

LIFT STATION 12 ABANDONMENT

LACEY PROJECT NUMBER PW 2021-16

**SPECIFICATIONS AND BID DOCUMENTS
DEPARTMENT OF PUBLIC WORKS**

LACEY PROJECT NUMBER PW 2021-16

***CITY OF LACEY
WASHINGTON***

CITY OFFICIALS

MAYOR

ANDY RYDER

DEPUTY MAYOR

MALCOLM MILLER

COUNCIL MEMBERS

LENNY GREENSTEIN

MICHAEL STEADMAN

CAROLYN COX

ED KUNKEL

ROBIN VAZQUEZ

CITY MANAGER

SCOTT H. SPENCE

CITY ATTORNEY

DAVID S. SCHNEIDER

DIRECTOR OF PUBLIC WORKS

SCOTT EGGER, P.E.

CITY ENGINEER

ROGER SCHOESSEL, P.E.

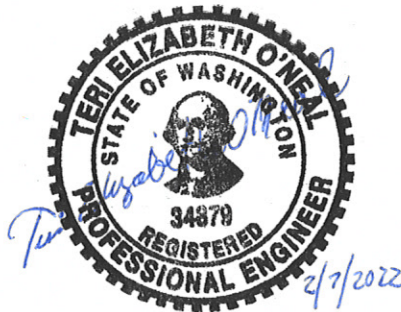


TABLE OF CONTENTS

Advertisement for Bids	i
------------------------------	---

INSTRUCTIONS

Instructions to Bidders	A-1
Bidder's Checklist	A-2

BID DOCUMENTS

Proposal & Bid Sheet.....	B-1
Bid Deposit Selection	B-4
Contractor's Bid Deposit Surety Bond	B-5
Non-Collusion Certificate	B-6
Certification of Compliance with Wage Payment Statutes.....	B-7
Certification of Employment Security Department (ESD) Good Standing.....	B-8

CONTRACT DOCUMENTS

Construction Contract	C-1
Performance Bond Form.....	C-4
Declaration of Option for Management of Statutory Retained Percentage.	C-5

AMENDMENTS AND SPECIAL PROVISIONS

Table of Contents	ii
Special Provisions	D-1

PREVAILING MINIMUM HOURLY RATES

State Wage Rates	E-1
------------------------	-----

APPENDICES

Appendix A – COL RAM Forms	a-1
Appendix B – Lead and Asbestos Survey.....	b-1

ADVERTISEMENT FOR BIDS
LIFT STATION 12 ABANDONMENT

NOTICE IS HEREBY GIVEN that sealed bids will be received by the City of Lacey at City Hall, Lacey, Washington until 2:30 p.m., March 3, 2022, at which time bids will be publicly opened via a live video stream. Links to the YouTube live video stream can be found at <http://www.ci.lacey.wa.us/city-government/city-departments/public-works/solicitations/public-works-advertisements> under the specific project section and on the specific project page on the Builders Exchange website located at http://bxwa.com/bxwa_toc/pub/2080/toc.html for the following work:

This contract provides for construction of approximately 1,300 LF of 12-inch and 8-inch gravity sewer main that will connect an existing sewer main located on 5th Ct SE to another existing sewer main located at the Motor Controls Park at 426 Carpenter Road SE. Work to include demolition of an existing single family manufactured home and supporting structures, decommissioning an existing lift station site including converting a wet well into a manhole, construction of new manholes, service lines, decommissioning of septic systems (permits required), connections to existing sewer and water systems, sewer and main abandonments and extensions, pavement and lawn restoration and other work.

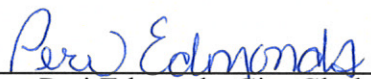
Each bid must be accompanied by a certified check for five percent of the amount of the proposal made payable to the City Treasurer, or an approved bid bond for five percent of the amount of the proposal executed on the approved form attached to these specifications. If bid bond is used, the five percent may be shown in dollars and cents or the form may be filled in by inserting therein, in lieu thereof, "five percent of the amount of the accompanying proposal". Check of unsuccessful bidders will be returned immediately upon award of contract.

The City Council reserves the right to reject any and all bids and to waive all informalities.

Plans, Specifications, and Addenda for this project are available through the "City of Lacey" on-line plan room. Free of charge access is provided by going to <http://bxwa.com> and clicking on: "Posted Projects", "Public Works", "City of Lacey", and "Projects Bidding". Bidders are asked to "Register" in order to receive automatic email notification of future addenda and to be placed on the "Bidders List". Any questions regarding this contract can be directed to Jason Kashani, at (360) 438-2642.

The range for this project is \$700,000 to \$900,000.

Publish: 2/15/2022
2/22/2022



Peri Edmonds, City Clerk
City of Lacey, Washington

A INSTRUCTIONS

INSTRUCTIONS TO BIDDERS

Bidders shall examine contract and bid documents and the site and shall satisfy themselves as to conditions that exist.

Each Bidder shall submit to the City Clerk, Lacey, Washington a sealed bid endorsed upon the outside wrapper with **Lift Station 12 Abandonment** at the time and place designated in the advertisement.

Bids may be delivered in person to Lacey City Hall, 420 College Street SE, or by mail to City of Lacey 420 College St SE Lacey, WA 98503.

Bids will be publicly opened via a live video stream. Links to the YouTube live video stream can be found at <http://www.ci.lacey.wa.us/city-government/city-departments/public-works/solicitations/public-works-advertisements> under the specific project section and on the specific project page on the Builders Exchange website.

The City of Lacey is committed to offering reasonable accommodations to persons with disabilities. We invite any person with special needs to contact the City Clerk at (360) 491-3212 at least seventy-two (72) hours before the meeting to discuss any special accommodations that may be necessary. Citizens with hearing impairment may call the TDD line at (800) 833-6388.

Each Bidder shall complete the proposal with prices in figures with the extension properly computed. The proposal must be properly signed by a duly authorized agent. Proposal must acknowledge addenda, if any, received.

If alternates are included in the proposal the Bidder shall complete the alternates. The City will award the contract to the lowest responsible Bidder as determined by the Special Provisions. The City reserves the right to delete alternates after award.

Each bid shall include properly executed bid surety as outlined in the Advertisement and the Proposal.

Each Proposal must be accompanied by a signed Affidavit of Non-Collusion.

The City does not pre-qualify Bidders. However, if the apparent low Bidder has not already been determined qualified, the City shall afford seven (7) days after notification for the low Bidder to provide evidence for evaluation, as to capability to perform the work. The evaluation will include consideration of experience, personnel, equipment, financial resources as well as performance record. The information must be sufficient to enable the Bidder to obtain the required qualification rating prior to the award of the contract.

No bidder may withdraw his bid after the hour set for the opening of bids or before award of the contract unless said award is delayed for a period of forty-five (45) days.

CONTRACT PARTS

The contract to be executed as a result of this bid consists of multiple parts, all of which pertain as if fully attached hereto and Bidder shall consider all parts as a complete document. In the event of discrepancies between the various parts, precedent shall be in the following order:

1. Contract Form,
2. Addenda (if any),
3. Proposal Form,
4. Special Provisions,
5. Technical Specifications, if included,
6. Contract Plans,
7. WSDOT Standard Specifications for Road, Bridge, and Municipal Construction,
8. City of Lacey Development Guidelines and Public Works Standards, and
9. WSDOT Standard Plans for Road, Bridge and Municipal Construction

- The Bidder is directed to complete and return the forms in Section B as a bid proposal.

BIDDER'S CHECKLIST

The bidder's attention is especially called to the following forms which must be executed in full as required, and submitted with the bid proposal:

1. Proposal: The unit prices bid must be shown in the space provided.
2. Proposal Signature Sheet: To be filled in and signed by the bidder. All addenda must be acknowledged.
3. Bid Deposit: Any bid shall be accompanied by a deposit of cash, certified check, cashier's check, or surety bond, in an amount equal to at least five percent (5%) of the total amount bid. Checks shall be payable to the City Clerk, City of Lacey, Washington.

If a surety bond is used, it shall be submitted on a form furnished by the Commission and signed by the bidder and his surety company. The sureties' "attorney-in-fact" must be registered with the Washington State Insurance Commissioner. The power of attorney must also be submitted with the bond. See Specification section 1-02.7 for more information.

4. Non-Collusion and Debarment Affidavit

The following form must be submitted within 24 hours following the bid submittal deadlines.

5. Certification of Compliance with Wage Payment Statutes
6. Certification of Employment Security Department (ESD) Good Standing and Number

The following must be completed before the contract can be awarded:

7. L&I training on the requirements related to public works and prevailing wages per RCW 39.04.350

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

8. Contract: This agreement to be executed by the successful bidder
9. Performance and Payment Bond
10. Insurance Certificate

Bidder's Checklist

1. Proposal	
2. Proposal Signature Sheet	
Addenda Acknowledged	
3. Bid Deposit	
Power of Attorney included if applicable	
4. Non-Collusion and Debarment Affidavit	
5. Certification of Compliance with Wage Payment Statutes	
6. Certification of Employment Security Department (ESD) Good Standing and Number	
7. L&I Public Works Prevailing Wage Training	

B

BID DOCUMENTS

CITY OF LACEY

Lift Station 12 Abandonment

Lacey Contract Number: PW 2021-16

Federal Aid Project Number:

WSDOT Contract Number:

TIB Contract Number:

Contract Proposal

DATE: _____

The undersigned, as bidder, has examined the bid documents as prepared by the Public Works Department, City of Lacey.

The undersigned, as bidder, proposes to furnish all material and perform all labor in accordance with the bid documents at the following prices.

Bidder must fill in unit prices in figures for each item and total.

Bidder shall sign this proposal form and submit all required paperwork with the bid.

A Sewer

No.	Quantity	Unit	Item ID	Item Description	Unit Price	Extended Price
A1	25000	MC	104-010	Minor Change	\$1.00	\$25,000.00
A2	1	LS	109-010	Mobilization	LUMP SUM	
A3	1	LS	110-010	Project Temporary Traffic Control	LUMP SUM	
A4	50	HR	110-040	Flaggers		
A5	200	HR	110-070	Portable Changeable Message Sign		
A6	1	LS	201-010	Clearing and Grubbing	LUMP SUM	
A7	1	LS	202-510	Removal of Structures and Obstructions	LUMP SUM	
A8	1	LS	202-520	Special Removal of Structures and Obstructions	LUMP SUM	
A9	200	CY	203-010	Roadway Excavation Incl. Haul		
A10	150	TN	203-190	Gravel Borrow Incl. Haul		
A11	1	LS	205-510	Trench Safety System	LUMP SUM	
A12	250	TN	404-020	Crushed Surfacing Top Course		
A13	400	TN	504-011	HMA Cl. 1/2" PG 58H-22		
A14	1	LS	504-610	Preparation of Existing Surfaces	LUMP SUM	
A15	1	LS	504-620	Driveway and Shoulder Preparation	LUMP SUM	
A16	10	EA	705-048	Manhole 48 In. Diam. Type 1		
A17	5	LF	705-049	Manhole Additional Height 48 In. Diam. Type 1		
A18	1	EA	705-059	Manhole 60 In. Diam. Type 1		
A19	1	EA	705-605	Manhole Treatment		
A20	3	EA	705-910	Raise Catch Basin to Grade		
A21	1500	TN	708-610	Bank Run Gravel for Trench Backfill		

A22	650	TN	708-620	Imported Pipe Bedding		
A23	40	HR	708-810	Utility Potholing		
A24	4	EA	708-965	Connect to Existing Plumbing - Sewer		
A25	197	LF	709-508	8 Inch Water Main		
A26	25	LF	709-509	8 Inch D.I. Water Main		
A27	1	EA	709-810	Blow-off Assembly for Extendable Main		
A28	3	EA	709-950	Connect to Existing Water Main		
A29	2	EA	712-506	6 Inch Gate Valve		
A30	2	EA	712-508	8 Inch Gate Valve		
A31	5	EA	712-915	Raise Valve Box to Grade		
A32	190	LF	717-506	6 Inch Diameter Sewer Pipe		
A33	90	LF	717-508	8 Inch Diameter Sewer Pipe		
A34	1270	LF	717-512	12 Inch Diameter Sewer Pipe		
A35	4	EA	717-850	Side Sewer Connections		
A36	1	EA	717-950	Connect to Existing Sewer Manhole		
A37	2	EA	717-965	Connect to Existing Sewer System		
A38	6	EA	717-971	Tank Abandonment		
A39	1	LS	717-990	Manhole Rehabilitation	LUMP SUM	
A40	3	EA	719-010	Sewer Cleanout		
A41	1	LS	723-510	Bypass Pumping	LUMP SUM	
A42	1	LS	801-010	ESC Lead	LUMP SUM	
A43	1	LS	801-680	Erosion/Water Pollution Control	LUMP SUM	
A44	25	CY	802-010	Topsoil Type A		
A45	10	CY	802-220	Bark or Wood Chip Mulch		
A46	160	LF	804-100	Extruded Curb		
A47	1	LS	805-510	Lawn and Landscape Restoration	LUMP SUM	
A48	1	EA	813-515	Surface Monument		
A49	20	SY	814-510	Cement Conc. Sidewalk		
A50	1	LS	850-792	Project Closeout	\$10,000.00	\$10,000.00

Schedule A Subtotal:

Tax Rate (%) : 9.40 Tax:

Schedule A Total:

Contract Total:

(All Schedules)

The undersigned also agrees as follows:

- Within 10 calendar days after the contract is awarded to sign and return the contract and provide insurance documents.
- That this proposal cannot be withdrawn within 45 days after receipt of bids.
- That it is the understanding that the City of Lacey may accept or reject any or all bids.
- The undersigned hereby agrees to pay for labor not less than the prevailing rates of wages per the bid documents.
- Enclosed with this proposal is a bid deposit in the sum of 5% of the bid total amount which it is agreed shall be collected and retained by the City of Lacey as liquidated damages in the event this proposal is accepted by the City of Lacey with 45 calendar days after the receipt of bids and the undersigned fails to execute the contract and the required bond with the City of Lacey, under the conditions thereof, within 10 calendar days after the undersigned is notified that said proposal has been accepted, otherwise said bid deposit shall be returned to the undersigned upon demand.
- A Performance/Payment Bond will be furnished to the City with the contract.
- Retention will be held on this contract per RCW 60.28.011.

Addenda Receipt Acknowledged

_____, _____, _____

Signature of Bidder

Date

(If an Individual, Partnership, or Non-Incorporated organization)

Firm Name

Please Print

Phone

Address of Bidder: _____

Name and Address of Firm Members:

Signature of Bidder (if a Corporation)

Title: _____

Firm Name: _____ Phone: _____

Business Address: _____

Incorporated under the Laws of the State of _____

Officers

Address

President: _____

Secretary: _____

Treasurer: _____

BID DEPOSIT SELECTION

A bid deposit in an amount of five percent (5%) of the total bid amount is attached hereto:

CASH ☐ In the amount of _____

CASHIER'S CHECK ☐ In the amount of _____

CERTIFIED CHECK ☐ In the amount of _____

BID BOND ☐ In the amount of 5% of the total bid amount

**CONTRACTOR'S BID DEPOSIT SURETY BOND
to City of Lacey, Washington**

We, _____, as Principal, existing under and by virtue of the laws of the State of Washington and authorized to do business in the State of Washington, and _____, as Surety, organized and existing under the laws of the State of _____, are held and firmly bound unto the City of Lacey, a Washington municipality, as Obligee, in the penal sum of 5% of the total amount bid, not to exceed \$ _____, for the payment of which we jointly and severally bind ourselves, and our legal representatives and successors.

WHEREAS, the Principal has submitted a bid for **Lift Station 12 Abandonment**.

NOW THEREFORE, the condition of the obligation is such that if the Obligee shall accept the bid of Principal and make timely award to the Principal according to the terms of the bid documents; and the Principal shall, within ten days after notice of the award, exclusive of the day of notice, enter into the contract with the Obligee and furnish the contractor's bonds (performance and payment bonds) with Surety satisfactory to the Obligee in an amount equal to 100% of the amount of the bid proposed including additives, alternatives and Washington State sales tax, then this obligation shall be null and void; otherwise if the Principal fails to enter into the contract and fails to furnish the contractor's bonds within ten days of notice of award, exclusive of the day of notice, the amount of the bid deposit shall be forfeited to the Obligee, payable by the Surety; but in no event will the Surety's liability exceed the face amount of this bid bond.

This bond may be executed in two original counterparts, and shall be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original power of attorney for the officer executing on behalf of the surety.

PRINCIPAL (CONTRACTOR)

SURETY

Principal Signature

Date

Surety Signature

Date

Printed Name

Printed Name

Title

Title

Name, address, and telephone of local office/agent of Surety Company is:

NON-COLLUSION AND DEBARMENT AFFIDAVIT

State of _____)

)ss

County of _____)

I, the undersigned, being duly sworn, deposes and says that the person, firm, association, copartnership or corporation herein named, has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in the preparation and submission of a proposal of the City of Lacey for consideration in the award of a contract on the improvement described as follows.

I further certify that, except as noted below, the firm, association or corporation or any person in a controlling capacity associated therewith or any position involving the administration of State or federal funds; is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal or State agency; has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal or State agency within the past three years; does not have a proposed debarment pending; and has not been indicted, convicted, or had a civil judgment rendered against said person, firm, association or corporation by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

I further acknowledge that by signing my signature, I am deemed to have signed and have agreed to the provisions of this affidavit.

Name of Project

Name of Firm

Signature of Authorized Member

Sworn to before me this

_____ day of _____, 20 _____

Notary Public

(CORPORATE SEAL)

CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date, the bidder is not a “willful” violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Bidder’s Business Name

Signature of Authorized Official*

Printed Name

Title

Date

City

State

Check One:

Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

State of Incorporation, or if not a corporation, State where business entity was formed:

If a co-partnership, give firm name under which business is transacted:

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

This form must be submitted with the Bid Proposal or as a Supplement to the Bid no later than 24 hours after the time for delivery of the Bid Proposal, as provided for in Section 1-02.9 of the Contract Provisions.

**CERTIFICATION OF EMPLOYMENT SECURITY DEPARTMENT (ESD)
GOOD STANDING AND NUMBER**

The bidder hereby provides an ESD number and certifies that per RCW 39.04.350 and Title 50 RCW, in which the City will verify prior to entering into contract with the Contractor, that the Bidder has a valid ESD number and is deemed to be in good standing with Washington State's Employment Security Department.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Bidder's Business Name

Employment Security Department (ESD) Number

WA State Unified Business Identifier (UBI #)

Signature of Authorized Official*

Printed Name

Title

Date

City

State

This form must be submitted with the Bid Proposal or as a Supplement to the Bid no later than 24 hours after the time for delivery of the Bid Proposal, as provided for in Section 1-02.9 of the Contract Provisions.

C
CONTRACT
DOCUMENTS

CONSTRUCTION CONTRACT

THIS AGREEMENT, made and entered into this _____ day of _____, 20_____, between the City of Lacey, hereinafter called Owner, under and by virtue of the charter, laws and ordinances of the said Owner and the laws of the State of Washington, and _____ hereinafter called Contractor,

WITNESSETH:

That in consideration of the payment, covenants and agreement hereinafter mentioned, attached and made a part of this Agreement, to be made and performed by the parties hereto, the parties covenant and agree as follows regarding:

1. The Contractor shall do all work and furnish all tools, materials and equipment in accordance with and as described in the attached Plans and Specifications, and in full compliance with the terms, conditions and stipulations herein set forth and attached, now referred to and by such reference incorporated herein and made a part hereof as fully for all purposes as if here set forth at length, and shall perform any alterations in or in addition to the work covered by this Contract and every part thereof and any force account work which may be ordered as provided in this Contract and every part thereof.

The Contractor shall provide and bear the expense of all materials, labor, equipment, tools, implements and conveniences and things of every description that may be requisite 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 Owner.

2. The Owner 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 schedule of unit or itemized prices hereto attached, at the time and in the manner and upon the conditions provided for in this Contract and every part thereof.
3. Contractor, for himself and for his heirs, executors, administrators, successors, assigns, does hereby agree to the full performance of all the covenants herein contained upon the part of Contractor.
4. It is further provided that no liability shall attach to Owner or Agent thereof by reason of entering into this Contract, except as expressly provided herein.
5. Payments will be made under the Contract according to the schedule of rates and prices and the specification attached and made a part thereof. Partial payments under the Contract will be made at the request of the Contractor not more than once each month upon approval of the Owner, as hereinafter specified, provided they are in accordance with the provisions of RCW 60.28.010. There will be reserved and retained from monies

earned by the Contractor, as determined by such monthly estimates, a sum equal to 5 percent of the Contract price.

Payment of the retained percentage shall be withheld for a period of forty-five (45) days following the final acceptance of the work and materials by the Owner, and shall be paid the Contractor at the expiration of said forty-five (45) days in event no claims, as provided by law, have been filed against such funds; and provided further, that releases have been obtained from all departments and agencies having jurisdiction over the activities of the Contractor. In the event such claims are filed, Contractor shall be paid such retained percentages less an amount sufficient to pay any such claims together with a sum sufficient to pay the cost of such action, and to cover attorney fees as determined by the Owner.

6. Requests for review of substitute items of material or equipment will not be accepted by the Owner or Agent from anyone other than the Contractor. If the Contractor wishes to furnish a substitute item, the Contractor shall make written application to the Owner's Agent for acceptance thereof, certifying that the proposed substitute will perform adequately the functions called for by the general design, be similar and of equal substance to that specified and be suited to the same use and capable of performing the same function as that specified. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, which shall be considered by the Owner in evaluating the proposed substitute. The Owner may require the Contractor to furnish at the Contractor's expense, additional data about the proposed substitute. The Owner will be the sole judge of acceptability, and no substitute will be ordered without the Owner's prior written acceptance. The Owner may require the Contractor to furnish at the Contractor's expense, a special performance guarantee or other surety with respect to any other substitute.

The Owner or Agent will record the time and expenses in evaluating substitutions proposed by the Contractor. Whether or not the Owner accepts a proposed substitute, the Contractor shall reimburse the Owner for the costs of evaluating any proposed substitute.

7. The Owner reserves the right, after the final payment has been made, to claim and recover by process of law such sums as may be sufficient to make good any defects in the equipment or to recover any over-payment resulting from dishonest acts of the Contractor.
8. The contract time will commence to run, and the Contractor shall start to perform his obligation under the contract documents, on the day indicated in the Notice to Proceed given by Owner to Contractor; but in no event shall contract time commence to run later than the 30th calendar day after the date when both Owner and Contractor execute the Contract. A Notice to Proceed may be given at any time within thirty (30) calendar days after the date when both Owner and Contractor execute the Contract.
9. The Contractor shall guarantee the materials and workmanship for a period of one (1) year from and after the date of final acceptance by the Owner.

If, within said guarantee period, repairs are required which, in the opinion of the Owner, are rendered necessary as a result of work or materials which are inferior, defective or not

in accordance with the terms of the Contract, the Contractor shall, promptly upon receipt of notice from the Owner, and without expense to the Owner, (a) correct all defects and place in satisfactory condition in every particular all of such guaranteed work and materials; (b) make good all damage which in the opinion of the Owner is caused by such defects; and (c) make good any other work or material or the equipment and contents of a building, structure or site disturbed in fulfilling any such guarantee.

If the Contractor, after notice, fails within ten (10) days to proceed to comply to the terms of this guarantee, the Owner may have the defects corrected, and the Contractor and his Surety shall be liable for all expense incurred, provided, however, that in case of an emergency where, in the opinion of the Owner, delay would cause serious loss or damage, repairs may be made without notice being given to the Contractor and the Contractor shall pay the cost thereof.

IN WITNESS WHEREOF, the said Contractor has executed this instrument and the City Manager, pursuant to resolution duly adopted, has caused this instrument to be executed in the name of the City of Lacey the day and year first above-written.

Contractor

Contractor's Registration Number (UBI No.)

City of Lacey Business License Number

City Manager

ATTEST:

By:

City Clerk

APPROVED AS TO FORM:

By :

City Attorney

**CONTRACTOR'S PERFORMANCE/PAYMENT BOND
to City of Lacey, Washington**

The City of Lacey, Washington, in Thurston County, has awarded to _____ (Contractor), as Principal, a contract for the construction of the project designated as **Lift Station 12 Abandonment**, Project No. **PW 2021-16** in Lacey, Washington, and said Principal is required under the terms of the Contract to furnish a performance/payment bond in accordance with chapter 39.08 Revised Code of Washington (RCW).

The Principal, and _____ (Surety), a corporation, organized under the laws of _____ and licensed to do business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Dept., are jointly and severally held and firmly bound to the City of Lacey, as Obligee, in the sum of \$ _____ total Contract amount (including Washington State sales tax), subject to the provisions herein.

The obligations of this bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall well and faithfully perform all of the Principal's obligations under the Contract and fulfill all the terms and conditions of all duly authorized modifications, additions, and changes to said Contract that may hereafter be made, at the time and in the manner therein specified; shall pay all persons in accordance with chapters 39.08, 39.12, and 60.28 RCW, including all workers, laborers, mechanics, subcontractors, and material suppliers, and all persons who shall supply such contractor or subcontractor with provisions and supplies for the carrying on of such work; shall warranty the work as provided in the Contract and shall indemnify and hold harmless the Obligee from any defects in the workmanship and materials incorporated into the work for the period identified in the Contract; and if such obligations have not been fulfilled, this bond shall remain in full force and effect.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation.

This bond may be executed in two original counterparts and shall be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original power of attorney for the officer executing on behalf of the surety.

PRINCIPAL (CONTRACTOR)

SURETY

Principal Signature

Date

Surety Signature

Date

Printed Name

Printed Name

Title

Title

Name, address, and telephone of local office/agent of Surety Company is:

**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 City of Lacey until forty-five (45) days following final acceptance of the work.

Contractor (please print)

Date

Signature

- B. I hereby elect to have the City of Lacey invest the retained percentage of this contract from time to time as such retained percentage accrues and in accordance with RCW Ch. 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 percentage in escrow and investing it as authorized by statute.

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

Contractor (please print)

Date

Signature

- C. I hereby elect to hold a retainage bond.

Contractor (please print)

Date

Signature

D
SPECIAL
PROVISIONS

TABLE OF CONTENTS

SPECIAL PROVISIONS	2
INTRODUCTION TO THE SPECIAL PROVISIONS	2
DESCRIPTION OF WORK	2
1-01 DEFINITIONS AND TERMS	3
1-02 BID PROCEDURES AND CONDITIONS	4
1-03 AWARD AND EXECUTION OF CONTRACT	10
1-04 SCOPE OF THE WORK	12
1-05 CONTROL OF WORK	13
1-06 CONTROL OF MATERIAL	17
1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC	18
1-08 PROSECUTION AND PROGRESS	24
1-09 MEASUREMENT AND PAYMENT	28
1-10 TEMPORARY TRAFFIC CONTROL	30
2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP	31
2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS	32
2-03 ROADWAY EXCAVATION AND EMBANKMENT	35
2-05 TRENCH SAFETY SYSTEM	36
2-07 WATERING	36
5-04 HOT MIX ASPHALT	37
7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS	56
7-08 GENERAL PIPE INSTALLATION REQUIREMENTS	59
7-09 WATER MAINS	65
7-12 VALVES FOR WATER MAINS	70
7-17 SANITARY SEWERS	71
7-20 ABANDON EXISTING SEPTIC SYSTEM	76
7-23 SANITARY SEWER BYPASS PUMPING	79
8-01 EROSION CONTROL AND WATER POLLUTION CONTROL	84
8-05 LAWN AND LANDSCAPE RESTORATION	86
8-13 MONUMENT CASES	86
8-14 CEMENT CONCRETE SIDEWALKS	88
9-03 AGGREGATES	89
9-14 EROSION CONTROL AND ROADSIDE PLANTING	90

SPECIAL PROVISIONS

INTRODUCTION TO THE SPECIAL PROVISIONS

(August 14, 2013 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2020 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter “Standard Specifications”). The Standard Specifications, as modified or supplemented by the Amendments to the Standard Specifications and these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The project-specific Special Provisions are not labeled as such. The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source. For example:

(March 8, 2013 APWA GSP)
(April 1, 2013 WSDOT GSP)
(May 1, 2013 Lacey GSP)

Also incorporated into the Contract Documents by reference are:

Manual on Uniform Traffic Control Devices for Streets and Highways, currently adopted edition, with Washington State modifications, if any

Standard Plans for Road, Bridge and Municipal Construction, WSDOT/APWA, current edition

City of Lacey Development Guidelines and Public Works Standards, current edition

Contractor shall obtain copies of these publications, at Contractor’s own expense.

DESCRIPTION OF WORK

This contract provides for construction of approximately 1,300 LF of 12-inch and 8-inch gravity sewer main that will connect an existing sewer main located on 5th Ct SE to another existing sewer main located at the Motor Controls Park at 426 Carpenter Road SE. Work to include demolition of an existing single family manufactured home and supporting structures, decommissioning an existing lift station site including converting a wet well into a manhole, construction of new manholes, service lines, decommissioning of septic systems (permits required), connections to existing sewer and water systems, sewer and main abandonments and extensions, pavement and lawn restoration and other work.

1-01 DEFINITIONS AND TERMS

1-01.3 Definitions

(January 4, 2016 APWA GSP)

Delete the heading Completion Dates and the three paragraphs that follow it, and replace them with the following:

Dates

Bid Opening Date

The date on which the Contracting Agency publicly opens and reads the Bids.

Award Date

The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.

Contract Execution Date

The date the Contracting Agency officially binds the Agency to the Contract.

Notice to Proceed Date

The date stated in the Notice to Proceed on which the Contract time begins.

Substantial Completion Date

The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date

The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date

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

Final Acceptance Date

The date on which the Contracting Agency accepts the Work as complete.

Supplement this Section with the following:

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

All references to the terms “State” or “state” shall be revised to read “Contracting Agency” unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

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

All references to “final contract voucher certification” shall be interpreted to mean the Contracting Agency form(s) by which final payment is authorized, and final completion and acceptance granted.

Additive

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

Alternate

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

Business Day

A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

Contract Bond

The definition in the Standard Specifications for “Contract Bond” applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

Contract Documents

See definition for “Contract”.

Contract Time

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

Notice of Award

The written notice from the Contracting Agency to the successful Bidder signifying the Contracting Agency’s acceptance of the Bid Proposal.

Notice to Proceed

The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

Traffic

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

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

Delete this Section and replace it with the following:

1-02.1 Qualifications of Bidder

[\(January 24, 2011 APWA GSP\)](#)

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

1-02.2 Plans and Specifications

(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

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

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

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	3	Furnished automatically upon award
Contract Provisions	3	Furnished automatically upon award
Large plans (22" x 34")	3	Furnished only upon request

Additional plans and Contract Provisions may be obtained by the Contractor from the source stated in the Call for Bids, at the Contractor's own expense.

1-02.4 Examination of Plans, Specifications and Site of Work

1-02.4(1) General

(August 15, 2016 APWA GSP Option A)

The first sentence of the last paragraph is revised to read:

Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, must request the explanation or interpretation in writing soon enough to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.4(1) General

(August 15, 2016 APWA GSP Option B)

The first sentence of the last paragraph is revised to read:

Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business 5 business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.4(2) Subsurface Information

(March 8, 2013 APWA GSP)

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

The Summary of Geotechnical Conditions and the boring logs, if and when included as an appendix to the Special Provisions, shall be considered as part of the Contract.

1-02.5 Proposal Forms

(July 31, 2017 APWA GSP)

Delete this section and replace it with the following:

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

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

1-02.6 Preparation of Proposal

(November 20, 2020 Lacey GSP)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.
5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Delete the last paragraph, and replace it with the following:

The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

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

A bid by a partnership shall be executed in the partnership name, and signed by a partner.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture.

1-02.6 Preparation of Proposal

(June 4, 2020 WSDOT 1-02.6OPT9.GR1)

Item number 1 in the fifth paragraph of Section 1-02.6 is revised to read:

1. Subcontractors who will perform the work of structural steel installation, rebar installation, heating, ventilation, air conditioning and plumbing as described in RCW 18.106 and electrical as described in RCW 19.28, and

1-02.6 Preparation of Proposal

(August 2, 2004 WSDOT 1-02.6OPT15.GR1)

The fifth and sixth paragraphs of Section 1-02.6 are deleted.

1-02.6 Preparation of Proposal

(February 8, 2021 Lacey GSP)

The thirteenth paragraph of Section 1-02.6 is deleted and replaced with the following:

The Bidder shall submit a completed Contractor Certification Wage Law Compliance form (WSDOT Form 272-009) within 24 hours of bidding opening, weekends and holidays are not included in that period. Failure to return this certification in the required timeframe will make this Bid Nonresponsive and ineligible for Award. A Contractor Certification of Wage Law Compliance form is included in the Proposal Forms.

1-02.7 Bid Deposit

(March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

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

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

1-02.9 Delivery of Proposal

(November 20, 2020 Lacey GSP)

Delete this section and replace it with the following:

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

If supplemental information is due after the Bid Proposal is due, the document(s) shall be submitted as follows:

1. In a sealed envelope labeled the same as for the Proposal, with "Supplemental Information" added, or
2. By e-mail to the following e-mail address: Jkashani@ci.lacey.wa.us

All other information required to be submitted with the Bid Proposal must be submitted with the Bid Proposal itself, at the time stated in the Call for Bids.

The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Call for Bids. The Contracting Agency will not open or consider any “Supplemental Information” that is received after the time specified above, or received in a location other than that specified in the Call for Bids.

1-02.10 Withdrawing, Revising, or Supplementing Proposal **(July 23, 2015 APWA GSP)**

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

After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and
2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

If the Bidder’s request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, Emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

1-02.12 Public Opening of Proposals **(November 20, 2020 Lacey GSP)**

Delete and replace this section with the following:

Proposals will be opened and publicly read by live video stream per the “Instructions to Bidders” in Section A of these Specifications at the time as indicated in the call for Bids

1-02.13 Irregular Proposals **(October 1, 2020 APWA GSP)**

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
 - a. The Bidder is not prequalified when so required;
 - b. The authorized Proposal form furnished by the Contracting Agency is not used or is altered;
 - c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
 - d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
 - e. A price per unit cannot be determined from the Bid Proposal;
 - f. The Proposal form is not properly executed;

- g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
 - h. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
 - i. The Bidder fails to submit written confirmation from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
 - j. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
 - k. The Bidder fails to submit a DBE Bid Item Breakdown form, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
 - l. The Bidder fails to submit DBE Trucking Credit Forms, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
 - m. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
 - n. More than one Proposal is submitted for the same project from a Bidder under the same or different names.
2. A Proposal may be considered irregular and may be rejected if:
- a. The Proposal does not include a unit price for every Bid item;
 - b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
 - c. Receipt of Addenda is not acknowledged;
 - d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
 - e. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders (May 17, 2018 APWA GSP Option A)

Delete this Section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1). To assess bidder responsibility, the Contracting Agency reserves the right to request documentation as needed from the Bidder and third parties concerning the Bidder's compliance with the mandatory bidder responsibility criteria.

If the Contracting Agency determines the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1) and is therefore not a responsible Bidder, the Contracting Agency 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 two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting

Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination..

1-02.15 Pre-Award Information

(August 14, 2013 APWA GSP)

Revise this section to read:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.3 Execution of Contract

(October 1, 2005 APWA GSP)

Revise this section to read:

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

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

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

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

1-03.3 Execution of Contract

(April 2, 2018 Lacey GSP)

Section 1-03.3 is supplemented with the following:

The Contract will not be executed until the Contractor completes sections I, III, and VIII of the Transfer of Coverage for the Construction Stormwater General Permit and returns the form to the Contracting Agency.

1-03.4 Contract Bond
(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
 - a) Is registered with the Washington State Insurance Commissioner, and
 - b) Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
 - a) Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
 - b) Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.7 Judicial Review
(November 30, 2018 APWA GSP)

Delete this section and replace it with the following:

Any decision made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

1-04 SCOPE OF THE WORK

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

(November 20, 2020 Lacey GSP)

Revise the second paragraph to read:

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

1. Contract Form,
2. Addenda (if any),
3. Proposal Form,
4. Special Provisions,
5. Technical Specifications, if included,
6. Contract Plans,
7. WSDOT Standard Specifications for Road, Bridge, and Municipal Construction,
8. City of Lacey Development Guidelines and Public Works Standards, and
9. WSDOT Standard Plans for Road, Bridge and Municipal Construction

1-04.4 Changes

(November 20, 2020 Lacey GSP)

Section 1-04.4 is supplemented with the following:

Change Orders will be transmitted electronically to the Contractor for signature. The Contractor shall apply all signatures electronically using the software provided by the Contracting Agency. Within 21 days of execution of the Contract, the Contractor shall submit the names, email addresses, and text-message capable phone numbers for the authorized change order signers and shall bear the name, phone number and email of the officer providing this authorization. Delegation of authority to sign Change Orders shall be by the officer authorized to sign the Contract.

1-04.4(1) Minor Changes

(May 30, 2019 APWA GSP)

Delete the first paragraph and replace it with the following:

Payments or credits for changes amounting to \$15,000 or less may be made under the Bid item “Minor Change”. At the discretion of the Contracting Agency, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes. All “Minor Change” work will be within the scope of the Contract Work and will not change Contract Time.

1-04.6 Variation in Estimated Quantities

(May 25, 2006 APWA GSP)

Supplement this Section with the following:

The quantities for “Utility Potholing”, “Imported Pipe Bedding” and “Bank Run Gravel for Trench Backfill” have been entered into the Proposal only to provide a common proposal for bidders. Actual quantities will be determined in the field as the work progresses, and will be paid at the original bid price, regardless of final quantity. These bid items shall not be subject to the provisions of 1-04.6 of the Standard Specifications.

1-04.6 Variations in Estimated Quantities **(July 23, 2015 APWA GSP Option B)**

Revise the first paragraph to read:

Payment to the Contractor will be made only for the actual quantities of Work performed and accepted in conformance with the Contract. When the accepted quantity of Work performed under a unit item varies from the original Proposal quantity, payment will be at the unit Contract price for all Work unless the total accepted quantity of any Contract item, adjusted to exclude added or deleted amounts included in change orders accepted by both parties, increases or decreases by more than 25 percent from the original Proposal quantity, and if the total extended bid price for that item at time of award is equal to or greater than 10 percent of the total contract price at time of award. In that case, payment for contract work may be adjusted as described herein:

1-05 CONTROL OF WORK

1-05.4 Conformity With and Deviations from Plans and Stakes

Supplement this section with the following:

Roadway and Utility Surveys

(July 23, 2015 APWA GSP, Option 1)

The Engineer shall furnish to the Contractor one time only all principal lines, grades, and measurements the Engineer deems necessary for completion of the work. These shall generally consist of one initial set of:

1. Slope stakes for establishing grading;
2. Curb grade stakes;
3. Centerline finish grade stakes for pavement sections wider than 25 feet; and
4. Offset points to establish line and grade for underground utilities such as water, sewers, and storm drains.

On alley construction projects with minor grade changes, the Engineer shall provide only offset hubs on one side of the alley to establish the alignment and grade.

1-05.4(2) Survey Control and Electronic Files

(August 10, 2010 Lacey GSP)

Add the following new section:

The Contractor shall re-establish the survey control used in design by using existing survey monuments and other control points as provided by the City.

When requested by the Contractor, the City will provide an electronic version of the construction plans (drawings), for use by the Contractor at the Contractor's own risk. In all cases, the approved paper construction plans are the official contract documents. If the Contractor wishes to use the electronic version of the construction plans for the purposes of providing surveying of the proposed improvements, it shall be the Contractor's responsibility to verify that any coordinates used from the electronic file match the station and offset location given in the contract construction plans. Construction plans are diagrammatic in nature. The coordinate locations of the various graphic elements within the electronic files may not necessarily be precisely shown with respect to their coordinate position. In all cases, the location callouts in the contract construction plans shall govern.

1-05.7 Removal of Defective and Unauthorized Work **(October 1, 2005 APWA GSP)**

Supplement this section with the following:

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

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

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

No adjustment in contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

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

1-05.11 Final Inspections and Operational Testing **(October 1, 2005 APWA GSP)**

Delete this section and replace it with the following:

1-05.11(1) Substantial Completion Date

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefore.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a

revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

1-05.11(2) Final Inspection and Physical Completion Date

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.

The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract, but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

1-05.11(3) Operational Testing

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the contract.

1-05.12(1) One-Year Guarantee Period
(March 8, 2013 APWA GSP)

Add the following new section:

The Contractor shall return to the project and repair or replace all defects in workmanship and material discovered within one year after Final Acceptance of the Work. The Contractor shall start work to remedy any such defects within 7 calendar days of receiving Contracting Agency's written notice of a defect, and shall complete such work within the time stated in the Contracting Agency's notice. In case of an emergency, where damage may result from delay or where loss of services may result, such corrections may be made by the Contracting Agency's own forces or another contractor, in which case the cost of corrections shall be paid by the Contractor. In the event the Contractor does not accomplish corrections within the time specified, the work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

When corrections of defects are made, the Contractor shall then be responsible for correcting all defects in workmanship and materials in the corrected work for one year after acceptance of the corrections by Contracting Agency.

This guarantee is supplemental to and does not limit or affect the requirements that the Contractor's work comply with the requirements of the Contract or any other legal rights or remedies of the Contracting Agency.

1-05.14 Cooperation with Other Contractors
(August 3, 2015 Lacey GSP)

Supplement this section with the following:

The Contractor shall coordinate residential refuse and recycling pick-up with Pacific Disposal (360) 923-0111. Construction activities shall be planned so that there is no interruption of services.

1-05.15 Method of Serving Notices
(March 25, 2009 APWA GSP)

Revise the second paragraph to read:

All correspondence from the Contractor shall be directed to the Project Engineer. All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, must be in paper format, hand delivered or sent via mail delivery service to the Project Engineer's office. Electronic copies such as e-mails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

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

Add the following new section:

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

1-05.18 Record Drawings
(January 3, 2011 Lacey GSP Option A)

Add the following new section:

The Contractor shall furnish As-Built/Record Drawings of all changes to the original plans in accordance with the following conditions:

One set of 22"x 34" plans showing the changes to the project as installed.

Drawings shall be to scale with all notations neat in appearance.

Turn the record drawings over to the Engineer for review and approval prior to final payment.

1-06 CONTROL OF MATERIAL

1-06.1 Approval of Materials Prior to Use

(January 4, 2016 Lacey GSP)

The second sentence of first paragraph is revised to read:

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

1-06.1(2) Request for Approval of Material (RAM)

The first paragraph is revised to read:

The COL RAM shall be used with all submittals. The COL RAM shall be prepared by the Contractor in accordance with the instructions and submitted to the engineer for approval before the material is incorporated into the Work..

Supplement this section with the following:

The Contractor shall submit sufficient information that describes the materials proposed as defined and described in these specifications and plans within 20 working days following the Notice to Proceed.

The Contractor shall submit one electronic of catalog cuts, shop drawings, and a material testing sample, as required for all items to be used in this contract for approval. The Contractor shall circle or highlight products and materials that are specific to this project, and cross out items that are not for this project.

All items not in exact compliance with the specifications must be noted as a change. The Contractor shall include an explanation, product specifications, sample articles, and any other items that will aid the Engineer in approving an item not in exact accordance with the specifications.

All submittals shall be submitted in Adobe Acrobat format and submittals that exceed 10 pages shall include a table of contents. Submittals that are not submitted in the format outlined may be rejected outright and the Contractor is required to resubmit in the correct format. The form and the submittal shall be sent in the same e-mail. Submittals that exceed 10 MB shall either be provided on a CD, a flash drive or via an internet link.

The Engineer will review submittals within 10 working days. The Contractor may request additional working days if approval or disapproval is not received in 10 working days. The Contractor may not request additional working days for failure to submit sufficient information to approve an item, or for rejection of an item not in accordance with the specifications.

Resubmittals shall be submitted within 5 working days from City's transmittal, to the contractor, of the Engineer reviewed submittal. If the submittal is "Rejected", the contractor shall resubmit the entire submittal. If the submittal is marked "Revise and Resubmit", the contractor shall submit items that are identified in the Engineer's comments.

Any material purchased or labor performed prior to such approval shall be at the Contractor's risk. The Contractor must receive all material approvals before the materials will be allowed on the project.

1-06.6 Recycled Materials **(January 4, 2016 APWA GSP)**

Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

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

Supplement this section with the following:

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

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well-known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

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

1-07.2 State Sales Tax

(June 27, 2011 APWA GSP)

Delete this section, including its sub-sections, in its entirety and replace it with the following:

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(1) State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

1-07.2(2) State Sales Tax — Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

1-07.9(5) Required Documents

[\(January 6, 2020 WSDOT 1-07.9\(5\).OPT1.GR1\)](#)

Section 1-07.9(5) is revised to read

General

All “Statements of Intent to Pay Prevailing Wages”, “Affidavits of Wages Paid” and Certified Payrolls, including a signed Statement of Compliance for Federal-aid projects, shall be submitted to the Engineer using the State L&I online Prevailing Wage Intent & Affidavit (PWIA) system.

Intents and Affidavits

On forms provided by the Industrial Statistician of State L&I, the Contractor shall submit to the Engineer the following for themselves and for each firm covered under RCW 39.12 that will or has provided Work and materials for the Contract:

1. The approved “Statement of Intent to Pay Prevailing Wages” State L&I’s form number F700-029-000. The Contracting Agency will make no payment under this Contract until this statement has been approved by State L&I and reviewed by the Engineer.
2. The approved “Affidavit of Prevailing Wages Paid”, State L&I’s form number F700-007-000. The Contracting Agency will not grant Completion until all approved Affidavit of Wages paid for the Contractor and all Subcontractors have been received by the Engineer. The Contracting Agency will not release to the Contractor any funds retained under RCW 60.28.011 until “Affidavit of Prevailing Wages Paid” forms have been approved by State L&I and all of the approved forms have been submitted to the Engineer for every firm that worked on the Contract.

The Contractor is responsible for requesting these forms from State L&I and for paying any fees required by State L&I.

Certified Payrolls

Certified payrolls are required to be submitted by the Contractor for themselves, all Subcontractors and all lower tier subcontractors. The payrolls shall be submitted weekly on all Federal-aid projects and no less than monthly on State funded projects..

1-07.18 Public Liability and Property Damage Insurance

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

1-07.18 Insurance

[\(January 4, 2016 APWA GSP\)](#)

1-07.18(1) General Requirements

A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer’s financial condition.

B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.

C. If any insurance policy is written on a claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made, and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.

D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor's insurance and shall not contribute with it.

E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency

G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

H. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

1-07.18(2) Additional Insured

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder's Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- The Contracting Agency and its officers, elected officials, employees, agents, and volunteers

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

1-07.18(3) Subcontractors

The Contractor shall cause each Subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors.

The Contractor shall ensure that all Subcontractors of every tier add all entities listed in 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency evidence of insurance and copies of the additional insured endorsements of each Subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury,

and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

\$1,000,000	Each Occurrence
\$2,000,000	General Aggregate
\$2,000,000	Products & Completed Operations Aggregate
\$1,000,000	Personal & Advertising Injury each offence
\$1,000,000	Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:

\$1,000,000 Combined single limit each accident

1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

1-07.23 Public Convenience and Safety

1-07.24 Rights of Way

(July 23, 2015 APWA GSP)

Delete this section and replace it with the following:

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

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

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

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is

delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

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

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

1-08 PROSECUTION AND PROGRESS

Add the following new section:

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

Add the following new section:

1-08.0(1) Preconstruction Conference **(October 10, 2008 APWA GSP)**

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer, and such other interested parties as may be invited. The purpose of the preconstruction conference will be:

- To review the initial progress schedule;
- To establish a working understanding among the various parties associated or affected by the work;
- To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
- To establish normal working hours for the work;
- To review safety standards and traffic control; and
- To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction conference the following:

- A breakdown of all lump sum items;
- A preliminary schedule of working drawing submittals; and
- A list of material sources for approval if applicable.

1-08.0(2) Hours of Work **(December 8, 2014 APWA GSP)**

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than 5 prior to the day(s) the Contractor is requesting to change the hours.

If the Contracting Agency approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:

1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)
2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.
3. Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.
4. If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.
5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll

1-08.0(2)A Lacey Hours of Work **(October 16, 2014 Lacey GSP Option A)**

Add the following new section:

Lacey Municipal Code (LMC) Chapter 14.38.010, prohibits outside construction activities between the hours of 9:00 p.m. and 7:00 a.m. in or adjacent to residential zones of the City. A waiver to this ordinance will not be allowed, except in case of emergency, or where operations are necessary during such hours in order to promote the safety of the traveling public as shown in theses specifications or as determined by the Engineer.

1-08.1 Subcontracting **(May 30, 2019 APWA GSP, Option B)**

Delete the ninth paragraph, beginning with "On all projects, the Contractor shall certify..."

1-08.3(2)A Type A Progress Schedule **(March 13, 2012 APWA GSP)**

Revise this section to read:

The Contractor shall submit five (5) copies of a Type A Progress Schedule no later than at the preconstruction conference, or some other mutually agreed upon submittal time. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. Regardless of which format used, the schedule shall identify the critical path. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

1-08.4 Prosecution of Work **(July 23, 2015 APWA GSP)**

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

1-08.4 Notice to Proceed and Prosecution of Work

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

When shown in the Plans, the first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration, as described in the Contract. Installation of high visibility fencing adjacent to the roadway shall occur after the placement of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No other work shall be performed on the site until the Contracting Agency has accepted the installation of high visibility fencing, as described in the Contract.

1-08.4(1) Order Of Work **(*****)**

Add the following new section:

Prior to starting construction and issuance of notice to proceed by the City, the Contractor shall furnish the Contracting Agency with a schedule, sequence, and method of proceeding with the work. This schedule shall address all items herein and must be approved by the Contracting Agency prior to commencing any construction operations.

Any decommissioning or abandonment of the lift station facilities or septic systems shall not take place until construction of the new sewer system has been completed to the point where it is able to accept flows from the facility that is being abandoned or decommissioned. Bypass pumping efforts shall be kept to a minimum.

Once the connection to the existing sewer manhole is made at the downstream most manhole of the system, the Contractor will work diligently until the new wastewater main has been constructed to the point of the first newly constructed manhole and revised sewer service line of 426 Carpenter is connected as shown on the plans. Once this section of the main is complete and has passed inspection, the Contractor shall complete all paving work at the cul-de-sac and parking lot of 426 Carpenter Rd SE as

shown on the plans. Once this portion of work has begun, the Contractor shall complete this work within a schedule of ten consecutive working days, including paving.

1-08.5 Time for Completion

(*****)

This project shall be completed in accordance with the provisions of Section 1-08 of the Standard Specifications within 80 working days. All design and submittal work for this project shall be completed within the first 15 calendar days of the contract.

1-08.5 Time for Completion

(November 30, 2018 APWA GSP Option A)

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the Notice to Proceed Date.

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

Revise the sixth paragraph to read:

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

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
 - a. Certified Payrolls (per Section 1-07.9(5)).
 - b. Material Acceptance Certification Documents
 - c. Monthly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.
 - d. Final Contract Voucher Certification
 - e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors
 - f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction

Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).

g. Property owner releases per Section 1-07.24

1-08.9 Liquidated Damages **(August 14, 2013 APWA GSP)**

Revise the fourth paragraph to read:

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine that the work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

1-09 MEASUREMENT AND PAYMENT

1-09.2(1) General Requirements for Weighing Equipment **(July 23, 2015 APWA GSP, Option 2)**

Revise item 4 of the fifth paragraph to read:

4. Test results and scale weight records for each day's hauling operations are provided to the Engineer daily. Reporting shall utilize WSDOT form 422-027, Scaleman's Daily Report, unless the printed ticket contains the same information that is on the Scaleman's Daily Report Form. The scale operator must provide an AM and PM tare weight for each truck on the printed ticket.

1-09.2(5) Measurement **(May 2, 2017 APWA GSP)**

Revise the first paragraph to read:

Scale Verification Checks – At the Engineer's discretion, the Engineer may perform verification checks on the accuracy of each batch, hopper, or platform scale used in weighing contract items of Work.

1-09.9 Payments **(March 13, 2012 APWA GSP)**

Supplement this section with the following:

Lump sum item breakdowns are not required when the bid price for the lump sum item is less than \$20,000.

Delete the first four paragraphs and replace them with the following:

The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payment. The progress estimates are subject to change at any time prior to the calculation of the Final Payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of Progress Payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

1-09.9 Payments

(November 20, 2020 Lacey GSP)

Section 1-09.9 is supplemented with the following:

Progress payments and the Final Contract Voucher Certification (FCVC) will be transmitted electronically to the Contractor for signature. The Contractor shall apply all signatures electronically using the software provided by the Contracting Agency. Within 21 days of execution of the Contract, the Contractor shall submit the names, email addresses, and text-message capable phone numbers for the authorized signers and shall bear the name, phone number and email of the officer providing this authorization. Delegation of authority to sign progress payments and the FCVC shall be by the officer authorized to sign the Contract.

1-09.11(3) Time Limitation and Jurisdiction

(November 30, 2018 APWA GSP)

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13(3) Claims \$250,000 or Less
(October 1, 2005 APWA GSP)

Delete this Section and replace it with the following:

The Contractor and the Contracting Agency mutually agree that those claims that total \$250,000 or less, submitted in accordance with Section 1-09.11 and not resolved by nonbinding ADR processes, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

1-09.13(3)A Administration of Arbitration
(November 30, 2018 APWA GSP)

Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

1-10 TEMPORARY TRAFFIC CONTROL

1-10.1 General **(January 3, 2017 Lacey GSP)**

Supplement this section with the following:

Delays to traffic shall be held to a minimum. There shall be no restrictions or interruptions to traffic on Saturdays, Sundays or Holidays. In addition, there shall be no restrictions or interruptions to traffic after 12:00 noon on the day prior to a holiday or holiday weekend.

There shall be no delay to medical, fire, police, or other emergency vehicles with flashing lights or sirens. The Contractor shall alert all flaggers and personnel of this requirement.

The Contractor shall be responsible for removing the permanent traffic signs, as deemed necessary by the Engineer, and shall install and maintain any temporary signs necessary for the safety of the public.

The Contractor shall maintain pedestrian access at all times, without having pedestrians enter the travel lane.

All lane restrictions shall be held to a minimum time and length. Lane closures shall comply with the traffic control plans and these specifications. If the Contractor wishes to deviate from the plans, the Contractor shall submit a traffic control plan to the Engineer, at no additional cost, that complies with the MUTCD, and the Traffic Control Plans, for approval by the Engineer within (5) five working days before the proposed lane closure. If the Engineer determines that lane restrictions are causing congestion, the Contractor will be required to open any lanes, as determined by the Engineer, until the congestion is eliminated.

During non-working hours, Saturdays, Sundays, and Holidays, the Contractor shall keep all lanes open to traffic throughout the limits of the project with the lane and sidewalk area completely clear of all material, tools, personnel, and equipment as directed by the Engineer.

1-10.4(3) Reinstating Unit Items With Lump Sum Traffic Control **(August 2, 2004 WSDOT GSP)**

Section 1-10.4(3) is supplemented with the following:

The bid proposal contains the item “Project Temporary Traffic Control,” lump sum and the additional temporary traffic control items listed below. The provisions of Section 1-10.4(1), Section 1-10.4(3), and Section 1-10.5(3) shall apply.

“Flaggers”, per hour.

“Portable Changeable Message Sign”, per hour.

1-10.5(2) Item Bids With Lump Sum For Incidentals **(November 23, 2015 Lacey GSP)**

Section 1-10.5(2) is supplemented with the following:

The City shall pay flagging hours only for paving operations. The paving traffic control plan shall be approved by the Engineer. Flagging hours as part of utility main construction shall be considered incidental and be accounted for in the lump sum price of “Project Temporary Traffic Control.”

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.1 Description **(October 16, 2009 Lacey GSP)**

Supplement this section with the following:

The City of Lacey is a Tree City USA, and has deemed it necessary to protect all trees to the best of their ability. Only the trees that are evaluated by a certified Arborist as being diseased or detrimental to the project shall be removed as shown in the plans. The Contractor shall conduct a site review noting all trees within the construction zone prior to submitting a bid. Ease of construction, spoils, or stockpiling needs shall not justify tree removal.

A high visibility fence shall be installed around all trees and vegetation as required by the Engineer prior to beginning work. The Contractor shall be responsible for installing, maintaining and removing the high visibility fence as required.

Disposal of all organic waste shall be by Disposal Method No. 2. Disposal Method No. 1 and No. 3 will not be permitted in this contract. The City of Lacey encourages recycling of organic material at a certified organic recycling center.

The Contractor shall take all precautions necessary to protect the public, property, trees, and natural vegetation from harm. Any damage to utilities or other structures on public right-of-way or private property shall be restored by the Contractor or authorized agent at the Contractor's expense.

2-01.5 Payment

(October 16, 2009 Lacey GSP)

Modify this section with the following:

The unit contract price per acre or lump sum for "Clearing and Grubbing" shall be full pay for all work described in this section including "Roadside Cleanup". If no bid item for "Clearing and Grubbing" or "High Visibility Fence" is included in the proposal, any work described in this section shall be incidental to the project.

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.1 Description

(***** Lacey)

Supplement this section with the following:

The following items plus all materials resulting from incidental work including clearing; grubbing and roadside cleanup shall be removed from the job site, disposed of in a waste site or when noted on the plans, delivered to the City.

This work consists of but shall not be limited to the following items:

Pavement	Sidewalk
Concrete	Curb and Gutter
Wheel Stops	Fencing
Refuse	Trees/Root Pruning
Rocks and Stumps	Water Pipe
Water Valves and Fittings	Valve Boxes
Area Lights	Roadside Cleanup
Sewer Piping	Sewer Manholes

The Contractor shall notify property owners/residents prior to all grading, clearing, and fence removal on private property a minimum of 3 days before any work.

The Contractor shall provide the temporary fencing immediately upon removal of the existing fence and will maintain the temporary fence until the permanent fence is installed.

2-02.2 Video

(July 17, 2012 Lacey GSP)

Add the following new section:

The Contractor shall provide pre-construction video of the existing conditions for the construction area including all easements, streets, alleys, and driveways within the project area. Further, video shall include existing drainage, driveways, sidewalks, and other frontage improvements. The Contractor shall also provide pre-construction video of the existing conditions of each face of an existing structure (houses, garages, sheds, fences, etc.), within 30 feet of the construction area.

The Contractor shall provide a copy of the video, in high definition DVD format, to the City prior to any construction.

All costs for providing and furnishing the pre-construction video shall be considered incidental to the Project and no other payment will be allowed.

2-02.3 Construction Requirements

(*** Lacey GSP)**

Supplement this section with the following:

Unless otherwise noted, catch basins and manholes shall be removed entirely.

Where shown on the plans, catch basins, manholes, and inlets may be removed to a point 5 feet below the subgrade and the cavity filled with gravel borrow compacted to 95% of maximum density. Where existing pipe is to be abandoned, the Contractor shall seal the pipe with commercial concrete or CDF.

In the event of removing an existing hydrant, the removal shall consist of turning off the gate valve, removing the existing hydrant assembly, valve box and anything else that is within 2' of the finished grade. Cap or plug the existing valve after the existing hydrant assembly has been removed. The Contractor shall return the existing fire hydrant assembly to the City. If the existing hydrant is damaged due to the Contractor's negligence, the Contractor shall replace the hydrant with a new hydrant.

The Contractor shall provide the Contracting Agency three working days following activation of the temporary bypass system to salvage any desired control and mechanical equipment from the lift station site. After that time, the Contractor shall remove and dispose of any remaining items as shown on the plans and specifications.

The Contractor shall use due care and caution during removal of any material to be salvaged so that no damage occurs to the salvaged material. Any damage caused by the Contractor shall be deducted from the amount due.

2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters

(October 16, 2016 Lacey GSP)

Supplement this section with the following:

In removing pavement, sidewalks, and curbs, the Contractor shall:

1. Mark all cut lines in the field and have the Engineer approve them prior to commencing cutting operations. The Engineer reserves the right to adjust removal to the nearest construction joint.

2. Make a vertical saw cut between any existing pavement, sidewalk, or curb that is to remain and the portion to be removed.
3. All sawcuts shall be continuous and made with saws designed specifically for this purpose; no skip cutting, wheel cutting, or jack hammering will be allowed unless given prior approval by the Engineer.
4. Replace at no expense to the Contracting Agency any pavement designated to remain that is damaged during the removal of other pavement. All damaged sidewalks and curbs shall be replaced to the nearest existing joint.
5. Haul all broken-up pieces of pavement, sidewalks, and curbs to an off-project disposal site.

All transitions to existing asphalt or cement concrete driveways, parking lots, curb and gutter and walkways shall be vertically sawcut full-depth with straight, uniform edges. Existing asphalt pavement roadway edge may be cut with a wheel, provided the wheel cut is full depth and no damage occurs to the pavement which is to remain. Neither impact tools nor pavement breakers may be used for trench crossing of existing pavement. Trench crossing of existing pavement shall be vertically sawcut.

When sawcutting the existing roadway is needed to widen the road to perform excavation, the Contractor shall take extra precaution to make a neat, uniform cut, and shall sawcut pavement to full depth, regardless of number of passes necessary. Compaction of asphalt near the sawcut is critical and a vertical, neat line sawcut is required. If in the opinion of the Engineer, the cut is not satisfactory due to Contractor's workmanship or equipment, or if the sawcut becomes damaged and irregular, the Contractor shall fix the problem to the satisfaction of the Engineer, at Contractor's own expense.

The Contractor may grind the existing pavement in lieu of excavation and haul. Spoils from grinding can be stockpiled and used and paid for per sections 4-04.3(12), 4-04.4 and 4-04.5. If the Contractor elects to grind and stockpile the existing pavement, all costs and expenses necessary to furnish all labor, equipment, tools and materials shall be incidental to other bid items and no additional compensation will be allowed.

2-02.3(4) Special Removal of Structures and Obstructions **(January 3, 2011 Lacey GSP)**

This work shall include demolition and razing of the property at 6612 5th Ct SE to include but not limited to; the house, shed, driveway, footings, foundations, fencing, landscaping, utilities and all other items and refuse on the site and within the structures as referenced on the plans and these specifications. All material shall be hauled to an approved recycling center or disposal site.

After all materials have been removed, any void spaces that result from their removal that are below existing grade shall be filled with gravel borrow to bring the surface to a smooth level grade and finished with a minimum of 6 inches of top soil and grass seed per section 9-14.

This work will also require an Olympic Region Clean Air Agency and City of Lacey Demolition Permit. The Contractor will be required to obtain permit approval and meet all required conditions. The Contracting agency has completed a good faith asbestos survey by a certified Asbestos Hazard Emergency Repose Act (AHERA) building inspector and has been attached in Appendix B. Any asbestos containing material in the house or property shall be removed and disposed as required.

2-02.5 Payment **(March 18, 2015 Lacey GSP)**

Delete this section and replace with the following:

“Removal of Structures and Obstructions”, lump sum.

“Special Removal of Structures and Obstructions”, lump sum.

The lump sum contract price for these bid items shall be full compensation for all labor, equipment and materials necessary to complete the requirements of this section.

2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.3(7)C Contractor-Provided Disposal Site

(October 16, 2009 Lacey GSP)

Supplement this section with the following:

The Contracting Agency has not provided a waste site for disposal of excess materials and debris.

2-03.3(14)D Compaction and Moisture Control Tests

(October 29, 2010 Lacey GSP Option B)

Supplement this section with the following:

The Contractor shall be required to provide the services of a testing laboratory approved by the City to conduct density tests to ensure compliance with these Specifications. The Contractor shall provide for one density test for backfill for each 500 linear feet of trench length (utility line installed). In addition, the Contractor shall provide for one density test for every 600 square yards of subgrade and crushed surfacing placed. Locations and timing of the compaction tests will be determined by the Engineer. In addition, any other areas may be tested at the City's expense. All costs for furnishing the services of an approved testing laboratory to conduct density testing and material certification shall be borne by the Contractor and merged into the various prices bid.

Compaction test reports shall be mailed directly from the testing laboratory to the City of Lacey Public Works Department.

2-03.4 Measurement

(October 29, 2010 Lacey GSP)

Supplement this section with the following:

The quantity of the following items to be paid for on this project shall be quantities shown on the bid proposal:

“Roadway Excavation Incl. Haul”, per cubic yard.

The quantities in the bid proposal are based on a computer generated earthwork calculated on the existing ground survey. The quantities do not incorporate expansion, clearing and grubbing, or construction methodology. These values are listed for the convenience of the Contractor in determining the volume of work involved as calculated by the Engineer and are not guaranteed to be accurate. The prospective bidders shall verify these quantities prior to submitting the bid. A digital copy of the survey is available to prospective bidders from the Contracting Agency at the Contractor's request. No adjustments will be made in these quantities although the actual quantities may deviate from those listed.

2-05 TRENCH SAFETY SYSTEM

(October 16, 2009 Lacey GSP)

Add the following new section:

2-05.1 Description

This work consists of furnishing, utilizing, moving, and maintaining a trench safety system.

2-05.3 Construction Requirements

The Contractor shall comply with all applicable state laws, OSHA, WISHA requirements, and Department of Labor and Industries regulations governing trench excavation and pipe laying.

If extra excavation is used in lieu of, or in addition to shoring, cribbing, trench shields, or trench boxes, and select backfill material is required in the trench zone, then select backfill shall be used in the extra excavation zone.

2-05.4 Measurement

Trench safety system shall be paid for per lump sum regardless of the type, size and quantity used.

2-05.5 Payment

The lump sum contract price for "Trench Safety System" shall be full compensation for all labor, tools, equipment, and materials necessary to comply with the requirements stated above.

2-07 WATERING

2-07.3 Construction Requirements

(October 16, 2009 Lacey GSP)

Supplement this section with the following:

If the Contractor anticipates the use of City water, the Contractor shall apply for a water meter through the City of Lacey. Any damage rendered to the meter shall be repaired or replaced by the Contracting Agency and those costs deducted from monies due to the Contractor. All water used shall be metered and used sparingly for the entire length of the project. The Contractor will not be charged for water used on the project.

The Contractor shall use the water to keep the project site clean and to control dust during and after construction hours as determined by the Engineer.

2-07.4 Measurement

(October 16, 2009 Lacey GSP)

Delete and replace this section with the following:

The Contractor shall apply for a construction meter through the Contracting Agency. All water used shall be measured with the Contracting Agency supplied meter.

2-07.5 Payment

(October 16, 2014 Lacey GSP)

Delete and replace this section with the following:

The Contractor will not be charged for water used on this project. A construction meter will also be provided free of charge. Any costs to repair meters damaged by the Contractor shall be recovered from monies due the Contractor.

All costs to supply tank trucks, and apply water as directed by the Engineer shall be considered incidental to the project and no other payment will be allowed.

5-04 HOT MIX ASPHALT

5-04.1 Description

(July 18, 2018 APWA GSP)

Delete this entire section and replace it with the following:

This Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

5-04.2 Materials

(July 18, 2018 APWA GSP)

Materials shall meet the requirements of the following sections:

Asphalt Binder 9-02.1(4)

Cationic Emulsified Asphalt 9-02.1(6)

Anti-Stripping Additive 9-02.4

HMA Additive 9-02.5

Aggregates 9-03.8

Recycled Asphalt Pavement 9-03.8(3)B

Mineral Filler 9-03.8(5)

Recycled Material 9-03.21

Portland Cement 9-01

Sand 9-03.1(2)

(As noted in 5-04.3(5)C for crack sealing)

Joint Sealant 9-04.2

Foam Backer Rod 9-04.2(3)A

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP. The RAP shall be sampled and tested at a frequency of one sample for every 1,000 tons produced and not less than ten samples per project. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

The grade of asphalt binder shall be as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01. Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02.

5-04.2(2) Mix Design – Obtaining Project Approval **(July 18, 2018 APWA GSP)**

No paving shall begin prior to the approval of the mix design by the Engineer.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the contract documents.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.

Nonstatistical Mix Design. Fifteen days prior to the first day of paving the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.**

The mix design shall be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO: resource proficiency sample program.

Mix designs for HMA accepted by Nonstatistical evaluation shall;

- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324, or based on historic anti-strip and aggregate source compatibility from previous WSDOT lab testing.

At the discretion of the Engineer, agencies may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Commercial Evaluation Approval of a mix design for “Commercial Evaluation” will be based on a review of the Contractor’s submittal of WSDOT Form 350-042 (For commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the Contracting Agency for mix design approval is not required.

For the Bid Item Commercial HMA, the Contractor shall select a class of HMA and design level of Equivalent Single Axle Loads (ESAL’s) appropriate for the required use.

5-04.2(2) Mix Design – Obtaining Project Approval **(January 3, 2011 WSDOT GSP)**

Section 5-04.2(2) is supplemented with the following

ESAL's

The number of ESAL's for the design and acceptance of the HMA shall be 1 million.

5-04.2(2)A Changes to the Job Mix Formula

Delete this section

5-04.2(2)B Using Warm Mix Asphalt Processes **(July 18, 2018 APWA GSP)**

The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

- Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.
- Before using additives, obtain the Engineer’s approval using WSDOT Form 350-076 to describe the proposed additive and process.

5-04.3 Construction Requirements

5-04.3(2) Paving Under Traffic **(April 2, 2018 Lacey GSP)**

Delete this section and replace it with the following:

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Section 8-23.

The Contractor shall remove all pavement markings including paint, tape, thermoplastic and RPM's.

All costs in connection with performing the Work associated with these requirements shall be included in the unit Contract prices for the various Bid items involved in the Contract.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

(July 18, 2018 APWA GSP)

Delete this section and replace it with the following:

Plants used for the preparation of HMA shall conform to the following requirements:

1. Equipment for Preparation of Asphalt Binder – Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.
2. Thermometric Equipment – An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.
3. Heating of Asphalt Binder – The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.
4. Sampling and Testing of Mineral Materials – The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field testing facilities of the Contracting Agency as provided for in Section 3-01.2(2).
5. Sampling HMA – The HMA plant shall provide for sampling HMA by one of the following methods:

- a. A mechanical sampling device attached to the HMA plant.
- b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

5-04.3(3)B Hauling Equipment

(July 18, 2018 APWA GSP)

Delete this section and replace it with the following:

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

5-04.3(3)C Pavers

(July 18, 2018 APWA GSP)

Delete this section and replace it with the following:

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any

of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

5-04.3(3)D Material Transfer Device or Material Transfer Vehicle
(April 2, 2018 Lacey GSP, Option 1)

Delete this section and replace it with the following:

A Material Transfer Device/Vehicle (MTD/V) is not required for this project.

5-04.3(3)E Rollers
(July 18, 2018 APWA GSP)

Delete this section and replace it with the following:

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

5-04.3(4) Preparation of Existing Surfaces
(December 19, 2019 Lacey)

Delete this section and replace it with the following:

When the surface of the existing pavement or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Preleveling of uneven or broken surfaces over which HMA is to be placed may be accomplished by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement. All pavements or bituminous surfaces shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly.

Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.

A tack coat of asphalt shall be applied to all paved surfaces on which any course of HMA is to be placed or abutted. Tack coat shall be uniformly applied to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. The rate of application shall be approved by the Engineer. A heavy application of tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces that will be paved during the same working shift. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

Equipment shall not operate on tacked surfaces until the tack has broken and cured. If the Contractor's operation damages the tack coat it shall be repaired prior to placement of the HMA.

The tack coat shall be CSS-1, or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one part water to one part emulsified asphalt. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer

All vegetation including root structures and moss shall be removed in their entirety within the paved areas including adjoining curbs, gutters, and sidewalks. Further, all vegetation overgrowth shall be trimmed and removed 6 inches from back of proposed HMA edge limits as directed by the Engineer.

Driveway preparation shall include saw cutting, cutting, filling, and grading the transitional area required to provide a HMA approach between the edge of pavement and driveway regardless of the existing surface treatment or width. The Engineer shall mark in the field where the asphalt or concrete shall be sawcut. Typical driveway aprons for paved/concrete driveways are 18" unless shown longer on the plans. Typical driveway aprons for gravel driveways are 48" unless shown longer in the plans. All material that must be removed from the driveway shall be hauled and disposed off the project site. All imported material required to grade and compact driveway bases shall be paid for by the unit bid item "Crushed Surfacing Top Course." All driveways shall require preparation. Temporary access shall be provided for all driveways prior to paving. There shall be no additional compensation for those driveways requiring more preparation than others.

Shoulder preparation shall include cutting, filling, and grading the shoulder to ensure a uniform, longitudinal pavement edge. Maximum distance shall be 12 inches from proposed edge of pavement surface to a maximum depth of 6 inches from edge of roadway finish grade. Backfill requirements beyond these limits shall be repaired at the Contractor's expense. All grading within drainage ditches or swales to establish or maintain existing flowlines shall also be included in shoulder preparation.

All excess asphalt joint filler shall be completely removed and all premolded and rubberized joint filler shall be removed to a minimum 1/2 inch below the surface of the existing pavement.

5-04.3(4)C Pavement Repair **(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

The Contractor shall excavate pavement repair areas and shall backfill these with HMA in accordance with the details shown in the Plans and as marked in the field. The Contractor shall conduct the excavation operations in a manner that will protect the pavement that is to remain. Pavement not designated to be removed that is damaged as a result of the Contractor's operations shall be repaired by

the Contractor to the satisfaction of the Engineer at no cost to the Contracting Agency. The Contractor shall excavate only within one lane at a time unless approved otherwise by the Engineer. The Contractor shall not excavate more area than can be completely finished during the same shift, unless approved by the Engineer.

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder. Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Sections 2-02.3(3) or 9-03.21.

Asphalt for tack coat shall be required as specified in Section 5-04.3(4). A heavy application of tack coat shall be applied to all surfaces of existing pavement in the pavement repair area.

Placement of the HMA backfill shall be accomplished in lifts not to exceed 0.35-foot compacted depth. Lifts that exceed 0.35-foot of compacted depth may be accomplished with the approval of the Engineer. Each lift shall be thoroughly compacted by a mechanical tamper or a roller.

5-04.3(5) Producing/Stockpiling Aggregates, RAP, & RAS

Delete this section and replace it with the following:

5-04.3(5) Producing/Stockpiling Aggregates and RAP

(October 30, 2018 Lacey GSP)

If Recycled asphalt pavement (RAP) is allowed per section 5-04.2, aggregates and RAP shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

5-04.3(5)A Stockpiling RAP or RAS for High RAP/Any RAS Mixes

Delete this section

5-04.3(6) Mixing

(October 30, 2018 Lacey GSP)

Delete this section and replace it with the following:

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

If Recycled asphalt pavement (RAP) is allowed per section 5-04.2, RAP utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured..

5-04.3(7) Spreading and Finishing **(April 2, 2018 Lacey GSP)**

Delete this section and replace it with the following:

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with Section 5-04.3(3) shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1"	0.35 feet
HMA Class ¾" and HMA Class ½"	
wearing course	0.208 feet
other courses	0.25 feet
HMA Class ⅜"	0.17 feet

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

The Contractor shall complete the first lift over the entire length of the project, before the final lift will be allowed to be installed.

If traffic signal loops are required, these loops shall be installed prior to the final lift.

5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA **(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

For HMA accepted by nonstatistical evaluation the aggregate properties of sand equivalent, uncompacted void content and fracture will be evaluated in accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

5-04.3(9) HMA Mixture Acceptance
(July 18, 2018 APWA GSP)

Delete this section and replace it with the following:

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Nonstatistical evaluation will be used for the acceptance of HMA unless Commercial Evaluation is specified.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Engineer.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Engineer and may be made in accordance with this section.

HMA Tolerances and Adjustments

1. Job Mix Formula Tolerances – The constituents of the mixture at the time of acceptance shall be within tolerance. The tolerance limits will be established as follows:

For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2

Property	Non-Statistical Evaluation	Commercial Evaluation
Asphalt Binder	+/- 0.5%	+/- 0.7%
Air Voids, Va	2.5% min. and 5.5% max	N/A

For Aggregates in the mixture:

a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

Aggregate Percent Passing	Non-Statistical Evaluation	Commercial Evaluation
1", ¾", ½", and 3/8" sieves	+/- 6%	+/- 8%
No. 4 sieve	+/- 6%	+/- 8%
No. 8 Sieve	+/- 6%	+/- 8%
No. 200 sieve	+/- 2.0%	+/- 3.0%

b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.

2. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the

change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.

- a. Aggregates –2 percent for the aggregate passing the 1½", 1", ¾", ½", ⅜", and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Section 9-03.8(6).
- b. Asphalt Binder Content – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent

5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation **(July 18, 2018 APWA GSP)**

Add the following new section:

HMA mixture which is accepted by Nonstatistical Evaluation will be evaluated by the Contracting Agency by dividing the HMA tonnage into lots.

5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots **(July 18, 2018 APWA GSP)**

Add the following new section:

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A subplot shall be equal to one day's production or 800 tons, whichever is less except that the final subplot will be a minimum of 400 tons and may be increased to 1200 tons.

All of the test results obtained from the acceptance samples from a given lot shall be evaluated collectively. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Sampling and testing for evaluation shall be performed on the frequency of one sample per subplot.

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling **(July 18, 2018 APWA GSP)**

Add the following new section:

Samples for acceptance testing shall be obtained by the Contractor when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with AASH-T O T 168. A minimum of three samples should be taken for each class of HMA placed on a project. If used in a structural application, at least one of the three samples shall to be tested.

Sampling and testing HMA in a Structural application where quantities are less than 400 tons is at the discretion of the Engineer.

For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed. In all cases, a minimum of 3

samples will be obtained at the point of acceptance, a minimum of one of the three samples will be tested for conformance to the JMF:

- If the test results are found to be within specification requirements, additional testing will be at the Engineer's discretion.
- If test results are found not to be within specification requirements, additional testing of the remaining samples to determine a Composite Pay Factor (CPF) shall be performed.

5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing **(July 18, 2018 APWA GSP)**

Add the following new section:

Testing of HMA for compliance of Va will at the option of the Contracting Agency. If tested, compliance of Va will use WSDOT SOP 731.

Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308.

Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11.

5-04.3(9)C4 Mixture Nonstatistical Evaluation – Pay Factors **(July 18, 2018 APWA GSP)**

Add the following new section:

For each lot of material falling outside the tolerance limits in 5-04.3(9), the Contracting Agency will determine a Composite Pay Factor (CPF) using the following price adjustment factors:

Table of Price Adjustment Factors	
Constituent	Factor "F"
All aggregate passing: 1½", 1", ¾", ½", ⅜" and No.4 sieves	2
All aggregate passing No. 8 sieve	15
All aggregate passing No. 200 sieve	20
Asphalt binder	40
Air Voids (Va) (where applicable)	20

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

5-04.3(9)C6 Mixture Nonstatistical Evaluation – Price Adjustments **(July 18, 2018 APWA GSP)**

Add the following new section:

For each lot of HMA mix produced under Nonstatistical Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The total job mix compliance price adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(9)C7 Mixture Nonstatistical Evaluation – Retests
(July 18, 2018 APWA GSP)

Add the following new section:

The Contractor may request a subplot be retested. To request a retest, the Contractor shall submit a written request within 7 calendar days after the specific test results have been received. A split of the original acceptance sample will be retested. The split of the sample will not be tested with the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and, at the option of the agency, Va. The results of the retest will be used for the acceptance of the HMA in place of the original subplot sample test results. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of \$500 per sample.

5-04.3(10) HMA Compaction Acceptance
(July 18, 2018 APWA GSP)

Delete this section and replace it with the following:

HMA mixture accepted by nonstatistical evaluation that is used in traffic lanes, including lanes for intersections, ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-foot, shall be compacted to a specified level of relative density. The specified level of relative density shall be a Composite Pay Factor (CPF) of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). The maximum density shall be determined by WSDOT FOP for AASHTO T 729. The specified level of density attained will be determined by the evaluation of the density of the pavement. The density of the pavement shall be determined in accordance with WSDOT FOP for WAQTC TM 8, except that gauge correlation will be at the discretion of the Engineer, when using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or roadway cores after completion of the finish rolling.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item “Roadway Core” the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item “Roadway Core” the Contracting Agency will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor’s request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

Test Results

For a subplot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the subplot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the subplot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the subplot have been provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of \$200 per core and the Contractor shall pay for the cost of the traffic control.

5-04.3(10)D HMA Compaction-Visual Evaluation

Delete this section and replace it with the following:

5-04.3(10)D HMA Nonstatistical Compaction

5-04.3(10)D1 HMA Nonstatistical Compaction – Lots and Sublots

(July 18, 2018 APWA GSP)

Add the following new section:

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A subplot shall be equal to one day’s production or 400 tons, whichever is less except that the final subplot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per subplot per WSDOT T 738.

The subplot locations within each density lot will be determined by the Engineer. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

5-04.3(10)D2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing **(July 18, 2018 APWA GSP)**

Add the following new section:

The location of the HMA compaction acceptance tests will be randomly selected by the Engineer from within each subplot, with one test per subplot.

5-04.3(10)D3 HMA Nonstatistical Compaction – Price Adjustments **(July 18, 2018 APWA GSP)**

Add the following new section:

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a subplot does not attain a relative density that is 92 percent of the reference maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The maximum CPF shall be 1.00, however, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92% a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF, the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

5-04.3(11)C Rejection Without Testing (Mixture or Compaction) **(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested. If the Contractor elects to have the rejected material tested, a minimum of three representative samples will be obtained and tested. Acceptance of rejected material will

be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the CPF is greater than or equal to 0.75, the cost of sampling and testing will be borne by the Contracting Agency. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

5-04.3(12)A1 Transverse Joints

(April 2, 2018 Lacey GSP)

Delete this section and replace it with the following:

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course. All joints must be flush and provide a smooth transition across the meet line.

A temporary wedge of HMA constructed on a 24H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The wedge shall be maintained until the paving is resumed. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

5-04.3(12)A2 Longitudinal Joints

(April 2, 2018 Lacey GSP)

Supplement this section with the following:

Cold joints shall be allowed only at locations approved by the Engineer.

Upon Completion of paving operations, all joints shall be sealed with PG 58H-22 asphalt binder.

5-04.3(14) Planing Bituminous Pavement

(April 2, 2018 Lacey GSP)

Supplement this section with the following:

The planning plan must be approved by the Engineer and a pre planning meeting must be held prior to the start of any planing. See Section 5-04.3(14)B2 for information on planning submittals. Pavement planing shall be completed to the cross-slopes as shown on the Plans. The Contractor shall provide a smooth transition at the changes in cross-slopes as directed by the Engineer.

Locations of existing surfacing to be planed are as shown in the Drawings.

Where planing an existing pavement is specified in the Contract, the Contractor must remove existing surfacing material and to reshape the surface to remove irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Repair or replace any metal castings and other surface improvements damaged by planing, as determined by the Engineer.

A tapered wedge cut must also be made at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Drawings. Cut butt joints in a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.

After planing is complete, planed surfaces must be swept, cleaned, and if required by the Contract, patched and preleveled.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

The Contractor can stockpile the grindings for use on the project as identified in section 2-02.3(3).

5-04.3(19) Submittals - Paving Plan **(October 30, 2018 Lacey GSP)**

Add the following new section:

The Contractor must submit a paving plan to the Engineer at least 5 Working Days in advance of the start date. These plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-paving briefing. When requested by the Engineer, the Contractor must provide the traffic control plan with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The traffic control plan must show where flaggers are proposed.

At a minimum, the plan must include:

1. A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's work. Briefly describe the sequencing of traffic control consistent with the proposed work sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's work.
2. Names and locations of HMA Supplier facilities to be used, and locations of temporary parking and staging areas.
3. List of all equipment to be used for paving.
4. Description (geometric or narrative) of the scheduled sequence of work, and intended area for each day's work, must include the directions of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection scheduling and sequencing.
5. Approximate times and days for starting and ending daily operations.

5-04.3(20) Pre-Paving Briefing **(October 30, 2018 Lacey GSP)**

Add the following new section:

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to discuss that day's operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, Metro transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day's operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. The actual times of starting and ending daily operations.
2. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, to public convenience and safety, and to other contractors who may operate in the Project Site.
3. Notifications required of Contractor activities, and coordinating with other entities and the public as necessary.
4. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and to paving.
5. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed
6. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monuments, monitoring wells, street car rail, and castings, before planning, see Section 5-04.3(14)B2.
7. Description of how flaggers will be coordinated with the planing, paving, and related operations.
8. When to start applying tack and coordinating with paving.
9. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and Supplier shutdown of operations.
10. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

5-04.3(21) Paving Operations Supervisor
(April 2, 2018 Lacey GSP)

Add the following new section:

The Contractor shall identify a Paving Operations Supervisor (POS) at the Preconstruction Conference. The POS shall be employed by the Paving Contractor, shall have direct and immediate control of the paving operations on the Project at all times, and shall perform no other duties on the project. No part of the paving operations shall commence or continue without the physical presence of the POS on-site. The POS shall act as the main point of contact in the field to the Engineer and shall execute all requests by the Engineer promptly and immediately.

Specific duties include, but are not limited to the following:

Ensures all paving operations meet the requirements of Section 5-04.

Ensures all iron is marked and properly lowered prior to pavement planing operations.

Ensures paving schedule is communicated to the Engineer 72 hours in advance of paving operations commencing. The Engineer shall be responsible for delivering paving notices to affected business owners and residents. Any changes to the paving schedule must also be communicated to the Engineer 72 hours in advance of the change.

Ensures existing surfaces to be paved are prepared in accordance with Sec. 5-04.3(4) a minimum of two (2) hours prior to paving. Specific attention shall be given to surface cleanliness, match lines to adjoining pavement are vertical and smooth, and matching to existing driveways and rolled gutters are prepared. In the event that preparation of existing surfaces are behind schedule, paving operations may be halted and rescheduled at the Engineer's request if, in his judgment, the delay of paving shall result in a less than satisfactory end product or inconvenience to the public. All costs resulting from paving rescheduling shall be borne by the Contractor.

Ensures all tack coating is completed in accordance with Sec. 5-04.3(4).

5-04.3(22) Temporary Patching

(April 2, 2018 Lacey GSP)

Add the following new section:

All excavations within or across streets, driveways, or failure of existing pavement that will be exposed to traffic shall be temporarily patched by the end of the working day or as directed by the Engineer. The patch shall be constructed of a minimum of 0.17 feet of either Commercial HMA or as directed by the Engineer. The Contractor shall maintain all temporary patches until such time as the permanent pavement is in place.

5-04.3(24) Roadway Shoulder Final Grading

(April 2, 2018 Lacey GSP)

Add the following new section:

The Contractor shall backfill and grade a 5 foot wide or a 5:1 transition (whichever is less) flush from the new edge of pavement down to the existing shoulder grade with Crushed Rock or Topsoil Type A to match existing shoulder material and condition. The Crushed Rock shall match gradation, shape, and color to of the existing rock shoulder. Upon placing and grading either material, the Contractor shall roll and compact the transition as directed by the Engineer. The Contractor shall then hydroseed all shoulder transitions backfilled with topsoil.

5-04.3(25) HMA Wedge Curb

(April 2, 2018 Lacey GSP)

Add the following new section:

The Contractor shall construct a HMA wedge curb where shown on the plans and shall be integral to the mainline paving operation respective to being placed and compacted. HMA used for wedge curb shall be compensated with the HMA bid item per ton and no other compensation shall be allowed.

5-04.3(26) Utility Access

(November 20, 2020 Lacey GSP)

Add the following new section:

When lowering and raising valves the valve riser pipes must remain free of debris. Cap the valve riser pipe to prevent debris from entering the riser and to provide access to the operating nut.

The contractor is responsible for tracking exact locations of all valves and manholes to be lowered or raised. Before asphalt is placed over a valve, metal must be placed directly above the valve location for the purpose of locating the valve with a metal detector. Once asphalt has been placed over a valve or manhole, the location of that valve or manhole must be marked on the asphalt within 3 working days. The location marks must be maintained until the valves are raised. Channelization near valves or manholes must be complete before they are raised. All valves and manholes must be raised within 20 working days after each time they are paved over. The cost of raising new valves and manholes is incidental to the cost for that bid item. The cost for raising existing valves and manholes will only be paid once for each location, no additional compensation will be allowed if the contractor has to raise the same valve/manhole twice. See sections 7-05 and 7-12 for additional information on raising valves and manholes.

5-04.5 Payment

(November 20, 2020 Lacey GSP)

Supplement this section with the following:

The unit Contract price per ton for all HMA bid items shall also include Paving Operations Supervisor (POS) and the removal of excess tack coat of asphalt from existing surfaces, including, but not limited to existing pavement markings. Pavement markings shall be restored to a pre-construction condition or better. No additional compensation shall be given to the Contractor for installing new pavement markings if existing pavement markings cannot be restored to a pre-construction condition or better as directed by the Engineer.

If no bid item for “HMA for Pre-leveling Cl. __ PG __” is included, all materials, equipment, and labor necessary to pre-level the existing pavement prior to paving shall be fully compensated by the bid item “HMA Cl. __ PG __” and “Fiber Reinforced HMA Cl. PG __” and no other pay shall be allowed.

The unit Contract price per ton for “HMA for Pavement Repair Cl. PG __” shall also include all costs for constructing speed humps as shown in the plans, including pavement markings if no bid item for this is included in the proposal.

“Preparation of Existing Surfaces,” lump sum.

The lump sum contract price for “Preparation of Existing Surfaces” shall be full pay for all labor, materials, and equipment to comply with the plans and specifications, including but not limited to cleaning and removal of all vegetation from proposed paved surfaces or that vegetation that will interfere with paving operations prior to paving.

“Driveway and Shoulder Preparation”, lump sum.

The lump sum contract price for “Driveway and Shoulder Preparation” shall be full pay for all labor, materials, and equipment to comply with the plans and specifications, including but not limited to sawcuts, cuts, fills, and grading all driveways and shoulders prior to paving.

7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.3(1)A Adjust Manhole

(January 7, 2019 Lacey GSP)

Add the following new section:

All manholes and Type 2 catch basins within the paved area, except those which are called out to be raised to grade, shall be adjusted flush to the new pavement surface. No wood adjustment of any kind will be allowed.

Maximum distance allowed from edge of iron ring or frame of appurtenance to outside edge of pavement restoration is 18 inches. Patches larger than this or clean misses (e.g. where the Contractor excavates in the new pavement mat and does not find the iron appurtenance to raise) shall result in a credit from the Contractor to the City of \$1000 for each occurrence. Further, the Contractor shall repair the pavement patch as directed by the Engineer.

7-05.3(1)B Raise Manhole To Grade

(January 7, 2019 Lacey GSP)

Add the following new section:

Where shown on the plans or where directed by the Engineer, existing manholes and Type 2 catch basins shall be raised to the grade as staked or as directed by the Engineer. The Contractor shall supply and install new manhole rings, frames, and covers as part of raising the manhole to grade. The finished installation shall conform to the detail shown in plans. No wood adjustment of any kind will be allowed.

Maximum distance allowed from edge of iron ring or frame of appurtenance to outside edge of pavement restoration is 18 inches. Patches larger than this or clean misses (e.g. where the Contractor excavates in the new pavement mat and does not find the iron appurtenance to raise) shall result in a credit from the Contractor to the City of \$1000 for each occurrence. Further, the Contractor shall repair the pavement patch as directed by the Engineer.

7-05.3(1)D Raise Catch Basin to Grade

(January 7, 2019 Lacey GSP)

Section 7-05.3(1)D is added with the following:

Where shown on the plans or as directed by the Engineer, existing catch basins shall be raised to the grade as staked or as directed by the Engineer. The Contractor shall remove and replace adjacent curb and gutter as required. Further, the Contractor shall supply and install concrete riser sections, and new frame and grate. The finished installation shall conform to the detail shown in plans. No wood adjustment of any kind will be allowed.

Maximum distance allowed from edge of iron ring or frame of appurtenance to outside edge of pavement restoration is 18 inches. Patches larger than this or clean misses (e.g. where the Contractor excavates in the new pavement mat and does not find the iron appurtenance to raise) shall result in a credit from the Contractor to the City of \$1000 for each occurrence. Further, the Contractor shall repair the pavement patch as directed by the Engineer.

7-05.3(5) Catch Basin Assembly

(January 3, 2017 Lacey GSP)

Section 7-05.3(5) is added with the following:

Contractor shall furnish and install East Jordan Iron Works Catch Basin Assembly, or approved equal, on all catch basins and storm sewer manholes unless otherwise indicated on the construction plans. Assemblies must be ductile iron and manufactured in the USA. Where a cover, grate or curb inlet is indicated in the plans, the Contractor shall furnish and install the indicated item.

7-05.3(8) Manhole Treatment **(October 30, 2018 Lacey GSP)**

Section 7-05.3(8) is added with the following:

The existing wet well shall be converted to a manhole per the plans and Manhole Rehabilitation specification in section 7-17.3(4) prior to applying the protective coating. Conversion may include but not limited to removing pumps and fittings, construction of shelf, surface preparation, repair grout utilizing pressure grouting and replacing ring and cover.

The manhole shall be thoroughly pressure washed using a minimum of 5,000 psi in preparation for the application to remove any dirt, debris, or loose material. All manhole joints and pipe penetrations shall be watertight to prevent infiltration or ex-filtration prior to application of the product. Final surface preparation shall be in accordance with the coating manufacturer's recommendations.

Manhole treatment shall require that a protective coating be applied to completely and uniformly cover the manhole floor, interior wall, and underside of lid at the thickness indicated by the manufacturer. Finished surface shall be smooth. All joints and penetrations shall be water tight prior to application of the product. The product shall be installed in accordance with the manufacturer's instructions by a factory certified applicator.

The Contractor shall be responsible to provide confined space entry for the coating inspector. The City shall be responsible to pay for the services of an independent NACE certified coatings inspector for the following:

1. Inspect and perform testing of all the surface preparation prior to the application of coatings.
2. Inspect and perform testing of coatings in the wetwell.
3. Provide a written report to the Owner after testing is completed. The contractor is responsible to correct all deficiencies noted in the report.

The coating material shall be 125 mils Raven 405 and primer per manufacturers recommendations by Raven Lining Systems, 250 mils SprayWall by SprayRoq Protective Lining Systems or 1" of SewperCoat PG by Kerneos Inc.

A complete liner system as manufactured by Predl Systems may be substituted where approved by the engineer. Complete liner systems shall include the base, riser sections, cone section, and telescopic lid liner. All joints shall be sealed and welded per the manufacture's recommendations.

7-05.4 Measurement **(October 30, 2018 Lacey GSP)**

Supplement this section with the following:

"Connect to Existing Manhole" will be measured per each location called out in the plans.

"Manhole Treatment" will be measured per each.

7-05.5 Payment **(October 30, 2018 Lacey GSP)**

Supplement this section with the following:

The unit contract price per each for manholes and catch basins shall be full pay for furnishing all labor, tools, equipment, and materials required to place the structure including excavation, haul, backfill, testing, and all accessories, such as rings, covers, grates, steps, grate inlets, trash racks, beehive grates and debris cages, removable silt trap tees, GU liners, inside drops, outside drops and all other items needed to install

the manhole complete in place in accordance with the plans and these specifications in conformity with the lines and grades staked.

“Manhole Treatment,” per each.

The unit contract price per each for “Manhole Treatment” shall be full pay for furnishing all labor, tools, equipment, and materials required to prepare and coat the manhole as required by these specifications and the manufacturer. The unit cost per each shall also include confined space entry for the coating inspector.

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.1 Description

(December 31, 2014 Lacey GSP)

This section is revised to read:

This work includes installing culverts, storm sewers, sanitary sewers, and water mains. The contractor shall also follow Section 7-02, 7-04, 7-09 or 7-17 as it applies to the specific kind of Work.

7-08.2 Materials

(October 16, 2009 Lacey GSP)

Supplement this section with the following:

Bank Run Gravel for Trench Backfill shall be in accordance with Section 9-03.19.

Controlled Density Fill shall be in accordance with Section 2-09.3(1)E.

Imported Pipe Bedding shall be in accordance with Section 9-03.16.

7-08.3 Construction Requirements

7-08.3(1) Excavation and Preparation of Trench

(October 30, 2018 Lacey GSP)

Supplement this section with the following:

The contractor shall locate and preserve all existing utilities per RCW 19.122. Utility locations shown on the plans depict the physical features that were visible at the time of the survey. The City of Lacey is not responsible for the location of underground utilities that are marked or not marked in the field by other utility providers. Utility service laterals are not typically shown on plans or locatable and the contractor shall anticipate such services. The City will locate the meters and the mains. For service laterals, pursuant to RCW 19.122.030, the City will indicate a presence of an un-locatable service lateral and if requested can meet with the contractor or provide copies of available records. The Contractor shall have a crimping tool available during excavation to crimp any broken water services. Before commencing work, the contractor shall coordinate with One-Call services to determine the location of all utilities.

The Contractor shall pothole all apparent conflicts between existing utilities and proposed construction as approved by the Engineer. The Contractor shall notify Engineer of location and approximate time to complete prior to potholing. The Contractor shall notify the Engineer of any conflicts with the existing utilities and proposed work at least 3 days prior to proceeding with work. Potholing of the utilities shall be completed a minimum distance of 300 feet in front of pipe laying operations. No adjustment to the contract price or time will be made if the contractor fails to follow this specification. Potholing for Utility Crossings and Connections shall be performed by the Contractor using vacuum excavation truck or other

device approved by the Engineer. If the Contractor potholes prior to approval no compensation shall be made for the potholing.

The Contractor shall deflect pressurized pipe at the joints no greater than the maximum allowable deflection as determined by the pipe or fitting manufacturer to avoid conflicts with crossing utilities. Vertical bends and vertical thrust blocking shall be avoided by deflecting pipe either upwards or downwards prior to the utility crossing.

7-08.3(1)A Trenches

(December 31, 2014 Lacey GSP)

Section 7-08.3(1)A is supplemented with the following to the fourth paragraph:

All material excavated from trenches shall not be piled on the roadway.

7-08.3(1)C Bedding the Pipe

(February 25, 2015 Lacey GSP)

Section 7-08.3(1)C is supplemented with the following

If native material meets the requirements of 7-08.2 the Contractor shall use all suitable native material prior to using imported pipe bedding or bank run gravel. All material shall be approved by the Engineer prior to placement. If the Contractor places imported material prior to approval, no compensation shall be made for the imported material.

7-08.3(3) Backfilling

(October 30, 2018 Lacey GSP)

Supplement this section with the following:

For backfilling trenches for longitudinal runs of pipe, the Contractor shall use all suitable native material prior to using bank run gravel and/or controlled density fill. All native backfill material shall be approved by the Engineer prior to placement. If the Contractor places imported material prior to approval, no compensation shall be made for the imported material. All backfill material shall be compacted and tested according to Section 2-03.3(14)D.

For transverse runs of pipe including the service lines within the roadway prism, the Contractor shall use controlled density fill unless approved otherwise by the Engineer. All native material shall be excavated, hauled and disposed of offsite. All exceptions shall be approved by the Engineer.

At the end of each workday, the Contractor shall install a lift of temporary asphalt cold mix on top of the trench backfill, flush with the existing pavement. No trench excavation shall be exposed to traffic without a temporary asphalt cold mix sealing the existing pavement surface. If approved by the Engineer, the Contractor may choose to use HMA for Pavement Repair Cl. ½" PG 64-22 for permanent pavement repair if a bid item for this work has been included in the Proposal. All costs associated with providing and removal of temporary asphalt cold mix shall be incidental to the bid item for the pipe being installed and no other compensation will be allowed.

7-08.3(3)A Controlled Density Fill

(December 31, 2014 Lacey GSP)

Section 7-08.3(3)A is added with the following:

The Contractor shall use controlled density fill (CDF) as shown in the Plans or directed by the Engineer.

Controlled Density Fill shall meet the following requirements:

1750# Sand,
1750# Pea Gravel,
230# Water,
141# Portland Cement,
6 ounces Water Reducing Agent per 100 lbs. cement.

The Controlled Density Fill will require 24 hours of cure time, or as directed by the Engineer. Prior to backfill, all appurtenances shall be covered with 11 mill plastic as directed by the Engineer.

7-08.3(3)B Steel Plating for Pipe Trench

(February 25, 2015 Lacey GSP)

Section 7-08.3(3)B is added with the following:

The Contractor shall install steel plating over the trench per the plans to allow for CDF to fully cure and allow vehicle traffic to pass during non-working hours. The steel plating shall remain complete over the trench until the pavement repair is complete. This process shall be coordinated so that there will be minimum inconvenience to the public. All costs for all labor, materials, and equipment to furnish, place, assemble, install, maintain and remove the steel plates and associated materials shall be included in the unit contract price per foot of pipe installed and no additional compensation shall be allowed.

7-08.3(5) Pipe Abandonment

(April 30, 2015 Lacey GSP)

Add the following new section:

The Contractor shall abandon pipes where shown on the Plans or directed by the Engineer. For abandonment, removal, handling and disposal of asbestos cement piping, refer to Section 7-09.3(19)D of these Special Provisions. All abandonments shall be done after all new utility mains and service connections are installed unless authorized by the Engineer. Abandonments shall include all excavation, pipe cutting and removal, fittings, concrete plugging, and backfilling. Some abandonments require specific fittings as indicated on the Plans. All fittings required to complete the abandonment shall be included in the cost for the abandonment. Potholing per 7-08.3(1) to verify required fittings shall be done as directed by the Engineer. Pipe abandonments shall be completed in cooperation with the engineer in order to minimize disruption of utility service to the residents. If water services will be interrupted follow the requirements of 7-09.3(19)B.

All pipes to be abandoned shall have the first 2 linear feet of abandoned pipe filled/plugged with a watertight concrete grout. The inspector shall inspect the abandonment prior to backfilling.

In the case of an abandonment associated with a connection to an existing main, no payment shall be made for the bid item "Pipe Abandonment". The Contractor shall include all costs with these associated abandonments under the "Connect to Existing Water Main", "Connect to Existing Reclaimed Water Main", "Connect to Existing Gravity Sewer Main", or "Connect to Existing Sanitary Sewer Main" pay item. In addition, payment for "Pipe Abandonment" will only be paid for the locations and quantities called out on the plans or as directed by the Engineer.

7-08.3(6) Water Main/Sanitary Sewer Service Crossings

(February 25, 2015 Lacey GSP)

Add the following new section:

Notify the Engineer if the waterline is less than 18 inches above sanitary sewer. The minimum cover as shown on the plans may be reduced as approved by the Engineer to maintain minimum vertical separation.

The Contractor shall install the longest standard length of water pipe so that the joints will fall an equal distance from any sewer crossing. In some cases where minimum separation cannot be maintained, it may be necessary to encase the water main as directed by the Engineer. No concrete shall be installed unless specifically directed by the Engineer.

Costs to cut and place water pipe as specified shall be incidental to the water pipe line and no other pay will be allowed.

7-08.3(7) Connections to Existing Mains
(October 30, 2018 Lacey GSP)

Add the following new section:

The Contractor shall be responsible for determining the scope of work for connection to existing mains.

It shall be the Contractor's responsibility to field verify the location and depth of the existing main and the fittings required in accordance with 7-08.3(1) to make the connections to the existing mains including any pipe abandonment associated with the connections to existing mains. Connect to existing mains shall be completed in cooperation with the engineer in order to minimize disruption of service to the residents. All taps shall be a minimum of 36" away from the bell joint unless otherwise approved by the engineer.

Temporary blow-off assembly required for temporary or permanent release of air, chlorination or flushing purposes shall be provided by the Contractor as a part of the connection to existing main.

In the case of a live tap connection no payment shall be made for the bid item, "Connect to Existing Water Main". The Contractor shall include all costs associated with live taps under "_____ Inch Tapping Valve With Tapping Sleeve" pay items.

Payment for "Connect to Existing _____" will only be paid for the locations and quantities called out on the plans or as directed by the Engineer. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing main or the quantity of connecting pipes or other materials needed.

7-08.3(8) Detectable Marking Tape
(January 4, 2016 Lacey GSP)

Add the following new section:

All pipeline installed under this contract will be identified by a continuous color coded tracer marker. For pressure lines it shall be buried 12 inches to 18 inches below finished grade, and for sewer lines it shall be buried 24 inches to 30 inches below finished grade. The marker shall be imprinted every 30 to 40 inches in permanent black ink indicating the type of line buried below and shall also have the word "Caution" prominently shown.

The tracer marker shall be plastic non-biodegradable and have a metallic core or backing which can be detected by a standard metal detector.

In addition to the , detectable marking tape a U.S.E coated 12 gauge tracer wire shall be taped to all mains and service lines. The wire shall be brought up and tied to all valves and meter boxes. The tracer wire shall be looped up into all valve boxes per the plans. A low voltage grease-type splice kits, or better shall be used on all tracer wire connection points. After the wire nut is used to connect the wire together an overhand knot shall be tied just outside the connection to prevent it from coming apart. All service and mainline tracer wires shall be properly connected. A tracer wire magnesium anode shall be installed at all dead ends of the tracer / locate system. On long stretches of pipe anodes may be required at a minimum spacing of 1000'. The anode type shall be Copperhead Anode Part# ANO-14, 1.5# x 1.315"Dx18.5"L or approved equal. When connecting a new main or a new service to an existing main, the new tracer wire shall be connected to the existing tracer wire if available.

Special high strength locate wire may be required for directional drilling where the wire is allowed to be pulled in with the pipe or conduit. High strength wire shall be Neptco Trace-Safe 1800 lb. strength or approved equal and shall be connected with the wire manufacturer's connections.

Continuity or locate testing of the wire will be done by the City. The contractor shall give 72 hours notice for continuity testing by the City. The testing shall be conducted prior to paving or final restoration of landscape areas. The locating device will be connected to the tracer wire at any or all Gate Valves and Services and tracer wire shall transmit an acceptable signal strength as determined by the City for a minimum of 300 feet. Contractor will locate and repair any failed connections. The wire shall be furnished and installed by the Contractor.

Color coding of tape and wire shall be as follows:

- a) Water – Blue
- b) Sewer – Green
- c) Reclaimed – Purple
- d) Electrical conduits – Red
- e) Communication Conduits - Orange

Installation of the pipeline tracer marker and 12 gauge coated copper wire is considered incidental to the construction of the pipe and conduits and no other compensation will be allowed.

7-08.3(9) Concrete Thrust Blocking

(February 25, 2015 Lacey GSP)

Add the following new section:

Install thrust blocking at bends, tees, dead ends, and crosses and as shown in the plans and as directed by the Engineer. Thrust Blocking shall be commercial concrete poured against undisturbed earth. An 11 mil plastic barrier shall be placed between all thrust blocks and fittings. The calculations for thrust blocking are as follows:

Thrust at fittings in pounds at 225 pounds per square inch of water pressure.

Pipe Diameter	90° Bend	45° Bend	22-1/2° Bend	11-1/4° Bend	Dead End or Tee
4"	3,600	2,000	1,000	500	2,600
6"	8,000	4,400	2,300	1,200	5,700
8"	14,300	7,700	4,000	2,000	10,100
10"	22,300	12,100	6,200	3,100	15,800
12"	32,000	17,400	8,900	4,500	22,700

14"	43,600	23,600	12,100	6,100	30,800
16"	57,000	30,800	15,700	7,900	40,300
18"	72,000	39,000	19,900	10,000	51,000

SAFE SOIL BEARING LOADS:

Soil	Pounds per Square Foot
Muck, Peat	0,000
Soft clay	1,000
Sand	2,000
Sand and gravel	3,000
Sand and gravel cemented with clay	4,000

Ecology blocks may be used for thrust blocking if approved by the Engineer.

Installation of thrust blocking is considered incidental to the construction of the pipe and no other compensation will be allowed.

7-08.4 Measurement

(October 30, 2018 Lacey GSP)

Supplement this section with the following:

- “Imported Pipe Bedding” will be measured per ton.
- “Bank Run Gravel for Trench Backfill” will be measured per ton.
- “Utility Potholing”, will be measured per hour.
- “Pipe Abandonment” will be measured per each, for each section called out on the Plans.
- “Controlled Density Fill” will be measured by the cubic yard for the quantity of material placed.
- “Connect to Existing Plumbing, Sewer” will be measured per each
- “Connect to Existing Water Main” will be measured per each location called out in the plans.

7-08.5 Payment

(October 30, 2018 Lacey GSP)

Supplement this section with the following:

“Bank Run Gravel for Trench Backfill” per ton and “Imported Pipe Bedding” per ton.
The unit contract price per ton for "Bank Run Gravel for Trench Backfill" and “Imported Pipe Bedding” shall be full compensation for all labor, material and equipment to furnish, place and compact the backfill. Native material used for backfill shall be considered incidental to the pipe installation and no additional compensation shall be allowed.

Payment shall be based on actual amount of imported bedding or bank run gravel for trench backfill used. The Engineer reserves the right to adjust the bid proposal quantity as required.

There will be no additional compensation made for the removal and wasting of trench excavation that is unsuitable for backfill.

If no bid item for “Bank Run Gravel for Trench Backfill” or “Imported Pipe Bedding” is included, any work described in these sections shall be included in the unit contract price per foot of pipe installed and no additional compensation shall be allowed.

“Utility Potholing”, per hour shall be full compensation for all labor, material and equipment necessary to excavate, backfill, and restore the utility location(s) required by the Engineer and determine its vertical and horizontal location. Utility potholing will only be paid for work approved by the Engineer in advance.

If no bid item for “Utility Potholing” is included, any work described in this section shall be incidental to the project.

“Pipe Abandonment”, per each.

The unit contract price per each for “Pipe Abandonment” shall be full pay for providing all labor, tools, equipment and materials necessary to abandon the specified piping including the plug material.

If no bid item for “Pipe Abandonment” is included, any work described in this section shall be incidental to the project.

“Controlled Density Fill”, per cubic yard.

If no bid item for “Controlled Density Fill” is included, any work described in this section shall be incidental to the project.

“Connect to Existing Plumbing, Sewer” per each

The unit contract price for each “Connect to Existing Plumbing, Sewer” shall be full compensation for all labor, materials, and equipment required to provide, install and connect the existing sewer plumbing from the point where it leaves the building foundation to the new 6 inch service line as shown on the plans.

This includes, but is not limited to all miscellaneous couplings, fittings, and adapters required. For purposes of payment, there will be no distinction made for the level of difficulty of disconnecting the existing plumbing from the septic system and redirecting the flow to the new service line. Any existing cleanout located near the building foundation shall remain in place unless a change in direction of flow is required. If removal of the existing cleanout is required, it shall be replaced as part of the “Connect to Existing Plumbing, Sewer” bid item at no extra cost. If a cleanout/cleanouts are not present near the foundation of the building, a new cleanout will be provided for each sewer line exiting the foundation as part of this bid item. While each building shown on the plans is believed to only have two sewer lines connecting the building to the existing septic system, there will be no distinction made for the number of sewer lines to be connected to the new 6 inch service line.

“Connect to Existing Water Main”, per each.

The unit contract price for "Connect to Existing Water Main" shall be full pay for providing all labor, tools, equipment, and materials necessary to connect to the existing main. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing main or the quantity of connecting pipes or other materials needed. If no such item exists all costs shall be incidental to the project and no additional compensation shall be allowed.

7-09 WATER MAINS

7-09.1 Description

[\(January 3, 2017 Lacey GSP\)](#)

Supplement this section with the following:

Various transition couplings, flanged coupling adapters, transition couplings with follower flanges and gaskets, and other miscellaneous couplings and fittings may be required for performance under this project.

It shall be the Contractor's responsibility to determine what specific couplings, adapters, and fittings that will be used to make connections shown on the plans. The Engineer has shown specific existing material types, and nominal sizes using the best information available. The Engineer has not determined the specific dimensions of existing materials. The Contractor shall submit a sketch showing configuration and materials of the proposed connection for review and approval.

Where vertical bends or pipe ends are required, the pipe and fittings shall be restrained on each side of the bend for a distance as recommended by the manufacturer.

7-09.2 Materials

(April 2, 2018 Lacey GSP)

Supplement this section with the following:

All pipe for water mains shall have flexible gasket joints and shall comply with one of the following two types unless otherwise specified on the plans:

Ductile iron pipe conforming to AWWA C 151 Standard Thickness Class 52 and have a cement mortar lining conforming to AWWA C 104. All pipes shall be joined using non-restrained joints that shall be rubber gaskets, push on type or mechanical joint, conforming to AWWA C 111.

PVC C900 pipe conforming to the latest revision of the following specifications, blue or white PVC Compound ASTM D1784 Class 12454B, Gasket ASTM F477, Manufacturing ASTM D2241. Pipe shall be certified NSF and meet requirements of Dimension Ratio 14.

All pipe, 12 inches or larger in diameter shall be ductile iron pipe unless PVC is approved by the Engineer.

Where restrained joint pipe is specifically identified on the plans,

Ductile iron pipe, use restrained joint pipe with "Field Lok" type gaskets rated to 350 p.s.i and tested in accordance with ANSI/AWWA C111/A21.11, TR Flex as furnished by U.S. Pipe, Piranha as furnished by Romac, or Gripper Gasket LLC.

PVC pipe 10 inches or less in diameter, use PVC C900/RJ Restrained Joint Pipe Certa-Lok by CertainTeed Corporation, Eagle Loc 900 by JM Eagle or Diamond Lok-21 by Diamond Plastics. The plastic pipe shall conform to the latest revision of the following specifications, PVC Compound ASTM D1784 Class 12454, Gasket ASTM F477, Manufacturing ASTM D2241. Pipe shall be certified NSF and meet requirements of Dimension Ratio 14.

PVC pipe larger than 10 inches in diameter, the pipe shall be restrained using bell joint restraint devices that have a working pressure of at least 200 psi with a minimum safety factor of 2:1 and shall be EBAA Iron, Inc., MEGALUG series 2800, Uni-Flange Series 1390, Romac Industries, Inc., U.S. Gripper, or approved equal.

PE Pipe: All 2 inch and smaller diameter pipe shall be NSF Approved, PE3408 blue polyethylene pipe manufactured from virgin materials. Pipe shall meet the following specifications:

- ANSI/AWWA C901
- ASTM D1248, ASTM D 3350, ASTM D 2239, ASTM D 3035 and ASTM D 2737,

- Pressure Class 200, SIDR - 7(Standard Inside Dimension Ration-Pressure Rated),
- Cell classification 345464C,

Pipe shall be manufactured by Interstate Plastics, Philips Driscopipe, Eagle Pacific, Superlon Plastics, U.S. Poly or approved equal.

All fittings for ductile iron pipe or PVC pipe shall be ductile iron compact fittings conforming to AWWA C 153 or conforming to AWWA C 110 and C 111. All shall be cement mortar lined conforming to AWWA C 104. Plain end fittings shall be ductile iron if mechanical joint retainer glands are installed on the plain ends. All fittings shall be flanged or mechanical joint.

Fittings with restrained joints shall be mechanical joint fittings with a mechanical joint restraint device. The mechanical joint restraint device shall have a working pressure of at least 250 psi with a minimum safety factor of 2:1 and shall be EBAA Iron, Inc., MEGALUG, Ford Uni-Flange Series 1400, Romac Industries, Inc., U.S. Gripper, or approved equal.

All pipe shall be new and in good condition with no visible signs of UV damage, fading or other defects.

7-09.3(19)B Maintaining Service

(December 31, 2014 Lacey GSP)

Supplement this section with the following:

Where existing water services must be interrupted, the Contractor shall notify the Engineer as to the date, time and duration of the interruption, a minimum of 72 hours (3 working days) prior to the interruption. The Contractor shall field verify pipe diameter and fittings prior to requesting a service interruption. The City will notify customers involved or affected by the water service interruption. The Contractor shall make every effort to schedule water main construction with a minimum interruption of water service. Water service can not be interrupted before 9:00 am.

7-09.3(19)D Asbestos Cement Water Main

(April 30, 2015 Lacey GSP)

Add the following new section:

Cutting, tapping, connecting to, or abandoning an Asbestos Cement Water Main shall be in accordance with the rules and regulations set forth by the Washington State Department of Labor and Industries, and as directed by the Engineer. All costs of complying with current regulations shall be included in the unit contract price for "Connect to Existing Water Main", "Pipe Abandonment", and "____ Inch Tapping Valve With Tapping Sleeve" as applicable.

Remove Asbestos Cement Water Pipe

The Contractor shall remove asbestos cement water pipe from the site as shown in the Plans. Costs for removal of any fittings and appurtenances attached to the AC pipe shall be incidental to the pay item "Remove Asbestos Cement Water Pipe". State certified hazardous removal specialists or sub-contractor must be hired to perform the removal. The Contractor shall notify Department of Labor and Industries and the Olympic Air Pollution Control Authority and acquire all required permits, and shall coordinate with the Engineer, prior to beginning the removal work. It shall be the Contractor's responsibility to furnish all necessary safety equipment and protective clothing and to protect the adjacent environment in accordance with applicable environmental and safety laws and regulations. Removed pipe, conduits and debris shall be properly handled, transported, and disposed. The Contractor shall submit to the Engineer documentation from certified hazard disposal site showing the chain of custody where asbestos cement pipe is disposed.

Abandon Asbestos Cement Water Pipe

Asbestos Cement Pipe with less than 4 feet of cover from finished grade or where shown on the plans or as directed by the Engineer shall be abandoned in-place per 7-08.3(5).

Asbestos Handling and Disposal

Prior to performance of any contract work, the Contractor shall obtain all permits from, and provide notification to, the Washington State Department of Labor and Industries, the U.S. EPA, the local air pollution control agency, and other permitting and regulatory agencies with jurisdiction over the work involving asbestos as the law requires.

Prior to commencing asbestos related work, the Contractor shall provide the Engineer with written verification of approvals and notifications that have been given and/or obtained from the required jurisdictional agencies, and the Contractor's schedule for all work involving asbestos removal. The schedule shall include the sequencing and scheduling of asbestos related work, and coordination with subcontractors. The Contractor shall notify the Engineer when all approvals have been received and notifications have been made, as required by the agencies involved.

The Contractor shall ensure the safety of all workers, visitors to the site, and the general public in accordance with all applicable laws, rules, and regulations.

The Contractor shall designate a Washington State Certified Asbestos Supervisor (CAS) to personally supervise the asbestos removal and to ensure that the handling and removal of asbestos is accomplished by certified asbestos workers, pursuant to Washington State Department of Labor and Industries standards. The Contractor shall ensure that the removal and disposal of asbestos meets the requirements of EPA regulation 40 CFR Part 61, local health department regulations, and all other applicable regulations.

7-09.3(24) Disinfection of Water Mains **(April 2, 2018 Lacey GSP)**

Modify this section with the following:

The Contractor shall provide extra safeguards to prevent contamination, rocks, sand or foreign matter from accumulating in the pipe.

Unless otherwise approved by the Engineer, the method for disinfecting water mains shall be by dry Calcium Hypochlorite conforming to ANSI/AWWA B300 and NSF/ANSI 61 as defined in Section 7-09.3(24)D of the WSDOT Standard Specifications and AWWA C651-14 Sec. 4.1.3 and Sec. 4.3. If adhesives are used to secure chlorine tablets to the pipe interior, they must meet the requirements of NSF/ANSI 61 and AWWA C651-14 Sec. 4.3.3.

Pipe and fittings used in connections to existing mains shall be less than one pipe length (generally less than 20 ft), and spray disinfected, swabbed or immersed for disinfection as per AWWA C651-14 Sec. 4.10 and 4.11 (1% chlorine solution).

Bacteriological testing shall be done by the City per AWWA C651-14 Sec. 5.1 Option A or B. Option B may not be able to be used if the pressure in the line is too low to allow the sample tap to run continuously for 15 minutes without opening the system valve. Bacteriological testing must be scheduled with the Engineer at least 3 days in advance and can not be done on Fridays. Results are typically provided within four (4) working days but may take up to (7) working days. If the samples fail to produce acceptable results, the main shall be re-chlorinated by the continuous-feed or slug method until satisfactory results are obtained per AWWA C651-14.

The Contractor shall flush the new main. Flushing mains shall require the assistance of City utility personnel and shall be coordinated with the Engineer 3 working days in advance.

7-09.3(24)A Flushing

(December 31, 2014 Lacey GSP)

Modify this section by deleting the first sentence of the fourth paragraph and replacing it with the following:

The Contractor shall be responsible for disposal of treated water flushed from mains and shall neutralize the wastewater for protection of aquatic life in the receiving water and their associated surface and ground water tributaries, before disposal into any natural drainage channel, i.e., receiving water, waters of the State, including wetlands.

7-09.4 Measurement

(April 30, 2015 Lacey GSP)

Supplement this section with the following:

“Blow-off Assembly for Extendable Main” shall be measured per each.

“Remove Asbestos Cement Water Pipe” shall be measured per linear foot.

7-09.5 Payment

(October 30, 2018 Lacey GSP)

Supplement this section with the following:

The pay item in quotes is revised to read, “__ Inch Water Main.”

The unit contract price for “__ Inch Water Main.” per linear foot shall be full pay for furnishing all labor, materials, tools and equipment, necessary to install the water main, complete in-place, including but not limited to pipe, couplings, adaptors, crosses, tees, bends, reducers, caps, plugs, restrained joint fittings, bend markers, and other fittings not specifically identified on the plans. Further, all excavation, bedding, backfilling with native material, compacting, temporary patching, formed thrust blocking, testing, flushing, and disinfecting shall also be included in the unit contract price. Items not specifically identified on the plans but necessary to properly install the water main shall be considered incidental to the water main and no other compensation shall be allowed.

“Blow-Off Assembly for Extendable Main”, per each.

The unit contract price per each for “Blow-Off Assembly for Extendable Main” shall be full pay for furnishing all labor, materials, tools and equipment, necessary to the cap on the new water main, thread and install required valves, valves boxes, brass pipe, bends, couplings and other fittings not specifically called out on the plans.

Temporary blow-off assembly required for temporary or permanent release of air, chlorination or flushing purposes shall be provided by the Contractor as a part of the new water main. The unit contract price for “__ inch Water Main” shall be full pay for providing all labor, tools, equipment, and materials necessary to abandon the pipe including temporary blow-off assembly.

7-12 VALVES FOR WATER MAINS

7-12.2 Materials

(April 2, 2018 Lacey GSP)

Supplement this section with the following:

All valves shall be non-rising stem, resilient wedge gate valves conforming to AWWA C515 unless otherwise specified and shall be American AVK, Clow, EJ Flowmaster, Kennedy, M & H, Mueller, Waterous Series 2500. The minimum cover over the valve, measured from the valve operator nut to finished grade, shall be 20 inches. Gate valves 14 inches and larger that are unable to provide 20 inches of cover over the valve shall be factory equipped with a bevel gear actuator for horizontal installation as directed by the engineer. The bevel gear actuator shall be rated for buried installations.

Butterfly valves shall meet all the requirements of AWWA C504 Class 150B and shall be Allis Chalmers, Kennedy, Linseal III, M&H, Mueller, Pratt Groundhog.

Valves shall be bolted to the tee and the cross with flanged ends. Joint materials for flanges shall be 1/8 inch thick one piece, cloth inserted rubber gaskets conforming to AWWA C107-78.

Bolts for all flanged and mechanical joints shall be high strength, low alloy steel bolts only, meeting the current provisions of American National Standard ANSI/AWWA C111/A 21.11 for rubber gasket joints for cast iron or ductile iron pipe and fittings.

Valve boxes shall be East Jordan Iron Works #248 or Olympic Foundry VB-950, 6-3/4 inch OD with recessed handle type iron cover marked "LACEY WATER."

Tapping sleeves shall be stainless steel with ductile iron flange and shall be Romac "SST" or approved equal.

Two inch air and vacuum release valve shall be a two inch ARI D-040. Fiberglass enclosure shall be Vent Guard Model No. AVG1824, Beige in color, manufactured by Hot Box, Inc. (800) 736-0238. An insulation pouch shall be placed over the air release assembly. The 18" x 24" insulation pouch shall be beige in color with the opening on the 18" side, and manufactured by DeKorra Products LLC

Valve insertions shall be Romac InsertaValve or Hydra-Stop Insta-Valve Plus and be completed by an experienced installer.

7-12.3(3) Raise Valve Box to Grade

(November 20, 2020 Lacey GSP)

Add the following new section:

Where shown on the plans or where directed by the Engineer, existing valve boxes shall be raised to the grade as staked or otherwise designated by the Engineer. The Contractor shall supply and install new valve boxes and covers as part of raising valve boxes to grade. The finished installation shall conform to the detail shown in plans.

All new and existing valve boxes located in any unpaved area shall have a concrete pad poured or placed entirely around each valve box. The pad shall be a minimum of 36 inches by 36 inches for each valve box. The concrete shall be commercial concrete or better with a minimum thickness of 8 inches.

Maximum distance allowed from edge of iron ring or frame of appurtenance to outside edge of pavement restoration is 18 inches. Patches larger than this or clean misses (e.g. where the Contractor excavates in the new pavement mat and does not find the iron appurtenance to raise) shall result in a credit from the Contractor to the City of \$1000 for each occurrence. Further, the Contractor shall repair the pavement patch as directed by the Engineer.

See Section 5-04.3(26) Utility Access for additional requirements.

7-12.5 Payment

(April 2, 2018 Lacey GSP)

Supplement this section with the following:

“Raise Valve Box to Grade,” per each.

" _____ Inch Gate Valve," per each.

The payment for the various items specified above shall be full pay for furnishing all labor, materials, tools, and equipment necessary to install the unit complete in place on the water main, including trenching, concrete pads and concrete or asphalt restoration of adjacent areas, disinfecting, testing, blocking of valve, valve box and marker post.

7-17 SANITARY SEWERS

7-17.1 Description

(October 29, 2010 Lacey GSP)

Supplement this section with the following:

Various transition couplings, flanged coupling adapters, transition couplings with follower flanges and gaskets, and other miscellaneous couplings and fittings may be required for performance under this project.

It shall be the Contractor's responsibility to determine what specific couplings, adapters, and fittings that will be used to make connections shown on the plans. The Engineer has shown specific existing material types, and nominal sizes using the best information available. The Engineer has not determined the specific dimensions of existing materials.

7-17.2 Materials

(November 20, 2020 Lacey GSP)

Delete this section and replace with the following:

Gravity Sewer Pipe - Pipe used for gravity sewer shall meet the requirements of WSDOT Section 9-05.12(1) Solid Wall PVC Sanitary Sewer Pipe, unless as noted otherwise on the plans. All pipe shall be white or green in color.

PVC Pressure Pipe – All pipe less than 4 inches in diameter shall be Schedule 80 PVC, ASTM D1784. All pipe 4 through 12 inches in diameter, shall be PVC C900 DR 14, meeting the requirements of WSDOT Section 9-30.1. A combination of solvent weld and PVC threaded schedule 80 fittings may be required to properly plumb the pump discharge piping to and through the valve vault. All pipe shall be grey, green or white in color. No sewer pipe installed in this project shall be blue.

HDPE (High density Polyethylene Pipe) Pressure Pipe- All HDPE pipe shall be Hi density ASTM D 3350, SDR 11 4710 socket welded or butt fusion welded and be sized by inside pipe diameter (see table below). IPS HDPE pipe shall be used; however, in cases where the required inside diameter of the pipe cannot be obtained using IPS HDPE, ductile iron pipe size (DIPS HDPE) pipe may be required. All HDPE pipe used for sewer shall be green or black with a green stripe manufactured on the pipe.

Table: Typical Sizes And Dimensions For Iron Pipe Size (IPS) PE3408
High Density Polyethylene (HDPE) Pipe

PRESSURE RATING		DR 11 (160 PSI)		
NOMINAL SIZE	ACTUAL O.D.	MINIMUM WALL THICKNESS	AVERAGE I.D.	WEIGHT LB/LF
2"	2.375"	0.216"	1.917"	0.639
3"	3.500"	0.318"	2.825"	1.387
4"	4.500"	0.409"	3.633"	2.294
5"	5.375"	0.489"	4.339"	3.272
5"	5.563"	0.506"	4.491"	3.505
6"	6.625"	0.602"	5.348"	4.971
7"	7.125"	0.648"	5.752"	5.750
8"	8.625"	0.784"	6.963"	8.425
10"	10.750"	0.977"	8.678"	13.089
12"	12.750"	1.159"	10.239"	18.412
14"	14.000"	1.273"	11.302"	22.199
16"	16.00"	1.455"	12.916"	28.994
18"	18.00"	1.636"	14.531"	36.696
20"	20.00"	1.818"	16.145"	45.304
22"	22.00"	2.000"	17.760"	54.818
24"	24.00"	2.182"	19.375"	65.237
26"	26.00"	2.364"	20.989"	76.563
28"	28.00"	2.545"	22.604"	88.795
30"	30.00"	2.727"	24.218"	101.934

Note:

Average inside diameter calculated using nominal OD and minimum wall plus 4% for use in estimating fluid flows. Actual ID will vary.

Pipe Restraint - Where pipe is specified as restrained joint pipe 4 inches through 10 inches in diameter, use PVC C900/RJ Restrained Joint Pipe Certa-Lok by CertainTeed Corporation, Eagle Loc 900 by JM Eagle or Diamond Lok-21 by Diamond Plastics. The plastic pipe shall conform to the latest revision of the following specifications, PVC Compound ASTM D1784 Class 12454, Gasket ASTM F477, Manufacturing ASTM D2241. Pipe shall be certified NSF and meet requirements of Dimension Ratio 14.

Pipe Restraint - Where specified as restrained joint pipe larger than 10 inches in diameter, the pipe shall be restrained using bell joint restraint devices that have a working pressure of at least 200 psi with a minimum safety factor of 2:1 and shall be EBAA Iron, Inc., MEGALUG series 2800, Uni-Flange Series 1390, Romac Industries, Inc., U.S. Gripper, or approved equal.

Ductile Iron Pipe - All ductile iron pipe shall conform to ANSI/AWWA C151/A21.51. Thickness class 52 specifications. Ductile iron pipe for sewer shall be ordered as bare pipe without cement lining and without outside coating. The pipe shall be lined on the inside to a minimum of 35 mils thick with Protecto 401 or 15 mils thick with 3M ScotchKote 134 fusion bonded epoxy. The pipe shall be coated on the outside to a minimum of 20 mils thick with Ceramawrap Ceramic Epoxy or 15 mils thick with 3M ScotchKote 134 fusion bonded epoxy. Coatings shall be applied according to the manufacturers'

requirements by a certified applicator of the product. Coatings shall not be applied to pipe, fittings or valves in the field by the contractor.

Ductile Iron Fittings for sewer mains - All ductile iron pipe fittings shall be compact ductile iron style and shall be ordered bare (without cement lining or outer coating) and then be coated with epoxy rated for sewer by a professional coating firm. Coatings applied by the fitting manufacturer shall be excepted pending approval of the coating material submitted. Coatings/linings shall be Protecto 401, Ceramawrap or 3M ScotchKote 134 per the Ductile iron pipe specifications shown above. Mechanical joint (MJ) fittings shall be installed with an approved mechanical joint restraint device. The mechanical joint restraint device shall have a working pressure of at least 250 psi with a minimum safety factor of 2:1 and conform to ANSI A21.10 and AWWA C110. Products shall be EBAA Iron, Inc., MEGALUG Series 2000PV, Romac Industries, Inc., U.S. Gripper, or approved equal.

Valve boxes shall be EJ Ironworks or Olympic Foundry VB-950, 6-3/4 inch OD with recessed handle type iron cover marked "CITY OF LACEY SEWER".

All pipe shall be new and in good condition with no visible signs of UV damage, fading or other defects.

7-17.3(2) Cleaning and Testing

7-17.3(2)A General

[\(March 14, 2016 Lacey GSP\)](#)

The first sentence shall be deleted and replaced with the following:

All sewer force mains and appurtenances shall be tested in sections of convenient length under a hydrostatic pressure of not less than 175 psi for 15 minutes.

Supplement this section with the following:

All pipe installed shall be tested in accordance with WSDOT Section 7-09.3(23).

All sanitary sewer pipe, including laterals, shall be high-velocity cleaned and televised prior to paving or substantial completion, whichever is sooner. Hydrant flushing lines is not an acceptable method of cleaning. If rocks or other debris are found in manholes, the Contractor shall re-clean the sewer pipe.

7-17.3(2)H Television Inspection

[\(December 19, 2019 Lacey GSP\)](#)

Delete this section and replace with the following:

The television inspection shall be completed with a CCTV color camera recorded in standard DVD format. CCTV inspection crawler shall be equipped with a flow depth indicator, such as a 1-inch steel bar or ball, to measure the magnitude of pipe vertical fluctuation. If multiple television inspections of the same pipe are required, they shall be completed in the same direction each time.

Television inspection shall meet related Pipeline Assessment and Certification Program (PACP) codes developed by NASSCO, Inc. Television inspection of pipelines shall be performed by experienced personnel trained in identifying structural and operational defects, obstacles and service connections by closed circuit color television. Personnel shall be PACP-trained and certified field technicians. No sags or bellies in the pipe shall be greater than ½ inch in depth.

The Contractor shall supply one paper copy and one electronic copy of the pipe inspection form for each pipe reach televised. Two copies of electronic video files shall be provided in DVD format. The Contractor shall submit DVDs and written reports for review within three (3) working days after line televising.

Acceptance of the line will be made after the television inspection DVD has been reviewed and approved by the Engineer.

The cost incurred in making all television inspections shall be included in the unit contract price per foot of pipe installed and no additional compensation shall be allowed.

7-17.3(4) Manhole Rehabilitation

(*****)

Section 7-15.3(4) is added with the following:

The Contractor shall utilize the existing structure that is the wet well for the City of Lacey Lift Station 12 and convert it to a gravity manhole structure to convey gravity sewer to the proposed point of connection per the plans and these specifications.

Work shall include but not limited to:

- Coordination with the City for salvaging components of the lift station per section 2-02 Removal of Structures & Obstructions and these specifications.
- Removing any ladder rungs as required per plan.
- Furnishing and placing cement concrete and channeling the structure to function as a manhole per the plans and specifications.
- Disconnecting the existing piping and core drilling the existing structure's penetrations to allow for link seal as shown on the plans.
- Connecting new piping to existing structure as shown on the plans.
- Furnishing and installing eccentric flat slab top, riser sections, ring and cover and concrete collar including raising to grade per the plans and specifications.
- Coordination with Puget Sound energy on electrical service abandonment.

The following items are not paid for in this section but other sections in the specifications.

- Crushed Surfacing Top Course
- Bypass pumping
- Manhole Treatment

7-17.3(5) Lawn and Landscape Repair

(September 23, 2013 Lacey GSP)

Section 7-15.3(5) is added with the following:

The Contractor shall limit damage of existing lawn and landscaping during service and service line installation. All damage shall be repaired equal to or better than the existing condition as shown in the preconstruction video. All costs for restoration shall be included in the unit price per service.

7-17.3(6) Tank Abandonment

(March 20, 2015 Lacey GSP)

Add the following new section:

The Contractor shall abandon the individual septic systems and associated drain fields as shown on the Plans and referenced in these Specifications, including section 7-20. For abandonment, all County and State requirements shall be met. All abandonments shall be done after all new utility mains and service connections are installed unless authorized by the Engineer. Abandonments shall include all excavation, pipe cutting and removal, fittings, concrete plugging, and backfilling. Some abandonments require specific fittings as indicated on the Plans. Any required pumping and filling material, all fittings required to complete the abandonment shall be included in the cost for the abandonment. Abandonments shall be completed in cooperation with the engineer in order to minimize disruption of utility service to the residents.

7-17.4 Measurement

(October 30, 2018 Lacey GSP)

Section 7-17.4 is supplemented with the following:

“Side Sewer Connection” shall be measured per each.

“Connect to Existing Sewer Manhole” shall be measured per each location called out on the plans.

“___ Inch Pipe Encasement”, per linear foot.

“Tank Abandonment” shall be measured per each septic system serving a parcel of land as called out on the plans.

“Manhole Rehabilitation” shall be measured per lump sum.

7-17.5 Payment

(October 30, 2018 Lacey GSP)

Section 7-17.5 is supplemented with the following:

"___ Inch Diameter Sewer Pipe", per linear foot.

The unit contract price per linear foot for "___ Inch Diameter Sewer Pipe", shall be full compensation for all labor, material, and equipment to furnish, place, assemble, and install sewer line, complete in place, including all wyes, tees, caps, plugs, clean outs, special fittings, joint materials, commercial concrete, bend markers, adjustment of inverts to manholes, dewatering, bypass pumping, cleaning, televising inspection and testing. Further, all excavation, hauling, disposal, compaction, temporary patching and other required earthwork shall be included.

“Side Sewer Connection”, per each.

The unit contract price per each for “Side Sewer Connection”, shall be full pay for furnishing all labor, materials, tools, and equipment, necessary or incidental to furnishing and installing the unit complete in place on the sewer main, including trenching and temporary patching, but not be limited to, service wye, tapping the pipe, service lines, cleanouts, and all miscellaneous couplings, fittings, and adapters to install the service lines and connect to the existing service, jointing, testing, blocking of valves, valve boxes, wyes, and other items necessary for the unit to be installed complete in-place. For purposes of payment, there will be no distinction made for the difficulty of disconnecting the old service and reconnecting to the new service or the length of service line required for each new service.

“Connect to Existing Sewer Manhole”, per each.

The unit contract price per each for “Connect to Existing Sewer Manhole” shall be full pay for furnishing all labor, tools, equipment, and materials required to connect to existing manhole in place, including but not be limited to concrete, concrete collars and sealants. Further, all excavation, coring, haul, backfill, testing, and accessories shall be included in the unit contract price. For purposes of payment, there will be

no distinction made for the difficulty of connecting to the existing sewer manhole or the quantity of connecting pipes or other materials needed. Items not specifically identified on the plans but necessary to properly connect to manhole shall be considered incidental and no other compensation shall be allowed.

"Dewatering Sewer Trench", lump sum.

The lump sum contract price for "Dewatering Sewer Trench" shall be full pay for submitting a Dewatering Plan, and all Work required to dewater the sewer trench during construction and keep the work area dry during construction and backfilling as specified. If no bid item for "Dewatering Sewer Trench" is included, any work described in this section shall be incidental to the project.

"Tank Abandonment", per each.

The payment for "Tank Abandonment", shall be full pay for furnishing all labor, tools, equipment, and materials necessary to complete the requirements of this section and section 7-20 to abandon the existing septic system including specified individual septic tanks, pump chambers and associated drain fields per Thurston County Environmental Health standards. Further, all excavation, haul, backfill, accessories, and removal of riser lids shall be included in the unit contract price. For purposes of payment, there will be no distinction made for the difficulty of tank abandonments. Items not specifically identified on the plans but necessary to properly abandon the tank shall be considered incidental and no other compensation shall be allowed.

"Manhole Rehabilitation", per lump sum.

The unit contract for "Manhole Rehabilitation", shall be full pay for furnishing all labor, tools, equipment, and materials necessary to furnish, place, assemble, install and convert the existing lift station wet well into a functioning manhole complete in place, as outlined in the plans and specifications.

7-20 ABANDON EXISTING SEPTIC SYSTEM

Add the following new section:

7-20.1 Description

[\(January 15, 2020 Lacey GSP\)](#)

This work consists of abandoning the existing septic systems per the requirements of the contract plans and specifications and "Tank Abandonment" from the preceding section 7-17.

7-20.2 Materials

[\(January 15, 2020 Lacey GSP\)](#)

Concrete used to plug the existing pipes shall meet the requirements of WSDOT Std. Spec. 9-04.3.

Controlled Density Fill (CDF) shall meet the requirements of WSDOT Std. Spec. 2-09.3(1)E.

Gravel Backfill for Walls shall meet the requirements of WSDOT Std. Spec. 9-03.12(2).

Topsoil Type C shall meet the requirements of WSDOT Std. Spec. 9-14.1(3) and these Special Provisions.

Seeding and fertilizer shall meet WSDOT Std. Spec. and Special Provision 8-01.

Bark shall meet the requirements of WSDOT Std. Spec. 9-14.4(3).

7-20.3 Construction Requirements

(January 15, 2020 Lacey GSP)

The Contractor shall obtain and comply with all Thurston County Department of Health requirements for abandoning the On-site Sewage System (OSS) according to the plans and these specifications. The Contractor will be responsible for filling out any applications and paying any fees associated with the abandonment of the existing OSS.

Prior to abandoning any tanks the Contractor shall submit photos to the City of the areas surrounding the construction area that could possibly be disturbed due to construction activities. The photos shall be taken with a camera that is 8 megapixels or better and shall be of sufficient quality to show identification of plant species and existing conditions of adjacent structures, walkways, driveways, landscaping foundations and walls. Contractor shall take care to minimize disturbance of any plant material or landscaping when performing septic tank abandonment, including side sewer stub and connection. If any plant material or landscaping will be disturbed by construction operations, the Contractor shall coordinate with the Engineer for approval to remove landscaping as required. Restore lawn and landscaping per section 8-05.

The Contractor shall provide the homeowner/resident with a written notice a minimum of 5 days prior to construction activities. The Contractor shall provide a copy of the written notice concurrently to the City. The City is responsible for obtaining the written "Construction Memorandum of Understanding" signed by the property owner. The Contractor shall not begin any construction activities on private property unless authorized by the Engineer.

The existing septic tanks shall be abandoned per the plans and these specifications. The Contractor shall field verify the location of the septic tanks, pump chambers, piping, appurtenances and also verify pipe sizes and material types prior to ordering parts. Methods of locating the previously listed shall include potholing, locating equipment, dye testing etc. which is included in the work for abandoning the existing septic system. The septic tanks and any additional pumping chambers, if any, shall be pumped out by a Thurston County certified sewage system pumper listed at www.co.thurston.wa.us/health/ehoss/cert_prof.html. The Contractor shall obtain a completed slip certifying the pumping and provide to Engineer. The existing septic tank shall not be used between the time of pumping and abandonment.

The Contractor shall be responsible for properly disposing effluent laden soils, drainfield rock, contaminated soils, drain field pipe, and other septic system components. All disposal shall be in accordance with all regulatory requirements.

If the Contractor can't utilize the existing electrical connection providing power to the existing pump chamber for a proposed grinder system as identified on the plans, then the circuit shall be decommissioned per current NEC and L & I requirements/codes. The decommissioning of the circuit shall include removing the disconnect switch box, alarm and any visible conduit. Any damage done to the structure during decommissioning activities shall be repaired by the Contractor without any additional compensation.

Existing sewer pipes shall be plugged on the inlet and outlet ends of the existing septic tanks for a distance of three pipe diameters with concrete. Care shall be used in placing the concrete in the pipe to see that the opening of the pipe is completely filled and thoroughly plugged. If any drain field pipe is removed in order to construct the sewer service connection it shall be plugged per the same requirements. Plugging the existing pipes is considered part of the abandoning the existing septic system and shall not be measured or paid separately.

Any excavation resulting from tank abandonment shall be backfilled with native or gravel borrow and compacted to 90% maximum density. The Contractor shall be responsible for determining method of compaction. Four inches of Topsoil Type C shall be placed prior to placing four inches of landscaping material, replacing sod or hydro seeding.

The septic tank abandonment method shall be as shown on the plans. Any pumping chambers in addition to the septic tank(s) shall be abandoned in place unless approved by the Engineer. Any tanks not abandoned by removal shall be perforated or cracked in the bottom to facilitate drainage.

Septic Tank Abandonment in Place

Concrete lids shall be removed or crushed in and covered with material from the proposed tank excavation or gravel backfill for walls. Concrete pieces resulting from crushing the lids in shall not be larger than four inches diameter measured in any direction. Any portion of the demolished tank shall be at least 18" below finished grade.

7-20.4 Measurement

(January 15, 2020 Lacey GSP)

"Tank Abandonment" will be measured per each.

7-20.5 Payment

(January 15, 2020 Lacey GSP)

Payment will be made in accordance with Section 1-04.1 for the following Bid Item:

"Tank Abandonment", per each.

Any additional pumping chambers and storage tanks are included in the existing septic system shall be abandoned per these specifications and shall be considered incidental to "Tank Abandonment".

The unit contract price "Tank Abandonment", per each shall be full pay for labor, materials, supplies, equipment, tools and all other items required to completely abandon the existing on-site sewage system for each individual residence per the plans and these specifications and includes but is not limited to:

1. Complying with all Thurston County Department of Health requirements.
2. Field verifying the exact location of the existing septic tanks, pumping chambers, piping, appurtenances and pipe size and material types.
3. Document (photograph) existing site conditions.
4. Removing any shrubs or vegetation, landscaping, decking, concrete pavement, or block walls required to gain access to the septic system.
5. Removing liquids and solids from the existing septic tanks and any additional pumping chambers.
6. Plugging and abandoning existing septic system conveyance piping in accordance with these plans and specifications.
7. Removing and disposal of tank(s) as applicable, appurtenances that include but not limited to the risers, lids, access hatches, pumps, rails, electrical equipment and pump control components, disconnect

electrical power, abandon conduit, remove and dispose of conductors inside conduits, repair/restore interior/exterior wall surfaces.

8. Stockpiling/disposing of material from tank and trench excavations including haul.
9. Abandoning existing power supply.
10. Any excavation required for tank and any additional pumping chamber abandonment.
11. Removing and disposing of the tanks, additional pumping chambers, piping, mound systems and other related components if called out to do so in plans.
12. Crushing the septic tank lids and portions of tanks a minimum of 6 inches below the outlet invert elevation for tanks to be abandoned in place with the new sewer drain line flowing through the existing tank location.
13. Using materials from proposed tanks excavation or gravel backfill for walls if native can't meet compaction requirements to fill voids within tank.
14. Placing four inches of topsoil and grade to match surrounding grades.
15. Restoration requirements (i.e, lawn, topsoil, other landscaping or other deck/patio or siding repair).

7-23 SANITARY SEWER BYPASS PUMPING

7-23.1 General

(October 29, 2010 Lacey GSP)

The Contractor is required to furnish all materials, labor, equipment, power, and maintenance, etc. to implement a temporary pumping system for the purpose of diverting the existing sanitary sewer flow around the work area as needed for the duration of the project. The bypass system as supplied by the contractor shall meet the requirements of all codes and regulatory agencies having jurisdiction, these general specifications and the technical specifications.

The design, installation, and operation of the temporary pumping system shall be the Contractor's responsibility. The Contractor shall employ the services of a subcontractor who can demonstrate to the engineer that he specializes in the design and operation of temporary bypass pumping systems. The subcontractor shall provide at least five (5) references of projects of a similar size and complexity as this project performed by his firm within the past five years.

7-23.1(1) Bypass Pumping Plan

(October 29, 2010 Lacey GSP)

The Contractor shall submit a detailed description of the proposed pumping system and the bypass pumping contractor's references for review and approval at the pre-construction conference. A separate pre-bypass pumping meeting will be conducted within 4 weeks of submittal of the bypass pumping plan and at minimum 2 weeks prior to the bypass pumping, at which time the Contracting Agency will notify the Contractor of any deficiencies or corrections that are required. Re-submittal of the corrected bypass pumping plan is required. Provided the corrected bypass pumping plan is satisfactory, an additional pre-bypass pumping meeting will not be required.

The Contractor shall submit to the Contracting Agency detailed plans and descriptions outlining all provisions and precautions to be taken by the Contractor regarding handling of existing wastewater flows. This plan must be specific and complete, including such items as schedules, locations, elevations, capacities of equipment, materials, and all other incidental items necessary and/or required to ensure proper protection of the facilities, including protection of the access and bypass pumping locations from damage due to the discharge flows, and compliance with the requirements and conditions specified in these Contract Documents. Work on or abandonment of the gravity sanitary sewer system or existing lift station shall not begin until all provisions and requirements have been approved by the Contracting Agency.

The bypass pumping plan shall include but not be limited to the following details:

1. Staging areas for pumps
2. Sewer plugging method and types of plugs
3. Size and location of manholes or access points for suction and discharge hose or piping
4. Calculations for selection of bypass pumping pipe size
5. Number, size, material, location and method of installation of suction piping
6. Number, size, material, method of installation and location of installation of discharge piping
7. Bypass pump sizes, capacity, solids handling capacity and number of each size to be on site and power requirements
8. Calculations of static lift, friction losses, and flow velocity (pump curves showing pump operating range) shall be submitted
9. Standby power generator size, location (if used)
10. Downstream discharge plan
11. Method of protecting discharge manholes or structures from erosion and damage
12. Thrust and restraint block sizes and locations
13. Sections showing suction and discharge pipe depth, embedment, select fill and special backfill
14. Method of noise control for each pump and/or generator
15. Any temporary pipe supports and anchoring requirements
16. Design plans and computation for access to bypass pumping locations indicated on the drawings
17. Schedule for installation of and maintenance of bypass pumping lines
18. List of spare parts and support equipment to be maintained on site
19. Secondary containment type and size, and plan for deployment
20. Methods for monitoring and assuring equipment is operating per plan
21. Alarm Response Plan which shall include contacting City of Lacey Shop
22. Contingency plan for spill, leak, or other discharge

7-23.2 Equipment

(October 29, 2010 Lacey GSP)

All pumps used shall be fully automatic self-priming units that do not require the use of foot valves or vacuum pumps in the priming system. The pumps may be electric or diesel powered. All pumps used must be constructed to allow dry running for long periods of time to accommodate the cyclical nature of effluent flows. Pumps shall be capable of pumping solids with a nominal spherical dimension of three (3) inches without clogging.

The Contractor shall provide the necessary stop/start controls for each pump.

The Contractor shall include one stand-by pump of each size to be maintained on site. Back up pumps shall be online, isolated from the primary pumping system by a valve.

The pumps shall be contained inside a temporary portable secondary containment structure(s) to contain any fuel or sewage that may spill during the normal course of operation.

Discharge Piping – In order to prevent the accidental spillage of flows, all discharge systems shall be temporarily constructed of rigid pipe with positive, restrained joints. Under no circumstances will “irrigation” type piping or glued PVC pipe be allowed. Discharge hose will only be allowed in short sections and by specific permission from the Engineer.

Noise levels of equipment shall meet Washington State noise level requirements. Contractor shall make the necessary provisions to control the noise of the temporary pumping equipment such that the noise generated by the equipment is limited to 55 dBA during the day (7 AM to 10 PM) and 45 dBA at night (10 PM to 7 AM) at property lines. Depending on the pumping equipment that is used, meeting this requirement may require the use of sound attenuating enclosures as well as other provisions and measures.

7-23.3 System Requirements

7-23.3(1) Design Requirements

(October 29, 2010 Lacey GSP)

Bypass pumping systems shall have sufficient capacity to pump a peak flow of 150 GPM. The Contractor shall provide all pipeline plugs, pumps of adequate size to handle peak flow, and temporary discharge piping to ensure that the total flow of the gravity collection system can be safely diverted around the project area. Bypass pumping systems will be required to be operated 24 hours per day.

Temporary sewer bypass systems shall be designed by a registered Professional Engineer in the State of Washington. Engineer shall have demonstrated experience in the design of pumping systems of comparable size and complexity.

The Contractor shall have adequate standby equipment available and ready for immediate operation and use in the event of an emergency or breakdown. One standby pump for each size pump utilized shall be installed at the mainline flow bypassing locations, ready for use in the event of primary pump failure.

Bypass pumping system shall be capable of bypassing the flow around the work area and be sized to handle any amount of flow up to full available flow as defined by the Contracting Agency into the work area as necessary for satisfactory performances of work.

The Contractor shall make all arrangements for bypass pumping during the time when the gravity sewer main is shut down for any reason. System shall overcome any existing force main pressure on discharge.

7-23.3(2) Performance Requirements

(October 29, 2010 Lacey GSP)

It is essential to the operation of the existing system being bypassed that no interruptions in the flow occur throughout the duration of the project. To this end, the Contractor shall provide, maintain, and operate all temporary facilities such as dams, plugs, pumping equipment (both primary and back-up units as required), conduits, all necessary power, and all other labor and equipment necessary to intercept the incoming flow before it reaches the point where it would interfere with his work, carry it past the work area and return it to the existing wastewater collection system downstream of his work.

The design, installation and operation of the temporary pumping system shall be the Contractor’s responsibility. The bypass system shall meet the requirements of all codes and regulatory agencies having jurisdiction. It shall be the responsibility of the Contractor to schedule and perform the work in a manner that does not cause or contribute to incidents of overflows, releases or spills of sewage from the sanitary sewer system or the bypass pumping operation.

The Contractor shall provide all necessary means to safely convey the sewage past the work area. The Contractor will not be permitted to stop or impede the main flows under any circumstances.

The Contractor shall divert the flow around the work area in a manner that will not cause damage to, or surcharging of Contracting Agency's system and will protect public and private property from damage and flooding.

During all bypass pumping operations, the Contractor shall protect the Contracting Agency's system (Pumping Station, Conveyance System, etc.) as applicable from damage inflicted by any equipment. The Contractor shall be responsible for all physical damage to the Contracting Agency's system caused by human or mechanical failure.

The Contractor shall protect water resources, wetlands, and other natural resources.

7-23.3(3) Field Quality Control and Maintenance

7-23.3(3)A Tests

[\(October 29, 2010 Lacey GSP\)](#)

The Contractor shall perform leakage and pressure tests of the bypass pumping discharge piping using clean water prior to the actual operation. The Engineer shall be given three working days notice prior to testing.

7-23.3(3)B Inspection

[\(October 29, 2010 Lacey GSP\)](#)

Contractor shall inspect the bypass pumping system on a continuous basis to ensure the system is working correctly. Contractor shall monitor pump power source fuel levels and make arrangements for timely refueling as needed.

7-23.3(3)C Maintenance Service

[\(October 29, 2010 Lacey GSP\)](#)

Contractor shall ensure the temporary pumping system is properly maintained and a responsible operator shall be on hand at all times when pumps are operating. The Contractor shall provide two contact phone numbers in case of a sewage emergency. In the event of a failure of the bypass pumping system, the Contractor shall respond to the incident within 1 hour of the start of an incident. In case of a sewage emergency, the Contractor shall immediately call the City of Lacey Maintenance Service Center to contact our wastewater staff at **(360) 491-5644** during business hours or at **(360) 704-2740** during nights/weekends as well as contact the City Inspector assigned to the project.

7-23.3(3)D Extra Materials

[\(October 29, 2010 Lacey GSP\)](#)

Spare parts for pumps and piping shall be kept on site as required by the bypass pumping plan.

Adequate hoisting equipment for each pump and accessories shall be maintained on the site.

7-23.3(4) Spills

[\(October 29, 2010 Lacey GSP\)](#)

Contractor is fully responsible for any damage that may result from an inadequate or improper installation, maintenance or operation, or failure of any kind of the sewer bypass pumping system.

In the event of a spill, the Contractor shall contact the LOTT Spill Reporting Group at **(360) 528-5700** and the City of Lacey Maintenance Center at **(360) 491-5644** during business hours or at **(360) 704-2740** during nights/weekends

Spills or leaks of sewage to surface waters or drainage courses is prohibited. In the event of sewage spills, the Contractor shall immediately take whatever actions are deemed necessary to stop and remedy the results of the spill. Should the Contractor not take immediate action, the Owner will be entitled to take whatever actions are deemed necessary to stop, contain, and decontaminate a spill, at the Contractor's expense.

Costs incurred by the Contractor or Owner, including penalties imposed on the Owner as a result of any sewage spill caused by the Contractor, its employees, or subcontractors, shall be borne in full by the Contractor, including legal fees and other expenses to the Contractor or Owner resulting directly or indirectly from the spill.

7-23.3(5) Installation and Removal **(October 29, 2010 Lacey GSP)**

Contractor is responsible for locating any existing utilities in the area selected for the bypass pipelines. The Contractor shall locate bypass pipelines to minimize any disturbance to project execution and shall obtain approval of the pipeline locations from the Contracting Agency as noted in the bypass pumping plan. All costs associated with relocating utilities and obtaining all approvals shall be paid by the Contractor.

If the system has to be drained to effect the work, such as for a cut-over or connection, Contractor shall provide the necessary temporary pumping and/or storage equipment to drain or remove the sewage from the excavation and/or system.

The Contractor shall remove manhole sections or make connections to the existing conveyance system and construct temporary bypass pumping structures only at the access location indicated on the Plans and is required to provide adequate suction conduit.

Plugging or blocking of flows shall incorporate a primary and secondary plugging device. When plugging or blocking is no longer needed for performance and acceptance or work, it is to be removed in a manner that permits the sewage flow to slowly return to normal without surge, to prevent surcharging or causing other major disturbances downstream.

When working inside a manhole or wet well, the Contractor shall exercise caution and comply with OSHA requirements when working in the presence of sewer gases, combustible or oxygen-deficient atmospheres, and confined spaces.

The temporary bypass pump discharge pipeline shall be located off streets and sidewalks and on shoulders of the roads where possible without causing delay to the project. When the bypass pipeline crosses local streets and private driveways that are in service, the Contractor shall employ traffic rated crossing devices or place the bypass pipelines in trenches and cover with temporary pavement. Upon completion of the bypass pumping operations, and after receipt of written permission from the Contracting Agency, the Contractor shall remove all the bypass pumping system piping, restore all property to pre-construction condition, and restore all pavement. The Contractor is responsible for obtaining any approvals for placement of the temporary pipeline from the Contracting Agency.

7-23.4 Measurement

(October 29, 2010 Lacey GSP)

No unit of measurement shall apply to the lump sum price for “Bypass Pumping”.

7-23.5 Payment

(October 29, 2010 Lacey GSP)

Payment will be made in accordance with Section 1-04.1, for the following bid item that is included in the proposal.

“Bypass Pumping”, lump sum.

The unit contract price per lump sum for “Bypass Pumping” shall be full pay for all labor, materials, and equipment to furnish, place, assemble, install and operate the bypass pumping system complete in place, including pumps, piping, valves, control systems, generators, permits, testing, wyes, tees, special fittings, joint materials, operators and all other work to provide and operate a complete and operating bypass pumping system. Further, all labor, equipment, and materials required for decommissioning, disassembly and removal from the site shall be included.

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.3 Construction Requirements

8-01.3(1) General

(May 28, 2020 WSDOT GSP)

Section 8-01.3(1) is supplemented with the following:

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

The ESC Lead shall implement the TESC Plan. Implementation shall include, but is not limited to:

1. Installing, adaptively managing, and maintaining temporary erosion and sediment control BMPs to assure continued performance of their intended function. Damaged or inadequate BMPs shall be corrected immediately.
2. Updating the TESC Plan to reflect current field conditions.
3. Inspecting and reporting on all areas disturbed by construction activities, all on-site erosion and sediment control BMPs, and all storm water discharge points every calendar week and within 24 hours of runoff events in which storm water discharges from the site or as directed by the Engineer.
4. Submit to the Engineer no later than the end of the next working day following the inspection a TESC Inspection Report that includes:
 - a. When, where, and how BMPs were installed, maintained, modified, and removed.

- b. Observations of BMP effectiveness and proper placement.
- c. Recommendations for improving future BMP performance with upgraded or replacement BMPs when inspections reveal TESC BMP deficiencies.
- d. Identify for each discharge point location whether there is compliance with state water quality standards in WAC 173-201A for turbidity and pH.

Inspection of temporarily stabilized, or inactive sites may be reduced to once every calendar month if allowed by the Engineer.

8-01.3(9)A2 Silt Fence

[\(October 16, 2014 Lacey GSP\)](#)

Supplement this section with the following:

If the Engineer determines that site conditions dictate additional silt fence throughout the duration of the project, the Contractor shall immediately install additional silt fence as directed by the Engineer.

8-01.3(9)D Inlet Protection

[\(November 20, 2020 Lacey GSP\)](#)

Delete the first paragraph and replace with the following:

All catch basins and inlets within 500 ft of the project limits, downstream or affected by construction activities shall have inlet protection and as required by the Engineer. Inlet protection devices shall be installed prior to beginning clearing, grubbing, or earthwork activities.

8-01.4 Measurement

[\(April 30, 2015 Lacey GSP\)](#)

Supplement this section with the following:

All items required for erosion control shall be included in the lump sum bid item “Erosion/Water Pollution Control” unless a specific bid item is included in the proposal.

Modify this section with the following:

No specific unit of measure shall apply to the lump sum item “ESC Lead”

8-01.5 Payment

[\(November 20, 2020 Lacey GSP\)](#)

Modify this section with the following:

“Silt Fence”, per linear foot.

“High Visibility Silt Fence”, per linear foot

The unit contract price per linear foot shall be full pay for all equipment, labor and materials to install, maintain, remove and dispose of the silt fence as shown in the Plans and as directed by the Engineer.

The lump sum contract price for “ESC Lead” shall be full compensation for all labor, material, tools, and equipment necessary to meet the requirements of Section 8-01.3(1)B to include conduct site inspections, stormwater sampling, report preparation, report submittal, lab work, and personnel certification.

Delete “Erosion/Water Pollution Control”, by force account and add the following bid item:
“Erosion/Water Pollution Control”, lump sum.

The lump sum contract price for “Erosion/Water Pollution Control” shall be full compensation for all labor, material, and equipment necessary to implement, install, maintain and remove all erosion and water pollution control items including removal and disposal of sediment, stabilization and rehabilitation of soil disturbed by these activities, and any additional Work deemed necessary by the Engineer to control erosion and water pollution and all Work required for compliance with the Construction Stormwater General Permit (CSWGP) including annual permit fees if required. The requirements for the ESC Lead shall also be included in this lump sum bid item if no bid item is included in the proposal. The Contractor shall bear full responsibility for erosion/water pollution control in all sources of material, disposal sites, and haul roads.

8-05 LAWN AND LANDSCAPE RESTORATION

(October 16, 2014 Lacey GSP)

Add the following new section:

8-05.1 Description

The Contractor shall take every precaution to preserve and protect existing lawn and landscape areas. Only those landscaped areas necessary for construction shall be disturbed. All lawn areas and landscaping damaged or removed shall be repaired as directed by the Engineer. Lawn areas damaged or removed shall be restored with sod as directed by the Engineer.

8-05.3 Construction Requirements

The Contractor shall repair any vegetation, fencing, culverts, ditch sections, or any other objects or structures that are not covered by a specific bid item. Restoration shall return anything damaged by construction to their original condition or to a condition superior to the original condition. The Contractor shall be responsible to evaluate the site prior to bidding this project to determine the areas to be affected by the particular construction method or machinery proposed to be used.

8-05.4 Measurement

No unit of measure shall apply to the lump sum price for Lawn and Landscape Restoration.

8-05.5 Payment

“Lawn and Landscape Restoration”, lump sum.

The lump sum contract price for “Lawn and Landscape Restoration” shall be full pay for all labor, materials, and equipment to restore the project site to condition equal to, or superior to the original condition.

If no bid item for “Lawn and Landscape Restoration” is included, any work described in this section shall be incidental to the project.

8-13 MONUMENT CASES

8-13.3 Construction Requirements

(October 16, 2009 Lacey GSP)

Supplement this section with the following:

The concrete shall be placed on firm undisturbed earth and unyielding foundation. The monument shall be constructed following the completion of all asphalt paving. All monuments shall be installed as shown in the Plans and as staked by the Engineer. Case and cover shall be supplied by the Contractor.

The Contractor shall request monument caps 5 working days in advance of monument installation work. The Engineer will punch the bronze plug marker upon completion of the installation. The Contractor shall notify the Engineer 72 hours prior to installation, so the Engineer can aid in the placement.

8-13.3(1) Surface Monument

(October 29, 2010 Lacey GSP)

Add the following new section:

The Contractor shall construct and install cast-in-place surface monuments as shown in the Plans and as staked by the Engineer. The Contractor shall request monument caps 5 working days in advance of monument installation work.

The concrete shall be placed on undisturbed earth, or firm and unyielding foundation. The monument shall be constructed following the completion of all asphalt paving. The Engineer will punch the bronze plug marker upon completion of the installation. The Contractor shall notify the Engineer 72 hours prior to installation, so the Engineer can aid in the placement of the marker cap.

8-13.3(2) Adjust Monument Case Cover

(August 10, 2010 Lacey GSP)

Add the following new section:

All monument case covers in paved areas shall be adjusted flush to the new pavement surface with the appropriately sized paving riser.

8-13.4 Measurement

(October 29, 2010 Lacey GSP)

Supplement this section with the following:

Surface monuments shall be measured by the unit for each surface monument furnished and set.

8-13.5 Payment

(October 29, 2010 Lacey GSP)

Modify this section with the following:

“Surface Monument”, per each.

“Monument Case and Cover”, per each.

“Adjust Monument Case and Cover”, per each.

The unit contract price per each shall be full compensation for all labor, equipment, tools, and materials required to complete the work as specified.

8-14 CEMENT CONCRETE SIDEWALKS

8-14.1 Description

(March 31, 2015 Lacey GSP)

Supplement this section with the following:

Where applicable in this section “concrete sidewalks” shall read “concrete sidewalks and driveways” unless a bid item is provided. Depth shall be as shown in the Plans. The minimum driveway depth shall be 6 inches. The Contractor shall match color, texture, and material of existing sidewalks and driveways.

All ADA requirements will be strictly enforced including ramps and slopes as shown in the plans. Sidewalk and Bus Pads shall not exceed 2% cross slope.

If a sign is to be installed in concrete, the Contractor shall place a breakaway sleeve in the concrete as shown on the Plans and as directed by the Engineer. The sleeve shall be cleared of all debris. The sign shall be installed by others.

8-14.4 Measurement

(April 2, 2018 Lacey GSP)

Supplement this section with the following:

Cement concrete sidewalks shall be measured by the square yard of finished surface outside of the ramp pay limits and will not include the surface area of the curb ramps (i.e. the sidewalk quantities indicated on the Plans are for informational purposes only and include the ramp area). Cement Concrete sidewalks shall include cement concrete bike ramps, and bus pads.

8-14.5 Payment

(April 2, 2018 Lacey GSP)

Supplement this section with the following:

The unit contract price for “Cement Conc. Sidewalk” per square yard shall be full pay for furnishing all materials, equipment, and labor to construct the sidewalk, and bus pads complete in-place, to include forms, and concrete. Further, the Contractor shall make all excavations including haul and disposal, regardless of depth required, for constructing the sidewalk to the lines and grades shown, and shall include all costs associated with maintaining pedestrian access through the construction area with crushed surfacing top course or other material as approved by the Engineer.

8-50.2 PROJECT CLOSEOUT

(April 2, 2018 Lacey GSP)

Description

This work shall consist of completing all miscellaneous items of work in accordance with the Plans and these Specifications that are required to achieve Completion and Final Acceptance, as identified by the Engineer and the Contracting Agency. This work may include but is not limited to punch list items, record drawings, O&M Manuals, training, material acceptance documents, copies of the approved

“Affidavit of Prevailing Wages Paid” for the Contractor and all Subcontractors, and any other work required in these Plans and Specifications that has not been completed.

Measurement

No unit of measurement shall apply to the lump sum price for “Project Closeout”.

Payment

“Project Closeout”, lump sum.

The unit contract price per lump sum for “Project Closeout” includes all compensation for all costs of completing the miscellaneous items of work identified by the Contracting Agency prior to final acceptance of the Project. A fixed lump sum price has been included in the Proposal for this work. Any additional costs anticipated or incurred by the Contractor for the work shall be included in the various lump sum and unit price bid items as found in the Proposal. Neither partial payment, nor additional compensation shall be allowed.

9-03 AGGREGATES

Add the following new Section:

9-03.16 Imported Pipe Bedding

[\(April 30, 2015 Lacey\)](#)

Bedding material for pressure mains and services shall be clean sand/gravel mixture free from organic matter and conforming to the following gradation:

Sieve Size	Percent Passing
3/4" square	100
3/8" square	70-100
U.S. No. 4	55-100
U.S. No. 10	35-95
U.S. No. 20	20-80
U.S. No. 40	10-55
U.S. No. 100	0-10
U.S. No. 200	0-3

Bedding material for gravity mains and stubs/or laterals shall be clean sand/gravel mixture free from organic matter and conforming to the following gradation:

Sieve Size	Percent Passing
3/8" square	85-100
U.S. No. 4	10-30
U.S. No. 8	0-10
U.S. No. 16	0-5

All percentages are by weight

9-03.21 Recycled Materials

[\(April 30, 2015 Lacey\)](#)

Section 9-03.21 is supplemented with the following:

Recycled materials will not be used unless approved by the Engineer.

9-14 EROSION CONTROL AND ROADSIDE PLANTING

9-14.1(1) Topsoil Type A

(October 16, 2009 Lacey)

Supplement this section with the following:

Topsoil Type A shall be composed of a three way winter mix consisting of 2 parts soil, 2 parts compost, 3 parts sand.

Soil shall be classified as gravelly sand, well-graded sand, poorly graded sand, or silty sand.

Compost shall be a weed free well decomposed, humus-like material derived from the decomposition of grass clippings, leaves, branches, wood, and other organic materials. Compost shall be produced at a permitted solid waste composting facility. Composts containing shavings, cedar sawdust, or straw will not be permitted.

Sand shall consist of 100 percent passing the 3/8 inch sieve, minimum 95 percent passing the #4 sieve, and maximum of 5 percent passing the #100 sieve.

Topsoil shall meet the following requirements:

Screen Size (approximate particle size)	5/8" maximum
Maturity measure (C:N ratio)	30:1
Total Nitrogen	0.5% minimum
PH range	5.5-8.0
Foreign matter by dry weight	1% maximum

The Contractor shall provide a sample of the topsoil and a laboratory analysis with recommendations from the laboratory for desired additives for the Engineers approval. The Contractor shall incorporate any additives recommended by the laboratory.

9-14.2 Seed

(November 20, 2020 Lacey)

Supplement this section with the following:

There shall be several types of mixes used on this project. The list of approved seed varieties are specifically identified list below. They shall be applied at the given rates. Source identified seed shall be fourth generation or earlier. Non-Source Identified seed shall meet or exceed Washington State Department of Agriculture Certified Seed Standards. Seeds shall be certified "Weed Free", indicating there are no noxious or nuisance weeds in the seed.

Lawn Mix - shall be applied at 200 pounds per acre and the maximum weed seed shall be no more than 0.5%. Grass seed of the following composition, proportion, and quality shall be applied as follows:

Kind and Variety of Seed	Percent	Minimum	Minimum
--------------------------	---------	---------	---------

	By Weight	Pure Seed	Germination
Equal Mix 3-Perennial Ryegrasses	60%	98%	90%
One Chewing Fine Fescue	20%	98%	90%
One Creeping Red Fescue	20%	98%	90%

Approved Seed Type:

Perennial Ryegrasses

Fiesta 4	Manhattan 5	Grand Slam GLD	Karma
SR 4650	Karma	Banfield	Sideways
Thrive	Wicked	Pavilion	Dasher 3
Tetradark			

Creeping Red Fescue

Salsa	Cindy	Jasper	Salem
-------	-------	--------	-------

Chewing Fescue

Tiffany	Shadow II	Treazure E	Longfellow
Weekend	Tamara	Enjoy	Victory

9-14.3 Fertilizer

(October 16, 2009 Lacey)

Supplement this section with the following:

Fertilizer for seeded areas shall be 1 pound nitrogen from ammonium sulfate, 0.5 pound water insoluble organic nitrogen, 2 pounds of phosphorous, and 2 pounds of potassium per 1,000 square feet, or a 10-20-20 turf fertilizer mix at 435 pounds per acre with 60 pounds of water insoluble organic nitrogen per acre.

Fertilizer for Trees and Shrubs shall be granular, tablet, or spikes applied at a rate recommended by the manufacturer for the size of the plant or as directed by the Engineer. Fertilizer shall be a 20-10-5 plant mix with 7% water soluble organic nitrogen and 13% water insoluble organic nitrogen or as approved by the Engineer.

Mycorrhizal fungi amendment shall be applied to all trees at a rate recommended by the manufacturer for the size of the tree.

9-14.5(3) Bark or Wood Chip Mulch

(November 20, 2020 Lacey GSP)

Supplement this section with the following:

Bark mulch shall be a pathogen-free medium-grind Hemlock or Douglas Fir bark mulch. The Contractor shall submit a sample to the Engineer for approval prior to use.

E PREVAILING WAGE RATES

PREVAILING WAGE RATES

The following wage rates are in effect for this project.

**State of Washington
Department of Labor and Industries
Washington State Prevailing Wage Rates For Public Works Contracts**

Thurston County Rates For All Trades

Effective: March 3rd, 2022, including any corrections issued by Labor and Industries prior to bid.

Wage Rates and the Benefit Code Key may be found at:
<https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx>


Supplemental to State Wage Rates may be found at:
<http://www.wsdot.wa.gov/Design/ProjectDev/WageRates/default.htm>

A copy is also available for viewing at the City of Lacey Public Works Engineering office located at 420 College St SE, Lacey, WA 98503. If requested, a hard copy will be mailed to you.

APPENDIX A


COL RAM FORMS

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PROJECT:		SUBMITTAL No.		 CITY OF LACEY
LACEY CONTRACT No. PW ____-20____		Date sent to City:		
Request for Approval of Material, Product or Shop Drawing				
Contractor:		Subcontractor:		
No. of Pages	Item: Material, Product or Shop Drawing		Specification Reference	
<input type="checkbox"/> This item is as specified		OR <input type="checkbox"/> This item is a substitution/or equal Material/Product Substitution Request shall be submitted		
<input type="checkbox"/> Supplier/Subcontractor certifies material/product conforms to contract.				
Review Priority: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 Requested Due Date:				
Notes to Engineer:				

City of Lacey Engineer:		Date Approved by City:	
<input type="checkbox"/> Rejected	New Submittal Required.		
<input type="checkbox"/> Revise and Resubmit	See Engineer's comments.		
<input type="checkbox"/> Conditionally Approved	See items included in Engineer's comments.		
<input type="checkbox"/> Conditionally Approved	No exceptions noted.		
Review of the materials, products or plans do not relieve the contractor from compliance with requirements of the contract documents and does not necessarily constitute acceptance for materials, products or plans to be incorporated in the work. This review is for general conformance of the project's conceptual design and general compliance with the project's plans and specifications.			
Date City Transmitted to Contractor:		Date Contractor Transmitted to Subcontractor/Supplier:	

Date Received by City of Lacey:	Reviewed by: (Name/Company)
<u>Engineer's Comments:</u> 1.	

PROJECT: <i>A</i>		SUBMITTAL NO. <i>C</i>	
LACEY CONTRACT NO. PW ____-20____ <i>B</i>			
Request for Approval of Material, Product or Shop Drawing			
Contractor: <i>D</i>		Subcontractor: <i>E</i>	
No. of Pages	Item: Material, Product or Shop Drawing	Specification Reference	
<i>F</i>	<i>G</i>	<i>H</i>	
<input type="checkbox"/> This item is as specified <i>I1</i> OR <input type="checkbox"/> This item is a substitution/or equal Material/Product Substitution Request shall be submitted <i>I2</i>			
<input type="checkbox"/> Supplier/Subcontractor certifies material/product conforms to contract.			
Review Priority: <input type="checkbox"/> 1 <i>K</i> <input type="checkbox"/> 2 <input type="checkbox"/> 3 Requested Due Date: <i>L</i>			
Notes to Engineer: <i>M</i>			

Section 1

City of Lacey Engineer: <i>R</i>		Date City Transmitted to Contractor: <i>S</i>
<input type="checkbox"/> Rejected	New Submittal Required.	
<input type="checkbox"/> Revise and Resubmit	See Engineer's comments.	
<input type="checkbox"/> Conditionally Approved	See items included in Engineer's comments.	
<input type="checkbox"/> Conditionally Approved	No exceptions noted.	
Review of the materials, products or plans do not relieve the contractor from compliance with requirements of the contract documents and does not necessarily constitute acceptance for materials, products or plans to be incorporated in the work. This review is for general conformance of the project's conceptual design and general compliance with the project's plans and specifications.		
Date Received by Contractor: <i>T</i>		Date Returned to Subcontractor/Supplier: <i>U</i>

Section 3

Date Received by City of Lacey:	<i>N</i>	Reviewed by: (Name/Company)	<i>@</i>
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Engineer's Comments:

1. *P*

Section 2

Section 1

The **Project Manager** shall fill in items **A** and **B**. The “Request for Approval of Material, Products or Shop Drawing” form shall be included in the specifications.

A Project Manager enters in the project title that matches the plans and specifications.

B Project Manager enters in PW project number that matches the plans and specifications.

The **Contractor** shall fill out the “Request for Approval of Material, Product or Shop Drawing” form for all materials or products that will be installed and Shop Drawing that will be used in the project. The form and the submittal shall be sent in the same e-mail. Submittals that exceed 10 MB shall either be provided on a CD, a flash drive or an internet link.

The products and materials that are specific to the project shall be circled or highlighted. If a submittal includes products or materials that are not project specific then these items shall be crossed out. Project Submittals that exceed 10 pages shall be submitted in Adobe Acrobat format and include a table of contents. Submittals that are not submitted in this format may be rejected outright and the contractor will be required to resubmit in the correct format.

The contractor shall enter in items **C, D, E, F, G, H, I, J, K, L**, and **M**.

C Contractor enters in the submittal number. The first “Request for Approval of Material, Product or Shop Drawing” submittal number shall be 1.0, the second shall be 2.0, the third shall be 3.0, etc.

When a “Request for Approval of Material, Product or Shop Drawing” requires resubmitting, the next submittal shall be the first part of the submittal number and then 0.1. Example: If submittal 9.0 requires resubmitting, then the resubmittal shall be 9.1. If a second resubmittal is required, then the next resubmittal shall be 9.2.

D Contractor shall fill in their name.

E Contractor shall fill in the subcontractor that is requesting approval. If only the General Contractor is requesting approval, then NA (not applicable) shall be entered.

F The number of pages for each specific material, product or shop drawing shall be entered.

G The specific material, product or shop drawing shall be entered. Material or product will be the trade name of the product or the name it is most easily recognized by. Materials or products that are similar (i.e. pipe fittings) can be bundled into one submittal.

H The specification that pertains to the specific material, product or shop drawing shall be entered. This information is critical in comparing the material, product or shop drawing to the specifications. You may also list Plan Sheet number or Special Provision page in this area.

I The Contractor shall check if the items submitted are either specified (I1) or that the submitted item is a substitution or equal (I2). If the product is a substitute or equal, then a Material/Product Substitution Request shall be submitted.

J The Contractor shall check that supplier and/or subcontractor certifies the bid item.

K The Contractor shall check if the submittal for approval is a high (1), average (2) or low (3) priority. The City of Lacey will review priority submittals as quickly as possible. Note: The majority of the submittals shall be checked as priority 2 or 3. Priority 1 submittals shall be critical or long lead items.

L A due date can be entered by the contractor. The City of Lacey will endeavor to review and return the request for approval by the requested due date.

M Any additional notes that the Contractor finds would assist the City of Lacey in reviewing the submittal can be entered in here.

Section 2

The **City of Lacey Engineer** shall fill in items **N**, **O** and **P**.

N Enter the date that the City of Lacey received the “Request for Approval of Material, Product or Shop Drawing” from the Contractor.

O Enter the name and company of the person that reviewed the submittal.

P Any comments regarding changes needed, resubmittals requirements, conditional approval, etc. shall be entered.

Section 3

The **City of Lacey Engineer** shall fill in items **Q**, **R**, and **S**.

Q Either “Rejected: New Submittal Required.”, “Review and Resubmit: See Engineer’s comments.”, “Conditionally Approved: See items included in Engineer’s comments.”, or “Conditionally Approved: No exceptions noted” shall be checked”.

R Enter the name of the Engineer sending the submittal back to the Contractor. The Engineering sending the form back may not necessarily be the Engineer completing the review.

S Enter the date that the City of Lacey transmits the “Request for Approval of Material, Product or Shop Drawing” to the Contractor.

The **Contractor** shall enter in items **T** and **U** for their own records. If there is a discrepancy between the **S** “Date City Transmitted to Contractor” and **T**, the Contractor shall notify the City of Lacey within 3 working days.

T Contractor enters the date that they received the completed “Request for Approval of Material or Shop Drawing”.

U Contractor enters the date that that they return the completed “Request for Approval of Material or Shop Drawing” to the Subcontractor/Supplier.

Appendix B

Lead and Asbestos Survey

December 30, 2021

Mr. Jason Kashani
City of Lacey
420 College St. SE
Olympia, Washington 98501

Subject: Hazardous Building Materials Survey
Manufactured Home and Shed
6612 5th Court SE, Lacey, Washington
Med-Tox Northwest Project No. 8998.2

Dear Mr.Kashani,

On December 20, 2021, Kimberly Riche of Med-Tox Northwest (MTNW) conducted a hazardous building materials survey (HBMS) of two structures located at 6612 5th Court Southeast in Lacey, Washington. The HBMS was completed in preparation of demolition of the structures.

The manufactured building was constructed in 1987 and the detached shed construction date is unknown. The manufactured building is approximately 1,568 square foot (SF), three-bedrooms, two-bathrooms, kitchen, laundry and two living room areas. The manufactured building is heated by an electrical furnace that is in the laundry room area. Interior finishes observed include two types of textured gypsum wallboard (GWB) on the walls and ceilings, two types of sheet vinyl flooring (SVF), ceramic tile, carpeting, and vinyl cove base with mastic. The roofing consisted of 3-tab with a vapor barrier. The shed consisted of wood framing and 3-tab roofing with a vapor barrier.

Asbestos Bulk Sampling Summary

There were fifty-seven (57) samples collected from seventeen (17) homogeneous materials (HM) identified during the survey. All samples collected were determined to be negative for asbestos. For a complete list of all samples collected, please refer to the attached Summary of Materials Sampled for Asbestos.

The purpose of the survey was to provide a "Good Faith Survey" (per Washington Administrative Code (WAC) 296-62-07721, (1)(c)(ii)) and to identify the materials which may require removal and/or special handling before any demolition activities.

Olympic Region Clean Air Agency (ORCAA) also requires compliance with survey and sampling requirements. This applies during any renovation or demolition activities where

suspect asbestos containing materials (ACM) may be disturbed.

Med-Tox Northwest employs inspectors certified by an Environmental Protection Agency (EPA)-approved training provider to provide Asbestos Hazard Emergency Response Act (AHERA) building surveys, including renovation and demolition surveys. Copies of Mrs. Riche's certificates are attached.

Table 1 provides a complete list of suspect material determined greater than 1% asbestos in the Med-Tox Northwest sampling conducted for the project located 6612 5th Court SE, Lacey, Washington.

Table 1. Summary of Asbestos-Containing Materials.

Material	Location	Friable	Quantity*
There were no asbestos containing materials identified.			

Note: This table is not to be used without the complete survey document including appendices for additional information.

Table 2 lists all suspect materials sampled that have been determined to be non-asbestos containing.

Table 2. Summary of Suspect Materials Determined Non-Asbestos Containing

Material Description	Material Description
Residence	
Brown paper, black mastic, and fiberglass insulation HM-01	12-inch square pattern SVF with glue, and white paper backing HM-09
Black paper and fiberglass insulation HM-02	White material under carpet HM-10
Blown in insulation HM-03	Blue ceramic tile, blue grout, and gray grout HM-11
Heavy textured GWB system HM-04	Tan plumber putty HM-12
Orange peel textured GWB system HM-05	Black padding HM-13
Wallpaper with GWB HM-06	White sealant HM-14
4-inch tan cove base with yellow mastic HM-07	Brown glue HM-15
4-inch square pattern SVF with glue, and white paper backing HM-08	3-tab roofing with vapor barriers HM-16
Shed	
3-tab roofing with vapor barrier HM-17	

Note: This table is not to be used without the complete survey document including appendices for additional information.

Lead-Based Paint Summary

Lead was commonly used in most paint products until 1978, when it was banned from residential paints at concentrations greater than 600 parts per million (ppm); however, commercial applications with lead were still utilized and are still available. Lead is poisonous to the human body and presents a potential health hazard during any kind of disturbance (such as maintenance, including grinding, welding, and cutting) and if improperly disposed, where lead can enter drinking water supplies.

EPA defines lead-based paint (LBP) as a concentration of 1.0 milligrams per centimeter squared (mg/cm²) or greater by X-ray fluorescence (XRF) or 0.5 percent by weight (% wt.) or greater by total lead analysis; equivalent to 5,000 milligrams per kilogram (mg/kg). This EPA action level triggers requirements for protection of the environment, maintenance workers, and building occupants in child occupied facilities as defined by 40 CFR 745. Additionally, building components exceeding EPA lead levels may cause demolition waste streams to fail waste designation sampling performed for compliance with WAC 173-303.

Washington Industrial Safety and Health Act (WISHA) worker protection regulations have not defined a minimum concentration for regulating lead and has clarified that lead at any detectable concentration shall be considered regulated by WAC 296-155-176, Lead. Paint sample results can be expressed in mg/kg (same as ppm), % wt. or mg/cm² by area depending on the type of analytical methods used. Any positive result, regardless of the reporting method by the laboratory, will require compliance with WAC 296-155-176.

Lead in Painted Surfaces

Interior painted surfaces were tested using bulk sample collection and chemical analysis. A total of eight paint chip samples were collected. Analytical results are provided in **Table 3**.

Table 3 Summary of Bulk Paint Chips Sampled for Lead

Sample Number	Location	Component	Substrate	Color	Result (% wt.*)
Shed					
8998.2-6612-01PB	Exterior	Wall	Wood	Cream	<0.0080
8998.2-6612-02PB	Exterior	Trim	Wood	Brown	<0.0080
Residence					
8998.2-6612-03PB	Interior	Wall	GWB	Tan	<0.0080
8998.2-6612-04PB	Interior	Wall	GWB	White	<0.0080
8998.2-6612-05PB	Interior	Trim	Wood	White	<0.0080
8998.2-6612-06PB	Exterior	Wall	Wood	Cream	<0.0080

Sample Number	Location	Component	Substrate	Color	Result (% wt.*)
8998.2-6612-07PB	Exterior	Wall	Wood	Gray	<0.0080
8998.2-6612-08PB	Exterior	Trim	Wood	Brown	<0.0080

% wt. = percent by weight. The WISHA worker protection regulations have stated that lead at any detectable concentration shall be considered regulated WAC 296-155-176, Lead.

Other Hazardous Building Materials

Light Ballasts and Fluorescent Light Tubes

Older fluorescent light ballasts have small capacitors that may contain high concentrations of polychlorinated biphenyl (PCBs). Nearly all ballasts manufactured before 1979 contain PCBs. All ballasts manufactured after July 1, 1978 that do not contain PCBs are required to be clearly marked "No PCBs". Unmarked ballasts or ballasts without a date code should be assumed to be PCB ballasts. PCBs are toxic chemicals according to the EPA. While there is only a small amount, about one ounce, of PCBs in each light ballast capacitor, but there are a large number of ballasts in the United States. A "No PCB" label means there are less than 50 ppm PCBs however, in the state of Washington PCB in oils are regulated at 2 ppm (WAC 173-303-9904). Ballasts manufactured after 1978/79 may contain a PCB replacement called Di (2-ethylhexyl) phthalate (DEHP), a probable human carcinogen. DEHP, a clear, odorless, synthetic compound, is often used as a plasticizer. By 1985, most manufacturers had stopped using DEHP in ballasts for 4-foot fixtures but continued to use it for most 8-foot and high intensity discharge fixtures until 1991. Electronic ballasts have been used since the early 1990's after the discontinuation of the use of DEHP in magnetic ballasts. Electronic ballasts used for fluorescent, compact fluorescent and high intensity discharge lighting do not contain PCB's. Electronic ballasts contain heavy metals that may fail toxicity characteristic leaching procedure (TCLP) under WAC 173-303. Recycling to recover metal used in the ballast case and circuitry is the recommended means of disposing of electronic ballasts as with any other electronic product.

There were no fluorescent light tubes identified during the inspection.

Summary of Analysis

Asbestos-Containing Materials

A total of fifty-seven (57) bulk samples were taken and analyzed by Polarized Light Microscopy (PLM) dispersion staining EPA Method 600/R-93/116 by Seattle Asbestos Test, LLC. Seattle Asbestos Test, LLC is accredited through the National Voluntary Laboratory Accreditation Program (NVLAP) of the U. S. Department of Commerce. This accreditation does not constitute endorsement, but rather a finding of laboratory competence. Seattle Asbestos Test, LLC participant number is 200768-0. The laboratory analytical report, chain of custody and NVLAP certificate are attached.

Lead-Based Paint

Bulk paint chip samples were submitted to EMSL Analytical, Inc. (EMSL), for analysis. A total of eight paint chip samples were analyzed for lead using atomic absorption spectroscopy (AAS) to determine the presence and percentage of lead. Procedures for analyzing metals are found in the American Society of Testing and Materials (ASTM) D-3335-78 and EPA Method Manual SW-846, Method 6010. (EMSL used SW 846 3050B*/7000B) an equivalent analytical method. The laboratory analytical report, chain of custody and EMSL Analytical, Inc. laboratory certification are attached.

Comments and Recommendations

Asbestos-Containing Materials

There were no asbestos containing materials identified in the samples collected.

Med-Tox Northwest recommends that this survey report be placed on-site during renovation and/or demolition and copies provided to the contractor(s) bidding and performing work. WISHA, Occupational Safety and Health Administration (OSHA) and ORCAA require that the report be on-site and available for review during the entire project duration.

Additional destructive investigation and sampling will be required prior to and during any demolition activities including the following:

1. Prior to any activity that will impact doors or the door frames, drill into the doors and door frames to determine if suspect fire protection is located inside.

Lead-Based Paint

There were eight samples collected for analysis of lead-based paint, all samples were determined to contain lead less than the level of detection for the analytical method. For lead, any percentage of lead in the material should be an assumed risk to human health. It is best work practice to assume all painted surfaces contain at least trace levels of lead in paint, therefore requiring compliance with WAC 296-155-176 during any disturbance of painted surfaces.

Disposal options under WAC 173-303 are also determined by whether the material contains lead. Based on the results of the samples collected for lead, the demolition debris for the site can be disposed of as general construction debris.

CITY OF LACEY
Hazardous Building Materials Survey
6612 5th Court SE, Lacey, Washington
December 30, 2021
Page 6



This survey is not intended for use as abatement plans and/or specifications.

If you have any questions or require additional information, please call me at (253) 351-0677.

Sincerely,

A handwritten signature in blue ink, appearing to read 'K Riche', is placed below the word 'Sincerely,'.

Kimberly Riche
Project Manager

Enclosures

SEATTLE ASBESTOS TEST, LLC

Lynnwood Laboratory: 18701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code 200768-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Kim Riche	Date Analyzed: 12/23/2021
Client: Med-Tox, Northwest	Client Job#: 8998.2
Address: PO Box 1446, Auburn, WA 98071-1446	Project Location: Lacey, Washington
Tel: 253.351.0677	Laboratory batch#: 202112010
Date Report Issued: 12/23/2021	Samples Received: 57

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover letter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Steve Zhang

Steve (Fanyao) Zhang
Approved Signatory

202112010

SEATTLE ASBESTOS TEST, LLC

NVLAP Accredited, 200768-0

CHAIN OF CUSTODY

☒ Bulk Asbestos (PLM)

☐ Point Count


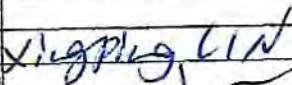
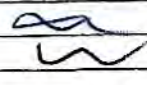
Client Name Med-Tox Northwest
 Address 129 A Street Northwest City Auburn ST WA ZIP 98001

Phone: _____ Fax: _____ Email: riches@medtoxnw.com

Project Location: Lacey, Washington Project Manager: Kim Riche

Turn Around Time 5-day Number of Samples 57 Client Job # 8998.2

SEQ#	CLIENT SAMPLE #	SAMPLE DESCRIPTION	LAB ID	A/R
1	8998.2-6612-001			
2	Through			
3	8998.2-6612-057			
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

	Print Name	Signature	Company Name	Date	Time
Sampled	Kim Riche		Med-Tox NW	12/20/21	1:45 pm
Relinquished	Kim Riche		Med-Tox NW	12/20/21	2:00 pm
Delivered					
Received			SAT	12/21/21	11:25
Analyzed			SAT	12/23/21	10:55
Reported					

Reporting Methods: ☐ Phone ☐ Fax ☒ Email

Seattle Asbestos Test warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted and disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. Seattle Asbestos Test accepts no legal responsibility for the purpose for which the client uses the test results. By signing on this form the clients agree to relieve Seattle Asbestos Test of any liability that may arise from the test results.

202 1120 10

Table C-1. Summary of Materials Sampled for Asbestos

Sample	Material	Location	AHERA Type	HM	Result
8998.2-6612-001	Brown paper, black mastic, and fiberglass insulation	Walls in master bathroom and closet	TSI	01	
8998.2-6612-002	Brown paper, black mastic, and fiberglass insulation	Walls in master bathroom and closet	TSI	01	
8998.2-6612-003	Brown paper, black mastic, and fiberglass insulation	Walls in master bathroom and closet	TSI	01	
8998.2-6612-004	Black paper and fiberglass insulation	Walls in bedroom 2	TSI	02	
8998.2-6612-005	Black paper and fiberglass insulation	Walls in bedroom 2	TSI	02	
8998.2-6612-006	Black paper and fiberglass insulation	Walls in bedroom 2	TSI	02	
8998.2-6612-007	Blown in insulation	In ceiling	TSI	03	
8998.2-6612-008	Blown in insulation	In ceiling	TSI	03	
8998.2-6612-009	Blown in insulation	In ceiling	TSI	03	
8998.2-6612-010	Heavy textured GWB system	Predominate walls and ceilings throughout	Surfacing	04	
8998.2-6612-011	Heavy textured GWB system	Predominate walls and ceilings throughout	Surfacing	04	
8998.2-6612-012	Heavy textured GWB system	Predominate walls and ceilings throughout	Surfacing	04	
8998.2-6612-013	Heavy textured GWB system	Predominate walls and ceilings throughout	Surfacing	04	
8998.2-6612-014	Heavy textured GWB system	Predominate walls and ceilings throughout	Surfacing	04	
8998.2-6612-015	Heavy textured GWB system	Predominate walls and ceilings throughout	Surfacing	04	
8998.2-6612-016	Heavy textured GWB system	Predominate walls and ceilings throughout	Surfacing	04	
8998.2-6612-017	Orange peel textured GWB system	Walls in master bathroom and bedroom 2	Surfacing	05	
8998.2-6612-018	Orange peel textured GWB system	Walls in master bathroom and bedroom 2	Surfacing	05	
8998.2-6612-019	Orange peel textured GWB system	Walls in master bathroom and bedroom 2	Surfacing	05	
8998.2-6612-020	Orange peel textured GWB system	Walls in master bathroom and bedroom 2	Surfacing	05	
8998.2-6612-021	Orange peel textured GWB system	Walls in master bathroom and bedroom 2	Surfacing	05	
8998.2-6612-022	Wallpaper with GWB	Walls in laundry room and bathroom	Misc.	06	
8998.2-6612-023	Wallpaper with GWB	Walls in laundry room and bathroom	Misc.	06	

8998.2-6612-024	Wallpaper with GWB	Walls in laundry room and bathroom	Misc.	06
8998.2-6612-025	4-inch tan cove base with yellow mastic	Base of walls in master bathroom	Misc.	07
8998.2-6612-026	4-inch tan cove base with yellow mastic	Base of walls in master bathroom	Misc.	07
8998.2-6612-027	4-inch tan cove base with yellow mastic	Base of walls in master bathroom	Misc.	07
8998.2-6612-028	4-inch square pattern SVF with glue, and white paper backing	Flooring in kitchen, laundry room, bathroom room, and entry way	Misc.	08
8998.2-6612-029	4-inch square pattern SVF with glue, and white paper backing	Flooring in kitchen, laundry room, bathroom room, and entry way	Misc.	08
8998.2-6612-030	4-inch square pattern SVF with glue, and white paper backing	Flooring in kitchen, laundry room, bathroom room, and entry way	Misc.	08
8998.2-6612-031	12-inch square pattern SVF with glue, and white paper backing	Flooring in master bathroom	Misc.	09
8998.2-6612-032	12-inch square pattern SVF with glue, and white paper backing	Flooring in master bathroom	Misc.	09
8998.2-6612-033	12-inch square pattern SVF with glue, and white paper backing	Flooring in master bathroom	Misc.	09
8998.2-6612-034	White material under carpet	Flooring throughout livingrooms, bedrooms, and hallway	Misc.	10
8998.2-6612-035	White material under carpet	Flooring throughout livingrooms, bedrooms, and hallway	Misc.	10
8998.2-6612-036	White material under carpet	Flooring throughout livingrooms, bedrooms, and hallway	Misc.	10
8998.2-6612-037	Blue ceramic tile, blue grout, and gray grout	Flooring under wood fireplace	Misc.	11
8998.2-6612-038	Blue ceramic tile, blue grout, and gray grout	Flooring under wood fireplace	Misc.	11
8998.2-6612-039	Blue ceramic tile, blue grout, and gray grout	Flooring under wood fireplace	Misc.	11
8998.2-6612-040	Tan plumber putty	Under kitchen sink	Misc.	12
8998.2-6612-041	Tan plumber putty	Under kitchen sink	Misc.	12
8998.2-6612-042	Tan plumber putty	Under kitchen sink	Misc.	12
8998.2-6612-043	Black padding	Under kitchen sink	Misc.	13
8998.2-6612-044	Black padding	Under kitchen sink	Misc.	13

Hazardous Building Materials Survey

202112010



8998.2-6612-045	Black padding	Under kitchen sink	Misc.	13
8998.2-6612-046	White sealant	Around kitchen counters	Misc.	14
8998.2-6612-047	White sealant	Around kitchen counters	Misc.	14
8998.2-6612-048	White sealant	Around kitchen counters	Misc.	14
8998.2-6612-049	Brown glue	Around master bathroom closet shelving and floor	Misc.	15
8998.2-6612-050	Brown glue	Around master bathroom closet shelving and floor	Misc.	15
8998.2-6612-051	Brown glue	Around master bathroom closet shelving and floor	Misc.	15
8998.2-6612-052	3-tab roofing with vapor barriers	Roof of residence	Misc.	16
8998.2-6612-053	3-tab roofing with vapor barriers	Roof of residence	Misc.	16
8998.2-6612-054	3-tab roofing with vapor barriers	Roof of residence	Misc.	16
8998.2-6612-055	3-tab roofing with vapor barrier	Shed roof	Misc.	17
8998.2-6612-056	3-tab roofing with vapor barrier	Shed roof	Misc.	17
8998.2-6612-057	3-tab roofing with vapor barrier	Shed roof	Misc.	17

SEATTLE ASBESTOS TEST

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

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ANALYTICAL LABORATORY REPORT

[PLM] EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples;
EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

[PLM]

Attn.: Kim Riche

Client: Med-Tox, Northwest

Address: PO Box 1446, Auburn, WA 98071-1446

Job#: 8998.2

Batch#: 202112010

Date Received: 12/21/2021

Samples Rec'd: 57

Date Analyzed: 12/23/2021

Samples Analyzed: 57

Project Loc.: Lacey, Washington

Analyzed by: Cassie Huang

Approved Signatory: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	8998.2-6612-001	1	Brown paper with black mastic		None detected	Filler, Asphalt/binder	70	Cellulose
		2	Pink fibrous material		None detected	Filler	89	Glass fibers
2	8998.2-6612-002	1	Brown paper with black mastic		None detected	Filler, Asphalt/binder	68	Cellulose
		2	Pink fibrous material		None detected	Filler	91	Glass fibers
3	8998.2-6612-003	1	Brown paper with black mastic		None detected	Filler, Asphalt/binder	66	Cellulose
		2	Pink fibrous material		None detected	Filler	90	Glass fibers
4	8998.2-6612-004	1	Black paper with black mastic		None detected	Filler, Asphalt/binder	71	Cellulose
		2	Pink fibrous material		None detected	Filler	87	Glass fibers
5	8998.2-6612-005	1	Black paper with black mastic		None detected	Filler, Asphalt/binder	65	Cellulose
		2	Pink fibrous material		None detected	Filler	88	Glass fibers
6	8998.2-6612-006	1	Black paper with black mastic		None detected	Filler, Asphalt/binder	70	Cellulose
		2	Pink fibrous material		None detected	Filler	92	Glass fibers
7	8998.2-6612-007	1	Dark gray fibrous material		None detected	Filler	91	Glass fibers
8	8998.2-6612-008	1	Dark gray fibrous material		None detected	Filler	89	Glass fibers
9	8998.2-6612-009	1	Dark gray fibrous material		None detected	Filler	90	Glass fibers
10	8998.2-6612-010	1	White powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
11	8998.2-6612-011	1	White powdery material with paint		None detected	Binder/filler, Paint	5	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	22	Cellulose
12	8998.2-6612-012	1	White powdery material with paint		None detected	Binder/filler, Paint	4	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
13	8998.2-6612-013	1	White powdery material with paint		None detected	Binder/filler, Paint	5	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
14	8998.2-6612-014	1	White powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose

SEATTLE ASBESTOS TEST

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

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ANALYTICAL LABORATORY REPORT

[PLM] EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples;
EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

[PLM]

Attn.: Kim Riche

Client: Med-Tox, Northwest

Address: PO Box 1446, Auburn, WA 98071-1446

Job#: 8998.2

Batch#: 202112010

Date Received: 12/21/2021

Samples Rec'd: 57

Date Analyzed: 12/23/2021

Samples Analyzed: 57

Project Loc.: Lacey, Washington

Analyzed by: Cassie Huang

Approved Signatory: Steve (Fanyao) Zheng, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
15	8998.2-6612-015	1	White powdery material with paint		None detected	Binder/filler, Paint	2	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	27	Cellulose
16	8998.2-6612-016	1	White powdery material with paint		None detected	Binder/filler, Paint	2	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
17	8998.2-6612-017	1	White powdery material with paint and paper		None detected	Binder/filler, Paint	33	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
18	8998.2-6612-018	1	White powdery material with paint and paper		None detected	Binder/filler, Paint	33	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	27	Cellulose
19	8998.2-6612-019	1	White powdery material with paint		None detected	Binder/filler, Paint	4	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
20	8998.2-6612-020	1	White powdery material with paint		None detected	Binder/filler, Paint	5	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	21	Cellulose
21	8998.2-6612-021	1	White powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
22	8998.2-6612-022	1	Beige soft/elastic material with paint		None detected	Binder, Filler, Paint	2	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
23	8998.2-6612-023	1	Beige soft/elastic material with paint		None detected	Binder, Filler, Paint	3	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
24	8998.2-6612-024	1	Beige soft/elastic material with paint		None detected	Binder, Filler, Paint	2	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	22	Cellulose
25	8998.2-6612-025	1	Tan rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose

SEATTLE ASBESTOS TEST

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

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ANALYTICAL LABORATORY REPORT

[PLM] EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples;
EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

[PLM]

Attn.: Kim Riche

Client: Med-Tox, Northwest

Address: PO Box 1446, Auburn, WA 98071-1446

Job#: 8998.2

Batch#: 202112010

Date Received: 12/21/2021

Samples Rec'd: 57

Date Analyzed: 12/23/2021

Samples Analyzed: 57

Project Loc.: Lacey, Washington

Analyzed by: Cassie Huang

Approved Signatory: Slove (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		3	Trace white powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
26	8998.2-6612-026	1	Tan rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Yellow mastic		None detected	Mastic/binder	4	Cellulose
27	8998.2-6612-027	1	Tan rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Yellow mastic		None detected	Mastic/binder	3	Cellulose
28	8998.2-6612-028	1	Gray sheet vinyl		None detected	Vinyl/binder		None detected
		2	White fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose
		3	Brown wood debris		None detected	Wood debris	7	Cellulose
29	8998.2-6612-029	1	Gray sheet vinyl		None detected	Vinyl/binder		None detected
		2	White fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
		3	Brown wood debris		None detected	Wood debris	6	Cellulose
30	8998.2-6612-030	1	Gray sheet vinyl		None detected	Vinyl/binder		None detected
		2	White fibrous material with mastic		None detected	Binder/filler, Mastic/binder	66	Cellulose
		3	Brown wood debris		None detected	Wood debris	7	Cellulose
31	8998.2-6612-031	1	Gray/green sheet vinyl		None detected	Vinyl/binder		None detected
		2	White fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose
		3	Brown wood debris		None detected	Wood debris	7	Cellulose
32	8998.2-6612-032	1	Gray/green sheet vinyl		None detected	Vinyl/binder		None detected
		2	White fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
		3	Brown wood debris		None detected	Wood debris	8	Cellulose
33	8998.2-6612-033	1	Gray/green sheet vinyl		None detected	Vinyl/binder		None detected

SEATTLE ASBESTOS TEST

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

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ANALYTICAL LABORATORY REPORT

[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples;
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Attn.: Kim Riche

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Date Analyzed: 12/23/2021

Samples Analyzed: 57

Project Loc.: Lacey, Washington

Analyzed by: Cassie Huang

Approved Signatory: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		2	White fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
		3	Brown wood debris		None detected	Wood debris	7	Cellulose
34	8998.2-6612-034	1	White soft/elastic material		None detected	Binder, Filler	4	Cellulose
		2	Brown wood debris		None detected	Wood debris	8	Cellulose
		3	Brown paper		None detected	Filler	75	Cellulose
35	8998.2-6612-035	1	Trace white powdery material		None detected	Filler, Binder	3	Cellulose
		2	Brown wood debris		None detected	Wood debris	7	Cellulose
36	8998.2-6612-036	1	White soft/elastic material		None detected	Binder, Filler	4	Cellulose
		2	Brown wood debris		None detected	Wood debris	6	Cellulose
37	8998.2-6612-037	1	Blue ceramic		None detected	Ceramic/binder		None detected
		2	Blue brittle/sandy material		None detected	Binder, Sand	3	Cellulose
		3	Gray brittle/sandy material		None detected	Binder, Sand	2	Cellulose
38	8998.2-6612-038	1	Blue ceramic		None detected	Ceramic/binder		None detected
		2	Blue brittle/sandy material		None detected	Binder, Sand	2	Cellulose
		3	Gray brittle/sandy material		None detected	Binder, Sand	3	Cellulose
39	8998.2-6612-039	1	Blue ceramic		None detected	Ceramic/binder		None detected
		2	Blue brittle/sandy material		None detected	Binder, Sand	2	Cellulose
		3	Gray brittle/sandy material		None detected	Binder, Sand	2	Cellulose
40	8998.2-6612-040	1	Tan soft material		None detected	Filler, Binder	3	Cellulose, Glass fibers
41	8998.2-6612-041	1	Tan soft material		None detected	Filler, Binder	4	Cellulose, Glass fibers
42	8998.2-6612-042	1	Tan soft material		None detected	Filler, Binder	6	Cellulose, Glass fibers
43	8998.2-6612-043	1	Black soft material		None detected	Filler, Binder	5	Cellulose
44	8998.2-6612-044	1	Black soft material		None detected	Filler, Binder	4	Cellulose
45	8998.2-6612-045	1	Black soft material		None detected	Filler, Binder	6	Cellulose

SEATTLE ASBESTOS TEST

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

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[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples;
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Attn.: Kim Riche

Client: Med-Tox, Northwest

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Samples Analyzed: 57

Project Loc.: Lacey, Washington

Analyzed by: Cassie Huang

Approved Signatory: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
46	8998.2-6612-046	1	White soft/elastic material		None detected	Binder, Filler	2	Cellulose
47	8998.2-6612-047	1	White soft/elastic material		None detected	Binder, Filler	4	Cellulose
48	8998.2-6612-048	1	White soft/elastic material		None detected	Binder, Filler	3	Cellulose
49	8998.2-6612-049	1	Brown mastic		None detected	Mastic/binder	3	Cellulose
		2	White chalky material with paint and paper		None detected	Binder/filler, Gypsum/binder, Paint	35	Cellulose
50	8998.2-6612-050	1	Brown mastic		None detected	Mastic/binder	4	Cellulose
		2	White chalky material with paint and paper		None detected	Binder/filler, Gypsum/binder, Paint	33	Cellulose
51	8998.2-6612-051	1	Brown mastic		None detected	Mastic/binder	2	Cellulose
		2	White chalky material with paint and paper		None detected	Binder/filler, Gypsum/binder, Paint	36	Cellulose
52	8998.2-6612-052	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	25	Glass fibers
		2	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	21	Glass fibers
		3	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	26	Glass fibers
		4	Black asphaltic material		None detected	Asphalt/binder	3	Cellulose
		5	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	66	Cellulose
		6	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	70	Cellulose
53	8998.2-6612-053	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	25	Glass fibers
		2	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	23	Glass fibers
		3	Black asphaltic material		None detected	Asphalt/binder	3	Cellulose
		4	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	68	Cellulose
		5	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	71	Cellulose
54	8998.2-6612-054	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	22	Glass fibers
		2	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	26	Glass fibers
		3	Black asphaltic material		None detected	Asphalt/binder	4	Cellulose

SEATTLE ASBESTOS TEST

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.573.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT

[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples;
EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

[PLM]

Attn.: Kim Riche

Client: Med-Tox, Northwest

Address: PO Box 1446, Auburn, WA 98071-1446

Job#: 8998.2

Batch#: 202112010

Date Received: 12/21/2021

Samples Rec'd: 57

Date Analyzed: 12/23/2021

Samples Analyzed: 57

Project Loc.: Lacey, Washington

Analyzed by: Cassie Huang

Approved Signatory: Siave (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		4	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	66	Cellulose
		5	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	72	Cellulose
55	8998.2-6612-055	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	24	Glass fibers
		2	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	23	Glass fibers
		3	Black asphaltic material		None detected	Asphalt/binder	2	Cellulose
		4	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	65	Cellulose
		5	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	70	Cellulose
56	8998.2-6612-056	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	22	Glass fibers
		2	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	26	Glass fibers
		3	Black asphaltic material		None detected	Asphalt/binder	5	Cellulose
		4	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	68	Cellulose
		5	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	70	Cellulose
57	8998.2-6612-057	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	24	Glass fibers
		2	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	23	Glass fibers
		3	Black asphaltic material		None detected	Asphalt/binder	2	Cellulose
		4	Clear plastic		None detected	Plastic		None detected
		5	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	69	Cellulose
		6	Black asphaltic fibrous material		None detected	Asphalt/binder, Binder/filler	68	Cellulose

**EMSL Analytical, Inc.**

6340 CastlePlace Dr., Indianapolis, IN 46250

Phone/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com>indianapolislab@emsl.com

EMSL Order: 162129666

CustomerID: MEDT50

CustomerPO:

ProjectID:

Attn: **Kimberly Riche**
Med-Tox Northwest
PO Box 1446
Auburn, WA 98071

Phone: (253) 351-0677
 Fax: (253) 351-0688
 Received: 12/21/2021 11:15 AM
 Collected: 12/20/2021

Project: **8998.2****Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)***

<i>Client SampleDescription</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>RDL</i>	<i>Lead Concentration</i>
8998.2-6612-01PB 162129666-0001	12/20/2021	12/22/2021 Site: Exterior Wall Wood Cream-Shed	0.2561 g	0.0080 % wt	<0.0080 % wt
8998.2-6612-02PB 162129666-0002	12/20/2021	12/22/2021 Site: Exterior Trim Wood-Brown-Shed	0.2521 g	0.0080 % wt	<0.0080 % wt
8998.2-6612-03PB 162129666-0003	12/20/2021	12/22/2021 Site: Interior Wall GWB-Tan-Residence	0.2581 g	0.0080 % wt	<0.0080 % wt
8998.2-6612-04PB 162129666-0004	12/20/2021	12/22/2021 Site: Interior Wall GWB-White-Residence	0.2561 g	0.0080 % wt	<0.0080 % wt
8998.2-6612-05PB 162129666-0005	12/20/2021	12/22/2021 Site: Interior Trim Wood-White-Residence	0.2581 g	0.0080 % wt	<0.0080 % wt
8998.2-6612-06PB 162129666-0006	12/20/2021	12/22/2021 Site: Exterior Wall Wood-Cream-Residence	0.2522 g	0.0080 % wt	<0.0080 % wt
8998.2-6612-07PB 162129666-0007	12/20/2021	12/22/2021 Site: Exterior Wall Wood-Gray-Residence	0.2503 g	0.0080 % wt	<0.0080 % wt
8998.2-6612-08PB 162129666-0008	12/20/2021	12/22/2021 Site: Exterior Trim Wood-Brown-Residence	0.2548 g	0.0080 % wt	<0.0080 % wt

Aleksandra Kuchenbrod, Inorganic Chemisry
 Lab Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.

Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN AIHA-LAP, LLC-ELLAP 157245, OH E10040

Initial report from 12/28/2021 08:06:11



Photo 1: Exterior of manufacture home.



Photo 2: Kitchen finishes.



Photo 3: Main bathroom finishes.



Photo 4: Living room finishes.



Photo 5: Master bathroom finishes.

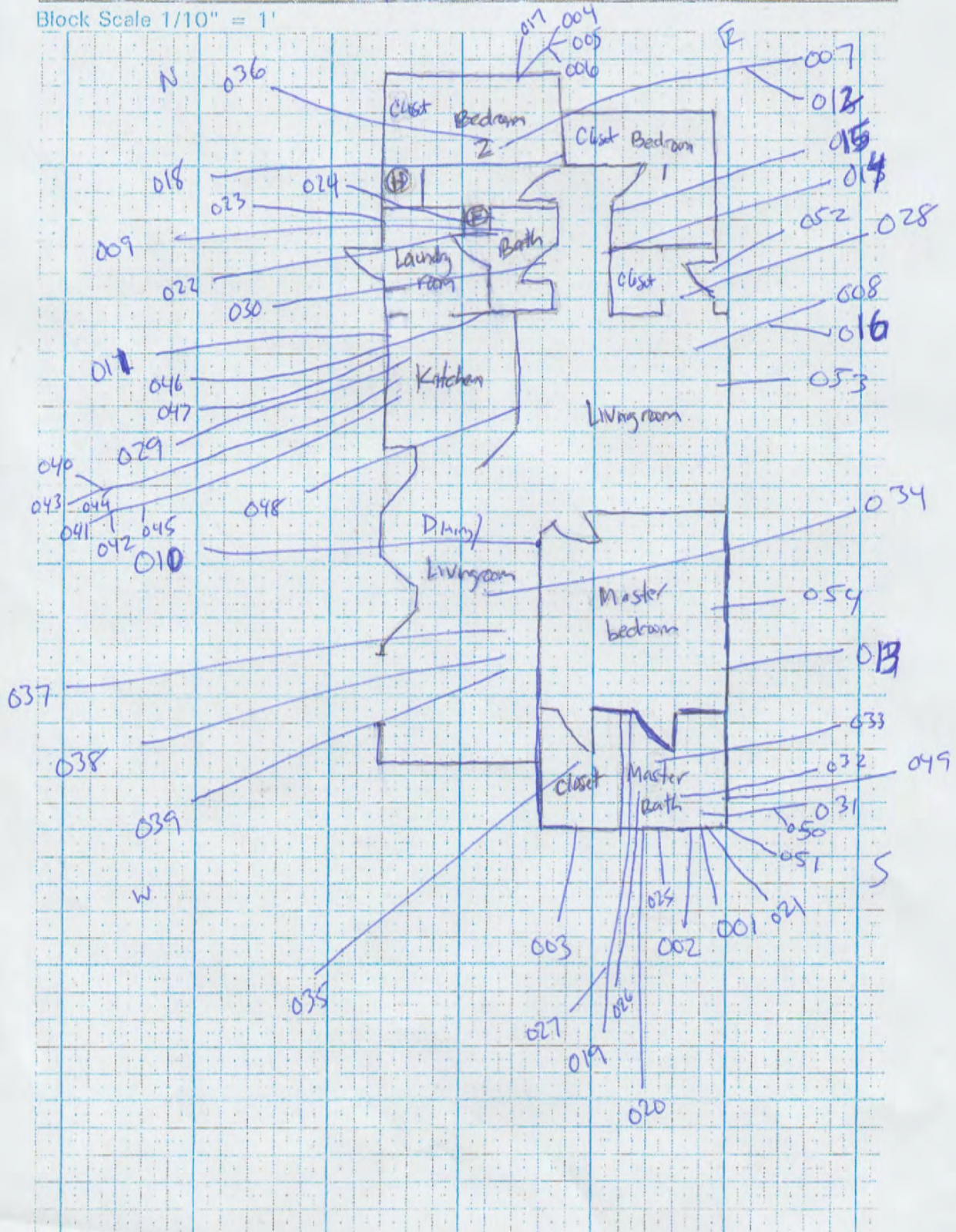


Photo 6: Exterior of shed



Photo 7: Interior shed finishes.

Block Scale 1/10" = 1'



United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 200768-0

Seattle Asbestos Test, LLC
Lynnwood, WA

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).

2021-10-01 through 2022-09-30

Effective Dates



A handwritten signature in blue ink, which appears to read "Peter S. Lander", is written over a horizontal line.

For the National Voluntary Laboratory Accreditation Program



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc.

6340 Castleplace Drive Indianapolis, IN 46250

Laboratory ID: LAP-157245

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

<input checked="" type="checkbox"/>	INDUSTRIAL HYGIENE	Accreditation Expires: June 01, 2023
<input checked="" type="checkbox"/>	ENVIRONMENTAL LEAD	Accreditation Expires: June 01, 2023
<input checked="" type="checkbox"/>	ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: June 01, 2023
<input type="checkbox"/>	FOOD	Accreditation Expires:
<input type="checkbox"/>	UNIQUE SCOPES	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2017 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Cheryl O. Morton

Cheryl O Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 19: 09/01/2020

Date Issued: 05/31/2021



AIHA Laboratory Accreditation Programs, LLC

SCOPE OF ACCREDITATION

EMSL Analytical, Inc.

6340 Castleplace Drive Indianapolis, IN 46250

Laboratory ID: LAP-157245

Issue Date: 05/31/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 09/01/2002

Component, parameter or characteristic tested	Technology sub-type/Detector	Method	Method Description (for internal methods only)
Airborne Dust	AA	NIOSH 7082	N/A
Paint	AA	EPA SW-846 3050B	N/A
		EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A
Settled Dust by Wipe	AA	EPA SW-846 3050B	N/A
		EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A
Soil	AA	EPA SW-846 3050B	N/A
		EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A

A complete listing of currently accredited ELLAP laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>

Certificate of Completion

This is to certify that

Kimberly D. Riche

has satisfactorily completed
4 hours of online refresher training as an
AHERA Building Inspector

to comply with the training requirements of
TSCA Title II, 40 CFR 763 (AHERA)

EPA Provider # 1085

181832
Certificate Number



Jun 16, 2021 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
(if applicable)

A handwritten signature in black ink, appearing to read "Andre Zwanenburg".

Instructor: Andre Zwanenburg

ARGUS PACIFIC, INC / 21905 64th AVE W, SUITE 100 / MOUNTLAKE TERRACE, WASHINGTON 98043 / 206.285.3373 / ARGUSPACIFIC.COM

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Kimberly D Riche

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Risk Assessor*

Certification #

6702

Issuance Date

07/09/2019

Expiration Date

07/09/2022