construction waste materials shall be removed from the project site and disposed of at approved points of disposal.
20. All waste resulting from the saw-cutting of pavement shall be removed using a vacuum (or other TRPA approved method) during the cutting process or immediately thereafter. Discharge of waste material to surface drainage features is prohibited and constitutes a violation of this permit.
21. This approval is based on the permittee's representation that all plans and information contained in the subject application are true and correct. Should any information or representation submitted in connection with the project application be incorrect or untrue, TRPA may rescind this approval, or take other appropriate action.
22. Any modifications to the TRPA approved plans shall be submitted to TRPA for review and approval.

**PERMIT CONTINUED ON NEXT PAGE**



**TRPA PROJECT NUMBER 510-101-00**  
**FILE NO. EIPC2013-0003**

23. To the maximum extent allowable by law, the Permittee agrees to indemnify, defend, and hold harmless TRPA, its Governing Board, its Planning Commission, its agents, and its employees (collectively, TRPA) from and against any and all suits, losses, damages, injuries, liabilities, and claims by any person (a) for any injury (including death) or damage to person or property or (b) to set aside, attack, void, modify, amend, or annul any actions of TRPA. The foregoing indemnity obligation applies, without limitation, to any and all suits, losses, damages, injuries, liabilities, and claims by any person from any cause whatsoever arising out of or in connection with either directly or indirectly, and in whole or in part (1) the processing, conditioning, issuance, or implementation of this permit; (2) any failure to comply with all applicable laws and regulations; or (3) the design, installation, or operation of any improvements, regardless of whether the actions or omissions are alleged to be caused by TRPA or Permittee.

Included within the Permittee's indemnity obligation set forth herein, the Permittee agrees to pay all fees of TRPA's attorneys and all other costs and expenses of defenses as they are incurred, including reimbursement of TRPA as necessary for any and all costs and/or fees incurred by TRPA for actions arising directly or indirectly from issuance or implementation of this permit. Permittee shall also pay all costs, including attorneys' fees, incurred by TRPA to enforce this indemnification agreement. If any judgment is rendered against TRPA in any action subject to this indemnification, the Permittee shall, at its expense, satisfy and discharge the same.

**END OF PERMIT**



**TAHOE  
REGIONAL  
PLANNING  
AGENCY**

**Mail**  
PO Box 5310  
Stateline, NV 89449-5310

**Location**  
128 Market Street  
Stateline, NV 89449

**Contact**  
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## MITIGATED FINDING OF NO SIGNIFICANT EFFECT

PROJECT DESCRIPTION: Boulder Mountain Erosion Control Project (EIP # 01.01.01.18)

TRPA PROJECT NUMBER: 510-101-00

FILE #: EIPC2013-0003

PERMITTEE(S): El Dorado County

COUNTY/LOCATION: El Dorado County/Mountain View Estates Subdivision. Units 7 & 10

Staff Analysis: In accordance with Article IV of the Tahoe Regional Planning Compact, as amended, and Section 6.3 of the TRPA Rules and Regulations of Practice and Procedure, the TRPA staff has reviewed the information submitted with the subject project. On the basis of this initial environmental evaluation, Agency staff has found that the subject project will not have a significant effect on the environment.

Determination: Based on the above-stated finding, the subject project is conditionally exempt from the requirement to prepare an Environmental Impact Statement. The conditions of this exemption are the conditions of permit approval.

\_\_\_\_\_  
TRPA Chairman or Executive Director

\_\_\_\_\_  
Date

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## **ATTACHMENT Q STANDARD CONDITIONS OF APPROVAL FOR GRADING PROJECTS**

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This handout on the standard conditions that must be met in all projects involving grading is divided into the following three sections:

- I. Pre-Grading Conditions (Pre-activity, where applicable)
- II. Construction/Grading Conditions
- III. General Conditions/Design Standards

Please read all of the conditions carefully to avoid any delays in construction of your project.

**NOTE:** Your plans have been reviewed and approved as required under Tahoe Regional Planning Agency (TRPA) Rules, Regulations and Ordinances only. TRPA has not reviewed and shall not be responsible for any elements contained in your plans, i.e., structural, electrical, mechanical, etc., which are not required for review under said Rules, Regulations and Ordinances.

### I. PRE-GRADING/PRE-ACTIVITY CONDITIONS:

The following conditions must be completely complied with prior to any site disturbance or commencement of activity.

#### A. Final Construction Plans:

Final construction plans must be submitted to and reviewed by TRPA to determine conformance with the approval. Said plans shall clearly depict the following:

1. Slope stabilization methods to stabilize all existing and proposed cut and fill slopes.
2. Areas to be revegetated, including complete specifications for such revegetation.
3. Fencing for vegetation protection.
4. Temporary and permanent erosion control devices.
5. Utility trenches.
6. Dust control measures.
6. All water quality improvements (BMPs) required in the conditional approval. Drainage facilities shall be designed to be capable of retaining runoff water for a two (2) year, six (6) hour storm.
8. The final plans shall contain equipment specifications necessary to establish compliance with Standard Conditions III. A-F.

#### B. Securities:

A security shall be posted with the TRPA to insure compliance with all permit conditions. The security shall include an amount equal to 110 percent of the cost of the BMPs and other erosion control and water quality improvements required. For further information on the acceptable types of securities, see Attachment J.

C. Mitigation Fees:

All required air quality, water quality, and excess coverage and offsite coverage mitigation fees shall be paid to TRPA.

D. Temporary BMPs:

The following temporary BMPs are required to be installed onsite prior to any grading activity occurring:

1. Installation of temporary erosion controls.
2. Installation of vegetation protection measures.
3. Installation of construction site boundary fencing.

E. Required Inspection:

An onsite inspection by TRPA staff is required prior to any construction or grading activity occurring. TRPA staff shall determine if the onsite improvements required by Condition II (1), above, have been properly installed. No grading or construction shall be undertaken by the permittee until receipt of TRPA notification that the pre-grading/pre-activity conditions of approval have been satisfied.

F. Required Notices:

The following notices to the TRPA are required prior to any grading or construction occurring on the project site:

1. Notice for Pre-Grading Inspection: The permittee shall notify the TRPA when all onsite improvements required under Condition II(1), above, have been installed so that the required pre-grading inspection may be scheduled.
2. Notice of Commencement of Construction: The permittee shall notify the TRPA at least 48 hours prior to commencement of construction or grading on the project site. Said notice shall include the date when construction will commence.

II. CONSTRUCTION/GRADING CONDITIONS:

The following conditions shall be complied with during the grading and construction phase of the project.

- A. All construction shall be accomplished in strict compliance with the plans approved by TRPA.
- B. The TRPA permit and the final construction drawings bearing the TRPA stamp of approval shall be present on the construction site from the time construction commences to final TRPA site inspection. The permit and plans shall be available for inspection upon request by any TRPA employee. Failure to present the TRPA permit and approved plans may result in the issuance of a Cease and Desist Order by the TRPA.
- C. Whenever possible, utilities shall occupy common trenches to minimize site disturbance.
- D. There shall be no grading or land disturbance performed with respect to the project between October 15 and May 1, except as follows:
  1. The grading or land disturbance is for excavation and backfilling for a volume not in excess of three cubic yards.
  2. The activity is completed within a 48-hour period.
  3. The excavation site is stabilized to prevent erosion.
  4. The pregrade inspection is performed by TRPA staff, and the activity passes the inspection.



5. The grading/project does not represent or involve a series of excavations, which, when viewed as a whole, would exceed the provisions of this Standard Condition of Approval, and Subsection 4.2.A of the TRPA Code of Ordinances.

**Grading is prohibited any time of the year during periods of precipitation and for the resulting period of time when the site is covered with snow, or is in a saturated, muddy, or instable condition (pursuant to Subsection 64.2.C of the TRPA Code of Ordinances.)**

- E. All material obtained from any excavation work that is not contained within foundations, retaining walls, or by other methods approved by TRPA shall be removed from the subject parcel and disposed of at a site approved by TRPA.
- F. Replanting of all exposed surfaces, in accordance with the revegetation and slope stabilization plan, shall be accomplished within the first growing season following disturbance, unless an approved construction/inspection schedule establishes otherwise.
- G. All trees and natural vegetation to remain on the site shall be fenced for protection. Scarring of trees shall be avoided and, if scarred, damaged areas shall be repaired with tree seal.
  1. Fencing specified shall be at least 48 inches high and shall be constructed of metal posts and either orange construction fencing or metal mesh fencing also at least 48 inches high (Section 65.2.I.3 and 65.2.J.3). Job sites with violations of the fencing standards will be required to re-fence the job site with a high gauge metal fencing.
  2. No material or equipment shall enter or be placed in the areas protected by fencing or outside the construction areas without prior approval from TRPA. Fences shall not be moved without prior approval (Section 65.2.I.2 and 65.2.J.2).
  3. To reduce soil disturbance and damage to vegetation, the area of disturbance during the construction of a structure shall be limited to the area between the footprint of the building and the public road. For the remainder of the site the disturbance areas shall not exceed 12 feet from the footprint of the structure, parking area or cut/fill slope. The approved plans should show the fencing and approved exceptions (Section 30.14.A).
- H. Soil and construction material shall not be tracked off the construction site. Grading operations shall cease in the event that a danger of violating this condition exists. The site shall be cleaned up and road right-of-way swept clean when necessary.
- I. During grading and construction, environmental protection devices such as erosion control devices, dust control, and vegetation protection barriers shall be maintained.
- J. Loose soil mounds or surfaces shall be protected from wind or water erosion by being appropriately covered when construction is not in active progress or when required by TRPA.
- K. Excavated material shall be stored up grade from the excavated areas to the extent possible. No material shall be stored in any stream zone or wet areas.
- L. Only equipment of a size and type that, under prevailing site conditions, and considering the nature of the work to be performed, will do the least amount of damage to the environment shall be used.
- M. No washing of vehicles or construction equipment, including cement mixers, shall be permitted anywhere on the subject property unless authorized by TRPA in writing.
- N. No vehicles or heavy equipment shall be allowed in any stream environment zone or wet areas, except as authorized by TRPA.
- O. All construction sites shall be winterized by October 15 to reduce the water quality impacts associated with winter weather as follows:

1. For the sites that will be inactive between October 15 and May 1:
  - (a) Temporary erosion controls shall be installed;
  - (b) Temporary vegetation protection fencing shall be installed;
  - (c) Disturbed areas shall be stabilized;
  - (d) Onsite construction slash and debris shall be cleaned up and removed;
  - (e) Where feasible, mechanical stabilization and drainage improvements shall be installed; and
  - (f) Spoil piles shall be removed from the site.
  
2. For sites that will be active between October 15 and May 1, in addition to the above requirements:
  - (a) Permanent mechanical erosion control devices shall be installed, including paving of driveway and parking areas; and
  - (b) Parking of vehicles and storage of building materials shall be restricted to paved areas.

### III. GENERAL CONDITIONS/DESIGN STANDARDS:

- A. Projects approved by TRPA shall be subject to inspections by TRPA at any reasonable time. The permittee shall be responsible for making the project area accessible for inspection purposes. TRPA shall not be liable for any expense incurred by the permittee as a result of TRPA inspections.
  
- B. Construction shall be completed in accordance with an approved construction schedule. An extension of a completion schedule for a project may be granted provided the request is made in writing prior to the expiration of the completion schedule, a security is posted to ensure completion or abatement of the project, and TRPA makes either of the following findings:
  1. The project was diligently pursued, as defined in Subparagraph 4.12.C.(2) of the Code of Ordinances, during each building season (May 1 - October 15) since commencement of construction.
  2. That events beyond the control of the permittee, which may include engineering problems, labor disputes, natural disasters, or weather problems, have prevented diligent pursuit of the project.
  
- C. Water conservation appliances and fixtures shall be installed in all new facilities or, when replaced, in existing facilities: low flow flush toilets; low flow showerheads (3 gpm rated maximum flow); faucet aerators; and water-efficient appliances (e.g., washing machines and dishwaters).
  
- D. Water heaters shall not emit nitrogen oxides greater than 40 nanograms of nitrogen oxide (NO<sub>2</sub>) per joule of heat output.
  
- E. Space heaters shall not emit greater than 40 nanograms of nitrogen oxides (as NO<sub>2</sub>) per joule of useful heat delivered to the heated space.
  
- F. Wood heaters to be installed in the Region shall meet the safety regulations established by applicable city, county, and state codes. Coal shall not be used as a fuel source.
  1. Emission Standards: Wood heaters installed in the Region shall not cause emissions of more than 7.5 grams of particulates per hour for noncatalytic wood heaters or 4.1 grams per hour for catalytically equipped wood heaters.



2. Limitations: Wood heaters shall be sized appropriately for the space they are designed to serve. Multi-residential projects of five or more units, tourist accommodations, commercial, recreation and public service projects shall be limited to one wood heater per project area.
  3. List of Approved Heaters: TRPA shall maintain a list of wood heaters which may be installed in the Region. The list shall include the brand names, model number, description of the model and the name and address of the manufacturer. Wood heaters certified for use in either Colorado or Oregon shall be considered in compliance with 6(a), above.
- G. Construction materials shall be secured to prevent them from rolling, washing, or blowing off the project site. Rehabilitation and clean-up of the site following construction must include removal of all construction waste and debris.
- H. Plant species on the TRPA Recommended Native and Adapted Plant List shall be used for lawns and landscaping.
- I. The following sizes and spacing shall be required for woody plant materials at time of planting:
1. Trees shall be a minimum six feet tall or 1-1/2 inch caliper size or diameter at breast height;
  2. Shrubs shall be a minimum three gallon pot size where upright shrubs have a minimum height of 18 inches and a minimum spread of 18 inches; and spreading shrubs have a minimum spread of 18-24 inches.
  3. Groundcovers shall be a minimum four inch pot size or one gallon container and shall be maximum 24 inches on center spacing.
- J. Plant species not found on the TRPA Recommended Native and Adapted Plant List may be used for landscaping as accent plantings but shall be limited to borders, entryways, flower-beds, and other similar locations to provide accent to the overall native or adapted landscape design.
- K. The following exterior lighting standards shall apply:
1. Exterior lights shall not blink, flash or change intensity. String lights, building or roofline tube lighting, reflective or luminescent wall surfaces are prohibited.
  2. Exterior lighting shall not be attached to trees except for Christmas season.
  3. Parking lot, walkway, and building lights shall be directed downward.
  4. Fixture mounting height shall be appropriate to the purpose. The height shall not exceed the limitations set forth in Chapter 22 of the Code.
  5. Outdoor lighting shall be used for purposes of illumination only, and shall not be designed for, or used as, an advertising display. Illumination for aesthetic or dramatic purposes of any building or surrounding landscape utilizing exterior light fixtures projected above the horizontal is prohibited.
  6. The commercial operation of searchlights for advertising or any other purpose is prohibited. Seasonal lighting displays and lighting for special events which conflict with other provisions of this section may be permitted on a temporary basis.
- L. Any normal construction activities creating noise in excess of the TRPA noise standards shall be considered exempt from said standards provided all such work is conducted between the hours of 8:00 a.m. and 6:30 p.m.
- M. Fertilizer use on this property shall be managed to include the appropriate type of fertilizer, rate, and frequency of application to avoid release of excess nutrients and minimize use of fertilizer.
- N. No trees shall be removed or trimmed without prior TRPA written approval unless otherwise specifically exempted under Chapter 4 of the Code of Ordinances.

- O. The architectural design of this project shall include elements that screen from public view all external mechanical equipment, including refuse enclosures, satellite receiving disks, communication equipment, and utility hardware on roofs, buildings or the ground. Roofs, including mechanical equipment and skylights, shall be constructed of nonglare finishes that minimize reflectivity.
- P. The permittee is responsible for insuring that the project, as built, does not exceed the approved land coverage figures shown on the site plan. The approved land coverage figures shall supersede scaled drawings when discrepancies occur.
- Q. The adequacy of all required BMPs as shown on the final construction plans shall be confirmed at the time of the TRPA pre-grading inspection. Any required modifications, as determined by TPRA, shall be incorporated into the project permit at that time.
- R. It is the permittee's obligation to locate all subsurface facilities and/or utilities prior to any grading, dredging or other subsurface activity. The permittee is responsible for contacting the Northern Underground Service Alert (USA, usually known as USA DIGS 1-800-227-2600) prior to commencement of any activity on the site.
- S. The permittee agrees to indemnify, defend, hold harmless, TRPA, its Governing Board, its Planning Commission, its agents, and employees from and against any and all loss, damage, injury, liability, and claims thereof, for actions arising directly, or indirectly, from issuance or implementation, of this permit.
- T. This approval is based on the permittee's representation that all plans and information contained in the subject application are true and correct. Should any information or representation submitted in connection with the project application be incorrect or untrue, TRPA may rescind this approval or take other appropriate action.