

DEPARTMENT OF TRANSPORTATION

ESC/OE MS #43
1727 30TH Street, 2ND Floor
Sacramento, CA 95816



December 20, 2000

07-LA-5-103.0
07-1X1204
ACIM-35G5(004)E

Addendum No. 5

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in LOS ANGELES COUNTY NEAR CASTAIC ON ROUTE 5 AT 0.5 km SOUTH OF ROUTE 5/5 SEPARATION NORTH.

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 January 11, 2001. The original bid opening date was previously postponed indefinitely under Addendum No. 4 dated August 31, 2000.

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 and the Federal Minimum Wages with Modification Number 14 dated 12-8-00. A copy of 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

Project Plan Sheets 1, 3, 7, 8, 10, 11, 12, 13 and 17 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

In the Special Provisions, Section 5-1.13, "AERIALY DEPOSITED LEAD," is revised as attached.

In the Special Provisions, Section 10-1.01, "ORDER OR WORK," the sixth and seventh paragraphs are replaced with the following paragraphs:

"Not less than 30 days after award of the contract, the Contractor shall furnish the Engineer a statement from the vendor that the order for the seed required for this contract has been received and accepted by the vendor. The statement from the vendor shall include the names and quantity of seed ordered and the anticipated date of delivery.

Attention is directed to "Erosion Control (Type C)" of these special provisions, regarding the process of applying Erosion Control (Type C).

Attention is directed to "Temporary Silt Fence" of these special provisions, regarding the installation of Temporary Silt Fence."

In the Special Provisions, Section 10-1.025, "TEMPORARY SILT FENCE," is added as attached.

In the Special Provisions, Section 10-1.155, "CLEARING AND GRUBBING," is added as attached.

07-LA-5-103.0
07-1X1204
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In the Special Provisions, Section 10-1.16, "EARTHWORK", the second paragraph is revised as follows:

"Prior to applying Erosion Control (Type C), the finish grade shall be left in a rough grade approximately 0.20 m in depth. The rough grade shall then be track walked parallel to the toe of the slope or wall."

In the Special Provisions, Section 10-1.16, "EARTHWORK", subsection "MATERIAL CONTAINING AERIALY DEPOSITED LEAD," is revised as attached.

In the Special Provisions, Section 10-1.16, "EARTHWORK", subsection "SOLDIER PILE WALL EARTHWORK," the following paragraphs are added after the third paragraph:

"Structure Excavation, Type Z-2

This material consists of the 600 mm cover of structural excavation within the limits as shown on the plans.

Structure excavation, Type Z-2 material shall be excavated, transported, and disposed of as specified in "Material Containing Aerially Deposited Lead", in these special provisions."

In the Special Provisions, Section 10-1.16, "EARTHWORK", subsection title "STRUCTURE EXCAVATION (SOLDIER PILE WALL)," is revised to "STRUCTURE EXCAVATION, TYPE Y (SOLDIER PILE WALL)."

In the Special Provisions, Section 10-1.16, "EARTHWORK," subsection title "STRUCTURE BACKFILL (SOLDIER PILE WALL)," is revised to "STRUCTURE BACKFILL, TYPE Y (SOLDIER PILE WALL)."

In the Special Provisions, Section 10-1.16, "EARTHWORK", subsection "STRUCTURE EXCAVATION (SOLDIER PILE WALL)," the following paragraph is added after the fifth paragraph:

"All excavated materials from structure excavation, Type Y (Soldier Pile Wall) shall be temporarily stockpiled in the designated area during construction and re-used as Structure Backfill, Type Y (Soldier Pile Wall)."

In the Special Provisions, Section 10-1.17, "DUFF," is deleted.

In the Special Provisions, Section 10-1.18, "EROSION CONTROL (TYPE D)," is replaced with Section 10-1.18, "EROSION CONTROL (TYPE C)," as attached.

In the Special Provisions, Section 10-1.23, "TIEBACK ANCHORS," subsection "MATERIALS," the following paragraph is added after the third paragraph:

"Galvanizing shall conform to the provisions in Section 75-1.05, "Galvanizing," of the Standard Specifications. All steel surfaces exposed to corrosive conditions, including bearing plates, anchorage assemblies, and anchorage enclosures, not embedded at least 50 mm in concrete, shall be galvanized."

07-LA-5-103.0
07-1X1204
ACIM-35G5(004)E

In the Special Provisions, Section 10-1.23, "TIEBACK ANCHORS," subsection "MEASUREMENT AND PAYMENT," the following paragraph is added after the last paragraph:

"Full compensation for galvanizing shall be considered as included in the contract unit price paid for tieback anchor and no additional compensation will be allowed therefor."

In the Special Provisions, Section 10-1.24, "CONCRETE STRUCTURES," subsection "GENERAL," the following paragraph is added after the second paragraph:

"For the walers, the concrete shall contain a minimum cementitious material content of 400 kg per cubic meter. Cementitious material shall consist of 75 percent by mass Type II modified, or Type V portland cement and 25 percent by mass mineral admixture conforming to ASTM C618 Type F or N (flyash or natural pozzolans). Also, the water-to-cementitious material ratio shall be a maximum of 0.40."

In the Special Provisions, Section 10-1.265, "CLEAN AND PAINT STEEL SOLDER PILING," is added as attached.

In the Special Provisions, Section 10-1.266, "PLASTIC PIPE," is added as attached.

In the Proposal and Contract, the Engineer's Estimate Items 11, 12, 13, 14, 17, and 20 are revised, Items 35, 36, 37, 38, and 39 are added and Items 16, 19, 21 and 34 are deleted as attached.

To Proposal and Contract book holders:

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

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 UPS overnight mail to Proposal and Contract book holders to ensure that each receives it.

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 Office Engineer

Attachments

5-1.13 Aerially Deposited Lead

Aerially deposited lead is present within the project limits. Aerially deposited lead is lead deposited within unpaved areas, primarily due to vehicle emissions.

Portions of the Site Investigation Report are included in the "Material Information Handout." The complete report, entitled "Lead Investigation Report, Embankment Restoration Project, Route 5 at Castaic, 0.5 km South of Route 5 Separation, Castaic, California," is available for inspection at the Department of Transportation, 120 South Spring Street, Division of Construction, Room 244, Los Angeles, California, 90012, telephone (213) 897-0054.

The Department has received from the California Department of Toxic Substances Control (DTSC) a variance regarding the use of aerially deposited lead. This project is subject to the conditions of the variance, as amended. The Variance is available for inspection at the Department of Transportation, 120 South Spring Street, Division of Construction, Room 244, Los Angeles, California, 90012, telephone (213) 897-0054.

Once the Contractor has completed the placement of material containing aerially deposited lead in conformance with these special provisions and as directed by the Engineer, the Contractor shall have no responsibility for such materials in place. The Department will not consider the Contractor a generator of such contaminated soils. Further cleanup, removal or remedial actions for such materials will not be required if handled or disposed of as specified herein.

Attention is directed to "Material Containing Aerially Deposited Lead" of these special provisions.

Excavation, reuse, and disposal of material with aerially deposited lead shall be in conformance with all rules and regulations including, but not limited to, those of the following agencies:

United States Department of Transportation (USDOT)
United States Environmental Protection Agency (USEPA)
California Environmental Protection Agency (Cal-EPA)
California Department of Health Services
Department of Toxic Substances Control (DTSC), Region 3
California Division of Occupational Safety and Health Administration (Cal-OSHA)
Integrated Waste Management Board
Regional Water Quality Control Board (RWQCB), Region 4 (Los Angeles)
State Air Resources Control Board
South Coast Air Quality Management District (SCAQMD)

Materials containing hazardous levels of lead shall be transported and disposed of in conformance with Federal and State laws and regulations, as amended, and county and municipal ordinances and regulations, as amended. Laws and regulations that govern this work include, but are not limited to:

Health and Safety Code, Division 20, Chapter 6.5 (California Hazardous Waste Control Act)
Title 22, California Code of Regulations, Chapter 30 (Minimum Standard for Management of Hazardous and Extremely Hazardous Materials)
Title 8, California Code of Regulations

10-1.025 TEMPORARY SILT FENCE

Temporary silt fence shall be placed at the toe of all finish grading and other areas, as specified by the Engineer, and shall conform to these special provisions.

Temporary silt fence shall be furnished, installed, maintained, and removed at the toe of all finish grading and other areas as specified by the Engineer.

Preparation shall conform to the provisions in Section 20-3.02, "Preparation," of the Standard Specifications.

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

MATERIALS

Materials for temporary silt fence shall conform to the provisions in Section 20-2, "Materials," of the Standard Specifications.

Temporary silt fence shall be a prefabricated silt fence composed entirely of biodegradable materials, including filter, backing, binding and staking materials. The minimum fabric width shall be 900 mm. The silt fence shall maintain sediment removal characteristics for a period of at least one year.

INSTALLATION

Temporary silt fence shall be installed as specified in these special provisions and in conformance with Detail Sheets 1 and 2 in Appendix C, CD36(2) in the Construction Contractors Guide and Specifications of the Caltrans Storm Water Quality Handbooks.

When joints are necessary, the temporary silt fence shall overlap a minimum of 150 mm with both posts tied together.

Temporary silt fences shall be maintained to provide for adequate sediment holding capacity. Sediment deposits shall be removed when the sediment deposit reaches approximately one-third of the fence height. Removed sediment shall be deposited within the project in such a way that the sediment is not subject to erosion by wind or water, or as directed by the Engineer.

When no longer required for the intended purpose, as determined by the Engineer, temporary silt fence shall be removed from the site of the work.

Holes, depressions or any other ground disturbance caused by the removal of the temporary silt fence shall be backfilled and repaired in conformance with the provisions in the second paragraph of Section 15-1.02, "Preservation of Property," of the Standard Specifications.

MEASUREMENT AND PAYMENT

The quantity of temporary silt fence will be measured by the meter as determined from actual measurements, the measurements to be made parallel with the ground slope along the line of the completed temporary silt fence, deducting the widths of openings.

The contract price paid per meter for temporary silt fence shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing temporary silt fence, complete in place, including trench excavation and backfill, and maintenance and removal of temporary silt fence, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Temporary silt fence placed at location other than as shown on the project plans or directed by the Engineer, in conformance with the Contractor's SWPPP, will not be measured and will be paid for as specified in "Water Pollution Control" of these special provisions.

No adjustment of compensation will be made for any increase or decrease in the quantities of temporary silt fence required, regardless of the reason for the increase or decrease. The provisions in Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications shall not apply to temporary silt fence.

10-1.155 CLEARING AND GRUBBING

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

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

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

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

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

MATERIAL CONTAINING AERIALY DEPOSITED LEAD

Earthwork involving materials containing aerially deposited lead shall conform to the provisions in Section 19, "Earthwork," of the Standard Specifications and these special provisions.

Attention is directed to "Aerially Deposited Lead" of these special provisions.

Type Y material exists within the area as shown on the plans. These materials shall be excavated to a depth of 0.6-m to 2.15-m below existing grade. These materials are hazardous waste regulated by the State of California that may be reused as permitted under the Variance of the Department of Toxic Substances Control. These materials shall be placed as shown on the plans and covered with a minimum 0.3-m layer of material. Temporary surplus material may be generated on this project due to the requirements of stage construction. Temporary surplus material shall not be transported outside the project limits. In order to conform to the requirements of these provisions, it may be necessary to stockpile materials for subsequent stages or construct some embankments out of stage or handle temporary surplus material more than once.

Excavated lead contaminated soil not placed into the designated fill area by the end of the working day shall be stockpiled and covered with sheets of polyethylene or at least one foot of non-hazardous soil. The lead contaminated soil shall be protected from surface water run-on until buried and covered to prevent potential migration of contamination due to storm water or wind dispersal. The stockpile covers shall be inspected at least once a week and within 24 hours after rainfall.

The Contractor shall ensure that all stockpiling of lead contaminated soil remains within the designated area. Stockpiling of lead contaminated soil outside the area is prohibited.

The Contractor shall conduct confirmatory sampling of all stockpile areas after removal of the lead contaminated soil to ensure that contamination has not been left behind or has not migrated from the stockpiled material to the surrounding soils. Test results shall be provided to the Engineer in a timely manner.

The Contractor shall stockpile lead contaminated soil only on high ground which will not be affected by surface water run-on or run-off.

The Contractor shall not stockpile soil in an environmentally sensitive area.

The Contractor shall ensure that run-off which has come into contact with stockpiled lead contaminated soils will not flow to storm drains, inlets, or waters of the State.

Type Z-2 material exists within the area as shown on the plans. These materials shall be excavated to a depth of 0.6-m below existing grade. These materials are hazardous waste regulated by the State of California and shall be transported to and disposed of at a Class 1 Disposal Site. Materials excavated from these areas shall be transported by a hazardous waste transporter registered with the Department of Toxic Substances Control using the required procedures for the manifest of materials. The vehicles used to transport the hazardous materials shall meet current certifications of compliance of the Department of Toxic Substances Control.

HEALTH AND SAFETY

The Contractor shall prepare a project specific Lead Compliance Plan to prevent or minimize worker exposure to lead contamination in soil. Attention is directed to Title 8, California Code of Regulations, Section 1532.1, "Lead," for specific Cal-OSHA requirements when working with lead.

The Lead Compliance Plan shall contain the elements listed in Title 8, California Code of Regulations, Section 1532.1(e)(2)(B). Before submission to the Engineer, the Lead Compliance Plan shall be approved by an Industrial Hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene and paid by the Contractor. The Plan shall be submitted to the Engineer at least 15 days prior to beginning work in areas containing aerially deposited lead.

Prior to performing work in areas containing aerially deposited lead, personnel who have no prior training or are not current in their training status, including State personnel, shall complete a safety training program provided by the Contractor. The safety training program shall meet the requirements of Title 8, California Code of Regulations, Section 1532.1, "Lead."

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

The Contractor shall not clear and grub or construct earthwork within the project limits, unless authorized in writing by the Engineer, until the Lead Compliance Plan has been accepted by the Engineer.

The Lead Compliance Plan will be paid for as a lump sum.

The contract lump sum price paid for Lead Compliance Plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparing the Lead Compliance Plan, and for providing personal protective equipment, training and medical surveillance, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

EXCAVATION AND TRANSPORTATION PLAN

Prior to starting excavation in areas determined to contain aurally deposited lead, the Contractor shall submit, for acceptance by the Engineer, a detailed excavation and transportation plan in conformance with the regulations of the Department of Toxic Substance Control and the California Division of Occupational Safety and Health Administration (Cal-OSHA). The detailed excavation and transportation plan shall be submitted to the Engineer 15 days prior to excavation and transportation of hazardous materials.

WORK PLAN

The Contractor shall prepare a work plan for handling and stockpiling materials containing hazardous levels of lead. The work plan shall include provisions for sampling any stockpile area after removal of the materials. The plan shall meet the requirements for the design and development of the sampling plan, statistical analysis, and reporting of test results contained in USEPA, SW 846, "Test Methods for Evaluating Solid Waste," Volume II: Field Manual Physical/Chemical, Chapter Nine, Section 9.1. The plan shall be submitted to the Engineer at least 15 days prior to beginning work in areas containing lead.

The Engineer will notify the Contractor of acceptance or rejection of any submitted or revised Lead Compliance Plan, work plan, and excavation and transportation plan not more than 10 days after submittal of the plan.

Excavation, transportation, placement, and handling of materials containing aurally deposited lead shall be processed without visible dust. The Contractor shall have a water truck available at all times while performing clearing and grubbing and earthwork operations in work areas containing aurally deposited lead.

Prior to traveling on public roads, loose and extraneous material shall be removed from surfaces outside the cargo areas of the transporting vehicles and the cargo shall be covered with tarpaulins, or other cover approved by the Engineer. The Contractor shall be responsible for costs due to spillage of material containing lead during transport. The Department will not consider the Contractor a generator of these hazardous materials, and the Contractor will not be obligated for further cleanup, removal or remedial action for such materials handled or disposed of in conformance with the requirements specified herein and the appropriate State and Federal laws and regulations and county and municipal ordinances and regulations regarding hazardous waste. The Engineer will sign all hazardous waste manifests.

If disposal of materials containing aurally deposited lead is within California, the disposal site shall be operating under a permit issued by the California Environmental Protection Agency (Cal-EPA) Boards. If disposal is outside California, the disposal site will be approved by the Engineer and shall be operating under a permit issued by the United States Environmental Protection Agency (EPA).

The Engineer will obtain the EPA Generator Identification Number and the State of California Board of Equalization Identification Number for hazardous material disposal. The Engineer will sign all hazardous waste manifests.

Sampling, analyzing, transporting, and disposing of materials containing aurally deposited lead excavated outside the pay limits of structure excavation will be at the Contractor's expense.

Full compensation for conforming to the requirements of this section involving materials containing aurally deposited lead, except as otherwise specifically provided in these special provisions, shall be considered as included in the contract prices paid for the items of work involved and no additional compensation will be allowed therefor.

10-1.18 EROSION CONTROL (TYPE C)

Erosion control (Type C) shall conform to the provisions in Section 20-3, "Erosion Control," of the Standard Specifications and these special provisions.

Erosion control (Type C) work shall consist of incorporating straw and applying seed, commercial fertilizer, and compost to embankment slopes with a length greater than 4 meters and are 1:4 (vertical:horizontal) or steeper. Erosion control (Type C) shall be applied during the period starting July 1 and ending January 31; or, if the slope on which the erosion control is to be placed is finished during the winter season as specified in "Water Pollution Control" of these special provisions, the erosion control shall be applied immediately; or, if the slope on which the erosion control is to be placed is finished outside both specified periods and the contract work will be completed before July 1, the erosion control shall be applied as a last item of work.

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 50 mm 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 job 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 g of seed will be taken from each seed container by the Engineer.

Legume Seed

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

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

LEGUME SEED

Botanical Name (Common Name)	Percent Germination (Minimum)	Kilograms Pure Live Seed Per Hectare (Slope Measurement)
Lotus Scoparius (Deerweed)	30	2.0

Non-legume seed shall consist of the following:

NON-LEGUME SEED

Botanical Name (Common Name)	Percent Germination (Minimum)	Kilograms Pure Live Seed Per Hectare (Slope Measurement)
Adenostoma Fasciculatum (Chamise)	10	.30
Artemisia Californica (California Sagebrush)	30	.30
Baccharis Pilularis (Chapparal Broom)	20	.30
Eriodyctyon Trichocalyx (Hairy Yerba Santa)	20	.60
Eriogonum Fasciculatum (California Buckwheat)	5	1.0
Eschsholzia Californica (California Poppy)	20	1.0
Malcothamnus Fasciculatus (Bushmallow)	30	.60
Salvia Mellifera (Black Sage)	30	3.5
Vulpia Microstachys (Small Fescue)	40	4.5
Yucca Whipplei (Our Lord's Candle)	30	.30

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.

Compost

Compost shall be derived from green material consisting of chipped, shredded or ground vegetation or clean processed recycled wood products or 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 57°C 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 6-mm screen. The moisture content of the compost shall not exceed 35 percent. Moisture content shall be determined by California Test 226. Compost products with a 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. Compost will 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.

APPLICATION

Erosion control materials shall be applied in 3 separate applications in the following sequence:

- A. Straw shall be applied and incorporated into the soil at the rate of 4.0 tonnes per hectare (slope measurement).
- B. Seed and compost shall be applied at the rates indicated in the following table. If hydro-seeding equipment is used to apply seed and compost, fiber shall be added to the mixture in conformance with the provisions in Section 20-3.04A, "General," of the Standard Specifications. The mixture shall be applied within 60 minutes after the seed has been added to the mixture:

Material	Kilograms Per Hectare (Slope Measurement)
Non-Legume Seed	12.4
Legume Seed	2.0
Compost	2270

- C. A second application of straw shall be applied and incorporated into the soil at the rate of 4.0 tonnes per hectare based on slope measurements.

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

MEASUREMENT AND PAYMENT

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

10.1.265 CLEAN AND PAINT STEEL SOLDIER PILING

Steel piling surfaces shall be cleaned and painted in conformance with the provisions in Sections 59-2, "Painting Structural Steel," and 91, "Paint," of the Standard Specifications and these special provisions. Limits of the steel soldier pile surfaces to be dry blast cleaned and shop painted with the inorganic zinc coating shall be as shown on the plans.

The fourth paragraph of Section 59-2.12, "Painting," of the Standard Specifications is amended to read:

- The dry film thickness of the paint will be measured in place with a calibrated Type 2 magnetic film thickness gage in conformance with the requirements of specification SSPC-PA2 of the "SSPC: The Society for Protective Coatings."

Clean and paint steel soldier piling shall consist of dry blast cleaning and painting steel soldier piles with an inorganic zinc undercoat and a final coat prior to pile installation.

At the Contractor's option, the undercoat and final coat painting of the portion of the front flange of the steel pile which is to receive the concrete anchors may be performed after pile installation.

Open joints between concrete and painted metal surfaces shall be caulked with non-silicone type sealing compound conforming to the requirements in Federal Specification TT-S-230, Type II, or other approved material. The sealing compound shall be applied no sooner than 24 hours after the high pressure cleaning has been applied. The sealing compound shall be allowed to cure as recommended by the manufacturer prior to the water rinsing and application of the first finish coat. When no finish coats are applied, the sealing compound shall be gray in color.

CLEANING

All designated piling surfaces to be blast cleaned shall be dry blast cleaned in conformance with the requirements of Surface Preparation Specification No. 10, "Near White Blast Cleaning," of the "SSPC: The Society for Protective Coatings." Blast cleaning shall leave all surfaces with a dense, uniform, angular, anchor pattern of not less than 40 μm nor more than 86 μm as measured in conformance with the requirements in ASTM Designation: D 4417.

Mineral and slag abrasives used for blast cleaning steel shall conform to the requirements in Abrasive Specification No. 1, "Mineral and Slag Abrasives," of the "SSPC: The Society for Protective Coatings," and shall not contain hazardous material. Mineral and slag abrasives shall comply with the requirements for Class A, Grade 2 to 3 as defined therein.

A Certificate of Compliance conforming to the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications and a Material Safety Data Sheet shall be furnished prior to use for each shipment of blast cleaning material to be used on steel.

PAINTING

Blast cleaned surfaces shall receive a single undercoat, and a final coat where specified or shown on the plans, consisting of a waterborne inorganic zinc coating conforming to the requirements in AASHTO Designation M 300, Type II, except that: 1) the first 3 sentences of Section 4.7, "Primer Field Performance Requirements," and the entire Section 4.7.1 shall not apply, and 2) zinc dust shall be Type II in conformance with the requirements in ASTM Designation: D 520. The inorganic zinc coating shall be listed on the qualified products list which may be obtained from the Transportation Laboratory.

The color of the final application of inorganic zinc coating shall essentially match Federal Standard 595B No. 36373.

Inorganic zinc coating shall be used within 12 hours of initial mixing.

Application of inorganic zinc coating shall conform to the provisions for applying zinc-rich coating in Section 59-2.13, "Application of Zinc-Rich Primer," of the Standard Specifications.

Inorganic zinc coating shall not be applied when the atmospheric or surface temperature is less than 7°C nor more than 29°C nor when the relative humidity exceeds 85 percent.

The single undercoat of inorganic zinc coating shall be applied to the required dry film thickness in 2 or more applications within 4 hours after blast cleaning.

The total dry film thickness of all applications of the single undercoat of inorganic zinc coating shall be not less than 100 μm nor more than 200 μm .

Areas where mudcracking occurs in the inorganic zinc coating shall be blast cleaned and repainted with inorganic zinc coating to the specified thickness.

Dry spray, or overspray, as defined in the Steel Structures Painting Manual, Volume 1, "Good Painting Practice," of the "SSPC: The Society for Protective Coatings," shall be removed prior to application of subsequent coats or final acceptance. Removal of dry spray shall be by screening or other methods that minimize polishing of the inorganic zinc surface. The dry film thickness of the coating after removal of dry spray shall be in conformance with the provisions for applying the single undercoat, as specified herein.

The inorganic zinc coating shall be tested for adhesion and cure. The locations of the tests will be determined by the Engineer. The sequence of the testing operations shall be determined by the Contractor. The testing for adhesion and cure will be performed no sooner than 72 hours after application of the single undercoat of inorganic zinc coating. At the Contractor's expense, satisfactory access shall be provided to allow the Engineer to determine the location of the tests and to test the inorganic zinc coating cure. The inorganic zinc coating shall pass the following tests:

Adhesion

- The inorganic zinc coating shall have a minimum adhesion to steel of 4 MPa when measured at no more than 3 locations on each pile using a self-aligning adhesion tester in conformance with the requirements in ASTM Designation: D 4541. The Contractor, at the Contractor's expense, shall: (1) verify compliance with the adhesion requirements, (2) furnish test results to the Engineer, and (3) repair the coating after testing.

Cure

- The inorganic zinc coating, when properly cured, shall exhibit a solid, hard, and polished metal surface when firmly scraped with the knurled edge of a quarter. Inorganic zinc coating that is powdery, soft, or does not exhibit a polished metal surface, as determined by the Engineer, shall be repaired by the Contractor, at the Contractor's expense, by blast cleaning and repainting with inorganic zinc coating to the specified thickness.

Surfaces of steel piling shall receive a final coat of a waterborne inorganic zinc coating of the same product used in the single undercoat.

The final coat of inorganic zinc coating shall be applied after testing for adhesion, testing for cure, and completion of all operations that may damage or discolor the steel surface, including correction of runs, sags, thin and excessively thick areas in the paint film, skips and holidays, dry spray, or areas of non-uniform appearance.

The area to receive the final coat of inorganic zinc coating shall be lightly roughened by abrasive blasting using an abrasive no larger than 600 μm . Abrasive blasting shall remove no more than 15 μm of inorganic zinc. The surface to be lightly roughened shall be free from moisture, dust, grease or deleterious material. The undercoated areas of pile surfaces not receiving a final coat shall be protected from abrasive blast cleaning operations.

The final coat of inorganic zinc coating shall be applied to the required dry film thickness in one uniform application within 24 hours after light roughening. The dry film thickness of the final coat shall be not less than 25 μm nor more than 75 μm .

The total dry film thickness of all applications of the single undercoat and final coat of inorganic zinc coating shall be not less than 125 μm nor more than 275 μm .

Finish coats will not be required.

Areas where mudcracking occurs in the inorganic zinc coating shall be blast cleaned and repainted with inorganic zinc coating to the specified thickness.

REPAIR

Shop waterborne inorganic zinc coated surfaces of piling that are abraded or damaged at any time after the application of the shop coat shall be repaired prior to installation. If the repair area exceeds 1 percent of the total coated surface as determined by the Engineer, the Contractor shall repair the surface by blast cleaning and painting the surface with waterborne inorganic zinc coating as previously specified. If the repair area is less than 1 percent of the total coated surface, the Contractor will be permitted to repair the area by thoroughly wire brushing the damaged areas and removing all loose and cracked coating, after which the cleaned areas shall be painted with 2 applications of unthinned zinc-rich primer (organic vehicle type) conforming to the provisions in Section 91, "Paint," of the Standard Specifications. Repair of abraded or damaged surfaces shall be at the Contractor's expense. Aerosol cans shall not be used.

After pile installation and after the removal of lean concrete from the exposed surfaces, areas where the inorganic zinc coating has been damaged or has deteriorated shall be thoroughly cleaned, foreign substances shall be removed, and surfaces shall be spot painted with the same inorganic zinc coating to the specified thickness. Damaged areas of inorganic zinc coating shall be blast cleaned and painted as specified in these special provisions.

PAYMENT

The contract lump sum price paid for clean and paint steel soldier piling shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in cleaning and painting piling, complete in place, including water rinsing, adhesion testing of inorganic zinc coating, and protecting, cleaning and repairing of surfaces prior to and after pile installation, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.266 PLASTIC PIPE

The 100 mm plastic pipe (unslotted) shall conform to the provisions in Section 64, "Plastic Pipe," of the Standard Specifications and these special provisions.

Full compensation for 100 mm PVC pipe (unslotted), including concrete splash pad (type A), shall be considered as included in the contract unit price paid for structural backfill Type Y (soldier pile wall) and no additional compensation will be allowed therefor.

ENGINEER'S ESTIMATE
07-1X1204

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
1 (S)	120090	CONSTRUCTION AREA SIGNS	LS	LUMP SUM	LUMP SUM	
2 (S)	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	LUMP SUM	
3 (S)	120151	TEMPORARY TRAFFIC STRIPE (TAPE)	M	280		
4 (S)	120165	CHANNELIZER (SURFACE MOUNTED)	EA	14		
5 (S)	120300	TEMPORARY PAVEMENT MARKER	EA	20		
6	129000	TEMPORARY RAILING (TYPE K)	M	180		
7	129100	TEMPORARY CRASH CUSHION MODULE	EA	14		
8	150662	REMOVE METAL BEAM GUARD RAILING	M	110		
9	150771	REMOVE ASPHALT CONCRETE DIKE	M	10		
10	151572	RECONSTRUCT METAL BEAM GUARD RAILING	M	10		
11	190101	ROADWAY EXCAVATION	M3	107		
12	018792	STRUCTURE EXCAVATION , TYPE Z-2	M3	520		
13 (F)	192049	STRUCTURE EXCAVATION, TYPE Y (SOLDIER PILE WALL)	M3	3652		
14 (F)	193029	STRUCTURE BACKFILL, TYPE Y (SOLDIER PILE WALL)	M3	3782		
15 (F)	193119	LEAN CONCRETE BACKFILL	M3	94		
16	BLANK					
17 (S)	203024	COMPOST (EROSION CONTROL)	KG	910		
18 (S)	203003	STRAW (EROSION CONTROL)	TONN	4		
19	BLANK					
20 (S)	203045	PURE LIVE SEED (EROSION CONTROL)	KG	6		

**ENGINEER'S ESTIMATE
07-1X1204**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
21	BLANK					
22	260301	CLASS 3 AGGREGATE BASE	M3	6		
23	390101	ASPHALT CONCRETE	TONN	68		
24	393001	PAVEMENT REINFORCING FABRIC	M2	120		
25	394049	PLACE ASPHALT CONCRETE DIKE (TYPE F)	M	10		
26	048269	STEEL SOLDIER PILING (W360X190)	M	411		
27	048270	750 MM DRILLED HOLE	M	431		
28 (S)	500050	TIEBACK ANCHOR	EA	43		
29 (F)	048271	STRUCTURAL CONCRETE, TIEBACK WALL	M3	138		
30 (F)	510220	CLASS 3 CONCRETE (BACKFILL)	M3	90		
31 (S-F)	048272	BAR REINFORCING STEEL (TIEBACK WALL)	KG	32 500		
32 (F)	530100	SHOTCRETE	M3	190		
33 (F)	048273	CONCRETE BARRIER (TYPE 736 MODIFIED)	M	95		
34	BLANK					
35	074029	TEMPORARY SILT FENCE	M	110		
36	020391	LEAD COMPLIANCE PLAN	LS	LUMP SUM		
37	198001	IMPORTED BORROW	M3	320		
38	020392	CLEAN AND PAINT STEEL SOLDIER PILING	LS	LUMP SUM		
39	999996	MOBILIZATION	LS	LUMP SUM		

TOTAL BID: _____