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**\*\* WARNING \*\* WARNING \*\* WARNING \*\* WARNING \*\***  
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October 5, 2007

11-SD-905-4.7/9.2,10.8  
11-274804  
ACNH-A905(018)E

Addendum No. 4

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in SAN DIEGO COUNTY IN SAN DIEGO FROM 0.3 KM WEST OF ROUTE 905/5 SEPARATION TO 0.9 KM EAST OF ROUTE 905/805 SEPARATION AND AT 0.4 KM WEST OF HARVEST ROAD.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on October 25, 2007. The original bid opening date was previously postponed under Addendum No. 3 dated September 21, 2007.

This addendum is being issued to set a new bid opening date as shown herein and revise the Project Plans, the Notice to Contractors and Special Provisions, the Proposal and Contract, the Federal Minimum Wages with Modification Number 13 dated 9-28-07, and provide a revised copy of the Information Handout.

The location description throughout the Notice to Contractors and Special Provisions and Proposal and Contract is revised as follows:

"FOR CONSTRUCTION ON STATE HIGHWAY IN SAN DIEGO COUNTY IN SAN DIEGO FROM  
0.3 KM WEST OF ROUTE 905/5 SEPARATION TO 0.9 KM EAST OF ROUTE 905/805 SEPARATION  
AND AT CALIENTE AVENUE"

The district, route, and kilometer post project limits description throughout the Notice to Contractors and Special Provisions and Proposal and Contract is revised from "11-SD-905-4.7/9.2, 16.9" to "11-SD-905-4.7/9.2,10.8."

Project Plan Sheets 1, 21, 22, 23, 24, 25, 26, 27, and 28 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

In the Special Provisions, Section 5-1.17 "PROJECT INFORMATION," in the second paragraph, item A is revised as follows:

"A. Geotechnical Report for Slurry Basins (Revised September 13, 2007)."

11-SD-905-4.7/9.2,10.8  
11-274804  
ACNH-A905(018)E

In the Special Provisions, Section 5-1.22 "PALEONTOLOGY," is added as attached.

In the Special Provisions, Section 10-1.04, "TEMPORARY PORTLAND CEMENT CONCRETE (PCC) GRINDING RESIDUE FACILITY," is revised as attached.

In the Special Provisions, Section 10-1.10, "COOPERATION," is revised as attached.

In the Proposal and Contract, the Engineer's Estimate Items 4 and 7 are revised as attached.

To Proposal and Contract book holders:

Replace page 3 of the Engineer's Estimate in the Proposal with the attached revised page 3 of the Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

Attached is a copy of the revised Information Handout.

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the NOTICE TO CONTRACTORS section of the Notice to Contractors and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This office is sending this addendum by GSO overnight mail to Proposal and Contract book holders to ensure that each receives it. A copy of this addendum and the modified wage rates are available for the contractor's use on the Internet Site:

**[http://www.dot.ca.gov/hq/esc/oe/weekly\\_ads/addendum\\_page.html](http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html)**

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL, Chief  
Office of Plans, Specifications & Estimates  
Division of Engineering Services - Office Engineer

Attachments

### **5-1.22 PALEONTOLOGY**

Attention is directed to the California Public Resources Code Section 5097.5, which protects vertebrate paleontological sites or other paleontological features situated on public lands. In compliance with the California Environmental Quality Act (CEQA) requirements a Paleontologist will monitor the excavation within the project limits to salvage fossil specimens as necessary during construction within the project limits.

A Paleontologist will be provided by the State for this project.

The Contractor shall provide the Engineer with a schedule of excavation operations within the project limits in writing at least 15 working days prior to construction and update the schedule as needed. The Contractor shall notify the Engineer 15 days in advance of the start of excavation operations.

If fossils are discovered, the Engineer may temporarily divert or suspend the excavation operations until the Paleontologist completes the salvage and removal of the fossil specimens.

All fossil specimens salvaged from within the State Right of Way shall remain the property of the State.

A delay due to paleontological monitoring or the salvage and removal of fossil specimens, when ordered by the Engineer, will be considered a temporary suspension of work, in accordance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications.

Any additional excavation required due to the discovery of paleontological remains, when ordered by the Engineer will be paid for as extra work as provided in Section 4-1.03, "Extra Work," of the Standard Specifications.

#### **10-1.04 TEMPORARY PORTLAND CEMENT CONCRETE (PCC) GRINDING RESIDUE FACILITY**

Temporary portland cement concrete (PCC) grinding residue facility may be used to dry the material before disposal outside the highway right of way. The Contractor shall dispose of PCC pavement grinding residues in accordance with "Disposal of PCC Pavement Grooving and Grinding Residues", of these special provisions.

Temporary PCC grinding residue facility includes constructing, maintaining and later removing facility, and restoring the site to its original condition, at the location shown on the plans, in conformance with "Water Pollution Control" of these special provisions, and in conformance with details shown on the plans and these special provisions.

The Contractor may elect to use a grinding slurry separator that uses the reverse osmosis or other method of drying. If the Contractor elects to use the grinding slurry separator it will be paid for at the lump sum price paid for the temporary portland cement concrete (PCC) grinding residue facility.

Or the Contractor may re-design the temporary PCC grinding residue facility for economic or operational reasons upon obtaining the Engineer's approval. The new design shall adhere to the Department Statewide NPDES Permit (Order 99-06-DWQ) without seepage, spills, or overflow. The Contractor shall submit the temporary PCC grinding residue facility re-design to the Engineer showing the new parameters with supporting calculations of proposed production rates, the water used and pan evaporation rates. Evaporation rates can be obtained from several sources such as the California Department of Water Resources "Eton Zone Maps" at:

<http://www.cimis.water.ca.gov/cimis/info.jsp>

The re-design of the facility shall account for the following factors:

1. Traffic safety.
2. Security fencing and locked access to prevent intrusion and illicit discharges of other waste.
3. The same freeboard depth as shown on the plans.
4. The minimum height of the berms as shown on the plans at the lower elevation of the parcel to contain residue in case of an overflow.
5. Implementation of the appropriate temporary construction site BMPs as shown on the plans.
6. Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary PCC grinding residue facility shall be backfilled and be repaired in conformance with the provisions in Section 15-1.02, "Preservation of Property," of the Standard Specifications.

The Contractor shall allow 15 days for the Engineer to review the re-design of the temporary PCC grinding residue facility. If revisions are required, the Engineer will provide comments and specify the date that the review stopped. The Contractor shall revise and resubmit the re-design within 7 days of receipt of the Engineer's comments. The Contractor shall have 3 days to address comments and resubmit revisions.

The Contractor may propose to use other drying techniques for the PCC grinding residue after getting the Engineer's Approval. Any proposed methodologies shall adhere to the Department's Statewide NPDES Permit Order 99-06-DWQ. The Contractor may elect to use separation techniques as described in the Department Field Guide to Construction Site Dewatering (October 2001) found at:

<http://www.dot.ca.gov/hq/construc/stormwater/DewateringGuide.pdf>

Temporary PCC grinding residue facility shall be one of the water pollution control practices for waste management and materials pollution control. The Storm Water Pollution Prevention Plan shall include the use of temporary PCC grinding residue facility.

Dewatering of temporary PCC grinding residue facility to avoid overflow during rain events shall conform to the provisions in "Construction Site Management" of these special provisions.

Decanted water in the temporary PCC grinding residue facility may be re-used for grind existing concrete pavement work, if the sediment from the PCC residue has settled in the bottom of the facility and it will not be disturbed by the removal of the water. Sediment shall be considered settled in the bottom when sediment is visually defined in the facility.

## **COST BREAK-DOWN**

The Contractor shall furnish the Engineer a cost break-down for the contract lump sum item of temporary PCC grinding residue facility. The cost break-down table shall be submitted to the Engineer for approval within 15 working days after the contract has been approved. The cost break-down table will be approved, in writing, by the Engineer before any partial payment will be made for the item of temporary PCC grinding residue facility.

Attention is directed to "Time-Related Overhead" of these special provisions regarding compensation for time-related overhead.

The cost break-down shall be completed and furnished in the format shown in the sample of the cost break-down included in this section. Line item descriptions of work shown in the samples are the minimum to be submitted. Additional line item descriptions of work may be designated by the Contractor. If the Contractor elects to designate additional line item descriptions of work, the quantity, value and amount for those line items shall be completed in the same manner as for the line item descriptions shown in the samples. The line items and quantities given in the sample are to show the manner of preparing the cost break-down to be furnished by the Contractor.

The Contractor shall determine the quantities required to complete the work shown on the plans. The quantities and their values shall be included in the cost break-down submitted to the Engineer for approval. The Contractor shall be responsible for the accuracy of the quantities and values used in the cost break-down submitted for approval.

The sum of the amounts for the line items of work listed in the cost break-down table for temporary PCC grinding residue facility work shall be equal to the contract lump sum price bid for the work. Overhead and profit, except for time-related overhead, shall be included in each individual line item of work listed in the cost break-down table.

No adjustment in compensation will be made in the contract lump sum price paid for temporary PCC grinding residue facility due to differences between the quantities shown in the cost break-down table furnished by the Contractor and the quantities required to complete the work as shown on the plans and as specified in these special provisions.

Individual line item values in the approved cost break-down table will be used to determine partial payments during the progress of the work and as the basis for calculating an adjustment in compensation for the contract lump sum item of temporary PCC grinding residue facility due to changes in line items of work ordered by the Engineer. When the total value of ordered changes to line items of work increases or decreases the lump sum price bid for temporary PCC grinding residue facility by more than 25 percent, the adjustment in compensation will be determined in the same manner specified for increases and decreases in the total pay quantity of an item of work in Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications.

At the Engineer's discretion, the approved cost break-down may be used to determine partial payments during the progress of the work and as the basis of calculating the adjustment in compensation for the item or items of temporary PCC grinding residue facility work due to changes ordered by the Engineer. When an ordered change increases or decreases the quantities of an approved cost break-down, the adjustment in compensation may be determined, at the Engineer's discretion, in the same manner specified for increases and decreases in the quantity of a contract item of work in Section 4-1.03B, "Increased or Decreased Quantities."

The cost breakdown shall, as a minimum, include the following items:

**TEMPORARY PORTLAND CEMENT CONCRETE (PCC) GRINDING RESIDUE FACILITY  
COST BREAK-DOWN**

**Contract No. 11-274804**

UNIT DESCRIPTION	UNIT	APPROXIMATE QUANTITY	VALUE	AMOUNT
ROADWAY EXCAVATION	M3	6,190		
IMPORTED BORROW	M3	560		
GEOMEMBRANE (BASIN LINER)	M2	8,400		
SIGN	EA	1		
ROCK SLOPE PROTECTION	M3	27		
ROCK SLOPE PROTECTION FABRIC	M2	36		
TEMPORARY SILT FENCE	M	420		
FIBER ROLLS	M	620		
EROSION CONTROL (TYPE D)	M2	29,700		

**TOTAL** \_\_\_\_\_

## **EARTHWORK**

Earthwork shall conform to Section 19, "Earthwork", of the Standard Specifications and as directed by the Engineer and these special provisions.

### **Embankment Construction**

Embankment construction consists of constructing temporary PCC grinding residue facility perimeter embankments, and earth berm at the location shown on the plans.

### **Backfill**

Basins excavated for the construction of the temporary PCC grinding residue facility, and ground disturbances caused by the construction of the facility, when no longer needed and when directed by the Engineer, shall be backfilled with embankment material, and shall be repaired to original grade in conformance with the provisions in Section 15-1.02, "Preservation of Property," of the Standard Specifications.

### **Imported Borrow**

Imported borrow consists of the layer of imported borrow required to cover the geomembrane (Basin Liner), as shown on the plans. Imported borrow shall comply with "Geomembrane (Basin Liner)" of these special provisions.

## **GEOMEMBRANE (BASIN LINER)**

Geomembrane (Basin Liner) for this project shall be ultraviolet (UV) ray protected.

Geomembrane (Basin Liner) shall consist of furnishing, placing, anchoring geomembrane, placing and compacting layer of imported borrow over geomembrane, and removing and disposing of the geomembrane when the temporary PCC grinding residue facility is no longer required for the work, as shown on the plans and as directed by the Engineer.

Geomembrane shall be a single layer of 0.75 mm thick linear low density polyethylene. The geomembrane shall conform to the requirements in Geosynthetics Research Institute Standard GM-17. Geomembrane shall be resistant to non-acidic liquids.

The subgrade to receive the geomembrane shall be smooth and free of rocks and foreign objects that could puncture the geomembrane. The Contractor shall place the geomembrane free of wrinkles. The Contractor shall install the geomembrane by wedge welding the seams, or an equivalent method recommended by the manufacturer. Seams shall be lapped a minimum of 75 mm in width, and shall be watertight. When making seams, the contact surfaces of the geomembrane shall be free of loose or extraneous material and moisture before welding the seams. Seams shall be made so there are no loose edges. Geomembrane repairs shall be made using patches with rounded corners and large enough to cover the damaged area, and to meet the overlap requirement.

The layer of imported borrow over the geomembrane shall be placed, to the depth as shown on the plans, a maximum of 72 hours after the placement of the geomembrane.

The imported borrow shall meet the following gradation requirements:

Sieve Size	Percent Passing
9.5 mm	100
4.75 mm	80
600 µm	15

The imported borrow shall be compacted to at least 90 percent relative compaction in accordance with "Earthwork" of these special provisions.

The Contractor shall not drive equipment directly on top of the geomembrane. Damage to the geomembrane resulting from the Contractor's vehicles, equipment or operations shall be replaced or repaired by the Contractor at the Contractor's expense within 24 hours.

When the temporary PCC grinding residue facility is no longer required as determined by the Engineer, geomembrane and imported borrow shall be removed and disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

## **SIGN**

A sign shall be furnished, installed, maintained and removed when no longer required, at a location inside the temporary storage site determined by the Contractor and approved by the Engineer. The sign shall be installed in conformance with the provisions in Section 56-2.03, "Construction," and Section 56-2.04, "Sign Panel Installation," of the Standard Specifications.

Wood posts for sign shall conform to the provisions in Section 56-2.02B, "Wood Posts," of the Standard Specifications. Lag screws shall conform to the provisions in Section 56-2.02D, "Sign Panel Fastening Hardware," of the Standard Specifications.

Plywood shall be freshly painted for each installation with not less than 2 applications of flat white paint. Sign letters shown on the plans shall be stenciled with commercial quality exterior black paint. Testing of paint will not be required.

## **ROCK SLOPE PROTECTION**

Rock slope protection consists of furnishing, placing, and removing rock slope protection on areas shown on the plans, when no longer required. Rock slope protection shall comply with Section 72-2, "Rock Slope Protection", of the Standard Specifications.

## **ROCK SLOPE PROTECTION FABRIC**

Rock slope protection fabric consists of furnishing, placing, and removing engineering fabric on areas shown on the plans, when no longer required. Rock slope protection fabric shall comply with Section 88, "Engineering Fabrics", of the Standard Specifications and these special provisions.

Rock slope protection fabric for this project shall be ultraviolet (UV) ray protected.

## **TEMPORARY SILT FENCE**

Temporary silt fence shall be furnished, installed, maintained, and later removed at the locations shown on the approved Storm Water Pollution Prevention Plan (SWPPP) in conformance with "Water Pollution Control" of these special provisions, and in conformance with details shown on the plans and these special provisions.

Temporary silt fence shall be one of the water pollution control practices for sediment control. The SWPPP shall include the use of temporary silt fence.

## **MATERIALS**

Temporary silt fence shall either be prefabricated or constructed with silt fence fabric, posts, and fasteners.

### **Silt Fence Fabric**

Silt fence fabric shall be geotextile manufactured from woven polypropylene or polymer material. Silt fence fabric may be virgin, recycled, or a combination of virgin and recycled polymer materials. No virgin or recycled polymer materials shall contain biodegradable filler materials that can degrade the physical or chemical characteristics of the finished fabric. The Engineer may order tests to confirm the absence of biodegradable filler materials in conformance to the requirements in ASTM Designation: E 204 (Fourier Transformed Infrared Spectroscopy-FTIR).

Silt fence fabric shall conform to the following requirements:

Specification	Requirements
Width, mm, min.	900
Grab tensile strength (25-mm grip), kilonewtons, min. in each direction ASTM Designation: D 4632*	0.55
Elongation, percent minimum in each direction ASTM Designation: D 4632*	15
Permittivity, 1/sec., min. ASTM Designation: D 4491	0.05
Flow rate, liters per minute per square meter, min. ASTM Designation: D 4491	400
Ultraviolet stability, percent tensile strength retained after 500 hours, min. ASTM Designation: D 4355 (xenon-arc lamp and water spray weathering method)	70

\* or appropriate test method for specific polymer

### **Posts**

Posts for temporary silt fence shall be one of the following:

1. Untreated fir or pine, a minimum of 34 mm x 40 mm in size, and 1.2 m in length. One end of the post shall be pointed.
2. Steel and have a "U," "T," "L," or other cross sectional shape that can resist failure from lateral loads. The steel posts shall have a minimum mass per length of 1.1 kg/m and a minimum length of 1.2 m. One end of the steel posts shall be pointed and the other end shall be capped with an orange or red plastic safety cap which fits snugly to the steel post. The Contractor shall submit to the Engineer for approval a sample of the capped steel post before installation.

### **Fasteners**

Fasteners for attaching silt fence fabric to posts shall be as follows:

1. When prefabricated silt fence is used, posts shall be inserted into sewn pockets.
2. Silt fence fabric shall be attached to wooden posts with nails or staples as shown on the plans or as recommended by the manufacturer or supplier. Tie wire or locking plastic fasteners shall be used to fasten the silt fence fabric to steel posts. Maximum spacing of fasteners shall be 200 mm along the length of the steel post.

### **INSTALLATION**

Temporary silt fence shall be installed parallel with the slope contour in reaches not to exceed 150 m. A reach is considered a continuous run of temporary silt fence from end to end or from an end to an opening, including joined panels. Each reach shall be constructed so that the elevation at the base of the fence does not deviate from the contour more than 1/3 of the fence height.

The silt fence fabric shall be installed on the side of the posts facing the slope. The silt fence fabric shall be anchored in a trench as shown on the plans. The trench shall be backfilled and mechanically or hand tamped to secure the silt fence fabric in the bottom of the trench.

Mechanically pushing 300 mm of the silt fence fabric vertically through the soil may be allowed if the Contractor can demonstrate to the Engineer that the silt fence fabric will not be damaged and will not slip out of the soil resulting in sediment passing under the silt fence fabric.

The maximum post spacing may be increased to 3 m if the fence is reinforced by a wire or plastic material by prefabrication or by field installation. The field-assembled reinforced temporary silt fence shall be able to retain saturated sediment without collapsing.

Temporary silt fence shall be joined as shown on the plans. The tops of the posts shall be tied together by minimum of 2 wraps of tie wire of a minimum 1.5-mm diameter. The silt fence fabric shall be attached to the posts at the joint as specified in these special provisions.

When no longer required as determined by the Engineer, temporary silt fence shall be removed and disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications. Trimming the silt fence fabric and leaving it in place will not be allowed.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary silt fence shall be backfilled and repaired in conformance with the provisions in Section 15-1.02, "Preservation of Property," of the Standard Specifications.

### **MAINTENANCE**

Temporary silt fence shall be maintained to provide a sediment holding capacity of approximately 1/3 the height of the silt fence fabric above ground. When sediment exceeds this height or when directed by the Engineer, sediment shall be removed. The removed sediment shall be deposited within the project limits so that the sediment is not subject to erosion by wind or by water.

Temporary silt fence shall be repaired or replaced the same day the damage occurs. Damage to the temporary silt fence resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

## **MAINTENANCE OF FACILITY**

Security fencing, enclosing Area for Contractor's Use as shown on plans, shall be locked at all times to prevent intrusion and to prevent illicit discharge of other wastes in the temporary PCC grinding residue facility.

Temporary PCC grinding residue facility shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary PCC grinding residue facility resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

### **Freeboard**

Temporary PCC Grinding Residue Facility shall be maintained to provide adequate holding capacity with a minimum freeboard of 610 mm.

The freeboard shown on the plans for the temporary PCC grinding residue facility shall be maintained until the facility is no longer required for the work, as determined by the Engineer. In order to maintain the freeboard of 610 mm PCC grinding work operations might need to be adjusted prior to the forecasted rain events. At no time will overflow of residue be allowed. If overflow of residue is anticipated due to a predicted large storm, dewatering of the facility shall be performed prior to the forecasted rain following the Department Field Guide to Construction Site Dewatering (October 2001) found at:

<http://www.dot.ca.gov/hq/construc/stormwater/DewateringGuide.pdf>.

### **Monitoring**

When the temporary PCC grinding residue facility is no longer required for the work, it should be monitored weekly or before a predicted rain event by the Contractor during the drying period.

## **REMOVAL AND DISPOSAL OF FACILITY**

When temporary PCC grinding residue facility is no longer required, as determined by the Engineer, the geomembrane (Basin Liner) shall be removed and disposed of, the basins shall be backfilled with embankment material and the area restored to its original condition. Temporary PCC grinding residue facility will be no longer be required for the work when there is no more free water present in the residue during spreading and compaction, and residue can be accepted as a non-liquid waste at a Class III landfill, as determined by the Engineer. Disking of the residues may be needed to sufficiently remove the remaining moisture.

Disposal of PCC grindings residue shall comply with "Disposal of Portland Cement Concrete (PCC) Pavement Grooving and Grinding Residues" of these special provisions.

Temporary PCC grinding residue facility shall become the property of the Contractor and be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Soil beneath the temporary PCC grinding residue facility shall be tested after the removal of the facility to ensure there is no contaminated soil left in place.

### **FIBER ROLLS**

Fiber rolls shall be furnished and installed in conformance with details shown on the plans and these special provisions and as directed by the Engineer.

Fiber rolls shall be installed on areas shown on the plans.

At the option of the Contractor, fiber rolls shall be Type 1 or Type 2.

## **MATERIALS**

### **Fiber Roll**

Fiber roll shall be either:

1. Constructed with a premanufactured blanket consisting of either wood excelsior, rice or wheat straw, or coconut fibers or a combination of these materials. The blanket shall be between 2.0 m and 2.4 m in width and between 20 m and 29 m in length. Wood excelsior shall be individual fibers, of which 80 percent shall be 150 mm or longer in length. The blanket shall have a photodegradable plastic netting or biodegradable jute, sisal, or coir fiber netting on at least one side. The blanket shall be rolled along the width and secured with jute twine spaced 2 m apart along the full length of the roll and placed 150 mm from the ends of each roll. The finished roll shall be between 200 mm and 250 mm in diameter, a minimum of 6 m in length, and shall weigh at least 0.81-kg/m. More than one blanket may be required to achieve the finished roll diameter. When more than one blanket is required, blankets shall be jointed longitudinally with an overlap of 150 mm along the length of the blanket.
2. A premanufactured roll of rice or wheat straw, wood excelsior, or coconut fiber encapsulated within a photodegradable plastic or biodegradable jute, sisal, or coir fiber netting. The netting shall have a minimum durability of one year after installation. The netting shall be secured tightly at each end of the roll. Rolls shall be between 200 mm and 300 mm in diameter. Rolls between 200 mm and 250 mm in diameter shall have a minimum weight of 1.6 kg/m and a minimum length of 6 m. Rolls between 250 mm and 300 mm in diameter shall have a minimum weight of 4.5 kg/m and a minimum length of 3 m.

### **Stakes**

Wood stakes shall be a minimum of 19 mm x 19 mm x 450 mm in size for Type 1 installation, or a minimum of 19 mm x 38 mm x 450 mm in size for Type 2 installation. Wood stakes shall be untreated fir, redwood, cedar, or pine and cut from sound timber. They shall be straight and free of loose or unsound knots and other defects which would render them unfit for the purpose intended. Metal stakes shall not be used.

### **Rope**

Rope shall be biodegradable, such as sisal or manila, with a minimum diameter of 6.35 mm.

## **INSTALLATION**

Fiber rolls shall be installed as follows:

1. Fiber rolls (Type 1): Furrows shall be constructed to a depth between 50 mm and 100 mm, and to a sufficient width to hold the fiber roll. Stakes shall be installed 600 mm apart along the length of the fiber rolls and stopped at 300 mm from each end of the rolls. Stakes shall be driven to a maximum of 50 mm above, or flush with the top of the roll.
2. Fiber rolls (Type 2): Rope and notched stakes shall be used to restrain the fiber rolls against the slope. Stakes shall be driven into the slope until the notch is even with the top of the fiber roll. Rope shall be knotted at each stake and laced between stakes. After installation of the rope, stakes shall be driven into the slope such that the rope will hold the fiber roll tightly to the slope. Furrows will not be required.
3. Fiber rolls shall be placed as shown on the plans.
4. The bedding area for the fiber rolls shall be cleared of obstructions including rocks, clods, and debris greater than 25 mm in diameter before installation.
5. Fiber rolls shall be installed approximately parallel to the slope contour.
6. Fiber rolls shall be installed before the application of other erosion control or soil stabilization materials in the same area.

If the intended function of the fiber rolls to disperse concentrated water runoff and to reduce runoff velocities is impaired, the Contractor shall take action to repair or replace the fiber rolls. Split, torn, or unraveling rolls shall be repaired or replaced. Broken or split stakes shall be replaced. Sagging or slumping fiber rolls shall be repaired with additional stakes or replaced. Locations where rills and other evidence of concentrated runoff have occurred beneath the rolls shall be corrected. Fiber rolls shall be repaired or replaced within 24 hours of identifying the deficiency.

Damage to fiber rolls resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

**EROSION CONTROL (TYPE D)**

Erosion control (Type D) includes applying erosion control materials to areas disturbed by the construction of the temporary PCC grinding residue facility. Erosion control (Type D) must be applied to areas shown on the plans after restoration of the temporary PCC grinding residue facility area work is complete. Erosion control (Type D) must comply with Section 20-3, "Erosion Control," of the Standard Specifications and these special provisions.

Before applying erosion control materials, prepare soil surface under Section 19-2.05, "Slopes," of the Standard Specifications, except that rills and gullies exceeding 50 mm in depth or width must be leveled. Remove debris from areas to receive erosion control.

**MATERIALS**

Materials must comply with Section 20-2, "Materials," of the Standard Specifications and these special provisions.

**Seed**

Seed must comply with Section 20-2.10, "Seed," of the Standard Specifications. Seed not required to be labeled under the California Food and Agricultural Code shall be tested for purity and germination by a seed laboratory certified by the Association of Official Seed Analysts or by a seed technologist certified by the Society of Commercial Seed Technologists. Measure and mix individual seed species in the presence of the Engineer.

Seed must contain at most 1.0 percent total weed seed by weight.

Deliver seed to the job site in unopened separate containers with the seed tag attached. Containers without a seed tag attached are not accepted. The Engineer takes a sample of approximately 30 g or 60 ml of seed for each seed lot greater than 1 kg.

Seed must comply with the following:

Seed		
Botanical Name (Common Name)	Percent Germination (Minimum)	Kilograms Pure Live Seed Per Hectare (Slope Measurement)
Lupinus succulentus (Arroyo Lupine)	50	3
Lotus scoparius (Deerweed)	35	5
Encelia californica (Bush Sunflower)	35	2
Eriogonum fasciculatum (California Buckwheat)	35	1
Eschscholzia californica (California Poppy)	60	5
Lasthenia California (Goldfields)	35	1
Nassella pulchra (Purple Needlegrass)	35	10
Leymus tricoides (Creeping Widrye)	40	5

\*Seed produced in California only.

### **Seed Sampling Supplies**

At the time of seed sampling, provide the Engineer a glassine lined bag and custody seal tag for each seed lot sample.

### **Commercial Fertilizer**

Commercial fertilizer must comply with Section 20-2.02, "Commercial Fertilizer," of the Standard Specifications and have a guaranteed chemical analysis within 2 percent of 6 percent nitrogen, 20 percent phosphoric acid and 20 percent water soluble potash.

### **Compost**

The compost producer must be fully permitted as specified under the California Integrated Waste Management Board, Local Enforcement Agencies and any other State and Local Agencies that regulate Solid Waste Facilities. If exempt from State permitting requirements, the composting facility must certify that it follows guidelines and procedures for production of compost meeting the environmental health standards of Title 14, California Code of Regulations, Division 7, Chapter 3.1, Article 7.

The compost producer must be a participant in United States Composting Council's Seal of Testing Assurance program. Compost may be derived from any single, or mixture of any of the following feedstock materials:

1. Green material consisting of chipped, shredded, or ground vegetation; or clean processed recycled wood products
2. Biosolids
3. Manure
4. Mixed food waste

Compost feedstock materials to reduce weed seeds, pathogens and deleterious materials as specified under Title 14, California Code of Regulations, Division 7, Chapter 3.1, Article 7, Section 17868.3

Compost must not be derived from mixed municipal solid waste and must be reasonably free of visible contaminants. Compost must not contain paint, petroleum products, pesticides or any other chemical residues harmful to animal life or plant growth. Compost must not possess objectionable odors.

Metal concentrations in compost must not exceed the maximum metal concentrations listed in Title 14, California Code of Regulations, Division 7, Chapter 3.1, Section 17868.2.

Compost must comply with the following:

**Physical/Chemical Requirements**

Property	Test Method	Requirement
pH	*TMECC 04.11-A, Elastometric pH 1:5 Slurry Method, pH Units	6.0–8.0
Soluble Salts	TMECC 04.10-A, Electrical Conductivity 1:5 Slurry Method dS/m (mmhos/cm)	0-10.0
Moisture Content	TMECC 03.09-A, Total Solids & Moisture at 70+/- 5 deg C, % Wet Weight Basis	N/A
Organic Matter Content	TMECC 05.07-A, Loss-On-Ignition Organic Matter Method (LOI), % Dry Weight Basis	30–65
Maturity	TMECC 05.05-A, Germination and Vigor Seed Emergence Seedling Vigor % Relative to Positive Control	80 or Above 80 or Above
Stability	TMECC 05.08-B, Carbon Dioxide Evolution Rate mg CO <sub>2</sub> -C/g OM per day	8 or below
Particle Size	TMECC 02.02-B Sample Sieving for Aggregate Size Classification % Dry Weight Basis	95% Passing 16 mm 70% Passing 9 mm
Pathogen	TMECC 07.01-B, Fecal Coliform Bacteria < 1000 MPN/gram dry wt.	Pass
Pathogen	TMECC 07.01-B, Salmonella < 3 MPN/4 grams dry wt.	Pass
Physical Contaminants	TMECC 02.02-C, Man Made Inert Removal and Classification: Plastic, Glass and Metal, % > 4mm fraction	Combined Total: < 1.0
Physical Contaminants	TMECC 02.02-C, Man Made Inert Removal and Classification: Sharps (Sewing needles, straight pins and hypodermic needles), % > 4mm fraction	None Detected

\*TMECC refers to "Test Methods for the Examination of Composting and Compost," published by the United States Department of Agriculture and the United States Compost Council (USCC).

Before compost application, provide the Engineer with a copy of the compost producer's compost technical data sheet and a copy of the compost producers Seal of Testing Assurance certification. The compost technical data sheet includes:

1. Laboratory analytical test results
2. Directions for product use
3. List of product ingredients

Before compost application, provide the Engineer with a Certificate of Compliance under Section 6-1.07, "Certificates of Compliance," of the Standard Specifications.

**Stabilizing Emulsion**

Stabilizing emulsion must comply with Section 20-2.11, "Stabilizing Emulsion," of the Standard Specifications and these special provisions.

Stabilizing emulsion:

1. Must be in a dry powder form
2. Must be a processed organic adhesive used as a soil tackifier
3. May be reemulsifiable

**APPLICATION**

Apply erosion control materials in two separate applications in the following sequence:

1. Apply the following mixture with hydroseeding equipment at the rates indicated within 60 minutes after the seed has been added to the mixture:

**APPLICATION 1**

Material	Kilograms Per Hectare (Slope Measurement)
Seed	32
Fiber	800

Material	Cubic Meter Per Hectare (Slope Measurement)
Compost	2

2. Compost may be dry applied 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 must be applied before the next operation.
3. Apply the following mixture with hydro-seeding equipment at the corresponding rates:

**APPLICATION 2**

Material	Kilograms Per Hectare (Slope Measurement)
Fiber	1000
Commercial Fertilizer	25
Stabilizing Emulsion (Solids)	150

Material	Cubic Meter Per Hectare (Slope Measurement)
Compost	3

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

**PAYMENT**

Full compensation for temporary silt fence, fiber rolls, and erosion control (Type D) including all labor, materials, tools, equipment, and incidentals, and for doing all the work involved including trench excavation and backfill, maintenance, and removal shall be considered as included in the contract lump sum price paid for temporary portland concrete cement (PCC) grinding residue facility and no separate payment will be allowed therefor.

The contract lump sum price paid for temporary portland concrete cement (PCC) grinding residue facility shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, for doing all the work involved in constructing, maintaining, removing and disposing of temporary PCC grinding residue facility (except PCC grinding residue removal), and restoring the site to its original condition, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

#### **10-1.10 COOPERATION**

Attention is directed to Section 7-1.14, "Cooperation," and Section 8-1.10, "Utility and Non-Highway Facilities," of the Standard Specifications and these special provisions.

It is anticipated that work by another contractor (Contract No.11-282904) to Recycled Water Conversion in San Diego County on Route 905 from 0.3 KM west of Del Sur Boulevard undercrossing to 0.9 KM east of Picador Boulevard undercrossing (KP 6.4 to KP 8.0) may be in progress adjacent to or within the limits of this project during progress of the work on this contract.

It is anticipated that work by another contractor (Contract No.11-232304) to Construct a 4-Lane Freeway, Interchange and Off-Ramp in San Diego County in San Diego and Chula Vista on Routes 125 and 905 from Route 905 to San Miguel Road (KP 2.7 to KP 16.7 and 905-KP R16.7 to KP R17.9) may be in progress adjacent to or within the limits of this project during progress of the work on this contract.

It is anticipated that work by another contractor (Contract No.11-091824) to Construct New Freeway in San Diego County in San Diego on Route 905 from 0.6 KM east of Cactus Road to 0.3 KM West of the Mexico Border (KP R13.9 to KP R18.6) may be in progress adjacent to or within the limits of this project during progress of the work on this contract.

Consecutive on-ramp or off-ramps in the same direction of travel shall not be closed simultaneously unless otherwise provided in these special provisions or permitted by the Engineer.

**ENGINEER'S ESTIMATE  
11-274804**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
1	070012	PROGRESS SCHEDULE (CRITICAL PATH METHOD)	LS	LUMP SUM	LUMP SUM	
2	070018	TIME-RELATED OVERHEAD	LS	LUMP SUM	LUMP SUM	
3 (S)	071322	TEMPORARY FENCE (TYPE CL-1.8)	M	740		
4 (S)	012265	TEMPORARY GATE (TYPE CL-1.8)	EA	1		
5	074016	CONSTRUCTION SITE MANAGEMENT	LS	LUMP SUM	LUMP SUM	
6	074019	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	LUMP SUM	LUMP SUM	
7	074033	TEMPORARY CONSTRUCTION ENTRANCE	EA	1		
8	074041	STREET SWEEPING	LS	LUMP SUM	LUMP SUM	
9	074042	TEMPORARY CONCRETE WASHOUT (PORTABLE)	LS	LUMP SUM	LUMP SUM	
10	012266	TEMPORARY PORTLAND CONCRETE CEMENT (PCC) GRINDING RESIDUE FACILITY	LS	LUMP SUM	LUMP SUM	
11 (S)	120090	CONSTRUCTION AREA SIGNS	LS	LUMP SUM	LUMP SUM	
12 (S)	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	LUMP SUM	
13 (S)	128650	PORTABLE CHANGEABLE MESSAGE SIGN	EA	8		
14 (S)	150662	REMOVE METAL BEAM GUARD RAILING	M	71		
15	150742	REMOVE ROADSIDE SIGN	EA	9		
16	150771	REMOVE ASPHALT CONCRETE DIKE	M	10 600		
17 (S)	151572	RECONSTRUCT METAL BEAM GUARD RAILING	M	78		
18 (S)	153103	COLD PLANE ASPHALT CONCRETE PAVEMENT	M2	113 000		
19	190101	ROADWAY EXCAVATION	M3	580		
20	260210	AGGREGATE BASE (APPROACH SLAB)	M3	8		