SECTION D - CONSTRUCTION DETAILS

1. SUMMARY OF WORK

A. GENERAL

The work to be performed under this Contract shall consist of furnishing all tools, equipment, materials, supplies, and manufactured articles for the project. It shall also include the furnishing of all transportation and services, including fuel, power, water, and essential communications, and for the performance of all labor, work, or other operations required for fulfillment of the Contract in strict accordance with the Contract Documents.

B. WORK COVERED BY CONTRACT DOCUMENTS

The Project is comprised, in general, of overlaying the two existing downhill lanes with the application of 0.08 feet of open-graded bituminous hot mix asphalt concrete friction course, over 0.17 feet of Type "A" hot mix asphalt concrete, over pavement reinforcing fabric, and including: traffic control; surface preparation; coordination of public notifications; application of herbicide; removal of existing vegetation, traffic striping, and markers; sweeping and cleaning of the roadways and adjacent paved shoulders to remove loose aggregate, soils, and debris; transportation and stockpiling, if necessary, of materials; placement and removal of temporary signage; installation of thermoplastic traffic stripes, thermoplastic pavement markings, and retroreflective pavement markers; placement of aggregate base shoulder backing; and adjustment of existing metal beam guard rail.

Such items or details not mentioned above that are required by the plans, standard specifications, standard plans, or these Special Provisions shall be performed, placed, constructed or installed under the identified project bid items.

The contractor shall also be required to establish temporary water pollution prevention and control measures in conformance to the applicable provisions of Section 7-1.01G "Water Pollution" of the Standard Specifications and these Special Provisions.

C. ORDER OF THE 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.

The work shall be carried on at such places on the project and in such order or sequence as may be found necessary by the Engineer to expedite completion of the project. After work has begun on any portion of a designated part of the project, it shall be carried forward to its final completion as rapidly as practicable. The order and time to complete each portion of the project shall conform to the requirements of the contractor's schedule as submitted under the

C. ORDER OF THE WORK (Continued)

provisions of Section 8-1.04, "Progress Schedule" of the Standard Specifications and these Special Provisions and as approved by the Engineer.

The Contractor shall furnish a computer generated schedule for the work, listing the dates on which sections of the street are to be to be closed to traffic for surfacing and lane controls are necessary. A minimum of one lane is to remain open to traffic during work hours and both lanes are to be open during non-work hours. See Section 1I "Maintaining Traffic" herein. The Contractor shall adhere diligently to the work schedule in the prosecution of the work. The Contractor must submit a traffic control plan for the project and all proposed revisions thereof to the Engineer for approval prior to implementation.

Following proper public notification as indicated herein, the first order of work shall be surface preparation and cleaning of the specified asphalt concrete pavement and shoulders in anticipation of placement of the pavement reinforcing fabric, including the application of herbicide and removal of existing striping and pavement markers as specified in these Special Provisions.

D. WORK SEQUENCE/NOTIFICATIONS

At least 3 days prior to the beginning of any operations, the Contractor shall circulate printed form letters, as approved by the Engineer, to all affected property owners, businesses, and facilities, explaining the project, work to be done, and anticipated length of time any inconvenience will be caused.

Public Transportation and Emergency Services: The Contractor's attention is directed to the fact that no sustained interruption in the use of public transportation or emergency services can be accommodated. Prior to commencing traffic control for application of pavement treatments or re-striping operations, the Contractor shall contact the appropriate agency manager, provide them written preliminary notification of the intended schedule, and, if necessary, determine and prepare an alternate schedule for the Engineer's approval that provides acceptable minimal disruption as required by the agency manager. If a practical schedule can not be determined to the satisfaction of the agency manager, the Contractor shall notify and seek the assistance of the Engineer.

Businesses: No sustained interruption in access to adjacent businesses can be accommodated. Prior to commencing work in the vicinity of these businesses, the Contractor shall contact the business owners, provide them written preliminary notification of the intended schedule, and, if necessary, determine and prepare an alternate schedule or sequence of application for the Engineer's approval that provides acceptable minimal disruption. In all cases, the Contractor shall verify that each business owner/facility manager has been notified and is aware of the final approved schedule.

Neighborhood Notifications: For portions of the work that require restricted access to affected adjacent streets and driveways, the Contractor shall provide written notice to all affected residents and businesses 72 hours in advance of the work. Notifications shall be

D. WORK SEQUENCE/NOTIFICATIONS (Continued)

hung or otherwise affixed to the front door knob of each affected residence or business. Said notices shall be approved by the Engineer prior to distribution and shall be distributed to affected neighborhoods as indicated on the Contractor's latest work schedule as approved by the Engineer.

The Contractor shall provide evidence of said notices by forwarding written verification to the Engineer, including dates at each address. If the scheduled work is not performed during this period, that particular work shall be rescheduled with 5 working days advance notice. The Contractor shall perform all necessary re-notification required by failure to meet the posted schedule.

The Contractor shall leave all traffic lanes open to traffic until starting the work during the scheduled times approved by the Engineer and all lanes shall be re-opened to traffic between the hours of 3:30 p.m. and 9:00 a.m., unless otherwise approved by the Engineer.

E. OBSTRUCTIONS

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

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least **2 working days (**48 hours), but not more than 28 calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. Regional notification centers include but are not limited to the following:

NOTIFICATION CENTER	TELEPHONE
Underground Service Alert Northern California	**1-800-227-2600**
(USA)	**1-800-642-2444**

The contract work shall be so conducted as to permit utility companies to maintain their services without interruption. Abandoned utility pipelines, telephone cables, and conduits, if encountered, shall be removed and disposed of off the job site. Attention is directed to the possible existence of storm drain and utility facilities, which are to remain and which are located within the area of work. The Contractor shall locate these facilities, work around them and protect them from damage during the course of his construction. Should the Contractor damage any of the existing facilities, they will be repaired and/or replaced immediately, any costs for repair and/or replacement shall be borne by the Contractor.

In lieu of conflicting provisions of Section 8-1.10, full compensation for conforming to the above requirements or for delay or inconvenience to the Contractor's operations by reason of his conformance with such requirements, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

F. COOPERATION

Attention is directed to Sections 7-1.14, "Cooperation," and 8-1.10, "Utility and Non-Highway Facilities," of the Standard Specifications and these Special Provisions.

Work by public utility forces and/or Butte County Public Works Department crews may be underway within and/or adjacent to the limits of this contract at the time work under these Special Provisions is being performed. For the work herein specified, the Contractor shall cooperate with all forces engaged in performing other work as described above. Such forces may conduct their operations with as little inconvenience and delay as possible. The Contractor shall permit such forces passage through the work to transport materials and equipment to the site of their operations.

G. EXISTING HIGHWAY FACILITIES

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

Existing roadside traffic signs that are in conflict with construction operations shall be removed and placed at the right-of-way line adjacent to the location where removed or at a location determined by the Engineer.

All bridges located within the project limits shall have surface treatments as existing. If a seal coat surface is present, the bridge shall be resurfaced. If the original concrete deck is the existing wearing surface, no seal coat surface shall be placed and construction paper, or similar material, will be placed during application of the surface treatments to make a neat line transition.

Existing raised pavement markers and thermoplastic pavement markings shall be removed from the existing pavement prior application of the surface overlay treatments.

Disposal of the markers and any other exiting highway facility items shall be done in accordance with Section 7-1.13, “Disposal of Material Outside the Highway Right of Way,” of the Standard Specifications and as determined by the Engineer.

All personnel covers, drain inlet covers, monument covers, and all other utility covers shall be protected from the Contractor’s surfacing operations and appropriately adjusted following the completion of the surfacing operations by methods approved by the Engineer. All residual surfacing and shoulder backing materials that end up within drain inlets shall be promptly removed following sweeping of the pavement and prior to final acceptance of the project.

H. STOCKPILE SITES AND CONSTRUCTION ZONES

Determination of stockpile sites and construction zone will be considered included as part of the bid items for "Clearing & Grubbing" and "Traffic Control" and no additional compensation will be allowed therefore. The sites for stockpiling materials shall be clean and free of objectionable materials and shall be located outside the street right-of-way. Arrangements for these sites shall be the responsibility of the Contractor. If on private property, a written agreement shall be provided to the Engineer prior to commencing operations. The Contractor shall also be responsible for any required permitting, including temporary use permits, if required. In terms of payments, actual stockpiling of materials shall be considered in the various bid items for surface treatments. In this regard, the Contractor shall clean up the stock pile areas prior to acceptance of the work. All spoils and debris of any nature shall be removed and the entire site shall be left in a clean, workmanlike appearance to the satisfaction of the Engineer.

For purposes of this contract the construction zone is defined to include the stockpile area, any ancillary storage yards, the area to be paved, and all streets and public rights-of-way in between these areas.

I. MAINTAINING TRAFFIC

Attention is directed to Sections 7-1.08, "Public Convenience," 7-1.09, "Public Safety," 12, "Construction Area Traffic Control Devices," and 37-1.03, "Maintaining Traffic" of the Standard Specifications and these Special Provisions. Nothing in these Special Provisions shall be construed as relieving the Contractor from his responsibility as provided in said Section 7-1.09.

The Contractor shall maintain access to thorough traffic during operations with traffic control measures indicated in Section 37-1.03, "Maintaining Traffic" of the Standard Specifications, except where it is otherwise specified in these Special Provisions or determined necessary and approved by the Engineer to intermittently close sections of the roadway to traffic for various safety issues and construction operations. The Contractor shall submit to the Engineer for approval a traffic-control plan that includes the proposed times and lengths of road closures. The Traffic Control Plan shall be submitted to the Engineer for approval at the pre-job conference and whenever changes are proposed by the Contractor. The Traffic Control Plan shall be considered as included in the contract lump sum price paid for the item "Traffic Control" and no additional compensation will be allowed therefore.

Illuminated traffic cones when used during the hours of darkness shall be affixed or covered with reflective cone sleeves as specified in Section 12-3.10, "Traffic Cones," of the Standard Specifications.

In addition to the existing warning and directional signs, the Contractor shall furnish the posts, mounting hardware and erect, within or adjacent to the limits of work, such construction supplemental warning and directional signs as ordered by the Engineer. These

I. MAINTAINING TRAFFIC (Continued)

signs will be furnished by the County of Butte and stored in the maintenance yard in Oroville. The Contractor shall haul them from storage to the site of the work, frame and erect them. After erection, the Contractor shall maintain these and the existing signs and keep them in good repair until he has returned them to the storage location in Oroville at the completion of the Contract.

Except as provided above for County-furnished signs, the Contractor, at his/her own expense, shall furnish and maintain in good working order all lights, additional signs, barricades, flashers, Type III barricades, or other devices necessary for the protection of the public and traffic and as necessary to accomplish the necessary traffic restrictions. All safety devices, their maintenance, and use shall conform to the latest requirements of OSHA and shall conform to the applicable provisions of the "Work Area Traffic Control Handbook," California State Traffic Manual of Traffic Controls for Construction and Maintenance Work Zones (1990), and the “California Manual on Uniform Traffic Control Devices for Streets and Highways” (FHWA 2003 edition, as amended for use in California). It shall be the Contractor’s responsibility to protect persons from injury and to avoid property damage. Adequate barricades, construction signs, flashers, changeable message boards, and other such safety devices, as required, shall be placed and maintained during the progress of the construction work until the project is completed. Whenever required, flagmen shall be provided to control traffic. The Contractor shall maintain business and property access as practicable as possible.

In lieu of payment as extra work as specified in Section 7-1.08, “Public Convenience,” the cost of installing and removing signs and sign covers, the cost of accommodating public traffic prior to commencing and during construction operations, the cost of furnishing pilot cars, drivers and flagmen, the cost of furnishing, installing and maintaining signs, lights, flares, barricades, Type III barricades and other facilities for the safety, sole convenience and direction of public traffic through and around the work area, the cost of loading, hauling, unloading, erecting, maintaining and returning County-furnished signs, all as determined by the Engineer shall be considered as included in the contract lump sum price paid for the item “Traffic Control & Construction Area Signs,” and no additional compensation will be allowed therefore.

A minimum of two Changeable Message Signs, placed to notify and warn traffic on the Chico-bound lanes of the Skyway, are to be used at all time during and two week prior to the work within the right of way. The cost of furnishing the Changeable Message Signs shall be considered as included in the contract lump sum price paid for the item “Traffic Control,” and no additional compensation will be allowed therefore.

In lieu of Section 12-2.02, “Flagging Costs,” the cost of furnishing all flagmen and guards to provide for passage of public traffic through the work under the provisions in Section 7-1.08, “Public Convenience,” and Section 7-1.09, ‘Public Safety,” shall be considered as included in the contract lump sum price paid for the item “Traffic Control,” and no additional compensation will be allowed therefore.

I. MAINTAINING TRAFFIC (Continued)

Road and lane closures are allowed only during normal working hours such that all lanes shall be re-opened to traffic between the hours of 3:30 p.m. and 9:00 a.m., unless otherwise approved by the Engineer. Any extended hours required by the Contractor shall be approved by the Engineer. Within the "normal working hours," specified herein, the Contractor shall place or remove the necessary traffic barricades, move equipment either on or off the job site, perform all resurfacing operations, including necessary rolling, curing, and placing temporary traffic markers prior to opening the roadway to traffic.

Construction operations shall be performed in such a manner that there will be at least **one 11-foot wide** lane open to public traffic at times of allowable traffic flow. At the end of each day's work and when construction operations are suspended, a passageway shall be maintained through the work of sufficient width to provide for a minimum of **two 11-foot-wide traffic lanes** for public traffic. Where determined necessary and approved by the Engineer to intermittently close sections of the roadway to traffic for short intervals of time for various unanticipated safety issues or approved construction operations, the Contractor shall provide adequate advance warning to alert drivers on the above mentioned changeable message signs, as approved by the Engineer. This action is presently unanticipated with this project due to traffic and safety issues and is applicable to approved short term temporary closures only. Long term closure of the roadway would require approved noticing and detour route signing placed in advance of the closure. Typically, long term closure would only be contemplated on the Skyway in the event of an emergency and would require prior approval by the Engineer.

The Contractor shall install and maintain temporary raised pavement markers and stop bars following the removal of existing striping to until the roadway surface is ready for permanent striping and raised pavement markers to be installed.

Full compensation for conforming to the requirements of this article shall be considered as included in the contract lump sum price paid for the item "Traffic Control" and no additional compensation will be allowed therefore

1) Traffic Control System for Lane Closure

A traffic control system shall consist of closing traffic lanes in accordance with the provisions of Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and the provisions under "Maintaining Traffic," elsewhere in these Special Provisions.

If any component in the traffic control system is displaced, or ceases to operate or function as specified, or as directed by the Engineer, from any cause, during the progress of the work, the Contractor shall immediately repair the component to its original condition or replace the component and shall restore the component to its original location.

I. MAINTAINING TRAFFIC (Continued)

STATIONARY TYPE LANE CLOSURE

When lane closures are made for work periods only, at the end of each work period, all components of the traffic control system shall be removed from the traveled way and shoulder. If the Contractor so elects, the components may be stored at selected central locations, approved by the Engineer, within the limits of the highway right-of-way.

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

MOVING TYPE LANE CLOSURE

Flashing arrow signs used in moving lane closures shall be truck-mounted. Flashing arrow signs shall be in the caution display mode when used on two-lane highways. Changeable message signs used in moving lane closure operations shall conform to Section 12-3.12, "Portable Changeable Message Signs," of the Standard Specifications, except the signs shall be truck-mounted and the full operation height of the bottom of the sign may be less than 7 feet above the ground, but should be as high as practicable.

Truck-mounted crash cushions (TMCC) for use in moving lane closures shall be any of the following approved models, or equal:

(1) Hexfoam TMA Series 3000 and
Alpha 1000 TMA Series 1000 and
Alpha 2001 TMA Series 2001

Manufacturer

Energy Absorption Systems, Inc.
One East Wacker Drive
Chicago, IL 60601-2076
Phone (312) 467-6750

Distributor (Northern)

Traffic Control Service, Inc.
8585 Thys Court
Sacramento, CA 95828
Phone (800) 884-8274

Distributor (Southern)

Traffic Control Service, Inc.
1881 Betmor Lane
Anaheim, CA 92805
Phone (800) 222-8274

(2) Cal T-001 Model 2 or Model 3:

Manufacturer	**Distributor**
Hexcel Corporation 11711 Dublin Boulevard P.O. Box 2312 Dublin, CA 94568 Phone: (510) 828-4200	Hexcel Corporation 11711 Dublin Boulevard P.O. Box 2312 Dublin, CA 94568 Phone: (510) 828-4200

(3) Renco Rengard Model Nos. CAM 8-815 and RAM 8-815

Manufacturer	**Distributor**
Renco, Inc. 1582 Pflugerville Loop Road P.O. Box 730 Pflugerville, TX 78660-0703 Phone (800) 654-8182	Renco, Inc. 1582 Pflugerville Loop Road P.O. Box 730 Pflugerville, TX 78660-0703 Phone (800) 654-8182

Each TMCC shall be individually identified with the manufacturer's name, address, TMCC model number, and a specific serial number. The names and numbers shall each be a minimum ½ inch high, and located on the left (street) side at the lower front corner. The TMCC shall have a message next to the name and model number in ½ inch high letters that states, "The bottom of this TMCC shall be ____ inches ± ___ inches above the ground at all points for proper impact performance." Any TMCC, which is damaged or appears to be in poor condition, shall not be used unless recertified by the manufacturer. The Engineer shall be the sole judge as to whether used TMCCs supplied under this contract need recertification. The manufacturer to meet the requirements for TMCCs in accordance with the standards established by the Transportation Laboratory Structures Research Section shall certify each unit.

Approvals for new TMCC designs proposed as equal to the above-approved models shall be in accordance with the procedures, (including crash testing), established by the Transportation Laboratory Structures Research Section. For information regarding submittal of new designs for evaluation contact:

Transportation Laboratory
Structures Research Section
P. O. Box 19128
5900 Folsom Boulevard
Sacramento, CA 95819

I. MAINTAINING TRAFFIC (Continued)

New TMCCs proposed as equal to approved TMCCs or approved TMCCs determined by the Engineer that need recertification shall not be used until approved or recertified by the Transportation Laboratory Structures Research Section.

2) Temporary Laneline and Centerline Delineation

Whenever the existing roadway striping is obliterated, covered, or obscured, the minimum laneline and centerline delineation to be provided shall consist entirely of temporary reflective raised pavement markers placed at longitudinal intervals of not more than **24 feet**. The temporary pavement delineation to be provided shall be equivalent to the pattern specified for the permanent pavement delineation for the area, as determined by the Engineer and shall be placed to maintain roadway centerline, laneline, and other traffic markings immediately following removal of the existing striping and prior to opening roadways with new surface treatments to traffic.

Temporary reflective raised pavement markers shall be placed in accordance with the manufacturer's instructions and shall be cemented to the surfacing with the adhesive recommended by the manufacturer, except epoxy adhesive shall not be used to place temporary pavement markers.

Temporary reflective raised pavement markers shall be one of temporary pavement markers listed for short term day/night use (14 days or less) in "Prequalified and Tested Signing and Delineation Materials," mentioned elsewhere in these Special Provisions, or as approved by the Engineer.

Full compensation for furnishing, placing, and maintaining the temporary reflective raised pavement markers used for temporary laneline and/or centerline delineation shall be considered as included in the contract prices paid for the item "Traffic Control," and no additional compensation will be made therefore.

J. CLEAN-UP

The Contractor shall clean up the job site prior to acceptance of the work. All dirt, spoil, and debris of any nature shall be removed and the entire site shall present a clean, workmanlike appearance to the satisfaction of the Engineer. Any damage to paint work, caused from spillage, or splattering from prime coating, paving or seal coating operations shall be corrected to the satisfaction of the Engineer

2. MATERIALS

Attention is directed to Section 6, "Control of Materials," of the Standard Specifications and these Special Provisions.

The Contractor shall furnish all materials as described in the items of work or as otherwise required to complete the work under this contract.

A. Weighing and Measuring Devices

The Contractor and/or suppliers shall bear the expense of all service fees for testing and approving of commercial and non-commercial weighing, measuring, and metering devices. The cost of the equipment, labor, and materials furnished by the Contractor to assist in the testing of the weighing, measuring or metering devices will be considered as included in the contract prices paid for the various items of work requiring said weighing, measuring, or metering and no separate payment will be made therefore.

B. Aggregates

Attention is directed to 26-1.02, “Materials,” and 39-2.02, “Aggregate,” respectively, of the Standard Specifications.

If the results of either or both the aggregate grading and Sand Equivalent tests do not meet the requirements specified for "Contract Compliance," the material, which is represented by these tests, shall be removed. However, if requested by the Contractor and approved by the Engineer, said material may remain in place and the Contractor shall pay to the State (County) the following amounts for all such material left in place:

Item	Adjustment
Aggregate Base	**$1.00/Ton**
Asphalt Concrete	**$1.75/Ton**

The Department may deduct such amounts from any moneys due, or that may become due, to the Contractor under the contract.

C. Surface Mining and Reclamation Act

Attention is directed to the Surface Mining and Reclamation Act of 1975, commencing in Public Resources Code, Mining and Geology, Section 2710, which establishes regulations pertinent to surface mining operations.

Material from the mining operations furnished for this project shall only come from permitted sites in compliance with the Surface Mining Reclamation Act of 1975.

The requirements of this section shall apply to all materials furnished for the project, except for acquisition of materials in conformance with Section 4-1.05, “Use of Materials Found on the Work,” of the Standard Specifications.

D. Pre-qualified & Tested Signing & Delineation Materials

The California Department of Transportation maintains a list of Pre-qualified and Tested Signing and Delineation materials. The Engineer shall not be precluded from sampling and testing products on the list of Pre-qualified and Tested Signing and Delineation Materials.

D. Pre-qualified & Tested Signing & Delineation Materials (Continued)

The manufacturer of products on the list of Pre-qualified 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 in the list of Pre-qualified 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 in the list of Pre-qualified 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 Pre-qualified and Tested Signing and Delineation Materials if the manufacture 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, tests the Department may elect to perform and approval by the Engineer.

The following is a partial listing of previously approved pre-qualified and tested delineation materials and products:

MATERIALS AND PRODUCTS

Pavement markers, retroreflective
Pavement markers, Temporary Type
Retroreflective sheeting for markers and delineators
Retroreflective sheeting for traffic cone sleeves

PAVEMENT MARKERS, PERMANENT TYPE

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

Retroreflective With Abrasion Resistant Surface (ARS)
(for recessed applications only)
1. Ennis Paint, Model 948 (2.3" x 4.7")
2. Ennis Paint, Model 944SB (2" x 4")*
3. Ray-O-Lite, Model 2002 (2" x 4.6")
4. Ray-O-Lite, Model 2004 ARS (2" x 4")*

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

D. Pre-qualified & Tested Signing & Delineation Materials (Continued)

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

PAVEMENT MARKERS, TEMPORARY TYPE

Temporary Markers For Long Term Day/Night Use (180 days or less)
1. Vega Molded Products "Temporary Road Marker" (3" x 4")

Temporary Markers For Short Term Day/Night Use (14 days or less)
(For seal coat or chip seal applications, clear protective covers are required)
1. Apex Universal, Model 932
2. Filtrona Extrusion, Models T.O.M., T.R.P.M., and "HH" (High Heat)
3. Hi-Way Safety, Inc., Model 1280/1281
4. Glowlite, Inc., Model 932

STRIPING AND PAVEMENT MARKING MATERIAL

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

Temporary (Removable) Striping and Pavement Marking Tape (180 days or less)
1. Advanced Traffic Marking, Series 200
2. Brite-Line, Series 100
3. Garlock Rubber Technologies, Series 2000
4. P.B. Laminations, Aztec, Grade 102
5. Swarco Industries, "Director-2"
6. Trelleborg Industries, R140 Series
7. 3M Series 620 "CR", and Series A750
8. 3M Series A145, Removable Black Line Mask
(Black Tape: for use only on Hot mix asphalt surfaces)
9. Advanced Traffic Marking Black "Hide-A-Line"
(Black Tape: for use only on Hot mix asphalt surfaces)

D. Pre-qualified & Tested Signing & Delineation Materials (Continued)

10. Brite-Line "BTR" Black Removable Tape
(Black Tape: for use only on Hot mix asphalt surfaces)
11. Trelleborg Industries, RB-140
(Black Tape: for use only on Hot mix asphalt surfaces)

Preformed Thermoplastic (Heated in place)
1. Flint Trading Inc., "Hot Tape"
2. Flint Trading Inc., "Premark Plus"
3. Ennis Paint Inc., "Flametape"

Ceramic Surfacing Laminate, 6" x 6"
1. Highway Ceramics, Inc.

CLASS 1 DELINEATORS

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

Special Use Type, 66-inch
1. Filtrona Extrusion, Model FG 560 (with 18-inch U-Channel base)
2. Carsonite, "Survivor" (with 18-inch U-Channel base)
3. Carsonite, Roadmarker CRM-375 (with 18-inch U-Channel base)
4. FlexStake, Model 604
5. GreenLine Model CGD (with 18-inch U-Channel base)
6. Impact Recovery Model D36, with #105 Driveable Base
7. Safe-Hit with 8-inch pavement anchor (SH248-GP1)
8. Safe-Hit with 15-inch soil anchor (SH248-GP2) and with 18-inch soil anchor (SH248-GP3)

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

CHANNELIZERS

Surface Mount Type, 36-inch
1. Bent Manufacturing Company, Masterflex Models MF-360-36 (Round) and MF-180-36 (Flat)
2. Filtrona Extrusion, Flexi-Guide Models FG300PE, FG300UR, and FG300EFX

D. Pre-qualified & Tested Signing & Delineation Materials (Continued)

3. Carsonite, "Super Duck" (Round SDR-336)
4. Carsonite, Model SDCF03601MB "Channelizer"
5. FlexStake, Models 703, 753 TM, and EB3
6. GreenLine, Model SMD-36
7. Hi-way Safety, Inc. "Channel Guide Channelizer" Model CGC36
8. Impact Recovery Model D36, with #101 Fixed (Surface-Mount) Base
9. Safe-Hit, Guide Post, Model SH236SMA
10. Three D Traffic Works "Boomerang" ID No. 522053W

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

CONICAL DELINEATORS, 42-inch
(For 28-inch Traffic Cones, see Standard Specifications)
1. Bent Manufacturing Company "T-Top"
2. Plastic Safety Systems "Navigator-42"
3. TrafFix Devices "Grabber"
4. Three D Traffic Works "Ringtop" TD7000, ID No. 742143
5. Three D Traffic Works, TD7500

OBJECT MARKERS

Type "K", 18-inch
1. Filtrona Extrusion, Model FG318PE
2. Carsonite, Model SMD 615
3. FlexStake, Model 701 KM
4. Safe-Hit, Model SH718SMA

Type "K-4" / "Q" Object Markers, 24-inch
1. Bent Manufacturing "Masterflex" Model MF-360-24
2. Filtrona Extrusion, Model FG324PE
3. Carsonite, "Channelizer"
4. FlexStake, Model 701KM
5. Safe-Hit, Models SH824SMA_WA and SH824GP3_WA
6. Three D Traffic Works ID No. 531702W and TD 5200
7. Three D Traffic Works ID No. 520896W

CONCRETE BARRIER MARKERS AND
TEMPORARY RAILING (TYPE K) REFLECTORS

Impactable Type
1. ARTUK, "FB"
2. Filtrona Extrusion, Models PCBM-12 and PCBM-T12
3. Duraflex Corp., "Flexx 2020" and "Electriflexx"

D. Pre-qualified & Tested Signing & Delineation Materials (Continued)

4. Hi-Way Safety, Inc., Model GMKRM100
5. Plastic Safety Systems "BAM" Models OM-BARR and OM-BWAR
6. Three D Traffic Works "Roadguide" Model TD 9304

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

METAL BEAM GUARD RAIL POST MARKERS
(For use to the left of traffic)
1. Filtrona Extrusion, "Mini" (3" x 10")
2. Creative Building Products, "Dura-Bull, Model 11201"
3. Duraflex Corp., "Railrider"
4. Plastic Vacuum Forming, "Cap-It C300"

CONCRETE BARRIER DELINEATORS, 16-inch
(For use to the right of traffic)
1. Filtrona Extrusion, Model PCBM T-16
2. Safe-Hit, Model SH216RBM

CONCRETE BARRIER-MOUNTED MINI-DRUM (10" x 14" x 22")
1. Stinson Equipment Company "SaddleMarker"

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

Wood Post Type, 27-inch
1. Filtrona Extrusion, FG 427 and FG 527
2. Carsonite, Model 427
3. FlexStake, Model 102 GR
4. GreenLine GRD 27
5. Safe-Hit, Model SH227GRD
6. Three D Traffic Works "Guardflex" TD9100
7. New Directions Mfg, NDM27

Steel Post Type
1. Carsonite, Model CFGR-327

RETROREFLECTIVE SHEETING

Channelizers, Barrier Markers, and Delineators
1. Avery Dennison T-6500 Series (For rigid substrate devices only)
2. Avery Dennison WR-7100 Series
3. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II

D. Pre-qualified & Tested Signing & Delineation Materials (Continued)

4. Reflexite, PC-1000 Metalized Polycarbonate
5. Reflexite, AC-1000 Acrylic
6. Reflexite, AP-1000 Metalized Polyester
7. Reflexite, Conformalight, AR-1000 Abrasion Resistant Coating
8. 3M, High Intensity

Traffic Cones, 4-inch and 6-inch Sleeves
1. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
2. Reflexite, Vinyl, "TR" (Semi-transparent) or "Conformalight"
3. 3M Series 3840
4. Avery Dennison S-9000C

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

Barricades: Type I, Medium-Intensity (Typically Enclosed Lens, Glass-Bead Element)
1. Nippon Carbide Industries, CN8117
2. Avery Dennison, W 1100 series
3. 3M Series CW 44

Barricades: Type II, Medium-High-Intensity (Typically Enclosed Lens, Glass-Bead Element)
1. Avery Dennison, W-2100 Series

Signs: Type II, Medium-High-Intensity (Typically Enclosed Lens, Glass-Bead Element)
1. Avery Dennison, T-2500 Series
2. Nippon Carbide Industries, Nikkalite 18000

Signs: Type III, High-Intensity (Typically Encapsulated Glass-Bead Element)
1. Avery Dennison, T-5500A and T-6500 Series
2. Nippon Carbide Industries, Nikkalite Brand Ultralite Grade II
3. 3M 3870 and 3930 Series

Signs: Type IV, High-Intensity (Typically Unmetallized Microprismatic Element)
1. Avery Dennison, T-6500 Series
2. Nippon Carbide Industries, Crystal Grade, 94000 Series
3. Nippon Carbide Industries, Model No. 94847 Fluorescent Orange
4. 3M Series 3930 and Series 3924S

Signs: Type VI, Elastomeric (Roll-Up) High-Intensity, without Adhesive
1. Avery Dennison, WU-6014
2. Novabrite LLC, "Econobrite"
3. Reflexite "Vinyl"

D. Pre-qualified & Tested Signing & Delineation Materials (Continued)

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

Signs: Type VII, Super-High-Intensity (Typically Unmetallized Microprismatic Element)
1. 3M Series 3924S, Fluorescent Orange
2. 3M LDP Series 3970

Signs: Type VIII, Super-High-Intensity (Typically Unmetallized Microprismatic Element)
1. Avery Dennison, T-7500 Series
2. Avery Dennison, T-7511 Fluorescent Yellow
3. Avery Dennison, T-7513 Fluorescent Yellow Green
4. Avery Dennison, W-7514 Fluorescent Orange
5. Nippon Carbide Industries, Nikkalite Crystal Grade Series 92800
6. Nippon Carbide Industries, Nikkalite Crystal Grade Model 92847 Fluorescent Orange

Signs: Type IX, Very-High-Intensity (Typically Unmetallized Microprismatic Element)
1. 3M VIP Series 3981 Diamond Grade Fluorescent Yellow
2. 3M VIP Series 3983 Diamond Grade Fluorescent Yellow/Green
3. 3M VIP Series 3990 Diamond Grade
4. Avery Dennison T-9500 Series
5. Avery Dennison, T9513, Fluorescent Yellow Green
6. Avery Dennison, W9514, Fluorescent Orange

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

ALTERNATIVE SIGN SUBSTRATES

Fiberglass Reinforced Plastic (FRP) and Expanded Foam PVC
1. Fiber-Brite (FRP)
2. Sequentia, "Polyplate" (FRP)
3. Inteplast Group "InteCel" (0.5 inch for Post-Mounted CZ Signs, 48-inch or less)(PVC)

Aluminum Composite, Temporary Construction Signs Only
1. Alcan Composites "Dibond Material, 80 mils"
2. Mitsubishi Chemical America, Alpolic 350

Note: For questions regarding this listing contact the:
Division of Signs & Delineation, Traffic Operations, (916) 654-5869 or
Transportation Laboratory, (916) 227-7289, 8-498-7289

3. ITEMS OF WORK:

A. GENERAL

Payment for the various items of the Bid Schedule, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of work as specified and shown on the Drawings, including all appurtenances thereto, and including all costs of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety. No separate payment will be made for any item of work that is not specifically set forth in the Bid Schedule(s), and all costs therefore shall be included in the prices named in the Bid Schedule(s) for the various appurtenant items of work.

Any and all items and/or work shown on the Drawings or indicated in the Contract Documents and not included in a description of a specific bid item shall be included by the Bidder in one or more appurtenant bid items. This includes, but is not is not limited to, such items as: scheduling and coordination; dust, debris, and noise control; protection of curing materials; replacement of damaged improvements and materials, provision of all safety requirements; and all work and materials required to provide public convenience and safety, such as flaggers, barricades, lights, vehicular detours, and pedestrian access walkways.

B. DESCRIPTION, MEASUREMENT, AND PAYMENT

Bid Item No. 1) Traffic Control:

Traffic Control shall conform to the provisions in Sections 7-1.08, "Public Convenience," 7-1.09, "Public Safety," and Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and herein in Section D – "Construction Details", including, but not limited to, Subsections 1C - "Order of Work", 1D – "Work Sequence/Notifications**,** 1G – "Existing Highway Facilities", 1I - "Maintaining Traffic", and Subsection 2 – "Materials" of these Special Provisions. Nothing in these Special Provisions shall be construed as relieving the Contractor from his responsibility as provided in said Section 7-1.09.

Full compensation for furnishing and placing all materials and for implementing all traffic control measures to the various phases of work, including: preparation, implementation, and coordination of a traffic control plan, as approved by the Engineer; notification of property owners; and furnishing all flagging and traffic control shall be considered as included in the lump sum price paid for the item "Traffic Control" and no additional compensation will be allowed therefore.

Bid Item No. 2) Clearing and Grubbing:

Prior to the application of pavement reinforcing fabric or other resurfacing treatments to the roadway, the Contractor shall perform the following surface preparation:

Apply herbicide at least 10 days prior to the initial surface treatment operation, or as directed by the manufacturer of the approved herbicide. Herbicides shall be applied in conformance with the applicable provisions of Section 7-1.01H "Use of Pesticides" and Section 20-4.026 "Pesticides" of the Standard Specifications and these Special Provisions, unless otherwise specified by the Engineer. Reward and Round Up are pre-approved herbicides. All other herbicides shall be submitted by the Contractor for approval by the Engineer and shall be certified for use in the State of California for the specific use intended.

The application of the herbicide shall be performed in accordance with all applicable regulations. Any and all fines or clean-up costs for unlawful misuse or discarding of herbicides shall be the sole responsibility of the Contractor. Mixtures and spread rates for the herbicides shall be determined by the manufacturer's specifications. Wash down of equipment or discarding of herbicides shall not enter the catch basins or positive drainage facilities.

Remove all existing thermoplastic striping, thermoplastic legends and raised pavement markers within the surface treatment limits. After removing the thermoplastic, the Contractor shall fog seal the newly exposed pavement surface with SS-1or SS-1h emulsion. When removing the raised pavement markers the Contractor shall remove excessive adhesive left on pavement following the removal of raised pavement markers. Removal shall be done to the satisfaction of the Engineer. Areas that have been patched within the past 60 days and not already treated with a sealant shall be fog sealed by the Contractor as part of the bid item for "Clearing and Grubbing." If traffic is to be put back on the roadway surface prior to application of the resurfacing treatments, the Contractor shall install temporary laneline and centerline delineation in accordance to Subsection 1I - "Maintaining Traffic", and Subsection 2 – "Materials" of these Special Provisions.

Immediately prior to any resurfacing treatment operations the Contractor shall remove any and all remaining vegetation, debris, oil, and grease spots within the limits of the resurfacing treatment and sweep the entire surface with vacuum assisted power brooms on residential streets and kick brooms on rural roads and highways, when approved by the Engineer.

Existing asphalt concrete dikes, aprons, and ditches located within the project limits shall also be cleaned of all soil and debris, treated with herbicide, and cleared of vegetation as part of the bid item for "Clearing and Grubbing" prior to the application of any resurfacing treatments.

The Contractor shall grade the existing gravel shoulders a minimum of 3 feet from the edge of pavement in order to remove objectionable vegetation and other debris. The removed vegetation and other debris shall be disposed of off the roadway right of way.

<u>Bid Item No. 2) Clearing and Grubbing:</u> (Continued)

The pavement markers, vegetation, and graded shoulder debris shall be removed from the pavement area and disposed of outside the highway right of way in accordance with Section 7-1.13, “Disposal of Material Outside the Highway Right of Way,” of the Standard Specifications and as determined by the Engineer.

Full compensation for determination of stockpile sites and the maintenance of and clean up thereof as described in Subsection 1H – “Stockpile Sites and Construction Zones” and Subsection 1J “Clean-up” shall be considered included as part of the bid items for “Clearing & Grubbing” and no additional compensation will be allowed therefore.

Full compensation for the above described surface preparation, including furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved, shall be considered as included in the lump sum price paid for the item “Clearing and Grubbing” and no additional compensation will be allowed therefore.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u>

The Contractor shall submit a Storm Water Pollution Prevention Plan (SWPPP) to the Engineer for approval. The SWPPP shall conform to the requirements in the Preparation Manual, the NPDES permit, and these Special Provisions. The SWPPP shall be submitted in place of the water pollution control program required by the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications.

The SWPPP shall include water pollution control practices:

A. For storm water and non-storm water from areas outside of the job site related to construction activities for this contract such as:

1. Staging areas.
2. Storage yards.
3. Access roads.

B. Appropriate for each season as described in "Implementation Requirements" of these Special Provisions.

C. For activities or mobile operations related to all NPDES permits.

The SWPPP shall include a schedule that:

A. Describes when work activities that could cause water pollution will be performed.

B. Identifies soil stabilization and sediment control practices for disturbed soil area.

C. Includes dates when these practices will be 25, 50, and 100 percent complete.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

D. Shows 100 percent completion of these practices before the rainy season.

The SWPPP shall include the following temporary water pollution control practices and their associated contract items of work as shown on the plans or specified in these Special Provisions:

A. Temporary Sediment Control

1. Temporary Drainage Inlet Protection
2. Street Sweeping

B. Tracking Control

1. Street Sweeping
2. Temporary Construction Entrance

C. Wind Erosion Control

1. Construction Site Management

D. Non-Storm Water Management

1. Construction Site Management

E. Waste Management and Materials Pollution Control

1. Temporary Concrete Washout Facility
2. Construction Site Management

Within 20 days after contract approval, the Contractor shall submit 3 copies of the SWPPP to the Engineer. The Contractor shall allow 20 days for the Engineer's review. If revisions are required, the Engineer will provide comments and specify the date that the review stopped. The Contractor shall revise and resubmit the SWPPP within 15 days of receipt of the Engineer's comments. The Engineer's review will resume when the complete SWPPP is resubmitted. When the Engineer approves the SWPPP, the Contractor shall submit 4 copies of the approved SWPPP to the Engineer. The Contractor may proceed with construction activities if the Engineer conditionally approves the SWPPP while minor revisions are being completed. If 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, the Contractor will be compensated for resulting losses, and an extension of time will be granted, as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The SWPPP shall include a copy of the California State Reclamation Board permit.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

The Contractor shall not perform work that may cause water pollution until the SWPPP has been approved by the Engineer. The Engineer's review and approval shall not waive any contract requirements and shall not relieve the Contractor from complying with Federal, State and local laws, regulations, and requirements.

The Contractor shall amend the SWPPP annually and shall resubmit it to the Engineer 25 days before the defined rainy season.

If there is a change in construction schedule or activities, the Contractor shall prepare an amendment to the SWPPP to identify additional or revised water pollution control practices.

The Contractor shall submit the amendment to the Engineer for review within a time agreed to by the Engineer not to exceed the number of days specified for the initial submittal of the SWPPP. The Engineer will review the amendment within the same time allotted for the review of the initial submittal of the SWPPP.

If directed by the Engineer or requested in writing by the Contractor and approved by the Engineer, changes to the water pollution control work specified in these special provisions will be allowed. Changes may include addition of new water pollution control practices. The Contractor shall incorporate these changes in the SWPPP. Additional water pollution control work will be paid for as extra work in accordance with Section 4-1.03, "Extra work," of the Standard Specifications.

The Contractor shall keep a copy of the approved SWPPP at the job site. The SWPPP shall be made available when requested by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or the local storm water management agency. Requests from the public shall be directed to the Engineer.

SAMPLING AND ANALYSIS

The Contractor shall include a Sampling and Analysis Plan (SAP) in the SWPPP to monitor the effectiveness of the water pollution control practices. The Contractor shall prepare the SAP in conformance with the Preparation Manual.

The Contractor shall designate trained personnel to collect water quality samples. The personnel and training shall be documented in the SAP. Training shall consist of the following elements:

A. SAP review,
B. Health and safety review, and
C. Sampling simulations.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

In the SAP the Contractor shall describe the following water quality sampling procedures:

A. Sampling preparation,
B. Collection,
C. Quality assurance and quality control,
D. Sample labeling,
E. Collection documentation,
F. Sample shipping,
G. Chain of custody,
H. Sample numbering, and
I. Precautions from the construction site health and safety plan.

The Contractor shall document sample collection during precipitation.

Samples to be analyzed in the field shall be taken by the Contractor's designated sampling personnel using collection and analysis methods, and equipment calibration specified by the manufacturer of the sampling equipment. Samples to be analyzed by a laboratory, shall be sampled, preserved, and analyzed by a State-certified laboratory in conformance with the requirements in 40 CFR Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants." The Contractor shall identify the State-certified laboratory, sample containers, preservation requirements, holding times, and analysis method in the SAP. A list of State-certified laboratories that are approved by the Department is available at:

http://www.dhs.ca.gov/ps/ls/ELAP/html/lablist.htm

Sediment and Turbidity

This project discharges directly into Butte Creek, a body of water required by the Clean Water Act, Section 303(d) to be listed as impaired due to Diazinon, mercury, and unknown toxicity from agricultural sources, historical mining operations, and other unknown sources. The Contractor shall describe in the SAP the schedule and strategy for monitoring turbidity in the listed body of water in accordance with the provisions in this section.

The Contractor shall develop the SAP schedule so that water quality samples are taken within 2 hours of discharge from precipitation during daylight hours (sunrise to sunset), regardless of the time of year, day of the week, or condition of the construction site. If precipitation occurs again after at least 72 hours of dry weather the Contractor shall take new samples, however, sampling will not be required more than 4 times in 30 days.

In the SAP the Contractor shall identify the locations where runoff sources on the construction site discharge directly into the listed body of water, and the locations where water flows onto the project with the potential to combine with runoff that discharges directly into the listed body of water. These locations shall also be shown on the SWPPP Water Pollution Control Drawings.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

The Contractor shall identify locations for collecting water quality samples and the reason for their selection. Sampling locations shall also be shown on the SWPPP Water Pollution Control Drawings. The sampling locations shall include:

A. Upstream from direct discharges from the construction site,
B. Immediately downstream from the last point of direct discharge from the construction site, and
C. Immediately downhill from the locations where water flows onto the right of way.

The Contractor shall specify in the SAP that for discharges into bodies of water listed as impaired due to sedimentation/siltation, samples will be analyzed for both settleable solids in accordance with the requirements of EPA Test Method 160.5, and total suspended solids in accordance with EPA Test Method 160.2; or for suspended sediment concentration in accordance with the requirements in ASTM Designation: D 3977.

For discharges to 303(d) bodies of water listed as impaired due to turbidity the Contractor shall specify in the SAP that samples will be analyzed for turbidity in accordance with the requirements in EPA Test Method 180.1.

Non-Visible Pollutants

This project has the potential to discharge non-visible pollutants in storm water from the construction site. The Contractor shall include in the SAP a description of the sampling and analysis strategy to be implemented on the project for monitoring non-visible pollutants.

In the SAP the Contractor shall identify potential non-visible pollutants that will be present on the construction site associated with the following:

A. Construction materials and wastes;
B. Existing contamination due to historical site usage; or
C. Application of soil amendments, including soil stabilization products, with the potential to alter pH or contribute toxic pollutants to storm water.

The Contractor shall show the locations planned for storage and use of the potential non-visible pollutants on the SWPPP Water Pollution Control Drawings.

The Contractor shall include in the SAP the following list of conditions that require sampling when observed during a storm water inspection:

A. Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions.

B. Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but:

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

1. A breach, leakage, malfunction, or spill is observed;
2. The leak or spill has not been cleaned up before precipitation; and
3. There is the potential for discharge of non-visible pollutants to surface waters or drainage system.

C. Construction activities; such as application of fertilizer, pesticide, herbicide, methyl methacrylate concrete sealant, or non-pigmented curing compound; have occurred during precipitation or within 24 hours preceding precipitation, and have the potential to discharge pollutants to surface waters or drainage system.

D. Soil amendments, including soil stabilization products, with the potential to alter pH levels or contribute toxic pollutants to storm water runoff have been applied, and have the

potential to discharge pollutants to surface waters or drainage system (unless independent test data are available that demonstrate acceptable concentrations of nonvisible pollutants in the soil amendment).

E. Storm water runoff from an area contaminated by historical usage of the site has the potential to discharge pollutants to surface waters or drainage system.

The Contractor shall describe in the SAP the schedule for collecting a sample downhill from each non-visible pollutant source and an uncontaminated control sample, during the first 2 hours of discharge from precipitation during daylight hours that result in enough discharge for sample collection. If discharge flows to the non-visible pollutant source, a sample shall be collected immediately downhill from where the discharge enters the Department's right of way. If precipitation occurs again after at least 72 hours of dry weather the Contractor shall take new samples.

In the SAP the Contractor shall identify sampling locations for collecting downstream and control samples, and the reason for their selection. The control sampling location shall be selected so the sample does not come into contact with materials, wastes or areas associated with potential non-visible pollutants or disturbed soil areas. The Contractor shall show non-visible pollutant sampling locations on the SWPPP Water Pollution Control Drawings.

The Contractor shall identify in the SAP the analytical method to be used for downhill and control samples for potential non-visible pollutants on the project.

Analytical Results and Evaluation

The Contractor shall submit a hard copy and electronic copy of water quality analytical results, and quality assurance and quality control data to the Engineer within 5 days of sampling for field analyses, and within 30 days for laboratory analyses. The Contractor shall also provide an evaluation of whether the downhill samples show levels of the tested parameter higher than in the control sample. If downhill or downstream samples show increased levels, the Contractor will assess the water pollution control measures, site

conditions, and surrounding influences to determine the probable cause for the increase. As determined by the assessment, the Contractor will repair or modify water pollution control measures to address increases and amend the SWPPP as necessary. Electronic results (in one of the following file formats: .xls, .txt, .csv, .dbs, or .mdb) shall have the following information:

A. Sample identification number.
B. Contract number.
C. Constituent.
D. Reported value.
E. Analytical method.
F. Method detection limit.
G. Reported limit.

The Contractor shall maintain the water quality sampling documentation and analytical results with the SWPPP on the project site.

If construction activities or knowledge of site conditions change such that discharges or sampling locations change, the Contractor shall amend the SAP in conformance with this section, "Water Pollution Control."

IMPLEMENTATION REQUIREMENTS

The Contractor's responsibility for SWPPP implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications.

If the Contractor or the Engineer identifies a deficiency in the implementation of the approved SWPPP, the deficiency shall be corrected immediately, unless an agreed date for correction is approved in writing by the Engineer. The deficiency shall be corrected before the onset of precipitation. If the Contractor fails to correct the deficiency by the agreed date or before the onset of precipitation, the Department may correct the deficiency and deduct the cost of correcting deficiencies from payments.

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

Year-Round

The Contractor shall monitor the National Weather Service weather forecast on a daily basis during the contract. The Contractor may use an alternative weather forecasting service if approved by the Engineer. Appropriate water pollution control practices shall be in place before precipitation.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

The Contractor may discontinue earthwork operations for a disturbed area for up to 21 days and the disturbed soil area will still be considered active. When earthwork operations in the disturbed area have been completed, the Contractor shall implement appropriate water pollution control practices within 15 days, or before predicted precipitation, whichever occurs first.

Rainy Season

The Contractor shall provide soil stabilization and sediment control practices during the rainy season between October 15 and April 15.

The Contractor shall implement soil stabilization and sediment control practices a minimum of 10 days before the start of the rainy season.

During the defined rainy season, the active disturbed soil area of the project site shall be not more than 2 hectares. The Engineer may approve expansions of the active disturbed soil area limit if requested in writing. The Contractor shall maintain soil stabilization and sediment control materials on site to protect disturbed soil areas.

INSPECTION AND MAINTENANCE

The WPCM shall inspect the water pollution control practices identified in the SWPPP as follows:

A. Before a forecasted storm,
B. After precipitation that causes site runoff,
C. At 24-hour intervals during extended precipitation,
D. On a predetermined schedule, a minimum of once every 2 weeks outside of the defined rainy season, and
E. On a predetermined schedule, a minimum of once a week during the defined rainy season.

The WPCM shall oversee the maintenance of the water pollution control practices.

The WPCM shall use the Storm Water Quality Construction Site Inspection Checklist provided in the Preparation Manual or an alternative inspection checklist provided by the Engineer. A copy of the completed site inspection checklist shall be submitted to the Engineer within 24 hours of finishing the inspection.

The Contractor may request approval from the Engineer to suspend inspections of water pollution control practices after work except plant establishment is complete. The Engineer's approval is contingent on approval from the Regional Water Quality Control Board. The Contractor shall not suspend inspections until written approval from the Engineer is received.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

REPORTING REQUIREMENTS

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

A. The date, time, location, and nature of the operation, type of discharge and quantity, and the cause of the notice or order.
B. The water pollution control practices used before the discharge, or before receiving the notice or order.
C. The date of placement and type of additional or altered water pollution control practices placed after the discharge, or after receiving the notice or order.
D. A maintenance schedule for affected water pollution control practices.

Annual Certifications

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

PAYMENT

During each estimate period the Contractor fails to conform to the provisions in this section, "Water Pollution Control," or fails to implement the water pollution control practices shown on the plans or specified elsewhere in these Special Provisions as items of work, the Department will withhold 25 percent of the progress payment.

Withholds for failure to perform water pollution control work will be in addition to all other withholds provided for in the contract. The Department will return performance-failure withholds in the progress payment following the correction of noncompliance.

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

Payments for prepare storm water pollution prevention plan will be made as follows:

A. After the SWPPP has been approved by the Engineer, 50 percent of the contract item price for prepare storm water pollution prevention plan will be included in the monthly progress estimate.
B. Forty percent of the contract item price for prepare storm water pollution prevention plan will be paid over the life of the contract.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

C. After acceptance of the contract in conformance with the provisions in Section 7-1.17, "Acceptance of Contract," of the Standard Specifications, payment for the remaining 10 percent of the contract item price for prepare storm water pollution prevention plan will be made in conformance with the provisions in Section 9-1.07A, "Payment Prior to Proposed Final Estimate."

Storm water sampling and analysis will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications. No payment will be made for the preparation, collection, analysis, and reporting of storm water samples where appropriate water pollution control practices are not implemented before precipitation or if a failure of a water pollution control practice is not corrected before precipitation.

Implementation of water pollution control practices in areas outside the highway right of way not specifically provided for in the SWPPP or in these special provisions will not be paid for.

Water pollution control practices for which there are separate contract items of work will be measured and paid for as those contract items of work.

10-1.03 CONSTRUCTION SITE MANAGEMENT

Construction site management shall consist of controlling potential sources of water pollution before they come in contact with storm water systems or watercourses. The Contractor shall control material pollution and manage waste and non-storm water existing at the construction site by implementing effective handling, storage, use, and disposal practices.

Attention is directed to "Water Pollution Control" of these special provisions regarding the Contractor's appointment of a water pollution control manager (WPCM) for the project.

The Contractor shall train all employees and subcontractors regarding:

A. Material pollution prevention and control;
B. Waste management;
C. Non-storm water management;
D. Identifying and handling hazardous substances; and
E. Potential dangers to humans and the environment from spills and leaks or exposure to toxic or hazardous substances.

Training shall take place before starting work on this project. New employees shall receive the complete training before starting work on this project. The Contractor shall have regular meetings to discuss and reinforce spill prevention and control; material delivery, storage, use, and disposal; waste management; and non-storm water management procedures.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

Instructions for material and waste handling, storage, and spill reporting and cleanup shall be posted at all times in an open, conspicuous, and accessible location at the construction site.

Nonhazardous construction site waste and excess material shall be recycled when practical or disposed of in accordance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications, unless otherwise specified.

Vehicles and equipment at the construction site shall be inspected by the WPCM on a frequent, predetermined schedule and by the operator each day of use. Leaks shall be repaired immediately, or the vehicle or equipment shall be removed from the construction site.

SPILL PREVENTION AND CONTROL

The Contractor shall implement spill and leak prevention procedures when chemicals or hazardous substances are stored. Spills of petroleum products; substances listed under CFR Title 40, Parts 110, 117, and 302; and sanitary and septic waste shall be contained and cleaned up as soon as is safe.

Minor spills involve small quantities of oil, gasoline, paint, or other material that can be controlled by the first responder upon discovery of the spill. Cleanup of minor spills includes:

A. Containing the spread of the spill,
B. Recovering the spilled material using absorption,
C. Cleaning the contaminated area, and
D. Disposing of contaminated material promptly and properly.

Semi-significant spills are those that can be controlled by the first responder with the help of other personnel. Cleanup of semi-significant spills shall be immediate. Cleanup of semi-significant spills includes:

A. Containing the spread of the spill;
B. Recovering the spilled material using absorption if the spill occurs on paved or an impermeable surface;
C. Containing the spill with an earthen dike and digging up contaminated soil for disposal if the spill occurs on dirt;
D. Covering the spill with plastic or other material to prevent contaminating runoff if the spill occurs during precipitation; and
E. Disposing of contaminated material promptly and properly.

Significant or hazardous spills are those that cannot be controlled by construction personnel. Notifications of these spills shall be immediate. The following steps shall be taken:

A. Construction personnel shall not attempt to cleanup the spill until qualified staff have arrived;

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

B. Notify the Engineer and follow up with a written report;
C. Obtain the services of a spills contractor or hazardous material team immediately;
D. Notify the local emergency response team by dialing 911 and county officials at the emergency phone numbers kept on the construction site;
E. Notify the Governor's Office of Emergency Services Warning Center at (805) 852-7550;
F. Notify the National Response Center at (800) 424-8802 regarding spills of Federal reportable quantities in conformance with CFR Title 40, Parts 110, 119, and 302;
G. Notify other agencies as appropriate, including:

1. Fire Department,
2. Public Works Department,
3. Coast Guard,
4. Highway Patrol,
5. City Police or County Sheriff Department,
6 Department of Toxic Substances,
7. California Division of Oil and Gas,
8. Cal OSHA, or
9. Regional Water Resources Control Board.

The WPCM shall oversee and enforce proper spill prevention and control measures. Minor, semi-significant, and significant spills shall be reported to the Contractor's WPCM who shall notify the Engineer immediately.

The Contractor shall prevent spills from entering storm water runoff before and during cleanup. Spills shall not be buried or washed with water.

The Contractor shall keep material or waste storage areas clean, well organized, and equipped with enough cleanup supplies for the material being stored. Plastic shall be placed under paving equipment when not in use to catch drips.

MATERIAL MANAGEMENT

Material shall be delivered, used, and stored for this contract in a manner that minimizes or eliminates discharge of material into the air, storm drain systems, or watercourses.

The Contractor shall implement the practices described in this section when taking delivery of, using, or storing the following materials:

A. Hazardous chemicals including:
1. Acids,
2. Lime,
3. Glues,
4. Adhesives,
5. Paints,

6. Solvents, and
7. Curing compounds;
B. Soil stabilizers and binders;
C. Fertilizers;
D. Detergents;
E. Plaster;
F. Petroleum products including:
1. Fuel,
2. Oil, and
3. Grease;
G. Asphalt components and concrete components; and
H. Pesticides and herbicides.

The Contractor shall supply the Material Safety Data Sheet to the Engineer for material used or stored. The Contractor shall keep an accurate inventory of material delivered and stored at the construction site.

Employees trained in emergency spill cleanup procedures shall be present when hazardous materials or chemicals are unloaded.

The Contractor shall use recycled or less hazardous products when practical.

Material Storage

The Contractor shall store liquids, petroleum products, and substances listed in CFR Title 40, Parts 110, 117, and 302 in containers or drums approved by the United States Environmental Protection Agency, and place them in secondary containment facilities. Secondary containment facilities shall be impervious to the materials stored there for a minimum contact time of 72 hours.

Throughout the rainy season secondary containment facilities shall be covered during non-working days and when precipitation is predicted. Secondary containment facilities shall be adequately ventilated.

The Contractor shall keep the secondary containment facility free of accumulated rainwater or spills. After precipitation, or in the event of spills or leaks, accumulated liquid shall be collected and placed into drums within 24 hours. These liquids shall be handled as hazardous waste in accordance with the provisions in "Hazardous Waste" of these special provisions, unless testing determines them to be nonhazardous.

Incompatible materials, such as chlorine and ammonia, shall not be stored in the same secondary containment facility. Materials shall be stored in the original containers with the original product labels maintained in legible condition. Damaged or illegible labels shall be replaced immediately.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

The secondary containment facility shall have the capacity to contain precipitation from a 24-hour-long, 25-year storm; and 10 percent of the aggregate volume of all containers, or all of the volume of the largest container within the facility, whichever is greater.

The Contractor shall store bagged or boxed material on pallets. Throughout the rainy season, bagged or boxed material shall be protected from wind and rain during non-working days and when precipitation is predicted.

The Contractor shall provide sufficient separation between stored containers to allow for spill cleanup or emergency response access. Storage areas shall be kept clean, well organized, and equipped with cleanup supplies appropriate for the materials being stored.

The Contractor shall repair or replace perimeter controls, containment structures, covers, and liners as needed. Storage areas shall be inspected before and after precipitation, and at least weekly during other times.

Stockpile Management

The Contractor shall reduce or eliminate potential air and water pollution from stockpiled material including soil, paving material, or pressure treated wood. Stockpiles shall be located out of floodplains when possible, and at least 15 m from concentrated flows of storm water, drainage courses, or inlets unless written approval is obtained from the Engineer.

The Contractor may discontinue adding or removing material for up to 21 days and a stockpile will still be considered active.

The Contractor shall protect active stockpiles with plastic or geotextile cover, soil stabilization measures, or with linear sediment barrier when precipitation is predicted. Active stockpiles of cold mix asphalt concrete shall be placed on an impervious surface and covered with plastic when precipitation is predicted.

The Contractor shall protect inactive soil stockpiles with a plastic or geotextile cover, or with soil stabilization measures at all times during the rainy season. A linear sediment barrier around the perimeter of the stockpile shall also be used.

During the non-rainy season soil stockpiles shall be covered and protected with a linear sediment barrier when precipitation is predicted. The Contractor shall control wind erosion during dry weather as provided in Section 10, "Dust Control," of the Standard Specifications.

Stockpiles of Portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, or aggregate subbase shall be covered with plastic or geotextile, or protected with a linear sediment barrier at all times during the rainy season, and when precipitation is predicted during the non-rainy season.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

Stockpiles of cold mix asphalt concrete shall be placed on and covered with impermeable material at all times during the rainy season, and when precipitation is predicted during the non-rainy season.

Stockpiles of pressure treated wood shall be covered with impermeable material and placed on pallets at all times during the rainy season, and when precipitation is predicted during the non-rainy season.

The Contractor shall repair or replace linear sediment barriers and covers as needed or as directed by the Engineer to keep them functioning properly. Sediment shall be removed when it accumulates to 1/3 of the linear sediment barrier height.

WASTE MANAGEMENT

Solid Waste

The Contractor shall not allow litter or debris to accumulate anywhere on the construction site, including storm drain grates, trash racks, and ditch lines. The Contractor shall pick up and remove trash and debris from the construction site at least once a week. The WPCM shall monitor solid waste storage and disposal procedures on the construction site. The Contractor shall provide enough dumpsters of sufficient size to contain the solid waste generated by the

project. Dumpsters shall be emptied when refuse reaches the fill line. Dumpsters shall be watertight. The Contractor shall not wash out dumpsters on the construction site.

The Contractor shall provide additional containers and more frequent pickup during the demolition phase of construction Solid waste includes:

A. Brick,
B. Mortar,
C. Timber,
D. Metal scraps,
E. Sawdust,
F. Pipe,
G. Electrical cuttings,
H. Non-hazardous equipment parts,
I. Styrofoam and other packaging materials,
J. Vegetative material and plant containers from highway planting, and
K. Litter and smoking material, including litter generated randomly by the public.

Trash receptacles shall be provided and used in the Contractor's yard, field trailers, and locations where workers gather for lunch and breaks.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

Hazardous Waste

The Contractor shall implement hazardous waste management practices when waste is generated on the construction site from the following substances:

A. Petroleum products,
B. Asphalt products,
C. Concrete curing compound,
D. Pesticides,
E. Acids,
F. Paints,
G. Stains,
H. Solvents,
I. Wood preservatives,
J. Roofing tar, and
K. Materials classified as hazardous by California Code of Regulations, Title 22, Division 4.5; or listed in CFR Title 40, Parts 110, 117, 261, or 302.

Nothing in these special provisions shall relieve the Contractor of the responsibility for compliance with Federal, State, and local laws regarding storage, handling, transportation, and disposal of hazardous wastes.

The WPCM shall oversee and enforce hazardous waste management practices. Production of hazardous materials and hazardous waste on the construction site shall be kept to a minimum. Perimeter controls, containment structures, covers, and liners shall be repaired or replaced when damaged.

The Contractor shall have a laboratory certified by the Department of Health Services (DHS) sample and test waste when hazardous material levels are unknown to determine safe methods for storage and disposal.

The Contractor shall segregate potentially hazardous waste from nonhazardous waste at the construction site. Hazardous waste shall be handled, stored, and disposed of as required in California Code of Regulations, Title 22, Division 4.5, Section 66262.34; and in CFR Title 49, Parts 261, 262, and 263.

The Contractor shall store hazardous waste in sealed containers constructed and labeled with the contents and date accumulated as required in California Code of Regulations, Title 22, Division 4.5; and in CFR Title 49, Parts 172, 173, 178, and 179. Hazardous waste containers shall be kept in temporary containment facilities conforming to the provisions in "Material Storage" of these Special Provisions.

There shall be adequate storage volume and containers shall be conveniently located for hazardous waste collection. Containers of hazardous waste shall not be overfilled and hazardous wastes shall not be mixed. Containers of dry waste that are not watertight shall be

stored on pallets. The Contractor shall not allow potentially hazardous waste to accumulate on the ground. Hazardous waste shall be stored away from storm drains, watercourses, moving vehicles, and equipment.

The Contractor shall clean water based or oil based paint from brushes or equipment within a contained area and shall not contaminate soil, watercourses, or storm drain systems. Paints, thinners, solvents, residues, and sludges that cannot be recycled or reused shall be disposed of as hazardous waste. When thoroughly dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths shall be disposed of as solid waste.

The Contractor shall dispose of hazardous waste within 90 days of being generated. Hazardous waste shall be disposed of by a licensed hazardous waste transporter using uniform hazardous waste manifest forms and taken to a Class I Disposal Site. A copy of the manifest shall be provided to the Engineer.

Contaminated Soil

The Contractor shall identify contaminated soil from spills or leaks by noticing discoloration, odors, or differences in soil properties. Soil with evidence of contamination shall be sampled and tested by a laboratory certified by DHS. If levels of contamination are found to be hazardous, the soil shall be handled and disposed of as hazardous waste. Contaminated soil existing on the construction site before mobilization shall be handled and disposed of in accordance with "Material Containing Lead" of these special provisions.

The Contractor shall prevent the flow of water, including ground water, from mixing with contaminated soil by using one or a combination of the following measures:

A. Berms,
B. Cofferdams,
C. Grout curtains,
D. Freeze walls, or
E. Concrete seal course.

If water mixes with contaminated soil and becomes contaminated, the water shall be sampled and tested by a laboratory certified by the DHS. If levels of contamination are found to be hazardous, the water shall be handled and disposed of a hazardous waste.

Concrete Waste

The Contractor shall implement practices to prevent the discharge of Portland cement concrete or asphalt concrete waste into storm drain systems or watercourses. Portland cement concrete or asphalt concrete waste shall be collected at the following locations and disposed of:

A. Where concrete material, including grout, is used;
B. Where concrete dust and debris result from demolition;

C. Where sawcutting, coring, grinding, grooving, or hydro-concrete demolition of Portland cement concrete or asphalt concrete creates a residue or slurry; or
D. Where concrete trucks or other concrete-coated equipment is cleaned at the construction site.

Sanitary and Septic Waste

Wastewater from sanitary or septic systems shall not be discharged or buried within the Department right of way. The WPCM shall inspect sanitary or septic waste storage and monitor disposal procedures at least weekly. Sanitary facilities that discharge to the sanitary sewer system shall be properly connected and free from leaks.

The Contractor shall obtain written approval from the local health agency, city, county, and sewer district before discharging from a sanitary or septic system directly into a sanitary sewer system, and provide a copy to the Engineer. The Contractor shall comply with local health agency requirements when using an on-site disposal system.

Liquid Waste

The Contractor shall not allow construction site liquid waste, including the following, to enter storm drain systems or watercourses:
A. Drilling slurries or fluids,
B. Grease-free or oil-free wastewater or rinse water,
C. Dredgings,
D. Liquid waste running off a surface including wash or rinse water, or
E. Other non-storm water liquids not covered by separate permits.

The Contractor shall hold liquid waste in structurally sound, leak proof containers such as:
A. Sediment traps,
B. Roll-off bins, or
C. Portable tanks.

Liquid waste containers shall be of sufficient quantity and volume to prevent spills and leaks. The containers shall be stored at least 15 m from storm drains, watercourses, moving vehicles, and equipment.

The Contractor shall remove and dispose of deposited solids from sediment traps as provided in "Solid Waste" of these special provisions, unless determined infeasible by the Engineer. Liquid waste may require testing to determine hazardous material content before disposal. Drilling fluids and residue shall be disposed of outside the highway right of way. If the Engineer determines that an appropriate location is available, fluids and residue exempt under California Code of Regulations, Title 23, Section 2511(g)
may be dried by infiltration and evaporation in a leak proof container. The remaining solid waste may be disposed of as provided in "Solid Waste" of these special provisions.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

NON-STORM WATER MANAGEMENT

Water Control and Conservation

The Contractor shall prevent erosion or the discharge of pollutants into storm drain systems or watercourses by managing the water used for construction operations. The Contractor shall obtain the Engineer's approval before washing anything on the construction site with water that could discharge into a storm drain system or watercourse. Discharges shall be reported to the Engineer immediately.

The Contractor shall implement water conservation practices when water is used on the construction site. Irrigation areas shall be inspected and watering schedules shall be adjusted to prevent erosion, excess watering, or runoff. The Contractor shall shut off the water source to broken lines, sprinklers, or valves, and they shall be repaired as soon as possible. When possible, water from waterline flushing shall be reused for landscape irrigation. Paved areas shall be swept and vacuumed, not washed with water.

Construction water runoff, including water from water line repair, shall be directed to areas to infiltrate into the ground and shall not be allowed to enter storm drain systems or watercourses. Spilled water shall not be allowed to escape water truck filling areas. When possible, the Contractor shall direct water from off-site sources around the construction site, or shall minimize contact with the construction site.

Illegal Connection and Discharge Detection and Reporting

The Contractor shall inspect the construction site and the site perimeter before beginning work for evidence of illegal connections, discharges, or dumping. Subsequently, the construction site and perimeter shall be inspected on a frequent, predetermined schedule.

The Contractor shall immediately notify the Engineer when illegal connections, discharges, or dumping are discovered.

The Contractor shall take no further action unless directed by the Engineer. Unlabeled or unidentifiable material shall be assumed to be hazardous.

The Contractor shall look for the following evidence of illegal connections, discharges, or dumping:

A. Debris or trash piles,
B. Staining or discoloration on pavement or soils,
C. Pungent odors coming from drainage systems,
D. Discoloration or oily sheen on water,
E. Stains or residue in ditches, channels or drain boxes,
F. Abnormal water flow during dry weather,
G. Excessive sediment deposits,

H. Nonstandard drainage junction structures, or
I. Broken concrete or other disturbances near junction structures.

Vehicle and Equipment Cleaning

The Contractor shall limit vehicle and equipment cleaning or washing on the construction site to that necessary to control vehicle tracking or hazardous waste. Vehicles and equipment shall not be cleaned on the construction site with soap, solvents, or steam until the Engineer has been notified. The resulting waste shall be contained and recycled, or disposed of as provided in "Liquid Waste" or "Hazardous Waste" of these special provisions, whichever is applicable. The Contractor shall not use diesel to clean vehicles or equipment, and shall minimize the use of solvents.

The Contractor shall clean or wash vehicles and equipment in a structure equipped with disposal facilities. If using a structure is not possible, vehicles and equipment shall be cleaned or washed in an outside area with the following characteristics:

A. Located at least 15 m from storm drainage systems or watercourses,
B. Paved with asphalt concrete or Portland cement concrete,
C. Surrounded by a containment berm, and
D. Equipped with a sump to collect and dispose of wash water.

When washing vehicles or equipment with water, the Contractor shall use as little water as possible. Hoses shall be equipped with a positive shutoff valve.

Wash racks shall discharge to a recycle system or to another system approved by the Engineer. Sumps shall be inspected regularly, and liquids and sediments shall be removed as needed.

Vehicle and Equipment Fueling and Maintenance

The Contractor shall fuel or perform maintenance on vehicles and equipment off the construction site whenever practical. When fueling or maintenance must be done at the construction site, the Contractor shall designate a site, or sites, and obtain approval from the Engineer before using. The fueling or maintenance site shall be protected from storm water, shall be on level ground, and shall be located at least 15 m from drainage inlets or watercourses. The WPCM shall inspect the fueling or maintenance site regularly. Mobile fueling or maintenance shall be kept to a minimum.

The Contractor shall use containment berms or dikes around the fueling and maintenance area. Adequate amounts of absorbent spill cleanup material and spill kits shall be kept in the fueling and maintenance area and on fueling trucks. Spill cleanup material and kits shall be disposed of immediately after use. Drip pans or absorbent pads shall be used during fueling or maintenance unless performed over an impermeable surface. Fueling or maintenance operations shall not be left unattended. Fueling nozzles shall be equipped with an automatic

shutoff control. Vapor recovery fueling nozzles shall be used where required by the Air Quality Management District. Nozzles shall be secured upright when not in use. Fuel tanks shall not be topped-off.

The Contractor shall recycle or properly dispose of used batteries and tires.

Material and Equipment Used Over Water

Drip pans and absorbent pads shall be placed under vehicles or equipment used over water, and an adequate supply of spill cleanup material shall be kept with the vehicle or equipment. Drip pans or plastic sheeting shall be placed under vehicles or equipment on docks, barges, or other surfaces over water when the vehicle or equipment will be idle for more than one hour.

The Contractor shall provide watertight curbs or toe boards on barges, platforms, docks, or other surfaces over water to contain material, debris, and tools. Material shall be secured to prevent spills or discharge into water due to wind.

Structure Removal Over or Adjacent to Water

The Contractor shall not allow demolished material to enter storm water systems or watercourses. The Contractor shall use covers and platforms approved by the Engineer to collect debris. Attachments shall be used on equipment to catch debris on small demolition operations. Debris catching devices shall be emptied regularly and debris shall be handled as provided in "Waste Management" of these special provisions.

The WPCM shall inspect demolition sites within 15 m of storm water systems or watercourses every day.

Paving, Sealing, Sawcutting, and Grinding Operations

The Contractor shall prevent the following material from entering storm drain systems or water courses:

A. Cementitious material,
B. Asphaltic material,
C. Aggregate or screenings,
D. Grinding or sawcutting residue,
E. Pavement chunks, or
F. Shoulder backing.

The Contractor shall cover drainage inlets and use linear sediment barriers to protect downhill watercourses until paving, sealing, sawcutting, or grinding operations are completed and excess material has been removed. Drainage inlets and manholes shall be covered during the application of seal coat, tack coat, slurry seal, or fog seal.

<u>Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan:</u> (Continued)

During the rainy season or when precipitation is predicted, paving, sawcutting, and grinding operations shall be limited to places where runoff can be captured. Seal coat, tack coat, slurry seal, or fog seal operations shall not begin if precipitation is predicted for the application or the curing period. The Contractor shall not excavate material from existing roadways during precipitation.

The Contractor shall vacuum up slurry from sawcutting operations immediately after the slurry is produced. Slurry shall not be allowed to run onto lanes open to public traffic or off the pavement.

The Contractor shall collect residue from Portland cement concrete grinding operations with a vacuum attachment on the grinding machine. The residue shall not be left on the pavement or allowed to flow across the pavement. Material excavated from existing roadways may be stockpiled as provided in "Stockpile Management" of these special provisions if approved by the Engineer. Asphalt concrete chunks used in embankment shall be placed above the water table and covered by at least 0.3-m of material.

Substances used to coat asphalt trucks and equipment shall not contain soap, foaming agents, or toxic chemicals.

Thermoplastic Striping and Pavement Markers

Thermoplastic striping and preheating equipment shutoff valves shall work properly at all times when on the construction site. The Contractor shall not preheat, transfer, or load thermoplastic within 15 m of drainage inlets or watercourses. The Contractor shall not fill the preheating container to more than 150 mm from the top. Truck beds shall be cleaned daily of scraps or melted thermoplastic.

The Contractor shall not unload, transfer, or load bituminous material for pavement markers within 15 m of drainage inlets or watercourses. All pressure shall be released from melting tanks before removing the lid to fill or service. Melting tanks shall not be filled to more than 150 mm from the top.

The Contractor shall collect bituminous material from the roadway after marker removal.

Pile Driving

The Contractor shall keep spill kits and cleanup material at pile driving locations. Pile driving equipment shall be parked over drip pans, absorbent pads, or plastic sheeting where possible. When not in use, pile driving equipment shall be stored at least 15 m from concentrated flows of storm water, drainage courses, or inlets. The Contractor shall protect pile driving equipment by parking it on plywood and covering it with plastic when precipitation is predicted. The WPCM shall inspect the pile driving area every day for leaks and spills.

The Contractor shall use vegetable oil instead of hydraulic fluid when practical.

Concrete Curing

The Contractor shall not overspray chemical curing compound. Drift shall be minimized by spraying as close to the concrete as possible. Drainage inlets shall be covered before applying curing compound.

The Contractor shall minimize the use and discharge of water by using wet blankets or similar methods to maintain moisture when curing concrete.

Concrete Finishing

The Contractor shall collect and dispose of water and solid waste from high-pressure water blasting. Drainage inlets within 15 m shall be covered before sandblasting. The nozzle shall be kept as close to the surface of the concrete as possible to minimize drift of dust and blast material. Blast residue may contain hazardous material.

Containment structures for concrete finishing operations shall be inspected for damage before each day of use and before predicted precipitation. Liquid and solid waste shall be removed from the containment structure after each work shift.

DEWATERING

Dewatering shall consist of discharging accumulated storm water, ground water, or surface water from excavations or temporary containment facilities. The Contractor shall discharge water within the limits of the project.

Dewatering discharge shall not cause erosion, scour, or sedimentary deposits that impact natural bedding materials.

The Contractor shall conduct dewatering activities in accordance with the Field Guide for Construction Dewatering available at:

http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

Before dewatering the Contractor shall submit a Dewatering and Discharge Plan to the Engineer in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications and "Water Pollution Control," of these special provisions. At a minimum, the Dewatering and Discharge Plan shall include the following:

A. A title sheet and table of contents;
B. A description of the dewatering and discharge operations detailing the locations, quantity of water, equipment, and discharge point;
C. The estimated schedule for dewatering and discharge (begin and end dates, intermittent

Bid Item No. 3) Prepare Storm Water Pollution Prevention Plan: (Continued)

or continuous);
D. Discharge alternatives such as dust control or percolation; and
E. Visual monitoring procedures with inspection log.

The Contractor shall not discharge storm water or non-storm water that has an odor, discoloration other than sediment, an oily sheen, or foam on the surface and shall notify the Engineer immediately upon discovery. If water cannot be discharged within the project limits due to site constraints it shall be disposed of in the same manner specified for material in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

PAYMENT

The contract lump sum price paid for "Prepare Storm Water Pollution Prevention Plan" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparing, developing, submitting, obtaining required approvals, revising, maintaining, and amending the Storm Water Pollution Prevention Plan (SWPPP), including payment of any permitting fees applicable to the Contractor, as specified in the Standard Specifications and these Special Provisions, the Central Valley Region Office of the California Regional Water Quality Control Board, and as directed by the Engineer.

Bid Item No. 4) Water Pollution Control:

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

Full compensation for implementing the Storm Water Pollution Prevention Plan (SWPPP) by providing and applying the necessary water pollution control measures to the various phases of work, including implementation of "best management practices" for erosion control and prevention of polluted runoff into storm drains and nearby streams and creeks, as determined by the Engineer, and also including any required sampling, testing, and remedial measures required by the Storm Water Pollution Prevention Plan (SWPPP), the Standard Specifications, these Special Provisions, and/or as otherwise determined by the Engineer shall be considered as included in the lump sum price paid for the item "Water Pollution Control" and no additional compensation will be allowed therefore.

The lump sum price paid for this item shall also include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in spill prevention and control, material management, waste management, non-storm water management, dewatering, and identifying, sampling, testing, handling, and disposing of hazardous wastes, as specified in the Storm Water Pollution Prevention Plan (SWPPP), the Standard Specifications, these Special Provisions, and as directed by the Engineer.

Bid Item No. 5) Pavement Grinding:

Pavement grinding shall be done in accordance with Section 42-2, "Grinding" of the Standard Specifications and these Special Provisions.

In lieu of using the type of grinder specified in Section 42-2, the Contractor shall have the option of using any type of grinder that will produce the desired finish detailed in the aforementioned section, as long as it meets any required air quality and safety provisions.

Pavement grinding locations are at the pavement conforms located at each end of the overlay area; the concrete valley gutter at Oak Ridge Drive; an area of approximately 450± feet by 15± feet on the left shoulder located at 4.00± miles west of Skyway Crossroad; and other minor locations as may be determined by the Engineer.

Pavement grinding performed at the project conforms shall consist of grinding off the existing layer of open-graded asphalt concrete for the full pavement width for a distance of 25 feet beyond the limits of the Type A asphalt concrete overlay, as well as grinding that portion of the roadway to be overlaid to a depth of 0.1 feet, for the full width of the existing pavement, for a distance of 50 feet. The exact limits shall be determined in the field as approved by the Engineer.

The grinding residual shall become the property of the Contractor and shall be disposed of off the road right-of-way. Disposal outside of the highway right-of-way shall be done in accordance with Section 7-1.13, "Disposal of Material Outside of the Highway Right of Way," of the Standard Specifications, these Special Provisions, and as determined by the Engineer. However, upon approval of the Engineer, the Contractor may be allowed to spread the residual along the roadway shoulder at select locations adjacent to the project limits or include it in material used for roadway embankment construction. Pavement grinding residue used as shoulder backing material shall not be larger than 1½ inches in any dimension.

The contract lump sum price paid for the item "Pavement Grinding," as specified herein, shall include full compensation for furnishing all labor, materials, tools, equipment, hauling, and incidentals for doing all the work involved in grinding the existing pavement, as well as, removing and disposing of the residual or relocating and spreading the residual material, as approved by the Engineer.

Bid Item No. 6) Adjust Metal Beam Guard Railing:

The existing metal beam guard railing, leading terminal section (SRT-350), and the trailing terminal section (SFT) located at approximately 4.4± miles west of Skyway Crossroad, shall be adjusted to grade to conform to the height requirements for new guard railing in conformance with: the provisions in Section 83-1.02B, "Metal Beam Guard Railing," of the Standard Specifications; the details shown on the State of California Department of Transportation Standard Plans, dated May, 2006; these Special Provisions; and as determined by the Engineer.

Bid Item No. 6) Adjust Metal Beam Guard Railing: (Continued)

Payment for furnishing all the labor, materials, tools and equipment needed for the adjustment of the metal beam guard railing, shall be considered as included in the contract price paid per linear foot for the item "Adjust Metal Beam Guard Railing", and no additional compensation will be allowed therefore.

Bid Item No. 7) Aggregate Base:

Aggregate base shall be Class 2, 3/4 inch maximum grading, and shall conform to the provisions in Section 26, "Aggregate Bases," of the Standard Specifications and these Special Provisions.

The contract price paid per ton for the item "Aggregate Base" shall include full compensation for doing all the work involved in furnishing, hauling, grading, compacting and moisture conditioning all aggregate base areas referenced on the plans and as determined by the Engineer, such that no additional compensation will be allowed therefore.

Bid Item No. 8) Paving Asphalt Binder:

Paving asphalt binder for the placement of pavement reinforcing fabric shall conform to the provisions in Section 92, "Asphalts," of the Standard Specifications and shall be Grade PG-64-10, unless otherwise ordered by the Engineer. The operation where this asphalt binder is to be used in conjunction with placement of the pavement reinforcing fabric shall not be applied to the existing pavement until the pavement temperature is at least **65 degrees Fahrenheit** and rising and shall conform to the provisions in Section 394.03, "Pavement Reinforcing Fabric," of the Standard Specifications and these Special Provisions.

The contract price paid per ton for the item "Paving Asphalt Binder" shall include full compensation for doing all the work involved in furnishing, hauling, mixing, and placing all paving asphalt binder as required to install the pavement reinforcing fabric as indicated or referenced on the plans, the Standard Specifications, these Special Provisions, and as determined by the Engineer, such that no additional compensation will be allowed therefore.

Bid Item No. 9) Pavement Reinforcing Fabric:

Pavement reinforcing fabric shall conform to the provisions in Sections 39-2.03 and 39-4.03, "Pavement Reinforcing Fabric," and Section 88, "Engineering Fabrics," of the Standard Specifications and these Special Provisions.

The maximum width of pavement reinforcing fabric for payment shall be 24 feet wide.

Paving asphalt binder for placement of pavement reinforcing fabric shall be **Grade PG-64-10** conforming to the provisions in Section 92, "Asphalts," of the Standard Specifications and these Special Provisions, unless otherwise ordered by the Engineer. Paving asphalt binder shall be paid for under a separate bid item as indicated herein above.

Bid Item No. 9) Pavement Reinforcing Fabric: (Continued)

Installation of pavement reinforcing fabric shall cover the same limits as the overlay as shown on the plans and as directed by the engineer.

The contract price paid per square yard of reinforcing fabric shall include full compensation for doing all the work involved in furnishing, hauling, placing, all as specified and as determined by the Engineer, and no additional compensation will be allowed therefore.

Bid Item No. 10) Asphalt Concrete (Type A):

Asphalt concrete shall be Type A, ¾ inch maximum, medium grading and shall conform to the provisions in Section 39, "Asphalt Concrete," of the Standard Specifications and these Special Provisions.

All leveling courses shall be considered as included with and paid for by the item "Asphalt Concrete" and no additional compensation will be allowed therefore.

The grade of paving asphalt shall be **PGA 6a (modified)** or as determined by the Engineer and shall conform to the provisions of Section 92, "Asphalts," of the Standard Specifications.

If the Contractor selects the batch mixing method, asphalt concrete shall be produced by the automatic batch mixing method as provided in Section 39-3.03A(2), "Automatic Proportioning," of the Standard Specifications.

An asphalt paint binder shall be required on all existing pavements prior to placing asphalt concrete and shall conform to Section 39, "Asphalt Concrete," of the Standard Specifications. Paint binder shall be either paving asphalt grade PG 64-10 or Asphaltic Emulsion SS-1. The amount of asphalt binder to be mixed with the aggregate shall be determined by the Engineer and shall conform to the provisions of Sections 39-3.03, "Proportioning," and Section 92, "Asphalts," of the Standard Specifications.

Full compensation for furnishing and placing any asphalt paint binder required shall be included in the contract price paid per ton for the item "Asphalt Concrete (Type A)," and no additional compensation will be allowed therefore.

Longitudinal pavement joints shall be at lanelines established by the Engineer. Driveways and intersections are to be paved as determined by the Engineer. Driveway and intersection paving shall not be done until placement of the adjacent mainline paving has been completed. The Contractor shall re=establish the construction centerline after the initial placement of pavement reinforcing fabric and prior to placement of the asphalt concrete mat.

Turn pockets, asphalt median crossovers, intersections, driveway conforms, tapers, and leveling courses are to be paved as determined by the Engineer. Unless otherwise permitted by the Engineer, mainline paving shall be completed prior to placement of any of this other

Bid Item No. 10) Asphalt Concrete (Type A): (Continued)

paving. Asphalt concrete used in the construction of these areas shall be Type A, ¾" maximum, medium grading, unless otherwise specified by the Engineer. Payment for furnishing and placing the asphalt concrete used in these areas shall be paid for at the contract price per ton for the item "Asphalt Concrete," and no additional compensation will be allowed therefore.

In addition to the requirements in Section 39-5.01, "Spreading Equipment," of the Standard Specifications, asphalt paving equipment shall be equipped with automatic screed controls and sensing devices.

When placing the initial mat of asphalt concrete, the end of the screed nearest the centerline, shall be controlled by a sensor activated by a ski device not less than twenty nine feet in length. The opposite end of the screed shall be controlled by an automatic transverse slope device set to produce the cross slope to match the existing slope, or as otherwise determined by the Engineer.

When paving contiguously with a previously placed mat, the end of the screed adjacent to the previously placed mat shall be controlled by a sensor that responds to the grade of the previously placed mat and will reproduce the grade in the new mat within a 0.02 of a foot tolerance. The opposite end of the screed shall be controlled in the same manner mentioned in the paragraph above.

All paving operations shall be discontinued should the methods and equipment furnished by the Contractor fail to produce a layer of asphalt concrete conforming to the requirements in Section 39-6.03, "Compacting," of the Standard Specifications, these Special Provisions, and as determined by the Engineer. Upon approval by the Engineer, the Contractor may resume paving operations following modifications to the existing equipment, procedures or furnish substitute equipment.

Should the automatic screed controls fail to operate properly during any day's work, the Contractor may use manual control of spreading equipment for the remainder of the day, however, the equipment shall be repaired or replaced with equipment conforming to the requirements in this section before starting another day's work.

The Contractor shall schedule his paving operations such that each layer of asphalt concrete is placed on contiguous lanes along the traveled way. At the end of each work shift, the distance between the ends of the layers of asphalt concrete on adjacent lanes shall not be greater than 10 feet nor less than 5 feet. Additional paving shall be placed along the transverse edge at the end of each lane and along the exposed longitudinal edges between adjacent lanes, hand raked and compacted to form temporary conforms. Kraft paper, or other approved bond breaker shall be placed under the conform tapers to facilitate the removal of the taper when paving operations resume.

<u>Bid Item No. 10) Asphalt Concrete (Type A):</u> (Continued)

Full compensation for furnishing and placing the Kraft paper or other bond breaking material on the pavement joints shall be included in the contract prices paid for the various items of work and no other compensation will be allowed therefore.

During and after the rolling operations and when ordered by the Engineer, the asphalt concrete may be cooled by applying water. Applying water shall conform to the provisions in Section 17, "Watering." of the Standard Specifications. No layer shall be cooled with water unless ordered or permitted by the Engineer.

Full compensation for furnishing and applying water during rolling operations will be considered as included in the contract price paid per ton for "Asphalt Concrete," and no additional compensation will be allowed therefore.

Asphalt concrete shall be compacted to a relative compaction of not less than 95 percent and shall be finished to the lines and cross sections as shown on the plans and as determined by the Engineer.

Asphalt concrete pavement shall conform to the straightedge requirements in Section 39-6.03, "Compacting," of the Standard Specifications and these Special Provisions.

Areas of the top surface of the uppermost layer of asphalt concrete that do not meet the specified surface tolerances shall be brought within tolerance by abrasive grinding followed with the application of a fog seal coat on the ground areas.

Deviations in excess of 0.03 of a foot which, cannot be brought to the specified tolerances by abrasive grinding shall be corrected by either (1) removal and replacement; or (2) placement of an asphalt concrete overlay. The Contractor shall select the corrective method for each area with approval by the Engineer prior to the beginning of corrective work.

Any replacement and/or overlay pavement not meeting the specified tolerances shall be corrected by the aforementioned methods as approved by the Engineer.

The abrasive grinding used to bring the finished surface of the asphalt concrete within specified surface tolerances may be expanded in each direction so that the lateral limits of the grinding are at a constant offset from and parallel to the nearest lane line or pavement edge, while the longitudinal grinding limits are normal to the pavement centerline. All ground areas shall be uniform in appearance and rectangular in shape.

Abrasive grinding shall conform to the requirements in the first paragraph and the last four paragraphs in Section 42-2.02, "Construction," of the Standard Specifications.

Full compensation for doing all the work in performing profile checks, supplying all required tools, equipment and materials, performing all corrective work to the pavement

Bid Item No. 10) Asphalt Concrete (Type A): (Continued)

surface including abrasive grinding, furnishing and placing asphalt concrete for use in removal and replacement as well as the asphalt concrete overlay methods of correction shall be borne by the Contractor and no additional payment will be made therefore.

Full compensation for preparing, mixing, hauling, placing, and compacting the asphalt concrete (Type A) shall be paid for by the ton and considered as included in the item "Asphalt Concrete (Type A)," and no additional compensation will be allowed therefore.

Bid Item No. 11) Paint Binder Tack Coat (Open Graded):

Paint binder tack coat (open graded) shall conform to the provisions in Section 39-4.02 "Prime Coat and Paint Binder (Tack Coat)," of the Standard Specifications, these Special Provisions, and shall be Grade PG-64-10 applied prior to placing the open graded asphalt concrete wearing surface**,** unless otherwise ordered by the Engineer

Full compensation for furnishing and applying the paint binder (tack coat), as specified in Section 39-4.02, "Prime Coat and Paint Binder (Tack Coat)," of the Standard Specifications, shall be included in the contract price paid per ton of "Paint Binder Tack Coat (Open Graded)" and no additional compensation will be allowed therefore.

Bid Item No. 12) Asphalt Concrete (Open Graded):

Asphalt concrete (Open Graded) shall be placed as the wearing surface on the mainline only and shall be Type 3/8" maximum grading conforming to the provisions for open graded asphalt concrete in Section 39 "Asphalt Concrete" and 39-6, "Spreading and Compacting", of the Standard Specifications and these Special Provisions.

The grade of paving asphalt shall be **PG 64-10,** or as determined by the Engineer, and shall conform to the provisions of Section 92, "Asphalts," of the Standard Specifications.

Open graded asphalt concrete shall be spread by depositing the mix on the roadbed in windrows, then transferring it to an asphalt paver by means of a pick-up machine attached to the asphalt paver.

When placing the initial mat of asphalt concrete (open graded), the end of the screed nearest the centerline, shall be controlled by a sensor activated by a ski device not less than twenty nine feet in length. The opposite end of the screed shall be controlled by an automatic transverse slope device set to produce the cross slope to match the existing slope or as otherwise determined by the Engineer.

The aggregate for open graded asphalt concrete shall have a Cleanness Value of a 63 minimum for "Contract compliance" and a 66 minimum for "Operating Range" as determined by California Test method 227, modified as follows: Samples will be obtained from the weight box area during or immediately after discharge from each bin of the batching

Bid Item No. 12) Asphalt Concrete (Open Graded): (Continued)

plant. The bin samples will be blended together in the proportion that each leg is being used in combined mix to make the test sample.

The test specimen will be prepared by hand shaking, for 30 seconds, a single loading of the entire test sample on an 8-inch diameter No. 4 sieve nested on top of an 8-inch diameter No. 8 sieve. That material retained on the aforementioned sieves shall be re-combined and shall comprise the test specimen. The test specimen weight and wash water volume specified for seal coat screenings will be used to determine the Cleanness Value.

At drier drum and continuous plants with cold feed control, Cleanness Value test samples will be obtained from the discharge of each coarse aggregate storage bin. An aggregate sampling device shall be provided by the material suppliers, which will provide a 50-pound sample of each coarse aggregate.

If the results of the Cleanness Value tests do not meet the requirements specified for "Operating Range" but meet the "Contract Compliance" requirements, placement of the material may be continued for the remainder of the day. However, another day's work may not be started until tests, or other information, indicate, to the satisfaction of the Engineer, that the next material to be used in the work will comply with the requirements specified for "operating range".

If results of the Cleanness Value tests do not meet the requirements specified for "contract compliance," the material, which is represented by these tests, shall be removed. However, if requested by the Contractor and approved by the Engineer, said material having a Cleanness Value of 48 or greater may remain in place and accepted on a basis of reduced payment for all such material left in place.

Asphalt concrete (open graded) that is accepted on the basis of reduced payment will be paid for at the contract prices for the items of asphalt concrete involved multiplied by the following factors;

Test Value	Pay Factor
56	**0.90**
55	**0.85**
54	**0.80**
53	**0.75**
52	**0.70**
51	**0.65**
50	**0.60**
49	**0.55**
48	**0.50**

Bid Item No. 12) Asphalt Concrete (Open Graded): (Continued)

If asphalt concrete (open graded) is accepted on the basis of reduced payment due to a Cleanness Value range of 48 to 56, and also accepted on the basis of aggregate Grading or Sand Equivalent tests not meeting the "Contract Compliance" requirements, the reduced payment for Cleanness Value shall not apply.

Full compensation for preparing, mixing, hauling, placing, and compacting the asphalt concrete (open graded) shall be paid for by the ton and considered as included in the item "Asphalt Concrete (Open Graded)," and no additional compensation will be allowed therefore.

Bid Item Nos. 13 &14) Thermoplastic Traffic Stripes and Pavement Markings:

Thermoplastic traffic stripes (traffic lines) and pavement markings shall conform to the provisions in Sections 84-1, "General," and 84-2, "Thermoplastic Traffic Stripes and Pavement Markings," of the Standard Specifications and these Special Provisions.

Thermoplastic material for traffic stripes shall be applied at a minimum thickness of 0.080 inch.

Measurement for payment for replacement of existing Detail 38 striping shall be paid for as (2) – 4" stripes.

Thermoplastic lettering stencils shall have the same dimensions as the "Hawkins Traffic Safety Supply" M8H Series. A copy of the stencil dimensions is available for review at the office of the Director of Public Works. Traffic arrows shall be of the dimensions pursuant to those shown in the State of California, Department of Transportation's Standard Plans.

Measurement for payment for the contract price paid per square foot of "Thermoplastic Pavement Markings" shall be the square footage for the completed markings as shown in the aforementioned Standard Plans.

The State Specification Number for glass beads in Section 84-2, "Materials," of the Standard Specifications is amended to read "8010-21C-22 (Type II)".

The unit prices paid for lineal foot of 4-inch Thermoplastic Stripe and square foot of Thermoplastic Pavement Markings shall include full compensation for furnishing all labor, tools, materials, and equipment, and for doing all the work involved in installing the thermoplastic and no additional compensation will be allowed therefore.

Bid Item No. 15) Pavement Markers (Retroreflective):

Pavement markers shall conform to the provisions in Section 85, "Pavement Markers," of the Standard Specifications and these Special Provisions. However, the second paragraph in Section 85-1.02, "Type of Markers," of the Standard Specifications shall not apply. Certificates of compliance shall be furnished for pavement markers as specified in "Pre-qualified and Tested Signing and Delineation Materials" elsewhere in these Special Provisions.

Pavement markers shall be “3M Series 290” or better. Adhesive shall be “Crafco Hot-Applied Flexible Pavement Marker Adhesive” (Part No. 34270) or better.

When bituminous adhesive is used for pavement marker placement, traffic control during placement operations shall conform to the requirements of "Traffic Control System For Lane Closure," of these Special Provisions.

The unit price paid for each pavement marker shall include full compensation for furnishing all labor, tools, materials, and equipment, and for doing all the work involved in installing the pavement marker and no additional compensation will be allowed therefore.

C. FINISHING ROADWAY

Finishing roadway shall conform to the provisions in Section 22, "Finishing Roadway," of the Standard Specifications and these Special Provisions.

Full compensation for finishing roadway shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.