CONTRACT AND BONDS
FOR HIGHWAY CONSTRUCTION

OREGON DEPARTMENT OF TRANSPORTATION
SALEM, OREGON

GRADING, PAVING & STRUCTURES

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS

ELKTON-SUTHERLIN HIGHWAY

DOUGLAS COUNTY

CONTRACT NUMBER 14292

EXPENDITURE ACCOUNT NUMBER CON03018

CLASS OF PROJECT X-BRS-S231(011)

CONTRACTOR _____

DATE OF AWARD _____

SPECIFIED COMPLETION OCTOBER 5, 2012

Key # 16796

Bid Date 11-16-10
Ad Date 10-07-10

CONTRACT AND BONDS
FOR HIGHWAY CONSTRUCTION

OREGON DEPARTMENT OF TRANSPORTATION
SALEM, OREGON

OREGON TRANSPORTATION COMMISSION

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DESCRIPTIONS OF PARTS OF CONTRACT WHICH ARE NOT BOUND HEREIN

(1) Standard Specifications

The "2008 Oregon Standard Specifications for Construction," Volume 1, which contain Part 00100 "General Conditions" and Volume 2, which contain Parts 00200 through 03000 "Technical Specifications" as published by the Oregon Department of Transportation.

Copies of the "2008 Oregon Standard Specifications for Construction, Volume 1 and Volume 2 may be purchased from the Oregon Department of Transportation, Procurement Office; 455 Airport Road SE, Building K; Salem, Oregon 97301-5348.

(2) Plans

Applicable Plans, either separate from the Special Provisions or included within the Special Provisions.

Copies of plans will be furnished by the Project Manager.

SECTION I. SPECIAL PROVISIONS

On the attached or inserted sheets which follow is given a description of the work to be performed under this Contract, together with required provisions, supplemental standard specifications, special provisions and instructions which supplement and modify the published "Oregon Standard Specifications for Construction," book and published "Supplemental Oregon Standard Specifications for Construction" book (if any) making them applicable to the particular work to be done.

DESCRIPTION OF WORK

Grading, Paving & Structures
OR138W: Dodge Cr/Calapooya Cr Bridge Replacements
Elkton-Sutherlin Highway
Douglas County

TIME AND PLACE OF RECEIVING BIDS

Bids for the work described above will be opened and read at the Oregon Department of Transportation, 455 Airport Road SE, Bldg. E, Salem, Oregon 97301-5348, at 9:00 a.m. on the 16th day of November, 2010.

COMPLETION TIME LIMIT

Complete all Work to be done under the Contract, except for seeding establishment andplant establishment, not later than October 5, 2012.

CLASS OF PROJECT

This is a Federal-Aid Project.

CLASS OF WORK

The Class of Work for this Project is: Bridges and Structures.

PROJECT INFORMATION

Information pertaining to this Project may be obtained from the following:

Ted Paselk, Project Manager, 3500 NW Stewart Parkway, Roseburg, 97470; Phone (541) 957-3572.

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EQUAL EMPLOYMENT OPPORTUNITY PROVISIONS
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ASSIGNED DBE CONTRACT GOAL
PROJECT WAGE RATES
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SPECIAL PROVISIONS

WORK TO BE DONE

The Work to be done under this Contract consists of the following on the OR138W: Dodge Cr/Calapooya Cr Bridge Replacement Section of the Elkton-Sutherlin Highway in Douglas County:

1. Install and maintain temporary traffic control including portable temporary traffic signals.
2. Perform earthwork.
3. Construct retaining walls.
4. Construct temporary work bridge.
5. Construct temporary roadway detour.
6. Construct temporary bridge.
7. Perform cold plane pavement removal.
8. Construct aggregate base and HMAC paving.
9. Construct Bridge No. 20861
10. Construct Bridge No. 21163
11. Construct Bridge No. 21162
12. Install two tube steel rail.
13. Install Guardrail
14. Perform right of way development.
15. Install signing and striping.
16. Perform additional and incidental Work as called for by the Specifications and Plans.

APPLICABLE SPECIFICATIONS

The Specification that is applicable to the Work on this Project is the 2008 edition of the "Oregon Standard Specifications for Construction".

All number references in these Special Provisions shall be understood to refer to the Sections and subsections of the Standard Specifications and Supplemental Specifications bearing like numbers and to Sections and subsections contained in these Special Provisions in their entirety.

CLASS OF PROJECT

This is a Federal-Aid Project.

Payment

00252.90 Payment - The accepted quantities of work performed under this Section will be paid for at the Contract lump sum amount for the item "Temporary Work Bridges".

Payment will be payment in full for furnishing and placing all materials, and for furnishing all equipment, labor, and incidentals necessary to complete the work as specified.

Progress payments and retained amounts will be made according to 00195.50 except for the following:

- No payment will be made for materials on hand.
- 20 percent of the bid amount will be retained until satisfactory removal of the work bridges is done.

No separate or additional payment will be made for designing, constructing, maintaining, and removing work bridges or trestles.

SECTION 00280 - EROSION AND SEDIMENT CONTROL

Comply with Section 00280 of the Standard Specifications modified as follows:

00280.14(e) Slope and Channel Liner Matting - Add the following paragraph to the end of this subsection:

Where shown, furnish hydraulically applied bonded fiber matrix slope protection matting that consists of fully biodegradable long fiber strands held together by a water resistant bonding agent.

00280.15(a) Check Dams - Add the following bullet to the end of the bullet list:

- **Type 6: Compost Filter Sock** - Sock material, compost, and stakes meeting the following requirements:
  - **Filter Sock Material** - 8, 12, and 18 inch diameter, 5 mil thick woven tubular mesh netting consisting of continuous HDPE filament or polypropylene material with 3/8 inch openings or 100 percent biodegradable burlap or coir as shown.
  - **Compost** - Commercially manufactured coarse compost material meeting the requirements of Section 03020.
  - **Stakes** - 1 1/2 by 1 1/2 inch wooden stakes that are a minimum length equal to the diameter of the sock plus 16 inches.

00280.16(d) Inlet Protection - Add the following bullet to the end of the bullet list:

- **Compost Filter Sock** - Sock material and compost meeting the following requirements:

- **Filter Sock Material** - 8, 12, and 18 inch diameter, 5 mil thick woven tubular mesh netting consisting of continuous HDPE filament or polypropylene material with 3/8 inch openings or 100 percent biodegradable burlap or coir as shown.

- **Compost** - Commercially manufactured coarse compost material meeting the requirements of Section 03020.

00280.45(a) Check Dams - Add the following bullet to the end of the bullet list:

- **Type 6: Compost Filter Sock** - Install compost filter socks perpendicular to the water flows that are not more than 3 feet deep. Stake at intervals of 6 to 8 feet. Install stakes through the center of the filter sock and at least 1 foot into the ground with no more than 4 inches protruding above the filter sock.

00280.46(d) Inlet Protection - Add the following bullet to the end of the bullet list:

- **Type 7: Compost Filter Sock** - Install compost filter socks as shown.

00280.90 Payment - Add the following sentence to the paragraph that begins "Item (f) includes...":

It also includes the bonded fiber matrix matting application.

SECTION 00290 - ENVIRONMENTAL PROTECTION

Comply with Section 00290 of the Standard Specifications modified as follows:

00290.20(c-3) Reuse, Recycle, and Dispose of Materials - Replace the bullet that begins "Reuse demolition..." with the following bullet:

- Reuse demolition debris.

00290.20(c-3-d) Concrete and Masonry - Replace the paragraph that begins "Concrete and masonry..." with the following paragraph:
Concrete and masonry, that is not recycled and does not contain hazardous substances, may be reused to fill basements or be buried in embankments on-site, provided that the materials are broken into pieces not exceeding 15 inches in any dimension, and places so that:

00290.20(d) Hazardous Waste Management - In the paragraph that begins "In addition to current Laws...", replace the two bullets that begin "If the quantity of hazardous waste projected to be..." with the following three bullets:

- If the quantity of hazardous waste projected to be generated meets the requirements for a LQG, prepare a full Hazardous Waste Contingency Plan according to 40 CFR 265 Subpart D. Maintain a copy of the Contingency Plan on-site at all times during construction activities, readily available to employees and inspectors.

- If the quantity of hazardous waste projected to be generated meets the requirements for a SQG, prepare a modified Hazardous Waste Contingency Plan according to 40 CFR 262.34(d)(5) and 40 CFR 265 Subpart C. Maintain a copy of the modified Contingency Plan on-site at all times during construction activities, readily available to employees and inspectors.

- If the quantity of hazardous waste projected to be generated meets the requirements for a CEG, follow the contingency planning and storage requirements of the SQG unless the only potentially hazardous waste is aerosol cans smaller than 20 ounces. Limit storage to 180 days and 2,200 pounds. Prepare a modified Hazardous Waste Contingency Plan and keep a copy on-site with emergency response procedures and contact information.

00290.20(g) Spills and Releases - Replace the lead-in paragraph that begins "In the event...", with the following lead-in paragraph:

In the event of a spill or release of a hazardous substance or hazardous waste or the release of any other material that has the potential to harm human health or the environment, do the following:

00290.30(a) Pollution Control Measures - Add the following subsection and bullets:

(7) Water Quality:

- Do not discharge contaminated or sediment-laden water, including drilling fluids and waste, or water contained within a work area isolation, directly into any waters of the State or U.S. until it has been satisfactorily treated (for example: bioswale, filter, settlement pond, pumping to vegetated upland location, bio-bags, dirt-bags). Treatment shall meet the turbidity requirements below.
- Do not cause turbidity in waters of the State or U.S. greater than 10% above background reading (up to 100 feet upstream of the Project), as measured 100 feet downstream of the Project.
- During construction, monitor in-stream turbidity and inspect all erosion controls daily during the rainy season and weekly during the dry season, or more often as necessary, to ensure the erosion controls are working adequately meeting treatment requirements.
- If construction discharge water is released using an outfall or diffuser port, do not exceed velocities more than 4 feet per second, and do not exceed an aperture size of 1 inch.
- If monitoring or inspection shows that the erosion and sediment controls are ineffective, mobilize work crews immediately to make repairs, install replacements, or install additional controls as necessary.
- Underwater blasting is not allowed.
- Implement containment measures adequate to prevent pollutants or construction and demolition materials, such as waste spoils, fuel or petroleum products, concrete cured less than 24 hours, concrete cure water, silt, welding slag and grindings, concrete saw cutting by-products and sandblasting abrasives, from entering waters of the state or U.S.
- End-dumping of riprap within the waters of the state or U.S. is not allowed. Place riprap from above the bank line.

- Cease project operations under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.
- The Project Manager retains the authority to temporarily halt or modify the Project in case of excessive turbidity or damage to natural resources.

00290.34 Protection of Fish and Fish Habitat - Add the following paragraph:

Meet with the Agency Biologist, Resource Representative, Project Manager, and inspector on site, before moving equipment on-site or beginning any work, to ensure that all parties understand the locations of sensitive biological sites and the measures that are required to be taken to protect them.

00290.34(a) Regulated Work Areas - Add the following to the end of this subsection:

The regulated work area is the area within the ordinary high water (OHW) elevation that is shown on the plans.

- For this Project, the regulated work area will be flagged by the ODOT biologist.

- Perform work within the regulated work area only during the in-water work period. The in-water work period is from July 1st to September 30th.

Submit a schedule to complete all work within the regulated work area within the in-water work period at least 10 days prior to the preconstruction conference.

Add the following subsection:

00290.34(c) Fish Protection Measures Required by Environmental Permits:

(1) General Equipment Requirements - Use heavy equipment as follows:

- Choice of equipment must have the least adverse effects on the environment (for example: minimally sized, low ground pressure).
- Before operations begin and as often as necessary during operation, steam clean all equipment that will be used below the regulated work area until all visible oil, grease, mud, and other visible contaminants are removed. Complete all cleaning in approved staging areas.
- Secure absorbent material around all stationary power equipment (for example: generators, cranes, drilling equipment) operated within 150 feet of wetlands, waters of the State and U. S., drainage ditches, or water quality facilities to prevent leaks, unless suitable containment is provided to prevent spills from entering waters of the state and U.S.
- Do not cross directly through a stream for construction access, unless shown or approved.
- The volume of material filled or discharged into waters of the state or U.S. plus the volume excavated shall not exceed the amount identified in the permits.
- Do not apply surface fertilizer within 50 feet of any stream channel.

(2) Work Area Isolation - At least 28 Calendar Days before beginning in-water work, submit a work area isolation plan for review and approval. The Plan is required for all work within the regulated work area showing how the work area will be isolated from the

active stream flow, both upstream and downstream of the work area using temporary water management facilities (for example: inflatable bags, sandbags, sheet pilings, or similar materials), unless otherwise approved in writing by appropriate regulatory agencies through the Project Manager. Piling may be installed without work area isolation provided all other relevant conditions are met.

- The plan shall be stamped by a Professional Engineer licensed in the State of Oregon.
- Include measures to comply with these specifications, the sequencing and schedule of dewatering and re-watering activities, plan view of all isolation elements, as well as a list of materials to adequately provide appropriate redundancy of key plan functions (for example: an operational, properly sized backup generator).
- If a water withdraw pump is used, a sizing submittal is required.
- Installation and removal of work area isolation equipment, and work within the isolated work area, is allowed only during the in-water work period.
- Notify the Project Manager at least 14 Calendar Days prior to beginning of work area isolation construction. Do not begin in-stream work or work within regulated work area prior to receiving approval.
- Safe passage around or through the in-water work area must be provided for adult and juvenile native migratory fish, unless passage did not previously exist, or as otherwise approved in writing by appropriate regulatory agencies through the Project Manager.
- Coordinate fish removal by Agency or ODFW biologists prior to installing work area isolation or conducting work within the regulated work area. Provide Agency, ODFW and qualified and permitted consultant personnel access to the regulated work area to remove fish trapped within the isolated work areas, as directed.
- Maintain water flow downstream of the isolated work area at a rate of at least 50% of upstream flow conditions for the duration of the diversion. Control water flow as necessary to prevent de-watering downstream of the diversion.
- If pumps are used, operate the pumps as needed up to 24-hours a day during the diversion to prevent de-watering the stream downstream of the diversion. Keep a back up pump available in the event of failure of the primary pump.

(3) Water Intake Screening - Install, operate, and maintain fish screens on each water intake used for project construction, including pumps used to isolate an in-water work area. When drawing or pumping water from any stream, protect fish by equipping intakes with screens having a minimum 27% open area and meeting the following requirements:

- Perforated plate openings shall be 3/32 inch or smaller.
- Mesh or woven wire screen openings shall be 3/32 inch or smaller in the narrowest direction.
- Profile bar screen or wedge wire openings shall be 1/16 inch or smaller in the narrow direction.

Choose size and position of screens to meet the following criteria:

Type	Approach Velocity [1] (Ft./Sec.)	Sweeping Velocity [2] (Ft./Sec.)	Wetted Area of Screen (Sq. Ft.)	Comments

Ditch Screen	≤ 0.4	Shall exceed approach velocity	Divide max. water flow rate (cfs) by 0.4 fps	If screen is longer than 4 feet, angle 45° or less to stream flow
Screen with proven self-cleaning system	≤ 0.4	–	Divide max. water flow rate (cfs) by 0.4 fps	–
Screen with no cleaning system other than manual	≤ 0.2	–	Divide max. water flow rate (cfs) by 0.2 fps	Pump rate 1 cfs or less
[1] Velocity perpendicular to screen face at a distance of approximately 3 inches [2] Velocity parallel to screen				

Provide ditch screens with a bypass system to transport fish safely and rapidly back to the stream.

(5) Site Restoration - Restore damaged streambanks to a natural slope, pattern, and profile suitable for establishment of permanent woody vegetation unless precluded by pre-project conditions (for example: natural rock substrate):

- Replant all damaged streambanks before the first April 15 following construction.
- If use of large wood, native topsoil, or native channel material is required for the site restoration according to the roadside development plans, stockpile all large wood, native vegetation, weed-free topsoil, and native channel material displaced by construction. Cut trees or large wood and trees into pieces of no less than 20 feet in length, or as shown on the roadside development plans or as directed. Stockpiled native wood and vegetation remain the property of the Agency.
- Stabilize all disturbed soils, including obliteration of temporary access roads, following any break in work unless construction will resume in 4 Calendar Days.

(7) Hydro-Acoustic - Hollow steel piling 24 inches in diameter or smaller and H-pile designated as HP24 or smaller may be installed below the ordinary high water as follows:

- Minimize the number and diameter of pilings, as feasible.
- Repairs, upgrades, and replacement of existing pilings consistent with these conditions are allowed. In addition, up to five single pilings or one dolphin consisting of three to five pilings may be added to an existing facility.
- Whenever feasible, use vibratory hammer for piling installation. Otherwise, use the smallest drop or hydraulic impact hammer necessary to complete the job, and set the drop height to the minimum necessary to drive the piling.
- When using an impact hammer to drive or proof steel pile, one of the following sound attenuation devices must be used to reduce sound pressure levels by 20 dB.

    - Place a block of wood or other sound dampening material between the hammer and the piling being driven.

- If water velocity is 1.7 miles per hour or less, surround the piling being driven by an unconfined bubble curtain that will distribute small air bubbles around 100% of the piling perimeter for the full depth of the water column. Contract the Project Manager for guidance on how to deploy an effective, economical bubble curtain.
- If water velocity is greater than 1.7 miles per hour, surround the piling being driven by a confined bubble curtain (for example: a bubble ring surrounded by a fabric or metal sleeve) that will distribute air bubbles around 100% of the piling perimeter for the full depth of the water column.
- Written approval of an alternative sound attenuation plan may be requested to the U. S. Army Corps of Engineers through the Project Manager, provided the plan will maintain sound pressure levels below 150dB rms (1 micro Pascal) for a minimum of 50% of the driver strikes, and peak sound pressure levels below 180 dB rms (1 micro Pascal) for all strikes.

(9) Treated Wood - Do not use lumber, pilings, or other wood products that are treated or preserved with pesticidal compounds below the ordinary high water (OHW) or as part of an in-water or over-water structure, except as described below:

- During demolition of treated wood, ensure that no treated wood debris falls into the water. If treated wood debris does fall into the water, remove it immediately.
- Store removed treated wood debris in appropriate dry storage areas, at least 150 feet away from the regulated work area.

(10) Piling Removal - If a temporary or permanent piling will be removed, the following conditions apply:

- Dislodge the piling with a vibratory hammer, whenever feasible.
- Once loose, place the piling onto the construction barge or other appropriate dry storage site.
- Ensure remaining treated wood piling is broken, cut, or pushed at least 3 feet below the sediment surface and covered with a cap of clean, native substrates that match surrounding streambed materials.
- Fill holes left by each piling with clean, native sediments whenever feasible.

Add the following subsection:

00290.36(c) Prevent Nesting - Comply with Migratory Bird Treaty Act (16 U.S.C. 703-712):

- Between March 15 and August 31, the Contractor shall allow USDA personnel access to each structure for bird nest removal. The Contractor shall coordinate with USDA through the Engineer. 7 (seven) days notice will be given to the Contractor in advance of USDA personnel requiring access to the bridge.
- Remove existing bird nests only if no eggs or young are found.
- Meet with the Agency Biologist, the Engineer, and inspector on-site if nests containing eggs or young are found.

00290.41(b) Disturbing Wetlands - Add the following to the end of this subsection:

Comply with the conditions of Section 404 and Removal/Fill permits obtained for the Project. Willful violation of permit conditions and applicable laws exposes the offending Contractor and other violators to criminal and civil sanctions. Civil sanctions include, but are not limited to, the offender's sole liability for all costs associated with site restoration, maintenance and additional mitigation work required by federal or State authorities.

The Project Manager may suspend work until the Contractor, Project Manager, Agency Wetland Specialist, and other required federal and State personnel, if any, meet to determine damage to the site and the nature and scope of necessary site restoration and maintenance. The Project Manager may require the Contractor to submit a written plan for protection of other sites for the duration of the Project before work resumes.

Add the following subsection:

00290.42 Work Containment Plan and System - A work containment plan (WCP) and a work containment system (WCS) are required on this Project for bridge demolition activities.

Develop and submit a WCP for approval at least 28 Calendar Days prior to mobilization for bridge demolition activities. Maintain a copy of the WCP on the Project Site at all times during construction, readily available to employees and inspectors. Ensure that all employees comply with the provisions of the WCP. Design the WCP to avoid or minimize disturbance to protected features (property, sensitive cultural or natural resources, the Regulated Work Area, or other features identified by Agency) related to Contractor operations.

Before developing the WCP, meet with Agency to review the Contractor's activities that require a WCP and WCS and to ensure that all parties understand the locations of protected features to be avoided and the measures needed to avoid and protect them.

Notify the Project Manager at least 10 Calendar Days before beginning WCS construction activities.

The Agency reserves the right to stop work and require the Contractor to change the WCP methods and equipment before any additional Contract work, at no additional cost to the Agency, if and when, in the opinion of the Agency, that such methods jeopardize the safety of traffic, the integrity of the new structure, damage protected features, or destroy aquatic life or habitat in the Regulated Work Area.

Provide a WCP and a WCS according to the following:

(a) Work Containment Plan (WCP) - The WCP shall identify the prevention of delivery of construction debris, material or other contaminants to protected features, caused by the Contractor's construction operations including but not limited to mobilization, construction, maintenance, and demolition. Implement the WCP as approved. The WCP shall:

- Include relevant construction, operation, or demolition activities.
- Include a work area isolation plan and a work containment system to provide complete containment measures that prevent construction waste, debris, rubble (for example: dust, concrete debris and saw cutting by-products, welding slag, and grindings) and work materials from damaging protected features.

- Not require any tree removal, clearing, or grubbing, unless approved by the Project Manager.
- Prohibit the use of treated timber.
- Prohibit the use of concrete form release agents within waters of the State and U.S., wetlands, drainage ditches, water quality facilities, or other water conveyances.
- Include full containment of fueling procedures.
- Require the WCS to be fire retardant or resistant to fire from welding slag, torch operation or any sparks from the Work.
- Require the WCS to be weather resistant.

(b) Work Containment System (WCS) - The WCS shall consist of a containment system that is rigid and in place before (repair) (removal) work begins, as described in the WCP. Design the containment system for not less than the system self-weight plus 25 psf live loading, or system self-weight plus debris weight plus removal equipment weight, or load combinations. Debris weight includes the possibility of a concrete form failure, concrete spills, and any other construction material load imposed on the containment system.

The WCS shall show specific attention to the need for special care in demolition work. Provide all required shoring, bracing, barricades, fencing, and other devices that may be required, and exercise all necessary precautions to fully protect pedestrian, vehicular, and navigation traffic, and to minimize disturbance to protected features and to prevent damage to the new bridge or other structures.

The WCS shall be designed and stamped by a registered Professional Engineer. Include all load assumptions and calculations and submit stamped working drawings to the Agency according to 00150.35.

00290.51 Protection of Sensitive Cultural Sites - Add the following to the end of this subsection:

There are sensitive cultural sites and associated "No Work Zones" on this Project.

The Agency Archaeologist for this Project is Jessica Bochart.
All contact with the Agency Archaeologist shall be through the Project Manager's office.

Contractor, Inspector, ODOT Regional Environmental Coordinator and Agency Archaeologist will discuss location of archaeological sites and high probability areas, prior to construction. Contractor to identify all No Work Zones with orange plastic mesh fencing from the QPL or lath and flagging, as shown.

00290.90 Payment - Add the following paragraph(s) to the end of this subsection:

The work containment plan and the work containment system will be paid for at the Contract lump sum amount for the item "Work Containment Plan and System".

Payment will be payment in full for furnishing all materials, equipment, labor, and incidentals necessary to complete the work as specified. Payment includes providing and updating the work containment plan and for designing, constructing, maintaining, and removing the containment system.

No separate or additional payment will be made for orange plastic mesh fencing.

SECTION 00305 - CONSTRUCTION SURVEY WORK

Section 00305, which is not a Standard Specification, is included for this Project by Special Provision.

Description

00305.00 Scope - Provide construction survey work according to the current edition on the date of Advertisement, of the ODOT "Construction Surveying Manual for Contractors". This manual is available on the web at:

http://www.oregon.gov/ODOT/HWY/GEOMETRONICS/documents.shtml

Measurement

00305.80 Measurement - No measurement of quantities will be made for construction survey work.

Payment

00305.90 Payment - The accepted quantities of construction survey work will be paid for at the Contract lump sum amount for the item "Construction Survey Work".

Payment will be payment in full for furnishing all material, equipment, labor, and incidentals necessary to complete the work as specified.

No separate or additional payment will be made for all temporary protection and direction of traffic measures including flaggers and signing necessary for the performance of the construction survey work.

No separate or additional payment will be made for preparing surveying documents including but not limited to office time, preparing and checking survey notes, and all other related preparation work.

Progress payments will not be in excess of the reasonable value of the surveying work estimated by the Engineer.

Costs incurred caused by survey errors will at the Contractor's expense. These costs include price adjustments for failure to meet requirements of the "Construction Surveying Manual for Contractors", repair or removal and replacement of deficient product, and over-run of material.

SECTION 00310 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Comply with Section 00310 of the Standard Specifications modified as follows:

00310.41(a) General - Replace this subsection, except for the subsection number and title, with the following:

Where an abutting structure or part of a structure is to be left in place, make clean, smooth, vertical cuts with a saw or other approved cutting device. Avoid operations that may damage any portion of the remaining structure.

SECTION 00320 - CLEARING AND GRUBBING

Comply with Section 00320 of the Standard Specifications modified as follows:

00320.42 Ownership and Disposal of Matter - Replace this subsection with the following subsection:

00320.42 Disposal of Matter - Dispose of all matter and debris according to 00290.20.

SECTION 00330 - EARTHWORK

Comply with Section 00330 of the Standard Specifications modified as follows:

00330.03 Basis of Performance - Add the following paragraph to the end of this subsection:

Perform all earthwork under this Section except for Stone Embankment on the excavation basis.

00330.20 Tamping Foot Rollers - In the paragraph, replace "115 tons" with "15 tons".

00330.41(a-4) Excess Materials - Replace this subsection, except for the subsection number and title, with the following:

If the quantities of excavated materials are greater than required to construct embankments and to do all filling and backfilling, use remaining materials to extend rip rap top dressing and uniformly widen embankments or to flatten slopes in a manner satisfactory to the Engineer.

00330.41(a-5) Waste Materials - Replace this subsection, except for the subsection number and title, with the following:

Unless otherwise specifically allowed and subject to the requirements of 00280.03, dispose of materials, classed as waste materials in 00330.41(a-3), outside and beyond the limits of the Project and Agency controlled property according to 00290.20. Do not dispose of materials on wetlands, either public or private, or within 300 feet of rivers or streams.

00330.41(a-9) Excavation Below Grade - Delete the bullet that begins "Unstable Subgrade...".

00330.42(c-3) Embankment Slope Protection - Add the following paragraph:

Construct the outer 12 inches of embankments with suitable materials to establish slope stabilization through permanent seeding. If suitable material is not available, provide suitable materials from a Contractor-provided source which conforms to the requirements of 00330.11 or 00330.13 and provides favorable conditions for germination of seed and growth of grass.

00330.80 Measurement - Replace the bullet that begins "Volume basis, computed by...", with the following bullet:

- Volume basis, based on the Agency's digital terrain model (DTM) calculated by End Area Volume, or by other methods of equivalent accuracy.

Add the following bullets to the end of the bullet list:

00330.94 Embankment Basis Payment - Delete the paragraph that begins "Excavation of unsuitable...".

SECTION 00331 - SUBGRADE STABILIZATION

Comply with Section 00331 of the Standard Specifications.

SECTION 00340 - WATERING

Comply with Section 00340 of the Standard Specifications.

SECTION 00350 - GEOSYNTHETIC INSTALLATION

Comply with Section 00350 of the Standard Specifications modified as follows:

00350.10 Materials - Add the following to the end of this subsection:

Provide manufacturer's certifications complying with 02320.10(c) for the following geosynthetic(s):

Geotextile	Certification Level A	Certification Level B
Drainage, Type 1		X
Riprap, Type 2		X
Subgrade	X	

SECTION 00370 - FINISHING ROADBEDS

Comply with Section 00370 of the Standard Specifications.

SECTION 00390 - RIPRAP PROTECTION

Comply with Section 00390 of the Standard Specifications modified as follows:

00390.11(b) Test Requirements - Under the "Requirement" column next to "Sediment Height" replace 8" with 8.0".

00390.43 Riprap Backing - Add the following sentence to the end of the paragraph:

Use either riprap geotextile or a filter blanket under the riprap.

SECTION 00405 - TRENCH EXCAVATION, BEDDING, AND BACKFILL

Comply with Section 00405 of the Standard Specifications.

SECTION 00430 - SUBSURFACE DRAINS

Comply with Section 00430 of the Standard Specifications.

SECTION 00440 - COMMERCIAL GRADE CONCRETE

Comply with Section 00440 of the Standard Specifications modified as follows:

00440.10 Materials - In the list of materials, delete the "Aggregates....02690" line.

00440.14(a) General - In the work item list, replace the square tube sign support line with the following line:

Perforated Steel Square Tube Sign Support Footings.....00920

SECTION 00445 - SANITARY, STORM, CULVERT, SIPHON, AND IRRIGATION PIPE

Comply with Section 00445 of the Standard Specifications modified as follows:

00445.80(a) Pipes - In the length bullet, add ", to the nearest foot" after the word "applicable".

SECTION 00460 - PAVED CULVERT END SLOPES

Comply with Section 00460 of the Standard Specifications.

SECTION 00470 - MANHOLES, CATCH BASINS, AND INLETS

Comply with Section 00470 of the Standard Specifications.

SECTION 00501 - BRIDGE REMOVAL

Comply with Section 00501 of the Standard Specifications modified as follows:

00501.00 Scope - Add the following paragraph to the end of this subsection:

Remove the following:

- The existing bridge that carries OR138E over Dodge Creek at approximately mile point 20.95.
- The existing bridge that carries OR138E over Dodge Creek at approximately mile point 21.15.
- The existing bridge that carries OR138E over Calapooya Creek at approximately mile point 22.10.

Add the following subsection:

00501.02 Plans - Plans of the existing structure are available for viewing at the office of the Engineer. Prints of these plans are available upon request.

SECTION 00510 - STRUCTURE EXCAVATION AND BACKFILL

Comply with Section 00510 of the Standard Specifications modified as follows:

00510.80(b-1) Structure Excavation (Lump Sum) - Add the following to the end of this subsection:

The estimated quantity of structure excavation is:

Location	Structure Excavation (Cubic Yard)
Calapooya Creek, Hwy 231 at MP 22.10 (Br. No. 20861)	90
Dodge Creek, Hwy 231 at MP 20.95 (MSE wall not included) (Br. No. 21162)	35
Dodge Creek, Hwy 231 at MP 21.15 (Br. No. 21163)	87

00510.80(c-1) Structure Excavation Below Elevations Shown (Lump Sum) - In the first bullet, replace "00190.10(f)" with "00190.10(h)".

00510.80(d) Granular Wall/Structure Backfill - Replace this subsection, except for the subsection number and title, with the following:

No measurement of quantities will be made for granular wall backfill or granular structure backfill. The estimated quantity of granular wall backfill or granular structure backfill is:

Location	Granular Wall/Structure Backfill (Cubic Yard)
Calapooya Creek, Hwy 231 at MP 22.10 (Br. No. 20861)	50
Dodge Creek, Hwy 231 at MP 20.95 (MSE wall not included) (Br. No. 21162)	21
Dodge Creek, Hwy 231 at MP 21.15 (Br. No. 21163)	53

00510.90(c-1) Structure Excavation Below Elevations Shown (Lump Sum) - In the sentence that begins "For excavation 0 to 3 feet...", replace "00190.10(f)" with "00190.10(h)".

00510.90(d) Granular Wall/Structure Backfill - Replace this subsection, except for the subsection number and title, with the following:

Granular wall backfill and granular structure backfill will be paid for at the Contract lump sum amount for the items "Granular Wall Backfill" or "Granular Structure Backfill", as applicable.

Payment for wall drain pipe and outlet block will be included in payment made for the Pay Item "Granular Wall/Structure Backfill". All materials shall be according to section 00430 of Standard Specification.

COFFERDAM DESIGN CHECKLIST

Instructions - This cofferdam design checklist was developed to facilitate the design, review, and erection of cofferdams to be used for ODOT bridge construction projects. This checklist is intended to act as a reminder to design or check for specific important aspects of this construction. It is not a substitute for plan and/or design criteria or specification requirements.

The Checklist is to be completed and signed by the cofferdam design engineer. Answer every question. Attach to the Checklist an explanation of any negative responses.

Submit the Checklist according to 00510.03.

	YES	NO	N/A
A. Contract Plans, Specifications, Permits, etc.			
1. Are the cofferdam plans prepared, stamped and signed by an engineer registered to practice in Oregon?	____	____	____
2. Have three copies (five copies if railroad approval is required) of the complete design calculations accompanied the cofferdam drawings submittal?	____	____	____
3. Are cofferdam plans in compliance with the requirements of the construction plans general notes?	____	____	____
4. Are cofferdam plans in compliance with contract plan structural details?	____	____	____
5. Are cofferdam plans in compliance with the requirements of the Oregon Standard Specifications for Construction, subsection 00150.35?	____	____	____
6. Are all existing, adjusted or new utilities in proximity with the proposed cofferdam shown on the cofferdam plans and is projection of these utilities addressed?	____	____	____
7. Are clearance requirements satisfied and shown on the cofferdam plans?	____	____	____
B. Loads			
1. Are the magnitude and location of all loads, equipment and personnel that will be supported by the cofferdam shown noted on the cofferdam plans?	____	____	____
2. Are design loads and material properties used to determine design stresses shown for each different cofferdam member shown on the cofferdam plans?	____	____	____
3. Is the assumed water elevation for seal design shown on the plans?	____	____	____

4. Does the cofferdam design assume water pressure acts on the full height of the cofferdam (from the vent to the bottom of the excavation?) ____ ____ ____

5. Has percolation into the excavation been addressed? ____ ____ ____

C. Allowable Stresses

1. Have the design loads used for cofferdam design of all members been noted in the design calculations? ____ ____ ____

2. Are the allowable stress and the calculated stress listed in the summary for each different cofferdam member? ____ ____ ____

D. Timber Construction

1. Are timber grades consistent with material to be delivered to the construction site, noted on the cofferdam drawings, and in accompanying calculations for all timber cofferdam material? ____ ____ ____

2. If "rough" lumber is specified for the cofferdam, are the actual lumber dimensions used in the calculations shown? ____ ____ ____

E. Steel Construction

1. Are steel structural shapes and plates identified by ASTM number on the cofferdam plans and in the calculations? ____ ____ ____

2. Have steel beams been checked for bending, shear, web crippling and buckling of the compression flange? ____ ____ ____

F. Compression Members, Bracing Members and Connections

1. Has general buckling been evaluated for all compression members? ____ ____ ____

2. Has bracing been provided at all points of assumed support for compression members? ____ ____ ____

3. Is bracing strength and stiffness sufficient for the intended purpose? ____ ____ ____

4. Have all connections been designed and detailed? ____ ____ ____

_____ _____

Designer's Signature Date

SHORING DESIGN CHECKLIST

Instructions - This shoring design checklist was developed to facilitate the design, review, and erection of shoring to be used for ODOT bridge construction projects. This checklist is intended to act as a reminder to design or check for specific important aspects of this construction. It is not a substitute for plan and/or design criteria or specification requirements.

The Checklist is to be completed and signed by the shoring design engineer. Answer every question. Attach to the Checklist an explanation of any negative responses.

Submit the Checklist according to 00510.04.

	YES	NO	N/A
A. Contract Plans, Specifications, Permits, etc.			
1. Are the shoring plans prepared, stamped, and signed by an engineer registered to practice in Oregon?	____	____	____
2. Have three copies (five copies if railroad approval is required) of the complete design calculations accompanied the shoring drawings submittal?	____	____	____
3. Are shoring plans in compliance with the requirements of the construction plans general notes?	____	____	____
4. Are shoring plans in compliance with contract plan structural details?	____	____	____
5. Are shoring plans in compliance with the requirements of the Oregon Standard Specifications for Construction, subsection 00150.35?	____	____	____
6. Are all existing, adjusted or new utilities in proximity with the proposed shoring shown on the shoring plans and is protection of these utilities addressed?	____	____	____
7. Are clearance requirements satisfied and shown on the shoring plans?	____	____	____
B. Loads			
1. Are the magnitude and location of all loads, equipment and personnel that will be supported by the shoring shown or noted on the shoring plans?	____	____	____
2. Are design loads and material properties used to determine design stresses shown for each different shoring member shown on the shoring plans?	____	____	____

3. Does the shoring design assume water saturated soil pressure acts on the full height of the shoring? ____ ____ ____

4. Has percolation into the excavation been addressed? ____ ____ ____

C. Allowable Stresses

1. Have the design loads used for shoring design of all members been noted in the design calculations? ____ ____ ____

2. Are the allowable stress and the calculated stress listed in the summary for each different shoring member? ____ ____ ____

D. Timber Construction

1. Are timber grades consistent with material to be delivered to the construction site and noted on shoring drawings and in accompanying calculations for all timber shoring material? ____ ____ ____

2. If "rough" lumber is specified for shoring by the shoring designer are the actual lumber dimensions used in calculations shown? ____ ____ ____

E. Steel Construction

1. Are steel structural shapes and plates identified by ASTM number on the shoring plans and in the calculations? ____ ____ ____

2. Have steel beams been checked for bending, shear, web crippling and buckling of the compression flange? ____ ____ ____

F. Compression Members, Bracing, Members and Connections

1. Has general buckling been evaluated for all compression members? ____ ____ ____

2. Has bracing been provided at all points of assumed support for compression members? ____ ____ ____

3. Is bracing strength and stiffness sufficient for the intended purpose? ____ ____ ____

4. Have all connections been designed and detailed? ____ ____ ____

_____ _____
Designer's Signature Date

SECTION 00512 - DRILLED SHAFTS

Comply with Section 00512 of the Standard Specifications modified as follows:

00512.13 Steel Casing - Delete the sentence that begins "Use casing with an outside diameter...".

00512.18 Grout - Replace this subsection with the following subsection:

00512.18 CSL Cement Grout - Furnish non-epoxy grout or tendon grout from the QPL or furnish a pumpable CSL cement grout consisting of neat cement and water that has a water cement ratio between 0.38 and 0.45. The portland cement for the pumpable CSL cement grout shall meet the requirements of Section 02010.

00512.43(c) Temporary Casing - In the paragraph that begins "Where the acceleration coefficient...", replace the words "acceleration coefficient" with the words "peak horizontal ground acceleration coefficient for the 1,000 year return period" and replace the value "0.10" with "0.16 g (acceleration due to gravity)".

Add the following subsection:

00512.44 Permanent Casing - Furnish and install permanent casing as follows:

Bridge Number	Bent Number	Casing Size	Elevation for Top of Casing (Feet)	Elevation for Bottom of Casing (Feet)
20861	2	8'-0"	372.07	364.40

Perform welding of all permanent casing according to AWS D1.1. Test all full penetration welds using nondestructive methods by either radiograph or ultrasonic methods. Base nondestructive testing acceptance criteria on cyclic tension loading.

After concrete placement, fill all void space between the casing and the shaft excavation with a material that approximates the geotechnical properties of the in-situ materials.

00512.45(d) Concrete Cover - Replace this subsection, except for the subsection number and title, with the following:

Maintain the required concrete cover shown by placing concentric spacer bars or other approved devices around the reinforcing cage. Place spacing devices on minimum 10 foot vertical spacings the full length of the shaft. At each 10 foot level, place spacers on a minimum 30 inch circumferential spacing with at least three spaces per level. Do not use wood spacers or concrete dobies. Provide details of the proposed centering method on the shop drawings submitted according to 00512.40.

00512.48(a) Crosshole Sonic Log Testing - Add the following to the end of this subsection:

For drilled shafts constructed using non-contact splice methods, perform CSL testing after the initial pour to the bottom of the splice region and prior to placement of the column reinforcement and pouring of the splice region.

00512.80(d) Drilled Shaft Concrete - Add the following at the end of the paragraph:

The estimated quantity of drilled shaft concrete is:

Structure	Class	Quantity (Cubic Yard)
20861	4000	93

00512.80(e) Drilled Shaft Reinforcement - Add the following at the end of the paragraph:

The estimated quantity of drilled shaft reinforcement is:

Structure	Quantity Uncoated (Pound)
20861	10,520

00512.80(f) Crosshole Sonic Log Equipment Mobilization - Delete this subsection.

00512.80(h) Crosshole Sonic Log Tests - Replace the sentence that begins "No separate measurement..." with the following sentence:

No separate measurement will be made for CSL equipment and operating personnel or for CSL tests performed at the Contractor's option.

00512.90 Payment - Delete the paragraph that begins "Item (f) includes...".

Item (h) includes mobilization of all CSL testing equipment and personnel to and from the site, all CSL testing, interpretation, analysis, electronic data, and final report for each tested and accepted shaft.

SECTION 00520 - DRIVEN PILES

Comply with Section 00520 of the Standard Specifications modified as follows:

00520.11 Engineer's Estimated Length List - Add the following to the end of this subsection:

The Engineer's estimated lengths of steel piling are:

Location	No.	Length (Feet)	Kind
Bridge 20861 – Bent 1	8	40	HP12x84

Bridge 20861 – Bent 3	6	40	HP12x84
Bridge 21162 – Bent 1	6	30	HP14x89
Bridge 21162 – Bent 2	6	35	HP14x89
Bridge 21163 – Bent 1	8	30	HP12x84
Bridge 21163 – Bent 2	8	25	HP12x84

00520.20(d-3) Wave Equation Method - Add the following paragraph and table(s) at the end of this subsection:

The input values for the wave equation analyses are:

Bridge-Bent	Pile Type	Pile Length * (Feet)	Quake (Inches)		Damping (sec./ft.)		% skin (ITYS)	R_n (kips)
			Skin	Toe	Skin	Toe		
20861 - Bent 1	HP12x84	40	0.10	0.10	0.05	0.15	98	890
20861 - Bent 3	HP12x84	40	0.10	0.10	0.05	0.15	98	890
21162 - Bent 1	HP14x89	30	0.10	0.10	0.05	0.15	14	940
21162 - Bent 2	HP14x89	35	0.10	0.10	0.05	0.15	12	940
21163 - Bent 1	HP12x84	30	0.10	0.10	0.05	0.15	7	890
21163 - Bent 2	HP12x84	25	0.10	0.10	0.05	0.15	5	890

* These pile lengths are based on the top of the pile being approximately 5 feet above the finished cutoff elevation. All additional pile length above that elevation, that may be required to accommodate the Contractors pile installation method or site conditions, shall be added to the lengths listed above and appropriate changes made to the skin friction distribution input listed below.

For Bridges 21162 and 21163 use triangular skin friction distribution.

For Bridge 20861 use the relative skin friction distribution values listed below in the WEAP analysis:

Bent 1		Bent 3	
Depth* (Feet)	Relative Distribution	Depth* (Feet)	Relative Distribution
2.0	0.0	2.0	0.0
11.3	1.2	6.4	1.4
16.3	0.4	7.4	1.4
18.8	0.2	12.4	0.6
24.6	0.2	15.4	0.7

25.8	0.7	17.3	0.7
26.0	32.4	17.4	0.8
36.6	32.4	22.4	0.8
		22.8	32.4
		33.4	32.4

* Depths are depth below finished cutoff elevation; assume approximately 4 to 7 ft. stick up above this level.

SECTION 00530 - STEEL REINFORCEMENT FOR CONCRETE

Comply with Section 00530 of the Standard Specifications modified as follows:

00530.30 Mechanical Splice Installers - Replace the bullet that begins "Construct each splice sample with two..." with the following bullet:

- Construct each splice sample with two equal lengths of straight reinforcing bar so the total length of the assembled splice sample is at least 72 inches for No. 3 through No. 8 bars and at least 96 inches for No. 9 through No. 18 bars.

00530.42(c-2-c) Testing - Replace the sentence that begins "Construct test splices with two..." with the following sentence:

Construct test splices with two equal lengths of straight reinforcing bar so that the total length of the assembled splice is not less than 72 inches for No. 3 through No. 8 bars and not less than 96 inches for No. 9 through No. 18 bars.

00530.80(a) Lump Sum - Add the following to the end of this subsection:

The estimated quantity of reinforcement is:

Structure	Quantity Uncoated (Pound)
Dodge Creek, Hwy 231 at MP 20.95 (BR No. 21162)	9,180
Dodge Creek, Hwy 231 at MP 21.15 (BR No. 21163)	76,000
Calapooya Creek, Hwy 231 at MP 22.10 (BR No. 20861)	158,624

The weight of miscellaneous metal, based on weights listed in 00530.80(b) and Project quantities, is included in the estimated quantity of uncoated reinforcement.

SECTION 00540 - STRUCTURAL CONCRETE

Comply with Section 00540 of the Standard Specifications modified as follows:

00540.10 General - Add the following sentence to the end of this subsection:

Furnish a concrete surface retarder from the QPL.

00540.15 Form Materials - Replace this subsection, except for the subsection number and title, with the following:

Furnish wood, minimum nominal 5/8 inch thick APA exterior grade plywood, minimum nominal 5/8 inch thick APA plyform, metal, or other suitable form material. For round concrete columns, provide either metal or other approved form material that produces a smooth and true surface free from fins, joints and other irregularities. Use APA plyform for all decks and slabs.

00540.17(a) Aggregate - Delete the sentence that reads "Blend aggregates only as allowed in 02001.20."

00540.17(c) Hardened Concrete - In the paragraph that begins "Cast and cure test...", replace "14 inch x 8 inch" with "4 inch x 8 inch".

00540.17(c-3) Acceptance - Replace the paragraph that begins "If an ASTV falls..." with the following paragraph:

If an ASTV falls below $f'c$, the Contractor may submit a written plan outlining a proposed alternate method of evaluating compressive strength. Submit the plan for review by the Engineer within three days of the test. Provide evidence that a reasonable $f'cr$ (over-design) was maintained and that there is credible evidence (besides low strength) which warrants consideration of this option. The Engineer may allow an alternate method of acceptance if the compressive strength test results are determined to be suspect from definable external factors.

00540.43(a) Construction Joints - Replace the paragraph that begins "Within 24 hours after..." with the following paragraphs:

Apply a concrete surface retarder according to the manufacturer's recommendations. Remove surface mortar within the time period recommended by the manufacturer and clean the joint surface and reinforcing steel by removing loosened particles of aggregate, damaged concrete, unconsolidated concrete and surface laitance with a high pressure washer conforming to 00540.28 to the extent that clean aggregate (free of surface mortar) is exposed on 50% of the surface. Clean the joint surface again immediately prior to the concrete placement to remove any subsequent deposits of dirt, debris or other foreign materials. Saturate the joint surface with potable water immediately before resuming concrete placement. Remove standing water in depressions or hollows of the joint surface. Saw cut the top 1 inch of the deck joints with a straight vertical cut before subsequent concrete placement and before saturating the surface with water. Where joints are straight and without spalls, the Engineer may waive this saw cut requirement.

Hand rub or brush fresh concrete paste onto the existing surface of vertical deck joints down to the top mat of reinforcing steel at the beginning of subsequent concrete placement.

Stay in place joint forms are not allowed in bridge deck construction joints.

00540.43(c) Joint with Fillers - Add the following sentence to the end of the paragraph:

Provide a 3/4 inch chamfer on each edge of the joint unless otherwise noted.

00540.48(g) Bridge Decks - Add the following bullet to the bullet list:

- Has saturated the tops of precast prestressed concrete members and formwork by applying continuous water for a minimum of 2 hours immediately prior to beginning deck placement.

00540.49(a-2-a) General - Replace the paragraph that begins "Do not place ..." with the following two paragraphs:

Do not place concrete if the air temperature is, or is forecast to be, below 40 °F the day of placement or is forecast to be below 40 °F on any of the next seven calendar days (14 calendar days for decks) after placement unless a Cold Weather Plan has been approved by the Engineer.

To place concrete when the temperature is below 40 °F, submit a Cold Weather Plan that identifies the methods that will be used to prevent the concrete temperature from falling below 50 °F. Methods include heated enclosures and insulated forms. Also include in the plan measures that will be taken if the concrete temperature falls below 50 °F. Provide a 24 hour continuous recording thermometer to verify the concrete temperature.

00540.49(b) Bridge Deck Placement - Add the following bullet before the first bullet:

- Only if precipitation is not forecast between 2 hours before and 2 hours after the scheduled placement duration. An acceptable forecast will have less than 30% chance of precipitation for the entire placement window. Provide a forecast to the Engineer 1 hour before placement.

00540.50(c) Deck Roadway Texturing - In the bullet that begins "Unequally space...", replace "Unequally space grooves from" with "Space groves randomly from".

Add the following bullet after the bullet that begins "Orient the grooves...":

- Do not groove within 6 inches of joint blockouts and bridge ends. For skewed bridges, additional ungrooved portions at joint blockouts and bridge ends are allowed to accommodate the width of the gang saw.

00540.51(b) Curing Concrete Bridge Decks - In the bullet that begins "Provide wind breaks...", replace "0.20 pounds per square foot" with "0.10 pounds per square foot".

00540.53(a-1) On All Surfaces - In the bullet that begins "Fill holes and...", replace "1/2 inch" with "1/4 inch".

00540.53(d-1) Concrete Paint - In the sentence that begins "Thoroughly saturate the surface...", replace "02210.30(c)" with "02210.30".

00540.54 Crack Inspection and Deck Sealing - Replace the paragraph that begins "Immediately after the cure..." with the following paragraph:

Before opening the bridge deck to traffic, the Engineer will inspect the deck for cracks.

00540.80(a-1) Lump Sum - Add the following to the end of this subsection:

The estimated quantity of concrete is:

Bridge No. 21162

Type and Class	Quantity (Cu. Yd.)
General Structural Concrete, Class 3300	47

Bridge No. 21163

Type and Class	Quantity (Cu. Yd.)
Deck Concrete, Class HPC4000	166
General Structural Concrete, Class 3300	162

Bridge No. 20861

Type and Class	Quantity (Cu. Yd.)
Deck Concrete, Class HPC4000	455
General Structural Concrete, Class 3300	227

00540.80(b) Saw Cut Texturing - Replace this subsection, except for the subsection number and title, with the following:

The quantities of surface texturing will be measured on the area basis and will be the area of each bridge deck or end panel shown less 16 inches along each curb. Field measurement of surface texturing will not be made. The area will be calculated to the nearest square yard for each bridge deck or end panel.

FALSEWORK DESIGN CHECKLIST

Instructions - This checklist was developed to facilitate the design, review, and erection of falsework to be used for Oregon Department of Transportation bridge construction projects. This checklist is intended to act as a reminder to design or check for specific important aspects of this construction. It is not a substitute for plan and/or design criteria or specification requirements.

The Checklist is to be completed and signed by the Falsework Design Engineer. Answer every question. Attach to the Checklist an explanation of any negative responses.

Submit the Checklist according to 00540.41(a).

	YES	NO	N/A
A. Contract Plans, Specifications, Permits, Etc.			
1. Are the falsework plans prepared, stamped and signed by an engineer registered to practice in Oregon?	___	___	___
2. Have three complete sets (five if railroad approval is required) of the design calculations been included with the falsework drawings submittal?	___	___	___
3. Are falsework plans in compliance with the requirements of the construction plans general notes?	___	___	___
4. Are falsework plans in compliance with contract plan structural details?	___	___	___
5. Are falsework plans in compliance with the requirements of the Oregon Standard Specifications for Construction, subsection 00150.35?	___	___	___
6. Are all existing, adjusted or new utilities in proximity with the proposed falsework shown on the falsework plans and is protection of these utilities addressed?	___	___	___
7. Are clearance requirements satisfied and shown on the falsework plans?	___	___	___
8. For construction in or over navigable waters have all requirements for construction of falsework that are called for in the Coast Guard Permit been incorporated in the falsework design?	___	___	___
9. Has possible damage from traffic been considered in the falsework design?	___	___	___

10. Has damage from stream drift been considered in the falsework design? ___ ___ ___

11. Is the concrete placing sequence shown and is it consistent with the contract plans? ___ ___ ___

B. Foundation Requirements

1. Are driven falsework piling provided as called for on the contract plans? ___ ___ ___

   a. Is a minimum pile tip elevation or penetration indicated on the drawings? ___ ___ ___

   b. If timber falsework piles are specified, are the recommended order lengths sufficient to virtually eliminate the possibility of pile splices? ___ ___ ___

   c. Is a detailed static pile capacity analysis included in the calculations? ___ ___ ___

   d. If lateral loads are applied to the piling by equipment, dead loads, flowing water, or drift, is a detailed lateral load analysis included in the calculations? ___ ___ ___

   e. When piling are in an active waterway, have the potential effects of scour on axial and lateral pile support been addressed in the calculations? ___ ___ ___

   f. Does the proposed falsework pile hammer meet the minimum field energy requirements as listed in 00520.20(d-2)? ___ ___ ___

   g. Will a driving criteria graph [FHWA Gates Equation, in 00520.42(b)] plotting blow count versus stroke for an acceptable pile hammer be provided for the project inspector? ___ ___ ___

2. Is falsework supported on spread footings or mud sills? ___ ___ ___

   a. Are the spread footing elevations shown on the drawings? ___ ___ ___

   b. Has a rational method for determining the ultimate bearing capacity of the foundation materials been presented and described in the calculations? ___ ___ ___

c. Have the soil parameters used in calculating the ultimate bearing capacity been listed and confirmed by the designer? ____ ____ ____

d. Has an appropriate Factor of Safety been used for calculating the allowable bearing capacity of the foundation materials? ____ ____ ____

e. Are spread footing settlement estimates included in the calculations? ____ ____ ____

f. Have effective stresses been used in the calculations, when applicable? ____ ____ ____

g. When spread footings are founded near the top of a slope or in a slope, have the ultimate bearing capacity calculations been modified accordingly? ____ ____ ____

h. When spread footings may be subjected to flowing water, have the potential effects of scour on ultimate bearing capacity been addressed in the calculations? ____ ____ ____

C. Loads

1. Are the magnitude and location of all loads, equipment and personnel that will be supported by the falsework shown and noted on the falsework plans? ____ ____ ____

2. Has the mass of specific equipment units to be supported by the falsework been included in the calculations or on the falsework plans? ____ ____ ____

3. Is the deck finishing machine supported in a manner that will not impose load on concrete forms except deck overhang brackets? ____ ____ ____

4. Are design loads and material properties used to determine design stresses for each different falsework member shown on the falsework plans? ____ ____ ____

5. Is the worst loading and member property condition, rather than the average condition, used to obtain design loads? ____ ____ ____

6. Are deck forms for concrete box girders supported from the girder stem and not from the bottom slab? ____ ____ ____

7. Are diaphragm loads or other concentrated loads included in the analysis of supporting beams? ____ ____ ____

8. If sloping structural members exert horizontal forces on the falsework, is bracing or ties used to resist these loads? ___ ___ ___

D. Allowable Stresses

1. Has the method used for falsework design of all members except for manufactured assemblies been noted in the design calculations? ___ ___ ___

2. Are manufactured assemblies identified as to manufacturer, model, rated working capacity and ultimate capacity? ___ ___ ___

3. Is the allowable stress and the calculated stress listed in the summary for each different falsework member, except for manufactured assemblies? ___ ___ ___

E. Timber Falsework Construction

1. Are timber grades consistent with material to be delivered to the construction site, and noted on falsework drawings, and in accompanying calculations for all timber falsework material? ___ ___ ___

2. If "rough" lumber is specified for falsework by the falsework designer are the actual lumber dimensions used in calculations shown? ___ ___ ___

3. If plywood spans are governed by the strength of the plywood, are the allowable stress and the calculated stress shown on the submitted calculations? ___ ___ ___

4. If plywood spans are governed by the allowable spacing of supporting joists, are the allowable and the proposed spacing shown on the falsework plans? ___ ___ ___

5. Have timber stringers been checked for bending, shear, bearing stresses, and 1/240 of the span length deflection? ___ ___ ___

6. Are joists identified as being continuous over 3 or more spans when they are not analyzed as simple spans? ___ ___ ___

7. Have stringers and cap beams been checked for bearing stresses perpendicular to the grain as well as for bending and shear stresses? ___ ___ ___

8. Have posts been checked as columns as well as for compression parallel to the grain? ___ ___ ___

F. Steel Falsework Construction

1. Are steel structural shapes and plates identified by ASTM number on the falsework plans and in the calculations? ____ ____ ____
2. Have steel beams been checked for bending, shear, web crippling and buckling of the compression flange? ____ ____ ____
3. Has horizontal plane bracing been shown where required to limit compression flange buckling? ____ ____ ____

G. Deflections and Settlement

1. Is falsework deflection for concrete dead load shown on the plans for all falsework spans? ____ ____ ____
2. Is falsework deflection from concrete dead load limited to 1/240 of the span length for all falsework spans? ____ ____ ____
3. Do stringers supporting cast-in-place concrete compensate for estimated camber? ____ ____ ____
4. For beam spans with cantilevers, has the upward deflection of the cantilevers due to load placed on the main spans been investigated? ____ ____ ____
5. Are provisions shown for taking up falsework settlement? ____ ____ ____

H. Compression Members, Connections and Bracing

1. Has general buckling been evaluated for all compression members? ____ ____ ____
2. Has bracing been provided at all points of assumed support for compression members? ____ ____ ____
3. Was bracing in each direction considered in establishing the effective length used to check post capacity? ____ ____ ____
4. Is bracing strength and stiffness sufficient for the intended purpose? ____ ____ ____
5. If temporary bracing is required during intermediate stages of falsework erection, is it shown on the falsework plans? ____ ____ ____
6. Have all connections been designed and detailed? ____ ____ ____
7. Are web stiffeners required on steel cap beams to resist eccentric loads? ____ ____ ____

8. Are wedges required between longitudinal beams and cap beams to accommodate longitudinal slope or to reduce eccentric loading? ___ ___ ___

9. Has the width to height ratio of wedge packs been verified to fall within the limits given in the special provisions? ___ ___ ___

10. If overhang brackets are attached to unstiffened girder webs, has the need for temporary bracing to prevent longitudinal girder distortion been investigated? ___ ___ ___

11. Have beams and stringers with height/width ratios greater than 2.5:1 been checked for stability? ___ ___ ___

12. Have sloping falsework members that exert horizontal forces on the falsework been braced or tied to resist these loads? ___ ___ ___

13. If beams supporting cast-in-place concrete have cantilever spans, have the falsework plans been noted to require the main spans be loaded before loading the cantilever spans? ___ ___ ___

14. Have timber headers set on shoring towers been checked for eccentric loads, and for shear and bending stresses produced by the eccentricity? ___ ___ ___

I. Highway and Railroad Traffic Openings (For falsework over or adjacent to highway or railroad traffic openings.)

1. Do falsework plans satisfy construction clearances shown on the contract plans? ___ ___ ___

2. Are posts designed for 150% of the calculated vertical loading and increased or readjusted for loads caused by prestressing forces? ___ ___ ___

3. Are mechanical connections 2,000 pounds minimum capacity shown at the bottom of posts to footing connections? ___ ___ ___

4. Are mechanical connections 1,000 pounds minimum capacity shown at the top of the post to cap connections? ___ ___ ___

5. Are beam tie downs 500 pounds minimum capacity shown for all beams? ___ ___ ___

6, Are 5/8 inch or larger diameter bolts used at connections for timber bracing? ___ ___ ___

7. Are temporary erection and removal bracing shown? ___ ___ ___

J. Additional Requirements for Railroad Traffic Openings

1. Do falsework plans show collision posts as shown on the contract plans? ___ ___ ___

2. Do posts adjacent to the openings have a minimum section modulus of?

   a. steel - 9.5 cubic inches ___ ___ ___
   b. timber - 250 cubic inches ___ ___ ___

3. Are soffit and deck overhang forming details shown? ___ ___ ___

4. Are falsework bents within 20 feet of centerline of the track sheathed solid between 3 feet and 17 feet above top of rail with 5/8 inch thick minimum plywood and properly blocked at the edges? ___ ___ ___

5. Is bracing on the bents within 20 feet of the centerline of the track adequate to resist the required assumed horizontal load or minimum 5,000 pounds, whichever is greater? ___ ___ ___

_____ _____
Designer's Signature Date

SECTION 00542 - ARCHITECTURAL TREATMENT

Section 00542, which is not in the Standard Specifications, is included in this project by Special Provision.

Description

00542.00 Scope - This work consists of constructing textured concrete surfaces on the face of the MSE Wall.

Materials

00542.10 General - Furnish, store, prepare, apply, and cure all materials according to manufacturers' directions specified for the intended use.

00542.11 Form Liners - Furnish one of the following form liner systems, or approved equal:

- Pattern #167D (Ashlar Stone D), from Scott System, Inc., 10777 East 45th Ave., Denver, CO, 80239; ph: (303) 373-2500
- Pattern #16999 (Georgia Ashlar), form Fitzgerald Form Liners, 1341 East Pomona Street, Santa Ana, CA, 92705; ph: (714) 547-6710
- Pattern #1506 (Random Block Ashlar Stone), from Spec Form liners, Inc., 530 East Dyer Road, Santa Ana, CA, 92707; ph: (888) 429-9550

Form liners shall be a high-quality reusable product that attaches easily to the forming system and does not compress more than 1/4 inch when concrete is placed in lined forms at a rate of 10 feet (vertical) per hour. Form liners shall be capable of withstanding anticipated concrete pour pressures without leakage causing physical or visual defects. No joints are allowed within the textured area of a panel.

Form liners shall be strippable without causing concrete surface deterioration or weakness in the substrate. Patching materials shall be mutually compatible with the coloring system to be applied.

00542.14 Release Agent; Wall Ties - Form release agent shall be compatible with form liner system to be used.

Wall ties shall have set break-backs at least 1 inch below the finished concrete surface (bottom of rustication groove), so designed that the device can be disengaged and removed without spalling or damaging the concrete.

00542.15 Quality Control - Provide quality control according to Section 00165 and the following:

(a)Working Drawings - Submit unstamped working drawings according to 00150.35, detailing the stone pattern.

SECTION II. SCHEDULE OF ITEMS

Payment for work done under this contract will be made at the unit prices listed on the inserted sheet or sheets which follow. The quantities given are approximate only, and it is neither expressly nor by implication agreed that the actual amounts of work to be done and paid for will be in accord therewith.

SCHEDULE OF ITEMS

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
	SECTION 0001 TEMPORARY FEATURES AND APPURTENANCES				
0010	0210-0100000A MOBILIZATION	LUMP	ALL	463,000.00	463,000.00
0020	0225-0100000A TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LUMP	ALL	5,000.00	5,000.00
0030	0225-0102000J TEMPORARY SIGNS	SQFT	542.00	18.00	9,756.00
0040	0225-0105000E TEMPORARY BARRICADES, TYPE III	EACH	20.00	130.00	2,600.00
0050	0225-0108000F TEMPORARY GUARDRAIL, TYPE 2A REFLECTORIZED	FOOT	737.50	12.10	8,923.75
0060	0225-0110000F TEMPORARY GUARDRAIL, TYPE 3 REFLECTORIZED	FOOT	50.00	25.50	1,275.00
0070	0225-0115000E TEMPORARY GUARDRAIL TERMINALS, NON-FLARED	EACH	5.00	1,000.00	5,000.00
0080	0225-0117000E TEMPORARY GUARDRAIL TRANSITION	EACH	4.00	1,000.00	4,000.00
0090	0225-0145000E TEMPORARY PLASTIC DRUMS	EACH	54.00	50.00	2,700.00
0100	0225-0149000E TEMPORARY FLEXIBLE PAVEMENT MARKERS	EACH	1,450.00	1.00	1,450.00
0110	0225-0153000F TEMPORARY STRIPING	FOOT	8,300.00	0.70	5,810.00
0120	0225-0153200J TEMPORARY PAVEMENT BARS	SQFT	24.00	4.00	96.00
0130	0225-0154000F STRIPE REMOVAL	FOOT	1,600.00	1.27	2,032.00
0140	0225-0158000E PORTABLE TRAFFIC SIGNAL	EACH	1.00	32,000.00	32,000.00

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0150	0225-0164000E PORTABLE CHANGEABLE MESSAGE SIGNS	EACH	2.00	2,500.00	5,000.00
0160	0225-0168000T FLAGGERS	HOUR	1,700.00	41.90	71,230.00
0170	0225-0168100T FLAGGER STATION LIGHTING	HOUR	160.00	12.52	2,003.20
0180	0225-0172000T PILOT CARS	HOUR	80.00	50.00	4,000.00
0190	0230-0100000A CONSTRUCT AND REMOVE DETOURS	LUMP	ALL	100,000.00	100,000.00
0200	0250-0102000A TEMPORARY DETOUR BRIDGES	LUMP	ALL	282,500.00	282,500.00
0210	0252-0104000A TEMPORARY WORK BRIDGES	LUMP	ALL	50,000.00	50,000.00
0220	0280-0100000A EROSION CONTROL	LUMP	ALL	4,000.00	4,000.00
0230	0280-0104000R TEMPORARY MULCHING	ACRE	2.80	1,500.00	4,200.00
0240	0280-0106000E CHECK DAM	EACH	16.00	150.00	2,400.00
0250	0280-0113000F SEDIMENT FENCE, UNSUPPORTED	FOOT	5,600.00	1.50	8,400.00
0260	0280-0114000E INLET PROTECTION	EACH	3.00	50.00	150.00
0270	0290-0100000A POLLUTION CONTROL PLAN	LUMP	ALL	500.00	500.00
0280	0290-0102000A WORK CONTAINMENT PLAN AND SYSTEM	LUMP	ALL	50,000.00	50,000.00

SECTION 0002 ROADWORK

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0290	0305-0100000A CONSTRUCTION SURVEY WORK	LUMP	ALL	33,250.00	33,250.00
0300	0310-0106000A REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP	ALL	6,500.00	6,500.00
0310	0320-0100000A CLEARING AND GRUBBING	LUMP	ALL	12,500.00	12,500.00
0320	0330-0103000K TOE TRENCH EXCAVATION	CUYD	970.00	15.00	14,550.00
0330	0330-0105000K GENERAL EXCAVATION	CUYD	16,729.00	9.00	150,561.00
0340	0330-0126000K STONE EMBANKMENT	CUYD	860.00	24.00	20,640.00
0350	0331-0106000J 12 INCH SUBGRADE STABILIZATION	SQYD	500.00	18.00	9,000.00
0360	0340-0100000Q WATERING	MGAL	1,510.00	2.00	3,020.00
0370	0350-0100000J DRAINAGE GEOTEXTILE, TYPE 1	SQYD	125.00	5.00	625.00
0380	0350-0104000J RIPRAP GEOTEXTILE, TYPE 2	SQYD	3,100.00	1.25	3,875.00
0390	0350-0105000J SUBGRADE GEOTEXTILE	SQYD	17,100.00	1.00	17,100.00
0400	0370-0101000A OBLITERATING SURFACINGS	LUMP	ALL	6,500.00	6,500.00
0410	0390-0105000K LOOSE RIPRAP, CLASS 50	CUYD	50.00	50.00	2,500.00
0420	0390-0111000K LOOSE RIPRAP, CLASS 200	CUYD	870.00	26.00	22,620.00
0430	0390-0114000K LOOSE RIPRAP, CLASS 700	CUYD	2,200.00	27.00	59,400.00

SECTION 0003 DRAINAGE AND SEWERS

SCHEDULE OF ITEMS

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0440	0430-0100120F 12 INCH DRAIN PIPE	FOOT	100.00	50.00	5,000.00
0450	0445-010012AF 12 INCH CULVERT PIPE, 5 FT DEPTH	FOOT	115.00	50.00	5,750.00
0460	0445-010018AF 18 INCH CULVERT PIPE, 5 FT DEPTH	FOOT	145.00	55.00	7,975.00
0470	0445-0700120E SLOPED END SECTIONS, 12 INCH	EACH	3.00	400.00	1,200.00
0480	0460-0100000J PAVED CULVERT END SLOPES	SQFT	49.00	50.00	2,450.00
0490	0470-0311000E CONCRETE INLETS, TYPE D	EACH	1.00	1,100.00	1,100.00
0500	0470-0319000E CONCRETE INLETS, TYPE G-2MA	EACH	2.00	1,850.00	3,700.00

SECTION 0004 BR NO 20861

0510	0501-0100000A BRIDGE REMOVAL WORK	LUMP	ALL	25,000.00	25,000.00
0520	0510-0100000A SHORING, CRIBBING AND COFFERDAMS	LUMP	ALL	20,000.00	20,000.00
0530	0510-0101000A STRUCTURE EXCAVATION	LUMP	ALL	1,000.00	1,000.00
0540	0510-0106000A GRANULAR WALL BACKFILL	LUMP	ALL	2,000.00	2,000.00
0550	0512-0100000A FURNISH DRILLING EQUIPMENT	LUMP	ALL	21,500.00	21,500.00
0560	0512-0101000A DRILLED SHAFT CONCRETE	LUMP	ALL	22,500.00	22,500.00
0570	0512-0103000A DRILLED SHAFT REINFORCEMENT	LUMP	ALL	18,000.00	18,000.00

SCHEDULE OF ITEMS

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0580	0512-0105000F CSL TEST ACCESS TUBES	FOOT	400.00	5.00	2,000.00
0590	0512-0106000E CSL TESTS	EACH	1.00	2,500.00	2,500.00
0600	0512-0114000F DRILLED SHAFT EXCAVATION, 96 INCH DIAMETER	FOOT	50.00	462.00	23,100.00
0610	0512-0115000F PERMANENT SHAFT CASINGS	FOOT	7.70	1,040.00	8,008.00
0620	0520-0100000A FURNISH PILE DRIVING EQUIPMENT	LUMP	ALL	7,500.00	7,500.00
0630	0520-0110000F FURNISH HP 12 X 84 STEEL PILES	FOOT	560.00	38.42	21,515.20
0640	0520-0209000E DRIVE HP 12 X 84 STEEL PILES	EACH	14.00	500.00	7,000.00
0650	0520-0330000E REINFORCED PILE TIPS	EACH	14.00	143.00	2,002.00
0660	0520-0406000E HP 12 X 84 STEEL PILE SPLICES	EACH	2.00	250.00	500.00
0670	0530-0100000A REINFORCEMENT	LUMP	ALL	160,000.00	160,000.00
0680	0540-0301000A GENERAL STRUCTURAL CONCRETE, CLASS 3300	LUMP	ALL	103,500.00	103,500.00
0690	0540-0307000A GENERAL STRUCTURAL CONCRETE, CLASS HPC4000	LUMP	ALL	164,500.00	164,500.00
0700	0540-0401000J SAW CUT TEXTURING	SQYD	1,475.00	5.50	8,112.50
0710	0545-0100000J REINFORCED CONCRETE BRIDGE END PANELS	SQYD	314.00	198.00	62,172.00
0720	0560-0102000A STEEL PLATE GIRDER	LUMP	ALL	620,000.00	620,000.00

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0730	0585-0106000A POURED JOINT SEALS	LUMP	ALL	3,000.00	3,000.00
0740	0587-0120000A TYPE "F" CONCRETE RAIL	LUMP	ALL	51,000.00	51,000.00

SECTION 0005 BR NO 21163

0750	0501-0100000A BRIDGE REMOVAL WORK	LUMP	ALL	20,000.00	20,000.00
0760	0510-0100000A SHORING, CRIBBING AND COFFERDAMS	LUMP	ALL	10,000.00	10,000.00
0770	0510-0101000A STRUCTURE EXCAVATION	LUMP	ALL	1,000.00	1,000.00
0780	0510-0108000A GRANULAR STRUCTURE BACKFILL	LUMP	ALL	2,000.00	2,000.00
0790	0520-0100000A FURNISH PILE DRIVING EQUIPMENT	LUMP	ALL	7,000.00	7,000.00
0800	0520-0110000F FURNISH HP 12 X 84 STEEL PILES	FOOT	440.00	41.00	18,040.00
0810	0520-0209000E DRIVE HP 12 X 84 STEEL PILES	EACH	16.00	438.00	7,008.00
0820	0520-0330000E REINFORCED PILE TIPS	EACH	16.00	125.00	2,000.00
0830	0520-0406000E HP 12 X 84 STEEL PILE SPLICES	EACH	3.00	160.00	480.00
0840	0530-0100000A REINFORCEMENT	LUMP	ALL	90,000.00	90,000.00
0850	0540-0203000A DECK CONCRETE, CLASS HPC4000	LUMP	ALL	59,500.00	59,500.00
0860	0540-0301000A GENERAL STRUCTURAL CONCRETE, CLASS 3300	LUMP	ALL	59,500.00	59,500.00

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0870	0540-0401000J SAW CUT TEXTURING	SQYD	558.00	5.40	3,013.20
0880	0545-0100000J REINFORCED CONCRETE BRIDGE END PANELS	SQYD	223.00	198.00	44,154.00
0890	0560-0102000A ERECTING STEEL STRUCTURE	LUMP	ALL	40,000.00	40,000.00
0900	0587-0120000A TYPE "F" CONCRETE RAIL	LUMP	ALL	22,500.00	22,500.00

SECTION 0006 BR NO 21162

0910	0501-0100000A BRIDGE REMOVAL WORK	LUMP	ALL	20,000.00	20,000.00
0920	0510-0100000A SHORING, CRIBBING AND COFFERDAMS	LUMP	ALL	50,000.00	50,000.00
0930	0510-0101000A STRUCTURE EXCAVATION	LUMP	ALL	5,000.00	5,000.00
0940	0510-0106000A GRANULAR WALL BACKFILL	LUMP	ALL	1,000.00	1,000.00
0950	0520-0100000A FURNISH PILE DRIVING EQUIPMENT	LUMP	ALL	20,000.00	20,000.00
0960	0520-0112000F FURNISH HP 14 X 89 STEEL PILES	FOOT	390.00	42.50	16,575.00
0970	0520-0211000E DRIVE HP 14 X 89 STEEL PILES	EACH	12.00	590.00	7,080.00
0980	0520-0330000E REINFORCED PILE TIPS	EACH	12.00	170.00	2,040.00
0990	0520-0408000E HP 14 X 89 STEEL PILE SPLICES	EACH	2.00	250.00	500.00
1000	0530-0100000A REINFORCEMENT	LUMP	ALL	25,000.00	25,000.00

SCHEDULE OF ITEMS

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
1010	0540-0301000A GENERAL STRUCTURAL CONCRETE, CLASS 3300	LUMP	ALL	32,500.00	32,500.00
1020	0545-0100000J REINFORCED CONCRETE BRIDGE END PANELS	SQYD	199.00	198.00	39,402.00
1030	0550-0139000F 30 INCH PRECAST PRESTRESSED SLABS	FOOT	933.00	250.00	233,250.00
1040	0587-0120000A TYPE "F" CONCRETE RAIL	LUMP	ALL	17,000.00	17,000.00
1050	0591-0100000J WARRANTED WATERPROOFING MEMBRANE	SQFT	3,507.00	2.50	8,767.50
1060	0596-0104000J RETAINING WALL, MSE	SQFT	1,636.00	65.00	106,340.00
	SECTION 0007 BASES				
1070	0620-0104000J COLD PLANE PAVEMENT REMOVAL, 0 - 2 INCHES DEEP	SQYD	1,570.00	4.50	7,065.00
1080	0620-0120000J COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	1,133.00	4.50	5,098.50
1090	0641-0102000M AGGREGATE BASE	TON	10,600.00	14.18	150,308.00
	SECTION 0008 WEARING SURFACES				
1100	0745-0322000M LEVEL 3, 1/2 INCH DENSE LIME TREATED HMAC	TON	7,120.00	61.05	434,676.00
1110	0745-0334000M LEVEL 3, 1/2 INCH DENSE LIME TREATED HMAC IN LEVELING	TON	100.00	61.05	6,105.00
1120	0745-0620000M PG 64-22 ASPHALT IN HMAC	TON	426.00	0.01	4.26

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
1130	0749-0100000E EXTRA FOR ASPHALT APPROACHES	EACH	3.00	400.00	1,200.00
	SECTION 0009 PERMANENT TRAFFIC SAFETY AND GUIDANCE DEVICES				
1140	0810-0104000F GUARDRAIL, TYPE 2A	FOOT	2,187.50	18.05	39,484.38
1150	0810-0107000F GUARDRAIL, TYPE 3	FOOT	150.00	50.00	7,500.00
1160	0810-0120000E GUARDRAIL ANCHORS, TYPE 1 MODIFIED	EACH	8.00	500.00	4,000.00
1170	0810-0122000E GUARDRAIL END PIECES, TYPE B	EACH	4.00	75.00	300.00
1180	0810-0126000E GUARDRAIL TRANSITION	EACH	12.00	2,250.00	27,000.00
1190	0810-0129000E GUARDRAIL TERMINALS, NON-FLARED	EACH	6.00	2,250.00	13,500.00
1200	0810-0133000E EXTRA FOR 8 FOOT POSTS	EACH	61.00	20.00	1,220.00
1210	0820-0100000F CONCRETE BARRIER	FOOT	75.00	40.00	3,000.00
1220	0840-0100000E DELINEATORS, TYPE 1	EACH	30.00	40.00	1,200.00
1230	0840-0106000E MILEPOST MARKER POSTS	EACH	2.00	80.00	160.00
1240	0855-0102000E BI-DIRECTIONAL YELLOW TYPE 1 MARKERS	EACH	108.00	5.50	594.00
1250	0865-0119000F THERMOPLASTIC, NON-PROFILE, 120 MILS, SPRAYED	FOOT	14,800.00	1.00	14,800.00
1260	0867-0145000J PAVEMENT BAR, TYPE B	SQFT	50.00	19.00	950.00
	SECTION 0010 PERMANENT TRAFFIC CONTROL AND ILLUMINATION SYSTEMS				

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
1270	0905-0100000A REMOVE EXISTING SIGNS	LUMP	ALL	1,500.00	1,500.00
1280	0910-0100000K WOOD SIGN POSTS	FBM	221.00	7.00	1,547.00
1290	0940-0113000J TYPE "G" SIGNS IN PLACE	SQFT	51.80	30.00	1,554.00
1300	0940-0121000J TYPE "R" SIGNS IN PLACE	SQFT	9.00	18.00	162.00
1310	0940-0134000J TYPE "Y1" SIGNS IN PLACE	SQFT	9.00	18.00	162.00
	SECTION 0011 RIGHT-OF-WAY DEVELOPMENT AND CONTROL				
1320	1030-0108000R PERMANENT SEEDING	ACRE	4.00	3,000.00	12,000.00
1330	1040-0107000K SOIL CONDITIONER	CUYD	111.00	40.00	4,440.00
1340	1040-0109000E CONIFER TREES, SEEDLINGS	EACH	180.00	4.00	720.00
1350	1040-0147000E DECIDUOUS TREES, NO. 1 CONTAINER	EACH	1.00	19.54	19.54
1360	1040-0153000E SHRUBS, NO. 1 CONTAINER	EACH	260.00	10.00	2,600.00
1370	1040-0161000E TUBELING PLANTS, 0.04 GAL CONTAINER	EACH	1,045.00	5.00	5,225.00
1380	1070-0100000E SINGLE MAILBOX SUPPORTS	EACH	1.00	200.00	200.00
1390	1070-0101000E MULTIPLE MAILBOX SUPPORTS	EACH	3.00	300.00	900.00
1400	1070-0102000E MAILBOX CONCRETE COLLARS	EACH	3.00	100.00	300.00
	SECTION 0012 ADDED BID ITEMS				

SCHEDULE OF ITEMS

OR138W: DODGE CR/CALAPOOYA CR BRIDGE REPLACEMENTS
CONCRETE ENTERPRISES, INC.

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
1410	1040-0123000E DECIDUOUS TREES, LARGE	EACH	80.00	40.00	3,200.00
1420	1040-0121000E DECIDUOUS TREES, SEEDLINGS	EACH	190.00	5.00	950.00
1430	1040-0183000E WETLAND PLANTS, PLUGS	EACH	90.00	5.00	450.00
1440	1040-0180000E PLANT CUTTINGS, LARGE	EACH	115.00	4.00	460.00
1450	1092-9Z90000J BIOFILTRATION SWALES	SQYD	210.00	21.00	4,410.00
1460	1092-9Z90000J FILTER STRIPS	SQYD	3,559.00	7.70	27,404.30
1470	1091-9Z90000E TYPE S-2 MARKERS	EACH	6.00	83.40	500.40
	TOTAL BID				4,631,770.73