

Amendment Explanation

	DESCRIPTION	Original Task Budget Amounts	Amendment No. 2 Amounts	Amendment No. 3 Amounts	Amendment No. 5 Amounts	Adjusted Task Budget Amounts
1	Project Management	\$93,469	\$14,297.80	-	\$53,732.05	\$161,498.85
2	Information Gathering	\$77,537	\$6,785.85	-	-	\$84,322.85
3	Alternatives Analysis	\$56,809	(\$7,056.74)	\$16,606.62	-	\$66,358.88
4	Final Design	\$297,416	\$92,221.08	\$4,839.90	\$129,306.32	\$523,783.30
5	Construction Services	\$82,274	\$6,438.40	(\$21,446.52)	\$67,785.12	\$135,051.00
6	CLOMR and LOMR	-	\$39,116.00	-	\$6,773.56	\$45,889.56
7	BES Managed Foreseen Additional Work Items (New)				\$58,701.00	\$58,701.00
TOTAL CONTRACT AMOUNT		\$607,505	\$151,802.39	-	\$316,298.05	\$1,075,605.44

Original Task Budget Amounts (approved 10/17/13)– Original Contract; Expired December 31, 2015.

Amendment 1 (approved 6/26/2014) – City required additional time to determine to replace the existing culvert with a culvert or a bridge, and availability of possible funding sources from outside agencies for the bridge upgrade alternative. Contract term extended to December 31, 2016.

Amendment 2 (approved 11/2/2015) – Additional compensation of \$151,802.39. All tasks increased due to bridge alternative upgrade and revised hourly billing rates. “Alternative Analysis” (Task 3) had reduction of \$7056.74. “Conditional Letter of Map Revision and Letter of Map Revision, CLOMR and LOMR” (Task 6) added in amendment for \$39,116. Total contract amount is \$759,307.39, which is at 25% of original contract.

Amendment 3 (approved 5/3/2016) - Reallocation of funds. “Alternative Analysis” (Task 3) increased \$16,606.62 to support a Steel Bridge vs. Concrete Bridge Evaluation, addressing substructure, superstructure, maintenance, constructability environmental impacts, and construction costs. “Final Design” (Task 4) increased \$4,839.90 to design a typical steel bridge section. “Construction Services” (Task 5) had reduction of \$21,446.52; BergerAbam indicated that reduction of Task 5 to \$67,265.88 was sufficient, at a minimum level, for bridge alternative construction meetings, submittal reviews, RFIs, and field visits. Total contract amount still \$759,307.39.

Amendment 4 (approved 10/25/2017) – Contract term extended to December 31, 2020, and revised hourly billing rates.

Amendment 5 (pending Council approval) – Additional compensation of \$316,298.05.

“Project Management” (Task 1) increased \$53,732.05 to support additional work (project meetings, scheduling, and coordination). “Final Design “ (Task 4) increased \$129,306.32 to:

- Finalize the location of the constructed wetland and provide redesign of the trail extension to Arnold Street.
- Incorporate waterline design and specifications from HDR Engineering (with review by Portland Water Bureau) into construction contract documents. PWB did not have staff or resources to conduct the design as normal.
- Assistance during bidding.
- Bridge Load Rating after construction.
- Possible Conformed Drawing and Specifications.

“Construction Services” (Task 5) increased \$67,785.12 to account for additional meetings, submittal reviews, and requests for information (RFIs) field visits due to:

- Expected construction duration is 9 months, not 7 months as previously assumed. The longer duration is expected due the presence of hazardous material that must be excavated.
- Hazardous material was not known until final design was underway.

“CLOMR and LOMR” (Task 6) increased \$6,773.56 to account for additional work to the LOMR (include upstream limits on Arnold Creek up to SW 11th Drive, and 1000 feet upstream Tryon Creek from the existing culvert).

“BES Managed Foreseen Additional Work Items (New, Task 7) – Added in amendment for \$58,701.00. This task includes:

- Added meetings in relation to permits, advisory committee, constructability, or other reasons not in the scope.
- Additional hydraulic analysis from BES to be incorporated in the plans upstream and downstream of SW Boones Ferry Road along Tryon Creek, including Arnold Creek if necessary. This task provides additional design for bank, scour, and flooding protection on all property along Tryon Creek.

Total contract amount is \$1,075,605.44. MWESB participation in subcontracting is \$219,135, which is 20.37%.

AMENDMENT NUMBER 5

CONTRACT NUMBER 30003652

FOR

Tryon Creek at Boones Ferry Road Culvert Replacement

Pursuant to Ordinance Number _____

This Contract was made and entered by and between BergerABAM, Inc., hereinafter called Consultant, and the City of Portland, a municipal corporation of the State of Oregon, by and through its duly authorized representatives, hereinafter called City.

1. Additional compensation is necessary and shall not exceed \$316,298.05 for an overall contract amount of \$1,075,605.44.
2. Additional work is necessary as described in the Scope of Work as follows:

Task 1.2 – Project Management and Coordination

This amendment includes additional project management and coordination to facilitate the extended project design schedule. The original contract assumed a 56-week design phase, and Amendment 2 extended the design phase to 68 weeks. The design phase of the project is now projected to have a 160 week duration. This amendment also includes a project re-start phase, anticipating that there will be a significant delay in the project while this amendment is processed.

Task 1.4 – Project Meetings

It is anticipated that up to 7 team meetings remain in the design phase schedule. The contract currently assumes that these meetings will be 1 hour in duration. It is expected that the remaining meetings will be 2 hours in duration. This amendment modifies the duration of the tri-weekly team meetings to 2 hours in duration.

Task 1.6 – Project Scheduling

This amendment includes a major revision to the already created design and construction project schedule. The design and construction schedule will be modified to reflect construction surrounding an in-water work window of summer 2019.

Deliverable:

Revised schedule within two weeks of notice to proceed of Amendment 5.

Task 4.4 – 100% Design (PS&E and Final Reports)

Subsequent to the submittal of the 90% PS&E documents, BES finalized the location of the constructed wetland. The location of this wetland is necessitating a redesign of a portion of the pedestrian trail. In addition, BES has requested that the trail be extended and connected to SW Arnold Street. This realignment and extension will require redesign of the trail and design of the trail extension to Arnold Street, which may include stairs, retaining walls and fencing to achieve the required grades. Consultant will modify the construction easement linework previously delivered to reflect the additional trail construction work. This amendment assumes that the extended pedestrian trail will not extend beyond the limits of topographic

survey that has been provided by BES.

Design of the waterline relocation is not part of this scope and is being performed by a firm that is not part of Consultant's team. This design commenced after the Consultant submitted 60% PS&E and the design is proceeding on a schedule different than the Consultant's delivery schedule. However, the waterline relocation is to become part of the project construction contract documents. Consultant has reviewed the 90% waterline design provided by BES. Incorporation of the waterline design into the construction contract documents will require Consultant to perform additional services.

These additional services consist of:

- Creation of an additional traffic control stage in advance of Stage 1, to provide single-lane road closures for construction of the waterline relocation. Includes 5 new sheets.
- Modification of traffic control plans to account for waterline relocation construction. Includes modifications to 6 existing sheets
- Modification of the project paving limits to account for waterline relocation construction. Includes modification to 1 sheet.
- Modification of the project erosion control plans to account for waterline relocation construction and extended downstream project limits. Includes 1 new sheet and modification to 1 sheet.
- Modification of the construction access and staging plans to account for waterline relocation construction. Includes modifications to 2 sheets.
- Modification of the project G-series drawings for inclusion of waterline work elements and extended downstream work limits. Includes modifications to 4 sheets.
- Modification of other project drawings for consistency with waterline work elements. Includes modification of up to 5 sheets.
- Modification of project special provisions at the direction of Portland Water Bureau.
- Modification of limits of disturbance. Includes modifications to 3 sheets.
- Modification of planting plans. Includes the creation of a new sheet.
- Trail realignment requires modifications to 8 sheets.

This amendment adds limited services related to hazardous materials. BES has determined that the road fill that will be excavated as part of the project is contaminated. Per the direction of BES construction management, Consultant will include the expected limits of contaminated media on the project plans. Includes creation of a new sheet.

Subtask 4.7 is replaced in its entirety with the following:

Task 4.7 – Assistance During Bidding

During the bid phase of the project, Consultant will assist BES by contributing to the response to bidder inquiries and contributing to addenda that BES may issue. Preparation of a conformed set of construction documents or an "issued for construction" set is not included in this scope of services.

Assumptions:

- BES will prepare and issue any addenda.
- BES will field and respond to all bidder inquiries.

Deliverables:

- Responses to bidder inquiries and assistance with preparation of up to 5 addenda.

Task 4.8 – Bridge Load Rating

This amendment includes additional services to perform a bridge load rating of a steel girder bridge in 2020 rather than a concrete girder bridge in 2016 as previously assumed. Consultant will perform the load rating using BRASS software.

Task 4.10 – Conformed Drawings and Specifications (New Task)

This task includes the production of a “conformed set” of drawings and special provisions based on the bidding process and the addenda produced during that process. Consultant will incorporate changes made to the construction drawings and special provisions and will issue new drawings and special provisions to BES for BES to reproduce and create a complete “conformed set” or “issued for construction” set of contract documents. Consultant’s role on this task is limited to changing only those drawings or special provisions sections that are affected by the approved bid addenda. However, the complete drawing set will be reissued with a label such as “conformed set” or “issued for construction” if required.

Assumptions:

- Consultant will modify only those drawings and special provisions under our control, i.e., changes to waterline design documents are not included in this task.

Deliverables:

- Conformed set of drawings and special provisions in Adobe PDF and MS Word format, respectively.

Task 5 – Construction Services

This amendment includes additional services required to perform construction services in 2019 rather than in 2017 as previously assumed.

This amendment also includes additional services required due to an expected construction duration of 9 months rather than the 7 months previously assumed. This longer duration is expected because of the presence of hazardous material that must be excavated from the project site; the presence and extent of the hazardous material was not known until final design was underway. In addition, BES has directed the Consultant to increase the expected durations of earthwork items within the construction schedule.

Subtasks 5.1 through 5.4 are replaced in their entirety with the following:

Task 5.1 – Construction Meetings

During the construction phase of the project, Consultant will assist BES by attending construction meetings up to the number of meetings indicated in the table below. This SOW assumes that one member of the Consultant team will attend the weekly meetings, the preconstruction meeting, and a meeting toward the end of construction that may be called the punchlist meeting.

Assumptions:

- BES construction management personnel will be responsible for preparing and distributing meeting agendas and minutes.
- BES construction management personnel will maintain submittal and RFI logs.
- The number of meetings attended, by team member firm, will not be more than indicated in the table below.
- BES project manager will direct consultant to attend meetings when required.

Deliverables:

- None

Task 5.2 – Submittal Reviews

Consultant will review contractor submittals. The Consultant will handle all submittals directed to the design team from BES construction management staff. Consultant will direct submittals to subconsultants for primary review as appropriate, in which case Consultant will be secondary reviewer.

Assumptions:

- BES construction management personnel will maintain the project submittal log.
- The number of submittal reviews required, by team member firm, will not be more than indicated in the table below.

Deliverables:

- Submittal responses in electronic (Adobe pdf) format.

Task 5.3 – RFIs

Consultant will review and respond to contractor requests for information (RFIs). The Consultant will handle all RFIs directed to the design team from BES construction management staff. Consultant will direct RFIs to subconsultants for primary review as appropriate, in which case Consultant will be secondary reviewer.

Assumptions:

- BES construction management personnel will maintain the project RFI log.
- The number of RFI responses required, by team member firm, will not be more than that indicated in the table below.

Deliverables:

- RFI responses in electronic (Adobe pdf) format.

Task 5.4– Field Visits

Consultant will visit the construction site to perform structural observations, to review construction, and to provide assistance when requested by BES project manager. The number of field visits assumed is shown in the table below.

The level of effort for Geotechnical observations during construction is limited as follows:

- One geotechnical engineer for two days observing bridge abutment pile driving
- One geotechnical engineer for two days observing MSE wall construction
- One geotechnical engineer for one day observing embankment construction

Assumptions:

- The number of field visits required, by team member firm, will not be more than indicated in the table below.

Tasks 5.1 through 5.4 Summary Table

	Weekly Construction Meetings + Precon. Mtg. + Punchlist Mtg. 40 total meetings 2 Hour Duration + Travel to/from	Construction Field Visits 9 Month Const. Period Assumed 1 Hour Duration + travel to/from site + Site Visit Report
	# Meetings Attended	# Field Visits
BergerABAM	40	20
Henderson	8	6
GRI	8	See Task 5.4 Scope for Geotech Field Work
DKS	4	4
HMA	0	0
Jacobs	2	2

	Contractor Submittals 40 Total Submittals Assumed B/A Handles all Consultant Submittals	Contractor RFIs 50 total RFIs Assumed B/A Handles all Consultant RFIs
	# Submittals as Primary Reviewer	# RFIs as Primary Responder
BergerABAM	36	46
Henderson	4	8
GRI	5	3
DKS	5	6
HMA	0	0
Jacobs	4	1

Subtask 5.6 is replaced in its entirety with the following:

Task 5.6 – Project Management

Consultant will provide project management to the consultant team during the construction phase. These project management services will include coordination of the consultant team's activities, communication with BES, and invoicing.

Assumptions:

- The construction phase (contract award to substantial completion) will be no longer than 40 weeks.

Deliverables:

- Construction phase invoices.

Task 6.1 – Conditional Letter of Map Revision/Letter of Map Revision

The budget for Task 6.1 is increased because the performance of this work is now scheduled for the year 2019, where previously it was to be performed in 2017.

Task 6.2 – Revision to CLOMR/LOMR (New Subtask)

This is a contingency task. This task is not expected to be used as the previous work that has been completed is assumed to be valid. However, this task provides for additional work if revisions to the LOMR are determined to be necessary. This task does not include the production of a CLOMR.

If revision to the LOMR is required, the limits of the map revision will be as follows:

- Downstream limits are defined as the current limits of the topographic survey data provided by BES downstream of the existing culvert.
- Upstream limits on Arnold Creek are at SW 11th Drive and Arnold Creek.
- Upstream limits on Tryon Creek are 1000 feet upstream of the existing culvert.

Assumptions:

- A CLOMR will not be required for the project.

Deliverables:

- No additional deliverables. Deliverables were previously defined via Amendment 2.

Task 7 - BES Managed Foreseen Additional Work Items (New Task)

This task is provided to respond to foreseen additional tasks. The funds in this task may be authorized by BES for additional work if needed as follows:

7.1 - Additional Meetings

This task provides for additional meetings in relation to permits, the advisory committee, constructability, or for other reasons, not included elsewhere in the scope, that may be required with regulatory agencies or City personnel. This task provides a budget for meeting attendance up to the number of hours given in the following table:

	Additional Meeting Hours
BergerABAM	40
Henderson	40
GRI	16
DKS	16
Jacobs	8

Deliverables:

- Meeting agendas and minutes

7.2 – Additional Hydraulic Design

This task provides for additional hydraulic analysis from BES to be incorporated in the plans upstream and downstream of SW Boones Ferry Road along Tryon Creek, including Arnold Creek if necessary. This task will provide additional design for bank, scour, and flooding protection on all property and structural appurtenances along Tryon Creek.

Assumptions:

- Unsteady state hydraulic analysis will be provided to Consultant by BES.
- Scour analysis will be provided to Consultant by BES. Analysis will include the determination of critical shear stress and the identification of stability thresholds based upon hydraulic modeling results.
- Consultant will incorporate hydraulic and design elements (channel and bank grading, floodplain grading, bank protection) in plans. The number of plan reviews will not be more than two.
- Upstream and downstream limits of additional hydraulic study are defined as the extents of the existing topographic survey that has been provided by BES to date.

Deliverables:

- Hydraulic and scour analysis – BES
- Basis of Design Memorandum – Consultant
- Final Design Plans with addition of channel design elements; up to 6 sheets
 - Addition of Bank Stabilization Plans
 - Addition of Floodplain Protection Plans

7.3 - Additional Services during Construction

The base assumption is that construction can be completed during one construction season (spring to fall 2019). However, if two seasons are required, this task provides some additional time to support the activities during the second construction season, and/or if differing site conditions are uncovered during construction that require additional engineering analysis and design.

1. The Project Task Budget amounts are adjusted as shown in the table below:

TASK	DESCRIPTION	Original Task Budget Amounts	Amendment No. 2 Amounts	Amendment No. 3 Amounts	Amendment No. 5 Amounts	Adjusted Task Budget Amounts
1	Project Management	\$93,469	\$14,297.80	-	\$53,732.05	\$161,498.85
2	Information Gathering	\$77,537	\$6,785.85	-	-	\$84,322.85
3	Alternatives Analysis	\$56,809	(\$7,056.74)	\$16,606.62	-	\$66,358.88
4	Final Design	\$297,416	\$92,221.08	\$4,839.90	\$129,306.32	\$523,783.30
5	Construction Services	\$82,274	\$6,438.40	(\$21,446.52)	\$67,785.12	\$135,051.00
6	CLOMR and LOMR	-	\$39,116.00	-	\$6,773.56	\$45,889.56
7	BES Managed Foreseen Additional Work Items (New)	-	-	-	\$58,701.00	\$58,701.00
TOTAL CONTRACT AMOUNT		\$607,505	\$151,802.39	-	\$316,298.05	\$1,075,605.44

Note: Amendments No. 1 and No. 4 did not alter the Project Task Budget amounts.

The adjusted task amounts noted above include \$219,135 in subcontracting to M/W/ESB certified firms, representing M/W/ESB participation of 20.37% of the total contract amount.

2. The allocation of project budget to subconsultants is revised as shown in the following table:

SUBCONSULTANT NAME	Original Subcontract Amount	Amendment No. 2 Amount	Amendment No. 3 Amount	Amendment No. 5 Amount	Adjusted Subcontract Amount
Henderson Land Services	\$77,425	\$56,660	(\$500)	\$77,650	\$211,235
Hanna, McEldowney and Associates	\$7,900	\$0	-	-	\$7,900
GRI	\$79,775	\$8,000	-	\$8,450	\$96,225
DKS Associates	\$51,010	\$6,825	(\$450)	\$29,800	\$87,185
Jacobs Associates	\$52,500	\$0	(\$650)	\$2,550	\$54,400

Note: Amendments No. 1 and No 4 did not alter the subconsultant budget allocation.

All other terms and conditions shall remain unchanged and in full force and effect.

CONSULTANT SIGNATURE:

This contract amendment may be signed in two (2) or more counterparts, each of which shall be deemed an original, and which, when taken together, shall constitute one and the same contract amendment.

The parties agree the City and Consultant may conduct this transaction by electronic means, including the use of electronic signatures.

BergerABAM, Inc.



By: _____
Thomas R. Wilcox, Vice President

Date: 1/22/2018

Contract Number: 30003652 **Amendment Number:** 5

Contract Title: Tryon Creek at Boones Ferry Road Culvert Replacement

CITY OF PORTLAND SIGNATURES:

By: _____ Date: _____
Chief Procurement Officer

By: _____ Date: _____
Elected Official

Approved:

By: _____ Date: _____
Office of City Auditor

Approved as to Form:

By: _____ Date: _____
Office of City Attorney

<div><div><div><div></div><div>Berger</div><div>ABAM</div></div></div><div>- AMENDMENT 5 FEE ESTIMATE -</div></div>																											
Title: Tryon Creek at Boones Ferry Road Culvert Replacement																											
Date: January 22, 2018																											
Project Role		BergerABAM Staff Designation																									
		TRW	SUE	HAW	BSM	VV	BDB	TAD	JRB	JTH	DS	EC	MD	EKL	Sub-consultant	Sub-consultant	Sub-consultant	Sub-consultant	Sub-consultant								
		Proj. Exec.	QC	Proj. Mgr.	Asst. PM/Struct. Lead	Utilities	Struct. Design Eng.	Specs & Cost Estimating	Roadway Design	CADD & Civil 3D	LA Lead	LA	Technical Editor	Admin.	Hydraulics, Stream Design, Constructability	Geotech.	R/W	Traffic	Shoring, Constructability								
		Officer	Sr. PM VIII QA/QC	Sr. Project Manager VIII	Project Manager VII	Engineer III	Sr. Project Engineer VI	Project Engineer V	Sr. Project Engineer VI	Designer III	Land. Architect	Assoc. Land. Arch.	Senior Technical Editor	Project Coord.	Henderson	GRI	HMA	DKS	Jacobs	Expenses	Totals						
Hourly Rate		\$232.69	\$214.95	\$186.78	\$168.00	\$110.00	\$163.82	\$141.91	\$163.82	\$88.69	\$152.35	\$93.91	\$105.39	\$67.83													
TASK	TASK DESCRIPTION																										
1	Project Management	6	4	119	23		4	4	11			2		91	\$ 10,500.00	\$ -	\$ -	\$ 5,500.00	\$ -	\$ -	\$53,732.05						
1.1	Project Work Plan																										
1.2	Project Management & Coordination	2		110	8		4	4	4					80	\$ 9,000.00			\$ 4,000.00			\$42,659.78						
1.3	Quality Assurance/Quality Control	4	4																		\$1,790.56						
1.4	Project Meetings (Every 3 weeks)			7	7				7			2		7	\$ 1,500.00			\$ 1,500.00			\$7,292.83						
1.5	Work Product Review Meetings (Assume 6)																										
1.6	Project Scheduling			2	8									4							\$1,988.88						
1.7	Public Meetings (6 Total)																										
2	Information Gathering														\$ -	\$ -	\$ -	\$ -	\$ -	\$ -							
3	Alternatives Analysis														\$ -	\$ -	\$ -	\$ -	\$ -	\$ -							
4	Final Design		7	40	57	6	32	132	140	122	10	50		11	\$ 28,000.00	\$ 550.00	\$ -	\$ 16,300.00	\$ 550.00	\$ -	\$129,306.32						
4.1	30% Design (PS&E)																										
4.2	60% Design (PS&E)																										
4.3	90% Design (PS&E and Draft Design Report)																										
4.4	100% Design (PS&E and Final Design Report)			30	40		24	24	130	88	10	44		2	\$ 23,000.00	\$ 550.00		\$ 13,200.00	\$ 550.00		\$91,853.44						
4.5	Final Construction Documents PS&E																										
4.6	Constructability Reviews at 30%, 60%, & 90%																										
4.7	Assistance During Bidding			6	6	6		18	6	18		4		4	\$ 3,400.00			\$ 1,000.00			\$12,969.36						
4.8	Bridge Load Rating		5		3		4	60						1							\$10,816.46						
4.9	Steel Girder Bridge Typical Section																										
	Maplecrest Drive Traffic Data Summary																										
4.10	Conformed drawings and specifications		2	4	8		4	30	4	16		2		4	\$ 1,600.00			\$ 2,100.00			\$13,667.06						
5	Construction Services			52	46		96	24	96					16	\$ 4,500.00	\$ 4,900.00	\$ -	\$ 5,000.00	\$ -	\$ -	\$67,785.12						
5.1	Construction Meetings			24	24		40		56						\$ 1,200.00	\$ 3,000.00		\$ 600.00			\$29,041.44						
5.2	Submittals			2	2		16	12	8						\$ 400.00	\$ 800.00					\$7,544.16						
5.3	RFIs			6	8		24	12	20						\$ 1,400.00	\$ 1,100.00		\$ 2,300.00			\$16,175.68						
5.4	Field Visits			4	12		16		12						\$ 1,200.00			\$ 700.00			\$9,250.08						
5.5	Not Used																										
5.6	Project Management			16										16	\$ 300.00			\$ 1,400.00			\$5,773.76						
6	CLOMR/LOMR			2											\$ 6,400.00						\$6,773.56						
6.1	CLOMR/LOMR			2											\$ 6,400.00						\$6,773.56						
7	BES Managed Foreseen Add'l Work	60				20				20				28				8				\$ 28,250.00	\$ 3,000.00	\$ -	\$ 3,000.00	\$ 2,000.00	\$58,701.00
7.1	Additional Meetings			40											\$ 6,750.00	\$ 3,000.00		\$ 3,000.00	\$ 2,000.00		\$22,221.20						
7.2	Additional Hydraulic Design			8					8						\$ 15,000.00						\$17,804.80						
7.3	Additional Services During Construction			12			20	20	20					8	\$ 6,500.00						\$18,675.00						
	Total Hours	6	11	273	126	6	152	180	275	122	10	52		126							1339						
	TOTAL FEE	\$1,396	\$2,364	\$50,991	\$21,168	\$660	\$24,901	\$25,544	\$45,051	\$10,820	\$1,524	\$4,883		\$8,547	\$77,650	\$8,450		\$29,800	\$2,550		\$316,298.05						