

**WHATCOM COUNTY CONTRACT
INFORMATION SHEET**

Whatcom County Contract No.
202106001-2

Originating Department:	Public Works
Division/Program: <i>(i.e. Dept. Division and Program)</i>	River & Flood/Flood Control Maint (907545)
Contract or Grant Administrator:	Paula Harris, River & Flood Manager
Contractor's / Agency Name:	Herrera Environmental Consultants, Inc.

Is this a New Contract? If not, is this an Amendment or Renewal to an Existing Contract? Yes No
 Yes No If Amendment or Renewal, (per WCC 3.08.100 (a)) Original Contract #: 202106001

Does contract require Council Approval? Yes No If No, include WCC: _____
 Already approved? Council Approved Date: _____ (Exclusions see: Whatcom County Codes 3.06.010, 3.08.090 and 3.08.100)

Is this a grant agreement? Yes No If yes, grantor agency contract number(s): _____ CFDA#: _____

Is this contract grant funded? Yes No If yes, Whatcom County grant contract number(s): 2022011006

Is this contract the result of a RFP or Bid process? Contract _____
 Yes No If yes, RFP and Bid number(s): RFP #21-12 Cost Center: 720008

Is this agreement excluded from E-Verify? No Yes If no, include Attachment D Contractor Declaration form.

If YES, indicate exclusion(s) below:

Professional services agreement for certified/licensed professional. Goods and services provided due to an emergency
 Contract work is for less than \$100,000. Contract for Commercial off the shelf items (COTS).
 Contract work is for less than 120 days. Work related subcontract less than \$25,000.
 Interlocal Agreement (between Governments). Public Works - Local Agency/Federally Funded FHWA.

Contract Amount:(sum of original contract amount and any prior amendments): \$ <u>218,441.27</u> This Amendment Amount: \$ <u>340,647.54</u> Total Amended Amount: \$ <u>559,088.81</u> Summary of Scope:	Council approval required for; all property leases, contracts or bid awards exceeding \$40,000 , and professional service contract amendments that have an increase greater than \$10,000 or 10% of contract amount, whichever is greater, except when: 1. Exercising an option contained in a contract previously approved by the council. 2. Contract is for design, construction, r-o-w acquisition, prof. services, or other capital costs approved by council in a capital budget appropriation ordinance. 3. Bid or award is for supplies. 4. Equipment is included in Exhibit "B" of the Budget Ordinance. 5. Contract is for manufacturer's technical support and hardware maintenance of electronic systems and/or technical support and software maintenance from the developer of proprietary software currently used by Whatcom County.
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This Contract Supplement No. 2 with Herrera Environmental Consultants, Inc. will provide for professional engineering and consulting services to support design and permitting for Phase 2 of the Truck Road Bank Stabilization Project.

Term of Contract: Not To Exceed	Expiration Date: December 31, 2023
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Contract Routing:

1. Prepared by: <u>C. Schoenfelder</u>	Date: <u>6/28/2022</u>
2. Attorney signoff: <u>Christopher Quinn</u>	Date: <u>6/29/2022</u>
3. AS Finance reviewed: <u>M Caldwell</u>	Date: <u>6/29/2022</u>
4. IT reviewed (if IT related): _____	Date: _____
5. Contractor signed: _____	Date: _____
6. Submitted to Exec.: _____	Date: _____
7. Council approved (if necessary): <u>Satpal Sidhu</u>	Date: _____
8. Executive signed: <u>Satpal Sidhu</u>	Date: <u>7/14/2022</u>
9. Original to Council: _____	Date: _____

**WHATCOM COUNTY
PUBLIC WORKS DEPARTMENT**

**JON HUTCHINGS
DIRECTOR**




RIVER AND FLOOD
322 N. Commercial Street, Suite 120
Bellingham, WA 98225-4042
Phone: (360) 778-6230
Fax: (360) 778-6231
www.whatcomcounty.us

MEMORANDUM

TO: The Honorable Satpal Singh Sidhu, Whatcom County Executive, and
Honorable Members of the Whatcom County Flood Control Zone District
Board of Supervisors

THROUGH: Jon Hutchings, Public Works Director

FROM: Paula J. Harris, P.E., River and Flood Manager
Gary Stoyka, Natural Resources Manager 

RE: Herrera Environmental Consultants, Inc. - Contract Supplement No. 2
Truck Road Stabilization (Prj No. 720008)

DATE: June 30, 2022

Enclosed is Supplement No. 2 to a contract for services between the Whatcom County Flood Control Zone District (FCZD) and Herrera Environmental Consultants, Inc. for your consideration.

Requested Action

Public Works respectfully requests that the FCZD Board of Supervisors authorize the County Executive to enter into a contract supplement with Herrera Environmental Consultants, Inc. (Herrera) to perform engineering design services for the Truck Road Stabilization Project.

Background and Purpose

In 2020 the County received Federal Emergency Management Agency (FEMA) Public Assistance funding to repair a section of Truck Road that was damaged during the Superbowl 2020 flood. Herrera was selected to provide engineering and design for the project. In November 2021 the flood events exacerbated erosion at this site and an emergency project was constructed.

Herrera successfully supported the County in the design and construction of the emergency project. A second phase of work is necessary to conduct remaining repairs to the road and provide required environmental mitigation. Supplement No. 2 provides for design and permit support for this Phase 2 project.

The Whatcom County Council approved supplemental budget request ID No. 3593 for the emergency work and design at the March 22, 2022 meeting.

Funding and Source

The proposed contract supplement is \$340,647.54 for a new total of \$559,088.81. The supplemented 2022 FCZD Budget includes \$1,650,000.00 for this project. Funding will be through the FEMA Public Damage Assistance Program which provides for 90% federal and 5% State reimbursement. The remaining 5% will be split equally between the FCZD and Road funds for a total of \$13,977.22 per fund.

Please contact Paula Harris at extension 6285, if you have any questions or concerns regarding the terms of this Contract.



Supplemental Agreement Number <u>2</u>		Organization and Address	
Original Agreement Number 202106001		2200 Sixth Ave., Suite 1100, Seattle, WA 98121	
Project Number 720008		Execution Date	Completion Date December 31, 2023
Project Title Truck Road Stabilization		New Maximum Amount Payable \$559,088.81	
Description of Work This supplement will provide for professional engineering, design, and permit support of Phase 2 of the Truck Road Bank Stabilization Project.			

The Local Agency of Whatcom County Flood Control Zone District desires to supplement the agreement entered in to with Herrera Environmental Consultants, Inc. and executed on 6-2-21 and identified as Agreement No. 202106001

All provisions in the basic agreement remain in effect except as expressly modified by this supplement. The changes to the agreement are described as follows:

I

Section 1, SCOPE OF WORK, is hereby changed to read:
see attached Exhibit B

II


Section IV, TIME FOR BEGINNING AND COMPLETION, is amended to change the number of calendar days for completion of the work to read: December 31, 2023 is the completion date.

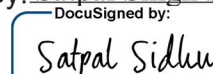
III

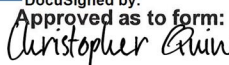
Section V, PAYMENT, shall be amended as follows:

Rate updates for prime and sub consultants are included. The Maximum Amount Payable will increase by \$340,647.54 for a new total of \$559,088.81.

as set forth in the attached Exhibit A, and by this reference made a part of this supplement. If you concur with this supplement and agree to the changes as stated above, please sign in the Appropriate spaces below and return to this office for final action.

By: Theresa Wood, Vice President
DocuSigned by:

5EB9F50233AF420... 7/14/2022
 Consultant Signature

By: Satpal Singh Sidhu, Whatcom County Executive
DocuSigned by:

1192C7C18B664E3... 7/14/2022
 Approving Authority Signature

DocuSigned by:
Approved as to form:

EC466EF5C88B4FD... 7/14/2022
 Christopher Quinn Date
 Senior Civil Deputy Prosecuting Attorney

Date

Exhibit "A"
Summary of Payments

Original Agreement	Supplement No. 1	Supplement No. 2	Total
\$ 140,587.53	\$ 77,853.74	\$ 340,647.54	\$ 559,088.81



Truck Road Re-Alignment Geotechnical Engineering Support

Project Management Plan

Job Number:	210153	Date Authorized:	
Project Manager:	Erik Andersen	Budget:	
Overhead Rate	204.88%	Target Completion Date:	
Profit	30.00%		

Task	Work Element	Labor Budget Basis in Hours					Total Labor Budget	Other Direct Charges (ODC)	Subs
		EOA	JG	AAF	CvS	JK			
		Principal I	Project II	Project I	Senior CAD	Senior Admin			
		\$73.56	\$41.83	\$38.47	\$39.91	\$36.54			
		\$ 246.34	\$ 140.08	\$ 128.83	\$ 133.65	\$ 122.37			
Task 18 Phase 2 Geotechnical Investigation									
Coordinate and Execute Field Work									
01	Coordinate Field Work	1	1	4		1	\$ 1,024	\$ 150	
01	Execute Field Work	0.5	1	8		1	\$ 1,416	\$ 150	\$ 1,750
01	Field Logs and Assign/Review Lab Testing	0.5	2	6	2		\$ 1,444		\$ 1,200
Geotechnical Engineering Analyses									
02	Geotechnical engineering analyses	4	8	6			\$ 2,879		
Geotechnical Engineering Reporting									
03	Draft Geotechnical Engineering Report	3	8	6	2	2	\$ 3,145		
03	Review comments and design collaboration, and Final Geotechnical Engineering Report	3	4	8	1	1	\$ 2,586		
Project Management and Contract Administration									
04	Proj Mgmt & Contract Admin	3	3			3	\$ 1,526		
Total		15	27	38	5	8	\$ 14,020	\$ 300	\$ 2,950

Task Budget Summary

Task #	Task Title	Labor	ODC	Subs	Total
01	Coordinate and Execute Field Work	\$ 3,884	\$ 300	\$ 2,950	\$ 7,134
02	Geotechnical Engineering Analyses	\$ 2,879			\$ 2,879
03	Geotechnical Engineering Reporting	\$ 5,731			\$ 5,731
04	Project Management and Contract Administration	\$ 1,526			\$ 1,526
Total Project Budget		\$ 14,020	\$ 300	\$ 2,950	\$ 17,270

Drayton Archaeology

Budget for a Cultural Resources of Truck Road Stabilization Project – Phase II											
LABOR	Principal	Deputy PI	Senior Sci	Field Director	Tech II	Tech I	Tech I	Tech I	Admin	Hours	Totals
Consultation	4	0	0	0	0	0	0	0	0	4	\$ 413.20
Research/ Maps/ Report Prep	2		2	2	4	1	1	1	1	13	\$ 814.66
Field Work				9	9	9	9	9		27	\$ 987.48
Reporting	10	3		16	16	12	6	6	1	64	\$ 3,535.65
Total Hours	16	3	2	27	20	22	16	16	2	104	\$ 5,750.99
Hourly Price	\$103.30	\$88.71	\$73.06	\$60.22	\$ 57.00	\$ 49.50	\$ 49.50	\$ 49.50	\$ 64.00		
Labor Price Total	\$ 1,652.80	\$ 266.13	\$ 146.12	\$ 1,625.94	\$ 1,140.00	\$ 1,089.00	\$ 792.00	\$ 128.00			\$ 6,839.99
Not to Exceed Cost											

*The above budget does not include costs associated with additional consultation, reporting or mitigation if archaeological materials are located.

2022 Actuals Not To Exceed Table (ANTE) Billing Rates

Job Classifications		Direct Labor Rate NTE*	Overhead NTE*	Fixed Fee NTE	All Inclusive Hourly Billing Rate NTE
President/Engineer VIII \\ Vice President / Engineer VII, Scientist VII, Planner VII		\$91.04	198.00%	30.00%	\$298.61
Engineer VI, Scientist VI, Planner VI, GIS Analyst VI		\$82.76	\$180.26	\$27.31	\$271.45
Engineer V / Scientist V / Planner V / GIS Analyst V		\$78.28	\$163.86	\$24.83	\$256.76
Engineer IV / Scientist IV / Planner IV / Landscape Architect IV / CAD Technician IV / GIS Analyst IV		\$67.20	\$154.99	\$23.48	\$220.42
Engineer III / Scientist III / Planner III / Landscape Architect III / CAD Technician III / GIS Analyst III		\$56.63	\$133.06	\$20.16	\$185.75
Engineer II / Scientist II / Planner II / Landscape Architect II / CAD Technician II / GIS Analyst II		\$47.78	\$112.13	\$16.99	\$156.72
Engineer I / Scientist I / Planner I / CAD Technician I / GIS Analyst I		\$39.66	\$94.60	\$14.33	\$130.08
Intern		\$23.98	\$78.53	\$11.90	\$78.65
Accounting Administrator I, II, III, IV, V		\$68.25	\$47.48	\$7.19	\$223.86
Project Accountant I, II, III, IV, V		\$45.15	\$135.14	\$20.48	\$148.09
Administrative Coordinator II, III, IV		\$39.59	\$89.40	\$13.55	\$129.86
			\$78.39	\$11.88	

North Fork Nooksack River Truck Road Stabilization

Herrera Environmental Consultants, Inc.

2200 Sixth Avenue, Suite 1100

Seattle, WA 98121

2022 Actuals Not To Exceed Table (ANTE)

North Fork Nooksack River Truck Road Stabilization

Aspect Consulting, LLC
 350 Madison Avenue N
 Bainbridge Island, WA 98110

Job Classifications	Direct Labor Hourly Billing Rate NTE	Overhead NTE	Fixed Fee NTE	All Inclusive Hourly Billing Rate NTE
		204.88%	30.00%	
Associate	\$61.30	\$125.59	\$18.39	\$205.28
Coordinator 1	\$27.88	\$57.12	\$8.36	\$93.36
Coordinator 2	\$36.06	\$73.88	\$10.82	\$120.76
Coordinator 3	\$45.19	\$92.59	\$13.56	\$151.33
Principal 1	\$86.48	\$177.18	\$25.94	\$289.60
Principal 2	\$91.20	\$186.85	\$27.36	\$305.41
Project 1	\$41.35	\$84.72	\$12.41	\$138.47
Project 2	\$43.27	\$88.65	\$12.98	\$144.90
Project 3	\$45.67	\$93.57	\$13.70	\$152.94
Senior 1	\$50.48	\$103.42	\$15.14	\$169.05
Senior 2	\$53.85	\$110.33	\$16.16	\$180.33
Senior 3	\$58.65	\$120.16	\$17.60	\$196.41
Senior Associate	\$67.31	\$137.90	\$20.19	\$225.41
Senior CAD	\$39.90	\$81.75	\$11.97	\$133.62
Senior Editor	\$38.46	\$78.80	\$11.54	\$128.79
Staff 1	\$32.21	\$65.99	\$9.66	\$107.86
Staff 2	\$35.10	\$71.91	\$10.53	\$117.54
Staff 3	\$36.54	\$74.86	\$10.96	\$122.37
		\$0.00	\$0.00	\$0.00

DRAYTON ARCHAEOLOGY TRUCK ROAD RATES							
FAR Overhead		Profit on Direct Labor					
78.73%		30.0%					
Employee	Position	Direct Labor	FAR Overhead	Profit	Billing Rate		
Garth Baldwin	Principal	\$ 49.49	\$ 38.96	\$ 14.85	\$ 103.30		
Stephen Austin	Deputy Principal	\$ 45.00	\$ 35.43	\$ 13.50	\$ 93.93		
Hillary Parsons	Deputy Principal	\$ 42.50	\$ 33.46	\$ 12.75	\$ 88.71		
Jim Schumacher	Senior Arch	\$ 40.00	\$ 31.49	\$ 12.00	\$ 83.49		
Ryan Schmidt	Senior Arch	\$ 35.00	\$ 27.56	\$ 10.50	\$ 73.06		
Alexander Berry	Field Director	\$ 28.85	\$ 22.71	\$ 8.66	\$ 60.22		
Kelsey Baldwin	Administration	\$ 26.33	\$ 20.73	\$ 7.90	\$ 54.96		
Adam Hefling	Tech II	\$ 22.00	\$ 17.32	\$ 6.60	\$ 45.92		
Courtney Paton-VanBeek	Tech II	\$ 22.00	\$ 17.32	\$ 6.60	\$ 45.92		
Jeffrey Hillstrom	Tech II	\$ 22.00	\$ 17.32	\$ 6.60	\$ 45.92		
Emily Hill	Tech I	\$ 21.00	\$ 16.53	\$ 6.30	\$ 43.83		
Simon Schultheis	Tech I	\$ 21.00	\$ 16.53	\$ 6.30	\$ 43.83		
Emma Graves	Tech I	\$ 21.00	\$ 16.53	\$ 6.30	\$ 43.83		
Jesse Hasselswerth	Tech I	\$ 20.00	\$ 15.75	\$ 6.00	\$ 41.75		
Katie Lewis	Tech I	\$ 17.50	\$ 13.78	\$ 5.25	\$ 36.53		
Megan Matson	Tech I	\$ 16.50	\$ 12.99	\$ 4.95	\$ 34.44		
Jackson Baldwin	Tech I	\$ 16.00	\$ 12.60	\$ 4.80	\$ 33.40		



**Washington State
Department of Transportation**

Development Division
Contract Services Office
PO Box 47408
Olympia, WA 98504-7408
7345 Linderson Way SW
Tumwater, WA 98501-6504

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

August 18, 2021

Herrera Environmental Consultants, Inc.
2200 Sixth Avenue, Suite 1100
Seattle, WA 98121

Subject: Acceptance FYE 2020 ICR – CPA Report

Dear Jennifer Swanson:

We have accepted your firms FYE 2020 Indirect Cost Rate (ICR) of 198.00% of direct labor (rate includes 0.07% Facilities Capital Cost of Money) based on the “Independent CPA Report,” prepared by Clifton Larson Allen, LLP. This rate will be applicable for WSDOT Agreements and Local Agency Contracts in Washington only. This rate may be subject to additional review if considered necessary by WSDOT. Your ICR must be updated on an annual basis.

Costs billed to agreements/contracts will still be subject to audit of actual costs, based on the terms and conditions of the respective agreement/contract.

This was not a cognizant review. Any other entity contracting with the firm is responsible for determining the acceptability of the ICR.

If you have any questions, feel free to contact our office at **(360) 705-7019** or via email consultantrates@wsdot.wa.gov.

Regards;

A handwritten signature in blue ink that reads "Erik K. Jonson".

ERIK K. JONSON
Contract Services Manager

EKJ:ah



**Washington State
Department of Transportation**

Development Division
Contract Services Office
PO Box 47408
Olympia, WA 98504-7408
7345 Linderson Way SW
Tumwater, WA 98501-6504

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

August 27, 2021

Tran Tech Engineering, LLC
12011 NE 1st Street, Suite 305
Bellevue, WA 98005

Subject: Acceptance FYE 2020 ICR - **Provisional**

Dear Kash Nikzad:

We have provisionally accepted your firms FYE 2020 Indirect Cost Rate (ICR) of 131.38% based on the economic hardship determined by WSDOT Audit Office. This rate will be applicable for WSDOT Agreements and Local Agency Contracts in Washington only. This rate is effective 180 days following your current fiscal year end and per terms and conditions of applicable agreement. This rate may be subject to additional review if considered necessary by WSDOT.

Costs billed to agreements/contracts will still be subject to audit of actual costs, based on the terms and conditions of the respective agreement/contract.

This was not a cognizant review. Any other entity contracting with the firm is responsible for determining the acceptability of the ICR.

If you have any questions, feel free to contact our office at **(360) 705-7019** or via email consultantrates@wsdot.wa.gov.

Regards;

A handwritten signature in blue ink that reads "Erik K. Jonson".

ERIK K. JONSON
Contract Services Manager

Aug 27, 2021

EKJ:mya



**Washington State
Department of Transportation**

Development Division
Contract Services Office
PO Box 47408
Olympia, WA 98504-7408
7345 Linderson Way SW
Tumwater, WA 98501-6504

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

July 7, 2021

Aspect Consulting, LLC
350 Madison Avenue N
Bainbridge Island, WA 98110

Subject: Acceptance FYE 2020 ICR – CPA Report

Dear Trish Klimek:

We have accepted your firms FYE 2020 Indirect Cost Rate (ICR) of 204.88% of direct labor (rate includes 0.25% Facilities Capital Cost of Money) based on the “Independent CPA Report,” prepared by BPM, LLP. This rate will be applicable for WSDOT Agreements and Local Agency Contracts in Washington only. This rate may be subject to additional review if considered necessary by WSDOT. Your ICR must be updated on an annual basis.

Costs billed to agreements/contracts will still be subject to audit of actual costs, based on the terms and conditions of the respective agreement/contract.

This was not a cognizant review. Any other entity contracting with the firm is responsible for determining the acceptability of the ICR.

If you have any questions, feel free to contact our office at **(360) 705-7019** or via email consultantrates@wsdot.wa.gov.

Regards;

A handwritten signature in blue ink that reads "Erik K. Jonson".

ERIK K. JONSON
Contract Services Manager

EKJ:ah



**Washington State
Department of Transportation**

Development Division
Contract Services Office
PO Box 47408
Olympia, WA 98504-7408
7345 Linderson Way SW
Tumwater, WA 98501-6504

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

October 11, 2021

Drayton Archaeological Research, LLC
P.O. Box 782
Blaine, WA 98231-0782

Subject: Acceptance FYE 2020 ICR – Audit Office Review

Dear Garth Baldwin:

Transmitted herewith is the WSDOT Audit Office's memo of "Acceptance" of your firm's FYE 2020 Indirect Cost Rate (ICR) of 78.73% of direct labor. This rate will be applicable for WSDOT Agreements and Local Agency Contracts in Washington only. This rate may be subject to additional review if considered necessary by WSDOT. Your ICR must be updated on an annual basis.

Costs billed to agreements/contracts will still be subject to audit of actual costs, based on the terms and conditions of the respective agreement/contract.

This was not a cognizant review. Any other entity contracting with your firm is responsible for determining the acceptability of the ICR.

If you have any questions, feel free to contact our office at **(360) 705-7019** or via email consultantrates@wsdot.wa.gov.

Regards;

A handwritten signature in blue ink that reads "Erik K. Jonson".

ERIK K. JONSON
Contract Services Manager

EKJ:ah



EXHIBIT B - SCOPE OF WORK

TRUCK ROAD STABILIZATION PROJECT – PHASE 2

Herrera Environmental Consultants (Herrera) is assisting Whatcom County with design of a project to stabilize the bank of the North Fork Nooksack River adjacent to Truck Road for long-term protection of the roadway. Before design of that project could be completed and constructed, erosive flood flows in November 2021 caused additional bank erosion that put Truck Road at high risk of severe damage during the next high-water event. In response to the November 2021 floods, Whatcom County pursued an emergency authorization stabilization project to protect Truck Road, which was constructed in February and March of 2022 (Phase 1). The Phase 2 project will include additional mitigation for the Phase 1 emergency repair and realignment and repair of the existing damage to Truck Road per the attached Phase 2 concept plan.

Whatcom County has authorized Herrera to prepare this scope of work and a corresponding cost estimate for completing design and providing construction support services for the Truck Road Stabilization Phase 2 project. The work to be performed by Herrera includes 30%, 60%, 90% and final design development, permitting support, cultural resources support, Whatcom County floodplain management compliance support, and reporting for the Phase 1 and Phase 2 projects. Task numbering follows the predefined progression of tasks 1-13 already in place in Herrera's contract #720008 with Whatcom County. This scope of work includes discussions of the activities, assumptions, and deliverables associated with the following tasks:

- Task 1: Project Management
- Task 14: Phase 2 - Agency Coordination and Project Support
- Task 15a: Phase 2 – 30% Design Development
- Task 15b: Phase 2 - 60% Design (P&E)
- Task 15c: Phase 2 - 90% Design (P&E)
- Task 15d: Phase 2 - Final Design (P&E)
- Task 15e: Phase 1 and 2 Basis of Design Report
- Task 16: Phase 2 – Permitting Support
- Task 17: Phase 2 – Floodplain Management Compliance Memorandum
- Task 18: Phase 2 – Cultural Resources Support
- Task 19: Phase 2 – Geotechnical Investigation

Subconsultants supporting Herrera in this work include: Aspect Consulting for geotechnical engineering, TranTech Engineering for roadway design and utility relocation coordination, and Drayton Archaeology for cultural and historical resources support.

SCOPE OF WORK

The following schedule milestones will be met for this project in order for construction to occur during the 2023 fish window:

- August 1: 30% design
- September 30: 60% design, permit packages, Basis of Design Report, Floodplain Compliance Memo
- November 30: 90% Design
- January 31: Final Design

TASK 1 – PROJECT MANAGEMENT

This task covers the work required for ongoing administration of the project, including preparing invoices and progress reports, maintaining a project schedule, and coordination of work efforts with the County and all subconsultants. Herrera's project manager and lead engineer will have phone or e-mail contact with the County's project manager bi-weekly and otherwise on an as-needed basis to coordinate progress and proactively address any issues affecting scope, schedule, or budget as the work proceeds.

Assumptions

- Bi-weekly meetings with the County will be attended by the project manager and lead hydraulic engineer for an assumed duration of 9 months.

Deliverables

- Progress reports will be delivered to the County with monthly invoices for the duration of the work described in this scope of work.

TASK 14: PHASE 2 – AGENCY COORDINATION AND PROJECT SUPPORT

This task covers the work for Herrera to support, at the direction of Whatcom County, the further refinement of mitigation requirements, agency coordination and other project support work efforts as directed.

SCOPE OF WORK

Assumptions

- This work assumes up to 60 hours of combined Herrera staff time for continued support to the County.
- Work will be completed only as requested and directed by Whatcom County.

Deliverables

- Deliverables will be defined as specific needs arise.

TASK 15A: PHASE 2 - 30% DESIGN DEVELOPMENT

This task covers the work required to advance the conceptual Phase 2 plan, previously developed under this contract, to the 30% level of design completion. The Phase 2 project includes the following major project elements which will be designed by Herrera and subconsultants and included in the eventual construction drawings:

- Offsetting and reconstruction a portion of Truck Road along the site of the existing damage within the existing County right of way.
- Construction of 2 ballasted bank roughening engineered logjam (ELJ) structures.
- Placement of additional non-ballasted logs with rootwads in the side channel downstream of the Phase 1 project.
- Placement of 3 ballasted habitat ELJ jack structures along the side channel.
- Placement of 2 bank roughening log structures along portions of the Phase 1 rock revetment that was not constructed with a wood roughened toe.
- Removal of excess portions of rock revetment along approximately 100 feet of bank downstream of Occlusion Structure 3 (built in the Phase 1 project) and placement of woody toe cover structures.
- Reconstruction of the eroded bank along the existing damaged roadway prism that includes a vegetated riprap and large wood toe.
- Placement of 3 protruding logs without rootwads into Occlusion Structure 4 and 1 protruding log without a rootwad into Occlusion Structure 1 from the Phase 1 project.
- Placement of angled cover logs and toe cover logs adjacent and on top of the rootwads embedded in the existing rock revetment.
- Placement of topsoil and fill to create a planting bench for riparian vegetation planting.

As a part of the roadway realignment and reconstruction work, TranTech Engineering (TranTech) will lead efforts in coordinating with the various utility agencies regarding the relocation of existing facilities and provision of new facilities within the Project Limits when required. Additionally, TranTech will revise a draft informational memorandum prepared for Herrera in October of 2021 for County approval to address and finalize the following topics:

SCOPE OF WORK

- Roadway design criteria/parameters
- Clear zone reductions allowed for Low Volume Roads
- Side slope recommendations to discourage parking along the reconstructed road
- Stormwater management compliance requirements for the project limits

Assumptions

- There will be no formal 30% submittal package and review/comment period. A progress print set of plans will be provided at 30% design completion to provide the County with an update on the design and a virtual meeting will be held with County staff to review the design progress and address major comments.
- No additional survey is required for the design of the Phase 2 project outside of the survey provided by Wilson Engineering in April 2022. In the absence of project survey/data, such as where river bathymetry has not been collected, engineering judgement will be used for design and construction quantity calculations.
- Planting plan design is to be done by others and is not included in this scope of work. No planting details or plans will be included or incorporated into the drawings generated by Herrera.
- TranTech will coordinate with Puget Sound Energy (PSE) during PS&E development when overhead utility lines are expected to be impacted. Other telecommunication utilities are expected to be within the project limits and require coordination. TranTech will provide services up to the amount shown in the fee proposal. Additional hours will be considered extra work to be negotiated as part of a supplemental agreement.
- Any design of existing undergrounding or overhead utilities is not included in this scope of work.
- It is expected utilities found to conflict with the County's Project will be relocated by others in advance of construction.
- The County will be responsible for coordinating right-of-entry permissions for any required activities on private properties for utility coordination/relocation.
- Given the project's location within Whatcom County and its ADT of less than 400, stormwater management concerning Runoff Treatment (RC) or Flow Control (FC) will not be required to construct this project.
- All necessary traffic data was collected in previous phases of the project, and no additional data collection is required. The value of 238 ADT, gathered from the County's "Mobility Database," will be used for roadway design purposes.

SCOPE OF WORK

- In regard to roadway design work, no structural work, including retaining wall design, is anticipated.
- Whatcom County will perform all work related to Right-of-Way acquisition related to Temporary Construction Easements (TCE), including appraisal, negotiations, and acquisition. Whatcom County will prepare any required ROW Plan with limits of any required TCE provided by the consultant team to the County in the form of AutoCAD linework.
- County approval of the draft Road Design Memorandum will be essential to developing the 30% design. The 30% design cannot be completed without approval from the County on the information presented in this memorandum.
- This scope does not include delineating such features as the ordinary high-water mark (OHWM) and wetland areas that may be necessary for design and/or permitting. Given the conditions of the bank, the OHWM will be assumed to be consistent with the work done for the Phase 1 emergency stabilization project.
- 2019 AutoCAD and 2019 Civil 3d software will be used to develop the construction drawings.
- County provided title blocks and associated pen styles will be used for the construction drawings. Herrera may use their own pen styles inside the drawings but not within the title block.
- This task has been budgeted assuming the development of the following 18 drawing sheets:
 - Phase 2 Site Plan – 1 Sheet
 - ELJ 1 Plan/Detail/Section – 4 Sheets
 - Roadway Embankment Plan/Detail/Section – 1 Sheet
 - Side Channel Unballasted Large Wood Plan/Detail – 1 Sheet
 - Planting Bench Grading Plan – 1 Sheet
 - Planting Bench Grading Sections – 1 Sheet
 - Roadway Plan & Profile Sheet (showing profiles, grading) - 4 Sheets
 - Roadway Typical Sections & Details - 1 Sheet
 - Roadway Cross-Sections- 4 Sheets

Deliverables

- 30% design progress print in electronic file format (Adobe .pdf).
- 30% Design Preliminary Estimate of Construction Costs in itemized tabular format – Microsoft Excel electronic file.

SCOPE OF WORK

- One electronic copy (.docx) of the Road Design Memorandum regarding roadway design criteria and stormwater management compliance requirements.
- A meeting will be held with the County, Herrera, and TranTech after submitting the 30% progress print to address any major comments in lieu of a formal comment and response period.

TASK 15B: PHASE 2 - 60% DESIGN (P&E)

This task covers the work required to develop the project design from the 30% completion level to a 60% design level. This task includes the development of an Estimate of Construction Cost (EOCC), development of a draft bid tab, and preparation of draft special provisions supplementing standard specifications for materials and their placement for non-standard items. Emphasis shall be placed on design content the County needs in the completed 60% plan set for permit applications, and it is understood that the submittal of the draft specifications may lag behind the formal 60% plan set submittal to expedite the permit application process.

Assumptions

- This task has been budgeted anticipating the development of the following 6 drawing sheets, additive to the sheets prepared in Task 15A (which will be embellished for the 60% level of completion):
 - Vicinity Map and Sheet Index – 1 Sheet
 - General Notes – 1 Sheet
 - Existing Conditions – 1 Sheet
 - TESC and Water Isolation Plan – 2 Sheets
 - Additional ELJ Details – 1 Sheet
 - Roadway Details - Driveways - 1 Sheet
- The County will provide consolidated comments on the 60% design plan set, draft specifications, and EOCC.
- The WSDOT/APWA Standard Specifications for Road, Bridge, and Municipal Construction will serve as the basis for the project's construction specifications (current version).
- Herrera will provide draft special provisions text, for items not adequately covered in Divisions 2 through 9 of the WSDOT Standard Specifications, with measurement and payment identified for all Bid Tab items. TranTech will provide a "Run List" for all non-standard specifications and those requiring a General Special Provision.

SCOPE OF WORK

- The County shall be responsible for all general administration and Division 0 and Division 1 specifications.
- The County will utilize a previously approved Traffic Control Plan from the Phase 1 project during the construction of Phase 2. The approved permit and plan will be included as an appendix to the contract bid documents and not be included in the 60% design plan set.
- FEMA funding prohibits the use of bid items that utilize WSDOT's Force Account (FA) method for payment, and also discourages the use of lump sum items. No FA items will be included in the bid package and use of lump sum items will be minimized.

Deliverables

- A 60% design plan set submittal will be provided in electronic format (Adobe .pdf).
- A draft copy of 60% complete design draft specifications for river design elements and a run list for roadway elements (.docx format) will be provided for review by the County. The delivery of draft specifications may lag behind 60% complete design plan set submittal to prioritize drawings for permitting needs.
- An Estimate of Construction Costs (EOCC) inclusive of all Bid Tab items in Microsoft Excel file format.

TASK 15C: PHASE 2 - 90% DESIGN (P&E)

This task covers the work required to advance the 60% design plans completed in Task 15b to the 90% level of design completion. The 90% submittal will update and revise the 60% design based on County comments and finalize all elements of the design. The work to update the 60% design also includes updating the EOCC, revising the draft 60% special provisions for riverine work, and special provisions associated with roadway and utility work.

Assumptions

- The County will provide consolidated comments on the 90% design plan set, specifications, and EOCC.
- Roadway related construction specifications shall conform to the published standards of WSDOT's Standard Specifications for Road, Bridge, and Municipal Construction, including all relevant published GSPs. Given the timing of the Project, it is understood that the 2023 version of these WSDOT Specifications will be used to develop the Contract Documents.

SCOPE OF WORK

Deliverables

- A 90% complete design plan set submittal will be provided in electronic file format (Adobe .pdf).
- A copy of 90% design specifications (Microsoft Word format) will be provided for review by the County.
- An updated Estimate of Construction Costs (EOCC) will be provided in Microsoft Excel file format.
- Anticipated bid advertisement and construction schedule showing number of working days. Three months will be allocated for bid advertisement/award/contract execution.

TASK 15D – PHASE 2 - FINAL DESIGN (P&E)

This task covers the work required to incorporate all County comments from the 90% submittal and submit completed design plans, specifications and EOCC to the County for construction contract advertisement.

Assumptions

- The County will be responsible for compiling the final specifications and bid documents for project advertisement.

Deliverables

- One electronically stamped and signed copy (Adobe pdf), for printing at 22"x34" size, of the Final Construction Drawings.
- One electronic copy (.docx) copy of the final Special Provisions in Divisions 2 through 9 with stamped and signed cover page.
- One electronic copy (Adobe pdf) of the final EOCC and corresponding Bid Form.
- 2019 AutoCAD and 2019 Civil 3d complete electronic drawing files.

TASK 15E – PHASE 1 AND 2 BASIS OF DESIGN REPORT

This task covers the work required to complete a Basis of Design (BOD) report that covers Phase 1 and Phase 2 of the project. The report will include the following:

SCOPE OF WORK

- A geomorphic risk assessment for the Phase 2 project.
- DNR safety checklist
- Basis of design information for the ELJ structures included in Phase 2.
- Summary of the County-approved basis of design information for the roadway and stormwater design from the technical memorandum developed as a part of Task 15a. This memorandum will also be included with the BOD report as an exhibit.
- Summary of geotechnical information developed as a part of Task 19. The geotechnical memorandum will also be included with the BOD report as an exhibit.
- Summary of floodplain compliance information developed as a part of Task 17. The floodplain compliance memorandum will also be included with the BOD report as an exhibit.
- Design intent and methods for the Phase 1 Truck Road Emergency Stabilization Project.

Assumptions

- The County will provide comments on the draft BOD report as comments within the draft BOD electronic file. Comments will be addressed and incorporated into the final BOD report.

Deliverables

- Draft BOD report in Microsoft Word (.docx) file format for County review.
- Final BOD report in Word (.docx) file format as a final check draft before final development of the .pdf.
- One stamped and signed electronic copy (Adobe .pdf) of the Final BOD report will be provided with comments addressed

TASK 16 PERMITTING AND ENVIRONMENTAL DOCUMENTATION SUPPORT

Herrera will assist Whatcom County with permitting support and environmental documentation as required for regulatory compliance with applicable environmental regulatory agencies, including Federal Emergency Management Agency (FEMA), the US Army Corps of Engineers (USACE), US Fish and Wildlife Service (USFWS), NOAA Fisheries (National Marine Fisheries

SCOPE OF WORK

Service) [NMFS], Washington Department of Fish and Wildlife (WDFW), Washington Department of Natural Resources (WDNR), and Whatcom County Planning and Development Services.

Based on meetings with the County and applicable regulatory agency staff representatives, Herrera's understanding of the project permitting completed to date and the ongoing environmental permitting needs is as follows:

- Permits acquired authorizing Phase 1 emergency project construction work included a nationwide Section 404 permit under the Clean Water Act (NWP-2021-26) from the USACE and a Hydraulic Project Approval (HPA) from WDFW.
- Phase 2 of the work will require an individual permit authorization from the USACE, which will include individual Section 401 Water Quality and Coastal Zone Management Consistency certifications, as administered by the Washington State Department of Ecology.
- Phase 2 work will require a HPA from WDFW.
- The County is requiring a Shoreline Substantial Development permit for the combined phases of the work.
- A draft shoreline permit application, critical areas report, and project description have been prepared by the County, however, further information from Herrera regarding the Phase 2 work is need for final submittals.
- Project reviews by FEMA, the lead funding agent, will also allow for one combined phased work project submittal. A Project Action Implementation Form, that has been partially prepared by the County will be finished by Herrera.
- The County has prepared a draft Biological Assessment (BA) for Endangered Species Act (ESA) Section 7 compliance and consultation with the federal service agencies (USFWS and NMFS). The BA may not be required if the project meets the compliance requirements of FEMA's Biological Opinion (Bi-Op) for NOAA Fisheries (National Marine Fisheries Service) ESA compliance requirements for routine flood projects. However, the information provided in the BA will be used by Herrera to prepare required project environmental documentation.

Table 1 provides a summary of the anticipated permits and authorizations required for regulatory compliance.

Table 1. Truck Road Stabilization Project – Anticipated Environmental Regulatory Compliance Authorizations and Reviews by Agency

Regulatory Agency	Permit/Authorization	Required Documentation
Federal Emergency Management Agency (FEMA)	<ul style="list-style-type: none"> ▪ National Environmental Policy Act (NEPA) ▪ Endangered Species Act Section 7 Consultation ▪ Section 106 National Historic Preservation Act 	<ul style="list-style-type: none"> ▪ Project Action Implementation Form

SCOPE OF WORK

US Army Corps of Engineers (USACE)	<ul style="list-style-type: none"> ▪ Clean Water Act Section 404 Individual Permit 	<ul style="list-style-type: none"> ▪ Joint Aquatic Resources Permit Application (JARPA) and Project Site Plans ▪ Alternative Analysis illustrating mitigation sequencing to avoid, reduce and compensate for in-water impacts ▪ Project description for public notice notification ▪ Mitigation installation and monitoring plan
Washington State Department of Ecology (Ecology)	<ul style="list-style-type: none"> ▪ Section 401 Water Quality Certification 	<ul style="list-style-type: none"> ▪ Same information as listed above for USACE individual project review ▪ Coastal Zone Management Consistency
Washington Department of Fish and Wildlife (WDFW)	<ul style="list-style-type: none"> ▪ Hydraulic Project Approval (HPA) 	<ul style="list-style-type: none"> ▪ JARPA (APPS or paper copy) (Phase 2 Only) ▪ SEPA Determination
Washington Department of Natural Resources	<ul style="list-style-type: none"> ▪ Aquatic Lands Authorization 	<ul style="list-style-type: none"> ▪ JARPA ▪ Safety Inspection
Whatcom County	<ul style="list-style-type: none"> ▪ Shoreline Substantial Development Permit ▪ State Environmental Policy Act (SEPA) Determination 	<ul style="list-style-type: none"> ▪ Shoreline Permit Application Submittal Packet ▪ Pre-application meeting ▪ SEPA Checklist

HERRERA will participate in a permitting kick off meeting with FEMA, County, Nooksack Indian Tribe, and applicable jurisdictional agency representatives to discuss permit application submittals and required environmental documentation. The meeting will occur via teleconference or in the Bellingham area if it is convened in person.

Herrera will finalize the County's initial drafts of the project's required environmental permit applications and prepare other documentation, as required for the project's multi-agency permit reviews and authorizations. The updated forms and documents will be provided to the County as a draft copy for County review and finalized after incorporation of comments and recommended revisions. Estimates of ground disturbance areas and volumes, vegetation clearing, in-water and riparian buffer impacts will be assessed and summarized in the project documentation.

Herrera's permitting lead staff will participate in up to five additional project team and/or County meetings to coordinate the permitting components with the project design and construction phases of the project.

Assumptions

- FEMA will be the lead federal agency for the project.
- The project is anticipated to meet NEPA project compliance as a Categorical Exclusion (CE).

SCOPE OF WORK

- Whatcom County will be the lead SEPA agent. The SEPA determination is required by WDFW for HPA project review and issuance.
- The Critical Areas Assessment and Mitigation Plan report will not include an assessment of aquifer recharge areas or geological hazardous areas. Performance standards for long-term monitoring of the mitigation components, such as native vegetation installations, will be included in the Critical Areas report, as required by Whatcom County, USACE and WDFW for permit compliance.
- Planting plans, as provided by others, will be included in submittals to regulatory agencies for project and site plan reviews, as applicable.
- All mitigation for project impacts will occur on site.
- The County will provide one set of consolidated comments on the Draft deliverables to Herrera for final preparation and submittal.
- All permit application fees will be paid directly by the County.
- Herrera will act as the authorized agent for submitting permit applications to the USACE, Ecology and WDFW.
- USACE and Ecology will conduct a joint public notification and comment period for the project.
- The County will submit the cultural resources documentation (prepared under Task 18) and coordinate with applicable agencies and tribes for compliance with Washington State and federal reviews under Section 106 of the NHPA.
- It is anticipated that ground disturbance area will not trigger the need for a Construction Stormwater General Permit from the Department of Ecology.

Deliverables

- Meeting agenda and notes for the permitting kick off meeting will be provided in an electronic format.
- Draft and final Project Action Implementation Form and other supporting documentation, such as NEPA Categorical Exclusion, stormwater review, compliance with Programmatic ESA biological opinions (NMFS and USFWS), as applicable, for submittal to FEMA.
- Draft and Final SEPA Checklist in Microsoft Word and Adobe .pdf electronic file formats.
- Draft updated Critical Areas Wetland Assessment and Mitigation technical report prepared according to the submittal requirements of Whatcom County in an electronic format.
- Final Critical Areas Wetland Assessment and Mitigation technical report incorporating County comments and revisions in an electronic format.
- Draft and final NEPA documentation to support a Categorical Exemption (CE) determination for the project. This will include the Project Action Implementation Form and documentation for ESA compliance, as applicable.

SCOPE OF WORK

- Draft and final JARPA and permit level site plans for submittal to USACE and Ecology.
- Ecology Section 401 Water Quality Certification and Coastal Zone Management Consistency Forms in draft and final form for County review and submittal to regulatory agencies.
- Draft and final shoreline substantial permit in-take application forms and associated project documentation.
- Draft and final Whatcom County pre-application meeting request form.
- The electronic APPS submittal process for WDFW's in-take for HPA applications will be completed and will also include an uploaded "paper version" of the JARPA as submitted to USACE and Ecology.
- Meeting notes from up to five additional project design team and/or County coordination meetings.

TASK 17 PHASE 2 – FLOODPLAIN MANAGEMENT COMPLIANCE MEMORANDUM

This task includes the work required to develop a technical memorandum to demonstrate compliance with the applicable Whatcom County FEMA floodplain management regulations. The memorandum will draw upon existing conditions hydraulic modeling and the geomorphic assessments conducted previously under this contract to provide the rationale that neither phases of the project will cause any adverse increases (i.e. less than 1 foot) to the 100-year flood water surface elevation relative to what that elevation was based on the previous bank of the river at the time the effective floodplain mapping was done. Memorandum will confirm that the project will result in no net loss of floodplain storage. Exhibits will be provided and included in the memo to support this conclusion.

Assumptions

- Isolated hydraulic modeling will be performed using the existing conditions model developed previously as a part of this contract to assess the direct and downstream effects of the habitat ELJ jack structures along the side channel. No additional hydraulic modeling will be required for this task.
- Existing conditions assume a pre-project bank as existed in 2020.

Deliverables

- Draft and final Floodplain Management Compliance Memorandum

SCOPE OF WORK

TASK 18 PHASE 2 - CULTURAL RESOURCES SUPPORT

Drayton Archaeology will provide cultural resources support for the design and permitting of the Phase 2 project. The work in this task will draw upon their previously performed desktop analysis of cultural resources conducted under this contract and provide the necessary level of assessment appropriate for the Phase 2 of this FEMA-funded project. The work is anticipated to include a site investigation of project areas where excavation and disturbances are anticipated, oversight of subsurface geotechnical investigations, as well as an updated inadvertent discovery protocol to be followed during construction.

Assumptions

- One day field reconnaissance of the project area where excavation and disturbances are anticipated.
- One day site visit to provide oversight of subsurface geotechnical investigations along the proposed roadway realignment.

Deliverables

- The results of the cultural resources review will be summarized in a brief technical memo that will be provided to the County for inclusion in permit submittals.
- Inadvertent Discovery Plan tailored to the specifics of the proposed project, work included, and any specific concerns of the local Tribes.
- One virtual meeting will be held between Drayton Archaeology, Whatcom County, and FEMA representatives to review the cultural resources support needed for the project.

TASK 19: PHASE 2 - GEOTECHNICAL INVESTIGATION

Aspect Consulting will provide geotechnical engineering support for necessary to inform the design of the realigned portion of Truck Road and associated stormwater management features. Aspect's work will include a one-day field exploration consisting of four to six backhoe test pits and soil sampling at selected areas along the planned roadway alignment, laboratory testing, and geotechnical engineering analyses to inform design of the roadway base, pavement, and stormwater management features.

The test pits will be excavated by rubber tire backhoe or rubber tracked excavator at accessible locations along the re-aligned roadway. Each of the test pits will be excavated and sampled down to a maximum depth of 12 feet or groundwater and caving conditions, whichever comes

SCOPE OF WORK

first. On completion the test pits will be backfilled with excavated soil tamped into place with the backhoe bucket; some ground disturbance and future subsidence of backfilled test pits is to be expected. Test pits will be completed by a local earthwork contractor under subcontract to Aspect. It is assumed that traffic control will not be needed as the test pits will be north of the active single road lane.

Soil samples recovered from the test pits will be classified and returned to the Aspect laboratory for further examination. Selected soil samples will be submitted for geotechnical and analytical laboratory testing of grain size distribution and cation exchange capacity.

Aspect will prepare logs of the test pits, compile laboratory test results, and prepare a site and exploration plan map showing the test pit locations.

Aspect will complete geotechnical engineering analyses with respect to roadway subgrade, pavement section thickness, and stormwater infiltration feasibility. Aspect will collaborate with the design team to identify permissible means of managing stormwater, such as widespread dispersion.

Aspect will prepare and submit a draft geotechnical engineering report in support of the re-aligned roadway design. Aspect will collaborate with the design team to review and discuss geotechnical and roadway design elements and will address any review comments on the draft geotechnical report. Aspect will then prepare a final geotechnical engineering report, co-stamped by a professional engineer and licensed engineering geologist.

Assumptions

- This scope of work will be completed in support of the 60% design work.
- Site access permission will be granted by the County.
- Traffic control will not be required to complete the test pit investigations north of the active single road lane.
- Environmental evaluations of potential presence or absence of contaminated soil or groundwater will not be required and are not included in this scope of work.
- Aspect will coordinate with Herrera and Drayton Archaeology on the appropriate oversight required for potential cultural resource inadvertent discovery for all ground disturbing activities in advance of those activities taking place.
- No detention or treatment of stormwater runoff in a concentrated location is anticipated to be required for the project; therefore, Pilot Infiltration Testing (PIT) is excluded from this scope of work. Should the need arise, a contract amendment will be required for PIT testing during the required timeframe set by the Department of Ecology of December 1st to April 1st.

Deliverables

- Draft geotechnical engineering report (.docx)

SCOPE OF WORK

- Final stamped and signed geotechnical engineering report (.pdf)