

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Authorize the City Manager to Enter into a Contract with KPFF Consulting Engineers in the Amount of \$72,444 for the 160 th and Greenwood/Innis Arden Intersection Project
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 City’s 2019 – 2024 Capital Improvement Plan (CIP) includes \$105,000 for developing a conceptual design to improve the operations of safety of the five-way intersection at N 160th Street, Greenwood Ave N and Innis Arden Way (the Intersection). A vicinity map for the project is included in Attachment A. Developing a conceptual design is needed to inform Shoreline Community College’s (SCC) traffic mitigation improvements at the intersection.

SCC is building new student housing on campus. Their traffic analysis shows that upon occupation they will not meet the City’s concurrency standards at the Intersection. State law requires them to mitigate within six years of not meeting concurrency.

The City and SCC entered into a Transportation Mitigation Agreement (Contract No. 9219) on November 8, 2018. The Agreement has a section regarding the City’s CIP project which includes commitments by the City to select a preferred concept for the intersection by September 2019.

This contract will provide the City with engineering design services needed to develop and select the preferred concept and comply with the City’s commitments in Contract No. 9219.

RESOURCE/FINANCIAL IMPACT:

The adopted 2019-2024 CIP budget for the 160th and Greenwood/Innis Arden Intersection Project is \$105,000. This consultant design services contract is budget for up to \$72,444 of this amount. The cost is budgeted through the General Fund.

The 2019-2024 project budget and revenue sources are as follows:

EXPENDITURES

Project Administration:	
Staff and Other Direct Expenses	\$32,556
<i>Consultant Design Contract</i>	<i>\$72,444</i>
<hr/>	
Total Project Cost	\$105,000

REVENUE

General Fund Contribution	\$105,000
<hr/>	
Total Revenue	\$105,000

RECOMMENDATION

Staff recommends that Council authorize the City Manager to execute an agreement with KPFF Consulting Engineers, for \$72,444 to provide engineering, traffic analysis, and other design consultant services for the 160th and Greenwood/Innis Arden Intersection Project.

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

BACKGROUND

On November 19, 2018 Council approved funding for this project as part of the 2019-2020 Biennial Budget and the 2019-2024 Capital Improvement Plan.

Shoreline Community College (SCC) is building a new student residence hall on campus. They completed a preliminary analysis for the N 160th Street, Greenwood Ave N and Innis Arden Way intersection (the Intersection) in a 2018 Transportation Technical Report. The Transportation Technical Report (TTR) shows that the City's level of service standards will not be met at the Intersection when the student residence hall is occupied in September 2019. The TTR proposed to install a signal at the Intersection to comply with the City's concurrency standards, however, the City's Transportation Master Plan has identified a roundabout as the preferred traffic control device for the Intersection.

On November 5, 2018 Council authorized the City Manager to enter into a Transportation Mitigation Agreement with SCC. The agreement was executed on November 8, 2018 as City contract No. 9219.

Section 3 of the Agreement with SCC outlines SCC's mitigation projects, including improvements at the Intersection. The section includes provisions that:

- SCC will complete mitigation improvements at the Intersection within 6 years of the date of Certificate of Occupancy for the student residence hall; and
- The City will identify a preferred concept for the Intersection by September 2019.

The scope of this project includes:

- Alternatives analysis for a traffic signal and roundabout; and
- Cost estimates for capital costs, operating costs, and public outreach.

The City will work closely with SCC throughout the project to develop a preferred alternative, including plans for funding and construction of the project if the cost of the preferred alternative exceeds the cost estimated for SCCs proposed traffic signal mitigation.

ALTERNATIVES ANALYSIS

On November 8, 2018, a waiver of Request for Qualification (RFQ) was authorized for selecting a design consultant for the CIP project. The request for the waiver was consistent with SMC 2.60.070 Services, Section D.1.c that allows the City Manager to waive the formal RFQ process when the costs of delay in using an RFQ process are likely to outweigh higher quality performance expected from the RFQ process.

Staff utilized the Municipal Research and Services Center (MRSC) Roster to find consultants with strong experience and success in designing roundabouts. Statements of Qualifications (SOQ) were evaluated for the listing of 83 consultant firms obtained from the MRSC roster.

Based on their roundabout design experience and ability to meet the project schedule, KPFF Consulting Engineers was selected as the most qualified firm for this design. 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 or significantly delay the project. Given that the City has an agreement with SCC to select a preferred alternative by September 2019, and that the estimated project duration is 7 months, not awarding the contract is not recommended.

The design will commence once the consultant is under contract. This is currently estimated to occur by January 21, 2018. The selection of a preferred design alternative is expected to be completed approximately seven (7) months after starting. The proposed scope of work and budget are provided as Attachment B.

COUNCIL GOAL(S) ADDRESSED

This project supports Council Goal #2 to improve Shoreline’s infrastructure to continue the delivery of highly-valued public services.

RESOURCE/FINANCIAL IMPACT

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Project Administration:	
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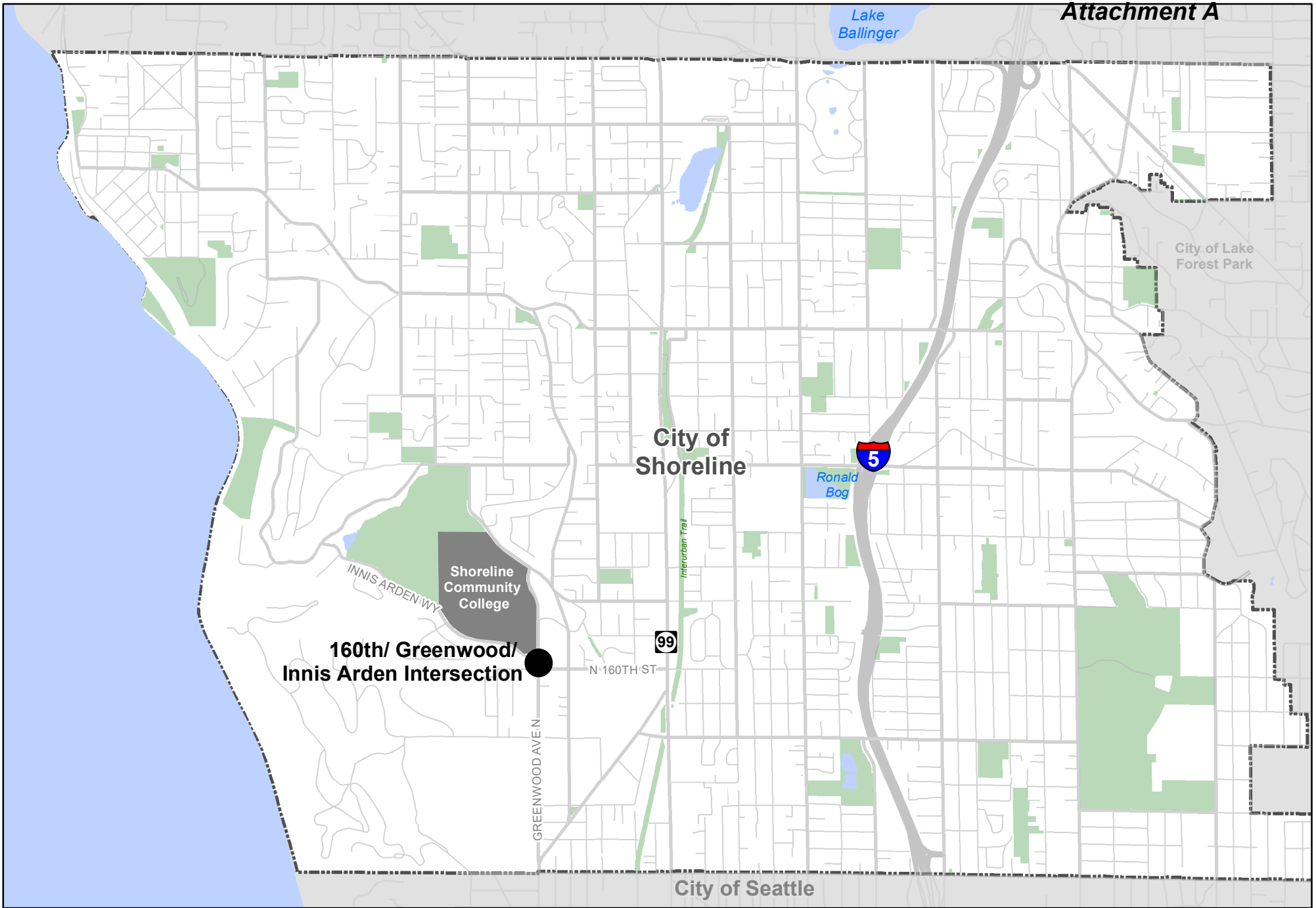
RECOMMENDATION

Staff recommends that Council authorize the City Manager to execute an agreement with KPFF Consulting Engineers, for \$72,444 to provide engineering, traffic analysis, and other design consultant services for the 160th and Greenwood/Innis Arden Intersection Project.

ATTACHMENTS

Attachment A: Vicinity Map

Attachment B: 160th and Greenwood/Innis Arden Intersection Preliminary Design Scope of Work and Fee Proposal.



Attachment A - Vicinity Map

N 160th Street, Greenwood Avenue N and N Innis Arden Way

7d-6

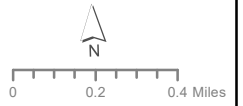




EXHIBIT A

SCOPE OF WORK

160th and Greenwood/Innis Arden Intersection Preliminary Design City of Shoreline

INTRODUCTION

During the term of this professional services agreement (AGREEMENT), KPFF (CONSULTANT) shall perform professional services for the City of Shoreline (CITY) in connection with the following project: **160th and Greenwood/Innis Arden Intersection Preliminary Design (PROJECT)**.

SCOPE OF WORK

This scope of work summarizes the tasks required to provide engineering services to study the intersections of Greenwood Avenue N, N 160th Street, and Innis Arden Way. The work will include preparation and analysis of roundabout design alternatives, followed by development of a 10% design for the preferred alternative. This scope of work includes civil design, traffic analysis, coordination with stakeholders, and public outreach.

PROJECT DESCRIPTION

The Shoreline Community College (SCC) has recently completed a Transportation Technical Report that analyzed traffic impacts to CITY roadways that will result from the future build out of the SCC Master Development Plan. This report indicates that the intersections of Greenwood Avenue N/NW Innis Arden Way and Greenwood Avenue N/N 160th Street S will operate below the CITY's adopted level of service (LOS) standard after the SCC projects are complete. The CITY wants to study this intersection and develop a preferred alternative that will improve the future LOS, safety, and mobility.

The primary goals for the project are:

- Improve safety and mobility of the intersection for all modes.
- Identify a preferred alternative for the intersections of Greenwood Ave N/ N 160th St/ NW Innis Arden Way intersection control. Complete a 10% design for the preferred alternative. The design shall support the projected 2040 volumes shown in the SSC Transportation Technical Report.
- Complete outreach to the community and major stakeholders to inform the selection of a preferred concept.
- Develop detailed cost estimates for signalized and roundabout intersection options. The cost estimates should include all phases including design, right-of-way, and construction.

APPLICABLE STANDARDS

The project shall adhere to applicable federal, state, and local engineering standards including, but not limited to:

SCOPE OF WORK

Greenwood/160th/Innis Arden Roundabout Preliminary Engineering Study

Page 2

- City of Shoreline's Engineering Development Manual, 2019 version
- City of Shoreline's Standard Details, 2019 version
- Shoreline Municipal Code

SCHEDULE

The schedule will be developed in coordination with the CITY. We anticipate a 7-month duration for this project, as shown below:

Task	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.
NTP							
Data Gathering							
Alternative Development							
Open House #1							
10% Design & Cost							
Open House #2							
Finalize 10% Design							

TASK 1: PROJECT MANAGEMENT AND ADMINISTRATION (KPFF)

KPFF shall provide project administration and coordination with the CITY to facilitate efficient progress and timely completion of the project.

TASK 1.1: MONTHLY PROGRESS REPORTING AND INVOICING

Prepare and submit monthly progress reports containing the following:

1. Invoices showing the actual costs; and
2. Status of work performed during work period.

TASK 1.2: MANAGEMENT AND QUALITY CONTROL

KPFF will provide direction and oversight of the project design team to ensure accurate and timely implementation of the work plan and the appropriate coordination of work activities, including the review of each project design team member's work over the course of the project. This task includes the effort related to providing quality control for the work activities in this scope of work.

TASK 1.3: PROJECT MEETINGS

Project meetings will be held as needed to coordinate with the project team, inform the CITY Project Manager of progress, identify issues, receive direction, and coordinate with key stakeholders. These meetings may be in person at the CITY offices or on phone conference. For scoping purposes, KPFF shall assume a maximum of two (2) CONSULTANT staff will attend four (4) project team meetings and two (2) stakeholder meetings.

Deliverable(s):

- Prepare and submit monthly billings (assume seven).
- Initial project schedule and one update. – Initial project schedule shall be submitted to the CITY at least two (2) working days prior to project kick off meeting for review.
- Meeting notes. – Meeting Notes shall be provided to the CITY within five (5) working days of the meeting.

TASK 2: CIVIL ENGINEERING (KPFF)

TASK 2.1: DATA GATHERING

KPFF will gather, review, and process CAD, GIS, aerials, plans, and traffic studies pertinent to the PROJECT

TASK 2.2: ESTABLISH DESIGN AND EVALUATION CRITERIA

KPFF will prepare and submit a design matrix to the CITY for review and approval. The matrix will identify key design and evaluation criteria for use in the alternative development task.

TASK 2.3: ALTERNATIVE DEVELOPMENT AND ANALYSIS

KPFF will prepare three (3) alternative roundabout concepts with a planning level evaluation matrix and submit to the CITY for review and comments. KPFF will assist the CITY to select a preferred alternative, with possible revisions, for analysis.

TASK 2.4: 10% DESIGN FOR PREFERRED ALTERNATIVE

The 10% design plans for the Preferred Alternative are anticipated to include:

- Proposed horizontal alignments, curb lines, channelization, and pedestrian & bicycle facilities.
- Right-of-Way needs.
- Major utility impacts.
- Preliminary stormwater management assessment.
- Transit facility impacts.

TASK 2.5: COST ESTIMATE

KPFF will develop a cost estimate for the Preferred Alternative and a signalized intersection concept (provided by the CITY). The cost estimate will be based on KPFF's past project experience, WSDOT historical bid analysis, and input from the CITY.

TASK 2.6: DESIGN REPORT

KPFF will create a memo summarizing the findings of the alternative analysis and subsequent development of the 10% design and cost estimate. A single design memo document will be submitted to the CITY.

Assumptions(s):

- The CITY will provide CAD files for the signalized intersection option.
- Three (3) alternatives will be developed by KPFF.
- Alternatives analysis shall include a rough order of magnitude of construction cost for all three (3) alternatives.
- KPFF will meet with the CITY to review, select, and complete a 10% design for one (1) preferred alternative.
- Development of 10% design for the Preferred Alternative will include one round of review by the CITY.
- The cost estimates will be based on WSDOT Bid Item Analysis information for key identifiable items and will use a contingency to account for unknowns.

Deliverable(s):

- Design and Evaluation Criteria.
- Three (3) roundabout alternatives will be prepared on 11x17 sheets and presented to the CITY (PDF and hard-copies, as needed). – Alternatives will be submitted to the CITY for final acceptance two (2) weeks prior to the first Open House.
- Draft 10% design for the Preferred Alternative on 11x17 sheets (PDF, CAD, and hard-copies, as needed). – Draft 10% design will be submitted to the CITY for review two (2) weeks prior to the second Open House. The CITY will provide comments within two (2) weeks after the second Open House.
- Draft Design Memorandum (PDF, Word file, and hard-copies, as needed). – Draft design memo will be submitted to the CITY for review two (2) weeks prior to the second Open House.
- 10% design for the Preferred Alternative on 11x17 sheets (PDF, CAD, and hard-copies, as needed). - 10% design will be submitted to the CITY for final acceptance no later than 7:00am on August 26, 2019, unless otherwise agreed to on the project schedule.
- Cost estimates for the Preferred Alternative and signalized intersection option (PDF, Excel file, and hard-copies, as needed). – Cost Estimates will be submitted to the CITY for final acceptance no later than 7:00am on August 26, 2019, unless otherwise agreed to on the project schedule.
- Final Design Memorandum (PDF, Word file, and hard-copies, as needed). - Final Design Memorandum will be submitted to the CITY for final acceptance no later than 7:00am on August 26, 2019, unless otherwise agreed to on the project schedule.

TASK 3: PUBLIC OUTREACH (KPFF)

KPFF will support the CITY in the preparation and staffing of two (2) Open Houses. KPFF will prepare four (4) boards (up to 22-inch x 34-inch) for each Open House including: plan view/aerial of roundabout alternatives, high level traffic analysis results, and typical sections.

Assumption(s):

- The CITY will prepare and distribute announcements for the Open Houses.
- The CITY and KPFF will coordinate to determine what information should be included on the display boards.
- Up to two (2) CONSULTANT staff will attend the two-hour Open Houses.

Deliverable(s):

- Eight (8) boards for public meetings. Boards for public meetings will be submitted to the CITY for final acceptance one (1) week prior to the public meetings.

TASK 4: TRAFFIC (Fehr & Peers)

TASK 4.1: GENERAL MANAGEMENT

FEHR & PEERS shall perform project administration and management tasks as follows:

Prepare a project management plan to consist of the following items:

- Budget tracking
- File management
- Prepare and submit monthly invoices, including a tabulation of hours expended, broken down by each major task.
- Prepare monthly progress reports summarizing the status of the budget.

TASK 4.2: QA/QC

The FEHR & PEERS shall provide internal quality assurance/quality control (QA/QC) reviews of the following major work elements prior to submittal to KPFF.

TASK 4.3: COMMENT RESOLUTION

The project includes CITY reviews of the project deliverables. FEHR & PEERS shall review comments and provide preliminary responses within 2 weeks of receiving comments or as defined in the project schedule - whichever is sooner.

Deliverable(s):

- Monthly progress report and invoice (electronic)
- Updated project schedules if required (electronic)
- Updated comment response log in MS Excel format (electronic)

TASK 4.4: ESTABLISH DESIGN & EVALUATION CRITERIA

FEHR & PEERS will coordinate with KPFF to establish design criteria and measures of effectiveness for the project and corresponding analysis. KPFF will provide any documentation required for the project with support from FEHR & PEERS. No additional documentation will be provided by FEHR & PEERS.

Assumption(s):

- Traffic data from the Shoreline Community College Transportation Technical Report (October 2018, Transpo Group) will be used in support of the analysis.

Deliverable(s):

- Traffic Analysis Standards for incorporation into Design and Evaluation Criteria described in Task 2.

TASK 4.5: ALTERNATIVE DEVELOPMENT & ANALYSIS

FEHR & PEERS will update the “proof-of-concept” analysis completed and documented in the Greenwood Avenue and 160th/Innis Arden Road Analysis memorandum (October 9th, 2018). The analysis will be updated to include up to two additional roundabout layout alternatives, and one signalized alternative. Analysis years, peak hours, and turning movement volumes will be the same as those originally considered, as specified below:

- Peak Hours:
 - AM Peak Hour
 - Mid-Day Peak Hour
 - PM Peak Hour
- Design Years:
 - Existing (Based on 2018 Traffic Counts)
 - 2040 Design Year

Modeling will be completed in VISSIM for all alternative analysis.

Assumption(s):

- All traffic analysis will be based on the analysis years, peak hours, and turning movement volumes as the used in the “Proof-of-Concept” analysis memo.

- Up to 3 roundabout layouts and 1 signalized layout alternative will be modeled.
- All modeling will be completed in VISSIM.
- VISSIM models shall include the Dayton Ave N and N 160th St Signalized intersection.

Deliverable(s):

- VISSIM Model Files.
- Draft and Final Greenwood Avenue 160th/Innis Arden Avenue Analysis Memorandum.

TASK 4.6: 10% DESIGN FOR PREFERRED ALTERNATIVE

FEHR & PEERS will support KPFF in the development of the 10% design of the preferred roundabout alternative by reporting any lane geometry from the VISSIM Model. This includes storage lane length, approach lane layouts, and circulating lane geometry as needed.

TASK 4.7: COST ESTIMATE

FEHR & PEERS will prepare a planning level Cost Estimate for the signalized alternative. The cost estimate will assume quantities based on the 10% design for the preferred signalized alternative provided by the City of Shoreline. The cost estimate will include assumptions used for quantity estimates and unit prices.

Assumption(s):

- Signalized intersection design will be provided by the CITY.

Deliverable(s):

- 10% Cost Estimate for the signalized intersection alternative.

TASK 4.8: DESIGN MEMORANDUM

FEHR & PEERS will assist KPFF document the design process by providing a summary of the traffic analysis. FEHR & PEERS shall provide a short narrative, not exceeding 1 page, and electronic version of tables to be incorporated into the overall Design Memorandum.

Deliverable(s):

- Traffic narrative and tables will be provided to KPFF for incorporation into the Design Memorandum described in Task 2.

City of Shoreline
 Greenwood/160th/Innis Arden Roundabout Preliminary Engineering Study
 12/19/2018

Fee Proposal Summary:

	Description	KPFF	Fehr & Peers	Total Cost
Task 1	Project Management and Administration	\$ 9,358		\$ 9,358
Task 2	Civil Engineering	\$ 39,077		\$ 39,077
Task 3	Public Outreach	\$ 3,969		\$ 3,969
Task 4	Traffic		\$ 19,240	\$ 19,240
Total Labor Cost by Firm		\$ 52,404	\$ 19,240	\$ 71,644
REIMBURSABLES				
Expenses				Totals
	Reimbursable Expense Subtotal by Firm		\$ 800	\$ 800
Total Project Cost		\$ 52,404	\$ 20,040	\$ 72,444

City of Shoreline
 Greenwood/160th/Innis Arden Roundabout Preliminary Engineering Study
 12/19/2018

Fee Proposal: KPFF

TASK	DESCRIPTION	Principal	Project Manager	Sr. Engineer	Design Engineer	CAD Technician	Admin.	Total Hours	
		Ron Leimkuhler	Nathan Anderson	Mick Monken	Jeff Fellowes	Ken Webber	Vanessa Reed		
Task 1	Project Management								\$ 9,358
1.1	Progress Reports and Invoicing		8				12	20	\$ 2,095
1.2	Team Management & QA/QC	8	8					16	\$ 2,629
1.3	Meeting with Project Stakeholders		8		4			12	\$ 1,544
1.4	Team Meetings		16		8			24	\$ 3,089
Task 2	Civil Engineering								\$ 39,077
2.1	Data Gathering and Review		4		4	8		16	\$ 1,863
2.2	Establish Design and Evaluation Criteria		8	2	8			18	\$ 2,300
2.3	Alternative Development and Analysis		16	4	40	40		100	\$ 11,529
2.4	10% Design for Preferred Alternative		24	4	40	60		128	\$ 14,853
2.5	Cost Estimate for Preferred Alternative and Signalized Option		12		24			36	\$ 4,212
2.6	Design Memo		8	4	24			36	\$ 4,320
Task 3	Public Outreach								\$ 3,969
4.1	Open House Meetings		8		8			16	\$ 1,966
4.2	Open House Preparation & Graphics		2		8	8		18	\$ 2,003
Total Hours		8	122	14	168	116	12	440	
	All Inclusive Hourly Rate	\$188.24	\$140.40	\$167.40	\$105.30	\$110.03	\$81.00		Sub-Totals
	Sub-Total Burdened Labor Cost	\$ 1,506	\$ 17,129	\$ 2,344	\$ 17,690	\$ 12,763	\$ 972		\$ 52,404

REIMBURSABLES

Direct Expenses	Quantity	Unit	Unit Cost	Sub-Totals	Totals
Mileage				\$ -	\$ -
Reprographics				\$ -	\$ -
Travel				\$ -	\$ -
Subcontract				\$ -	\$ -
Total Reimbursables					\$ -
Total Firm Cost					\$ 52,404

City of Shoreline
 Greenwood/160th/Innis Arden Roundabout Preliminary Engineering Study
 12/19/2018

Fee Proposal: FEHR & PEERS

TASK	DESCRIPTION	Principal	Senior Engineer / Planner	Engineer / Planner	Admin.	Total Hours	
		C. Brieland	C. Grgich	S. Keenan	Y. Bettencourt		
Task 4	Traffic						\$ 19,240
4.1	General Management		4		8	12	\$ 1,620
4.2	QA/QC	4	2			6	\$ 1,450
4.3	Comment Resolution		2	2		4	\$ 630
4.4	Establish Design & Evaluation Criteria			4		4	\$ 560
4.5	Alternative Development & Analysis		22	56		78	\$ 11,690
4.6	10% Design for Preferred Alternative		2	4		6	\$ 910
4.7	Cost Estimate for Signalized Alternative		2	8		10	\$ 1,470
4.8	Design Memorandum		2	4		6	\$ 910
							\$ -
Total Hours		4	36	78	8	126	
All Inclusive Hourly Rate		\$275.00	\$175.00	\$140.00	\$115.00		Sub-Totals
Sub-Total Burdened Labor Cost		\$ 1,100	\$ 6,300	\$ 10,920	\$ 920		\$ 19,240

REIMBURSABLES

Direct Expenses	Quantity	Unit	Unit Cost	Sub-Totals	Totals
Project Reproduction Charges	1	LS	\$ 800.00	\$ 800	\$ 800.00
				\$ -	\$ -
				\$ -	\$ -
				\$ -	\$ -
Total Reimbursables					\$ 800
Total Firm Cost					\$ 20,040