

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Authorizing the City Manager to Execute a Contract with the Louis Berger Group, Inc., for \$184,238 for the Boeing Creek Regional Stormwater Facility Study
DEPARTMENT:	Public Works
PRESENTED BY:	Tricia Juhnke, City Engineer
ACTION:	<input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution <input checked="" type="checkbox"/> Motion <input type="checkbox"/> Discussion <input type="checkbox"/> Public Hearing

PROBLEM/ISSUE STATEMENT:

The goal of the Boeing Creek Regional Stormwater Facility Study is to assess feasibility for City implementation of a regional stormwater facility (RSF) within the Boeing Creek Basin sufficient to meet the stormwater management needs for future redevelopment of the Aurora Square Community Renewal Area (CRA) as compared to the conventional alternative of multiple separate, private on-site facilities. This feasibility assessment will take into account multiple factors which include alternative methodologies, NPDES requirements, availability of potential locations, costs and potential funding mechanisms, engineering, and permitting. The Feasibility Study will also consider opportunities to locate and size an RSF to serve selected areas in addition to the CRA.

RESOURCE/FINANCIAL IMPACT:

The adopted 2017-2022 CIP budget for the Boeing Creek Regional Stormwater Facility Study is \$200,000. This consultant services contract is budgeted for up to \$184,238 of this amount. The total cost is budgeted for in the Surface Water Capital Fund.

RECOMMENDATION

Staff recommends that Council move to authorize the City Manager to execute an agreement with the Louis Berger Group, Inc., for \$184,238 to provide engineering, environmental, and other consultant services for the Boeing Creek Regional Stormwater Facility Study.

Approved By: City Manager **DT** City Attorney **MK**

BACKGROUND

In 2012, the City Council designated the Aurora Square shopping complex as a Community Renewal Area (CRA). The CRA is a 70+ acre area defined by Dayton Avenue N, N 160th Street, Aurora Avenue N, and N 155th Street that includes the existing sites occupied by Sears, Central Market, Marshalls, and the Washington State Department of Transportation (WSDOT) regional offices. A planned-action environmental impact statement (PAEIS) performed for the CRA proposed that a City-owned regional stormwater facility (RSF) could provide certainty and a possible reduction in stormwater facility costs to developers of CRA properties, as well as allowing for greater flexibility in the use of their sites.

Information related to the CRA, including the PAEIS, can be found on the City's website located at:

<http://www.shorelinewa.gov/business/aurora-square-community-renewal-area>

The goal of the Boeing Creek Regional Stormwater Facility Study is to assess feasibility for City implementation of a regional stormwater facility (RSF) within the Boeing Creek Basin sufficient to meet the stormwater management needs for future redevelopment of the CRA as compared to the conventional alternative of multiple separate private on-site facilities. This feasibility assessment will take into account multiple factors which include alternative methodologies, NPDES requirements, availability of potential locations, costs and potential funding mechanisms, engineering, and permitting. The Feasibility Study will also consider opportunities to locate and size an RSF to serve selected areas in addition to the CRA.

ALTERNATIVE ANALYSIS

On March 23, 2017, the City issued Request for Qualifications (RFQ) #8766 for the Boeing Creek Regional Stormwater Facility Study. Statements of Qualification (SOQs) were received from three consultant teams:

- KPFF Consulting Engineers
- Louis Berger Group, Inc.
- Osborn Consulting, Inc.

The selection committee reviewed the consultant SOQs and selected the Louis Berger Group, Inc. as the most qualified for this study.

There are two primary alternatives regarding the award of this contract:

1. Award the contract to the selected consultant (recommended).
2. Do not award the contract.

Awarding the contract allows the project to move forward; conversely, not awarding the contract would stop it. Given that feasibility for an RSF needs to be assessed prior to potentially utilizing an RSF to incentivize redevelopment of the CRA, this alternative is not recommended.

The study will commence once the consultant is under contract, currently estimated to occur no later than June 22, 2017. The study is expected to be completed approximately nine months after starting. The proposed scope of work and budget are provided as Attachment A.

COUNCIL GOAL(S) ADDRESSED

This project supports Council Goal #1 to strengthen Shoreline’s economic base to maintain the public services that the community expects.

RESOURCE/FINANCIAL IMPACT

The adopted 2017-2022 CIP budget for the Boeing Creek Regional Stormwater Facility Study is \$200,000. This consultant services contract is budgeted for up to \$184,238 of this amount. The total cost is budgeted for in the Surface Water Capital Fund.

The 2017-2022 project budget and revenue sources are as follows:

EXPENDITURES

Project Administration:		
	Staff and other Direct Expenses	\$15,762
	<i>Consultant Contract for Study</i>	<i>\$184,238</i>
<hr/>		
	Total Project Cost	\$200,000

REVENUE

	Surface Water Capital Fund	\$200,000
<hr/>		
	Total Revenue	\$200,000

Some additional budget may be needed for 2018, depending on the outcome of the alternatives analysis. One known source of possible additional cost is geotechnical exploration to investigate subsurface infiltration capacities; the alternatives analysis will determine if such exploration is necessary.

RECOMMENDATION

Staff recommends that Council move to authorize the City Manager to execute an agreement with the Louis Berger Group, Inc., for \$184,238 to provide engineering, environmental, and other consultant services for the Boeing Creek Regional Stormwater Facility Study.

ATTACHMENTS

Attachment A: Boeing Creek Regional Stormwater Facility Study Consulting Contract Scope of Work and Budget

City of Shoreline
Boeing Creek Regional Stormwater Facility Feasibility Study
Draft Scope of Work Outline
May 10, 2017

Introduction and Background

The purpose of this study is to confirm the feasibility — technically and financially — to provide a City-owned and operated regional stormwater facility or facilities designed to reduce the overall cost for stormwater mitigation as an incentive for redevelopment of the Aurora Square Community Renewal Area (CRA) and potential additional areas in the upper Boeing Creek Basin. As part of feasibility assessment, this study will provide a framework for the next steps leading toward potential implementation.

Key issues that must be considered are:

- **Optimizing the benefits** of distributed green stormwater infrastructure (GSI) and water quality treatment practices to work in concert with regional flow control in a manner which satisfies NPDES/Ecology requirements for redevelopment.
- **Maximizing benefits relative to costs** considering basin-wide costs and benefits as well as long-term (life cycle) costs to the City to construct, operate, and maintain a regional stormwater facility or facilities. It is important that the facility is self-funded for foreseeable future, so that the City's Surface Water Utility limited resources are not burdened by operating, maintenance, and replacement/upgrade costs.
- **Optimizing regional facility size and area(s) served** by specifically recognizing the runoff reduction benefits of GSI, considering deep infiltration (underground injection control [UIC] wells) to maximize volume reduction in areas of till soil, and identification of non-redeveloping areas not needing regional control.
- **Implementation means and timing**, including funding. The funding approach must be sound, transparent, equitable, and function by mechanism which is agreeable to facility customers and other key stakeholders. Implementation must recognize that development will be phased over time. Proposed regional facilities will likely need to be implemented in advance of redevelopment in order to serve redevelopment needs.
- **Permitting**, especially for any facility potentially located in-line with or adjacent to the existing Boeing Creek flood control facility upstream of the M1 Dam in the Shoreline Community College (SCC) Greenwood parking lot. Such a facility would need to consider permitting elements related to critical area impacts and dam safety.
- **Sustainability and protection of environmental systems.** Reflecting the goal of the City's stormwater utility to protect stream resources, the regional facility plan must make sense as a worthwhile stream habitat and protection effort, in addition to complying with NPDES requirements.

The following paragraphs provide a scope of work, including project assumptions and deliverables.

Task 1 - Data Collection and Review

The Consultant will review data and information provided by the City to become familiar with the project needs, issues, basin setting including drainage system, its condition, and geology. Some of the available items are included the following list;

- **CRA PAEIS** which includes the Stormwater Concept Development Study and identification of specific alternative sites within the SCC.
- **Master Drainage Plan Supplement for SCC** that lays out a drainage plan for future development of the SCC as well as providing information about wetlands within and upstream of the M1 pond.
- **Boeing Creek Basin Plan** providing a broad overall perspective of basin conditions.
- **On-going task activities** under the City's Surface Water Master Plan Update that have included efforts to evaluate regional detention vs. distributed facilities.
- **City GIS mapping** (storm system, land use, wetland, soils, groundwater wells (if any), topography, etc.).
- **Available geotechnical information** (borings, studies, Department of Natural Resources Subsurface Information Portal, Ecology's water well viewer, etc.).
- **Available plans, reports, and other documents** from any previous surface water projects in the area which may be relevant to the study.
- **Other significant future development plans** for the upper basin that could potentially be within the service area of a regional facility.
- **Other important activities in the basin** that could be affected by the project (e.g. how might regional control affect the Hidden Lake project that is being led by team member Herrera).
- **Available hydrologic and hydraulic models** that have been developed in support of the various projects in the basin

Task 1 Assumptions:

- City will gather relevant background data and information for the project and provide to the Consultant.
- The City will make available relevant data in City files. This data may consist of GIS coverages, geotechnical reports submitted for development projects, or water level monitoring data or spreadsheets.

Task 1 Deliverables:

- A brief summary table describing the documents and information available and relevance to the project.

Task 2 – Preliminary Analysis and Alternative Screening

Building upon the information gained under the data review task, the Consultant will engage in preliminary analysis and brainstorming with the City to consider the full range of potential options that could be considered including: available sites for a regional facility, areas served, and regional vs. distributed flow control options. The intent of this task is to utilize discipline experts (drainage, environmental permitting, GSI, NPDES, infiltration, and finance) to quickly focus on those approaches deemed most likely to be successfully developed by the City of Shoreline. Example questions include:

- Are there other potential sites for a regional facility, outside of the SCC Greenwood parking lot (where the PAEIS Stormwater Concept Study sited two alternatives)?
- Which combination of NPDES/Ecology Minimum Requirements MR#5, MR#6, and MR#7 would the alternative satisfy?
- Could deep infiltration facilities compete with, or be combined with, “conventional” regional stormwater control facilities?
- Is the approach capable of being phased?
- Would the alternative require significant conveyance improvements, and if so, would that make an alternative less desirable?

Consultant will prepare a preliminary listing of potential alternatives in a matrix. The matrix would include a brief description, potential area served, a discussion of regulatory compliance, and pros and cons, and any major unknowns or potentially complicating factors. For example, when considering the potential sites at SCC vs. other sites or options, it will be important to have a reasonable understanding of assumed costs and other needs for acquiring property from SCC.

The initial alternatives would include traditional flow control distributed on individual sites, the two optional regional sites at SCC, and other potential facility configurations identified as favorable. Deep infiltration (UIC wells) will be considered as both a potential element of distributed (on-site) control as well as regional control.

The analysis would include some GIS mapping to facilitate regional site identification, contributing area analysis, shallow and deep infiltration feasibility, high level screening of GSI feasibility, and some limited analysis that could involve preliminary sizing or cost estimating. Considerations in the development of alternatives include:

- Potential integration of distributed on-site GSI practices to meet NPDES Minimum Requirements #5 (MR5) and/or distributed water quality practices to meet NPDES Minimum Requirement #6 (MR6). The study will need to have a solid understanding of exactly how redeveloping areas connected to the facility will meet the NPDES requirements for redevelopment. For example, would GSI/water quality treatment provided be only for the redeveloping area, or would there also be non-redeveloping area tributary to the site (such as roads that do not exceed the 50 percent threshold or other areas not likely to redevelop).
- Permitting, especially for any facility potentially located in-line with or adjacent to the existing Boeing Creek flood control facility upstream of the M1 Dam in the Shoreline

Community College (SCC) Greenwood parking lot. Based on current designation of the M1 Dam as a Class 1C – high hazard dam, and also as an in-line stream facility with wetlands, permitting needs for any such alternatives will need to be accounted for as part of feasibility. This assessment will consider the new/pending regulatory changes by USACE.

For each alternative, the Consultant will identify any “deal breaker” issues/questions to be answered before moving forward with that alternative. These deal breaker questions could be raised as early on questions during the initial stakeholder input described below under Task 5.

The Consultant will provide the preliminary matrix to the City for review and comment. The Consultant team (LB, Herrera, and AESI) will meet with the City to review the preliminary options with the intent to screen the alternatives down to a handful (assumed to be three or four) of the most favorable selected to advance to more detailed analysis. Quantifiable scoring may be used to help distinguish and/or justify the selected alternatives. Another outcome of this meeting will be to identify what specific information is needed from affected stakeholders to support alternatives development and analysis.

Task 2 Assumptions:

- No detailed engineering analysis is included in this task (e.g., sizing, cost estimating, modeling, etc.). Up to 12 hours of GIS support is included to support development of informal GIS maps to support alternative identification.
- Figures will be developed for the general study area (e.g., infiltration potential and GSI feasibility) under this task, but no formal figures of alternatives will be prepared at this stage
- One approach for on-site stormwater practices for development/redevelopment in CRA (to meet NPDES Minimum Requirement #5 [MR5]) will be developed and applied to all alternatives.
- There will be no field work conducted to identify wetlands, streams, or priority habitats. All permitting assumptions will be based on known, mapped critical area resources identified in Task 1.

Task 2 Deliverables:

- Matrix of preliminary options
- Team meeting for screening of options and selection of the most favorable alternatives

Task 3 – Detailed Alternative Evaluation

Task 3.1 – Infiltration Assessment

The Consultant (team member AESI) will develop an understanding of the general hydrogeologic and geotechnical opportunities and constraints to evaluate shallow and deep infiltration for the three to four alternatives selected for further analysis. Consultant will review publically available and in-house data and information provided by the City related to land use and physical characteristics of the Boeing Creek watershed that will affect infiltration feasibility, including:

- Infiltration potential as determined by geology and soil type: This information will be based on available geologic, soils and hydrogeologic reports and maps, explorations obtained from subsurface information databases, including in-house (AESI's) geotechnical database, the Department of Natural Resources (DNR) Subsurface Information Portal, and the Department of Ecology (Ecology) water well viewer, along with targeted geologic reconnaissance.
- Topography/slope: Based on analysis of LiDAR (Light Detection and Ranging) and U.S. Geological Survey (USGS) topographic data, landslide hazard areas within the City of Shoreline occur mostly along the western edge of the City, along Puget Sound bluffs, or within steeply incised natural drainages, such as Boeing and McAleer Creeks.
- Risk to environment: Based on maps of environmentally sensitive areas, including steep slopes, wetlands, and surface water. No well head protection areas or large on-site septic fields are mapped in project area.
- Depth to ground water/seasonal high water table in the deep Vashon advance outwash: This information will be based on geology, well data, available hydrogeologic studies, and surface water elevations. It is assumed that there is not enough quality data to map discrete areas of shallow recessional outwash aquifer.
- Thickness of unsaturated permeable horizon: This information will be used to help assess the potential for deep stormwater infiltration. It can be estimated based on hydrogeologic information, including well logs, and nearby surface water elevations. The information is generally of poor quality and can be difficult to interpret but is considered appropriate for a screening level analysis.

Information documented as part of Task 1 will be used to map the potential for infiltration for the selected alternatives, document and map ground water flow direction and depth to the extent possible, and identify areas for targeted additional subsurface exploration and infiltration testing. The distribution, thickness, and depth to ground water will be described based on the available data. Shallow infiltration opportunities are expected to be limited, but may be present in selected portions of the basin within the Vashon recessional outwash and within the Vashon advance outwash (where present near the existing ground surface). Deep infiltration potential is expected to be present within Vashon advance outwash where present and unsaturated beneath low permeability surficial glacial till. Recharge via deep infiltration to the Vashon advance outwash aquifer would provide baseflow to lower portions of Boeing Creek.

Information shall be summarized graphically and in a technical memorandum. This memorandum will include a description of the hydrogeologic setting, infiltration feasibility approach, and a summary of the results.

Task 3.2 – Alternative Analysis

Following the Task 2 initial screening, and Task 5.1 Initial Stakeholder Coordination, three or four of the most favorable alternatives will be selected for further assessment. This task includes the detailed evaluation of these selected alternatives and will also be informed by the results of the Task 3.1 infiltration assessment. The alternatives will be described in narrative form and presented graphically. Continuous hydrologic modeling will be used to verify that Minimum

Requirement 7 (MR7) flow control targets are met with each alternative. Both initial cost and life-cycle costs will be developed. Through the detailed evaluation, there will likely be some preliminary optimizing of facility sizing to the degree preliminary assumptions can be relied upon. (e.g., optimizing facility size to treat the CRA and as much additional area as possible while fitting the footprint into an area that reduces permit requirements and desired site uses (e.g., parking if within SCC).

For each alternative, a possible phasing approach and funding options will be defined. An alternative comparison will be developed considering such things as: preliminary estimates of area served, initial and life cycle costs, permit requirements, land acquisition requirements, ease of implementation, funding, and advantages and disadvantages. Team experts and City staff would participate in identification of one preliminary preferred alternative.

Some considerations to be used in the detailed analysis of specific regional facility sites include: the need to accommodate other uses (such as SCC parking); ability to collect water from the service area (e.g. existing gravity storm drains); need for associated conveyance improvements; and feasibility of the site to infiltrated water, such as infiltration rates and risk to slopes from increased flow of groundwater.

Key considerations in the detailed alternative evaluation analysis would include:

- The detailed analysis will confirm that the approach is allowable with regard to Ecology redevelopment requirements and fully complies with NPDES permits. For example, establishing a point of compliance to demonstrate and assess flow control compliance. One potential issue with this approach is that it assumes on-site distributed systems would be employed in the CRA to meet NPDES requirements MR#5 (GSI BMPs) and MR#6 (treatment). However this flow then co-mingles with non-treated flow from other upper Boeing Creek basin areas prior to reaching the SCC site, so under such a point of compliance approach, a regional infiltration facility would be required to provide pre-treatment meeting Ecology's Stormwater Manual requirements regardless of upstream treatment (which could be a reason for the facility to include treatment meeting MR#6).
- The detailed analysis will also attempt to accurately capture the performance of MR5 facilities anticipated (given code and likely development buildout scenario), and associated reduction in size of regional facility(s). Consultant will work with the City and CRA property owners as appropriate to develop one likely future development condition for the CRA, and assumptions for other upper basin areas.
- A geotechnical challenge is the lack of site-specific subsurface data, resulting in unknown geologic and ground water condition at any potential facility location. To address this challenge, for infiltration siting and feasibility, team member AESI will correlate between existing widely-spaced explorations obtained from subsurface information databases, including AESI's in-house geotechnical database, the DNR Subsurface Information Portal, and the Ecology water well viewer, along with targeted geologic reconnaissance and review of regional geologic and soils maps, ground water publications, then compiling datasets in a GIS database.

Task 3.3 – Funding and Implementation Analysis

Concurrent with the Task 3.2 Detailed Alternative Analysis, Consultant will investigate alternatives for funding/implementation. Given the scale of the improvements and the number of properties in the area to be served, an implementation and funding strategy will be very important. For example, the approach must allow for phased construction and long-term support of regional facility maintenance and operations. Some of the funding options to be considered would include the following:

- Local improvement district(s), resulting in assessments to the benefitting properties;
- Ratepayer funding
 - Citywide rates
 - Area-specific rates to apply only to areas benefitted by improvements
- Bond (debt) funding, utilizing a second funding source to pay debt service
- Capital Facilities Charge (CFC) funding, with CFCs payable upon development
 - Citywide CFCs
 - Area-specific CFCs
- Grant/special loan program funding
- Fees in lieu of on-site detention
- Latecomer (reimbursement) agreements

Considerations in the selection of the preferred funding approach would likely include.

- Equity – An equity criterion would inform the solution with a discussion of who should pay for the needed improvements.
- Legal defensibility – Any solution must be designed to withstand a potential legal challenge.
- Practicality/Affordability – A practicality criterion would provide for a realistic evaluation of specific financial burden property owners would be expected to bear.
- Ease of administration – Some solutions, such as multiple local improvement districts could require a high level of staff engagement and administration.
- Revenue sufficiency – The solution, whether making use of a single or multiple funding mechanisms, must be shown to provide enough revenue to meet the costs of improvements.
- Stakeholder input developed from Task 5

Task 3 Assumptions:

- The City will provide information on the likely development condition (including presumed areas to develop, density of development, and assumed percent between roof/PGIS) for the CRA which will be the basis for the alternative analysis.
-
- The analysis will be done for 3-4 options.
- For the purposes of modeling, it is assumed one approach (meeting an Ecology standard) will be used for on-site stormwater practices for redevelopment/redevelopment in CRA (to meet MR5) and will be applied to all alternates.
- No survey is included in the project. Analysis will be based upon LIDAR and other available GIS information.
- No subsurface explorations are included in this phase. If it is determined needed, additional scope will be developed.
- Field work during this task is limited to one day of field reconnaissance (3.1 for AESI, and 3.2 for LB).
- Assumes that the existing conveyance system is adequate for future redevelopment scenarios (assuming long-term flows decrease through redevelopment and implementation of MR5 and MR6). If new conveyance systems are proposed for an alternative, they will be sized on a preliminary basis using normal flow hydraulics.
- Modeling assumes up to 12 individual subbasins.
- It is assumed no revisions to City-provided GIS layers will be made. If errors, discrepancies, or inconsistencies are observed in the City-provided GIS data, observations will be summarized for the City's information.
- No assessment of occurrence of contaminated soil or ground water is performed. This information can be incorporated into the infiltration feasibility maps if readily available in GIS format.

Task 3 Deliverables:

- Task 3.1 Draft and Final Technical Memorandum (Word and PDF). Assumed figures include: project Vicinity, Surficial Geology, Landslide Hazards and Explorations; Hydrogeologic Cross Section; Vashon Advance Outwash Aquifer Extent; Shallow Infiltration Feasibility; Deep Infiltration Feasibility.
- Detailed Alternative Analysis of Regional Control Approaches (and compared to traditional approach). For the traditional approach, the Consultant will work with the City to determine if the traditional approach should include UIC where possible or not.
- Funding and Implementation summary – to be a section in the Task 4 plan development.
- Meeting to select a preferred alternative

Task 4 - Plan Development - Implementation Road Map

A draft report will be prepared that summarizes the methods and findings of the study and includes an implementation plan for the preferred alternative. The implementation plan will define the additional analysis, such as survey and geotechnical investigations, as well as

permitting and design that would be necessary. It would also describe the funding approach, including any agreements that would need to be in place with stakeholders. It would define how the facility would be phased, to be ahead of future development. It would also define how the implementation would be tracked and reported to Ecology to make sure NPDES requirements are being met and the implementation is staying ahead of redevelopment.

The draft plan would be presented to the full breadth of stakeholders for review and comment as described under Task 5. The stakeholder process will determine if there is a need for fine-tuning or adjustments to the preferred alternative. This would then be documented in the final report, which would be presented to Council for approval.

Task 4 Assumptions:

- Phasing discussions are assumed to include no more than three phases.
- City will consolidate review comments into one document.

Task 4 Deliverables:

- Draft Report
- Final Report

Task 5 - Stakeholder Involvement

Stakeholder involvement will be a key to the success of this project, as it will require support of the stakeholders that will ultimately be funding the regional facility. The stakeholder involvement will include two phases as described below.

Task 5.1 - Initial Stakeholder Input

An initial effort will focus on a limited number of key stakeholders once the Task 2 alternative screening is complete and preliminary concepts are developed. Working with the City, the Consultant will participate in meetings/coordination with stakeholders to solicit input on key questions that need answering in order to inform further implementation of that alternative. Examples of these type of questions include:

- For SCC, what financial arrangement would SCC be comfortable with if using a site on their property? How much of the site is available considering high parking demand? Are there other areas that could be used to offset lost parking?
- For CRA, what areas will not be redeveloped in the foreseeable future? How do they see phasing occurring? What is their preference on financing and implementation?
- For Ecology, does Ecology approve of the approach for representing MR#5 (e.g., build out scenario assumed), approve of project phasing versus development timeline, and would UIC wells for regional control be an acceptable method for stormwater disposal following MR#5 and MR#6?

Task 5.2 - Draft Plan Stakeholder Input

This input would be sought on the draft plan and the recommended stormwater approach. This effort will include both meetings with targeted stakeholders and a public meeting.

Task 5 Deliverables:

- Stakeholder Plan,
- Meeting Agendas,
- Meeting Minutes.

Task 5 Assumptions:

- The budget assumes participation of up to four individual stakeholder meetings.
- City will lead the overall stakeholder involvement effort, and Consultant will provide supporting role.
- City PM will lead coordination with internal (City) stakeholders

Task 5 Deliverables:

- Meeting Agendas
- Meeting Minutes.

Task 6 – Project Management

Project Management will include the following activities:

Task 6.1 - Project Administration

Preparing subconsultant agreements, monitoring progress of subconsultants, and project filing.

Task 6.2 -Monthly Progress Reports: Provide Progress Reports with invoices to include the following:

- Progress-to-date since last invoice.
- Anticipated upcoming tasks.
- Budget summary status for the project / percent complete, including:
 - Spent and remaining budgets by task
 - Estimate of percent complete by task. This will be used to assess whether/if remaining budget will be sufficient to complete tasks (and bring to City PM's attention if not)
- Anticipated schedule delays or other problems. If schedule is delayed, provide an updated schedule
- Other issues and concerns

Task 6.3 -Communication and Meetings

- Miscellaneous communications with consulting team and City
- Up to two (2) team meetings (not associated with specific technical tasks); meetings may be held at Louis Berger office depending on number of City staff to attend.

Task 6.4 -Quality Assurance/Quality Control.

Consultant will perform quality control reviews of client deliverables. Quality control reviews will be done by senior staff personnel. Consultant shall keep a log of QA/QC reviews that may be provide to the City upon request.

Task 6 Assumptions:

Project Management will be up to 12 months.

Task 6 Deliverables:

- Monthly invoices and project status reports.
- Up to three (2) team meetings attended by one Louis Berger staff.
- QA/QC log

City of Shoreline

Project: Boeing Creek Regional Stormwater Pond

Project Budget Task Summary

5-11-17

Phase No.	Task No.	Phase/Task	Charges, including Contingency+Admin					Total Charges
			LB Labor	LB Labor Revenue	General Expenses	Travel Expenses	Subcontractor Charges	
1	0	Data Review	20.00	\$2,925	\$0	\$0	\$3,826	\$6,751
2	0	Preliminary Analysis/Screening	58.00	\$9,160	\$0	\$0	\$10,623	\$19,783
3	0	Detailed Alternative Evaluation	0.00	\$0	\$0	\$120	\$0	\$120
3	1	Infiltration Assessment	6.00	\$1,284	\$0	\$0	\$17,500	\$18,784
3	2	Alternative Analysis	314.00	\$41,022	\$0	\$120	\$10,811	\$51,953
3	3	Funding and Implemenation	0.00	\$0	\$0	\$0	\$23,240	\$23,240
4	0	Plan Development	132.00	\$20,149	\$0	\$0	\$7,948	\$28,097
5	0	Stakeholder Involvement	44.00	\$7,120	\$0	\$0	\$6,745	\$13,865
6	0	Project Management	0.00	\$0	\$0	\$0	\$0	\$0
6	1	Project Administration	40.00	\$6,111	\$0	\$0	\$0	\$6,111
6	2	Monthly Progress Reports	40.00	\$6,111	\$0	\$0	\$0	\$6,111
6	3	Communication and Meetings	16.00	\$3,424	\$0	\$0	\$0	\$3,424
6	4	QA/QC	24.00	\$6,000	\$0	\$0	\$0	\$6,000
			0.00	\$0	\$0			\$0
			0.00	\$0	\$0			\$0
GRAND TOTALS			694.00	\$103,305	\$0	\$240	\$80,693	\$184,238

City of Shoreline

Project: Boeing Creek Regional Stormwater Pond

Labor Revenue Summary

5-11-17

Phase No.	Task No.	Phase/Task	Enter names and rates from left to right							Task Totals		
			Nelson, Ralph D	Giseburt, Michael S	Weber, Mary B	Ellis, James	Cammermeyer, Jon W	Mcintyre, Susan E				
			Assoc VP	Sen Eng	Sen Eng	Staff Eng	Project Eng	Project Assistant			Hours	Revenues
		Labor Rate	\$250.00	\$214.00	\$191.36	\$101.11	\$145.64	\$91.53	\$0.00			
1	0	Data Review		8.00		12.00					20.00	\$2,925
2	0	Preliminary Analysis/Screening	10.00	16.00		32.00					58.00	\$9,160
3	0	Detailed Alternative Evaluation									0.00	\$0
3	1	Infiltration Assessment		6.00							6.00	\$1,284
3	2	Alternative Analysis	8.00	62.00	12.00	232.00					314.00	\$41,022
3	3	Funding and Implemenation										
4	0	Plan Development	4.00	56.00		60.00		12.00			132.00	\$20,149
5	0	Stakeholder Involvement		24.00		16.00		4.00			44.00	\$7,120
6	0	Project Management									0.00	\$0
6	1	Project Administration		20.00				20.00			40.00	\$6,111
6	2	Monthly Progress Reports		20.00				20.00			40.00	\$6,111
6	3	Communication and Meetings		16.00							16.00	\$3,424
6	4	QA/QC	24.00								24.00	\$6,000
											0.00	\$0
Total Hours			46.00	228.00	12.00	352.00	0.00	56.00	0.00	694.00		
Total Revenues			\$11,500	\$48,792	\$2,296	\$35,591	\$0	\$5,126				\$103,305

