

<b>Snohomish County Standard Consultant Agreement Supplement</b>		Consultant/Address/Telephone <b>BergerABAM Inc.</b> 3301 Ninth Avenue South, Suite 300 Federal Way, WA 98003	
Supplement Number <b>Supplement No.1</b>		Contact Name / E-Mail Address Robert L. Fernandes / bob.fernandes@abam.com	
Agreement Number <b>CCF07-13</b>		Telephone 206-357-5616	Fax 206-357-5601
Project Title <b>Structural Engineering, Geotechnical Design, Survey and Mapping Services for the Index Galena Road (MP 6.4 – 6.9) Flood Repair Project</b>		Execution Date <i>August 8, 2013</i>	Completion Date <i>December 31, 2015</i>
Description of Work <i>Provide Structural Engineering, Geotechnical Design, Survey and Mapping Services for the Index Galena Road (MP 6.4 – 6.9) Flood Repair Project. The Index-Galena Road is located along the Skykomish River in the Mount Baker – Snoqualmie National Forest in southeast Snohomish County. During Fall 2006 it was severely damaged by flooding and was washed out between mile posts 6.4 and 6.9.</i>		New Maximum Amount Payable Remains Unchanged at <b>\$1,237,640.00</b>	

WHEREAS, Snohomish County desires to supplement the Agreement entered into with **BergerABAM Inc.** and executed on the 8th day of August, 2013, and identified as Agreement No. **CCF07-13**, and

WHEREAS, Snohomish County desires to authorize the release of \$32,214 in Management Reserve Funds to compensate for the additional services defined in this supplement. All provision of the basic agreement remain in effect except as expressly modified by this supplement.

The changes to this Agreement are described as follows:

1. The "Total Amount Authorized" amount on the Agreement title page is amended as follows:

Total Amount Authorized                    ~~(\$1,137,640.00)~~ **\$1,169,854.00**

2. The "Management Reserve Fund" amount on the Agreement title page is amended as follows:

Management Reserve Fund                    ~~(\$100,000.00)~~ **\$67,786.00**

3. Maximum Amount Payable, on the Agreement title page, shall remain unchanged as payment for the supplemental work will be drawn from the management reserve fund.

4. Section II **Scope of Work**, is hereby amended to read:

The Scope of Work and projected level of effort required for this PROJECT is detailed in Exhibit "A" comprised of Exhibit A-1 and Exhibit A-1a, attached hereto and by this reference made a part of this AGREEMENT.

5. The first unnumbered paragraph in section VI **Sub-Contracting**, is amended to read:

The COUNTY permits sub-contracts for those items of work as shown in Exhibit "G" comprised of Exhibit G and Exhibit Ga, attached hereto, and by reference made a part of this AGREEMENT.

6. **EXHIBIT A-1a Supplemental Scope of Work**, attached hereto is added to and incorporated into this Agreement.

7. **EXHIBIT E-1a Supplemental Consultant Fee Determination – Budget**, attached hereto is added to and incorporated into this Agreement.


8. **EXHIBIT Ga Supplemental Subcontracted Work**, attached hereto is added to and incorporated into this Agreement.
9. **EXHIBIT G-1a Supplemental Subconsultant Fee Determination – Budget**, attached hereto is added to and incorporated into this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Supplement No.1 on this 13 day of May, 2014.

**SNOHOMISH COUNTY**

  
\_\_\_\_\_  
Director of Public Works

**BERGERABAM INC.**

  
\_\_\_\_\_  
Signature  
VICE PRESIDENT  
\_\_\_\_\_  
Title

## **EXHIBIT A-1a Supplemental Scope of Work**

### **PROJECT DESCRIPTION**

The COUNTY desires to restore the roadway connection of the Index-Galena Road between project design Mileposts 6.088 and 7.032 by constructing a new roadway realigned to the south and east of the original roadway which was damaged during flooding of the North Fork of the Skykomish River in November of 2006.

The phase 1 services included preliminary bridge engineering and a bridge study. Resulting from this, drilled shaft foundations are proposed for the bridge near the northern extent of the project and additional subsurface information is needed to complete the design of the bridge foundations.

BergerABAM, the CONSULTANT, including the firm of Shannon & Wilson, hereinafter called the SUBCONSULTANT, together referred here forward as the CONSULTANT, shall provide the following engineering services as supplemental to the original scope of work. The proposed scope of services is based on discussions with the COUNTY and a brief site visit by an engineer from the SUBCONSULTANT conducted in early 2014.

The purpose of these services is to observe two geotechnical explorations, one located near each of two proposed drilled shafts; perform geotechnical laboratory testing; revise the existing geologic profiles and sections; and revise the existing geotechnical engineering analyses. The findings will be presented in a geotechnical memorandum included in the original contract scope of work.

### **ESTIMATED LEVEL OF EFFORT**

The estimated level of effort to provide these services is shown in Exhibit E-1a, and is based upon the scope of work, assumptions, and task descriptions provided below.

### **SCHEDULE**

The field exploration schedule depends upon accessibility through Jacks Pass, WSDOT drill rig availability, and permitting issues. The drilling is expected to be accomplished in eight working days. Following completion of the borings, laboratory testing of selected soil samples is anticipated to take approximately two weeks and laboratory testing on selected rock samples will take approximately four weeks. The Geotechnical Design Memorandum for Bridge Foundations is anticipated to be submitted internally to the CONSULTANT team within eight weeks of completion of the field exploration and laboratory testing.

### **ASSUMPTIONS**

The scope of work for this supplement and associated estimate of effort includes the preceding schedule and following assumptions:

- The COUNTY will provide rights of entry and all applicable permits associated with the geotechnical studies.
- No environmental assessment will be performed to evaluate the potential for contaminated soil or water above, around, or below the project site. We can provide these services if requested, but they are not included in this scope of services.
- No assessment or evaluations regarding the presence or absence of wetlands will be performed.
- The proposed borehole locations will be accessed via Jacks Pass. One borehole will be drilled to about 95 feet bgs, and one borehole will be drilled to about 130 feet bgs.
- The borings will be sampled using a combination of rock coring and Standard Penetration Tests (SPTs) sampling techniques. SPTs will be performed at a 5-foot interval unless subsurface conditions indicate additional testing and sampling is needed.
- The investigation-derived waste (IDW) will be disposed of on site. We will not perform analytical lab testing for IDW disposal; we can provide these services if requested, but they are not included in this scope of services.

- The COUNTY will coordinate and subcontract the drilling subcontractor (Washington State Department of Transportation [WSDOT]) and provide associated site restoration.
- WSDOT will provide core boxes to transport rock core.
- The SUBCONSULTANT will make a site visit with the COUNTY to mark the borehole locations, and then we will call the public utility locate.
- Drilling fieldwork schedule is based on eight hours per day for eight days on a four-day per week schedule. Travel time is based on two round trip drives from Seattle and six round trip drives from Skykomish.
- Survey of the boring locations after drilling is complete will be performed by the COUNTY or the CONSULTANT as mutually agreed.

**TASK 1 (EXISTING) – PROJECT MANAGEMENT**

The CONSULTANT will provide additional project administration, management and coordination associated with these supplemental services to Tasks 1.1, 1.2, and 1.3 as identified in the associated estimate of effort, Exhibit E-1a.

**TASK 3 (EXISTING) GEOTECHNICAL ENGINEERING (SUBCONSULTANT)**

The SUBCONSULTANT will provide supplemental geotechnical engineering services as required to complete performance of two additional geotechnical borings for design of the bridge. This work is considered supplemental to Task 3.2 – Preliminary Design (Phase 1).

Associated project management services including scheduling of work, communications with the CONSULTANT and the COUNTY, and QA/QC will also be performed as supplemental to Task 3.1.

**Additional Geotechnical Explorations**

The SUBCONSULTANT will coordinate and observe two borings near the proposed new bridge. Exploration locations and depths are based on the anticipated drilled shaft locations and depths as provided by the CONSULTANT. Effort associated with this task includes:

- Attend one site visit with COUNTY team members: (1) to mark the location of the field exploration and (2) to discuss the proposed drilled shaft design. This site visit was conducted in early 2014.
- Prepare a site subsurface exploration sketch showing the proposed boring locations.
- Perform utility check using One Call. No other utility checks will be made before drilling the borings.
- Observe drilling of two borings to evaluate the subsurface conditions near the proposed drilled shafts. We assume one boring will be 95 feet deep below the ground surface (bgs) and one boring will be 130 feet deep bgs. The exact boring locations will depend on site constraints (e.g., accessibility for the drill rig). The exact depths will be determined in the field based on the depth that bedrock or colluvium is encountered. SUBCONSULTANT staff will observe the borings and classify the soil encountered in accordance with ASTM International Designation: D2488, Standard Recommended Practice for Description of Soils (Visual-Manual Procedure). Classification of the rock, if applicable, will be performed in accordance with Shannon & Wilson, Inc. procedures.
- Soil and rock samples will be transported to the laboratory of the SUBCONSULTANT for further classification and laboratory testing.
- Provide interpretation of geologic units and contacts between units and develop logs of the subsurface conditions encountered in the borings.
- Perform geotechnical laboratory tests on selected soil and rock samples obtained in the borings. Depending on subsurface conditions encountered, the proposed geotechnical laboratory testing includes:

- Water Content Determinations (soil)
- Grain Size Analyses (soil)
- Unconfined Compression Strength tests (rock)
- Point Load Tests (cobbles and boulders)

**Revise Geologic Profiles and Sections**

The SUBCONSULTANT will compile information obtained from the previous and proposed borings and will revise the existing geologic profile and cross sections along bridge alignment. After revising the profile and cross sections, the draft boring logs will be reviewed and finalized.

**Revise Bridge Foundation Analyses**

The SUBCONSULTANT will evaluate the results from field and laboratory programs and revise the soil and rock (if encountered) parameters and assumed stratigraphy at the bridge foundations. We will evaluate the potential for liquefaction or earthquake-induced settlement and its impact on drilled shaft axial capacity and estimate applied drag loads. Based on our analyses, we will provide revised axial capacity charts and lateral resistance parameters.

**Deliverables**

Boring logs, revised profile, analyses, conclusions, and recommendations will be included in the Geotechnical Design Memorandum for Bridge Foundations described in the original contract scope of work.

**EXHIBIT E-1a  
Supplemental Consultant Fee Determination – Budget**

**EXHIBIT E-1, PROJECT FEE DETERMINATION  
BergerABAM  
SUPPLEMENT NO. 1**

**Total Costs  
5/2/2014**

**Index-Galena Road MP 6.4 to 6.9 Realignment  
Snohomish County - RC 1532 / UPI #06-0150**

**BergerABAM PERSONNEL**

<u>Project Function</u>	<u>Hours</u>		<u>Billing Rate</u>		<u>Cost</u>
1 Officer / Managing Principal	14	X	\$ 192.61	= \$	2,697
2 Bridge Lead / Constr. Specialist	0	X	\$ 172.29	= \$	-
3 Project Engineer	14	X	\$ 139.48	= \$	1,953
4 Structural Engineer	0	X	\$ 102.62	= \$	-
5 Civil Engineer	0	X	\$ 114.24	= \$	-
6 Designer/CAD Operator/Graphics	0	X	\$ 98.45	= \$	-
7 Coordinator /Administration	0	X	\$ 83.69	= \$	-
<b>BergerABAM Hours, TOTAL</b>	<b>28</b>			<b>Subtotal Personnel Costs = \$</b>	<b>4,649</b>
				<b>Salary Escalation for FY 2014 at = 0.00%</b>	<b>\$ -</b>
				<b>TOTAL PERSONNEL COSTS = \$</b>	<b>4,649</b>

**DIRECT NONSALARY COSTS (DNSC)**

Mileage	200	miles @	\$ 0.565	\$	113
Federal Express / Courier	0	each @	\$ 15.00	\$	-
				\$	-
				<b>TOTAL REIMBURSABLE EXPENSES (DNSC) = \$</b>	<b>113</b>

**TOTAL BergerABAM FEE = \$ 4,762**

**SUBCONSULTANTS**

Shannon & Wilson - Geotechnical Engineering	\$	27,452
	\$	-
	<b>TOTAL SUBCONSULTANT FEES = \$</b>	<b>27,452</b>

**TOTAL SUPPLEMENT AMOUNT = \$ 32,214**

**MANAGEMENT RESERVE**

	\$	-
	<b>\$</b>	<b>-</b>

Prepared by: SKJ

Date: 02 May 2014

TASK DESCRIPTION	Task Number	Officer /	Managing	Principal	Bridge Lead /	Construction	Specialist	Project	Engineer	Structural	Engineer	Civil Engineer	Designer /	CAD Operator /	Graphics	Coordinator /	Administration	Totals
<b>BILLING RATE =&gt;</b>		\$ 192.61	\$ 172.29	\$ 139.48	\$ 102.62	\$ 114.24	\$ 98.45	\$ 83.55										
<b>TASK 1 - PROJECT MANAGEMENT</b>	<b>1</b>	<b>14</b>						<b>14</b>										<b>28</b>
Project Coordination	1.1	2						2										4
Progress Meetings	1.2	6						6										12
Management of Subconsultants	1.3	6						6										12
Project Demobilizations & Restarts ( 2 )	1.4																	
Project Closeout	1.5																	
		<b>\$2,697</b>						<b>\$1,953</b>										<b>\$4,649</b>
<b>TASK 3 - GEOTECHNICAL ENGINEERING</b>	<b>3</b>	<b>See Sheet 4</b>						<b>Shannon &amp; Wilson Hours</b>										
<b>BergerABAM TOTAL HOURS =</b>		<b>14</b>						<b>14</b>										<b>28</b>

**DIRECT NONSALARY COSTS (DNCS)**

	Qty	Unit Cost	Per		
Task 1 - Mileage for Meeting / Site Visit (1)	200	\$ 0.565	/ Mile	\$ 113	Task 1
Task 1 - Federal Express / Courier		\$ 15.00	/ Each	\$ -	Task 1
<b>TOTAL REIMBURSABLE EXPENSES (DNCS) =</b>				<b>\$ 113</b>	

**Note:**

1. See Shannon & Wilson Cost Sheet for Task 3 DNCS.

## **EXHIBIT Ga Supplemental Subcontracted Work**

The County permits subcontracting for the following portions of the work of this AGREEMENT.

### **TASK 3 (EXISTING) GEOTECHNICAL ENGINEERING (SUBCONSULTANT)**

The SUBCONSULTANT will provide supplemental geotechnical engineering services as required to complete performance of two additional geotechnical borings for design of the bridge. This work is considered supplemental to Task 3.2 – Preliminary Design (Phase 1).

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**Deliverables**

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**EXHIBIT G-1a  
Supplemental Subconsultant Fee Determination – Budget**

**EXHIBIT G-1, SUBCONSULTANT FEE  
SHANNON and WILSON  
SUPPLEMENT NO. 1**

**S&W Task 3 Costs  
5/2/2014**

**Index-Galena Road MP 6.4 to 6.9 Realignment  
Snohomish County - RC 1532 / UPI #06-0150**

**GEOTECHNICAL ENGINEERING - TASK 3  
ADDITIONAL BORINGS AT BRIDGE**

**SHANNON & WILSON PERSONNEL**

<u>Position Classification</u>	<u>Hours</u>		<u>Billing Rate</u>		<u>Cost</u>
1 Officer	7.5	X	\$224.40	= \$	1,683
2 Sr Associate	0	X	\$180.40	= \$	-
3 Associate	1.5	X	\$178.50	= \$	268
4 Senior Tech Staff	72	X	\$133.26	= \$	9,595
5 Professional Staff II-IV	94	X	\$110.37	= \$	10,374
6 Professional Staff I	0	X	\$102.00	= \$	-
7 Senior Drafter / Tech	0	X	\$103.04	= \$	-
8 Drafter / Tech	5	X	\$98.72	= \$	494
9 Administrative (Senior)	10	X	\$88.88	= \$	889
10 Administrative	0	X	\$81.14	= \$	-
<b>Total Hours</b>	<b>190</b>		<b>TOTAL PERSONNEL COSTS =</b>	<b>\$</b>	<b>23,283</b>

**DIRECT NONSALARY COSTS (DNSC)**

Mileage	1170	miles @	\$ 0.565	\$	661
Hotel	6	nights @	\$ 100.00	\$	600
Per Diem	8	days @	\$ 46.00	\$	368
SPT Sample Boxes	5	boxes @	\$ 42.00	\$	210
Rock Core Handling and Receiving	38	boxes @	\$ 10.00	\$	380
Lab testing					
<i>Water Content</i>	10	tests @	\$15.00	\$	150
<i>Sieve Analysis-No Hydrometer</i>	4	tests @	\$135.00	\$	540
<i>Unconfined Compressive Strength</i>	2	tests @	\$250.00	\$	500
<i>Point Load Tests</i>	10	tests @	\$40.00	\$	400
B&W 8.5x11 Copies	200	copies @	\$ 0.10	\$	20
B&W 11x17 Copies	200	copies @	\$ 0.20	\$	40
Color 8.5x11 Copies	100	copies @	\$ 1.00	\$	100
Color 11x17 Copies	100	copies @	\$ 2.00	\$	200
<b>TOTAL REIMBURSABLE EXPENSES (DNSC) =</b>					<b>\$ 4,169</b>

<b>TOTAL AUTHORIZED AMOUNT = \$ 27,452</b>
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**EXHIBIT G-1, SUBCONSULTANT FEE  
SHANNON and WILSON  
SUPPLEMENT No. 1**

**S&W Task 3 Hours  
5/2/20 14**

TASK 3 - GEOTECHNICAL ENGINEERING	Shannon & Wilson Staff Detail									
	Officer	Assoc.	Assoc.	Staff	Senior Staff	Professional Staff	Senior Professional Staff	Tech	Senior Tech	Admin
Task 3.1 Project Management Providing all program reports scheduling, coordination, work assignments quality control & quality assurance type calculations	1	0	0	10	0	0	0	0	0	0
Task 3.3 Preliminary Design Task 3.2.1 Bridge Foundations All main soil resistance - drilled shafts and Caisson piles Bored pile design - drilled shafts and Caisson piles Bored pile design - driven piles Bored pile design - cast-in-place Additional Geotechnical Explorations Review Design Profiles Revised Bridge Foundation Analyses Geotechnical Design Memorandum - Bridge Foundations	3 1 2.5	0	1.5	62	84	0	0	0	0	10
	<b>7.5</b>	<b>0</b>	<b>1.5</b>	<b>72</b>	<b>84</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>
<b>SUBTOTAL TASK 3 HOURS</b>										