

**PROJECT MANUAL FOR THE
BUCODA LEVEE IMPROVEMENT PROJECT
FOR THE
TOWN OF BUCODA**

**PREPARED BY
JEROME W. MORRISSETTE & ASSOCIATES INC., P. S.
1700 COOPER POINT ROAD S.W., #B-2
OLYMPIA, WASHINGTON 98502-1110**

PH: (360) 352-9456

FAX: (360) 352-9990

BID SET

January 24, 2014

TABLE OF CONTENTS

	<u>Page Number</u>
CALL FOR BIDS & INSTRUCTIONS TO BIDDERS	
Call for Bids	00032-1
Instructions to Bidders	00040-1
PROPOSAL DOCUMENTS	
Bidders Check List	00045-1
Proposal	00049-1
Proposal Signature	00050-1
Bid Bond	00051-1
Non-Collusion Affidavit	00052-1
Subcontractor Listing	00053-1
CONTRACT DOCUMENTS	
Contract	00060-1
Performance Bond	00061-1
Declaration of Option for Management of Statutory Retained Percentage	00062-1
GENERAL REQUIREMENTS	
Introduction	00070-1
Definitions	00070-1
Use of Explosives	00070-2
Salvage	00070-2
Progress Payments and Retained Percentage	00070-2
Existing Improvements	00070-2
Contractor's Responsibility for Utilities	00070-3
Construction Staking	00070-4
Field Relocation	00070-4
Contractor's Insurance	00070-4
Storage Areas and Waste Site	00070-4
Submittal of Information	00070-5
Dust Control	00070-5
Opening of Completed Work to Public	00070-5
Engineer's Status During Construction	00070-5
Substantial Completion	00070-8

	<u>Page Number</u>
Partial Utilization	00070-9
Final Inspection	00070-10
Final Application for Payment	00070-10
Final Payment and Acceptance	00070-10
Contractor's Continuing Obligation	00070-11
Computation of Time	00070-11
Schedule for Completion of Work	00070-11
Preconstruction Conference	00070-11
Permits	00070-11
Use of Premises	00070-11
Record Documents	00070-12
Abbreviations	00070-12
Drawings	00070-13
Intent of Plans and Specifications	00070-13

SPECIAL PROVISIONS

Examination of Site	00080-1
Scope of Work	00080-1
Scheduling of Work	00080-1
Code Requirements	00080-1
Protection of Structures and Property	00080-1
Site Safety	00080-2
Owner's Authorized Agent	00080-2
Start and Time of Completion	00080-2
Overtime and Holiday Work	00080-2
Incompetent Employees	00080-2
Liquidated Damages	00080-2
Bid Items/Estimated Quantities	00080-2
Site Access	00080-3
Waste Site	00080-3
Construction Staking	00080-3
Project Meetings	00080-3
Submittals	00080-4
Progress Payments	00080-4
Storage and Use of Premises and Site	00080-4
Temporary Sanitary Facilities	00080-5
Project Closeout	00080-5
Order of Precedence	00080-5
Mobilization	00080-6
Maintenance and Protection of Traffic/ Labor for Traffic Control	00080-6

Page Number

TECHNICAL REQUIREMENTS

Section 01010	Scope of Work	01010-1
Section 01300	Submittals	01300-1
Section 02050	Site Clearing and Demolition	02050-1
Section 02216	Subgrade Preparation	02216-1
Section 02221	Trenching, Backfilling and Compaction for Utilities	02221-1
Section 02300	Earthwork and Riprap	02300-1
Section 02508	Erosion Control and Surface Restoration	02508-1
Section 02630	Drainage Systems	02630-1
Section 02680	Chain Link Fencing and Gates	02680-1
Section 02792	Impermeable Lining Systems	02792-1

ATTACHMENTS

Attachment A	Bidder Responsibility Criteria
Attachment B	Prevailing Wages and Benefit Code Key
Attachment C	Soils Report for Dike Project at North End of Main Street in Bucoda, WA – October 10, 2013.

**CALL FOR BIDS
&
INSTRUCTIONS TO BIDDERS**

CALL FOR BIDS

THE TOWN OF BUCODA
BUCODA LEVEE IMPROVEMENT PROJECT

Notice is hereby given that the **Town of Bucoda, Thurston County, Washington** does hereby invite sealed proposals for the **Town of Bucoda – Bucoda Levee Improvement Project** as described and in accordance with the Bid Documents.

Contract Documents are only available on CDROM in Adobe Acrobat .PDF format. Contract Documents may be obtained beginning February 5, 2014 from Jerome W. Morrisette & Associates Inc., P. S.; 1700 Cooper Point Rd. S.W. #B-2, Olympia, WA 98502-1110, for a \$15.00 non-refundable fee (includes postage if applicable). Make checks payable to J. W. Morrisette & Associates. Copies of the Contract Documents may be examined at the above location.

The scope of work consists of removing existing soil and constructing a new levee, and related work as specified in the contract documents.

This project includes a non-mandatory pre-bid walk-through for the purpose of inspecting the site before submitting a bid. The pre-bid walk-through is scheduled for Wednesday, February 19, 2014 at 9:00 am. Meet at 19535 Main Street SE. Bucoda, WA (Public Works Yard).

Estimated Base Bid Range: \$225,000 to \$275,000

Proposals for this work must be sealed and marked “TOWN OF BUCODA – BUCODA LEVEE IMPROVEMENT PROJECT” and delivered to the Town of Bucoda Town Hall at 110 N Main St, Bucoda, WA 98530 by 11:00 am Tuesday, March 4, 2014.

Direct questions regarding the project to Scott Severs at the office of the Engineer: Email: Scott@jwmorrisette.com, Ph: (360) 352-9456. All work performed on this project will be subject to Washington State prevailing wage rates. The Town of Bucoda is an equal opportunity employer.

A certified or bank cashier's check in the amount of five percent (5%) of the bid amount, payable to Town of Bucoda, or a bid bond executed by a licensed bonding company is required with each bid.

At time and place named, such bids will be opened and read, and the Town of Bucoda staff will proceed to canvas the bids, and may award the project contract to the lowest responsible bidder. The Town of Bucoda reserves the unqualified right in their sole and absolute discretion to reject any and all bids, and to accept the bid which will, in their sole and absolute judgment, best serve the interest of the Town of Bucoda.

This project is funded by the Washington State Office of Financial Management, Contract #K1351.

THE TOWN OF BUCODA

The Honorable Alan Carr, Mayor

DATE: January 21, 2014

PUBLISH: Tenino Independent & Sun News, February 5th and 12th, 2014
Seattle Daily Journal of Commerce, February 5th and 12th, 2014

BID OPENING: Tuesday March 4, 2014 at 11:00 am.

INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS

Terms used in the Instructions to Bidders which are defined in the General Requirements of the Construction Contract, have the meanings assigned to them in the General Requirements. The term "Successful Bidder" means the lowest, qualified, responsible Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

2. COPIES OF BIDDING DOCUMENTS

- 2.1 Complete sets of Bidding Documents in the number and for the sum, if any, stated in the Call for Bids, may be obtained from the Engineer.
- 2.2 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.3 Owner and Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

3. BIDDER RESPONSIBILITY CRITERIA

All Bidders must submit the Mandatory Bidder Responsibility Checklist – Form A, contained in this Project Manual with the bid proposal documents at the time of Bid opening. After bid opening, the Owner will request additional responsibility submittals, including but not limited to the Contractor Experience Summary – Form B, in accordance with the Supplemental Bidder Responsibility Criteria contained in this Project Manual.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- 4.1 Before submitting a Bid, each Bidder must:
 - a) Examine the Contract Documents thoroughly;
 - b) Visit the site to familiarize themselves with local conditions that may in any manner affect cost, progress or performance of the work;
 - c) Familiarize themselves with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the work; and
 - d) Study and carefully correlate Bidder's observations with the Contract Documents.
- 4.2 Before submitting their bid, each Bidder shall, at their own expense, make such additional investigations and tests as the Bidder may deem necessary to determine his or her Bid for performance of the Work in accordance with the time, price and

other terms and conditions of the Contract Documents.

- 4.3 On request, Owner will provide each Bidder access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of his or her Bid.
- 4.4 The lands upon which the work is to be performed, rights-of-way for access thereto and other lands designated for use by Contractor in performing the Work are identified in the General Requirements or Drawings.
- 4.5 The submission of a Bid will constitute an incontrovertible representation by the Bidder that he or she has complied with every requirement of this Article 4 and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.

5. INTERPRETATIONS

All questions about the meaning or intent of the Contract Documents shall be submitted to the Engineer in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by the Engineer as having received the Bidding Documents. Questions received less than five (5) days prior to the date for opening of Bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

6. BID SECURITY

- 6.1 Bid Security shall be made payable to Owner, in an amount of five percent of the Bidder's Base Bid price and in the form of a certified or bank check or a Bid Bond issued by a Surety meeting the requirements of Standard Specifications.
- 6.2 The Bid Security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Contract Security, whereupon it will be returned; if the successful Bidder fails to execute and deliver the Agreement and furnish the required Contract Security within ten (10) days of the Notice of Award, Owner may annul the Notice of Award and the Bid Security of that Bidder will be forfeited. The Bid Security of any Bidder whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of the seventh day after the "effective date of the Agreement" (which term is defined in the General Requirements) by Owner to the Contractor and the required Contract Security is furnished or the forty-fifth day after the Bid Opening.

7. CONTRACT TIME/COMMENCEMENT OF WORK

The number of days within which, or the date by which, the work is to be completed (the Contract Time) is set forth on the Proposal Form.

8. LIQUIDATED DAMAGES

If said work is not completed within the time specified, the Contractor agrees to pay to the Owner the sum as identified in Section 1-08.9 of the Standard Specifications for each and every day said work remains uncompleted after expiration of the specified time as liquidated damages.

9. SUBSTITUTE MATERIAL AND EQUIPMENT

The Contract, if awarded, will be on the basis of material and equipment described in the drawings or specified in the Specifications without consideration of possible substitute or "or equal" items. Whenever it is indicated in the Drawings or specified in the Specifications, a substitute or "or equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer. Application for such acceptance will not be considered by Engineer until after the "effective date of the Agreement".

10. SUBCONTRACTORS, ETC.

10.1 The identity of certain Subcontractors and materials suppliers shall be provided with the Bidder's Proposal in accordance with the instructions contained on the Subcontractor Listing Form contained in these Contract Documents. If the Owner or Engineer has any reasonable objection to any proposed Subcontractor or materials supplier, they may request the apparent successful Bidder to submit an acceptable substitute without an increase in Bid price before giving the Notice of Award. If the apparent successful Bidder declines to make any such substitution, the Contract shall not be awarded to such Bidder, but the Bidder declining to make any such substitution will not constitute grounds for sacrificing such Bid Security. Any Subcontractor or materials supplier so listed and to whom the Owner or Engineer does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer.

10.2 No Contractor will be required to employ any Subcontractor, other person or organization against whom they have reasonable objection.

11. BID PROPOSAL FORM

11.1 The Bid Proposal Form is attached hereto; additional copies may be obtained from Engineer.

11.2 Bid Forms must be completed in ink or by typewriter. The Unit Bid Price of each item on the form must be stated in words and numerals; in case of a conflict, words will take precedence.

11.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to

sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

- 11.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- 11.5 All names must be typed or printed below the signature.
- 11.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form).
- 11.7 The address to which communications regarding the Bid are to be directed must be shown.
- 11.8 All bidders are required to provide pricing for every item listed on the Bid Proposal Form. Failure to provide pricing for every item listed on the Bid Proposal Form will result in a non-responsive bid.

12. SUBMISSION OF BIDS

Bids shall be submitted at the time and place indicated in the Call for Bids and shall be included in an opaque sealed envelope, marked with the Project title and name and address of the Bidder and accompanied by the Bid Security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope, with the notation "Bid Enclosed" on the face thereof.

13. MODIFICATION AND WITHDRAWAL OF BIDS

- 13.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.
- 13.2 If, within twenty-four (24) hours after Bids are opened, any Bidder files a duly signed written Notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of their Bid, that Bidder may withdraw their Bid and the Bid Security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work.

14. OPENING OF BIDS

When Bids are opened publicly they will be read aloud, and an abstract of the amounts of the base Bids and major alternates (if any) will be made available after the opening of

Bids.

15. BIDS TO REMAIN OPEN

All Bids shall remain open for forty-five (45) days after the day of the Bid opening, but Owner may, in his/her sole discretion, release any Bid and return the Bid Security prior to that date.

16. AWARD OF CONTRACT

16.1 Owner reserves the right to reject any and all Bids, to waive any and all informalities and to negotiate contract terms with the Successful Bidder, and the right to disregard all non-conforming, non-responsive or conditional Bids. Discrepancies between words and figures will be resolved in favor of words. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

16.2 In evaluating Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and alternates if requested in the Bid forms. It is Owner's intent to accept alternates (if any are accepted) in any order or combination.

16.3 Owner may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the Work as to which the identity of Subcontractors and other persons and organizations must be submitted as provided in the General Requirements. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by Owner.

16.4 Owner may conduct such investigations as it deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to do the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

16.5 Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.

16.6 If the Contract is to be awarded it will be awarded to the lowest Bidder (including selected alternates) whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Project.

16.7 If the Contract is to be awarded, Owner will award the Contract within forty-five (45) calendar days after the day of Bid opening. The Owner will award the Contract to the lowest bidder deemed responsible by the Owner.

17. PERFORMANCE AND OTHER BONDS

The Standard Specifications set forth Owner's requirements as to performance and other bonds. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required Contract Security.

18. SIGNING OF AGREEMENT

When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by at least three unsigned counterparts of the Agreement and all other Contract Documents. Within ten days thereafter Contractor shall sign and deliver at least three counterparts of the Agreement to Owner with all other Contract Documents attached. The Owner will deliver one fully signed copy to Contractor. Engineer will identify those portions of the Contract Documents not fully signed by Owner and Contractor and return documents for signatures.

19. SPECIAL LEGAL REQUIREMENTS

19.1 The Washington State Sales Tax shall be paid by the Contractor as required by the laws of the State of Washington. Said sales tax, if applicable, shall be shown separately in the bidder's proposal in the spaces provided.

19.2 The Contractor must comply with the requirements of the United States Department of Labor Safety and Health Regulations for Construction, 29 CFR 1518 of April 17, 1972, Part II, as well as the Washington Industrial Safety and Health Act of 1973, or as amended therefore.

19.3 The Contractor and all their subcontractors shall be responsible for paying prevailing rate of wages to all workmen, laborers, or mechanics employed in the performance of any part of this Contract in accordance with the provisions of Chapter 39.12 RCW, as amended. On federal aid projects, federal wage laws and regulations are also applicable. The rules and regulations of the Department of Labor on federal aid projects, and the schedule of prevailing wage rates for the locality or localities where this Contract will be performed are by reference made a part of this Contract.

On projects governed by wage rates determined by the State of Washington Department of Labor and Industries and by the U.S. Secretary of Labor, if there is a difference between the two in the prevailing rate of wage for a similar classification of labor, the Contractor shall pay not less than the wage which is the higher of the two.

Inasmuch as the Contractor will be held responsible for paying the prevailing wages, it is imperative that all Contractors familiarize themselves with the current wage rates before submitting bids based on these specifications.

In case any dispute arises as to what are the prevailing rates of wages for work of a similar nature and such dispute cannot be adjusted by the parties of interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries of the State of Washington (or to the United States Secretary of Labor when prevailing wages established by that office are involved), and his decision therein shall be final and conclusive and binding on all parties involved in the dispute.

20. LUMP SUM AND UNIT PRICES

- 20.1 Lump sum prices shall include all materials, labor, services, equipment and all work necessary to complete the project in accordance with the plans and specifications that are not included in unit price items. If an increase is required in the work covered by a lump sum price, it shall be computed on the basis of "extra work" for which an increase in payment will have been earned, and if there should be a decrease in the lump sum payment, it shall be only as a result of negotiation between the undersigned and the Owner.
- 20.2 Unit prices, if applicable, shall include all labor, materials, equipment, shoring, pumping, restoration, overhead, profit, insurance, etc., needed to complete the finished work called for.
- 20.3 It is understood that any estimate with respect to time, materials, equipment, or services which may appear on the plans or in the specifications is for the sole purpose of assisting the Contractor in checking his own independent calculations, and at no time shall the undersigned attempt to hold the Owner, the Engineer or any other person, firm or corporation responsible for any errors or omissions that may appear in any estimate.
- 20.4 Unless provided for otherwise in the contract specifications, the Contractor shall coordinate and obtain all permits and licenses required for the completion of this project. All costs of such permits shall be incidental to the contract items provided, and no separate payment shall be made.

PROPOSAL DOCUMENTS

BIDDERS CHECK LIST

The bidder's attention is especially called to the following forms which must be executed in full as required:

(a) Bid Proposal:

The lump sum bid prices must be shown in the space provided. Show lump sum bid prices in both words and figures.

(b) Proposal Signature Sheet:

To be filled in and signed by the bidder.

(c) Bond Accompanying Bid:

This form is to be executed by the bidder and the surety company unless bid is accompanied by a certified check. The amount of this bond shall be not less than five percent (5%) of the total amount bid and may be shown in dollars or on a percentage basis. Checks shall be payable to the Town of Bucoda. Bonds shall be furnished by a company authorized to do business in the State of Washington.

(d) Non-Collusion Affidavit:

Non-collusion Affidavit must be subscribed to and sworn before a notary public.

(e) Subcontractor Listing:

This form must be submitted with the Bid Proposal. The Contractor shall list all subcontractors who's subcontracts exceed ten (10) percent of the submitted base bid plus the additive alternates (if any).

(f) Mandatory Bidder Responsibility Checklist (Attachment A – Form A):

To be completed and signed by the bidder.

The following forms are to be executed after the Contract is awarded:

(a) Contract:

This agreement to be executed by the successful bidder.

(b) Performance Bond:

To be executed by the successful bidder and the bidder's surety company.

(c) Declaration of Option for Management of Statutory Retained Percentage:

This item to be executed by the successful bidder.

BID PROPOSAL

Bucoda Levee Improvements, Complete and In-Place, Lump Sum Bid \$ _____
(In words) _____
Trench Excavation Safety Systems, Lump Sum Bid \$ _____
(In words) _____
Subtotal Base Bid \$ _____
7.9% Sales Tax \$ _____
Total Base Bid (Including Sales Tax) \$ _____

Proposal of _____ (hereinafter called
"BIDDER"), organized and existing under the laws of the State of _____ doing
business as _____.

To The Town of Bucoda (hereinafter called "OWNER").

In compliance with your Call for Bids, BIDDER hereby proposes to perform all WORK for the
construction of THE TOWN OF BUCODA – BUCODA LEVEE IMPROVEMENT PROJECT, in strict
accordance with the CONTRACT DOCUMENTS, and at the prices stated above.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto
certifies as to its own organization, that this BID has been arrived at independently, without consultation,
communication or agreement as to any matter relating to this BID with any other BIDDER or with any
competitor.

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the
NOTICE TO PROCEED and to fully complete the work within **forty-five (45) working days**. Bidder
further agrees to pay the Liquidated Damages as specified in Section 1-08.9 of the Standard Specifications
for each working day thereafter.

_____ Bidder	_____ Address	_____ Phone No.
_____ Authorized Official	_____ Date	

PROPOSAL SIGNATURE

If the bidder is awarded a contract on this Proposal the surety who will provide the Performance Bond will be:

_____ whose address is:

The business address of the Bidder who is submitting this proposal is:

_____ ,

which is the address to which all communications concerning this Proposal and the Contract should be sent.

The names of the principal officers of the company, partnership, or corporation, or all persons who may represent the Bidder are as follows:

(a) For non-incorporated bidders:

in witness thereto the undersigned has set (his)(their) hand(s) this _____ day of _____, 20__.

Bidder

Title

Telephone No.

State Contractor's License No.: _____

Date of Expiration of License: _____

Federal Employer's Identification Number Issued by I.R.S.: _____

OR

(b) For incorporated bidders:

In witness whereof the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly elected officers this _____ day of _____, 20__

Name of Corporation

By

Title

Telephone No.

Attested to by Secretary

State Contractor's License No.: _____

Date of Expiration of License: _____

Federal Employer's Identification Number Issued by I.R.S.: _____

1. If the bidder is a co-partnership, so state giving firm name under which business is transacted.
2. If the bidder is a corporation, this proposal must be executed by its duly authorized officials.

Receipt of the following Addenda to the Plans and/or Specifications is hereby acknowledged:

Addendum Number	Date of Receipt	Signed Acknowledgment
1.	_____	_____
2.	_____	_____
3.	_____	_____

NOTE: Failure to acknowledge receipt of Addenda may be considered as an irregularity in the Proposal.

The undersigned also agrees as follows:

1. Within ten (10) days after the contract is awarded, to execute the contract and to furnish to the Town of Bucoda a satisfactory contract bond, guaranteeing the faithful performance of the work and payment of bills.
2. Enclosed with this proposal is a cashier's or certified check for \$_____ or a bid bond in the sum of five percent (5%) of bid which it is agreed shall be collected and retained by the Town of Bucoda as liquidated damages in the event this proposal is accepted by the Town of Bucoda within forty-five (45) calendar days after bid opening and the undersigned fails to execute the contract and the required bond with the Town of Bucoda, under the conditions thereof, within ten (10) calendar days after the undersigned is notified that said proposal has been accepted, otherwise said check or bond shall be returned to the undersigned upon demand.
3. That his/her proposal cannot be withdrawn within forty-five (45) days after the scheduled time for receipt of bids.
4. That it is understood the Town of Bucoda may accept or reject any or all bids.
5. Receipt of Addenda numbered through _____ is hereby acknowledged.

Signature of Bidder

By_____

Date_____

Address of Bidder_____

Name and Addresses of Firm Members:

BID BOND DEPOSIT

Herewith find deposit in the form of a certified check, cashiers check, cash or bid bond in the amount of \$_____, which amount is not less than five percent (5%) of the total bid.

Signature_____

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety, are held and firmly bound unto the Town of Bucoda, as Obligee, in the penal sum of _____ dollars for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for TOWN OF BUCODA - BUCODA LEVEE IMPROVEMENT PROJECT according to the terms of the Proposal or bid made by the Principal therefore, and the Principal shall duly make and enter into a contract with the Obligee in accordance with terms of said Proposal or bid and award and shall give bond for the faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure so to do, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect and Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED this ____ day of _____, 20__.

Principal

Surety

On this _____ day of _____, 20__, received return of deposit in the sum of \$_____.

Signature_____

STATE OF WASHINGTON)
)
) ss
COUNTY OF _____)

SUBCONTRACTOR LISTING

List the subcontractor(s) whose subcontract(s) exceed ten (10) percent of the submitted bid.

(If additional space is required, provide same information on separate sheet)

<u>Firm Name</u>	<u>Designated Work</u>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

Signed by

Name of Bidder/Firm Submitting Bid

CONTRACT DOCUMENTS

CONTRACT

THIS AGREEMENT, made and entered into in duplicate, this _____ day of _____, 20__ by and between the Town of Bucoda, hereinafter called the Owner, and _____ hereinafter called the Contractor,

WITNESSETH:

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 TOWN OF BUCODA - BUCODA LEVEE IMPROVEMENT PROJECT in accordance with and as described in the attached plans and specifications and the 2012 edition of the W.S.D.O.T. Standard Specifications for Road, Bridge, and Municipal Construction, which are by this reference incorporated herein and made a part hereof except where noted otherwise, and shall perform any alterations in or additions to the work provided under this contract and every part thereof.

Work shall be completed within the number of working days shown on the Bid Proposal form.

If said work is not completed within the time specified, the Contractor agrees to pay to the Owner the sum as outlined in Section 1-08.9 of the Standard Specifications.

The Contractor shall provide and bear the expense of all equipment, work 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 this contract and every part thereof, except such as are mentioned in the specifications to be furnished by the Town of Bucoda.

II. The Town of Bucoda hereby promises and agrees with the Contractor to employ, and does employ the Contractor to provide the materials and to do and cause to be done the above described work and to complete and finish the same according to the attached plans and specifications and the terms and conditions herein contained; and hereby contracts to pay for the same according to the attached specifications for the lump sum contract price of \$ _____, at the time and in the manner and upon the conditions provided for in this contract.

III. The Contractor for himself, and for his/her heirs, executors, administrators, successors, and assigns, does hereby agree to the full performance of all the covenants herein upon the part of the Contractor.

IV. It is further provided that no liability shall attach to the Town of Bucoda by reason of entering into this contract, except as expressly provided herein.

V. The Contractor shall not discriminate against any person, firm, partnership, or organization as it pertains to race, color, religion, sex, age, national origin, marital status, sexual orientation, medical condition, physical handicap or disability. Any person, firm, partnership, or organization contracting with, or doing business with, the Town of Bucoda shall be in conformity with the Town of Bucoda's policy on non-discrimination.

IN WITNESS WHEREOF the parties hereto have caused this agreement to be executed the day and year first hereinabove written.

By _____
(Mayor)

By _____
(Contractor)

Approved as to Legality:

(Town of Bucoda Attorney)

PERFORMANCE BOND

BOND TO TOWN OF BUCODA

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, _____

_____, as Principal, and _____, a corporation organized and existing under the laws of the State of Washington, as a surety corporation, and qualified under the laws of the State of Washington to become surety upon bonds of contractors with municipal corporations, as surety, are jointly and severally held and firmly bound to the Town of Bucoda in the penal sum as identified in the Standard Specifications, the payment of which sum on demand we bind ourselves and our successors, heirs, administrators or personal representatives, as the case may be.

This obligation is entered into in pursuance of the statutes of the State of Washington and the Ordinances of the Town of Bucoda.

Dated at _____, Washington, this _____ day of _____, 20____.

Nevertheless, the conditions of the above obligation are such that:

WHEREAS, the Council of the Town of Bucoda passed in regular council meeting on _____, 20____ to award this contract, the Council of said Town of Bucoda has let or is about to let to the said, _____, the above bounden Principal, a certain contract, the said contract being _____, and providing for _____ (which contract is referred to herein and is made a part hereof as though attached hereto), and

WHEREAS, the said Principal has accepted, or is about to accept, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth;

NOW, THEREFORE, if the said _____ shall faithfully perform all of the provisions of said contract in the manner and within the time therein set forth, or within such extensions of time as may be granted under said contract, and shall pay all laborers, mechanics, subcontractors and material men, and all persons who shall supply said principal or subcontractors with provisions and supplies for the carrying on of said work, and shall hold said Town of Bucoda harmless from any loss or damage occasioned to any person or property by reason of any carelessness or negligence on the said principal, or any sub-contractor in the performance of said work, and shall indemnify and hold the Town of Bucoda harmless from any damage or expense by reason of failure of performance as specified in said contract or from defects appearing or developing in the material or workmanship provided or performed under said contract within a period of one year after its acceptance

thereof by the Town of Bucoda, then and in that event this obligation shall be void; but otherwise it shall be and remain in full force and effect.

Approved as to Legality:_____

Approved:_____

PRINCIPAL

Company Name

Authorized Signature

Title

SURETY

Surety Company

Authorized Company

Title

Please attach certification of authorization for signatures for Surety company.

TOWN OF BUCODA
BUCODA LEVEE IMPROVEMENT PROJECT
DECLARATION OF OPTION FOR MANAGEMENT OF
STATUTORY RETAINED PERCENTAGE

A. I hereby elect to have the retained percentage of this Contract held in a fund by the Town of Bucoda until thirty (30) days following final acceptance of the work.

Signed _____

Date _____

B. I hereby elect to have the Town of Bucoda invest the retained percentage of this Contract from time to time as such retained percentage accrues and in accordance with RCW 60.28.

I hereby designate _____ as the repository for the escrow of said funds.

I hereby further agree to be fully responsible for payment of all costs or fees incurred as a result of placing said retained percentage in escrow and investing it as authorized by statute.

The Town of Bucoda shall not be liable in any way for any costs or fees in connection therewith.

Signed _____

Date _____

GENERAL REQUIREMENTS

GENERAL REQUIREMENTS

INTRODUCTION

The various parts of the Contract Documents are all essential to the Contract and are intended to be complementary and prescribe and provide for a complete project. Any work or material that has been omitted from the description of the work but is clearly implied shall be furnished by the Contractor as though it had been specifically stated.

In case of discrepancies, the Contract Documents shall govern in the following order, with each part listed governing over those indicated after it: Signed Contract (including any change orders and any special forms), Addenda, Bid Proposal, Technical Specifications, Contract Drawings, Special Provisions, General Requirements, Standard Specifications, Standard Plans, Call for Bids.

On federal aid construction contracts, however, federal aid provisions contained therein shall supersede any other requirements of the Contract Documents in case of conflict.

Failure or neglect to receive or examine the Contract Documents shall in no way relieve the Bidder from any obligations regarding his proposal or to this Contract. No claim for additional compensation will be allowed for lack of knowledge of the Contract Documents and the Owner will in no case be responsible for any loss suffered by the Contractor.

1. DEFINITIONS

Whenever used in the Contract documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

OWNER - The Town of Bucoda, for whom the work is to be performed, acting through its legally constituted officials, officers, or employees.

ENGINEER - The Town of Bucoda Engineer or his or her designee.

INSPECTOR - The authorized representative of the Engineer who is assigned to the project site or any part thereof.

CONTRACTOR - The person, firm or corporation with whom the Owner has executed the agreement.

SUBCONTRACTOR - The person, firm, or corporation having a direct Contract with the Contractor or with any other subcontractor for the performance of a part of the work at the site.

STATE - Wherever the Standard Specifications uses the term "state" to define "owner", the term "state" shall be construed to mean the Town of Bucoda.

EFFECTIVE DATE OF THE AGREEMENT – The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

2. USE OF EXPLOSIVES

Blasting will not be permitted in any case.

3. SALVAGE

Unless otherwise indicated on the plans or in the specifications, all castings, pipe and any of the discarded facilities shall be carefully salvaged and stockpiled as directed by the Owner. The Owner shall have salvage rights to all equipment and materials. If Owner elects to dispose of any equipment or material, it shall be disposed of by the Contractor and at no cost to the Owner.

4. PROGRESS PAYMENTS AND RETAINED PERCENTAGE

Attention to Bidders:

Payments will be made for work and labor performed and materials furnished under the Contract according to the schedule of rates and prices and the Specifications attached and made a part thereof. Partial payments under the Agreement will be made at the request of the Contractor once each month upon partial estimates by the Engineer. The amount of retainage shall be in accordance with Standard Specifications.

No payment will be made for materials on hand. Section 1-09.8 of the Standard Specifications is hereby modified to read "No payment will be made for materials on hand."

5. EXISTING IMPROVEMENTS

Removing and replacing fences, mail boxes, rockeries, landscaping, irrigation systems, or similar improvements that interfere with the construction shall be done by the Contractor and shall be considered incidental to the construction, and the cost thereof shall be included in the unit contract prices in the proposal. Said improvements shall be removed and replaced to the satisfaction of the Engineer and the Contractor shall, at his or her own expense, completely repair any damage thereto caused by his operations.

Ornamental or decorative shrubs and/or trees removed by the Contractor shall be "balled" with adequate peat moss, watered and attended until it can be replaced in a new location as directed by the Engineer. The Contractor shall be responsible for sustaining the growth of trees, within the confines of the work area, for a period of one year following final acceptance of the improvement. All costs incurred shall be considered incidental to the bid items and shall be included in the unit contract prices in the proposal.

The Contractor will make his own arrangements for disposing all materials subject to shrinkage or decay. Burning will not be allowed on-site.

The Contractor shall take adequate precautions to protect existing lawns, trees, shrubs outside rights-of-way, sidewalk, curbs, pavements, utilities, adjoining property, and structures and to avoid damage thereto. The Contractor shall, at his or her own expense, completely repair any damage thereto.

6. CONTRACTOR'S RESPONSIBILITY FOR UTILITIES

Known utilities and structures expected to be adjacent to, or encountered in the work, are shown on the drawings. It is expected that there may be some discrepancies and omissions in the locations and quantities of utilities and structures shown. Those shown are for the convenience of the Contractor only and no responsibility is assumed by either the Owner or the Engineer for their accuracy or completeness.

The Contractor shall note the specific utilities identified on the contract plans that will be affected by construction of this project. The Contractor shall support and protect by timbers or otherwise, all pipes, conduits, poles, wires or other apparatus which may be in any way affected by the work, and do everything to support, sustain and protect the same under, over, along or across said work. In case any of said pipes, conduits, poles, wires or apparatus should be damaged they shall be repaired by the authorities having control of same, and the expense of such repairs shall be charged to the Contractor.

The Contractor shall further be responsible for any damage done to any street or public property, or to any private property by reason of the breaking of any water pipe, sewer or gas pipe, electric conduit, or other utility by or through his or her negligence.

The Contractor shall notify all utilities' offices that are affected by the construction operation at least 48 hours in advance. This may be accomplished by notifying the "one-call" system. Under no circumstances shall the Contractor expose any utility without first requesting permission and being granted permission to do so from the affected agency. Contractor shall coordinate all Private Utility Detection Services. All costs associated with Private Utility Detection Services shall be incidental to the lump sum bid, and no separate compensation shall be made.

Should it be necessary for any utility to be moved or replaced as it relates to pipe placement, grading and paving operations on this project, it will be the Contractor's responsibility to coordinate his or her operation with the affected utility. The utility will perform the relocation unless otherwise described in these Contract Documents. Any delays relating to this matter shall not be subject to claim for additional compensation by the Contractor.

No utility, private or public, shall be moved to accommodate the Contractor's equipment or his method of operation when such utility does not interfere with the improvement under construction.

The Contractor shall not be expected to bear any costs or perform utility relocation unless specified in the Contract Documents.

7. CONSTRUCTION STAKING

Construction Staking shall be provided as described by the Special Provisions.

8. FIELD RELOCATION

During the progress of construction, it is expected that minor re-locations in line and grade may be necessary. Such re-locations shall be made only by direction of the Engineer.

Unforeseen obstructions encountered as the result of such re-locations will not be subject to claim for additional compensation by the Contractor at any greater extent than would have been the case had the obstruction been encountered along the original location.

9. CONTRACTOR'S INSURANCE

The Contractor shall not commence work under the Contract until he has obtained all necessary insurance and until such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractors has been obtained and approved.

The minimum policy limits of the Contractor's liability and property damage insurance shall be in conformance with Section 1-07.18 of the Standard Specifications, except for the following modifications:

1-07.18.1: all \$3,000,000 limits are reduced to \$1,000,000 limits.

1-07.18.2: all \$3,000,000 limits are reduced to \$1,000,000 limits.

The Contractor shall include in all insurance policies as additional named insureds:

The Owner, the Engineer (J.W. Morrisette & Associates, Inc., P.S.), and each of their officers, agents and employees.

10. STORAGE AREAS AND WASTE SITE

In all cases, storage area for construction materials or temporary storage for excavated materials are to be provided by the Contractor at no expense to the Owner. The Contractor shall provide a waste site at which all unsuitable excavated material shall be disposed of, and no additional compensation will be allowed therefore.

All waste or storage sites shall be maintained by the Contractor in such a manner as to meet safety, health and other requirements of all State and local laws. No runoff which will cause pollution of any State waters will be allowed. The storage or disposal of waste materials shall not damage any abutting properties or improvements thereon.

When the Contractor uses private lands provided by any party for storage, he or she shall supply the Owner with a release signed by the property owner prior to final payment.

11. SUBMITTAL OF INFORMATION

The apparent successful bidder shall within three (3) days after the day of the bid opening submit the following information concerning his or her qualifications:

- A. A list of job experiences similar to this project, with a contact person and phone number noted for each.
- B. A list of major equipment anticipated to be used on this project.

12. DUST CONTROL

It shall be the Contractor's responsibility to control dust by water or dust palliative, as ordered by the Engineer, for the alleviation or prevention of dust nuisance. All costs incurred as a result of controlling dust as specified herein shall be considered as incidental to the contract and included in the lump sum bid price, and no additional compensation will be allowed therefore.

13. OPENING OF COMPLETED WORK TO THE PUBLIC

Completed work shall be opened to the public when and where directed by the Engineer, but such opening shall not constitute final acceptance of the work. Maintenance shall be at the Contractor's expense until final acceptance.

14. ENGINEER'S STATUS DURING CONSTRUCTION

A. Owner's Representative

Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and shall not be extended without written consent of Owner and Engineer.

B. Visits to Site

Engineer will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed work and to determine, in general, if the work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed work will conform to the Contract Documents. On the basis of such visits and onsite observations as an experienced and qualified design professional, Engineer will keep Owner informed of the progress of the work and will endeavor to guard Owner against defects and deficiencies in the work.

C. Clarifications and Interpretations

Engineer will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents (in the form of Drawings or otherwise) as

Engineer may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If Contractor believes that a written clarification or interpretation justifies an increase in the Contract Price or Contract Time, Contractor may make a claim therefore as provided in the Standard Specifications.

D. Rejecting Defective Work

Engineer will have authority to disapprove or reject work which is defective, and will also have authority to require special inspection or testing of the work as provided in the Standard Specifications.

E. Decisions on Disagreements

Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the work thereunder. Claims, disputes and other matters relating to the acceptability of the work or the interpretation of the requirements of the Contract Documents pertaining to the execution and progress of the work shall be referred initially to Engineer in writing with a request for a formal decision in accordance with this paragraph, which Engineer will render in writing within a reasonable time. Written notice of each such claim, dispute, and other matter shall be delivered by the claimant to the Engineer and the other party to the Agreement within fifteen days of the occurrence of the event giving rise thereto, and written supporting data will be submitted to Engineer and the other party within forty-five days of such occurrence unless Engineer allows an additional period of time to ascertain more accurate data. In his capacity as interpreter and judge, the Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

The rendering of a decision by Engineer pursuant to the above paragraph with respect to any such claim, dispute, or other matter will be a condition precedent to any exercise by Owner or Contractor of such rights or remedies as either may otherwise have under the Contract Documents or at law in respect to any such claim, dispute or other matter.

F. Limitations on Engineer's Responsibilities

Neither Engineer's authority to act under this Section or elsewhere in the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of Engineer to Contractor, any subcontractor, any manufacturer, fabricator, supplier or distributor, or any of their agents or employees or any other person performing any of the work.

Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives of like effect or import are used, to describe requirements, direction, review or judgment of Engineer as to the work, it is intended that such requirements, direction, review or

judgment will be solely to evaluate the work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective never indicates that Engineer shall have authority to supervise or direct performance of the work or authority to undertake responsibility contrary to the provisions of paragraphs "1" and "2" below.

1. Engineer will not be responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and Engineer will not be responsible for Contractor's failure to perform the work in accordance with the Contract Documents.
2. Engineer will not be responsible for the acts or omissions of Contractor or of any subcontractors, or of the agents or employees of any Contractor or subcontractor, or of any other persons at the site or otherwise performing any of the work.

G. Engineer's Review of Application for Progress Payment

Engineer will, within ten days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application. Owner will, within thirty (30) days of presentation of the Application for Payment with Engineer's recommendation pay Contractor the amount recommended.

Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's on-site observations of the work in progress as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules that the Work has progressed to the point indicated; that to the best of Engineer's knowledge, information and belief, the quality of the work is in accordance with the Contract Documents (subject to an evaluation of the work as a functioning Project upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and any qualifications stated in the recommendation; and that Contractor is entitled to payment of the amount recommended. However, by recommending any such payment Engineer will not thereby be deemed to have represented that exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the work, or that the means, methods, techniques, sequences, and procedures of construction have been reviewed or that any examination has been made to ascertain how or for what purpose Contractor has used the moneys paid or to be paid to Contractor on account of the Contract Price, or that title to any work, materials or equipment has passed to Owner free and clear of any liens.

Engineer may refuse to recommend the whole or any part of any payment if, in his opinion, it would be incorrect to make such representations to Owner. He or she may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

1. The work is defective, or completed work has been damaged requiring correction or replacement
2. Written claims have been made against Owner or liens have been filed in conjunction with the work
3. The contract price has been reduced because of modifications
4. Owner has been required to correct defective work or complete the work
5. Of Contractor's unsatisfactory prosecution of the work in accordance with the Contract Documents.
6. Of Contractor's failure to make payment to subcontractors, or for labor, materials or equipment.

15. SUBSTANTIAL COMPLETION

When Contractor considers the entire work ready for its intended use Contractor shall, in writing to Owner and Engineer, certify that the entire work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Within a reasonable time thereafter, Owner, Contractor and Engineer will make an inspection of the work to determine the status of completion. If Engineer does not consider the work substantially complete, Engineer will notify Contractor in writing giving his or her reasons therefore. If Engineer considers the work substantially complete, Engineer will prepare and deliver to Owner a tentative certificate of Substantial Completion which will fix the date of Substantial Completion. There will be attached to the certificate a tentative list of items to be completed or corrected before final payment.

Owner will have seven days after receipt of the tentative certificate during which he may make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the work is not substantially complete, Engineer will within fourteen days after submission of the tentative certificate to Owner notify Contractor in writing, stating his or her reasons therefore. If, after consideration of Owner's objections, Engineer considers the work substantially complete, Engineer will within said fourteen days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as he believes justified after consideration of any objections from Owner.

At the time of delivery of the tentative certificate of Substantial Completion Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, heat, utilities and insurance. Unless Owner and Contractor agree otherwise in writing and so inform Engineer prior to his or her issuing the definitive certificate of Substantial Completion Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

Owner will have the right to exclude Contractor from the work after the date of Substantial Completion, but Owner will allow Contractor reasonable access to complete or correct items on the tentative list.

16. PARTIAL UTILIZATION

Use by Owner of completed portions of the work may be accomplished prior to Substantial Completion of all work subject to the following:

Owner at any time may request Contractor in writing to permit Owner to use any part of the work which Owner believes to be substantially complete and which may be so used without significant interference with construction of the other parts of the work. If Contractor agrees, Contractor shall certify to Owner and Engineer that said part of the work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the work. Within a reasonable time thereafter Owner, Contractor and Engineer will make an inspection of that part of the work to determine its status of completion. If Engineer does not consider that part of the work to be substantially complete, Engineer will notify Owner and Contractor in writing giving his reasons therefore. If Engineer considers that part of the work to be substantially complete, engineer will execute and deliver to Owner and Contractor a certificate to that effect, fixing the date of Substantial Completion as to that part of the work, attaching thereto a tentative list of items to be completed or corrected before final payment.

Prior to issuing a certificate of Substantial Completion as to part of the work Engineer will deliver to Owner and Contractor a written recommendation as to the division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, utilities and insurance for that part of the work which will become binding upon Owner and Contractor at the time of issuing the definitive certificate of Substantial Completion as to that part of the work unless Owner and Contractor shall have otherwise agreed in writing and so informed Engineer. Owner will have the right to exclude Contractor from any part of the work which Engineer has so certified to be substantially complete, but Owner will allow Contractor reasonable access to complete or correct items on the tentative list.

In lieu of the issuance of a certificate of Substantial Completion as to part of the work, Owner may take over operation of a facility constituting part of the work whether or not it is substantially complete if such facility is functionally or separately usable; provided that prior to any such takeover, Owner and Contractor have agreed as to the division of responsibilities

between Owner and Contractor for security, operation, safety, maintenance, correction period, heat, utilities and insurance with respect to such facility.

No occupancy of part of the work or taking over of operations of a facility will be accomplished before the insurers providing the property insurance have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or lapse on account of any such partial use or occupancy.

17. FINAL INSPECTION

Upon written notice from Contractor that the work is complete, Engineer will make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the work is incomplete or defective. Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

18. FINAL APPLICATION FOR PAYMENT

After Contractor has completed all such corrections to the satisfaction of Engineer and delivered all maintenance and operating instruction, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents and other documents -- all as required by the Contract Documents, and after Engineer has indicated that the work is acceptable, Contractor may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents and such other data and schedules as Engineer may reasonably require, together with complete and legally effective releases or waivers (satisfactory to Owner) of all liens arising out of or filed in connection with the work. In lieu thereof and as approved by Owner, Contractor may furnish receipts or releases in full; an affidavit by the Contractor that the releases and receipts include all labor, services, material and equipment for which a lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the work have been paid or otherwise satisfied; and consent of the Surety, if any, to final payment. If any subcontractor, manufacturer, fabricator, supplier or distributor fails to furnish a release or receipt in full, Contractor may furnish a Bond or other collateral satisfactory to Owner to indemnify Owner against any lien.

19. FINAL PAYMENT AND ACCEPTANCE

If, on the basis of Engineer's observation of the work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation -- all as required by the Contract Documents, Engineer is satisfied that the work has been completed and Contractor has fulfilled all of his obligations under the Contract Documents, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing his recommendation of payment and present the Application to Owner for payment. Thereupon Engineer will give written notice to Owner and Contractor that the work is acceptable subject to the provisions of the Standard Specifications.

Otherwise, Engineer will return the Application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the

necessary corrections and resubmit the Application. If the Application and accompanying documentation are appropriate as to form and substance, Owner shall within thirty days after receipt thereof pay Contractor the amount recommended by Engineer.

20. CONTRACTOR'S CONTINUING OBLIGATION

Contractor's obligation to perform and complete the work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by Engineer, nor the issuance of a certificate of Substantial Completion, nor any payment by Owner to Contractor under the Contract Documents, nor any use or occupancy of the work or any part thereof by Owner, nor any act of acceptance by Owner nor any failure to do so, nor the issuance of a notice of acceptability by the Engineer, nor any correction of defective work by Owner shall constitute an acceptance of work not in accordance with the Contract Documents or a release of Contractor's obligation to perform the work in accordance with the Contract Documents.

21. COMPUTATION OF TIME

When any period of time is referred to in the Contract Documents by days, it shall be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation.

22. SCHEDULE FOR COMPLETION OF WORK

Within ten days after the effective date of the Agreement, Contractor shall submit to Engineer for review and acceptance an estimated progress schedule indicating the starting and completion dates of the various stages of the work, a preliminary schedule of Shop Drawing submissions, and a preliminary schedule of values of the work.

23. PRECONSTRUCTION CONFERENCE

Within ten days after the effective date of the Agreement, but before Contractor starts the work at the site, a conference will be held for review and acceptance of the Schedules, to establish procedures of handling Shop Drawings and other submittals and for processing Applications for Payment, and to establish a working understanding among the parties as to the work.

24. PERMITS

The Contractor shall secure all necessary permits for all work on this project. The cost of the permit will be reimbursed by the Owner. The cost of securing all permits shall be incidental to the bid items.

25. USE OF PREMISES

Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workmen to areas permitted by law, ordinances, permits or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

During the progress of the work, Contractor shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the work. At the completion of the work Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by Owner. Contractor shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents.

Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the work or adjacent property to stresses or pressures that will endanger it.

26. RECORD DOCUMENTS

Contractor shall keep one record copy of all Specifications, Drawings, Addenda, Modifications, Shop Drawings and samples at the site, in good order and annotated to show all changes made during the construction process. These shall be available to Engineer for examination and shall be delivered to Engineer for Owner upon completion of the work.

27. ABBREVIATIONS

Any material specified by reference to the number, symbol or title of a specific standard such as a commercial standard, federal specification, a trade association standard, or other similar standard, shall comply with the requirements in the latest revision thereof and of any amendment or supplement thereto, in effect on the date of Call for Bids, except as limited to type, class or grade or modified in the specifications, shall have full force and effect as though printed in the specifications.

When references are made to the following capitalized abbreviations, the reference shall be made to the specifications, standards or methods of the respective nationally recognized association, organization or resource.

AAN	American Association of Nurserymen
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGA	American Gas Association
AGC	Associated General Contractors of America
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APA	American Plywood Association
APWA	American Public Works Association
ARA	American Railway Association
AREA	American Railway Engineering Association
ASCE	American Society of Civil Engineers

ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
CRSI	Concrete Reinforcing Steel Institute
DIPRA	Ductile Iron Pipe Research Association
EEI	Edison Electric Institute
FHWA	Federal Highway Administration
FSS	Federal Specifications and Standards, General Services Administration
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronics Engineers
ITE	Institute of Transportation Engineers
MSHA	Mine Safety and Health Act
MUTCD	Manual on Uniform Traffic Control Devices
NEC	National Electrical Code
NEMA	National Building Code of Manufacturers Association
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
RCW	Revised Code of Washington (Laws of the State)
SAE	Society of Automotive Engineers
SEPA	State Environmental Policy Act
SSPC	Steel Structures Painting Council
UL	Underwriters' Laboratories, Inc.
WAC	Washington Administration Code
WISHA	Washington Industrial Safety and Health Administration
WSDOT	Washington State Department of Transportation
WWPA	Western Wood Products Association

28. DRAWINGS

The Contractor will be furnished, free of charge, three copies of the Contract Documents and three sets of full-sized drawings. Additional copies of the Contract Documents and/or Drawings may be obtained on request by paying the actual cost of the reproducing of Contract Documents or Drawings. The Contractor shall keep one copy of the Contract Documents and the Drawings on the work site, available to the Engineer and to his representative. Said copies shall be kept in good readable condition.

29. INTENT OF PLANS AND SPECIFICATIONS

The intent of the Plans and Specifications is to describe a complete and operable system. Any materials not identified in the Plans and Specifications including any pipe fittings required to complete all systems shall meet the approval of the Engineer and shall be furnished and installed at no additional cost to the Owner.

SPECIAL PROVISIONS

SPECIAL PROVISIONS

1. EXAMINATION OF SITE

- A. The Contractor or bidder shall examine the site of work to ascertain all the physical conditions in relation thereto.
- B. All interested bidders should call Jerome W. Morrisette & Associates in Olympia at (360) 352-9456 for any questions concerning the bid documents.
- C. All working measurements shall be taken at the site.

2. SCOPE OF WORK

All work will be performed under one contract and consists of all work indicated on the Contract Plans and as described herein:

In accordance with the Contract Documents for the Town of Bucoda - Bucoda Levee Improvement Project, remove and construct a new levee, and perform related work as specified in the contract documents.

3. SCHEDULING OF WORK

Before any work is done, the Contractor shall confer with the Owner at a pre-construction conference. At the pre-construction conference the Contractor shall submit to the owner a work schedule for the Owner's approval and shall make such arrangements as may be necessary for the prosecution of the contract. The Contractor shall maintain access to all shop facilities at all times.

4. CODE REQUIREMENTS

The Contractor will be required to comply without additional expense to the Owner, with all state, county, and municipal ordinances and regulations, which are binding upon the Owner.

5. PROTECTION OF STRUCTURES AND PROPERTY

- A. The Contractor shall: provide, erect, and maintain barricades, warning signs, and guards as necessary for the protection of the public during construction.
- B. Provide protection for all shrubs, trees, lawns, landscaping, irrigation systems, walls, roads, drives, adjacent buildings, fences, pedestrians, vehicles, and equipment.
- C. Remove all protections when the work is complete, and accepted by the Owner.
- D. Repair damage to Owner's property, or any other person's property on or off premises caused by reason of required work.

6. SITE SAFETY

The Contractor shall at all times take extra care in protecting his work. The Contractor shall keep to a minimum any noise, dust, pollution, etc., and shall daily coordinate his activities with the designated owner's representative, and the Engineer to minimize any disruptions or inconvenience to the personnel and facilities.

7. OWNER'S AUTHORIZED AGENT

The word "Owner", as used herein, shall mean the Town of Bucoda. The word "Engineer", as used herein, shall mean Jerome W. Morrisette & Associates Inc., P. S.

"As directed" means "as directed by the Engineer". Where the words "or approved" are used, the Engineer is the sole judge of the quality and suitability of the proposed substitutions, and the Contractor shall guarantee the substitution materials and equipment as equal to or better than those named in the specifications.

8. START AND TIME OF COMPLETION

The improvements under this contract shall begin within fourteen (14) calendar days after the date of the Notice to Proceed. All work shall be completed within the time stated on the Bid Proposal form. Working days shall be in compliance with Section 1-08.5 of the Standard Specifications.

9. OVERTIME AND HOLIDAY WORK

The number of days provided in the contract is intended to be sufficient time to complete the project. Inspection time required before 8:00 A.M., after 5:00 P.M., on Saturdays, Sundays, or holidays, will be considered as overtime for the Engineer, and the costs thereof will be charged to the Contractor.

10. INCOMPETENT EMPLOYEES

Incompetent, careless, or negligent employees shall be discharged forthwith by the Contractor upon written request of the Owner.

11. LIQUIDATED DAMAGES

In case the contract is not completed within the fixed time specified under "Time of Completion" or prior to a date which the period of completion may have been extended in writing, the Owner will deduct from the amounts due the Contractor the sums specified in Section 1-08.9 of the Standard Specifications. The Contractor agrees by submittal to the proposal to pay the Owner as liquidated damages for each consecutive calendar day that they shall be in default after the time for completion specified herein.

12. BID ITEMS/ESTIMATED QUANTITIES

The following text shall modify Section 1-04 of the Standard Specifications:
The quantities shown in the Proposal and Contract forms are estimates only, being given only as a basis for the comparison of bids. The Owner does not warrant,

expressly or by implication, that the actual amount of work will correspond thereto. The Contractor shall field-confirm actual quantities. The Engineer and Owner accept no responsibility for any variance between the actual quantities and the quantities provided for the Contractor's information. The right to increase or decrease the amount of any class or portion of the work, without a change order, or to make changes in the work required as may be deemed necessary by the Engineer, is reserved by the Owner. When such increases or decreases become necessary, the Engineer or Owner may issue written instructions to the Contractor, and the Contractor shall adjust the quantities installed as directed.

No unit pricing shall be adjusted as a result of decreasing quantities unless the total value of the Contract decreases by at least 25 percent.

The Owner will not pay restocking fees or any other costs for the return or disposal of unused materials ordered by the Contractor.

The basis of payment will be for the items of work furnished, installed, successfully tested, measured, and accepted by the Engineer in accordance with the Contract requirements.

13. SITE ACCESS

The area of the project is on private property owned by the Town of Bucoda or on private property owned by other parties in which the Town of Bucoda has easements for access, construction, and maintenance and operation of the improvements identified on the Contract Documents. The Contractor shall be responsible for confining operations to those areas that are on Town of Bucoda property or easement areas. The Contractor may negotiate with private property owners to use area outside of easements. If areas outside of easements are used the Contractor must restore all surfaces and improvements to a condition equal to or better than original.

14. WASTE SITE

All excess excavation material shall be disposed of off-site at a Contractor-provided waste site, except where specifically noted otherwise.

15. CONSTRUCTION STAKING

The Owner will provide one set of construction stakes for primary construction control only. Primary construction control for clearing limits consists of stakes for line-only at angle points and on 50-foot centers elsewhere. Primary construction control for earthen embankments consists of stakes for the top of embankment and embankment centerline at radius points, angle points, grade breaks, and on 50-foot centers elsewhere. Primary construction control for drainage structures consists of stakes for flowlines at inlets, outlets, and grade breaks. Primary construction control for paved areas consists of stakes for the centerline of roadway subgrade at high points, grade breaks, and on 25-foot centers elsewhere.

All other required construction control is considered to be secondary control and shall be provided by the Contractor.

The Contractor shall provide a minimum of three (3) working days advance written notice for staking requests prior to the time when staking will be required. All staking requests shall identify which stakes are to be provided by identifying the specific sheet number of the Contract Drawings and referencing street names, or pipe stations, or building numbers, or addresses if the staking request covers less than the entire sheet.

16. PROJECT MEETINGS

A. Pre-construction Conference

The Engineer will schedule and conduct a pre-construction meeting after awarding the Contract, and prior to start of construction, to discuss Contract Administration procedures. Representatives of Owner, Contractor and any Sub-Contractors shall attend.

Agenda:

1. Contractor information to be presented:
 - a) List of Sub-Contractors
 - b) Construction Schedule
 - c) Sequencing of Work
 - d) Designation of Construction Superintendent and
 - e) Phone number
 - f) Schedule of Values for Payment Requests
2. Project Manager information to be discussed:
 - a) Communication procedures
 - b) Distribution of Contract Documents
 - c) Submittal requirements and procedures
 - d) Project record documents
 - e) Payment requests
 - f) Material storage on-site
 - g) Parking
 - h) Change order procedures

17. SUBMITTALS

A. Product Submittals

See Section 01300 and individual technical contract sections for requirements relative to submittals and approvals.

18. PROGRESS PAYMENTS

- A. Owner will make progress payments, in such amounts as Owner determines are properly due, within thirty (30) days after receipt of a properly executed Application for payment. Owner will notify Contractor in accordance with RCW

39.76 if the Application for Payment does not comply with the requirements of the Contract Documents.

- B. Owner will retain 5% of the amount of each progress payment until 30 days after Final Acceptance and receipt of all documents required by law or the Contract Documents including, at Owner's request, consent of surety to release of the retainage. In accordance with RCW 60.28, Contractor may request that moneys reserved be retained in a fund by Owner, deposited by owner in a bank or savings and loan, or placed in escrow with a bank or trust company to be converted into bonds and securities to be held in escrow with interest to be paid to Contractor. Owner may permit Contractor to provide an appropriate bond in lieu of the retained funds.

19. STORAGE AND USE OF PREMISES AND SITE

1. The Contractor shall confine all operations to the Owner's property and public rights-of-way.
2. Secure storage is not available at the work site.
3. Keep all work areas clean and orderly every day.
4. All activities onsite shall be consistent with the Owner's Wellhead Protection Plan and shall not compromise the safety of the Owner's water supply. For example: do not store fuel onsite or refuel vehicles onsite. Do not locate temporary sanitary facilities within 100 feet of the Owner's wells.
5. Secure all fencing and gates by the end of every working day to positively exclude unauthorized personnel from the site. Provide temporary chain link fencing and gate if required to meet this requirement.

20. TEMPORARY SANITARY FACILITIES

Contractor shall be responsible for providing temporary sanitary facilities on site. Do not locate temporary sanitary facilities within 100 feet of the Owner's wells.

21. PROJECT CLOSEOUT

Contractor shall comply with all requirements stated in the Contract Documents.

The Contractor shall notify the Engineer in writing when all work is completed and ready for pre-final inspection. The Engineer will make an inspection, forwarding a "Punch List" of deficiencies to the contractor, who shall promptly correct all items noted.

The Contractor shall notify the Engineer in writing when all "Punch List" deficiencies from the pre-final inspection have been completed. The Engineer will set a time for a Final Inspection, at which time the Contractor and the Engineer shall jointly inspect the work. The Contractor shall promptly correct any further deficiencies noted.

When the Engineer finds that all work is acceptable under Contract Documents, the Contractor may proceed with closeout submittals. When Contractor considers the

work complete, the Contractor shall submit written verification, closeout submittals, to the Engineer that:

1. Contract Documents have been reviewed.
2. Work has been completed and inspected for compliance with Contract Documents.
3. Evidence of compliance with the requirements of all governing authorities.
4. Warranties and bonds have been submitted to the Owner.

After the work has been accepted by the Owner, the Contractor shall submit the final application for payment in accordance with procedures and requirements stated in the conditions of the Contract.

22. ORDER OF PRECEDENCE

Any conflict or inconsistency in the Contract Documents shall be resolved by giving the documents precedence in the following order:

1. Signed Contract (including signed change orders)
2. Addenda
3. Bid Proposal
4. Technical Specifications
5. Contract Drawings
6. Special Provisions
7. General Requirements
8. 2012 WSDOT Standard Specifications
9. Standard Plans
10. Call for bids

23. MOBILIZATION

The Contractor shall complete Mobilization in accordance with Section 1-09.7 of the Standard Specifications, except as noted otherwise.

Mobilization will include the requirement to comply with Section 8-01.3(1)B of the Standard Specifications for an Erosion and Sediment Control (ESC) Lead person to observe construction activities. The ESC Lead will make non-binding recommendations for the installation of erosion-control devices during construction of the project. The installation of such erosion control devices will only be done at the direction of the Owner's onsite Representative. Such ESC Lead persons shall be certified by training from an approved Department of Transportation or Department of Ecology training program which meets the requirements of the Thurston County Public Works Department. The ESC lead shall prepare all required documentation to meet the requirements of the Standard Specifications and the requirements of Thurston County, and shall submit such documentation to the Engineer prior to obtaining Substantial Completion.

Measurement and Payment for Mobilization shall be included in the lump sum bid and shall include all labor, materials, tools, fuel, equipment, and supervision required to complete Mobilization as specified herein.

24. MAINTENANCE AND PROTECTION OF TRAFFIC / LABOR FOR TRAFFIC CONTROL

A. General

It shall be the Contractor's responsibility to notify in advance fire and police departments when Contractor's operations will hinder in any manner normal access by emergency vehicles. The Contractor shall leave their night emergency telephone number(s) with the police department so that contact may be made at all times in case of emergencies involving the project.

Existing traffic signs and street name signs located along the project route that will conflict with construction shall be temporarily relocated by the Contractor. The Contractor shall provide portable signs as required to temporarily replace the permanent signs. Immediately upon completion of the conflicting work, the Contractor shall reset the permanent traffic signs back to the original locations at the proper mounting height. Any signs damaged by the Contractor shall be replaced by the Contractor at no cost to the Owner.

The Contractor shall not close down through traffic on the project route. Access to businesses and residents for both vehicular and pedestrian traffic shall be maintained at all times.

The Contractor shall furnish all flagging and shall provide, erect, and maintain all temporary traffic control devices (including signs) required during construction. The Contractor shall delineate all obstructions and excavations with appropriate barricades. Flaggers, barricades, signs and traffic control shall conform to the Standards established in the latest edition of the "Manual on Uniform Traffic Control Devices", published by the U.S. Department of Transportation.

B. Public Convenience and Safety

The Contractor shall conduct all operations with the least possible obstruction and inconvenience to the public. The Contractor shall have under construction no greater length or amount of work than can be prosecuted properly with due regards to the right of the public. To the extent possible, the Contractor shall finish each section before beginning work on the next.

To disrupt public traffic as little as possible, the Contractor shall:

1. Permit traffic to pass through the work with the least possible inconvenience or delay;
2. Maintain existing roads and streets that lie next to or inside the project limits, keeping them open and in good, safe condition at all times;

3. Remove or repair any condition resulting from the work that might impede traffic or create a hazard, and
4. Keep existing traffic signals and highway lighting systems in operation as the work proceeds.

To protect the rights of abutting property owners, the Contractor shall:

1. Conduct the construction so that the least inconvenience as possible is caused to abutting property and business owners;
2. Maintain ready access to driveways, houses, and commercial buildings along the line of work;
3. Provide temporary approaches to crossing or intersecting roads and keep these approaches in good condition, and
4. Provide another access before closing an existing one whenever the Contract calls for removing and replacing an abutting owner's access.

When traffic must pass through grading areas, the Contractor shall:

1. Make cuts and fills that provide a reasonably smooth, even roadbed;
 2. Place, in advance of other grading work, enough fill at all culverts to permit traffic to cross;
 3. Make roadway cuts and fills, if ordered by the Engineer, in partial-width lifts, alternating lifts from side to side to permit traffic to pass on the side opposite the work;
 4. Install culverts or storm drains on half the width of the traveled way, keeping the other half open to traffic and unobstructed until the first half is ready for use;
 5. After rough grading or placing any subsequent layers, prepare the final roadbed to a smooth, even surface (free of humps and dips) suitable for use by public traffic, and
 6. Settle dust with water, or other dust palliative, as the Engineer may order.
- If grading work is on or next to a roadway in use, the Contractor shall finish the grade immediately after rough grading and place surfacing materials as the work proceeds.

The Contractor shall be responsible for providing adequate safeguards, safety devices, protective equipment, and any other needed actions to protect the life, health, and safety of the public, and to protect property in connection with the performance of the work covered by the Contract. The Contractor shall perform any measures or actions the Engineer may deem necessary to protect the public and property. The responsibility and expense to provide this protection shall be the Contractor's.

Temporary Asphalt Concrete used for the temporary restoration of utility or other trench work as required by the Engineer may be cold mix if the applicable patch is required for seven (7) or less days prior to the installation of the final asphalt cement patch. If the final asphalt patch is to occur more than (7) days from the

date of the temporary patch, Temporary Asphalt Concrete shall be HMA Cl. 1/2" PG 64-22. If the Contractor utilizes asphalt cold mix for Temporary Asphalt Concrete and the period between the temporary patch and the final patch exceeds seven (7) days, the Engineer may order the Contractor to replace the asphalt cold mix with Asphalt Concrete HMA Cl. 1/2" PG 64-22 and such replacement shall be deemed incidental to the initial installation of Temporary Asphalt Concrete, and no separate (or second) compensation shall be made. The Contractor shall prepare the subgrade prior to placing the Temporary Asphalt Concrete, and compact the Temporary Asphalt Concrete with steel wheel compaction equipment such that the finished surface is smooth as approved by the Engineer.

C. Construction and Maintenance of Detours

The Contractor shall build, maintain in a safe condition, keep open to traffic, and remove when no longer needed:

1. Detours that will accommodate traffic diverted from the roadway during construction;
2. Detour crossings of intersecting highways, and
3. Temporary approaches.

The Contractor shall pay all costs to build, maintain, and remove any other detours, whether built for the Contractor's convenience or to facilitate construction operations. Any detour proposed by the Contractor shall not be built or put into operation until the Engineer approves. Surfacing and paving shall be consistent with traffic requirements.

Upon failure of the Contractor to immediately provide, maintain, or remove detours when ordered to do so by the Engineer, the Owner may, without further notice to the Contractor or the Surety, provide, maintain, or remove the detours and deduct the costs from any payments due or coming due the Contractor.

D. Flagging, Signs, and all other Traffic Control Devices

The Contractor shall provide all flaggers, signs, and other traffic control devices. 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 that may occur on highways, roads, or streets. No work shall be done on or adjacent to the roadway until all necessary signs and traffic control devices are in place.

All signs required by the approved traffic control plan(s) as well as any other appropriate signs prescribed by the Engineer will be furnished by the Contractor. The Contractor shall erect them on posts or supports and maintain them in a clean, neat, and presentable condition until the necessity for them has ceased. All non-applicable signs shall be removed or covered with either metal or plywood during periods when they are not needed. When the need for any of these signs has

ceased, the Contractor, upon approval of the Engineer, shall take down these signs, posts, or supports. All signs, posts or supports shall be removed from the project and shall remain the property of the Contractor.

Construction signs will be divided into two classes. Class A construction signs are those signs that remain in service throughout the construction or during major phase of the work. They are mounted on posts, existing fixed structures, or substantial supports of a semi-permanent nature. Class B construction signs are those signs that are placed and removed daily, or are used for short durations that may extend for one or more days. They are mounted on portable or temporary mountings. In the event of disputes, the Engineer will determine if a construction sign is considered as a Class A or Class B construction sign.

All reflectorized safety vests, hard hats, or any other equipment required by flaggers shall be provided by the Contractor, and the cost of such shall be deemed incidental to "Maintenance and Protection of Traffic".

Upon failure of the Contractor to immediately provide flaggers; erect, maintain, and remove signs; or provide, erect, maintain, and remove other traffic control devices when ordered to do so by the Engineer, the Owner may, without further notice to the Contractor or the Surety, perform any of the above and deduct all of the costs from the Contractor's payments.

The Contractor shall be responsible for providing adequate flaggers, signs, and other traffic control devices for the protection of the work and the public at all times.

Signs, posts, or supports that are lost, stolen, destroyed, or that the Engineer deems to be unacceptable, while their use is required on the project, shall be replaced by the Contractor without additional compensation.

E. Measurement and Payment for Labor for Traffic Control

All Labor for Traffic Control shall be included in the lump sum bid.

The Contractor shall submit daily written traffic control records for all traffic control hours worked under the Contract. The daily traffic control records shall show the name(s) of the person(s) providing traffic control labor, the date on which the traffic control labor was provided, the number of hours worked on that day for each person, and the street or pipe station(s) where the traffic control labor was provided. The Contractor shall submit the written records within one (1) working day after the labor is performed. Written records which are submitted later will be considered void and will not be payable under the Contract.

Payment for Labor for Traffic Control shall be full compensation for flagging and shall include all costs of labor, materials, equipment, and incidentals necessary for flagging.

F. Measurement and Payment for Maintenance and Protection of Traffic

All Maintenance and Protection of Traffic shall be included in the lump sum bid. Payment for Maintenance and Protection of Traffic shall be full compensation for all labor, materials, equipment and incidentals necessary for maintaining and protecting traffic, and shall include, but not be limited to the furnishing and/or installation of maintenance of, or provision of barricades, flashers, channelization devices, temporary lane stripes, removing temporary striping at completion of construction, supervisory personnel, vehicle(s), Class A and Class B construction signs, and traffic control devices, patrolling, replacing signs or devices, or any other item including flagging as defined herein.

TECHNICAL SPECIFICATIONS

**SECTION 01010
SCOPE OF WORK**

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work in this Section is bound by the General Requirements, Special Provisions, and Standard Specifications of the Contract, except as modified herein.

1.2 TIME FOR COMPLETION

- A. The allowable time for completion for the scope of work shall be as stated on the bid form.

1.3 WORK BY OWNER

- A. The Owner will award separate work related to this contract as follows:
 - 1. None.
- B. Items noted "NIC" (Not in Contract), will be furnished and installed by separate Contract or by Owner:
 - 1. None.
- C. The Owner will remove and retain possession of the following items prior to start of work:
 - 1. None.
- D. Items furnished by Owner for installation by Contractor:
 - 1. None.
- E. Items removed by Contractor and turned over to Owner for storage and future use:
 - 1. None.

1.4 CONTRACTOR USE OF SITE AND PREMISES

- A. Access to the Site: Limited to access is available by the routes shown on the Contract Drawings.
- B. Construction operations shall be limited to the areas identified on the Contract Drawings as the following:
 - 1. Areas within the limits of grading shown on the Contract Documents.

2. Locations in the immediate vicinity of where work is identified on the Contract Drawings.

C. Time restrictions for performing construction work:

1. The Contractor's normal working hours for this project shall be defined as follows: Normal working hours for this project are 7:00 am to 5:00pm Monday through Friday. Outside normal working hours for this project are 5:00 pm to 7:00 am and Saturdays and Sundays. The Contractor shall notify the Owner of intent to engage in weekend work a minimum of seven (7) days in advance of the specific dates of work.
2. The Contractor shall provide the names and emergency telephone number(s) of two (2) contact person's for the Contractor and each subcontractor who are capable of addressing any emergency issue that may occur outside of the Contractor's normal working hours. The Owner's site representative will have available the Owner's emergency list.
3. All overtime required to complete this project within the required time of completion shall be included as a part of this Contract. No additional compensation will be authorized for work performed on weekends or holidays. No additional compensation will be authorized for the time required to attend meetings, or for any time or work performed outside of the Contractor's normal working hours.

1.5 ALL COSTS INCLUDED

- A. All costs for all work described below shall be included on the Contractors Bid Proposal Form, including all costs for labor, materials, equipment, tools, fuel, supplies, supervision, coordination, profit, bonding, insurance, overhead, etc. **Where the Bid Proposal Form does not contain an entry which corresponds to an item of work listed below, the Contractor shall distribute the costs for this work throughout the various bid items which are listed thereon, and no additional compensation will be allowed therefore.**

1.6 WORK INCLUDED

Provide work as shown on the Contract Drawings for:

The Town of Bucoda Levee Improvements, Complete and In-Place.

The scope of work to be provided by the Contractor includes all of the following:

Include all work shown on the Contract Drawings and described in this Project Manual for the following work (located in the vicinity of the Town of Bucoda Well Site and shop facilities).

A. BEFORE, DURING, AND AFTER MOBILIZATION

01. Attend the Preconstruction Conference.
02. Verify that all equipment and materials will fit in the space which is available onsite. Verify dimensions and equipment clearances prior to ordering any materials.
03. Make all required submittals in accordance with Section 01300 of the Project Manual including all materials submittals and the construction schedule, and obtain the Engineer's approvals as required.
04. Provide temporary protective fencing around above-ground structures to be protected in place where shown on the Contract Drawings.
05. Provide temporary chain link security fencing where the existing fencing is temporarily removed, as required to positively exclude unauthorized persons from the construction site.
06. Implement all necessary precautions to protect the existing propane tank, wells, buildings, generator, vaults, fences, utilities, and power poles in place, except where the Contract Drawings specifically require modifications or adjustments.
07. Provide utility coordination with the owners of utilities in the vicinity of the work.
08. Coordinate to obtain utility location markings for the project. Note that portions of the project are not in the public right-of-way and may require private locates. Specifically, watermain, electrical, communications, and underground propane lines must be marked out in advance of construction.
09. Provide secure storage for those Contract items which require storage onsite.
10. Protect-in-place items shown on the Contract Drawings to be protected in place, and all other existing structures which are visible without excavation.
11. Furnish the specified dewatering trash pump and trash pump accessories such as suction hose with strainer and discharge hose.
12. All other tasks required for mobilization.

B. EROSION CONTROL, CLEARING, AND DEMOLITION

01. Provide straw wattle prior to clearing in all locations identified on the Contract Drawings. Provide all other erosion control devices where shown on the Contract Drawings.
02. Provide clearing and grubbing as required to construct the work shown on the Contract Drawings.

03. Sawcut, remove, haul, and dispose of existing concrete pavement where shown on the Contract Drawings.
04. Excavate and haul the soil volume contained within the existing levee except where “existing levee to remain” is shown on the Contract Drawings. Place and compact it where shown on the Contract Drawings.
05. Excavate and haul all gravel material located in the northerly gravel pile. Place and compact it in the area identified as Stockpile Area “A”.
06. Protect-in-place the portion of the existing levee which is shown on the Contract Drawings to remain in place.
07. Remove existing double gate, two (2) gate posts, and portions of the existing fence which are in conflict with the proposed improvements.
08. When the relocation of onsite soils and gravel has been completed, and prior the placement of any imported fill materials, call for the Engineer’s inspection and cease all work at the site for one (1) working day to allow for the inspection.
09. Provide all erosion control, clearing, and demolition as described in this Project Manual whether shown on the Contract Drawings or not.

C. SUBGRADE PREPARATION, AND DRAINAGE SYSTEM

01. Trenching, imported pipe bedding, backfilling, and compaction for drainage system construction.
02. Furnish, install, and maintain trench excavation safety systems.
03. Provide drainage pipe and drainage structures as shown on the Contract Drawings.
04. Provide trench dewatering.
05. Provide all other work for the drainage system as shown on the Contract Drawings.
06. Coordinate with communications provider and raise telephone vault lid to grade where shown on the Contract Drawings.
07. Provide a complete and fully-functional Drainage System as described in this Project Manual whether shown on the Contract Drawings or not.

D. EARTHWORK, LINER, RIPRAP, PAVING, AND RESTORATION

01. Import the required volume of fill materials from a Contractor-provided source. Place and compact fill materials into their final locations as shown on the Contract Drawings.
02. Provide the services of a soils test lab to complete the specified number of compaction tests.
03. Immediately prior to the placement of any impermeable liner materials, call for the Engineer’s inspection and cease all work at the site for one (1) working day to allow for the inspection.
04. Provide the specified impermeable liner system.

05. Immediately after the installation of all impermeable liner materials and prior to covering the liner with any additional materials, call for the Engineer's inspection and cease all work at the site for one (1) working day to allow for the inspection.
06. Provide quarry spalls where shown on the Contract Drawings.
07. Complete the surface restoration including asphalt surface restoration and surface restoration outside of existing pavement.
08. Install two (2) new gate posts and a new double gate as shown on the Contract Drawings. Repair the existing fence where it was disassembled. Reconnect existing fence to new posts.
09. Trimming, cleanup, and removal of all temporary measures.
10. Furnish, install, and compact crushed surfacing base course for Town garage driving and parking areas using the crushed surfacing base course volume shown on the Contract Drawings. The area of installation will be as directed by the Engineer in the field at the time of installation.
11. Seed and fertilize all areas disturbed by the Contractor during the work of this Contract, except for those areas which are to receive gravel restoration as a part of this Contract.
12. Also seed and fertilize all onsite areas which did not have vegetative ground cover prior to the start of the work of this Contract, except for those areas which are to receive gravel restoration as part of this Contract, and where directed otherwise by the Owner.
13. Provide as-built redline drawings.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

**SECTION 01300
SUBMITTALS**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The Work of this Section is bound by the General Requirements, Special Provisions, and Standard Specifications of the Contract, except as modified herein.
- B. General: Prepare and process submittals as required by this section.
- C. Required Submittals:
 - 1. Construction progress schedule.
 - 2. Schedule of Values showing itemized amounts for Scope of Work A, B, C, and D.
 - 3. Material and product data for all materials used.

1.02 REQUIREMENTS FOR SUBMITTAL PROCEDURES

- A. The technical Provisions may not list all submittal requirements specific to that section (i.e., shop drawings, samples, product data, etc.). Instead, the Contractor shall make complete submittals for all methods and all materials and all products to be incorporated into the project. This requirement shall apply even when the Contractor proposes to use the same materials, methods, and products which are specifically identified in the Contract. The submittal requirements listed in this section will apply to all Technical Specifications sections whether specific requirements are listed in other sections or not.
- B. Each copy of each submittal shall have the following information on the cover, on the first page of the submittal, or on a permanent label attached to the submittal, as applicable:
 - 1. Project name.
 - 2. Submittal number correlated with previous submittals.
 - 3. Date of submittal.
 - 4. Name of the Contractor.
 - 5. Name and phone number of subcontractor, supplier, and installer.
 - 6. Name of manufacturer.
 - 7. Number and title of applicable specification section.
 - 8. Drawing number and detail references, when applicable.
 - 9. Other necessary identifying information, such as stating the different parts of the submittal (i.e., product data, samples, etc.) and how many of each item are provided.
- C. Contractor shall sign or initial each copy of each submittal to certify compliance with requirements of the contract documents or shall notify the Engineer, in writing at time of submittal, of all deviations from requirements of the contract documents.

- D. Address to Engineer. Copy and distribute as specified for each type of submittal (below).
- E. Submittals to receive Engineer's review should have blank space provided on cover, first page, or label for marking.
- F. Package submittals required for each particular specification section together. Incomplete submittals will not be reviewed.
- G. Submittals will be accepted from the Contractor only. Submittals received from other entities will not be reviewed.

1.03 FORMAT

- A. Unless otherwise specified or impractical, use paper no larger than 8 ½ by 11 inches, except drawings to be size required, but folded to 8 ½ by 11 inches where possible.

1.04 TIMING OF SUBMITTALS

- A. The Contractor's first payment request will not be processed prior to receipt of:
 - 1. Schedule of Values.
 - 2. Updated Construction Progress Schedule.
 - 3. All materials submittals.
- B. Engineer to receive submittals no less than 15 working days in advance of required approval time to allow proper review by Engineer. Submittals requiring action in less than 15 working days are not timely submittals.
- C. Prepare and transmit each submittal requiring approval sufficiently in advance of scheduled performance of the work to which it relates to allow for adequate review and processing time, including time for resubmittal if necessary.
- D. Prepare and transmit each informational submittal prior to start of the work involved, unless the submittal is of a type which cannot be prepared until after completion of work. Submit promptly.
- E. If processing time for a particular submittal will be critical to progress of the work, so advise the Engineer on the submittal.
- F. No extension of time will be authorized because of the Contractor's failure to transmit submittals sufficiently in advance of the work.

1.05 COORDINATION

- A. Coordinate preparation and processing of submittals with performance of the work. Coordinate each separate submittal with other submittals and related activities that require sequential performance.

- B. Coordinate submittal of different units of interrelated work so that no submittal will be delayed by the Engineer's need to review a related submittal. The Engineer reserves the right to withhold action on any such submittal until the related submittals are received.

1.06 REVIEW AND RETURN OF SUBMITTALS

- A. Engineer will review and may mark with appropriate action as follows:
 - 1. No Exception Taken: Work covered by the submittal may proceed provided it complies with requirements of the contract documents. "No exception taken" shall also mean "subject to plans and specifications; dimensions and quantities not guaranteed."
 - 2. Note Marking, Confirm: Work covered by the submittal may proceed provided it complies both with notations and corrections on the submittal and with the requirements of the contract documents.
 - 3. Not Accepted, Resubmit: Do not proceed with work covered by the submittal. Revise the submittal or prepare a new submittal in accordance with notations made. Resubmit the submittal without delay.
- B. Submittals will be returned to the Contractor by the most economical mode.
- C. The Engineer reserves the right to respond to submittals using a memo format which does not require the return of the Contractor's submittals.
- D. Contractor shall perform re-submittals in the same manner as original submittals. Indicate all changes other than those requested by the Engineer.

1.07 SUBMITTAL OF ITEMS FOR SUBSTITUTION

- A. Submittals for alternate materials or substitutions shall contain sufficient information to prove that the alternate materials are in fact equivalent to the materials identified by the Contract Documents. The Contractor shall retain the burden of proving that alternate materials, methods, products, and systems are in fact equivalent to those specified with regard to the salient characteristics.

1.08 REQUIREMENT FOR ENGINEER'S APPROVAL

- A. The Contractor shall obtain the Engineer's written approval for all materials installed on this project. Such approval may take the form of a notation such as: "no exceptions taken" or "approved". The Contractor shall immediately remove all unapproved materials from the project site, and shall make submittals to the Engineer for the replacement materials to be installed, and shall install only materials which have been approved by the Engineer, and no additional compensation will be allowed therefore.

1.09 MEASUREMENT AND PAYMENT FOR SUBMITTALS

- A. The Contractor shall be compensated for work performed on this project based on the units of work identified on the Bid Form. All submittals required to complete the project and not specifically identified in a Bid Form item shall be deemed included in the item(s) of work on the Bid Form and no separate compensation shall be made.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.01 MATERIAL AND PRODUCT DATA

- A. General:
1. The purpose of these submittals is to establish the materials, products, and methods to be used in the work.
 2. Submit to the Engineer shop drawings and samples.
- B. Format:
1. Provide with Cover Sheet information per Part 1.02.B.
 2. Bind to allow removal or insertion of pages. Provide suitable protective cover.
 3. Present items in order they occur in specification sections.
- C. Required Information:
1. The Contractor's statement of approval and identification of any deviations from contract documents. Place on face or "cover sheet" of submittals.
 2. A description of materials, products, systems, and methods is required for all Technical Specifications sections. Provide sufficient technical information to establish conformance with specification via:
 - a. Manufacturer's literature or other necessary descriptive materials, including application data, listing of all possible options offered by the manufacturer, installation and operation instructions, technical performance data, certified test data, and all other information which the manufacturer has available for technical review purposes.
 - b. Contractor's letter that minor, miscellaneous items (nails, bolts, etc.) shall conform to specified standards.
 3. Where possible, submittal should include rough-in and dimensional information to preclude need for further submittal per below.
 4. Indicate clearly for each item the need for selection by Engineer of color, style, mounting, etc. Selections will be returned with approval.
 5. Include recommendations for application and use.
 6. Show special coordination requirements for the product.

D. Distribution

1. Submit five (5) copies to Engineer for all architectural, structural, civil, mechanical, and electrical submittals.
2. The Engineer will forward approved copy of submittal to Contractor.

3.02 SHOP DRAWINGS AND SAMPLES

A. General

1. The purpose of these submittals is to determine installation and assembly requirements for components of the work.
2. Submit with product data, samples, test data, and installation or application procedures and other submittals as delineated for each section of the specifications.
3. Show all conditions and connections to other work on shop drawings.
4. Submittals under this part are not intended to duplicate those specified under Part 3.01 above.

B. Format

1. Provide with "cover sheet" information per Part 1.02.B.
2. Submit one set of blueline or blackline prints of appropriate size or two 8 ½ by 11 inch or 11 by 17 inch copies, whichever applies. Provide one additional copy of all civil, structural, mechanical, and electrical shop drawings.
3. Sample size (2 inches minimum) to be as necessary to display requested color, texture, pattern, or construction. Provide four samples total; one sample will be retained by the Engineer and one sample is to be kept at the jobsite at all times.

C. Required Information

1. Submittal information required per specification for subject work.
2. Samples to include accurate samples of all substrates and coverings, by same or other trades, as required to produce example of final result.

D. Distribution

1. Submit one copy to Engineer for each review.
2. For work concerning Engineer's consultant, submit all copies to Engineer for distribution.
3. The Engineer will forward approved submittal to Contractor, or a memo serving the same purpose.
4. The Engineer may return one copy of approved submittal requesting return of corrected copy. Contractor will return one corrected copy each directly to Engineer, Consultant, and Owner's representative.

3.03 MISCELLANEOUS SUBMITTALS

A. Maintenance Instruction:

1. Completely describe the manufacturer's recommended maintenance methods, procedures, and materials.

2. Submit one copy to the Owner in advance of Owner's use or maintenance of product or material to preclude incorrect action by Owner.

B. Materials for Maintenance

1. Provide quantities specified in the technical provisions.
2. Deliver to Owner as directed.
3. Colors, patterns, and textures shall match installed and shall be taken from same run of stock.

END OF SECTION 01300

**SECTION 02050
SITE CLEARING AND DEMOLITION**

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Work of this Section is bound by the Conditions of the Contract and Division 1 Specifications sections, bound herein, in addition to this Specification and accompanying Drawings.

1.02 WORK INCLUDED

- A. Work under this Section includes all labor, supervision, equipment, tools, fuel, materials, services and incidentals necessary for the following:
 - 1. Installing safety fencing to protect those structured identified on the Contract Drawings to be protected in place.
 - 2. Sawcutting, removing, hauling, and disposing of existing asphalt and concrete pavement materials which are in conflict with the proposed work, and where shown on the Contract Drawings.
 - 3. Clearing and Grubbing.
 - 4. Demolition, which includes excavating and hauling existing soils, then either placing and compacting the existing soils, or removing and disposing of existing soils and other materials which are in conflict with the proposed work of the Contract, as shown on the Contract Drawings.

1.03 QUALITY ASSURANCE

A. PERMITS & LICENSES

- 1. The Contractor shall obtain and pay for any required permits.
- 2. The Contractor shall be licensed for any work required under this item.
- 3. The Contractor shall obtain and pay for a Town of Bucoda business license.

B. STANDARD SPECIFICATIONS

- 1. The work under this section shall be governed by the 2012 version of the WSDOT *Standard Specifications for Road, Bridge, and Municipal Construction* published by the Washington State Department of Transportation (WSDOT), referred to herein as “The Standard Specifications”.

2. All references in the Standard Specifications to measurement and payment shall be deleted from consideration, and the terms agreed to in the Contract substituted therefore.

1.04 JOB CONDITIONS

A. CONDITION OF SITE PRIOR TO CONSTRUCTION

1. The attached soils report describes onsite soils conditions. The Contractor shall accept the existing onsite conditions whether or not they are accurately described in the soils report. The Owner assumes no responsibility for site condition now, at time of bidding, nor thereafter.
2. Assume all risks from damage or loss to premises by means of fire, theft, and all other causes.
3. Damage or loss resulting from any cause to buildings, persons and/or property shall not relieve Contractor from his obligation to complete all work under the contract.

B. PROTECTION

1. General: Conduct all operations in such a manner as to prevent damage to trees that are to remain, surfaces, and adjacent property. Keep free of damage those portions of existing site appurtenances that are to remain or to be removed for re-use by owner. Repair any damage incurred because of the work of this section to the satisfaction of the Owner.
2. Protection of benchmarks and monuments:
 - a. Protect and maintain benchmarks, monuments, property corners, and all other survey reference points.
 - b. If benchmarks, monuments, or property corners are disturbed or damaged, the Contractor shall obtain the services of a registered Land Surveyor to replace such survey reference points in accordance with WAC 332-120, and no additional payments will be allowed therefore.
3. Utilities:
 - a. Where existing utilities are located at the site, either overhead or underground, take care not to cause damage thereto; keep building drains, street drains and sewers open, for free drainage at all times.
 - b. The Contractor shall be responsible for, and shall immediately repair, all damage to existing sewers, watermains, and building service connections to the same, operated by the Owner, which is caused by the construction work; repair such damage at no cost to Owner in manner approved by the applicable utility. Contractor shall contact

the underground utility locating service at 1-800-424-5555 a minimum of 48 hours prior to construction.

4. Landscape plantings to remain: Save and protect trees as designated on applicable Architectural, Landscape and Civil Drawings or as designated in the field.
5. Above-ground structures: Provide protection-in-place for all existing structures such as buildings, electrical devices, propane tanks, fences, and gates. Such protection includes the occupants of adjacent buildings, visitors, and passers-by from damage, injury and discomfort caused by equipment and dust.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 SITE CLEARING

- A. Provide and conform to all permits, approvals and necessary agency requirements for site work indicated on Drawings and specified herein.
- B. Do all clearing and grubbing work noted below as required for the completion of new work shown on Contract Drawings and as specified.
- C. Remove, haul and dispose of all debris and materials on site except those items identified to remain.
- D. As noted on the plans and details saw or cut materials and debris so that only those portions noted are removed.
- E. All debris shall become the property of the Contractor and the Contractor shall remove it from the site.

3.02 DEMOLITION

- A. General: Remove, haul and dispose of the existing soil, rock, asphalt, and concrete materials where shown on the Contract Drawings.
- B. Asphalt removal: The Contractor shall saw cut the existing asphalt to a “neat line” prior to asphalt removal. All asphalt shall be removed from the site and disposed of in an approved manner (i.e. recycling plant, permitted landfill etc.).
- C. Concrete removal: The Contractor shall saw cut the existing cement concrete to a “neat line” prior to concrete removal. All cement concrete shall be removed from the site and disposed of in an approved manner (i.e. recycling plant, permitted landfill etc.).

3.03 CLEARING & GRUBBING

A. General:

1. Clear and grub completely all materials indicated to be cleared, plus all grasses, shrubs, trees, vines, organic topsoil, asphalt and concrete pavement and other debris within the limits of grading shown on the Contract Drawings.
2. Remove all tree and vine roots to a minimum depth of 18 inches below the elevations of new work shown on the Contract Drawings.
3. All materials cleared and grubbed under work of this Section shall be disposed of off-site at a Contractor-provided site at no cost to the Owner.

B. Stripping Topsoil:

1. After clearing and grubbing is completed, strip all organic topsoil below the existing grade of all areas to be cleared and grubbed for the placement of new soil fill materials and drainage systems.
2. Keep topsoil reasonably free of subsoil, clay lumps, stones, weeds, roots and other foreign materials. Strip topsoil to whatever depths encountered, to prevent mixing with underlying subsoil.

C. Topsoil Stockpiling:

1. Stockpile existing topsoil in separate piles in designated onsite stockpile area(s) or as otherwise directed by the Engineer, for re-use and re-spreading.
2. Construct topsoil piles to allow free drainage of surface water. When required due to dry, wet and windy weather conditions, cover topsoil to prevent blowing dust or erosion and migration of sediments.

3.04 UTILITIES

- A. Take care not to cause damage to any other existing utilities; keep all other utilities intact and in continuous operation.
- B. If damaged, repair such damage at no cost to Owner in manner approved by the owner of the applicable utility.

3.05 DISPOSAL OF DEMOLISHED, CLEARED & GRUBBED MATERIAL

- A. Remove all non-usable materials and debris from site, streets and walkways as work proceeds, excepting those material/items indicated on Drawings and/or otherwise selected by the Owner to be retained by the Owner or to be reused in the new work.
- B. Remove from site all other cleared and grubbed material not selected to be retained by Owner. Non-usable material shall not accumulate on the site. Conform to all laws and ordinances relating to fires and disposal; obtain and pay for fire and air pollution permits and remove ash residue from site. Haul all said materials/debris to an approved off-site disposal site as selected by Contractor, at Contractor's expense.

3.06 UNAUTHORIZED REMOVAL OF TIMBER

- A. Contractor shall remove only timber that has been designated to be removed. Timber removed without the authorization of the Engineer shall be compensated at 300% of the marketable value of the unauthorized removal. In addition, the Contractor shall plant three new trees (5-Gallon Size) of the same type for every unauthorized removal of an existing tree at a location agreed upon by the Owner.

3.07 MAINTAIN TRAFFIC ACCESS

- A. Contractor shall maintain access over and through the various work areas as identified on the Contract Plans. Lane closures and traffic diversions shall be per the latest edition of the MUTCD (Manual of Uniform Traffic Control Devices), Contract Plans shall be submitted to the engineer and Jurisdiction for approval prior to any existing traffic modifications.

3.08 DEMOLITION REQUIREMENTS

- A. Conduct demolition to minimize interference with adjacent property owners and vehicular traffic.
- B. Cease operations immediately if adjacent structures appear to be in danger. Notify owner and do not resume operations until directed.
- C. Conduct operations with the minimum interference to public and private accesses.
- D. Maintain protected egress and access at all times.
- E. Obtain written permission from adjacent property owners when demolition equipment will traverse, infringe upon or limit access to their property.
- F. Sprinkle work site with water to minimize dust. Provide hoses, water and connections for this purpose.

3.09 DEMOLITION

- A. Remove, haul and dispose of items which are shown on the Contract Drawings to be removed.
- B. Backfill any areas which were excavated as result of demolition.
- C. Rough grade and compact areas affected by demolition to maintain site grades and contours.
- D. Remove demolished materials from site.

END OF SECTION 02050

**SECTION 02216
SUBGRADE PREPARATION**

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Work of this Section is bound by the Conditions of the Contract and Division 1 Specifications sections, bound herein, in addition to this Specification and accompanying Drawings.

1.02 WORK INCLUDED

- A. All subgrade preparation as specified herein or otherwise required for installation of new work shown or specified.
- B. In general, work specified herein shall be included in the Bid. Work under this section includes all labor, supervision, equipment, tools, materials, service and incidentals necessary for subgrade preparation.
- C. STANDARD SPECIFICATIONS
 - 1. The work under this section shall be governed by the 2012 version of the WSDOT “Standard Specifications” for Road, Bridge, and Municipal Construction published by the Washington State Department of Transportation (WSDOT).
 - 2. All references in the Standard Specifications to measurement and payment shall be deleted from consideration, and the terms agreed to in the Contract substituted therefore.

1.03 QUALITY ASSURANCE

A. PERMITS & LICENSES

- 1. The Contractor shall obtain and pay for any required permits.
- 2. The Contractor shall be licensed for any work required under this item.
- 3. The Contractor shall obtain and pay for a Town of Bucoda business license.

B. STANDARD SPECIFICATIONS

- 1. The work under this section shall be governed by the 2012 version of the WSDOT *Standard Specifications for Road, Bridge, and Municipal Construction* published by the Washington State Department of Transportation (WSDOT), referred to herein as “The Standard Specifications”.

2. All references in the Standard Specifications to measurement and payment shall be deleted from consideration, and the terms agreed to in the Contract substituted therefore.

1.04 JOB CONDITIONS

A. CONDITION OF SITE PRIOR TO CONSTRUCTION

1. Accept premises on an “as-is” condition; Owner assumes no responsibility for site condition now, at time of bidding, nor thereafter.
2. Assume all risks from damage or loss to premises by means of fire, theft, and all other causes.
3. Damage or loss resulting from any cause to building, persons and/or property shall not relieve Contractor from his obligation to complete all work under the contract.

B. PROTECTION

1. General: Conduct all operations in such a manner as to prevent damage to trees that are to remain, surfaces, and adjacent property. Keep free of damage those portions of existing site appurtenances that are to remain or to be removed for re-use by owner. Repair any damage incurred because of the work of this section to the satisfaction of the Owner.
2. Protection of benchmarks and monuments:
 - a. Protect and maintain benchmarks, monuments, property corners, and all other survey reference points.
 - b. If benchmarks, monuments, or property corners are disturbed or damaged, the Contractor shall obtain the services of a registered Land Surveyor to replace such survey reference points in accordance with WAC 332-120, and no additional payments will be allowed therefore.
4. Utilities:
 - a. Where existing utilities exist at site, either overhead or underground, take care not to cause damage thereto; keep building drains, street drains and sewers open, for free drainage at all times.
 - b. The Contractor shall be responsible for, and shall immediately repair, all damage to existing sewers, watermains, and building service connections to the same, operated by the Owner, which is caused by the construction work; repair such damage at no cost to Owner in manner approved by the applicable utility. Contractor shall contact

the underground utility locating service at 1-800-424-5555 a minimum of 48 hours prior to construction.

5. Landscape plantings to remain: Save and protect trees as designated on applicable Architectural, Landscape and Civil Drawings or as designated in the field.
6. Adjacent buildings: Provide protection required by the General Conditions. Such protection includes occupants of said adjacent buildings, visitors, and passers-by from damage, injury and discomfort caused by dust.
7. Street Blockage: Coordinate with the Owner and Jurisdiction should blockage of any streets be contemplated due to site prep work of this project; provide all necessary signs, lights and barricades required for any said blockage.

1.05 DEFINITIONS

A. Optimum Moisture Content:

1. Ratio, in percent, of as-compacted field dry density to laboratory maximum dry density, as determined in accordance with ASTM D 1557-12.
2. Apply corrections for oversize material to either as-compacted field dry density or maximum dry density, as determined by the Engineer.

B. Prepared Ground Surface: Ground surface after completion of clearing and grubbing, scalping of sod, stripping of topsoil, excavation to grade, and scarification and compaction of Subgrade.

C. Subgrade: Layer of existing soil after completion of clearing, grubbing, scalping of topsoil prior to placement of fill.

D. Proof-Rolling: Testing of Subgrade by compaction effort to identify areas that will not support the future loading without excessive settlement.

E. Dry Subgrade: Subgrade for which the in-place moisture content is more than 5 percent below the optimum moisture content

F. Wet Subgrade: Subgrade for which the in-place moisture content is more than 5 percent above the optimum moisture content.

G. Unsuitable Material: Material which, in the judgment of the Owner's representative, is not suitable to be used for the intended purpose.

1.06 SEQUENCING AND SCHEDULING

- A. Complete applicable work specified in Section 02050 – Site Clearing and Demolition, prior to subgrade preparation.

1.07 QUALITY ASSURANCE

- A. Notify the Engineer when the subgrade is ready for compaction or proof-rolling, and when compaction or proof-rolling is resumed after a period of inactivity lasting more than 72 hours.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 GENERAL

- A. Keep the subgrade free of water, debris, and foreign matter during compaction or proof-rolling.
- B. Bring subgrade to proper grade and cross-section and uniformly compact surface.
 - 1. Do not use sections of the prepared ground surface as haul roads. Protect prepared subgrade from traffic.
 - 2. Maintain the prepared ground surface in finished condition until next course is placed.

3.02 COMPACTION

- A. Under Earth fill: Compact the upper 6 inches to minimum of 90 percent Relative Compaction as determined in accordance with ASTM D 1557-12.
- B. Under Pavement Structure: Granular Fill Under Concrete Slabs or Asphalt Concrete: Compact the upper 12 inches to minimum of 95 percent Relative Compaction as determined in accordance with ASTM D 1557-12.

3.03 MOISTURE CONDITIONING

- A. Dry Subgrade: Add water, then mix to make moisture content uniform throughout.
- B. Wet Subgrade: Aerate material by blading, discing, harrowing, or other methods, to hasten drying process.

3.04 CORRECTION FOR SOFT OR LOOSE SUBGRADE

A. Soft or Loose Subgrade:

1. Adjust moisture content and re-compact all soft or loose subgrade.

END OF SECTION 02216

SECTION 02221
TRENCHING, BACKFILLING, AND COMPACTION FOR UTILITIES

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Work of this Section is bound by the Conditions of the Contract and Division 1 Specifications sections, bound herein, in addition to this Specification and accompanying Drawings.

1.02 WORK INCLUDED

- A. Work under this Section includes all labor, supervision, equipment, tools materials, services and incidentals necessary for trenching, bedding, backfilling, compaction and dewatering for storm water system, and the associated appurtenances.

1.03 JOB CONDITIONS

A. CONDITION OF SITE PRIOR TO CONSTRUCTION

1. The attached soils report describes onsite soils conditions. The Contractor shall accept the existing onsite conditions whether or not they are accurately described in the soils report. The Owner assumes no responsibility for site condition now, at time of bidding, nor thereafter.
2. Assume all risks from damage or loss to premises by means of fire, theft, and all other causes.
3. Damage or loss resulting from any cause to buildings, persons and/or property shall not relieve Contractor from his obligation to complete all work under the contract.

B. PROTECTION

1. General: Conduct all operations in such a manner as to prevent damage to trees that are to remain, surfaces, and adjacent property. Keep free of damage those portions of existing site appurtenances that are to remain or to be removed for re-use by owner. Repair any damage incurred because of the work of this section to the satisfaction of the Owner.
2. Protection of benchmarks and monuments:
 - a. Protect and maintain benchmarks, monuments, property corners, and all other survey reference points.

- b. If benchmarks, monuments, or property corners are disturbed or damaged, the Contractor shall obtain the services of a registered Land Surveyor to replace such survey reference points in accordance with WAC 332-120, and no additional payments will be allowed therefore.
- 3. Utilities:
 - a. Where existing utilities are located at the site, either overhead or underground, take care not to cause damage thereto; keep building drains, street drains and sewers open, for free drainage at all times.
 - b. The Contractor shall be responsible for, and shall immediately repair, all damage to existing sewers, watermains, and building service connections to the same, operated by the Owner, which is caused by the construction work; repair such damage at no cost to Owner in manner approved by the applicable utility. Contractor shall contact the underground utility locating service at 1-800-424-5555 a minimum of 48 hours prior to construction.
- 4. Landscape plantings to remain: Save and protect trees as designated on applicable Architectural, Landscape and Civil Drawings or as designated in the field.
- 5. Above-ground structures: Provide protection-in-place for all existing structures such as buildings, electrical devices, propane tanks, fences, and gates. Such protection includes the occupants of adjacent buildings, visitors, and passers-by from damage, injury and discomfort caused by equipment and dust.

1.04 QUALITY ASSURANCE

A. PERMITS & LICENSES

- 1. Obtain and pay for any required permits.
- 2. Contractor shall be licensed for any work required under this item.

B. STANDARD SPECIFICATIONS

- 1. The work under this section shall be governed by the 2012 version of the WSDOT "Standard Specifications" for Road, Bridge, and Municipal Construction published by the Washington State Department of Transportation (WSDOT).
- 2. All references in the Standard Specifications to measurement and payment shall be deleted from consideration, and the terms agreed to in the Contract substituted therefore.

1.05 CONSTRUCTION STAKING

- A. See Special Provisions.

- B. Should construction staking be lost as a result of the Contractor's operations or as a result of vandalism, the Contractor shall replace the staking at the Contractor's sole expense.

PART 2 - PRODUCTS

2.01 BEDDING MATERIAL FOR PIPE

A. General

1. The existing soils are unsuitable for pipe bedding material. The Contractor shall utilize imported bedding material for pipe bedding.

B. Bedding Material

1. Imported bedding material shall consist of clean, well graded granular material, meeting the requirements of Gravel Backfill for Pipe Zone Bedding in Section 9-03.12(3) of the Standard Specifications.

2.02 BACKFILL MATERIAL

A. General Backfill Material

1. Select native material may be used for trench backfill above the level of the pipe bedding, provided the materials are suitable, conform to the specified requirements, and are approved by the Engineer.
2. The material shall be substantially free from peat, wood, roots, bark or other extraneous material. The material size of stones within this material shall not exceed 6 inches in the largest dimension or as approved by the Engineer.

B. Select Granular Backfill

1. Select granular backfill material shall be clean crushed, partially crushed, or naturally occurring granular material, meeting the following requirements for gradation and quality:

<u>Sieve Size</u>	<u>Percent Passing</u>
3" square	100
1/4" square	25 minimum
U.S. No. 40 Sieve	40 maximum
U.S. No. 200 Sieve	7.5 maximum
Sand equivalent	35 minimum

PART 3 – EXECUTION

3.01 TRENCHING, BACKFILLING & COMPACTION FOR PIPE

A. Trench Excavation

1. Clearing and Grubbing: The area to be excavated shall be cleared and grubbed by the Contractor. This work shall consist of the removal and disposal of all logs, stumps, roots, brush, and all other refuse within the area to be excavated. All such material shall be disposed of offsite at a Contractor provided waste site unless otherwise directed by the Engineer.
2. Removal of Existing Improvements: With certain exceptions the Contractor shall remove and replace all fences, pavement, sidewalks, curbs, and other existing structures which are in conflict with the proposed work. The exceptions are existing utilities and any other items the Engineer may direct the Contractor to leave intact. All materials described above shall be disposed of offsite at a Contractor provided waste site. In removing pavement, sidewalks, and curbs, the Contractor shall make a vertical full-depth saw cut between any existing pavement, sidewalk, culvert, or curb that is to remain and the portion to be removed. The Contractor shall replace any existing pavement, sidewalk or other improvement designated to remain that is damaged during the Contractor's operations, and no additional payment will be allowed therefore.
3. Existing Utilities: Existing utilities of record are shown on the plans. These are shown for convenience only, and the Engineer assumes no responsibility for improper locations or failure to show utility locations on the Plans. The Contractor shall be responsible for protecting all existing public and private utilities including, but not limited to telephone, power, gas, and water lines. Call 1-800-424-5555 for utility location. Any utility owner may enter the job site to repair, rearrange, alter or connect their equipment. The Contractor shall cooperate with such efforts and shall avoid creating delays or hindrances to those doing the work. As needed, the Contractor shall arrange to coordinate work schedules. To ease or streamline the work, the Contractor may desire to ask utility owners to move, remove, or alter their equipment in ways other than those listed in the Plans. The Contractor shall make the arrangements and pay all costs that arise from them. All costs that this section makes the Contractor's obligation shall be incidental to the Contract Bid Items and no separate compensation will be allowed.
4. Trench Excavation: Trench excavation shall be performed in accordance with section 7-10.3(7) of the Standard Specifications, except as modified herein. The length of trench excavated shall be only that necessary to install the required improvements. All trenches shall be closed up at the end of the day. The trench must be of sufficient width to permit proper jointing of the pipe and backfilling of material along the sides of the pipe. Trench width at the surface of the ground shall be kept to the minimum necessary to safely install the improvements identified in the Contract Plans.

5. Trench Shoring: Shoring shall comply with Section 7-08.3(1)B of the Standard Specifications.

B. Stockpiling & Disposal

1. Unless approved or directed otherwise by the Engineer, excess excavated material shall be removed from the site and disposed of at a Contractor provided waste site. If suitable material is encountered, the soil shall be piled beside the trench as it is removed, unless otherwise directed, and shall be backfilled from the position. The material shall be piled and maintained so that the toe of the slope of the material is at least 2 feet from the edge of the trench. It shall be piled in such a manner to prevent surface water from flowing into the excavation and in a manner that will cause a minimum of inconvenience to travel. Free access shall be provided to all fire hydrants, water valves and meters; and clearance shall be left to enable the free flow of stormwater in all gutters, conduits, and natural watercourses.
2. The disposal of excess material shall be considered as incidental.

C. Control of Water

1. The Contractor shall furnish, install and operate all necessary equipment to keep excavations free from water during construction, and shall dewater and dispose of the water so as not to cause injury to public or private property or to cause a nuisance to the public. The Contractor shall at all times have on hand sufficient pumping equipment in good working conditions for all ordinary emergencies, including power outage, and shall have available at all times competent workers for the operation of the pumping equipment.
2. The control of ground water shall be such that softening of the bottom of excavations or formations of "quick" conditions or "boils" during excavation shall be prevented. Dewatering systems shall be designed and operated to prevent removal of natural soils.
3. Dewatering of the trench and excavations for underground structures shall be considered as incidental to the construction and all costs thereof shall be included in the various contract prices in the proposal.

D. Bedding & Backfilling:

1. Pipe shall be bedded in conformance with Section 7-08.3(1)C of the Standard Specifications and the details on the Contract Plans. Bedding shall be placed in more than one lift. The first lift shall be placed before the pipe is installed, and shall be spread smoothly so that the pipe is uniformly supported along the barrel. Subsequent lifts of not more than 6 inches thickness shall be installed to a depth of 6 inches over the crown of the pipe. Each lift shall be compacted to 95 percent of the maximum density as determined by methods outlined in Section 2-03.3(14)D of the Standard Specifications.

2. Trenches shall be backfilled in conformance with section 7-08.3(3) of the Standard Specifications. Prior to backfilling, all debris shall be removed from the trench. Sheeting used by the Contractor shall be removed just ahead of backfilling. Backfill up to 12 inches over the top of the pipe shall be evenly and carefully placed. Materials capable of damaging the pipe or its coating shall be removed from the backfill material. A minimum 3 inch sand cushion shall be placed between the proposed utility and existing pipelines or other conduits when encountered during construction and as directed by the Engineer.

E. Compaction

1. Pipe Bedding shall be compacted to at least 95% of the maximum density as determined by ASTM D-1557 except as noted. Trench Backfill shall be compacted to at least a minimum of 95% of the maximum density as determined by ASTM D-1557. At locations where paved streets, roadway shoulders, driveways, or sidewalks will be constructed or reconstructed over the trench, the backfill shall be spread in layers and be compacted by mechanical tampers. In such cases, the backfill material shall be placed in successive layers not exceeding 6 inches in loose thickness, and each layer shall be compacted with mechanical tampers to the density specified herein. Mechanical tampers shall be of the impact type as approved by the Engineer.

END OF SECTION 02221

**SECTION 02300
EARTHWORK AND RIPRAP**

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Work of this Section is bound by the Conditions of the Contract and Division 1 Specifications sections, bound herein, in addition to this Specification and accompanying Drawings.

1.02 WORK INCLUDED

- A. Work under this section includes all labor, supervision, equipment, tools, materials, service and incidentals necessary for the completion of the following:
 - 1. Excavation as specified herein or otherwise required for installation of new work shown or specified.
 - 2. General filling and contouring of site surfaces for earthen structures and paving.
 - 3. Rough and finish grading of cut and fill surfaces.
 - 4. Compaction of soil fill materials. Provide the services of a soils test lab to complete the specified number of compaction tests.
 - 5. Placement of sand and quarry spall materials.
 - 6. Inspection and testing of fill materials.
- B. The earthwork quantities for this project do not balance. The contractor will be required to import and export as required to achieve the design grades based on the site survey and Contract Drawings and no additional compensation will be allowed therefore.
- C. All cut volumes and all excavation volumes identified by the Contract Documents are estimated values based on in-place volumes prior to excavation. Truck volumes or capacities shall not be used for estimating or payment purposes in any case.
- D. All imported soil and rock volumes and fill volumes identified by the Contract Documents are estimated values based on in-place volumes after proper compaction into their final position on the project. Truck volumes or capacities shall not be used for estimating or payment purposes in any case.

1.03 QUALITY ASSURANCE

A. PERMITS & LICENSES

1. Obtain and pay for any required permits.
2. Contractor shall be licensed for any work required under this item.

B. STANDARD SPECIFICATIONS

1. The work under this section shall be governed by the 2012 version of the WSDOT "Standard Specifications" for Road, Bridge, and Municipal Construction published by the Washington State Department of Transportation (WSDOT).
2. All references in the Standard Specifications to measurement and payment shall be deleted from consideration, and the terms agreed to in the Contract substituted therefore.

1.04 JOB CONDITIONS

A. CONDITION OF SITE PRIOR TO CONSTRUCTION

1. The attached soils report describes onsite soils conditions. The Contractor shall accept the existing onsite conditions whether or not they are accurately described in the soils report. The Owner assumes no responsibility for site condition now, at time of bidding, nor thereafter.
2. Assume all risks from damage or loss to premises by means of fire, theft, and all other causes.
3. Damage or loss resulting from any cause to buildings, persons and/or property shall not relieve Contractor from the obligation to complete all work under the Contract.

B. PROTECTION

1. General: Conduct all operations in such a manner as to prevent damage to trees that are to remain, surfaces, and adjacent property. Keep free of damage those portions of existing site appurtenances that are to remain or to be removed for re-use by owner. Repair any damage incurred because of the work of this section to the satisfaction of the Owner.
2. Protection of benchmarks and monuments:
 - a. Protect and maintain benchmarks, monuments, property corners, and all other survey reference points.

- b. If benchmarks, monuments, or property corners are disturbed or damaged, the Contractor shall obtain the services of a registered Land Surveyor to replace such survey reference points in accordance with WAC 332-120, and no additional payments will be allowed therefore.
- 3. Utilities:
 - a. Where existing utilities are located at the site, either overhead or underground, take care not to cause damage thereto; keep building drains, street drains and sewers open, for free drainage at all times.
 - b. The Contractor shall be responsible for, and shall immediately repair, all damage to existing sewers, watermains, and building service connections to the same, operated by the Owner, which is caused by the construction work; repair such damage at no cost to Owner in manner approved by the applicable utility. Contractor shall contact the underground utility locating service at 1-800-424-5555 a minimum of 48 hours prior to construction.
- 4. Landscape plantings to remain: Save and protect trees as designated on applicable Architectural, Landscape and Civil Drawings or as designated in the field.
- 5. Above-ground structures: Provide protection-in-place for all existing structures such as buildings, electrical devices, propane tanks, fences, and gates. Such protection includes the occupants of adjacent buildings, visitors, and passers-by from damage, injury and discomfort caused by equipment and dust.

1.05 SUBMITTALS

- A. The Contractor shall submit an Excavation Plan detailing:
 - 1. Methods and sequencing of excavation.
 - 2. Proposed locations of stockpiled excavated material.
 - 3. Proposed onsite and offsite spoil disposal sites.
- B. The Contractor shall submit the following compaction test reports:
 - 1. One subgrade compaction test report for every 2000 SF of subgrade preparation prior to the placement of any fill materials onto the prepared surfaces, at the locations where directed by the Engineer.
 - 2. One compaction test report for every 100 cubic yards of fill placed, at the locations where directed by the Engineer.

1.06 WEATHER LIMITATIONS

- A. Material excavated during inclement weather shall not be used as fill or backfill until after material drains and dries sufficiently for proper compaction in accordance with the Standard Specifications.

1.07 SEQUENCING AND SCHEDULING

- A. Complete all Clearing, Grubbing, Demolition, and Subgrade Preparation prior to the import of any fill materials.

1.08 BASE TOPOGRAPHIC ADVISORY

- A. Contractor is advised to verify site conditions prior to bidding.

PART 2 - PRODUCTS

2.01 GRAVEL BACKFILL FOR WALLS

- A. Gravel Backfill for Walls, regardless of the actual use of the material, shall conform to the requirements of Section 9-03.12(2) of the Standard Specifications.

2.02 BALLAST

- A. Ballast shall conform to the requirements of Section 9-03.9(1) of the Standard Specifications.

2.03 CRUSHED SURFACING TOP COURSE AND BASE COURSE

- A. Crushed Surface Top and Base Course shall conform to the requirement of Section 9-03.9(3) of the Standard Specifications.

2.04 QUARRY SPALLS

- A. Quarry Spalls shall consist of broken natural stone meeting the requirements of Section 9-13 and Section 9-13.6 of the Standard Specifications.

2.05 SAND

- A. Sand shall conform to the requirements of Section 9-03.13 of the Standard Specifications.

PART 3 – EXECUTION

3.01 GENERAL

- A. Excavate to lines, grades, and dimensions shown and as necessary to accomplish Work. Excavate to within tolerance of plus or minus 0.1 foot except where dimensions or grades are shown or specified as maximum or minimum. Allow for forms, working space, granular base, topsoil, and similar items, wherever applicable. Trim to neat lines where concrete is to be deposited against earth.
- B. Do not over-excavate without written authorization of Engineer.
- C. Remove or protect obstructions as shown.

3.02 EMBANKMENT AND CUT SLOPES

- A. Shape, trim, and finish cut slopes to conform with lines, grades, and cross sections shown, with proper allowance for topsoil or slope protection, where shown.
- B. Remove stones and rock that exceed six (6) inches in diameter and that are loose and may roll down slope. Remove exposed roots from cut slopes.
- C. Round tops of cut slopes in soil to not less than a six (6)-foot radius, provided such rounding does not extend offsite or outside easements and right-of-ways, or adversely impacts existing facilities, adjacent property, or completed work.
- D. Embankment construction shall be performed in accordance with Section 2-03.3(14) or the Standard Specifications.

3.03 SUBGRADE PREPARATION

- A. All subgrade areas beneath structures, paving and walls shall be prepared in accordance with Section 2-06 of the Standard Specifications, with the following modifications:
 - 1. In paragraph 2-06.3(1)6 the wording “Compact subgrade to a depth of 6 inches.” shall be removed and replaced with “Compact subgrade to a depth of 12 inches.”
 - 2. In paragraph 2-06.3(2) the wording “The Contractor shall compact the subgrade to a depth of 6 inches to 95 percent standard density” shall be removed and replaced with “The Contractor shall compact the subgrade to a depth of 12 inches to 98 percent standard density.”

3.04 STOCKPILING EXCAVATED MATERIAL

- A. Confine stockpiles to within easements, right-of-way, and approved work areas. Do not obstruct roads or streets.

- B. Do not stockpile excavated material adjacent to trenches and other excavations unless excavation side slopes and excavation support systems are designed, constructed, and maintained for stockpile loads.
- C. Do not stockpile excavated materials near or over existing facilities, adjacent property, or completed work, if weight of stockpiled material could induce excessive settlement.

3.05 DISPOSAL OF SPOIL

- A. Remove, haul, and dispose of excavated materials which are unsuitable or exceed quantity needed for fill or backfill at an offsite location provided by the Contractor.

3.06 EMBANKMENT AND FILL

- A. Earth Embankment shall consist of fill placed in earthen structures in accordance with Section 2-03.3(14)B and compacted in accordance with Section 2-03.3(14)C – Method A of the Standard Specification.
- B. Gravel Backfill for Walls shall be placed in accordance with Section 2-03.3(14)B and compacted in accordance with Section 2-03.3(14)C – Method B of the Standard Specification.
- C. Gravel Backfill for Foundations – Class B shall be placed in accordance with Section 2-03.3(14)C and compacted in accordance with Section 2-03.3(14)C – Method B of the Standard Specification.
- D. Ballast and Crushed Surface Top Course shall be placed and compacted in accordance with Section 4-04 of the Standard Specifications.

3.07 PLACEMENT OF SAND

- A. Place and compact sand as shown on the Contract Drawings.

3.08 PLACEMENT OF QUARRY SPALLS

- A. Install quarry spalls in accordance with Section 8-15.3(6) of the Standard Specifications and as shown on the Contract Drawings.

END OF SECTION 02300

SECTION 02508
EROSION CONTROL AND SURFACE RESTORATION

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Work of this Section is bound by the General Requirements, Special Provisions, and Standard Specifications of the Contract, except as modified herein.
- B. Work under this Section includes all labor, supervision, equipment, tools, fuel, materials, services and incidentals necessary for the following:
 - 1. Furnish and install Straw Wattle and other erosion control materials where shown on the Contract Drawings.
 - 2. Furnish and install plastic sheeting to cover soil stockpiles.
 - 3. Provide protection for all items identified by the word “protect” on the Contract Drawings.
 - 4. If items identified by the word “protect” on the Contract Drawings are damaged by construction operations, then the Contractor shall furnish and install new materials to complete repairs of damaged items, and no additional payment will be allowed therefore.
 - 5. Provide Asphalt Pavement Restoration, and Surface Restoration Outside of Pavement.
 - 6. Restore original ground contours in all areas where the Contract Drawings do not show improvements to be constructed.
 - 7. Provide topsoil, compost, seeding, and fertilizing where specified by the Contract Documents.
 - 8. All other surface restoration as specified herein.

1.2 FIELD APPROVAL OF WORK

- A. All construction shall be field-approved by the Engineer, Jerome W. Morrisette & Associates Inc., P.S.

1.3 SUBMITTALS

- A. Make required submittals for all materials to be installed.

1.4 QUALITY ASSURANCE

- A. Install all materials in accordance with the manufacturer's written installation instructions. The manufacturer's written recommendations shall become mandatory requirements under this Contract.

1.5 MEASUREMENT AND BASIS OF PAYMENT

- A. The Contractor shall be compensated for work performed on this project based on the units of work identified on the Bid Form. All work required to complete the project and not specifically identified by a Bid Form item shall be deemed incidental to the item(s) of work on the Bid Form and no separate compensation shall be made.
- B. All references in the Standard Specifications to measurement and payment are deleted from consideration, and the terms agreed to in the Contract are substituted therefore.
- C. **EROSION CONTROL**
 - 1. Includes all labor, equipment, tools, materials, fuel, and supervision required to install and maintain Erosion Controls such as plastic sheeting for soil stockpiles, and all other temporary erosion control materials. Also includes the complete removal of such materials at the conclusion of the construction.
 - 2. Basis of measurement and payment: No separate bid item is provided by this work. Bidders will distribute the cost of this work throughout the various bid items provided on the Bid Form.
- D. **STRAW WATTLE**
 - 1. Includes all labor, equipment, tools, materials, fuel, and supervision required to install and maintain Straw Wattles for the purposes of erosion control where shown on the Contract Drawings. Also includes the complete removal of such materials upon the establishment of grass for erosion control purposes.
 - 2. Basis of measurement and payment: No separate bid item is provided for this work. Bidders will distribute the cost of this work throughout the various bid items provided on the Bid Form.

E. ASPHALT PAVEMENT SURFACE RESTORATION

1. Includes all labor, equipment, tools, materials, fuel, and supervision required to complete the surface restoration with asphalt pavement as shown on the Contract Drawings and as specified herein.
2. Basis of measurement and payment: No separate bid item is provided for this work. Bidders will distribute the cost of this work throughout the various bid items provided on the Bid Form.

F. SURFACE RESTORATION OUTSIDE OF PAVEMENT

1. Includes all labor, equipment, tools, materials, fuel, and supervision required to complete the surface restoration outside of pavement as shown on the Contract Drawings and as specified herein.
2. Basis of measurement and payment: No separate bid item is provided for this work. Bidders will distribute the cost of this work throughout the various bid items provided on the Bid Form.

G. TRIMMING AND CLEANUP

1. Includes all labor, equipment, tools, materials, fuel, and supervision required to complete the Trimming and Cleanup specified herein. Includes continuous street sweeping as required to keep County roads clean.
2. Basis of measurement and payment: No separate bid item is provided for this work. Bidders will distribute the cost of this work throughout the various bid items provided on the Bid Form.

PART 2 - PRODUCTS

2.1 **STRAW WATTLES**

- A. Straw Wattles for erosion control purposes shall meet the requirements of Section 9-14.5(5) of the Standard Specifications, including netting, filler, and stakes.

2.2 SOIL STERILIZATION

- A. Similar to U.S. Borax Monobar-Chlorate (granular), containing 30% sodium chlorate and 68% sodium mataborate, dry and free-flowing.

2.3 BALLAST

- A. Ballast shall conform to the requirements of Section 9-03.9(1) of the Standard Specifications.

2.4 CRUSHED SURFACING BASE COURSE AND TOP COURSE

- A. Crushed Surfacing shall conform to the requirements of Section 9-03.9(3) of the Standard Specifications.
- B. Shoulder rock shall also meet the requirements of Section 9-03.9(3) of the Standard Specifications. Install either Top Course or Base Course as shown on the Contract Drawings.

2.5 ASPHALT PAVEMENT

- A. Asphalt Pavement shall conform to the requirements of Section 5.04 of the Standard Specifications, except as modified herein. The Contractor shall furnish HMA Class ½-inch PG 64-22. Asphalt binder content shall be adjusted as required to obtain to maximum compacted density based on the job mix formula submitted by the Contractor.

2.6 TACK OIL

- A. Asphalt for tack coat shall be CRS-1 meeting the requirements of Section 9-02 of the Standard Specifications.

2.7 SEED

- A. Seed mix shall be furnished as follows:

<u>Name</u>	<u>By Weight</u>	<u>% Purity</u>	<u>% Germination</u>
Redtop or Oregon bentgrass (Argrostis Alba or Argrostis Oregonensis)	20%	92	85
Red Fescue (Festuca Rubra)	70%	98	90
White Dutch Clover (Trifolium Repens)	10%	98	90

2.8 FERTILIZER

- A. Fertilizer shall meet the requirements of Section 9-14.3 of the Standard Specifications and shall be furnished as follows:

Nitrogen (as N):	16% minimum
Available Phosphorus (as P ₂ O ₅):	16% minimum
Water Soluble Potash (as K ₂ O):	16% minimum

2.9 TOPSOIL

- A. Topsoil shall meet the requirements for Topsoil Type A of Section 9-14.1(1) of the Standard Specifications. Topsoil Type A shall be soils imported from outside the project limits and shall meet the requirements of ASTM D5268. The Owner will not provide a source for Topsoil Type A. Topsoil shall be stockpiled separately and shall not be mixed with other excavated soils. Topsoil stockpiles shall be covered to prevent saturation by rainfall using 8-mil clear plastic sheeting.

2.10 COMPOST

- A. Compost shall meet the requirements of Fine Compost in accordance with Sections 9-14.4 and 9-14.4(8), (8)A, and (8)B of the Standard Specifications.

2.11 MISCELLANEOUS MATERIALS

- A. Provide all other materials as indicated on the Contract Drawings or in the Specifications.

PART 3 - EXECUTION

3.1 INSPECTION OF PRIOR WORK

Prior to all work in this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point this installation may properly commence. In the event of discrepancy, immediately notify the Engineer. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.2 RESTORATION OF ALL SURFACES

- A. Restore all disturbed surfaces to an equal or better condition than the condition existing prior to construction, and as follows:

1. Trench and Surface Restoration requirements are shown on the Contract Drawings. The applicable locations are shown by construction notes on each plan sheet at the locations where they apply.
2. Furnish and install all required surface restoration materials including but not limited to all rock aggregate materials, and asphalt pavement, as shown on the Contract Drawings, and as specified.
3. All existing surfaces disturbed by construction activities that are graveled shall be restored using the specified crushed surfacing materials. All surfaces that are to be paved shall be restored using the specified asphalt pavement materials.
4. All road shoulders disturbed by construction activities shall be restored, including placing crushed surfacing as required to restore to original or better condition.
5. Perform other surface restoration outside of pavement as specified in these Contract Documents.
6. All existing surfaces disturbed by construction activities which are not otherwise specified for restoration shall be seeded and fertilized in accordance with this specification section.

3.3 ASPHALT PAVEMENT RESTORATION

- A. The Contractor shall provide asphalt pavement surfaces in accordance with Section 5-04 of the Standard Specifications, except where otherwise specified, and as directed by the Engineer.
- B. The intent of these provisions is to require the Contractor to install new asphalt pavement where shown on the Contract Drawings, and to restore existing asphalt pavement to at least the condition which existed prior to construction. This shall include the requirement to restore the existing pavement where the Contractor planned to disturb existing pavement, and areas where the Contractor or adjacent traffic accidentally damages existing asphalt pavement.
- C. The Contractor shall restore asphalt pavement surfaces to establish the finished (driving) surface elevations shown on the Contract Drawings, and to the thickness shown on the Contract Drawings.

- D. The Contractor shall restore asphalt pavement surfaces to re-establish the same width of pavement which existed prior to construction, or as shown on the Contract Documents, whichever is wider.
- E. Provide soil sterilization solution to all surfaces under areas to be paved, prior to placing the ballast. Mix and apply solution in accordance with the manufacturer's instructions.
- E. At every location where new asphalt pavement is proposed to be placed against existing asphalt pavement, the Contractor shall sawcut the existing pavement full depth to provide a clean, vertical, and continuous join line. The Contractor is notified that this may require multiple sawcut operations to remove pavement beyond the limits of damage caused by the Contractor's operations. Widths of existing pavement which are less than three (3) feet wide shall not remain in place. Where pavement removals result in widths of existing pavement which are less than three (3) feet wide, the Contractor shall remove the existing pavement and shall construct asphalt pavement to the required width, and thickness, and no additional compensation will be allowed.
- F. Asphalt Pavement Restoration includes furnishing and installing asphalt pavement materials, ballast, crushed surfacing, tack coat and other materials as specified.
- G. An asphalt tack coat shall be applied to all asphalt and cement concrete pavement surfaces to be overlaid or abutted as specified by Section 5-04.3(5)A of the Standard Specifications. All asphalt seams shall be sealed with AR4000 and topped with sand as approved by the Engineer. Asphalt tack coat and asphalt for seam sealing shall be deemed incidental to surface restoration, and no separate compensation shall be made.
- H. This project will not attain Substantial Completion until the asphalt pavement has been provided in accordance with the Contract Documents.

3.4 SURFACE RESTORATION OUTSIDE OF PAVEMENT

- A. The Contractor shall furnish and install any and all materials required to return all disturbed areas outside of pavement to a condition which is equal to or better than their pre-construction appearance and function, in accordance with these specifications, and as directed by the Engineer.
- B. The Contractor shall also provide final grading as required to smooth out rough areas and return disturbed areas outside of pavement to the lines and grades which existed in the pre-construction condition, except where the Contract Documents specifically show revised lines and grades.

- C. In cases where these Contract Documents show or otherwise require restoration to a condition which is better than the pre-construction condition, the Contractor shall install new materials to result in a better condition, and no additional payment will be allowed therefore.
- D. The required materials for surface restoration Outside of Pavement shall be new materials and shall include, but will not be limited to the various surface materials such as rock, concrete, vegetative, and miscellaneous materials as required to restore the subject areas, regardless of whether such materials are shown on the Contract Drawings or not.
- E. The required new rock materials will include, but will not be limited to: ballast rock, crushed surfacing base course rock, decorative rock, rock walls, and rock headwalls, all as required to replace the existing materials regardless of whether such materials are shown on the Contract Drawings.
- F. The required new concrete materials will include, but will not be limited to: asphalt concrete driveways and cement concrete driveways, as required to replace the existing materials which have been damaged by construction activities regardless of whether such materials are shown on the Contract Drawings.
- G. The required new vegetative materials will include, but will not be limited to: any and all types of vegetation and components of vegetative materials, whether living or not, such as trees, shrubs, bushes, flowers, seeding, fertilizing, and plant establishment period, all as required to replace existing materials which have been damaged by construction activities regardless of whether such materials are shown on the Contract Drawings.
- H. The required new miscellaneous materials will include, but will not be limited to: gates, fence posts, barbed wire fencing, hog wire fencing, wooden fencing, combinations of these materials used to re-construct fencing, culvert pipe, decorative timber materials, timber wheel stops, decorative bark, topsoil, private light posts, mow strips, bender board, plastic sheeting, mail boxes, trellises, as required to replace the existing materials which have been damaged by construction activities regardless of whether such materials are shown on the Contract Drawings.
- I. Surface Restoration Outside of Pavement shall include areas where the contractor planned to disturb surface materials and shall also include areas where the Contractor accidentally disturbed surface materials.
- J. Surface Restoration Outside of Pavement includes the requirement to replace topsoil at all locations shown on the Contract Drawings.

- K. The Contractor shall guarantee all existing vegetative materials disturbed by the Contractor for a period of two (2) months from the date of the Notice of Substantial Completion for the project, hereby called the Existing Vegetation Guarantee Period. These requirements are in addition to other guarantees, warranties, and maintenance periods contained in these Contract Documents. The guarantee shall insure that all living plants which are disturbed by construction activities will retain their original levels of health and appearance during the Existing Vegetation Guarantee Period. Exceptions will be made only for “annuals” which may not survive the establishment period. The Contractor shall provide thorough weekly watering during the Existing Vegetation Guarantee Period as required to insure the original levels of health and appearance.
- L. Surface Restoration Outside of Pavement includes the requirement to Seed and Fertilize all locations disturbed by construction activities except where otherwise specified. The Contractor shall furnish and install Seed and Fertilizer at disturbed locations in accordance with the Standard Specifications, and no additional compensation will be allowed therefore. Where the words “restore lawn” appear on the Contract Documents, the Contractor shall utilize only matching live turf for this purpose.
- M. This project will not attain Substantial Completion until all Surface Restoration Outside of Pavement and all erosion control devices have been provided in accordance with the Contract Documents.

3.5 SEEDING AND FERTILIZING

- A. Seeding and Fertilizing shall conform to the requirements of Section 8-01.3(2) of the Standard Specifications, except as otherwise specified. Seed shall be applied at a minimum rate of fifteen (15) pounds per 1000 square feet. Fertilizer shall be applied at a rate of twelve (12) pounds per 1000 square feet to all areas where seed has been applied.
- B. Wherever the seeding and fertilizing operation results in bare areas due to the failure of the seed to germinate, lack of adequate watering, or other reasons, the Contractor shall re-seed and re-fertilize and water such areas until an acceptable ground cover is established, and no additional compensation will be allowed therefore.

3.6 TRIMMING AND CLEANUP

- A. Dispose of all excess materials at the waste site provided by Contractor, as directed by the Engineer, trim all affected areas of the site to produce

smooth, uniform surfaces. Provide continuous sweeping of all streets as required to keep County roads clean.

END OF SECTION 02508

**SECTION 02630
DRAINAGE SYSTEMS**

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Work of this Section is bound by the Condition of the Contract and Division 1 Specifications sections, bound herein, in addition to this Specification and accompanying Drawings.

1.02 WORK INCLUDED

- A. Work under this section includes all labor, supervision, equipment, tools, fuel, materials, service, and incidentals necessary to provide drainage structures, piping, fittings, and dewatering trash pump as specified herein and where shown on the Contract Drawings.

1.03 QUALITY ASSURANCE

A. PERMITS & LICENSES

- 1. Obtain and pay for any required permits.
- 2. Contractor shall be licensed for any work required under this item.

B. STANDARD SPECIFICATIONS

- 1. The work under this section shall be governed by the 2012 version of the WSDOT “Standard Specifications” for Road, Bridge, and Municipal Construction published by the Washington State Department of Transportation (WSDOT).
- 2. All references in the Standard Specifications to measurement and payment shall be deleted from consideration, and the terms agreed to in the Contract substituted therefore.

1.04 JOB CONDITIONS

A. CONDITION OF SITE PRIOR TO CONSTRUCTION

- 1. Accept premises on an “as-is” condition; Owner assumes no responsibility for site condition now, at time of bidding, nor thereafter.
- 2. Assume all risks from damage or loss to premises by means of fire, theft, and all other causes.

3. Damage or loss resulting from any cause to buildings persons and/or property shall not relieve Contractor from his obligation to complete all work under the contract.

B. PROTECTION

1. General: Conduct all operations in such a manner as to prevent damage to existing structures and surfaces and adjacent property. Keep free of damage those portions of existing site building and appurtenance that are to remain. Repair any damage incurred because of the work of this section to the satisfaction of the Owner.
2. Utilities:
 - a. Where existing utilities exist at site, either overhead or underground, take care not to cause damage thereto; keep building drains, street drains and sewers open, for free drainage at all times.
 - b. The Contractor shall be responsible for, and shall immediately repair, all damage to existing sewers, watermains, and building service connections to the same, operated by the Owner, which is caused by the construction work; repair such damage at no cost to Owner in manner approved by the applicable utility. Contractor shall contact the underground utility locating service a 1-800-424-5555 a minimum of 48 hours prior to construction.
3. Landscape plantings to remain: Save and protect trees as designated on applicable Architectural, Landscape and Civil Drawings or as designated in the field.
4. Adjacent structures: Provide protection required by the General Conditions. Such protection includes occupants of said adjacent buildings, visitors, and passers-by from damage, injury and discomfort caused by dust.

1.05 SYSTEM INSPECTIONS

- A. The drainage system will be inspected by the Engineer as required. Coordinate with the Engineer prior to starting any work on the drainage system. The Contractor shall notify the Engineer prior to starting work on the drainage system to coordinate required inspections for certification.

PART 2 – PRODUCTS

2.01 DRAINAGE PIPE

- A. Pipe for drainage shall be furnished in accordance with the sizes, pipe classes, and material types shown on the Contract Drawings.

2.02 ALUMINUM TRASH RACK

- A. Provide Trash Rack of the type shown on the Contract Drawings.

2.03 GATEVALVE AND PIPE SUPPORT

- A. Gate valve shall be resilient-seated gate valve with non-rising stem meeting the requirements of AWWA C509 or AWWA C515. Furnish with 2-inch square operating nut.
- B. Pipe Support shall be Standon Model S89 flanged pipe support. Provide two (2) stainless steel nuts and bolts using type 304 stainless steel.

2.04 CATCH BASINS

- A. Type 1 and Type 2 catch basins shall be in accordance with the Standard Specifications and Contract Drawings. Provide either solid lids or grate types as shown on the Contract Drawings. Provide bolt-down lids where shown on the Contract Drawings.

2.05 DEWATERING TRASH PUMP AND ACCESSORIES

- A. The dewatering trash pump shall be IPT Model #3994-IPT-96 Trash Pump with 4-inch diameter suction and discharge ports, 37,800 GPH capacity, 2in. Solids handling, and 390cc Honda GX390 Engine, or approved equal.
- B. Furnish 15-feet of 4-inch diameter suction hose rated for a minimum of 20-feet of negative water column (suction lift). Furnish suction hose with 4-inch diameter leak-proof ball brass foot valve / strainer.
- C. Furnish 50-feet of 4-inch diameter discharge hose rated for a minimum of 80 PSI internal pressure.

2.06 MISCELLANEOUS MATERIALS

- A. All other materials required for construction shall be as noted on the Contract Drawings.

PART 3 – EXECUTION

3.01 TRENCH EXCAVATION, BACKFILL AND COMPACTION

- A. Trench excavation, backfill, and compaction shall conform to the requirements of Section 02221 Trenching, Backfilling, and Compaction for Utilities

3.02 DRAINAGE PIPE

- A. Drainage pipe shall be installed in the sizes, material types and to the lines and grades shown on the plans.
- B. Drainage pipe shall be installed in accordance with Section 7-04 of the Standard Specifications.

3.03 CATCH BASINS

- A. Catch basins shall be installed in accordance with the manufacturer's recommendations and in accordance with Section 7-05 of the Standard Specifications.
- B. Catch basin frames shall be installed with the flanges in the down position.
- C. Circular frames and cover shall be installed in accordance with Standard Plans B-30.70-00 and B-30.80-00, except cover embossed lettering shall read "DRAIN".

3.04 DEWATERING TRASH PUMP

- A. The Contractor shall furnish the dewatering trash pump and all required accessories, and shall deliver the trash pump to the Owner. Deliver trash pump in a fully-assembled condition with air-tight connections on the suction side and water-tight connections on the discharge side. The Contractor shall coordinate the delivery time and location with Owner. The Contractor shall test the pump at the project site in the configuration directed by the Engineer. The Contractor shall conduct the test by pumping water with all accessories attached for at least 60 seconds at full power, while the Engineer observes the test. The Contractor shall provide the fuel for the test.

3.05 CLEAN UP

- A. Remove all excess materials, rocks, roots, or foreign material, leaving the site in a clean, complete condition approved by the engineer. All drainage system components shall be free of any foreign materials including dirt, rocks, debris, and concrete or asphalt materials.

END OF SECTION 02630

**SECTION 02680
CHAIN LINK FENCING AND GATES**

PART 1 - GENERAL

1.1 STANDARD SPECIFICATIONS

- A. All work under this Section shall be governed by the Special Provisions, the General Requirements, and the Standard Specifications of the Contract, except as modified herein.
- B. The Standard specifications for this project shall be the 2012 Standard Specifications for Road, Bridge, and Municipal Construction, as published by the Washington State department of Transportation (WSDOT). All references in the Standard Specifications to measurement and payment shall be deleted from consideration and the terms agreed to in the Contract substituted therefore.

1.2 MEASUREMENT FOR PAYMENT AND UNIT PRICE BASIS OF PAYMENT

- A. The Contractor shall be compensated for work performed on this project based on the units of work identified in the Proposal. All work required to complete the project and not specifically identified in a Proposal item, shall be deemed incidental to the items of work in the Proposal and no separate compensation shall be made.
- B. **CHAIN LINK DOUBLE GATE**
 - 1. Basis of Measurement: Per each double gate, including both halves.
 - 2. Basis of Payment: Includes furnishing and installing both halves of a 6-foot tall double gate as specified, including chain link gate fabric, two (2) gate posts, two (2) gate frames, top and bottom hinges, two (2) truss rods, fabric bands, accessories, hardware, attachments, two (2) concrete post bases, center locking bar, concrete base for locking bar, connecting existing fence wire to new gate posts, restoration of surfaces, and all other components and tasks required for a completed chain link double gate installation.

1.3 NOTICE TO SERVING UTILITIES

- A. Before commencing any excavation, the Contractor shall provide notice of the scheduled commencement of excavation to all owners of underground facilities through a one-number locator service.
- B. The notice shall be communicated to the owners of underground facilities not less than three (3) business days or more than ten (10) business days before the scheduled date for commencement of excavation, unless otherwise agreed by the parties involved.
- C. Excavation work shall not proceed until all known facilities have been marked.
- D. If an underground facility is damaged and such damage is the consequence of the Contractor's failure to fulfill an obligation under the requirements of the RCW, the Contractor shall be liable for any and all damages.

PART 2 – PRODUCTS

2.1 GATE POSTS

- A. Gate Posts shall be nine (9) feet in length, 6-inch nominal diameter schedule 40 galvanized steel pipe meeting the requirements of ASTM F1083-10 *Standard Specification for Pipe, Steel, Galvanized and Welded for Fence Structures*.
- B. Furnish dome caps for the tops of all posts, hog rings, clips, tie rods, and any unspecified fence fittings in accordance with ASTM F626-08 *Standard Specification for Fence Fittings* using galvanized steel for all such fittings.
- C. Concrete Footings for posts shall be commercial class 3000 PSI concrete.

2.2 CHAIN LINK DOUBLE GATE

- A. Chain link fabric for double gates shall be 72-inches tall. Fabric shall be galvanized 9-gauge steel with 2-inch mesh size. Galvanizing shall be hot-dipped galvanized Class 1 – 1.2 OZ/SF in accordance with ASTM A392-11 *Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric*.

- B. Gate frame shall be fabricated of 2-inch nominal diameter schedule 40 galvanized steel pipe meeting the requirements of ASTM F1083 *Standard Specification for Pipe, Steel, Galvanized and Welded for Fence Structures*.
- C. Assemble gate components using welded fabrication in accordance with ASTM F900-05 *Standard Specification for Industrial and Commercial Swing Gates*. Protect welded areas by the application of zinc-rich paint in accordance with ASTM A780-09 *Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings*.
- D. Truss Rods shall be 3/8-inch diameter galvanized steel meeting the requirements of ASTM F626-08 *Standard Specification for Fence Fittings*, except as otherwise specified.
- E. Furnish hog rings, clips, and any unspecified fence fittings in accordance with ASTM F626-08 *Standard Specifications for Fence Fittings* using galvanized steel for all such fittings.
- F. Furnish all connections and hinges to be capable of restraining a force of 350 pounds applied to any point on the gate and in any direction.
- G. Furnish two (2) Type OM4-1 (Type 4 Object Marker) signs for end-of-roadway application with 18"x18" red diamond shape and nine (9) red reflectors mounted symmetrically in three (3) diagonal rows. Reflectorized sheeting shall be 3M Series 3930 or 3M Diamond Grade High Intensity Prismatic Sheeting. Sign blank (backing) shall be 0.080-inch thick Type 5052-H38 aluminum sheeting.
- H. Furnish positive locking gate latch, drop-bar, and drop-bar receiver between the two gate halves, fabricated of 5/16-inch thick x 1.75-inch pressed steel and galvanized after fabrication.

PART 3 – EXECUTION

3.1 GATE POSTS

- A. Install chain link gate posts in accordance with ASTM F900-05 *Standard Specification for Industrial and Commercial Swing Gates* and ASTM F567-11 *Standard Practice for Installation of Chain Link Fence*.
- B. All carriage bolts shall be fully tightened and installed with round ends facing outside the secured area, and peened on top of the threads after installation to prevent removal.

- C. Connect the existing fence structure to the new gate posts using a combination of galvanized wire clamps and 9 gauge galvanized steel wire ties. Utilize additional fence mesh fabric (or wires) matching the existing fabric (or wires) such that no gaps greater than eight (8) inches are remaining within four (4) feet of the new gate posts.

3.2 CHAIN LINK DOUBLE GATE

- A. Install chain link gates in accordance with ASTM F900-05 *Standard Specification for Industrial and Commercial Swing Gates* and ASTM F567-11 *Standard Practice for Installation of Chain Link Fence*. Gates shall be installed to swing outward from the site.
- B. Install double-gate drop-bar receiver set in concrete a minimum of 6-inches diameter x 24-inches depth.
- C. All carriage bolts shall be tightened and installed with round ends facing outside the secured area, and peened on top of the threads after installation to prevent removal.
- D. Install a Type 4 Object Marker onto each gate half facing the approaching roadway. Attach using two (2) chain link fabric clamps for each object marker, secured with two (2) 3/8-inch diameter galvanized steel carriage bolts.

END OF SECTION

**SECTION 02792
IMPERMEABLE LINING SYSTEMS**

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Work of this Section is bound by the Conditions of the Contract and Division 1 Specifications sections, bound herein, in addition to this Specification and accompanying Drawings.

1.02 WORK INCLUDED

- A. Impermeable membrane lining systems as specified herein and as shown on the Contract Drawings.
- B. All work specified herein shall be included in the Bid. The work under this section includes labor, supervision, equipment, tools, fuel, materials, service and incidentals necessary for providing completed impermeable membrane lining systems.

1.03 QUALITY ASSURANCE

A. Standard Specifications

- 1. For materials and installation procedures used on this project, conform to the provisions of the 2012 version of the “Standard Specifications for Road, Bridge, and Municipal Construction”, as prepared by the Washington State Chapter of American Public Works Association and the Washington State Department of Transportation (APWA/WSDOT), except as modified hereinafter, and hereinafter called the “Standard Specifications”.
- 2. All references in Standard Specifications to Measurement and Payment shall be deleted from consideration; and terms agreed to in the Contract substituted therefore.

B. Inspections & Tests

- 1. Inspections and Testing shall be provided by the Owner’s representative for all work under this section.

1.04 JOB CONDITIONS

A. Weather Conditions

- 1. Do no work when raining or when subgrade or base has free water on the surface or does not meet compaction requirements; suspend operations until surfaces are adequately dry.

B. Defective Work

1. Remove and replace defective work, when directed by Engineer, including surfaces without proper drainage; patching of membranes is not permitted.

1.05 SUBMITTALS

- A. Submittals shall be made for all the materials specified in this section. The Contractor shall furnish four (4) sets of submittals to the Engineer for review. Product Submittals must be approved by the Engineer prior to ordering materials.

PART 2 – PRODUCTS

2.01 MATERIALS

A. PVC Liner Material

1. 30 mil (.762 mm) thickness Polyvinyl Chloride (PVC) geomembrane sheet material compounded with plasticizers, stabilizers, and pigments to satisfy all requirements contained in ASTM D7176-06 *Standard Specification for PVC Geomembranes Used in Buried Applications*, including but not limited to the following:
 - a. Thickness measured in accordance with ASTM D5199: 0.762 mm.
 - b. Breaking Strength measured in accordance with ASTM D882, Method A: 73 PSI.
 - c. Elongation: 380%.
 - d. Tear Strength measured in accordance with ASTM D1004: 8 lb.
 - e. Hydrostatic Resistance measured in accordance with ASTM D751: 100 PSI.
 - f. Minimum Molecular Weight in accordance with ASTM D2124: 400.
 - g. Color: Black.
2. Approved Manufacturers:
 - a. Environmental Protection, Inc. (EPI), Mancelona, Michigan;
Phone: 1-800-655-4637
 - b. Other manufacturers which supply comprehensive product documentation including the following: Quality Control Manual for Fabrication and Installation of Geomembranes, PVC Product Data Sheets, List of Compatible Adhesives, and Material Safety Data Sheets.
 - c. Manufacturers and suppliers which do not furnish comprehensive product documentation are hereby rejected.

B. Vinyl Cement Adhesive

1. R-H Products HH-66 Vinyl Adhesive Contact Cement, or equivalent as recommended by the manufacturer of the PVC Liner Material.

C. Non-woven Geotextile Material

1. TenCate Geosynthetics Mirafi 160N Needle-punched, Non-Woven, Polypropylene Geotextile, or equivalent.

PART 3 – EXECUTION

3.01 INSPECTION

A. Inspection of Prior Work

1. Carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
2. In the event of discrepancy, immediately notify the Engineer.
3. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

B. Inspection Before Liner Placement

1. Immediately prior to the placement of any impermeable liner materials, call for the Engineer's inspection and cease all work at the site for one (1) working day to allow for the inspection.

C. Inspection after Liner Completion

1. Immediately after the installation of all impermeable liner materials and prior to covering the liner with any additional materials, call for the Engineer's inspection and cease all work at the site for one (1) working day to allow for the inspection.

3.02 PREPARATION

A. Protection

1. Protect existing site improvements from damage.

3.03 TOLERANCES

A. General

1. Correction of Defective Work: Conform to applicable provisions of the Contract Documents. Contractor shall correct defective work to the satisfaction of the Engineer.

3.04 INSTALLATION PROCEDURES

- A. Complete all installation in strict accordance with the written recommendations of the product manufacturers. For the purposes of meeting this requirement, the manufacturers' suggested procedures and recommendations shall become mandatory Contract requirements.

3.05 FIELD QUALITY CONTROL

A. Inspections & Tests

- 1. General: Field inspection and testing shall be performed by the Owner's representative. Contractor shall comply with the requirements of the Owner's testing and inspection agency.
- 2. Inspections: Owner may also employ the services of an independent inspection services to inspect work of this Section for conformance with the Contract Documents and may conduct tests as follows:
 - a. Frequency of Testing: As required for testing laboratory to certify compliance with the Contract Documents.

3.06 PROTECTION

A. General

- 1. Immediately after placement, protect membranes from mechanical injury.

END OF SECTION 02792

ATTACHMENT A

Bidder Responsibility Criteria

ATTACHMENT A

BIDDER MANDATORY AND SUPPLEMENTAL RESPONSIBILITY CRITERIA

A. Bidder Responsibility Criteria: It is the intent of Owner to award a contract to the lowest responsible bidder. Pursuant to RCW 39.04.350(1) the bidder must meet the following bidder responsibility criteria to be considered a responsible bidder. Each Bidder shall submit the attached Mandatory Bidder Responsibility Checklist with its bid demonstrating compliance with the following mandatory bidder responsibility criteria:

1. At the time of bid submittal, have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW;
2. Have a current Washington Unified Business Identifier (UBI) number;
3. If applicable (if not applicable state why):
 - a. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
 - b. Have a Washington Employment Security Department number, as required in Title 50 RCW;
 - c. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3).
5. If bidding on a public works project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the date of the bid solicitation; and
6. Until December 31, 2013, not have violated RCW 39.04.370 more than one time as determined by the Department of Labor and Industries.

Documentation: Each Bidder shall complete the "**Mandatory Bidder Responsibility Checklist**" ("FORM A", attached) at the end of this section and submit the Checklist as part of bidder's bid.

- B. Supplemental Bidder Responsibility Criteria:** In addition to the mandatory bidder responsibility criteria referenced above, each bidder must also meet the following supplemental bidder responsibility criteria applicable to this Project. Each bidder must submit WITH ITS BID a list of projects meeting the requirements of Section B.2.A below on the “**Bidder Experience Form**,” (FORM B, attached) at the end of this Attachment A.

The Owner reserves the right to request additional documents verifying any Bidder’s compliance with both the experience criteria and responsibility criteria after bid opening. The Owner’s request will be provided to the Bidder and such requested documents shall be provided to the Owner within forty-eight (48) hours of receiving the Owner’s written request or within such other time as determined at the Owner’s sole discretion.

1. Business Status

- A. Criterion: The Bidder shall not be "inactive" or "not in good standing" with the Washington State Secretary of State's Office, the Department of Revenue or the Department of Labor & Industries.
- B. Possible Documentation: Provide documented information from the Washington State Secretary of State's Office, the Department of Revenue and/or the Department of Labor & Industries providing the date of incorporation or formation, the state of incorporation or formation, that the Bidder is active and in good standing in the State of Washington, State of Washington tax reporting number, and the name and address of the registered agent, general partner or managing member.

2. Completion of Similar Projects

- A. Criterion: The Bidder shall have successfully completed a minimum of three (3) projects of similar size and scope within the five (5) year period immediately preceding the bid date of this Contract. The experience of either the Bidder or the Bidder’s subcontractors from previous projects may be used for meeting this requirement. If any experience of the Bidder’s previous subcontractors is used, then the Bidder shall also utilize a subcontractor to perform all similar work on this Contract. In that case, the Bidder shall make additional submittals for their currently-proposed subcontractor in accordance with Section B.4.A. Projects will be considered to be similar only if all of the following conditions are met:
- Each project listed shall have been completed under the same firm name as the Bidder submitting the Bid.
 - Each project listed shall have included construction and installation of PVC or similar liner materials.
 - Each project listed shall have included grading and earthwork placement.
 - Each project listed shall have included laying pipe to grade and installation of manholes or catch basins.

In evaluating whether the projects were “successfully completed,” the Owner may check owner references for the previous projects and may evaluate the owners' assessment of the Bidder performance, including but not limited to the following areas:

- Quality control;
- Safety record;
- Timeliness of performance;
- Use of skilled personnel;
- Management of subcontractors;
- Availability of and use of appropriate equipment;
- Compliance with contract documents;
- Management of submittals process, change orders, and close-out.

B. Documentation: Each Bidder shall submit a list of projects meeting the criteria listed in B.2.A. above. The list shall be submitted as part of the Bidder's bid. The information about each project shall include the following:

- Owner's name and contact information for the owner's representative;
- Awarded contract amount and final contract amount;
- A description of the scope of the project and how the project is similar to this project;
- Whether or not any subcontractors were used.
- The Bidder's assessment of its performance of each project, including but not limited to the following:
 - Quality control;
 - Safety record;
 - Timeliness of performance;
 - Use of skilled personnel;
 - Management of subcontractors;
 - Availability of and use of appropriate equipment;
 - Compliance with contract documents;
 - Management of submittals process and change orders.

3. **Insurance**

- A. Criterion: The Bidder shall be able to fully comply with the insurance requirements set forth in the Invitation to Bid and Project Manual.
- B. Possible Documentation: Provide the Owner with the types and amounts of insurance and related endorsements set forth in the Invitation to Bid and Project Manual.

4. Subcontractor Responsibility, Experience, and Proficiency

- A. Criterion: The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility and suitable experience and proficiency of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also responsible subcontractors.

The Bidder may utilize the experience of subcontractors from previous projects to meet the experience requirements for similar work on this project. In that case, the required subcontractor for this project shall also have successfully completed a minimum of three (3) projects of similar size and scope within the five (5) year period immediately preceding the bid date of this Contract. Projects will be considered to be similar only if all of the following conditions are met:

- Each project listed shall have been completed under the same firm name as the Bidder submitting the Bid.
- Each project listed shall have included construction and installation of PVC or similar liner materials.
- Each project listed shall have included grading and earthwork placement.
- Each project listed shall have included laying pipe to grade and installation of manholes or catch basins.

In evaluating whether the projects were "successfully completed," the Owner may check owner references for the previous projects and may evaluate the owners' assessment of the subcontractor's performance, including but not limited to the following areas:

- Quality control;
- Safety record;
- Timeliness of performance;
- Use of skilled personnel;
- Availability of and use of appropriate equipment;
- Compliance with contract documents;

The Owner reserves the right to require the Bidder to replace unqualified or unacceptable subcontractors based upon lack of experience, lack of financial or technical capabilities, poor past performance on similar projects including but not limited to significant claims or defaults on previous projects indicating poor management practices. Failure of the Bidder to agree to replace such subcontractors shall be the basis to reject Bidder as not responsible.

- B. Documentation: Submit a copy of the Bidder's standard subcontract form for review by the Owner, submit a list of experience, personnel, and financial information for significant subcontractors. Submit a written summary of Bidder's procedure for verifying the responsibility and compliance of Bidder's subcontractors.

Each Bidder using the experience of previous subcontractors to meet the experience requirements shall submit a list of projects for their currently-proposed subcontractor meeting the criteria listed in B.4.A. above. The list shall be submitted as part of the Bidder's bid. The information about each project shall include the following:

- Owner's name and contact information for the owner's representative;
- Dollar amount of original subcontract;
- Final subcontract amount;
- A description of the scope of the project and how the project is similar to this project;
- The Bidder's assessment of its performance of each project, including but not limited to the following:
 - Quality control;
 - Safety record;
 - Timeliness of performance;
 - Use of skilled personnel;
 - Availability of and use of appropriate equipment;
 - Compliance with contract documents;

C. Subcontractor Responsibility:

1. The Successful Bidder shall include the language of this section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the successful Bidder shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. In addition to the criteria listed below, this Contract may contain additional experience requirements for Subcontractors in the Technical Provisions. The requirements of this section apply to all subcontractors regardless of tier.
2. At the time of subcontract execution, the Successful Bidder shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
 - a. Have a current certificate of registration in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
 - b. Have a current Washington Unified Business Identifier (UBI) number;

- c. If applicable, have:
 - i. Have Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
 - ii. A Washington Employment Security Department number, as required in Title 50 RCW;
 - iii. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 - iv. An electrical contractor license, if required by Chapter 19.28 RCW;
 - v. An elevator contractor license, if required by Chapter 70.87 RCW.
 - d. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3).
 - e. If bidding on a public works project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the date of the bid solicitation; and
 - f. Until December 31, 2013, not have violated RCW 39.04.370 more than one time as determined by the Department of Labor and Industries.
3. Possible Documentation: The Owner reserves the right to request verification of subcontractor responsibility and may request that the successful bidder have all proposed subcontractors complete a "**Mandatory Responsibility Checklist**" Form A at the end of this section and submit it for some or all of its subcontractors prior to award and execution of the Contract. Failure to submit any such requested documentation may result in rejection of the Bidder as not responsible under RCW 39.04.350.

D. References: The Owner may conduct reference checks on the apparent lowest and second lowest bidders whose bids are under consideration for award. In the event that information obtained from the reference checks:

- Reveals that the bidder does not meet the Mandatory or Supplemental Bidder Responsibility Criteria; or
- Indicates concerns about the bidder's performance on projects identified as meeting the Supplemental Bidder Responsibility Criteria, which may include, but not be limited to the

quality of construction, the bidder's management of subcontractors, responsibility of subcontractors used by Bidder, timeliness of required submittals, and safety record on the project; or

- Indicates other concerns about the bidder's ability to successfully perform the work,

the Owner shall have the right to determine that the bidder is not a responsible bidder. Prior to making such a determination that a bidder is not responsible based on information received through reference checks, the Owner may discuss with the bidder the information obtained from the references, and provide the bidder with the opportunity to offer explanations that may help inform whether the Owner declares the bidder not responsible.

In conducting reference checks, the Owner may include itself as a reference if the bidder has performed work for the Owner, even if the bidder did not identify the Owner as a reference.

If the Owner determines the bidder is not a responsible bidder, subject to following the requirements of the appeal process (see below), the Owner may award the contract to the next lowest bidder who meets these Supplemental Bidder Responsibility Criteria.

- E. Failure to Submit Documentation:** If a bidder fails to submit any documentation required by the bidding documents to demonstrate compliance with the Mandatory and Supplemental Bidder Responsibility Criteria within the time period specified in the bidding documents, the Owner may:

- Find the bidder not responsible, or
- Find the bidder responsible based upon any available information that demonstrates that the bidder meets the Mandatory and Supplemental Bidder Responsibility Criteria.

- F. Procedure to Request Modification of Supplemental Bidder Responsibility Criteria.** During the bidding period, but not later than five (5) business days before the bid submittal deadline, a potential bidder may request that the Owner modify the supplemental bidder responsibility criteria. The Owner shall evaluate any such requests, and if a decision is made by the Owner in its sole discretion to modify the criteria, such modification shall be communicated to all bidders and plan holders via the issuance of an addendum to the bidding documents. If the Owner determines not to modify the supplemental criteria, the Owner shall notify the requesting bidder of its decision in writing.

- G. Appeal of Determination that Bidder does not Meet Responsibility Criteria:** If the Owner determines that a bidder does not meet the Mandatory or Supplemental bidder responsibility criteria and is therefore not a responsible bidder, the Owner shall notify the bidder in writing with the reasons for its determination. If the bidder disagrees with this determination, it may appeal the determination within 24 hours of receipt of the Owner's determination by presenting additional information in writing to the Owner. The Owner will consider the additional information before issuing its final determination in writing. If the final determination affirms that the bidder is not responsible, the Owner will not execute a contract with any other bidder

until two (2) business days after the bidder determined to be not responsible has received written notice of the final determination. For the purposes of this subsection, the date of the Owner's transmission of the Owner's determination(s) by facsimile or electronic mail to the bidder at the facsimile number or e-mail address provided by the bidder in its bid shall constitute the date of receipt by the bidder of the written notices provided for herein.

Mandatory Bidder Responsibility Checklist – Form A

General Information	
Project Name:	Project Number:
Bidder's Business Name:	Bid Submittal Deadline:
Contractor Registration – https://fortress.wa.gov/lni/bbip/	
License Number:	Status: Active: Yes <input type="checkbox"/> No <input type="checkbox"/>
Effective Date (must be effective on or before Bid Submittal Deadline):	Expiration Date:
Contractor and Plumber Infraction List – http://www.lni.wa.gov/tradeslicensing/contractors/hirecon/infractions/	
Is Bidder on Infraction List? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Current UBI Number – http://dor.wa.gov/content/doingbusiness/registermybusiness/brd/	
UBI Number:	Account Closed: Open <input type="checkbox"/> Closed <input type="checkbox"/>
Industrial Insurance Coverage – https://fortress.wa.gov/lni/crpsi/MainMenu.aspx	
Account Number:	Account Current: Yes <input type="checkbox"/> No <input type="checkbox"/>
Employment Security Department Number –	
Employment Security Department Number:	
<ul style="list-style-type: none"> • Has Bidder provided account number on the Bid Form? Yes <input type="checkbox"/> No <input type="checkbox"/> • And/or have you asked the Bidder for documentation from Employment Security Department on account number? Yes <input type="checkbox"/> No <input type="checkbox"/> 	
State Excise Tax Registration Number – http://dor.wa.gov/content/doingbusiness/registermybusiness/brd/	
Tax Registration Number:	Account Closed: Open <input type="checkbox"/> Closed <input type="checkbox"/>
Not Disqualified from Bidding – http://www.lni.wa.gov/TradesLicensing/PrevWage/AwardingAgencies/DebarredContractors/default.asp	
Is the Bidder listed on the "Contractors Not Allowed to Bid" list of the Department of Labor and Industries? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Checked by:	
Name of Employee:	Date:

Contractor Experience Summary – Form B

Project No. 1

Project Name: _____

Contractor Name: _____

Owner Name: _____

Project Description: _____

Contact For Owner: (Include Name and Phone No.) _____

Awarded Contract Amount: \$ _____

Final Contract Amount: \$ _____

Completion Date: _____

Project No. 2

Project Name: _____

Contractor Name: _____

Owner Name: _____

Project Description: _____

Contact For Owner: (Include Name and Phone No.) _____

Awarded Contract Amount: \$ _____

Final Contract Amount: \$ _____

Completion Date: _____

Project No. 3

Project Name: _____

Contractor Name: _____

Owner Name: _____

Project Description: _____

Contact For Owner: (Include Name and Phone No.) _____

Awarded Contract Amount: \$ _____

Final Contract Amount: \$ _____

Completion Date: _____

ATTACHMENT B

Prevailing Wages and Benefit Code Key

State of Washington
Department of Labor & Industries
Prevailing Wage Section - Telephone 360-902-5335
PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 1/23/2014

<u>County</u>	<u>Trade</u>	<u>Job Classification</u>	<u>Wage</u>	<u>Holiday</u>	<u>Overtime</u>	<u>Note</u>
Thurston	Asbestos Abatement Workers	Journey Level	\$41.69	<u>5D</u>	<u>1H</u>	
Thurston	Boilermakers	Journey Level	\$50.03		<u>1</u>	
Thurston	Brick Mason	Brick And Block Finisher	\$43.26	<u>5A</u>	<u>1M</u>	
Thurston	Brick Mason	Journey Level	\$50.12	<u>5A</u>	<u>1M</u>	
Thurston	Brick Mason	Pointer-Caulker-Cleaner	\$50.12	<u>5A</u>	<u>1M</u>	
Thurston	Building Service Employees	Janitor	\$9.32		<u>1</u>	
Thurston	Building Service Employees	Shampooer	\$10.32		<u>1</u>	
Thurston	Building Service Employees	Waxer	\$9.32		<u>1</u>	
Thurston	Building Service Employees	Window Cleaner	\$10.84		<u>1</u>	
Thurston	Cabinet Makers (In Shop)	Journey Level	\$13.48		<u>1</u>	
Thurston	Carpenters	Acoustical Worker	\$50.82	<u>5D</u>	<u>1M</u>	
Thurston	Carpenters	Bridge, Dock And Wharf Carpenters	\$50.82	<u>5D</u>	<u>1M</u>	
Thurston	Carpenters	Carpenter	\$50.82	<u>5D</u>	<u>1M</u>	
Thurston	Carpenters	Carpenters on Stationary Tools	\$50.95	<u>5D</u>	<u>1M</u>	
Thurston	Carpenters	Creosoted Material	\$50.92	<u>5D</u>	<u>1M</u>	
Thurston	Carpenters	Floor Finisher	\$50.82	<u>5D</u>	<u>1M</u>	
Thurston	Carpenters	Floor Layer	\$50.82	<u>5D</u>	<u>1M</u>	
Thurston	Carpenters	Scaffold Erector	\$50.82	<u>5D</u>	<u>1M</u>	
Thurston	Cement Masons	Journey Level	\$51.18	<u>7A</u>	<u>1M</u>	
Thurston	Divers & Tenders	Diver	\$100.28	<u>5D</u>	<u>1M</u>	<u>8A</u>
Thurston	Divers & Tenders	Diver On Standby	\$56.68	<u>5D</u>	<u>1M</u>	
Thurston	Divers & Tenders	Diver Tender	\$52.23	<u>5D</u>	<u>1M</u>	
Thurston	Divers & Tenders	Surface Rcv & Rov Operator	\$52.23	<u>5D</u>	<u>1M</u>	

Thurston	Divers & Tenders	Surface Rcv & Rov Operator Tender	\$48.67	<u>5A</u>	<u>1B</u>	
Thurston	Dredge Workers	Assistant Engineer	\$53.00	<u>5D</u>	<u>3F</u>	
Thurston	Dredge Workers	Assistant Mate (Deckhand)	\$52.58	<u>5D</u>	<u>3F</u>	
Thurston	Dredge Workers	Boatmen	\$52.30	<u>5D</u>	<u>3F</u>	
Thurston	Dredge Workers	Engineer Welder	\$54.04	<u>5D</u>	<u>3F</u>	
Thurston	Dredge Workers	Leverman, Hydraulic	\$55.17	<u>5D</u>	<u>3F</u>	
Thurston	Dredge Workers	Mates	\$52.30	<u>5D</u>	<u>3F</u>	
Thurston	Dredge Workers	Oiler	\$52.58	<u>5D</u>	<u>3F</u>	
Thurston	Drywall Applicator	Journey Level	\$50.82	<u>5D</u>	<u>1H</u>	
Thurston	Drywall Tapers	Journey Level	\$49.79	<u>5P</u>	<u>1E</u>	
Thurston	Electrical Fixture Maintenance Workers	Journey Level	\$29.54		<u>1</u>	
Thurston	Electricians - Inside	Cable Splicer	\$60.94	<u>5C</u>	<u>1G</u>	
Thurston	Electricians - Inside	Journey Level	\$57.35	<u>5C</u>	<u>1G</u>	
Thurston	Electricians - Inside	Lead Covered Cable Splicer	\$64.54	<u>5C</u>	<u>1G</u>	
Thurston	Electricians - Inside	Welder	\$60.94	<u>5C</u>	<u>1G</u>	
Thurston	Electricians - Motor Shop	Craftsman	\$15.37		<u>1</u>	
Thurston	Electricians - Motor Shop	Journey Level	\$14.69		<u>1</u>	
Thurston	Electricians - Powerline Construction	Cable Splicer	\$66.43	<u>5A</u>	<u>4A</u>	
Thurston	Electricians - Powerline Construction	Certified Line Welder	\$60.75	<u>5A</u>	<u>4A</u>	
Thurston	Electricians - Powerline Construction	Groundperson	\$42.36	<u>5A</u>	<u>4A</u>	
Thurston	Electricians - Powerline Construction	Heavy Line Equipment Operator	\$60.75	<u>5A</u>	<u>4A</u>	
Thurston	Electricians - Powerline Construction	Journey Level Lineperson	\$60.75	<u>5A</u>	<u>4A</u>	
Thurston	Electricians - Powerline Construction	Line Equipment Operator	\$51.05	<u>5A</u>	<u>4A</u>	
Thurston	Electricians - Powerline Construction	Pole Sprayer	\$60.75	<u>5A</u>	<u>4A</u>	
Thurston	Electricians - Powerline Construction	Powderperson	\$45.39	<u>5A</u>	<u>4A</u>	
Thurston	Electronic Technicians	Journey Level	\$22.99		<u>1</u>	
Thurston	Elevator Constructors	Mechanic	\$77.70	<u>7D</u>	<u>4A</u>	
Thurston	Elevator Constructors	Mechanic In Charge	\$84.24	<u>7D</u>	<u>4A</u>	
Thurston	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	\$13.50		<u>1</u>	
Thurston	Fence Erectors	Fence Erector	\$35.34	<u>7A</u>	<u>2Y</u>	

Thurston	Flaggers	Journey Level	\$35.34	<u>7A</u>	<u>2Y</u>	
Thurston	Glaziers	Journey Level	\$53.76	<u>7L</u>	<u>1Y</u>	
Thurston	Heat & Frost Insulators And Asbestos Workers	Journeyman	\$58.93	<u>5J</u>	<u>1S</u>	
Thurston	Heating Equipment Mechanics	Journey Level	\$69.37	<u>7E</u>	<u>1E</u>	
Thurston	Hod Carriers & Mason Tenders	Journey Level	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Industrial Power Vacuum Cleaner	Journey Level	\$9.32		<u>1</u>	
Thurston	Inland Boatmen	Boat Operator	\$52.51	<u>5B</u>	<u>1K</u>	
Thurston	Inland Boatmen	Cook	\$48.89	<u>5B</u>	<u>1K</u>	
Thurston	Inland Boatmen	Deckhand	\$49.13	<u>5B</u>	<u>1K</u>	
Thurston	Inland Boatmen	Deckhand Engineer	\$50.12	<u>5B</u>	<u>1K</u>	
Thurston	Inland Boatmen	Launch Operator	\$51.34	<u>5B</u>	<u>1K</u>	
Thurston	Inland Boatmen	Mate	\$51.34	<u>5B</u>	<u>1K</u>	
Thurston	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator, Foamer Operator	\$9.73		<u>1</u>	
Thurston	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	\$11.48		<u>1</u>	
Thurston	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	\$12.78		<u>1</u>	
Thurston	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	\$25.00		<u>1</u>	
Thurston	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Tv Truck Operator	\$10.53		<u>1</u>	
Thurston	Insulation Applicators	Journey Level	\$50.82	<u>5D</u>	<u>1M</u>	
Thurston	Ironworkers	Journeyman	\$59.77	<u>7N</u>	<u>1Q</u>	
Thurston	Laborers	Air, Gas Or Electric Vibrating Screed	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Airtrac Drill Operator	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Ballast Regular Machine	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Batch Weighman	\$35.34	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Brick Pavers	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Brush Cutter	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Brush Hog Feeder	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Burner	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Caisson Worker	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Carpenter Tender	\$41.69	<u>7A</u>	<u>2Y</u>	

Thurston	Laborers	Caulker	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Cement Dumper-paving	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Cement Finisher Tender	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Change House Or Dry Shack	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Chipping Gun (under 30 Lbs.)	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Chipping Gun(30 Lbs. And Over)	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Choker Setter	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Chuck Tender	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Clary Power Spreader	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Clean-up Laborer	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Concrete Dumper/chute Operator	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Concrete Form Stripper	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Concrete Placement Crew	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Concrete Saw Operator/core Driller	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Crusher Feeder	\$35.34	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Curing Laborer	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Demolition: Wrecking & Moving (incl. Charred Material)	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Ditch Digger	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Diver	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Drill Operator (hydraulic,diamond)	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Dry Stack Walls	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Dump Person	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Epoxy Technician	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Erosion Control Worker	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Faller & Bucker Chain Saw	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Fine Graders	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Firewatch	\$35.34	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Form Setter	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Gabian Basket Builders	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	General Laborer	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Grade Checker & Transit Person	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Grinders	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Grout Machine Tender	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Groutmen (pressure)including Post Tension Beams	\$42.46	<u>7A</u>	<u>2Y</u>	

Thurston	Laborers	Guardrail Erector	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Hazardous Waste Worker (level A)	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Hazardous Waste Worker (level B)	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Hazardous Waste Worker (level C)	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	High Scaler	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Jackhammer	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Laserbeam Operator	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Maintenance Person	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Manhole Builder-mudman	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Material Yard Person	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Motorman-dinky Locomotive	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Nozzleman (concrete Pump, Green Cutter When Using Combination Of High Pressure Air & Water On Concrete & Rock, Sandblast, Gunite, Shotcrete, Water Bla	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Pavement Breaker	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Pilot Car	\$35.34	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Pipe Layer Lead	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Pipe Layer/tailor	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Pipe Pot Tender	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Pipe Reliner	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Pipe Wrapper	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Pot Tender	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Powderman	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Powderman's Helper	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Power Jacks	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Railroad Spike Puller - Power	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Raker - Asphalt	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Re-timberman	\$42.99	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Remote Equipment Operator	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Rigger/signal Person	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Rip Rap Person	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Rivet Buster	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Rodder	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Scaffold Erector	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Scale Person	\$41.69	<u>7A</u>	<u>2Y</u>	

Thurston	Laborers	Sloper (over 20")	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Sloper Sprayer	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Spreader (concrete)	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Stake Hopper	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Stock Piler	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Tamper (multiple & Self-propelled)	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Timber Person - Sewer (lagger, Shorer & Cribber)	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Toolroom Person (at Jobsite)	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Topper	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Track Laborer	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Track Liner (power)	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Traffic Control Laborer	\$37.79	<u>7A</u>	<u>2Y</u>	<u>8R</u>
Thurston	Laborers	Traffic Control Supervisor	\$37.79	<u>7A</u>	<u>2Y</u>	<u>8R</u>
Thurston	Laborers	Truck Spotter	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Tugger Operator	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Tunnel Work-Compressed Air Worker 0-30 psi	\$60.06	<u>7A</u>	<u>2Y</u>	<u>8Q</u>
Thurston	Laborers	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	\$65.09	<u>7A</u>	<u>2Y</u>	<u>8Q</u>
Thurston	Laborers	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	\$68.77	<u>7A</u>	<u>2Y</u>	<u>8Q</u>
Thurston	Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	\$74.47	<u>7A</u>	<u>2Y</u>	<u>8Q</u>
Thurston	Laborers	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	\$76.59	<u>7A</u>	<u>2Y</u>	<u>8Q</u>
Thurston	Laborers	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	\$81.69	<u>7A</u>	<u>2Y</u>	<u>8Q</u>
Thurston	Laborers	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	\$83.59	<u>7A</u>	<u>2Y</u>	<u>8Q</u>
Thurston	Laborers	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	\$85.59	<u>7A</u>	<u>1H</u>	<u>8Q</u>
Thurston	Laborers	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	\$87.59	<u>7A</u>	<u>1H</u>	<u>8Q</u>
Thurston	Laborers	Tunnel Work-Guage and Lock Tender	\$43.09	<u>7A</u>	<u>2Y</u>	<u>8Q</u>
Thurston	Laborers	Tunnel Work-Miner	\$43.09	<u>7A</u>	<u>2Y</u>	<u>8Q</u>
Thurston	Laborers	Vibrator	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Vinyl Seamer	\$41.69	<u>7A</u>	<u>2Y</u>	

Thurston	Laborers	Watchman	\$32.12	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Welder	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Well Point Laborer	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers	Window Washer/cleaner	\$32.12	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers - Underground Sewer & Water	General Laborer & Topman	\$41.69	<u>7A</u>	<u>2Y</u>	
Thurston	Laborers - Underground Sewer & Water	Pipe Layer	\$42.46	<u>7A</u>	<u>2Y</u>	
Thurston	Landscape Construction	Irrigation Or Lawn Sprinkler Installers	\$14.41		<u>1</u>	
Thurston	Landscape Construction	Landscape Equipment Operators Or Truck Drivers	\$14.41		<u>1</u>	
Thurston	Landscape Construction	Landscaping Or Planting Laborers	\$14.41		<u>1</u>	
Thurston	Lathers	Journey Level	\$50.82	<u>5D</u>	<u>1H</u>	
Thurston	Marble Setters	Journey Level	\$50.12	<u>5A</u>	<u>1M</u>	
Thurston	Metal Fabrication (In Shop)	Fitter	\$27.10	<u>6T</u>	<u>2U</u>	
Thurston	Metal Fabrication (In Shop)	Laborer	\$16.91	<u>6T</u>	<u>2U</u>	
Thurston	Metal Fabrication (In Shop)	Layerout	\$30.63	<u>6T</u>	<u>2U</u>	
Thurston	Metal Fabrication (In Shop)	Machine Operator	\$20.86	<u>6T</u>	<u>2U</u>	
Thurston	Metal Fabrication (In Shop)	Welder	\$24.74	<u>6T</u>	<u>2U</u>	
Thurston	Millwright	Journey Level	\$51.92	<u>5D</u>	<u>1M</u>	
Thurston	Modular Buildings	Cabinet Assembly	\$9.98		<u>1</u>	
Thurston	Modular Buildings	Electrician	\$9.98		<u>1</u>	
Thurston	Modular Buildings	Equipment Maintenance	\$9.98		<u>1</u>	
Thurston	Modular Buildings	Plumber	\$9.98		<u>1</u>	
Thurston	Modular Buildings	Production Worker	\$9.75		<u>1</u>	
Thurston	Modular Buildings	Tool Maintenance	\$9.98		<u>1</u>	
Thurston	Modular Buildings	Utility Person	\$9.98		<u>1</u>	
Thurston	Modular Buildings	Welder	\$9.98		<u>1</u>	
Thurston	Painters	Journey Level	\$36.64	<u>6Z</u>	<u>2B</u>	
Thurston	Pile Driver	Journey Level	\$51.07	<u>5D</u>	<u>1M</u>	
Thurston	Plasterers	Journey Level	\$49.29	<u>7Q</u>	<u>1R</u>	
Thurston	Playground & Park Equipment Installers	Journey Level	\$9.32		<u>1</u>	
Thurston	Plumbers & Pipefitters	Journey Level	\$61.57	<u>5A</u>	<u>1G</u>	
Thurston	Power Equipment Operators	Asphalt Plant Operator	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Assistant Engineers	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Barrier Machine (zipper)	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Batch Plant Operator: Concrete	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Bobcat	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>

Thurston	Power Equipment Operators	Brokk - Remote Demolition Equipment	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Brooms	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Bump Cutter	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Cableways	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Chipper	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Compressor	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42m	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Concrete Finish Machine -laser Screed	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Conveyors	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Cranes, 100 Tons - 199 Tons, Or 150 Ft Of Boom (including Jib With Attachments)	\$54.04	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Cranes, 200 Tons To 300 Tons, Or 250 Ft Of Boom (including Jib With Attachments)	\$54.61	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Cranes: 20 Tons Through 44 Tons With Attachments	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Cranes: A-frame - 10 Tons And Under	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Cranes: Friction 100 Tons Through 199 Tons	\$54.61	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Cranes: Friction Over 200 Tons	\$55.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Cranes: Over 300 Tons, Or 300' Of Boom (Including Jib With Attachments)	\$55.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Crusher	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Deck Engineer/deck Winches	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>

		(power)				
Thurston	Power Equipment Operators	Derricks, On Building Work	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Dozers D-9 & Under	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Drilling Machine	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Elevator And Man-lift: Permanent And Shaft Type	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Forklift: 3000 Lbs And Over With Attachments	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Forklifts: Under 3000 Lbs. With Attachments	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Grade Engineer: Using Blueprints, Cut Sheets, etc.	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Gradechecker/stakeman	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Guardrail Punch	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Horizontal/directional Drill Locator	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Horizontal/directional Drill Operator	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Hydralifts/Boom Trucks Over 10 Tons	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Hydralifts/boom Trucks, 10 Tons And Under	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Loader, Overhead 8 Yards. & Over	\$54.04	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Loaders, Overhead Under 6 Yards	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Loaders, Plant Feed	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Loaders: Elevating Type Belt	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Locomotives, All	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Material Transfer Device	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Mechanics, All (Leadmen -	\$54.04	<u>7A</u>	<u>3C</u>	<u>8P</u>

		\$0.50 Per Hour Over Mechanic)				
Thurston	Power Equipment Operators	Motor Patrol Grader - Non-finish	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Motor Patrol Graders, Finishing	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Outside Hoists (elevators And Manlifts), Air Tuggers, strato	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Overhead, Bridge Type: 100 Tons And Over	\$54.04	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Overhead, Bridge Type: 45 Tons Through 99 Tons	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Pavement Breaker	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Pile Driver (other Than Crane Mount)	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Posthole Digger, Mechanical	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Power Plant	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Pumps - Water	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Quad 9, HD 41, D10 And Over	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Rigger And Bellman	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Rollagon	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Roller, Other Than Plant Mix	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Roto-mill, Roto-grinder	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Saws - Concrete	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators	Scrapers - Concrete & Carry All	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>

Thurston	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	\$53.49	7A	3C	8P
Thurston	Power Equipment Operators	Service Engineers - Equipment	\$52.58	7A	3C	8P
Thurston	Power Equipment Operators	Shotcrete/gunite Equipment	\$50.22	7A	3C	8P
Thurston	Power Equipment Operators	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	\$52.58	7A	3C	8P
Thurston	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$53.49	7A	3C	8P
Thurston	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$54.04	7A	3C	8P
Thurston	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$54.61	7A	3C	8P
Thurston	Power Equipment Operators	Slipform Pavers	\$53.49	7A	3C	8P
Thurston	Power Equipment Operators	Spreader, Toppers & Screedman	\$53.49	7A	3C	8P
Thurston	Power Equipment Operators	Subgrader Trimmer	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators	Tower Bucket Elevators	\$52.58	7A	3C	8P
Thurston	Power Equipment Operators	Tower Crane Over 175'in Height, Base To Boom	\$54.61	7A	3C	8P
Thurston	Power Equipment Operators	Tower Crane Up: To 175' In Height, Base To Boom	\$54.04	7A	3C	8P
Thurston	Power Equipment Operators	Transporters, All Track Or Truck Type	\$53.49	7A	3C	8P
Thurston	Power Equipment Operators	Trenching Machines	\$52.58	7A	3C	8P
Thurston	Power Equipment Operators	Truck Crane Oiler/driver - 100 Tons And Over	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators	Truck Crane Oiler/driver Under 100 Tons	\$52.58	7A	3C	8P
Thurston	Power Equipment Operators	Truck Mount Portable Conveyor	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators	Welder	\$53.49	7A	3C	8P
Thurston	Power Equipment Operators	Wheel Tractors, Farmall Type	\$50.22	7A	3C	8P
Thurston	Power Equipment Operators	Yo Yo Pay Dozer	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Asphalt Plant Operator	\$53.49	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Assistant Engineers	\$50.22	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Barrier Machine (zipper)	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators-	Batch Plant Operator: Concrete	\$53.00	7A	3C	8P

	Underground Sewer & Water					
Thurston	Power Equipment Operators- Underground Sewer & Water	Bobcat	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Brokk - Remote Demolition Equipment	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Brooms	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Bump Cutter	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Cableways	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Chipper	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Compressor	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42m	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Concrete Finish Machine -laser Screed	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Conveyors	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Cranes, 100 Tons - 199 Tons, Or 150 Ft Of Boom (including Jib With Attachments)	\$54.04	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Cranes, 200 Tons To 300 Tons, Or 250 Ft Of Boom (including Jib With Attachments)	\$54.61	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Cranes: 20 Tons Through 44 Tons With Attachments	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Cranes: A-frame - 10 Tons And Under	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Cranes: Friction 100 Tons Through 199 Tons	\$54.61	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-	Cranes: Friction Over 200 Tons	\$55.17	<u>7A</u>	<u>3C</u>	<u>8P</u>

	Underground Sewer & Water					
Thurston	Power Equipment Operators- Underground Sewer & Water	Cranes: Over 300 Tons, Or 300' Of Boom (Including Jib With Attachments)	\$55.17	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	\$52.58	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Crusher	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Deck Engineer/deck Winches (power)	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Derricks, On Building Work	\$53.49	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Dozers D-9 & Under	\$52.58	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	\$52.58	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Drilling Machine	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Elevator And Man-lift: Permanent And Shaft Type	\$50.22	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Forklift: 3000 Lbs And Over With Attachments	\$52.58	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Forklifts: Under 3000 Lbs. With Attachments	\$50.22	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Grade Engineer: Using Blueprints, Cut Sheets,etc.	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Gradechecker/stakeman	\$50.22	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Guardrail Punch	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$53.49	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Horizontal/directional Drill Locator	\$52.58	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Horizontal/directional Drill Operator	\$53.00	7A	3C	8P
Thurston	Power Equipment Operators- Underground Sewer & Water	Hydralifts/Boom Trucks Over 10 Tons	\$52.58	7A	3C	8P

Thurston	Power Equipment Operators- Underground Sewer & Water	Hydralifts /boom Trucks, 10 Tons And Under	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead 8 Yards. & Over	\$54.04	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Loaders, Overhead Under 6 Yards	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Loaders, Plant Feed	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Loaders: Elevating Type Belt	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Locomotives, All	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Material Transfer Device	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Mechanics, All (Leadmen - \$0.50 Per Hour Over Mechanic)	\$54.04	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Motor Patrol Grader - Non- finishing	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Motor Patrol Graders, Finishing	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Outside Hoists (elevators And Manlifts), Air Tuggers, strato	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type: 100 Tons And Over	\$54.04	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type: 45 Tons Through 99 Tons	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Pavement Breaker	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Pile Driver (other Than Crane Mount)	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Posthole Digger, Mechanical	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>

Thurston	Power Equipment Operators- Underground Sewer & Water	Power Plant	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Pumps - Water	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Quad 9, HD 41, D10 And Over	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Rigger And Bellman	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Rollagon	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Roller, Other Than Plant Mix	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Roto-mill, Roto-grinder	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Saws - Concrete	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Scrapers - Concrete & Carry All	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Service Engineers - Equipment	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Shotcrete/gunite Equipment	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$54.04	<u>7A</u>	<u>3C</u>	<u>8P</u>

Thurston	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$54.61	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Slipform Pavers	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Spreader, Topsider & Screedman	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Subgrader Trimmer	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Tower Bucket Elevators	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Tower Crane Over 175'in Height, Base To Boom	\$54.61	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Tower Crane: Up To 175' In Height, Base To Boom	\$54.04	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Transporters, All Track Or Truck Type	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Trenching Machines	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Truck Crane Oiler/driver - 100 Tons And Over	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Truck Crane Oiler/driver Under 100 Tons	\$52.58	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Truck Mount Portable Conveyor	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Welder	\$53.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Wheel Tractors, Farmall Type	\$50.22	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Equipment Operators-Underground Sewer & Water	Yo Yo Pay Dozer	\$53.00	<u>7A</u>	<u>3C</u>	<u>8P</u>
Thurston	Power Line Clearance Tree Trimmers	Journey Level In Charge	\$43.76	<u>5A</u>	<u>4A</u>	
Thurston	Power Line Clearance Tree Trimmers	Spray Person	\$41.51	<u>5A</u>	<u>4A</u>	
Thurston	Power Line Clearance Tree Trimmers	Tree Equipment Operator	\$43.76	<u>5A</u>	<u>4A</u>	
Thurston	Power Line Clearance Tree Trimmers	Tree Trimmer	\$39.10	<u>5A</u>	<u>4A</u>	
Thurston	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	\$29.44	<u>5A</u>	<u>4A</u>	
Thurston	Refrigeration & Air Conditioning Mechanics	Journey Level	\$26.64		1	
Thurston	Residential Brick Mason	Journey Level	\$27.50		1	
Thurston	Residential Carpenters	Journey Level	\$29.46		1	

Thurston	Residential Cement Masons	Journey Level	\$14.00		1	
Thurston	Residential Drywall Applicators	Journey Level	\$39.62	5D	1M	
Thurston	Residential Drywall Tapers	Journey Level	\$18.00		1	
Thurston	Residential Electricians	Journey Level	\$28.33	5A	1B	
Thurston	Residential Glaziers	Journey Level	\$35.10	7L	1H	
Thurston	Residential Insulation Applicators	Journey Level	\$18.70		1	
Thurston	Residential Laborers	Journey Level	\$20.00		1	
Thurston	Residential Marble Setters	Journey Level	\$27.50		1	
Thurston	Residential Painters	Journey Level	\$18.27		1	
Thurston	Residential Plumbers & Pipefitters	Journey Level	\$20.40		1	
Thurston	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	\$26.64		1	
Thurston	Residential Sheet Metal Workers	Journey Level (Field or Shop)	\$41.84	7E	1R	
Thurston	Residential Soft Floor Layers	Journey Level	\$16.00		1	
Thurston	Residential Sprinkler Fitters (Fire Protection)	Journey Level	\$21.67		1	
Thurston	Residential Stone Masons	Journey Level	\$27.50		1	
Thurston	Residential Terrazzo Workers	Journey Level	\$9.32		1	
Thurston	Residential Terrazzo/Tile Finishers	Journey Level	\$17.00		1	
Thurston	Residential Tile Setters	Journey Level	\$9.32		1	
Thurston	Roofers	Journey Level	\$42.61	5A	2O	
Thurston	Roofers	Using Irritable Bituminous Materials	\$45.61	5A	2O	
Thurston	Sheet Metal Workers	Journey Level (Field or Shop)	\$69.37	7E	1E	
Thurston	Shipbuilding & Ship Repair	Boilermaker	\$39.66	7M	1H	
Thurston	Sign Makers & Installers (Electrical)	Journey Level	\$18.04		1	
Thurston	Sign Makers & Installers (Non-Electrical)	Journey Level	\$15.50		1	
Thurston	Soft Floor Layers	Journey Level	\$42.15	5A	3D	
Thurston	Solar Controls For Windows	Journey Level	\$10.31		1	
Thurston	Sprinkler Fitters (Fire Protection)	Journey Level	\$46.50		1	
Thurston	Stage Rigging Mechanics (Non Structural)	Journey Level	\$13.23		1	
Thurston	Stone Masons	Journey Level	\$50.12	5A	1M	
Thurston	Street And Parking Lot Sweeper Workers	Journey Level	\$16.00		1	

Thurston	Surveyors	All Classifications	\$32.43	<u>Null</u>	<u>1</u>	
Thurston	Telecommunication Technicians	Journey Level	\$22.00		<u>1</u>	
Thurston	Telephone Line Construction - Outside	Cable Splicer	\$36.01	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Hole Digger/Ground Person	\$20.05	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Installer (Repairer)	\$34.50	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Special Aparatus Installer I	\$36.01	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Special Apparatus Installer II	\$35.27	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Telephone Equipment Operator (Heavy)	\$36.01	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	\$33.47	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Telephone Lineperson	\$33.47	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Television Groundperson	\$19.04	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Television Lineperson/Installer	\$25.27	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Television System Technician	\$30.20	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Television Technician	\$27.09	<u>5A</u>	<u>2B</u>	
Thurston	Telephone Line Construction - Outside	Tree Trimmer	\$33.47	<u>5A</u>	<u>2B</u>	
Thurston	Terrazzo Workers	Journey Level	\$46.96	<u>5A</u>	<u>1M</u>	
Thurston	Tile Setters	Journey Level	\$46.96	<u>5A</u>	<u>1M</u>	
Thurston	Tile, Marble & Terrazzo Finishers	Finisher	\$37.79	<u>5A</u>	<u>1B</u>	
Thurston	Traffic Control Stripers	Journey Level	\$42.33	<u>7A</u>	<u>1K</u>	
Thurston	Truck Drivers	Asphalt Mix Over 16 Yards (W. WA-Joint Council 28)	\$47.91	<u>5D</u>	<u>3A</u>	<u>8L</u>
Thurston	Truck Drivers	Asphalt Mix To 16 Yards (W. WA-Joint Council 28)	\$47.07	<u>5D</u>	<u>3A</u>	<u>8L</u>
Thurston	Truck Drivers	Dump Truck	\$17.23		<u>1</u>	
Thurston	Truck Drivers	Dump Truck And Trailer	\$17.23		<u>1</u>	
Thurston	Truck Drivers	Other Trucks (W. WA-Joint Council 28)	\$47.91	<u>5D</u>	<u>3A</u>	<u>8L</u>
Thurston	Truck Drivers	Transit Mixer	\$29.41	<u>6I</u>	<u>2H</u>	
Thurston	Well Drillers & Irrigation Pump	Irrigation Pump Installer	\$17.53		<u>1</u>	

	Installers				
Thurston	Well Drillers & Irrigation Pump Installers	Oiler	\$12.44	1	
Thurston	Well Drillers & Irrigation Pump Installers	Well Driller	\$18.00	1	

Benefit Code Key – Effective 8-31-2013 thru 3-4-2014

Overtime Codes

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.
 - 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 and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - D. The first two (2) hours before or after a five-eight (8) hour workweek day or a four-ten (10) hour workweek day and the first eight (8) hours worked the next day after either workweek 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. All hours worked on Sundays and holidays shall also be paid at double the hourly rate of wage.
 - J. 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.
 - K. 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.
 - M. 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.

Benefit Code Key – Effective 8-31-2013 thru 3-4-2014

1. N. 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.
- O. 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.
- P. All hours worked on Saturdays (except makeup days if circumstances warrant) 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.
- 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 hours worked on holidays and 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.
- 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 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 due to conditions beyond the control of the employer)) 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.
- X. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage. When holiday falls on Saturday or Sunday, the day before Saturday, Friday, and the day after Sunday, Monday, shall be considered the holiday and all work performed shall be paid at double the hourly rate of wage.
- Y. All hours worked outside the hours of 5:00 am and 5:00 pm (or such other hours as may be agreed upon by any employer and the employee) and all hours worked in excess of eight (8) hours per day (10 hours per day for a 4 x 10 workweek) and on Saturdays and holidays (except labor day) shall be paid at one and one-half times the hourly rate of wage. (except for employees who are absent from work without prior approval on a scheduled workday during the workweek shall be paid at the straight-time rate until they have worked 8 hours in a day (10 in a 4 x 10 workweek) or 40 hours during that workweek.) All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and Labor Day shall be paid at double the hourly rate of wage.
- Z. 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 the straight time rate of pay in addition to holiday pay.

Benefit Code Key – Effective 8-31-2013 thru 3-4-2014

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.
- 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 holidays 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.
 - K. All hours worked on holidays shall be paid at two times the hourly rate of wage in addition to the holiday pay.
 - O. All hours worked on Sundays and holidays shall be paid at one and one-half times the hourly rate of wage.
 - R. All hours worked on Sundays and holidays and all hours worked over sixty (60) in one week 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 over 12 hours in a day or on Sundays and holidays shall be paid at double the hourly rate of wage.
 - W. 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. On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The first eight (8) hours worked on the fifth day shall be paid at one and one-half times the hourly rate of wage. All other hours worked on the fifth, sixth, and seventh days and on holidays shall be paid at double the hourly rate of wage.
 - Y. All hours worked on Saturdays (except for make-up days) 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.
3. 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. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal shift, and all work on Saturdays shall be paid at time and one-half the straight time rate. Hours worked over twelve hours (12) in a single shift and all work performed after 6:00 pm Saturday to 6:00 am Monday and holidays shall be paid at double the straight time rate of pay. Any shift starting between the hours of 6:00 pm and midnight shall receive an additional one dollar (\$1.00) per hour for all hours worked that shift. The employer shall have the sole discretion to assign overtime work to employees. Primary consideration for overtime work shall be given to employees regularly assigned to the work to be performed on overtime situations. After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

Benefit Code Key – Effective 8-31-2013 thru 3-4-2014

3.
 - B. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - C. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays shall be paid at double the hourly rate of wage. After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.
 - D. All hours worked between the hours of 6:00 pm and 6:00 am, Monday through Saturday, shall be paid at a premium rate of 15% over the hourly rate of wage. All other hours worked after 6:00 am 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.
 - E. All hours worked Sundays and holidays shall be paid at double the hourly rate of wage. Each week, once 40 hours of straight time work is achieved, then any hours worked over 10 hours per day Monday through Saturday shall be paid at double the hourly wage rate.
 - F. All hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. 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.
 - G. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, , and all work on Saturdays shall be paid at time and one-half the straight time rate. Hours worked over twelve hours (12) in a single shift and all work performed after 8:00 am Sunday to 8:00 am Monday and Holidays shall be paid at double the straight time rate of pay. After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.
4. 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 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).

Benefit Code Key – Effective 8-31-2013 thru 3-4-2014

- H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).
5. 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).
- K. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9).
- L. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, And Christmas Day (8).
- 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). If A Holiday Falls On Sunday, The Following Monday Shall Be Considered As A Holiday.
- 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).
- T. Paid Holidays: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, Christmas Day, And The Day Before Or After Christmas (9).
- 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).

Holiday Codes Continued

6. A. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (8).
- E. 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, And A Half-Day On Christmas Eve Day. (9 1/2).
- G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, Christmas Day, And Christmas Eve Day (11).
- H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day,

Benefit Code Key – Effective 8-31-2013 thru 3-4-2014

Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).

- I. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, And Christmas Day (7).
- 6. T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).
- Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.

Holiday Codes Continued

- 7. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday And Saturday After Thanksgiving Day, And Christmas Day (8). Any Holiday Which Falls On A Sunday Shall Be Observed As A Holiday On The Following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- C. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- F. 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). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Benefit Code Key – Effective 8-31-2013 thru 3-4-2014

- I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
7. J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- M. Paid Holidays: New Year's Day, The Day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, And the Day after or before Christmas Day. 10). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.
- O. Paid Holidays: New Year's Day, The Day After Or Before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, Christmas Day, The Day After Or Before Christmas Day, And The Employees Birthday. 11). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- Q. 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). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- R. Paid Holidays: New Year's Day, the day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day after or before Christmas Day (10). If any of the listed holidays fall on Saturday, the preceding Friday shall be observed as the holiday. If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
- S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

Note Codes

8. A. In addition to the hourly wage and fringe benefits, the following depth premiums apply to depths of fifty feet or more:

Benefit Code Key – Effective 8-31-2013 thru 3-4-2014

Over 50' To 100' -\$2.00 per Foot for Each Foot Over 50 Feet
Over 100' To 150' -\$3.00 per Foot for Each Foot Over 100 Feet
Over 150' To 220' -\$4.00 per Foot for Each Foot Over 150 Feet
Over 220' -\$5.00 per Foot for Each Foot Over 220 Feet

- 8 C. 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.
- P. Workers on hazmat projects receive additional hourly premiums as follows -Class A Suit: \$2.00, Class B Suit: \$1.50, Class C Suit: \$1.00, And Class D Suit \$0.50.
- Q. The highest pressure registered on the gauge for an accumulated time of more than fifteen (15) minutes during the shift shall be used in determining the scale paid.
- R. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. These classifications are only effective on or after August 31, 2012.
- S. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.
- T. Effective August 31, 2012 – A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

ATTACHMENT C

Soils Report



Jerome W. Morrisette & Associates Inc., P.S.

1700 Cooper Point Road SW, #B-2, Olympia, WA 98502-1110
(360) 352-9456 FAX (360) 352-9990

October 10, 2013

Mayor Alan Carr
Town of Bucoda
110 North Main Street
Bucoda, WA 98530

Subject: Soils Report for dike project. Project Site is at the Town of Bucoda Public Works yard and well site, at the north end of Main Street in Bucoda, WA. Tax Parcel Number 11507210100; Section 7, T15N, R1W, W.M.

INTRODUCTION

The Town of Bucoda Public Works office and well facility is located at the northern end of town in a fenced yard area that also houses the City shop and maintenance operations. The yard is partially surrounded by a small diversion dike intended to provide some protection of the well area from Skookumchuck River flooding (see Figures in report below). However, the dike design is not optimal, and it has not provided adequate protection in the past. A new, more protective dike is proposed, with a new design that will wrap around the yard rather than provide primarily a flood diversion function.

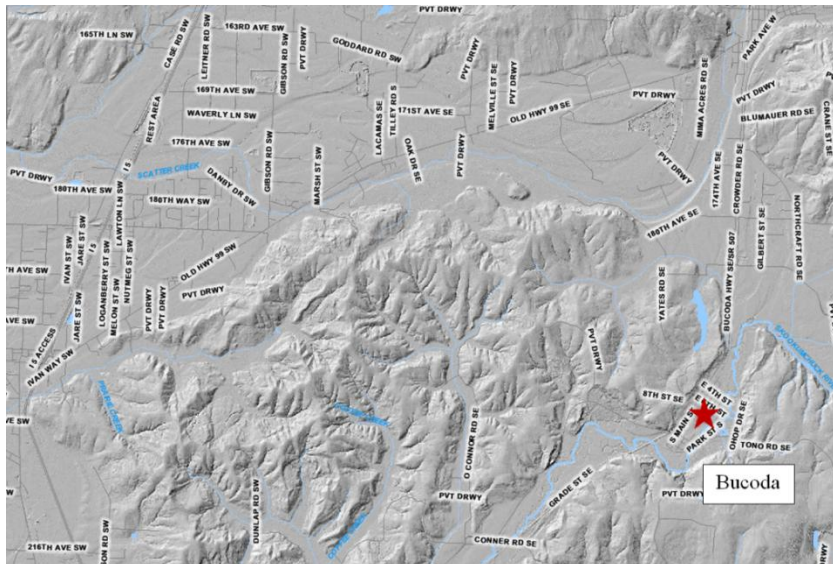


Figure 1. Bucoda location map on LiDAR image basemap.

Soil and hydrology conditions around and within the dike will affect dike design as well as materials disposal decisions. The purpose of this report is to provide background information about local soil and hydrology conditions, but this is not a comprehensive study. Site specific characterization of the dike materials, stockpiled soil conditions within the yard and flood conditions by contractors is recommended.

The affected parcel (Figure 2) has a site address of 19535 Main Street SE, Bucoda, WA 98530, but is also identified by its Tax Parcel Number: 11507210100. This 2.5 acre parcel is located at the

north end of Main Street in Bucoda, with the gated entry just north of the intersection with East 3rd Street.

Phase 1 Field work was carried out on March 4, 2013 by JWMA staff (Lisa Palazzi, CPSS, PWS and Zach Severs, EIT) working with Tom Campbell, Licensed Professional Well Driller and Krazan Engineering drill rig operators. Staff from Ecology was also onsite (John Pearch, LHG). The work was intended to log in soil borings and depth to groundwater at three locations and to install a groundwater monitoring well in one of the three borings. Phase 2 field work was carried out on September 19, 2013 by Lisa Palazzi, working with City of Bucoda staff. Several soil pits were dug and soils were assessed in stockpile areas and within the existing dike remnants.

METHODS AND MATERIALS

Prior to the onsite visits, JWMA staff reviewed site topography maps, geology and soil maps to provide baseline information about onsite soil and hydrology conditions. Preliminary locations for the proposed borings and soil pits were chosen.

March 4 Site Visit Soil Borings

Prior to the site visit, three areas were targeted for borings. The first proposed boring site was located at the north end near the dike; the second one at the south end between the shop building and entry gate, and the third to the east, east of the well house and near the dike. Once onsite during the first site visit on March 4, 2013, the northern boring was attempted first, with the drill rig operated by Krazan staff, assisted and supervised by Tom Campbell (licensed professional well driller). The northern boring location was abandoned after trying for more than an hour to get below 2 feet depth (details below). The eastern boring was then attempted, and by the end of the day, that boring was completed at about 20-21 feet depth, and a groundwater monitoring well was installed with the base at about 17-18 feet depth. A HOBO Water level datalogger was installed at 16 feet below the soil surface in the well, programmed to sample water depth hourly. The southern boring was not attempted.

Soil pits were dug with a backhoe to approx. 7-9 feet depth adjacent to the northern and southern boring locations. Soil profile descriptions were collected at each pit, using NRCS /USDA standard soil profile description protocols with particular attention paid to evidence of seasonal shallow groundwater or soil profile characteristics.

Due to the cobbly soil surface, the groundwater well could not be installed with a flush mount. Furthermore, the well was potentially partly plugged from suspended sediments. Sediments in the well casing were washed out and pressurized water was introduced to try and clear out the well casing slots with some success. However, it was not possible to force the flush mount further into the ground due to subsurface boulders. Thus, rather than install costly safety bollards, the well was abandoned and decommissioned on March 25, 2013 (supervised by Trent Loughheed, P.E. of JWMA).

September 19 Site Visit Soil Pits

For the second site visit, we sampled soils at four locations in the stockpile at the southeastern end of the yard; at two locations on a small berm at the southwestern part of the yard; at two locations in a small stockpile north of the shop; and at three locations along the dike surface.

RESULTS & DISCUSSION

As described above, the first phase of field work was carried out on March 4, 2013 by JWMA staff (Lisa Palazzi, CPSS, PWS and Zach Severs, EIT) working with Tom Campbell, Licensed Professional Well Driller. The intent of that work was to evaluate soil and hydrology conditions in support of design and installation of a new perimeter dike. No samples were taken of material within the dike – only soils within the dike were evaluated.

The second phase of field work was carried out on September 19, 2013 by Lisa Palazzi, CPSS assisted by City of Bucoda staff – to additionally assess soil conditions in stockpiled areas and within the dike.

March 4th Soil Borings and Soil Pit Descriptions

The existing diversion dike wraps around the north and east sides of the yard (Figure 2). The upper portions of the old dike have already been removed in some sections, leaving only about 1-2 feet of base material in place. The base material in the northern dike appears to be composed of native soils – i.e., dark-colored cobbly sandy substrates (Figure 3). However, the dike materials were not characterized in detail during this site visit.

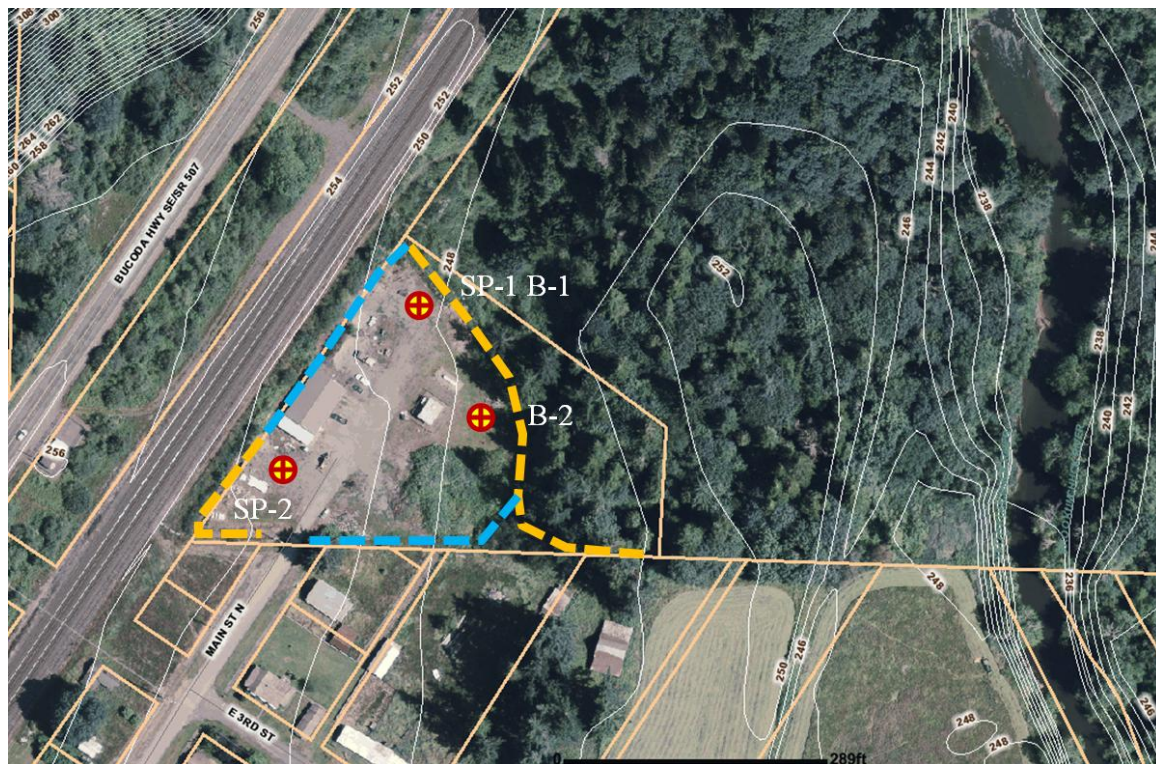


Figure 2. Showing current dike/ embankment locations (yellow dashed line) and future proposed dike orientation (retaining yellow dashed line sections and adding blue dashed line sections) as well as soil pits and Soil Borings locations, described below. This Figure is displayed with GeoData topography background.

Soil borings and/or soil pits were logged in at three locations – at the north, east and southern side of the yard, inside of the perimeter dike (Figure 2). These locations were chosen with an intention to document background soil conditions as well as to better characterize the groundwater surface that was expected to occur within 10-15 feet of the surface.

The soil surface at the northern and southern soil pit locations is higher in elevation than the eastern soil boring surface – which was at the lowest elevation portion of the yard. According to JWMA onsite survey information (NAVD88 datum), the surface elevation near the northern pit is about 253 ft; around the southern pit is about 254 ft, and around the eastern pit is about 251 ft elevation¹. It is our understanding that water ponded to about 253 feet elevation in the 2006 event (described below). Also noted: GeoData topography indicates a slight 2-4ft rise offsite to the east, which would deflect short duration surface flooding to the south.



Figure 4. Showing section of the current dike conditions at north end and along east side.



Figure 3. Northern soil pit (SP-1) -- cobbly soils to greater than 7 feet depth.

The soil profile characteristics at all three boring/ soil pit locations were relatively similar, in that the surface materials were extremely cobbly (3-10" diameter cobbles) and gravelly (65-90% coarse fragments) with loamy sand fine fraction to greater than 7-8 feet depth.

¹ Note that GeoData uses NGVD29 elevation datum and this survey is based in NAVD88 -- -3.42 feet elevation difference; thus GeoData elevations will be about 4 feet lower than these surveyed elevations.

Figure 5. Showing cobbly surface soil condition at SP-1.



The soil boring initially attempted at the northern location (B-1) was abandoned after about an hour of drilling due to the cobbly surface making it difficult drill below about 2.5 feet depth. A soil pit (SP-1) was dug adjacent to the attempted boring to about 7-8 feet depth (Figures 4 and 5). It was not possible to dig deeper than 7-8 feet at that location due to the pit sidewalls caving continually. No groundwater was observed within 8 feet of the surface, but groundwater at that location was expected to be at about 10-11 feet, based on elevation of the Skookumchuck River to the east and the highly permeable cobbly soil substrate mapped and observed onsite (Figure 2).

Figure 6. Surface cobbles and dark soils at SP-2.



A second soil pit (SP-2, Figures 6 and 7) was excavated and described at the proposed southern boring location. This pit was very similar to the profile in SP-1 – extremely gravelly and cobbly loamy sand soils to greater than 8 ft depth with no evidence of groundwater observed within 8 ft of the surface.

Figure 7. Soil Profile above, showing cobbles and gravels to greater than 8 feet depth at SP-2.



Figure 8. Example of soil materials from about 2-10' depth, loamy sand matrix with periodic layers of clay loam binder

A boring was completed in the eastern, lowest elevation part of the yard, drilled to about 20 ft depth. From the surface to 2 ft depth, the substrate was a mixture of fill and disturbed native soils, with about 35% coarse fragment content (lower gravel and cobble content than native soils). From 2 ft to about 10 ft depth (Figure 8), the native soils were gravelly and cobbly (70%+ content) – similar to what was observed in SP1 and SP-2, but in addition to loamy sand between the coarse fragments, had periodic layers about 1 ft thick of clay loam (~35% clay content) fine fraction. Water content increased rapidly below about 8 ft, with a water table initially estimated at around 9-10 ft (Figure 9).



Figure 9. Example of soil materials from about 12 ft depth; water table was estimated to occur at about 9-10 ft depth

The soil substrates below the water table surface were layered sands and gravel with higher silt (25-50%) content and lower gravel content (35%) than was observed above (Figure 10). The silty substrate within the water table in combination with the cobbly matrix made well installation very difficult. Due to complications related with an unacceptably high surface “flush” monument, the monitoring well was abandoned and decommissioned within 3 weeks of installation, but some useful data was collected from the datalogger over the 3 week study period.

Datalogger readout results indicated that the water table at the well location within a day or 2 of installation was at about 7 feet depth, i.e. about 244 feet elevation (NAVD88 datum). GeoData Maps indicate that the edge of the Skookumchuck River about 600 ft east of our study area is about that same elevation (taking aerial topography error of ± 2 ft into account)². It is possible to assess onsite elevation in relation to flood stage elevations through a



Figure 10. Split spoon sampler from about 15 ft depth

² GeoData elevations use the NGVD29 datum. But JWMA survey ad report elevation information is reported in NAVD88.

Difference between NGVD29 and NAVD88 is 3.42 ft, i.e., NGVD29+3.42 = NAVD88. The edge of the river east of study area is shown as 238 ft NGVD29, which converts to about 242 ft NAVD88.

nearby river stage gauge. The nearest Skookumchuck river gauge is within 5 miles (SE) of Bucoda. (More on this below)

September 19th Soil Descriptions

The site was revisited on September 19, 2013 to further assess onsite soil conditions in stockpile and dike areas that might impact construction activities. ***This information is not comprehensive, but is provided for context. Project contractors are responsible for fully assessing conditions in these areas.*** Specifically, we assessed soils:

- in the Southeastern stockpile – a collection of materials from various past Public Works activities in Bucoda;
- in the Southwestern berm – a small linear berm running along the property line west of the yard entry gate;
- in the Northwest Stockpile – a small pile of materials north of the shop that appears to be mostly gravels, but includes some soil;
- at four locations along the top of the dike remnant around the north and eastern edge of the yard.

We did not assess the dike remnant extension to the east away from the yard. Figure 11 shows soil condition assessment locations.



Figure 11. Showing soil assessment locations for the September 2013 site visit.

Materials in the Southeastern Stockpile were highly varied, as might be expected. This round, mounded stockpile is about 12-15 feet tall and about 60-80 feet across at the base. It is covered with Himalayan blackberry, with brush and grass clippings piled up around the western perimeter. The City backhoe was used to extract samples at four locations around the stockpile perimeter. Sample 1 was in the NW quadrant showing sandy loam soil with about 20% cobbles and gravels content. Sample 2 was from the NE quadrant showing similar soil and cobbles, but with some chunks of what appeared to be asphalt mixed in. Sample 3 was in the SSE quadrant, with sandy loam and about 30% cobbles and gravels, as well bits of particle board, plastic and metal strips. This soil sample is darker in color (very dark brown to black) and smells of rotting organic matter -- possibly grass clippings and/or possibly a motor oil component. Sample 4 was in the SW quadrant with about 30-40% cobbles and gravels, sandy loam soil and small chunks of asphalt or concrete. Overall, this pile appears to be dominated by local soil substrates, but might be expected to contain any surplus materials from various City Public Works Projects -- ranging from pipe replacement projects to mowing and general maintenance.



Figure 12. The four pictures above provide examples of materials in and around the southeastern stockpile. Note the chunks of concrete, metal straps and plastic as well as grass clippings and pruned branches.

Materials in the Southwestern Berm (located west of the entry gate) were non-native crushed rock mixed with non-native rounded 0.5-1" gravels and native gravelly sandy loam soils (Figure 13 and 14). The linear berm is about 90 feet long, about 12-15 feet wide at the base, and 3 feet high. No concrete, asphalt, metal or plastic materials were observed in the two sample locations in the berm.



Figure 13. Sampling of materials in the southwestern berm.



Figure 14. Example of materials in the berm.

Materials in the northwestern stockpile (located about 50 feet north of the yard office building) were a mixture of native cobbly, gravelly sandy loam soil and non-native 0.5-1" rounded gravels. There were minor inclusions of concrete chunks, but minimal amounts of foreign materials. This mounded, oval stockpile is about 60 feet long, about 20 feet wide at the widest part of the base, and about 8 feet tall at center.



Figure 15. Excavating for sampling in the northwestern stockpile; An example of native soil materials above..



Figure 16. Another view of the northwestern stockpile showing cobbles on the surface; Example of non-native rounded gravels found in the northern portions of the stockpile, shown above to the right..

The remnant dike surface materials varied from north to southeast as it wrapped around the yard. At the far north end, the dike is only about 1 foot higher than surrounding ground surface, and materials are comparable to the surrounding native soils – loose, uncompacted, cobbly, gravelly sandy loams with occasional chunks of brick or concrete (Figure 17).



Figure 18. Example of materials from north end of dike.



Figure 17. Example of materials from central dike



Figure 19. Example of basalt quarry spalls material in the southern dike surface.

The central dike was about 2 feet higher than surrounding grade, and was composed mostly of native soil and cobbles with large angular rocks (basalt?) mixed in (Figure 18). The southern dike was about 2-3 feet high at the point where it turns out to the east. That area had a surface of basalt quarry spalls, capping what appear to be native cobbly sandy loams.

In summary, there are several stockpiles or berms in the Bucoda yard area that might contain materials useful for construction, or might need to be removed during construction. We provide basic information about materials the various areas as well as within the remnant dike surface, but it is the contractor's responsibility to fully characterize these areas as needed within the context of the project.

Flood Event Summary Information

We provide summary information about local Flood Stage elevations, which will inform optimal dike and pump design. However, it is the contractor's responsibility to verify specific values for designing to local conditions. Elevations reported below are reported in NAVD88 values unless otherwise indicated.

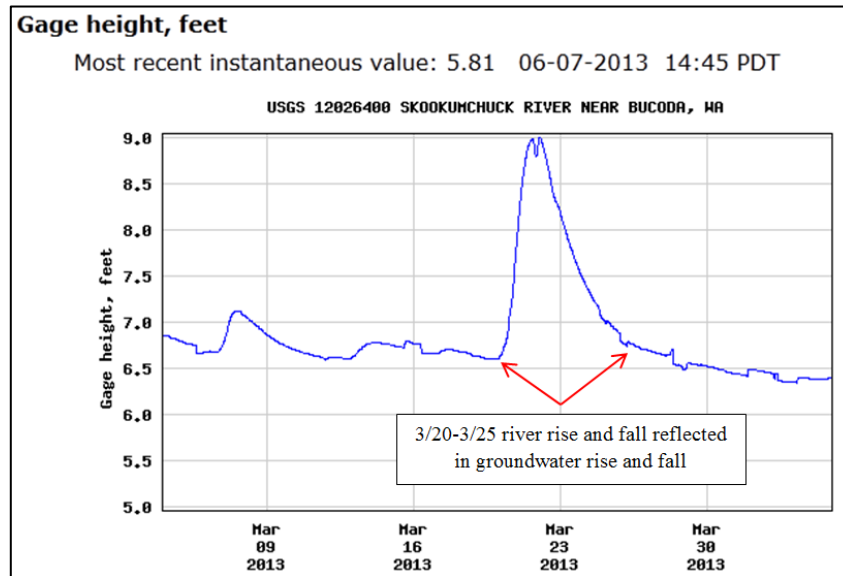
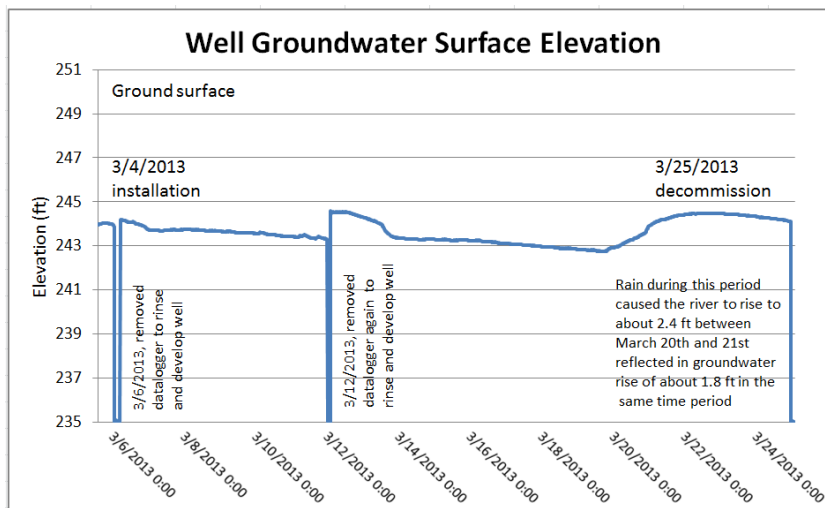


Figure 20. Skookumchuck River Gauge height near Bucoda for period of study

Based on daily stage gauge records provided online through the NOAA / NWS website (Figure 20), the Skookumchuck gauge southwest of Bucoda (507 bridge crossing, about 4-5 miles downstream) was at about 6.5-7ft height during most of the period when the datalogger was monitoring water levels in the well. But this data also showed a short-duration river surface elevation rise of 2.4 ft starting between about midday March 20 and cresting at about 9 ft by

midnight on March 21 (about 1.5 days) due to several days of high rainfall. The water surface receded within to pre-crest river levels by about March 28th.

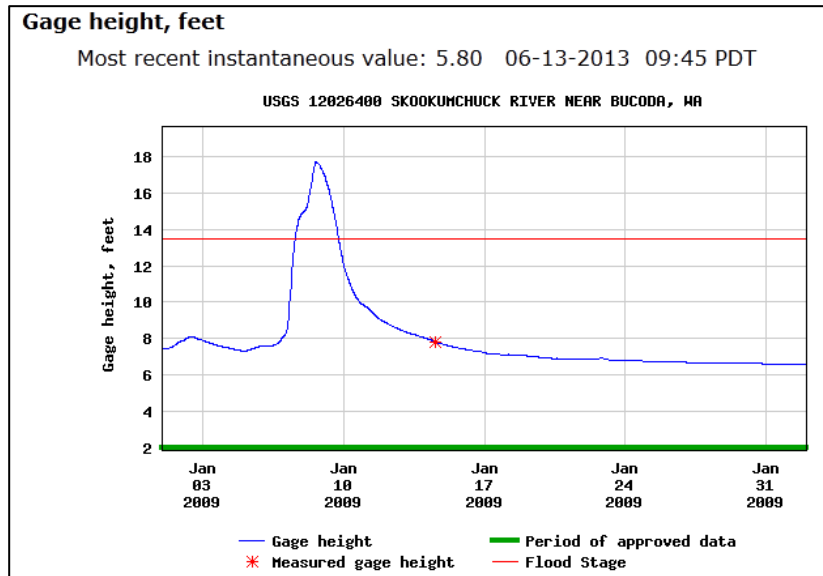
The onsite datalogger showed a groundwater surface elevation fluctuation of about 1.8 ft during that same time period (Figure 21). This result indicates a strong relationship between groundwater table elevation and river water elevation, but with groundwater response about 25% lower and of slightly longer duration than the river -- cresting about ½ day later (at about 2 days), with the crest persisting for about a day, then falling off slowly.



Stage Gauge Flood Stages

Stage gauge information indicates that Flood Stage starts at 13.5 ft (low-lying roads and pastureland); Moderate Flood Stage at 15 ft (individual residences are threatened); and Major Flood Stage above 17 ft (widespread threat to communities and major thoroughfares). These river gauge values convert to **Flood stage in Bucoda starting at about 250 ft elevation;**

Moderate Flood Stage at about 251.5 ft and Major Flood Stage at about 253.5 ft.



According to NOAA site information, Bucoda most recently experienced severe flooding on January 8, 2009 (Figure 22), when the stage gauge was at about 17.72 ft – which converts to an elevation of about 253.5 ft in Bucoda.

The photo in Figure 23 was taken on January 8, 2013 looking south toward the intersection of Nenant and 8th street in Bucoda (at about 249-250 ft elevation).

Figure 22. Skookumchuck River Gauge height during January 2009 storm.



Figure 23. Bucoda flood event, January 2009

We provide below (Figure 24) the dates and heights of the 5 highest recorded flood crests at the stage gauge. In 1996, water at the stage gauge crested at 17.87 – roughly translating to flood crest at 253-254 ft elevation in Bucoda.

As described above, Flood Stage in Bucoda starts at about 250 ft elevation with Moderate Flood Stage at about 251.5 and Major Flood Stage at 253.5. The Public Works yard surface elevation ranges from about 250 ft to 256 ft, thus would be impacted to varying degrees by surface flooding at Moderate to Major Flood Stage water heights. Historical Crest data indicate the river has crested at or above Moderate Flood Stage more than 22 times since 1968.

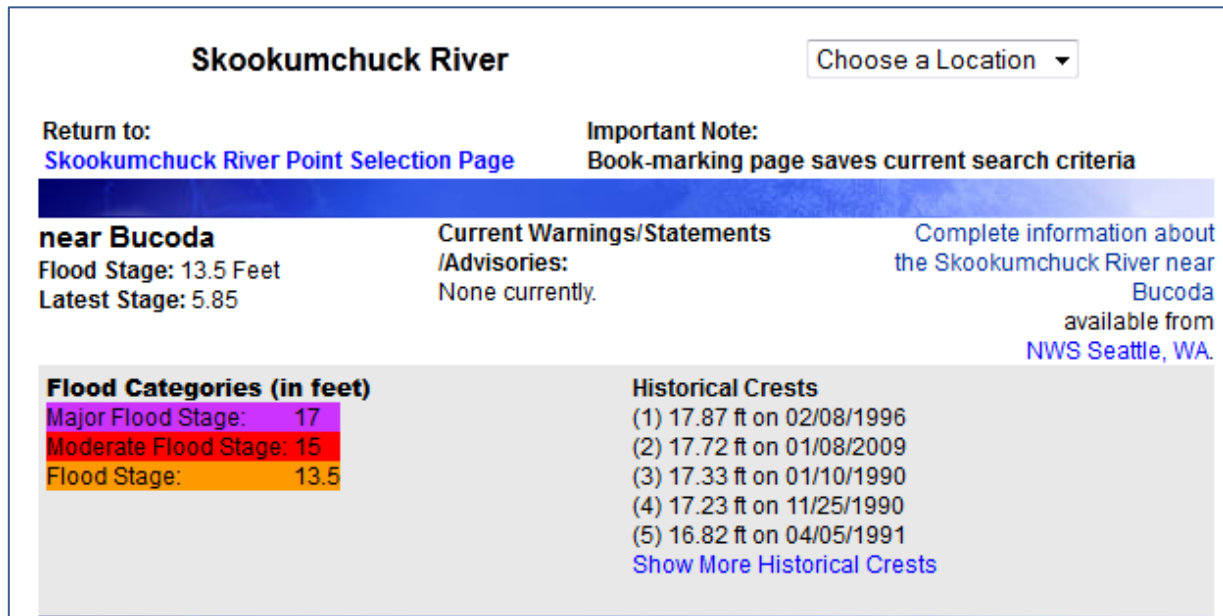


Figure 22. Skookumchuck River Stage Gauge near Bucoda, Flood Category, Historical Crests and current conditions printout for June 5, 2013

The duration of surface flooding will affect dike performance, due to the local near-surface soil conditions being highly permeable – both vertically and horizontally. This results in rapid groundwater table rises in response to river surface crests. Therefore, a dike will be most effective at protecting the yard from short-duration flood events. But longer duration surface flood events will likely be reflected in rising groundwater tables, resulting in horizontal flow through the highly permeable native soil substrates below the dike and into the yard. Thus, for longer duration events, pumping from behind the dike may be necessary to control flooding.

Based on a potential surface water elevation of 253.5 ft at Major Flood stage, about half of the Public Works yard would be flooded, with water depths ranging from 0.5-3.5 ft. This calculates roughly to 28,000 cuft of water, or about 209,454 gallons. If we assume a pump capable of 630 gallons per minute (gpm), with no inflow, the yard could be pumped dry in about 5.5 hours. But during periods of extended flooding, the highly permeable soils below the dike in combination with rapid groundwater rise during flooding would greatly hamper pumping efficacy. In essence, the pump would be lowering the water within the dike as it refills from behind the dike.

We may assume a horizontal transmissivity rate of 50-100 inches per hour (in/hr) in the highly permeable gravelly and cobbly soils around the wetted dike perimeter (about 450 ft when water ponds to 253.5ft). This results in about 14,000-28,000 gallons per hour (g/hr) inflow. The 630 gpm pump is capable of removing about 37,800 g/hr, thus its effective rate is reduced to about 9800g/hr when compensating for potential inflow volumes at 100 in/hr (28,000 g/hr), or to about 25% of its original rate. Therefore, during long-duration flood events of this magnitude, it would take about 4 times as long to lower the water with pumping – almost 24 hours. The pumping rate will be most effective when the water surface is highest, due to there being minimal head differential on either side of the dike. But as the water surface lowers, head differential increases and effective pumping rates will be slower as inflow rates will increase. Therefore, it may be difficult to remove the last foot or so of water from behind to dike as the flood event is ongoing. However, pumping could be used to limit the surface flooding to the far eastern edge of the yard during the long-duration flood event

Soil and Geology Mapping – Regional Conditions

We provided onsite soil descriptions above, but provide background Soil and Geology mapping information below to provide additional context.

Geologic Mapping

The local geology mapping (Figure 25) show the Skookumchuck River floodplain is a reflection of an old “stratified pebble, cobble and boulder” glacial outwash floodway (Qgog) with other more recent silt, sand and gravel alluvium inflows (Qa) capping that deposit in places. The higher elevation uplands above the outwash and alluvium flood plain are older sedimentary bedrock units (En), but with erosion channels filled in some places with sandy, gravelly glacial outwash deposits (Qapo).

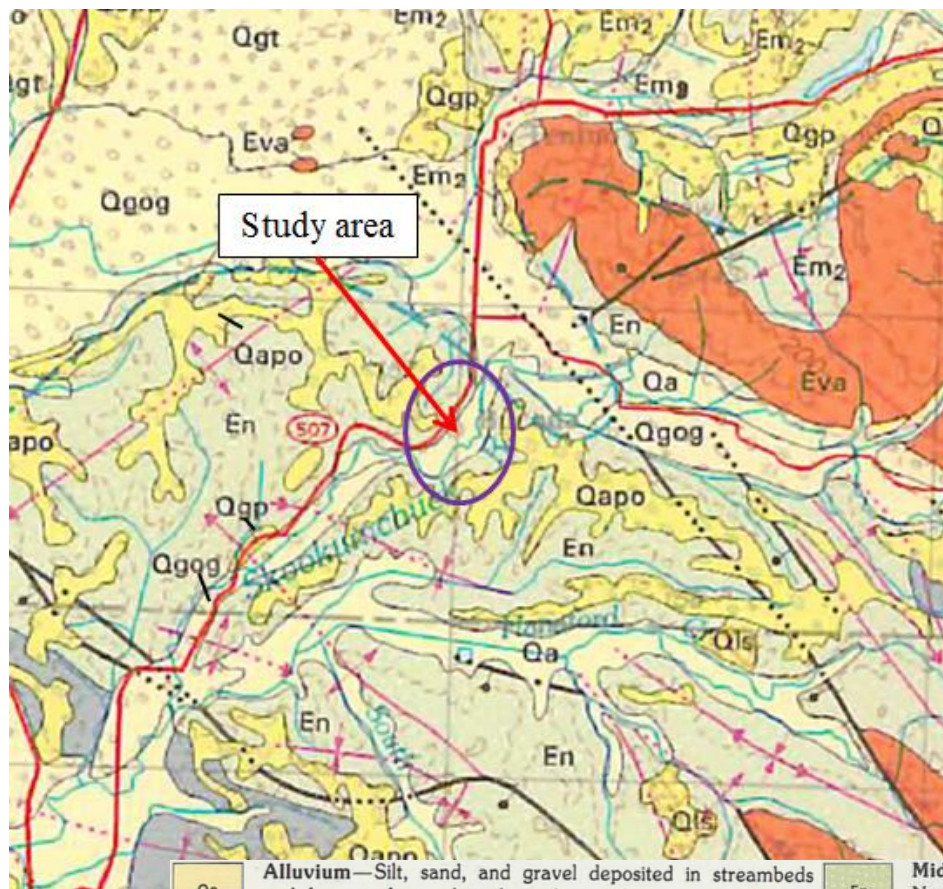







Figure 24. Geology map of the study site area, showing cobbly and bouldery outwash flood deposits (Qgog) in the Skookumchuck River floodplain around Bucoda.

	Alluvium —Silt, sand, and gravel deposited in streambeds and fans; surface relatively undissected
	Outwash gravel —Recessional and proglacial, stratified pebble, cobble, and boulder gravel deposited in meltwater streams and their deltas; locally contains ice-contact deposits. Includes Steilacoom Gravel and part of the Vashon Drift
	Undifferentiated drift —Till and outwash sand and gravel; commonly oxidized. Includes Salmon Springs, Orting, and Stuck Drifts, and Helm Creek drift of Carson (1970)
	Outwash deposits —Outwash sand and gravel with minor silt and clay. Includes Logan Hill Formation, part of Hayden Creek, Kittitas, and Wingate Hill Drifts, part of the Humptulips drift (Moore, 1965), part of the Amboy drift (Mundorff, 1964, 1984), and the Weatherwax and Wedekind Creek formations (Carson, 1970)

	Middle to upper Eocene nearshore sedimentary rocks —Nearshore marine to nonmarine micaceous feldspathic sandstone, siltstone, shale, carbonaceous siltstone, claystone, and thick coal seams; locally interbedded with basalt flows and volcanoclastic rocks. Contains foraminiferal faunas referable to the Narizian Stage. Includes Skookumchuck Formation, Olequa Creek Member of the Cowlitz Formation (Henriksen, 1956), Cowlitz Formation (Wells, 1981), and rocks mapped as upper McIntosh by Pease and Hoover (1957) [See Logan, 1987a]
--	--

Mapped Soil Conditions

The Web-Based Thurston County Soil Survey (Figure 26) provides additional context at a finer level of detail, and agrees with the general idea presented in the geology maps. The main soil series mapped on or near the site are as follows:



Figure 25. Soil Survey of the study area, Bucoda Public Works yard outlined in red.

1) The *Spanaway* series (Map Unit 110) consists of very deep, somewhat excessively drained soils that formed in glacial outwash on terraces and in floodplains. Typically, the surface horizons to about 3 feet depth are black gravelly or cobbly sandy loams grading to brown gravelly and cobbly sands with depth. Permeability is very rapid (20+ inches per hour).

The *Spanaway* soils are mapped across the western floodplain, and around the study site.

2) The ***Chehalis*** series (Map Unit 26) consists of very deep, well drained soils that formed in relatively recent silty and loamy mixed alluvium (flood deposit), in this setting, capping the cobbly outwash deposits that define the ***Spanaway*** soils. ***Chehalis*** soils are nearly level to undulating and are found in recent flood plains. Typically, the surface horizon (0-8inches) is a very dark grayish brown silt loam, grading to brown silt loam then silty clay loam with depth. Permeability is moderate (0.6-2 inches per hour), and occasional surface flooding is expected from November through April.

The ***Chehalis*** soils are mapped just east of the study the site, nearer to, but not directly adjacent to the river. This soil map unit overlies a slightly higher elevation feature that is a flood deposit, comparable to an old sand bar, from post glacial flooding.

3) The ***Newberg*** series (Map Unit 71) consists of very deep, somewhat excessively drained soils that formed in relatively recent loamy and sandy alluvium from sedimentary and basic igneous rocks on flood plains with slopes of 0 to 4 percent. In this setting, the ***Newberg***, like the ***Chehalis*** soils, cap the underlying cobbly outwash deposits that define the ***Spanaway*** soils. Typically, the surface horizon (0-7inches) is a dark brown fine sandy loam, grading to yellowish brown sandy loam and loamy sand with depth. Permeability is moderately rapid (2-6 inches per hour), and occasional surface flooding is expected from December through March.

The ***Newberg*** soils are mapped between the finer-textured ***Chehalis soils*** and the river; thus in this setting, represent the heavier, sandy deposits that drop out of suspension in early flood stages closer to a river's edge.

Please note that the NRCS (formerly the SCS) soil series maps and descriptions represent expected characteristics in only the top 60 inches of soil. Furthermore, the map units can have extensive inclusions of other soil types, and in some rare cases, can be entirely in error – thus the reason for onsite investigations to verify or fine-tune indications from mapping. Taxonomic descriptions listed above reflect the most recent changes to Soil Taxonomy and represent the current accepted understanding of soil forming processes. These do not necessarily correspond to descriptions found in the hard copy of the Thurston County Soil Survey.

Summary

Permeability of soils around the dike as well as between the dike and the river will affect the dike's ability to protect the yard area during extended flood periods. Groundwater will rise with the river, albeit slightly slower. Therefore, if surface flooding higher than 251-252 feet lasts more than a few days, groundwater is expected to rise below the site, eliminating benefits of the dike, which protects from surface flow flooding only. Under that condition, pumping surface water from behind the dike during periods of extended flooding may help extend the period of flood protection.

Please call if you have any questions or require additional detail or clarification on any of these issues.

Respectfully,



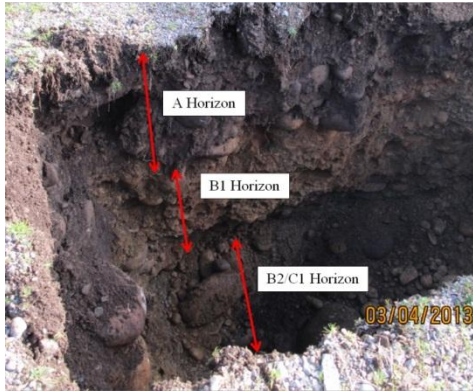
J.W. Morrisette and Associates, Inc.
Lisa Palazzi, CPSS, PWS

APPENDIX I

Soil Profile Descriptions and Soil Boring logs³

Pit #1

Hor.	Dep.	Color	%CF	Text.	Struct.	Perc.	Mott.	Root	%OM	%C
A	0-22	10YR2/1	65	XGrCoLS	WMG	6-20	0	MF	4-6	<10
B1	22-50	10YR4/3	70	XGrCoLS	WMSAB	6-20	0	CF	<3	<10
B2/C1	50-86	2.5Y4/4	70	XGrCoLS	SG	20+	0	0	<3	<10
C2	86+	2.5Y4/3	85	XGrCoLS	SG	20+	FFF	0	<3	<10



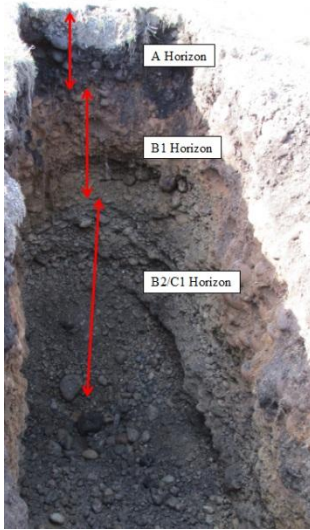
This soil pit has a slightly disturbed surface, but is native material – an extremely gravelly and cobbly outwash deposit through the profile with many cobbles 10-12 inches in diameter. The black surface is characteristic of this soil type – Spanaway series – and typically has high volcanic ash content, making it somewhat “smeary” and prone to sealing. The cobbles and gravels are randomly mixed, with loamy sand fines between the coarse fragments, making it apparent that these materials were deposited in a high energy rolling flash flood type of event.

There was no evidence of a long-duration water table within 7-8 feet of the surface. But we would expect one at about 10-12 feet relative to the surface elevation at this location – close to the elevation of the Skookumchuck River, located about 600’ to the east.

³ Soil profile descriptions follow standard NRCS Soil profile description methodology. “Hor.” refers to Soil Horizon; “Dep.” refers to horizon depth increment (inches); “Color” refers to Munsell Color chip designation; “%CF” refers to percent coarse-fragments (>2mm diameter); “Text.” refers to soil Texture (NRCS % sand/silt and clay + coarse frags >2mm); “Struct” refers to soil structure; “Perc.” refers to expected percolation rate (in/hr); “Mott.” refers to mottles, or an expression of redoximorphic features; “Root” refers to the size and preponderance of roots; “%OM” refers to percent Organic Matter, estimated from a collar change; “%C” refers to percent clay, estimated from hand-texturing assessment in the field.

Pit #2

Hor.	Dep.	Color	%CF	Text.	Struct.	Perc.	Mott.	Root	%OM	%C
A	0-25	10YR2/1	75	XGrCoLS	WMG	6-20	0	MF	4-6	<10
B1	25-46	10YR4/3	75	XGrCoLS	WMSAB	6-20	0	CF	<3	<10
B2/C1	46-100	2.5Y4/3	85	XGrCoLS	SG	20+	0	0	<3	<10
C2	100+	2.5Y5/3	85	XGrCoLS	SG	20+	FFF	0	<3	<10



Very similar to SP-1. Highly permeable materials from glacial outwash flood deposits. No evidence of long-duration water table within the pit, but could not get below about 100" due to sidewalls caving. Soils at 100 appear slightly wetter and some rocks are slightly Fe and Mn stained, indicating that those layers were once flooded by a shallow fluctuating groundwater table (expected at 10-12 feet depth).

Soil Boring #1

Hor.	Dep.	Color	%CF	Text.	Struct.	Perc.	Mott.	Root	%OM	%C
Layer 1	0-30	10YR2/1	75	XGrCoLS	WMG	6-20	0	MF	4-6	<10

This Soil Boring was abandoned as the cobbly materials made drilling very slow and ineffective. See SP-1 for details on soil conditions in this area.

Soil Boring #2

Hor.	Dep.	Color	%CF	Text.	Struct.	Perc.	Mott.	Root	%OM	%C
Sample Layer 1	0-2 ft	10YR2/2	50	XGrSL	WMG	6-20	0	MF	4-6	25
Sample Layer 2	2-4 ft	10YR5/4	85	XGrCoLS	SG	20+	0	FF	<3	<10
Sample Layer 3	4-6 ft	10YR5/4	70	XGrSL	--	6-20	0	0	<3	30
Sample Layer 4	6-15 ft	10YR5/4	70	XGrSL/LS	--	20+	0	0	<3	15
Sample Layer 5	15-17 ft	10YR5/4	35	VGrSL	--	--	0	0	<3	25
Sample layer 6	17-21 ft	--	75	cobbly	--	20+	--	--	--	--

- Surface layer appears to be some fill mixed with native soils – < coarse fragments than was observed at SP-1 and SP-2. Also has about 25% clay content, so is a sandy loam rather than loamy sand. Slightly wet.
- Layer 2 is native material – very little fine fraction with no clay content. Not wet, so layer above is wet only due to clays holding water.
- Layer 3 has about 30% clay content. Thus it appears that this area is a transition into the finer-textured surface deposits mapped to the east.
- Layer 4 was difficult to characterize due to high percent cobbles causing the drill to mix and periodically redirect. It appeared that groundwater was encountered at about 9-10 feet depth, and some of the materials appeared to have some silt and clay content. Driller indicated that there appears to be a dense or confining layer of some sort at 14-15 feet.
- Layer 5 was from a split spoon sample 24” of material. 0-4” was silty “soup” likely to be an artifact of drilling impacts; 4-12 inches was a super-saturated gravelly loamy sand layer; 12-24 inches was a silty “froth” with ~35% gravel content. These results indicate mixed and layered flood deposits.
- Layer 6 was from sample to base. Very difficult drilling indicating many cobbles, and below water table. No sampling possible.