

EVERETT CITY COUNCIL AGENDA ITEM COVER SHEET

**PROJECT TITLE:**

Supplemental Agreement No. 3 of Local Agency Standard	<u>12/14/16</u>	Briefing	COUNCIL BILL #	_____
Consultant Agreement with KPFF Consulting Engineers for the Grand Avenue Park Bridge Construction Management	<u>12/21/16</u>	Proposed Action	Originating Department	<u>Public Works</u>
		Consent	Contact Person	<u>Heather Griffin</u>
		Action	Phone Number	<u>425-257-7206</u>
		First Reading	FOR AGENDA OF	<u>December 14, 2016</u>
		Second Reading		<u>December 21, 2016</u>
		Third Reading		
		Public Hearing		
		Budget Advisory	Initialed by:	
			Department Head	_____
			CAA	
			Council President	

<u>Location</u>	<u>Preceding Action</u>	<u>Attachments</u>	<u>Department(s) Approval</u>
16 <sup>th</sup> Street from Grand Avenue to West Marine View Drive	12/3/2014 Consultant Agreement for Design 3/23/2016 No Cost Time Extension	Supplemental Agreement No. 3	Public Works

Amount Budgeted	\$14,800,000.00	
Expenditure Required	\$1,390,791.35	Account Number(s):
Budget Remaining	\$11,000,000.00	WO 3588, Fund 336, Fund 303
Additional Required	-0-	

**DETAILED SUMMARY STATEMENT:**

The Grand Avenue Park Bridge design provides for a utility and pedestrian crossing from Grand Avenue Park, over a steep slope, Burlington Northern Santa Fe Railroad tracks, State Route 529 (also known as West Marine View Drive) to the waterfront.

City staff is providing construction inspection for the project. However, additional construction management services are needed to supplement oversight of the construction in accordance with requirements of the project's federal funding. Additional funds are included to provide construction engineering support from the Engineer-of-Record.

**RECOMMENDATION:**

Authorize the Mayor to sign Supplemental Agreement No. 3 of the Local Agency Standard Consultant Agreement with KPFF Consulting Engineers for the Grand Avenue Park Bridge construction management services in an amount not to exceed \$1,390,791.35.



## EXHIBIT A

### SCOPE OF WORK Grand Avenue Park Bridge Construction Management and Construction Support SUPPLEMENT 3 November 28, 2016

#### **PROJECT DESCRIPTION**

KPFF Consulting Engineers (KPFF) has an agreement with the City of Everett (City) to complete the Plans, Specifications and Cost Estimate (PS&E), and Construction Management (CM) including full Construction Support (CS) services for the Grand Avenue Park Bridge.

The PS&E (design Phases 1 & 2) is complete and was delivered for final WSDOT review in September 2016. Supplement 3 is for the CM and CS (Construction) phase of the project only and addresses the cost of using the KPFF design and construction team to provide CM and CS services through the completion of construction. Construction involves building a combined utility and pedestrian bridge from Grand Ave Park, spanning the BNSF railway right of way and SR 529 (West Marine View Drive) and terminating just west of MVD on Port of Everett right of way. This effort includes the installation of 3 Utility lines extending from Grand Avenue at the north end of Grand Avenue Park to the bridge, across the bridge, down the west Abutment shaft, and then into Marine View Drive (MVD) and finally extending north of the bridge along MVD for about 50 feet, at which point all utility lines will be capped. The utility pipes (CS, SD, and FM) will be connected to extend to PS03 and further along MVD as detailed in a separate construction bid document developed as Phase 2 PS&E. Supplement 3 includes Construction Support for both Phase 1& 2 construction. It does not include CM services for Phase 2 construction

#### **PROJECT OBJECTIVES**

This scope of work details Construction Support (CS) and Construction Management (CM) for the construction of the Grand Avenue Park Bridge. CM will be performed in conformance with the common WSDOT Construction Documentation practices for Local Agencies including applicable chapters of the LAG Manual (particularly Chapters 52 and 53), and in conformance with applicable sections of the WSDOT Standard Specifications (M41-10), 2016, and the WSDOT Construction Manual (M41-01.25, April 2016) which provides construction engineering personnel instruction for fulfilling the objectives, procedures, and methods for construction administration of federally funded projects.

CS will be on an as-needed/on-call basis. The need of the work will be established and caused by the Resident Engineer (RE) or the Owner Project Manager (PM) for Construction or a direct agent of either the RE or the Owner PM. The RE or PM will contact the KPFF Project Manager (Tom Whiteman) to request the services. The KPFF Manager will arrange the services with the required design team member(s) and provide direction and schedule as required per the work request.

The scope of work is expected to last approximately 16 months following the Notice to Proceed. The budget allocated may be used for either phase of work as needed based on the actual amount the CM and CS team are caused to work per requests from the CM team, with the City's concurrence.

## **PROJECT TEAM**

This supplement includes effort by the following project team members:

Prime Consultant	KPFF Consulting Engineers (KPFF)
Structural Engineering	KPFF Consulting Engineers (KPFF)
Civil Engineering	KPFF Consulting Engineers (KPFF)
Topographic & Boundary Survey	KPFF Consulting Engineers (KPFF)
Construction Management	KBA, Inc. (KBA)
Geotechnical Engineering	HWA GeoSciences, Inc. (HWA)
Architectural Services	LMN Architects (LMN)
Electrical Engineering	Stantec Consulting Services, Inc. (Stantec)
Landscape Architecture	City of Everett
Environmental Services	Landau Associates (Landau)
Elevator Design	The Greenbusch Group, Inc. (Greenbusch)
Mechanical Design	Tres West Engineers, Inc. (Tres West)
Combined Sewer & Stormwater	HDR, Inc.

## **SCOPE OF WORK**

The following is a scope of work for Construction Management and Construction Support for the construction phase of the project. All services under an on-call/as-needed basis.

### **PHASE 1: GRAND AVENUE PARK BRIDGE**

CM and CS services will consist of the following tasks.

#### **1. PROJECT MANAGEMENT & ADMINISTRATION**

KPFF will provide overall project management of the construction management and construction support teams. This effort is anticipated to entail the following:

##### **1.10 – Coordination, Contract Management & Invoicing (assume 6 hours/month)**

KPFF will provide the necessary project coordination to facilitate transfer of design intent and data for the benefit of a construction process that is collaborative, provides clarity to the design, resolves questions arising between the contractor the specs and plans and serves to minimize confusion or change orders for the purpose of allowing for the successful and on schedule construction of the bridge and installation of the utility system. This effort involves communication (email and telephone), contract management, scheduling, invoicing, and site visits between the City and the project design team.

Team members will prepare monthly invoices for work completed, which will then be compiled into one invoice and one progress report per month by KPFF to submit to the City.

##### **1.20 – Meetings (assume 1 every 2 months)**

This subtask includes an assumption of one to two (1.5 average) meetings per month between the KPFF Project Manager and the City including the city design and construction group, and agents. The PM will travel to Everett for these meetings as necessary.

##### **1.30 – General Client Communications (assume 22 minutes/day)**

KPFF will be the main point of contact for communication with the City for the CSS (with the exception of KBA) team. The City Construction Manager and KBA Resident Engineer and Office

Engineer will have direct communications during the normal course of performing their contractual obligations. KBA will communicate to the CSS team through the KPFF PM.

**1.40 – General Team Communications and Management (assume 18 minutes/day)**

This subtask will include email and phone communications with the CSS team.

**2. TOPOGRAPHIC & BOUNDARY SURVEY SUPPORT**

KPFF will provide survey services throughout the duration of construction. These services will be provided to the City on an on-call / as-needed basis, as authorized by the City.

**3. GEOTECHNICAL ENGINEERING SUPPORT**

HWA will provide the following geotechnical services as directed by the City during the construction phase:

**3.10 – Geotechnical Construction Engineering**

This effort will include one pre-construction meeting, submittal review, construction engineering on an as-needed basis, dewatering rate analysis, and railroad coordination on an as-needed basis.

**3.20 – Geotechnical Observation and Associated Field Engineering**

For the East Abutment, this effort will include utility excavation and shoring as well as installation of drilled shafts. For the West Abutment, effort includes sheetpile installation, installation of drilled shafts, and utility excavation and shoring. For this subtask, HWA will also install the slope protection system and attend construction meetings.

**3.30 – Project Management**

In order to fulfill this task, HWA will also require effort for QA, budget tracking, communications, scheduling, and billing.

**4. STRUCTURAL ENGINEERING SUPPORT**

KPFF will provide structural engineering support as needed by the City. Requested work includes, but is not limited to, the following items:

**4.10 – RFI review (assume 150 reviews @ 1.5 hours each)**

**4.20 – Shop drawing review (assume original 350 drawings @ 0.75 hours each + duplicates @ 25% + re-submittals @ 25%)**

**4.30 – Site visits (assume 1.5 per month for 14 months)**

**4.40 – Develop final as-built plans (assume 80/120 sheets @ 2 hour CAD and 2 hour eng/sheet)**

**4.50 – Respond/participation in technical questions and answers (assume 8 hours/month)**

**4.60 – Drilled shaft submittal reviews (rebar, pre-con meeting, CSL, construction sequence)**

**4.70 – Rebar shop drawing review: Tower, East & West abutment, foundations, deck slab, stairs**

**4.80 – Construction sequence Structural review**

**4.90 – Engineering reviews required per specs (on-call basis)**

**5. CIVIL ENGINEERING SUPPORT**

KPFF will provide the following civil engineering support as needed/required by the City:

**5.10 – Construction meetings**

- Preconstruction meeting
- Field observation visits (assume 4) with observation reports
- Update Civil design based on field visits

**5.20 – Office time support**

- Engineer Shop Drawing review
- Review & approval of RFIs and materials submittals
- Technical engineering support

**6. COMBINED SEWER & STORMWATER SUPPORT**

There is no Sewer & Stormwater Support needed for this phase of construction.

**7. ARCHITECTURE & BRIDGE AESTHETICS SUPPORT**

LMN will provide architectural services as needed. LMN will perform shop drawing review and other requested services, including reviews related to the bridge railing and other items as requested by KPFF. These requests will be related to their original design responsibilities, and related to the information depicted in the architecture plans and related specs.

**8. ELECTRICAL ENGINEERING SUPPORT**

Stantec will provide the following electrical engineering support as needed:

**8.10 – Bidding Support**

- Answer bidding questions
- Prepare one (1) addendum

**8.20 – Constructability Review**

- Pre-construction meeting
- Review submittals
- Answer contractor questions/RFIs
- Prepare/Review contract change orders

**8.30 – Electrical Construction Support Services**

- Construction observation visits (6)
- Lighting focusing review and observation
- Punch list
- Project closeout & record drawings

**9. LANDSCAPE ARCHITECTURE & IRRIGATION SUPPORT**

The City of Everett will provide landscape architectural services for this phase of the project and will therefore not be included in the team fee estimate. Their duties are expected to include review and consultation on all aspects of the work required to construct the landscaping elements as shown in the landscape plans and related specs, and as requested by the KBA resident or office engineer, or the City construction manager.

**10. ENVIRONMENTAL SERVICES**

Landau will provide the effort for sampling of stockpiled soil from the area of known potential contamination.

## **11. ELEVATOR DESIGN SUPPORT**

Greenbusch will provide the following elevator design support as needed:

### **11.10 – Project management & administration**

### **11.20 – Bidding Support**

- Answer pre-bid questions
- Review substitution requests
- Provide addendum

### **11.30 – Design services during construction**

- Respond to RFIs (assume 8)
- Review shop drawings and submittals; provide written response
- Provide clarifying sketches as may be required (assume 3)
- Review re-submittal of shop drawings and submittals (assume 1 re-review)
- Visit site once during construction to review progress; provide written memo
- Perform punchlist at substantial completion; provide written memo
- Perform final completion back-punch; provide written memo
- Review O&M manual and provide written comments (assume 1 review and 1 re-review)

## **12. MECHANICAL SUPPORT**

Tres West will provide the mechanical construction support as needed.

## **13. CONSTRUCTION MANAGEMENT SERVICES**

KBA will provide CM services for the Grand Avenue Park Bridge. These services will include consultation, contract administration, field observation, documentation, and material testing, as required during the construction of the Project, as detailed below, and in conformance with the common WSDOT Construction Documentation practices for Local Agencies including applicable chapters of the LAG manual (especially Chapters 52 and 53), and in conformance with applicable sections of the WSDOT Standard Specifications (M41-10), 2016, and the WSDOT Construction Manual (M41-01.25, April 2016) which provides construction engineering personnel instruction for fulfilling the objectives, procedures, and methods for construction administration of federally funded projects.

“Contract Documents”, as used in this scope, includes but is not limited to the contract plans, the contract special provisions, GSP’s, amendments, and itemized schedules of quantities.

### **A. Consultant Contract and Team Management:** Provide overall day-to-day management of the Consultant contract and team, including:

1. Develop a plan and provide to Client and Owner for agreement considering best modes and frequency of communication with Client, Owner and Designer, and actively work the plan. Consultant will meet and coordinate with Client weekly to discuss Project issues and status.
2. Manage Consultant Team, comprised of Consultant’s staff and sub-consultants. Organize and layout work for Consultant Team. Orient City-provided Inspector to Consultant inspection procedures and documentation.
3. Review monthly expenditures and Consultant Team scope activities. Prepare and submit to Client monthly, an invoice and progress report describing Consultant Team services provided that month. Prepare and submit reporting required by funding source(s), if any. Consultant will submit invoices for payment of any month by the 5<sup>th</sup> day of the following month. After the 5<sup>th</sup> it is most likely the invoice will be assigned to the 2<sup>nd</sup> month following services provided.

4. Communication on consultant contractual issues will be with the Client. Communication on day-to-day construction activities and issues will be directly between the Consultant and the Owner. The Client will be an active member of the Project team and consulted on design issues, and will be provided with information affecting Project progress.

*Deliverables*

- Monthly invoices and progress reports

**B. Design-phase Constructibility Review**

1. **Site Visit.** Accompany Designer on a plans-in-hand site visit to acquaint Consultant with the Project and site.
2. Review of Contract Documents
  - i. Review of 100% Plans, Project Manual/Contract Provisions and Preliminary Engineer's Estimate, prior to going to Ad, for consistency between the plans, project specifications, and cost estimate. and conformance with standard WSDOT and Local Agency practices.

*Deliverables*

- Memo describing conclusions and findings from review of pre-bid Contract Documents.

**C. Pre-construction Services**

1. Review Contract Documents to familiarize Consultant team with Project requirements.
2. During Bidding period:
  - a. Lead Pre-Bid meeting(s).
  - b. Assist in analyzing bidder questions, as needed.
  - c. Assist Designer in researching and preparing Addenda, as needed.
3. Assist Owner in checking and analyzing bids and bidders.
4. Organize and lead pre-construction conference:
  - a. It is understood that the Owner will prepare and distribute notices.
  - b. Contact Owner and Client for any special requirements
  - c. Prepare agenda.
  - d. Conduct the meeting.
  - e. Prepare and distribute meeting notes to attendees and affected agencies.
5. Provide one set of pre-construction photographs and video of pre-existing conditions of Project site.

*Deliverables*

- Pre-construction Conference Notice, Agenda, and Notes
- Pre-construction photos, digital files on electronic storage medium
- Videotape or video file on electronic storage medium

**D. Construction Phase Services – Contract Administration**

1. Liaison with the Owner, Client, construction contractor, Designer, appropriate agencies, property owners, PUD, BNSF and utility companies as necessary to facilitate construction progress.
2. Provide the Client with brief monthly construction progress reports, highlighting progress and advising of issues which are likely to impact cost, schedule, or quality/scope.
3. Schedule Review:

- a. Review construction contractor's schedules weekly for compliance with Contract Documents.
- b. Monitor the construction contractor's conformance to schedule and require revised schedules when needed. Advise Owner and Client of schedule changes.
4. Progress Meetings. Lead weekly progress meetings with the construction contractor, including Client pre-briefing. Prepare weekly meeting agenda and meeting notes, and distribute copies to attendees. Track outstanding issues on a weekly basis. Some meetings may be rescheduled or cancelled due to holidays or other reasons. Consultant will notify effected parties at least one week in advance, when possible.
5. Manage Submittal Process. Track and review, or cause to be reviewed by other appropriate party, work plans, shop drawings, samples, test reports, and other data submitted by the construction contractor, for general conformance to the Contract Documents.
6. The Consultant Project Engineer will accept material in accordance with Chapter 9 of the WSDOT Construction Manual.
7. Record of Materials. The Consultant shall perform and document all Material Approval and Acceptance. Review all materials sent for construction for compliance with the specifications, and sign the necessary transmittals. Provide Record of Materials indicating anticipated material approvals, the bid Item and specification reference, material compliance documentation including manufacturers/ fabricator's Certificates of Compliance, applicable Qualified Products List (QPL) codes, other fabrication inspection documentation, visual inspections, rebar order cut sheets and materials testing requirements. Maintain records of material compliance documentation received and advise of any known deficiencies.
  - a. The Consultant will maintain and make use of the most current WSDOT QPL. Client recommends using the WSDOT Transmittal of Manufacturer's Certificate of Compliance – Form 350-572 (or similar but equivalent form).
  - b. As part of the Records of Materials the Consultant will confirm and document conformance to federal and State "Buy America" provisions, per the project General Special Provisions. This provision relates to all products that contain steel or iron and are to be permanently incorporated into the project.
  - c. The Consultant will confirm that the steel fabrication inspection program is set-up and confirm the inspector has the required AISC training per 6-03.3 in the Standard Spec. If the WSDOT Material lab is performing the inspection, the Consultant will confirm they are properly notified and scheduled for the necessary inspections.
8. Prepare weekly statement of working days and distribute to the Owner, Client, and Contractor.
9. Manage RFI (Request for Information) process. Track and review/evaluate, or cause to be reviewed/ evaluated by other appropriate party, RFIs. Manage responses to RFIs.
10. Change Management. Evaluate entitlement, and prepare scope, impact, and independent estimate for change orders. Facilitate resolution of change orders. It is understood that the owner will prepare the actual change order document.
11. Monthly Pay Requests. Prepare monthly bid item quantity requests for payment and/or review payment requests submitted by the construction contractor. Review with Owner, Client and construction contractor, and recommend approval, as appropriate.
12. Evaluate construction contractor's Schedule of Values for lump sum items. Review the Contract Price allocations and verify that such allocations are made in accordance with the requirements of the Contract Documents.
13. Prevailing Wage Monitoring:

- a. Monitor Payroll Compliance. Review Statements of Intent to Pay Prevailing Wage against the Contract Document requirements. Collect, record, and check weekly certified payrolls and conduct on-site wage interviews, both at a frequency documented in the CM Plan. The City will perform monitoring of weekly Certified Payrolls, review and tracking of the Statement of Intent to Pay Prevailing Wages and Affidavits of Wages Paid documents. Consultant field observer will conduct wage rate interviews and address contractor individuals that are not being paid appropriate minimum prevailing wage.
14. Assist the Owner and Client in the investigation of malfunctions or failures during construction.
15. Public Information. Provide information for Owner's Public Works Information & Education Officer to prepare media communications and public notices on Project status. Provide information for Owner and Client's inclusion into a Project website and/or newsletters, if requested.
16. Record Drawings. Review not less than monthly, the construction contractor's redline set of contract plans. Maintain a CM Team set of updated drawings tracking plan changes, location of discovered anomalies and other items, as encountered by the CM team. Use these markups to check the progress of the Contractor-prepared Record Drawings.
17. Document Control. Establish and maintain document filing and tracking systems, following WSDOT and Local Agency Guidelines (LAG) and meeting funding agency requirements. Collect, organize, and prepare the documentation on the Project.
  - a. One hard copy of files will be kept in the Project field office.

Electronic documentation will be stored in a Project Website, using SharePoint software, managed and hosted by the Consultant. The Client and Owner will be provided with up to two licenses each for their and the construction contractor's use of the SharePoint website during the Project. Consultant will provide one training session each for Owner, Client and construction contractor users of the SharePoint system.
18. Subcontractor Monitoring. Owner will review and approve Contractor submitted Request to Sublet Work forms. Once approved by the Owner, (Keith Alewine) will forward copies to Consultant Resident Engineer, Client and Contractor. The monitoring of monthly Contractor amounts paid to D/WBE subcontractor reports will be performed by Consultant personnel in the field office. If work quality issues arise with work being performed by a DBE subcontractor, or if the projected percentage of work being completed by a DBE subcontractor will not be met, Consultant shall notify the Owner' Project Manager. The annual EEO report due for the month of July (PR-1391 and PR-1392) will be handled by City staff.
19. If there is a Training requirement on the Project the Consultant will collect from the Contractor the Training Plan and submit the plan to WSDOT Local Programs office for review and general acceptance/comment before official approval by Owner. Consultant will interview trainees on site to make sure they are receiving training consistent with the approved Training Plan.
20. Work Performed by the Force Account In accordance with Section 1-09.6 The tracking of Contractor's labor, equipment and materials, when work is being performed by Force Account, will be performed by Consultant's field observer. Consultant's field office staff will review and approve the Contractor provided Project Labor and Project Equipment Lists. Consultant's field office staff will perform the computation of individual force account sheets for all work being performed under all force account bid items.
21. WSDOT/FHWA Project Reviews. The Consultant will make themselves available for WSDOT project reviews and FHWA performance audit. *Note: The FHWA performance audit could be at a time frame several months passed project Final Acceptance.*

22. Project Closeout. Prepare Letters of Substantial (including punch list), Physical, and Final Completion for Owner approval and signature. Prepare final pay estimate and Final Contract Voucher Certification for Owner approval and processing.
23. Final Records. Compile and convey final Project records, transferring to the Owner for archiving at final acceptance of the Project. Records will consist of hard copy originals and electronic records on electronic storage medium.

*Deliverables*

- Monthly Construction Progress Reports
- Schedule Review Comments
- Meeting Agendas and Notes
- Submittal Log
- Record of Materials
- RFI Log
- Change Order(s)
- Progress Pay Requests and Final Contract Voucher Certification
- Letters of Completion
- Final records – hard copy and electronic
- DBE subcontractor monthly monitoring documentation
- Record Drawings
- Documentation for work performed by Force Account in accordance with Section 1-09.6
- FHWA Audit Review

**E. Construction Phase Services – Field - (*Owner and Consultant Staff*)**

1. Observe the technical conduct of the construction, including providing day-to-day contact with the construction contractor, Owner, Client, utilities, and other stakeholders, and monitor for adherence to the Contract Documents. The Consultant's personnel will act in accordance with Sections 1-05.1 and 1-05.2 of the WSDOT/APWA Standard Specifications.
2. Observe material, workmanship, and construction areas for compliance with the Contract Documents and applicable codes, and notify construction contractor of noncompliance. Immediately or as soon as possible, advise the Owner and Client of any non-conforming work observed during site visits.
3. Consultant field observer to prepare Inspector Daily Reports (IDR's), recording the construction contractor's operations as actually observed by the Consultant; includes quantities of work placed that day, contractor's equipment and crews, and other pertinent information, including any non-conforming work issues or concerns.
4. Interpret Contract Documents, in coordination with Designer.
5. Evaluate issues which may arise as to the quality and acceptability of material furnished, work performed, and rate of progress of work performed by the construction contractor. Summarize during the weekly meetings.
6. Establish communications with adjacent property owners. Respond to questions from property owners and the general public in accordance with the Owners directives and preferences. Normal communications with general public concerns can be handled by field staff members. For those issues that may arise from a business owner or citizen that could be elevated to the City's Public Works Director or Mayor's Office, or could result in a potential claim issue against the City, then those types of complaints need to be brought to Owner's Construction Manager's or liaison's attention.

7. Coordinate with permit holders on the Project to monitor compliance with approved permits, if applicable.
8. Prepare field note records and documents to help assure the Project is administered in accordance with funding agency requirements and Contractor payments
9. Attend and actively participate in regular on-site meetings.
10. Take digital photographs during the course of construction in particular to document construction progress and other construction events for purposes of communicating to the Client and Owner about progress, problems, challenges, or non-conformance. Photographs to be labeled and organized as detailed in the CM Plan, and stored logically by date or other means on the SharePoint
11. Punch List. Upon substantial completion of work, coordinate with the Owner, Client and affected agencies, to prepare a 'punch list' of items to be completed or corrected. Coordinate final inspection with those agencies.
12. Testing. Conduct or cause to be conducted, materials and laboratory tests. Coordinate the work of the Field Representative(s) and testing laboratories in the observation and testing of materials used in the construction; document and evaluate results of testing; and inform Client and construction contractor of deficiencies.

*Deliverables*

- Inspector Daily Reports with Project photos – submitted on a weekly basis
- Punch List(s)
- Test reports

**F. Assumptions**

1. Client Contract type is: Washington State DOT Local Agency A&E Professional Services Cost Plus Fixed Fee Consultant Agreement (2014).
  - a. Budget: Staffing levels are anticipated in accordance with the attached budget estimate. Consultant services are budgeted for an approximate 16.5 month period, beginning November 2016 through March 2018. This is intended to span the originally planned construction duration of 321 contractor working days, plus time allotted for Project setup and closeout. Contract Plan and Specification conformance review is budgeted to occur in August or September of 2016. Overtime has not been figured into the budget. Overtime must be pre-approved by the Owner prior to work. The approval process will include a budget submitted by the Client.
  - b. The Consultant commits the following Project Staff members for the duration of the bridge construction: Depending on the actual work load, which could result in fewer hours or delays, for purpose of negotiations at this time, the Consultant commits the RE to full time (40 hr per week), OE to 2/3 time, and the FO as on-call. The general duties of the RE, OE, PA, and FO are briefly described below:
    - i. Resident Engineer (RE): Manages all day-to-day construction management activities and serves as the primary representative to the Construction Contractors, Client, and Owner.
    - ii. Office Engineer (OE) The Office Engineer assists the Resident Engineer (RE) in managing day-to-day construction management activities including assessing and advising response to contractor submittals, change control, project coordination, and managing project staff.
    - iii. Inspector (Field Observer FO): Conducts independent third party analysis of the technical conduct of construction, advising the Resident Engineer on matters significant to the successful outcome of the project. This includes daily examination

and analysis of construction work to facilitate compliance with the contract documents and specs, and day-to-day contact with contractors, testing labs, Clients and Owner.

- c. Consultant will work up to the limitations of the authorized budget. If additional budget is needed to cover such instances as the following, Client and Consultant will negotiate a supplement to this Agreement:
    - i. By Owner's written request, the Consultant is requested to perform additional duties because the contractor's schedule requires inspection coverage of extra crews and shifts.
    - ii. The construction contract runs longer than the time period detailed above.
    - iii. If construction slowdown or delays occur and the contractor is not working, then in consultation with the Owner and the Client, Consultant will adjust their level of effort to accommodate an appropriate level of staffing for the necessary duration, as mutually agreed in writing. Any added scope tasks.
    - iv. The work is anticipated to be performed during daytime hours. Should night work be necessary, a 15 percent premium for labor will be applied to all night shift hours worked by Consultant's employees. The Owner must pre-approve all night shift work including any negotiated premium prior to the work occurring.
  - d. The budget allocations shown on Exhibit B, are itemized to aid in Project tracking purposes only. The budget may be transferred between tasks or labor classifications, or between labor and expenses, provided the total contracted amount is not exceeded without prior authorization.
  - e. For budgeting purposes, an averaged loaded labor rate for each job classification was used based on averaged direct salary cost (DSC) times a labor multiplier (LM). LM based on averaged overhead rate (audited WSDOT ICR rate) over the Project period. Consultant's DSC rates adjust annually on January 1. Overhead rate adjusts as allowed per Prime Agreement.
  - f. The actual billed amounts for each labor classification will be based on the employee's actual DSC x actual LM and shall not exceed the loaded rate shown for each labor classification.
  - g. The budget assumes that Consultant's standard forms, logs, and processes will be used on the Project SharePoint site. Any customization to meet specialized Client requirements will be Extra Work. Consultant standard forms, logs, and process which are used must meet the requirements of WSDOT and FHWA.
2. Items and Services Owner and Client will provide. Items and services will be incorporated into the Contractor's Contract specifications to be provided by the Contractor:
- a. Meeting arrangements and facilities for pre-bid and pre-construction meetings.
  - b. Field office, including:
    - i. workstations (desk, chair, and storage) for three staff
    - ii. dedicated server for the Project, with backup, firewall
    - iii. conference table and chairs
    - iv. landline telephone for each full-time assigned staff [or IP phone system]
    - v. combination printer/copier/scanner machine with these capabilities: 11x17 size, color
    - vi. hi-speed data connection (minimum 2-GB upload speed)
    - vii. miscellaneous office supplies

viii. utilities and sanitary facilities

- c. Retain Engineer of Record for shop drawing review, RFIs, design changes, and final record drawings.
  - d. Coordination with and enforcement of utility franchise agreements and/or contracts and schedules for services related to this Project.
  - e. Verify that the required permits, bonds, and insurance have been obtained and submitted by the construction contractor. Obtain all permits not required to be provided by construction contractor.
  - f. Construction Survey. Provide project control survey as required by the Project contract documents and staking that is not already assigned to the construction contractor.
3. Scope:
- a. The SharePoint tool being used on this Project is proprietary to the Consultant (KBA, Inc.), and may not be used by any other party or on any other project without the written permission and involvement of KBA, Inc.
  - b. Review of design documents will serve as a check on the conformance with industry standards and consistency of the contract documents between each other such as the plans, quantities, measurement and payment items and specification identification. This review will not include review of the accuracy or completeness of details, such as quantities, dimensions, weights, gauges, or fabrication processes; and will not include quantity takeoffs.
  - c. Consultant will provide observation services for the days/hours that it's Field Observer(s) is/are on-site. The Field Observer(s) will not be able to observe or report construction activities, or collect documentation, during the time they are not on-site.
  - d. The Consultant's monitoring of the construction contractor's activities is to ascertain whether or not they are performing the work in accordance with the Contract Documents; in case of noncompliance, Consultant will reject non-conforming work and pursue the other remedies in the interests of the Owner, as detailed in the Contract Documents. The Consultant cannot guarantee the construction contractor's performance, and it is understood that Consultant shall assume no responsibility for proper construction means, methods, techniques, Project site safety, safety precautions or programs, or for the failure of any other entity to perform its work in accordance with laws, contracts, regulations, or Owner's expectations.
  - e. Definitions and Roles. The use of the term "inspect" in relation to Consultant services is synonymous with "construction observation, and reference to the "Inspector" role is synonymous with "Field Observer," and means: performing on-site observations of the progress and quality of the Work and determining, in general, if the Work is being performed in conformance with the Contract Documents; and notifying the Owner if Work does not conform to the Contract Documents or requires special inspection or testing. Where "Specialty Inspector" or "specialty inspection" is used, it refers to inspection by a Building Official or independent agent of the Building Official, or other licensed/certified inspector who provides a certified inspection report in accordance with an established standard.
  - f. Consultant shall have no responsibility for the discovery, presence, handling, removal or disposal of toxic or hazardous materials, or for exposure of persons to toxic or hazardous materials in any form at the Project site, including but not limited to asbestos, asbestos products, polychlorinated biphenyl (PCB), or other toxic substances. If the Consultant suspects the presence of hazardous materials, they will notify the Owner and Client immediately for resolution.

- g. The Designer will perform Shop Drawing Reviews for all work in the design plans. The Consultant will forward shop drawings to the Designer / Client. The Client / Designer will distribute the shop drawing to the appropriate member of the design team, and following the review will return the reviewed plans to the Consultant on an agreed schedule. Landscape was designed by the Owner so certain components may require the Owner's review. The Client will distribute these sheets to the Owner as required.
- h. The Designer will review and respond to RFI's, review material certifications, test results and other requests as initiated or caused by the Consultant. The Consultant will send the documents to the Designer for review. In the event that the Consultant performs these reviews it will be for conformance with the design concept and compliance with the requirements of the contract for construction. Such review will not relieve the Contractor from its responsibility for performance in accordance with the contract for construction, nor is such review a guarantee that the work covered by the shop drawings, samples and submittals is free of errors, inconsistencies or omissions.
- i. Any opinions of probable construction cost provided by the Consultant will be on the basis of experience and professional judgment. However, since Consultant has no control over competitive bidding or market conditions, the Consultant cannot and does not warrant that bids or ultimate construction costs will not vary from these opinions of probable construction costs.
- j. Quantity takeoffs and calculated quantities are for the purpose of comparing with Designer's and/or bidders' quantities, and are not a guarantee of final quantities.
- k. Reviewing and commenting on contractor's schedules is for the purpose of estimating number of days to complete a project, and for identifying potential schedule and coordination challenges and determining compliance with the construction contract. It is not a guarantee that a construction contractor will complete the Project in that sequence or timeline, as means and methods are the responsibility of the construction contractor.
- l. Consultant is not responsible for any costs, claims or judgments arising from or in any way connected with errors, omissions, conflicts or ambiguities in the Contract Documents prepared by others. The Consultant does not have responsibility for the professional quality or technical adequacy or accuracy of the design plans or specifications, nor for their timely completion by others.
- m. Services provided by the Consultant under this Agreement will be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances, in the same geographical area and time period.
- n. Client and Consultant agree to release the receiving party of any liability arising from the readability or compatibility of any transmitted electronic data following 30 days of receipt of the electronic data.
- o. Consultant will not be liable for any damage or theft to the field office premises or utilities provided by Owner, unless caused by Consultant's own negligence.

## II. **OPTIONAL SERVICES**

All services not detailed above, are considered Optional Services, which, along with any other Extra Work requested by the Client or the Owner, will be performed only when a mutually negotiated Supplement to this Agreement is executed, specifying scope of services and budget.

## **PHASE 2: WEST MARINE VIEW DRIVE UTILITIES**

This phase of construction is based on a 6-month long duration, and consists of the following tasks. Very few hours are projected for these tasks. Work is on an on-call basis.

### **1. PROJECT MANAGEMENT & ADMINISTRATION**

This task will include the following effort, correlating with the Phase 1 Project Management & Administration task under a 6-month period.

**1.10 – Coordination, Contract Management & Invoicing (assume 2 hours/month)**

**1.20 – Meetings (assume 2 total)**

**1.30 – General Client Communications (assume 1 hour/week)**

**1.40 – General Team Communications and Management (assume 1 hour/week)**

### **2. TOPOGRAPHIC & BOUNDARY SURVEY SUPPORT**

KPFF will provide survey services throughout the duration of construction. These services will be provided to the City on an on-call / as-needed basis, as authorized by the City.

### **3. GEOTECHNICAL ENGINEERING SUPPORT**

HWA will provide the following geotechnical services on an as-needed basis authorized by the City during the construction phase. A total of 55.5 hours have been allocated to Geotechnical Engineering Support.

#### **3.10 – Geotechnical Construction Engineering**

This effort may include one pre-construction meeting, possible submittal review, general consultation on an as-needed basis, and dewatering rate review.

#### **3.20 – Geotechnical Observation and Associated Field Engineering**

This effort may include a few hours of general consultation.

#### **3.30 – Project Management**

In order to fulfill this task, HWA will also require effort for QA, budget tracking, communications, scheduling, and billing.

### **4. STRUCTURAL ENGINEERING SUPPORT**

There is no Structural Engineering Support needed for this phase of construction.

### **5. CIVIL ENGINEERING SUPPORT**

KPFF Civil will provide the following Civil services as needed during the construction phase. A total of 159 hours have been allocated to Civil Engineering Support.

#### **5.10 – Construction Support Ph 2 – Port of Everett**

This effort will include (but only required on an as-needed basis) meeting attendance and coordination with the Port of Everett, responses to RFIs, ASIs and submittals, and general communication (emails, phone calls, general consultation). The City will provide work on the punch list visit and report preparation, and preparation of as-built for Civil Engineering Design Elements, though KPFF may provide support as needed.

#### **5.20 – Construction Support Ph 2 – City of Everett**

This effort will include meeting attendance and coordination with the City of Everett, response to RFIs, ASIs and submittals, and general communication (emails, phone calls, general consultation). The City will provide work on the punch list visit and report preparation, and preparation of as-built for Civil Engineering Design Elements, though KPFF may provide support as needed.

**6. COMBINED SEWER & STORMWATER SUPPORT**

HDR will provide the following Sewer & Stormwater services as needed during the construction phase. A total of 28 hours have been allocated for HDR services.

**6.10 – Project Invoicing & Controls**

**6.20 – Site Visits**

**6.30 – RFIs (4 total)**

**6.40 – Submittal Reviews**

**7. ARCHITECTURE & BRIDGE AESTHETICS SUPPORT**

There is no Architectural Support needed for this phase of construction.

**8. ELECTRICAL ENGINEERING SUPPORT**

There is no Electrical Engineering Support needed for this phase of construction.

**9. LANDSCAPE ARCHITECTURE & IRRIGATION SUPPORT**

There is no Landscape Architecture & Irrigation Support needed for this phase of construction.

**10. ENVIRONMENTAL SERVICES**

*Environmental and Permitting support services will be provided on an on-call basis.*

**11. ELEVATOR DESIGN SUPPORT**

There is no Elevator Design Support needed for this phase of construction.

**12. MECHANICAL SUPPORT**

There is no Mechanical Support needed for this phase of construction.

**13. CONSTRUCTION MANAGEMENT SERVICES**

There are no Construction Management Services needed for this phase of construction.

**EXHIBIT E-1**  
**KPFF Consulting Engineers**  
**CONSULTANT FEE DETERMINATION**  
**SUMMARY OF COST**

**GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS**

**PHASES 1 & 2**

Classification	Total Hours	X	Rate	=	Cost
Principal	25	X	\$64.43	=	\$1,610.75
Project Manager	732	X	\$67.00	=	\$49,014.23
Senior Engineer / Tech. Specialist	437	X	\$64.43	=	\$28,172.02
Task Lead (Civil)	59	X	\$49.29	=	\$2,908.11
Project Engineer	1481	X	\$35.40	=	\$52,418.55
CADD Technician	198	X	\$39.23	=	\$7,767.54
Project Coordinator	251	X	\$25.50	=	\$6,391.15
Admin	0	X	\$20.00	=	\$0.00
Land Surveyor	57	X	\$40.00	=	\$2,280.00

DSC Subtotal \$150,562.35

**Overhead (OH) Cost**

OH Rate x DSC of 127.17% X \$150,562.35 = \$191,470.14

**Fixed Fee (FF)**

FF Rate x DSC of 30.00% X \$150,562.35 = \$45,168.70

**Total KPFF Labor Cost** \$387,201.19

**Reimbursables**

Mileage	(2500 Miles x \$0.545/mile)	\$1,362.50
Subcontract	Ott Consultants (on-call)	\$3,000.00
<i>Subtotal</i>		<u>\$4,362.50</u>

**Subconsultant Costs (See Exhibit G)**

\$999,227.66

**GRAND TOTAL:** \$1,390,791.35



COST ESTIMATE: GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT CSS

**PHASE 2 (assume 6 months)**

November 28, 2016		KPF Consulting Engineers									KPFF
GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT &		Principal	Project Manager	Senior Engineer / Tech. Specialist	Task Lead (Civil)	Project Engineer	CADD Technician	Project Coordinator	Admin	Land Surveyor	MULTIPLIER:
Item	SCOPE OF WORK	\$64.43	\$67.00	\$64.43	\$49.29	\$35.40	\$39.23	\$25.50	\$20.00	\$40.00	2.5717
<b>1 PROJECT MANAGEMENT &amp; ADMINISTRATION</b>											
1.10	Coordination, Contract Management & Invoicing (Assume 2 hr /mo)	3	6					12			\$2,318
1.20	Meetings (Assume 2 total)		10					2			\$1,854
1.30	General Client Communications (assume 1 hour / week)		23					10			\$4,685
1.40	General Team communications and management (assume 1 hour / week)		23					10			\$4,685
<b>Labor Subtotal:</b>		<b>3</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>\$13,541</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>2 TOPOGRAPHIC &amp; BOUNDARY SURVEY SUPPORT</b>											
2.10	Survey Construction Support Services									12	\$1,234
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>\$1,234</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>3 GEOTECHNICAL ENGINEERING SUPPORT</b>											
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>4 STRUCTURAL ENGINEERING SUPPORT</b>											
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>5 CIVIL ENGINEERING SUPPORT</b>											
5.10	Construction Support Ph 2 - Port of Everett										
5.11	Meeting Attendance (assume 1)				1	5					\$582
5.12	Response to RFI, ASI & Submittals				4	36					\$3,784
5.13	Punch List Visit & Report Preparation (city will do)				1	2					\$309
5.14	Preparation of As-built for Civil Engr Design Elements (city will do)				1	3					\$400
5.15	Emails, phone calls, general consultation				2	8					\$982
5.20	Construction Support Ph 2 - City of Everett										
5.21	Meeting Attendance (assume 2)					10					\$910
5.22	Response to RFI, ASI & Submittals				6	40					\$4,402
5.23	Punch List Attendance (city will do)					3					\$273
5.24	Preparation of As-built for Civil Engr Design Elements (city will do)					3					\$273
5.25	Emails, phone calls, general consultation				4	30					\$3,238
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>140</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$15,154</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>6 COMBINED SEWER &amp; STORMWATER SUPPORT</b>											
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>7 ARCHITECTURE &amp; BRIDGE AESTHETICS SUPPORT</b>											
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>8 ELECTRICAL ENGINEERING SUPPORT</b>											
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>9 LANDSCAPE ARCHITECTURE &amp; IRRIGATION SUPPORT</b>											
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>10 ENVIRONMENTAL SERVICES</b>											
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>11 ELEVATOR DESIGN SUPPORT</b>											
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>12 MECHANICAL SUPPORT</b>											
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>13 CONSTRUCTION MANAGEMENT SERVICES</b>											
<b>Labor Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>
<b>Reimbursables:</b>											<b>\$0</b>
<b>Labor Sum:</b>		<b>3</b>	<b>63</b>	<b>0</b>	<b>19</b>	<b>140</b>	<b>0</b>	<b>34</b>	<b>0</b>	<b>12</b>	<b>\$29,929</b>
<b>Reimbursable Sum:</b>											<b>\$0</b>
										KPFF	<b>\$29,929</b>

**EXHIBIT G-1**  
**The Greenbusch Group, Inc.**  
**CONSULTANT FEE DETERMINATION**  
**SUMMARY OF COST**  
**GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS**

**PHASE 1**

Classification	Total Hours	X	Rate	=	Cost
Principal	4	X	\$74.25	=	\$297.00
Sr. Vertical Transportation Specialist	50	X	\$47.60	=	\$2,380.00
Vertical Transportation Specialist	75	X	\$27.10	=	\$2,032.50
CADD	15	X	\$34.00	=	\$510.00
		X		=	\$0.00
		X		=	\$0.00
		X		=	\$0.00
		X		=	\$0.00
			<b>DSC Subtotal</b>		<b>\$5,219.50</b>
<b>Overhead (OH) Cost</b>					
OH Rate x DSC of	99.44%	X	\$5,219.50	=	\$5,190.27
<b>Fixed Fee (FF)</b>					
FF Rate x DSC of	30.00%	X	\$5,219.50	=	\$1,565.85
			<b>Total Greenbusch Labor Cost</b>		<b>\$11,975.62</b>
<b>Reimbursables</b>					
Mileage	(120 Miles x \$0.545/mile)				\$65.40
<i>Subtotal</i>					\$65.40
<b>Subconsultant Total:</b>					<b>\$12,041.02</b>



**EXHIBIT G-1**  
**HWA GeoSciences Inc.**  
**CONSULTANT FEE DETERMINATION**  
**SUMMARY OF COST**  
**GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS**

**PHASES 1 & 2**

Classification	Total Hours	X	Rate	=	Cost
Principal IX	13	X	\$82.93	=	\$1,078.09
Principal VIII	4	X	\$74.04	=	\$296.16
Geotech. Engineer VI	185	X	\$52.88	=	\$9,756.36
Hydrogeologist VI	32	X	\$40.00	=	\$1,280.00
Geotech. Engineer III	154	X	\$37.02	=	\$5,701.08
Geotech. Engineer I	128	X	\$32.69	=	\$4,184.32
Geologist V	36	X	\$32.69	=	\$1,176.84
Clerical	38	X	\$21.25	=	\$807.50
			<b>DSC Subtotal</b>		<b>\$24,280.35</b>
<b>Overhead (OH) Cost</b>					
OH Rate x DSC of	188.40%	X	\$24,280.35	=	\$45,744.18
<b>Fixed Fee (FF)</b>					
FF Rate x DSC of	30.00%	X	\$24,280.35	=	\$7,284.11
			<b>Total HWA Labor Cost</b>		<b>\$77,308.63</b>
<b>Reimbursables</b>					
Mileage	(2,377 Miles x \$0.545/mile)				\$ 1,295.47
<i>Subtotal</i>					\$1,295.47
<b>Subconsultant Total:</b>					<b>\$78,604.10</b>

**COST ESTIMATE: GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT CSS**

**PHASE 1 (assume 16 months)**

November 22, 2016		HWA GeoSciences Inc.								HWA
GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS		Principal IX	Principal VIII	Geotech. Engineer VI	Hydrogeologist VI	Geotech. Engineer III	Geotech. Engineer I	Geologist V	Clerical	MULTIPLIER:
Item	SCOPE OF WORK	\$82.93	\$74.04	\$52.88	\$40.00	\$37.02	\$32.69	\$32.69	\$21.25	3.1840
<b>1</b>	<b>PROJECT MANAGEMENT &amp; ADMINISTRATION</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>2</b>	<b>TOPOGRAPHIC &amp; BOUNDARY SURVEY SUPPORT</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>3</b>	<b>GEOTECHNICAL ENGINEERING SUPPORT</b>									
3.10	Geotechnical Construction Engineering									\$0
3.11	Preconstruction Meeting			6		0	0			\$1,010
3.12	Geotechnical Submittal Review			8		16	8			\$4,068
3.13	Geotechnical Construction Engineering (as needed)	10		20		20				\$8,365
3.14	Dewatering Rate Analysis		4	8	24					\$5,347
3.15	Geotechnical Railroad Coordination (as needed)			8	8					\$2,366
<b>3.20</b>	<b>Geotechnical Observation and Associated Field Engineering</b>									
3.21	Utility Excavation & Shoring - East Abutment (5 days)			5		10	20			\$4,102
3.22	Installation of Drilled Shafts - East Abutment (6 days)			6		12	24			\$4,923
3.23	Installation of Slope Protection System (10 days)			10		20	4	36		\$8,205
3.24	Sheetpile Installation - West Abutment (5 days)			15		10	20			\$5,786
3.25	Installation of Drilled Shafts - West Abutment (8 days)			8		12	32			\$6,092
3.26	Utility Excavation & Shoring - West Abutment (5 days)			8		10	20			\$4,607
3.27	Construction Meetings (assume 10 meetings)			40						\$6,735
3.30	Project Management									\$0
3.31	QA, Budget Tracking, Communications, Scheduling, Billing			8		32			32	\$7,284
	Labor Subtotal:	10	4	150	32	142	128	36	32	\$68,887
	Reimbursables:									\$1,295
<b>4</b>	<b>STRUCTURAL ENGINEERING SUPPORT</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>5</b>	<b>CIVIL ENGINEERING SUPPORT</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>6</b>	<b>COMBINED SEWER &amp; STORMWATER SUPPORT</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>7</b>	<b>ARCHITECTURE &amp; BRIDGE AESTHETICS SUPPORT</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>8</b>	<b>ELECTRICAL ENGINEERING SUPPORT</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>9</b>	<b>LANDSCAPE ARCHITECTURE &amp; IRRIGATION SUPPORT</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>10</b>	<b>ENVIRONMENTAL SERVICES</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>11</b>	<b>ELEVATOR DESIGN SUPPORT</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>12</b>	<b>MECHANICAL SUPPORT</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
<b>13</b>	<b>CONSTRUCTION MANAGEMENT SERVICES</b>									
	Labor Subtotal:	0	0	0	0	0	0	0	0	\$0
	Reimbursables:									
	Labor Sum:	10	4	150	32	142	128	36	32	\$68,887
	Reimbursable Sum:									\$1,295
								<b>HWA SUBTOTAL:</b>	<b>\$70,183</b>	



**EXHIBIT G-1**

**KBA Construction Management & Observation**

**CONSULTANT FEE DETERMINATION**

**SUMMARY OF COST**

**GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS**

**PHASE 1**

<b>Classification</b>	<b>Total Hours</b>	<b>X</b>	<b>Rate</b>	<b>=</b>	<b>Cost</b>
Principal	17	X	\$85.32	=	\$1,450.44
Project Manager	280	X	\$60.35	=	\$16,898.00
Resident Engineer	2832	X	\$60.85	=	\$172,327.20
Office Engineer	1896	X	\$43.70	=	\$82,855.20
Inspector	0	X	\$47.87	=	\$0.00
Project Admin.	0	X	\$92.76	=	\$0.00
Contract Admin.	42	X	\$52.03	=	\$2,185.26
		X		=	\$0.00
			<b>DSC Subtotal</b>		<b>\$275,716.10</b>
<b>Overhead (OH) Cost</b>					
OH Rate x DSC of	140.15%	X	\$275,716.10	=	\$386,416.11
<b>Fixed Fee (FF)</b>					
FF Rate x DSC of	30.00%	X	\$275,716.10	=	\$82,714.83
			<b>Total KBA Labor Cost</b>		<b>\$744,847.04</b>
<b>Reimbursables</b>					
Vehicles	(\$5.75/hour + tax)				\$17,668.00
Supplies, Equipment					\$726.00
Subcontract	Materials Testing & Consulting, Inc.				\$85,500.00
					\$103,894.00
<i>Subtotal</i>					\$103,894.00
<b>Subconsultant Total:</b>					<b>\$848,741.04</b>



**EXHIBIT G-1**

**Landau Associates**

**CONSULTANT FEE DETERMINATION**

**SUMMARY OF COST**

**GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS**

**PHASES 1 & 2**

<b>Classification</b>	<b>Total Hours</b>	<b>X</b>	<b>Rate</b>	<b>=</b>	<b>Cost</b>
Senior Associate	2	X	\$60.53	=	\$121.06
Associate	4	X	\$45.87	=	\$183.48
Senior	0	X	\$44.71	=	\$0.00
Staff/Senior Tech II	16	X	\$27.74	=	\$443.84
Project Coordinator	4	X	\$32.97	=	\$131.88
CAD/GIS Tech	0	X	\$33.08	=	\$0.00
Support Staff	2	X	\$23.43	=	\$46.86
		X		=	\$0.00
<b>DSC Subtotal</b>					<b>\$927.12</b>

<b>Overhead (OH) Cost</b>					
OH Rate x DSC of	204.07%	X	\$927.12	=	\$1,891.97

<b>Fixed Fee (FF)</b>					
FF Rate x DSC of	30.00%	X	\$927.12	=	\$278.14

**Total Landau Labor Cost** \$3,097.23

<b>Reimbursables</b>		
Mileage	(40 Miles x \$0.545/mile)	\$21.80
Subcontract	ALS Laboratories	\$2,318.00
Field Equipment	(Allowance)	\$122.00
<i>Subtotal</i>		<u>\$2,461.80</u>

<b>Subconsultant Total:</b>	<b>\$5,559.03</b>
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COST ESTIMATE: GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT CSS

**PHASE 2 (assume 6 months)**

November 22, 2016		Landau Associates							Landau
GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS		Senior Associate	Associate	Senior	Staff/Senior Tech II	Project Coordinator	CAD/GIS Tech	Support Staff	MULTIPLIER:
Item	SCOPE OF WORK	\$60.53	\$45.87	\$44.71	\$27.74	\$32.97	\$33.08	\$23.43	3.3407
1	PROJECT MANAGEMENT & ADMINISTRATION								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
2	TOPOGRAPHIC & BOUNDARY SURVEY SUPPORT								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
3	GEOTECHNICAL ENGINEERING SUPPORT								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
4	STRUCTURAL ENGINEERING SUPPORT								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
5	CIVIL ENGINEERING SUPPORT								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
6	COMBINED SEWER & STORMWATER SUPPORT								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
7	ARCHITECTURE & BRIDGE AESTHETICS SUPPORT								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
8	ELECTRICAL ENGINEERING SUPPORT								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
9	LANDSCAPE ARCHITECTURE & IRRIGATION SUPPORT								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
10	ENVIRONMENTAL SERVICES								
10.10	Sampling of Stockpiled Soil from Area of Known Potential Contamination	1	2		8	2		1	\$1,549
	Labor Subtotal:	1	2	0	8	2	0	1	\$1,549
	Reimbursables:								
11	ELEVATOR DESIGN SUPPORT								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
12	MECHANICAL SUPPORT								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
13	CONSTRUCTION MANAGEMENT SERVICES								
	Labor Subtotal:	0	0	0	0	0	0	0	\$0
	Reimbursables:								
	Labor Sum:	1	2	0	8	2	0	1	\$1,549
	Reimbursable Sum:								\$0
							Landau		\$1,549



**COST ESTIMATE: GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT CSS**

***PHASE 1 (assume 16 months)***

November 22, 2016		LMN Architects			LMN
GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS		Partner	Project Designer	Specs	MULTIPLIER:
Item	SCOPE OF WORK	\$77.88	\$34.86	\$45.91	3.1500
<b>1</b>	<b>PROJECT MANAGEMENT &amp; ADMINISTRATION</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>2</b>	<b>TOPOGRAPHIC &amp; BOUNDARY SURVEY SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>3</b>	<b>GEOTECHNICAL ENGINEERING SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>4</b>	<b>STRUCTURAL ENGINEERING SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>5</b>	<b>CIVIL ENGINEERING SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>6</b>	<b>COMBINED SEWER &amp; STORMWATER SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>7</b>	<b>ARCHITECTURE &amp; BRIDGE AESTHETICS SUPPORT</b>				
7.10	Architectural Construction Support Services	10	120	8	\$16,787
					\$0
					\$0
	Labor Subtotal:	10	120	8	\$16,787
	Reimbursables:				\$164
<b>8</b>	<b>ELECTRICAL ENGINEERING SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>9</b>	<b>LANDSCAPE ARCHITECTURE &amp; IRRIGATION SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>10</b>	<b>ENVIRONMENTAL SERVICES</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>11</b>	<b>ELEVATOR DESIGN SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>12</b>	<b>MECHANICAL SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>13</b>	<b>CONSTRUCTION MANAGEMENT SERVICES</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
	Labor Sum:	10	120	8	\$16,787
	Reimbursable Sum:				\$164
					\$16,951



**COST ESTIMATE: GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT CSS**

**PHASE 1 (assume 16 months)**

November 22, 2016		Stantec Consulting Services Inc.			Stantec
GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS		Project Manager	Designer	Production	MULTIPLIER:
Item	SCOPE OF WORK	\$170.00	\$142.00	\$98.00	1.3000
<b>1</b>	<b>PROJECT MANAGEMENT &amp; ADMINISTRATION</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>2</b>	<b>TOPOGRAPHIC &amp; BOUNDARY SURVEY SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>3</b>	<b>GEOTECHNICAL ENGINEERING SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>4</b>	<b>STRUCTURAL ENGINEERING SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>5</b>	<b>CIVIL ENGINEERING SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>6</b>	<b>COMBINED SEWER &amp; STORMWATER SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>7</b>	<b>ARCHITECTURE &amp; BRIDGE AESTHETICS SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>8</b>	<b>ELECTRICAL ENGINEERING SUPPORT</b>				
<b>8.10</b>	<b>Bidding Support</b>				
8.11	Answer Bidding Questions	2			\$442
8.12	Prepare One Addendum	4	2	2	\$1,508
<b>8.20</b>	<b>Constructability Review</b>				
8.21	Attend Pre-Con	4			\$884
8.22	Review Submittals	4	4		\$1,622
8.23	Answer Contractor Questions\RFI	6	6		\$2,434
8.24	Prepare\Review Contract Change Orders	6	6		\$2,434
<b>8.30</b>	<b>Electrical Construction Support Services</b>				
8.31	Construction Observation Visits (6)	12	6		\$3,760
8.32	Lighting Focusing Review and Observation	6			\$1,326
8.33	Punch List	5			\$1,105
8.34	Project Closeout & Record Drawings	2	2	2	\$1,066
	Labor Subtotal:	51	26	4	\$16,580
	Reimbursables:				\$65
<b>9</b>	<b>LANDSCAPE ARCHITECTURE &amp; IRRIGATION SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>10</b>	<b>ENVIRONMENTAL SERVICES</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>11</b>	<b>ELEVATOR DESIGN SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>12</b>	<b>MECHANICAL SUPPORT</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
<b>13</b>	<b>CONSTRUCTION MANAGEMENT SERVICES</b>				
	Labor Subtotal:	0	0	0	\$0
	Reimbursables:				
	<b>Labor Sum:</b>	<b>51</b>	<b>26</b>	<b>4</b>	<b>\$16,580</b>
	<b>Reimbursable Sum:</b>				<b>\$65</b>
					<b>\$16,646</b>

**EXHIBIT G-1**

**Tres West Engineers, Inc.**

**CONSULTANT FEE DETERMINATION**

**SUMMARY OF COST**

**GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS**

**PHASE 1**

<b>Classification</b>	<b>Total Hours</b>	<b>X</b>	<b>Rate</b>	<b>=</b>	<b>Cost</b>
Principal	48	X	\$52.00	=	\$2,496.00
Project Manager	40	X	\$39.66	=	\$1,586.40
Designer	40	X	\$30.00	=	\$1,200.00
Administration	24	X	\$27.00	=	\$648.00
		X		=	\$0.00
		X		=	\$0.00
		X		=	\$0.00
		X		=	\$0.00
<b>DSC Subtotal</b>					<b>\$5,930.40</b>

<b>Overhead (OH) Cost</b>	OH Rate x DSC of	121.75%	X	\$5,930.40	=	\$7,220.26
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<b>Fixed Fee (FF)</b>	FF Rate x DSC of	30.00%	X	\$5,930.40	=	\$1,779.12
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**Total Tres West Engineers Labor Cost** \$14,929.78

<b>Reimbursables</b>			
Mileage	(300 Miles x \$0.545/mile)		\$163.50
<i>Subtotal</i>			<u>\$163.50</u>

<b>Subconsultant Total:</b>	<b>\$15,093.28</b>
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**COST ESTIMATE: GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT CSS**

**PHASE 1 (assume 16 months)**

November 22, 2016		Tres West Engineers, Inc.				Tres West
GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS		Principal	Project Manager	Designer	Administration	MULTIPLIER:
Item	SCOPE OF WORK	\$52.00	\$39.66	\$30.00	\$27.00	2.5175
<b>1</b>	<b>PROJECT MANAGEMENT &amp; ADMINISTRATION</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>2</b>	<b>TOPOGRAPHIC &amp; BOUNDARY SURVEY SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>3</b>	<b>GEOTECHNICAL ENGINEERING SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>4</b>	<b>STRUCTURAL ENGINEERING SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>5</b>	<b>CIVIL ENGINEERING SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>6</b>	<b>COMBINED SEWER &amp; STORMWATER SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>7</b>	<b>ARCHITECTURE &amp; BRIDGE AESTHETICS SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>8</b>	<b>ELECTRICAL ENGINEERING SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>9</b>	<b>LANDSCAPE ARCHITECTURE &amp; IRRIGATION SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>10</b>	<b>ENVIRONMENTAL SERVICES</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>11</b>	<b>ELEVATOR DESIGN SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>12</b>	<b>MECHANICAL SUPPORT</b>					
12.10	Mechanical Construction Support Services	48	40	40	24	\$14,930
	Labor Subtotal:	48	40	40	24	\$14,930
	Reimbursables:					\$164
<b>13</b>	<b>CONSTRUCTION MANAGEMENT SERVICES</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
	Labor Sum:	48	40	40	24	\$14,930
	Reimbursable Sum:					\$164
						\$15,093



**COST ESTIMATE: GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT CSS**

***PHASE 2 (assume 6 months)***

November 22, 2016		HDR				HDR
GRAND AVENUE PARK BRIDGE - CONSTRUCTION MANAGEMENT & CSS		Principal	Project Manager	Engineer	Controller	MULTIPLIER:
Item	SCOPE OF WORK	\$92.00	\$89.59	\$42.00	\$46.76	3.0535
<b>1</b>	<b>PROJECT MANAGEMENT &amp; ADMINISTRATION</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>2</b>	<b>TOPOGRAPHIC &amp; BOUNDARY SURVEY SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>3</b>	<b>GEOTECHNICAL ENGINEERING SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>4</b>	<b>STRUCTURAL ENGINEERING SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>5</b>	<b>CIVIL ENGINEERING SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>6</b>	<b>COMBINED SEWER &amp; STORMWATER SUPPORT</b>					
6.10	Project Invoicing & Controls		2		4	\$1,118
6.20	Site Visits		6	0		\$1,641
6.30	RFIs - 4 total		2	4		\$1,060
6.40	Submittal Reviews		2	8		\$1,573
	Labor Subtotal:	0	12	12	4	\$5,393
	Reimbursables:					\$200
<b>7</b>	<b>ARCHITECTURE &amp; BRIDGE AESTHETICS SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>8</b>	<b>ELECTRICAL ENGINEERING SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>9</b>	<b>LANDSCAPE ARCHITECTURE &amp; IRRIGATION SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>10</b>	<b>ENVIRONMENTAL SERVICES</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>11</b>	<b>ELEVATOR DESIGN SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>12</b>	<b>MECHANICAL SUPPORT</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
<b>13</b>	<b>CONSTRUCTION MANAGEMENT SERVICES</b>					
	Labor Subtotal:	0	0	0	0	\$0
	Reimbursables:					
	Labor Sum:	0	12	12	4	\$5,393
	Reimbursable Sum:					\$200
						\$5,593

