SECTION F - CONSTRUCTION DETAILS

1. BUY AMERICA REQUIREMENTS

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

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

The requirements imposed by said law and regulations do not prevent a minimal use of foreign steel and iron materials if the total combined cost of such materials used does not exceed one-tenth of 1 percent (0.1%) of the total contract cost or $2,500, whichever is greater. The Contractor shall furnish the Engineer acceptable documentation of the quantity and value of any foreign steel and iron prior to incorporating such materials into the work.

2. 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 improving, widening on one side, and overlaying two existing two-lane roadway segments and their common intersection with the construction of new curb, gutter, sidewalk, pedestrian ramps, tie-in pavement, roadway transition, and drainage system improvements, including: traffic control; coordination of public notifications; demolition and rehabilitation of existing improvements; grading and compaction of subgrade; installation and compaction of Class 2 aggregate base section and shoulder backing;

2. SUMMARY OF WORK (Continued)

installation of traffic signal conduits, pull boxes, and detection loops for anticipated future traffic signal installation; extension and replacement of storm drain culverts; application of 0.10 feet of Type "A" hot mix asphalt concrete overlay; removal and replacement of existing fences, mail boxes, and driveway transitions; installation of roadway signage, thermoplastic traffic stripes, thermoplastic pavement markings, and reflective pavement markers.

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 contract items, or otherwise included in the various contract items and no additional compensation will be allowed therefore.

The contractor shall also be required to establish temporary and final erosion and 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 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. A minimum of one lane is to remain open to traffic subject to construction delays and directional traffic controls during work hours and both lanes are to be open during non-work hours. See Section I "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 to place all necessary traffic control measures and signage, including that required to divert pedestrian traffic and detour school traffic from the work zone. The plan for doing this shall be preapproved by the Engineer with the nearby schools included in the public notification and coordination process as specified in these Special Provisions.

Prior to taking down existing fences from those locations containing animals, all temporary fences shall be in place. The Contractor shall inquire as to animal containment of all owners prior to fence demolition.

2. <u>SUMMARY OF WORK</u> (Continued)

After the concrete for the Modified D-89 Headwall has cured per the Standard Specifications and prior to backfilling or surcharging the headwall with roadway embankment, the original side embankment of the drainage channel surrounding the ends of the headwall shall be re-compacted to the original tops and toes of the channel at this location.

D. WORK SEQUENCE/NOTIFICATIONS

At least two weeks prior to the beginning of any operations that will create traffic delays or affect access to adjacent streets, homes, fields, businesses, or utilities, the Contractor shall install changeable message boards at both ends of the project facing approaching traffic and circulate printed form letters where necessary, as approved by the Engineer, to all affected homes, businesses, schools, transportation and emergency services, and other 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 various roadway construction or re-striping operations, the Contractor shall contact appropriate agency managers, provide them written notification of the intended schedule, and, if determined necessary, 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.

Schools and Businesses: No sustained interruption in access to adjacent schools, businesses, or use of the roadway critical for student drop off access can be accommodated. Prior to commencing work in the vicinity of adjacent schools or businesses operations, the Contractor shall contact the various school superintendent and principal offices, school bus transportation mangers, and business owners, provide them written 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 entity has been individually notified and is aware of the final approved schedule.

The Contractor shall leave all traffic lanes open to traffic until starting the work during the predetermined scheduled times approved by the Engineer and all lanes shall be re-opened to traffic when it is determined safe and satisfactory to do so at the conclusion of daily operations, as 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 14

3. SUMMARY OF WORK (Continued)

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 therefor.

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.

In lieu of the conflicting provisions in Section 8-1.10, full compensation for conforming to the above requirements or for any 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.

2. <u>SUMMARY OF WORK</u> (Continued)

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. The Contractor shall reset these signs to County Standards after the work has been completed and prior to opening the roadway to traffic.

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 discarded 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.

Full payment for the removal of the traffic signs, raised pavement markers, and thermoplastic pavement markings shall be included in the contract lump sum price paid for the item “Clearing and Grubbing,” and no additional payment will be made therefore.

Full payment for the removal of existing stop signs and the furnishing of portable stop signs shall be included in the contract lump sum price paid for the item “Traffic Control,” and no additional payment will be made therefore.

Full payment for the reinstallation of the existing signs, and installation of any additional signage as may be indicted on the plans and provided by the County, shall be included in the contract unit price paid for the item “Concrete Sidewalk (4 “ thickness),” and no additional payment will be made therefore.

All water laterals, valves, mains, or any utility belonging to the South Feather Water and Power Company shall be relocated by the company or at their expense. If a lateral, main, valve, or any other water utility item is discovered as conflicting with any portion of the new facilities being constructed, the South Feather Water and Power Company shall be contacted and a request shall be made, by the Contractor, to have immediate response in relocating those items. The main contact for South Feather Water and Power Company is Matt Colwell at (530) 533-4578. The Contractor shall give the Utility Company (2) days advance notice for relocation efforts. The South Feather Water and Power Company shall bear the full expense for furnishing all the labor, materials, tools, and equipment needed for the relocation of all water laterals, valves, mains, or any water utility found to be in conflict with any new facilities under construction, and no additional compensation will be allowed therefore.

2. SUMMARY OF WORK (Continued)

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. The Contractor shall coordinate adjustment of utility covers with the appropriate utility company. All residual surfacing and shoulder backing materials that end up within drain inlets shall be promptly removed following completion of the work and prior to final acceptance of the project. Full compensation for protecting, adjusting, and cleaning these existing facilities shall be included in the contract prices paid for the various items of work and no additional payment shall be made therefore.

All existing mailboxes located in the construction area shall be removed and temporarily relocated by either cutting the existing posts off at ground level, or by pulling them out of the ground. In the event that a mailbox is constructed of custom materials, care shall be taken to preserve and protect the custom mailbox and structure for relocation, if possible. On a temporary basis, all existing mailboxes shall be placed in 5-gallon buckets and filled with aggregate for stability and support and shall be placed in a location on the owner's frontage where postal delivery may have access. In the event that a custom mailbox will not stand in a 5-gallon bucket, a temporary mailbox shall be supplied with a temporary post that may be placed in a 5-gallon bucket for the duration until final relocation is possible. All existing mailboxes shall be preserved and protected for final relocation, unless otherwise specified on the plans, in these Special Provisions, or as determined by the Engineer. In the event that any mailboxes are damaged in the relocation process, they shall be replaced, in like kind and quality, at the contractor's expense.

Upon completion of the project, all mailboxes shall be permanently relocated to the back of sidewalk. The mailbox shall be mounted on a 4 x 4 post unless the existing mailbox is custom and the owner wishes to have it relocated in like kind and quality. All mailboxes shall be placed such that the front face of the mailbox is 6 inches behind the back of sidewalk. All mailboxes shall be mounted to a minimum height of 41" and a maximum height of 45" measured from the back of sidewalk to the base of the mailbox. Full compensation for relocating mailboxes, both temporarily and on permanent basis, as specified on the plans, in these Special Provisions, and as determined by the Engineer, shall be included in the contract lump sum price paid for the item "Clearing and Grubbing" and no additional compensation will be allowed therefore.

H. CONSTRUCTION ZONES

Determination and signing of the construction zone will be considered included as part of the bid items for "Traffic Control" and no additional compensation will be allowed therefore.

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

2. <u>SUMMARY OF WORK</u> (Continued)

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 through 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 Management Plan, providing for a smooth and efficient flow of traffic, while retaining safety though the roadway work zone, including the proposed times and lengths of proposed road closures, and a Temporary Traffic Control Plan detailing the necessary signing, delineation, and safety measures required per the applicable provisions of the "Work Area Traffic Control Handbook," California State Traffic Manual of Traffic Controls for Construction and Maintenance Work Zones (1990); the “California Manual on Uniform Traffic Control Devices for Streets and Highways” (FHWA 2003 edition, as amended for use in California), and these Special Provisions. The Traffic Management and Temporary Traffic Control Plans shall be submitted to the Engineer for approval at the pre-construction conference and whenever changes are proposed by the Contractor. These plans shall be considered as included in the contract lump sum price paid for the item “Traffic Control” and no additional compensation will be allowed therefor.

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 required construction signs, posts, mounting hardware, and erect, within or adjacent to the limits of work, such construction supplemental warning and directional signs necessary or as otherwise ordered by the Engineer. After erection, the Contractor shall maintain the existing signs as necessary until the completion of the Work.

The Contractor, at his/her own expense, shall furnish and maintain in good working order all lights, construction signs, changeable message boards, barricades, flashers, Type III barricades, or other devices necessary for the protection of the public and for notification and direction to 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

2. <u>SUMMARY OF WORK</u> (Continued)

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 erecting and maintaining construction signs, all as determined by the Engineer shall be considered as included in the contract lump sum price paid for the item "Traffic Control," and no additional compensation will be allowed therefor.

A minimum of one changeable message board each stating the dates of anticipated construction shall be placed in the road right-of-way on Lower Wyandotte Road northbound at the intersection with Las Plumas Avenue and southbound at the intersection with Ophir Road and on Monte Vista Avenue eastbound at the intersection with Farley Street to notify and warn the public of impending work. The signs are to be placed a minimum of two weeks prior to any anticipated work within the road right-of-way. The cost of furnishing these changeable message boards shall be considered as included in the contract lump sum price paid for the item "Traffic Control," and no additional compensation will be allowed therefor.

Full compensation for furnishing, placing, and maintaining changeable message boards 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 therefor.

Road and lane closures are allowed only during predetermined "working hours," as approved by the Engineer and as necessary to complete work operations such that all lanes shall be re-opened to traffic as specified below when it is determined safe and satisfactory to do so at the conclusion of daily operations, per the approval of the Engineer. Any extended working hours required by the Contractor shall be approved by the Engineer. Within the "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.

2. <u>SUMMARY OF WORK</u> (Continued)

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 warning, as approved by the Engineer. Long term closure of the roadway would require pre-approved noticing and detour route signing placed in advance of the closure. Typically, long term closure would only be contemplated 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 and per the provisions under "temporary laneline and centerline delineation" included elsewhere in these Special Provisions.

Full compensation for conforming to the requirements of providing construction zones, maintaining traffic, and installing and maintaining temporary delineation shall be considered as included in the contract lump sum price paid for the item "Traffic Control" and no additional compensation will be allowed therefor.

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.

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.

2. SUMMARY OF WORK (Continued)

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

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

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

2. SUMMARY OF WORK (Continued)

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 shall determine that each unit meets the requirements for TMCCs in accordance with the standards established by the Transportation Laboratory Structures Research Section.

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

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.

2. SUMMARY OF WORK (Continued)

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 therefor.

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.

Full compensation for job site clean-up shall be considered as included in the contract price paid for the item "Construction Site Management," and no additional compensation will be made therefor

3. 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 therefor.

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:

3. MATERIALS (Continued)

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 found on the Caltrans website.

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

3. MATERIALS (Continued)

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

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")

3. MATERIALS (Continued)

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

STRIPING AND PAVEMENT MARKING MATERIAL

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

Temporary (Removable) Striping and Pavement Marking Tape (180 days or less)
1. Advanced Traffic Marking, Series 200
2. Brite-Line, Series 100
3. Garlock Rubber Technologies, Series 2000
4. P.B. Laminations, Aztec, Grade 102
5. Swarco Industries, "Director-2"
6. Trelleborg Industries, R140 Series
7. 3M Series 620 "CR", and Series A750
8. 3M Series A145, Removable Black Line Mask
   (Black Tape: for use only on Hot mix asphalt surfaces)
9. Advanced Traffic Marking Black "Hide-A-Line"
   (Black Tape: for use only on Hot mix asphalt surfaces)
10. Brite-Line "BTR" Black Removable Tape
    (Black Tape: for use only on Hot mix asphalt surfaces)
11. Trelleborg Industries, RB-140
    (Black Tape: for use only on Hot mix asphalt surfaces)

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

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

3. MATERIALS (Continued)

CLASS 1 DELINEATORS

One Piece Driveable Flexible Type, 66-inch

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

Special Use Type, 66-inch

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

Surface Mount Type, 48-inch

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

CHANNELIZERS

Surface Mount Type, 36-inch

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

Lane Separation System

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

3. MATERIALS (Continued)

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

OBJECT MARKERS

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

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

CONCRETE BARRIER MARKERS AND
TEMPORARY RAILING (TYPE K) REFLECTORS

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

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

METAL BEAM GUARD RAIL POST MARKERS
(For use to the left of traffic)
1. Filtrona Extrusion, "Mini" (3" x 10")
2. Creative Building Products, "Dura-Bull, Model 11201"

3. MATERIALS (Continued)

3. Duraflex Corp., "Railrider"
4. Plastic Vacuum Forming, "Cap-It C300"

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

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

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

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

Steel Post Type
1. Carsonite, Model CFGR-327

RETROREFLECTIVE SHEETING

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

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

Drums
1. Avery Dennison WR-6100

3. MATERIALS (Continued)

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

Barricades: Type I, Medium-Intensity (Typically Enclosed Lens, Glass-Bead Element)
1. Nippon Carbide Industries, CN8117

2. Avery Dennison, W 1100 series
3. 3M Series CW 44

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

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

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

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

Signs: Type VI, Elastomeric (Roll-Up) High-Intensity, without Adhesive
1. Avery Dennison, WU-6014
2. Novabrite LLC, "Econobrite"
3. Reflexite "Vinyl"
4. Reflexite "SuperBright"
5. Reflexite "Marathon"
6. 3M Series RS20

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

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

3. MATERIALS (Continued)

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

4. ITEMS OF WORK

A. GENERAL

Payment for the various items of the Bid Schedule(s), 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 Nos. A1 & B1) Clearing and Grubbing:

Clearing and grubbing shall conform to the provisions in Section 16, "Clearing and Grubbing," of the Standard Specifications and these special provisions. Clearing limits shall be as determined by the Engineer.

Clearing and grubbing shall also include but not be limited to: removing existing vegetation, masonry pillars, and fences; removing existing concrete curb & gutter, sidewalks, pedestrian ramps, and rip-rap; saw cutting and removing existing asphalt concrete pavement, removing existing asphalt concrete and concrete driveway approaches; removing and/or salvaging existing culverts and flared end sections; cutting, removing and disposing of the existing concrete headwall; removing and disposing of existing raised pavement markers; grinding, removing, and disposing of existing thermoplastic markings and striping prior to placing asphalt overlay; grading and preparing shoulders; cleaning and re-grading the roadside ditches and shoulders to drain; and finishing driveways before and after construction, as shown on the plans and as determined by the Engineer.

As part of the removal of existing masonry pillars located at 52+98/36.6’ Lt, 53+15/36.2’ Lt, 53+93/33.6’ Lt, and 54+07/33.6’ Lt, on Lower Wyandotte Road, the Contractor shall remove existing light fixtures, and electrical lines, and metal gates. The light fixtures and metal gates

4. <u>ITEMS OF WORK</u> (Continued)

shall be salvaged and preserved for installation back on replacement masonry pillars as described in these Special Provisions under the contract item for Masonry Pillars. Existing electrical connections shall also be preserved for reconnection of lighting under said contract item.

Prior to the commencement of fencing removal operations the Contractor shall notify the adjacent property owners in order to avoid any possible problems with wandering livestock or pets in the event that the fields are enclosed. New fencing may have to be installed before or immediately after removal of the existing fence. The County will provide the Contractor with a list of property owner and/or tenants' names, addresses, and contact numbers at the pre-construction meeting, if available.

The existing fencing to be removed is primarily three to five strand barbed wire and chain link with wooden and steel posts. The fences to be removed are at locations as shown on the plans and as determined by the Engineer.

The removed fencing and posts shall become the property of the Contractor and shall be disposed of outside the roadway right of way limits in accordance with the provisions in Section 7-1.13, "Disposal of Material Outside the Right of Way," of the Standard Specifications and these special provisions.

The removed metal portions of the fencing material shall **<u>NOT</u>** be disposed of at the Neal Road Landfill without prior approval of the landfill managers. A metal recycling facility shall be utilized to dispose of the fencing material if the fencing material is determined to be unacceptable refuse by the Neal Road Landfill.

No adjustment in compensation will be made for any decrease or increase in the quantity of fencing removal required, regardless of the reason for such decrease or increase. The provisions in Section 4-1.03B, "Increased or Decreased Quantities," of the Special provisions shall not apply to the contract item "Clearing and Grubbing."

The Contractor shall apply herbicide at least 10 days prior to the initial clearing and operations and pavement surface treatment operations, 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 for use in areas where there is no standing water. 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, positive drainage facilities, or adjacent riparian areas.

4. <u>ITEMS OF WORK</u> (Continued)

Prior to the application of the resurfacing treatments to the roadway, the Contractor shall perform the following surface preparation:

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 also 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 2I - "Maintaining Traffic", and Subsection 3 – "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 to limits indicated on the plans and/or as determined by the Engineer without disturbing riparian areas 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.

The pavement markers, thermoplastic grindings, 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 these Special Provisions.

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

Full compensation for furnishing all the labor, materials, tools, and equipment needed perform the work described above, including: removing, hauling and disposing of existing fencing and posts; removing and disposing of vegetation; removing and disposing of existing asphalt; cleaning and re-grading ditches and shoulders; removing existing storm drain pipes and culverts; salvaging existing pipes and flared end sections; removing, salvaging, replacing, and re-grading cobble in the existing ditches; and grinding any existing thermoplastic striping or markings from the roadway and disposing of residue, as specified in these Special Provisions, shall be considered as

included in the contract lump sum price paid for the item "Clearing and Grubbing," and no additional payment will be made therefore.

Bid Item Nos. A2 & B2) 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 F – "Construction Details," including, but not limited to, Subsections 2C - "Order of Work", 2D – "Work Sequence/Notifications**",** 2G – "Existing Highway Facilities", 2I - "Maintaining Traffic", and Subsection 3 – "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 Nos. A3 & B3) Develop Water Supply:

Develop Water Supply shall conform to the provisions in Section 10, "Dust Control," and Section 17, "Watering" of the Standard Specifications and herein in Section F – "Construction Details," of these Special Provisions, including, but not limited to, Subsection 4B – "Description, Measurement, and Payment," as it describes requirements under bid items for "Construction Site Management," and "Storm Water Pollution Prevention Plan (SWPPP)." Nothing in these Special Provisions shall be construed as relieving the Contractor from his responsibility as provided in Section 17-1.02, "Application," and the rights reserved by the Engineer to prohibit additives as provided in Section 17-1.025, "Chemical Additives," of the Standard Specifications.

Full compensation for applying water, including the provision of a stand-by water truck on site, when required, will be considered as included in the prices paid for the various contract items requiring water and no separate payment will be made therefore, except as pertaining to extra work on force account as specified in Section 17-1.04, "Payment'" of the Standard Specifications.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in developing a sufficient supply of water, including contracts with water districts for the supply of water, and the quantity of water used in performance of the work, including applying water for dust control, will be considered as included in the lump sum price paid for the item "Develop Water Supply" and no additional compensation will be allowed therefore.

4. ITEMS OF WORK (Continued)

Bid Item Nos. A4 & B4) 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 also train and oversee 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.

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 before and during each day of use. Leaks shall be contained and repaired immediately, or the vehicle or equipment shall be removed from the construction site in a manner avoiding spillage.

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.

4. <u>ITEMS OF WORK</u> (Continued)

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;
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.

4. <u>ITEMS OF WORK</u> (Continued)

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.

4. ITEMS OF WORK (Continued)

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.

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.

4. <u>ITEMS OF WORK</u> (Continued)

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 50 feet 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.

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.

4. <u>ITEMS OF WORK</u> (Continued)

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.

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,

4. <u>ITEMS OF WORK</u> (Continued)

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.

4. <u>ITEMS OF WORK</u> (Continued)

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 County 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 50 feet 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.

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

4. <u>ITEMS OF WORK</u> (Continued)

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.

4. ITEMS OF WORK (Continued)

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 50 feet 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.

4. <u>ITEMS OF WORK</u> (Continued)

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.

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 and pavement striping grinding operations with a vacuum attachment on the grinding machine. Particular attention should be given to yellow pavement striping that has the potential to contain lead. The residue shall not be left on the pavement or allowed to flow across the pavement. The residue shall be properly collected and disposed of in accordance to the requirements of OSHA and these Special Provisions.

Material excavated from existing roadways may be stockpiled as provided in "Stockpile Management" of these special provisions only if approved by the Engineer. Asphalt concrete chunks used in embankment shall be placed above the water table and covered by at least 10 inches 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 50 feet of drainage inlets or watercourses. The Contractor shall not fill the preheating container to more than 6 inches 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 50 feet 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 6 inches from the top.

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

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 50 feet 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

4. <u>ITEMS OF WORK</u> (Continued)

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 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 “Construction Site Management” shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in implementing the Storm Water Pollution Prevention Plan (SWPPP) and for installing, constructing, maintaining, removing, and disposal per the pollution control practices, including non-storm water management, and waste management and hazardous materials pollution control practices and doing all the work involved in responsibly overseeing the construction site management as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer., 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.

Payments under “Construction Site Management” for pollution control practices executed in accordance with the approved or amended Storm Water Pollution Prevention Plan (SWPPP) above, or as otherwise approved by the Engineer, shall be paid as described in the Standard Specifications and these Special Provisions, including the specifications described herein above for determining adjustment in compensation, extra work, and/or retention of payments for pollution control practices performed under the lump sum price paid for the item “Construction Site Management.” Attention is also directed to Section 9-1.06, "Partial Payments," and Section 9-1.07, "Payment After Acceptance," of the Standard Specifications, and Section C6, “Payments” of these Special Provisions.

4. ITEMS OF WORK (Continued)

Bid Item Nos. A5 & B5) Storm Water Pollution Prevention Plan (SWPPP):

WATER POLLUTION CONTROL

GENERAL

Water pollution control work shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications, and these Special Provisions, including, but not limited to, Subsection 4B – "Description, Measurement, and Payment," as it describes requirements under bid items for "Construction Site Management," and "Storm Water Pollution Prevention Plan (SWPPP)."

The Contractor shall perform water pollution control work in conformance with the applicable requirements in the "*Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual*" and the "*Construction Site Best Management Practices (BMPs) Manual*," and addenda thereto issued up to, and including, the date of advertisement of the project. These manuals are hereinafter referred to respectively as the "Preparation Manual" and the "Construction Site BMPs Manual," and collectively, as the "Manuals." Copies of the Manuals may be obtained from the Department of Transportation, Material Operations Branch, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, Telephone: (916) 445-3520, and may also be obtained from the Department's Internet website at:

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

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

The Contractor shall know and fully comply with applicable provisions of the Manuals, and Federal, State, and local regulations and requirements that govern the Contractor's operations and storm water and non-storm water discharges from both the project site and areas of disturbance outside the project limits during construction. Attention is directed to Sections 7-1.01, "Laws to be Observed," and 7-1.12, "Indemnification and Insurance," of the Standard Specifications, and these Special Provisions.

Water pollution control requirements shall apply to storm water and non-storm water discharges from areas outside the project site which are directly related to construction activities for this contract including, but not limited to, asphalt batch plants, material borrow areas, concrete plants, staging areas, storage yards and access roads. The Contractor shall comply with the Manuals for those areas and shall implement, inspect and maintain the required water pollution control best management practices. Installing, inspecting and maintaining water pollution control practices on areas outside the roadway right of way not specifically arranged and provided for by the County for the execution of this contract, will not be paid for.

4. <u>ITEMS OF WORK</u> (Continued)

The Contractor shall be responsible for obtaining applicable National Pollutant Discharge Elimination System (NPDES) permits that apply to those separate activities and mobile operations outside of the project limits and which are not included within the scope of the project, including asphalt batch plants, material borrow areas, concrete plants, staging areas, storage yards, or access roads.

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

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

RETENTION OF FUNDS

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

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

When a regulatory agency identifies a failure to comply with the Manuals, or other Federal, State or local requirements, the County may retain money due the Contractor, subject to the following:

A. The County will give the Contractor 30 day’s notice of the County's intention to retain funds from partial payments which may become due to the Contractor prior to acceptance of the contract. Retention of funds from payments made after acceptance of the contract may be made without prior notice to the Contractor.

4. <u>ITEMS OF WORK</u> (Continued)

B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications.

C. If the County has retained funds, and it is subsequently determined that the County is not subject to the entire amount of the costs and liabilities assessed or proposed in connection with the matter for which the retention was made, the County shall be liable for interest on the amount retained for the period of the retention. The interest rate payable shall be 6 percent per annum.

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

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

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PREPARATION, APPROVAL, AND AMENDMENTS

As part of the water pollution control work, the Contractor shall submit a Storm Water Pollution Prevention Plan (SWPPP) to the Engineer for approval. The SWPPP shall conform to the provisions in Section 7-1.01G, “Water Pollution,” of the Standard Specifications, the applicable requirements in the Manuals, the NPDES permit, and these Special Provisions. The SWPPP shall be submitted in place of the Water Pollution Control Program (WPCP) required by the provisions in Section 7-1.01G, “Water Pollution”, of the Standard Specifications. Upon the Engineer’s approval of the SWPPP, the SWPPP shall be considered to fulfill the provisions in Section 7-1.01G, “Water Pollution,” of the Standard Specifications for development and submittal of a WPCP.

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

The Contractor shall designate in writing a Water Pollution Control Manager (WPCM). The Contractor shall submit a statement of qualifications describing the training, work history, and expertise of the proposed WPCM. The qualifications shall include either:

A. A minimum of 24 hours of Department approved storm water management training described at Caltrans Construction Storm Water and Water Pollution Control web site.

4. <u>ITEMS OF WORK</u> (Continued)

B. Certification as a Certified Professional in Erosion and Sediment Control (CPESC).

The WPCM shall be:

A. Responsible for water pollution control work.
B. The primary contact for water pollution control work.
C. Have authority to mobilize crews to make immediate repairs to water pollution control practices.
D. Responsible for the maintenance of the water pollution control practices

The Contractor may designate one manager to prepare the SWPPP and a different manager to implement the plan. The SWPPP preparer shall meet the training requirements for the WPCM.

The WPCM shall know and comply with provisions of Federal, State, and local regulations and requirements that govern the Contractor's operations and storm water and non-storm water discharges from the project site and areas of disturbance outside the project limits during construction. Attention is directed to Sections 7-1.01, "Laws to be Observed," 7-1.11, "Preservation of Property," and 7-1.12, "Indemnification and Insurance," of the Standard Specifications.

The Water Pollution Control Managers shall serve as the primary contact for issues related to the WPCP or its implementation. The Contractor shall assure that the Water Pollution Managers have adequate training and qualifications necessary to prepare the WPCP, implement and maintain water pollution control practices.

Before the start of job site activities, the Contractor shall provide training for project managers, supervisory personnel, and employees involved with water pollution control work. The training shall include:

A. Rules and regulations
B. Implementation and maintenance for:

1. Temporary Soil Stabilization
2. Temporary Sediment Control
3. Tracking Control
4. Wind Erosion Control

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.

4. <u>ITEMS OF WORK</u> (Continued)

3. Access roads.

B. Appropriate for each season as described in "Implementation Requirements" of these special provisions.

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.
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 Soil Stabilization

1. Temporary Straw Mulch

B. Temporary Sediment Control

1. Temporary Fiber Rolls
2. Street Sweeping

C. Tracking Control

1. Street Sweeping

D. Wind Erosion Control

1. Wind Erosion Control

E. Non-Storm Water Management

1. Construction Site Management

F. Waste Management and Materials Pollution Control

1. Construction Site Management

The SWPPP shall include the following contract items of work for permanent water pollution control as shown on the plans or as specified in these special provisions:

A. Erosion Control (Type D)

4. <u>ITEMS OF WORK</u> (Continued)

Within 10 working days after the approval of the contract, the Contractor shall submit 2 copies of the draft SWPPP to the Engineer. The Engineer will have 10 working days to review the SWPPP. 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 7 days of receipt of the Engineer's comments. The Engineer's review will resume when 2 copies of the complete SWPPP are resubmitted. The Engineer will have 5 working days to review the revisions. Upon the Engineer's approval of the SWPPP, the Contractor shall submit 3 copies of the approved SWPPP to the Engineer. In order to allow construction activities to proceed, the Engineer may conditionally approve the SWPPP while minor revisions are being completed. In the event the Engineer fails to complete the review within the time allowed, and if, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of the Engineer's delay in completing the review, the Contractor will be compensated for resulting losses, and an extension of time will be granted, in the same manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications, and these Special Provisions.

The SWPPP shall include a copy of the California Water Quality Board, Central Valley Region Permit, California Department of Fish & Game Permit, and the Army Corps of Engineers Permit.

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 4-1.03D, "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.

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.

4. <u>ITEMS OF WORK</u> (Continued)

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.

The Contractor shall construct permanent water pollution control items identified in the SWPPP as specified in "Order of Work" of these special provisions. The Contractor shall maintain the permanent water pollution control items in the locations and condition shown on the plans throughout the duration of the project.

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.

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 project has no defined rainy season.

Soil stabilization and sediment control practices conforming to these special provisions shall be in place during the rainy season between <u>October 15th</u> and <u>April 15th</u> .

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

Winter Shutdown

The Contractor shall not remove vegetation or disturb existing ground surface conditions between October 15 and May 1.

INSPECTION AND MAINTENANCE

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

A. Before a forecasted storm,

4. <u>ITEMS OF WORK</u> (Continued)

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.
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 suspend inspections of water pollution control practices during plant establishment work upon written approval from the Engineer.

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.

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 for noncompliance.

4. <u>ITEMS OF WORK</u> (Continued)

The contract lump sum price paid for Storm Water Pollution Prevention Plan (SWPPP) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in performing water pollution control work in conformance to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications, and these Special Provisions not covered by another bid item, including preparing, obtaining approval of, and amending the SWPPP and inspecting water pollution control practices as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Payments for Storm Water Pollution Prevention Plan (SWPPP) will be made as follows:

A. After the SWPPP has been approved by the Engineer, up to 75 percent of the contract item price for Storm Water Pollution Prevention Plan (SWPPP) will be included in the monthly progress estimate.

B. 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 percentage of the contract item price for Storm Water Pollution Prevention Plan (SWPPP) will be made in conformance with the provisions in Section 9-1.07A, "Payment Prior to Proposed Final Estimate."

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.

<u>Bid Item Nos. A6 & B6) Pavement Grinding:</u>

Pavement grinding shall be done at the locations as shown on the plans and as determined by the Engineer. Pavement grinding shall be 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 performed at the project conforms shall consist of grinding off the existing surface layer of asphalt concrete at the limits marked in the field of that portion of the roadway to be overlaid to a depth of 0.1 feet for the full width of the existing pavement and 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, unless otherwise approved by the Engineer. 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 use the residual in roadway embankment and/or as shoulder backing material along the roadway shoulder at select locations adjacent to the project limits. 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 Nos. A7 & B7) Final Erosion Control (Type D):

Erosion control (Type D) shall conform to the provisions in Section 20-3, "Erosion Control," of the Standard Specifications and these special provisions and shall consist of applying erosion control materials to embankment and excavation slopes and other areas disturbed by construction activities. The areas to receive the erosion control (Type D), but not limited to, are shown on the sheets entitled “Final Erosion Control” of the plans and represent a total area of approximately 0.40 acre. Areas disturbed for contractor staging and storage shall be hydro seeded at the contractor’s expense and are not included in the 0.40 acre. The areas shown are for estimating purposes only, the exact amount and locations shall be as determined by the Engineer.

If the slope on which the erosion control is to be placed is finished during the month of October or later, the erosion control shall be applied immediately to the slope.

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

Materials

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

Seed

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

Seed shall be delivered to the project site in unopened separate containers with the seed tag attached. Containers without a seed tag attached will not be accepted. A sample of approximately 30 grams of seed will be taken from each seed container by the Engineer.

4. <u>ITEMS OF WORK</u> (Continued)

Legume Seed

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

A. Inoculated seed shall be inoculated in conformance with the provisions in Section 20-2.10, "Seed," of the Standard Specifications.
B. Inoculated seed shall have a calcium carbonate coating.
C. Industrial-inoculated seed shall be inoculated with Rhizobia and coated using an industrial process by a manufacturer whose principal business is seed coating and 2 seed inoculation.
D. Industrial-inoculated seed shall be sown within 180 calendar days after inoculation.

Legume seeds shall consist of genetic material collected from Central Valley or Foothills of Northern California below 2000 feet. Legume seed shall consist of the following:

LEGUME SEED

Botanical Name (Common Name)	Percent Germination (Minimum)	Pounds Pure Live Seed Per Acre (Slope Measurement)
*Lotus purshianus (Pershings Lotus)	70	5
*Lupinus bicolor (Pygmy-Leaf Lupine)	40	9
*Trifolium wildenovii (Tomcat Clover)	40	8

Non-Legume Seed

Non-Legume seeds shall consist of genetic material collected from Central Valley or Foothills of Northern California below 2000 feet. Non-legume seed shall consist of the following:

NON-LEGUME SEED

Botanical Name (Common Name)	Percent Germination (Minimum)	Pounds Pure Live Seed Per Acre (Slope Measurement)
*Leymus triticoides (Creeping Wildrye)	70	12
*Bromus carinatus (California Brome)	70	9
*Elymus glaucus (Blue Wildrye)	70	9
*Nassella pulchra (Purple Needlegrass)	70	9

4. <u>ITEMS OF WORK</u> (Continued)

Commercial Fertilizer

Commercial fertilizer shall conform to the provisions in Section 20-2.02, "Commercial Fertilizer," of the Standard Specifications and shall have a guaranteed chemical analysis of 20 percent nitrogen, 11 percent phosphoric acid and 12 percent water soluble potash.

Straw

Straw shall conform to the provisions in Section 20-2.06, "Straw," of the Standard Specifications and these special provisions. Straw shall be derived from rice and shall be applied at the rate of two (2) tons/acre.

Compost

Compost shall be derived from green material consisting of chipped, shredded or ground vegetation or clean processed recycled wood products or a Class A, exceptional quality biosolids composts, as required by the United States Environmental Protection Agency (EPA), 40 CFR, Part 503c regulations or a combination of green material and biosolids compost. The compost shall be processed or completed to reduce weed seeds, pathogens and deleterious material, and shall not contain paint, petroleum products, herbicides, fungicides or other chemical residues that would be harmful to plant or animal life. Other deleterious material, plastic, glass, metal or rocks shall not exceed 0.1 percent by weight or volume. A minimum internal temperature of 135˚F shall be maintained for at least 15 continuous days during the composting process. The compost shall be thoroughly turned a minimum of 5 times during the composting process and shall go through a minimum 90-day curing period after the 15-day thermophilic compost process has been completed. Compost shall be screened through a maximum 3/8 inch screen. The moisture content of the compost shall not exceed 35 percent. Compost products with higher moisture content may be used provided the weight of the compost is increased to equal the compost with a moisture content of 35 percent. Moist samples of compost on an as received basis shall be dried in an oven at a temperature between 220°F and 240°F until a constant dry weight of the sample is achieved. The percentage of moisture will be determined by dividing the dry weight of the sample by the moist weight of the sample and then multiplying by 100. Compost may be tested for maturity and stability with a Solvita test kit. The compost shall measure a minimum of 6 on the maturity and stability scale.

Stabilizing Emulsion

Stabilizing emulsion shall conform to the provisions in Section 20-2.11, "Stabilizing Emulsion," of the Standard Specifications and these special provisions. Stabilizing emulsion shall be in a dry powder form, may be re-emulsifiable, and shall be a processed organic adhesive used as a soil tackifier.

<u>Application</u>

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

4. <u>ITEMS OF WORK</u> (Continued)

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

Material	Pounds Per Acre (Slope Measurement)
Legume Seed	22
Non-Legume Seed	39
Fiber	357
Commercial Fertilizer	268

Material	Cubic Feet Per Acre (Slope Measurement)
Compost	47

B. The Contractor may dry apply compost at the total of the rates specified in the preceding table and the following table instead of including it as part of the hydro-seeding operations. In areas where the compost is dry applied, all compost for that area shall be applied before the next operation.

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

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

Material	Pounds Per Acre (Slope Measurement)
Fiber	357
Commercial Fertilizer	268
Stabilizing Emulsion (Solids)	156

Material	Cubic Feet Per Acre (Slope Measurement)
Compost	47

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

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

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

conditions.

Measurement and Payment

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and applying compost, stabilizing emulsion, fertilizer, seed and straw for final erosion control, complete in place, as specified in the Standard Specifications, these special provisions, and as determined by the Engineer shall be included in the contract lump sum price paid for the item "Final Erosion Control (Type D)".

FIBER ROLLS

Fiber rolls shall conform to these special provisions. Fiber Rolls are to be installed on all areas where erosion control (type D) is being placed and as determined by the Engineer.

Materials

Fiber rolls shall consist of one of the following:

A. Fiber rolls shall be constructed on the project site with manufactured blankets consisting of one or a combination of wood excelsior, rice, wheat or coconut fibers. The blanket shall measure approximately 12 ft. wide by 85 ft. to 100 ft. in length. Wood excelsior material shall have individual fibers, 80 percent of which shall be 6 inches or longer in fiber length. The blanket shall have photodegradable plastic netting. The blanket shall be rolled on the blanket's width and secured with jute twine spaced 6 feet apart along the roll for the full length and 6 inches from each end of the individual rolls. The blanket shall be rolled so that the netting is on the outside of the finished roll. The finished roll diameter shall be a minimum of 7 inches and a maximum of 9 inches and shall weigh not less than 2.5 pounds/yard.

B. Fiber rolls shall be pre-manufactured rice or wheat straw, wood excelsior or coconut fiber rolls encapsulated within photodegradable plastic netting. Each roll shall be a minimum of 7 inches and a maximum of 9 inches in diameter and 23 ft. to 30 ft. in length and shall weigh not less than 2.5 pounds/yard. The netting shall be ultraviolet (UV) degradable plastic. The netting shall have a minimum durability of one year after installation. The netting shall be secured tightly at each end of the individual rolls.

Stakes for installation of the fiber rolls shall be fir or pine and shall be a minimum of 1 inch x 1 inch x 2 ft. in length. Metal stakes may be used as an alternative. The Contractor shall submit a sample of the metal stake to the Engineer prior to installation. The tops of the metal stakes shall be bent over at a 90-degree angle. No additional compensation will be allowed for the use of a metal stake.

Installation

Fiber rolls shall be joined tightly together to form a single linear roll that is installed

approximately parallel to the slope contour. Fiber rolls shall be installed prior to the application of other erosion control materials.

Furrows shall be constructed at a slight angle to the slope contour, to a depth of 2 inches to 4 inches, and at a sufficient width to hold the fiber rolls.

Rolls shall be installed at contour intervals of 6 ft. of elevation in the furrows with the first row installed 5 ft. above the toe of slope. Individual rolls shall be placed with adjacent ends butted firmly to each other to create a continuous linear roll.

Stakes shall be installed 3 ft. apart along the total length of the rolls and 5 inches from the end of each individual roll. Stakes shall be driven flush or a maximum of 2 inches above the roll.

Measurement and Payment

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing fiber rolls, complete in place, including stakes, as specified in the Standard Specifications, these special provisions and as determined by the Engineer shall be included in the contract lump sum price paid for the item "Final Erosion Control (Type D)".

Bid Item No. B8) Traffic Signal Conduit, Detector Loops, & Pull Box Installation:

Conduit

For this project, only the traffic signal conduit, pull boxes, and pull ropes shall be installed as shown on the "Conduit Plan Sheet" of the Project Plans for the "Lower Wyandotte Road and Monte Vista Avenue SRTS Project," unless otherwise noted herein, on the plans, or as directed by the Engineer. No conductors will be installed with this phase of the traffic signal installation, except those associated with the detector loops to be installed and the flashing beacon to be installed in the future. Future hardware locations are shown faded on the plan to denote future phases of work by others and are shown for the purpose of aiding in pull box and conduit placement. Conductors indicated to be installed with this phase shall terminate in the pull boxes shown located closest to the future controller box at the northwest return of the Lower Wyandotte Road/Monte Vista Avenue intersection.

Conduits shall conform to the provisions in Section 86-2.05, "Conduit," of the Standard Specifications and these Special Provisions.

Conduits to be installed underground shall be the rigid steel or rigid non-metallic type unless otherwise specified. Detector termination conduits may be the rigid non-metallic type.

The conduit in a foundation and between a foundation and the nearest pull box shall be the same as in the foundation when a standard coupling cannot be used for coupling metal type conduit, a UL listed threaded union coupling, as specified in the third paragraph of Section 86-2.05C, "Installation," of the Standard Specifications, or a concrete-tight split coupling or concrete-tight set screw coupling shall be used.

4. <u>ITEMS OF WORK</u> (Continued)

Non-metallic conduits placed in trenches that are within the limits of asphalt surfacing shall be backfilled with a slurry cement backfill in accordance with the provisions in Section 19-3.062, "Slurry Cement Backfill," of the Standard Specifications. The trench shall be backfilled to within 2 inches of the existing roadway surface. The remaining 2 inches of the trench shall be backfilled with commercial quality asphalt concrete in accordance with Section 39, "Asphalt Concrete," of the Standard Specifications.

Insulated bonded bushings will be required on metal conduits.

Upon complete installation of all conduit runs, where any conduit does not terminate in a specified pull box, the conduit shall be temporarily capped with an end cap of like material and as determined by the engineer.

Full compensation for furnishing all the labor, materials, tools, and equipment needed for the installation of conduit, as shown on the plans or as directed by the Engineer, shall be included in the contract item "Traffic Signal Conduit, Detector Loops, and Pull Box Installation" and no additional compensation will be allowed therefore.

Pull Boxes

Pull boxes shall conform to the provisions in Section 86-2.06, "Pull Boxes," of the Standard Specifications and these Special Provisions.

Pull boxes shall be Type 5 except as otherwise noted on the plans. However, those pull boxes containing four or more conduit runs shall be Type 6. Grout shall be placed in the bottom of all pull boxes.

Full compensation for furnishing all the labor, materials, tools, and equipment needed for the installation of pull boxes, as shown on the plans or as directed by the Engineer, shall be included in the contract item "Traffic Signal Conduit, Detector Loops, and Pull Box Installation" and no additional compensation will be allowed therefore.

Detector Hand Holes

Detector Hand Holes shall be installed according to Standard Plan ES-5B, per Caltrans Standard Plans dated May 2006, and all associated amendments.

Full compensation for furnishing all the labor, materials, tools, and equipment needed for the installation of the Detector Hand Holes, as shown on the plans or as directed by the Engineer, shall be included in the contract item "Traffic Signal Conduit and Pull Box Installation" and no additional compensation will be allowed therefore.

Detectors

Detectors shall conform to provisions in Section 86-5, "Detectors," of the Standard Specifications and these special provisions.

The Contractor shall test the detectors with a motor-driven cycle, as defined in the State of California Vehicle Code that is licensed for street use by the State of California Department of Motor Vehicles. The unladened weight shall not exceed 220 pounds and the engine displacement shall not exceed 100 cubic centimeters. Special features, components or vehicles designed to

4. <u>ITEMS OF WORK</u> (Continued)

activate the detector will not be permitted. The Contractor shall provide an operator who shall drive the motor-driven cycle through the response or detection area of the detector at a speed of not more than seven miles per hour. Additionally, all detector loops shall have a "Megger Test" ran and a print out of each tested detector loop shall be supplied to the County of Butte, to verify that all loops are functioning properly at the date of installation.

The first paragraph in Section 86-2.14B(3), "Insulation Resistance," is amended by the addition of the following two sentences:

"A final insulation resistance test shall be performed on the inductive loop detectors at the controller cabinet location after said detectors have been installed in accordance with the plans and the final splices have been made between the loop detector at the pull box adjacent to the loop. Conductors for the inductive loop detectors shall be placed to a depth in the slots cut in the pavement to provide at least one inch of cover over the top conductor installed in the slot."

The slots shall be filled with an elastomeric sealant or hot-melt rubberized asphalt sealant. Residue resulting from the slot cutting operations shall not be permitted to flow across shoulders or public traffic lanes and shall be removed from pavement surface. Alternative methods of loop placement shall be approved by the Engineer.

The special detector handhold shall be a type B.

Loop detector lead-in cable shall be Type B and the loop wire shall be Type 2. The number of lead-in cables required to achieve the specified detection shall be installed. The lead-in cables shall run continuously without splices from the detector termination pull box to the field terminals in the controller cabinet.

The Type 'D' loop detectors shall be used at all limit lines and Type 'A' loop detectors shall be used else where. See Standard Plan Sheet ES-5B. Each turn shall start and finish in the termination pull box and shall be connected in series.

Full compensation for furnishing all the labor, materials, tools, and equipment needed for the installation of Detector Loops, including conductors, as shown on the plans or as directed by the Engineer, shall be included in the contract item "Traffic Signal Conduit, Detector Loops, and Pull Box Installation" and no additional compensation will be allowed therefore.

<u>Bid Item Nos. A8 & B9) Roadway Excavation:</u>

Roadway excavation shall conform to the provisions in Section 19, "Earthwork," of the Standard Specifications and these Special Provisions.

The quantity of roadway excavation for payment shall be the "Project Total" quantity for cubic yards of excavation as shown on the plans and as determined by the Engineer.

Sub-grade shall be compacted in conformance to the provisions in Section 19-5.03, "Relative Compaction (95 percent)," of the Standard Specifications except that the provisions in the second paragraph of Section 19-5.03 will not apply in areas of excavation.

4. <u>ITEMS OF WORK</u> (Continued)

It is anticipated that there will be a surplus of approximately **<u>2000</u>** cubic yards of excavated material. The surplus excavated material shall become the property of the Contractor and shall be 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. All excavation quantities are calculated as in situ or "in place" and shall be paid for accordingly. No expansion due to excavation will be considered for excavation payment quantities.

The contract unit price paid per cubic yard for the item "Roadway Excavation," shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work in removing, hauling and disposal of the excess material as well as grading and compacting the in place material, all as specified herein, and as determined by the Engineer.

<u>Bid Item Nos. A9 & B10) Aggregate Base (Class 2):</u>

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. This shall include finishing the roadway in conformance with to the provisions in Section 22, "Finishing Roadway," of the Standard Specifications and these Special Provisions

<u>Bid Item Nos. A10 & B11) Asphalt Concrete (Type A, 1/2"Max., Med. Grading):</u>

Asphalt Concrete shall be Type A, ½ 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 (Type A, ½" Max., Med. Grading)" and no additional compensation will be allowed therefore.

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.

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.

4. <u>ITEMS OF WORK</u> (Continued)

An Asphalt Concrete 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 the asphalt paint binder shall be included in the contract price paid per ton for the item “Asphalt Concrete (Type A, 1/2” Max., Med. Grading),” 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. Unless otherwise permitted by the Engineer, mainline paving shall be completed prior to placement of any other paving. Driveway paving shall not be done until placement of the adjacent mainline paving has been completed.

Asphalt Concrete used in the construction of driveways shall be Type A, ½” maximum, medium grading. Payment for furnishing and placing the Asphalt Concrete used in the paving of driveways as shown on the plans, including that per Detail S-31 and the Asphalt Concrete Driveway Overlay Schedule shown on the detail sheets of the plans and the paving conforms at back of driveway depicted on the plans, 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 Concrete 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.

4. <u>ITEMS OF WORK</u> (Continued)

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.

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 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.

4. <u>ITEMS OF WORK</u> (Continued)

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 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, ½” Max., Med. Grading,)” and no additional compensation will be allowed therefore.

<u>Bid Item Nos. A11 & B12) Asphalt Concrete - Miscellaneous Areas:</u>

“Asphalt Concrete Miscellaneous Areas” shall be Type A, ½ inch maximum, medium grading and shall conform to the provisions in Section 39, "Asphalt Concrete," of the Standard Specifications, the applicable Special Provisions for Asphalt Concrete (Type A, 1/2”Max., Med. Grading) above, and these Special Provisions.

“Asphalt Concrete Miscellaneous Areas” shall conform to the provisions of Section 39-7.01, “Miscellaneous Areas,” of the Standard Specifications. Miscellaneous Areas shall include curb ramps at the end of all concrete returns and other areas outside the traveled way which are designated on the plans or areas as determined by the Engineer.

Full compensation for “Asphalt Concrete Miscellaneous Areas” shall be paid for at the contract price per ton and included in the item “Asphalt Concrete (Type A, ½” Max., Med. Grading,)” and also for placement at the contract price per **square yard** for the item “Asphalt Concrete Miscellaneous Areas,” as included in Section 39-8.02, “Payment,” of the Standard Specifications and no additional compensation will be allowed therefore.

<u>Bid Item Nos. A12 & B13) Liquid Asphalt (Prime Coat):</u>

Liquid asphalt prime coat shall be Grade SC-250, or as otherwise determined by the Engineer, and shall conform to the provisions in Section 39, “Liquid Asphalts,” and in Section 39-4.02,

"Prime Coat and Paint Binder (Tack Coat)," of the Standard Specifications and these special provisions.

At locations where public traffic is being routed over the roadbed to be treated, the prime coat shall not be applied to more than one-half the width of the traveled way at a time, and the remaining width shall be kept free of obstructions and open for use by public traffic until the prime coat first applied is sanded. Liquid asphalt shall not be applied when the atmospheric temperature is below 50 degrees Fahrenheit.

Full compensation for placing liquid asphalt prime coat shall be paid for by the ton and considered as included in the item "Liquid Asphalt (Prime Coat,)" and no additional compensation will be allowed therefore.

No adjustment in compensation will be made for any increase or decrease in the quantity of liquid asphalt (prime coat), regardless of the reason for such increase or decrease. The provisions in Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications shall not apply to the contract item "Liquid Asphalt (Prime Coat)," which may be deleted in it's entirety.

Bid Item Nos. A13 & B14) Sand Cover:

After the application of the liquid asphalt, the surface shall be covered with sand at the time determined by the Engineer and conforming to these special provisions.

Sand cover shall be free from clay and organic material and shall be of such size that from 90 percent to 100 percent will pass through a No. 4 size sieve and not more than 5 percent will pass a No. 200 size sieve and shall be spread uniformly at the approximate rate of 12 to 15 pounds per square yard. The exact spread rate shall be as determined by the Engineer. All loose sand shall be removed from the treated area at a time determined by the Engineer. The treated surface shall be maintained in a smooth and satisfactory condition.

Full compensation for furnishing all labor, materials, tools, equipment, incidentals, hauling, and placing all sand shall be paid for by the ton and considered as included in the item "Sand Cover," and no additional compensation will be allowed therefore.

No adjustment in compensation will be made for any increase or decrease in the quantity of sand cover, regardless of the reason for such increase or decrease. The provisions in Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications shall not apply to the contract item "Sand Cover," which may be deleted in it's entirety.

Bid Item No. B15) Flap Valve:

A single pivot flap valve of the size and specifications shown below shall be installed in the 15-inch reinforced concrete pipe invert within the existing storm drain manhole located at station 53+33 24-feet right of construction centerline for Lower Wyandotte Road. The flap valve size

4. <u>ITEMS OF WORK</u> (Continued)

shall be 14"; valve schedule shall be flange framed with resilient to bronze seating, Rodney Hunt Series FV-SPR, or approved equal. The cover shall be bronze ASTM B584 C885. The Body shall be Cast iron ASTM A126 Class B. The resilient elastomeric seat will be mounted in the body of the valve. Pivot hardware shall be Type 304 stainless steel. Attaching hardware shall be Type 304 stainless steel.

The contract price paid for installing the Flap Valve assembly shall include full compensation for furnishing all the labor, materials, tools, and equipment needed, all cleaning and grinding of area directly around and in the path of the swinging Flap Valve to ensure it's smooth, uninterrupted operation, as shown on the plans or as directed by the Engineer, and shall be included in the contract item "Flap Valve," and no additional compensation will be allowed therefore.

<u>Bid Item Nos. A14) 35"x 24"Corrugated Steel Pipe Arch (CSPA) & A15) 35"x 24"(CSPA) Flared End Section; and B16) 18" Dia Corrugated Metal Pipe (CMP) & B17) 18" (CMP) Flared End Section:</u>

Corrugated metal pipe shall be 0.079 inch thick and conform to the provisions in Section 66, "Corrugated Metal Pipe," of the Standard Specifications and these special provisions.

Structure backfill surrounding the pipe shall have a sand equivalent value of not less than 30.

Culvert joints shall conform to the plans or specifications for standard joints.

This Section shall also apply to bid items for Corrugated Steel Pipe Arch (CSPA) and flared end sections (both CSPA & CMP.)

The Contractor's attention is directed to the existing corrugated steel culverts shown on the plans and the extensions of those culverts to be installed. The portion of the existing pipe to remain shall be trimmed as determined by the Engineer to provide a clean joint for attachment to the new corrugated steel pipe.

Payment for all excavation required, including that for inlet and outlet ditches for pipe culverts, shall be considered as included in the contract prices paid per linear foot for such pipe and per each for the flared end sections such that no additional compensation will allowed therefore.

Furnishing and installing, as well as payment for furnishing and installing, the pipe and couplings shall conform to the provisions in Section 66, "Corrugated Metal Pipe", of the Standard Specifications. Payment for pipe installation shall be by the Linear Foot and each for flared end section such that no additional compensation will allowed therefore.

4. ITEMS OF WORK (Continued)

Bid Item Nos. A16) 48"Dia. Reinforced Concrete Pipe (RCP); B18) 15" Dia. Reinforced Concrete Pipe (RCP) & B19) 15" Dia. Reinforced Concrete Pipe Flared End Section; B20) 24" Dia. Reinforced Concrete Pipe (RCP) & B21) 24" Dia. Reinforced Concrete Pipe Flared End Section; B22) 30" Dia. Reinforced Concrete Pipe (RCP); B23) 30" Dia. Equivalent Reinforced Concrete Arch Pipe; B24) 48" Dia. Equivalent Reinforced Concrete Arch Pipe & B25) 48" Dia. Equivalent Reinforced Concrete Arch Pipe Flared End Section:

Reinforced concrete pipe shall conform to the special provisions provided in Section 65, "Reinforced Concrete Pipe", of the Standard Specifications and these Special Provisions. Where embankment will not be placed over the top of the pipe, a relative compaction of not less than 85 percent shall be required below the pipe spring line for pipe installed using method I backfill in trench, as shown on Standard plan A62D. Where the pipe is to be placed under the traveled way, a relative compaction of not less than 90 percent shall be required unless the minimum distance between the top of pipe and the pavement surface is the greater of 4.0-feet or one half of the outside diameter of the pipe. This paragraph shall not apply to those sections of reinforced concrete pipe that are designated on the plans as being backfilled by slurry cement.

Except as otherwise designated by classification on the plans or in the specifications, joints for culvert and drainage pipes shall conform to the plans or specifications for standard joints. When reinforced concrete pipe is to be installed in conformance with the details shown on Standard Plan A62DA, the fifth paragraph of Section 19-3.04, "Water Control and Foundation Treatment", of the Standard Specifications shall not apply.

When solid rock or other unyielding material is encountered at the planned elevation of the bottom of the bedding, the material below the bottom of the bedding shall be removed to a depth of 1/50 of the height of the embankment over the top of the culvert, but not less than 6-inches or more than 1-foot. The resulting trench below the bottom of the bedding shall be backfilled with structure backfill material in conformance with the provisions in Section 19-3.06, "Structure backfill," of the Standard Specifications.

Concrete pipe extensions shall conform to the provisions in Section 15-2.05C "Extending Pipes" of the Standard Specifications and these Special Provisions and as shown on the plans.

This Section also applies to Concrete Arch Pipe, where applicable.

The unit prices paid for installation of the various bid items for Reinforced Concrete Pipe (RCP), Equivalent Reinforced Concrete Arch Pipe, or their associated Flared End Sections shall include full compensation for furnishing all labor, tools, materials, and equipment, and for doing all the work as shown on the plans, and shall be included in the items for the specified diameter of reinforced concrete pipe, equivalent reinforced concrete arch pipe, or associated reinforced concrete flared end section as specified in the Standard Specifications, in these Special Provisions and as determined by the Engineer.

Payment for the various bid items for Reinforced Concrete Pipe and Equivalent Reinforced Concrete Arch Pipe shall be by the linear foot and no additional compensation will allowed

therefore. Payment for the associated Reinforced Concrete Pipe and Equivalent Reinforced Concrete Arch Pipe Flared End Sections shall be by each and no additional compensation will be allowed therefore.

Bid Item No. A17) 5-Foot Dia. Manhole (Butte Co. Std. S-19):

Storm drain manholes of 5-foot diameter or less shall be constructed per County Standard S-19 with a cast metal frame and cover per County Standard S-24 as shown in the "Butte County Improvement Standards" dated October 2006 of which may also appear on the detail sheet of the construction plans for the project. One exception to the detail shall be that galvanized steps are to be omitted and may be substituted with steps made of poly material in accordance with Cal-OSHA requirements or eliminated entirely.

The contract price paid for each for installing the Standard Storm Drain Manhole shall include full compensation for furnishing all the labor, materials, tools, and equipment needed for placement and adjustment, including pour in place base section, precast cone and barrel sections, mastic joint seals, interior grout finish, and frame & cover adjusted to final grade, and no additional compensation will be allowed therefore.

Bid Item No. B26) 7-Foot Dia. Manhole (Jensen or approved equal):

Storm drain manholes of 7-foot diameter as indicated on the construction plans shall be constructed using Jensen Precast components as indicated on the detail sheet of the construction plans for the project, or equal as determined by the Engineer. The cast metal frame and cover shall conform to County Standard S-24 as shown in the "Butte County Improvement Standards" dated October 2006.which may also appear on the detail sheet of the construction plans for the project. If step rungs are incorporated into the precast sections, they shall be made of poly material in accordance with Cal-OSHA requirements. The opening in the precast lid shall be oriented in the field as determined by the Engineer and line up with the step rungs, if they are incorporated in the precast barrel sections. The contract price paid for each for installing the 7-Foot Diameter Storm Drain Manhole shall include full compensation for furnishing all the labor, materials, tools, and equipment needed for placement and adjustment, including grouted pipe seals and finished pour in place concrete in the base section to create shelves and direct flows through the base section, precast lid and barrel sections, mastic joint seals, interior grout finish, and frame & cover adjusted to final grade, and no additional compensation will be allowed therefore.

Bid Item No. A18) Rip-Rap Protection ¼ ton (Method A):

Rip-Rap Protection ¼ Ton shall conform to the special provisions in Section 72-2 "Rock Slope Protection." Filter fabric shall be placed prior to placing the Rock Slope Protection, per Section 72-2.025. Method A placement shall be used to place the Rip-Rap protection on various pipe outlet locations as shown on the plans and as directed by the Engineer.

The unit price paid for installation of Rip-Rap protection shall include full compensation for furnishing all labor, tools, materials, and equipment, hauling, and for doing all the work as shown on the plans, as specified in the Standard Specifications, in these Special Provisions and as

determined by the Engineer. Payment for the Item "Rip-Rap Protection ¼ Ton (Method A)" shall be by the Ton and no additional compensation will be allowed therefore.

Bid Item Nos. A19 & B27) Slurry Cement/Cobble Rip-Rap Protection:

Slurry Cement/Cobble Rip-Rap Protection shall conform to the special provisions in Section 19-3.062, "Slurry Cement Backfill", of the Standard Specifications and these Special Provisions. Slurry Cement/Cobble Rip-Rap Protection shall be made up of Slurry Cement Backfill with 6" cobbles placed in the desired locations. Slurry Cement/Cobble Rip-Rap Protection shall be utilized on new concrete pipe outlets where existing concrete rip-rap has been damaged or removed, and/or as specified on the plans and as directed by the Engineer. All cobble used in replacing the Cement/Cobble Rip-Rap shall be in like kind to the existing in material makeup, density, spacing, and color.

The unit price paid for installation of Slurry Cement/Cobble Rip-Rap Protection shall include full compensation for furnishing all labor, tools, materials, and equipment, hauling, and for doing all the work as shown on the plans, as specified in the Standard Specifications, in these Special Provisions and as determined by the Engineer. Payment for the Item "Slurry Cement/Cobble Rip-Rap Protection" shall be by the Cubic Yard and no additional compensation will be allowed therefore.

Bid Item No. B28) Slurry Cement Backfill (Pipe Cover):

Slurry cement backfill shall conform to the special provisions in Section 19-3.062, "Slurry Cement Backfill", of the Standard Specifications and these Special Provisions. Slurry cement backfill shall be utilized on new concrete pipe as specified on the plans where inadequate cover is provided.

The unit price paid for installation of slurry cement backfill shall include full compensation for furnishing all labor, tools, materials, and equipment, hauling, and for doing all the work as shown on the plans, as specified in the Standard Specifications, in these Special Provisions and as determined by the Engineer. Payment for slurry cement backfill shall be by the Cubic Yard and no additional compensation will allowed therefore.

Bid Item No. B29) Type GO Drainage Inlet (Butte Co. Std S-8-B):

The Type GO Drainage Inlet (Butte County S-8-B) shall be constructed per County Standard S-8-B for Modified Type GO Drainage Inlet as shown in the "Butte County Improvement Standards" dated October 2006, which appears on the detail sheet of the construction plans for the project. Exceptions to the detail shall be that the 6"high x 24"long side opening is to be constructed facing away from the construction centerline in order to catch the storm water draining from Nissen Ranch Road, as shown on the plans, and the galvanized steps are to be omitted and may be substituted with steps made of poly material in accordance with Cal-OSHA requirements or eliminated entirely.

The contract price paid for each for installing the Modified Type GO Drainage Inlet (Butte County S-8-B) shall include full compensation for furnishing all the labor, materials, tools, and equipment needed, including pour in place construction and finishing to final grade, all complete and in-place

4. <u>ITEMS OF WORK</u> (Continued)

as specified herein, shown on the plans, and as determined by the Engineer, and no additional compensation will be allowed therefore.

<u>Bid Item No. B30) Type GO Drainage Inlet (Butte Co. Std S-8):</u>

The Type GO Drainage Inlet (Butte County S-8) shall be constructed per County Standard S-8 for Type GO Drainage Inlet, with Type 24-13 Grate, as shown in the "Butte County Improvement Standards" dated October 2006, which appears on the detail sheet of the construction plans for the project. One exception to the detail shall be that the galvanized steps are to be omitted and may be substituted with steps made of poly material in accordance with Cal-OSHA requirements or eliminated entirely.

The contract price paid for each for installing the Type GO Drainage Inlet (Butte County S-8) shall include full compensation for furnishing all the labor, materials, tools, and equipment needed, including pour in place construction and finishing to final grade, all complete and in-place as specified herein, shown on the plans, and as determined by the Engineer, and no additional compensation will be allowed therefore.

<u>Bid Item No. A20) Type GOL Drainage Inlet (Caltrans D-72):</u>

The Type GOL Drainage Inlet (Caltrans D-72) shall be constructed per Caltrans Standard Detail D-72 as shown in the Standard Plans Dated May, 2006, Standard Plans Dated and accompanied by all associated plan updates and amendments, and which also appears on the detail sheet of the construction plans for the project. All material quality and grade standards shall apply.

The contract price paid for each for installing the Type GOL Drainage Inlet (Caltrans D-72) shall include full compensation for furnishing all the labor, materials, tools, and equipment needed, including pour in place construction and finishing to final grade, all complete and in-place as specified herein, shown on the plans, and as determined by the Engineer, and no additional compensation will be allowed therefore.

<u>Bid Item No. B31) Type GOL Drainage Inlet (Caltrans D-72 Modified):</u>

The Type GOL Drainage Inlet Caltrans D-72 Modified, shall be modified to remove the sweeper section form the original Type GOL Caltrans D-72 detail and utilize only the box section and mirror those dimensions as shown on the opposite side of the sweeper section, as per the Standard Plans Dated May, 2006, Standard Plans Dated and accompanied by all associated plan updates and amendments. All material quality and grade standards shall apply.

The contract price paid for each for installing the Type GOL Drainage Inlet (Caltrans D-72 Modified) shall include full compensation for furnishing all the labor, materials, tools, and equipment needed, including pour in place construction and finishing to final grade, all complete and in-place as specified herein, shown on the plans, and as determined by the Engineer, and no additional compensation will be allowed therefore.

4. ITEMS OF WORK (Continued)

Bid Item No. A21) Minor Concrete (Modified D89 Headwall):

Concrete placed in minor structures shall be per Section 90-10.01 “Minor Concrete”. The quantities of concrete shown on the plans for the contract items “Minor Concrete (Standard D89 Headwall)” shall be the final quantity for which payment be made, as provided in Section 9-1.015, “Final Pay Quantities,” of the Standard Specifications.

The new headwall shall be constructed to fit three pipe outlets using the specifications of the Standard D89 Headwall with a straight headwall configuration. Any removed concrete shall become the property of the contractor and shall be disposed of off of the roadway right of way according to the provisions outlined in Sections 15-2, “Miscellaneous Highway Facilities” and 7-1.13 “Disposal of Material Outside the Highway Right of Way,’ of the Standard Specifications and these Special Provisions.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals needed for the cutting, removing and disposing of the existing headwall as determined by the engineer, shall be included in the contract lump sum prices paid for the item “**Clearing and Grubbing”** and no additional payment will be allowed therefore.

Attention is directed to Section 90-7, "Curing Concrete," of the Standard Specifications and these Special Provisions.

Portland cement concrete structures shall conform to the provisions in Section 51, "Concrete Structures," of the Standard Specifications and these Special Provisions. Sections 90-4.05, "Optional Use of Chemical Admixtures," and 90-4.09, "Optional Use of Mineral Admixtures," of the Standard Specifications shall not apply. The amount of admixtures used, if any, and the amount of cement reduction allowed shall be determined by the Engineer.

A. Structure Backfill

Structure backfill shall include backfill for the “Modified D89 Headwall.” In lieu of possible conflicting provisions of Section 19-3.06, “Structure Backfill,” of the Standard Specifications, structure backfill shall have a sand equivalent value of not less than 30.

B. Reinforcement

Bar reinforcing steel shall conform to the provisions in Section 52, "Reinforcement," of the Standard Specifications and these Special Provisions.

The first paragraph of Section 52-1.02A, “Bar Reinforcement,” of the Standard Specifications is amended as follows:

“Reinforcing bars shall be low alloy steel deformed bars conforming to the specifications of ASTM Designation: A 706, except that bars conforming to the specifications of ASTM Designation: A 615, Grade 40 or 60 may be used as reinforcement in the following:

1. Slope and channel paving.
2. Minor Structures.
3. Sign and signal foundations (pile and spread footings).

4. <u>ITEMS OF WORK</u> (Continued)

4. Roadside rest facilities.
5. Concrete barrier Type 50 series and temporary railings.

Deformations specified in ASTM Designation: A 706 will not be required on bars used as spiral or hoop reinforcement in structures and concrete piles."

Bar reinforcing steel to be furnished and placed in the construction of the concrete.

In lieu of the measurement and payment provisions outlined in Sections 52-1.10, "Measurement" and 52-1.11, "Payment," of the Standard Specifications, the costs for furnishing and placing the bar reinforcing steel in the concrete "Modified D89 Headwall" shall be considered as included in the contract final pay quantity for the items "Minor Concrete (Modified D89 Headwall)" and no additional payment will be allowed therefore.

Full compensation for furnishing all the labor, materials, tools, equipment, hauling, and incidentals needed to construct the concrete headwall including, structure excavation, structure backfill, bar reinforcing steel, all complete and in-place as specified herein and as determined by the Engineer, shall be considered as included in the contract final pay quantity for the item "Minor Concrete (Modified D89 Headwall)" and no additional payment will be allowed therefore. Payment for "Minor Concrete (Modified D89 Headwall)"shall be by the Cubic Yard and no additional compensation will allowed therefore.

<u>Bid Item Nos. A22 & B32) Concrete Driveway Approaches (Butte Co. Std S-3):</u>

Concrete Driveway Approaches shall conform to the provisions in Section 73-1, "Concrete Curbs and Sidewalks," of the Standard Specifications, these Special Provisions, and as shown on the plans, including Butte County Standard Nos. S-3, S-3A (Modified) & S-3B (Modified) and the Concrete Driveway Schedule as shown on the detail sheets of the construction plans.

The unit price paid for the item "Concrete Driveway Approaches (Butte Co. Std. S-3)" shall be by the square foot and shall include full compensation for furnishing all labor, tools, materials, and equipment, all hauling, grading, placement of aggregate base, and for doing all the work involved in constructing the concrete facilities, as specified in the Standard Specifications, in these Special Provisions, and as shown on the plans or as determined by the Engineer. Pay limits for the item "Concrete Driveway Approaches (Butte Co. Std. S-3)" shall be as shown on the plans, details shown thereon (where the line of separation between concrete driveway approach and concrete driveway apron shall be the back of sidewalk,) or as directed by the Engineer.

<u>Bid Item Nos. A23 & B33) Concrete Driveway Aprons (4" Thickness):</u>

Concrete Driveway Aprons shall conform to the provisions in Section 73-1, "Concrete Curbs and Sidewalks," of the Standard Specifications, these Special Provisions, and as shown on the plans, including Butte County Standard Nos. S-3, S-3A (Modified) & S-3B (Modified) and Concrete Driveway Schedule as shown on the detail sheets of the construction plans. The unit price paid for the item "Concrete Driveway Aprons (4" Thickness)" shall be by the square foot and shall include full compensation for furnishing all labor, tools, materials, and equipment, all hauling, grading, placement of aggregate base, and for doing all the work

4. <u>ITEMS OF WORK</u> (Continued)

involved in constructing the concrete facilities, as specified in the Standard Specifications, in these Special Provisions, and as shown on the plans or as determined by the Engineer. Pay limits for the item ”Concrete Driveway Aprons (4” Thickness)” shall be as shown on the plans, details shown thereon (where the line of separation between concrete driveway approach and concrete driveway apron shall be the back of sidewalk,) or as directed by the Engineer.

<u>Bid Item Nos. A24 & B34) Concrete Pedestrian Ramp (Type “B”); B35) Concrete Pedestrian Ramp (Type “B” – Retrofit); and B36) Concrete Pedestrian Ramp (Caltrans Case “C”):</u>

Concrete returns with pedestrian ramps shall conform to the provisions in Section 73-1 “Concrete Curbs and Sidewalks,” of the Standard Specifications, these Special Provisions, and as shown on the plans, including Butte County Standard Nos. S-5A (Modified) & S-6 (Modified) and Pedestrian Ramp Schedule as shown on the detail sheets of the construction plans, and revised Detail A88A of the Standard Plans dated May, 2006, as included in the appendices of the specifications.

The detectable warning surface and truncated domes shall conform to the requirements indicated on the above mentioned revised Detail A88A of the Standard Plans and Butte County Standard No. S-5A Modified, as shown on the detail sheets of the construction plans. The truncated domes, as specified, shall be included in the unit price paid for the items ”Concrete Pedestrian Ramp (Type B)”, Concrete Pedestrian Ramp (Type “B” - Retrofit)”, ”Concrete Pedestrian Ramp (Caltrans Case ‘C’),” and no additional compensation will be allowed therefore.

The concrete used in the construction of the above mentioned items shall be class 3 and conform to the requirements in these Special Provisions.

Portland cement concrete facilities shall be constructed at the locations and per the details and dimensions shown on the construction plans, including Butte County Standard Nos. S-5A (Modified) & S-6 (Modified) and Pedestrian Ramp Schedule as shown on the detail sheets of the construction plans, and revised Detail A88A of the Standard Plans dated May, 2006, as included in the appendices of the specifications, or as determined by the Engineer.

The Contractor shall ensure that any utility company relocations and/or adjustments of utility boxes to grade, which may be in conflict with the Concrete Pedestrian Ramp, occur prior to placement of any concrete. All costs required to relocate any utility item shall be borne by the utility company and are not included in this contract.

No concrete shall be placed until the sub-grade and forms have been reviewed for satisfactory compaction, alignment, and grade, and approved by the Engineer.

No adjustment in compensation will be made for any increase or decrease in the quantity of concrete facilities required, regardless of the reason for such increase or decrease. The provisions in Section 4-1.03B, “Increase or Decrease Quantities”, of the Standard Specifications shall not apply to the items ”Concrete Pedestrian Ramp (Type B)”, Concrete Pedestrian Ramp (Type “B” - Retrofit)”,

4. <u>ITEMS OF WORK</u> (Continued)

Concrete Pedestrian Ramp (Caltrans Case 'C')." Concrete Quantities are indicated in the Pedestrian Ramp Schedule as shown on the detail sheets of the construction plans

The contract unit price paid for **each** pedestrian ramp shall include full compensation for furnishing all labor, tools, materials, and equipment, all grading, hauling, placement of aggregate base, and for doing all the work involved in constructing the concrete facilities, including: sawcutting, excavation, and removal of existing concrete and structural section material; placement of asphalt concrete adjacent to new concrete construction, where required: setting forms and grades as shown on the plans; and back filling behind pedestrian ramp for final grading, all as specified in the Standard Specifications, and these Special Provisions , shown on the plans, or determined by the Engineer. Pay limits for the items "Concrete Pedestrian Ramp (Type B)", Concrete Pedestrian Ramp (Type B Retrofit)", and "Concrete Pedestrian Ramp (Caltrans Case 'C') " shall be as shown on the plans.

<u>Bid Item Nos. A25 & B37) Concrete Curb & Gutter (Butte Co. Std. S-1):</u>

Concrete Curb & Gutter shall conform to the provisions in Section 73-1 "Concrete Curbs and Sidewalks," of the Standard Specifications, these Special Provisions, and as shown on the plans, including Butte County Standards S-1 & S-2 as shown in the "Butte County Improvement Standards," dated October 2006.

The unit price paid for the item "Concrete Curb and Gutter (Butte Std. S-1)", shall be by the linear foot and shall include full compensation for furnishing all labor, tools, materials, and equipment, all grading, placement of aggregate base, and for doing all the work involved in constructing the concrete facilities, as specified in the Standard Specifications, in these Special Provisions, and as shown on the plans or as determined by the Engineer. Pay limits for the item "Concrete Curb and Gutter (Butte Std. S-1)" shall be as shown on the plans or as directed by the Engineer.

<u>Bid Item Nos. A26 & B38) Concrete Sidewalk (4" Thickness):</u>

Concrete Sidewalk conform to the provisions in Section 73-1 "Concrete Curbs and Sidewalks," of the Standard Specifications, these Special Provisions, and as shown on the plans, including Butte County Standard S-1 as shown in the "Butte County Improvement Standards," dated October 2006.

The unit price paid for the item "Concrete Sidewalk ($" Thickness)", shall be by the square foot and shall include full compensation for furnishing all labor, tools, materials, and equipment, all grading, compaction, placement of aggregate base, and for doing all the work involved in constructing the concrete facilities, setting forms and grades, and reinstalling existing signs and installing any additional signage as may be indicted on the plans and provided by the County as specified in the Standard Specifications, these Special Provisions and as shown on the plans or as determined by the Engineer shall be included in the contract unit price paid for the item "Concrete Sidewalk (4 "Thickness)," and no additional payment will be made therefore. Pay limits for the item "Concrete Sidewalk (4" Thickness)" shall be as shown on the plans or as directed by the Engineer.

4. <u>ITEMS OF WORK</u> (Continued)

<u>Bid Item Nos. A27 & B39) Sidewalk Under Drain:</u>

Sidewalk under drains shall be constructed per the Sidewalk Under Drain Detail as shown on the detail sheet of the construction plans, and at locations per the Engineer's desecration. Conditions that warrant a sidewalk drain will be where the elevation of existing ground may be consistently lower than the back of sidewalk, or where a drainage problem may be determined after commencement of construction.

The contract unit price paid for each installation of a Sidewalk Under Drains shall include full compensation for furnishing all the labor, materials, tools, and equipment needed, as directed by the Engineer, and shall be included in the contract item "Sidewalk Under Drain", and no additional compensation will be allowed therefore.

It shall be noted that Sidewalk Under Drains will be optional and will be on an "As Needed" basis, as determined by the Engineer, and will not be subject section 4-1.03B of the Standard Specifications.

<u>Bid Item No. B40) Grind Concrete Sidewalk (4-Foot Width):</u>

All trip hazards protruding 3/16" or more from the existing sidewalk surface shall be ground smooth by means of a mechanical concrete grinder. Existing sidewalks that are broken during the grinding process by shaving too much from the surface in a single pass shall be replaced by the Contractor at no additional cost. If the sidewalk is currently cracked and heaving before grinding is attempted, and the grinder damages it, the entire square shall be replaced at the County's expense. A square shall be defined as that entire concrete sidewalk section between surface joints. All grinds shall be uniform and shall have a straight back line with no adjacent scaring with a 2" max grind depth. If any grinding results in excessive scaring, excessive depth of grind, or angled back lines, the section shall be replaced at the Contractor's expense, as determined by the Engineer.

The unit price paid for the item "Grind Concrete Sidewalk (4-Foot Width)," shall be by the square foot and shall include full compensation for furnishing all labor, tools, materials, and equipment for doing all the work involved in Grinding Concrete Sidewalks, as specified in the Standard Specifications, in these Special Provisions and as shown on the plans or as determined by the Engineer. Pay limits for the item "Grind Concrete Sidewalk (4-Foot Width)" shall be as shown on the plans or as determined in the field by the Engineer.

<u>Bid Item No. B41) Masonry Pillars:</u>

The existing masonry pillars located at 52+98/36.6' Lt, 53+15/36.2' Lt, 53+93/33.6' Lt, and 54+07/33.6' Lt, on Lower Wyandotte Road, shall be removed during construction along with the fencing as part of the contract item for "Clearing and Grubbing." New Masonry Pillars shall be re-constructed at 37.0' Lt on the same stationing that they previously occupied. Existing lighting fixtures on the pillars shall be preserved and protected and later remounted and electrically reconnected in like positions on the newly located pillars. All lighting fixtures, if damaged, shall be replaced with the same or better quality fixtures, including full operational status. All existing

4. <u>ITEMS OF WORK</u> (Continued)

gates shall be removed, protected and preserved, then re-mounted on the pillars at the newly relocated positions. If the gates are damaged during construction, they shall be replaced by the Contractor with equal or better quality materials than existing. The gates shall also be re-mounted to equal their existing operational status, or better.

<u>Miscellaneous electrical conduit and wiring</u>

The existing wiring for fixtures located within the limits of the masonry pillars at Stations 52+98/36.6' Lt, 53+15/36.2' Lt, 53+93/33.6' Lt, and 54+07/33.6' Lt on Lower Wyandotte Road, and currently being threaded through the existing drainage pipe at Station 54+00 Lt on lower Wyandotte Road, shall be re-routed through new 4" conduit to cross under the new driveway portions. All lighting fixtures and wiring at or behind the Right-of-Way, within the Temporary Construction Easement (TCE), shall be preserved and protected and relocated if required. If any fixtures and/or wiring are damaged by the Contractor, it shall be replaced at the Contractor's expense. All wiring and/or fixtures shall be replaced to equal or better quality than existing and in compliance with current UUL and Uniform Building Code Specifications.

The contract price paid per each for "Masonry Pillars" shall include full compensation for furnishing all the labor, materials, tools, and equipment needed for the construction of the masonry pillars, including: installing gate hinges; re-mounting or replacing existing gates; remounting and re-wiring existing or replacement lighting fixtures; installing new 4" electrical conduits and electrical wiring; and reconnecting the affected existing landscape lighting, and no additional compensation will be allowed therefore.

<u>Bid Item Nos. A28 & B42) 4" Thermoplastic Traffic Stripe and A29 & B43) Thermoplastic Markings:</u>

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.

The Detail 22 Centerline Striping shown on the plans for Lower Wyandotte Road from Forest View Drive to the north end of the project (deemed temporary for this phase of the project) shall be traffic paint conforming to the provisions in Sections 84-3, "Painted Traffic Stripes and Pavement Markings," of the Standard Specifications and these Special Provisions, in-lieu of thermoplastic, but paid at the same unit price per linear foot as 4" Thermoplastic Traffic Stripe per these Special Provisions, or as otherwise determined by the Engineer.

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

Measurement for payment for all striping details shall be paid for in equivalent 4" width per lineal foot per Section 84-2.05 of the Standard Specifications, and these Special Provisions.

4. <u>ITEMS OF WORK</u> (Continued)

Grinding to eliminate existing conflicting striping shall be paid for in the contract item "Clearing & Grubbing." Removal of yellow striping shall be in conformance with these Special Provisions.

Thermoplastic lettering stencils shall have the same dimensions as the pursuant to those shown in the State of California, Department of Transportation's Standard Plans, in these Special Provisions, and on the construction drawings, or as otherwise determined by the Engineer. Traffic arrows shall be of the dimensions pursuant to those shown in the State of California, Department of Transportation's Standard Plans, in these Special Provisions, and on the construction drawings, or as otherwise determined by the Engineer.

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 per lineal foot of 4-inch Thermoplastic Stripe and per square foot for 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 in accordance with Section 84-2.06, "Payment," of the Standard Specifications, and no additional compensation will be allowed therefore.

<u>Bid Item Nos. A30 & B44) Pavement Markers (Retroreflective):</u>

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.

During 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 retroreflective 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.

4. <u>ITEMS OF WORK</u> (Continued)

<u>Bid Item Nos. A31 & B45) Adjust Manhole Covers to Grade:</u>

Upon completion of the final lift of paving, all manhole rims, covers, and associated hardware located within the limits of work and/or as shown on the construction plans shall be adjusted to grade and paved to match the finished surface. The existing covers and all related portions of the structure shall be preserved and protected before and during the process. All manhole assemblies that are damaged by the Contractor shall be replaced at the Contractors expense.

The unit price paid for adjusting each manhole to grade shall include full compensation for furnishing all the labor, materials, tools, and equipment required and shall be included in the contract item "Adjust Manholes to Grade", and no additional compensation will be allowed therefore.

<u>Bid Item Nos. A31 & B45) Adjust Water Valves to Grade:</u>

Upon completion of the final lift of paving, all water valve boxes, covers, and associated hardware located within the limits of work and/or as shown on the construction plans shall be adjusted to grade and paved to match the finished surface in accordance with the requirements of . The existing covers and all related portions of the structure shall be preserved and protected before and during the process.

All damaged portions of the valve box and cover assemblies that are damaged by the Contractor shall be replaced at the Contractor's expense.

The unit price paid for adjusting each required valve box and cover assembly to grade shall include full compensation for furnishing all the labor, materials, tools, and equipment needed and shall be included in the contract item "Adjust Water Valves to Grade", and no additional compensation will be allowed therefore.

<u>Bid Item No. A33) Adjust SS Cleanouts to Grade:</u>

Upon completion of the final lift of paving, all SS Cleanouts, and associated hardware shall be adjusted to grade and paved to match the finished surface. The existing boxes, covers, and all related portions of the structure shall be preserved and protected before and during the process. All damaged portions of the SS Cleanout assemblies that are damaged by the Contractor shall be replaced at the Contractors expense.

The unit price paid for adjusting each required SS Cleanout assembly to grade shall include full compensation for furnishing all the labor, materials, tools, and equipment needed and shall be included in the contract item "Adjust SS Cleanouts to Grade", and no additional compensation will be allowed therefore.

4. <u>ITEMS OF WORK</u> (Continued)

<u>Bid Item Nos. A34 & B47) Adjust Monument Wells to Grade:</u>

Upon completion of the final lift of paving, all monument wells and associated hardware shall be adjusted to grade and paved or regarded to match the finished surface. Three days prior to completing any work on the monument wells, the Butte County Public Works Department shall be contacted and notified that the work is going to take place. All monument wells shall be tied out and referenced with four straddling nails before any additional work is to be completed. The existing covers and all related portions of the structure shall be preserved and protected before and during the process. All monument wells damaged by the Contractor shall be replaced at the Contractors expense.

The contract price paid for adjusting monument well assemblies to grade shall include full compensation for furnishing all the labor, materials, tools, and equipment needed as shown on the plans and as directed by the Engineer, and shall be included in the contract item "Adjust Monument Wells to Grade", and no additional compensation will be allowed therefore.

<u>Bid Item Nos. A35 & B48) Fencing – Chain Link (4-Foot High); B49) Fencing – Chain Link (5-Foot High); and A36 & B50) Fencing – Chain Link (6-Foot High).</u>

Fencing shall conform to the provisions in Section 15-2.05B, "Fences," and Section 80, "Fences," of the Standard Specifications, these Special Provisions, and/or as directed by the Engineer.

New fencing under these contract items shall be chain link with metal posts and shall comply with the provisions in Section 80-4, "Chain Link Fence," of the Standard Specifications, these Special Provisions, and/or as directed by the Engineer.

All existing fencing to be removed shall be replaced in like kind and construction or better.

All proposed fencing material, hardware and posts are subject to the "Buy America Requirements" of this contract and shall be approved by the Engineer prior to installation.

Braces shall be used at all angle points within the fencing limits. All metal posts shall be utilized for the construction of the fence.

The contract price paid per linear foot for the items "Fencing – Chain Link(4-Foot Height)", "Fencing – Chain Link (5-Foot Height)", and "Fencing – Chain Link (6-Foot Height)" shall include full compensation for furnishing all the labor, materials, tools, and equipment needed for the construction of the fencing in current soil conditions as noted, as shown on the plans or as directed by the Engineer, and no additional compensation will be allowed therefore.

4. <u>ITEMS OF WORK</u> (Continued)

<u>Bid Item No. A37) Fencing – WM Modified (5-Foot High):</u>

Fencing shall conform to the provisions in Section 15-2.05B, "Fences," and Section 80, "Fences," of the Standard Specifications, these Special Provisions, and/or as directed by the Engineer.

New fencing under this contract item shall be Type WM (modified) with metal posts and shall comply with the provisions in Section 80-3, "Types BW and WM Fence," of the Standard Specifications, these Special Provisions, and/or as directed by the Engineer.

The minimum width for the wire mesh fencing outlined in Section 80-3.01D, "Wire Mesh," of the Standard Specifications has been changed to 39 inches.

Where those property owners have small animals on the premises and the existing wire mesh has been installed to intentionally retain small animals, the new wire mesh dimensions shall match those of the existing fencing, or shall be reconstructed with an approved equal to those wire mesh openings that currently exist, per the approval of the Engineer.

The barbed wire mentioned in section 80-1.01, "Description" and Section 80-3.01C, "Barbed Wire," of the Standard Specifications shall be placed in two lines.

All proposed fencing material, hardware and posts are subject to the "Buy America Requirements" of this contract and shall be approved by the Engineer prior to installation.

Braces shall be used at all angle points within the fencing limits. All metal post shall be utilized for the construction of the fence.

The contract price paid per linear foot for the item "Fencing - Type WM (Modified)" shall include full compensation for furnishing all the labor, materials, tools, and equipment needed for the construction of the fencing in current soil conditions as noted, as shown on the plans or as directed by the Engineer, and no additional compensation will be allowed therefore.

<u>Bid Item Nos. A38 & B51) Fencing – (Temporary):</u>

Temporary fencing shall be placed by preserving and salvaging the existing fencing to be removed and re-using it for those locations designated for temporary fencing as designated by the temporary fencing schedules on the plans and as directed by the Engineer. All locations designated as temporary fenced areas shall be made resistant for small animals. Existing gates shall be re-used where feasible. If existing gates will not suffice, new gates shall be supplied and shall be hung on a temporary basis, then on a final basis upon completion of the project.

The contract price paid per linear foot for the items "Fencing (Temporary)" shall include full compensation for furnishing all the labor, materials, tools, and equipment needed for the construction of the fencing and hanging gates, and no additional compensation will be allowed therefore.

4. ITEMS OF WORK (Continued)

Bid Item Nos. A39 & B52) Temporary Straw Mulch:

GENERAL

Summary

This work includes applying, maintaining, and removing temporary tacked straw. Tacked straw uses a mixture of tackifier, fiber, and water to stabilize active and non-active disturbed soil areas.

The SWPPP must describe and include the use of temporary tacked straw as a water pollution control practice for soil stabilization.

Submittals

At least 5 business days before applying tacked straw, submit:

1. Material Safety Data Sheet for the tackifier.
2. Product label describing the tackifier as an erosion control product.
3. List of pollutant indicators and potential pollutants for the use of temporary tacked straw. Pollutant indicators are described under "Sampling and Analysis Plan for Non-Visible Pollutants" in the Preparation Manual.
4. Determination of acute and chronic toxicity for aquatic organisms conforming to EPA methods for the tackifier.
5. Composition of ingredients including chemical formulation.

Submit a Certificate of Compliance as specified in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for:

1. Tackifier
2. Fiber

Quality Control and Assurance

Retain and submit records of temporary tacked straw applications including:

1. Compliance with specified rates
2. Application area
3. Application time
4. Quantity

MATERIALS

Tackifier

The tackifier must be:

1. Nonflammable
2. Nontoxic to aquatic organisms
3. Free from growth or germination inhibiting factors
4. Either a plant-based product or a polymeric-emulsion blend.

4. <u>ITEMS OF WORK</u> (Continued)

Tackifier classified as a plant-based product must be:

1. A natural high molecular weight polysaccharide
2. A high viscosity hydrocolloid that is miscible in water
3. Functional for at least 180 days
4. Labeled as either guar, psyllium, or starch

Guar must be:

1. A guar gum based product derived from the ground endosperm of the guar plant, cyanmopsis tetragonolobus
2. Treated with dispersant agents for easy mixing
3. Able to be diluted at the rate of 1 to 5 pounds per 100 gallons of water

Psyllium must be:

1. Made of the finely ground muciloid coating of plantago ovata or plantago ispaghula seeds.
2. Able to dry and form a firm but rewettable membrane

Starch must be a non-ionic, water-soluble granular material derived from corn, potato, or other plant-based source.

Tackifier classified as polymeric emulsion blend must be:

1. A liquid or dry powder formulation
2. Anionic with a residual monomer content that is at most 0.05 percent by weight
3. Functional for at least 180 days
4. A prepackaged product labeled as containing one of the following as the primary active ingredient of the polymeric emulsion blend:

    4.1 Acrylic copolymers and polymers
    4.2 Polymers of methacrylates and acrylates
    4.3 Copolymers of sodium acrylates and acrylamides
    4.4 Polyacrylamide (PAM) and copolymer of acrylamide
    4.5 Hydrocolloid polymers

Fiber

Fiber must be wood fiber, cellulose fiber, alternate fiber, or a combination of these fibers as specified. Fiber must be:

1. Free from lead paint, printing ink, varnish, petroleum products, seed germination inhibitors, or chlorine bleach
2. Free from synthetic or plastic materials
3. At most 7 percent ash

4. <u>ITEMS OF WORK</u> (Continued)

If wood fiber is specified, wood fiber must be:

1. Long strand, whole wood fibers, thermo-mechanically processed from clean, whole wood chips
2. Not made from sawdust, cardboard, paper, or paper byproducts
3. At least 25 percent of fibers 3/8 inch long
4. At least 40 percent held on a No. 25 sieve

If cellulose fiber is specified, cellulose fiber must be made from natural or recycled pulp fiber, such as wood chips, sawdust, newsprint, chipboard, corrugated cardboard, or a combination of these materials.

If alternate fiber is specified, alternate fiber must be:

1. Long strand, whole natural fibers made from clean straw, cotton, corn, or other natural feed stock
2. At least 25 percent of fibers 3/8 inch long
3. At least 40 percent held on a No. 25 sieve

Coloring Agent

Use a biodegradable, nontoxic coloring agent free from copper, mercury, and arsenic to ensure the tacked straw contrasts with the application area.

Straw

Straw must comply with Section 20-2.06, "Straw," of the Standard Specifications and be:

1. Rice, wheat, or barley. Wheat and barley straw must be derived from irrigated crops.
2. Free of plastic, glass, metal, rocks, and refuse or other deleterious material.

CONSTRUCTION

Application

Apply temporary straw mulch when an area is ready to receive temporary erosion control under "Move-in/Move-out (Use Temporary Straw Mulch)."

The quantity of tackifier in the mixture must be as recommended by the manufacturer.

The ratio of water to fiber and tackifier in the mixture must be as recommended by the manufacturer. The proportions of various erosion control materials may be changed by the Engineer to meet field conditions.

4. <u>ITEMS OF WORK</u> (Continued)

Apply tacked straw materials in separate applications in the following sequence:

1. Apply straw:

    1.1. At the rate of 2 tons per acre (slope measurement)
    1.2. To extend to the edge of retaining walls, dikes, paving and to within 4 feet from the flow line of paved and unpaved drainage ditches
    1.3. Using mechanical, pneumatic, or manual methods

2. Apply tackifier and fiber mixture:

    2.1.1. At application rate indicated:

Material	Application Rate lbs/acre
Wood Fiber	2000
Cellulose Fiber	100
Alternate Fiber	0

    2.2. During dry weather or at least 24 hours before predicted rain.

Do not apply tacked straw if:

1. Water is standing on or moving across the soil surface
2. Soil is frozen
3. Air temperature is below 40 ºF during the tackifier curing period unless allowed by the manufacturer and approved by the Engineer

Do not over-spray tacked straw onto the traveled way, sidewalks, lined drainage channels, or existing vegetation.

Maintenance

Reapply tacked straw within 24 hours of discovering visible erosion, unless the Engineer approves a longer period.

Temporary tacked straw disturbed or displaced by the Contractor's vehicles, equipment, or operations must be reapplied at the Contractor's expense.

Cleanup, repair, removal, disposal, or replacement due to improper installation or the Contractor's negligence are not included in the cost for performing maintenance.

Removal

Remove tacked straw by mechanically blending it into the soil with track laying equipment, disking, or other approved method.

4. ITEMS OF WORK (Continued)

MEASUREMENT AND PAYMENT

Temporary tacked straw is measured by the square yard from measurements along the slope of the areas covered by the tacked straw.

The contract item price paid per square yard for temporary tacked straw includes full compensation for furnishing all labor, materials (including straw, tackifier, and fiber), tools, equipment, and incidentals, and for doing all the work involved in applying temporary tacked straw, complete in place, including removal of tacked straw, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Bid Item Nos. A40 & B53) Temporary Fiber Roll:

GENERAL

Summary

This work includes constructing, maintaining, and removing temporary fiber roll.

The SWPPP must describe and include the use of temporary fiber roll as a water pollution control practice for sediment control.

Submittals

Submit a Certificate of Compliance as specified in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for fiber roll.

MATERIALS

Fiber Roll

Fiber roll must:

1. Last for at least one year after installation
2. Be Type 1 or Type 2

If specified, Type 1 fiber roll must be:

1. Made from an erosion control blanket:

    1.1. Classified by the Erosion Control Technology Council (ECTC) as ECTC 2D
    1.2. With a Universal Soil Loss Equation (USLE) C-Factor of not more than 0.20 at a 2:1 (horizontal:vertical) slope
    1.3. Capable to withstand a maximum shear stress of 1.75 pounds per square foot under ASTM D 6460
    1.4. With a minimum tensile strength of 75 pounds per foot under ASTM D 5035

4. <u>ITEMS OF WORK</u> (Continued)

1.5. With top and bottom surfaces covered with extruded photodegradable plastic netting or lightweight non-synthetic netting
1.6. That complies with one of the following:

1.6.1. Double net straw and coconut blanket with 70 percent straw and 30 percent coconut fiber
1.6.2. Double net excelsior blanket with 80 percent of the wood excelsior fibers being 6 inches or longer

2. Rolled along the width
3. Secured with natural fiber twine every 6 feet and 6 inches from each end
4. Finished to be either:

4.1. From 8 to 10 inches in diameter, from 10 to 20 feet long, and at least 0.5 pounds per linear foot
4.2. From 10 to 12 inches in diameter, at least 10 feet long, and at least 2 pounds per linear foot

If specified, Type 2 fiber roll must:

1. Be filled with rice or wheat straw, wood excelsior, or coconut fiber

2. Be covered with photodegradable plastic netting or a biodegradable jute, sisal, or coir fiber netting
3. Have the netting secured tightly at each end

4. Be finished to be either:

4.1. From 8 to 10 inches in diameter, from 10 to 20 feet long, and at least 1.1 pounds per linear foot

4.2. From 10 to 12 inches in diameter, at least 10 feet long, and at least 3 pounds per linear foot

Wood Stakes

Wood stakes must be:

1. Untreated fir, redwood, cedar, or pine and cut from sound timber

2. Straight and free of loose or unsound knots and other defects which would render the stakes unfit for use
3. Pointed on the end to be driven into the ground

4. <u>ITEMS OF WORK</u> (Continued)

For fiber roll, wood stakes must be at least:

1. 1" x 1" x 24" in size for Type 1 installation
2. 1" x 2" x 24" in size for Type 2 installation

Rope

For Type 2 installation, rope must:

1. Be biodegradable, such as sisal or manila
2. Have a minimum diameter of 1/4 inch

CONSTRUCTION

Before placing fiber roll, remove obstructions including rocks, clods, and debris greater than one inch in diameter from the ground.

If fiber roll is to be placed in the same area as erosion control blanket, install the blanket before placing the fiber roll. For other soil stabilization practices such as hydraulic mulch or compost, place the fiber roll and then apply the soil stabilization practice.

Place fiber roll on slopes at the following spacing unless the plans show a different spacing:

1. 10 feet apart for slopes steeper than 2:1 (horizontal:vertical)
2. 15 feet apart for slopes from 2:1 to 4:1 (horizontal:vertical)
3. 20 feet apart for slopes from 4:1 to 10:1 (horizontal:vertical)
4. 50 feet apart for slopes flatter than 10:1 (horizontal:vertical)

Place fiber roll approximately parallel to the slope contour. For any 20 foot section of fiber roll, do not allow the fiber roll to vary more then 5 percent from level.

Type 1 and Type 2 fiber roll may be installed using installation method Type 1, Type 2, or a combination:

For installation method Type 1, install fiber roll by:

1. Placing in a furrow that is from 2 to 4 inches deep
2. Securing with wood stakes every 4 feet along the length of the fiber roll
3. Securing the ends of the fiber roll by placing a stake 6 inches from the end of the roll
4. Driving the stakes into the soil so that the top of the stake is less then 2 inches above the top of the fiber roll

For installation method Type 2, install fiber roll by:

1. Securing with rope and notched wood stakes.
2. Driving stakes into the soil until the notch is even with the top of the fiber roll.

4. <u>ITEMS OF WORK</u> (Continued)

3. Lacing the rope between stakes and over the fiber roll. Knot the rope at each stake.
4. Tightening the fiber roll to the surface of the slope by driving the stakes further into the soil.

MAINTENANCE

Maintain temporary fiber roll to provide sediment holding capacity and to reduce runoff velocities.

Remove sediment deposits, trash, and debris from temporary fiber roll as needed or when directed by the Engineer. If removed sediment is deposited within project limits, it must be stabilized and not subject to erosion by wind or water. Trash and debris must be removed and disposed of as specified in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Maintain temporary fiber roll by:

1. Removing sediment from behind the fiber roll when sediment is 1/3 the height of the fiber roll above ground
2. Repairing or adjusting the fiber roll when rills and other evidence of concentrated runoff occur beneath the fiber roll.
3. Repairing or replacing the fiber roll when they become split, torn, or unraveled
4. Adding stakes when the fiber roll slump or sag
5. Replacing broken or split wood stakes

Repair temporary fiber roll within 24 hours of discovering damage unless the Engineer approves a longer period.

If your vehicles, equipment, or activities disturb or displace temporary fiber roll, repair temporary fiber roll at your expense.

The Department does not pay maintenance costs for cleanup, repair, removal, disposal, or replacement due to improper installation or your negligence.

REMOVAL

When the Engineer determines that temporary fiber roll is not required, they must be removed and disposed of under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary fiber roll must be backfilled and repaired under Section 15-1.02, "Preservation of Property," of the Standard Specifications.

4. <u>ITEMS OF WORK</u> (Continued)

MEASUREMENT AND PAYMENT

Temporary fiber roll is measured by the linear foot along the centerline of the installed roll. Where temporary fiber roll is joined and overlapped, the overlap is measured as a single installed roll.

The contract price paid per linear foot for temporary fiber roll includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the temporary fiber roll, complete in place, including removal of materials, cleanup and disposal of retained sediment and debris, and backfilling and repairing holes, depressions and other ground disturbance, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer .

<u>Bid Item Nos. A41 & B54) Street Sweeping:</u>

Street sweeping shall be conducted where sediment is tracked from the job site onto paved roads, as described in the approved Storm Water Pollution Prevention Plan (SWPPP) in accordance with "Water Pollution Control" of these Special Provisions, and as directed by the Engineer.

Street sweeping shall be one of the water pollution control practices for sediment control. The SWPPP shall include the use of street sweeping. Street sweeping shall be performed in accordance with Section 4, SC-7 in the Construction Site Best Management Practices Manual of the Caltrans Storm Water Quality Handbooks.

The number of street sweepers shall be as designated in the approved SWPPP. The Contractor shall maintain at least one sweeper on the site at all times during the period that sweeping work is required. Sweepers shall be self- loading, motorized, and shall have spray nozzles. Sweepers may include a vacuum apparatus.

Street sweeping shall start at the beginning of clearing and grubbing and shall continue until completion of the project, or as directed by the Engineer.

Street Sweeping shall be performed immediately after soil disturbing activities occur or offsite tracking of material is observed. Street sweeping shall be performed so that dust is minimized. If dust generation is excessive or sediment pickup is ineffective, as determined by the Engineer, the use of water vacuum will be required.

At the option of the Contractor, collected material may be temporarily stockpiled in accordance with the approved SWPPP. Collected material shall be disposed of at least once per week.

Material collected during street sweeping operations shall be disposed of in conformance with Section 7-1.13 "Disposal of Material Outside of The Highway Right-of-Way" of the Standard Specifications.

4. ITEMS OF WORK (Continued)

The contract lump sum price paid for "Street Sweeping" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in street sweeping, including disposal of collected material, as shown on the plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

Bid Item Nos. A42 & B55) Wind Erosion Control:

Wind erosion control shall be used to minimize blowing dust and erosion control for any stockpiling including trench stockpiling for storm drains. Wind erosion control shall be accomplished by applying either water or dust palliative, or both, in conformance with Section 10 "Dust Control" of the Standard Specifications, and as determined by the Engineer.

The contract lump sum price paid for "Wind Erosion Control" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in "Wind Erosion Control", including watering and placing dust palliative, as shown on the plans, as specified in the Standard Specifications, as shown in these special provisions, and as directed by the Engineer.

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.

5. REGULATORY AGENCIES, LICENSING, AND PERMITTING:

The Contractor shall conform to the provisions and requirements of the Mitigation Monitoring and Reporting Programs of the separate Mitigated Negative Declarations and the separate requirements of the following agencies for both Monte Vista Avenue and Lower Wyandotte Road:

California Regional Water Quality Control Board (CRWQCB)
Department of Fish & Game (DF&G)*
Army Corps of Engineers (ACOE)
Western Area Power Administration (WAPA)

***Note:**

Fish and Game requires a signature sheet to be signed and returned to Butte County Public Works prior to the commencement of work for both streets.

5. REGULATORY AGENCIES, LICENSING, AND PERMITTING (Continued)

The Contractor shall fully inform himself of all rules, regulations, agreements, mitigation, and conditional requirements that may govern his operations for the project prior to the commencement of any activities on the site. The Mitigation Monitoring and Reporting Program and all permits which outline said requirements, are attached to these specifications as found in Appendix A in the following order.

Appendix A – Licensing and Permitting

Monte Vista Avenue SRTS Improvements

1. **Mitigated Negative Declaration dated April 8, 2008 and the Mitigation Monitoring and Reporting Program thereof**
2. **401 Clean Water Act Permit and Conditions**
3. **404 Army Corp. of Engineers Permit and Conditions**
4. **1600 Fish & Game Stream Alteration Agreement and Conditions**
5. **WAPA License Agreement**

Lower Wyandotte Road SR2S Improvements

6. **Mitigated Negative Declaration dated April 8, 2008 and the Mitigation Monitoring and Reporting Program thereof**
7. **401 Clean Water Act Permit and Conditions**
8. **404 Army Corp. of Engineers Permit and Conditions**
9. **1600 Fish & Game Stream Alteration Agreement and Conditions**

Such items or actions required of the Contractor per the above mentioned rules, regulations, agreements, mitigation, and conditional requirements and/or that additionally required by the plans, Standard Specifications, these Special Provisions, or the Engineer shall be performed, placed, constructed, or installed in accordance with the order of work and included in the various contract items, particularly that for Construction Site Management, and no additional compensation will be allowed therefore.

6. REFERENCED STANDARDS

Except as otherwise indicated, the current editions of the following Specifications and Standards shall apply to the Items of Work of this Section, where applicable:

SSPC Steel Structures Painting Council,
4516 Henry Street, Pittsburgh, PA 15213.

NACE NACE International, the Corrosion Society,
1440 South Creek Drive, Houston, TX 77084.

6. REFERENCED STANDARDS (Continued)

SSPC Steel Structures Painting Council,
4516 Henry Street, Pittsburgh, PA 15213.

NACE NACE International, the Corrosion Society,
1440 South Creek Drive, Houston, TX 77084.

ASTM American Society for Testing Materials, 100 Barr Harbor Drive,
West Conshohocken, PA 19428-2959.

ANSI/AWWA American Water Works Association,
6666 West Quincy Ave., Denver, CO 80235.

TT-S230 type II Federal Specifications

Occupational Safety and Health Standards:

29 CFR Codes of Federal Regulations Title 29, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

Part 1926 - Safety and Health Regulations for Construction

EPA - Environmental Protection Agency Standards:

40 CFR Code of Federal Regulations Title 40, Environmental Protection Agency

Part 50 - National primary and secondary ambient air quality standards

Part 60 - Standards of performance for new stationary sources.

Part 262 - Standards applicable to generators of hazardous waste.

Part 263 - Standards applicable to transporters of hazardous waste.

Part 264 - Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities.

Part 264 - Interim status standards for owners and operators of hazardous waste treatment, storage, and disposal facilities.

Part 268 - Land disposal restrictions.

Part 300 - National Oil and Hazardous Substances Pollution Contingency Plan.

6. REFERENCED STANDARDS (Continued)

Part302 - Designation, reportable quantities, and notification.

EPA - Environmental Protection Agency Standard Tests:

Method 1311 Toxicity Characteristic Leaching Procedure (TCLP).

SW 846 Test Methods for Evaluating Solid Waste Physical/Chemical Methods