

CLEAR CREEK IMPROVEMENT INTER-LOCAL AGREEMENT

In support of Pierce County objectives to preserve and enhance surface water resources and provide flood risk reduction improvements to the Clear Creek area, along with the Port of Tacoma's long-standing commitment to environmental stewardship along Clear Creek, this agreement seeks to advance those respective goals.

THIS INTER-LOCAL AGREEMENT ("Agreement") is made and entered into under Chapter 39.34 RCW by and between Port of Tacoma, a Washington State special purpose municipal corporation ("Port") and Pierce County, a municipal corporation and political subdivision of the State of Washington, by and through Pierce County Department of Planning and Public Works - Surface Water Management ("Pierce County"), on the Effective Date as stated in the last paragraph herein. For purposes of this Agreement, the Port and Pierce County may each be referred to individually as a "Party" or collectively as the "Parties".

RECITALS

A. WHEREAS, Pierce County expects to receive two National Resource Damage Assessment (NRDA) grants as administered by the National Oceanic & Atmospheric Association (NOAA) and the Commencement Bay Trustees, for the purpose of improving and restoring off-channel salmonid habitat within Clear Creek.

B. WHEREAS, Pierce County is seeking to provide off-channel habitat improvements and flood risk reduction in the Clear Creek area through the design and construction of two projects. The first, being a retrofit to an existing wooden flap gate at the confluence of Clear Creek and the Puyallup River (Exhibit A – "D227 Clear Creek Flood Gate Retrofit Project"). The second, being the removal of an existing access road that currently separates Clear Creek from an existing wetland (Exhibit B – "D228 Clear Creek Habitat Restoration Project"). Exhibit A and Exhibit B include the preliminary design plans for the referenced projects; both exhibits are attached hereto and incorporated by reference herein.

C. WHEREAS, the normal and routine flow of Clear Creek is conveyed under and through Washington State highway State Route 167 (SR-167) to the Puyallup River by twin-barrel concrete culverts, located at approximately Mile Post 0.81 of SR-167.

D. WHEREAS, wooden flow-control flap gates were previously installed on the river-side outlet of each culvert for the purpose of regulating the flow between the Puyallup River and Clear Creek, and Port previously replaced one such flap gate with a motorized gate and related appurtenances. Back-up power for the Port's motorized gate is provided by a generator, also installed by Port. Port owns and is responsible for the motorized gate, the generator, and related appurtenances.

E. WHEREAS, as noted in the attached Exhibit G, incorporated herein by reference, Washington State, through the Washington State Department of Transportation (WSDOT), has acknowledged that WSDOT owns and is responsible for the maintenance of the twin-barrel culverts,

together with the surrounding or supporting subsurface materials, but does not own and is not responsible for the two flow control gates and related appurtenances that are affixed to the river-side outlets of the twin-barrel culverts, although that equipment is located within WSDOT (SR 167) Right-of-Way. The Parties agree that WSDOT owns and is responsible for the culverts but not the flow control gates affixed to the culverts.

F. WHEREAS, Port also previously constructed, owns, and is responsible for a debris barrier apparatus located on the inlet-side of the WSDOT twin-barrel culverts and attached to those culverts. As also noted in Exhibit G, WSDOT has acknowledged that the debris barrier apparatus is located in a portion of Clear Creek that is within Washington State (SR-167) Right-of-Way and that WSDOT owns and is responsible for the real property where the debris barrier is located.

G. WHEREAS, a portion of the access road to be removed by Pierce County to benefit the Clear Creek Habitat Restoration Project, as depicted in Exhibit B, is located on and adjacent to real property owned and/or operated by the Port, and the remaining portion of the access road is on real property previously controlled by WSDOT. WSDOT has now conveyed its interest in that real property to Pierce County, Exhibit C - "WSDOT ROW Quit Claim Deed to Pierce County", attached hereto, and incorporated by reference herein.

H. WHEREAS, the Port and Pierce County desire to enter into an agreement to facilitate construction and maintenance of said projects and identify the consideration and their respective roles and obligations. And the Parties desire to clarify and establish ownership and control of project-related infrastructure, before and after completion of said projects.

I. WHEREAS, Chapter 39.34 RCW authorizes the Parties to enter this agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the benefits summarized herein, the Parties agree as follows:

1. Purpose. The purpose of this Interlocal Agreement is to allow the Parties, both public agencies as defined in RCW 39.34.020(1), to cooperate in preserving and enhancing surface water resources and providing flood risk reduction improvements to the Clear Creek area, to temporarily transfer certain real property interests to Pierce County, and to transfer ownership and responsibility for certain equipment from the Port to Pierce County.
2. Finance, Budget, and Property Acquisition. No joint budget or financing is required by or established by this Agreement. Each Party is responsible for the cost of meeting that Party's obligations under this Agreement, and each Party agrees to budget and appropriate funds necessary to meet those obligations. Each Party will acquire and transfer real and personal property as set forth the Agreement, but no property will be jointly acquired or held by the Parties.
3. Obligations of the Parties.

3.1. Conditioned on receiving funding from the anticipated NRDA grants, Pierce County agrees to construct both the Clear Creek Flood Gate Retrofit Project, the preliminary design plans for which is depicted in Exhibit A, and the Clear Creek Habitat Restoration Project, the preliminary design plans for which is depicted in Exhibit B.

3.2. To facilitate the construction, monitoring, and maintenance of the habitat improvement project identified in Exhibit B, Port will convey to Pierce County an easement. Said easement will authorize all uses upon all portions of Port's real property that Pierce County determines are desirable for construction of the Exhibit B project, and all uses upon all portions of Port's real property that Pierce County determines are desirable to monitor and maintain the project, and shall have a duration extending at least 5 years after project construction is complete. In addition, to facilitate maintenance of the debris barrier transferred by this agreement, the Port will convey a second easement, perpetual and non-exclusive. Said easement will authorize ingress and egress with all necessary equipment and personnel over and across tax parcel number 5000350672 and any other Port real property the County determines is needed for the purpose of accessing and maintaining said debris barrier, including without limitation access through any fences or gates.

3.3 On May 12, 2021, the Port and Pierce County conducted a joint inspection of the motorized flood gate and related appurtenances. A list of deficiencies needing replacement, repair, or improvement, including the reasonable cost to correct each deficiency resulting from that joint inspection, the entitled "Clear Creek Flood Gate Facility Deficiencies List," (hereinafter "Deficiency List") is attached hereto as Exhibit D and incorporated herein by reference. Port agrees to transfer funds to Pierce County necessary to pay the total costs listed on the Deficiency List in an amount not to exceed \$25,000.00 (twenty-five thousand and no/100 dollars) as partial consideration for Pierce County assumption of responsibility for the motorized gate system. If desired, Port may salvage the old generator after Pierce County installs the new generator, but Port is then the owner of the old generator and is responsible for removing it from the project site.

3.4 Port agrees to convey the easements referenced in Section 3.2 and to transfer the funds required by Section 3.3 prior to Pierce County, on or before June 1, 2022.

3.5 Following construction of the Flood Gate Retrofit Project (preliminary designs depicted in Exhibit A), the Parties agree that ownership of the motorized flood gate, its appurtenances, and the debris barrier attached to the WSDOT twin-barrel concrete culvert all transfer from the Port to Pierce County. After that transfer, Pierce County agrees that it will own and will assume sole maintenance and operational responsibility for the entire flood gate apparatus and for the debris barrier associated with the WSDOT twin-barrel culvert. The equipment transferred to Pierce County includes: one (1) motorized top-hinge sluice gate, float activation equipment, operating motor, jack screw and gear box, electrical controller, currently installed backup generator (if not otherwise claimed by the Port), cement platform, fence/gate enclosure, and steel debris barrier. The Parties agree that any new equipment installed as part of the Flood Gate Retrofit Project will belong to Pierce County. The equipment Port transfers to Pierce County will be the equipment in place prior to commencement of the Project, including any equipment improved or repaired as part of that Project.

3.6 Pierce County agrees to operate and maintain the flood gate previously owned and operated by Port in a manner consistent with the flood control and fish passage parameters required

by the U.S. District Court consent decree binding Port that was entered on October 8, 1993, Cause No. C93-5462 RJB, as set forth in the attached Exhibit E, incorporated by reference herein, for so long as required by the consent decree or until the culverts are replaced, whichever is sooner. Pierce County may adjust the operating parameters of the gate, in the interest of improving fish passage or flood risk reduction, if future conditions warrant.

3.7 Following completion of the Clear Creek Habitat Restoration Project, Pierce County and Port will collectively monitor project elements on Port property during an initial five-year monitoring period according to the post project monitoring plan mutually developed and agreed to by Pierce County and Port, as specified in the attached Exhibit F, a draft version of the "Clear Creek Habitat Restoration – Lower Access Road Removal Monitoring Plan", incorporated by reference herein. After completion of the Project, the parties agree to amend this Agreement by substituting the final version of the "Clear Creek Habitat Restoration – Lower Access Road Removal Monitoring Plan" as Exhibit F. While both parties will monitor, Pierce County is responsible for project performance during the initial five-year monitoring period. Following expiration of the five-year monitoring period, Port will assume monitoring and maintenance responsibility for project performance and infrastructure on Port property to ensure the habitat benefit is preserved in perpetuity in a manner consistent with their long term monitoring and maintenance plan, as required by the mitigation requirements associated with the following Consent Decrees: Phase I: October 8, 1993, Case No. C93-5462 RJB, Phase II: February 8, 2005, Case No. C05-5103 FDB binding Port.

4. Duration of Agreement.

4.1 Duration. After the Effective Date, as defined in section 7.12, this Agreement will stay in effect until completion of all contemplated work and transfer of all contemplated personal property and real property rights, when this Agreement shall expire. The maintenance, operation, and monitoring obligations of Sections 3.6 and 3.7 are continuing obligations and survive expiration of this Agreement, but may be altered by termination under Section 4.2 or by future projects that eliminate the need for such maintenance, operation, or monitoring.

4.2 Termination. Both Parties benefit from this Agreement continuing in force during the entire contemplated term. If either Party wishes to withdraw from or terminate this Agreement for its own convenience, it must provide written notice to the other Party. The Parties will then make good faith efforts to negotiate terms and conditions for withdrawal or termination. No withdrawal or termination will become effective until the Parties agree, in writing, to a binding amendment to this Agreement establishing such terms and conditions for its termination.

4.2.1 If a Party breaches its obligations under this Agreement, as specified in Section 1 or elsewhere, the non-breaching Party may, by written notice, demand cure or state its intent to terminate. If cure is demanded, the breaching party shall, within 30 days, either cure the breach or proceed to mediation and, if necessary, arbitration as specified below if the parties dispute the existence of breach or cure. If termination is requested, the non-breaching party may terminate this Agreement 61 days after receipt of the written notice, but only if the breach is not cured within 60 days of receipt of the notice. Provided, however, that if the Parties disagree about whether a breach occurred or whether a breach has been cured, the

Parties agree to submit the dispute to mediation. If mediation is unsuccessful, the Parties agree to submit the dispute to an arbitrator and to accept and abide by the decision of the arbitrator as to the occurrence or cure of the breach. The Parties further agree to make good faith efforts to agree on the selection of said mediator or arbitrator, and to equally split the cost of mediation or arbitration.

4.2.2 Disposition of Property. Upon termination, all conveyances of real or personal property remain effective to the extent specified by this Agreement or by the terms of conveyance, regardless of whether this Agreement is terminated prior to expiration of the term. Upon termination, each Party will continue to be responsible for property held by that Party; the Parties will not jointly acquire or hold any real or personal property under this Agreement. If Port does not salvage the old generator as permitted in subsection 3.3, Pierce County may make such use or disposition of that old generator as is in Pierce County's best interest.

4.2.3 Termination – Grant Funding. Notwithstanding the other terms of this section 4.2, Pierce County may unilaterally terminate this Agreement immediately upon written notice to Port if, for any reason, NRDA denies the requested grants or Pierce County does not receive the anticipated grant funds. The Parties agree that termination on this basis is not a breach of this Agreement and shall not result in any penalty to or liability for Pierce County.

5. Nature of Agreement/Independent Contractor. The Parties do not intend by this Agreement to, and nothing contained in this Agreement will, create any partnership, joint venture, buy/sell agreement, agency agreement, brokerage agreement, employment agreement, or relationship between the Parties as guarantor or fiduciary.

6. Mutual Indemnification.

6.1 To the extent of its comparative liability, each Party agrees to indemnify, defend and hold the other Party, its elected and appointed officials, employees, agents, and volunteers, harmless from and against any and all claims, damages, losses, and expenses, including but not limited to court costs, attorney's fees, and alternative dispute resolution costs, for any injury or damage of any kind which are alleged or proven to be caused by an act or omission related to the actions under this Agreement, negligent or otherwise, of the Party, its elected and appointed officials, employees, agents, or volunteers.

6.2 A Party shall not be required to indemnify, defend, or hold the other Party harmless if the claim, damage, loss, or expense for any injury or damage of any kind is caused by the sole act or omission of the other Party.

6.3 The Parties agree to maintain a consolidated defense to claims made against them by claimants not included in this Agreement and to reserve all indemnity claims against each other until after liability to the claimant and damages, if any, are adjudicated.

6.4 To the extent of each Party's obligations under this provision, each Party agrees to specifically defend, indemnify, and hold harmless the indemnified Party for claims against the indemnified Party by the indemnifying Party's own employees, and, solely for the purpose of this provision, each Party specifically waives any immunity under the state industrial insurance law, Title 51 RCW. Both Parties agree that the Parties mutually negotiated this waiver.

7. General.

7.1 Joint Board and Manner of Notice. As this Agreement does not create any separate legal or administrative entity, Pierce County and the Port will jointly administer this Agreement by a Joint Board consisting of the persons receiving notice under this subsection or their designees. Notices required or desired to be given under this Agreement shall be in writing and sent by either: (a) United States Postal Service first class mail, postage pre-paid; (b) recognized overnight express service which customarily maintains a contemporaneous permanent delivery record; or (c) by email to the email addresses designated below, if the subject line indicates that the email is formal notice under this Agreement and also references the Pierce County contract number designation. The notice shall be deemed delivered on the earlier of: (a) Actual receipt; (b) Three (3) business days from deposit in the United States mail; (c) the delivery date as shown in the regular business records of the overnight courier service; or (d) the day and time the email message is received by the recipient's email system, but emails received between 5:00 PM and 8:00 AM will be considered delivered at the start of the next business day. Notices shall be addressed as follows:

To Port of Tacoma: Director, Environmental and Planning Programs
Port of Tacoma
PO Box 1837
Tacoma, WA 98401-1837

To Pierce County: Manager, Surface Water Management Division
Pierce County Planning and Public Works
2702 S 42nd Street, Suite 201
Tacoma, WA 98409

Any Party, by written notice to the other in the manner herein provided, may designate an address different from that set forth above. Any notices sent by a Party's attorney on behalf of such Party shall be deemed delivered by such Party.

7.2 Entire Agreement and Modification. This Agreement embodies the entire agreement and understanding between the Parties hereto with respect to its subject matter and supersedes all prior agreements and understandings, whether written or oral, relating to its subject matter. No amendment or modification of this Agreement shall be valid unless made in writing and signed by each of the Parties.

7.3 Authority. Each Party to this Agreement, and each individual signing on behalf of each Party, hereby represents and warrants to the other that it has full power and authority to enter into this Agreement and that its execution, delivery, and performance of this Agreement has been

fully authorized and approved, and that no further approvals or consents are required to bind such Party.

7.4 Affiliates, Successors, and Assigns. This Agreement will be binding upon and will inure to the benefit of the Parties hereto and their respective successors and permitted assigns. Neither Party will assign its rights under this Agreement without prior written consent of the other Party. Any such prohibited assignment will be void.

7.5 Assurances. Each Party agrees to carry out its activities under this Agreement in accordance with all applicable federal, state, and local laws, rules, and regulations.

7.6 Survival. The following provisions of this Agreement shall survive the expiration or termination of the Agreement: Rights and obligations of the Parties under Section 3 of this Agreement and all procedural and remedial provisions of the Agreement.

7.7 Interpretation. Each Party acknowledges that it and its legal counsel have reviewed this Agreement. The Parties agree that the terms and conditions of this Agreement will not be construed against any Party on the basis of such Party's drafting, in whole or in part, of such terms and conditions.

7.8 Choice of Law, Venue and Responsibility for Attorney Fees and Costs. This Agreement and all issues relating to its validity, interpretation, and performance shall be governed by and interpreted under the laws of the State of Washington without regard to conflict of law provisions. In the event any suit, arbitration, or other proceeding is instituted to enforce any term of this Agreement, the Parties specifically understand and agree that venue will be in the Washington State Superior Court in and for Pierce County, Washington. If a Court determines that RCW 36.01.050(3) applies to this Agreement, then venue shall be in any of the three superior courts authorized by RCW 36.01.050(1) for actions against Pierce County. In the event of any dispute related to this Agreement (including those under subsection 4.2.1), whether pursued in court or otherwise, each Party shall be responsible for its own actual attorney fees and costs.

7.9 Severability. If any provision of this Agreement is held to be illegal, invalid, or unenforceable, such provision shall be fully severable, and the remainder of this Agreement shall remain in full force and effect.

7.10 Counterparts. This Agreement may be executed in as many counterparts as may be deemed necessary or convenient, each of which, when so executed, shall be deemed an original, but all such counterparts shall constitute but one and the same instrument. Signatures transmitted by e-mail (PDF attachment) or facsimile transmission shall be acceptable.

7.11 Recitals and Exhibits. All recitals, and exhibits referenced herein and attached hereto, are hereby incorporated into and made part of this Agreement.

7.12 Effective Date. This Agreement shall become effective upon the date this Agreement document is fully signed and dated by all Parties .

{Signature Page(s) to Follow}

EXHIBIT

IN WITNESS WHEREOF, the undersigned duly authorized representatives of the Parties hereto have executed and delivered this Agreement as of the dates provided below.

PORT OF TACOMA

PIERCE COUNTY

Eric Johnson, Executive Director

Bruce Dammeier, County Executive

Date:

Date

ATTEST

ATTEST

Clerk of Port of Tacoma

Clerk of the County Council

APPROVED AS TO FORM

APPROVED AS TO FORM

Attorney for the Port of Tacoma

Deputy Prosecuting Attorney for Pierce
County

EXHIBIT

EXHIBIT LIST

{Exhibits attached:}

- Exhibit A – “Preliminary Design Plans for the D227 Clear Creek Flood Gate Retrofit Project”
- Exhibit B – “Preliminary Design Plans for the D228 Clear Creek Habitat Restoration Project”
- Exhibit C – “WSDOT ROW Quit Claim Deed to Pierce County”
- Exhibit D – “Clear Creek Flood Gate Facility Deficiencies List”
- Exhibit E – “Port Consent Decree in Cause No. C93-5462 RJB”
- Exhibit F – Draft version of the “Clear Creek Habitat Restoration – Lower Access Road Removal Monitoring Plan”
- Exhibit G – “Washington State Acknowledgement of Ownership”



Pierce County
SURFACE WATER MANAGEMENT

60% PLANS

SHEET 1 OF 21



APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



SUMMARY OF QUANTITIES			
ITEM	TOTAL QUANTITY	UNITS	ITEM DESCRIPTION
PREPARATION			
1	LUMP SUM	L.S.	MOBILIZATION
2	0.25	ACRE	CLEARING AND GRUBBING
3	LUMP SUM	L.S.	REMOVAL OF STRUCTURES AND OBSTRUCTIONS
4	60	L.F.	REMOVAL OF CHAIN LINK FENCE
5	LUMP SUM	L.S.	PORTABLE TRACKOUT CONTROL SYSTEM
DRAINAGE			
6	42	TON	QUARRY SPALLS
STRUCTURE			
7	LUMP SUM	L.S.	COMBINATION SLUICE/FLAP GATE, THIMBLE, INSTALLATION, REINFORCING & ALL MOUNTING HARDWARE
8	LUMP SUM	L.S.	METAL WORK (INCLUDES ALL HAND RAILS, LADDERS & MOUNTING STEEL)
9	LUMP SUM	L.S.	CONCRETE (INCLUDES ALL CAST IN PLACE WALLS, PIERS, SLABS & GROUTING)
10	LUMP SUM	L.S.	ELECTRICAL (ALL LABOR & MATERIALS TO DEMO, RELOCATE AND INSTALLATION OF ALL ELECTRICAL COMPONENTS)
11	1	EACH	25 KW GENERATOR
SURFACING AND GRADING			
12	LUMP SUM	L.S.	MAINTENANCE ACCESS ROAD CONSTRUCTION AND GRADING
13	132	TON	CRUSHED SURFACING BASE COURSE
EROSION CONTROL AND ROADSIDE PLANTING			
14	9	DAY	ESC LEAD
15	0.3	ACRE	SEEDING, FERTILIZING, AND MULCHING
16	292	L.F.	HIGH VISIBILITY SILT FENCE
17	EST. \$ 5,000	DOL.	EROSION/WATER POLLUTION CONTROL
TRAFFIC			
18	1,008	HR	PORTABLE CHANGEABLE MESSAGE SIGN
19	LUMP SUM	L.S.	PROJECT TEMPORARY TRAFFIC CONTROL
OTHER ITEMS			
20	LUMP SUM	L.S.	SURVEYING
21	LUMP SUM	L.S.	SPCC PLAN
22	LUMP SUM	L.S.	FUGITIVE DUST CONTROL PLAN
23	LUMP SUM	L.S.	CLEANING EXISTING DRAINAGE STRUCTURE
24	1	EACH	PROJECT SIGN INSTALLATION
25	70	L.F.	7" HIGH GALVANIZED SECURITY FENCE
26	10	EACH	GALVANIZED END, GATE, CORNER, FOR CHAIN LINK FENCE
27	1	EACH	SINGLE 4 FT. CHAIN LINK GATE
28	LUMP SUM	L.S.	TEMPORARY DEWATERING AND CREEK BYPASS SYSTEM
29	EST. \$ 15,000	DOL.	MINOR CHANGE

GENERAL NOTES:

1. EXISTING WOOD FLAP GATE WILL BE REMOVED AND A NEW ELECTRONICALLY CONTROLLED METAL COMBINATION SLUICE/FLAP GATE WILL BE INSTALLED
2. EXISTING 17'-6" WIDE DOUBLE BARREL CONCRETE CULVERT WILL REMAIN AND THE NEW COMBINATION SLUICE/FLAP GATE WILL BE ATTACHED TO EXISTING WEST BARREL OF THE CULVERT
3. THE EXISTING CONCRETE PLATFORM WILL REMAIN IN PLACE AND A NEW ELEVATED CONCRETE PLATFORM AND HEADWALL WILL BE CONSTRUCTED TO ACCOMMODATE THE NEW COMBINATION SLUICE/FLAP GATE AND EMERGENCY BACKUP GENERATOR
4. ALL CRITICAL INFRASTRUCTURE (GENERATOR AND ALL CRITICAL ELECTRICAL COMPONENTS) WILL BE ELEVATED TO AT OR ABOVE ELEVATION 24.32 (500 YEAR FLOOD EVENT)
5. THE NEW ELECTRIC COMBINATION SLUICE/FLAP GATE WILL BE PROVIDED BY THE CONTRACTOR
6. CLEAR CREEK WILL BE BYPASSED AROUND CONSTRUCTION SITE, TEMPORARY COFFER DAMS, FISH SCREENS, PUMPS & DISCHARGE PIPE WILL BE INSTALLED BY THE CONTRACTOR PRIOR TO CONSTRUCTION
7. THE CONTRACTOR SHALL SUBMIT A PROPOSED CREEK BYPASS PLAN TO PIERCE COUNTY PRIOR TO COMMENCING WORK. PLAN MUST BE APPROVED BY PROJECT ENGINEER
8. THE EXISTING EAST ELECTRIC COMBINATION SLUICE/FLAP GATE WILL REMAIN
9. THE NEW ELECTRIC SLUICE GATE WILL WORK IN TANDEM WITH THE EXISTING PORT OF TACOMA GATE, BOTH GATES WILL BE OPERATED BY A SINGLE POWER SOURCE AND CONTROLLING SYSTEM
10. ALL OPERATIONS OF BOTH GATES WILL BE MONITORED BY PIERCE COUNTY'S SCADA SYSTEM
11. BOTH GATES WILL BE SET TO CLOSE AT ELEVATION 12.5' AND OPEN @ ELEVATION 12.0' (NAVD88) PER THE ORIGINAL OPERATING PARAMETERS OF THE PORT OF TACOMA'S GATE
12. GATES WILL REMAIN OPEN DURING STAGES LESS THAN ELEVATION 12.5'
13. EMERGENCY BACKUP POWER WILL BE SUPPLIED BY A DIESEL POWERED GENERATOR
14. ALL CHAIN LINK FENCE SHALL BE CONSTRUCTED PER DEPARTMENT OF DEFENSE UNIFIED FACILITIES CRITERIA (UFC) "SECURITY FENCES AND GATES" UFC-4-022-03 AND PER APPROVED PLANS
15. PIERCE COUNTY WILL HAVE OWNERSHIP AND MAINTENANCE RESPONSIBILITIES OF THE NEWLY CONSTRUCTED COMBINATION SLUICE/FLAP GATE. PIERCE COUNTY WILL GAIN OWNERSHIP OF THE EXISTING COMBINATION SLUICE/FLAP GATE AND ALL OF IT'S APPURTENANCES FROM THE PORT OF TACOMA. PIERCE COUNTY WILL THEN HAVE SOLE OWNERSHIP, OPERATION AND MAINTENANCE RESPONSIBILITIES OF BOTH COMBINATION SLUICE/FLAP GATES INCLUDING THE DEBRIS BARRIER ON THE UPSTREAM END OF THE CULVERT. A DEBRIS MANAGEMENT PLAN WILL BE COMPLETED BY PIERCE COUNTY FOR THE SLUICE GATES AND DEBRIS BARRIER. THE PLAN WILL BE INCLUDED UPON COMPLETION OF THE PROJECT
16. WSDOT WILL RETAIN OWNERSHIP AND MAINTENANCE OF THE EXISTING TWIN BARREL CULVERT THAT IS CURRENTLY UNDER HWY-167
17. ALL DIMENSIONS OF EXISTING STRUCTURES ARE BASED OFF OF DRAWING NO. EP-4720-20 SHEET 10 OF 17 DATED 05/02/97 PROVIDED TO PIERCE COUNTY BY THE PORT OF TACOMA AND ARE NOT ACTUAL DIMENSIONS
18. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS

Date: Apr 06, 2021 8:29:11 AM
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Xref(s):

DRAWING NO. ---	SURVEYED BY: ---						
DRAWN BY: M. DACCA	DATE SURVEYED: ---						
DESIGNED BY: M. DACCA	BOOK NO. ---						
CHECKED BY: D.DAWS	DATE PLOTTED: SEE SIDE STAMP	NO.	DATE	REVISION	BY	APPROVED	



Pierce County

DEPARTMENT OF PLANNING AND PUBLIC WORKS
SURFACE WATER MANAGEMENT
TACOMA MALL PLAZA BUILDING
2702 SOUTH 42nd STREET, SUITE 109
TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



CLEAR CREEK FLOOD GATE
REPLACEMENT PROJECT

60% PLANS

SUMMARY OF QUANTITIES & GENERAL NOTES

C.I.P. # D227

SHEET 2 OF 21

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GENERAL

- G 1 SCOPE
THE FOLLOWING PROJECT GENERAL NOTES AND STANDARD DETAILS APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.
- G 2 SAFETY
1. CONTRACTOR HAS PRIMARY RESPONSIBILITY FOR THE SAFETY OF ITS OPERATIONS, WORKERS, AND JOBSITE VISITORS (INCLUDING OWNER REPRESENTATIVES AND WORKFORCE, ENGINEER REPRESENTATIVES, TESTING, AND INSPECTION PERSONNEL, ETC).
2. CONTRACTOR SHALL HAVE A WRITTEN SAFETY PLAN AND TAKE ADEQUATE PRECAUTIONS TO ENSURE THE SAFETY OF WORKERS AND VISITORS TO THE SITE, INCLUDING, BUT NOT LIMITED TO SHORING, BRACING, FALL PROTECTION, EGRESS, AND ACCESS RESTRICTIONS.
3. THIS NOTE SUPPLEMENTS, BUT DOES NOT REPLACE OR LESSEN, CONTRACTOR'S OBLIGATION TO THE HEALTH AND SAFETY TERMS OF ITS PROJECT AGREEMENT, OR FEDERAL, STATE AND LOCAL HEALTH AND SAFETY CODES AND STANDARDS COMPLIANCE.
- G 3 PRECEDENCE
IF THERE IS A CONFLICT BETWEEN PROJECT SPECIFICATIONS AND STRUCTURAL DRAWINGS, INCLUDING STRUCTURAL NOTES, CONTACT THE CONSTRUCTION MANAGER FOR CLARIFICATION. SPECIFIC NOTES AND DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND STANDARD DETAILS.
- G 4 DIMENSIONS
VERIFY DIMENSIONS CONTROLLED BY OR RELATED TO THE MECHANICAL OR ELECTRICAL EQUIPMENT PRIOR TO CONSTRUCTION. COORDINATE CONSTRUCTION DIMENSIONS AND DIMENSIONS RELATED TO EXISTING FACILITIES. NOTIFY CONSTRUCTION MANAGER OF DISCREPANCIES.
- G 5 PROVISIONS FOR EQUIPMENT
COORDINATE AND PROVIDE MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND EMBEDMENTS NOT SPECIFIED ON STRUCTURAL DRAWINGS, BUT SPECIFIED ON OTHER CONTRACT DRAWINGS OR AS REQUIRED TO ACCOMMODATE MECHANICAL AND ELECTRICAL EQUIPMENT.
- G 6 MEANS, METHODS & CONSTRUCTION LOADS
CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS AND SEQUENCE OF CONSTRUCTION, AND SHALL MAKE ADEQUATE PROVISION TO MAINTAIN THE INTEGRITY OF STRUCTURES AT ALL STAGES OF CONSTRUCTION INCLUDING DETERMINATION OF AND PROVISIONS FOR CONSTRUCTION LOADING.
- G 7 DRAINAGE SURFACES
SLOPE UNIFORMLY 1/8" TO 1/4" PER FOOT.
- G 8 OPENINGS
OPENINGS THROUGH NEW AND EXISTING WALLS AND SLABS FOR PIPES, DUCTS, CONDUITS, ETC., ARE NOT ALL SHOWN ON STRUCTURAL DRAWINGS. COORDINATE WITH OTHER DISCIPLINES AND PROVIDE THESE OPENINGS.

DESIGN CRITERIA

- D 1 GOVERNING BUILDING CODE
CONSTRUCTION AND DESIGN SHALL BE IN ACCORDANCE WITH 2015 INTERNATIONAL BUILDING CODE. THIS CODE SHALL GOVERN EXCEPT WHERE OTHER APPLICABLE CODES OR CONTRACT PROVISIONS ARE MORE RESTRICTIVE.
- D 2 LIVE LOADS
1. ELEVATED PLATFORM 150 PSF
- D 3 SNOW LOADS
GROUND SNOW LOAD $P_g = 15$ PSF
SNOW EXPOSURE FACTOR $C_e = 0.9$
THERMAL FACTOR $C_t = 1.2$
SNOW LOAD IMPORTANCE FACTOR $I_s = 1.10$
PLUS DRIFT LOADS IN ACCORDANCE WITH ASCE 7-10
- D 4 WIND
BASIC WIND SPEED (ULTIMATE) 115 MPH
RISK CATEGORY III
EXPOSURE CATEGORY C
TOPOGRAPHIC FACTOR $K_{zt} = 1.0$
- D 5 SEISMIC
MCE ACCELERATION, SHORT PERIOD $S_S = 1.282$ g
MCE ACCELERATION, 1-SEC PERIOD $S_1 = 0.498$ g
SITE CLASS D
DESIGN ACCEL, SHORT PERIOD $S_{DS} = 0.855$ g
DESIGN ACCEL, 1-SEC PERIOD $S_{D1} = 0.498$ g
RISK CATEGORY III
SEISMIC IMPORTANCE FACTOR $I_e = 1.25$ $I_e = 1.00$,
EXCEPT FOR FIRE PROTECTION SYSTEM, EGRESS STAIRWAYS,
AND COMPONENTS CONTAINING HAZARDOUS MATERIALS $I_e = 1.50$
SEISMIC DESIGN CATEGORY D
BEARING SPECIAL REINFORCED
CONCRETE SHEAR WALLS $R = 5$ $\Omega_o = 2.5$
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

FOUNDATION

- F 1 DESIGN BASIS
FOUNDATION DESIGN IS BASED ON REQUIREMENTS CONTAINED IN THE 2015 INTERNATIONAL BUILDING CODE, CHAPTERS 16 AND 18 PROJECT SITE IS CONSIDERED TO BE LOCATED WITHIN AA FLOOD HAZARD AREA. CONTRACTOR SHALL FOLLOW PROJECT SPECIFICATIONS AND TAKE INTO CONSIDERATION REQUIREMENTS CONTAINED IN THE IBC. NOTIFY THE CONSTRUCTION MANAGER OF CONFLICTS BETWEEN SPECIFICATIONS AND IBC REQUIREMENTS FOR RESOLUTION.
- F 2 WATER SURFACE AND FLOOD DESIGN ELEVATIONS (NAVD88 DATUM)
ORDINARY HIGH WATER SURFACE = EL 14.50
500 YEAR FLOOD = EL 24.32
- F 3 ALLOWABLE BEARING PRESSURE
SHALLOW FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2,000 PSF PER IBC TABLE 1806.2.
- F 4 MINIMUM FOUNDATION PREPARATION
ALL NEW FOUNDATIONS SHALL BE SUPPORTED ON A MINIMUM OF ONE FOOT OF PROPERLY PLACED AND COMPACTED STRUCTURAL FILL.
- F 5 DE-WATERING AND EXCAVATION
CONTRACTOR SHALL PROVIDE FOR ALL DE-WATERING OF EXCAVATIONS, AND DESIGN / PROVIDE ALL CRIBBING, SHORING AND BRACING REQUIRED FOR SAFETY AND TO ALLOW CONSTRUCTION OF THE WORK PRESENTED HEREIN.
- F 6 STRUCTURAL BACKFILL
UNLESS NOTED OTHERWISE, STRUCTURAL BACKFILL SHALL BE PLACED IN UNIFORM LAYERS AND SHALL BE BROUGHT UP UNIFORMLY AROUND THE STRUCTURE.

CONCRETE

- C 1 APPLICABLE CODES
CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 301-10 "STRUCTURAL FOR STRUCTURAL CONCRETE", AND THE FOLLOWING CODES: ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
- C 2 REINFORCING STEEL DETAILS
ALL DETAIL, FABRICATE AND ERECT REINFORCING BARS, SHALL BE IN ACCORDANCE WITH ACI DETAILING MANUAL (ACI SP-66), LATEST EDITION.
- C 3 DESIGN STRENGTH
1. STRUCTURAL CAST-IN-PLACE CONCRETE
EXCEPT AS NOTED IN $f_c = 4,500$ PSI
2. REINFORCING STEEL ASTM A615,
GRADE 60 DEFORMED BARS UNLESS OTHERWISE NOTED
- C 4 CONCRETE COVER
CONCRETE COVER FOR REINFORCING BARS SHALL CONFORM TO ACI 350 AND AS FOLLOWS WITH MINIMUM COVER OF ONE BAR DIAMETER:
1. CONCRETE CAST AGAINST EARTH 3"
2. CONCRETE EXPOSED TO EARTH,
WASTEWATER, CHEMICALS OR WEATHER 2"
3. CONCRETE NOT EXPOSED TO EARTH,
WASTEWATER, CHEMICALS OR WEATHER 1-1/2"
- C 5 BAR TENSION DEVELOPMENT AND LAP SPLICE LENGTH
SEE TABLE AT THE END OF THESE STRUCTURAL NOTES. IN SLABS, BEAMS, GIRDERS AND HORIZONTAL REINFORCING AT WALLS. SPLICES OF ADJACENT REINFORCING STEEL BARS SHALL BE STAGGERED AT LEAST ONE SPLICE LENGTH.
- C 6 WELDING REINFORCING BARS
ALL REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706. REBAR WELDING SHALL BE IN ACCORDANCE WITH AWS D1.4.
- C 7 STANDARD HOOKS
BARS ENDING IN RIGHT ANGLE BENDS OR HOOKS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-14. PROVIDE STANDARD HOOK IN BARS WHICH TERMINATE AT WALL OR SLAB EDGES / INTERSECTIONS THAT PROVIDE LESS THAN THE SPECIFIED DEVELOPMENT LENGTH.
- C 8 CHAMFERS
PROVIDE 3/4" CHAMFER AT EXPOSED CONCRETE CORNERS AND EDGES.
- C 9 ANCHOR BOLTS
STAINLESS STEEL TYPE 316 MATERIAL (SEE SPECIFICATIONS).
- C 10 COMPATIBLE FINISHES
CURING COMPOUNDS AND OTHER SURFACE TREATMENTS, CONCRETE ADMIXTURES AND SUB-SLAB DRAINAGE SHALL BE REVIEWED BY CONTRACTOR AND CERTIFIED COMPATIBLE WITH FINISHES TO BE APPLIED LATER IN THE CONSTRUCTION SEQUENCE.
- C 11 EXPOSED ENDS OF REINFORCING BARS AT SAWCUT OPENINGS IN EXISTING CONCRETE
REMOVE REINFORCING BARS 1 1/2 INCHES BACK FROM FACE OF OPENING BY FLAME GOUGING. FILL HOLE AND REPAIR SURFACE WITH CONCRETE REPAIR MORTAR.

GROUTING

- GR 1 PRECISION NON-SHRINK CEMENT GROUT FOR STRUCTURAL STEEL COLUMNS AND TRUSS BEARING BASE PLATES: MASTERFLOW 928 GROUT OR EQUAL APPROVED BY OWNER.
- GR 2 EQUIPMENT GROUTING
SEE MECHANICAL SPECIFICATIONS AND SPECIFICATION SECTION 03 60 00, GROUT.
- GR 3 EPOXY ADHESIVE GROUT AT ANCHORS INTO CONCRETE: HILTI HIT-RE 500v3 EPOXY ADHESIVE ANCHOR SYSTEM BY HILTI INC. OR EQUAL APPROVED BY ENGINEER OF RECORD. INSTALLERS OF HORIZONTAL OR UPWARDLY INCLINED ADHESIVE ANCHORS SHALL BE CERTIFIED IN ACCORDANCE WITH THE ACI / CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM.

DOWELS

- DL 1 LOCATE HOLES IN EXISTING CONCRETE TO MISS MAIN REINFORCING BARS, STIRRUPS AND EMBEDMENTS. THIS MAY INVOLVE RELOCATING DOWELS FROM POSITIONS SHOWN. NOTIFY THE OWNER OF ANY DOWEL RELOCATIONS. PRIOR TO DRILLING HOLES, FIELD VERIFY AND MARK THE LOCATION OF NEARBY REINFORCING BARS, STIRRUPS AND EMBEDMENTS USING A PACHOMETER. IF THEY ARE HIT DURING DRILLING, NOTIFY THE OWNER.
- DL2 CLEAN AND PREPARE HOLES IN ACCORDANCE WITH THE EPOXY MANUFACTURER'S RECOMMENDATIONS. AS A MINIMUM, BLOW COMPRESSED OIL-FREE AIR FROM THE BOTTOM OF HOLE TOWARDS THE SURFACE. DRY AND CLEAN HOLE OF CONTAMINANTS.
- DL 3 FILL EACH HOLE WITH A SUFFICIENT AMOUNT OF EPOXY TO COMPLETELY SURROUND THE DOWEL. INSERT THE DOWEL AFTER THE EPOXY IS PLACED IN THE HOLE.

STEEL

- ST 1 ALL STRUCTURAL STEEL WORK SHALL BE IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC 360-10) AND AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 303-10). IN SEISMIC DESIGN CATEGORIES D, E AND F, THE PROVISIONS OF AISC 341-10, "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS", SHALL ALSO APPLY.
- ST 2 MATERIALS
1. STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO ASTM A36.
2. STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A53 TYPES E OR S, GRADE B. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500 GRADE B ($F_y = 46$ KSI).
3. ALL STAINLESS STEEL SHALL BE TYPE 316 MEETING ASTM A276 FOR BARS AND SHAPES, AND ASTM A240 FOR PLATES. ALL STAINLESS STEEL SHALL BE PASSIVATED PER ASTM A380.
- ST 3 WELDING
1. WELDING SHALL CONFORM TO AWS D1.1-1 AND AISC 341-10.
2. ELECTRODES FOR SHOP AND FIELD WELDS SHALL CONFORM TO AWS A5.1 OR A5.5, CLASS E70XX.
3. STAINLESS STEEL WELDING SHALL CONFORM TO AWS D1.6 WITH A5.4 OR A5.9 ELECTRODES.
- ST 4 BOLTS
STRUCTURAL BOLTS AT STEEL FRAMING SHALL BE GALVANIZED AND CONFORM TO ASTM A325N (TYPE 1) FOR CONNECTION OF GALVANIZED OR PAINTED FRAMING. HIGH STRENGTH BOLTS SHALL BE FULLY TENSIONED UNLESS CONNECTING HSS SHAPES OR OTHERWISE NOTED. STAINLESS STEEL TYPE 316 BOLTS SHALL BE USED FOR CONNECTION OF STAINLESS STEEL AND ALUMINUM FRAMING.
- ST 5 EXPANSION ANCHORS SHALL BE STAINLESS STEEL "KWIK BOLT TZ" BY HILTI INC. OR EQUAL APPROVED BY OWNER.
- ST 6 ENCASED STEEL
STEEL COMPLETELY ENCASED IN CONCRETE SHALL NOT BE GALVANIZED OR PAINTED AND SHALL HAVE A CLEAN SURFACE FOR BONDING TO CONCRETE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ST 7 PAINTING
STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATION. SHOP PRIMER SHALL BE COMPATIBLE WITH FINISH COATINGS. MONORAIL CAPACITIES SHALL BE PAINTED ON THE SIDE OF MONORAIL BEAMS.

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APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER

PRELIMINARY PLANS
SUBJECT TO REVISION

CLEAR CREEK FLOOD GATE
REPLACEMENT PROJECT

60% PLANS

GENERAL NOTES - 1

GS-00-0001

SHEET 3 OF 20

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ALUMINUM

- A 1 APPLICABLE CODE
ALUMINUM CONSTRUCTION SHALL CONFORM TO THE 2015 EDITION OF THE ALUMINUM DESIGN MANUAL FROM THE ALUMINUM ASSOCIATION.
- A 2 MATERIAL
- ALUMINUM STRUCTURAL SHAPES SHALL BE ALLOY 6061-T6 PER ASTM B308.
 - ALUMINUM PIPE AND TUBING SHALL BE ALLOY 6061-T6 PER ASTM B241.
 - ALUMINUM PLATE SHALL BE ALLOY 6061-T6 PER ASTM B209.
 - ALUMINUM RAISED PATTERN (CHECKERED) PLATE SHALL BE ALLOY 6061-T6 TREAD PLACE PER ASTM B632.
- A 3 DISSIMILAR MATERIALS
WHERE ALUMINUM IS IN CONTACT WITH CONCRETE OR MASONRY SURFACES, CONTACT SURFACE SHALL BE COATED WITH A HEAVY COAT OF ALKALI-RESISTANT BITUMINOUS PAINT.

SPECIAL INSPECTIONS

- SI 1 AN INDEPENDENT TESTING COMPANY RETAINED BY THE OWNER AND APPROVED BY THE BUILDING OFFICIAL SHALL INSPECT THE FOLLOWING (SEE EXPANDED LIST ON DRAWINGS, SPECIFICATIONS AND GOVERNING CODE):
- SOIL COMPACTION AT FOUNDATIONS.
 - REINFORCING BAR, CONCRETE PLACEMENT AND TAKING OF CONCRETE TEST SPECIMENS.
 - ANCHOR BOLTS.
 - FIELD WELDING OF STRUCTURAL STEEL AND ALUMINUM.
 - SHOP WELDING OF STRUCTURAL STEEL EXCEPT WHERE WELDING IS DONE IN AN APPROVED FABRICATOR'S SHOP.
 - EXPANSION ANCHOR INSTALLATION.
 - ANCHORS INSTALLED USING EPOXY ADHESIVE.
 - MECHANICAL AND ELECTRICAL EQUIPMENT, INSPECTION OF STRUCTURAL COMPONENTS FOR SEISMIC RESISTANCE:
 - ANCHORAGE OF ELECTRICAL EQUIPMENT.
 - EMERGENCY AND STANDBY POWER SYSTEMS.
 - INSTALLATION OF COMPONENTS WHERE THE COMPONENT IMPORTANCE FACTOR IS 1.5.
 - ELECTRICAL MOTORS, TRANSFORMERS, SWITCHGEAR UNIT, SUBSTATIONS AND MOTOR CONTROL CENTERS.
 - EQUIPMENT USING COMBUSTIBLE ENERGY SOURCES.
 - EQUIPMENT VIBRATION ISOLATION SYSTEMS.

- SI 2 NOTIFY THE TESTING COMPANY FOR INSPECTIONS.

SPECIAL OBSERVATIONS

- SO 1 THE OWNER SHALL RETAIN A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS. THE CONSTRUCTION MANAGER SHALL NOTIFY THE OWNER AT LEAST 48 HOURS BEFORE A DESIGNATED WORK IS TO BE COVERED. REFER SPECIFICATION 01400 FOR ADDITIONAL REQUIREMENTS.
- SO 2 REQUIRED STRUCTURAL OBSERVATIONS INCLUDE:
- FOUNDATIONS PREPARED FOR CONCRETE PLACEMENT.
 - COMPLETION OF LATERAL FORCE RESISTING ELEMENTS INCLUDING SHEAR WALLS AND OTHER ELEMENTS.

STRUCTURAL DEFERRED SUBMITTALS

- SDS 1 THE CONTRACTOR SHALL SUBMIT DRAWINGS AND CALCULATIONS BEARING THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN WASHINGTON TO THE ENGINEER FOR REVIEW. STRUCTURAL DEFERRED SUBMITTALS INCLUDE:
- ANCHOR BOLTS FOR EQUIPMENT ANCHORAGE.
 - GUARDRAILS.
 - CONSTRUCTION SHORING.

TENSION DEVELOPMENT AND LAP SPLICE LENGTHS (IN INCHES) FOR UNCOATED BARS IN NORMAL-WEIGHT CONCRETE WITH f_c' = 4,000 PSI OR HIGHER

THIS TABLE IS GOOD ONLY FOR CENTER/CANTER SPACING OF REINFORCING BARS EQUAL TO THE MINIMUM SHOWN OR GREATER. NO TRANSVERSE REINFORCING ASSUMED.

BAR SIZE	APPLICATION	CONCRETE COVER = 1.50 IN.			CONCRETE COVER = 2.00 IN.			CONCRETE COVER = 3.00 IN.		
		TOP	OTHER	MIN C/C SPACING	TOP	OTHER	MIN C/C SPACING	TOP	OTHER	MIN C/C SPACING
#3	DEVELOPMENT LAP SPLICE	12	12	3.50	12	12	4.50	12	12	6.50
		16	16	3.75	16	16	4.75	16	16	6.75
#4	DEVELOPMENT LAP SPLICE	15	12	3.50	15	12	4.50	15	12	6.50
		20	16	4.00	20	16	5.00	20	16	7.00
#5	DEVELOPMENT LAP SPLICE	19	15	3.75	19	15	4.75	19	15	6.75
		24	19	4.25	24	19	5.25	24	19	7.25
#6	DEVELOPMENT LAP SPLICE	22	17	3.75	22	17	4.75	22	17	6.75
		29	22	4.50	29	22	5.50	29	22	7.50

- NOTES:
- TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL-WEIGHT CONCRETE.
 - TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE CALCULATED PER ACI 318-14, SECTIONS 25.4.2.3 AND 25.5, RESPECTIVELY.
 - LAP SPLICE LENGTHS ARE LAP CLASS B = 1.3 l_d (ACI 318-14, SECTION 25.5.2).
 - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 IN. OF FRESH CONCRETE CAST BELOW THE BARS. NOTE THAT IN ADDITION TO TOP BARS IN SLABS, ALL HORIZONTAL BARS IN WALLS ARE CONSIDERED TO BE TOP BARS.

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TACOMA MALL PLAZA BUILDING
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APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER

PRELIMINARY PLANS
SUBJECT TO REVISION

CLEAR CREEK FLOOD GATE
REPLACEMENT PROJECT

60% PLANS

GENERAL NOTES - 2

GS-00-0002

SHEET 4 OF 20

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TABLE 1				
REQUIRED SPECIAL INSPECTIONS - STRUCTURAL SYSTEMS				
SYSTEM OR MATERIAL	REQUIRED INSPECTION	FREQUENCY OF INSPECTION		REMARKS
		CONTINUOUS	PERIODIC	
SOILS	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X	
	VERIFY SOIL MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY		X	
	PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X	
	PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X	SEE TABLE 3
	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	X		SEE TABLE 3
CONCRETE	INSPECT FORMWORK FOR LOCATION AND DIMENSIONS OF MEMBER BEING FORMED		X	
	VERIFY MATERIAL FOR REINFORCEMENT		X	CONTRACTOR TO SUBMIT CERTIFIED MILL TEST REPORTS
	REINFORCING STEEL PLACEMENT		X	
	INSPECT ANCHORS TO BE CAST IN CONCRETE		X	PRIOR TO AND DURING CONCRETE PLACEMENT
	INSPECT POST-INSTALLED CONCRETE ANCHORS: - HORIZONTAL AND UPWARDLY INCLINED ADHESIVE ANCHORS - OTHER ANCHORS UNLESS ICC REPORT REQUIRED CONTINUOUS INSPECTION	X	X	INSPECTION TO CONFORM TO IBC AND TO ANCHOR MANUFACTURER'S RECOMMENDATIONS AND ICC REPORTS
	VERIFY USE OF REQUIRED CONCRETE MIX DESIGN(S)		X	
	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND TEMPERATURE OF CONCRETE	X		CONTINUOUS DURING PREPARATION OF SAMPLES
	CONCRETE PLACEMENT	X		
	INSPECTION FOR MAINTENANCE OF CURING PROCEDURES AND TEMPERATURE		X	VERIFY APPROPRIATE CURING METHOD HAS BEEN IMPLEMENTED AFTER EACH POUR
	VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM STRUCTURAL SLABS AND BEAMS		X	
	CEMENTITIOUS GROUTING OF BASE PLATES AND EPOXY GROUTING FOR EQUIPMENT MOUNTING	X		
STRUCTURAL STEEL AND ALUMINUM	VERIFY MATERIAL OF ANCHOR BOLTS AND THREADED RODS		X	CONTRACTOR TO SUBMIT MANUFACTURER'S CERTIFIED TEST REPORTS
	VERIFY MATERIAL FOR STRUCTURAL STEEL AND ALUMINUM SHAPES, PLATES, BARS, ETC.		X	CONTRACTOR TO SUBMIT CERTIFIED MILL TEST REPORTS
	VERIFY MATERIALS FOR WELD FILLER MATERIALS		X	
	VERIFY WELDER QUALIFICATIONS		X	CONTRACTOR TO SUBMIT WELDERS CERTIFICATES
	VERIFY USE OF PROPER WELDING PROCEDURES		X	
	INSPECT COMPLETE AND PARTIAL-PENETRATION GROOVE WELDS, MULTI-PASS FILLET WELDS, AND SINGLE-PASS FILLET WELDS GREATER THAN 5/16"	X		
	INSPECT SINGLE-PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"		X	VISUALLY INSPECT ALL WELDS

QUALITY ASSURANCE NOTES

- THE QUALITY OF THE WORKMANSHIP AND THE QUALITY OF THE MATERIALS OF CONSTRUCTION ARE GOVERNED BY THE INTERNATIONAL BUILDING CODE, 2015 EDITION (IBC).
- ALL NEW STRUCTURES AND MODIFICATIONS TO EXISTING STRUCTURES TO BE CONSTRUCTED AS A PART OF THIS PROJECT ARE CLASSIFIED AS OCCUPANT CATEGORY III, WASTE WATER TREATMENT FACILITY, IN ACCORDANCE WITH THE IBC. THE STRUCTURES ARE CLASSIFIED AS SEISMIC DESIGN CATEGORY D.
- TO ASSURE THE QUALITY OF THE CONSTRUCTION OF THIS PROJECT, STRUCTURAL TESTS, SPECIAL INSPECTION AND STRUCTURAL OBSERVATION WILL BE PERFORMED IN ACCORDANCE WITH IBC, CHAPTER 17.
- WHERE FREQUENCY OF INSPECTION IS SPECIFIED TO BE CONTINUOUS, THE SPECIAL INSPECTOR IS EXPECTED TO BE PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED AND PROVIDING FULL-TIME OBSERVATION OF THE WORK REQUIRING SPECIAL INSPECTION.
- WHERE FREQUENCY OF INSPECTION IS SPECIFIED TO BE PERIODIC, THE SPECIAL INSPECTOR IS EXPECTED TO BE PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK (PRIOR TO THE NEXT CONSTRUCTION TASK).
- SPECIAL INSPECTIONS ARE IN ADDITION TO INSPECTIONS BY THE BUILDING OFFICIALS. CONSTRUCTION IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL. COORDINATE WITH BUILDING DEPARTMENT TO DETERMINE REQUIRED INSPECTIONS.
- CONTRACTOR SHALL PROVIDE ACCESS TO THE WORK FOR REQUIRED INSPECTIONS. CONTRACTOR SHALL PROVIDE NOTIFICATION IN ADVANCE OF REQUIRED INSPECTIONS, TESTING AND STRUCTURAL OBSERVATIONS.

TABLE 2				
REQUIRED SPECIAL INSPECTIONS - NONSTRUCTURAL SYSTEMS				
SYSTEM OR MATERIAL	REQUIRED INSPECTION	FREQUENCY OF INSPECTION		REMARKS
		CONTINUOUS	PERIODIC	
ARCHITECTURAL	INSPECT WELDING OF GUARD AND HANDRAIL SYSTEMS		X	
MECHANICAL	INSPECT ANCHORAGE OF ALL MECHANICAL SYSTEMS (INCLUDING EQUIPMENT PIPING, DUCT WORK, ETC.) REQUIRING STANDBY POWER		X	
	CERTIFICATE OF COMPLIANCE FOR ALL MECHANICAL EQUIPMENT REQUIRING STANDBY POWER			EQUIPMENT MANUFACTURER SHALL PROVIDE CERTIFICATE OF COMPLIANCE
ELECTRICAL	INSPECT ANCHORAGE OF ELECTRICAL EQUIPMENT FOR STANDBY POWER		X	
	INSPECT ANCHORAGE OF ALL OTHER ELECTRICAL EQUIPMENT REQUIRING STANDBY POWER		X	
	CERTIFICATE OF COMPLIANCE FOR ALL ELECTRICAL EQUIPMENT FOR STANDBY POWER AND ALL ELECTRICAL EQUIPMENT REQUIRING STANDBY POWER			EQUIPMENT MANUFACTURER SHALL PROVIDE CERTIFICATE OF COMPLIANCE
	EMERGENCY LIGHTING		X	

TABLE 3			
REQUIRED TESTING FOR SPECIAL INSPECTIONS			
SYSTEM OR MATERIAL	TESTING		REMARKS
	CODE OR STANDARD REFERENCE	FREQUENCY	
GEOTECHNICAL			
PREPARED SUBGRADE DENSITY	ASTM D6938	EACH 300 SF OF PREPARED SUBGRADE	PER GEOTECHNICAL REPORT
FILL IN-PLACE DENSITY	ASTM D6938	EACH 300 SF OF EACH LIFT PLACED EACH DAY	PER GEOTECHNICAL REPORT
CONCRETE			
CONCRETE COMPRESSIVE STRENGTH	ASTM C31,ASTM C39,ASTM C172	SEE SPECIFICATION 03300	
CONCRETE SLUMP	ASTM C143	WHENEVER CYLINDERS ARE CAST	
CONCRETE AIR CONTENT	ASTM C231	WHENEVER CYLINDERS ARE CAST	
CONCRETE TEMPERATURE	ASTM C1064	WHENEVER CYLINDERS ARE CAST	
CEMENTITIOUS AND EPOXY GROUT COMPRESSIVE STRENGTH	ASTM C942 (CEMENTITIOUS) ASTM C579 (EPOXY)		TEST 2" CUBES FOR EACH GROUT SHIPMENT TO THE FIELD
STEEL			
MAGNETIC PARTICLE (MT) AND ULTRASONIC (UT) TESTING OF WELDS	MT - AWS D1.1 6.14.4 UT - AWS D1.1 6.13 & 6.14.3	AT ALL PARTIAL AND FULL PENETRATION FIELD WELDS	

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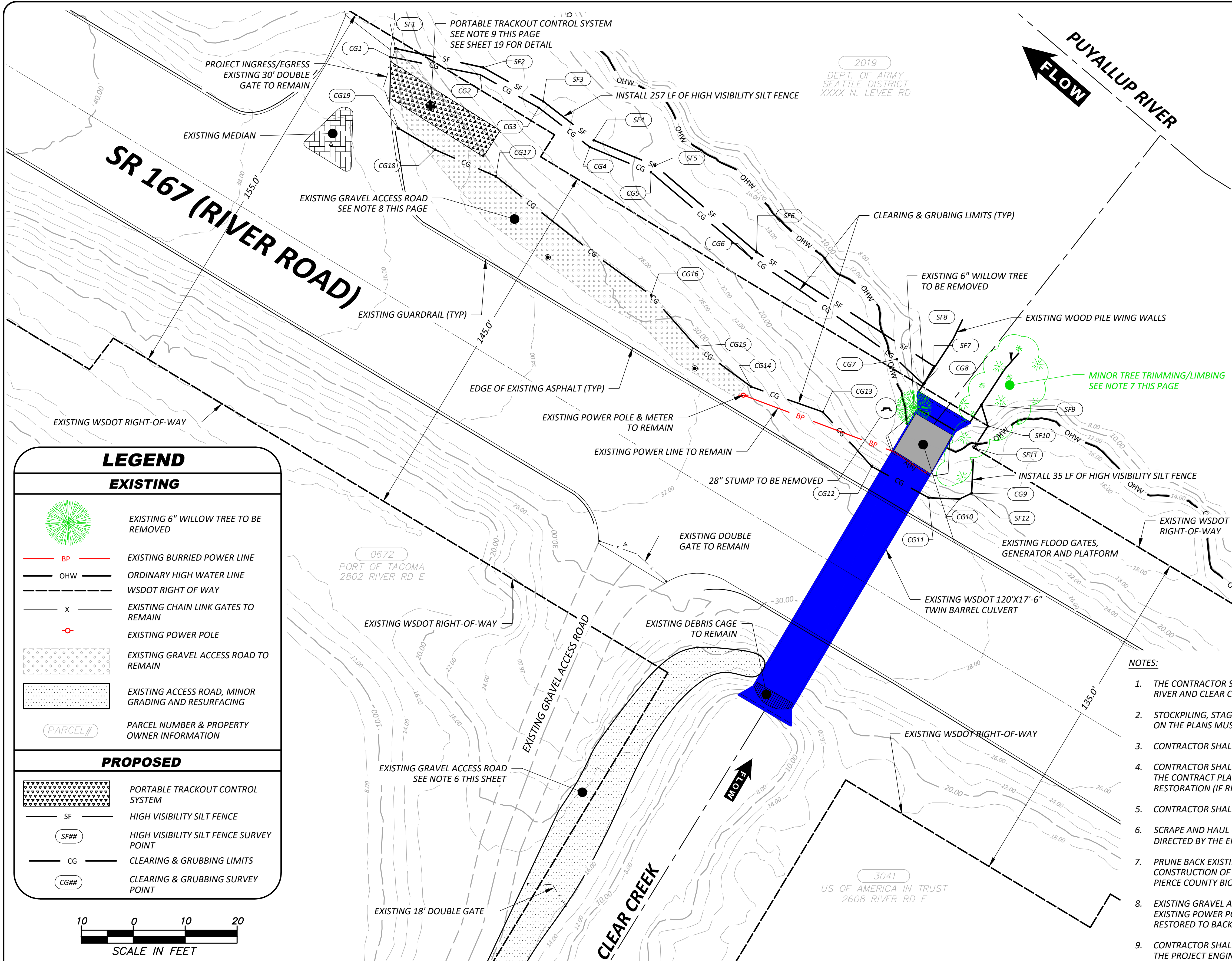
60% PLANS

SPECIAL INSPECTION NOTES - 1

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LEGEND

EXISTING

- EXISTING 6" WILLOW TREE TO BE REMOVED
- EXISTING BURIED POWER LINE
- ORDINARY HIGH WATER LINE
- WSDOT RIGHT OF WAY
- EXISTING CHAIN LINK GATES TO REMAIN
- EXISTING POWER POLE
- EXISTING GRAVEL ACCESS ROAD TO REMAIN
- EXISTING ACCESS ROAD, MINOR GRADING AND RESURFACING
- PARCEL NUMBER & PROPERTY OWNER INFORMATION

PROPOSED

- PORTABLE TRACKOUT CONTROL SYSTEM
- HIGH VISIBILITY SILT FENCE
- HIGH VISIBILITY SILT FENCE SURVEY POINT
- CLEARING & GRUBBING LIMITS
- CLEARING & GRUBBING SURVEY POINT



SCALE IN FEET

DRAWING NO. ---	SURVEYED BY: ---						
DRAWN BY: M. DACCÀ	DATE SURVEYED: ---						
DESIGNED BY: M. DACCÀ	BOOK NO. ---						
CHECKED BY: D. DAVIS	DATE PLOTTED: SEE SIDE STAMP	NO.	DATE	REVISION	BY	APPROVED	



Pierce County

DEPARTMENT OF PLANNING AND PUBLIC WORKS
SURFACE WATER MANAGEMENT
TACOMA MALL PLAZA BUILDING
2702 SOUTH 42nd STREET, SUITE 109
TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

60% PLANS

CONSTRUCTION SWPPP

C.I.P. # D227

SHEET 6 OF 21

CLEARING AND GRUBBING COORDINATE TABLE

POINT NUMBER	NORTHING	EASTING
CG1	N 699666.47	E 1170027.16
CG2	N 699659.66	E 1170061.80
CG3	N 699646.91	E 1170084.41
CG4	N 699631.79	E 1170104.06
CG5	N 699622.07	E 1170127.64
CG6	N 699588.96	E 1170166.45
CG7	N 699550.13	E 1170222.32
CG8	N 699540.43	E 1170232.61
CG9	N 699498.51	E 1170251.12
CG10	N 699496.27	E 1170246.40
CG11	N 699496.76	E 1170234.61
CG12	N 699508.81	E 1170212.67
CG13	N 699529.78	E 1170193.84
CG14	N 699539.55	E 1170166.10
CG15	N 699555.11	E 1170145.01
CG16	N 699574.71	E 1170127.69
CG17	N 699620.51	E 1170067.84
CG18	N 699630.79	E 1170044.47
CG19	N 699639.08	E 1170030.21

HIGH VISIBILITY SILT FENCE COORDINATE TABLE

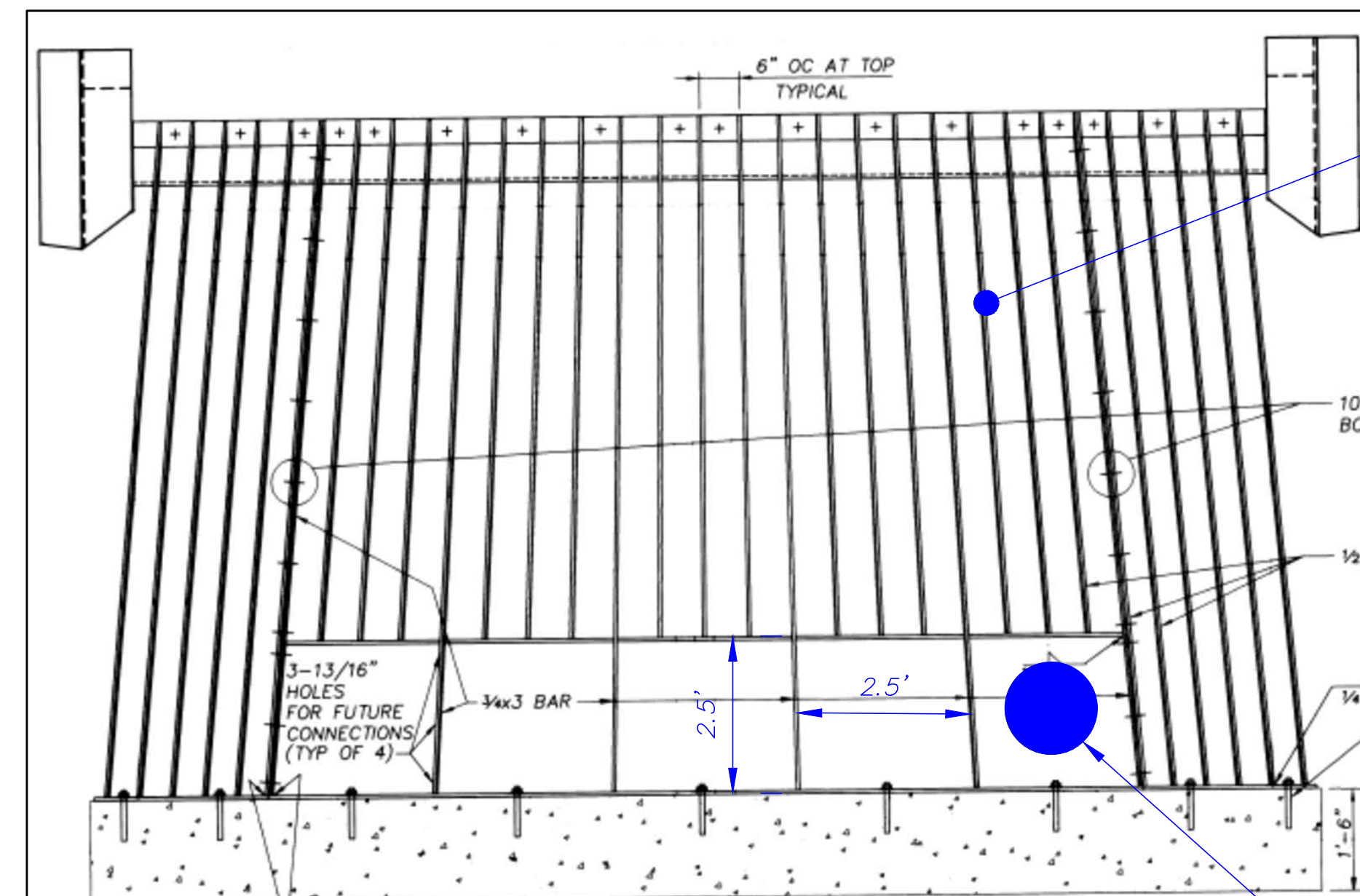
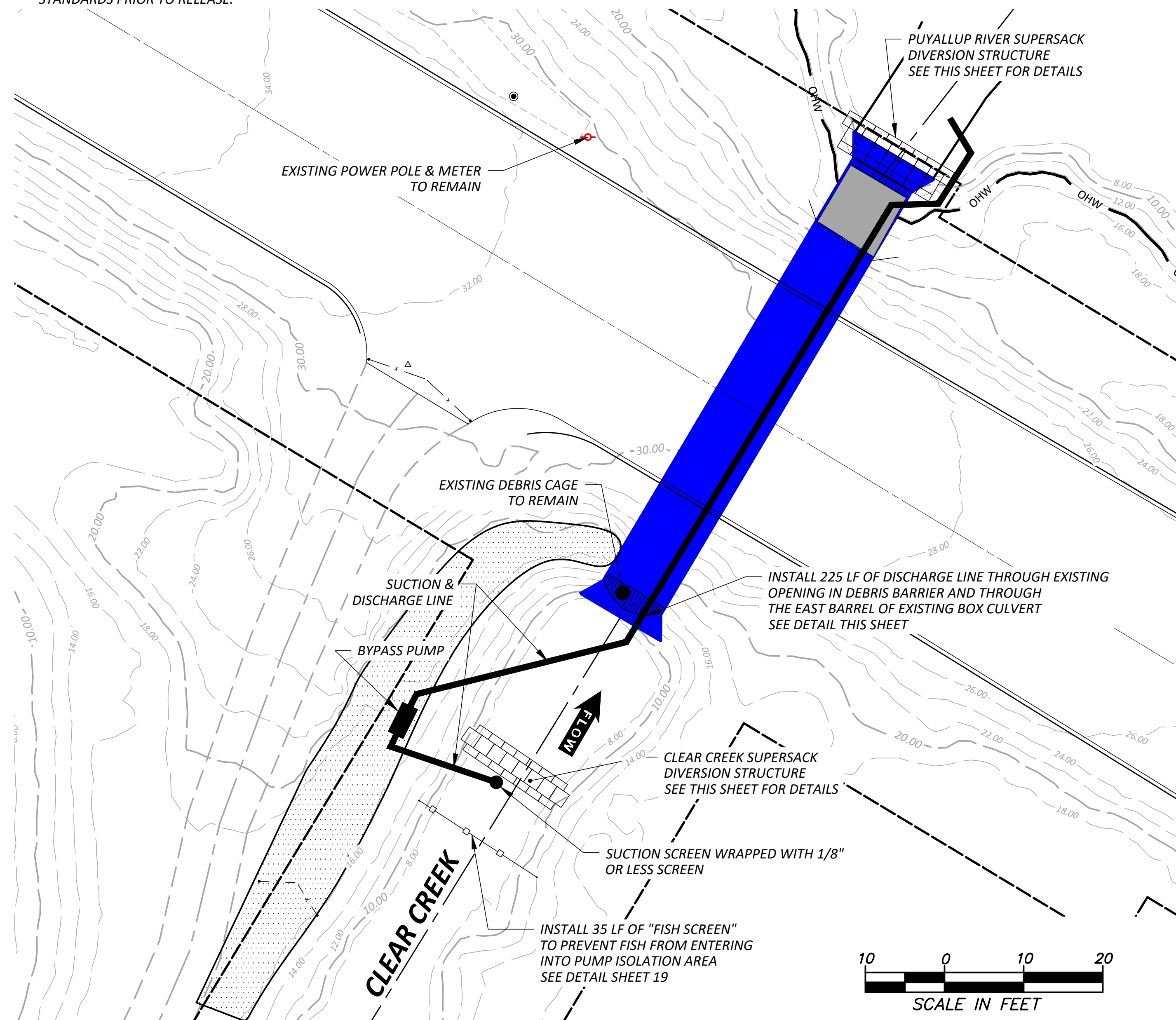
POINT NUMBER	NORTHING	EASTING
HVSF1	N 699669.74'	E 1170029.22'
HVSF2	N 699662.43'	E 1170062.98'
HVSF3	N 699649.42'	E 1170086.07'
HVSF4	N 699634.41'	E 1170105.58'
HVSF5	N 699624.66'	E 1170129.22'
HVSF6	N 699591.36'	E 1170168.27'
HVSF7	N 699547.41'	E 1170236.61'
HVSF8	N 699540.94'	E 1170232.91'
HVSF9	N 699532.57'	E 1170254.90'
HVSF10	N 699524.39'	E 1170257.43'
HVSF11	N 699515.99'	E 1170252.01'
HVSF12	N 699498.51'	E 1170251.12'

- NOTES:
- THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PREVENT SEDIMENT FROM ENTERING INTO THE PUYALLUP RIVER AND CLEAR CREEK
 - STOCKPILING, STAGING AND LOADING AREAS ARE LIMITED ON THE PROJECT SITE. ALL AREAS THAT ARE NOT CALLED OUT ON THE PLANS MUST BE APPROVED BY THE PROJECT ENGINEER PRIOR TO ANY PRE MENTIONED ACTIVITIES TAKING PLACE
 - CONTRACTOR SHALL TRY AND SCHEDULE WORK ACTIVITIES DURING EXTENDED DRY PERIODS IF AT ALL POSSIBLE
 - CONTRACTOR SHALL LIMIT AND OR AVOID WORK ACTIVITIES OUTSIDE OF THE "CLEARING AND GRUBBING LIMITS" AS PER THE CONTRACT PLANS. ANY WORK OUTSIDE OF THESE LIMITS SHALL BE APPROVED BY PROJECT ENGINEER. ALL RESTORATION (IF REQUIRED) IN THESE AREAS WILL BE COMPLETED TO THE SATISFACTION OF THE PROJECT ENGINEER
 - CONTRACTOR SHALL INSTALL HIGH VISIBILITY SILT FENCE PER CONTRACT PLANS OR AS DIRECTED BY THE PROJECT ENGINEER
 - SCRAPE AND HAUL OFF TOP LAYER OF GRASS AND SOIL ALONG EXISTING GRAVEL ROAD. PERFORM MINOR GRADING AS DIRECTED BY THE ENGINEER. PLACE 2" COMPACTED DEPTH OF CRUSHED SURFACE BASE COURSE (CSBC)
 - PRUNE BACK EXISTING TREE BRANCHES TO ALLOW FOR CLEAR ACCESS AROUND THE EXISTING STRUCTURE TO ALLOW FOR CONSTRUCTION OF THE PROJECT. NO TREE REMOVAL IS PERMITTED IN THIS AREA WITHOUT PRIOR APPROVAL FROM PIERCE COUNTY BIOLOGIST OR PROJECT ENGINEER
 - EXISTING GRAVEL ACCESS ROAD SHALL REMAIN IN PLACE TO ALLOW FOR ACCESS TO THE POWER METER MOUNTED ON THE EXISTING POWER POLE. IF TOP SURFACE IS DISTURBED OR DAMAGED DURING CONSTRUCTION, THE ROAD WILL BE RESTORED TO BACK TO ORIGINAL OR BETTER CONDITION
 - CONTRACTOR SHALL INSTALL 50 LF OF PORTABLE TRACKOUT CONTROL MAT PER APPROVED PLANS OR PER DIRECTION OF THE PROJECT ENGINEER

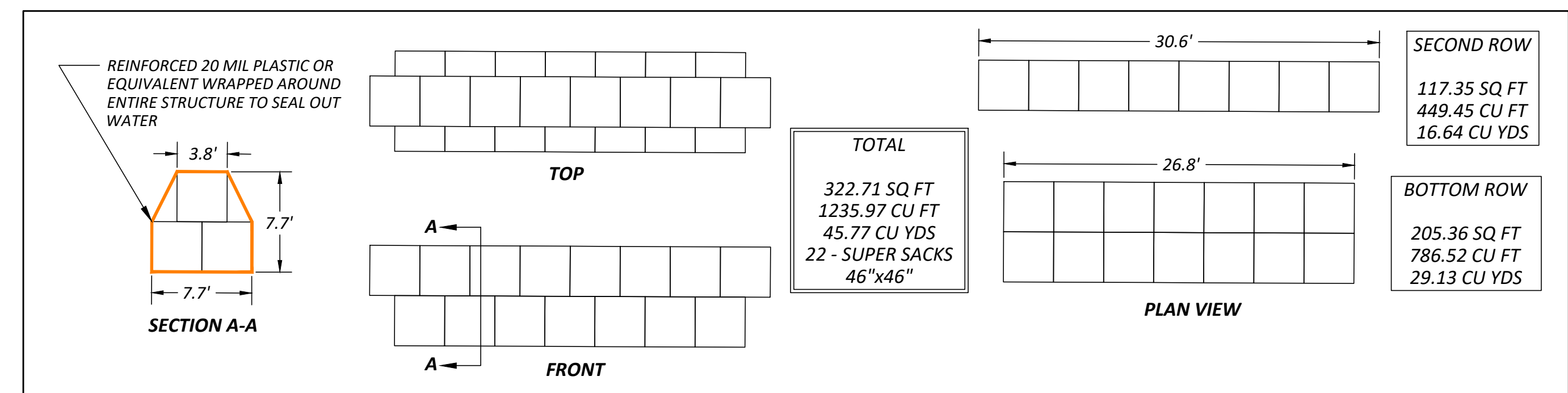


Know what's below.
Call before you dig.

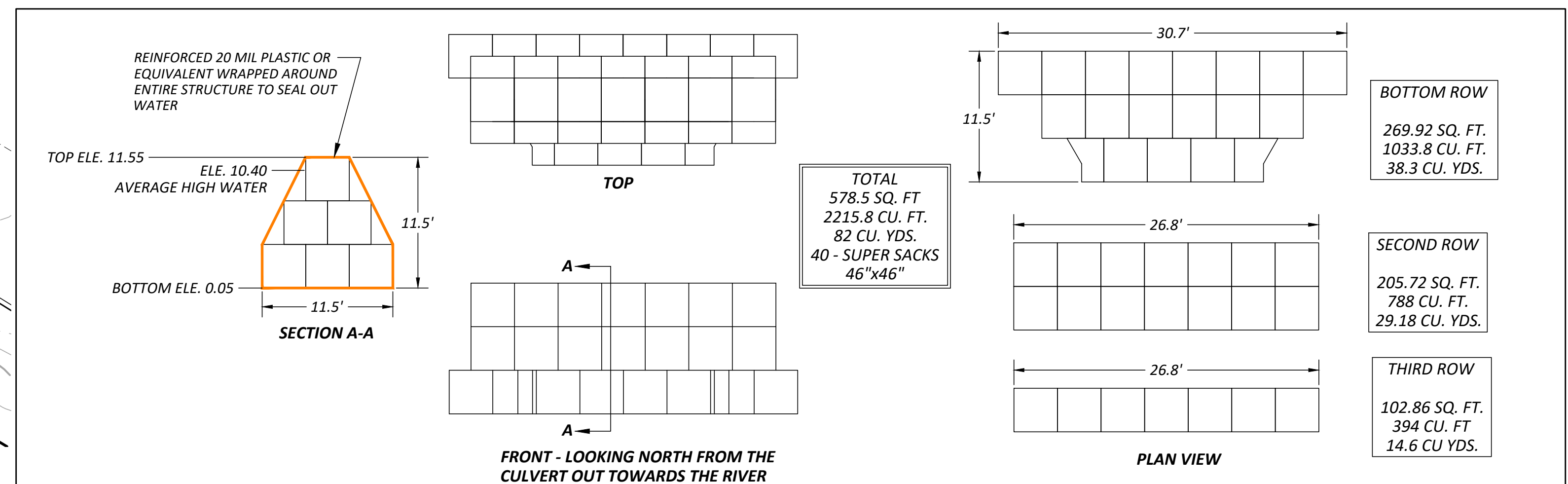
1. INSTALL "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" ON EACH SIDE OF THE CULVERT (CREEK SIDE AND RIVER SIDE), WHERE SHOWN ON THE PLANS, PRIOR TO INSTALLATION OF THE COMBINATION SLUICE/FLAP GATE. INSTALLATION, MAINTENANCE, AND REMOVAL OF "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" (SUPER SACK/BULK BAGS OR APPROVED EQUAL) SHALL COMPLY WITH ALL ATTACHED PERMIT DOCUMENTS. PIERCE COUNTY WILL PROVIDE FISH REMOVAL SERVICES WITHIN ISOLATED WORK AREAS IF IT IS DETERMINED THAT FISH ARE PRESENT. FISH REMOVAL WILL REQUIRE A COORDINATED EFFORT WITH CONTRACTOR. PIERCE COUNTY WILL WORK WITH THE CONTRACTOR BEFORE, DURING, AND AFTER TEMPORARY FLOW ISOLATION FEATURES HAVE BEEN INSTALLED, TO ENSURE FISH ISOLATION AND THAT FISH HAVE BEEN REMOVED FROM WORK AREAS. THE CONTRACTOR SHALL CEASE WORK AND NOTIFY PIERCE COUNTY IMMEDIATELY IF FISH ARE OBSERVED WITHIN WORK AREAS, AFTER THE INITIAL FISH REMOVAL ACTIVITIES. THE CONTRACTOR SHALL PROVIDE AT LEAST 3 WORKING DAYS ADVANCE NOTICE TO PERFORM THE INITIAL FISH RELOCATING ACTIVITIES AT PROJECT SITE
2. ELEVATION 10.58 IS THE APPROXIMATE AVERAGE HIGH TIDAL ELEVATION DURING SUMMER MONTHS PLUS 6", HOWEVER WATER SURFACE WILL FLUCTUATE DAILY AND HIGHER ELEVATIONS ARE POSSIBLE. THE CONTRACTOR IS RESPONSIBLE TO INSTALL ISOLATION SYSTEMS AND COORDINATE WORK ACTIVITIES AROUND PROJECTED TIDAL ELEVATIONS.
3. "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" SHALL CONSIST OF SUPER SACK/BULK BAGS WITH AN AVERAGE SIZE OF 46"x46" FILLED WITH AN APPROVED MATERIAL, AND REINFORCED PLASTIC (OR APPROVED EQUAL). THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" METHOD, BUT THAT ALTERNATE METHOD SHALL BE PRE-APPROVED BY THE ENGINEER A MINIMUM OF 15 CALENDAR DAYS PRIOR TO "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" ACTIVITIES COMMENCING.
4. THE ACTUAL LOCATION, LINEAL FEET AND HEIGHT OF SUPER SACKS/BULK BAGS (OR APPROVED EQUAL) REQUIRED FOR EACH LOCATION MAY VARY FROM WHAT IS SHOWN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF AN ISOLATION SYSTEM THAT PREVENTS WATER FROM ENTERING WORK AREA.
5. WORK AREA SHALL BE DE-WATERED SUFFICIENTLY TO SAFELY AND CORRECTLY INSTALL PROJECT ELEMENTS. THE CONTRACTOR SHALL SUBMIT A PROJECT DEWATERING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL. ANY DISCHARGE TO WATERS OF THE STATE (CLEAR CREEK, PUYALLUP RIVER, OR WETLANDS) SHALL MEET WATER QUALITY STANDARDS PRIOR TO RELEASE.



EXISTING DEBRIS BARRIER DETAIL
NOT TO SCALE



CLEAR CREEK DIVERSION STRUCTURE
NOT TO SCALE



PUYALLUP RIVER DIVERSION STRUCTURE
NOT TO SCALE

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DRAWN BY: M.DACCA	DATE SURVEYED: ---					
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Pierce County

**DEPARTMENT OF PLANNING AND PUBLIC WORKS
SURFACE WATER MANAGEMENT
TACOMA MALL PLAZA BUILDING
2702 SOUTH 42nd STREET, SUITE 109
TACOMA, WA 98409-7322**

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION

C.I.P. # D227

SHEET 7 OF 21



now what's below.
Call before you dig.



Know what's below.
Call before you dig.

NOTES:

1. CONSTRUCT A 12'x50'x1.5' THICK QUARRY SPALL CONSTRUCTION PAD PER PAY ITEM "MAINTENANCE ACCESS ROAD CONSTRUCTION AND GRADING". QUARRY SPALL PAD WILL BE LEFT IN PLACE AND CAPPED WITH 6" CRUSHED SURFACE BASE COURSE UPON COMPLETION OF THE PROJECT. QUARRY SPALLS WILL ACT TO HELP STABILIZE THE SUB BASE IN THIS AREA AS IT IS MOST SUSCEPTIBLE TO BEING DESTABILIZED DURING HIGH RIVER FLOWS

QUARRY SPALL PAD
COORDINATE TABLE

POINT NUMBER	NORTHING	EASTING
QS1	N 699551.87	E 1170183.96
QS2	N 699562.03	E 1170190.35
QS3	N 699545.18	E 1170217.09
QS4	N 699540.42	E 1170219.47
QS5	N 699529.74	E 1170228.53
QS6	N 699524.39	E 1170222.57
QS7	N 699535.26	E 1170213.36
QS8	N 699535.03	E 1170210.69

LEGEND

EXISTING

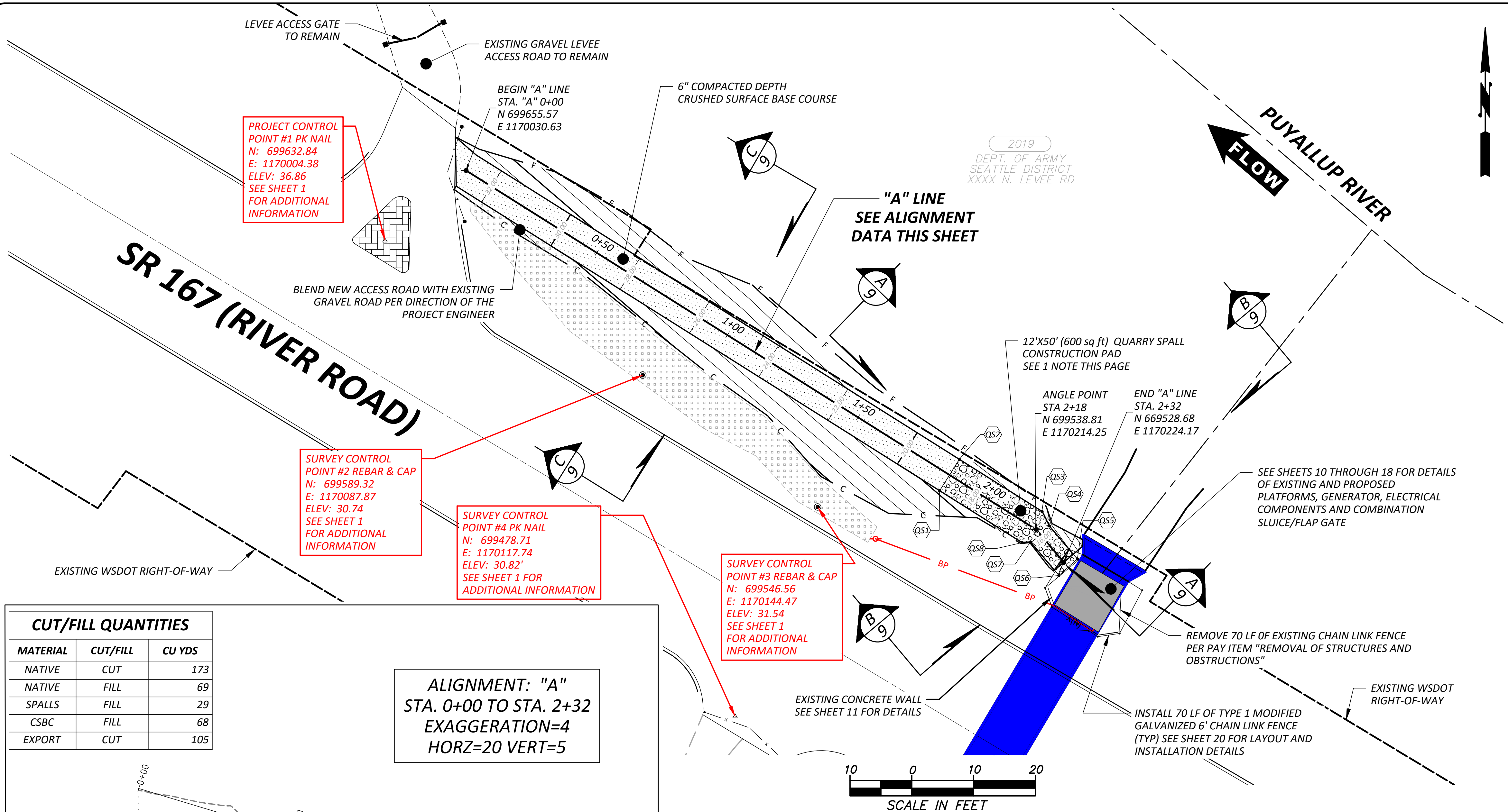
X(R)	EXISTING CHAIN LINK FENCE WITH RAZOR WIRE TOP TO BE REMOVED
---	EXISTING GROUND
BP	EXISTING BURIED POWER LINE

PROPOSED

X	PROPOSED TYPE 1 MODIFIED GALVANIZED CHAIN LINK FENCE
F	DAYLIGHT FILL LINE
C	DAYLIGHT CUT LINE
QS1	QUARRY SPALL CONSTRUCTION PAD COORDINATES
	PROPOSED ACCESS ROAD CRUSHED SURFACE TOP

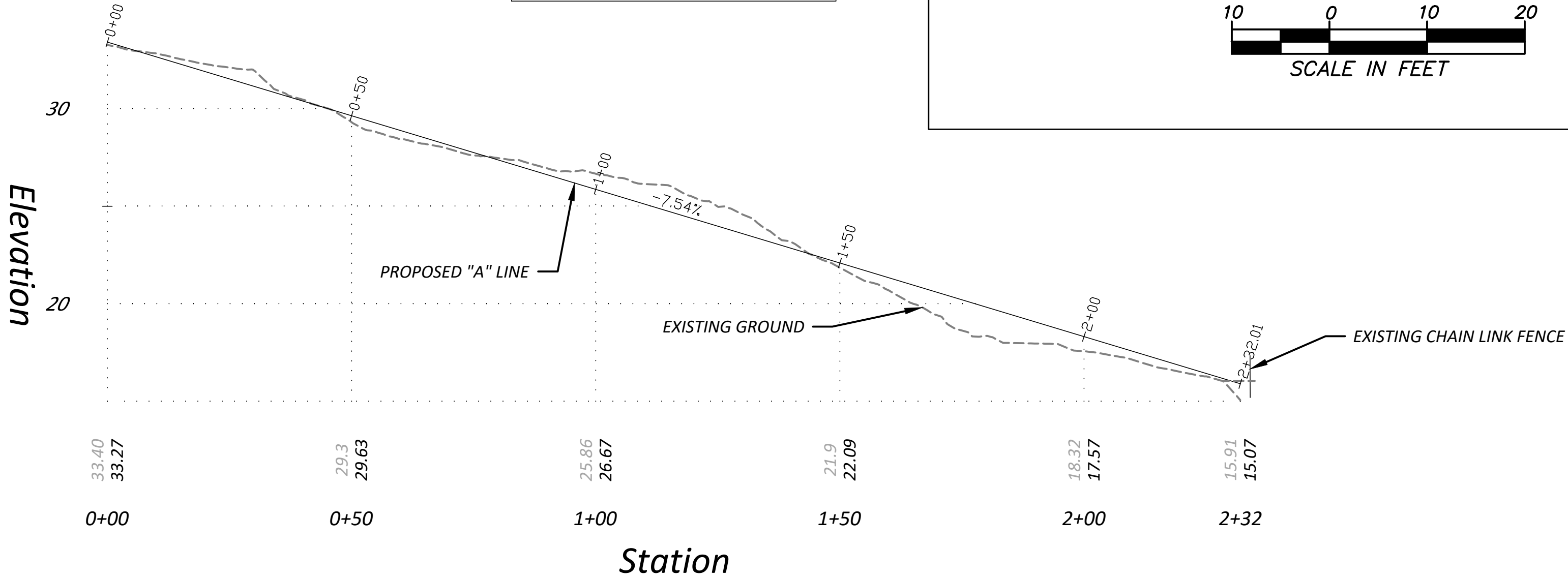
"A" LINE
ALIGNMENT DATA

STATION	NORTHING	EASTING
0+00	N 699655.57	E 1170030.63
2+18	N 699538.81	E 1170214.25
2+32	N 699528.68	E 1170224.17



CUT/FILL QUANTITIES		
MATERIAL	CUT/FILL	CU YDS
NATIVE	CUT	173
NATIVE	FILL	69
SPALLS	FILL	29
CSBC	FILL	68
EXPORT	CUT	105

ALIGNMENT: "A"
STA. 0+00 TO STA. 2+32
EXAGGERATION=4
HORZ=20 VERT=5



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DRAWN BY: M. DACCA	DATE SURVEYED: ---								
DESIGNED BY: M. DACCA	BOOK NO. ---								
CHECKED BY: D. DAVIS	DATE PLOTTED: SEE SIDE STAMP	NO.	DATE	REVISION	BY	APPROVED			



Pierce County

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2702 SOUTH 42nd STREET, SUITE 109
TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



CLEAR CREEK FLOOD GATE
REPLACEMENT PROJECT

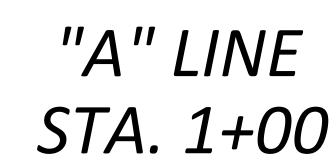
60% PLANS

MAINTENANCE ACCESS PLAN & PROFILE

C.I.P. # D227

SHEET 8 OF 21

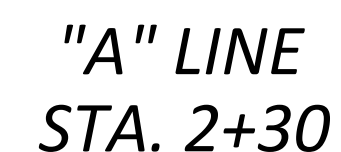
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Drawing: S:\CIP\ACTIVE CIP\D227 CLEAR CREEK TIDE GATE\DESIGN\ACAD\ACCESS ROAD\AUTOCAD\BASE_2021312.DWG
Xref(s):



SECTION

NOT TO SCALE

TYPICAL 12' ROAD SECTION
STA. 0+00 TO STA. 2+18



SECTION
NOT TO SCALE

TYPICAL 8' ROAD SECTION
STA. 2+18 TO STA. 2+30



1. REMOVE SILT/SEDIMENT THAT HAS ACCUMULATED AGAINST THE EXISTING CHAIN LINK FENCE. SLOPE GROUND AT A 1:1 SLOPE FROM THE TOP OF THE EXISTING STRUCTURE TO FINISHED GRADE OF PROPOSED ACCESS ROAD. SEDIMENT DEPTH VARIES FROM APPROXIMATELY 1' TO 4' DEEP
2. GRADING AND COMPACTION REQUIRED TO CONSTRUCT THE "A" LINE. ALL GRADING AND COMPACTING SHALL BE PER 2-03.3 (14)c COMPACTING EARTH EMBANKMENTS - METHOD A USING SELECT EXCAVATION MATERIAL. ALL WORK WILL SHALL BE INCIDENTAL TO PAY ITEM "MAINTENANCE ACCESS ROAD CONSTRUCTION AND GRADING"

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CHECKED BY: D. DAWS	DATE PLOTTED: SEE SIDE STAMP	NO.	DATE	REVISION	BY	APPROVED



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SURFACE WATER MANAGEMENT
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APPROVED BY: _____
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

60% PLANS

SECTION DETAILS

C.I.P. # D227

SHEET 9 OF 21



1. ALL REINFORCING SHALL BE CONTINUOUS THROUGH JOINT.



- NOTES:

1. UNLESS NOTED OTHERWISE, SIZE AND SPACING OF CORNER OR INTERSECTION REINFORCING SHALL MATCH HORIZONTAL REINFORCING SHOWN IN SPECIFIC SECTIONS OR DETAILS. VERTICAL REINFORCING NOT SHOWN FOR CLARITY.
2. UNLESS NOTED OTHERWISE, BAR SPICE SHALL BE LOCATED OUTSIDE OF CORNER OR INTERSECTION AREA TO AVOID CONGESTION. CONTRACTORS OPTION TO PROVIDE SINGLE BENT BAR IN LIEU OF SPICE CONFIGURATION AT ONE END ONLY.
3. SEE GENERAL STRUCTURAL NOTES FOR SPICE LENGTH. HORIZONTAL WALL BARS SHALL BE CONSIDERED TOP BARS FOR DEVELOPMENT AND SPICE LENGTHS.



1. ALL REINFORCING SHALL BE CONTINUOUS THROUGH JOINT.

DOUBLE MAT OF REINFORCING

TYPICAL SLAB CONSTRUCTION JOINT

SCALE: NONE

TYPICAL HORIZONTAL CONSTRUCTION JOINT

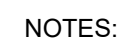
SCALE: NONE

TYPICAL VERTICAL WALL CONSTRUCTION JOINT

SCALE: NONE

TYPICAL HORIZONTAL WALL REINFORCING

SCALE: NONE



1. EMBEDMENT LENGTH IS BASED ON DOWELS SET WITH HILTI HIT-RE 500-SD ADHESIVE ANCHOR SYSTEM. SUBMIT ICC EVALUATION SERVICE REPORT (ES REPORT) IF ALTERNATE PRODUCT IS PROPOSED.
2. INSTALL DOWELS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ICC ES REPORT ESR-2322.
3. LOCATE DOWELS CENTERED IN WALL OR SLAB UNLESS NOTED OTHERWISE ON DRAWINGS. WHERE 2 ROWS OF DOWELS ARE INDICATED, STAGGER SPACING AND LOCATE ALTERNATING DOWELS AT MINIMUM EDGE DISTANCE FROM OPPOSITE FACES.
4. SPECIAL INSPECTION IS REQUIRED FOR ADHESIVE DOWEL INSTALLATION.

REBAR DOWELS SET WITH ADHESIVE

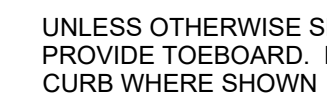
SCALE: NONE



SCALE: NONE



SCALE: NONE



TYPICAL GUARDRAIL

SCALE: NONE



SIDE MOUNT AT CONCRETE SLAB

SCALE: NONE

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Pierce County

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APPROVED BY: _____

MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER

CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

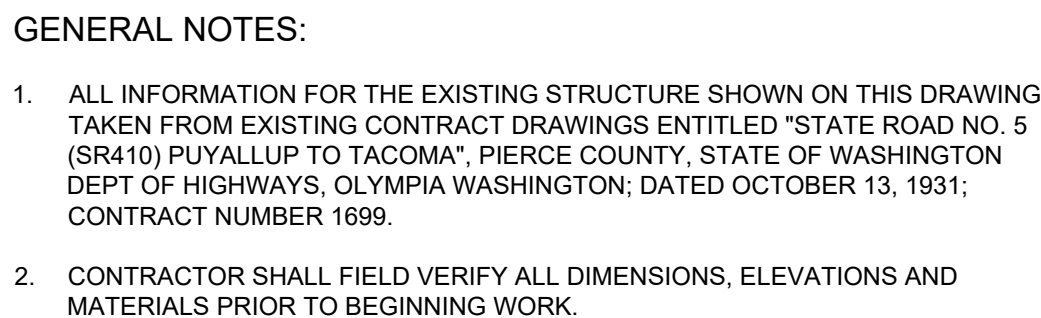
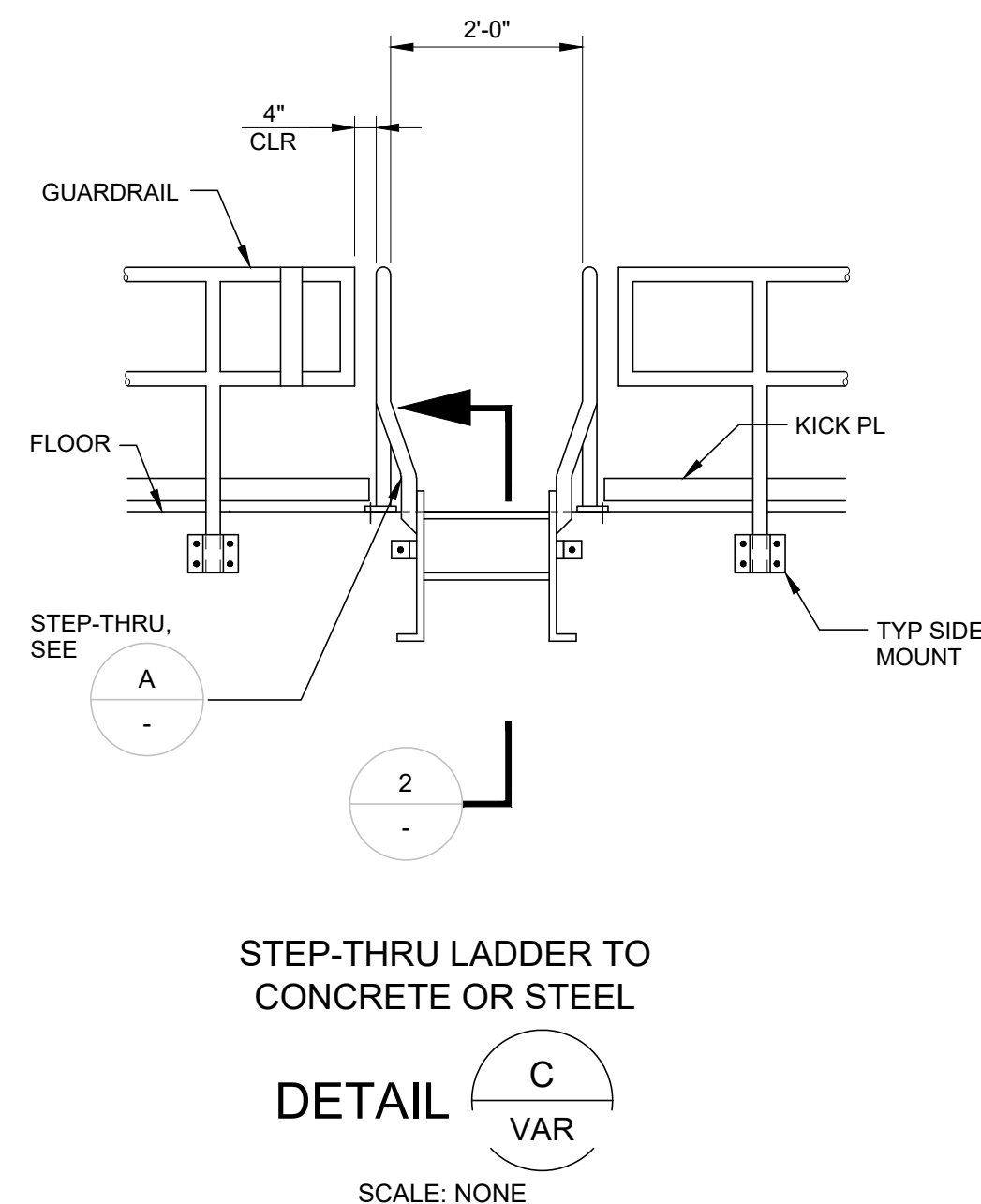
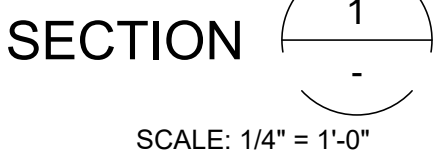
60% PLANS

STANDARD DETAILS - 1

GS-00-0004

SHEET **10** *OF* **20**

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DESIGNED BY: GCB	BOOK NO. ---				
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Pierce County

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APPROVED BY:
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CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

60% PLANS

EXISTING PLANS AND SECTIONS

GS-00-0005

SHEET **11** *OF* **20**

Date: Apr 06, 2021 8:30:21 AM ()
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User: (Drawing failed)
Refs: (DIESEL evaluation failed)

1. ALL INFORMATION FOR THE EXISTING STRUCTURE SHOWN ON THIS DRAWING TAKEN FROM EXISTING CONTRACT DRAWINGS ENTITLED "STATE ROAD NO. 5 (SR410) PUYALLUP TO TACOMA", PIERCE COUNTY, STATE OF WASHINGTON DEPT OF HIGHWAYS, OLYMPIA WASHINGTON; DATED OCTOBER 13, 1931; CONTRACT NUMBER 1699.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS AND MATERIALS PRIOR TO BEGINNING WORK.



- NOTES:**
1. AT GATE MFR'S OPTION AND APPROVAL, PROVIDE THREADED WELDED STUDS ON SIDE FLANGES FOR GATE INSTALLATION, SIZE & LENGTH PER GATE MFR.
 2. 5/8"Ø SS ADHESIVE ANCHORS, SEE DETAIL A/GS-00-0007.
 3. AT SIDES & TOP, PROVIDE EPOXY GROUT AFTER ADHESIVE ANCHOR INSTALLATION.



















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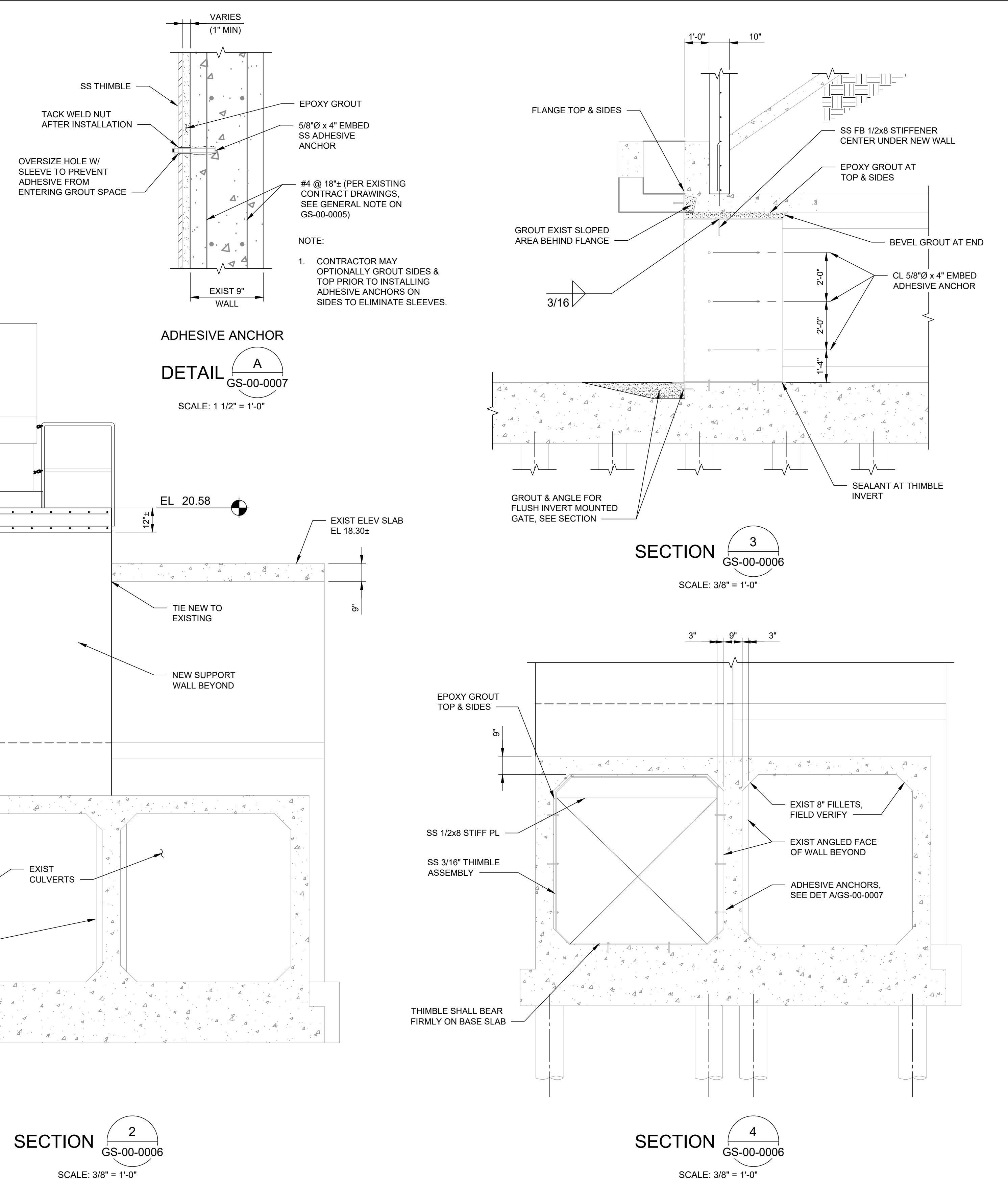
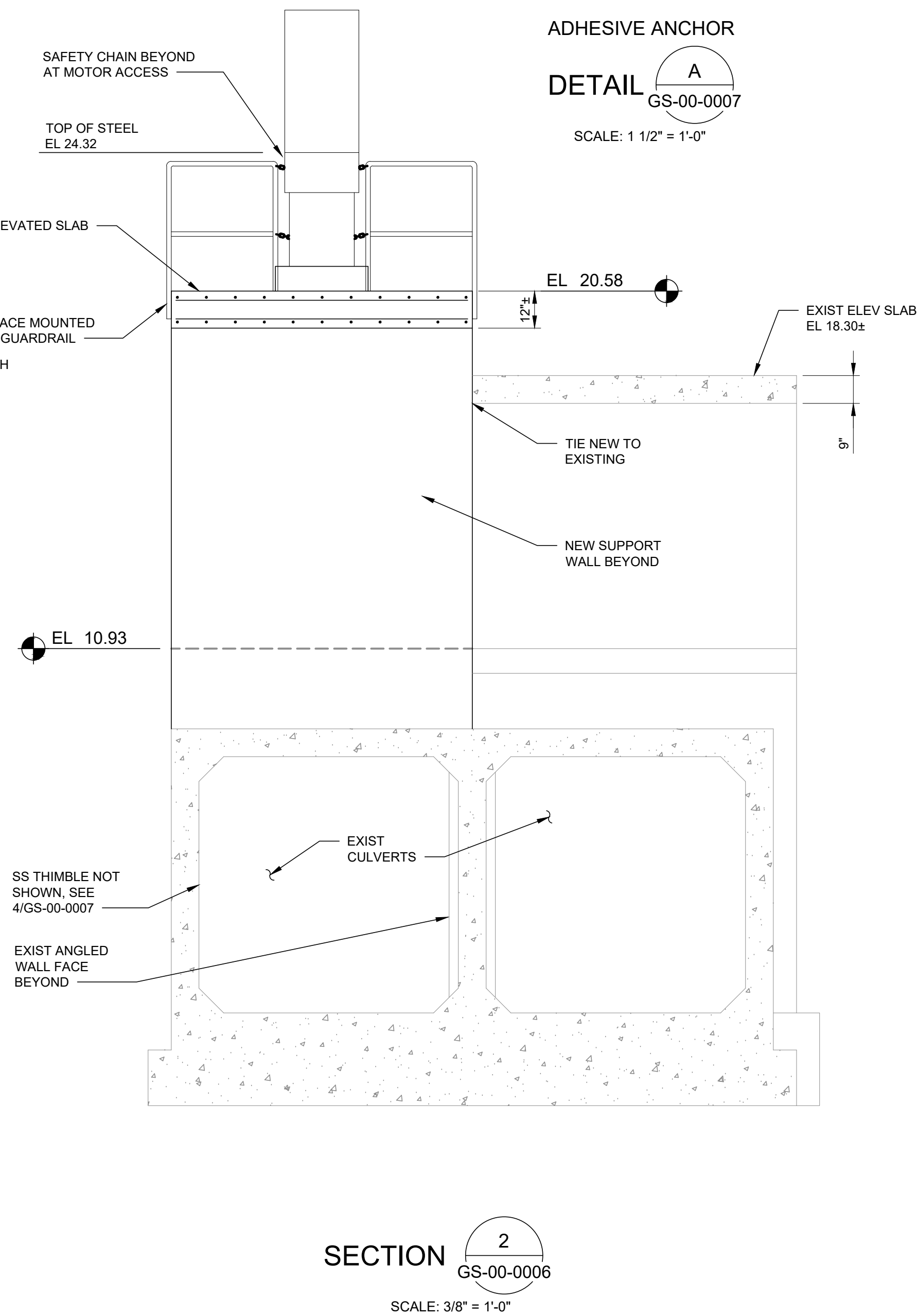
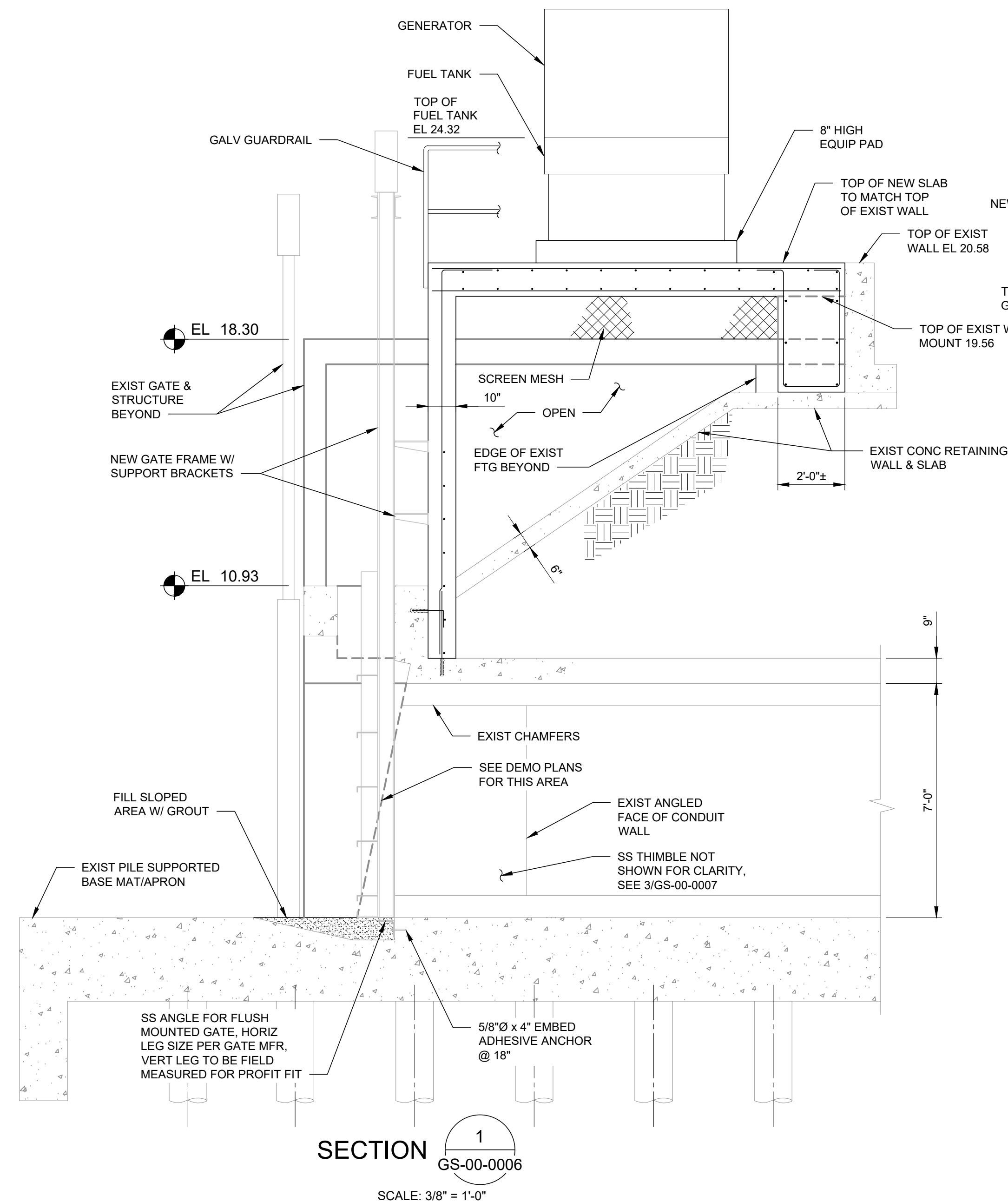
CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

60% PLANS

NEW GATE PLANS

GS-00-0006

SHEET **12** *OF* **20**



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APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518
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CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

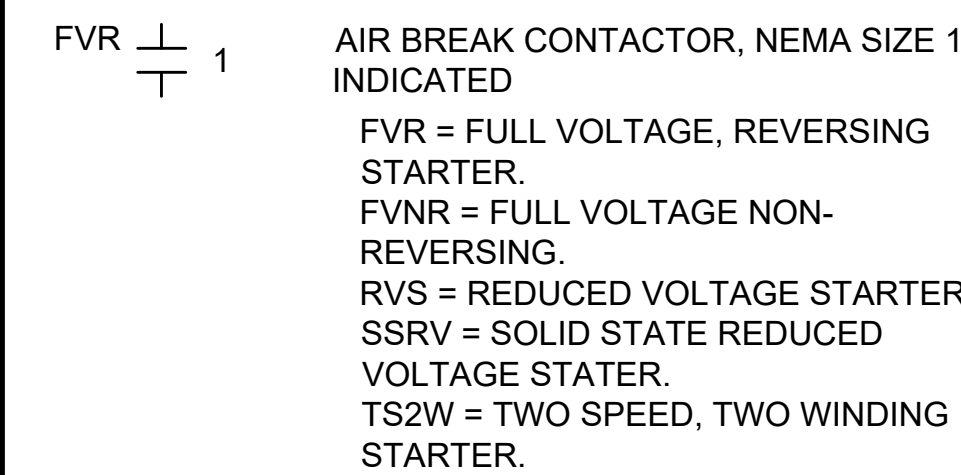
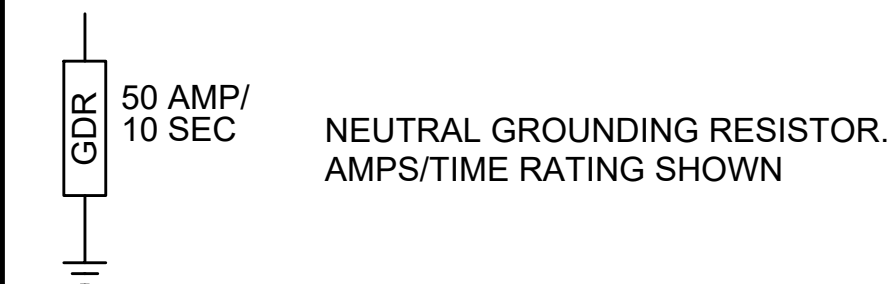
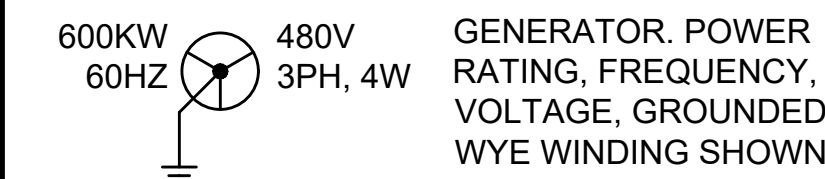
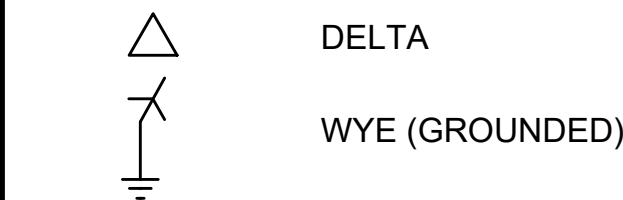
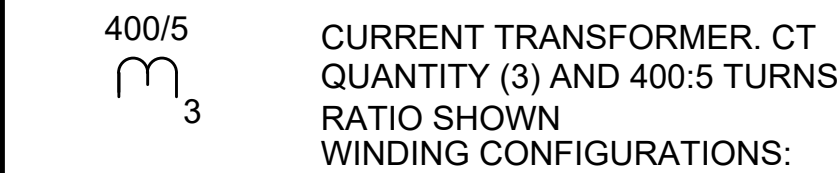
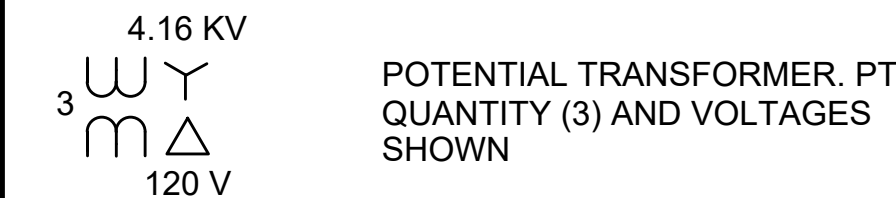
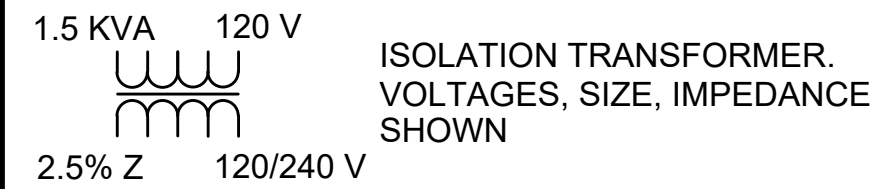
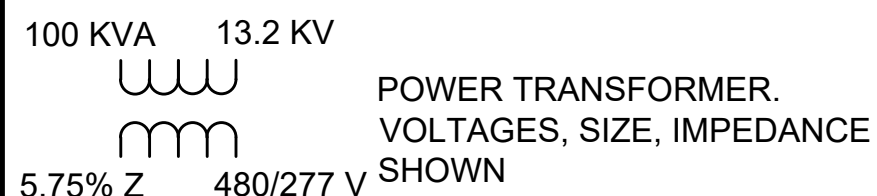
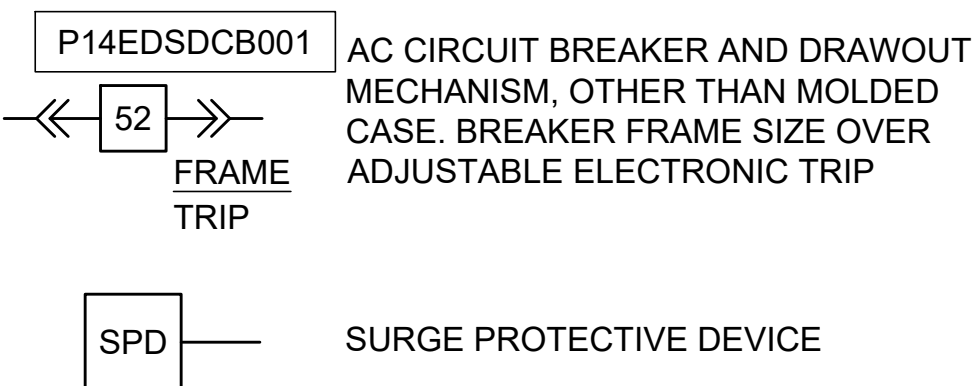
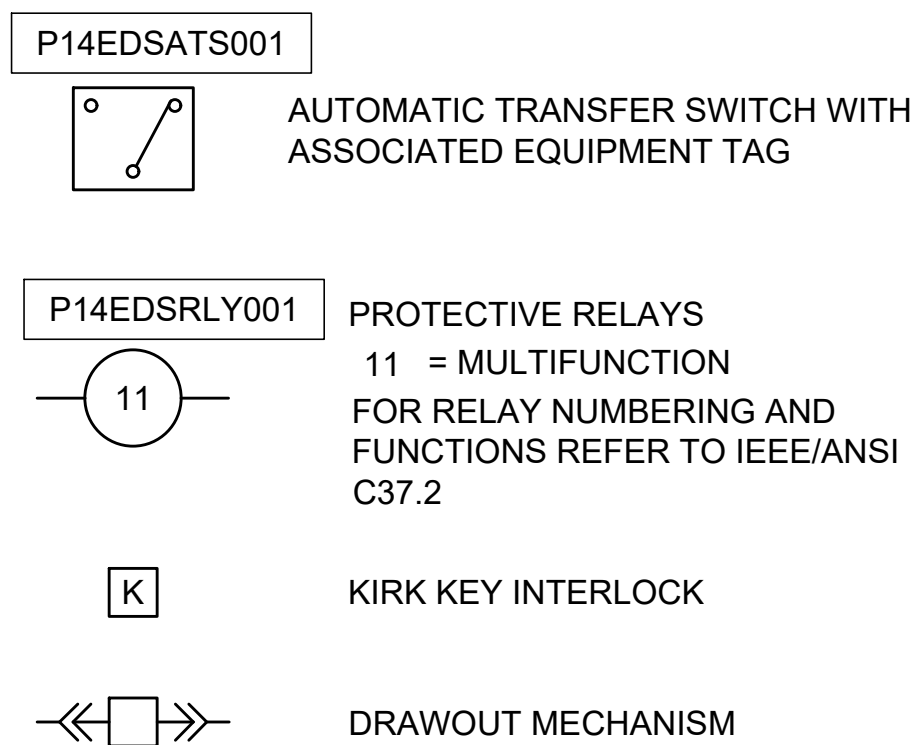
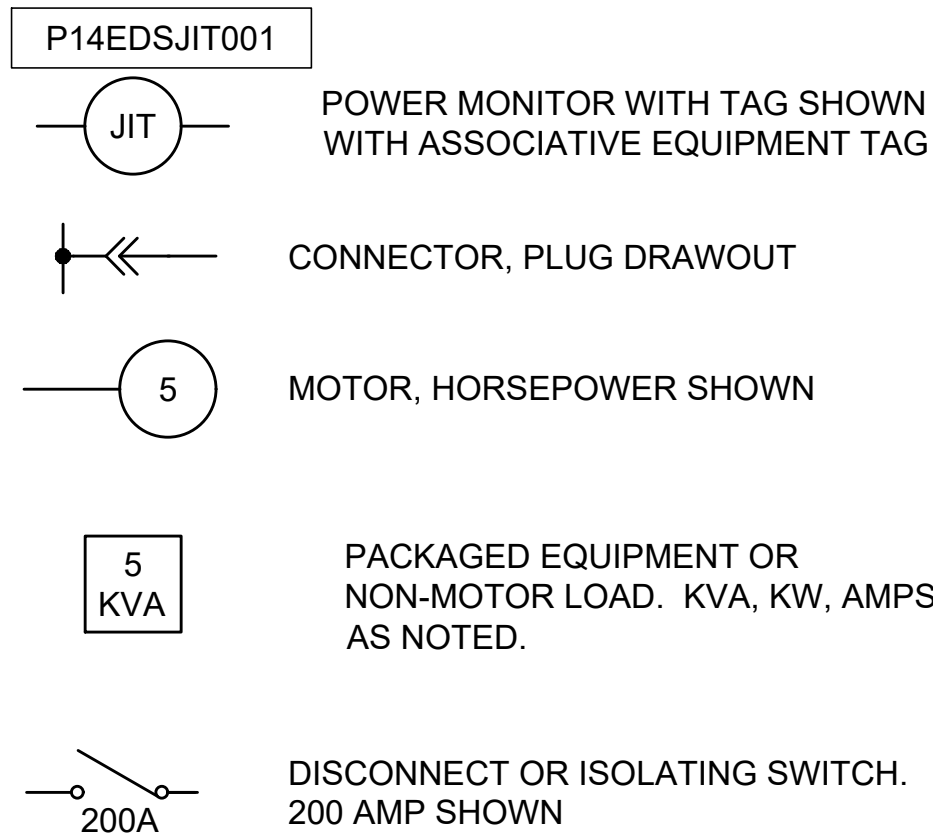
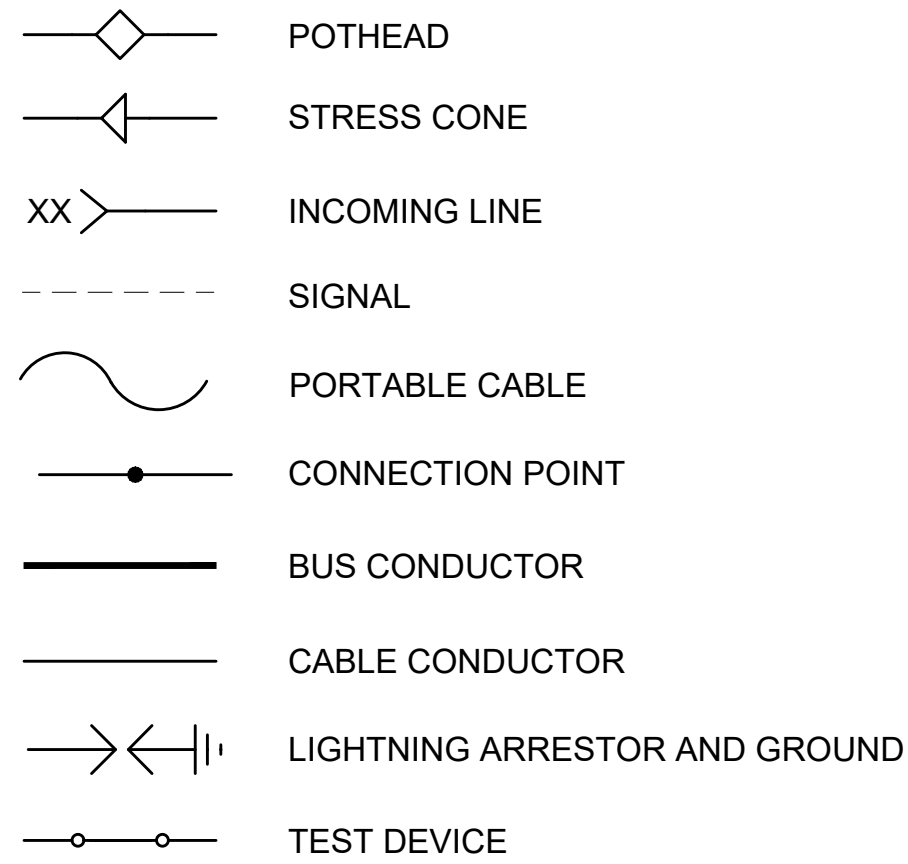
60% PLANS

NEW GATE SECTIONS AND DETAILS

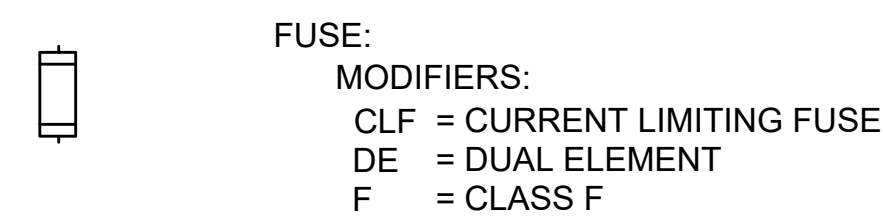
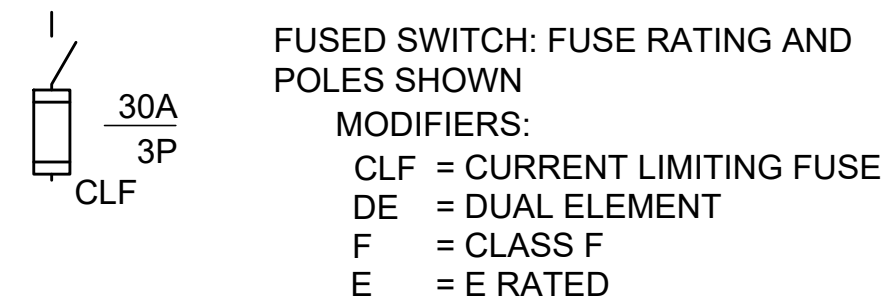
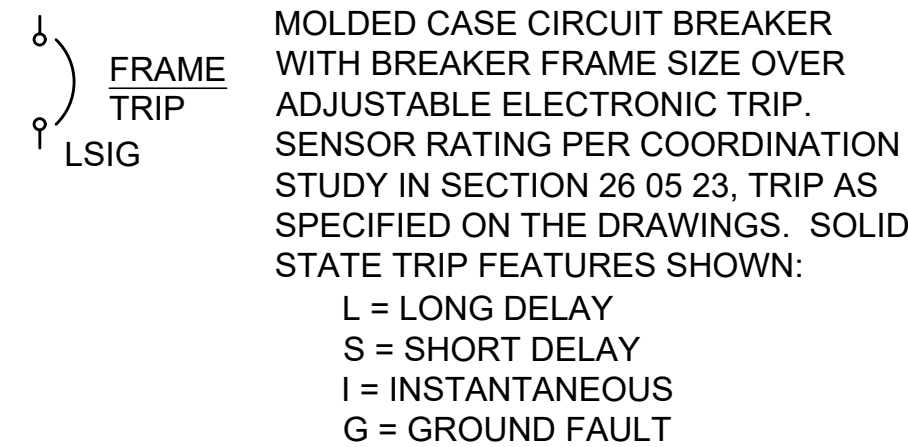
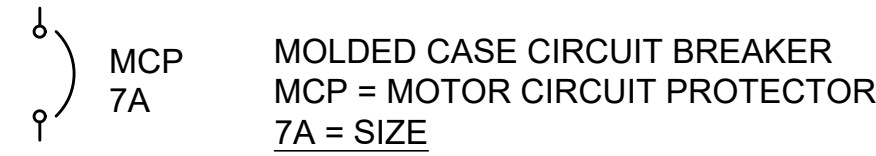
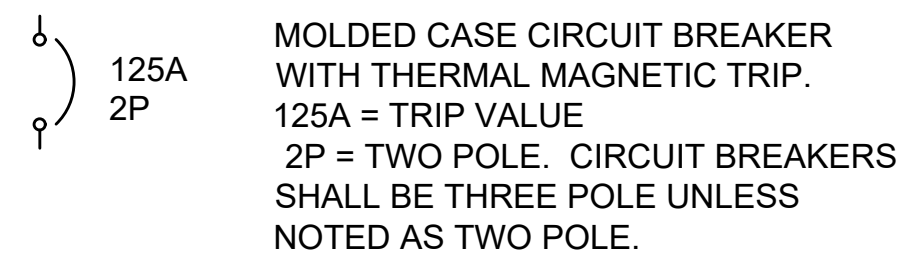
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SHEET **13** *OF* **20**

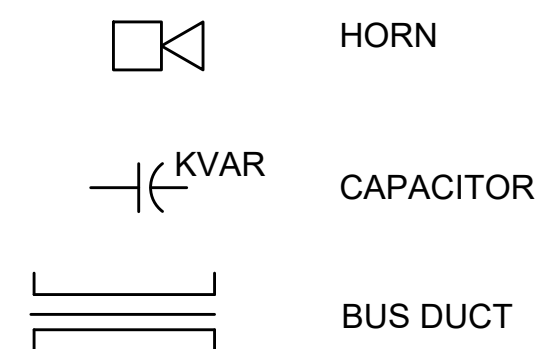
ONE LINE DIAGRAM SYMBOLS



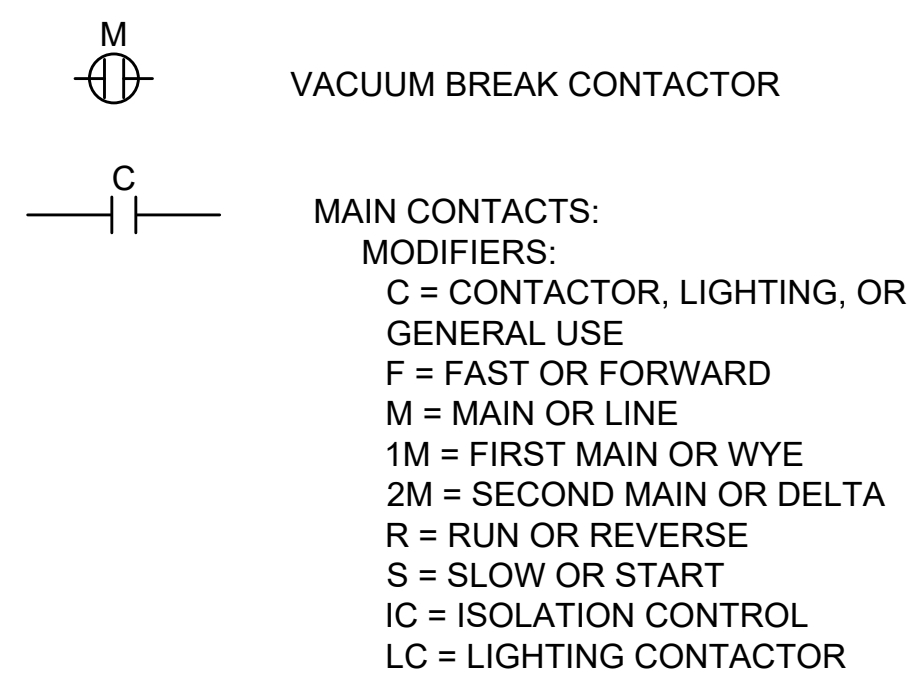
DISCONNECTS AND OVERCURRENT DEVICES



MISCELLANEOUS



MAIN CONTACTS



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					APPROVED



Pierce County

DEPARTMENT OF PLANNING AND PUBLIC WORKS
SURFACE WATER MANAGEMENT
TACOMA MALL PLAZA BUILDING
2702 SOUTH 42nd STREET, SUITE 109
TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER

	C
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CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

60% PLANS

ELECTRICAL LEGEND AND SYMBOLS 2

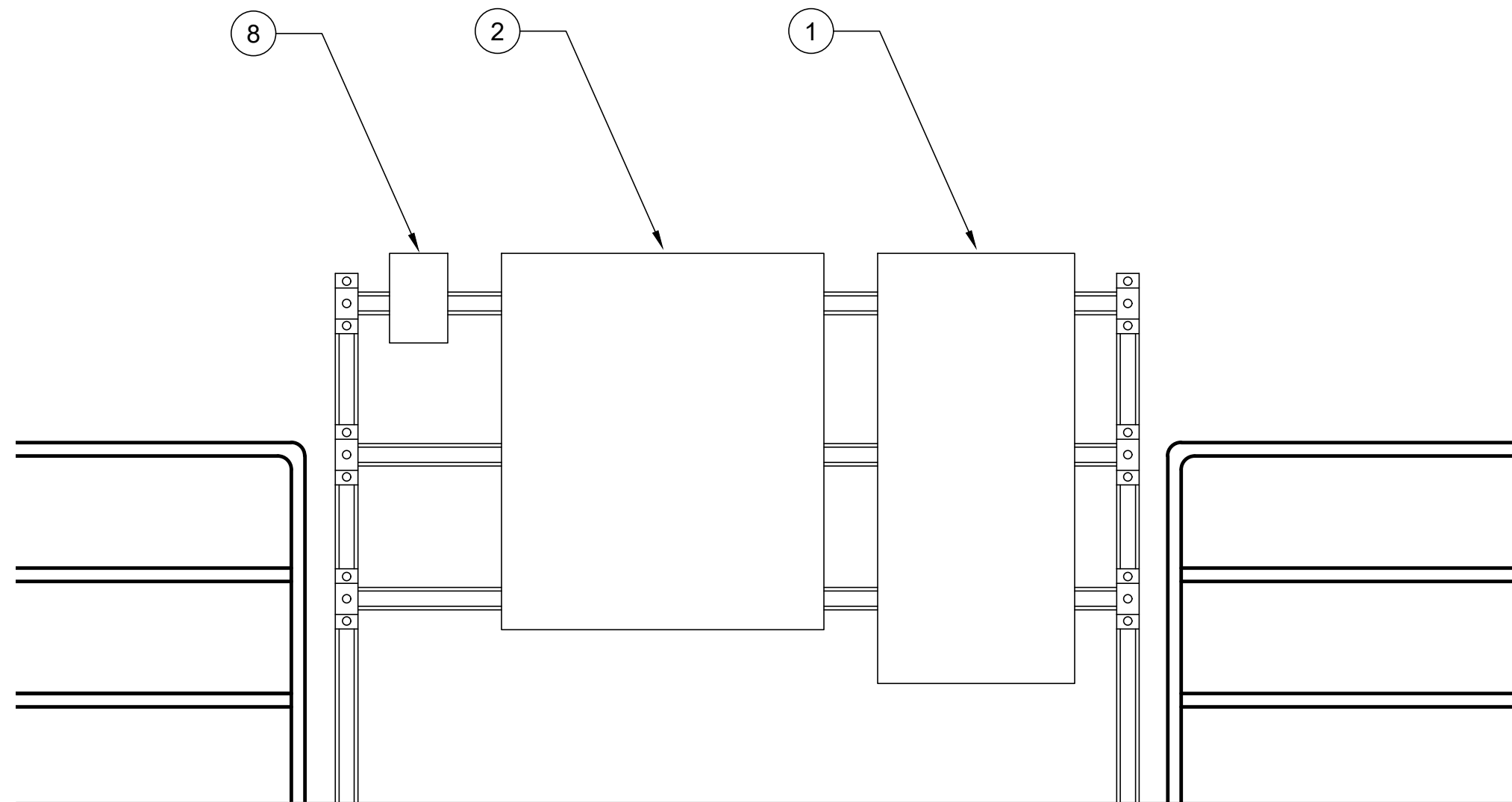
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SHEET **15** OF **20**

A	AMPERE, AIR, AERATION AIR	CD	CONDUIT	FCR	FINE CRUSHED ROCK	LTG	LIGHTING	R	RADIUS, RISER, RETURN	THH	TELEPHONE HANDHOLE
AB	ANCHOR BOLT	CDF	CONTROL DENSITY FILL	FCS	FLOW CONTROL STRUCTURE	LUM	LUMINAIRE	RCP	REINFORCED CONCRETE PIPE	TMH	TELEPHONE MANHOLE
ABAN	ABANDON(ED)	CEM	CEMENT	FHY	FIRE HYDRANT	LVL	LEVEL	RDWY	ROADWAY	TR	TRAFFIC
ABBR	ABBREVIATED	CGD	COMBINED GAS DETECTOR	FIG	FIGURE			REBAR	REINFORCING BAR (CONCRETE)	TRCB	TRAFFIC SIGNAL CABLE
ABW	ASPHALT BIKE WAY	C&G	CURB & GUTTER	FLEX	FLEXIBLE	MAINT	MAINTENANCE	REC	RECEPTACLE	TRCD	TRAFFIC SIGNAL CONDUIT
AC	ASPHALTIC CONCRETE, ALTERNATING CURRENT	CI	CAST IRON	FO	FIBER OPTICS	MATL	MATERIAL	RECONN	RECONNECT	TRSB	TRAFFIC SIGNAL BOX
		CIP	CAST IRON PIPE	FOP	FIBER OPTIC PANEL	MAX	MAXIMUM	RED	REDUCER	TRSP	TRAFFIC SIGNAL POLE
A/C	AIR CONDITIONING	CJ	CONSTRUCTION JOINT	FPC	FLEXIBLE PIPE COUPLING	MCC	MOTOR CONTROL CENTER	REF	REFERENCE	TS2W	TWO SPEED, 2 WINDINGS (MOTOR)
ACB	ALTERNATING CURRENT	CL	CENTERLINE, CLASS	FRP	FIBERGLASS REINFORCED	MC-HL	METAL CLAD HAZARDOUS LOCATION	REINF	REINFORCE(D) (ING)	TV	TELEVISION
ACST	ACOUSTIC(AL)	CLF	CHAIN LINK FENCE			MECH	MECHANICAL	RELOC	RELOCATE	TVCB	TELEVISION CABLE
AD	ADDENDUM	CLR	CLEAR	FT	FEET, FOOT	MFR	MANUFACTURER	REM	REMOVE	TVHH	TELEVISION HANDHOLE
ADD	ADDITIONAL	CMC	CEMENT MORTAR COATED	FTG	FOOTING	MH(S)	MANHOLE(S)	REPL	REPLACE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
ADH	ADHESIVE	CML	CEMENT MORTAR LINED	FWD	FORWARD	MIN	MINIMUM, MINUTE	REQ'D	REQUIRED	TYP	TYPICAL
ADJ	ADJUST(ABLE)	CMP	CORRUGATED METAL PIPE			MISC	MISCELLANEOUS	RESTL	REINFORCING STEEL		
AF	AMPERE FRAME	CO	CLEANOUT	G	GROUND, GAS, GAGE	MISC/EE	MISCELLANEOUS ELECTRICAL	RET	RETIRE(D)	UG	UNDERGROUND
AFF	ABOVE FINISH FLOOR	CONC	CONCRETE	GALV	GALVANIZED		EQUIPMENT	RGS	RIGID GALVANIZED STEEL	UIC	UNDERGROUND INTERCONNECT
AGG	AGGREGATE	CONN	CONNECTION	GASV	GAS VALVE	MJ	MECHANICAL JOINT	RR	RAILROAD	UP	UNION PACIFIC RAILROAD, UTILITY POLE
AHB	AIR HOSE BIB	CONT	CONTINUOUS	GM	GAS METER	ML	MONUMENT LINE	R&R	REMOVE & REPLACE		
AHD	AHEAD	CP	CONTROL PANEL	GND	GROUND	M/L	MATCH LINE	RT	RIGHT		
AHU	AIR HANDLING UNIT	CPLG	COUPLING	GP	GUY POLE	MO	MAGNETIC ONLY	RTP	REINFORCED THERMOSET	V	VALVE, VOLT, VENT
AIC	AERIAL INTERCONNECT	CTC	CABLE TRAY CONTROL	GPM	GALLONS PER MINUTE	MOD	MODIFY, MODIFIED		POLYESTER	VA	VOLT AMPERES
AL	ALUMINUM	CTS	CABLE TRAY SIGNAL	GR	GRADE	MON	MONUMENT	RUB	RUBBER	VB	VALVE BOX, VERTICAL BEND
ALH	ALARM HORN	CULV	CULVERT	GRS	GALVANIZED RIGID STEEL	MTB	MAIN TELEPHONE BOARD	R/W	RIGHT-OF-WAY	V/C	VERTICAL CURVE
ALM	ALARM	CW	CONCRETE WALK	GRT	GROUT	MTD	MOUNT(ED) (ING)			VCH	VALVE CHAMBER
ALT	ALTERNATOR, ALTERNATIVE			GRTG	GRATING	MTL	METAL	S	SOUTH, SUPPLY	VERT	VERTICAL
AMD	AIR MONITORING DEVICE	DAB	DRILLED ANCHOR BOLT	GSKT	GASKET	MTS	MANUAL TRANSFER SWITCH	SCH	SCHEDULE	VFD	VARIABLE FREQUENCY DRIVE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	DB	DIRECT BURIAL CABLE	GVL	GRAVEL	MVL	MERCURY VAPOR LUMINAIRE	SCHEM	SCHEMATIC	VO	VACATION ORDINANCE
		DET	DETAIL					SCL	SEATTLE CITY LIGHT	V/VAR	VARIABLE, VARIES
AP	ANGLE POINT	DIA	DIAMETER	HB	HORIZONTAL BEND	N	NORTH	SD	STORM DRAIN		
APPROX	APPROXIMATELY	DIAG	DIAGRAM	HD	HEAD	N/A	NOT APPLICABLE	SEC	SECTION	W	WATT, WATER
AR	ALARM RELAY, AIR RETURN	DIM	DIMENSION	HGL	HYDRAULIC GRADE LINE	NEC	NATIONAL ELECTRICAL CODE	SEW	SEWER	WCR	WHEEL CHAIR RAMP
ASPH	ASPHALT	DIP	DUCTILE IRON PIPE	HH	HANDHOLE	NG	NATURAL GAS	SF	SPACE FACTOR	WM	WATER METER
AS	AMPERE SENSOR	DISCH	DISCHARGE	HORIZ	HORIZONTAL (HOR)	NIC	NOT IN CONTRACT	SHT	SHEET	WMR	WATER MAIN RADIUS
AT	AMPERE TRIP	DN	DOWN	HP	HIGH PRESSURE, HIGH POINT	NO	NUMBER	SIM	SIMILAR	WP	WOOD POLE
ATS	AUTOMATIC TRANSFER SWITCH	DR	DRIVE, DRAIN ROCK, DRAINAGE, DOOR	HPG	HIGH PRESSURE GAS	NOM	NOMINAL	SL	SLOPE, STREET LIGHT, SURVEY LINE	WSP	WOOD STAVE PIPE
AUTO	AUTOMATIC			HR	HANDRAIL	NTS	NOT TO SCALE			WU	WESTERN UNION
AUX	AUXILIARY	DS	DISCONNECT SWITCH, DOWN SPOUT	HT	HEIGHT			SLG	SLIDE GATE, SLUICE GATE	WV	WATER VALVE
AVE	AVENUE	DWG	DRAWING	HYD	HYDRANT, HYDRAULIC	OC	ON CENTER	SLHH	STREET LIGHT HANDHOLE	WWF	WELDED WIRE FABRIC
AVG	AVERAGE	DWY	DRIVEWAY	HZ	HERTZ	OD	OUTSIDE DIAMETER/DIMENSION	SNS	STREET NAME SIGN		
AW	ASPHALT WALK					OPP	OPPOSITE, OPPOSE	SP	STRAIN POLE	XFMR	TRANSFORMER
				OUT	OUTLET			SPCS	SPACES	XP	TRANSMISSION POLE
				OVFL	OVERFLOW			SPEC	SPECIFICATIONS		
								SQ	SQUARE		
BCR	BEGINNING OF CURVE	E	EAST	IAW	IN ACCORDANCE WITH	PAV	PAVEMENT	SS	SIDE SEWER - COMBINED,		
BF	BOTTOM FACE	EA	EACH	ID	INSIDE DIAMETER/DIMENSION	PC	POINT OF CURVATURE, PORTLAND CEMENT,				

THD	THREAD(ED)
	C
	R
	EL
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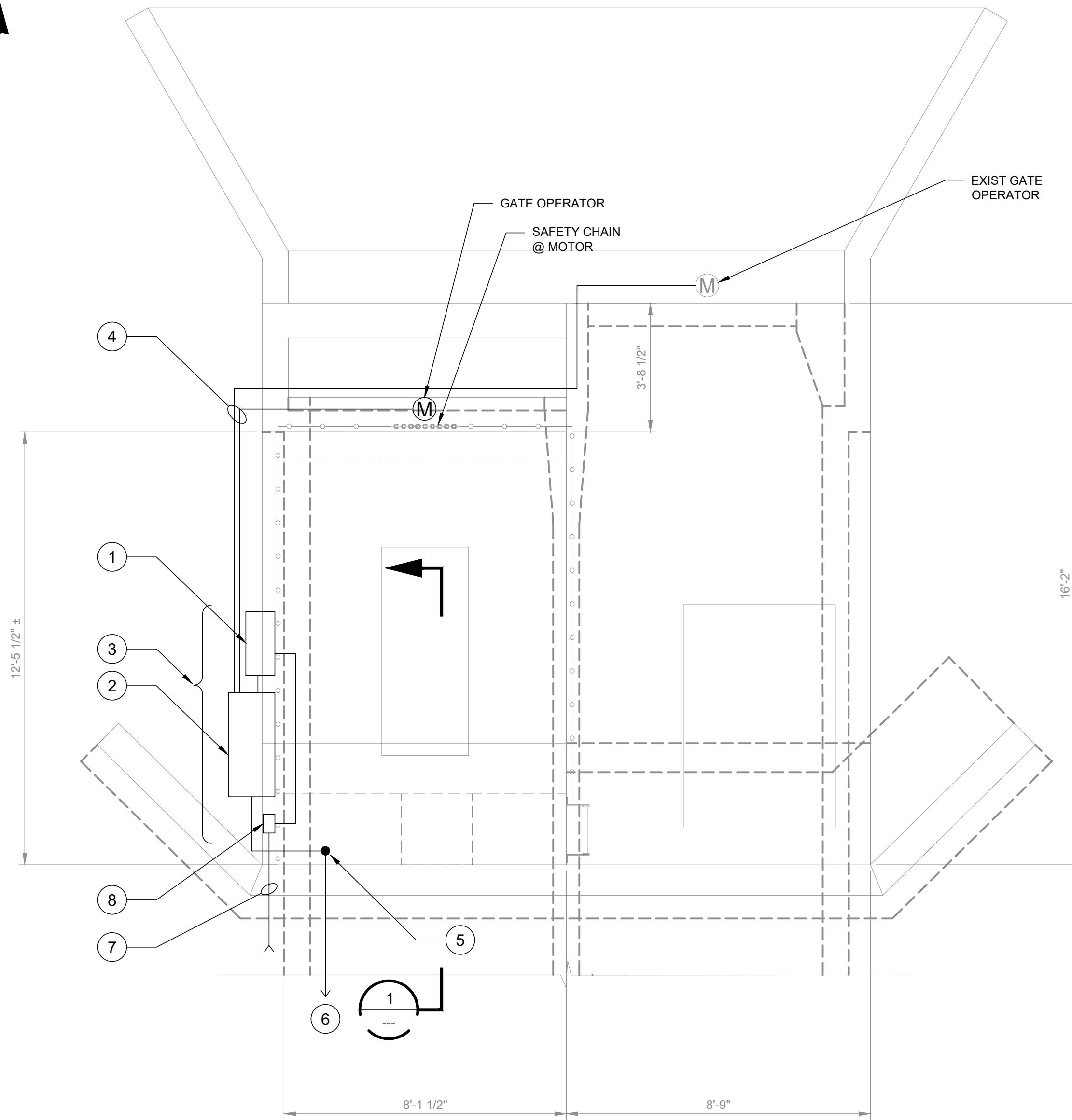
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ELECTRICAL PANEL LAYOUT

SECTION

SCALE: 3/4"=1'-0"



TOP PLAN

SCALE: 3/8" = 1'-0"

- GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL PRE-EXISTING CONDITIONS.

KEY NOTES:

1. NEW GENERATOR ATS UNIT, MODEL SHOWN IS GENERATOR 1000 IN STAINLESS STEEL.
2. NEW SITE CONTROL PANEL - WILL INCLUDE REMOTE TELEMETRY EQUIPMENT. HOFFMAN MODEL CSD423616SSDR WITH PANEL (CP4236G), 316 STAINLESS STEEL.
3. CONTRACTOR TO FIELD FABRICATE NEW RACK USING STAINLESS STEEL COMPONENTS. CONTRACTOR TO AFFIX NEW RACK TO LOWER CONCRETE STRUCTURE AND SUSPEND ENCLOSURES SO THAT THE ENCLOSURE FRONTS ARE FLUSH WITH HAND-RAILING (REMOVING FALL HAZARD). CONTRACTOR TO ABUT ATS UNIT ENCLOSURE WITH CONTROL PANEL ENCLOSURE (SEE ELEVATION VIEW).
4. CONTRACTOR TO FIELD ROUTE NEW CLX POWER AND CONTROL CABLES FROM CONTROL PANEL TO BOTH GATE OPERATORS.
5. CONTRACTOR TO CORE DRILL ACCESS FOR CONDUIT CONDUIT INTO EXISTING GUB CULVERT. CONTRACTOR TO INSTALL NEW ALUMINUM CONDUIT LB AT OR NEAR CONCRETE GRADE BEFORE CONDUIT ENTERS CORE DRILL SPACE. ONCE CONDUITS/LB HAVE BEEN RUN/PLACED, CONTRACTOR TO SEAL AND GROUT CORE DRILL ACCESS.
6. CONTRACTOR TO FIELD ROUTE ALUMINUM CONDUIT FROM CONTROL PANEL TO LB THROUGH CORE DRILL ACCESS, THROUGH EXISTING GUB CULVERT TO SOUTHERLY CULVERT OPENING, TERMINATING CONDUIT RUN AT NEW LEVEL TRANSMITTER. CONTRACTOR TO ROUTE CONTROL CONDUCTORS THROUGH NEW CONDUIT TO NEW LEVEL TRANSMITTER.
7. CONTRACTOR TO FIELD ADJUST INCOMING POWER FROM UTILITY TRANSFORMER TO ACCOMMODATE LOCATION OF SERVICE DISCONNECT.
8. MAIN SERVICE DISCONNECT.

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Pierce County

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TACOMA MALL PLAZA BUILDING
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TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER

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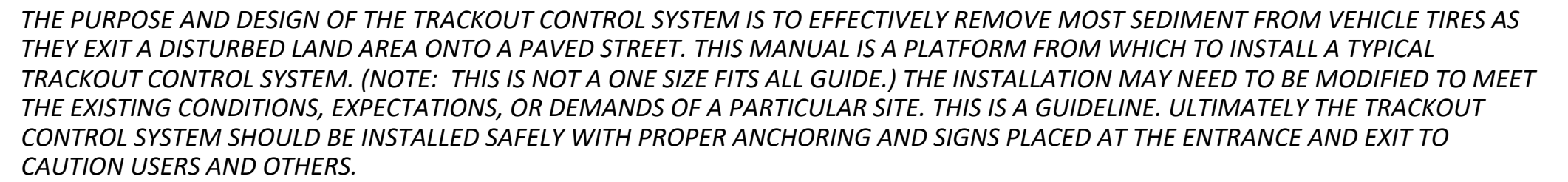
CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

60% PLANS

ELECTRICAL ENLARGED PLAN

E-00-4001

SHEET **17** OF **20**



- A. PORTABLE TRACKOUT CONTROL SYSTEM MAT
- B. ANCHOR POINTS (PER MANUFACTURERS SPECIFICATION)
- C. HIGH VISIBILITY SILT FENCE

1. THE SITE WHERE THE TRACKOUT CONTROL SYSTEM IS TO BE PLACED SHOULD CORRESPOND TO BEST MANAGEMENT PRACTICES AS MUCH AS POSSIBLE. THE SITE WHERE TRACKOUT CONTROL SYSTEM IS PLACED SHOULD ALSO MEET OR EXCEED THE LOCAL JURISDICTION OR STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS
2. ONCE THE SITE IS ESTABLISHED WHERE TRACKOUT CONTROL SYSTEM IS TO BE PLACED, ANY EXCESSIVE UNEVEN TERRAIN SHOULD BE LEVELED OUT OR REMOVED SUCH AS LARGE ROCKS, LANDSCAPING MATERIALS, OR SUDDEN ABRUPT CHANGES IN ELEVATION
3. THE BEGINNING OF THE MAT SHOULD BE PLACED NEXT TO THE CLOSEST POINT OF EGRESS. THIS WILL ENSURE THAT THE VEHICLE WILL EXIT STRAIGHT FROM THE SITE ONTO THE PAVED SURFACE
4. PLACE AND ANCHOR ALL MATS IN THE PROPER LOCATION PER APPROVED PLANS AND PER THE MANUFACTURERS SPECIFICATIONS. ALL MATS ARE TO BE ANCHORED TO PREVENT THE POTENTIAL MOVEMENT THROUGHOUT THE DURATION OF THE PROJECT

1. *VEHICLES SHOULD TRAVEL DOWN THE LENGTH OF THE TRACKOUT CONTROL SYSTEM AND NOT CUT ACROSS THE MATS*
2. *DRIVERS SHOULD TURN THE WHEEL OF THEIR VEHICLES SUCH THAT THE VEHICLE WILL MAKE A SHALLOW S-TURN ROUTE DOWN THE LENGTH OF THE TRACKOUT CONTROL SYSTEM*
3. *THE TRACKOUT CONTROL SYSTEM SHOULD BE CLEANED ONCE THE VOIDS BETWEEN THE PYRAMIDS BECOME FULL OF SEDIMENT. TYPICALLY THIS WILL NEED TO BE PERFORMED WITHIN TWO WEEKS AFTER A STORM EVENT. BRUSHING IS THE PREFERRED METHOD OF CLEANING, EITHER MANUALLY OR MECHANICALLY*
4. *THE USE OF ICE MELT, ROCK SALT, SNOW MELT, DE-ICER, ETC. SHOULD BE UTILIZED AS NECESSARY DURING THE WINTER MONTHS AND AFTER A SNOW EVENT TO PREVENT ICE BUILDUP*

1. REMOVAL OF THE TRACKOUT CONTROL SYSTEM IS TO BE COMPLETED PER THE MANUFACTURERS SPECIFICATIONS
2. ALL SEDIMENT SHALL BE REMOVED FROM THE TRACKOUT CONTROL SYSTEM
3. ALL MATS, ANCHORS AND INSTALLATION HARDWARE SHALL BE REMOVED UPON COMPLETION OF THE PROJECT

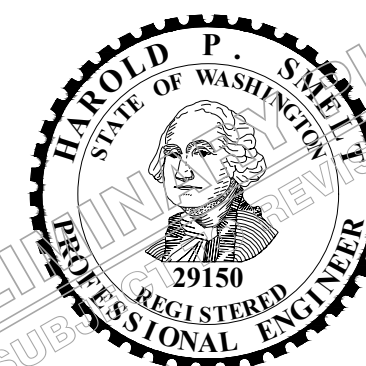


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APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



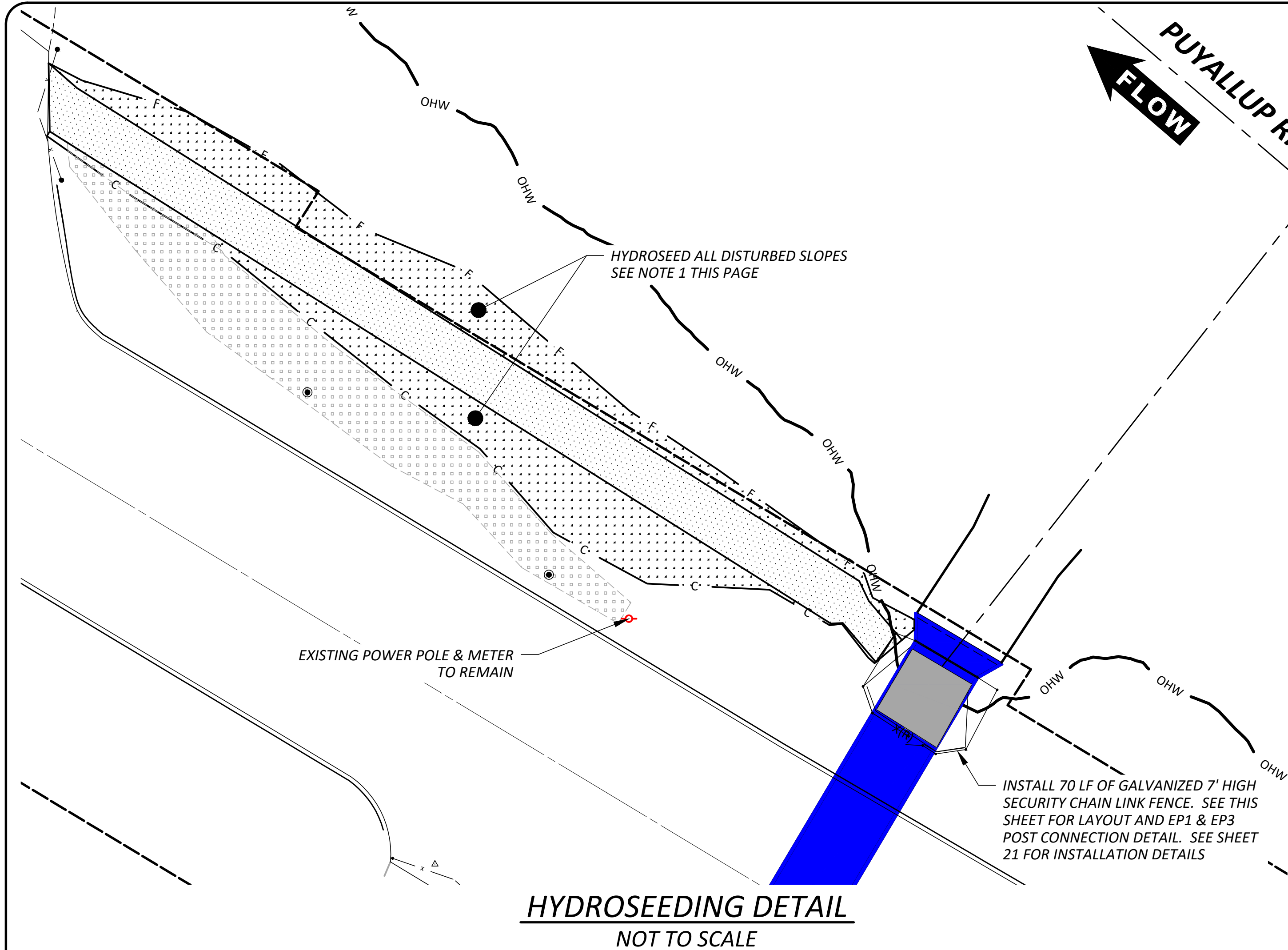
CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

DETAILS

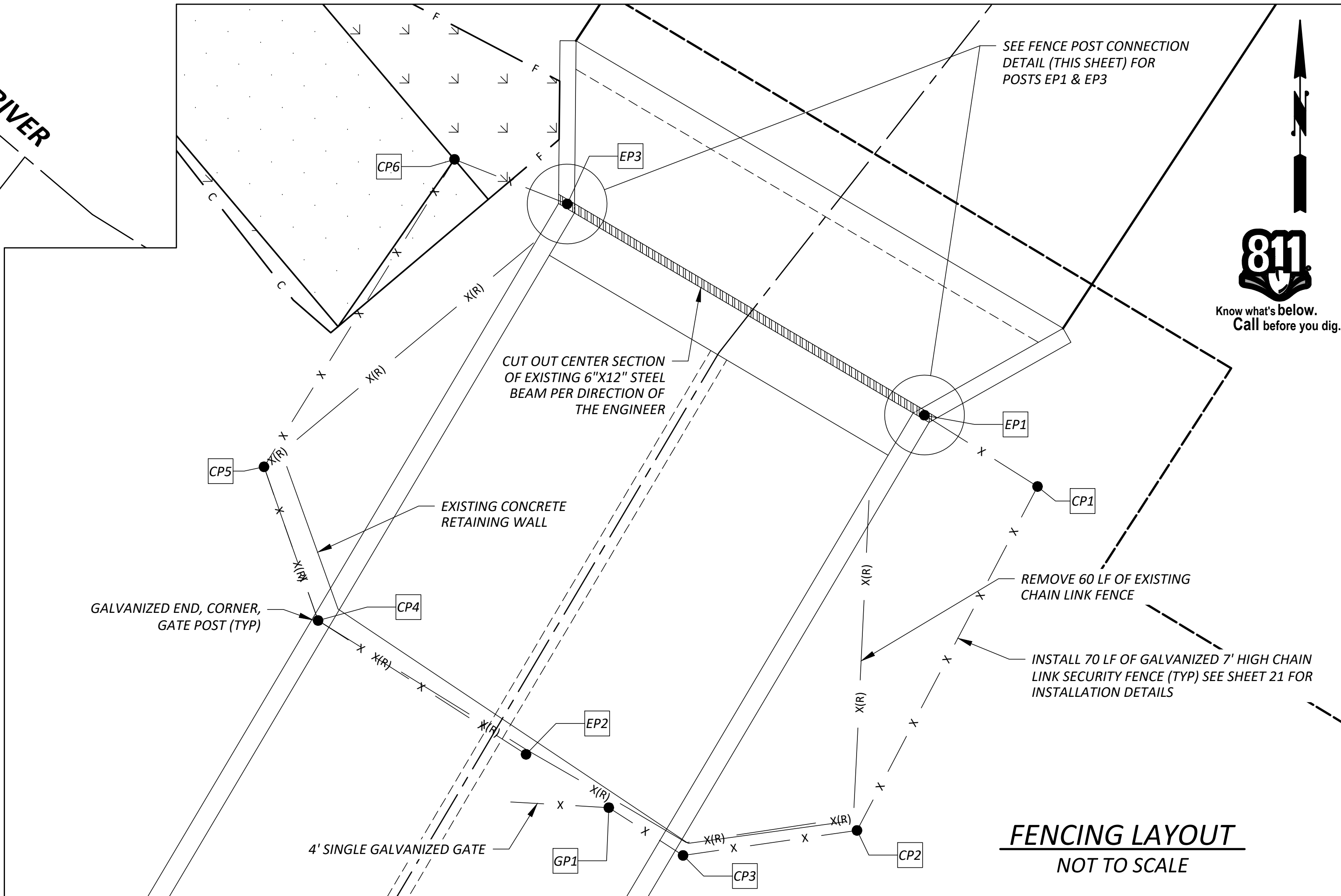
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SHEET 19 OF 21

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HYDROSEEDING DETAIL
NOT TO SCALE



FENCING LAYOUT
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FENCING NOTES:

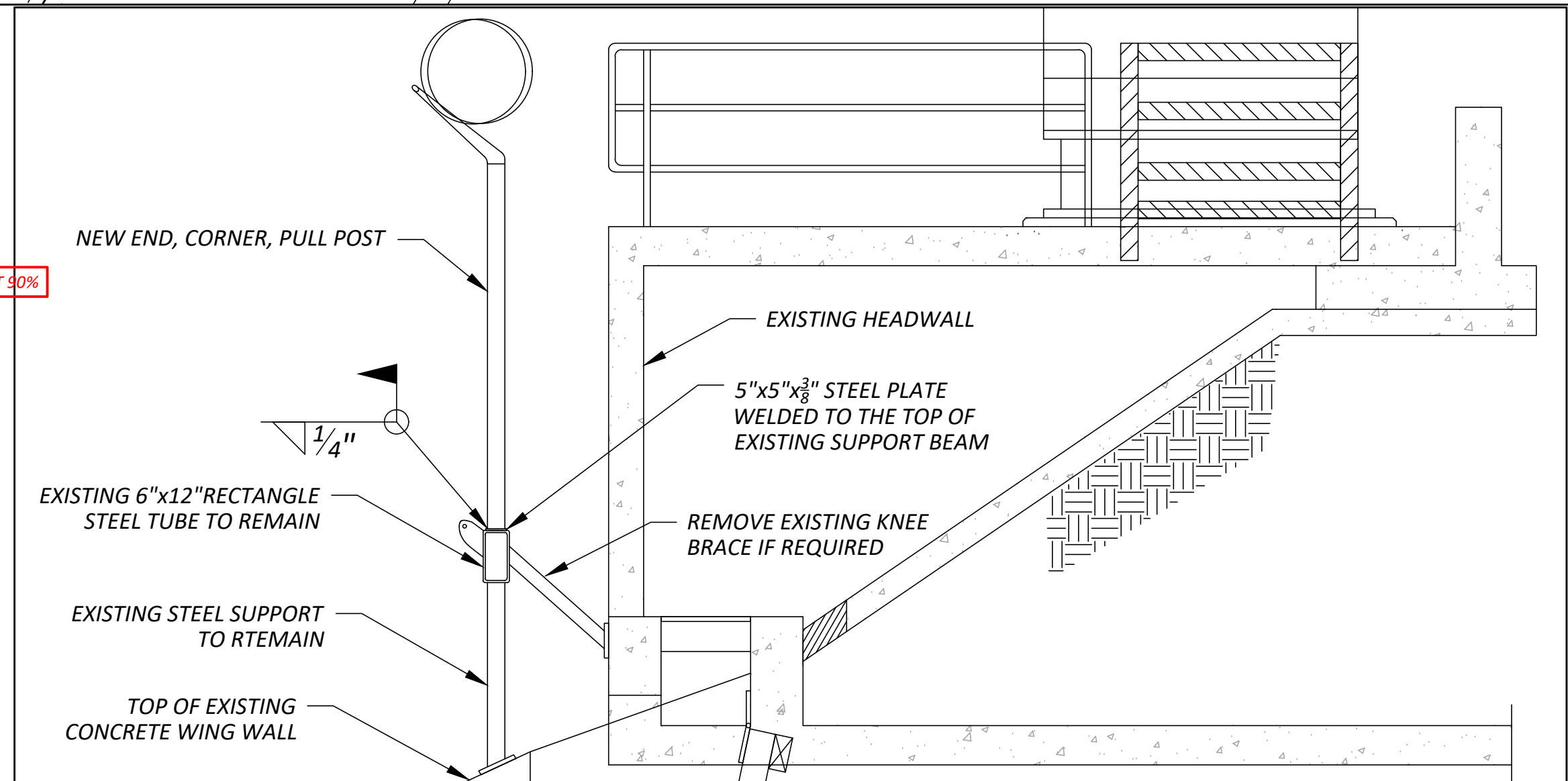
- FENCE POST LOCATIONS MAY NEED TO BE SLIGHTLY ADJUSTED PER DIRECTION OF THE PROJECT ENGINEER. EXISTING FOOTING SIZES AND LOCATIONS ARE UNCLEAR ON EXISTING AS-BUILT PLANS
- ALL CHAIN LINK FENCE SHALL BE CONSTRUCTED PER DEPARTMENT OF DEFENSE UNIFIED FACILITIES CRITERIA (UFC) "SECURITY FENCES AND GATES" - UFC-4-022-03. SEE SPECIAL PROVISION: **XX-XX** CHAIN LINK FENCE
- SEE SHEET 21 FOR FENCE AND GATE DETAILS
- ALL CHAIN LINK FENCE AND GATES SHALL BE GALVANIZED
- ALL FENCE SHALL HAVE THREE STRANDS OF BARBED WIRE AND CONCERTINA WIRE ON TOP

FENCING QUANTITIES:

- 70 LF GALVANIZED 7' HIGH SECURITY CHAIN LINK FENCE
- 1 - 4' WIDE GALVANIZED GATE
- 10 - GALVANIZED END, GATE, CORNER, PULL POSTS FOR CHAIN LINK

SEEDING AND PLANTING NOTES:

- HYDROSEED ALL SLOPES AND DISTURBED SOIL. ALL HYDROSEEDING WILL BE PAID UNDER PAY ITEM 14 "SEEDING, FERTILIZING AND MULCHING"
- PIERCE COUNTY FORCES WILL PLANT SUPPLEMENTAL PLANTS AT A RATIO OF 4:1 TO MITIGATE FOR ANY TREES THAT WILL BE REMOVED DUE TO THIS PROJECT. PLANTING SITE WILL BE DETERMINED BY PROJECT ENGINEER AND WILL BE LOCATED ON PIERCE COUNTY MAINTAINED LEVEE SEGMENT UPSTREAM OF THE PROJECT SITE



FENCE POST CONNECTION DETAIL
NOT TO SCALE

LEGEND

EXISTING

X(R) EXISTING GALVANIZED CHAIN LINK FENCE TO BE REMOVED

PROPOSED

X PROPOSED GALVANIZED 7' HIGH SECURITY CHAIN LINK FENCE

PROPOSED GALVANIZED END, CORNER, GATE POST (TYP)

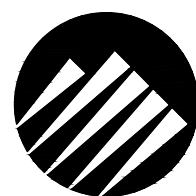
PROPOSED SINGLE GALVANIZED 4' GATE

C DAYLIGHT CUT LINE WITH HYDRO SEEDED SLOPES

F DAYLIGHT FILL LINE WITH HYDRO SEEDED SLOPES

FENCE POST COORDINATE TABLE				
POINT NUMBER	POST TYPE	NORTHING	EASTING	
CP1	CORNER	699519.59'	1170249.56'	
CP2	CORNER	699505.60'	1170242.22'	
CP3	CORNER	699504.58'	1170235.15'	
CP4	CORNER	699514.14'	1170220.31'	
CP5	CORNER	699520.39'	1170218.11'	
CP6	CORNER	699532.89'	1170225.85'	
EP1	END POST	699522.48'	1170244.96'	
EP2	END POST	699508.69'	1170228.76'	
EP3	END POST	699531.08'	1170230.43'	
GP1	GATE POST	699506.53'	1170232.13'	

DRAWING NO. ---	SURVEYED BY: ---				
DRAWN BY: M. Dacca	DATE SURVEYED: ---				
DESIGNED BY: M. Dacca	BOOK NO. ---				
CHECKED BY: D. DAVIS	DATE PLOTTED: SEE SIDE STAMP	NO.	DATE	REVISION	BY
					APPROVED



Pierce County

DEPARTMENT OF PLANNING AND PUBLIC WORKS
SURFACE WATER MANAGEMENT
TACOMA MALL PLAZA BUILDING
2702 SOUTH 42nd STREET, SUITE 109
TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



CLEAR CREEK FLOOD GATE REPLACEMENT PROJECT

60% PLANS

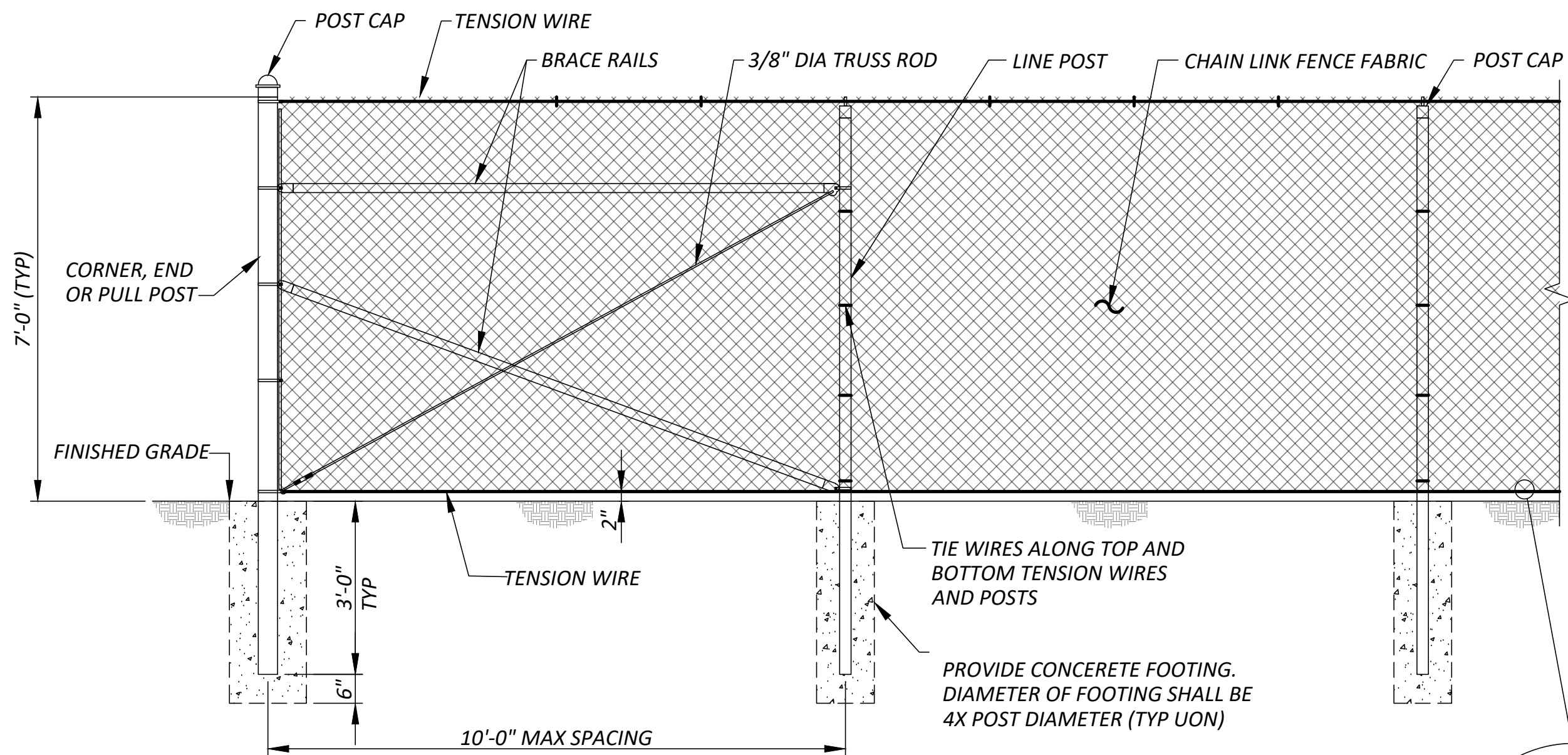
FENCING & SEEDING PLAN

C.I.P. # D227

SHEET **20** OF **21**

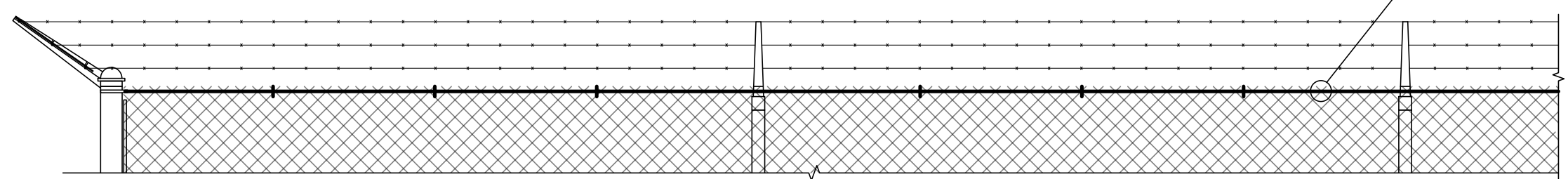


Know what's below.
Call before you dig.



TYPICAL FENCE AND CORNER PANEL ELEVATION

NOT TO SCALE



TYPICAL 3 STRAND BARBED WIRE AND SINGLE EXTENSION ARM CONFIGURATION

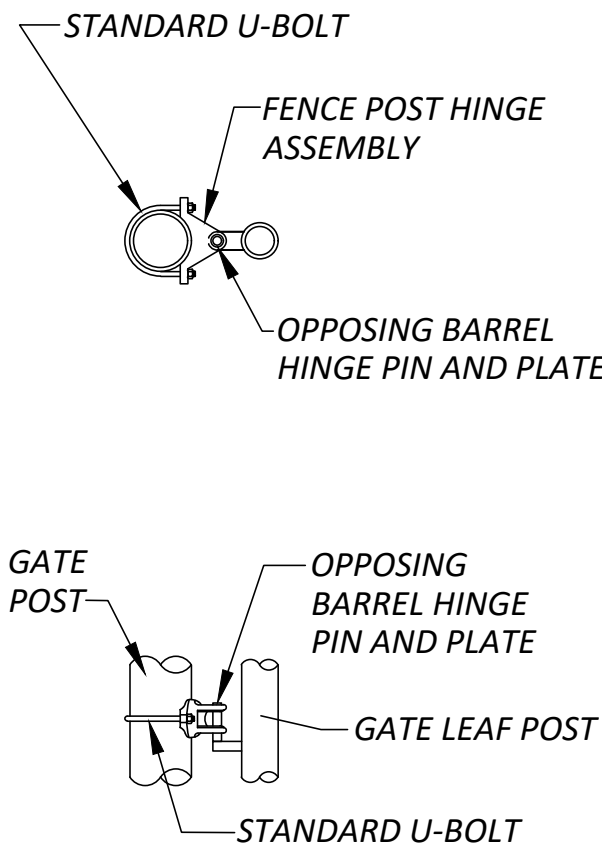
NOT TO SCALE

CHAIN LINK FENCING NOTES:

- FABRIC:** THE STANDARD FENCE FABRIC SHALL BE 9-GAUGE ZINC OR ALUMINUM-COATED STEEL WIRE CHAIN LINK WITH MESH OPENINGS NOT LARGER THAN TWO INCHES PER SIDE AND A TWISTED AND BARBED SELVAGE AT TOP AND BOTTOM IN ACCORDANCE WITH THE SPECIFICATIONS
- FABRIC TIES:** ONLY 12-GAUGE TIES SHALL BE USED. COATING OR PLATING WILL BE ELECTROLYTICALLY COMPATIBLE WITH THE FENCE FABRIC TO INHIBIT CORROSION
- REINFORCEMENT:** TENSION WIRES SHALL BE INSTALLED AND INTERWOVEN (OR AFFIXED WITH FABRIC TIES) ALONG THE TOP & BOTTOM OF THE FENCE FOR STABILIZATION OF THE FENCE FABRIC
- FENCE HEIGHT:** CHAIN LINK FABRIC SHALL BE 7' HIGH WITH AN ADDITIONAL 1' IN HEIGHT COMPOSED OF 3 STRANDS OF BARBED WIRE AND COILED CONCERTINA WIRE AFFIXED TO BARBED WIRE AS REQUIRED. THE TOTAL FENCE HEIGHT SHALL BE 8'
- GROUND CLEARANCE:** BOTTOM OF THE FENCE FABRIC SHALL BE WITHIN TWO INCHES OF FIRM SOIL
- TOP GUARDS:** A TOP GUARD IS AN OVERHANG OF BARBED WIRED AND CONCERTINA WIRE ALONG THE TOP OF A FENCE, FACING OUTWARD (AWAY FROM PROTECTED SITE) AND UPWARD AT APPROX. 45° ANGLE. TOP GUARD SUPPORTING ARMS WILL BE PERMANENTLY AFFIXED TO THE TOP OF FENCE POSTS TO INCREASE THE OVERALL HEIGHT OF THE FENCE AT LEAST 1 FOOT. THREE STRANDS OF 12-GAUGE BARBED WIRE, EQUALLY SPACED AND COILED CONCERTINA WIRE SHALL BE INSTALLED ON THE SUPPORTING ARMS
- FENCE POSTS:** SHALL BE ASTM F1043 OR F1083 ROUND PIPE AND SHALL BE GALVANIZED IN ACCORDANCE WITH THE SPECIFICATIONS. FENCE POST SPACING AND SIZE (DIAMETER) SHALL BE DETERMINED IN ACCORDANCE WITH CHAIN LINK FENCE MANUFACTURERS' INSTITUTE (WLG 2445). SPACING SHALL NOT EXCEED 10'-0" OC. SIZE (DIAMETER) SHALL NOT BE LESS THAN THAT SPECIFIED
- GATE POSTS & FOUNDATIONS:** GATE POST SIZE AND ASSOCIATED FOOTING DIAMETER TO BE DETERMINED BY MANUFACTURER, BASED ON LEAF WEIGHT & DIMENSION, BUT NOT LESS THAN DIAMETER SHOWN ON THESE DRAWINGS. MINIMUM FOOTING DIAMETERS (TO BE FILLED W/4000 PSI CONC): 40" Ø FOR 8" POST; 36" Ø FOR 6" POST; 24" Ø FOR 4" POST; NO FOOTING WIDTH SHALL BE LESS THAN 4(X) THE POST WIDTH

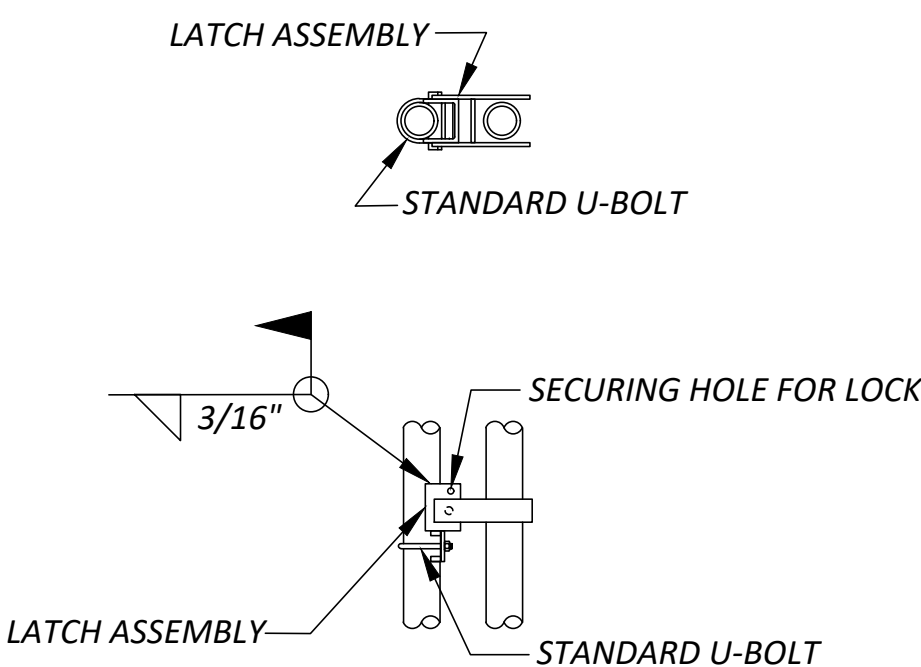
SINGLE OR DOUBLE LEAF GATES		
NOM HEIGHT (H)	UPRIGHT HT (U)	FRAME HT (F)
NOM HT INCLUDING BARBED WIRE	ACTUAL DIM	ACTUAL DIM
8'-0" [2438MM]	7'-10" [2388MM]	6'-8 1/2" [2045MM]

SINGLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQUARE & ROUND SIZES	POST TO UPRIGHT
3'-0" [914MM]	2.5"[63.5MM]SQ x 3/16"TH	FOR SQUARE &
THROUGH	OR	ROUND GATE POSTS:
6'-0" [1829MM]	2.875" [73MM] OD	2 1/4" [57MM]



GATE HINGE DETAIL

NOT TO SCALE

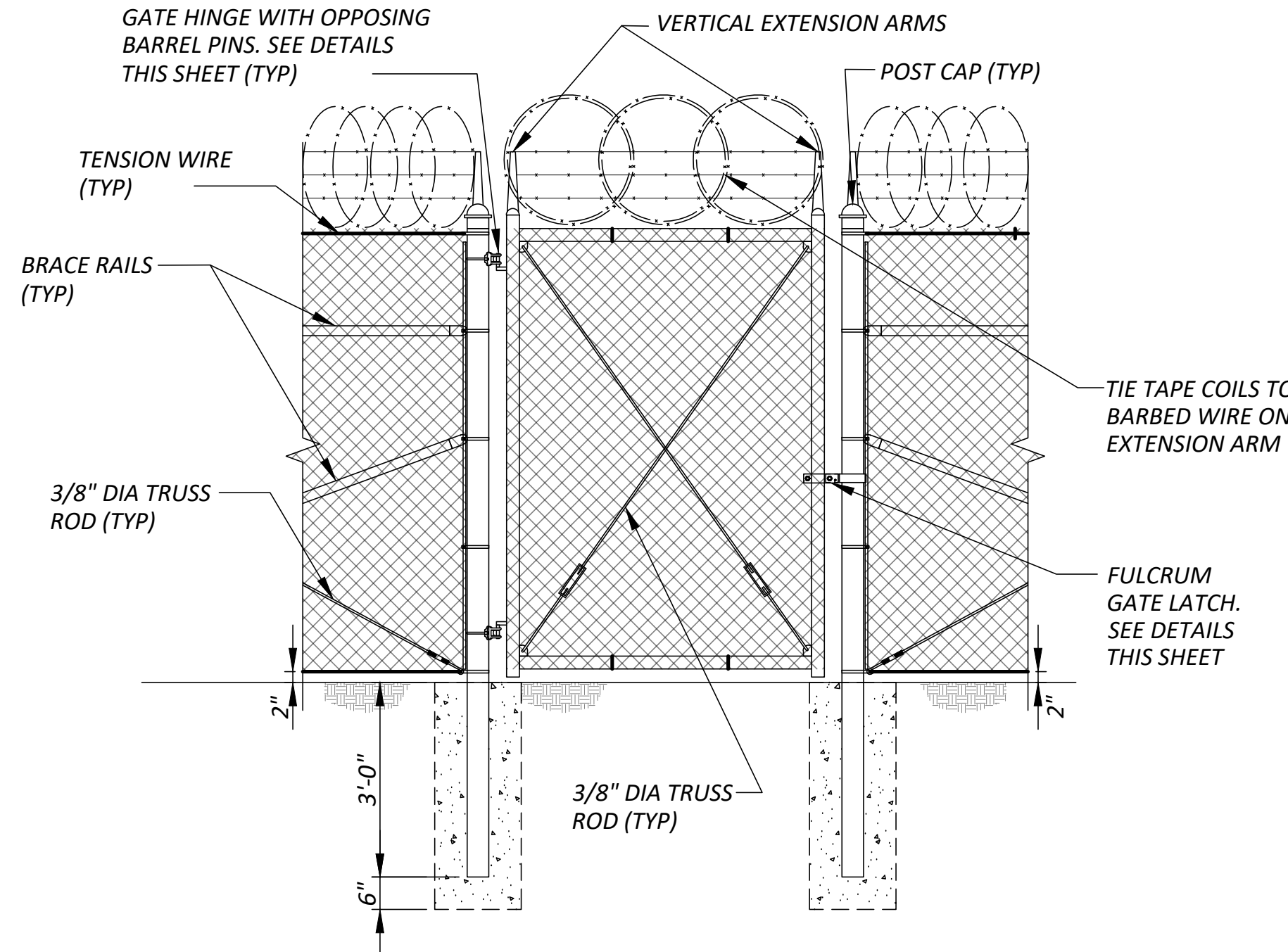


FULCRUM LATCH DETAIL

NOT TO SCALE

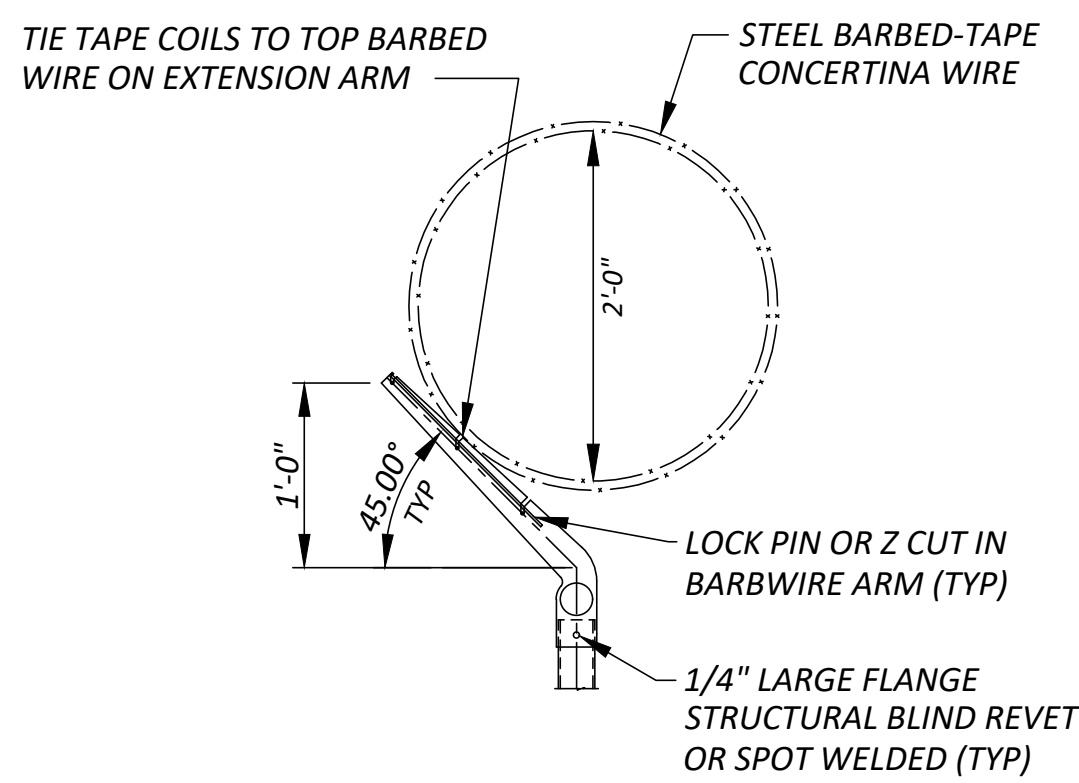
PLAN SINGLE SWING GATE

NOT TO SCALE



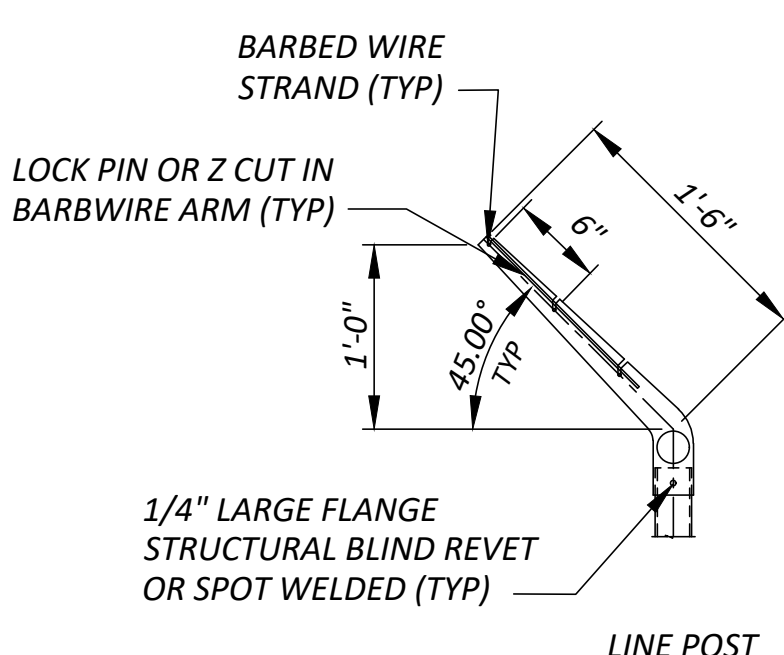
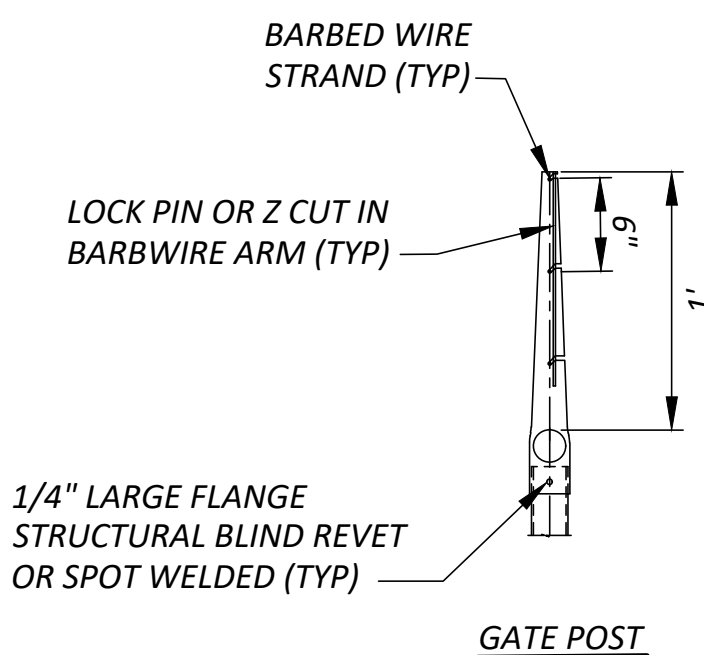
TYPICAL FENCE SINGLE SWING GATE ELEVATION

NOT TO SCALE

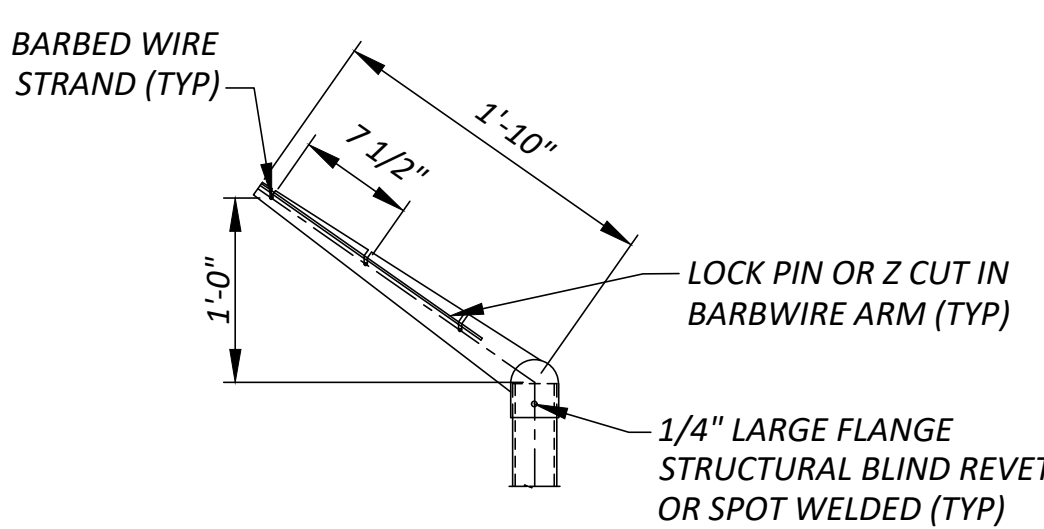


CONCERTINA WIRE MOUNTING

NOT TO SCALE



LINE POST



CORNER POST

SINGLE EXTENSION ARM DETAILS

NOT TO SCALE

DRAWING NO. ---	SURVEYED BY: ---				
DRAWN BY: M. DACCA	DATE SURVEYED: ---				
DESIGNED BY: M. DACCA	BOOK NO. ---				
CHECKED BY: D. DAMS	DATE PLOTTED: SEE SIDE STAMP	NO.	DATE	REVISION	BY
					APPROVED



Pierce County

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TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



**CLEAR CREEK FLOOD GATE
REPLACEMENT PROJECT**

60 % PLANS

FENCING DETAILS

C.I.P. # D227

SHEET **21** OF **21**

Date: Apr 06, 2021 8:31:40 AM
Drawing: S:\CIP\ACTIVE CIP\D227 CLEAR CREEK TIDE GATE\DESIGN\FENCING\FENCING DETAILS.DWG
Xrefs:

Date: Jan 11, 2021 11:57:29 AM
Drawing: P:\ACTIVE CIP\0228 CLEAR CREEK HABITAT RESTORATION\AUTOCAD\DWG\0228 BASE_LOWER CLEAR CR.DWG
Xrefs:

S. 11, T. 20 N., R. 03 E., W.M.

Exhibit B - Preliminary Design Plans_D228



Pierce County
SURFACE WATER MANAGEMENT

CLEAR CREEK HABITAT RESTORATION ACCESS ROAD REMOVAL FOR IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION PROJECT NO. D228

SHEET INDEX

COVER SHEET	1
SUMMARY OF QUANTITIES	2
ALIGNMENT PLAN	3
CONSTRUCTION SWPPP	4
TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION PLAN	5
GRADING PLAN	6 - 9
TYPICAL GRADING DETAIL AND SECTIONS	10
HABITAT DETAIL AND SECTIONS	11 - 12
PLANTING PLAN	13
SUGGESTED TRAFFIC CONTROL PLAN	14

90% PLAN NOTE:

- Text numbers that appear in **RED** will be changed to black in the final plans, and are red to track all "See Sheet" reference or values that need to be filled in.
- Text that appears in **GREEN** will be changed to black in the final plans, and are green to track Special Provision reference.

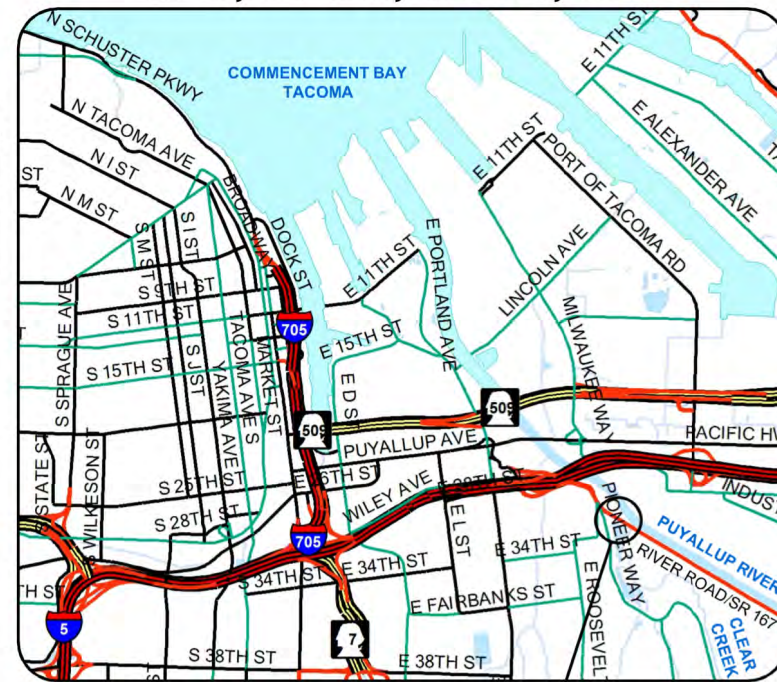
GENERAL PROJECT NOTES

- CONSTRUCTION OF THIS PROJECT IS FUNDED BY NATIONAL RESOURCE DAMAGE ASSESSMENT (NRDA) GRANT ADMINISTERED BY NOAA AND COMMENCEMENT BAY TRUSTEES. THESE GRANT FUNDS WILL ALSO SUPPORT A SEPARATE PROJECT (D227- CLEAR CREEK FLOOD GATE RETROFIT), THAT WILL REPLACE AN EXISTING WOODEN FLAP GATE ON THE DOWNSTREAM END OF THE WESTERLY BARREL OF THE CULVERT THAT CROSSES UNDER SR167, WITH A DEFAULT OPEN MOTORIZED SLUICE GATE.

THE D227 - CLEAR CREEK FLOOD GATE RETROFIT PROJECT, MAY OCCUR SIMULTANEOUS TO THIS PROJECT. SEE SPECIAL PROVISION: 1-05.14 "COOPERATION WITH OTHER CONTRACTORS".

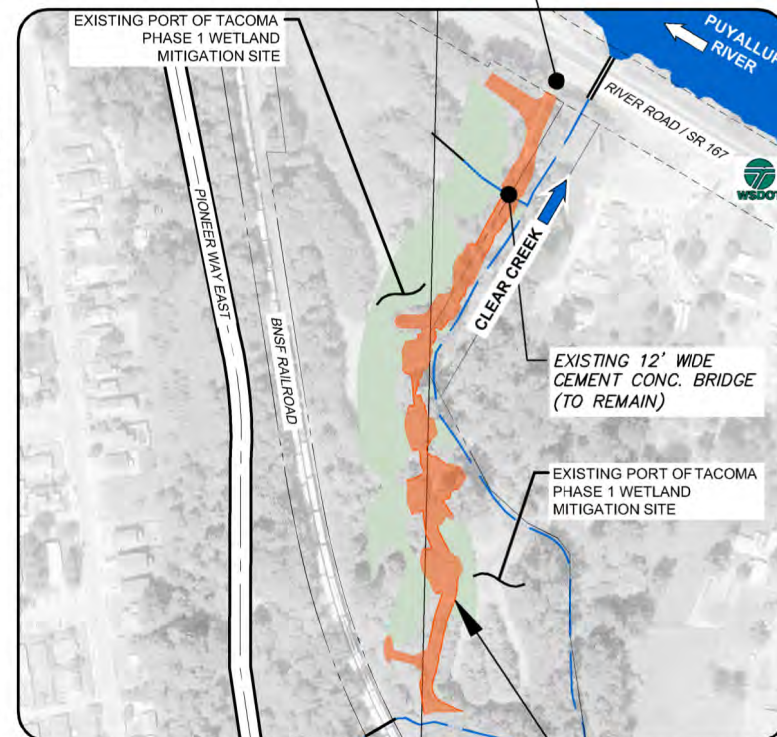
- ALL VERTICAL CONTROL ELEVATIONS ARE BASED ON THE NAVD 88 DATUM, SEE SHEET 3 FOR SURVEY DATA FOR ADDITIONAL INFORMATION.
- SEE BID DOCUMENTS FOR "GEOTECHNICAL ENGINEERING SERVICES REPORT".
- THE CONTRACTOR WILL BE PROVIDED WITH AN AUTOCAD DRAWING (eTransmit) ZIP FILE UPON REQUEST.
- THE CONSTRUCTION ACTIVITIES WILL BE WITHIN TIDAL INFLUENCE AREAS AND IT WILL BE THE CONTRACTORS RESPONSIBILITY TO COORDINATE WORK ACTIVITIES AROUND LOW TIDES. THE CONTRACTOR SHALL USE THE FOLLOWING WEB LINK AND STATION, USING NAVD 88 DATUM AND THE APPLICABLE TIME SERIES. SEE <https://tidesandcurrents.noaa.gov/noaatidepredictions.html?id=9446484>
- ALL WORK AREAS BELOW ELEVATION 10.58 MUST BE ISOLATED FROM TIDAL INFLUENCE.
- ALL TRAFFIC CONTROL INCLUDING "PORTABLE CHANGEABLE MESSAGE SIGNS" (PCMS) SHALL BE APPROVED BY WSDOT PRIOR "NOTICE TO PROCEED".

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR REVIEW THAT ACCOUNTS FOR ALL INGRESS/EGRESS ACTIVITY AND ANY WORK WITHIN THE WSDOT R-O-W AND PORT OF TACOMA PARCEL. THE TRAFFIC CONTROL PLAN SHALL COMPLY WITH MUTCD STANDARDS AND INCLUDE ANY TRAFFIC CONTROL PERSONNEL REQUIRED TO SAFELY CONDUCT THE WORK. TRAFFIC CONTROL SUPERVISOR, SHALL BE INCLUDED AND INCIDENTAL TO THE CONTRACT BID ITEM "PROJECT TEMPORARY TRAFFIC CONTROL" PER LUMPS SUM. SEE SPECIAL PROVISION: "1-10 TEMPORARY TRAFFIC CONTROL". SEE SHEET 14.



VICINITY MAP
(NOT TO SCALE)

THE ONLY PROJECT SITE
INGRESS/EGRESS LOCATION SEE
NOTE 7



PROJECT MAP
(NOT TO SCALE)

PROJECT LIMITS OF THE
EXISTING ACCESS ROAD
TO BE REMOVED

DRAWING NO. See Side Stamp	SURVEYED BY: See Sheet 1				
DRAWN BY: Jeffrey Davidson	DATE SURVEYED: See Sheet 1				
DESIGNED BY: Jeffrey Davidson David Davis	BOOK NO. See Sheet 1				
CHECKED BY: Charlene Poggensee David Davis	DATE PLOTTED: See Side Stamp				
NO.	DATE	REVISION	BY	APPROVED	

Pierce County



DEPARTMENT OF PLANNING AND PUBLIC WORKS
SURFACE WATER MANAGEMENT
TACOMA MALL PLAZA BUILDING
2702 SOUTH 42nd STREET, SUITE 201
TACOMA, WA 98409-7322

APPROVED BY:

MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



CLEAR CREEK HABITAT RESTORATION
ACCESS ROAD REMOVAL FOR
IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION

COVER SHEET

D228

Date: Jan 11, 2021 11:59:10 AM ()
Drawing: P:\ACTIVE CIP\D228 CLEAR CREEK HABITAT RESTORATION\AUTOCAD\DWG\D228 BASE_LOWER CLEAR CR.DWG
Xrefs:

SUMMARY OF QUANTITIES

ITEM NUMBER	UNIT	ITEM DESCRIPTION	QUANTITY
PREPARATION			
1	L.S.	MOBILIZATION	LUMP SUM
2	ACRE	CLEARING	1.5
3	DOL.	TREE TOPPING	EST. \$5,000
GRADING			
4	C.Y.	SITE EXCAVATION INCL. HAUL	4,165
5	DOL.	EXTRA SITE EXCAVATION INCL. HAUL	EST. \$5,000
6	C.Y.	STREAMBED GRAVEL	601
7	C.Y.	PERMEABLE BALLAST	170
8	C.Y.	BACKFILL FOR SAND DRAINS	106
EROSION CONTROL AND ROADSIDE PLANTING			
9	DAY	ESC LEAD	10
10	L.S.	TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION	LUMP SUM
11	DOL.	DEWATERING	EST. \$20,000
12	S.Y.	STABILIZED CONSTRUCTION ENTRANCE	875
13	HR	STREET CLEANING	76
14	L.F.	WATTLE	850
15	DOL.	EROSION/WATER POLLUTION CONTROL	EST. \$10,000
16	EACH	WOODSTRAW (Regular Bale)	260
17	ACRE	SEEDING, FERTILIZING, AND MULCHING (Upland and Riparian Areas)	1.0
18	EACH	PLANT SELECTION: Slough Sedge (4")	840
19	EACH	PLANT SELECTION: Small Fruited Bulrush (4")	840
20	EACH	PLANT SELECTION: Hardstem Bulrush (4")	840
21	EACH	PLANT SELECTION: Common Rush (4")	840
22	EACH	PLANT SELECTION: Douglas Spirea (1 Gal.)	90
23	EACH	PLANT SELECTION: Pacific Willow (1 Gal.)	90
24	EACH	PLANT SELECTION: Sitka Willow (1 Gal.)	90
25	EACH	PLANT SELECTION: Hookers Willow (1 Gal.)	90
26	EACH	PLANT SELECTION: Red-Osier Dogwood (1 Gal.)	90
27	EACH	PLANT SELECTION: Salmonberry (1 Gal.)	90
28	EACH	PLANT SELECTION: Pacific Dogwood (2 Gal.)	90
29	EACH	PLANT SELECTION: Black Cottonwood (2 Gal.)	80
30	EACH	PLANT SELECTION: Beaked Hazelnut (1 Gal.)	230
31	EACH	PLANT SELECTION: Red Elderberry (1 Gal.)	230
32	EACH	PLANT SELECTION: Indian Plum (1 Gal.)	230
33	EACH	PLANT SELECTION: Oceanspray (1 Gal.)	230
34	EACH	PLANT SELECTION: Thimble Berry (1 Gal.)	230
35	EACH	PLANT SELECTION: Bitter Cherry (2 Gal.)	40
36	EACH	PLANT SELECTION: Western Red Cedar (5 Gal.)	30
37	EACH	PLANT SELECTION: Nootka Rose (1 Gal.)	210
38	EACH	PLANT SELECTION: Black Hawthorn (1 Gal.)	370
39	EACH	PLANT SELECTION: Red osier dogwood (live stake)	200
40	L.F.	WILLOW FASCINES	150
41	L.F.	HIGH VISIBILITY FENCE	1350
TRAFFIC			
42	HR	PORTABLE CHANGEABLE MESSAGE SIGN	2,160
43	L.S.	PROJECT TEMPORARY TRAFFIC CONTROL	LUMP SUM
OTHER ITEMS			
44	L.S.	SURVEYING	LUMP SUM
45	L.S.	SPCC PLAN	LUMP SUM
46	L.S.	FUGITIVE DUST CONTROL PLAN	LUMP SUM
47	EACH	HABITAT FEATURE - PINNED THALWEG DEFLECTOR UNIT	6
48	EACH	HABITAT FEATURE - PINNED BED CONTROL LOG WEIR UNIT	6
49	EACH	HABITAT FEATURE - PINNED BENCH LOG UNIT	6
50	EACH	HABITAT FEATURE - PINNED BRUSH PILE UNIT	18
51	DOL.	MINOR CHANGE	EST. \$15,000

DRAWING NO. See Side Stamp	SURVEYED BY: See Sheet 1
DRAWN BY: Jeffrey Davidson	DATE SURVEYED: See Sheet 1
DESIGNED BY: Jeffrey Davidson David Davis	BOOK NO. See Sheet 1
CHECKED BY: Charlene Roggensee David Davis	DATE PLOTTED: See Side Stamp

NO.	DATE	REVISION	BY	APPROVED	



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APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



STABILIZED CONSTRUCTION ENTRANCE
COORDINATE TABLE

POINT NUMBER	STATION AND OFFSET	NORTHING	EASTING
C1	STA "A"	N:	E:
C2	STA "A"	N:	E:
C3	STA "A"	N:	E:
C4	STA "A"	N:	E:
C5	STA "A"	N:	E:
C6	STA "A"	N:	E:
C7	STA "A"	N:	E:
C8	STA "A"	N:	E:
C9	STA "A"	N:	E:
C10	STA "A"	N:	E:
C11	STA "A"	N:	E:
C12	STA "A"	N:	E:
C13	STA "A"	N:	E:

SUGGESTED
CONSTRUCTION SEQUENCE

PRIOR TO IMPORT OR EXPORT OF MATERIALS THE FOLLOWING MUST BE SUBMITTED AND ACCEPTED BY PIERCE COUNTY:

- PROJECT SCHEDULE
- APPROVED TRAFFIC CONTROL PLAN PER SHEET 14.
- MATERIAL ACCEPTANCE FORM "REQUEST FOR APPROVAL OF MATERIAL" (RAM).
- TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION PLAN

- INSTALL "STABILIZED CONSTRUCTION ENTRANCE".
- SURVEY "CLEARING" LIMITS AND INSTALL "HIGH VISIBILITY FENCE" (PIERCE COUNTY WILL FLAG EXISTING TREES TO BE PRESERVED IN ADVANCE).
- PERFORM "CLEARING" AND STOCKPILE MATERIAL ON-SITE FOR USE IN "HABITAT FEATURE – PINNED BRUSH PILE UNIT".
- PIERCE COUNTY SUGGESTS THAT THE CONTRACTOR DO THE REMAINING WORK, WORKING FROM THE SOUTH TO THE NORTH DUE TO LIMITED STOCKPILING AREAS AND ACCESS. THE CONTRACTOR MUST INSTALL "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" BEFORE WORKING BELOW ELEVATION 10.58. ROUGH EXCAVATION ABOVE THIS ELEVATION MAY BE DONE OUTSIDE OF THE PERMITTED (SEE ATTACHED) "IN-WATER WORK WINDOW", AND WITHOUT "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION".

EXCAVATION BELOW ELEVATION 10.58 MUST BE DONE WITHIN THE PERMITTED "IN-WATER WORK WINDOW", AND MUST INCLUDE "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION".

PIERCE COUNTY SUGGESTS THAT THE SUPER SACK /BULK BAGS BE FILLED WITH "STREAMBED GRAVEL" TO BE USED IN THE CONSTRUCTION OF THE " HABITAT FEATURE – PINNED BED CONTROL LOG WEIR UNIT", SUCH THAT WHEN THE SACKS/BAGS ARE REMOVED THE MATERIAL WOULD BE PLACED.

- ALL EXCAVATION WILL HAVE TO BE MONITORED BY A INDEPENDENT CULTURAL RESOURCES MONITOR WHO WILL BE PROVIDED BY PIERCE COUNTY. A CULTURAL RESOURCES MONITOR WILL BE SITE DURING EXCAVATION ACTIVITIES. SEE CULTURAL RESOURCES REPORT.

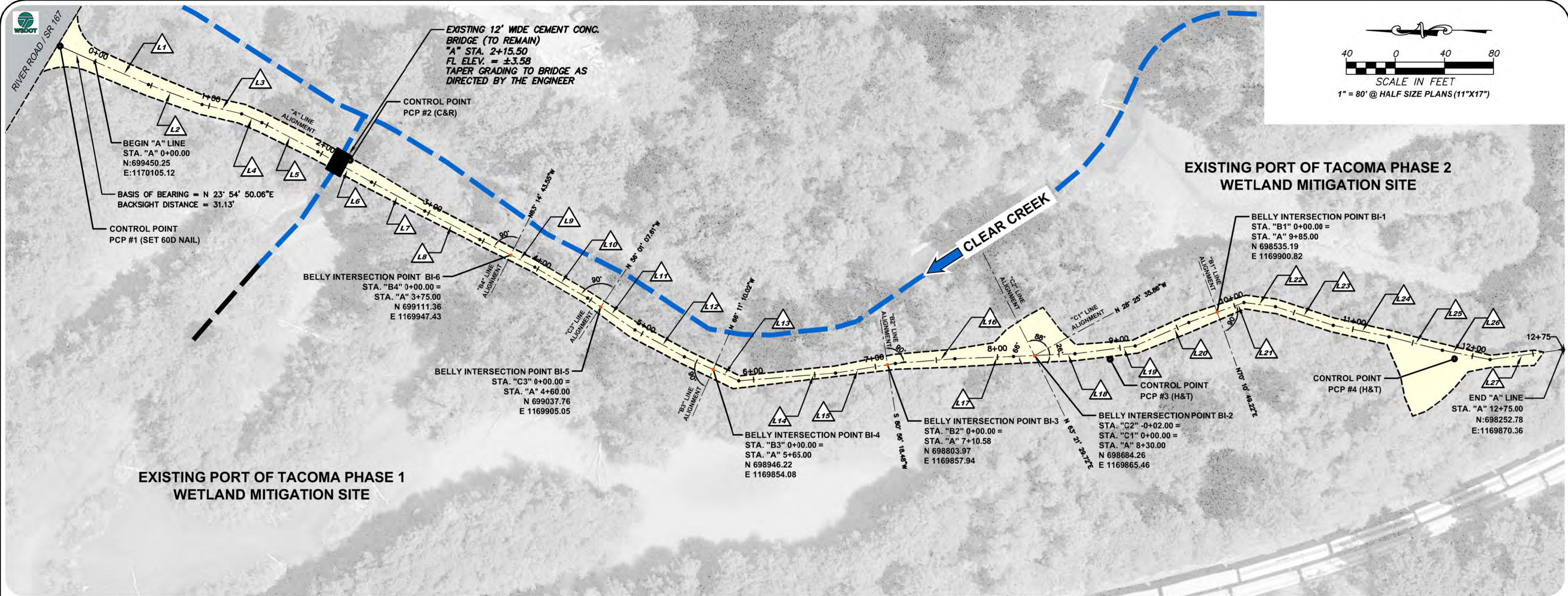
AN ARCHAEOLOGIST SHALL BE ON SITE AT ALL TIMES DURING ANY AND ALL EXCAVATION ACTIVITIES. SEE SPECIAL PROVISION: "ARCHAEOLOGICAL AND HISTORICAL SALVAGE".

CLEAR CREEK HABITAT RESTORATION
ACCESS ROAD REMOVAL FOR
IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION




























SUMMARY OF QUANTITIES

D228

Date: Jan 11, 2021 12:01:42 PM
Drawing: P:\ACTIVE CIP\D228 CLEAR CREEK HABITAT RESTORATION\AUTOCAD\DWG\D228 BASE_LOWER CLEAR CR.DWG
Xrefs:



SURVEY DATA	
VERTICAL CONTROL: DATUM NAVD 88	
BASIS OF BEARING: N 23° 54' 50.06" E AS MEASURED 31.13' BETWEEN PROJECT CONTROL POINTS, PCP #1 AND STA "A" 0+00.00, NEAR THE PROJECT INGRESS/EGRESS.	
PROJECT CONTROL POINT: PCP #1 (SET 60D NAIL) ELEV: 30.82' NORTHING: 699478.71 EASTING: 1170117.74'	
PROJECT CONTROL POINT: PCP #2 (C&R) ELEV: 16.24' NORTHING: 699242.09 EASTING: 1170024.77	
PROJECT CONTROL POINT: PCP #3 (H&T) ELEV: 15.00' NORTHING: 698622.58 EASTING: 1169862.29	
PROJECT CONTROL POINT: PCP #4 (H&T) ELEV: 15.27' NORTHING: 698341.55 EASTING: 1169862.71	

"A" LINE ALIGNMENT DATA TABLE																				
Line No.	Start PI Station	End PI Station	Line Length	Direction	Starting Point Northing Easting	Ending Point Northing Easting	Line No.	Start PI Station	End PI Station	Line Length	Direction	Starting Point Northing Easting	Ending Point Northing Easting	Line No.	Start PI Station	End PI Station	Line Length	Direction	Starting Point Northing Easting	Ending Point Northing Easting
 L1	"PMR" 0+00.00	"PMR" 0+47.50	47.50	S 23° 11' 09.31" W	N 699450.25 E 1170106.12	N 699406.59 E 1170086.42	 L10	"PMR" 3+96.96	"PMR" 4+47.07	50.10	S 30° 16' 31.33" W	N 699091.75 E 1169937.54	N 699048.48 E 1169912.28	 L19	"PMR" 8+63.20	"PMR" 9+12.74	42.54	S 7° 22' 55.64" E	N 698651.09 E 1169866.92	N 698601.96 E 1169873.28
 L2	"PMR" 0+47.50	"PMR" 0+94.09	46.59	S 20° 21' 37.07" W	N 699406.59 E 1170086.42	N 699362.91 E 1170070.21	 L11	"PMR" 4+47.07	"PMR" 4+93.46	46.39	S 33° 58' 52.39" W	N 699048.48 E 1169912.28	N 699010.01 E 1169866.35	 L20	"PMR" 9+12.74	"PMR" 9+60.31	47.56	S 23° 45' 12.36" E	N 698601.96 E 1169873.28	N 698558.43 E 1169892.44
 L3	"PMR" 0+94.09	"PMR" 1+27.24	33.15	S 13° 20' 25.66" W	N 699362.91 E 1170070.21	N 699330.65 E 1170062.56	 L12	"PMR" 4+93.46	"PMR" 5+39.43	45.96	S 28° 30' 39.51" W	N 699010.01 E 1169886.35	N 698969.62 E 1169864.41	 L21	"PMR" 9+60.31	"PMR" 10+08.12	47.81	S 19° 49' 10.78" E	N 698558.43 E 1169892.44	N 698513.45 E 1169908.65
 L4	"PMR" 1+27.24	"PMR" 1+45.23	17.99	S 23° 17' 11.17" W	N 699330.65 E 1170062.56	N 699314.13 E 1170055.45	 L13	"PMR" 5+39.43	"PMR" 5+87.97	48.54	S 23° 48' 49.98" W	N 698969.62 E 1169864.41	N 698925.21 E 1169844.81	 L22	"PMR" 10+08.12	"PMR" 10+34.21	26.09	S 7° 24' 14.00" W	N 698513.45 E 1169908.65	N 698487.58 E 1169905.29
 L5	"PMR" 1+45.23	"PMR" 1+96.50	51.28	S 27° 40' 45.98" W	N 699314.13 E 1170055.45	N 699268.72 E 1170031.63	 L14	"PMR" 5+87.97	"PMR" 6+67.06	79.09	S 4° 36' 49.67" E	N 698925.21 E 1169844.81	N 698846.38 E 1169851.18	 L23	"PMR" 10+34.21	"PMR" 10+83.72	49.51	S 17° 51' 56.74" W	N 698487.58 E 1169905.29	N 698440.45 E 1169890.10
 L6	"PMR" 1+96.50	"PMR" 2+46.88	50.37	S 29° 26' 24.56" W	N 699268.72 E 1170031.63	N 699224.85 E 1170006.87	 L15	"PMR" 6+67.06	"PMR" 7+16.39	49.34	S 9° 03' 41.52" E	N 698846.38 E 1169851.18	N 698797.66 E 1169858.94	 L24	"PMR" 10+83.72	"PMR" 11+30.21	46.48	S 11° 34' 36.35" W	N 698440.45 E 1169890.10	N 698394.91 E 1169880.77
 L7	"PMR" 2+46.88	"PMR" 2+96.35	49.47	S 28° 25' 28.86" W	N 699224.85 E 1170006.87	N 699181.34 E 1169983.32	 L16	"PMR" 7+16.39	"PMR" 7+65.11	48.72	S 4° 35' 04.06" E	N 698797.66 E 1169858.94	N 698749.09 E 1169862.84	 L25	"PMR" 11+30.21	"PMR" 11+74.85	44.64	S 14° 18' 02.72" W	N 698394.91 E 1169880.77	N 698351.65 E 1169869.75
 L8	"PMR" 2+96.35	"PMR" 3+46.94	50.58	S 27° 22' 31.97" W	N 699181.34 E 1169983.32	N 699136.42 E 1169960.06	 L17	"PMR" 7+65.11	"PMR" 8+12.99	47.88	S 2° 14' 04.99" E	N 698749.09 E 1169862.84	N 698701.25 E 1169864.71	 L26	"PMR" 11+74.85	"PMR" 12+14.59	39.74	S 10° 58' 58.00" W	N 698351.65 E 1169869.75	N 698312.64 E 1169862.17
 L9	"PMR" 3+46.94	"PMR" 3+96.96	50.03	S 26° 45' 16.45" W	N 699136.42 E 1169960.06	N 699091.75 E 1169937.54	 L18	"PMR" 8+12.99	"PMR" 8+63.20	50.22	S 2° 31' 08.67" E	N 698701.25 E 1169864.71	N 698651.09 E 1169866.92	 L27	"PMR" 12+14.59	"PMR" 12+75.00	60.41	S 7° 47' 27.24" E	N 698312.64 E 1169862.17	N 698252.78 E 1169870.36

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Pierce County

DEPARTMENT OF PLANNING AND PUBLIC WORKS
SURFACE WATER MANAGEMENT
TACOMA MALL PLAZA BUILDING
2702 SOUTH 42nd STREET, SUITE 201
TACOMA, WA 98409-7322

APPROVED BY:

MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



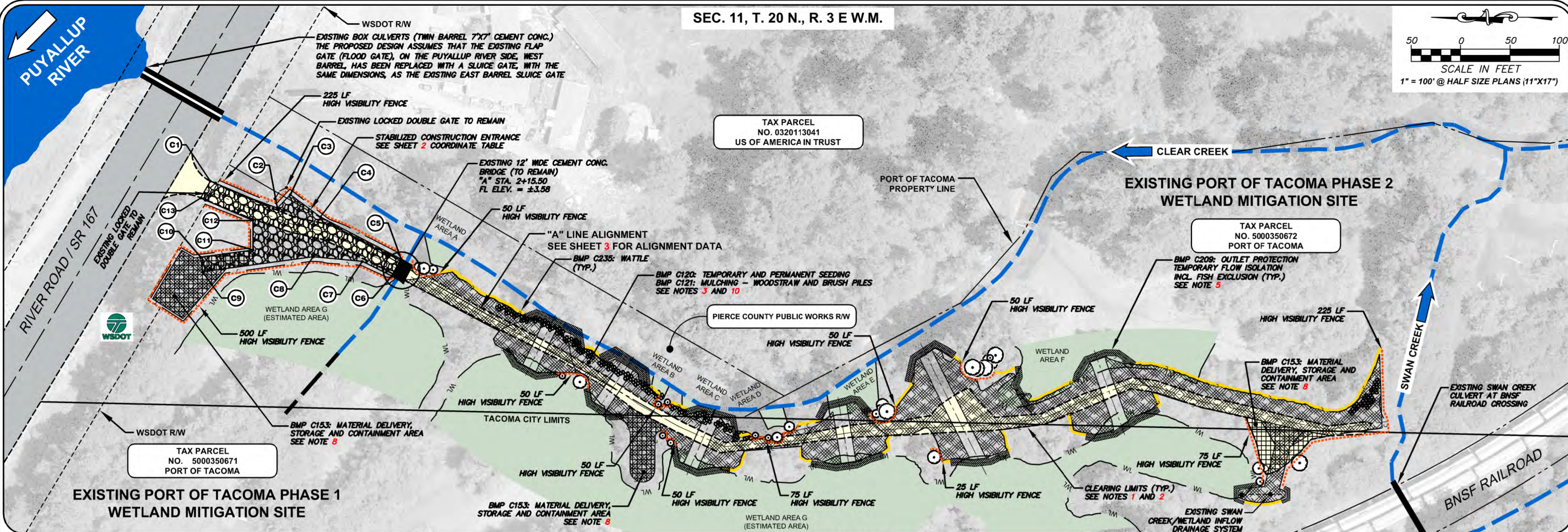
CLEAR CREEK HABITAT RESTORATION ACCESS ROAD REMOVAL FOR IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION

ALIGNMENT PLAN

D228

SHEET 3 OF 14

Date: Jan 12, 2021 9:20:53 AM (Drawing: P:\ACTIVE\CD\228 CLEAR CREEK HABITAT RESTORATION\AUTOCAD\DWG\228 BASE LOWER CLEAR CR.DWG Xrefs)



THE FOLLOWING 2019 DOE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (SWMWW) AND 2019 PIERCE COUNTY STORMWATER MANAGEMENT AND SITE DEVELOPMENT MANUAL BMPs ARE ANTICIPATED. THE PROJECT CONSTRUCTION BMPs SHOWN BELOW SHALL BE INSTALLED, MAINTAINED, AND REPLACED, BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER.

- ELEMENT #1 - PRESERVE MARK/VEGETATION CLEARING LIMITS**
- BMP C101: PRESERVING NATURAL VEGETATION - THE CONTRACTOR WILL BE PROVIDED WITH AN AUTOCAD DRAWING FILE AND/OR XML FILES UPON REQUEST FOR USE IN DETERMINING THE "CLEARING" LIMITS. PRESERVATION TREES WILL BE FLAGGED FOR PRESERVATION BY PIERCE COUNTY IN ADVANCE OF THESE ACTIVITIES COMMENCING. SEE SPECIAL PROVISION: "CONTROL OF WORK".
 - BMP C102: BUFFER ZONES - THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES, WITHIN THE BUFFER ZONES, TO FOOT TRAFFIC ONLY, TO PROTECT NATURAL VEGETATION.
- ELEMENT #2 - ESTABLISH CONSTRUCTION AREAS**
- BMP C105: STABILIZED CONSTRUCTION ENTRANCE - THE CONTRACTOR SHALL INSTALL "STABILIZED CONSTRUCTION ENTRANCE". SEE STANDARD DRAWING "STABILIZED CONSTRUCTION ENTRANCE".
 - BMP C107: CONSTRUCTION ROAD/PARKING AREA STABILIZATION - THE CONTRACTOR SHALL UTILIZE AND MAINTAIN THE ESTABLISHED ROADS, PARKING, AND STAGING AREAS.
- ELEMENT #3 - CONTROL FLOW LIMITS**
- BMP C162: SCHEDULING - PROJECT IS BEING SCHEDULED DURING DRIEST TIME OF THE YEAR TO MINIMIZE CLEAR CREEK FLOW IMPACTS. SEE SHEET X NOTE X.
- ELEMENTS #4, #5, AND #6 - INSTALL SEDIMENT CONTROLS, STABILIZE SOILS, AND PROTECT SLOPES**
- BMP C140: DUST CONTROL - THE CONTRACTOR SHALL ABIDE BY THE SUBMITTED FDCP PER PAY ITEM "FUGITIVE DUST CONTROL PLAN, LUMP SUM".
 - BMP C120: TEMPORARY AND PERMANENT SEEDING - THE CONTRACTOR SHALL HAND SEED (W/ TEMPORARY EROSION CONTROL SEED MIX) PER PLAN OR AS DIRECTED BY THE ENGINEER.
 - BMP C121: MULCHING - THE CONTRACTOR SHALL USE "WOODSTRAW" MULCH AND "HABITAT FEATURE - PINNED BRUSH PILE UNIT" MULCH, WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 - BMP B233: SILT FENCE - THE CONTRACTOR SHALL INSTALL "HIGH VISIBILITY SILT FENCE" WHERE SHOWN, OR DIRECTED BY THE ENGINEER.
 - BMP C235: WATTLES - TO BE USED AT ELEVATION 10.58 ON CLEAR CREEK SIDE AT SITE EXCAVATION LIMITS ALONG CLEAR CREEK.
- ELEMENT #7 - PROTECT DRAIN INLETS - NOT APPLICABLE**
- ELEMENT #8 - STABILIZE CHANNELS AND OUTLETS**
- BMP C121: MULCHING - THE CONTRACTOR SHALL USE "WOODSTRAW" MULCH AND "HABITAT FEATURE - PINNED BRUSH PILE UNIT" MULCH, WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 - BMP C209: OUTLET PROTECTION - COFFERDAM OR APPROVED EQUAL "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION".
- ELEMENT #9 - CONTROL POLLUTANTS**
- BMP C153: MATERIAL DELIVERY, STORAGE AND CONTAINMENT - THE CONTRACTOR SHALL FOLLOW THE "SPILL, PREVENTION AND COUNTER MEASURES PLAN" (SPCC).
- ELEMENT #10 - CONTROL DEWATERING**
- BMP C162: SCHEDULING - PROJECT IS BEING SCHEDULED DURING DRIEST TIME OF THE YEAR TO MINIMIZE INTERACTION WITH CLEAR CREEK FLOW. SEE NOTE 5.
- ELEMENT #11, #12 - MAINTAIN BMPs - PER 2019 DOE SWMMWW AND 2019 PC SWMSDM.**
- ELEMENT #13 - NOT APPLICABLE**

GENERAL NOTES:

- AN AUTOCAD DRAWING FILE WILL BE PROVIDED TO THE CONTRACTOR FOR ESTABLISHING THE "CLEARING" LIMITS. THE "CLEARING" LIMITS SHALL BE STAKED BY THE CONTRACTOR BY USING GPS METHODS. THE CONTRACTOR MAY BE REQUIRED TO FIELD ADJUST GPS STAKES TO A DESIRED ELEVATION, OR TO AVOID CLEARING EXCESS CLEARING. EXISTING PRESERVATION TREES SHOWN ON THIS SHEET ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. ALL PRESERVATION TREES WILL BE FLAGGED FOR PRESERVATION BY PIERCE COUNTY, PRIOR TO "CLEARING" ACTIVITIES. ALL FLAGGED TREES TO REMAIN, SHALL BE PROTECTED BY THE USE OF "HIGH VISIBILITY FENCE". EXCAVATED CATCH SLOPES AROUND EACH TREE SHALL BE STEEPENED TO CATCH AT "HIGH VISIBILITY FENCE LIMITS" TO AVOID ROOT DAMAGE AS DETAILED ON SHEET 10. IF A PRESERVATION TREE IS DEEMED TO HAVE SIGNIFICANT ROOT DAMAGE DURING EXCAVATION, DAMAGED TREES SHALL BE TOPPED AT 15' ABOVE FINISHED GRADE (FG) PER PAY ITEM "TREE TOPPING". THE STAKED "CLEARING" LIMITS STAKING, AND "HIGH VISIBILITY FENCE" INSTALLATION, SHALL BE APPROVED BY THE ENGINEER PRIOR TO "CLEARING" ACTIVITIES COMMENCING. SEE SPECIAL PROVISION: "CLEARING, GRUBBING, AND ROADSIDE CLEANUP".
- TEMPORARY SEEDING MAY BE HAND SEEDING AS DIRECTED BY THE ENGINEER, PER PAY ITEM "EROSION/WATER POLLUTION CONTROL" DOL. EST. - FORCE ACCOUNT
- "WOODSTRAW (Regular Bale)" WILL REQUIRE A MINIMUM OF 2 APPLICATIONS. THE FIRST APPLICATION SHALL BE IMMEDIATELY FOLLOWING FINISH GRADING (FG) AND HABITAT FEATURE INSTALLATION. THE FIRST APPLICATION SHALL BE AT APPROX. 50% COVERAGE (180 BALES). THE FINAL APPLICATION SHALL BE FOLLOWING PLANTING ACTIVITIES, WHERE DIRECTED BY THE ENGINEER, TO FILL VOIDS (80 BALES), WITH THE TOTAL APPLICATION RATE CALCULATED TO BE 70% GROUND COVERAGE. THE FIRST APPLICATION OF "WOODSTRAW (Regular Bale)", SHALL BE COMPLETED IN ADVANCE OF "SEEDING, FERTILIZING, AND MULCHING (Upland and Riparian Areas)". SEE SPECIAL PROVISION: "ROADSIDE RESTORATION". SEE SPECIAL PROVISION: "WOODSTRAW (Regular Bale)".
- THE CONTRACTOR SHALL PROVIDE A TEMPORARY DEWATERING AND DISCHARGE PLAN. SEE SPECIAL PROVISION: "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION".
- SEE STANDARD DRAWING "XXXXXX" FOR "STABILIZED CONSTRUCTION ENTRANCE" DETAIL.
- SEE STANDARD DRAWING "XXXXXX" FOR "HIGH VISIBILITY FENCE" DETAIL.
- STREET SWEEPING SHALL BE PER SEE SPECIAL PROVISION: "STREET SWEEPING" AND WORK IN CONJUNCTION WITH THE "FUGITIVE DUST CONTROL PLAN".
- ANY AND ALL WORK TO CREATE A MATERIAL DELIVERY, STORAGE AND CONTAINMENT AREA SHALL BE AS APPROVED BY THE ENGINEER, AND MUST COMPLY WITH THE "SPCC PLAN", AND SHALL BE PAID FOR PER PAY ITEM "EROSION/WATER POLLUTION CONTROL" DOL. EST. - FORCE ACCOUNT.
- SEE SHEETS 11 AND 12 FOR "HABITAT FEATURE - PINNED BRUSH PILE UNIT" DETAIL.
- WETLAND AREAS SHOWN ON THE CLEAR CREEK SIDE AREA DELINEATED FROM APPROX. ELEVATION 12.5 TO OUT TO CLEAR CREEK WATER LINE.
- THE CONTRACTOR SHALL ADHERE TO AQUATIC INVASIVE SPECIES, EQUIPMENT CLEANING, MATERIAL IMPORT PROTOCOL PER THE ATTACHED HPA.
- SEE SHEET 2 FOR STABILIZED CONSTRUCTION ENTRANCE TABLE

LEGEND

EXISTING

PROPOSED

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CLEAR CREEK HABITAT RESTORATION
ACCESS ROAD REMOVAL FOR
IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION

CONSTRUCTION SWPPP

D228

SHEET **4** OF **14**

WATER ELEVATION AT THE TIME OF INSTALLATION VARIES DUE TO TIDAL INFLUENCE. SEE NOTE 2

FISH REMOVAL AREA SEE NOTE 1

DISTANCE VARIES

TYPICAL TEMPORARY FLOW ISOLATION EXAMPLE USING THREE STACKED SACK/BULK BAGS (SUPER SACK/BULK BAG OR APPROVED EQUAL) MINIMUM TOP ELEVATION 10.58 SACKS/BULK BAGS SHALL BE FILLED WITH "STREAMBED GRAVEL" ENCLOSING WORK AREA SEE NOTE 1

REINFORCED PLASTIC (VISQUEEN MEMBRANE)

EXISTING BOTTOM ELEVATION VARIES

ASSUMED FOOTPRINT WIDTH 9'

* APPROXIMATE OFFSET DISTANCE SHOWN IN PLAN VIEW

"A" LINE

EXISTING GROUND

DISTANCE VARIES

FISH REMOVAL AREA SEE NOTE 1

WATER ELEVATION AT THE TIME OF INSTALLATION VARIES DUE TO TIDAL INFLUENCE. SEE NOTE 2

TYPICAL TEMPORARY FLOW ISOLATION EXAMPLE USING TWO STACKED SACK/BULK BAGS (SUPER SACK/BULK BAG OR APPROVED EQUAL) MINIMUM TOP ELEVATION 10.58 SACKS/BULK BAGS SHALL BE FILLED WITH "STREAMBED GRAVEL" ENCLOSING WORK AREA SEE NOTE 1

REINFORCED PLASTIC (VISQUEEN MEMBRANE)

EXISTING BOTTOM ELEVATION VARIES

ASSUMED FOOTPRINT WIDTH 6'

EXCAVATION LIMITS VARY SEE SHEETS 7 AND 8

DISTANCE VARIES

DEWATERING AREA SEE NOTE 1

TYPICAL TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION SECTION

NOT TO SCALE

1. INSTALL "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" ON EACH SIDE OF THE "A" LINE (CREEK SIDE AND WETLAND SIDE), WHERE SHOWN ON THE PLANS, PRIOR TO "SITE EXCAVATION INCL. HAUL" ACTIVITIES BELOW ELEVATION 10.58. INSTALLATION, MAINTENANCE, AND REMOVAL OF "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" (SUPER SACK/BULK BAGS OR APPROVED EQUAL) SHALL COMPLY WITH ALL ATTACHED PERMIT DOCUMENTS. PIERCE COUNTY WILL PROVIDE FISH REMOVAL SERVICES WITHIN ISOLATED WORK AREAS IF IT IS DETERMINED THAT FISH ARE PRESENT. FISH REMOVAL WILL REQUIRE A COORDINATED EFFORT WITH CONTRACTOR. PIERCE COUNTY WILL WORK WITH THE CONTRACTOR BEFORE, DURING, AND AFTER "TEMPORARY FLOW ISOLATION FEATURES" HAVE BEEN INSTALLED, TO ENSURE FISH ISOLATION AND THAT FISH HAVE BEEN REMOVED FROM WORK AREAS. THE CONTRACTOR SHALL CEASE WORK AND NOTIFY PIERCE COUNTY IMMEDIATELY IF FISH ARE OBSERVED WITHIN WORK AREAS. AFTER THE INITIAL FISH REMOVAL ACTIVITIES, THE CONTRACTOR SHALL PROVIDE AT LEAST 3 WORKING DAYS ADVANCE NOTICE TO PERFORM THE INITIAL FISH RELOCATING ACTIVITIES AT EACH LOCATION. **SEE SPECIAL PROVISION: "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION".** ANY DEWATERING DONE WITHIN THE ISOLATION AREAS SHALL BE PER **SPECIAL PROVISION "DEWATERING".**
2. ELEVATION 10.58 IS THE APPROXIMATE AVERAGE HIGH TIDAL ELEVATION DURING SUMMER MONTHS PLUS 6". HOWEVER WATER SURFACE WILL FLUCTUATE DAILY AND HIGHER ELEVATIONS ARE POSSIBLE. THE CONTRACTOR IS RESPONSIBLE TO INSTALL ISOLATION SYSTEMS AND COORDINATE WORK ACTIVITIES AROUND PROJECTED TIDAL ELEVATIONS. **SEE SHEET 1, NOTE 4 FOR LINK TO TIDAL GAUGE DATA.**
3. TO HELP MITIGATE EFFECT OF TIDAL INFLUENCE DURING WORKING HOURS, **THE CONTRACTING AGENCY MAY CLOSE FLOODGATE AT CREEK OUTLET TO THE RIVER.** HOWEVER, GATE WILL NEED TO BE OPENED DAILY DURING NON-WORKING HOURS TO ALLOW FISH PASSAGE.
4. "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" SHALL CONSIST OF A MINIMUM 35" HIGH SUPER SACK/BULK BAGS FILLED WITH "STREAMBED GRAVEL", AND REINFORCED PLASTIC (OR APPROVED EQUAL). THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" METHOD, BUT THAT ALTERNATE METHOD SHALL BE PRE-APPROVED BY THE ENGINEER A MINIMUM OF 15 CALENDAR DAYS PRIOR TO "TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION" ACTIVITIES COMMENCING.
5. THE ACTUAL LINEAL FEET AND HEIGHT OF SUPER SACKS/BULK BAGS (OR APPROVED EQUAL) REQUIRED FOR EACH INSTALLATION MAY VARY FROM WHAT IS SHOWN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF AN ISOLATION SYSTEM THAT PREVENTS WATER FROM ENTERING WORK AREA.
6. WORK AREA SHALL BE DE-WATERED SUFFICIENTLY TO SAFELY AND CORRECTLY INSTALL PROJECT ELEMENTS. **SEE GEOTECHNICAL REPORT FOR SOILS AND GROUNDWATER INFORMATION.** THE CONTRACTOR SHALL SUBMIT A PROJECT DEWATERING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL. ANY DISCHARGE TO WATERS OF THE STATE (CLEAR CREEK, PUYALLUP RIVER, OR WETLANDS) SHALL MEET WATER QUALITY STANDARDS PRIOR TO RELEASE.

* THE APPROXIMATE OFFSET DISTANCE TO FACE OF SUPER SACK/BULK BAG IS DIMENSIONED ON THIS SHEET. THE ACTUAL DISTANCE AND ORIENTATION VARIES FOR EACH INDIVIDUAL ISOLATION, WITH ALL INSTALLATIONS BEING DEPENDENT ON THE FLOW ISOLATION METHOD SUBMITTED BY THE CONTRACTOR, AND APPROVED BY PIERCE COUNTY. SEE NOTE 4

** RS&O AREA REFERS TO THE "REMOVAL OF STRUCTURES AND OBSTRUCTIONS" AREA, AND THE REMOVAL OF THE "EXISTING SWAN CREEK/WETLAND INFLOW DRAINAGE SYSTEM. SEE SPECIAL PROVISION" REMOVAL OF STRUCTURES AND OBSTRUCTIONS"

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CLEAR CREEK HABITAT RESTORATION ACCESS ROAD REMOVAL FOR IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION TEMPORARY FLOW ISOLATION INCL. FISH EXCLUSION PLAN

GRADING PLAN OVERVIEW
CONCEPTUAL BIRD'S-EYE PERSPECTIVE
(EXISTING GROUND SURFACE IS 1' CONTOURS FROM LIDAR)



SEC. 11, T. 20 N., R. 3 E W.M.

EXISTING PORT OF TACOMA PHASE 1
WETLAND MITIGATION SITE

WETLAND CONTROL/FISH LADDER
TOP WEIR CONTROL ELEV. = 8.44
TOP WEIR NOTCH ELEV. = 6.87

CLEAR CREEK

"A" LINE
BACK SLOPE TO MATCH
EXISTING GROUND 5' RT
ELEV. = ±15.00 (TYP.)

EXISTING 12' WIDE CEMENT CONC.
BRIDGE (TO REMAIN)
"A" STA. 2+15.50
FL ELEV. = ±3.58
TAPER GRADING TO BRIDGE AS
DIRECTED BY THE ENGINEER

"A" LINE
FRONT SLOPE MATCH EXISTING
ELEV. = 10.58 (TYP.)

EXISTING PORT OF TACOMA PHASE 2
WETLAND MITIGATION SITE

CLEAR CREEK

SWAN
CREEK

TYPICAL "HIGH BELLY"
PROPOSED WEIR CREST ELEVATIONS OF 10.58
FOR THE "C" LINE BELLIES WERE ESTABLISHED
BASED ON THE OHW TIDAL FL ELEV. OF 10.58
AS DETERMINED BY PIERCE COUNTY

TYPICAL "LOW BELLY"
PROPOSED WEIR CREST ELEVATIONS OF 7.80 FOR THE "B"
LINE BELLIES WERE ESTABLISHED, BASED ON A MAXIMUM
LOW FOR THE WETLAND WHICH WAS ESTABLISHED
THROUGH ADVANCE HEC-RAS 2D MODELING

"C1" & "C2" LINES

"B3" LINE

"B4" LINE

"B1" LINE

"B2" LINE

"C3" LINE

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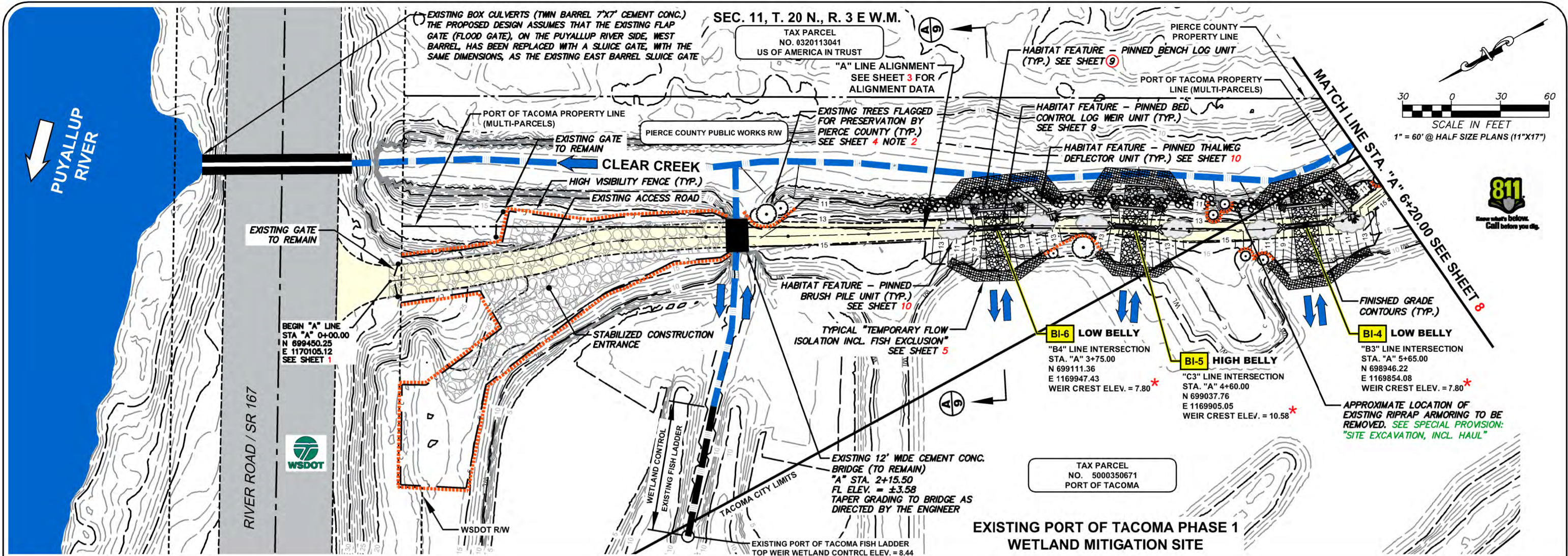
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ACCESS ROAD REMOVAL FOR
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GRADING PLAN

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Xrefs:



LEGEND

EXISTING

- CREEK (AS NOTED)
- ACCESS ROAD
- APPROXIMATE LOCATION OF PRESERVATION TREES
- WETLAND BOUNDARY AS DETERMINED BY PIERCE COUNTY 4/20/20
- APPROX. LOCATION OF RIPRAP ARMORING

PROPOSED

- HIGH VISIBILITY FENCE
SEE STANDARD DRAWING - STANDARD PLAN I-10.10-01
- WATTLE
SEE STANDARD DRAWING - FIGURE II-3.24: WATTLES
- CLEARING LIMITS
- TEMPORARY FLOW ISOLATION INCLUDING DEWATERING
- BELLY GRADING (STREAMBED GRAVEL, PERMEABLE BALLAST, AND BACKFILL FOR SAND DRAINS)
- HABITAT FEATURE - PINNED THALWEG DEFLECTOR UNIT
- HABITAT FEATURE - PINNED BENCH LOG UNIT
- HABITAT FEATURE - PINNED BED CONTROL LOG WEIR UNIT
- HABITAT FEATURE - PINNED BRUSH PILE UNIT

GENERAL NOTES:

- ANY EXTRA EXCAVATION OR GRADING, OUTSIDE OF THE CLEARING LIMITS SHALL BE PER PAY ITEM: "EXTRA SITE EXCAVATION INCL. HAUL".
- SEE SHEET 11 FOR "HABITAT FEATURE - PINNED THALWEG DEFLECTOR UNIT"
- SEE SHEET 11 FOR "HABITAT FEATURE - PINNED BED CONTROL LOG WEIR UNIT", AND THE CONTROL POINT TABLE FOR BP 1 THRU BI-6.
- SEE SHEET 11 FOR "HABITAT FEATURE - PINNED BENCH LOG UNIT" DETAIL, AND EACH PROFILE FOR THE BELLY SPANNING LOG STATIONING.
- SEE SHEETS 11 & 12 FOR "HABITAT FEATURE - PINNED BRUSH PILE UNIT" DETAIL.

* PROPOSED WEIR CREST ELEVATIONS OF 7.80 FOR THE "B" LINE BELLIES WERE ESTABLISHED, BASED ON A MAXIMUM LOW WATER SURFACE ELEVATION FOR THE WETLAND WHICH WAS ESTABLISHED THROUGH ADVANCE HEC-RAS 2D MODELING.

PROPOSED WEIR CREST ELEVATIONS OF 10.58 FOR THE "C" LINE BELLIES WERE ESTABLISHED BASED ON THE OHW TIDAL FL ELEV. OF 10.58 WHICH IS BASED ON MATCHING THE APPROXIMATE OHW IN CLEAR CREEK AS DETERMINED BY PIERCE COUNTY.

** THE TOP ELEVATION OF "BELLY SPANNING BENCH LOG" OF THE "HABITAT FEATURE - PINNED BENCH LOG UNIT", SHALL MATCH THE TOP FG ELEVATION OF STREAMBED GRAVEL, AS SHOWN.

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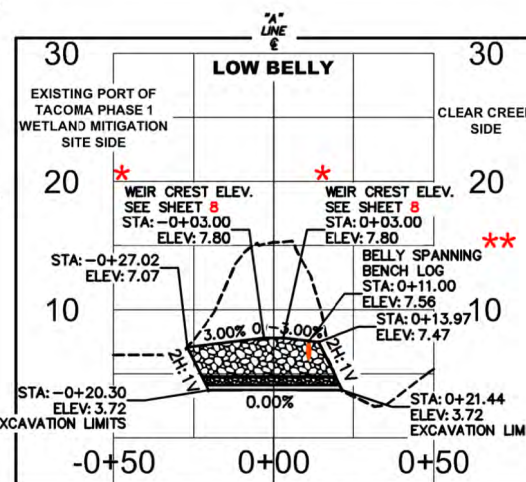


CLEAR CREEK HABITAT RESTORATION ACCESS ROAD REMOVAL FOR IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION

GRADING PLAN

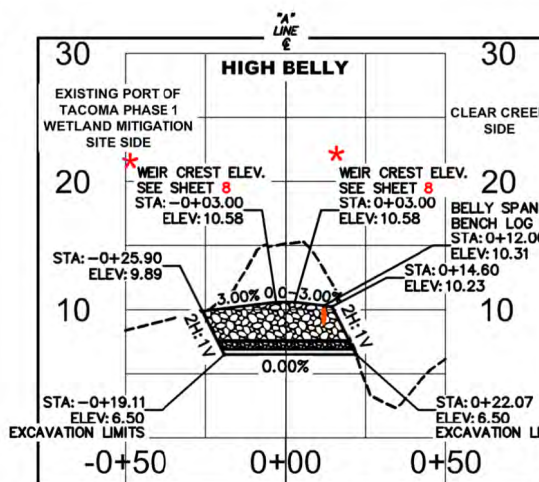
D228

SHEET 7 OF 14



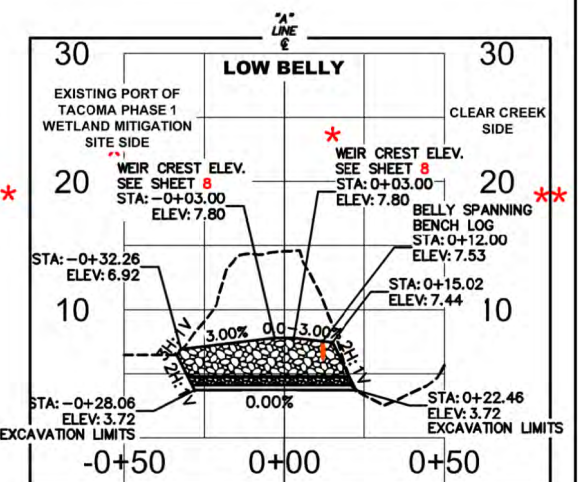
"B4" LINE PROFILE

FULL SIZE HORZ. SCALE: 1" = 30'
HALF SIZE (11"x17") HORZ. SCALE: 1" = 60'
FULL SIZE VERT. SCALE: 1" = 7.5'
HALF SIZE (11"x17") VERT. SCALE: 1" = 15'



"C3" LINE PROFILE

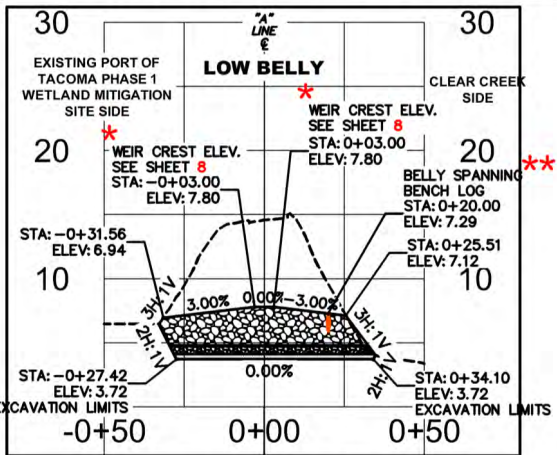
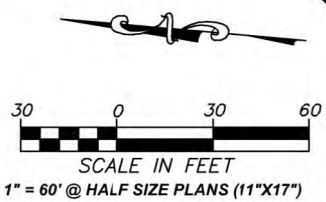
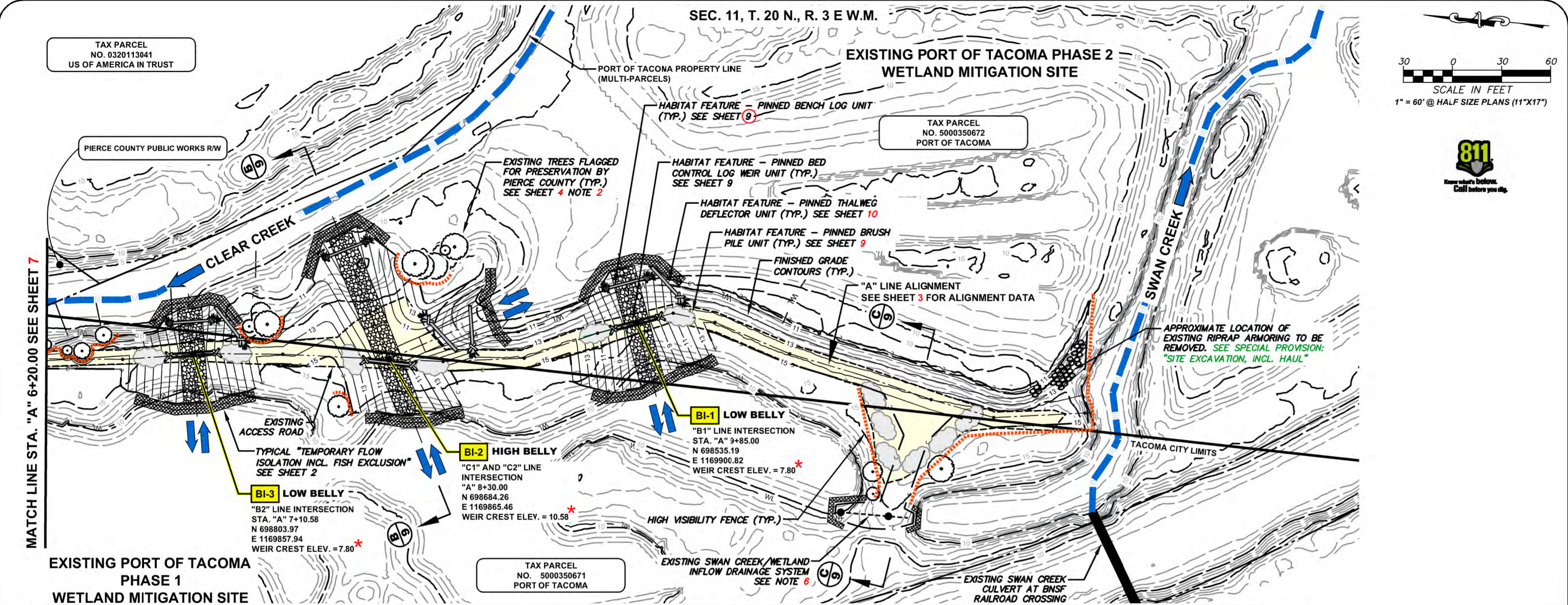
FULL SIZE HORZ. SCALE: 1" = 30'
HALF SIZE (11"x17") HORZ. SCALE: 1" = 60'
FULL SIZE VERT. SCALE: 1" = 7.5'
HALF SIZE (11"x17") VERT. SCALE: 1" = 15'



"B3" LINE PROFILE

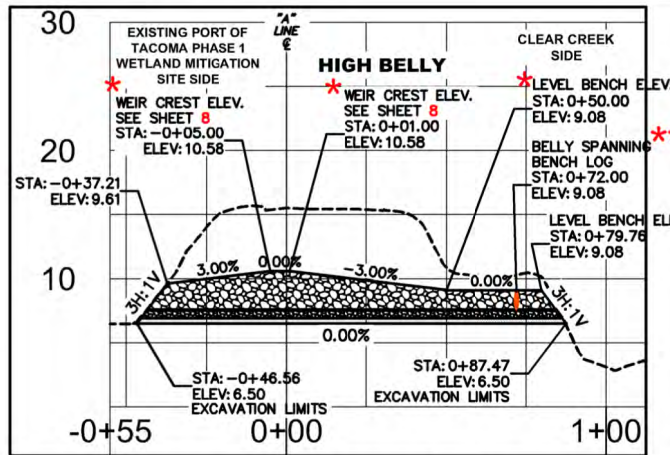
FULL SIZE HORZ. SCALE: 1" = 30'
HALF SIZE (11"x17") HORZ. SCALE: 1" = 60'
FULL SIZE VERT. SCALE: 1" = 7.5'
HALF SIZE (11"x17") VERT. SCALE: 1" = 15'

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Drawing: P:\ACTIVE CIP\D228 CLEAR CREEK HABITAT RESTORATION\AUTOCAD\DWG\D228 BASE_LOWER CLEAR CR.DWG
Xrefs:



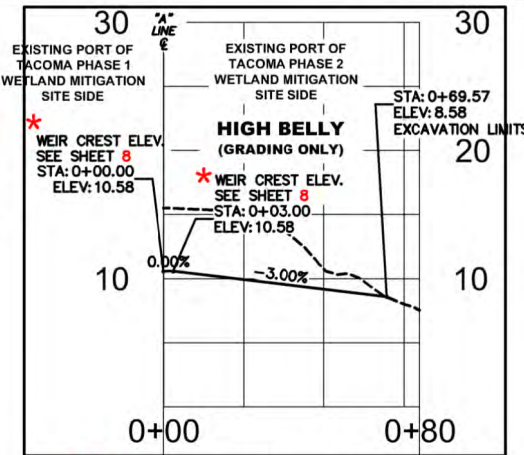
"B2" LINE PROFILE

FULL SIZE HORZ. SCALE: 1" = 30'
HALF SIZE (11"x17") HORZ. SCALE 1" = 60'
FULL SIZE VERT. SCALE: 1" = 7.5'
HALF SIZE (11"x17") VERT. SCALE 1" = 15'



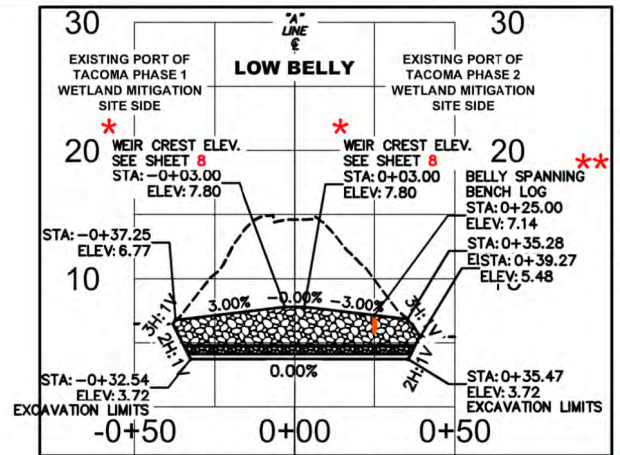
"C2" LINE PROFILE

FULL SIZE HORZ. SCALE: 1" = 30'
HALF SIZE (11"x17") HORZ. SCALE 1" = 60'
FULL SIZE VERT. SCALE: 1" = 7.5'
HALF SIZE (11"x17") VERT. SCALE 1" = 15'



"C1" LINE PROFILE

FULL SIZE HORZ. SCALE: 1" = 30'
HALF SIZE (11"x17") HORZ. SCALE 1" = 60'
FULL SIZE VERT. SCALE: 1" = 7.5'
HALF SIZE (11"x17") VERT. SCALE 1" = 15'



"B1" LINE PROFILE

FULL SIZE HORZ. SCALE: 1" = 30'
HALF SIZE (11"x17") HORZ. SCALE 1" = 60'
FULL SIZE VERT. SCALE: 1" = 7.5'
HALF SIZE (11"x17") VERT. SCALE 1" = 15'

- GENERAL NOTES:**
- ANY EXTRA EXCAVATION OR GRADING, OUTSIDE OF THE CLEARING LIMITS SHALL BE PER PAY ITEM: "EXTRA SITE EXCAVATION INCL. HAUL".
 - SEE SHEET 11 FOR "HABITAT FEATURE - PINNED THALWEG DEFLECTOR UNIT"
 - SEE SHEET 11 FOR "HABITAT FEATURE - PINNED BED CONTROL LOG WEIR UNIT", AND THE CONTROL POINT TABLE FOR BP 1 THRU BP-6.
 - SEE SHEET 11 FOR "HABITAT FEATURE - PINNED BENCH LOG UNIT" DETAIL, AND EACH PROFILE FOR THE BELLY SPANNING LOG STATIONING.
 - SEE SHEETS 11 & 12 FOR "HABITAT FEATURE - PINNED BRUSH PILE UNIT" DETAIL.
 - THE EXISTING SWAN CREEK/WETLAND INFLOW DRAINAGE SYSTEM SHALL BE REMOVED PER PAY ITEM "REMOVAL OF STRUCTURES AND OBSTRUCTIONS. SEE SPECIAL PROVISION: "REMOVAL OF STRUCTURES AND OBSTRUCTIONS".
- * PROPOSED WEIR CREST ELEVATIONS OF 7.80 FOR THE "B" LINE BELLIES WERE ESTABLISHED, BASED ON A MAXIMUM LOW WATER SURFACE ELEVATION FOR THE WETLAND WHICH WAS ESTABLISHED THROUGH ADVANCE HEC-RAS 2D MODELING.
- * PROPOSED WEIR CREST ELEVATIONS OF 10.58 FOR THE "C" LINE BELLIES WERE ESTABLISHED BASED ON THE OHW TIDAL FL. ELEV. OF 10.58 WHICH IS BASED ON MATCHING THE APPROXIMATE OHW IN CLEAR CREEK AS DETERMINED BY PIERCE COUNTY.
- * THE TOP ELEVATION OF "BELLY SPANNING BENCH LOG" OF THE "HABITAT FEATURE - PINNED BENCH LOG UNIT", SHALL MATCH THE TOP FG ELEVATION OF STREAMBED GRAVEL, AS SHOWN.
- *** "C1" LINE BOTTOM WIDTH IS 10' WIDE WITH 5H:1V SLOPES TO CATCH, JOINING "C2" LINE GRADING AT COMMON "HABITAT FEATURE - PINNED BED CONTROL LOG WEIR UNIT". THE "C1" LINE BOTTOM SHALL BE NATIVE SOIL. SEE SHEET 6.

DRAWING NO. See Side Stamp	SURVEYED BY: See Sheet 1
DRAWN BY: Jeffrey Davidson	DATE SURVEYED: See Sheet 1
DESIGNED BY: Jeffrey Davidson David Davis	BOOK NO. See Sheet 1
CHECKED BY: Charlene Foggensee David Davis	DATE PLOTTED: See Side Stamp

NO.	DATE	REVISION	BY	APPROVED

Pierce County

DEPARTMENT OF PLANNING AND PUBLIC WORKS
SURFACE WATER MANAGEMENT
TACOMA MALL PLAZA BUILDING
2702 SOUTH 42nd STREET, SUITE 201
TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



CLEAR CREEK HABITAT RESTORATION
ACCESS ROAD REMOVAL FOR
IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION

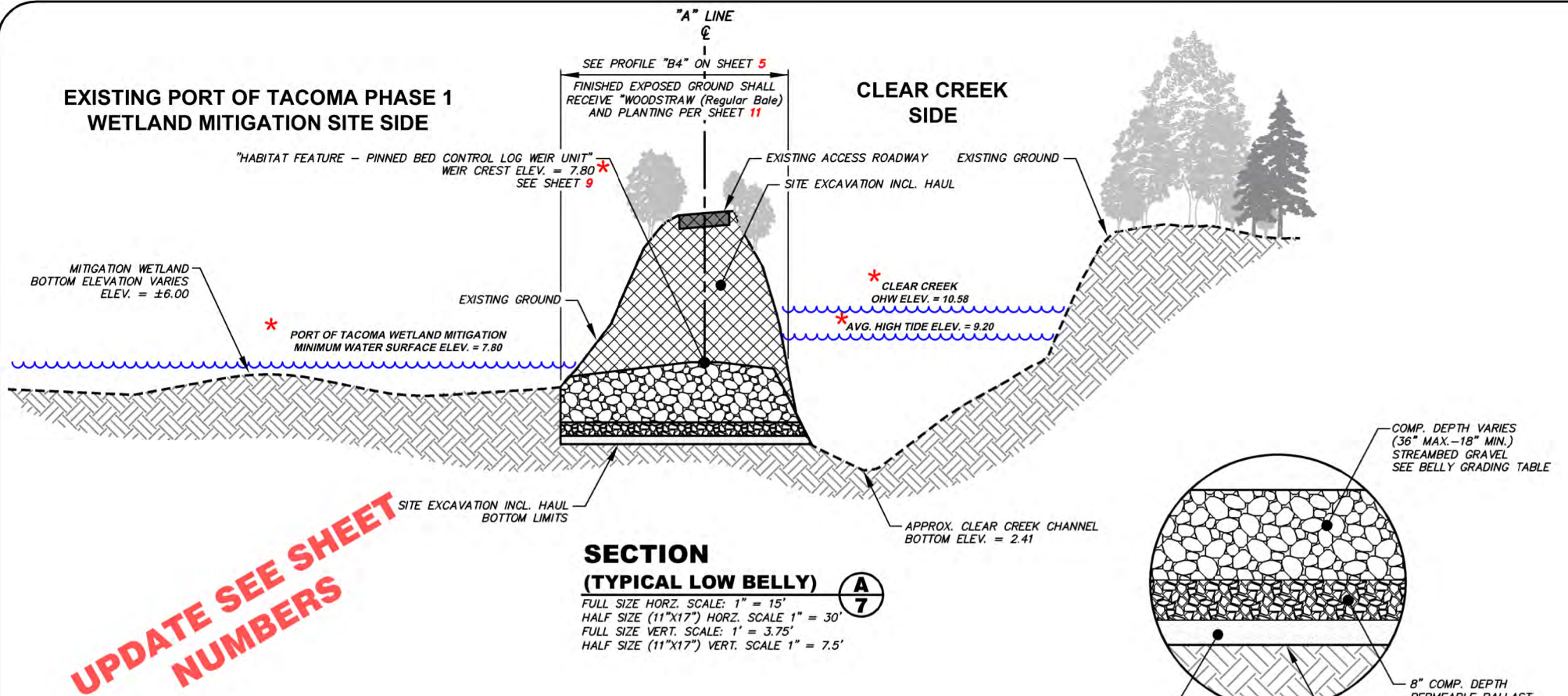
GRADING PLAN

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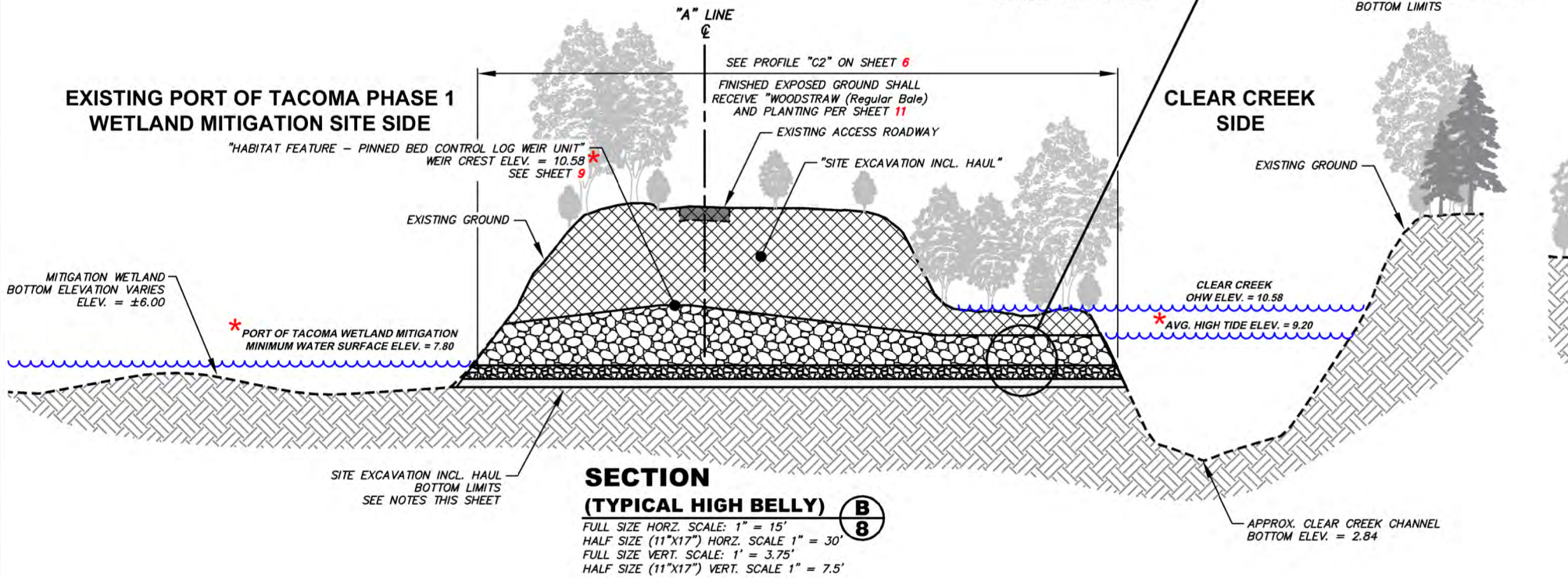
SHEET **8** OF **14**

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Xrefs:

EXISTING PORT OF TACOMA PHASE 1 WETLAND MITIGATION SITE SIDE



EXISTING PORT OF TACOMA PHASE 1 WETLAND MITIGATION SITE SIDE



BELLY GRADING TABLE

BELLY ALIGN.	SITE EXCAVATION INCL. HAUL FOR BELLY GRADING AREA ONLY (C.Y.)	STREAMBED GRAVEL (C.Y.)	PERMEABLE BALLAST (C.Y.)	BACKFILL FOR SAND DRAINS (C.Y.)
"B1"	165 (C.Y.)	116 (C.Y.)	30 (C.Y.)	19 (C.Y.)
"C2"	245 (C.Y.)	159 (C.Y.)	52 (C.Y.)	34 (C.Y.)
"B2"	144 (C.Y.)	100 (C.Y.)	27 (C.Y.)	17 (C.Y.)
"B3"	122 (C.Y.)	86 (C.Y.)	22 (C.Y.)	14 (C.Y.)
"C3"	106 (C.Y.)	75 (C.Y.)	19 (C.Y.)	12 (C.Y.)
"B4"	95 (C.Y.)	65 (C.Y.)	20 (C.Y.)	10 (C.Y.)
TOTAL	877 (C.Y.)	601 (C.Y.)	170 (C.Y.)	106 (C.Y.)

GENERAL GRADING MATERIAL NOTES:

- ALL BELLY GRADING MATERIAL VOLUME MEASUREMENTS PER C.Y. ARE MEASURED BY THE VOLUME PLACED WITHIN THE NEATLINE LIMITS SHOWN. SEE SPECIAL PROVISIONS FOR EACH PAY ITEM.
- SITE EXCAVATION INCL. HAUL VOLUME PER C.Y. IS MEASURED BY THE NEATLINE LIMITS SHOWN.
- SEE SHEETS 5, 6, AND 9 FOR "HABITAT FEATURE - PINNED THALWEG DEFLECTOR UNIT", "HABITAT FEATURE - PINNED BED CONTROL LOG WEIR UNIT", AND "HABITAT FEATURE - PINNED BRUSH PILE UNIT".
- SEE SPECIAL PROVISION: 8-00 MISCELLANEOUS CONSTRUCTION - HABITAT FEATURES FOR "HABITAT FEATURE - PINNED THALWEG DEFLECTOR UNIT", "HABITAT FEATURE - PINNED BED CONTROL LOG WEIR UNIT", "HABITAT FEATURE - PINNED BENCH LOG UNIT", AND "HABITAT FEATURE - PINNED BRUSH PILE UNIT".

* PROPOSED WEIR CREST ELEVATIONS OF 7.80 FOR THE "B" LINES, IS EQUAL TO THE MINIMUM WATER SURFACE ELEVATION IN THE WETLAND AS DETERMINED BY HEC-RAS 2D MODELING OF EXISTING CONDITIONS.

PROPOSED LOG WEIR CREST ELEVATION OF 10.58 FOR THE "C" LINES, IS EQUAL TO ORDINARY HIGH WATER MARK (OHW) ALONG CLEAR CREEK AS DETERMINED BY OBSERVATION OF WATER STAIN DEMARCATION ON THE EXISTING BOX CULVERT AND ELEVATION OF VEGETATION REGIMES ALONG THE CREEK.

AVERAGE HIGH TIDE ELEVATION OF 9.20 WAS DETERMINED BASED ON LEVEL LOGGER DATA COLLECTED AT THE EXISTING BOX CULVERT.

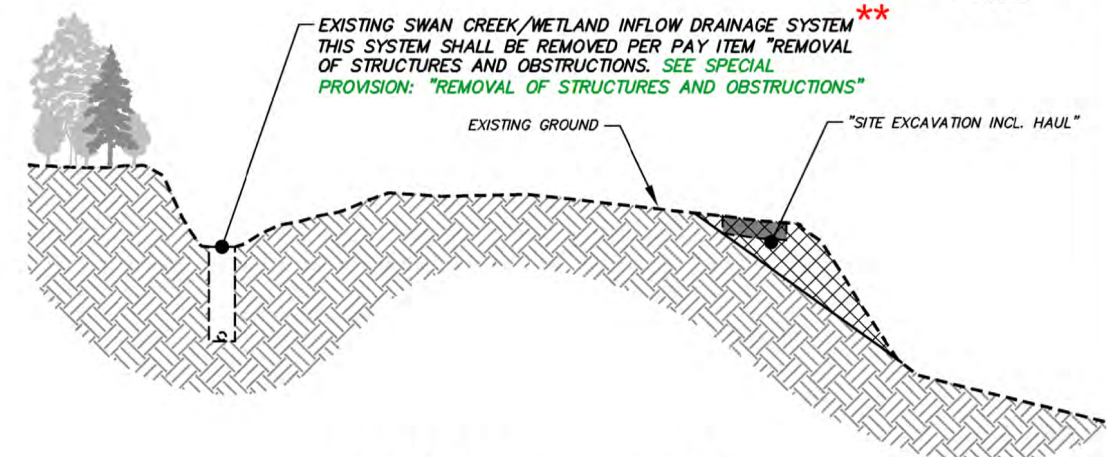
MHHW AT COMMENCEMENT BAY TIDAL GAUGE IS 9.39 (NAVD88).

THE PORT OF TACOMA WETLAND BOTTOM SURFACE, WAS DETERMINED FROM PORT OF TACOMA PROJECT PLANS AND VARIES THROUGHOUT THE SITE. WETLAND BOTTOM ELEVATIONS RANGE FROM ±2.5 TO ±6.5.

** "REMOVAL OF STRUCTURES AND OBSTRUCTIONS" SHALL INCLUDE THE FOLLOWING:

- CATCH BASIN TYPE 1 (WITHIN WETLAND PHASE 1).
- CATCH BASIN TYPE 2 60" DIAM. (WITHIN THE ACCESS ROAD).
- VALVE (BETWEEN CATCH BASINS).
- ±37 LF 6" PVC DRAINPIPE (BETWEEN CATCH BASINS).
- BACKFILL AND EMBANKMENT COMPACTION WITH NATIVE SOIL, MATCHING EXISTING GROUND, AS DIRECTED BY THE ENGINEER

CLEAR CREEK SIDE



SECTION

(TYPICAL HIGH BELLY) C 8

FULL SIZE HORZ. SCALE: 1" = 15'
HALF SIZE (11"x17") HORZ. SCALE 1" = 30'
FULL SIZE VERT. SCALE: 1" = 3.75'
HALF SIZE (11"x17") VERT. SCALE 1" = 7.5'

DRAWING NO. See Side Stamp	SURVEYED BY: See Sheet 1				
DRAWN BY: Jeffrey Davidson	DATE SURVEYED: See Sheet 1				
DESIGNED BY: Jeffrey Davidson David Davis	BOOK NO. See Sheet 1				
CHECKED BY: Charlene Foggensee David Davis	DATE PLOTTED: See Side Stamp				
NO.	DATE	REVISION	BY	APPROVED	



Pierce County

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2702 SOUTH 42nd STREET, SUITE 201
TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



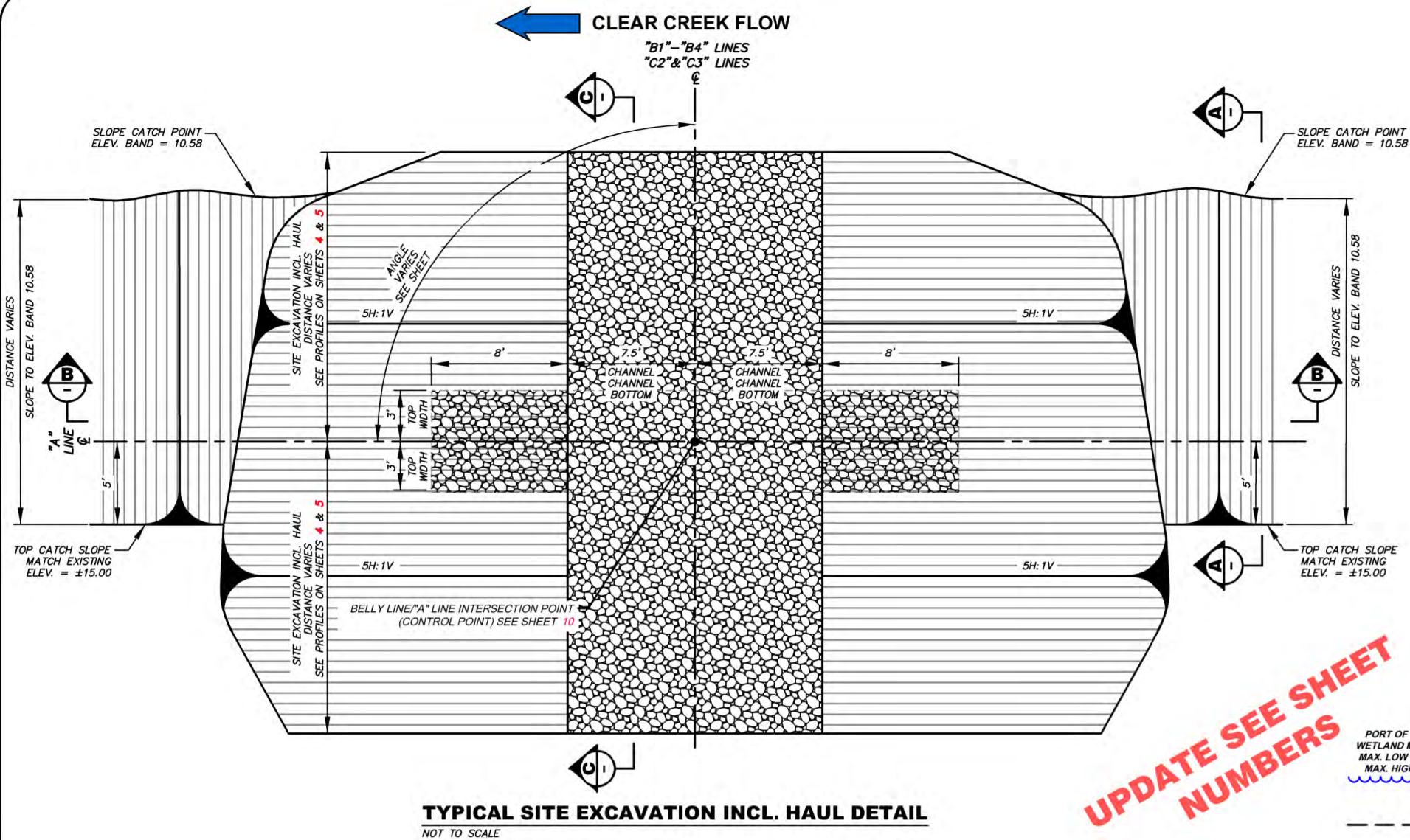
CLEAR CREEK HABITAT RESTORATION ACCESS ROAD REMOVAL FOR IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION

GRADING PLAN

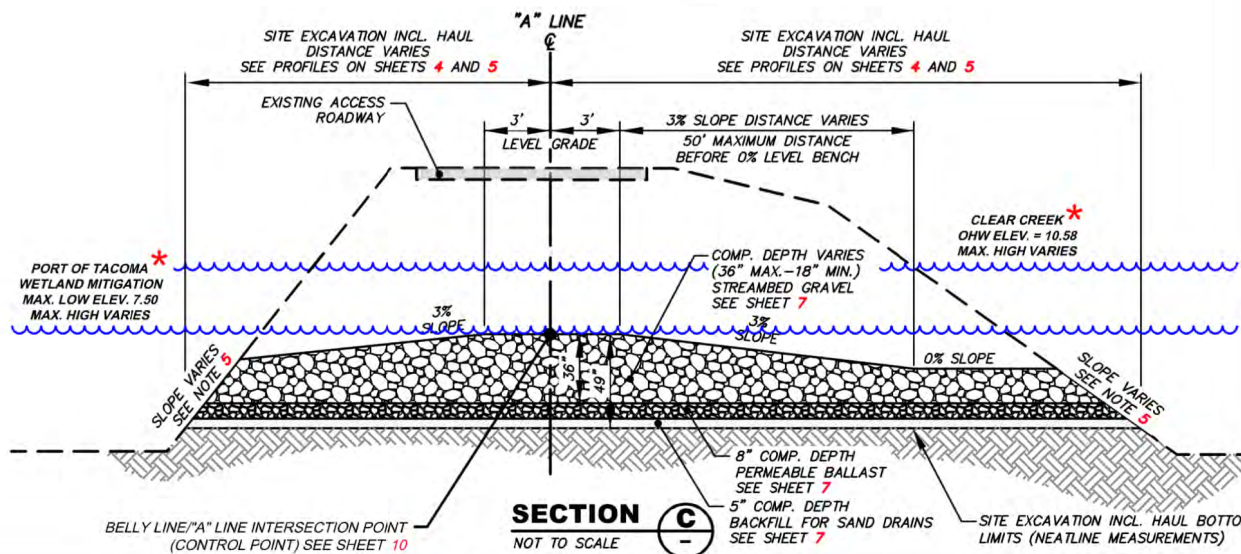
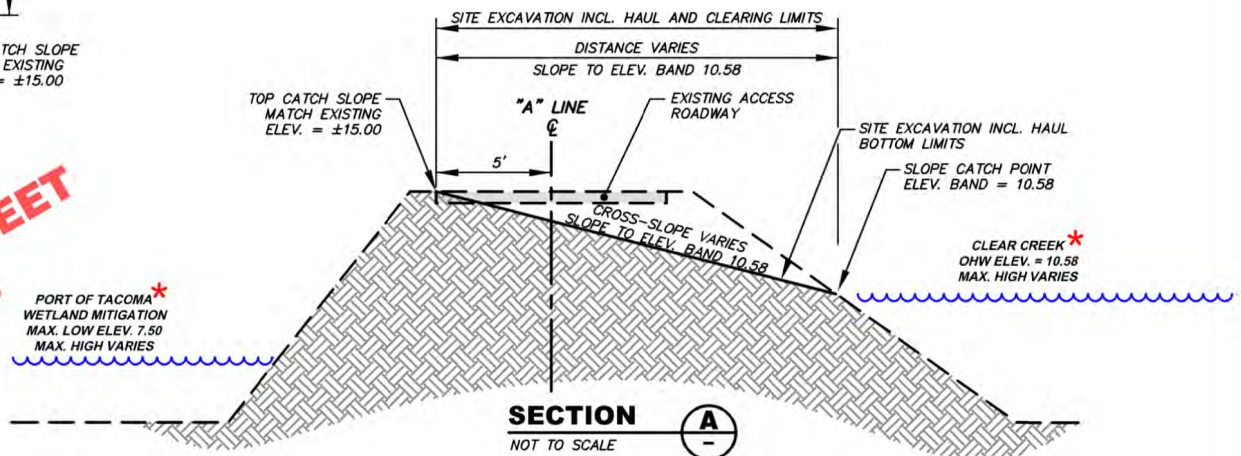
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SHEET 9 OF 14

Date: Jan 11, 2021 1:01:44 PM
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Xrefs:



UPDATE SEE SHEET
NUMBERS



**HABITAT FEATURE ARE NOT SHOWN FOR CLARITY
SEE SHEETS 10 AND 11**

GENERAL NOTES:

- SEE "GRADING PLAN SHEETS 5 THROUGH 8 FOR ADDITION INSTALLATION AND LOCATION INFORMATION, INCLUDING BUT NOT LIMITED TO, BELLY SPANNING BENCH LOG STATION AND TOP OF LOG ELEVATION, AND VARIABLE END SLOPES.
- "HABITAT FEATURE - PINNED BED CONTROL LOG WEIR UNIT", "HABITAT FEATURE - PINNED BENCH LOG UNIT", AND "COIR LOG" SHALL BE INCORPORATED INTO THE "STREAMBED GRAVEL" PER SHEET SEE SHEETS 10.

* PROPOSED WEIR CREST ELEVATIONS OF 7.80 FOR THE "B" LINES, IS EQUAL TO THE MINIMUM WATER SURFACE ELEVATION IN THE WETLAND AS DETERMINED BY HEC-RAS 2D MODELING OF EXISTING CONDITIONS.

PROPOSED LOG WEIR CREST ELEVATION OF 10.58 FOR THE "C" LINES, IS EQUAL TO ORDINARY HIGH WATER MARK (OHWM) ALONG CLEAR CREEK AS DETERMINED BY OBSERVATION OF WATER STAIN DEMARCATION ON THE EXISTING BOX CULVERT AND ELEVATION OF VEGETATION REGIMES ALONG THE CREEK.

AVERAGE HIGH TIDE ELEVATION OF 9.20 WAS DETERMINED BASED ON LEVEL LOGGER DATA COLLECTED AT THE EXISTING BOX CULVERT.

MHHW AT COMMENCEMENT BAY TIDAL GAUGE IS 9.39 (NAVD88).

THE PORT OF TACOMA WETLAND BOTTOM SURFACE, WAS DETERMINED FROM PORT OF TACOMA PROJECT PLANS AND VARIES THROUGHOUT THE SITE. WETLAND BOTTOM ELEVATIONS RANGE FROM ±2.5 TO ±6.5.

ALL BELLY GRADING MATERIAL VOLUME MEASUREMENTS PER C.Y. ARE MEASURED BY THE VOLUME PLACED WITHIN THE NEATLINE LIMITS SHOWN SEE SHEET 7 AND SEE SPECIAL PROVISIONS FOR EACH PAY ITEM

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APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER

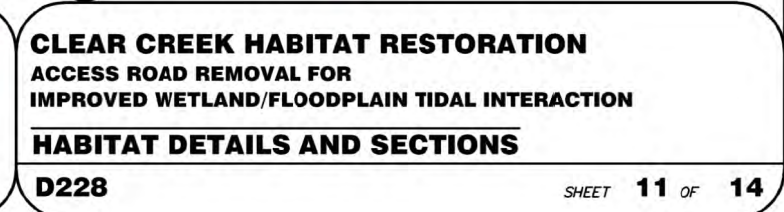


**CLEAR CREEK HABITAT RESTORATION
ACCESS ROAD REMOVAL FOR
IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION**

TYPICAL GRADING DETAIL AND SECTIONS

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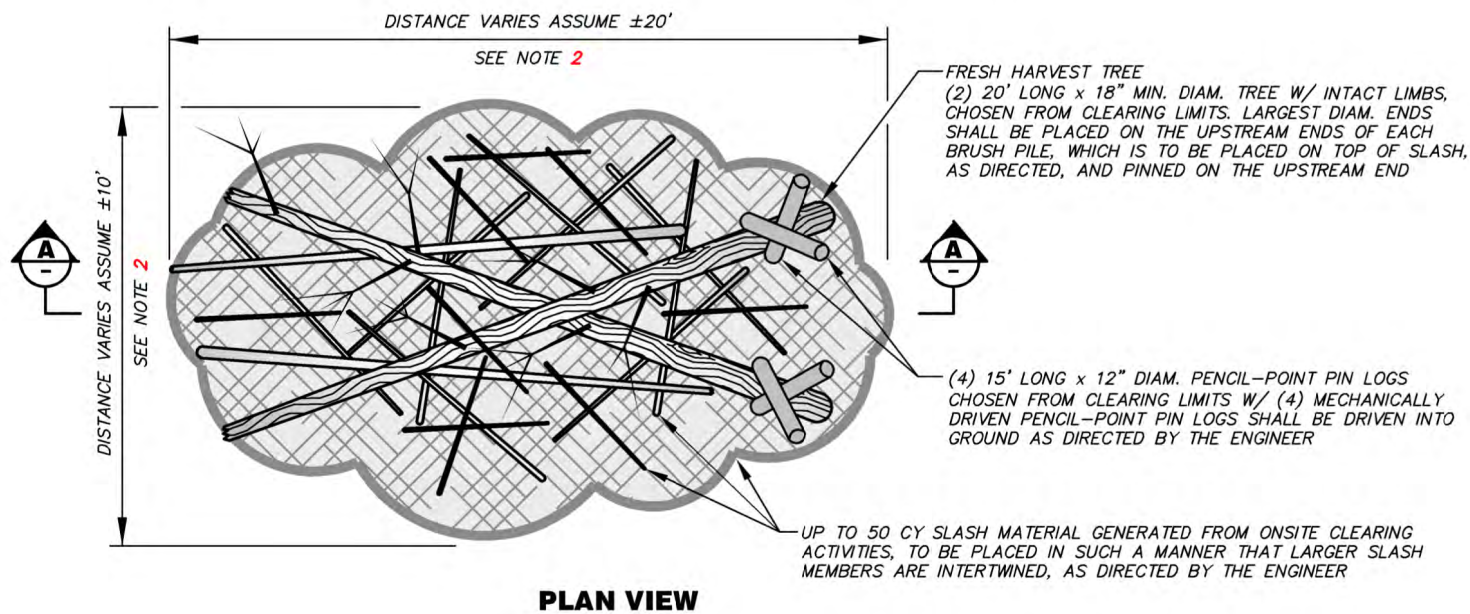
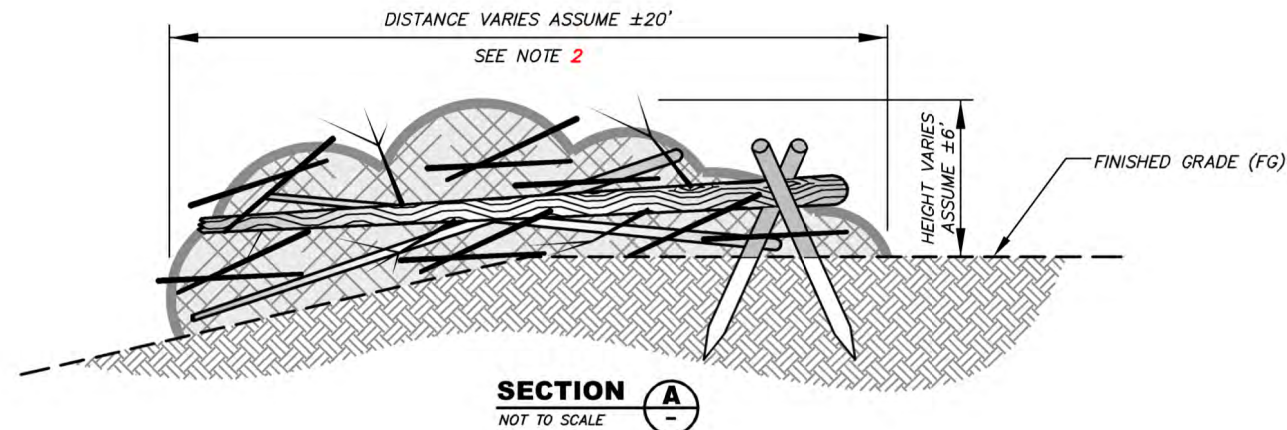
SHEET 10 OF 14



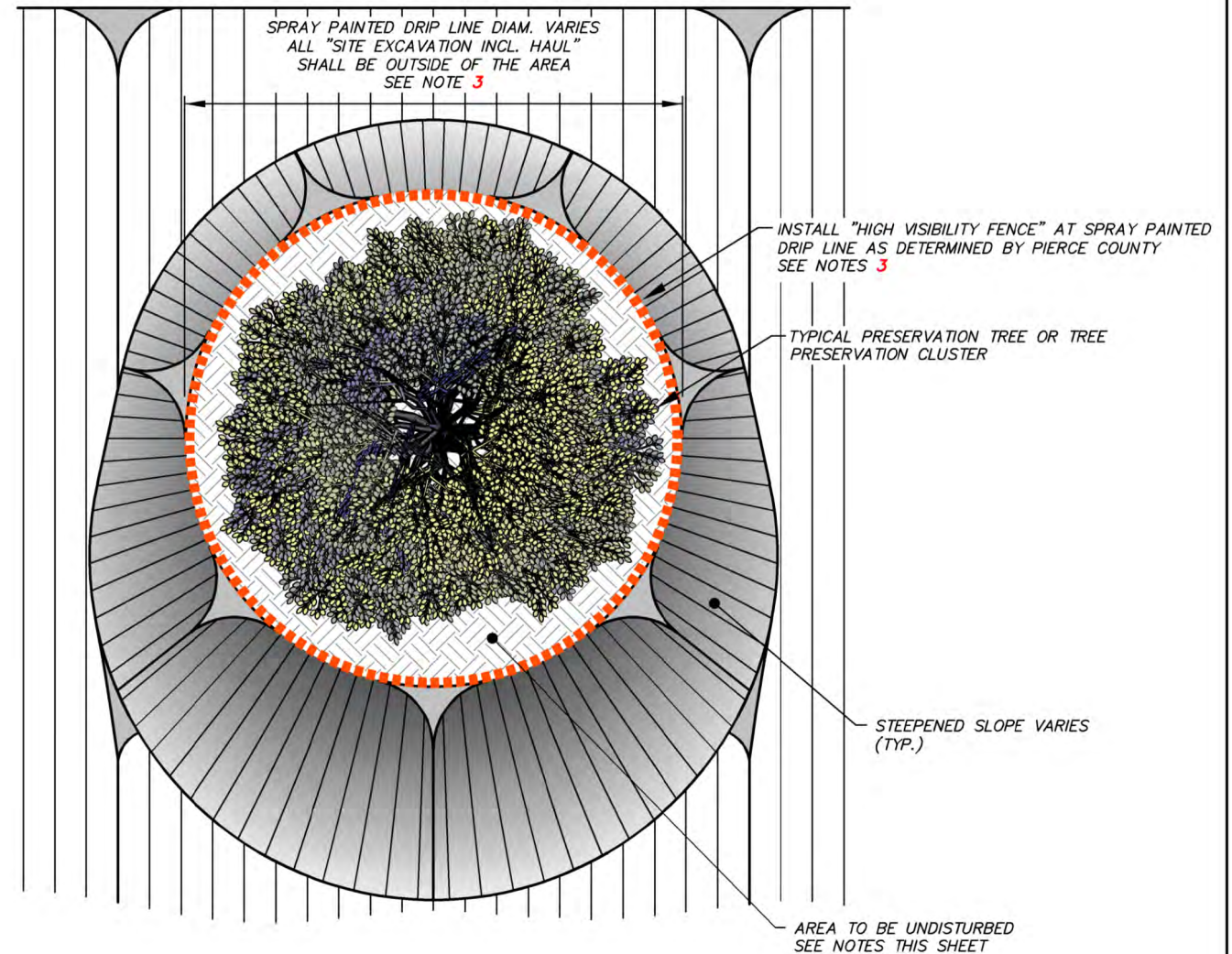
GENERAL NOTES:

- SEE SPECIAL PROVISION: 8-00 MISCELLANEOUS CONSTRUCTION - HABITAT FEATURES FOR "HABITAT FEATURE - PINNED THALWEG DEFLECTOR UNIT", "HABITAT FEATURE - PINNED BED CONTROL LOG WEIR UNIT", "HABITAT FEATURE - PINNED BENCH LOG UNIT", AND "HABITAT FEATURE - PINNED BRUSH PILE UNIT".
- "HABITAT FEATURE - PINNED BRUSH PILE" NOT TO RECEIVE "WOODSTRAW (REGULAR BALE)", "SEEDING, FERTILIZING, AND MULCHING (UPLAND AND RIPARIAN AREAS)", OR PLANTING (TYP.). THE NUMBER OF "HABITAT FEATURE - PINNED BRUSH PILE" UNITS AND QUANTITY AND SIZE OF MATERIALS MAY BE FIELD ADJUSTED BY THE ENGINEER BASED ON FIELD CONDITIONS AND AMOUNT OF ON "CLEARING" MATERIAL AVAILABLE.
- EXISTING PRESERVATION TREES SHOWN ON SHEETS 4 THRU 6 ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. ALL PRESERVATION TREES WILL BE FLAGGED FOR PRESERVATION BY PIERCE COUNTY, WITH ALL FLAGGED TREES TO REMAIN UNDISTURBED. EXCAVATED CATCH SLOPES AROUND EACH TREE SHALL BE STEEPENED TO "DRIP LINE" TO AVOID ROOT DAMAGE PER THE DETAIL BELOW. IF FLAGGED TREES ARE DEEMED TO HAVE SIGNIFICANT ROOT DAMAGE DURING SLOPE STEEPENING, THEY SHALL BE TOPPED (5 MAX.) PER PAY ITEM "TREE TOPPING". ALL WORK; PRESERVATION TREE SELECTION, "DRIP LINE" LIMITS DETERMINATION, AND SLOPE STEEPENING GRADING, SHALL BE DIRECTED BY THE ENGINEER WITH ALL WORK PER PAY ITEM: "SITE EXCAVATION INCL. HAUL".

UPDATE SEE SHEET
NUMBERS



HABITAT FEATURE - PINNED BRUSH PILE DETAIL
NOT TO SCALE



TYPICAL PRESERVATION TREE DETAIL
NOT TO SCALE

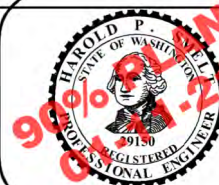
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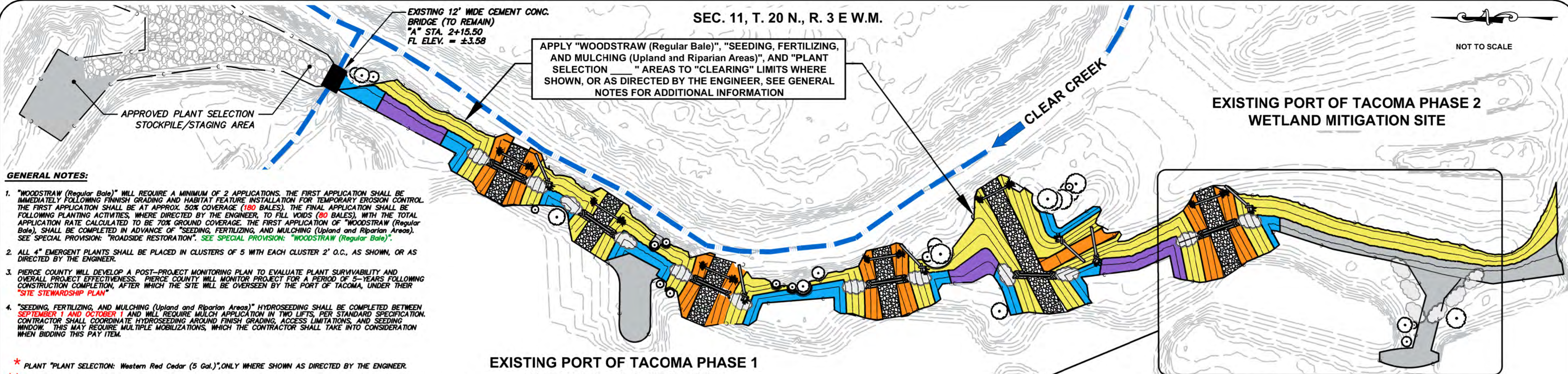
CLEAR CREEK HABITAT RESTORATION
ACCESS ROAD REMOVAL FOR
IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION

HABITAT DETAILS AND SECTIONS

D228

SHEET **12** OF **14**

Date: Jan 11, 2021 1:16:58 PM
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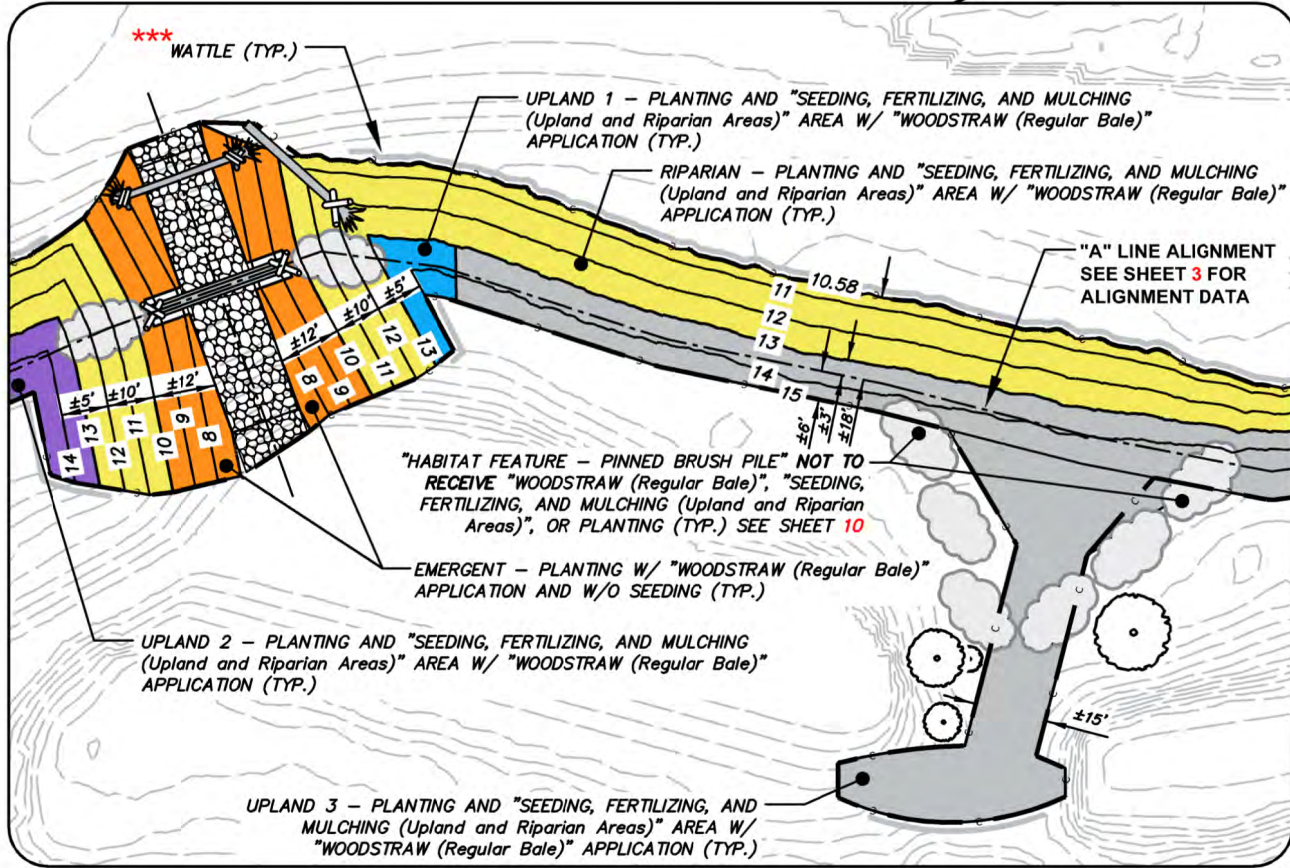


- GENERAL NOTES:**
- "WOODSTRAW (Regular Bale)" WILL REQUIRE A MINIMUM OF 2 APPLICATIONS. THE FIRST APPLICATION SHALL BE IMMEDIATELY FOLLOWING FINISH GRADING AND HABITAT FEATURE INSTALLATION FOR TEMPORARY EROSION CONTROL. THE FIRST APPLICATION SHALL BE AT APPROX. 50% COVERAGE (180 BALES). THE FINAL APPLICATION SHALL BE FOLLOWING PLANTING ACTIVITIES, WHERE DIRECTED BY THE ENGINEER, TO FILL VOIDS (60 BALES), WITH THE TOTAL APPLICATION RATE CALCULATED TO BE 100% GROUND COVERAGE. THE FIRST APPLICATION OF "WOODSTRAW (Regular Bale)" SHALL BE COMPLETED IN ADVANCE OF "SEEDING, FERTILIZING, AND MULCHING (Upland and Riparian Areas)". SEE SPECIAL PROVISION: "ROADSIDE RESTORATION". SEE SPECIAL PROVISION: "WOODSTRAW (Regular Bale)".
 - ALL 4" EMERGENT PLANTS SHALL BE PLACED IN CLUSTERS OF 5 WITH EACH CLUSTER 2' O.C., AS SHOWN, OR AS DIRECTED BY THE ENGINEER.
 - PIERCE COUNTY WILL DEVELOP A POST-PROJECT MONITORING PLAN TO EVALUATE PLANT SURVIVABILITY AND OVERALL PROJECT EFFECTIVENESS. PIERCE COUNTY WILL MONITOR PROJECT FOR A PERIOD OF 5-YEARS FOLLOWING CONSTRUCTION COMPLETION, AFTER WHICH THE SITE WILL BE OVERSEEN BY THE PORT OF TACOMA, UNDER THEIR "SITE STEWARDSHIP PLAN".
 - "SEEDING, FERTILIZING, AND MULCHING (Upland and Riparian Areas)" HYDROSEEDING SHALL BE COMPLETED BETWEEN SEPTEMBER 1 AND OCTOBER 1 AND WILL REQUIRE MULCH APPLICATION IN TWO LIFTS, PER STANDARD SPECIFICATION. CONTRACTOR SHALL COORDINATE HYDROSEEDING AROUND FINISH GRADING, ACCESS LIMITATIONS, AND SEEDING WINDOW. THIS MAY REQUIRE MULTIPLE MOBILIZATIONS, WHICH THE CONTRACTOR SHALL TAKE INTO CONSIDERATION WHEN BIDDING THIS PAY ITEM.
- * PLANT "PLANT SELECTION: Western Red Cedar (5 Gal.)", ONLY WHERE SHOWN AS DIRECTED BY THE ENGINEER.
- ** PLANT "PLANT SELECTION: Nootka Rose (1 Gal.)" AND "PLANT SELECTION: Black Hawthorne (1 Gal.)", TO BE PLANTED ONLY WHERE SHOWN AS DIRECTED BY THE ENGINEER, TO DISCOURAGE UNWANTED SITE USE.
- *** RED-OSIER DOGWOOD LIVE STAKES SHALL BE PLANTED INTO INSTALLED WATTLE SECTIONS, AS DIRECTED BY THE ENGINEER.

PLANTING PLAN						
EMERGENT - PLANTING AREA - 5,715 SF						
Slough Sedge	Carex obnata	10' & Below	4"	Plug	2' (Cluster of 3)	840
Small Fruited Bulrush	Scirpus microcarpus	10' & Below	4"	Plug	2' (Cluster of 3)	840
Hardstem Bulrush	Scirpus acutus	10' & Below	4"	Plug	2' (Cluster of 3)	840
Common Rush	Juncus effusus	10' & Below	4"	Plug	2' (Cluster of 3)	840
RIPARIAN - PLANTING AREA - 16,125 SF						
Douglas Spirea	Spiraea douglasii	10' - 13'	1 Gal.	Bare Root	5'	90
Pacific Willow	Salix lasiandra	10' - 13'	1 Gal.	Bare Root	5'	90
Sitka Willow	Salix sitchensis	10' - 13'	1 Gal.	Bare Root	5'	90
Hookers Willow	Salix hookeriana	10' - 13'	1 Gal.	Bare Root	5'	90
Red-Osier Dogwood	Cornus sericea	10' - 13'	1 Gal.	Bare Root	5'	90
Salmonberry	Rubus spectabilis	10' - 13'	1 Gal.	Bare Root	5'	90
Pacific Dogwood	Cornus nuttallii	10' - 13'	2 Gal.	Pot	10'	90
Black Cottonwood	Populus balsamifera	10' - 13'	2 Gal.	Pot	15'	80
UPLAND 1 - PLANTING AREA - 3,765						
Beaked Hazelnut	Corylus cornuta var. californica	13' & Above	1 Gal.	Pot	3'	80
Red Elderberry	Sambucus racemosa	13' & Above	1 Gal.	Pot	3'	80
Indian Plum	Oemleria cerasiformis	13' & Above	1 Gal.	Pot	3'	80
Oceanspray	Holodiscus discolor	13' & Above	1 Gal.	Pot	3'	80
Thimble Berry	Rubus parviflorus	13' & Above	1 Gal.	Bare Root	3'	80
Bitter Cherry	Prunus emarginata	13' & Above	2 Gal.	Pot	10'	40
UPLAND 2 - PLANTING AREA - 2,565						
Beaked Hazelnut	Corylus cornuta var. californica	13' & Above	1 Gal.	Pot	3'	60
Red Elderberry	Sambucus racemosa	13' & Above	1 Gal.	Pot	3'	60
Indian Plum	Oemleria cerasiformis	13' & Above	1 Gal.	Pot	3'	60
Oceanspray	Holodiscus discolor	13' & Above	1 Gal.	Pot	3'	60
Thimble Berry	Rubus parviflorus	13' & Above	1 Gal.	Bare Root	3'	60
Western Red Cedar★	Thuja plicata	13' & Above	5 Gal.	Pot	10'	30
UPLAND 3 - PLANTING AREA - 7,400						
Beaked Hazelnut	Corylus cornuta var. californica	13' & Above	1 Gal.	Pot	3'	90
Red Elderberry	Sambucus racemosa	13' & Above	1 Gal.	Pot	3'	90
Indian Plum	Oemleria cerasiformis	13' & Above	1 Gal.	Pot	3'	90
Oceanspray	Holodiscus discolor	13' & Above	1 Gal.	Pot	3'	90
Thimble Berry	Rubus parviflorus	13' & Above	1 Gal.	Bare Root	3'	90
Nootka Rose★★	Rosa nutkana	13' & Above	1 Gal.	Bare Root	4'	210
Black Hawthorn★★	Crataegus douglasii	13' & Above	1 Gal.	Pot	5'	370
RANDOM DIRECTED - PLANTING AREA						
Red-Osier Dogwood	Cornus sericea★★★	As Directed	4'-6'	Live Stake	Random	200

SEEDING PLAN			
SEEDING, FERTILIZING, AND MULCHING (Upland and Riparian Areas)			
Native Red fescue	festuca rubra var rubra	40%	See Special Provision: "Roadside Restoration" for addition information
Pollinator mix flowers		60%	

DRAWING NO. See Side Stamp	SURVEYED BY: See Sheet 1				
DRAWN BY: Jeffrey Davidson	DATE SURVEYED: See Sheet 1				
DESIGNED BY: Jeffrey Davidson David Davis	BOOK NO. See Sheet 1				
CHECKED BY: Charlene Poggensee David Davis	DATE PLOTTED: See Side Stamp				
NO.	DATE	REVISION	BY	APPROVED	



TYPICAL PLANTING DETAIL
NOT TO SCALE

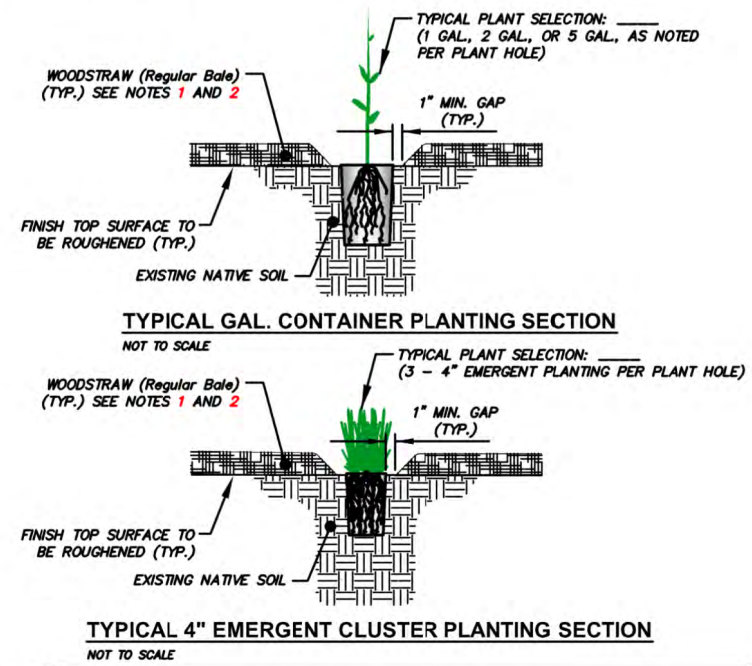


Pierce County
DEPARTMENT OF PLANNING AND PUBLIC WORKS
SURFACE WATER MANAGEMENT
TACOMA MALL PLAZA BUILDING
2702 SOUTH 42nd STREET, SUITE 201
TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER - STORMWATER



- TYPICAL PLANTING STEPS:**
- SEE SPECIAL PROVISION: "ROADSIDE RESTORATION" FOR ALL "PLANT SECTION ____" PRIOR TO PLANTING.
 - PLANTING WINDOW - OCTOBER 1ST THROUGH OCTOBER 31ST. THE CONTRACTOR MAY REQUEST A REVISED WINDOW BUT IT MUST BE APPROVED IN ADVANCE.
 - PRE-WET ALL PLANTS PRIOR TO INSTALLATION.
 - CAREFULLY CLEAR "WOODSTRAW" AWAY FROM PLANTING HOLE, AND DIG A HOLE INTO FINISHED GRADE, EXISTING NATIVE SOIL.
 - SPREAD ROOTS, PLANT UPRIGHT, AND TAMP SOIL AROUND ROOTS TO PREVENT AIR POCKETS.
 - PLANTINGS SHALL BE INSTALLED IN LIKE-KIND CLUSTERS OF 3.
 - SPREAD "WOODSTRAW" BACK AROUND EACH PLANTING, LEAVING A MIN. OF A 1" GAP, AS SHOWN OR AS DIRECTED BY THE ENGINEER.
 - APPLY REMAINING "WOOD STRAW (Regular Bale)" BALES AS DIRECTED BY THE ENGINEER.



CLEAR CREEK HABITAT RESTORATION
ACCESS ROAD REMOVAL FOR
IMPROVED WETLAND/FLOODPLAIN TIDAL INTERACTION

PLANTING PLAN

D228

SHEET **13** OF **14**

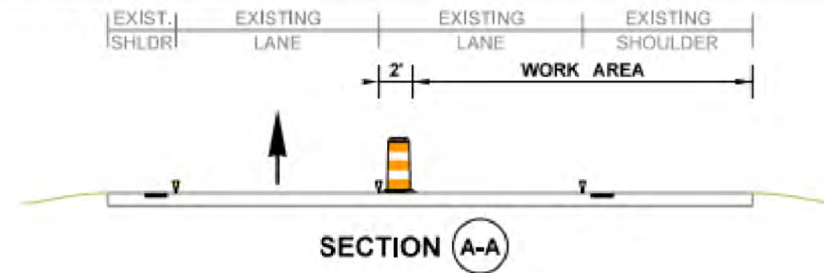
PCMS	
1	2
RIGHT LANE CLOSED	1.5 MILES AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1.5 +/-
MILES PRIOR TO
FIRST LANE CLOSURE
TAPER.

LOCATE PCMS PER
WSDOT STANDARD
SPEC. 1-10.3(3)C.

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50-75	40	80
45	30	60

SIGN SPACING ■ X (1)		
FREEWAYS & EXPRESSWAYS	50-75 MPH	1500' +/-
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS.		



SHOULDER CLOSURE		TAPER		LENGTH ■ L/3				
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65	70	75
6'	L/3 (feet)	90	120	120	120	160	160	160
10'		150	200	200	200	240	240	280

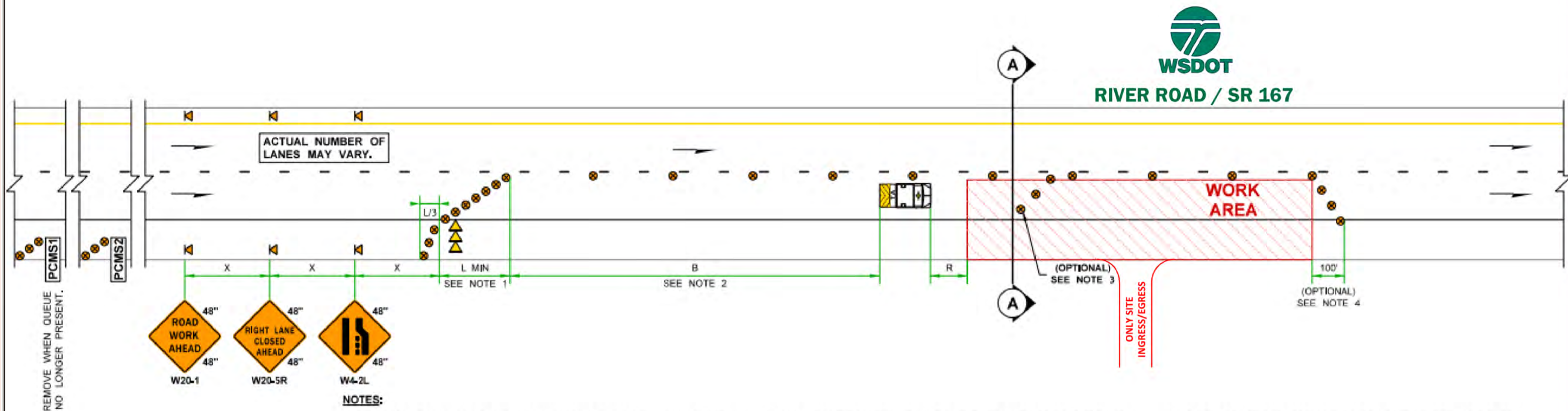
FOR SHOULDERS LESS THAN 6', USE 3 DEVICES MINIMUM

MINIMUM LANE CLOSURE TAPER LENGTH ■ L								
LANE WIDTH	SPEED (MPH)	45	50	55	60	65	70	75
12'	L (feet)	540	600	680	720	800	840	920

FOR RAMP DETAILS:
SEE TC107, SHEET 2 AND 3.

LONGITUDINAL BUFFER SPACE ■ B							
SPEED (MPH)	45	50	55	60	65	70	75
B (feet)	360	425	495	570	645	730	820

STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE ■ R			
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.		HOST VEHICLE WEIGHT 22,001+ lbs.	
45-55 MPH	60+ MPH	45-55 MPH	60+ MPH
123'	172'	100'	150'



1. IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.
2. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
3. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45° +/- AND 5' SPACING AT STRATEGIC LOCATIONS.
4. IF USED, REOPENING TAPER DEVICE SPACING IS 20'.

5. ADD "TRUCKS LEAVING HIGHWAY" AND "TRUCKS ENTERING HIGHWAY" (W21-30, 48"x48" 5' HEIGHT) SIGNS 500'-+ PRIOR TO WHERE CONSTRUCTION VEHICLES FREQUENTLY EXIT AND ENTER INTO THE OPEN LANE(S).
6. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
7. PLAN IS APPLICABLE TO LANE CLOSURES OF 3 DAYS OR LESS.

8. BICYCLES PROHIBITED THROUGH WORK ZONE; CONSIDER PROVIDING DETOUR, ALTERNATIVE ROUTE, OR SHUTTLE IN HIGH-USE LOCATIONS PERMITTING PERMANENT BICYCLE ACCESS.

LEGEND:

	TEMPORARY SIGN LOCATION
	TEMPORARY SIGN LOCATION (5' MIN HEIGHT)
	TRAFFIC SAFETY DRUM
	SEQUENTIAL ARROW SIGN
	TRANSPORTABLE ATTENUATOR
	PORTABLE CHANGEABLE MESSAGE SIGN

**FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE
(MAINTAIN EXISTING SPEED LIMIT)**

NOT TO SCALE

FILE NAME		C:\Users\Lintz\F\Desktop\Work_Zone_TCPs\107Fwy1R\Lane.dgn				REGION NO.		STATE		FED.AID PROJ.NO.	
TIME		12/30/48 PM				10		WASH			
DATE		8/10/2020									
PLOTTED BY		LintzF									
DESIGNED BY		HAAPALA & LINTZ						JOB NUMBER			
ENTERED BY		F. LINTZ									
CHECKED BY		S. HAAPALA									
PROJ. ENGR.											
REGIONAL ADM.		REVISION				DATE		BY		LOCATION NO.	

P.S. STAMP BOX DATE _____	P.S. STAMP BOX DATE _____



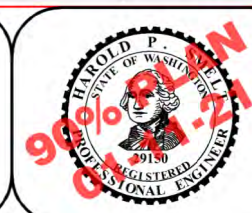
		Plot 1
		PLAN REF NO TC107
		SHEET 1 OF 3 SHEETS
TYPICAL TRAFFIC CONTROL PLANS		

DRAWING NO. See Side Stamp	SURVEYED BY: See Sheet 1					
DRAWN BY: Jeffrey Davidson	DATE SURVEYED: See Sheet 1					
DESIGNED BY: Jeffrey Davidson David Davis	BOOK NO. See Sheet 1					
CHECKED BY: Charlene Poggensee David Davis	DATE PLOTTED: See Side Stamp					
		NO.	DATE	REVISION	BY	APPROVED

Pierce County

DEPARTMENT OF PLANNING AND PUBLIC WORKS
SURFACE WATER MANAGEMENT
TACOMA MALL PLAZA BUILDING
2702 SOUTH 42nd STREET, SUITE 201
TACOMA, WA 98409-7322

APPROVED BY:
MELISSA MCFADDEN, P.E. ASSISTANT COUNTY ENGINEER – STORMWATER



CLEAR CREEK HABITAT RESTORATION

SUGGESTED TRAFFIC CONTROL PLAN

D228



Development Division
Real Estate Services Office
PO Box 47338
Olympia, WA 98504-7338
7345 Linderson Way SW
Tumwater, WA 98501-6504

TTY: 1-800-833-6388
www.wsdot.wa.gov

9/28/2021

Pierce County
ATTN: ROW DEPT/Kai Miller
2702 South 42nd Street, Suite 109
Tacoma, WA 98409

RE: IC# 3-27-16135

Dear: Kia Miller

The original recorded Deed from the State of Washington to you is enclosed for your records.

The instrument was recorded 9/17/2021, under Pierce County Auditor's File No. 202109170558

Please accept our thanks for your cooperation in this transaction.

Sincerely,

Greg Snelson
Property & Acquisition Specialist
Real Estate Services
(360) 709-8229
snelsog@wsdot.wa.gov

202109170558 RJOHNSO 4 PGS
09/17/2021 12:01:08 PM \$206.50
AUDITOR, Pierce County, WASHINGTON

AFTER RECORDING RETURN TO:

ATTN: REAL ESTATE SERVICES
DEPARTMENT OF TRANSPORTATION
P.O. BOX 47338
OLYMPIA, WA 98504-7338

Document Title: Quitclaim Deed
Reference Number of Related Document: N/A
Grantor: State of Washington, Department of Transportation
Grantee: Pierce County, Public Works
Legal Description: Ptn. Sec. 11, T. 20 N., R. 3 E., W.M.
Additional Legal Description is on Page 1 and 2 of document
Assessor's Tax Parcel Number: N/A Highway Right of Way

QUITCLAIM DEED

SR 167, Puyallup to Tacoma

The STATE OF WASHINGTON acting by and through its DEPARTMENT OF TRANSPORTATION, Grantor, for and in consideration of CONTINUED ROAD PURPOSES, hereby conveys and quitclaims unto PIERCE COUNTY, a Municipal Corporation and a political subdivision of the State of Washington, Grantee, all right, title, and interest in and to the following described real property situated in Pierce County, State of Washington:

All that portion of the hereinafter described tract of land situate in Section 11, Township 20 North, Range 3 East, Willamette Meridian, in Pierce County, Washington, described as PARCEL A, PARCEL B, PARCEL C, and PARCEL D, lying Southwesterly of the following described line:

BEGINNING at a point opposite Highway Engineer's Station (hereinafter referred to as HES) 338+50 on the SR 167 line survey of SR 167, PUYALLUP TO TACOMA, and 75 feet Southwesterly therefrom; thence Northwesterly parallel with said line survey to HES 342+00 thereon and the terminus of this line description.

PARCEL A:

That property acquired by Deed recorded May 24, 1933, in Volume 538 of Deeds, Page 120, under recording number 1085368, records of Pierce County, Washington.

PARCEL B:

That property acquired by Deed recorded Jun 22, 1933, in Volume 536 of Deeds, Page 379, under recording number 1087369, records of Pierce County, Washington.

PARCEL C:

That property acquired by Quitclaim Deed filed June 22, 1933, in Volume 536 of Deeds, Page 581, under recording number 1087371, records of Pierce County, Washington.

PARCEL D:

That property appropriated by Judgment and Decree in the Superior Court of the State of Washington for Pierce County, under cause No. 71614 on July 15, 1933, recorded July 20, 1933, in Volume 538 of Deeds, Page 335, under recording number 1089344, records of Pierce County, Washington, as revised by Order Correcting Description of said cause No. 71614 by said court, dated November 30, 1950, recorded in Volume 9, Pages 661 and 662, under recording number 1607528, records of said county.

The specific details concerning all of which are to be found on sheet 6 of 6 sheets of that certain plan entitled SR 167, PUYALLUP TO TACOMA, bearing date of approval October 13, 1931, as revised March 6, 2020, now of record and on file in the office of the Secretary of Transportation at Olympia, Washington.

Subject to all existing encumbrances, including easement, restrictions, and reservations, if any.

The Grantee herein, on behalf of itself and its successors or assigns, as part consideration paid herein, waives and/or releases Grantor from any past, present, or future claims for damages directly or indirectly caused by highway drainage or runoff, and further, Grantee, its successors or assigns, shall have no right of compensation for damages to the property herein conveyed caused directly or indirectly by highway drainage or runoff.

The Grantee herein, on behalf of itself and its successors or assigns, covenants and agrees that the above referenced property is transferred for road/street purposes only, and no other use shall be allowed. Should said property cease to be used for road/street purposes said ownership shall automatically revert to Grantor, and Grantee, its successors, or assigns agree to convey by deed the property to Grantor immediately upon Grantor's written notice to Grantee, its successors, or assigns. Further, Grantee, its successors or assigns shall release in the deed all Grantee's, successors' or assigns' interest in said property.

The Grantee, on behalf of themselves and its successors or assigns, as part consideration herein, do hereby agree to comply with all civil rights and anti-discrimination requirements of chapter 49.60 RCW as to the lands herein conveyed.

The lands herein described are not required for state highway purposes and are conveyed pursuant to the provisions of RCW 47.12.080.

Dated at Olympia, Washington, this 31 day of July, 2021.

STATE OF WASHINGTON,
DEPARTMENT OF TRANSPORTATION -
GRANTOR



Roger Millar, PE, FASCE, FAICP
Secretary of Transportation

APPROVED AS TO FORM:

By:

Mark Schumacher
Assistant Attorney General

APPROVED AS TO FORM ONLY:

Approved electronically via email 5/26/2021

Pierce County Deputy Prosecuting Attorney

ACCEPTED BY:

[Signature]
Pierce County Executive

STATE OF WASHINGTON)

) : ss

COUNTY OF THURSTON)

On this 31st day of July, 20____, before me personally appeared Roger Millar, known to me as the Secretary of Transportation, State of Washington, Department of Transportation, and executed the foregoing instrument, acknowledging said instrument to be the free and voluntary act and deed of the State of Washington, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument.

Given under my hand and official seal the day and year last above written.



Verna Wuertth
Notary (print name) Verna Wuertth
Notary Public in and for the State of Washington,
residing at Olympia
My Appointment Expires 6/1/25



August 20, 2021

Port of Tacoma

Subject: **Exhibit D - Clear Creek Floodgate Deficiencies List**

On May 12, 2021, a joint condition assessment of the Port of Tacoma's existing motorized floodgate was conducted. Maintenance and Operations staff from Pierce County PPW – Surface Water Management (Pierce County) and the Port of Tacoma (Port) evaluated the operation and function of the existing motorized slide gate, actuator motor, jack screw, and associated appurtenances. This inspection was completed per section 3.3 of the draft *Clear Creek Improvement Inter-Local Agreement* (Agreement).

Based on the results of the condition assessment Pierce County provides the following list of items we request the Port address prior to infrastructure transfer from the Port to Pierce County, per section 3.5 of the draft Agreement. This list includes:

1. Please provide verification that the motorized gate can be operated through the full range of the culvert opening ensuring the gate can be fully opened and fully closed.
 - It was observed the gate did not open completely stopping approximately 1.5' before the top of the culvert opening. It was stated that setting adjustments can be made to allow for full range of operation.
2. Please provide funds commensurate to replace the existing backup power generator in the amount of \$18,000.
 - It has been documented the existing generator is an older unit re-purposed and installed following damage to the original generator. Remaining service life is unknown.
 - Pierce County has received a quote (Attachment #1) in the amount of \$24,442 to provide a new and upgraded generator system. Pierce County is not seeking full replacement costs as some of the features represented in the quote are upgrades above what the current generator provides. We are seeking an approximate replacement cost that would provide equivalent function to the existing system.
3. Please provide funds commensurate to replace the existing actuator motor in the amount of \$7,000.

- It was stated the existing actuator motor had been manually rebuilt and parts for the existing unit cannot be acquired. Reliability and remaining service life are unknown.
 - Pierce County has received a quote for a replacement unit in the amount of \$7,361 (Attachment #2).
4. Please provide Power Utility Contact information and assist Pierce County in getting utility service and billing transferred.

In consideration of all future costs and liabilities transferring to Pierce County we believe the requests identified herein are fair and reasonable and support of our continued cooperation at Clear Creek.

Thank you for your consideration.



Date: July 12, 2021

To: Pierce County Surface Water Management

Attn: Mike Bacca

Reference: Flood Gate Backup Generator

Energy Systems is pleased to offer the following proposal:

SCOPE OF SUPPLY:

Quantity 1 - Generac Industrial diesel engine-driven generator set with turbocharged/aftercooled 4-cylinder 2.2L engine, consisting of the following features and accessories:

- Stationary Emergency-Standby rated
- 15 kW Rating, wired for 277/480 VAC three phase, 60 Hz
- Brushless Excitation
- Level 2 Acoustic Enclosure, Steel
 - Industrial Grey Baked-On Powder Coat Finish
- UL2200
- EPA Certified
- H-100 Control Panel
 - Meets NFPA 99 and 110 requirements
 - Temp Range -40 to 70 degrees C
 - Digital Microprocessor:
 - Two 4-line x 20 displays, full system status
 - 3 Phase sensing, +/-0.25% digital voltage regulation
 - RS232, RS485 and Canbus remote ports
 - Waterproof connections
 - All engine sensors are 4-20ma for minimal interference
 - Programmable I/O
 - Built-in PLC for special applications
 - Engine function monitoring and control:
 - Full range standby operation; programmable auto crank, Emergency Stop, Auto-Off-Manual switch
 - Isochronous Governor, +/-0.25% frequency regulation
 - Full system status on all AC output and engine function parameters
 - Service reminders, trending, fault history (alarm log)
 - I2T function for full generator protection
 - Selectable low-speed exercise
 - HTS transfer switch function monitoring and control
 - 2-wire start controls for any 2-wire transfer switch
- Remote Emergency Stop Switch, Surface-Mount, shipped loose
- 110 AH, 925 CCA Group 31 Battery, with rack, installed
- Standard MLCB, 80% rated thermal-magnetic
 - 25 Amp
- Air Filter Restriction Indicator

- Battery Charger, 10 Amp, NFPA 110 compliant, installed
- Coolant Heater, 1500W, 120VAC
- 24" 190 Gallon Double-Wall UL142 Basetank
 - External fill and vent
 - Mechanical fuel level indicator gauge
 - Electronic fuel level sender
 - Emergency Vent
 - Florida DEP-DERM, Fuel Drop Tube, Overfill Prevention Valve, Fill/Spill Return Hose
- 3 Owner's Manuals
- 120V GFI Receptacle and 240V Receptacle
- Alternator Strip Heaters
- Crankcase Oil Heater
- Engine Run Relay
- Water Barrier Kit
- 5-Year Comprehensive Warranty
- SD0015KG222.2D18HBL3

Quantity 1 - TRANSFER SWITCH - TX SERIES

- 100 Amp, 3 pole, 277/480 VAC three phase, 60 Hz, with 2-Wire Start Circuit
 - Utility Voltage Sensing Controls:
 - Adjustable Drop-out and Pick-up
 - Adjustable Utility Interrupt Delay
 - Adjustable Logic Controls:
 - Minimum Standby Voltage
 - Minimum Standby Frequency
 - Engine Warmup
 - Return to Utility
 - Engine Cooldown
 - Transfer on Exercise
- Enclosure Heater
- Double Set of Form C Auxiliary Contacts
- UL Listed 1008 by ETL
- Controller and Circuit Breaker Covers, Padlockable, Black
- NEMA 3R Enclosure
- 3 Owner's Manuals
- 35KA Contactor Withstand and Closing Rating
- Service Entrance Rated
- In Phase Only Transfer
- Five Year Extended Warranty
- TX301NS0100K3CH

Quantity 1 - TRANSFER SWITCH - TX SERIES

- 100 Amp, 3 pole, 277/480 VAC three phase, 60 Hz, with 2-Wire Start Circuit
 - Utility Voltage Sensing Controls:
 - Adjustable Drop-out and Pick-up
 - Adjustable Utility Interrupt Delay
 - Adjustable Logic Controls:
 - Minimum Standby Voltage
 - Minimum Standby Frequency
 - Engine Warmup
 - Return to Utility
 - Engine Cooldown
 - Transfer on Exercise
- Enclosure Heater
- Double Set of Form C Auxiliary Contacts

- UL Listed 1008 by ETL
- Controller Cover, Padlockable, Black
- NEMA 3R Enclosure
- 3 Owner's Manuals
- 35KA Contactor Withstand and Closing Rating
- Non Service Entrance Rated
- In Phase Only Transfer
- Five Year Extended Warranty
- TX301NN0100K3CH

Pricing:

Generator Pricing (Includes Freight and Startup)	\$ 24,442.00
SE Rated ATS Pricing (Includes Freight and Startup)	\$ 3,942.00
Non-SE Rated ATS Pricing (Includes Freight and Startup)	\$ 2,018.00

Optional Adders via change order:

• Fleet Monitoring System 4G LTE Hardware Installed	\$ 500.00
• Fleet Annual Subscription	\$ 240.00
• On-site Tank Testing	\$ 1,000.00

Shipping:

Estimated lead time from factory, excluding transit: 14-16 Weeks.

Scope Clarifications:

- If the Fleet 4G LTE Hardware option is selected, it will be installed by the during the startup. If a separate trip is required for installation, additional travel time will be required. The Fleet Monitoring Systyem will provide e-mail notifications to the customer for alarms and when service is needed. In the future, a customer accessible portal will be available.
- Estimated Submittal Lead time: 5-7 business days
- No equipment will be ordered without written release to proceed
- Pricing includes freight to site.
- If transfer switch needs to be shipped separately, additional freight charges will apply
- Installation, fueling and termination of connections not included. The Energy Systems provided start-up checklist and supporting pictures must be received by Supplier two weeks prior to technician scheduling.
- Installation and mounting of exhaust not included
- All industrial products require a formal start up by a Generac factory certified technician
- Pricing is based on work being completed during regular business hours
- Load bank (if included) is resistive load
- Training to be completed same day as start up. Additional charges will apply if a separate trip is required.
- Enclosure color is Generac Industrial grey. Custom colors can be quoted separately

- Not included: equipment offloading, installation, fuel, permits, signage, taxes, exhaust system backpressure test, exhaust emissions test, infrared scanning, NETA testing, harmonic testing, concrete pad, anchoring, fuel pipe, exhaust pipe, pipe insulation, Building communication integration, license fees.

Terms and Conditions:

1. Offer Validity: 45 days.
2. Credit is subject to approval by Energy Systems upon receipt of business credit application.
3. Manufacturer lead time to be confirmed upon approved release for production letter and receipt of a West Coast Energy Systems approved purchase order.
4. Equipment cannot be held by Energy Systems or its suppliers without prior written agreement.
5. Any sale of goods or services, and any extension of credit, is governed by and subject to West Coast Energy Systems' Terms and Conditions of Sales and Service ("Terms") located at <http://www.espowergen.com/terms> which is incorporated by reference. The Terms are subject to change at any time and you are advised to frequently re-review the Terms. Unless pursuant to a written agreement mutually executed by both parties, the Terms shall be binding upon the parties, and any other terms, communications or documents are to be disregarded and hereby expressly rejected.

Sincerely,

Kerry Nicolaus
West Coast Energy Systems
(209) 479-0413



Emerson Impact Partner

Quotation

**Date:** 7/9/2021**Attention:** Michael Dacca**Company:** PIERCE COUNTY UTILITY**Address:****Phone:** (253) 798-8954**Email:** michael.dacca@piercecounitywa.gov**Reference:** Electric Actuator Offerings for Large Hydro Gate Valve**Quote#:** EB22130**RFQ #:****From:** Emma Bykov**Phone:** (425) 487-9600**Email:** emma.bykov@pcepacific.com

PCE Pacific is pleased to offer the following quotation for your consideration. Please carefully review materials of construction, conditions of service and all details, including specifications stated or on attachments, to verify our understanding of your requirements. Product availability and quoted lead times are subject to change prior to sale.

Item	Description	Qty	Unit Price	Total Price	Lead Time to Ship
1	Bettis M2CP Actuator, PN: 3GNK-3 (460VAC / 3 Phase / 60Hz, 4-Train Geared Limit Switches, Submersible Rating - Type 6P/IP68 (20 ft Head / 3 Days), Local Indication Only) *Made Similar to Job# 43192A (Add Submersible Rating)	1	\$7,361.00	\$7,361.00	10 Weeks ARO
1 A	Bettis XTE3000 Actuator, PN: XE022-UJ0WB-WXE1XX-24A1XZ (XTE-040 (720Nm / 531 ft-lbs), 22 RPM, 3 Phase / 460V / 60Hz, On/Off, NEMA 4, 4X, 6 (50ft Submersion Depth for 90 Hours), Conduit Entries: 2 x 1" NPT, 1 x 1-1/2" NPT + 1 x 3/4" NPT, Internal 120VAC Transformer)	1	\$7,754.00	\$7,754.00	14 - 18 Weeks ARO

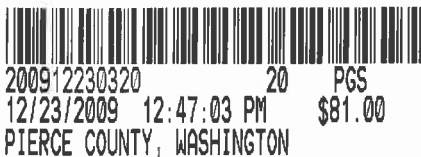
Shipping: Best Way Parcel**Delivery Terms:** FCA - Billed**Payment Terms:** Net 30**Pricing Valid:** 30 Days

A 3% convenience fee will be added for credit card payments

Please refer to quote #EB22130 on PO and address your order to:

PCE Pacific, Inc.
22011 26th Ave SE
Bothell, WA 98021 US
P (800) 321-4723 F (425) 487-1114

UNLESS PREVIOUSLY NEGOTIATED TERMS AND CONDITIONS OF SALE BETWEEN BOTH PARTIES APPLY, THIS PROPOSAL INCORPORATES HEREIN AND MAKES A PART HEREOF BY REFERENCE "PCE PACIFIC, INC. STANDARD TERMS AND CONDITIONS FOR THE SALE OF GOODS AND CONSULTING SERVICES" WHICH ARE AVAILABLE ON OUR WEBSITE AT <https://www.pcepacific.com/lp/pcetc/>. BY PURCHASING OR ACCEPTING DELIVERY OF GOODS OR CONSULTING SERVICES PURSUANT TO THIS PROPOSAL THE BUYER AGREES TO BE BOUND BY PCE PACIFIC, INC. STANDARD TERMS AND CONDITIONS FOR THE SALE OF GOODS AND CONSULTING SERVICES UNLESS OTHERWISE AGREED TO IN WRITING BY BOTH PARTIES



Filed for record at request of:
After recording return to:

Port of Tacoma
Real Estate Department
PO Box 1837
Tacoma WA 98401

**NOTICE OF CONSENT DECREE
(Sitcum Waterway)**

Grantor: Port of Tacoma
Grantee: The Public
Abbr. Legal Description: Ptn Blks 4, 5, 6, 7, 8, 9, 10, 16 and 16A, Tacoma Tidelands
Ptn Lot 67, Port of Tacoma Assessor's Tracts
Addl. Legal Description: Exhibit A, pages 3-10 of this document
Tax Parcel Nos.: 8950000181; 8950000121; 8950000050; 8950000092; 8950000061;
2275200620; 5000350671; 5000350672

Notice is hereby given that, pursuant to Section 122 of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9622 et seq., Grantor entered into a settlement agreement with the United States that is embodied in a Consent Decree and affects the property described in Exhibit A hereto and shown in Exhibit B hereto. The Consent Decree was entered on October 8, 1993 in the United States District Court for the Western District of Washington at Tacoma in the matter entitled *United States of America et al. v. Port of Tacoma*, Civil Action No. C93-5462 RJB. The Decree is entitled "Commencement Bay Nearshore/Tideflats Superfund Site; Sitcum Waterway Problem Area Consent Decree". The property described in Exhibit A is part of the "Site" and the "Sitcum Waterway Remediation Project" defined in the Consent Decree. The United States Environmental Protection Agency (EPA) selected a remedy for the Site on September 30, 1989, and further described the Sitcum Waterway Remediation Project in an Explanation of Significant Differences ("ESD") dated June 24, 1993. Grantor entered into the Consent Decree, which requires implementation of the remedy as provided in the Consent Decree. This Notice is recorded pursuant to Paragraph 9 (Notice of Obligations to Successors-in-Title), and Section X (Access), of the Consent Decree. The Record of Decision, ESD, related administrative record, and Consent Decree, are on file with EPA Region 10 or its successor agency, presently located at 1200 Sixth Avenue, Seattle, WA 98101.

Pursuant to Paragraph 9 (Notice of Obligations to Successors-in-Title) of the Consent Decree, Grantor hereby provides record notice of the Consent Decree, and the obligations set forth in the Consent Decree to provide access under Section X (Access) of the Consent Decree, to provide notice to EPA and the State of a proposed conveyance of any interest in the property, and to include a provision regarding notice of the Consent Decree, access, and notice of a proposed conveyance in each subsequent instrument conveying an interest in the property. A copy of the cover page, Paragraph 9 (Notice of Obligations to Successors-in-Title), and Section X (Access), of the Consent Decree are attached as Exhibit C hereto.

DATED: 16 December, 2009.

PORT OF TACOMA

By: 


Jack Hedge, Director,
Real Estate and Industrial Development

STATE OF WASHINGTON)
) ss.
COUNTY OF PIERCE)

On this 16 day of December, 2009, personally appeared before me the undersigned, a Notary Public, in and for the State of Washington, duly commissioned and sworn, JACK HEDGE, to me known to be the Director, Real Estate and Industrial Development, of the PORT OF TACOMA, a municipal corporation, that executed the foregoing instrument and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute the said instrument and that the seal affixed is the seal of said municipal corporation.

WITNESS MY HAND AND OFFICIAL SEAL hereto affixed the day and year first above written.




Printed Name: DERRICK HESTON
Notary Public in and for the State of WA
My appointment expires: 10-19-11

APPROVED AS TO FORM:


Counsel for Port of Tacoma

EXHIBIT A

Legal Description of Affected Property

Legal Description of Tax Parcel No. 8950000181:

PORTIONS OF BLOCKS 8, 9 AND 10, TACOMA TIDELANDS, ACCORDING TO THE OFFICIAL MAP THEREOF FILED IN THE OFFICE OF THE COMMISSIONER OF PUBLIC LANDS AT OLYMPIA, SEPTEMBER 3, 1895, AND THOSE PORTIONS OF VACATED STREETS AND AVENUES ABUTTING THEREON AND ATTACHED THERETO BY OPERATION OF LAW, AS VACATED BY CITY OF TACOMA ORDINANCE NO. 20168 AND RECORDED UNDER RECORDING NUMBER 2564340, DESCRIBED AS FOLLOWS:

COMMENCING AT A MONUMENT WHICH IS THE INTERSECTION OF EAST 11TH STREET AND SITCUM AVENUE (MILWAUKEE WAY) IN THE CITY OF TACOMA, PIERCE COUNTY, WASHINGTON; THENCE NORTH 31°11'25" WEST, 51.74 FEET TO THE NORTHWEST RIGHT OF WAY LINE OF 11TH STREET; THENCE SOUTH 43°53'39" WEST, 970.79 FEET ALONG SAID RIGHT OF WAY LINE; THENCE SOUTH 49°28'45" WEST, 247.87 FEET ALONG SAID RIGHT OF WAY LINE TO THE TRUE POINT OF BEGINNING; THENCE NORTH 75°22'23" WEST, 134.29 FEET; THENCE NORTH 52°40'34" WEST, 409.67 FEET; THENCE NORTH 32°21'10" WEST, 2970.00 FEET TO A POINT ON THE INNER HARBOR LINE; THENCE SOUTH 69°21'11" WEST, 304.33 FEET ALONG SAID INNER HARBOR LINE TO THE EASTERLY MARGIN OF THE PUYALLUP WATERWAY, WHICH MARGIN IS DESIGNATED A COMBINED PIERHEAD AND BULKHEAD LINE IN SHEET 3 OF 4 FILE NO. E-8-5-23.1 OF U.S. CORPS OF ENGINEERS DRAWING DATED AUGUST 23, 1950; THENCE ALONG SAID EASTERLY MARGIN OF THE PUYALLUP WATERWAY SOUTH 32°21'10" EAST, 3590.44 FEET TO THE NORTHWEST RIGHT OF WAY LINE OF EAST 11TH STREET; THENCE ALONG SAID RIGHT OF WAY LINE OF EAST 11TH STREET NORTH 49°28'45" EAST, 537.36 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPT ANY PORTION THEREOF LYING WITHIN THE PUYALLUP WATERWAY.

SITUATE IN THE CITY OF TACOMA, COUNTY OF PIERCE, STATE OF WASHINGTON.

EXHIBIT A

Legal Description of Affected Property

Legal Description of Tax Parcel No. 8950000121:

PORTIONS OF BLOCKS 7, 8 AND 10, TACOMA TIDELANDS, ACCORDING TO THE OFFICIAL MAP THEREOF FILED IN THE OFFICE OF THE COMMISSIONER OF PUBLIC LANDS AT OLYMPIA, SEPTEMBER 3, 1895, AND THOSE PORTIONS OF VACATED STREETS AND AVENUES ABUTTING THEREON AND ATTACHED THERETO BY OPERATION OF LAW, AS VACATED BY CITY OF TACOMA ORDINANCE NO. 20168 AND RECORDED UNDER RECORDING NUMBER 2564340, DESCRIBED AS FOLLOWS:

COMMENCING AT A MONUMENT WHICH IS THE INTERSECTION OF EAST 11TH STREET AND SITCUM AVENUE (MILWAUKEE WAY) IN THE CITY OF TACOMA, PIERCE COUNTY, WASHINGTON; THENCE NORTH 31°11'25" WEST, 51.74 FEET TO THE NORTHWEST RIGHT OF WAY LINE OF EAST 11TH STREET; THENCE SOUTH 43°53'39" WEST, 828.90 FEET ALONG SAID RIGHT OF WAY LINE TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 43°53'39" WEST, 141.88 FEET ALONG SAID RIGHT OF WAY LINE; THENCE SOUTH 49°28'45" WEST, 247.87 FEET ALONG SAID RIGHT OF WAY LINE; THENCE NORTH 75°22'23" WEST, 134.29 FEET; THENCE NORTH 52°40'34" WEST 409.67 FEET; THENCE NORTH 32°21'10" WEST, 2970 FEET TO THE INNER HARBOR LINE; THENCE NORTH 69°21'11" EAST, 303.48 FEET ALONG SAID INNER HARBOR LINE; THENCE NORTH 69°21'08" EAST, 295.07 FEET ALONG SAID INNER HARBOR LINE; THENCE NORTH 69°21'12" EAST, 111.47 FEET ALONG SAID INNER HARBOR LINE; THENCE SOUTH 31°22'50" EAST, 1260.23 FEET; THENCE SOUTH 29°56'30" EAST, 414.58 FEET; THENCE SOUTH 31°05'44" EAST, 398.18 FEET; THENCE SOUTH 30°15'22" EAST, 199.66 FEET; THENCE SOUTH 31°47'08" EAST, 199.68 FEET; THENCE SOUTH 30°04'46" EAST, 98.29 FEET; THENCE SOUTH 32°54'21" EAST, 99.32 FEET; THENCE SOUTH 28°17'33" EAST, 168.45 FEET; THENCE SOUTH 34°43'14" EAST, 215.17 FEET; THENCE SOUTH 27°39'51" EAST, 187.89 FEET TO THE TRUE POINT OF BEGINNING.

SITUATE IN THE CITY OF TACOMA, COUNTY OF PIERCE, STATE OF WASHINGTON.

EXHIBIT A

Legal Description of Affected Property

Legal Description of Tax Parcel No. 8950000050:

PORTIONS OF BLOCKS 4 AND 7, TACOMA TIDELANDS, ACCORDING TO THE OFFICIAL MAP THEREOF FILED IN THE OFFICE OF THE COMMISSIONER OF PUBLIC LANDS AT OLYMPIA, SEPTEMBER 3, 1895, TOGETHER WITH THOSE PORTIONS OF VACATED STREETS AND AVENUES ABUTTING THEREON AND ATTACHED THERETO BY OPERATION OF LAW, AS VACATED BY CITY OF TACOMA ORDINANCE NO. 20168 AND RECORDED UNDER RECORDING NUMBER 2564340, DESCRIBED AS FOLLOWS:

COMMENCING AT A MONUMENT WHICH IS THE INTERSECTION OF EAST 11TH STREET AND SITCUM AVENUE (MILWAUKEE WAY) IN THE CITY OF TACOMA, PIERCE COUNTY, WASHINGTON; THENCE NORTH 31°11'25" WEST, 51.74 FEET TO THE NORTHWEST RIGHT OF WAY LINE OF EAST 11TH STREET; THENCE SOUTH 43°53'39" WEST, 600.15 FEET ALONG SAID RIGHT OF WAY LINE TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 43°53'39" WEST, 228.75 FEET ALONG SAID RIGHT OF WAY LINE; THENCE NORTH 27°39'51" WEST, 187.89 FEET; THENCE NORTH 34°43'14" WEST, 215.17 FEET; THENCE NORTH 28°17'33" WEST, 168.45 FEET; THENCE NORTH 32°54'21" WEST, 99.32 FEET; THENCE NORTH 30°04'46" WEST, 98.29 FEET; THENCE NORTH 31°47'08" WEST, 199.68 FEET; THENCE NORTH 30°15'22" WEST, 199.66 FEET; THENCE NORTH 31°05'44" WEST, 398.18 FEET; THENCE NORTH 29°56'30" WEST, 414.58 FEET; THENCE NORTH 10°11'57" WEST, 280.29 FEET; THENCE NORTH 31°20'48" WEST, 436.76 FEET; THENCE NORTH 59°57'56" EAST, 32.96 FEET; THENCE NORTH 22°41'47" WEST, 324.90 FEET; THENCE NORTH 31°14'56" WEST, 206.84 FEET TO THE INNER HARBOR LINE; THENCE NORTH 69°21'12" EAST, 21.70 FEET ALONG SAID INNER HARBOR LINE; THENCE SOUTH 31°14'51" EAST, 3143.15 FEET TO THE TRUE POINT OF BEGINNING.

SITUATE IN THE CITY OF TACOMA, COUNTY OF PIERCE, STATE OF WASHINGTON.

EXHIBIT A

Legal Description of Affected Property

Legal Description of Tax Parcel No. 8950000092:

THAT PORTION OF BLOCK 7, TACOMA TIDELANDS, ACCORDING TO THE OFFICIAL MAP THEREOF FILED IN THE OFFICE OF THE COMMISSIONER OF PUBLIC LANDS AT OLYMPIA, SEPTEMBER 3, 1895, AND THOSE PORTIONS OF VACATED STREETS AND AVENUES ABUTTING THEREON AND ATTACHED THERETO BY OPERATION OF LAW, AS VACATED BY CITY OF TACOMA ORDINANCE NO. 20168 AND RECORDED UNDER RECORDING NUMBER 2564340, DESCRIBED AS FOLLOWS:

COMMENCING AT A MONUMENT WHICH IS THE INTERSECTION OF EAST 11TH STREET AND SITCUM AVENUE (MILWAUKEE WAY), IN THE CITY OF TACOMA, PIERCE COUNTY, WASHINGTON; THENCE NORTH 31°11'25" WEST, 51.74 FEET TO THE NORTHWEST RIGHT OF WAY LINE OF EAST 11 TH STREET; THENCE SOUTH 43°53'39" WEST, 600.15 FEET ALONG SAID RIGHT OF WAY LINE; THENCE NORTH 31°14'51" WEST, 3143.15 FEET TO THE INNER HARBOR LINE; THENCE SOUTH 69°21'12" WEST, 21.70 FEET ALONG SAID INNER HARBOR LINE TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 69°21'12" WEST, 187.29 FEET ALONG SAID INNER HARBOR LINE; THENCE SOUTH 31°22'50" EAST, 1260.23 FEET; THENCE NORTH 10°11'57" WEST, 280.29 FEET; THENCE NORTH 31°20'48" WEST, 436.76 FEET; THENCE NORTH 59°57'56" EAST, 32.96 FEET; THENCE NORTH 22°41'47" WEST, 324.90 FEET; THENCE NORTH 31°14'56" WEST, 206.84 FEET TO THE TRUE POINT OF BEGINNING.

SITUATE IN THE CITY OF TACOMA, COUNTY OF PIERCE, STATE OF WASHINGTON.

EXHIBIT A

Legal Description of Affected Property

Legal Description of Tax Parcel No. 8950000061:

THAT PORTION OF BLOCKS 4, 5 AND 6, TACOMA TIDELANDS, ACCORDING TO THE OFFICIAL MAP THEREOF FILED IN THE OFFICE OF THE COMMISSIONER OF PUBLIC LANDS AT OLYMPIA, SEPTEMBER 3, 1895, AND THOSE PORTIONS OF VACATED STREETS AND AVENUES ABUTTING THEREON AND ATTACHED THERETO BY OPERATION OF LAW, AS VACATED BY CITY OF TACOMA ORDINANCE NOS. 7634 AND 20168, AND RECORDED UNDER RECORDING NUMBERS 620706 AND 2564340, RESPECTIVELY, DESCRIBED AS FOLLOWS:

COMMENCING AT A MONUMENT WHICH IS THE INTERSECTION OF EAST 11TH STREET AND SITCUM AVENUE (MILWAUKEE WAY); THENCE NORTH $31^{\circ}11'25''$ WEST 51.74 FEET ALONG THE CENTERLINE OF SAID SITCUM AVENUE TO THE NORTHWEST RIGHT OF WAY LINE OF EAST 11TH STREET AND THE TRUE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH $43^{\circ}53'39''$ WEST, 600.15 FEET ALONG SAID RIGHT OF WAY LINE; THENCE NORTH $31^{\circ}14'51''$ WEST, 3143.15 FEET TO THE INNER HARBOR LINE; THENCE NORTH $69^{\circ}21'12''$ EAST ALONG SAID INNER HARBOR LINE 338.28 FEET TO THE MOST WESTERLY CORNER OF A TRACT OF LAND CONVEYED TO THE PORT OF TACOMA BY DEED RECORDED UNDER RECORDING NUMBER 731315; THENCE SOUTH $40^{\circ}49'38''$ EAST ALONG THE WESTERLY LINE OF SAID PORT OF TACOMA TRACT AND ALONG THE EASTERLY LINE OF A TRACT OF LAND CONVEYED BY DEED RECORDED UNDER RECORDING NUMBER 721735, A DISTANCE OF 2864.79 FEET TO THE SAID NORTHWEST RIGHT OF WAY LINE OF EAST 11TH STREET; THENCE SOUTH $43^{\circ}53'39''$ WEST ALONG SAID RIGHT OF WAY LINE 237.05 FEET TO AN ANGLE POINT IN SAID LINE; THENCE SOUTH $31^{\circ}11'25''$ EAST 41.39 FEET TO THE TRUE POINT OF BEGINNING.

SITUATE IN THE CITY OF TACOMA, COUNTY OF PIERCE, STATE OF WASHINGTON.

EXHIBIT A

Legal Description of Affected Property

Legal Description of Tax Parcel No. 2275200620:

BLOCKS 16 AND 16A, TACOMA TIDELANDS, ACCORDING TO THE OFFICIAL MAP THEREOF FILED IN THE OFFICE OF THE COMMISSIONER OF PUBLIC LANDS AT OLYMPIA, SEPTEMBER 3, 1895, AND THOSE PORTIONS OF VACATED STREETS AND AVENUES ABUTTING THEREON AND ATTACHED THERETO BY OPERATION OF LAW, AS VACATED BY CITY OF TACOMA ORDINANCE NO. 7634 AND RECORDED UNDER RECORDING NUMBER 620706.

EXCEPT THAT PORTION THEREOF CONVEYED TO THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY BY WARRANTY DEED RECORDED AUGUST 14, 1924 UNDER RECORDING NUMBER 721735.

ALSO EXCEPT ANY PORTION THEREOF CONVEYED BY WARRANTY DEED RECORDED JULY 30, 1974 UNDER RECORDING NUMBER 2564426.

SITUATE IN THE CITY OF TACOMA, COUNTY OF PIERCE, STATE OF WASHINGTON.

EXHIBIT A

Legal Description of Affected Property

Legal Description of Tax Parcel No. 5000350671:

THAT PORTION OF LOT 67, PORT OF TACOMA ASSESSOR'S TRACTS, LYING WITHIN THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER AND THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 20 NORTH, RANGE 3 EAST OF THE WILLAMETTE MERIDIAN, LYING WITHIN THE CITY OF TACOMA AND DESCRIBED AS FOLLOWS:

TRACT 12, INDIAN ADDITION, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 7 OF PLATS, PAGES 30 AND 31, RECORDS OF PIERCE COUNTY AUDITOR, LYING EAST OF TACOMA-PUYALLUP COUNTY ROAD, AND TRACTS 13 AND 14 OF SAID INDIAN ADDITION, LYING EAST OF THE NORTHERN PACIFIC RAILROAD RIGHT OF WAY.

TOGETHER WITH THAT PORTION OF GOVERNMENT LOT 4 OF SAID SECTION LYING SOUTHWESTERLY OF PRIMARY STATE HIGHWAY NO. 5 AND LYING BETWEEN THE EASTERLY MEANDER LINE OF THE OLD CHANNEL OF THE PUYALLUP RIVER AND THE WEST LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION;

ALSO TOGETHER WITH ALL THAT PORTION OF THE ABANDONED CHANNEL OF THE PUYALLUP RIVER WITHIN THE GOVERNMENT MEANDER LINE LYING EAST OF THE EAST LINE OF TRACTS 12 AND 13 OF SAID INDIAN ADDITION AND WEST OF THE NORTH-SOUTH 1/16 LINE.

EXCEPT THE RIGHT OF WAY FOR CLEAR CREEK CHANNEL.

SITUATE IN THE CITY OF TACOMA, COUNTY OF PIERCE, STATE OF WASHINGTON.

EXHIBIT A

Legal Description of Affected Property

Legal Description of Tax Parcel No. 5000350672:

THAT PORTION OF LOT 67, PORT OF TACOMA ASSESSOR'S TRACTS, LYING WITHIN THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER AND THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 20 NORTH, RANGE 3 EAST OF THE WILLAMETTE MERIDIAN, LYING OUTSIDE OF THE CITY OF TACOMA AND DESCRIBED AS FOLLOWS:

BEGINNING 417.18 FEET SOUTH OF THE NORTHWEST CORNER OF GOVERNMENT LOT 7; THENCE SOUTHERLY AND SOUTHEASTERLY ALONG THE CENTERLINE OF CLEAR CREEK CHANNEL TO A POINT 384 FEET WEST OF THE EAST LINE OF THE SAID SOUTHWEST QUARTER; THENCE SOUTH 20 FEET, MORE OR LESS, TO THE NORTH RIGHT OF WAY LINE OF THE NORTHERN PACIFIC RAILROAD; THENCE NORTHERLY AND WESTERLY ALONG SAID RIGHT OF WAY 968 FEET TO THE SOUTH LINE OF GOVERNMENT LOT 6; THENCE WEST ALONG SAID SOUTH LINE 121.91 FEET TO THE SOUTHWEST CORNER OF SAID LOT 6; THENCE NORTH ALONG THE WEST LINE OF SAID LOT 6 901.38 FEET TO THE POINT OF BEGINNING.

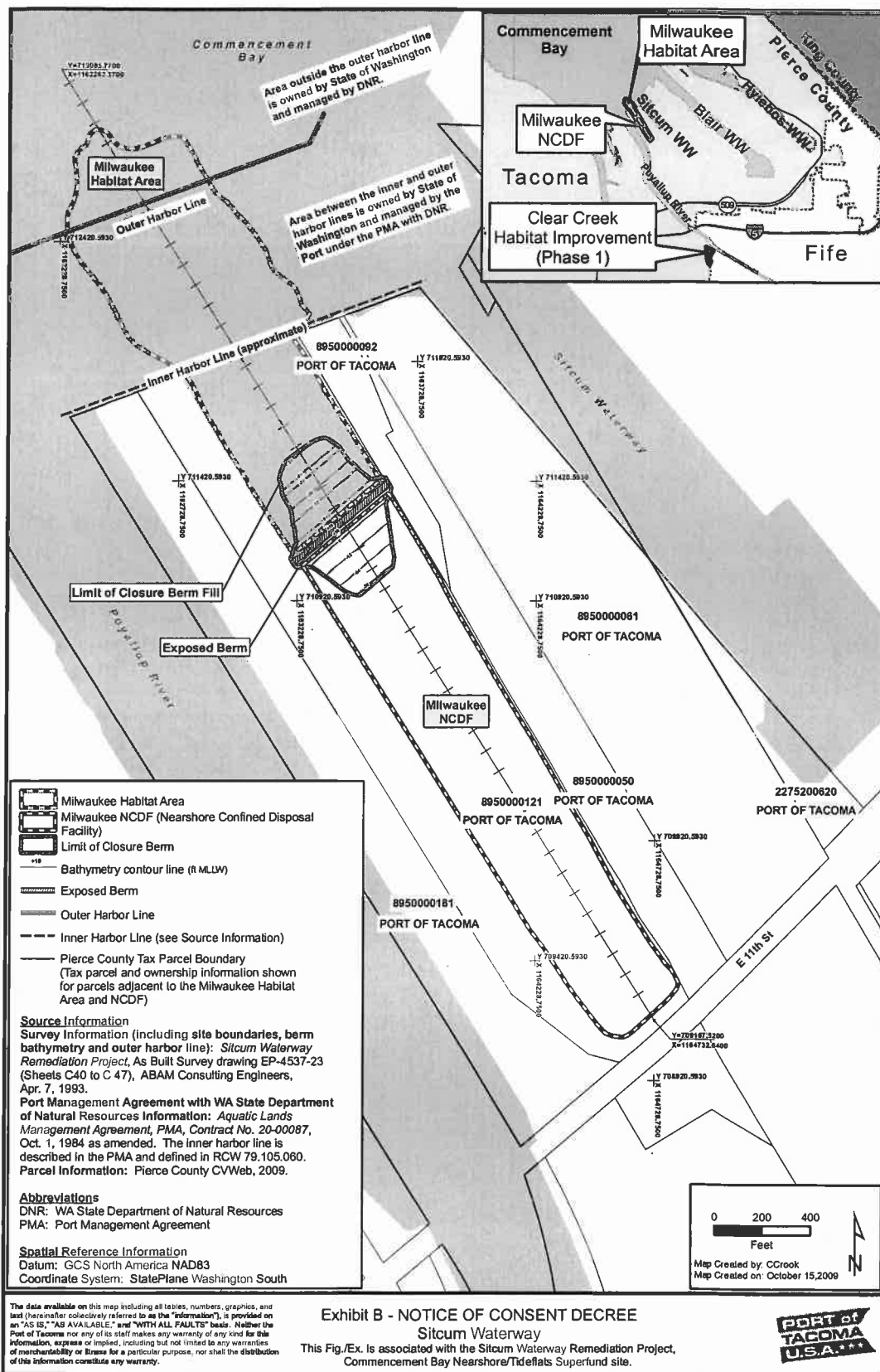
EXCEPT THE NORTHERN PACIFIC RAILROAD RIGHT OF WAY.

TOGETHER WITH THE FOLLOWING DESCRIBED PROPERTY:

BEGINNING AT THE NORTHWEST CORNER OF SAID GOVERNMENT LOT 7; THENCE EAST ON THE NORTH LINE OF SAID LOT 7 TO THE WESTERLY RIGHT OF WAY LINE OF CLEAR CREEK CHANNEL; THENCE SOUTH 28°56'50" WEST TO THE WESTERLY LINE OF SAID LOT 7; THENCE NORTH ON SAID WEST LINE TO THE POINT OF BEGINNING.

ALSO TOGETHER WITH THAT PORTION OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION LYING SOUTHWESTERLY OF PRIMARY STATE HIGHWAY NO. 5 AND NORTHWESTERLY OF CLEAR CREEK CHANNEL.

SITUATE IN THE COUNTY OF PIERCE, STATE OF WASHINGTON.



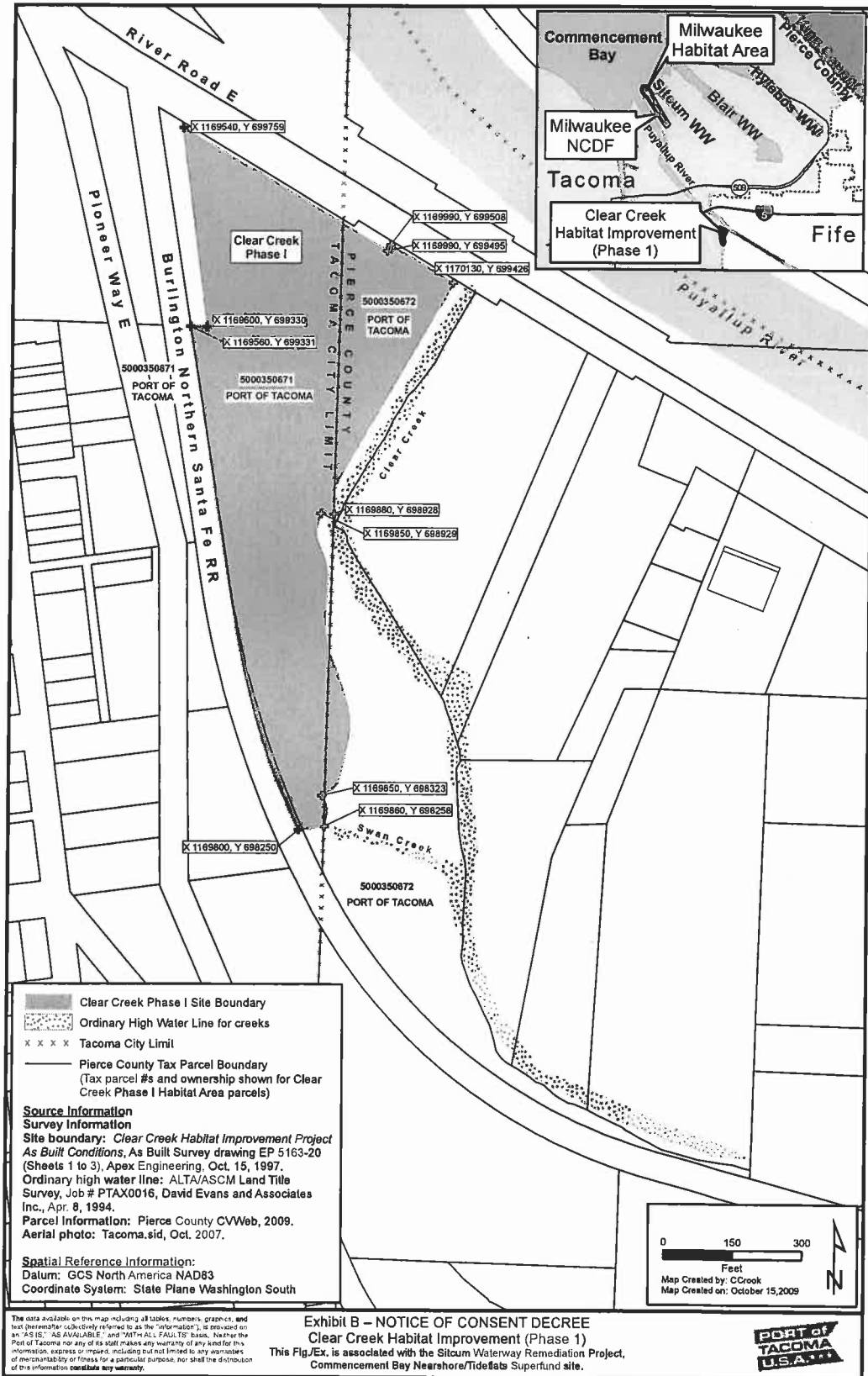


EXHIBIT C

Cover Page, Paragraph 9, and Section X of Consent Decree

**Auditor's notation
to facilitate
scanning process**

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AUG 17 1993

FILED RECEIVED
OCT - 8 1993
CLERK U.S. DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON AT TACOMA
DEPUTY

FILED ENTERED
LODGED RECEIVED
AUG 16 1993
AT SEATTLE
CLERK U.S. DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
DEPUTY

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WASHINGTON

UNITED STATES OF AMERICA,
ON BEHALF OF THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
THE UNITED STATES DEPARTMENT OF
THE INTERIOR, AND THE NATIONAL
OCEANIC AND ATMOSPHERIC
ADMINISTRATION;
STATE OF WASHINGTON;
PUYALLUP TRIBE OF INDIANS;
MUCKLESHOOT INDIAN TRIBE;

Plaintiffs,

v.

PORT OF TACOMA

Defendant

OCT 8 1993

C93-5462

Civil No.

COMMENCEMENT BAY
NEARSHORE/TIDEFLATS
SUPERFUND SITE; SITCUM
WATERWAY PROBLEM AREA
CONSENT DECREE

SITCUM WATERWAY
CONSENT DECREE

Thomas W. Swegle
WA Bar Number 15667
U.S. Department of Justice
Env't. Enforcement, P.O. Box 7611
Washington, D.C. 20044
(202) 514-3143

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1 submitted timely and complete applications, (2) took all other
2 actions necessary to obtain all such permits or approvals, and
3 (3) took no action, either directly or indirectly, to challenge,
4 appeal or delay the issuance of a permit if the permit activity
5 is substantially consistent with the Remedial Design for Work
6 approved under this Consent Decree or the AOC.

7 c. This Consent Decree is not, and shall not be
8 construed to be, a permit issued pursuant to any federal or state
9 statute or regulation.

10 9. Notice of Obligations to Successors-in-Title

11 a. Within fifteen (15) days after the entry of this
12 Consent Decree, the Settling Defendant shall record a certified
13 copy of this Consent Decree with the Registry of Deeds, Pierce
14 County, State of Washington. Thereafter, each deed, title, or
15 other instrument conveying an interest in the property included
16 in the Sitcum Waterway Remediation Project shall contain a notice
17 stating that the property is subject to this Consent Decree and
18 shall reference the recorded location of the Consent Decree and
19 any restrictions applicable to the property under this Consent
20 Decree.

21 b. The obligations of the Settling Defendant with
22 respect to the provision of access under Section X (Access) and
23 the implementation of institutional controls shall be binding
24 upon the Settling Defendant and any and all persons who

25
26 Thomas W. Swagle
27 WA Bar Number 15667
28 SITCUM WATERWAY U.S. Department of Justice
CONSENT DECREE - PAGE 24 Env't. Enforcement, P.O. Box 7611
Washington, D.C. 20044
(202) 514-3143

1 subsequently acquire any such interest or portion thereof
2 (hereinafter "Successors-in-Title"). Within 15 days after the
3 entry of this Consent Decree, Settling Defendant shall record at
4 the Registry of Deeds a notice of obligation to provide access
5 under Section X (Access) and related covenants. Each subsequent
6 instrument conveying an interest to any such property included in
7 the Sitcum Waterway Remediation Project shall reference the
8 recorded location of such notice and covenants applicable to the
9 property.

10 c. The Settling Defendant and any Successor-in-Title
11 shall, at least thirty (30) days prior to the conveyance of any
12 such interest, give written notice of this Consent Decree to the
13 grantee and written notice to EPA and the State of the proposed
14 conveyance, including the name and address of the grantee, and
15 the date on which notice of the Consent Decree was given to the
16 grantee. In the event of any such conveyance, the Settling
17 Defendant's obligations under this Consent Decree, including
18 their obligations to provide or secure access pursuant to Section
19 X, shall continue to be met by the Settling Defendant. In
20 addition, if the United States approves, the grantee may perform
21 some or all of the Work under this Consent Decree. In no event
22 shall the conveyance of an interest in property that includes, or
23 is a portion of, the Sitcum Waterway Remediation Project area

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SITCUM WATERWAY
CONSENT DECREE - PAGE 25

Thomas W. Swegle
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1 release or otherwise affect the liability of the Settling
2 Defendant to comply with the Consent Decree.

3 VI. PERFORMANCE OF THE WORK BY SETTLING DEFENDANT

4 10. Selection of Supervising Contractor.

5 a. All aspects of the Work to be performed by Settling
6 Defendant pursuant to Sections VI (Performance of the Work by
7 Settling Defendant), VII (Additional Response Actions), VIII
8 (U.S. EPA Periodic Review), and IX (Quality Assurance, Sampling
9 and Data Analysis) of this Consent Decree shall be under the
10 direction and supervision of the Supervising Contractor, the
11 selection of which shall be subject to disapproval by EPA.
12 Within ten (10) days after the lodging of this Consent Decree,
13 Settling Defendant shall notify EPA in writing of the name,
14 title, and qualifications of any contractor proposed to be the
15 Supervising Contractor. EPA will issue a notice of disapproval
16 or an authorization to proceed. If at any time thereafter,
17 Settling Defendant proposes to change a Supervising Contractor,
18 Settling Defendant shall give such notice to EPA and must obtain
19 an authorization to proceed from EPA before the new Supervising
20 Contractor performs, directs, or supervises any Work under this
21 Consent Decree.

22 b. If EPA disapproves a proposed Supervising Contractor,
23 EPA will notify the Settling Defendant in writing. Settling
24 Defendant shall submit to EPA a list of contractors, including

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28 SITCUM WATERWAY
CONSENT DECREE - PAGE 26

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WA Bar Number 15667
U.S. Department of Justice
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Washington, D.C. 20044
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1 otherwise. Upon request, the United States or the Natural
2 Resource Trustees will provide the Settling Defendant the results
3 of all sampling and/or tests or other data obtained or generated
4 pursuant to Paragraph 25.

5 27. Notwithstanding any provision of this Consent Decree, the
6 United States and the Natural Resource Trustees hereby retain all
7 information gathering and inspection authorities and rights,
8 including enforcement actions related thereto, that they may have
9 under CERCLA, CWA, RCRA, Chapter 70.105D RCW, and any other
10 applicable statutes or regulations.

11 X. ACCESS

12 28. Commencing upon the effective date of this Consent
13 Decree, the Settling Defendant agrees to provide the United
14 States, the Natural Resource Trustees, and their representatives,
15 including EPA and its contractors, access to the Sitcum Waterway
16 Remediation Project area and any other property to which access
17 is required for the implementation of this Consent Decree, to the
18 extent access to the property is controlled by Settling
19 Defendant, for the purposes of conducting any activity related to
20 this Consent Decree including, but not limited to:

- 21 a. Monitoring the Work;
22 b. Verifying any data or information submitted to the
23 United States;

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27 SITCUM WATERWAY
28 CONSENT DECREE - PAGE 40

Thomas W. Swegle
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- 1 c. Conducting investigations relating to contamination
2 at or near the Sitcum Waterway Remediation Project;
3 d. Obtaining samples;
4 e. Assessing the need for, planning, or implementing
5 additional response actions at or near the Sitcum Waterway
6 Remediation Project area;
7 f. Inspecting and copying records, operating logs,
8 contracts, or other documents maintained or generated by Settling
9 Defendant or its agents, consistent with Section XXV; and
10 g. Assessing Settling Defendant's compliance with this
11 Consent Decree.

12 Where determined feasible by EPA and the Natural Resource
13 Trustees in their unreviewable discretion, EPA and the Natural
14 Resource Trustees shall give notice prior to access and agree to
15 abide by all health and safety requirements.

16 29. To the extent that the Sitcum Waterway Remediation
17 Project or any other property to which access is required for the
18 implementation of this Consent Decree is owned or controlled by
19 persons other than Settling Defendant, Settling Defendant shall
20 use best efforts to secure from such persons access for Settling
21 Defendant, as well as for the United States, the State, and the
22 Natural Resource Trustees and their representatives, including,
23 but not limited to, their contractors, as necessary to effectuate
24 this Consent Decree. For purposes of this Paragraph "best

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SITCUM WATERWAY
CONSENT DECREE - PAGE 41

Thomas W. Swegle
WA Bar Number 15667
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Washington, D.C. 20044
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1 efforts" includes the payment of reasonable sums of money in
2 consideration of access. If any access required to complete the
3 work is not obtained within forty-five (45) days of the effective
4 date of this Consent Decree, or within forty-five (45) days of
5 the date EPA notifies the Settling Defendant in writing that
6 additional access beyond that previously secured is necessary,
7 Settling Defendant shall promptly notify the United States, and
8 shall include in that notification a summary of the steps
9 Settling Defendant has taken to attempt to obtain access. The
10 United States or the Natural Resource Trustees may, as they deem
11 appropriate, assist Settling Defendant in obtaining access.
12 Settling Defendant shall reimburse the United States or the
13 Natural Resource Trustees, in accordance with the procedures in
14 Section XVII (Reimbursement of Response Costs), for all costs
15 incurred by the United States or the Natural Resource Trustees in
16 obtaining access.

17 30. Notwithstanding any provision of this Consent Decree, the
18 United States and the Natural Resource Trustees retain all access
19 authorities and rights, including enforcement authorities related
20 thereto, that they may have under CERCLA, CWA, RCRA and any other
21 applicable statute or regulations.

22 XI. REPORTING REQUIREMENTS

23 31. In addition to any other requirement of this Consent
24 Decree, Settling Defendant shall submit to EPA and the State four

25
26
27 SITCUM WATERWAY
28 CONSENT DECREE - PAGE 42

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Clear Creek Habitat Restoration -Lower Access Road Removal Monitoring Plan

Pierce County PPW-Surface Water Management



Figure 1: Aerial overview of the Clear Creek channel and Port of Tacoma Mitigation wetland complex (Photo: Port of Tacoma)

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FINAL DRAFT

Intent of Document

The purpose of this document is to outline monitoring procedures that will ensure the habitat benefits of the project, as well as the Port of Tacoma mitigation wetland is preserved. Long-term success of these objectives relies on strong cooperation between Pierce County Planning and Public Works – Surface Water Management (Pierce County) and the Port of Tacoma (Port). This document also identifies roles and responsibilities for each party and is included as ‘Exhibit F’ to the *Clear Creek Improvement Inter-Local Agreement* entered by both parties solidifying the partnership on this project.

This project seeks to supplement and enhance the existing habitat benefits provided by the Port’s mitigation wetlands. As such this monitoring plan is not intended to replace or supersede the Port’s existing obligations to the EPA regarding wetland mitigation. Rather, this document seeks to compliment the Port’s Long-Term Monitoring Plan (citation) and their decades of effort at this site. All elevations described herein are in datum NAVD88.

A summary of key elements include:

- Contingent on receiving funding from the Commencement Bay National Resource Trustees (Trustees) Grant, Pierce County in collaboration with the Port of Tacoma, will construct a habitat enhancement project that removes portions of an existing access road to increase hydraulic connectivity between Clear Creek and a Port of Tacoma wetland mitigation site.
- Pierce County will receive temporary construction and Right-of Entry Agreements from the Port to facilitate construction and post construction monitoring activities described herein.
- Pierce County has acquired a narrow strip of Right-of-Way from Washington State Department of Transportation (WSDOT) that conveys Clear Creek under SR-167. This property shares a common boundary along the northeastern side of the Port’s Phase 1 mitigation site. Pierce County will work to acquire a Conservation Covenant on this property.
- Pierce County will extensively monitor the constructed project elements for a period of 5-years. The objective is to demonstrate the design elements are stable requiring only periodic monitoring and minimal maintenance thereafter. In addition, this 5-year period will demonstrate the existing wetland function remains viable, if not improved.
- Pierce County will be responsible to perform all monitoring, reporting, adaptive management actions according to the performance criteria described herein, and

communication with the with Trustees through the duration of the 5-year monitoring period. All of which to be done in close coordination with the Port.

- Following conclusion of the 5-year post construction monitoring period the project elements including hydraulic connections (bellies) and established vegetation will be incorporated into the overall Port of Tacoma mitigation site to be qualitatively monitored, maintained, and stewarded by the Port of Tacoma in perpetuity, or until a larger habitat beneficial project is initiated, subject to advanced approval by the Trustees.
- In addition to long-standing commitments from each party to see habitat improvements implemented in Clear Creek, project elements will be preserved through Environmental Covenants established upon the Port's Phase 1 and Phase 2 mitigation sites per Consent Decrees entered between Port of Tacoma and the Environmental Protection Agency (EPA).

Management Agreement

The intent of the project design is to create a stable habitat enhancement that can be demonstrated at the conclusion of the 5-year monitoring period. Pierce County believes a 5-year post construction monitoring term is sufficient to document the effectiveness and long-term sustainability of project goals. Key focus areas include establishing hydraulic connections that improve fish access opportunities, establishing and enhancing riparian and wetland vegetation communities, and invasive species control.

A 5-year monitoring period will begin after physical completion of the project and acceptance of the as-built conditions by both Pierce County and Port staff. During this period Pierce County will be responsible for the areas within the project limits to manage vegetation, including invasive species, hydraulic connectivity between the wetland and Clear Creek, and general monitoring of the project elements. The purpose is to ensure the project is functioning as designed, and that the Port's wetland has not been negatively impacted. Wetland hydrology should not be altered in such a way as to cause the wetland to cease or decrease in size, thus cause the Port of Tacoma to be out of compliance of the Consent Decrees associated with Phase 1 and Phase 2 of the Lower Clear Creek wetland mitigation site (1993, 2005). Pierce County will monitor areas directly impacted by their project activities, such as the access road and wetland areas directly adjacent to the access road as shown in figure 5. Areas outside of the project impact area will remain the responsibility of Port of Tacoma to monitor and maintain.

All maintenance work associated with project elements within the limits of the impact area will be the responsibility of Pierce County until the expiration of the 5-year monitoring period. The Port will be responsible to address human occupation and/or illegal dumping on their property

throughout the monitoring period. Pierce County will address dumping and/or debris removal in the Clear Creek channel on their property. Pierce County will work in close coordination and in good faith with Port of Tacoma staff for all monitoring activity, and any changes and/or adaptive management work necessary through the duration of the 5-year monitoring period. Following the conclusion of the 5-year monitoring period all monitoring, maintenance, and stewardship responsibilities of project elements will revert to the Port of Tacoma's exclusive control, as described in the Inter-Local Agreement (2022x). The entire site, including project elements will be managed consistent with their overall Lower Clear Creek Habitat Improvement Project Plan (1995b) and the Port of Tacoma Long-Term Monitoring and Maintenance Plan (LTMP).

Following the 5-year monitoring period and the conclusion of Pierce County's initial roll on the site Pierce County will continue to collaborate with the Port, as needed and upon request, to ensure the habitat goals and wetland function are sustained.

Project Background

Clear Creek Habitat Restoration Project (Access Road Removal), project number D228 & Clear Creek Flood Gate Retrofit Project, project number D227, are being developed by Pierce County Surface Water Management in cooperation with the Port of Tacoma. Construction funding is provided by a grant from the Trustees with an overarching goal to create an ecological benefit to off-channel areas tributary to Commencement Bay. This project increases fish life access to existing habitat within the Clear Creek basin consistent with the restoration objectives of the Trustees.

The purpose of the Clear Creek Habitat Restoration Project is to enhance salmon habitat in the Clear Creek basin by increasing interaction between an existing Port of Tacoma mitigation wetland and the Clear Creek main channel. This project proposes to increase hydraulic connectivity, enhance fish use between Clear Creek and the adjoining wetland, and remove fill from the Clear Creek floodplain through the elimination of an existing access road. This road currently acts as a barrier between the wetland and Clear Creek (figure 3). The project includes completely removing the road prism at six strategic locations create "bellies" (figure 4). These bellies allow water movement back and forth that was otherwise prevented by the access road. The project also includes the incorporation of large woody debris, habitat brush piles, and the installation and maintenance of native plantings.

Project Location

The project is located in the lower reach of Clear Creek, approximately 0.15 miles from the confluence with the Puyallup River. This project area is within a Port of Tacoma wetland mitigation site. The majority of proposed project elements lie within un-incorporated Pierce County. The Pierce County/City of Tacoma boundary bisects the overall property immediately to the west of the project limits. The approximately 9.5-acre Port of Tacoma mitigation wetland is located just upstream of a double box culvert, flood gate(s) and trash rack/debris barrier. The culvert under SR167/River Road connects Clear Creek to the Puyallup

River. A compacted gravel access road runs parallel to Clear Creek and served as a construction and monitoring access for the mitigation wetland.

Project Design

The six lowered bellies in the access road are designed and located in such a way as to disturb the fewest number of mature trees preserving shading opportunities, while still providing the maximum feasible amount of fill removal and hydrologic connectivity. In areas where the access road is removed or regraded, large woody debris will be installed to interact with the water and provide edge complexity along Clear Creek, habitat brush piles will be installed above the ordinary high-water mark (OHWM), and native plantings will be installed where appropriate.

The belly sections are also designed to include an anchored grade control log at the apex that serves to maintain minimum water surface elevations in the wetland. Given the hydrologic conditions encountered at the site the design intends for a dynamic cycle of sediment deposition and scour to naturally occur at the bellies. The belly profile grade is designed with a two-directional slope and erosion resilient materials intended to minimize sediment deposition and resist scour.

Currently, water surface elevation in the mitigation wetland is controlled by the top step of an engineered step-pool fishway. The overflow height of the top step is approximately elevation 8.5'. Nested within that top step is a notched weir at elevation 7.2'. This notch works to control and maintain minimum water surface elevations within the wetland and allow a steady outflow from the wetland in between tidal cycles. Currently, this fishway provides the only location for fish to access the rearing and refugia opportunities provided by the wetland. The fishway also serves as the only pathway during normal flow periods, for the wetland to fill and empty (Figure 2). The fishway becomes overtopped during high tides and/or high Puyallup River flows. Mean high tidal elevation is approximately 9.2'. Following hydraulic analysis using HEC-RAS 2D modeling software each of the four lower belly sections were designed with a grade control elevation of 7.8'. This elevation was determined to maximize opportunity for fish passage while maintaining existing hydrologic characteristics of the wetland. A primary benefit of the bellies is to provide additional opportunities for fish access to the wetland and increase water exchange above what currently exists through the fishway. Two additional higher bellies were designed to elevation 10.5', which correlates approximately to the OHWM within Clear Creek. These two additional bellies provide connection opportunity during high-water events and are not intended to be engaged during normal tidal interaction.

Since the grade control elevation of the bellies is higher than the elevation of the notch in the uppermost weir, minimum water surface elevations in the wetland should not be significantly altered, thereby ensuring wetland hydrology will not be negatively impacted. This also preserves the existing wetland acreage and vegetation.

This area is within the tidal influence of Commencement Bay and Puget Sound. Currently, there is no existing data to determine if the salt wedge enters the project site. Watershed partners

are currently working on expanding previous studies (Ebberts 2002) to evaluate the extent of saltwater exchange in the lower Puyallup river. However, saltwater is not expected to reach the site with high frequency or duration based on vegetation types present.

Pre-Construction Site Conditions

This project will take place primarily on Port of Tacoma owned parcels; # 5000350672 and # 5000350671. There is narrow strip of Right-of-Way on the northeast end of the project site that conveys Clear Creek, not owned by the Port. This property, parcel # 0320113081, is approximately 80-feet wide and 320-feet long and abuts portions of the access road and Port of Tacoma property. This property was deeded to Pierce County from WSDOT. As mentioned above an Environmental Covenant has been established on Port property protecting the wetland mitigation site from non-habitat related development or alterations.

In the pre-construction condition the Clear Creek channel is separated from the Port's wetland by an elevated access road with an approximate top elevation of 15.5'. At the north end there is a 12-foot-wide concrete bridge crossing connecting the creek with the fishway and the wetland.



Figure 2: View of the fishway facing west from the access road at the 12-foot-wide concrete bridge crossing. The fishway is clearly visible during a receding tide and acts as the hydraulic elevation control for the wetland. The wetland bottom is currently perched at a higher elevation than the Clear Creek channel by approximately 1 to 3 feet depending on location, and water surface elevation maintained by a

fishway. The wetland hydrology fluctuates daily with tidal influence, but typically does not become dewatered. The Port of Tacoma is obligated through an EPA consent decree (1993), to maintain a wetland that is a minimum of 9.5-acres with 6-acres regularly wetted and sustaining typical wetland hydrology and vegetation, as described the Clear Creek Habitat Improvement Project Operations, Maintenance, and Monitoring Plan (1995a).

Current vegetation at the site includes a robust wetland vegetation community in the Port of Tacoma mitigation wetland with numerous emergent and riparian species. These species have been monitored by the Port for over 20-years to ensure survival and control for invasive species. The vegetation along the access road is typical for a riparian community in this location and includes large cottonwood trees, big leaf maple, vine maple, salmon berry, snowberry, thimble berry and numerous herbaceous species. There currently is invasive ivy, blackberry, tansy, non-native hawthorn, daphne, laurel and scotch broom at the location. Pierce County has begun controlling for all species except for blackberry in preparation for construction. The blackberry will mostly be removed during the construction process, so no prior control is warranted. As many large trees as possible will be preserved during construction and the remaining disturbed area will be replanted. The plant selection mimics both the current community and the species planted by the Port. The final planting list for construction will be reviewed by Port of Tacoma staff for consistency.

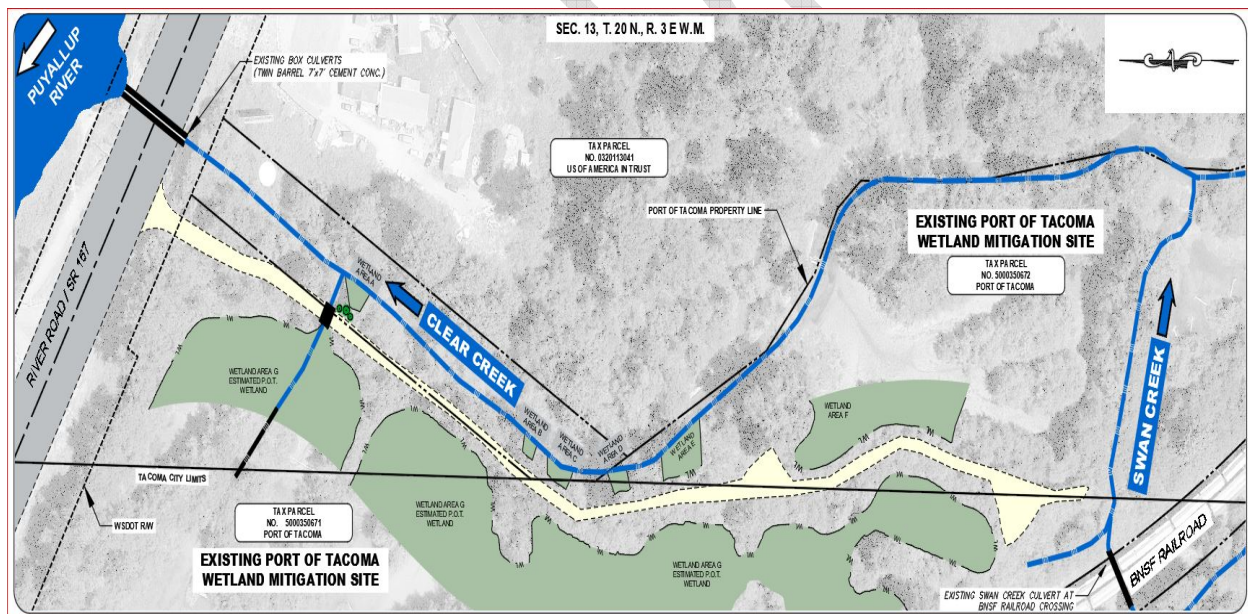


Figure 3: Existing site plan of the lower Clear Creek area

Post-Construction Site Conditions

Post-construction, sections of the access road will be lowered and regraded, creating bellies in the road and allowing hydraulic connections in 6 locations. Two of those locations provide

connection during high water events. The remaining access road will be regraded and planted with native vegetation.

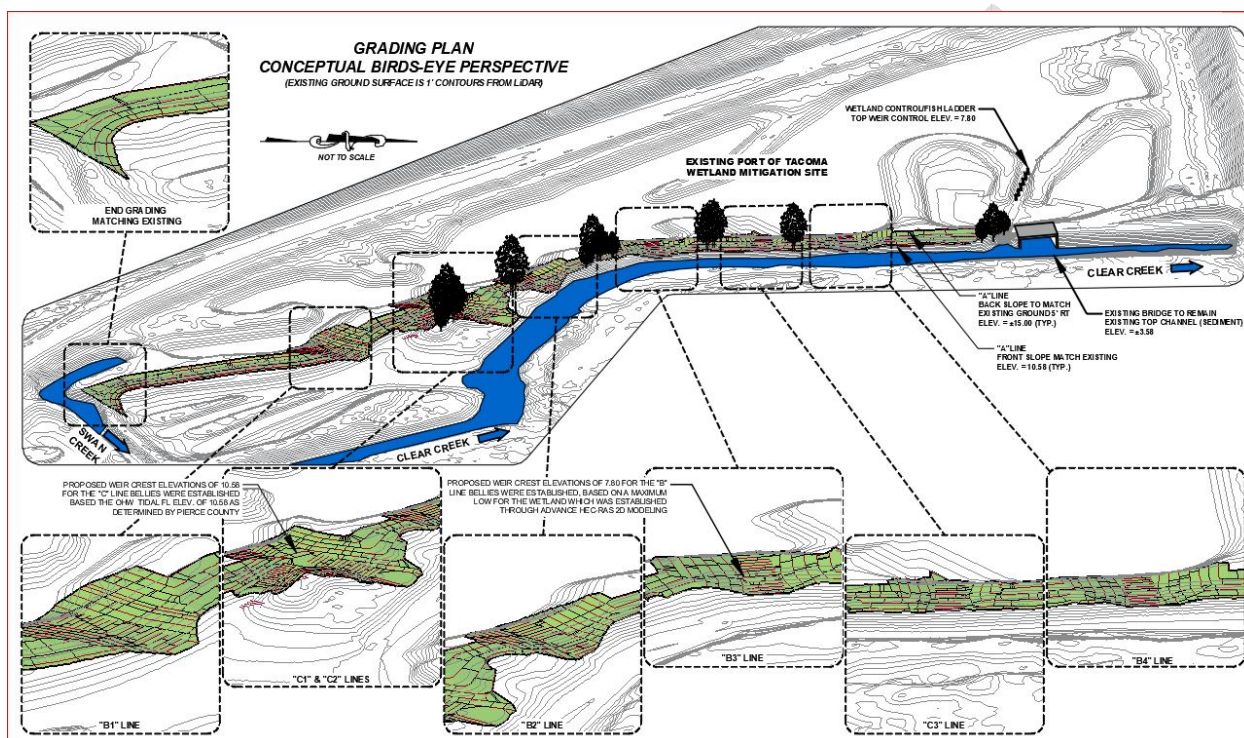


Figure 4: Conceptual post-construction site plan showing the increased number of connections between Clear Creek and the mitigation wetland

Hydraulic Connectivity

Hydraulic modeling indicates that the increased number of connections between the creek and mitigation wetland will slightly modify the existing hydrologic condition by increasing the depth of water in the wetland during high tides, as well increase the rate of drawdown in between tidal cycles. Through the increased connection points, afforded by the four lower bellies, the wetland will fill and drain more naturally with the corresponding tidal signal. Through increased tidal interaction freshwater exchange will also be increased. As a result, an existing catch basin, valve, and perforated pipe will be removed during construction. The original intent of this infrastructure was to allow a minor amount of flow (.25 cfs) to enter the south end of the mitigation wetland from Swan Creek. This inflow was for water quality benefit during summer months when tidal inundation was less frequent. It is not anticipated that these modifications will negatively impact the existing wetland condition, decrease wetland acreage or existing vegetation communities.

The bellies provide a significant increase in lateral connection area between the creek and the wetland. Under the pre-project condition the uppermost weir provides an approximate 10-foot width for water and fish to access the wetland at mean high tide. At an equivalent tide under the as-built condition the project provides approximately 27-feet of width at each of the four lower bellies, or approximately 108 linear feet. This is a 10-fold increase in hydraulic connectivity opportunity. However, periods of intermittent sediment accretion and loss across the bellies will occur. As a result, consistent and dynamic adjustments to the as-built belly dimensions should be expected.

Property Ownership

Port of Tacoma will remain the primary property owner at the site and grant access easement to Pierce County and Pierce County agents to access portions of the site not otherwise owned by Pierce County. Pierce County access is limited to the Clear Creek access road and other areas associated with the project for the purposes of construction, monitoring, or maintenance. Specific access requirements will be identified in a separate access easement or Right-of-Entry Agreement. Pierce County owns an approximate 80-foot wide by 320-foot-long strip, centered on Clear Creek. The three most northerly bellies will overlap the Port of Tacoma parcels and Pierce County property, with the wetland side of each belly on Port property, and the creek side of each belly within Pierce County property.

As condition of title transfer from WSDOT to Pierce County the Right-of-Way property must remain in its current use as a conveyance for Clear Creek into and through the twin-barrel concrete culverts under SR-167. This will prevent any channel modification that could negatively impact the creek side of the bellies that lie within the property.

Unauthorized Use

As the property will remain in ownership of Port of Tacoma, Pierce County staff will monitor for and notify Port of Tacoma staff should any unauthorized use be observed. This use may include illegal dumping or other uses. It is anticipated unauthorized uses may be deterred through project elements such as elimination of the access road and extensive site planting using “thorny deterrents”. Pierce County staff will also ensure the security of the site through the diligent locking of gates, restricting access to only approved uses and will remain vigilant in the prevention of such access and report any instances to the Port upon discovery. Any illegal activity such as dumping or unauthorized camping will be addressed by the Port within the project area. Pierce County will be responsible to address debris removal or unauthorized encampment with the channel area, upon their property.

Monitoring and Data Collection

Monitoring and data collection of project elements will be the sole responsibility of Pierce County staff and/or authorized agents acting on behalf of Pierce County. Pierce County commits to monitoring the project site quarterly, timing visits to coincide with appropriate high and low tidal events necessary to capture complete site information, for a period of 5-years

after the completion of construction. The quarterly timing shall occur during the following dates- Jan 1-March 31; April 1-June 30; July 1-Sept 31; Oct 1- Dec 31.

These site inspections are in addition to any site visits performed by Port staff respective to their monitoring purposes.

Timing around tidal events will assist Pierce County staff with visual monitoring of the constructed bellies (See general monitoring schedule, appendix A). Additional monitoring may also take place after significant storm and/or river flood events. Pierce County staff will monitor for parameters outlined in Table 1 and described below to meet the performance metrics described in Table 2.

Table 1: Monitoring Parameters

Parameter	Frequency of monitoring	Technique
Site condition	Quarterly	Photo points; visual observation
LWD/Habitat Features	Quarterly	Visual observation
Installed Vegetation growth & survival	Twice annually, Feb 1- May 31; August 1-Oct 31.	Monitoring at data plots; visual observation
Invasive species presence	Quarterly	Visual observation of entire site
Siltation & hydraulic connection	Quarterly	Visual observation of bellies for sediment aggradation or evidence of scour
Wetland hydrology	Quarterly	Visual observation of wetland perimeter, water depth measurement at two monitoring points, download data loggers at monitoring points
Post storm monitoring	After events where the flood gates have closed	General site inspection, visual observation of bellies, grade

		control logs and sediment build up and fish way during low tides
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Table 2: Performance metrics

Parameter	Performance standard
Installed Vegetation growth & survival	80% survival 75% of total installed species diversity present
Invasive species presence	No more than 5% total cover of invasive species throughout project site
Siltation & hydraulic connection	Hydraulic connection through at least 50% of the four lower belly areas during an average high tide of approximately 9.0'
Wetland hydrology	No more than 5% net loss of wetland area along project site at end of 5-year period

General Site Monitoring

During each quarterly monitoring event, the entire site will be walked and visually observed to inspect for any abnormalities, unauthorized use, dumping or other changes to the location, as well as a qualitative assessment of vegetation conditions.

Sampling Consistency

To help ensure sampling consistency across years and in the event of staff turnover, observations will be made at established and permanently marked locations. Vegetation sampling will take place at established, permanently marked sampling locations using a fixed sampling radius of 10-feet with the sampling plot marker as the center of the radius. Plots will be numbered sequentially, and their location captured using GPS upon installation.

Hydraulic connection monitoring will take place using established photo points. A photo point will be established in proximity to each belly and one in proximity to the fish way and will be permanently marked in the field. During each site visit, a photo will be taken at each photo point. The files should be named using the following format "PTX_MM_DD_YYYY, with PTX being the photo point identifier, followed by the 2-digit month, 2-digit day and 4-digit year.

In the event changes or adaptations become necessary to data collection, methodology changes will be documented and incorporated into this document including the date the change become effective and justification for the change. A version number will be recorded on data sheets to note the change.

Vegetation & Invasive Species

Installed Plantings

Native plantings will be installed during construction to establish vegetation in the area currently occupied by the access road surface, and as a method to re-establish impacted vegetation. An overall goal of 80% survival and 75% of the total number species initially installed at the end of the 5-year monitoring period is desired to maintain a healthy and productive riparian community. It is anticipated that there will be some natural attrition of installed plantings and that there will be introduction of other volunteer species from nearby seed sources, and the overarching intent is to provide a diverse habitat with a variety of niches rather than focusing on individual plant survival.

Installed plantings will be monitored twice annually, at both the beginning and end of the growing season, during the quarter 2 and quarter 3 sampling events. The timing of this monitoring will correspond to when the plant life is likely to be green, leafy and evidence of mortality apparent. Vegetation sampling may take place during quarter 1 or quarter 4 sampling if seasonal conditions are atypical and sampling requires postponement to obtain accurate data.

Installed plantings will be visually monitored at pre-established plots that are clearly and permanently marked in the field and in Attachment A – Project Monitoring Display. During the installation of these plots, initial data will be collected including the total number of plants of each species present to assist in evaluating. Changes to the plant community can be quantified in subsequent monitoring events.

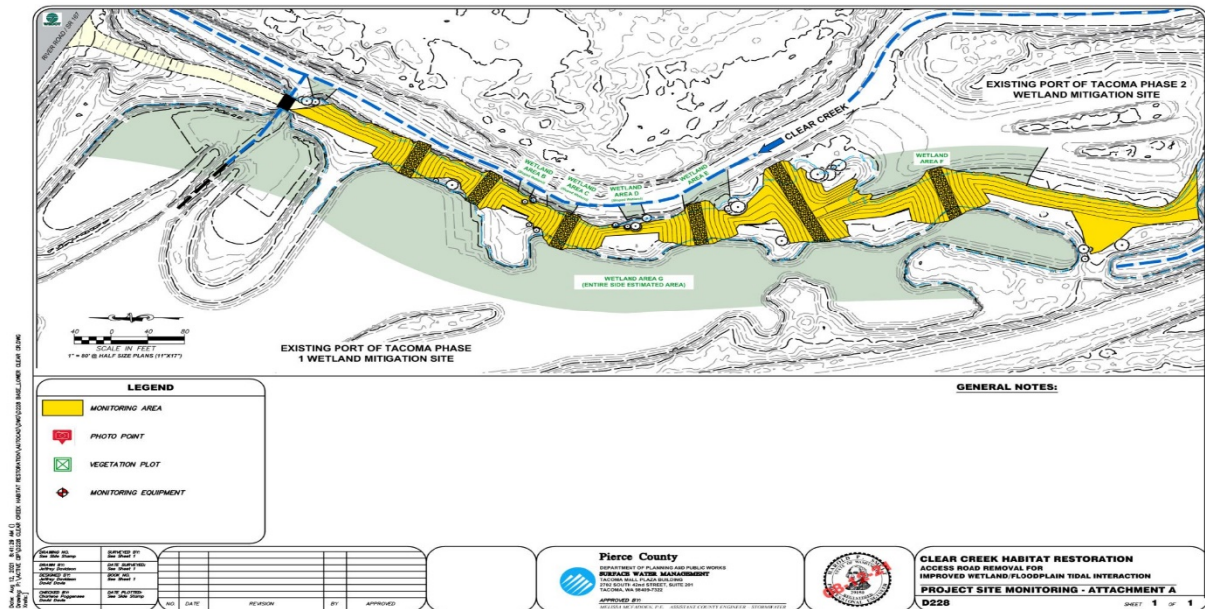


Figure 5 – Attachment A – Project Site Monitoring Display

During each monitoring event, at the established data collection points, the vegetation will be visually evaluated in a 10-foot radius using the data collection point as the center of each plot. From this perspective, the plant communities shall be described in terms of species present and number of individuals of each species. Species will be identified to the most specific level possible, never to a level higher than family. If individual plants cannot be determined, such as in the instances of grasses, an estimate of abundance for that plant within the plot radius will be determined.

At each plot a total percent cover will be estimated. Vegetation will also be inspected for evidence of stress or mortality as demonstrated by dead or dying plants, dead leaves, or excessive wilting.

In addition to monitoring the data plots, the entire project area will also be walked and visually inspected for any significant evidence of plant mortality, stress, and general cover. If any areas are identified, they will be marked in the field and/or on a map, photographed and re-inspected the following site visit.

Along the perimeter of the Port's mitigation wetland existing areas impacted by project construction will be replanted with appropriate wetland plants. Immediately post construction, the number of wetland plants installed in this area will be verified. During vegetation monitoring site visits, the impacted wetland areas will be visually inspected for plant survival or the presence of areas of bare ground. Along the same perimeter of the mitigation wetland vegetation not directly impacted or replanted during construction will also be visually inspected for evidence of plant stress or mortality. If this is observed, the area will be monitored, and Port of Tacoma staff will be notified and both parties will work together to determine the underlying

circumstances causing vegetation impacts. In the event corrective action is needed in this area it will be addressed per “Adaptive Management” section discussed below.

This monitoring strategy is being selected for efficient and consistent data collection, and so the plant community can be compared among monitoring years.

Invasive Species

Pierce County aims to have no invasive species present within the project area during the 5-year monitoring time frame. It is understood that, even with eradication efforts, some species were present at the location prior to construction and even with continued eradication efforts, may continue to be present, and it is likely that new seed and plant material may continually colonize the location. To that end, a target of less than 5% total plant cover from invasive species is set, with additional total eradication of knotweed, tansy ragwort, reed canary grass and/or poison hemlock.

The project location will be monitored quarterly to inspect for the presence of invasive species. Staff will also make note of invasive species present whenever on site for other purposes and report findings to the biologist for control. During each scheduled monitoring inspection, the entire project site will be walked and visually inspected for the presence of invasive species, included but not limited to; Tansy ragwort, poison hemlock, English holly, English Ivy, Himalayan and Evergreen blackberry, Scots broom, yellow flag iris, reed canary grass, non-native ornamental species and/or other Class A, B or C noxious weeds as defined by the Pierce County Weed Control Board. Invasive species located outside of the project boundaries will not be addressed unless they are encroaching. Port of Tacoma staff will be notified of any invasive species observed outside of the project limits.

Hydraulic Connection Monitoring

A primary goal of this project is to create and maintain hydraulic connectivity between the Clear Creek channel and the adjacent wetland. These connections are created through the removal of access road fill lowered to form belly swales in 6 locations, with 4 bellies graded to a lower elevation, and 2 graded to a higher elevation. These bellies are lowered areas where water can pass between the stream and wetland, but wetland hydrology is still maintained. The 6 belly connections are maintained through grade control logs spanning the bellies, designed to keep them open and prevent erosion or deformation. Grade control logs and belly geometry are intended to be stable, however the design assumes minor scour and/or siltation will naturally occur as the newly constructed site evolves. Given the low gradient of the project area, the abundance of fine sediment from the Puyallup River, and the regular tidal interaction, it is expected the site will respond with a natural cycle of sediment deposition/scour above the grade control elevations. It is anticipated that some of the bellies may become periodically experience ephemeral sediment build up or woody debris accumulation. It is also anticipated that sediment build up will naturally clear and the process will remain dynamic through time.

The primary habitat objective of project is to increase fish access and water exchange between the stream and the wetland. However, there was no minimum access creation criteria required for the project. Instead, the design focused on removing as much of the road as feasible, thereby creating as much access opportunity as possible. Regardless of the potential for dynamic sediment movement through the bellies and the difficulty in accessing project elements following construction it is desired to maintain a minimum amount of 'openness'. Therefore, at least 50% of the total passage area for the four lower bellies should remain open and passing water near the apex of high tide. Even at 50% of the as-built condition this still provides a 5-fold increase in access opportunity from the pre-project condition.

Instead of monitoring amounts of sediment present in each belly, which is anticipated to be an ever-changing measurement, each of the four lower bellies will be examined for evidence of freely flowing water at a tidal elevation of 9.0' (NAVD88) or as close as feasible to that elevation using the NOAA Commencement Bay station (Station 9446484 available at <https://www.tidesandcurrents.noaa.gov/noaatidepredictions.html?id=9446484>). It will be inferred that any decrease in belly openness is being caused by sediment deposition and as such, the relative degree of openness is inversely proportional to the amount of sediment deposition.

During an approximate 9.0' tidal elevation at the cross section represented by the apex grade control log in each of the four lower bellies, an estimate of percentage of belly width that has moving water will be made. Once all belly measurements have been collected, the total percentage of "open belly area" will be made. For example:

Belly 1 is 100% open; Belly 2 is 85% open; Belly 3 is 0% open, and Belly 4 is 40% open. $100\% + 85\% + 0\% + 40\% = 225\%$ / 4 bellies = 56% of the total belly area open. If this percentage falls below 50% corrective action will be taken by Pierce County during the 5-year monitoring period. See Adaptive Management section below.

Since regular tidal exchange is not anticipated across the two higher bellies these will be monitored differently than the four lower bellies. A visual inspection and photo documentation of the high-flow bellies will be conducted quarterly. The files should be named using the following format "BX_MM_DD_YYYY, with BX being the belly identifier, followed by the 2-digit month, 2-digit day and 4-digit year. In addition, following high water events resulting in flood gate closure visual inspection will be conducted to evaluate signs of sediment accumulation or scour. See Adaptive Management section below.

Scour Monitoring

The four lower bellies will be visually inspected quarterly during tides that are lower than designed grade control elevation of 7.8' and the entirety of the grade control log is visible. Inspections will be conducted when tidal stage is approximately 7.5' (NAVD88) using the NOAA Commencement Bay station. During inspection, standing at the established photo point, each belly will be inspected for any evidence of scour that is causing undercutting, flanking or scour

occurring lower than the elevation of the grade control log. Undercutting or scour lower than the grade control log has the potential to significantly change or deform the belly shape from as-built condition and threaten the integrity of wetland hydrology. A photo will be taken of each belly at the photo point.

Fishway Monitoring

Water level in the wetland is controlled by the existing fishway located at the north side of the wetland. Under normal tidal conditions hydraulic modeling suggests water level in the wetland should not drop below the level of the notch elevation in the top step of the fishway. This will also be inspected, and photographic evidence taken during the same low tide timing as the scour monitoring. Fishway function will be determined by the presence of water flowing out of the wetland through the fishway during low tide. If no such condition is observed, subsequent monitoring during low tide will take place as soon as feasible to determine if the cause is related to project elements, abnormal tidal events, or another un-related cause.

Post-Storm Monitoring

Additional monitoring will take place after significant flood events where the downstream flood gates have been closed. Current operating parameters for the gates calls for them to close when Puyallup River stage elevation reaches 12.5'. The timing of monitoring should occur at least 48 hours after the re-opening of the flood gates, and at low tide, to allow for any backwater effects to dissipate before inspecting for siltation or other impacts. Inspection will include hydraulic connectivity monitoring and monitoring of general site condition for evidence of damage that requires immediate attention.

Wetland Hydrology

Preservation of the existing Port of Tacoma wetland hydrology is paramount to the overall success of the project and the habitat lift provided by increasing connectivity. To ensure that the project is having no detrimental effect on wetland hydrology, water levels in the area will be monitored continuously using installed level loggers at two locations. The level loggers will measure water depth at regular intervals to help ensure that there are no periods when water depth in the wetland is insufficient and could potentially lead to drying or loss of wetland area. Staff gauges or similar equipment will also be installed and recorded at each quarterly visit to cross check the loggers if necessary. Vegetation along the wetland fringe will also be inspected for evidence of plant stress or mortality that could indicate changes in hydrology.

Pierce County and Port Staff will conduct a wetland determination prior to construction and then again at the end of the 5-year monitoring period to estimate any changes to wetland conditions. If there is evidence to suggest the wetland has been negatively impacted, Pierce County in conjunction with Port of Tacoma staff will conduct a final wetland assessment to ensure that the overall wetland area has not decreased in size by more than 5%. If, following the final assessment, corrective measures are required, Pierce County will be responsible to complete any necessary adaptive management actions.

Habitat Features

The project also includes installation of three habitat feature types. These include; a pinned thalweg deflector which is a large diameter conifer tree that protrudes into Clear Creek providing cover and channel edge complexity, a belly spanning bench log which is a large diameter conifer tree installed parallel to Clear Creek and perpendicular to the profile grade of each belly that replaces the existing rock armoring along the creek edge, and finally a habitat brush pile consisting of trees and slash salvaged from onsite clearing which provide diversity in surface topography and cover for small birds, mammals and insects. These features are designed to be stable but consist of natural material that is subject to deterioration, minor deflection, and deformation. They will be monitored for presence only on general site inspections through the duration of the 5-year monitoring period. Additionally, they may be monitored for fish presence by other Clear Creek habitat stakeholders following installation. As these are natural features located in areas without equipment access no repair or replacement is proposed following project completion.

Adaptive Management

The Clear Creek habitat restoration site, as a newly constructed habitat location, is expected to undergo natural changes and modifications from fluctuating flow regimes during the first several years post-construction. The project is designed to allow for these natural changes to occur, without detrimentally impacting the Clear Creek channel, adjoining wetland, or undermining the intent of the project, which is to increase connectivity to the wetland. Furthermore, machine access opportunities will be severely impacted and generally infeasible following construction limiting monitoring and maintenance functions to what can be completed 'by hand'.

As monitoring progresses and site conditions adapt, maintenance and/or site modification may become necessary. Management actions may be taken for, but not limited to, the following reasons: 1. Invasive species become established at the project site; 2. Installed plantings fail to thrive and/or survival standards are not met; 3. Excessive siltation is observed in the bellies, inhibiting hydraulic connectivity to the wetland longer than expected; 4. Grade control logs are no longer present or have become unsecured; 5. Significant erosion within the bellies has been observed; 6. Wetland hydrology appears to be altered in such a way that drying is apparent and plant stress is observed; or 7. The fishway becomes dry and consistently ceases function during normal low tide events.

Prior to any adaptive management action being taken, Port of Tacoma staff will be consulted and a mutually agreed upon plan will be developed for corrective action. Pierce County staff commits to working closely with Port of Tacoma staff to ensure that all adaptive management actions are taken according to existing mitigation requirements and performance metrics described herein.

Vegetation

Installed plantings

If evidence of plant mortality or stress is discovered, it will be noted in the monitoring report and location recorded. Based on surrounding plant communities, presence of volunteer plants, and overall vegetation coverage, Pierce County staff will consult with Port staff to determine if additional plantings will be required. If it is deemed necessary, additional plants will be installed by Pierce County. These additional plantings will preferentially be live cuttings taken from the site, volunteer plants sources from the site or, if necessary, plugs purchased from an outside vendor. The plantings will be installed during the next appropriate planting window, typically during the winter months.

Invasive Species

If invasive species are found, control will preferentially be accomplished using hand removal methods such as digging and pulling that may include the use of hand or power tools to mechanically remove plants. If invasive species become established or begin to encroach outside of the project location and more aggressive control methods are warranted, Port of Tacoma and Pierce County staff will agree upon a mutually acceptable control plan that may include the use of approved herbicide application. Invasive species herbicide control will be used as a last resort, after consultation with Port of Tacoma staff. Invasive vegetation will be disposed of in a manner suited to each individual species. If feasible, some species may be left on site to die and decompose naturally. Others that pose a seed-spreading threat will be disposed of in an appropriate manner for that species.

Removal and control will occur on an as-needed basis, coinciding with the most appropriate timing for control for each species and control method.

Hydraulic Connectivity Actions

Sediment Deposition

Adaptive management actions will be taken in the four lower bellies if siltation or other blockages become such that more than 50% of the belly area is obstructed, preventing water from freely flowing between Clear Creek and the wetland for a period of one full year as observed during high tide cycles.

Adaptive management actions will be taken in the two higher bellies if it is apparent that water passage through the bellies following a post-gate closure event did not occur. Comparison of photo-point documentation from previous inspections will be used to evaluate condition changes over time.

If evidence of siltation is observed during regular monitoring visits, it will be noted and further monitored. If the siltation does not clear naturally, re-establishing at least 50% total passage area, during flow cycles after one-year, Port of Tacoma Staff will be consulted, and corrective

action will be taken. This will include manual removal of the silt or other debris and continued monitoring.

Scour Conditions

If the grade control logs appear to have evidence of scour that is causing undercutting, flanking or scour occurring lower than the elevation of the grade control log or water appears to be flowing around the grade-control log, additional photographic evidence and/or measurements will be collected and presented to Pierce County engineering staff for evaluation. Port of Tacoma staff will also be notified to determine if further action is necessary. Next steps for adaptive management will be to perform additional monitoring and data collection to analyze if condition is impacting wetland. If negative impact is determined corrective action will be taken by Pierce County during the monitoring period. Pierce County will make every effort to utilize passive, bioengineering solutions to correct, if necessary.

Wetland Hydrology

If, during the monitoring period, evidence of wetland drying or plant mortality is observed, Port of Tacoma staff will be contacted, and Pierce County staff will attempt to identify the cause of the event. If it is determined the cause is related to project elements Pierce County will perform the appropriate corrective maintenance action. This may include re-planting, or adjustments to grade control structures.

Data reporting and Storage

All gathered data, including data sheets, will be filed on the Pierce County server, available upon request. Any water quality data collected will be uploaded to the water quality data server, WISKI, held at Pierce County and available upon request. The data will be compiled and provided as part of the annual report provided digitally to Port of Tacoma staff and Trustees no later than January 31 of the following year. Port of Tacoma staff will provide a copy of the report to EPA as requested. Other interested parties will be provided with the report upon request. The report will include a summary of field visits, findings and if any actionable items were identified. If necessary and desired, an annual meeting will be held between Pierce County staff and Port of Tacoma staff to address any issues or revise the monitoring plan.

Concluding the 5-Year Monitoring Period

It is the intent of the 5-year monitoring period to demonstrate the project elements are functioning as designed and stable. By that we intend; the hydraulic connections, or bellies, serve to provide a consistent improvement to fish passage opportunity above the current condition, vegetation communities have established and are generally free of invasive species, and the existing wetland function has not been detrimentally impacted.

Within 6-months of the end of the 5-year monitoring period, Port of Tacoma and Pierce County staff will meet to conduct a site examination and identify any deficiencies that require attention prior to Pierce County transitioning responsibility of project elements back to the Port. Pierce County will provide written notice of the final site examination to the Trustees. Trustees will review and approve site conditions prior to transition to the Port. If there are any deficiencies identified during this joint inspection Pierce County and Port will work together to develop a mutually agreeable strategy to address any outstanding issues prior to formal hand-off to Port control. The Trustees will be provided opportunity to review and comment on any proposed actions.

At the end of the 5-year monitoring period, following a successful site examination and/or correction of any deficiencies, Pierce County will relinquish all monitoring and site responsibilities on Port of Tacoma property to Port of Tacoma staff. As previously stated, Pierce County may become actively involved following the conclusion of the monitoring period should project elements require significant repair or re-design, at the request of the Port. The Commencement Bay Trustees will be notified in writing of the official transition and will be provided any final monitoring documentation.

Pierce County will act in good faith to hand over the site in proper function free of invasive species to the greatest extent feasible. Any installed equipment will be removed unless mutually agreed upon for the equipment to remain. Any physical equipment installed will remain the property of Pierce County. Any data files requested by the Port of Tacoma will be given to them in their entirety, as will a set of as-built design plans and the project design report for future use.

Following the transition, project elements including hydraulic connectivity of the bellies will be absorbed into the overall Port of Tacoma mitigation site, protected, and preserved from alteration by existing Environmental Covenants. The site will be monitored and maintained by the Port of Tacoma in perpetuity consistent with their Long-term Monitoring and Maintenance plan for the site. The Port will qualitatively monitor established vegetation and hydraulic connectivity of the bellies installed as part of this project to ensure function and ecological benefit is preserved over time. Port staff may perform minor maintenance actions such as invasive species removal, minor sediment/and or debris removal in belly sections, beaver management, and garbage removal.

In the event project elements become significantly compromised such as complete blockage resulting in the loss of hydraulic connection of the bellies at high-tide, or belly grade control is affected such that it results in a negative impact to the existing wetland the Port of Tacoma may notify Pierce County. Pierce County will re-engage with the Port, upon request, and provide support if any necessary corrective action. In the event this occurs Pierce County will notify the Trustees in writing.

Pierce County commits to working collaboratively with Port of Tacoma and remain available to address any future questions, concerns that may arise associated with this project, consistent with the existing collaboration currently underway within the Clear Creek basin.

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References

2002. Ebbert, J.C. Concentrations of Dissolved Oxygen in the Lower Puyallup and White Rivers, Washington, August and September 2000 and 2001. U.S. Department of the Interior, U.S. Geological Survey
1995. Clear Creek Habitat Improvement Project Operations, Maintenance, and Monitoring Plan. Prepared for Port of Tacoma
- 1995b. Lower Clear Creek Habitat Improvement Project. Prepared for Port of Tacoma
1993. Consent Decree Phase I: October 8, 1993, Case No. C93-5462 RJB
Recorded under Auditor File number: 200912230320
2005. Consent Decree Phase II: February 8, 2005, Case No. C05-5103 FDB
- 202X. Port of Tacoma Long Term Monitoring & Maintenance Plan (LTMP) ****placeholder****
- 2022 Clear Creek Interlocal Agreement

Appendices

Appendix A- Monitoring and Annual Reporting

Monitoring & Reporting Schedule

Table 3: Monitoring schedule

	Monitor during lowest tide feasible
Quarter 1 (Jan 1-March 31)	General site condition, photo points, invasive species, wetland hydrology, hydraulic connection, fishway function. Annual report due by January 31 of the following year
Quarter 2 (April 1-June 30)	General site condition, photo points, invasive species, wetland hydrology, hydraulic connection, fishway function, vegetation survey
Quarter 3 (July 1-Sept 30)	General site condition, photo points, invasive species, wetland hydrology, hydraulic connection, fishway function, vegetation survey
Quarter 4 (Oct 1-Dec 31)	General site condition, photo points, invasive species, wetland hydrology, hydraulic connection, fishway function
Post storm event	General site condition, invasive species, hydraulic connection, fishway function
Tidal cycle	Low tides less than 7.5' High tides at 9.0' or as close as possible

** Tidal datum NADV88 NOAA Commencement Bay station # 9446484;
<https://www.tidesandcurrents.noaa.gov/noaatidepredictions.html?id=9446484>

Annual Report

An annual report shall be produced by Pierce County staff and delivered to Port of Tacoma Environmental Project Managers and the Commencement Bay Trustees no later than January 31 of the following year. The report will be delivered in digital format unless otherwise requested. It will be the responsibility of the Port of Tacoma to disseminate the report to EPA. Other interested parties may receive a copy of the report upon request. If desired, a meeting will be held between Port of Tacoma and Pierce County staff to discuss findings, adapt the monitoring plan and implement actions if necessary. The meeting will take place no later than March 31 of the same year to ensure adequate time to implement any changes or modifications.

The annual report will include the following information:

1. A narrative of monitoring events
2. Pictures taken during each monitoring event. This may include aerial drone photography.
3. Assessment if outcomes are currently being met
4. Issues encountered during monitoring
5. Issues identified on site and resolutions to those issues
6. Events that triggered outreach to Port of Tacoma
7. Adaptive management decisions
8. Narrative of adaptive management activities and outcomes if appropriate
9. Copies of monitoring data sheets
10. Copies or attachments containing level logger data
11. Recommendations for any monitoring changes or alterations
12. Anticipated activities for the following year (invasive species control, replanting, maintenance, etc) and justification

Project site monitoring display

Display Map of project area to be monitored, monitoring locations, data points, photo points, staff gauge locations and level logger locations etc.

Once construction is complete. Exact monitoring locations will be identified. The Project Site Monitoring Display will be amended to reflect monitoring locations, photo points, vegetation plots, and all installed monitoring equipment.

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Data Collection Sheet- D228 Clear Creek Habitat Project Monitoring

Collector name(s): _____ Date: _____ Time (24 hr): _____

Time of closest low tide and height: _____ Time of 9.0' height _____

Tidal station: NOAA Commencement Bay #9446484

Use <https://www.tidesandcurrents.noaa.gov/noaatidepredictions.html?id=9446484> and do not forget to CHANGE DATUM to **NAVD88** and select Update

Monitoring Event (circle one)

Q1 (Jan 1-March 31); Q2 (April 1-June 30); Q3 (July 1-Sept 31); Q4 (Oct 1- Dec 31);
Post storm; Other (describe)

Total belly openness calculation _____ %

Tasks completed at each visit. Do not leave site until all tasks have been completed and marked

Photos taken at photo points if Q 2 or Q3 ☐

Invasive species inspected for ☐

Photos taken at belly locations ☐

All bellies observed ☐

Presence of unauthorized use inspected for ☐

Trashrack inspected ☐

In-stream habitat features visually observed ☐

Level loggers downloaded ☐

General plant condition observed at entirety of site ☐

Gate secured and photo taken ☐

A. Overall site condition

Presence of unauthorized use noted? Y/N If yes, describe and approximate location

Date reported to Port of Tacoma & contact person _____

Excessive build up observed at trash rack? Y/N Describe or take photo

B. Vegetation

B.1 General site

Evidence of significant plant mortality anywhere on site? Y/N

Description and locations:

**Significant mortality is anything above 2-3 individual plants within a 5-foot radius of each other

Bare patches of soil or unvegetated areas observed? Y/N

Description and locations:

Other indicators of areas of plant mortality or stress or areas where plant cover is sparse?

Description and locations:

B.2 Invasive Species

Invasive species present? Y/N _____ Were locations flagged or recorded? Y/N

Describe species and amount and locations:

Approximate % cover across site of all invasive species present _____

B.3 Sampling Plots- 10' sample radius around each plot. Plot sampling should take place Q2 & Q3 only

Plot #1 Photo taken? Y/N

Describe general plant condition:

Estimated % cover in vegetation strata as measured 6" off ground surface _____

List plant species and total number of each species:

Species	Number present	Species	Number present

Plot #2 Photo taken? Y/N

Describe general plant condition:

Estimated % cover in vegetation strata as measured 6" off ground surface _____

List plant species and total number of each species:

Species	Number present	Species	Number present

Plot #3 Photo taken? Y/N

Describe general plant condition:

Estimated % cover in vegetation strata as measured 6" off ground surface _____

List plant species and total number of each species:

Species	Number present	Species	Number present

Plot #4 Photo taken? Y/N

Describe general plant condition:

Estimated % cover in vegetation strata as measured 6" off ground surface _____

List plant species and total number of each species:

Species	Number present	Species	Number present

C. Mitigation wetland-

Look for evidence along wetland fringe of plant stress, excessive inundation or drying

Logger 1 staff gauge reading_____ Time (24 hr) of reading_____

Logger 2 staff gauge reading_____ Time (24 hr) of reading_____

Data loggers downloaded? Y/N

Evidence of bare ground along wetland edge? Y/N

Location:

Evidence of plant stress, drying or mortality observed along wetland edge? Y/N

Describe:

Were locations on concern marked with flagging? Y/N/NA

D. Hydraulic Connection

1. During the low tide, examine each belly for the presence/absence of the grade control log; evidence of scour undercutting or flanking the grade control log. Photo document each belly from the established photo point
2. During low tide, examine the fishway for flow of water and photo document
3. At any point in the tidal cycle- download level logger equipment, take staff gauge reading- note time
4. At tidal height 9.0' (NADV88), observe cross sections at belly locations

D.1 Bellies

Photos taken at all belly locations? Y/N

Rename each photo "BX_MM_DD_YYYY" and save to file server under folder "MM_DD_YY_QX"

Belly #1 – Low Flow

Time of inspection (24 hr):

Approximate Tidal Elevation at time of Inspection:

Grade Control Log visible? Y/N

Grade control log present and secure? Y/N/NA.

If No, describe:

Evidence of scour under, around or flanking grade control logs? Y/N

If Yes, describe location of scour: _____

% of cross section with flowing water present _____

Belly #2 – Low Flow

Time of inspection (24 hr):

Approximate Tidal Elevation at time of Inspection:

Grade Control Log visible? Y/N

Grade control log present and secure? Y/N/NA.

If No, describe:

Evidence of scour under, around or flanking grade control logs? Y/N

If Yes, describe location of scour: _____

% of cross section with flowing water present _____

Belly #3 – Low Flow

Time of inspection (24 hr):

Approximate Tidal Elevation at time of Inspection:

Grade Control Log visible? Y/N

Grade control log present and secure? Y/N/NA.

If No, describe:

Evidence of scour under, around or flanking grade control logs? Y/N

If Yes, describe location of scour: _____

% of cross section with flowing water present _____

Belly #4 – Low Flow

Time of inspection (24 hr):

Approximate Tidal Elevation at time of Inspection:

Grade Control Log visible? Y/N

Grade control log present and secure? Y/N/NA.

If No, describe:

Evidence of scour under, around or flanking grade control logs? Y/N

If Yes, describe location of scour: _____

% of cross section with flowing water present _____

Belly #5 – High Flow Belly

Time of inspection (24 hr):

Approximate Tidal Elevation at time of Inspection:

Grade Control Log visible? Y/N

Grade control log present and secure? Y/N/NA.

If No, describe:

Evidence of scour under, around or flanking grade control logs? Y/N

If Yes, describe location of scour: _____

% of cross section with flowing water present _____

Belly #6- High Flow Belly

Time of inspection (24 hr):

Approximate Tidal Elevation at time of Inspection:

Grade Control Log visible? Y/N

Grade control log present and secure? Y/N/NA.

If No, describe:

Evidence of scour under, around or flanking grade control logs? Y/N

If Yes, describe location of scour: _____

% of cross section with flowing water present _____

Total Belly openness: To calculate, add percent openness for Bellies 1-4 and divide by 4. Record data on page 1.

Belly Openness _____%

D.2 Fishway- during low tide events, observe the fish way for evidence of wetland draining

Fishway flowing at low tide?: Y/N Time of observation: Photograph taken? Y/N

Approximate Tidal Elevation at time of Inspection:

Additional notes or observations: _____

Upon return to office- Download photos and rename; Scan the datasheets, rename according to YYYY_MM_DD_Datasheet naming format, and place in project file; notify Port of Tacoma and/or M&O if necessary; Store level logger data in project file for upload into WISKI

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Appendix B- Right-of-Entry Agreement

To be added prior to construction

Appendix C- As-Constructed Photos and Plan set

To be added after construction

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Olympic Region
7407 31st Ave NE, Lacey
P.O. Box 47440
Olympia, WA 98504-7440
360-357-2600 / Fax 360-357-2601
TTY: 1-800-833-6388
www.wsdot.wa.gov

November 3, 2021

Melissa McFadden P.E.
Assistant County Engineer - Stormwater
Pierce County Planning and Public Works Department
2702 South 42nd Street Tacoma WA 98409 melissa.mcfadden@piercecountywa.gov

Re: Responsibility for certain structures and property at the SR 167 Clear Creek crossing

Dear Ms. McFadden,

With this letter, the Washington State Department of Transportation (WSDOT) seeks to clarify ownership and control of infrastructure at the Washington State Route 167 (SR 167) intersection with Clear Creek in Pierce County. This clarification has been requested by Pierce County to more clearly establish maintenance obligations and to facilitate that agency's project to improve infrastructure at that location. Pierce County's project is funded by a National Resource Damage Assessment grant administered by the National Oceanic & Atmospheric Association.

WSDOT acknowledges as follows:

1. The waters of Clear Creek are conveyed under and through SR 167 to the Puyallup River by twin-barrel concrete culverts, located at approximately Mile Post 0.83 of SR 167.
2. WSDOT owns and is responsible for the maintenance of the twin-barrel culverts and is responsible for the maintenance of the highway at this location.
3. WSDOT does not own and is not responsible for the two flow control gates and related appurtenances that are affixed to the river-side outlets of the twin-barrel culverts, although that equipment is located within the SR-167 Right-of-Way.
4. WSDOT owns or controls the portion of SR-167 Right-of-Way where a debris barrier apparatus attached to the inlet-side of the WSDOT twin-barrel culverts is located. WSDOT does not own, and is not responsible for maintaining, the debris barrier itself.

To facilitate the County's future maintenance of the flow control gates, the debris barrier, and appurtenances, WSDOT and Pierce County intends to negotiate a general permit authorizing Pierce County to use a designated portion of SR-167 Right-of-Way for operation and maintenance of the gates and barrier.

By the signatures below, WSDOT and Pierce County acknowledge WSDOT's responsibility for the culverts, but not for the gates and barriers attached to the culverts. All parties agree to work together to negotiate the County's access for future operations and maintenance.

For WSDOT

Olympic Region ARA – Maintenance and Operations – Troy Cowan

Troy A Cowan

For Pierce County

Assistant County Engineer – Stormwater Melissa McFadden

Melissa
McFadden

Digitally signed by Melissa
McFadden
Date: 2021.11.10 10:16:29
-08'00'