CONTRACT DOCUMENTS

HUDSON ROAD BRIDGE
NO. 489 REPLACEMENT

YAKIMA COUNTY PUBLIC SERVICES PROJECT
C 3158
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CERTIFICATE

I HEREBY CERTIFY THAT THE ATTACHED DOCUMENTS, PLANS AND SPECIFICATIONS CONFORM TO ORIGINALS WHICH ARE ON FILE IN THE OFFICE OF THE COUNTY ENGINEER OF YAKIMA COUNTY, WASHINGTON.

GARY N. EKSTEDT, P.E.
COUNTY ENGINEER
INSTRUCTIONS TO BIDDERS

DELIVERY OF PROPOSALS

Sealed bids will be received at the following location before the specified time:
Office of the Board of County Commissioners of Yakima County, Room 232, Yakima County Courthouse, Yakima, Washington 98901 until 2:00 p.m. of the bid opening date.

Each proposal, or bid shall be completely sealed in a separate package, addressed to the Board of County Commissioners of Yakima County with the name of the improvements for which the bid is submitted plainly written on the outside of the package.
No oral, telephonic, facsimile, or telegraphic Bids or modifications shall be accepted.

DATE OF OPENING BIDS

The bid opening date for this project shall be October 11, 2006.
The bids shall be publicly opened and read after 2:00 p.m. on that date at the following location:
Room 419, Yakima County Courthouse, 128 North 2nd Street, Yakima, Washington 98901.

RIGHT TO REJECT BIDS:

The right is reserved to reject any and all proposals, to accept the proposal or proposals deemed best for the County or to advertise for new proposals when in the opinion of the Board the best interest of the County shall be promoted thereby.

PROPOSAL GUARANTY:

A certified check, cashiers check, cash or bid bond made payable to the Treasurer of the County of Yakima for an amount equal to at least five percent (5%) of the total amount bid must accompany each bid as evidence of good faith and as a guarantee that if awarded the Contract the bidder shall execute the Contract and give bond as required.

FORM FURNISHED:

All Bids shall be submitted on authorized forms supplied by the County. Any Bid submitted on forms marked "Informational" or otherwise watermarked shall be considered irregular and will be rejected. Bidders wishing to submit Bids should contact the Yakima County Road Engineer's office at the address above to request authorized bid documents.

This project is a federal-aid funded project. Yakima County in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000-4 and Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, Part 21, nondiscrimination in federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it shall affirmatively assure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises shall be afforded full opportunity to submit bids in response to this invitation and shall not be discriminated against on the grounds of race, color or national origin in consideration for an award.

YAKIMA COUNTY IS AN EQUAL OPPORTUNITY EMPLOYER
PROPOSAL

This certifies that the undersigned has examined the location of the noted project:

And that the Plans, Specifications and Contract governing the work embraced in these improvements, and the method by which payment will be made for said work, is understood. The undersigned hereby proposes to undertake and complete the work embraced in these improvements, or as much as can be completed with the money available, in accordance with the said Plans, Specifications, and Contract, and the following schedule of rates and prices:

C 3158 – HUDSON ROAD BRIDGE NO. 489 REPLACEMENT

**NOTE:** Unit Prices for all items, all extensions, and total amount of bid shall be shown. Sales Tax shall be included in Unit Prices. No oral, telephonic, facsimile, or teleographic Bids or modifications shall be considered or accepted.

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<th>Unit</th>
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PROPOSAL - CONTINUED

The bidder is hereby advised that by signature of this proposal he/she is deemed to have acknowledged all requirements and signed all certificates contained herein.

A proposal guaranty in an amount of five percent (5%) of the total bid, based upon the approximate estimate of quantities at the above prices and in the form as indicated below, is attached hereto:

CASH [ ] IN THE AMOUNT OF __________________________

CASHIER’S CHECK [ ] _________________________________DOLLARS

CERTIFIED CHECK [ ] ($________) PAYABLE TO THE COUNTY TREASURER

PROPOSAL BOND [ ] IN THE AMOUNT OF 5 PERCENT (5%) OF THE BID

Bidder acknowledges receipt of the following Addendums:

No. Date

The undersigned has telephoned the Office of the Yakima County Engineer for verification of the number of Addendums issued.

SIGNATURE OF AUTHORIZED OFFICIAL(S)

________________________________________
Title: ________________________________
Firm Name: _____________________________
Address: _______________________________

Phone No.: _____________________________
Washington Registration No.: _______________________
Federal ID Tax No.: _______________________
UBI No.: _______________________________
E-Mail: ________________________________

Signed and sworn (or affirmed) before me on __________________________ Date

________________________________________
(Tear and Stamp)

My appointment expires __________________________

NOTE: (1) This proposal is not transferable and any alteration of the firm’s name entered hereon without prior permission from the County Engineer shall be cause for considering the proposal irregular and subsequent rejection of the bid.

(2) Please refer to Section 1-02.6 of the Standard Specifications, re: “Preparation of Proposal”.

(3) Should it be necessary to modify this proposal either in writing or by electronic means, please make reference to the following proposal number in your communications C 3158.
LETTER OF RESPONSIBILITY

Date: ________________________________
County Road Project No.: C 3158

TO:
BOARD OF COUNTY COMMISSIONERS OF YAKIMA COUNTY, WASHINGTON
(Party awarding principal contract)

Dear Sirs:

I hereby maintain that I am a responsible bidder as contemplated by the policies of the State of Washington (Chapter 157, Laws of Washington of 1937).

a. My permanent place of business is ________________________________, which I have maintained for __________ years.

b. I have adequate plant equipment to do expeditiously and properly the work contemplated for Yakima County, Washington.

DESCRIPTION OF WORK:
C 3158 – HUDSON ROAD BRIDGE NO. 489 REPLACEMENT

I have the following equipment available for the work:

________________________________________________________________________

________________________________________________________________________

c. I have adequate funds to promptly meet obligations incident to this work.
Bank reference: ________________________________

________________________________________________________________________

d. I have had experience in this class of work, having constructed the following improvements.

I hereby certify that the above is a true and accurate statement.

Very truly yours,
________________________________________
Contractor

NOTE: This sheet need not be submitted, unless so requested by the Engineer subsequent to opening of bid. This “letter of responsibility” shall not be construed to be a request for pre-qualification of bidder.
DEFINITION OF TERMS

In interpreting these specifications, the following definitions shall prevail:


SECRETARY OF TRANSPORTATION: Secretary of Transportation of the State of Washington.

BOARD: The Board of County Commissioners of Yakima County.

ENGINEER: County, or construction engineer, or his duly authorized assistants by whom all explanations and directions necessary for the satisfactory prosecution and completion of the work described in these specifications will be given.

CONTRACTOR: The person, firm, co-partnership, or corporation, or any lawful agent of such person, firm, partnership or corporation constituting one of the principals to the contract and undertaking to perform the work herein specified.

CONTRACT: The Agreement between the Contractor and the County of Yakima acting through the Board of County Commissioners. The contract shall include the accepted “Proposal”, “Plans”, “Specifications” and “Contract Bond”, also any and all supplemental agreements which reasonably could be required to complete the construction of the work in a substantial and acceptable manner.

PROPOSAL: The written offer, or copy thereof of the bidder to perform the work proposed.

PLANS: The officially approved drawings, or reproductions thereof attached to this contract.

SPECIFICATIONS: The directions, provisions and requirements contained herein, together with all written agreements made, or to be made pertaining to the method and manner of performing the work, or to the quantities and qualities of materials to be furnished under the contract.

CONTRACT BOND: The approved form of security furnished by the Contractor and his surety as a guarantee of good faith on the part of the Contractor to execute the work in accordance with the terms of the contract.

LABORATORY: The laboratories of the Department of Transportation, or other laboratories designated by the engineer.

AMOUNT OF THE CONTRACT: For the purpose of awarding the contract and determining the amount of the bond, the lump sum bid, or the summation of the products of the approximate quantities shown on the plans or otherwise stated by the unit prices will be considered the total amount of the bid and the full amount of the contract price.
NON-COLLUSION DECLARATION

I, by signing the proposal, hereby declare, under penalty of perjury under the laws of the United States that the following statements are true and correct:

1. That the undersigned person(s), firm, association or corporation has (have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.

2. That by signing the signature page of this proposal, I am deemed to have signed and have agreed to the provisions of this declaration.

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U. S. Department of Transportation (USDOT) operates the above toll-free “hotline” Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the “hotline” to report such activities.

The “hotline” is part of USDOT’s continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.
Certification Regarding
Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 29 CFR Part 98, Section 98.510, Participant's responsibilities. The regulations were published as Part VII of the May 26, 1998 Federal Register (pages 19160-19211).

(BEFORE COMPLETING CERTIFICATION, READ ATTACHED INSTRUCTIONS WHICH ARE AN INTEGRAL PART OF THE CERTIFICATION)

(1) The prospective recipient of federal assistance funds certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

(2) Where the prospective recipient of federal assistance funds is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Name and Title of Authorized Representative

Signature Date
CONTRACT

THIS AGREEMENT, made and entered into between Yakima County acting under and by virtue of Titles 36 and 39 RCW, hereinafter called the "COUNTY" and ______________, hereinafter called the "CONTRACTOR".

That in consideration of the terms and conditions contained herein and attached and made a part of this agreement, the parties hereto covenant and agree as follows:

I. The CONTRACTOR shall do all work and furnish all tools, materials and equipment for C 3158 – HUDSON ROAD BRIDGE NO. 489 REPLACEMENT and shall perform any changes in the work in accordance with the Contract Documents. "Contract Documents" are this Contract, the attached Plans and Specifications and the current edition of the Standard Specifications of the Washington State Department of Transportation and American Public Works Association which are by this reference incorporated herein and made a part hereof. In using said Standard Specifications and Amendments thereto, "Secretary of Transportation", "Engineer" and like terms used therein will be construed to mean Yakima County Engineer and "State" or "Thurston County" shall mean Yakima County.

II. The CONTRACTOR shall provide and bear the expense of all equipment, material and labor of any sort whatsoever that may be required for the transfer of materials and for constructing and completing the work provided for in the Contract Documents except those items mentioned therein to be furnished by Yakima County.

III. The COUNTY hereby promises and agrees to pay the CONTRACTOR according to the attached Specifications and the schedule of unit or itemized prices at the time and in the manner and upon the conditions provided for in the Contract Documents.

IV. The CONTRACTOR for itself, and for its heirs, executors, administrators, successors and assigns does hereby agree to the full performance of all the covenants herein contained upon the part of the CONTRACTOR.

V. It is further provided that no liability shall attach to the COUNTY by reason of entering into this Contract, except as expressly provided herein.

IN WITNESS WHEREOF, the CONTRACTOR has executed this instrument, on the date indicated below and Yakima County has caused this instrument to be executed in the name of said COUNTY by and through the Board of Yakima County Commissioners on the date indicated below.

Executed by the CONTRACTOR: ____________________  BOARD OF YAKIMA COUNTY COMMISSIONERS

CONTRACTOR

Signature

Print or Type Name of Person Signing

Title

Foregoing Contract approved and ratified ______________, 20__.

Surety

Attorney-in-fact

Chair

Commissioner

Commissioner

ATTEST: Deputy Clerk of the Board

Christina Steiner

Approved as to form:

Deputy Prosecuting Attorney
PERFORMANCE BOND
(RCW 39.08)

KNOW ALL MEN BY THESE PRESENTS, That ____________________________, as "PRINCIPAL", and _______________ ____________________________, a corporation authorized to do business in the State of Washington, as "SURETY", are jointly and severally held and bound unto Yakima County, Washington in the penal sum ___________________________ Dollars ($________________________) for the payment of which by these presents we jointly and severally bind ourselves, our heirs, executors, administrators, assigns, and successors.

THE CONDITION of this bond is such that WHEREAS, on ________________, 20____, the PRINCIPAL executed a certain Contract with the County, by the terms of which PRINCIPAL agrees to furnish all material and labor and will undertake and complete the construction of C 3158 - HUDSON ROAD BRIDGE NO. 489 REPLACEMENT according to the maps, plans and specifications made a part of said Contract, which Contract is attached hereto and by this reference is incorporated herein and made a part hereof. FURTHER, the SURETY agrees to be bound by the laws of the State of Washington and subjected to the jurisdiction of the State of Washington.

NOW, THEREFORE, if the PRINCIPAL shall faithfully perform all the provisions of such contract and pay all laborers, mechanics, subcontractors and materialmen, and all persons who supply such persons or subcontractors with provisions or supplies for the carrying on of such work, then this obligation to be void, otherwise to remain in full force and effect.

Dated this ______ day of __________________________, 20____.

PRINCIPAL

By: __________________________________________

Title: __________________________________________

SURETY

By: __________________________________________

Attorney-in-Fact

APPROVED: YAKIMA COUNTY

Chair of the Board of
Yakima County Commissioners

Date: __________________________, 20____

Approved as to form:

Deputy Prosecuting Attorney

Name of Local Office of Agent

Address of Local Office Agent

BOND NUMBER __________________________

YAKIMA COUNTY CONTRACT NUMBER __________________________

HUDSON ROAD BRIDGE NO. 489 REPLACEMENT
C 3158

Informational Bid Documents

10
AMENDMENTS TO
THE STANDARD
SPECIFICATIONS
AMENDMENTS TO STANDARD SPECIFICATIONS

C 3158 – HUDSON ROAD BRIDGE NO. 489 REPLACEMENT

YAKIMA COUNTY, WASHINGTON

STANDARD SPECIFICATIONS

The English version of the 2006 Standard Specifications for Road, Bridge, and Municipal Construction (English) as prepared by the Washington State Department of Transportation are adopted by the Board of County Commissioners of Yakima County as Standard Specifications. These Standard Specifications and the Amendments thereto shall apply to all work to be done under this project except as these Special Provisions expressly alter or modify them. In using said Standard Specifications, and Amendments thereto, Secretary of Transportation, Engineer, and like terms therein shall be construed to mean Yakima County Engineer and where Thurston County is used it shall mean Yakima County.

INTRODUCTION

The following Amendments and Special Provisions shall be used in conjunction with the 2006 Standard Specifications for Road, Bridge, and Municipal Construction.

This project is designed in metric units. Among the Special Provisions contained in this project are revisions to sections within Divisions 1, 6, 7 and 9 that provide conversion methods and charts needed to administer this project utilizing the 2004 Standard Specifications.

AMENDMENTS TO THE STANDARD SPECIFICATIONS

The following Amendments to the Standard Specifications are made a part of this contract and supersede any conflicting provisions of the Standard Specifications. For informational purposes, the date following each Amendment title indicates the implementation date of the Amendment or the latest date of revision.

Each Amendment contains all current revisions to the applicable section of the Standard Specifications and may include references which do not apply to this particular project.

SECTION 1-04, SCOPE OF THE WORK

April 3, 2006

1-04.6 Variation in Estimated Quantities

The third paragraph beginning with "If the adjusted final quantity of any items", is revised to read:
If the adjusted final quantity of any item does not vary from the quantity shown in the proposal by more than 25%, then the Contractor and the Contracting Agency agree that all work under that item will be performed at the original contract unit price.

SECTION 1-06, CONTROL OF MATERIAL

April 3, 2006

1-06.1 Approval of Materials Prior To Use
The second sentence in the first paragraph is revised to read:

The Contractor shall use the Qualified Product List (QPL), the Aggregate Source Approval (ASA) Database, or the Request for Approval of Material (RAM) form.

Number 1 under the second paragraph is revised to read:

1. Shall be new, unless the Special Provisions or Standard Specifications permit otherwise;

1-06.1(1) Qualified Products List (QPL)
This section is supplemented with the following:

The current QPL can be accessed on-line at www.wsdot.wa.gov/biz/mats/QPL/QPL.cfm

The following new sub-section is inserted to follow 1-06.1(2).

1-06.1(3) Aggregate Source Approval (ASA) Database
The ASA is a database containing the results of WSDOT preliminary testing of aggregate sources. This database is used by the Contracting Agency to indicate the approval status of these aggregate sources for applications that require preliminary testing as defined in the contract. The ASA 'Aggregate Source Approval Report' identifies the currently approved applications for each aggregate source listed. The acceptance and use of these aggregates is contingent upon additional job sampling and/or documentation.

Aggregates approved for applications on the ASA 'Aggregate Source Approval Report' not conforming to the specifications, not fulfilling the acceptance requirements, or improperly handled or installed, shall be replaced at the Contractor’s expense.

For questions regarding the approval status of an aggregate source, contact the WSDOT Regional Materials Engineer for the Region the source is located in. The Contracting Agency reserves the right to make revisions to the ASA database at anytime.

If there is a conflict between the ASA database and the contract, then the contract shall take precedence over the ASA database in accordance with Section 1-04.2. The ASA database can be accessed on-line at www.wsdot.wa.gov/biz/mats/ASA.
1-06.2(2)D Quality Level Analysis

Item 9 under the first paragraph is revised to read:

9. Determine the Composite Pay Factor (CPF) for each lot.

$$\text{CPF} = \frac{f_1(PF_1) + f_2(PF_2) + \ldots + f_j(PF_j)}{\sum f_i}$$

where: $f_i = \text{price adjustment factor listed in these Specifications for the applicable material}$

$j = \text{number of constituents being evaluated}$

SECTION 1-07, LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC
August 7, 2006

1-07.9(1) General

The fifth paragraph is revised to read:

If employing labor in a class not listed in the contract provisions on state funded projects only, the Contractor shall request a determination of the correct wage and benefits rate for that class and locality from the Industrial Statistician, Washington State Department of Labor and Industries (State L&I), and provide a copy of those determinations to the Engineer.

The fifth paragraph is supplemented with the following new paragraph:

If employing labor in a class not listed in the contract provisions on federally funded projects, the Contractor shall request a determination of the correct wage and benefits for that class and locality from the U. S. Secretary of Labor through the project engineer's office. Generally, the contractor initiates the request by preparing standard form 1444 and submitting it to the project engineers' office for further action.

1-07.10 Worker's Benefits

The fourth paragraph is revised to read:

The Public Works Contract Division of the Washington State Department of Labor and Industries will provide the Contractor with applicable industrial insurance and medical aid classification and premium rates. After receipt of Revenue Release from the Washington State Department of Revenue, the contracting agency will verify through the Department of Labor and Industries that the Contractor is current with respect to the payments of industrial insurance and medical aid premiums.

1-07.15 Temporary Water Pollution/Erosion Control

The first paragraph is revised to read:
In an effort to prevent, control, and stop water pollution and erosion within the project, thereby protecting the work, nearby land, streams, and other bodies of water, the Contractor shall perform all work in strict accordance with all Federal, State, and local laws and regulations governing waters of the State, as well as permits acquired for the project.

SECTION 1-08, PROSECUTION AND PROGRESS
August 7, 2006

1-08.1 Subcontracting
The eighth paragraph (beginning with - On all projects funded with both Contracting Agency funds and Federal assistance ...) is supplemented with the following:

Or, the Contractor has the option of submitting actual MBE/WBE or DBE payment data to the contracting agency on a monthly basis using the Construction Management and Tracking System (CMATS). Use of CMATS will become a requirement for all contractors effective January 7, 2008.

1-08.3 Progress Schedule
Section 1-08.3 and all subsections are deleted in their entirety and replaced with the following:

1-08.3 Progress Schedule

1-08.3(1) General Requirements
The Contractor shall submit Type A or Type B Progress Schedules and Schedule Updates to the Engineer for approval. Schedules shall show work that complies with all time and order of work requirements in the contract. Scheduling terms and practices shall conform to the standards established in Construction Planning and Scheduling, Second Edition, published by the Associated General Contractors of America. Except for Weekly Look-Ahead Schedules, all schedules shall meet these General Requirements, and provide the following information:

1. Include all activities necessary to physically complete the project.

2. Show the planned order of work activities in a logical sequence.

3. Show durations of work activities in working days as defined in Section 1-08.5.

4. Show activities in durations that are reasonable for the intended work.

5. Define activity durations in sufficient detail to evaluate the progress of individual activities on a daily basis.

6. Show the physical completion of all work within the authorized contract time.

The Contracting Agency allocates its resources to a contract based on the total time allowed in the contract. The Contracting Agency may accept a Progress Schedule indicating an early physical completion date but cannot guarantee the Contracting Agency’s resources will be available to meet an accelerated schedule. No additional compensation will be allowed if the Contractor is not able to meet their accelerated schedule due to the unavailability of Contracting Agency’s resources or for other reasons beyond the Contracting Agency’s control.
If the Engineer determines that the Progress Schedule or any necessary Schedule Update does not provide the required information, then the schedule will be returned to the Contractor for correction and resubmittal.

The Engineer's approval of any schedule shall not transfer any of the Contractor's responsibilities to the Contracting Agency. The Contractor alone shall remain responsible for adjusting forces, equipment, and work schedules to ensure completion of the work within the time(s) specified in the contract.

1-08.3(2) Progress Schedule Types
Type A Progress Schedules are required on all projects that do not contain the bid item for Type B Progress Schedule. Type B Progress Schedules are required on all projects that contain the bid item for Type B Progress Schedule. Weekly Look-Ahead Schedules and Schedule Updates are required on all projects.

1-08.3(2)(A) Type A Progress Schedule
The Contractor shall submit five copies of a Type A Progress Schedule no later than the first working day of the contract as defined in Section 1-08.5. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

1-08.3(2)(B) Type B Progress Schedule
The Contractor shall submit a preliminary Type B Progress Schedule no later than five calendar days after the date the contract is executed. The preliminary Type B Progress Schedule shall comply with all of these requirements and the requirements of Section 1-08.3(1), except that it may be limited to only those activities occurring within the first 60 working days of the project.

The Contractor shall submit five copies of a Type B Progress Schedule no later than 30 calendar days after the date the contract is executed. The schedule shall be a critical path method (CPM) schedule developed by the Precedence Diagramming Method (PDM). Restraints may be utilized, but may not serve to change the logic of the network or the critical path. The schedule shall display at least the following information:

- Contract Number and Title
- Construction Start Date
- Critical Path
- Activity Description
- Milestone Description
- Activity Duration
- Predecessor Activities
- Successor Activities
- Early Start (ES) and Early Finish (EF) for each activity
- Late Start (LS) and Late Finish (LF) for each activity
- Total Float (TF) and Free Float (FF) for each activity
- Physical Completion Date
- Data Date
The Engineer will evaluate the Type B Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

1-08.3(2)C Vacant

1-08.3(2)D Weekly Look-Ahead Schedule
Each week that work will be performed, the Contractor shall submit a Weekly Look-Ahead Schedule showing the Contractor's and all subcontractors' proposed work activities for the next two weeks. The Weekly Look-Ahead Schedule shall include the description, duration and sequence of work, along with the planned hours of work. This schedule may be a network schedule, bar chart, or other standard schedule format. The Weekly Look-Ahead Schedule shall be submitted to the Engineer by the midpoint of the week preceding the scheduled work or some other mutually agreed upon submittal time.

1-08.3(3) Schedule Updates
The Engineer may request a Schedule Update when any of the following events occur:

1. The project has experienced a change that affects the critical path.
2. The sequence of work is changed from that in the approved schedule.
3. The project is significantly delayed.
4. Upon receiving an extension of contract time.

The Contractor shall submit five copies of a Type A or Type B Schedule Update within 15 calendar days of receiving a written request, or when an update is required by any other provision of the contract. A "significant" delay in time is defined as 10 working days or 10 percent of the original contract time, whichever is greater.

In addition to the other requirements of this Section, Schedule Updates shall reflect the following information:

1. The actual duration and sequence of as-constructed work activities, including changed work.
2. Approved time extensions.
3. Any construction delays or other conditions that affect the progress of the work.
4. Any modifications to the as-planned sequence or duration of remaining activities.
5. The physical completion of all remaining work in the remaining contract time.

Unresolved requests for time extensions shall be reflected in the Schedule Update by assuming no time extension will be granted, and by showing the effects to follow-on activities necessary to physically complete the project within the currently authorized time for completion.
1-08.3(4) Measurement
No specific unit of measurement shall apply to the lump sum item for Type B Progress Schedule.

1-08.3(5) Payment
Payment will be made in accordance with Section 1-04.1, for the following bid item when it is included in the proposal:

"Type B Progress Schedule", lump sum.

The Lump Sum price shall be full pay for all costs for furnishing the Type B Progress Schedule and preliminary Type B Progress Schedule.

Payment of 80 percent of the lump sum price will be made upon approval of the Progress Schedule.

Payment will be increased to 100 percent of the lump sum price upon completion of 80 percent of the original total contract award amount.

All costs for providing Type A Progress Schedules and Weekly Look-Ahead Schedules are considered incidental to other items of work in the contract.

No payment will be made for Schedule Updates that are required due to the Contractors operations. Schedule Updates required by events that are attributed to the actions of the Contracting Agency will be paid for in accordance with Section 1-09.4.

1-08.4 Prosecution of Work
The first sentence is revised to read:

The Contractor shall begin work within 21 calendar days from the date of execution of the contract by the Contracting Agency, unless otherwise approved in writing.

1-08.5 Time for Completion
This section is revised to read:

The Contractor shall complete all physical contract work within the number of "working days" stated in the Contract Provisions or as extended by the Engineer in accordance with Section 1-08.8. Every day will be counted as a "working day" unless it is a nonworking day or an Engineer determined unworkable day. A nonworking day is defined as a Saturday, a Sunday, a day on which the contract specifically suspends work, or one of these holidays: January 1, the third Monday of January, the third Monday of February, Memorial Day, July 4, Labor Day, November 11, Thanksgiving Day, the day after Thanksgiving, and Christmas Day. When any of these holidays fall on a Sunday, the following Monday shall be counted a nonworking day. When the holiday falls on a Saturday, the preceding Friday shall be counted a nonworking day. The days between December 25 and January 1 will be classified as nonworking days.

An unworkable day is defined as a half or whole day the Engineer declares to be unworkable because of weather or conditions caused by the weather that prevents satisfactory and timely performance of the work shown on the critical path of the Contractor's approved progress
schedule. Other conditions beyond the control of the Contractor may qualify for an extension of time in accordance with Section 1-08.8.

Contract time shall begin on the first working day following the 21st calendar day after the date the Contracting Agency executes the contract. If the Contractor starts work on the project at an earlier date, then contract time shall begin on the first working day when onsite work begins. The contract provisions may specify another starting date for contract time, in which case, time will begin on the starting date specified.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any half or whole day the Engineer declares as unworkable. Within 10 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in that period, the Contractor shall be deemed as having accepted the statement as correct.

The Engineer will give the Contractor written notice of the physical completion date for all work the contract requires. That date shall constitute the physical completion date of the contract, but shall not imply the Secretary's acceptance of the work or the contract.

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor's obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
   a. Certified Payrolls (Federal-aid Projects)
   b. Material Acceptance Certification Documents
   d. FHWA 47 (Federal-aid Projects)
   e. Final Contract Voucher Certification

1-08.8 Extensions of Time
Section 1-08.8 is revised to read:

The Contractor shall submit any requests for time extensions to the Engineer in writing no later than 10 working days after the delay occurs. The requests for time extension shall be
limited to the affect on the critical path of the Contractor's approved schedule attributable to
the change or event giving rise to the request.

To be considered by the Engineer, the request shall be in sufficient detail (as determined by
the Engineer) to enable the Engineer to ascertain the basis and amount of the time
requested. The request shall include an updated schedule that supports the request and
demonstrates that the change or event: (1) had a specific impact on the critical path, and
except in cases of concurrent delay, was the sole cause of such impact, and (2) could not
have been avoided by resequencing of the work or by using other reasonable alternatives. If
a request combined with previous extension requests, equals 20 percent or more of the
original contract time then the Contractor's letter of request must bear consent of Surety. In
evaluating any request, the Engineer will consider how well the Contractor used the time from
contract execution up to the point of the delay and the effect the delay has on any completion
times included in the special provisions. The Engineer will evaluate and respond within 15
calendar days of receiving the request.

The authorized time for physical completion will be extended for a period equal to the time
the Engineer determines the work was delayed because of:

1. Adverse weather causing the time requested to be unworkable, provided that the
   Engineer had not already declared the time to be unworkable and the Contractor
   has filed a written protest according to Section 1-08.5.

2. Any action, neglect, or default of the Contracting Agency, its officers, or employees,
   or of any other contractor employed by the Contracting Agency.

3. Fire or other casualty for which the Contractor is not responsible.

4. Strikes.

5. Any other conditions for which these Specifications permit time extensions such as:
   a. In Section 1-04.4 if a change increases the time to do any of the work
      including unchanged work.
   b. In Section 1-04.5 if increased time is part of a protest that is found to
      be a valid protest.
   c. In Section 1-04.7 if a changed condition is determined to exist that caused
      a delay in completing the contract.
   d. In Section 1-05.3 if the Contracting Agency does not approve properly
      prepared and acceptable drawings within 30 calendar days.
   e. In Section 1-07.13 if the performance of the work is delayed as a result of
      damage by others.
   f. In Section 1-07.17 if the removal or the relocation of any utility by forces
      other than the Contractor caused a delay.
g. In Section 1-07.24 if a delay results from all the right of way necessary for
the construction not being purchased and the special provisions does not
make specific provisions regarding unpurchased right of way.

h. In Section 1-08.6 if the performance of the work is suspended, delayed, or
interrupted for an unreasonable period of time that proves to be the
responsibility of the Contracting Agency.

i. In Section 1-09.11 if a dispute or claim also involves a delay in completing
the contract and the dispute or claim proves to be valid.

j. In Section 1-09.6 for work performed on a force account basis.

6. If the actual quantity of work performed for a bid item was more than the original
plan quantity and increased the duration of a critical activity. Extensions of time will
be limited to only that quantity exceeding the original plan quantity.

7. Exceptional causes not specifically identified in items 1 through 6, provided the
request letter proves the Contractor had no control over the cause of the delay and
could have done nothing to avoid or shorten it.

Working days added to the contract by time extensions, when time has overran, shall only
apply to days on which liquidated damages or direct engineering have been charged, such
as the following:

If substantial completion has been granted prior to all of the authorized working days
being used, then the number of days in the time extension will eliminate an equal
number of days on which direct engineering charges have accrued. If the substantial
completion date is established after all of the authorized working days have been used,
then the number of days in the time extension will eliminate an equal number of days on
which liquidated damages or direct engineering charges have accrued.
The Engineer will not allow a time extension for any cause listed above if it resulted from
the Contractor's default, collusion, action or inaction, or failure to comply with the
contract.
The Contracting Agency considers the time specified in the special provisions as sufficient to
do all the work. For this reason, the Contracting Agency will not grant a time extension for:

- Failure to obtain all materials and workers unless the failure was the result of
  exceptional causes as provided above in subsection 7;

- Changes, protests, increased quantities, or changed conditions (Section 1-04) that
do not delay the completion of the contract or prove to be an invalid or inappropriate
time extension request;

- Delays caused by nonapproval of drawings or plans as provided in Section 1-05.3;

- Rejection of faulty or inappropriate equipment as provided in Section 1-05.9;

- Correction of thickness deficiency as provided in Section 5-05.5(1)B.
The Engineer will determine whether the time extension should be granted, the reasons for
the extension, and the duration of the extension, if any. Such determination will be final as
provided in Section 1-05.1.

SECTION 1-09, MEASUREMENT AND PAYMENT

January 3, 2006

1-09.9(1) Retainage

The fourth paragraph is revised to read:

Release of the retainage will be made 60 days following the Completion Date (pursuant to
RCW 39.12, and RCW 60.28) provided the following conditions are met:

1. On contracts totaling more than $20,000, a release has been obtained from the
Washington State Department of Revenue.

2. Affidavits of Wages Paid for the Contractor and all Subcontractors are on file with
the Contracting Agency (RCW 39.12.040).

3. A certificate of Payment of Contributions Penalties and Interest on Public Works
Contract is received from the Washington State Employment Security Department.

4. Washington State Department of Labor and Industries (per section 1-07.10) shows
the Contractor is current with payments of industrial insurance and medical aid
premiums.

5. All claims, as provided by law, filed against the retainage have been resolved. In
the event claims are filed and provided the conditions of 1, 2, 3 and 4 are met, the
Contractor will be paid such retained percentage less an amount sufficient to pay
any such claims together with a sum determined by the Contracting Agency
sufficient to pay the cost of foreclosing on claims and to cover attorney’s fees.

SECTION 2-03, ROADWAY EXCAVATION AND EMBANKMENT

August 7, 2006

2-03.3(2) Rock Cuts

This section is revised to read:

1. Preserving Rock Below Subgrade. The Contractor shall take care not to break down,
loosen, or damage the rock under the subgrade line, except as provided by Section 2-
03.3(3). Normally cuts will be made from the top, lift by lift, to protect the rock bench that
will remain. The Contractor shall be responsible for methods used and for any damage
caused to the roadbed, regardless of any previous approvals by the Engineer.

2. Scaling and Dressing. To leave rock cuts in a safe, stable condition, the Contractor
shall scale and dress them, removing all loose fragments and rocks not firmly fastened
to the rock slope. The Contractor shall also remove any overhanging rock the Engineer
sees as a hazard to roadway users.
If the Engineer requires it, the Contractor shall remove loose fragments and rocks lying outside the slope stakes. Payment for such extra work shall be by force account as provided in Section 1-09.6. The Contracting Agency will pay for loading and hauling these materials at the unit contract prices that apply or as provided in Section 1-04.4.

3. **Drilling and Blasting.** Not less than two weeks prior to commencing drilling and blasting operations or at any time the Contractor proposes to change the drilling and blasting methods, the Contractor shall submit a blasting plan to the Engineer for review. The blasting plan shall contain the full details of the drilling and blasting patterns and controls the Contractor proposes to use for both the controlled and production blasting. The blasting plan submittal is required for all blasting operations and shall contain the following minimum information:

   a) Station limits of proposed shot.

   b) Plan and section views of proposed drill pattern including free face, burden, blast hole spacing, blast hole diameter, blast hole angles, lift height, and subdrill depth.

   c) Loading diagram showing type and amount of explosives, primers, initiators, and location and depth of stemming.

   d) Initiation sequence of blast holes including delay times and delay system.

   e) Manufacturer's data sheets for all explosives, primers, and initiators to be employed.

Review of the blasting plan by the Engineer shall not relieve the Contractor of the responsibility for the accuracy and adequacy of the plan when implemented in the field.

When blasting to establish slopes ½ to 1 or steeper, and more than 10 feet high, the Contractor shall use controlled blasting. The Engineer may require the Contractor to use controlled blasting to form the faces of other slopes, even if the slopes could be formed by nonblasting methods.

Controlled blasting refers to the controlled use of explosives and blasting accessories in carefully spaced and aligned drill holes to provide a free surface or shear plane in the rock along the specified backslope. Controlled blasting techniques covered by this specification include presplitting and cushion blasting.

In addition to the blasting plan submittal, when using controlled blasting the Contractor shall:

   a) Prior to commencing full-scale blasting operations, the Contractor shall demonstrate the adequacy of the proposed blast plan by drilling, blasting, and excavating short test sections, up to 100 feet in length, to determine which combination of method, hole spacing, and charge works best. When field conditions warrant, the Contractor may be ordered to use test section lengths less than 100 feet.
Unless otherwise approved by the Engineer, the Contractor shall begin the tests with the controlled blast holes spaced 30-inches apart, then adjust if needed, until the Engineer approves the spacing to be used for full-scale blasting operations.

b) The Contractor shall completely remove all overburden soil and loose or decomposed rock along the top of the excavation for a distance of at least 30 feet beyond the end of the production hole drilling limits, or to the end of the cut, before drilling the presplitting holes.

c) The controlled blast holes shall be not less than 2\( \frac{1}{2} \) inches nor more than 3 inches in diameter.

d) The Contractor shall control drilling operations by the use of the proper equipment and technique to ensure that no hole shall deviate from the plane of the planned slope by more than 9 inches either parallel or normal to the slope. Drill holes exceeding these limits shall not be paid for unless satisfactory slopes are being obtained.

e) Controlled blast holes shall extend a minimum of 30 feet beyond the limits of the production holes to be detonated, or to the end of the cut as applicable.

f) The length of controlled blast holes for any individual lift shall not exceed 20 feet unless the Contractor can demonstrate to the Engineer the ability to stay within the above tolerances and produce a uniform slope. If greater than 5 percent of the presplit holes are misaligned in any one lift, the Contractor shall reduce the height of the lifts until the 9-inch alignment tolerance is met. Upon satisfactory demonstration, the length of holes may be increased to a maximum of 60 feet with written approval of the Engineer.

g) When the cut height requires more than one lift, a maximum 2-foot offset between lifts will be permitted to allow for drill equipment clearances. The Contractor shall begin the control blast hole drilling at a point that will allow for necessary offsets and shall adjust, at the start of lower lifts, to compensate for any drift that may have occurred in the upper lifts.

h) Before placing charges, the Contractor shall determine that the hole is free of obstructions for its entire depth. All necessary precautions shall be exercised so that the placing of the charges will not cause caving of material from the walls of the holes.

i) The maximum diameter of explosives used in presplit holes shall not be greater than \( \frac{1}{2} \) the diameter of the presplit hole.

j) Only standard explosives manufactured especially for controlled blasting shall be used in controlled blast holes, unless otherwise approved by the Engineer. Bulk ammonium nitrate and fuel oil (ANFO) shall not be allowed to be loaded in the presplit holes.

k) If fractional portions of standard explosive cartridges are used, they shall be firmly affixed to the detonating cord in a manner that the cartridges will not slip
down the detonating cord nor bridge across the hole. Spacing of fractional cartridges along the length of the detonating cord shall not exceed 30 inches center to center and shall be adjusted to give the desired results.

l) Continuous column cartridge type of explosives used with detonating cord shall be assembled and affixed to the detonating cord in accordance with the explosive manufacturer’s instructions, a copy of which shall be furnished to the Engineer.

m) The bottom charge of a presplit hole may be larger than the line charges but shall not be large enough to cause overbreak. The top charge of the presplitting hole shall be placed far enough below the collar, and reduced sufficiently, to avoid overbreaking and heaving.

n) The upper portion of all presplit holes, from the top most charge to the hole collar, shall be stemmed. Stemming materials shall be sand or other dry angular material, all of which passes a 3/16-inch sieve.

o) If presplitting is specified, the detonation of these holes shall be fired first.

p) If cushion blasting is specified, the detonation of these holes shall be fired last on an instantaneous delay after all other blasting has taken place in the excavation.

q) Production blast holes shall not be drilled closer than 6 feet to the controlled blast line, unless approved by the Engineer. The bottom of the production holes shall not be lower than the bottom of the controlled blast holes. Production holes shall not exceed 6 inches in diameter, unless approved by the Engineer. Detonation of production holes shall be on a delay sequence toward a free face.

r) The use of horizontal blast holes for either production or controlled blasting is prohibited.

SECTION 2-09, STRUCTURE EXCAVATION
January 3, 2006

2-09.3(1)E Backfilling

Item 1 of the first paragraph under Compaction is revised to read:

1. Backfill supporting roadbed, roadway embankments, or structures, including backfill providing lateral support for noise barrier wall foundations, luminaire poles, traffic signal standards, and roadside and overhead sign structure foundations — placed in horizontal layers no more than 6 inches thick with each layer compacted to 95 percent of the maximum density determined by the Compaction Control Test, Section 2-03.3(14)D.

SECTION 2-12 CONSTRUCTION GEOTEXTILE
August 7, 2006

The section title is revised to read:
CONSTRUCTION GEOSYNTHETIC

2-12 CONSTRUCTION GEOTEXTILE

This heading is revised to read:

2-12 CONSTRUCTION GEOSYNTHETIC

2-12.1 Description
The word geotextile is revised to geosynthetic.

2-12.2 Materials
In the first and second paragraphs geotextile is revised to geosynthetic.

2-12.3 Construction Requirements
In the first, second, and third paragraphs geotextile is revised to geosynthetic.

SECTION 3-01, PRODUCTION FROM QUARRY AND PIT SITES
August 7, 2006

3-01.4(1) Acquisition and Development
The first paragraph is revised to read:

If, under the terms of the Contract, the Contractor is required to provide a source of materials, or if the Contractor elects to use materials from sources other than those provided by the Contracting Agency, the Contractor shall, at no expense to the Contracting Agency, make all necessary arrangements for obtaining the material and shall ensure the quantity of suitable material is available. Preliminary samples shall be taken by or in the presence of the Engineer or a designated representative unless the Engineer permits otherwise. Approval of the source does not relieve the Contractor from meeting these specification requirements, nor does it guarantee that the material will meet these requirements without additional or proper processing. The Engineer may require additional preliminary samples at any time.

SECTION 5-01, CEMENT CONCRETE PAVEMENT REHABILITATION
April 3, 2006

5-01.3(2)B Portland Cement Concrete
The third paragraph beginning with “Acceptance testing” is supplemented with the following:

The Contractor shall provide cure boxes in accordance with Section 6-02.3(5)H, and protect concrete cylinders in cure boxes from excessive vibration and shock waves during the curing period in accordance with Section 6-02.3(6)D. Payment for cure boxes shall be in accordance with Section 6-02.5.

5-01.3(6) Dowel Bar Retrofit
The sixth paragraph is revised to read:
All slot surfaces shall be cleaned to bare concrete by sand blasting. The cleaning shall remove all slurry, parting compound, and other foreign materials prior to installation of the dowel. Any damage to the concrete shall be repaired by the Contractor at no cost to the Contracting Agency. Traffic shall not be allowed on slots where concrete has been removed.

5-01.3(10) Pavement Smoothness
This section is revised to read:

Perform the work described in Section 5-05.3(12), and the following:

Where the pavement is ground, calculation of the profile index shall exclude dips and depressions in the existing roadway. The profilograph generated reports shall be provided to the Engineer prior to payment.

5-01.5 Payment
This section is revised to read:

In the 15th paragraph for Sealing Transverse and Longitudinal Joints, delete "Cement Concrete Pavement Grinding", per square yard.

At the top of the 16th paragraph add "Cement Concrete Pavement Grinding", per square yard.

The second sentence in the 16th paragraph is revised to read:

The costs of any additional pavement grinding and profiling required to complete the work as specified is also included in this payment.

The 18th paragraph for Replace Uncompactable Material is supplemented with the following:

All costs associated with the containment, collection and disposal of concrete slurry and grinding residue shall be included in the applicable concrete grinding or cutting items of work.

SECTION 5-05, CEMENT CONCRETE PAVEMENT
April 3, 2006

5-05.3(4)A Acceptance of Portland Cement Concrete Pavement
The ninth paragraph beginning with "Acceptance testing for compliance" is supplemented with the following:

The Contractor shall provide cure boxes in accordance with Section 6-02.3(5)H, and protect concrete cylinders in cure boxes from excessive vibration and shock waves during the curing period in accordance with Section 6-02.3(6)D. Payment for cure boxes shall be in accordance with Section 6-02.5.

5-05.3(7) Placing, Spreading, and Compacting Concrete
The second paragraph is revised to read:
The average density of the cores shall be at least 97 percent of the approved mix design density or the actual concrete density when determined by the Contractor using AASHTO T 121 with no cores having a density of less than 96 percent.

SECTION 6-02, CONCRETE STRUCTURES
August 7, 2006

6-02.3(2) Proportioning Materials
The third paragraph is revised to read:

The use of fly ash is required for Class 4000D and 4000P concrete, except that ground granulated blast furnace slag may be substituted for fly ash at a 1:1 ratio. The use of fly ash and ground granulated blast furnace slag is optional for all other classes of concrete.

6-02.3(2)A Contractor Mix Design
The first paragraph is revised to read:

The Contractor shall provide a mix design in writing to the Engineer for all classes of concrete specified in the Plans except for those accepted based on a Certificate of Compliance. No concrete shall be placed until the Engineer has reviewed the mix design. The required average 28 day compressive strength shall be selected per ACI 318, Chapter 5, Section 5.3.2. ACI 211.1 and ACI 318 shall be used to determine proportions. The proposed mix for Class 4000P shall provide a minimum fly ash or ground granulated blast furnace slag content per cubic yard of 100 pounds, and a minimum cement content per cubic yard of 600 pounds. The proposed mix for Class 4000D shall provide a minimum fly ash or ground granulated blast furnace slag content per cubic yard of 75 pounds, and a minimum cement content per cubic yard of 660 pounds. All other concrete mix designs, except those for lean concrete and commercial concrete, shall have a minimum cementitious material content of 564 pounds per cubic yard of concrete.

The following new sentence is inserted after the first sentence in the fourth paragraph.

An alternate combined aggregate gradation conforming to Section 9-03.1(5) may also be used.

6-02.3(4)A Qualification of Concrete Suppliers
The first paragraph and the entire second paragraph (1 through 4) are deleted and replaced with the following:

Batch Plant Prequalification may be obtained through one of the following methods:

1. Certification by the National Ready Mix Concrete Association (NRMCA). Information concerning NRMCA certification may be obtained from the NRMCA at 900 Spring Street, Silver Springs, MD 20910 or online at www.nrmca.org. The NRMCA certification shall be good for a two year period. When this method of certification is used the following documentation shall be submitted to the project engineer.

a. A copy of the current NRMCA Certificate of Conformance, the concrete mix design(s) (WSDOT Form 350-040), along with copies of the truck list,
batch plant scale certification, admixture dispensing certification, and volumetric water batching devices (including water meters) verification.

2. Independent evaluation certified by a Professional Engineer using NRMCA checklist. The Professional Engineer shall be licensed under title 18 RCW, state of Washington, qualified in civil engineering. The independent certification using the NRMCA checklist shall be good for a two year period. When this method of certification is used the following documentation shall be submitted to the engineer:

   a. A copy of the Professional Engineer’s stamped and sealed NRMCA Verification of Inspection and Application for Certificate page from the NRMCA checklist, the concrete mix design(s) (WSDOT Form 350-040), along with copies of the truck list, batch plant scale certification, admixture dispensing certification, and volumetric water batching devices (including water meters) verification.

3. Inspection conducted by the Plant Manager, defined as the person directly responsible for the daily plant operation, using the NRMCA Plant Certification checklist. The Plant Manager certification shall be done prior to the start of a project, and every six months throughout the life of the project, and meet the following requirements:

   a. The Agreement to Regularly Check Scales and Volumetric Batching Dispensers page in the NRMCA Plant Certification checklist shall be signed by the Plant Manager and notarized.

   b. The signed and notarized Agreement to Regularly Check Scales and Volumetric Batching Dispensers page and a copy of the NRMCA Plant Certification checklist cover page showing the plant designation, address and Company operating plant shall all be submitted to the Project Engineer with the concrete mix design (WSDOT Form 350-040), along with copies of the truck list, batch plant scale certification, admixture dispensing certification, and volumetric water batching devices (including water meters) verification.

   c. The NRMCA Plant Certification checklists shall be maintained by the Plant Manager and are subject to review at any time by the Contracting Agency.

   e. Volumetric water batching devices (including water meters) shall be verified every 90 days.

6-02.3(5)C Conformance to Mix Design
Item 2 under the first paragraph is revised to read:

2. Fly ash and ground granulated blast furnace slag weight plus or minus 5 percent of that specified in the mix design.

6-02.3(5)H Sampling and Testing for Compressive Strength
This section including title is revised to read:
6-02.3(5)H Sampling and Testing for Compressive Strength and Initial Curing

Acceptance testing for compressive strength shall be conducted at the same frequency as the acceptance tests for temperature, consistency, and air content.

The Contractor shall provide, and maintain cure boxes for curing concrete cylinders. The Contractor shall also provide, maintain and operate all necessary power sources and connections needed to operate the curing box. Concrete cylinders shall be cured in a cure box in accordance with WSDOT FOP for AASHTO T 23. The cure boxes shall maintain a temperature between 60°F and 80°F for concrete with specified strengths less than 6000 psi and between 68°F and 78°F for concrete with specified strengths of 6000 psi and higher. A minimum/maximum thermometer shall be installed to measure the internal temperature of the cure box. The thermometer shall be readable from outside of the box and be capable of recording the high and low temperatures in a 24-hour period. The cure boxes shall create an environment that prevents moisture loss from the concrete specimens. The top shall have a working lock and the interior shall be rustproof. A moisture-proof seal shall be provided between the lid and the box. The cure box shall be the appropriate size to accommodate the number of concrete acceptance cylinders necessary or the Contractor shall provide additional cure boxes. Once concrete cylinders are placed in the cure box, the cure box shall not be moved until the cylinders have been cured in accordance with these specifications. When concrete is placed at more than one location simultaneously, multiple cure boxes shall be provided.

The Contractor shall protect concrete cylinders in cure boxes from excessive vibration and shock waves during the curing period in accordance with Section 6-02.3(6)D.

6-02.3(6)D Protection Against Vibration

The last sentence in the second paragraph is revised to read:

See the Shaft Special Provision, and Section 6-16 respectively for shaft installation, and soldier pile shaft installation operations.

The first sentence in number 3 under Prescriptive Safe Distance Method is revised to read:

(3) Equipment Class H (High Vibration) shall include pile drivers, machine operated impact tools, pavement breakers, and other large pieces of equipment.

6-02.3(16) Plans for Falsework and Formwork

The address for FEDEX delivery following the fourth paragraph is revised to read:

Washington State Department of Transportation
Bridge and Structures Engineer
7345 Linderson Way SW
Tumwater, WA 98501-6504

6-02.3(16)A Nonpreapproved Falsework and Formwork Plans

The address for FEDEX delivery following the first paragraph is revised to read:

Washington State Department of Transportation
Bridge and Structures Engineer
7345 Linderson Way SW
6-02.3(16)B Preapproved Formwork Plans
The address for FEDEX delivery following the second paragraph is revised to read:
Washington State Department of Transportation
Bridge and Structures Engineer
7345 Linderson Way SW
Tumwater, WA 98501-6504

6-02.3(24)C Placing and Fastening
The 14th paragraph is revised to read:
Clearances shall be at least:

4-inches between: Main bars and the top of any concrete masonry exposed to the action of salt or alkaline water.

3-inches between: Main bars and the top of any concrete deposited against earth without intervening forms.

2\(\frac{1}{2}\)-inches between: Adjacent bars in a layer. Roadway slab bars and the top of the roadway slab.

2-inches between: Adjacent layers. Main bars and the surface of concrete exposed to earth or weather (except in roadway slabs). Reinforcing bars and the faces of forms for exposed aggregate finish.

1\(\frac{1}{2}\)-inches between: Main bars and the surface of concrete not exposed to earth or weather. Slab bars and the top of the slab (except roadway slabs). Barrier and curb bars and the surface of the concrete. Stirrups and ties and the surface of the concrete exposed to earth or weather.

1-inch between: Slab bars and the bottom of the slab. Stirrups and ties and the surface of the concrete not exposed to earth or weather.

6-02.3(26)A Shop Drawings
The address for FEDEX delivery under Item 1 in the first paragraph is revised to read:
Washington State Department of Transportation
Bridge and Structures Engineer
7345 Linderson Way SW
Tumwater, WA 98501-6504

6-02.3(28)A Shop Drawings
The first paragraph is revised to read:
Before casting the structural elements, the Contractor shall submit:
1. Seven sets of shop drawings for approval by the Department of Transportation Bridge and Structures Engineer, Construction Support, addressed as follows:

US Postal Service
P. O. Box 47340
Olympia, WA 98504-7340

FedEx
7345 Linderson Way SW
Tumwater, WA 98501-6504; and

2. Two sets of shop drawings to the Project Engineer.

6-02.4 Measurement
This section is supplemented with the following:

No specific unit of measure will apply to the lump sum item for cure box.

6-02.5 Payment
This section is supplemented with the following:

"Cure Box", lump sum.
The lump sum contract price for "Cure Box" shall be full pay for all costs for providing, operating, maintaining, moving and removing the cure boxes and providing, maintaining and operating all necessary power sources and connections needed to operate the curing boxes.

SECTION 6-03, STEEL STRUCTURES
April 3, 2006

6-03.3(7) Shop Plans
The first two sentences in the first paragraph are revised to read:

The Contractor shall submit for approval all shop detail plans for fabricating the steel. These shall be sent to the Department of Transportation Bridge and Structures Engineer, Construction Support, addressed as follows:

US Postal Service
P. O. Box 47340
Olympia, WA 98504-7340

FedEx
7345 Linderson Way SW
Tumwater, WA 98501-6504

6-03.3(33) Bolted Connections
The first sentence in the second paragraph is revised to read:

All bolted connections are slip critical.
SECTION 6-05, PILING
August 7, 2006

6-05.3(11)H Pile Driving From or Near Adjacent Structures
The second paragraph is revised to read:

Freshly placed concrete in the vicinity of the pile driving operation shall be protected against vibration in accordance with Section 6-02.3(6)D.

The third paragraph is deleted.

6-05.5 Payment
The paragraph following “Furnishing St. Piling”, per linear foot is revised to read:

The unit contract price per linear foot for “Furnishing (type) Piling (____)" shall be full pay for furnishing the piling specified, including fabricating and installing the steel reinforcing bar cage, and casting and curing the concrete, as required for concrete piling. Such price shall also be full pay, when measurement includes, for piling length ordered but not driven.

SECTION 6-07, PAINTING
August 7, 2006

6-07.2 Materials
The first sentence in the second paragraph is revised to read:

Material used for field abrasive blasting shall meet Military Specification MIL-A-22262B(SH) as listed on QPL-22262-28 as maintained by the Department of the Navy.

6-07.3(2)A Bridge Cleaning
In the third paragraph under Pressure Flushing, the US Sieve size for Apparent opening size (ASTM D4751) is revised to read:

#100 US Sieve

SECTION 6-11, PRECAST CONCRETE RETAINING WALL STEMS
January 3, 2006

This section including title is revised to read:

SECTION 6-11, REINFORCED CONCRETE WALLS

6-11.1 Description
This work consists of constructing reinforced concrete retaining walls, including those shown in the Standard Plans, L walls, and counterfort walls.

6-11.2 Materials
Materials shall meet the requirements of the following sections:

Cement 9-01
Aggregates for Portland Cement Concrete 9-03.1
Gravel Backfill 9-03.12
Premolded Joint Filler 9-04.1(2)
Steel Reinforcing Bar 9-07.2
Epoxy-Coated Steel Reinforcing Bar 9-07.3
Concrete Curing Materials and Admixtures 9-23
Fly Ash 9-23.9
Water 9-25

Other materials required shall be as specified in the Special Provisions.

6-11.3 Construction Requirements

6-11.3(1) Submittals
The Contractor shall submit all excavation shoring plans to the Engineer for approval in accordance with Section 2-09.3(3)D.

The Contractor shall submit all falsework and formwork plans to the Engineer for approval in accordance with Sections 6-02.3(16) and 6-02.3(17).

If the Contractor elects to fabricate and erect precast concrete wall stem panels, the following information shall be submitted to the Engineer for approval in accordance with Sections 6-01.9 and 6-02.3(28)A:

1. Working drawings for fabrication of the wall stem panels, showing dimensions, steel reinforcing bars, joint and joint filler details, surface finish details, lifting devices with the manufacturer's recommended safe working capacity, and material specifications.

2. Working drawings and design calculations for the erection of the wall stem panels showing dimensions, support points, support footing sizes, erection blockouts, member sizes, connections, and material specifications.

3. Design calculations for the precast wall stem panels, the connection between the precast panels and the cast-in-place footing, and all modifications to the cast-in-place footing details as shown in the Plans or Standard Plans.

The Contractor shall not begin excavation and construction operations for the retaining walls until receiving the Engineer's approval of the above submittals.

6-11.3(2) Excavation and Foundation Preparation
Excavation shall conform to Section 2-09.3(3), and to the limits and construction stages shown in the Plans. Foundation soils found to be unsuitable shall be removed and replaced in accordance with Section 2-09.3(1)C.

6-11.3(3) Precast Concrete Wall Stem Panels
The Contractor may fabricate precast concrete wall stem panels for construction of Standard Plan Retaining Wall Types 1 through 6 and 1SW through 6SW. Precast concrete wall stem panels may be used for construction of non-Standard Plan retaining walls if allowed by the Plans or Special Provisions. Precast concrete wall stem panels shall conform to Section 6-02.3(28), and shall be cast with Class 4000 concrete.
The precast concrete wall stem panels shall be designed in accordance with the requirements for Load Factor Design in the following codes:

1. For all loads except as otherwise noted - AASHTO Standard Specifications for Highway Bridges, latest edition and current interims. The seismic design shall use the acceleration coefficient and soil profile type as specified in the Plans.


The precast concrete wall stem panels shall be fabricated in accordance with the dimensions and details shown in the Plans, except as modified in the shop drawings as approved by the Engineer.

The precast concrete wall stem panels shall be fabricated full height, and shall be fabricated in widths of 8 feet, 16 feet, and 24 feet.

The construction tolerances for the precast concrete wall stem panels shall be as follows:

- Height ±1/4 inch
- Width ±1/4 inch
- Thickness ±1/4 inch
- Concrete cover for steel reinforcing bar -1/8 inch
- Concrete cover for steel reinforcing bar ±3/8 inch
- Width of precast concrete wall stem panel joints -1/8 inch
- Offset of precast concrete wall stem panels ±1/4 inch
- Deviation from a straight line extending 5 feet on each side of the panel joint

The precast concrete wall stem panels shall be constructed with a mating shear key between adjacent panels. The shear key shall have beveled corners and shall be 1-1/2 inches in thickness. The width of the shear key shall be 3-1/2 inches minimum and 5-1/2 inches maximum. The shear key shall be continuous and shall be of uniform width over the entire height of the wall stem.

The Contractor shall provide the specified surface finish as noted, and to the limits shown, in the Plans to the exterior concrete surfaces. Special surface finishes achieved with form liners shall conform to Sections 6-02.2 and 6-02.3(14) as supplemented in the Special Provisions. Rolled on textured finished shall not be used. Precast concrete wall stem panels shall be cast in a vertical position if the Plans call for a form liner texture on both sides of the wall stem panel.

The precast concrete wall stem panel shall be rigidly held in place during placement and curing of the footing concrete.

The precast concrete wall stem panels shall be placed a minimum of one inch into the footing to provide a shear key. The base of the precast concrete wall stem panel shall be sloped ½ inch per foot to facilitate proper concrete placement.
To ensure an even flow of concrete under and against the base of the wall panel, a form shall be placed parallel to the precast concrete wall stem panel, above the footing, to allow a minimum one foot head to develop in the concrete during concrete placement.

The steel reinforcing bars shall be shifted to clear the erection blockouts in the precast concrete wall stem panel by 1-1/2 inches minimum.

All precast concrete wall stem panel joints shall be constructed with joint filler installed on the rear (backfill) side of the wall. The joint filler material shall extend from two feet below the final ground level in front of the wall to the top of the wall. The joint filler shall be a nonorganic flexible material and shall be installed to create a waterproof seal at panel joints.

The soil bearing pressure beneath the falsework supports for the precast concrete wall stem panels shall not exceed the maximum design soil pressure shown in the Plans for the retaining wall.

6-11.3(4) Cast-In-Place Concrete Construction
Cast-in-place concrete for concrete retaining walls shall be formed, reinforced, cast, cured, and finished in accordance with Section 6-02, and the details shown in the Plans and Standard Plans. All cast-in-place concrete shall be Class 4000.

The Contractor shall provide the specified surface finish as noted, and to the limits shown, in the Plans to the exterior concrete surfaces. Special surface finishes achieved with formliners shall conform to Sections 6-02.2 and 6-02.3(14) as supplemented in the Special Provisions.

Cast-in-place concrete for adjacent wall stem sections (between vertical expansion joints) shall be formed and placed separately, with a minimum 12 hour time period between concrete placement operations.

Premolded joint filler, 1/2" thick, shall be placed full height of all vertical wall stem expansion joints in accordance with Section 6-01.14.

6-11.3(5) Backfill, Weepholes and Gutters
Unless the Plans specify otherwise, backfill and weepholes shall be placed in accordance with Standard Plan D-4 and Section 6-02.3(22). Gravel backfill for drain shall be compacted in accordance with Section 2-09.3(1)E. Backfill within the zone defined as bridge approach embankment in Section 1-01.3 shall be compacted in accordance with Method C of Section 2-03.3(14)C. All other backfill shall be compacted in accordance with Method B of Section 2-03.3(14)C, unless otherwise specified.

Cement concrete gutter shall be constructed as shown in the Standard Plans.

6-11.3(6) Traffic Barrier and Pedestrian Barrier
When shown in the Plans, traffic barrier and pedestrian barrier shall be constructed in accordance with Sections 6-02.3(11)A and 6-10.3(2), and the details shown in the Plans and Standard Plans.

6-11.4 Measurement
Concrete Class 4000 for retaining wall will be measured as specified in Section 6-02.4.
Steel reinforcing bar for retaining wall and epoxy-coated steel reinforcing bar for retaining wall will be measured as specified in Section 6-02.4.

Traffic barrier and pedestrian barrier will be measured as specified in Section 6-10.4 for cast-in-place concrete barrier.

6-11.5 Payment
Payment will be made in accordance with Section 1-04.1 for each of the following bid items when they are included in the proposal:

"Conc. Class 4000 For Retaining Wall", per cubic yard.
All costs in connection with furnishing and installing weep holes and premolded joint filler shall be included in the unit contract price per cubic yard for "Conc. Class 4000 for Retaining Wall".

"St. Reinf. Bar For Retaining Wall", per pound.
"Epoxy-Coated St. Reinf. Bar For Retaining Wall", per pound.

"Traffic Barrier", per linear foot.
"Pedestrian Barrier", per linear foot.
The unit contract price per linear foot for "___ Barrier" shall be full pay for constructing the barrier on top of the retaining wall, except that when these bid items are not included in the proposal, all costs in connection with performing the work as specified shall be included in the unit contract price per cubic yard for "Conc. Class 4000 For Retaining Wall", and the unit contract price per pound for "___ Bar For Retaining Wall".

SECTION 6-12, NOISE BARRIER WALLS
January 3, 2006

6-12.3(6) Precast Concrete Panel Fabrication and Erection
Item 5 following the first paragraph of Section 6-12.3(6) is renumbered to item 6.
The below new item 5 is inserted ahead of renumbered item 6:

5. Precast concrete panels shall not be erected until the foundations for the panels have attained a minimum compressive strength of 3,400 psi.

SECTION 6-13, STRUCTURAL EARTH WALLS
August 7, 2006

6-13.3(6) Welded Wire Faced Structural Earth Wall Erection
This section is supplemented with the following:
Geosynthetic reinforcing, when used, shall be placed in accordance with Sections 2-12.3 and 6-13.3(5).

6-13.3(7) Backfill
Under number 4 in the fifth paragraph, the words "light mechanical tampers" are revised to "a plate compactor".
6-13.3(9) SEW Traffic Barrier and SEW Pedestrian Barrier

This Section is revised to read:

The Contractor, in conjunction with the structural earth wall manufacturer, shall design and detail the SEW traffic barrier and SEW pedestrian barrier in accordance with Section 6-13.3(2) and the above ground geometry details shown in the Plans. The barrier working drawings and supporting calculations shall include, but not be limited to, the following:

1. Complete details of barrier cross section geometry, including the portion below ground, and accommodations necessary for bridge approach slabs, PCCP, drainage facilities, underground utilities, and sign support, luminaire pole, traffic signal standard, and other barrier attachments.

2. Details of the steel reinforcement of the barrier, including a bar list and bending diagram in accordance with Section 6-02.3(24), and including additional reinforcement required at sign support, luminaire pole, traffic signal standard, and other barrier attachment locations.

3. Details of the interface of, and the interaction between, the barrier and the top layers of structural earth wall reinforcement and facing.

4. When the Plans specify placement of conduit pipes through the barrier, details of conduit pipe and junction box placement.

SEW traffic barrier and SEW pedestrian barrier shall be constructed in accordance with Sections 6-02.3(11)A and 6-10.3(2), and the details in the Plans and in the structural earth wall working drawings as approved by the Engineer.

SECTION 6-14, GEOSYNTHETIC RETAINING WALLS

August 7, 2006

6-14.3(2) Submittals

Item 2 is revised to read:

2. The Contractor’s proposed wall construction method, including proposed forming systems, types of equipment to be used, proposed erection sequence and details of how the backfill will be retained during each stage of construction.

6-14.3(4) Erection and Backfill

The first sentence in the eighth paragraph is revised to read:

The Contractor shall place and compact the wall backfill in accordance with the wall construction sequence detailed in the Plans and Method C of Section 2-03.3(14)C, except as follows:

Under number 5 in the eighth paragraph, the words "light mechanical tempers" are revised to "a plate compactor".

6-14.4 Measurement

The first three paragraphs are revised to read:
Permanent geosynthetic retaining wall and temporary geosynthetic retaining wall will be measured by the square foot of face of completed wall. Corner wrap area and extensions of the geosynthetic wall beyond the area of wall face shown in the Plans or staked by the Engineer are considered incidental to the wall construction and will not be included in the measurement of the square foot of face of completed geosynthetic retaining wall.

Gravel borrow for geosynthetic retaining wall backfill will be measured as specified in Section 2-03.4.

Shotcrete facing and concrete fascia panel will be measured by the square foot surface area of the completed facing or fascia panel, measured to the neat lines of the facing or panel as shown in the Plans. When a footing is required, the measurement of the fascia panel area will include the footing.

6-14.5 Payment
The bid item “Borrow for Geosynthetic Retaining Wall Incl. Haul” and subsequent paragraph are revised to read:

“Gravel Borrow for Geosynthetic Retaining Wall Incl. Haul”, per ton or per cubic yard.
All costs in connection with furnishing and placing backfill material for temporary or permanent geosynthetic retaining walls as specified shall be included in the unit contract price per ton or per cubic yard for “Gravel Borrow for Geosynthetic Retaining Wall Incl. Haul”.

SECTION 6-15, SOIL NAIL WALLS
August 7, 2006

6-15.3(8) Soil Nail Testing and Acceptance
The first sentence in the fourth paragraph is revised to read:

The pressure gauge shall be graduated in increments of either 100 psi or two percent of the maximum test load, whichever is less.

SECTION 6-16, SOLDIER PILE AND SOLDIER PILE TIEBACK WALLS
August 7, 2006

6-16.3(5) Backfilling Shaft
The first and second paragraphs are revised to read:

The excavated shaft shall be backfilled with either controlled density fill (CDF), or pumpable lean concrete, as shown in the Plans and subject to the following requirements:

1. Dry shaft excavations shall be backfilled with CDF.
2. Wet shaft excavations shall be backfilled with pumpable lean concrete.
3. Pumpable lean concrete shall be a Contractor designed mix providing a minimum 28 day compressive strength of 100 psi. Acceptance of pumpable lean concrete will conform to the acceptance requirements specified in Section 2-09.3(1) for CDF.
4. A wet shaft is defined as a shaft where water is entering the excavation and remains present to a depth of six inches or more.

5. When the Plans or test hole boring logs identify the presence of a water table at or above the elevation of the bottom of soldier pile shaft, the excavation shall be considered as wet, except as otherwise noted. Such a shaft may be considered a dry shaft provided the Contractor furnishes and installs casing that is sufficiently sealed into competent soils such that water cannot enter the excavation.

Placement of the shaft backfill shall commence immediately after completing the shaft excavation and receiving the Engineer's approval of the excavation. CDF or pumpable lean concrete shall be placed in one continuous operation to the top of the shaft. Vibration of shaft backfill is not required.

6-16-3(6) Installing Timber Lagging and Permanent Ground Anchors

The first paragraph is revised to read:

The excavation and removal of CDF and pumpable lean concrete for the lagging installation shall proceed in advance of the lagging, and shall not begin until the CDF and pumpable lean concrete are of sufficient strength that the material remains in placed during excavation and lagging installation. If the CDF or pumpable lean concrete separates from the soldier pile, or caves or spalls from around the pile, the Contractor shall discontinue excavation and timber lagging installation operations until the CDF and pumpable lean concrete is completely set. The bottom of the excavation in front of the wall shall be level. Excavation shall conform to Section 2-03.

SECTION 6-17, PERMANENT GROUND ANCHORS
August 7, 2006

6-17.3(8) Testing and Stressing
The first sentence in the third paragraph is revised to read:

The pressure gauge shall be graduated in increments of either 100 psi or two percent of the maximum test load, whichever is less.

SECTION 7-01, DRAINS
August 7, 2006

7-01.3 Construction Requirements
This section is revised to read:

A trench of the dimensions shown in the Plans or as specified by the Engineer shall be excavated to the grade and line given by the Engineer.

Section 7-01.3 is supplemented with the following new sub-sections:

7-01.3(1) Drain Pipe

Drain pipe shall be laid in conformity with the line and grades as shown in the Plans. The drain pipe shall be laid with soil-tight joints unless otherwise specified. Concrete drain pipe shall be laid with the bell or larger end upstream. PVC drain pipe shall be jointed with a bell
and spigot joint using a flexible elastomeric seal as described in Section 9-04.8. The bell
shall be laid upstream. PE drain pipe shall be jointed with snap-on, screw-on, bell and
spigot, or wraparound coupling bands as recommended by the manufacturer of the tubing.

7-01.3(2) Underdrain Pipe

When underdrain pipe is being installed as a means of intercepting ground or surface water,
the trench shall be fine-graded in the existing soil 3 inches below the grade of the pipe as
shown in the Plans. Gravel backfill shall be used under the pipe. Gravel backfill shall be
placed to the depth shown in the Plans or as designated by the Engineer. All backfill shall be
placed in 12-inch maximum layers and be thoroughly compacted with three passes of a
vibratory compactor for each layer. The Contractor shall use care in placing the gravel
backfill material to prevent its contamination.

Class 2 perforations shall be used unless otherwise specified. When Class 1 perforations
are specified the perforated pipe shall be laid with the perforations down. Upon final
acceptance of the work, all drain pipes shall be open, clean, and free draining. Perforated
pipe does not require a watertight joint. PVC underdrain pipe shall be jointed using either the
flexible elastomeric seal as described in Section 9-04.8 or solvent cement as described in
Section 9-04.9, at the option of the Contractor unless otherwise specified in the Plans. The
bell shall be laid upstream. PE drainage tubing underdrain pipe shall be jointed with snap-on,
screw-on, bell and spigot, or wraparound coupling bands, as recommended by the
manufacturer of the tubing.

SECTION 7-02, CULVERTS
January 3, 2006

7-02.2 Materials

The fifth and seventh paragraphs are deleted:

SECTION 7-04, STORM SEWERS
January 3, 2006

7-04.2 Materials

The fourth and sixth paragraphs are deleted:

SECTION 8-01, EROSION CONTROL AND WATER POLLUTION CONTROL
August 7, 2006

8-01.3(1) General

The eighth paragraph, beginning with “In western Washington, erodible soil”, is deleted and
replaced with the following:

Erodible soil not being worked, whether at final grade or not, shall be covered within the
following time period, using an approved soil covering practice, unless authorized otherwise
by the Engineer:

In western Washington (west of the Cascade Mountain crest):

October 1 through April 30
       2 days maximum

May 1 to September 30
       7 days maximum
In eastern Washington (east of the Cascade Mountain crest):

October 1 through June 30  5 days maximum
July 1 through September 30  10 days maximum

8-01.3(1)B Erosion and Sediment Control (ESC) Lead
This section is revised to read:

The Contractor shall identify the ESC Lead at the preconstruction discussions and in the TESC plan. The ESC Lead shall have, for the life of the contract, a current Certificate of Training in Construction Site Erosion and Sediment Control from a course approved by the Washington State Department of Ecology. The ESC Lead shall be listed on the Emergency Contact List required under Section 1-05.13(1).

The ESC Lead shall implement the Temporary Erosion and Sediment Control (TESC) plan. Implementation shall include, but is not limited to:

1. Installing and maintaining all temporary erosion and sediment control Best Management Practices (BMPs) included in the TESC plan to assure continued performance of their intended function. Damaged or inadequate TESC BMPs shall be corrected immediately.

2. Updating the TESC plan to reflect current field conditions.

When a TESC plan is included in the contract plans, the Contractor shall inspect all on-site erosion and sediment control BMPs at least once every calendar week and within 24 hours of runoff events in which stormwater discharges from the site. Inspections of temporarily stabilized, inactive sites may be reduced to once every calendar month. The Erosion and Sediment Control Inspection Form (Form Number 220-030 EF) shall be completed for each inspection and a copy shall be submitted to the Engineer no later than the end of the next working day following the inspection.

8-01.3(2)E Tackging Agent and Soil Binders
The third paragraph, (PAM) is revised to read:

Soil Binding Using Polyacrylamide (PAM)
The PAM shall be applied on bare soil completely dissolved and mixed in water or applied as a dry powder. Dissolved PAM shall be applied at a rate of not more than 2/3 pound per 1,000 gallons of water per acre. A minimum of 200 pounds per acre of cellulose fiber mulch treated with a non-toxic dye shall be applied with the dissolved PAM. Dry powder applications may be at a rate of 5 pounds per acre using a hand-held fertilizer spreader or a tractor-mounted spreader.

8-01.3(2)F Dates for Application of Final Seed, Fertilizer, and Mulch
The second paragraph under East of the summit of the Cascade Range, beginning with “The Contractor will be responsible”, is deleted.

8-01.3(9)A Silt Fence
The fifth paragraph is revised to read:
Posts shall be either wood or steel. Wood posts shall have minimum dimensions of 1 1/4 inches by 1 1/4 inches by the minimum length shown in the Plans. Steel posts shall have a minimum weight of 0.90 lbs/ft

8-01.4 Measurement
This section is supplemented with the following:

Coir log will be measured by the linear foot along the ground line of the completed installation.

8-01.5 Payment
The following bid item is inserted after "Compost Sock", per linear foot:

"Coir Log", per linear foot

SECTION 8-02, ROADSIDE RESTORATION
April 3, 2006

8-02.3(8) Planting
The seventh and eighth paragraphs are deleted and replaced with the following:

All burlap, baskets, string, wire and other such materials shall be removed from the hole when planting balled and burlapped plants. The plant material shall be handled in such a manner that the root systems are kept covered and damp at all times. The root systems of all bare root plant material shall be dipped in a slurry of silt and water immediately prior to planting. The root systems of container plant material shall be moist at the time of planting. In their final position, all plants shall have their top true root (not adventitious root) no more than 1" below the soil surface, no matter where that root was located in the original root ball or container. After planting, the backfill material and root ball shall be thoroughly watered in within 24 hours.

8-02.3(9) Pruning, Staking, Guying, and Wrapping
The first paragraph is revised to read:

Plants shall be pruned at the time of planting, only to remove minor broken or damaged twigs, branches or roots. Pruning shall be done with a sharp tool and shall be done in such a manner as to retain or to encourage natural growth characteristics of the plants. All other pruning shall be performed only after the plants have been in the ground at least one year.

SECTION 8-04, CURBS, GUTTERS, AND SPILLWAYS
January 3, 2006

8-04.4 Measurement
The first paragraph is revised to read:

All curbs, gutters, and spillways will be measured by the linear foot along the line and slope of the completed curbs, gutters, or spillways, including bends. Measurement of cement concrete curb and cement concrete curb and gutter, when constructed across driveways or sidewalk ramps, will include the width of the driveway or sidewalk ramp.
SECTION 8-08, RUMBLE STRIPS
April 3, 2006

8-08.1 Description
The first sentence is revised to read:

This work consists of constructing centerline and shoulder rumble strips by grinding hot mix asphalt.

8-08.3 Construction Requirements
The first sentence in the first paragraph is revised to read:

The equipment shall have a rotary type cutting head or series of cutting heads capable of grinding one or more recesses in the hot mix asphalt as detailed in the Standard Plans.

The third sentence in the third paragraph is revised to read:

All cuttings and other debris shall become the property of the Contractor and be disposed of outside the project limits.

SECTION 8-09, RAISED PAVEMENT MARKERS
April 3, 2006

8-09.3(5) Recessed Pavement Marker
This section is revised to read:

Construct recesses for pavement markers by grinding the pavement in accordance with the dimensions shown in the Standard Plans. This work shall include cleanup and disposal of cuttings and other resultant debris. Prepare the surface in accordance with Section 8-09.3(1). Install Type 2 markers in the recess in accordance with the Standard Plans and Section 8-09.3(4).

SECTION 8-11, GUARDRAIL
April 3, 2006

8-11.3(4) Removing Guardrail
This section including title is revised to read:

8-11.3(4) Removing Guardrail and Guardrail Anchor
Removal of the various types of guardrail shall include removal of the rail, cable elements, hardware, and posts, including transition sections, expansion sections and terminal sections. Removal of the various types of guardrail anchors shall include removal of the anchor assembly in its entirety, including concrete bases, rebar, and steel tubes and any other appurtenances in the anchor assembly. All holes resulting from the removal of the guardrail posts and anchors shall be backfilled with granular material in layers no more than 6-inches thick and compacted to a density similar to that of the adjacent material. The removed guardrail items shall become the property of the Contractor.
SECTION 8-16, CONCRETE SLOPE PROTECTION
August 7, 2006

8-16.2 Materials
The material "Concrete Class 3000" and referenced section "6-02" are revised to read:

Commercial Concrete 6-02.3(2)B

8-16.3(3) Poured in Place Cement Concrete
In the second paragraph, the words "Class 3000 cement" are revised to read "commercial".

SECTION 8-20, ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, AND ELECTRICAL
August 7, 2006

8-20.3(2) Excavating and Backfilling
The third paragraph is revised to read:

The excavations shall be backfilled in conformance with the requirements of Section 2-09.3(1)E, Structure Excavation.

8-20.3(4) Foundations
The second paragraph is revised to read:

The bottom of concrete foundations shall rest on firm ground. If the portion of the foundation beneath the existing ground line is formed or cased instead of being cast against the existing soil forming the sides of the excavation, then all gaps between the existing soil and the completed foundation shall be backfilled and compacted in accordance with Section 2-09.3(1)E.

The thirteenth paragraph is revised to read:

Both forms and ground which will be in contact with the concrete shall be thoroughly moistened before placing concrete; however, excess water in the foundation excavation will not be permitted. Foundations shall have set at least 72 hours prior to the removal of the forms. All forms shall be removed, except when the Plans or Special Provisions specifically allow or require the forms or casing to remain.

8-20.3(9) Bonding, Grounding
The first two paragraphs are revised to read:

All metallic appurtenances containing electrical conductors (luminaires, light standards, cabinets, metallic conduit, etc.) shall be made mechanically and electrically secure to form continuous systems, that shall be effectively grounded. Supplemental grounding shall be provided at light standards, signal standards, cantilever sign structures, and sign bridges.

Steel sign posts which support signs with flashing beacons shall also have supplemental grounding. Foundations for these standards shall be installed with a bare, 6 AWG copper wire that is connected to the reinforcing cage with a listed connector suitable for use embedded in concrete and routed to connect to the pole at the grounding lug.
Where conduit is installed, the installation shall include an equipment ground conductor, in addition to the conductors noted in the contract. Bonding jumpers and equipment grounding conductors shall be installed in accordance with Section 9-29.3 and NEC. Where existing conduits are used for the installation of new circuits, an equipment-grounding conductor shall be installed unless an existing equipment ground conductor is already present in the existing raceway. The equipment ground conductor between the isolation switch and the sign lighter fixtures shall be a minimum of a 14 AWG stranded copper conductor. Where parallel circuits are enclosed in a common conduit, the equipment-grounding conductor shall be sized by the largest overcurrent device serving any circuit contained within the conduit.

8-20.3(14)E Signal Standards
The second paragraph is revised to read:

Signal standards shall not be erected on concrete foundations until the foundations have attained 2400 psi or 14 days after concrete placement. Signal standards without mast arms may be erected after 72 hours. Type IV and V strain pole standards may be erected but the messenger cable (span wire) shall not be placed until the foundation has attained 2400 psi or 14 days after concrete placement.

SECTION 8-21, PERMANENT SIGNING
January 3, 2006

8-21.3(9)F Bases
The second paragraph is revised to read:

The excavation and backfill shall be in conformance with the requirements of Section 2-09.3(1)E.

The fifth paragraph is revised to read:

The bottom of concrete foundations shall rest on firm ground. If the portion of the foundation beneath the existing ground line is formed or cased instead of being cast against the existing soil forming the sides of the excavation, then all gaps between the existing soil and the completed foundation shall be backfilled and compacted in accordance with Section 2-09.3(1)E.

The fourteenth paragraph is revised to read:

Both forms and ground which will be in contact with the concrete shall be thoroughly moistened before placing concrete; however, excess water in the foundation excavation will not be permitted. Forms shall not be removed until the concrete has set at least three days. All forms shall be removed, except when the Plans or Special Provisions specifically allow or require the forms or casing to remain.

SECTION 8-22, PAVEMENT MARKING
April 3, 2006

8-22.3(2) Preparation of Roadway Surfaces
The following new sentence is inserted after the first sentence in the second paragraph:
The temperature requirement may be superseded by the material manufacturers written installation instructions.

**8-22.3(3) Marking Application**

The second paragraph is revised to read:

Centerlines on two lane highways with skip patterns, paint or plastic, shall be applied in the increasing mile post direction so they are in cycle with existing skip pattern lines at the beginning of the project. Skip patterns applied to multi-lane or divided roadways shall be applied in cycle in the direction of travel.

Where paint is applied on centerline on two-way roads with bituminous surface treatment or centerline rumble strips, the second paint application shall be applied in the opposite (decreasing mile post) direction as the first application (increasing mile post) direction. This will require minor skip pattern corrections for curves on the second application.

The fourth paragraph, beginning with “Lines with skip patterns”, is deleted.

The first sentence in the sixth paragraph is revised to read:

Pavement markings shall be applied at the following base line thickness measured above the pavement surface or above the slot bottom for inset markings in thousandths of an inch (mils):

In the sixth paragraph, the final line in the chart **Marking Material Application** is revised to read:

| Type | inset/long line | extruded | 230 | 230 | 230 |

In the seventh paragraph, the final line in the chart for Liquid pavement marking material yield per gallon is revised to read:

| 230 | 21 | 7 |

In the eighth paragraph, the final line in the chart for Solid pavement marking material (Type A) yield is revised to read:

| 230 | flat inset | 47 | 15 |

The third, fourth, fifth and sixth sentences in the eleventh paragraph are revised to read:

For Type C material the slot shall be cut with equipment to produce a smooth square slot with a width in accordance with the material manufacturer’s recommendation. The slot depth for Type C material shall be 100 mils, plus or minus 10 mils. The slot depth for Type A or D material shall be 250 mils minimum. Slots for Type A or D material shall be filled with material so that the top of the material with glass beads is 20 mils, +/- 10 mils, below the pavement surface.

This section is supplemented with the following:

When two or more spray applications are required to meet thickness requirements for Type A and Type D materials, top dressing with glass beads is only allowed on the last application.
The cure period between successive applications shall be in accordance with the manufacturer's recommendations. Any loose beads, dirt or other debris shall be swept or blown off the line prior to application of each successive application. Successive applications shall be applied squarely on top of the preceding application.

8-22.3(5) Installation Instructions
This section including title is revised to read:

8-22.3(5) Plastic Installation Instructions
Installation instructions for plastic markings shall be provided for the Engineer. All materials including glass beads shall be installed according to the manufacturer's recommendations. A manufacturer's technical representative shall be present at the initial installation of plastic material to approve the installation procedure or the material manufacturer shall certify that the Contractor will install the plastic material in accordance with their recommended procedure.

8-22.4 Measurement
The following is inserted after the fifth paragraph:

Diagonal and chevron-shaped lines used to delineate medians, gore areas, and parking stalls are constructed of painted or plastic 4 inch and 8 inch wide lines in the color and pattern shown in the Standard Plans. These lines will be measured as painted or plastic line or wide line by the linear foot of line installed. Crosswalk line will be measured by the square foot of marking installed.

Traffic arrows, traffic letters, access parking space symbols, HOV symbols, railroad crossing symbols, drainage markings, bicycle lane symbols, aerial surveillance full, and 1/2 markers, yield line symbols, yield ahead symbols, and speed bump symbols will be measured per each. Type 1 through 6 traffic arrows will be measured as one unit each, regardless of the number of arrow heads.

The last paragraph is revised to read:

Removal of traffic arrows, traffic letters, access parking space symbol, HOV lane symbol, railroad crossing symbol, bicycle lane symbols, drainage markings, aerial surveillance full and 1/2 markers, yield line symbol, yield ahead symbol, and speed bump symbol will be measured per each. Removal of crosswalk lines will be measured by the square foot of lines removed.

8-22.5 Payment
The following items are deleted:

"Painted HOV Lane Symbol Type ______"
"Plastic HOV Lane Symbol Type ______"

SECTION 9-00, DEFINITIONS AND TESTS
January 3, 2006

9-00.8 Sand Equivalent
The second paragraph is revised to read:
For acceptance, there must be a clear line of demarcation. If no clear line of demarcation has formed at the end of a 30 minute sedimentation period, the material will be considered as failing to meet the minimum specified sand equivalent.

SECTION 9-02, BITUMINOUS MATERIALS
January 3, 2006

9-02.1(4) Asphalt Binders
This section including title is revised to read:

9-02.1(4) Performance Graded Asphalt Binder (PGAB)
PGAB meeting the requirements of AASHTO M 320 Table 1 of the grades specified in the contract shall be used in the production of HMA. The Direct Tension Test (AASHTO T 314) of M 320 is not a specification requirement.

9-02.1(4)A Performance Graded Asphalt Binder
This section including title is revised to read:

9-02.1(4)A Quality Control Plan
The Asphalt Supplier of PGAB shall have a Quality Control Plan (QCP) in accordance with WSDOT QC 2 “Standard Practice for Asphalt Suppliers That Certify Performance Graded Asphalts”. The Asphalt Supplier’s QCP shall be submitted and approved by the WSDOT State Materials Laboratory. Any change to the QCP will require a new QCP to be submitted. The Asphalt Supplier of PGAB shall certify through the Bill of Lading that PGAB meets the specification requirements of the contract.

9-02.1(6)A Polymerized Cationic Emulsified Asphalt CRS-2P
This section is revised to read:

The asphalt CRS-2P shall be a polymerized cationic emulsified asphalt. The polymer shall be milled into the asphalt or emulsion during the manufacturing of the emulsion. The asphalt CRS-2P shall meet the following specifications:

<table>
<thead>
<tr>
<th>AASHTO Test Method</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity @122°F, SFS</td>
<td>T 59</td>
</tr>
<tr>
<td>Storage Stability 1 day %</td>
<td>T 59</td>
</tr>
<tr>
<td>Demulsibility 35 ml. 0.8% Dioctyl Sodium Sulfo succinate</td>
<td>T 59</td>
</tr>
<tr>
<td>Particle Charge</td>
<td>T 59</td>
</tr>
<tr>
<td>Sieve Test %</td>
<td>T 59</td>
</tr>
<tr>
<td>Distillation</td>
<td></td>
</tr>
<tr>
<td>Oil distillate by vol. of emulsion %</td>
<td>T 59&lt;sup&gt;Note 1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residue</td>
<td>T 59&lt;sup&gt;Note 1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Test on the Residue From Distillation</td>
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<tr>
<td>--------------------------------------</td>
<td></td>
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<tr>
<td>Penetration @77°F</td>
<td>T 49</td>
</tr>
<tr>
<td>Torsional Recovery %</td>
<td>note 2</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>Toughness/Tenacity in-lbs</td>
<td>note 3</td>
</tr>
</tbody>
</table>

1. Distillation modified to use 300 grams of emulsion heated to 350°F ± 9°F and maintained for 20 minutes.

2. The Torsional Recovery test shall be conducted according to the California Department of Transportation Test Method No. 332. The residue material for this test shall come from California Department of Transportation Test Method No. 331.

3. Benson method of toughness and tenacity; Scott tester, inch-pounds at 77°F, 20 in. per minute pull. Tension head 7/8 in. diameter.

At the option of the supplier the Benson Toughness/Tenacity test can be used in lieu of Torsional Recovery based on type of modifier used. If the Benson Toughness/Tenacity method is used for acceptance the supplier must supply all test data verifying specification conformance.

SECTION 9-05, DRAINAGE STRUCTURES, CULVERTS, AND CONDUITS
August 7, 2006

9-05.1(6) Corrugated Polyethylene Drainage Tubing Drain Pipe
This section including title is revised to read:

9-05.1(6) Corrugated Polyethylene Drain Pipe (up to 10-inch)
Corrugated polyethylene drain pipe shall meet the requirements of AASHTO M 252 type C (corrugated both inside and outside) or type S (corrugated outer wall and smooth inner liner). The maximum size pipe shall be 10 inches in diameter.

9-05.1(7) Corrugated Polyethylene Drain Pipe
This section including title is revised to read:

9-05.1(7) Corrugated Polyethylene Drain Pipe (12-inch through 60-inch)
Corrugated polyethylene drain pipe, 12-inch through 60-inch -diameter maximum, shall meet the minimum requirements of AASHTO M 294 Type S or 12-inch through 24 inch diameter maximum shall meet the minimum requirements of AASHTO M 294 Type C.

9-05.2(7) Perforated Corrugated Polyethylene Drainage Tubing Underdrain Pipe
This section including title is revised to read:
9-05.2(7) Perforated Corrugated Polyethylene Underdrain Pipe (Up to 10-inch)
Perforated corrugated polyethylene underdrain pipe shall meet the requirements of AASHTO M252, Type CP or Type SP. Type CP shall be Type C pipe with Class 2 perforations and Type SP shall be Type S pipe with either Class 1 or Class 2 perforations. Additionally, Class 2 perforations shall be uniformly spaced along the length and circumference of the pipe. The maximum size pipe shall be 10-inch diameter.

9-05.2(8) Perforated Corrugated Polyethylene Underdrain Pipe
This section including title is revised to read:

9-05.2(8) Perforated Corrugated Polyethylene Underdrain Pipe (12-inch through 60-inch)
Perforated corrugated polyethylene underdrain pipe, 12-inch through 60-inch diameter maximum, shall meet the requirements of AASHTO M 294 Type CP or Type SP. Type CP shall be Type C pipe with Class 2 perforations and Type SP shall be Type S pipe with either Class 1 or Class 2 perforations. Additionally, Class 2 perforations shall be uniformly spaced along the length and circumference of the pipe.

9-05.15 Metal Castings
This section is revised to read:

For all metal castings the producing foundry shall provide certification stating the country of origin, the material meets the required ASTM or AASHTO specification noted in the subsections below. The producing foundry shall detail all test results from physical testing to determine compliance to the specifications. The test reports shall include physical properties of the material from each heat and shall include tensile, yield, and elongation as specified in the appropriate ASTM or AASHTO specification. For AASHTO M 306, Section 8, Certification is deleted and replaced with the above certification and testing requirements.

Metal castings for drainage structures shall not be dipped, painted, welded, plugged, or repaired. Porosity in metal castings for drainage structures shall be considered a workmanship defect subject to rejection by the Engineer. Metal castings made from gray iron or ductile iron shall conform to the requirements of AASHTO M 306, and metal castings made from cast steel shall conform to the requirements of Section 9-06.8. All metal castings shall meet the proof load testing requirements of AASHTO M 306.

9-05.15(1) Manhole Ring and Cover
This section is revised to read:

Castings for manhole rings shall be gray iron or ductile iron and covers shall be ductile iron.

All covers shall be interchangeable within the dimensions shown in the Standard Plans. All mating surfaces shall be machine finished to ensure a nonrocking fit.

The inside vertical recessed face of the ring and the vertical outside edge of the cover shall be machined or manufactured to the following tolerances:

<table>
<thead>
<tr>
<th></th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring</td>
<td>+3/32 inch to -3/32 inch</td>
</tr>
<tr>
<td>Cover</td>
<td>+3/32 inch to -3/32 inch</td>
</tr>
</tbody>
</table>
All manhole rings and covers shall be identified by the name or symbol of the producing foundry and country of casting origin. This identification shall be in a plainly visible location when the ring and cover are installed. Ductile iron shall be identified by the following, "DUC" or "DI." The producing foundry and material identification shall be adjacent to each other and shall be minimum ½ inch to maximum 1 inch high letters, recessed to be flush with the adjacent surfaces.

9-05.15(2) Metal Frame, Grate and Solid Metal Cover for Catch Basins or Inlets
The first and second paragraphs are revised to read:

Castings for metal frames for catch basins and inlets shall be cast steel, gray iron, or ductile iron, and as shown in the Standard Plans.

Castings for grates and solid metal covers for catch basins and inlets shall be cast steel or ductile iron and as shown in the Standard Plans. Additionally, leveling pads are allowed on grates and solid metal covers with a height not to exceed 1/8 inch. The producing foundry’s name and material designation shall be embossed on the top of the grate. The material shall be identified by the following: "CS" for cast steel or "DUC" or "DI" for ductile iron and shall be located near the producing foundry’s name.

9-05.15(3) Cast Metal Inlets
The first sentence is revised to read:

The castings for cast metal inlets shall be cast steel or ductile iron, and as shown in the Standard Plans.

9-05.19 Corrugated Polyethylene Culvert Pipe
The first paragraph is revised to read:

Corrugated polyethylene culvert pipe shall meet the requirements of AASHTO M 294 Type S or D for pipe 12-inch to 60-inch diameter with silt-tight joints.

SECTION 9-06, STRUCTURAL STEEL AND RELATED MATERIALS
August 7, 2006

9-06.9 Gray Iron Castings
The AASHTO requirement is revised to read "AASHTO M 306".

SECTION 9-09, TIMBER AND LUMBER
August 7, 2006

9-09.2(3) Inspection
This section is revised to read:

Timber and lumber requiring a grade stamp shall be marked with a certified lumber grade stamp provided by one of the following agencies:

West Coast Lumber Inspection Bureau (WCLIB)
Western Wood Products Association (WWPA)
Pacific Lumber Inspection Bureau (PLIB)
Any lumber grading bureau certified by the American Lumber Standards Committee
Timber and Lumber requiring a grading certificate shall have a certificate that was issued by either the grading bureau whose stamp is shown on the material, or by the lumber mill, which must be under the supervision of one of the grading bureaus listed above. The certificate shall include the following:

Name of the mill performing the grading
The grading rules being used
Name of the person doing the grading with current certification
Signature of a responsible mill official
Date the lumber was graded at the mill
Grade, dimensions, and quantity of the timber or lumber

For Structures:
All material delivered to the project shall bear a grade stamp and have a grading certificate.
The grade stamp and grading certificate shall not constitute final acceptance of the material.
The Engineer may reject any or all of the timber or lumber that does not comply with the specifications or has been damaged during shipping or upon delivery.

For Guardrail Posts and Blocks, Sign Posts, Mileposts, Sawed Fence Posts, and Mailbox Posts:
Material delivered to the project shall either bear a grade stamp on each piece or have a grading certificate. The grade stamp or grading certificate shall not constitute final acceptance of the material. The Engineer may reject any or all of the timber or lumber that does not comply with the specifications or has been damaged during shipping or upon delivery.

9-09.3(1) General Requirements
The last sentence in the first paragraph is revised to read:

Unless otherwise specified in the contract, all timber and lumber shall be treated in accordance with Sections U1 and T1 of the latest edition of the AWPA standards.

SECTION 9-12, MASONRY UNITS
August 7, 2006

9-12.7 Precast Concrete Drywells
The third sentence is revised to read:
Each seepage port shall provide a minimum of 1 square inch and a maximum of 7 square inches for round openings and 15 square inches for rectangular openings.

SECTION 9-13, RIPRAP, QUARRY SPALLS, SLOPE PROTECTION, AND ROCK WALLS
August 7, 2006

9-13.5(2) Poured Portland Cement Concrete Slope Protection
The first paragraph is revised to read:
Cement concrete for poured concrete slope protection shall be commercial concrete in
conformance with Section 6-02.3(2)B.

SECTION 9-14, EROSION CONTROL AND ROADSIDE PLANTING
August 7, 2006

9-14.2 Seed
This section is revised to read:

Grasses, legumes, or cover crop seed of the type specified shall conform to the standards for
“Certified” grade seed or better as outlined by the State of Washington Department of
Agriculture “Rules for Seed Certification,” latest edition. Seed shall be furnished in standard
containers on which shall be shown the following information:

(1) Common and botanical names of seed,
(2) Lot number,
(3) Net weight,
(4) Pure live seed

All seed installers and vendors must have a business license issued by the Washington State
Department of Licensing with a “seed dealer” endorsement. Upon request, the contractor
shall furnish the Engineer with copies of the applicable licenses and endorsements.

Upon request, the Contractor shall furnish to the Engineer duplicate copies of a statement
signed by the vendor certifying that each lot of seed has been tested by a recognized seed
testing laboratory within six months before the date of delivery on the project. Seed which
has become wet, moldy, or otherwise damaged in transit or storage will not be accepted.

9-14.4(1) Straw
This section is revised to read:

All straw material shall be in an air dried condition free of noxious weeds and other materials
detrimental to plant life. Straw mulch so provided shall be suitable for spreading with mulch
blower equipment.

9-14.4(3) Bark or Wood Chips
This section is supplemented with the following:

Sawdust shall not be used as mulch.

9-14.4(4) Sawdust
This section including title is revised to read:

9-14.4(4) Vacant

9-14.4(8) Compost
This section is revised to read:

Compost products shall be the result of the biological degradation and transformation of
plant-derived materials under controlled conditions designed to promote aerobic
decomposition. Compost shall be stable with regard to oxygen consumption and carbon
dioxide generation. Compost shall be mature with regard to its suitability for serving as a soil
amendment or an erosion control BMP as defined below. The compost shall have a moisture
content that has no visible free water or dust produced when handling the material.

Compost production and quality shall comply with Chapter 173-350 WAC.

Compost products shall meet the following physical criteria:

1. Compost material shall be tested in accordance with Testing Methods for the
   Examination of Compost and Composting (TMECC) Test Method 02.02-B, “Sample
   Sieving for Aggregate Size Classification”.

   Fine Compost shall meet the following:

<table>
<thead>
<tr>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent passing 2&quot;</td>
<td>100%</td>
</tr>
<tr>
<td>Percent passing 1&quot;</td>
<td>99%</td>
</tr>
<tr>
<td>Percent passing 1/2&quot;</td>
<td>90%</td>
</tr>
<tr>
<td>Percent passing 1/4&quot;</td>
<td>75%</td>
</tr>
<tr>
<td>Maximum particle length of 6 inches</td>
<td></td>
</tr>
</tbody>
</table>

   Coarse Compost shall meet the following:

<table>
<thead>
<tr>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent passing 3&quot;</td>
<td>100%</td>
</tr>
<tr>
<td>Percent passing 1&quot;</td>
<td>90%</td>
</tr>
<tr>
<td>Percent passing 1/2&quot;</td>
<td>70%</td>
</tr>
<tr>
<td>Percent passing 1/4&quot;</td>
<td>40%</td>
</tr>
<tr>
<td>Maximum particle length of 6 inches</td>
<td></td>
</tr>
</tbody>
</table>

2. The pH shall be between 6.0 and 8.5 when tested in accordance with TMECC
   04.11-A, “1:5 Slurry pH”.

3. Manufactured inert material (plastic, concrete, ceramics, metal, etc.) shall be less
   than 1.0 percent by weight as determined by TMECC 03.08-A.

4. Minimum organic matter shall be 40 percent dry weight basis as determined by

5. Soluble salt contents shall be less than 4.0mhmhos/cm tested in accordance with
   TMECC 04.10-A, “1:5 Slurry Method, Mass Basis”.

6. Maturity shall be greater than 80% in accordance with TMECC 05.05-A,
   “Germination and Root Vigor”.

7. Stability shall be 7 or below in accordance with TMECC 05.08-B, Carbon Dioxide
   Evolution Rate”

8. The compost product must originate a minimum of 65 percent by volume from
   recycled plant waste as defined in WAC 173-350 as “Type 1 Feedstocks.” A
   maximum of 35 percent by volume of other approved organic waste and/or biosolids
may be substituted for recycled plant waste. The supplier shall provide written
verification of feedstock sources

9. The Engineer may also evaluate compost for maturity using the Solvita Compost
Maturity Test. Fine Compost shall score a number 6 or above on the Solvita
Compost Maturity Test. Coarse Compost shall score a 5 or above on the Solvita
Compost Maturity Test.

The compost supplier will test all compost products within 90 calendar days prior to
application. Samples will be taken using the Seal of Testing Assurance (STA) sample collection
protocol. (The sample collection protocol can be obtained from the U.S. Composting Council,
4250 Veterans Memorial Highway, Suite 275, Holbrook, NY 11741
Phone: 631-737-4931, www.compostingcouncil.org). The sample shall be sent to an
independent STA Program approved lab. The compost supplier will pay for the test. A copy of
the approved independent STA Program laboratory test report shall be submitted to the
Contracting Agency prior to initial application of the compost. Seven days prior to application,
the Contractor shall submit a sample of each type compost to be used on the project to the
Engineer.

Compost not conforming to the above requirements or taken from a source other than those
tested and accepted shall be immediately removed from the project and replaced at no cost
to the Contracting Agency.

The Contractor shall either select a compost supplier from the Qualified Products List, or
submit the following information to the Engineer for approval:

1. A Request for Approval of Material Source.

2. A copy of the Solid Waste Handling Permit issued to the supplier by the
Jurisdictional Health Department as per WAC 173-350 (Minimum Functional
Standards for Solid Waste Handling).

3. The supplier shall verify in writing, and provide lab analyses that the material
complies with the processes, testing, and standards specified in WAC 173-350 and
these specifications. An independent STA Program certified laboratory shall perform
the analysis.

4. A list of the feedstock by percentage present in the final compost product.

5. A copy of the producer’s Seal of Testing Assurance certification as issued by the
U.S. Composting Council.

Acceptance will be based upon a satisfactory Test Report from an independent STA program
certified laboratory and the sample(s) submitted to the Engineer.

9-14.5(5) Wattles
This section is revised to read:

Wattles shall consist of cylinders of biodegradable plant material such as straw, coir,
compost, or wood shavings encased within biodegradable or photodegradable netting.
Wattles shall be at least 5 inches in diameter, unless otherwise specified. Encasing material shall be clean, evenly woven, and free of encrusted concrete or other contaminating materials such as preservatives. Encasing material shall be free from cuts, tears, or weak places and shall have a lifespan greater than 6 months.

Compost filler shall meet the material requirements as specified in Section 9-14.4(8), and shall be Coarse Compost.

9-14.5(6) Compost Sock

This section is revised to read:

Biodegradable fabric for compost sock and compost wattle shall be clean, evenly woven, and free of encrusted concrete or other contaminating materials and shall be free from cuts, tears, broken or missing yarns and thin, open, or weak places. Fabric for compost sock shall consist of extra heavy weight biodegradable fiber which has not been treated with any type of preservative. Compost for compost socks shall meet the material requirements as specified in Section 9-14.4(8), and shall be Coarse Compost.

Wood stakes for compost sock and wattles shall be made from Douglas-fir, hemlock, or pine species. Wood stakes shall be 2 inch by 2 inch nominal dimension and 36 inches in length, unless otherwise indicated in the Plans.

Section 9-14.5 is supplemented with the following new section.

9-14.5(7) Coir Log

Coir log: Logs shall be made of 100% durable coconut (coir) fiber uniformly compacted within an outer netting. Log segments shall have a maximum length of 20 feet, with a minimum diameter as shown in the Plans. Logs shall have a density of 7 lbs/cf or greater.

Coir logs shall be manufactured with a woven wrapping netting made of bristle coir twine with minimum strength of 80 lbs tensile strength. The netting shall have nominal 2 inch by 2 inch openings.

Stakes shall conform to the requirements of Section 9-09. Cedar wood stakes shall have a notch to secure the rope ties. Rope ties shall be one-quarter inch diameter commercially available hemp rope.

9-14.6(1) Description

This section is revised to read:

Bareroot plants are grown in the ground and harvested without soil or growing medium around their roots.

Container plants are grown in pots or flats that prevent root growth beyond the sides and bottom of the container.

Balled and burlapped plants are grown in the ground and harvested with soil around a core of undisturbed roots. This rootball is wrapped in burlap and tied or placed in a wire basket or other supportive structure.
Cuttings are live plant material without a previously developed root system. Source plants for cuttings shall be dormant when cuttings are taken. All cuts shall be made with a sharp instrument. Written permission shall be obtained from property owners and provided to the Engineer before cuttings are collected. The Contractor shall collect cuttings in accordance with applicable sensitive area ordinances. For cuttings, the requirement to be nursery grown or held in nursery conditions does not apply. Cuttings include the following forms:

A. Live branch cuttings shall have flexible top growth with terminal buds and may have side branches. The rooting end shall be cut at an approximate 45 degree angle.

B. Live stake cuttings shall have a straight top cut immediately above a bud. The lower rooting end shall be cut at an approximate 45 degree angle. Live stakes are cut from one to two year old wood. Live stake cuttings shall be cut and installed with the bark intact with no branches or stems attached, and be ¾ to 1 ½ inch in diameter.

C. Live pole cuttings shall have a minimum 2 inch diameter and no more than three branches which shall be pruned back to the first bud from the main stem.

D. Rhizomes shall be a prostrate or subterranean stem, usually rooting at the nodes and becoming erect at the apex. Rhizomes shall have a minimum of two growth points.

E. Tubers shall be a thickened and short subterranean branch having numerous buds or eyes.

9-14.6(2) Quality
This section is revised to read:

All plant material furnished shall meet the grades established by the latest edition of the American Standard for Nursery Stock, (ASNS) ANSI Z60.1 shall conform to the size and acceptable conditions as listed in the contract, and shall be free of all foreign plant material.

All plant material shall comply with State and Federal laws with respect to inspection for plant diseases and insect infestation.

All plant material shall be purchased from a nursery licensed to sell plants in Washington State.

Live woody or herbaceous plant material, except cuttings, rhizomes, and tubers, shall be vigorous, well formed, with well developed fibrous root systems, free from dead branches, and from damage caused by an absence or an excess of heat or moisture, insects, disease, mechanical or other causes detrimental to good plant development. Evergreen plants shall be well foliated and of good color. Deciduous trees that have solitary leaders shall have only the lateral branches thinned by pruning. All conifer trees shall have only one leader (growing apex) and one terminal bud, and shall not be sheared or shaped. Trees having a damaged or missing leader, multiple leaders, or Y-crotches shall be rejected.

Root balls of plant materials shall be solidly held together by a fibrous root system and shall be composed only of the soil in which the plant has been actually growing. Balled and burlapped rootballs shall be securely wrapped with jute burlap or other packing material not injurious to the plant life. Root balls shall be free of weed or foreign plant growth.
Plant materials shall be nursery grown stock. Plant material, with the exception of cuttings, gathered from native stands shall be held under nursery conditions for a minimum of one full growing season, shall be free of all foreign plant material, and meet all of the requirements of these Specifications, the Plans, and the Special Provisions.

Container grown plants must be plants transplanted into a container and grown in that container sufficiently long for new fibrous roots to have developed so that the root mass will retain its shape and hold together when removed from the container, without having roots that circle the pot. Plant material which is root bound, as determined by the Engineer, shall be rejected. Container plants shall be free of weed or foreign plant growth.

Container sizes for plant material of a larger grade than provided for in the container grown specifications of the ASNS shall be determined by the volume of the root ball specified in the ASNS for the same size plant material.

All bare root plant materials shall have a heavy fibrous root system and must be dormant at the time of planting.

Average height to spread proportions and branching shall be in accordance with the applicable sections, illustrations, and accompanying notes of the ASNS.

Plants specified or identified as “Street Tree Grade” shall be trees with straight trunks, full and symmetrical branching, central leader, and be developed, grown, and propagated with a full branching crown. A “Street Tree Grade” designation requires the highest grade of nursery shade or ornamental tree production which shall be supplied.

Trees with improperly pruned, broken, or damaged branches, trunk, or root structure shall be rejected. In all cases, whether supplied balled and burlapped or in a container, the root crown (top of root structure) of the tree shall be at the top of the finish soil level. Trees supplied and delivered in a nursery fabric bag will not be accepted.

Plants, which have been determined by the Engineer to have suffered damage as the result of girdling of the roots, stem, or a major branch; have deformities of the stem or major branches; have a lack of symmetry; have dead or defoliated tops or branches; or have any defect, injury, or condition which renders the plant unsuitable for its intended use, shall be rejected.

Plants that are grafted shall have roots of the same genus as the specified plant.

9-14.6(3) Handling and Shipping
The last sentence in the sixth paragraph is deleted.

9-14.6(6) Substitution of Plants
The second paragraph is revised to read:

Container or balled and burlapped plant material may be substituted for bare root plant material. Container grown plant material may be substituted for balled and burlapped plant materials. When substitution is allowed, use current ASNS standards to determine the correct rootball volume (container or balled and burlapped) of the substituted material that
corresponds to that of the specified material. These substitutions shall be approved by the
Engineer and be at no cost to the Contracting Agency.

9-14.6(7) Temporary Storage
The third paragraph is revised to read:
Cuttings shall continually be shaded and protected from wind. Cuttings must be protected
from drying at all times and shall be heeled into moist soil or other insulating material or
placed in water if not installed within 8 hours of cutting. Cuttings to be stored for later
installation shall be bundled, laid horizontally, and completely buried under 6 inches of water,
moist soil or placed in cold storage at a temperature of 34°F and 90% humidity. Cuttings that
are not planted within 24 hours of cutting shall be soaked in water for 24 hours prior to
planting. Cuttings taken when the temperature is higher than 50°F shall not be stored for later
use. Cuttings that already have developed roots shall not be used.

The fourth paragraph is deleted.

SECTION 9-15, IRRIGATION SYSTEM
August 7, 2006

9-15.1 Pipe, Tubing, and Fittings
The second paragraph is revised to read:
Copper pipe or tubing shall be annealed, seamless, and conform to the requirements of
ASTM B 88, and shall be a minimum of Type L rating.

SECTION 9-16, FENCE AND GUARDRAIL
April 3, 2006

9-16.1(1)A Post Material for Chain Link Fence
The two references in the second paragraph to “Standard Plan L 2” are revised to “ASTM F1043”.
Under Roll Form Material, the reference in the third paragraph to “Standard Plan L 2” is revised to
“ASTM F1043”.

SECTION 9-22, MONUMENT CASES
August 7, 2006

9-22.1 Monument Cases, Covers, and Risers
The AASHTO requirement is revised to read “AASHTO M 306”.

SECTION 9-28, SIGNING MATERIALS AND FABRICATION
August 7, 2006

9-28.14(1) Timber Sign Posts
The last sentence is revised to read:
Preservative and retention shall be as shown in Section 9-16.2 for sawn posts.
SECTION 9-29, ILLUMINATION, SIGNAL, ELECTRICAL
January 3, 2006

9-29.2(1) Standard Junction Box
This section including title is revised to read:

**9-29.2(1) Standard Duty and Heavy Duty Junction Box**
Concrete junction boxes shall have a minimum compressive strength of 6000 psi when reinforced with a welded wire hoop and 4000 psi when reinforced with welded wire fabric or fiber reinforcement. The frame shall be anchored to the box by welding the wire fabric to the frame or by welding headed studs 3/8 inch x 3 inches long, as specified in section 9-06.15, to the frame. The wire fabric shall be attached to the studs and frame with standard tie practices. The box shall contain ten studs located near the centerline of the frame and box wall. The studs shall be placed one anchor in each corner, one at the middle of each width and two equally spaced on each length of the box. For Standard Duty Junction boxes the steel frame, lid support, and lid shall be painted with a black paint containing rust inhibitors or painted with a shop applied, inorganic zinc primer in accordance with Section 6-07.3 or hot dip galvanized in accordance with ASTM A 111. For Heavy Duty Junction Boxes the steel frame, lid support and lid shall be painted with a shop applied, inorganic zinc primer in accordance with Section 6-07.3.

Non-concrete junction boxes shall be gray in color and shall have an open bottom design with approximately the same inside dimensions as concrete junction boxes. Non-concrete junction box lids shall include a pull slot and shall be secured with two ½ inch stainless steel hex-head bolts factory coated with anti-seize compound and recessed into the cover. The tapped holes for the securing bolts shall extend completely through the box to prevent accumulation of debris. Bolts shall conform to ASTM F 593, stainless steel.

This section is supplemented with the following new sections:

**9-29.2(1)A Standard Duty Junction Boxes**
Standard Duty Junction Boxes are defined as Type 1, 2, 3, 7 and 8 concrete and non-concrete junction boxes and shall have a minimum load rating of 22,500 pounds, applied through a 10 inch. x 10 inch x 1 inch steel plate centered on the lid.

Type 1 non-concrete junction boxes with the same approximate interior dimensions are considered to be equivalent to any Type 1 concrete junction box. The Type 2 and 3 non-concrete junction boxes respectively are considered as equivalent to the type 2 and 3 concrete junction boxes with the approximate same interior dimensions.

Currently approved Type 1, 2, and 3 junction boxes shall remain approved, unless the design is modified. Any modification to approved junction boxes will require review or retesting for acceptance. The non-concrete junction boxes require testing by an independent testing lab, as described below.

Material for Type 1, 2, 3, 7 and 8 concrete junction boxes shall conform to the following:

<table>
<thead>
<tr>
<th>Material</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Section 6-02</td>
</tr>
<tr>
<td>Reinforcing Steel</td>
<td>Section 9-07</td>
</tr>
<tr>
<td>Fiber Reinforcing</td>
<td>ASTM C 1116, Type III</td>
</tr>
</tbody>
</table>
Lid  
ASTM A786 diamond plate steel
Frame  
ASTM A786 diamond plate steel or
ASTM A36 flat steel
Lid Support & Handle  
ASTM A36 steel
Anchors (studs)  
Section 9-06.15

9-29.2(1)B Heavy Duty Junction Boxes
Heavy Duty Junction Boxes are defined as Type 4, 5, and 6 junction boxes and lids shall have a minimum vertical load rating of 46,000 pounds without permanent deformation and 60,000 pounds without failure.

Material for type 4, 5, and 6 concrete junction boxes shall conform to the following:

Concrete  
Section 6-02
Reinforcing Steel  
Section 9-07
Lid  
ASTM A786 diamond plate steel, rolled from plate complying with ASTM A572, grade 50 or ASTM A588 with min. CVN toughness of 20 ft-lb at 40 degrees F
Frame and stiffener plates  
ASTM A572 grade 50 or ASTM A588, both with min. CVN toughness of 20 ft-lb at 40 degrees F
Handle  
ASTM A36 steel
Anchors (studs)  
Section 9-06.15
Bolts, Nuts, Washers  
ASTM F 593 or A 193, type 304 or 316

The lid stiffener plates shall bear on the frame. Mill so that there is full even contact, around the perimeter, between the bearing seat and lid stiffener plates, after fabrication of the frame and lid. The bearing seat and lid perimeter bar shall be free from burrs, dirt and other foreign debris that would prevent solid seating. Bolts and nuts shall be liberally coated with anti-seize compound. Bolts shall be installed snug tight. The bearing seat and lid perimeter bar shall be machined to allow a minimum of 75% of the bearing areas to be seated with a tolerance of 0.0 to 0.005 inches measured with a feeler gage. The bearing area percentage will be measured for each side of the lid as it bears on the frame.

9-29.2(1)C Testing Requirements
For fabrication approval by the Contracting Agency, junction boxes shall be tested, and a test report from an independent materials testing facility shall be provided showing compliance with the load test.

The test report shall certify that the box and cover meet or exceed the loading requirements and shall document the results of the load test. Three copies of the test report shall be furnished to the Contracting Agency. The report shall include the following information:

1. Product identification.
2. Date of testing.
3. Description of testing apparatus and procedure.
4. All load, deflection and failure data.
5. Weight of box and cover tested.
6. A brief description of type and location of failure.
7. Upon completion of the required test(s) the box shall be loaded to failure.
8. A brief description of type and location of failure.

Prior to installation of junction boxes, the contractor shall provide a certified test report, prepared by an independent testing lab which documents results of testing done by the independent testing lab for the manufacturer. The test report shall certify that the boxes meet or exceed the loading requirements and shall document the results of the load test listed below. The independent testing lab shall meet the requirements of AASHTO R 18. Representatives of the State Materials Lab shall witness the test and sign the test report. The Contractor shall give the Engineer 30 days notice prior to testing.

**Testing for Standard Duty Junction Boxes**

Standard Duty Junction Boxes shall be load tested to 22,500 pounds. At each interval the test box shall be inspected for lid deformation, failure of the lid/ frame welds, vertical and horizontal displacement of the lid/ frame, cracks, and concrete spalling. The test load shall be applied uniformly through a 10 inch x 10 inch x 1 inch steel plate centered on the lid.

Concrete junction boxes will be considered to have withstood the test if none of the following conditions are exhibited:

1. Permanent deformation of the lid or any impairment to the function of the lid.
2. Vertical or horizontal displacement of the lid frame.
3. Cracks wider than 0.012 inches that extend 12 inches or more.
4. Fracture or cracks passing through the entire thickness of the concrete.
5. Spalling of the concrete.

Non concrete junction boxes will be considered to have withstood the test if none of the following conditions are exhibited:

1. Permanent deformation of the lid or lid frame or any impairment to the function of the lid.
2. Vertical or horizontal displacement of the lid frame.
3. Fracturing of the sidewall or lid.
4. Displacement of lid or junction box side.

**Testing for Heavy Duty Junction Boxes**

Heavy duty junction boxes shall be load tested to 46,000 pounds and then to 60,000 pounds. The test load shall be applied in both longitudinal and transverse orientations. At each interval the test box shall be inspected for lid deformation, failure of the lid/ frame welds, vertical and horizontal displacement of the lid frame, cracks, and concrete spalling. The test load shall be applied uniformly through a 10-inch x 20-inch x 1-inch steel plate centered on the lid.

Heavy duty junction boxes will be considered to have withstood the 46,000 pounds test if none of the following conditions are exhibited:

1. Permanent deformation of the lid or any impairment to the function of the lid.
2. Vertical or horizontal displacement of the lid frame.
3. Cracks wider than 0.012-inches that extend 12-inches or more.
4. Fracture or cracks passing through the entire thickness of the concrete.
5. Spalling of the concrete.
Heavy duty junction boxes will be considered to have withstood the 60,000 pounds test if none of the following conditions are exhibited:

1. The lid is operational.
2. The lid is securely fastened.
3. The welds have not failed.
4. Permanent dishing or deformation of the lid is 1/4 inch or less.
5. No buckling or collapse of the box.

9-29.6(2) Slip Base Hardware
The last sentence in the first paragraph is revised to read:
Plate washers shall conform to ASTM A 36, and also shall conform to the flatness tolerances specified in AASHTO M 293 for circular washers.

SECTION 9-30, WATER DISTRIBUTION MATERIALS
August 7, 2006

9-30.6(3)A Copper Tubing
This section is revised to read:
Copper pipe or tubing shall be annealed, seamless, and conform to the requirements of ASTM B 88, Type K rating.

SECTION 9-33, CONSTRUCTION GEOTEXTILE
August 7, 2006

Section 9-33 including title is revised in its entirety to read:

SECTION 9-33, CONSTRUCTION GEOSYNTHETIC

9-33.1 Geosynthetic Material Requirements
The term geosynthetic shall be considered to be inclusive of geotextiles, geogrids, and prefabricated drainage mats.

Geotextiles, including geotextiles attached to prefabricated drainage core to form a prefabricated drainage mat, shall consist only of long chain polymeric fibers or yarns formed into a stable network such that the fibers or yarns retain their position relative to each other during handling, placement, and design service life. At least 95 percent by weight of the material shall be polyolefins or polyesters. The material shall be free from defects or tears. The geotextile shall also be free of any treatment or coating which might adversely alter its hydraulic or physical properties after installation.

Geogrids shall consist of a regular network of integrally connected polymer tensile elements with an aperture geometry sufficient to permit mechanical interlock with the surrounding backfill. The long chain polymers in the geogrid tensile elements, not including coatings, shall consist of at least 95 percent by mass of the material of polyolefins or polyesters. The material shall be free of defects, cuts, and tears.
Prefabrcated drainage core shall consist of a three dimensional polymeric material with a structure that permits flow along the core laterally, and which provides support to the geotextiles attached to it.

The geosynthetic shall conform to the properties as indicated in Tables 1 through 8 in Section 9-33.2, and additional tables as required in the Standard Plans and Special Provisions for each use specified in the Plans. Specifically, the geosynthetic uses included in this section and their associated tables of properties are as follows:

<table>
<thead>
<tr>
<th>Geotextile Geosynthetic Application</th>
<th>Applicable Property Tables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground Drainage, Low and Moderate Survivability, Classes A, B, and C</td>
<td>Tables 1 and 2</td>
</tr>
<tr>
<td>Separation</td>
<td>Table 3</td>
</tr>
<tr>
<td>Soil Stabilization</td>
<td>Table 3</td>
</tr>
<tr>
<td>Permanent Erosion Control, Moderate and High Survivability, Classes A, B, and C</td>
<td>Tables 4 and 5</td>
</tr>
<tr>
<td>Ditch Lining</td>
<td>Table 4</td>
</tr>
<tr>
<td>Temporary Silt Fence</td>
<td>Table 6</td>
</tr>
<tr>
<td>Permanent Geosynthetic Retaining Wall</td>
<td>Table 7 and Std. Plans</td>
</tr>
<tr>
<td>Temporary Geosynthetic Retaining Wall</td>
<td>Tables 7 and 10</td>
</tr>
<tr>
<td>Prefabricated Drainage Mat</td>
<td>Table 8</td>
</tr>
</tbody>
</table>

Table 10 will be included in the Special Provisions.

Geogrid and geotextile reinforcement in geosynthetic retaining walls shall conform to the properties specified in the Standard Plans for permanent walls, and Table 10 for temporary walls.

For geosynthetic retaining walls that use geogrid reinforcement, the geotextile material placed at the wall face to retain the backfill material as shown in the Plans shall conform to the properties for Construction Geotextile for Underground Drainage, Moderate Survivability, Class A.

Thread used for sewing geotextiles shall consist of high strength polypropylene, polyester, or polyamide. Nylon threads will not be allowed. The thread used to sew permanent erosion control geotextiles, and to sew geotextile seams in exposed faces of temporary or permanent geosynthetic retaining walls, shall also be resistant to ultraviolet radiation. The thread shall be of contrasting color to that of the geotextile itself.

**9-33.2 Geosynthetic Properties**

**9-33.2(1) Geotextile Properties**

Table 1: Geotextile for underground drainage strength properties for survivability.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>ASTM Test Method¹</th>
<th>Geotextile Property Requirements²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Woven</td>
<td>Nonwoven</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Survivability</td>
<td>Survivability</td>
</tr>
</tbody>
</table>

¹ Surrogates

² Suitability
Grab Tensile Strength, in machine and x-machine direction

D 4632

|          | 180 lb min. | 115 lb min. | 250 lb min. | 160 lb min. |

Grab Failure Strain, in machine and x-machine direction

D 4632

|          | < 50% | ≥ 50% | < 50% | ≥ 50% |

Seam Breaking Strength

D 4632

Puncture Resistance

D 6241

|          | 160 lb min. | 100 lb min. | 220 lb min. | 140 lb min. |

Tear Strength, in machine and x-machine direction

D 4533

|          | 67 lb min. | 40 lb min. | 80 lb min. | 50 lb min. |

Ultraviolet (UV) Radiation Stability

D 4355

50% strength retained min., after 500 hours in a xenon arc device

Table 2: Geotextile for underground drainage filtration properties.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>ASTM Test Method</th>
<th>Class A</th>
<th>Class B</th>
<th>Class C</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>D 4751</td>
<td>U.S. No. 40 max.</td>
<td>U.S. No. 60 max.</td>
<td>U.S. No. 80 max.</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>D 4491</td>
<td>0.5 sec⁻¹ min.</td>
<td>0.4 sec⁻¹ min.</td>
<td>0.3 sec⁻¹ min.</td>
</tr>
</tbody>
</table>

Table 3: Geotextile for separation or soil stabilization.

| Geotextile Property | ASTM Test Method | Geotextile Property Requirements
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>D 4751</td>
<td>Separation Woven U.S. No. 30 max.</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>D 4491</td>
<td>Nonwoven U.S. No. 40 max.</td>
</tr>
<tr>
<td>Grab Tensile Strength, in machine and x-machine direction</td>
<td>D 4632</td>
<td>0.02 sec⁻¹ min.</td>
</tr>
<tr>
<td>Grab Failure Strain, in machine and x-machine direction</td>
<td>D 4632</td>
<td>&lt; 50% ≥ 50% &lt; 50% ≥ 50%</td>
</tr>
<tr>
<td>Seam Breaking</td>
<td>D 4632³</td>
<td>220 lb min. 140 lb min. 270 lb min. 180 lb min.</td>
</tr>
<tr>
<td>Strength</td>
<td>D 6241</td>
<td>495 lb min.</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>Puncture Resistance</td>
<td>D 4533</td>
<td>80 lb min.</td>
</tr>
<tr>
<td>Tear Strength, in machine and x-machine direction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultraviolet (UV) Radiation Stability</td>
<td>D 4355</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Geotextile for permanent erosion control and ditch lining.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>ASTM Test Method²</th>
<th>Geotextile Property Requirements¹</th>
<th>Ditch Lining</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geotextile Property</td>
<td></td>
<td>Permanent Erosion Control Survivability</td>
<td>High Survivability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-woven</td>
<td>Non-woven</td>
</tr>
<tr>
<td>AOS Water Permittivity Grab Tensile Strength,</td>
<td>D 4751</td>
<td>See Table 5</td>
<td>See Table 5</td>
</tr>
<tr>
<td>in machine and x-machine direction Grab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Failure Strain, in machine and x-machine</td>
<td>D 4491</td>
<td>See Table 5</td>
<td>See Table 5</td>
</tr>
<tr>
<td>direction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D 4632</td>
<td>250 lb min.</td>
<td>160 lb min.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D 4632</td>
<td>15% - 50%</td>
<td>≥ 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seams Breaking Strength</td>
<td>D 4632³</td>
<td>220 lb min.</td>
<td>140 lb min.</td>
</tr>
<tr>
<td>Puncture Resistance</td>
<td>D 6241</td>
<td>495 lb min.</td>
<td>310 lb min.</td>
</tr>
<tr>
<td>Tear Strength, in machine and x-machine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>direction</td>
<td>D 4533</td>
<td>80 lb min.</td>
<td>50 lb min.</td>
</tr>
<tr>
<td>Ultraviolet (UV) Radiation Stability</td>
<td>D 4355</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

70% strength retained min., after 500 hours in xenon arc device
Table 5: Filtration properties for geotextile for permanent erosion control.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>ASTM Test Method</th>
<th>Geotextile Property Requirements(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>D 4751</td>
<td>Class A: U.S. No. 40 max.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Class B: U.S. No. 60 max.</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>D 4491</td>
<td>Class C: U.S. No. 70 max.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.7 sec(^{-1}) min.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.4 sec(^{-1}) min.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.2 sec(^{-1}) min.</td>
</tr>
</tbody>
</table>

Table 6: Geotextile for temporary silt fence.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>ASTM Test Method</th>
<th>Geotextile Property Requirements(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>D 4751</td>
<td>Unsupported Between Posts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supported Between Posts with Wire or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Polymeric Mesh</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>D 4491</td>
<td>U.S. No. 30 max. for slit wovens, U.S. No. 50</td>
</tr>
<tr>
<td>Grab Tensile</td>
<td>D 4632</td>
<td>for all other geotextile types, U.S. No. 100 min.</td>
</tr>
<tr>
<td>Strength,</td>
<td></td>
<td>0.02 sec(^{-1}) min.</td>
</tr>
<tr>
<td>in machine and</td>
<td></td>
<td>180 lb min. in machine direction,</td>
</tr>
<tr>
<td>x-machine direction</td>
<td></td>
<td>100 lb min.</td>
</tr>
<tr>
<td>Grab Failure Strain,</td>
<td>D 4632</td>
<td>100 lb min.</td>
</tr>
<tr>
<td>in machine and</td>
<td></td>
<td>in x-machine direction</td>
</tr>
<tr>
<td>x-machine direction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultraviolet (UV)</td>
<td>D 4355</td>
<td>30% max. at 180 lb or more</td>
</tr>
<tr>
<td>Radiation Stability</td>
<td></td>
<td>70% strength retained min., after 500 hours in xenon arc device</td>
</tr>
</tbody>
</table>

93.32.2(2) Geosynthetic Properties For Retaining Walls and Reinforced Slopes

Table 7: Minimum properties required for geotextile reinforcement used in geosynthetic reinforced slopes and retaining walls.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>ASTM Test Method</th>
<th>Geotextile Property Requirements(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>D 4751</td>
<td>Woven: U.S. No. 20 max.</td>
</tr>
<tr>
<td></td>
<td>D 4491</td>
<td>0.02 sec(^{-1}) min.</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td></td>
<td>200 lb min.</td>
</tr>
<tr>
<td>Grab Tensile</td>
<td>D 4632</td>
<td>120 lb min.</td>
</tr>
<tr>
<td>Strength,</td>
<td></td>
<td>&lt; 50%</td>
</tr>
<tr>
<td>in machine and</td>
<td>D 4632</td>
<td>≥ 50%</td>
</tr>
<tr>
<td>x-machine direction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grab Failure Strain,</td>
<td>D 4632</td>
<td></td>
</tr>
<tr>
<td>in machine and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>x-machine direction</td>
<td>D 4632(^{2,4})</td>
<td>160 lb min.</td>
</tr>
<tr>
<td>Seam Breaking</td>
<td></td>
<td>100 lb min.</td>
</tr>
<tr>
<td>Strength</td>
<td>D 4632</td>
<td></td>
</tr>
<tr>
<td>Puncture Resistance</td>
<td>D 6241</td>
<td>370 lb min.</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>D 4533</td>
<td>63 lb min.</td>
</tr>
</tbody>
</table>

Hudson Road Bridge No. 489 Replacement
C 3158

Amendments
in machine and x-machine direction

Ultraviolet (UV) Radiation Stability D 4355 70% (for polypropylene and polyethylene) and 50% (for polyester) Strength Retained min., after 500 hours in a xenon arc device

9-33.2(3) Prefabricated Drainage Mat
Prefabricated drainage mat shall have a single or double dimpled polymeric core with a geotextile attached and shall meet the following requirements:

Table 8: Minimum properties required for prefabricated drainage mats.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>ASTM Test Method</th>
<th>Geotextile Property Requirements¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>D 4751</td>
<td>U.S. No. 60 max.</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>D 4491</td>
<td>0.4 sec⁴ min.</td>
</tr>
<tr>
<td>Grab Tensile Strength, in machine and x-machine direction</td>
<td>D 4632</td>
<td>Nonwoven – 100 lb min.</td>
</tr>
<tr>
<td>Width</td>
<td>D 5199</td>
<td>12 in. min.</td>
</tr>
<tr>
<td>Thickness</td>
<td></td>
<td>0.4 in. min.</td>
</tr>
<tr>
<td>Compressive Strength at Yield</td>
<td>D 1621</td>
<td>100 psi min.</td>
</tr>
<tr>
<td>In Plan Flow Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gradient = 0.1, Pressure = 5.5 psi</td>
<td>D 4716</td>
<td>5.0 gal./min./ft.</td>
</tr>
<tr>
<td>Gradient = 1.0, Pressure = 14.5 psi</td>
<td></td>
<td>15.0 gal/min./ft.</td>
</tr>
</tbody>
</table>

¹All geotextile properties in Tables 1 through 8 are minimum average roll values (i.e., the test results for any sampled roll in a lot shall meet or exceed the values shown in the table).

²The test procedures used are essentially in conformance with the most recently approved ASTM geotextile test procedures, except for geotextile sampling and specimen conditioning, which are in accordance with WSDOT Test Methods T 914, Practice for Sampling of Geotextiles for Testing, and T 915, Practice for Conditioning of Geotextiles for Testing, respectively. Copies of these test methods are available at the State Materials Laboratory P.O. Box 47365, Olympia, WA 98504-7365.

³With seam located in the center of 8-inch long specimen oriented parallel to grip faces.

⁴Applies only to seams perpendicular to the wall face.
9-33.3 Aggregate Cushion of Permanent Erosion Control Geotextile

Aggregate cushion for permanent erosion control geotextile, Class A shall meet the requirements of Section 9-03.9(2). Aggregate cushion for permanent erosion control geotextile, Class B or C shall meet the requirements of Section 9-03.9(3) and 9-03.9(2).

9-33.4 Geosynthetic Material Approval and Acceptance

9-33.4(1) Geosynthetic Material Approval

If the geosynthetic source material has not been previously evaluated, or is not listed in the current WSDOT Qualified Products List (QPL), a sample of each proposed geosynthetic shall be submitted to the State Materials Laboratory in Tumwater for evaluation. Geosynthetic material approval will be based on conformance to the applicable properties from the Tables in Section 9-33.2 or in the Standard Plans or Special Provisions. After the sample and required information for each geosynthetic type have arrived at the State Materials Laboratory in Tumwater, a maximum of 14 calendar days will be required for this testing. Source approval shall not be the basis of acceptance of specific lots of material delivered to the Contractor unless the roll numbers of the lot sampled can be clearly identified as the rolls tested and approved in the geosynthetic approval process.

For geogrid and geotextile products proposed for use in permanent geosynthetic retaining walls or reinforced slopes that are not listed in the current QPL, the Contractor shall submit test information and the calculations used in the determination of $T_{st}$ performed in accordance with WSDOT Standard Practice T 925, Standard Practice for Determination of Long-Term Strength for Geosynthetic Reinforcement, to the State Materials Laboratory in Tumwater for evaluation. The Contracting Agency will require up to 30 calendar days after receipt of the information to complete the evaluation.

The Contractor shall submit to the Engineer the following information regarding each geosynthetic material proposed for use:

- Manufacturer's name and current address,
- Full product name,
- Geosynthetic structure, including fiber/yarn type,
- Geosynthetic polymer type(s) (for temporary and permanent geosynthetic retaining walls),
- Proposed geosynthetic use(s), and
- Certified test results for minimum average roll values.

9-33.4(2) Vacant

9-33.4(3) Acceptance Samples

When the quantities of geosynthetic materials proposed for use in the following geosynthetic applications are greater than the following amounts, acceptance shall be by satisfactory test report:

<table>
<thead>
<tr>
<th>Application</th>
<th>Geosynthetic Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground Drainage</td>
<td>600 sq. yd.</td>
</tr>
<tr>
<td>Temporary or Permanent Geosynthetic</td>
<td>All quantities</td>
</tr>
<tr>
<td>Retaining Walls</td>
<td></td>
</tr>
</tbody>
</table>
The samples for acceptance testing shall include the information about each geosynthetic roll to be used as stated in 9-33.4(4).

Samples will be randomly taken by the Engineer at the job site to confirm that the geosynthetic meets the property values specified.

Approval will be based on testing of samples from each lot. A "lot" shall be defined for the purposes of this specification as all geosynthetic rolls within the consignment (i.e., all rolls sent the project site) that were produced by the same manufacturer during a continuous period of production at the same manufacturing plant and have the same product name. After the samples have arrived at the State Materials Laboratory in Tumwater, a maximum of 14 calendar days will be required for this testing.

If the results of the testing show that a geosynthetic lot, as defined, does not meet the properties required for the specified use as indicated in Tables 1 through 8 in Section 9-33.2, and additional tables as specified in the Special Provisions, the roll or rolls which were sampled will be rejected. Geogrids and geotextiles for temporary geosynthetic retaining walls shall meet the requirements of Table 7, and Table 10 in the Special Provisions. Geogrids and geotextiles for permanent geosynthetic retaining wall shall meet the requirements of Table 7, and Table 9 in the Special Provisions, and both geotextile and geogrid acceptance testing shall meet the required ultimate tensile strength $T_{ult}$ as provided in the current QPL for the selected product(s). If the selected product(s) are not listed in the current QPL, the result of the testing for $T_{ult}$ shall be greater than or equal to $T_{ult}$ as determined from the product data submitted and approved by the State Materials Laboratory during source material approval.

Two additional rolls for each roll tested which failed from the lot previously tested will then be selected at random by the Engineer for sampling and retesting. If the retesting shows that any of the additional rolls tested do not meet the required properties, the entire lot will be rejected. If the test results from all the rolls retested meet the required properties, the entire lot minus the roll(s) that failed will be accepted. All geosynthetic that has defects, deterioration, or damage, as determined by the Engineer, will also be rejected. All rejected geosynthetic shall be replaced at no additional expense to the Contracting Agency.

9-33.4(4) Acceptance by Certificate of Compliance
When the quantities of geosynthetic proposed for use in each geosynthetic application are less than or equal to the following amounts, acceptance shall be by Manufacturer's Certificate of Compliance:

<table>
<thead>
<tr>
<th>Application</th>
<th>Geosynthetic Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground Drainage</td>
<td>600 sq. yd.</td>
</tr>
<tr>
<td>Soil Stabilization and Separation</td>
<td>All quantities</td>
</tr>
<tr>
<td>Permanent Erosion Control</td>
<td>All quantities</td>
</tr>
<tr>
<td>Temporary Silt Fence</td>
<td>All quantities</td>
</tr>
<tr>
<td>Prefabricated Drainage Mat</td>
<td>All quantities</td>
</tr>
</tbody>
</table>

The Manufacturer's Certificate of Compliance shall include the following information about each geosynthetic roll to be used:
9-33.4(5) Approval of Seams
If the geotextile seams are to be sewn in the field, the Contractor shall provide a section of sewn seam that can be sampled by the Engineer before the geotextile is installed.

The seam sewn for sampling shall be sewn using the same equipment and procedures as will be used to sew the production seams. If production seams will be sewn in both the machine and cross-machine directions, the Contractor must provide sewn seams for sampling which are oriented in both the machine and cross-machine directions. The seams sewn for sampling must be at least 2 yards in length in each geotextile direction. If the seams are sewn in the factory, the Engineer will obtain samples of the factory seam at random from any of the rolls to be used. The seam assembly description shall be submitted by the Contractor to the Engineer and will be included with the seam sample obtained for testing. This description shall include the seam type, stitch type, sewing thread type(s), and stitch density.

SECTION 9-34, PAVEMENT MARKING MATERIAL
April 3, 2006

9-34.2 Paint
This section is revised to read:

White and yellow paint shall comply with the specifications for high volatile organic compound (VOC) solvent based paint, low VOC solvent based paint or low VOC waterborne paint. Blue paint for "Access Parking Space Symbol with Background" shall be chosen from a WSDOT QPL listed Manufacturer. The blue color shall match Fed Standard 595, color 15090 and the tolerance of variation shall match that shown in the FHWA "Highway Blue Color Tolerance Chart."

9-34.3 Plastic
This section is revised to read:

White and yellow plastic pavement marking materials shall comply with the specifications for:

Type A – Liquid hot applied thermoplastic
Type B – Pre-formed fused thermoplastic
Type C – Cold applied pre-formed tape
Type D – Liquid cold applied methyl methacrylate
Blue plastic pavement marking material for “Access Parking Space Symbol with Background” shall be chosen from a WSDOT QPL listed Manufacturer. The blue color shall match Fed Standard 595, color 15090 and the tolerance of variation shall match that shown in the FHWA “Highway Blue Color Tolerance Chart.”

9-34.4 Glass Beads
In the first sentence the reference to AASHTO M 247-81, Type 1 is revised to AASHTO M 247, Type 1.

SECTION 9-35, TEMPORARY TRAFFIC CONTROL MATERIALS
April 3, 2006

9-35.2 Construction Signs
The first paragraph is supplemented with the following:

Post mounted Class A construction signs shall conform to the requirements of this section and additionally shall conform to the requirements stated in section 9-28.

The second paragraph is revised to read:

Aluminum sheeting shall be used to fabricate all construction signs. The signs shall have a minimum thickness of 0.080-inches and a maximum thickness of 0.125-inches.

The first sentence in the fourth paragraph is revised to read:

The use of plywood, composite, fiberglass reinforced plastic, new fabric rollup signs, and any other previously approved sign materials except aluminum is prohibited. Any sign which otherwise meets the requirements of this section and was purchased prior to July 1, 2004, may be utilized until December 31, 2007. If a fabric sign is used, it shall have been fabricated with Type VI reflective sheeting.
SPECIAL

PROVISIONS
SPECIAL PROVISIONS

The following Special Provisions are made a part of this contract and supersede any conflicting provisions of the 2006 Standard Specifications for Road, Bridge and Municipal Construction, and the foregoing Amendments to the Standard Specifications.

Several types of Special Provisions are included in this contract; General, Region, Bridges and Structures, and Project Specific. Special Provisions types are differentiated as follows:

(date) General Special Provision
(******) Notes a revision to a General Special Provision and also notes a Project Specific Special Provision.
(Regions\(^1\) date) Region Special Provision
(BSP date) Bridges and Structures Special Provision

General Special Provisions are similar to Standard Specifications in that they typically apply to many projects, usually in more than one Region. Usually, the only difference from one project to another is the inclusion of variable project data, inserted as a "fill-in".

Region Special Provisions are commonly applicable within the designated Region. Region designations are as follows:

<table>
<thead>
<tr>
<th>Regions(^1)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER</td>
<td>Eastern Region</td>
</tr>
<tr>
<td>NCR</td>
<td>North Central Region</td>
</tr>
<tr>
<td>NWR</td>
<td>Northwest Region</td>
</tr>
<tr>
<td>OR</td>
<td>Olympic Region</td>
</tr>
<tr>
<td>SCR</td>
<td>South Central Region</td>
</tr>
<tr>
<td>SWR</td>
<td>Southwest Region</td>
</tr>
<tr>
<td>WSF</td>
<td>Washington State Ferries Division</td>
</tr>
</tbody>
</table>

Bridges and Structures Special Provisions are similar to Standard Specifications in that they typically apply to many projects, usually in more than one Region. Usually, the only difference from one project to another is the inclusion of variable project data, inserted as a "fill-in".

Project Specific Special Provisions normally appear only in the contract for which they were developed.

DIVISION 1
GENERAL REQUIREMENTS

DESCRIPTION OF WORK

(March 13, 1995)

This contract provides for the improvement of the Hudson Road crossing of the Snipes Lateral by replacing the existing bridge with a new concrete girder bridge, and reconstructing the approaches, revising affected irrigation facilities, and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.
1-01 DEFINITIONS AND TERMS

1-01.3 Definitions

(*****)

Delete the definition for Bridge Approach Embankments and replace it with the following:

Bridge Approach Embankments
An embankment beneath a structure and extending beyond the structure's ends the length of
the project limits plus access ramps as shown on the plans. Also, any embankment that
replaces unsuitable foundation soil beneath the bridge approach embankment.

(May 25, 2006 APWA GSP)

This Section is supplemented with the following:

All references in the Standard Specifications to the terms “State”, “Department of
Transportation”, “Washington State Transportation Commission”, “Commission”, “Secretary of
Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read
“Contracting Agency”.

All references to “State Materials Laboratory” shall be revised to read “Contracting Agency
designated location”.

The venue of all causes of action arising from the advertisement, award, execution, and
performance of the contract shall be in the Superior Court of the County where the
Contracting Agency’s headquarters are located.

Additive
A supplemental unit of work or group of bid items, identified separately in the proposal, which
may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

Alternate
One of two or more units of work or groups of bid items, identified separately in the proposal,
from which the Contracting Agency may make a choice between different methods or material
of construction for performing the same work.

Contract Documents
See definition for “Contract”.

Contract Time The period of time established by the terms and conditions of the contract
within which the work must be physically completed.

Dates

Bid Opening Date
The date on which the Contracting Agency publicly opens and reads the bids.

Award Date
The date of the formal decision of the Contracting Agency to accept the lowest responsible
and responsive bidder for the work.

Contract Execution Date
The date the Contracting Agency officially binds the agency to the contract.
Notice to Proceed Date
The date stated in the Notice to Proceed on which the contract time begins.

Substantial Completion Date
The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, and only minor incidental work, replacement of temporary substitute facilities, or correction or repair remains for the physical completion of the total contract.

Physical Completion Date
The day all of the work is physically completed on the project. All documentation required by the contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date
The day all the work specified in the contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date
The date on which the Contracting Agency accepts the work as complete.

Notice of Award
The written notice from the Contracting Agency to the successful bidder signifying the Contracting Agency’s acceptance of the bid.

Notice to Proceed
The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the work and establishing the date on which the contract time begins.

Traffic
Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders
Delete this Section and replace it with the following:

1-02.1 Qualifications of Bidder
(October 1, 2005 APWA GSP)

Bidders shall be qualified by experience, financing, equipment, and organization to do the work called for in the Contract Documents. The Contracting Agency reserves the right to take whatever action it deems necessary to ascertain the ability of the bidder to perform the work satisfactorily.
1-02.2 Plans and Specifications
(October 1, 2005 APWA GSP)

Delete this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed will be found in the Call for Bids (Advertisement for Bids) for the work.

After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

<table>
<thead>
<tr>
<th>To Prime Contractor</th>
<th>No. of Sets</th>
<th>Basis of Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced plans (11&quot; x 17&quot;) and Contract Provisions</td>
<td>4</td>
<td>Furnished automatically upon award.</td>
</tr>
<tr>
<td>Large plans (22&quot; x 34&quot;) and Contract Provisions</td>
<td>0</td>
<td>Furnished only upon request.</td>
</tr>
</tbody>
</table>

Additional plans and Contract Provisions may be purchased by the Contractor by payment of the cost stated in the Call for Bids.

(March 13, 1995)

1-02.4 Examination Of Plans, Specifications And Site Of Work
Section 1-02.4, is supplemented with the following:

The soils information used for study and design of this project is available for review by the bidder at the following address:

Yakima County Public Works Department
128 North Second Street, Room 408
Yakima, WA 98901-2614

1-02.5 Proposal Forms
(October 1, 2005 APWA GSP)

Delete this section and replace it with the following:

At the request of a bidder, the Contracting Agency will provide a proposal form for any project on which the bidder is eligible to bid.

The proposal form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder’s name, address, telephone number, and signature; the bidder’s D/M/WBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the proposal form.
The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the proposal forms unless otherwise specified.

Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid. The bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

A bid by a corporation shall be executed in the corporate name, by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign).

A bid by a partnership shall be executed in the partnership name, and signed by a partner. A copy of the partnership agreement shall be submitted with the Bid Form if any D/M/WBE requirements are to be satisfied through such an agreement.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any D/W/MBE requirements are to be satisfied through such an agreement.

1-02.6 Preparation of Proposal

(January 23, 2006 APWA GSP)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit price must equal or exceed the minimum amount stated.

1-02.7 Bid Deposit

(October 1, 2005 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

1. Contracting Agency-assigned number for the project;
2. Name of the project;
3. The Contracting Agency named as obligee;
4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;
5. Signature of the bidder's officer empowered to sign official statements. The signature of the person authorized to submit the bid should agree with the signature on the bond, and the title of the person must accompany the said signature;
6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.
1-02.9  Delivery of Proposal
(October 1, 2005 APWA GSP)

Revise the first paragraph to read:

Each proposal shall be submitted in a sealed envelope, with the Project Name and Project Number as stated in the Advertisement for Bids clearly marked on the outside of the envelope, or as otherwise stated in the Bid Documents, to ensure proper handling and delivery.

1-02.12  Public Opening of Proposals
(******)
The Bid opening date for this project shall be October 11, 2006.

Sealed bids shall be received at the following location before the specified time:

Board of County Commissioners of Yakima County, Room 232, Yakima County Courthouse, Yakima, Washington 98901, until 2:00 p.m. of the bid opening date.

The County shall not consider proposals it receives after the time specified above. No oral, telephone, facsimile, or telegraphic bids or modifications shall be considered or accepted.

The bids shall be publicly opened and read after 2:00 p.m. on this date.

1-02.13  Irregular Proposals
(October 1, 2005 APWA GSP)

Revise item 1 to read:

1. A proposal will be considered irregular and will be rejected if:
   a. The bidder is not prequalified when so required;
   b. The authorized proposal form furnished by the Contracting Agency is not used or is altered;
   c. The completed proposal form contains any unauthorized additions, deletions, alternate bids, or conditions;
   d. The bidder adds provisions reserving the right to reject or accept the award, or enter into the contract;
   e. A price per unit cannot be determined from the bid proposal;
   f. The proposal form is not properly executed;
   g. The bidder fails to submit or properly complete a subcontractor list, if applicable, as required in Section 1-02.6;
   h. The bidder fails to submit or properly complete a Disadvantaged, Minority or Women's Business Enterprise Certification, if applicable, as required in Section 1-02.6; or
   i. The bid proposal does not constitute a definite and unqualified offer to meet the material terms of the bid invitation.
1-02.14 Disqualification of Bidders
(October 1, 2005 APWA GSP)

Revise this section to read:

A bidder may be deemed not responsible and the proposal rejected if:
1. More than one proposal is submitted for the same project from a bidder under the same or different names;
2. Evidence of collusion exists with any other bidder or potential bidder. Participants in collusion will be restricted from submitting further bids;
3. The bidder, in the opinion of the Contracting Agency, is not qualified for the work or to the full extent of the bid, or to the extent that the bid exceeds the authorized prequalification amount as may have been determined by a prequalification of the bidder;
4. An unsatisfactory performance record exists based on past or current Contracting Agency work or for work done for others, as judged from the standpoint of conduct of the work; workmanship; progress; affirmative action; equal employment opportunity practices; or Disadvantaged Business Enterprise, Minority Business Enterprise, or Women’s Business Enterprise utilization;
5. There is uncompleted work (Contracting Agency or otherwise) which might hinder or prevent the prompt completion of the work bid upon;
6. The bidder failed to settle bills for labor or materials on past or current contracts;
7. The bidder has failed to complete a written public contract or has been convicted of a crime arising from a previous public contract;
8. The bidder is unable, financially or otherwise, to perform the work;
9. A bidder is not authorized to do business in the State of Washington (not registered in accordance with RCW 18.27);
10. There are any other reasons deemed proper by the Contracting Agency.

1-02.15 Pre Award Information
(October 1, 2005 APWA GSP)

Revise this section to read:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:
1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located,
7. A copy of State of Washington Contractor’s Registration, or
8. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.
1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids

(January 23, 2006 APWA GSP)

Revise the first paragraph to read:

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder’s unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

1-03.3 Execution of Contract

(October 1, 2005 APWA GSP)

Revise this section to read:

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Contracting Agency.

Within 10 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 10 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

1-03.4 Contract Bond

(******)

The Contractor shall provide an executed Contract Bond on the Contract Bond form supplied by Yakima County for the full contract amount. This Contract Bond shall conform to all requirements listed in Section 1-03.4 Contract Bond.
1-04 SCOPE OF THE WORK

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda

(October 1, 2005 APWA GSP)

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Addenda,
2. Proposal Form,
3. Special Provisions, including APWA General Special Provisions, if they are included,
4. Contract Plans,
5. Amendments to the Standard Specifications,
6. WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction,
7. Contracting Agency’s Standard Plans (if any), and
8. WSDOT/APWA Standard Plans for Road, Bridge, and Municipal Construction.

1-05 CONTROL OF WORK

1-05.7 Removal of Defective and Unauthorized Work

(October 1, 2005 APWA GSP)

Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remediing defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor’s unauthorized work.
No adjustment in contract time or compensation will be allowed because of the delay in the
performance of the work attributable to the exercise of the Contracting Agency’s rights
provided by this Section.

The rights exercised under the provisions of this section shall not diminish the Contracting
Agency’s right to pursue any other avenue for additional remedy or damages with respect to
the Contractor's failure to perform the work as required.

1-05.13 Superintendents, Labor and Equipment of Contractor
(May 25, 2006 APWA GSP)

Revise the seventh paragraph to read:

Whenever the Contracting Agency evaluates the Contractor’s qualifications pursuant to
Section 1-02.1, it will take these performance reports into account.

Add the following new section:

1-05.16 Water and Power
(October 1, 2005 APWA GSP)

The Contractor shall make necessary arrangements, and shall bear the costs for power and
water necessary for the performance of the work, unless the contract includes power and
water as a pay item.

Add the following new section:

1-05.17 Oral Agreements
(October 1, 2005 AWPA GSP)

No oral agreement or conversation with any officer, agent, or employee of the Contracting
Agency, either before or after execution of the contract, shall affect or modify any of the terms
or obligations contained in any of the documents comprising the contract. Such oral
agreement or conversation shall be considered as unofficial information and in no way binding
upon the Contracting Agency, unless subsequently put in writing and signed by the
Contracting Agency.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed
(October 1, 2005 APWA GSP)

Supplement this section with the following:

In cases of conflict between different safety regulations, the more stringent regulation shall
apply.

The Washington State Department of Labor and Industries shall be the sole and paramount
administrative agency responsible for the administration of the provisions of the Washington
Industrial Safety and Health Act of 1973 (WISHA).
The Contractor shall maintain at the project site office, or other well known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor’s care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor’s care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor’s plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor’s performance does not, and shall not, be intended to include review and adequacy of the Contractor’s safety measures in, on, or near the project site.

1-07.2 State Taxes

Section 1-07.2 is supplemented with the following:

(March 13, 1995)
The work on this contract is to be performed upon lands whose ownership obligates the Contractor to pay Sales tax. The provisions of Section 1-07.2(1) apply.

1-07.6 Permits And Licenses

Section 1-07.6 is supplemented with the following:

(******)

Sunnyside Valley Irrigation District (SVID) Requirements

SVID has granted permission to perform this construction project only during the irrigation season shutoff. The construction work can begin on or after October 30, 2006 and must begin on or before November 27, 2006 to ensure this requirement is met.

(February 5, 2001)

1-07.17 Utilities And Similar Facilities

Section 1-07.17 is supplemented with the following:

Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification.

Public and private utilities, or their Contractors, will furnish all work necessary to adjust, relocate, replace, or construct their facilities unless otherwise provided for in the Plans or these Special Provisions. Such adjustment, relocation, replacement, or construction will be done during the prosecution of the work for this project.

The following addresses and telephone numbers of utility companies known or suspected of having facilities within the project limits are supplied for the Contractor’s convenience:
1-07.24 Rights of Way

(October 1, 2005 APWA GSP)

Delete this section in its entirety, and replace it with the following:

Street right of way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public right of way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file
with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

1-08 PROSECUTION AND PROGRESS

Add the following new section:

1-08.0 Preliminary Matters
(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference
(May 25, 2006 APWA GSP)

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer and such other interested parties as may be invited. The purpose of the preconstruction conference will be:
1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction meeting the following:
1. A breakdown of all lump sum items;
2. A preliminary schedule of working drawing submittals; and
3. A list of material sources for approval if applicable.

Add the following new section:

1-08.0(2) Hours of Work
(May 25, 2006 APWA GSP)

Except in the case of emergency or unless otherwise approved by the Contracting Agency, the normal straight time working hours for the contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. of a working day with a maximum 1-hour lunch break and a
5-day work week. The normal straight time 8-hour working period for the contract shall be established at the preconstruction conference or prior to the Contractor commencing the work.

If a Contractor desires to perform work on holidays, Saturdays, Sundays, or before 7:00 a.m. or after 6:00 p.m. on any day, the Contractor shall apply in writing to the Engineer for permission to work such times. Permission to work longer than an 8-hour period between 7:00 a.m. and 6:00 p.m. is not required. Such requests shall be submitted to the Engineer no later than noon on the working day prior to the day for which the Contractor is requesting permission to work.

Permission to work between the hours of 10:00 p.m. and 7:00 a.m. during weekdays and between the hours of 10:00 p.m. and 9:00 a.m. on weekends or holidays may also be subject to noise control requirements. Approval to continue work during these hours may be revoked at any time the Contractor exceeds the Contracting Agency's noise control regulations or complaints are received from the public or adjoining property owners regarding the noise from the Contractor's operations. The Contractor shall have no claim for damages or delays should such permission be revoked for these reasons.

Permission to work Saturdays, Sundays, holidays or other than the agreed upon normal straight time working hours Monday through Friday may be given subject to certain other conditions set forth by the Contracting Agency or Engineer. These conditions may include but are not limited to: requiring the Engineer or such assistants as the Engineer may deem necessary to be present during the work; requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency employees who worked during such times, on non Federal aid projects; considering the work performed on Saturdays, Sundays, and holidays as working days with regards to the contract time; and considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period. Assistants may include, but are not limited to, survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees when in the opinion of the Engineer, such work necessitates their presence.

Add the following new section:

1-08.0(3) Reimbursement for Overtime Work of Contracting Agency Employees
(May 25, 2006 APWA GSP; may not be used on FHWA-funded projects)

Where the Contractor elects to work on a Saturday, Sunday, or holiday, or longer than an 8-hour work shift on a regular working day, as defined in the Standard Specifications, such work shall be considered as overtime work. On all such overtime work an inspector will be present, and a survey crew may be required at the discretion of the Engineer. In such case, the Contracting Agency may deduct from amounts due or to become due to the Contractor for the costs in excess of the straight-time costs for employees of the Contracting Agency required to work overtime hours.

The Contractor by these specifications does hereby authorize the Engineer to deduct such costs from the amount due or to become due to the Contractor.

1-08.4 Prosecution of the Work
(*****)
1-08.4 Notice to Proceed and Prosecution of the Work

Revise the section to read:

(******)

Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site between October 30, 2006 and November 27, 2006 and shall notify the Engineer in writing a minimum of 10 calendar days in advance of the date on which the Contractor intends to begin work after the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

1-08.5 Time for Completion

(March 13, 1995)
Section 1-08.5 is supplemented with the following:

This project shall be physically completed within 70 working days.

(October 1, 2005 APWA GSP)

Revise the fourth and fifth paragraphs to read:

Contract time shall begin on the first working day following the Notice to Proceed Date. The Contract Provisions may specify another starting date for contract time, in which case, time will begin on the starting date specified.

Each working day shall be charged to the contract as it occurs, beginning on the day after the Notice to Proceed Date, unless otherwise provided in the Contract Provisions, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. Within 10 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in that period, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor elects to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.
Revise the seventh paragraph to read:

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor's obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and

2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
   a. Certified Payrolls (Federal-aid Projects)
   b. Material Acceptance Certification Documents
   d. FHWA 47 (Federal-aid Projects)
   e. Final Contract Voucher Certification
   f. Property owner releases per Section 1-07.24

1-09 MEASUREMENT AND PAYMENT

1-09.6 Force Account
(October 1, 2005 APWA GSP; may be used on FHWA-funded projects)
Supplement this Section with the following:
Owner has estimated and included in the Proposal, dollar amounts for all items to be paid per force account, only to provide a common proposal for Bidders. All such dollar amounts are to become a part of Contractor's total bid. However, Owner does not warrant expressly or by implication, that the actual amount of work will correspond with those estimates. Payment will be made on the basis of the amount of work actually authorized by Engineer.

1-09.9 Payments
Section 1-09.9 is supplemented with the following:
(*****)

The quantity of the following items to be paid for on this project shall be the quantity shown in the Proposal, unless changes are made in accordance with Section 1-04.4 which affect this quantity. The quantity shown in the Proposal will be adjusted by the amount of the change and will be paid for as specified in Section 1-04.4.

Steel Reinf. Bar for Bridge
Conc. Class 4000 for Bridge

The quantities in the Proposal are listed only for the convenience of the Contractor in determining the volume of work involved and are not guaranteed to be accurate. The prospective bidders shall verify these quantities before submitting a bid. No adjustments other than for approved changes will be made in the quantity even though the actual quantities required may deviate from those listed.
The unit contract price for these items shall be full pay to construct and complete this portion of the work.

1-09.13(3) Claims $250,000 or Less
(October 1, 2005 APWA GSP; may be used on FHWA-funded projects)
Delete this Section and replace it with the following:
The Contractor and the Contracting Agency mutually agree that those claims that total $250,000 or less, submitted in accordance with Section 1-09.11 and not resolved by nonbinding ADR processes, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

1-09.13(3)A Administration of Arbitration
(October 1, 2005 APWA GSP)
Revise the third paragraph to read:
The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters are located. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the contract as a basis for decisions.

1-10 TEMPORARY TRAFFIC CONTROL

1-10.1(2) Description
(May 25, 2006 APWA GSP)
Revise the third paragraph to read:
The Contractor shall provide signs and other traffic control devices not otherwise specified as being furnished by the Contracting Agency. The Contractor shall erect and maintain all construction signs, warning signs, detour signs, and other traffic control devices necessary to warn and protect the public at all times from injury or damage as a result of the Contractor's operations which may occur on highways, roads, streets, sidewalks, or paths. No work shall be done on or adjacent to any traveled way until all necessary signs and traffic control devices are in place.

1-10.2 Traffic Control Management

1-10.2(1) General
(August 2, 2004)
Section 1-10.2(1) is supplemented with the following:
The Traffic Control Supervisor shall be certified by one of the following:
The Northwest Laborers-Employers Training Trust
27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035

Evergreen Safety Council
401 Pontius Ave. N.
Seattle, WA 98109
1-800-521-0778 or
(206) 382-4090

1-10.4 Measurement
(August 2, 2004)
Section 1-10.4(2) is supplemented with the following:
The bid proposal does not contain the item “Project Temporary Traffic Control,” lump sum.
The provisions of Section 1-10.4(2) shall apply.

DIVISION 2
EARTHWORK

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.1 Description
Section 2-01.1 is supplemented with the following:

(March 13, 1995)
Clearing and grubbing on this project shall be performed within the following limits:
Within the project limits as required.

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.3(2) Removal of Bridges, Box Culverts, and other Drainage Structures
Section 2-02.3(2) is supplemented with the following:

(June 26, 2000)
The Contractor shall remove existing Bridge “Hudson Road Bridge No. 489” after routing traffic onto the detour route.

(June 26, 2000)
Bridge Demolition Plan
The Contractor shall submit a bridge demolition plan with working drawings and calculations to the Engineer for approval in accordance with Section 6-01.9, showing the method of removing the existing bridge(s), or portions of bridges, as specified.
The bridge demolition plan shall show support bents, bracing, guys, lifting devices, lifting attachments, the sequence of demolition and removal, the type of equipment to be used in all demolition and removal operations, the location of cranes and barges, the location of support or lifting points, and the weights of structure parts being removed. The plan shall include a crane stability analysis and crane load calculations based on the
controlling crane picks of the Contractor’s plan. The plan shall detail the containment, 
collection, and disposal of all debris. The plan shall show all stages of demolition.

The Contractor shall not begin removal operations until receiving the Engineer’s 
approval of the bridge demolition plan.

Use of Explosives
(June 26, 2000)
Explosives shall not be used in the demolition.

(January 7, 2002)
Requirements for Closing Bridge to Traffic Prior to Beginning Removal
The Contractor shall not close the existing bridge to traffic, and shall not begin bridge 
removal operations, until the following conditions are met:

1. The Contractor has received the Engineer’s approval of the bridge demolition 
plan.

2. The Contractor has sufficient material on hand to complete bridge removal and 
bridge construction operations in the least possible time.

3. The Contractor shall furnish a report on the status of material delivery to the 
Engineer. The report shall specify the materials already available at the site, 
the materials yet to arrive at the site, and the scheduled delivery dates of the 
materials yet to arrive at the site.

4. The Contractor has received the Engineer’s approval to proceed.

2-02.5 Payment
(June 26, 2000)
“Removing Existing Bridge ____", lump sum.

2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.4 Measurement
Section 2-03.4 is supplemented with the following:

(March 13, 1995)
Only one determination of the original ground elevation will be made on this project.
Measurement for roadway excavation and embankment will be based on the original ground 
elevations recorded previous to the award of this contract.

If discrepancies are discovered in the ground elevations which will materially affect the 
quantities of earthwork, the original computations of earthwork quantities will be adjusted 
accordingly.

Earthwork quantities will be computed, either manually or by means of electronic data 
processing equipment, by use of the average end area method or by the finite element 
analysis method utilizing digital terrain modeling techniques.
Copies of the ground cross-section notes will be available for the bidder's inspection, before the opening of bids, at the Project Engineer's office and at the Region office.

Upon award of the contract, copies of the original ground cross-sections will be furnished to the successful bidder on request to the Project Engineer.

DIVISION 6
STRUCTURES

6-01 GENERAL REQUIREMENTS FOR STRUCTURES

6-01.2 Foundation Data
Section 6-01.2 is supplemented with the following:

(June 26, 2000)
The attached log of test boring pages are reproductions of the original Log of Test Boring for the test holes shown in the Plans.

The Contractor should review the geotechnical recommendations report prepared for this project. Copies of the geotechnical recommendations report are available for review by prospective bidders at the location specified in Section 1-02.4 as supplemented in these Special Provisions.

6-02 CONCRETE STRUCTURES

6-02.2 Materials
Section 6-02.2 is supplemented with the following:

*Bridge Supported Utilities*

(June 26, 2000)
Inserts shall be of the type and model specified in the Plans. Inserts shall be galvanized in accordance with AASHTO M 111.

(April 30, 2001)
Hanger rods, and associated nuts and washers, shall conform to Section 9-06.5(1), and shall be galvanized in accordance with AASHTO M 232.

Steel bars and plates shall conform to ASTM A 36 and shall be galvanized in accordance with AASHTO M 111.

6-02.3 Construction Requirements
Section 6-02.3 is supplemented with the following:

*Bridge Supported Utilities*

(June 26, 2000)
The Contractor shall furnish and install inserts for the bridge utility supports as shown in the Plans. The Contractor shall verify that the hanger rods freely hang plumb in their inserts, and shall make adjustments to the inserts as necessary and as approved by the Engineer prior to utility installation.

(June 26, 2000)
The Contractor shall furnish and install the bridge utility supports, and the utility pipe or conduit pipe, as shown in the Plans.

6-02.4 Measurement
Section 6-02.4 is supplemented with the following:

(June 26, 2000)
Superstructure – “Hudson Road Bridge” contains the following approximate quantities of materials and work:

<table>
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<tr>
<th>Material</th>
<th>Quantity</th>
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<tr>
<td>St. Reinf. Bar</td>
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<td>Epoxy-Coated St. Reinf. Bar.</td>
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<td>Prestressed Precast Girders</td>
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<td>Utility Hanger Inserts</td>
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<td>Bearing Grout Pads</td>
<td>8 Each</td>
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<tr>
<td>Diaphragm Anchor Inserts and Bolts</td>
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The quantities are listed only for the convenience of the Contractor in determining the volume of work involved and are not guaranteed to be accurate. The prospective bidders shall verify these quantities before submitting a bid. No adjustments other than for approved changes will be made in the lump sum contract price for “Superstructure – Hudson Road Bridge” even though the actual quantities required may deviate from those listed.

6-02.5 Payment
The third bid item under Section 6-02.5 is supplemented with the following:

(June 26, 2000)
All costs in connection with grout and other material where no pay item has been established shall be included in the lump sum contract price for “Superstructure – Hudson Road Bridge”.

Section 6-02.5 is supplemented with the following:

(June 26, 2000)
Bridge Supported Utilities
All costs in connection with placing 6 inch Ductile Iron Pipe through the superstructure of the Hudson Road Bridge as shown in the Plans, including all hanger hardware, shall be included in the pay item “Irrigation System”.
6-05  PILING

6-05.3  Construction Requirements

6-05.3(10)  Test Piles
Section 6-05.3(10) is supplemented with the following:

(March 6, 2000)
The Contractor shall furnish and drive two test piles at the following locations or at locations designated by the Engineer:

One at Pier 1
One at Pier 2

The steel test piles shall be driven in the location of permanent piles and the number of permanent steel piles required for this project has been reduced by the appropriate number.

DIVISION 7
DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS, AND CONDUITS

7-02  CULVERTS

7-02.4  Measurement
Section 7-02.4 paragraph one is supplemented with the following:

(******)
No separate measurement will be made for excavation or backfill for the culverts installed. The measurement for these items will be included in the linear foot measurement for pipe in place.

7-02.5  Payment
Section 7-02.5 is supplemented with the following:

(******)
No separate payment will be made for excavation or backfill for the culverts installed. The payment for these items will be included in the linear foot measurement for pipe in place.

DIVISION 8
MISCELLANEOUS CONSTRUCTION

8-03  IRRIGATION SYSTEMS

8-03.1  Description
Replace Section 8-03.1 with the following:
As part of this contract, the Contractor shall replace an existing irrigation system with lines located on the existing bridge. The work consists of replacing an existing 5 inch PVC line on the existing bridge with a new 6 inch Ductile Iron Pipe, Class 52 line on the new bridge, including all iron pipe connection fittings and fittings to connect to the PVC line on the outside of the abutments. The work also includes the relocation of 6 irrigation risers and re-connecting their associated 2 inch supply lines due to the relocation of the Southeast field driveway approach. All trenching/excavating is included. The new portion of the system must be pressure tested to verify it is leak-proof.

8-03.3 Construction Requirements
Replace Section 8-03.3 with the following:

Location of the 6 inch Ductile Iron Pipe, Class 52 line shall be as shown on the plans. No changes shall be made except as approved by the Engineer. Connecting to the existing 5 inch PVC shall be accomplished with the appropriate fittings. Location of the 6 irrigation risers and connecting their associated 2 inch supply lines shall be field located similar to the existing riser layout, except moved East as required due to the relocation of the Southeast field driveway approach. All trenching/excavating is included. The new portion of the system must be pressure tested to verify it is leak-proof.

8-03.4 Measurement
Section 8-03.4 is supplemented with the following:

The pay item “Irrigation System” contains the following approximate quantities of materials and work:

- 6 inch Ductile Iron Pipe, Class 52: 95 L.F.
- Pipe hangers and hardware: 9 Each
- Connections between 5 inch PVC and 6 inch iron pipe: 2 Each
- New irrigation risers and riser relocation: 6 Each
- Re-use riser heads: 6 Each
- 2 inch supply lines (with fittings) to risers: 300 L.F.
- Connections to 2 inch supply lines: 6 Each
- Trenching to place new lines: 300 L.F.
- Pressure Test: 1 Each

The quantities are listed for the Contractor in determining the volume of work involved and are provided for a uniform basis for bidding. Actual construction may reveal discrepancies. Reasonable adjustment will be considered in the lump sum contract price for “Irrigation System” if the actual work required differs from that listed above.

DIVISION 9
MATERIALS

9-28 SIGNING MATERIALS AND FABRICATION
The second paragraph of Section 9-28.8 is supplemented with the following:
Sheet thickness over 36 inches shall be 0.125.

APPENDICES
The following appendices are attached and made a part of this contract:

APPENDIX A:
Log of Test Borings and Test Results

APPENDIX B:
Drawings of existing bridge

STANDARD PLANS
August 7, 2006

The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01 transmitted under Publications Transmittal No. PT 06-035, effective August 7, 2006 is made a part of this contract.

The Standard Plans are revised as follows:

All Standard Plans
All references in the Standard Plans to "Asphalt Concrete Pavement" shall be revised to read "Hot Mix Asphalt".

All references in the Standard Plans to the abbreviation "ACP" shall be revised to read "HMA".

A-1
The TIE BAR length of 32" is revised to 30".

In the PCCP TO ACP LONGITUDINAL JOINT, SECTION VIEW: the reference to Std. Spec. 5-04.3(11) is revised to Std. Spec. 5-04.3(12)B.

C-1 Sheet 2
The SNOW LOAD RAIL WASHER dimensions are revised to 1 3/4" from 2", and to 7/8" from 1".

C-11b Sheets 1 and 2
In the PRECAST FOOTING, ELEVATION view (Sheet 1) and in the CAST-IN-PLACE FOOTING, ELEVATION view (Sheet 2), COMMERCIAL CONCRETE is revised to CONCRETE CLASS 4000.
In the BREAKAWAY ANCHOR ANGLE, ELEVATION view (Sheet 2), the welding symbols are revised to indicate that the 1/4" Inside Gussets have 1/4" fillet weld joints, and the 1/2" End Gussets have 1/2" fillet weld joints.

D-1a Sheet 2 & D-1b Sheet 2
Reinforcing Steel Bar marked “R1” (see lower left corner): the dimension 1’ - 2 1/2" is revised to 1’ - 0 1/2”.

F-3b
In SECTION “C”: the dimension labeled VARIES ~ 3’ - 0” TO “A” ~ TYPE 2A is revised to VARIES ~ 3’ - 0” TO “E” ~ TYPE 2A; VARIES ~ 2’ - 6” TO “C” ~ TYPE 2B is revised to VARIES ~ 2’ - 6” TO “G” ~ TYPE 2B; and, VARIES ~ 6’ - 0” TO “B” is revised to VARIES ~ 6’ - 0” TO “F”.

G-8a Sheet 1
In the ELEVATION views, in the labels LOWER SIGN POST SUPPORT: the parenthetical specification “12 GAGE” is revised to “7 GAGE”.

I-10
In NOTE 1: the reference to Standard Specification 8-01.3(5)A is revised to Standard Specification 8-01.3(6)A.

K-1 through K-27
These plans are for local agency use only.

M-17.10-00
NOTE 2 is omitted. (See Standard Plan G-1 for sign mounting height)

The following are the Standard Plan numbers applicable at the time this project was advertised. The date shown with each plan number is the publication approval date shown in the lower right-hand corner of that plan. Standard Plans showing different dates shall not be used in this contract.

A-1..................5/13/02 A-3..................5/30/02 A-6..................2/24/03
A-2..................5/09/02 A-5..................2/24/03 A-7..................10/04/05
B-5.20-00..........6/01/06 B-30.50-00...... 6/01/06 B-75.20-00......6/01/06
B-5.40-00..........6/01/06 B-30.70-00...... 6/01/06 B-75.50-00......6/08/06
B-5.60-00..........6/01/06 B-30.80-00...... 6/08/06 B-75.60-00......6/08/06
B-10.20-00........6/01/06 B-30.90-00...... 6/08/06 B-80.20-00......6/08/06
B-10.40-00........6/01/06 B-35.20-00...... 6/08/06 B-80.40-00......6/01/06
B-10.60-00........6/08/06 B-35.40-00...... 6/08/06 B-82.20-00......6/01/06
B-15.20-00........6/01/06 B-40.20-00...... 6/01/06 B-85.10-00......6/01/06
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APPENDIX A

GEOTECHNICAL REPORT
FINAL GEOTECHNICAL REPORT
Hudson Road Bridge No. 489 Replacement Project
Yakima County, Washington

PROJECT NO. 04-115
August 2005

Prepared for:

SARGENT

PanGEO INCORPORATED
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APPENDIX B: LABORATORY TESTING AND RESULTS
GEOTECHNICAL REPORT  
HUDSON ROAD BRIDGE NO. 489 REPLACEMENT  
YAKIMA COUNTY, WASHINGTON  

PROJECT DESCRIPTION  

Yakima County plans to replace the existing bridge on Hudson Road that crosses the Snipes Mountain Lateral with a new bridge. The bridge crosses the lateral at the northern margin of the Yakima Valley, northeast of the town of Granger (Figure 1). The existing bridge on Hudson Road is a three span concrete beam structure with an asphaltic concrete pavement, approximately 70 feet in length. The bridge has concrete abutments on shallow spread footings, with one wing wall on the upstream (north) and east side. Two center bents are located adjacent to the stream channel, roughly 15 to 20 feet from the abutments. Each bent consists of five octagonal concrete pile/columns that extend to an unknown depth below the stream channel. The new bridge is planned as a single-span structure.

SITE DESCRIPTION  

The project site is located in the southeastern portion of Yakima County, in Township 10N, Range 22E. The Hudson Road Bridge No. 489 is located near the intersection of Sections 8, 9, 16 and 17. The bridge crosses the Snipes Mountain Lateral, an element of the Sunnyside Canal irrigation system. Hudson Road is a two lane, gravel surfaced section line road used as local access in this agricultural area. The topography of the area slopes gently to the south (Figure 2). The area surrounding the bridge site consists of subtle terraces and slopes underlain by loess, catastrophic flood deposits (termed Touchet Beds, especially east of the Columbia Plateau), old Yakima River gravels and Ellensburg Formation deposits. The Sunnyside Canal follows the contour of the land just to the north of the project site. The project site is located at approximately the 825 foot elevation. The Snipes Mountain Lateral carries water from the canal to the fields south of the canal. At the times of our visits, the canal carried little water. Marks on the bridge columns indicate that normal high water depth in the stream is generally not more than about 3 to 4 feet.

GEOLOGY  

The project site is located along the northern side of the Yakima Valley, an east-west trending structural syncline on the west side of the Columbia River Basalt (CRB) province. The project area is within the portion of the CRB province known as the Yakima Fold Belt, a zone of broad anticlines and synclines that encompasses most of the western portion of the CRB. The main reference for the geology of the project area is Bentley, et al (Geologic Maps of part of the Yakima fold belt, northeastern Yakima County, Washington, 1993). The materials in the project area consist generally of volcaniclastic sedimentary and basalt bedrock in the hills to the north, and catastrophic flood deposits or Yakima River alluvium to the south. To the north of the site the basalt bedrock belongs to the Elephant Mountain member of the Saddle Mountains Basalt. These rocks are overlain by the volcaniclastic and alluvial strata of Ellensburg Formation. Neither of these bedrock units outcrop within a mile of the project site, and are not important to
this project. The glacial advances of the Pleistocene did not reach this area, so glacial units do not occur in the project area. The important geologic units in the project area are described below.

**Older Alluvial Fan Deposits:** The bedrock of the Yakima valley is overlain by relatively unconsolidated late Tertiary and Quaternary deposits that accumulated in the Yakima Valley and have been incised during the Holocene. These gravels were deposited by the Yakima River during times when the river was aggrading in response to uplift of fold ridges of the Yakima Fold Belt (Waitt, 1979). The oldest such unit in the project area is a fanglomerate deposit consisting of mainly basalt clasts cemented by iron stained clay and capped with caliche (Bentley, et al, 1993). Large areas of this material are mapped at surface approximately 1½ mile north of the project site.

**Catastrophic Flood Slackwater Sediments:** These fine-grained sediments cover much of the lower Yakima River valley below about elevation 1,000. These strata are rhythmically bedded, non-plastic silt with minor sand and gravel. On the east side of the Columbia Plateau, these units are called the Tockett Beds. These strata were observed to underlie both bridge abutments at the project site. These sediments also appear to crop out at the level of the streambed.

**Eolian Deposits:** The youngest materials in the project area are wind-blown deposits of silt and fine sand (Bentley, et al, 1993). West of the Columbia River, these deposits mostly consist of a thin (less than 3 feet) blanket draped over ridges and slopes. Although not encountered in the test borings drilled at the site, Bentley, et al (1993) show an occurrence of this material immediately east of the project site.

**SITE SEISMICITY**

The site is located within the area known as the Yakima Fold Belt, a region of on-going structural deformation. The area has been relatively free of major seismic events within the historic period. Seismicity in the fold belt is generally limited to micro-earthquake swarms that may contain up to 100 individual events in a limited time frame. These occur at shallow depths, normally 3 to 5 kilometers (DOE, 1987, Tillson, 1989). These events rarely exceed magnitude 3.5. Concentrations of swarms have occurred in the area of the Saddle Mountains on the north margin of the Pasco Basin, and in the Walla Walla area. The largest historic quake in region took place at Milton-Freewater on July 16, 1936 (Tillson, 1989). This earthquake had a maximum intensity of approximately VII, and a magnitude of 6.1, and was felt over an area of 105,000 square miles. Research by Campbell and others (1994, 1998) indicates that the faulting along the Toppenish Ridge area has been active in the Holocene. Trenching in 1994 indicated a seismic event, with about 3½ meters of offset, occurred approximately 500 to 700 years ago along the Toppenish Ridge. The projected size of this movement is on the order of magnitude 6.0 to 7.3 (Campbell and others, 1998). An event of magnitude 7.1 may have occurred on the Mill Creek thrust fault between 5,000 and 7,000 years ago (Campbell and others, 1998). This research also suggests that the Union Gap Fault may have been active as recently as 12,570 years ago, and capable of a magnitude 6.0 event (Campbell and others, 1998).
FIELD EXPLORATIONS

The subsurface exploration program consisted of drilling two test borings at the bridge site, one near each abutment location (Figure 2). The field exploration took place on February 2, 2005. The borings were drilled by Bore-Tec, Inc. of Valleyford, Washington, under subcontract to PanGEO. The borings were drilled using hollow stem auger drilling technology. The soils encountered were sampled using conventional Standard Penetration Test (SPT) split spoon samplers. The borings were designated BH-1 and BH-2, and were advanced to depths of 35.2 and 40.3 feet at the west and east abutments, respectively. Both borings met refusal in very dense silty, sandy gravel interpreted as Older Alluvial Fan Deposits. A geotechnical engineer of PanGEO was on site to direct drilling activities and log the test borings.

Appendix A contains summary logs of boreholes and describes the field exploration methodology in greater detail.

SUBSURFACE CONDITIONS

SOILS

The site soils, as encountered in the test borings, consist of catastrophic slackwater flood deposits overlying gravelly alluvium. The subsurface conditions at the bridge sites are illustrated in a subsurface profile developed for each site (Figure 3).

Catastrophic Slackwater Flood Deposits: the flood deposits (also known as Touchet Beds) consist of stiff to hard, dry to moist, light brown sandy silt. The material is thin to medium bedded (a few inches to a few feet). Some beds contain sand seams, which may be wet as water tends to accumulate in the coarser material. The soil is non-plastic to low plasticity, is approximately 33 feet thick in BH-1 and 39 feet thick in BH-2.

Older Alluvial Fan Gravel: Quaternary gravel materials were encountered in the borings below the flood deposits. These materials consist of very dense, light brown, silty sandy gravel. The gravel materials are subangular, and consist mainly of basalt clasts. The material was observed to be weathered, and locally is partly cemented by red – brown iron oxide. These materials were sufficiently dense and coarse to prevent penetration by the auger drilling equipment beyond a few feet.

GROUND WATER

Ground water was encountered in isolated, perched sand seams within the catastrophic flood deposits. Water amounts within these seams are generally negligible. Groundwater was also found to have accumulated roughly 1 to 2 feet above the flood deposits – older alluvial fan gravels interface. The water table occurs at a depth of about 34 feet in BH-1, and 37 feet in BH-2. In both borings, the water table was below the elevation of the canal thalweg.
CONCLUSIONS AND RECOMMENDATIONS

SEISMIC DESIGN PARAMETERS
For seismic design, an acceleration coefficient of 0.10g is recommended per the current acceleration map in the Bridge Design Manual (WSDOT, 2005). The recommended acceleration coefficient is based on expected ground motion at the project site that has a 10 percent probability of exceedence in a 50-year period.

Design response spectra presented in AASHTO (AASHTO, 2004) are considered appropriate for seismic design of the bridge. A Type I soil profile response spectrum is recommended for seismic design. An associated Site Coefficient of 1.0 is recommended.

LIQUEFACTION POTENTIAL
Liquefaction is not expected to develop at the site under the design earthquake conditions due to the low level of groundwater present. Therefore, no special design considerations are recommended relative to the potential occurrence of liquefaction.

APPROACH FILLS
No new approach fills are anticipated for this project. Any new fills that may be placed will be contained by wing walls.

LATERAL EARTH PRESSURES ON ABUTMENT WALL
If a joint is provided at the abutment so that the abutment wall is free to deflect slightly, active pressures can be used in design. An equivalent fluid pressure of 35 pounds per cubic foot (pcf) may be used to calculate lateral earth pressures on the abutments. This equivalent fluid pressure does not include live load surcharge. A lateral earth pressure coefficient, $K_a$, of 0.3 may be used to calculate the lateral load due to surcharge.

If abutment walls are fixed against lateral deflection, at-rest pressures will be appropriate for design. An equivalent, at-rest fluid pressure of 45 pcf may be used to calculate at-rest passive earth pressures on the abutments. This equivalent fluid pressure does not include live load surcharge. An at-rest lateral earth pressure coefficient, $K_o$, of 0.4 may be used to calculate the lateral load due to surcharge.

BRIDGE APPROACH SLABS
Since new approach fill construction is not anticipated, and due to the low traffic volume on Hudson Road, approach slabs are not considered an essential addition to this bridge.
August 29, 2005
Project No. 04-115

**Bridge Foundations**

As encountered in the test borings, the near surface soils at the abutments are generally suitable for support of the replacement structure on spread footings. However, care will need to be exercised to mitigate potential scour and global stability considerations, as discussed below.

Alternatively, the abutments could be supported on driven piles that will bear within the dense granular deposits below the flood slackwater sediments. Either closed-end steel pipe piles or steel H-piles are feasible options, although there is a possibility of the H-piles “running” in the sands, gravels and cobbles of the older alluvium unit. Recommendations for pile supported abutments are discussed below.

Drilled shafts are also a feasible foundation type, but considering the size and relative cost of the replacement structure, shafts are likely to be the least cost effective option of those discussed here. Therefore, shaft design recommendations are not provided.

**Spread Footings**

Spread footings may be used to support the new structure, provided certain geometric constraints are adhered to for global stability considerations. Scour potential should also be investigated in design of spread footings for abutment support. Our design recommendations were developed to be consistent with load and resistance factor design methodology.

**Service Limit State Design**

The charts in Figure 4 and 5 may be used to determine Service Limit State bearing resistances for spread footings as a function of least effective footing dimension, B', for the west and east abutments, respectively. The resistance factors in Table 1 (below) should be used in conjunction with Figures 4 and 5, to evaluate all applicable limit states.

If the channel slopes are not laid back to flatter slope angles, the nominal Service Limit State bearing resistances presented in Figures 4 and 5 are limited in applicability to footings that bear at or below El. +820 feet. The footings should also be located such that the toe of the footing is at least 5 feet behind the face of the existing abutments. These two criteria are necessary to maintain a suitable resistance factor for global stability considerations (e.g., φ <= 0.65).

If the channel slopes are cut back to a 2H:1V slope (projected up from the toe of slope), spread footings may be located according to minimum geometric requirements for structure depth, minimum cover over the footing, and minimum setback from the face of the re-graded slope per the Bridge Design Manual LRFD (WSDOT, 2005). For this configuration, the nominal bearing resistances in Figures 4 and 5 remain applicable.

*Note*: The nominal bearing resistances were developed such that similar bearing stresses will result for similar effective footing widths, but at slightly different estimated settlements. The nominal Service Limit State bearing stress presented in Figure 4 (west abutment) was developed
for 1-inch of total settlement, while the nominal bearing stress presented in Figure 5 (east abutment) was developed for 1½-inch of total settlement. The net effect is expected to result in about ½-inch of differential settlement between the two abutments. This will therefore allow for similar design details for both sides of the bridge, thus simplifying construction.

Strength & Extreme Limit State Design

The charts in Figure 4 and 5 may also be used to determine Strength and Extreme Limit State bearing resistances for spread footings as a function of least effective footing dimension, B', for the west and east abutments, respectively. Nominal sliding resistance may be computed using a friction factor, tanδ, equal to 0.6 for footings cast against native soil. The resistance factors in Table 1 should be used in conjunction with Figures 4 and 5, to evaluate all applicable limit states.

<table>
<thead>
<tr>
<th>Limit State</th>
<th>Resistance Factors, φ Spread footings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>1.0</td>
</tr>
<tr>
<td>Strength</td>
<td>0.45</td>
</tr>
<tr>
<td>Extreme</td>
<td>1.0</td>
</tr>
<tr>
<td>Sliding</td>
<td>0.8(1)</td>
</tr>
</tbody>
</table>

(1) Assumes concrete cast against ground.

Soil-Structure Interaction Parameters for Spread Footings

The values presented in Table 2 for dynamic shear modulus (G) and Poisson's Ratio (v) (needed for static and dynamic design) are recommended for the material below the footing level.

| Table 2: Recommended Spread Footing Spring Constants |
|------------------------------------------|----------|
| G (0.02%)   | G (0.2%) | v       |
| 1600 ksf   | 400 ksf | 0.35    |

This range of values for the dynamic shear modulus (G) is for strain magnitudes between 0.02% and 0.2%; hence, a linear relationship should be assumed over the given range.

PILE SUPPORTED ABUTMENTS

The proposed bridge replacement may also be founded on driven pile foundations bearing in the alluvial fan deposits comprised of very dense silty, sand and gravel. Steel pipe piles driven closed end or steel H-piles are appropriate for support of the proposed structure. Piles driven at the abutments will encounter approximately 40 feet of stiff to hard, non-to-low plastic sandy silt before bearing in the very dense sand and gravel. We estimate that pipe piles will penetrate 3 to
5 feet into the bearing layer and H-piles will penetrate 5 to 10 feet before achieving the design capacity.

We recommend driving 12- to 14-inch diameter steel pipe piles closed end or 12- to 14-inch steel H-piles. For pipe piles, a minimum wall thickness of ½ inch is preferred for drivability but the final thickness should be evaluated by the structural engineer. H-piles should be fitted with driving shoes for tip protection. Pile installation should be performed in accordance with Section 6-05 of the 2004 WSDOT Standard Specifications. We recommend using the dynamic WSDOT Driving formula in Section 6-05 to determine the pile capacity during driving. The LRFD resistance factor associated with this formula is 0.55 (WSDOT Geotechnical Design Manual, 2004). This resistance factor should be used to evaluate Strength Limit States. A resistance factor of 1.0 is applicable for Extreme Event Limit States.

For piles driven to or below the minimum tip elevation presented in Table 3 and that meet the minimum required bearing resistance as determined by the WSDOT dynamic formula, settlement under working or service loads will be less than about ½-inch. Since the piles are driven essentially to end-bearing in a dense soil stratum, Service State settlement checks need not be performed.

Table 3: Recommended Pile Design and Construction Parameters

<table>
<thead>
<tr>
<th>Steel Pile Type/Size</th>
<th>Nominal (Ultimate) Axial Compressive Resistance</th>
<th>Nominal (Ultimate) Axial Uplift Resistance</th>
<th>Estimated Pile Tip Elevation (feet)*</th>
<th>Minimum Pile Tip Elevation (feet)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed End Pipe Pile</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-inch diameter</td>
<td>330 kips</td>
<td>60 kips</td>
<td>East Abutment 788</td>
<td>East Abutment: 794</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>West Abutment 788</td>
<td>West Abutment: 794</td>
</tr>
<tr>
<td>14-inch diameter</td>
<td>420 kips</td>
<td>75 kips</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H-Pile</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HP 12</td>
<td>420 kips</td>
<td>40 kips</td>
<td>East Abutment 783</td>
<td>East Abutment: 794</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>West Abutment 783</td>
<td>West Abutment: 794</td>
</tr>
<tr>
<td>HP 14</td>
<td>600 kips</td>
<td>50 kips</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| *Approximate existing ground surface Elevation: east abutment: 833 ft; west abutment 834 ft.
Downdrag

Since no new approach fills are anticipated for this project and since consolidation of the underlying silt soils is not expected, downdrag loads are not anticipated and no special design considerations are required to accommodate downdrag forces.

Lateral Pile Resistance

Recommended parameters for analysis of lateral pile resistance using the program LPILE or COM 624 are presented in Table 4. Note that the soil layers are referenced to the existing ground surface and do not take into consideration the depth of the pile cap.

<table>
<thead>
<tr>
<th>Soil Layer</th>
<th>Bottom of Layer Elevation (feet)</th>
<th>Bottom of Layer Depth (ft)</th>
<th>Soil Type</th>
<th>Effective Unit Weight of Soil (pcf) / (pci)</th>
<th>Cohesion (psf) / (psi)</th>
<th>Axial Strain ε50</th>
<th>Friction Angle Φ (deg)</th>
<th>Modulus of Subgrade Reaction (pci)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>793</td>
<td>40</td>
<td>Sand</td>
<td>120 / 0.069</td>
<td>--</td>
<td>--</td>
<td>35</td>
<td>135</td>
</tr>
<tr>
<td>2</td>
<td>783</td>
<td>50</td>
<td>Sand</td>
<td>62.6 / 0.036</td>
<td>--</td>
<td>--</td>
<td>40</td>
<td>140</td>
</tr>
</tbody>
</table>

*Ground surface at El. 833 feet. Ground water table assumed to be at El. 793 feet.

Group Reduction Factors

For the proposed pile groups consisting of a single row of piles, the group reduction factors for lateral analysis presented in Table 5 should be used. The factors account for pile interaction effects due to proximity and are a function of pile spacing based on pile diameter, D, and the direction of loading. Group effects for axial loads will not be significant so long as piles are spaced at least 2.5D. These factors are consistent with those presented in the WSDOT Bridge Design Manual (2005).
Table 5: Recommended Group Reduction Factors for Lateral Analysis

<table>
<thead>
<tr>
<th>Pile Spacing(1)</th>
<th>Reduction Factor for Load Applied Parallel to Pier Cap</th>
<th>Reduction Factor for Load Applied Perpendicular to Pier Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>6D</td>
<td>0.9</td>
<td>1.0</td>
</tr>
<tr>
<td>5D</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td>4D</td>
<td>0.65</td>
<td>0.9</td>
</tr>
<tr>
<td>3D</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>2D</td>
<td>0.4</td>
<td>0.6</td>
</tr>
</tbody>
</table>

(1) As a function of pile diameter, D.

CONSTRUCTION CONSIDERATIONS

The following items should be considered during the foundation design and development of the contract specifications.

1. Temporary shoring and/or slopes will be required during construction of the abutment foundations. The design and construction of temporary shoring/slopes should be the responsibility of the contractor. Groundwater inflow is not expected in foundation excavations.

2. Pile tip protection should be included for H-piles to mitigate potential pile tip damage when the piles reach the older alluvium bearing layer.

3. The piles should be driven in accordance with Section 6-05 of the Standard Specifications for Road, Bridge and Municipal Construction (WSDOT, 2004). Ultimate capacities of driven piles should be verified during construction using the method consistent with the strength limit state resistance factor recommended in Table 6 for field verification of nominal pile resistance using the dynamic equation in Section 6-05.

4. At least one test pile should be driven at each pile-supported footing.
LIMITATIONS AND UNIFORMITY OF CONDITIONS

PanGEO, Inc. (PanGEO) prepared this report for Sargent Engineering, and the Yakima County Department of Public Works. The recommendations contained in this report are based on a site reconnaissance, a subsurface exploration program, review of pertinent subsurface information, and our understanding of the project.

Variations in soil conditions may exist between the locations of the explorations and the actual conditions underlying the site. The nature and extent of soil variations may not be evident until construction occurs. If any soil conditions are encountered at the site that are different from those described in this report, PanGEO should be immediately notified to review the applicability of the recommendations presented herein. Additionally, PanGEO should also be notified to review the applicability of these recommendations if there are any changes in the project scope.

This report has been prepared for planning and design purposes for specific application to the proposed bridge replacement projects in accordance with the generally accepted standards of local practice at the time this report was written. No warranty, express or implied, is made. This report may be used only by the client and for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both off and on-site), or other factors including advances in our understanding of applied science, may change over time and could materially affect our findings. Therefore, this report should not be relied upon after 36 months from its issuance. PanGEO should be notified if the project is delayed by more than 36 months from the date of this report so that the applicability of the conclusions and recommendations presented herein may be evaluated considering the time lapse.

Within the limitations of scope, schedule and budget, PanGEO engages in the practice of geotechnical engineering and endeavors to perform its services in accordance with generally accepted professional principles and practices at the time this report and/or its contents was prepared. No warranty, express or implied, is made. The scope of PanGEO’s work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous or toxic substances in the soil, surface water or ground water at this site. PanGEO does not practice or consult in the field of safety engineering. PanGEO does not direct the contractor’s operations, and cannot be held responsible for the safety of personnel other than our own on the site; the safety of others is the responsibility of the contractor.

It is the client’s responsibility to see that all parties to this project, including the designer, contractor, subcontractors, etc., are made aware of this report in its entirety. The use of information contained in this report for bidding purposes shall be at the contractor’s sole option and risk. Any party other than the client who wishes to use this report shall notify PanGEO of such intended use and for permission to copy this report. Based on the intended use of the report, PanGEO may require that additional work be performed and that an updated report be reissued.
August 29, 2005  
Project No. 04-115  

Noncompliance with any of these requirements will release PanGEO from any liability resulting from the use this report.

CLOSURE  
PanGEO is pleased to support the Sargent Engineers design team and the Yakima County Public Works Department with geotechnical engineering recommendations. If you have any questions regarding this report, please call (206) 262-0370.

Robert E. Kimmerling, P.E.  
Principal Geotechnical Engineer
REFERENCES

AASHTO, 2004 (with interims) LRFD Bridge Design Specifications, 3rd edition, American Association of State Highway and Transportation Officials


LEGEND
Borehole Symbols

BH-1
SPT N-value
Groundwater table
Geologic Contact (approximate)

Notes:
1. Ground profile based on survey data provided by Sargent Engineering.
2. See Figure 2 for location of Section A
3. Subsurface profile based on interpolation of widely-spaced test borings, actual conditions should be anticipated to vary.
Nominal Service Limit State Bearing Resistance
(1-inch settlement)

Note: Nominal Service Limit State bearing resistance applicable for footings bearing at or below El. +820 feet. See text for additional limitations and discussion.

Strength & Extreme Limit State
Nominal Bearing Resistance

PanGEO
Hudson Road Bridge
No. 489 Replacement
Yakima County, Washington

WEST ABUTMENT SPREAD FOOTING
NOMINAL BEARING RESISTANCES

Project No.
04-115
Figure No.
4
Nominal Service Limit State Bearing Resistance
(1.5-inch settlement)

Note: Nominal Service Limit State bearing resistance applicable for footings bearing at or below El. +820 feet. See text for additional limitations and discussion.

Strength & Extreme Limit State Nominal Bearing Resistance

PanGEO INCORPORATED
Hudson Road Bridge No. 489 Replacement Yakima County, Washington
EAST ABUTMENT SPREAD FOOTING NOMINAL BEARING RESISTANCES

Project No. 04-115  Figure No. 5
APPENDIX A

FIELD EXPLORATIONS
APPENDIX A: FIELD EXPLORATIONS

Appendix A contains written and graphical borehole logs presenting the factual and interpretive results of our exploratory drilling program on the subject sites. The descriptions of the materials encountered in the subsurface explorations are based on the soil and rock samples extracted from the borings. The sample descriptions are augmented by observation of the drilling action and drill cuttings brought to the surface during field operations. The paragraphs below describe the field operations and sampling procedures used during the geotechnical field explorations.

FIELD EXPLORATIONS

The subsurface exploration program consisted of drilling two test borings at the bridge site, drilled on February 2, 2005. Both borings were drilled on the north shoulder of the road, as close as possible to the planned locations of the new abutments (approximately 15 to 20 feet from the existing bridge abutments). The borings, designated BH-1 and BH-2, were advanced to depths of 35.2 and 41.4 feet, respectively.

The approximate boring locations are shown on Figures 2 and 3 of the main text. A representative of PanGEO logged the test borings. Soil samples were collected from selected intervals in each boring. The borings were drilled using a trailer mounted Mobile B-24 drill rig supplied with Hollow Stem Auger drilling equipment with a safety hammer sampling system operated by a rope and cathead system, provided by Bore-Tec, Inc. of Valleyford, Washington. The locations of the borings were measured from existing site features, using steel measuring tape.

SAMPLING METHODS

Standard penetration tests were taken in both borings at 5-foot intervals, starting at 5 feet below ground surface and continuing to the bottom of each boring. The number of blows to drive the sampler each 6 inches over an 18-inch interval was recorded and indicated on the boring logs. The number of blows to drive the sampler the final 12 inches is termed the SPT resistance, or N-value, and is used to evaluate the strength and consistency/relative density of the soil. The hammer used to perform SPT sampling was a "standard" hammer equipped with a rope and cathead mechanism. The efficiency of the hammer mechanism is considered when evaluating the liquefaction potential of a soil. The SPT N-values reported on the borehole logs are field values, and are therefore not corrected for hammer efficiency, overburden stress or rod lengths.

A geotechnical engineer from PanGEO was present throughout the field exploration program to observe the borings, assist in sampling, and to prepare descriptive logs of the explorations. Soils were classified in general accordance with the guidelines shown on Figure A-1. Summary boring logs are included as Figures A-2 and A-3. The stratigraphic contacts shown on the summary logs represent the approximate boundaries between soil types; actual stratigraphic contacts encountered at other locations in the field may differ from the contact elevations shown on the logs, and may be gradual rather than abrupt. The soil and groundwater conditions depicted are only for the specific date and locations reported, and therefore, are not necessarily representative of other locations and times.
**RELATIVE DENSITY / CONSISTENCY**

<table>
<thead>
<tr>
<th>SAND / GRAVEL</th>
<th>SPT N-values</th>
<th>Approx. Relative Density (%)</th>
<th>Consistency</th>
<th>SPT N-values</th>
<th>Approx. Undrained Shear Strength (psf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Loose</td>
<td>&lt;4</td>
<td>&lt;15</td>
<td>Very Soft</td>
<td>&lt;2</td>
<td>&lt;200</td>
</tr>
<tr>
<td>Loose</td>
<td>4 to 10</td>
<td>15 - 35</td>
<td>Soft</td>
<td>2 to 4</td>
<td>250 - 500</td>
</tr>
<tr>
<td>Med. Dense</td>
<td>10 to 30</td>
<td>35 - 65</td>
<td>Med. Stiff</td>
<td>4 to 8</td>
<td>500 - 1000</td>
</tr>
<tr>
<td>Dense</td>
<td>30 to 50</td>
<td>65 - 85</td>
<td>Stiff</td>
<td>8 to 15</td>
<td>1000 - 2000</td>
</tr>
<tr>
<td>Very Dense</td>
<td>&gt;50</td>
<td>85 - 100</td>
<td>Very Stiff</td>
<td>15 to 30</td>
<td>2000 - 4000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hard</td>
<td>&gt;30</td>
<td>&gt;4000</td>
</tr>
</tbody>
</table>

**SILT / CLAY**

<table>
<thead>
<tr>
<th>Density</th>
<th>SPT N-values</th>
<th>Consistency</th>
<th>SPT N-values</th>
<th>Approx. Undrained Shear Strength (psf)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Soft</td>
<td>&lt;2</td>
<td>&lt;200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft</td>
<td>2 to 4</td>
<td>250 - 500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Med. Stiff</td>
<td>4 to 8</td>
<td>500 - 1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stiff</td>
<td>8 to 15</td>
<td>1000 - 2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Stiff</td>
<td>15 to 30</td>
<td>2000 - 4000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard</td>
<td>&gt;30</td>
<td>&gt;4000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**UNIFIED SOIL CLASSIFICATION SYSTEM**

**MAJOR DIVISIONS**

<table>
<thead>
<tr>
<th>Gravel</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% or more of the coarse fraction retained on the #4 sieve. Use dual symbols (e.g. GP-GM) for 5% to 12% fines.</td>
</tr>
</tbody>
</table>

**GROUP DESCRIPTIONS**

**GRAVEL (<5% fines)**

| GW: Well-graded GRAVEL |

**GRAVEL (>12% fines)**

| GM: Silty GRAVEL |

**SAND (<5% fines)**

| SP: Poorly-graded SAND |

**SAND (>12% fines)**

| SM: Silty SAND |

**Silt and Clay**

| ML: Elastic SILT |

**Liquid Limit < 50**

| CL: Lean SILT |

**Organic Silt or Clay**

| OL: Organic Silt or CLAY |

**Liquid Limit > 50**

| CH: Fat CLAY |

**Organic Silt or CLAY**

| OH: Organic Silt or CLAY |

**Highly Organic Soils**

| PT: PEAT |

**Notes:**

1. Soil exploration logs contain material descriptions based on visual observation and field tests using a system modified from the Uniform Soil Classification System (USCS). Where necessary laboratory tests have been conducted (as noted in the "Other Tests" column), unit descriptions may include a classification. Please refer to the discussions in the report text for a more complete description of the subsurface conditions.

2. The graphic symbols given above are not inclusive of all symbols that may appear in borehole logs. Other symbols may be used where field observations indicate mixed soil constituents or dual constituent materials.

**DESCRIPTIONS OF SOIL STRUCTURES**

- **Layered:** Units of material distinguished by color and/or composition from material units above and below
- **Laminated:** Layers of soil typically 0.05 to 1 mm thick, max. 1 cm
- **Lens:** Layer of soil that pinches out laterally
- **Interlayered:** Alternating layers of differing soil material
- **Pocket:** Erratic, discontinuous deposit of limited extent
- **Homogeneous:** Soil with uniform color and composition throughout
- **Fissured:** Breaks along defined planes
- **Slickensided:** Fracture planes that are polished or glossy
- **Blocky:** Angular soil lumps that resist breakdown
- **Disrupted:** Soil that is broken and mixed
- **Scattered:** Less than one per foot
- **Numerous:** More than one per foot
- **BCN:** Angle between bedding plane and a plane normal to core axis

**COMPONENT DEFINITIONS**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>SIZE / SIEVE RANGE</th>
<th>COMPONENT</th>
<th>SIZE / SIEVE RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boulder</td>
<td>&gt; 12 inches</td>
<td>Sand</td>
<td>#4 to #10 sieve (4.5 to 2.0 mm)</td>
</tr>
<tr>
<td>Cobble</td>
<td>3 to 12 inches</td>
<td>Coarse Sand</td>
<td>#10 to #40 sieve (2.0 to 0.42 mm)</td>
</tr>
<tr>
<td>Gravel</td>
<td></td>
<td>Medium Sand</td>
<td>#40 to #200 sieve (0.42 to 0.074 mm)</td>
</tr>
<tr>
<td>Coarse Gravel</td>
<td>3 to 3/4 inches</td>
<td>Fine Sand</td>
<td>0.074 to 0.002 mm</td>
</tr>
<tr>
<td>Fine Gravel</td>
<td>3/4 inches to #4 sieve</td>
<td>Silt</td>
<td>&lt;0.002 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clay</td>
<td></td>
</tr>
</tbody>
</table>

**MOISTURE CONTENT**

- **Dry:** Dusty, dry to the touch
- **Moist:** Damp but no visible water
- **Wet:** Visible free water

**TERMS AND SYMBOLS**

- CBR: California Bearing Ratio
- Comp: Compaction Tests
- Con: Consolidation
- DD: Dry Density
- DS: Direct Shear
- %F: Fine Content
- GS: Grain Size
- Perm: Permeability
- PP: Pocket Penetrometer
- R: R-value
- SG: Specific Gravity
- TV: Torsion
- TXC: Triaxial Compression
- UCC: Unconfined Compression

**SYMBOLS**

- Sample/In Situ test types and intervals
- 2-inch OD Split Spoon, SPT (140-B, hammer, 30° drop)
- 3.25-inch OD Split Spoon (300-lb hammer, 30° drop)
- Non-standard penetration test (see boring log for details)
- Thin wall ( Shelby) tube
- Grab
- Rock core
- Vane Shear

**MONITORING WELL**

- Groundwater Level at time of drilling (ATD)
- Static Groundwater Level
- Cement / Concrete Seal
- Bentonite grout / seal
- Silica sand backfill
- Slotted tip
- Slough
- Bottom of Boring

**PanGEO INCORPORATED**

Phone: 206.292.0370
MATERIAL DESCRIPTION

Stiff to hard tan sandy SILT, dry to moist, with occasional wet sand seams, roots noted in upper 10 feet. (Catastrophic Flood Slackwater Deposits).

LOG OF TEST BORING BH-1

Completion Depth: 36.2 ft
Date Borehole Started: 2/2/05
Date Borehole Completed: 2/2/05
Logged By: TEA
Drilling Company: Bore-Tec

**LOG OF TEST BORING BH-1**

**Project:** Hudson Road Bridge  
**Job Number:** 04-115  
**Location:** Yakima County, Washington  
**Coordinates:** Northing, Easting:  
**Surface Elevation:** ~627 ft  
**Top of Casing Elev.:**  
**Drilling Method:** Hollow Stem Auger  
**Sampling Method:** SPT

### MATERIAL DESCRIPTION

<table>
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<th>Depth (ft)</th>
<th>Sample No.</th>
<th>Sample Type</th>
<th>Blows / 6 in.</th>
<th>Other Tests</th>
<th>Symbol</th>
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<td>50/2</td>
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<td></td>
<td>Very dense tan silty sandy GRAVEL, dry to moist, coarse-grained, angular. (Older Alluvial Fan Deposits). Bottom of boring at 35.2 feet.</td>
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**Completion Depth:** 35.2 ft  
**Date Borehole Started:** 2/2/05  
**Date Borehole Completed:** 2/2/05  
**Logged By:** TEA  
**Drilling Company:** Bore-Tec

**Remarks:** Standard Penetration Test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with an rope and cathead mechanism. Approximate Station & Offset: 5+46, 27’ Lt.

---

The stratification lines represent approximate boundaries. The transition may be gradual.
**MATERIAL DESCRIPTION**

Very stiff to hard tan sandy Silt, dry to moist, with occasional wet sand seams, roots noted in upper 10 feet. (Catastrophic Flood Slackwater Deposits).

**LOG OF TEST BORING BH-2**


The stratification lines represent approximate boundaries. The transition may be gradual.
Material Description:

Very stiff to hard tan sandy SILT, dry to moist, with occasional wet sand seams, roots noted in upper 10 feet. (Catastrophic Flood Slackwater Deposits). (Continued)

Very dense tan silty sandy GRAVEL, dry to moist, coarse-grained, angular. (Older Alluvial Fan Deposits).

Bottom of boring at 40.3 feet.

APPENDIX B

LABORATORY TESTING AND RESULTS
APPENDIX B: LABORATORY TESTING AND RESULTS

This appendix contains descriptions of the procedures and results of physical (geotechnical) laboratory testing conducted on soil samples retained during the field explorations at the Hudson Road Bridge No. 489 replacement site. The methodology of the soil sampling from the borings was described in Appendix A. The samples were tested to determine basic physical index properties of the soils for purposes of classifying the material types encountered and to measure or correlate parameters used in the geotechnical design.

Laboratory testing was performed by The Riley Group, Inc., of Seattle, Washington, in general accordance with the following ASTM Standard Test Methods (STM):

D 2216 Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock

D 421/422 Test Method for Particle-Size Analysis of Soils

D 4318 Test Method for Liquid Limits, Plastic Limits, and Plasticity Index of Soils (Atterberg Limits)

Moisture contents and liquid/plastic limits (where determined) are shown on the logs of test borings. The results of particle-size analyses (grain size distribution) are presented on Figure B-1.
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<th>PL</th>
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**GRAIN SIZE DISTRIBUTION**

Project: Hudson Road Bridge  
Job Number: 04-115  
Location: Yakima County, Washington  

Figure B-1
APPENDIX B

DRAWINGS OF EXISTING BRIDGE
COUNTY ROAD PROJECT
No. 658
HUDSON ROAD BRIDGE
YAKIMA COUNTY, WASHINGTON
SCALE AS NOTED
APPROX. 0.1 MILE EAST OF NW CORNER
SEC. 16 T. 10 N., R. 22 E., W.2
DECEMBER 1956
H.R. SWEET COUNTY ROAD ENGINEER
SHEET 1 OF 2 SHEETS

TAILS DECK UNITS
SCALE 3/8" = 1'-0"

REQUIRED:
6 DECK UNITS 19'-11" LONG 29'-0" HIGH
6 DECK UNITS 29'-10" LONG 22'-11" LONG
6 DECK UNITS

3/8" COIL TIES for lag bolts in each peg at each end of each unit

1/8" DIA. HOLES

SCALE 3/8" = 1'-0"
PLAN
SCALE ¼" = 1'-0"

Location of 1" Dia Holes in each Bay of and Base Unit above beams over piling as shown in Section BB

SECTION AA
SCALE ¼" = 1'-0"
STIRUP SPACING

7" Spacing at ends for a distance of 12% of section length or a minimum of 3 spaces.

SPACED @ 1'-2"

PRECAST CONCRETE DECK SECTION
SCALE: 3/4" = 1'-0"

OPTIONAL LENGTH

ALL REINF STEEL #4 EXCEPT A

NCORA ANGLE LENGTHS SEE TABLE BELOW
TOTAL OF 6 STANDARD DECK UNITS

GRAouted BETWEEN SECTIONS

HOLE LEFT FOR 13/4" BOLTS
MAX. SPACING 10'-0"

TOTAL OF 7 DECK UNITS (incl. 2 CURB SECTIONS)
SCALE: 3/8" = 1'-0"

FROM BR 519
PREVAILING WAGE RATES
**Washington State Prevailing Wage Rates For Public Works Contracts**

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, workers' wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements is provided on the Benefit Code Key.

**YAKIMA COUNTY**

**Effective 08-31-06**

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## YAKIMA COUNTY

Effective 08-31-06

(See Benefit Code Key)

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<th>Holiday Code</th>
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OVERTIME CALCULATIONS ARE BASED ON THE HOURLY RATE ACTUALLY PAID TO THE WORKER. ON PUBLIC WORKS PROJECTS, THE HOURLY RATE MUST BE NOT LESS THAN THE PREVAILING RATE OF WAGE MINUS THE HOURLY RATE OF THE COST OF FRINGE BENEFITS ACTUALLY PROVIDED FOR THE WORKER.

1. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

A. ALL HOURS WORKED ON SATURDAYS, SUNDAYS AND HOLIDAYS SHALL ALSO BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

B. ALL HOURS WORKED ON SATURDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

C. THE FIRST TWO (2) HOURS AFTER EIGHT (8) REGULAR HOURS MONDAY THROUGH FRIDAY AND THE FIRST TEN (10) HOURS ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL OTHER OVERTIME HOURS WORKED SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

D. THE FIRST TWO (2) HOURS BEFORE OR AFTER A FIVE - EIGHT (8) HOUR WORK WEEK DAY OR A FOUR - TEN (10) HOUR WORK WEEK DAY AND THE FIRST EIGHT (8) HOURS WORKED THE NEXT DAY AFTER EITHER WORK WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL ADDITIONAL HOURS WORKED AND ALL WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

E. THE FIRST TWO (2) HOURS AFTER EIGHT (8) REGULAR HOURS MONDAY THROUGH FRIDAY AND THE FIRST EIGHT (8) HOURS ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL OTHER HOURS WORKED MONDAY THROUGH SATURDAY AND ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

F. THE FIRST TWO (2) HOURS AFTER EIGHT (8) REGULAR HOURS MONDAY THROUGH FRIDAY AND THE FIRST TEN (10) HOURS ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL OTHER OVERTIME HOURS WORKED, EXCEPT LABOR DAY, SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON LABOR DAY SHALL BE PAID AT THREE TIMES THE HOURLY RATE OF WAGE.

G. THE FIRST TEN (10) HOURS WORKED ON SATURDAYS AND THE FIRST TEN (10) HOURS WORKED ON A FIFTH CALENDAR WEEKDAY IN A FOUR - TEN HOUR SCHEDULE, SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED IN EXCESS OF TEN (10) HOURS PER DAY MONDAY THROUGH SATURDAY AND ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

H. ALL HOURS WORKED ON SATURDAYS (EXCEPT MAKEUP DAYS IF WORK IS LOST DUE TO INCLEMENT WEATHER CONDITIONS OR EQUIPMENT BREAKDOWN) SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED MONDAY THROUGH SATURDAY OVER TWELVE (12) HOURS AND ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

I. THE FIRST TWO (2) HOURS AFTER EIGHT (8) REGULAR HOURS MONDAY THROUGH FRIDAY AND THE FIRST TEN (10) HOURS ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED OVER TEN (10) HOURS MONDAY THROUGH SATURDAY, SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

J. ALL HOURS WORKED ON SATURDAYS AND SUNDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

K. ALL HOURS WORKED IN EXCESS OF TEN (10) HOURS PER DAY MONDAY THROUGH SATURDAY AND ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

L. ALL HOURS WORKED ON SATURDAYS (EXCEPT MAKEUP DAYS IF WORK IS LOST DUE TO INCLEMENT WEATHER CONDITIONS) SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

M. ALL HOURS WORKED ON SATURDAYS (EXCEPT MAKEUP DAYS) SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

N. THE FIRST TEN (10) HOURS WORKED ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SUNDAYS, HOLIDAYS, AND AFTER TWELVE (12) HOURS, MONDAY THROUGH FRIDAY, AND AFTER TEN (10) HOURS ON SATURDAY SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

O. ALL HOURS WORKED ON SATURDAYS (EXCEPT MAKEUP DAYS) AND SUNDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.
1. Q. THE FIRST TWO (2) HOURS AFTER EIGHT (8) REGULAR HOURS MONDAY THROUGH FRIDAY AND UP TO TEN (10) HOURS WORKED ON SATURDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED IN EXCESS OF TEN (10) HOURS PER DAY MONDAY THROUGH SATURDAY AND ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS (EXCEPT CHRISTMAS DAY) SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON CHRISTMAS DAY SHALL BE PAID AT TWO AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

R. ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE.

S. THE FIRST TWO (2) HOURS AFTER EIGHT (8) REGULAR HOURS MONDAY THROUGH FRIDAY AND THE FIRST EIGHT (8) HOURS ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL OTHER OVERTIME HOURS WORKED, EXCEPT LABOR DAY, SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON LABOR DAY SHALL BE PAID AT THREE TIMES THE HOURLY RATE OF WAGE.

T. ALL HOURS WORKED ON SATURDAYS, EXCEPT MAKE-UP DAYS, SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED AFTER 6:00PM SATURDAY TO 6:00AM MONDAY AND ON HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

U. ALL HOURS WORKED ON SATURDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS (EXCEPT LABOR DAY) SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON LABOR DAY SHALL BE PAID AT THREE TIMES THE HOURLY RATE OF WAGE.

V. ALL HOURS WORKED ON SATURDAYS, SUNDAYS AND HOLIDAYS (EXCEPT THANKSGIVING DAY AND CHRISTMAS DAY) SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON THANKSGIVING DAY AND CHRISTMAS DAY SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

W. ALL HOURS WORKED ON SATURDAYS AND SUNDAYS (EXCEPT MAKE-UP DAYS) SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

2. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

A. THE FIRST SIX (6) HOURS ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED IN EXCESS OF SIX (6) HOURS ON SATURDAY AND ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE.

B. ALL HOURS WORKED ON HOLIDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

C. ALL HOURS WORKED ON SUNDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SUNDAYS SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE.

D. ALL HOURS WORKED ON SATURDAYS AND SUNDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. THE FIRST EIGHT (8) HOURS WORKED ON HOLIDAYS SHALL BE PAID AT STRAIGHT TIME IN ADDITION TO THE HOLIDAY PAY. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS ON HOLIDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

E. ALL HOURS WORKED ON SATURDAYS OR HOLIDAYS (EXCEPT LABOR DAY) SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SUNDAYS OR ON LABOR DAY SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE.

F. THE FIRST EIGHT (8) HOURS WORKED ON HOLIDAYS SHALL BE PAID AT THE STRAIGHT HOURLY RATE OF WAGE IN ADDITION TO THE HOLIDAY PAY. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS ON HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

G. ALL HOURS WORKED ON SUNDAY SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON PAID HOLIDAYS SHALL BE PAID AT TWO AND ONE-HALF TIMES THE HOURLY RATE OF WAGE INCLUDING HOLIDAY PAY.

H. ALL HOURS WORKED ON SUNDAY SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON HOLIDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

I. ALL HOURS WORKED ON SATURDAYS AND HOLIDAYS (EXCEPT LABOR DAY) SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SUNDAYS AND ON LABOR DAY SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE.

J. ALL HOURS WORKED ON SUNDAYS SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON PAID HOLIDAYS SHALL BE PAID AT TWO AND ONE-HALF TIMES THE HOURLY RATE OF WAGE, INCLUDING THE HOLIDAY PAY. ALL HOURS WORKED ON UNPAID HOLIDAYS SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE.
BENEFIT CODE KEY - EFFECTIVE 08-31-06

2. K. ALL HOURS WORKED ON HOLIDAYS SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE IN ADDITION TO THE HOLIDAY PAY.

M. ALL HOURS WORKED ON SATURDAYS, SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

O. ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

P. THE FIRST EIGHT (8) HOURS ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS ON SATURDAY AND ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE.

4A. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SATURDAYS, SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

HOLIDAY CODES

5. A. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (7).

B. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, FRIDAY AFTER THANKSGIVING DAY, THE DAY BEFORE CHRISTMAS, AND CHRISTMAS DAY (8).

C. HOLIDAYS: NEW YEAR'S DAY, PRESIDENTS' DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (8).

D. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, THE FRIDAY AND SATURDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (8).

E. HOLIDAYS: NEW YEAR'S DAY, PRESIDENTS' DAY, MEMORIAL DAY, INDEPENDENCE DAY, PRESIDENTIAL ELECTION DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (8).


G. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, THE LAST WORK DAY BEFORE CHRISTMAS DAY, AND CHRISTMAS DAY (7).


I. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, AND CHRISTMAS DAY (6).

J. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, THANKSGIVING DAY, FRIDAY AFTER THANKSGIVING DAY, CHRISTMAS EVE DAY, AND CHRISTMAS DAY (7).

N. HOLIDAYS: NEW YEAR'S DAY, PRESIDENTS' DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS' DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (9).

P. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, FRIDAY AND SATURDAY AFTER THANKSGIVING DAY, THE DAY BEFORE CHRISTMAS, AND CHRISTMAS DAY (9).

Q. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, AND CHRISTMAS DAY (6).

R. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING DAY, ONE-HALF DAY BEFORE CHRISTMAS DAY, AND CHRISTMAS DAY. (7 1/2).

S. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENTS' DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, AND CHRISTMAS DAY (7).

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5. V. PAID HOLIDAYS: SIX (6) PAID HOLIDAYS.
W. PAID HOLIDAYS: NINE (9) PAID HOLIDAYS.
X. HOLIDAYS: AFTER 520 HOURS - NEW YEAR'S DAY, THANKSGIVING DAY AND CHRISTMAS DAY. AFTER 2080 HOURS - NEW YEAR'S DAY, WASHINGTON'S BIRTHDAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, CHRISTMAS DAY AND A FLOATING HOLIDAY (8).
Y. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, PRESIDENTIAL ELECTION DAY, THANKSGIVING DAY, THE FRIDAY FOLLOWING THANKSGIVING DAY, AND CHRISTMAS DAY (8).
Z. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (8).

B. PAID HOLIDAYS: NEW YEAR'S EVE DAY, NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, CHRISTMAS EVE'S DAY, AND CHRISTMAS DAY (9).
I. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (7).
L. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, THE LAST WORKING DAY BEFORE CHRISTMAS DAY, AND CHRISTMAS DAY. (8)
Q. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS DAY, THANKSGIVING DAY, THE DAY AFTER THANKSGIVING DAY AND CHRISTMAS DAY (8). UNPAID HOLIDAY; PRESIDENTS' DAY.
V. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING DAY, CHRISTMAS EVE DAY, CHRISTMAS DAY, AND ONE DAY OF THE EMPLOYEE'S CHOICE (9).
W. PAID HOLIDAYS: NEW YEAR'S DAY, DAY BEFORE NEW YEAR'S DAY, PRESIDENTS DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING DAY, CHRISTMAS DAY, DAY BEFORE OR AFTER CHRISTMAS DAY (10).
X. PAID HOLIDAYS: NEW YEAR'S DAY, DAY BEFORE OR AFTER NEW YEAR'S DAY, PRESIDENTS DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING DAY, CHRISTMAS DAY, DAY BEFORE OR AFTER CHRISTMAS DAY, EMPLOYEE'S BIRTHDAY (11).

NOTE CODES

8. A. THE STANDBY RATE OF PAY FOR DIVERS SHALL BE ONE-HALF TIMES THE DIVERS RATE OF PAY. IN ADDITION TO THE HOURLY WAGE AND FRINGE BENEFITS, THE FOLLOWING DEPTH PREMIUMS APPLY TO DEPTHS OF FIFTY FEET OR MORE:
OVER 50' TO 100' - $1.00 PER FOOT FOR EACH FOOT OVER 50 FEET
OVER 100' TO 175' - $2.25 PER FOOT FOR EACH FOOT OVER 100 FEET
OVER 175' TO 250' - $5.50 PER FOOT FOR EACH FOOT OVER 175 FEET
OVER 250' - DIVERS MAY NAME THEIR OWN PRICE, PROVIDED IT IS NO LESS THAN THE SCALE LISTED FOR 250 FEET

C. THE STANDBY RATE OF PAY FOR DIVERS SHALL BE ONE-HALF TIMES THE DIVERS RATE OF PAY. IN ADDITION TO THE HOURLY WAGE AND FRINGE BENEFITS, THE FOLLOWING DEPTH PREMIUMS APPLY TO DEPTHS OF FIFTY FEET OR MORE:
   OVER 50' TO 100' - $1.00 PER FOOT FOR EACH FOOT OVER 50 FEET
   OVER 100' TO 150' - $1.50 PER FOOT FOR EACH FOOT OVER 100 FEET
   OVER 150' TO 200' - $2.00 PER FOOT FOR EACH FOOT OVER 150 FEET
   OVER 200' - DIVERS MAY NAME THEIR OWN PRICE

D. WORKERS WORKING WITH SUPPLIED AIR ON HAZMAT PROJECTS RECEIVE AN ADDITIONAL $1.00 PER HOUR.

L. WORKERS ON HAZMAT PROJECTS RECEIVE ADDITIONAL HOURLY PREMIUMS AS FOLLOWS - LEVEL A: $0.75, LEVEL B: $0.50, AND LEVEL C: $0.25.

M. WORKERS ON HAZMAT PROJECTS RECEIVE ADDITIONAL HOURLY PREMIUMS AS FOLLOWS: LEVELS A & B: $1.00, LEVELS C & D: $0.50.

N. WORKERS ON HAZMAT PROJECTS RECEIVE ADDITIONAL HOURLY PREMIUMS AS FOLLOWS - LEVEL A: $1.00, LEVEL B: $0.75, LEVEL C: $0.50, AND LEVEL D: $0.25.
Washington State Department of Labor and Industries  
Policy Statement  
(Regarding the Production of "Standard" or "Non-standard" Items)

Below is the department's (State L&I's) list of criteria to be used in determining whether a prefabricated item is "standard" or "non-standard". For items not appearing on WSDOT's predetermined list, these criteria shall be used by the Contractor (and the Contractor's subcontractors, agents to subcontractors, suppliers, manufacturers, and fabricators) to determine coverage under RCW 39.12. The production, in the State of Washington, of non-standard items is covered by RCW 39.12, and the production of standard items is not. The production of any item outside the State of Washington is not covered by RCW 39.12.

1. Is the item fabricated for a public works project? If not, it is not subject to RCW 39.12. If it is, go to question 2.

2. Is the item fabricated on the public works jobsite? If it is, the work is covered under RCW 39.12. If not, go to question 3.

3. Is the item fabricated in an assembly/fabrication plant set up for, and dedicated primarily to, the public works project? If it is, the work is covered by RCW 39.12. If not, go to question 4.

4. Does the item require any assembly, cutting, modification or other fabrication by the supplier? If not, the work is not covered by RCW 39.12. If yes, go to question 5.

5. Is the prefabricated item intended for the public works project typically an inventory item which could reasonably be sold on the general market? If not, the work is covered by RCW 39.12. If yes, go to question 6.

6. Does the specific prefabricated item, generally defined as standard, have any unusual characteristics such as shape, type of material, strength requirements, finish, etc? If yes, the work is covered under RCW 39.12.

Any firm with questions regarding the policy, WSDOT's Predetermined List, or for determinations of covered and non-covered workers shall be directed to State L&I at (360) 902-5330.
WSDOT's
Predetermined List for
Suppliers - Manufacturers - Fabricators

Below is a list of potentially prefabricated items, originally furnished by WSDOT to Washington State Department of Labor and Industries, that may be considered non-standard and therefore covered by the prevailing wage law, RCW 39.12. Items marked with an X in the "YES" column should be considered to be non-standard and therefore covered by RCW 39.12. Items marked with an X in the "NO" column should be considered to be standard and therefore not covered. Of course, exceptions to this general list may occur, and in that case shall be evaluated according to the criteria described in State and L&I's policy statement.

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<th>ITEM DESCRIPTION</th>
<th>YES</th>
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<tr>
<td>1. Manhole Ring &amp; Cover - manhole type 1, 2, 3, and 4. For use with Catch Basin</td>
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<td>type 2. The casting to meet AASHTO-M-105, class 30 gray iron casting. See Std.</td>
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<td>Plan B-30.10, B-30.70, B-30.80, and E-5.</td>
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<tr>
<td>2. Frame &amp; Grate - frame and Grate for Catch Basin type 1, 1L, 1P, 2, and Concrete</td>
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<td>Inlets. Cast frame may be grade 70-36 steel, class 30 gray cast iron or grade</td>
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<td>80-55-06 ductile iron. The cast grate may be grade 70-36 steel or grade 80-55-06 ductile iron. See Std. Plan B-25.20, B-30.20, B-30.30, B-30.40, and B-30.50.</td>
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<tr>
<td>3. Grate Inlet &amp; Drop Inlet Frame &amp; Grate - Frame and Grate for Grate Inlets Type 1 or 2 or Drop Inlets Type 1 or 2. Angle iron frame to be cast into top of inlet. See Std. Plan B-35.20, B-40.20, B-40.40, and B-50.20.</td>
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<tr>
<td>4. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes smaller than 60 inch diameter.</td>
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<tr>
<td>5. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes larger than 60 inch diameter.</td>
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</table>
6. Corrugated Steel Pipe - Steel lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, 1 thru 5. X

7. Corrugated Aluminum Pipe - Aluminum lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, #5. X

8. Anchor Bolts & Nuts - Anchor Bolts and Nuts, for mounting sign structures, luminaries and other items, shall be made from commercial bolt stock. See Contract Plans and Std. Plans for size and material type. X

9. Aluminum Pedestrian Handrail - Pedestrian handrail conforming to the type and material specifications set forth in the contract plans. Welding of aluminum shall be in accordance with Section 9-28.14(3). X

10. Major Structural Steel Fabrication - Fabrication of major steel items such as trusses, beams, girders, etc., for bridges. X

11. Minor Structural Steel Fabrication - Fabrication of minor steel items such as special hangers, brackets, access doors for structures, access ladders for irrigation boxes, bridge expansion joint systems, etc., involving welding, cutting, punching and/or boring of holes. See Contact Plans for item description and shop drawings. X

12. Aluminum Bridge Railing Type BP - Metal bridge railing conforming to the type and material specifications set forth in the Contract Plans. Welding of aluminum shall be in accordance with Section 9-28.14(3). X
13. Concrete Piling—Precast-Prestressed concrete piling for use as 55 and 70 ton concrete piling. Concrete to conform to Section 9-19.1 of Std. Spec.. Shop drawings for approval shall be provided per Section 6-05.3(3) of the Std. Spec. See Std. Plans E-4 and E-4a

14. Manhole Type 1, 2, 3 and 4 - Precast Manholes with risers and flat top slab and/or cones. See Std. Plans B-15.20, B-15.40, and B-15.60.

15. Drywell - Drywell as specified in Section 9-12.7 of the Std. Sec. See Std. Plan B-20.20, B-20.40, and B-20.60.

16. Catch Basin - Catch Basin type 1, 1L, 1P, and 2, including risers, frames maybe cast into riser. See Std. Plans B-5.20, B-5.40, B-5.60, B-10.20, B-10.40, and B-10.60.

17. Precast Concrete Inlet - Concrete Inlet with risers, frames may be cast into risers. See Std. Plan B-25.60.

18. Drop Inlet Type 1 - Drop Inlet Type 1 with support angles and grate. See Std. Plans B-45.20.

19. Drop Inlet Type 2 - Drop Inlet type 2 with support angles and grate. See Std. Plans B-45.40.

20. Grate Inlet Type 2 - Grate Inlet Type 2 with risers and top unit with bearing angles. See Std. Plans B-35.40.

21. Precast Concrete Utility Vaults - Precast Concrete utility vaults of various sizes. Used for in ground storage of utility facilities and controls. See Contract Plans for size and construction requirements. Shop drawings
are to be provided for approval prior to casting.

22. Vault Risers - For use with Valve Vaults and Utilities Vaults.

23. Valve Vault - For use with underground utilities.
   See Contract Plans for details.

24. Precast Concrete Barrier - Precast Concrete Barrier for use as new barrier or may also be used as Temporary Concrete Barrier. Only new state approved barrier may be used as permanent barrier.

25. Reinforced Earth Wall Panels - Reinforced Earth Wall Panels in size and shape as shown in the Plans. Fabrication plant has annual approval for methods and materials to be used. See Shop Drawing. Fabrication at other locations may be approved, after facilities inspection, contact HQ. Lab.

26. Precast Concrete Walls - Precast Concrete Walls - tilt-up wall panel in size and shape as shown in Plans. Fabrication plant has annual approval for methods and materials to be used.

27. Precast Railroad Crossings - Concrete Crossing Structure Slabs.

28. 12, 18 and 26 inch Standard Precast Prestressed Girder - Standard Precast Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)c.

Supplemental To Wage Rates
Page 5
29. Prestressed Concrete Girder Series 4-14 -
Prestressed Concrete Girders for use in structures.
Fabricator plant has annual approval of methods and
materials to be used. Shop Drawing to be provided for
approval prior to casting girders. See Std.
Spec. Section 6-02.3(25)c.

30. Prestressed Tri-Beam Girder - Prestressed Tri-Beam
Girders for use in structures. Fabricator plant has
annual approval of methods and materials to be used.
Shop Drawing to be provided for approval prior to
casting girders. See Std. Spec. Section 6-02.3(25)c.

31. Prestressed Precast Hollow-Core Slab - Precast
Prestressed Hollow-core slab for use in structures.
Fabricator plant has annual approval of methods and
materials to be used. Shop Drawing to be provided for
approval prior to casting girders. See Std. Spec.
Section 6-02.3(25)c.

32. Prestressed-Bulb Tee Girder - Bulb Tee Prestressed
Girder for use in structures. Fabricator plant has
annual approval of methods and materials to be used.
Shop Drawing to be provided for approval prior to
casting girders. See Std. Spec. Section 6-02.3(26)A.

33. Monument Case and Cover - To meet AASHTO-M-105 class
30 gray iron casting. See Std. Plan H-7.

34. Cantilever Sign Structure - Cantilever Sign Structure
fabricated from steel tubing meeting AASHTO-M-183. See Std.
Plans G-3, G-3a, G-3b, and Contract Plans for details. The steel
structure shall be galvanized after fabrication in
accordance with AASHTO-M-111.

35. Mono-tube Sign Structures - Mono-tube Sign Bridge
fabricated to details shown in the Plans. Shop drawings
for approval are required prior to fabrication.
36. Steel Sign Bridges - Steel Sign Bridges fabricated from steel tubing meeting AASHTO-M-138 for Aluminum Alloys. See Std. Plans G-2, G2a, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.

37. Steel Sign Post - Fabricated steel sign posts as detailed in Std. Plan G-8a, G-8b, G-8c, G-8d, G-8e, G-8f, and G-8g. Shop drawings for approval are to be provided prior to fabrication.

38. Light Standard-Prestressed - Spun, prestressed, hollow, concrete poles.

39. Light Standards - Lighting Standards for use on highway illumination systems, poles to be fabricated to conform with methods and materials as specified on Std. Plan J-1a. See Special Provisions for pre-approved drawings.

40. Traffic Signal Standards - Traffic Signal Standards for use on highway and/or street signal systems. Standards to be fabricated to conform with methods and material as specified on Std. Plans J-7a and J-7c. See Special Provisions for pre-approved drawings.

41. Traffic Curb, Type A or C Precast - Type A or C Precast traffic curb, for use in construction of raised channelization, and other traffic delineation uses such as parking lots, rest areas, etc. NOTE: Acceptance based on inspection of Fabrication Plant and an advance sample of curb section to be submitted for approval by Engineer.
42. Traffic Signs - Prior to approval of a Fabricator of Traffic Signs, the sources of the following materials must be submitted and approved for reflective sheeting, legend material, and aluminum sheeting. NOTE: *** Fabrication inspection required. Only signs tagged "Fabrication Approved" by WSDOT Sign Fabrication Inspector to be installed.

43. Cutting & bending reinforcing steel

44. Guardrail components

45. Aggregates/Concrete mixes

46. Asphalt

47. Fiber fabrics

48. Electrical wiring/components

49. Treated or untreated timber piles

50. Girder pads (elastomeric bearing)
51. Standard Dimension lumber

52. Irrigation components

53. Fencing materials

54. Guide Posts

55. Raised Pavement Markers

56. Epoxy

57. Cribbing

58. Water distribution materials

59. Steel "H" piles

60. Steel pipe for concrete pile casings

61. Steel pile tips, standard

62. Steel pile tips, custom
WASHINGTON STATE PREVAILING WAGE RATES - EFFECTIVE 08/31/06
METAL FABRICATION (IN SHOP)

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Supplemental To Wage Rates
Page 10
## METAL FABRICATION (IN SHOP) 08/31/06

### Counties Covered:
- **Clark**
  - **Layerout**: 27.16, Code: 1J, Holiday: 6B
  - **Fitter**: 26.75, Code: 1J, Holiday: 6B
  - **Welder**: 26.14, Code: 1J, Holiday: 6B
  - **Painter**: 23.24, Code: 1J, Holiday: 6B
  - **Machine Operator**: 20.32, Code: 1J, Holiday: 6B
  - **Laborer**: 19.70, Code: 1J, Holiday: 6B

- **Snohomish**
  - **Fitter**: 15.38, Code: 1
  - **Welder**: 15.38, Code: 1
  - **Machine Operator**: 8.84, Code: 1
  - **Painter**: 9.98, Code: 1
  - **Laborer**: 9.79, Code: 1

- **Spokane**
  - **Fitter**: 12.59, Code: 1
  - **Welder**: 10.80, Code: 1
  - **Machine Operator**: 13.26, Code: 1
  - **Painter**: 10.27, Code: 1
  - **Laborer**: 7.98, Code: 1

- **Thurston**
  - **Layerout**: 25.98, Code: 1R, Holiday: 6T
  - **Fitter**: 23.90, Code: 1R, Holiday: 6T
  - **Welder**: 21.83, Code: 1R, Holiday: 6T
  - **Machine Operator**: 18.72, Code: 1R, Holiday: 6T
  - **Laborer**: 15.61, Code: 1R, Holiday: 6T

- **Whatcom**
  - **Fitter/Welder**: 13.81, Code: 1
  - **Machine Operator**: 13.81, Code: 1
  - **Laborer**: 9.00, Code: 1

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Supplemental To Wage Rates
Page 11
## METAL FABRICATION (IN SHOP) 08/31/06

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**Counties Covered:**

- Yakima

| Fitter               | 23.65           | 1B             | 6V           |           |
| Welder               | 23.65           | 1B             | 6V           |           |
| Machine Operator     | 23.65           | 1B             | 6V           |           |

**Counties Covered:**

- Cowlitz

| Fitter               | 10.79           | 1              |              |           |
| Welder               | 10.79           | 1              |              |           |
| Painter              | 7.63            | 1              |              |           |

**Counties Covered:**

- Grant

| Fitter               | 15.86           | 1              |              |           |
| Welder               | 15.48           | 1              |              |           |
| Machine Operator     | 13.04           | 1              |              |           |
| Painter              | 11.10           | 1              |              |           |
| Laborer              | 9.78            | 1              |              |           |

**Counties Covered:**

- King

| Fitter               | 26.96           | 1              |              |           |
| Welder               | 13.83           | 1              |              |           |
| Machine Operator     | 13.83           | 1              |              |           |
| Laborer              | 7.63            | 1              |              |           |

**Counties Covered:**

- Kitsap
## METAL FABRICATION (IN SHOP) 08/31/06

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**Counties Covered:**
Klickitat, Skamania and Wahkiakum

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**Counties Covered:**
Pierce

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Page 13
WASHINGTON STATE PREVAILING WAGE RATES - EFFECTIVE 08/31/06
FABRICATED PRECAST CONCRETE PRODUCTS

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Washington State Department of Labor and Industries
Policy Statements
(Regarding Production and Delivery of Gravel, Concrete, Asphalt, etc.)

The following two letters from the State Department of Labor and Industries (State L&I) dated August 18, 1992 and June 18, 1999, clarify the intent and establish policy for administering the provisions of WAC 296-127-018 COVERAGE AND EXEMPTIONS OF WORKERS INVOLVED IN THE PRODUCTION AND DELIVERY OF GRAVEL, CONCRETE, ASPHALT, OR SIMILAR MATERIALS.

Any firm with questions regarding the policy, these letters, or for determinations of covered and non-covered workers shall be directed to State L&I at (360) 902-5330.

Effective September 1, 1993, minimum prevailing wages for all work covered by WAC 296-127-018 for the production and/or delivery of materials to a public works contract will be found under the regular classification of work for Teamsters, Power Equipment Operators, etc.
August 18, 1992

TO: All Interested Parties

FROM: Jim P. Christensen
       Acting Industrial Statistician

SUBJECT: Materials Suppliers - WAC 296-127-018

This memo is intended to provide greater clarity regarding the application of WAC 296-127-018 to awarding agencies, contractors, subcontractors, material suppliers and other interested parties. The information contained herein should not be construed to cover all possible scenarios which might require the payment of prevailing wage. The absence of a particular activity under the heading "PREVAILING WAGES ARE REQUIRED FOR" does not mean that the activity is not covered.

Separate Material Supplier Equipment Operator rates have been eliminated. For those cases where a production facility is set up for the specific purpose of supplying materials to a public works construction site, prevailing wage rates for operators of equipment such as crushers and batch plants can be found under Power Equipment Operators.

PREVAILING WAGES ARE REQUIRED FOR:

1. Hauling materials away from a public works project site, including excavated materials, demolished materials, etc.

2. Delivery of materials to a public works project site using a method that involves incorporation of the delivered materials into the project site, such as spreading, leveling, rolling, etc.

3. The production of materials at a facility that is established for the specific, but not necessarily exclusive, purpose of supplying materials for a public works project.

4. Delivery of the materials mentioned in #3 above, regardless of the method of delivery.

PREVAILING WAGES ARE NOT REQUIRED FOR:

1. The production of materials by employees of an established materials supplier, in a permanent facility, as well as the delivery of these materials, as long as delivery does not include incorporation of the materials into the job site.

2. Delivery of materials by a common or contract carrier, as long as delivery does not include incorporation of the materials into the job site.

3. Production of materials for unspecified future use.
TO:  Kerry S. Radcliff, Editor
      Washington State Register

FROM:  Gary Moore, Director
        Department of Labor and Industries

SUBJECT: Notice re WAC 296-127-018, Coverage and exemptions of workers involved in the production and delivery of gravel, concrete, asphalt, or similar materials

The department wishes to publish the following Notice in the next edition of the Washington State Register:

NOTICE

Under the current material supplier regulations, WAC 296-127-018, the department takes the position that prevailing wages do not apply to the delivery of wet concrete to public works sites, unless the drivers do something more than just deliver the concrete. Drivers delivering concrete into a crane and bucket, hopper of a pump truck, or forms or footings, are not entitled to prevailing wages unless they operate machinery or use tools that screed, float, or put a finish on the concrete.

This position applies only to the delivery of wet concrete. It does not extend to the delivery of asphalt, sand, gravel, crushed rock, or other similar materials covered under WAC 296-127-018. The department's position applies only to this regulation.

If you need additional information regarding this matter, please contact Greg Mowat, Program Manager, Employment Standards, at P.O. Box 44510, Olympia, WA 98504-4510, or call (360) 902-5310.

Please publish the above Notice in WSR 99-13. If you have questions or need additional information, please call Selwyn Walters at 902-4206. Thank you.

Cc:  Selwyn Walters, Rules Coordinator
     Patrick Woods, Assistant Director
     Greg Mowat, Program Manager

Supplemental to Wage Rates
18
STANDARD

PLANS
NOTES
1. See Standard Specifications Section 7-08.3(3) for Pipe Zone Backfill.
2. See Standard Specifications Section 9-03.12(3) for Gravel Backfill for Pipe Zone Bedding.
3. See Standard Specifications Section 2-06.4 for Measurement of Trench Width.
4. For sanitary sewer installation, concrete pipe shall be bedded to spring line.
NOTES

1. As an alternative connection on 15" through 24" pipe, a 1" wide strap of 10 gauge or 12 gauge galvanized steel, fastened with a 1/2" diam., 5" long galvanized bolt and square head nut, may be used.

2. Number of safety bars required will vary depending upon the length of the end section.

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NOTES
1. See Contract for transition and connection type.
2. The slope from the edge of the shoulder into the face of the guardrail should not be steeper than 10:1.
3. Guardrail installation shall be Beam Guardrail Type 1 with standard post and block.
4. First letter of case designation indicates end treatment on side road. Second letter indicates treatment on main road. For instance a terminal on the side road and a bridge connection on the main road would be Case 22 BC.
5. For terminal type and details, see Contract and applicable Standard Plans.
6. Radius dimensions shall be etched into plate replacing the letters "HM" shown on the Identification Plate Detail. Digits shall be 1/2" MIN height and 3/4" MAX width.
7. Plate shall be galvanized after etching.
8. The guardrail Identification Plate shall be mounted at the lower splice bolt on the back side of the rail element at the PC of the guardrail radius.

IDENTIFICATION PLATE MOUNTING DETAIL
(See Note 7)
NOTES

1. Anchor plate may be constructed from 1/4" plates welded to equal strength and dimensions as shown.

2. For end section details see Standard Plan "Beam Guardrail End Sections".

3. For post details, see Standard Plan "Beam Guardrail Posts and Blocks".

4. Eight 5/8" x 1 1/2" machine bolts with hex nut and washer. Place washer on face side of rail.

5. Outside nut shall be torqued against inside nut a minimum of 100 ft-lbs.

6. Dowel bearing plate with 10d nail at corners to prevent turning.

7. Anchor pay limit does not apply when anchor is included in a Beam Guardrail Terminal.

STND PLAN C-6
BEAM GUARDRAIL ANCHOR
TYPE 1

TYPE 1 ANCHOR
IMPROVEMENT

PLANS
## SUMMARY OF QUANTITIES

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TYPICAL ROADWAY SECTION
Sta. 4+23.79 to Sta. 4+36.82
Sta. 4+65.78 to Sta. 5+00.00

TYPICAL ROADWAY SECTION
Sta. 4+23.79 to Sta. 4+36.82
Sta. 5+00.00 to Sta. 5+65.78

DRIVEWAY SECTION
** Water to 10'-0" of guard rail
GENERAL NOTES:

All materials and work shall be in accordance with the requirements of the State of Washington, Department of Transportation, Standard Specifications for Road, Bridge, and Municipal Construction, dated 2016.

This structure has been designed in accordance with the requirements of the 2004 AASHTO "AASHTO Bridge Design Specifications" and AASHTO "Standard Specifications" through 2005.

For Seismic design, an acceleration coefficient of 0.05g has been used with a site coefficient of 1.0.

All cast-in-place concrete shall have a minimum compressive strength of 4000 psi. Footings shall be carefully restrained to prevent imprints or undue stresses in the structure. The bridge does not have approach slabs. Bridge has been designed for a 2" future asphalt overlay.

Unless otherwise shown, the deck concrete cover shall be measured from the base of concrete to the base of any reinforcing bar. Cover shall be 1 1/2".

For pile design, the resistance factors are:
- Limit State Bearing Shear
- Strength = 0.30
- Service = 0.60
- & Ultimate = 1.0

Required nominal resistance of piles is 454 kips.

P.S. CONCRETE

55" DECK BULB TEE GIRDER

LOADING: HL93

LEGEND
+ Identifies Section, View or Detail
+ Taken or Shown on Bridge Sheet 3
- Use dash where Section, View or Detail is taken and shown on the same sheet.
-izzy under bar

ELEVATION
Scale: 1" = 20'
Guardrail Notes:
1. All material and work shall be in accordance with the requirements of the State of Washington, Department of Transportation, Standard Specifications for Road, Bridge, and Municipal Construction, dated 2000.
2. All steel unless otherwise noted shall be AASHTO M 130 and galvanized after fabrication according to AASHTO M 115.
3. Roll posts shall be installed pin-connected.
4. All bolts, unless otherwise noted, shall be AASHTO M84 and shall be galvanized according to AASHTO M 115.
5. Roll post tubes shall be ASTM A500, G.B and shall be galvanized according to AASHTO M 115.

FRAMING PLAN

INTERMEDIATE DIAPHRAGM

Anchorage Details
A.S.T.M. A-307
(GALVANIZED)
GENERAL NOTES:

1. The type of post (rectangular wood post, or steel post) will be shown elsewhere in the plans. The exact position of transitions shall be as shown elsewhere in the plans or as directed by the Engineer.

2. Rail elements shall meet all requirements of AASHTO A-180 except as modified on the plans.

3. Bottom head post bolts (A307) shall be of sufficient length to extend through the full thickness of the rail and no less than 1/2" beyond it. Bottom head splice bolts (A325) are 1/2" x 1 1/2" with a 1/2" diameter threaded nut. Geometric fittings (bolts, nuts, and washers) shall be in accordance with Section 5-16.2.3 of Std. Spec. Fittings shall be incidental to the rail and requiring construction of transitions.

4. Where solid rail is encountered or where shown on the plans, the diameter of the holes shall be approximately 12 inches, the bocking shall be with a continuous restraint, and embedment depth shall be 1-1/2" or more as directed by the Engineer.
REINFORCEMENT BENDING DIAGRAMS

REINFORCING NOTES:
1. All reinforcing bars on this sheet shall be AASHTO M-21 Grade 60, unless shown otherwise.
2. Bond for transverse bars due to roadway crown conditions are not shown. These bars shall be bent as required to conform to the configuration of the structure.
3. Reinforcing of precast girders are not shown in this bar list.

BAR LIST

SARGENT
Sargent Engineers, Inc.
320 Post Office Square
Seattle, WA 98104
Tel: 206-682-4151 Fax: 206-682-4150

PROJECT ENGINEER:
CHECKED BY:

REVISED:

SHEET 16 OF 16
TRAFFIC CONTROL

PLANS
# ROAD CLOSURE SIGN SPECIFICATIONS

<table>
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<th>SIGN No.</th>
<th>MUTCD SIGN #</th>
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**NOTES:**
1. MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
2. FOR STRUCTURE AND MOUNTING DETAILS, SEE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, SERIES 6.
3. FOR CODE REFERENCES AND STANDARD SIGN LAYOUT DETAILS, SEE STANDARD HIGHWAY SIGN BOOK.
4. POST LENGTHS SHOWN ARE APPROXIMATE; FINAL VALUES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
5. INJECTION FROM THE EXISTING SHOULDERS, OR FACE OF CURB, TO THE SIGN POST.
6. ALL SIGNS, POSTS AND ANY OTHER TRAFFIC CONTROL DEVICES SHALL BE SUPPLIED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
7. THE POSTS SHALL NOT PROTRUDE ABOVE THE SIGNS.
## ROAD CLOSURE SIGN SPECIFICATIONS

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**NOTES:**
1. MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
2. PER STRUCTURE AND MOUNTING DETAILS, SEE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, SERIES G.
3. FOR CODE REFERENCES AND STANDARD SIGN LAYOUT DETAILS, SEE STANDARD HIGHWAY SIGN BOOK.
4. POST LENGTH SHOWN ARE APPROXIMATE. FINAL VALUES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
5. LOCATION FROM THE EXISTING SHOULDER, OR FACE OF CURB, TO THE SIGN POST.
6. ALL SIGNS, POSTS AND ANY OTHER TRAFFIC CONTROL DEVICES SHALL BE SUPPLIED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
7. THE SIGNS SHALL NOT PROTRUDE ABOVE THE SIGNS.
NOTE: A MINIMUM OF THREE (3) TYPE III BARRIERS SHALL BE PLACED ACROSS THE ROADWAY, FROM OUTSIDE EDGE OF SHOULDER TO OUTSIDE EDGE OF SHOULDER, IN ORDER TO BLOCK THE ENTIRE ROADWAY.

SPECIAL SIGN NO. 1
(4" x 36")
BLACK ON ORANGE
WITH MARON AND BORDER
4" SERIES C LETTERS
ROAD WILL BE CLOSED FOR BRIDGE WORK
(09/01)

SPECIAL SIGN NO. 2
(30" x 2")
BLACK ON ORANGE
WITH MARON AND BORDER
INSTALL 10 DAYS PRIOR TO CLOSURE
REMOVE IMMEDIATELY AFTER THE ROAD IS CLOSED
5" SERIES C LETTERS

TYPICAL SIGN INSTALLATION NTS

NOTE: CONTRACTOR IS RESPONSIBLE FOR SUBMITTING SITE SPECIFIC TRAFFIC CONTROL PLANS TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL.